PORT TOWNSEND POST OFFICE
PORT TOWNSEND, WASHINGTON 98368

100% Submittal Specifications

June 10, 2022

Exterior & Window Repairs

FMS B14633

CAG #282007

Cornerstone
ARCHITECTURAL GROUP

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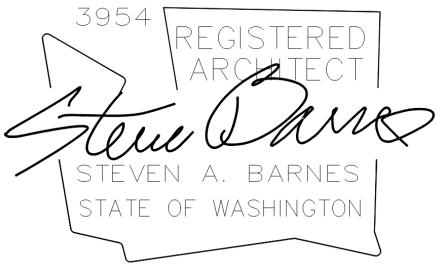
SEALS PAGE

PROJECT

Name:	Port Townsend Post Office Exterior & Window Repairs
Location:	Port Townsend, WA 98368
FMS Project Number:	B14633

ARCHITECT OF RECORD



Steve Barnes
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Kenmore, WA 98028

Architect of Record _____ Date _____

END OF DOCUMENT

USPS MPF Specifications issued: 10/1/2018
Last revised 6/17/2013

DOCUMENT 000010
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DIVISION 33 – UTILITIES - NOT USED

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USPS CSF Specifications issued: 5/1/2014
Last revised: 4/25/14

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SECTION 011000

SUMMARY OF WORK

PART 1 - GENERAL

1.1 SCOPE

A. The Contractor must provide all material, labor, tools, plant, supplies, equipment, transportation, superintendence, temporary construction of every nature, and all other services and facilities necessary to complete the construction of a postal facility for the Postal Service, including all incidental work described in the contract documents. [Insert the following in NCL projects - For purposes of this construction project, the terms “Landlord”, “Lessor”, “Owner”, “Offeror”, and “Contractor” are interchangeable and refer to the party whose proposal is accepted by the Postal Service. It is the Landlord’s sole responsibility to clarify design and construction responsibilities among the Landlord’s designers, contractors and other agents.]

B. The scope of work includes, but is not limited to the following:

1. All work to comply with SHPO and these contract documents.
2. Provide all scaffolding and protection of grounds and adjacent surfaces. Provide covers at existing entry locations to protect the public from the work.
3. Clean the exterior of the building and adjacent stairs, stair walls, brick piers, etc. The intent is to completely clean the exterior of the building including stair walls and retaining walls in window wells.
4. Remove existing wood window sashes complete and provide temporary protection of interior from inclement weather.
5. Abate all paint from exterior window frames and sashes.
6. Repair all framing and sashes to match existing.
7. Paint exterior of window frames and sashes to match existing.
8. Replace exterior sealant at all existing window & door frames.
9. All glazing to be reused. replace all broken glazing with new glazing to match existing.
10. Provide repair of sandstone in field, quoins, sills, cornices and head stones at windows. repair must be the same color and texture to avoid a "patchy" look.
11. Tuck-point existing sandstone masonry mortar joints.
12. Apply water repellant to all sandstone. this includes stair walls and retaining walls in window wells.
13. Remove and reinstall flag poles. Prep and paint.
14. Clean interior window trim, sand sills and deteriorated trim to remove existing finish and make ready to recieve new finish. Replace damaged sill pieces, as indicated, see interior elevations for more information.
15. Remove water damaged plaster at walls and ceilings adjacent to leaking windows or other leaks as indicated, repair areas as required. Repaint repaired walls from inside corner to corner. This scope of work includes repainting the interior walls requiring repair only.
16. Gutters: remove existing gutter & coating, provide new copper gutter.

17. Replace 4 exterior light fixtures and remove or remove and reinstall wiring as shown on drawings.

18. Building shall be occupied during construction. Provide access to all operations and remove equipment and furniture away from windows as required. Once complete return furnishings and equipment to their original locations.

1.3 MISCELLANEOUS CONTRACT EXPENSES

A. Apply for and secure PSCAA for abatement permit and include cost in proposal.
B. Contractor shall included $10,000 in bid for testing and removal of ACM/LBP in accordance with Sections 022623 & 028233.

PART 2 – PRODUCTS

NOT USED

PART 3 – EXECUTION

NOT USED

END OF SECTION

USPS Specification issued: 5/1/2014
Last revised: 9/17/2013

SECTION 011001ra-H

GENERAL GUIDELINES FOR HISTORIC PRESERVATION PROJECTS

PART 1---GENERAL

1.1 SUMMARY

A. PREFACE: This Section includes general project guidelines provided to supplement specific repair and preventive maintenance procedures. Not all of these requirements will be applicable given the level of difficulty of the procedure. However, where applicable, these guidelines should be used in addition to recommendations provided by the Federal Preservation Officer (FPO).

1.2 RELATED SECTIONS

A. Section 013300 – Submittal Procedures.
B. Section 013543 – Environmental Procedures: Environmental, Health and Safety.
C. Section 014000 - Quality Requirements: Submittals and Contractor Quality Control.
D. Section 016000 - Product Requirements: Delivery, Storage and Handling.
E. Section 017300 - Execution.

1.3 HISTORIC STRUCTURES PRECAUTIONS

A. The principal aim of any work must be to halt the process of deterioration and stabilize the item's condition. Repair is a second option which becomes necessary only where preservation is not sufficient to ensure mid- to long-term survival. Repair should always be based on the fundamental principle of 'minimal disturbance'. The following are good practices which arise from this principle:

1. Retention of as much existing material as possible; repairing and consolidating rather than renewing.
2. The use of additional material or structure to reinforce, strengthen, prop, tie, and/or support existing material or structure.
3. The use of reversible processes wherever possible.
4. The use of traditional materials and techniques. New work should be distinguishable to the trained eye, on close inspection, from the old.
5. The item should be recorded before, during and after the work.
6. No smoking will be allowed by personnel performing work on or about Historic Structures.
7. Federal Preservation Officer (FPO) approval is required for any change, addition or removal of historic structural fabric or historic property.
8. FPO should be notified of any visible change in the integrity of the material or component whether environmental, such as biological attack, ultraviolet degradation, freeze, thaw, etc., or structural defects, such as cracks, movement, or distortion.
9. Architectural features will be repaired rather than replaced wherever possible. Repair or replacement of missing features will be based on accurate duplications rather than on conjectural designs.

10. Work which requires existing features to be removed, cleaned and reused shall be accomplished without damage to the material itself, to adjacent materials, or the substrate.
11. Existing features removed from the building which are to be reinstalled shall be carefully labeled and stored within the building in a place where they will not be damaged or obstruct other work.
12. New or replacement materials/features will be permanently marked in an unobtrusive manner to distinguish them from original fabric. The manner of identification and location of these marks shall be recorded in permanent building records.
13. Identify the historic importance of the material or feature. The item's merit, in terms of age, uniqueness of design, materials, size, technological development, association with persons or events, exceptional workmanship or design qualities, must be understood before decisions regarding repair, maintenance and preservation can be made.
14. Statement of Non-Compliance: Wherever it is necessary to proceed with the use of products, under conditions which do not comply with the requirements (because of time schedule difficulties or other reasons which the supervisor determines that are crucial to the project), prepare a written statement for the FPO's Record indicating the nature of the non-compliance, the reasons for proceeding, the extra or precautionary measures taken to ensure the best possible work, and the names of the individuals concurring with the decisions to proceed with the work.
15. When cleaning, avoid overcleaning. Aim for achieving 85% clean. Most damage occurs when attempting to clean the last 15%.
    a. Do not use acids or flame tools to strip paint from stone, as it will damage the surface.
    b. Do not use steel or metal spatulas or tools to scrape stone because of the likelihood of scratching, chipping, gouging, or otherwise marring the surface.

1.4 SUBMITTALS

A. Product Data (when applicable): Required.
B. Samples: Required. Substitutions will not be permitted without written approval from the FPO.
C. Submit written program for each phase of process including protection of surrounding materials during operations. Describe in detail materials, methods and equipment to be used for each phase of work.
D. If alternative methods and materials to those indicated are proposed for any phase of work, provide written description to FPO, including evidence of successful use on other, comparable projects, and program of testing to demonstrate effectiveness for use on this project.
E. Safety Data Sheets are required for all chemicals and cleaning products planned to be delivered and used on USPS premises. The MSDS must be submitted and must be approved by the FPO prior to being delivered and used on USPS premises.

1.5 QUALITY ASSURANCE

A. Qualifications:

1. Restoration Specialist: Work must be performed by a firm having not less than five years successful experience in comparable projects and employing personnel skilled in the processes and operations indicated. Project supervisor must have five years'

experience in work similar to this procedure. Additional personnel must also have experience.

B. Regulatory Requirements:

1. Engage an approved independent testing laboratory to examine materials prior to use and continuously inspect the work for compliance with this procedure and any related documents.
2. The required research report and manufacturer's data shall be at the site and used for reference.

C. Mock-ups: After acceptance of the list of materials and proposed method of cleaning, repair or refinishing, a representative sample area shall be cleaned, repaired or refinished as specified.

1. Employ the method proposed and accepted for use. Obtain acceptance of the sample area from the FPO or designated representative before proceeding with remainder of the procedure.
2. Maintain the sample area in its accepted condition until final acceptance of the completed work. Manufacturer's Representative should be present during mock-up and its inspection for approval. Sample work should be performed in an area approved by the FPO or designated representative.
3. A SMALLER TEST FOR EACH PRODUCT SHOULD BE DONE ON EACH MATERIAL IN AN INCONSPICUOUS AREA TO CHECK FOR ADVERSE EFFECTS AND DAMAGE TO THE MATERIAL.

1.6 PROJECT/SITE CONDITIONS

A. Environmental Requirements:

1. Proceed with the work only when forecasted weather conditions are favorable.

B. Check manufacturer's literature for precautions and effects of products and procedures on adjacent building materials, components, and especially vegetation.

1.7 PROTECTION

A. Do not change sources or brands of materials during the course of the work.
B. All necessary precautions shall be taken to protect all parts of the building not being cleaned or repaired from effects of the work, including excessive amounts of water that should not be allowed to pond in any area. Also provide protection as required to prevent damage to adjacent property.
C. Provide protection against the spread of dust, debris and water at or beyond the work area by suitable enclosures of sheeting and tarpaulins.
D. Provide masking or covering on adjacent surfaces and permanent equipment. Secure coverings without the use of adhesive type tape or nails. Impervious sheeting which produces condensation should not be used.
E. Prevent the entry of dust, debris and water into the building by sealing all openings.
F. Provide protection from water damage to building, structure, or building contents as required.
G. Protect all landscape work adjacent to or within maintenance work areas:

1. Provide plank barriers to protect tree trunks. Bind spreading shrubs.
2. Covering should allow plants to breathe and should be removed at the end of each work day. Do not cover plant material with a waterproof membrane for more than 8 hours at one time.
3. Set scaffolding and ladder legs away from plants. Pruning requests should be directed to the COR.

H. Test all drains and other water removal systems to assure that drains and systems are functioning properly prior to performing any cleaning operations. Notify FPO immediately of any and all drains or systems that are found to be stopped or blocked. Contractor shall repair drains if so directed by the COR. Do not begin work of this Section until the drains are in working order.

I. Provide a method to prevent solids such as stone or mortar residue from entering the drains or drain lines. Contractor shall be responsible for cleaning out drains and drain lines that become blocked or filled by sand or any other solids because of work performed under this Contract.

J. Scaffolding, ladders and working platforms, required for the execution of this work should be provided. These items should not be attached to the building.

END OF SECTION

USPS Master Specifications, issued: 10/1/2021
Last revised: 10/1/2017

SECTION 013300

SUBMITTAL PROCEDURES

PART 1 – GENERAL

1.1 SCHEDULE OF SUBMITTALS

A. In accordance with the terms and conditions of the contract provisions and clauses, including those concerning Shop Drawings, Coordination Drawings, *Record "As Built" Drawings, and Schedules;* within 30 days after receiving a Notice to Proceed, the Contractor must complete the Schedule of Submittals, in the format indicated below, in duplicate, listing all items that must be furnished for review and approval by the Postal Service. The schedule must indicate the type of items (such as sample, shop drawings, catalog cut, and so forth) and include the scheduled dates of submittal. In preparing the schedule, adequate time (10 business days or more, exclusive of time in the mails) must be allowed for review and approval and possible resubmittal. Also, the schedule must be coordinated with the approved construction progress chart. The Contractor must revise and/or update the schedule as directed. Such revised schedules must be made available to the COR for monitoring.

B. Within 30 days after receiving a Notice to Proceed, the Contractor must complete and submit to the COR a listing of all subcontractors, including subcontractor name, address, telephone number, fax number and email address. Include an updated list with each progress payment request.

C. Schedule of Submittals Format

Project _____

Contract No. _____

Project Description _____

Spec. Section	Spec. Description	Paragraph Number	*Submittal Type	Date		Action Taken	Assigned Number
				Submittal	Returned		

*Submittal Type:

C – Certificate
S – Sample
SD – Shop Drawing
CD – Catalog Data
PL – Spare Parts List
MM – Maintenance Manual

1.2 SHOP DRAWINGS AND RELATED DATA

A. Submittal of shop drawings, samples and related data must conform to the requirements of the terms and conditions of the contract provisions and clauses, including those concerning, *Record "As Build" Drawings*, and *Samples*. Prior to submittal, the Contractor must stamp the submittal to indicate that it has been reviewed and approved. The Contractor must make any corrections required by the COR. If the Contractor considers any correction indicated on the drawings to constitute a change to the contract drawings or specifications, notice, as required under the terms and conditions of the contract provisions and clauses, including those concerning Changes must be given to the COR. [Four] [ ] prints of all approved shop drawings must be given to the COR. The approval of the drawings by the COR must not

be construed as a complete check but indicates only that the general method of construction and detailing is satisfactory. Approval of the shop drawings does not relieve the Contractor of responsibility for any error that may exist because the Contractor is responsible for the dimensions and design of adequate connections and details and for satisfactory construction of all work. The submission by the Contractor must be accompanied by a transmittal letter of a type approved by the COR.

1. Each shop drawing must have a blank area of 5 by 5 inches, located adjacent to the title block. The title block must display:
   a. Number and title of drawing;
   b. Date of drawing or revision;
   c. Name of project building or facility;
   d. Name of Contractor and (if appropriate) of subcontractor submitting drawing;
   e. Clear identity of contents and location on the work; and
   f. Project title and contract number.
2. All drawings to be provided shall be clear and fully representative of the facility and fixed mechanization work.
3. Drawing files to be in .dwg and .pdf formats. .dwg files to be generated from Autocad revision 12 or other revision level concurred by USPS.
4. Documents other than drawings shall be provided in MicroSoft Word format.
5. Interim project documentation may be provide to USPS electronically
6. All final project documentation shall be provided to the USPS on a single CD or DVD media

1.3 EQUIPMENT ROOM LAYOUT DRAWINGS

A. The Contractor must prepare and submit equipment room layout drawings as required by the technical provisions as well as for areas where equipment proposed for use could present interface or space difficulties. Room layout drawings must be submitted within 40 days after receiving a Notice to Proceed and must conform to the specified requirements for shop drawings. Submittals describing the various mechanical and electrical equipment items that are to be installed in the areas represented by the layout drawings must be assembled and submitted concurrently and must be accompanied by the room layout drawings. Room layout drawings must be consolidated for all trades, to scale, and must show all pertinent structural and fenestration features and other items, such as cabinets, that are required for installation and that affect the available space. All mechanical and electrical equipment and accessories must be shown to scale in the plan and also in elevation or section in their installation positions. Ductwork and piping must be shown.

1.4 MATERIAL, EQUIPMENT, AND FIXTURE LISTS

A. When required by the technical provisions, lists of materials, equipment, and fixtures must be submitted by the Contractor in accordance with the requirements specified for shop drawings. The lists must be supported by sufficient descriptive material, such as catalogs, cuts, diagrams, and other data published by the manufacturer, as well as by evidence of compliance with safety and performance standards, to demonstrate conformance to the specification requirements. Catalog numbers alone are not acceptable. The data must include the name and address of the nearest service and maintenance organization that regularly stocks repair parts. No consideration will be given to partial lists submitted from time to time. Approval of materials and equipment is tentative, subject to submission of complete shop drawings indicating compliance with the contract documents.

1.5 CERTIFICATES OF COMPLIANCE

A. Any certificates required for demonstrating proof of compliance of materials with specification requirements, including mail certificates, statements of application, and extended guarantees, must be signed and submitted 4 copies to the COR at least 10 days before delivery. The Contractor must review all certificates before submissions are made to the COR, to ensure compliance with the contract specification requirements and to ensure that the affidavit is properly signed. Each certificate must be

signed by an official authorized to certify on behalf of the manufacturing company and must contain the name and address of the Contractor, the project name and location, and the quantity and date or dates of shipment or delivery to which the certificates apply. Copies of laboratory test reports submitted with certificates must contain the name and address of the testing laboratory and the dates of tests to which the report applies. Certification must not be construed as relieving the Contractor from furnishing satisfactory material if, after tests are performed on selected samples, the material is found not to meet the specific requirements.

1.6 A-E'S REVIEW OF SUBMITTALS

A. When submittals are reviewed by the A-E on behalf of the COR, each submittal must be returned to the Contractor stamped or marked by the A-E in one of the following ways:
   1. A Action: The Contractor is advised that "A Action" means that fabrication, manufacture, or construction may proceed, provided the work complies with the contract documents.
   2. B Action: The Contractor is advised that "B Action" means that fabrication, manufacture, or construction may proceed, provided the work complies with the A-E's notations and the contract documents.
   3. C Action: The Contractor is advised that "C Action" means that no work may be fabricated, manufactured, or constructed and that the Contractor must make a new submittal to the A-E. Any submission marked "C Action" is not permitted on the site.

B. The A-E must return reproducibles stamped "A Action" or "B Action" to the Contractor, who is responsible for obtaining prints of them and for distributing them to the field and to subcontractors.

C. In the case of shop drawings in the form of manufacturers' descriptive literature, catalog cuts, and brochures stamped "A Action" or "B Action," the A-E must return the stamped copies to the Contractor, who is responsible for distributing them to the field and to the subcontractors. If the shop drawings are stamped "C Action," the A-E will return stamped copies to the Contractor, who must submit new shop drawings to the A-E.

D. In the case of samples stamped "A Action" or "B Action," the A-E must return one of the samples to the Contractor. In the case of samples stamped "C Action," the A-E must return all of the submitted samples.

1.7 SPARE PARTS DATA

A. Spare parts data must be submitted in quadruplicate in accordance with the terms and conditions of the contract provisions and clauses, including those concerning *Spare Parts Data*.

1.8 SCHEDULE OF VALUES

A. In accordance with the terms and conditions of the contract provisions and clauses concerning, *Construction Cost Breakdown*, the Contractor must submit a construction cost breakdown using the attached Schedule of Values. When applicable, a separate cost breakdown form must be submitted for each separate building. However, the total cost of site work for the facility must be included in the cost estimate breakdown for the main postal building. The number of items provided on the Systems Construction Cost Estimate Breakdown form are the minimum required. Additional subdivision of these items may be used by the Contractor.

B. Submit the construction cost breakdown after contract award to the COR. A Sample Schedule of Values and Definitions is attached to this Section, as Attachment A.

C. Do not delete items from the Schedule of Values form. However, expand the schedule “Description of Work” as necessary to allow evaluation of work or to make partial payments.

D. If the contract price changes, the Schedule of Values must be revised to reflect the change(s) and forwarded to the COR.

E. A current Schedule of Values must accompany all Contractor Requests for Payment.

PART 2 – PRODUCTS

NOT USED

PART 3 – EXECUTION

NOT USED

END OF SECTION

USPS Specification issued: 10/1/2018
Last revised: 10/1/2015

UNITED STATES POSTAL SERVICE

Schedule of Values

Facility: Port Townsend, WA MPO
Contractor:
Date:

Item	Description of Work		Scheduled Value	Work Completed					Work Remaining	
				Previous Application	This Application		Total Completed and Stored	%	Balance to Finish	Retainage
					Work In Place	Stored Materials				
Division 01	**General Conditions**	%								
1.0	Overhead									
1.1	Profit									
1.2	Bonds & Insurance									
1.3	Bldg. Permits									
1.4	O.& M. manuals									
1.5	Training									
1.6	Subtotal, % only		-	-	-	-	-	-	-	-
Division 02	**Existing Conditions**									
2.0	Demolition									
Division 03	**Concrete**									
3.0	Site Concrete									
3.1	Building Concrete									
Division 04	**Masonry**									
4.0	Masonry									
4.1	Quoin Repair									
4.2	Sill & Headstone Repair									
4.3	Entablature Review and Repair									
4.4	Cornice Repair									
4.5	Inspect & Repoint Mortar									
4.6	Sound & Repair Rusticated Sandstone									
Division 05										
5.0	Structural Steel									
5.1	Steel Joists									
5.2	Steel Deck									
5.3	Metal Studs									
5.4	Handrails & Railings									
5.5	Flag Pole									
Division 06	**Wood, Plastics and Composites**									
6.0	Rough Carpentry									
6.1	Finish Carpentry									
6.2	Interior Casing / Trim Repair									
6.3	Interior Plaster Repair									
Division 07	**Thermal & Moisture Protection**									
7.0	Roofing System									
7.1	Wall Insulation & V.B.									
7.2	Water Repellant & Anti - Graffiti Sealer									
Division 08	**Openings**									
8.0	Doors & Frames									
8.1	Specialty & Grilles									
8.2	Impact Traffic Doors									
8.3	Storefronts									
8.4	Hardware									
8.5	Other Glazing									
8.6	Sectional Knockout Doors									
Division 09	**Finishes**									
9.0	Gypsum Board									
9.1	Tile									
9.2	Acoustical Ceiling									
9.3	Resilient & Carpet									
9.4	Painting									
Division 10	**Specialties**									
10.0	Toilet Accessories									
10.1	Flagpoles									
10.2	Exterior Signage									
10.3	Interior Signage									
10.4	Wall and Door Protection									
10.5	Toilet Compartment									
Division 11	**Equipment**									
11.0	Dock Equipment									

Item	Description of Work		Scheduled Value	Work Completed					Work Remaining	
				Previous Application	This Application		Total Completed and Stored	%	Balance to Finish	Retainage
					Work In Place	Stored Materials				
Division 12	**Furnishings**									
12.0	Casework									
Division 13	**Special Construction**									
13.0	Metal Building Systems									
13.2	Vaults									
Division 14	**Conveying Equipment**									
Division 21	**Fire Suppression**									
21.0	Fire Sprinkler System									
Division 22	**Plumbing**									
22.0	Plumbing									
Division 23	**Heating Ventilating and Air Conditioning**									
23.0	Duct Cleaning									
23.1	Air Handling Units									
23.2	Heating & Ventilation Units									
23.3	HVAC Pumps									
23.4	VAV Terminal Units									
23.5	Rooftop Units									
23.6	VRV Systems									
23.7	Unit Heaters									
23.8	Chillers									
23.9	Cooling Towers									
23.10	Water Treatment									
23.11	Controls Systems									
23.12	Ductwork and Duct Insulation									
23.13	HVAC Piping & Insulation									
23.14	Testing & Balancing, & Commissioning Assistance									
Division 25	**Integrated Automation**									
25.0	Building Automation System									
25.1	EEMS Integration									
Division 26	**Electrical**									
26.0	Electrical Power									
26.1	Electrical Lighting									
Division 27	**Communications**									
27.0	Communications Systems									
Division 28	**Electronic Safety and Security**									
28.0	IDS System									
28.1	Robbery Countermeasure CCTV									
28.2	Investigative CCTV									
28.3	Physical Access Control System (PACS)									
28.4	Fire Alarm System									
28.5	Security CCTV									
Division 31	**Earthwork**									
31.0	Site Clearing									
31.1	Earthwork (develop.)									
31.2	Earthwork (finish)									
Division 32	**Exterior Improvements**									
32.0	Paving (off-site)									
32.1	Paving									
32.2	Chain Link Fence & Gates									
32.3	Landscaping									
Division 33	**Utilities**									
33.0	Utilities & Fees (off-site)									
33.1	Utilities (on-site)									
33.2	Electrical (site)									
	Subtotal			(without General Conditions)						
Subtotal	**Site Development**			(#2.0, #31.0, #31.1, #32.0 and #33.0) x (100% + #1.7 percentage)						
	Site Improvement			(#3.0, #10.2, #31.2, #32.1, #32.2, #32.3, #33.1 and #33.2) x (100% + #1.7 percentage)						
	Building			(Construction costs not including Sitework cost) x (100% + #1.6 percentage)						
	Total		$ -	$ -	$ -	$ -	$ -		$ -	$ -

SECTION 013543

ENVIRONMENTAL PROCEDURES

PART 1 – GENERAL

1.1 SCOPE

A. This section is required in accordance with the terms and conditions of the contract provisions and clauses, including those concerning Safety & Health Standards, Accident Prevention, Protection of the Environment, Existing Vegetation, Structures, Utilities and Improvements, and Handling Asbestos and other Hazardous Materials. The work covered by this section consists of furnishing all labor, material, and equipment and performing all work required for compliance with environmental regulations and preventing pollution during, and as a result of, construction operations under this contract, in addition to those measures set forth in other technical provisions of these specifications.

B. The Contractor and subcontractors must comply with all applicable federal, state and local laws and regulations related to the environment, health and safety.

1.2 NOTIFICATION

A. The Contractor must, after receiving a notice of noncompliance with the foregoing provisions, immediately take corrective action. The notice, when delivered to its Contractor or its authorized representative at the site of the work, is deemed sufficient for this purpose. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost because of any such stop orders may be made the subject of a claim for extension of time or for excess costs or damages by the Contractor unless it is subsequently determined that the Contractor was in compliance and the Contractor demonstrates that it is otherwise entitled to an extension of time, excess costs or damages, under the applicable terms and conditions of the contract provisions and clauses.

1.3 ENVIRONMENTAL REGULATORY COMPLIANCE

A. Within 30 days after receiving the notice to proceed or not less than 15 days prior to commencing on-site work, the Contractor must submit any environmental documents that are required by federal, state or local environmental regulations. Plans must be approved by the COR prior to commencing on-site work and must describe and include, but is not limited to, the following

1. Erosion Control and Stormwater Management Plan that describes erosion control methods, surface drainage, storm water permitting requirements, and if applicable, protection of site wetlands and/or compliance with wetland permits. This must ensure any federal, state or local permitting requirements for site preparation, erosion control or surface drainage are met.
2. Landscape Management and Protection Plan that ensures any site-specific beneficial landscaping requirements are met. The plan shall describe the prevention and restoration of landscape damage, temporary roads and embankments, and post construction cleanup as prescribed in the terms and conditions of the contract provisions and clauses, including those concerning *Protection of the Environment, Existing Vegetation, Structures, Utilities and Improvements*.
3. Waste Minimization and Management Plan must describe how natural resources potentially impacted by construction will be protected or managed; construction wastes will be stored and disposed of or recycled; and pollutants associated with building materials will be controlled. The waste minimization and management section of the plan

must also list materials and construction debris to be recycled, and address the disposal of solid and hazardous wastes and materials, including asbestos and lead-based paint. It must also include tables applicable to the reclamation of chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) in accordance with 1.4 (B) below.

1.4 ENVIRONMENTAL SITE CONTROLS

A. Location of Hazardous Materials: The location of the Contractor's temporary storage of any hazardous materials and/or wastes must be appropriately marked and included in the health and Safety Plan (see Section 1.5 below).

B. Refrigerant Recovery, Recycling, and Disposal: Any work involving the replacement or repair of equipment containing refrigerant shall meet the following requirements:
   1. Recover and recycle or dispose of refrigerant from equipment according to 40 CFR 82 and local regulations.
   2. The work shall be completed by a certified refrigerant recovery technician, per 40 CFR 82 and local regulations.
   3. Provide a statement signed by the certified refrigerant recovery technician that the work was completed per 40 CFR 82 and local regulations. Include the name and address of technician and date refrigerant was recovered.

C. Post-construction Cleanup or Obliteration: The Contractor must remove and properly dispose of all signs of temporary construction facilities such as haul roads, work area, structures, foundations of temporary structures, excess or waste materials, or any other vestiges of construction as directed by the COR. No separate or direct payment may be made for post-construction cleanup and all associated costs must be considered included in the contract price.

D. Historical and Archeological: Monuments, markers, and works of art must be protected. Items discovered that have potential historical or archeological interest must be preserved. The Contractor must leave the archeological find undisturbed and must immediately report the find to the COR so that the proper authority may be notified.

E. Dust Control: The Contractor must keep the site free from dust in accordance with applicable federal, state and/or local regulations.

F. Noise Minimization: The Contractor must perform demolition and construction operations to minimize noise including conducting work during less sensitive hours of the day in accordance with applicable noise control regulations.

1.5 HEALTH AND SAFETY

A. Prior to commencing on-site work, the Contractor must submit an Occupational Safety and Health Administration (OSHA) Emergency Action Plan (EAP) to the Contracting Officer to demonstrate compliance by the Contractor and subcontractors with applicable OSHA regulations. If the Contractor is not required by OSHA to develop a written EAP, i.e. if 10 or fewer are employed for the construction project or any other specific regulations identified by OSHA, then the Contractor shall submit to the Contracting Officer a signed letter stating the Contractor shall meet OSHA's EAP requirements in a verbal communication to all employees.

B. The Postal Service has provided a *Safety and Health Guide for Contractors*, as Attachment A to this section. Prior to commencing on-site work, Contractor must read the *Safety and Health Guide for Contractors* and must sign the attached Certificate of Understanding acknowledging and accepting the requirements stated therein.

C. Prior to commencing on-site work, the Contractor must submit a project-specific Project Safety Plan to the Contracting Officer. The plan must include, but is not limited to, hazard communication, labeling, emergency response and preparedness and training.

D. Copies of Material Safety Data Sheets (MSDSs) for any hazardous material(s), as defined by OSHA's Hazard Communications Standard, must be included whenever such materials arrive on-site. MSDSs must be kept together and maintained centrally on-site through to project completion. Provide a copy of each MSDS in the Operating and Maintenance Manual. The use of asbestos containing materials, in excess of one percent as defined by US Environmental Protection Agency regulations, is prohibited in the construction of this project. Provide an executed copy of the "Certificate of Asbestos and Lead-Based Paint (New Work)" in the Operating and Maintenance Manual and include a copy with the final payment request.

E. The use of lead-based paint is prohibited in the construction of this project.

F. The use of lead-containing solder for plumbing and plumbing fixtures is prohibited in the construction of this project.

G. In accordance with the terms and conditions of the contract provisions and clauses, including those concerning *Asbestos Free and Lead-Based Paint Free Certification*, the Contractor must sign and submit to the Contracting Officer the attached "Certification of Asbestos and Lead-Based Paint" for this project. The signed certificate is required to be included in the final payment request.

H. Do not use any of the USPS targeted chemicals (see regulated and prohibited materials identified under Safety and Health and related environmental requirements).

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION

USPS Specification issued: 10/1/2018
Last revised: 9/17/2015

Safety and Health Guide for Contractors

Certificate of Understanding

This *Safety and Health Guide for Contractors* was developed by the Postal Service to provide guidance for contractors hired to perform repair, alteration, renovation, demolition, equipment installation, and other work requiring access to postal-owned or -leased property.

Distribution

A copy of this Certificate of Understanding should be signed by the Contractor's representative at the post award orientation conference or before the commencement of work. A copy of this guide should be readily accessible where the work is being performed. The contracting officer's representative (COR) should thoroughly brief the Contractor's representative on the Contract Safety and Health Requirements contained herein.

Contractor's Verification Statement

As a representative of _____ (Contractor's name), I have received the *Safety and Health Guide for Contractors* prepared by the Postal Service. As the Contractor's representative, I understand and accept the requirements contained herein, and I have reviewed each of the required sections of the guide with the COR and/or the designated Postal Service representative. I agree to review the contents of this guide with all subcontractors hired to perform work on postal property.

Contractor's Representative

Printed Name: _____ Contact Number: _____

Signature: _____ Date: _____

Designated Postal Service Representative

Printed Name: _____ Contact Number: _____

Signature: _____ Date: _____

Safety Representative (If Required by COR)

Printed Name: _____ Contact Number: _____

Signature: _____ Date: _____

Postal Service CO, COR, or Project Manager

Printed Name: _____ Contact Number: _____

Signature: _____ Date: _____

Maintain a copy of this signed form in the Postal Service and Contractor's project files.

Safety and Health and Related Environmental Requirements

The Contractor is required to meet all applicable OSHA, federal, state, and local safety, health, and related environmental requirements in addition to the US Postal Service requirement listed in this table.	
Issue	**Postal Requirements**
Asbestos	*Review of Facility Asbestos Survey:* Before any building maintenance, equipment installation, renovation, alteration, demolition, or other project begins, determine whether ACBM will be disturbed. Proper Work Practices: If ACBM is present, follow proper control procedures and work practices. *Consultation With Facility Asbestos Coordinator:* Consult with the facility manager or his or her designee before the start of any work likely to disturb ACBM. Disturbance means activities that crumble or pulverize ACBM or presumed asbestos-containing material (PACM) or generate visible debris. Operations may include drilling, abrading, cutting a hole, pulling cable, and crawling through tunnels or attics and spaces above the ceiling where asbestos is actively disturbed or asbestos-containing debris is actively disturbed. *Asbestos Work Authorization:* You must have an approved Form 8210, *Work Authorization - Asbestos,* before work begins within any building containing asbestos.
Barricades, Barriers, and Warnings	Your barricades must meet the OSHA requirements. In addition, you assume control of your work area during your activities unless otherwise specified in writing by the contracting officer (CO) or contracting officer's representative (COR).
Confined Spaces	Confined space work must meet the OSHA requirements. You must have a comprehensive confined space program that includes a written program, employee training, entry and testing equipment, and rescue capabilities. If you require access to confined space requiring a permit, then the trained, designated Postal Service representative must review and approve the project and permit. Entry into other confined spaces must be in accordance with OSHA regulations.
Electrical Work	Lock or rope off work areas involving exposed energized equipment or have an attendant present to prevent accidental contact by unqualified people. Refer to the Barricade section of this guideline for additional information.
Elevated Work and Fall Protection	Follow strictly the applicable OSHA fall protection requirements.
Excavation	All excavations 4 feet or more in depth must be properly shored or sloped and meet all OSHA requirements. Before any digging or drilling commences, inform the Postal Service COR and call Dig Safe or its local equivalent to determine whether any underground utilities are located in the work area. Submit documentation that these notifications have been performed. You must not begin digging or drilling until you have verified that underground utilities have been identified and are properly marked so that work may be accomplished in a safe manner.
Fire Protection	Do not block, remove, or otherwise prevent Postal Service fire extinguishers from being immediately accessible and usable. If a system must be impaired by a scheduled shutdown, notify the appropriate Postal Service representative and do not proceed without Postal Service authorization.
Hazard Communication	Inform the Postal Service before any chemicals are used. Before materials are brought on site, provide material safety data sheets (MSDSs) and an inventory of materials. For projects that are anticipated to use substantial quantities of hazardous materials, you may be required to provide a routing, storage, and waste disposal plan. Upon request, the Postal Service will make available to you MSDSs for hazardous materials the Postal Service uses in the Contractor work area.
Hazardous Materials	Follow all OSHA requirements regarding hazardous materials. Hazardous materials include, but are not limited to, flammable and combustible liquids, gasoline, diesel fuel, motor oil, lubricating oil, hydraulic oil, corrosive cleaners, and battery acid. Provide secondary containment for all containers of liquids that are over 5 gallons in capacity. Immediately report all hazardous material releases ("spills"), regardless of how small or where they occur, to the designated Postal Service representative. Releases include solids, liquids, and gases.
Hot Work	Do not begin any hot work until a Postal Service qualified person has completed and signed a Postal Service Hot Work Permit. The permit will be valid for only a single work shift. You must display the permit at the work site. You are prohibited from performing hot work (a) when the Postal Service has not authorized it, (b) in locations in which fire protection systems have been impaired, (c) in the presence of explosive or flammable atmospheres, or (d) in locations were large quantities of flammable

	and combustible materials are unprotected.
Powered Industrial Trucks	Powered industrial trucks and other mobile equipment must follow all traffic rules of the postal facility. The maximum speed limit for in-plant powered vehicles is 5 miles per hour. Many work areas have posted speed limits that you must strictly follow. Perform refueling only in authorized locations following safe procedures. As a general rule, the Postal Service does not allow gas- or diesel-powered industrial equipment inside postal facilities. Coordinate exceptions to the rule through the servicing safety office.
Ladders	Strictly follow all OSHA requirements regarding ladders. Barricade the ladder use area to prevent contact with mobile equipment and employees.
Lead-Based Paint	*Review of Facility Lead Survey:* Before any construction, alterations, and/or repair activities begin, determine whether LBP will be disturbed. If the painted surface has not been tested, you must have it tested before beginning any activities that could potentially disturb LBP. *Proper Work Practices:* If LBP is present, follow proper control procedures and work practices. *Consultation With Facility Manager:* Consult with the facility manager or his or her designee before the start of any work likely to disturb LBP. Examples of activities that may affect LBP include paint removal by scraping, sanding, power tools, or heat guns; alterations that include removing drywall, structural steel, or other building materials coated with LBP; welding, cutting, or other hot work on coated metal surfaces; abrasive blasting of mail boxes and other equipment; and moving or cleaning of abrasive blasting enclosures.
Lockout/Tagout	Provide a copy of your lockout/tagout procedures, which must meet or exceed the OSHA Lockout/Tagout standard. You will be given access to and must review the Postal Service lockout/tagout program. If you encounter a Postal Service lockout/tagout device that prevents the continuation of work, do not make any attempts to remove, tamper with, or bypass the devices. Contact a Postal Service Maintenance official and make arrangements to have the lockout device removed in accordance with Postal Service lockout removal policies.
Machinery and Equipment	Postal facilities use state-of-the-art mail handling machinery, some of which may operate automatically. Hazards may include, but are not limited to, moving parts and power transmission apparatus, pinch points, electrical contact, and hot surfaces. Do not use machine surfaces as work platforms. Contact the designated Postal Service representative concerning facility machinery.
Personal Protective Equipment	Before beginning work, evaluate the work area for hazards, determine whether contract employees will be required to use personal protective equipment (PPE) to protect themselves from these hazards, and document the hazard assessment. Wear the PPE required by the postal facility in which you are working, regardless of your perception of hazard potential.
Regulated And Prohibited Materials	*Pesticides.* The Postal Service has restricted the use of pesticides. Obtain prior approval of the district environmental compliance coordinator for special cases that may require the use of pesticide treatments. *Chemical Prohibition.* Adhere to the Postal Service Hazard Communication Program and chemical prohibition policies. Do not use on postal property any of the chemicals prohibited by EPA unless a Postal Service person authorizes its use (each of these chemicals must be authorized separately). The USPS Office of Sustainability can supply the list. *Asbestos-Free Products.* Install no asbestos-containing products or materials in postal facilities. *Lead.* Apply no lead-based paint in postal facilities.
Scaffolding	Follow strictly the applicable OSHA scaffolding requirements. Provide adequate barrier protection around the scaffolding to prevent hazards to postal workers.
Walking and Working Surfaces	If the project requires temporary modifications to the means of egress, inform the designated Postal Service representative before performing such actions, provide appropriate alternative means of egress, and communicated these to all employees.

Emergency Procedures

Preparations for Emergency	Be prepared for emergency situations. Ensure that emergency telephone numbers are site specific, readily available, easily read, and communicated to all employees. Train and authorize employees to implement emergency procedures.
Medical Emergencies	Have procedures and medical supplies to provide emergency medical services for your own personnel. Determine how to contact emergency medical services before work begins, and have on-site capabilities to contact such services immediately.
Fires	See Fire Protection above. In the event of a fire, you must: - Immediately remove personnel from the area or building following Postal Service evacuation procedures. - Immediately contact the nearest postal employee and inform him or her of the fire. You may also activate an emergency alarm in the area. If no postal employees are on-site, immediately contact the local fire department. Personnel trained in the use and limitations of fire extinguishers may attempt to extinguish the fire if it is safe to do so.
Chemical Releases	See Hazardous Materials above. If the event of a hazardous material release, you must: - Immediately remove personnel from the area or building following Postal Service evacuation procedures. - Immediately contact the designated Postal Service representative and inform him or her of the release. You may also activate an emergency alarm in the area. If no postal employees are on-site, immediately contact the local fire department. Contractor personnel should not respond to the release unless specifically trained and protected to perform hazardous material response.
Power Outages	In the event of a power outage, you must: - Immediately stop work and assemble for a head count and possible facility egress. - Inform all contract employees that equipment may automatically restart when power resumes. - Immediately contact the designated Postal Service representative and inform him or her of the status of contract work and personnel head count. Relay at this time all hazards created due to the power outage. When power resumes evaluate the status of operations that were being performed relative to hazard potential. For example, the interruption of ventilation in confined spaces may generate atmospheric hazards.
Accident Investigation and Reporting	As soon as is practical after an accident, investigate and document an accident investigation. The documentation must describe the incident and identify the causes and the corrective actions that will prevent future incidents. Report all accidents, whether or not they result in injury. Give the written report to the Postal Service COR within 24 hours of the accident or incident.

Certificate of Asbestos and Lead-Based Paint

(New Work)

To: Contracting Officer, United States Postal Service

Subject: Certification for new construction

Postal facility name: _____

Postal facility address: _____

Certification for new construction:
This Contractor/Owner hereby certifies that no asbestos-containing material in excess of 1 percent as defined by applicable US Environmental Protection Agency regulations, and no lead-based paint has been furnished or installed at the referenced project.

Contractor/Owner name: _____

Signature: _____

Address: _____

_____

Telephone: _____ Date executed: _____

The penalty for making a false statement is prescribed by 18 USC 1001.

SECTION 014000

QUALITY REQUIREMENTS

PART 1 – GENERAL

1.1 CONTRACTOR QUALITY CONTROL

A. Contractor Quality Control: The Contractor is responsible for the overall quality of all its own work and the work performed by their subcontractors working under this contract. The quality of any part of the work installed must not be less than that required by the technical divisions of this specification. If the COR determines that the quality of work does not conform to the applicable specifications and drawings, the Contractor will be advised in writing of the areas of nonconformance, and within 7 days the Contractor must correct the deficiencies and advise the COR in writing of the corrective action taken.

B. Noncompliance with Quality Control Requirements: Failure of the Contractor to comply with the above requirements may be cause for termination for default as defined in the terms and conditions of the contract provisions and clauses, including those concerning, *Termination for Convenience or Default*, of the general contract clauses.

1.2 SUBMITTALS

A. Prior to the start of on-site work, the Contractor must submit to the Contracting Officer a Contractor Quality Control Plan that includes the following information:
   1. Quality Control Organization: In chart form, showing relationship of Quality Control organization to other elements of Contractor's organization.
   2. Names and qualifications of personnel in Quality Control organization, including Contractor Quality Control Representative, inspectors, Independent Testing and Inspection Laboratory, and Independent HVAC Test and Balance Agency.
   3. Procedures for reviewing coordination drawings, shop drawings, certificates, certifications, or other submittals.
   4. Testing and inspection schedule, keyed to Construction Schedule, indicating tests and inspections to be performed, names of persons responsible for inspection and testing for each segment of work including preparatory, initial, and follow-up.
   5. Proposed forms to be used including Contractor's Daily Report, Contractor Test and Inspection Report and Non-Compliance Check-Off List.

B. INDEPENDENT TESTING AND INSPECTION LABORATORY: Submit the following.
   1. Name.
   2. Address.
   3. Telephone number.
   4. Names of full time registered engineer.
   5. Responsible officer.
   6. Copy of report of laboratory facilities inspection made by Materials Reference Laboratory of National Bureau of Standards during most recent inspection, with memorandum of remedies of any deficiencies reported by inspection.

1.3 QUALITY CONTROL PROCEDURES

A. Monitor quality control over Contractor staff, subcontractors, suppliers, manufacturers, products, services, site conditions, and workmanship.

B. Comply fully with manufacturer's published instructions, including each step in sequence of installation.

C. Should manufacturer's published instructions conflict with Contract Documents, request clarification from COR before proceeding.

D. Comply with specified standards as a minimum quality for work, except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

E. Perform work by persons who are thoroughly qualified and trained in their respective trade, to produce workmanship of specified quality.

F. Perform tests required by governing authorities having jurisdiction and utilities having jurisdiction.

1.4 TESTING AND INSPECTION LABORATORY SERVICES

A. Selection and Payment:
   1. The Contractor shall pay for services of an Independent Testing and Inspection Laboratory to perform specified testing and inspection.
   2. Employment of Independent Testing and Inspection Laboratory in no way relieves Contractor of obligation to perform work in accordance with requirements of Contract Documents.

B. Quality Assurance:
   1. Comply with requirements of all applicable ASTM standards.
   2. Laboratory: Authorized to operate in State in which Project is located.
   3. Laboratory Staff: Maintain a full time registered engineer on staff to review services.
   4. Testing Equipment: Calibrated at reasonable intervals with devices of and accuracy traceable to either National Bureau of Standards or accepted values of natural physical constraints.

C. Laboratory Responsibilities. Contractor shall ensure the Laboratory has the following responsibilities and limits on authority:
   1. Test samples of mixes submitted by Contractor.
   2. Provide qualified personnel at Project site. Cooperate with COR and Contractor in performance of services.
   3. Perform specified sampling, testing, and inspection of Products in accordance with specified standards.
   4. Determine compliance of materials and mixes with requirements of Contract Documents.
   5. Promptly notify Contractor Quality Control Representative and COR of observed irregularities or non-conformance of work or Products.
   6. Submit one copy of all test results directly to the COR.
   7. Perform additional tests as required by COR.
   8. Attend appropriate preconstruction meetings and progress meetings.

D. Limits on Authority. Contractor shall ensure the Laboratory has the following limits on authority:
   1. Laboratory may not release, revoke, alter, or expand on requirements of Contract Documents.
   2. Laboratory may not approve or accept any portion of work.
   3. Laboratory may not assume any duties of Contractors.
   4. Laboratory has no authority to stop work.

1.5 CONTRACTOR FIELD INSPECTION AND TESTING

A. Contractor: Test and Inspect work provided under this Contract to ensure work is in compliance with Contract requirements. Required tests and inspections are indicated in each individual Specification Section.

B. Preparatory Inspection: Performed prior to beginning work and prior to beginning each segment of work and includes:
   1. Review of Contract requirements.
   2. Review of shop drawings and other submittal data after return and approval.
   3. Examination to assure materials and equipment conform to Contract requirements.
   4. Examination to assure required preliminary or preparatory work is complete.

C. Initial Inspection: Performed when representative portion of each segment of work is completed and includes:
   1. Performance of required tests.
   2. Quality of workmanship.
   3. Review for omissions or dimensional errors.
   4. Examination of products used, connections and supports.
   5. Approval or rejection of inspected segment of work.

D. Follow-Up Inspections: Performed daily, and more frequently as necessary, to assure non-complying work has been corrected.

E. Testing and Inspection: Perform testing and inspection in accordance with requirements in individual Specification Sections.

1.6 CONTRACTOR'S DAILY REPORT

A. In accordance with the terms and conditions of the contract provisions and clauses, including those concerning *Performance and Superintendence of Work by Contractor*, the Contractor shall submit daily report to COR, for days that work was performed. Include the following information:
   1. Date, weather, minimum and maximum temperatures, rainfall, and other pertinent weather occurrences.
   2. Daily workforce of Contractor and subcontractors, by trades.
   3. Description of work started, ongoing work, and work completed by each subcontractor.
   4. Coordination implemented between various trades.
   5. Approval of substrates received from various trades.
   6. Nonconforming and unsatisfactory items to be corrected.
   7. Remarks, to include at a minimum, any potential delays, schedule changes, workplace incidents or other items of note. However, nothing reported herein shall relieve the Contractor of the separate responsibility under other terms and conditions of the Contract provisions and clauses to provide specific notice to the Contracting Officer,

1.7 CONTRACTOR'S TEST AND INSPECTION REPORTS

A. Prepare and submit, to COR, a written report of each test or inspection signed by Contractor Quality Control Representative performing inspection within 2 days following day inspection was made.

B. Include the following on written reports of inspection:
   1. Cover sheet prominently identifying that inspection "CONFORMS" or "DOES NOT CONFORM" to Contract Documents.
   2. Date of inspection and date of report.
   3. Project name, location, solicitation number, and Contractor.
   4. Names and titles of individuals making inspection, if not Contractor's Project Field Superintendent.
   5. Description of Contract requirements for inspection by referencing Specification Section.
   6. Description of inspection made, interpretation of inspection results, and notification of significant conditions at time of inspection.
   7. Requirements for follow-up inspections.

1.8 NON-COMPLIANCE CHECK-OFF LIST

A. Maintain check-off list of work that does not comply with Contract Documents, stating specifically what is non-complying, date faulty work was originally discovered, and date work was corrected. No requirement to report deficiencies corrected same day it was discovered. Submit copy of Non-Compliance Check-Off List of non-complying work items to COR on a weekly basis.

1.9 COMPLETION AND INSPECTION OF WORK

A. Prior to final acceptance by Contracting Officer, submit a certification signed by Contractor to Contracting Officer stating that all work has been inspected and all work, except as specifically noted, is complete and in compliance with Contract Documents.

PART 2 – PRODUCTS

NOT USED

PART 3 – EXECUTION

NOT USED

END OF SECTION

USPS Specification issued: 10/1/2018
Last revised: 9/23/2015

SECTION 015000

TEMPORARY FACILITIES AND CONTROLS

PART 1 – GENERAL

1.1 SUMMARY

A. The Contractor must provide all temporary facilities and services required to complete the work and to comply with OSHA and other applicable regulations.

B. The Contractor must maintain temporary facilities in a proper, safe, operating and sanitary condition for the duration of this Contract. Upon completion of this Contract, all such temporary work and facilities shall be removed in their entirety and the premises will be restored to its prior condition.

1.2 PROJECT SIGN

A. The Contractor must provide and maintain a construction project sign at the location directed by the COR. The sign must conform to the Construction Sign as detailed in the Contract drawings. The information needed to complete the wording on the sign is provided by the COR and will be essentially as shown on the cover of the specification. The sign must be erected within 15 days after receiving a Notice to Proceed. The sign will remain the property of the Contractor and must be removed upon completion of the work and the premises will be restored to its prior condition.

B. Construction Site Sign:
   1. Silk-screened, painted or pressure-sensitive vinyl letters applied to Medium Density Overlay plywood sign.
   2. Red: Match Benjamin Moore OP-67.
   3. Blue: Match PPG 7062 Federal Blue.
   4. White background.

C. The Contractor must construct and erect a minimum of two hard hat signs at locations designated by the COR. The signs must be erected prior to the commencement of on-site work.

1.3 BULLETIN BOARD

A. A bulletin board, not less than 36 inches wide and 30 inches high mounted in, the Contractor's project office. If adjacent to the office, the bulletin board must be securely mounted on not less than two posts. The bulletin board and posts must be painted or have approved factory finish. The bulletin board must be easily accessible at all times and must contain wage rates, equal opportunity notice, and other items required to be posted.

B. The Contractor must maintain the bulletin board in good condition throughout the life of the project. The bulletin board will remain the property of the Contractor and upon completion of the project must be removed from the site and the premises will be restored to its prior condition.

1.4 CONSTRUCTION-USE UTILITIES

A. The Contractor may use existing utilities and make connections required for construction under this project and must pay all costs in connection with them. The Contractor must, at its own expense, make all temporary connections and install distribution lines. All temporary lines must be maintained by the

Contractor in a manner satisfactory to the COR and must be removed by the Contractor in like manner before final acceptance of the construction.

1.5 TEMPORARY ELECTRICITY

A. Service Required: The Contractor must provide temporary electric power throughout the construction period using existing electrical panels.

B. Safety: The Contractor must provide and maintain lights and signs to prevent damage or injury and must illuminate all hazardous areas. Safety lights must be kept burning from dusk to dawn.

C. Use of Permanent System: The Contractor must regulate any part of the permanent electrical system that is used for construction purposes in order to prevent interference with safety and with the orderly progress of the work. The Contractor must leave permanent electrical services in a condition as good as new.

D. Materials: The materials may be new or used but must be adequate in capacity for the purposes intended and must not create unsafe conditions or violate the requirements of applicable codes. At the Contractor's option, patented specialty materials may be used if UL-approved.

E. Conductors: The Contractor must use wire, cable, or busses of appropriate type, sized in accordance with the National Electrical Code for the applied loads. Use only UL-approved wire.

F. Equipment: In compliance with NEMA standards, the Contractor must provide an appropriate enclosure for the environment in which the equipment is used.

G. Installation: The Contractor must provide all required facilities, including transformers, conductors, poles, conduits, raceways, fuses, switches, fixtures, and lamps, located so as to avoid interference with cranes and materials-handling equipment, storage areas, traffic areas, and work under other contracts. The Contractor must install all work to have a neat and orderly appearance and to make it structurally sound throughout. The Contractor must maintain it to give continuous service and to provide safe working conditions. The Contractor must modify the service as required by the progress of the job.

H. Removal: The Contractor must remove all temporary equipment and materials upon completion of construction, repair all damage caused by the installation, and the premises will be restored to its prior condition.

1.6 TEMPORARY HEATING AND VENTILATION

A. The Contractor must provide cold weather protection and temporary heat and fuel as required to carry on the work expeditiously during inclement weather, protect all work and materials against damage from dampness and cold, dry out the building, and provide suitable working conditions for the installation and curing of materials until final acceptance by the Contracting Officer. The Contractor must refer to requirements in detailed specifications for temperatures to be provided and maintained for installation and curing of work under the various trades.

B. The Contractor must provide temporary heat consisting of smokeless heating appliances satisfactory to the COR. The Contractor must furnish and pay for all necessary fuel and attendants in any trade and must maintain temporary heat at temperatures adequate for the intended purpose.

C. When the permanent heating system is operable and the Contractor elects to use it, the Contractor must provide all labor, materials, services, equipment, and attendants necessary to operate the permanent heating system for temporary heat and to maintain a minimum temperature as specified in the terms

and conditions of the contract provisions and clauses, including those concerning *Heat*. If the permanent system is used to provide temporary heating and ventilation, the Contractor must replace all filters and restore the system to a condition satisfactory to the COR.

1.7 TEMPORARY WATER

A. The Contractor must provide and maintain a temporary water supply system for building purposes, extending branches to convenient points and terminating them with a proper stop and hose connection. Before any paving is laid, the temporary supply must be removed and the tap in the main supply properly capped.

1.8 SANITARY PROVISIONS

A. The Contractor must provide and keep in neat and sanitary condition conveniences and accommodations for the use of the construction personnel necessary to comply with the requirements and regulations of the local department of health and of other bodies having jurisdiction.

1.9 APPROACHES AND EXITS

A. The Contractor must provide all necessary approaches and exits required to properly execute the work.

B. In connection with these, the Contractor must provide for temporary drainage to keep the site free from standing water at all times.

1.10 PROJECT PHOTOS - Required on construction contracts that exceed $10,000.00. The number of photographs, and their content, shall be appropriate to the Contract Scope of Work, with their intended purpose being to illustrate, generally, the work in place for which this payment application applies.

PART 2 – PRODUCTS

NOT USED

PART 3 – EXECUTION

NOT USED

END OF SECTION

USPS Specification issued: 10/1/2018
Last revised: 9/23/2015

SECTION 016000

PRODUCT REQUIREMENTS

PART 1 – GENERAL

1.1 PRODUCT OPTIONS AND SUBSTITUTIONS

A. Refer to the terms and conditions of the contract provisions and clauses, including those concerning *Optional Materials or Methods (Construction)*, *Materials and Workmanship*, *Information On "Equal" Products* and *Brand Name or Equal.*

B. Provide Products that comply with Contract Documents, which are undamaged and new at time of installation.

C. Provide Products complete with accessories, trim, finish, safety guards, and other devices and details needed for complete installation and intended use and effect.

D. Substitutions may be considered when the Contractor:

1. Becomes aware of a product or procedure that is more environmentally sensitive or is otherwise advantageous to the Postal Service;
2. Represents that he has personally investigated the proposed substitute product and determined that it is equal or superior in all respects to that specified;
3. Will provide the same guarantee for the substitution that he would for that specified; and
4. Will coordinate the installation of the accepted substitute, making such changes as may be required for the Work to be complete in all respects, at no additional cost to the Postal Service and at no extension of the Contract completion date.

1.2 PRODUCT DELIVERY REQUIREMENTS

A. Transport and handle Products in accordance with manufacturer's instructions, using means and methods that will prevent damage, deterioration and loss, including theft.

B. Schedule Product delivery to minimize long-term storage at Project site and prevent overcrowding of construction spaces.

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

D. Deliver Products to Project site in undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.

E. Promptly inspect shipments to ensure that Products comply with project requirements, quantities are correct, Products are undamaged, and properly protected.

F. Provide equipment and personnel to handle Products by methods to prevent soiling, disfigurement, or damage.

1.3 PRODUCT STORAGE AND HANDLING REQUIREMENTS

A. Store and protect Products in accordance with manufacturers' published instructions, with seals and labels intact and legible.

B. Store Products subject to damage by elements above ground, under cover in weathertight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's published instructions.

C. For exterior storage of fabricated Products, place on sloped supports, above ground.

D. Provide off-site storage and protection when Project site does not permit on-site storage or protection.

E. Cover Products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation or potential degradation of Products.

F. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.

G. Provide equipment and personnel to store Products by methods to prevent soiling, disfigurement, or damage.

H. Arrange storage of Products to permit access for inspection. Periodically inspect to verify Products are undamaged and are maintained in acceptable condition.

PART 2 – PRODUCTS

NOT USED

PART 3 – EXECUTION

NOT USED

END OF SECTION

USPS Specification issued: 10/1/2018
Last revised: 9/23/2015

SECTION 017300

EXECUTION

PART 1 – GENERAL

1.1 LAYOUT OF WORK

A. The Contractor must lay out its work from Postal Service-established base lines and benchmarks indicated on the drawings and is responsible for all measurements based on them. The Contractor must furnish, at its own expense, all stakes, templates, platforms, equipment, tools, materials, and labor as may be required in laying out any part of the work from the base lines and benchmarks established by the Postal Service. The Contractor is responsible for the execution of the work to those lines and grades established or indicated by the COR.

1.2 CONTRACTOR'S TEMPORARY USE OF FACILITIES AND EQUIPMENT

A. No new facilities or equipment intended for the permanent installation, including materials-handling vehicles, may be used for temporary purposes unless specified in the Contract or unless the Contractor has the written permission of the COR.

1.3 CLEANING

A. Refer to the terms and conditions of the contract provisions and clauses, including those clauses *Debris and Clean Up*.

B. Cleaning During Construction:
   1. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
   2. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
   3. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
   4. Collect and remove waste materials, debris, and rubbish from site as specified in the Environmental Compliance and Management Plan as required in Section 013543 - Environmental Procedures.

C. Final Cleaning:
   1. Use cleaning materials and agents recommended by manufacturer or fabricator of surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property, or that might damage finished surfaces.
   2. Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit of Work to condition expected from a commercial building cleaning and maintenance program. Comply with manufacturer's published instructions.
   3. Complete following cleaning operations before requesting COR inspection for Substantial Completion.
      a. Clean Project Site, yard and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste materials, litter and foreign substances. Sweep paved areas broom clean. Remove petro-chemical spills, stains and other foreign deposits. Rake grounds that are neither planted nor paved, to a smooth even-textured surface.
      b. Remove tools, construction equipment, machinery and surplus material from Project Site.
      c. Remove snow and ice to provide safe access to building.

d. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
e. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics and similar spaces.
f. Broom clean concrete floors in unoccupied spaces.
g. Provide final cleaning, waxing, and buffing of resilient tile, in accordance with manufacturer's requirements.
h. Vacuum clean carpet and similar soft surfaces, removing debris and excess nap. Shampoo if required.
i. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other substances that are noticeable vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
j. Remove labels that are not permanent labels.
k. Touch-up and otherwise repair and restore marred exposed finishes and surfaces. Replace finishes and surfaces that can not be satisfactorily repaired or restored, or that show evidence of repair or restoration. Do not paint over "UL" and similar labels, including mechanical and electrical name plates.
l. Wipe surfaces of mechanical and electrical equipment, and other similar equipment. Remove excess lubrication, paint and mortar droppings and other foreign substances.
m. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
n. Replace air disposable filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills. Clean ducts, blowers, and coils if units were operated without filters during construction.
o. Clean light fixtures, lamps, globes and reflectors to function with full efficiency. Replace burned out bulbs, and defective and noisy starters in fluorescent and mercury vapor fixtures.
p. Leave Project clean and ready for occupancy.

4. Engage an experienced licensed exterminator to make a final inspection, and rid Project of rodents, insects, and other pests. Comply with regulations of local authorities having jurisdiction.
5. Remove temporary protection and facilities installed during construction to protect previously completed installations during remainder of construction.
6. Comply with governing regulations and safety standards for cleaning operations. Remove waste materials from Project Site and dispose of in accordance with requirements of local authorities having jurisdiction.
7. Where extra materials of value remain after completion of construction, they become Postal Service property and these materials should be stored as directed by COR.

PART 2 – PRODUCTS

NOT USED

PART 3 – EXECUTION

NOT USED

END OF SECTION

USPS Specification issued: 10/1/2018
Last revised: 8/8/2017

SECTION 017419

CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes: Procedures for achieving the most environmentally conscious Work feasible within the limits of the Construction Schedule, Contract Sum, and available materials, equipment, and products.
   1. Participate in promoting efforts of Postal Service to create an energy-efficient and environmentally-sensitive structure.
   2. Use recycled-content, toxic-free, and environmentally-sensitive materials and equipment.
   3. Use environmentally-sensitive procedures.
      a. Protect the environment, both on-site and off-site, during demolition and construction operations.
      b. Prevent environmental pollution and damage.
      c. Effect optimum control of solid wastes.

B. Related Documents: The Contract Documents, as defined in Section 011000 - Summary of Work, apply to the Work of this Section. Additional requirements and information necessary to complete the Work of this Section may be found in other documents.

C. Related Sections:
   1. Section 013200 - Construction Progress Documentation.
   2. Section 014000 - Quality Requirements: Contractor's Daily Report.
   3. Section 015000 - Temporary Facilities And Controls: Temporary ventilation, progress cleaning and waste removal.
   4. Section 016000 - Product Requirements: Substitutions.
   5. Section 017704 – Closeout Procedures and Training: Record submittals.
   6. Section 024113 – Selective Site Demolition.

1.2 DEFINITIONS

A. Adequate ventilation: Ventilation, including air circulation and air changes, required to cure materials, dissipate humidity, and prevent accumulation of dust fumes, vapors, or gases.

B. Construction and demolition waste: Includes solid wastes, such as building materials, packaging, rubbish, debris, and rubble resulting from construction, remodeling, repair, and demolition operations.
   1. Rubbish: Includes both combustible and noncombustible wastes but excludes recyclable materials such as paper, boxes, glass, metal, lumber scrap and metal cans.
   2. Debris: Includes both combustible and noncombustible wastes, such as leaves and tree trimmings, stumps and rubble that result from construction or maintenance and repair work.

C. Chemical waste: Includes petroleum products, bituminous materials, salts, acids, alkalis, herbicides, pesticides, organic chemicals, and inorganic wastes.

D. Diversion: Redirection of waste ordinarily deposited in a municipal landfill to a recycling facility or to another destination for reuse.

E. Environmental pollution and damage: The presence of chemical, physical, or biological elements or agents, which adversely affect human health or welfare; unfavorably alter ecological balances; or degrade the utility of the environment for aesthetic, cultural, or historical purposes.

F. Hazardous materials: Includes pesticides, biocides, and carcinogens as listed by recognized authorities, such as the Environmental Protection Agency (EPA) and the International Agency for Research on Cancer (IARC).

G. Interior final finishes: Materials and products that will be exposed at interior, occupied spaces; including flooring, wallcovering, finish carpentry, and ceilings.

H. Municipal Solid Waste Landfill: A permitted facility that accepts solid, non-hazardous waste such as household, commercial, and industrial waste, including construction and demolition waste.

I. Packaged dry products: Materials and products that are installed in dry form and are delivered to the site in manufacturer's packaging; including carpets, resilient flooring, ceiling tiles, and insulation.

J. Sediment: Soil and other debris that has been eroded and transported by storm or well production runoff water.

K. Sanitary wastes:
   1. Garbage: Refuse and scraps resulting from preparation, cooking, distribution, or consumption of food.
   2. Sewage: Domestic sanitary sewage.

L. Wet products: Materials and products installed in wet form, including paints, sealants, adhesives, and special coatings.

1.3 SUBMITTALS

A. Solid Waste Management and Environmental Protection Plan: Prepare and ***submit at the Preconstruction Meeting*** a Solid Waste Management and Environmental Protection Plan including, but not limited to, the following:
   1. Procedures for Recycling/Re-Use Program.
   2. Schedule for application of interior finishes.
   3. Revise and resubmit Solid Waste Management and Environmental Protection Plan as required by Postal Service.
      a. Approval of the Contractor's Solid Waste Management and Environmental Protection Plan, will not relieve the Contractor of responsibility for adequate and continuing control of pollutants and other environmental protection measures.
   4. Any permits required by local, state or federal agencies.

B. With each Contractor's Report as specified in Section 014000 – Quality Requirements, submit an updated Summary Of Solid Waste Disposal And Diversion. Submit on form in Appendix A of this Section. Include manifests, weight tickets, receipts, and invoices specifically identifying the Project and waste material for:
   1. Municipal Solid Waste Landfills.
   2. Recycling/Reuse Facilities.

C. With Record Submittals as specified in Section 017704 - Closeout Procedures and Training, submit the following:
   1. Final Summary Of Solid Waste Disposal And Diversion. Submit on form in Appendix A of this Section.
   2. Resource Conservation and Recovery Act Project Summary. Submit on form in Appendix B of this Section.

PART 2 – PRODUCTS

NOT USED

PART 3 – EXECUTION

3.1 RECYCLING AND REUSE

A. Collection: Implement a recycling/reuse program that includes separate collection of waste materials of the following types as appropriate to authorized local and regional recycling/reuse facilities:
   1. Asphalt.
   2. Concrete.
   3. Metal.
      a. Ferrous.
      b. Non-ferrous.
   4. Wood.
   5. Debris.
   6. Glass.
   7. Clay brick.
   8. Paper/Cardboard.
   9. Plastic.
   10. Gypsum.
   11. Paint.
   12. Carpet.
   13. Others as appropriate.

B. Recycling/reuse centers: Contact state and/or local governmental solid waste offices, Environmental Protection Agency (EPA) regional offices, and authorized applicable non-profit organizations.
   1. Asphalt
   2. Concrete.
   3. Metal.
   4. Wood.
   5. Debris.
   6. Glass.
   7. Clay brick.
   8. Paper/Cardboard.
   9. Plastic.
   10. Gypsum.
   11. Paint.
   12. Carpet.
   13. Others as appropriate.

C. Handling:
   1. Clean materials which are contaminated prior to placing in collection containers. Deliver materials free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to recycling process.
   2. Arrange for collection by or delivery to the appropriate recycling or reuse facility.

D. Participate in re-use programs: identify local and regional re-use programs, including but not limited to non-profit organizations such as schools, local housing agencies, and public arts programs, that accept used materials. The following are examples for Contractor's information only.
   1. National materials exchange network, such as CAL-MAX, a free service provided by various state and regional offices, designed to help businesses find markets for materials

that traditionally would be discarded. The premise of the program is that material discarded by one business may be a resource for another business.

a. Items and regions covered by materials exchange programs may vary. Contact the applicable regional materials exchange program. In California, contact CAL-MAX at (916) 255-2369.

2. Habitat For Humanity, a non-profit housing organization that rehabilitates and builds housing for low income families.

a. Sites requiring donated materials vary. Contact the national hotline (800) HABITAT.

E. Rebates, tax credits, and other savings obtained for recycled or re-used materials accrue to Contractor.

3.2 ENVIRONMENTAL CONTROLS

A. Protection of natural resources: Preserve the natural resources within the Project boundaries and outside the limits of permanent Work performed under this Contract in their existing condition or restore to an equivalent or improved condition as approved by Postal Service, upon completion of the Work.

1. Confine demolition and construction activities to work area limits indicated on the Drawings and as directed by COR.

a. Temporary construction: As specified in Section 015000 - Temporary Facilities And Controls.

b. Demolition and salvage operations: As specified in Section 024119 - Selective Structure Demolition.

c. Disposal operations for demolished and waste materials that are not identified to be salvaged, recycled or reused:

1) Remove debris, rubbish, and other waste materials resulting from demolition and construction operations, from site.

2) No burning permitted.

3) Transport materials with appropriate vehicles and dispose off-site to areas which are approved for disposal by governing authorities having jurisdiction.

4) Avoid spillage by covering and securing loads when hauling on or adjacent to public streets or highways. Remove spillage and sweep, wash, or otherwise clean project site, streets, or highways.

5) Comply with applicable federal, state and/or local regulations.

2. Water resources as follows:

a. Comply with requirements of the National Pollutant Discharge Elimination System (NPDES) and the State Pollutant Discharge Elimination System (SPDES).

b. Oily substances: Prevent oily or other hazardous substances from entering the ground, drainage areas, or local bodies of water.

1) Store and service construction equipment at areas designated for collection of oil wastes.

c. Mosquito abatement: Prevent ponding of stagnant water conducive to mosquito breeding habitat.

d. Prevent run-off from site during demolition and construction operations.

3. Land resources: Prior to construction, identify land resources to be preserved within the Work area. Do not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, top soil, and land forms without permission from Postal Service.

4. Air Resources: Prevent creation of dust, air pollution, and odors.

a. Use water sprinkling, temporary enclosures, and other appropriate methods to limit dust and dirt rising and scattering in air to lowest practical level.

1) Do not use water when it may create hazardous or other adverse conditions such as flooding and pollution.

b. Do not use any hazardous chemicals on USPS property when it is a shared work space with USPS employees. If chemicals are authorized for use, store volatile liquids, including fuels and solvents, in closed containers.

c. Properly maintain equipment to reduce gaseous pollutant emissions.

d. Interior final finishes: Schedule construction operations involving wet products prior to packaged dry products to the greatest extent possible in accordance with Postal Service approved Solid Waste Management and Environmental Protection Plan.

e. Temporary Ventilation: As specified in Section 015000 - Temporary Facilities And Controls, and as follows:

1) Provide adequate ventilation during and after installation of interior wet products and interior final finishes.

2) Provide adequate ventilation of packaged dry products prior to installation. Remove from packaging and ventilate in a secure, dry, well-ventilated space free from strong contaminant sources and residues. Provide a temperature range of 60 degrees F minimum to 90 degree F maximum continuously during the ventilation period. Do not ventilate within limits of Work unless otherwise approved by the COR.

f. Pre-occupancy ventilation: After final completion and prior to initial occupancy, provide adequate ventilation for minimum 5 days. Pre-occupancy ventilation procedures:

1) Use supply air fans and ducts only.

2) Temporarily seal exhaust ducts.

3) Temporarily disable exhaust fans.

4) Provide exhaust through operable windows or temporary openings.

5) Provide temporary exhaust fans as required to pull exhaust air from deep interior locations. Stair towers may be used for exhausting air from the building during the temporary ventilation.

6) After pre-occupancy ventilation and prior to final testing and balancing of HVAC system, replace air filters and make HVAC system fully operational.

5. Fish and Wildlife Resources: Manage and control construction activities to minimize interference with, disturbance of, and damage to fish and wildlife.

6. Noise Control: Perform demolition and construction operations to minimize noise. Perform noise producing work in less sensitive hours of the day or week as directed by Postal Service .

a. Repetitive, high level impact noise will be permitted only between the hours of 8:00 a.m. and 6:00 p.m. Do not exceed the following dB limitations:

Sound Level in dB	Time Duration of Impact Noise
70	More than 12 minutes in any hour
80	More than 3 minutes in any hour

b. Provide equipment, sound-deadening devices, and take noise abatement measures that are necessary for compliance.

END OF SECTION

USPS Master Specifications, issued: 10/1/2018
Last revised: 9/17/2013

Appendix A

SUMMARY OF SOLID WASTE DISPOSAL AND DIVERSION

Project Name: ___ FMS Project Number: ___

Contractor Name: _____ License Number: _____

Contractor Address: _____

Solid Waste Material	**Date Material** Disposed/ **Diverted**	**Amount Disposed/ Diverted** (ton or cu. yd)	**Municipal Solid Waste Facility** (name, address, & **phone number)**	**Recycling/Reuse Facility (name, address, & phone number)**	**Comments (if disposed, state why not diverted)**
Asphalt					
Concrete					
Metal					
Wood					
Debris					
Glass					
Clay brick					
Paper/ Cardboard					
Plastic					
Gypsum					
Paint					
Carpet					
Other:					

Signature: _____ Date: _____

RESOURCE CONSERVATION AND RECOVERY ACT - PROJECT SUMMARY.

Project Name: ___ FMS Project Number: ___

Contractor Name: _____ License Number: _____

Contractor Address: _____

1.0 EPA GUIDELINE ITEMS

A. Fly Ash:

1. Total dollar amount of concrete and cement provided for this project. $_____.
2. Total dollar amount of concrete and cement containing fly ash provided for this project. $_____.
3. Were there any technical impediments to increasing the amount of concrete and cement containing fly ash provided for this project? _____.
   a. If yes, please explain. _____
   _____
   _____
   _____.

B. Building Insulation Products:

1. Total dollar amount of building insulation products provided for this project. $_____.
2. Total dollar amount of building insulation products containing recycled materials provided for this project. $_____.
3. Were there any technical impediments to increasing the amount of building insulation products containing recycled materials provided for this project? _____.
   a. If yes, please explain. _____
   _____
   _____
   _____.

C. Carpet:

1. Total dollar amount of carpet provided for this project. $_____.
2. Total dollar amount of carpet containing recycled materials provided for this project. $_____.
3. Were there any technical impediments to increasing the amount of carpet containing recycled materials provided for this project?_____.
   a. If yes, please explain. _____
   _____
   _____
   _____.

D. Floor Tiles (resilient):

1. Total dollar amount of floor tile (resilient) provided for this project. $_____.
2. Total dollar amount of floor tile (resilient) containing recycled materials provided for this project. $_____.
3. Were there any technical impediments to increasing the amount of floor tile (resilient) containing recycled materials provided for this project? _____.
   a. If yes, please explain. _____
   _____
   _____
   _____.

E. Floor Tiles (ceramic):

1. Total dollar amount of floor tile (ceramic) provided for this project. $_____.
2. Total dollar amount of floor tile (ceramic) containing recycled materials provided for this project. $_____.
3. Were there any technical impediments to increasing the amount of floor tile (ceramic) containing recycled materials provided for this project? _____.
   a. If yes, please explain. _____
   _____
   _____
   _____.

F. Hydraulic Mulch:

1. Total dollar amount of hydraulic mulch provided for this project. $_____.
2. Total dollar amount of hydraulic mulch containing recycled materials provided for this project. $_____.
3. Were there any technical impediments to increasing the amount of hydraulic mulch containing recycled materials provided for this project? _____.
   a. If yes, please explain. _____
   _____
   _____
   _____.

G. Compost:

1. Total dollar amount of compost provided for this project. $_____.
2. Total dollar amount of compost containing recycled materials provided for this project. $_____.
3. Were there any technical impediments to increasing the amount of hydraulic mulch containing recycled materials provided for this project? _____.
   a. If yes, please explain. _____
   _____
   _____
   _____.

2.0 SPECIFICATIONS

NOT USED

3.0 SOLID WASTE PREVENTION

A. Total dollar amount of solid waste disposed (landfill) for this project. $_____.

B. Total weight of solid waste disposed (landfill) for this project. $_____.

4.0 RECYCLING

A. Total dollar value of solid waste diverted from landfill and recycled or reused for this project. (Express as total dollar amount for solid waste disposal in landfill for equivalent type and amount of diverted waste.)
$_____.

B. Total weight of solid waste diverted from landfill and recycled or reused for this project. (Express as total weight for solid waste disposal in landfill for equivalent type and amount of diverted waste.)
Tons_____.

5.0 COMMENTS

A. Comments and suggestions for increasing amount of recycled materials used in construction materials.
_____
_____
_____
_____
_____
_____.

B. Comments and suggestions for improving solid waste prevention and recycling efforts during construction.
_____
_____
_____
_____
_____
_____.

Signature: _____ Date: _____

SECTION 017704

CLOSEOUT PROCEDURES AND TRAINING

PART 1 – GENERAL

1.1 MANUALS

A. Purpose: Operation and maintenance manuals are for the training of, and use by, Postal Service employees in the operation and maintenance of the systems and related equipment as specified below. The manuals must consist of instruction on systems and equipment. A separate manual or chapter must be prepared for each of the following classes of equipment or system:
1. Landscaping.
2. Roof system.
3. Doors.
4. Security system.
5. Fire protection.
6. Plumbing systems.
7. Mechanical systems.
8. Electrical systems.
9. Miscellaneous building equipment and systems.
10. Mechanization (for requirements for mechanization maintenance manuals, see Mechanization Specification M-5000).

B. Content: Unless otherwise indicated, each chapter must contain the following, as applicable:
Introduction.
Table of contents.
Description of system (including design intent and considerations).

C. Preparation: The outline below is intended as a general guide for preparing the manuals. The manuals must be prepared to provide for the optimum operation and maintenance of the various systems. The description of systems and general operating instructions for plumbing and electrical manuals may cover only complicated or unusual parts of these systems, such as sewage ejectors, transformers, high tension switchgear, and signal and alarm systems. Manufacturer's literature and data must be those of the actual equipment installed under contract for the particular facility. Further guidance is available in the ASHRAE Handbook, 1984, Systems Volume, Chapter 39, Mechanical Maintenance.

D. Suggested Outline for Operation and Maintenance (O&M) Manuals: This is a suggested outline, with general requirements of O&M manuals. The outline is presented to indicate the extent of material to be covered and the individual items required in manuals for Mail Processing Facilities. The outline may be modified to suit specific installations; however, the purpose of the manual must be fulfilled. The manual is not intended to duplicate manufacturers' data, but proper references must be made in the text of the O&M manual to indicate that that information is applicable and where it is located.
1. Part I. Description and Design Intent
    a. Introduction
        1) Provide a brief description of project and purpose of the maintenance manual. The following statements must be included: "Operation and maintenance of this equipment must be performed in accordance with this manual and posted instructions, subject to compliance with applicable technical guides and standards issued by USPS. It is recognized that minor changes in control points and settings will be required, based on actual operating experience, to correct varying conditions and improve operation. When such changes appear necessary, they must be submitted to the maintenance manager for consideration. Upon approval of any changes, the applicable portions of

all copies of the manual and proposed instructions must be revised and reissued, and any change in operating procedure brought to the attention of all operating personnel."

2) "This manual is specifically developed to assist the Postal official in charge at the facility to operate and maintain the building systems and equipment. Manufacturers' recommendations set forth for certain components must be followed during the complete warranty period for that equipment."

3) Contents of Manual. This portion of the introduction must explain that the manual is to contain complete operating, maintenance, and safety instructions for all equipment listed. It must also contain any other appropriate references as required to outline an explanation of the manuals and major categories of reference material required with the manuals.

b. Table of Contents

1) The table of contents must list numbers and titles of chapters, sections, and main paragraphs, with their page numbers. Each volume in a set of manuals must contain its own table of contents. Publications containing 10 or more illustrations or tables must include a list of illustrations or tables, as applicable. These lists must show number, title, and page number of each illustration and table. Following is a typical table of contents:

a. Landscaping
   1.) Irrigation system
   2.) Lawns and grasses
   3.) Exterior plants
   4.) Plant maintenance

b. Roof System
   1.) Roof and flashing type
   2.) Local inspection (frequency and what is included)
   3.) Maintenance (when manufacturer performs, if USPS performs what methods compatible materials, etc.)

c. Doors
   1.) Overhead coiling doors
   2.) Folding closures
   3.) Sectional overhead doors
   4.) Impact traffic doors
   5.) Automatic entrance doors
   6.) Specialized hardware

d. Security Systems
   1.) CCTV system
   2.) Intrusion detection
   3.) Electronic article surveillance
   4.) Access control

e. Fire Protection System
   1.) Water supply and distribution
   2.) Exterior fire hydrants
   3.) Sprinklers
   4.) Fire Department connections
   5.) Fire extinguishers
   6.) Exit signs

f. Plumbing Systems
   1.) Potable water
   2.) Domestic hot water
   3.) Roof and sanitary drains

g. Mechanical Systems
   1.) Space conditioning

2.) Heating
3.) Central chilled water and distribution
4.) HVAC instrumentation and controls

h. Electrical Systems
1.) Incoming Service
2.) Electrical power distribution
3.) Lighting and lighting controls
4.) Fire alarm
5.) Emergency lighting unit

i. Miscellaneous Building Equipment
1.) Postal Parcel Lockers
2.) Floor mats
3.) Dock equipment
4.) Window Treatments
5.) Elevators
6.) Scales
7.) Dust collectors
8.) Vehicle maintenance equipment

2. Part II. Operating Sequence and Procedures

a. Contents: Each chapter must describe the procedures necessary for Postal Service personnel to operate the system and equipment covered in that chapter.

b. Operating Procedures: The operating procedures must be divided into four subsections: Startup, Operation, Emergency Operation, and Shutdown.

1) Startup: Give complete instructions for energizing the equipment and making initial settings and adjustments whenever applicable. If equipment is fully automatic, a statement to that effect is all that is required. If a specific sequence of steps must be performed, give step-by-step instructions in the proper sequence. If timing- (such as warm-up between power-on and adjustment) is important, clearly state the specific minimum time required at the proper point in the procedure. Refer to controls and indicators by panel; make references consistent with the nomenclature used in illustrations and tables of controls and indicators. If preliminary settings differ for different modes of operations, give procedures for each mode.

2) Operation: Give detailed instructions in proper sequence for each mode of operation. When, for a given action on the part of the operator, alternate equipment responses are possible, give the appropriate operation reaction to each.

3) Emergency Operation: If some functions of the equipment can be operated while other functions are disabled, give instructions for operations under these conditions. Include here only those alternate methods of operation (from normal) that the operator can follow when there is a partial failure or malfunctioning of components, or other unusual condition.

4) Shutdown: Include instructions for stopping and securing the equipment after operation. If a particular sequence is required, give step-by-step instructions in that order.

3. Part III. Maintenance Instructions and Requirements

a. Contents: Each chapter must describe the procedures necessary for Postal Service personnel to perform the maintenance on the systems and equipment covered in that chapter. Emphasis must be placed on the method of mechanical control of systems and equipment from a maintenance standpoint. References must be made, as appropriate, to drawings, schematics, and sequences of operation included as part of the construction Contract drawings and specifications that show piping and equipment arrangements and items of

control. Prints of these drawings must be reduced to 11 inches x 17 inches for insertion in the manuals. Drawings must represent the "as-built" condition.

b. Maintenance Procedures: The maintenance procedures must be divided into two categories: Preventive Maintenance and Corrective Maintenance.
   1. Preventive Maintenance
      a. Provide a schedule for preventive maintenance. State, preferably in tabular form, the recommended frequency of performance for each preventive maintenance task (cleaning, inspection, and scheduled overhauls).
      b. Provide instruction and schedules for all routine maintenance cleaning and inspection, with recommended lubricants.
      c. If periodic inspection of equipment is required for operation, cleaning, or other reasons, indicate the items to be inspected and give the inspection criteria for, but not limited to, the following:
         1.) Motors
         2.) Controls
         3.) Filters
         4.) Heat exchangers
   2. Provide instruction for minor repairs or adjustments required for preventive maintenance routines. Minor repair and adjustment must be limited to repairs and adjustments that may be performed without special tools or test equipment and that require no special training or skills. Identify test points and give values for each.

c. Corrective Maintenance
   1. Corrective Maintenance: Corrective maintenance instructions must be predicated upon a logical effect-to-cause troubleshooting philosophy and a rapid replacement procedure to minimize equipment downtime. Instructions and data must appear in the normal sequence of corrective maintenance, for example, troubleshooting first, repair and replacement of parts second, and then the parts list.
   2. Troubleshooting: This information must describe the general procedure for locating malfunctions and must give, in detail, any specific remedial procedures or techniques. The data shown are intended to isolate only the most common equipment deficiencies. Troubleshooting tables, charts, or diagrams may be used to present specific procedures. A guide to this type must be a three-column chart. The columns must be entitled Malfunction, Probable Cause, and Recommended Action. The information must be alphabetically arranged by component, and each component must, in turn, list deficiencies that may be expected. Each deficiency must contain one or more problems with a recommended correction.
   3. Repair and Replacement: Indicate the repair and replacement procedures most likely to be required in the maintenance of the equipment. Information included here must consist of step-by-step instructions for repair and replacement of defective items. Include all information required to accomplish repair or replacement, including information such as torque values. Identify all tools, special equipment, and materials that may be required. Identify uses for maintenance equipment. The paragraphs must contain headings to identify the topics covered.
   4. Safety Precautions: This subsection must comprise a listing of safety precautions and instructions to be followed before, during, and after repairs or adjustments are made or routine maintenance is performed.

d. Manufacturers' Brochures: Include manufacturers' descriptive literature covering devices used in the system, together with illustrations, exploded views, and

renewal parts lists. This section must also include special devices manufactured by the Contractor.

e. Special Maintenance: Provide information of a maintenance nature covering warranty items that have not been discussed elsewhere.

f. Shop Drawings: Provide a copy of all approved shop drawings covering approval of equipment for the project with the manufacturers' brochures.

g. Spare Parts Lists: Include a recommended spare parts list for all equipment furnished for the project. The parts list must include a tabulation of descriptive data for all the electrical-electronic spare parts and all the mechanical spare parts proposed for each type of equipment or system. Each part must be properly identified by part number and manufacturer.

h. Warranty: Include a copy of the “special” or extended warranty in the operation and maintenance manual.

E. Submittal, In both “hard” and electronic USB disc:

1. Preliminary Submittal: Two draft copies of the completed manuscript for items in this outline must be submitted to the COR for review within 60 days after approval of equipment to be provided. One copy will be returned to the Contractor within 30 days after submittal and, if required, must be revised and resubmitted within 30 days.
2. Final Submittal: four complete sets of manuals must be furnished to the COR not later than 90 days before completion of the project.
3. Final Submittal must be accepted by the COR before training can begin.

1.2 POSTED OPERATING INSTRUCTIONS

A. General. Operating instructions and diagrams must be prepared for posting near the equipment. Posted operating instructions must be photographic or equal non-fading reproductions framed under glass or encased in non-discoloring plastic and must be mounted in locations as directed. Copies of the posted operating instructions must also be used with the O&M manuals as a basis for training Postal Service personnel in the operation and maintenance of systems and related equipment installed under contract at the facility.

B. Posted operating instructions must consist of simplified, consolidated equipment, control, and power diagrams graphically representing the entire system and actual equipment installed, including concise written instructions on how to start and stop systems, what settings and conditions are to be observed, and what control adjustments are to be made or maintained by the operation. Posted operating instructions must include, but are not limited to the following:

1. Boiler and burner controls.
2. Refrigeration controls.
3. Heating, ventilating, and air-conditioning controls for each system.
4. Controls for dust collection systems.
5. One-line schematic diagrams of water supply (plumbing).
6. One-line diagrams of steam distribution and hot water and chilled water systems, including risers, main shutoff valves, balancing cocks, and the like.
7. One-line isometric diagrams of sanitary drainage.

1.3 TRAINING

A. The Contractor must train Postal Service personnel in the operation and maintenance of mechanical and electrical equipment. Coordination must be maintained with systems designers for developing the hours of instruction and scope of material to be covered. Training of Postal Service personnel must not begin until the COR has approved the final submittal copy of each O&M manual.

B. Schedule Submittal: The proposed scope of training and materials and instruction schedule must be submitted for review and approval approximately 30 days before the scheduled completion of the buildings. Mutually agreeable dates for training must be arranged with the COR, but the training must be completed before final acceptance of the facility.

C. Scope of Training: Training must include classroom and on-the-job instructions by qualified installation and maintenance personnel having the necessary knowledge, experience, and teaching skills. The use of recording on digital media (DVD or CD discs) during the instruction.

D. Time Period of Training: The minimum specific hours of training time required for each category of major equipment and systems is indicated below. Past experience indicates a workable ratio in the vicinity of approximately 25 percent classroom to 75 percent application, except that the ratio may be reversed for control systems. The COR must have the option of redistributing the training times, subject to the total time specified. Training must be presented on an 8-hour per day, 5-day per week schedule, with all reading assignments and review to be within this period.

1.4 TRAINING PERIOD

Item	Time (Hours)
1. Roofing	4
2. Special Doors	2
3. Dock Equipment	2
4. Security Equipment	2
5. Ventilation Covers air-handling units with heating and cooling coils, fans, and all other air-handling equipment, together with associated operating and limit controls.	4
6. Overall Control System Covers central control center, coordinating respective controls of heating, cooling, and ventilation systems, and shows how these controls work together to provide an integrated overall control of the complete air-conditioning system, both heating and cooling, as well as all other utility control systems.	4
7. Electrical System Covers all building services, lighting, lighting controls, and intercommunications, and security system.	4]
8. Elevators Covers operation of the different types installed, demonstrations in the machine room on the various operating and control equipment installed, and explanation of the use of the electric circuit diagrams (of sufficient size) to ensure proper operation and assistance in troubleshooting.	4
9. Piping and Plumbing Includes, but is not limited to, domestic water supply, storm and sanitary drainage systems, cold-water supply systems, sprinkler systems, and the like.	2
10. Miscellaneous Includes, but is not limited to, vehicle maintenance equipment, fire protection and alarm equipment, dust collection systems, compressed air systems, automatic door operators, dock levelers, truck scales, data collection center, and all other equipment not specifically covered above.	4

1.5 TRAINING PARTICIPATION SHEETS

A. Submit to the COR sign-in sheets with the dates and names of all training participants. Training sheets must be reviewed and certified by an authorized facility manager.

1.6 OTHER CLOSEOUT SUBMITTALS

A. Additional requirements for Systems Manuals, Operating Instructions, Training and other deliverables are contained in individual Specification Sections. All closeout requirements must be provided to and accepted by the COR prior to requesting final payment. Examples of additional closeout requirements include, but are not limited to, the following
   1. Final Punch-List with all items certified as complete.
   2. In accordance with the terms and conditions of the contract provisions and clauses, including those concerning *Record "As Built" Drawings*, the Contractor shall submit certified As-Built Record Drawings and Specifications in the quantities and media specified.
   3. In accordance with the terms and conditions of the contract provisions and clauses, including those concerning *Warranty*, the Contractor shall submit all transferable guarantees and warranties for equipment, materials and installations furnished by any manufacturer, supplier, or installer.
   4. Signed Asbestos and Lead-Based Paint Certificate.
   5. RE-4 Certification of Accessibility (CoA) and Facility Accessibility Survey Report.
   6. Material Safety Data Sheets.
   7. Signed and sealed Contractor Release of Claims.

PART 2 – PRODUCTS

NOT USED

PART 3 – EXECUTION

NOT USED

END OF SECTION

USPS Master Specifications, issued: 10/1/2018
Last revised: 9/17/2013

SECTION 02 41 19
SELECTIVE STRUCTURE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Procedures for demolition and removal of existing building elements.
2. Removal of designated building equipment and fixtures.
3. Salvaged items.
4. Salvaged material.
5. Salvaged items for re-use.

B. Related Sections:
1. Section 013543- Environmental Procedures: Recycling and reuse of waste materials.

1.2 SYSTEM DESCRIPTION

A. The extent of Selective Demolition Work is that Work necessary and required to facilitate the repair work and remediation as described in the project drawings and specifications.

B. Demolition shall be such that all construction, new and existing, can be performed, and completed in accordance with the construction documents.

C. The contractor shall visit the project site and familiarize himself with the existing conditions and project requirements.

D. Verify the scope of the Work under this Section including salvage material. The United States Postal Service will be responsible for removing all materials and equipment which the United States Postal Service wishes to salvage prior to the beginning of this Work.

E. The existing fire protection sprinkler system shall remain in place.

1.3 QUALITY ASSURANCE

A. Engage only personnel who can demonstrate not less than five years successful experience in Work of similar character.

B. Performance Criteria:
1. Requirements of Structural Work: Do not cut structural work in a manner resulting in a reduction of load-carrying capacity of load/deflection ratio.
2. Operational and Safety Limitations: Do not cut operational elements and safety-related components in a manner resulting in a reduction of capacities to perform in a manner intended or resulting in a decreased operational life, increased maintenance or decreased safety.
3. Visual Requirements: Do not cut work which is exposed on the exterior or exposed in occupied spaces of the building in a manner resulting in a reduction of visual qualities or resulting in substantial evidence of the demolition work judged by the Architect to be cut and patched in a visually unsatisfactory manner.

4. Loading: Do not superimpose loads at any point upon existing structure beyond design capacity including loads attributable to materials, construction equipment, demolition operations and shoring and bracing.
5. Vibration: Do not use means, methods, techniques or procedures which would induce vibration into any element of the structure.
6. Fire: Do not use means, methods, techniques or procedures which would produce any fire hazard unless otherwise approved by Contracting Officer.
7. Water: Do not use means, methods, techniques or procedures which would produce excessive water run-off, and water pollution.
8. Air Pollution: Do not use means, methods, techniques or procedures which would produce uncontrolled dust, fumes or other damaging air pollution.

1.4 PROJECT SITE

A. Indicated "Existing Construction" was obtained from existing drawings or other information which may not reflect actual conditions. The Contractor shall verify all existing conditions and notify the Contracting Officer of discrepancies before proceeding with the Work.

B. Perform the removal, cutting, drilling, etc., of existing work with extreme care, and using small tools in order not to jeopardize the structural integrity of the building.

C. Occupancy: Contractor shall have full use of the facility during construction.

D. Condition of Structure: The United States Postal Service assumes no responsibility for the actual condition of portions of the structure to be demolished.

E. Partial removal: Items of salvageable value to the Contractor may be removed from the structure as the work progresses if not claimed by the United States Postal Service. Salvaged items must be transported from the site as they are removed.

F. Protection: Make sure that the safe passage of persons around the area of demolition is maintained during the demolition operation. Conduct operations to prevent injury to adjacent buildings, structures, other facilities, and persons.

1.5 PROTECTION OF EXISTING CONSTRUCTION

A. Provide temporary protection of existing construction (floors, roof, and walls) when adjoining new work and in traffic areas.

B. Provide temporary construction, constructed of framing and plywood, to protect existing construction and surrounding surfaces from damage by movement of materials and personnel.

C. After removing window infill opening with temporary water tight enclosure until repaired window is ready for reinstallation.

D. The contractor is responsible for all damage to existing structure and shall replace or repair all areas of damage.

E. Repair, replace, or rebuild existing construction as required or as directed which has been removed, altered or disrupted to allow for new construction. Existing construction shall be corrected to match adjacent construction, new or existing.

F. Perform cutting of existing concrete and masonry construction with saws and core drills. Do not use jack-hammers or explosives.

1.6 SHORING AND BRACING

A. Provide temporary shoring of existing construction to allow removal of existing structural elements. Maintain shoring until new structural elements are in place and accepted.

PART 2 - PRODUCTS

2.1 SALVAGED ITEMS

A. The Contract Documents indicate the existing materials that are to be reinstalled in the new construction. The Contractor shall remove, protect and reinstall these items as indicated.
1. Items for "Reinstallation" will be indicated as such within the Contract Documents.

B. Materials scheduled for reinstallation which are damaged by the Contractor to the extent that they cannot be reinstalled shall be replaced by the Contractor with equal quality material at no additional cost to the United States Postal Service.

C. Coordinate with the Contracting Officer on disposition of salvage items note scheduled for reinstallation, demolished materials, and equipment. Salvaged materials, not reinstalled, shall be delivered, as directed, to the United States Postal Service.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 017300 - Execution: Verification of existing conditions before starting work.

B. Verification of Conditions: Verify that field measurements, surfaces, substrates and conditions are as required, and ready to receive Work.

C. Report in writing to Contracting Officer prevailing conditions that will adversely affect satisfactory execution of the Work of this Section. Do not proceed with Work until unsatisfactory conditions have been corrected.

D. By beginning Work, Contractor accepts conditions and assumes responsibility for correcting unsuitable conditions encountered at no additional cost to the United States Postal Service.

3.2 PREPARATION

A. Temporary Support: Provide adequate temporary support for work to be cut to prevent failure. Do not endanger other work.

B. Provide adequate protection of other work during selective demolition to prevent damage and provide protection of the work from adverse weather exposure.

3.3 PROCEDURE

A. Employ only skilled tradesmen to perform selective demolition.

B. Cut work by methods least likely to damage work to the retained and work adjoining.

C. In general, where physical cutting action is required, cut work with sawing and grinding tools, not with hammering and chopping tools. Core drill openings through concrete and masonry work.

D. Patch with seams which are durable and as invisible as possible. Comply with specified tolerances for the work.

E. Where selective demolition terminates at a surface or finish to remain, completely remove all traces of material selectively demolished, including mortar beds. Provide smooth, even, substrate transition.

3.4 POLLUTION CONTROLS

A. Use temporary enclosures and other suitable methods to limit the amount of dust and dirt rising and scattering in the air to the lowest practical level.

B. Comply with governing authorities pertaining to environmental protection.
   1. Protect natural resources as specified in Section 013543 - Environmental Procedures.

C. Clean adjacent portion of the structure and improvement of dust, dirt and debris caused by demolition operations, as directed by Contracting Officer and governing authorities. Return adjacent areas to conditions existing prior to the start of the work.

3.5 DISPOSAL OF DEMOLISHED MATERIALS

A. Collect, recycle, reuse, and dispose of demolished materials as specified in Section 013543 - Environmental Procedures and as approved by the U.S. Postal Service in the Solid Waste Management and Environmental Protection Plan.

3.6 SCHEDULE OF SELECTIVE DEMOLITION

A. Existing Exterior Window Blinds:
   1. Remove existing window blinds and store for reinstallation.

B. Existing Exterior Wood Windows:
   1. Remove all wood window sashes and provide temporary covering that is water-tight over opening. Take sashes to the window refurbishment contractor’s shop for repair and upgrade according to the specifications.
   2. Scrape the existing paint from all window frames. Contractor shall assume the paint is lead containing.

C. Existing Exterior Wood Doors:

1. Remove all wood doors (provide temporary doors provide egress and security). Take doors to the window refurbishment contractor's shop for repair and upgrade according to the specifications in a similar manner to the windows.

D. Sandstone Coins Around Windows:
   1. Remove existing mildew, fungus or mold. Do not use any abrasive measures that could mare the sandstone. Test any an all methods and materials on a window area in the rear of the building at a window well.
   2. Sound the sandstone to remove any delaminated sections and provide sandstone repair to match texture and color.

E. Existing Flag Poles:
   1. Remove existing paint. Contractor shall assume the existing paint is lead containing.

F. Provide additional selective demolition as indicated and required by the Contract Documents and as required for indicated new construction.

END OF SECTION

USPS CSF Specifications issued: 5/1/2014
Last revised: 4/12/2011

SECTION 022623

ASBESTOS LABORATORY ANALYSIS REPORT

PART 1 - GENERAL

1.1 SUMMARY

A. Contractor shall provide testing for any suspect ACM/LBP material found on the site. Should the tests confirm the tested material contains hazardous materials contractor shall remove material in accordance with these specifications and all applicable government standards.

1.2 RELATED SECTIONS

A. Section 013543 – Environmental Procedures

B. Section 028233 – Removal and Disposal of Non-Friable ACM

1.3 LABORATORY TESTING FOR ASBESTOS

A. NOTE: See section 011000 for contingency to be included in bid to cover testing. Contractor shall go through the building prior to the start of demolition and test any suspected materials and provide test results to USPS representative. Should the tests come back positive and cost for removal exceeds the amount budgeted the cost will be included in a contract modification.

D. Refer to Sections 013543 and 028233 for removal, handling, and disposal requirements of non-friable ACMs.

PART 2 – PRODUCTS

NOT USED

PART 3 – EXECUTION

NOT USED

END OF SECTION

USPS CSF Specifications issued: 10/1/2021
Last revised: 3/6/2013

SECTION 028233

REMOVAL AND DISPOSAL OF NON-FRIABLE ACM

PART 1 - GENERAL

1.1 SUMMARY

A. Removal and disposal of non-friable asbestos-containing materials related to roof replacement.

1.2 RELATED SECTIONS

A. Section 013543 – Environmental Procedures

B. Section 022623 – Asbestos Laboratory Analysis Report

1.3 QUALITY ASSURANCE PROCEDURES

A. Immediately refer any conflicts between the requirements outlined in this Section and those of regulatory agencies to the Owner for resolution.

PART 2 – PRODUCTS

NOT USED

PART 3 – EXECUTION

3.1 GENERAL

A. Removal of identified ACM shall be performed by contractor personnel trained for such removal. Prior to work start, the contractor shall provide an ACM removal plan, identifying ACM components to be removed, personnel performing the work, documentation of training provided to personnel performing work, methodology for custody, handling and disposal of ACM, and the schedule for performing removal work. Maintain this documentation on-site. The contractor shall provide all necessary labor, materials, equipment and transportation to perform ACM removal work.

B. The contractor shall maintain a contact person on-site during work.

C. The contractor shall provide necessary permits and/or licenses necessary for ACM removal.

D. The contractor shall comply with all applicable local, state, federal, and Owner-mandated regulations and requirements related to removal of ACM.

H. Remove identified ACMs, following all applicable federal, state, local, and Owner-mandated requirements identified in Section 013543 for removal, handling, and disposal of non-friable ACMs. Dispose of ACMs as required by these regulations and requirements.

END OF SECTION

USPS CSF Specifications issued: 10/1/2021

SECTION 04 47 00.1
PATCHING WEATHERED, EXFOLIATED, OR BLISTERING SANDSTONE

PART 1---GENERAL

1.01 SUMMARY

A. This procedure includes guidance on composite patching of sandstone. Composite patching is required when portions of the stone surface are lost and must be replaced. For retaining sandstone that is delaminating internally, see 04 47 00.2 "Repairing Sandstone by Through Surface Repair".

B. Composite patching is the process whereby cement and sand mixtures are applied as a series of stucco-like coats to reconstruct missing stone surfaces. Three types of stone deterioration that warrant composite patching include weathering, exfoliation, and blistering.

C. See the contract requirements for general project guidelines to be reviewed along with this procedure. These guidelines cover the following sections:
   1. Safety Precautions
   2. Historic Structures Precautions
   3. Submittals
   4. Quality Assurance
   5. Delivery, Storage and Handling
   6. Project/Site Conditions
   7. Sequencing and Scheduling
   8. General Protection (Surface and Surrounding)
   These guidelines should be reviewed prior to performing this procedure and should be followed, when applicable, along with recommendations from the Regional Historic Preservation Officer (RHPO).

1.02 REFERENCES

A. American Society for Testing and Materials (ASTM) www.astm.org

1.03 SUBMITTALS

A. Samples: Routine testing of materials, of proposed mortar mix, and of final work for compliance with this procedure will be carried out by the RHPO or his\her appointed representative.
   9. Select sand and aggregate resembling a crushed sample of the stone to be matched; Blend different sands and pigments with crushed stone as necessary.
   10. Keep track of the amounts added to each sample; The color of the dry mix is a good indication of the final repair color.
   11. Add water and an acrylic latex admixture to make a paste sample large enough to fill a 3 inch pie tin.
   12. Cure the sample in a pie tin or similar container for at least 48 hours.

13. Treat half of each sample with appropriate surface finishing.
14. Compare samples to actual stone, make new samples as necessary to achieve a color match.

B. Mock-up: Apply a test patch to a small area.
   1. Check to see that the composite patch matches the stone in color, texture and surface treatment.
   2. See that the patch adheres well to the adjacent stone and does not shrink, crack or fall away.
   3. See that the composite patch does not cause deterioration of the old stone by differing too greatly in hardness, moisture transmission, or thermal expansion and contraction.

PART 2---PRODUCTS

2.01 MANUFACTURERS

A. Thoro System Products www.thorosystems.com

B. Edison Coatings Inc. www.edisoncoatings.com

2.02 MATERIALS

A. Cement: Portland cement ASTM C 150, Type II, white. NOTE: DO NOT use gray cement; It is more difficult to color and work, shrinks more in curing, and may cause staining.

B. Lime: ASTM C 207, Type S, high plasticity: Increases cohesion during mixing, slows down the rate of cure, and moderates the qualities which could cause an excessively strong and moisture-resistant cement repair to fail and damage old stone.

C. Sand:
   1. Local natural sand, graded or masonry mortar conforming to ASTM C 144.
   2. Sand color, size, and texture should match the original as closely as possible to provide the proper visual characteristics without other additives. A sample of the sand is necessary for comparison to the original and should be approved by the RHPO before beginning repointing work.
   3. The color of the sand shall be the primary factor used to make mortars which match existing adjacent fabrics.

D. Crushed Sandstone:
   1. Best repairs contain actual sandstone; Use stone removed from the area to be repaired, or other old stone with the same qualities.
   2. Grind it fine enough to pass through a 16-mesh screen and wash thoroughly.

E. Dry Pigments:
   3. Use when available crushed stone is not sufficient to give a color match.
   4. Use stable fade-proof mineral oxide pigments either natural- or synthetic-fade. NOTE: DO NOT exceed recommended manufacturer's suggested maximum amounts; Too much pigment reduces strength and gives unstable color. Maximum pigment/cement ratio to be 1/10 (verify with manufacturer).

F. Clean, potable water

G. Additives:

1. ACRYL-60 (Thoro System Products) or approved equal: Use only latex admixtures that are labeled nonreemulsifiable like ACRYL-60; Do not use bonding agents that may break down in the presence of moisture. CAUTION: ADMIXTURE ABOVE RECOMMENDED AMOUNTS GIVES A GLOSSY, ARTIFICIAL LOOK, AND CAUSES A GREENISH TINT.

H. Hydrochloric Acid:
NOTE: Chemical products are sometimes sold under a common name. This usually means that the substance is not as pure as the same chemical sold under its chemical name. The grade of purity of common name substances, however, is usually adequate for stain removal work, and these products should be purchased when available, as they tend to be less expensive. Common names are indicated below by an asterisk (*).
1. A strong corrosive irritating acid.
2. Other chemical or common names include Chlorhydric acid; Hydrogen chloride; Muriatic acid* (generally available in 18 degree and 20 degree Baume solutions); Marine acid*; Spirit of salt*; Spirit of sea salt*.
3. Potential Hazards: TOXIC, CORROSIVE TO FLESH; CORROSIVE TO CONCRETE, STEEL, WOOD OR GLASS, FLAMMABLE.
4. Available from chemical supply house, drugstore or pharmaceutical supply distributor, or hardware store.

2.03 EQUIPMENT

A. Trowels

B. Hawks

C. Stiff natural bristle brushes

D. Hammer and cold chisel

E. Wood screeds

2.04 MIXES

A. Slurry Coat:
1. 1 part white Portland cement
2. 2 parts Type S lime
3. 6 parts sand
4. Mix with water and ACRYL-60 in 3:1 ratio

B. Scratch Coat:
1. 1 part white Portland cement
2. 1 part Type S lime
3. 6 parts sand
4. Mix with water and ACRYL-60 in 5:1 ratio

C. Finish Coat: Final mix will depend on field matching.
   1. 1 part white Portland cement
   2. 1 part Type S lime
   3. 2-3 parts sand
   4. 3-4 parts crushed sandstone
   5. Dry pigments (maximum 10% by weight)
   6. Mix with water and ACRYL-60 (or equivalent) in 5:1 ratio

PART 3---EXECUTION

3.01 EXAMINATION

A. Deterioration of sandstone due to moisture is evident as spalling, erosion, cracking, flaking and deteriorated mortar joints.

B. Before proceeding with any type of repair, examine the sandstone to determine the extent and the cause of the damage. Compare undamaged stone with areas of suspected decay. Use a magnifying glass if necessary. Look closely at the following:
   1. Color: What color is the stone? Is there variation in color within individual stones? Is there variation between stones?
   2. Pattern: Are there swirls, bands, or veins of color within the individual stones?
   3. Texture: Is the stone surface rough or smooth? Is it hard or crumbly? Is the texture uniform or varied?
   4. Surface Tooling: Is the face of the stone rough or smooth? Are there any chiseled grooves? Are there any decorative surface patterns? Are any parts damaged or missing?
   5. Sand Grains: Is the grain size large or small? Are the grain shapes regular or irregular, uniform or varied? Does the grain structure appear densely or loosely packed together? Are there mica flakes present in the stone (these will often appear to glitter on the surface)?
   6. Cementing Material: What color is the material between the grains? Do the grains project from the stone surface, giving the surface a rough texture?
   7. Decay and Old Repairs: Is there evidence of erosion, crumbling, spalling or other types of deterioration? Is there evidence of previous patching or repairs?

3.02 ERECTION/INSTALLATION/APPLICATION

A. Cut or chip out all loose stone with a hammer and cold chisel to a minimum thickness of 1/2"; Undercut the stone so the patch will lock firmly.

B. Drill holes approximately 1/2 inch deep by 1/4 inch in diameter at varying angles about 2 inches apart along the newly exposed surface.

C. Remove stone dust from the patch area with bristle brushes and lightly spray the area with water.

D. Apply a thin slurry coat of approximately 1part white Portland cement, 2 parts lime and 6 parts sand and any additives as required. Final mix will depend on field testing of mix to get correct color and texture match.

E. Build the scratch coat layers up to within 3/16 inch of the surface; Each layer should be no less than 3/4 inch and no more than 3 inches thick. Do not feather the edges.

F. Use a trowel to gouge many scratches into the surface of each layer in order to provide keying; Allow 2-4 hours for each coat to cure, but apply each layer while the previous layer is still damp.

G. Use wood screeds set in adjacent mortar joints to prevent repairs from extending continuously between separate blocks of stone and remove when the mortar is partly set; Repoint the joint after the patch has cured.

H. Trowel on a final coat of color matched stucco.

I. Work a straight edge back and forth across the width of the patch to strike it off flush.

J. Execute resurfacing carefully. Finish the surface repair by one of the following:

1. Acid etching: After the surface has cured 48 hours, brush on Technical Grade hydrochloric acid, diluted 1:5 with water; Rinse the surface thoroughly with clean, clear water.
2. Rubbing stones: Coarse or fine grade (grits #60, 80, 100, 120); Use dry or with water to hone the surface of well cured repairs.
3. Stipple with a damp sponge or dry-towel with a wooden float.
4. Score partially cured repair with stone tools to match original tool marks and patterns.

END OF SECTION

SECTION 04 47 00.2
REPAIRING SANDSTONE BY THROUGH-SURFACE REPAIR

PART 1---GENERAL

1.01 SUMMARY

A. This procedure includes guidance on retaining delaminated sandstone with the use of adhesive grout and pins countersunk into the stone surface. This procedure is known as Through Surface Repair.

B. Through Surface Repair is recommended for surfaces that are delaminated but cannot be composite patched, or if the void between layers exceeds 1/2". Composite patching is the process of reconstructing missing stone surfaces by applying layers of cement/sand mixtures to the deteriorated surface. For guidance on composite patching sandstone, see 04 47 00-1.

D For additional information on the characteristics, uses and problems associated with sandstone, see 04 47 00-1.

1.02 REFERENCES

A. American Society for Testing and Materials (ASTM), 100 Barr Drive, West Conshohocken, PA 19428, 610-832-9585 or FAX 610-832-9555.

PART 2---PRODUCTS

2.01 MANUFACTURERS

A. E. I. Dupont de Nemours & Co., Inc.
1007 Market Street
Wilmington, DE 19898
302/774-1000
Teflon and Nylon Plus/dowels

B. Ernest F. Fullam, Inc.
900 Albany-Shaker Road
Latham, NY 12110
518/785-5533
60 mm. syringe<</p>

C. Sika Corporation
201 Polito Ave.
Lyndhurst, NJ 07071
201/933-8800
Sikadur

D. Emerson & Cummings, Inc.
59 Walpole St.
Canton, MA 02021
617/821-4250
Microballoons

E. Conservation Materials Ltd.
P.O. Box 2884
Sparks, NV 89432

800/733-5283 or 702/331-0582
Fluid Coke

F. Samuel Cabot, Inc.
100 Hale Street
Newburyport, MA 01950
508/465-1900
Cab-o-sil

G. Thoro System Products
7800 NW 38th Street
Miami, FL 33166
305/597-8100
ACRYL-60

2.02 MATERIALS

A. For Epoxy Resin Grout:
1. Epoxy resin such as "Sikadur Lo Mod" (Sika Chemical Corporation) or approved equal.
2. Microballoons (Emerson and Cummings, Inc.), or approved equal.

B. For Cementitious Grout:
1. Cement: Portland cement ASTM C 150, Type II, white.
NOTE: DO NOT use gray cement; It is more difficult to color and work, shrinks more in curing, and may cause staining.
2. Microballoons (see Section 2.02 A.2. above)
3. Fluid coke (Conservation Materials, Ltd.), or approved equal
4. Cab-O-Sil (Cabot Corporation), or approved equal
5. Bonding agent such as ACRYL-60 (Thoro System Products), or approved equal

C. For Finish Coat:
1. Cement: Portland cement ASTM C 150, Type II, white. NOTE: DO NOT use gray cement; It is more difficult to color and work, shrinks more in curing, and may cause staining.
2. Lime: ASTM C 207, Type S, high plasticity: Increases cohesion during mixing, slows down the rate of cure, and moderates the qualities which could cause an excessively strong and moisture- resistant cement repair to fail and damage old stone.
3. Sand:
   - Local natural sand, graded or masonry mortar and conforming to ASTM C 144.
   - Sand color, size, and texture should match the original as closely as possible to provide the proper visual characteristics without other additives. A sample of the sand is necessary for comparison to the original, and should be approved by the consultant before beginning re-pointing work.
   - The color of the sand shall be the primary factor used to make mortars which match existing adjacent fabrics.
4. Crushed Sandstone:
   - Best repairs contain actual sandstone; Use stone removed from the area to be repaired, or other old stone with the same qualities.
   - Grind it fine enough to pass through a 16-mesh screen, and wash thoroughly.
5. Dry Pigments:
   - Use when available crushed stone is not sufficient to give a color match.
   - Use stable fade-proof mineral oxide pigments either natural- or synthetic-fade.
     NOTE: DO NOT exceed recommended manufacturer's suggested maximum

amounts; Too much pigment reduces strength and gives unstable color. Maximum pigment/cement ratio to be 1/10 (verify with manufacturer).

6. Additives:
    - ACRYL-60 (Thoro System Products), or approved equal: Use only latex admixtures that are labeled nonreemulsifiable like ACRYL-60; Do not use bonding agents that may break down in the presence of moisture. **CAUTION:** ADMIXTURE ABOVE RECOMMENDED AMOUNTS GIVES A GLOSSY, ARTIFICIAL LOOK, AND CAUSES A GREENISH TINT.

D. Clean, potable water

2.03 EQUIPMENT

A. Masonry drill with 1/4" drill bit

B. Pins (size to be 1/8" smaller than hole size)

C. 60 mm (2 oz.) single-use syringe designed for use by veterinarians (Ernest F. Fullam, Inc.), or approved equal.

D. Trowels

2.04 MIXES

A. Epoxy Resin Grout (simpler to use and stronger):
1. 1 part Sikadur Lo Mod, or approved equal
2. 2 parts Microballoons

-OR-

B. Cementitious Grout (less hard and more flexible):
1. 2 parts white Portland cement
2. 2 parts Microballoons
3. 2 parts fluid coke
4. 1 part Cab-O-Sil, sizes 0-1
5. 3 parts ACRYL-60, or equivalent

C. Finish Coat (for painting drill holes):
1. 1 part white Portland cement
2. 1 part Type S lime
3. 2-3 parts sand
4. 3-4 parts crushed sandstone
5. Dry pigments (maximum 10% by weight)
6. Mix with water and ACRYL-60, or equivalent in 5:1 ratio

PART 3---EXECUTION

3.01 EXAMINATION

A. Deterioration of sandstone due to moisture is evident as spalling, erosion, cracking, flaking and deteriorated mortar joints.

B. Before proceeding with any type of repair, examine the sandstone to determine the extent and the cause of the damage. Compare undamaged stone with areas of suspected decay. Use a magnifying glass if necessary. Look closely at the following:
1. Color: What color is the stone? Is there variation in color within individual stones? Is there variation between stones?
2. Pattern: Are there swirls, bands, or veins of color within the individual stones?
3. Texture: Is the stone surface rough or smooth? Is it hard or crumbly? Is the texture uniform or varied?

4. Surface Tooling: Is the face of the stone rough, smooth? Are there any chiseled grooves? Are there any decorative surface patterns? Are any parts damaged or missing?
5. Sand Grains: Is the grain size large or small? Are the grain shapes regular or irregular, uniform or varied? Does the grain structure appear densely or loosely packed together? Are there mica flakes present in the stone (these will often appear to glitter on the surface)?
6. Cementing Material: What color is the material between the grains? Do the grains project from the stone surface, giving the surface a rough texture?
7. Decay and Old Repairs: Is there evidence of erosion, crumbling, spalling or other types of deterioration? Is there evidence of previous patching or repairs?

3.02 ERECTION/INSTALLATION/APPLICATION

A. Seal any cracks with a non-oily clay.

B. Drill staggered rows of holes no more than 1/4 inch in diameter through the face of the stone.

C. Using a 60mm syringe, inject adhesive grout (either epoxy resin-based or cementitious acrylic-based) into the drilled holes.

D. Insert pins into the grout-filled holes and countersink them; The pins should be 1/8 inch smaller than the hole.

E. Patch holes with finish coat of composite patching material.

END OF SECTION

SECTION 04 90 00
MASONRY CLEANING

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK:

A. Sandstone masonry cleaning work includes the application of specific products and cleaners with low pressure rinsing to remove atmospheric carbon, dirt, paint oxidation, embedded clay and mud stains, rust, smoke, algae, tar, and plant growth from sandstone surfaces.

B. Abrasive blasting will not be permitted.

C. Extent restoration and cleaning work is indicated on drawings and notes and includes the following:

1. General cleaning of all sandstone coins around windows and doors in preparation for water repellent/anti-graffiti application under Section 071900.

1.2 QUALITY ASSURANCE:

A. Single Source Responsibility: Work under this Section and following Sections shall be performed by a single firm:

1. Special masonry cleaning/coating removal under Section 049150.

2. Water repellent/anti-graffiti coating application under Section 071900

B. Masonry Cleaning Specialist: Work must be performed by a firm having demonstrated successful experience in comparable stone masonry cleaning projects of this magnitude and employing personnel skilled in the masonry cleaning processes, operations, and scope of work indicated.

C. Manufacturer Qualifications: Manufacturer's supplying products shall have been regularly engaged in the formulation, manufacture and distribution of masonry restorative or masonry cleaning products.

D. Application Monitoring: The Owner reserves the right to retain a Cladding Consultant to perform observation/monitoring of the masonry restoration applications. Such monitoring shall not relieve the Contractor(s) of responsibility for proper execution and completion of the work.

E. Pre-Application Meeting: Convene a pre-application meeting 2 weeks before the start of application of masonry cleaning. Require attendance of parties directly affecting work of this section, including the Contractor, Architect, Cladding Consultant (as directed), Applicator, and water repellent/anti-graffiti coating manufacturer’s representative. Review environmental regulations, test panel procedures, protections of surrounding areas and nonmasonry surfaces, surface preparation, application, field quality control, final cleaning, and coordination with other work.

F. Test Area Cleaning: Demonstrate materials and methods to be used for cleaning each type of masonry surface and condition on sample panels of approximately 25 sq. ft. in area. Test areas shall be chosen by Owner and/or Architect.

1. Conduct testing on each building and each building exposure in unobtrusive locations on representative stained conditions. Tests shall employ the cleaning agents and procedures proposed for full-scale cleaning operations and shall include evaluation of all surfaces to be cleaned.

2. Technical representative from water repellent/anti-graffiti coating manufacturer shall be present during or after testing and shall confirm cleaned test area substrate is in compliance with water repellent/anti-graffiti warranty requirements and adequately prepared to receive coating.

3. Test adjacent non-masonry materials for possible reaction with cleaning materials. Test procedures shall include evaluation and techniques for protection of surrounding and adjacent non masonry surfaces from cleaning solutions and rinse waters.

4. The contractor may use on site water and electrical services necessary for these test areas.

5. The architect shall approve all test areas and application procedures prior to the start of full-scale cleaning operations.

6. Allow waiting period of not less than seven (7) calendar days, after completion of sample cleaning to permit study of sample panels for negative reactions.

7. Completed and approved test areas shall serve as standards by which all subsequent work in this section will be judged.

1.3 SUBMITTALS:

A. Product Data: Submit manufacturers' technical data for each product indicated including recommendations for their application and use. Include test reports, material safety data sheets, and certifications substantiating that products comply with requirements.

B. References: Submit list of local projects successfully completed by cleaning specialist with indication of names and telephone numbers of owners and architects and date of work.

C. Cleaning Program: Submit written program for each phase of cleaning process including protection of surrounding materials on building and site during operations. Describe in detail materials, methods and equipment to be used for each phase of work including disposal and obtain approval of local wastewater treatment authorities.

D. If alternative methods and materials to those indicated are proposed for any phase of cleaning work, provide written description, including evidence of successful use on other, comparable projects, and program of testing to demonstrate effectiveness for use on this project.

1.4 DELIVERY STORAGE AND HANDLING:

A. Deliver materials to site in manufacturer's original and unopened containers and packaging, bearing labels as to type and names of products and manufacturers.

B. Protect materials during storage and construction from wetting by rain, snow or groundwater.

C. Protect materials from deterioration by moisture and temperature. Store in a dry location or in waterproof containers. Keep containers tightly closed and away from open flames. Protect liquid components from freezing. Comply with manufacturer's recommendations for minimum and maximum temperature requirements for storage.

1.5 PROJECT CONDITIONS:

A. Clean masonry surfaces only when surface and air temperatures are between 50 deg. and 90 deg. F . Do not clean masonry when there is a chance of surface temperature dropping below 40 deg. F in the 7 days following application. Cleaning when temperatures are below freezing or will be overnight may harm masonry. If freezing

conditions have existed, let the masonry thaw before cleaning.

B. When possible, clean when surfaces are shaded from direct sunlight. Wet hot surfaces with fresh water immediately before applying cleaner to remove loose soiling and reduce surface temperature. Do not let cleaner dry on the surface. If drying occurs, lightly wet treated surfaces with fresh water and reapply the cleaner in a gentle scrubbing manner.

C. Do not clean masonry during winds of sufficient force to spread cleaning solutions to unprotected surfaces.

D. New mortar must cure 28 days prior to applying masonry cleaning products.

E. New sealant joints must cure a minimum of 7 days prior to applying masonry cleaning products.

PART 2 - PRODUCTS:

2.1 CLEANING MATERIALS AND EQUIPMENT:

A. Water for Cleaning: Clean, potable, free of oils, acids, alkalis, salts, and organic matter.

B. Brushes: Fiber bristle only recommended by manufacturer.

C. Hardwood hand scrapers: Corners shall be rounded to prevent gouging of masonry.

D. Metal scraping knives: Corners shall be rounded to prevent gouging of masonry.

E. Dusting brushes or brooms:

F. Polyethylene tarps, masking tape, nylon cord:

G. Buckets: Molded rubber or plastic shall be used for cleaning compounds.

H. Rinsing equipment: Capable of generating up 400-1000 psi at the wall with a water flow rate of 6-8 gallons per minute. Cold or hot water shall be employed with a fan spray tip of between 15 and 45 degrees for the restorative cleaning of all materials.

2.2 MASONRY CLEANING PRODUCT:

A. Subject to compliance with requirements, provide the following:

1. "Sure Klean® Light-Duty Restoration Cleaner", Prosoco, Inc., 3741 Greenway Circle, Lawrence, KS 66046. Phone: (800) 255-4255; Fax: (785) 830-9797. E-mail: CustomerCare@prosoco.com

PART 3 - EXECUTION

3.1 GENERAL

A. Before applying, read “Preparation” and “Safety Information” sections in the Manufacturer’s Product Data Sheet for Light Duty Restoration Cleaner. Do not dilute or alter.

3.2 PROTECTIONS

A. Take all necessary precautions to protect existing work and to prevent damage to new work.

B. Provide protections for any surfaces to remain that may be damaged by the work.

C. Obtain approval for proposed cleaning effluent disposal with local wastewater treatment authorities.

D. Dispose of run-off from cleaning operations by legal means and in manner which prevents soil erosion, undermining of paving and foundations, damage to landscaping, and water penetration into building interiors.

E. Erect temporary protection covers over pedestrian walkways and at points of entrance and exit for persons and vehicles which must remain in operation during course of masonry restoration work.

F. Protection can be eliminated subject to Architect's approval, if testing demonstrates no detrimental effect from exposure to cleaning solutions.

G. Landscape and lawn areas shall be protected with polyethylene tarps in areas adjacent to masonries being cleaned.

H. Non masonry surfaces, aluminum, wooden, and/or painted surfaces shall be protected with sheets of polyethylene, or other proven protective materials, firmly fixed and sealed to the surface.

I. Provide for the removal and subsequent reinstallation of surface mounted items where practical. Where not practical, such items shall be protected in place.

J. Prevent overspray of the cleaning materials caused by wind drift.

K. All open joints shall be temporarily caulked or otherwise protected to prevent intrusion of washing waters into the wall structure or building interior.

3.3 PREPARATION:

A. General: Comply with recommendations of manufacturers of chemical cleaners for protecting building surfaces against damage from exposure to their products.

B. Perform masonry cleaning work prior to installation of new roof membrane and insulation system

C. Protect persons, motor vehicles, surrounding surfaces of building whose masonry surfaces are being restored, building site, and surrounding buildings from injury resulting from masonry restoration work.

3.4 CLEANING EXISTING MASONRY, GENERAL:

A. Working from bottom to top prewet the surface with clean water.

B. Apply cleaner using a brush or roller. Gently scrub to improve results.

C. Let cleaner dwell for 5 to 15 minutes. Gently scrub heavily soiled areas. Don’t let cleaner dry on the surface. If drying occurs, lightly wet treated surfaces with fresh water. Reapply the cleaner in a gentle scrubbing manner.

D. Rinse thoroughly with clean water.

1. Equipment should be adjustable to reduce water flow rate and rinsing pressure as required for controlled cleaning of more sensitive surfaces. See also “Equipment” section of the Product Data Sheet.

E. Repeat steps A. through D. above if necessary.

F. Note: Application to surfaces exposed to direct sunlight or high winds may cause rapid drying.

G. Proceed with cleaning in an orderly manner; work from top to bottom and from one end of each elevation to the other.

H. Use only those cleaning methods indicated for each masonry material and location. Contractor shall collect all runoff water as not to allow water to enter public drainage of river, and shall dispose legally according to the AHJ.

I. Perform each cleaning method indicated in a manner which results in uniform coverage of all surfaces, including corners, molding, interstices and which produces an even effect without streaking or damage to masonry surfaces.

J. Rinse off chemical residue and soil by working upwards from bottom to top of each treated area at each stage.

K. Water Application Methods: Where water application methods are indicated, comply with the following:

L. Spray Applications: Spray apply water to masonry surfaces to comply with requirements indicated for location, purpose, water temperature, pressure, volume, an equipment unless otherwise indicated, hold spray nozzle no less than 6 inches from surface of masonry and apply water from side to side in overlapping bands to produce uniform coverage and an even effect.

END OF SECTION

SECTION 04 91 50
MASONRY RESTORATION

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

A. Extent of masonry restoration and cleaning work is indicated on drawings and notes and includes the following:

1. Repair of sandstone quoins, entablature and sills and rusticated sandstone. See section 044700.1 for sandstone repair.

2. Provide repair of vertical and horizontal masonry mortar joints involving raking joint, and filling joint with mortar as indicated on the plans. This includes but is not limited to repointing quoins around the windows. This includes inside the window opening. The allowance for mortar joint repair is indicated on the plans.

1.2 WORK IN OTHER SECTIONS

A. Masonry cleaning/coating removal specified in Section 04 90 00.

B. Water repellent/anti-graffiti coating is specified in Section 07 19 00

C. Joint sealers are specified in Section 07 90 00.

1.3 DEFINITIONS

A. Tuckpointing or Repointing: The process of placing new mortar in existing mortar joints, which have been previously raked out.

1.4 REFERENCES

A. Comply with the following requirements as listed herein.

1. MIW The Northwest Masonry Guide, available from the Masonry Institute of Washington, (425) 453-8820

1.5 QUALITY ASSURANCE:

A. Coordination with Masonry cleaning work: Work under this Section shall be coordinated with application of masonry cleaning and water repellent/anti-graffiti coating application specified under Sections 04 90 00 and 07 19 00

B. Masonry Restoration Specialist: Work must be performed by a firm having demonstrated successful experience in comparable masonry restoration projects of this magnitude. The firm shall employ only personnel skilled in the masonry cleaning processes, operations, and scope of work indicated.

C. Manufacturer Qualifications: Manufacturer's supplying products shall have been regularly engaged in the formulation, manufacture and distribution of masonry restorative or masonry cleaning products.

D. Repointing Samples: Prepare two separate sample joints, one for demonstrating methods and quality of workmanship expected in removal of mortar from joints and the other for demonstrating quality of materials and workmanship expected in pointing mortar joints.

1. The architect shall approve results prior to the start of full-scale repair operations.

1.6 SUBMITTALS:

A. Certification: Submit evidence of certification required by manufacturer of factory-mixed mortar materials.

B. Product Data: Submit manufacturers' technical data for each product indicated including recommendations for their application and use. Include test reports, material safety data sheets, and certifications substantiating that products comply with requirements.

C. References: Submit list of local projects successfully completed by restoration specialist with indication of names and telephone numbers of owners and architects and date of work.

D. Restoration Program: Submit written program for each phase of restoration process including protection of surrounding materials on building and site during operations. Describe in detail materials, methods and equipment to be used for each phase of restoration work including disposal.

E. If alternative methods and materials to those indicated are proposed for any phase of restoration work, provide written description, including evidence of successful use on other, comparable projects, and program of testing to demonstrate effectiveness for use on this project.

1.7 DELIVERY STORAGE AND HANDLING:

A. Deliver materials to site in manufacturer's original and unopened containers and packaging, bearing labels as to type and names of products and manufacturers.

B. Protect masonry restoration materials during storage and construction from wetting by rain, snow or groundwater, and from staining or intermixture with earth or other types of materials.

C. Protect grout, mortar and other materials from deterioration by moisture and temperature. Store in a dry location or in waterproof containers. Keep containers tightly closed and away from open flames. Protect liquid components from freezing. Comply with manufacturer's recommendations for minimum and maximum temperature requirements for storage.

1.8 ENVIRONMENTAL CONDITIONS

A. Surface and surrounding air temperatures must exceed 50 degrees F. but must be less than 85 degrees F.,

B. Safety Equipment shall be used in conformance with regulatory requirements. Include safety plan.

1.9 PROJECT CONDITIONS:

A. Do not repoint mortar joints or repair masonry unless air temperatures are between 40 deg. F (4 deg. C) and 80 deg. F (27 deg. C) and will remain so for at least 48 hours after completion of work.

B. Assure that required conditions are met for proper curing of repair mortar and patching materials. Take all steps necessary to prevent premature drying out of

repair work by placement of damp cloths, plastic sheeting, etc. as recommended by manufacturer of mortar materials.

C. Prevent grout or mortar used in repair work from staining face of surrounding masonry and other surfaces. Remove immediately grout and mortar in contact with exposed masonry and other surfaces.

D. Protect sills, ledges, cornices, and projections from mortar droppings.

PART 2. - PRODUCTS

2.1 MORTAR MATERIALS:

A. Mortar mix shall be specifically formulated for use with sandstone and shall be in accordance with GSA requirements for historic repair. Materials listed below, may or may not be part of the specific formulated mix.

B. Portland Cement: ASTM C 150, Type I or II.

1. Alkalis: Provide low-alkali content such that Portland cement meets optional low-alkali chemical requirement of ASTM C150, to help reduce efflorescence.

C. Hydrated Lime: ASTM C 207, Type S.

D. Aggregate for Mortar: ASTM C 144

1. For pointing mortar use aggregate graded with 100 percent passing the No. 16 sieve, sand to have rounded corners.

2. White Mortar Aggregates: Natural white sand or ground white stone.

3. Colored Mortar Aggregates: Ground marble, granite, or other sound stone, as required to match approved sample.

4. Colored Mortar Pigments: Natural and synthetic iron oxides and chromium oxides, compounded for use in mortar mixes. Use only pigments with record of satisfactory performance in mortars.

a. “SGS Mortar Colors”, manufactured by Solomon Grind-Chem Services, Inc.

b. “True Tone Mortar Colors”, manufactured by Davis Colors, Rockwood Industries.

c. “Sonobrite”,manufactured by Sonneborn B. P. Div., Rexnord Chemical Products, Inc.

d. Samuel Cabot Company

5. Color mixes to be compatible with standard mortar mixes and existing brick masonry. Do not reduce strength of mortar.

6. Color to be selected by the Project Representative.

7. Match original in color and texture

E. Water: Clean, free of oils, acids, alkalis and organic matter.

2.2 REPOINTING MORTAR MIXES:

A. Measurement and Mixing: Measure cementitious and aggregate material in dry condition by volume or equivalent weight. Do not measure by shovel, use known measure. Mix materials in a clean mechanical batch mixer.

B. Mixing Repointing Mortar: Thoroughly mix cementitious and aggregate materials together before adding any water. Then mix again adding only enough water to produce a damp, unworkable mix which will retain its form when pressed into a ball. Maintain mortar in this dampened condition for one to two hours. Add remaining water in small portions until mortar of desired consistency is reached. Use mortar within 30 minutes of final mixing; do not retemper or use partially hardened material.

C. Do not use admixtures of any kind in mortar, unless otherwise indicated.

PART 3 - EXECUTION

3.1 PRECONSTRUCTION MEETING:

A. Convene a pre-application meeting 2 weeks before the start of masonry restoration. Require attendance of parties directly affecting work of this section, including the Contractor, Architect, Applicator, and masonry restoration contractor. Review scope, procedures, protections of surrounding areas and nonmasonry surfaces, surface preparation, application, field quality control, final cleaning, and coordination with other work.

3.2 REPOINTING EXISTING MASONRY JOINTS:

A. Remove defective mortar by hand methods and hand tools as approved by the Project Representative where feasible. No electric or pneumatic chisels are permitted to clean joints. Special diamond blade power saws and pin routers may be allowed by the Project Representative for use in cleaning horizontal joints, but only if the Contractor can demonstrate that chipping of the masonry will be held to an acceptable tolerance.

1. Head joints shall be cut back using hand chisels and hammers. Do not cut, spall, or chip masonry.

2. More than 1/2 square inch of chip per square foot of masonry is unacceptable. Replace units chipped beyond acceptable limits. Clean mortar from the masonry surface within the joint so that new mortar bonds to masonry, not to old mortar.

3. Use chisels with a 1/2” maximum head for cutting out mortar. Sharpen chisels hourly to minimize chipping. Motorized equipment may be used if methods and contractors’ skill level are reviewed and approved by the Project Representative, prior to beginning work of this section.

4. Do not spall edges of units or widen joints. Replace units damaged by work of this section.

B. Joint Raking: Rake out mortar from defective joints to depths equal to 2-1/2 times their widths but not less than 1/2”, nor less than that required to expose sound, unweathered mortar for joints pointed with mortar, or provide sufficient depth for sealant and sealant backing for joints pointed with sealants. Remove mortar from masonry surfaces within raked-out joints to provide reveals with square backs and to expose masonry for contact with pointing mortar. Brush, vacuum, or dry

flush joints to remove dirt and loose debris.

C. Prepare joint surfaces for pointing with mortar by removing dust and mortar particles. Insure old mortar has been removed to reveal clean masonry for maximum bond.

D. Wet the masonry thoroughly 24 hours before beginning pointing work. Wet masonry again prior to pointing. Joints should be damp, but without standing water, to reduce hydration of pointing mortar.

3.3 MORTAR AND GROUT MIXES

A. General: Do not add admixtures including coloring pigments, air-entraining agents, accelerators, retarders, water repellent agents, anti-freeze compounds, or calcium chloride, unless otherwise directed.

B. Measurement and Mixing: Measure cementitious and aggregate material in a dry condition by volume or equivalent weight.

C. Mixing:

1. Combine and thoroughly mix cementitious materials, water, and aggregates in a mechanical batch mixer; comply with referenced ASTM standard for mixing time and water content, unless otherwise indicated.

2. Thoroughly mix cementitious and aggregate materials together before adding water. When dry ingredients are thoroughly intermixed, add proper amount of water and mix for not less than three (3) minutes. Mix adding only enough water to produce a damp, workable mix which will retain its form when prodded into a ball.

3. Maintain mortar in this dampened condition for 1 to 2 hours. Add remaining water in small portions until mortar of desired consistency is reached. Use mortar within 30 minutes of final mixing. Use of continuous mixers shall not be allowed for mortar preparation.

D. Mortar must be used within two (2) hours from completion. Discard expired mortar after two hours. Retempering of mixed mortar will not be allowed.

3.4 FINAL CLEANING:

A. After mortar has fully hardened, thoroughly clean exposed masonry surfaces of excess mortar and foreign matter using final masonry cleaner, stiff nylon or bristle brushes and clean water rinse, spray applied at low pressure.

B. Use of metal scrapers or brushes will not be permitted.

C. Use of raw acid or alkali cleaning agents will not be permitted.

END OF SECTION

SECTION 06 01 38
REPLACING DETERIORATED WOODWORK

PART 1---GENERAL

1.1 SUMMARY

A. This Section includes guidance on wood restoration work including repairing existing woodwork by removing damaged or deteriorated material and replacing with new to match existing.

B. See contract requirements for general project guidelines for historic preservation projects to be reviewed along with this procedure. These guidelines cover the following sections:
1. Safety Precautions
2. Historic Structures Precautions
3. Submittals
4. Quality Assurance
5. Delivery, Storage and Handling
6. Project/Site Conditions
7. Sequencing and Scheduling
8. General Protection (Surface and Surrounding)
These guidelines should be reviewed prior to performing this procedure and should be followed, when applicable, along with recommendations from the Building Envelope Consultant.

1.2 REFERENCES

A. AWI Quality Standard: Comply with applicable requirements of Architectural Woodwork Standards, published by the Architectural Woodwork Institute (www.AWInet.net), except as otherwise indicated.

1.3 SYSTEM DESCRIPTION

A. Performance Requirements: Submit written program for each phase of restoration process including protection of surrounding materials on building during operations. Describe in detail materials, methods and equipment to be used for each phase of restoration work.

1.4 QUALITY ASSURANCE

A. Mock-Ups: Prior to start of wood restoration work, prepare the following sample panels in building where directed by consultant or designated representative. Obtain consultant's or designated representative's acceptance of visual qualities before proceeding with the work. Retain acceptable panels in undisturbed condition, suitably marked, during construction as a standard for judging completed work.
1. Wood Repair: Prepare sample panels for each type of woodwork indicated to be patched, resurfaced, modified or replaced. Prepare mock-up panels on existing woodwork to demonstrate quality of materials and workmanship.

1.5 PROJECT/SITE CONDITIONS

A. Existing Conditions:

1. Installer shall advise Contractor of temperature and humidity requirements for woodwork installation areas. Do not install woodwork until required temperature and relative humidity have been stabilized and will be maintained in installation areas.
2. Maintain temperature and humidity in installation area as required to maintain moisture content of installed woodwork within a 1.0 percent tolerance of optimum moisture content, from date of installation through remainder of construction period. The fabricator of woodwork shall determine optimum moisture content and required temperature and humidity conditions.
3. Determine that surfaces to which finishes are to be applied are even, smooth, sound, clean, dry and free from defects affecting proper application. Correct or report defective surfaces to Contracting Officer.

PART 2---PRODUCTS

2.1 MATERIALS

A. New or Replacement Materials:
1. Wood Moisture Content: Provide kiln-dried lumber with an average moisture content range of 6% to 11% for interior work. Maintain temperature and relative humidity during fabrication, storage and finishing operations so that moisture content values for woodwork at time of installation do not exceed the above range.
2. Replacement Wood: Match species, grade, grain pattern, and other special characteristics of existing woodwork.

B. Clean, soft cloths

PART 3---EXECUTION

3.1 PREPARATION

A. Surface Preparation:
1. Condition woodwork to average prevailing humidity conditions in installation areas prior to installing.
2. Back prime woodwork on all surfaces which will be concealed with one coat of wood primer. Schedule delivery to allow time for application and drying of back prime coat before installation of woodwork.
3. Remove miscellaneous hardware, nails, etc., from all existing woodwork as required to provide a first class installation of new or replacement woodwork.
4. Prior to installation of new architectural woodwork, examine shop fabricated work for completion, and complete work as required, including back priming and removal of packing.

3.2 ERECTION, INSTALLATION, APPLICATION

A. Carefully remove at locations indicated any damaged or deteriorated woodwork. Unless indicated otherwise, replace the entire length of the existing damaged piece to the next butt joint.

B. For partial replacement of existing pieces, use a neat, well-fitted level cut with grain aligned in transparent finished wood.

C. Install new pieces as described below:
1. Install the work plumb, level, true and straight with no distortions. Shim as required using concealed shims.

2. Cut to fit unless specified to be shop-fabricated or shop-cut to exact size. Where woodwork abuts other finished work, scribe and cut for accurate fit. Before making cutouts, drill pilot holes at corners.
3. Standing and Running Trim: Install with minimum number of joints possible, using full-length pieces (from maximum length of lumber available) to the greatest extent possible. Stagger joints in adjacent and related members. Cope at returns, miter at corners, and comply with Quality Standards for joinery.
4. Anchor woodwork to anchors or blocking built-in or directly attached to substrates. Secure to grounds, stripping and blocking with countersunk, concealed fasteners and blind nailing as required for a complete installation. Except where prefinished matching fasteners heads are required, use fine finishing nails for exposed nailing, countersunk and filled flush with woodwork, and matching final finish where transparent finish is indicated.

D. Finish replacement woodwork to match adjacent woodwork surfaces.

3.3 ADJUSTING/CLEANING

A. Upon completion of this work, all floors, walls, and other adjacent surfaces that are stained, marred, or otherwise damaged by work under this section shall be cleaned and repaired and all work and the adjacent areas shall be left in a clean and perfect condition.

B. All completed work shall be adequately protected from damage by subsequent building operations and effects of weather. Protection shall be by methods recommended by the manufacturer of installed materials and as approved by the FPO or designated representative.

C. Repair damaged and defective woodwork wherever possible to eliminate defects functionally and visually; where not possible to repair properly, replace woodwork. Adjust joinery for uniform appearance.

D. Clean woodwork: Dust and damp wipe woodwork with a soft cloth dampened in clean water; dry rub with soft cloth to maintain the polish, rubbing along the grain of the wood.

E. Stain and Spot Removal:
1. Stains may be cleaned by prompt damp wiping with cloth dampened in clear water or rubbing with cloth dampened in solvent. Dry the wood with a soft cloth.
2. White spots may be removed by rubbing them with a small amount of linseed oil.

END OF SECTION

USPS Master Specifications, issued: 10/1/2020
Last revised: 10/1/2017

SECTION 06 01 39
PATCHING CRACKS AND HOLES IN WOODWORK

PART 1---GENERAL

1.1 SUMMARY

A. This Section includes guidance on patching cracks and small holes in woodwork.

B. See contract requirements for general project guidelines for historic preservation projects to be reviewed along with this procedure. These guidelines cover the following sections:
1. Safety Precautions
2. Historic Structures Precautions
3. Submittals
4. Quality Assurance
5. Delivery, Storage and Handling
6. Project/Site Conditions
7. Sequencing and Scheduling
8. General Protection (Surface and Surrounding)
These guidelines should be reviewed prior to performing this procedure and should be followed, when applicable, along with recommendations from the Building Envelope Consultant.

1.2 REFERENCES

A. AWI Quality Standard: Comply with applicable requirements of the latest edition of "Architectural Woodwork Standards", published by the Architectural Woodwork Institute (www.AWInet.org), except as otherwise indicated.

1.3 SYSTEM DESCRIPTION

A. Performance Requirements: Submit written program for each phase of restoration process including protection of surrounding materials on building during operations. Describe in detail materials, methods and equipment to be used for each phase of restoration work.

1.4 QUALITY ASSURANCE

A. Mock-Ups: Prior to start of wood restoration work, prepare the following sample panels in building where directed by FPO or designated representative. Obtain FPO's or designated representative's acceptance of visual qualities before proceeding with the work. Retain acceptable panels in undisturbed condition, suitably marked, during construction as a standard for judging completed work.
1. Wood Repair: Prepare sample panels for each type of woodwork indicated to be patched, resurfaced, modified or replaced. Prepare mock-up panels on existing woodwork to demonstrate quality of materials and workmanship.

1.5 PROJECT/SITE CONDITIONS

A. Existing Conditions:

1. Installer shall advise Contractor of temperature and humidity requirements for woodwork installation areas. Do not install woodwork until required temperature and relative humidity have been stabilized and will be maintained in installation areas.
2. Maintain temperature and humidity in installation area as required to maintain moisture content of installed woodwork within a 1.0 percent tolerance of optimum moisture content, from date of installation through remainder of construction period. The fabricator of woodwork shall determine optimum moisture content and required temperature and humidity conditions.
3. Determine that surfaces to which finishes are to be applied are even, smooth, sound, clean, dry and free from defects affecting proper application. Correct or report defective surfaces to Contracting Officer.

PART 2---PRODUCTS

2.1 MATERIALS

A. Patching Materials:
1. Wood Filler: Standard filler manufactured specifically for restorative patching of woodwork.
   a. Tint filler to match existing woodwork.
2. Sandpaper: No. 3/0 or No. 5/0 garnet paper.

B. Replacement Wood: Match species, grade, grain pattern, and other special characteristics of existing woodwork.

PART 3---EXECUTION

3.1 ERECTION, INSTALLATION, APPLICATION

A. Remove all minor surface imperfections such as scratches, dents, etc., by rubbing surface with a fine grit sandpaper.

B. Patch all holes and cracks in woodwork up to 1/16 (one sixteenth) inch across with wood filler tinted to match existing wood.

C. Carefully hand rub filled area with a fine grit sandpaper to match surface characteristics of adjacent woodwork.

D. Touch-up patch during finishing so that color and other appearance characteristics of filled area match the finish of adjacent woodwork.

E. Patch holes and cracks in woodwork 1/4 (one quarter) inch and greater across and woodwork damaged from hardware changes with wood plugs or wood patches or as directed by manufacturer.

F. Rout out hole or crack woodwork to receive plus or patch materials. Veneer-type patches shall be comparable to the thickness of the surrounding intact veneer and historically 1/16 (one sixteenth) to 1/20 (one twentieth) inch thick, referring to the thickness of the veneer.

G. All repair plugs and patches in wood with a transparent finish shall have grain aligned.

3.2 ADJUSTING/CLEANING

A. Upon completion of this work, all floors, walls, and other adjacent surfaces that are stained, marred, or otherwise damaged by work under this section shall be cleaned and repaired and all work and the adjacent areas shall be left in a clean and perfect condition.

B. All completed work shall be adequately protected from damage by subsequent building operations and effects of weather. Protection shall be by methods recommended by the manufacturer of installed materials and as approved by the FPO or designated representative.

C. Repair damaged and defective woodwork wherever possible to eliminate defects functionally and visually; where not possible to repair properly, replace woodwork. Adjust joinery for uniform appearance.

D. Clean woodwork: Dust and damp wipe woodwork with a soft cloth dampened in clean water; dry rub with soft cloth to maintain the polish, rubbing along the grain of the wood.

E. Stain and Spot Removal:
1. Stains may be cleaned by prompt damp wiping with cloth dampened in clear water or rubbing with cloth dampened in solvent. Dry the wood with a soft cloth.
2. White spots may be removed by rubbing them with a small amount of linseed oil.

END OF SECTION

USPS Master Specifications, issued: 10/1/2020
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SECTION 06 01 40
CLEANING AND REFINISHING OF WOODWORK

PART 1---GENERAL

1.1 SUMMARY

A. This Section includes guidance on cleaning and refinishing both shellacked and varnished woodwork.

B. See contract requirements for general project guidelines for historic preservation projects to be reviewed along with this procedure. These guidelines cover the following sections:
1. Safety Precautions
2. Historic Structures Precautions
3. Submittals
4. Quality Assurance
5. Delivery, Storage and Handling
6. Project/Site Conditions
7. Sequencing and Scheduling
8. General Protection (Surface and Surrounding)
These guidelines should be reviewed prior to performing this procedure and should be followed, when applicable, along with recommendations from the Building Envelope Consultant.

1.2 SUBMITTALS

A. Product Data: Submit product data for all materials selected that will be applied to existing woodwork.

B. Operation and Maintenance Data: Submit a dust control procedure.

1.3 QUALITY ASSURANCE

A. Field Samples: A sample area shall be restored and serve as a standard of quality in restoration of wood. The sample area will be restored by means of the approved process.

B. Each sample area must receive the approval of the Contracting Officer before a general application is made.

PART 2---PRODUCTS

2.1 MATERIALS

A. Wood Stain

B. Floor Varnish

C. Shellac

D. Alcohol

E. Paste Wax - Proprietary or job-mixed compound containing carnauba, beeswax, cadelilla, or ceresin mixed with turpentine.

F. Floor Wax

G. Wood Bleach: Solution of sodium perborate, hydrogen peroxide or proprietary mixture suitable for oak.

H. Wood Filler

I. Steel Wool

J. Sandpaper: Extra Fine Grit.

PART 3---EXECUTION

3.1 PREPARATION

A. Protection: Mask all adjacent surfaces and protect other exposed surfaces in the work area.

B. Surface Preparation:
1. Select an inconspicuous area on which to test materials and application for each method type required. Test area must be approved by the Contracting Officer. After each test area has been prepared, receive approval from the Contracting Officer before commencing general application.
2. Fill any split in existing wood and sand smooth prior to sealer application.

3.2 ERECTION, INSTALLATION, APPLICATION

A. General:
1. Follow manufacturer's application instructions.
2. Final appearance of woodwork must be uniform in all respects.

B. Refinishing When Removal of Existing Shellac is Required:
1. Coat wood with denatured alcohol. Apply with soft cloth. Scrape up residue as quickly as possible. Repeat application of alcohol until all shellac is removed.
2. Sand smooth.
3. Apply one coat of shellac with soft cloth.
4. Apply mixture of shellac and alcohol with soft cloth and allow to dry overnight.
5. Apply liberal amount of paste wax with soft cloth and allow to dry.
6. Buff wood lightly with steel wool.
7. Buff wood with soft brush.
8. Polish with soft cloth.
9. Other processes may be used as long as final results conform to quality standards and give uniform appearance.

C. Refinishing When Removal of Existing Wax is Required:
1. Rub wood with a soft cloth moistened in turpentine.
2. Apply liberal amount of paste wax with soft cloth and allow to dry.
3. Polish wood with soft cloth.

D. Refinishing Wood Floor:
1. Remove existing finish by sanding two or three times until bare wood is exposed.
2. Repair scratched or broken boards. Do not replace boards unless approved by the Contracting Officer.

3. Clean area of dust and sawdust.
4. Apply stain of same color as existing. Allow to dry overnight.
5. Apply two coats of floor varnish.
6. Apply two coats of floor wax.

3.4 ADJUSTING/CLEANING

A. Wash woodwork with mild detergent and water.

B. Dry immediately with clean cloth.

C. Apply a liberal amount of paste wax and allow to dry.

END OF SECTION

USPS Master Specifications, issued: 10/1/2020
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SECTION 06 01 41
REFINISHING INTERIOR WOOD

PART 1---GENERAL

1.1 PREFACE

A. Before undertaking any project involving paint removal, applicable state and federal laws on lead paint abatement and disposal must be considered and carefully followed. State and federal requirements may affect options available to owners on both paint removal and repainting. These laws, and any requirements prohibiting volatile organic compounds (VOCs), should be requested from the state historic preservation officer in each state. (From Preservation Brief 28, "Painting Historic Interiors"). Regulatory information may also be requested from the environmental protection agency (EPA) regional office and/or the state office of environmental quality.

1.2 SUMMARY

A. This Section includes guidance on removing an existing wood finish and refinishing with a stain, varnish or wax.

B. Safety Precautions:
1. Dispose of all used solutions, paint stripper residue and soiled rags in sealed non-combustible containers daily to prevent fire hazard
2. The Contractor shall maintain a healthy level of air circulation within the space being treated. Exhaust fans or other air moving devices shall be regularly employed and maintained to the satisfaction of the Contracting Officer or designated representative.
3. Areas being treated shall be curtained off from other trades or occupants to prevent fumes from reaching other parts of the building.
4. All workers in the area being treated shall wear appropriate safety devices, including but not limited to, respirators fitted with the correct cartridge, gloves, other clothing.

C. See contract requirements for general project guidelines for historic preservation projects to be reviewed along with this procedure. These guidelines cover the following sections:
1. Safety Precautions
2. Historic Structures Precautions
3. Submittals
4. Quality Assurance
5. Delivery, Storage and Handling
6. Project/Site Conditions
7. Sequencing and Scheduling
8. General Protection (Surface and Surrounding). These guidelines should be reviewed prior to performing this procedure and should be followed, when applicable, along with recommendations from the Building Envelope Consultant.

1.3 SUBMITTALS

A. Samples:
1. The Contractor shall refinish two (2) sample areas for approval by the consultant or designated representative. Locations of sample areas shall be as selected by the FPO or designated representative.
2. The Contractor shall obtain written approval from the FPO or designated representative of wood refinishing methods, materials, and sample panels before proceeding with the work of this section. Approved sample panels shall be marked

and protected for the duration of the project. They shall be used as the standard for similar work throughout the project.

3. In the case of rejection of the sample areas, these locations shall be re-stripped and refinished until approved by the FPO or designated representative.

1.4 QUALITY ASSURANCE

A. General Objective: The objectives of wood refinishing and cleaning are to give wood surfaces a smooth, uniform appearance consistent with the original design intent, and to preserve the inherent patina. Splotches, streaks, runs, or any other kind of spotty appearance shall not be accepted. Too aggressive cleaning or sanding shall not be accepted.

B. Work Standards: Basic reference and standard for wood refinishing shall be "Wood Finishing and Refinishing Revised Edition," by S.W. Gibbia, New York: Van Nostrand Reinhold Co., 1971.

C. Contractor: A firm with not less than five (5) years in wood refinishing and restoration. The Contractor shall be required to submit reference for six (6) other projects of similar nature. The consultant or designated representative reserves the right to approve or disapprove the use of the Contractor contingent upon their experience.

D. Refinish Standard: Sample areas shall be prepared which shall form a standard for wood refinishing.

E. Refinishing is defined as all the process(es) necessary to restore woodwork. Stripping is defined as the process of removing existing coatings from woodwork without damage to the wood. Finishing is defined as the process of applying stain and protective coating and all related preparatory and follow-up tasks. Cleaning is defined as the removal of dirt embedded in the upper finish layers and does not include the removal of any finish layer.

F. Single Source Responsibility: Provide compatible finish coating, thinner, sanding sealer, and wood filler that are produced by the same manufacturer.

G. Regulatory Requirements: Comply with municipal and Federal regulations governing the refinishing operations, chemical waste disposal, and scaffolding.

PART 2---PRODUCTS

2.1 MANUFACTURERS

A. Bonakemi USA, Inc.

B. Butcher Polish Company

C. 3M Consumer Products Group

D. The Sherwin Williams Co.

E. W.M. Barr & Company

2.2 MATERIALS

NOTE: Chemical products are sometimes sold under a common name. This usually means that the substance is not as pure as the same chemical sold under its chemical name. The grade of purity of common name substances, however, is usually adequate for stain removal work, and these products should be purchased when available, as they may be less expensive. Common names are shown below by an asterisk (*).

A. Commercial Paint and Varnish Remover such as "Citristrip" (W.M. Barr & Company), "Safest Stripper" (3M), or approved equal

B. Mineral Spirits:
   1. A petroleum distillate that is used especially as paint or varnish thinner.
   2. Other chemical or common names include Benzine* (not Benzene); Naphtha*; Petroleum spirits*; Solvent naphtha*.
   3. Potential Hazards: TOXIC AND FLAMMABLE.
   4. Safety Precautions:
      a. AVOID REPEATED OR PROLONGED SKIN CONTACT.
      b. ALWAYS wear rubber gloves when handling mineral spirits.
      c. If any chemical is splashed onto the skin, wash immediately with soap and water.
   5. Available from construction specialties' distributor, hardware store, paint store, or printer's supply distributor.

      -OR-

C. Turpentine:
   1. Typically used as a solvent and thinner.
   2. Potential Hazards: TOXIC AND FLAMMABLE.
   3. Safety Precautions:
      a. Work in a well ventilated area.
      b. Observe safety rules as turpentine is flammable, and the fumes can trip an ionization smoke detection system.
      c. Store soiled cloths in a metal safety container to guard against spontaneous combustion.
      d. Available from hardware store or paint store.

         -OR-

D. Solvent Wax Remover such as "Woodline Renovator" (Bonakemi USA, Inc.), or approved equal

E. Wood filler in color to match original stain.

   CAUTION: WOOD FILLERS CONTAINING A LINSEED OIL VEHICLE MAY CAUSE WHITE SPOTS TO DEVELOP IN THE LACQUER FINISH COAT.

F. Oil stain or universal stain (Sherwin Williams), or approved equal.

G. Alkyd or urethane-base satin varnish (Sherwin Williams), or approved equal.

H. Paste wax (non-yellowing) such as "Butcher's Paste Wax" (Butcher Polish Company), or approved equal.

2.3 EQUIPMENT

A. 000 steel wool

B. Steel or brass wire brushes

C. Stiff fiber bristle brushes

D. Putty knife or broad knife

E. Clean, dry cloths (cheese cloth or gauze)

F. Orbital Sander

G. Electric floor polisher

H. Nylon web scrubbing pads

I. Lamb's wool buffing pads

PART 3---EXECUTION

3.1 ERECTION, INSTALLATION, APPLICATION

A. Remove Existing Coating:

1. Work in areas approximately 4' by 4' at one time.
2. Apply chemical stripper using a brush or roller. Follow manufacturer's instructions.
3. Allow stripper to stand for length of time as recommended by manufacturer, depending upon the number of surface layers to be stripped; if necessary, cover with plastic sheeting to keep the stripper moist.
4. Using a broad knife or scrapper, remove paint and stripper from the surface.
5. Safely dispose of paint and stripper residue. Follow EPA regulations for disposal of lead-base paint.
6. Specifically for varnish buildup:
   a. Wet steel wool with solvent and rub over the wood surface to remove varnish buildup and to smooth out any checks in the surface.
   b. Replace steel wool frequently with clean, and continue the wiping process until a smooth surface is achieved.

NOTE: DO NOT USE WATER ON THE WOOD SURFACE.

7. Wipe wood with a clean cloth soaked in mineral spirits to remove chemical residue.
8. Allow to dry and dry-brush loose material from the surface using a short fiber bristle brush.
9. Repeat as necessary to sufficiently remove the previous coating.
10. Special Procedures for Varnished Wood Floors:
    a. Sand the floor with an orbital sander to remove stains, old finish and indentations in the wood. Sand in direction of wood grain.

NOTE: DO NOT REMOVE MORE THAN 1/16" OF THE WOOD SURFACE.

    b. Remove dust from floor with vacuum and tack cloth.

11. Special Procedures for Waxed Wood Floors:

NOTE: Some sophisticated modern waxes, formulated for long wear and for high production commercial use, require special strippers that most often are not appropriate

for historic materials because the ingredients cannot be readily detected. Some silicon waxes can only be removed by abrasion.

NOTE: WORK IN A WELL-VENTILATED ROOM. OBSERVE SAFETY RULES AS BOTH THE TURPENTINE AND THE WAX ARE FLAMMABLE, AND THE FUMES CAN TRIP AN IONIZATION SMOKE DETECTION SYSTEM. STORE SOILED CLOTHS IN A METAL SAFETY CONTAINER TO GUARD AGAINST SPONTANEOUS COMBUSTION.

a. Dampen small area of floor with turpentine or mineral spirits, or apply wax remover evenly over the floor following manufacturer's instructions.
b. Using a 16" electric floor machine, scrub lightly with a piece of 000 steel wool or nylon web scrubbing pad. Change steel wool or pads as they become clogged with old wax.
c. Wipe up solvent and wax with clean cloths.
d. Continue cleaning in this manner until all of the old wax has been removed. Allow floor to dry, approximately 15-20 minutes after the last area has been cleaned.
e. Apply wax and buff. Apply two or more thin coats rather than one thick coat. Buff after each coat.

B. Fill scratches, gouges and dents with wood filler.

C. Apply a high quality paste wood filler with a brush to all open grain wood species (i.e., Oak) before staining.
1. Dampen a clean cloth with mineral spirits and wipe the paste off across the grain of the wood to enable the filler to remain in the grain depressions.
2. Allow the filler to fully dry before applying the stain or varnish.

D. Stain and Varnish the Wood:
1. On a SAMPLE area 12 inches square, brush apply oil stain or universal stain.
2. Allow the stain to penetrate the wood for at least 5-10 minutes.
3. Remove excess stain with a clean, lint-free cloth. Rub the wood parallel to the grain.
4. Allow the stain to dry at least 12 hours before applying varnish.
5. Brush apply one coat of alkyd or urethane-base satin varnish. Varnish should be thin, but not watery.
6. Allow to dry for at least 24 hours.
7. When dry, buff the surface with 000 steel wool and dry-brush with a fiber bristle brush to remove any metal particles left behind from the steel wool. A tack rag may also be used to remove dust from the surface.
8. Apply second coat of satin varnish (full-strength).
9. Allow to fully dry.
10. Buff the surface with 000 steel wool and dry-brush with a fiber bristle brush to remove any metal particles left behind from the steel wool.
11. If sample is approved by FPO or designated representative, follow the same procedures for all remaining wood.
12. For areas subject to wear (i.e., handrails, wainscot, etc.):
    a. After buffing the final coat of varnish, apply one coat of non-yellowing paste wax.

END OF SECTION

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SECTION 06 20 00
FINISH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Interior trim to be removed and reinstalled after repair and refurbishment or that maybe disturbed by the work of this contract.

B. Related Documents: The Contract Documents, as defined in Section 011000 - Summary of Work, apply to the Work of this Section. Additional requirements and information necessary to complete the Work of this Section may be found in other documents.

1.2 REFERENCES

A. American Woodworking Institute (AWI):
   1. AWI AWQS - Architectural Woodwork Quality Standards, 6th Edition Version 1.0.

B. United States Department of Commerce Product Standard (PS):
   1. PS 20 - American Softwood Lumber Standard.

1.3 QUALITY ASSURANCE

A. Perform work in accordance with AWI Custom quality.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Section 016000 - Material and Equipment: Transport, handle, store, and protect products.

1.5 ENVIRONMENTAL REQUIREMENTS

A. Environmental Impact:
   1. Formaldehyde: Products containing formaldehyde will not be permitted.

1.6 SITE ENVIRONMENTAL PROCEDURES

A. Indoor Air Quality:
   1. Temporary ventilation: As specified in Section 013543 - Environmental Procedures.

PART 2 - PRODUCTS

2.1 INTERIOR FINISH CARPENTRY

A. Trim and boards for transparent finish: Rift sawn oak stained to match existing.

B. Trim for painted finish: Softwood suitable for exposure and use.

C. Sheathing : Formaldehyde free board product sanded smooth and painted each exposed side and each exposed edge as specified in Section 09900 - Painting.
   1. PrimeBoard, Incorporated, Wahpeton, ND (701) 642-1152.
   2. Medite, Roseville, CA (800) 676-3339.
   3. Naturall Fibre Board, Minneapolis, KS (785) 392-9922.
   4. Section 016000 - Product Requirements: Product options and substitutions. Substitutions: Permitted.

2.2 ACCESSORIES

A. Adhesive: Type recommended by AWI to suit application. Low VOC
   1. Titebond by Franklin International, Columbus, OH, (800) 877-4583.
   2. Famowood/Famobond by Eclectic Products (800) 767-4667.
   3. Almighty Adhesive by American Formulating & Manufacturing (619) 239-0321.
   4. Section 01600 - Product Requirements: Product options and substitutions. Substitutions: Permitted.

B. Fasteners: Size and type to suit application.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Site Verification of Conditions:
   1. Examine areas in which Work of this Section is to be performed.
   2. Verify that surfaces and site conditions are ready to receive Work.

B. Report in writing to Construction Manager prevailing conditions that will adversely affect satisfactory execution of Work of this Section. Do not proceed with Work until unsatisfactory conditions have been corrected.

C. Beginning of installation means acceptance of existing conditions.

3.2 INSTALLATION

A. Install work in accordance with AWI AWQS.

B. Install Work plumb, level, and straight without distortion; use concealed shims. Scribe and cut Work to fit adjoining work. Anchor Work items to nailers or blocking or directly to substrate using concealed fasteners.

C. Install shelving units, standards, and brackets at locations as indicated on Drawings.

3.3 ADJUSTING

A. Adjust installed work. Test installed work for rigidity and ability to support loads.

B. Adjust moving or operating parts to function smoothly and correctly.

3.4 CLEANING

A. Section 017704 - Contract Closeout: Cleaning installed work.

B. Clean shelves, hardware, fittings, and fixtures.

3.5 SITE ENVIRONMENTAL PROCEDURES

A. Indoor Air Quality:
   1. Temporary ventilation: As specified in Section 013543 - Environmental Procedures.

END OF SECTION

USPS MSBD Specifications issued: 6/17/2010
Last revised: 9/17/2000

SECTION 07 19 00
WATER REPELLANT/ANTI-GRAFFITI COATING

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

A. Single Source Responsibility: Work under this Section and masonry cleaning work under Division 4 shall be performed by a single firm:

B. Provide preparation, materials, services, and equipment required and apply clear water repellent and graffiti resistant coating to existing brick masonry and CMU surfaces.

1. Water repellent and graffiti resistant coating shall be applied to all exterior masonry walls and capstones including masonry benches and screen walls.

2. Water repellent shall be applied full height and anti-graffiti coating shall be applied to 8’-0” above grade or as indicated on drawings.

1.2 WORK IN OTHER SECTIONS

A. Masonry Cleaning is specified in Section 04 90 00.

B. Masonry Restoration in Section 04 91 50.

C. Joint sealers are specified in Section 07 90 00.

1.3 REGULATORY REQUIREMENTS:

A. Products shall comply with State and local regulations concerning AIM (Architectural, Industrial and Maintenance) coatings regarding Volatile Organic Content (VOC).

B. Asbestos Free Certification: All new materials and products installed as part of this work shall be certified to be free of asbestos in accordance with the requirements of Section 01 70 00. Each Supplier and subcontractor shall warrant to the Contractor that materials and products provided by them are free of asbestos.

1.4 SUBMITTALS

A. Product Data: Submit manufacturer’s product data sheets for the specified clear water repellent material. Submit description for protection of surrounding areas and nonmasonry surfaces, surface preparation, application, and final cleaning.

B. Applicator Qualifications: Submit qualifications of applicator; stating applicator has a minimum of three (3) years experience using the specified or equivalent products. Provide a list of several most recently completed projects, including project name and location, names of owner and architect, and description of products used, substrates, and method of application.

C. Environmental Regulations: Submit applicable environmental regulations.

D. VOC Certification: Submit certification that water repellents furnished comply with regulations controlling content of volatile organic compounds (VOC).

E. Sample warranty.

1.5 QUALITY ASSURANCE

A. Single Source Responsibility: Work under this Section and masonry cleaning under Sections 04 90 00 and 04 91 50 shall be performed by a single firm:

B. Applicator Qualifications:

1. Experience in the application of the specified or equivalent products.

2. Employs persons trained for the application of the specified products.

C. The Owner reserves the right to retain a Cladding Consultant to perform observation/monitoring of the masonry restoration applications. Such monitoring shall not relieve the Contractor(s) of responsibility for proper execution and completion of the work.

D. Pre-Application Meeting: Convene a pre-application meeting 2 weeks before the start of application of water repellents. Require attendance of parties directly affecting work of this section, including the Contractor, Architect, Applicator, Cladding Consultant (as directed), and water repellent/anti-graffiti coating manufacturer's representative. Review environmental regulations, test panel procedures, protections of surrounding areas and nonmasonry surfaces, surface preparation, application, field quality control, final cleaning, and coordination with other work.

E. Field Quality Control Mock-Up Panels: Before full-scale application, review manufacturer's product data sheets to determine the suitability of each product for the specific surfaces. Apply each water repellent to test panels to determine appropriate strength, coverage rates, compatibility, effectiveness, surface preparation, application procedures, and desired results.

1. Manufacturer's Field Services:

a. Provide written certification that surface preparation methods and final condition have manufacturer's approval and comply with the warranty.

b. Furnish Test Area: Furnish results of test area absorption on each type of substrate. Test results shall determine application rate.

c. Before a product application, the following field evaluation will be done. The cost of the field testing will be the responsibility of the Water Repellent manufacturer.

1) Prepare a minimum of 4' x 4' area to be sprayed with water repellent. The area will be determined by the Owner. Apply water repellent to half of test panel and graffiti-resistant coating to the other half in accordance with manufacturers written instructions. Allow 24 hours or until test panels are thoroughly cured before evaluating final appearance and results.

2) Water Repellency Test - After allowing the manufacturer's recommended time for the sample to cure, run a RILEM Method II.4 uptake test on the treated area and an adjacent untreated area. Place one tube on the treated and tube on an untreated area. For masonry substrates place a tube on the brick or block, and one tube each on the bottom of the head joint and center of the bed joint. Owner must be present for the application of the water repellent and the test. Acceptable minimum results are as stated in the warranty provisions. Coverage rates used to pass the test section must be used on the entire project. Provide written test results to the Owner and Architect.

3) Anti-graffiti Test - Apply graffiti paint to test panels and allow at least 48 hours or longer for paint to cure. Apply cleaner to test for ease of removal of graffiti. Repeat cycles of cleanings as directed by Architect. Do not begin full-scale application until test panels are inspected and approved by the Architect.

2. The Owner reserves the right to perform Rilem uptake testing on treated wall areas to confirm compliance with indicated water repellency.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Delivery: Deliver materials to the job site in original, tightly sealed, unopened containers, with labels clearly identifying product name and manufacturer. Verify that the product matches that of the original sample applied on the test panel.

B. Storage and Handling: Store containers upright in a cool, dry place. Keep away from sparks and open flame. Store and handle materials in accordance with manufacturer's written instructions. Must use product within 48 hours of opening container. Store in a secure area to avoid tampering and contamination. Water based materials must be kept from freezing.

C. Record Keeping: Contractor / applicator shall record product batch number or lot number for warranty purposes.

1.7 PROJECT CONDITIONS

A. Surface Preparation: Contractor or Applicator shall be responsible for providing a clean, dry substrate free from oil, dirt, grease, efflorescence or any other coating which may inhibit penetration and adhesion of water repellent. This requirement applies to new construction, renovation or remedial projects. Substrate must be completely dry prior to applying product.

B. Building Occupancy during Application: Contractor shall coordinate with Owner's Representative the shutdown of outside air ventilation and other mechanical units as required to prevent entrance of product fumes from entering building.

1. Water repellent/ anti-graffiti product shall not be applied during times of student occupancy. Refer to the building activiey schedule on Cover Sheet, AC1 of drawings.

C. Environmental Requirements:

1. Air and substrate temperature must be above 40° F (4° C) or below 95° F (35° C) unless otherwise specified by manufacturer.

2. Do not proceed with application if the substrate is wet or contains frozen water.

3. Do not apply material when rain is predicted within 24 hours; or earlier than five (5) days after the substrate became wet.

4. Do not use spray methods of application under windy conditions.

D. Protection:

1. Special precautions should be taken to avoid fumes from entering the building being treated. Ventilation systems and fresh air intakes should be turned off and covered.

2. Protect shrubs, metal, glass, vehicles, and other building hardware from overspray.

1.8 WARRANTY

A. Applicator's Warranty: Contractor shall provide a standard materials and labor warranty for installed system for a period of two (2) years from Date of Substantial Completion against water intrusion greater than the level indicated below. When notified in writing from Owner, Manufacturer shall, promptly and without inconvenience and cost to Owner correct said deficiencies.

1. When tested per Rilem II.4 methods, water absorption at any location on wall shall not exceed:

a. Brick Masonry: 1.0 mil/20 minutes.

b. Concrete Masonry: Brick Masonry: 1.0 mil/20 minutes.

2. Exclusions: Warranty does not include deterioration or failure of coating due to unusual weather phenomena, failure of prepared and treated substrate, formation of new joints or cracks in excess of 1/16 inch, fire, vandalism, or abuse by maintenance equipment.

B. Manufacturer's Warranty: Manufacturer shall provide a materials only warranty that their product will prevent water penetration for a period of ten (10) years from Date of Substantial Completion.

1. Prior to application complete and submit the required information for pre-approval of warranty. Submit to manufacturer a minimum of ten (10) days prior to application.

2. After completion of the water repellent application, submit remainder of warranty application to manufacturer for processing. Include material batch number / lot number previously recorded. Upon receiving a validated warranty, submit copies to Architect and building owner.

1.9 PROJECT CONDITIONS

A. Weather and Substrate Conditions: Do not proceed with application of water repellent (except with written recommendation of manufacturer) under any of the following conditions:

1. Ambient temperature is less than 40 deg F (4 deg C) for over a 24 hour period.

2. Cementitious surfaces have cured for less than 28 days and including sealant joints.

3. Rain or temperatures below 40 deg F (4 deg C) are predicted for a period of 24 hours. Allow substrate to dry for a minimum of 48 hours after rain or 72 hours after power washing.

4. Earlier than 24 hours after surfaces became wet.

5. Substrate is frozen or surface temperature is less than 40 deg F (4 deg C).

6. Windy condition such that repellent may be blown to vegetation or substrates not intended.

7. Surface or ambient temperature 95 degrees or above.

B. Sealer Coordination:

1. Verify compatibility with curing compounds, patching materials, repair mortar, paints, sealants, etc. to be used on substrate to ensure compatibility with the water repellent.

PART 2 PRODUCTS

2.1 MANUFACTURER

A. Chemprobe Coating Systems, L.P., Masonry Division of Tnemec Company, Inc., 2805 Industrial Lane, Garland, TX 75041 PH: 800/760-6776 PH: 972/271-5551 FX: 972/271-5553

B. Professional Products of Kansas, Inc., 4456 S. Clifton, Wichita, KS 67216, 316-522-9300, Fax: 316-522-9346, Toll-Free: 800-676-7346

2.2 WATER REPELLENTS

A. Manufacturer's technical representative shall determine which of their products below are appropriate to install at each project site.

1. Chemprobe Coating System, LP

a. Dur A Pell GS, Series 626, Solvent based 15% solids RTV Silicone Rubber Water Repellent and Graffiti Protection System.

2. Professional Products of Kansas

a. Professional® Water Sealant, Extra Strength:

b. Professional® Water Sealant & Anti-Graffitiant, Super Strength:

2.3 SELECTED PRODUCTS

A. The water repellent and graffiti resistant coating products selected are a standard of quality and based on manufacturers recommendations for execution. Application procedure and coverage rates must be in conformance with effectiveness of testing samples submitted, recommendation of application rates suggested, approved manufacturers standards and as a minimum, that specified herein.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify the following:

1. The required joint sealants have been installed.

2. New masonry and mortar has cured a minimum of 28 days.

3. Surface to be treated is clean, dry, and contains no frozen moisture.

4. Environmental conditions are appropriate for application.

5. The pH is within acceptable limits on walls cleaned with alkaline products.

3.2 PROTECTION

A. Protect surrounding areas, glass, landscaping, building occupants, pedestrians, vehicles, and nonmasonry surfaces during the work from contact with water repellents.

B. Special precautions should be taken to prohibit fumes from entering the building being treated. Ventilation systems and fresh air intakes should be turned off and covered.

3.3 SURFACE PREPARATION

A. Clean all dirt, oil, grease, mold, mildew, efflorescence, or any other coating or material from surfaces that interfere with penetration, performance, adhesion, or aesthetics of water repellents per appropriate Division 4 Sections.

B. Repair, patch, and fill all cracks, voids, defects, and damaged areas in surface as approved by the Architect. Allow repair materials to cure completely before application of water repellents.

C. Seal all open joints. Allow sealant to fully cure before application of water repellents.

D. Allow new masonry and concrete construction and repointed surfaces to cure for a minimum of 28 days before application of water repellents.

3.4 APPLICATION

A. Apply water repellents and graffiti resistant coatings to substrates in accordance with manufacturer’s written instructions, environmental regulations, and application procedures determined from the test panel results approved by the Architect. Graffiti protection requires a two-coat application. In most cases, the first coat will be Super Strength. The second coat will be either Super or Extra, depending on the porosity of the substrate.

B. Apply to clean, dry, cured, and properly prepared surfaces approved by Architect.

C. Apply material as shipped by the manufacturer. Do not dilute.

D. Do not apply to below-grade surfaces.

E. Do not apply to painted surfaces.

F. Do not apply to compensate for structural or material defects in substrates.

G. Do not apply to substrates such as asphalt or polystyrene which may be affected by the solvent carrier.

H. Apply material using low pressure, sprayer (40 - 50 psi), a garden sprayer with solvent resistant fittings, foam roller, or brush of natural bristle or foam. Do not use an airless sprayer.

1. Vertical Applications: When spraying, material should be applied from the top down, in even strokes, allowing for a 4 to 6 inch run down to ensure adequate saturation and penetration. A test should be conducted to determine if it is necessary to apply a mist coat prior to flood coating. Allow first coat to dry to the touch prior to applying second coat. Apply the second coat by flood coating from the top down.

3.5 FIELD QUALITY CONTROL

A. Inspection: Inspect the water repellent and graffiti resistant coating work with the Contractor, Architect, applicator, and manufacturer's representative, and compare with test panel results approved by the Architect. Determine if the substrates are suitably protected by the water repellents.

B. Manufacturer's Field Services: Provide the services of a manufacturer's authorized field representative to verify specified products are used; protection, surface preparation, and application of water repellents are in accordance with the manufacturer's written instructions; and the test panel is approved by the Architect.

3.6 FINAL CLEANING

A. Upon completion of all work covered in a specification, the Contractor shall remove all equipment, material and debris, leaving the area in an undamaged and acceptable condition. Dispose of water repellent containers according to state and local environmental regulations.

B. Repair, restore, or replace to the satisfaction of the Architect, all materials, landscaping, and nonmasonry surfaces damaged by exposure to water repellents.

END OF SECTION

SECTION 07 62 00
SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Flashings and sill-flashings and fabricated sheet metal items.
2. Sheet metal accessories.

B. Related Documents: The Contract Documents, as defined in Section 011100 - Summary of Work, apply to the Work of this Section. Additional requirements and information necessary to complete the Work of this Section may be found in other Documents.

1.2 REFERENCES

A. American Society for Testing and Materials (ASTM):
1. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.

B. Federal Specifications (FS):
1. FS TT-C-494 - Coating Compound, Bituminous, Solvent Type, Acid Resistant.

1.3 SUBMITTALS

A. Submittal procedures as required by the contract.
a. Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations, and installation details.

1.4 QUALITY ASSURANCE

A. Qualifications:
1. Fabricator: Company specializing in manufacturing Products specified with minimum 5 years documented experience.
2. Installer: Company specializing in performing the Work of this Section with minimum 5 years documented experience.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Section 01 60 00 - Product Requirements: Transport, handle, store, and protect Products.

B. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.

C. Prevent contact with materials which may cause discoloration or staining.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Copper: ASTM B 370; temper H00 (cold-rolled) except where temper 060 is required for forming; 16 oz. (0.0216-inch thick) (0.55 mm) except as otherwise indicated.

2.2 ACCESSORIES

A. Fasteners: Copper

B. Protective Backing Paint: FS TT-C-494, Bituminous.

C. Sealant: Specified in Section 07 90 00.

2.3 FABRICATION

A. Form sections true to shape, accurate in size, square, and free from distortion or defects.

B. Fabricate cleats of same material as sheet, interlocking with sheet.

C. Form pieces in longest possible lengths.

D. Hem exposed edges on underside 1/2; miter and seam corners.

E. Form material with flat lock seams, except where otherwise indicated. At moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.

F. Tin edges of copper sheet to be soldered. Solder shop formed metal joints. After soldering, remove flux. Wipe and wash solder joints clean. Weather seal joints.

G. Fabricate gutters to profile and size indicated on Drawings.

H. Fabricate downspouts to profile and size indicated on Drawings.

I. Fabricate accessories in profile and size to suit gutters and downspouts.
   1. Anchorage Devices: Type recommended by fabricator.
   2. Gutter Supports: Brackets.
   3. Downspout Supports: Straps.

J. Seal metal joints.

2.4 FACTORY FINISHING

A. Primer Coat: Finish concealed side of metal sheets with primer compatible with finish system, as recommended by finish system manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 01 73 00 - Execution Requirements: Verification of existing conditions before starting work.

B. Verification of Conditions: Verify that field measurements, surfaces, substrates and conditions are as required, and ready to receive Work.
   1. Verify roof openings, curbs, pipes, sleeves, ducts, and vents through roof are solidly set, reglets in place, and nailing strips located.
   2. Verify roofing termination and base flashings are in place, sealed, and secure.

C. Report in writing to Contracting Officer prevailing conditions that will adversely affect satisfactory execution of the Work of this Section. Do not proceed with Work until unsatisfactory conditions have been corrected.

D. By beginning Work, Contractor accepts conditions and assumes responsibility for correcting unsuitable conditions encountered at no additional cost to the United States Postal Service.

3.2 PREPARATION

A. Install starter and edge strips, and cleats before starting installation.

B. Install surface mounted reglets true to lines and levels. Seal top of reglets with sealant.

C. Paint concealed metal surfaces with protective backing paint to a minimum dry film thickness of 15 mil .

3.3 INSTALLATION

A. Secure flashings in place using concealed fasteners.

B. Apply plastic cement compound between metal flashings and felt flashings.

C. Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.

D. Seal metal joints watertight.

END OF SECTION

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Last revised: 9/17/2001

SECTION 07 90 00
JOINT SEALERS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Preparing sealant substrate surfaces.
   2. Sealant and backing.

B. Related Documents: The Contract Documents, as defined in Section 011000 - Summary of Work, apply to the Work of this Section. Additional requirements and information necessary to complete the Work of this Section may be found in other documents.

1.2 REFERENCES

A. American Society for Testing and Materials (ASTM):
   1. ASTM C717 - Standard Terminology of Building Seals and Sealants.
   2. ASTM C834 - Specification for Latex Sealants.
   3. ASTM C920 - Specification for Elastomeric Joint Sealants.
   4. ASTM D1056 - Flexible Cellular Material- Sponge or Expanded Rubber.

B. Federal Specifications (FS):
   1. FS SS-S-200 - Sealing Compounds, Two Component, Elastomeric, Polymer Type, Jet-Fuel Resistant, Cold Applied.
   2. FS TT-S-1657 - Sealing Compound, Single Component Butyl Rubber Based Solvent Release Type (for Buildings and other Types of Construction).

1.3 SUBMITTALS

A. Submittal procedures according to the contract:
   1. Product Data: Product chemical characteristics, performance criteria, substrate preparation, limitations, and color availability.

B. Section 017704 - Closeout Submittals: Procedures for closeout submittals.
   1. Warranty: Submit manufacturer warranty with forms completed in United States Postal Service name and registered with manufacturer.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Company specializing in performing Work of this Section with minimum 5 years documented experience.

1.5 DELIVERY, STORAGE AND HANDLING

A. Section 01 60 00 - Product Requirements: Transport, handle, store, and protect products.

B. Deliver Products in manufacturer's original unopened containers or packages with labels intact, identifying product and manufacturer, date of manufacture, lot number, shelf life, curing time, and mixing instructions, where applicable.

C. Store and handle materials to prevent deterioration or damage due to moisture, temperature changes, contaminants, or other causes.

1.6 PROJECT CONDITIONS OR SITE CONDITIONS

A. Environmental Requirements: Install sealant during manufacturer's recommended temperature ranges and weather conditions for application and cure. Consult manufacturer when sealant cannot be applied during recommended conditions.

1.7 WARRANTY

A. Section 017704 - Closeout Submittals: Procedures for closeout submittals.

B. Warranty:
1. Submit written warranty signed by sealant manufacturer agreeing to replace sealants and accessories which fail because of loss of cohesion or adhesion or which do not cure.
2. Warranty Period: 5 years or longer per the manufacturers' standard warranties.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Subject to compliance with project requirements, manufacturers offering specified items which may be incorporated into the work include the following:
1. Bostik, Inc, Huntingdon Valley, PA, (800) 523-2678, (125) 674-5600.
2. Dow Corning, Midland, MI (517) 496-4000.
3. GE Silicones, Waterford, NY (518) 233-3330.
4. Mameco International, Cleveland, OH, (800) 321-6412, (216) 752-4400.
5. W.R. Meadows, Inc, Elgin, IL (800) 342-5976, (847) 683-4500.
6. Nomaco, Inc., Zebulon, NC, (919) 269-6500.
7. Pecora Corporation, Harleysville, PA, (800) 523-6688, (215) 723-6051.
8. Sika Corporation, Lyndhurst, NJ, (800) 933-7452, (201) 933-8800.
9. Sonneborn Building Products Div. ChemRex, Inc., Shakopee, MN (800) 243-6739, (612) 496-6000.
10. Tremco, Beachwood, OH, (800) 852-3821, (216) 292-5000.
11. USG Corp., Chicago, IL (800) 874-4968, (312) 606-4000.

2.2 BUILDING SEALANTS (See Sealant Schedule at the end of this Section for specific use of sealants.)

A. Urethanes:
1. Type 1: Two-Part Urethane: Self-Leveling, ASTM C920, Type M, Grade P, Class 25.
   a. Chem-Calk CC-550, by Bostik.
   b. Vulkem 245, by Mameco.
   c. Vulkem 255, Wide-Joint, by Mameco.
   d. NR-200 Urexpan, by Pecora Corporation.
2. Type 2: Two-Part Urethane: Non-Sag, ASTM C920, Type M, Grade NS, Class 25.

a. Chem-Calk 500, by Bostik.
b. Vulkem 227, by Mameco.
c. Sonolastic NP 2, by Sonneborn Building Products, ChemRex Inc.

3. Type 3: One-Part Urethane: Self-Leveling, ASTM C920, Type S, Grade P, Class 25.
   a. Vulkem 45, by Mameco.
   b. Urexpan NR-201, by Pecora Corporation.
   c. Sonolastic SL1, by Sonneborn Building Products, ChemRex Inc.
   d. Sikaflex 1C-SL by Sika.
4. Type 4: One-Part Urethane: Non-Sag, ASTM C920, Type S, Grade NS, Class 25.
   a. Chem-Calk 900, by Bostik.
   b. Vulkem 116, by Mameco.
   c. Sonolastic NP I, by Sonneborn Building Products, ChemRex Inc.

B. Silicones:
1. Type 1: One-Part Silicones: ASTM C920, Type S, Grade NS, Class 50.
   a. 795 Silicone Building Sealant, by Dow Corning.
   b. 864 Architectural Silicone Sealant, by Pecora Corporation.
2. Type 2: One-Part Silicones: ASTM C920, Type S, Grade NS, Class 25.
   a. 999-A Silicone Building & Glazing Sealant, Dow Corning.
   b. Construction 1200 Sealant, General Electric Company.
3. Type 3: One-Part Silicones: ASTM C920, Type S, Grade NS, Class 25. Vertical Surfaces Only.
   a. Construction 1200 Sealant, General Electric Company.
   b. 999-A, Dow Corning.
   c. 860 Glaziers and Contractors Silicone Sealant, by Pecora Corporation. (colors only)
4. Type 4: One-Part Silicones: ASTM C920, Type S, Grade NS, Class 25 or 50.
   a. 786 Mildew Resistant Silicone Sealant, Dow Corning.
   b. SCS 1700 Sanitary Sealant, General Electric.
   c. 898 Silicone Sanitary Sealant, Pecora Corporation.

C. Acoustical Sealants:
1. Type 1: AC-20 FTR Acoustical and Insulation Sealant, by Pecora Corporation.
2. Type 2: 60+ Unicrylic, by Pecora Corporation.
3. Type 3: Sheetrock Acoustical Sealant, by United States Gypsum.

D. Butyls:
1. Type 1: One-Part Butyl, Non-Sag, FS TT-S-1657.
   a. Chem-Calk 300, by Bostik.
   b. BC-158 Butyl Rubber, by Pecora Corporation. (ASTM C1085)

E. Preformed Compressible & Non-Compressible Fillers:
1. Type 1: Backer Rod - Closed cell polyethylene foam:
   a. HBR Backer Rod, by Nomaco.
   b. #92 Greenrod, by Nomaco.
   c. Sonofoam Closed-Cell Backer Rod, Sonneborn Building Products, ChemRex Inc.
2. Type 2: Backer Rod - Open cell polyurethane foam:
   a. Denver Foam, by Backer Rod Mfg Inc.
   b. Foam Pack II, by Nomaco.
3. Type 3: Neoprene compression seals:
   a. WE, WF, and WG Series, by Watson Bowman & Acme Corp.
   b. Will-Seal 150 Precompressed Expanding Foam Sealants, by Will-Seal, a Division of Illbruck.
4. Type 4: Butyl Rod: Kirkhill Rubber Co. (714)529-4901.

F. Bond Breaker Tape: Polyethylene tape of plastic as recommended by sealant manufacturer, to be applied to sealant-contact surfaces where bond to substrate of joint filler must be avoided for proper performance of sealant

2.3 PAVING SEALANTS

A. Type 1: Two-Part Urethane: Self-Leveling, ASTM C920, Type M, Grade P, Class 25.
   1. Vulkem 202, by Mameco. (Jet Fuel Resistant) (FS SS-S-200D, Type H only)
   2. NR-300 Urexpan, by Pecora Corporation. (FS SS-S-200E)

B. Type 2: One-Part Urethane: Self-Leveling, ASTM C920, Type S, Grade P, Class 25.
   1. Sonomeric 1 Sealant, by Sonneborn Building Products, ChemRex Inc. (FS SS-S-200E)
   2. Vulkem 45, by Mameco.

2.4 COLORS

A. Generally use sealant colors matching color of material joint is located in.

B. Where a joint occurs between two materials of differing colors and Contractor cannot determine which material to match, contact Contracting Officer for selection.

2.5 ACCESSORIES

A. Joint Cleaner: Provide type of joint cleaning compound recommended by sealant manufacturer for joint surfaces to be cleaned.

B. Primer: As recommended by sealant manufacturer.

C. Masking tape and similar accessories to protect surfaces from damage.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 01 73 00 - Execution Requirements: Verification of existing conditions before starting work.

B. Verification of Conditions: Verify that field measurements, surfaces, substrates and conditions are as required, and ready to receive Work.
   1. Verify that joint widths are in conformance with sealant manufacturer allowable limits.
   2. Verify that contaminants capable of interfering with adhesion have been cleaned form joint and joint properly prepared.

C. Report in writing to Contracting Officer prevailing conditions that will adversely affect satisfactory execution of the Work of this Section. Do not proceed with Work until unsatisfactory conditions have been corrected.

D. By beginning Work, Contractor accepts conditions and assumes responsibility for correcting unsuitable conditions encountered at no additional cost to the United States Postal Service.

3.2 PREPARATION

A. Prepare and size joints in accordance with manufacturer's instructions. Clean substrates of dirt, laitance, dust, or mortar using solvent, abrasion, or sandblasting as recommended by manufacturer. Remove loose materials and foreign matter which might impair adhesion of sealant.

B. Verify that joint backing and release tapes are compatible with sealant. Verify sealant is suitable for substrate. Verify that sealant is paintable if painted finish is indicated.

C. Protect materials surrounding work of this Section from damage or disfiguration.

3.3 INSTALLATION

A. Install sealant in accordance with manufacturer's published instructions.

B. Prime or seal joint surfaces where recommended by sealant manufacturer. Do not allow primer or sealer to spill or migrate onto adjoining surfaces.

C. Install backer rod and bond breaker tape where required by manufacturer.

D. Install preformed compressible and non-compressible fillers in accordance with manufacturer's published instructions.

E. Install sealants to depths recommended by sealant manufacturer in uniform, continuous ribbons free of air pockets, foreign embedded matter, ridges, and sags, "wetting" joint bond surfaces equally on both sides.

F. Tool joints concave unless shown otherwise. Where horizontal joints are between a horizontal surface and a vertical surface, fill joint to form slight cove so that joint will not trap moisture and foreign matter. Dry tool joints. Do not use soap, water, or solvent to tool joints.

G. Epoxy Floor Joint Sealant: Install sealant at floor construction and control joints in accordance with manufacturer's published instructions and initially under manufacturer's supervision.

3.4 CURING

A. Cure sealants in compliance with manufacturer's published instructions.

3.5 CLEANING

A. Remove excess and spillage of sealants promptly as the work progresses, using materials and methods as recommended by sealant and substrate manufacturers. Clean adjoining surfaces to eliminate evidence of spillage without damage to adjoining surfaces or finishes.

3.6 SEALANT SCHEDULE

A. Exterior Joints:
   1. Perimeters of exterior openings where frames and other penetrations meet exterior facade of building: precast concrete, brick, CMU, polymer reinforced concrete.
      a. Sealant Urethane Type 2

b. Sealant Silicone Type 1 (for prefinished materials only)

2. Expansion and control joints in exterior surfaces of cast-in-place concrete walls, precast architectural wall panels.
   a. Sealant Urethane Type 2
   b. Sealant Urethane Type 4
   c. Preformed Compressible & Non-Compressible Filler Type 1
3. Expansion and control joints in exterior surfaces of unit masonry walls and polymer reinforced concrete, including at metal panels.
   a. Sealant Urethane Type 2
4. Coping joints, coping-to-facade joints, cornice and wash, or horizontal surface joints not subject to foot or vehicular traffic.
   a. Sealant Urethane Type 2
   b. Sealant Urethane Type 4
   c. Sealant Silicone Type 1 (for prefinished materials only)
5. Exterior joints in horizontal wearing and non-wearing surfaces.
   a. Sealant No. Urethane Type 1
   b. Sealant No. Urethane Type 3
   c. Preformed Compressible & Non-Compressible Filler Type 1
6. Paving joints and curbs.
   a. Sealant Urethane Type 4
   b. Paving Sealant Type 2
7. Setting bed for threshold and saddles.
   a. Sealant Acoustical Type 1
8. Painted metal lap or flashing joints.
   a. Sealant Silicone Type 1

B. Interior Joints:
1. Seal interior perimeters of exterior openings.
2. Expansion and control joints on interior of exterior cast-in-place concrete walls.
3. Expansion and control joints on interior of exterior precast, architectural wall panels.
4. Expansion and control joints on interior of exterior masonry walls.
5. Perimeters of interior hollow metal and aluminum frames.
6. Interior masonry vertical control joints and intersecting masonry walls; CMU-to-CMU, CMU-to-concrete.
7. Joints at intersection of exterior masonry walls and interior gypsum board partitions.
8. For all of the above interior joints:
   a. Sealant Urethane Type 2
   b. Sealant Urethane Type 4
   c. Sealant Silicone Type 1 (for prefinished materials only)
9. Exposed interior control joints in drywall and concealed joints.
   a. Sealant Acrylic, Latex, Type 1
   b. Sealant Acoustical Type 1
   c. Sealant Acoustical Type 3
   d. Sealant Butyl Type 1
10. Joints of underside of precast beams or planks.
    a. Sealant Urethane Type 2
    b. Sealant Urethane Type 4
11. Joints at tops of non-load bearing masonry walls at underside of cast-in-place concrete.
    a. Sealant Urethane Type 2
    b. Sealant Urethane Type 4
12. Perimeter of bath fixtures: sinks, tubs, urinals, waterclosets, basins, vanities, etc.
    a. Sealant Silicone Type 4
13. Interior expansion and control joints in floor surfaces exposed to foot traffic.
    a. Sealant Urethane Type 2
    b. Sealant Urethane Type 4
    c. Preformed Compressible & Non-Compressible Filler Type 1

14. Interior saw-cut contraction joints in exposed concrete floors exposed to forklift traffic.
    a. Paving Sealant Type 1
15. Interior non-moving joints, including control, contraction, or construction joints, in interior floor slabs exposed to heavy duty traffic.
    a. Paving Sealant Type 1
16. Painted metal lap joints.
    a. Sealant Silicone Type 1

C. Glazing:
1. Structural Glazing.
    a. Sealant Silicone Type 2
    b. Sealant Silicone Type 3
2. General Purpose Glazing.
    a. Sealant Silicone Type 3
3. End Damming.
    a. Sealant Butyl Type 1

END OF SECTION

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Last revised: 7/21/2009

SECTION 085200
WOOD WINDOW REPAIR

PART 1 - GENERAL

1.1 SUMMARY

A. Work included in this section:
   1. Repair of all existing wood window frames.
   2. Removal and repair of all sashes
   3. Removal and salvage of all existing glazing and reinstallation.
   4. Painting of all window frames and sashes
   5. Make sure all windows are operating as intended prior to this work.

B. Related Documents: The Contract Documents, as defined in Section 011000 - Summary of Work, apply to the Work of this Section. Additional requirements and information necessary to complete the Work of this Section may be found in other Documents.

1.2 ENVIRONMENTAL REQUIREMENTS

A. Repair materials included must meet all current environmental standards.

1.3 WARRANTY

A. Section 017704 - Closeout Procedures and Training: Procedures for closeout submittals.

B. Special Craftsmanship Warranty:
   1. Window Restoration Company shall provide the Owner a five (5) year NDL Warranty for all refurbishment and repair work completed. The warranty shall include leaks at the sashes, deterioration of finishes and mechanical operation of the sashes.

   2. Include coverage for degradation of color finish.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Wood:
   1. Match existing wood. Contractor shall have the wood tested and verified in order to match materials appropriately.

B. Fasteners:
   1. Stainless steel or as appropriate for the existing wood in the windows as not to cause splitting or damage.

C. Oil based glazing compound:

   1. DAP 33 glazing putty
   2. Sarco glazing compound

3. Or approved equal

2.2 FABRICATION

A. Remove sashes to shop for repair work.

B. Provide temporary protection at windows.

C. Remove and store existing window mechanisms and hardware for reinstallation.

D. Remove existing paint from sashes and frames (contractor shall assume existing paint to be lead containing).

E. Contractor shall examine existing wood of frames and sashes to determine structural integrity. Replace sections of wood framing as required.

F. Remove and store existing glazing for reinstallation.

G. Refurbish frames and sashes. Paint frames and sashes.

H. Reinstall glass (existing and new).

I. Reinstall sashes, hardware and mechanisms. Ensure windows are operable.

2.3 FINISHES

A. Exterior Surfaces: Remove existing paint complete; apply 3 coats of white paint to match existing. See paint specification.

B. Interior Surfaces: Remove existing finish complete; apply 3 coats of clear polyurethane.

PART 3 - EXECUTION

3.1 REPAIR & REFURBISH WORK

A. Prior to the bid, contractor shall inspect all windows and determine the repair and refurbishment necessary for this project and provide a full and complete bid for all windows to be repaired and refurbished in order to provide long term service. See drawings and specifications.

B. Remove both sashes in each window for shop repair and refurbishment. Stamp or mark each sash and frame to verify each sash is reinstalled at its original location. Contractor shall include the complete fabrication of 2 new sashes to match existing of all window types.

C. Remove all hardware. Store hardware for reinstallation. Inspect all hardware and replace components as necessary to provide fully functioning sashes and windows. Contractor shall include in his bid the replacement of 20 sash chords (chains), 20 pulley wheels, and 20 pairs of weights.

D. Provide temporary weather protection in window, which will provide light and keep envelope watertight.

E. Remove all glazing – clean and store for reinstallation.

F. Remove existing paint from frames and sashes to expose the existing wood. Paint removal shall include lead abatement practices – contractor shall assume paint is lead containing. Paint removal shall be in such a way as not to damage wood surface or cause chemical damage to the structure of the wood.

G. Repair all damaged areas and surface defects with acceptable wood filler – two part epoxies, which are sandable and can receive paint finish. Replace wood sections of frames and sashes as required to maintain structural integrity. Contractor shall match as closely as possible the type of wood. Reinforce all joints as required with dowels and or wood glue.

H. Replace muntins as required.

I. Sand frames and sashes to a smooth finish in order to receive specified finishes and apply mineral spirits.

J. Prime all glass bedding surfaces with an oil-based primer.

K. Reinstall glass. Set glass in a bed of silicone sealant. Fix glass in muntin frames with glazing points and set with oil-based glazing compound. Glazing compound shall cure for a minimum of 14 days prior to reinstallation. Contractor shall include in his bid the replacement of 20 glass units. Note – if the contractor breaks glass units during the course of this work, replacement is at his expense and not to be passed onto the USPS.

L. Prime all window surfaces, allow to cure. Apply 1 coat of latex – white and 2 coats to match existing color per paint specification. Replace sealant joint at window frame/brick façade.

M. Paint frames – interior and exterior to match existing color.

N. Reinstall hardware and reinstall sashes, so that windows operate freely.

O. Reinstall storm windows, Set in double sided butyl tape around the perimeter of the storm window.

END OF SECTION

SECTION 08 80 00
GLAZING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Clear glass (match existing) replacement where required.
   2. Glass with security film.

B. Related Documents: The Contract Documents, as defined in Section 011000 - Summary of Work, apply to the Work of this Section. Additional requirements and information necessary to complete the Work of this Section may be found in other Documents.

1.2 REFERENCES

A. American National Standards Institute (ANSI):
   1. ANSI Z97.1 - Safety Performance Specifications and Methods of Test for Safety Glazing Material Used in Buildings.

B. American Society for Testing and Materials (ASTM):
   1. ASTM C920 - Standard Specification for Elastomeric Joint Sealants.
   2. ASTM C1036 - Standard Specification for Flat Glass.
   3. ASTM C1048 - Standard Specification for Heat-Treated Flat Glass-Kind HS, Kind FT Coated and Uncoated Glass.
   4. ASTM D2000 - Standard Classification System for Rubber Products in Automotive Applications.
   5. ASTM F1233 - Standard Test Method for Security Glazing Materials and Systems.

C. Consumer Product Safety Standards for Architectural Glazing. CPSC 16 CFR, Part 1201.

D. Flat Glass Marketing Association (FGMA):
   1. FGMA - Glazing Manual and Glazing Sealing Systems Manual.

1.3 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Procedures for submittals.
   1. Product Data:
      a. Glass: Structural, physical and environmental characteristics, size limitations, special handling or installation requirements.
      b. Glazing compound: Provide chemical, functional, and environmental characteristics, limitations, special application requirements.
   2. Samples:
      a. Glazing: Submit one sample 12 x 12 inches (300 x 300 mm) in size of each type of glazing, illustrating tinting, and finish of glazing materials. Label each sample indicating kind, quality and manufacturer.
   3. Assurance/Control Submittals:
      a. Certificates: Manufacturer's certificate that Products meet or exceed specified requirements.

b. Qualification Documentation: Submit documentation of experience indicating compliance with specified qualification requirements.

B. Section 01 77 04 – Closeout Submittals: Procedures for closeout submittals.
1. Submit written special warranty with forms completed in United States Postal Service name and registered with manufacturer as specified in this section.

1.4 QUALITY ASSURANCE

A. Identification: Each unit of tempered glass and burglar resistant glazing shall be permanently identified by the manufacturer. The identification shall be etched or ceramic fired on the glass and be visible when the unit is glazed.

B. Perform Work in accordance with FGMA Glazing Manual.

C. Installer Qualifications: Company specializing in performing the Work of this Section with minimum 5 years documented experience.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Section 016000 - Product Requirements: Transport, handle, store, and protect Products.

1.6 PROJECT CONDITIONS OR SITE CONDITIONS

A. Environmental Requirements:
1. Do not install glazing when ambient temperature is less than 40 degrees F.
2. Maintain minimum ambient temperature before, during and 24 hours after installation of glazing compounds.

1.7 WARRANTY

A. Section 01 77 04 - Closeout Submittals: Procedures for closeout submittals.

B. Special Warranty:
1. Include coverage for cracking, breakage, and replacement of same.
a. Warranty Period: 1 year.
2. Include coverage for sealed glass units from seal failure, interpane dusting or misting, and replacement of same.
a. Warranty Period: 10 years.
3. Include coverage for delamination of laminated glass and replacement of same.
a. Warranty Period: 5 years.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Subject to compliance with project requirements, manufacturers offering Products which may be incorporated in the Work include the following:
1. Pilkington Libbey-Owens-Ford, Toledo, OH (800)221-0444.

2. PPG Industries, Pittsburgh, PA (412) 434-2858 (800) 377-5267.
3. Viracon, Owatonna, MN (800) 533-2080.

B. Subject to compliance with project requirements, manufacturers offering polycarbonate products which may be incorporated in the Work include the following:
1. Sheffield Plastics, Incorporated Sheffield, MA (413) 229-8711 (800) 628-5084.
2. GE Plastics, Pittsfield, MA (800) 451-3147.

C. Subject to compliance with project requirements, manufacturers offering security film products which may be incorporated in the Work include the following:
1. 3M, St. Paul, MN (800) 480-1704.

D. Section 016000 - Product Requirements: Product options and substitutions. Substitutions: Permitted.

2.2 GLASS MATERIALS

A. Clear Glass: 1/4 in. thick plate glass.

B. Security Film: Security film of a minimum 0.007 inch (0.1778 mm) on the inner side of panel. Film shall be translucent similar to sand blasted glazing.

2.3 GLAZING COMPOUNDS

A. Polysulphide Sealant: Two component, chemical curing, non-sagging type; cured Shore A hardness of 15-25.

B. Silicone Sealant: Single component, chemical curing; capable of water immersion without loss of properties; non-bleeding, non-staining; cured Shore A hardness of 15-25.
1. Color: Clear.

C. Acrylic terpolymer compounded especially for glazing; non-hardening, non-staining, and non-bleeding.

2.4 GLAZING ACCESSORIES

A. Setting Blocks: Resilient blocks of 70 to 90 Shore A durometer hardness; compatible with glazing sealant.

B. Spacers: Resilient blocks of 40 to 50 Shore A durometer hardness; self adhesive on one side; compatible with glazing sealant.

C. Filler Rods: Closed cell or jacketed foam rods of polyethylene, butyl, neoprene, polyurethane, or vinyl; compatible with glazing sealant.

D. Joint Cleaners, Primers, and Sealers: As recommended by glazing sealant manufacturer.

E. Gaskets: ASTM D2000, SBC 415 to 3BC 620; extruded or molded neoprene or EPDM, black.

F. Mastic: Non-solvent type adhesive as recommended by mirrored glass manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 01 73 00 - Execution Requirements: Verification of existing conditions before starting work.

B. Verification of Conditions: Verify that field measurements, surfaces, substrates and conditions are as required, and ready to receive Work.
   1. Verify that openings for glazing are correctly sized and within tolerance.
   2. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and ready to receive glazing.

C. Report in writing to Contracting Officer prevailing conditions that will adversely affect satisfactory execution of the Work of this Section. Do not proceed with Work until unsatisfactory conditions have been corrected.

D. By beginning Work, Contractor accepts conditions and assumes responsibility for correcting unsuitable conditions encountered at no additional cost to the United States Postal Service.

3.2 PREPARATION

A. Clean contact surfaces with solvent and wipe dry.

B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.

C. Prime surfaces scheduled to receive sealant.

3.3 GLAZING

A. Install glazing in sashes to match existing.

B. Install spacers inside and out except where preshimmed tape or glazing gaskets are to be used.

C. Set each piece in a series to other pieces in pattern draw, bow, or other visually perceptible characteristics.

D. Provide glazing sealants and gaskets as required for particular glazing application. Coordinate with other Sections for material compatibility.

E. Gaskets:
   1. Provide adequate anchorage, particularly for driven-in wedge gaskets.
   2. Miter and weld ends of channel gaskets at corners to provide continuous gaskets.
   3. Seal face gaskets at corners with sealant to close opening and prevent withdrawal of gaskets from corners.

F. Do not leave voids in glazing channels except as specifically indicated or recommended by glass manufacturer. Force sealant into channel to eliminate voids. Tool exposed surfaces to slight wash away from joint. Trim and clean promptly.

3.4 FIELD QUALITY CONTROL

A. Section 01 40 00 - Quality Control: Field testing and inspection.

B. Inspect preparation and installation of glass.

3.5 CLEANING

A. Section 01 73 00 - Execution Requirements: Cleaning installed work.

B. Remove glazing materials from finish surfaces.

C. Remove labels after Work is complete.

D. Clean glass and adjacent surfaces.

3.6 PROTECTION

A. Section 01 73 00 - Execution Requirements: Protecting installed work.

B. After installation, mark pane with an 'X' by using removable plastic tape or paste. Do not mark reflective glass units.

END OF SECTION

SECTION 09 21 08
CONCEALING WATER STAINS ON PLASTER SURFACES

PART 1---GENERAL

1.1 SUMMARY

A. This Section includes guidance on concealing water stains on plaster walls or ceilings using a shellac-based primer sealer. A product, such as white-pigmented shellac can be used to seal, prime and block out existing stains, prohibiting them from bleeding through finish layers of paint.

B. See 011001ra-H "General Project Guidelines for Historic Preservation Projects" for general project guidelines to be reviewed along with this procedure. These guidelines should be reviewed prior to performing this procedure and should be followed, when applicable, along with recommendations from the Consultant. The guidelines cover the following sections:
1. Safety Precautions
2. Historic Structures Precautions
3. Submittals
4. Quality Assurance
5. Delivery, Storage and Handling
6. Project/Site Conditions
7. Sequencing and Scheduling
8. General Protection (Surface and Surrounding)

PART 2---PRODUCTS

2.1 MANUFACTURERS

A. Zinsser Brand
Rustoleum Inc.
Evanston, IL

B. Kilz Brand
Masterchem Industries
Santa Ana, CA

2.2 MATERIALS

A. White-pigmented shellac such as "Kilz" (Kilz/Masterchem), "Zinsser" (Zinsser/Rustoleum), or approved equal. Both are available from hardware stores in spray cans or brushable liquid.

2.3 EQUIPMENT

A. Clean sponge

B. Stiff, fiber bristle brush

C. Paint brush, roller or airless sprayer

PART 3---EXECUTION

3.1 EXAMINATION

A. Before proceeding with steps to conceal water stains, examine the plaster and substrate material for potential sources of moisture and make repairs as required.
   1. Look for signs of water infiltration: Examination may show where the water is entering.
   2. If possible, examine the condition of the back-up material:
      a. CAREFULLY EXAMINE the wall for open gaps or cracks in joints and around openings that could allow water to enter the building.
         1) Are joints properly caulked or sealed?
         2) Are flashings and drips in good condition?
         3) Are there open or eroded mortar joints in copings or in sills?
      b. Carefully note the condition and profile of the mortar joints.
      c. Repair cracks in masonry and/or repoint as necessary before proceeding with the cleaning operations.
   3. Examine wall sections and details of construction: Carefully examine roof and wall junctures and flashing details for possible sources of moisture entry.

3.2 ERECTION, INSTALLATION, APPLICATION

A. After source of moisture has been eliminated, allow the surface to thoroughly dry out.

B. Carefully remove any surface deposits and loose paint using a stiff fiber bristle brush only. Fill cracks and holes as required.

C. Wipe the surface with a clean, damp cloth.

D. Apply white-pigmented shellac over the stained area using a brush, roller or airless sprayer. Follow manufacturer's instructions.
   1. Depending on the severity of the stain, multiple coats may be required. If so, allow the first coat to thoroughly dry (typically 45 minutes) before proceeding with additional coats.
   2. If using a brush or roller, apply additional coats in the same direction as the first coat.
   3. If the surface is to be repainted with a high-hiding paint, spot-priming only the stained areas is acceptable. However, if a high-hiding paint is NOT used to finish the surface, spot-priming is NOT RECOMMENDED, as primed areas may appear shiny through the paint finish. (Note: Many ceiling paints have little hiding strength). In such cases, the entire wall or ceiling surface should be primed with the white-pigmented shellac before repainting to produce a more uniform final appearance.

E. Prime and repaint the entire surface with oil or latex paint as required. For guidance on painting, see "General Guidelines for Painting Exterior and Interior Surfaces."

END OF SECTION

USPS Master Specifications, issued: 10/1/2020
Last revised: 10/1/2017

SECTION 09 23 01
PATCHING HAIRLINE CRACKS IN PLASTER

PART 1---GENERAL

1.1 SUMMARY

A. This Section includes guidance on patching hairline cracks in plaster with reinforcing tape and joint compound.

B. Cracks may be cyclical, opening and closing with seasonal variation in humidity which causes the lath to swell and shrink.

C. See 011001ra-H for general project guidelines for historic preservation projects to be reviewed along with this procedure. These guidelines should be reviewed prior to performing this procedure and should be followed, when applicable, along with recommendations from the Consultant The guidelines cover the following sections:
1. Safety Precautions
2. Historic Structures Precautions
3. Submittals
4. Quality Assurance
5. Delivery, Storage and Handling
6. Project/Site Conditions
7. Sequencing and Scheduling
8. General Protection (Surface and Surrounding)

1.2 PROJECT/SITE CONDITIONS

A. Environmental Requirements:
1. Keep the room temperature above 55 degrees F until the plaster/joint compound has set.
2. Provide plenty of ventilation as the plaster dries.

PART 2---PRODUCTS

2.1 MANUFACTURERS

A. USG Corporation
www.usg.com

B. TKO Waterproof Coatings, LLP
www.tkocoatings.com

2.2 MATERIALS

A. Joint compound such as "Sheetrock Setting-Type Joint Compound" (USG Corp.), "Krack-kote" (TKO Waterproof), or approved equal.
1. "Krack-kote": Good for problem cracks that may break through the Sheetrock tape and compound.
   a. It uses a pliable adhesive and a glass fiber reinforcing tape; it has more flexibility and strength than ordinary joint compound.
   b. Available from large paint supply stores.

c. It is more expensive and more timely to apply than ordinary joint compounds.

B. Reinforcing tape (cloth or paper): Cloth is better for flat surfaces because of its open-weave, but it is difficult to find in the U.S.

C. Acrylic latex caulk

2.3 EQUIPMENT

A. Wide joint knife (approximately 5-6 inches wide)

B. Sponge or heavy-nap cloth

C. Caulking gun

D. Crack widener or triangular can opener

E. Stiff bristle brushes or vacuum

PART 3---EXECUTION

3.1 EXAMINATION

A. Types of plaster cracking include, map cracking, alligatoring, settlement cracks, hairline cracks, stress related cracks and cracks due to moisture.

B. If a wall has an enormous number of cracks to be taped, consider replastering or canvasing the surface.

3.2 ERECTION, INSTALLATION, APPLICATION

A. Slightly widen the crack with a sharp, pointed tool like a crack widener or a triangular can opener.

B. Brush or vacuum surface to remove dust and debris.

C. Apply joint compound with a wide joint knife; Butter the compound into the crack, spreading it about 3 inches on either side of the crack.

D. Center mesh reinforcing tape over the crack, and force the tape down into the bed of the joint compound with the knife; Remove any excess compound by wiping with the joint knife.

E. When the tape is bedded, cover surface with a thin layer of compound and smooth as much as possible by working with the joint knife.

F. When the first coat has dried (at least 24 hours), smooth out any ridges by "wet sanding" with a damp sponge or a heavy-nap cloth folded flat or wrapped around a suitable block.

G. Apply a second thin coat of joint compound and feather the edge at least 1 inch beyond the first coat.

H. After the second coat has dried, wet-sand lightly and apply a thin finishing coat.

I. Lightly sand the surface again, and clean off the area with damp sponge.

J. After the surface has dried, brush off any plaster residue or dust.

NOTE: For gaps between plaster surfaces and surrounding woodwork, apply acrylic latex caulk using a caulking gun.

END OF SECTION

USPS Master Specifications, issued: 10/1/2020
Last revised: 10/1/2017

SECTION 09 23 03
RESECURRING LOOSE WALL OR CEILING PLASTER

PART 1---GENERAL

1.1 SUMMARY

A. This Section includes guidance on resecuring loose plaster by injecting adhesive behind the loose plaster and securing it with plaster washers.

B. Plaster is in need of re-securing when sound plaster has lost its keys and is floating away from the lath or when the plaster and lath are no longer attached to stud or joist.

C. If wood lath strips are placed too close together, or the lath is nailed directly over planks, keys do not form properly and the plaster may eventually sag away from the lath. Other factors contributing to sagging plaster include wood shrinkage, weight of plaster or broken vertical ties.

D. See 011001ra-H "General Project Guidelines for Historic Preservation Projects" for general project guidelines to be reviewed along with this procedure. These guidelines should be reviewed prior to performing this procedure and should be followed, when applicable, along with recommendations from the Consultant. The guidelines cover the following sections:
1. Safety Precautions
2. Historic Structures Precautions
3. Submittals
4. Quality Assurance
5. Delivery, Storage and Handling
6. Project/Site Conditions
7. Sequencing and Scheduling
8. General Protection (Surface and Surrounding)

PART 2---PRODUCTS

2.1 MANUFACTURERS

A. Charles Street Supply Company
Boston, MA

B. USG Corporation
Chicago, IL

C. TKO Industrial Coatings, LLC
Walworth, WI

2.2 MATERIALS

NOTE: When the common name of a chemical is used on the label, it is usually a sign that the substance is not as pure as the same chemical sold under its chemical name. However, the grade of purity of the common-name substance is almost certain to be adequate for stain removal work, and because it is likely to be less expensive, the common-name product should be purchased when available. Common names are indicated by an asterisk (*).

A. Denatured Alcohol:
   1. Other chemical or common names include Methylated spirit*.
   2. Potential hazards: TOXIC AND FLAMMABLE.
   3. Available from hardware store, paint store or printer's supply distributor.
   4. Denatured alcohol should be a satisfactory substitute for ethyl alcohol for stain removing purposes.

B. Plaster Washers suppliers: Charles Street Supply Co., hardware and building supply firms, internet search, or approve equal.

C. Acrylic, latex or polymer emulsion adhesive (all water- based) such as "StrongStik" Construction Adhesive (DAP), "Liquid Nails", or approved equal.

D. Foam carpet pad

E. Wood shingles

F. Joint compound such as "Durabond Setting-Type Joint Compound" (USG.com), "Krack-kote" (TKOCoatings.com), or approved equal.

G. Flat head wood screws or drywall screws and plaster washers

H. Clean, potable water

2.3 EQUIPMENT

A. Electric drill

B. Bent wire tool

C. Vacuum

D. Ladder

E. 1/2 inch plywood

F. 1 x 2 or 2 x 4 wood braces

G. Caulking gun

H. Phillips head screwdriver

PART 3---EXECUTION

3.1 EXAMINATION

A. Determine the extent of the damage and evaluate work requirements and causes before proceeding.
   1. Thumping with a finger makes a solid, snappy sound on good plaster; it makes a hollow and dull sound on loose plaster.
   2. Gently press the plaster surface with palm of hand or with a T-brace made from 2x4s; If plaster moves in relation to the studs and lath, then the keys are broken; With more

pressure, a similar movement indicates that the plaster is well keyed to the lath, but the lath is loose from the studs

3.2 ERECTION, INSTALLATION, APPLICATION

A. Resecuring Plaster by Injected Adhesive Bonding:
1. Determine the areas of loose plaster and mark them out with chalk (see section 3.01 EXAMINATION).
2. Ceilings (accessible backside):
   a. From the backside of the surface to be repaired, drill 1/4 inch injection holes through the lath 3-6 inches apart and at the center of the lath (use a drill stop on the bit to keep from drilling into the plaster).
   b. Using a bent wire tool and a vacuum, loosen and suck dust out through the injection holes.
3. Ceilings (inaccessible backside) and Walls:
   a. Drill through plaster and lath with holes 3-6 inches apart, and if possible, through the center of the lath.
   b. In walls, break-the plaster open at the bottom of loose areas and vacuum up debris left by broken keys.
4. Have 1/2 inch plywood as big as the patch area and enough 1x2 wood braces on hand.
5. Trim the tip of the caulking-gun cartridge so that it fits in the wood-lath holes.
6. If selected adhesive has an adhesive primer, squirt into pre-drilled holes according to manufacturer's instructions.
7. If adhesive has no primer, mix 4 parts water, 2 parts denatured alcohol and 1 part adhesive (water-based only).
8. Pre-wet both the plaster and lath.
9. Inject adhesive into the pre-drilled holes, giving the adhesive enough time to flow into the space between the plaster and the lath.
10. T-brace a 1/2 inch layer of foam carpet padding between the plywood and the plaster; Add additional braces as necessary or drive screws through washers and wood shingles to draw the plaster up against the lath.
11. When the adhesive has set, carefully remove the plywood (it may need to be twisted gently to break the bond).
12. Fill holes and/or tape and mud cracks and finish as required.

B. Re-securing Loose Plaster with Plaster Washers: Use plaster washers (also called repair discs or ceiling buttons) to pull sound plaster back up to the lath (when the keys have broken), or to pull plaster and lath back to the studs or joists.
1. If the lath was nailed directly to the joists or rafters, find the joists, then measure and mark their locations with chalk lines snapped across the ceiling.
2. From below, drive 1-1/2 to 2 inch gyp-board screws, fitted with plaster washers, through the plaster and lath up into the joists. Space every 4 inches on each joist where sagging is apparent, or as often as necessary, and 1-1/2 inches from the edge of the loose section (only screws that hit lath will hold).
3. Tighten the screws gradually all along the edge.
4. Patch the holes with spackling or joint compound and finish with a skim coat of joint (taping) compound.

3.3 ADJUSTING/CLEANING

A. Remove all rubbish and debris caused by plastering work.

B. Clean all affected surfaces of room and furnishings to their prior condition.

END OF SECTION

USPS Master Specifications, issued: 10/1/2020
Last revised: 10/1/2017

SECTION 09 23 05
PATCHING SMALL CHIPS AND CRACKS IN PLASTER

PART 1—GENERAL

1.1 SUMMARY

A. This Section includes guidance on patching small chips, cracks or depressions in plaster surfaces.

B. See 011001ra-H for general project guidelines for historic preservation projects to be reviewed along with this procedure. These guidelines should be reviewed prior to performing this procedure and should be followed, when applicable, along with recommendations from the Consultant. The guidelines cover the following sections:
1. Safety Precautions
2. Historic Structures Precautions
3. Submittals
4. Quality Assurance
5. Delivery, Storage and Handling
6. Project/Site Conditions
7. Sequencing and Scheduling
8. General Protection (Surface and Surrounding)

1.2 REFERENCES

A. American National Standards Institute (ANSI) www.ansi.org

B. American Society for Testing and Materials (ASTM) www.astm.org

PART 2---PRODUCTS

2.1 MANUFACTURERS

A. USG Corporation www.usg.com

2.2 MATERIALS

A. Gypsum Plaster Materials:
1. General: gypsum plastering materials shall conform to ANSI A42.1. Provide neat or ready-mixed materials at installer's option unless indicated otherwise.
2. Base coat plaster: Perlite gypsum plaster such as "Structo-Lite" (USG Corp.), or approved equal.
3. Base coat aggregate: Sand.
4. Finish coat plaster: Keene's cement.
5. Finishing lime: Type is installer's option.

B. Bonding Materials: Bonding agent shall conform to ASTM C631.

2.3 EQUIPMENT

A. Joint knife

B. Sponge or heavy-nap cloth

C. Crack widener or triangular can opener

D. Stiff bristle brushes

E. Hawk

F. Slicker (flexible straight edge)

G. Plasterer's trowel

H. Margin trowel

I. Mortarboard and mud pan

J. Pointing trowel

PART 3—EXECUTION

3.1 ERECTION, INSTALLATION, APPLICATION

A. Scrape loose or damaged finish plaster and peeling paint from surface with chisel or joint knife. Remove material where required to enlarge cracks, chips, holes, etc. to at least 1/2 inch across and undercut to improve bonding of new material.

B. Brush or vacuum surface to remove dust and debris.

C. Moisten the surface by lightly spraying a fine mist of clean water from a spray bottle.

D. Apply skim finish coat over low areas to bring entire< finished surface out flush with the projecting firm and sound layers of adjacent plaster or paint. Form plaster as required to match original configuration and design or ornamental plaster.

E. Once dry, sand by hand to produce a surface without bumps, cracks or depressions, ready to receive finish treatment.

3.2 ADJUSTING/CLEANING

A. Upon completion of this work, all floors, walls and other adjacent surfaces that are stained, marred, or otherwise damaged by work in this procedure shall be cleaned and repaired and all work and the adjacent areas shall be left in a clean and perfect condition.

B. All completed work shall be adequately protected from damage by subsequent building operations and effects of weather. Protection shall be by methods recommended by the manufacturer of installed materials and as approved by the FPO.

END OF SECTION

SECTION 09 91 00
PAINTING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Surface preparation and field application of paints and finishes for interior and exterior surfaces.
   2. Schedule of Items to be painted.
   3. Exterior painting and finishing schedule.
   4. Interior painting and finishing schedule.

B. Related Documents: The Contract Documents, as defined in Section 011000 - Summary of Work, apply to the Work of this Section. Additional requirements and information necessary to complete the Work of this Section may be found in other Documents.

1.2 REFERENCES

A. American Society for Testing and Materials (ASTM):
   1. ASTM E 84 - Test Method for Surface Burning Characteristics of Building Materials.

1.3 SUBMITTALS

A. Section 013300 - Submittals: Procedures for submittals.
   1. Product Data: Submit product data for each type of paint specified.
      a. Technical data sheets indicating manufacturer's catalog number, paint type description, and VOC content.
      b. Painting Schedule listing surfaces to be painted with cross reference to the specific painting and finishing system and application. Identify each paint material by manufacturer's catalog number and general classification.
   2. Samples: Submit color brush-out sample for each paint color and sheen specified.
      a. Three samples on 8 1/2 inch x 11 inch card stock for color and sheen verification.
      b. Identify each sample by paint manufacturer, paint type, color, and sheen.
   3. Assurance/Control Submittals:
      a. Test Reports: Submit manufacturer's Material Safety Data Sheets (MSDS) for each paint type proposed.

1.4 QUALITY ASSURANCE

A. Applicator Qualifications: Company specializing in performing Work of this Section with minimum five years documented experience.

B. Regulatory Requirements:
   1. Surface Burning Characteristics in Accordance with ASTM E-84 for Class I or A finish:
      a. Flame Spread (Non-Combustible Surfaces): Less than 25.
      b. Smoke Density (Non-Combustible Surfaces): Less than 450.

2. Provide paint and coating materials that conform to Federal, State, and Local restrictions for Volatile Organic Compounds (VOC) content.

1.5 DELIVERY, STORAGE AND HANDLING

A. Section 016000 - Product Requirements: Transport, handle, store, and protect products.

B. Deliver paint materials in sealed original labeled containers, bearing manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and/or reducing.

C. Store paint materials at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's published instructions.

D. Prevent fire hazards and spontaneous combustion.

1.6 PROJECT CONDITIONS OR SITE CONDITIONS

A. Environmental Requirements:
1. Apply paint finishes only when moisture content of surfaces is within manufacturer's acceptable ranges for type of finish being applied.
2. Surface temperatures or surrounding air temperature to be above 40 degrees F before applying alkyd finishes; above 45 degrees F for interior latex, and 50 degrees F for exterior latex work. Minimum for varnish and transparent finishes is 65 degrees F.
3. Provide continuous ventilation and heating facilities to maintain temperatures above 45 degrees F for 24 hours prior to, during and 48 hours after application of finishes.
4. Do not apply paint in areas where dust is being generated.
5. Provide lighting level in areas being painted of 80 foot candles measured mid-height at substrate surface.

1.7 MAINTENANCE

A. Section 017704 - Closeout Submittals: Procedures for closeout submittals.

B. Extra Materials:
1. Provide one gallon of each color, type and sheen to Contracting Officer.
2. Label each container with color, type, texture, room locations, in addition to the manufacturer's label.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Subject to compliance with project requirements, manufacturers offering specified items which may be incorporated in the work include the following:
1. Benjamin Moore and Company, Montvale, NJ (201) 573-9600.
2. Duron Paints and Wallcoverings, Beltsville, MD (800) 723-8766.
3. Devoe (ICI), Cleveland, OH (888) 681-6353.
4. Glidden (ICI), Cleveland, OH (888) 681-6353.
5. Frazee Paint Company, Los Angeles, CA (800) 826-9048.

6. Pittsburgh Paints, Pittsburgh, PA (800) 441-9695.
7. Sherwin-Williams Company, Cleveland, OH (800) 321-8194.

B. Section 016000 - Product Requirements: Product options and substitutions. Substitutions: Permitted.

2.2 MATERIALS

A. Paints:
1. Manufacturer's "Best Grade" for each type specified.
2. Ready-mixed; pigments fully ground maintaining a soft paste consistency, capable of readily and uniformly dispersing to a complete homogeneous mixture.
3. Providing good flowing and brushing properties and be capable of drying or curing free of streaks or sags.
4. VOC limits (g/L) for exterior and interior paint applications:

a. Exterior- Steel-Shop Primed
1) Top Coat – Non-Flat: 150
2) Top Coat - Gloss: 250
b. Exterior- Steel - Galvanized
1) Primer Coat: 200
2) Top Coat - Non-Flat: 150
3) Top Coat - Gloss: 250
c. Interior Wood – Transparent
1) Stain: 250
2) Varnish: 350
d. Interior Concrete, Concrete Block
1) Block filler: 300
2) Top Coat – Flat: 100
3) Top Coat – Non-Flat: 150
4) Top Coat – Gloss: 250
e. Interior Steel – Unprimed
1) Rust Prime Coat: 400
2) Top Coat – Non-Flat: 150
3) Top Coat – Gloss: 250
f. Interior Steel – Primed
1) Top Coat – Flat: 100
2) Top Coat – Non-Flat: 150
3) Top Coat – Gloss: 250
g. Interior Steel – Galvanized
1) Top Coat – Non-Flat: 150
2) Top Coat – Gloss: 250
h. Interior Plaster, Gypsum Board
1) Undercoater: 200
2) Top Coat - Flat: 100
3) Top Coat – Non-Flat: 150
4) Top Coat – Gloss: 250
i. Interior Exposed Structural Steel and Metal Deck
1) Industrial Maintenance - Primer: 340
2) Industrial Maintenance – Top Coat: 340

B. Primers and Undercoaters: Manufactured by same manufacturer as finish coat materials.

C. Paint Accessory Materials: Linseed oil, shellac, turpentine and other materials not specifically indicated herein but required to achieve the finishes specified of high quality and approved manufacturer.

2.3 EXTERIOR PAINT SYSTEMS

A. Benjamin Moore:
1. Ferrous Metal: Semi-Gloss, Water Base, Alkyd Primer/Acrylic Latex.
   a. Primer: M04 Acrylic Metal Primer; MDF 2.0 mils.
   b. Each Finish Coat: M29 DTM Acrylic Semi-Gloss; MDF 2.0 mils.
2. Galvanized Metal: Semi-Gloss, Water Base, Alkyd Primer/Acrylic Latex.
   a. Primer: M04 Acrylic Metal Primer; MDF 2.0 mils.
   b. Each Finish Coat: M29 DTM Acrylic Semi-Gloss; MDF 2.0 mils.

B. Pittsburgh:
1. Ferrous Metal: Semi-Gloss, Water Base, Alkyd Primer/Acrylic Latex.
   a. Primer: 90-709 DTM Interior/Exterior Primer; MDF 3.0 mils.
   b. Each Finish Coat: 90-474 Acrylic Enamel Satin; MDF 3.0 mils.
2. Galvanized Metal: Semi-Gloss, Water Base, Alkyd Primer/Acrylic Latex.
   a. Primer: 90-709 DTM Interior/Exterior Primer; MDF 3.0 mils.
   b. Each Finish Coat: 90-474 Acrylic Enamel Satin; MDF 3.0 mils.

C. Sherwin-Williams:
1. Ferrous Metal: Semi-Gloss, Low VOC, Alkyd Primer/Acrylic Latex.
   a. Primer: Pro-Cryl Universal Water-Based Primer, B66-310, MDF 3.0 mils.
   b. Each Finish Coat: DTM Acrylic B66 Series; MDF 3.0 mils.
2. Galvanized Metal: Semi-Gloss, Water Base, Alkyd Primer/Acrylic Latex.
   a. Primer: Pro-Cryl Universal Water Based Primer, B66-310, MDF 3.0 mils.
   b. Each Finish Coat: DTM Acrylic B66 Series; MDF 3.0 mils.

2.4 INTERIOR PAINT SYSTEMS

A. Benjamin Moore:
1. Gypsum Board: Eggshell, Water Base, Acrylic Latex.
   a. Primer: 284 Moorecraft Superhide Interior Latex Primer/Undercoater; MDF 1.5 mils.
   b. Each Finish Coat: Moorecraft Super-Hide Eggshell 286.
2. Masonry: Eggshell, Water Base, Acrylic Latex.
   a. Primer: Moorecraft Super Hide Interior/Exterior Latex Blockfiller 285; MDF 11.0 mils.
   b. Each Finish Coat: Moorecraft Super-Hide Eggshell 286.
3. Metal: Satin, Water Base, Acrylic Latex.
   a. Each Finish Coat: Moorecraft Super-Hide Eggshell 286.
4. Wood and Wood Doors : Satin, Water Base, Acrylic Latex.
   a. Primer: 253 Moorecraft Latex Enamel Undercoater and Primer Sealer; 2.0 mils.
   b. Each Finish Coat: Moorecraft Super-Hide Eggshell 286.
5. Concrete: Semi-Gloss, Water Base, Acrylic Latex.
   a. Primer: Moorecraft Super Hide Interior/Exterior Latex Blockfiller 285; MDF 11.0 mils.
   b. Each Finish Coat: 276 Moorecraft Acrylic Latex; MDF 1.5 mils.
6. Ferrous Metal: Semi-Gloss, Water Base, Acrylic Latex.
   a. Primer: M04 Acrylic Metal Primer; MDF 2.0 mils.
   b. Each Finish Coat: 276 Moorecraft Acrylic Latex; MDF 1.5 mils.

B. Glidden(ICI):
1. Gypsum Board: Eggshell, Water Base, Acrylic Latex.
a. Primer: ProMaster Interior Latex Primer-Sealer MP-5111; MDF 1.5 mil.
b. Each Finish Coat: ProMaster Interior Latex Eggshell MP-6800; MDF 1.5 mil.
2. Masonry: Eggshell, Water Base, Acrylic Latex.
a. Primer: Bloxfil 4000 Interior/Exterior Heavy Duty Acrylic Block Filler 4000-1000; MDF 11 mil
b. Each Finish Coat: ProMaster Interior Latex Eggshell MP-6800; MDF 1.5 mil.
3. Metal: Satin, Water Base, Acrylic Latex.
a. Each Finish Coat: Devflex 4214HP High Performance Waterborne Acrylic Semi-Gloss Enamel; MDF 1.5 mil.
4. Wood and Wood Doors : Satin, Water Base, Acrylic Latex.
a. Primer: Prime Interior 100% Acrylic Multi-Purpose Latex Stain Killer, PC 1000; MDF 1.5 mil.
b. Each Finish Coat: Devflex 4216 HP High Performance Waterborne Acrylic Semi-Gloss Enamel; MDF 1.5 mil.
5. Concrete: Semi-Gloss, Water Base, Acrylic Latex.
a. Primer: Bloxfil 4000 Interior/Exterior Heavy Duty Acrylic Block Filler 4000-1000; MDF 11 mil
b. Each Finish Coat: Devflex 4216 HP High Performance Waterborne Acrylic Semi-Gloss Enamel; MDF 1.5 mil.
6. Ferrous Metal: Semi-Gloss, Water Base, Acrylic Latex.
a. Primer: Devflex 4020 PF Direct to Metal Primer & Flat Finish; MDF 1.5 mil.
b. Each Finish Coat: Devflex 4216 HP High Performance Waterborne Acrylic Semi-Gloss Enamel; MDF 1.5 mil.
7. Wood Cabinets and Wood Shelves: Semi-Gloss, Water Base, Acrylic Latex.
a. Primer/Sealer: Prime Interior 100% Acrylic Multi-Purpose Latex Stain Killer, PC 1000; MDF 1.5 mil.
b. Each Finish Coat: Devflex 4216 HP High Performance Waterborne Acrylic Semi-Gloss Enamel; MDF 1.5 mil.
8. Wood Bumpers:
a. Stain: DF200 semi-transparent; MDF 1.5 mil.
b. Clear Polyurethane: Penchrome Interior 100% Acrylic Finishes, DF 400 Satin; MDF 1.5 mil.

C. Pittsburgh:
1. Gypsum Board: Eggshell, Water Base, Acrylic Latex.
a. Primer: 6-2 Speedhide Latex Sealer; MDF 1.0 mils.
b. Each Finish Coat: 6-411 Speedhide Eggshell Latex; MDF 1.5 mils.
2. Masonry: Eggshell, Water Base, Acrylic Latex.
a. Primer: 6-2 Speedhide Latex Sealer; MDF 1.0 mils.
b. Each Finish Coat: 6-411 Speedhide Eggshell Latex; MDF 1.5 mils.
3. Metal: Satin, Water Base, Acrylic Latex.
a. Each Finish Coat: 90-474 DTM Acrylic Satin; MDF 1.5 mils.
4. Wood and Wood Doors : Satin, Water Base, Acrylic Latex.
a. Primer: 6-855 Interior Water Base Undercoater; MDF 1.5 mils.
b. Each Finish Coat: 90-474 DTM Acrylic Satin; MDF 1.5 mils.
5. Concrete: Semi-Gloss, Water Base, Acrylic Latex.
a. Primer: 6-7 Speedhide Block Filler; MDF 6.0 - 12.0 mils.
b. Each Finish Coat: 6-500 Speedhide Semi-Gloss Latex; MDF 1.2 mils.
6. Ferrous Metal: Semi-Gloss, Water Base, Acrylic Latex.
a. Each Finish Coat: 90-474 DTM Acrylic Satin; MDF 1.5 mils.
7. Wood Cabinets and Wood Shelves: Semi-Gloss, Water Base, Acrylic Latex.
a. Primer/Sealer: 6-855 Interior Water Base Undercoater; MDF 1.5 mils.

b. Each Finish Coat: 90-474 DTM Acrylic Satin; MDF 1.5 mils.

8. Wood Bumpers:
   a. Stain: 77-560 Interior Oil Stain
   b. Clear Polyurethane: 77-89 Interior Oil Satin Polyurethane

D. Sherwin Williams:
1. Gypsum Board: Low VOC, Eg-shell, Water Base, Acrylic Latex.
   a. Primer: Harmony Latex Primer, MDF 1.6 mils.
   b. Each Finish Coat: Harmony Latex Eg-Shel, MDF 1.6 mils.
2. Masonry: Semi-Gloss, Water Base, Acrylic Latex.
   a. Primer: ProMar Interior/Exterior Block Filler, B25W25; MDF 10.0 mils
   b. Each Finish Coat: ProMar 200 Interior Latex Egg Shell: MDF 1.5 mils.
3. Metal: Semi-Gloss, Water Base, Acrylic Latex.
   a. Each Finish Coat: DTM Acrylic S-G, B66W200; MDF 3.0 mils.
4. Wood and Wood Doors : Semi-Gloss, Water Base, Acrylic Latex.
   a. Primer: PrepRite Classic Primer, B28W101, MDF 1.6 mils.
   b. Each Finish Coat: ProClassic Waterborne S-G, MDF 1.4 mils.
5. Concrete: Semi-Gloss, Water Base, Acrylic Latex.
   a. Primer: ProMar Interior/Exterior Block Filler, B25W25; MDF 10.0 mils.
   b. Each Finish Coat: ProClassic Waterborne S-G, MDF 1.4 mils.
6. Ferrous Metal: Semi-Gloss, Water Base, Acrylic Latex.
   a. Primer: Pro-Cryl Universal Water Based Primer, B66-310, MDF 3.0 mils.
   b. Each Finish Coat: DTM Acrylic S-G, B66W200; MDF 3.0 mils.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 017300 - Execution Requirements: Verification of existing conditions before starting work.

B. Verification of Conditions: Verify that field measurements, surfaces, substrates and conditions are as required, and ready to receive Work.

C. Report in writing to Contracting Officer prevailing conditions that will adversely affect satisfactory execution of the Work of this Section. Do not proceed with Work until unsatisfactory conditions have been corrected.

D. By beginning Work, Contractor accepts conditions and assumes responsibility for correcting unsuitable conditions encountered at no additional cost to the United States Postal Service.

3.2 PREPARATION

A. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, and conditions otherwise detrimental to formation of a durable paint film.

B. Perform preparation and cleaning procedures in accordance with paint manufacturer's published instructions for each particular substrate condition.
1. Provide barrier coats over incompatible primers or remove and reprime as required.
2. Remove hardware, hardware accessories, machined surfaces, plates, lighting fixtures, and similar items in place and not to be painted or provide surface applied protection

prior to surface preparation and painting operations. Reinstall all removed items after completion of paint work.

3. Clean surfaces to be painted before applying paint of surface treatment. Remove oil and grease prior to mechanical cleaning.

C. Ferrous Metals: Clean ferrous surfaces, that are not galvanized or shop-coated, of oil, grease, dirt, loose mill scale and other foreign substances by solvent or mechanical cleaning.

1. Touch-up shop-applied prime coats, where damaged or bare. Clean and touch-up with same type shop primer.

D. Galvanized Surfaces: Clean free of oil and surface contaminants with non-petroleum-based solvent. Apply coat of etching primer if required by paint manufacturer.

E. Cementitious Materials: Prepare cementitious surfaces to be painted by removing efflorescence, chalk, dust, dirt, grease, oils, and by roughening as required to remove glaze.

1. Determine alkalinity and moisture content of surfaces to be painted by performing appropriate tests.
   a. If surfaces are found to be sufficiently alkaline to cause blistering and burning of finish paint, correct condition before application of paint.
2. Do not paint over surfaces where moisture content exceeds that permitted in manufacturer's printed instructions.
3. Clean floor surfaces scheduled to be painted with a commercial solution of muriatic acid, or other etching cleaner. Flush floor with clean water to neutralize acid, and allow to dry before painting.

F. Wood: Clean wood surfaces to be painted of dirt, oil, and other foreign substances with scrapers, mineral spirits, and sandpaper, as required. Sandpaper smooth those finished surfaces exposed to view, and dust off. Scrape and clean small, dry, seasoned knots and apply a thin coat of white shellac or other recommended knot sealer, before application of priming coat. After priming, fill holes, and imperfections in finish surfaces with putty or plastic wood-filler. Sandpaper smooth when dried.

1. Prime, stain, or seal wood required to be job-painted immediately upon delivery to job. Prime edges, ends faces, undersides, and backsides of such wood, including cabinets and counters.
2. Seal tops, bottoms, and cut-outs with a heavy coat of varnish or equivalent sealer immediately upon delivery to job.

G. Gypsum Board: Fill minor defects with filler compound. Spot prime defects after repair.

3.3 APPLICATION

A. Apply paint products in accordance with manufacturer's published instructions using application procedures approved for the particular application and substrate to the specified Minimum Dry Film Thickness (MDF). Apply each coat to uniform finish.

B. Apply each coat slightly darker than preceding coat unless otherwise approved by Contracting Officer. Sand lightly between coats to achieve specified finish.

C. Do not apply finishes on surfaces that are not dry.

D. Number of coats and film thickness required is same regardless of application method. Do not apply succeeding coats until the previous coat has cured as recommended by the manufacturer.

E. Apply additional coats when undercoats, stains, or other conditions show through final coat until paint film is of uniform finish, color, and appearance. Surfaces, including edges, corners, crevices, welds, and exposed fasteners to receive minimum dry film thickness equivalent to that of flat surfaces.

F. Minimum Coating Thickness: Apply materials at not less than manufacturer's recommended spreading rate. Provide minimum dry film thickness (MDF) of the entire coating system as indicated in Painting and Finishing Schedule at end of this Section.

G. Block Fillers: Apply block fillers to concrete masonry units at rate to provide complete coverage with pores filled.

H. Prime Coats: Before application of finish coats, apply a prime coat of material as recommended by manufacturer to material scheduled to be painted or finished that has not been shop primed. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to assure a finish coat with no burn through or other defects due to insufficient sealing.

I. Pigmented (Opaque) Finishes: Completely cover to provide an opaque, smooth surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, laps, brush marks, runs, sags, or other surface imperfections will not be acceptable.

J. Hollow Metal Doors: Paint each door edge.

K. Completed Work: Match Contracting Officer approved field samples for color and sheen.

3.4 MECHANICAL AND ELECTRICAL EQUIPMENT

A. Clean or replace identification markings on mechanical or electrical equipment when painted over or spattered.

B. Paint both sides and edges of plywood backboards for electrical equipment before installing backboards and mounting equipment on them.

C. Prepaint Gas piping prior to installation. (Touch-up paint after installation.)
   1. Color:
      a. Roof (Yellow): OSHA Standard "Safety Yellow."
      b. Other Areas: Match adjacent surfaces.

D. At Workroom locations, paint red background on wall behind fire extinguisher extending 6 inches on both sides of the extinguisher and from floor to ceiling, or to 12 feet above floor, whichever is lower. Color is to be OSHA Standard "Safety Red" and in accordance with ANSI Z53.1.

3.5 FIELD QUALITY CONTROL

A. Section 014000 - Quality Control: Field testing and inspection.

B. Inspect painting and coating application for scheduled material, color, sheen, specified thickness (MDF), and coverage.

3.6 CLEANING

A. As work proceeds and upon completion, promptly remove paint where spilled, splashed, or spattered.

B. During progress of work keep premises free from any unnecessary accumulation of tools, equipment, surplus materials, and debris.

C. Collect waste, cloths, and material which may constitute a fire hazard, place in closed metal containers and remove daily from site.

D. Upon completion of work leave premises neat and clean.

3.7 PROTECTION

A. Protect other surfaces from paint and damage. Repair damage as a result of inadequate or unsuitable protection.

3.8 COLOR SCHEDULE

A. **Note:** Contractor shall determine the existing colors prior to demolition and shall submit all color to the architect for review. This building is on the historic register of buildings and all colors shall be consistent with the existing.

B. **Items to determine color matches:**
   1. Railings
   2. Metal grates
   3. Wood Windows
   4. Interior trim
   5. Doors
   6. Any other colors to be impacted by this work

3.9 SCHEDULE OF ITEMS TO BE PAINTED

A. Painted finishes shall be provided for, but not limited to, the following items. Refer to Drawings and Paint Color Schedule at end of this Section for designated finishes and colors of areas.
   1. Exterior: All exterior surfaces including, but not limited to:
      a. Metal railings.
      b. Metal grates
      c. Wood Windows
      d. Wood Doors
   2. Interior: All interior surfaces as scheduled on Drawings including, but not limited to:
      a. Wood Windows.
      b. Exposed wood trim.
      c. Plaster

3.10 PAINTING AND FINISHING SCHEDULE

A. Interior Paint Systems:
   1. Interior Wood (painted):
      a. 1 coat Enamel Undercoat
      b. 2 coats Alkyd Semi-Satin Enamel

2. Interior Wood Windows (stained):
   a. 2 coats wood stain (semitransparent)
   b. 3 coats polyurethane varnish

3. Interior Plaster (painted)
   a. 2 coats Enamel undercoat
   b. 3 coats Alkyd Semi-Satin Enamel

B. Exterior Paint Systems:
1. Wood Windows:
   a. Two coats prime coat
   b. Three tinted coats Exterior Alkyd Enamel Semi-Gloss Enamel.

2. Ferrous Metals:
   a. Touch up Prime Coat.
   b. Two tinted coats Exterior Alkyd Enamel Semi-Gloss Enamel.

3. Wood Doors:
   a. Two coats prime coat
   b. Three tinted coats Exterior Alkyd Enamel Semi-Gloss Enamel

END OF SECTION

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