

Section 01200

Selective Demolition

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

- A. The term "Demolition" shall include modification, removal, relocation, and/or disposal of associated items as shown on the Drawings or as specified herein, and associated repair, patching or remediation. In all surrounding areas which are not being renovated under this contract, the Contractor shall verify that electrical power, lighting, and systems have not been affected by Demolition operations. In locations where systems are affected, the Contractor shall provide all work as required to maintain proper operations of the systems at no additional cost to the Owner. Provide demolition work required to allow complete installation and construction of the project components.
- B. Demolition of equipment including all associated appurtenances. Appurtenances shall include but are not limited to concrete pads, concrete base supports, support structures, electrical switchgear, conduit, wiring, instrumentation, and piping.
- C. Removal and replacement of utilities, pavement, curbing, vegetation and landscaping as required to accommodate new construction.
- D. Coring of holes of diameter required and at locations required to accommodate utilities and piping as necessary for new construction.
- E. Repair and restoration of all substrate surfaces including floors, walls, concrete, masonry, wood, plastic, wall panels, facades, etc. Repair and restoration shall include providing a smooth finish surface to match the existing surface. Removal of all anchor bolts, painting, re-surfacing, etc. shall also be required.

PART 2 - PRODUCTS

2.01 REPAIR AND PATCHING

- A. Repair and patching materials shall be selected to match the quality and look of the existing substrate.
- B. Concrete patching repair materials shall be trowel grade mortar for vertical and horizontal substrate and non-sag mortar for overhead surfaces. Provide SikaTop 122/123 Plus or approved equal. Mortars shall provide high early strength to minimize process downtime and shall meet the following requirements:
 - 1. 7,000 PSI 28 day compressive strength (ASTM C109/C109M)
 - 2. 2,200 PSI 28 day bond strength (ASTM C882/C882M)
 - 3. 750 PSI 28 day splitting tensile strength (ASTM C496/C496M)

PART 3 - EXECUTION

3.01 PREPARATION

- A. The Contractor shall provide interior and exterior shoring, bracing, or support to prevent movement, settlement, or collapse of structure(s) or element(s) to be demolished as well as adjacent facilities or work to remain.
- B. The Contractor shall stop demolition operations and notify the Owner and Engineer immediately if structural conditions appear to be endangered. The Contractor shall take all precautions to support the structure until a determination is made for continuing demolition operations.
- C. The Contractor shall locate, identify, stub-off and disconnect all utility services and appurtenances that are not indicated to remain in accordance with the Drawings and that specified.

3.02 PERFORMANCE

- A. The Contractor shall perform selective demolition work in a systematic manner. Use such methods as required to complete the work as indicated on the Drawings or as specified in accordance with the demolition schedule and applicable regulations.
- B. All items specified for removal or indicated for removal on the Drawings shall be removed completely, back to the source. All associated items and appurtenances including but not limited to conduit, boxes, wiring troughs, wiring, cables, hangers, etc. shall be completely removed.
- C. The Contractor shall completely fill below grade areas and voids resulting from demolition work. Provide fill materials as shown on the Drawing or as specified.
- D. The Contractor shall saw-cut asphalt and concrete paved surfaces prior to removal. The joint cut shall be neat and straight.
- E. Where exposed conduit exits concrete surfaces; the Contractor shall cut the conduit flush to the concrete surfaces and seal the openings gas and liquid tight.

3.03 SUBSTRATE AND SURFACE REPAIR

- A. Following demolition, the Contractor shall repair surfaces and substrates to remain. The repair shall match the surrounding area in material, quality, color and quantity.
- B. For repair of poured concrete walls, floors or suspended slabs (including but not limited to concrete below equipment pads), provide a smooth and finished surface.
 - 1. Areas to be repaired shall be mechanically prepared, clean, sound and free of contaminants. All loose and deteriorated concrete shall be removed by mechanical means. Remove all dirt, oil, grease and all bond-inhibiting materials from the surface. Saw cut perimeter 1/8 inch minimum depth when a neat mortar is to be applied, and 1 inch minimum depth when an extended mortar is to be applied. Prepare concrete substrate to obtain a minimum surface profile of 1/16 inch in depth with a new aggregate fractured surface. Be sure the area to be repaired is not less than 1/8 inch in depth. The substrate shall be saturated surface dry with no standing water. Mix and install in strict adherence with Manufacturer's recommendations. Apply reinforcing steel primer in any location where it is exposed.

- C. Anchor bolts, threaded rods, and other systems embedded in concrete that require demolition shall be cut flush with the substrate or wall unless otherwise noted or detailed. Provide a three stage corrosion resistant epoxy coating over the embedded surface and substrate a minimum of 6" outside the extents of the embedded surface.
- D. Provide aluminum diamond plate covers for equipment penetrations and openings that remain in any floor(s) following demolition. Diamond plate covers shall be a minimum of 1/4 inch thickness with beveled edge and retaining lips to maintain its position in the floor.
- E. For all open floor, wall and ceiling penetrations through buildings, floors or process tankage, fill holes with non-shrink grout unless otherwise noted. All floor holes greater than 6" shall be covered with beveled edge aluminum non-slip diamond plate with underside catches so they cannot be kicked out of place.
- F. Trench Patching – Roadway
 - 1. Place gravel sub-base and base to match the depth of existing gravel sub-base and base.
 - 2. Bituminous Tack Coat: Apply tack coat immediately prior to placing pavement to curbing, gutters, manholes, pavement, etc. for adequate bond.
 - 3. Provide UPM High-Performance Cold Mix asphalt repair, or equivalent product, to restore paved surface to match existing grade.
- G. Trench Restoration for Non-Paved Areas
 - 1. Provide 6" of loam and provide Seeding Method Number 2 ("Roadside Mixture") in accordance with Maine DOT specification Section 618.

3.04 SALVAGED MATERIALS

- A. Where shown on the Drawings or specified as Salvage all items shall be property of the Owner. The Contractor shall deliver such items to the Owner. The Contractor shall carefully remove indicated items, clean, store, and turn over the items and appurtenances to the Owner in area(s) designated by the Engineer or Owner.

3.05 PIPE CORING

- A. The Contractor shall core holes for all pipe protrusions through existing concrete structures to allow watertight installation of pipe and link seal or pipe sleeve as required or as shown on the Drawings. Coring shall be with a non-impact rotary tool with diamond core drills. Double link seals shall be installed at all pipe protrusions through concrete walls containing liquid or saturated conditions on either side. Link seal requirements shall be as follows:
 - 1. Pressure plate: glass reinforced nylon
 - 2. Bolt and nut: 18-8 stainless steel
 - 3. Sealing element: EPDM rubber

3.06 DISPOSAL OF DEMOLISHED MATERIALS

- A. The Contractor shall remove from the project site all debris, rubbish, and other materials resulting from demolition operations. Do not remove from the project site without prior permission by Owner or Engineer. Store all demolished materials that the Owner wishes to retain at location designated by Owner or Engineer.
- B. Burning of removed materials from demolished structures shall not be permitted. The Contractor shall dispose of demolition debris in a lawful manner. Management of hazardous materials not specifically identified in this specification shall be extra work. This provision does not relieve Contractor of his responsibility to respond promptly and appropriately to indications of hazardous materials. The Contractor shall dispose of all hazardous materials in a lawful manner at no additional cost to the Owner.
- C. In the event that unanticipated hazardous materials are discovered or suspected, the Contractor shall carry out suitable measures to minimize hazards and immediately report conditions to the Owner & Engineer.

-- END OF SECTION --