

## **SECTION 02 41 13 - SELECTIVE DEMOLITION**

### **PART 1 - GENERAL**

#### 1.01 SUMMARY

- A. Work Included: Provide products in accordance with the Contract Documents. The Contract Documents are as defined in the "Agreement". The "General Conditions" shall apply to all work under the Contract. The Work of this Section shall include but not be limited to the following:
1. The work shall generally include removal of portions of existing building structures and assemblies indicated on drawings and as required to accommodate new construction including walls, fixtures, equipment, and interior finishes.
  2. The extent of selective demolition work required is shown by notes and graphic information on the drawings, and may be summarized, but not by way of limitation, as the removal of interior work as indicated, the removal of existing construction (to the extent indicated) from the building and removal work at existing adjacent construction, as necessary to receive or provide for new construction and related items to be reinstalled and/or retained.
  3. Primary repair and restoration of existing and installation of new construction after completion of the selective removal work. The work of this section is limited to that necessary to enable subsequent new construction work to proceed in a phased schedule as described in the contract documents.
  4. Removal of portions of existing assemblies indicated on drawings and as required to accommodate new construction; including walls, partitions, finishes, doors, door frames, fixtures, built-in casework, office partitions, equipment and assemblies, as indicated.
  5. Removal of assemblies and adjacent concrete and masonry work as well structural items to accommodate new construction and new openings.
  6. Removal and protection of existing items to remain or to be relocated.
  7. Removal of debris, rubbish, materials and equipment resulting from removals, abandoned items, and items serving no useful purpose in new construction, including items such as piping, fixtures, conduit, wiring, ducts, etc. except for material intended for reuse or to be retained by the Client.
  8. Provisions for storage and protection of salvaged materials and other materials in good condition intended for reuse or to be retained.
  9. Patching of existing surfaces damaged as a result of this work, for refinishing of existing surfaces prior to installation of new work.
  10. Cutting of non-structural concrete and masonry for piping ducts, and conduit is included in the respective mechanical and electrical sections in Divisions 23 and 26.
- B. Related Sections
1. Refer to Division 1 for coordination, cutting and patching standards, submittals, temporary facilities, materials, close-out and other related requirements specified.
  2. Division 22 Plumbing.
  3. Division 23 - Mechanical.
  4. Division 26 - Electrical.

## 1.02 SUBMITTALS

- A. Schedule indicating proposed sequence of operations for selective demolition work to the Architect for review prior to start of work. Include coordination for shutoff, capping, and continuation of utility services as required, together with details for dust and noise control protection.
  - 1. Include written proposals, supplemented by diagrams and shop drawings as necessary, indicating proposed procedures for the protection of portions of the existing building indicated to remain.
- B. Data Sheets: Submit manufacturers' data sheets of all materials to be used for protection.
- C. Photographs of existing conditions of structures, surfaces, equipment, and adjacent improvements that might be misconstrued as damage related to removal operations. Submit copies to the Architect prior to start of work.
- D. Contractor shall obtain permits for the demolition of existing premises prior to the start of any demolition.

## 1.03 QUALITY ASSURANCE

- A. Code: Perform the work in accordance with the applicable provisions of the New York City Building Code including, but not limited to, "Safety in Building Operations" and "Safety of Public and Property During Construction Operations, and Demolition Operations".
- B. Structural Work: Do not remove or cut-and-patch structural work in a manner resulting in a reduction of load carrying capacity or load/deflection ratio, unless specifically indicated, or adequate temporary support is provided.
  - 1. The Contractor shall employ at no additional cost to the Owner, a structural engineer, licensed in the State of New York, to assist in determining correct methods and materials to be used during the Work of this Section.
  - 2. Where structural elements of the building are removed, submit certification by licensed engineer that the means and methods used are appropriate and do not endanger remaining structure.
- C. Operational and Safety Limitations: Do not remove or cut-and-patch operational elements and safety-related components in a manner intended or resulting in decreased operational life or decreased safety, unless specifically indicated.
- D. Workman's Qualifications: Assign the work of moving, removal, cutting, and patching to trades qualified to perform the work in a manner to cause least damage to each type of work and provide means of returning surfaces to appearance of new work.
- E. Contractor's Responsibility: Be solely responsible for construction means, methods, techniques, sequences, procedures, and safety precautions, including work necessary to support existing construction. Correct, at no additional cost, damage caused by movement or settlement due to inadequate or improper supports.

#### 1.04 JOB CONDITIONS

- A. Existing Information: Data on existing conditions are not intended as representations or warranties of accuracy or continuity of as-built conditions. It is expressly understood that the Architect will not be responsible for deviations from conditions indicated. Data made available are derived from existing documents or field survey and is made available for convenience of the Contractor.
- B. Condition of Structures: The Owner assumes no responsibility for actual condition of items or structures to be demolished.
  - 1. Conditions existing at time of inspection for bidding purposes will be maintained by the Owner in so far as practicable. However, variations within structure may occur by Owner's removal and salvage operations prior to start of this demolition work.
- C. Partial Demolition and Removal: Items to be removed, of salvageable value to Contractor, may be removed from structure as work progresses. The Architect shall designate items that are to be removed by the Contractor for the Owner and items that will be reinstalled or turned over to the Owner. All other demolition items shall be removed by the Contractor and removed from the premises.
  - 1. Storage or sale of removed items on site will not be permitted.
- D. Protections: Ensure safe passage of persons around area of demolition. Conduct operations to prevent injury to adjacent buildings, structures, other facilities, and persons.
  - 1. Provide shoring, bracing, or support to prevent movement, settlement or collapse of structures to be demolished and adjacent facilities to remain.
  - 2. Protect from damage existing finish work that is to remain in place and becomes exposed during demolition operations.
  - 3. Carefully remove items indicated to be reinstalled using methods that will not cause damage or prevent reinstallation.
  - 4. Provide at least one general type fire extinguisher in each area where removal work is taking place. Locate extinguisher where easily accessible and insure that workmen are familiar with their use.
  - 5. Refer to the Drawings for existing connection and materials requiring special care be exercised to protect and maintain them in their original condition.
  - 6. Remove and dispose of temporary protections at completion of work or when no longer necessary.
- E. Damages: Promptly repair damages caused to adjacent facilities by demolition work at no cost to the Owner. All remedial work to be done by the Contractor shall first be approved by the Architect.

- F. Traffic: Conduct selective demolition operations and removal of debris to ensure minimum interference with streets, walks, and other adjacent occupied or used facilities.
  - 1. Do not close or obstruct streets, walks or other occupied or used facilities without permission from authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
- G. Explosives: Do not bring explosives to site or use explosives.
- H. Utility Services: Maintain existing utilities indicated to remain, keep in service, and protect against damage during demolition operations.
  - 1. Verify that utilities not required to remain in service have been shut off. Disconnecting and capping indicated utilities where noted before starting demolition is part of this Work. Confirm with local utilities the locations of existing utilities so that adequate protection of services is provided.
  - 2. Should uncharted, or incorrectly charted piping or other utilities be encountered during alteration work, consult Architect and Engineer immediately for directions.
  - 3. Demolish and completely remove existing utilities indicated to be removed. Coordinate shut-off of services if lines are active.
- I. Flame Cutting: Do not use cutting torches until work area is cleared of flammable materials. Maintain portable fire extinguisher during flame-cutting operations.
- J. Protect and support conduits, drains, pipes and wires to remain which are subject to damage by construction activities.
- K. Environmental Controls: Use temporary enclosures, water sprinkling, and other methods to limit dust and dirt migration. Comply with governing regulations pertaining to environmental protection.
- L. Do not use water when it may create hazardous or objectionable conditions such as damage to finishes, flooding, and pollution.

## **PART 2 - PRODUCTS**

### 2.01 MATERIALS

- A. Where indicated on the Drawings or otherwise indicated furnish all required lumber, plywood and fasteners for use as protection materials.
- B. Other materials indicated on the Drawings or otherwise required for use as protection include the following:
  - 1. Masonite: 1/4" thick minimum.
  - 2. Polyethylene sheeting, 6 mil minimum, reinforced.

## 2.02 REPAIR MATERIALS

- A. Use repair materials identical to existing materials.
  - 1. Where identical materials are unavailable or cannot be used for exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
  - 2. Use materials whose installed performance equals or surpasses that of existing materials.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. General: Prior to commencement of selective demolition operations, verify that existing utilities have been located, identified, disconnected and capped.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.
- D. When unanticipated mechanical, electrical, or structural elements that conflict with the intended function or design are encountered, investigate and measure the nature and extent of the conflict. Promptly submit a written report to the Architect.
- E. Survey the condition of the building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of the structure or adjacent structures during selective demolition. Design for shoring and bracing shall be prepared by a licensed engineer.
- F. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

### 3.02 UTILITY SERVICES

- A. Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
  - 1. Do not interrupt existing utilities serving occupied or operating facilities, except when authorized in writing by the Owner and authorities having jurisdiction, including building management. Provide temporary services during interruptions to existing utilities, as acceptable to governing authorities.
    - a. Provide not less than 72 hours notice to Architect and Owner if shutdown of service is required during changeover.
- B. Utility Requirements: Refer to Division 22, 23 and 26 Sections for shutting off, disconnecting, removing, and sealing or capping utility services. Do not start selective demolition work until utility disconnecting and sealing have been completed and verified in writing.

### 3.03 PREPARATION

- A. General: Provide interior shoring, bracing, or support to prevent movement, settlement, or collapse of areas to be demolished or disassembled and adjacent facilities to remain.
- B. Cease operations and notify the Architect immediately if safety of structure appears to be endangered. Take precautions to support structure until determination is made for continuing operations.
- C. Cover and protect finishes, equipment, and fixtures from spoilage or damage when demolition or disassembly work is performed in areas where such items have not been removed.
- D. Locate, identify, stub off, and disconnect utility services that are not indicated to remain.
  - 1. Each respective trade to provide bypass connections as necessary to maintain continuity of service to occupied areas of building. Provide minimum of 72 hours advance notice to the Architect if shutdown of service is necessary during changeover.

### 3.04 DEMOLITION

- A. General: Perform selective demolition work in a systematic manner. Use such methods as required to complete work indicated on Drawings in accordance with demolition schedule and governing regulations.
  - 1. Demolish concrete and masonry in small sections. Cut concrete and masonry at junctures with construction to remain using power-driven masonry saw or hand tools; do not use power-driven impact tools.
  - 2. Locate demolition equipment throughout structure and promptly remove debris to avoid imposing excessive loads on supporting walls, floors, or framing.
  - 3. Provide services for effective air and water pollution controls as required by local authorities having jurisdiction.
  - 4. For interior slabs, use removal methods that will not crack or structurally disturb adjacent slabs or partitions. Use power saw where possible.
- B. If unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure both nature and extent of the conflict. Submit report to the Architect in written, accurate detail. Pending receipt of directive from the Architect and Engineer, rearrange the selective demolition schedule as necessary to continue overall job progress without undue delay.

### 3.05 SALVAGED MATERIALS

- A. Salvaged Items: Where indicated on Drawings as "Salvage" or "to be salvaged", carefully remove indicated items, clean, store, and turn over to the Resident Engineer and obtain receipt.
  - 1. Where Salvage is indicated clean store and protect as directed. Turn over or reinstall as indicated.

### 3.06 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove from building site debris, rubbish, and other materials resulting from demolition operations. Transport and legally dispose off site.
  - 1. If hazardous materials are encountered during demolition operations, comply with applicable regulations, laws, and ordinances concerning removal, handling, and protection against exposure or environmental pollution.
  - 2. Burning of removed materials is not permitted on project site.
  - 3. All lead-contaminated debris and wastes generated during the demolition must be disposed of as hazardous waste, pursuant to the local State of New York and federal environmental regulations.

### 3.07 CLEANUP, PATCHING AND REPAIR

- A. General: Upon completion of demolition work, remove tools, equipment, and demolished materials from site. Remove protections and leave interior areas broom clean.
  - 1. Repair demolition performed in excess of that required. Return elements of construction and surfaces to remain to condition existing prior to start operations. Repair adjacent construction or surfaces soiled or damaged by selective demolition work.
  - 2. Clean adjacent areas, of all dust, dirt, and debris caused by demolition, cutting, and patching operations. Daily and final clean up shall be satisfactory to the Architect.
  - 3. Where repairs to existing surfaces are required, patch to produce surfaces suitable for new materials. Restore exposed finishes of patched areas and extend finish restoration into adjoining construction to remain in a manner that eliminates evidence of patching and refinishing.
  - 4. Restore the integrity of rated construction where compromised by demolition.
  - 5. Patch and repair floor and wall surfaces where demolished walls or partitions extend one finished area into another. Provide a flush and even surface of uniform color. Closely match texture and finish of existing adjacent surface with durable seams that are as invisible as possible, complying with specified tolerances.

END OF SECTION