

## SECTION 024000

### SELECTIVE DEMOLITION AND ALTERATION

#### WORK PART 1 GENERAL

##### 1.1 GENERAL REQUIREMENTS

- A. Work of this Section, under the General Construction Contract, as shown or specified, shall be in accordance with the requirements of the Contract Documents.
  - 1. Contractor shall furnish all labor, materials, equipment and incidentals required for demolition, removals, and disposal work shown, specified, and required to complete the project. Included are all modifications of existing facilities as shown and required to complete the work.
  - 2. Demolitions, removals, and modifications which may be specified under other Sections shall conform to requirements of this Section.

##### 1.2 SECTION INCLUDES

- A. The Work of this Section includes all labor, materials, equipment, and services necessary to complete the selective demolition and alteration work as shown on the drawings and/or specified herein, including, but not limited to, the following:
  - 1. Alterations, selective demolition and removals as noted on drawings and as required to accommodate new construction.
  - 2. Removal of debris.
  - 3. Protection of existing building and spaces to remain.
  - 4.. Temporary coverage passageways.
  - 5. Alterations, selective demolition and removals of exterior façade, where noted.
  - 6. Patching and refinishing of existing surfaces damaged as a result of this work.
  - 7. Protection.

##### 1.3 QUALITY ASSURANCE

- A. The Contractor shall comply with the requirements of all applicable Federal, State and local safety and health regulations regarding the demolition of structures including ANSI/NFPD 241-Building Construction and Demolition Operations, ANSI A10.2 and NFPA 241.

- B. The Contractor shall be responsible for any damage to any adjacent structures or buildings to remain.
- C. Professional Engineering: The Contractor shall retain the services of a Professional Engineer licensed in the State of New York, who shall design and supervise installation of all shoring and bracing when/if determined to be required.
- D. Where alterations require cutting or drilling into existing floors, walls, and roofs, the damages shall be repaired in an approved manner. Contractor shall repair such openings with the same or matching materials as the existing wall, floor, or roof or as otherwise approved by the Architect. All repairs shall be smoothly finished unless otherwise approved by the Architect.
- E. Openings in existing concrete slabs, ceilings, roofs, masonry walls, floors, and partitions which are not to be used in the new work shall be closed and sealed.

#### 1.4 RELATED SECTIONS

- A. Alteration and removal requirements for HVAC, Plumbing and Electrical work – HVAC, Plumbing and Electrical Sections.

#### 1.5 SUBMITTALS

- A. Schedule of Demolition Operations: Submit demolition procedures and operational sequence for Architect's review prior to start of work. Submit a written request to Architect well in advance of executing any cutting or alteration which affects:
  - 1. The work of tying in or connecting to operational systems of the building, including electrical, mechanical and security systems.
  - 2. The work of the Owner or any separate Contractor.
  - 3. The structural value or integrity of any element of the project or of adjacent structures.
  - 4. The integrity or effectiveness of weather-exposed and moisture-resistant elements or systems.
  - 5. The efficiency, operational life, maintenance, or safety of operational elements or systems.
- B. Notice of Differing Conditions: Submit a written notification if, during the work of demolition and cutting, conditions are discovered which significantly vary from those shown on the drawings. Do not commence work without approval of Architect.

#### 1.6 SPECIAL PRECAUTION

- A. Hazardous materials may be encountered during demolition operations including asbestos which have not been identified; comply with applicable

regulations, laws, and ordinances concerning removal, handling, and protection against exposure or environmental pollution.

1. Such hazardous materials will be removed by Abatement contractor during the course of the work after advising Architect and confirming quantities.
  2. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Architect and Owner in writing.
  3. Based on test results of a lead-based paint inspection, it should be presumed that windows, window frames, interior doors and frames contain lead-based paint. Due to the existence of lead-based paint, the contractor shall be required to comply with, at a minimum, the Occupational Safety and Health (OSHA) Lead Standard for the Construction Industry, Title 29 of the Federal Regulations.
  4. Waste streams generated by demolition or alteration of building components shall require appropriate testing (i.e. TCLP) for waste handling procedures.
- B. Pest Control: Employ a certified, licensed exterminator to treat building and to control rodents and vermin before and during selective demolition operations.

## 1.7 JOB CONDITIONS

### A. Condition of Structure

1. The Contractor for the work of this Section shall be held to have visited the site, examined the premises, determined for himself the existing conditions, character of equipment and facilities needed for the performance of the work, and all matters which may in any way affect the work before submitting a bid.
  - a. Information regarding existing construction or conditions is based on available record drawings which may or may not truly reflect existing conditions. Such information is included on the assumption that it may be of interest to the Contractor, but the Architect, Owner and their consultants do not assume responsibility for its accuracy or completeness.
  - b. Notify the Architect if, during the course of demolition, conditions are discovered which significantly vary from those shown on the drawings. Do not proceed until authorized by Architect.
2. The Contractor shall accept the condition of the site and structures as found. The Architect and Owner assume no responsibility for condition of site or structures nor the continuation of the condition existing at time of bidding or thereafter.

## 1.8 SCHEDULING

- A. Before commencing any alteration or demolition work, submit for review by the Architect, a schedule showing the commencement, the order, and the completion dates for the various parts of this work.
- B. Before starting any work relating to existing utilities (electrical, sewer, water, heat, gas, fire lines, etc.) that will temporarily discontinue or disrupt service to the structures to remain, notify the Architect 7 days in advance and obtain the Owner's approval in writing before proceeding with this phase of the work.

## PART 2 PRODUCTS

Refer to Part 3 - Execution, for Product Requirements

## PART 3 EXECUTION

### 3.1 PROTECTION

- A. Take full precautions to protect all workmen, passersby or any other persons from falling debris and other hazards of demolition operations.
- B. Execute demolition work to insure protection of existing portions of building to remain against damages which might occur from falling debris or other cause. Do not interfere with use of adjacent occupied buildings and areas.
- C. Materials Placement: Do not load structure with weight that will endanger, overload or cause excessive deflection of the existing structure, or that will damage finished surfaces adjacent to and/or supported by the existing structure, except portions being removed.
- D. Construction Operations: Do not employ any construction operation, equipment or vehicles that will endanger, overload or cause excessive deflection of the existing structure, or that will damage finished surfaces adjacent to and/or supported by the existing structure, except portions being removed.
- E. Take precautions to guard against movement, settlement, damage, or collapse of any part of building, sidewalks, adjacent property or street passages; be liable for any such movement, settlement or collapse. If such damage does accidentally occur, Contractor shall repair promptly at no cost to Owner.
- F. Provide the necessary safeguards to prevent accidents, to avoid all necessary hazards and protect the public, the work and property at all times, including Saturdays, Sundays, and holidays.
- G. Be responsible for any and all damages which may arise or occur to any party whatsoever by reason of the neglect in providing proper lights, guards, barriers, or any other safeguards to prevent damage to property, life and limb.
- H. Make such explorations and probes as are necessary to ascertain any required protective measures before proceeding with demolition and removal. Give particular attention to shoring and bracing requirements so as to prevent any damage to existing construction.

1. Contractor shall ensure so as to prevent movement or settlement or collapse of structures to be demolished and adjacent facilities to remain. The Contractor shall bear all responsibility for prevention of movement or other structural fault. Any damage caused by inadequate support shall also be restored by the Contractor at no cost to the Owner.
- I. Provide, erect and maintain catch platforms, lights, barriers, weather protection, warning signs, and other items as required for proper protection of the workmen engaged in demolition and alteration operations, occupants of the building, public and adjacent property. Any damage caused by the Contractor's operations shall be promptly repaired by the Contractor at no cost to the Owner.
- J. Provide and maintain temporary protection of the existing structure designated to remain where demolition, removal, and new work are being done, connections made, materials handled, or equipment moved.
- K. Take necessary precautions to prevent dust and dirt from rising. Protect unaltered portions of the existing building affected by the operations under this Section by dustproof partitions and other adequate means.
- L. Provide adequate fire protection in accordance with local Fire Department requirements.
- M. Be responsible for any damage to the existing structure or contents by reason of the insufficiency of protection provided.
- N. Promptly repair damages caused to adjacent facilities by demolition operations at no cost to the Owner.
- O. Provide and maintain weather protection at exterior openings so as to fully protect the interior premises against damage from the elements until such openings are closed by new construction.

### 3.2 INSPECTION

- A. Verify that areas of demolition work are protected and temporary dustproof partitions have been installed.
- B. Verify that construction to be removed is not load bearing or has been properly braced, framed or supported.
- C. Inspect existing conditions of the project, including elements subject to damage or to movement during demolition and cutting.
- D. After uncovering work, inspect the conditions affecting the installation or performance of the work.
  1. Report differing or questionable conditions to the Architect in writing; do not proceed with the work until the Architect has provided further instructions.

### 3.3 PREPARATION

- A. Provide adequate temporary support as necessary to assure the structural value or integrity of the affected portion of the work
- B. Provide devices and methods to protect other portions of the project from damage.
- C. Pollution Controls
  - 1. Use water sprinkling, 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. Comply with governing regulations pertaining to environmental protection.
    - a. Do not use water when it may create hazardous or objectionable conditions such as ice, flooding, and pollution.
  - 2. Clean adjacent structures and improvements of dust, dirt and debris caused by demolition operations. Return adjacent areas to condition existing prior to the start of the work.
  - 3. Provide drainage for temporary water use.

### 3.4 DEMOLITION AND CUTTING

- A. Selectively demolish existing construction in conformance with the drawings and these specifications.
  - 1. Execute cutting and demolition by methods which will prevent damage to other work and will provide proper surface to receive installation of new work by others and patching of finish surfaces.
  - 2. Do all cutting or removal so as to leave neat, true, plumb and square edges, at edges to remain. Use carborundum or diamond saw equipment for cutting masonry, concrete and stone work, where edges or surfaces are to remain.
  - 3. Do not cut or remove construction which might weaken or impair the structural integrity or strength of the structural framing or support systems which are to remain.
  - 4. Demolish and remove materials as shown on the drawings without damage to the remaining parts of the structure or mechanical/electrical/utility systems.
  - 5. Remove materials so as to not impose excessive loads in supporting walls, floors or framing and so as not to damage remaining undemolished portions of the structure.
  - 6. Where portions of structures are to be removed, remaining portions shall be protected from damage and prepared to fit new construction. Damage to portions of structures to remain shall be repaired.

7. Proceed with demolition in a systematic manner.
8. Demolish concrete and masonry in small sections.

### 3.5 SELECTIVE DEMOLITION

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
  1. Remove floor, walls, and ceiling finishes prior to any structural removals.
  2. In general, demolish masonry in small sections from the top down. Where necessary to prevent collapse of any construction, install temporary shores, struts, or bracing.
  3. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
  4. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
  5. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
  6. Maintain adequate ventilation when using cutting torches.
  7. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
  8. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
- B. Concrete: Demolish in sections. Cut concrete full depth at junctures with construction to remain and at regular intervals, using power-driven saw, then remove concrete between saw cuts.
- C. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, then remove masonry between saw cuts.
- D. Concrete Slabs-on-Grade: Saw-cut perimeter of area to be demolished, then break up and remove.
- E. Temporary Enclosures: Provide temporary weathertight enclosures for protection of existing building and construction, in progress and completed, from exposure, foul

weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.

### 3.6 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.
- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

### 3.7 SELECTIVE DEMOLITION SCHEDULE

- A. Scope of demolition work is shown on the drawing or implied by the total renovation/alteration project.

### 3.8 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Remove from the site debris, rubbish and other materials resulting from work of this Section. Burning of removed materials from demolished structures will not be permitted on the site.
- B. Removal: Transport materials removed from demolished structures and legally dispose of off site. Pay any and all fees associated with disposal work. Leave the site in an orderly condition to the approval of the Architect.

### 3.9 CLEANING UP

- A. Contractor shall remove from the site all debris resulting from the demolition operations as it accumulates. Upon completion of the work, all materials, equipment, waste, and debris of every sort shall be removed and premises shall be left clean, neat, and orderly.

END OF SECTION