

SECTION 02 41 00
MINOR DEMOLITION

PART 1 - GENERAL

1.1 DESCRIPTION:

- A. Minor and partial demolition for alterations purposes, including underpinning operations.
- B. Abandonment and removal of existing utilities and utility structures.

1.2 RELATED WORK

- A. Requirements for isolation of construction areas: Section 01 00 11, MEDICAL CENTER REQUIREMENTS.
- B. Cutting and Patching: Section 01 73 29, CUTTING AND PATCHING
- C. Waster Management: Section 01 74 19, CONSTRUCTION WASTE MANAGEMENT

1.3 SUBMITTALS

- A. Product Data: Submit all materials to be used in patching and in temporary enclosures that are not submitted under another Section of this Specification.
- B. Site Plan showing:
 - 1. Areas for temporary construction, barriers and enclosures.
 - 2. Areas for temporary and permanent placement of removed materials.
 - 3. Plan for closing off or partially closing off exterior access routes.
- C. Demolition Plan: Submit demolition plan to the Resident Engineer including the following:
 - 1. Schedule of utility shut offs, partial closure of access or pathways and other key items which may affect operations of the Facility.
 - 2. Measures planned to reduce noise and vibration and control dust.
 - 3. Sequencing of major portions of the Work, including timing between portions of the Work.
 - 4. Plans for closing off interior portions of the building to remain occupied during construction including submit materials and systems to be used.
- D. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.

1.4 PROJECT CONDITIONS

- A. Minimize production of dust due to demolition operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.
- B. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
 - 1. Verify that construction and utility arrangements are as shown.

2. Report discrepancies to Architect/Engineer before disturbing existing installation.
3. Beginning of demolition work constitutes acceptance of existing conditions.

1.5 APPLICABLE PUBLICATIONS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.
- B. Code of Federal Regulations (CFR):
29 CFR 1926.....Occupational Safety and Health Standards.
- C. National Fire Protection Association (NFPA):
241Standard for Safeguarding Construction, Alteration, and
Demolition Operations.

PART 2 - PRODUCTS

2.1 TEMPORARY CLOSURE MATERIALS

- A. Materials used for barriers, enclosures and other temporary structures may be new or used but must be in serviceable condition, safe and visually free of defect.
- B. Wood in contact with the public must not be an easy source of splinters.
- C. Barriers exposed to the public shall be painted a single color (e.g. not piece of old signs cut up with parts of many colors).
- D. Submit specific closure materials and systems to Resident Engineer for approval.
- E. See also Section 01 00 11, MEDICAL CENTER REQUIREMENTS.

2.2 PATCHING

- A. See Section 01 73 29, CUTTING AND PATCHING for material requirements for patching materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
 1. Verify that construction and utility arrangements are as shown.
 2. Report discrepancies to Architect/Engineer and the Resident Engineer before disturbing existing installation.
 3. Beginning of demolition work constitutes acceptance of existing conditions.

3.2 PREPARATION

- A. Do not begin removal until receipt of notification to proceed from Resident Engineer.

- B. Do not proceed until barriers are in place and negative air pressure is established as described in Section 01 00 11, MEDICAL CENTER REQUIREMENTS.
- C. See Section 01 73 29, CUTTING AND PATCHING for temporary support and protection.
- D. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

3.3 GENERAL REQUIREMENTS

- A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
 - 1. Obtain required permits.
- B. Use of explosives is not permitted.
- C. Protect existing structures and other elements that are not to be removed. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
 - 1. Prevent movement or settlement of adjacent structures.
 - 2. Stop work immediately if adjacent structures appear to be in danger and report condition to the Resident Engineer and Architect/Engineer.
- D. Conform to the requirements of Section 01 00 11, MEDICAL CENTER REQUIREMENTS erection and maintenance of temporary barriers and security devices. Separate areas in which demolition is being conducted from other areas that are still occupied.
- E. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
- F. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
- G. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
- H. Obtain written permission from the Resident Engineer for any activity outside the limits indicated on the Drawings, including the path to be used by large construction equipment and trucks and dumpsters to and from the site.
- I. If hazardous materials are discovered during removal operations, stop work and notify Architect/Engineer and Resident Engineer; hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.
- J. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Resident Engineer. Obtain required permits before modifying or disabling life safety system including exit pathways.

3.4 SELECTIVE DEMOLITIONS PROCEDURE

- A. Remove existing work as indicated and as required to accomplish new work.
- B. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.
- C. Conform to Section 01 73 29, CUTTING AND PATCHING for all cutting and patching procedures.
 - 1. Repair and patch adjacent construction and finishes damaged during removal work as necessary:
 - a. Surfaces or elements which are scheduled to be removed or remodeled in a later phase of this project must be patched as required to provide stable construction. Patches may be temporary but must be of a nature which will serve until the finish construction scheduled for a later phase of this Project.
 - b. Surfaces or elements not scheduled to be removed or remodeled or refinished in later phases of this project, must be patched and finished in a permanent manner to match existing finishes.
- D. Separate areas in which demolition is being conducted from other areas that are still occupied.
 - 1. Provide, erect, and maintain temporary dustproof partitions and sound barriers of construction conforming to Section 01 00 11, MEDICAL CENTER REQUIREMENTS and as approved by the Resident Engineer where shown on the drawings and as required to meet project requirements.

3.5 EXISTING UTILITIES

- A. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove existing systems and equipment as indicated.
 - 1. Protect existing utilities to remain from damage.
 - 2. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components.
 - 3. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
 - 4. Verify that abandoned services serve only abandoned facilities before removal.
- B. Cutting of existing pipe, conduit or ductwork serving the building, which is indicated to be removed or relocated, must be scheduled only after adequate provisions have been made to bypass them. Services must be maintained at all times.

- C. Coordinate work with Resident Engineer; notify before starting work and comply with requirements; obtain required permits. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 7 days prior written notification to Resident Engineer.
- D. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities where possible to do so, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification.
- E. Marking of Capped and Abandoned Services: Mark using highly visible tags or flags, protect from damage due to subsequent construction, using substantial barricades if necessary.
 - 1. At utilities or ductwork to be permanently capped and abandoned, provide a permanent type tag (metal or plastic) attached to the duct, pipe, conduit, etc. near the cap and containing the following information:
 - a. Utility carried (e.g. gas, hot water, return air, 240 V electrical, etc.)
 - b. Original source.
 - c. Original destination.
 - d. Note to which (if either) it is still connected.
 - e. Note whether the pipe, conduit or duct is active or contains anything.
 - f. Date capped.
 - 2. Utilities or ductwork to be temporarily capped may be tagged with less permanent tags (paper) but must carry the same information.

3.6 CLEANING

- A. Thoroughly clean areas and spaces where cutting and patching is performed or used as access including cleaning piping, metal framing, conduits, ducts and other similar features.

3.7 DEBRIS AND WASTE REMOVAL

- A. Daily remove waste from areas where demolition is occurring.
- B. Keep area around dumpsters and other waste disposal facilities clean.
- C. Do not permit waste materials to blow about the site.

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