SECTION 02060
BUILDING DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY:

A. Section Includes:

1. Demolition of buildings or portions of buildings

2. Removal of materials from site

3. Subgrade removal including:
   a. Foundations.
   b. Basement floor slab demolition.
   c. First floor slab demolition.
   d. Underground tanks and piping.

4. Disconnection, capping, and identification of utilities.

5. Salvage. Unless requested specifically by the Owner, all salvage shall belong to the Contractor.

B. Related Sections:

1. Section 01500 - Construction Facilities and Temporary Controls: Barricades, fences, landscape protection, and dust control.

2. Section 01700 - Contract Closeout: Project record documents.


4. Section 02080 - Asbestos Removal: Owner's procedures.

5. Section 02110 - Site Clearing: Site clearing outside periphery of existing structures including fences, concrete slabs on grade and asphalt paving.

6. Section 02200 - Earthwork.

1.2 SUBMITTALS:

CHECK HAZARDOUS MATERIALS ABATEMENT PROCEDURES.
A. Submit a construction waste management plan including demolition and removal procedures and schedule under provisions of Section 01300.

**LEED – Waste management Plan is required.**

B. Submit record documents under provisions of Section 01700.

**LEED MRc2: Construction Waste Management**
Submit waste reduction progress reports with applications for payment. Include the following in the reports:
1. Material Category/Type
2. Where waste was generated
3. Total quantity of waste in tons
4. Total quantity salvaged, in tons
5. Total quantity recycled, in tons
6. Total quantity recovered (salvaged + recycled), in tons
7. Total quantity recovered as a percentage of total waste.

1.3 QUALITY ASSURANCE:

A. Permits and Fees: Obtain and pay for all permits.

B. Coordinate with regulating authorities and University Agencies in order to shut off:
   1. Electric.
   2. Gas.
   3. Water.
   4. Sewer (sanitary and storm).
   5. Telecommunications (coordinate with both Telecom and U.S. West).
   6. Steam.
   7. Steam condensate.
   8. Chilled water.
   9. Compressed air.
   10. Cable - AMS (Academic Media Services).

1.4 PROJECT SITE CONDITIONS:
A. Existing Conditions:

1. Condition of the Structures:
   a. Buildings to be demolished will be vacated and discontinued in use prior to the start of the work.
   b. The Owner assumes no responsibility for the actual condition of the structures to be demolished.
   c. Conditions existing at the time of inspection for bidding purposes will be maintained by the Owner insofar as practicable. Variations within the structures may occur by the Owner's salvage and asbestos abatement operations prior to start of demolition. A copy of the environmental site assessment will be available for inspection at the CU project manager’s office.

B. Environmental Conditions:

1. Pollution Controls:
   a. Comply with all governing regulations.
   b. Return areas to condition existing prior to the start of the work, unless directed otherwise in Contract Documents.
   c. Keep dust from entering existing facilities. Comply with Colorado Department of Health requirements regarding debris control. Jet and video storm sewers where debris may have accumulated. Comply with Section 02722 requirements.
   d. Coordinate noisy operations with Owner such that nearby functioning facilities are disturbed minimally.
   e. Coordinate vibration creating operations with Owner such that nearby functioning facilities are disturbed minimally.

2. Explosives: The use of explosives will **not** be permitted.

3. Traffic:
   a. Ensure minimum interference with streets, pedestrian ways and adjacent facilities.
   b. Provide alternate routes around closed or obstructed vehicular and pedestrian ways as routes required by Owners operations.
   c. Ensure the safe passage of vehicular and pedestrian traffic around site.
4. Utilities:
   
a. Before disconnecting, removing, plugging or abandoning any existing utilities serving the building:
   
   1) Notify the Owner, applicable utility companies, and local authorities having jurisdiction.
   
   2) Cut off and cap utilities at the mains on the property or in the street as required by the Owner and responsible utility company.
   
   3) Remove, cut off and plug, or cap all utilities within the existing building areas to be demolished, except those designated to remain.
   
   b. Locate and protect existing utilities as specified in Section 02200.

PART 2 - PRODUCTS

2.1 SALVAGE:

   A. The Owner reserves first salvage rights.
   
   B. The Contractor shall notify the Owner for review of material to be stored or selected for salvage.
   
   C. Coordinate with the Department of Facilities Management.
   
   D. Items of salvageable value to the Contractor may be removed from the structure as the work progresses, if such items are not claimed by the Owner.

      **LEED** - Proper documentation must be completed before items are removed from project site.

   E. Transport salvaged items from the site as they are removed to a location determined by the CU project manager.

      **LEED** - All items of salvageable value must be salvaged.

2.2 RECYCLE

   **LEED - MRc2: Construction Waste Management**

   A. All demolition and land clearing debris that is recyclable must be recycled.
   
   B. Documentation must be kept of all recycled material in order to fill out waste reduction progress reports.
C. Recycle paper and beverage containers used by onsite workers. Provide recycling receptacles for the duration of construction activities at the building site.

PART 3 - EXECUTION

3.1 PREPARATION:

A. Prevent movement or settlement of adjacent structures, and utilities. Provide bracing and shoring as necessary.

B. Protect existing landscaping materials, appurtenances, utilities, and structures which are not to be demolished.

C. Mark location of disconnected utilities. Identify utilities and indicate capping locations on Project Record Documents. Provide locate fixes/points in the field prior to disconnection.

3.2 BUILDING DEMOLITION:

A. Demolish designated structures and remove from the site.

3.3 BELOW-GRADE CONSTRUCTION:

A. Demolish foundation walls, utility lines, manholes and related structures to the following depths.

1. General Site: Remove to 3 feet below existing grade unless noted otherwise.

2. Structural areas within 5 feet either side of foundation walls and column bearing pads: Remove completely.

3. Utility Trenches: Where existing below ground structures conflict with new construction, the obstructions shall be completely removed and backfilled with structural fill. Coordinate with Owner and Section 02200 requirements.

B. Demolish concrete basement and other slabs on grade into pieces manageable for disposal. Slabs are not required to be removed if location is below the elevations described above, and do not conflict with subgrade utilities.

C. Buried Tanks:

1. Pump out buried tanks located within demolition area. Comply with EPA and State of Colorado requirements regarding equipment and disposal of tank contents.

2. Remove underground tanks, components, and piping from site where tanks occur within 5' of building lines.
3. Fill abandoned tanks with clean sand or lean concrete where tanks occur outside of 5' of building lines, if approved by the Owner.

D. Remove any contaminated soil from around tanks and replace with material acceptable to the Owner.

3.4 FILLING BASEMENTS AND VOIDS:

A. Completely fill below-grade areas and voids resulting from the demolition of structures. Comply with Section 02200 requirements.

3.5 DISPOSAL OF DEMOLISHED MATERIALS:

A. Campus dumpsters or other trash receptacles shall not be used for disposal of demolition debris.
B. Remove from the site all debris, rubbish, and other materials resulting from demolition operations.
C. Remove and promptly dispose of contaminated, vermin infested, or dangerous materials encountered.
D. Burning of removed materials from demolished structures will not be permitted on the site.

1. Transport all non-recyclable or non-salvageable materials removed from demolished structures and dispose of in a legal manner off the site.

LEED MRc2: Construction Waste Management
2. Recyclable materials shall be taken to local recycling facility. Waste reduction progress reports shall be completed for all material.

3. If owner and contractor do not want salvageable items, they shall be donated and waste reduction progress reports shall be completed for those items.

END OF SECTION 02060