

SECTION TABLE OF CONTENTS

DIVISION 02 - SITE WORK

SECTION 02720

DEMOLITION

PART 1 GENERAL

- 1.1 SCOPE OF WORK
  - 1.1.1 SCOPE
  - 1.1.2 DEMOLITION SITES
    - 1.1.2.1 Hazardous Material Tests
  - 1.1.3 NO WARRANTIES OF THE CONDITION OF THE SITE, STRUCTURES OR CONTENTS
- 1.2 REFERENCES
- 1.3 SUBMITTALS
- 1.4 PAYROLL
- 1.5 AVAILABILITY OF GROUNDS
  - 1.5.1 Contractor's Temporary Facilities
    - 1.5.1.1 Administrative Field Offices
    - 1.5.1.2 Staging Area
- 1.6 GOVERNMENT'S REPRESENTATIVE
- 1.7 MEASUREMENT AND PAYMENT

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

- 3.1 PROTECTION OF PERSONNEL
- 3.2 PROPERTY IDENTIFICATION
- 3.3 TEMPORARY PROJECT SAFETY FENCING
- 3.4 EXISTING UTILITIES
  - 3.4.1 General
  - 3.4.2 Buried Utilities
  - 3.4.3 North Dakota One Call Excavation Notice System
- 3.5 DEMOLITION
  - 3.5.1 Pavements and Walks
  - 3.5.2 Burning
  - 3.5.3 Use of Explosives
  - 3.5.4 Dust Control
  - 3.5.5 Testing
- 3.6 EXCEPTIONS
- 3.7 UTILITIES
  - 3.7.1 Gas, electric, phone, cable.
  - 3.7.2 Sewer
  - 3.7.3 Water
    - 3.7.3.1 Service Main
  - 3.7.4 Pavement and Sidewalk Restoration
- 3.8 DISPOSITION OF MATERIAL
  - 3.8.1 Disposal of Clearing and Grubbing Debris
    - 3.8.1.1 Disposal offsite for useful purposes
    - 3.8.1.2 Disposal in a locally operated sanitary landfill
  - 3.8.2 Disposal of Solid Construction Debris and Waste

- 3.9 CLEANUP
  - 3.9.1 Restoration of Storage Areas
- 3.10 FILLING
  - 3.10.1 Fill Material Requirements
  - 3.10.2 Degree of Compaction
  - 3.10.3 Testing
- 3.11 ESTABLISHMENT OF TURF
  - 3.11.1 Topsoil
  - 3.11.2 Seed
    - 3.11.2.1 Seed Mix
  - 3.11.3 Application
  - 3.11.4 Maintenance
- 3.12 PROTECTION OF TREES
  - 3.12.1 Restoration of Damaged Trees
- 3.13 CONTROLLED DENSITY FILL (CDF)
  - 3.13.1 Material Properties
  - 3.13.2 Submittals and Testing Requirements
  - 3.13.3 Curing Requirements
- 3.14 MISCELLANEOUS
  - 3.14.1 Snow Removal
  - 3.14.2 Fuel Tanks

-- End of Section Table of Contents --

SECTION 02720

DEMOLITION

PART 1 GENERAL

1.1 SCOPE OF WORK

1.1.1 SCOPE

The work shall be as specified herein and shall include all project management, administration, supervision, labor, materials, tools, equipment, personal protective equipment, safety monitoring system, consumables, temporary facilities (including power) as required.

1.1.2 DEMOLITION SITES

Each site to be demolished is listed and described in the attachment "SUPPLEMENTAL INSTRUCTIONS/SPECIFICATIONS" at the end of this section.

1.1.2.1 Hazardous Material Tests

Tests have been performed on all properties and hazardous materials have been removed.

1.1.3 NO WARRANTIES OF THE CONDITION OF THE SITE, STRUCTURES OR CONTENTS

The Government DOES NOT warrant the condition or contents of the sites or structures. The Government makes no guaranty that the site, structures or materials to be removed from the site will be in their present condition (or their condition as of the date of any inspection by the quoters). These sites are NOT secured. All sites and structures are exposed to the elements and may be subject to vandalism or damage by weather or other acts of nature. No adjustment in contract price will be made for structures or property that are lost, damaged or destroyed.

Since the Government makes no warranties regarding the condition of the sites, structures, or materials, quoters are advised to prepare their quotes on the assumption that no salvageable materials will be recovered. Quoters basing their quotes on recovering significant salvage value do so at their own risk.

Since the structures are exposed to the elements, the Contractor shall be responsible for any dewatering or other site preparation necessary to perform the work. No adjustment in contract price will be made for flooded basements, wet ground conditions or other weather related costs.

The Government assumes no responsibility for the actual condition of buildings or other site features at the demolition sites.

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

ENGINEERING MANUALS (EM)

EM 385-1-1 (1996) U.S. Army Corps of Engineers Safety and Health Requirements Manual

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 698 (1991) Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft<sup>3</sup>) (600 KN-m/m<sup>3</sup>)

ASTM D 1556 (1996) Density and Unit Weight of Soil in Place by the Sand-Cone Method

ASTM D 2487 (1998) CLASSIFICATION OF SOILS FOR ENGINEERING PURPOSES (UNIFIED SOIL CLASSIFICATION SYSTEM)

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted:

SD-01 Preconstruction Submittals

Work Plan; G,CO

The procedures proposed for the accomplishment of the work. The procedures shall provide for safe conduct of the work, including method of identifying sites, procedures and methods to provide necessary supports, lateral bracing and shoring when required, protection of property which is to remain undisturbed, coordination with other work in progress, and timely disconnection of utility services. Include a detailed description of the methods and equipment to be used for each operation, and the sequence of operations in accordance with EM 385-1-1. EM 385-1-1 can be found at <http://www.hnd.usace.army.mil/techinfo/index.htm>, select Engineer Manuals.

Permits;

The Contractor shall be responsible for securing all permits, licenses, certifications and like required for compliance with the standards and regulations bearing upon performance of the work. Copies of permits shall be submitted.

1.4 PAYROLL

The Contractor is required to comply with the provisions of the Davis-Bacon Act. Wage rates for this contract are attached. The Contractor shall submit certified payroll reports.

1.5 AVAILABILITY OF GROUNDS

The work limits shall be the established property lines of the property to be demolished, beginning at the street. The Contractor shall not enter upon private property without first obtaining permission from the owner. Any additional rights-of-way or grounds desired by the Contractor shall be obtained by the Contractor at its own expense, and copies of agreements for the use of such rights-of-way shall be furnished to the Contracting Officer before entering thereon. Such agreements shall clearly relieve the Government of any responsibility for damages resulting from the use of the grounds.

#### 1.5.1 Contractor's Temporary Facilities

##### 1.5.1.1 Administrative Field Offices

The Contractor may provide and maintain administrative field office facilities within the construction area at the designated site(s). Government office and warehouse facilities will not be available to the Contractor's personnel.

##### 1.5.1.2 Staging Area

The boundary limits of the grounds made available for the Contractor's use are the property limits for the work sites designated for removal. The Contractor may use a work site only during the designated period of work at that work site except as noted below. Trailers, supplies, or equipment shall not be placed or stored outside the work limits. Upon completion of the work at a work site, the Contractor shall remove all trailers, supplies, and equipment from the work site. If requested by the Contractor to the Contracting Officer, the Contracting Officer will designate a work site, where work is not in progress, that the Contractor may use to store trailers, supplies, and equipment in accordance with any restrictions designated by the Contracting Officer.

#### 1.6 GOVERNMENT'S REPRESENTATIVE

The Government's representative for this contract is:

Mr. Craig Johnson  
U.S. Army Corps of Engineers  
Western Area Office  
201 North 3rd Street  
Suite 101  
Grand Forks, North Dakota 58203

#### 1.7 MEASUREMENT AND PAYMENT

Work of this contract will not be measured for payment. All costs associated with furnishing all labor, equipment, materials, and all costs for permits, disposal, and any other costs will be paid for on a lump sum (LS) basis for each site specified in the pricing schedule. All costs therefore shall be included in the pricing for the CLIN to which the work pertain.

In the event that the Contractor's price for a given CLIN is positive (calls for payment by the Government to the Contractor), payments to the Contractor for the work required by that CLIN will be governed by the clause entitled 52.237-4 -- Payment by Government to Contractor (Apr 1984).

In the event that the Contractor's price for a given CLIN is negative

(calls for payment by the contractor to the Government), payments to the Government for the property acquired under that CLIN will be governed by the clause entitled 52.237-5 -- Payment by Contractor to Government (Apr 1984).

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.1 PROTECTION OF PERSONNEL

During the demolition work the Contractor shall continuously evaluate the condition of the structure being demolished and take immediate action to protect all personnel working in and around the demolition site. No area, section, or component of floors, roofs, walls, columns, pilasters, or other structural element will be allowed to be left standing without sufficient bracing, shoring, or lateral support to prevent collapse or failure while workmen remove debris or perform other work in the immediate area.

3.2 PROPERTY IDENTIFICATION

The Contractor shall locate and verify each property address prior to the start of demolition. Before beginning any demolition work, the Contractor shall inspect the site to determine the extent and limits of the work. The Contractor shall take necessary precautions to avoid damage to adjoining property, and existing items to remain in place. Any damaged items shall be repaired or replaced as approved by the Contracting Officer. Damages resulting from demolition of properties, that are not specifically identified herein, shall be the responsibility of the Contractor.

3.3 TEMPORARY PROJECT SAFETY FENCING

The work sites with existing safety hazards at the time of contract award will be fenced by others with temporary fencing. Upon commencement of work at a site, the Contractor shall maintain temporary project safety fencing at the work site where there is a safety hazard and the Contractor is not present at the site. A safety hazard includes an abrupt change in grade such as at an open basement, a steep slope to the bottom of an open excavation, a building at a partial stage of demolition, or any other similar safety hazards. Upon completion and acceptance of the work, all fencing, including all existing temporary fencing, shall become the property of the Contractor and shall be removed from the work site.

3.4 EXISTING UTILITIES

3.4.1 General

The Contractor shall coordinate all utility work with the local utility companies.

3.4.2 Buried Utilities

Prior to commencing excavation, the Contractor shall accurately locate all buried utilities. In the event the Contractor damages any existing utility lines, report thereof shall be made immediately to the Contracting Officer.

If the Contracting Officer determines that repairs shall be made by the Contractor, such repairs shall be performed immediately.

### 3.4.3 North Dakota One Call Excavation Notice System

For contract work performed within the State of North Dakota, the Contractor shall meet the requirements of North Dakota Statutes, Chapter 42-23 "One Call Excavation Notice System." The North Dakota One Call notification center telephone numbers are:

Hotline	800-795-0555
Main Office	701-223-9380

### 3.5 DEMOLITION

In the interest of occupational safety and health, the work shall be performed in accordance with EM 385-1-1, Section 23, Demolition, and other applicable Sections. The Contractor shall demolish, remove and dispose of the main structure(s), garage, shed and other outbuildings including their contents. Demolition shall include complete removal of basement walls, basement slabs, on grade slabs, walkways, driveways, aprons, patios, decks, fences, and other items within the work limits. Varying types of concrete reinforcement, basement depths, concrete thickness and similar items should be expected. The Government will not consider a request for change for such variations. The Contractor shall remove all items of property on the work site including but not limited to vehicles, campers, boats, trailers, etc. The Contractor shall clear and grub trees which interfere with site safety or are designated to be removed. The work includes removal of rubbish and debris, removal of utilities (water and sewer) and site restoration. In the interest of conservation, salvage shall be pursued to the maximum practical extent.

#### 3.5.1 Pavements and Walks

Driveway pavement and sidewalks shall be removed to the back side of the curb, or to the edge of street pavement where there is no curb, or as indicated in the SUPPLEMENTAL INSTRUCTIONS/SPECIFICATIONS attached at the end of this section. Where pavement removal is to the edge of street, prior to removing driveway pavement, the Contractor shall saw cut to provide a well defined edge at the street. Where sidewalk removal is to be stopped at a location other than a construction joint, the Contractor shall saw cut to provide a well defined edge. The saw cuts shall be deep enough to cut at least three quarters through the pavement or concrete thickness.

#### 3.5.2 Burning

The use of burning at the project site for the disposal of refuse and debris will not be permitted.

#### 3.5.3 Use of Explosives

Use of explosives will not be permitted.

#### 3.5.4 Dust Control

The amount of dust resulting from demolition shall be controlled to prevent the spread of dust to occupied portions of the construction site and to avoid creation of a nuisance in the surrounding area. Use of water will not be permitted when it will result in, or create, hazardous or objectionable conditions such as ice, flooding and pollution.

#### 3.5.5 Testing

The Contractor shall be responsible for all tests that are required by law or permit such as air quality and noise level.

### 3.6 EXCEPTIONS

Items specifically identified to be left in place shall not be demolished.

### 3.7 UTILITIES

Existing utilities shall be removed or abandoned as specified in the SUPPLEMENTAL INSTRUCTIONS/SPECIFICATIONS attached. The location of each abandoned corporation stop and sewer plug shall be documented by the Contractor. This documentation shall be provided to the Contracting Officer upon completion of the work at each site. The documentation shall include a sketch with notes and dimension accurately tying the abandoned corporation stops and sewer plugs to at least 2 reference points such as hydrants, power poles, sign posts or other features.

#### 3.7.1 Gas, electric, phone, cable.

Capping/removal will be by others prior to award of this contract. The Contractor shall be responsible for verifying that these services have been capped and/or disconnected prior to commencing work at each site.

#### 3.7.2 Sewer

The Contractor shall be responsible for disconnecting and plugging sewer service at the location given in the SUPPLEMENTAL INSTRUCTIONS/SPECIFICATIONS at the end of this section. Sewer lines shall be excavated and removed from the structure to the point of disconnection. Remaining pipes shall be plugged with portland cement concrete or by a method approved by the City of Grand Forks. Concrete plug shall fill pipe for a length that is at least one and one half times the diameter. Plugs shall be inspected by the City of Grand Forks prior to backfill.

#### 3.7.3 Water

During demolition the Contractor shall not pull on a service line in a manner that will break or damage the line. Leaks caused by Contractor operations shall be reported to the Contracting Officer immediately. Such leaks shall be repaired as directed at no additional cost to the Government.

##### 3.7.3.1 Service Main

The Contractor shall expose the main, turn off the corporation stop, disconnect the service line at the corporation stop and pull out the curb box or cut off 3 feet below grade.

#### 3.7.4 Pavement and Sidewalk Restoration

Where portions of streets must be removed to shut off water service the Contractor shall saw cut to provide a smooth edge, compact subgrade as specified and patch pavement with a cold asphalt mix at least 8 inches thick. The final patch shall be flush with existing pavement. All curb and gutter shall be replaced in kind.

### 3.8 DISPOSITION OF MATERIAL

Title to material and equipment to be demolished is vested in the Contractor upon receipt of notice to proceed. The Government will not be responsible for the condition, loss or damage to such property after notice to proceed. Material salvaged for the Contractor shall be stored, as approved by the Contracting Officer, and shall be removed from Government property before completion of the contract. Material salvaged for the Contractor shall not be sold on the site. Disposal of material that cannot be salvaged shall be the responsibility of the Contractor.

### 3.8.1 Disposal of Clearing and Grubbing Debris

Debris or waste shall not be left on the site. Disposal of clearing and grubbing debris shall be by one of the following methods:

#### 3.8.1.1 Disposal offsite for useful purposes

In the interest of conservation, it is required that the Contractor make a reasonable effort to dispose of the material offsite for some useful purpose. Timber may be cut into convenient lengths and utilized for making saw logs, posts, cordwood, wood chips for paper making or other uses, or other similar use.

#### 3.8.1.2 Disposal in a locally operated sanitary landfill

Contractor shall select the disposal site with the approval of the Contracting Officer. The Contractor shall secure the required permits for disposal and provide copies of the permit to the Contracting Officer.

### 3.8.2 Disposal of Solid Construction Debris and Waste

Disposal of Solid Construction Debris and Waste, including all debris from the demolition work, shall consist of removal from Government property and disposal in compliance with Federal, state, and local requirements for solid waste disposal. Contractor shall select the disposal site with the approval of the Contracting Officer.

## 3.9 CLEANUP

Rubbish and debris shall be removed daily, unless otherwise directed, to avoid accumulation at the demolition site. Materials that cannot be removed daily shall be stored in manner that minimizes risk to the public. Debris and rubbish shall be removed from basement and similar excavations. Debris shall be removed and transported in a manner that prevents spillage on streets or adjacent areas. Local regulations regarding hauling and disposal shall apply.

### 3.9.1 Restoration of Storage Areas

Upon completion of the project and after removal of trailers, materials, and equipment from within the fenced area, the fence shall be removed and will become the property of the Contractor. Areas used by the Contractor for the storage of equipment or material, or other use, shall be restored to the original or better condition. Gravel used to traverse grassed areas shall be removed and the area restored to its original condition, including top soil and seeding as necessary.

### 3.10 FILLING

The Contractor shall provide fill for all below grade areas and voids both

existing and those resulting from demolition and debris removal. Placement of fill shall commence immediately after the demolition and removal activities are complete and shall proceed diligently until fill is brought up to grade. Fill shall be placed in layers that do not exceed 12 inches thick, compacted to a density not less than 95% of the Standard Proctor value and fine graded to blend with the terrain and to drain. Fill operations shall allow for placing topsoil as specified.

### 3.10.1 Fill Material Requirements

The material used for fill shall meet the following requirements:

- a) plasticity index less than 50%,
- b) classified by ASTM D 2487 as CL or CH,
- c) less than 40% retained on the No. 4 sieve,
- d) less than 30% retained on the 3/4 inch sieve.

### 3.10.2 Degree of Compaction

Degree of compaction required is expressed as a percentage of the maximum density obtained by the test procedure presented in ASTM D 698. The maximum density is the "Standard Proctor" value.

### 3.10.3 Testing

All testing expenses shall be the Contractor's responsibility. Tests shall be by a firm that provides testing service and that routinely does tests of this nature. Results shall be submitted to the Contracting Officer prior to payment.

#### a. Moisture-Density Relations (ASTM D 698)

One test for each material variation, not less than 3 tests total.

#### b. In-Place Densities (ASTM D 1556)

(1) For basement fill, not less than 1 test for each 2 vertical feet of fill

(2) For fill under streets not less than one test for each 2 vertical feet of fill.

### 3.11 ESTABLISHMENT OF TURF

The Contractor shall be responsible for establishing a stand of turf at all sites. A stand of turf is defined as a stand of grass that is at least two inches tall with at least 100 grass plants per square foot, and reasonably free of weeds, bald areas and visual imperfections as assessed by the Contracting Officer.

Work associated with establishment of turf may be accomplished in the next growing season following the completion date specified. Seed shall not be planted between June 15 and September 15.

#### 3.11.1 Topsoil

The Contractor shall place a minimum of 6 inches (loose) topsoil on areas

of removal or backfill or areas that have been damaged by the construction activity. Topsoil shall be free of debris, lumps of clay, stones, excess vegetation, sticks, and other objectionable material.

### 3.11.2 Seed

The Contractor shall seed all areas where topsoil has been placed and all locations where construction activities have damaged existing seeded areas.

#### 3.11.2.1 Seed Mix

Seed mix shall be:

For sunny areas

Kentucky Bluegrass	60%	-	65%
Fescue (dreeping and/or chewings)	40%	-	35%

or for shade

Kentucky Bluegrass	30%	-	35%
Fescue (dreeping and/or chewings)	65%	-	70%

#### 3.11.3 Application

Roto-till to a depth of three inches pulverizing all large lumps, remove stones, sticks and rubbish greater than 1 1/2 inch, rake to finished grade and contour, broadcast seed, compact with roller, mulch and water as required.

#### 3.11.4 Maintenance

The Contractor shall be responsible for maintenance of seeded areas until a stand of turf has been established.

### 3.12 PROTECTION OF TREES

Trees within the project site shall be left in place and shall be protected from damage, unless the tree(s) interfere with site safety or are designated to be removed. The following measures shall be implemented for tree protection:

- a. The trees shall be protected from wounds to the bark and foliage.
- b. The critical root zone shall be protected from compaction and grading.
- c. Changes in temporary site drainage and ponding shall be minimized to the extent possible that it effects the protected trees.

The critical root zone of trees designated to be protected shall be surrounded by a high visibility fence 4 feet in height, supplied and erected by the Contractor. The critical root zone shall be defined by an area extending 1.5 feet radius from each tree for each inch of Diameter at Breast Height (DBH). The fence shall be securely erected and installed prior to any movement through the project site by construction vehicles or equipment, and remain in place until construction and clean-up are completed. The critical root zone shall remain free of all construction activities including trenching, staging, stockpiling and storage of

materials. Vehicles and equipment shall not drive or park within the critical root zone. Variation to the critical root zone size or configuration will only be permitted where it is absolutely necessary for construction of the project, and requires approval of the Contracting Officer. Short duration alterations of the critical root zone involving wood chips and limited equipment travel shall be submitted in writing for approval.

The Contractor shall not operate equipment in vegetated areas outside the work limits.

#### 3.12.1 Restoration of Damaged Trees

Any existing tree designated to be protected that is damaged by the Contractor's operations shall be replaced. Trees will be considered damaged if the critical root zone in cohesive soils is compacted, if there are significant wounds that could contribute to rot, or if distress (evident by reduced growth or other observations of distress documented by a forester) is observed prior to closing the contract. Trees shall be replaced in kind on a caliper inch per caliper inch basis (DBH) (i.e. one 6-inch red oak shall be replaced with two 3-inch red oaks, three 2-inch red oaks, or six 1-inch red oaks). Replacement trees shall be planted and guaranteed with the Contractor's standard warranty. Replacement tree size and location will be determined and staked by the Contracting Officer. Repair by pruning, aeration, soil conditioning, or other recommendation from a qualified forester will be considered as substitution for replacement by the Contracting Officer.

#### 3.14 MISCELLANEOUS

##### 3.14.1 Snow Removal

Snow removal shall be the responsibility of the Contractor.

##### 3.14.2 Fuel Tanks

If, during construction, buried fuel tanks are discovered the Contractor shall remove the tanks and dispose of them. Soil abatement, if needed, will be by others. Removal of buried fuel tanks will be considered a differing site condition for which additional payment is due.

-- End of Section --

SUPPLEMENTAL INSTRUCTIONS/SPECIFICATIONS

BID ITEM	ADDRESS	STREET	STRUCTURE	DIMENSION	BASEMENT	UTILITIES	GARAGE	NOTES
1	1829	Riverside Drive	Wood Structure	30' x 70'	Concrete	Plug sewer in lot; remove or cut off curb box 3 feet below grade	Detached 3 stall. Garage structure has been removed by others. Remove slab/foundation.	Remove concrete swimming pool with deck and pump. Remove sauna, outbuildings and fencing. Remove debris, driveway and walks.
2	121	3rd Street South	Parking Lot	145' x 190', Concrete				Remove lights, parking sign and all concrete paving and curbing to riverward side of sidewalk
3	210	Gertrude Avenue Building 1	Wood Structure	30' x 40'	Concrete slab/footing	Plug sewer at lot line; Disconnect water at main; Remove or cut off curb box 3 feet below grade.		
4	210	Gertrude Avenue Building 2	Wood Structure	30' x 60'	Foundation			
5	210	Gertude Avenue Building 3	Steel Structure	30' x 35'	Concrete slab/footing			Remove 3 large fire damaged trees about 50' NW of building. Also remove trees within 5 feet of structures
6	222	Red Dot Place	Steel Structures - 2 Quonsets & 1 detached metal stack		Concrete slab/footing w/3' concrete perimeter wall	40' x 60' with 22' x 22' addition; 40' x 80'; stack approx. 8 dia x 40' high		Remove steel/metal stack on the north side of structure. Remove all trees within 10' of buildings. Leave fencing intact; remove all trash and debris on site ( within 60' of structures).