

SECTION 02230

SITE CLEARING AND GRUBBING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Removal of surface debris.
- B. Clear site of plant life and grass.
- C. Removal of trees, shrubs, and other plants.
- D. Removal of root system of trees, brush and shrubs.
- E. Removal of paving, curbs, and existing gravel.
- F. Removal of culverts, catch basins, manholes and other drainage features.
- G. Removal of fences, posts, bollards, poles, signs, gates and other minor structures.
- H. Removal and stockpiling of topsoil.
- I. Temporary Construction Fencing.

1.02 RELATED SECTIONS

- A. Section 02050 - Demolition.
- B. Section 02250 - Dewatering
- C. Section 02315 - Common Excavation, Embankment and Compaction
- D. Section 02317- Trenching.
- E. Section 02320 - Slope Protection and Erosion Control.

1.03 DEFINITIONS

- A. Loam
 - 1. Friable clay loam surface soil found in depth of not less than 4 inches.
 - 2. Satisfactory topsoil is free of subsoil, clay lumps, stones, and other objects over 2 inch in diameter, and without weeds, roots and other objectionable material.

1.04 REGULATORY REQUIREMENTS

- A. Obtain required permits from authorities.
- B. Notify affected utility companies before starting work and comply with their requirements.
- C. Do not close or obstruct roadways without permits.
- D. Conform to applicable code for disposal of debris.
- E. Conform to applicable regulatory procedures when hazardous or contaminated materials are discovered.
- F. Dispose of all demolition and construction debris offsite in accordance with local requirements.

1.05 PROJECT CONDITIONS

- A. Conform to applicable regulations relating to environmental requirements, disposal of debris, and use of herbicides.
- B. Coordinate clearing work with utility companies.
- C. Protect utilities to remain from damage.

- D. Protect trees, plants, and other features designated to remain as final landscaping.
- E. Provide protection necessary to prevent damage to existing improvements, trees, or vegetation indicated.
- F. Provide traffic control as required, in accordance with the U.S. Department of Transportation "Manual of Uniform Traffic Control Devices" and Maine Department of Transportation (MDOT) requirements.
- G. Conduct site clearing operations to ensure minimum interference with roads, streets, walks and other adjacent occupied or used facilities. Do not close or obstruct streets, walks, or other occupied or used facilities without permission from authorities having jurisdiction. Thoroughly clean and/or sweep streets and roadways on a daily basis or more frequently as required by the governing authority
- H. Promptly repair damage to adjacent facilities caused by the clearing and grubbing operations, at no cost to the Owner.
- I. Protect bench marks, survey control points, and existing structures from damage or displacement.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Herbicide: Use an approved chemical registered in the State of Maine for stump or basal bark treatment.
- B. Snow Fence: Beacon Plus Orange Construction Fence by Geotenax Corporation, 4800 Monument Street, Baltimore, Maryland, 21205 or approved equal. Support snow or construction fence with 1" steel posts spaced at a maximum of 8'-0" on center.

PART 3 EXECUTION

3.01 PREPARATION

- A. Locate and identify utilities to remain.
- B. Verify that existing plants designated to be relocated are tagged or identified.
- C. Identify a waste area for placing removed materials.

3.02 PROTECTION

- A. Protect utilities to remain from damage.
- B. Protect existing trees and other vegetation indicated or directed by the Owner to remain in place, against unnecessary cutting, breaking, or skinning of roots, skinning or bruising of bark, smothering of trees by stockpiling construction materials or excavated materials within the drip line, excess foot or vehicular traffic, or parking of vehicles within dripline.
- C. Pollution Controls: Use water sprinkling to limit to the lowest practical level the amount of dust and dirt rising and scattering in the air. Do not use water when it may create hazardous conditions, ice, flooding or pollution.
- D. Clean adjacent structures and improvements of dust, dirt and debris caused by clearing and grubbing or earthwork operations. Return adjacent areas to condition existing prior to the start of the work.

3.03 CLEARING

- A. Clear areas required for access to site and execution of Work.
- B. Remove trees, shrubs, and stumps within marked areas and as directed by Owner.

- C. Remove roots to a depth of 18 inches.
- D. Clear undergrowth and deadwood, including blown down or uprooted trees, without disturbing subsoil.
- E. Apply herbicide to remaining stumps to inhibit growth.
- F. Carefully and cleanly cut roots and branches of trees indicated to be left standing, where such roots and branches obstruct new construction.
- G. Stumps not required to be removed: Cut flush with ground elevation.
- H. Retain root systems intact in areas where erosion is likely.
- I. Tree wound paint:
 - 1. Apply to all cut surfaces of trees to remain and to all surgically repaired areas damaged by construction.
 - 2. Apply material recommended by the tree wound paint manufacturer for trees which are not readily affected by the standard applications.

3.04 REMOVAL

- A. Remove paving, curbs, poles, posts, signs, fences, gates, culvert and minor structures to facilitate construction. Where required by these Drawings, or directed by Owner, preserve those curbs, poles, posts, signs, fences, gates, culverts, minor structures, and other features called for to be reset. Reset removed objects immediately upon completion of backfilling, unless otherwise directed by Owner.
- B. Remove portions of existing pavement; as indicated. Neatly saw cut edges at right angle to surface with a paving saw or compressed air cutter satisfactory to Owner.
- C. Remove debris from site.

3.05 GRUBBING

- A. Limits of grubbing: Coincide with limits of clearing.
- B. Use only hand methods for grubbing inside drip line of trees indicated to be left standing.
- C. Remove all stumps, roots over 2 inches in diameter, and matted roots within limit of grubbing to depths of organics or maximum depths shown below:
 - 1. Walks - 18 inches.
 - 2. Roads - 24 inches.
 - 3. Parking Areas - 24 inches.
 - 4. Lawn Areas - 12 inches.

3.06 TOPSOIL REMOVAL

- A. Remove vegetation from areas before stripping.
- B. Strip topsoil to whatever depths encountered, avoiding its intermingling with the underlying subsoil or other objectionable material.
- C. Prevent topsoil from mixing with underlying subsoil or other objectionable material.
- D. Stockpiling:
 - 1. Stockpile in areas on site as directed by Owner.
 - 2. Locate out of natural drainageways.
 - 3. Construct to freely drain surface water to a height not to exceed 8 feet with side slopes of 1.5:1 to 2:1.
 - 4. Erect silt fence surrounding stockpile immediately following formation.
 - 5. Cover if required to prevent wind-blown dust.
 - 6. Apply temporary seeding if piles remain for a period of greater than ten days.

3.07 DISPOSAL

- A. Burning of Materials: Burning will not be permitted.
- B. Removal: Remove material, debris, rock and extracted plant life from site daily as it accumulates and legally dispose of.
- C. Dumping: Dispose of material in an approved off site legally operated disposal area.
- D. Chipping: Reduce to dimensions of less than 2 inches by use of an approved chipping machine and dispose of at an approved off site, legally operated disposal area.
- E. Trucks removing demolition debris from the site shall be covered or shall be of a closed body design to prevent the accidental throwing upon any way of tacks, nails, wire, scrap metal, glass, crockery, or other substances injurious to the feet of persons or animals or to tires or wheels of vehicles.

3.08 RESTORATION

- A. Restore any improvements damaged by or removed by this work to original condition, as acceptable to Owners or other parties or authorities having jurisdiction including but not limited to fences, curbs, signs, trees, shrubs, vegetation, poles, and posts.
- B. Repair or replace trees and vegetation damaged by construction operations, in a manner acceptable to Owner.
- C. Retain qualified tree surgeon to repair specimen tree damage.
- D. Replace trees damaged beyond repair.

END OF SECTION