

SECTION 02100

CLEARING AND GRUBBING

PART 1 GENERAL

1.01 DESCRIPTION

A. The work of this section includes, but is not limited to:

1. Clearing.
2. Grubbing.
3. Stripping and stockpiling topsoil.
4. Debris disposal.
5. Provide all labor, material and equipment to perform all clearing and grubbing as shown on the Contract Drawings and as specified herein.

B. Related Work Specified Elsewhere:

1. Trenching, Backfilling & Compacting: Section 02221
2. Grading & Seeding: Section 02485

C. Definitions:

1. Clearing is defined as the removal of trees, brush, down timber, rotten wood, rubbish, any other vegetation, and objectionable material at or above original ground elevation not designated to be saved. Clearing also includes removal of fences, walls, guard posts, guard rail, signs, and other obstructions interfering with the proposed work.
2. Grubbing is defined as the removal from below the surface of the natural ground of stumps, roots and stubs, brush, organic materials and debris.

1.02 Protection

A. Streets, roads, adjacent property and other works to remain shall be protected throughout the work.

B. Existing trees, shrubs and bushes

1. Trees shall be protected by fencing, barricades, or wrapping as may be required.
2. Shrubs and bushes shall be protected by fences or barricades as may be required.
3. Shallow-rooted plants shall be protected at ground surface under and in some cases outside the spread of branches by fences, barricades or ground cover protection as may be required.

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1.03 JOB CONDITIONS

- A. The Contractor may clear obstructions within the permanent and construction rights-of-way except those specifically designated to be saved or restored on the Contract Drawings or in the Specifications or obstructions specifically designated to be saved as marked by the Owner during construction. Owner shall be given a minimum of 7 days written notice prior to initiation of the clearing activities.
- B. Federal, State and Local laws and code requirements shall control the disposal of trees and shrubs.
- C. Burning not permitted.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Temporary Fencing:
 - 1. Orange safety fence minimum 48 inches in height.
- B. Tree Wound Dressing:
 - 1. Antiseptic and waterproof, asphalt base.

PART 3 EXECUTION

3.01 PREPARATION

- A. When working within temporary or permanent rights-of-way, use every means possible to protect from injury and damage all property, including trees, shrubbery, lawns, fences, buildings, walls, roads, water courses, natural features or any improvements thereto, which may exist. Do not willfully or maliciously injure or destroy trees, shrubs or vegetation and do not remove or cut them without permission of the Owner.
- B. All operations must be confined to the width of the rights-of-way secured. All damage done to property resulting from the Contractor's negligence shall be repaired without charge to the satisfaction of the Owner with the exception of those items (trees, shrubbery, etc.) that must be removed for construction and have been agreed upon beforehand, in writing, between the Contractor and Owner.
- C. Notify the Owner at least 7 days prior to beginning any clearing work.

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- D. Protect benchmarks, utilities, existing trees, shrubs and other landscape features with temporary fencing or barricades satisfactory to the Owner. No material shall be stored or construction operation carried on within 4-feet of any tree to be saved or within the tree protection fence.

3.02 UTILITY RELOCATIONS

- A. Inform all companies, individuals and others owning or controlling facilities or structures within the limits of the work which have to be relocated, adjusted or reconstructed in sufficient time for the utility to organize and perform such work in conjunction with or in advance of the Contractor's operations.
- B. Comply with the provisions of Act 172 regarding the location of subsurface utilities.

3.03 CLEARING

- A. Confine clearing to within the limits of the right-of-way or easement.
- B. Fall trees in a manner that will avoid damage to adjacent trees, shrubs, and other installations which are to be retained.
- C. Where stumps are not required to be grubbed, flushcut with ground elevation.
- D. Trees in construction zones or rights-of-way shall not be removed until inspected and/or tagged by the Owner.
 - 1. No trees shall be removed within the construction zone or rights-of-way except the following:
 - a. Trees within an excavated area such as footing or trench.
 - b. Trees whose root system will be destroyed by the excavation.
 - c. Trees that interfere with the movement of the Contractor's equipment with the approval of the Owner. Any trees that interfere with the movement of the Contractor's equipment shall be reviewed by the Owner before they are removed.
- E. All trees bordering any construction zone or right-of-way shall be protected by acceptable methods. (Trees damaged by the Contractor will be either repaired or replaced as determined by the Owner at the Contractor's expense).
- F. Stumps
 - 1. Stumps required to be removed shall be to a depth of 18 inches. This depth shall be measured from the existing ground surface or the

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proposed finished grade, whichever is the lower. All stumps in lawn areas shall be removed.

2. Engineering requirements shall control removal of stumps under fills, foundations, or any construction in contact with the stumps.
- G. When required, with the Owner's approval, trees shall be trimmed to remove branches or roots which interfere with construction. Paint all cut branches and roots with wound paint as recommended for the application.
- H. Material which is to be salvaged, as a result of the clearing operations, shall include the following items which are to be turned over to the Property owner if the Property owner so desires.
1. Logs over 12 inches, butt diameter
 2. Branches over 6 inches, butt diameter
 3. Parts suitable for use as mulch
 4. Live plants suitable for replanting
- I. All salvageable material not desired by the Property owner shall be removed as part of the Work. Cut logs and branches into cordwood, 2 feet 6 inches in length and store on site where acceptable to the Owner.

3.04 GRUBBING

- A. Grub all areas within the construction limits to remove stumps and roots over 4" in diameter and other objectionable material to a minimum depth of 12".
- B. Remove all stumps within the cleared areas unless otherwise authorized by the Owner.

3.05 STRIPPING AND STOCKPILING TOPSOIL

- A. Strip topsoil to whatever depth it may occur from areas to be excavated, filled, or graded and stockpile at a location approved by the Owner for use in finish grading.
- B. The topsoil is the property of the Owner and shall not be used as backfill or removed from the site.

3.06 DEBRIS DISPOSAL

- A. Trees, logs, branches, brush, stumps, and other debris resulting from clearing and grubbing operations shall, if not requested by the property owner, become the property of the Contractor and shall be legally disposed of.

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- B. Do not deposit or bury on the site debris or stumps resulting from the clearing and grubbing.
- C. Debris may not be burned on-site.
- D. Removal:
 - 1. Material to be removed shall be removed from the site daily as it accumulates.
 - 2. Should the Contractor elect to continue work beyond normal working hours, material to be removed shall not be allowed to accumulate for more than 48 hours.
- E. Prior to depositing surplus material at any off-site location, the Contractor shall obtain a written agreement between himself and the owner of the property on which the disposal is proposed. The Contractor's disposal shall comply with all Federal, State and Local laws and regulations.

3.07 RESTORATION

- A. Repair all injuries to bark, trunk, limbs, and roots of remaining plants by properly dressing, cutting, tracing and painting, using approved arboricultural practices and materials.
- B. Replace trees, shrubs and plants designated to be saved which are permanently injured or die during the life of the Contract and the maintenance period as a result of construction operations with like species acceptable to the Owner.
- C. Remove protective fences, enclosures, and guards upon the completion of the project.
- D. Restore guard posts, guard rail, signs, mail boxes and other interferences to the condition equal to that existing before construction operations. Maintain appropriate height of facilities to finish grade.

*** END OF SECTION ***