

SECTION 301

CLEARING AND GRUBBING

I. GENERAL

1.1 DESCRIPTION OF WORK

The Contractor shall furnish all labor, supervision, material (except as herein provided), tools, equipment, supplies, and services; and, shall perform all Work necessary for the clearing and grubbing activities. The Work shall consist of clearing, grubbing, removing, and disposing of trees, vegetation, debris, and other objects within the construction limits except for trees, vegetation and objects that are designated to be preserved, protected, or removed in accordance with the requirements or other provisions of these Specifications.

1.2 SUBMITTALS

Submittals shall be made by the Contractor in accordance with the procedures set forth in Section 105 and as described below:

- A. The Contractor shall acquire and purchase a copy of any required Tree Trimming Permit and shall submit one copy to the Owner (applicable for Work in right-of-way).
- B. If permitted by the local jurisdiction, before burning debris, the Contractor shall obtain burning permits required by local and state jurisdictions and shall submit one copy to the Owner.
- C. If debris is to be disposed of on private lands, the Contractor shall obtain a letter from the owner of the property granting permission for the disposal activities. The Contractor shall submit a copy of the letter to the Owner, along with copies of other permits required for the land disposal activities.
- D. The Contractor shall obtain and submit a copy of the approved permits, including but not limited to Erosion and Sediment Control, Land Disturbing Activity, certificate to construct, etc. Permits shall be submitted to the Owner prior to commencing clearing and grubbing activities.
- E. If permits are required, they shall be posted on site by the Contractor in a weatherproof enclosure visible from the entrance to the site.

II. EXECUTION

2.1. PROCEDURES

- A. The Contractor shall mark areas to be cleared, the areas to be grubbed, and items to be saved with stakes, flags, paint or plastic colored ribbon for the approval of the Owner.
- B. The Contractor shall protect benchmarks, right of way monuments, utilities, and existing trees, shrubs, and other landscape features designated for preservation with temporary fencing or barricades satisfactory to the Owner. No material shall be stored or construction operation carried on within the drip line or within 5-feet of any tree to be saved (whichever is greater) or within the tree protection fencing. Tree protection shall be in accordance with the Contract Documents and Virginia Erosion and Sediment Control Handbook.

C. If a private fence encroaches on the work area, the Contractor shall notify the property owner at least 5 days in advance of the clearing/grubbing operations to permit the property owner to remove it, construct a supplemental fence, or make such other arrangements as may be necessary for security purposes. Should the property owner fail to reasonably proceed with the work required to secure his or her property within the 5-day time frame, the Contractor shall carefully remove the fence, in whole or in part, and neatly store the materials in a location suitable to the property owner and the Contractor.

2.2. CLEARING

A. The Contractor shall clear all areas within public easements or rights of way as shown in the Contract Documents. The Contractor shall not begin clearing until the following has occurred:

1. The Contractor has delineated the site in accordance with Paragraph 2.1.A; and,
2. The Owner has approved the delineation.

B. Clearing shall include felling all standing trees and cutting of all brush, except where designated to remain.

C. The Contractor shall confine clearing to areas identified in the Contract Documents.

D. The Contractor shall install erosion and sediment control devices, as specified in the Contract Documents, prior to beginning clearing or grubbing operations.

E. Trees shall be removed in such a manner that will avoid damage to other trees, shrubs, and other installations that are to be preserved.

2.3. GRUBBING

A. The Contractor shall grub all areas within public easements or rights of way as shown in the Contract Documents. The Contractor shall not begin grubbing until the following has occurred:

1. The Contractor has delineated the site in accordance with Paragraph 2.1.A; and,
2. The Owner has approved the delineation.

B. Grubbing shall include removal of all stumps and root mat. Roots shall be removed to a depth not less than 18-inches below subgrade. The Work also includes complete removal and disposal of all felled trees, brush and stumps, etc. In addition, any depressions resulting from the above removals must be backfilled to the original ground elevation.

C. Grubbing of root mat and stumps shall be confined to the area over which excavation is to be performed within 30-days after initial grubbing exposure.

D. Tree Protection and Trimming

1. Protection

Existing trees that are designated to be retained after construction shall be protected during construction as follows and in accordance with VDOT *Road and Bridge Specifications* Section 601.

- a. Prior to any clearing, grading or construction, protective barriers shall be placed around all trees to be retained on the site to prevent the destruction or damage of trees. These barriers shall be located in a circular pattern with a radius equal to the length of the widest or longest branch. Material shall not be stockpiled within this defined area and vehicles and other equipment shall be excluded from this area to avoid soil compaction. The only exception to this requirement will be those specifically allowed by these standards.
- b. Boards or wires of a non-protective nature shall not be nailed or attached to trees during building operations.
- c. Heavy equipment operations shall be cautioned to avoid damage to existing tree trunks, and roots during land leveling operations. Feeder roots should not be cut in an area equal to twice the tree circumference (measured in inches at a point 4 1/2 feet above ground, expressed in feet). (Example – A tree circumference measured 4 1/2 feet above the ground of ten inches would have a "no cut" zone of twenty feet in all directions from the tree). This should apply to ditching for all utilities services, if feasible.
- d. All roots severed or severely damaged during building or land leveling shall be trimmed to remove damaged or splintered area. Exposed roots should be covered and moistened immediately after exposure.
- e. All tree limbs damaged during building or land leveling, or removed for any other reason, shall be sawed flush to tree trunk.

2. Trimming

Branches of trees that overhang the roadway, or reduce sight distance, and are less than 20 feet above the elevation of the finished grade, shall be trimmed using approved tree surgery practices in accordance with VDOT Road and Bridge Specifications Section 601.03(b).

2.4. DEBRIS DISPOSAL

Unless specified in the Contract Documents that trees, other timber or other specified clearing and grubbing material is to be reserved for the property owner, all clearing and grubbing material shall become the property of the Contractor. Cleared and grubbed material shall be disposed of in accordance with the following:

A. Materials Retained by Contractor

Unless otherwise indicated, trees, limbs and other timber having a diameter of 3-inches and greater may be retained by the Contractor and removed as saw logs, pulpwood, firewood, or other usable material; however, treated timber shall not be disposed of as firewood. No more than 2 feet of trunk shall be left attached to grubbed stumps. Materials retained by the Contractor shall be removed within thirty days of being felled.

B. Materials to be retained by the Property Owner

When specified in the Contract Documents that trees or other timber is to be reserved for the property owner, such material shall be cut to lengths specified and piled where designated in the

Contract Documents, either within the limits of the right-of-way or not more than 100 feet from the right-of-way line.

C. Materials used for Brush Silt Barriers

When specified in the Contract Documents or where directed by the Owner, material less than 3-inches in diameter shall be used to form brush silt barriers when located within 500 feet of the source of such material. Material shall be placed approximately 5 feet beyond the toe of fill in a strip approximately 10-feet wide to form a continuous barrier on the downhill side of fills. Where selective clearing has been done, material shall be piled, for stability, against trees in the proper location. On the uphill side of fills, brush shall be stacked against fills at approximately 100-foot intervals in piles approximately 5-feet high and 10-feet wide. Any such material not needed to form silt barriers shall be processed into chips having a thickness of not more than 3/8 inch and an area of not more than 6 square inches and may be stockpiled out of sight of any public highway for use as mulch.

When indicated in the Contract Documents to be removed after use, material used for silt barriers shall be disposed of in a legal manner in a Commonwealth of Virginia recycling facility or landfill permitted to accept such waste.

D. On-Site Burial

Material may be buried on site only when approved by the Owner and then only in areas designated in the Contract Documents or in areas otherwise approved by the Owner.

E. Off-Project Site Disposal

Logs, stumps, roots, brush, rotten wood, and other refuse from the clearing and grubbing operations, except for useable material, shall be disposed of in a legal manner in a Commonwealth of Virginia recycling facility or landfill permitted to accept such waste.

F. Burning

1. Burning may only be performed if approved in advance by the Owner and all necessary permitting has been obtained by the Contractor.
2. Burning shall be performed under the constant surveillance of watchpersons. Care shall be taken so that the burning of materials does not destroy or damage property or cause excessive air pollution. The Contractor shall not burn rubber tires, asphalt, used oil, or other materials that produce dense smoke. Burning shall not be initiated when atmospheric conditions are such that smoke will create a hazard to the motoring public or airport operations. Provisions shall be made for flagging vehicular traffic if visibility is obstructed or impaired by smoke. At no time shall a fire be left unattended.
3. This work shall be done in strict accordance with local, state, and federal laws controlling open burning. Prior approval and coordination must be handled by the Contractor with the Locality's Fire Department.

III. MEASUREMENT FOR PAYMENT

A. Lump Sum Basis

The area to be cleared and grubbed will not be measured unless the construction limits are changed by the Owner and increase or decrease the area by at least 1/20 of an acre.

B. Acre Basis

The work to be paid for will be the number of acres, computed to the nearest 1/10 of an acre, actually cleared and grubbed. Areas within the limits of any existing roadway or local material pit will not be measured.

C. Debris

Disposal of debris, as described in 301.2.4, shall be incidental to the Contract unit price for clearing and grubbing.

D. Temporary and/or Tree Protection Fencing, installed complete in place.

Measurement of the tree protection fencing will be made per linear foot along the line of the fence installed. Payment will be made at the unit price bid per linear foot of temporary and/or tree protection fencing installed, or for each tree protected, and will include the cost of the following:

1. Excavation,
2. Incidental work,
3. Installation,
4. Labor,
5. Maintenance,
6. Materials,
7. Removal, and
8. Tools.

End of Section