



3-10.1 General

Before allowing grading operations in a given area to start, it should be determined the clearing and grubbing has been satisfactorily completed. Generally, grubbing of all roots and stumps is performed wherever clearing is required, except that grubbing is not required under embankments of 6 feet or more in height nor on areas provided by the state for disposal of marsh excavation.

The limits of clearing and grubbing areas are to be staked or marked, unless otherwise satisfactorily delineated. Due to changed conditions, clearing and grubbing areas shown on the plans may not coincide with those marked in the field. Clearing and grubbing areas and individual trees to be removed should be measured and quantities computed sufficiently in advance of the contractor's clearing operations to permit any necessary recheck and verification of field measurements and quantities before the substantiating evidence is disturbed.

Dead and dying trees on the right-of-way, but outside the specified limits for clearing, should be removed to improve the appearance of the finished project. When the contract does not include an item for Roadside Clearing, the removal of dead or dying trees will be considered and paid for as extra work. Method of measurement will be specified in the change order.

Suitable trees, shrubs, and ground cover that could enhance the appearance and break the uniformity of the conventional lines of clearing, and which are situated outside the limits of construction operations, should be preserved in the interest of beautification of the highway.

Any trees or shrubs within a clearing area that are designated to be preserved are to be identified and marked by the engineer. The marking may consist of tying or attaching to the tree, where it will be readily visible, a suitable placard or a tag bearing the word SAVE.

Subsequent to the marking of clearing and grubbing areas and of trees to be saved, and prior to the start of work operations, the manager contractor or superintendent should travel the project together and discuss the trees and debris to be removed, so there will be no misunderstanding.

Generally, the merchantable timber removed in clearing shall become the property of the contractor. Exceptions are those shown in the contract or plans, and timber from lands acquired or reserved for highway purposes by use or certain easements and on which a private owner holds underlying title. A review of the right-of-way acquisitions and/or commitments may be required to determine rightful ownership of the merchantable timber. Logs and timber 4 inches or larger in diameter, which are the property of the contractor shall be made available for commercial or fuel use before disposal by the contractor.

Before burning clearing and grubbing debris the contractor must determine if a WDNR permit and/or a local permit is needed. If a permit is necessary it is the contractor's responsibility to obtain and abide by the terms and conditions of the permit. WDNR annual burning permits are only valid within WDNR Protection Areas and outside incorporated cities and villages. The contractor must also comply with local ordinances that may be more restrictive than state law. Contact the local fire department, town chairperson, or local municipal official with questions.

A good source of information on burning permits in Wisconsin is located on the WDNR web site. This site contains drop down list of counties. Selecting a county will open a map that is shaded to identify the regulatory authority. The site is available at:

<http://dnr.wi.gov/topic/ForestFire/permits.html>

The contractor should only burn the debris at permitted locations and must control the burn to avoid property damage or injuring trees to be preserved. The contractor should select burning sites on clearing and grubbing areas where the fire can be kept under control and sufficiently away from trees to protect them from injury by the heat. The engineer should check the terms of the burning permit before allowing burning.

WDNR regulations prohibit some materials from being used as accelerants to start or maintain a fire. These materials include but are not limited to used oil, clean oil, hydraulic fluid, diesel, gasoline, jet fuel or other oily substances, and other substances, like used tires, that create black smoke. Acceptable alternatives that have been used successfully are heat sources like heat wands used for HMA pavement or acetylene torches.

The contractor should not burn poison ivy, poison oak, or poison sumac because fumes released during combustion pose a serious health risk. In the past field staff persons have required hospitalization after breathing smoke from these materials. The harmful effects can even cause serious problems for persons a significant distance downwind from the burn.

In areas where open burning is prohibited by regulation or by ordinance, debris from clearing and grubbing operations may be disposed of by chipping, burying, removing from the highway right-of-way, or by disposing in approved air curtain destructors where the use of such destructors is permitted. In areas where open burning is prohibited, the plans will usually indicate approved areas of the right-of-way outside the construction limits where debris can be buried. If such areas are not on the plans, the manager will approve or reject proposed burial locations. The debris should be confined, compacted, and covered with at least one foot of earth. All voids should be filled with earth. Debris remaining from open burning, when such burning is permitted, may be disposed of similarly.

Chipped material must either be disposed of off the right-of-way, stockpiled on the right-of-way at approved locations suitable for future use and loading, or be used on the slopes as mulch.

The Bureau of Project Development, Project Services Section is responsible for sponsoring the earthwork inspection course. Each region offers the course on an as-needed basis. Contact your region training coordinator to attend the course.

3-10.2 Oak Wilt

Concern has been expressed over the possibility of oak wilt being spread by our highway construction. Oaks are among the most valuable of our trees, both for their commercial uses and for their aesthetic qualities. Oak wilt fungus continues to be a serious threat in Wisconsin and each year valuable stands and specimen trees are lost.

Oak wilt is caused by a fungus spread from infested trees to healthy trees in two ways: (1) By natural root grafts that link closely spaced oak trees together, and (2) through fresh wounds in the bark that attract insects carrying the fungus spores. There is no cure for oak wilt, so control of the disease depends on our ability to prevent transmittal from tree to tree.

Symptoms of wilt differ between the various species of oak and may also be confused with symptoms of other tree disorders. Positive identification will require the assistance of a trained individual, usually the county forester. Apparent symptoms of wilt in red and black oaks, the most susceptible species, are pale leaves curling at tips or edges. These leaves will gradually turn brown or bronze. Leaf fall may be heavy, with full defoliation occurring in a few weeks.

3-10.2.1 Recommendations

3-10.2.1.1 Apparently Healthy Trees

The contractor should avoid pruning or cutting oaks, if possible, during the period when chances for infection are highest. This period runs from approximately April 1 through September 30.

If pruning or cutting is necessary from April 1 through September 30, all cut surfaces, abrasions and damaged areas on healthy oak trees and saplings shall immediately be painted with asphalt base tree paint by the contractor. Cut surfaces on the stumps of all healthy oak trees and saplings, regardless whether the stumps are to remain in place or are to be grubbed, shall also be painted with asphalt base tree paint by the contractor.

3-10.2.1.2 Apparently Diseased Trees

If any oak tree in an area to be cleared is wilting, or in any way appears to be under stress, the engineer should contact the county forester before work begins. The forester will assist in positive identification of the disease and provide advice on working with the diseased trees.

3-10.2.1.3 Dead Trees

No treatment is needed on oak trees that are dead prior to the start of clearing.

Work performed by the contractor to prevent the spread of oak wilt, beyond the measures contained in the [standard spec 201.2](#) will be considered as extra work and will be paid for as such. Method of measurement will be specified in the change order authorizing the extra work.