Road Maintenance T-Specifications

for

Soda CS Timber Sale

5-31-2016

T - 800 SPECIFICATION DEFINITIONS

Wherever the following terms or pronouns are used in Specification T-800 the intent and meaning shall be interpreted as follows:

800-1.1 Agreement: Maintenance projects require a mutually acceptable method to resolve the problems which arise when incompatible situations arise between drawings and specifications and actual conditions on the ground to allow orderly and satisfactory progress of the maintenance.

These specifications have been developed in anticipation of those problem areas and have provided that such changes will be by Agreement.

It is intended that drawings and specifications will govern unless "on-the-ground" conditions warrant otherwise, when specifications call for "Agreement", "agreed", or "approval" such Agreement or approval shall be promptly confirmed in writing.

800-1.2 Annual Road Maintenance Plan: A plan prepared by various users of one or several roads. The plan is an Agreement on maintenance responsibilities to be performed for the coming year.

800-1.3 Base Course: Material used to reinforce subgrade or, as shown on drawings, placed on subgrade to distribute wheel loads.

800-1.4 Berm: Curb or dike constructed to prevent Roadway runoff water from discharging onto embankment slope.

800-1.5 Borrow: Select Material taken from designated borrow sites.

800-1.6 Crown, Inslope, and Outslope: The cross slope of the Traveled Way to aid in drainage and traffic maneuverability.

800-1.7 Culverts: A conduit or passageway under a road, trail, or other obstruction. A culvert differs from a bridge in that it is usually entirely below the elevation of the Traveled Way.

800-1.8 Drainage Dip: A dip in the Traveled Way which intercepts surface runoff and diverts the water off the Traveled Way. A Drainage Dip does not block the movement of traffic.

800-1.9 Drainage Structures: Manufactured structures which control the runoff of water from the Roadway including Inslope, overside drains, aprons, flumes, down drains, downpipes, and the like.

800-1.10 Dust Abatement Plan: A table which lists the road, dust palliative, application rates, and estimated number of subsequent applications.

800-1.11 Lead-off Ditches: A ditch used to transmit water from a Drainage Structure or Drainage Dip outlet to the natural drainage area.

800-1.12 Material: Any substances specified for use in the performance of the work.

800-1.13 Prehaul Maintenance: Road maintenance work which the Purchaser determines must be accomplished to maintain the roads to a satisfactory condition commensurate with the Purchaser's use provided Purchaser's Operations do not damage improvements under B6.22 or National Forest resources and hauling can be done safely. This work will be shown in the Annual Road Maintenance Plan as provided in C/CT5.4.

T-803 - SNOW REMOVAL (05/07)

803.01 Description

This Section provides for removal of snow from roads to facilitate logging operations and safe use.

803.02 Maintenance Requirements

(1) Erect signs required by the Sign Plan in the SUPPLEMENTAL SPECIFICATIONS.

(2) Perform work in a manner to preserve and protect roads and appurtenances, and prevent erosion damage to roads, streams, and other Forest values.

(3) Do not undercut banks. Do not blade gravel or other surfacing material off the road.

(4) Keep roadbed drainage ditches, drain dips, and culverts functional when needed during operations and upon completion of operations.

(5) Control snow removal to identify the usable traveled way having roadbed support. Reshape over-width plowing as necessary to define the usable width.

(6) Space, construct, and maintain drainage holes in the dike of snow or berm caused by snow removal operations. Place drain holes to obtain surface drainage without discharging on erodible fills.

(7) Close roads to wheeled vehicles at times and in the manner specified in C(T)5.12 or the Road Rules document.

(8) Upon seasonal completion of Purchaser's Operations, effectively block the road by a snow barricade, unless otherwise approved by the Contracting Officer.

(9) Remove snow for either public access or project use as established in the SUPPLEMENTAL SPECIFICATIONS and meet the following requirements:

(a) Removal for Public Access (Method JU) - Remove snow from all of the traveled way, including turnouts, for safe and efficient use for both timber transportation and the public. Remove intruding windfalls, debris, or slough and slide material for the full width of the traveled way and deposit out of drainage's at locations designated by the Contracting Officer.

(b) Removal for Project Use (Method TS) - Remove snow from all or part of the traveled way, including sufficient turnouts for safe and efficient use for timber transportation and to protect the road. Remove intruding windfalls, debris or slough and slide material and dispose of only as necessary to provide passage for timber transportation. Removed materials may be deposited off the traveled way or outside the traveled way at locations designated by the Contracting Officer.

(10) When directed by the Contracting Officer, replace in kind, within sixty (60) days after the start of Normal Operating Season, any surfacing material which has been bladed off the road, unless otherwise agreed. Contracting Officer will notify Purchaser in writing as to the cubic yard equivalent of bladed off material by the start of the normal operating season.

T - 811 BLADING (10/07)

811.01 Description

This work consists of surface blading the traveled way to a condition that facilitates traffic and provides proper drainage. Blading includes shaping the crown or slope of travel way, berms, and drainage dips in accordance with this specification. Compaction is required when shown on the ROAD LISTING.

811.02 Maintenance Requirements

A. Timing - Perform surface blading during the contract period as often as needed to provide conditions stated for the maintenance level of the road.

B. General

1. Blade and shape the existing traveled way and shoulders, including turnouts, to produce a surface which is uniform, consistent to grade, and crowned or cross-sloped as indicated by the character of the existing surface, unless otherwise shown in the ROAD LISTING, to at least ½ inch per 1 foot of width, but not more than ¾ inch per 1 foot of width. Thoroughly loosen surfacing material to no less than 2 inches depth or the depth of potholes or corrugations. Scarification to facilitate cutting to the full depth of potholes or corrugations may be elected, but will be considered incidental to blading. Do not scarify to a depth that will cause contamination of the surfacing.

2. Apply water during blading when sufficient moisture is not present to prevent segregation. Supply, haul, and apply water in accordance with Section T-891.

3. Shape existing native rock or aggregate surfaced drainage dips to divert surface runoff to existing outlet devices, ditches, or discharge locations.

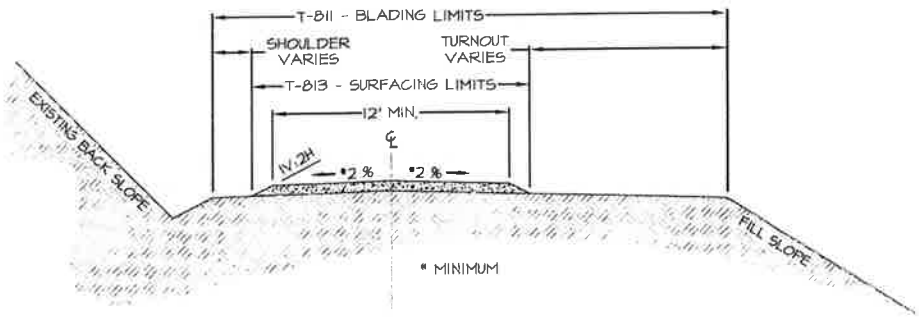
4. Establish a blading pattern which provides a uniform driving surface, retains the surfacing on the roadbed, and provides a thorough mixing of the materials within the completed surface width. Upon final blading, no disturbed rock shall protrude more than 2 inches above the adjacent surface unless otherwise provided in the contract. Remove and place outside the roadbed, material not meeting this dimension so as not to obstruct drainage ways or structures. This material may be scattered off the roadbed if there is free drainage.

5. Where DESIGNATED ON THE GROUND, included in the ROAD LISTING, SHOWN ON THE DRAWINGS or as ordered by the Contracting Officer invasive species of concern prevention practices shall be followed as listed below.

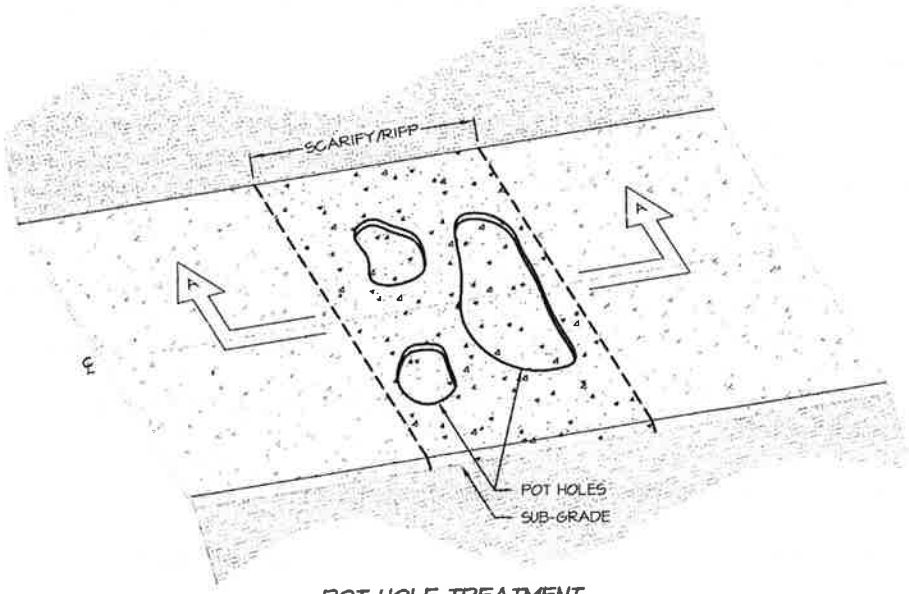
Invasive Species of Concern Prevention Practices
NA

C. Routine Blading

1. Conform to the dimensions SHOWN ON THE DRAWINGS or designated in the SUPPLEMENTAL SPECIFICATIONS upon completion of blading.



BLADING & SPOT ROCK TYPICAL
Not to Scale



POT HOLE TREATMENT TYPICAL
Not to Scale

SECTION A - A
Not to Scale

NOTES:

1. GRADING - CROWN ROADS WITH A 2 % - 3 % CROWN. FOR IN-SLOPE/OUT-SLOPE ROADS SLOPE WITH A 2 % - 3 % CROSS SLOPE OVER THE ENTIRE ROAD WIDTH. COMPACTION METHOD SHALL BE COMPLETED AS SHOWN ON C5.31# - ROAD MAINTENANCE REQUIREMENTS TABLE
2. SURFACING SPOT ROCK - PLACE MATERIAL THE FULL ROAD WIDTH BY END DUMPING TO A MINIMUM DEPTH OF 3".
3. CLEANING DITCHES, WHEN REQUIRED BY REFERENCE, IS COVERED UNDER T-831, T-832, AND T-834.
4. POT HOLES - PRIOR TO GRADING AND SPOT ROCK ACTIVITIES, SCARIFY/RIPP ALL POT HOLES, FULL WIDTH, DOWN TO SUB-GRADE OR FIRM GROUND AS DIRECTED BY CONTRACTING OFFICER.

T-811 & T-813 TYPICALS (11/14)

Compaction Methods

Compaction Method A: Breaking track while operating equipment on the traveled way.

Compaction Method B: 7-10 ton pneumatic, steel, or equivalent vibratory roller, operated to cover the full width two (2) times.

Either Method A or B may be used unless Method B is designated in the ROAD LISTING.

T - 831 DITCH MAINTENANCE (10/07)

831.01 Description

This Section provides for routine maintenance of various types of ditches to provide a waterway which is unobstructed, as shown on the ROAD LISTING or DESIGNATED ON THE GROUND.

831.02 Maintenance Requirements

A. Maintain ditches by removing rock, soil, wood, and other materials. Maintained ditches shall function to meet the intent of the original design.

B. Undercutting back slopes during removal operations is not permitted.

C. Suitable material up to 4 inches in greatest dimension removed from the ditches may be blended into existing native road surface and shoulder or placed in designated berm.

D. Do not blend material from ditch cleaning operations into aggregate surfaced roads. Do not blade material across aggregate or bituminous surfaced roads, unless approved in writing by the Contracting Officer.

E. Haul material in excess of 831.02 D or subject to 831.02 E to a designated waste area under Section T-832. Remove excess materials temporarily stored on the ditch slope or edge of the shoulder daily.

F. Remove limbs and wood chunks in excess of 12 inches in length or 3 inches in diameter from ditches and place outside the roadway.

G. Clean paved surfaces of all materials resulting from ditch maintenance work.

Shape lead-off ditches to drain away from the traveled way.

Where DESIGNATED ON THE GROUND, included in the ROAD LISTING, SHOWN ON THE DRAWINGS or as ordered by the Contracting Officer invasive species of concern prevention practices shall be followed as listed below.

Invasive Species of Concern Prevention Practices
NA

T - 832 REMOVE AND END HAUL MATERIALS (05/07)

832.01 Description

Work consists of loading, hauling, and placing of slide, slough, or excess materials such as rock, soil, vegetation, and other materials to designated disposal sites.

832.02 Maintenance Requirements

A. Remove, end haul, and dispose of excess materials generated by work under other Sections of this contract.

B. Remove the slide and slough materials in the area extending approximately 6 feet vertically above the road surface and not more than 3 feet down slope from the roadbed. Dispose of material at designated sites as SHOWN ON THE DRAWINGS, identified in SUPPLEMENTAL SPECIFICATIONS, or as ordered by the Contracting Officer.

   Reshape the slope which generated the slide material as nearly as practical to its original condition by equipment operating from road surface. Reshaping of roadside ditches in slide area shall be in accordance with Section T-831.

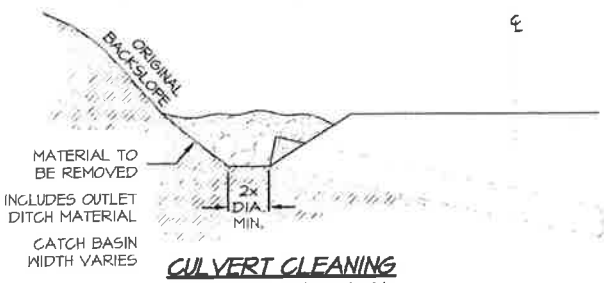
C. When approved by the Contracting Officer, fill slumps by compacting selected materials into roadway depressions. Compaction is by Method 2.

D. Place all materials in disposal sites as specified in the SUPPLEMENTAL SPECIFICATIONS, as SHOWN ON THE DRAWINGS, or as ordered by the Contracting Officer.

   1. Method 1 - Side Casting and End Dumping. Material may be placed by side casting and end dumping. Where materials include large rocks, provide a solid fill by working smaller pieces and fines into voids. Shape the finished surfaces to drain.

   2. Method 2 Layer Placement - Step or roughen surfaces on which materials are to be placed prior to placing any material. Place materials in approximately horizontal layers no more than 12 inches thick. Compact each layer by operating hauling and spreading equipment over the full width of each layer.

E. Repair any damage to existing aggregate or pavement surfaces.



CULVERT CLEANING TYPICAL SECTION

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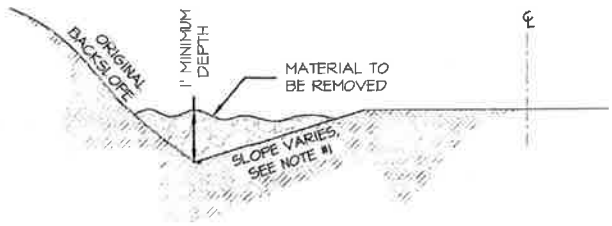

DITCH CLEANING TYPICAL SECTION

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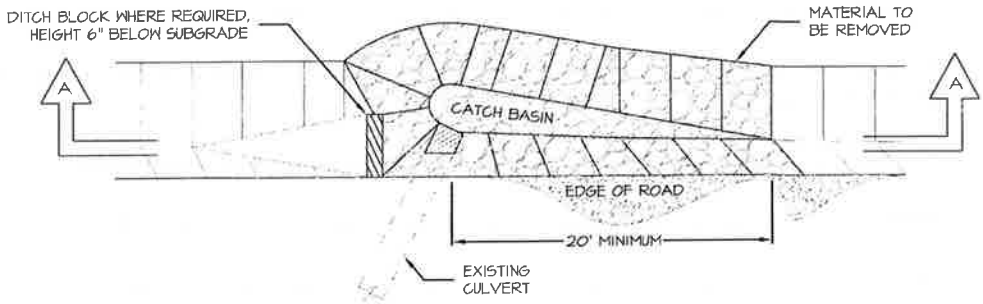

CULVERT CLEANING PLAN VIEW

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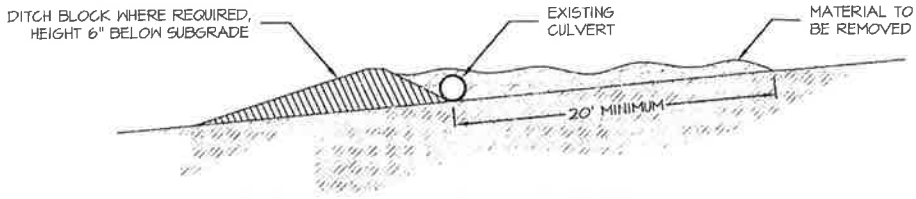


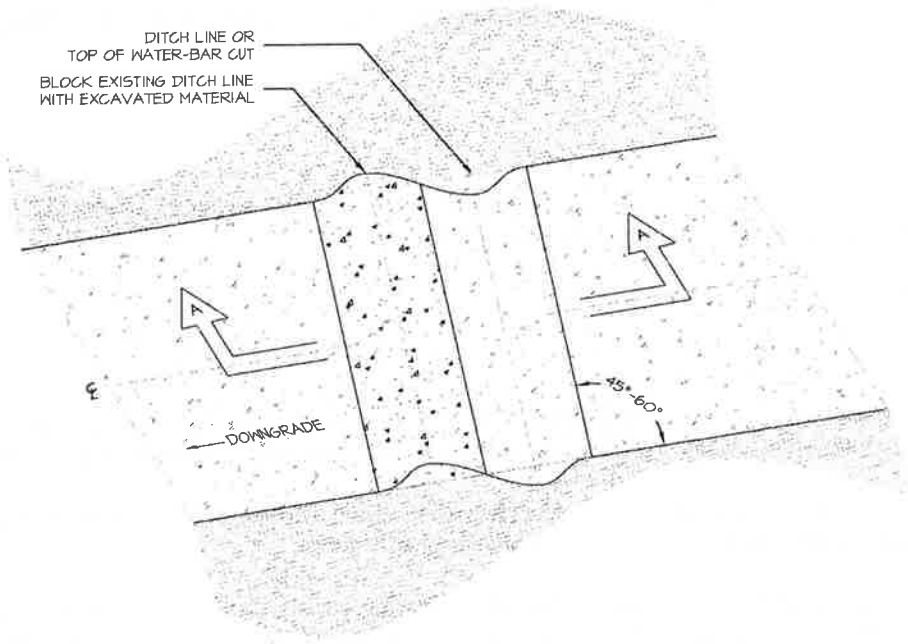
CULVERT CLEANING SECTION A - A

Not to Scale

NOTES:

1. DITCH SLOPE VARIES FROM 1V:3H, TYPICAL, TO A 1V:2H MINIMUM ALONG WIDTH RESTRICTED ROAD SEGMENTS. CLEAN AS DIRECTED BY CONTRACTING OFFICER.
2. DISPOSE OF EXCESS MATERIALS AT DESIGNATED WASTE AREAS.

T-831 & T-834 TYPICALS (11/14)



WATER-BAR PERSPECTIVE VIEW

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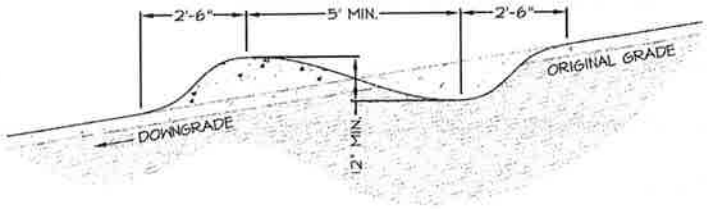


SECTION A - A

Not to Scale

NOTES:

1. CONSTRUCT WATER-BARS AS DIRECTED BY CONTRACTING OFFICER OR AS MARKED ON THE GROUND.
2. INLET OF WATER-BARS SHALL BE TO BOTTOM OF DITCH LINE OR A MINIMUM OF 6" BELOW THE EXISTING ROAD ELEVATION.
3. GRADE OF WATER-BARS SHALL BE OUT-SLOPED A MINIMUM OF 6% OR 2% MORE THAN THE EXISTING ROAD OUT-SLOPE, WHICHEVER IS GREATER.

T-835 WATER-BAR TYPICALS (11/14)

3. Unless the Contractor Officer agrees to material being placed on slumps, ramp the slumps on both ends into undisturbed roadbed to provide at least 10 feet usable width. Use removed materials to guide vehicles to the ramp location or to aid in draining the area.

4. Washouts may be filled with suitable material.

D. Post haul

At the end of hauling or prior to entering into seasonal shutdowns or a period of extended inactivity:

1. Shape the traveled way and disturbed roadbed to provide functional drainage.

2. Reinstall removed cross ditches and water bars and provide any additional drainage structures necessary to offset changes caused through use and maintenance.

3. Leave roads useable for high clearance vehicles. Remove or reshape purchaser modifications at road junctions to leave the entrance as it was before use, or as agreed at the time of improvement.

T - 838 MAINTENANCE FOR HIGH CLEARANCE VEHICLE USE (05/07)

838.01 Description

This work consists of making limited use roads passable for project use by Purchaser and providing drainage from the traveled way and roadbed.

838.02 Maintenance Requirements

A. Traveled Way

Purchaser may smooth or fill existing cross ditches and water bars and as approved by the Contracting Officer modify existing road junctions to enable vehicle access. The Purchaser may perform the following work prior to beginning haul and resumption of haul after an extended stoppage:

1. Remove brush, fallen trees, rocks, and other debris from traveled way, including turnouts, turnarounds, and other locations that interfere with needed maintenance as follows:

   a. No object extending over 4 inches above the road surface shall remain within the 12 feet usable traveled way. Center the usable width on the roadbed or position away from the fill slope.

   b. Cut and remove standing or down trees, logs, brush, and limbs from within the area described in 1(a). Remove all encroaching limbs to a height of 14 feet above the traveled way surface. Scatter material not meeting utilization standards outside and below the roadbed on the fill side. Limb and remove timber that meets utilization standards or deck at locations approved by the Contracting Officer.

   c. Place all removed materials away from drainages.

   d. During use, maintain drainage structures including dips, ditches and culverts in a usable condition.

2. Clean and recondition drainage facilities in accordance with Section T-831 and T-834.

B. Slough and Slides

1. Slough and slides may be left in place, provided surface drainage is provided and at least 12 feet of width is available for vehicle passage.

2. Purchaser may reposition or ramp over slides and slough when the traveled way width is less than 12 feet providing the material is capable of supporting vehicles. Limit out slope to no more than six percent.

3. Reposition slough or slide materials, which are not capable of supporting a vehicle, on the roadbed to provide the 12 feet width. When directed by the Contracting Officer, slough or slide material will be removed under Section T-832.

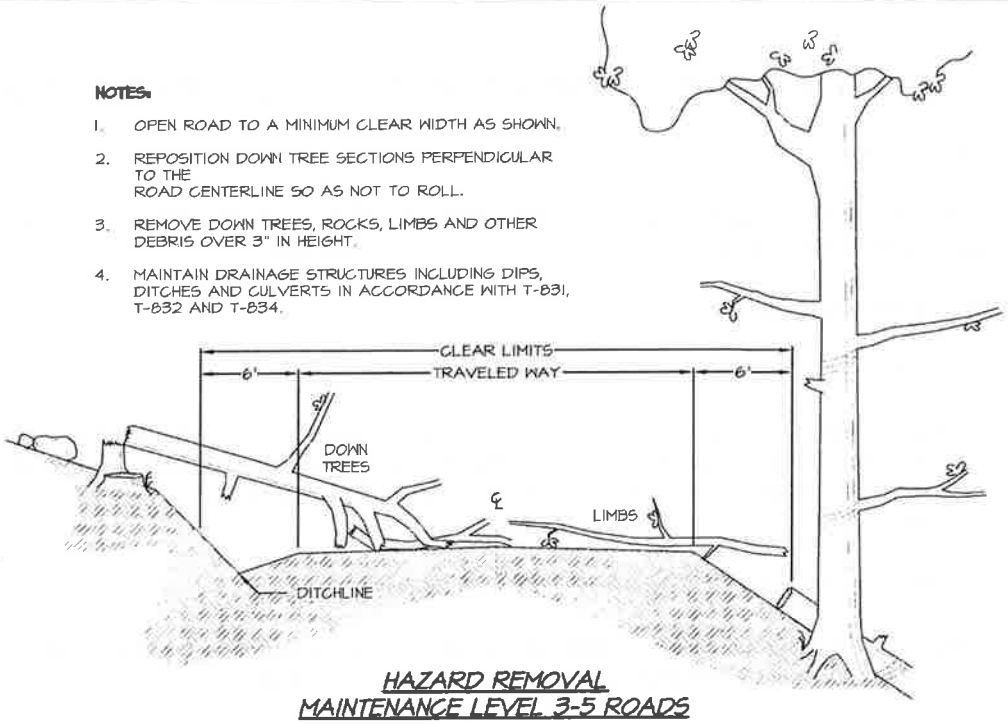
C. Slumps and Washouts

1. Drain the roadbed immediately upgrade of slumps and longitudinal cracks to prevent water from entering slump area.

2. Slumps and longitudinal cracks at the edge of the roadbed shall not be considered a part of the usable width. Usable width may be reduced to 10 feet in the area of the slump.

NOTES:

1. OPEN ROAD TO A MINIMUM CLEAR WIDTH AS SHOWN.
2. REPOSITION DOWN TREE SECTIONS PERPENDICULAR TO THE ROAD CENTERLINE SO AS NOT TO ROLL.
3. REMOVE DOWN TREES, ROCKS, LIMBS AND OTHER DEBRIS OVER 3" IN HEIGHT.
4. MAINTAIN DRAINAGE STRUCTURES INCLUDING DIPS, DITCHES AND CULVERTS IN ACCORDANCE WITH T-831, T-832 AND T-834.

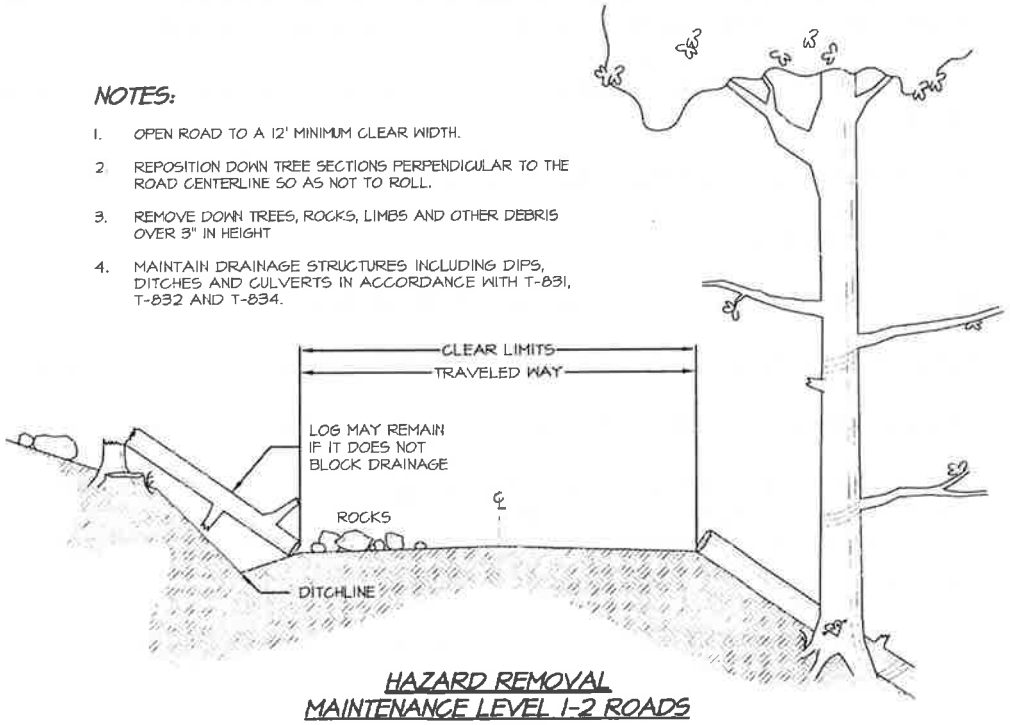


HAZARD REMOVAL
MAINTENANCE LEVEL 3-5 ROADS

Not to Scale

NOTES:

1. OPEN ROAD TO A 12' MINIMUM CLEAR WIDTH.
2. REPOSITION DOWN TREE SECTIONS PERPENDICULAR TO THE ROAD CENTERLINE SO AS NOT TO ROLL.
3. REMOVE DOWN TREES, ROCKS, LIMBS AND OTHER DEBRIS OVER 3" IN HEIGHT
4. MAINTAIN DRAINAGE STRUCTURES INCLUDING DIPS, DITCHES AND CULVERTS IN ACCORDANCE WITH T-831, T-832 AND T-834.



HAZARD REMOVAL
MAINTENANCE LEVEL 1-2 ROADS

Not to Scale

T-836, T-838 & T-839 TYPICALS (11/14)

C. Debris

1. Materials resulting from the cutting operation in excess of 12 inches in length or 3 inches in diameter are not allowed to remain on roadway slopes within the treated area, in ditches, or within water courses.

2. Remove limbs and chunks in excess of 3 inches in any dimension from the traveled way and shoulders.

3. Materials may be scattered down slope from the roadbed, outside of the work area and drainages unless otherwise listed in D. Invasive Species of Concern.

Invasive Species of Concern

Where DESIGNATED ON THE GROUND, included in the ROAD LISTING, SHOWN ON THE DRAWINGS or as ordered by the Contracting Officer invasive species of concern prevention practices shall be followed as listed below.

Invasive Species of Concern Prevention Practices
NA

T - 854 TREATMENT AND DISPOSAL OF DANGER TREES (5/07)

854.01 Description

This work consists of felling and disposal of designated live or dead danger trees sufficiently tall to reach roads used by the Purchaser. Any removal of logs is subject to prior agreement between the Contractor Officer and the Purchaser.

854.02 Requirements

A. Designation of danger trees.

Danger trees to be felled will be designated in advance by the Contracting Officer. Trees to be removed will be marked.

B. Falling, bucking and treatment for disposal.

Use controlled felling to ensure the direction of fall and prevent damage to property, structures, roadway, residual trees, and traffic. Stump heights, measured on the side adjacent to the highest ground, must not exceed 12 inches or 1/3 of the stump diameter, whichever is greater. Higher stump heights are permitted when necessary for safety.

Felled snags and trees, which are not marked for removal, will be left in a stable condition such that they will not roll or slide. Position logs away from standing trees so they will not roll, are not on top of one another, and are located out of roadway and drainage structures.

Fell, limb and, remove trees, which are marked for removal, that equal or exceed the utilization standards as listed in the Timber Sale contract or SUPPLEMENTAT SPECIFICATIONS. Dispose of merchantable timber designated for removal in accordance with B/BT2.32 Construction Clearing, of the Timber Sale Contract, or as described in SUPPLEMENTAL SPECIFICATIONS.

C. Slash treatment.

Within the roadway, remove limbs, chunks, and debris in excess of 12 inches in length and 3 inches in diameter, and concentrations that may plug ditches or culverts, and water courses.

Dispose of slash by scattering outside the roadway limits without damaging trees, or improvements.

Large accumulations of slash may be ordered hauled under T-832.