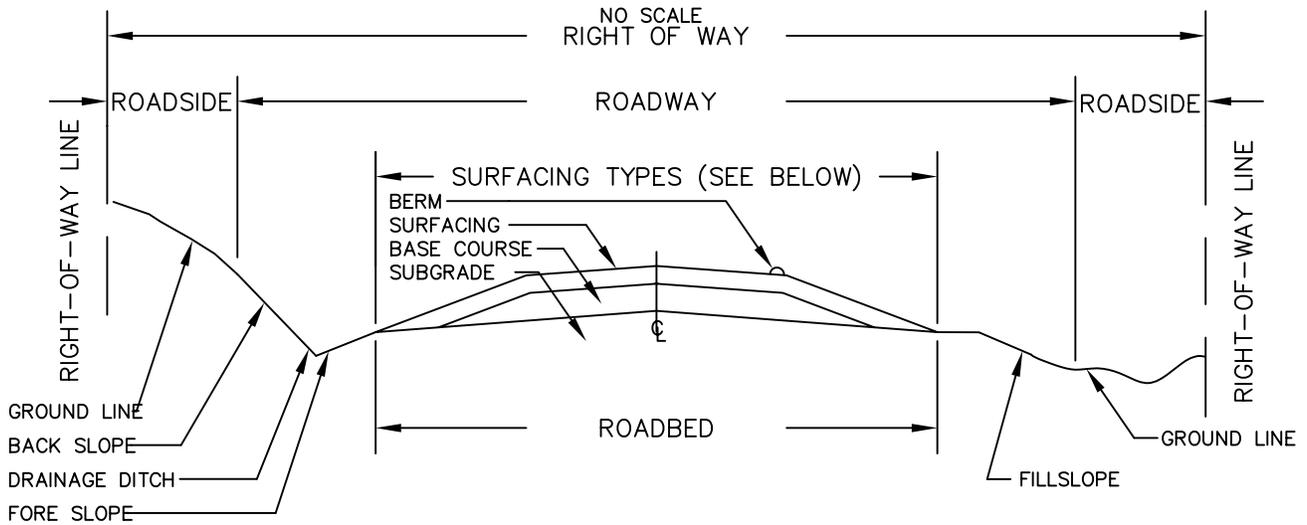


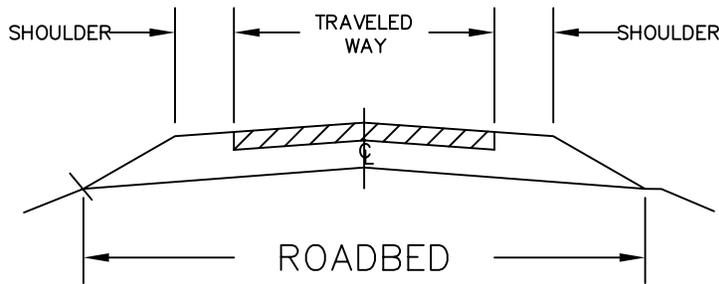
Sandshed Timber Sale Road Maintenance T-Specifications

<u>Specification</u>	<u>Description</u>
(no specification)	801-1 Illustration of Road Maintenance Terms (drawing)
T811	Blading T811F-1 Blading (drawing)
T831F	Ditch Maintenance
T832	Removal and End Haul Materials T832F-1 Special Specification
T834	Drainage Structure Maintenance T834-1 Cleaning of Ditch Relief Catch Basin and Transition (drawing) T834-4 Treatment of Slides and Sloughs (drawing)
T835F	Roadway Drainage Maintenance T835-1 Road Closure Earth Mound Typical (drawing)
T836	Maintenance for Project Use
T838	Maintenance for High Clearance Vehicles T838-1 Cross Ditching (drawing) T838-3 Object on Roadbed (drawing) T838-5 Treatment of Slumps and Roadbed Cracks (drawing)
T839	Maintenance for Project Use
T851	Logging Out T851-2 Hazard Removal (drawing)
T891	Water Supply and Watering

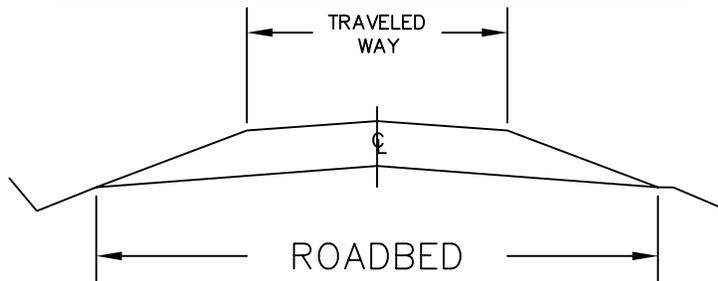
ROAD STRUCTURE DETAILS



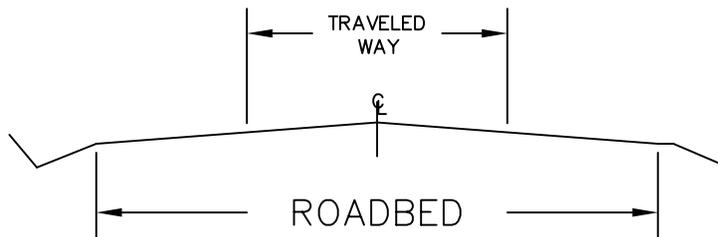
DEFINITIONS BY SURFACING TYPE



ASPHALT PAVED SURFACING SECTION



AGGREGATE SURFACING SECTION



NATIVE MATERIAL SURFACING SECTION

NOTES
SHAPES AND DIMENSIONS WILL VARY WITH LOCAL CONDITIONS.

	TITLE ILLUSTRATION OF ROAD MAINTENANCE TERMS	
	DRAWING 801-1	APPROVED

T-831F DITCH MAINTENANCE (1/11)

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 backslopes 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 C or subject to 831.02 D 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.
- H. Shape lead-off ditches to drain away from the traveled way.

- I. 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
<p>All earth moving equipment (loaders, excavators, dump trucks, ect.) moved to the job site shall be cleaned of weeds and their seeds prior to each entrance onto the National Forest lands. Cleaning shall consist of the removal of all dirt, grease, debris, and materials that may harbor noxious weeds and their seeds. This may require the use of a pressure hose.</p> <p>Upon request by the Contracting Officer, equipment shall be made available for visual inspection by the Forest Service prior to entering Forest Service lands. Inspections will take place at mutually agreeable en-route locations in advance of entry onto National Forest lands.</p>

T-834 DRAINAGE STRUCTURE MAINTENANCE (10/07)

834.01 Description

This work consists of cleaning and reconditioning culverts and other drainage structures.

834.02 Maintenance Requirements

A. Clean drainage structures, inlet structures, culverts, catch basins, and outlet channels specified in the SUPPLEMENTAL SPECIFICATIONS. Clean catch basins by removing the material within the area SHOWN ON THE DRAWINGS.

B. Clean the transition from the ditch line to the catch basin a distance of 10 feet from the catch basin. Clean outlet channels and lead-off ditches a distance of 6 feet. Remove and place debris and vegetation so as to not enter the channel or ditch, or obstruct traffic. Haul debris and vegetation to a designated disposal area in accordance with Section T-832.

C. Hydraulic flushing of drainage structures is not allowed unless provided for in the SUPPLEMENTAL SPECIFICATIONS.

D. Cleaning and reconditioning are limited to the first 3 feet of inlet and outlet, determined along the top of the structure. Recondition culvert inlet and outlet by field methods such as jacking out or cutting away damaged metal which obstructs flow. Treat cut edges with a zinc rich coating, in accordance with AASHTO M 36M and ASTM A 849.

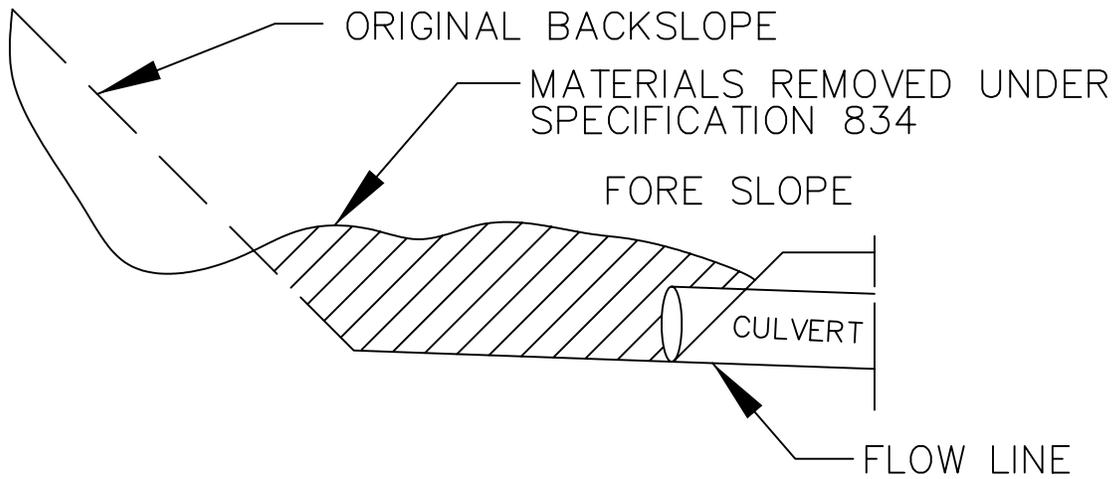
E. Where DESIGNATED ON THE GROUND, included in the ROAD LISTING, SHOWN ON THE DRAWINGS or as ordered by the Contracting Officer invasive species of concern prevention practices shall be followed as listed below.

Invasive Species of Concern Prevention Practices

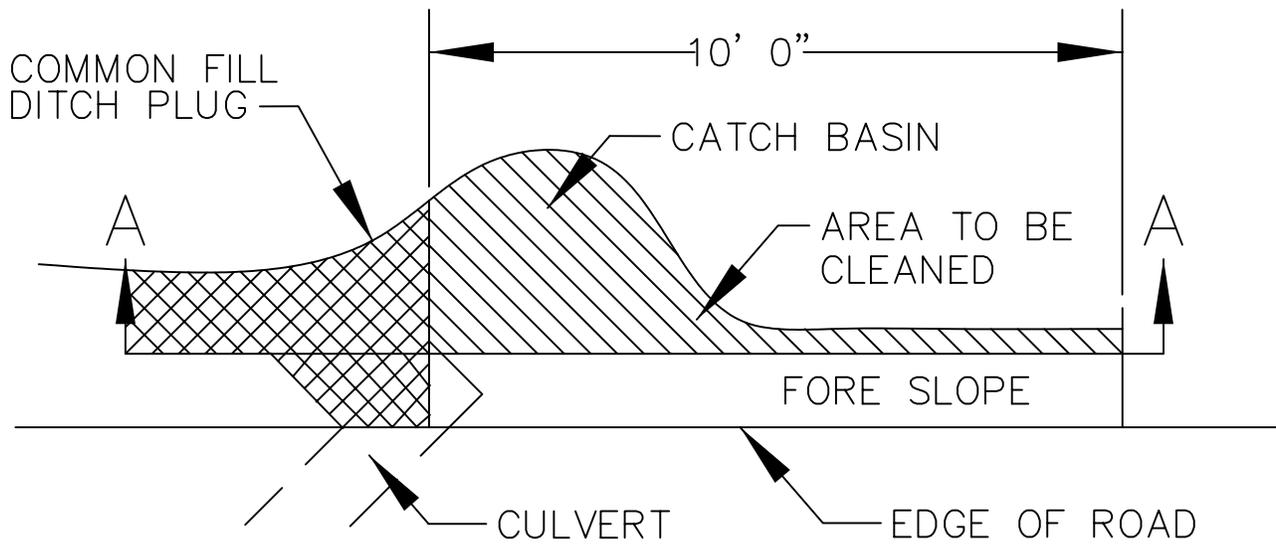
All earth moving equipment (loaders, excavators, dump trucks, ect.) moved to the job site shall be cleaned of weeds and their seeds prior to each entrance onto the National Forest lands. Cleaning shall consist of the removal of all dirt, grease, debris, and materials that may harbor noxious weeds and their seeds. This may require the use of a pressure hose.

Upon request by the Contracting Officer, equipment shall be made available for visual inspection by the Forest Service prior to entering Forest Service lands. Inspections will take place at mutually agreeable en-route locations in advance of entry onto National Forest lands.

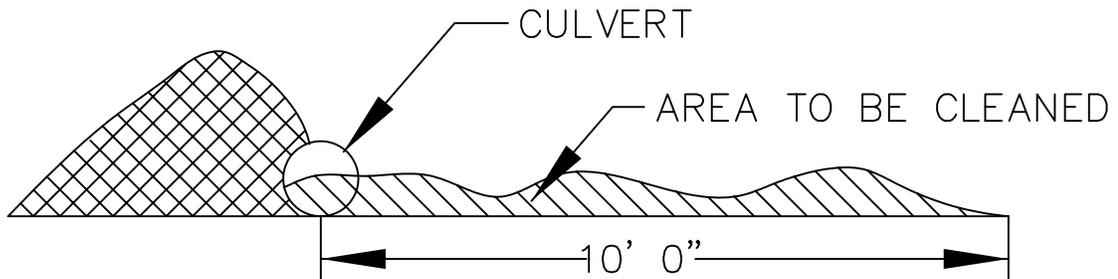
TYPICAL SECTION OF CATCH BASINS AND TRANSITION AREAS



CROSS SECTION VIEW

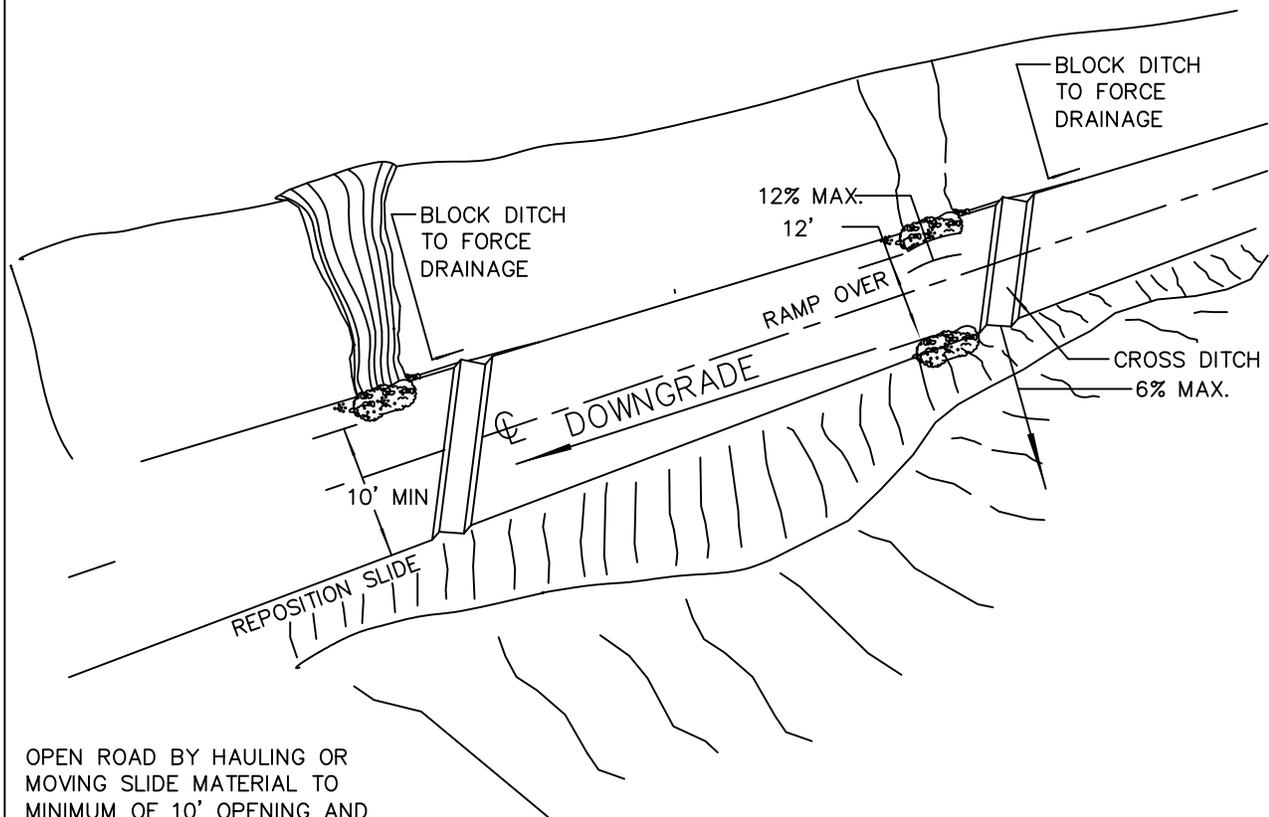


PATH VIEW ALONG DITCH



SECTION A - A

TITLE		CLEANING OF DITCH RELIEF CATCH BASIN AND TRANSITION
DRAWING	T834-1	APPROVED



OPEN ROAD BY HAULING OR MOVING SLIDE MATERIAL TO MINIMUM OF 10' OPENING AND SLOPES NOT STEEPER THAN 1:1

TITLE		TREATMENT OF SLIDES AND SLOUGH	
DRAWING		APPROVED	
T834-4			

T-835F ROADWAY DRAINAGE MAINTENANCE (6/12)

835.01 Description

This work consists of providing post haul drainage on roads.

835.02 Maintenance Requirements

A. Drainage

1. Upon completion of work, shape the roadway to provide for the removal of surface water. The roadway need not be passable to vehicles. Repair and reinstall water bars, barriers or berms existing prior to the Purchaser's operation. Areas where water is ponded by existing centerline profile sags in through cuts may be left untreated.
2. Continuous blade shaping of the roadbed is not required under this specification.
3. Work to be done at staked locations shall be as indicated on the stake and/or stated in SUPPLEMENTAL SPECIFICATIONS:
4. Any of the following methods are acceptable for use at eroded or rutted locations:
 - Method A: Outsloping the roadbed at not less than $\frac{1}{2}$ inch per yard of width.
 - Method B: Insloping the roadbed at not less than $\frac{1}{2}$ inch per yard of width.
 - Method C: Water bar roadbed at locations staked on the ground and construct as SHOWN ON THE DRAWINGS or as included in SUPPLEMENTAL SPECIFICATIONS.
5. Drainage structures located in through fills and natural watercourses shall be fully functional without obstructions, including inlet and outlet channel within 20 feet of the structure.

6. Either clean culverts and other fabricated structures to provide drainage from road ditches and make the ditch functional or provide water bar(s) across the roadbed. Removed structures shall become Purchaser's property to be removed from National Forest System land. Remove and replace any purchaser-installed temporary drainage structures with a water bar.

B. Slides, Slumps and Slough

1. Slides and slough may be left in place, provided they do not potentially impound water or divert water from watercourses. As necessary, reshape the various surfaces to provide drainage.
2. Provide drainage to effectively decrease or eliminate the entry of surface water into slides, slumps, and roadbed surface cracks. Place berms, waterbars or ditches as needed to intercept and remove runoff water from the roadbed. Surface seal cracks by covering over with native soil materials to prevent additional water entry and compact with equipment tires.

C. Entrance Devices

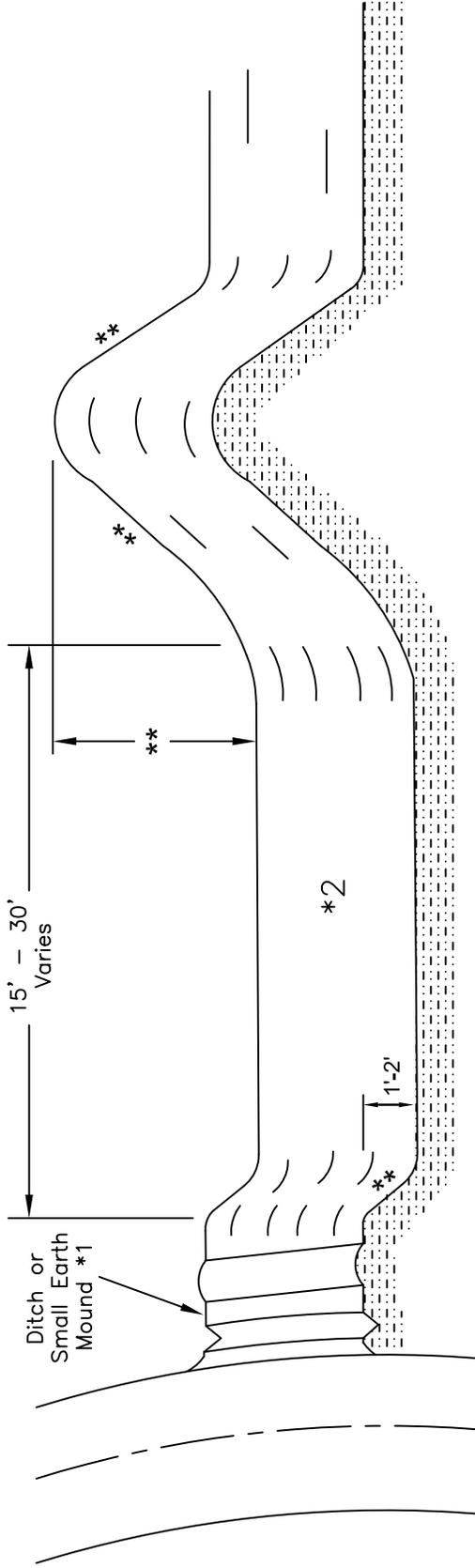
Upon completion of work, construct or replace road closure devices in accordance with drawing T-835F-1 and the type as shown in the Road Listing.

D. Seeding

If shown on the Road Listing, seed and fertilize all disturbed areas in accordance with requirements set forth in Section T-841.

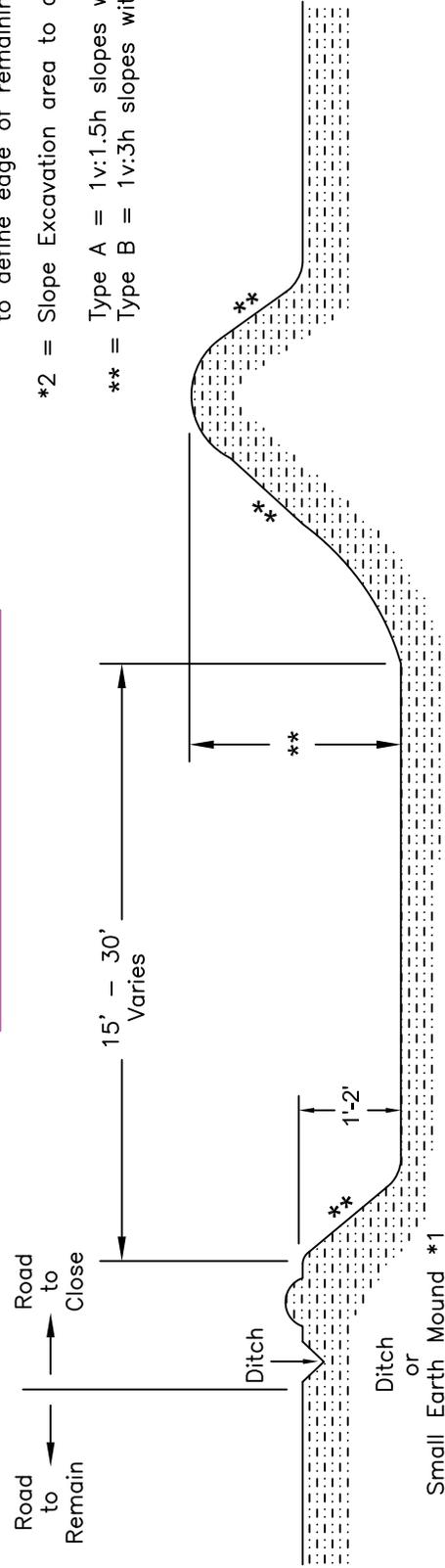
ROAD CLOSURE - EARTH MOUND TYPICAL

T-835-1



- *1 = Construct ditch line or small earth mound across closed road entrance to define edge of remaining road.
- *2 = Slope Excavation area to drain
- Type A = 1v:1.5h slopes with 5' height.
- Type B = 1v:3h slopes with 4' height.

Isometric View



Profile View

T-836 - MAINTENANCE FOR LIMITED USE (05/07)

836.01 Description

This work consists of making limited use roads passable for joint use by Purchaser and high clearance vehicles, and providing drainage from the traveled way and roadbed.

836.02 Maintenance Requirements

A. Traveled Way

Purchaser may smooth or fill existing cross ditches and water bars and by agreement modify existing road junctions to enable vehicle access. 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 and 10 feet turnout widths. 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. above. Remove 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 which meets utilization standards or deck at agreed locations.
 - c. Place all removed materials away from drainages.
 - d. During use, maintain drainage structures, including dips, ditches and culverts in a useable 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 on the roadbed which are not capable of supporting a vehicle to provide the 12 foot 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.
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.
1. 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 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.

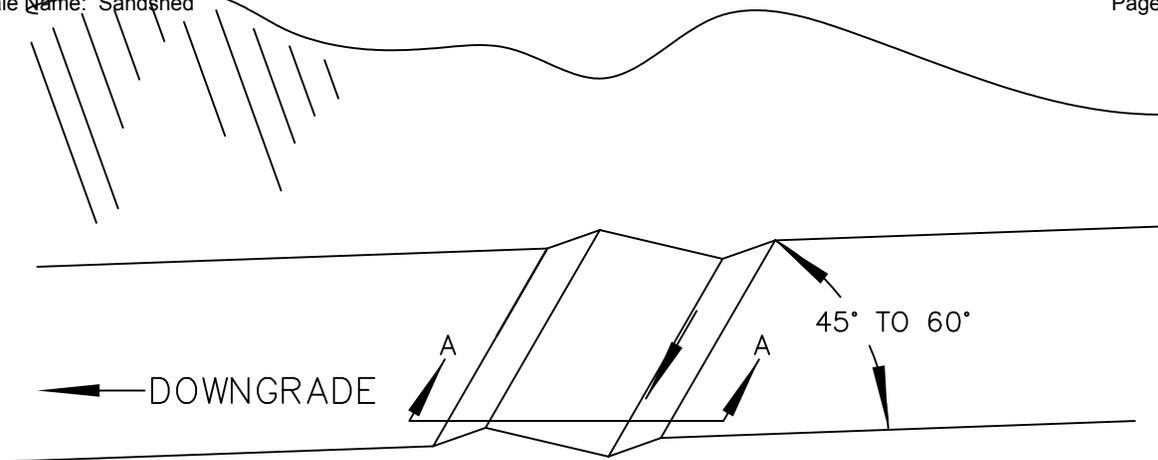
C. Slumps and Washouts

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.
3. Unless the Contracting Officer approves 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

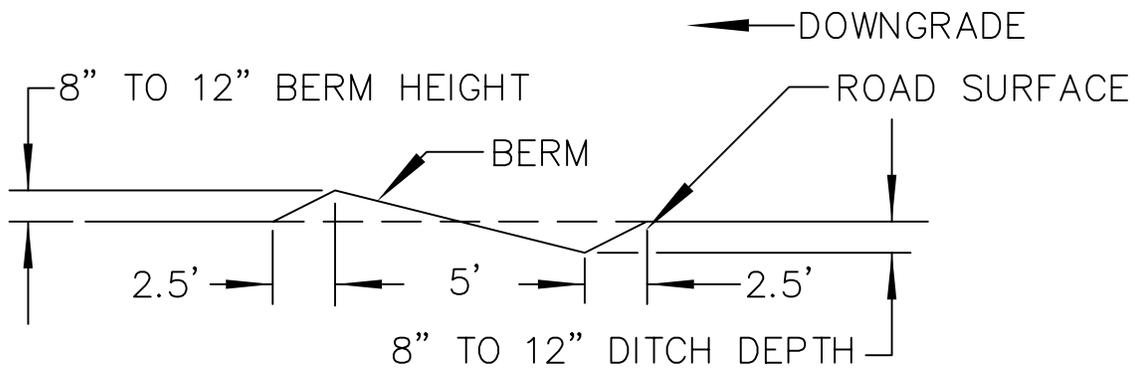
At the end of hauling or prior to entering into seasonal shutdowns or a period of extended inactivity:

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.

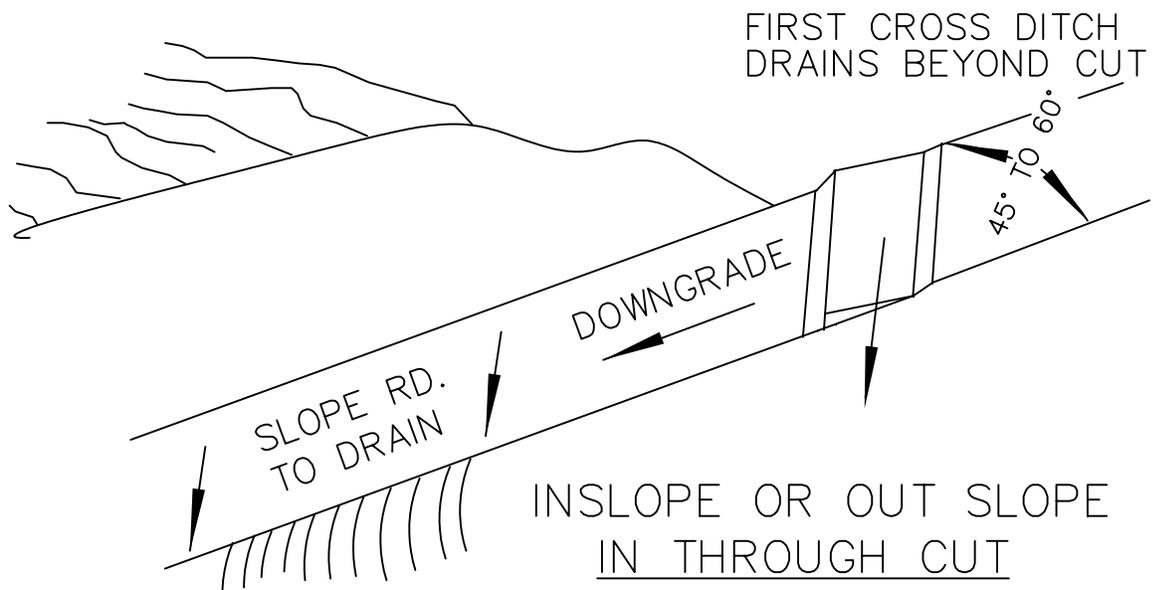


TYPICAL CROSS DITCH

NO SCALE



SECTION A - A



TITLE

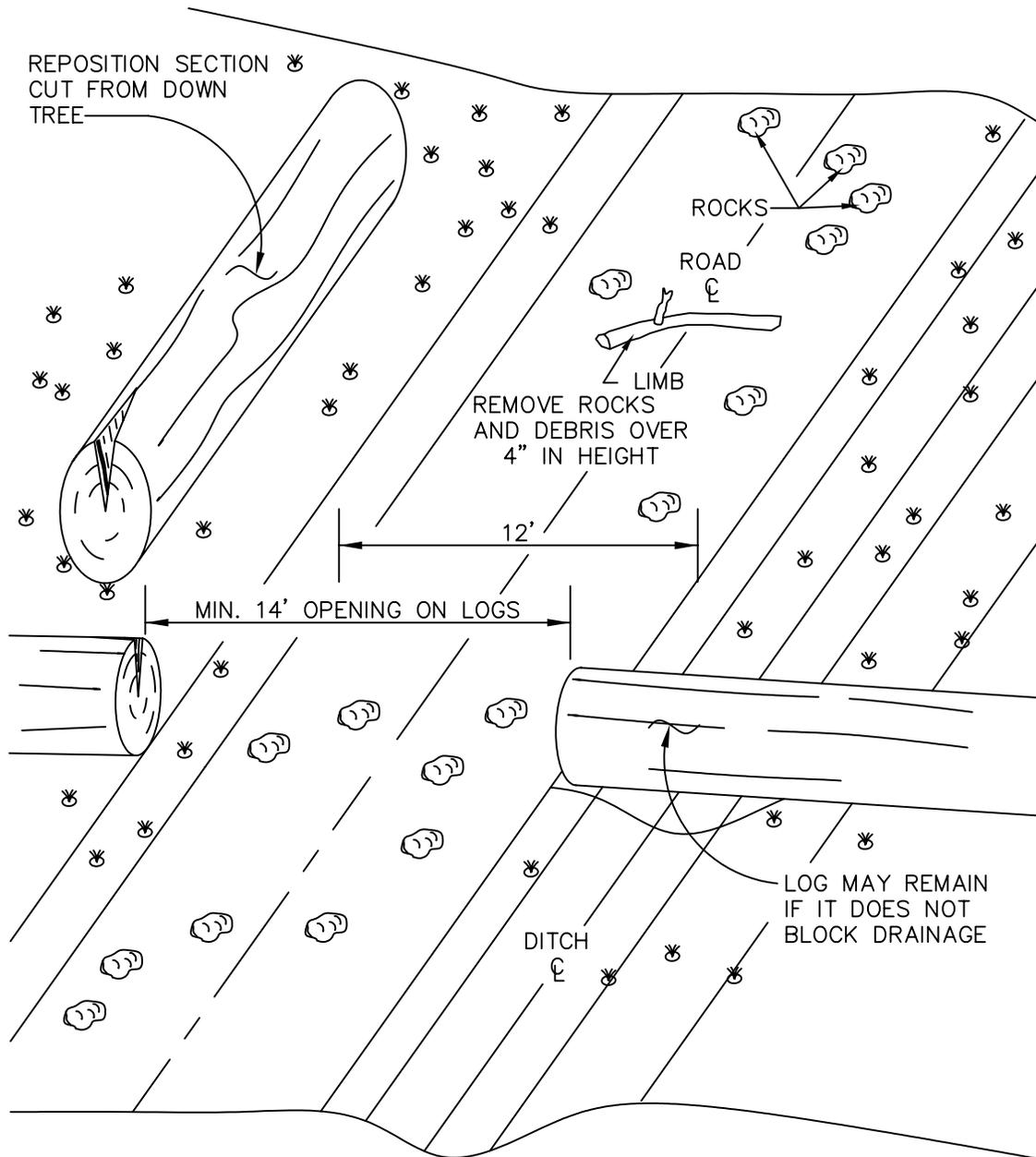
CROSS DITCHING

DRAWING

T838-1

APPROVED

8/85



TITLE

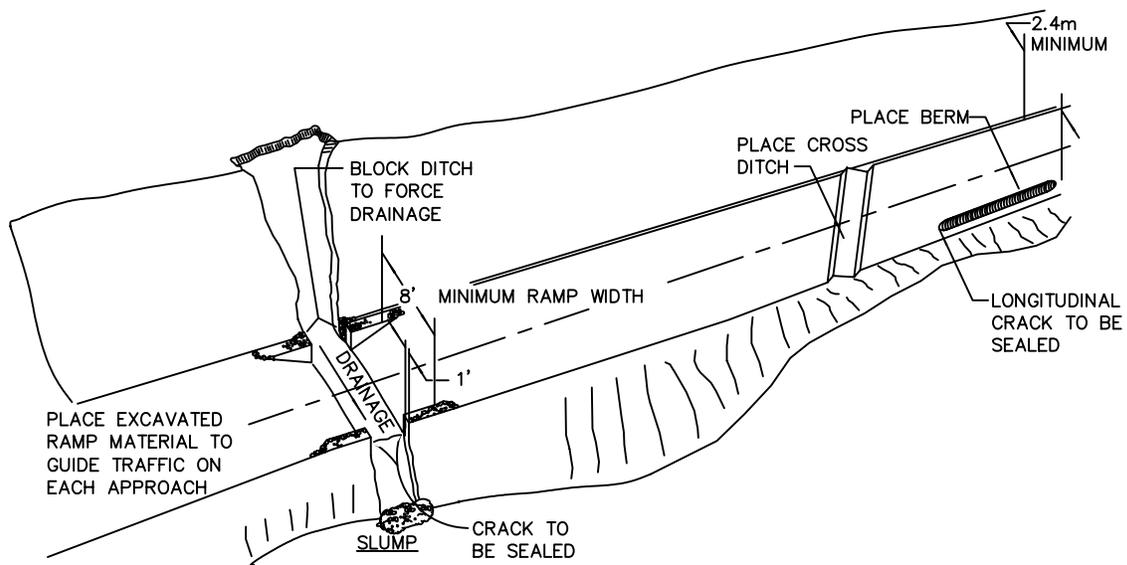
OBJECT ON ROADBED

DRAWING

T838-3

APPROVED

8/85



TITLE TREATMENT OF SLUMPS AND ROADBED CRACKES

DRAWING

T838-5

APPROVED

8/85

T-839 MAINTENANCE FOR PROJECT USE (05/07)

839.01 Description

Work consists of providing minimum access required for Purchaser's Operations and associated Forest Service contract administration and preventing unacceptable resource or road damage.

839.02 Maintenance Requirements

- A. Purchaser is authorized to perform the following maintenance to provide vehicle passage and drainage:
1. Removing log, earth, and rock barriers and/or improving existing road junctions to enable vehicle access as mutually agreed.
 2. Smoothing or filling existing cross ditches and water bars.
 3. Installing Purchaser-furnished culverts or other temporary drainage structures for shallow stream crossings as approved by the Contracting Officer.
 4. Removing brush, fallen trees, rocks, and other materials from the traveled way and other locations that interfere with needed maintenance:
 - a. Place all removed materials away from drainages.
 - b. Limb and remove timber which meets utilization standards or deck at locations approved by the Contracting Officer. Scatter other woody materials, including limbs, off of and below the roadbed without creating concentrations.
 5. Clean and recondition drainage structures in accordance with Section T-831 and Section T-834.
 6. Reposition or ramp over slough and slides to provide adequate width of traveled way material.
 7. Provide traveled way drainage above slumps and seal cracks in slump area. Ramp the slumps on both ends into undisturbed roadbed to provide usable width unless otherwise ordered by the Contracting Officer.

- B. During use, the traveled way shall not channel water along the road. Prior to seasonal periods of anticipated rains and runoff, perform the following work:
1. Shape the traveled way and roadbed to drain.
 2. Reinstall removed cross ditches and water bars and provide any additional drainage structures necessary to offset changes through use and maintenance.
 3. Perform work outlined in 839.02 A (5), (6), and (7).
 4. During periods of non use, replace original barrier or provide and maintain standard MUTCD, Type 3, barricades unless alternate type barriers are approved by the Contracting Officer.

839.03 Post Haul Requirements

- A. Upon completion of project use perform such work as needed to reasonably conform to the character of the existing road prior to Purchaser's maintenance for project use, unless otherwise provided in the SUPPLEMENTAL SPECIFICATIONS or the Road Listing. Work shall be in addition to requirements of 839.02 B and in accordance with 839.03 B and C.
- B. Roads designated in the Road Listing to be blocked shall conform to the requirements of Section T-835. Unless otherwise approved by the Contracting Officer, remove Purchaser-installed temporary structures from National Forest System land. Associated commercially-obtained materials shall remain the property of the Purchaser.
- C. Remove or reshape Purchaser improvements at road junctions, as approved by the Contracting Officer at the time of improvement.

T-851 LOGGING OUT (5/07)

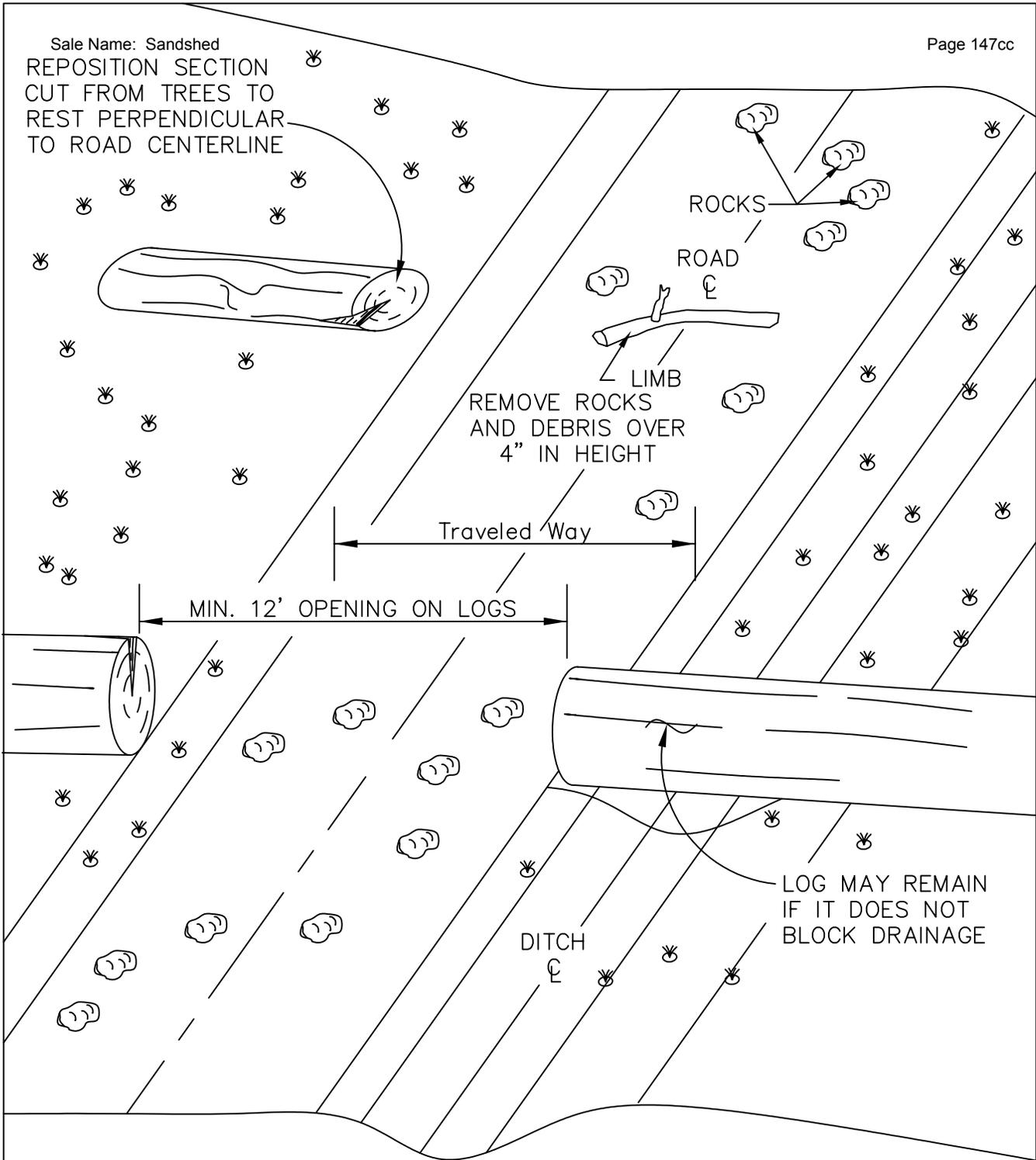
851.01 Description

This work consists of removal of fallen trees and snags which encroach into the roadway or the 3 feet of roadside abutting the roadway on the cut side.

851.02 Maintenance Requirements

- A. Limb and remove timber which meets Utilization Standards, or deck at locations designated by the Contracting Officer.
- B. Limb other material cut into lengths for handling. Deck outside ditches and drainages, off the traveled way and turnouts or at staked locations. The clearing width is to the edge of the roadway for public use roads, except limited use roads. The clearing width for limited use roads is shown in the specifications.
- C. Notwithstanding B(T)2.3, blowdown timber outside Sale Area required to be removed, which meets Utilization Standards in A(T)2, when designated by the Contracting Officer is Included Timber subject to requirements of B(T)2.2.
- D. Do not leave woody debris and slash in excess of 12 inches in length or 3 inches in diameter, or concentrations which may plug ditches or culverts, in ditches, drainage channels, or on backslopes, traveled way, shoulders, or turnouts.

REPOSITION SECTION
CUT FROM TREES TO
REST PERPENDICULAR
TO ROAD CENTERLINE



MIN. 12' OPENING ON LOGS

Traveled Way

ROCKS

ROAD

LIMB

REMOVE ROCKS
AND DEBRIS OVER
4" IN HEIGHT

LOG MAY REMAIN
IF IT DOES NOT
BLOCK DRAINAGE

DITCH

NOTE: APPLIES TO MAINTENANCE LEVEL 2 ROADS
FOR HIGH CLEARANCE VEHICLES

DO NOT SCALE OFF DRAWING

TITLE	HAZARD REMOVAL	
DRAWING	851-2	APPROVED

T-891 WATER SUPPLY AND WATERING (5/07)

891.01 Description

This work consists of providing facilities to furnish an adequate water supply, hauling and applying water.

891.02 Materials

If the Purchaser elects to provide water from other than designated sources, the Purchaser is responsible to obtain the right to use the water, including any cost for royalties involved.

Suitable and adequate water sources designated available for Purchaser's use under this contract are as follows:

Map Key No.	Location/ Road	Location/ Milepost	Use Restrictions
Lake Creek	4700-710	0.71	

891.03 Equipment

A. Positive control of water application is required. Equipment shall provide uniform application of water without ponding or washing.

B. An air gap or positive anti-siphon device shall be provided between the water source and the vehicle being loaded if the vehicle has been used for other than water haul, if the source is a domestic potable water supply, or the water is used for tank mixing with any other materials.

C. The designated water sources may require some work prior to their use. Such work may include cleaning ponded areas, installing temporary weirs or sandbags, pipe repair, pump installation, or other items appropriate to the Contractor's operations. Flowing streams may be temporarily sandbagged or a weir placed to pond water, provided a minimum flow of N/A cu.m/s (cu. ft/sec) is maintained. Obtain approval from the Contracting Officer on improvements for sandbags or weirs prior to placement.