Timber Sale Appraisal
EFR GNA
Sale SW-341-2024-GF9719-01

"STEWARDSHIP IN FORESTRY"

District: Southwest

Date: September 01, 2023

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	$200,582.29	$0.00	$200,582.29
		Project Work:	($4,439.00)
		Advertised Value:	$196,143.29

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District: Southwest **Date: September 01, 2023**

Timber Description

Location: T17S, R06E, Sec 7, 8, 17 W.M. Lane County, Oregon

Stand Stocking: 60%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	13	0	100
Western Hemlock / Fir	16	0	100

Volume by Grade	2S	3S & 4S 6"-11"	Total
Douglas - Fir	25	658	683
Western Hemlock / Fir	0	91	91
Total	25	749	774

Comments: SOURCE OF POND VALUES

Local Pond Values, September 2023.

Western Red Cedar Sawlog Price = $1,192/MBF - $221.47/MBF = $970.53/MBF
Hardwood Sawlog Price = $350/MBF - $221.47/MBF = $128.53/MBF

PULP PRICE

Hardwood Sawlog Price = $350/MBF
Pulp (Conifer) Price = $1/Ton
Pulp (Hardwood) Price = $1/Ton

OTHER COSTS WITH PROFIT & RISK TO BE ADDED

Tree marking in ground-based yarding areas: $80/ac x 37.6 ac = $3,010

Equipment move-in: (($150/hr + ($22/hr x 2 pilots)) x 5 hr move cycle x 5 machines= $4,850

Equipment weed wash: ($150/hr x 3 hr wash) = $450 x 5 machines = $2,250

New temporary road construction: $15,000/mi x 0.61 mi= $9,150
Spur 1: 690 ft
Spur 2: 1,150 ft
Spur 3: 500 ft
Spur 4: 420 ft
Spur 5: 430 ft
Total: 0.615 mi

Prior to wet weather season or heavy rain events, landings and temporary roads water barred: $4,000 x 2 wet seasons = $8,000

Temporary road subsoiled to depth of 20 inches, water bars installed, seeded, mulched and entrance blocked: $5,000/mi x 0.61 mi = $3,050

Landing subsoiled to depth of 20 inches, seeded, and application of mulch or weed-free straw: $150 x 16 landings = $2,400

Primary skid trail subsoiled to depth of 20 inches, water bars installed, seeded, mulched and entrance blocked = $2,500

Seeding and application of weed-free straw of all disturbed sites with seed provided by STATE (disposal sites and other areas determined by STATE) = $4,000

TOTAL Other Cost (with Profit & Risk to be added) = $39,210

PROJECT WORK COSTS

Fire trailing, 1,630 feet of fireline (1,130 ft + 500 ft) @ $2/ft = $3,260

Reconstruction of one pipe crossing = $1,179.3 (see attached appraisal)

SLASH DISPOSAL COSTS

Move-In: (($150/hour loaded transport) + ($22/hour x 2 pilots)) X 4 hour Move-In Cycle = $776 X 1 Excavator = $776

Equipment weed wash: (($150/hour loaded transport) + ($22/hour X 1 wash personnel)) X 3 hour wash time = $516 X 1 Excavator = $516

Roadside grapple piling along temporary and system roads: $1,000/mi x 1.15 mi = $1,150

Pile landing slash: 16 Landings (16hrs @ $100/hr) = $1,600

Covering piles: ($12/pile x 100 piles) + ($22/hr x 2 covering personnel x 40 hours) = $2,960

TOTAL Slash Disposal Costs = $7,002

ROAD MAINTENANCE COSTS

TOTAL Road Maintenance: $10,476
Cost/MBF = $10,476 / 774 MBF = $13.53
Move in cost @$4,000
See the attached ‘Road Maintenance Appraisal’ for cost estimates of blading, brushing, etc. for maintenance of USFS system roads by Purchaser.

Logging Conditions

Combination#: 1

Douglas - Fir	25.00%
Western Hemlock / Fir	25.00%

Logging System: Cable: Small Tower <=40 **Process:** Manual Falling/Delimbing

yarding distance: Medium (800 ft) **downhill yarding:** No

tree size: Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF

loads / day: 5 **bd. ft / load:** 4500

cost / mbf: $330.30

machines: Log Loader (A)
Tower Yarder (Small)

Combination#: 2

Douglas - Fir	75.00%
Western Hemlock / Fir	75.00%

Logging System: Shovel **Process:** Harvester Head Delimbing

yarding distance: Medium (800 ft) **downhill yarding:** No

tree size: Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF

loads / day: 12 **bd. ft / load:** 4500

cost / mbf: $185.19

machines: Forwarder
Harvester

"STEWARDSHIP IN FORESTRY"

District: Southwest **Date: September 01, 2023**

Logging Costs

Operating Seasons:	3.00	**Profit Risk:**	12%
Project Costs:	$4,439.00	**Other Costs (P/R):**	$39,210.00
Slash Disposal:	$7,002.00	**Other Costs:**	$0.00

Miles of Road

Road Maintenance: $13.53

Dirt	Rock (Contractor)	Rock (State)	Paved
0.0	0.0	0.0	0.0

Hauling Costs

Species	$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	$0.00	2.0	4.5
Western Hemlock / Fir	$0.00	2.0	4.5

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Date: September 01, 2023

Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas - Fir									
$221.47	$13.53	$17.01	$138.89	$50.66	$52.99	$9.05	$2.00	$0.00	$505.60
Western Hemlock / Fir									
$221.47	$13.53	$17.01	$138.89	$50.66	$52.99	$9.05	$2.00	$0.00	$505.60

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	$0.00	$792.43	$286.83	$0.00
Western Hemlock / Fir	$0.00	$557.00	$51.40	$0.00

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
EFR GNA
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District: Southwest **Date: September 01, 2023**

Summary

Amortized

Specie	MBF	Value	Total
Douglas - Fir	0	$0.00	$0.00
Western Hemlock / Fir	0	$0.00	$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	683	$286.83	$195,904.89
Western Hemlock / Fir	91	$51.40	$4,677.40

Gross Timber Sale Value

Recovery: $200,582.29

Prepared By: Kolton Vickers **Phone:** 971-375-6232

TIMBER SALE SUMMARY
EFR GNA
Contract No. SW-341-2024-GF9719-01

1. **Location:** T17SR05E, T17S R06E Sec 7,8,17W.M., Lane County, Oregon.

2. **Type of Sale:** This timber sale has three units and one gap. The timber will be sold on a recovery basis at a sealed bid auction.

3. **Sale Acreage:** Acreage was determined by traversing with a Trimble TDC 100 and ESRI ArcMap GIS software. Total sale acreage is 61 acres.

4. **Cruise**: The Timber Sale was cruised by ODF Cruisers in May of 2022. For more information see the Cruise Report.

5. **Timber Description:** The Timber Sale Area consists of three 44 year old stands. The predominate tree species is Douglas-fir with a moderate component of western hemlock. A minor component of western red cedar, true firs, and hardwood spp. are also present. The average DBH for all species is 16" for take trees. The estimated net volume/ac. for all take species and trees is 13 MBF/Acre.

6. **Volume Summary:**

SALE VOLUME BY GRADE						
Species	2 Saw	3 Saw	4 Saw	5 Saw	6 Saw	Total
DF	25,298	550,416	107,803	--	--	683,517
WH	0	60,469	9,269	--	--	69,738
SF	0	17,171	3,823	--	--	20,993
Sale Volume	25,298	628,056	120,895	--	--	774,249

Volume summary is for "take" trees. See attached SuperAce outputs: Project Statistics, Stand Table Summary, Log Stock Table, and Species, Sort, Grade Table for more cruise volume summary information.

7. **Topography and Logging Method:** The elevation for the Timber Sale is 3,200 feet. Slopes within the sale areas range from 5-75%. The Timber Sale Area is 61% ground-based and 39% cable-yarded.

8. **Access:** The Timber Sale Area is located southeast of Blue River, Oregon, within the Willamette National Forest on the McKenzie River Ranger District. Access to the Timber Sale Area is as follows: from the town of Blue River, Oregon, continue on Hwy. 126 east for approximately 4.5 miles until you reach the Cougar Dam Road, turn right. Continue on Cougar Dam Road for approximately 0.5 miles take a right on Aufderheide Drive. Continue on Aufderheide Drive to NF-1993. Drive approximately ten miles to the beginning of project.

CRUISE REPORT
EFR GNA
Contract No. SW-341-2024-GF9719-01

1. Locations: T17SR05E, T17S R06E Sec 7,8,17, W.M., Lane County, Oregon.

2. Cruise Design:
A Coefficient of Variation of 50% and an average stand diameter of 12.5 inches (take trees) is estimated prior to cruising. For sales of this size and approximate value, ODF cruise standards require a sampling error of 8% at a 68% confidence level. Based on silvicultural prescription, the cruise design chosen for this sale is a variable radius sample plot cruise of 1 stratum, consisting of areas 1, 2, 3, 4, 5, 6, 7a, and 7b. The cruise used a 34 BAF.

3. Sampling Methods:
Plots were laid out on a 225 ft. x 225 ft. grid. Plots falling on or near the Timber Sale Boundary or existing roads were offset 1 chain (66 ft.). A ratio of 1:1 grade to count was used. Odd plots are count and even plots are measure. The 'likely take' trees were cruised based on each Area's silviculture prescription.

4. Cruise Report:
Additional and more specific cruise summaries are included in the SuperAce outputs: Project Statistics, Stand Table Summary, Log Stock Table, and Species, Sort, Grade Table.

5. Tree Measurement and Grading:
All grade plot sample trees were measured and graded following Columbia River Log Scale grade rules.

a) Height Standards: Total tree heights were measured to the nearest foot. Bole heights are measured to a minimum of a 6" DIB.

b) Diameter Standards: Diameters were measured outside bark at breast height to the nearest tenth of an inch. Minimum merchantable diameter is 8" DBH for all conifers. In gaps, minimum merchantable diameter is 7" DBH.

c) Form Factors: Measured or estimated for each grade tree using a form point of 16 feet.

d) Tree Segments: Log segments were recorded in 40' lengths whenever possible. Preferred lengths are 40', 38', 36', 32', 28', 26', and descending 2' multiples. The maximum segment is 40' and the minimum is 12' for all grades.

e) Sort and Grade: Conifer was graded to a merchantable top specified by the official log scaling rules. For all Douglas-fir, 2S segments were graded to a 12" top DIB and minimum net volume 60 bf (12' @ 12"), 3S to 6" top DIB and minimum net volume 50 bf (34' @ 6") and 4S to a 6" top DIB and minimum net volume 10 bf (5' @ 6").

f) Field Procedures: Mark plot center with blue pin flag or a stick with green flagging with plot number written on it. Flag 'likely take' trees in green.

5. Data Processing:

a) **Volumes and Statistics**, Cruise, volume estimates and sampling statistics were derived from Super Ace 2008 cruise software.

b) **Deductions:** An estimate visible defect or damage as a length deduction, diameter deduction, or percentage deduction was made. A 4 percent volume deduction will be used for all species and log segments to account for hidden defect and breakage in addition to any visible defect.

c) **Acreage:** The total timber sale area is 61 net acres.

6. Cruisers: The sale was cruised by ODF cruisers Patten and Luciani.

Road Maintenance Costs

Move In				
Total			**$**	**4,000.00**
General Road Maintenance				
# of miles	$/mile		Total	
8.73	$	1,200.00		**$10,476**
Total Road Maintenance				
total general road maintenance	Total Net Volume (mbf)		$/MBF	
		774		**$13.53/MBF**

GNA EFR Timber Sale
Logging Feasibility Report

Notes: Due to the variability of the sale, there may be the need for intermediate support trees in units not so stated in this analysis. Rigging heights are based on a particular profile and will also differ from given heights throughout each unit. Unless otherwise stated Skyline yarding will be uphill and Ground Based skidding will be downhill. All skidding and yarding operations will have constraints within stream corridors in all units. See contract provision C6.42# for special yarding and skidding methods. All Ground based skid roads and landings must be approved prior to use. Skid roads will be placed 150' apart.

For Skyline operations, a carriage with skyline clamping capability will be recommended. Unless otherwise stated in the unit comments the Diamond D2000m, 42' boom, 7/8'' skyline, 5/8 inch mainline and ½ inch haul-back line will be used with an Acme-23 carriage for profile analysis. Skyline corridors for uphill yarding will be 150 feet apart at the farthest reach of the corridor. For downhill yarding the corridors spacing can be adjusted to be closer than 150 feet with prior approval from the Timber Contract Officer.

In those areas which are recommended for ground base systems, and which have slopes in excess of 30%, shovel operations can be considered. Each situation must be looked at and approved by the TSO with the cooperation of the zone Geologist.

There may be small areas along and near landing sites that can be harvested in a manner not specified in the logging feasibility report. With prior approval from the TSO these areas may be harvested using alternate methods of operations.

Guyline anchors, intermediate support trees and tailspar trees for all units are of adequate size for operations unless otherwise stated under unit comments. Intermediate support tree and tail spar heights are determined in accordance to OSHA standards and guidelines.

GNA EFR TS Logging Feasibility Report

Unit:	1
Stand:	1001537
Elevation:	3080-3300
Age:	42
Acres:	21
LMA:	11A,11D,16A
DXD:	16
DTRs:	0

Logging Systems Ac	
GB:	21
S:	0
HeC:	

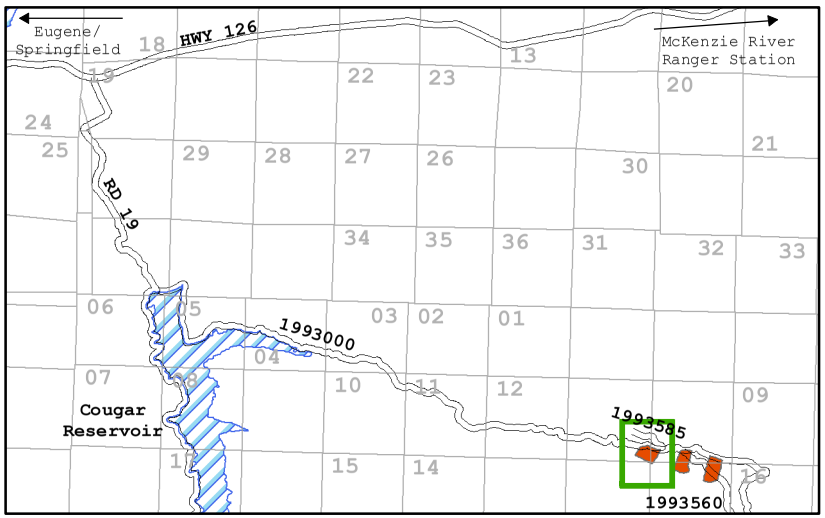
Temporary Spurs (ft.)	
New:	0
Existing:	1530
Total:	1530

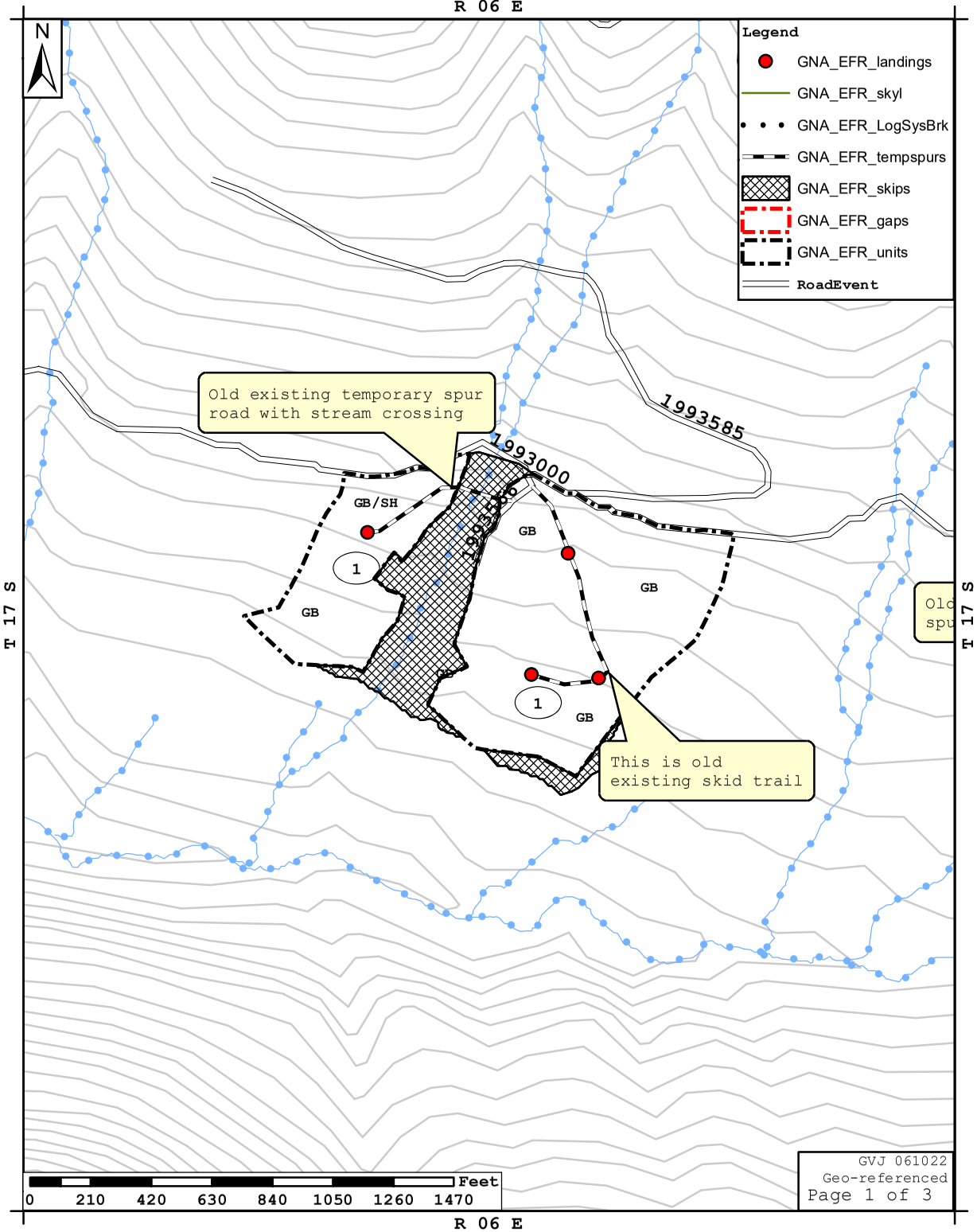
Number of Landings	
GB:	4
S:	0
HeC:	

Gaps Ac:	0
Skips Ac:	6

Stand Remarks:

Unit 1 will be ground base skidded to the landings located on the proposed temporary spur roads. The proposed temporary spur that will provide access to the western section of the unit is located on existing tread and contains an existing stream crossing from previous management. A temporary culvert will be required for the class 4 stream crossing. Refer to C5.1# (Option 1) for stream crossing specifications. The second proposed temporary spur is also located on an existing tread from an old skid trail. Together both temporary spurs total approximately 1540 feet. There is a small section of the unit to the northwest with slopes above 35% that can be shovel logged for short pitches. The average skidding distance is approximately 300 feet. The longest skidding distance is approximately 520 feet.





GVJ 061022
Geo-referenced

GNA EFR TS Logging Feasibility Report

Unit:	2
Stand:	1001548
Elevation:	3140-3420
Age:	53
Acres:	16
LMA:	11A,11D,16A
DXD:	16
DTRs:	0

Logging Systems Ac	
GB:	3
S:	13
HeC:	

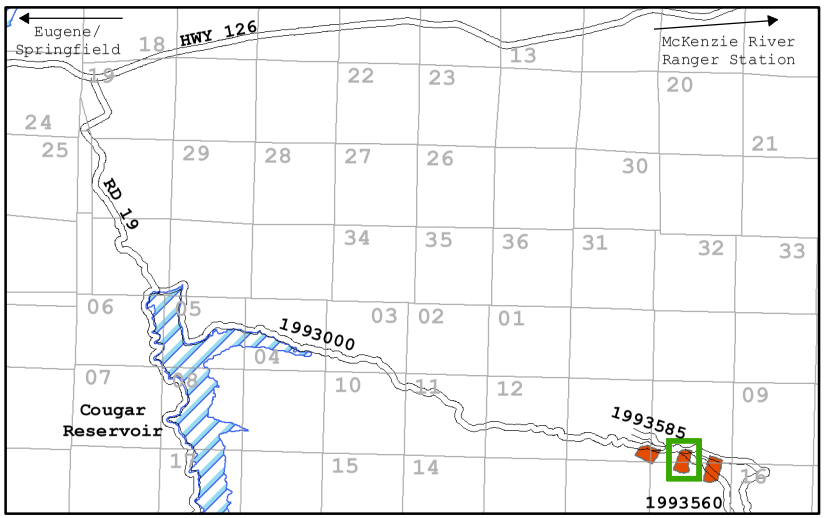
Temporary Spurs (ft.)	
New:	0
Existing:	520
Total:	520

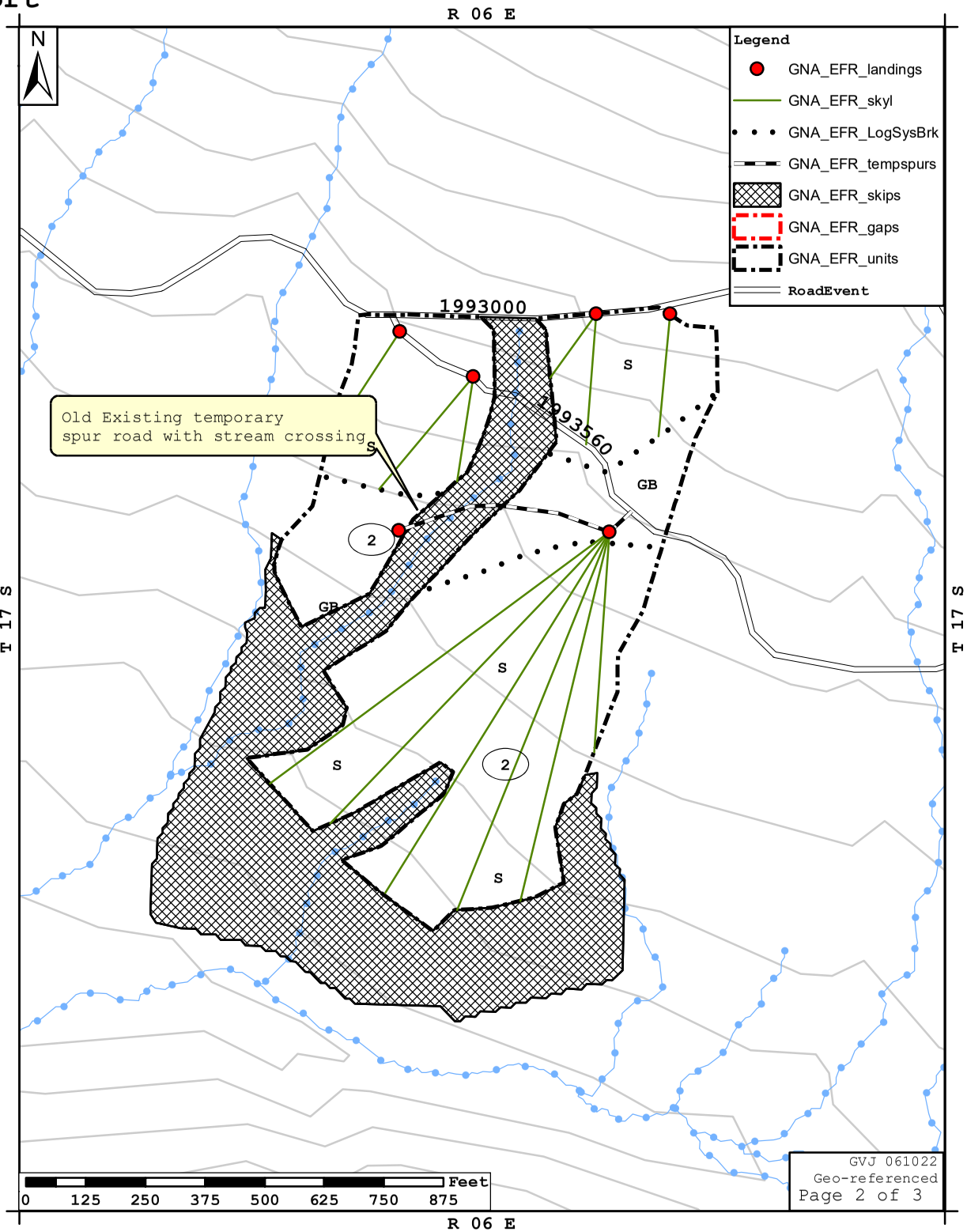
Number of Landings	
GB:	1
S:	5
HeC:	

Gaps Ac:	0
Skips Ac:	11

Stand Remarks:

Unit 2 contains a proposed temporary spur that is located on existing tread with an existing stream crossing. The proposed temporary spur is approximately 520 feet in length. A temporary culvert will be required for the class 4 stream crossing. Refer to C5.1# (Option 1) for stream crossing specifications. The stream crossing will provide access to the ground base portion of the unit. The average skidding distance is approximately 200 feet. The longest skidding distance is approximately 350 feet. Most of the unit will be skyline yarding to the landings located off the 1993000, 1993560-forest service roads, and to the proposed temporary spur. The area of the unit south of the proposed temporary road is relatively flat with slopes under 35%. The map suggest skyline yarding over ground base skidding due to the long skidding distances. The average skyline yarding distances is approximately 540 feet. The longest skyline yarding distance is approximately 900 feet.



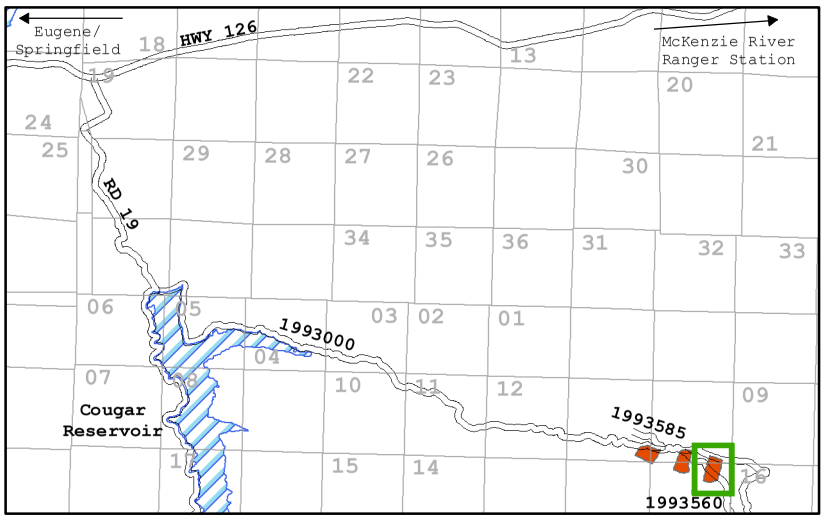


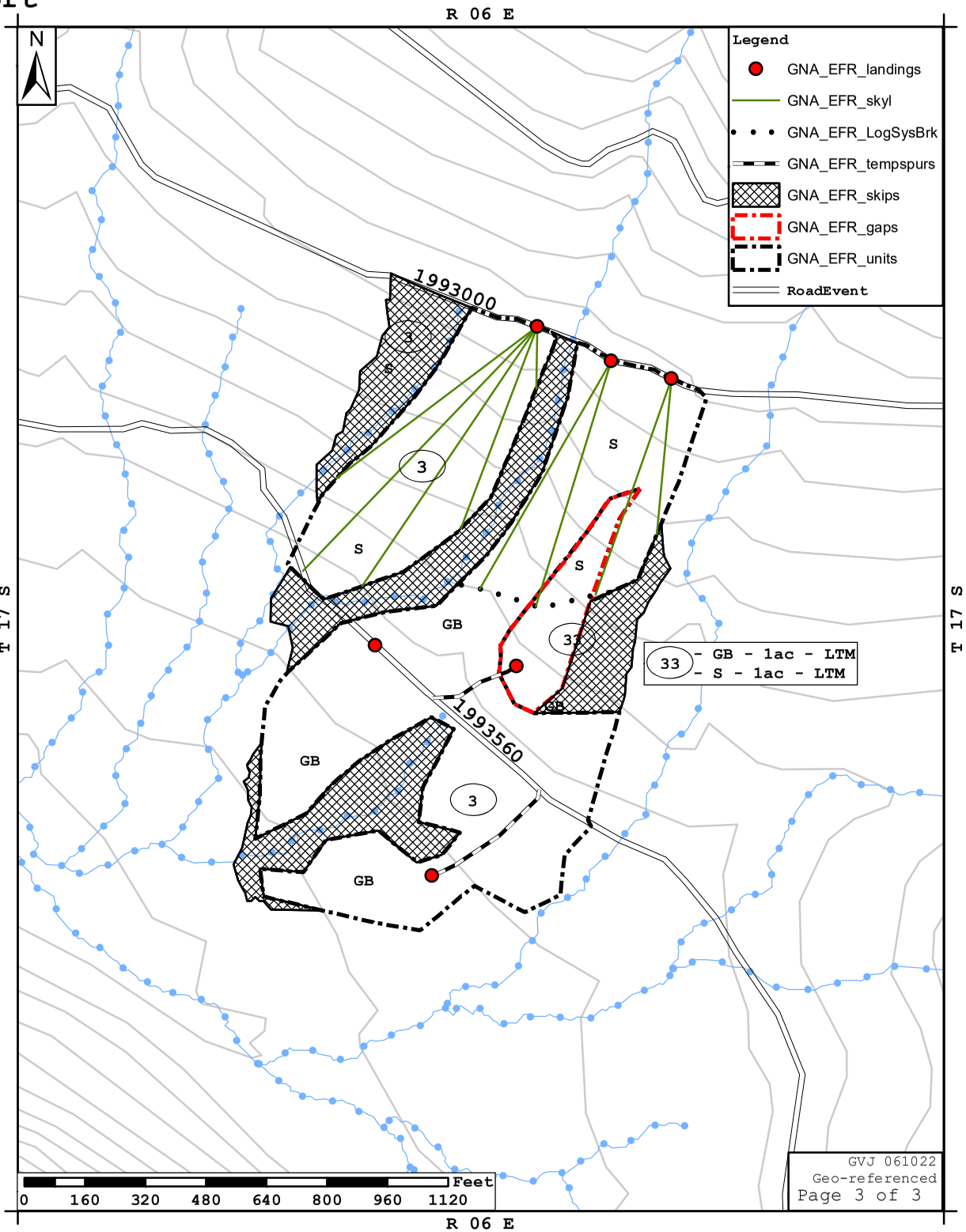
GNA EFR TS Logging Feasibility Report

Unit:	3	Temporary Spurs (ft.)	
Stand:	1001556	New:	590
Elevation:	3200-3520	Existing:	0
Age:	42	Total:	590
Acres:	22		
LMA:	11A,11D,16A	Number of Landings	
DXD:	16	GB:	3
DTRs:	0	S:	3
Logging Systems Ac		HeC:	
GB:	12	Gaps Ac:	2
S:	10	Skips Ac:	9
HeC:			

Stand Remarks:

There are two proposed temporary spur roads within unit 3 that will facilitate ground base operations by shortening skidding distances. The two proposed temporary spurs combined totals approximately 590 feet. The ground base areas of the unit can be skidded to the landings located off the temporary spur roads and to the existing 1993560-forest road. The average skidding distance is approximately 360 feet. The longest skidding distance is approximately 600 feet. The Skyline yarding portion of the unit can be yarded uphill to the landings located off the 1993000-forest road. The average yarding distance is approximately 560 feet. The longest yarding distance is approximately 920 feet.





Project Design Criteria & Mitigations:

EFR CE

Implementation Project: EFR GNA TS

Design Criteria & Mitigation are from the ROD, with edits to shorten and eliminate duplication. This tracker is kept for each implementation project associated with the CE. It is kept in implementation files (pre-sale folder, prescription folders, burn plan folder, timber sale admin notes). It is available for discussion at implementation coordination meetings and reviews with IDT members. Layout and Administration are marked with an 'X' if that design feature is addressed in either the layout of the timber sale or the administration of the timber sale contract.

This crosswalk is designed to refer the IDT members to the section of the contract or exhibits where each mitigation measure is addressed.

	Design/Mitigation	Applicable Areas	Method Addressed		
			Layout	Contract	TS Admin
Soils/Watershed/Fisheries	Ground-based equipment should be limited to slopes less than 30%. Equipment use may be approved on slopes from 30-40% on short pitches (<250 ft) based on site specific conditions. The upper limit for pre-bunching is on 45% slope. All pre-bunching trails will be pre-located and pre-approved. Undesirable soil damage from skidding shall be avoided through layout and mitigated using alternate logging systems.	All		Section 2355	
	Timber transport on aggregate surfaced and native surfaced roads is only allowed during the dry season (generally May 15 to October 15).	All		Section 2355	

	Design/Mitigation	Applicable Areas	Method Addressed		
			Layout	Contract	TS Admin
	Where practical, given availability of quality slash and appropriateness for equipment being used, ground-based yarding equipment should travel on a slash mat greater than 8 inches.	All		Section 2355	X
	Preexisting skid trails and non-system roads should be used before new skid trails are approved. Skid trails would be spaced a minimum of 150 feet apart for forwarder/processor operations. Skid trail width should not exceed 15 feet, with the average width no greater than 12 feet. The number of passes per trail should be minimized.	All		Section 2355	X
	Trees designated as included timber will be felled away from, or parallel to, the no-harvest buffer. Trees, or portions of trees, that are inadvertently felled into the no-harvest buffer shall remain where felled to protect riparian vegetation. The portion of the tree outside of the no-harvest buffer may be bucked at the boundary and yarded. Trees felled within the no-harvest buffer to create yarding corridors, non-system roads, or to meet restoration objectives will be directionally felled towards the stream channel where feasible and left on site.	All		Section 2310	X
	The Class IV streams within or adjacent to the subdivisions will be protected by a 30-foot no harvest buffer and a 50-foot equipment exclusion zone. The Class III Stream in subdivision 1 will be protected by 60 foot no harvest buffer and a 120 foot no harvest buffer will be used for the East Fork of the South Fork McKenzie River (Class I)	All	X	Section 2355	X

	Design/Mitigation	Applicable Areas	Method Addressed		
			Layout	Contract	TS Admin
	Skid trails should avoid being designated to cross streams, but when stream crossings are necessary the following will apply: a) Prohibit skid trails across Class 1 streams. b) Skid trail stream crossings are prohibited within 1000' of listed fish habitat. c) Limit skid trail corridors through no-harvest buffers to less than 15' width, and no more than one crossing per 1000' of stream. d) Require bank protection in the crossing with the use of logs felled from the corridor, or other bank protection technique. e) All trees felled in no-harvest buffers must be left on site. f) Require stream crossings to be removed before the wet season (generally October 16 to May 14). This includes removal of the culvert, logs, or temporary bridge and hydrologically stabilizing the skid trails for wet conditions as needed (ie. constructing water bars, placing slash over exposed soils, and installing erosion control devices to prevent sediment delivery to stream channels). g) Require skid trails to be perpendicular to the stream channel and take the shortest corridor through the no-harvest buffer.	All		Section 2355(h)	X
	The following activities would be suspended during wet conditions: use of all ground-based equipment for yarding, processing, fuels treatment, or other project activities. Wet conditions are defined as the observation of trenching, rutting, or pooling water, and the above activities should be suspended before precipitation or runoff results in off-site movement of sediment into drainage courses.	All		Section 2355 (I)	
	Snow/frozen soil would only be operated on in the following conditions, with approval from the FS: 0 inches of frozen soil and at least 18 inches of packed snow, 4 inches of frozen soil and at least 9 inches of packed snow, or at least 6 inches of frozen soil. Over snow operations would be suspended or re-routed if thawing, soil exposure or uneven snowpack occurs during operations. During snow melt periods, drainage courses would be maintained for proper routing of runoff. Activities would cease until requirements are met.	All		Section 2355 (J)	X

	Design/Mitigation	Applicable Areas	Method Addressed		
			Layout	Contract	TS Admin
	Prohibit construction of new landings, or the use of existing vegetative recovered landings (does not apply to landings in existing roads) if they are: a) within 200 feet of LFH b) within 200 feet of a class 2 stream, if the potentially affected stream reach is within 0.5 miles of LFH within 100 feet of any stream channel c) within 100 feet of any stream crossing.	All		Section 2360 (B)	x
	Ground based equipment and skid roads should not be permitted within 50 feet of all streams (fish-bearing to intermittent), except at approved crossings. These widths are required unless a change is approved by the district hydrologist or district fish biologist.	All	X	Section 2355 (G)	X
	Minimize adverse skidding including the number of passes per trail where feasible. Locate skid trails to avoid concentrating runoff and provide breaks in grade.	All		Section 2355 (B)	
	Temporary spurs shall be limited to no more than ½ mile in total length and use existing impacted areas wherever possible. Locate temporary spurs on existing skid roads where possible to minimize soil compaction.	All	X	Section 2360 (F)	
	Temporary roads will be made hydrologically stable and rehabilitated after completion of project activities. Rehabilitation of temporary roads may include blocking the entrance, removal of culverts, out-sloping the road surface, pulling back displaced material onto the road way, installation of water bars, re-vegetation of the road prism, and/or the subsoiling of compacted surfaces when necessary.	All		Section 2360 (C)	X
	All landings (not in system roads) and temporary roads used during project activities would be subsoiled to a minimum depth of 20 inches of mineral soil. 'Munching' or bucket ripping would be the preferred style ofsubsoiling. Areas of disturbed soil would be seeded with native seed and covered with weed-free straw, mulch, or on-site slash following subsoiling activities.	All		Section 2360 (C)	X

	Design/Mitigation	Applicable Areas	Method Addressed		
			Layout	Contract	TS Admin
	A minimum of one end suspension of logs is required for all logging systems.	All		Section 2350 (A)	X
	No skyline yarding will occur over Class 1 streams, or Class 2 streams within 1000' of ESA Listed Fish Habitat, unless full suspension above the canopy of the no-harvest buffer can be achieved. Class 2 streams>1000' from LFH and Class 3 streams require full suspension over the channel, however yarding corridors through the no-harvest buffer are allowed. Skyline yarding over Class 4 streams requires one-end suspension with bump logs, although full suspension shall be utilized where feasible.	All		Section 2350 (I)	X
	Limit the establishment of skyline yarding corridors that clear corridors of trees over all streams to no more than five corridors per 1,000 lineal feet of stream. Individual corridor widths must not exceed 12 feet. Corridors will be spaced at least 150 feet apart or 100 feet apart if along the stream	All		Section 2360 (G)	X
	All non-system roads used for timber harvest will be decommissioned after completion of project activities, which includes removing all stream crossings and de-compacting the road surface. Decommissioning will include at a minimum removing all stream culverts and water-barring the road. May also include removal of ditch relief culverts, side cast pull back, de-compaction and re-contouring the slope. Decommissioning includes the administrative action of removing the road from the road system	All		Section 2360 (H)	X

	Design/Mitigation	Applicable Areas	Method Addressed		
			Layout	Contract	TS Admin
	Non-system roads, skid trails and landings that have not been designated for wet season use shall be storm proofed with water bars or drain dips prior to extended periods of wet weather or predicted high precipitation events. Water bar location shall occur where local terrain facilitates effective drainage of the non-system road, skid trail, or landing while avoiding unnecessary soil disturbance. An example would be to construct water bars every 100 feet on slopes less than 15%, and every 50 feet on slopes greater than 15%. Water bars should be keyed-in to the cut bank and have a clear outlet on the downhill side. In lieu of water bars, where available in concentrations, slash can be scattered on corridors, skid trails and landings.	All		Section 2360 (I)	X
	Any project activity that occurs within a perennial stream channel, such as culvert replacement, shall comply with the Oregon Department of Fish and Wildlife seasonal restriction for in-stream work activities [July 1 – August 15 window]. If a waiver to these dates is necessary, the District Fisheries Biologist would need to review the proposal and seek concurrence from the applicable regulatory agencies. Culvert removal sites will be dewatered while the culvert is being removed if stream flow is sufficient for dewatering to be possible. On class 2 streams, ensure fish salvage is performed by a fisheries biologist and ensure continuous stream flow below the work site. At culvert removal sites, the road must have waterbars or other drainage features constructed to route surface water away from the newly excavated slopes.	All		Section 2455 (E)	X
	Dust abatement is limited to the application of water or lignosulfonate only. If lignosulfonate is used for dust abatement, one application will occur during the dry season (July/August/September) at a dilution rate of 50 percent lignosulfonate and 50 percent water. Lignosulfonate will remain on the road surface and not go over road edge. During blading, small berms may be created or wattles used at stream crossings to assist with	All		Section 2130	X

	Design/Mitigation	Applicable Areas	Method Addressed		
			Layout	Contract	TS Admin
	Areas being thinned in riparian reserves will maintain 40 percent canopy cover and 60 trees per acre. All gaps will be placed outside riparian reserves.	All	X	Section 2320	
	All existing down wood would be retained within Riparian Reserves to maintain aquatic objectives. Any tree felled into any Riparian Reserve no-harvest buffer is to be left in place and not removed.			Section 2230	X
	Material piling may occur by hand or with a grapple machine. Piling of fuels intended for burning is prohibited closer than 15 feet from the no-harvest buffer. Grapple piling should not occur during rainfall conditions to prevent off-site movement of sediment, pooling, trenching, or rutting. Grapple piling activities should occur in ground-based units on slopes less than 35% and road prisms.	All		Section 2560	X
	Fuel and other petroleum products must be stored and refueling must occur at least 150 feet from any stream or other waterbody.	All		Section 2415	X
Wildlife	Retain existing snags where possible, except those needed to be fallen for safety or operational purposes. Those cut during operations should remain as down wood. Danger trees felled during operations would be left on site for large woody material.	All		Section 2240 (B)	X
	All existing down logs regardless of decay class would be retained on site.	All		Section 2240 (B)	X

	Design/Mitigation	Applicable Areas	Method Addressed		
			Layout	Contract	TS Admin
Botany	Large down wood should be enhanced at the rate of two trees per acre if they are not present after project completion to improve conditions for the spotted owl prey base. The sale administrator should work with the purchaser to retain existing full tree lengths as much as possible.	All		KV Collection	
	Leave 2-3 trees per acre in gaps.	All	X		
	Snag creation activities will have seasonal restrictions applied as needed with a separate Biological Evaluation completed shortly before implementation. Implementation will not occur during the Cascade Elk Rifle season.	All		KV Collection	
	All off-road equipment will be cleaned to remove all dirt and debris prior to entering National Forest System Lands. Landings would not be placed in or adjacent to invasive plant infestations.	All		Section 2416	X
	Equipment should work in non-infested areas and then move to infested areas (USFS would provide map). If the purchaser elects to move from an infested area to a non-infested area, equipment shall be washed prior to leaving the infested area.	All		Section 2416	X
	Roads to be closed or decommissioned would be treated for invasive plants prior to closing. Protect dry and mesic special habitats with buffers or special avoidance measures (i.e. directional felling). Presale will work with the district botanist.	All	X	Section 2360	X
	Clean fill (soil or rock free of slash and debris) would be used for construction of temporary roads. Sources of rock and fill material needs to be free of invasive plants. Rock quarries that may be used would be surveyed for invasive plants prior to use. If invasive plants are found, they would be treated as necessary prior to use.	All		Section 2360	X
	Minimize soil disturbance (minimize fireline construction, reuse old skid roads) to meet project objectives.	All		Section 2355	
	Disturbed areas (road shoulders, closed/obliterated roads, landings, skid trails) should be re-vegetated with weed free native seed to compete with invasive plants as soon as possible. Weed free mulch would be used if necessary	All		Section 2130	X

	Design/Mitigation	Applicable Areas	Method Addressed		
			Layout	Contract	TS Admin
	One or a combination of Integrated Pest Management practices (i.e. manual, mechanical, chemical, mulch) would be used to treat invasive plant species found in the project area. Existing infestations should be treated prior to project implementation to minimize seed spread.	All		KV Collection	
Roads	Best Management Practices (BMPs), including placement of sediment barriers, provision of flow bypass, and other applicable measures, would be included as necessary to control off-site movement of sediment.	All		Section 2130 ©	X
	All road reopening, reconstruction and temporary road building would occur when soils are relatively dry to avoid potential surface erosion of exposed soil	All		Section 2130 (2)	X
	A) Require road maintenance and reconstruction activities to be implemented during the dry season (generally May 15 to October 15). Addition of operational gravel (including blading and compacting) for wet season haul and unforeseen slide removal is allowed in the wet season.	All		Section 2130 (2)	X
	For any perennial stream crossing culvert replacement, a specific dewatering plan shall be included with the contract design provisions.	All		Section 2360 (J)	X
	Native surface roads shall be restricted from hauling during the wet season (typically October 16- May 14) or when soils are saturated, or run-off occurs	All		Section 2035 (A)	X
	On segments of decommissioned roads in between fill removals, either build waterbars to divert surface drainage or de-compact the road surface to a depth of 18-24” to ensure infiltration of surface runoff.	All		Section 2360 (C)	X

	Design/Mitigation	Applicable Areas	Method Addressed		
			Layout	Contract	TS Admin
	All required road maintenance will be completed prior to any haul activities.	All		Section 2130 (B)7	X
	Closed system roads will be hydrologically stabilized. This usually includes removing all stream culverts and water-barring, but sometimes deep fill stream crossings will be stabilized by reducing the fill material over culverts left in place, or other measures to hydrologically stabilize the road as determined by a hydrologist.	All		Section 2360 (E)	X
	Roadside danger tree treatment is only allowed within 2 Site Potential Tree Heights (SPTH) uphill of the road prism and 1 SPTH downhill of the road prism. Commercial harvest of roadside hazard trees is prohibited in the no-harvest stream buffers, and commercial harvest of Douglas fir trees greater than 20" DBH is prohibited within 1 SPTH of streams. Trees deemed hazardous within the above conditions can be cut but must be left where felled.	All		Section 2210	X
	Require all waste material generated from road maintenance (ditch cleaning, blading, etc.) be placed in a pre- designated area outside of Riparian Reserves.	All		Section 2130 (B)7	X
	When removing vegetation from ditch lines where ditches are hydrologically connected to any stream, install an effective sediment trap to prevent ditch erosion from entering streams (e.g. wattles, mulching cleared ditches within 100' of stream crossing culverts) until vegetation is re-established.	All		Section 2130 (B)6	X

	Design/Mitigation	Applicable Areas	Method Addressed		
			Layout	Contract	TS Admin
Heritage	If human remains or cultural resources are identified during project implementation (inadvertent discovery) all work will cease immediately in that area until the situation is reviewed by the District Archeologist or Heritage Program Manager, and an assessment and mitigation plan is instituted	All		Section 2435	X
	Change to any proposed project activities will require District Archaeologist consultation. This includes but is not limited to any ground disturbing activities (e.g. newly proposed harvest activities, helicopter landings, temporary roads, burning, staging areas).			Section 2435	X
	No ground-disturbing activities shall occur within the boundary of a historic property that is included in, or eligible for inclusion in, the National Register of Historic Places.	All		Section 2435	X
Fire/Fuels/Fireline Construction	Landing Pile locations: Slash piles shall be located to minimize damage of standing green trees and snags during burning. Unless otherwise agreed, they would be constructed at least 12 feet from standing green trees and snags. Piles shall not be built on tree stumps or heat sinks when burning. Piles shall not be in the bottom of draws, streams, or ditches and shall not obstruct roadways. Piles shall be spaced 30 feet apart, however where this cannot be attained, keep piles spaced not less than the average pile height. All piles shall be constructed within the subdivision.	All		Section 2560	X

	Design/Mitigation	Applicable Areas	Method Addressed		
			Layout	Contract	TS Admin
	Construction and size of landing piles: The Purchaser shall pile substantially all created slash at least 1 inch in diameter on the small end and at least 3 feet in length and shall be piled as compact as possible and free of soil and rocks. Excessive bark that has fallen off logs generated from logging activities on the landing shall be dispersed on the landing, not piled. Piles will be constructed with a “lift and pile” mechanism rather than a “push and pile” mechanism. Landing piles shall be a minimum of 8 feet in height and diameter at base shall not exceed height. Height of piles should not exceed 12 feet. The area around each pile shall be cleared of all created slash and bark a minimum of 6 feet. All pieces extruding from piles shall be bucked off to facilitate covering after construction.	All		Section 2560	X
	Covering of all landing piles: All piles shall be covered with polyethylene plastic film .006 inches thick. Plastic shall cover 80% of the pile to ensure safe and adequate ignition can be achieved allowing consumption of piles. Plastic shall be anchored to the piles on at least 4 corners. Pieces of burnable material shall be placed on top to keep the plastic from blowing off.	All		Section 2560	X
	The Forest Service should underburn: Subdivisions: 1 and 3	All		KV Collection	
	Fireline Construction: Subdivisions #1 and 3: Firelines shall be cleared of all brush and debris for a minimum width of 10 feet with the outer edge of the clearing inside the subdivision boundary. Debris from the clearing shall be scattered inside the subdivision to reduce the creation of a windrow of slash along the fireline. A continuous fireline, minimum of 18 inches wide, shall be dug to mineral soil within the outer portion of the clearing.	All		Section 2550	X

	Design/Mitigation	Applicable Areas	Method Addressed		
			Layout	Contract	TS Admin
	Subdivision #1: shall have approximately 1,130 feet of fire line constructed. Fire line construction shall begin on the northwest corner on the 1993 road of the unit continuing south along the west boundary and then east across the south boundary ending at the 1st riparian buffer.	Area 1&2		Section 2550	X
	Subdivision #3: shall have approximately 500 feet of fire line constructed. Fire line construction shall begin on the northwest corner on the 1993 road continuing south along the west boundary skipping across the 560-road ending at the bottom of the unit tying into the riparian buffer.	Area 6,7A &7B		Section 2550	X
	Treatment-created fuels or natural fuel accumulations will be reduced through various methods such as yard tops attached, hand and machine piling, underburning or pile burning to lessen the fire hazard. If slash piles are created, three to five piles per acre will be retained for wildlife benefit. If grapple piles are created, one pile will be left per every three acres.	All		Section 2550	X
	Yard Tops Attached (YTA): Tops attached to the last log will be yarded to the landing	Area 3&4		Section 2550	X
	The purchaser will be covering landing piles and the Forest Service is responsible to burn all landing piles	All		Section 2550	X
RECREATION	The purchaser will be covering landing piles and the Forest Service is responsible to burn all landing piles	All		Section 2425	X

	Design/Mitigation	Applicable Areas	Method Addressed		
			Layout	Contract	TS Admin
Timber Marking	Designation by Description: (DXD) All Live Douglas-fir, noble fir, grand fir, Pacific silver fir, incense cedar, western red cedar, and western hemlock within the specified spacing of a live conifer with a larger stump diameter. Hardwoods not identified as a cut tree are to be ignored; they are not counted in the spacing. A contract spacing of the above DXD will result in residual trees spacing of 1-2 times the DXD. Boundary trees with orange paint and boundary tags "cut" trees within the subdivision that have a smaller stump diameter than the boundary tree. Stump diameter is measure at 4" above the ground on the high side. Distance between trees is measured at the two closest points of any two trees at ground 4" off the ground.	All		Section 2320	X
	Group Selects (Gaps): Douglas-fir, noble fir, grand fir, Pacific silver fir, incense cedar, and western hemlock tree not marked with orange tree marking paint and greater than 7.0" DBH will be designated for cutting. Gaps are one to three acres in size and should have random shapes. Gaps are to retain 4 merchantable trees per acre to add diversity and provide for natural recruitment of snags and down woody material, these trees will be conifers other than an included cut species, however if only a cut species exist, one shall be identified as a leave tree.	All		Section 2320	X

McKenzie River Ranger District Timber Management Staff: /s/Shadie Nimer _____

Road Maintenance T-Specifications

for

EFR GNA Timber Sale

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.

Prehaul Maintenance work the Purchaser elects to perform will be in compliance with the Road Maintenance T-Specifications.

800-1.14 Roadbed: The portion of a road between the intersection of Subgrade and side slopes, excluding that portion of the ditch below Subgrade.

800-1.15 Road Maintenance Plan: A table which shows applicable road maintenance specifications to be performed by Purchaser on specific roads.

800-1.16 Roadside. A general term denoting the area adjoining the outer edge of the Roadway.

800-1.17 Roadway: The portion of a road within the limits of excavation and embankment.

800-1.18 Shoulder: That portion of Roadway contiguous with Traveled Way for accommodation of stopped vehicles, for emergency use, and lateral support of base and Surface Course, if any.

800-1.19 Slide: A concentrated deposit of Materials from above or on back slope extending onto the Traveled Way or Shoulders, whether caused by mass land movements or accumulated raveling.

800-1.20 Slough: Material eroded from the back slope which partially or completely blocks the ditch, but does not encroach on the Traveled Way so as to block passage of traffic.

800-1.21 – Slump: A localized portion of the Roadbed which has slipped or otherwise become lower than that of the adjacent Roadbed and constitutes a hazard to traffic.

800-1.22 Special Project Specifications: Specifications which detail conditions and requirements peculiar to the individual project.

800-1.23 Subgrade: Top surface of Roadbed upon which Base Course or Surface Course is constructed. For roads without Base Course or Surface Course, that portion of Roadbed prepared as the finished wearing surface.

800-1.24 Surface Course: The Material placed on Base Course or Subgrade primarily to resist abrasion and the effects of climate. Surface Course may be referred to as surfacing.

800-1.25 Surface Treatment Plan: A table which lists the roads and surface treatments to be applied.

800-1.26 Traveled Way: That portion of Roadway, excluding Shoulders, used for the movement of vehicles.

800-1.27 Turnouts: That portion of the Traveled Way constructed as additional width on single lane roads to allow for safe passing of vehicles.

800-1.28 Water Source: A place designated on the Road Maintenance Map for acquiring water for road maintenance purposes.

800-1.29 Water bar: A dip in the Roadbed which intercepts surface runoff and diverts the water off the Roadway. A Water bar is not designed to be traversable by logging trucks.

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 STATE 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.

2. Shape roadbed width in excess of the dimensions shown only as needed to provide drainage away from the traveled way. Do not remove established grasses and other vegetation from the excess width except as incidental to providing drainage or unless otherwise provided in the contract.

D. Compaction

1 Roads requiring compaction will be included in the ROAD LISTING.

2. Unless Compaction Method B is designated in the ROAD LISTING, all traveled ways requiring compaction may be compacted by Method A. Compaction shall commence immediately following blading.

Compaction methods are:

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.

E. Undercutting - Undercutting roadway back slope is not permitted.

F. Intersections

At intersections, blade the roadbeds of side roads which are not closed or restricted from vehicular use to ensure smooth transitions.

Signing, cross ditching in the road surface (traveled way), earth berms, or other devices placed to discourage or eliminate use by passenger cars, are field evidence of road closure or restriction. Roads listed for work under Sections T-835, T-836, T-838, and T-839 shall be considered restricted.

Side roads listed for work under this Section are not restricted.

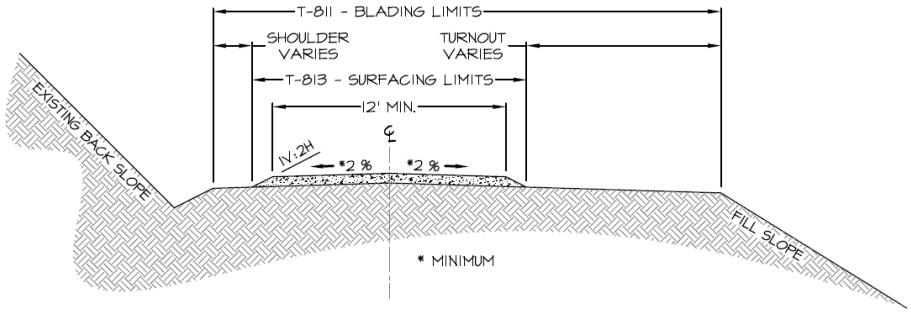
G. Cleaning of Structures - Do not allow materials resulting from work under this Section to remain on or in structures, such as bridges, culverts, cattle guards, or drainage dips.

H. Berms - Maintain existing berms to the condition of adjacent segments. Do not create new berms.

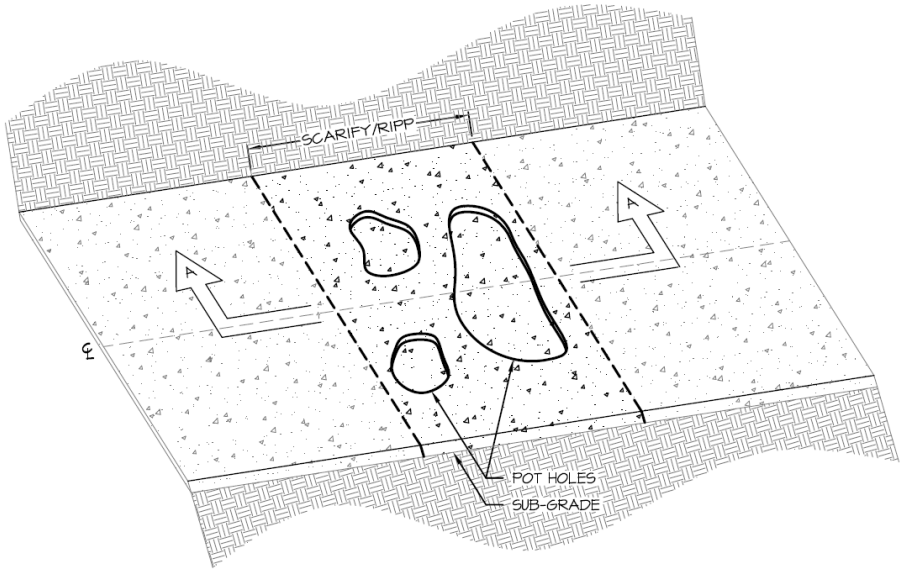
I. Smooth Blading - Smooth blading may be used as an interim measure to remove loose surfacing material from the wheel paths, and store removed materials in a recoverable windrow, until blade processing as described in this section is feasible.

Watering will not be required for smooth blading. Accomplish smooth blading without distorting the existing cross-slope or crown of the traveled way.

Move and store loose surfacing materials on the high side of super-elevated curves and sections with uniform inslope or outslope. In crowned sections, store the material on either or both sides as elected. Windrow and place stored materials to provide not less than 12 feet of smooth traveled way on one-lane segments, or 20 feet of smooth traveled way on two-lane segments, or segments with turnouts. Cut holes through windrows, which may collect water on the road, for drainage at least every 500 feet.



BLADING & SPOT ROCK TYPICAL
Not to Scale



POT HOLE TREATMENT TYPICAL
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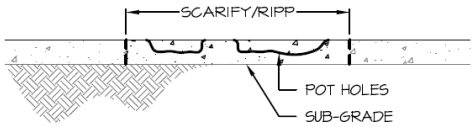


SECTION A - A
Not to Scale

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)

T – 812 DUST ABATEMENT (05/09)

812.01 Description

This work consists of applying dust palliatives on roads shown in the Road Listing.

812.02 Materials

The dust palliative materials are shown in the Road Listing, unless shown as Optional for Purchaser's election. If Optional is shown then the Purchaser may use any of the products listed below. Dust palliative materials shall meet the following requirements:

A. Water (H2O) will be obtained from sources SHOWN ON THE DRAWINGS or listed in the SUPPLEMENTAL SPECIFICATIONS to Section T-891 Water Supply, unless otherwise approved by the STATE.

B. Lignin Sulfonate (LIG S) Provide certification that the material meets the requirements of Subsection 725.20 of the "Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects (FP-03)" and the Forest Service Supplemental Specification 725.20.

C. Magnesium Chloride (MG CL2) Provide certification that that the material meets the requirements of Subsection 725.02 of the "Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects (FP03) " and the Forest Service Supplemental Specification 725.02.

D. Calcium Chloride Brine (CA CL2B). Provide certification that the material meets the requirements of Subsection 725.02 of the " Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects (FP03) " and the Forest Service Supplemental Specification 725.02.

E. Calcium Chloride Flake (CA CL2F). Provide certification that that the material meets the requirements of Subsection 725.02 of the "Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects (FP03) " and the Forest Service Supplemental Specification 725.02.

F. Bituminous dust palliatives. Manufacture materials specifically for dust abatement purposes which conform to the requirements of Section T-892 for each listed road in the Road Listing.

812.03 Methods

As shown in the SUPPLEMENTAL SPECIFICATIONS, Purchaser may utilize a variety of methods to decrease or eliminate the need for dust abatement.

812.04 Equipment

A. Design, equip, and operate application equipment for spreading dust palliatives so that the material is uniformly applied at the rate and traveled way widths shown in the Road Listing.

B. For bituminous palliatives provide equipment that heats and applies the bituminous material. Provide a bituminous distributor that is self-powered and mounted on pneumatic tires and equipped with a pump and circulating spray bar, a tachometer, pressure gauges, accurate volume measuring devices such as visual volume dial or gauge calibrated to the tank, and a thermometer. Provide equipment which is a standard commercial type of proven performance.

C. Accomplish dilution of dust palliatives within the application vehicle with the water source protected from contamination. Circulate the resulting mixture at least five (5) minutes to ensure uniform mixing prior to application.

812.05 Maintenance Requirements

A. Limit water applications to abatement for hauling vehicles and provide at a frequency and rate which controls dust such that vehicle tail lights and turn signals remain visible. Vary rates of application as needed but remain low enough to avoid forming rivulets. Accomplish the abatement by sufficient frequency of application without saturating and softening the traveled way. Compacted or glazed road surface or wheel tracks may be loosened as needed for water penetration.

B. Apply all other dust palliatives at the rates and times agreeable to the STATE. The Road Listing shows the expected average application rate and may be varied to meet field conditions. Lignin Sulfonate, Magnesium Chloride, and Calcium Chloride Brine are listed as gallons per square foot of the undiluted product at fifty (50), thirty- three (33), and thirty-eight (38) percent respectively. Calcium Chloride Flake is listed in pounds per square foot at seventy-seven (77) percent concentration.

C. Apply bituminous dust palliatives only when the surface to be treated contains sufficient moisture to obtain uniform distribution of the dust palliative unless noted differently in the SUPPLEMENTAL SPECIFICATIONS.

D. Prior to initial application, when needed, the road will be bladed and shaped under Section T-811, Blading.

E. Required subsequent applications may be applied to the existing road surface without blading.

F. Dust palliatives will not be applied in a manner that spatters or mars adjacent structures or trees, or placed on or across cattleguards or bridges. Discharge dust abatement material only on roads approved by the STATE.

T - 813 SURFACING (10/07)

813.01 Description

This work consists of placing surface aggregate as DESIGNATED ON THE GROUND, or as ordered by the STATE. It includes preparing the area, furnishing, hauling, and placing all necessary materials and other work necessary to blend with the adjacent road cross section.

813.02 Materials

Materials will be Government-furnished when stated in the supplemental specifications.

Materials furnished by the Purchaser shall conform to the gradation and quality requirements of Section 703 of the "Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects FP-03 U.S. Customary Units" and FS supplements to the FP-03. Use ODOT 1 ½ dense gradation or FS Gradation S.

All materials transported onto National Forest System land shall be free of invasive species of concern. Written documentation of methods used to determine the invasive species of concern free status of any and all materials furnished by the Purchaser shall be submitted to the STATE before transport of any materials onto National Forest System land.

The STATE shall have 5 days, excluding weekends and Federal holidays, to review the methods and inspect the materials after the required written documentation is provided by the Purchaser. After satisfactory review and inspection or after such 5 day period, the Purchaser may transport the material onto National Forest System land.

Material or methods appropriate for establishing invasive species of concern free status for the particular invasive species of concern are listed below.

Invasive Species of Concern and Acceptable Methods specific to this project:

Invasive Species of Concern	Acceptable Methods
NA	NA

813.03 Maintenance Requirements

A. Thoroughly loosen the area to be surfaced to a minimum depth of 1 inch prior to placement of aggregate.

B. Mixing and Placing

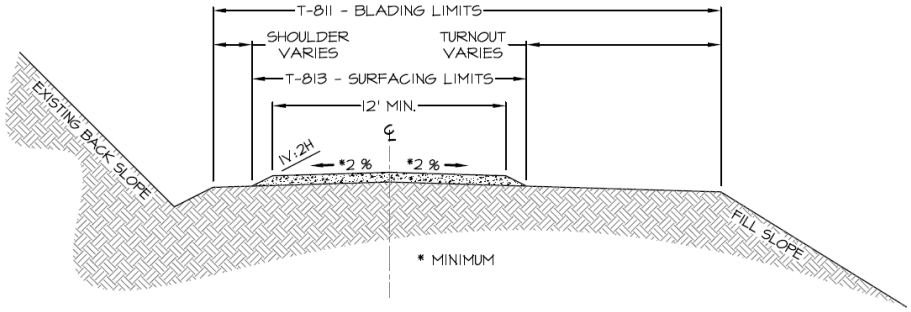
When scheduled coincidentally with work under Section T-811, and included in the SUPPLEMENTAL SPECIFICATIONS, mix surfacing and existing aggregate with water until a uniform mixture is obtained prior to final shaping and compaction.
Otherwise, spread the material on the prepared area in layers no more than 4 inches in depth. When more than one (1) layer is required, shape and compact each layer before the succeeding layer is placed. Upon completion, the surfacing shall reasonably conform to the adjacent cross section and provide smooth transitions in the road profile.

Compaction Methods

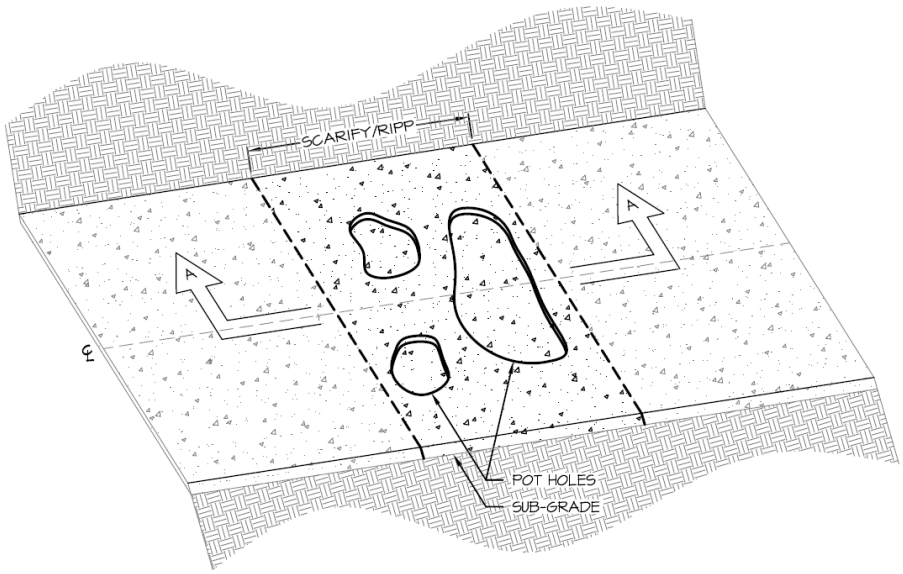
Compaction Method A: Breaking track while operating equipment on the traveled way.

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.



BLADING & SPOT ROCK TYPICAL
Not to Scale



POT HOLE TREATMENT TYPICAL
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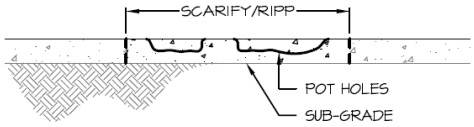


SECTION A - A
Not to Scale

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)

T-814 – ASPHALT SKIN PATCHING

814.01 Description

This Section provides for the patching and repair of paved asphalt roads to facilitate safe and efficient log hauling. This work is shown in Exhibit A and designated on the ground with stakes.

814.02 Performance Standard

A. This work is complete when the pavement is clean and free of potholes and surface irregularities.

B. Furnish Hot Asphalt Pavement Mix, ODOT Spec. 3/8" Dense Gradation, Level II HMAC, Asphalt Grade PG 64-22, as approved by STATE.

C. Place the asphalt concrete mixture in layers not exceeding 4 inches. Thoroughly compact each layer with mechanical tampers or rollers. For hot asphalt concrete mixtures, compact the mix while it is above 230 degrees Fahrenheit.

D. Compact the finished surface with an approved steel-wheel roller, as approved by STATE. Ensure that the compacted patch is approximately 1/8 to 1/4 inches above the level of the adjacent pavement.

E. Clean the existing surface of all loose material, dirt, or other deleterious substances by approved methods. Apply emulsified asphalt tack coat on a dry, unfrozen surface when the air temperature in the shade is above 35 degrees Fahrenheit and rising.

F. Seal the edges of the completed patch with emulsified asphalt, and blot with fine sand. STATE will approve the exact application rate, temperature, and area to be treated before application and may make adjustments for variations in field conditions.

814.03 Measurement

Material will be measured by the ton and shall be verified by certified weight tickets.

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 STATE.

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.

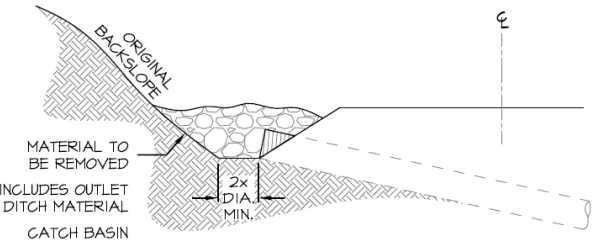
F. Remove limbs and wood chunks in excess of 12 inches in length or 3 inches in diameter from ditches and place outside the roadway.

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

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

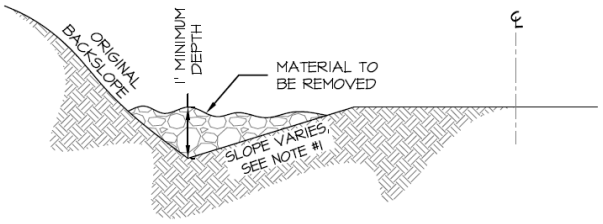
Where DESIGNATED ON THE GROUND, included in the ROAD LISTING, SHOWN ON THE DRAWINGS or as ordered by the STATE invasive species of concern prevention practices shall be followed as listed below.

Invasive Species of Concern Prevention Practices
NA



CULVERT CLEANING TYPICAL SECTION

Not to Scale



DITCH CLEANING TYPICAL SECTION

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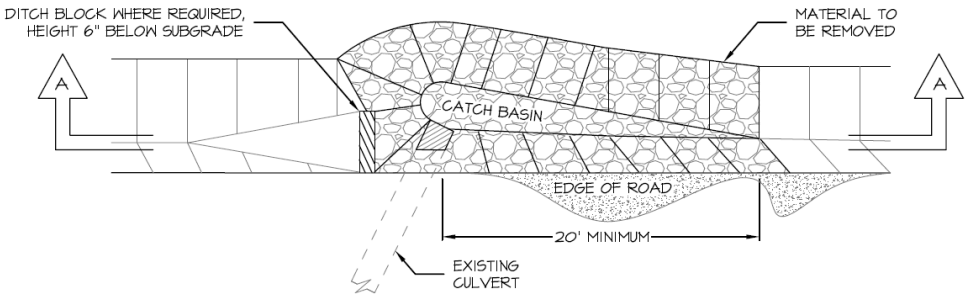
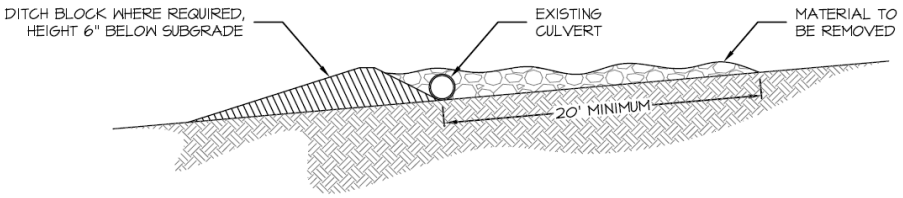


CULVERT CLEANING PLAN VIEW

Not to Scale



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)

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 STATE.

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 STATE, 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 STATE.

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.

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.

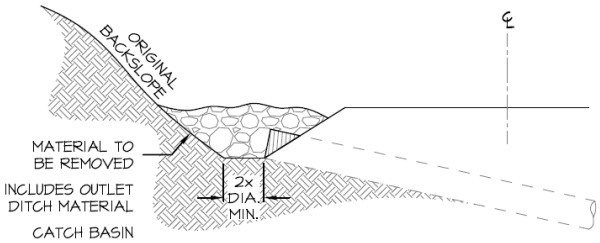
B. Clean the transition from the ditch line to the catch basin a distance of 10 feet from the catch basin. Clean outlet channels and lead-off ditches a distance of 6 feet. Remove and place debris and vegetation so as to not enter the channel or ditch, or obstruct traffic. Haul debris and vegetation to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

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 STATE invasive species of concern prevention practices shall be followed as listed below.

Invasive Species of Concern Prevention Practices
NA



CULVERT CLEANING TYPICAL SECTION

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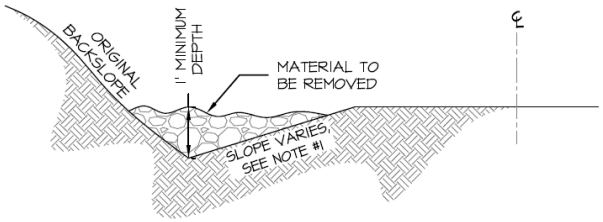

DITCH CLEANING TYPICAL SECTION

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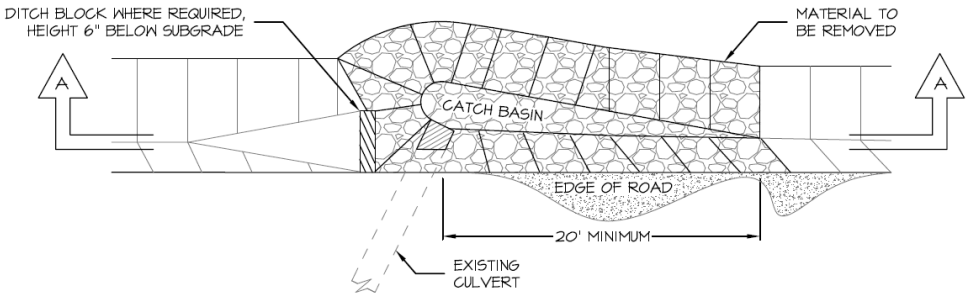
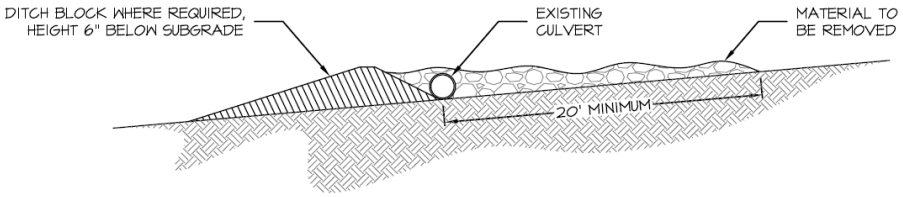


CULVERT CLEANING PLAN VIEW

Not to Scale



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)

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 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 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:

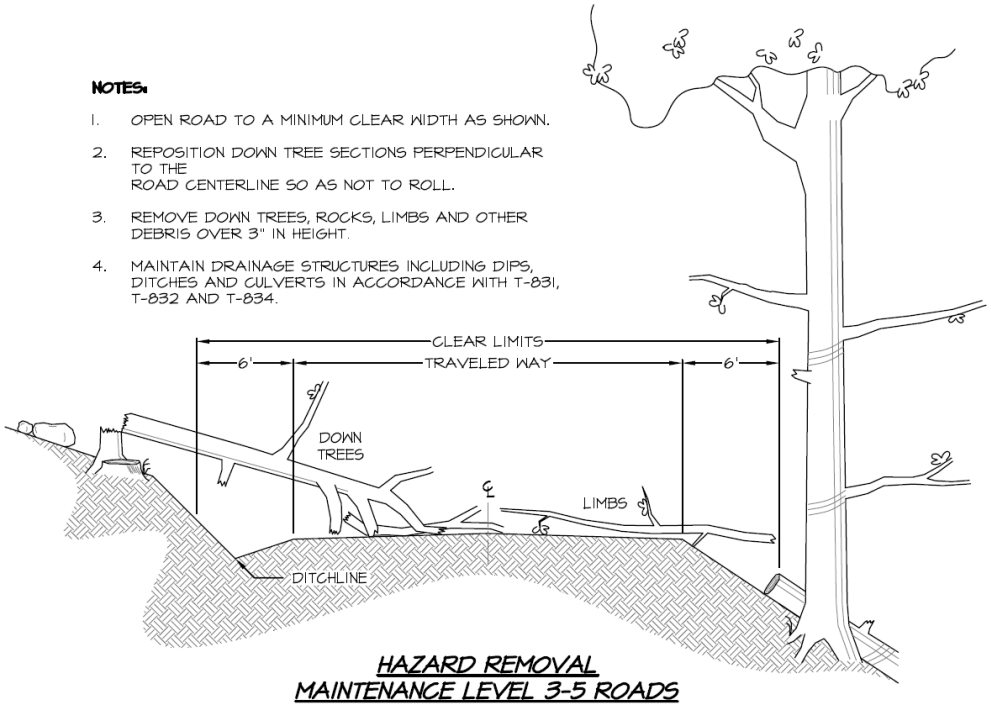
1. Shape the traveled way and disturbed roadbed to provide functional drainage.

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

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.

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.

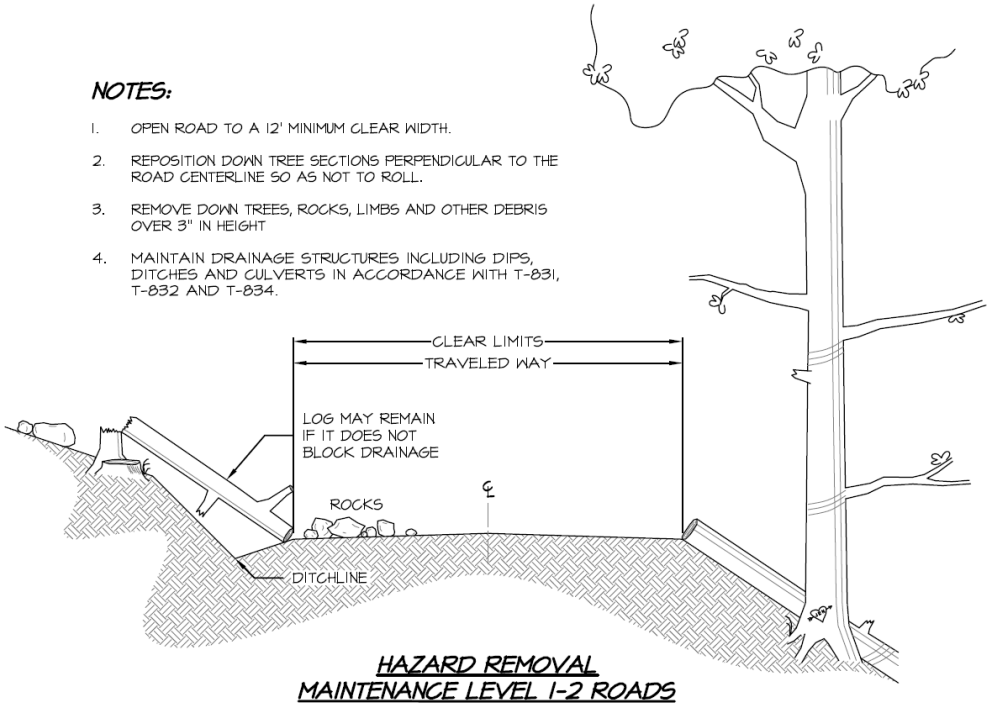


HAZARD REMOVAL
MAINTENANCE LEVEL 3-5 ROADS

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)

T - 842 CUTTING ROADWAY VEGETATION (10/07)

842.01 Description

This work consists of cutting all vegetative growth, including trees and other vegetation less than 4 inches in diameter measured 6 inches above the ground, on roadway surfaces and roadsides.

842.02 Maintenance Requirements

A. General

1. Cut brush, trees, and other vegetation within each area treated to a maximum height of 6 inches above the ground surface or obstruction such as rocks or existing stumps. When work is performed under this Section, remove all limbs which extend into the treated area, or over the roadbed, to a height of 14 feet above the traveled way surface elevation.

2. Items to remain will be DESIGNATED ON THE GROUND.

3. Work may be performed either by hand or mechanically unless specifically shown in the Road Listing. Self-propelled equipment is not allowed on cut and fill slopes or in ditches.

4. Correct damage to trunks of standing trees caused by Purchaser's operation either by treatment with a commercial nursery sealer or by removing the tree as directed by the STATE.

5. Limb trees within the cutting limits which are over 4 inches -measured at 6 inches above the ground in lieu of cutting.

6. When trees are limbed, cut limbs within 4 inches of the trunk.

B. Cutting Side Vegetation

1. Show the width of vegetation to be removed in the Road Listing.

2. Unless otherwise included in the SUPPLEMENTAL SPECIFICATIONS or DESIGNATED ON THE GROUND:

   a. Commence work at the edge of the traveled way and proceed away from the road centerline.

   b. Roads without a defined traveled way: The starting point for cutting will be marked on the ground or defined in the SUPPLEMENTAL SPECIFICATIONS.

3. The points for establishing cutting limits are as follows:

   a. Fill and day lighted (wide roadbed) section cutting commences at the edge of the traveled way and proceeds away from the road center line.

   b. Drainage ditched section cutting commences at the bottom of the existing ditch and proceeds away from the road center line. Cutting on ditch fore slopes is not required.

   c. Non-ditched cut section cutting commences at the intersection of the cut bank and the roadbed and proceeds away from center line.

4. Provide transitions between differing increments of cutting width. Accomplish transitions in a taper length of not less than 50 feet or more than 70 feet.

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.

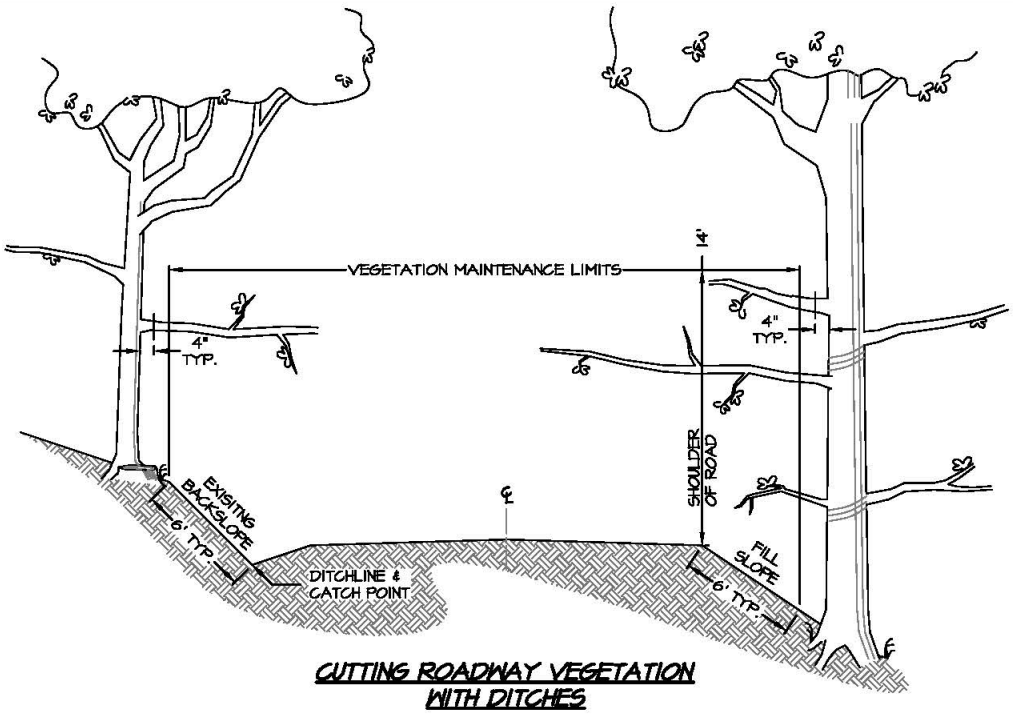
2. Remove limbs and chunks in excess of 3 inches in any dimension from the traveled way and shoulders.

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 STATE invasive species of concern prevention practices shall be followed as listed below.

Invasive Species of Concern Prevention Practices
NA



CUTTING ROADWAY VEGETATION WITH DITCHES

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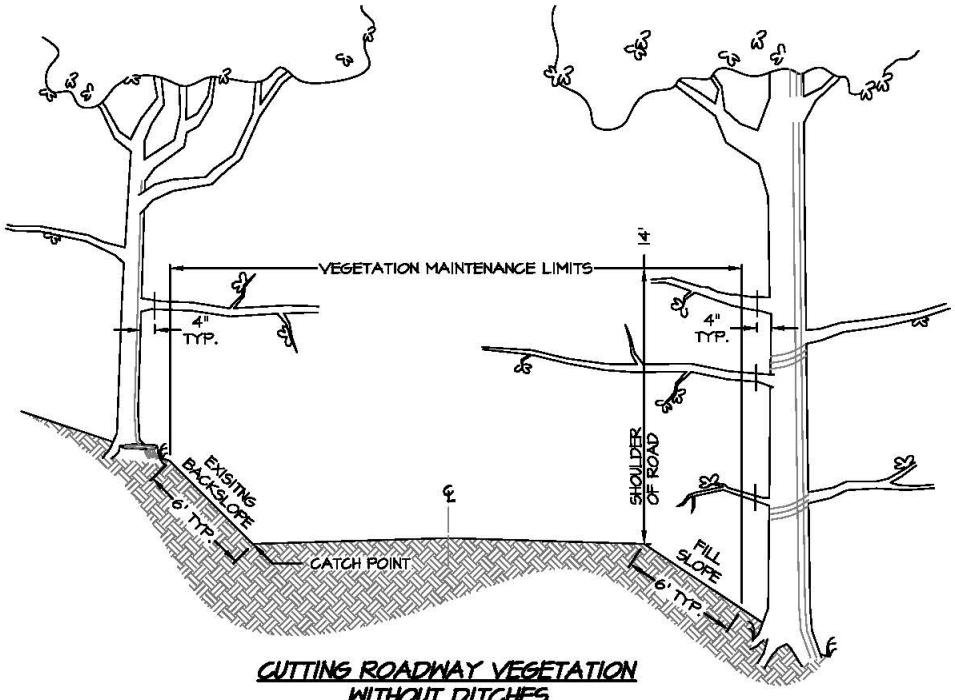

CUTTING ROADWAY VEGETATION WITHOUT DITCHES

Not to Scale

NOTES:

1. EXTEND AN ADDITIONAL 5' ON THE INSIDE OF HORIZONTAL CURVES, WHERE DIRECTED BY CONTRACTING OFFICER, TO REDUCE OBSTRUCTIONS IN SIGHT DISTANCE.

T-842 TYPICALS (11/14)

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 STATE. 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.

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 available for Purchaser's use under this contract are designated as follows:

All water sources are designated by the STATE

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 Purchaser's operations. Flowing streams may be temporarily sandbagged or a weir placed to pond water, provided a minimum flow of 10 cu. ft/sec is maintained. Obtain approval from the STATE on improvements for sandbags or weirs prior to placement.

TC PSTATS

PROJECT STATISTICS

PAGE 1

Matthew Luciani — PROJECT FLIPS — DATE 7/18/2023

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
18S	05E	07	FLIPS	EFR1	21.00	19	105	S	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	19	105	5.5		
CRUISE	9	52	5.8	5,437	1.0
DBH COUNT					
REFOREST					
COUNT	10	53	5.3		
BLANKS					
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR-L	20	86.1	14.4	83	25.7	97.8	11,447	11,447	3,059	3,059
DOUG FIR-T	25	153.8	12.3	68	36.1	126.3	12,955	12,955	3,436	3,436
WHEMLOCK-L	2	4.3	21.1	91	2.2	10.3	1,176	1,176	362	362
WHEMLOCK-T	4	12.5	14.8	78	3.9	14.9	1,566	1,566	454	454
PS FIR-L	1	2.2	14.0	70	0.6	2.4	243	243	75	75
TOTAL	*52*	*258.9*	*13.4*	*74*	*68.9*	*251.7*	*27,388*	*27,388*	*7,386*	*7,386*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL 68.1 — **SAMPLE TREES - BF** — # OF TREES REQ. — INF. POP.

SD: 1.0

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR-L	36.1	8.3	135	148	160			
DOUG FIR-T	47.4	9.7	91	101	111			
WHEMLOCK-L	22.3	20.9	225	285	345			
WHEMLOCK-T	34.5	19.7	106	133	159			
PS FIR-L								
TOTAL	*48.0*	*6.7*	*120*	*129*	*137*	*92*	*23*	*10*

CL 68.1 — **SAMPLE TREES - CF** — # OF TREES REQ. — INF. POP.

SD: 1.0

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR-L	32.6	7.5	36	39	42			
DOUG FIR-T	47.1	9.6	24	27	30			
WHEMLOCK-L	34.9	32.7	60	89	118			
WHEMLOCK-T	27.7	15.8	32	38	44			
PS FIR-L								
TOTAL	*50.7*	*7.0*	*33*	*35*	*38*	*103*	*26*	*11*

CL 68.1 — **TREES/ACRE** — # OF PLOTS REQ. — INF. POP.

SD: 1.0

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR-L	52.5	12.4	75	86	97			
DOUG FIR-T	78.6	18.5	125	154	182			
WHEMLOCK-L	201.2	47.4	2	4	6			
WHEMLOCK-T	299.5	70.6	4	13	21			
PS FIR-L	435.9	102.7		2	4			
TOTAL	*45.6*	*10.7*	*231*	*259*	*287*	*88*	*22*	*10*

CL 68.1 — **BASAL AREA/ACRE** — # OF PLOTS REQ. — INF. POP.

SD: 1.0

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR-L	49.5	11.7	86	98	109			
DOUG FIR-T	77.6	18.3	103	126	149			
WHEMLOCK-L	199.4	47.0	5	10	15			
WHEMLOCK-T	299.5	70.6	4	15	25			
PS FIR-L	435.9	102.7		2	5			
TOTAL	*39.6*	*9.3*	*228*	*252*	*275*	*66*	*17*	*7*

PROJECT STATISTICS

PROJECT FLIPS

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
18S	05E	07	FLIPS	EFR1	21.00	19	105	S	W

CL 68.1 SD: 1.0

NET BF/ACRE

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DOUG FIR-L	49.7	11.7	10,107	11,447	12,787			
DOUG FIR-T	79.2	18.7	10,539	12,955	15,371			
WHEMLOCK-L	199.0	46.9	625	1,176	1,728			
WHEMLOCK-T	299.5	70.6	461	1,566	2,671			
PS FIR-L	435.9	102.7		243	493			
TOTAL	*41.9*	*9.9*	*24,683*	*27,388*	*30,093*	*74*	*19*	*8*

CL 68.1 SD: 1.0

NET CUFT FT/ACRE

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DOUG FIR-L	49.1	11.6	2,705	3,059	3,413			
DOUG FIR-T	78.7	18.5	2,799	3,436	4,074			
WHEMLOCK-L	199.2	46.9	192	362	532			
WHEMLOCK-T	299.5	70.6	133	454	774			
PS FIR-L	435.9	102.7		75	151			
TOTAL	*40.4*	*9.5*	*6,683*	*7,386*	*8,088*	*69*	*17*	*8*

TC PSTATS

PROJECT STATISTICS

PROJECT FLIPS

Matthew Luciani

DATE 7/18/2023

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
18S	05E	07	FLIPS	EFR2	16.00	13	73	S	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	13	73	5.6		
CRUISE	6	32	5.3	2,701	1.2
DBH COUNT					
REFOREST					
COUNT	7	41	5.9		
BLANKS					
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR-L	11	55.4	17.7	104	22.5	94.5	9,135	9,135	2,231	2,231
DOUG FIR-T	15	101.4	14.8	86	31.6	121.9	12,014	12,014	3,143	3,143
WHEMLOCK-L	5	10.4	22.2	84	6.0	28.1	1,784	1,784	545	545
WHEMLOCK-T	1	1.6	19.2	79	0.8	3.3	378	378	110	110
TOTAL	*32*	*168.8*	*16.4*	*92*	*61.2*	*247.7*	*23,311*	*23,311*	*6,030*	*6,030*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL 68.1 SD: 1.0

SAMPLE TREES - BF

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
DOUG FIR-L	99.8	31.5	171	249	328			
DOUG FIR-T	67.5	18.0	101	123	146			
WHEMLOCK-L	91.9	45.7	92	170	248			
WHEMLOCK-T								
TOTAL	*97.0*	*17.1*	*147*	*177*	*208*	*376*	*94*	*42*

CL 68.1 SD: 1.0

SAMPLE TREES - CF

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
DOUG FIR-L	93.3	29.5	42	60	77			
DOUG FIR-T	70.2	18.8	27	33	39			
WHEMLOCK-L	91.4	45.4	28	52	75			
WHEMLOCK-T								
TOTAL	*89.4*	*15.8*	*39*	*46*	*53*	*319*	*80*	*35*

CL 68.1 SD: 1.0

TREES/ACRE

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DOUG FIR-L	74.7	21.5	43	55	67			
DOUG FIR-T	60.3	17.4	84	101	119			
WHEMLOCK-L	105.5	30.4	7	10	14			
WHEMLOCK-T	360.6	103.9		2	3			
TOTAL	*44.3*	*12.8*	*147*	*169*	*190*	*85*	*21*	*9*

CL 68.1 SD: 1.0

BASAL AREA/ACRE

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DOUG FIR-L	62.7	18.1	77	94	112			
DOUG FIR-T	53.8	15.5	103	122	141			
WHEMLOCK-L	106.1	30.6	19	28	37			
WHEMLOCK-T	360.6	103.9		3	7			
TOTAL	*38.8*	*11.2*	*220*	*248*	*275*	*65*	*16*	*7*

CL 68.1 SD: 1.0

NET BF/ACRE

	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DOUG FIR-L	76.8	22.1	7,112	9,135	11,158			
DOUG FIR-T	68.8	19.8	9,630	12,014	14,398			
WHEMLOCK-L	120.1	34.6	1,166	1,784	2,402			
WHEMLOCK-T	360.6	103.9		378	770			

TC PSTATS

Matthew Luciani

PROJECT STATISTICS

PROJECT FLIPS

PAGE **2**

DATE 7/18/2023

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
18S	05E	07	FLIPS	EFR2	16.00	13	73	S	W

NET BF/ACRE

						# OF PLOTS REQ.		
CL 68.1	COEFF							INF. POP.
SD: 1.00	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
TOTAL	*61.8*	*17.8*	*19,161*	*23,311*	*27,461*	*165*	*41*	*18*

NET CUFT FT/ACRE

						# OF PLOTS REQ.		
CL 68.1	COEFF							INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR-L	78.2	22.6	1,728	2,231	2,735			
DOUG FIR-T	69.3	20.0	2,515	3,143	3,771			
WHEMLOCK-L	120.7	34.8	356	545	735			
WHEMLOCK-T	360.6	103.9		110	225			
TOTAL	*61.6*	*17.8*	*4,960*	*6,030*	*7,100*	*164*	*41*	*18*

PROJECT STATISTICS

PROJECT FLIPS

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
18S	05E	07	FLIPS	EFR3	22.00	20	103	S	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	20	103	5.2		
CRUISE	11	58	5.3	4,266	1.4
DBH COUNT					
REFOREST					
COUNT	9	45	5.0		
BLANKS					
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR-L	18	50.2	17.2	89	19.5	81.0	9,955	9,955	2,707	2,707
DOUG FIR-T	31	112.6	12.6	69	27.4	97.2	9,840	9,840	2,600	2,600
WHEMLOCK-L	2	8.9	18.4	75	3.8	16.5	1,760	1,760	528	528
WHEMLOCK-T	1	7.3	18.4	82	3.1	13.5	1,533	1,533	433	433
PS FIR-L	4	4.5	21.0	94	2.4	10.8	1,571	1,571	400	400
PS FIR-T	1	9.0	13.5	83	2.4	9.0	994	994	276	276
WR CEDAR-L	1	1.4	18.5	71	0.6	2.7	199	199	75	75
TOTAL	*58*	*193.9*	*14.8*	*76*	*60.0*	*230.7*	*25,853*	*25,853*	*7,018*	*7,018*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL 68.1	COEFF		**SAMPLE TREES - BF**			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR-L	36.8	8.9	200	219	239			
DOUG FIR-T	61.1	11.0	99	111	123			
WHEMLOCK-L	55.3	51.8	111	230	349			
WHEMLOCK-T								
PS FIR-L	33.6	19.2	307	380	453			
PS FIR-T								
WR CEDAR-L								
TOTAL	*63.4*	*8.3*	*155*	*169*	*183*	*160*	*40*	*18*

CL 68.1	COEFF		**SAMPLE TREES - CF**			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR-L	35.1	8.5	55	60	65			
DOUG FIR-T	59.4	10.7	26	30	33			
WHEMLOCK-L	56.9	53.3	32	69	106			
WHEMLOCK-T								
PS FIR-L	32.6	18.6	79	97	115			
PS FIR-T								
WR CEDAR-L								
TOTAL	*61.1*	*8.0*	*42*	*46*	*50*	*149*	*37*	*17*

CL 68.1	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR-L	49.1	11.3	45	50	56			
DOUG FIR-T	82.7	18.9	91	113	134			
WHEMLOCK-L	212.9	48.8	5	9	13			
WHEMLOCK-T	190.4	43.7	4	7	10			
PS FIR-L	214.1	49.1	2	5	7			
PS FIR-T	205.2	47.0	5	9	13			
WR CEDAR-L	447.2	102.5		1	3			
TOTAL	*50.0*	*11.5*	*172*	*194*	*216*	*105*	*26*	*12*

CL 68.1	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15

PROJECT STATISTICS

PROJECT FLIPS

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
18S	05E	07	FLIPS	EFR3	22.00	20	103	S	W

DOUG FIR-L	49.0	11.2	72	81	90			
DOUG FIR-T	79.6	18.3	79	97	115			
WHEMLOCK-L	212.9	48.8	8	16	25			
WHEMLOCK-T	190.4	43.7	8	13	19			
PS FIR-L	218.0	50.0	5	11	16			
PS FIR-T	205.2	47.0	5	9	13			
WR CEDAR-L	447.2	102.5		3	5			
TOTAL	*36.6*	*8.4*	*211*	*231*	*250*	*56*	*14*	*6*

CL 68.1 COEFF **NET BF/ACRE** # OF PLOTS REQ. INF. POP.

SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR-L	52.1	11.9	8,766	9,955	11,144			
DOUG FIR-T	88.4	20.3	7,845	9,840	11,834			
WHEMLOCK-L	212.9	48.8	901	1,760	2,619			
WHEMLOCK-T	190.4	43.7	864	1,533	2,202			
PS FIR-L	225.1	51.6	760	1,571	2,382			
PS FIR-T	205.2	47.0	527	994	1,462			
WR CEDAR-L	447.2	102.5		199	403			
TOTAL	*42.2*	*9.7*	*23,354*	*25,853*	*28,351*	*75*	*19*	*8*

CL 68.1 COEFF **NET CUFT FT/ACRE** # OF PLOTS REQ. INF. POP.

SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR-L	50.5	11.6	2,394	2,707	3,020			
DOUG FIR-T	86.7	19.9	2,083	2,600	3,117			
WHEMLOCK-L	212.9	48.8	270	528	785			
WHEMLOCK-T	190.4	43.7	244	433	622			
PS FIR-L	220.7	50.6	198	400	602			
PS FIR-T	205.2	47.0	146	276	406			
WR CEDAR-L	447.2	102.5		75	152			
TOTAL	*39.1*	*9.0*	*6,390*	*7,018*	*7,647*	*64*	*16*	*7*

TC PSTATS

PROJECT STATISTICS

PROJECT FLIPS

DATE 7/18/2023

Matthew Luciani

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
18S	05E	07	FLIPS	EFRG	2.00	3	13	S	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	3	13	4.3		
CRUISE	1	5	5.0	174	2.9
DBH COUNT					
REFOREST					
COUNT	2	8	4.0		
BLANKS					
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR-T	5	87.1	16.7	82	32.4	132.4	15,611	15,611	4,145	4,145
TOTAL	*5*	*87.1*	*16.7*	*82*	*32.4*	*132.4*	*15,611*	*15,611*	*4,145*	*4,145*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL 68.1	COEFF		**SAMPLE TREES - BF**			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR-T	64.6	32.1	160	236	312			
TOTAL	*64.6*	*32.1*	*160*	*236*	*312*	*206*	*51*	*23*

CL 68.1	COEFF		**SAMPLE TREES - CF**			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR-T	65.6	32.6	42	63	83			
TOTAL	*65.6*	*32.6*	*42*	*63*	*83*	*212*	*53*	*24*

CL 68.1	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR-T	66.7	46.1	47	87	127			
TOTAL	*66.7*	*46.1*	*47*	*87*	*127*	*255*	*64*	*28*

CL 68.1	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR-T	66.7	46.1	71	132	193			
TOTAL	*66.7*	*46.1*	*71*	*132*	*193*	*255*	*64*	*28*

CL 68.1	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR-T	66.7	46.1	8,411	15,611	22,811			
TOTAL	*66.7*	*46.1*	*8,411*	*15,611*	*22,811*	*255*	*64*	*28*

CL 68.1	COEFF		**NET CUFT FT/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR-T	66.7	46.1	2,233	4,145	6,056			
TOTAL	*66.7*	*46.1*	*2,233*	*4,145*	*6,056*	*255*	*64*	*28*

TC PSPCSTGR

Matthew Luciani

Species, Sort Grade - Board Foot Volumes (Project)

T18S R05E S07 TyEFR1 21.00

Project: **FLIPS**

Acres **21.00**

Page **1**

Date **7/18/2023**

Time **10:46:19AM**

Spp	S T	So Gr rt ad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent of Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-30	31-35	36-99	Average Log: Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
DF	T	DO 3M	86		11,162	11,162	234	11	89				10	4	86	37	7	73	0.52	153.8
DF	T	DO 4M	14		1,793	1,793	38	100				29	45	15	10	13	5	12	0.22	153.8
DF	**Totals**		47		12,955	12,955	272	23	77			4	15	6	75	25	6	42	0.44	307.5
DF	L	DO 2M	22		2,547	2,547	53		79	21					100	40	10	157	0.93	16.3
DF	L	DO 3M	60		6,885	6,885	145	6	94			2			98	38	8	91	0.66	75.5
DF	L	DO 4M	18		2,015	2,015	42	93	7			16	60	17	7	22	5	24	0.31	83.2
DF	**Totals**		42		11,447	11,447	240	20	76	5		4	11	3	83	30	7	65	0.57	174.9
WH	T	DO 3M	87		1,373	1,373	29		100						100	40	9	110	0.78	12.5
WH	T	DO 4M	13		193	193	4	100					100			20	5	15	0.25	12.5
WH	**Totals**		6		1,566	1,566	33	12	88				12		88	30	7	63	0.61	25.0
WH	L	DO 3M	85		1,006	1,006	21			100					100	40	13	236	1.67	4.3
WH	L	DO 4M	15		170	170	4	100						60	40	35	5	40	0.52	4.3
WH	**Totals**		4		1,176	1,176	25	14		86				9	91	38	9	138	1.13	8.5
SF	L	DO 3M	81		199	199	4		100						100	40	8	90	0.71	2.2
SF	L	DO 4M	19		44	44	1	100					100			22	5	20	0.24	2.2
SF	**Totals**		1		243	243	5	18	82				18		82	31	7	55	0.54	4.4
Totals					27,388	27,388	575	21	74	6		3	12	4	80	27	6	53	0.52	520.5

TC PSPCSTGR

Matthew Luciani

Species, Sort Grade - Board Foot Volumes (Project)

T18S R05E S07 TyEFR2 16.00

Project: **FLIPS**

Acres **16.00**

Page **1**

Date **7/18/2023**

Time **10:51:58AM**

Spp	S T	So Gr rt ad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent of Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-30	31-35	36-99	Average Log: Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
DF	T	DO 2M	13		1,647	1,647	26			100					100	40	12	200	1.28	8.2
DF	T	DO 3M	66		7,870	7,870	126		100						100	40	8	99	0.65	79.8
DF	T	DO 4M	21		2,498	2,498	40	100				17	43	25	15	25	5	28	0.29	88.1
DF	**Totals**		52		12,014	12,014	192	21	66	14		4	9	5	82	33	7	68	0.55	176.1
DF	L	DO 2M	32		2,998	2,998	48			63	37				100	40	14	301	1.65	10.0
DF	L	DO 3M	43		3,939	3,939	63		48	23	29				100	40	12	235	1.42	16.7
DF	L	DO 4M	25		2,198	2,198	35	55	17	29			57		43	32	7	62	0.55	35.3
DF	**Totals**		39		9,135	9,135	146	13	25	37	25		14		86	35	9	147	1.01	62.0
WH	L	DO 3M	90		1,608	1,608	26			100					100	40	13	252	1.74	6.4
WH	L	DO 4M	10		176	176	3	100				18		55	27	30	5	28	0.53	6.4
WH	**Totals**		8		1,784	1,784	29	10		90		2		5	93	35	9	140	1.22	12.7
WH	T	DO 3M	86		328	328	5			100					100	40	12	200	1.38	1.6
WH	T	DO 4M	14		49	49	1	100					100			26	5	30	0.46	1.6
WH	**Totals**		2		378	378	6	13		87			13		87	33	9	115	1.02	3.3
Totals					23,311	23,311	373	17	43	30	10	2	10	3	85	33	8	92	0.71	254.2

TC PSPCSTGR

Matthew Luciani

Species, Sort Grade - Board Foot Volumes (Project)

T18S R05E S07 TyEFR3 22.00

Project: **FLIPS**

Acres **22.00**

Page **1**

Date **7/18/2023**

Time **10:54:16AM**

Spp	S T	So Gr rt ad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent of Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-30	31-35	36-99	Average Log Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
DF	L	DO 2M	23		2,357	2,357	52		18	82					100	40	12	224	1.44	10.5
DF	L	DO 3M	58		5,804	5,804	128		83	17					100	40	10	146	0.95	39.6
DF	L	DO 4M	19		1,794	1,794	39	72	28			10	37	24	29	28	5	33	0.40	54.7
DF	**Totals**		39		9,955	9,955	219	13	58	29		2	7	4	87	34	8	95	0.77	104.9
DF	T	DO 3M	85		8,459	8,459	186	16	77	8			7	4	89	37	7	75	0.53	112.6
DF	T	DO 4M	15		1,381	1,381	30	100				21	38	26	16	14	5	12	0.26	112.6
DF	**Totals**		38		9,840	9,840	216	27	66	7		3	11	7	79	25	6	44	0.46	225.2
SF	L	DO 2M	62		976	976	21			100					100	40	15	345	2.04	2.8
SF	L	DO 3M	19		303	303	7		100						100	40	11	180	1.03	1.7
SF	L	DO 4M	19		292	292	6	43	29	28			87		13	27	7	46	0.59	6.4
SF	**Totals**		6		1,571	1,571	35	8	25	67			16		84	32	10	144	1.14	10.9
SF	T	DO 3M	81		813	813	18		100						100	40	8	90	0.64	9.0
SF	T	DO 4M	19		181	181	4	100					100			21	5	20	0.24	9.0
SF	**Totals**		4		994	994	22	18	82				18		82	31	7	55	0.50	18.1
RC	L	DO 3M	85		171	171	4		100						100	40	9	120	1.21	1.4
RC	L	DO 4M	15		28	28	1	100				100				16	5	20	0.29	1.4
RC	**Totals**		1		199	199	4	14	86			14			86	28	7	70	0.94	2.8
WH	L	DO 3M	88		1,554	1,554	34		47	53					100	40	11	175	1.26	8.9
WH	L	DO 4M	12		207	207	5	100				59	41			20	5	23	0.44	8.9
WH	**Totals**		7		1,760	1,760	39	12	41	47		7	5		88	30	8	99	0.98	17.8
WH	T	DO 3M	85		1,314	1,314	29		100						100	40	11	180	1.21	7.3
WH	T	DO 4M	15		219	219	5	100					100			27	5	30	0.40	7.3
WH	**Totals**		6		1,533	1,533	34	14	86				14		86	34	8	105	0.88	14.6
Totals					25,853	25,853	569	18	61	21		2	10	4	84	28	7	66	0.63	394.2

TC PSPCSTGR

Matthew Luciani

Species, Sort Grade - Board Foot Volumes (Project)

T18S R05E S07 TyEFRG 2.00

Project: **FLIPS**

Acres **2.00**

Page **1**

Date **7/18/2023**

Time **10:56:17AM**

Spp	S T	So Gr rt ad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent of Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-30	31-35	36-99	Average Log: Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
DF	T	DO 3M	86		13,465	13,465	27		78		22				100	40	10	155	0.96	87.1
DF	T	DO 4M	14		2,146	2,146	4	100				15	46	39		23	5	25	0.39	87.1
DF	**Totals**		100		15,611	15,611	31	14	68		19	2	6	5	86	32	7	90	0.75	174.3
Totals					15,611	15,611	31	14	68		19	2	6	5	86	32	7	90	0.75	174.3

TC PSTNDSUM

Matthew Luciani

Stand Table Summary

Page 1

Date: 7/18/2023

T18S R05E S07 TyEFR1 21.00

Project FLIPS

Acres 21.00

Time: 10:46:20AM

Grown Year:

Spc	S T	DBH	Sample Trees	FF 16'	Tot Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF	T	8	1	84	78	14.318	5.25	28.64	3.6	15.0	2.97	104	430	62	22	9
DF	T	9	2	87	63	21.732	9.93	43.46	4.6	20.0	5.68	199	869	119	42	18
DF	T	10	1	85	47	10.024	5.25	20.05	4.3	15.0	2.48	87	301	52	18	6
DF	T	11	3	86	78	23.144	15.28	46.29	7.8	30.0	10.29	361	1,389	216	76	29
DF	T	12	1	90	80	6.167	4.68	12.33	10.9	45.0	3.83	134	555	80	28	12
DF	T	13	5	87	74	27.014	24.99	54.03	11.4	39.8	17.50	614	2,149	367	129	45
DF	T	14	5	86	89	23.896	25.45	47.79	17.0	64.7	23.16	813	3,093	486	171	65
DF	T	15	3	87	85	12.770	14.71	25.54	18.2	69.7	13.24	465	1,781	278	98	37
DF	T	16	3	85	86	11.215	15.53	22.43	21.8	78.5	13.91	488	1,760	292	102	37
DF	T	17	1	85	90	3.494	5.25	6.99	24.5	90.0	4.88	171	629	103	36	13
DF	T	Totals	25	86	76	153.773	126.32	307.55	11.2	42.1	97.94	3,436	12,955	2,057	722	272
DF	L	10	1	83	70	9.571	5.33	19.14	6.8	20.0	3.72	131	383	78	27	8
DF	L	13	4	86	87	21.429	19.53	42.86	13.3	50.2	16.21	569	2,152	340	119	45
DF	L	14	4	86	85	17.803	19.63	35.61	17.4	64.5	17.62	618	2,296	370	130	48
DF	L	15	4	87	92	15.159	18.96	30.32	19.9	78.7	17.23	605	2,385	362	127	50
DF	L	16	3	86	88	10.133	14.68	20.27	23.2	84.8	13.39	470	1,719	281	99	36
DF	L	17	3	86	86	9.355	14.80	18.71	25.6	95.6	13.64	479	1,788	286	101	38
DF	L	18	1	87	105	2.683	4.85	8.05	23.4	90.0	5.37	189	724	113	40	15
DF	L	Totals	20	86	86	86.132	97.78	174.95	17.5	65.4	87.19	3,059	11,447	1,831	642	240
WH	T	13	1	83	68	4.100	3.90	8.20	11.9	35.0	3.12	97	287	66	20	6
WH	T	14	1	87	83	3.225	3.55	6.45	18.4	70.0	3.80	119	451	80	25	9
WH	T	16	1	84	80	2.694	3.72	5.39	21.7	70.0	3.74	117	377	79	25	8
WH	T	17	1	84	85	2.502	3.72	5.00	24.0	90.0	3.85	120	450	81	25	9
WH	T	Totals	4	84	78	12.521	14.87	25.04	18.1	62.5	14.51	454	1,566	305	95	33
WH	L	19	1	86	92	2.533	4.73	5.07	33.6	120.0	5.45	170	608	114	36	13
WH	L	24	1	80	89	1.722	5.59	3.44	55.6	165.0	6.13	192	568	129	40	12
WH	L	Totals	2	84	91	4.255	10.32	8.51	42.5	138.2	11.58	362	1,176	243	76	25
SF	L	14	1	86	83	2.212	2.36	4.42	16.9	55.0	2.14	75	243	45	16	5
SF	L	Totals	1	86	83	2.212	2.36	4.42	16.9	55.0	2.14	75	243	45	16	5
Totals			52	86	80	258.893	251.65	520.47	14.2	52.6	213.36	7,386	27,388	4,480	1,551	575

TC PSTNDSUM

Matthew Luciani

Stand Table Summary

Page 1

Date: 7/18/2023

T18S R05E S07 TyEFR2 16.00

Project FLIPS

Acres 16.00

Time: 10:51:59AM

Grown Year:

Spc	S T	DBH	Sample Trees	FF 16'	Tot Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF	T	12	3	87	86	31.872	24.34	63.74	11.2	45.0	20.37	715	2,868	326	114	46
DF	T	14	4	87	86	31.330	32.63	62.66	16.4	62.5	29.20	1,025	3,916	467	164	63
DF	T	15	2	88	88	13.574	16.22	13.52	19.9	80.0	7.66	269	1,081	123	43	17
DF	T	17	1	86	96	5.022	8.29	10.04	29.5	110.0	8.45	297	1,105	135	47	18
DF	T	18	2	88	85	9.050	16.04	9.71	28.9	110.0	8.00	281	1,068	128	45	17
DF	T	19	2	88	94	8.233	16.04	16.47	33.9	120.0	15.89	558	1,976	254	89	32
DF	T	25	1	87	113	2.357	8.29									
DF	T	Totals	15	87	88	101.437	121.85	176.14	17.8	68.2	89.58	3,143	12,014	1,433	503	192
DF	L	9	1	89	107	17.804	8.22									
DF	L	17	1	89	95	5.276	8.22	10.55	27.7	110.0	8.34	293	1,161	133	47	19
DF	L	18	1	87	102	5.206	8.80	10.41	30.5	120.0	9.06	318	1,249	145	51	20
DF	L	19	1	89	108	4.046	8.22	12.14	26.5	120.0	9.17	322	1,456	147	52	23
DF	L	20	3	87	100	11.758	26.00	7.63	39.2	140.0	8.53	299	1,068	136	48	17
DF	L	21	1	84	98	3.759	9.21	7.52	44.1	155.0	9.45	332	1,165	151	53	19
DF	L	24	1	87	113	2.920	8.80									
DF	L	25	1	86	104	2.500	8.80	7.50	46.4	203.3	9.91	348	1,525	159	56	24
DF	L	27	1	90	108	2.098	8.22	6.29	50.9	240.0	9.13	321	1,511	146	51	24
DF	L	Totals	11	88	104	55.366	94.47	62.04	36.0	147.2	63.59	2,231	9,135	1,018	357	146
WH	L	20	1	85	85	2.602	5.79									
WH	L	21	2	84	88	4.794	11.58	9.59	42.2	135.1	12.94	404	1,295	207	65	21
WH	L	25	1	89	66	1.578	5.17	3.16	44.7	155.0	4.51	141	489	72	23	8
WH	L	27	1	87	87	1.422	5.53									
WH	L	Totals	5	85	84	10.396	28.07	12.74	42.8	140.0	17.45	545	1,784	279	87	29
WH	T	19	1	88	79	1.642	3.30	3.28	33.5	115.0	3.52	110	378	56	18	6
WH	T	Totals	1	88	79	1.642	3.30	3.28	33.5	115.0	3.52	110	378	56	18	6
Totals			32	87	93	168.842	247.70	254.20	23.7	91.7	174.15	6,030	23,311	2,786	965	373

TC PSTNDSUM

Matthew Luciani

Stand Table Summary

Page 1

Date: 7/18/2023

T18S R05E S07 TyEFR3 22.00

Project FLIPS

Acres 22.00

Time: 10:54:17AM

Grown Year:

Spc	S T	DBH	Sample Trees	FF 16'	Tot Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF	L	13	1	87	70	4.587	4.49	9.17	11.9	35.0	3.11	109	321	68	24	7
DF	L	14	1	89	93	3.927	4.20	7.85	17.8	75.0	3.99	140	589	88	31	13
DF	L	15	2	86	87	7.419	8.98	14.84	18.8	75.0	7.95	279	1,113	175	61	24
DF	L	16	3	86	86	9.661	13.48	19.32	22.2	83.3	12.25	430	1,609	269	95	35
DF	L	18	2	87	100	5.258	8.98	10.52	30.3	110.0	9.09	319	1,157	200	70	25
DF	L	19	5	85	94	12.049	23.20	28.63	27.4	96.5	22.35	784	2,764	492	173	61
DF	L	20	1	86	91	1.979	4.49	3.96	40.3	140.0	4.55	159	554	100	35	12
DF	L	21	1	87	110	1.868	4.49	3.74	45.9	180.0	4.88	171	672	107	38	15
DF	L	22	2	88	100	3.415	8.69	6.83	46.2	172.2	8.99	315	1,176	198	69	26
DF	L	Totals	18	86	90	50.163	81.01	104.86	25.8	94.9	77.15	2,707	9,955	1,697	596	219
DF	T	8	1	90	41	8.123	2.98	16.25	2.4	15.0	1.12	39	244	25	9	5
DF	T	10	5	87	65	27.975	15.73	55.95	5.6	20.8	8.94	314	1,162	197	69	26
DF	T	11	4	86	69	20.058	12.85	40.12	7.4	27.5	8.41	295	1,103	185	65	24
DF	T	12	3	87	63	12.802	9.51	25.60	8.2	30.1	6.00	211	771	132	46	17
DF	T	13	1	86	87	3.567	3.19	7.13	14.0	55.0	2.85	100	392	63	22	9
DF	T	14	4	88	90	11.442	12.40	22.88	17.2	66.0	11.19	393	1,511	246	86	33
DF	T	15	6	88	85	15.103	18.57	30.21	18.8	72.3	16.17	567	2,185	356	125	48
DF	T	16	2	88	89	4.637	6.23	9.27	21.1	85.0	5.58	196	788	123	43	17
DF	T	17	1	86	102	2.096	3.19	4.19	28.5	110.0	3.41	120	461	75	26	10
DF	T	18	2	87	91	3.592	6.38	7.18	31.0	112.2	6.35	223	806	140	49	18
DF	T	19	2	87	60	3.185	6.23	6.37	22.5	65.5	4.08	143	417	90	32	9
DF	T	Totals	31	87	72	112.579	97.25	225.16	11.5	43.7	74.10	2,600	9,840	1,630	572	216
WH	L	16	1	85	71	6.048	8.24	12.10	20.7	70.0	8.01	250	847	176	55	19
WH	L	23	1	85	82	2.854	8.24	5.71	48.6	160.0	8.87	277	913	195	61	20
WH	L	Totals	2	85	75	8.903	16.47	17.81	29.6	98.9	16.89	528	1,760	371	116	39
SF	L	17	1	89	88	1.684	2.62	3.37	26.5	105.0	2.56	89	354	56	20	8
SF	L	21	1	90	101	1.060	2.62	3.18	31.6	130.0	2.88	100	413	63	22	9
SF	L	24	2	87	96	1.768	5.56	4.34	48.4	185.1	6.02	210	804	132	46	18
SF	L	Totals	4	88	94	4.512	10.81	10.89	36.7	144.3	11.46	400	1,571	252	88	35
WH	T	18	1	87	82	7.298	13.48	14.60	29.6	105.0	13.85	433	1,533	305	95	34
WH	T	Totals	1	87	82	7.298	13.48	14.60	29.6	105.0	13.85	433	1,533	305	95	34
SF	T	14	1	87	83	9.038	8.98	18.08	15.3	55.0	7.90	276	994	174	61	22
SF	T	Totals	1	87	83	9.038	8.98	18.08	15.3	55.0	7.90	276	994	174	61	22
RC	L	19	1	80	71	1.423	2.66	2.85	26.4	70.0	1.77	75	199	39	17	4
RC	L	Totals	1	80	71	1.423	2.66	2.85	26.4	70.0	1.77	75	199	39	17	4
Totals			58	87	78	193.916	230.66	394.23	17.8	65.6	203.11	7,018	25,853	4,468	1,544	569

TC PSTNDSUM

Matthew Luciani

Stand Table Summary

Page 1

Date: 7/18/2023

T18S R05E S07 TyEFRG 2.00

Project FLIPS

Acres 2.00

Time: 10:56:18AM

Grown Year:

Spc	S T	DBH	Sample Trees	FF 16'	Tot Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF	T	12	1	89	75	31.539	25.19	63.08	10.6	40.0	19.03	668	2,523	38	13	5
DF	T	17	2	87	87	33.830	53.90	67.66	26.2	99.6	50.55	1,774	6,742	101	35	13
DF	T	18	1	86	86	15.423	26.95	30.85	28.1	105.0	24.73	868	3,239	49	17	6
DF	T	28	1	88	82	6.340	26.34	12.68	65.9	245.0	23.82	836	3,107	48	17	6
DF	T	Totals	5	88	82	87.132	132.38	174.26	23.8	89.6	118.12	4,145	15,611	236	83	31
Totals			5	88	82	87.132	132.38	174.26	23.8	89.6	118.12	4,145	15,611	236	83	31

TC PLOGSTVB
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Log Stock Table - MBF

T18S R05E S07 TyEFR1 21.00

Project: FLIPS
Acres 21.00

Page 1
Date 7/18/2023
Time 10:18:11AM

Spp	ST	Sort	Grade	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF	T	DO	3M	30	24		24	8.9		15	9									
DF	T	DO	3M	35	9		9	3.4		9										
DF	T	DO	3M	40	201		201	73.8			69	109	23							
DF	T	DO	4M	16	4		4	1.6		4										
DF	T	DO	4M	19	5		5	1.7		5										
DF	T	DO	4M	20	2		2	.8		2										
DF	T	DO	4M	21	2		2	.6		2										
DF	T	DO	4M	22	2		2	.7		2										
DF	T	DO	4M	24	6		6	2.2		6										
DF	T	DO	4M	25	3		3	1.0		3										
DF	T	DO	4M	28	2		2	.9		2										
DF	T	DO	4M	30	2		2	.8		2										
DF	T	DO	4M	31	2		2	.9		2										
DF	T	DO	4M	34	3		3	1.2		3										
DF	T	DO	4M	37	4		4	1.4		4										
DF		Totals			272		272	47.3		62	78	109	23							
DF	L	DO	2M	40	53		53	22.3				10	33	11						
DF	L	DO	3M	12	2		2	1.0			2									
DF	L	DO	3M	40	142		142	59.2		8	15	96	23							
DF	L	DO	4M	14	1		1	.4		1										
DF	L	DO	4M	16	4		4	1.5		4										
DF	L	DO	4M	20	2		2	.8		2										
DF	L	DO	4M	21	5		5	2.0		2		3								
DF	L	DO	4M	22	1		1	.5		1										
DF	L	DO	4M	23	2		2	.6		2										
DF	L	DO	4M	24	5		5	2.0		5										
DF	L	DO	4M	25	3		3	1.4		3										
DF	L	DO	4M	28	5		5	2.2		5										
DF	L	DO	4M	30	5		5	1.9		5										
DF	L	DO	4M	32	2		2	.8		2										
DF	L	DO	4M	34	5		5	2.1		5										
DF	L	DO	4M	39	3		3	1.3		3										
DF		Totals			240		240	41.8		48	18	109	55	11						
WH	T	DO	3M	40	29		29	87.6			6	15	8							
WH	T	DO	4M	23	2		2	7.6		2										

TC PLOGSTVB
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Log Stock Table - MBF

T18S R05E S07 TyEFR1 21.00

Project: FLIPS
Acres 21.00

Page 2
Date 7/18/2023
Time 10:18:11AM

Spp	ST	Sort	Grade	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches											
									2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
WH	T	DO	4M	27	2		2	4.8	2											
WH		Totals			33		33	5.7	4		6	15	8							
WH	L	DO	3M	40	21		21	85.5						11		10				
WH	L	DO	4M	35	2		2	8.6	2											
WH	L	DO	4M	36	1		1	5.9	1											
WH		Totals			25		25	4.3	4					11		10				
SF	L	DO	3M	40	4		4	81.8				4								
SF	L	DO	4M	22	1		1	18.2	1											
SF		Totals			5		5	.9	1			4								
Total		All Species			575		575	100.0	118		102	237	86	22		10				

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Log Stock Table - MBF

T18S R05E S07 TyEFR2 16.00

Project: FLIPS
Acres 16.00

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Spp	ST	Sort	Grade	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF	T	DO	2M	40	26		26	13.7						26						
DF	T	DO	3M	40	126		126	65.5			36	62	28							
DF	T	DO	4M	15	4		4	1.8		4										
DF	T	DO	4M	20	3		3	1.7		3										
DF	T	DO	4M	21	2		2	1.2		2										
DF	T	DO	4M	23	3		3	1.7		3										
DF	T	DO	4M	24	8		8	4.0		8										
DF	T	DO	4M	27	4		4	1.9		4										
DF	T	DO	4M	33	10		10	5.2		10										
DF	T	DO	4M	36	3		3	1.7		3										
DF	T	DO	4M	39	3		3	1.4		3										
DF		Totals			192		192	51.5		40	36	62	28	26						
DF	L	DO	2M	40	48		48	32.8						30		18				
DF	L	DO	3M	40	63		63	43.1					30	14		18				
DF	L	DO	4M	24	14		14	9.4		3			6	5						
DF	L	DO	4M	26	5		5	3.7						5						
DF	L	DO	4M	27	1		1	.7		1										
DF	L	DO	4M	36	3		3	2.3		3										
DF	L	DO	4M	39	2		2	1.7		2										
DF	L	DO	4M	41	9		9	6.3		9										
DF		Totals			146		146	39.2		19			36	55		36				
WH	L	DO	3M	40	26		26	90.1						18	7					
WH	L	DO	4M	17	1		1	1.8		1										
WH	L	DO	4M	33	2		2	5.5		2										
WH	L	DO	4M	36	1		1	2.6		1										
WH		Totals			29		29	7.7		3				18	7					
WH	T	DO	3M	40	5		5	87.0						5						
WH	T	DO	4M	26	1		1	13.0		1										
WH		Totals			6		6	1.6		1				5						
Total		All Species			373		373	100.0		63	36	62	64	105	7	36				

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Log Stock Table - MBF

T18S R05E S07 TyEFR3 22.00

Project: FLIPS
Acres 22.00

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Spp	ST	Sort	Grade	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF	L	DO	2M	40	52		52	23.7					9	20	22					
DF	L	DO	3M	40	128		128	58.3			7	39	60	10	11					
DF	L	DO	4M	17	1		1	.7	1											
DF	L	DO	4M	20	2		2	1.1				2								
DF	L	DO	4M	21	1		1	.4	1											
DF	L	DO	4M	23	3		3	1.4				3								
DF	L	DO	4M	24	2		2	.7	2											
DF	L	DO	4M	25	2		2	1.1	2											
DF	L	DO	4M	26	4		4	1.8	4											
DF	L	DO	4M	29	3		3	1.2	3											
DF	L	DO	4M	31	6		6	2.8	6											
DF	L	DO	4M	32	2		2	.7	2											
DF	L	DO	4M	35	2		2	.8	2											
DF	L	DO	4M	39	2		2	.7	2											
DF	L	DO	4M	40	10		10	4.6	5		5									
DF		Totals			219		219	38.5	29		12	44	70	30	34					
DF	T	DO	3M	24	6		6	3.0	5		1									
DF	T	DO	3M	25	3		3	1.3	3											
DF	T	DO	3M	30	3		3	1.5	3											
DF	T	DO	3M	32	8		8	3.5	8											
DF	T	DO	3M	40	166		166	76.7	10		39	72	31	14						
DF	T	DO	4M	12	1		1	.5	1											
DF	T	DO	4M	13	1		1	.5	1											
DF	T	DO	4M	18	3		3	1.4	3											
DF	T	DO	4M	20	1		1	.5	1											
DF	T	DO	4M	22	3		3	1.2	3											
DF	T	DO	4M	23	3		3	1.2	3											
DF	T	DO	4M	26	2		2	.7	2											
DF	T	DO	4M	27	3		3	1.4	3											
DF	T	DO	4M	28	2		2	.8	2											
DF	T	DO	4M	31	2		2	.8	2											
DF	T	DO	4M	32	2		2	.7	2											
DF	T	DO	4M	33	2		2	.9	2											
DF	T	DO	4M	34	3		3	1.2	3											
DF	T	DO	4M	37	1		1	.6	1											
DF	T	DO	4M	39	2		2	.7	2											

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Log Stock Table - MBF

T18S R05E S07 TyEFR3 22.00

Project: FLIPS
Acres 22.00

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Spp	ST	Sort	Grade	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF	T	DO	4M	40	2		2	.9		2										
DF		Totals			216		216	38.1		59	40	72	31	14						
SF	L	DO	2M	40	21		21	62.1							14	7				
SF	L	DO	3M	40	7		7	19.3					7							
SF	L	DO	4M	21	2		2	5.1						2						
SF	L	DO	4M	22	3		3	7.8		1			2							
SF	L	DO	4M	30	1		1	3.2		1										
SF	L	DO	4M	40	1		1	2.4		1										
SF		Totals			35		35	6.1		3			9	2	14	7				
SF	T	DO	3M	40	18		18	81.8				18								
SF	T	DO	4M	21	4		4	18.2		4										
SF		Totals			22		22	3.8		4		18								
RC	L	DO	3M	40	4		4	85.7				4								
RC	L	DO	4M	16	1		1	14.3		1										
RC		Totals			4		4	.8		1		4								
WH	L	DO	3M	40	34		34	88.3				16			18					
WH	L	DO	4M	16	3		3	6.9		3										
WH	L	DO	4M	30	2		2	4.9		2										
WH		Totals			39		39	6.8		5		16			18					
WH	T	DO	3M	40	29		29	85.7					29							
WH	T	DO	4M	27	5		5	14.3		5										
WH		Totals			34		34	5.9		5			29							
Total		All Species			569		569	100.0		105	53	153	138	47	66	7				

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Log Stock Table - MBF

T18S R05E S07 TyEFRG 2.00

Project: FLIPS
Acres 2.00

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Spp	ST	Sort	Grade	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches											
									2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF	T	DO	3M	40	27		27	86.3			4		17			6				
DF	T	DO	4M	13	1		1	2.0		1										
DF	T	DO	4M	25	1		1	3.4		1										
DF	T	DO	4M	29	1		1	3.0		1										
DF	T	DO	4M	31	0		0	1.2		0										
DF	T	DO	4M	33	1		1	4.2		1										
DF		Totals			31		31	100.0		4		4		17		6				
Total		All Species			31		31	100.0		4		4		17		6				

Volume By Unit

		CRUISE VOLUME PER ACRE				ADJUSTED VOLUME BF/ACRE*				TOTAL VOLUME BF					
Species (Take)	Unit	2 Saw	3 Saw	4 Saw	Cruise Vol/Acre	2 Saw	3 Saw	4 Saw	NET ACRES	2 Saw	3 Saw	4 Saw	Total Volume	Cull, Breakage	
DF	1		11,162	1,793	12,955	0	10,716	1,721	21.0	0	225,026	36,147	261,173	4%	272,055.0
WH	1		1,373	193	1,566	0	1,318	185	21.0	0	27,680	3,891	31,571	4%	32,886.0
SF	1				0	0	0	0	21.0	0	0	0	0	4%	0.0
DF	2	1,647	7,870	2,498	12,015	1,581	7,555	2,398	16.0	25,298	120,883	38,369	184,550	4%	192,240.0
WH	2		328	49	377	0	315	47	16.0	0	5,038	753	5,791	4%	6,032.0
SF	2				0	0	0	0	16.0	0	0	0	0	4%	0.0
DF	3		8,459	1,381	9,840	0	8,121	1,326	22.0	0	178,654	29,167	207,821	4%	216,480.0
WH	3		1,314	219	1,533	0	1,261	210	22.0	0	27,752	4,625	32,377	4%	33,726.0
SF	3		813	181	994	0	780	174	22.0	0	17,171	3,823	20,993	4%	21,868.0
DF	33		13,465	2,146	15,611	0	12,926	2,060	2.0	0	25,853	4,120	29,973	4%	31,222.0
WH	33				0	0	0	0	2.0	0	0	0	0	4%	0.0
SF	33				0	0	0	0	2.0	0	0	0	0	4%	0.0
Sale Volume		1,647	44,784	8,460	54,891	1,581	42,993	8,122	61	25,298	628,056	120,895	774,249	4%	806,509.0
*Adjusted 4% for hidden cull and breakage															774,248.6

SALE VOLUME BY GRADE BF						
Species	2 Saw	3 Saw	4 Saw	5 Saw	6 Saw	Total
DF	25,298	550,416	107,803			683,517
WH	0	60,469	9,269			69,738
SF	0	17,171	3,823			20,993
Sale Volume	25,298	628,056	120,895			774,249

SALE VOLUME BY GRADE PERCENTAGE						
	2 Saw	3 Saw	4 Saw	5 Saw	6 Saw	Total
DF	3%	71%	14%			88%
WH	0%	8%	1%			9%
SF	0%	2%	0%			3%
Sale Volume	3%	81%	16%			100%

LOGGING PLAN

Sale No. SW-341-2024-
GF9719-01 EFR GNA Timber Sale
T17S, R06E, Sec 7, 8, 17 Lane
County, Oregon
Willamette National Forest
Net Acres appx. 61

Legend

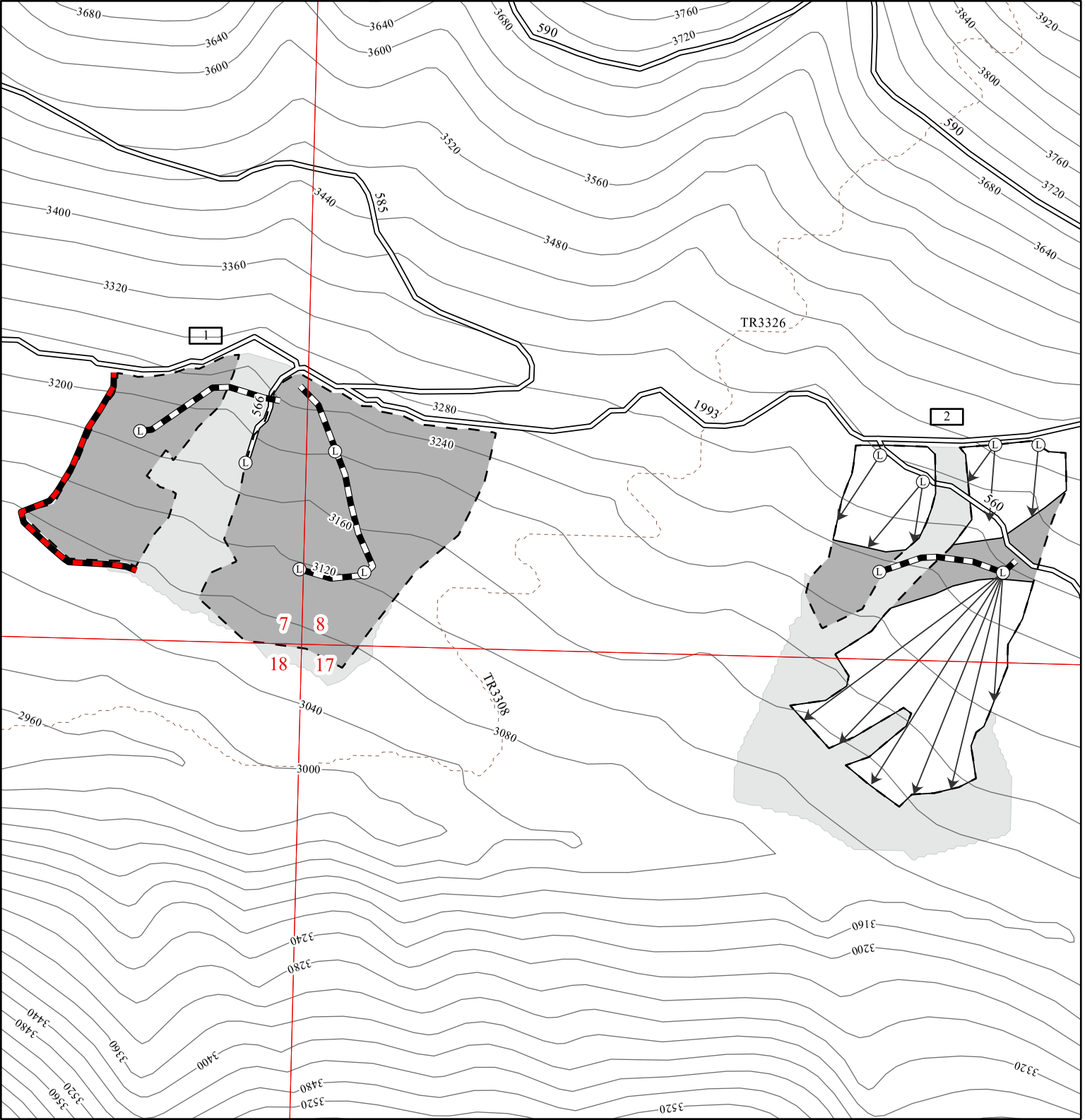
- Timber Sale Boundary
- Cable Ground
- Ground Based
- Cable Corridor
- Landing
- Temporary Spur
- All weather
- Hiking trail
- Skips
- Gap
- Project Work - Fireline
- Contours

N

Unit Name	RX	# of Acres
1	DxD 16	21
2	DxD 16	16
3	DxD 16	22
33	Gap (2-4 Leave Trees/Acre)	2
Total		61

This product is for informational use and may not be suitable for legal, engineering, or surveying purposes. Acreage is approximate and for display only.

0 410 820 1,640 Feet



LOGGING PLAN (1)

Sale No. SW-341-2024-
GF9719-01 EFR GNA Timber Sale
T17S, R06E, Sec 7, 8, 17 Lane
County, Oregon
Willamette National Forest
Net Acres appx. 61

Legend

- Timber Sale Boundary
- Cable Ground
- Ground Based
- Cable Corridor
- Landing
- Temporary Spur
- All weather
- Hiking trail
- Skips
- Project Work - Fireline
- Contours

N

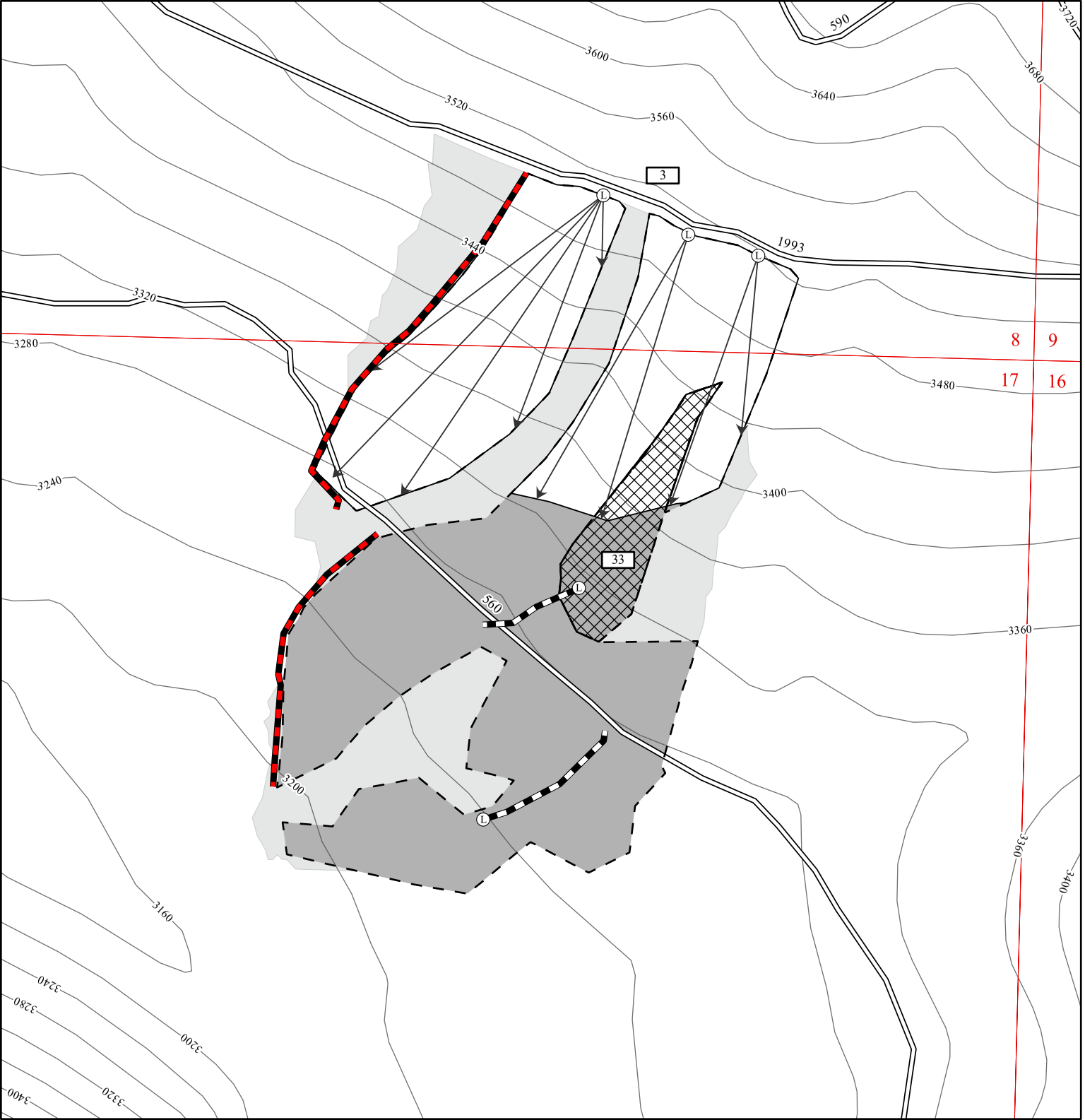
Unit Name	RX	# of Acres
1	DxD 16	21
2	DxD 16	16
3	DxD 16	22
33	Gap (2-4 Leave Trees/Acre)	2
Total		61

This product is for informational use and may not be suitable for legal, engineering, or surveying purposes. Acreage is approximate and for display only.

0 260 520 1,040 Feet

LOGGING PLAN (2)

Sale No. SW-341-2024-GF9719-01
EFR GNA Timber Sale
T17S, R06E, Sec 7, 8, 17 Lane
County, Oregon
Willamette National Forest
Net Acres appx. 61



Legend

- Timber Sale Boundary
- Cable Ground
- Ground Based
- Cable Corridor
- Landing
- Temporary Spur
- All weather
- Skips
- Gap
- Project Work - Fireline
- Contours

N

Unit Name	RX	# of Acres
1	DxD 16	21
2	DxD 16	16
3	DxD 16	22
33	Gap (2-4 Leave Trees/Acre)	2
Total		61

This product is for informational use and may not be suitable for legal, engineering, or surveying purposes. Acreage is approximate and for display only.

0 165 330 660 Feet