WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

TIMBER NOTICE OF SALE

***SALE NAME**: GOOD GOLLY* ***AGREEMENT NO**: 30-100647*

AUCTION: December 16, 2020 starting at 10:00 a.m., Olympic Region Office, Forks, WA

COUNTY: Clallam, Jefferson

SALE LOCATION: Sale located approximately 10 miles south of Forks

PRODUCTS SOLD AND SALE AREA: All timber except trees marked with a ring of blue paint or bounded out by Leave Tree Area tags; bounded by Timber Sale Boundary tags in Units 1, 2, 4, 5, 6, 8, 9, and 10; Timber Sale Boundary tags and the G-1400 road in Unit 3; Timber Sale Boundary tags and the G-2100 road in Unit 7; Timber Sale Boundary Tags and the G-2500 road in Unit 11.

All forest products above located on part(s) of Sections 16, 22, 23, 27 and 28 all in Township 27 North, Range 13 West, Sections 26, 35 and 36 all in Township 28 North, Range 14 West, W.M., containing 291 acres, more or less.

CERTIFICATION: This sale is certified under the Sustainable Forestry Initiative® program Standard (cert no: PwC-SFIFM-513)

ESTIMATED SALE VOLUMES AND QUALITY:

Species	Avg DBH	Ring Count	Total MBF	MBF by Grade 1P	2P	3P	SM	1S	2S	3S	4S	UT
Hemlock	13.3		3,392						462	1,896	899	136
Douglas fir	16		2,734						878	1,331	492	33
Spruce	14.2		298						63	134	97	4
Red alder	11.1		54								52	2
Red cedar	11.5		43							9	34	
Silver fir	14		33									33
Sale Total			6,554									

MINIMUM BID: $0.00

BID METHOD: Sealed Bids

PERFORMANCE SECURITY: $0.00

SALE TYPE: Lump Sum

EXPIRATION DATE: October 15, 2022

ALLOCATION: Export Restricted

BID DEPOSIT: $0.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.

HARVEST METHOD: 83% cable. 17% ground based shovel/tracked skidder.

Rubber tired skidders will only be allowed if rutting and skidding requirements can be met and a harvest plan is submitted and approved. A 30' equipment limitation zone applies on all typed streams.

ROADS: 22.80 stations of optional construction. 4.40 stations of optional reconstruction. 974.80 stations of optional prehaul maintenance. 8.50 stations of decommissioning.

Timber felling, yarding, road work or operation of heavy equipment performed during the marbled murrelet nesting season (April 1 through September 23), is restricted to two hours after sunrise to two hours before sunset on the G-1000 from station 121+80 to 135+80 and from station 166+00 and 219+30; on the G-1200 from station 92+30 to 116+40; on the G-2000 from station 29+50 to 48+75 and from 187+00 to 197+00; on the G-2108 from station 0+00 to 7+00; on the G-2170 from station 16+00 to 33+50; on the G-2170.3 from station 19+00 to 22+00; on the G-2500 from station 0+00 to 23+50 and from station 86+75 to 108+40; on the 11+25 Spur from station 0+00 to 3+00. This does not apply to hauling timber, rock or equipment.

ACREAGE DETERMINATION

CRUISE METHOD: Sale area was 100% GPS'd. Sale units were cruised using a variable plot sample.

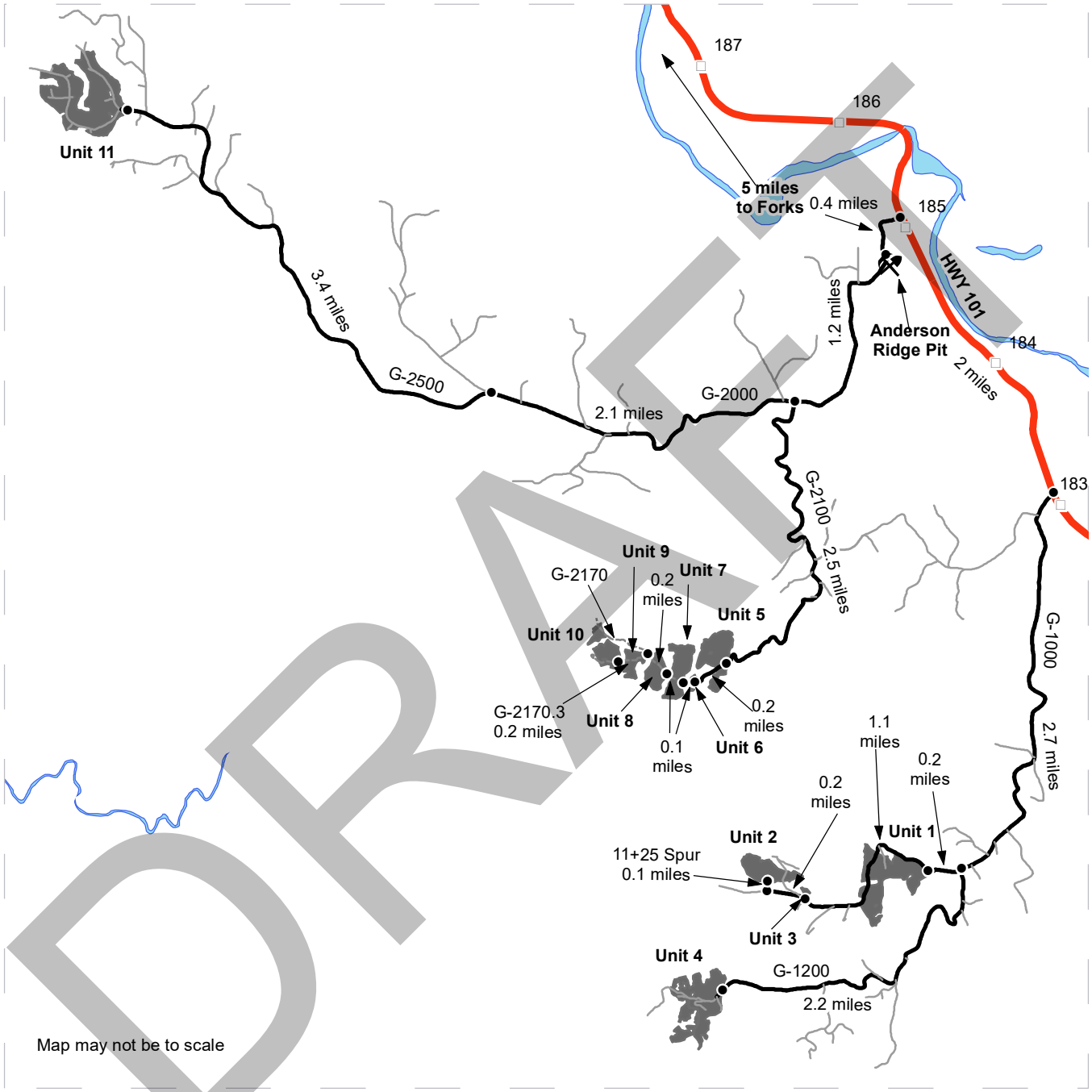
FEES: $111,418.00 is due on day of sale. $9.00 per MBF is due upon removal. These are in addition to the bid price.

SPECIAL REMARKS: The bridge installation on the G-2100 road and fish culvert installation on the G-2170 road are restricted from operating during the closed period of September 30th to June 30th unless authorized in writing by the Contract Administrator.

DRIVING MAP

SALE NAME: GOOD GOLLY
AGREEMENT#: 30-100647
TOWNSHIP(S): T27R13W, T28R14W
TRUST(S): Capitol Grant (7), Common School and Indemnity (3), State Forest Transfer (1), University - Transferred (5)

REGION: Olympic Region
COUNTY(S): Clallam, Jefferson
ELEVATION RGE: 320'-960'



Timber Sale Unit
Haul Route
Other Route
View Only Route
Highway
Milepost Markers
Distance Indicator
Rock Pit

Unit 1: From Forks, drive south on HWY 101 for 7 miles. Turn right on G-1000 and continue for 2.9 miles to reach U1.
Unit 3: Continue on G-1000 for 1.1 miles to reach U3.
Unit 2: Continue on G-1000 for 0.2 miles and park at junction of G-1000/11+25 Spur (Right hand side). Walk north 0.1 miles on 11+25 Spur to reach U2.
Unit 4: From G-1000/G-1200 junction, drive south on G-1200 for 2.2 miles to reach U4.
Unit 5: From Forks, drive south on Highway 101 for 5 miles. Turn right on G-2000 and continue for 1.6 miles.Turn left on G-2100 and continue for 2.5 miles to reach U5.
Unit 6: Continue on G-2100 for 0.2 miles (end of road) to reach U6.
Unit 7: Walk west on G-2170 for 0.2 miles to reach U7.
Unit 8: Continue walking on G-2170 to reach U8.
Unit 9: Continue walking on G-2170 to reach U9 and G-2170.3 junction.
Unit 10: Turn left on G-2170.3 and continue walking for 0.2 miles to reach U10.
Unit 11: From G-2000/G-2100 junction, continue driving west on G-2000 for 2.1 miles. Turn left on the G-2500 and continue for 3.4 miles to reach U11.
Anderson Ridge Pit: From HWY101/G-2000 junction, drive west on G-2000 for 0.4 miles. Turn left to enter the pit.

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Prepared By: lpuk490
Accessed: 10/06/2020 14:55
Modification Date: lpuk490 8/3/2020

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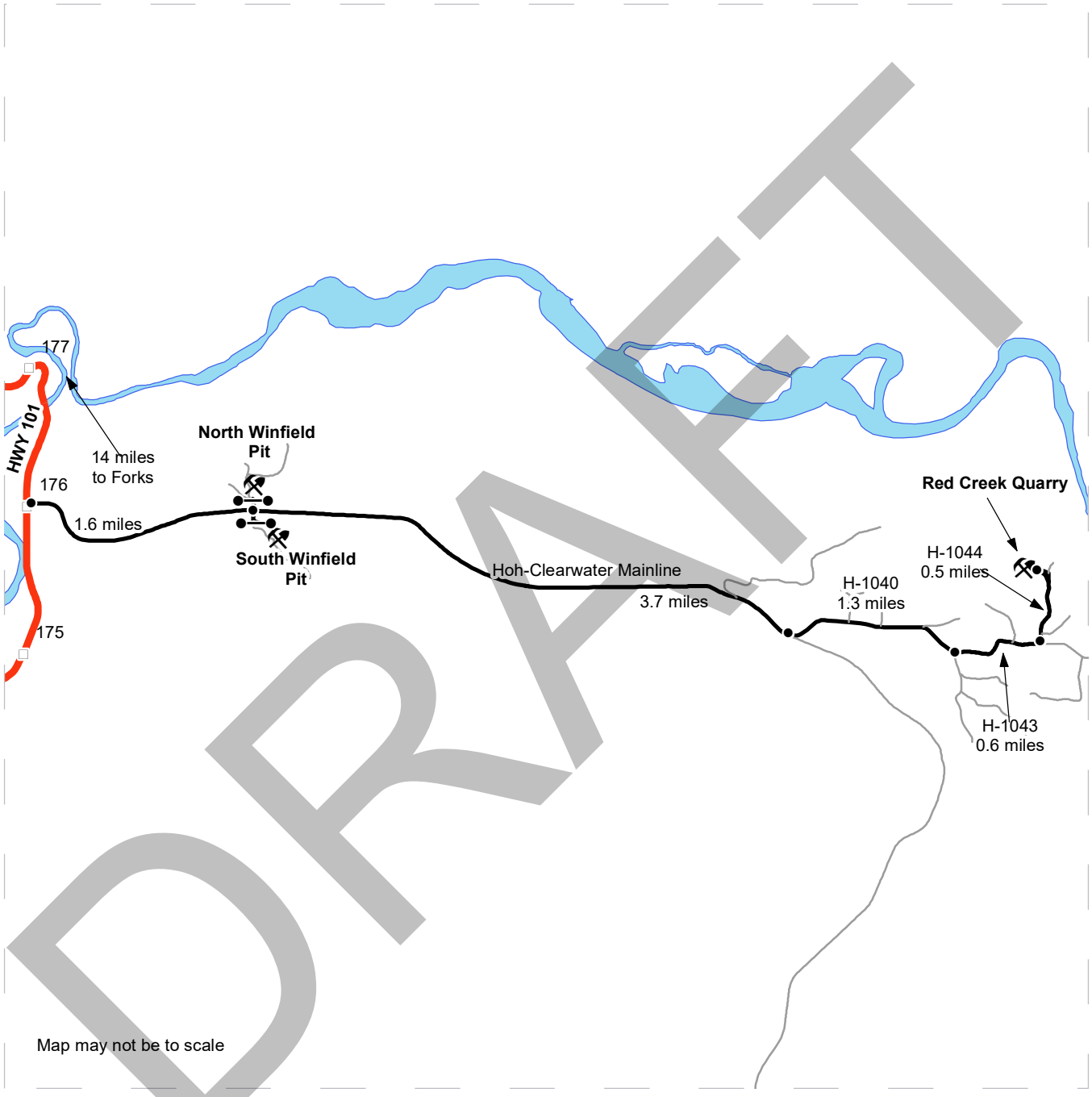

- Haul Route
- Other Route
- Highway
- Milepost Markers
- Distance Indicator
- Gate (AA-1 Key)
- Rock Pit

North & SouthWinfield Pits: From Forks, drive south on Highway 101 for 14 miles. Turn left on the Hoh-Clearwater mainline and continue driving east for 1.6 miles. Turn left to access North Winfield Pit, or turn right to access South Winfield Pit.

Red Creek Quarry: From Winfield Pit entrances, continue driving east on Hoh/Clearwater Mainline for 3.7 miles and turn left on the H-1040. Continue for 1.3 miles and turn left on the H-1043. Continue for 0.6 miles and turn left on the H-1044. Continue for 0.5 miles to access Red Creek Quarry.

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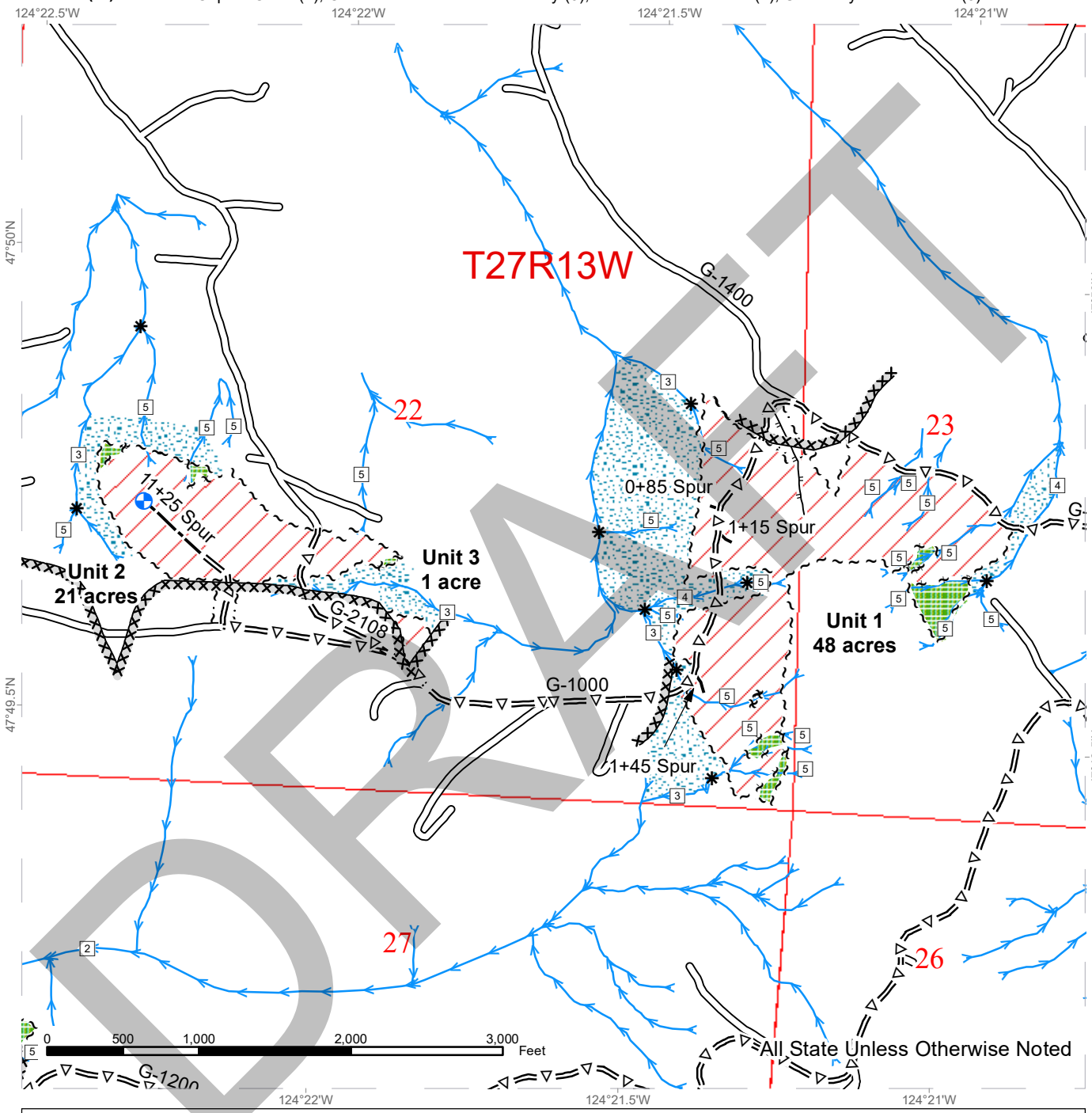

- Variable Retention Harvest
- Leave Tree Area
- Riparian Mgt Zone
- Streams
- Stream Type
- Stream Type Break
- Sale Boundary Tags
- Leave Tree Tags
- Right of Way Tags
- Property Line
- Timing Restriction
- Existing Roads
- Optional Pre-Haul Maintenance
- Optional Construction
- Designated Skid Trail
- Landing - Proposed

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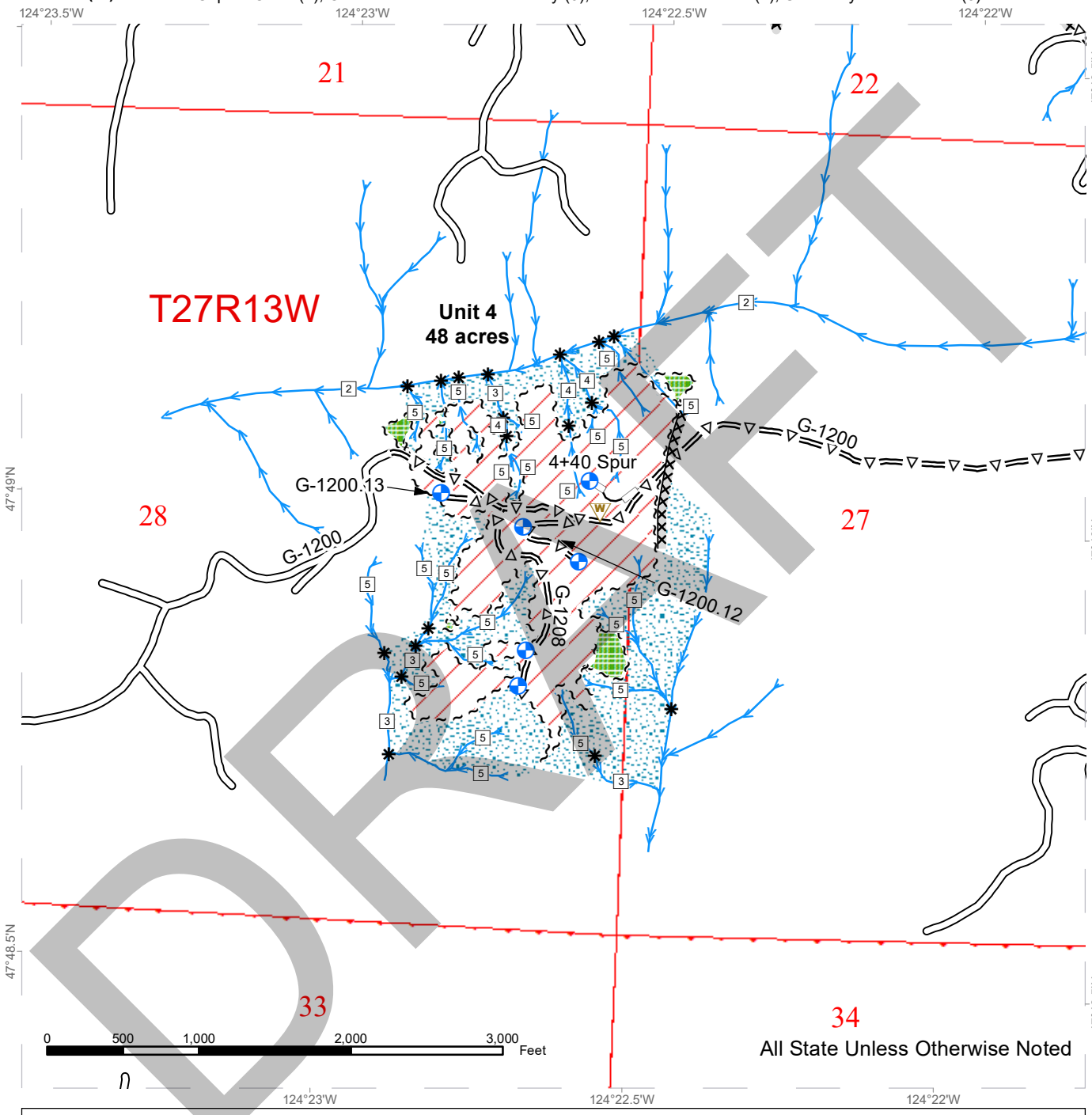

- Variable Retention Harvest
- Leave Tree Area
- Riparian Mgt Zone
- Streams
- Stream Type
- Stream Type Break
- Sale Boundary Tags
- Leave Tree Tags
- Right of Way Tags
- Property Line
- Timing Restriction
- Existing Roads
- Optional Pre-Haul Maintenance
- Optional Reconstruction
- Landing - Proposed
- Waste Area

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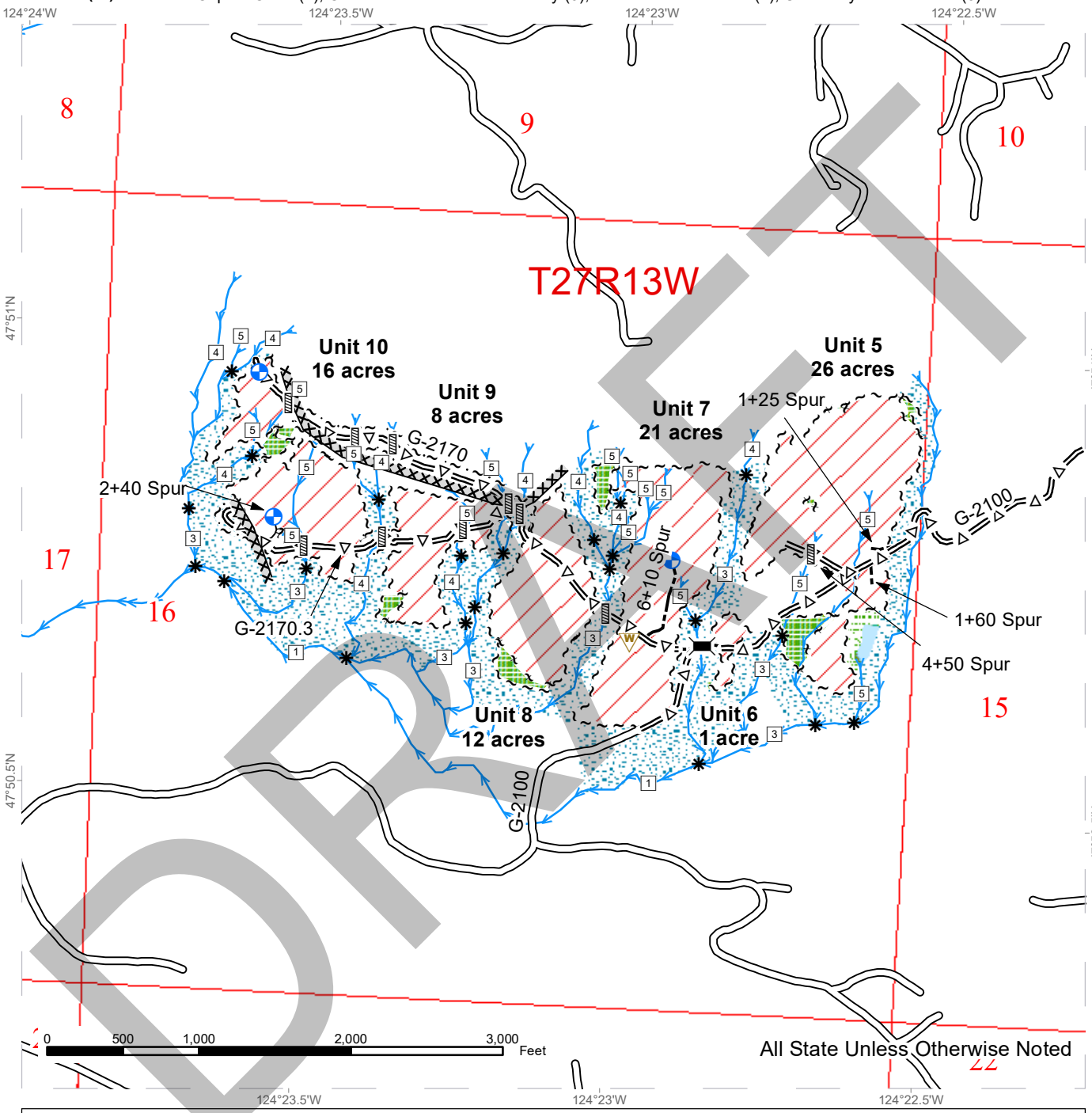

- Variable Retention Harvest
- Leave Tree Area
- Riparian Mgt Zone
- Forested Wetland
- Wetland Mgt Zone
- Streams
- Stream Type
- Stream Type Break
- Sale Boundary Tags
- Leave Tree Tags
- Right of Way Tags
- Property Line
- Timing Restriction
- Existing Roads
- Optional Pre-Haul Maintenance
- Optional Construction
- Designated Skid Trail
- Bridge
- Culvert
- Landing - Proposed
- Waste Area

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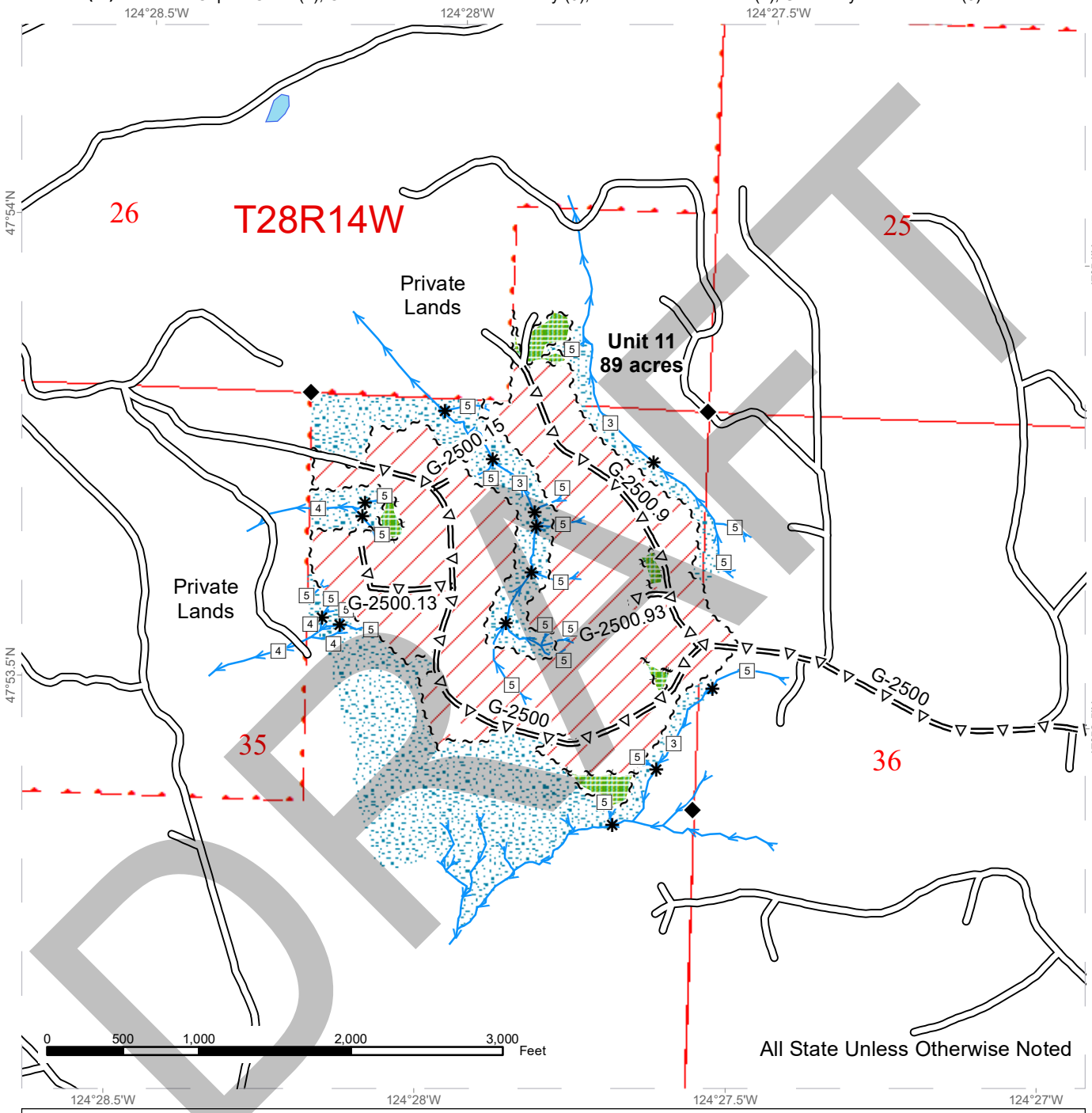

Variable Retention Harvest
Leave Tree Area
Riparian Mgt Zone
Streams
Stream Type
Stream Type Break
Sale Boundary Tags
Leave Tree Tags
Right of Way Tags
Property Line
Existing Roads
Optional Pre-Haul Maintenance
Survey Monument

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Accessed: 10/06/2020 14:55

Modification Date: lpuk490 8/3/2020

Timber Sale Cruise Report
Good Golly

Sale Name: GOOD GOLLY

Sale Type: LUMP SUM

Region: OLYMPIC

District: OZETTE

Lead Cruiser: Kevin Peterson

Other Cruisers:

Cruise Narrative:
Location:
Good Golly is located off of the G-1000 and G-2000 Road system south of Forks. Access to units is pretty good, short hike to units 7-11.

Cruise Design:
Minor species: Red Alder and Western Red Cedar. Cruise BAF 40
Average DBH
WH - 13.3”
DF – 16.1”
Top Diameter is 40% of Diameter at 16’ or 5”
Logs were cruise at 40’ lengths, except Red Cedar at 36’

Timber Quality:
Major Species are WH 51% and DF 41%
Common Defects are sweep and forks

Logging and Stand Conditions:
Sale is 100% Ground based harvest
Units are pretty easy to walk thru with a little bit of reprod in some units.

Timber Sale Notice Volume (MBF)

				MBF Volume by Grade				
Sp	QMD	Rings/In	Age	All	2 Saw	3 Saw	4 Saw	Utility
WH	13.3			3,392.3	461.7	1,895.7	898.9	135.9
DF	16.0			2,733.6	877.7	1,330.9	491.6	33.4
SS	14.2			298.5	62.6	134.2	97.3	4.2
RA	11.1			53.8			51.5	2.3
RC	11.5			42.9		8.5	34.4	
SF	14.0			33.3				33.3
ALL	14.2			6,554.5	1,401.9	3,369.4	1,574.1	209.0

Timber Sale Notice Weight (tons)

	Tons by Grade				
Sp	All	2 Saw	3 Saw	4 Saw	Utility
WH	35,296.7	4,292.8	20,379.1	8,706.0	1,919.0

	Tons by Grade				
Sp	All	2 Saw	3 Saw	4 Saw	Utility
DF	25,821.2	7,600.4	13,092.0	4,402.5	726.2
SS	2,713.2	487.5	1,261.2	895.9	68.5
RA	557.0			518.8	38.2
RC	411.7		81.1	330.6	
SF	347.4				347.4
ALL	65,147.2	12,380.4	34,813.7	14,853.9	3,099.4

Timber Sale Overall Cruise Statistics (Cut + Leave Trees)

BA (sq ft/acre)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR SE (%)	Net Vol (bf/acre)	Vol SE (%)
218.9	2.2	100.9	1.5	22,524	2.5

Timber Sale Unit Cruise Design

Unit	Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
GOOD GOLLY U1	B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 4.5 ft	48.0	48.3	25	11	0
GOOD GOLLY U2	B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 4.5 ft	21.0	21.0	12	6	0
GOOD GOLLY U3	B2: VR, 2 BAF (54.44, 40 for some species) Measure All, Sighting Ht = 4.5 ft	1.0	1.1	1	1	0
GOOD GOLLY U4	B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 4.5 ft	48.0	48.2	23	11	0
GOOD GOLLY U5	B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 4.5 ft	26.0	25.9	13	6	0
GOOD GOLLY U6	B2: VR, 2 BAF (54.44, 40 for some species) Measure All, Sighting Ht = 4.5 ft	1.0	1.3	1	1	0
GOOD GOLLY U7	B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 4.5 ft	21.0	21.1	10	5	0
GOOD GOLLY U8	B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 4.5 ft	12.0	12.0	6	3	0
GOOD GOLLY U9	B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 4.5 ft	8.0	8.2	4	4	0
GOOD	B2C: VR, 2 BAF (54.44, 40 for some	16.0	15.0	8	6	0

Unit	Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
GOLLY U10	species) Measure/Count Plots, Sighting Ht = 4.5 ft					
GOOD GOLLY U11	B2C: VR, 2 BAF (40, 40 for some species) Measure/Count Plots, Sighting Ht = 4.5 ft	89.0	89.0	30	10	0
All		291.0	291.2	133	64	0

Timber Sale Log Grade x Sort Summary

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	13.7	40.0	3,016	3.4	7,600.3	877.6
DF	LIVE	3 SAW	Domestic	8.3	40.0	4,574	3.4	13,092.0	1,330.9
DF	LIVE	4 SAW	Domestic	5.2	26.0	1,690	0.2	4,402.5	491.8
DF	LIVE	UTILITY	Pulp	2.1	16.0	115	0.0	726.3	33.4
RA	LIVE	4 SAW	Domestic	5.9	36.0	177	1.4	518.8	51.6
RA	LIVE	UTILITY	Pulp	2.1	15.0	8	0.0	38.2	2.2
RC	LIVE	3 SAW	Domestic	6.2	36.0	29	0.0	81.1	8.5
RC	LIVE	4 SAW	Domestic	5.5	32.0	118	0.0	330.6	34.4
RC	LIVE	CULL	Cull	5.0	6.0	0	100.0	0.0	0.0
SF	LIVE	UTILITY	Pulp	6.4	26.0	114	0.0	347.4	33.3
SS	LIVE	2 SAW	Domestic	13.5	40.0	215	2.9	487.4	62.6
SS	LIVE	3 SAW	Domestic	8.1	40.0	462	1.4	1,261.2	134.3
SS	LIVE	4 SAW	Domestic	5.2	29.0	335	0.0	895.9	97.4
SS	LIVE	UTILITY	Pulp	2.1	15.0	15	0.0	68.6	4.3
WH	LIVE	2 SAW	Domestic	13.9	40.0	1,587	2.1	4,292.7	461.8
WH	LIVE	3 SAW	Domestic	8.6	40.0	6,514	1.8	20,379.2	1,895.6
WH	LIVE	4 SAW	Domestic	5.2	27.0	3,089	0.2	8,705.9	899.0
WH	LIVE	UTILITY	Pulp	2.3	16.0	467	0.0	1,918.9	135.9

Timber Sale Log Grade x Diameter Bin Summary

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.1	16.0	115	0.0	726.3	33.4
DF	5 - 8	LIVE	4 SAW	5.2	26.0	1,690	0.2	4,402.5	491.8
DF	5 - 8	LIVE	3 SAW	7.5	40.0	2,290	2.0	6,917.7	666.5
DF	9 - 11	LIVE	3 SAW	10.1	40.0	2,283	4.8	6,174.3	664.4
DF	12 - 14	LIVE	2 SAW	13.3	40.0	2,006	4.0	5,352.2	583.6
DF	15 - 19	LIVE	2 SAW	15.4	40.0	1,010	2.3	2,248.1	294.0
RA	< 5	LIVE	UTILITY	2.1	15.0	8	0.0	38.2	2.2

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
RA	5 - 8	LIVE	4 SAW	5.8	36.0	177	1.4	518.8	51.6
RC	5 - 8	LIVE	CULL	5.0	6.0	0	100.0	0.0	0.0
RC	5 - 8	LIVE	4 SAW	5.5	32.0	118	0.0	330.6	34.4
RC	5 - 8	LIVE	3 SAW	6.2	36.0	29	0.0	81.1	8.5
SF	5 - 8	LIVE	UTILITY	6.4	26.0	114	0.0	347.4	33.3
SS	< 5	LIVE	UTILITY	2.1	15.0	15	0.0	68.6	4.3
SS	5 - 8	LIVE	4 SAW	5.2	29.0	335	0.0	895.9	97.4
SS	5 - 8	LIVE	3 SAW	7.6	40.0	319	2.1	920.0	92.9
SS	9 - 11	LIVE	3 SAW	10.3	40.0	142	0.0	341.2	41.4
SS	12 - 14	LIVE	2 SAW	13.5	40.0	215	2.9	487.4	62.6
WH	< 5	LIVE	UTILITY	2.1	15.0	176	0.0	1,071.0	51.2
WH	5 - 8	LIVE	4 SAW	5.1	27.0	3,089	0.2	8,705.9	899.0
WH	5 - 8	LIVE	UTILITY	6.0	38.0	120	0.0	379.6	35.0
WH	5 - 8	LIVE	3 SAW	7.5	40.0	3,197	0.9	10,488.0	930.4
WH	9 - 11	LIVE	3 SAW	10.3	40.0	3,317	2.5	9,891.2	965.2
WH	9 - 11	LIVE	UTILITY	11.7	40.0	171	0.0	468.3	49.7
WH	12 - 14	LIVE	2 SAW	13.4	40.0	1,209	0.8	3,334.0	351.9
WH	15 - 19	LIVE	2 SAW	16.0	40.0	377	6.1	958.7	109.8

Timber Sale Log Sort x Diameter Bin Summary

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.1	16.0	115	0.0	726.3	33.4
DF	5 - 8	LIVE	Domestic	6.0	31.0	3,980	1.3	11,320.2	1,158.3
DF	9 - 11	LIVE	Domestic	10.1	40.0	2,283	4.8	6,174.3	664.4
DF	12 - 14	LIVE	Domestic	13.3	40.0	2,006	4.0	5,352.2	583.6
DF	15 - 19	LIVE	Domestic	15.4	40.0	1,010	2.3	2,248.1	294.0
RA	< 5	LIVE	Pulp	2.1	15.0	8	0.0	38.2	2.2
RA	5 - 8	LIVE	Domestic	5.8	36.0	177	1.4	518.8	51.6
RC	5 - 8	LIVE	Cull	5.0	6.0	0	100.0	0.0	0.0
RC	5 - 8	LIVE	Domestic	5.6	33.0	148	0.0	411.7	43.0
SF	5 - 8	LIVE	Pulp	6.4	26.0	114	0.0	347.4	33.3
SS	< 5	LIVE	Pulp	2.1	15.0	15	0.0	68.6	4.3
SS	5 - 8	LIVE	Domestic	6.1	33.0	654	1.0	1,816.0	190.3
SS	9 - 11	LIVE	Domestic	10.3	40.0	142	0.0	341.2	41.4
SS	12 - 14	LIVE	Domestic	13.5	40.0	215	2.9	487.4	62.6
WH	< 5	LIVE	Pulp	2.1	15.0	176	0.0	1,071.0	51.2
WH	5 - 8	LIVE	Domestic	5.9	31.0	6,286	0.5	19,193.9	1,829.3

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
WH	5 - 8	LIVE	Pulp	6.0	38.0	120	0.0	379.6	35.0
WH	9 - 11	LIVE	Domestic	10.3	40.0	3,317	2.5	9,891.2	965.2
WH	9 - 11	LIVE	Pulp	11.7	40.0	171	0.0	468.3	49.7
WH	12 - 14	LIVE	Domestic	13.4	40.0	1,209	0.8	3,334.0	351.9
WH	15 - 19	LIVE	Domestic	16.0	40.0	377	6.1	958.7	109.8

Cruise Unit Report
GOOD GOLLY U1

Unit Sale Notice Volume (MBF): GOOD GOLLY U1

				MBF Volume by Grade				
Sp	QMD	Rings/In	Age	All	2 Saw	3 Saw	4 Saw	Utility
DF	16.2			552.6	253.6	219.6	74.9	4.5
WH	13.5			461.5	72.7	271.0	111.5	6.4
RC	11.5			38.8		8.5	30.3	
SF	14.0			33.3				33.3
SS	14.0			31.1		25.8	5.3	
RA	11.0			15.7			15.0	0.7
ALL	14.4			1,133.0	326.3	525.0	236.9	44.8

Unit Sale Notice Weight (tons): GOOD GOLLY U1

	Tons by Grade				
Sp	All	2 Saw	3 Saw	4 Saw	Utility
DF	5,363.6	2,239.8	2,286.6	713.4	123.8
WH	4,644.3	641.8	2,743.9	1,110.0	148.6
RC	364.2		81.1	283.1	
SF	347.4				347.4
SS	266.9		236.4	30.5	
RA	182.4			172.8	9.6
ALL	11,168.8	2,881.6	5,347.9	2,309.9	629.4

Unit Cruise Design: GOOD GOLLY U1

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 4.5 ft	48.0	48.3	25	11	0

Unit Cruise Summary: GOOD GOLLY U1

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	26	54	2.2	0
WH	20	42	1.7	0
RC	5	9	0.4	0
SF	1	4	0.2	0

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
SS	1	3	0.1	0
RA	1	3	0.1	0
ALL	54	115	4.6	0

Unit Cruise Statistics (Cut + Leave Trees): GOOD GOLLY U1

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	116.4	67.3	13.5	98.9	23.2	4.5	11,513	71.1	14.2
WH	90.9	64.5	12.9	105.8	24.8	5.5	9,615	69.1	14.0
RC	14.4	158.0	31.6	56.2	10.8	4.8	809	158.3	32.0
SF	8.7	295.4	59.1	79.5	0.0	0.0	693	295.4	59.1
SS	6.5	366.4	73.3	99.2	0.0	0.0	648	366.4	73.3
RA	4.8	276.4	55.3	68.2	0.0	0.0	327	276.4	55.3
ALL	241.8	22.5	4.5	97.6	27.2	3.7	23,604	35.3	5.8

Unit Summary: GOOD GOLLY U1

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	26	ALL	16.2	58	72	11,513	2.6	81.3	116.4	28.9	5,363.6	552.6
RA	LIVE	CUT	1	ALL	11.0	51	61	327	0.0	7.3	4.8	1.4	182.4	15.7
RC	LIVE	CUT	5	ALL	11.5	41	50	809	1.7	20.0	14.4	4.2	364.2	38.8
SF	LIVE	CUT	1	ALL	14.0	56	69	693	0.0	8.1	8.7	2.3	347.4	33.2
SS	LIVE	CUT	1	ALL	14.0	61	76	648	0.0	6.1	6.5	1.7	266.9	31.1
WH	LIVE	CUT	20	ALL	13.5	56	69	9,615	0.5	91.4	90.9	24.7	4,644.3	461.5
ALL	LIVE	CUT	54	ALL	14.4	55	68	23,605	1.5	214.2	241.7	63.2	11,168.8	1,132.9
ALL	ALL	ALL	54	ALL	14.4	55	68	23,605	1.5	214.2	241.7	63.2	11,168.8	1,132.9

Unit Stand Table: GOOD GOLLY U1

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	8	LIVE	CUT	1	8.0	28	32	263	0.0	13.1	4.6	1.6	71.9	12.6
DF	10	LIVE	CUT	1	10.0	44	53	303	0.0	8.4	4.6	1.4	138.1	14.5
DF	12	LIVE	CUT	1	12.0	52	64	263	0.0	5.8	4.6	1.3	175.8	12.6
DF	14	LIVE	CUT	4	13.7	58	72	1,417	0.0	17.8	18.3	4.9	747.3	68.0
DF	16	LIVE	CUT	1	16.0	65	81	460	0.0	3.3	4.6	1.1	202.2	22.1
DF	18	LIVE	CUT	4	17.7	72	90	1,942	5.4	10.7	18.3	4.3	879.9	93.2
DF	20	LIVE	CUT	2	20.0	68	84	853	8.1	4.2	9.1	2.0	419.9	40.9

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	22	LIVE	CUT	4	21.2	78	99	1,798	0.0	6.5	15.9	3.4	832.0	86.3
DF	24	LIVE	CUT	5	23.4	80	101	2,588	4.0	7.7	22.9	4.7	1,203.1	124.2
DF	26	LIVE	CUT	3	25.3	76	95	1,627	1.2	3.9	13.7	2.7	693.5	78.1
RA	12	LIVE	CUT	1	11.0	51	61	327	0.0	7.3	4.8	1.4	182.4	15.7
RC	10	LIVE	CUT	1	9.0	36	43	183	0.0	6.5	2.9	1.0	58.8	8.8
RC	12	LIVE	CUT	2	11.5	42	51	296	0.0	8.0	5.8	1.7	147.5	14.2
RC	14	LIVE	CUT	1	13.0	46	56	178	0.0	3.1	2.9	0.8	81.1	8.5
RC	16	LIVE	CUT	1	15.0	45	55	153	8.5	2.3	2.9	0.7	76.8	7.3
SF	14	LIVE	CUT	1	14.0	56	69	693	0.0	8.1	8.7	2.3	347.4	33.3
SS	14	LIVE	CUT	1	14.0	61	76	648	0.0	6.1	6.5	1.7	266.9	31.1
WH	8	LIVE	CUT	1	8.0	40	48	398	0.0	13.2	4.6	1.6	142.2	19.1
WH	10	LIVE	CUT	2	9.5	43	51	681	0.0	18.9	9.2	3.0	316.5	32.7
WH	12	LIVE	CUT	4	11.7	56	69	1,608	0.0	24.6	18.4	5.4	872.2	77.2
WH	14	LIVE	CUT	1	13.0	62	76	447	0.0	5.0	4.6	1.3	230.8	21.5
WH	16	LIVE	CUT	2	15.0	71	88	1,061	0.0	6.5	8.0	2.1	452.2	50.9
WH	18	LIVE	CUT	5	17.6	70	86	2,599	1.9	13.7	23.0	5.5	1,291.4	124.8
WH	20	LIVE	CUT	2	19.0	64	78	974	0.0	4.7	9.2	2.1	475.3	46.8
WH	22	LIVE	CUT	1	21.0	71	88	539	0.0	1.9	4.6	1.0	268.2	25.9
WH	24	LIVE	CUT	2	23.5	81	102	1,307	0.0	3.1	9.2	1.9	595.5	62.7

Unit Log Grade Summary: GOOD GOLLY U1

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	13.9	40.0	5,283	2.0	2,239.8	253.6
DF	LIVE	3 SAW	8.2	39.0	4,576	4.3	2,286.6	219.6
DF	LIVE	4 SAW	5.4	26.0	1,560	0.0	713.4	74.9
DF	LIVE	UTILITY	2.1	16.0	94	0.0	123.8	4.5
RA	LIVE	4 SAW	5.5	40.0	312	0.0	172.8	15.0
RA	LIVE	UTILITY	2.0	14.0	15	0.0	9.6	0.7
RC	LIVE	3 SAW	6.2	36.0	178	0.0	81.1	8.5
RC	LIVE	4 SAW	5.5	31.0	631	0.0	283.1	30.3
RC	LIVE	CULL	5.0	6.0	0	100.0	0.0	0.0
SF	LIVE	UTILITY	6.4	26.0	693	0.0	347.4	33.3
SS	LIVE	3 SAW	8.3	40.0	538	0.0	236.4	25.8
SS	LIVE	4 SAW	5.0	17.0	110	0.0	30.5	5.3
WH	LIVE	2 SAW	14.7	40.0	1,515	0.0	641.8	72.7
WH	LIVE	3 SAW	8.9	40.0	5,645	0.9	2,743.9	271.0
WH	LIVE	4 SAW	5.3	27.0	2,322	0.0	1,110.0	111.5

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
WH	LIVE	UTILITY	2.1	15.0	133	0.0	148.6	6.4

Unit Log Sort Summary: GOOD GOLLY U1

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	7.9	33.0	11,419	2.7	5,239.8	548.1
DF	LIVE	Pulp	2.1	16.0	94	0.0	123.8	4.5
RA	LIVE	Domestic	5.5	40.0	312	0.0	172.8	15.0
RA	LIVE	Pulp	2.0	14.0	15	0.0	9.6	0.7
RC	LIVE	Cull	5.0	6.0	0	100.0	0.0	0.0
RC	LIVE	Domestic	5.6	32.0	809	0.0	364.2	38.8
SF	LIVE	Pulp	6.4	26.0	693	0.0	347.4	33.3
SS	LIVE	Domestic	6.7	29.0	648	0.0	266.9	31.1
WH	LIVE	Domestic	7.0	33.0	9,482	0.5	4,495.7	455.2
WH	LIVE	Pulp	2.1	15.0	133	0.0	148.6	6.4

Unit Log Grade x Sort Summary: GOOD GOLLY U1

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	13.9	40.0	5,283	2.0	2,239.8	253.6
DF	LIVE	3 SAW	Domestic	8.2	39.0	4,576	4.3	2,286.6	219.6
DF	LIVE	4 SAW	Domestic	5.4	26.0	1,560	0.0	713.4	74.9
DF	LIVE	UTILITY	Pulp	2.1	16.0	94	0.0	123.8	4.5
RA	LIVE	4 SAW	Domestic	5.5	40.0	312	0.0	172.8	15.0
RA	LIVE	UTILITY	Pulp	2.0	14.0	15	0.0	9.6	0.7
RC	LIVE	3 SAW	Domestic	6.2	36.0	178	0.0	81.1	8.5
RC	LIVE	4 SAW	Domestic	5.5	31.0	631	0.0	283.1	30.3
RC	LIVE	CULL	Cull	5.0	6.0	0	100.0	0.0	0.0
SF	LIVE	UTILITY	Pulp	6.4	26.0	693	0.0	347.4	33.3
SS	LIVE	3 SAW	Domestic	8.3	40.0	538	0.0	236.4	25.8
SS	LIVE	4 SAW	Domestic	5.0	17.0	110	0.0	30.5	5.3
WH	LIVE	2 SAW	Domestic	14.7	40.0	1,515	0.0	641.8	72.7
WH	LIVE	3 SAW	Domestic	8.9	40.0	5,645	0.9	2,743.9	271.0
WH	LIVE	4 SAW	Domestic	5.3	27.0	2,322	0.0	1,110.0	111.5
WH	LIVE	UTILITY	Pulp	2.1	15.0	133	0.0	148.6	6.4

Unit Log Grade x Diameter Bin Summary: GOOD GOLLY U1

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.1	16.0	94	0.0	123.8	4.5
DF	5 - 8	LIVE	4 SAW	5.4	26.0	1,560	0.0	713.4	74.9
DF	5 - 8	LIVE	3 SAW	7.1	38.0	2,142	0.9	1,170.5	102.8
DF	9 - 11	LIVE	3 SAW	10.3	40.0	2,434	7.1	1,116.1	116.8
DF	12 - 14	LIVE	2 SAW	13.7	40.0	4,303	2.5	1,877.0	206.6
DF	15 - 19	LIVE	2 SAW	16.0	40.0	979	0.0	362.8	47.0
RA	< 5	LIVE	UTILITY	2.0	14.0	15	0.0	9.6	0.7
RA	5 - 8	LIVE	4 SAW	5.5	40.0	312	0.0	172.8	15.0
RC	5 - 8	LIVE	CULL	5.0	6.0	0	100.0	0.0	0.0
RC	5 - 8	LIVE	4 SAW	5.5	31.0	631	0.0	283.1	30.3
RC	5 - 8	LIVE	3 SAW	6.2	36.0	178	0.0	81.1	8.5
SF	5 - 8	LIVE	UTILITY	6.4	26.0	693	0.0	347.4	33.3
SS	5 - 8	LIVE	4 SAW	5.0	17.0	110	0.0	30.5	5.3
SS	5 - 8	LIVE	3 SAW	8.3	40.0	538	0.0	236.4	25.8
WH	< 5	LIVE	UTILITY	2.1	15.0	133	0.0	148.6	6.4
WH	5 - 8	LIVE	4 SAW	5.3	27.0	2,322	0.0	1,110.0	111.5
WH	5 - 8	LIVE	3 SAW	7.0	39.0	1,607	0.0	852.4	77.1
WH	9 - 11	LIVE	3 SAW	10.6	40.0	4,038	1.2	1,891.5	193.8
WH	12 - 14	LIVE	2 SAW	14.0	40.0	925	0.0	420.6	44.4
WH	15 - 19	LIVE	2 SAW	16.4	40.0	590	0.0	221.2	28.3

Unit Log Sort x Diameter Bin Summary: GOOD GOLLY U1

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.1	16.0	94	0.0	123.8	4.5
DF	5 - 8	LIVE	Domestic	6.0	30.0	3,703	0.5	1,883.9	177.7
DF	9 - 11	LIVE	Domestic	10.3	40.0	2,434	7.1	1,116.1	116.8
DF	12 - 14	LIVE	Domestic	13.7	40.0	4,303	2.5	1,877.0	206.6
DF	15 - 19	LIVE	Domestic	16.0	40.0	979	0.0	362.8	47.0
RA	< 5	LIVE	Pulp	2.0	14.0	15	0.0	9.6	0.7
RA	5 - 8	LIVE	Domestic	5.5	40.0	312	0.0	172.8	15.0
RC	5 - 8	LIVE	Cull	5.0	6.0	0	100.0	0.0	0.0
RC	5 - 8	LIVE	Domestic	5.6	32.0	809	0.0	364.2	38.8
SF	5 - 8	LIVE	Pulp	6.4	26.0	693	0.0	347.4	33.3
SS	5 - 8	LIVE	Domestic	6.7	29.0	648	0.0	266.9	31.1
WH	< 5	LIVE	Pulp	2.1	15.0	133	0.0	148.6	6.4
WH	5 - 8	LIVE	Domestic	5.7	30.0	3,929	0.0	1,962.4	188.6

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
WH	9 - 11	LIVE	Domestic	10.6	40.0	4,038	1.2	1,891.5	193.8
WH	12 - 14	LIVE	Domestic	14.0	40.0	925	0.0	420.6	44.4
WH	15 - 19	LIVE	Domestic	16.4	40.0	590	0.0	221.2	28.3

Cruise Unit Report
GOOD GOLLY U2

Unit Sale Notice Volume (MBF): GOOD GOLLY U2

				MBF Volume by Grade			
Sp	QMD	Rings/In	Age	All	3 Saw	4 Saw	Utility
DF	14.2			226.9	167.3	57.4	2.3
WH	11.4			194.3	102.9	88.3	3.1
SS	10.0			23.6		22.5	1.0
ALL	12.4			444.8	270.1	168.3	6.4

Unit Sale Notice Weight (tons): GOOD GOLLY U2

	Tons by Grade			
Sp	All	3 Saw	4 Saw	Utility
DF	2,278.7	1,714.8	521.8	42.1
WH	2,075.9	1,169.4	844.4	62.1
SS	218.0		204.4	13.6
ALL	4,572.6	2,884.2	1,570.6	117.9

Unit Cruise Design: GOOD GOLLY U2

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 4.5 ft	21.0	21.0	12	6	0

Unit Cruise Summary: GOOD GOLLY U2

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	14	27	2.3	0
WH	14	24	2.0	0
SS	1	3	0.3	0
ALL	29	54	4.5	0

Unit Cruise Statistics (Cut + Leave Trees): GOOD GOLLY U2

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	122.5	68.7	19.8	88.2	17.9	4.8	10,807	71.0	20.4
WH	108.9	90.5	26.1	85.0	24.2	6.5	9,253	93.6	26.9

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
SS	13.6	180.9	52.2	82.5	0.0	0.0	1,123	180.9	52.2
ALL	245.0	27.6	8.0	86.5	20.5	3.8	21,183	34.4	8.8

Unit Summary: GOOD GOLLY U2

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	14	ALL	14.2	60	75	10,807	5.1	111.4	122.5	32.5	2,278.7	227.0
SS	LIVE	CUT	1	ALL	10.0	53	65	1,123	0.0	25.0	13.6	4.3	218.0	23.6
WH	LIVE	CUT	14	ALL	11.4	48	59	9,253	2.4	153.6	108.9	32.2	2,075.9	194.3
ALL	LIVE	CUT	29	ALL	12.4	53	66	21,183	3.6	290.0	245.0	69.0	4,572.6	444.9
ALL	ALL	ALL	29	ALL	12.4	53	66	21,183	3.6	290.0	245.0	69.0	4,572.6	444.9

Unit Stand Table: GOOD GOLLY U2

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	10	LIVE	CUT	1	10.0	44	53	578	0.0	16.0	8.8	2.8	105.6	12.1
DF	12	LIVE	CUT	2	12.0	54	66	1,237	0.0	22.3	17.5	5.1	293.4	26.0
DF	14	LIVE	CUT	3	13.6	64	80	2,456	2.8	25.9	26.3	7.1	513.3	51.6
DF	16	LIVE	CUT	4	15.5	66	83	3,413	4.1	26.8	35.0	8.9	678.9	71.7
DF	18	LIVE	CUT	4	17.5	66	83	3,124	10.3	21.0	35.0	8.4	687.5	65.6
SS	10	LIVE	CUT	1	10.0	53	65	1,123	0.0	24.9	13.6	4.3	218.0	23.6
WH	8	LIVE	CUT	2	8.0	32	37	1,069	0.0	44.6	15.6	5.5	149.7	22.5
WH	10	LIVE	CUT	3	9.6	49	59	1,917	0.0	46.1	23.3	7.5	427.2	40.3
WH	12	LIVE	CUT	2	12.0	56	68	1,307	0.0	19.8	15.6	4.5	306.1	27.5
WH	14	LIVE	CUT	2	14.0	52	63	1,019	0.0	14.6	15.6	4.2	293.3	21.4
WH	16	LIVE	CUT	4	15.2	66	82	3,141	4.5	24.6	31.1	8.0	720.5	66.0
WH	18	LIVE	CUT	1	17.0	65	80	799	9.0	4.9	7.8	1.9	179.1	16.8

Unit Log Grade Summary: GOOD GOLLY U2

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	3 SAW	8.7	40.0	7,964	6.7	1,714.8	167.3
DF	LIVE	4 SAW	5.2	25.0	2,735	0.0	521.8	57.4
DF	LIVE	UTILITY	2.1	15.0	107	0.0	42.1	2.3
SS	LIVE	4 SAW	5.3	40.0	1,073	0.0	204.4	22.5
SS	LIVE	UTILITY	2.1	16.0	50	0.0	13.6	1.0
WH	LIVE	3 SAW	8.5	40.0	4,898	4.4	1,169.4	102.9
WH	LIVE	4 SAW	5.1	28.0	4,207	0.0	844.4	88.3

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
WH	LIVE	UTILITY	2.1	14.0	148	0.0	62.1	3.1

Unit Log Sort Summary: GOOD GOLLY U2

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	6.8	32.0	10,700	5.1	2,236.6	224.7
DF	LIVE	Pulp	2.1	15.0	107	0.0	42.1	2.3
SS	LIVE	Domestic	5.3	40.0	1,073	0.0	204.4	22.5
SS	LIVE	Pulp	2.1	16.0	50	0.0	13.6	1.0
WH	LIVE	Domestic	6.0	31.0	9,105	2.4	2,013.8	191.2
WH	LIVE	Pulp	2.1	14.0	148	0.0	62.1	3.1

Unit Log Grade x Sort Summary: GOOD GOLLY U2

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	3 SAW	Domestic	8.7	40.0	7,964	6.7	1,714.8	167.3
DF	LIVE	4 SAW	Domestic	5.2	25.0	2,735	0.0	521.8	57.4
DF	LIVE	UTILITY	Pulp	2.1	15.0	107	0.0	42.1	2.3
SS	LIVE	4 SAW	Domestic	5.3	40.0	1,073	0.0	204.4	22.5
SS	LIVE	UTILITY	Pulp	2.1	16.0	50	0.0	13.6	1.0
WH	LIVE	3 SAW	Domestic	8.5	40.0	4,898	4.4	1,169.4	102.9
WH	LIVE	4 SAW	Domestic	5.1	28.0	4,207	0.0	844.4	88.3
WH	LIVE	UTILITY	Pulp	2.1	14.0	148	0.0	62.1	3.1

Unit Log Grade x Diameter Bin Summary: GOOD GOLLY U2

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.1	15.0	107	0.0	42.1	2.3
DF	5 - 8	LIVE	4 SAW	5.2	25.0	2,735	0.0	521.8	57.4
DF	5 - 8	LIVE	3 SAW	7.7	40.0	3,251	2.1	711.9	68.3
DF	9 - 11	LIVE	3 SAW	9.8	40.0	4,713	9.7	1,002.9	99.0
SS	< 5	LIVE	UTILITY	2.1	16.0	50	0.0	13.6	1.0
SS	5 - 8	LIVE	4 SAW	5.3	40.0	1,073	0.0	204.4	22.5
WH	< 5	LIVE	UTILITY	2.1	14.0	148	0.0	62.1	3.1
WH	5 - 8	LIVE	4 SAW	5.1	28.0	4,207	0.0	844.4	88.3
WH	5 - 8	LIVE	3 SAW	7.5	40.0	2,253	0.0	560.1	47.3
WH	9 - 11	LIVE	3 SAW	9.7	40.0	2,645	7.9	609.3	55.5

Unit Log Sort x Diameter Bin Summary: GOOD GOLLY U2

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.1	15.0	107	0.0	42.1	2.3
DF	5 - 8	LIVE	Domestic	5.9	30.0	5,987	1.2	1,233.6	125.7
DF	9 - 11	LIVE	Domestic	9.8	40.0	4,713	9.7	1,002.9	99.0
SS	< 5	LIVE	Pulp	2.1	16.0	50	0.0	13.6	1.0
SS	5 - 8	LIVE	Domestic	5.3	40.0	1,073	0.0	204.4	22.5
WH	< 5	LIVE	Pulp	2.1	14.0	148	0.0	62.1	3.1
WH	5 - 8	LIVE	Domestic	5.5	30.0	6,459	0.0	1,404.5	135.6
WH	9 - 11	LIVE	Domestic	9.7	40.0	2,645	7.9	609.3	55.5

Cruise Unit Report
GOOD GOLLY U3

Unit Sale Notice Volume (MBF): GOOD GOLLY U3

				MBF Volume by Grade			
Sp	QMD	Rings/In	Age	All	3 Saw	4 Saw	Utility
DF	14.5			10.2	8.4	1.8	
WH	10.0			9.6	3.9	5.3	0.3
SS	12.0			3.1		3.0	0.1
ALL	11.7			22.9	12.3	10.1	0.5

Unit Sale Notice Weight (tons): GOOD GOLLY U3

	Tons by Grade			
Sp	All	3 Saw	4 Saw	Utility
DF	95.8	82.4	13.4	
WH	94.6	51.1	38.5	5.0
SS	41.5		37.9	3.6
ALL	231.9	133.5	89.8	8.6

Unit Cruise Design: GOOD GOLLY U3

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2: VR, 2 BAF (54.44, 40 for some species) Measure All, Sighting Ht = 4.5 ft	1.0	1.1	1	1	0

Unit Cruise Summary: GOOD GOLLY U3

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	2	2	2.0	0
WH	2	2	2.0	0
SS	1	1	1.0	0
ALL	5	5	5.0	0

Unit Cruise Statistics (Cut + Leave Trees): GOOD GOLLY U3

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	108.9	0.0	0.0	93.5	7.1	5.0	10,183	7.1	5.0
WH	108.9	0.0	0.0	87.8	3.0	2.1	9,559	3.0	2.1

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
SS	54.4	0.0	0.0	57.3	0.0	0.0	3,119	0.0	0.0
ALL	272.2	0.0	0.0	84.0	18.6	8.3	22,861	18.6	8.3

Unit Summary: GOOD GOLLY U3

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	2	ALL	14.5	62	78	10,183	0.0	95.0	108.9	28.6	95.8	10.2
SS	LIVE	CUT	1	ALL	12.0	50	62	3,119	0.0	69.3	54.4	15.7	41.5	3.1
WH	LIVE	CUT	2	ALL	10.0	46	55	9,559	0.0	199.6	108.9	34.4	94.6	9.6
ALL	LIVE	CUT	5	ALL	11.7	51	62	22,861	0.0	363.9	272.2	78.7	231.9	22.9
ALL	ALL	ALL	5	ALL	11.7	51	62	22,861	0.0	363.9	272.2	78.7	231.9	22.9

Unit Stand Table: GOOD GOLLY U3

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	14	LIVE	CUT	1	14.0	61	76	5,348	0.0	50.9	54.5	14.6	46.5	5.3
DF	16	LIVE	CUT	1	15.0	64	80	4,835	0.0	44.4	54.5	14.1	49.3	4.8
SS	12	LIVE	CUT	1	12.0	50	62	3,119	0.0	69.3	54.4	15.7	41.5	3.1
WH	8	LIVE	CUT	1	8.0	40	48	4,679	0.0	156.0	54.5	19.3	35.0	4.7
WH	16	LIVE	CUT	1	15.0	65	80	4,880	0.0	44.4	54.5	14.1	59.6	4.9

Unit Log Grade Summary: GOOD GOLLY U3

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	3 SAW	8.4	40.0	8,386	0.0	82.4	8.4
DF	LIVE	4 SAW	5.0	18.0	1,797	0.0	13.4	1.8
SS	LIVE	4 SAW	5.9	40.0	2,980	0.0	37.9	3.0
SS	LIVE	UTILITY	2.0	14.0	139	0.0	3.6	0.1
WH	LIVE	3 SAW	8.9	40.0	3,904	0.0	51.1	3.9
WH	LIVE	4 SAW	5.0	25.0	5,343	0.0	38.5	5.3
WH	LIVE	UTILITY	2.0	14.0	312	0.0	5.0	0.3

Unit Log Sort Summary: GOOD GOLLY U3

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	6.7	29.0	10,183	0.0	95.8	10.2
SS	LIVE	Domestic	5.9	40.0	2,980	0.0	37.9	3.0
SS	LIVE	Pulp	2.0	14.0	139	0.0	3.6	0.1

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
WH	LIVE	Domestic	5.7	28.0	9,247	0.0	89.6	9.2
WH	LIVE	Pulp	2.0	14.0	312	0.0	5.0	0.3

Unit Log Grade x Sort Summary: GOOD GOLLY U3

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	3 SAW	Domestic	8.4	40.0	8,386	0.0	82.4	8.4
DF	LIVE	4 SAW	Domestic	5.0	18.0	1,797	0.0	13.4	1.8
SS	LIVE	4 SAW	Domestic	5.9	40.0	2,980	0.0	37.9	3.0
SS	LIVE	UTILITY	Pulp	2.0	14.0	139	0.0	3.6	0.1
WH	LIVE	3 SAW	Domestic	8.9	40.0	3,904	0.0	51.1	3.9
WH	LIVE	4 SAW	Domestic	5.0	25.0	5,343	0.0	38.5	5.3
WH	LIVE	UTILITY	Pulp	2.0	14.0	312	0.0	5.0	0.3

Unit Log Grade x Diameter Bin Summary: GOOD GOLLY U3

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 8	LIVE	4 SAW	5.0	18.0	1,797	0.0	13.4	1.8
DF	5 - 8	LIVE	3 SAW	8.4	40.0	8,386	0.0	82.4	8.4
SS	< 5	LIVE	UTILITY	2.0	14.0	139	0.0	3.6	0.1
SS	5 - 8	LIVE	4 SAW	5.9	40.0	2,980	0.0	37.9	3.0
WH	< 5	LIVE	UTILITY	2.0	14.0	312	0.0	5.0	0.3
WH	5 - 8	LIVE	4 SAW	5.0	25.0	5,343	0.0	38.5	5.3
WH	5 - 8	LIVE	3 SAW	8.9	40.0	3,904	0.0	51.1	3.9

Unit Log Sort x Diameter Bin Summary: GOOD GOLLY U3

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 8	LIVE	Domestic	6.7	29.0	10,183	0.0	95.8	10.2
SS	< 5	LIVE	Pulp	2.0	14.0	139	0.0	3.6	0.1
SS	5 - 8	LIVE	Domestic	5.9	40.0	2,980	0.0	37.9	3.0
WH	< 5	LIVE	Pulp	2.0	14.0	312	0.0	5.0	0.3
WH	5 - 8	LIVE	Domestic	5.7	28.0	9,247	0.0	89.6	9.2

Cruise Unit Report
GOOD GOLLY U4

Unit Sale Notice Volume (MBF): GOOD GOLLY U4

				MBF Volume by Grade				
Sp	QMD	Rings/In	Age	All	2 Saw	3 Saw	4 Saw	Utility
WH	12.4			801.3	31.2	504.8	222.3	43.0
DF	12.8			512.4	57.3	303.5	140.4	11.2
RA	10.8			28.1			27.0	1.1
SS	12.0			12.1		9.8	2.0	0.3
RC	12.0			4.1			4.1	
ALL	12.4			1,358.1	88.5	818.2	395.9	55.5

Unit Sale Notice Weight (tons): GOOD GOLLY U4

	Tons by Grade				
Sp	All	2 Saw	3 Saw	4 Saw	Utility
WH	8,424.3	247.7	5,584.6	1,988.0	604.0
DF	4,804.0	497.3	2,965.5	1,148.5	192.7
RA	274.9			254.6	20.3
SS	101.6		86.5	11.3	3.8
RC	47.5			47.5	
ALL	13,652.3	744.9	8,636.7	3,449.9	820.8

Unit Cruise Design: GOOD GOLLY U4

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 4.5 ft	48.0	48.2	23	11	0

Unit Cruise Summary: GOOD GOLLY U4

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
WH	30	67	2.9	0
DF	17	45	2.0	0
RA	4	4	0.2	0
SS	1	1	0.0	0
RC	1	1	0.0	0
ALL	53	118	5.1	0

Unit Cruise Statistics (Cut + Leave Trees): GOOD GOLLY U4

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
WH	158.6	52.7	11.0	105.3	13.5	2.5	16,693	54.4	11.3
DF	106.5	58.6	12.2	100.2	15.8	3.8	10,675	60.7	12.8
RA	7.0	331.3	69.1	84.3	12.6	6.3	586	331.6	69.4
SS	2.4	479.6	100.0	107.0	0.0	0.0	253	479.6	100.0
RC	1.7	479.6	100.0	49.7	0.0	0.0	86	479.6	100.0
ALL	276.2	15.1	3.2	102.5	16.3	2.2	28,294	22.3	3.9

Unit Summary: GOOD GOLLY U4

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	17	ALL	12.5	60	57	10,675	3.9	125.0	106.5	30.1	4,804.0	512.4
RA	LIVE	CUT	4	ALL	10.8	51	62	586	2.6	10.9	7.0	2.1	274.9	28.1
RC	LIVE	CUT	1	ALL	12.0	45	55	86	0.0	2.2	1.7	0.5	47.5	4.1
SS	LIVE	CUT	1	ALL	12.0	61	76	253	4.5	3.0	2.4	0.7	101.6	12.2
WH	LIVE	CUT	30	ALL	12.4	61	75	16,693	1.8	189.1	158.6	45.0	8,424.3	801.2
ALL	LIVE	CUT	53	ALL	12.4	60	68	28,293	2.7	330.2	276.2	78.4	13,652.3	1,358.0
ALL	ALL	ALL	53	ALL	12.4	60	68	28,293	2.7	330.2	276.2	78.4	13,652.3	1,358.0

Unit Stand Table: GOOD GOLLY U4

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	8	LIVE	CUT	2	8.0	40	48	828	0.0	29.1	10.1	3.6	278.3	39.8
DF	10	LIVE	CUT	1	10.0	59		508	3.9	9.3	5.1	1.6	228.8	24.4
DF	12	LIVE	CUT	7	11.7	63	45	3,451	2.5	47.7	35.5	10.4	1,548.6	165.7
DF	14	LIVE	CUT	4	14.0	69	86	2,078	3.9	19.0	20.3	5.4	960.7	99.8
DF	16	LIVE	CUT	1	15.0	61	76	372	14.3	4.1	5.1	1.3	209.2	17.9
DF	18	LIVE	CUT	3	17.0	76	95	1,705	7.0	9.7	15.2	3.7	766.0	81.9
DF	20	LIVE	CUT	2	19.5	81	102	1,088	4.1	4.9	10.1	2.3	541.3	52.2
DF	22	LIVE	CUT	1	21.0	81	102	643	0.0	2.1	5.1	1.1	271.1	30.9
RA	10	LIVE	CUT	2	9.5	48	57	269	5.5	7.2	3.5	1.1	124.5	12.9
RA	12	LIVE	CUT	1	12.0	57	70	146	0.0	2.2	1.8	0.5	73.1	7.0
RA	14	LIVE	CUT	1	14.0	60	73	171	0.0	1.6	1.8	0.5	77.3	8.2
RC	12	LIVE	CUT	1	12.0	45	55	86	0.0	2.2	1.7	0.5	47.5	4.1
SS	12	LIVE	CUT	1	12.0	61	76	253	4.5	3.1	2.4	0.7	101.6	12.1
WH	8	LIVE	CUT	2	8.0	44	53	984	0.0	30.3	10.6	3.7	372.2	47.2
WH	10	LIVE	CUT	3	9.3	52	64	1,389	0.0	33.6	15.9	5.2	724.0	66.7

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
WH	12	LIVE	CUT	4	11.2	60	74	2,087	1.9	30.8	21.1	6.3	1,070.5	100.2
WH	14	LIVE	CUT	12	13.6	68	84	6,800	2.0	63.3	63.4	17.2	3,525.9	326.4
WH	16	LIVE	CUT	5	16.0	70	87	2,836	2.3	18.9	26.4	6.6	1,482.9	136.1
WH	18	LIVE	CUT	3	17.3	72	90	1,825	2.9	9.7	15.9	3.8	911.2	87.6
WH	24	LIVE	CUT	1	23.0	82	102	773	1.6	1.8	5.3	1.1	337.7	37.1

Unit Log Grade Summary: GOOD GOLLY U4

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	12.7	40.0	1,193	0.0	497.3	57.3
DF	LIVE	3 SAW	8.2	40.0	6,324	6.2	2,965.5	303.5
DF	LIVE	4 SAW	5.1	25.0	2,925	0.3	1,148.5	140.4
DF	LIVE	UTILITY	2.1	16.0	233	0.0	192.7	11.2
RA	LIVE	4 SAW	5.7	34.0	563	2.7	254.6	27.0
RA	LIVE	UTILITY	2.2	14.0	23	0.0	20.3	1.1
RC	LIVE	4 SAW	5.4	36.0	86	0.0	47.5	4.1
SS	LIVE	3 SAW	7.1	40.0	205	5.6	86.5	9.8
SS	LIVE	4 SAW	5.0	13.0	42	0.0	11.3	2.0
SS	LIVE	UTILITY	2.1	13.0	6	0.0	3.8	0.3
WH	LIVE	2 SAW	15.0	40.0	650	0.0	247.7	31.2
WH	LIVE	3 SAW	8.4	40.0	10,517	2.7	5,584.6	504.8
WH	LIVE	4 SAW	5.1	27.0	4,630	0.5	1,988.0	222.3
WH	LIVE	UTILITY	2.3	17.0	896	0.0	604.0	43.0

Unit Log Sort Summary: GOOD GOLLY U4

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	6.5	31.0	10,442	4.0	4,611.3	501.2
DF	LIVE	Pulp	2.1	16.0	233	0.0	192.7	11.2
RA	LIVE	Domestic	5.7	34.0	563	2.7	254.6	27.0
RA	LIVE	Pulp	2.2	14.0	23	0.0	20.3	1.1
RC	LIVE	Domestic	5.4	36.0	86	0.0	47.5	4.1
SS	LIVE	Domestic	6.1	27.0	247	4.7	97.8	11.9
SS	LIVE	Pulp	2.1	13.0	6	0.0	3.8	0.3
WH	LIVE	Domestic	6.5	32.0	15,797	1.9	7,820.3	758.3
WH	LIVE	Pulp	2.3	17.0	896	0.0	604.0	43.0

Unit Log Grade x Sort Summary: GOOD GOLLY U4

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	12.7	40.0	1,193	0.0	497.3	57.3
DF	LIVE	3 SAW	Domestic	8.2	40.0	6,324	6.2	2,965.5	303.5
DF	LIVE	4 SAW	Domestic	5.1	25.0	2,925	0.3	1,148.5	140.4
DF	LIVE	UTILITY	Pulp	2.1	16.0	233	0.0	192.7	11.2
RA	LIVE	4 SAW	Domestic	5.7	34.0	563	2.7	254.6	27.0
RA	LIVE	UTILITY	Pulp	2.2	14.0	23	0.0	20.3	1.1
RC	LIVE	4 SAW	Domestic	5.4	36.0	86	0.0	47.5	4.1
SS	LIVE	3 SAW	Domestic	7.1	40.0	205	5.6	86.5	9.8
SS	LIVE	4 SAW	Domestic	5.0	13.0	42	0.0	11.3	2.0
SS	LIVE	UTILITY	Pulp	2.1	13.0	6	0.0	3.8	0.3
WH	LIVE	2 SAW	Domestic	15.0	40.0	650	0.0	247.7	31.2
WH	LIVE	3 SAW	Domestic	8.4	40.0	10,517	2.7	5,584.6	504.8
WH	LIVE	4 SAW	Domestic	5.1	27.0	4,630	0.5	1,988.0	222.3
WH	LIVE	UTILITY	Pulp	2.3	17.0	896	0.0	604.0	43.0

Unit Log Grade x Diameter Bin Summary: GOOD GOLLY U4

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.1	16.0	233	0.0	192.7	11.2
DF	5 - 8	LIVE	4 SAW	5.1	25.0	2,925	0.3	1,148.5	140.4
DF	5 - 8	LIVE	3 SAW	7.5	40.0	4,143	4.7	1,977.8	198.8
DF	9 - 11	LIVE	3 SAW	10.7	40.0	2,181	9.0	987.7	104.7
DF	12 - 14	LIVE	2 SAW	12.7	40.0	1,193	0.0	497.3	57.3
RA	< 5	LIVE	UTILITY	2.2	14.0	23	0.0	20.3	1.1
RA	5 - 8	LIVE	4 SAW	5.7	34.0	563	2.7	254.6	27.0
RC	5 - 8	LIVE	4 SAW	5.4	36.0	86	0.0	47.5	4.1
SS	< 5	LIVE	UTILITY	2.1	13.0	6	0.0	3.8	0.3
SS	5 - 8	LIVE	4 SAW	5.0	13.0	42	0.0	11.3	2.0
SS	5 - 8	LIVE	3 SAW	7.1	40.0	205	5.6	86.5	9.8
WH	< 5	LIVE	UTILITY	2.1	16.0	391	0.0	370.2	18.8
WH	5 - 8	LIVE	4 SAW	5.1	27.0	4,630	0.5	1,988.0	222.3
WH	5 - 8	LIVE	UTILITY	6.2	40.0	505	0.0	233.8	24.2
WH	5 - 8	LIVE	3 SAW	7.7	40.0	6,171	2.6	3,404.2	296.2
WH	9 - 11	LIVE	3 SAW	10.1	40.0	4,346	2.9	2,180.4	208.6
WH	15 - 19	LIVE	2 SAW	15.0	40.0	650	0.0	247.7	31.2

Unit Log Sort x Diameter Bin Summary: GOOD GOLLY U4

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.1	16.0	233	0.0	192.7	11.2
DF	5 - 8	LIVE	Domestic	5.9	30.0	7,068	2.9	3,126.3	339.3
DF	9 - 11	LIVE	Domestic	10.7	40.0	2,181	9.0	987.7	104.7
DF	12 - 14	LIVE	Domestic	12.7	40.0	1,193	0.0	497.3	57.3
RA	< 5	LIVE	Pulp	2.2	14.0	23	0.0	20.3	1.1
RA	5 - 8	LIVE	Domestic	5.7	34.0	563	2.7	254.6	27.0
RC	5 - 8	LIVE	Domestic	5.4	36.0	86	0.0	47.5	4.1
SS	< 5	LIVE	Pulp	2.1	13.0	6	0.0	3.8	0.3
SS	5 - 8	LIVE	Domestic	6.1	27.0	247	4.7	97.8	11.9
WH	< 5	LIVE	Pulp	2.1	16.0	391	0.0	370.2	18.8
WH	5 - 8	LIVE	Domestic	6.0	31.0	10,801	1.7	5,392.2	518.5
WH	5 - 8	LIVE	Pulp	6.2	40.0	505	0.0	233.8	24.2
WH	9 - 11	LIVE	Domestic	10.1	40.0	4,346	2.9	2,180.4	208.6
WH	15 - 19	LIVE	Domestic	15.0	40.0	650	0.0	247.7	31.2

Cruise Unit Report
GOOD GOLLY U5

Unit Sale Notice Volume (MBF): GOOD GOLLY U5

				MBF Volume by Grade				
Sp	QMD	Rings/In	Age	All	2 Saw	3 Saw	4 Saw	Utility
DF	21.1			398.3	252.6	122.7	19.8	3.2
WH	16.9			373.3	102.1	192.3	44.7	34.1
SS	13.6			45.5	24.2	6.0	14.2	1.2
ALL	17.9			817.2	378.9	321.0	78.8	38.5

Unit Sale Notice Weight (tons): GOOD GOLLY U5

	Tons by Grade				
Sp	All	2 Saw	3 Saw	4 Saw	Utility
WH	3,799.5	973.8	1,914.4	516.3	395.1
DF	3,618.8	2,156.2	1,139.1	227.7	95.8
SS	424.1	176.5	62.3	163.0	22.3
ALL	7,842.4	3,306.4	3,115.8	907.0	513.2

Unit Cruise Design: GOOD GOLLY U5

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 4.5 ft	26.0	25.9	13	6	0

Unit Cruise Summary: GOOD GOLLY U5

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	11	29	2.2	0
WH	12	27	2.1	0
SS	2	4	0.3	0
ALL	25	60	4.6	0

Unit Cruise Statistics (Cut + Leave Trees): GOOD GOLLY U5

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	121.4	68.9	19.1	126.2	17.8	5.4	15,321	71.1	19.8
WH	113.1	57.2	15.9	127.0	6.2	1.8	14,357	57.5	16.0

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
SS	16.8	204.9	56.8	104.5	47.1	33.3	1,751	210.2	65.9
ALL	251.3	22.6	6.3	125.1	15.5	3.1	31,430	27.4	7.0

Unit Summary: GOOD GOLLY U5

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	11	ALL	21.1	84	106	15,321	3.0	50.0	121.4	26.4	3,618.8	398.4
SS	LIVE	CUT	2	ALL	13.6	61	76	1,751	0.0	16.6	16.8	4.5	424.1	45.5
WH	LIVE	CUT	12	ALL	16.9	75	93	14,357	2.4	72.6	113.1	27.5	3,799.5	373.3
ALL	LIVE	CUT	25	ALL	18.2	77	96	31,429	2.6	139.2	251.3	58.4	7,842.4	817.2
ALL	ALL	ALL	25	ALL	18.2	77	96	31,429	2.6	139.2	251.3	58.4	7,842.4	817.2

Unit Stand Table: GOOD GOLLY U5

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	18	LIVE	CUT	1	17.0	77	97	1,345	0.0	7.0	11.0	2.7	306.2	35.0
DF	20	LIVE	CUT	4	19.7	80	101	4,960	2.0	20.8	44.1	9.9	1,260.7	129.0
DF	22	LIVE	CUT	1	22.0	84	107	1,066	19.3	4.2	11.0	2.4	325.4	27.7
DF	24	LIVE	CUT	5	23.6	90	115	7,950	1.4	18.2	55.2	11.4	1,726.5	206.7
SS	12	LIVE	CUT	1	11.0	55	68	584	0.0	12.7	8.4	2.5	180.2	15.2
SS	20	LIVE	CUT	1	20.0	80	102	1,167	0.0	3.9	8.4	1.9	243.9	30.3
WH	12	LIVE	CUT	2	12.0	65	80	2,171	0.0	24.0	18.9	5.4	549.0	56.5
WH	16	LIVE	CUT	1	16.0	73	91	1,255	0.0	6.8	9.4	2.4	297.6	32.6
WH	18	LIVE	CUT	6	17.8	79	99	7,127	0.7	32.6	56.6	13.4	1,914.9	185.3
WH	22	LIVE	CUT	1	21.0	85	107	1,242	0.0	3.9	9.4	2.1	338.9	32.3
WH	26	LIVE	CUT	2	25.0	89	113	2,562	10.8	5.5	18.9	3.8	699.1	66.6

Unit Log Grade Summary: GOOD GOLLY U5

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	13.8	40.0	9,716	4.6	2,156.2	252.6
DF	LIVE	3 SAW	8.6	39.0	4,720	0.0	1,139.1	122.7
DF	LIVE	4 SAW	5.7	33.0	763	0.0	227.7	19.8
DF	LIVE	UTILITY	2.1	17.0	122	0.0	95.8	3.2
SS	LIVE	2 SAW	13.7	40.0	929	0.0	176.5	24.2
SS	LIVE	3 SAW	6.6	38.0	230	0.0	62.3	6.0
SS	LIVE	4 SAW	5.9	40.0	546	0.0	163.0	14.2
SS	LIVE	UTILITY	2.1	18.0	46	0.0	22.3	1.2

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
WH	LIVE	2 SAW	14.1	40.0	3,928	6.6	973.8	102.1
WH	LIVE	3 SAW	9.3	40.0	7,396	1.1	1,914.4	192.3
WH	LIVE	4 SAW	5.3	28.0	1,721	0.0	516.3	44.7
WH	LIVE	UTILITY	3.0	18.0	1,312	0.0	395.1	34.1

Unit Log Sort Summary: GOOD GOLLY U5

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	9.9	38.0	15,199	3.0	3,523.0	395.2
DF	LIVE	Pulp	2.1	17.0	122	0.0	95.8	3.2
SS	LIVE	Domestic	7.5	40.0	1,705	0.0	401.8	44.3
SS	LIVE	Pulp	2.1	18.0	46	0.0	22.3	1.2
WH	LIVE	Domestic	8.1	35.0	13,045	2.7	3,404.4	339.2
WH	LIVE	Pulp	3.0	18.0	1,312	0.0	395.1	34.1

Unit Log Grade x Sort Summary: GOOD GOLLY U5

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	13.8	40.0	9,716	4.6	2,156.2	252.6
DF	LIVE	3 SAW	Domestic	8.6	39.0	4,720	0.0	1,139.1	122.7
DF	LIVE	4 SAW	Domestic	5.7	33.0	763	0.0	227.7	19.8
DF	LIVE	UTILITY	Pulp	2.1	17.0	122	0.0	95.8	3.2
SS	LIVE	2 SAW	Domestic	13.7	40.0	929	0.0	176.5	24.2
SS	LIVE	3 SAW	Domestic	6.6	38.0	230	0.0	62.3	6.0
SS	LIVE	4 SAW	Domestic	5.9	40.0	546	0.0	163.0	14.2
SS	LIVE	UTILITY	Pulp	2.1	18.0	46	0.0	22.3	1.2
WH	LIVE	2 SAW	Domestic	14.1	40.0	3,928	6.6	973.8	102.1
WH	LIVE	3 SAW	Domestic	9.3	40.0	7,396	1.1	1,914.4	192.3
WH	LIVE	4 SAW	Domestic	5.3	28.0	1,721	0.0	516.3	44.7
WH	LIVE	UTILITY	Pulp	3.0	18.0	1,312	0.0	395.1	34.1

Unit Log Grade x Diameter Bin Summary: GOOD GOLLY U5

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.1	17.0	122	0.0	95.8	3.2
DF	5 - 8	LIVE	4 SAW	5.7	33.0	763	0.0	227.7	19.8
DF	5 - 8	LIVE	3 SAW	7.2	39.0	1,787	0.0	480.9	46.5
DF	9 - 11	LIVE	3 SAW	10.4	40.0	2,933	0.0	658.2	76.2
DF	12 - 14	LIVE	2 SAW	12.9	40.0	4,614	9.2	1,188.3	120.0

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	15 - 19	LIVE	2 SAW	15.2	40.0	5,101	0.0	967.9	132.6
SS	< 5	LIVE	UTILITY	2.1	18.0	46	0.0	22.3	1.2
SS	5 - 8	LIVE	4 SAW	5.9	40.0	546	0.0	163.0	14.2
SS	5 - 8	LIVE	3 SAW	6.6	38.0	230	0.0	62.3	6.0
SS	12 - 14	LIVE	2 SAW	13.7	40.0	929	0.0	176.5	24.2
WH	< 5	LIVE	UTILITY	2.1	15.0	144	0.0	84.5	3.8
WH	5 - 8	LIVE	4 SAW	5.3	28.0	1,721	0.0	516.3	44.7
WH	5 - 8	LIVE	UTILITY	5.7	36.0	208	0.0	75.4	5.4
WH	5 - 8	LIVE	3 SAW	7.2	40.0	2,010	0.0	543.9	52.2
WH	9 - 11	LIVE	3 SAW	11.0	40.0	5,387	1.5	1,370.5	140.1
WH	9 - 11	LIVE	UTILITY	11.8	40.0	960	0.0	235.1	25.0
WH	12 - 14	LIVE	2 SAW	12.8	40.0	1,993	0.0	484.0	51.8
WH	15 - 19	LIVE	2 SAW	16.5	40.0	1,935	12.5	489.8	50.3

Unit Log Sort x Diameter Bin Summary: GOOD GOLLY U5

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.1	17.0	122	0.0	95.8	3.2
DF	5 - 8	LIVE	Domestic	6.5	36.0	2,551	0.0	708.6	66.3
DF	9 - 11	LIVE	Domestic	10.4	40.0	2,933	0.0	658.2	76.2
DF	12 - 14	LIVE	Domestic	12.9	40.0	4,614	9.2	1,188.3	120.0
DF	15 - 19	LIVE	Domestic	15.2	40.0	5,101	0.0	967.9	132.6
SS	< 5	LIVE	Pulp	2.1	18.0	46	0.0	22.3	1.2
SS	5 - 8	LIVE	Domestic	6.1	40.0	776	0.0	225.3	20.2
SS	12 - 14	LIVE	Domestic	13.7	40.0	929	0.0	176.5	24.2
WH	< 5	LIVE	Pulp	2.1	15.0	144	0.0	84.5	3.8
WH	5 - 8	LIVE	Pulp	5.7	36.0	208	0.0	75.4	5.4
WH	5 - 8	LIVE	Domestic	6.0	32.0	3,730	0.0	1,060.2	97.0
WH	9 - 11	LIVE	Domestic	11.0	40.0	5,387	1.5	1,370.5	140.1
WH	9 - 11	LIVE	Pulp	11.8	40.0	960	0.0	235.1	25.0
WH	12 - 14	LIVE	Domestic	12.8	40.0	1,993	0.0	484.0	51.8
WH	15 - 19	LIVE	Domestic	16.5	40.0	1,935	12.5	489.8	50.3

Cruise Unit Report
GOOD GOLLY U6

Unit Sale Notice Volume (MBF): GOOD GOLLY U6

				MBF Volume by Grade				
Sp	QMD	Rings/In	Age	All	2 Saw	3 Saw	4 Saw	Utility
DF	19.5			20.1	11.0	7.5	1.3	0.2
WH	18.3			14.1	4.9	7.7	1.3	0.1
ALL	19.0			34.1	15.9	15.2	2.7	0.3

Unit Sale Notice Weight (tons): GOOD GOLLY U6

	Tons by Grade				
Sp	All	2 Saw	3 Saw	4 Saw	Utility
DF	185.7	91.7	76.2	12.2	5.5
WH	142.6	53.5	69.8	16.6	2.7
ALL	328.3	145.2	146.1	28.8	8.2

Unit Cruise Design: GOOD GOLLY U6

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2: VR, 2 BAF (54.44, 40 for some species) Measure All, Sighting Ht = 4.5 ft	1.0	1.3	1	1	0

Unit Cruise Summary: GOOD GOLLY U6

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	3	3	3.0	0
WH	2	2	2.0	0
ALL	5	5	5.0	0

Unit Cruise Statistics (Cut + Leave Trees): GOOD GOLLY U6

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	163.3	0.0	0.0	122.9	9.9	5.7	20,066	9.9	5.7
WH	108.9	0.0	0.0	129.2	12.0	8.5	14,071	12.0	8.5
ALL	272.2	0.0	0.0	125.4	9.6	4.3	34,137	9.6	4.3

Unit Summary: GOOD GOLLY U6

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	3	ALL	19.5	81	102	20,066	3.7	78.8	163.3	37.0	185.7	20.1
WH	LIVE	CUT	2	ALL	18.3	79	98	14,071	0.0	59.6	108.9	25.5	142.6	14.1
ALL	LIVE	CUT	5	ALL	19.0	80	100	34,137	2.2	138.4	272.2	62.5	328.3	34.2
ALL	ALL	ALL	5	ALL	19.0	80	100	34,137	2.2	138.4	272.2	62.5	328.3	34.2

Unit Stand Table: GOOD GOLLY U6

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	16	LIVE	CUT	1	16.0	75	94	5,927	0.0	39.0	54.4	13.6	57.8	5.9
DF	22	LIVE	CUT	1	21.0	86	109	7,016	2.2	22.6	54.4	11.9	63.2	7.0
DF	24	LIVE	CUT	1	24.0	89	113	7,123	7.8	17.3	54.4	11.1	64.7	7.1
WH	18	LIVE	CUT	1	17.0	78	97	7,634	0.0	34.5	54.5	13.2	70.7	7.6
WH	20	LIVE	CUT	1	20.0	80	100	6,437	0.0	25.0	54.5	12.2	71.9	6.4

Unit Log Grade Summary: GOOD GOLLY U6

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	14.0	40.0	11,023	5.2	91.7	11.0
DF	LIVE	3 SAW	8.7	40.0	7,519	2.1	76.2	7.5
DF	LIVE	4 SAW	5.0	32.0	1,326	0.0	12.2	1.3
DF	LIVE	UTILITY	2.2	17.0	198	0.0	5.5	0.2
WH	LIVE	2 SAW	12.9	40.0	4,890	0.0	53.5	4.9
WH	LIVE	3 SAW	9.1	39.0	7,715	0.0	69.8	7.7
WH	LIVE	4 SAW	5.4	36.0	1,347	0.0	16.6	1.3
WH	LIVE	UTILITY	2.1	12.0	119	0.0	2.7	0.1

Unit Log Sort Summary: GOOD GOLLY U6

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	9.1	38.0	19,868	3.7	180.2	19.9
DF	LIVE	Pulp	2.2	17.0	198	0.0	5.5	0.2
WH	LIVE	Domestic	8.8	38.0	13,952	0.0	139.9	14.0
WH	LIVE	Pulp	2.1	12.0	119	0.0	2.7	0.1

Unit Log Grade x Sort Summary: GOOD GOLLY U6

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	14.0	40.0	11,023	5.2	91.7	11.0
DF	LIVE	3 SAW	Domestic	8.7	40.0	7,519	2.1	76.2	7.5
DF	LIVE	4 SAW	Domestic	5.0	32.0	1,326	0.0	12.2	1.3
DF	LIVE	UTILITY	Pulp	2.2	17.0	198	0.0	5.5	0.2
WH	LIVE	2 SAW	Domestic	12.9	40.0	4,890	0.0	53.5	4.9
WH	LIVE	3 SAW	Domestic	9.1	39.0	7,715	0.0	69.8	7.7
WH	LIVE	4 SAW	Domestic	5.4	36.0	1,347	0.0	16.6	1.3
WH	LIVE	UTILITY	Pulp	2.1	12.0	119	0.0	2.7	0.1

Unit Log Grade x Diameter Bin Summary: GOOD GOLLY U6

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.2	17.0	198	0.0	5.5	0.2
DF	5 - 8	LIVE	4 SAW	5.0	32.0	1,326	0.0	12.2	1.3
DF	5 - 8	LIVE	3 SAW	7.7	40.0	2,996	5.0	31.8	3.0
DF	9 - 11	LIVE	3 SAW	9.8	40.0	4,523	0.0	44.5	4.5
DF	12 - 14	LIVE	2 SAW	13.1	40.0	5,477	0.0	45.8	5.5
DF	15 - 19	LIVE	2 SAW	15.1	40.0	5,546	9.9	45.9	5.5
WH	< 5	LIVE	UTILITY	2.1	12.0	119	0.0	2.7	0.1
WH	5 - 8	LIVE	4 SAW	5.4	36.0	1,347	0.0	16.6	1.3
WH	5 - 8	LIVE	3 SAW	6.2	38.0	1,497	0.0	16.8	1.5
WH	9 - 11	LIVE	3 SAW	11.2	40.0	6,217	0.0	53.1	6.2
WH	12 - 14	LIVE	2 SAW	12.9	40.0	4,890	0.0	53.5	4.9

Unit Log Sort x Diameter Bin Summary: GOOD GOLLY U6

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.2	17.0	198	0.0	5.5	0.2
DF	5 - 8	LIVE	Domestic	6.4	36.0	4,322	3.5	44.0	4.3
DF	9 - 11	LIVE	Domestic	9.8	40.0	4,523	0.0	44.5	4.5
DF	12 - 14	LIVE	Domestic	13.1	40.0	5,477	0.0	45.8	5.5
DF	15 - 19	LIVE	Domestic	15.1	40.0	5,546	9.9	45.9	5.5
WH	< 5	LIVE	Pulp	2.1	12.0	119	0.0	2.7	0.1
WH	5 - 8	LIVE	Domestic	5.7	37.0	2,844	0.0	33.3	2.8
WH	9 - 11	LIVE	Domestic	11.2	40.0	6,217	0.0	53.1	6.2
WH	12 - 14	LIVE	Domestic	12.9	40.0	4,890	0.0	53.5	4.9

Cruise Unit Report
GOOD GOLLY U7

Unit Sale Notice Volume (MBF): GOOD GOLLY U7

				MBF Volume by Grade				
Sp	QMD	Rings/In	Age	All	2 Saw	3 Saw	4 Saw	Utility
DF	18.0			330.0	160.1	128.0	38.1	3.8
WH	15.0			239.3	125.7	54.4	25.9	33.4
SS	18.6			73.6	38.4	30.6	4.2	0.3
ALL	16.7			642.9	324.2	213.0	68.2	37.5

Unit Sale Notice Weight (tons): GOOD GOLLY U7

	Tons by Grade				
Sp	All	2 Saw	3 Saw	4 Saw	Utility
DF	3,124.5	1,430.5	1,198.5	398.0	97.5
WH	2,406.2	1,193.3	648.8	184.6	379.6
SS	611.2	311.0	256.1	35.5	8.7
ALL	6,141.9	2,934.7	2,103.4	618.1	485.7

Unit Cruise Design: GOOD GOLLY U7

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 4.5 ft	21.0	21.1	10	5	0

Unit Cruise Summary: GOOD GOLLY U7

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	10	25	2.5	0
WH	8	17	1.7	0
SS	3	5	0.5	0
ALL	21	47	4.7	0

Unit Cruise Statistics (Cut + Leave Trees): GOOD GOLLY U7

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	136.1	28.3	8.9	115.5	17.6	5.6	15,716	33.3	10.5
WH	92.5	83.4	26.4	123.1	15.1	5.4	11,395	84.8	26.9

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
SS	27.2	170.0	53.7	128.8	9.6	5.5	3,505	170.2	54.0
ALL	255.9	26.6	8.4	119.7	15.6	3.4	30,615	30.9	9.1

Unit Summary: GOOD GOLLY U7

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	10	ALL	18.0	74	93	15,716	4.0	77.0	136.1	32.1	3,124.5	330.0
SS	LIVE	CUT	3	ALL	18.6	76	97	3,505	3.1	14.4	27.2	6.3	611.2	73.6
WH	LIVE	CUT	8	ALL	15.0	62	76	11,395	1.4	75.4	92.5	23.9	2,406.2	239.3
ALL	LIVE	CUT	21	ALL	16.8	69	86	30,616	2.9	166.8	255.8	62.3	6,141.9	642.9
ALL	ALL	ALL	21	ALL	16.8	69	86	30,616	2.9	166.8	255.8	62.3	6,141.9	642.9

Unit Stand Table: GOOD GOLLY U7

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	12	LIVE	CUT	1	11.0	55	68	949	0.0	20.6	13.6	4.1	234.5	19.9
DF	16	LIVE	CUT	1	16.0	77	97	1,501	0.0	9.7	13.6	3.4	303.4	31.5
DF	18	LIVE	CUT	2	17.0	73	92	3,238	0.0	17.3	27.2	6.6	589.2	68.0
DF	20	LIVE	CUT	1	20.0	80	101	1,547	3.9	6.2	13.6	3.0	317.3	32.5
DF	22	LIVE	CUT	1	21.0	84	106	1,737	0.0	5.7	13.6	3.0	325.1	36.5
DF	24	LIVE	CUT	4	23.7	88	112	6,744	8.0	17.7	54.4	11.2	1,355.1	141.6
SS	16	LIVE	CUT	1	16.0	71	89	1,196	0.0	6.5	9.1	2.3	188.1	25.1
SS	20	LIVE	CUT	1	20.0	80	102	1,264	0.0	4.2	9.1	2.0	208.9	26.5
SS	22	LIVE	CUT	1	21.0	82	104	1,045	9.8	3.8	9.1	2.0	214.2	21.9
WH	8	LIVE	CUT	1	8.0	40	48	994	0.0	33.1	11.6	4.1	155.9	20.9
WH	14	LIVE	CUT	1	14.0	71	88	1,277	0.0	10.8	11.6	3.1	290.9	26.8
WH	18	LIVE	CUT	1	18.0	78	97	1,447	0.0	6.5	11.6	2.7	308.0	30.4
WH	20	LIVE	CUT	3	20.0	81	102	4,613	0.0	15.9	34.7	7.8	979.9	96.9
WH	22	LIVE	CUT	2	22.0	85	107	3,063	5.2	8.8	23.1	4.9	671.4	64.3

Unit Log Grade Summary: GOOD GOLLY U7

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	14.2	40.0	7,624	7.7	1,430.5	160.1
DF	LIVE	3 SAW	8.9	40.0	6,096	0.3	1,198.5	128.0
DF	LIVE	4 SAW	5.4	36.0	1,816	0.0	398.0	38.1
DF	LIVE	UTILITY	2.1	17.0	180	0.0	97.5	3.8
SS	LIVE	2 SAW	13.4	40.0	1,829	4.7	311.0	38.4

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
SS	LIVE	3 SAW	8.0	39.0	1,459	1.5	256.1	30.6
SS	LIVE	4 SAW	5.0	29.0	201	0.0	35.5	4.2
SS	LIVE	UTILITY	2.2	14.0	16	0.0	8.7	0.3
WH	LIVE	2 SAW	13.7	40.0	5,985	2.1	1,193.3	125.7
WH	LIVE	3 SAW	7.4	40.0	2,590	1.5	648.8	54.4
WH	LIVE	4 SAW	5.0	26.0	1,231	0.0	184.6	25.9
WH	LIVE	UTILITY	3.0	18.0	1,589	0.0	379.6	33.4

Unit Log Sort Summary: GOOD GOLLY U7

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	8.8	38.0	15,536	4.0	3,027.0	326.3
DF	LIVE	Pulp	2.1	17.0	180	0.0	97.5	3.8
SS	LIVE	Domestic	8.8	37.0	3,489	3.1	602.5	73.3
SS	LIVE	Pulp	2.2	14.0	16	0.0	8.7	0.3
WH	LIVE	Domestic	7.9	34.0	9,806	1.7	2,026.6	205.9
WH	LIVE	Pulp	3.0	18.0	1,589	0.0	379.6	33.4

Unit Log Grade x Sort Summary: GOOD GOLLY U7

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	14.2	40.0	7,624	7.7	1,430.5	160.1
DF	LIVE	3 SAW	Domestic	8.9	40.0	6,096	0.3	1,198.5	128.0
DF	LIVE	4 SAW	Domestic	5.4	36.0	1,816	0.0	398.0	38.1
DF	LIVE	UTILITY	Pulp	2.1	17.0	180	0.0	97.5	3.8
SS	LIVE	2 SAW	Domestic	13.4	40.0	1,829	4.7	311.0	38.4
SS	LIVE	3 SAW	Domestic	8.0	39.0	1,459	1.5	256.1	30.6
SS	LIVE	4 SAW	Domestic	5.0	29.0	201	0.0	35.5	4.2
SS	LIVE	UTILITY	Pulp	2.2	14.0	16	0.0	8.7	0.3
WH	LIVE	2 SAW	Domestic	13.7	40.0	5,985	2.1	1,193.3	125.7
WH	LIVE	3 SAW	Domestic	7.4	40.0	2,590	1.5	648.8	54.4
WH	LIVE	4 SAW	Domestic	5.0	26.0	1,231	0.0	184.6	25.9
WH	LIVE	UTILITY	Pulp	3.0	18.0	1,589	0.0	379.6	33.4

Unit Log Grade x Diameter Bin Summary: GOOD GOLLY U7

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.1	17.0	180	0.0	97.5	3.8
DF	5 - 8	LIVE	4 SAW	5.4	36.0	1,816	0.0	398.0	38.1

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 8	LIVE	3 SAW	7.3	40.0	1,820	1.0	414.4	38.2
DF	9 - 11	LIVE	3 SAW	10.1	40.0	4,276	0.0	784.1	89.8
DF	12 - 14	LIVE	2 SAW	13.6	40.0	4,855	6.3	950.8	102.0
DF	15 - 19	LIVE	2 SAW	15.7	40.0	2,769	10.0	479.7	58.1
SS	< 5	LIVE	UTILITY	2.2	14.0	16	0.0	8.7	0.3
SS	5 - 8	LIVE	4 SAW	5.0	29.0	201	0.0	35.5	4.2
SS	5 - 8	LIVE	3 SAW	6.4	39.0	465	4.6	103.5	9.8
SS	9 - 11	LIVE	3 SAW	10.0	40.0	994	0.0	152.6	20.9
SS	12 - 14	LIVE	2 SAW	13.4	40.0	1,829	4.7	311.0	38.4
WH	< 5	LIVE	UTILITY	2.1	14.0	155	0.0	75.9	3.2
WH	5 - 8	LIVE	4 SAW	5.0	26.0	1,231	0.0	184.6	25.9
WH	5 - 8	LIVE	UTILITY	5.6	36.0	255	0.0	70.4	5.4
WH	5 - 8	LIVE	3 SAW	7.4	40.0	2,590	1.5	648.8	54.4
WH	9 - 11	LIVE	UTILITY	11.5	40.0	1,179	0.0	233.2	24.8
WH	12 - 14	LIVE	2 SAW	13.7	40.0	5,985	2.1	1,193.3	125.7

Unit Log Sort x Diameter Bin Summary: GOOD GOLLY U7

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.1	17.0	180	0.0	97.5	3.8
DF	5 - 8	LIVE	Domestic	6.1	37.0	3,636	0.5	812.4	76.4
DF	9 - 11	LIVE	Domestic	10.1	40.0	4,276	0.0	784.1	89.8
DF	12 - 14	LIVE	Domestic	13.6	40.0	4,855	6.3	950.8	102.0
DF	15 - 19	LIVE	Domestic	15.7	40.0	2,769	10.0	479.7	58.1
SS	< 5	LIVE	Pulp	2.2	14.0	16	0.0	8.7	0.3
SS	5 - 8	LIVE	Domestic	5.8	34.0	666	3.3	139.0	14.0
SS	9 - 11	LIVE	Domestic	10.0	40.0	994	0.0	152.6	20.9
SS	12 - 14	LIVE	Domestic	13.4	40.0	1,829	4.7	311.0	38.4
WH	< 5	LIVE	Pulp	2.1	14.0	155	0.0	75.9	3.2
WH	5 - 8	LIVE	Pulp	5.6	36.0	255	0.0	70.4	5.4
WH	5 - 8	LIVE	Domestic	6.1	32.0	3,821	1.0	833.4	80.2
WH	9 - 11	LIVE	Pulp	11.5	40.0	1,179	0.0	233.2	24.8
WH	12 - 14	LIVE	Domestic	13.7	40.0	5,985	2.1	1,193.3	125.7

Cruise Unit Report
GOOD GOLLY U8

Unit Sale Notice Volume (MBF): GOOD GOLLY U8

				MBF Volume by Grade				
Sp	QMD	Rings/In	Age	All	2 Saw	3 Saw	4 Saw	Utility
DF	19.7			207.4	97.3	92.0	16.3	1.8
WH	14.2			144.0	55.3	60.6	27.0	1.1
SS	14.0			11.6		9.0	2.4	0.2
ALL	16.5			363.0	152.5	161.6	45.8	3.1

Unit Sale Notice Weight (tons): GOOD GOLLY U8

	Tons by Grade				
Sp	All	2 Saw	3 Saw	4 Saw	Utility
DF	1,833.0	776.1	843.4	163.7	49.8
WH	1,482.3	510.2	663.5	283.4	25.3
SS	103.3		84.8	15.9	2.6
ALL	3,418.6	1,286.3	1,591.7	463.0	77.7

Unit Cruise Design: GOOD GOLLY U8

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 4.5 ft	12.0	12.0	6	3	0

Unit Cruise Summary: GOOD GOLLY U8

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	7	15	2.5	0
WH	5	12	2.0	0
SS	1	1	0.2	0
ALL	13	28	4.7	0

Unit Cruise Statistics (Cut + Leave Trees): GOOD GOLLY U8

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	136.1	21.9	8.9	127.0	8.7	3.3	17,281	23.6	9.5
WH	108.9	31.6	12.9	110.2	26.2	11.7	12,002	41.1	17.4

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
SS	9.1	244.9	100.0	106.6	0.0	0.0	968	244.9	100.0
ALL	254.1	17.5	7.1	119.1	17.2	4.8	30,251	24.6	8.6

Unit Summary: GOOD GOLLY U8

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	7	ALL	19.7	80	101	17,281	0.0	64.3	136.1	30.7	1,833.0	207.4
SS	LIVE	CUT	1	ALL	14.0	67	84	968	0.0	8.5	9.1	2.4	103.3	11.6
WH	LIVE	CUT	5	ALL	14.2	60	73	12,002	0.0	99.0	108.9	28.9	1,482.3	144.0
ALL	LIVE	CUT	13	ALL	16.5	68	84	30,251	0.0	171.8	254.1	62.0	3,418.6	363.0
ALL	ALL	ALL	13	ALL	16.5	68	84	30,251	0.0	171.8	254.1	62.0	3,418.6	363.0

Unit Stand Table: GOOD GOLLY U8

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	16	LIVE	CUT	1	16.0	75	94	2,117	0.0	13.9	19.4	4.9	247.6	25.4
DF	18	LIVE	CUT	2	17.5	78	98	4,803	0.0	23.3	38.9	9.3	497.3	57.6
DF	22	LIVE	CUT	1	21.0	81	102	2,465	0.0	8.1	19.4	4.2	259.8	29.6
DF	24	LIVE	CUT	2	23.5	87	110	5,193	0.0	12.9	38.9	8.0	549.3	62.3
DF	26	LIVE	CUT	1	25.0	89	113	2,703	0.0	5.7	19.4	3.9	278.9	32.4
SS	14	LIVE	CUT	1	14.0	67	84	968	0.0	8.5	9.1	2.4	103.3	11.6
WH	10	LIVE	CUT	1	10.0	42	50	1,398	0.0	39.9	21.8	6.9	184.0	16.8
WH	12	LIVE	CUT	1	12.0	65	80	2,523	0.0	27.7	21.8	6.3	298.1	30.3
WH	18	LIVE	CUT	1	18.0	71	88	2,268	0.0	12.3	21.8	5.1	307.6	27.2
WH	20	LIVE	CUT	1	20.0	80	100	3,034	0.0	10.0	21.8	4.9	344.9	36.4
WH	22	LIVE	CUT	1	21.0	82	102	2,779	0.0	9.1	21.8	4.8	347.6	33.3

Unit Log Grade Summary: GOOD GOLLY U8

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	14.6	40.0	8,105	0.0	776.1	97.3
DF	LIVE	3 SAW	9.3	40.0	7,668	0.0	843.4	92.0
DF	LIVE	4 SAW	5.2	34.0	1,362	0.0	163.7	16.3
DF	LIVE	UTILITY	2.1	15.0	147	0.0	49.8	1.8
SS	LIVE	3 SAW	8.5	40.0	747	0.0	84.8	9.0
SS	LIVE	4 SAW	5.0	22.0	204	0.0	15.9	2.4
SS	LIVE	UTILITY	2.1	12.0	17	0.0	2.6	0.2
WH	LIVE	2 SAW	13.3	40.0	4,606	0.0	510.2	55.3

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
WH	LIVE	3 SAW	7.7	40.0	5,051	0.0	663.5	60.6
WH	LIVE	4 SAW	5.1	26.0	2,251	0.0	283.4	27.0
WH	LIVE	UTILITY	2.0	14.0	94	0.0	25.3	1.1

Unit Log Sort Summary: GOOD GOLLY U8

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	9.2	38.0	17,134	0.0	1,783.2	205.6
DF	LIVE	Pulp	2.1	15.0	147	0.0	49.8	1.8
SS	LIVE	Domestic	6.8	31.0	951	0.0	100.7	11.4
SS	LIVE	Pulp	2.1	12.0	17	0.0	2.6	0.2
WH	LIVE	Domestic	7.1	33.0	11,908	0.0	1,457.0	142.9
WH	LIVE	Pulp	2.0	14.0	94	0.0	25.3	1.1

Unit Log Grade x Sort Summary: GOOD GOLLY U8

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	14.6	40.0	8,105	0.0	776.1	97.3
DF	LIVE	3 SAW	Domestic	9.3	40.0	7,668	0.0	843.4	92.0
DF	LIVE	4 SAW	Domestic	5.2	34.0	1,362	0.0	163.7	16.3
DF	LIVE	UTILITY	Pulp	2.1	15.0	147	0.0	49.8	1.8
SS	LIVE	3 SAW	Domestic	8.5	40.0	747	0.0	84.8	9.0
SS	LIVE	4 SAW	Domestic	5.0	22.0	204	0.0	15.9	2.4
SS	LIVE	UTILITY	Pulp	2.1	12.0	17	0.0	2.6	0.2
WH	LIVE	2 SAW	Domestic	13.3	40.0	4,606	0.0	510.2	55.3
WH	LIVE	3 SAW	Domestic	7.7	40.0	5,051	0.0	663.5	60.6
WH	LIVE	4 SAW	Domestic	5.1	26.0	2,251	0.0	283.4	27.0
WH	LIVE	UTILITY	Pulp	2.0	14.0	94	0.0	25.3	1.1

Unit Log Grade x Diameter Bin Summary: GOOD GOLLY U8

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.1	15.0	147	0.0	49.8	1.8
DF	5 - 8	LIVE	4 SAW	5.2	34.0	1,362	0.0	163.7	16.3
DF	5 - 8	LIVE	3 SAW	7.5	40.0	1,523	0.0	204.7	18.3
DF	9 - 11	LIVE	3 SAW	10.2	40.0	6,145	0.0	638.7	73.7
DF	12 - 14	LIVE	2 SAW	13.9	40.0	3,883	0.0	384.3	46.6
DF	15 - 19	LIVE	2 SAW	15.5	40.0	4,222	0.0	391.8	50.7
SS	< 5	LIVE	UTILITY	2.1	12.0	17	0.0	2.6	0.2

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
SS	5 - 8	LIVE	4 SAW	5.0	22.0	204	0.0	15.9	2.4
SS	5 - 8	LIVE	3 SAW	8.5	40.0	747	0.0	84.8	9.0
WH	< 5	LIVE	UTILITY	2.0	14.0	94	0.0	25.3	1.1
WH	5 - 8	LIVE	4 SAW	5.1	26.0	2,251	0.0	283.4	27.0
WH	5 - 8	LIVE	3 SAW	6.9	40.0	3,166	0.0	412.6	38.0
WH	9 - 11	LIVE	3 SAW	10.9	40.0	1,886	0.0	250.8	22.6
WH	12 - 14	LIVE	2 SAW	13.3	40.0	4,606	0.0	510.2	55.3

Unit Log Sort x Diameter Bin Summary: GOOD GOLLY U8

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.1	15.0	147	0.0	49.8	1.8
DF	5 - 8	LIVE	Domestic	6.0	36.0	2,885	0.0	368.4	34.6
DF	9 - 11	LIVE	Domestic	10.2	40.0	6,145	0.0	638.7	73.7
DF	12 - 14	LIVE	Domestic	13.9	40.0	3,883	0.0	384.3	46.6
DF	15 - 19	LIVE	Domestic	15.5	40.0	4,222	0.0	391.8	50.7
SS	< 5	LIVE	Pulp	2.1	12.0	17	0.0	2.6	0.2
SS	5 - 8	LIVE	Domestic	6.8	31.0	951	0.0	100.7	11.4
WH	< 5	LIVE	Pulp	2.0	14.0	94	0.0	25.3	1.1
WH	5 - 8	LIVE	Domestic	5.8	31.0	5,417	0.0	696.0	65.0
WH	9 - 11	LIVE	Domestic	10.9	40.0	1,886	0.0	250.8	22.6
WH	12 - 14	LIVE	Domestic	13.3	40.0	4,606	0.0	510.2	55.3

Cruise Unit Report
GOOD GOLLY U9

Unit Sale Notice Volume (MBF): GOOD GOLLY U9

				MBF Volume by Grade				
Sp	QMD	Rings/In	Age	All	2 Saw	3 Saw	4 Saw	Utility
WH	12.7			132.1		97.0	33.2	1.9
DF	12.3			74.7	9.8	37.8	25.1	2.0
SS	14.0			10.4		8.0	2.1	0.2
ALL	12.7			217.2	9.8	142.8	60.5	4.1

Unit Sale Notice Weight (tons): GOOD GOLLY U9

	Tons by Grade				
Sp	All	2 Saw	3 Saw	4 Saw	Utility
WH	1,340.6		1,030.1	279.9	30.5
DF	699.2	89.6	374.5	201.9	33.2
SS	100.6		84.7	13.2	2.6
ALL	2,140.4	89.6	1,489.4	495.0	66.4

Unit Cruise Design: GOOD GOLLY U9

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 4.5 ft	8.0	8.2	4	4	0

Unit Cruise Summary: GOOD GOLLY U9

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
WH	11	11	2.8	0
DF	7	7	1.8	0
SS	1	1	0.3	0
ALL	19	19	4.8	0

Unit Cruise Statistics (Cut + Leave Trees): GOOD GOLLY U9

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
WH	149.7	45.8	22.9	110.3	10.5	3.2	16,517	46.9	23.1
DF	95.3	28.6	14.3	98.0	15.4	5.8	9,336	32.5	15.4

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
SS	13.6	200.0	100.0	95.4	0.0	0.0	1,299	200.0	100.0
ALL	258.6	10.5	5.3	105.0	13.2	3.0	27,152	16.9	6.1

Unit Summary: GOOD GOLLY U9

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	7	ALL	12.3	59	73	9,336	1.2	115.5	95.3	27.2	699.2	74.7
SS	LIVE	CUT	1	ALL	14.0	65	82	1,299	8.1	12.7	13.6	3.6	100.6	10.4
WH	LIVE	CUT	11	ALL	12.7	62	76	16,517	1.6	170.2	149.7	42.0	1,340.6	132.1
ALL	LIVE	CUT	19	ALL	12.6	61	75	27,152	1.8	298.4	258.6	72.8	2,140.4	217.2
ALL	ALL	ALL	19	ALL	12.6	61	75	27,152	1.8	298.4	258.6	72.8	2,140.4	217.2

Unit Stand Table: GOOD GOLLY U9

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	10	LIVE	CUT	2	9.5	50	60	2,134	0.0	55.8	27.2	8.9	154.3	17.1
DF	12	LIVE	CUT	1	12.0	65	81	1,386	0.0	17.3	13.6	3.9	98.8	11.1
DF	14	LIVE	CUT	2	14.0	66	83	2,852	0.0	25.5	27.2	7.3	211.9	22.8
DF	16	LIVE	CUT	1	16.0	74	93	1,355	7.9	9.8	13.6	3.4	113.3	10.8
DF	20	LIVE	CUT	1	20.0	80	101	1,609	0.0	6.2	13.6	3.0	120.9	12.9
SS	14	LIVE	CUT	1	14.0	65	82	1,299	8.1	12.7	13.6	3.6	100.6	10.4
WH	8	LIVE	CUT	1	8.0	38	45	1,131	0.0	39.0	13.6	4.8	69.9	9.0
WH	12	LIVE	CUT	2	11.5	67	83	3,279	0.0	38.0	27.2	8.0	245.7	26.2
WH	14	LIVE	CUT	4	13.5	68	84	5,932	0.0	55.0	54.4	14.8	497.2	47.5
WH	16	LIVE	CUT	1	15.0	70	87	1,608	0.0	11.1	13.6	3.5	127.8	12.9
WH	18	LIVE	CUT	3	17.0	74	93	4,568	5.7	25.9	40.8	9.9	400.1	36.5

Unit Log Grade Summary: GOOD GOLLY U9

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	12.5	40.0	1,222	0.0	89.6	9.8
DF	LIVE	3 SAW	7.8	40.0	4,720	2.4	374.5	37.8
DF	LIVE	4 SAW	5.1	27.0	3,139	0.0	201.9	25.1
DF	LIVE	UTILITY	2.1	16.0	254	0.0	33.2	2.0
SS	LIVE	3 SAW	8.4	40.0	1,006	10.2	84.7	8.0
SS	LIVE	4 SAW	5.0	20.0	267	0.0	13.2	2.1
SS	LIVE	UTILITY	2.0	12.0	25	0.0	2.6	0.2
WH	LIVE	3 SAW	8.5	40.0	12,124	2.2	1,030.1	97.0

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
WH	LIVE	4 SAW	5.1	23.0	4,155	0.0	279.9	33.2
WH	LIVE	UTILITY	2.1	13.0	238	0.0	30.5	1.9

Unit Log Sort Summary: GOOD GOLLY U9

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	6.3	32.0	9,082	1.3	666.0	72.7
DF	LIVE	Pulp	2.1	16.0	254	0.0	33.2	2.0
SS	LIVE	Domestic	6.7	30.0	1,274	8.3	98.0	10.2
SS	LIVE	Pulp	2.0	12.0	25	0.0	2.6	0.2
WH	LIVE	Domestic	6.6	30.0	16,279	1.7	1,310.1	130.2
WH	LIVE	Pulp	2.1	13.0	238	0.0	30.5	1.9

Unit Log Grade x Sort Summary: GOOD GOLLY U9

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	12.5	40.0	1,222	0.0	89.6	9.8
DF	LIVE	3 SAW	Domestic	7.8	40.0	4,720	2.4	374.5	37.8
DF	LIVE	4 SAW	Domestic	5.1	27.0	3,139	0.0	201.9	25.1
DF	LIVE	UTILITY	Pulp	2.1	16.0	254	0.0	33.2	2.0
SS	LIVE	3 SAW	Domestic	8.4	40.0	1,006	10.2	84.7	8.0
SS	LIVE	4 SAW	Domestic	5.0	20.0	267	0.0	13.2	2.1
SS	LIVE	UTILITY	Pulp	2.0	12.0	25	0.0	2.6	0.2
WH	LIVE	3 SAW	Domestic	8.5	40.0	12,124	2.2	1,030.1	97.0
WH	LIVE	4 SAW	Domestic	5.1	23.0	4,155	0.0	279.9	33.2
WH	LIVE	UTILITY	Pulp	2.1	13.0	238	0.0	30.5	1.9

Unit Log Grade x Diameter Bin Summary: GOOD GOLLY U9

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.1	16.0	254	0.0	33.2	2.0
DF	5 - 8	LIVE	4 SAW	5.1	27.0	3,139	0.0	201.9	25.1
DF	5 - 8	LIVE	3 SAW	7.4	40.0	3,707	0.0	285.6	29.7
DF	9 - 11	LIVE	3 SAW	9.7	40.0	1,014	10.3	88.9	8.1
DF	12 - 14	LIVE	2 SAW	12.5	40.0	1,222	0.0	89.6	9.8
SS	< 5	LIVE	UTILITY	2.0	12.0	25	0.0	2.6	0.2
SS	5 - 8	LIVE	4 SAW	5.0	20.0	267	0.0	13.2	2.1
SS	5 - 8	LIVE	3 SAW	8.4	40.0	1,006	10.2	84.7	8.0
WH	< 5	LIVE	UTILITY	2.1	13.0	238	0.0	30.5	1.9

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
WH	5 - 8	LIVE	4 SAW	5.1	23.0	4,155	0.0	279.9	33.2
WH	5 - 8	LIVE	3 SAW	7.8	40.0	7,150	0.0	611.8	57.2
WH	9 - 11	LIVE	3 SAW	10.4	40.0	4,973	5.3	418.3	39.8

Unit Log Sort x Diameter Bin Summary: GOOD GOLLY U9

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.1	16.0	254	0.0	33.2	2.0
DF	5 - 8	LIVE	Domestic	5.9	31.0	6,846	0.0	487.5	54.8
DF	9 - 11	LIVE	Domestic	9.7	40.0	1,014	10.3	88.9	8.1
DF	12 - 14	LIVE	Domestic	12.5	40.0	1,222	0.0	89.6	9.8
SS	< 5	LIVE	Pulp	2.0	12.0	25	0.0	2.6	0.2
SS	5 - 8	LIVE	Domestic	6.7	30.0	1,274	8.3	98.0	10.2
WH	< 5	LIVE	Pulp	2.1	13.0	238	0.0	30.5	1.9
WH	5 - 8	LIVE	Domestic	6.0	29.0	11,305	0.0	891.8	90.4
WH	9 - 11	LIVE	Domestic	10.4	40.0	4,973	5.3	418.3	39.8

Cruise Unit Report
GOOD GOLLY U10

Unit Sale Notice Volume (MBF): GOOD GOLLY U10

				MBF Volume by Grade			
Sp	QMD	Rings/In	Age	All	3 Saw	4 Saw	Utility
WH	12.8			314.1	238.3	70.2	5.6
DF	13.5			124.5	90.0	32.7	1.8
SS	13.0			10.4	8.5	1.9	
ALL	13.0			449.0	336.8	104.7	7.5

Unit Sale Notice Weight (tons): GOOD GOLLY U10

	Tons by Grade			
Sp	All	3 Saw	4 Saw	Utility
WH	3,162.0	2,384.1	655.5	122.4
DF	1,131.4	850.1	255.0	26.3
SS	92.1	82.9	9.2	
ALL	4,385.5	3,317.1	919.7	148.7

Unit Cruise Design: GOOD GOLLY U10

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 4.5 ft	16.0	15.0	8	6	0

Unit Cruise Summary: GOOD GOLLY U10

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
WH	19	26	3.3	0
DF	9	11	1.4	0
SS	1	1	0.1	0
ALL	29	38	4.8	0

Unit Cruise Statistics (Cut + Leave Trees): GOOD GOLLY U10

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
WH	176.9	27.3	9.6	110.9	13.4	3.1	19,629	30.4	10.1
DF	74.9	54.1	19.1	104.0	12.2	4.1	7,783	55.5	19.6

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
SS	6.8	282.8	100.0	95.5	0.0	0.0	650	282.8	100.0
ALL	258.6	9.7	3.4	108.5	13.2	2.4	28,062	16.4	4.2

Unit Summary: GOOD GOLLY U10

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	9	ALL	13.5	60	75	7,783	3.2	75.3	74.9	20.4	1,131.4	124.5
SS	LIVE	CUT	1	ALL	13.0	61	76	650	0.0	7.4	6.8	1.9	92.1	10.4
WH	LIVE	CUT	19	ALL	12.8	62	76	19,629	0.6	198.0	176.9	49.5	3,162.0	314.1
ALL	LIVE	CUT	29	ALL	13.0	61	76	28,062	1.3	280.7	258.6	71.8	4,385.5	449.0
ALL	ALL	ALL	29	ALL	13.0	61	76	28,062	1.3	280.7	258.6	71.8	4,385.5	449.0

Unit Stand Table: GOOD GOLLY U10

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	8	LIVE	CUT	1	8.0	38	45	643	0.0	23.8	8.3	2.9	65.2	10.3
DF	14	LIVE	CUT	3	14.0	67	84	2,568	2.7	23.4	25.0	6.7	386.7	41.1
DF	16	LIVE	CUT	2	16.0	72	89	1,686	3.4	11.9	16.6	4.2	260.8	27.0
DF	18	LIVE	CUT	3	17.0	76	95	2,886	4.2	15.8	25.0	6.1	418.7	46.2
SS	14	LIVE	CUT	1	13.0	61	76	650	0.0	7.4	6.8	1.9	92.1	10.4
WH	8	LIVE	CUT	1	8.0	38	45	774	0.0	26.7	9.3	3.3	95.6	12.4
WH	10	LIVE	CUT	1	10.0	51	62	768	0.0	17.1	9.3	2.9	131.1	12.3
WH	12	LIVE	CUT	4	11.0	62	76	3,923	0.0	56.4	37.2	11.2	643.0	62.8
WH	14	LIVE	CUT	5	14.0	68	84	4,922	0.5	43.5	46.6	12.4	860.8	78.8
WH	16	LIVE	CUT	5	15.4	71	89	5,791	0.0	36.1	46.6	11.9	879.6	92.7
WH	18	LIVE	CUT	3	17.3	76	95	3,451	2.7	17.1	27.9	6.7	551.9	55.2

Unit Log Grade Summary: GOOD GOLLY U10

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	3 SAW	9.3	40.0	5,626	4.0	850.1	90.0
DF	LIVE	4 SAW	5.1	26.0	2,042	1.2	255.0	32.7
DF	LIVE	UTILITY	2.1	13.0	115	0.0	26.3	1.8
SS	LIVE	3 SAW	7.7	40.0	532	0.0	82.9	8.5
SS	LIVE	4 SAW	5.0	15.0	118	0.0	9.2	1.9
WH	LIVE	3 SAW	8.3	40.0	14,892	0.6	2,384.1	238.3
WH	LIVE	4 SAW	5.1	27.0	4,386	0.6	655.5	70.2
WH	LIVE	UTILITY	2.1	17.0	351	0.0	122.4	5.6

Unit Log Sort Summary: GOOD GOLLY U10

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	6.8	31.0	7,668	3.2	1,105.1	122.7
DF	LIVE	Pulp	2.1	13.0	115	0.0	26.3	1.8
SS	LIVE	Domestic	6.4	28.0	650	0.0	92.1	10.4
WH	LIVE	Domestic	6.7	33.0	19,278	0.6	3,039.6	308.4
WH	LIVE	Pulp	2.1	17.0	351	0.0	122.4	5.6

Unit Log Grade x Sort Summary: GOOD GOLLY U10

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	3 SAW	Domestic	9.3	40.0	5,626	4.0	850.1	90.0
DF	LIVE	4 SAW	Domestic	5.1	26.0	2,042	1.2	255.0	32.7
DF	LIVE	UTILITY	Pulp	2.1	13.0	115	0.0	26.3	1.8
SS	LIVE	3 SAW	Domestic	7.7	40.0	532	0.0	82.9	8.5
SS	LIVE	4 SAW	Domestic	5.0	15.0	118	0.0	9.2	1.9
WH	LIVE	3 SAW	Domestic	8.3	40.0	14,892	0.6	2,384.1	238.3
WH	LIVE	4 SAW	Domestic	5.1	27.0	4,386	0.6	655.5	70.2
WH	LIVE	UTILITY	Pulp	2.1	17.0	351	0.0	122.4	5.6

Unit Log Grade x Diameter Bin Summary: GOOD GOLLY U10

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.1	13.0	115	0.0	26.3	1.8
DF	5 - 8	LIVE	4 SAW	5.1	26.0	2,042	1.2	255.0	32.7
DF	5 - 8	LIVE	3 SAW	8.3	40.0	1,984	3.4	315.8	31.7
DF	9 - 11	LIVE	3 SAW	10.2	40.0	3,642	4.3	534.3	58.3
SS	5 - 8	LIVE	4 SAW	5.0	15.0	118	0.0	9.2	1.9
SS	5 - 8	LIVE	3 SAW	7.7	40.0	532	0.0	82.9	8.5
WH	< 5	LIVE	UTILITY	2.1	17.0	351	0.0	122.4	5.6
WH	5 - 8	LIVE	4 SAW	5.1	27.0	4,386	0.6	655.5	70.2
WH	5 - 8	LIVE	3 SAW	7.4	40.0	7,389	0.0	1,253.8	118.2
WH	9 - 11	LIVE	3 SAW	10.2	40.0	7,503	1.2	1,130.3	120.0

Unit Log Sort x Diameter Bin Summary: GOOD GOLLY U10

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.1	13.0	115	0.0	26.3	1.8
DF	5 - 8	LIVE	Domestic	5.9	29.0	4,026	2.3	570.8	64.4
DF	9 - 11	LIVE	Domestic	10.2	40.0	3,642	4.3	534.3	58.3

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
SS	5 - 8	LIVE	Domestic	6.4	28.0	650	0.0	92.1	10.4
WH	< 5	LIVE	Pulp	2.1	17.0	351	0.0	122.4	5.6
WH	5 - 8	LIVE	Domestic	6.0	32.0	11,775	0.2	1,909.3	188.4
WH	9 - 11	LIVE	Domestic	10.2	40.0	7,503	1.2	1,130.3	120.0

Cruise Unit Report
GOOD GOLLY U11

Unit Sale Notice Volume (MBF): GOOD GOLLY U11

				MBF Volume by Grade				
Sp	QMD	Rings/In	Age	All	2 Saw	3 Saw	4 Saw	Utility
WH	12.5			708.7	69.8	362.8	269.2	6.9
DF	12.9			276.5	36.0	154.1	83.8	2.6
SS	12.3			77.1		36.5	39.7	0.9
RA	12.0			10.0			9.5	0.5
ALL	12.6			1,072.3	105.8	553.4	402.2	10.8

Unit Sale Notice Weight (tons): GOOD GOLLY U11

	Tons by Grade				
Sp	All	2 Saw	3 Saw	4 Saw	Utility
WH	7,724.4	672.5	4,119.4	2,788.8	143.7
DF	2,686.5	319.2	1,560.9	746.9	59.5
SS	753.9		367.5	375.0	11.3
RA	99.7			91.4	8.3
ALL	11,264.5	991.7	6,047.9	4,002.1	222.8

Unit Cruise Design: GOOD GOLLY U11

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (40, 40 for some species) Measure/ Count Plots, Sighting Ht = 4.5 ft	89.0	89.0	30	10	0

Unit Cruise Summary: GOOD GOLLY U11

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
WH	11	65	2.2	0
DF	8	27	0.9	0
SS	4	8	0.3	0
RA	1	1	0.0	0
ALL	24	101	3.4	0

Unit Cruise Statistics (Cut + Leave Trees): GOOD GOLLY U11

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
WH	86.7	61.9	11.3	91.9	22.0	6.6	7,963	65.7	13.1
DF	36.0	98.3	17.9	86.3	20.8	7.3	3,107	100.5	19.4
SS	10.7	239.9	43.8	81.2	22.4	11.2	866	240.9	45.2
RA	1.3	547.7	100.0	84.0	0.0	0.0	112	547.7	100.0
ALL	134.7	43.8	8.0	89.5	20.5	4.2	12,047	48.3	9.0

Unit Summary: GOOD GOLLY U11

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	8	ALL	12.3	52	32	3,107	0.0	43.6	36.0	10.3	2,686.5	276.5
RA	LIVE	CUT	1	ALL	12.0	55	67	112	0.0	1.7	1.3	0.4	99.7	10.0
SS	LIVE	CUT	4	ALL	13.0	56	48	866	0.0	11.6	10.7	3.0	753.9	77.1
WH	LIVE	CUT	11	ALL	12.5	53	45	7,963	0.8	101.7	86.7	24.5	7,724.4	708.7
ALL	LIVE	CUT	24	ALL	12.5	53	42	12,048	0.6	158.6	134.7	38.2	11,264.5	1,072.3
ALL	ALL	ALL	24	ALL	12.5	53	42	12,048	0.6	158.6	134.7	38.2	11,264.5	1,072.3

Unit Stand Table: GOOD GOLLY U11

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	8	LIVE	CUT	1	8.0	40		207	0.0	6.9	2.4	0.8	179.1	18.4
DF	10	LIVE	CUT	3	10.0	42	33	502	0.0	13.2	7.2	2.3	424.6	44.7
DF	12	LIVE	CUT	2	11.5	54	33	409	0.0	6.7	4.8	1.4	365.1	36.4
DF	14	LIVE	CUT	4	14.0	63	40	861	0.0	9.0	9.6	2.6	751.1	76.6
DF	16	LIVE	CUT	3	15.3	64	53	662	0.0	5.6	7.2	1.8	572.6	58.9
DF	18	LIVE	CUT	1	18.0	74		207	0.0	1.4	2.4	0.6	179.1	18.4
DF	20	LIVE	CUT	1	20.0	72	90	259	0.0	1.1	2.4	0.5	214.9	23.0
RA	12	LIVE	CUT	1	12.0	55	67	112	0.0	1.7	1.3	0.4	99.7	10.0
SS	10	LIVE	CUT	1	10.0	50	62	143	0.0	3.3	1.8	0.6	120.7	12.8
SS	12	LIVE	CUT	1	11.0	44	54	105	0.0	2.7	1.8	0.5	99.7	9.4
SS	14	LIVE	CUT	2	14.0	62	37	289	0.0	3.3	3.6	1.0	256.5	25.7
SS	16	LIVE	CUT	1	16.0	71		144	0.0	1.3	1.8	0.4	125.6	12.8
SS	18	LIVE	CUT	1	18.0	70	88	184	0.0	1.0	1.8	0.4	151.3	16.4
WH	8	LIVE	CUT	2	8.0	40	24	963	0.4	31.0	10.8	3.8	792.1	85.7
WH	10	LIVE	CUT	1	10.0	45	54	367	0.0	9.9	5.4	1.7	367.7	32.7
WH	12	LIVE	CUT	2	11.0	49	59	706	0.0	16.4	10.8	3.3	841.5	62.8
WH	14	LIVE	CUT	3	14.0	62	51	1,572	0.3	15.2	16.3	4.3	1,492.9	139.9

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
WH	16	LIVE	CUT	5	15.8	68	50	2,540	2.1	19.9	27.1	6.8	2,576.3	226.1
WH	18	LIVE	CUT	1	17.0	70	87	629	0.0	3.4	5.4	1.3	567.7	56.0
WH	20	LIVE	CUT	2	19.5	73	49	1,186	0.4	5.2	10.8	2.5	1,086.3	105.5

Unit Log Grade Summary: GOOD GOLLY U11

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	12.1	40.0	404	0.0	319.2	36.0
DF	LIVE	3 SAW	7.9	40.0	1,731	0.0	1,560.9	154.1
DF	LIVE	4 SAW	5.1	26.0	942	0.0	746.9	83.8
DF	LIVE	UTILITY	2.0	18.0	30	0.0	59.5	2.6
RA	LIVE	4 SAW	6.5	40.0	107	0.0	91.4	9.5
RA	LIVE	UTILITY	2.1	19.0	5	0.0	8.3	0.5
SS	LIVE	3 SAW	8.9	40.0	411	0.0	367.5	36.5
SS	LIVE	4 SAW	5.1	32.0	446	0.0	375.0	39.7
SS	LIVE	UTILITY	2.0	14.0	10	0.0	11.3	0.9
WH	LIVE	2 SAW	12.3	40.0	784	0.0	672.5	69.8
WH	LIVE	3 SAW	8.8	39.0	4,077	1.6	4,119.4	362.8
WH	LIVE	4 SAW	5.1	29.0	3,025	0.0	2,788.8	269.2
WH	LIVE	UTILITY	2.0	14.0	77	0.0	143.7	6.9

Unit Log Sort Summary: GOOD GOLLY U11

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	6.4	32.0	3,077	0.0	2,627.0	273.9
DF	LIVE	Pulp	2.0	18.0	30	0.0	59.5	2.6
RA	LIVE	Domestic	6.5	40.0	107	0.0	91.4	9.5
RA	LIVE	Pulp	2.1	19.0	5	0.0	8.3	0.5
SS	LIVE	Domestic	6.0	34.0	856	0.0	742.6	76.2
SS	LIVE	Pulp	2.0	14.0	10	0.0	11.3	0.9
WH	LIVE	Domestic	6.4	32.0	7,886	0.9	7,580.7	701.9
WH	LIVE	Pulp	2.0	14.0	77	0.0	143.7	6.9

Unit Log Grade x Sort Summary: GOOD GOLLY U11

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	12.1	40.0	404	0.0	319.2	36.0
DF	LIVE	3 SAW	Domestic	7.9	40.0	1,731	0.0	1,560.9	154.1
DF	LIVE	4 SAW	Domestic	5.1	26.0	942	0.0	746.9	83.8

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	UTILITY	Pulp	2.0	18.0	30	0.0	59.5	2.6
RA	LIVE	4 SAW	Domestic	6.5	40.0	107	0.0	91.4	9.5
RA	LIVE	UTILITY	Pulp	2.1	19.0	5	0.0	8.3	0.5
SS	LIVE	3 SAW	Domestic	8.9	40.0	411	0.0	367.5	36.5
SS	LIVE	4 SAW	Domestic	5.1	32.0	446	0.0	375.0	39.7
SS	LIVE	UTILITY	Pulp	2.0	14.0	10	0.0	11.3	0.9
WH	LIVE	2 SAW	Domestic	12.3	40.0	784	0.0	672.5	69.8
WH	LIVE	3 SAW	Domestic	8.8	39.0	4,077	1.6	4,119.4	362.8
WH	LIVE	4 SAW	Domestic	5.1	29.0	3,025	0.0	2,788.8	269.2
WH	LIVE	UTILITY	Pulp	2.0	14.0	77	0.0	143.7	6.9

Unit Log Grade x Diameter Bin Summary: GOOD GOLLY U11

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.0	18.0	30	0.0	59.5	2.6
DF	5 - 8	LIVE	4 SAW	5.1	26.0	942	0.0	746.9	83.8
DF	5 - 8	LIVE	3 SAW	7.6	40.0	1,357	0.0	1,242.1	120.8
DF	9 - 11	LIVE	3 SAW	9.4	40.0	374	0.0	318.8	33.3
DF	12 - 14	LIVE	2 SAW	12.1	40.0	404	0.0	319.2	36.0
RA	< 5	LIVE	UTILITY	2.1	19.0	5	0.0	8.3	0.5
RA	5 - 8	LIVE	4 SAW	6.5	40.0	107	0.0	91.4	9.5
SS	< 5	LIVE	UTILITY	2.0	14.0	10	0.0	11.3	0.9
SS	5 - 8	LIVE	4 SAW	5.1	32.0	446	0.0	375.0	39.7
SS	5 - 8	LIVE	3 SAW	7.7	40.0	180	0.0	178.9	16.0
SS	9 - 11	LIVE	3 SAW	10.9	40.0	231	0.0	188.6	20.6
WH	< 5	LIVE	UTILITY	2.0	14.0	77	0.0	143.7	6.9
WH	5 - 8	LIVE	4 SAW	5.1	29.0	3,025	0.0	2,788.8	269.2
WH	5 - 8	LIVE	3 SAW	8.1	39.0	2,070	0.0	2,132.5	184.3
WH	9 - 11	LIVE	3 SAW	9.9	40.0	2,006	3.3	1,986.9	178.6
WH	12 - 14	LIVE	2 SAW	12.3	40.0	784	0.0	672.5	69.8

Unit Log Sort x Diameter Bin Summary: GOOD GOLLY U11

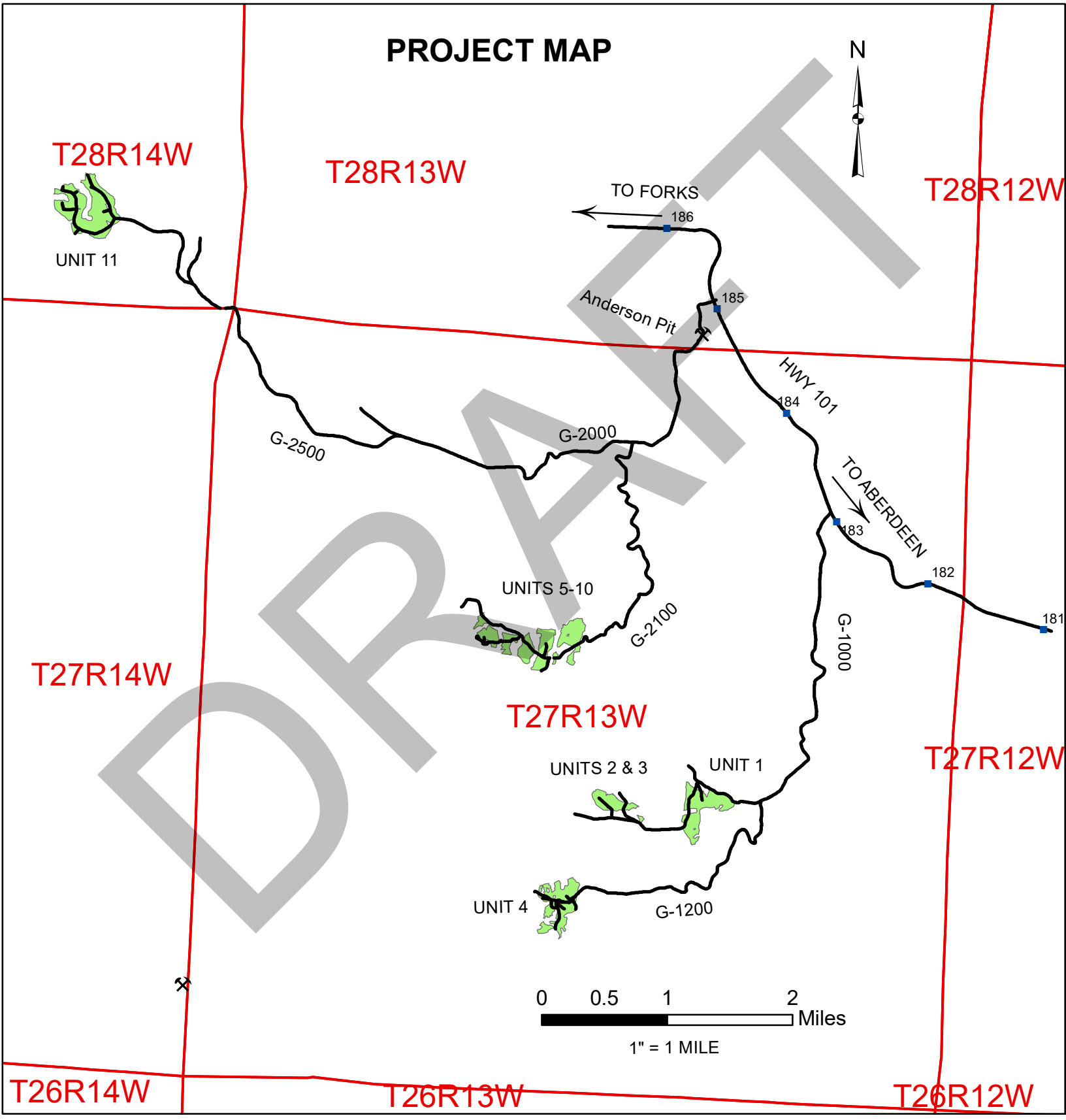
Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.0	18.0	30	0.0	59.5	2.6
DF	5 - 8	LIVE	Domestic	6.0	31.0	2,299	0.0	1,989.0	204.6
DF	9 - 11	LIVE	Domestic	9.4	40.0	374	0.0	318.8	33.3
DF	12 - 14	LIVE	Domestic	12.1	40.0	404	0.0	319.2	36.0
RA	< 5	LIVE	Pulp	2.1	19.0	5	0.0	8.3	0.5

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
RA	5 - 8	LIVE	Domestic	6.5	40.0	107	0.0	91.4	9.5
SS	< 5	LIVE	Pulp	2.0	14.0	10	0.0	11.3	0.9
SS	5 - 8	LIVE	Domestic	5.5	33.0	625	0.0	554.0	55.7
SS	9 - 11	LIVE	Domestic	10.9	40.0	231	0.0	188.6	20.6
WH	< 5	LIVE	Pulp	2.0	14.0	77	0.0	143.7	6.9
WH	5 - 8	LIVE	Domestic	5.7	31.0	5,095	0.0	4,921.3	453.5
WH	9 - 11	LIVE	Domestic	9.9	40.0	2,006	3.3	1,986.9	178.6
WH	12 - 14	LIVE	Domestic	12.3	40.0	784	0.0	672.5	69.8

STATE OF WASHINGTON
DEPARTMENT OF NATURA RESOURCES
GOOD GOLLY TIMBER SALE ROAD PLAN
CLALLAM COUNTY
COAST DISTRICT

AGREEMENT NO: 30-100647
DATE: JULY 30, 2020

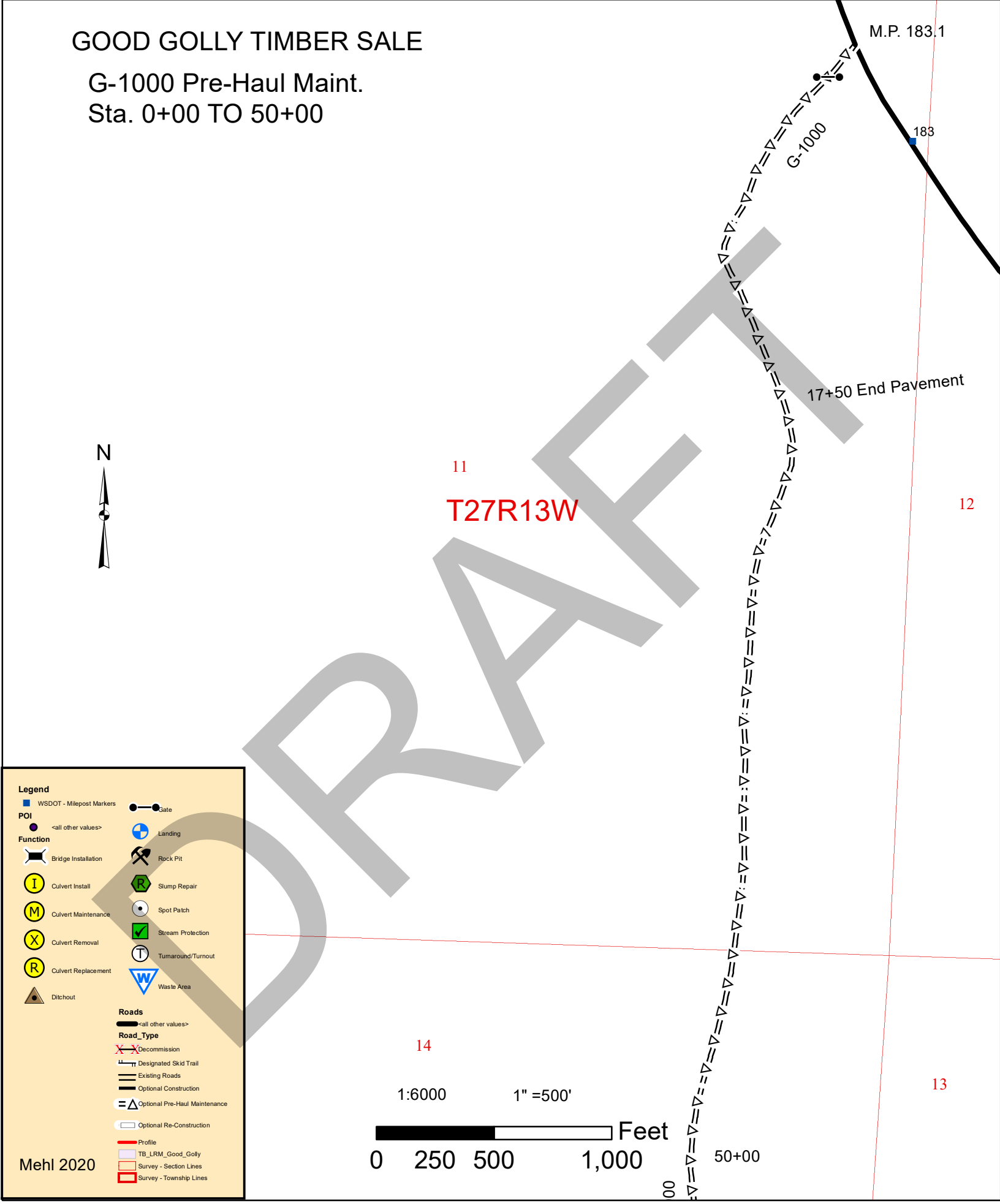
DISTRICT ENGINEER: BILL MEHL
DRAWN & COMPILED BY: BILL MEHL

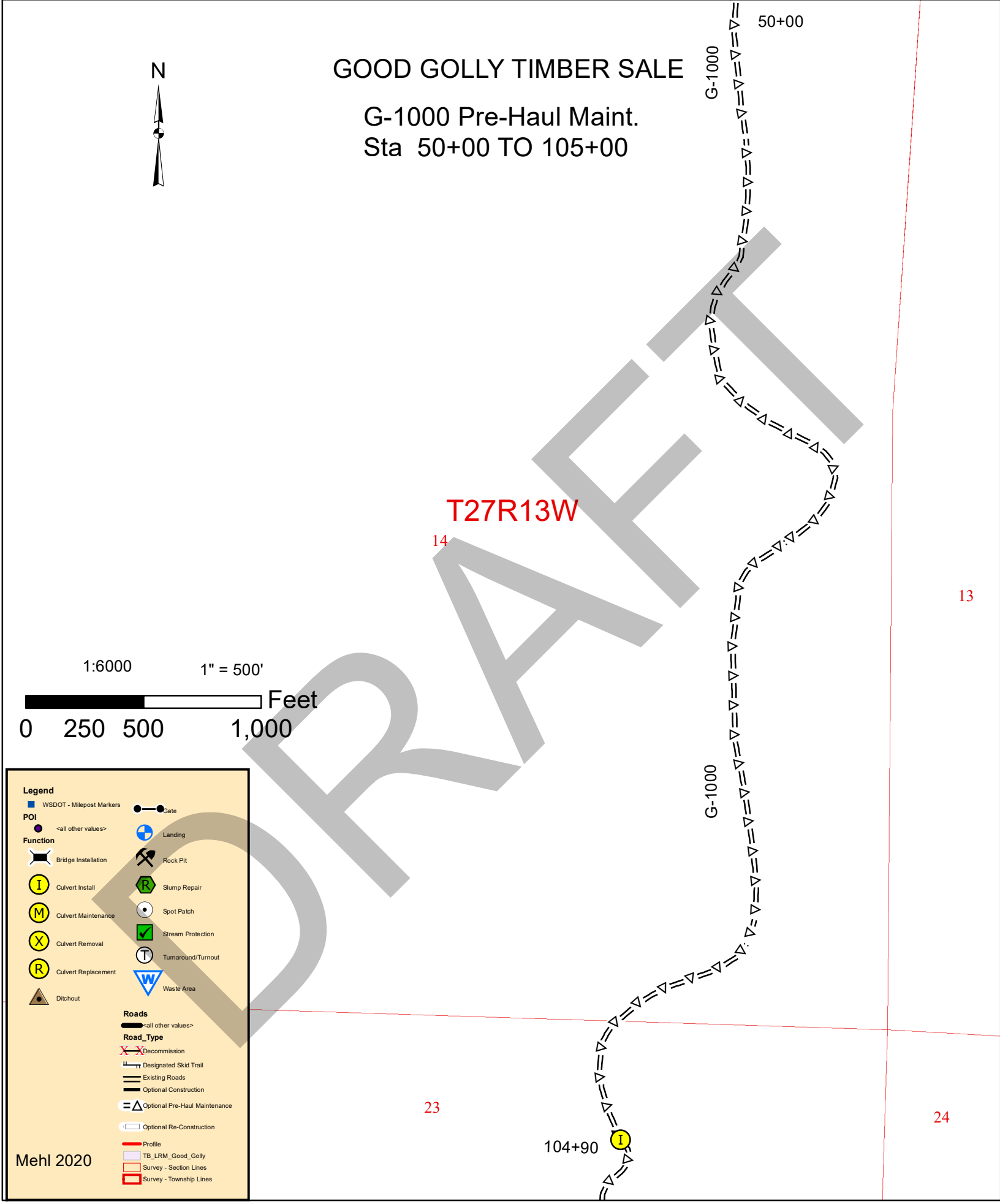


Accessed: 10/06/2020

GOOD GOLLY TIMBER SALE

G-1000 Pre-Haul Maint.
Sta. 0+00 TO 50+00

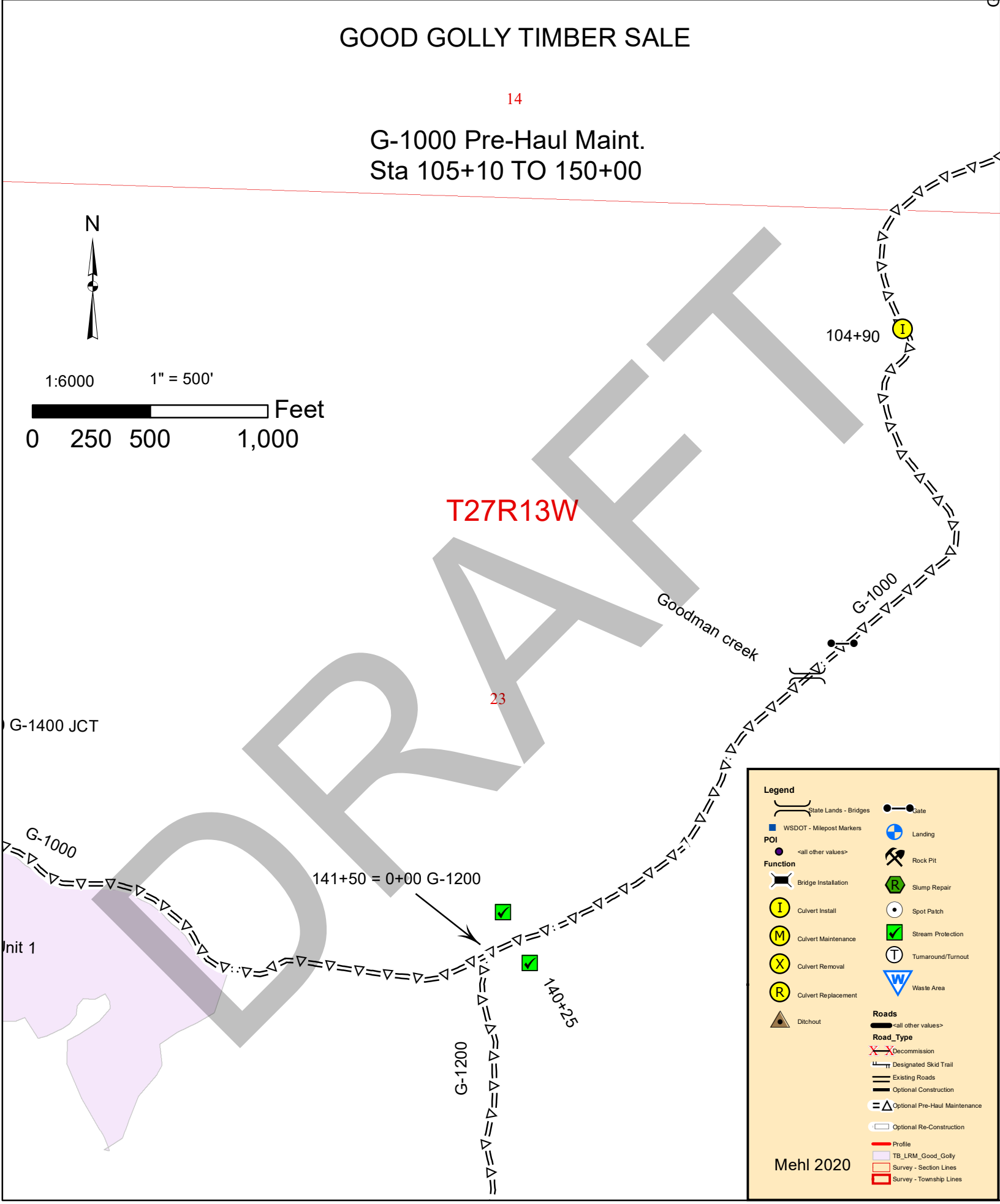


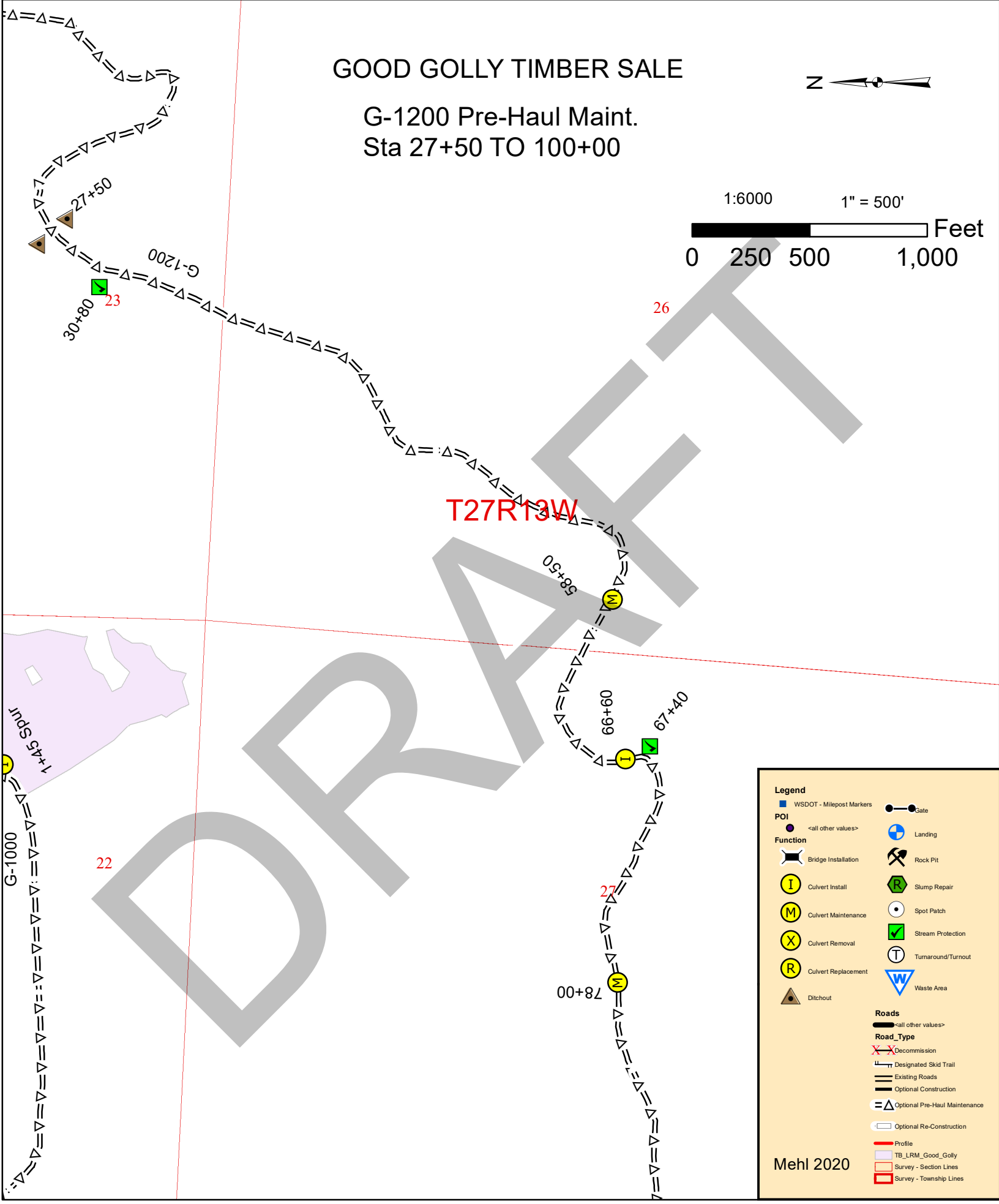


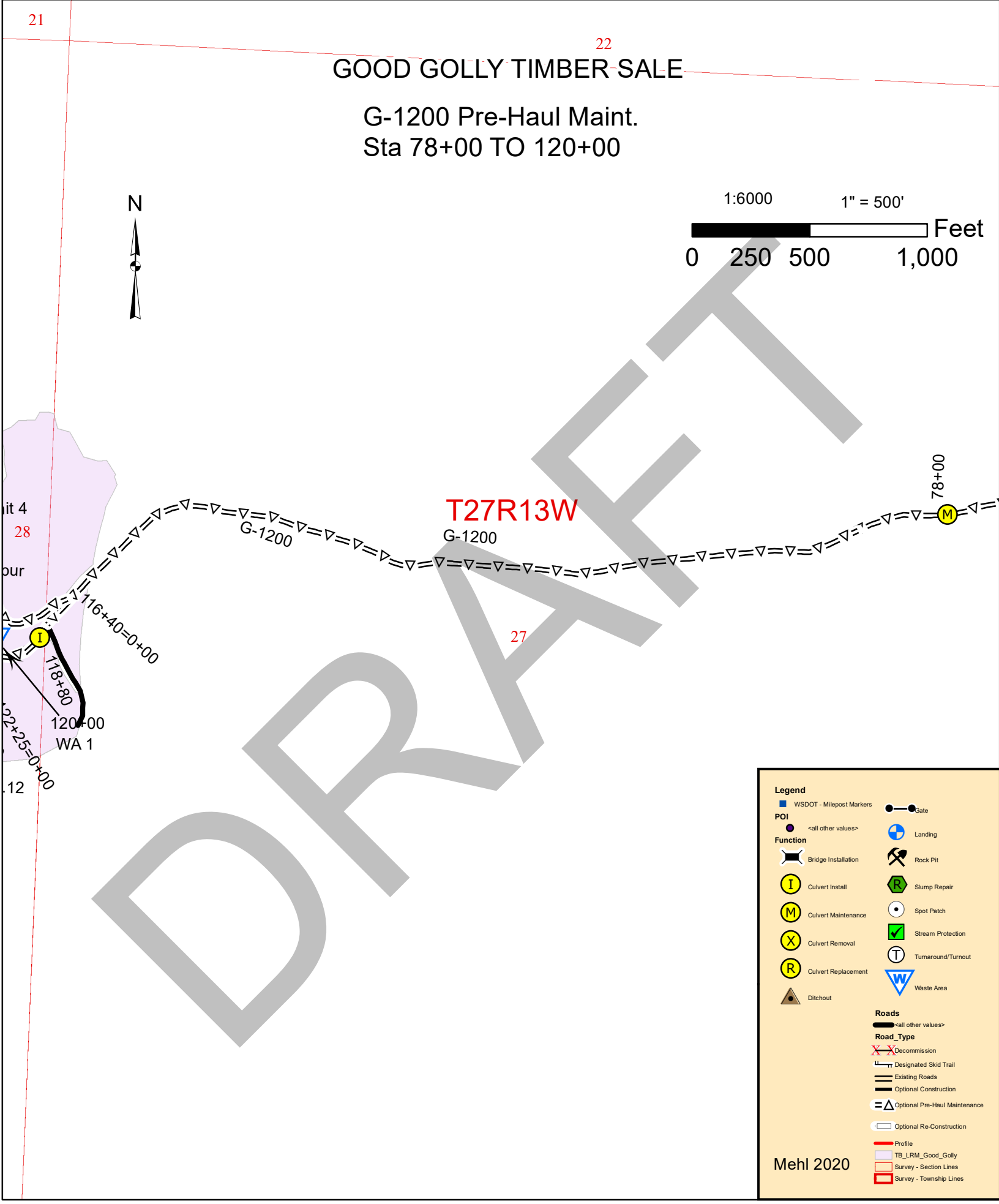
GOOD GOLLY TIMBER SALE

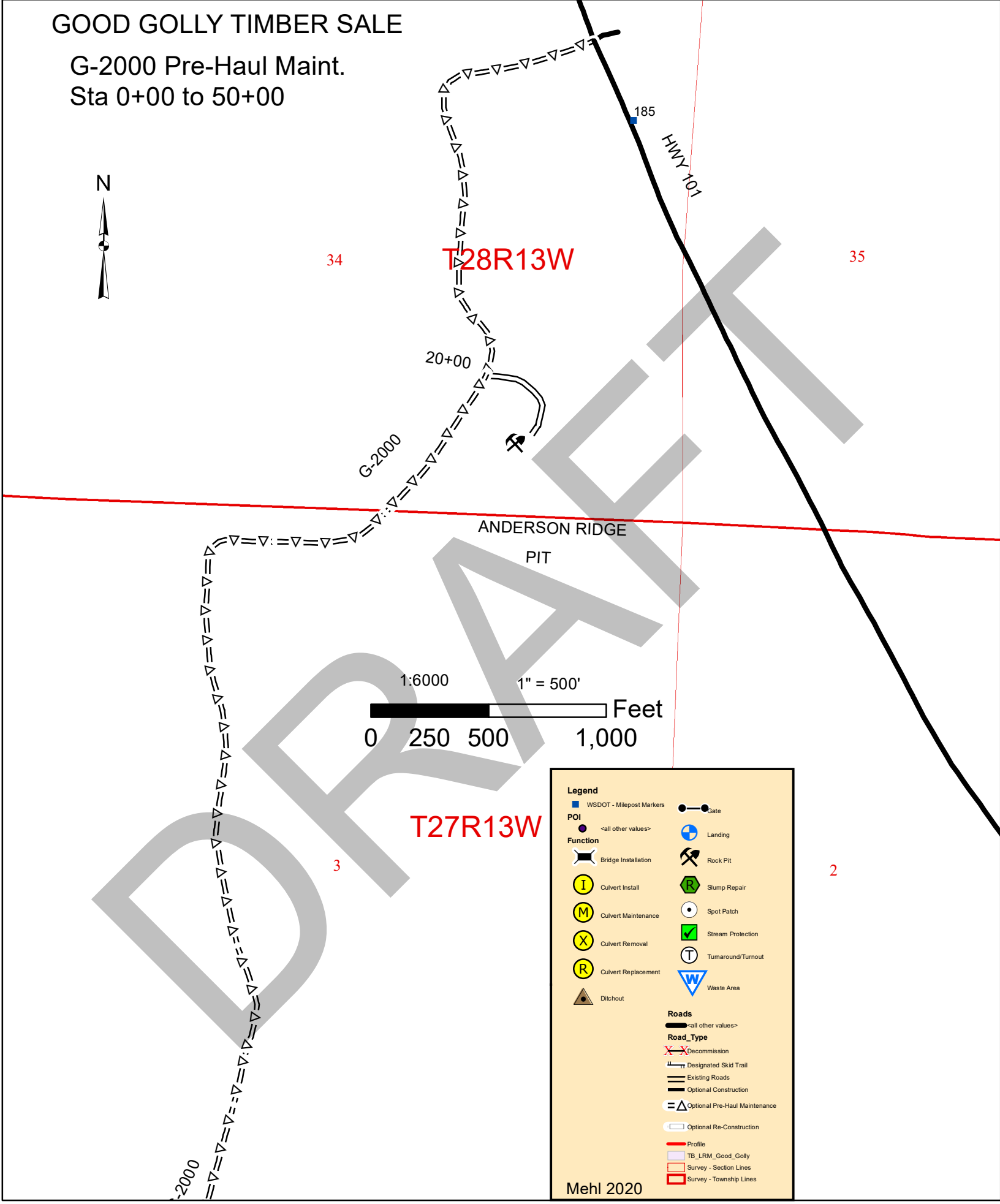
14

G-1000 Pre-Haul Maint.
Sta 105+10 TO 150+00



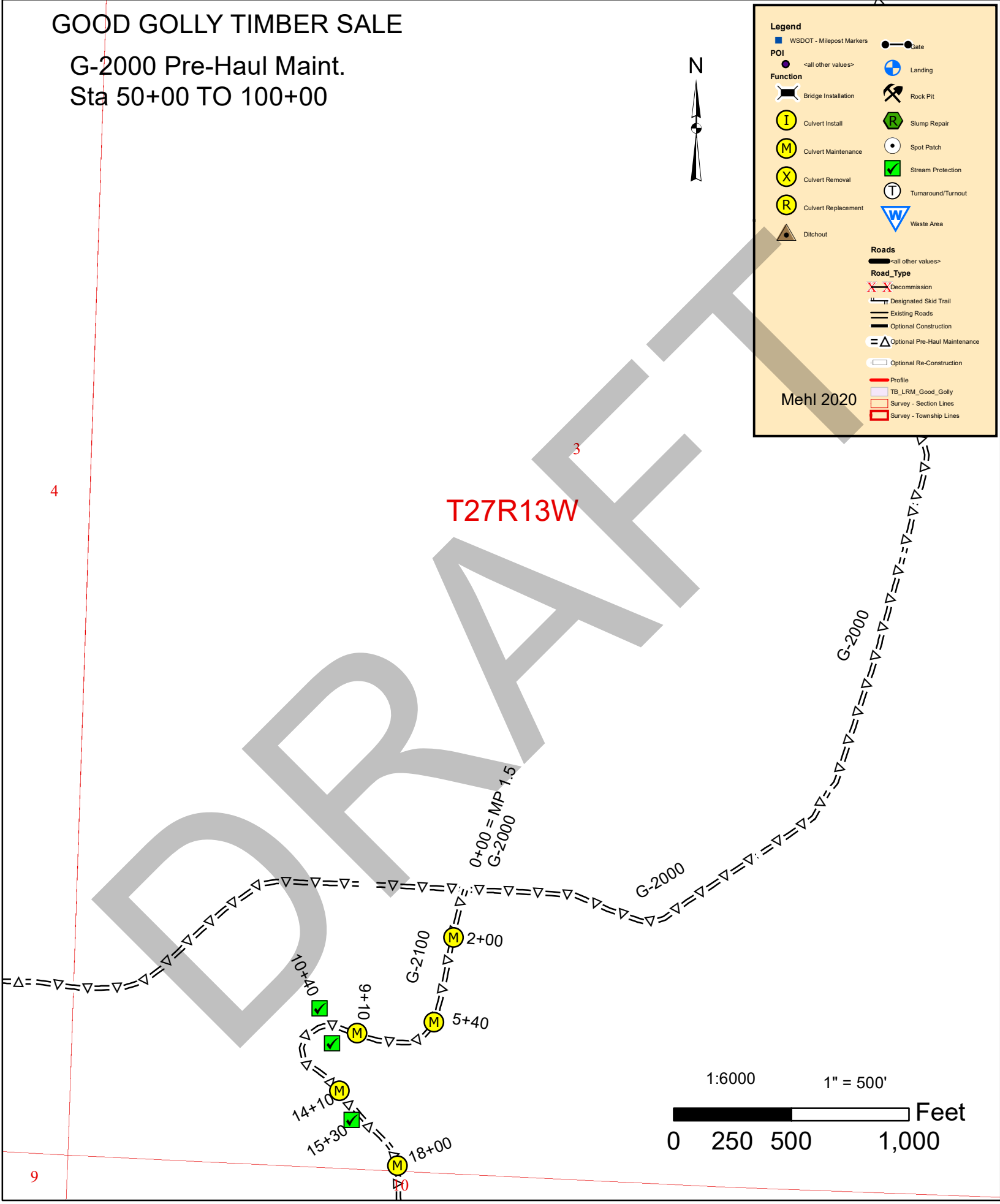

GOOD GOLLY TIMBER SALE
G-1200 Pre-Haul Maint.
Sta 27+50 TO 100+00
N
1:6000
1" = 500'
Feet
0 250 500 1,000
27+50
G-1200
30+80
23
26
T27R13W
58+50
69+99
67+40
1+45 Spur
G-1000
22
27
78+00
DRAFT
Legend
WSDOT - Milepost Markers
POI
<all other values>
Function
Bridge Installation
Culvert Install
Culvert Maintenance
Culvert Removal
Culvert Replacement
Ditchout
Gate
Landing
Rock Pit
Slump Repair
Spot Patch
Stream Protection
Turnaround/Turnout
Waste Area
Roads
<all other values>
Road_Type
Decommission
Designated Skid Trail
Existing Roads
Optional Construction
Optional Pre-Haul Maintenance
Optional Re-Construction
Profile
TB_LRM_Good_Golly
Survey - Section Lines
Survey - Township Lines
Mehl 2020

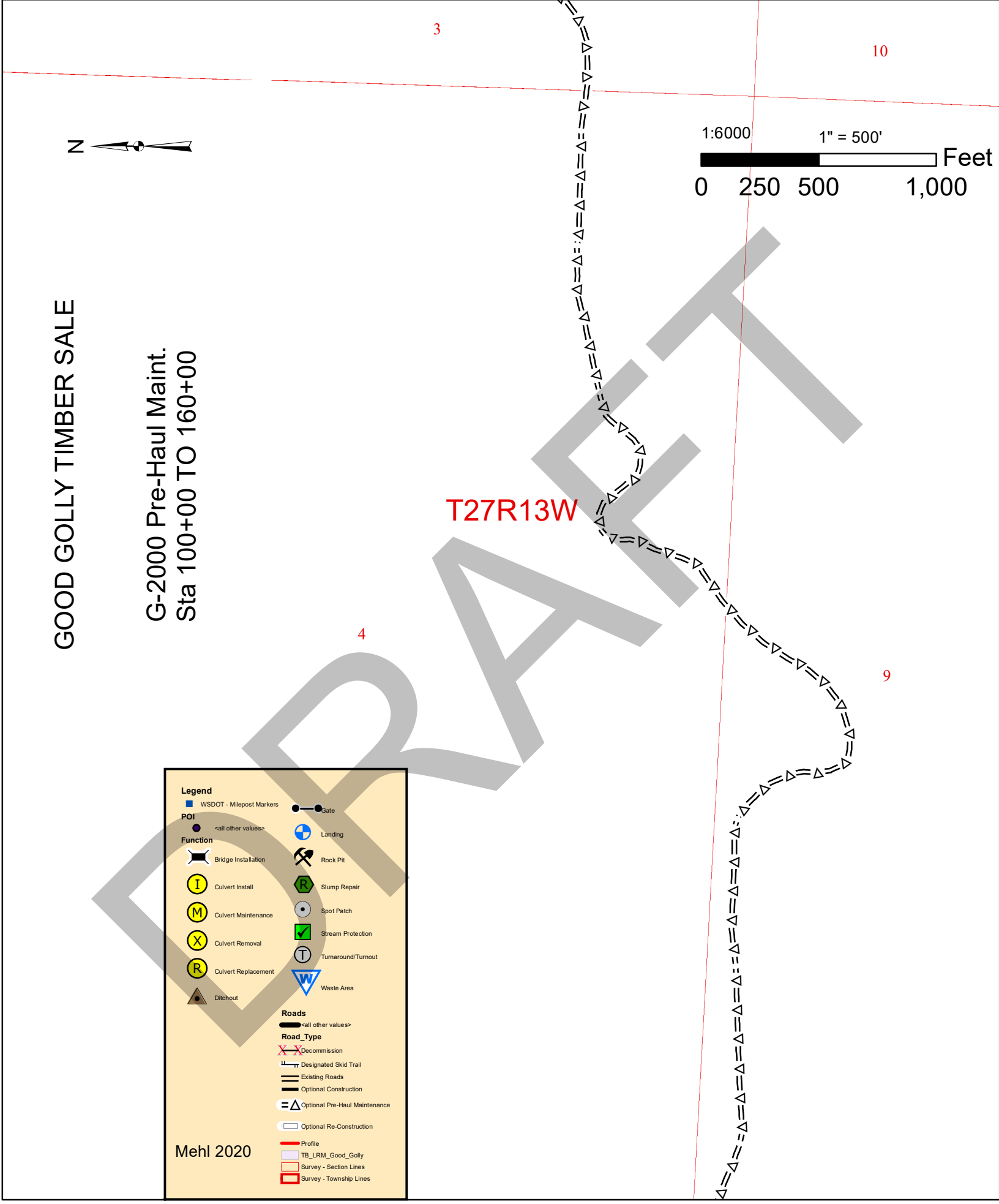

21
22
GOOD GOLLY TIMBER SALE
G-1200 Pre-Haul Maint.
Sta 78+00 TO 120+00
N
1:6000
1" = 500'
Feet
0 250 500 1,000
T27R13W
G-1200
G-1200
78+00
116+40=0+00
118+80
120+00
WA 1
22+25=0+00
28
27
DRAFT
Legend
WSDOT - Milepost Markers
POI
<all other values>
Function
Bridge Installation
Culvert Install
Culvert Maintenance
Culvert Removal
Culvert Replacement
Ditchout
Gate
Landing
Rock Pit
Slump Repair
Spot Patch
Stream Protection
Turnaround/Turnout
Waste Area
Roads
<all other values>
Road_Type
Decommission
Designated Skid Trail
Existing Roads
Optional Construction
Optional Pre-Haul Maintenance
Optional Re-Construction
Profile
TB_LRM_Good_Golly
Survey - Section Lines
Survey - Township Lines
Mehl 2020

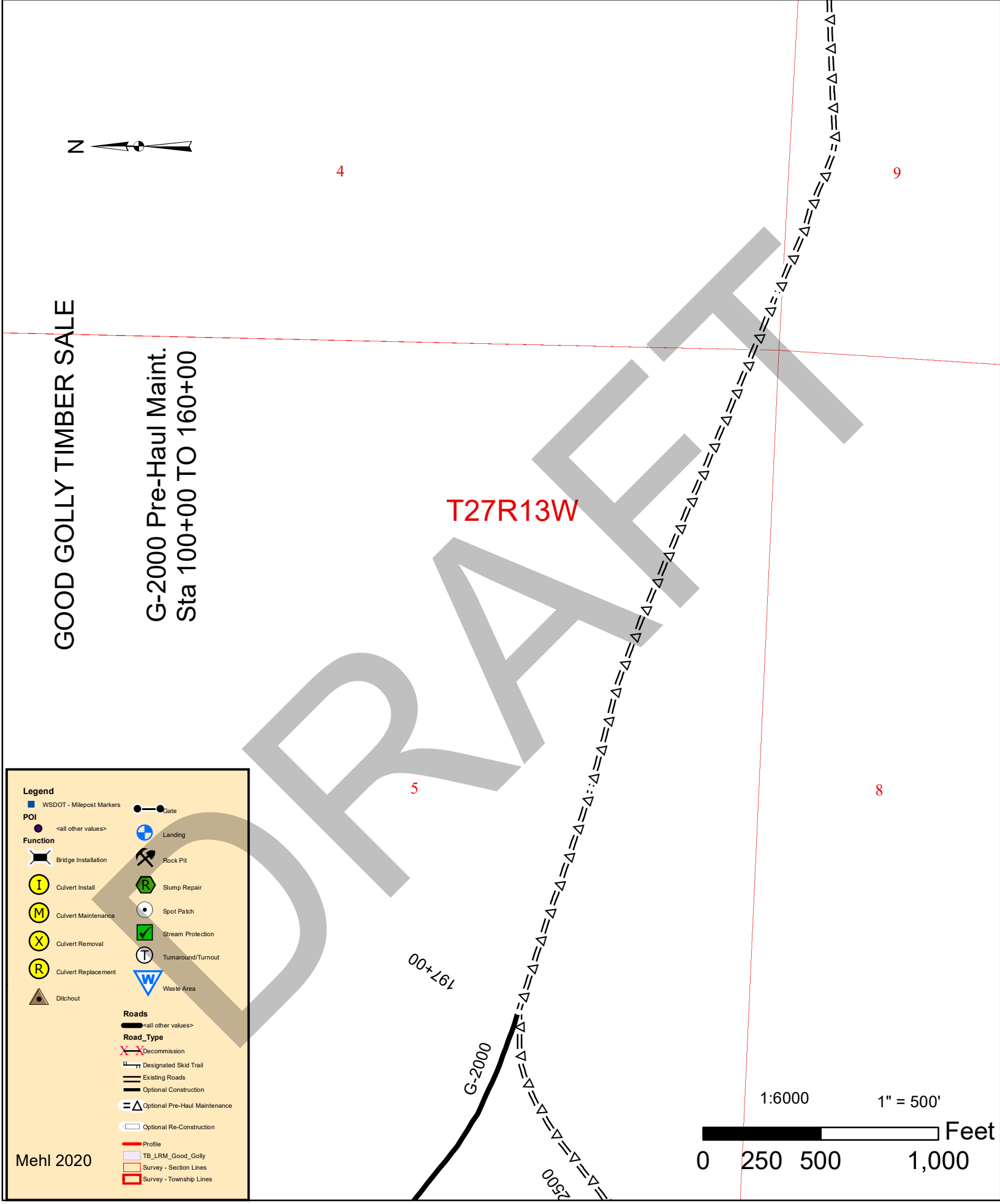

GOOD GOLLY TIMBER SALE
G-2000 Pre-Haul Maint.
Sta 0+00 to 50+00
N
185
HWY 101
34
T28R13W
35
20+00
G-2000
ANDERSON RIDGE
PIT
1:6000
1" = 500'
Feet
0 250 500 1,000
T27R13W
3
2
Legend
WSDOT - Milepost Markers
POI
<all other values>
Function
Bridge Installation
Culvert Install
Culvert Maintenance
Culvert Removal
Culvert Replacement
Ditchout
Gate
Landing
Rock Pit
Slump Repair
Spot Patch
Stream Protection
Turnaround/Turnout
Waste Area
Roads
<all other values>
Road_Type
Decommission
Designated Skid Trail
Existing Roads
Optional Construction
Optional Pre-Haul Maintenance
Optional Re-Construction
Profile
TB_LRM_Good_Golly
Survey - Section Lines
Survey - Township Lines
Mehl 2020
DRAFT

GOOD GOLLY TIMBER SALE

G-2000 Pre-Haul Maint.
Sta 50+00 TO 100+00

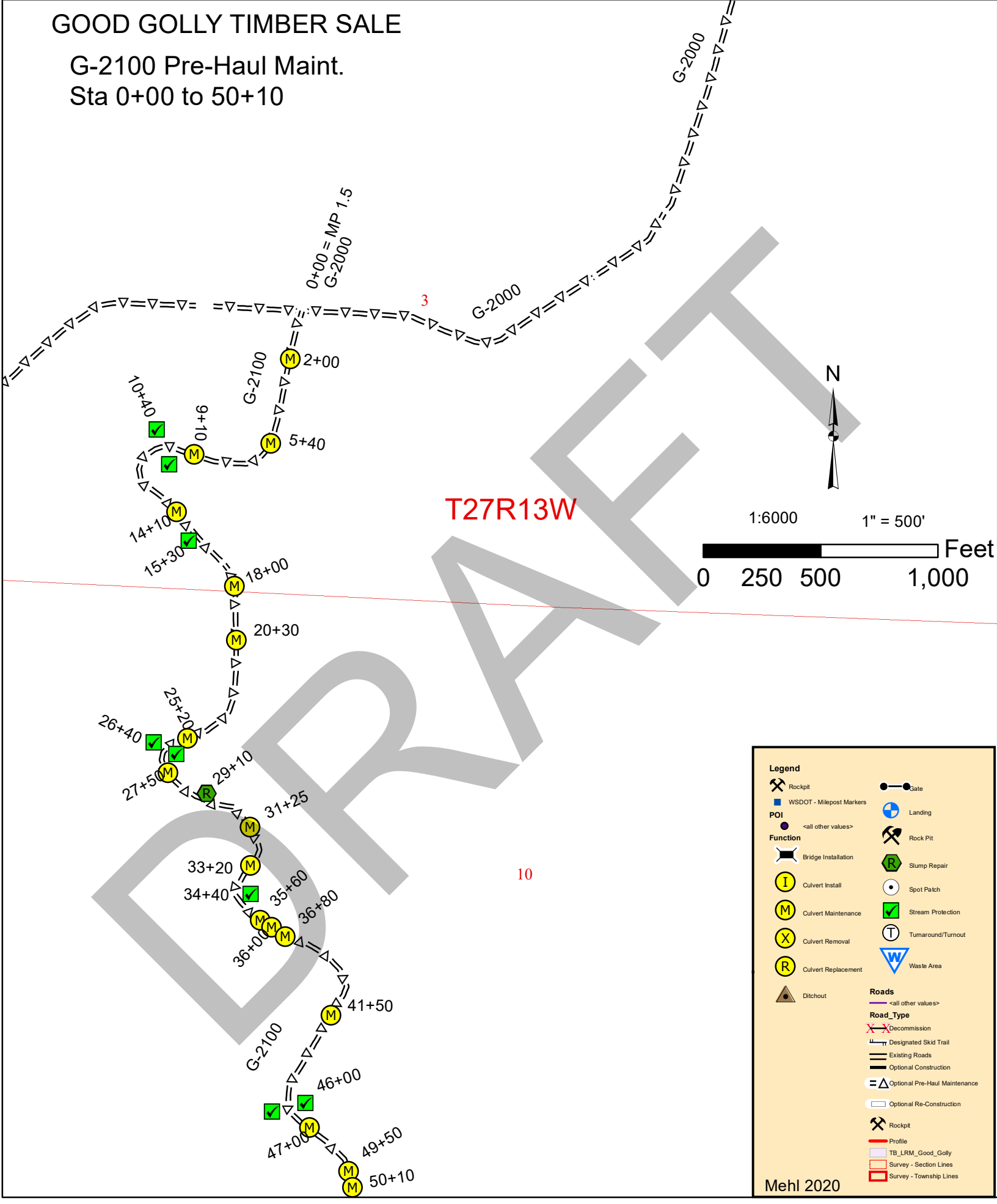


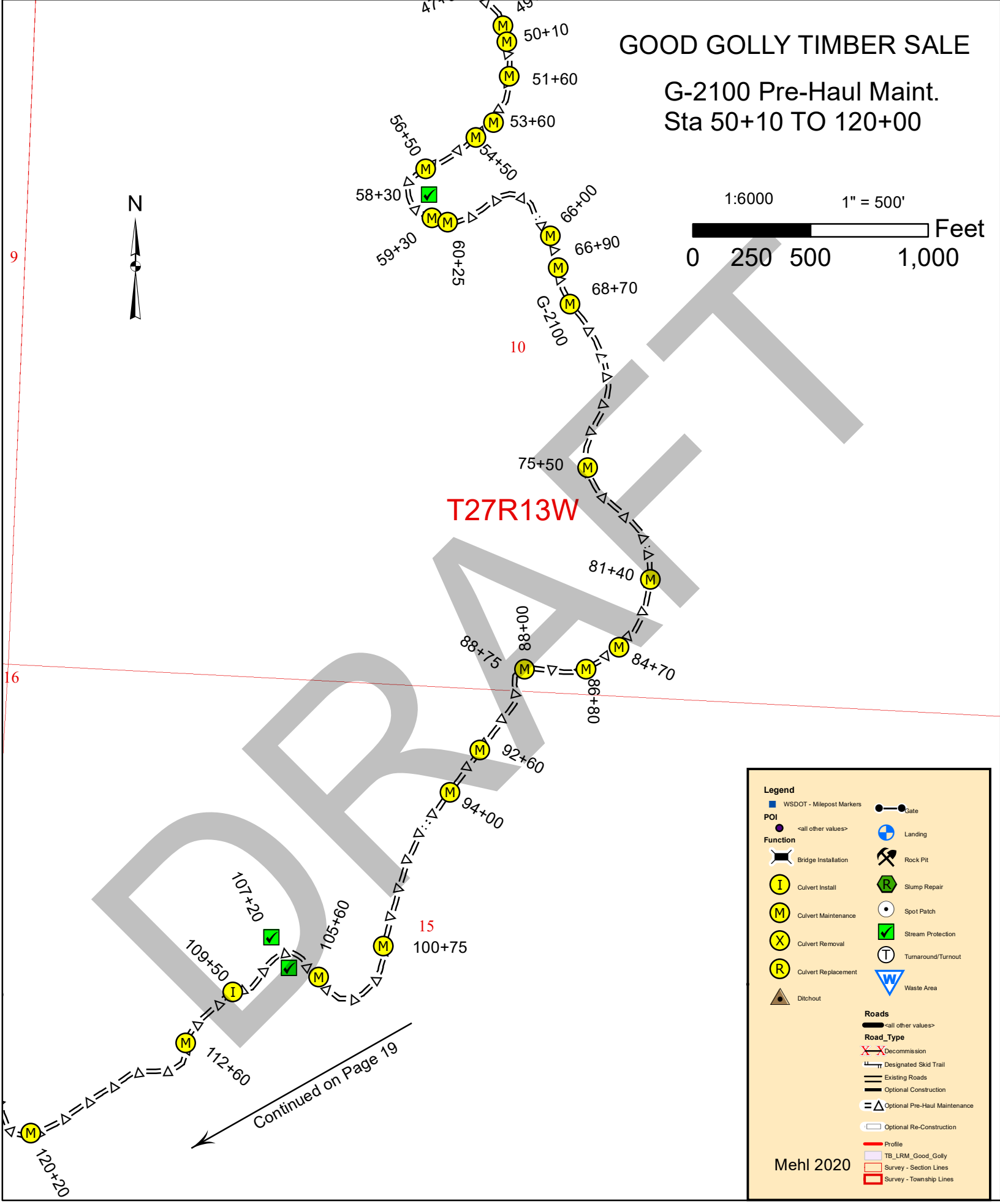


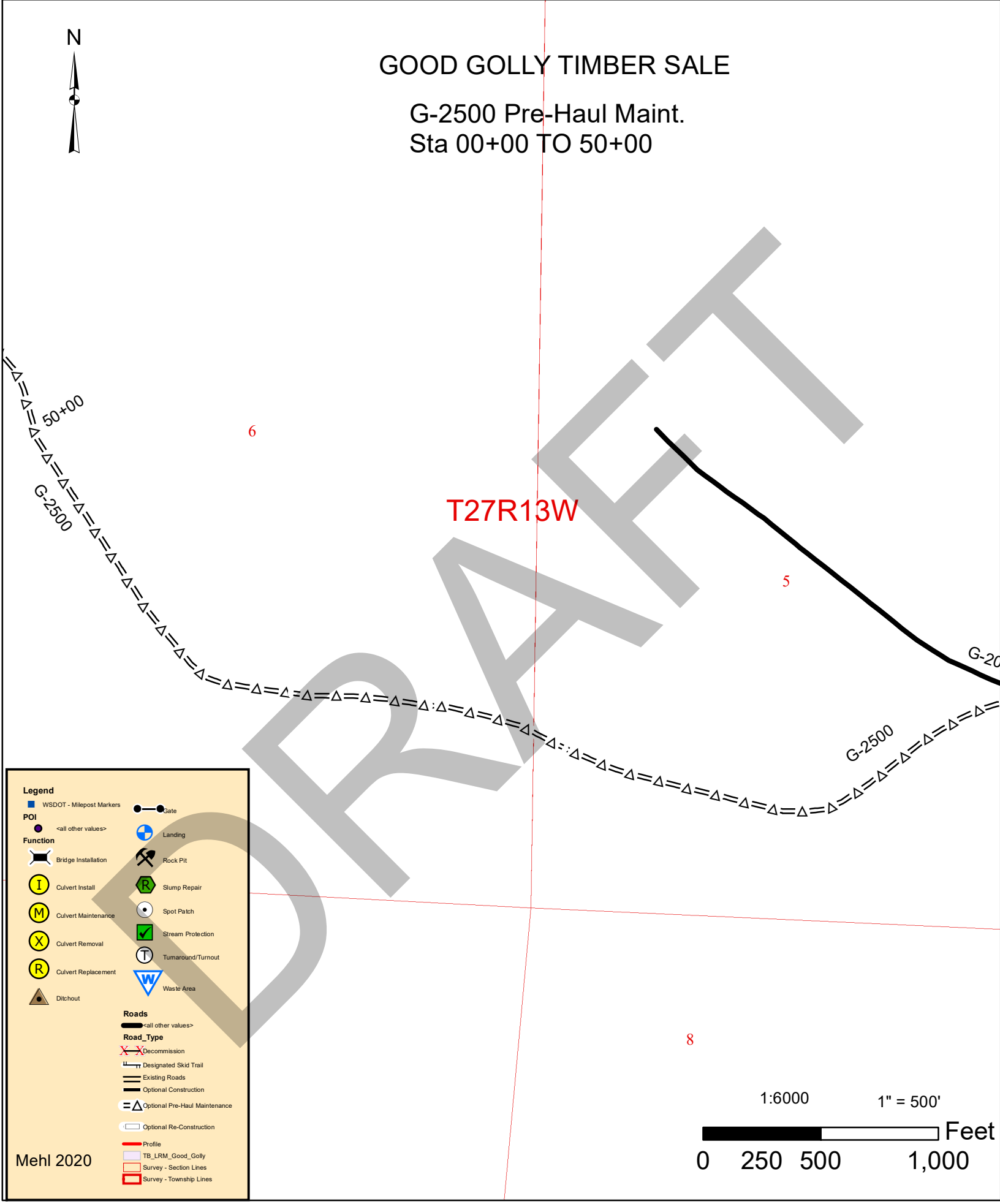

GOOD GOLLY TIMBER SALE
G-2000 Pre-Haul Maint.
Sta 100+00 TO 160+00
N
4
9
5
8
T27R13W
197+00
G-2000
DRAFT
Legend
WSDOT - Milepost Markers
POI
<all other values>
Function
Bridge Installation
Culvert Install
Culvert Maintenance
Culvert Removal
Culvert Replacement
Ditchout
Gate
Landing
Rock Pit
Slump Repair
Spot Patch
Stream Protection
Turnaround/Turnout
Waste Area
Roads
<all other values>
Road_Type
Decommission
Designated Skid Trail
Existing Roads
Optional Construction
Optional Pre-Haul Maintenance
Optional Re-Construction
Profile
TB_LRM_Good_Golly
Survey - Section Lines
Survey - Township Lines
Mehl 2020
1:6000
1" = 500'
Feet
0 250 500 1,000

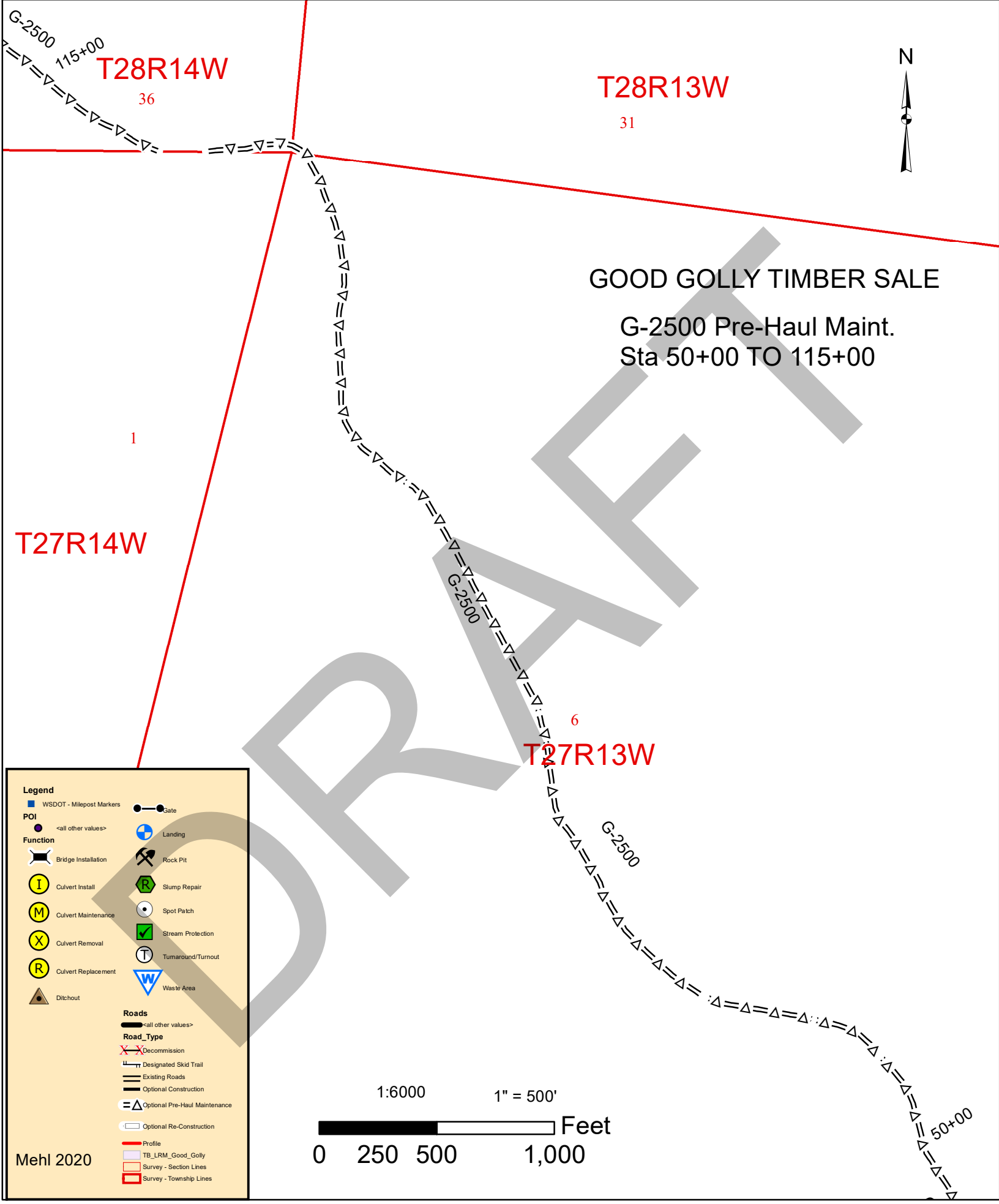
GOOD GOLLY TIMBER SALE

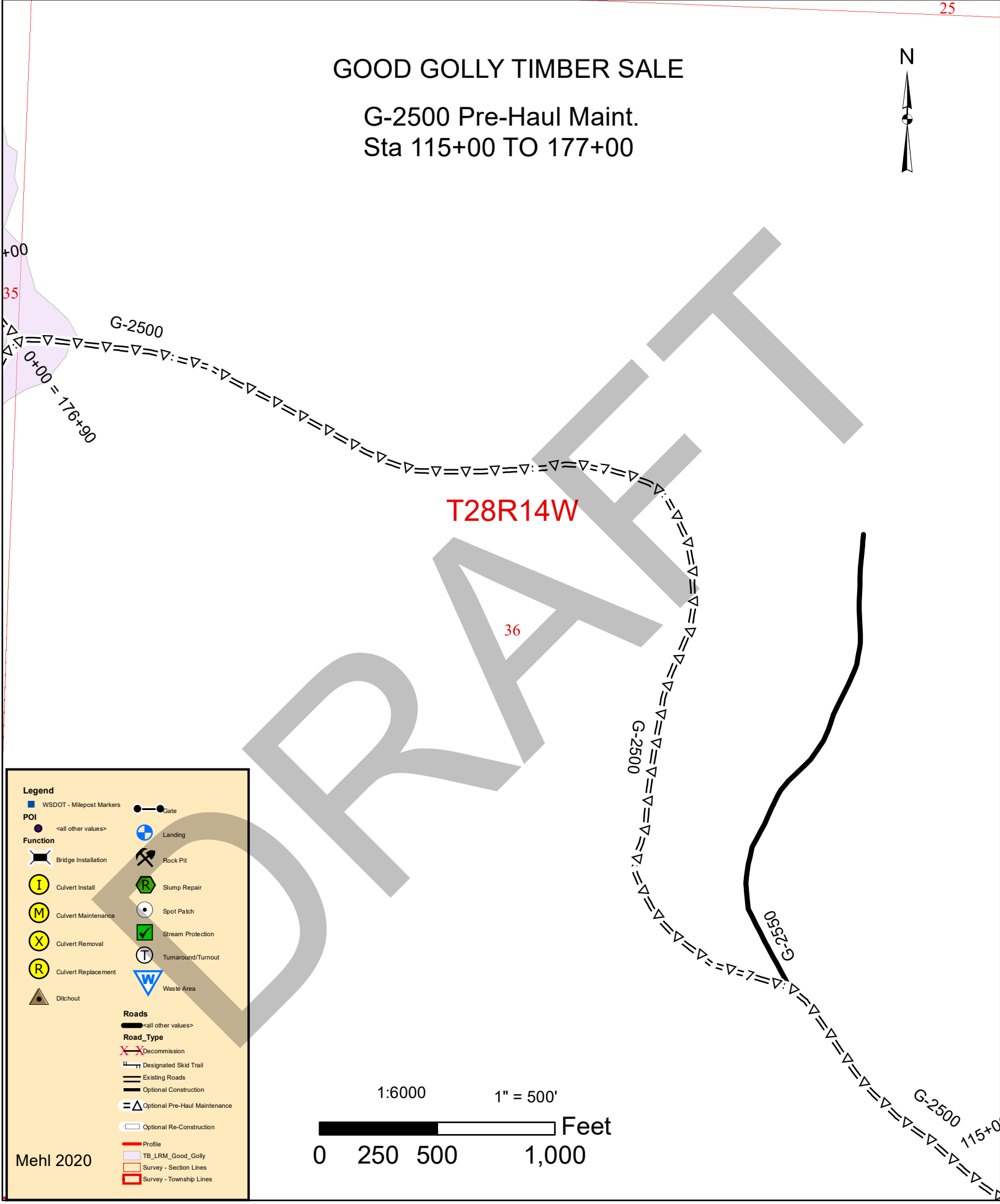
G-2100 Pre-Haul Maint.
Sta 0+00 to 50+10

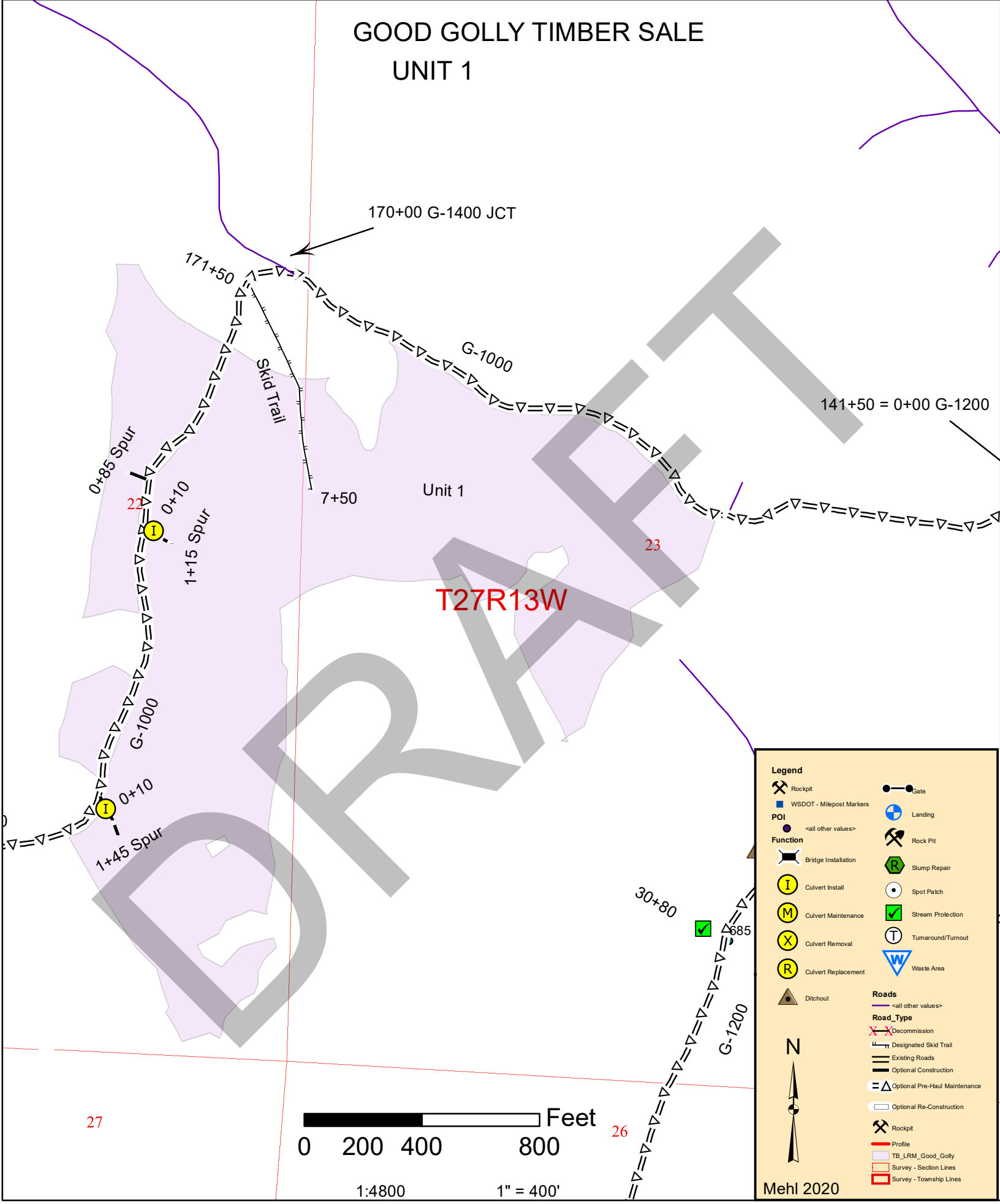



GOOD GOLLY TIMBER SALE
G-2100 Pre-Haul Maint.
Sta 50+10 TO 120+00
N
1:6000
1" = 500'
Feet
0 250 500 1,000
T27R13W
9
10
15
16
50+10
51+60
53+60
54+50
56+50
58+30
59+30
60+25
66+00
66+90
68+70
G-2100
75+50
81+40
84+70
86+80
88+00
88+75
92+60
94+00
100+75
105+60
107+20
109+50
112+60
120+20
Continued on Page 19
DRAFT
Legend
WSDOT - Milepost Markers
POI
<all other values>
Function
Bridge Installation
Culvert Install
Culvert Maintenance
Culvert Removal
Culvert Replacement
Ditchout
Gate
Landing
Rock Pit
Slump Repair
Spot Patch
Stream Protection
Turnaround/Turnout
Waste Area
Roads
<all other values>
Road_Type
Decommission
Designated Skid Trail
Existing Roads
Optional Construction
Optional Pre-Haul Maintenance
Optional Re-Construction
Profile
TB_LRM_Good_Golly
Survey - Section Lines
Survey - Township Lines
Mehl 2020


N
GOOD GOLLY TIMBER SALE
G-2500 Pre-Haul Maint.
Sta 00+00 TO 50+00
50+00
G-2500
6
T27R13W
5
G-2500
8
DRAFT
Legend
WSDOT - Milepost Markers
POI
<all other values>
Function
Bridge Installation
Culvert Install
Culvert Maintenance
Culvert Removal
Culvert Replacement
Ditchout
Gate
Landing
Rock Pit
Slump Repair
Spot Patch
Stream Protection
Turnaround/Turnout
Waste Area
Roads
<all other values>
Road_Type
Decommission
Designated Skid Trail
Existing Roads
Optional Construction
Optional Pre-Haul Maintenance
Optional Re-Construction
Profile
TB_LRM_Good_Golly
Survey - Section Lines
Survey - Township Lines
Mehl 2020
1:6000
1" = 500'
Feet
0 250 500 1,000

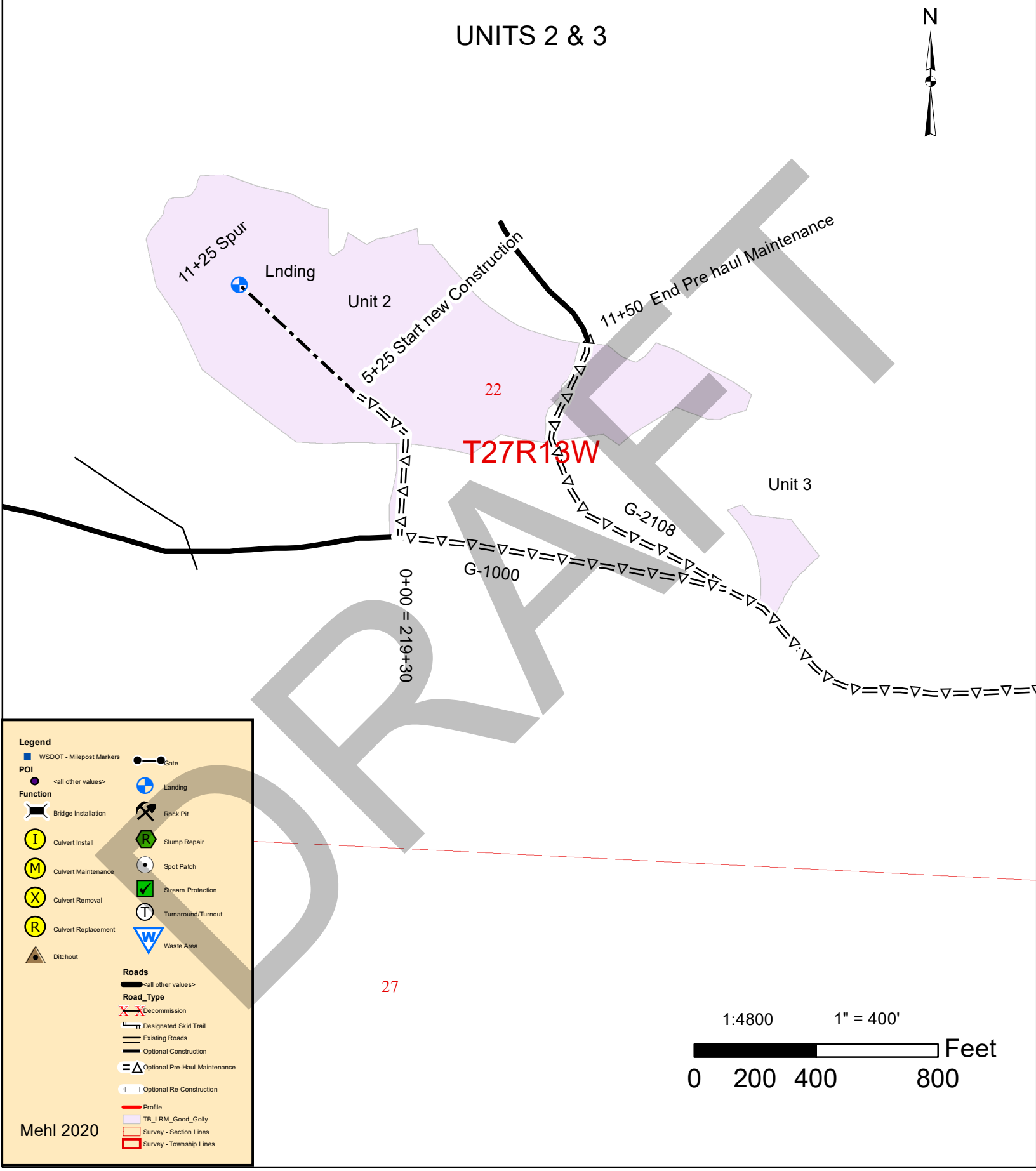

G-2500
115+00
T28R14W
36
T28R13W
31
N
GOOD GOLLY TIMBER SALE
G-2500 Pre-Haul Maint.
Sta 50+00 TO 115+00
1
T27R14W
G-2500
6
T27R13W
G-2500
50+00
DRAFT
Legend
WSDOT - Milepost Markers
POI
<all other values>
Function
Bridge Installation
Culvert Install
Culvert Maintenance
Culvert Removal
Culvert Replacement
Ditchout
Gate
Landing
Rock Pit
Slump Repair
Spot Patch
Stream Protection
Turnaround/Turnout
Waste Area
Roads
<all other values>
Road_Type
Decommission
Designated Skid Trail
Existing Roads
Optional Construction
Optional Pre-Haul Maintenance
Optional Re-Construction
Profile
TB_LRM_Good_Golly
Survey - Section Lines
Survey - Township Lines
Mehl 2020
1:6000
1" = 500'
Feet
0 250 500 1,000


GOOD GOLLY TIMBER SALE
G-2500 Pre-Haul Maint.
Sta 115+00 TO 177+00
N
25
35
36
G-2500
0+00 = 176+90
T28R14W
G-2550
G-2500
115+0
DRAFT
Legend
WSDOT - Milepost Markers
POI
<all other values>
Function
Bridge Installation
Culvert Install
Culvert Maintenance
Culvert Removal
Culvert Replacement
Ditchout
Gate
Landing
Rock Pit
Slump Repair
Spot Patch
Stream Protection
Turnaround/Turnout
Waste Area
Roads
<all other values>
Road_Type
Decommission
Designated Skid Trail
Existing Roads
Optional Construction
Optional Pre-Haul Maintenance
Optional Re-Construction
Profile
TB_LRM_Good_Golly
Survey - Section Lines
Survey - Township Lines
Mehl 2020
1:6000
1" = 500'
Feet
0 250 500 1,000


GOOD GOLLY TIMBER SALE
UNIT 1
170+00 G-1400 JCT
171+50
G-1000
Skid Trail
7+50
141+50 = 0+00 G-1200
0+85 Spur
0+10
1+15 Spur
Unit 1
22
23
T27R13W
G-1000
0+10
1+45 Spur
30+80
685
G-1200
27
26
DRAFT
0 200 400 800
Feet
1:4800
1" = 400'
N
Legend
Rockpit
WSDOT - Milepost Markers
POI
<all other values>
Function
Bridge Installation
Culvert Install
Culvert Maintenance
Culvert Removal
Culvert Replacement
Ditchout
Gate
Landing
Rock Pit
Slump Repair
Spot Patch
Stream Protection
Turnaround/Turnout
Waste Area
Roads
<all other values>
Road_Type
Decommission
Designated Skid Trail
Existing Roads
Optional Construction
Optional Pre-Haul Maintenance
Optional Re-Construction
Rockpit
Profile
TB_LRM_Good_Golly
Survey - Section Lines
Survey - Township Lines
Mehl 2020

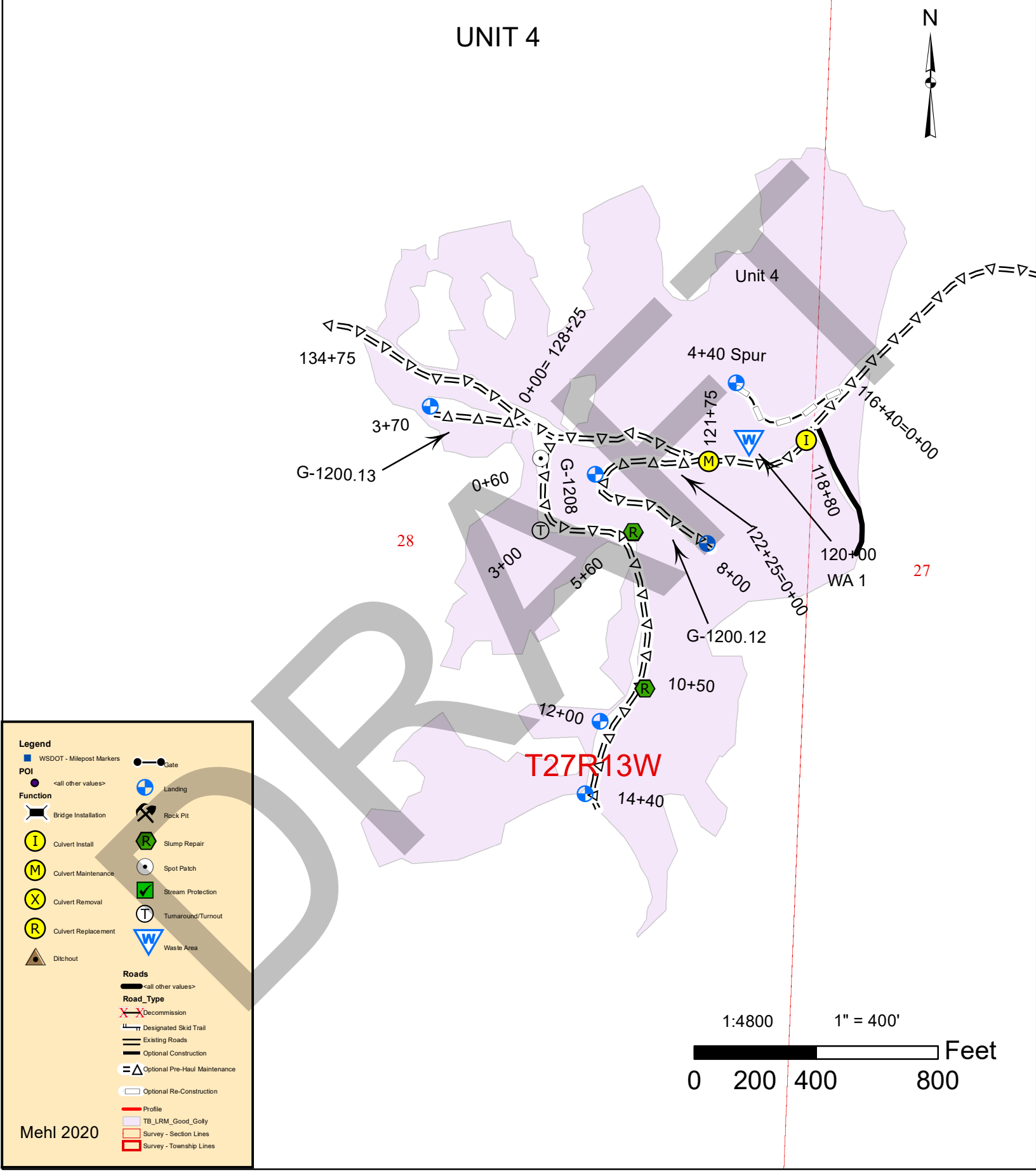
GOOD GOLLY TIMBER SALE

UNITS 2 & 3



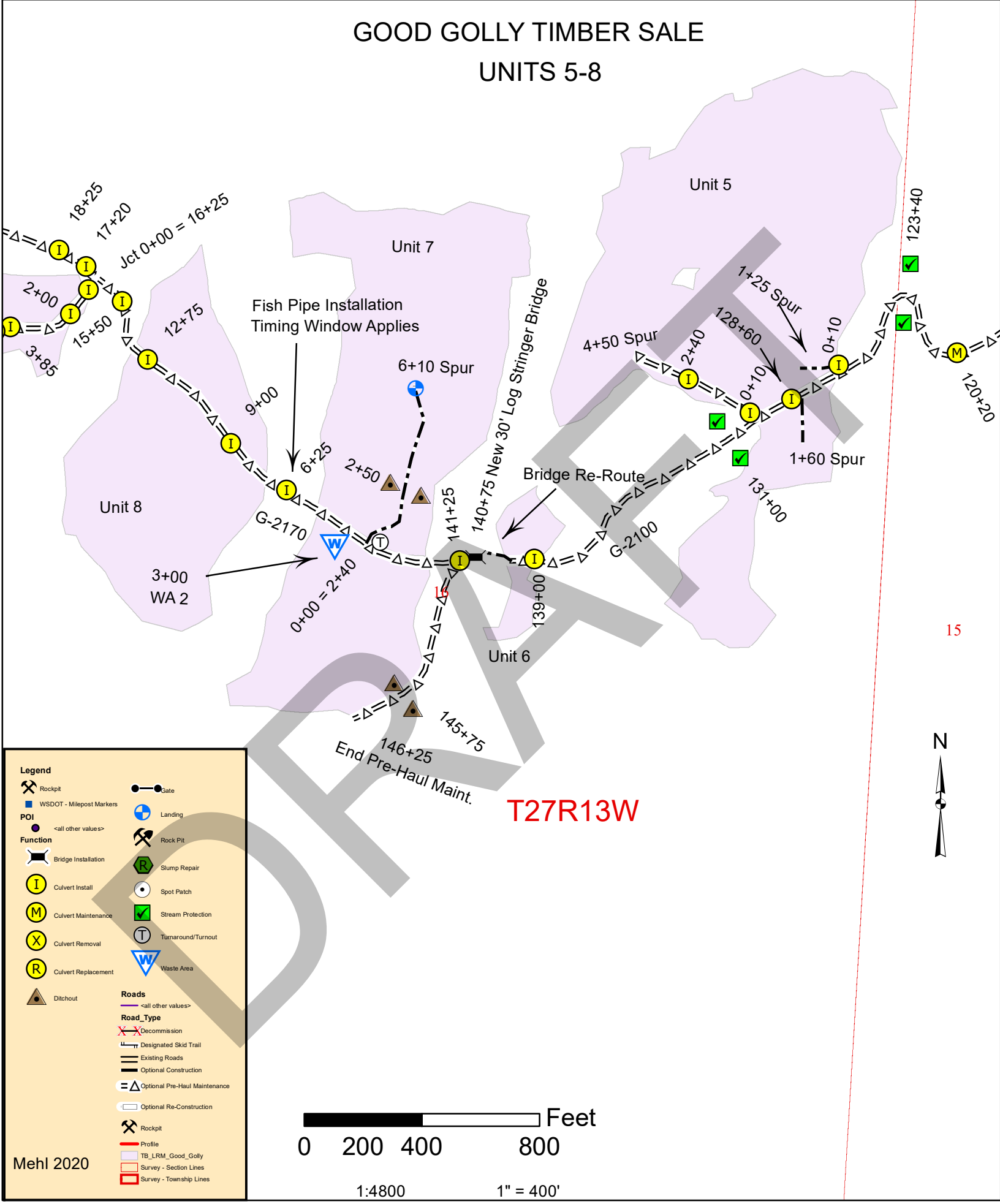
GOOD GOLLY TIMBER SALE

UNIT 4



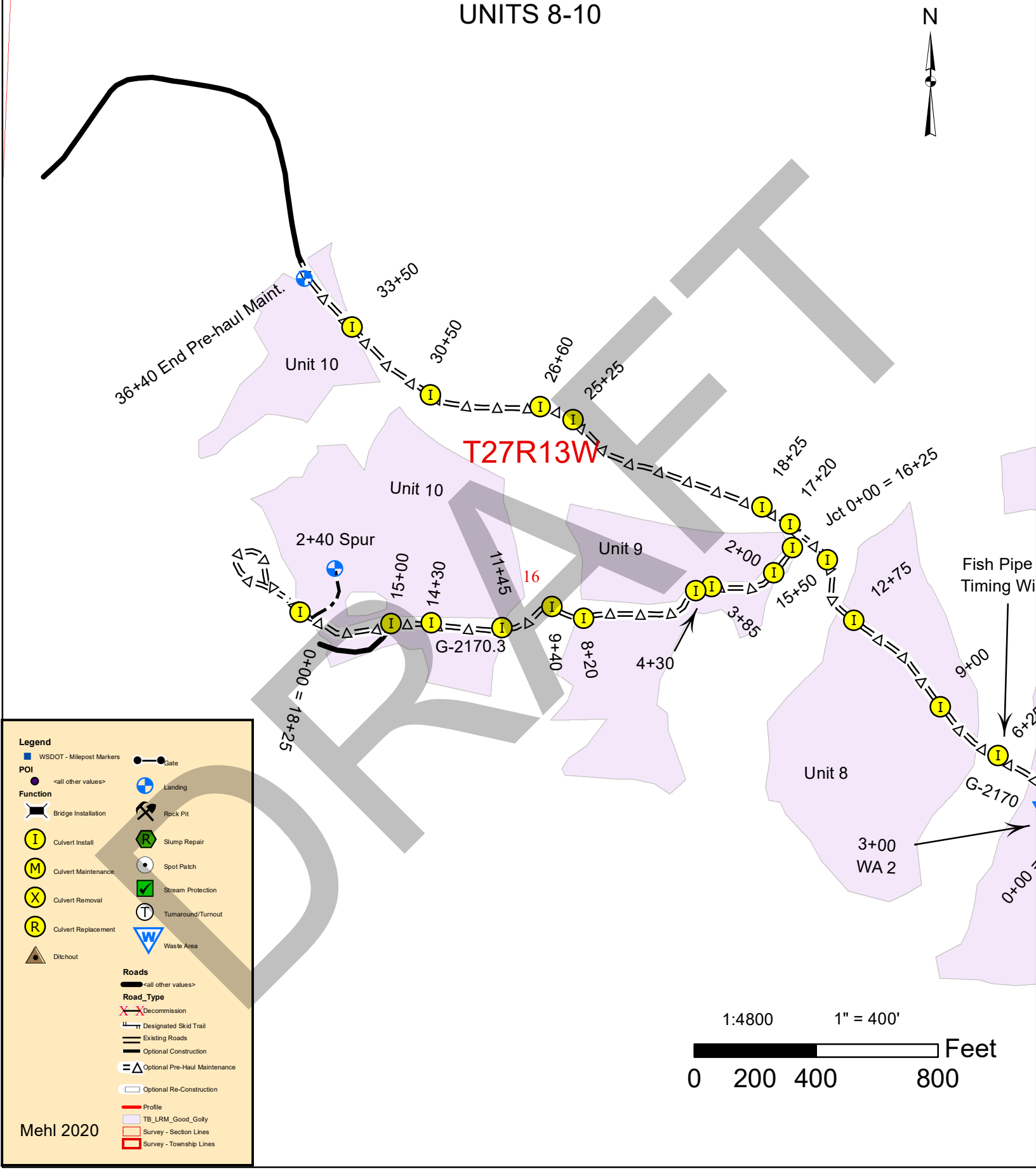
GOOD GOLLY TIMBER SALE

UNITS 5-8



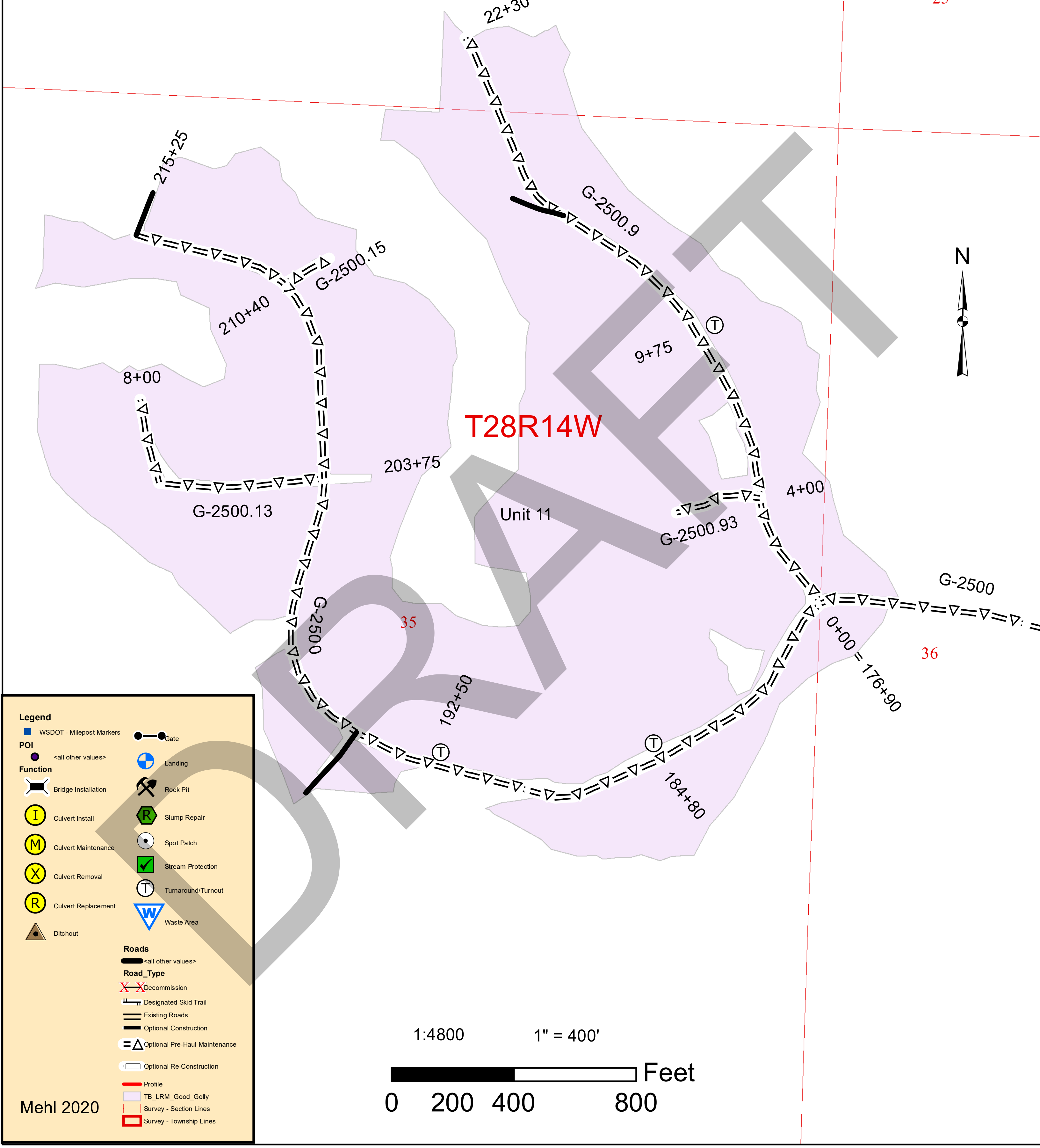
GOOD GOLLY TIMBER SALE

UNITS 8-10

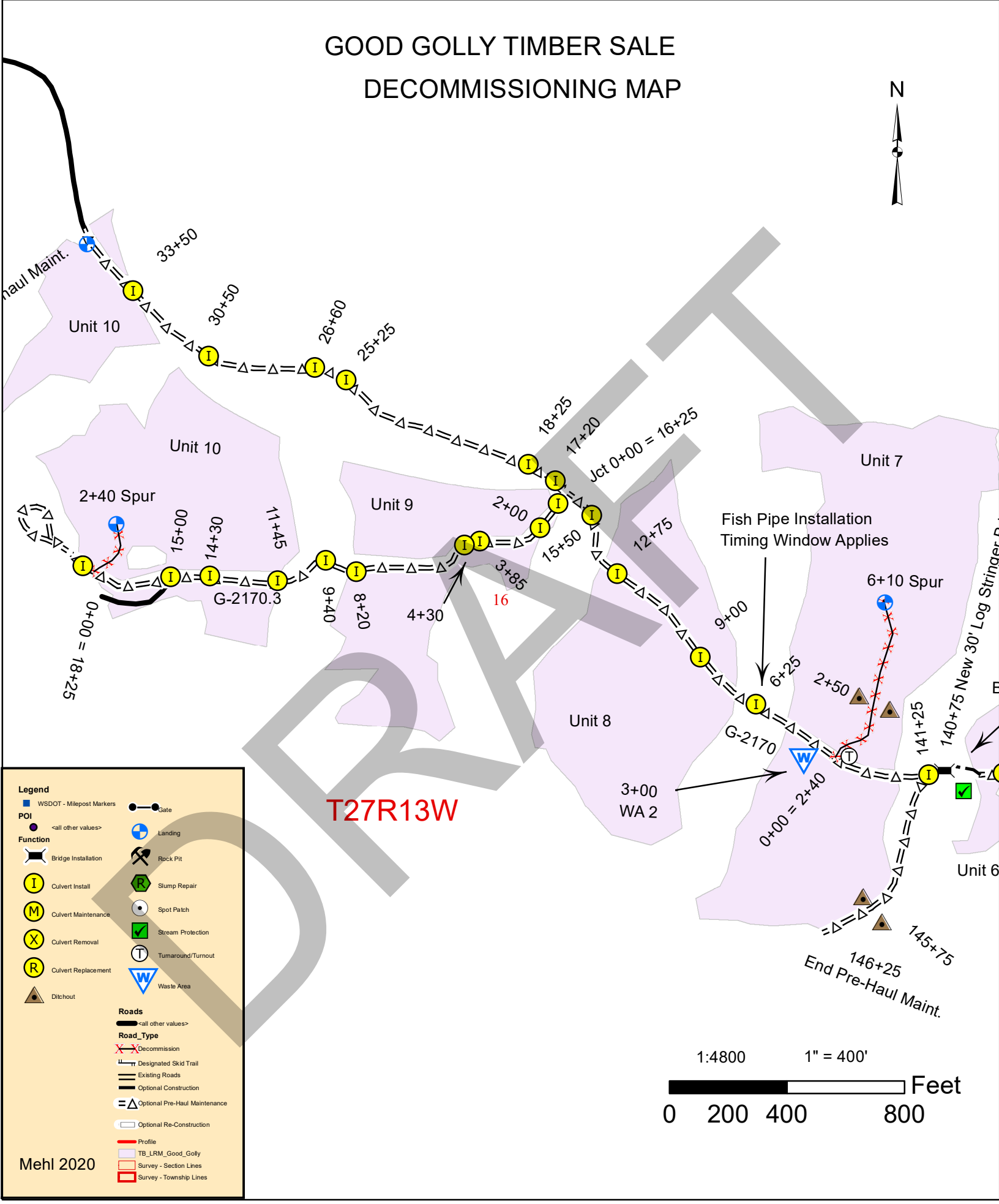


GOOD GOLLY TIMBER SALE

UNIT 11



GOOD GOLLY TIMBER SALE
DECOMMISSIONING MAP



STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

GOOD GOLLY TIMBER SALE ROAD PLAN
CLALLAM AND JEFFERSON COUNTIES
COAST DISTRICT

AGREEMENT NO.: 30-100647 DISTRICT ENGINEER: BILL MEHL

DATE: JULY 30, 2020 DRAWN & COMPILED BY: BILL MEHL

SECTION 0 – SCOPE OF PROJECT

0-1 ROAD PLAN SCOPE

Clauses in this road plan apply to all road related work, including landings and rock source development, unless otherwise noted.

0-3 OPTIONAL ROADS

The specified work on the following roads is not required. Any optional roads built by the Purchaser must meet all the specifications in the road plan.

Road	Stations	Type
G-1000	141.50	Pre-Haul Maintenance
G-1200	134.75	Pre-Haul Maintenance
G-1208	14.40	Pre-Haul Maintenance
G-1200.13	3.70	Pre-Haul Maintenance
G-1200.12	8.00	Pre-Haul Maintenance
11+25 Spur	5.25	Pre-Haul Maintenance
11+25 Spur	6.00	Construction
G-2000	197.00	Pre-Haul Maintenance
G-2100	146.25	Pre-Haul Maintenance
G-2100	2.00	Construction
G-2108	11.50	Pre-Haul Maintenance
G-2170	36.40	Pre-Haul Maintenance
G-2170.3	22.00	Pre-Haul Maintenance
G-2500	215.25	Pre-Haul Maintenance
G-2500.13	8.00	Pre-Haul Maintenance
G-2500.15	1.50	Pre-Haul Maintenance
G-2500.9	22.30	Pre-Haul Maintenance
G-2500.93	2.50	Pre-Haul Maintenance
4+40 Spur	4.40	Re-Construction
2+40 Spur	2.40	Construction
6+10 Spur	6.10	Construction
1+15 Spur	1.15	Construction
1+45 Spur	1.45	Construction
0+85 Spur	0.85	Construction
1+25 Spur	1.25	Construction
1+60 Spur	1.60	Construction
4+50 Spur	4.50	Pre-Haul Maintenance

0-4 CONSTRUCTION

This project includes, but is not limited to the following construction requirements:

Road	Stations	Requirements
11+25 Spur	5+25-11+25	See Below
2+40 Spur	0+00-2+40	See Below
6+10 Spur	0+00-6+10	See Below
G-2100	139+50 – 141+50	Bridge Re-route
1+15 Spur	0+00 -1+15	See Below
1+45 Spur	0+00 – 1+45	See Below
0+85 Spur	0+00 – 0+85	See Below
1+25 Spur	0+00 – 1+25	See Below
1+60 Spur	0+00 – 1+60	See Below
Total:	***22.80 Sta***	

Construction includes, but is not limited to:
Clearing, grubbing, right-of-way debris disposal, excavation and/or embankment to subgrade, end hauling material for construction, compacting road surfaces, constructing ditchlines, constructing ditchouts, constructing turnouts and turnarounds, curve widening, acquisition and installation of drainage structures, application of rock, spreading grass seed and hay.

0-5 RECONSTRUCTION

This project includes, but is not limited to the following reconstruction requirements:

Road	Stations	Requirements
4+40 Spur	0+00-4+40	Rebuild old Grade
Total:	***4.40 Sta***	

Reconstruction includes, but is not limited to:
Installing additional culvert, realigning road segments, application of rock, removing culvert.

0-6 PRE-HAUL MAINTENANCE

This project includes, but is not limited to the following prehaul maintenance requirements:

Road	Stations	Requirements
G-1000	0+00 - 141+50	Grade and shape non-paved sections of road in accordance with Clause 2-5. Install culvert in accordance with Culvert List. Install sediment control structures in accordance with 8-1 and 2-7.
G-1200	0+00 - 134+75	Grade and shape road in accordance with Clause 2-5. Install and maintain culverts in accordance with Culvert List. Install sediment control structures in accordance with 8-1 and 2-7.

G-1208	0+00 - 14+40	Remove all vegetative material with a minimum loss of rock in accordance with Clause 2-9 and 3-23.Grade and shape road in accordance with Clause 2-5. Do embankment widening in accordance with Clause 4-9 and install keyed embankment in accordance with Clause 4-11 and Typical Embankment Key Detail. Apply rock in accordance with Rock List. Compact rock in accordance with Compaction List.
G-1200.13	0+00 - 3+70	Remove all vegetative material with a minimum loss of rock in accordance with Clause 2-9 and 3-23.Grade and shape road in accordance with Clause 2-5. . Apply rock in accordance with Rock List. Compact rock in accordance with Compaction List.
G-1200.12	0+00 - 8+00	Remove all vegetative material with a minimum loss of rock in accordance with Clause 2-9 and 3-23.Grade and shape road in accordance with Clause 2-5. . Apply rock in accordance with Rock List. Compact rock in accordance with Compaction List.
11+25 Spur	0+00 – 5+25	Remove all vegetative material with a minimum loss of rock in accordance with Clause 2-9 and 3-23.Grade and shape road in accordance with Clause 2-5. . Apply rock in accordance with Rock List. Compact rock in accordance with Compaction List.
G-2000	0+00 – 197+00	Grade and shape non-paved sections of road in accordance with Clause 2-5.
G-2100	0+00 - 148.25	Grade and shape road in accordance with Clause 2-5. Install and maintain culverts in accordance with Culvert List. Install sediment control structures in accordance with Clauses 8-1 and 2-7. . Apply rock in accordance with Rock List. Compact rock in accordance with Compaction List. Fix Slump at Sta 29+10. New Construction between stations 139+50 and 141+50 for bridge installation.
G-2108	0+00 -11+50	Grade and shape road in accordance with Clause 2-5.

4+50 Spur	0+00 – 4+50	Remove all vegetative material with a minimum loss of rock in accordance with Clause 2-9 and 3-23.Grade and shape road in accordance with Clause 2-5. Install culverts in accordance with Culvert List. . Apply rock in accordance with Rock List. Compact rock in accordance with Compaction List.
G-2170	0+00 – 36+40	Remove all vegetative material with a minimum loss of rock in accordance with Clause 2-9 and 3-23.Grade and shape road in accordance with Clause 2-5 Install culverts in accordance with Culvert List. . Apply rock in accordance with Rock List. Compact rock in accordance with Compaction List.
G-2170.3	0+00 – 21+00	Remove all vegetative material with a minimum loss of rock in accordance with Clause 2-9 and 3-23.Grade and shape road in accordance with Clause 2-5 Install culverts in accordance with Culvert List. . Apply rock in accordance with Rock List. Compact rock in accordance with Compaction
G-2500	0+00 – 215+25	Grade and shape road in accordance with Clause 2-5 and apply rock in accordance with Rock List. Compact rock in accordance with Compaction List.
G-2500.13	0+00 – 8+00	Brush road in accordance with Clause 3-1 and Brushing Detail. Grade and shape road in accordance with Clause 2-5.
G-2500.15	0+00 – 1+50	Brush road in accordance with Clause 3-1 and Brushing Detail. Grade and shape road in accordance with Clause 2-5.
G-2500.9	0+00 – 22+30	Grade and shape road in accordance with Clause 2-5. Brush road in accordance with Clause 3-1 and Brushing Detail.
G-2500.93	2.50	Brush road in accordance with Clause 3-1 and Brushing Detail. Grade and shape road in accordance with Clause 2-5.
Total:	975.80 Sta	

Maintenance includes, but is not limited to:

Brushing right-of-way, right-of-way debris disposal, cleaning ditches, constructing ditches, installing additional culverts, widening road segments, constructing headwalls, cleaning culvert inlets and outlets, cross drain culvert replacement, installing erosion control materials and sediment removal structures, spot rocking, grading and shaping existing road surface and turnouts, constructing additional turnouts, compaction of road surface, application of rock, acquisition and application of grass seed and hay.

0-7 POST-HAUL MAINTENANCE

This project includes post-haul road maintenance listed in Clause 9-5 POST-HAUL MAINTENANCE.

0-8 CLOSURE

This project includes road closure listed in Clause 9-15 ROAD CLOSURE.

0-9 DECOMMISSIONING

This project includes, but is not limited to decommissioning listed in Clause 9-20 ROAD DECOMMISSIONING.

0-12 DEVELOP ROCK SOURCE

The Purchaser shall develop a new rock source at Anderson Ridge Pit. Development will involve stripping approximately 1 acre to useable rock as determined by the Contract Administrator. Work for developing rock sources is listed in Section 6 ROCK AND SURFACING.

0-13 STRUCTURES

The Purchaser shall acquire and install all structures. Requirements for these structures are listed in Section 7 Structures.

SECTION 1 – GENERAL

1-1 ROAD PLAN CHANGES

If the Purchaser desires a change from this Road Plan including, but not limited to relocation, extension, change in design, or adding roads; a revised road plan shall be submitted, in writing, to the Contract Administrator for consideration. The State must approve the submitted plans before road work begins.

1-2 UNFORESEEN CONDITIONS

Quantities established in this road plan are minimum acceptable values. Additional quantities required by the state due to unforeseen conditions, or Purchaser's choice of construction season or techniques will be at the Purchaser's expense. Unforeseen conditions include, but are not limited to, solid subsurface rock, subsurface springs, saturated ground, and unstable soils.

1-3 ROAD DIMENSIONS

Unless controlled by construction stakes or design data (plan, profile, and cross-sections), road work shall be performed in accordance with the dimensions shown on the Typical Section Sheet and the specifications within this Road Plan.

1-5 DESIGN DATA

Design data is available upon request at the Department of Natural Resources Olympic Region Office in Forks, WA.

1-6 ORDER OF PRECEDENCE

Any conflict or inconsistency in this Road Plan shall be resolved by giving the documents precedence in the following order:

1. Addenda.
2. Designs or Plans. On designs and plans, figured dimensions shall take precedence over scaled dimensions.
3. Road Plan Clauses.
4. Typical Section Sheet.
5. Standard Lists.
6. Standard Details.

In case of any ambiguity or dispute over interpreting the Road Plan, the Contract Administrator's or designee's decision will be final.

1-8 REPAIR OR REPLACEMENT OF DAMAGED MATERIALS

The Purchaser is responsible for the repair or replacement of all materials, roadway infrastructure, and road components damaged during roadwork or operation activities. Repairs and replacements shall be directed by the Contract Administrator. Repairs to structural materials will be made according to the manufacturer's recommendation, and shall not begin without written approval from the Contract Administrator.

1-9 DAMAGED METALLIC COATING

Any damaged galvanized or aluminized coating on existing or new bridge components, culverts, downspouts, and flumes must be cleaned and treated with a minimum of two coats of zinc rich paint.

1-10 WSDOT STANDARD SPECIFICATION REFERENCE

References in this road plan to "WSDOT Standard Specifications" mean the Washington State Department of Transportation's Standard Specifications for Road, Bridge, and Municipal Construction 2018 (M41-10).

1-11 FPHP REQUIREMENTS

The following work is subject to requirements under a Forest Practice Hydraulics Project Approval issued by the State of Washington.

FPA Crossing Identifier	Road	Stations	Work Type
C-1	G-2100	140+88 – 141+13	Bridge Installation
C-2	G-2170	6+25	Fish culvert installation

1-12 SURVEY MONUMENTS

At no time during construction, reconstruction, or maintenance shall survey monuments, witness trees, or bearing trees be disturbed or damaged. If damaged or disturbed, Purchaser shall hire a licensed land surveyor to repair, replace, and/or reset them.

SUBSECTION ROAD MARKING

1-15 ROAD MARKING

Road work must be in accordance with the State's marked location. All road work is marked as follows:

- Orange ribbon and paint for construction centerlines.
- Construction stakes for everything else.

1-16 CONSTRUCTION STAKES SET BY STATE

Purchaser shall perform work on the following road(s) in accordance with the construction stakes set in the field for grade and alignment. Reconstruction of existing road grades must conform to the original location except where construction staked or designed.

Road	Stations	Type
G-2100	140+88 – 141+13	Bridge Abutments
G-2170	6+25	Culvert Install

1-18 REFERENCE POINT DAMAGE

Purchaser shall reset reference points (RPs) that were moved or damaged at any time during construction to their original locations. Excavation and embankment may not proceed on road segments controlled by said RPs until Purchaser resets all moved or damaged RPs.

SUBSECTION TIMING

1-20 COMPLETE BY DATE

Purchaser shall complete pre-haul road work before the start of timber haul.

1-21 HAUL APPROVAL

The Purchaser shall not use roads under this Road Plan without written approval from the Contract Administrator.

1-22 WORK NOTIFICATIONS

On all roads, the Purchaser shall notify the Contract Administrator a minimum of 3 calendar days before work begins.

1-23 ROAD WORK PHASE APPROVAL

Written approval by Contract Administrator needs to be given at these phases of road work:

- Subgrade approval
- Drainage installation
- Subgrade compaction
- Rock application
- Rock compaction

SUBSECTION RESTRICTIONS

1-25 ACTIVITY TIMING RESTRICTION

On the following road(s), the specified activities are not permitted during the listed closure period(s) unless authorized in writing by the Contract Administrator.

Road	Stations	Activity	Closure Period
G-2100	140+75 – 141+20	Bridge Install	Sept. 30th – June 30th
G-2170	6+25	Fish Culvert	Sept. 30th – June 30th

1-26 OPERATING DURING CLOSURE PERIOD

If permission is granted to operate during a closure period listed in Clause 1-25 Activity Timing Restriction, the Purchaser shall provide a maintenance plan to include further protection of State resources. The Contract Administrator must approve the maintenance plan in writing, and preventative measures shall be put in place, before operation in the closure period. The Purchaser shall be required to maintain all haul roads at their own expense including those listed in Contract Clause C-060 Designated Road Maintainer. If other operators are using, or desire to use these designated maintainer roads, a joint operating plan shall be developed. All parties shall follow this plan.

1-27 LIMITED OPERATING PERIOD FOR MARBLED MURRELET

On the following road(s), any road work, right-of-way timber falling and yarding, rock pit operations, or operation of heavy equipment must be performed during the limited operating period if implemented during the nesting season. The limited operating period runs from two hours after sunrise to two hours before sunset between April 1 through September 23. This restriction does not apply to the hauling of timber, rock, or equipment.

Road	Stations
G-1000	121+80 – 135+60, 166+00 – 219+30
G-1200	92+30 – 116+40
G-2000	29+50 – 48+75, 187+00 – 197+00
G-2108	0+00 – 7+00
G-2170	16+00 – 33+50
G-2170.3	19+00 – 22+00
G-2500	0+00 – 23+50, 86+75 – 108+40
11+25 Spur	0+00 – 3+00

1-29 SEDIMENT RESTRICTION

Purchaser shall not allow silt-bearing runoff to enter any streams.

1-30 CLOSURE TO PREVENT DAMAGE

In accordance with Contract Clause G-220 State Suspends Operation, the Contract Administrator shall suspend road work or hauling of right-of-way timber, forest products, or rock under the following conditions:

- In the opinion of the Contract Administrator excessive road damage or rutting may occur.

Operations must stop unless authority to continue working or hauling is granted, in writing, by the Contract Administrator. In the event that surface or base stability problems persist, the Purchaser will be required to cease operations, or perform corrective maintenance or repairs, subject to specifications within this Road Plan. Before

and during any suspension, the Purchaser shall protect the work from damage or deterioration.

1-32 BRIDGE AND ASPHALT SURFACE RESTRICTION

The use of metal tracked equipment is not allowed on bridge or asphalt surfaces at any time. If Purchaser must run equipment on bridge or asphalt surfaces, then rubber tired equipment or other methods, as approved in writing by Contract Administrator, shall be used.

If tracked equipment is used on bridge or asphalt surfaces, Purchaser shall immediately cease all road work and hauling operations. Any dirt, rock, or other material tracked or spilled on bridge or asphalt surface(s) shall be removed immediately. Any damage to the surface(s) shall be repaired at the Purchaser's expense as directed by the Contract Administrator.

1-33 SNOW PLOWING RESTRICTION

On all roads, snow plowing shall be permitted only after the execution of a Snow Plowing Agreement, which is available from the Contact Administrator upon request. Purchaser shall request a Snow Plowing Agreement each time plowing occurs. If damage occurs while plowing, further permission to plow may be revoked by the Contract Administrator.

SUBSECTION OTHER INFRASTRUCTURE

1-40 ROAD APPROACHES TO COUNTY ROADS AND STATE HIGHWAYS

At existing road approaches to county roads and state highways, any mud, dirt, rock or other material tracked or spilled on the asphalt surface shall be removed immediately by the Purchaser.

If additional damage to the surface, signs, guardrails, etc. occurs then the damage shall be repaired, at the Purchaser's expense, as directed by the Contract Administrator when authorized by the county or WSDOT.

The following county roads and state highways are affected by this sale:

Road Name
Hwy 101

1-41 REQUIREMENTS FOR PAVED ROAD APPROACHES

Requirements for the paved road approaches:
Purchaser shall build up approaches to allow a smooth grade transition. The top of the rock road surfacing must be kept level with the surface of the paved roads at all times.

SECTION 2 – MAINTENANCE

2-1 GENERAL ROAD MAINTENANCE

Purchaser shall maintain all roads used under this contract in accordance with the FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS for the entire term of this contract. Maintenance is required even during periods of inactivity.

2-2 ROAD MAINTENANCE – PURCHASER MAINTENANCE

Purchaser shall perform maintenance on roads listed in Contract Clause C-050 PURCHASER ROAD MAINTENANCE AND REPAIR in accordance with FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS.

2-3 ROAD MAINTENANCE – DESIGNATED MAINTAINER

Purchaser may be required to perform maintenance on roads listed in Contract Clause C-060 DESIGNATED ROAD MAINTAINER as directed by the Contract Administrator. Purchaser shall maintain roads in accordance with FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS.

C-060 Designated Roads

Road	Stations
G-1000	0+00 – 141+50
G-2000	0+00 – 197+00
G-2100	0+00 – 123+00
G-2500	0+00 – 176+00

2-4 PASSAGE OF LIGHT VEHICLES

Purchaser shall maintain the following road(s) in a condition that will allow the passage of light administrative vehicles.

Road	Stations
G-1000	0+00 – 141+50
G-2000	0+00 – 197+00
G-2100	0+00 – 123+00

2-5 MAINTENANCE GRADING – EXISTING ROAD

On the following road(s), a grader shall be used to shape the existing surface.

Road	Stations	Requirements
G-1000	0+00 – 141+50	Grade/Shape non pavement to G-1200 Jct
G-1200	0+00 – 134+75	Grade/Shape/add rock
G-1208	0+00 – 14+40	Grade/Shape
G-2000	0+00 – 197+00	Grade/Shape non pavement to G-2500 Jct
G-2100	0+00.- 139+50	Grade/Shape/add rock
G-2108	0+00 – 11+50	Grade/Shape
G-2500	0+00 – 215+25	Grade/Shape/add rock
G-2500.9	0+00 – 22+30	Grade/Shape

2-6 CLEANING CULVERTS

On the following road(s), all inlets and outlets of culverts shall be cleaned before the start of timber haul and shall be subject to the written approval of the Contract Administrator.

Road	Stations
G-1000	Per Culvert List or C/A
G-2000	Per Culvert List or C/A
G-2100	Per Culvert List or C/A
G-2500	Per Culvert List or C/A

2-7 CLEANING DITCHES, HEADWALLS, AND CATCH BASINS

On the following road(s), Purchaser shall clean and/or construct the ditches, headwalls, and catch basins. Work shall be completed before the start of timber haul and shall be done in accordance with the Typical Section Sheet. Pulling ditch material across the road or mixing in with the road surface will not be allowed. Ditchlines, headwalls, and catch basins shall not encroach into the existing road.

Road	Stations	Left or Right	Comments
G-1200	127+75 – 134+75	L	Scatter waste in accordance with Clause 4-38
G-1208	0+00 – 14+40	L	End Haul waste in accordance with Clause 4-37
G-2100	0+00 – 139+50	R	Lower Ditch Blocks and clean pipes in accordance with culvert list and Clause 4-38
G-2170	0+00 – 36+40	R	Scatter waste in accordance with Clause 4-38

2-9 REMOVING VEGETATIVE MATERIAL

On the following road(s), Purchaser shall remove all vegetative material, dirt, mud, and other debris on the existing road surface with a minimum loss of rock. Material removed shall be disposed of in accordance with Clause 3-21 through Clause 3-25 and Clause 4-36 through Clause 4-38.

Road	Stations
G-1208	0+00 – 14+40
G-1200.12	0+00 – 8+00
G-1200.13	0+00 – 3+70
G-2170	0+00 – 36+40
G-2170.3	0+00 – 21+00
11+25 Spur	0+00 – 5+25
4+50 Spur	0+00 – 4+50

SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

SUBSECTION BRUSHING

3-1 BRUSHING

On the following road(s), vegetative material up to 5 inches in diameter, including limbs, shall be cut as shown on the Brushing Detail. Brushing shall be achieved by mechanical cutting of brush, trees, and branches. Root systems and stumps of cut vegetation shall not be disturbed unless directed by the Contract Administrator.

Road	Side	Stations
G-2100	As Needed/directed by C/A	0+00 – 139+00
G-2170	L & R	0+00 – 36+40
G-2500	L & R	176+9+0 – 215+25
G-2500.13	L & R	0+00 – 8+00
G-2500.15	L & R	0+00 – 1+00
G-2500.9	L & R	0+00 – 22+30
G-2500.93	L & R	0+00 – 3+10

3-2 BRUSHING RESTRICTION

Pulling, digging, pushing over, and other non-cutting methods used for vegetation removal shall not be used for brushing. Excavator buckets, log loaders and similar equipment shall not be used for brushing.

3-3 BRUSH REMOVAL

Remove brushing debris from the road surface, ditchlines, and culvert inlets and outlets. Brush should be disposed of so that it will not fall back onto the road prism.

SUBSECTION CLEARING

3-5 CLEARING

Purchaser shall fall all vegetative material larger than 5 inches DBH or over 15 feet high between the marked right-of-way boundaries or if not marked in the field, between the clearing limits specified on the TYPICAL SECTION SHEET. Clearing must be completed before starting excavation and embankment.

3-7 RIGHT-OF-WAY DECKING

Deck all merchantable right-of-way timber. Decks shall be parallel to the road centerline and placed within the cleared right-of-way. Decks shall be free of dirt, limbs and other right-of-way debris, and removable by standard log loading equipment.

3-8 PROHIBITED DECKING AREAS

Right-of-way timber shall not be decked in the following areas:

- Within the grubbing limits.
- Within 50 feet of any stream.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- On slopes greater than 40%.
- Against standing trees unless approved by the Contract Administrator.

SUBSECTION GRUBBING

3-10 GRUBBING

Remove all stumps between the grubbing limits specified on the Typical Section Sheet. Those stumps outside the grubbing limits but with undercut roots shall also be removed. Stump removal shall be accomplished using a hydraulic mounted excavator unless authorized, in writing, by the Contract Administrator. Grubbing shall be completed before starting excavation and embankment.

3-12 STUMP PLACEMENT

Grubbed stumps shall be placed outside of the clearing limits, as directed by the Contract Administrator and in compliance with all other clauses in this road plan. Stumps shall be positioned upright with root wads in contact with the forest floor and on stable locations.

3-14 STUMPS WITHIN DESIGNATED WASTE AREAS

In the following waste area(s), the removal of stumps is not required within waste areas if they are cut flush with the ground.

Road	Waste Area	Stations
G-1200	WA-1	120+00

SUBSECTION ORGANIC DEBRIS

3-20 ORGANIC DEBRIS DEFINITION

Organic debris is defined as all vegetative material not eligible for removal by Contract Clauses G-010 Products Sold And Sale Area or G-011 Right To Remove Forest Products And Contract Area, that is larger than one cubic foot in volume within the grubbing Typical Section Sheet.

3-21 DISPOSAL COMPLETION

All disposal of organic debris, shall be completed before the application of rock.

3-23 PROHIBITED DISPOSAL AREAS

Organic debris shall not be deposited in the following areas:

- Within 5 feet of a cross drain culvert.
- Within 50 feet of a live stream, or wetland.
- On road subgrades road prism excavation and embankment slopes**.**
- On slopes greater than 45%.
- Within the operational area for cable landings where debris may shift or roll.
- On locations where brush will fall into the ditch or onto the road surface.
- Against standing timber.

3-24 BURYING ORGANIC DEBRIS RESTRICTED

Organic debris shall not be buried unless otherwise stated in this Road Plan.

3-25 SCATTERING ORGANIC DEBRIS

Organic debris shall be scattered outside of the grubbing limits in accordance with Clause 3-23 unless otherwise detailed in this Road Plan and as directed by the Contract Administrator.

SUBSECTION PILE

3-31 PILING

Organic debris shall be piled no closer than 20 feet from standing timber and no higher than 20 feet in areas specified in Clause 3-22 Designated Waste Area For Organic Debris. Piles shall be free of rock and soil.

3-32 END HAULING ORGANIC DEBRIS

On the following road(s), organic debris shall be end hauled or pushed to the designated waste areas specified in Clause 3-22 Designated Waste Area For Organic Debris, or to a waste area located by the Contract Administrator.

Road	Stations
G-1208	0+00 – 14+40

SECTION 4 – EXCAVATION

4-1 EXCAVATOR CONSTRUCTION

All roads shall be constructed, reconstructed, and maintained using a track mounted hydraulic excavator unless stated otherwise within this Road Plan, or permission to do otherwise is granted in writing by the Contract Administrator.

4-2 PIONEERING

Pioneering shall not extend past construction that will be completed during the current construction season. Pioneering shall not extend more than 1000 feet beyond completed construction unless approved in writing by the Contract Administrator. In addition, the following actions shall be taken as pioneering progresses:

- Drainage shall be provided on all uncompleted construction.
- Road pioneering operations shall not undercut the final cut slope or restrict drainage.
- Culverts at live stream crossings shall be installed during pioneering operations prior to embankment.

4-3 ROAD GRADE AND ALIGNMENT STANDARDS

The following road grade and alignment standards shall be followed:

- Grade and alignment shall have smooth continuity, without abrupt changes in direction.
- Maximum grade shall not exceed 18 percent favorable and 16 percent adverse.
- Minimum curve radius is 60 feet at centerline.
- Sag vertical curves shall not have a grade change greater than 5% in 100 feet.
- Crest vertical curves shall not have a grade change greater than 4% in 100 feet.

4-4 SWITCHBACK STANDARDS

A switchback is defined as a curved segment of road between a beginning and end of the same curve, where the change of traffic travel direction is greater than 90 degrees. The following standards for switchbacks shall be followed:

- Adverse grades on switchbacks shall not exceed 10%.
- Favorable grades through switchbacks shall not exceed 12%.
- Transition grades entering and leaving switchbacks shall not exceed a 5% grade change.
- Transition grades required to meet switchback grade limitations shall be constructed on the tangents preceding and departing from the switchbacks.

4-5 CUT SLOPE RATIO

Unless construction staked or designed excavation slopes shall be constructed no steeper than shown on the following table:

Material Type	Excavation Slope Ratio	Excavation Slope Percent
Common Earth (on side slopes up to 55%)	1:1	100
Common Earth (56% to 70% side slopes)	¾:1	133
Common Earth (on slopes over 70%)	½:1	200
Fractured or loose rock	½:1	200
Hardpan or solid rock	¼:1	400

4-6 EMBANKMENT SLOPE RATIO

Unless construction staked or designed embankment slopes shall be constructed no steeper than shown on the following table:

Material Type	Embankment Slope Ratio	Embankment Slope Percent
Sandy Soils	2:1	50
Common Earth and Rounded Gravel	1½:1	67
Angular Rock	1¼:1	80

4-7 SHAPING CUT AND FILL SLOPE

Excavation and embankment slopes shall be constructed to a uniform line and left rough for easier revegetation.

4-8 CURVE WIDENING

The minimum widening placed on the inside of curves is:

- 6 feet for curves of 50 to 79 feet radius.
- 4 feet for curves of 80 to 100 feet radius.

4-9 EMBANKMENT WIDENING

The minimum embankment widening is:

- 2 feet for embankment heights at centerline of 2 to 6 feet.
- 4 feet for embankment heights at centerline of greater than 6 feet.

Embankment widening shall be applied equally to both sides of the road to achieve the required width.

4-10 WIDEN THE EXISTING SUBGRADE

On the following road(s), the Purchaser shall widen the subgrade and fill slopes to the dimensions shown on the Road Widening Detail Sheets. If necessary, the Purchaser shall reconstruct excavation slopes to provide sufficient width for the road surface and any ditches. Excavated slopes shall be consistent with Clause 4-5. Pulling excavation material across the road or mixing in with the existing road surface is not allowed.

Road	Stations
G-1208	5+10 – 6+10
G-1208	10+00 – 11+00

4-11 KEYED EMBANKMENT

On the following road(s), embankments shall be keyed into the native slope in accordance with the Typical Embankment Key Detail Sheet.

Road	Stations
G-1208	5+10 – 6+10
G-1208	10+00 – 11+00

4-12 FULL BENCH CONSTRUCTION

Where side slopes exceed 45%, Purchaser shall use full bench construction for the entire subgrade width except as construction staked or designed. If designated, Purchaser shall end haul waste material to the location specified in Clause 4-37 WASTE AREA LOCATION.

SUBSECTION INTERSECTIONS, TURNOUTS AND TURNAROUNDS

4-21 TURNOUTS

Turnouts shall be intervisible with maximum of 1,000 feet between turnouts unless shown otherwise on drawings. Locations shall be adjusted to fit the final subgrade alignment and sight distances. Turnout locations shall be subject to written approval by the Contract Administrator.

4-22 TURNAROUNDS

Turnarounds shall be no larger than 50 feet long and 30 feet wide. Locations shall be subject to written approval by the Contract Administrator.

SUBSECTION DITCH CONSTRUCTION

4-25 DITCH CONSTRUCTION AND RECONSTRUCTION

The Purchaser shall construct ditches into the subgrade as specified on the Typical Section Sheet. Excavated slopes shall be consistent with Clause 4-5 Cut Slope Ratio. Ditches shall be constructed concurrently with construction of the subgrade.

4-27 DITCH WORK – MATERIAL USE PROHIBITED

On all roads, pulling ditch material across the road or mixing in with the road surface will not be allowed. Excavated material shall be disposed of as specified in Clause 4-36 through Clause 4-38.

4-28 DITCH DRAINAGE

Ditches must drain to cross-drain culverts or ditchouts.

4-29 DITCHOUTS

Ditchouts shall be constructed at locations shown on the list below, and as needed to fit as built conditions. Ditchouts shall be constructed in a manner that diverts ditch water onto the forest floor and shall have excavation backslopes no steeper than a 1:1 ratio. L or R denotes ditchout left or ditchout right heading in.

Road	Stations
G-1200	27+50 L & R
G-2100	145+75 L & R
6+10 Spur	2+50 L & R

SUBSECTION WASTE MATERIAL (DIRT)

4-35 WASTE MATERIAL DEFINITION

Waste material is defined as all dirt, rock, mud, or related material that is extraneous or unsuitable for construction material. Waste material, as used in Section 4 EXCAVATION, is not organic debris.

4-36 DISPOSAL OF WASTE MATERIAL

Purchaser may sidecast waste material on side slopes up to 45% if the waste material is compacted and free of organic debris. On side slopes greater than 45%, all waste material must be end hauled or pushed to the designated embankment sites and waste areas identified in Clause 4-37 WASTE AREA LOCATION.

4-37 WASTE AREA LOCATION

Waste material shall be deposited in the listed designated areas. The amount of material to be contained in a waste area shall be at the discretion of the Contract Administrator**.** Note: All amount values are estimated bank yards.

Waste Area Location	Waste Generated From Road	Estimated Volume	Waste Area Identifier	Waste Area Permitted Vol.
G-1200 sta 120+00	G-1208	800 CY	WA 1	1200
G-2170 sta 3+00	G-2170	200	WA 2	1000

4-38 PROHIBITED WASTE DISPOSAL AREAS

Waste material shall not be deposited in the following areas:

- Within 5 feet of a cross drain culvert.
- Within 50 feet of a live stream or wetland.
- Within a riparian management zone.
- On side slopes steeper than 45%.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- Within the operational area for cable landings.
- Against standing timber.

4-39 WASTE AREA COMPACTION

Excavated material may be deposited adjacent to the road prism on side slopes up to 45% if the waste material is compacted and free of debris. On side slopes of 45% or more, all excavation shall be end hauled or pushed to designated waste areas. All waste material shall be compacted. The minimum acceptable compaction is achieved by placing embankments in 2 foot or shallower lifts and routing excavation equipment over the entire width of the lifts, with the exception of side hill embankments too narrow to accommodate excavation equipment which may be placed by end-dumping or sidecasting until sufficiently wide to support the equipment.

SUBSECTION BORROW

4-45 SELECT BORROW

Select borrow shall consist of granular material, either naturally occurring or processed, and shall contain no more than 5% clay, organic debris, or trash by volume.

4-46 COMMON BORROW

Common borrow shall consist of soil, and/or aggregate that is non-plastic and shall contain no more than 5% clay, organic debris, or trash by volume. The material is considered non-plastic if the fines (passes the U.S. #40 sieve) in the sample cannot be rolled between the hand and a smooth surface into a thread at any moisture content.

4-47 NATIVE MATERIAL
Native material shall be excavated material free of organic debris, trash, and rocks greater than 12" in any dimension.

4-48 BORROW MATERIAL
Borrow material shall contain no more than 5% clay, organic debris, or trash by volume.

SUBSECTION SHAPING

4-55 ROAD SHAPING
The road subgrade and surface shall be shaped as shown on the Typical Section Sheet. The subgrade and surface shape shall ensure runoff in an even, un-concentrated manner, and shall be uniform, firm, and rut-free.

4-56 DRY WEATHER SHAPING
At any time of year, the Contract Administrator may require the application of water to facilitate shaping activities. The method of water application is subject to written approval by the Contract Administrator.

SUBSECTION COMPACTION

4-60 FILL COMPACTION
Purchaser shall compact all embankment and waste material in accordance with the Compaction List by routing equipment over the entire width of each lift. A plate compactor must be used for areas specifically requiring keyed embankment construction, and embankment segments too narrow to accommodate equipment.

4-61 SUBGRADE COMPACTION
Purchaser shall compact constructed and reconstructed subgrades in accordance with the Compaction List by routing equipment over the entire width, except ditch. Purchaser shall obtain written approval from the Contract Administrator for subgrade compaction before placement of rock.

4-62 DRY WEATHER COMPACTION
At any time of the year, the Contract Administrator may require the application of water to facilitate compaction activities. The method of water application is subject to written approval by the Contract Administrator.

4-63 EXISTING SURFACE COMPACTION
Purchaser shall compact maintained road surfaces in accordance with the Compaction List by routing equipment over the entire width.

4-64 WASTE MATERIAL COMPACTION
All waste material shall be compacted by running equipment over it or bucket tamping.

4-65 CULVERT BACKFILL COMPACTION
Culvert backfills shall be accomplished by using a jumping jack compactor, performing at least 2 passes per lift, in lifts not to exceed 8 inches.

4-66 COMPACTION BY METHOD

Compaction shall consist of three complete passes over the entire width of each lift with a vibratory drum roller weighing a minimum of 6,000 pounds at a maximum operating speed of 3 mph. For embankment segments too narrow to accommodate a drum roller, a plate compactor shall be used.

SECTION 5 – DRAINAGE

5-4 PUNCHEON RESTRICTED

At no time shall puncheon be used in the subgrade, unless approved by the Contract Administrator.

SUBSECTION CULVERTS

5-5 CULVERTS

Culverts shall be installed as part of this contract. Culverts shall be installed concurrently with subgrade work and shall be installed before subgrade compaction and rock application. Culvert locations and the minimum requirements for culvert length and diameter are designated on the Culvert List. Culvert, downspout, and flume lengths shall be adjusted to fit as-built conditions and shall not terminate directly on unprotected soil. Culverts shall be new and meet the material specifications in Clauses 10-15 through 10-23.

5-8 BEVELED ENDS

The following culverts shall have their ends beveled as specified below.

Road	Stations	Bevel Type
G-2170	6+25	PP

5-11 UNUSED MATERIALS STATE PROPERTY

On required roads, any materials listed on the Culvert List and Rock List that are not installed shall become the property of the State. Purchaser shall stockpile materials as directed by the Contract Administrator**.**

5-12 CONTINGENCY CULVERTS

The following culverts will be supplied by the Purchaser and will be available for installation on any road listed in the TYPICAL SECTION SHEET as directed by the Contract Administrator. Unused pipes will be located at __Forks Culvert Yard__ or as directed by C/A prior to contract expiration.

Road	Size
As Directed	(1) 18” x 30’
By C/A	

SUBSECTION CULVERT INSTALLATION

5-15 CULVERT INSTALLATION

Installation shall be in accordance with the Typical Cross Drain Culvert Installation Detail, Typical Type Ns Np Culvert Installation Detail**,** the National Corrugated Metal Pipe Association's "Installation Manual for Corrugated Steel Drainage Structures"**,** and the Corrugated Polyethylene Pipe Association's "Recommended Installation Practices for Corrugated Polyethylene Pipe and Fittings". Corrugated Polyethylene pipe shall be installed in a manner consistent with the manufacturer's recommendations.

5-16 APPROVAL FOR LARGER CULVERT INSTALLATION

Installation of culverts 30 inches in diameter and over shall be subject to written approval by the District Engineer or their designee before backfilling.

5-17 CROSS DRAIN SKEW AND SLOPE

Cross drains on road grades in excess of 3% shall be skewed at least 30 degrees from perpendicular to the road centerline, except where the cross drain is at the low point in the road. Where the cross drain is at the low point in the road, culverts shall not be skewed. Cross drain culverts shall be installed at a slope steeper than the incoming ditch grade, but not less than 3% or more than 10%.

5-18 CULVERT DEPTH OF COVER

Cross drain culverts shall be installed with a depth of cover of not less than 18 inches of compacted depth over the top of the culvert at the shallowest point. Stream crossing culverts shall be installed with a depth of cover specified in the Engineer's design, Type Ns Np Typical Detail Sheet, or to the minimum depth recommended by the culvert manufacturer for the type of cover material over the pipe, whichever is greater.

SUBSECTION ENERGY DISSIPATERS

5-20 ENERGY DISSIPATERS

Energy dissipaters shall be installed to prevent erosion and are subject to approval by the Contract Administrator. Rock shall weigh at least 10 pounds and be placed by zero-drop-height method. Energy dissipater shall extend a minimum of ¾ foot to each side of the culvert at the outlet and a minimum of 2 feet beyond the outlet.

5-21 DOWNSPOUTS AND FLUMES

Downspouts and flumes longer than 10 feet shall be staked on both sides at maximum intervals of 10 feet with 6-foot heavy-duty steel posts or 1 ½" X 3/16" angle iron, and fastened securely to the posts with No. 10 galvanized smooth wire, or bolted using minimum 5/16" bolts and 2 washers per bolt, in accordance with the Culvert Installation Typical Details Page.

SUBSECTION CATCH BASINS, HEADWALLS, AND ARMORING

5-25 CATCH BASINS

Catch basins shall be constructed to resist erosion. Approximate dimensions are 1-2 feet deep, 1-2 feet wide, and 2-4 feet long.

5-26 HEADWALLS FOR CROSS DRAIN CULVERTS

Headwalls shall be constructed in accordance with the Typical Cross Drain Culvert Installation Detail at all cross drain culverts that specify the placement of rock. Rock used for headwalls shall consist of oversize or quarry spall material. Rock shall be placed on shoulders, slopes, and around culvert inlets and outlets. Rock shall not

restrict the flow of water into culvert inlets or catch basins. No end dumping of rock is allowed.

SECTION 6 – ROCK AND SURFACING

SUBSECTION ROCK SOURCE

6-2 ROCK SOURCE ON STATE LAND

Rock used in accordance with the quantities on the Rock List may be obtained from the following source(s) on state land at no charge to the Purchaser. Use of material from any other source must have prior written approval from the Contract Administrator. If other operators are using, or desire to use, the rock source(s), a joint operating plan shall be developed. All parties shall follow this plan. The Purchaser shall notify the Contract Administrator a minimum of 5 calendar days before starting any operations in the listed locations.

Source	Location	Rock Type
Anderson Ridge Pit	Sec. 34, T28N R13W	Pit Run
Winfield North	Sec. 35, T27N R12W	Crushed
Winfield South	Sec. 35, T27N R12W	Pit Run, Oversize

6-3 ROCK SOURCE STATE LAND, EXISTING STOCKPILE

Rock used in accordance with the quantities on the Rock List may be obtained from the following existing stockpile(s) on state land at no charge to the Purchaser. Purchaser shall remove no more than 360 cubic yards of 1 ½" minus crushed rock, unless authorized by the Contract Administrator.

Source	Location	Quantity (yd^3)
Crushed	North Winfield	360 yd^3

6-5 ROCK FROM COMMERCIAL SOURCE

Rock used in accordance with the quantities on the Rock List may be obtained from any commercial source at the Purchaser's expense. Rock sources will be subject to written approval by the Contract Administrator before their use.

SUBSECTION ROCK SOURCE DEVELOPMENT

6-10 ROCK SOURCE DEVELOPMENT PLAN BY STATE

All rock source development and use shall be in accordance with a written Rock Source Development and Reclamation Plan prepared by the State and included in this Road Plan**.** Rock source operations shall be conducted as directed by the Contract Administrator and in accordance with the plan. Upon completion of operations, the rock source shall be left in the condition specified in the Rock Source Development and Reclamation Plan, and approved in writing by the Contract Administrator. The Purchaser shall notify the Contract Administrator a minimum of 5 calendar days before starting any operations in the rock source.

6-12 ROCK SOURCE SPECIFICATIONS

Rock sources shall be in accordance with the following unless otherwise specified in Rock Source Development and reclamation plan:

- Pit walls shall not be undermined or over-steepened. The maximum slope of the walls shall be consistent with recognized engineering standards for the type of material being excavated in accordance with the following table:

Material	Maximum Slope Ratio (Horiz.:Vert.)	Maximum Slope Percent
Sand	2:1	50
Gravel	1.5:1	67
Common Earth	1:1	100
Fractured Rock	0.5:1	200
Solid Rock	0:1	vertical

- Pit walls shall be maintained in a condition to minimize the possibility of the walls sliding or failing.
- The width of pit benches shall be a minimum of 1.5 times the maximum length of the largest machine used.
- The surface of pit floors and benches shall be uniform and free-draining at a minimum 2% outslope gradient.
- All operations shall be carried out in compliance with all regulations of the Regulations and Standards Applicable to Metal and Nonmetal Mining and Milling Operations (30 CFR) U.S. Department of Labor, Mine Safety and Health Administration and Safety Standards for Construction Work (296-155 WAC), Washington Department of Labor and Industries.
- Block all vehicle access to the top of the pit faces.

6-15 REQUIRED ROCK SOURCE WORK

The following rock source work is required. Work is to be done according to the approved Rock Source Development And Reclamation Plan and as directed by the Contract Administrator.

Site	Requirements
Anderson Ridge Pit	Strip 1 acre down to usable rock. Add Culvert and drainage ditch as staked or instructed by C/A.

SUBSECTION ROCK GRADATIONS

6-25 FINES

% Passing U.S. #40 sieve	100%
% Passing U.S. #200 sieve	0%

The portion of aggregate retained on the No. 200 sieve may not contain more than 0.2 percent organic debris and trash. All percentages are by weight.

6-29 1 ½-INCH MINUS CRUSHED ROCK

% Passing 1 ½" square sieve	100%
% Passing 1" square sieve	50 - 85%
% Passing U.S. #4 sieve	30 - 50%
% Passing U.S. #40 sieve	16% maximum
% Passing U.S. #200 sieve	5% maximum

The portion of aggregate retained on the No. 4 sieve shall not contain more than 0.2% organic debris and trash. All percentages are by weight.

6-50 LIGHT LOOSE RIP RAP

Rip rap shall consist of angular, hard, sound, and durable stone. It shall be free from segregation, seams, cracks, and other defects. Light loose rip rap shall be free of rock fines, soil, organic debris or other extraneous material, and shall meet the following requirements:

At Least/Not More Than	Weight Range	Size Range
20% / 90%	300 lbs. to 1 ton	12”- 36”

6-52 OVERSIZE

% Passing 8” square sieve	100%
% Passing 4” square sieve	0%

Rock shall not contain more than 5 percent vegetative debris or trash. All percentages are by weight.

SUBSECTION ROCK MEASUREMENT

6-55 ROCK APPLICATION MEASURED BY COMPACTED DEPTH

Measurement of specified rock depths are defined as the compacted depth(s) using the compaction methods required in this Road Plan. Estimated quantities specified in the Rock List are estimated truck yards. Purchaser shall apply adequate amounts of rock to meet the specified rock depths. Specified rock depths are minimum requirements and are not subject to reduction.

SUBSECTION ROCK STOCKPILE

6-65 ROCK STOCKPILE LOCATION

The Purchaser may stockpile rock as approved by the Contract Administrator and in accordance with Clause 6-67.

6-67 ROCK STOCKPILE SPECIFICATIONS

Rock stockpiles listed in Clause 6-65 Rock Stockpile Location shall meet the following specifications:

- Before placing aggregates upon the stockpile site, the site shall be cleared of vegetation, trees, stumps, brush, rocks or other debris and the ground leveled to a smooth, firm, uniform surface.
- When completed, the stockpile shall be neat and regular in shape.
- The stockpile height shall be limited to a maximum of 30 feet.
- Stockpiles in excess of 500 cubic yards shall be built up in layers not more than 8 feet in depth. Stockpile layers shall be constructed by trucks, clamshells, or other methods approved, in writing, by the Contract Administrator.
- Each layer shall be completed over the entire area of the pile before depositing aggregates in the next layer. The aggregates shall not be dumped so that they run down and over the lower layers in the stockpile. The method of dropping from

a bucket or spout in one location so as to form a cone shaped pile will not be permitted.

- Stockpiles of different types or sizes of aggregate shall be spaced far enough apart, or separated by suitable walls or partitions, to prevent the mixing of the aggregates.

SUBSECTION ROCK APPLICATION

6-70 APPROVAL BEFORE ROCK APPLICATION

Subgrade drainage installation including grading and compaction, shall be completed and approved in writing by the Contract Administrator, before rock application.

6-71 ROCK APPLICATION

Rock shall be applied in accordance with the specifications and quantities shown on the Rock List. Rock shall be spread, shaped, and compacted full-width concurrent with rock hauling operations. Rock shall be compacted in accordance with Compaction List, in lifts not to exceed 6 inches.

6-72 ROCK APPLICATION AFTER HAULING

On the following road(s), upon completion of all hauling operations, Purchaser shall apply 1 $^{1}/_{2}$" minus crushed rock in accordance with the quantities shown on the Rock List.

Road	Stations	Amount
G-1000	Per C/A	100 yd^3
G-2000	Per C/A	100 yd^3

6-73 ROCK FOR WIDENED PORTIONS

Turnarounds, turnouts, and areas with curve widening shall have rock applied to the same depth and specifications as the traveled way.

6-78 ROCK FOR SPOT PATCHING

Rock for spot patching shall be applied before any grading is done and before any rock lifts are applied. Once applied, spot patches shall be graded into the existing running surface.

SECTION 7 – STRUCTURES

SUBSECTION SIGNS

7-2 SIGN INSTALLATION (NON-HIGHWAY)

The Purchaser shall be responsible for the purchase, installation, and maintenance of the following road signs. Signs shall be installed a minimum of 1 day before Construction Begins. Signs shall be at least 2 feet in any direction, and shall be orange with black lettering.

Road	Station	Sign

G-1000	1+00	CB Channel
G-2000	1+00	CB Channel
*All others	1+00	CB Channel

*CB Channel sign to be installed at beginning of any road wherever channel change occurs.

SUBSECTION STREAM CROSSING STRUCTURES GENERAL

7-5 STRUCTURE DEBRIS

The Purchaser shall ensure that debris from the installation or removal of structures does not enter any stream. Components removed from the existing structures(s) shall be placed at designated site(s), as directed in writing by the Contract Administrator. The Purchaser is responsible for maintaining a clean jobsite, with all materials stored away from any high water mark or other area presenting a risk of the materials entering a stream. Debris entering any stream shall be removed immediately and placed in the site(s) designated for stockpiling or disposal. The Purchaser is responsible for retrieving all material carried downstream from the jobsite by the stream current.

7-6 STREAM CROSSING INSTALLATION

Installation of stream crossing structures shall be in accordance with the manufacturer's requirements, and as directed by the District Engineer or their designee.

7-7 BANK PROTECTION FOR STREAM CROSSING STRUCTURES

Bank protection shall be designed and constructed to prevent the undermining of the structure.

SUBSECTION ACCEPTANCE

7-20 REQUIRED NOTIFICATION AND APPROVAL

Purchaser shall provide the District engineer or their designee 3 day notification prior to beginning Bridge work on the G-2100. Purchaser shall receive approval for completed road work on the G-2100 and G-2170 roads from the District engineer or their designee prior to log haul on those roads.

SUBSECTION BRIDGE INSTALLATION

7-45 PURCHASER SUPPLIED BRIDGE

On the following road(s), the Purchaser shall supply and construct each bridge, listed below, in accordance with this Road Plan. Refer to Log stringer design sheets.

Road	Station	Length (ft)	W.B.S.R.[1] (ft)	Loading/ Deflection Ratio	Type	Vert.Clear[2] (ft)	Hor. Align[3]
G-2100	141+00	30	14	U-80	Log Stringer	7	P.P

[1]W.B.S.R. = Width between shear rails.

[2]Vertical clearance shall be measured from 100 year flood level.

[3]Horizontal alignment: P.P. = on the attached plan/profile, C.S. = according to construction stakes on the ground.

7-47 CONTRACTOR SUPPLIED STRINGERS AND ABUTMENTS

Contractor is responsible for acquiring stringers and abutments from the timber sale units. Stringers shall meet a minimum mid-span diameter of 25 inches and abutments shall meet a minimum mid-span diameter of 24 inches. Stringers and abutments shall be constructed of spruce.

Bridge delineators shall be installed and shall consist of four reflective striped delineators mounted on each bridge. Mounting may consist of post and bolt or other Owner approved means of attachment. One delineator shall be installed at each end of each bridge guard rail or curb, and shall be installed with the reflector stripes angled downward and guiding traffic towards the center of the bridge.

7-51 EMBANKMENT RETENTION

Embankment retention methods shall be provided to ensure that bridge approach embankments are stable, contained, and do not encroach on the stream channel.

SUBSECTION LARGE CULVERTS

7-55 LARGE CULVERT INSTALLATION

On the following road(s), Purchaser shall install large culverts as specified below. The installation of the culvert shall follow the appropriate detail sheet. Culvert designs shall meet or exceed the following specifications:

Road	G-2170	G-2170	G-2170
Station	6+25	15+50	25+25
Type	Steel	Steel	Steel
Material and Coating Type*	Aluminized	Aluminized	Aluminized
Span (in.)	144”	48”	36”
Rise (in.)	144”	48”	36”
Length (ft.)	60	50’	60’
Depth of Cover Material (ft.)	3’	3’	3’
End design	Round	Round	Round
Corrugations	5” x 1”	3” x 1”	2 2/3” x ½”
Gauge	10	12	14
Detail Sheet	See Plans		

* See Clause10-15 Corrugated Steel Culvert or Clause 10-18 Corrugated Steel Structural Plate

7-55 LARGE CULVERT INSTALLATION CONTINUED

On the following road(s), Purchaser shall install large culverts as specified below. The installation of the culvert shall follow the appropriate detail sheet. Culvert designs shall meet or exceed the following specifications:

Road	G-2170	G-2170.3	
Station	26+60	9+40	
Type	Steel	Steel	
Material and Coating Type*	Aluminized	Aluminized	
Span (in.)	36	48”	
Rise (in.)	36	48”	
Length (ft.)	60	60’	
Depth of Cover Material (ft.)	3’	3’	
End design	Round	Round	
Corrugations	2 2/3” x ½”	3” x 1”	
Gauge	14	12	
Detail Sheet			

* See Clause10-15 Corrugated Steel Culvert or Clause 10-18 Corrugated Steel Structural Plate

7-56 STEEL PIPE, PIPE ARCH, AND STRUCTURAL PLATE INSTALLATION

Steel pipe, pipe arches, and structural plate culverts shall be installed according to the National Corrugated Pipe Association Installation Manual, and are subject to the inspection and approval of the Contract Administrator before placement and backfill. The latest edition of the NCSPA Installation Manual can be found at www.ncspa.org.

7-57 CULVERT SHAPE CONTROL

Purchaser shall monitor the culvert shape during backfill and compaction. Special attention shall be paid to maintaining the structure’s rise dimensions, concentricity and smooth, uniform curvature. If compaction methods are resulting in peaking and/or deflection of the culvert, Purchaser shall, in consultation with the District Engineer or their designee, modify their compaction method to achieve the appropriate end-result. The National Corrugated Steel Pipe Association "Installation Manual for Corrugated Steel Pipe, Pipe Arches, and Structural Plate" includes guidance on how to monitor culvert shape control and recommends corrective actions to take when shape control problems arise.

7-58 MATERIAL INSIDE CULVERT

Purchaser shall furnish and install rock in accordance with detail sheets listed below and quantities in the Rock List. Rock shall be placed inside the following culvert(s) as specified in the detail sheets.

Road	Station	Detail Sheet Name
G-2170	6+25	C-2 Profile Sheet

7-76 GATE INSTALLATION

On the following road(s), Purchaser shall install the designated gate(s). Gate installations shall be installed before expiration of Timber Sale Contract.

Road	Station	Type*	Furnished by
Anderson Pit Road	1+00	Tubular	Contractor

* Tubular gate installation(s) shall be in accordance Typical Gate Installation Detail

The gate and lock box shall be installed plumb and aligned to ensure all mating components match with precision. Each post shall be filled with concrete, capped, and set in a minimum of 2 cubic yards of poured-in-place concrete. The gate shall be installed with a post and locking device to allow the gate to be locked in an open position. The Contract Administrator will supply the Purchaser with a padlock. If the Purchaser wishes to install an alternate design, detailed plans for the construction of the gate shall be submitted to the Contract Administrator or their designee in writing, for approval, before gate installation. The gate shall be primed and painted in at least 2 coats of Safety Yellow.

If fences exist at the site of gate installation(s), the Purchaser shall be required to connect the fencing to the posts of the new installation, except by permission from the Contract Administrator. Purchaser shall supply and place stumps to prevent vehicles driving around the gate.

7-78 GATE SUPPLIED BY PURCHASER

The gate structure to be installed by the Purchaser, as specified in Clause 7-76 Gate Installation, shall be supplied by the Purchaser and accepted, in writing, by the Contract Administrator before installation.

SECTION 8 – EROSION CONTROL

8-1 SEDIMENT CONTROL STRUCTURES

On the following road(s), Purchaser shall install sediment control structures as listed below.

Road	Stations	Comments
G-1000	139+75 – 140+75	Silt Fence L & R
G-1200	30+80	Silt Fence In Ditch
G-1200	67+40	Silt Fence In Ditch
G-2100	10+00 - 11+00	Berms L & R
G-2100	10+40	Settling Ponds all 4 corners
G-2100	12+10	Settling Pond
G-2100	12+10	Silt Fence In Ditch
G-2100	15+30	Silt Fence In Ditch
G-2100	25+75 – 27+25	Berms L & R (no extra rk needed)
G-2100	34+40	Settling Pond & silt fence
G-2100	45+00 – 47+00	Berms L & R
G-2100	57+30 – 59+30	Berm L
G-2100	105+50 – 107+00	Berms L & R
G-2100	123+00 – 124+00	Silt Fence L
G-2100	123+50	Settling Ponds with Silt Fence In Ditch
G-2100	129+10	Settling Ponds with Silt Fence In Ditch
G-2100	131+00	Settling Ponds both ditches

8-2 PROTECTION FOR EXPOSED SOIL

Purchaser shall furnish and evenly spread a 3-inch layer of straw to all exposed soils at stream culvert installations**.** Soils shall not be allowed to sit exposed during any rain event.

8-7 ROAD SHOULDER BERM INSTALLATION

On the following road(s), the Purchaser shall construct berms on the road shoulders as listed below.

Road	Stations	Remarks
G-2100	9+90 – 10+90	L & R
G-2100	25+75 – 27+25	L & R
G-2100	45+00 – 47+00	L & R
G-2100	57+30 – 59+30	L
G-2100	106+50 – 107+00	L & R

SUBSECTION SLOPE STABILIZATION

8-10 STABILIZE SLOPES – ROCK APPLICATION

On the following road(s), Purchaser shall stabilize embankment slopes by applying rock as specified below. Rock must be set in place and must be applied in quantities specified in the Rock List. Rock must be set in place by machine by zero-drop-height method only. No placement by end dumping or dropping of rock is allowed

Road	Stations	Rock Type
G-2100	28+70 -29+20	Light Loose Rip Rap
G-1208	5+00 – 6+00, 10+00 – 11+00	Light Loose Rip Rap

SUBSECTION REVEGETATION

8-15 REVEGETATION

Purchaser shall grass seed and hay mulch all exposed soils including, but not limited to, stream culverts, waste areas, sidecast pull back areas, stream crossing removals, bridge installations, and other areas directed by the Contract Administrator. Revegetation of exposed soils shall be accomplished by manual dispersal of grass seed unless otherwise detailed in this Road Plan. Other methods of revegetation must be approved in writing by the Contract Administrator.

8-16 REVEGETATION SUPPLY

All seed**,** mulch**,** hay, matting, etc. will be provided by the Purchaser.

8-17 REVEGETATION TIMING

Purchaser shall perform revegetation during the first available opportunity. Soils shall not be allowed to sit exposed for longer than one month without receiving revegetation treatment unless otherwise approved in writing by the Contract Administrator. Soils shall not be allowed to sit exposed during any rain event.

8-18 PROTECTION FOR SEED

Purchaser shall provide a protective cover over the revegetated area. The protective cover may consist of, but not be limited to, such items as dispersed hay mulch 3” thick or jute matting.

8-19 ASSURANCE FOR SEEDED AREA

The Purchaser shall be responsible to ensure a uniform and dense crop of grass. The Purchaser shall reapply the seed and/or mulch in areas that have been damaged through any cause, before approval from the Contract Administrator. The Purchaser shall restore eroded or disturbed areas, clean up and properly dispose of eroded materials, and reapply the seed and/or mulch at no additional cost to the state.

SUBSECTION SEED, FERTILIZER, AND MULCH

8-25 GRASS SEED

Purchaser shall evenly spread the seed mixture listed below on all exposed soils at a rate of 60 pounds per acre of exposed soil.

Seed Species	% by Weight
• Perennial Ryegrass	40.00
• Creeping Red Fescue	40.00
• White Dutch Clover	10.00
• Colonial Bentgrass	10.00

Grass seed shall meet the following specifications:

1. Weed seed may not exceed 0.5% by weight.
2. All seed species must have a minimum 90% germination rate, unless otherwise specified.
3. Seed must be certified.
4. Seed must be furnished in standard containers showing the following information:
    a. Common name of seed
    b. Net weight
    c. Percent of purity
    d. Percentage of germination
    e. Percentage of weed seed and inert material

SECTION 9 – POST-HAUL ROAD WORK

SUBSECTION STRUCTURES

9-3 REMOVAL OF CULVERT MATERIAL FROM STATE LAND

Culvert material removed from roads becomes the property of the Purchaser and must be removed from state land.

SUBSECTION POST-HAUL MAINTENANCE

9-5 POST-HAUL MAINTENANCE

Post-haul maintenance shall be performed in accordance with the Forest Access Road Maintenance Specifications and as specified below.

Road	Stations	Additional Requirements
All	All	Clean culverts, clean ditches, grade road shape and compact as directed by the Contract Administrator
G-1000	All	Apply post haul rock as per Clause 6-72. Clean Bridge Deck.
G-2000	All	Apply post haul rock as per Clause 6-72.

SUBSECTION POST-HAUL LANDING MAINTENANCE

9-10 LANDING DRAINAGE

On all roads, Purchaser shall provide for drainage of the landing surface as approved in writing by the Contract Administrator.

9-11 LANDING EMBANKMENT

On all roads, landing embankments shall be sloped to original construction specifications.

SUBSECTION DECOMMISSIONING AND ABANDONMENT

9-20 ROAD DECOMMISSIONING

The following road(s) shall be decommissioned by the Purchaser before the termination of this contract.

Road	Stations	Type
6+10 Spur	0+00 – 6+10	Light Decommissioning
2+40 Spur	0+00 – 2+40	Light Decommissioning

9-22 LIGHT DECOMMISSIONING

Decommissioning shall consist of:

1. Remove all culverts. Resulting back slopes shall be 1:1 or shallower for cross drains and 1.5:1, or as specified in approved drawings, for all live stream culvert removals. Material removed shall be placed on the roadbed and compacted, with slopes of 2:1 or shallower, or end-hauled to designated waste areas. Culverts removed shall become the property of the Purchaser and removed from State land.

2. Construct non-drivable water bars as directed by the Contract Administrator. On grades in excess of 3%, non-drivable water bars shall be skewed 30 degrees from the perpendicular of the road centerline.

3. Restore all ditchouts to drain water.

4. Repair or construct ditchlines.

5. Remove any berms, except as directed.

6. Restoration of natural stream channels across road prism, as directed by the Contract Administrator.

7. Removing all fill material as approved by the Contract Administrator.

8. All material from fill removals, culvert removals, and bridge removals shall be placed on roadbed and compacted, except that material listed in Clause 4-37.

9. Purchaser shall furnish and apply grass seed to all areas of exposed soil, including but not limited to: water bars, waste piles, and culvert removal sites. Grass seed shall be applied at a rate of 60 pounds per acre.

10. Block road to vehicular traffic using logs, slash, and stumps, as directed by the Contract Administrator.

SECTION 10 MATERIALS

SUBSECTION GEOTEXTILES

10-2 GEOTEXTILE FOR SEPARATION

Geotextiles shall meet the following minimum requirements for strength and property qualities, and shall be designed by the manufacturer to be used for separation. Material shall be free of defects, cuts, and tears.

	ASTM Test	Requirements
Type	--	Non-woven
Apparent opening size	D 4751	No. 30 max
Water permittivity	D 4491	0.02 sec^{-1}
Grab tensile strength	D 4632	160 lb
Grab tensile elongation	D 4632	= 50%
Puncture strength	D 6241	310 lb
Tear strength	D 4533	50 lb
Ultraviolet stability	D 4355	50% retained after 500 hours of exposure

10-6 GEOTEXTILE FOR TEMPORARY SILT FENCE

Geotextiles shall meet the following minimum requirements for strength and property qualities, and shall be designed by the manufacturer to be used for filtration. Woven slit-film geotextiles will not be allowed. Material shall be free of defects, cuts, and tears.

	ASTM Test	Requirements
Type	--	<Unsupported between posts>
Apparent opening size	D 4751	<No. 30 max., No. 100 min.>
Water permittivity	D 4491	0.02 sec^{-1}
Grab tensile strength	D 4632	<180 lb in machine direction, 100lb in cross-machine direction>
Grab tensile elongation	D 4632	<30% max. at 180 lb or more>
Ultraviolet stability	D 4355	70% retained after 500 hours of exposure

SUBSECTION CULVERTS

10-15 CORRUGATED STEEL CULVERT

Metallic coated steel culverts shall meet AASHTO M-36 (ASTM A-760) specifications. Culverts shall be aluminized (aluminum type 2 coated meeting AASHTO M-274.

10-16 CORRUGATED ALUMINUM CULVERT

Aluminum culverts shall meet AASHTO M-196 (ASTM A-745) specifications.

10-17 CORRUGATED PLASTIC CULVERT

Polyethylene culverts shall meet AASHTO M-294 specifications. Culverts shall be Type S – double walled with a corrugated exterior and smooth interior.

10-18 CORRUGATED STEEL STRUCTURAL PLATE

Structural plate culverts shall be galvanized steel meeting AASHTO M-167 (ASTM A-761) specifications.

10-19 CORRUGATED ALUMINUM STRUCTURAL PLATE

Structural plate culverts shall be aluminum alloy meeting AASHTO M-219 (ASTM A-746) specifications.

10-20 FLUME AND DOWNSPOUT

Downspouts and flumes shall meet the AASHTO specification designated for the culvert. Plastic downspouts and flumes shall be Type S – double walled with a corrugated exterior and smooth interior.

10-21 METAL BAND

Metal coupling and end bands shall meet the AASHTO specification designated for the culvert and shall have matching corrugations. On culverts 24 inches and smaller, bands shall have a minimum width of 12 inches. On culverts over 24 inches, bands shall have a minimum width of 24 inches.

10-22 PLASTIC BAND

Plastic coupling and end bands shall meet the AASHTO specification designated for the culvert. Only fittings supplied or recommended by the culvert manufacturer shall be used. Couplings shall be split coupling band. Split coupling bands shall have a minimum of four corrugations, two on each side of the pipe joint.

10-23 RUBBER CULVERT GASKETS

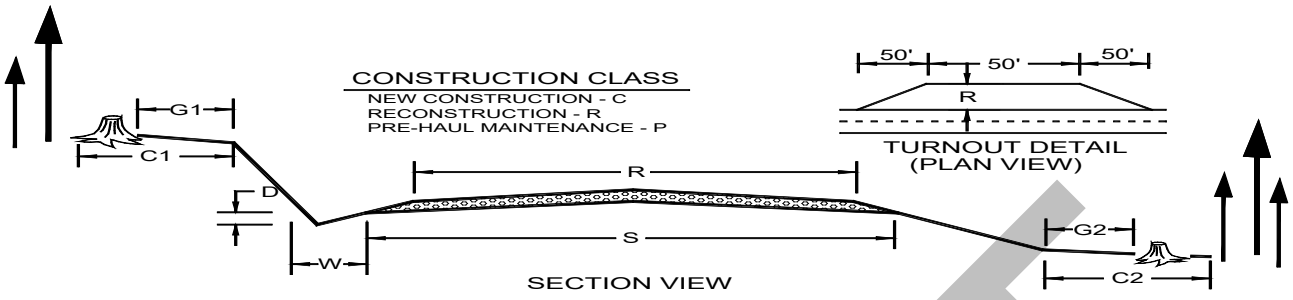
Rubber gaskets must be continuous closed cell, synthetic expanded rubber gaskets conforming to the requirements of ASTM D 1056. Rubber gaskets must be used with all corrugated metal pipe coupling bands.

10-24 GAGE AND CORRUGATION

Metal culverts shall conform to the following specifications for gage and corrugation as a function of diameter.

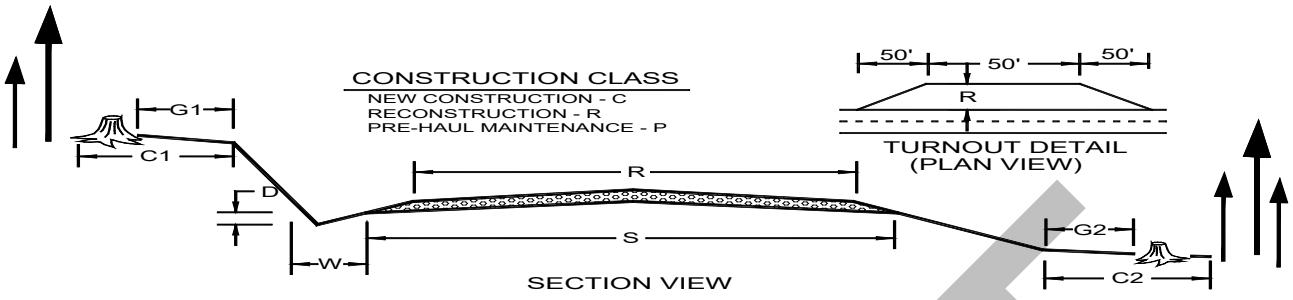
Diameter	Gage	Corrugation
18"	16 (0.064")	2 $^{2}/_{3}$" X $^{1}/_{2}$"
24" to 42"	14 (0.079")	2 $^{2}/_{3}$" X $^{1}/_{2}$"
48" to 54"	12	3" X 1"
60" +	10	5" X 1"

TYPICAL SECTION SHEET



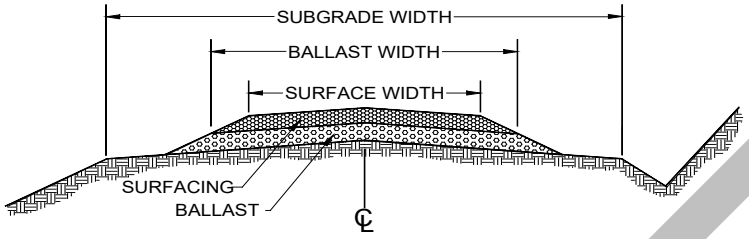
ROAD NAME	START STATION	END STATION	CONSTRUCTION CLASS		SUBGRADE WIDTH (S)	ROAD WIDTH (R)	CROWN AT CL (in)	DITCH WIDTH (W)	DITCH DEPTH (D)	GRUBBING CUT BANK (G1)	GRUBBING FILL TOE (G2)	ROAD CUT CLEARING (C1)	ROAD FILL CLEARING (C2)
G-1000	0+00	141+50	P			16’	3”	2’	1’				
G-1200	0+00	134+75	P			14’	3”	2’	1’				
G-1208	0+00	14+40	P			14’	3”	2’	1’				
G-1200.13	0+00	3+70	P			14’	3”	2’	1’				
G-1200.12	0+00	8+00	P			14’	3”	2’	1’				
11+25 Spur	0+00	5+25	P			14’	3”	2’	1’				
11+25 Spur	5+25	11+25	C		18’	14’	3”	2’	1’	3’	5’	10’	5’
G-2000	0+00	197+00	P			16’	3”	2’	1’				
G-2100	0+00	139+50	P			16’	3”	2’	1’				
G-2100	139+50	141+00	C		18’	14’	3”	2’	1’	3’	5’	10’	5’
G-2100	141+00	148+25	P			14’	3”	2’	1’				
G-2108	0+00	11+50	P			16’	3”	2’	1’				
G-2170	0+00	36+40	P			14’	3”	2’	1’				
G-2170.3	0+00	22+00	P			14’	3”	2’	1’				
G-2500	0+00	215+25	P			16’	3”	2’	1’				
G-2500.13	0+00	8+00	P			14’	3”	2’	1’				
G-2500.15	0+00	1+50	P			14’	3”	2’	1’				
G-2500.9	0+00	22+30	P			14’	3”	2’	1’				
G-2500.93	0+00	2+50	P			14’	3”	2’	1’				
4+40 Spur	0+00	4+40	R		18’	14’	3”	2’	1’	3’	5’	10’	5’
2+40 Spur	0+00	2+40	C		18’	14’	3”	2’	1’	3’	5’	10’	5’
6+10 Spur	0+00	6+10	C		18’	14’	3”	2’	1’	3’	5’	10’	5’
1+15 Spur	0+00	1+15	C		18’	14’	3”	2’	1’	3’	5’	10’	5’
1+45 Spur	0+00	1+45	C		18’	14’	3”	2’	1’	3’	5’	10’	5’
0+85 Spur	0+00	0+85	C		18’	14’	3”	2’	1’	3’	5’	10’	5’

TYPICAL SECTION SHEET



ROAD NAME	START STATION	END STATION	CONSTRUCTION CLASS		SUBGRADE WIDTH (S)	ROAD WIDTH (R)	CROWN AT CL (in)	DITCH WIDTH (W)	DITCH DEPTH (D)	GRUBBING CUT BANK (G1)	GRUBBING FILL TOE (G2)	ROAD CUT CLEARING (C1)	ROAD FILL CLEARING (C2)
1+25 Spur	0+00	1+25	C		18’	14’	3”	2’	1’	3’	5’	10’	5’
1+60 Spur	0+00	1+60	C		18’	14’	3”	2’	1’	3’	5’	10’	5’
4+50 Spur	0+00	4+50	P			14’	3”	2’	1’				

ROCK LIST SHEET



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2. All depths are compacted depths.
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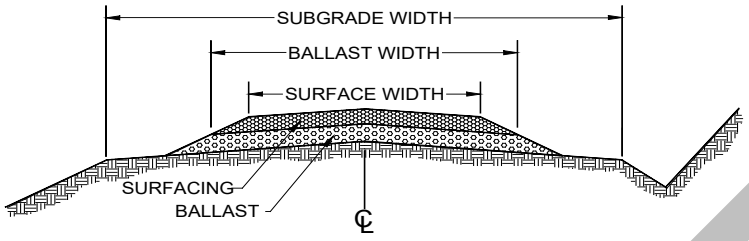
4. All rock sources are subject to approval by the Contract Administrator.
5. Pitrun is defined as pitrun or ballast per Line 6. Crushed is defined as any crushed rock from ¼” minus to 4” minus per Line 6. Oversize is defined as oversize, quarry spalls, light loose rip rap, or heavy loose rip rap per Line 6.
6. Rock sources= -1: Anderson Ridge Pit Run, 2: Winfield 1 ½” minus, 3: Winfield Oversize, 4. Red Creek Quarry Light Loose Rip Rap

ROAD NAME	START STATION	END STATION	SUBGRADE WIDTH (ft)	Pitrun SOURCE	Pitrun WIDTH (ft)	Pitrun DEPTH (in)	Pitrun Quantity(yd^3/sta)	Pitrun SUBTOTAL(yd^3)	Crushed SOURCE	Crushed WIDTH (ft)	Crushed DEPTH (in)	Crushed Quantity(yd^3/sta)	Crushed Subtotal(yd^3)	Oversize/ Rip rap Source	Oversize/Rip Rap Quantity(yd^3)
G-1000															
Culvert	104+90			1				20							
Posthaul									2				200		
G-1200															
Lift	127+75	134+75		1	12	6	35	250							
Culvert	66+60			1				20							
Culvert	118+80			1				20							
G-1208															
Lift	0+00	14+40		1	12	6	35	500							
Spot patch	0+60			1				20							
Keyed Embank	5+00	6+00												4	30
Keyed Embank	10+00	11+00												4	30
G-1200.12															
Lift	0+00	8+00		1	12	6	35	280							
Landing	3+50			1				50							
Landing	8+00			1				50							
G-1200.13															
Lift	0+00	3+70		1	12	6	35	130							
Landing	3+70			1				50							
Totals:								1390					200		60

ROCK LIST SHEET CONTINUED



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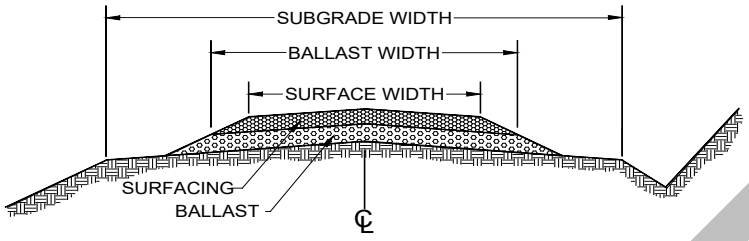
ROAD NAME	START STATION	END STATION		Pitrun SOURCE	Pitrun WIDTH (ft)	Pitrun DEPTH (in)	Pitrun Quantity(yd³/sta)	Pitrun SUBTOTAL(yd³)	Crushed SOURCE	Crushed WIDTH (ft)	Crushed DEPTH (in)	Crushed Quantity(yd³/sta)	Crushed Subtotal(yd³)	Oversize/ Rip rap Source	Oversize/Rip Rap Quantity(yd³)
4+40 Spur															
Misc				1				100							
11+25 Spur															
Lift	0+00	5+25		1	12	6	35	180							
Lift	5+25	11+25		1	12	18	110	660							
G-2000															
Misc	Per C/A								2				50		
Posthaul	Per C/A								2				100		
G-2100															
Slump Repair	28+70	29+20		1				20						4	40
Berm	45+00	47+00							2				5		
Berm	57+30	59+60							2				5		
Culvert	109+50			1				20							
Culvert	128+60			1				20							
Culvert	139+00			1				20							
Re-route Lift	139+50	140+50		1	14	18	110	110							
Bridge Approaches	140+00	141+00		1				250							
Lift	141+00	146+25		1	12	6	35	180							
Energy Dissipaters	59+30													4	5
Energy Dissipaters	100+70													4	5
Totals:								1560					160		50

ROCK LIST SHEET CONTINUED



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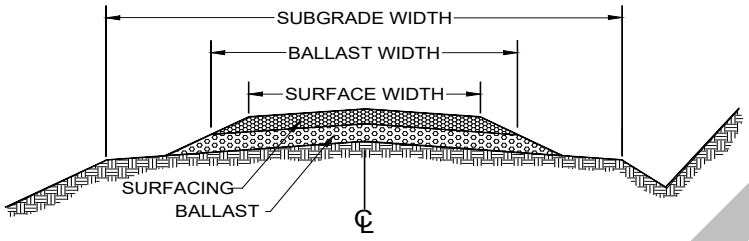
ROAD NAME	START STATION	END STATION	SUBGRADE WIDTH (ft)	Pitrun SOURCE	Pitrun WIDTH (ft)	Pitrun DEPTH (in)	Pitrun Quantity(yd³/sta)	Pitrun SUBTOTAL(yd³)	Crushed SOURCE	Crushed WIDTH (ft)	Crushed DEPTH (in)	Crushed Quantity(yd³/sta)	Crushed Subtotal(yd³)	Oversize/ Rip Rap Source	Oversize/Rip Rap Quantity(yd³)
G-2100 Cont.															
Energy Dissipaters	112+60													4	5
G-2170															
Lift	0+00	36+40	17	1	12	6	35	1280							
Crossing	6+25			1				200							
Pipe fill	6+25			1				200							
Culvert	9+00			1				20							
Culvert	12+75			1				20							
Culvert	15+50			1				150							
Culvert	17+20			1				50							
Culvert	18+25			1				20							
Culvert	25+25			1				150							
Culvert	26+60			1				150							
Culvert	30+50			1				20							
Culvert	33+50			1				50							
Landing								50							
6+10 Spur															
Lift	0+00	6+10		1	12	18	110	670							
Totals:								3030					0		5

ROCK LIST SHEET CONTINUED



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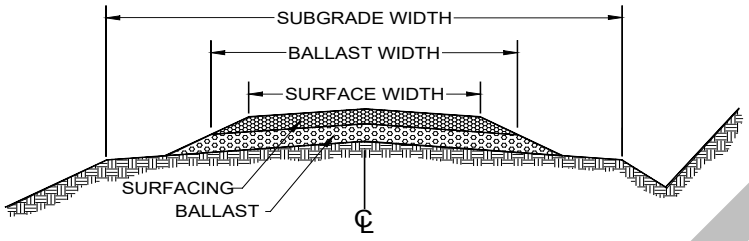
ROAD NAME	START STATION	END STATION	SUBGRADE WIDTH (ft)	Pitrun SOURCE	Pitrun WIDTH (ft)	Pitrun DEPTH (in)	Pitrun Quantity(yd³/sta)	Pitrun SUBTOTAL(yd³)	Crushed SOURCE	Crushed WIDTH (ft)	Crushed DEPTH (in)	Crushed Quantity(yd³/sta)	Crushed Subtotal(yd³)	Oversize/ Rip Rap Source	Oversize/Rip Rap Quantity(yd³)
1+15 Spur															
Lift	0+00	1+15	18	1	14	18	110	130							
Culvert	0+10			1				20							
1+45 Spur															
Lift	0+00	1+45	18	1	14	18	110	160							
Culvert	0+10			1				20							
0+85 Spur															
Lift	0+00	0+85	18	1	14	18	110	100							
1+25 Spur															
Lift	0+00	1+25	18	1	14	18	110	140							
Culvert	0+10							20							
1+60 Spur															
Lift	0+00	1+60	18	1	14	18	110	180							
4+50 Spur															
Lift	0+00	4+50	18	1	14	12	70	320							
Culvert	0+10							50							
Culvert	2+40							40							
Totals:								1180					0		0

ROCK LIST SHEET CONTINUED



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ROAD NAME	START STATION	END STATION	SUBGRADE WIDTH (ft)	Pitrun SOURCE	Pitrun WIDTH (ft)	Pitrun DEPTH (in)	Pitrun Quantity(yd³/sta)	Pitrun SUBTOTAL(yd³)	Crushed SOURCE	Crushed WIDTH (ft)	Crushed DEPTH (in)	Crushed Quantity (yd³/sta)	Crushed Subtotal(yd³)	Oversize/ Rip rap Source	Oversize/Rip Rap Quantity(yd³)
G-2170.3															
Lift	0+00	22+65		1	12	6	35	800							
Culvert	1+10			1				20							
Culvert	3+85			1				20							
Spot Patch	1+00			1				10							
Culvert	4+30			1				30							
Culvert	8+18			1				20							
Culvert	9+40			1				100							
Culvert	11+45			1				20							
Culvert	14+30			1				20							
Culvert	15+00			1				80							
Culvert	17+27							20							
Culvert	19+18							20							
2+40 Spur															
Lift	0+00	2+40		1	12	18	110	260							
Landing	2+40			1				50							
G-2500															
Misc									2			100			
Contingency pipe				1				20							
Totals:								1490				100			0
Grand Totals:								8650				460			115

CULVERT LIST

ROAD NAME	STATION	CULVERT DIAMETER (in)	CULVERT LENGTH (ft)	FLUME LENGTH (ft)		RIP RAP - INLET (cy)	RIP RAP – OUTLET (cy)	BACKFILL MATERIAL	NOTES
G-1000	104+90	18	40					PR	New Cross Drain culvert
G-1200	58+50							PR	Pipe Maintenance, clean inlet
G-1200	66+60	18	30					PR	New Cross Drain culvert
G-1200	78+00							PR	Pipe Maintenance, clean inlet
G-1200	118+80	18	30					PR	New Cross Drain culvert
G-1200	121+75							PR	Pipe Maintenance, clean inlet
G-2100	2+00							PR	Pipe Maintenance, clean inlet
G-2100	5+40							PR	Pipe Maintenance, clean inlet & Outlet
G-2100	9+10							PR	Pipe Maintenance, clean inlet
G-2100	14+10							PR	Pipe Maintenance, clean inlet
G-2100	18+00							PR	Pipe Maintenance, clean inlet
G-2100	20+30							PR	Pipe Maintenance, clean inlet
G-2100	25+20							PR	Pipe Maintenance, clean inlet
G-2100	27+50							PR	Pipe Maintenance, clean inlet
G-2100	31+25							PR	Pipe Maintenance, clean inlet
G-2100	33+20							PR	Remove flume, add energy dissipater
G-2100	35+60							PR	Pipe Maintenance, clean inlet
G-2100	36+00							PR	Pipe Maintenance, clean inlet & Outlet
G-2100	36+80							PR	Pipe Maintenance, clean inlet
G-2100	41+50							PR	Fix pipe inlet
G-2100	47+00							PR	Pipe Maintenance, clean inlet
G-2100	49+50							PR	Pipe Maintenance, clean inlet
G-2100	50+10							PR	Fix inlet, add energy dissipater
G-2100	51+60							PR	Pipe Maintenance, clean inlet
G-2100	53+60							PR	Clean inlet, add energy dissipater
G-2100	54+50							PR	Pipe Maintenance, clean inlet
G-2100	56+50							PR	Pipe Maintenance, clean inlet
G-2100	59+30							PR	Clean inlet, add energy dissipater
G-2100	60+25							PR	Clean Inlet, lower ditch block
G-2100	66+00							PR	Pipe Maintenance, clean inlet
G-2100	66+90							PR	Pipe Maintenance, clean inlet

**Means Live Creek Installation

CULVERT LIST Continued

ROAD NAME	STATION	CULVERT DIAMETER (in)	CULVERT LENGTH (ft)	FLUME LENGTH (ft)		RIP RAP - INLET (cy)	RIP RAP – OUTLET (cy)	BACKFILL MATERIAL	NOTES
G-2100	68+70							PR	Clean inlet, add energy dissipater
G-2100	75+50							PR	Pipe Maintenance, clean inlet
G-2100	81+40							PR	Clean Inlet, lower ditch block
G-2100	84+70							PR	Pipe Maintenance, clean inlet
G-2100	86+80							PR	Clean Inlet, lower ditch block
G-2100	88+00							PR	Clean Inlet, lower ditch block
G-2100	92+60							PR	Clean Inlet, lower ditch block
G-2100	94+00							PR	Seal Inlet leakage
G-2100	100+75							PR	Lower ditch block, add energy dissipater
G-2100	105+60							PR	Lower ditch block, add energy dissipater
G-2100	109+50	18	30						New Cross Drain culvert
G-2100	112+60							PR	Lower ditch block, add energy dissipater
G-2100	120+20							PR	Clean inlet, add energy dissipater
G-2100	128+60	18	30					PR	New Cross Drain culvert
G-2100	139+50	18	40					PR	New Cross Drain culvert
G-2100	141+25	18	60						New Cross Drain culvert
**G-2170	6+25	132	55					PR	New Fish Pipe
G-2170	9+00	18	30					PR	New Cross Drain culvert
G-2170	12+75	18	30					PR	New Cross Drain culvert
**G-2170	15+50	48	50					PR	New Np Pipe install
**G-2170	17+20	24	40					PR	New Np Pipe install
G-2170	18+25	18	30					PR	New Cross Drain culvert
**G-2170	25+25	36	60					PR	New Np Pipe install
**G-2170	26+60	36	60					PR	New Np Pipe install
G-2170	30+50	18	30					PR	New Cross Drain culvert
**G-2170	33+50	24	40					PR	New Np Pipe install
G-2170.3	2+00	18	30					PR	New Cross Drain culvert
G-2170.3	3+85	18	40					PR	New Cross Drain culvert
**G-2170.3	4+30	24	40					PR	New Ns Pipe install

All rip rap shall be Oversize unless specified in the Rock List, or in the field.
All backfill shall be native material (NT) unless specified otherwise. CR= 1 ¼"- crushed rock, PR = pit run.

CULVERT LIST Continued

ROAD NAME	STATION	CULVERT DIAMETER (in)	CULVERT LENGTH (ft)	FLUME LENGTH (ft)		RIP RAP - INLET (cy)	RIP RAP – OUTLET (cy)	BACKFILL MATERIAL	NOTES
G-2170.3	8+20	18	30					PR	New Cross Drain culvert
**G-2170.3	9+40	48	60					PR	New Np Pipe install
G-2170.3	11+45	18	30					PR	New Cross Drain culvert
G-2170.3	14+30	18	30					PR	New Cross Drain culvert
**G-2170.3	15+00	24	40					PR	New Ns Pipe install
G-2170.3	17+30	18	30					PR	New Cross Drain culvert
G-2170.3	19+20	18	30					PR	New Cross Drain culvert
Anderson Pit Drainage	As staked	24	80					PR	New Cross Drain culvert
1+15 Spur	0+10	18	30					PR	New Cross Drain culvert
1+45 Spur	0+10	18	30					PR	New Cross Drain culvert
1+25 Spur	0+10	18	30					PR	New Cross Drain culvert
4+50 Spur	0+10	18	40					PR	New Cross Drain culvert
**4+50 Spur	2+40	18	30					PR	New Ns Pipe install
Contingency	Per C/A	18	30					PR	Contingency Pipe
								PR	
								PR	
								PR	
								PR	
								PR	
								PR	
								PR	
								PR	
								PR	
								PR	
								PR	
								PR	

All rip rap shall be Oversize unless specified in the Rock List, or in the field.
All backfill shall be native material (NT) unless specified otherwise. CR= 1 ¼"- crushed rock, PR = pit run.

FISH STREAM WORK PROVISIONS

TIMING LIMITATIONS: The fish culvert project may begin July 1 and shall be completed by September 30.

1. Work shall conform to plans and specifications in the road plan.

2. Prior to the commencement of in-stream work, the Purchaser shall isolate the work area in a manner that fish cannot enter the work area, capture and safely move fish and other fish life from the work area. The Purchaser shall have fish capture and transportation equipment ready and on the job site. Captured fish shall be immediately and safely transferred to free-flowing water downstream of the work area.

TEMPORARY STREAM FLOW BYPASS

3. All in-stream work shall be conducted in the dry or in isolation from the stream flow by the installation of a bypass flume/pipe or by pumping the flow around the work area, back into the stream below the work area. Waste water pumped from within the work area shall terminate on the forest floor, sufficient distance from the stream to filter sediment prior to entering the stream.

4. The temporary bypass to divert flow around the work area shall be in place prior to initiation of other work in the wetted perimeter.

5. A sandbag revetment or similar device shall be installed at the bypass inlet to divert the entire flow through the bypass.

6. The bypass shall be of sufficient size to pass all flows and debris for the duration of the project.

7. If a pump is used for diverting water from the stream where fish are present, as per RCW 77.57.010 and 77.57.070, the pump intake shall be equipped with a fish guard to prevent passage of fish into the diversion pump. The pump intake shall be screened with 1/8 inch mesh to prevent fish from entering the pump. Velocity through the screened intake shall be less than 0.4 feet per second. Screens shall be maintained to prevent injury or entrapment of juvenile fish.

WATER QUALITY

8. Extreme care shall be taken to ensure that no petroleum products, hydraulic fluid, chemicals, or any other toxic or deleterious materials are allowed to enter or leach into the stream.

COMPACTION LIST

Road	Stations	Type	Max Depth Per Lift (inches)	Equipment Type	Minimum Equipment Weight (lbs)	Minimum Number of Passes	Maximum Operating Speed (mph)
Waste Areas	All	Waste Areas	24	Dozer/ Excavator	6000	2	3
Construction	All	Subgrade	6	Vibratory Smooth Drum	6000	2	3
Reconstruction	All	Fill					
Pre-Haul Maintenance	All	Pre-haul Surface					
Construction, Reconstruction, Pre-Haul Maintenance, Post-Haul Maintenance	All	Rock					
Reconstruction	Keyed Embankment	Embankment					
Post-Haul Maintenance	All	Post-haul Surfaces					
Pre-Haul Maintenance, Reconstruction	All	Culvert Backfills		Jumping Jack	N/A	3	N/A

SUMMARY - Road Development Costs

SALE NAME:	Good Golly		CONTRACT#: 30-100647			REGION:	Olympic		DISTRICT:	Coast					
	LEGAL DESCRIPTION:		Section 16 T.27N. R. 13W.												
ROAD NAME:			11+25 Spur	2+40 Spur	6+10 Spur	G-2100	1+15 Spur	1+45 Spur	0+85 Spur	1+25 Spur	1+60 Spur	4+40 Spur	G-1000	TOTAL:	TOTAL SHEET #2-4
ROAD TYPE:			Construction	Construction	Construction	Construction	Construction	Construction	Construction	Construction	Construction	Recon.	Prehaul		
NUMBER OF STATIONS:			6	2	6	2	1	1	1	1	2	4	142	168.70	1,536.30
SIDESLOPE:			5%	40%	10%	10%	10%	10%	10%	10%	10%	10%	0%		
CLEARING AND GRUBBING:			$834	$562	$695	$171	$160	$202	$118	$174	$223	$376	$0	$3,516	$0
ROAD BRUSHING:			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,249
EXCAVATION AND FILL:			$848	$2,833	$1,034	$339	$195	$246	$144	$212	$271	$746	$0	$6,868	$4,600
ROAD GRADING:			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$920	$920	$9,895
DITCH CLEANING/CONSTRUCTION:			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,712
ROCK TOTALS (Cu. Yds.)/ROCK COSTS:															
Ballast:	8650	8,650	840	310	670	360	150	180	100	160	180	100	20	3,068	5,579
			$8,750	$3,261	$7,149	$3,805	$1,537	$2,079	$1,142	$1,753	$1,753	$1,584	$242	$33,055	72,052
Surface:	460	460	0	0	0	0	0	0	0	0	0	0	0	0	460
			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$6,596
Oversize:	115	115	0	0	0	0	0	0	0	0	0	0	0	0	115
			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,095
CULVERTS AND FLUMES:			$0	$0	$0	$0	$660	$660	$0	$660	$0	$0	$880	$2,860	$60,287
STRUCTURES:			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$5,000
MISC. EXPENSES:			$75	$14	$58	$228	$7	$8	$5	$7	$9	$26	$145	$582	$5,007
OVERHEAD:			$946	$600	$804	$409	$230	$287	$127	$253	$203	$328	$175	$4,362	$13,734
TOTAL COSTS:			$11,453	$7,271	$9,740	$4,952	$2,789	$3,482	$1,536	$3,058	$2,459	$3,060	$2,361	$52,162	$182,228
COST PER STATION:			$1,909	$3,030	$1,597	$2,476	$2,425	$2,401	$1,808	$2,447	$1,537	$695	$17	$309	$119
MOBILIZATION:					$8,200										
ROAD DEACTIVATION AND ABANDONMENT COSTS:					$1,158										
Pit Work (Does not include Gate)				$20,000		Road Standard	Const.	Reconst.	Prehaul	Posthaul				TOTAL (All Roads) =	$281,898
Log Stringer Bridge Construction:				$15,000		Total Costs =	$86,941	$5,110	$177,233	$11,456				SALE VOLUME MBF =	6,554
NOTE: This appraisal has no allowance for profit and risk.						Total Sta. =	23	4	976	976				TOTAL COST PER MBF =	$43.01
Sheet 1 of 3						Cost per Sta. =	$3,813	$1,161	$182	$12				TOTAL COST PER STATION=	$165.34
Plans to be furnished by:		Wyatt				Compiled by:	Bill Mehl							Date:	June 22, 2020

SUMMARY - Road Development Costs

SALE NAME: Good Golly CONTRACT#: 30-100647 REGION: Olympic DISTRICT: Coast

LEGAL DESCRIPTION: Section 16 T.27N. R. 13W.

ROAD NAME:	G-1200	G-1208	G-1200.13	G-1200.12	11+25 Spur	G-2000	G-2100	G-2108	G-2170	G-2170.3	G-2500	G-2500.13	G-2500.15	G-2500.9
ROAD TYPE:	Prehaul	Prehaul	Prehaul	Prehaul	Prehaul	Prehaul	Prehaul	Prehaul	Prehaul	Prehaul	Prehaul	Prehaul	Prehaul	Prehaul
NUMBER OF STATIONS:	135	14	4	8	5	197	148	12	36	21	215	8	2	22
SIDESLOPE:	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
CLEARING AND GRUBBING:	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
ROAD BRUSHING:	$0	$0	$0	$0	$0	$0	$0	$0	$655	$378	$0	$144	$27	$0
EXCAVATION AND FILL:	$0	$4,000	$0	$100	$500	$0	$0	$0	$0	$0	$0	$0	$0	$0
ROAD GRADING:	$876	$94	$24	$52	$34	$1,281	$964	$75	$237	$137	$1,399	$0	$0	$145
DITCH CLEANING/CONSTRUCTION	$390	$562	$0	$0	$0	$0	$0	$0	$195	$390	$0	$0	$0	$0
ROCK TOTALS (Cu. Yds.)/ROCK COSTS:														
Ballast:	290	520	180	380	0	0	260	0	2,360	1,160	20	0	0	0
	$3,506	$7,051	$3,753	$7,946	$0	$0	$2,634	$0	$25,181	$17,547	$379	$0	$0	$0
Surface:	0	0	0	0	0	50	10	0	0	0	100	0	0	0
	$0	$0	$0	$0	$0	$788	$158	$0	$0	$0	$1,739	$0	$0	$0
Oversize:	0	60	0	0	0	0	55	0	0	0	0	0	0	0
	$0	$1,093	$0	$0	$0	$0	$1,002	$0	$0	$0	$0	$0	$0	$0
CULVERTS AND FLUMES:	$1,320	$0	$0	$0	$0	$0	$5,601	$0	$38,209	$12,958	$660	$0	$0	$0
Anderson Pit Gate:	$0	$0	$0	$0	$0	$5,000	$0	$0	$0	$0	$0	$0	$0	$0
MISC. EXPENSES:	$142	$84	$382	$825	$542	$0	$2,259	$0	$213	$123	$0	$0	$0	$0
OVERHEAD:	$499	$1,031	$333	$714	$86	$565	$1,009	$6	$5,175	$2,523	$334	$12	$2	$12
TOTAL COSTS:	$6,732	$13,915	$4,492	$9,637	$1,162	$7,634	$13,626	$81	$69,865	$34,055	$4,511	$156	$29	$157
COST PER STATION:	$50	$966	$1,214	$1,205	$221	$39	$92	$7	$1,919	$1,622	$21	$19	$19	$7

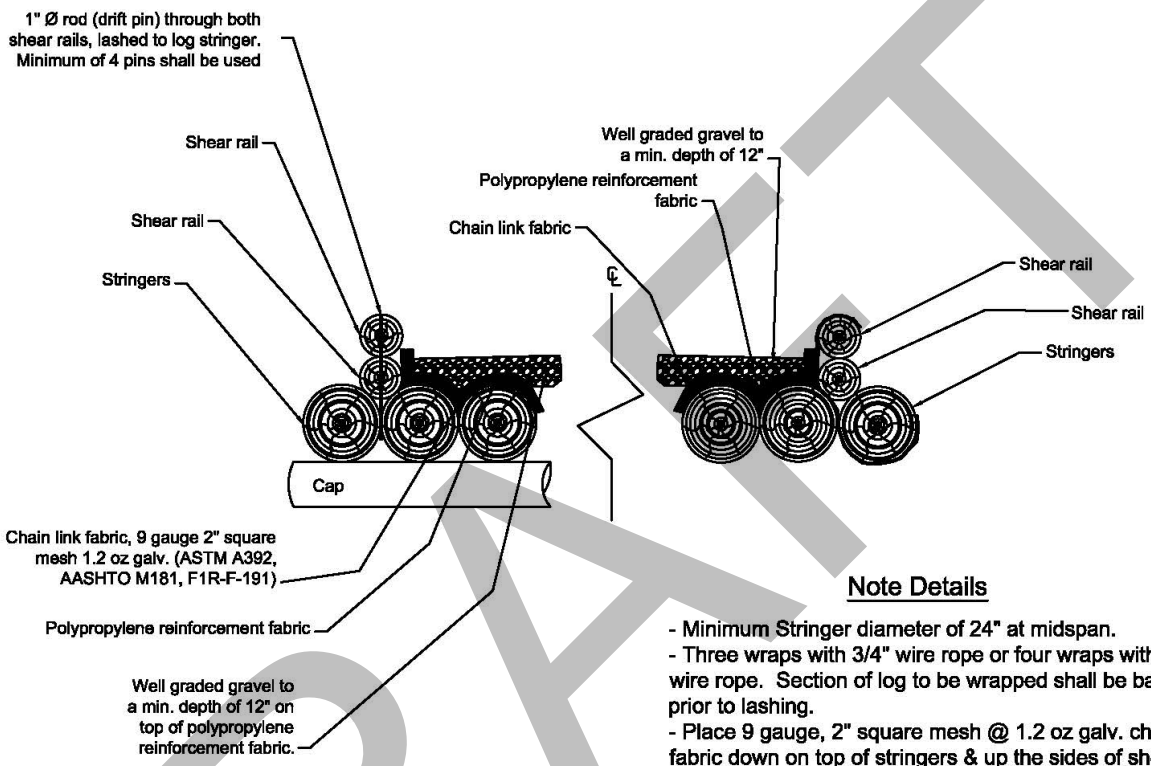
Total Costs	$166,050
Stations	827.30
Cost/station	$200.71

SUMMARY - Road Development C

SALE NAME:	Good Golly		CONTRACT#:	30-100647		REGION:	Olympic		DISTRICT:	Coast
	LEGAL DESCRIPTION		Section 16 T.27N. R. 13W.							
ROAD NAME:		G-2500.93	4+50 Spur	G-1000	G-2000	G-2100	G-2500			
ROAD TYPE:		Prehaul	Prehaul	Posthaul	Posthaul	Posthaul	Posthaul			
NUMBER OF STATIONS:		3	5	142	197	148	215			
SIDESLOPE:		0%	0%	0%	0%	0%	0%			
CLEARING AND GRUBBING:		$0	$0	$0	$0	$0	$0			
ROAD BRUSHING:		$45	$0	$0	$0	$0	$0			
EXCAVATION AND FILL:		$0	$0	$0	$0	$0	$0			
ROAD GRADING:		$16	$0	$920	$1,281	$964	$1,399			
DITCHING:		$0	$176	$0	$0	$0	$0			
ROCK TOTALS (Cu. Yds.)/ROCK COSTS:										
Ballast:		0	410	0	0	0	0			
		$0	$4,055	$0	$0	$0	$0			
Surface:		0	0	200	100	0	0			
		$0	$0	$2,498	$1,413	$0	$0			
Oversize:		0	0	0	0	0	0			
		$0	$0	$0	$0	$0	$0			
CULVERTS AND FLUMES:		$0	$1,540	$0	$0	$0	$0			
STRUCTURES:		$0	$0	$0	$0	$0	$0			
MISC. EXPENSES:		$0	$438	$0	$0	$0	$0			
OVERHEAD:		$5	$497	$376	$296	$106	$154			
TOTAL COSTS:		$66	$6,705	$3,794	$2,990	$1,070	$1,553			
COST PER STATION:		$26	$1,490	$27	$15	$7	$7			

	Total
Costs	$16,177
Stations	709.00
Cost/station	$22.82

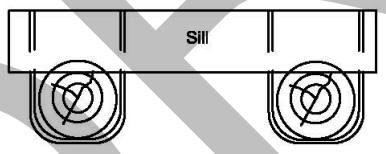
Bridge Surfacing & Shear Rail Details



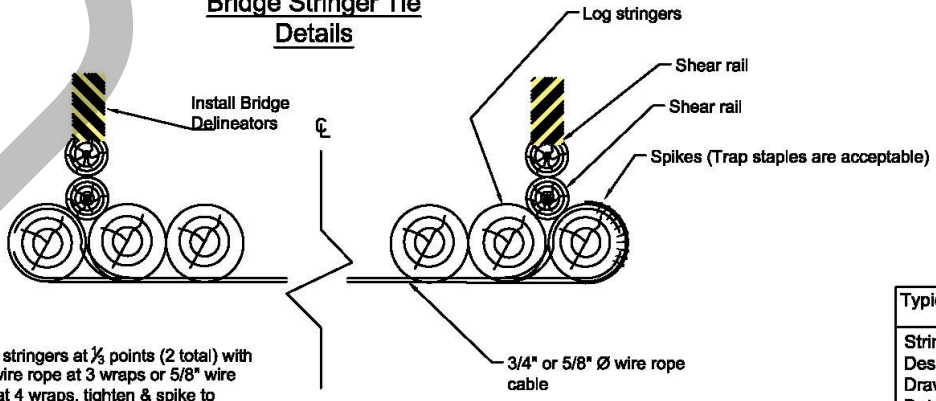
Note Details

- Minimum Stringer diameter of 24" at midspan.
- Three wraps with 3/4" wire rope or four wraps with 5/8" wire rope. Section of log to be wrapped shall be barked prior to lashing.
- Place 9 gauge, 2" square mesh @ 1.2 oz galv. chain link fabric down on top of stringers & up the sides of shear rails by min. 9" and over the ends to the top of the cap.
- After placement of chain link fabric, place polypropylene reinforcement fabric over the chain link fabric.
- Place well graded gravel over the polypropylene reinforcement fabric to a min. depth of 12". Finished surface elevation shall transition smoothly to road surface.
- Rail logs shall be selected and placed so that at least 15" are free and above the top of the gravel surfacing.

Lashing Detail



Bridge Stringer Tie Details

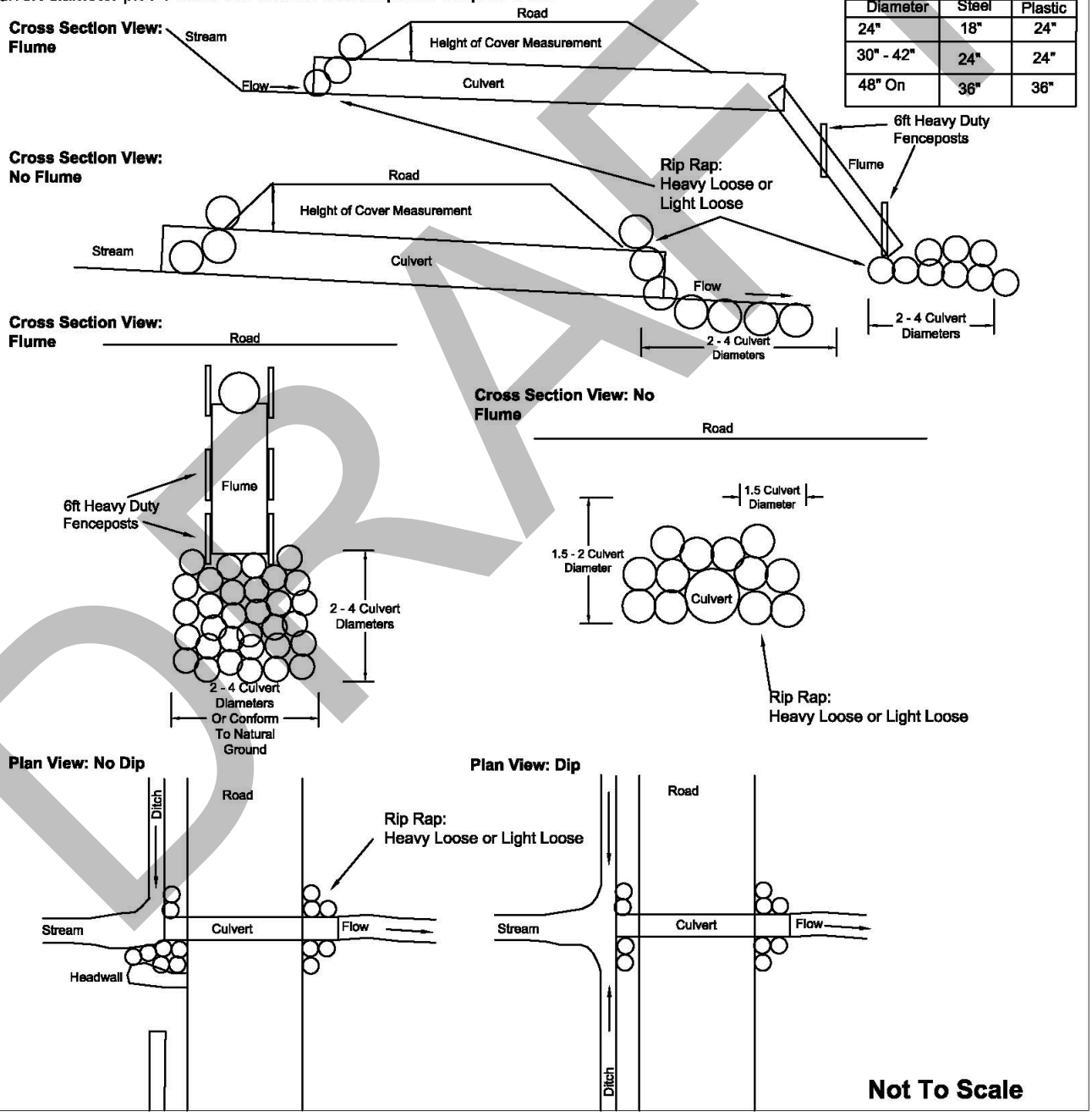


Typical Stringer Bridge
Stringer and Rail Details Designed By: Jed Nowak Drawn By: Jed Nowak Date: 10/30/2018

Typical Type Ns, Np Culvert Installation Detail Sheet.

-Water shall be diverted away from the work site before any "in stream" work begins, and shall continue until culvert installation is complete.
-Culvert lay shall match stream gradient up to 5%.
-Flumes longer than 10ft shall be staked on both sides at maximum intervals of 10ft with 6ft heavy duty steel fence posts, and fastened securely to the posts with No. 10 galvanized smooth wire or bolted to the fence posts.
-Rip rap shall be placed using a "zero height drop method", and shall be set in conjunction with the culvert installation.
-Rip rap shall be placed at headwalls, along the fill at the inlet, and at the end off flumes in accordance with this Detail. On culverts with no flume rip rap shall be placed along the fill at the outlet, unless there is stream drop or it is called for in the Road Plan, at which point it will be installed as an energy dissipater at the end of the culvert as specified in this Detail. All rip rap distance to be determined by the Contract Administrator or the District Engineer.
-Backfill compaction shall be achieved using a jumping jack, walk behind vibratory roller, or plate compactor on lifts not to exceed 8in. 3 complete passes per lift is required for compaction. Backfill shall be placed and compacted evenly on both sides of the culvert. Care shall be taken to ensure adequate compaction of backfill material under the haunches of the pipe. Excavation trench width shall be at least culvert diameter plus 3 times the width of the compactor footprint used.

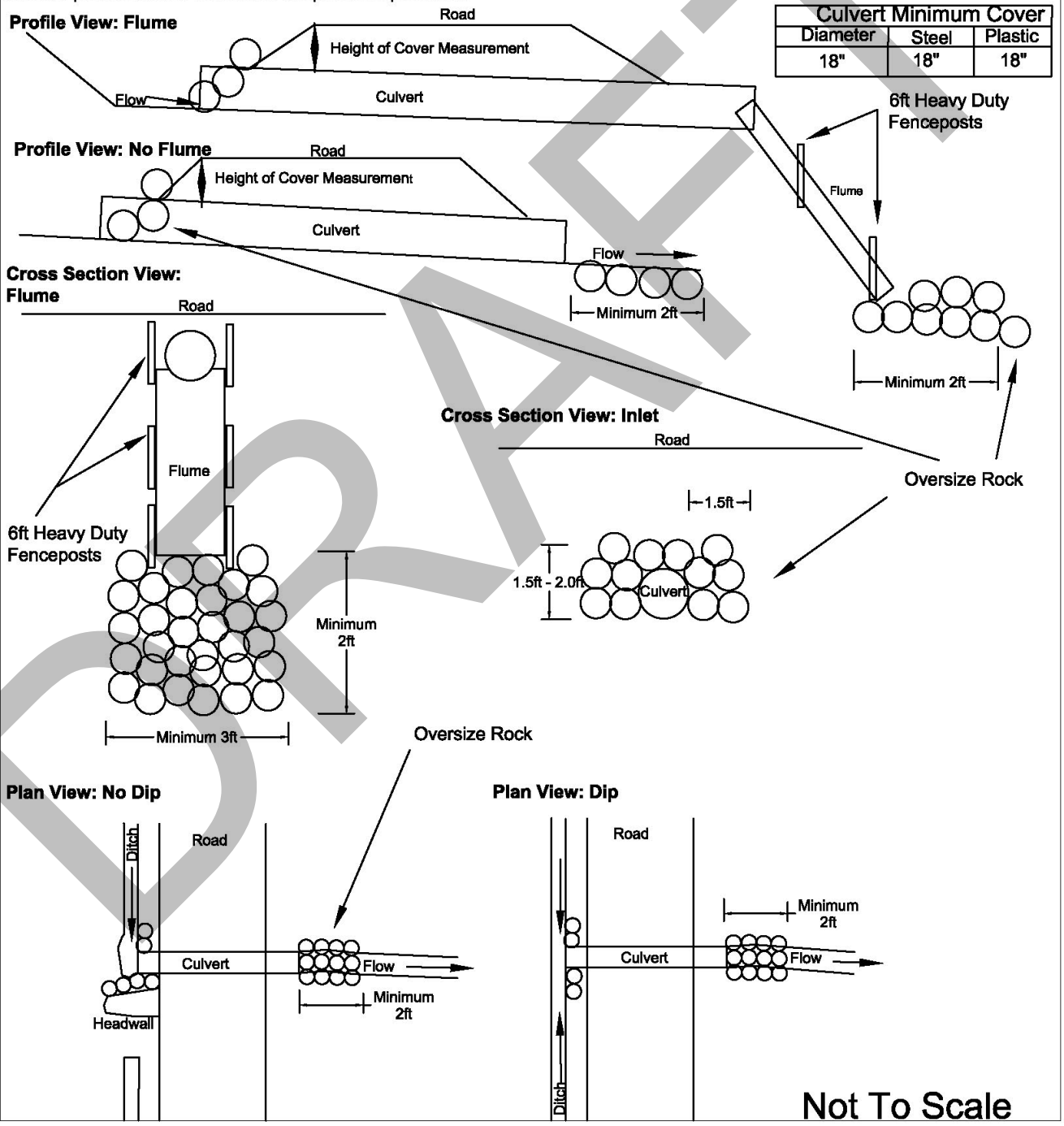
Culvert Minimum Cover		
Diameter	Steel	Plastic
24"	18"	24"
30" - 42"	24"	24"
48" On	36"	36"



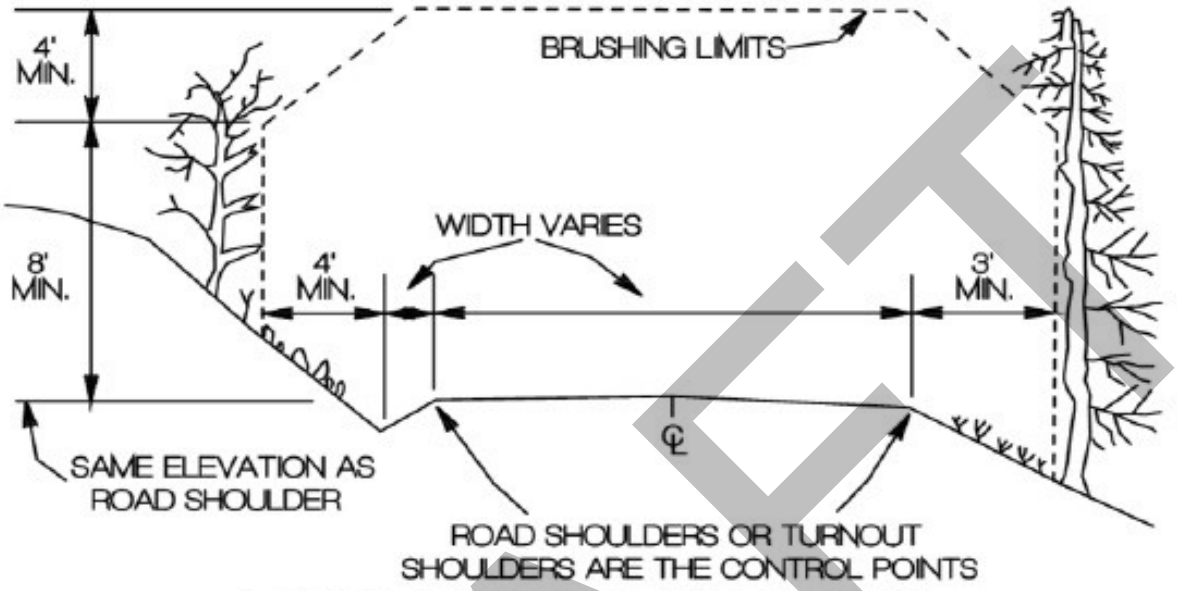
Typical Cross Drain Culvert Installation Detail Sheet

-Culvert lay shall not exceed 10%.
-Flumes longer than 10ft shall be staked on both sides at maximum intervals of 10ft with 6ft heavy duty steel fence posts, and fastened securely to the posts with No. 10 galvanized smooth wire or bolted to the fence posts.
-Oversize shall be placed using a "zero height drop method", and shall be set in conjunction with the culvert installation.
-Oversize shall be placed at headwalls, along the fill at the inlet, and at the end off flumes in accordance with this Detail. On culverts with no flume oversize shall be placed at the outlet as an energy dissipater as specified in this Detail. All oversize distance to be determined by the Contract Administrator.
-Backfill compaction for installations on existing roads shall be achieved using a jumping jack, or plate compactor on lifts not to exceed 8in. 3 complete passes per lift is required for compaction. Backfill shall be placed and compacted evenly on both sides of the culvert. Care shall be taken to ensure adequate compaction of backfill material under the haunches of the pipe. Excavation trench width shall be at least culvert diameter plus at least the width of the compactor footprint used..

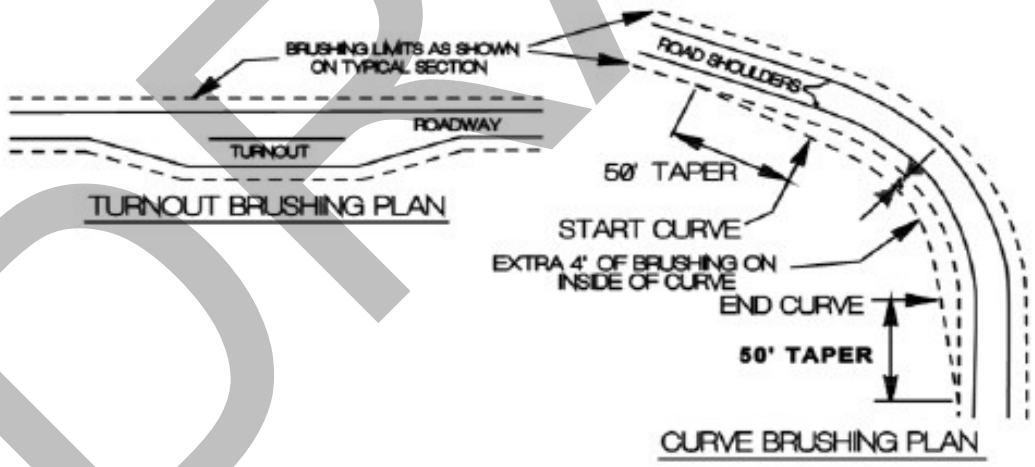
Culvert Minimum Cover		
Diameter	Steel	Plastic
18"	18"	18"



BRUSHING DETAIL

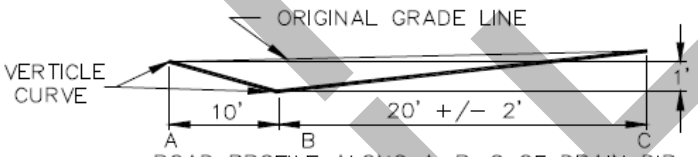


TYPICAL BRUSHING LIMITS SECTION

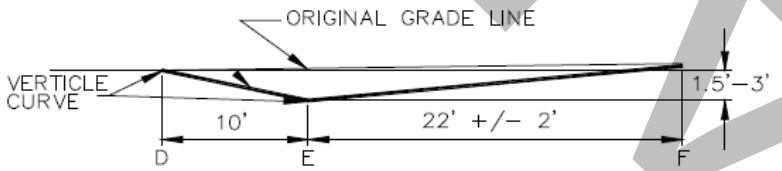


1.) ALL VEGETATION WITHIN THE BRUSHING LIMITS SHALL BE CUT TO WITHIN 8" OF THE GROUND, UNLESS OTHERWISE DIRECTED BY THE CONTRACT ADMINISTRATOR.
2.) ALL BRUSH, TREES, LIMBS, ETC. SHALL BE REMOVED FROM THE ROAD SURFACE.
3.) ALL BRUSH, TREES, LIMBS, ETC. THAT MAY RESTRICT THE FLOW OF WATER SHALL BE REMOVED FROM THE DITCH LINE.
4.) ALL DEBRIS THAT MAY ROLL OR MIGRATE INTO THE DITCHLINE SHALL BE REMOVED.

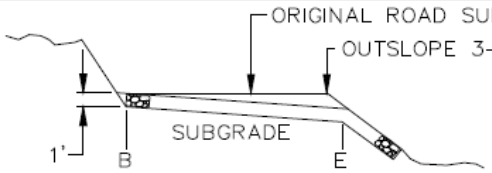
ROLLING DIP DETAIL



ROAD PROFILE ALONG A–B–C OF DRAIN DIP

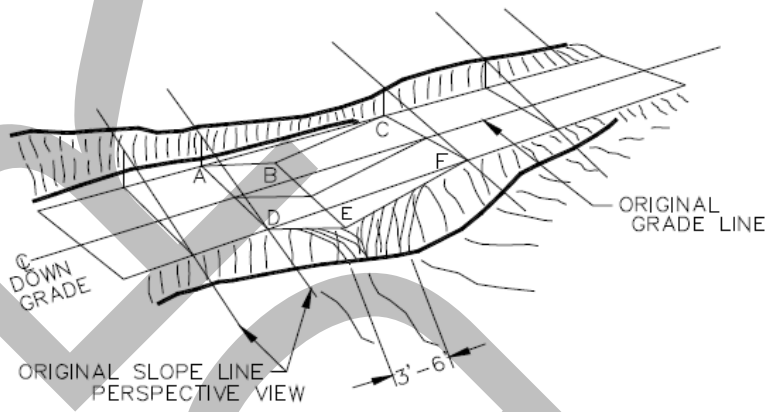


ROAD PROFILE ALONG D–E–F OF DRAIN DIP



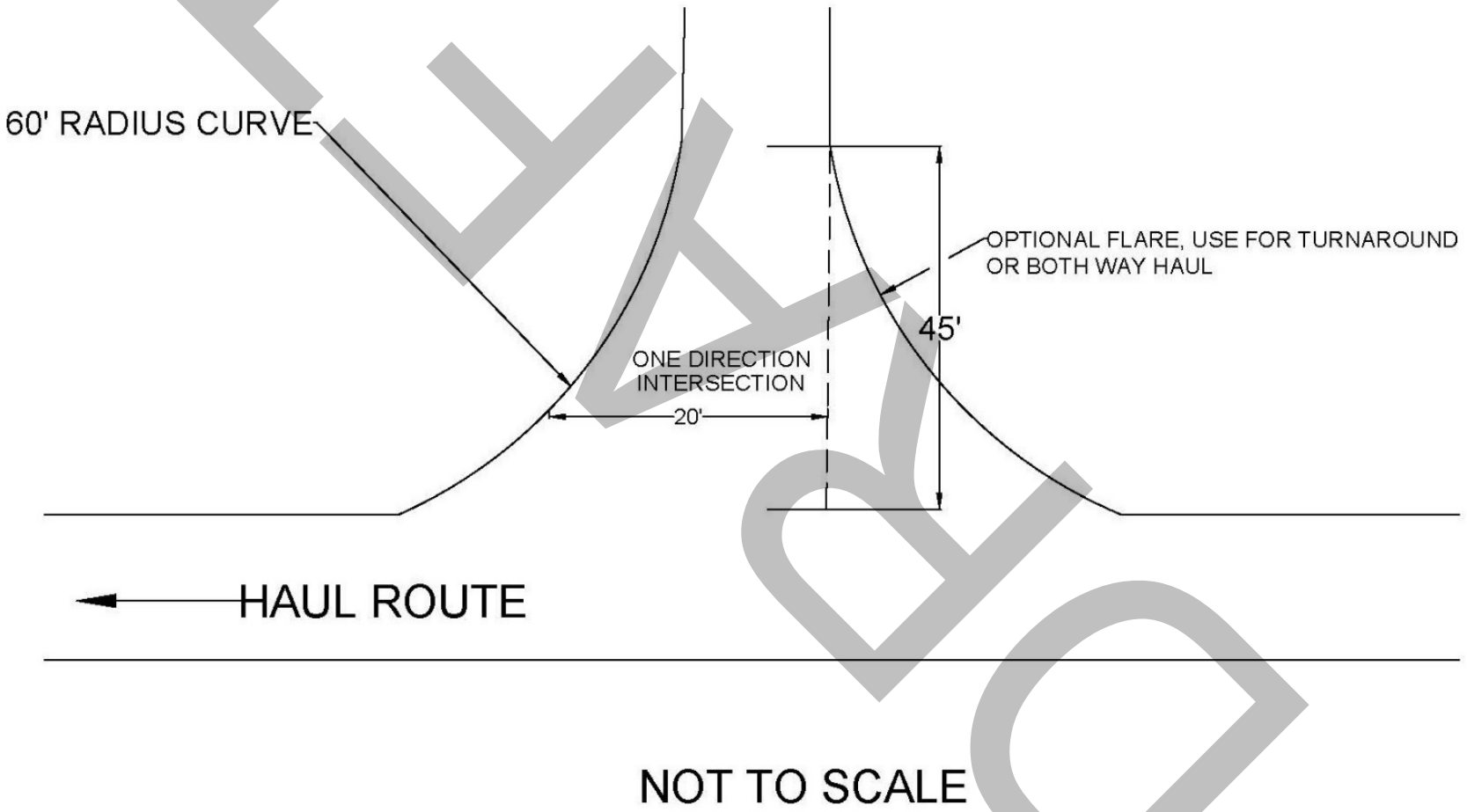
OUTLET OF DIP TO BE CLEAR OF OBSTRUCUTIONS TO ALLOW WATER TO FLOW FREELY. IF SOILS ARE ERODABLE, TOE OF DIP TO BE ARMORED WITH NATIVE ROCK.

NOTE: PLAN OF DIP SHOWN IS FOR OUTSLOPED ROLLING DIP, DIPS MAY BE EITHER INSLOPED OR OUTSLOPED. WHEN INSLOPED, DIPS SHALL DRAIN FREELY INTO DITCHES OR CULVERT INLETS. WHEN OUTLSLOPED, THEY SHALL DRAIN FREELY ONTO NATURAL GROUND. WHERE SOILS ARE ERODABLE, OUTLET SHALL BE ARMORED WITH NATIVE ROCK. THE MINIMUM CROSS GRADE FROM "B" TO "E" IS 4% GREATER THAN THE ROAD SURFACE SLOPE. SKEW LINE B–E TO FIT LOW POINT IN DRAW, IF LOCATED IN NATURAL DRAIN.



PERSPECTIVE VIEW

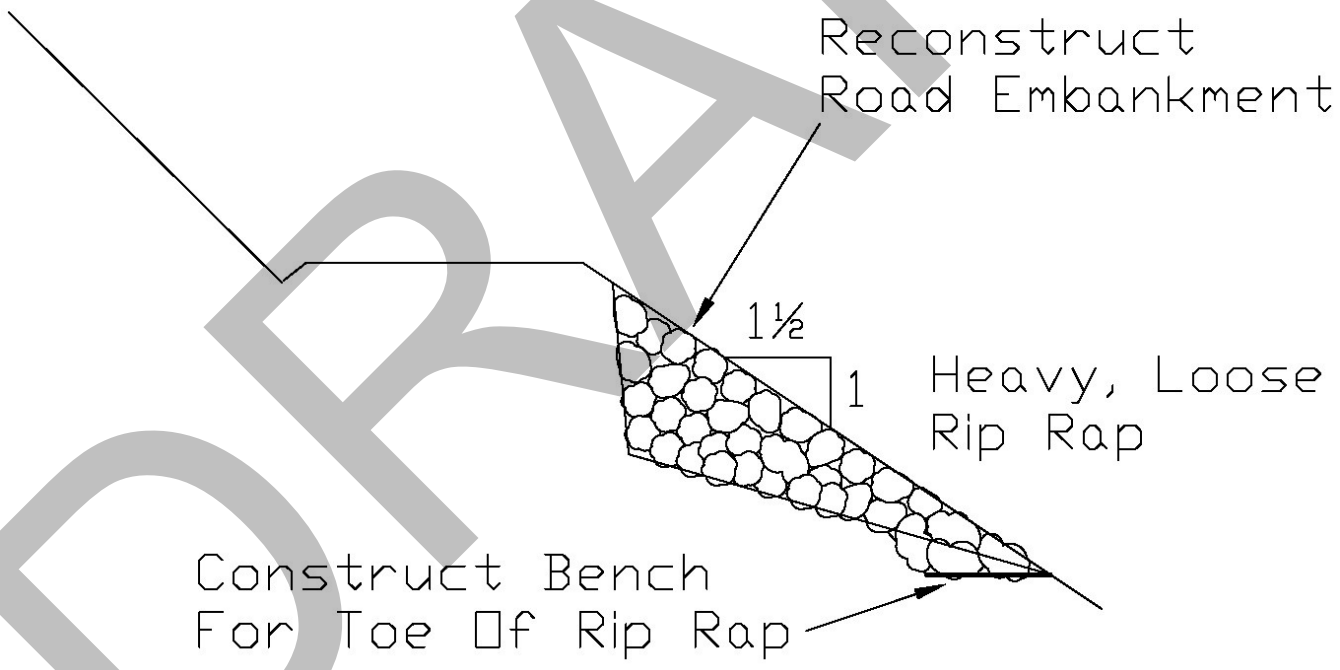
TYPICAL INTERSECTION



NOT TO SCALE

Typical Embankment Key Detail

Except where designed otherwise, road reconstruction with rip rap keyed toe and embankment.



FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS

Cuts and Fills

- Maintain slope lines to a stable gradient compatible with the cut slope/fill slope ratios. Remove slides from ditches and the roadway. Repair fill-failures in accordance with Clause 4-6 Embankment Slope Ratio, and with material approved by the Contract Administrator. Remove overhanging material from the top of cut slopes.
- Waste material from slides or other sources shall be placed and compacted in stable locations identified in the road plan or approved by the Contract Administrator, so that sediment will not deliver to any streams or wetlands.
- Slide material and debris shall not be mixed into the road surface materials, unless approved by the Contract Administrator.

Surface

- Grade, shape, and compact the road surface, turnouts, and shoulders to the original shape on the Typical Section Sheet, to provide a smooth, rut-free traveled surface and maintain surface water runoff in an even, unconcentrated manner.
- Blading shall not undercut the backslope or cut into geotextile fabric on the road.
- If required by the Contract Administrator, water shall be applied as necessary to control dust and retain fine surface rock.
- Surface material shall not be bladed off the roadway. Replace surface material when lost or worn away, or as directed by the Contract Administrator.
- Remove shoulder berms, created by grading, to facilitate drainage, except as marked or directed by the Contract Administrator.
- For roads with geotextile fabric: spread surface aggregate to fill in soft spots and wheel ruts (barrel spread) to prevent damage to the geotextile fabric.

Drainage

- Prevent silt bearing road surface and ditch runoff from delivering sediment to any streams or wetlands.
- Maintain rolling dips and drivable waterbars as needed to keep them functioning as intended.
- Maintain culvert headwalls to a level slightly below the road shoulder with material that will resist erosion. This is to allow for culverts that are overtopped to keep the water in the ditchline.
- Maintain energy dissipaters at culvert outlets with non-erodible material or rock.
- Keep ditches, culverts, and other drainage structures clear of obstructions and functioning as intended.
- Inspect and clean culverts at least monthly, with additional inspections during storms and periods of high runoff. This shall be done even during periods of inactivity.

Preventative Maintenance

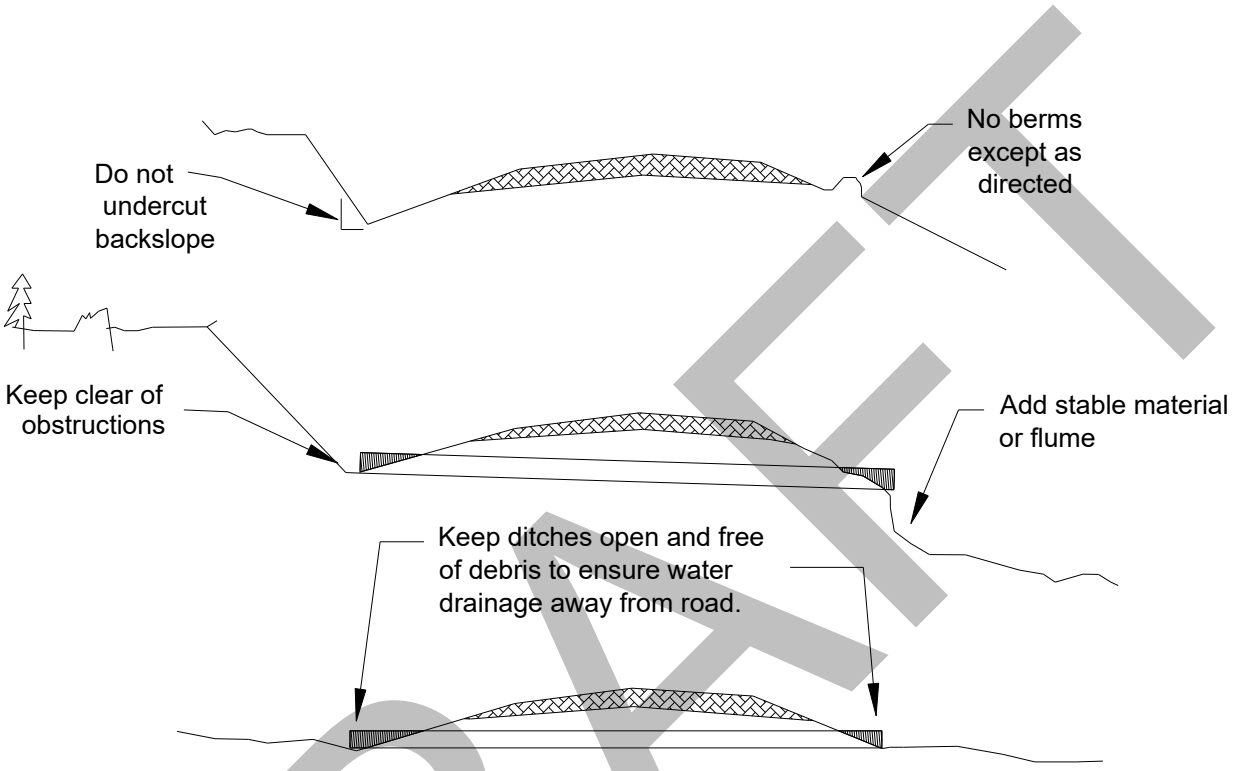
Perform preventative maintenance work to safeguard against storm damage, such as blading to ensure correct runoff, ditch and culvert cleaning, and waterbar maintenance.

Termination of Use or End of Season

At the conclusion of logging operations, ensure all conditions of these specifications have been met.

Debris

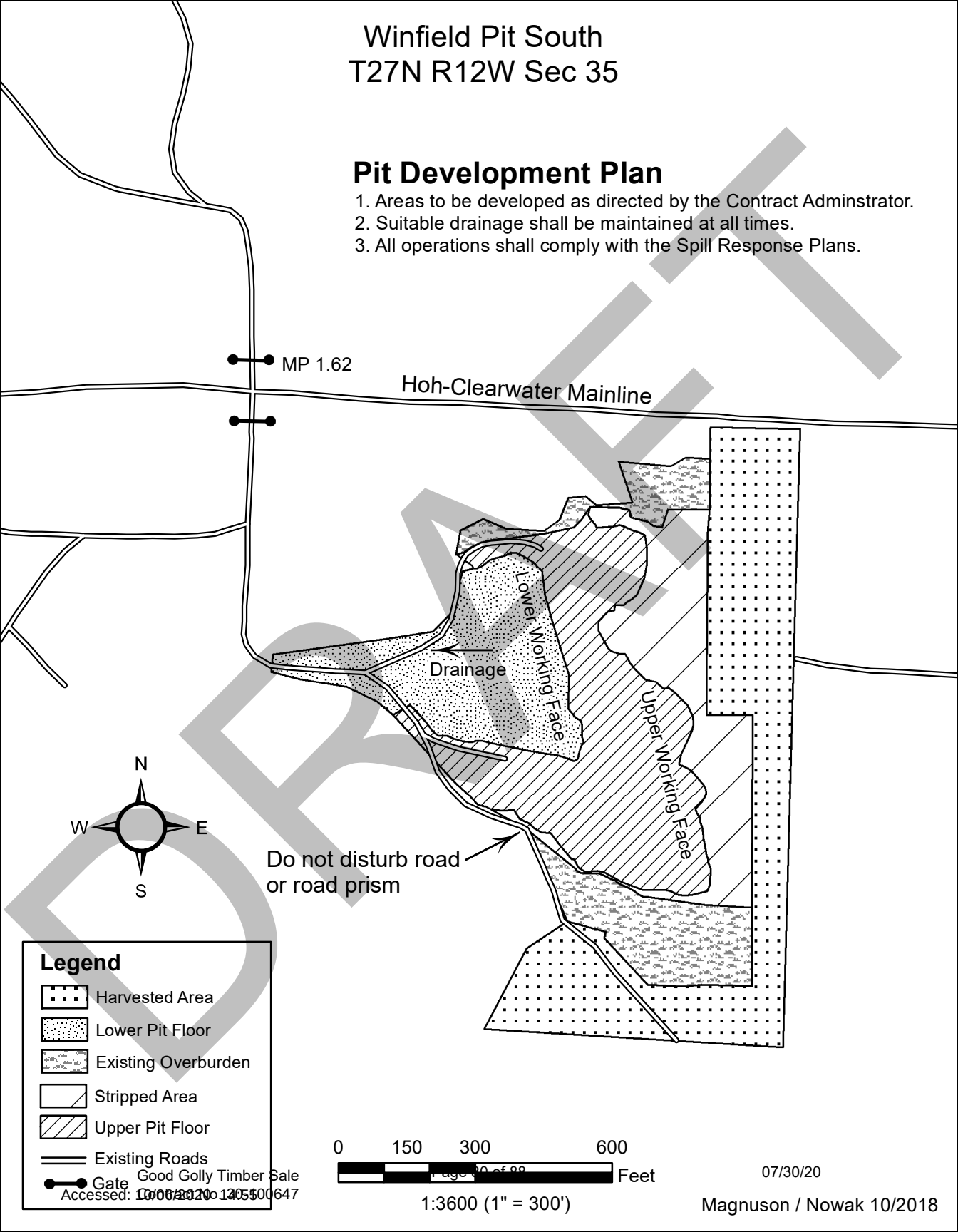
Remove fallen timber, limbs, and stumps from the slopes, roadway, ditchlines, and culvert inlets.



Winfield Pit South
T27N R12W Sec 35

Pit Development Plan

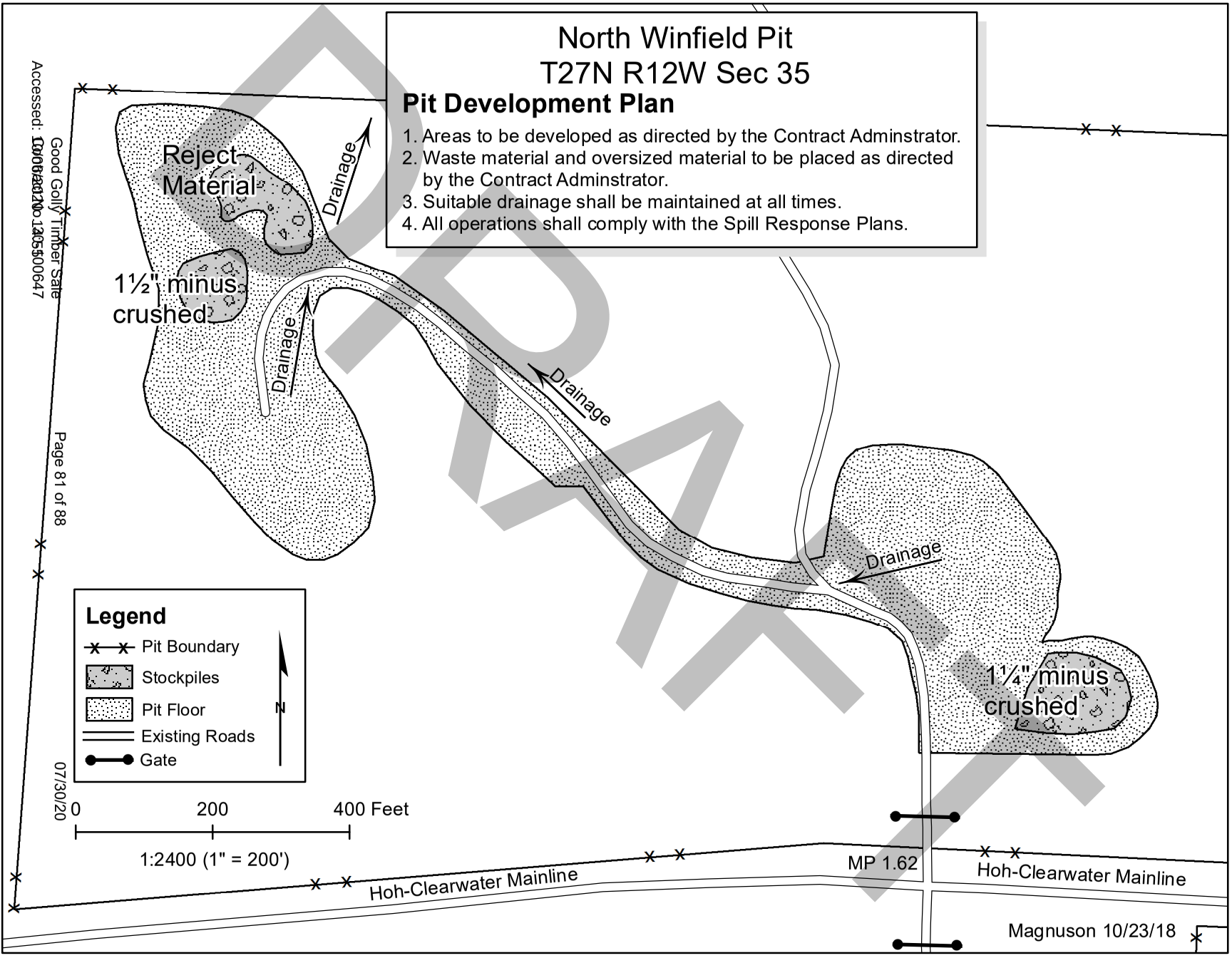
1. Areas to be developed as directed by the Contract Adminstrator.
2. Suitable drainage shall be maintained at all times.
3. All operations shall comply with the Spill Response Plans.



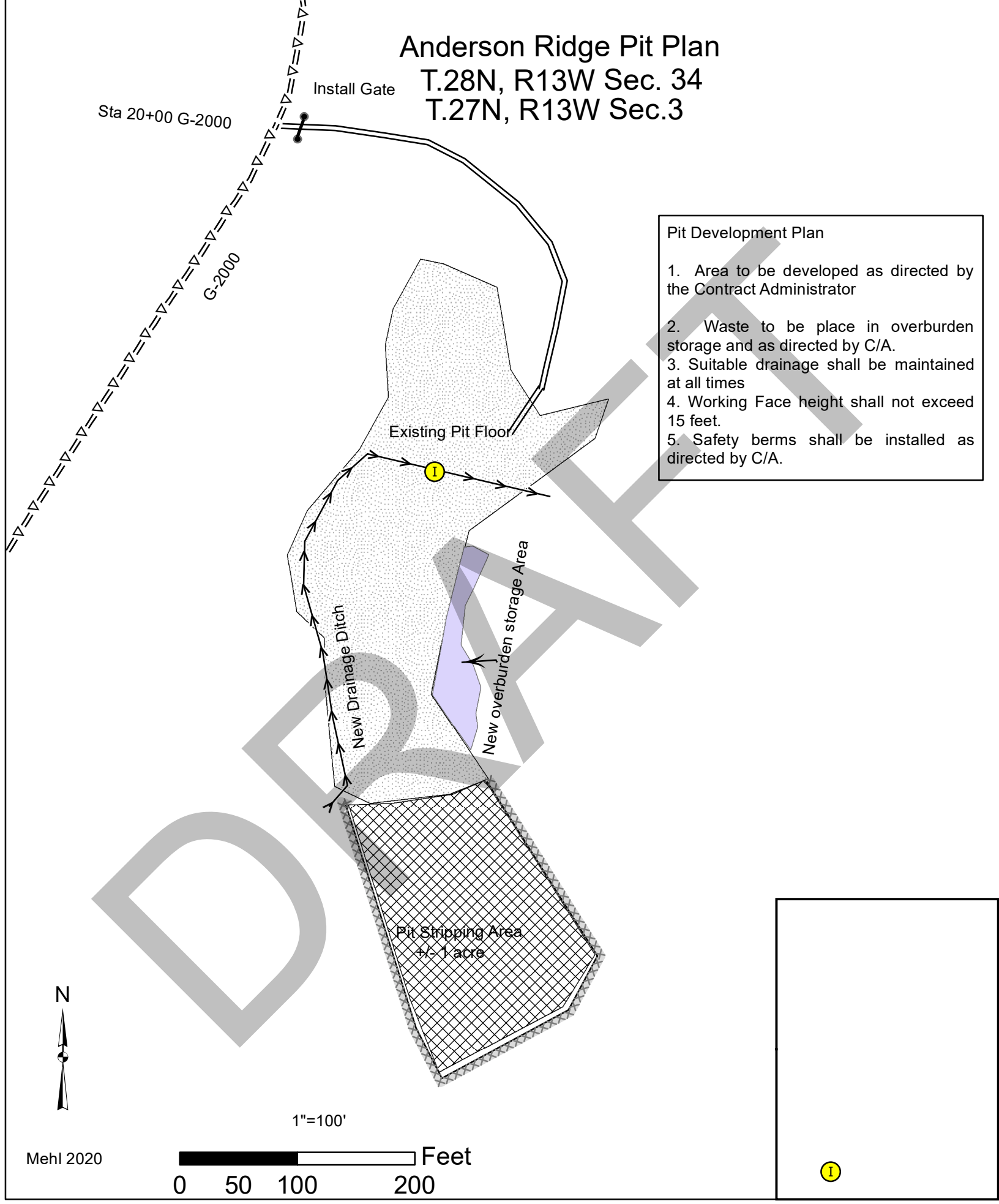
Good Golly Timber Sale
Contract No. 14551

07/30/20

Magnuson / Nowak 10/2018


North Winfield Pit
T27N R12W Sec 35
Pit Development Plan
1. Areas to be developed as directed by the Contract Adminstrator.
2. Waste material and oversized material to be placed as directed by the Contract Adminstrator.
3. Suitable drainage shall be maintained at all times.
4. All operations shall comply with the Spill Response Plans.
Reject Material
1½" minus crushed
1¼" minus crushed
Drainage
Drainage
Drainage
Drainage
Legend
Pit Boundary
Stockpiles
Pit Floor
Existing Roads
Gate
N
0
200
400 Feet
1:2400 (1" = 200')
07/30/20
Good Golly Timber Sale
Page 81 of 88
Hoh-Clearwater Mainline
MP 1.62
Hoh-Clearwater Mainline
Magnuson 10/23/18
DRAFT

Anderson Ridge Pit Plan
T.28N, R13W Sec. 34
T.27N, R13W Sec.3



Pit Development Plan

1. Area to be developed as directed by the Contract Administrator

2. Waste to be place in overburden storage and as directed by C/A.
3. Suitable drainage shall be maintained at all times
4. Working Face height shall not exceed 15 feet.
5. Safety berms shall be installed as directed by C/A.

I

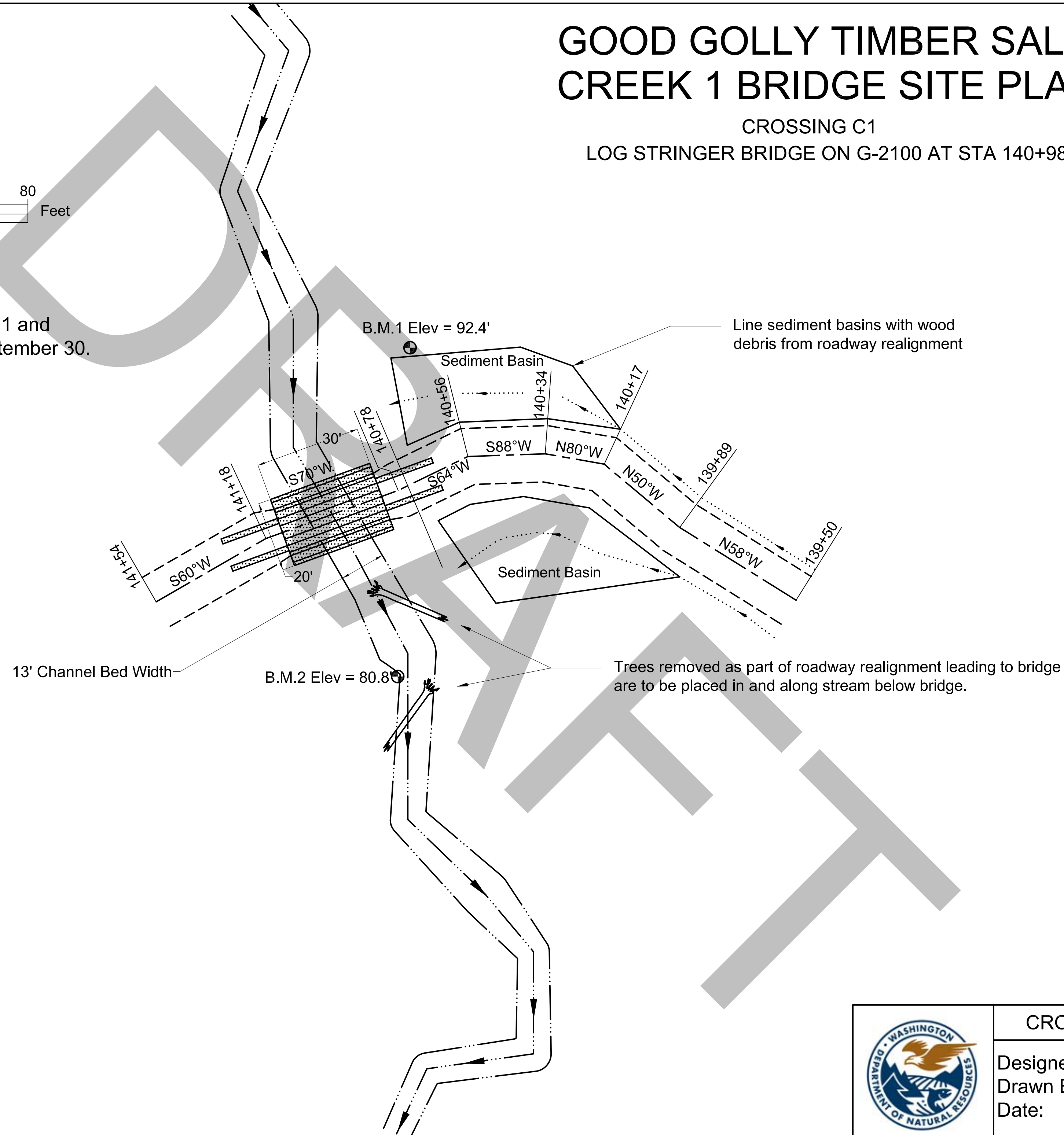
GOOD GOLLY TIMBER SALE
CREEK 1 BRIDGE SITE PLAN

CROSSING C1

LOG STRINGER BRIDGE ON G-2100 AT STA 140+98

0 40 80 Feet

Installation may begin July 1 and shall be completed by September 30.



SEC. 17, T.27N R13W
W 124° 22.883'
N 47° 50.681'
AVERAGE BFW: 11.3'

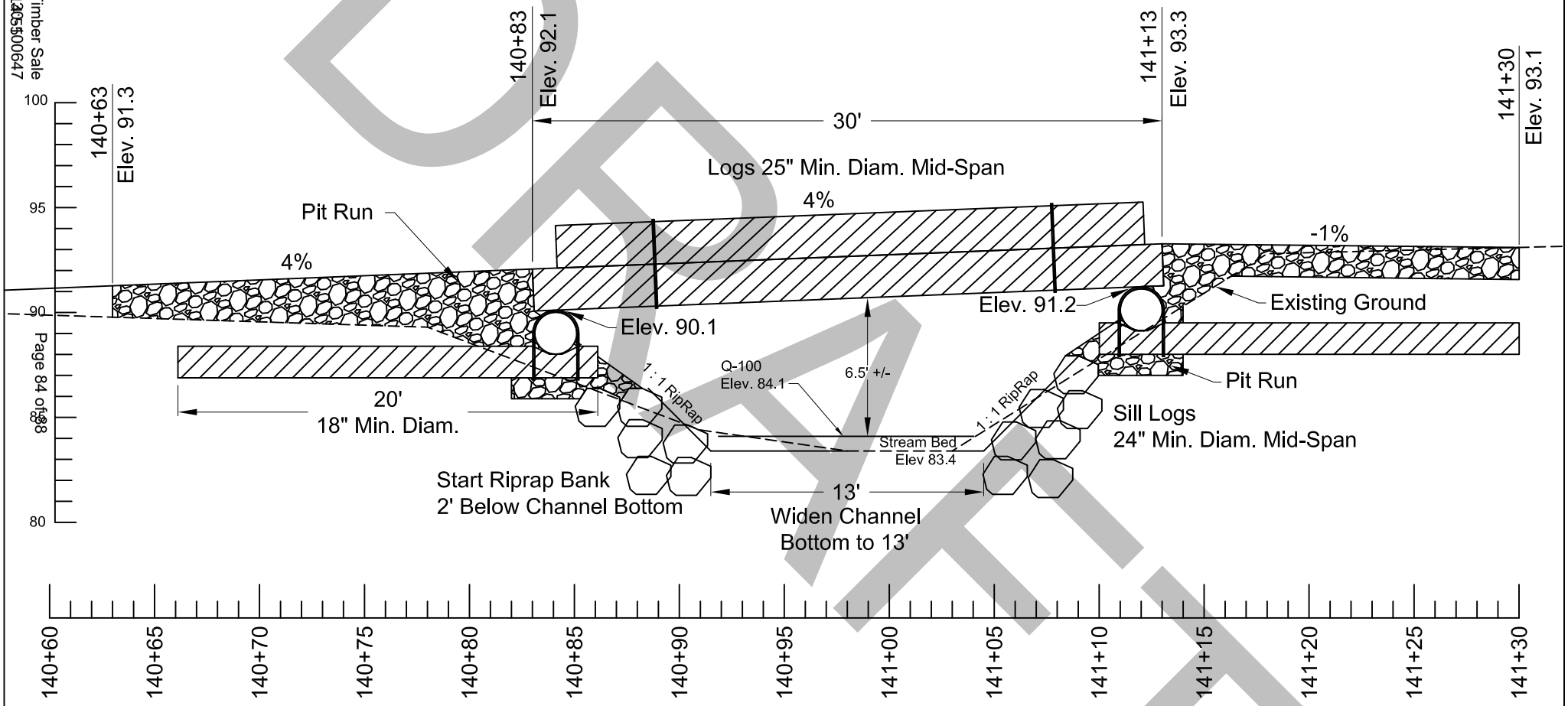
CROSSING C1

Designed By: Wyatt
Drawn By: Wyatt
Date: 7/9/2020
Sheet 1 of 3

GOOD GOLLY TIMBER SALE
BRIDGE PROFILE

CROSSING C1

ROAD CENTERLINE CROSS SECTION LOG STRINGER BRIDGE ON G-2100 AT STA 140+98



CROSSING C1
SEC. 17, T.27N R13W
W124° 22.883'
N47° 50.681'

Average BFW	= 11.3 ft
Stream Bed Width	= 13 ft
Q-100	= 59 cfs
Flow Depth	= 0.65 ft
Flow Velocity	= 6.7 fps

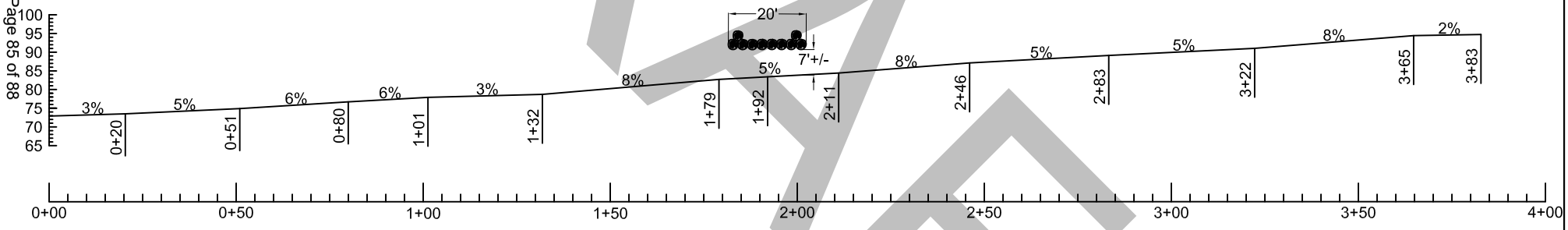
Installation may begin July 1 and shall be completed by September 30.

CROSSING C1	
Designed By:	Wyatt
Drawn By:	Wyatt
Date:	5/4/2020
	Sheet 2 of 3

GOOD GOLLY TIMBER SALE
STREAM PROFILE

CROSSING C1

LOG STRINGER BRIDGE ON G-2100 AT STA 140+98



Installation may begin July 1 and shall
be completed by September 30.

07/30/20

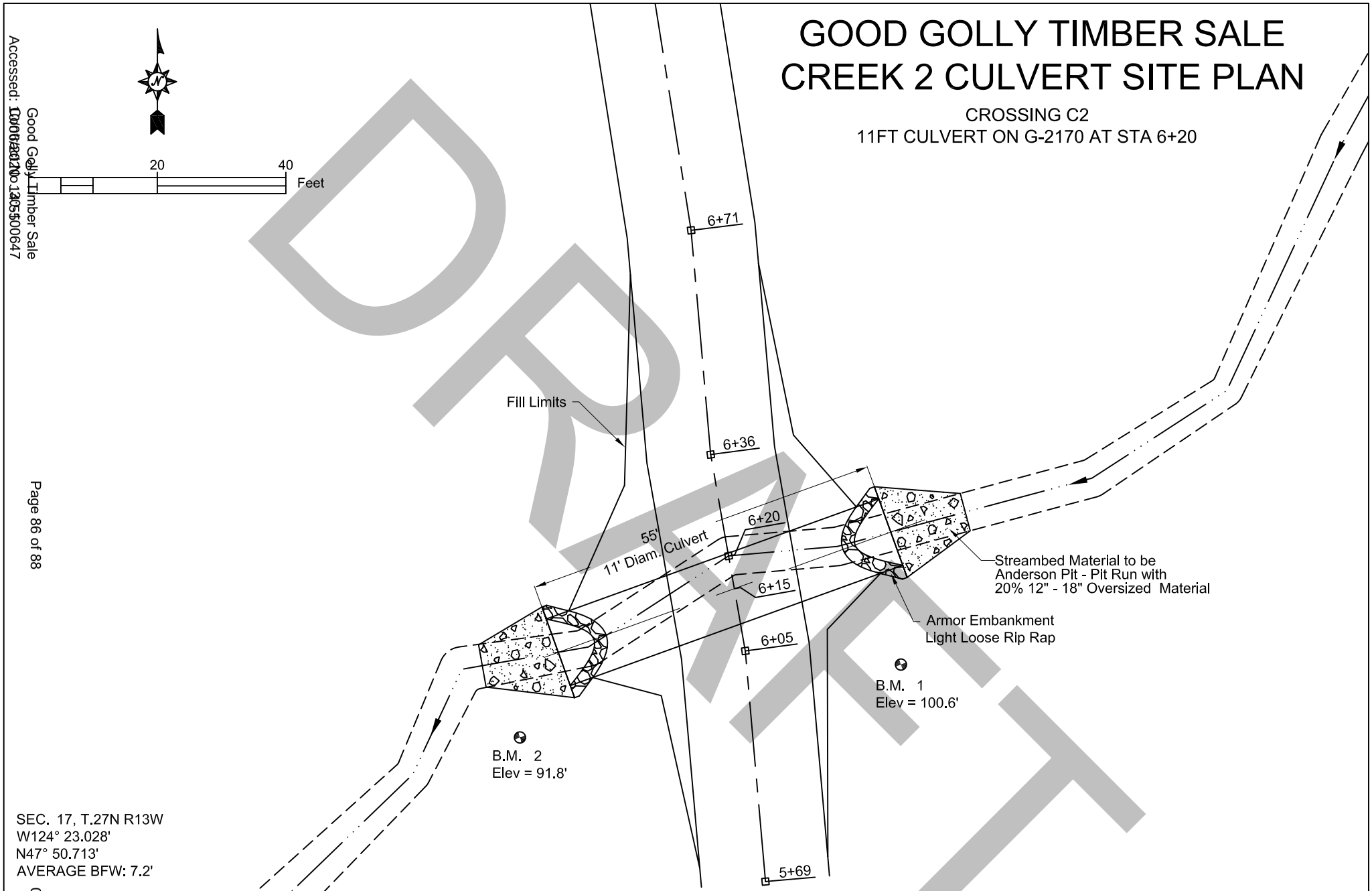
SEC 17, T 27N R 13W
W124° 22.883'
N47° 50.681'
AVERAGE BFW: 11.3'

CROSSING C1

Designed By: Wyatt
Drawn By: Wyatt
Date: 5/7/2020
Sheet 3 of 3

GOOD GOLLY TIMBER SALE
CREEK 2 CULVERT SITE PLAN

CROSSING C2
11FT CULVERT ON G-2170 AT STA 6+20



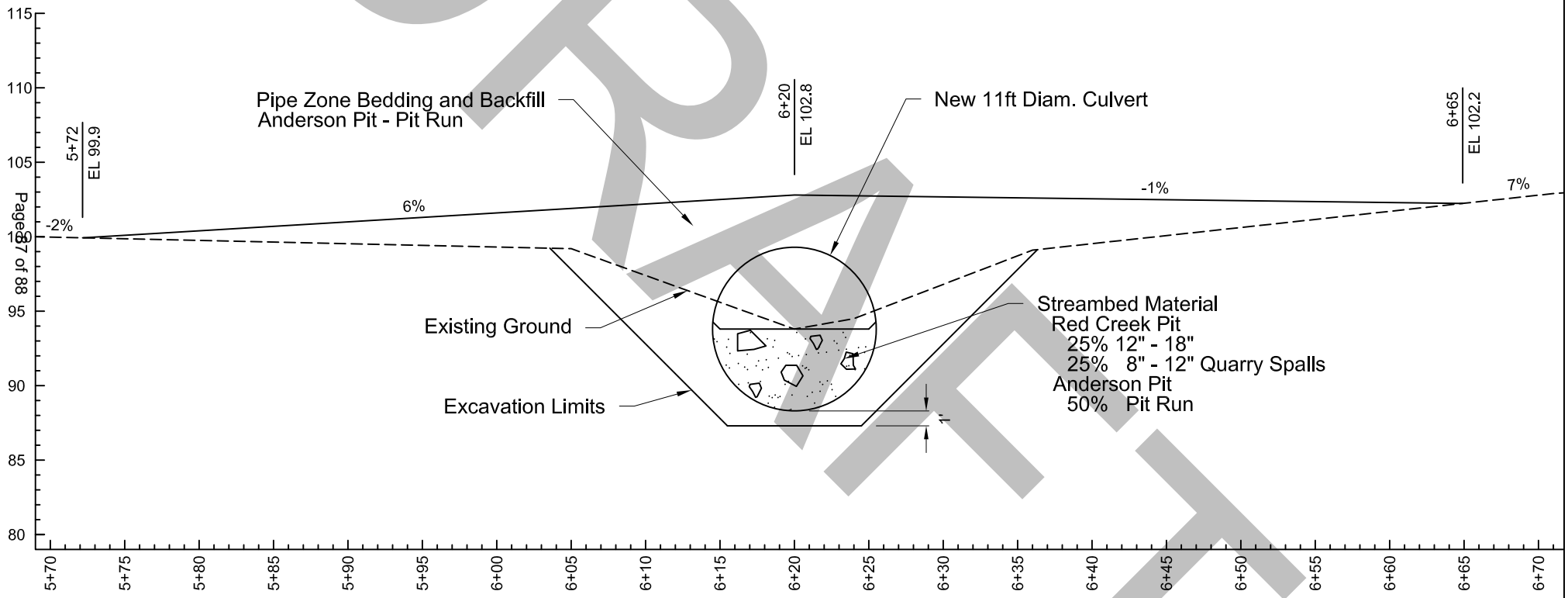
SEC. 17, T.27N R13W
W124° 23.028'
N47° 50.713'
AVERAGE BFW: 7.2'

Installation may begin July 1 and
shall be completed by September 30.

	CROSSING C2
	Designed By: Wyatt
	Drawn By: Wyatt
	Date: 7/9/2020
	Sheet 1 of 3

GOOD GOLLY TIMBER SALE
ROAD PROFILE

CROSSING C2
11FT CULVERT ON G-2170 AT STA 6+20



SEC 17, T 27N R 13W
W124° 23.028'
N47° 50.713'

Average BFW	= 7.2 ft
Culvert Diameter	= 11 ft
Q-100	= 12 cfs
Flow Depth	= 0.27 ft
Flow Velocity	= 4.9 fps

Installation may begin July 1 and shall be completed by September 30.

CROSSING C2

Designed By: Wyatt
Drawn By: Wyatt
Date: 7/23/2020
Sheet 2 of 3

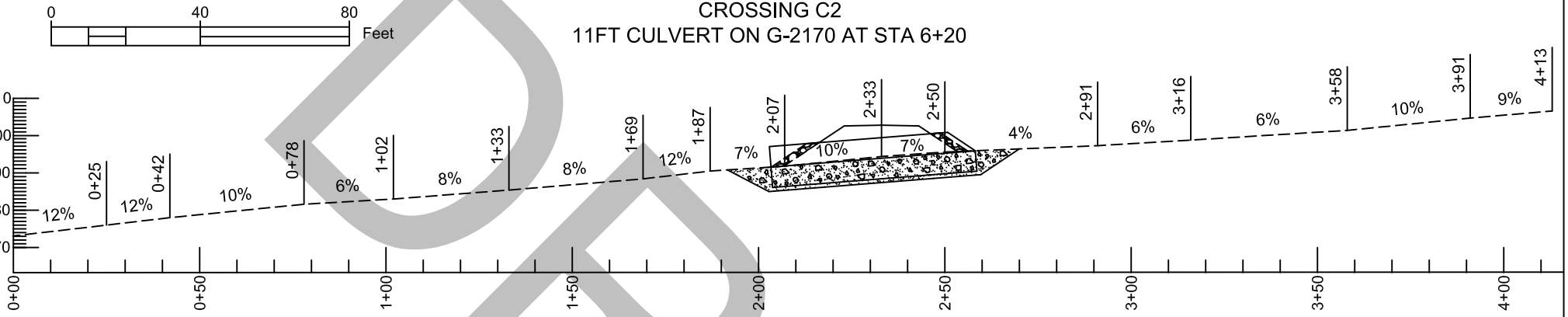
SEC 17, T 27N R 13W
W124° 23.028'
N47° 50.713'
AVERAGE BFW: 7.2'

Accessed: 10/06/2020 14:55

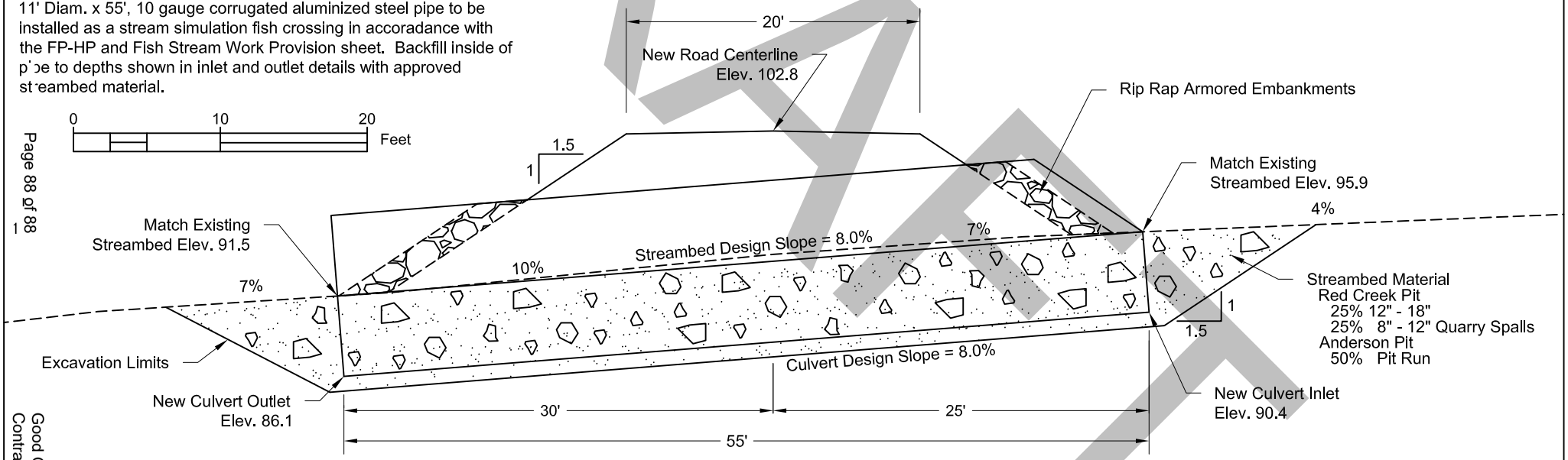
GOOD GOLLY TIMBER SALE
STREAM PROFILE

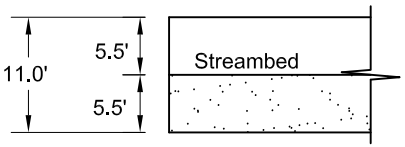
Installation may begin July 1 and shall be completed by September 30.

CROSSING C2
11FT CULVERT ON G-2170 AT STA 6+20

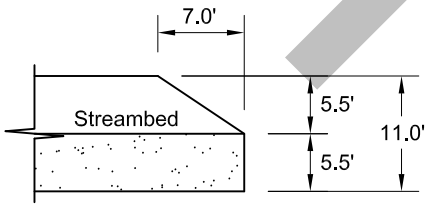


11' Diam. x 55', 10 gauge corrugated aluminized steel pipe to be installed as a stream simulation fish crossing in accoradance with the FP-HP and Fish Stream Work Provision sheet. Backfill inside of pipe to depths shown in inlet and outlet details with approved streambed material.





OUTLET SECTION DETAIL



INLET SECTION DETAIL

Good Golly Timber Sale
Contract No. 30-100647

07/30/20

CROSSING C2

Designed By: Wyatt
Drawn By: Wyatt
Date: 7/23/2020
Sheet 3 of 3