

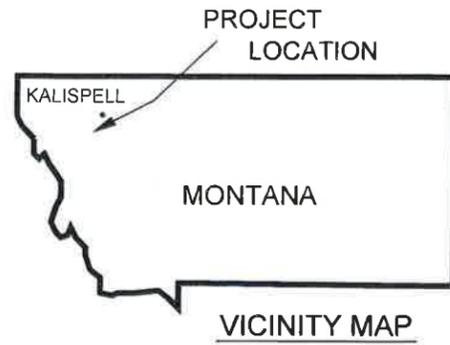
# FLATHEAD NATIONAL FOREST

## CONSTRUCTION DRAWINGS FOR:

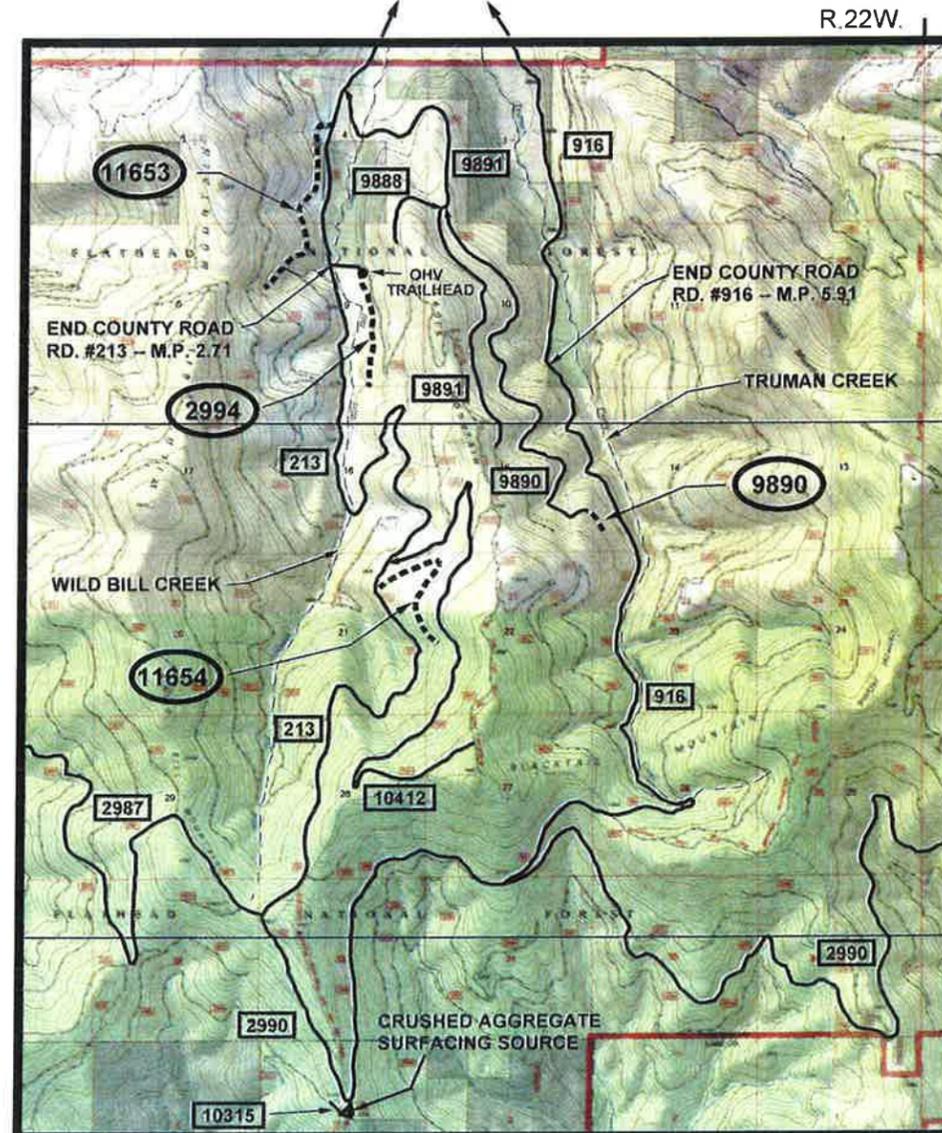
# DEWEY TIMBER SALE ROAD CONSTRUCTION

### INDEX TO SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET & VICINITY MAP
2	SUMMARY OF QUANTITIES & CULVERT LIST
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18	STANDARD LIVESTOCK GATE DETAILS



Approx. 15 Miles to Kalispell, Mt.



LEGEND	
ROAD CONSTRUCTION	2994
EXISTING ACCESS ROADS	213
MATERIAL SOURCES	

T.26N.



Submitted By:  
*Brad Russell* 3/16/15  
 Project Engineer Date

Recommended By:  
*Richard H. White* 3/11/15  
 Swan Lake District Ranger Date

Reviewed By:  
*[Signature]* 3/20/15  
 Forest Engineer Date

Approved By:  
*Sharon Laberge* 4/1/15  
 Forest Supervisor Date



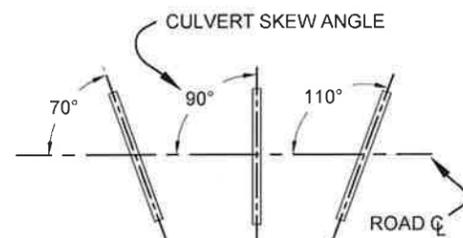
# DEWEY TIMBER SALE ROADS

## SUMMARY OF ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	MEASUREMENT		RD. #2994 (0.70 Mi.)	RD. #9890 (0.10 Mi.)	RD. #11653 (1.22 Mi.)	RD. #11654 (0.88 Mi.)	TOTALS (2.90 Mi.)
		METHOD	UNIT					
201(01)	CLEARING & GRUBBING	DQ	ACRE	3.00	0.45	4.60	3.15	11.20
202(03)	REMOVAL OF EARTH BERM	AQ	EACH	1			1	2
202(04)	REMOVAL OF BARB WIRE FENCE & STEEL POSTS	DQ	LIN.FT.	1120				1120
203(01)	EXCAVATION, PLACEMENT METHOD 1	DQ	CU.YDS.	3255	405	685	677	5022
203(02)	EXCAVATION, PLACEMENT METHOD 1	DQ	MILE			1.06	0.67	1.73
203(17)CB	DRAINAGE EXCAVATION, TYPE CATCH BASIN	AQ	EACH	1			1	2
203(17)DD	DRAINAGE EXCAVATION, TYPE DRAIN DIP	AQ	EACH	2	1	3	6	12
203(17)MDD	DRAINAGE EXCAVATION, TYPE MODIFIED DRAIN DIP	AQ	EACH			8		8
304(13)	CRUSHED AGGREGATE SURFACING, COMPACTION A -- GOV'T-FURNISHED -- (LOOSE C.Y.)	VQ	CU.YDS.	20			60	80
601(01)	MOBILIZATION	LSQ	LUMP SUM	1	1	1	1	ALL REQ'D.
603(01)	18-INCH CORRUGATED STEEL PIPE, 0.064-INCH THICKNESS	AQ	LIN.FT.	30			36	66
625(01)	SEEDING, DRY METHOD (WITHOUT MULCH)	DQ	ACRE	0.95	0.15	1.45	1.00	3.55
640(01)	FURNISH & INSTALL 12 FT. STANDARD LIVESTOCK GATE	AQ	EACH	1		1	1	3

### CULVERT LISTING

ROAD NO.	STATION	LENGTH FEET	STEEL --- 2- $\frac{2}{3}$ " X $\frac{1}{2}$ " CORRUGATIONS		SKEW	CATCH BASIN	DITCH BLOCK	REMARKS
			SIZE	THICKNESS				
2994	38+35	30'	18"	0.064"	90°	X		Dry Draw
11654	1+05 (Segment 1)	36'	18"	0.064"	110°	X	X	Intercept Rd. #213 Ditch Line



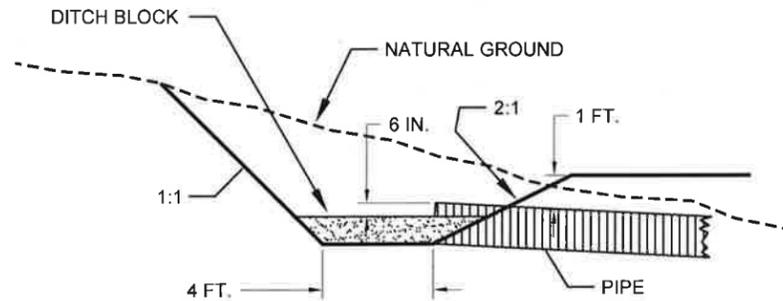
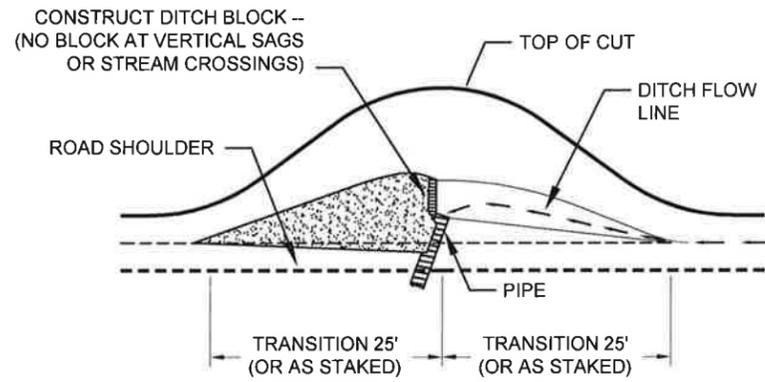
FOR ALL PIPE INSTALLATIONS, CONSERVE ROCK FROM THE PIPE AND/OR CATCH BASIN EXCAVATION AND PLACE AS RIPRAP AT PIPE INLETS & OUTLETS. ARMOR CATCH BASINS WHEN SHOWN ON THE DRAWINGS. (CONSERVING & PLACING RIPRAP IS CONSIDERED INCIDENTAL TO PIPE INSTALLATION).

# TYPICAL SECTIONS

(TYPICALS APPLY TO ALL ROADS WHERE CALLED FOR)

## CATCH BASIN & DITCH BLOCK TYPICAL

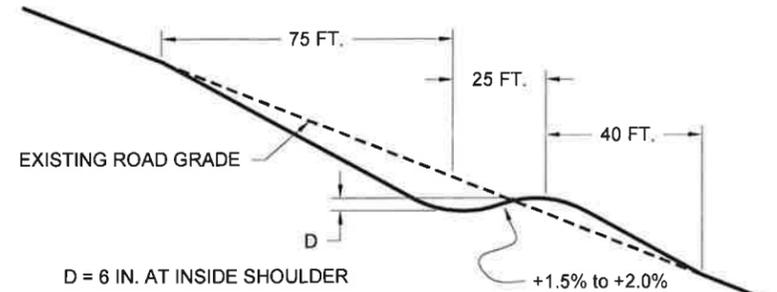
Not to Scale



FOR ALL PIPE INSTALLATIONS, CONSERVE ROCK FROM THE PIPE AND/OR CATCH BASIN EXCAVATION AND PLACE AS RIPRAP AT PIPE INLETS & OUTLETS. ARMOR CATCH BASINS WHEN SHOWN ON THE DRAWINGS. (CONSERVING & PLACING RIPRAP IS CONSIDERED INCIDENTAL TO PIPE INSTALLATION).

## DRAIN DIP

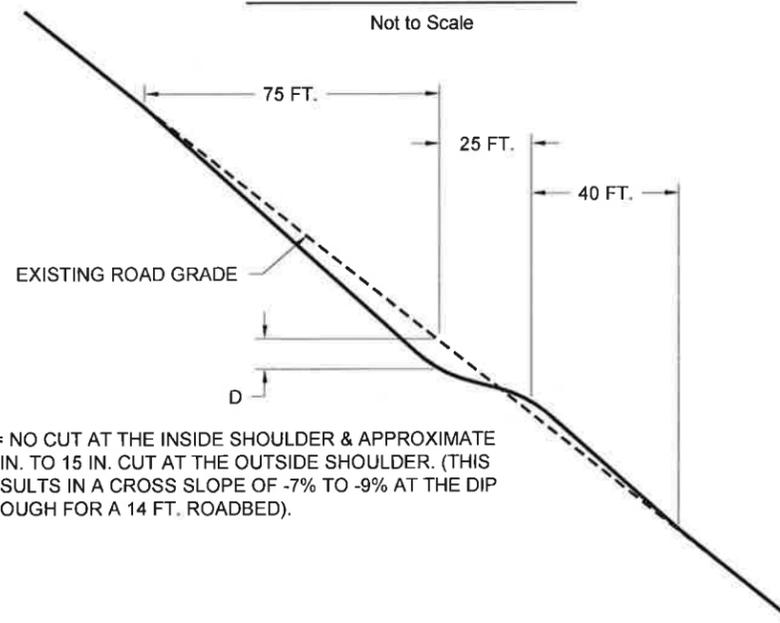
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1. CONSTRUCTED DRAIN DIPS SHALL NOT HAVE PROTRUSIONS OR DEPRESSIONS GREATER THAN 2 IN. FROM THE TYPICAL SECTION --- (MOTOR GRADER FINISH).
2. SKEW TROUGH AND CREST OF THE DIP 10 DEGREES FROM PERPENDICULAR TO THE ROAD CENTERLINE.
3. CROSS DRAIN SLOPE OF THE DIP SHALL BE OUTSLOPED 5% TO 8%.
4. ALL DIP TRANSITIONS SHALL BE SHAPED SMOOTH AND UNIFORM AS DIRECTED.
5. CONSERVE ROCK FROM DIP EXCAVATION AND PLACE AT DIP OUTFALL TO SERVE AS ENERGY DISSIPATER.
6. UNLESS SHOWN OTHERWISE ON THE DRAWINGS, ON DITCHED ROADS DO NOT INTERCEPT THE DITCH LINE WITH THE DRAIN DIPS.

## MODIFIED DRAIN DIP

Not to Scale

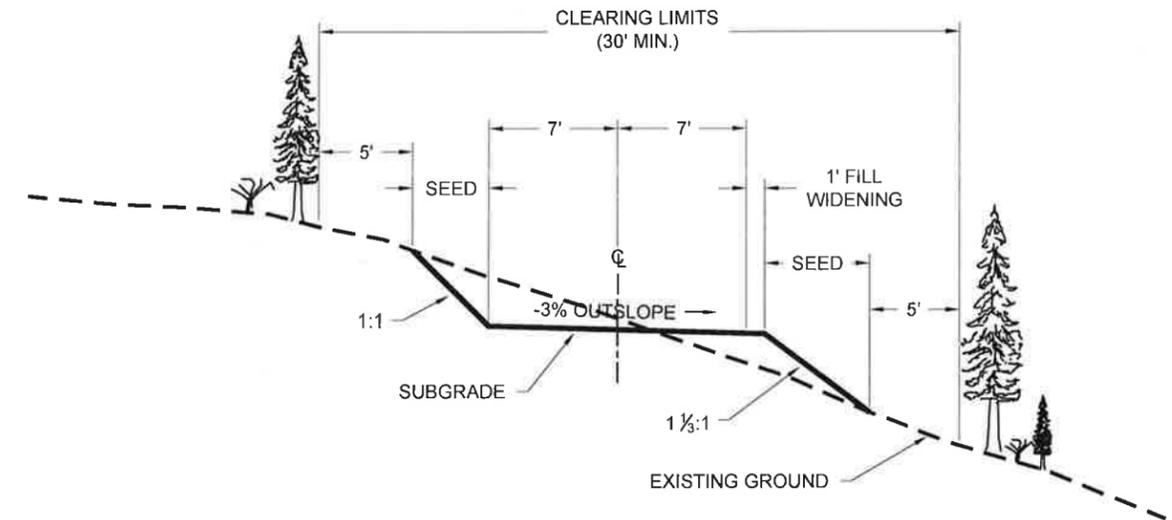


1. CONSTRUCT MODIFIED DRAIN DIPS AT LOCATIONS SHOWN ON THE DRAWINGS WHEN ROAD GRADES EXCEED 12%.
2. CONSTRUCT AN OUTSLOPED SECTION OF ROADBED TO THE APPROXIMATE DIMENSIONS SHOWN TO DRAIN WATER FROM THE ROAD SURFACE.
3. CONSTRUCTED DRAIN DIPS SHALL NOT HAVE PROTRUSIONS OR DEPRESSIONS GREATER THAN 2 IN. FROM THE TYPICAL SECTION --- (MOTOR GRADER FINISH).
4. ALL DIP TRANSITIONS SHALL BE SHAPED SMOOTH AND UNIFORM AS DIRECTED.
5. UNLESS SHOWN OTHERWISE ON THE DRAWINGS, ON DITCHED ROADS DO NOT INTERCEPT THE DITCH LINE WITH THE MODIFIED DRAIN DIPS.

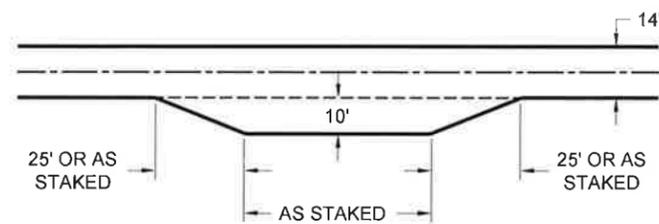
NO SCALE

GENERAL NOTES --- ROAD #2994

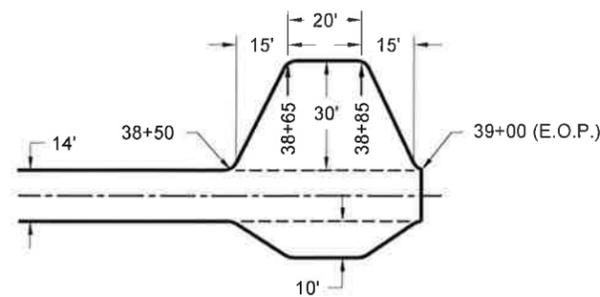
1. INITIAL CLEARING LIMITS AND CONSTRUCTION STAKES WILL BE SET BY THE GOVERNMENT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN AND PRESERVE ALL STAKES AND OTHER MARKS SET BY THE GOVERNMENT.
2. ITEM 201(01) --- CLEARING & GRUBBING  
 UTILIZATION OF TIMBER --- METHOD (1) --- DISPOSE OF MERCHANTABLE TIMBER IN ACCORDANCE WITH THE PROVISIONS OF THE TIMBER SALE CONTRACT.  
 SLASH TREATMENT --- METHOD (11), PILING --- ALL TOPS & LIMBS, STUMPS, CULL LOGS, AND OTHER VEGETATIVE MATERIAL WITHIN THE CLEARING LIMITS SHALL BE CLEARED, GRUBBED, REMOVED, AND PILED IN CLEAN PILES ADJACENT TO THE CLEARING LIMITS AT DESIGNATED LOCATIONS FOR LATER BURNING BY THE FOREST SERVICE. CLEARING REQUIRED FOR BURNING BAYS IS CONSIDERED INCIDENTAL TO THIS PAY ITEM. PLACE AND CONSTRUCT PILES SO FUTURE BURNING WILL NOT DAMAGE REMAINING TREES.
3. ITEM 202(04) --- EXISTING BARB WIRE FENCE AND STEEL POSTS DESIGNATED FOR REMOVAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM NATIONAL FOREST LANDS.
4. ITEM 203(01) --- EXCAVATION, EMBANKMENT & HAUL (PAY ITEM BY THE C.Y.) --- TOLERANCE CLASS G --- EMBANKMENT PLACEMENT METHOD (1) - SIDE CASTING & END DUMPING --- ROADBED FINISHING METHOD A (SHAPE AND FINISH THE ROADBED TO A "MOTOR GRADER FINISH", ROCK PROTRUSIONS LESS THAN 1" ABOVE THE FINISHED ROAD SURFACE WILL BE ALLOWED.
5. ITEM 304(13) --- CRUSHED AGGREGATE SURFACING SHALL BE OBTAINED FROM THE EXISTING STOCKPILE OR THE STOCKPILE FLOOR LOCATED IN THE FREELAND QUARRY (SEC. 4, T.25 N., R.22 W.). COMPACTION METHOD A. CUBIC YARD MEASUREMENT WILL BE MADE IN THE HAULING VEHICLE.
6. ITEM 625(01) --- SEEDING w/o MULCH --- APPLY SEED AND FERTILIZER AT THE RATES SPECIFIED TO ALL DISTURBED AREAS OUTSIDE OF THE ROAD SHOULDERS (INCLUDES FILL SLOPES, CUT SLOPES, CATCH BASINS, ETC.).
7. ITEM 640(01) --- 12' STANDARD LIVESTOCK GATE --- INSTALL AT DESIGNATED LOCATIONS AS SOON AS PRACTICAL AFTER CLEARING AND EXCAVATION IS COMPLETE AT THE INSTALLATION SITE.



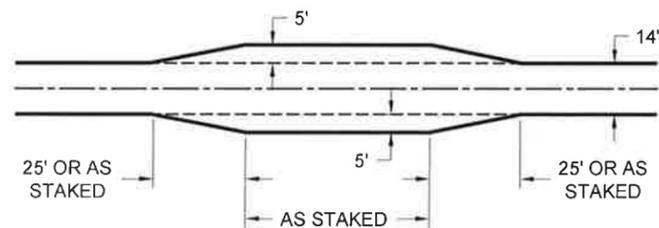
ROAD SECTIONS WITHOUT DITCH



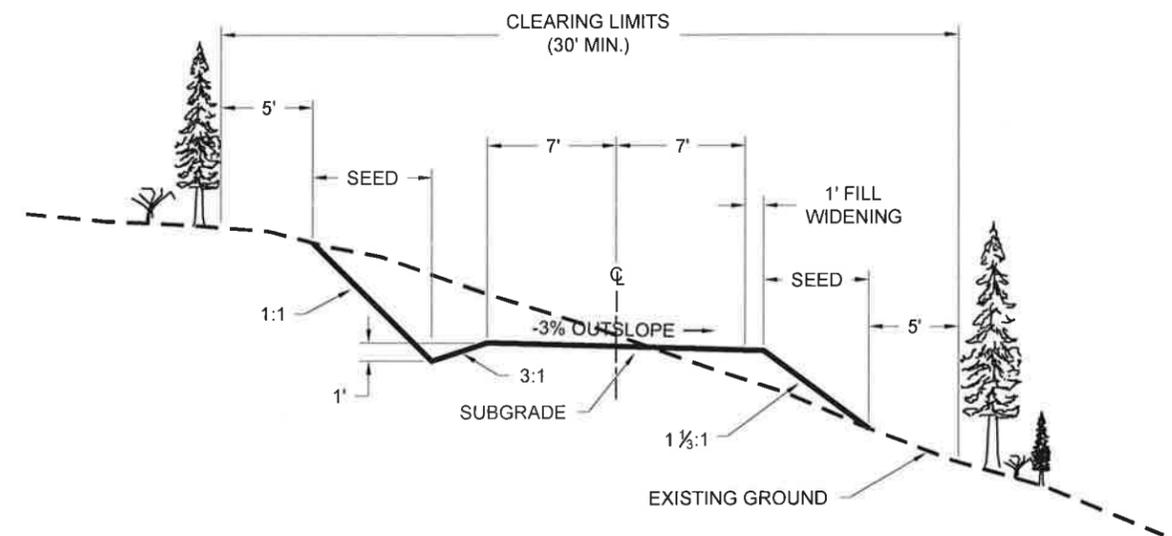
TURNOUT RIGHT OR LEFT



TURN-A-ROUND



SPLIT TURNOUT



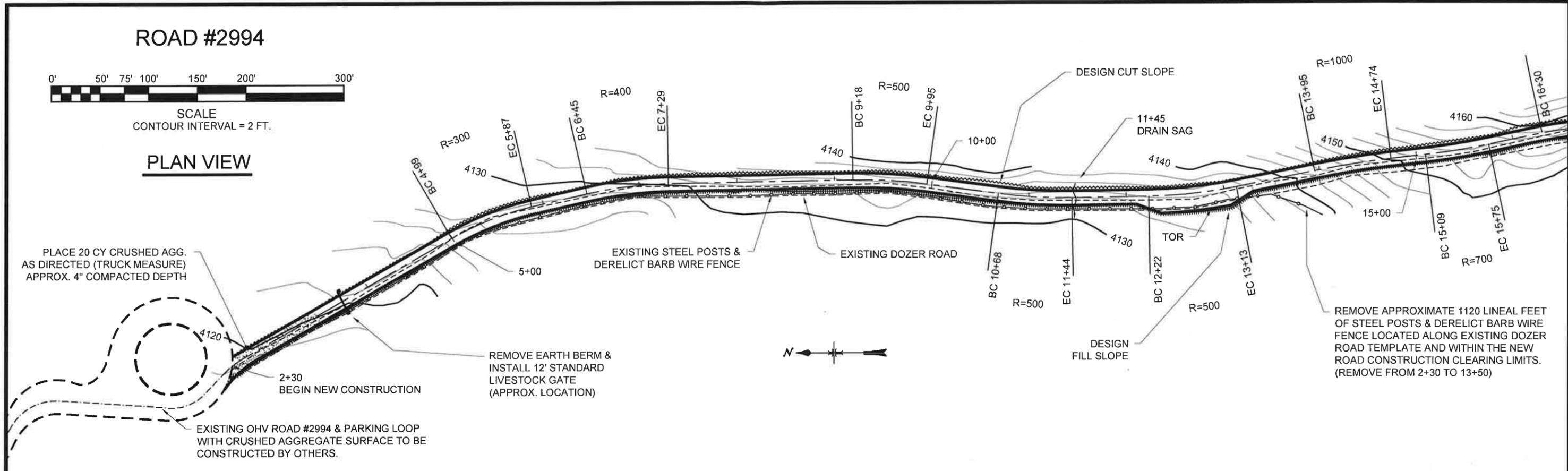
ROAD SECTIONS WITH DITCH

# ROAD #2994

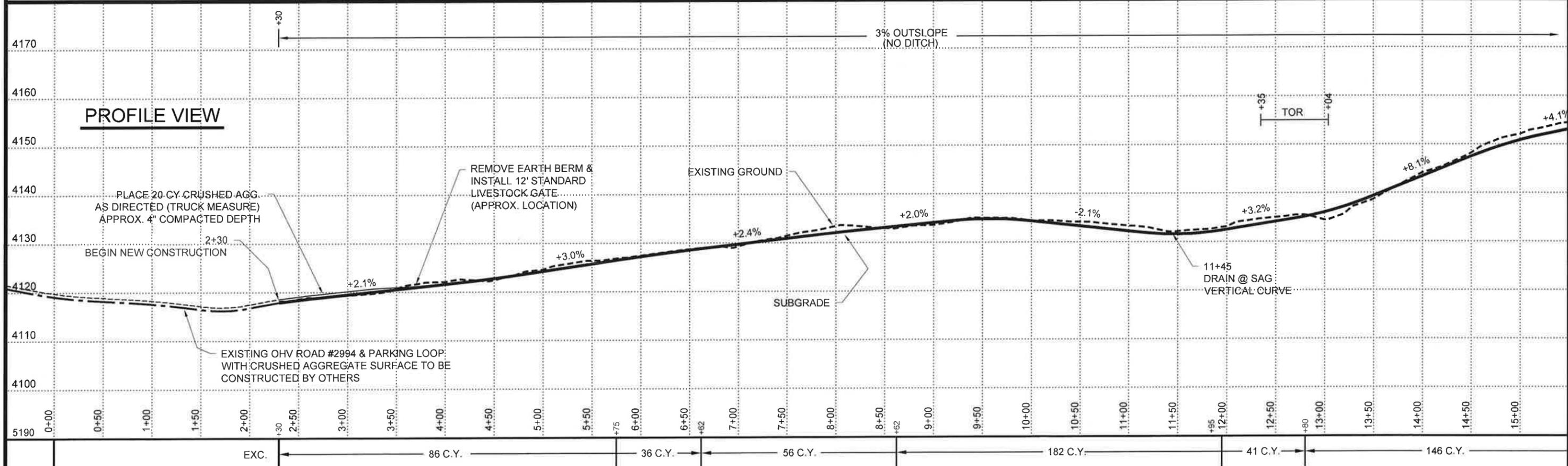


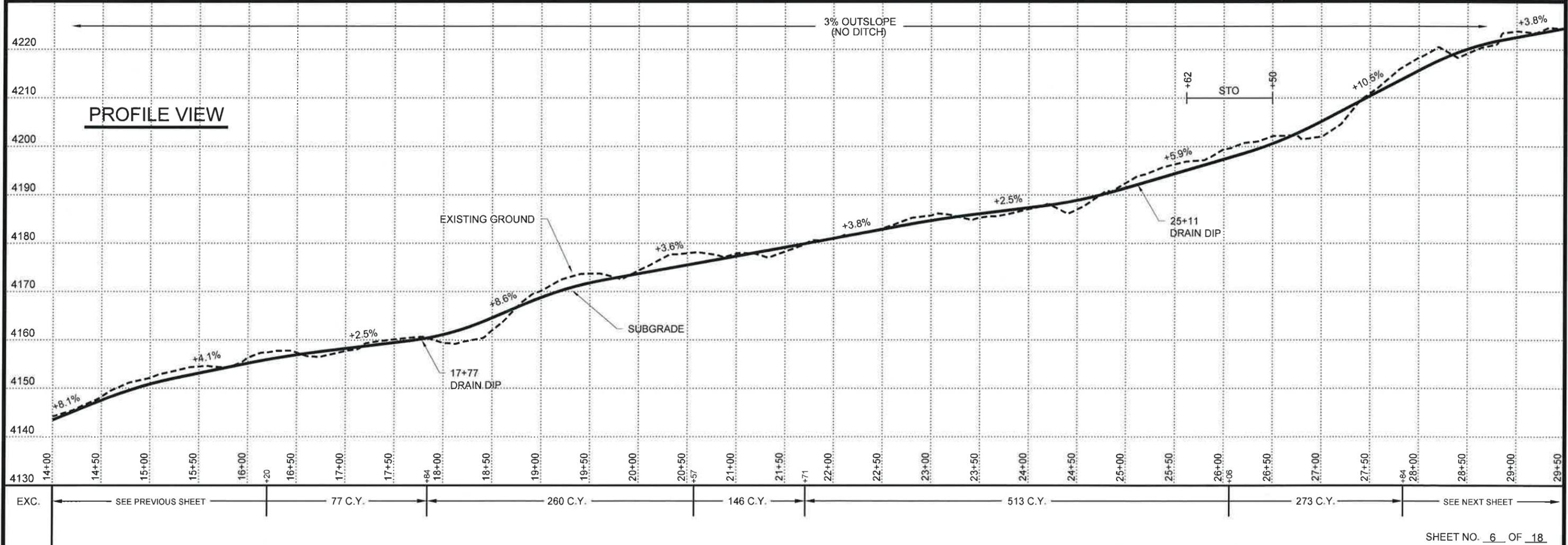
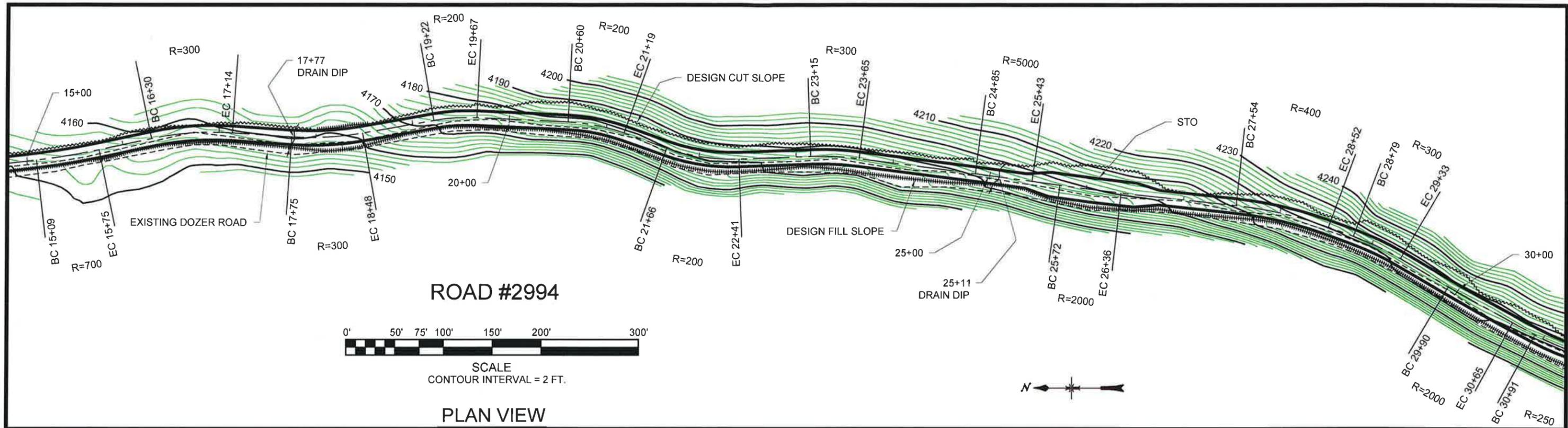
SCALE  
CONTOUR INTERVAL = 2 FT.

## PLAN VIEW



## PROFILE VIEW



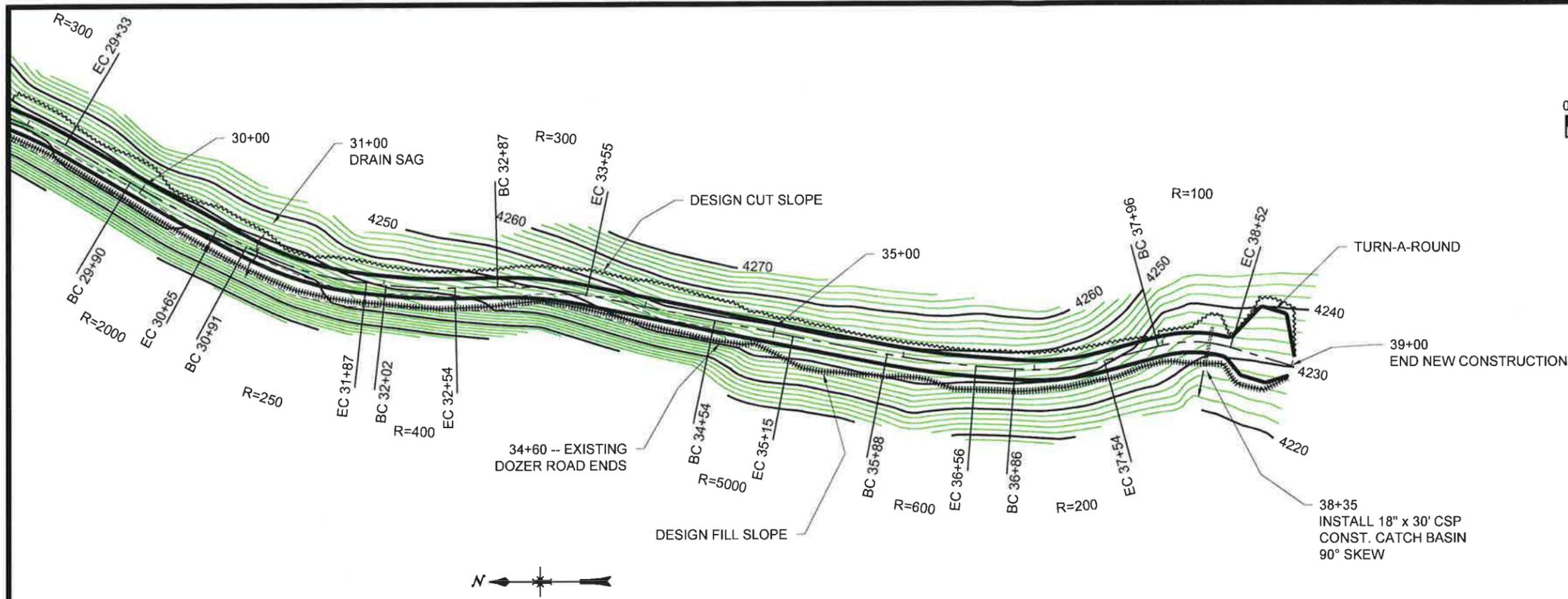


# ROAD #2994

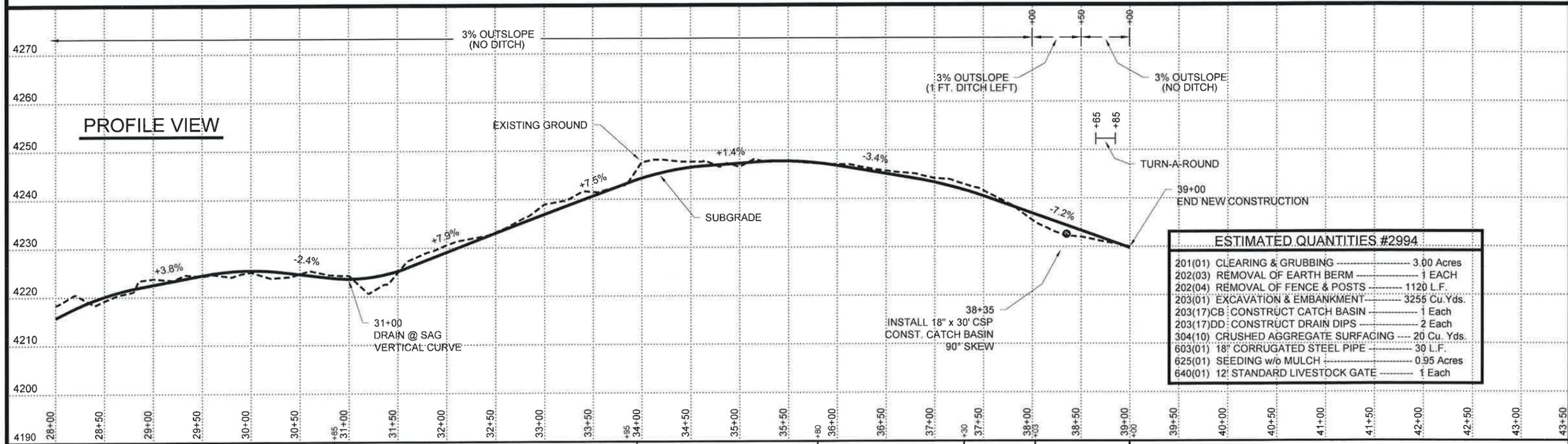


SCALE  
CONTOUR INTERVAL = 2 FT.

## PLAN VIEW



## PROFILE VIEW



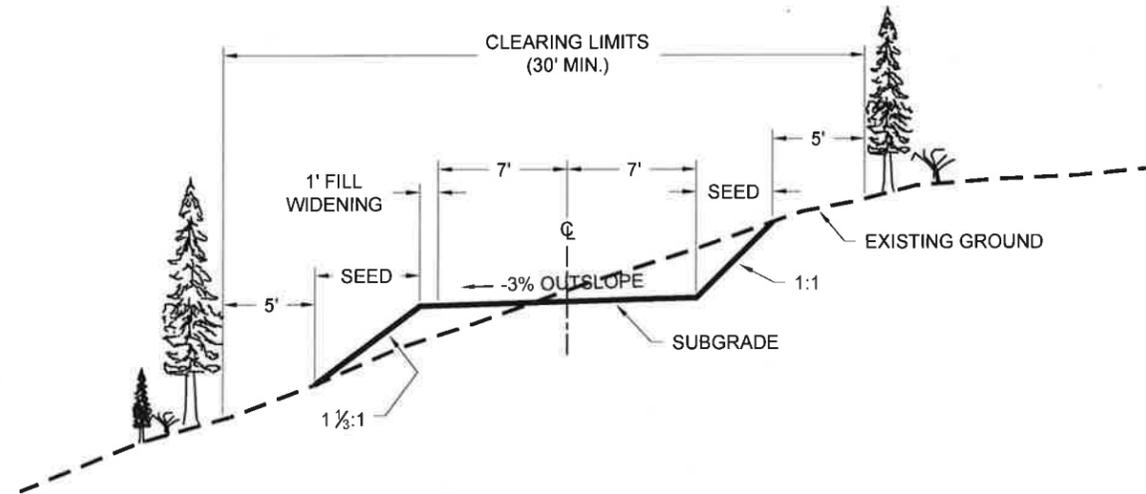
ESTIMATED QUANTITIES #2994	
201(01) CLEARING & GRUBBING	3.00 Acres
202(03) REMOVAL OF EARTH BERM	1 EACH
202(04) REMOVAL OF FENCE & POSTS	1120 L.F.
203(01) EXCAVATION & EMBANKMENT	3255 Cu. Yds.
203(17)CB: CONSTRUCT CATCH BASIN	1 Each
203(17)DD: CONSTRUCT DRAIN DIPS	2 Each
304(10) CRUSHED AGGREGATE SURFACING	20 Cu. Yds.
603(01) 18" CORRUGATED STEEL PIPE	30 L.F.
625(01) SEEDING w/o MULCH	0.95 Acres
640(01) 12" STANDARD LIVESTOCK GATE	1 Each

EXC.	387 C.Y.	435 C.Y.	215 C.Y.	140 C.Y.	50 C.Y.	212 C.Y.	3255 C.Y. TOTAL
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# ROAD #9890

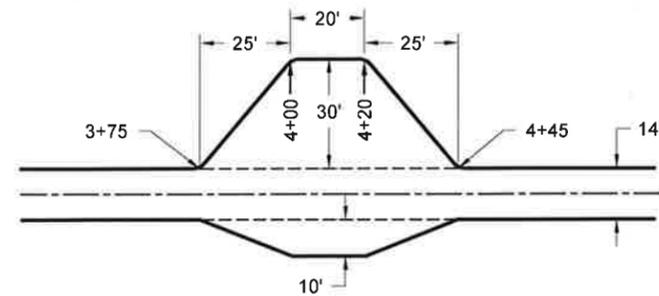
## TYPICAL SECTION --- ROAD #9890

NO SCALE



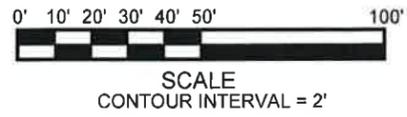
## GENERAL NOTES --- ROAD #9890

1. INITIAL CLEARING LIMITS AND CONSTRUCTION STAKES WILL BE SET BY THE GOVERNMENT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN AND PRESERVE ALL STAKES AND OTHER MARKS SET BY THE GOVERNMENT.
2. ITEM 201(01) --- CLEARING & GRUBBING  
 UTILIZATION OF TIMBER --- METHOD (1) --- DISPOSE OF MERCHANTABLE TIMBER IN ACCORDANCE WITH THE PROVISIONS OF THE TIMBER SALE CONTRACT.  
 SLASH TREATMENT --- METHOD (11), PILING --- ALL TOPS & LIMBS, STUMPS, CULL LOGS, AND OTHER VEGETATIVE MATERIAL WITHIN THE CLEARING LIMITS SHALL BE CLEARED, GRUBBED, REMOVED, AND PILED IN CLEAN PILES ADJACENT TO THE CLEARING LIMITS AT DESIGNATED LOCATIONS FOR LATER BURNING BY THE FOREST SERVICE. CLEARING REQUIRED FOR BURNING BAYS IS CONSIDERED INCIDENTAL TO THIS PAY ITEM. PLACE AND CONSTRUCT PILES SO FUTURE BURNING WILL NOT DAMAGE REMAINING TREES.
3. ITEM 203(01) --- EXCAVATION, EMBANKMENT & HAUL (PAY ITEM BY THE C.Y.) --- TOLERANCE CLASS G --- EMBANKMENT PLACEMENT METHOD (1) - SIDE CASTING & END DUMPING --- ROADBED FINISHING METHOD A (SHAPE AND FINISH THE ROADBED TO A "MOTOR GRADER FINISH". ROCK PROTRUSIONS LESS THAN 1" ABOVE THE FINISHED ROAD SURFACE WILL BE ALLOWED.
4. ITEM 625(01) --- SEEDING w/o MULCH --- APPLY SEED AND FERTILIZER AT THE RATES SPECIFIED TO ALL DISTURBED AREAS OUTSIDE OF THE ROAD SHOULDERS (INCLUDES FILL SLOPES, CUT SLOPES, CATCH BASINS, ETC.).

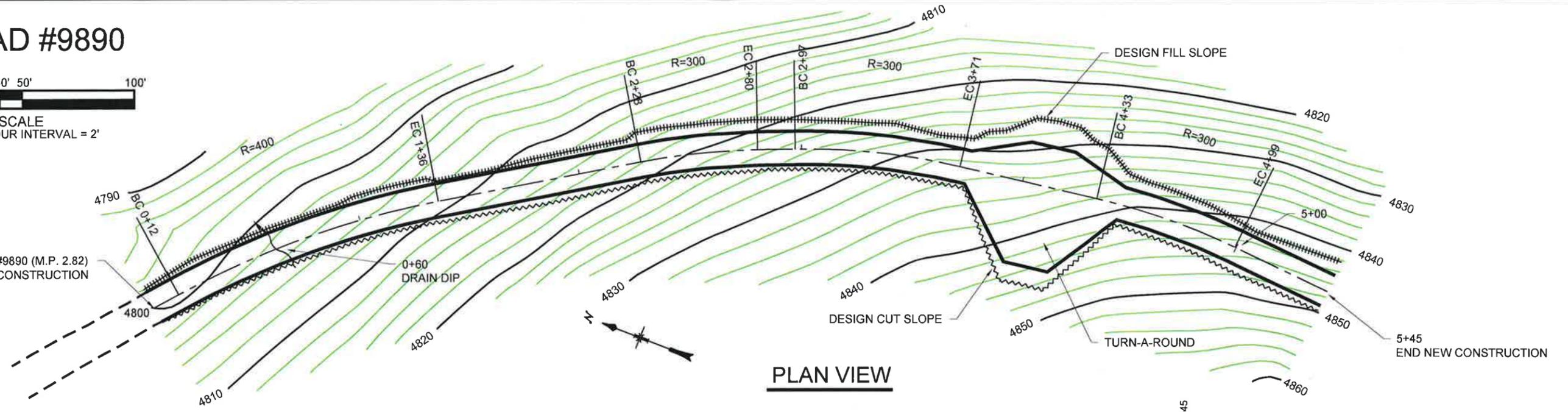


TURN-A-ROUND

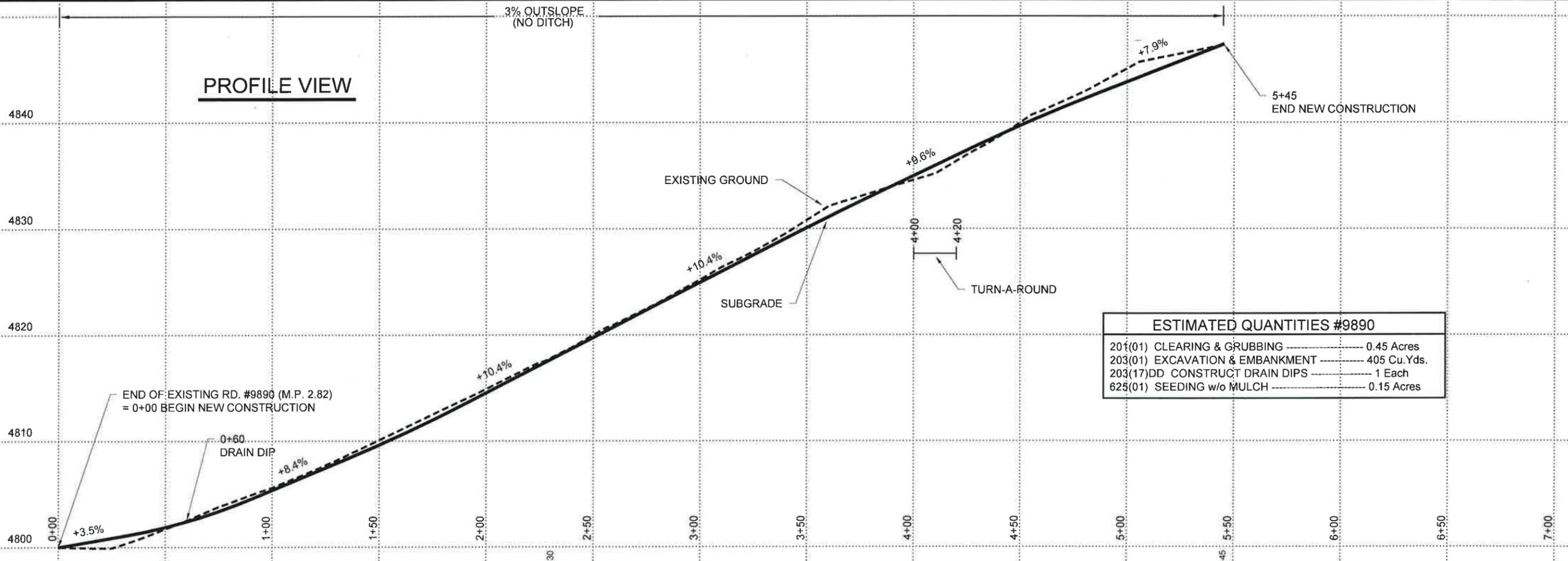
# ROAD #9890



END OF EXISTING RD. #9890 (M.P. 2.82)  
= 0+00 --- BEGIN NEW CONSTRUCTION



## PROFILE VIEW



ESTIMATED QUANTITIES #9890	
201(01) CLEARING & GRUBBING	0.45 Acres
203(01) EXCAVATION & EMBANKMENT	405 Cu.Yds.
203(17)DD CONSTRUCT DRAIN DIPS	1 Each
625(01) SEEDING w/o MULCH	0.15 Acres

EXC. ← 83 C.Y. → 322 C.Y. → 405 C.Y. TOTAL

## ROAD #11653 -- (SEGMENT 1)

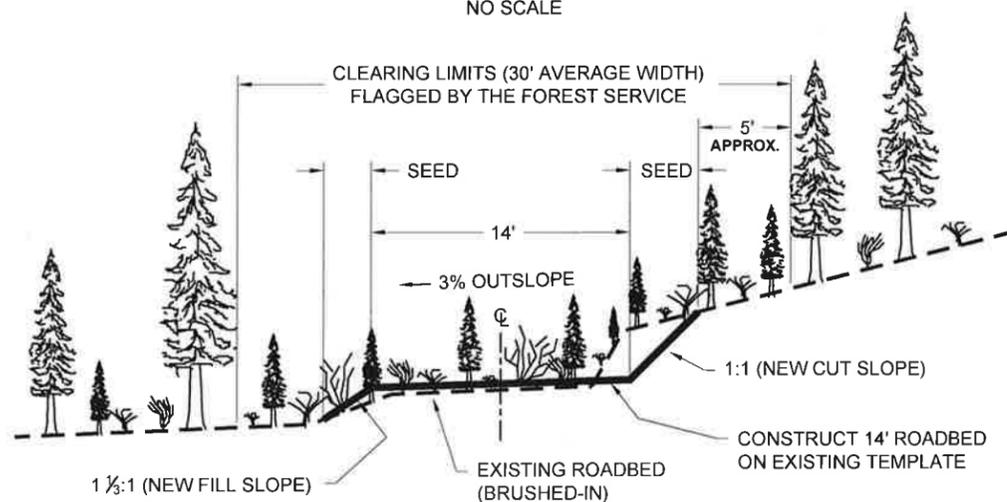
STATION OR MILE POST	WORK DESCRIPTION	201(01) Clearing & Grubbing	203(02) Excavation Mile	203(17)DD Drain Dip	203(17)MDD Modified Drain Dip	625(01) Seeding	640(01) Livestock Gate
0+00 (Segment 1) = M.P. 0.00	<b>NOTE: The first 300' of this Road Log is actually Existing Rd. #10411 --- (Treat the Same as New Construction Rd. #11653)</b> Junct. w/ Existing Rd. #213 --- Begin Segment 1 (Road Log) --- Begin Clearing & Grubbing (30' Average Clearing Width for Segment 1) & Begin Excavation by the Mile (Construct Existing Roadbed to a Width of 14' plus Turnouts - No Ditch) <b>See Typical Section &amp; General Notes for Segment 1</b>	↑	↑			↑	
0+60	Remove Existing Rocks Blocking Road Access (Incidental) Furnish & Install 12' Standard Livestock Gate	↑	↑			↑	1
2+60	Reshape Existing Drain Dip (Incidental)	↑	↑			↑	
3+00	Junct. w/ New Construction Rd. #11653 Left. (Clearing & Excavation Work Continues to the Left)	↑	↑			↑	
6+60	Construct Drain Dip	↑	↑	1		↑	
10+40	Crest Vertical Curve	↑	↑			↑	
11+25	Logging Unit #3 Boundary	↑	↑			↑	
12+30	Reshape Sag Vertical Curve (Incidental)	↑	↑			↑	
18+50	Crest Vertical Curve	↑	↑			↑	
19+25	Reshape Sag Vertical Curve (Incidental)	↑	↑			↑	
22+00	Crest Vertical Curve	↑	↑			↑	
24+60	Reshape Sag Vertical Curve (Incidental)	↑	↑			↑	
24+90	Junct. w/ Old Spur Rd. Goes Straight Ahead. (Rd. #11653 Clearing & Excavation Work Continues to the Right)	↑	↑			↑	
25+50	Through Cut Section of Road for 50 FT. -- Widen to the Left Side to Achieve 14' Rd. Width <b>NOTE: Grades on the Existing Roadbed Ahead Steepen from +10% to +18%. --- (See Modified Drain Dip Typical Section)</b>	↑	↑			↑	
26+70	Construct Modified Drain Dip	↑	↑		1	↑	
29+70	Construct Modified Drain Dip	↑	↑		1	↑	
31+40	Remove Existing Rocks Blocking Road access (Incidental)	↑	↑			↑	
32+50	Construct Modified Drain Dip	↑	↑		1	↑	
35+00	Construct Modified Drain Dip	↑	↑		1	↑	
35+35	Dry Draw (No Pipe Needed)	↑	↑			↑	
37+00	Construct Modified Drain Dip	↑	↑		1	↑	
39+10	Logging Unit #6 Boundary	↑	↑			↑	
39+50	Construct Drain Dip	↑	↑	1		↑	
40+75	Temporary Road Take-off Left	↑	↑			↑	

## ROAD #11653 -- (SEGMENT 1)

STATION OR MILE POST	WORK DESCRIPTION	201(01) Clearing & Grubbing	203(02) Excavation Mile	203(17)DD Drain Dip	203(17)MDD Modified Drain Dip	625(01) Seeding	640(01) Livestock Gate
44+00	Construct Modified Drain Dip	↑ Clearing & Grubbing Avg. 30' Clearing Width ↓	↑ Excavation (14' Roadbed plus Turnouts) ↓		1	↑ Seed & Fertilize (All Disturbed Areas Outside the Roadbed) ↓	
47+50	Construct Modified Drain Dip			1			
51+35	Construct Modified Drain Dip			1			
55+20	Construct Drain Dip			1			
55+70	Switback Right						
55+80 = 0+00 = Mile Post 1.06	End Segment 1 (Road Log) & Begin New Construction (Segment 2) -- Begin Design Clearing & Grubbing & Excavation by the C.Y. <b>See Typical Section &amp; General Notes for Segment 1 &amp; Segment 2</b>						
ESTIMATED QUANTITIES SEGMENT 1							
	201(01) CLEARING & GRUBBING -----	3.85 AC					
	203(02) EXCAVATION & EMBANKMENT -----		1.06 MI				
	203(17)DD CONSTRUCT DRAIN DIPS -----			3 EA			
	203(17)MDD CONSTRUCT MODIFIED DRAIN DIPS -----				8 EA		
	625(01) SEEDING w/o MULCH -----					1.20 AC	
	640(01) 12' STANDARD LIVESTOCK GATE -----						1 EA

### TYPICAL SECTION (SEGMENT 1)

NO SCALE



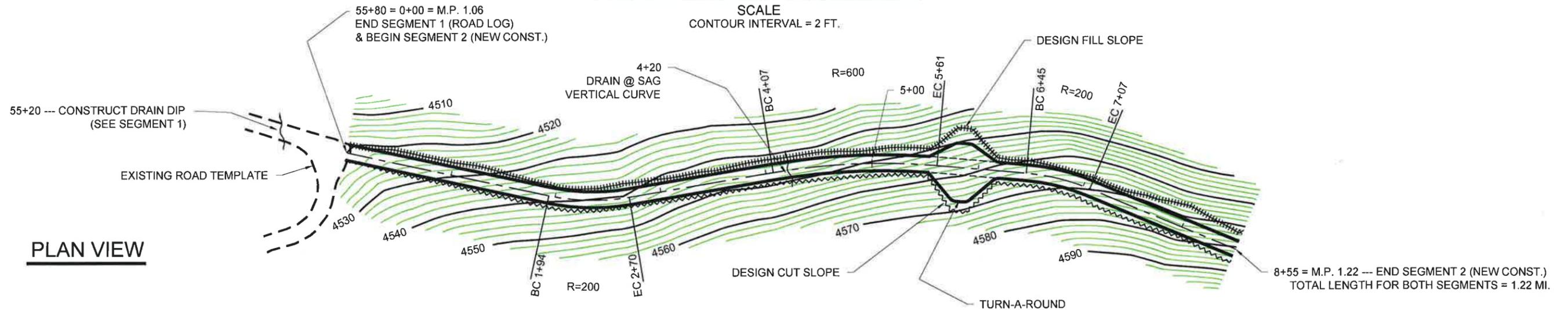
### GENERAL NOTES (SEGMENT 1)

1. INITIAL CLEARING LIMITS AND CONSTRUCTION STAKES WILL BE SET BY THE GOVERNMENT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN AND PRESERVE ALL STAKES AND OTHER MARKS SET BY THE GOVERNMENT.
2. ITEM 201(01) --- CLEARING & GRUBBING  
 UTILIZATION OF TIMBER --- METHOD (1) --- DISPOSE OF MERCHANTABLE TIMBER IN ACCORDANCE WITH THE PROVISIONS OF THE TIMBER SALE CONTRACT.  
 SLASH TREATMENT --- METHOD (11), PILING --- ALL TOPS & LIMBS, STUMPS, CULL LOGS, AND OTHER VEGETATIVE MATERIAL WITHIN THE CLEARING LIMITS SHALL BE CLEARED, GRUBBED, REMOVED, AND PILED IN CLEAN PILES ADJACENT TO THE CLEARING LIMITS AT DESIGNATED LOCATIONS FOR LATER BURNING BY THE FOREST SERVICE. CLEARING REQUIRED FOR BURNING BAYS IS CONSIDERED INCIDENTAL TO THIS PAY ITEM. PLACE AND CONSTRUCT PILES SO FUTURE BURNING WILL NOT DAMAGE REMAINING TREES.
3. ITEM 203(02) --- EXCAVATION, EMBANKMENT & HAUL (PAY ITEM BY THE MILE) --- CONSTRUCT A 14' ROADBED TO A UNIFORM LINE AND GRADE ON THE EXISTING ROAD TEMPLATE. CONSTRUCT 10' OF ADDITIONAL ROADBED WIDTH AT STAKED TURNOUT LOCATIONS. SELF-BALANCE EXCAVATED MATERIAL AS THE WORK PROGRESSES. SHAPE AND FINISH THE ROADBED TO A "MOTOR GRADER FINISH". ROCK PROTRUSIONS LESS THAN 1" ABOVE THE FINISHED ROAD SURFACE WILL BE ALLOWED.
4. ITEM 625(01) --- SEEDING w/o MULCH --- APPLY SEED AND FERTILIZER AT THE RATES SPECIFIED TO ALL DISTURBED AREAS OUTSIDE OF THE ROAD SHOULDERS (INCLUDES FILL SLOPES, CUT SLOPES, CATCH BASINS, ETC.).
5. ITEM 640(01) --- 12' STANDARD LIVESTOCK GATE --- INSTALL AT DESIGNATED LOCATIONS AS SOON AS PRACTICAL AFTER CLEARING AND EXCAVATION IS COMPLETE AT THE INSTALLATION SITE.

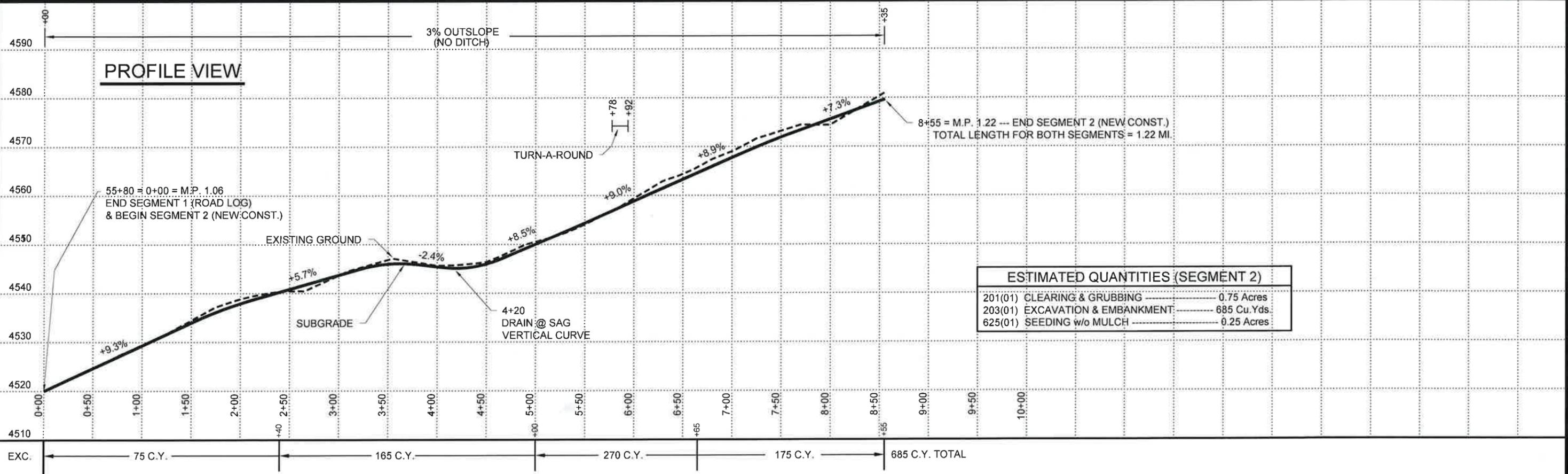
# ROAD #11653 --- (SEGMENT 2)



SCALE  
CONTOUR INTERVAL = 2 FT.



**PLAN VIEW**



**PROFILE VIEW**

ESTIMATED QUANTITIES (SEGMENT 2)	
201(01) CLEARING & GRUBBING	0.75 Acres
203(01) EXCAVATION & EMBANKMENT	685 Cu.Yds
625(01) SEEDING w/o MULCH	0.25 Acres



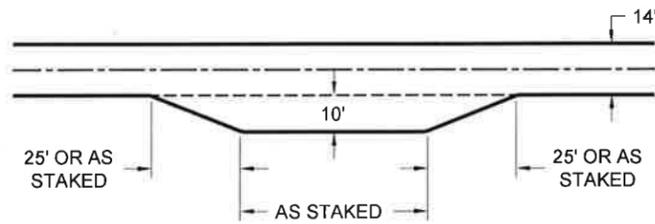
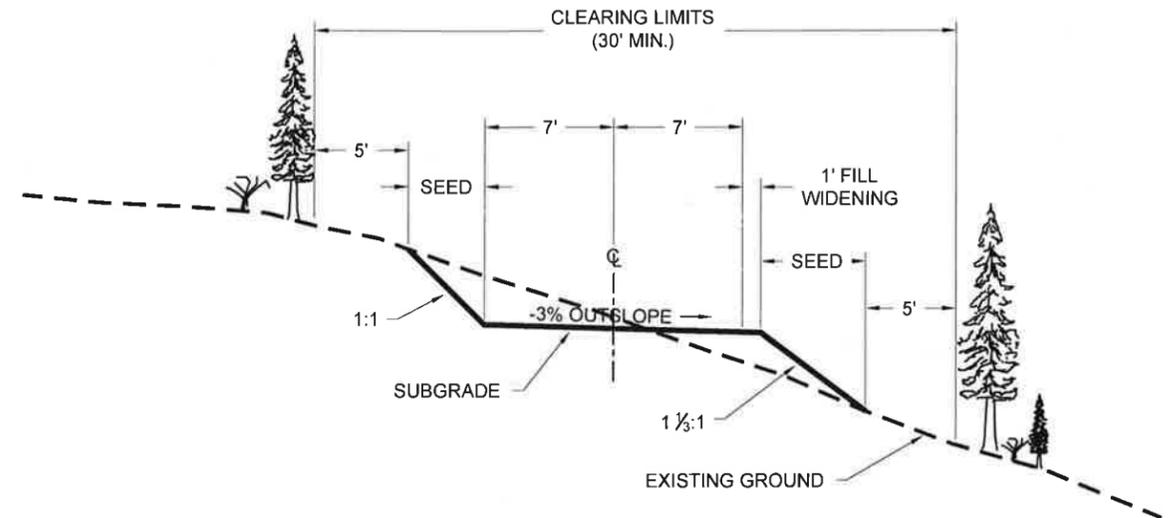
# ROAD #11653 -- (SEGMENT 2)

## GENERAL NOTES (SEGMENT 2)

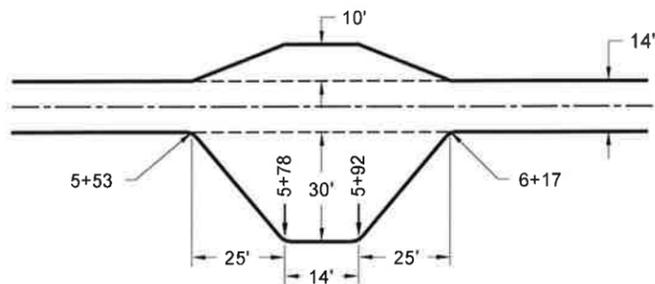
- INITIAL CLEARING LIMITS AND CONSTRUCTION STAKES WILL BE SET BY THE GOVERNMENT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN AND PRESERVE ALL STAKES AND OTHER MARKS SET BY THE GOVERNMENT.
- ITEM 201(01) --- CLEARING & GRUBBING  
 UTILIZATION OF TIMBER --- METHOD (1) --- DISPOSE OF MERCHANTABLE TIMBER IN ACCORDANCE WITH THE PROVISIONS OF THE TIMBER SALE CONTRACT.  
 SLASH TREATMENT --- METHOD (11), PILING --- ALL TOPS & LIMBS, STUMPS, CULL LOGS, AND OTHER VEGETATIVE MATERIAL WITHIN THE CLEARING LIMITS SHALL BE CLEARED, GRUBBED, REMOVED, AND PILED IN CLEAN PILES ADJACENT TO THE CLEARING LIMITS AT DESIGNATED LOCATIONS FOR LATER BURNING BY THE FOREST SERVICE. CLEARING REQUIRED FOR BURNING BAYS IS CONSIDERED INCIDENTAL TO THIS PAY ITEM. PLACE AND CONSTRUCT PILES SO FUTURE BURNING WILL NOT DAMAGE REMAINING TREES.
- ITEM 203(01) --- EXCAVATION, EMBANKMENT & HAUL (PAY ITEM BY THE C.Y.) --- TOLERANCE CLASS G --- EMBANKMENT PLACEMENT METHOD (1) - SIDE CASTING & END DUMPING --- ROADBED FINISHING METHOD A (SHAPE AND FINISH THE ROADBED TO A "MOTOR GRADER FINISH". ROCK PROTRUSIONS LESS THAN 1" ABOVE THE FINISHED ROAD SURFACE WILL BE ALLOWED.
- ITEM 625(01) --- SEEDING w/o MULCH --- APPLY SEED AND FERTILIZER AT THE RATES SPECIFIED TO ALL DISTURBED AREAS OUTSIDE OF THE ROAD SHOULDERS (INCLUDES FILL SLOPES, CUT SLOPES, CATCH BASINS, ETC.).

## TYPICAL SECTION (SEGMENT 2)

NO SCALE



TURNOUT RIGHT OR LEFT



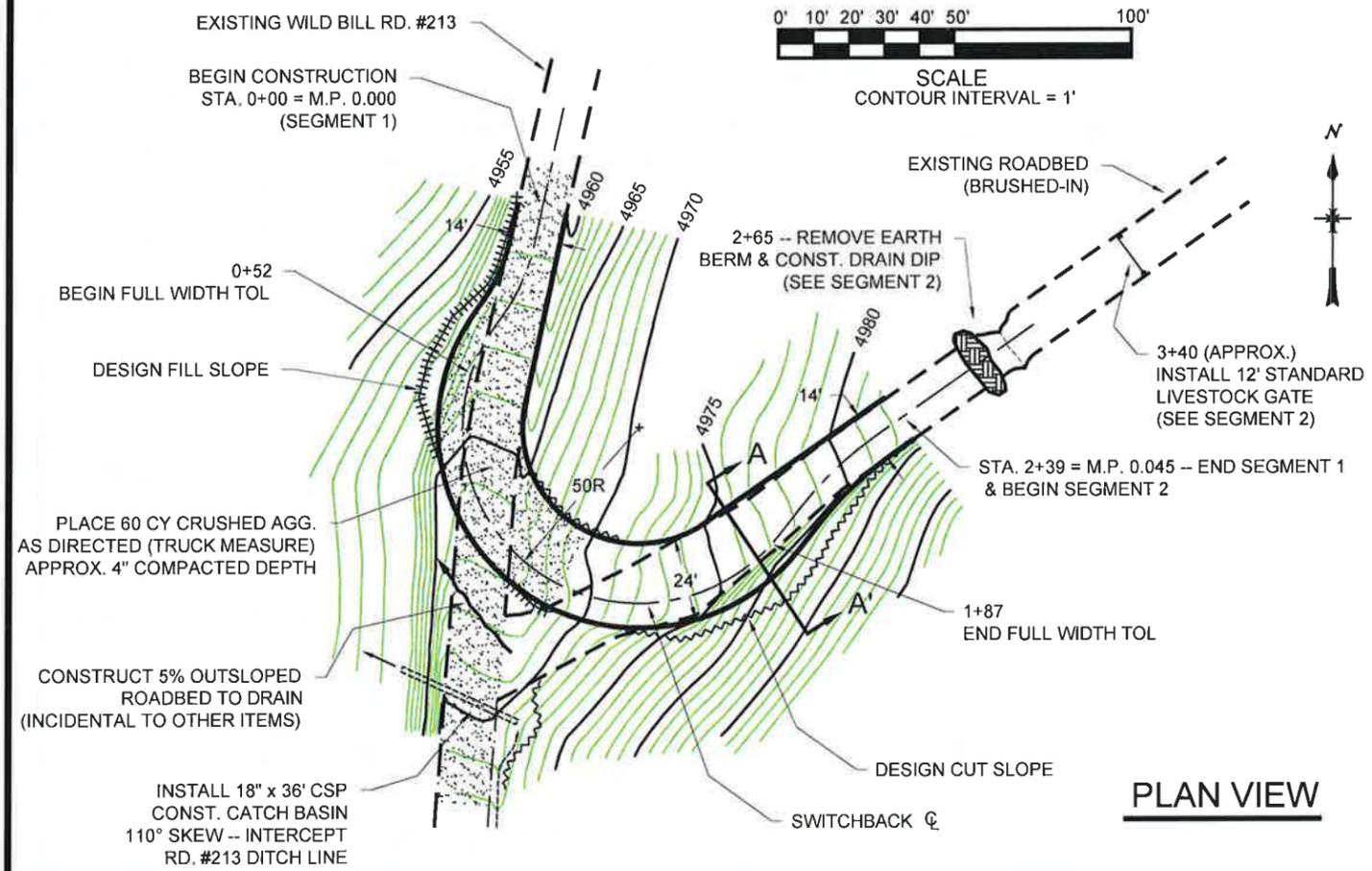
TURN-A-ROUND

## ROAD #11653 --- ESTIMATED QUANTITIES --- (SEGMENT 1 & 2)

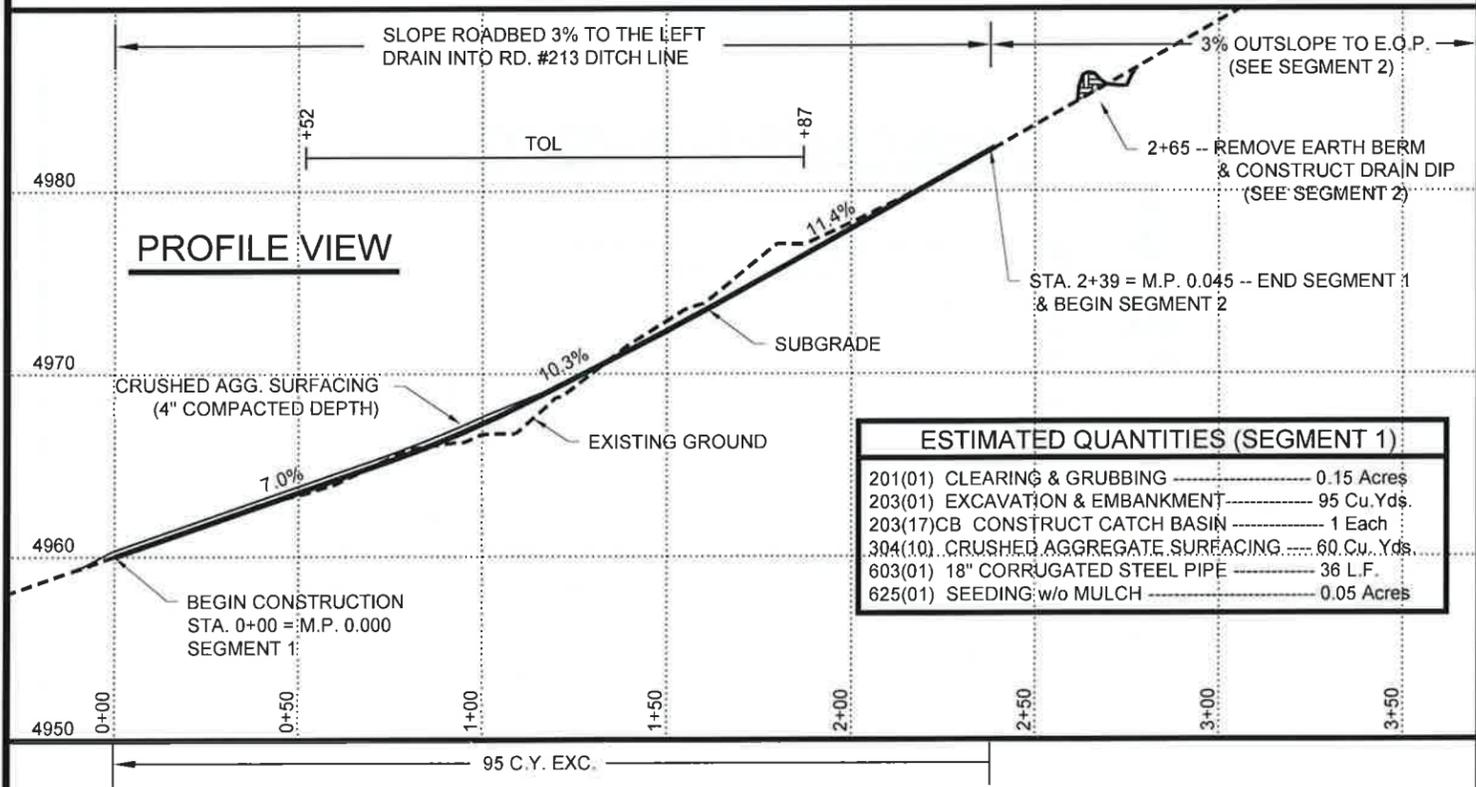
DESCRIPTION	UNIT	SEGMENT 1	SEGMENT 2	TOTALS
201(01) CLEARING & GRUBBING	ACRE	3.85	0.75	4.60
203(01) EXCAVATION & EMBANKMENT	CU.YDS.		685	685
203(02) EXCAVATION & EMBANKMENT	MILE	1.06		1.06
203(17)DD CONSTRUCT DRAIN DIPS	EACH	3		3
203(17)MDD CONSTRUCT MODIFIED DRAIN DIPS	EACH	8		8
625(01) SEEDING w/o MULCH	ACRE	1.20	0.25	1.45
640(01) 12' STANDARD LIVESTOCK GATE	EACH	1		1

TOTAL LENGTH FOR BOTH SEGMENTS = 1.22 MILES

# ROAD #11654 -- (SEGMENT 1)



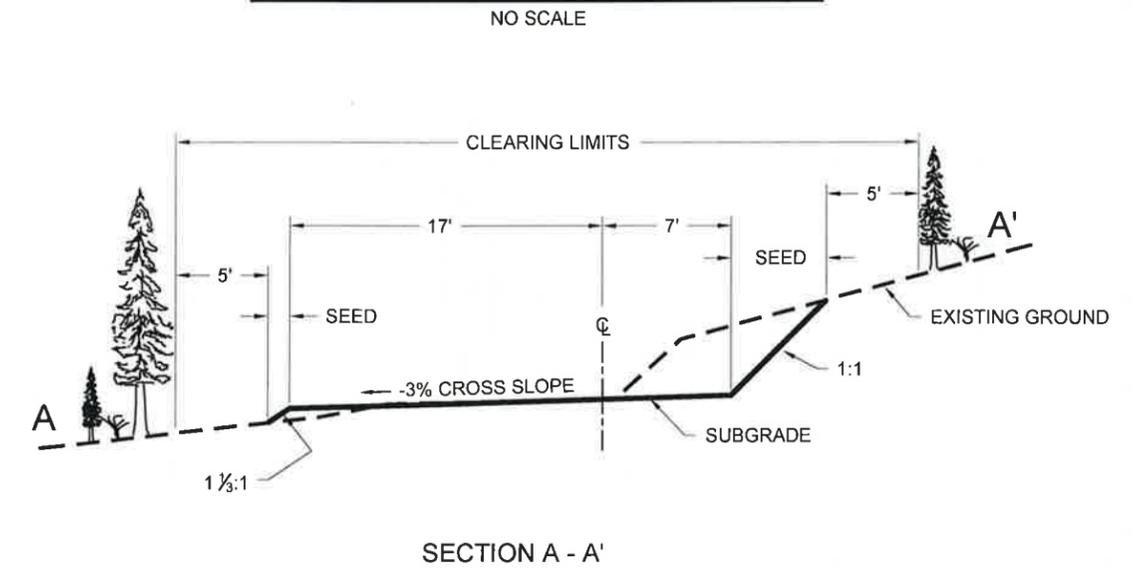
**PLAN VIEW**



**PROFILE VIEW**

ESTIMATED QUANTITIES (SEGMENT 1)	
201(01) CLEARING & GRUBBING	0.15 Acres
203(01) EXCAVATION & EMBANKMENT	95 Cu.Yds.
203(17)CB CONSTRUCT CATCH BASIN	1 Each
304(10) CRUSHED AGGREGATE SURFACING	60 Cu.Yds.
603(01) 18" CORRUGATED STEEL PIPE	36 L.F.
625(01) SEEDING w/o MULCH	0.05 Acres

## TYPICAL SECTION (SEGMENT 1)



**SECTION A - A'**

## GENERAL NOTES (SEGMENT 1)

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- ITEM 304(13) --- CRUSHED AGGREGATE SURFACING SHALL BE OBTAINED FROM THE EXISTING STOCKPILE OR THE STOCKPILE FLOOR LOCATED IN THE FREELAND QUARRY (SEC. 4, T.25 N., R.22.). COMPACTION METHOD A. CUBIC YARD MEASUREMENT WILL BE MADE IN THE HAULING VEHICLE.
- ITEM 625(01) --- SEEDING w/o MULCH --- APPLY SEED AND FERTILIZER AT THE RATES SPECIFIED TO ALL DISTURBED AREAS OUTSIDE OF THE ROAD SHOULDERS (INCLUDES FILL SLOPES, CUT SLOPES, CATCH BASINS, ETC.).