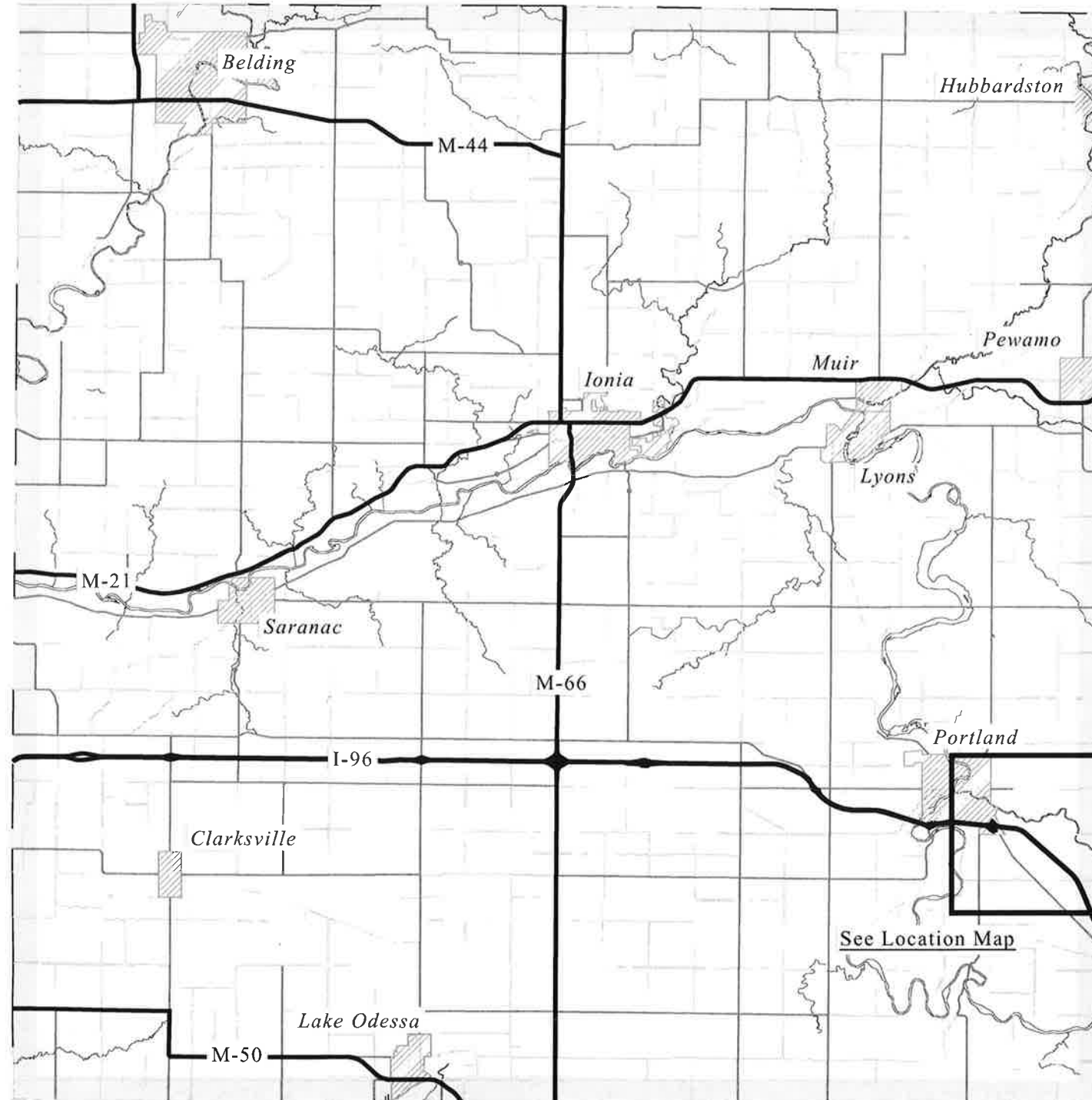
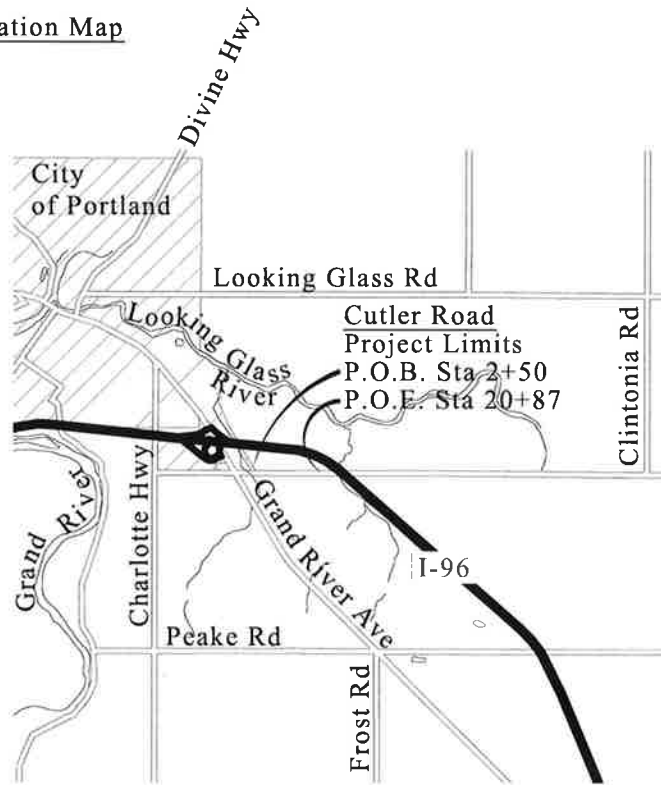


# Ionia County Road Commission

In Cooperation with  
 Danby Township and Portland Township  
 Proposed Improvements of Cutler Road  
 from Grand River Avenue to the bridge over I-96  
 Danby and Portland Township, Ionia County, Michigan  
 I.C.R.C. Work Order No. 489-888W

Location Map



Ionia County, MI

**General Note**

Materials and workmanship shall be in accordance with the Michigan Department of Transportation Standard Specifications for Construction, 2012, except where otherwise indicated on these plans or in the proposal or supplemental specification. All traffic controls shall be in accordance with the Michigan Manual of Uniform Traffic Control Devices, 2011.

**MDOT Standard Plans**

Detail	Description
R-96-E	Soil Erosion & Sedimentation Control Measures

**Index of Sheets**

Sheet 1	Title Sheet
Sheet 2	Typical Cross Sections
Sheet 3	General Plan Notes
Sheet 4 to 8	Plan & Profile
Sheet 9	Cross Sections
Sheet 10	Quantity Breakdown

Utilities	Phone No.
AT&T (phone and fiber) 337 N. Abbott Rd, Lansing, MI 48823 Attn: Heather Vallee-Knoblauch	517-337-3610
WOW! (cable tv and internet) 2512 Lansing Rd, Charlotte, MI 48813 Attn: James Scott	517-319-3158
City of Portland (water and sewer) 259 Kent St, Portland, MI 48875 Attn: Royal Thompson	517-647-6129
Consumers Energy (overhead electric) 4000 Clay Ave SW, Grand Rapids, MI 49548 Attn: Ian Meredith	616-530-4284
Consumers Energy (natural gas) 530 W. Willow, Lansing, MI 48906 Attn: Adam Bertram	517-374-2375
Windstream (cable tv and internet) 800 N. Durand Rd, Corunna, MI 48507 Attn: Chris Rogers	812-253-1554

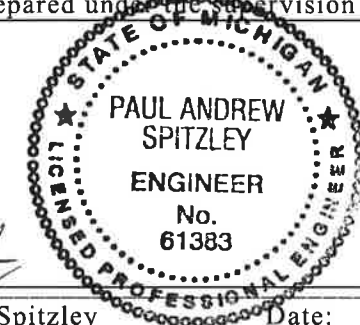
**Note:**

These plans do not assure the presence or location of utilities. the contractor shall notify "miss dig" toll free at 1-800-482-7171 OR simply 811 three (3) days before the start of construction, excluding Saturdays, Sundays and holidays.



Contract For: 0.35 miles of reconstruction including tree removal, earthwork, drainage, pavement removal, subbase, base, and restoration.

Road plans prepared under the supervision of:



*Paul A. Spitzley* Date: 2-15-19  
 Paul A. Spitzley  
 Registered Professional Engineer Number: 61383

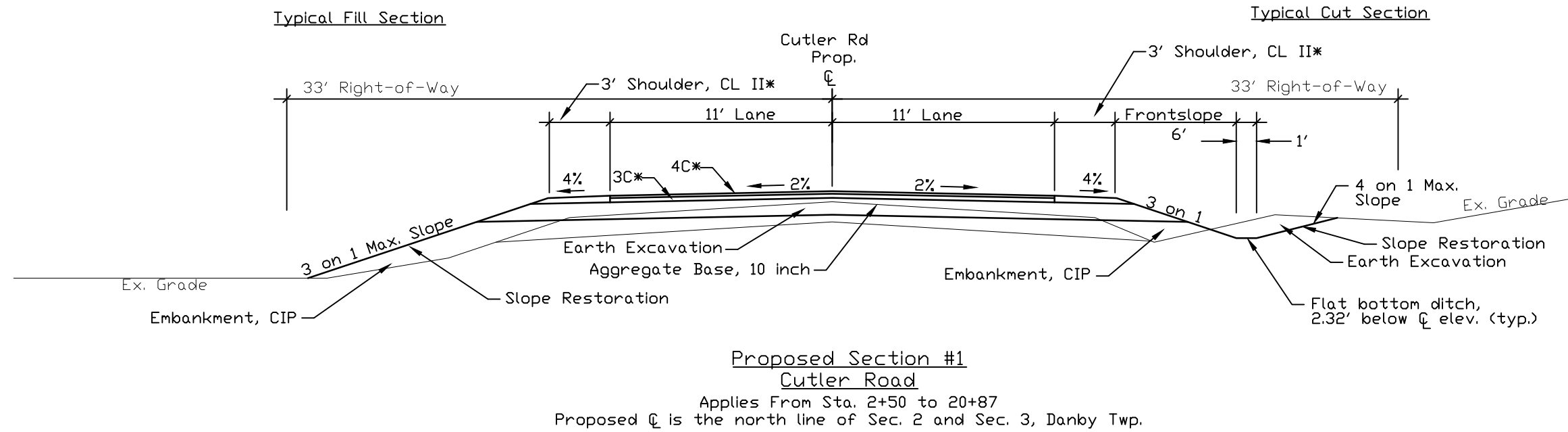
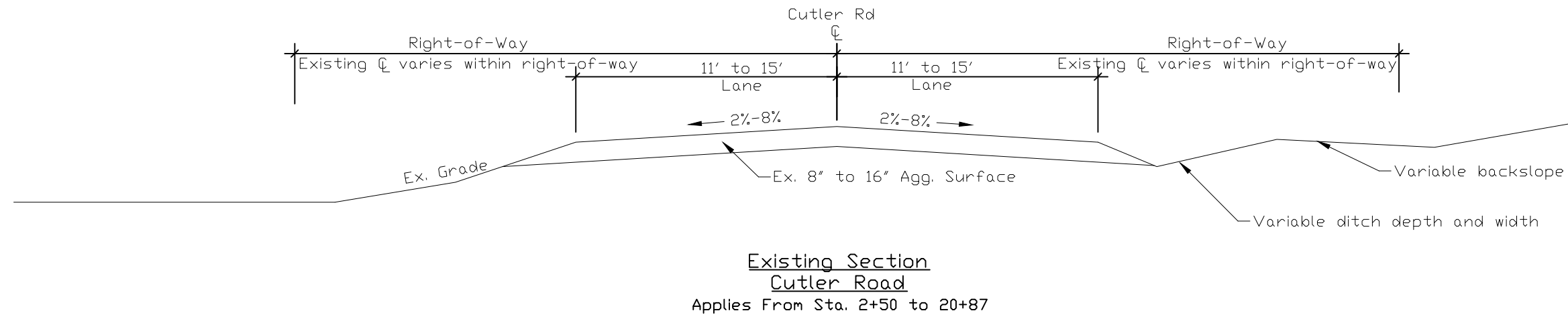
Managing Director:

Dorothy G. Pohl

Ionia County Board of County Road Commissioners:

Charles G. Minkley, Chairperson  
 Robert G. Dunton, Vice Chairperson  
 Karen D. Bota, Member  
 Nick Bowerman, Member  
 Kenneth L. Gasper, Member

Typical Cross Sections



PAVEMENT MATERIALS APPLICATION TABLE

IDENT.	ITEM	APPLICATION RATE	PERFORMANCE GRADE	REMARKS
4C*	HMA, 4C (by others)	165 lb/syd	PG 58-28	Min. AWI of 260
3C*	HMA, 3C (by others)	220 lb/syd	PG 58-28	
AP*	HMA Approach	220 lb/syd	PG 58-28	Depth for Residential Driveways
	Aggregate Base	as needed per ton		For HMA and conc. driveways
	Approach, Cl II	as needed per ton		

\* Note: HMA Paving items were on a separate bid and are not to be considered "by others" and not part of this bid letting. However, the contractor for this project must work with the paving contractor in efforts to complete the project as proposed.

TYPICAL CROSS SECTIONS  
CUTLER ROAD

DRAWN BY: PAS

DATE: 01/18/19

I.C.R.C. W.D. 489-888W

Sheet 2 of 10

GENERAL PLAN NOTES

PROJECT SCHEDULE

WORK IS TO BEGIN NO EARLIER THAN JULY 8TH, 2019. ALL WORK, WHICH INCLUDES THE PAVING (BY OTHERS), IS TO BE COMPLETED NO LATER THAN OCTOBER 1ST, 2019. THIS COMPLETION DATE IS IN COORDINATION WITH THE OPEN TO TRAFFIC DATE OF THE BRIDGE PROJECT.

TRAFFIC CONTROL PLAN

CUTLER ROAD WILL BE DETOURED THROUGH THE MDT BRIDGE PROJECT AND THEREFORE MOST ALL TRAFFIC CONTROL DEVICES WILL BE BY OTHERS. HOWEVER, TYPE III BARRICADES (4) AND 'ROAD CLOSED TO THROUGH TRAFFIC' SIGNS (2) ARE STILL TO BE USED AT THE POINT OF BEGINNING AND ENDING OF THIS PROJECT OR AS DIRECTED BY ENGINEER INDICATING THE LIMITS OF THIS PROJECT.

COORDINATION WITH BRIDGE PROJECT

THE CONTRACTOR IS TO COORDINATE ALL WORK ACTIVITIES WITH THE ADJACENT BRIDGE PROJECT. THE BRIDGE PROJECT MAY NEED ACCESS FOR MATERIAL, LABOR, AND EQUIPMENT THROUGH THIS CONSTRUCTION ZONE. IT IS THE RESPONSIBILITY OF BOTH BRIDGE AND ROAD (THIS PROJECT) CONTRACTORS TO COMPLETE THE WORK AS SPECIFIED EVEN THOUGH OTHER PROJECTS MAY IMPACT THEIR WORK SITE.

UTILITIES

THE CONTRACTOR SHALL COOPERATE AND COORDINATE CONSTRUCTION ACTIVITIES WITH THE OWNERS OF UTILITIES AS STATED IN SECTION 104.08 OF THE 2012 MDT STANDARD SPECIFICATIONS FOR CONSTRUCTION. IN ADDITION, FOR THE PROTECTION OF UNDERGROUND UTILITIES, THE CONTRACTOR SHALL FOLLOW THE REQUIREMENTS IN SECTION 107.12 OF THE 2012 STANDARD SPECIFICATIONS FOR CONSTRUCTION.

TREE REMOVAL

ALL ADJACENT PROPERTY OWNERS SHALL HAVE FIRST RIGHTS TO ALL TREES REMOVED. ONLY LEAVE TIMBER 3 INCHES IN DIAMETER TO 24 INCHES IN DIAMETER FOR PROPERTY OWNERS FOR WOOD BURNERS. ALL STUMPS AND BRUSH SHALL BE REMOVED FROM SITE.

STUMP REMOVALS ARE INCLUDED IN THE COST OF THE TREE REMOVAL ITEM PER EACH RESPECTIVELY. HOWEVER, EXISTING STUMPS MAY NEED TO BE REMOVED FOR GRADING, AS DIRECTED BY THE ENGINEER, TO BE PAID FOR AS STUMP, REM, PER EACH.

EXCAVATION AND EMBANKMENT

BOTH ITEMS ARE TO BE PAID FOR PER CUBIC YARD COMPACTED IN PLACE AS SHOWN ON THE PLANS AND CALCULATED IN THE ITEM BREAKDOWN. VARIANCES FROM THESE QUANTITIES MUST BE APPROVED BY THE ENGINEER.

ACCESS EXCAVATION REQUIRED TO INSTALL 3 INCHES OF TOP SOIL IS INCLUDED IN THE ESTIMATED QUANTITIES OF EXCAVATION. SUITABLE TOP SOIL MAY BE SALVAGED AND USED FOR SLOPE RESTORATION.

EMBANKMENT CAN BE SUITABLE EXCAVATED AND SALVAGED MATERIAL. NOTE THAT A CONSIDERABLE AMOUNT OF EXISTING ROAD GRAVEL WILL BE EXCAVATED TO ACHIEVE PROPOSED GRADES. THIS EXCAVATED AGGREGATE CAN BE USED AS EMBANKMENT IF FREE OF UNSUITABLE SOILS AND FOREIGN MATERIALS.

STORM SEWER

ALL STORM SEWER AND CULVERTS WILL BE CORRUGATED, SMOOTH WALLED, M292 TYPE S PLASTIC PIPE OR GALVANIZED CORRUGATED METAL PIPE.

EXISTING ROAD SIGNS

EXISTING ROAD SIGNS MAY NEED TO BE REMOVED AS NECESSARY FOR EARTHWORK. SIGNS ARE TO BE SALVAGED AND THEN REPLACED BY CONTRACTOR. THIS WORK IS TO BE PAID FOR AS THE ITEM SIGN, TYPE II, REM AND REPLACE.

HMA PAVING

ALL HMA PAVING ITEMS WILL BE PERFORMED BY OTHERS. HOWEVER, IT IS THE RESPONSIBILITY OF THE CONTRACTOR ON THIS PROJECT TO COORDINATE THIS PAVING IN ORDER TO ENSURE THAT THE PROJECT IS COMPLETED AS SPECIFIED. HMA PAVING, APPROACH PAVING, SHOULDER GRAVEL, AND PAVEMENT MARKING WILL BE PERFORMED BY OTHERS. THE IONIA COUNTY ROAD COMMISSION WILL HAVE CONTACT INFORMATION OF THE PAVING CONTRACTOR.

THE CONTRACTOR IS RESPONSIBLE TO KEEP THE AGGREGATE SURFACE WITHIN PROPOSED GRADE UNTIL THE SURFACE IS PAVED. THERE MAY BE A PERIOD OF TIME BETWEEN FINISHED AGGREGATE BASE GRADE AND PAVING THE BASE COURSE, IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO MAINTAIN THAT SURFACE UNTIL THE PAVING OCCURS. ALL ASSOCIATED WORK AND MATERIALS FOR THIS COORDINATION ARE TO BE PAID FOR AS DUST CONTROL, PER GALLON AND PAVING COORDINATION, PER LUMP SUM.

SLOPE RESTORATION

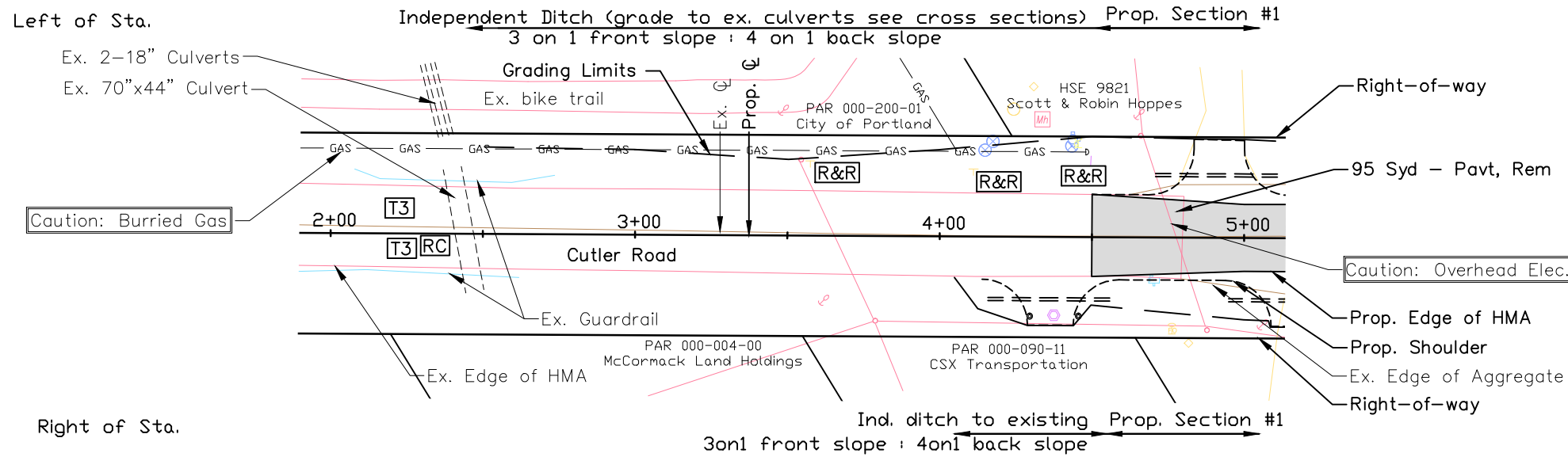
THIS WORK SHALL BE DONE AS DESCRIBED IN SECTION 816 OF THE 2003 STANDARD SPECIFICATIONS FOR CONSTRUCTION WITH THE FOLLOWING MODIFICATIONS. ALL WORK OF TURF ESTABLISHMENT SHALL BE PAID FOR AS SLOPE RESTORATION. THIS SHALL INCLUDE 3 INCHES OF TOPSOIL SURFACE, SALVAGED OR FURNISHED; CHEMICAL FERTILIZER NUTRIENT, CLASS A & B; SEEDING, MULCH, ANCHORING MULCH AND MIXTURE THV. THE RATE OF APPLICATION OF EACH ITEM SHALL BE AS SPECIFIES IN SECTION 816.01 OR AS DIRECTED BY THE ENGINEER. CHEMICAL FERTILIZER NUTRIENT, CLASS A SHALL BE USED IN ALL RESIDENTIALLY MAINTAINED AREAS.

MULCH BLANKET WILL BE PAID FOR SEPARATELY IN AREAS AS DEFINED BY THE ENGINEER.

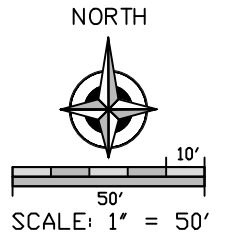
Underground Utility Detail

- TEL — TEL — Telephone
- GAS — GAS — Natural Gas
- WATER — WATER — Water
- SEWER — SEWER — Sewer
- FIBER — FIBER — Fiber Optic Communications

Locations shown on plans are approximate. Do not use in lieu of Miss Dig locating.

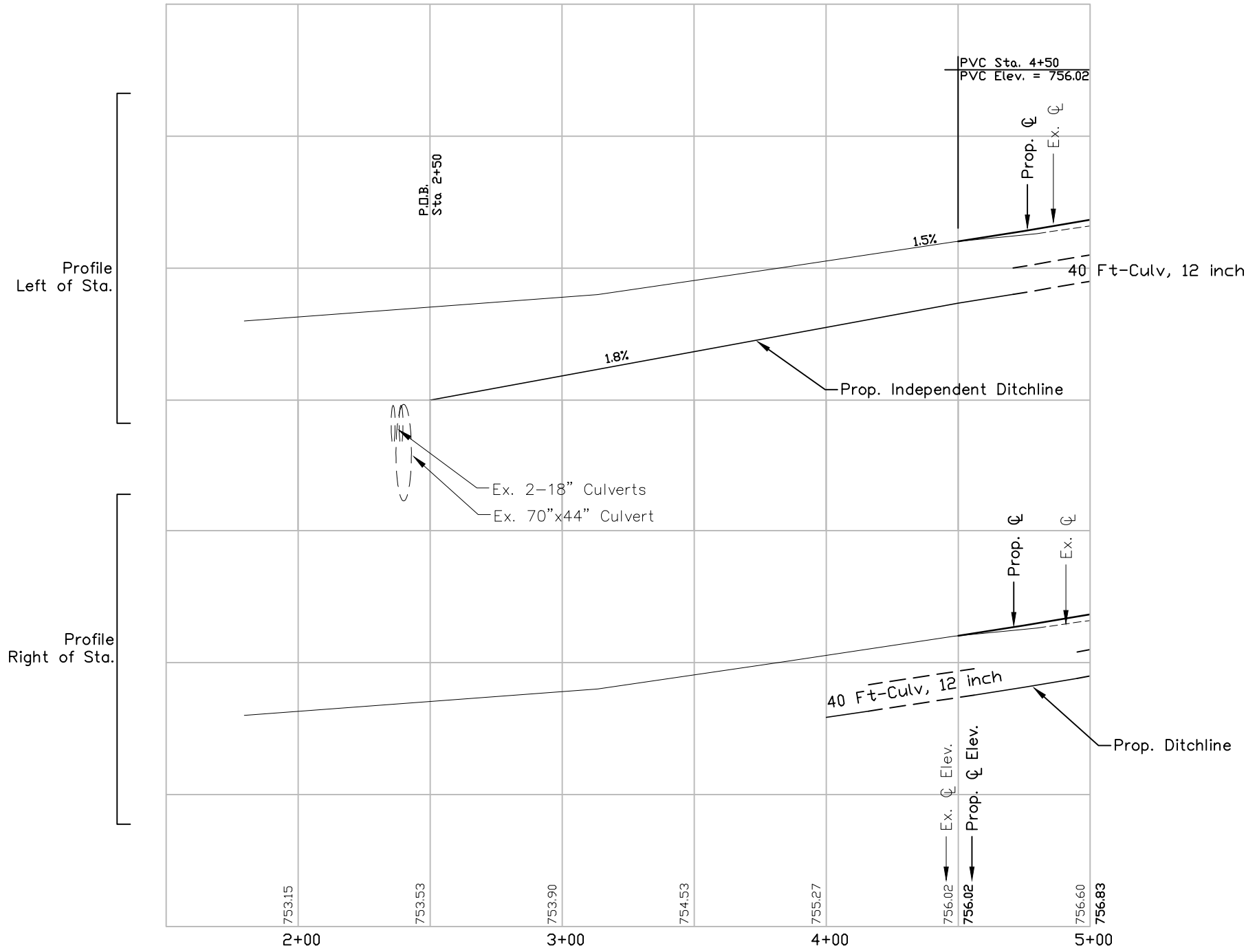


- R&R = 1 Ea - Sign, Rem and Replace
- T3 = 1 Ea - Barricade, Type III, Double Sided
- RC = 1 Ea - Road Closed to Thru Traffic Sign

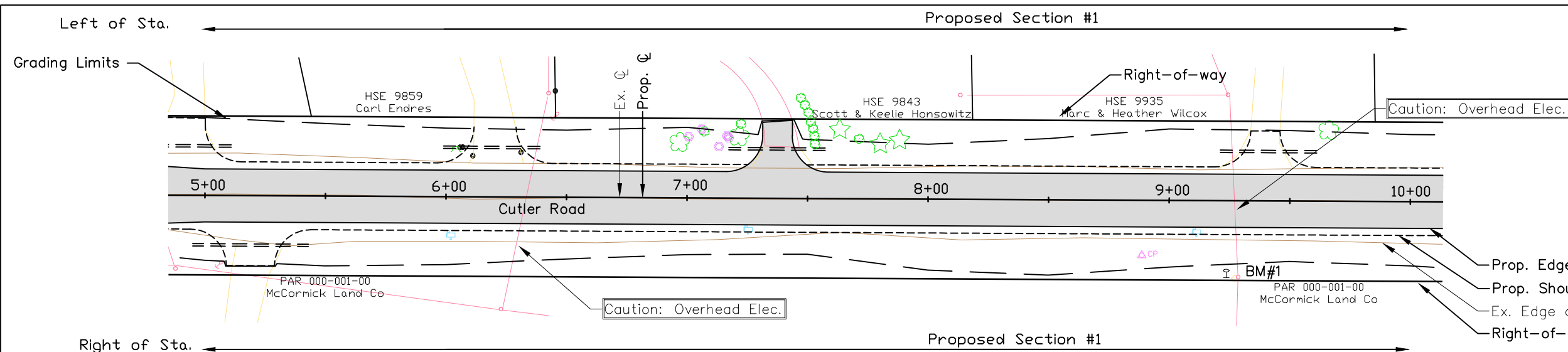


Right of Sta.

Ind. ditch to existing Prop. Section #1  
3 on 1 front slope : 4 on 1 back slope



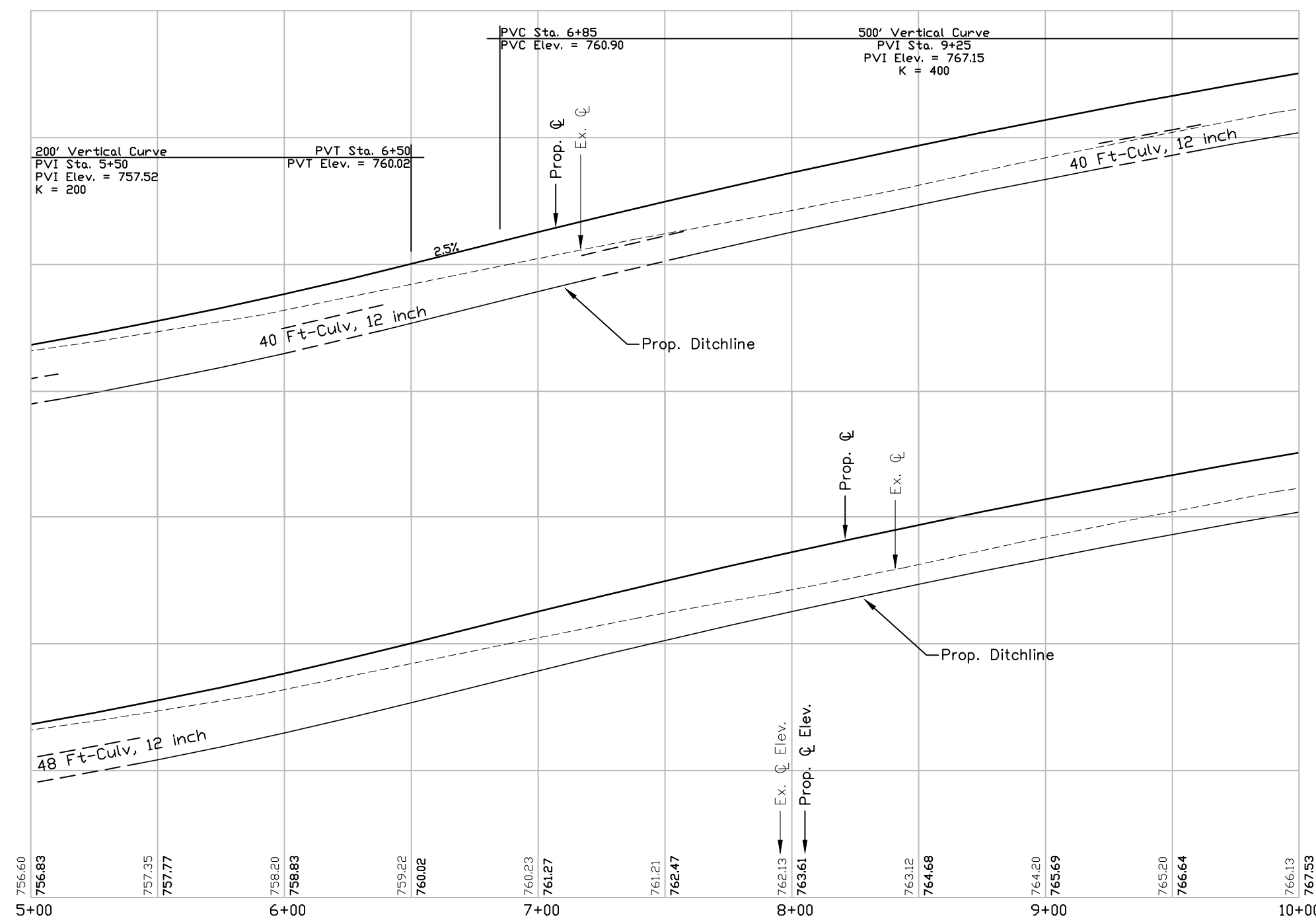
Sta.	Driveways This Sheet		*By Others	
	Left/Right	Pavt. Rem (Syd)	Agg. Base (Ton)	HMA Appr. Approach CL II (Ton)
4+35	R			10
4+90	L			16



Bench Mark #1 Elev.=766.20  
 Nail on the north face of a utility pole on the south side of Cutler Road. ±1,090' east of the  $\phi$  of Grand River Avenue. Sta 9+29 31' Rt

NORTH

10'  
 50'  
 SCALE: 1" = 50'

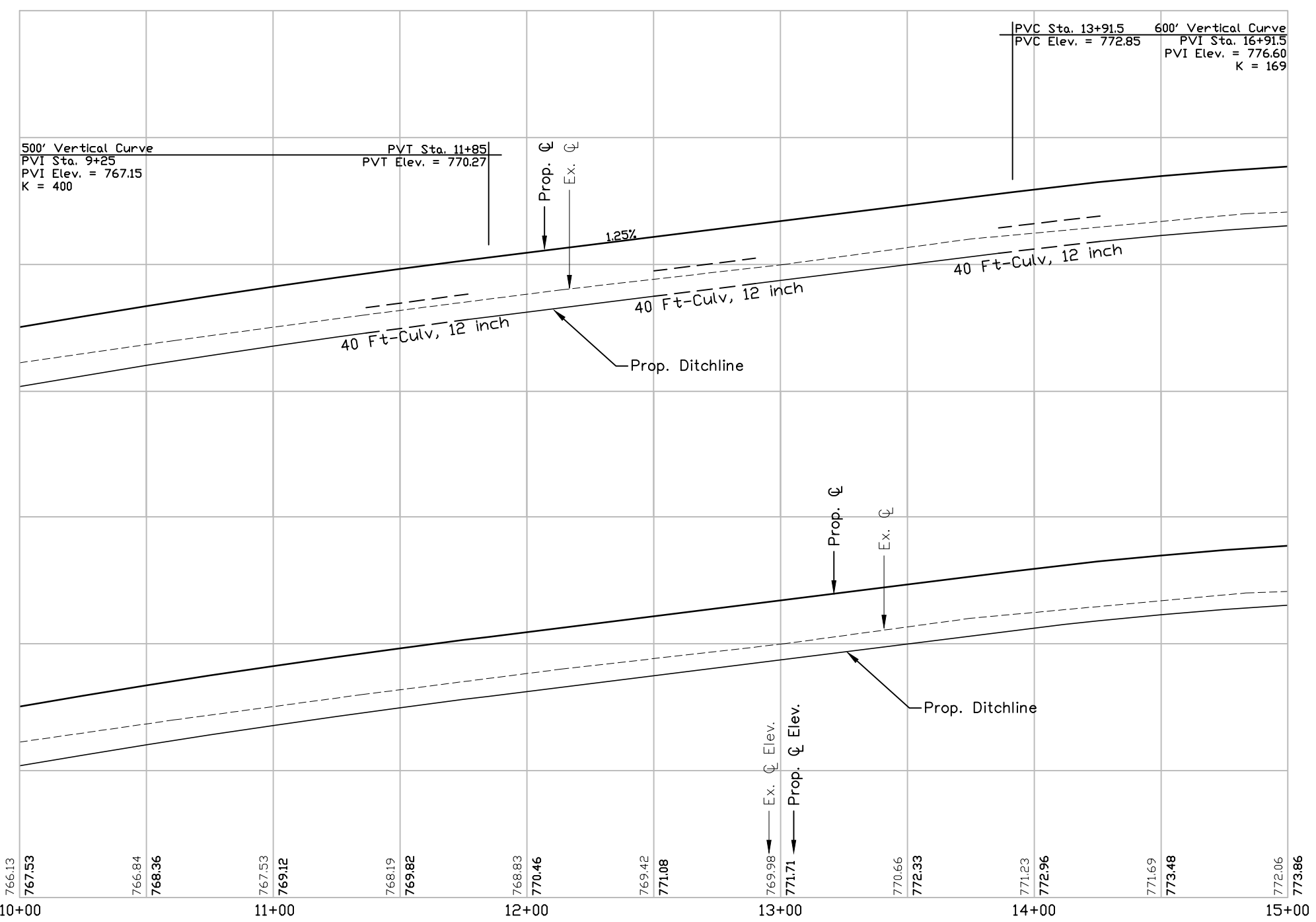
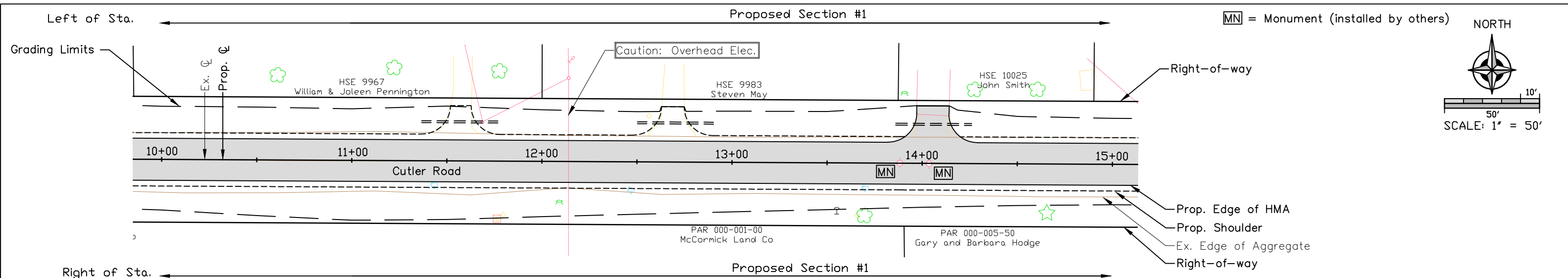


**Driveways This Sheet**

Sta.	Left/Right	*By Others	
		Agg. Base (Ton)	HMA Appr. Approach CL II (Ton)
5+20	R		16
6+20	L		13
7+40	L	16	4.4*
9+41	L		9

**Tree Removals This Sheet**

Sta.	Offset	Diameter (ST=Stump)		
		6'-18'	19'-36'	>37'
6+05	20' L		24" ST	
6+48	23' L			40"
7+21	25' L			40"
7+81	22' L	10"		
7+89	24' L		20"	
9+67	29' L			48"

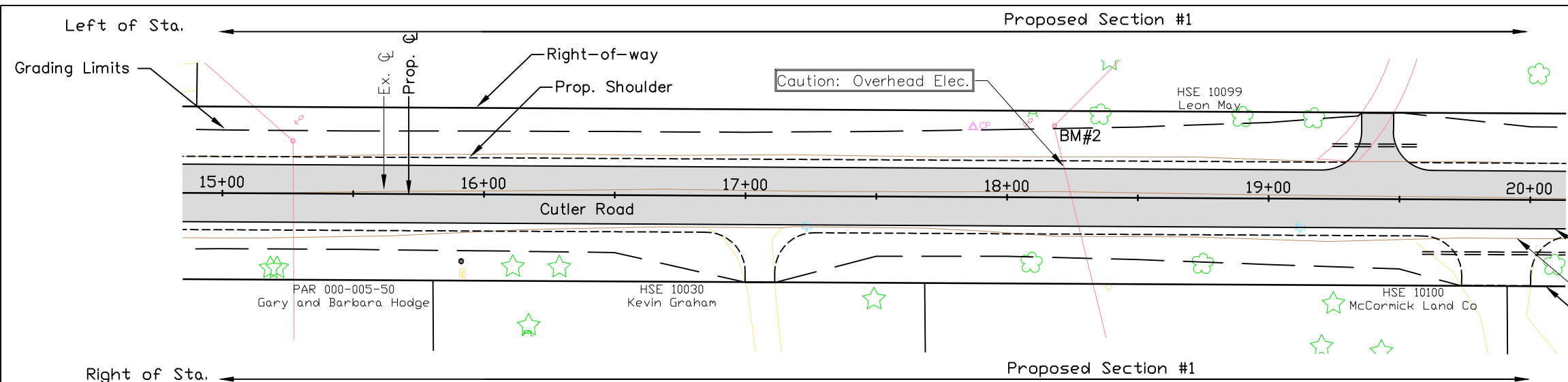


**Driveways This Sheet**

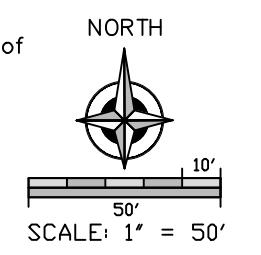
Sta.	Left/Right	*By Others	
		HMA Appr. (Ton)*	CL II (Ton)
11+60	L		9
12+65	L		9
14+05	L	9	13

**Tree Removals This Sheet**

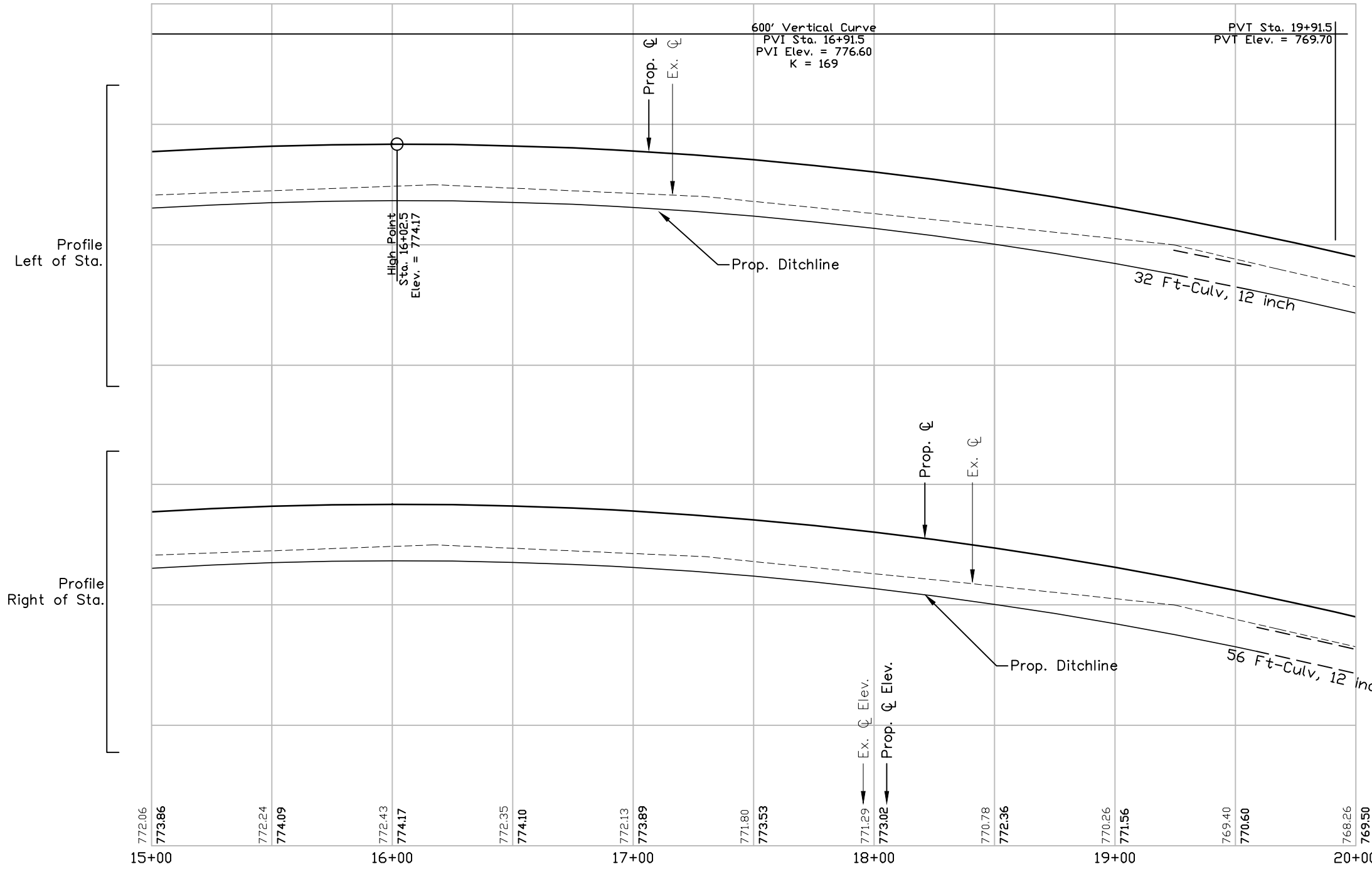
Sta.	Offset	Diameter (ST=Stump)		
		6'-18'	19'-36'	>37'
12+09	21' R		12' ST	
13+70	26' R			19'



Bench Mark #2 Elev.=772.30  
 Nail on the south face of a utility pole on the north side of Cutler Road. ±1,980' east of the  $\phi$  of Grand River Avenue. Sta 18+19 27' Lt



Right of Sta. ← Proposed Section #1 →



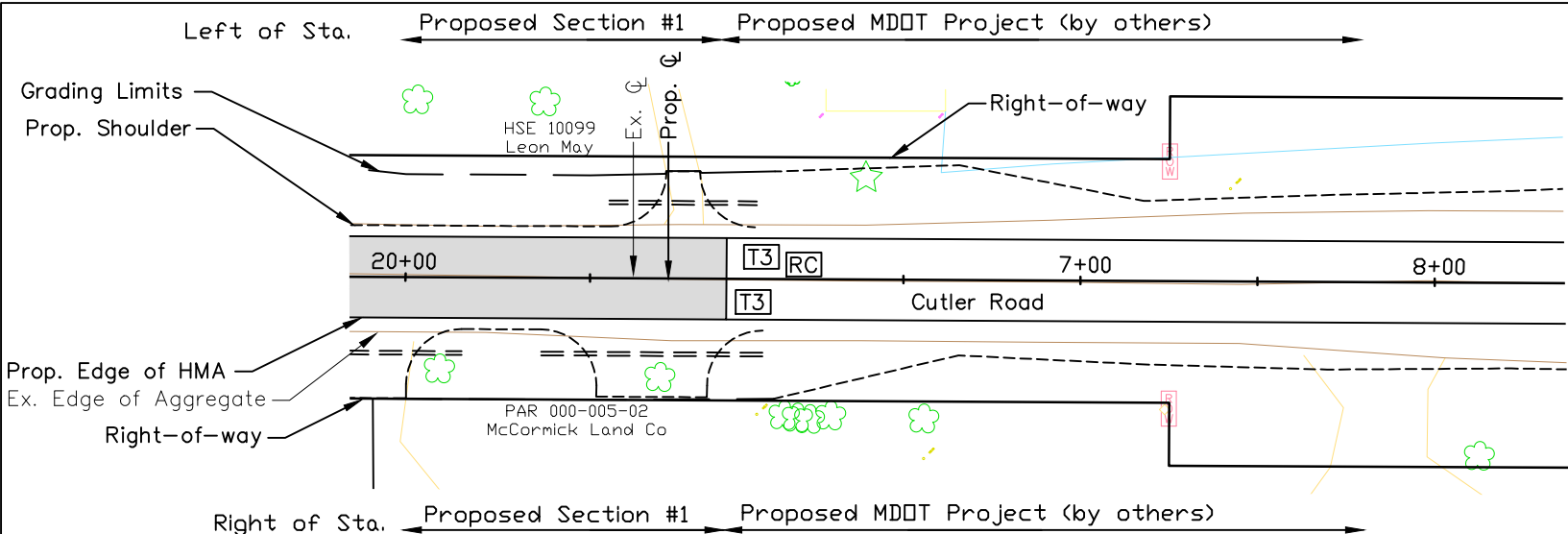
**Driveways This Sheet**

Sta.	Left/ Right	Pavt. Rem (Syd)	Agg. Base (Ton)	*By Others	
				HMA Appr. (Ton)*	Approach CL II (Ton)
17+05	R				10
19+40	L	29	11	5*	
19+87	R				23

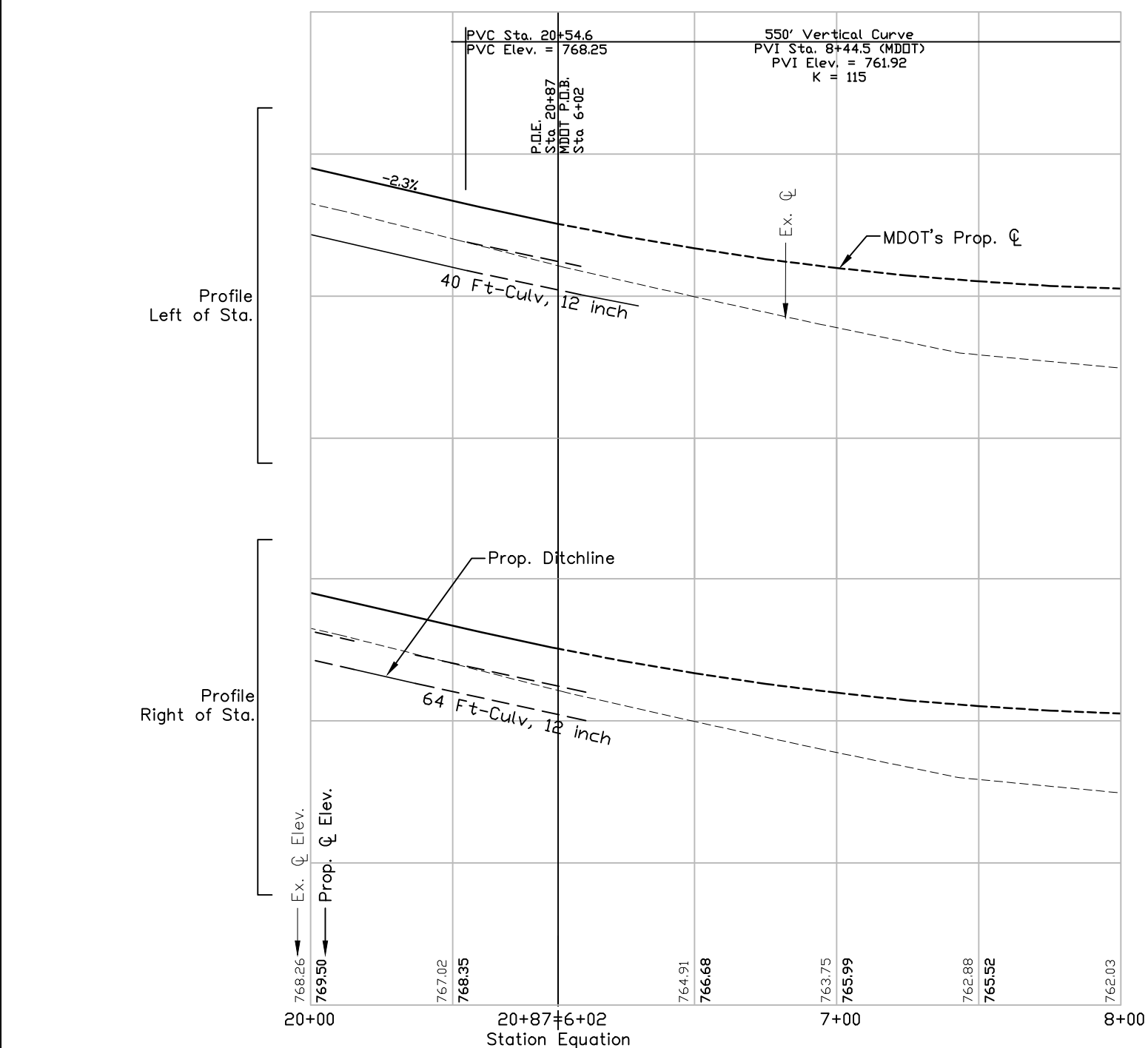
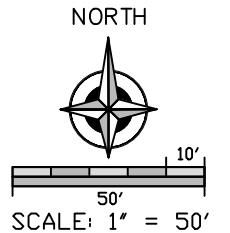
**Tree Removals This Sheet**

Sta.	Offset	Diameter (ST=Stump)		
		6'-18'	19'-36'	>37'
15+18	27' R	2-12"		
18+09	24' R			38"
18+74	25' R		24"	
18+91	30' L			38"
19+17	30' L		24"	

PLAN AND PROFILE  
 CUTLER ROAD STA 15+00 TO 20+00



- R&R = 1 Ea - Sign, Rem and Replace
- T3 = 1 Ea - Barricade, Type III, Double Sided
- RC = 1 Ea - Road Closed to Thru Traffic Sign



**Driveways This Sheet**

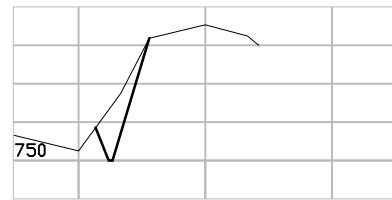
Sta.	Left/ Right	*By Others	
		Pavt. Rem (Syd)	Agg. Base (Ton)
20+70	R		26
20+80	L		9

**Tree Removals This Sheet**

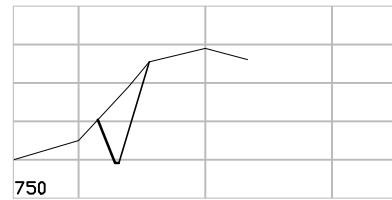
Sta.	Offset	Diameter (ST=Stump)		
		6'-18"	19'-36"	>37"
20+08	25' R		30"	
20+69	26' R		24"	

PLAN AND PROFILE  
CUTLER ROAD STA 20+00 TO 20+87

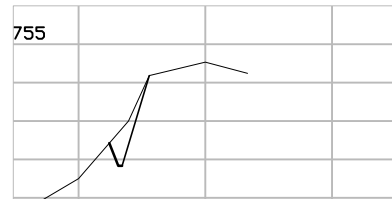




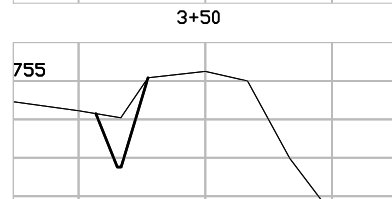
2+50



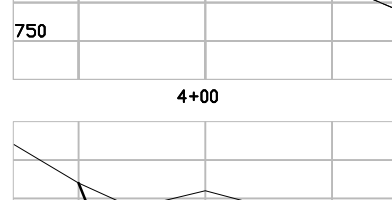
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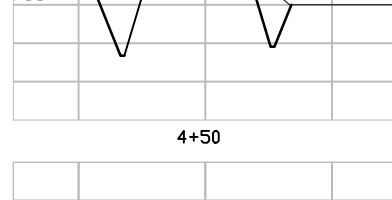
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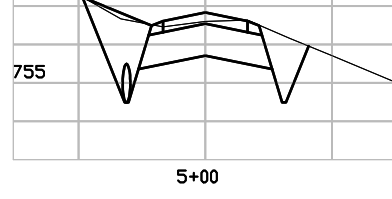
4+00



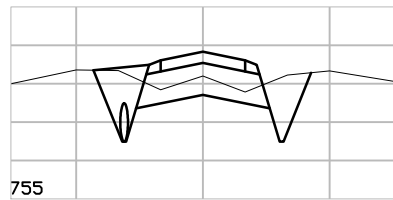
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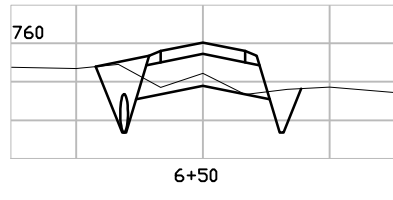
5+00



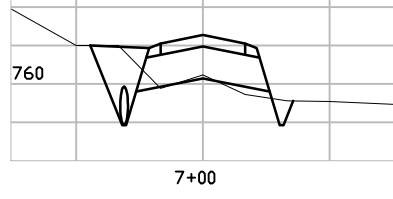
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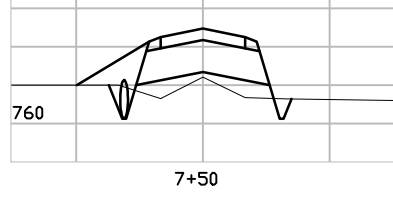
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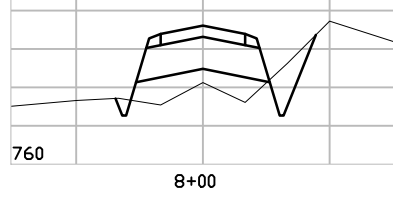
6+50



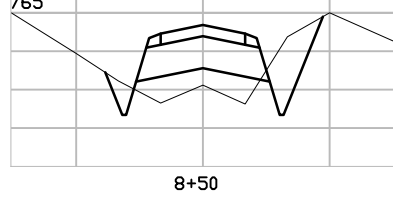
7+00



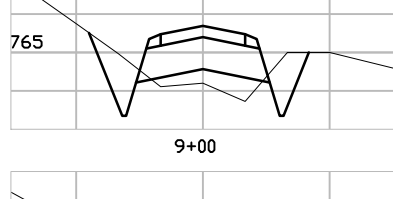
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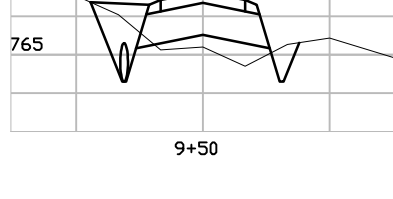
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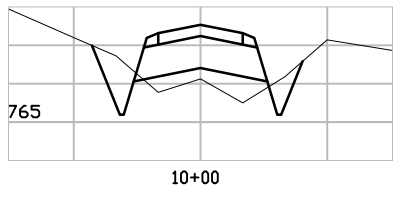
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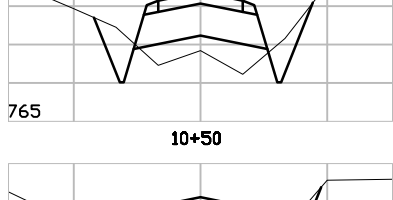
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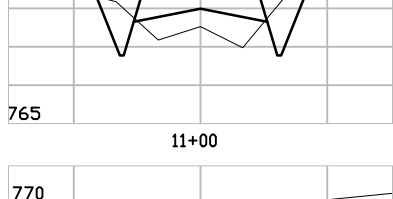
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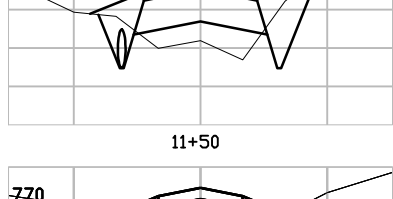
10+00



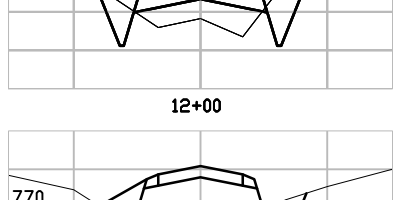
10+50



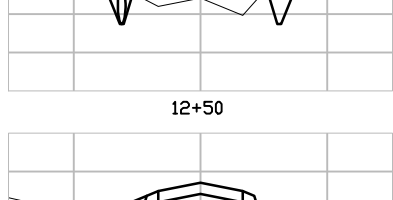
11+00



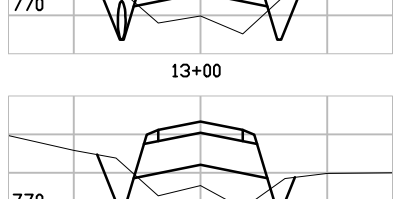
11+50



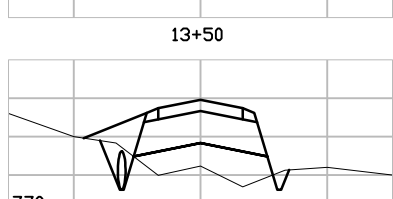
12+00



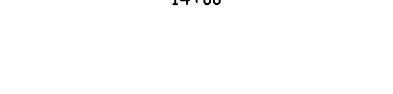
12+50



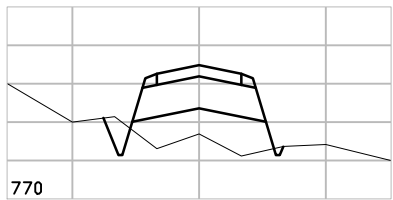
13+00



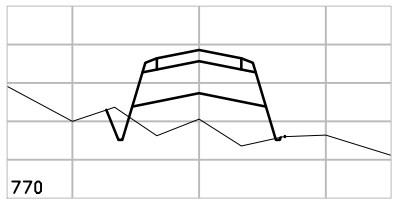
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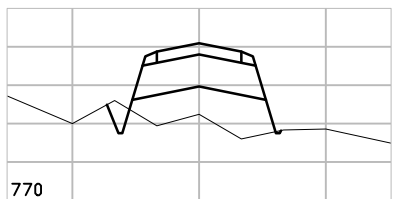
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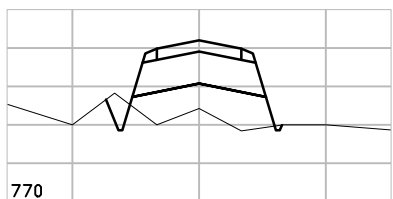
14+50



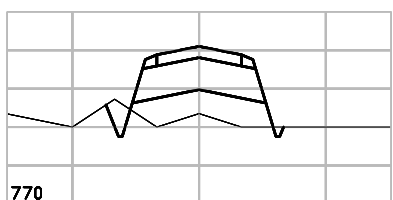
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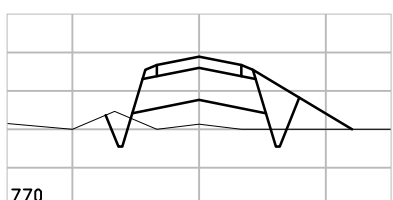
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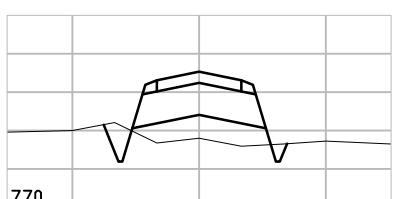
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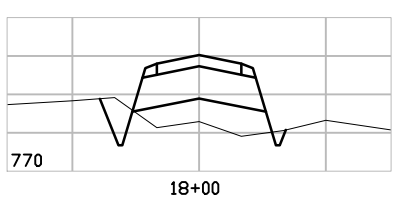
16+50



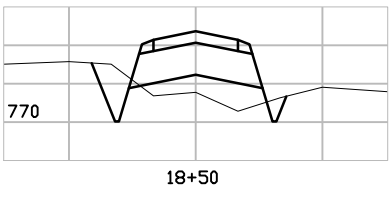
17+00



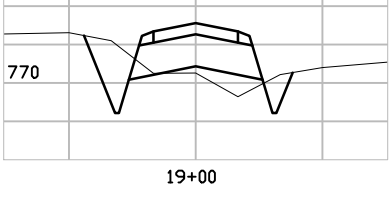
17+50



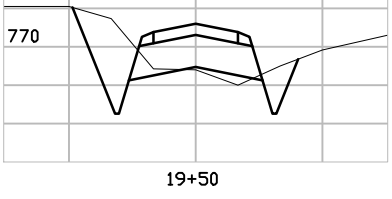
18+00



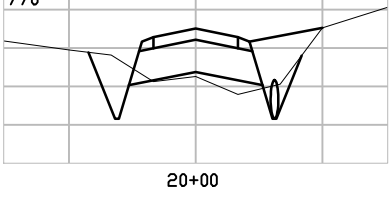
18+50



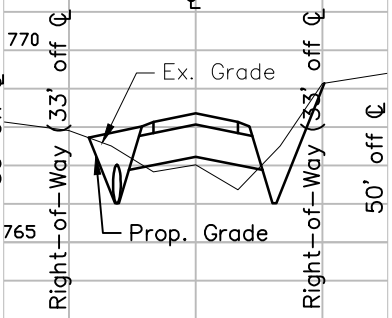
19+00



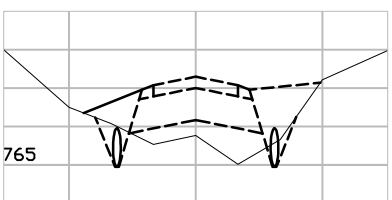
19+50



20+00



20+50



21+00

Notes on this section are typical throughout cross sections

Section 21+00 is within the MDOT project. Shown here for reference of driveways and culverts at P.O.E.

CROSS SECTIONS	
CUTLER ROAD STA 2+50 TO 21+00	
DRAWN BY: PAS	DATE: 01/18/19
I.C.R.C. W.D. 489-884W	Sheet 9 of 10

**Earthwork & Drainage Items**

	Stations	Earth Excavation per Cu Yard	Embankment CIP per Cu Yard	Culv, Rem, less than 60 inch dia per Foot	Culv, 12 inch dia per Foot	Culv, 18 inch dia per Foot	Underdrain, 4 inch dia per Foot	Underdrain Tap per Each	Mulch Blanket per Sq Yard	Slope Restoration per Sq Yard
Sheet 4	2 +50 to 5 +00	217			80					856
Sheet 5	5 +00 to 10 +00	560	138		128					1,102
Sheet 6	10 +00 to 15 +00	328	355		120					1,013
Sheet 7	15 +00 to 20 +00	272	333		88					1,399
Sheet 8	20 +00 to 20 +87	82	31		104					1,672
Miscellaneous		150	100	300	40	40	100	2	500	
<b>Totals</b>		1,609	957	300	560	40	100	2	500	6,042

**Removal Items**

	Stations	Tree, Rem, 6 to 18 inch dia per Each	Tree, Rem, 19 to 36 inch dia per Each	Tree, Rem, 37 inch dia or larger per Each	Stump, Rem, 6 to 18 inch dia per Each	Stump, Rem, 19 to 36 inch dia per Each	Stump, Rem, 37 inch dia or larger per Each
Sheet 5	5 +00 to 10 +00	1	1	3		1	
Sheet 6	10 +00 to 15 +00	1	1		1		
Sheet 7	15 +00 to 20 +00	2	2	2			
Sheet 8	20 +00 to 20 +87		2				
Miscellaneous		2	2	1	1	1	1
<b>Totals</b>		6	8	6	2	2	1

**Driveway Items**

	Stations	Pavt, Rem per Sq Yard	Aggregate Base per Ton	HMA Approach* per Ton*	Approach, CI II per Ton
Sheet 4	2 +50 to 5 +00				26
Sheet 5	5 +00 to 10 +00	16	11	4.4*	38
Sheet 6	10 +00 to 15 +00	9	13	5.5*	18
Sheet 7	15 +00 to 20 +00	29	11	5*	33
Sheet 8	20 +00 to 20 +87				35
Miscellaneous		10	10		20
<b>Totals</b>		64	45	*by others	170

**Roadway Items**

	Stations	Pavt, Rem per Sq Yard	Subgrade Undercutting per Cyd	Subbase, CIP per Cyd	Aggregate Base, 10 inch per Syd	Paving Coordination per Lump Sum	Dust Control per Gallon
Sheet 4	2 +50 to 5 +00	95			167		
Sheet 5	5 +00 to 10 +00				1,667		
Sheet 6	10 +00 to 15 +00				1,667		
Sheet 7	15 +00 to 20 +00				1,667		
Sheet 8	20 +00 to 20 +87				290		
Miscellaneous		10	500	500	200	1	1,000
<b>Totals</b>		105	500	500	5,658	1	1,000

**Traffic Control Items**

	Maintain Mailboxes per Each	Barricade, Type III, Double Sided per Each	Sign, Type II, Temp per Sft	Sign, Type II, Rem and Replace per Each
Sheet 5	8	2	12.5	3
Sheet 8		2	12.5	
Miscellaneous			20	1
<b>Totals</b>	8	4	45	4

QUANTITY BREAKDOWN

CUTLER ROAD

DRAWN BY: PAS

DATE: 01/18/19

I.C.R.C. W.D. 489-888W

Sheet 10 of 10