

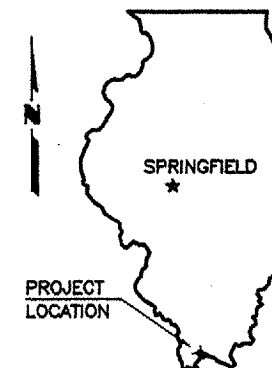
JOINT UTILITY LOCATION INFORMATION
FOR EXCAVATION
J.U.L.I.E. 1-800-892-0123
CONTACT 48 HOURS BEFORE EXCAVATING

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 938	05-00064-00-RS	PULASKI	32	1
PROJECT RS-HPP-3300 (002)			CONTRACT NO. 99260	

SURFACE TRANSPORTATION PROGRAM

FAS ROUTE 938 (SHAWNEE COLLEGE ROAD)
SECTION 05-00064-00-RS
PROJECT NO. RS-HPP-3300 (002)
JOB NO. C-99-518-06



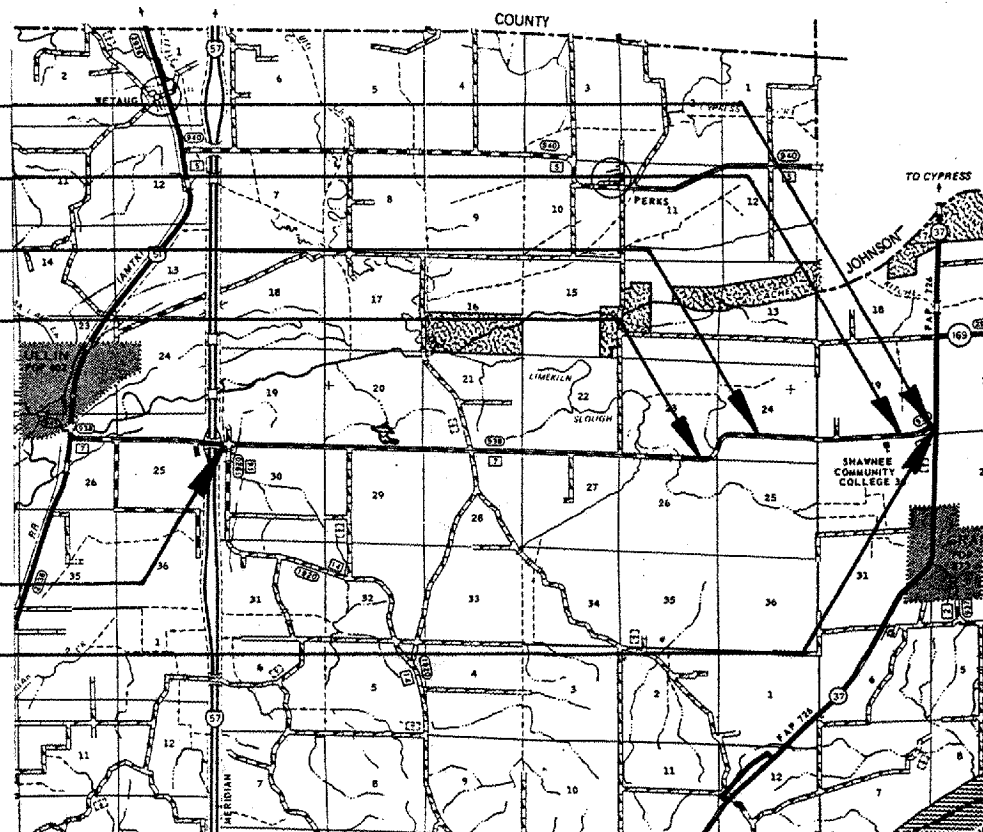
PULASKI COUNTY

EQ. STA. 478+84.00 BACK
= STA. 479+00.00 AHEAD

EQ. STA. 453+25.00 BACK
= STA. 454+18.20 AHEAD

EQ. STA. 374+80.00 BACK
= STA. 377+10.04 AHEAD

EQ. STA. 336+90.00 BACK
= STA. 337+00.00 AHEAD



BEGIN IMPROVEMENT
STATION 83+20.00

END IMPROVEMENT
STATION 480+12.23



03/08/07

Edward W. Miller

Edward W. Miller
PROFESSIONAL ENGINEER
#062-025277
EXPIRES NOV. 30, 2007

CLASSIFICATION : COLLECTOR
ADT : 2300
DESIGN SPEED : 50 MPH

ILLINOIS DEPARTMENT OF TRANSPORTATION	
Approved	<u>2/14/07</u> <i>Glenn Parnat</i> Pulaski County, Engineer
Passed	<u>4/17/07</u> <i>Dennis W. Hill</i> District 9 Engineer of Local Roads and Streets
Releasing for Bid Based on Limited Review	<u>4-17-07</u> <i>Mary C. Lamin</i> Deputy Director of Highways, Region 5 Engineer

CONTRACT NO. 99260

E. MILLER ENGINEERING, INC.
CONSULTING ENGINEERS
HARRISBURG, ILLINOIS

LOCATION MAP

SCALE: 1" = 2 MILES

NET LENGTH OF IMPROVEMENT = 39,342.99 FT. = 7.4513 MILES

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 938	05-00064-00-RS	PULASKI	32	2
PROJECT NO. RS-HPP-3300 (002)			CONTRACT NO. 99260	

SUMMARY OF QUANTITIES

CODE NO.	PAY ITEM	UNIT	TOTAL
X7240600*	REMOVE AND RE-ERECT EXISTING SIGN	EACH	2
XX004029*	SEEDING CLASS 2 SPECIAL	L SUM	1
20200100	EARTH EXCAVATION	CU YD	690
28100807	STONE DUMPED RIPRAP, CLASS A4	TON	300
35100100	AGGREGATE BASE COURSE, TYPE A	TON	760
40200800*	AGGREGATE SURFACE COURSE, TYPE B	TON	80
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	2,810
40600300	AGGREGATE (PRIME COAT)	TON	40
40600635	LEVELING BINDER (MACHINE METHOD), N70	TON	625
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	1,236
40603085	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70	TON	13,550
40603315	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70	TON	10,760
44000157	HOT-MIX ASPHALT SURFACE REMOVAL, 2"	SQ YD	588
48101200	AGGREGATE SHOULDERS, TYPE B	TON	12,690
50104400*	CONCRETE HEADWALL REMOVAL	EACH	11
50800105	REINFORCEMENT BARS	POUND	3,900
54002050	EXPANSION BOLTS 3/4 INCH X 9 INCH	EACH	48
54003000	CONCRETE BOX CULVERTS	CU YD	25.2
542D0229	PIPE CULVERTS, CLASS D, TYPE 1 24"	FOOT	48
54213669	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 24"	EACH	3
54213681	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 36"	EACH	2
54213687	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 42"	EACH	5
54213693	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 48"	EACH	3
54215559*	METAL END SECTIONS 24"	EACH	2
54223459*	REMOVE AND RELAY PIPE CULVERTS 24"	FOOT	30
54223465*	REMOVE AND RELAY PIPE CULVERTS 30"	FOOT	12
54223471*	REMOVE AND RELAY PIPE CULVERTS 36"	FOOT	24
54223477*	REMOVE AND RELAY PIPE CULVERTS 42"	FOOT	12
54223483*	REMOVE AND RELAY PIPE CULVERTS 48"	FOOT	24
60206805*	CATCH BASINS, TYPE B, SPECIAL	EACH	1
△ 63000005	STEEL PLATE BEAM GUARD RAIL, TYPE B	FOOT	1,025
△ 63000025	STEEL PLATE BEAM GUARD RAIL, ATTACHED TO STRUCTURES	FOOT	25
△ 63100167*	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EACH	6
63200305*	STEEL PLATE BEAM GUARD RAIL REMOVAL	FOOT	225
67100100*	MOBILIZATION	L SUM	1
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	7,872
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	113,340
72000100	SIGN PANEL - TYPE 1	SQ FT	308.7
72800100	TELESCOPING STEEL SIGN SUPPORT	FOOT	873.5
△ 78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	96
△ 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	5,060
△ 78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	395
△ 78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	114
△ 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	113,340
△ 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	505
△ 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	2
△ 78201000*	TERMINAL MARKER - DIRECT APPLIED	EACH	6
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	252

* SEE SPECIAL PROVISIONS
 △ SPECIALTY ITEMS

GENERAL NOTES

The thickness of the hot-mix asphalt shown on the plans is the minimum thickness. Deviations from the minimum thickness may occur due to irregularities in the existing surface or base on which the hot-mix asphalt is placed.

All bridge decks, tapers, and milled butt joints shall be primed the full width of the surface. The general roadway shall be primed as indicated on the typical sections. Prime shall be applied at the rates shown below.

Factors used for quantity calculations are as follows:

All Hot-Mix Asphalt	112.0	Tons/Sq. Yd./Inch
All Aggregate	2.025	Tons/Cu. Yd.
Bit. Matls. (Prime Coat)	0.10	Gals./Sq. Yd. (Asphalt Base)
Bit. Matls. (Prime Coat)	0.25	Gals./Sq. Yd. (Agg. Base)
Aggregate (Prime Coat)	0.0015	Tons/Sq. Yd. (Asphalt Base)
Aggregate (Prime Coat)	0.0025	Tons/Sq. Yd. (Agg. Base)

INDEX OF SHEETS

1. COVER SHEET
 2. INDEX OF SHEETS, SUMMARY OF QUANTITIES, GENERAL NOTES
 3. SCHEDULES OF QUANTITIES
 4. RESURFACING SCHEDULE
 - 5.-6. TYPICAL SECTIONS
 - 7.-21. PLAN & PROFILE
 - 22.-24. TURN LANE DETAILS
 25. INTERSECTION DETAILS - FAS 938 & FAP 726
 26. TYPICAL SIDE ROAD & ENTRANCE DETAILS
 27. MISCELLANEOUS DETAILS
 28. BOX CULVERT EXTENSION - STA. 172+52 LT. & RT.
 - 29.-32. CROSS SECTIONS
- STANDARDS
- 542301-01 PRC FLARED END SECTIONS
 - 542401 METAL END SECTIONS
 - 602006-01 CATCH BASIN, TYPE B
 - 604031-01 GRATE, TYPE 7
 - 630001-07 STEEL PLATE BEAM GUARDRAIL
 - 630101-07 GUARDRAIL MOUNTED ON EXISTING CULVERTS
 - 630301-04 SHLDR WIDENING FOR TY 1 (SP) TERMINALS
 - 631011-03 TRAFFIC BARRIER TERMINAL TYPE 2
 - 635006-02 REFLECTOR & TERMINAL MARKER PLACEMENT
 - 701001-01 TRAFFIC CONTROL
 - 701006-02 TRAFFIC CONTROL
 - 701011-01 TRAFFIC CONTROL
 - 701301-02 TRAFFIC CONTROL
 - 701306-01 TRAFFIC CONTROL
 - 701311-02 TRAFFIC CONTROL
 - 701326-02 TRAFFIC CONTROL
 - 702001-06 TRAFFIC CONTROL DEVICES
 - 720001 SIGN PANEL MOUNTING DETAILS
 - 720006-01 SIGN PANEL ERECTION DETAILS
 - 780001-01 TYPICAL PAVEMENT MARKINGS
 - 781001-02 RAISED REFLECTIVE PAVEMENT MARKERS
 - BLR 24-1 MAILBOX TURNOUTS

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

Mixture Use:	Leveling Binder (MM), N70
PG:	PG64-22
RAP% (Max):	10
Design Air Voids:	4%, 70 Gyration Superpave Design
Mixture Composition: (Gradation Mixture)	IL-9.5mm
Friction Aggregate:	None

Mixture Use:	HMA Binder Course, IL-19.0, N70
PG:	PG64-22
RAP% (Max):	10
Design Air Voids:	4%, 70 Gyration Superpave Design
Mixture Composition: (Gradation Mixture)	IL-19.0mm
Friction Aggregate:	None

Mixture Use:	HMA Surface Course, Mix "C", N70
PG:	PG64-22
RAP% (Max):	10
Design Air Voids:	4%, 70 Gyration Superpave Design
Mixture Composition: (Gradation Mixture)	IL-9.5mm or IL-12.5mm
Friction Aggregate:	C Surface

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 938	05-00064-00-RS	PULASKI	32	3
PROJECT NO. RS-HPP-3300 (002)			CONTRACT NO. 99260	

PAINT PAVEMENT MARKING - LINE 4"		
Centerline (Yellow Dashed)	Edge Line (White Solid)	No Passing (Yellow Solid)
8,000 Ft.	78,199 Ft.	27,141 Ft.

NOTE: Any bridges that are omitted shall receive pavement marking.

"NO PASSING ZONES"			
EAST BOUND LANE		WEST BOUND LANE	
Location	Length	Location	Length
Sta. 102+50 ¹ to Sta. 110+50	800'	Sta. 112+50 to Sta. 119+25 ¹	675'
Sta. 128+00 ¹ to Sta. 138+25	825'	Sta. 137+00 to Sta. 145+00 ¹	800'
Sta. 146+75 ¹ to Sta. 154+75	800'	Sta. 155+75 to Sta. 163+75 ¹	800'
Sta. 195+50 ¹ to Sta. 202+50	700'	Sta. 204+50 to Sta. 211+50 ¹	700'
Sta. 211+75 ¹ to Sta. 220+50	875'	Sta. 220+50 to Sta. 229+50 ¹	900'
Sta. 241+00 ¹ to Sta. 245+50	450'	Sta. 250+00 to Sta. 254+50 ¹	450'
Sta. 267+75 ¹ to Sta. 273+25	550'	Sta. 276+75 to Sta. 282+25 ¹	550'
Sta. 340+00 ¹ to Sta. 370+25	3,025'	Sta. 349+00 to Sta. 381+50 ¹	3,020'
Sta. 379+50 ¹ to Sta. 385+25	575'	Sta. 388+25 to Sta. 394+00 ¹	575'
Sta. 392+00 ¹ to Sta. 397+50	550'	Sta. 400+75 to Sta. 406+00 ¹	525'
Sta. 409+00 ¹ to Sta. 414+00	500'	Sta. 417+00 to Sta. 422+75 ¹	575'
Sta. 421+75 ¹ to Sta. 480+12	5,728'	Sta. 432+00 to Sta. 480+12	4,703'
TOTALS	15,378'		14,273'

¹ Denotes location of "No Passing Zone" signs to be erected in accordance with Sign Schedule & Std. 720006.

HMA SURFACE REMOVAL 2"	
Bridge Location	Area (S.Y.)
Sta. 308+73.6 to Sta. 309+76.6	344
Sta. 331+43.5 to Sta. 332+16.5	244
TOTAL	588

HMA SURF. REMOVAL - BUTT JT.	
Location	Area (S.Y.)
Sta. 83+43.4 to Sta. 83+80.0	86
Sta. 307+98.6 to Sta. 308+73.6	183
Sta. 309+76.6 to Sta. 310+51.6	183
Sta. 330+68.5 to Sta. 331+43.5	183
Sta. 332+16.5 to Sta. 332+91.5	183
Sta. 479+87.2 to Sta. 480+12.2	418
TOTAL	1,236

SIGNS				
Location	Name	Signs No.	Sq. Ft.	Post Length
Sta. 156+70 Lt.	SIDE ROAD 90'	W2-2	9.00	16.5
Sta. 222+30 Lt.	CROSS ROAD	W2-1	9.00	16.5
Sta. 277+10 Lt.	SIDE ROAD 90'	W2-2	9.00	16.5
Sta. 441+40 Rt.	STOP	R1-1	9.00	16.5
	DO NOT ENTER	R5-1	9.00	-
Sta. 442+00 Rt.	STOP	R1-1	9.00	16.5
	DO NOT ENTER	R5-1	9.00	-
Sta. 474+00 Rt.	STOP AHEAD	W3-1a	9.00	16.5
Sta. 479+91 Rt.	STOP	R1-1	9.00	15.5
Various (23)*	NO PASSING	W14-3	227.70	759.0
TOTALS			308.70	873.5

* See schedule of "No Passing Zones" for sign locations. Each location will have one sign of 9.90 Sq. Ft. and two posts with a combined length of 33.0 Ft. Quantities shown are totals.

THERMOPLASTIC PAVEMENT MARKING					
Location	Description	Sym. & Ltrs. Sq. Ft.	Line 4" Foot	Line 12" Foot	Line 24" Foot
Sta. 434+68 - 440+88 Rt.	Flush Median		2,484	178	
Sta. 439+08 - 440+24 Rt.	Lane Line		116		
Sta. 439+15 Rt.	"ONLY"	20.8			
Sta. 439+45 Rt.	Through Arrow	11.5			
Sta. 439+75 Rt.	Right Arrow	15.6			
Sta. 440+65 Rt.	Flush Island		168	73	
Sta. 441+23 Rt.	Flush Island		66	31	
Sta. 441+49 - 442+83 Rt.	Lane Line		134		
Sta. 441+51	Stop Bar				30
Sta. 441+58 - 442+83 Rt.	No Passing		250		
Sta. 441+67 Rt.	Flush Island		82	20	
Sta. 441+83 Rt.	Stop Bar				26
Sta. 442+16 Rt.	Left Arrow	15.6			
Sta. 442+46 Lt.	Through Arrow	11.5			
Sta. 442+76 Rt.	"ONLY"	20.8			
Sta. 442+83 - 447+23 Rt.	Flush Median		1,760	93	
Sta. 479+68 Rt.	Stop Bar				35
Sta. 479+90 Rt.	Stop Bar				23
TOTALS		95.8	5,060	395	114

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 938	05-00064-00-RS	PULASKI	32	4
PROJECT NO. RS-HPP-3300 (002)			CONTRACT NO. 99260	

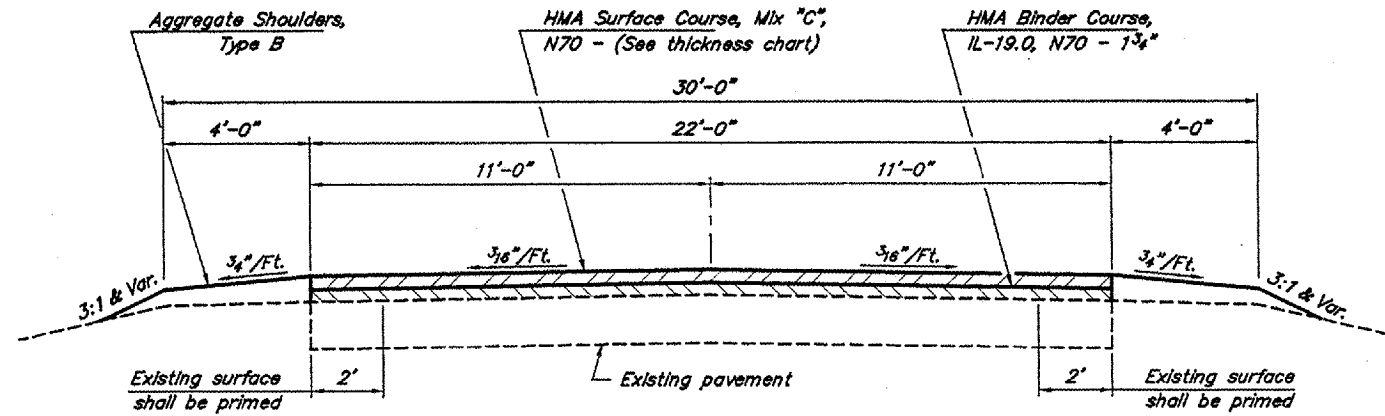
RESURFACING SCHEDULE

Location Station to Station	Length Feet	Prime Coat		Leveling Binder Machine Method Tons	Hot-Mix Asphalt Binder Course Tons	Hot-Mix Asphalt Surface Course Tons
		Bituminous Materials Gallons	Aggregate Tons			
EASTBOUND (RIGHT) LANE						
83+20 to 89+50	630.00	20.6	0.3		85.8	76.5
89+50 to 298+00	20850.00	477.2	7.2		3733.6	2566.8
298+00 to 308+73.60	1073.60	32.2	0.4		269.7	151.2
308+73.60 to 309+76.60	103.00	17.7	0.3			19.8
309+76.60 to 331+43.50	2166.90	64.7	1.0		629.7	305.1
331+43.50 to 332+16.50	73.00	12.5	0.2			14.0
332+16.50 to 343+26	1099.50	32.8	0.5		201.4	154.9
343+26 to 344+62.30	136.30	3.1			18.3	19.2
344+62.30 to 358+66	1403.70	32.1	0.5	174.4	1.3	197.6
358+66 to 372+79.06	1413.06	32.4	0.5	142.4	1.7	199.0
372+79.06 to 374+15	135.94	3.1			22.2	19.1
374+15 to 413+24	3678.96	84.2	1.3		786.1	518.0
413+24 to 419+71	647.00	14.8	0.2		141.9	91.1
419+71 to 434+68	1497.00	34.3	0.5		267.3	210.8
434+68 to 447+23	1255.00	28.7	0.5		272.1	176.7
447+23 to 464+45	1628.80	37.3	0.5		293.9	229.3
464+45 to 472+24.65	779.65	17.8	0.3		168.8	109.8
472+24.65 to 480+12.23	771.58	114.8	1.7		4.2	92.1
Subtotals for EastBound (Right) Lane		1060.3	15.9	316.8	6898.0	5151.0
WESTBOUND (LEFT) LANE						
83+20 to 89+50	630.00	20.6	0.3		105.9	76.5
89+50 to 298+00	20850.00	477.2	7.2		3053.5	2566.8
298+00 to 308+73.60	1073.60	32.2	0.4		195.9	151.2
308+73.60 to 309+76.60	103.00	17.7	0.3			19.8
309+76.60 to 331+43.50	2166.90	64.7	1.0		395.9	305.1
331+43.50 to 332+16.50	73.00	12.5	0.2			14.0
332+16.50 to 343+26	1099.50	32.8	0.5		207.8	154.9
343+26 to 344+62.30	136.30	3.1			27.4	19.2
344+62.30 to 358+66	1403.70	32.1	0.5	144.3	2.1	197.6
358+66 to 372+79.06	1413.06	32.4	0.5	162.2	2.4	199.0
372+79.06 to 374+15	135.94	3.1			33.8	19.1
374+15 to 413+24	3678.96	84.2	1.3		886.4	518.0
413+24 to 419+71	647.00	14.8	0.2		137.0	91.1
419+71 to 434+68	1497.00	34.3	0.5		386.5	210.8
434+68 to 447+23	1255.00	28.7	0.5		243.3	176.7
447+23 to 464+45	1628.80	37.3	0.5		355.6	229.3
464+45 to 472+24.65	779.65	17.8	0.3		147.1	109.8
472+24.65 to 480+12.23	771.58	114.8	1.7		5.4	80.5
Subtotals for WestBound (Left) Lane		1060.3	15.9	306.5	6186.0	5139.4
TOTALS		2120.6	31.8	623.3	13084.0	10290.4

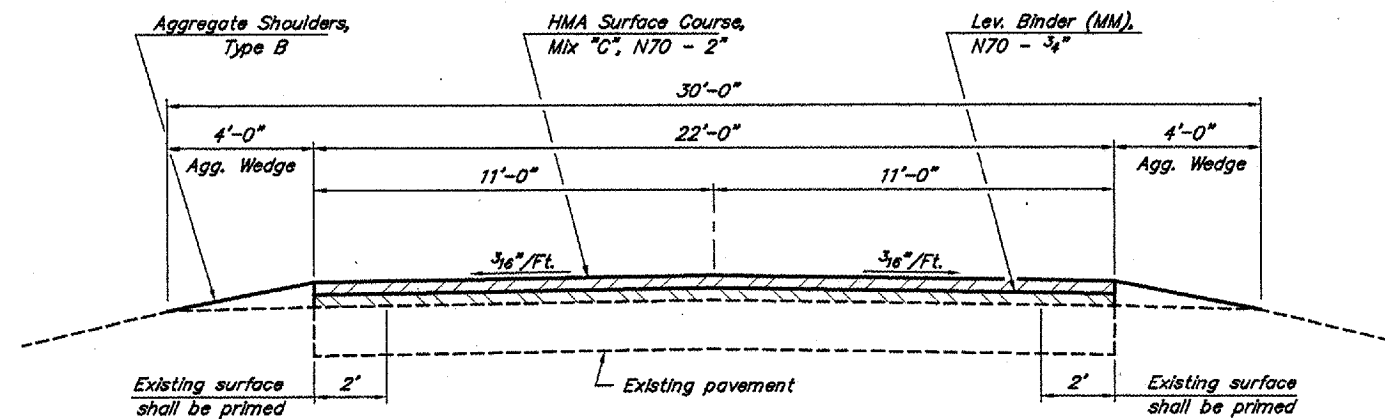
NOTE: Quantities shown do not include materials for entrances, side roads, and mailbox turnouts.

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 938	05-00064-00-RS	PULASKI	32	5
PROJECT NO. RS-HPP-3300 (002)			CONTRACT NO. 99260	

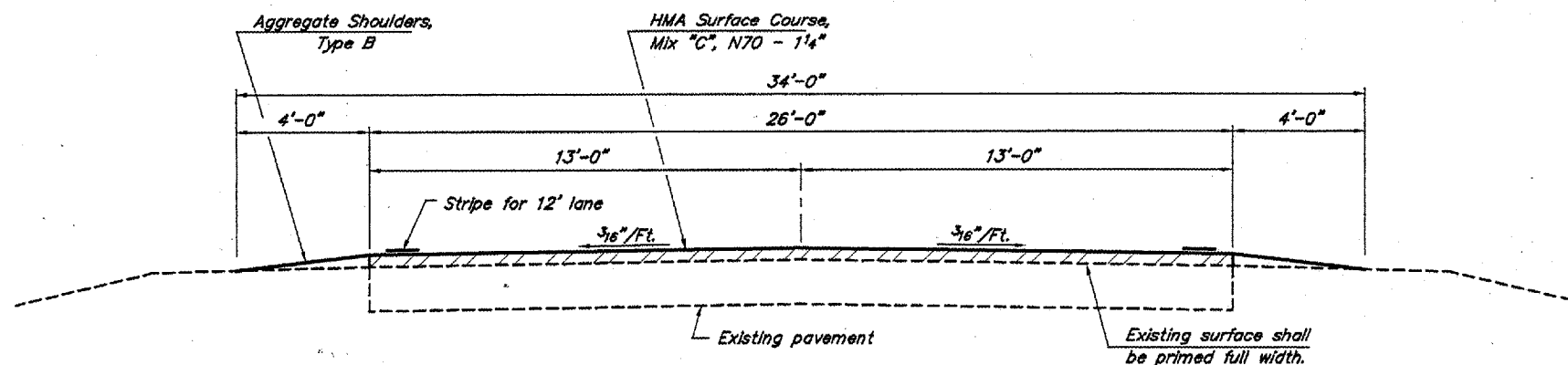
HMA SURFACE COURSE THICKNESS	
Location	Thickness
Sta. 83+20 - Sta. 298+00	1 3/4"
Sta. 298+00 - Sta. 472+24.65	2"
Sta. 472+24.65 - Sta. 480+12.23	1 1/4"



TYPICAL SECTION
 STA. 83+20 - STA. 344+62.30
 STA. 372+79.06 - STA. 434+68
 STA. 447+23 - STA. 472+24.65



TYPICAL SECTION
 STA. 344+62.30 - STA. 372+79.06



TYPICAL SECTION
 STA. 472+24.65 - STA. 480+12.23

STRUCTURAL DESIGN DATA

STA. 83+20 - STA. 298+00
 Class II Roadway
 Design Period - 20 Years
 PC 2090 IBR 5.0
 SU 85 TF 0.1947
 MU 25 DT 2.860

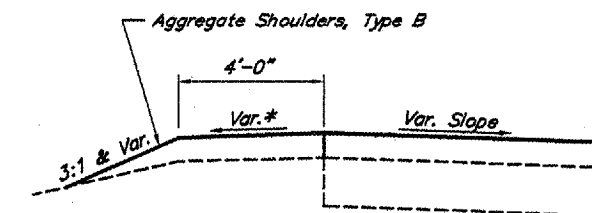
STA. 298+00 - STA. 480+12.23
 Class II Roadway
 Design Period - 20 Years
 PC 2520 IBR 5.0
 SU 100 TF 0.2314
 MU 30 DT 2.920

MATERIAL COEFFICIENT

- Existing Agg. Base Course - 0.11
- Existing Waterbound Macadam - 0.11
- Existing Oil & Chip Surface - 0.13
- Existing BAM/BMC - 0.23
- Levelling Binder - 0.33
- HMA Binder Course - 0.33
- HMA Surface Course - 0.40

NOTES

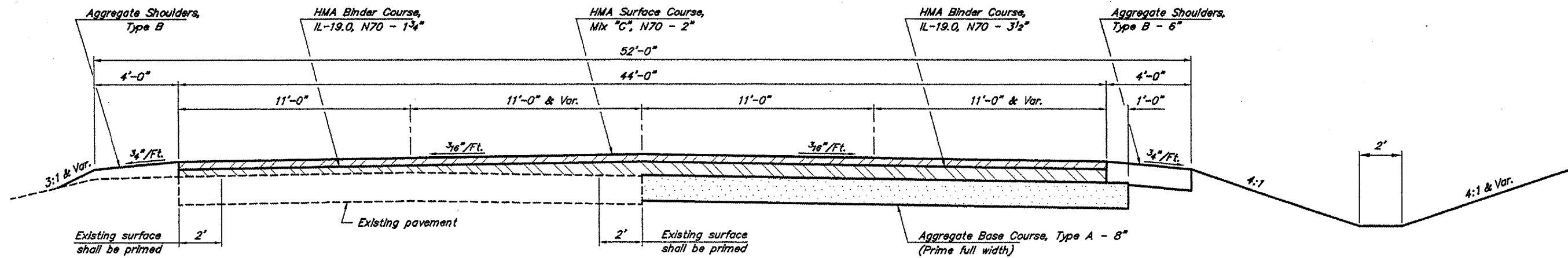
Crown and/or superelevation corrections may be constructed with Levelling Binder/HMA Binder Course prior to placing the first full lift as directed by the Engineer.



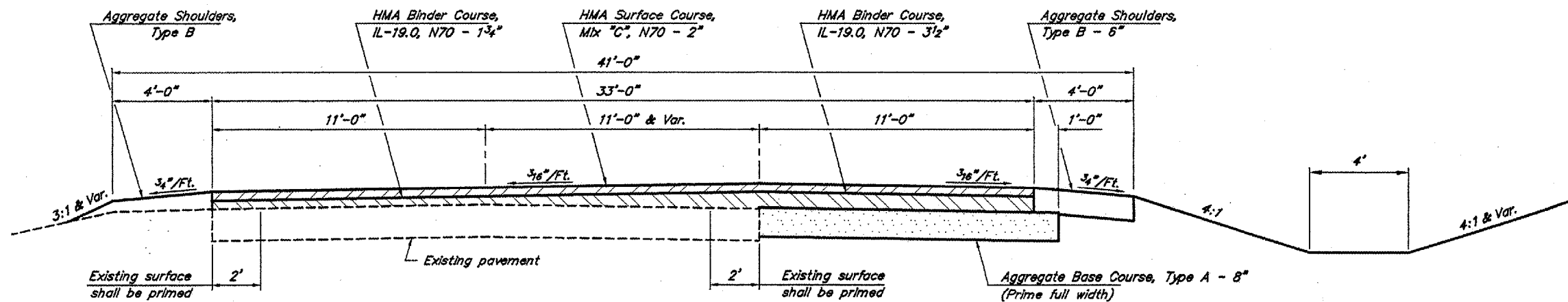
* Slope 3/4"/Ft. but not more than 0.12'/Ft. break between pavement and shoulder.

SHOULDER DETAIL FOR OUTSIDE EDGE OF SUPERELEVATED CURVES

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 938	05-00064-00-RS	PULASKI	32	6
PROJECT NO. RS-HPP-3300 (002)			CONTRACT NO. 99260	



TYPICAL SECTION
STA. 434+68 - STA. 441+67



TYPICAL SECTION
STA. 441+67 - STA. 447+23

NOTES

Crown correction may be constructed with HMA Binder Course prior to placing the first full lift as directed by the Engineer.

STRUCTURAL DESIGN DATA

Class II Roadway
 Design Period - 20 Years
 PC 2520 IBR 5.0
 SU 100 TF 0.2314
 MU 30 DT 2.920

MATERIAL COEFFICIENT

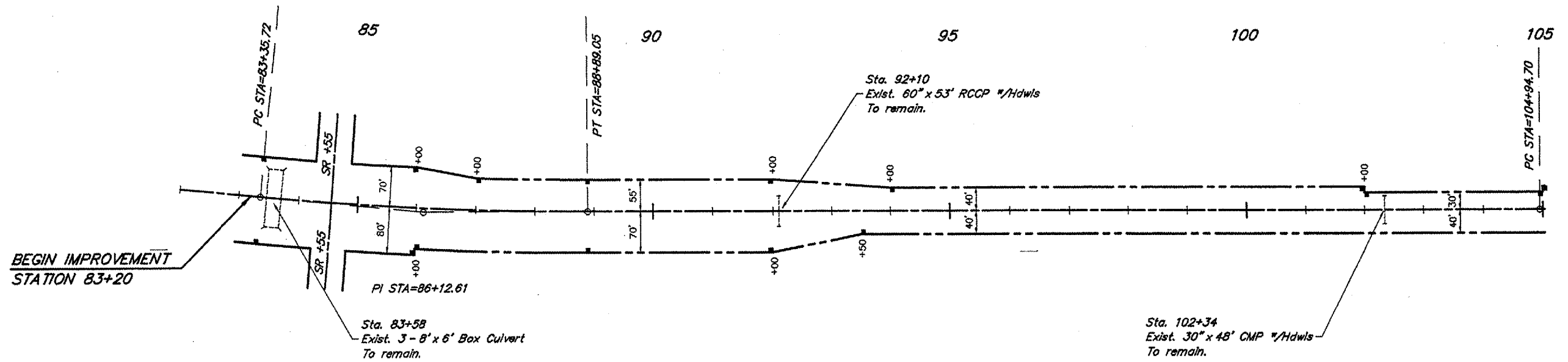
Existing Agg. Base Course - 0.11
 Existing Waterbound Macadam - 0.11
 Existing Oil & Chip Surface - 0.13
 Existing BAM/BMC - 0.23
 Aggregate Base Course - 0.13
 Leveled Binder - 0.33
 HMA Binder Course - 0.33
 HMA Surface Course - 0.40

578 TSec Turn Lanes 02/07/07 1531 RLM

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 938	05-00064-00-RS	PULASKI	32	7
PROJECT NO. RS-HPP-3300 (002)			CONTRACT NO. 99260	

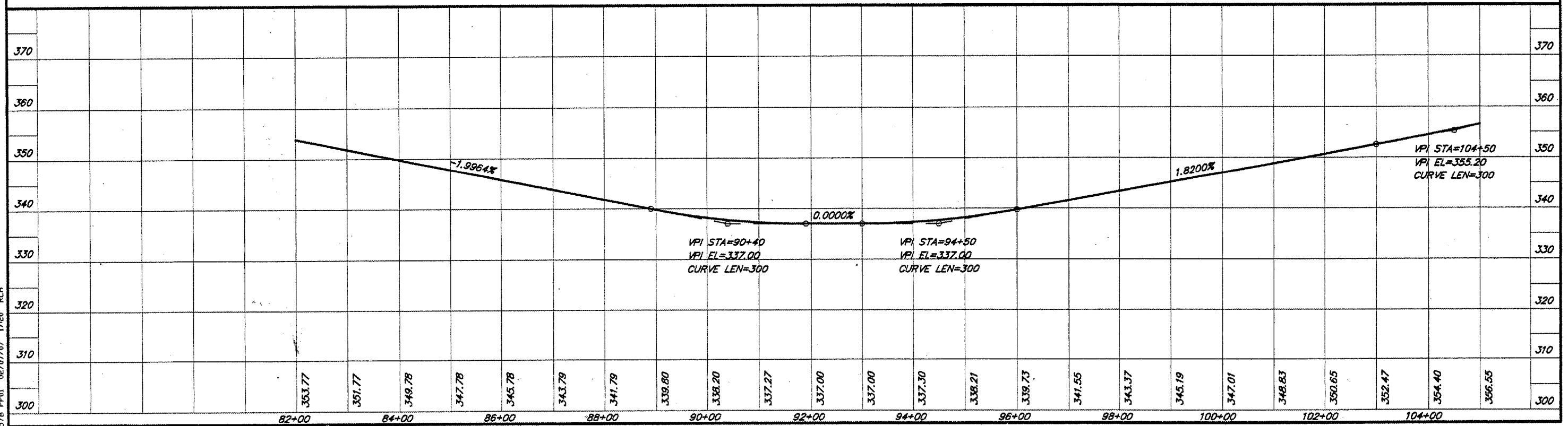
CURVE DATA

$\Delta = 5^{\circ}41'27''$ $T = 276.89'$
 $D = 1^{\circ}01'42''$ $L = 553.33'$
 $R = 5570.97'$ $E = 6.88'$
 $S.E. = 0.019'/ft.$
 Attain Sta. 82+75 to Sta. 83+49
 Remove Sta. 88+75 to Sta. 89+50



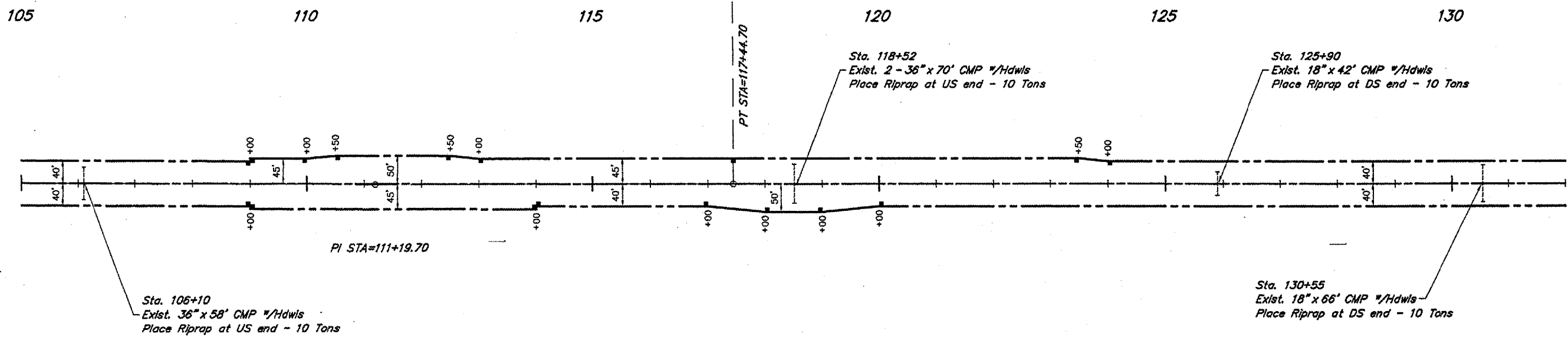
NOTE: Locations of entrances shall be determined in the field.
See "Typical Side Road & Entrance Details".

SCALES:
 1" = 200' HOR
 1" = 20' VER

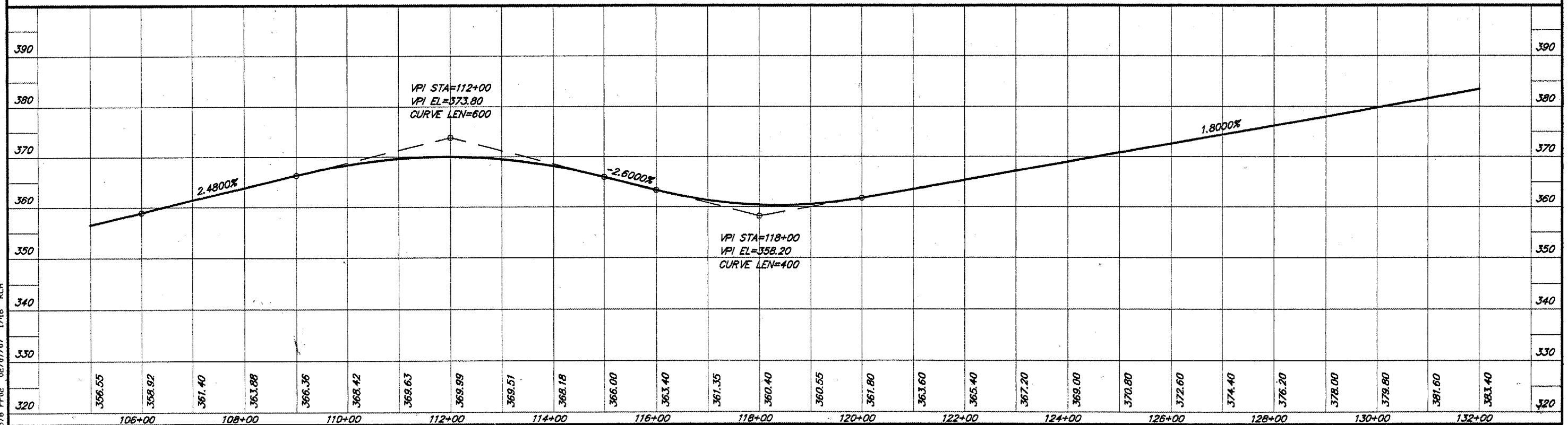


ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 938	05-00064-00-RS	PULASKI	32	8
PROJECT NO. RS-HPP-3300 (002)			CONTRACT NO. 99260	

CURVE DATA
 $\Delta = 0^{\circ}25'00''$ $T = 625.00'$
 $D = 0^{\circ}02'00''$ $L = 1250.00'$
 $R = 171887.34'$ $E = 1.14'$
 Normal Crown



SCALES:
 1" = 200' HOR
 1" = 20' VER



ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 938	05-00064-00-RS	PULASKI	32	9
PROJECT NO. RS-HPP-3300 (002)			CONTRACT NO. 99260	



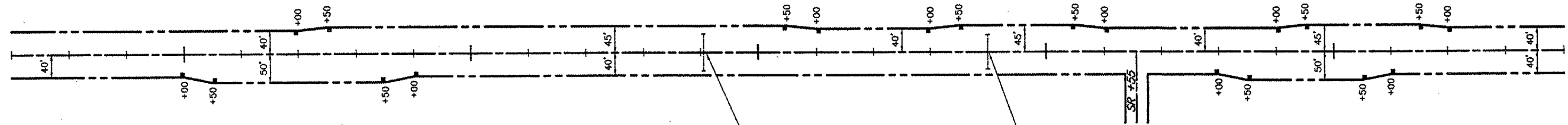
135

140

145

150

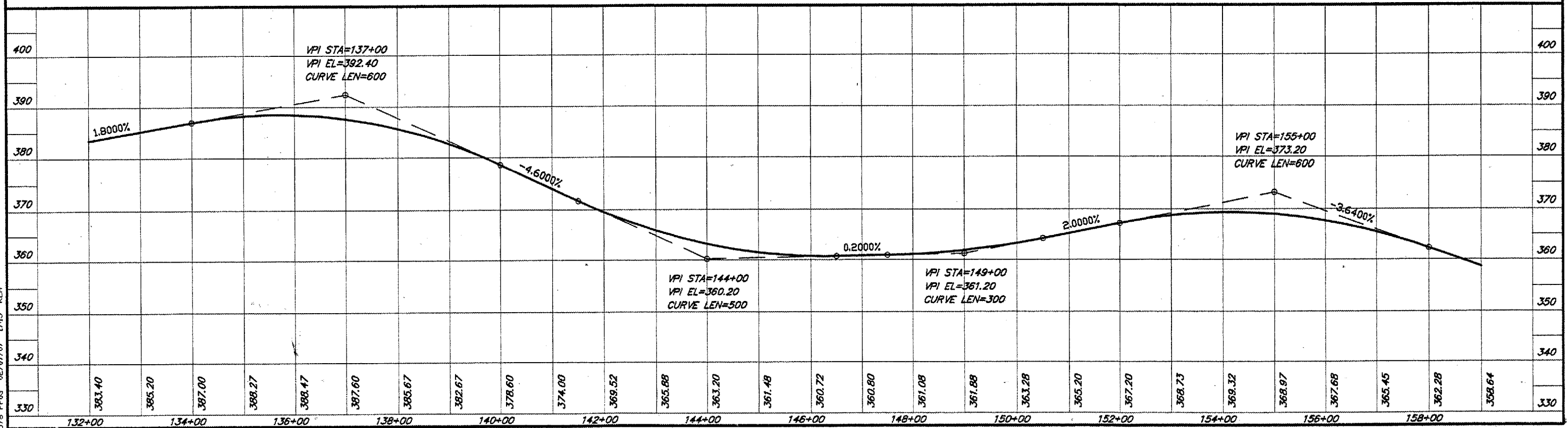
155



Sta. 149+00
Exist. 42" x 60" CMP w/Hdwls
Place Riprap at US end - 10 Tons

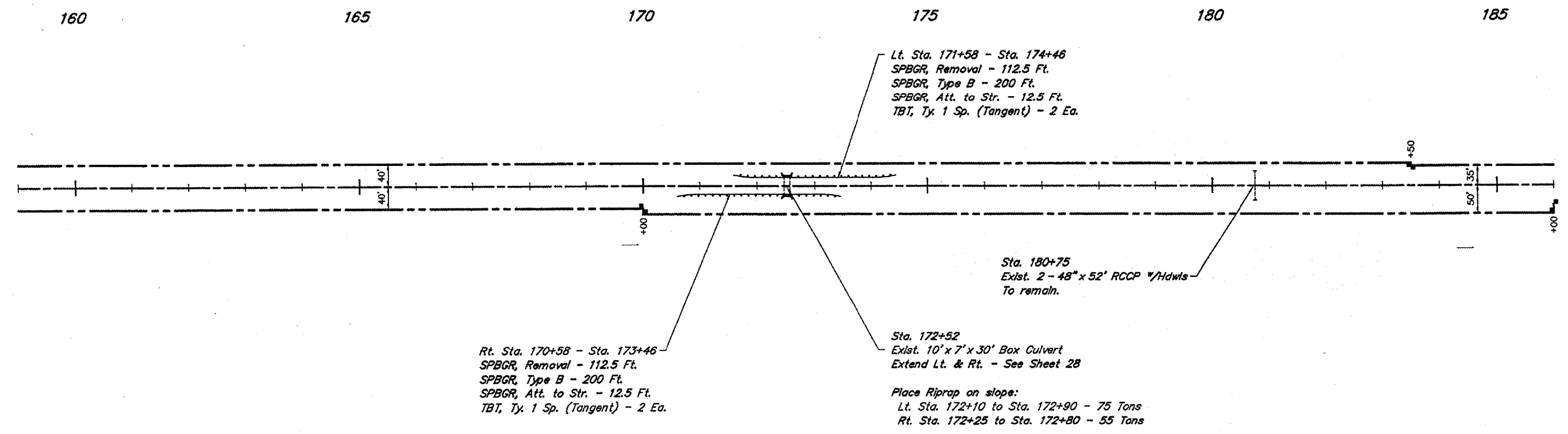
Sta. 144+05
Exist. 42" x 64" CMP w/Hdwls
To remain.

SCALES:
1" = 200' HOR
1" = 20' VER

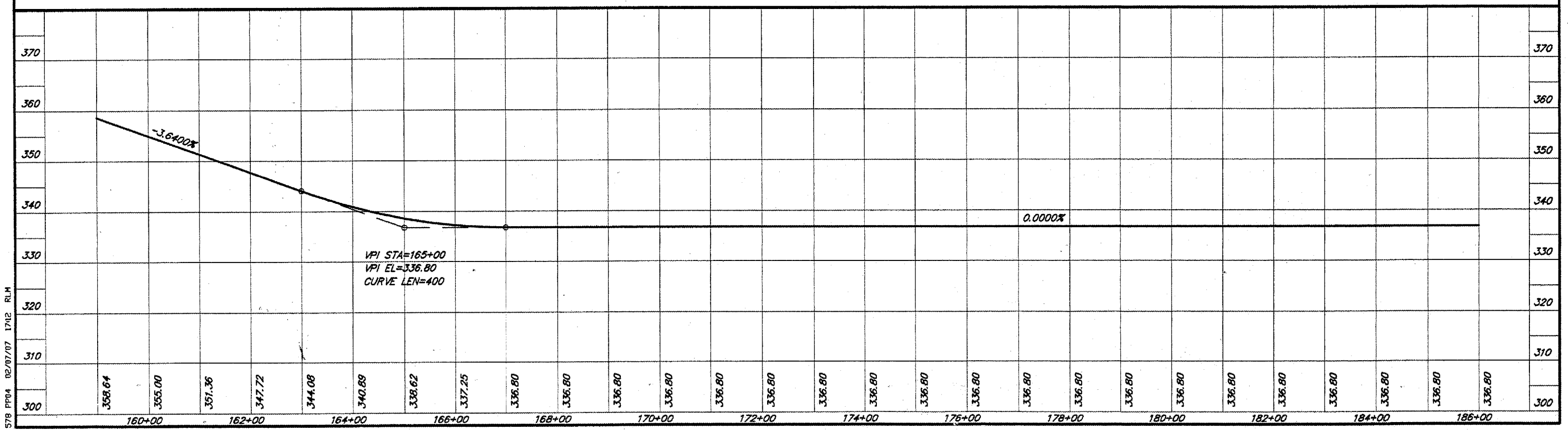


578 PP03 02/07/07 1715 RLM

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 938	05-00064-00-RS	PULASKI	32	10
PROJECT NO. RS-HPP-3300 (002)			CONTRACT NO. 99260	



SCALES:
 1" = 200' HOR
 1" = 20' VER



578 PPO4 02/07/07 1712 RLM

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 938	05-00064-00-RS	PULASKI	32	11
PROJECT NO. RS-HPP-3300 (002)			CONTRACT NO. 99250	



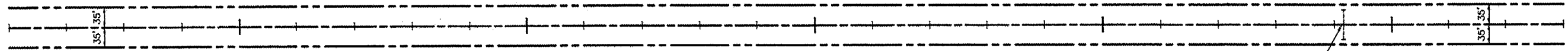
190

195

200

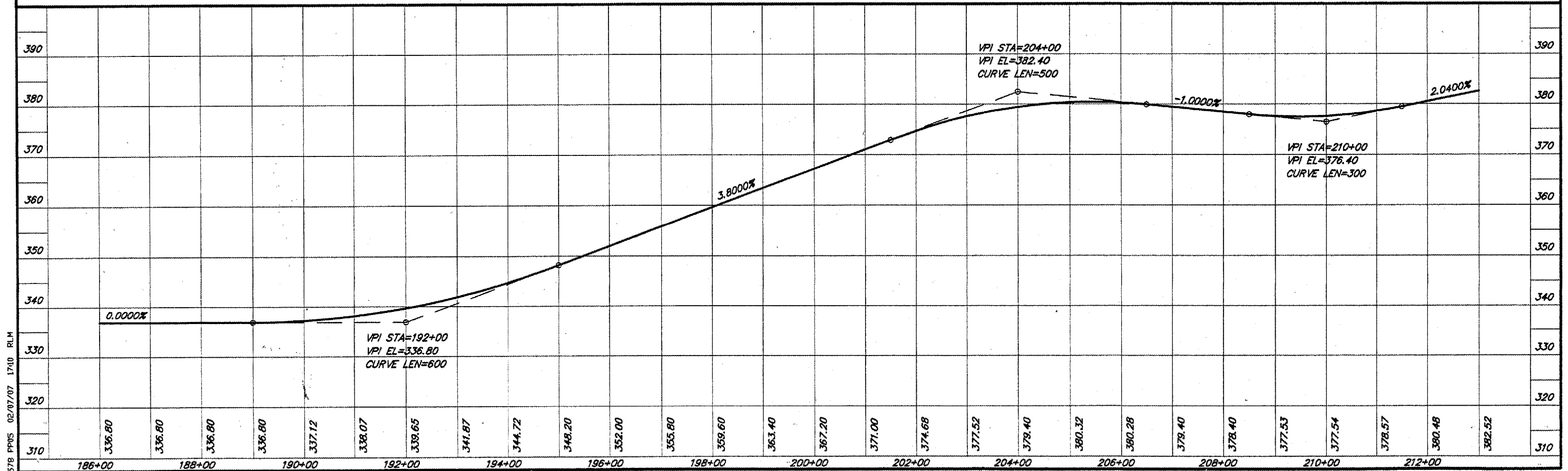
205

210



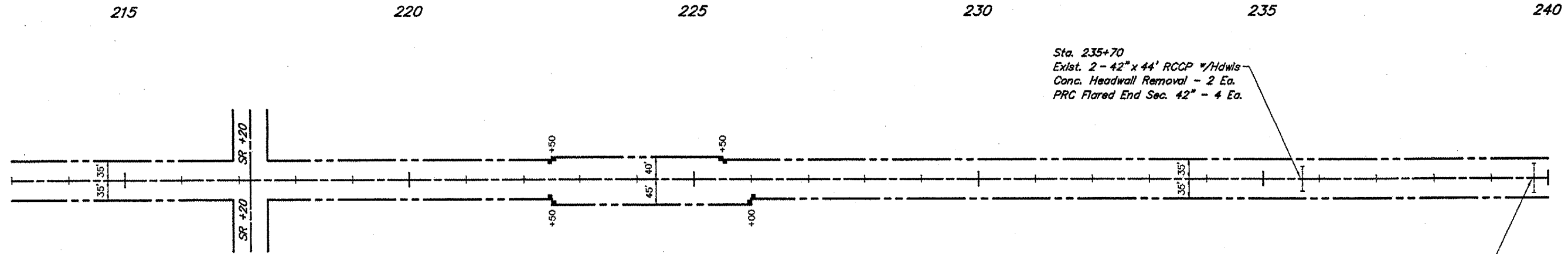
Sta. 209+16
Exist. 18" x 52' CMP w/Hdws
To remain.

SCALES:
1" = 200' HOR
1" = 20' VER

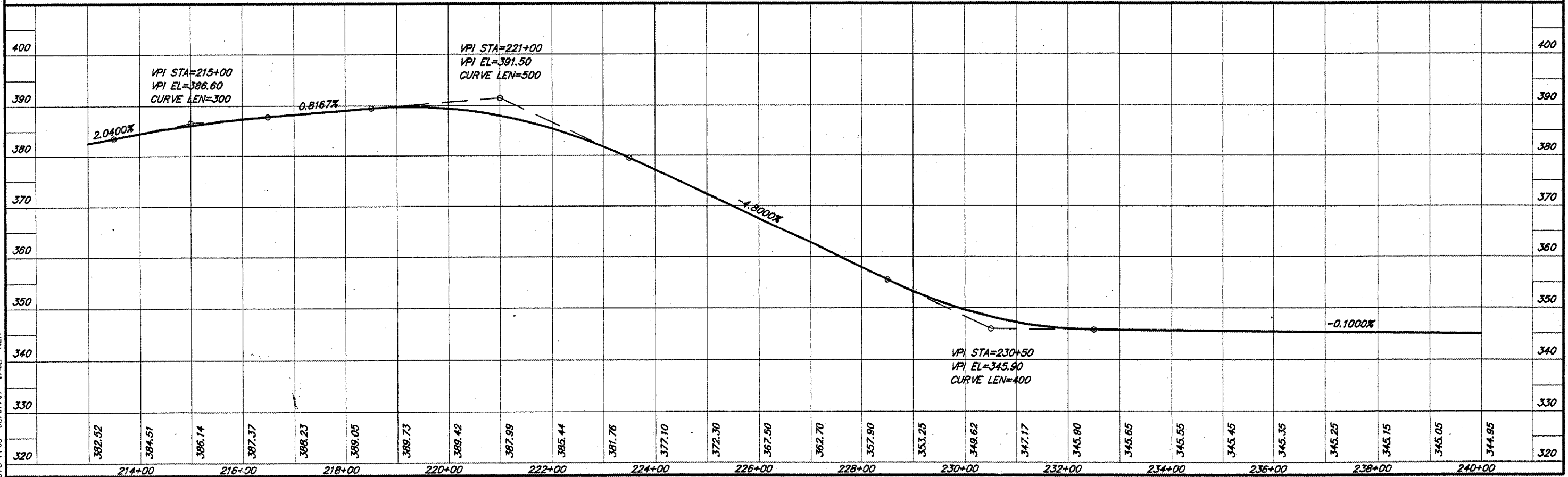


578 PPS 02/07/07 1710 RLM

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 938	05-00064-00-RS	PULASKI	32	12
PROJECT NO. RS-HPP-3300 (002)			CONTRACT NO. 99260	



SCALES:
 1" = 200' HOR
 1" = 20' VER



578 PPO6 02/07/07 1702 RLM

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 938	05-00064-00-RS	PULASKI	32	13
PROJECT NO. RS-HPP-3300 (002)			CONTRACT NO. 99260	



240

245

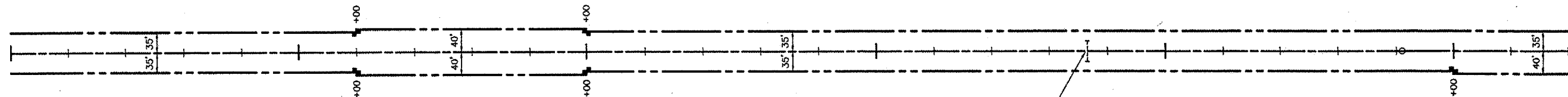
250

255

260

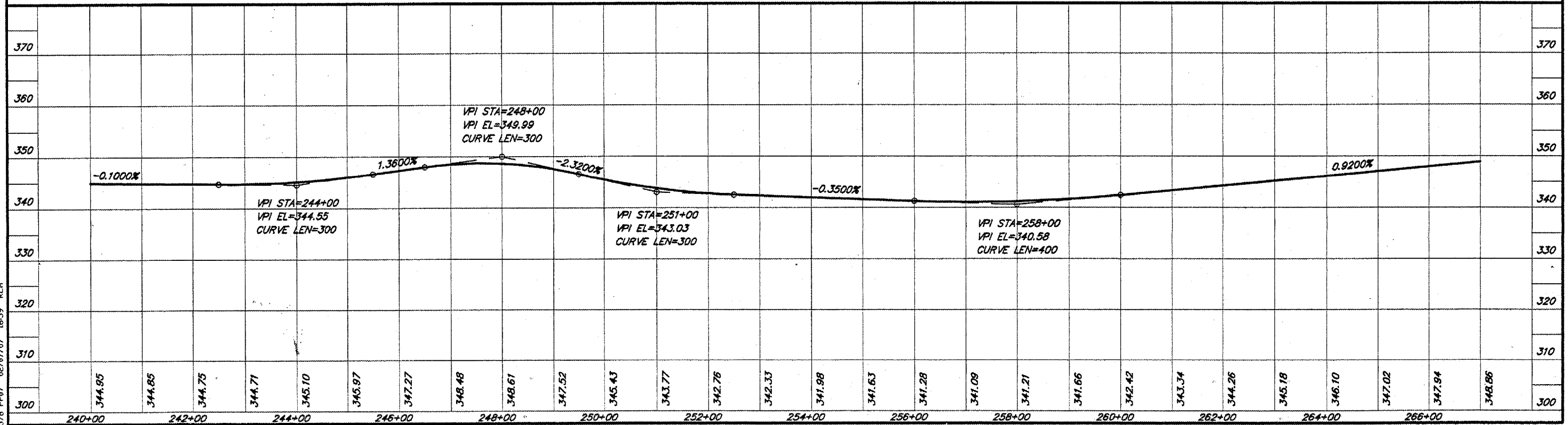
265

PI STA=264+10
Δ=0°22'00" R



Sta. 258+66
Exist. 48" x 36" RCCP w/Hdws
Conc. Headwall Removal - 2 Ea.
PRC Flared End Sec. 48" - 2 Ea.

SCALES:
1" = 200' HOR
1" = 20' VER



578 P07 02/07/07 16:59 RLM

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 938	05-00064-00-RS	PULASKI	32	14
PROJECT NO. RS-HPP-3300 (002)			CONTRACT NO. 99260	



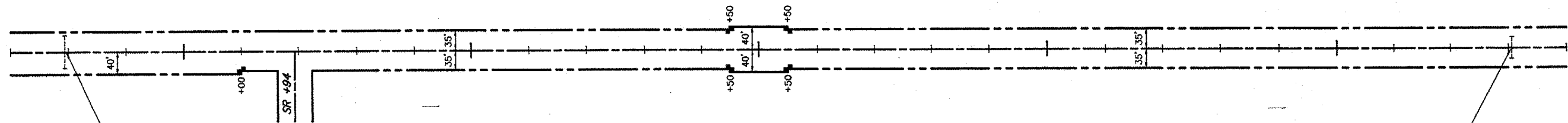
270

275

280

285

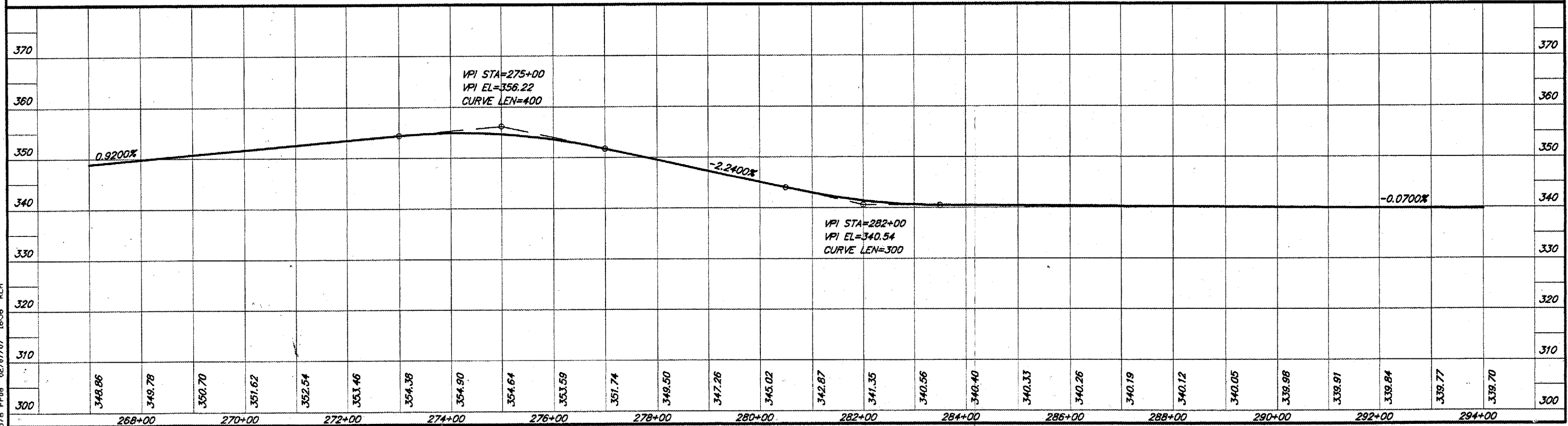
290



Sta. 267+94
 Exist. 24" x 58' RCCP w/ Hdws
 Concrete Headwall Removal - 2 Ea.
 Rem. & Relay P C 24" - 24 Ft. (12' US, 12' DS)
 PRC Flared End Section 24" - 2 Ea.

Sta. 293+06
 Exist. 36" x 38' RCCP w/ Hdws
 To remain.

SCALES:
 1" = 200' HOR
 1" = 20' VER



578 PPOB 02/07/07 16:56 RLM

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 938	05-00064-00-RS	PULASKI	32	15
PROJECT NO. RS-HPP-3300 (002)			CONTRACT NO. 99260	



295

300

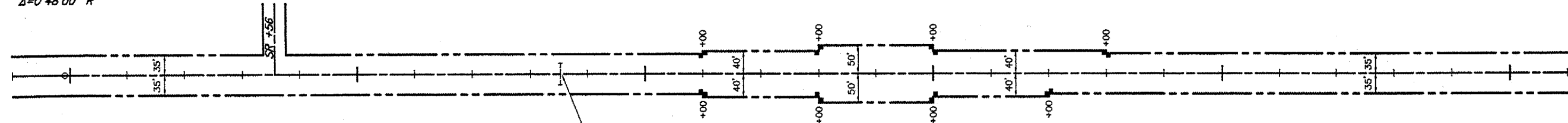
305

310

315

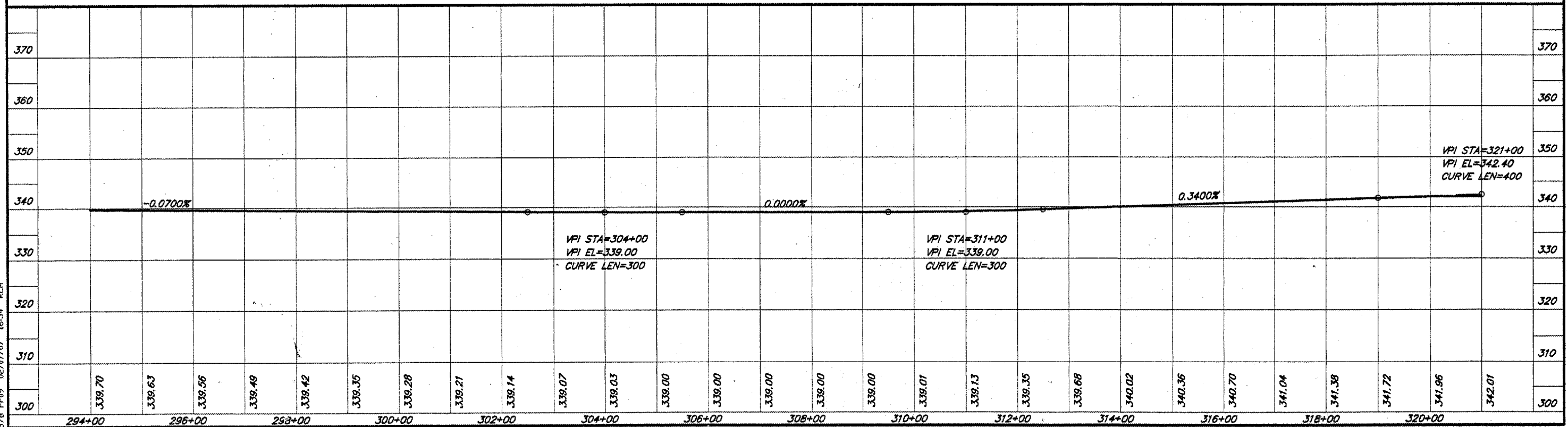
320

PI STA=294+91
Δ=0°48'00" R

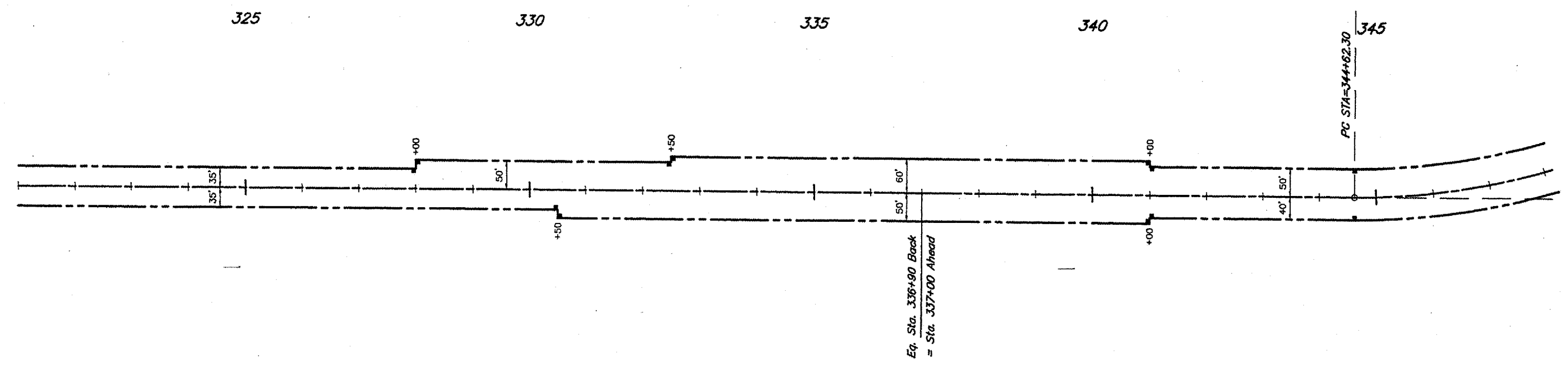


Sta. 303+52
Exist. 36" x 38' RCCP w/Hdws
Conc. Headwall Removal - 1 Ea. (DS)
Rem. & Relay P C 36" - 12 Ft. (DS)
PRC Flared End Sec. 36" - 1 Ea. (DS)

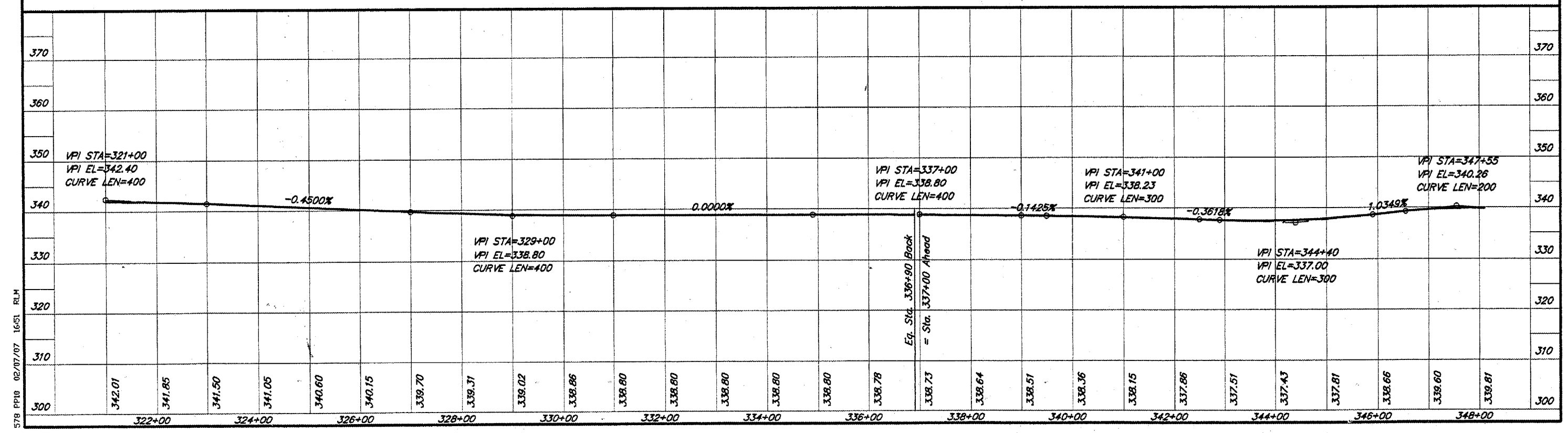
SCALES:
1" = 200' HOR
1" = 20' VER



ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 938	05-00064-00-RS	PULASKI	32	16
PROJECT NO. RS-HPP-3300 (002)			CONTRACT NO. 99260	



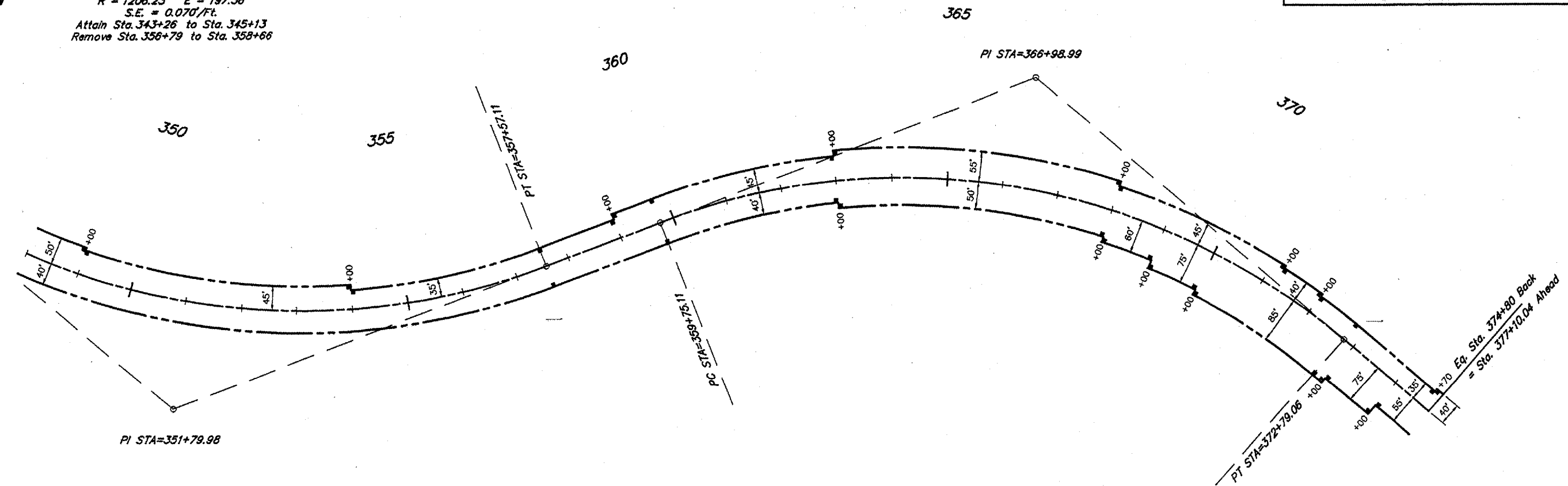
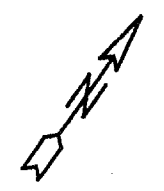
SCALES:
 1" = 200' HOR
 1" = 20' VER



578 PPI0 02/07/07 1651 RLM

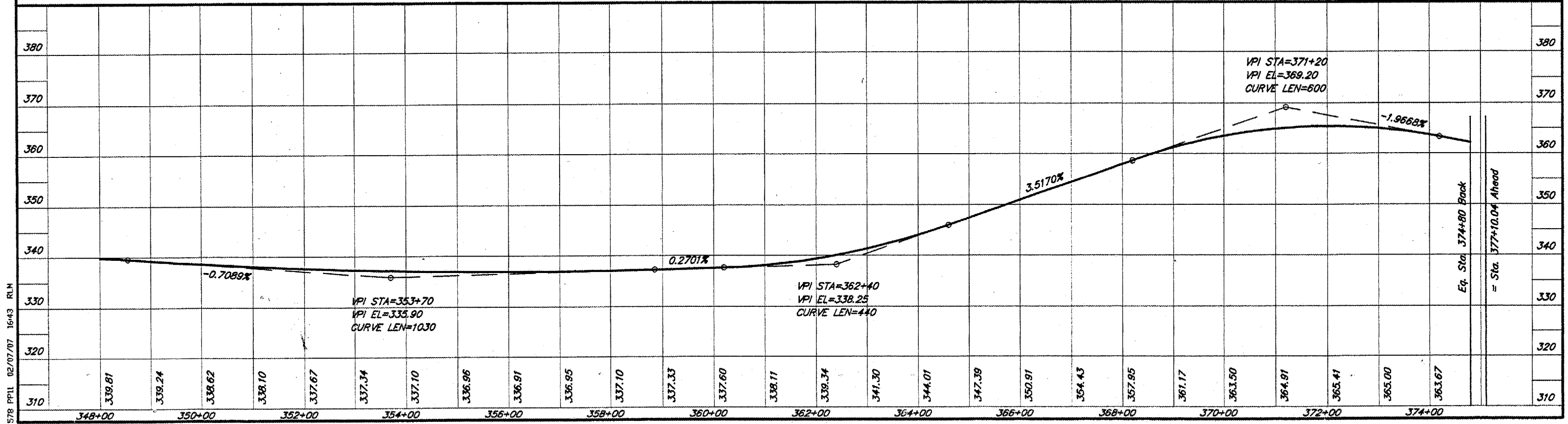
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 938	05-00064-00-RS	PULASKI	32	17
PROJECT NO. RS-HPP-3300 (002)			CONTRACT NO. 99260	

CURVE DATA
 $\Delta = 61^{\circ}30'13''$ $T = 717.68'$
 $D = 4^{\circ}45'00''$ $L = 1294.81'$
 $R = 1206.23'$ $E = 197.36'$
 $S.E. = 0.070'/ft.$
 Attain Sta. 343+26 to Sta. 345+13
 Remove Sta. 356+79 to Sta. 358+66



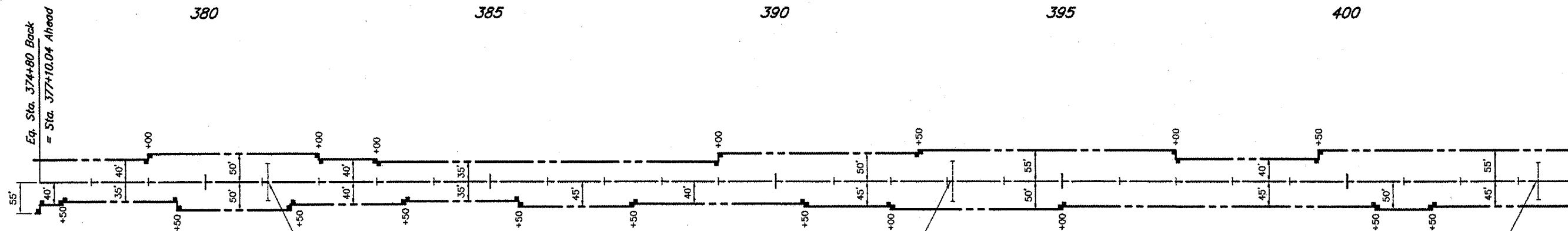
SCALES:
 1" = 200' HOR
 1" = 20' VER

CURVE DATA
 $\Delta = 61^{\circ}56'15''$ $T = 723.88'$
 $D = 4^{\circ}45'00''$ $L = 1303.95'$
 $R = 1206.23'$ $E = 200.54'$
 $S.E. = 0.070'/ft.$
 Attain Sta. 358+66 to Sta. 360+53
 Remove Sta. 372+28 to Sta. 374+15



578 PPII 02/07/07 16:43 RLM

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 938	05-00064-00-RS	PULASKI	32	18
PROJECT NO. RS-HPP-3300 (002)			CONTRACT NO. 99260	

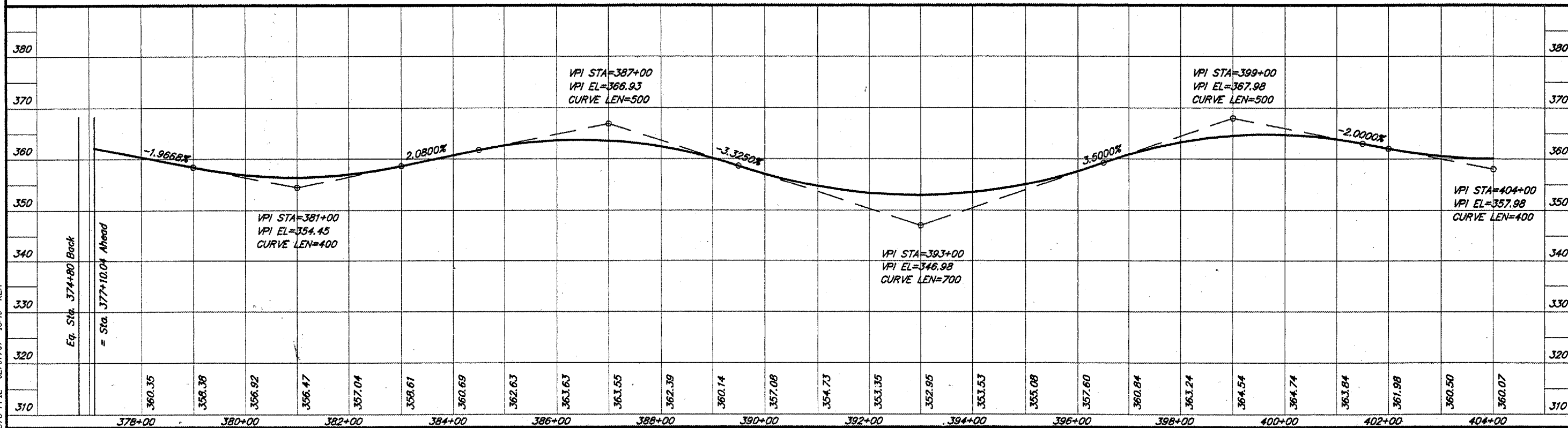


Sta. 381+10
 Exist. 36" x 66' RCCP w/Hdws
 Conc. Headwall Removal - 1 Ea. (DS)
 Rem. & Relay P C 36" - 12 Ft. (DS)
 PRC Flared End Sec. 36" - 1 Ea. (DS)
 Place Riprap at DS end - 20 Tons

Sta. 393+10
 Exist. 48" x 72' RCCP w/Hdws
 Conc. Headwall Removal - 1 Ea. (DS)
 Rem. & Relay P C 48" - 24 Ft. (DS)
 PRC Flared End Sec. 48" - 1 Ea. (DS)
 Place Riprap at DS end - 20 Tons

Sta. 403+35
 Exist. 42" x 66' RCCP w/Hdws
 Conc. Headwall Removal - 1 Ea. (DS)
 Rem. & Relay P C 42" - 12 Ft. (DS)
 PRC Flared End Sec. 42" - 1 Ea. (DS)
 Place Riprap at DS end - 20 Tons

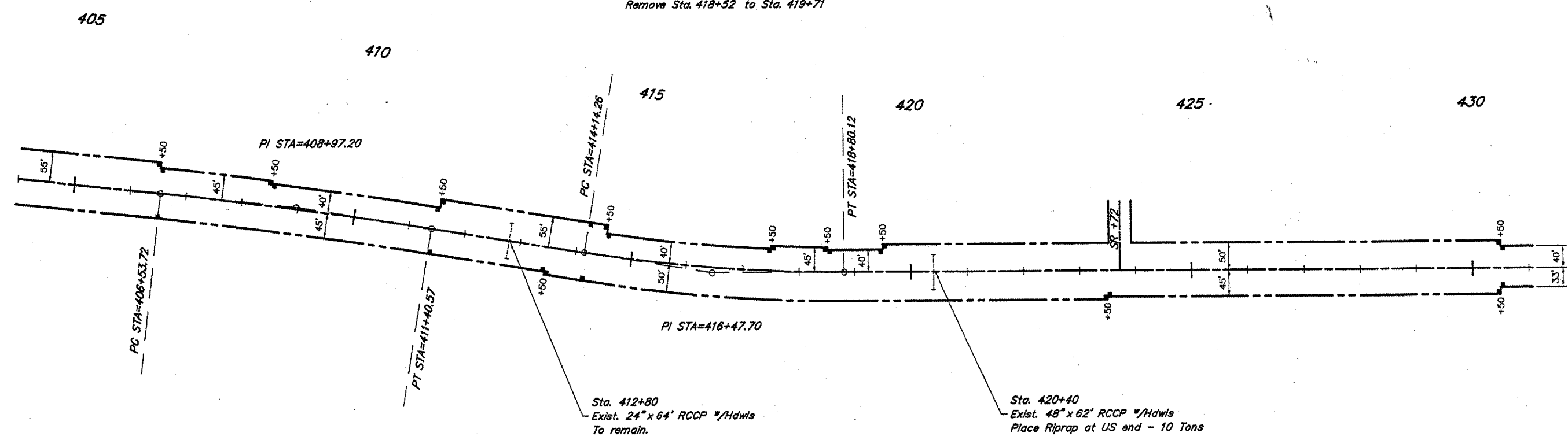
SCALES:
 1" = 200' HOR
 1" = 20' VER



578 PPI2 02/07/07 16:40 RLM

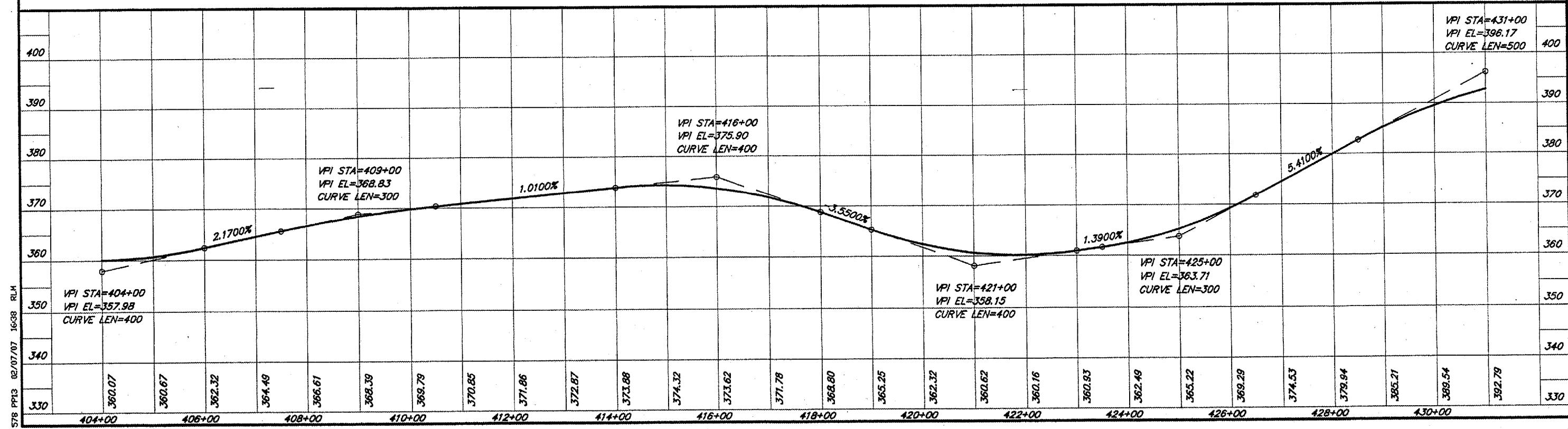
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 938	05-0064-00-RS	PULASKI	32	19
PROJECT NO. RS-HPP-3300 (002)			CONTRACT NO. 99260	

CURVE DATA
 $\Delta = 9^{\circ}19'00''$ $T = 233.44'$
 $D = 2^{\circ}00'00''$ $L = 465.86'$
 $R = 2864.93'$ $E = 9.50'$
 $S.E. = 0.039'/ft.$
 Attain Sta. 413+24 to Sta. 414+43
 Remove Sta. 418+52 to Sta. 419+71



CURVE DATA
 $\Delta = 3^{\circ}05'00''$ $T = 243.48'$
 $D = 0^{\circ}38'00''$ $L = 486.84'$
 $R = 9046.75'$ $E = 3.28'$
 Normal Crown

SCALES:
 1" = 200' HOR
 1" = 20' VER

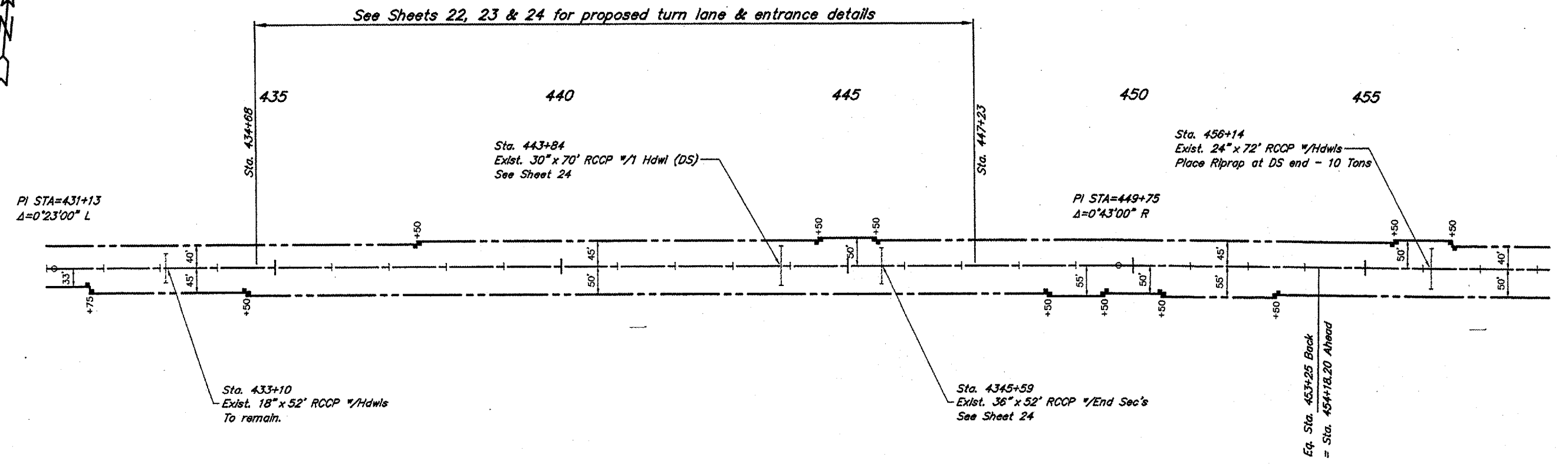


578 PPI3 02/07/07 1638 RLM

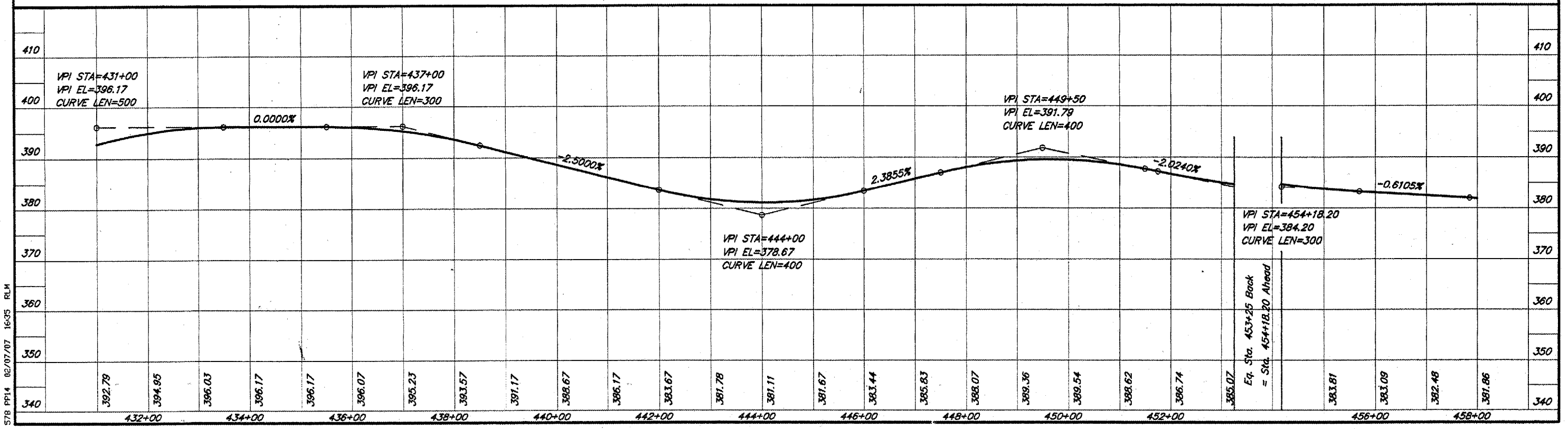
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 938	05-00064-00-RS	PULASKI	32	20
PROJECT NO. RS-HPP-3300 (002)			CONTRACT NO. 99260	



See Sheets 22, 23 & 24 for proposed turn lane & entrance details



SCALES:
 1" = 200' HOR
 1" = 20' VER

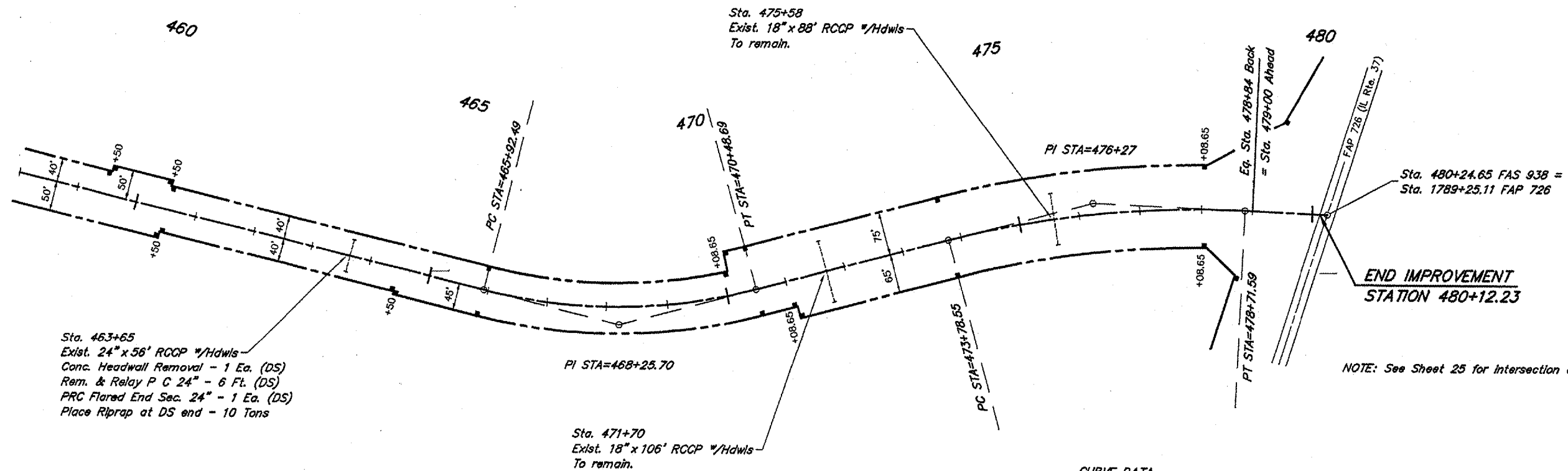


578 P114 02/07/07 16:35 RLM



CURVE DATA
 $\Delta = 29^{\circ}20'00''$ $T = 233.22'$
 $D = 6^{\circ}25'48''$ $L = 456.20'$
 $R = 891.08'$ $E = 30.01'$
 $S.E. = 0.078'/ft.$
 Attain Sta. 464+45 to Sta. 466+49
 Remove Sta. 469+92 to Sta. 471+96

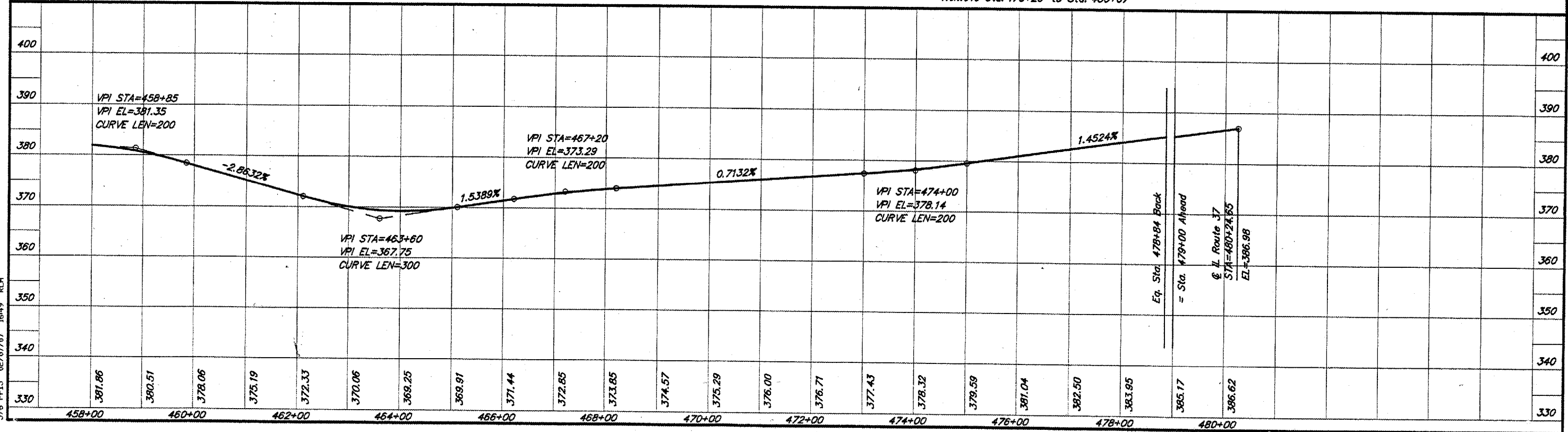
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 938	05-00064-00-RS	PULASKI	32	21
PROJECT NO. RS-HPP-3300 (002)			CONTRACT NO. 99260	



NOTE: See Sheet 25 for intersection details.

SCALES:
 1" = 200' HOR
 1" = 20' VER

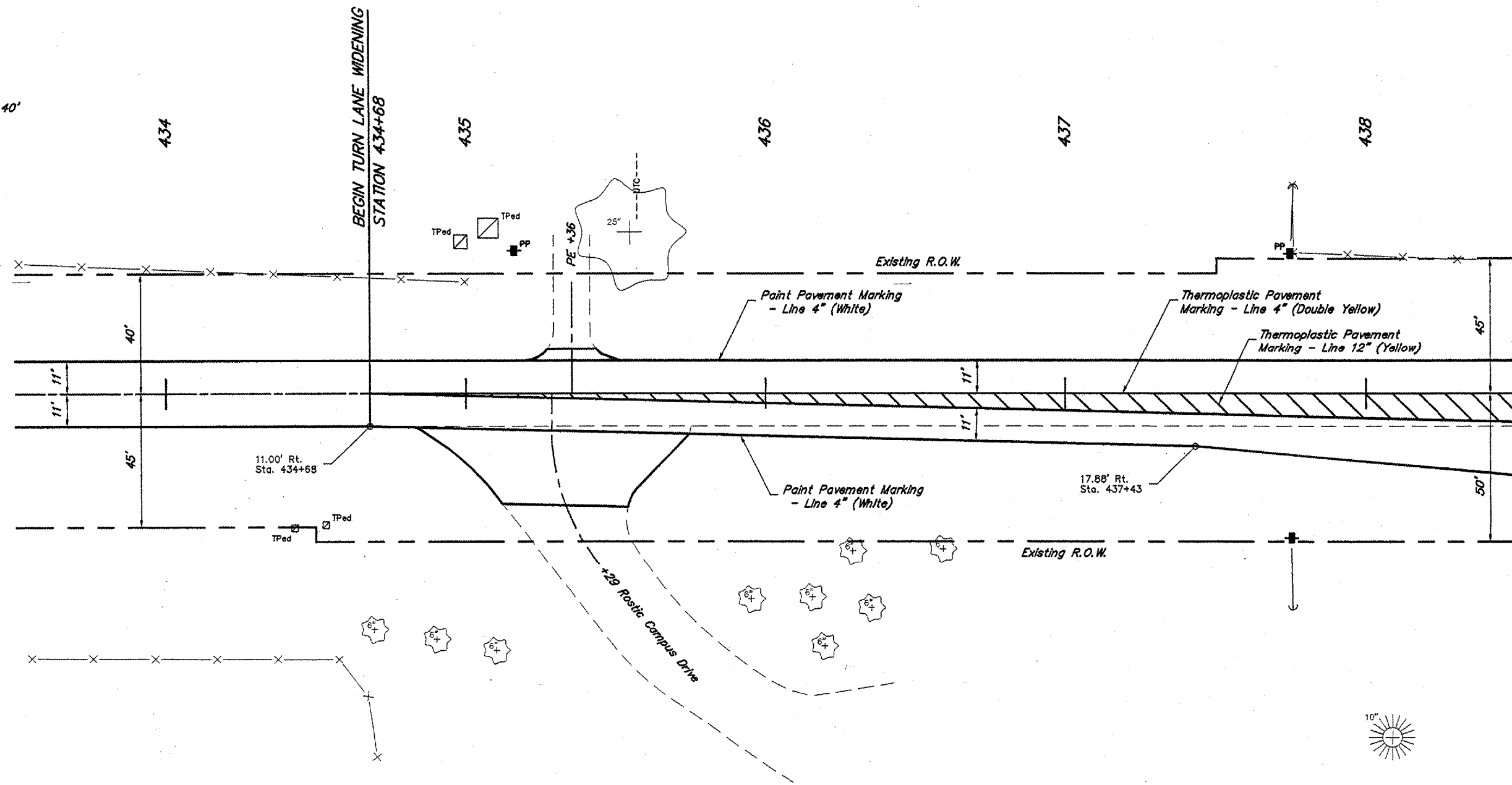
CURVE DATA
 $\Delta = 17^{\circ}30'00''$ $T = 248.45'$
 $D = 3^{\circ}32'58''$ $L = 493.04'$
 $R = 1614.22'$ $E = 19.01'$
 $S.E. = 0.059'/ft.$
 Attain Sta. 472+59 to Sta. 474+22
 Remove Sta. 478+29 to Sta. 480+07



578 PPI5 02/07/07 16:49 RLM

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 938	05-00064-00-RS	PULASKI	32	22
PROJECT NO. RS-HPP-3300 (002)			CONTRACT NO. 99260	

SCALE: 1" = 40'

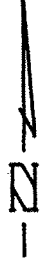


578 TL1 02/07/07 1612 RLM

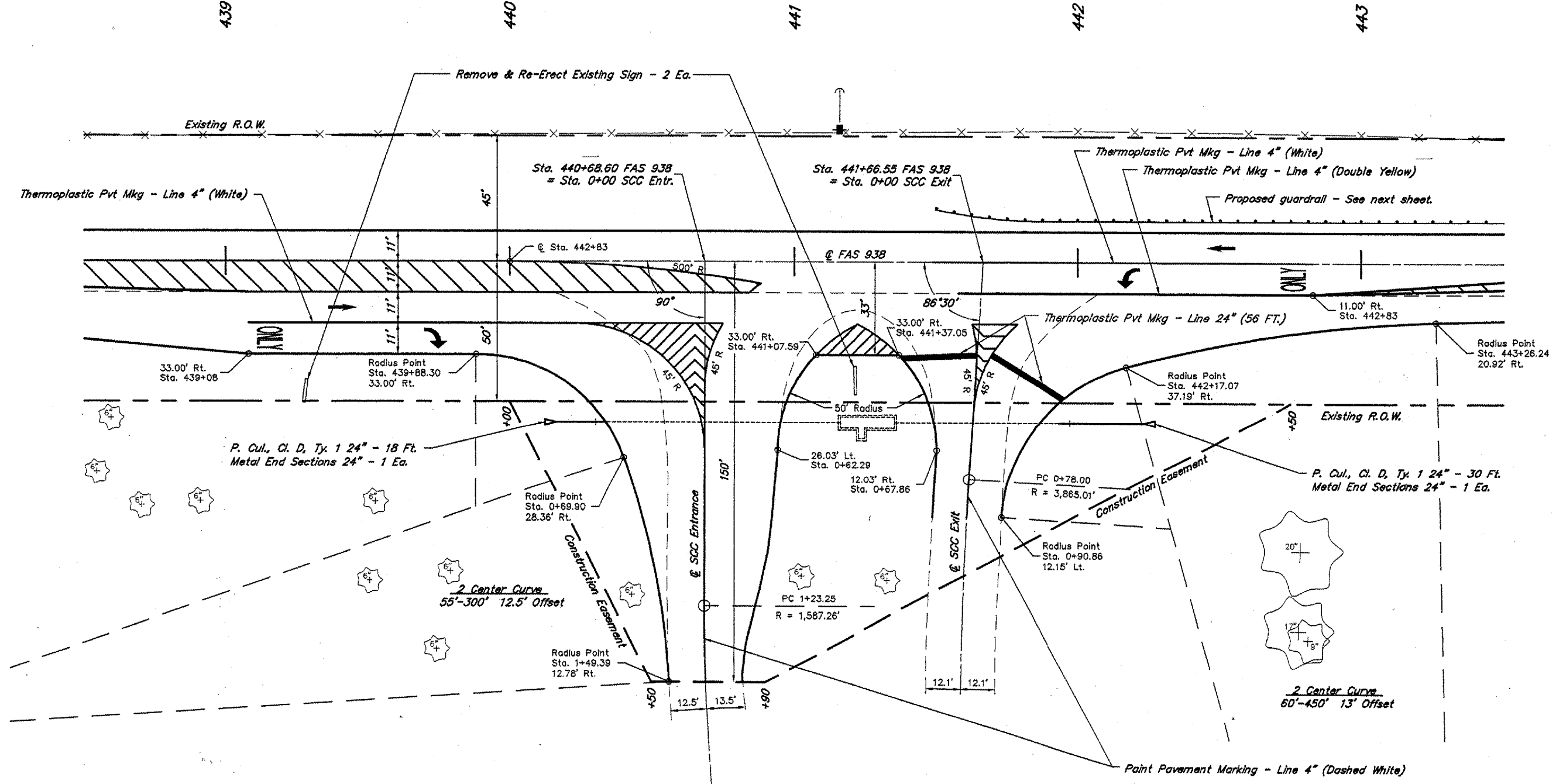
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 938	05-00064-00-RS	PULASKI	32	23
PROJECT NO. RS-HPP-3300 (002)			CONTRACT NO. 99260	

NOTE: Typical Pavement Marking within the limits of the turn lanes shall be as follows:

- Flush Median
 - Exterior Lines: Thermoplastic Pvt Mkg - Line 4" (Double Yellow)
 - Interior Lines: Thermoplastic Pvt Mkg - Line 12" (Yellow)
- Flush Island
 - Exterior Lines: Thermoplastic Pvt Mkg - Line 4" (White)
 - Interior Lines: Thermoplastic Pvt Mkg - Line 12" (White)
- Stop Bars: Thermoplastic Pvt Mkg - Line 24" (White)
- Edge Lines: Paint Pavement Marking - Line 4" (White)
- Other lines shall be as labeled.



SCALE: 1" = 40'



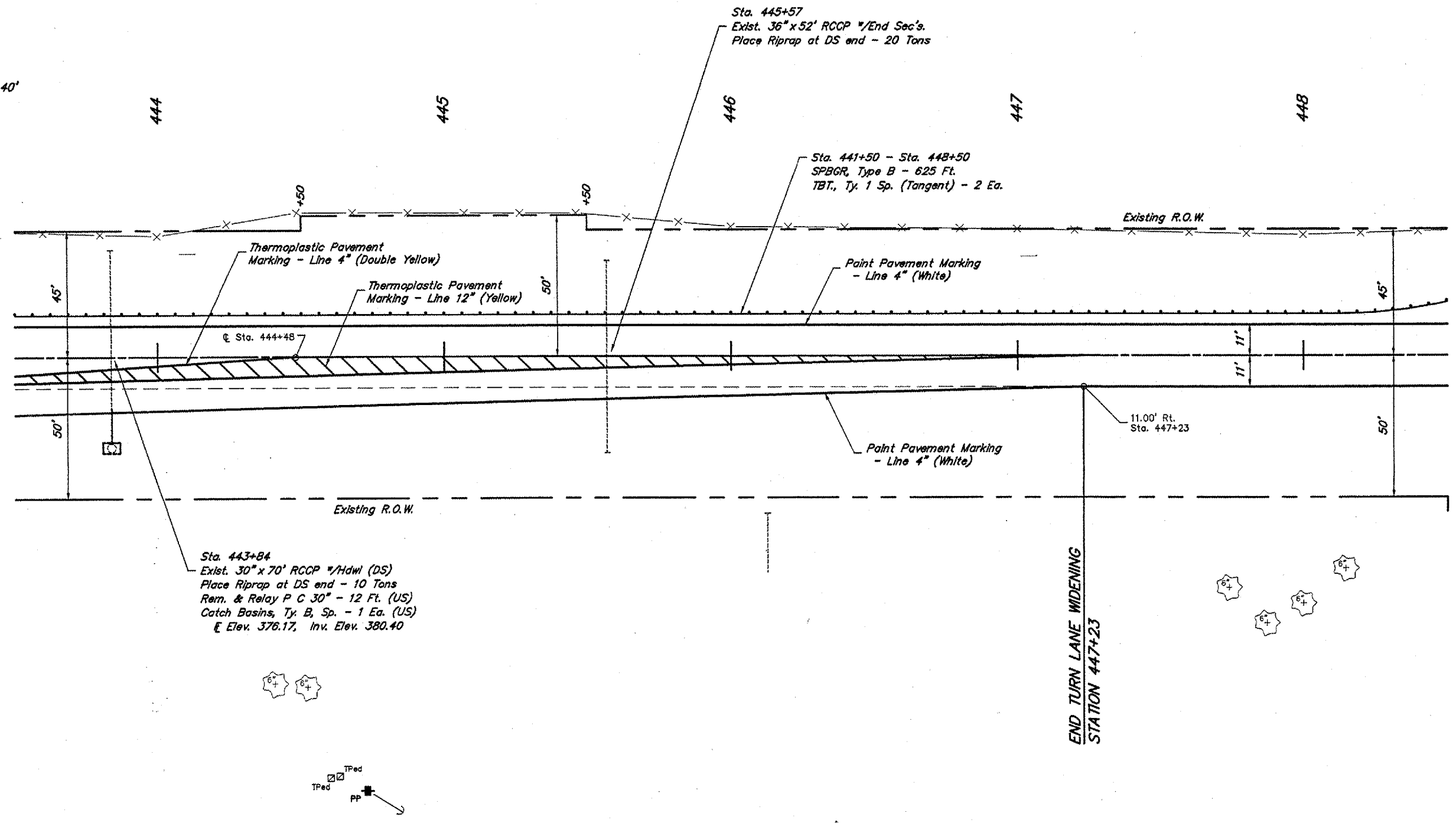
578 TL2 02/16/07 16:15 RLM

TURN LANE DETAILS

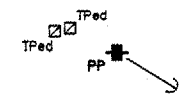
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 938	05-00064-00-RS	PULASKI	32	24
PROJECT NO. RS-HPP-3300 (002)			CONTRACT NO. 99260	



SCALE: 1" = 40'



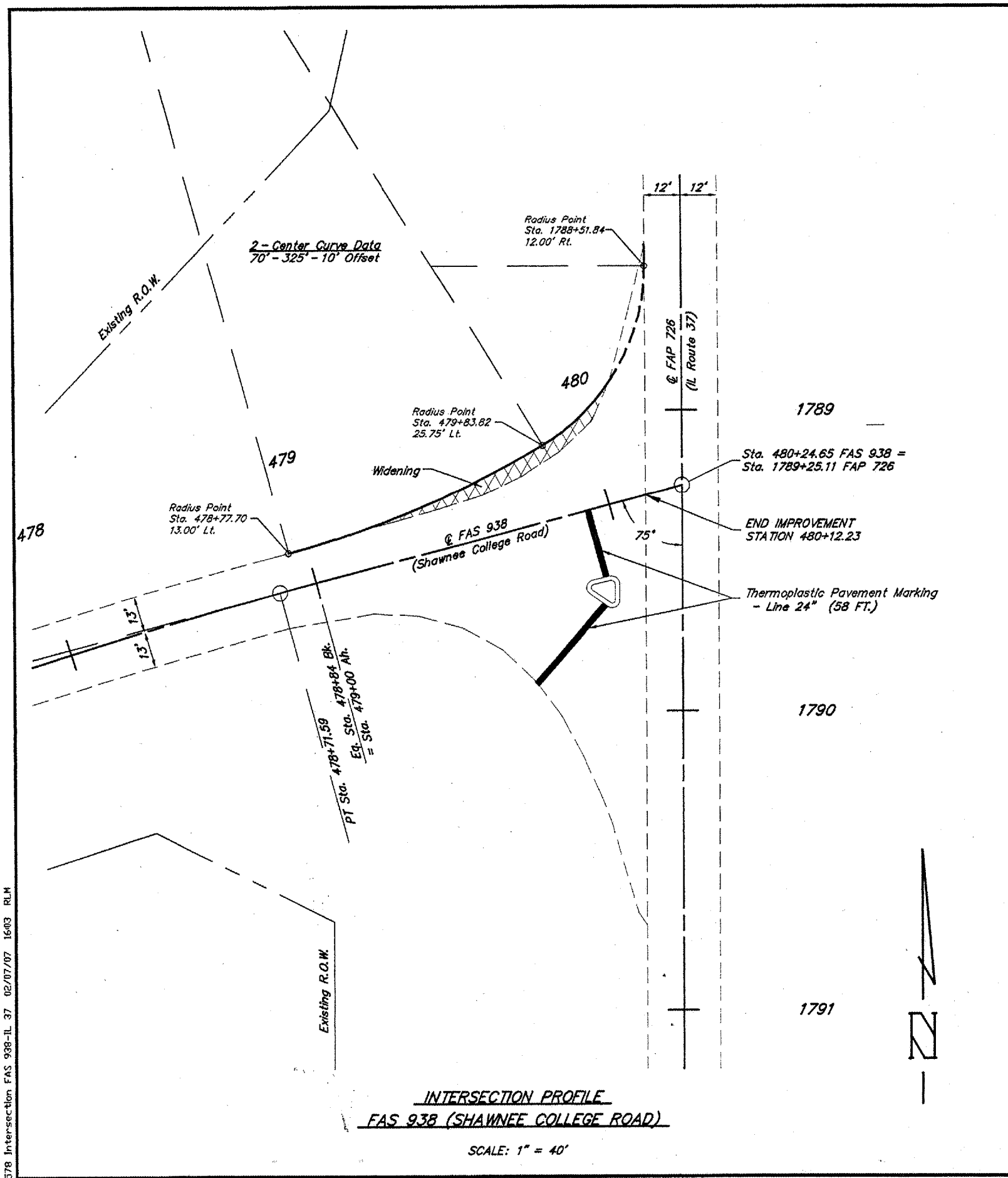
END TURN LANE WIDENING
STATION 447+23



TURN LANE DETAILS

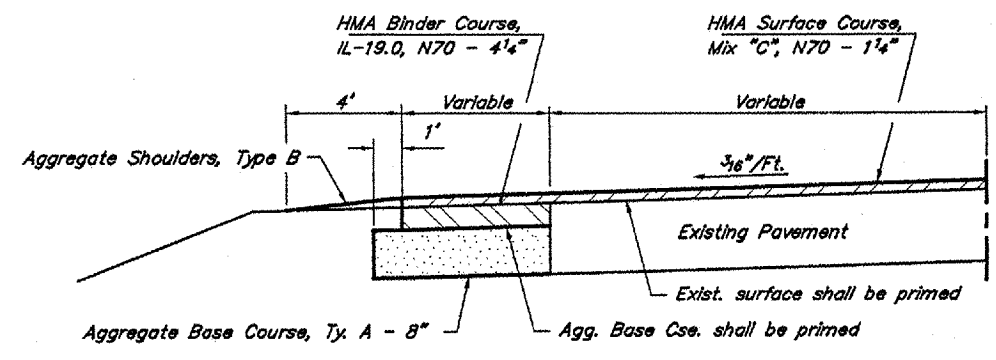
578 TL3 02/07/07 16:06 RLM

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 938	05-00064-00-RS	PULASKI	32	25
PROJECT NO. RS-HPP-3300 (002)			CONTRACT NO. 99260	

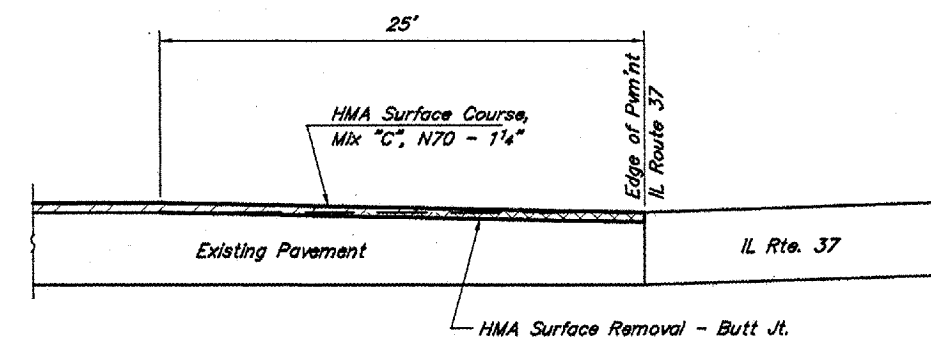


**INTERSECTION PROFILE
FAS 938 (SHAWNEE COLLEGE ROAD)**

SCALE: 1" = 40'



**INTERSECTION PAVING & WIDENING DETAIL
FAS 938 (SHAWNEE COLLEGE ROAD)**



**INTERSECTION PROFILE
FAS 938 (SHAWNEE COLLEGE ROAD)**

578 Intersection FAS 938-IL 37 02/07/07 16:03 RLM

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 938	05-00064-00-RS	PULASKI	32	26
PROJECT NO. RS-HPP-3300 (002)			CONTRACT NO. 99260	

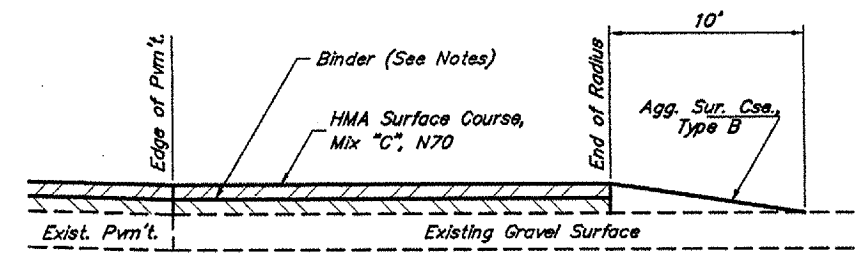
Angle of Intersection	Side Road		Private Entrance	
	Acute L.	Obtuse L.	Acute L.	Obtuse L.
	90° - 80°	25'	25'	15'
79° - 70°	25'	40'	15'	25'
69° - 60°	25'	60'	15'	35'
59° - 50°	20'	75'	10'	40'
49° - 40°	20'	100'	10'	60'
39° - 30°	15'	150'	10'	100'

NOTES

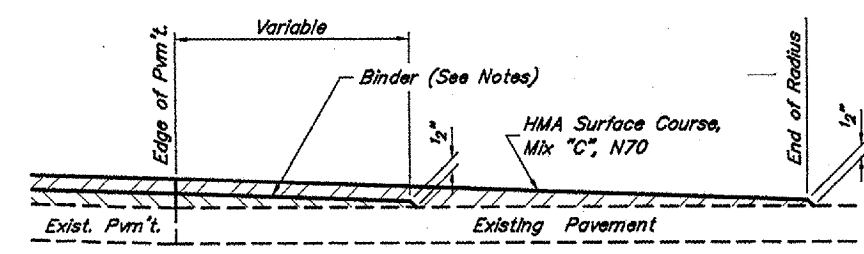
Thickness of binder (if applicable) and surface course shall be equal to the mainline resurfacing.

Where hot-mix asphalt is to be placed, the existing surface shall be primed.

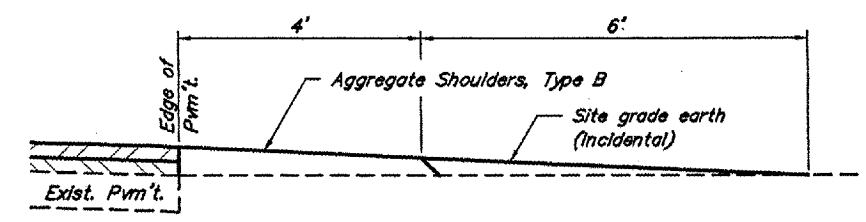
The actual number, and locations, of entrances and side roads shall be determined in the field by the Engineer.



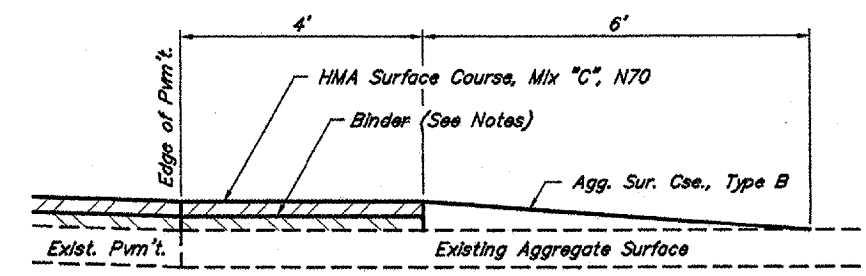
SECTION A-A SIDE ROAD - AGGREGATE
(Est. No. = 0)



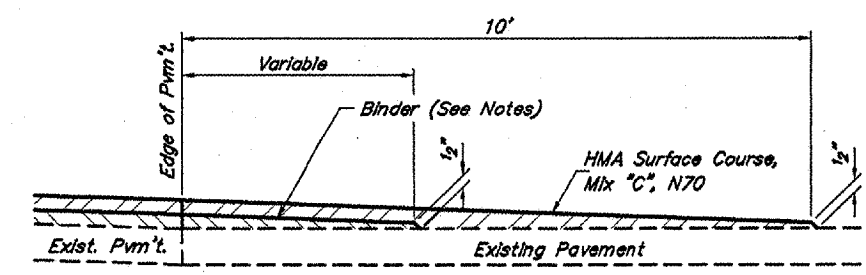
SECTION B-B SIDE ROAD - ASPHALT
(Est. No. = 9)



SECTION A-A FIELD ENTRANCE
(Est. No. = 49)



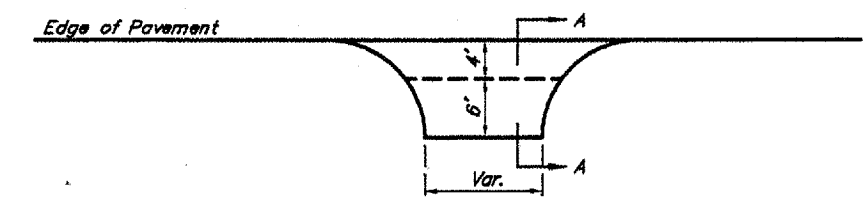
SECTION A-A PRIVATE ENTRANCE - AGGREGATE
(Est. No. = 38)



SECTION A-A PRIVATE ENTRANCE - ASPHALT
(Est. No. = 8)



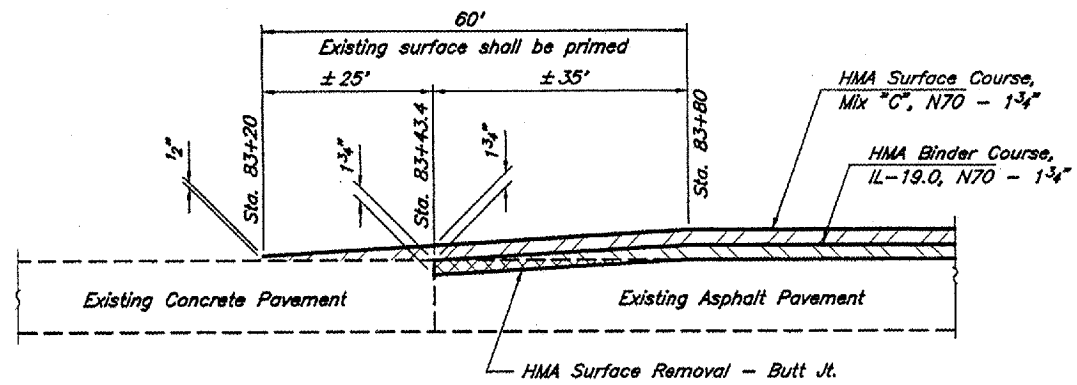
TYPICAL SIDE ROAD DETAILS



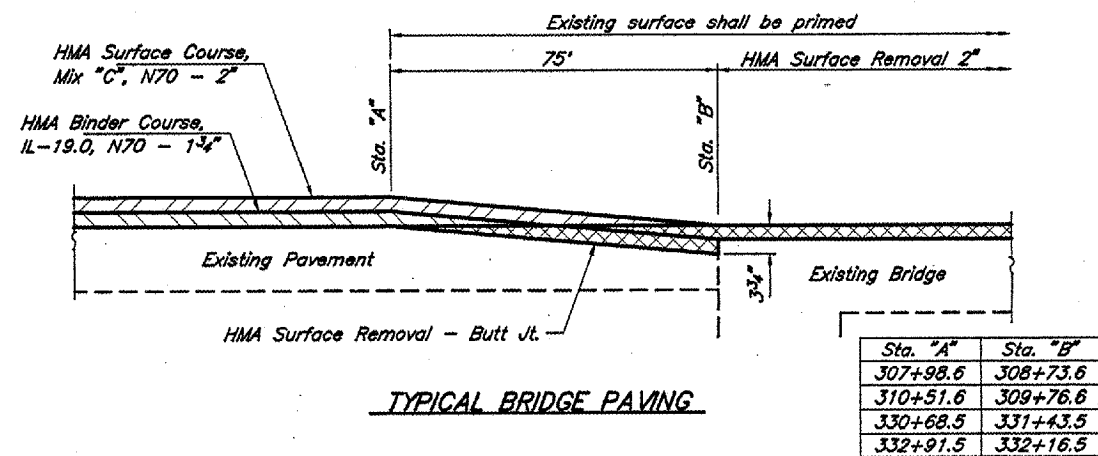
TYPICAL ENTRANCE DETAILS

578 Ent-SR 02/07/07 1547 RLM

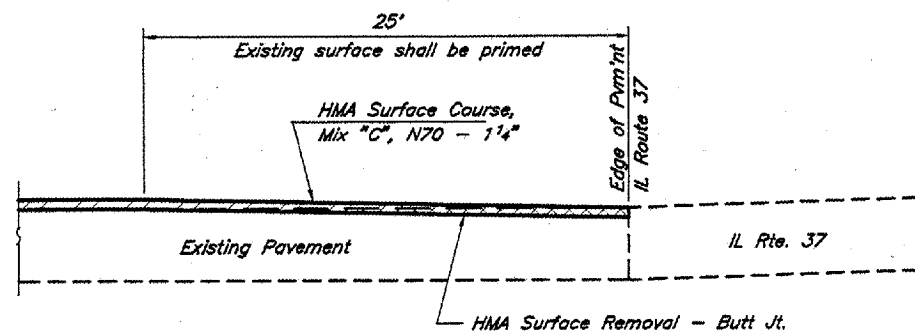
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 938	05-00064-00-RS	PULASKI	32	27
PROJECT NO. RS-HPP-3300 (002)			CONTRACT NO. 99260	



BEGINNING BUTT JOINT



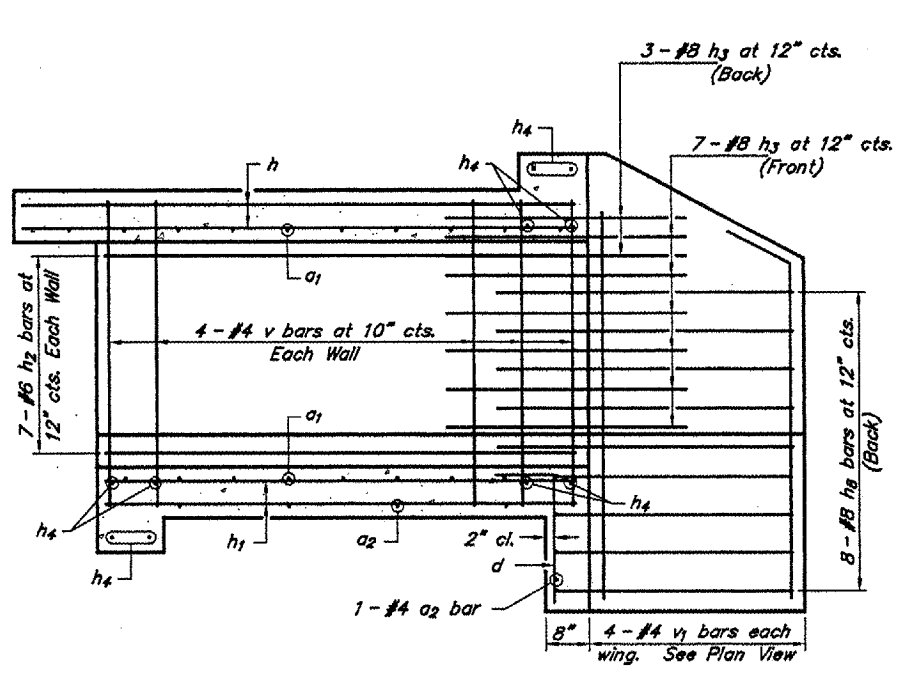
TYPICAL BRIDGE PAVING



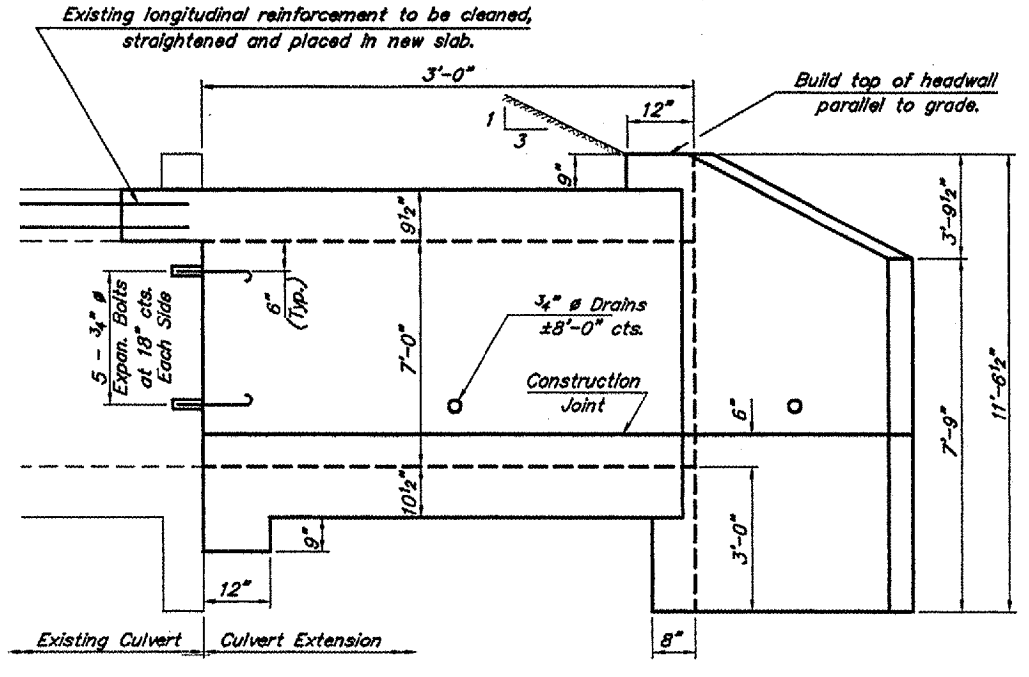
ENDING BUTT JOINT

578 MDet 02/07/07 1544 RLM

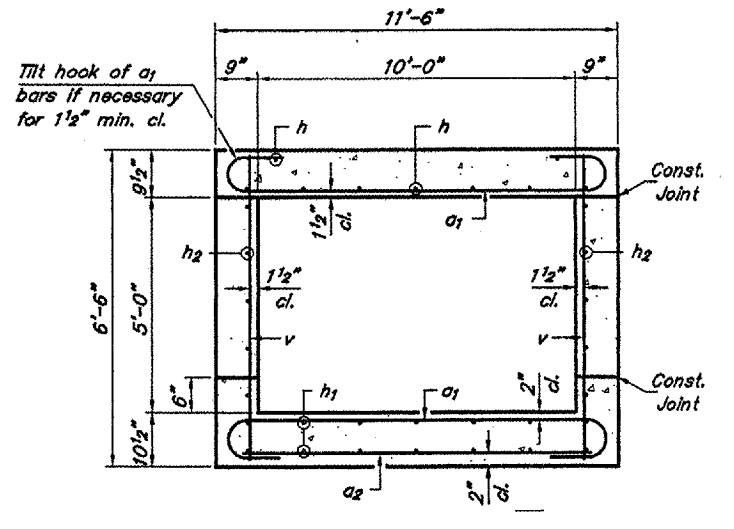
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 93B	05-00064-00-RS	PULASKI	32	28
PROJECT NO. RS-HPP-3300 (002)		CONTRACT NO. 99260		



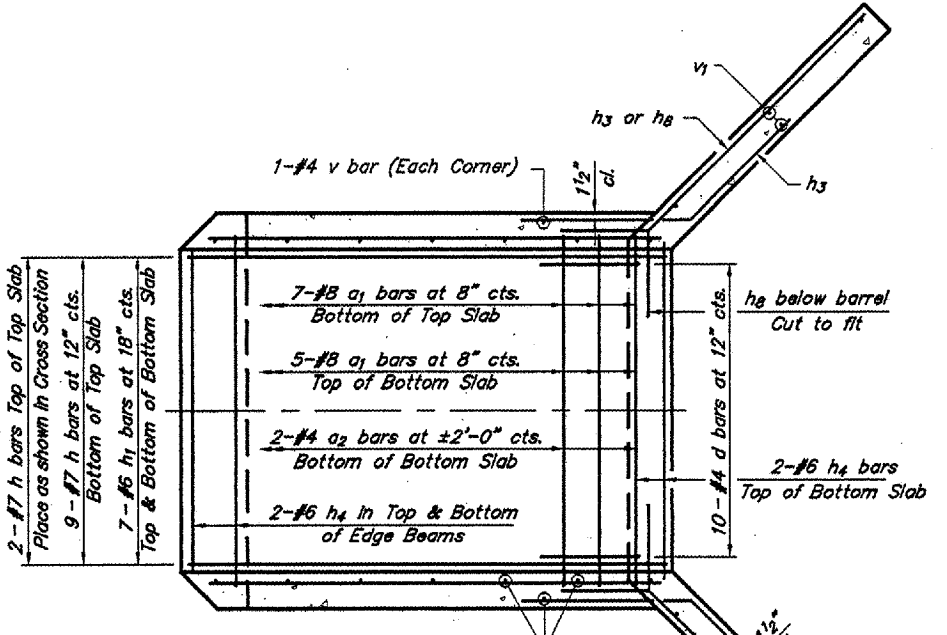
SHOWING REINFORCEMENT



SHOWING OUTLINE



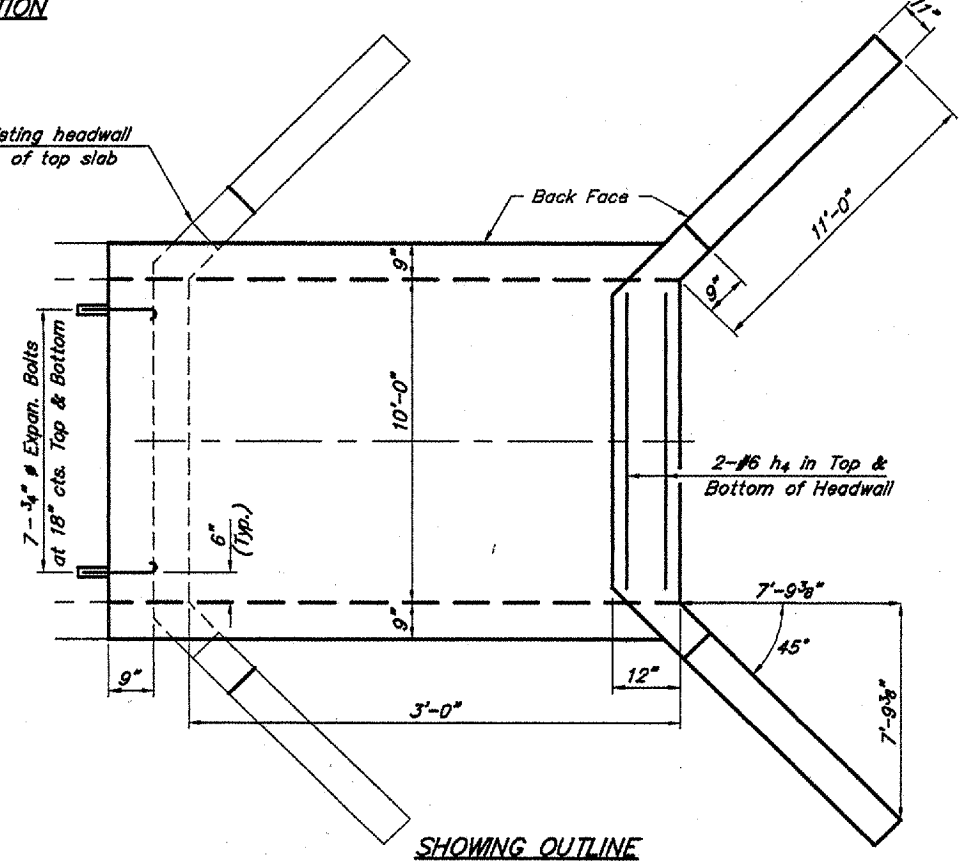
SECTION THRU BARREL



SHOWING REINFORCEMENT

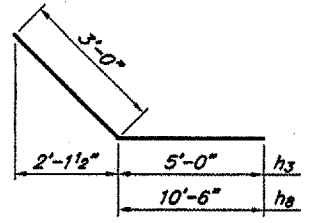
ELEVATION

Remove existing headwall and portion of top slab as shown.

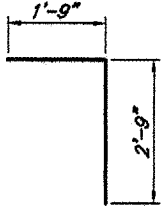


SHOWING OUTLINE

PLAN



BARs h3 & h8



BAR d

BILL OF MATERIAL
(One Extension)

Bar	No.	Size	Length
a1	12	#8	12'-8"
a2	3	#4	10'-3"
d	10	#4	4'-6"
h	11	#7	4'-5"
h1	14	#6	2'-8"
h2	14	#6	2'-8"
h3	20	#8	8'-0"
h4	10	#6	10'-6"
h8	16	#8	13'-6"
v	10	#4	8'-4"
v1	8	#4	10'-6"
Conc. Box Culverts			Cu. Yds. 12.6
Reinforcement Bars			Lbs. 1950
Expansion Bolts			Each 24

NOTES

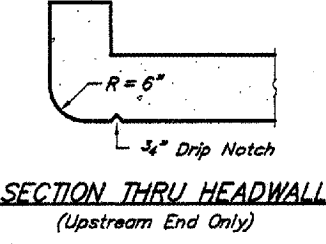
Barrel shall be poured monolithically with wingwalls. Exposed edges shall be beveled 3/4". Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53, Grade 60. Expansion bolts shall consist of self drilling expansion shields and 3/4" hooked bolts. Bolts shall extend a minimum of 9" into new concrete.

DESIGN STRESSES

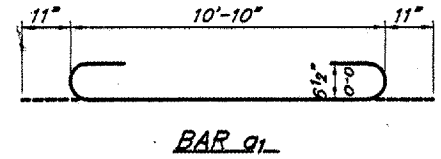
fy = 60,000 psi
fc = 3,500 psi

LOADING HS 20-44 & ALT.

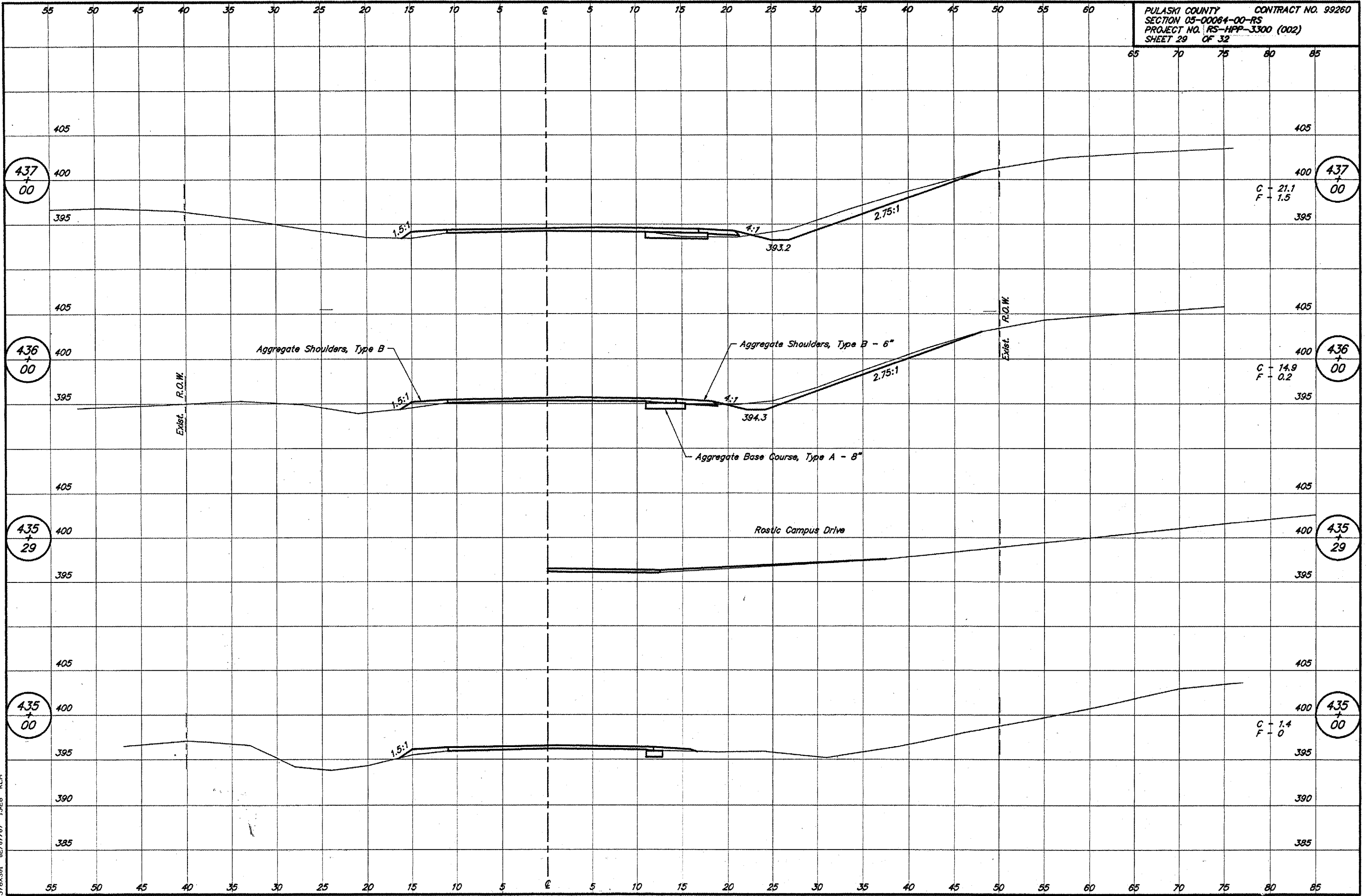
BOX CULVERT EXTENSION
STATION 172+52 LT. & RT.
FAS ROUTE 93B
SECTION 05-00064-00-RS
PROJECT NO. HPP-3300
PULASKI COUNTY



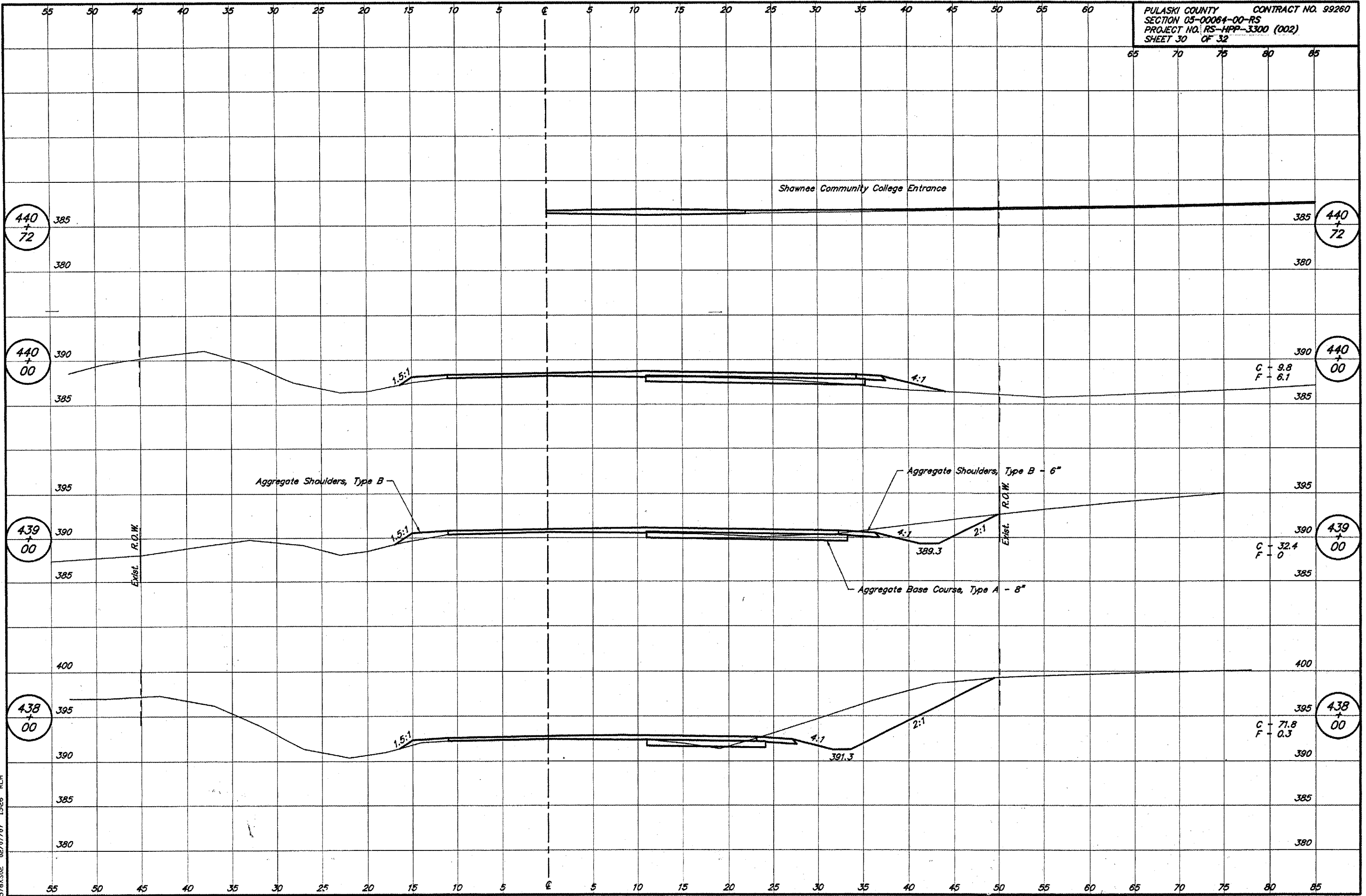
SECTION THRU HEADWALL
(Upstream End Only)



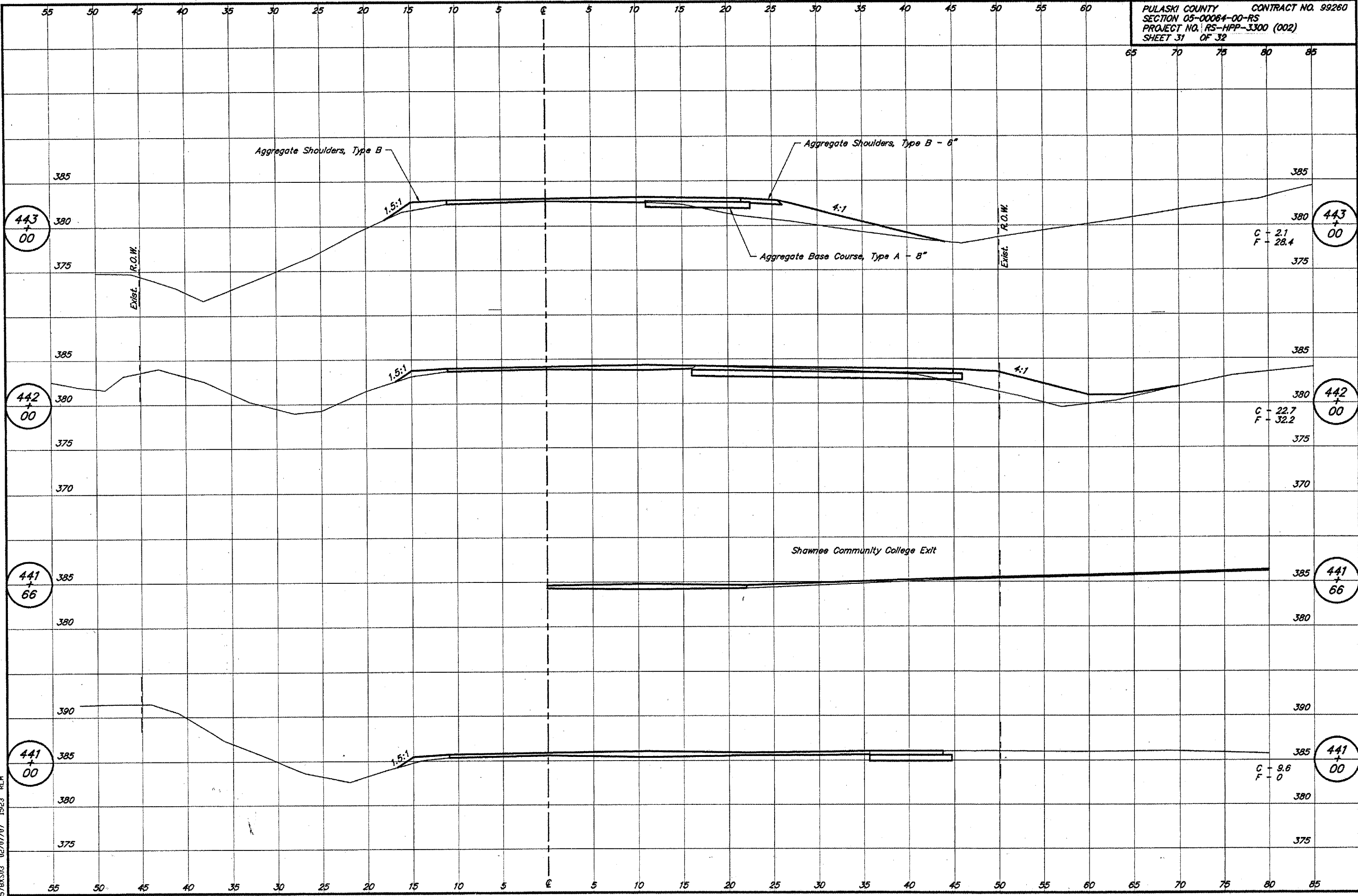
BAR a1



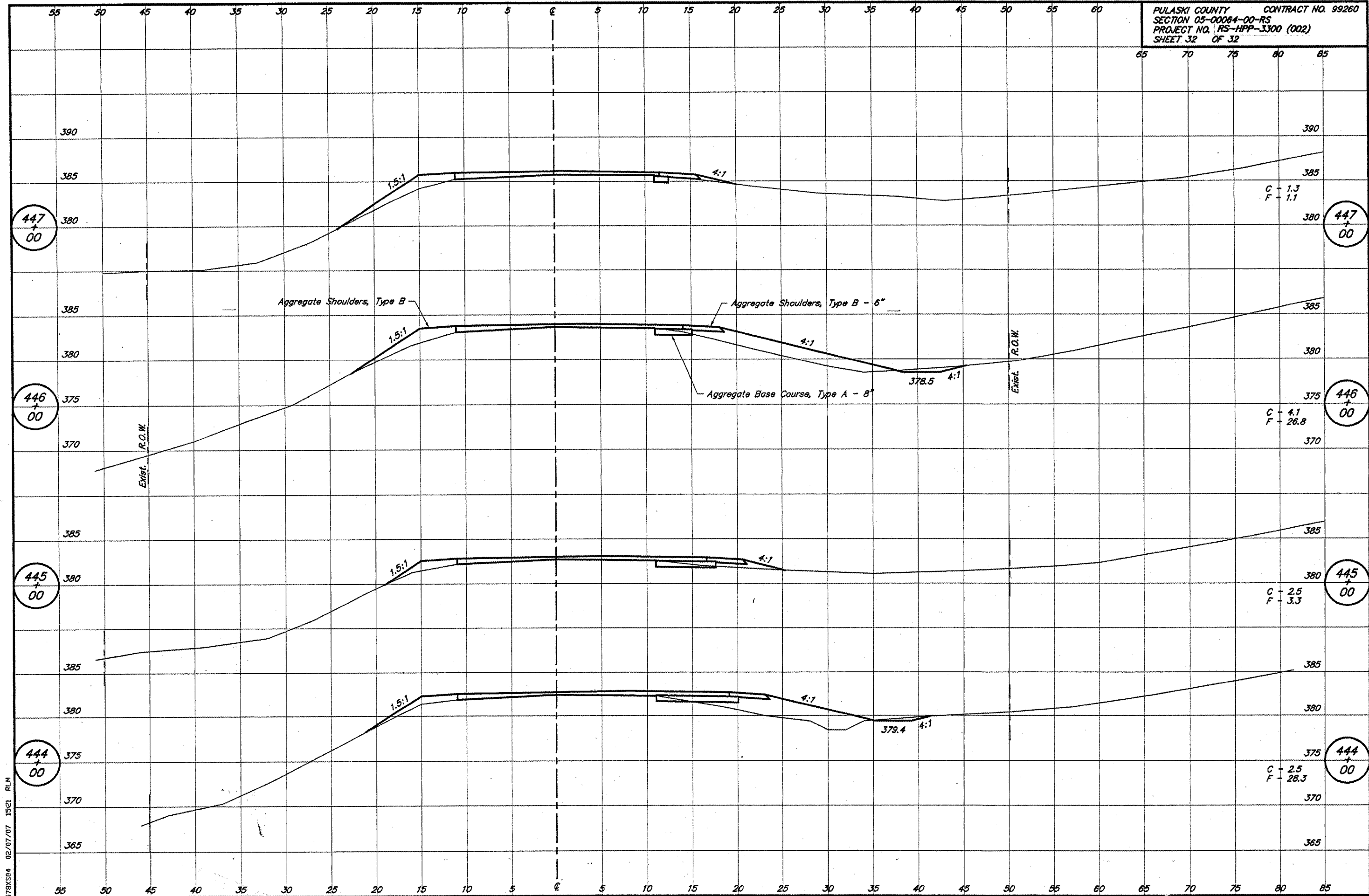
578XS01 02/07/07 15228 RLM



578X502 02/07/07 15226 RLM



57BX503 02/07/07 1523 RLM



579XS04 02/07/07 1521 RLM

447
+
00

447
+
00

446
+
00

446
+
00

445
+
00

445
+
00

444
+
00

444
+
00

C - 1.3
F - 1.1

C - 4.1
F - 26.8

C - 2.5
F - 3.3

C - 2.5
F - 28.3

Exist. R.O.W.

Aggregate Shoulders, Type B

Aggregate Shoulders, Type B - 6"

Aggregate Base Course, Type A - 8"

1.5:1

4:1

1.5:1

4:1

378.5

1.5:1

4:1

1.5:1

4:1

379.4