

MID-COUNTY PLAZA HIGHWAY OCCUPANCY PERMIT

PennDOT EPS #42543

PAVEMENT DESIGN REPORT

IN

MARPLE TOWNSHIP
DELAWARE COUNTY

Prepared for

Marple Associates, Inc

November 5, 2013
Revised January 15, 2014

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PAVEMENT DESIGN

EXECUTIVE SUMMARY

Project: Mid-County Plaza Mixed Use Development off of Langford Run Road in Marple Township, Delaware County. Project is adjacent to the southwest quadrant of the I-476/Route 3 interchange. Expected traffic will the addition of lanes, a new signal, and modifications to an existing signal on Route 3 at the interchange.

Roadways:

- SR 0003, Segment 0120, Offset 2106 to Offset 3451, and Segment 0121, Offset 2122 to Offset 3467.
- SR 8037, Segment 0510, Offset 0000 to Offset 1300 and SR 8073, Segment 0520, Offset 0000 to Offset 0545.
- Langford Run Road, a local road.

Proposed Pavement Lengths

- SR 0003, West Chester Pike
 - o Addition of 735 feet long left turn lane for SR 0003 westbound to Langford Run Road consisting of 75 feet entrance taper, 600 feet lane, and 60 feet exit taper, and
 - o 840 feet lengthening of the left lane for SR 0003 eastbound consisting of 100 feet entrance taper and 740 feet of lane.
- SR 8037 Segment 0501, Ramp S-WC Spur
 - o 690 feet reconfiguration of crown, shoulder to lane, restriping, and widening, and
- SR 8037, Segment 0520, Ramp S-WC
 - o Removal of 960 feet of ramp to westbound SR 0003 including the acceleration taper.
- Langford Run Road
 - o 605 feet of widening consisting of 330 feet of 23 feet to 24.6 feet widening and 275 feet of gradual taper to existing roadway.

Existing Pavement

- SR 0003, West Chester Pike
 - o Superpave Asphalt Mixture Design, HMA Wearing Course, 12.5 MM Mix, 3 ½" Depth on
 - o Reinforced Concrete Pavement, 10" thick, on
 - o Subbase, 8" Depth. In good condition.
- SR 8037, Ramp S-WC and Ramp S-WC Spur
 - o Superpave Asphalt Mixture Design, HMA Wearing Course, PG 64-22, 10 to <30 Million ESALs, 9.5 MM Mix, 1 ½" Depth, SRL-E, on
 - o Bituminous Binder Course ID-2, 5" Depth, on
 - o Bituminous Concrete Base Course, 8.5" Depth, on
 - o Subbase 8" Depth. In good condition
- Langford Run Road
 - o Superpave Asphalt Mixture Design, HMA Wearing Course, PG 64-22, 3 to 10 Million ESALs, 9.5 MM Mix, 1 ½" Depth SRL-H, on
 - o Superpave Asphalt Mixture Design, HMA Binder Course, PG 64-22, 3 to 10 Million ESALs, 19 MM Mix, 2" Depth, on

- o Superpave Asphalt Mixture Design, HMA Base Course, PG 64-22, 3 to 10 Million ESALs, 37.5 MM Mix, 6" Depth, on
- o Subbase, 6" Depth. In good condition.

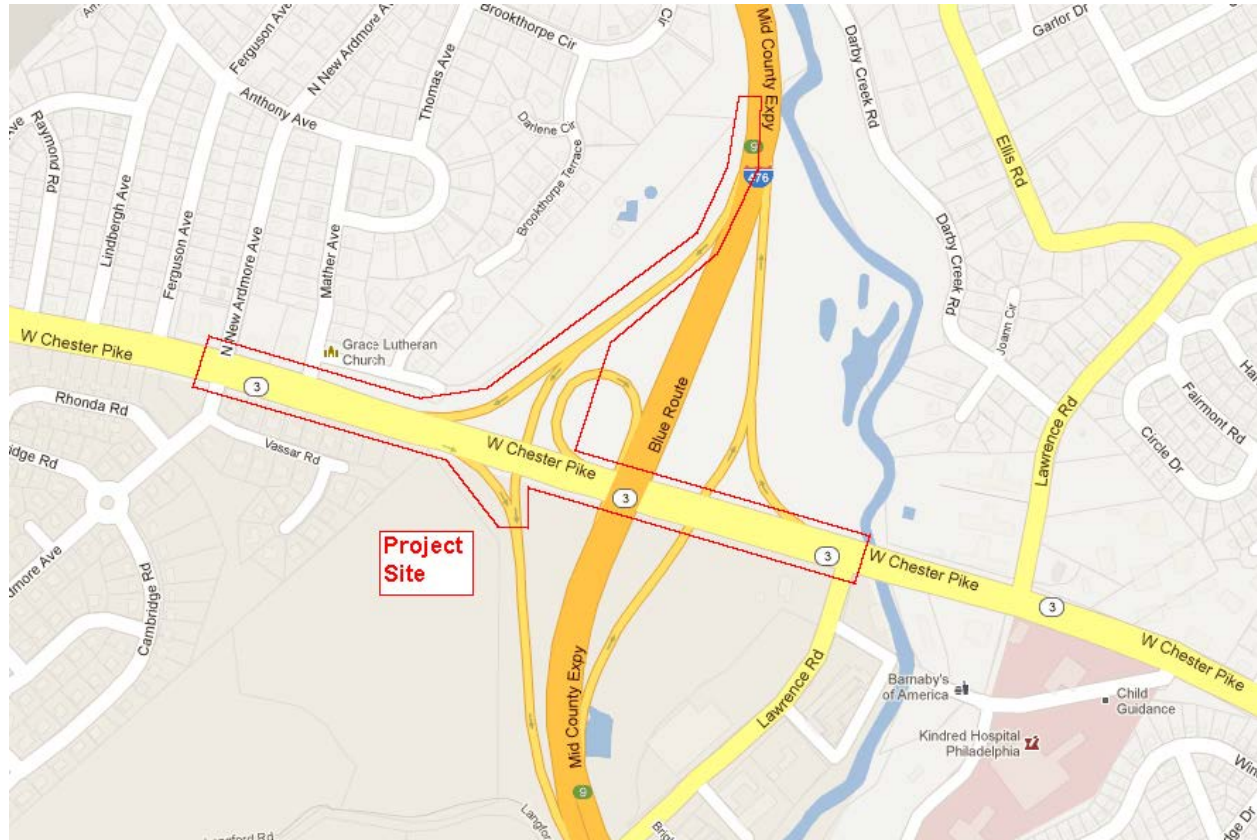
Recommended Pavement Sections:

- SR 0003, West Chester Pike:
 - o Superpave Asphalt Mixture Design, HMA Wearing Course, PG 64-22, 3 to <10 Million ESALs, 12.5 MM Mix, 2" Depth, SRL-E,
 - o Superpave Asphalt Mixture Design, HMA Wearing Course (Leveling), PG 64-22, 3 to <10 Million ESALs, 12.5 MM Mix, 1 ½" Depth, SRL-E,
 - o Reinforced Cement Concrete Pavement, 10" Depth,
 - o Subbase, 8" Depth
- SR 8037, Ramp S-WC Spur
 - o Superpave Asphalt Mixture Design, HMA Wearing Course, PG 64-22, 10 to <30 Million ESALs, 9.5 MM Mix, 1 ½" Depth, SRL-E,
 - o Superpave Asphalt Mixture Design, HMA Binder Course (Leveling), PG 64-22, 10 to <30 Million ESALs, 19 MM Mix, (Build-up Areas),
 - o Superpave Asphalt Mixture Design, HMA Binder Course, PG 64-22, 10 to <30 Million ESALs, 19 MM Mix, 5" Depth,
 - o Superpave Asphalt Mixture Design, HMA Base Course, PG 64-22, 10 to <30 Million ESALs, 37.5 MM Mix, 8 ½" Depth,
 - o Subbase, 8" Depth (No. 2A).
- Langford Run Road
 - o Superpave Asphalt Mixture Design, HMA Wearing Course, PG 64-22, 3 to 10 Million ESALs, 9.5 MM Mix, 1 ½" Depth, SRL-H,
 - o Superpave Asphalt Mixture Design, HMA Binder Course, PG 64-22, 3 to 10 Million ESALs, 19 MM Mix, 2" Depth,
 - o Superpave Asphalt Mixture Design, HMA Base Course, PG 64-22, 3 to 10 Million ESALs, 37.5 MM Mix, 6" Depth,
 - o Subbase, 6" Depth (No. 2A).

INTRODUCTION

National Realty Corporation proposes to construct a mixed use retail, office, and residential development on Langford Run Road in Marple Township, Delaware County. As part of the development, a left turn lane will be added to SR 0003, West Chester Pike, a thru-lane will be lengthened on SR 0003, SR 8037, the southbound off-ramp from I-476, Blue Route, to SR 0003, will be widened and reconfigured, and Langford Run Road will be widened.

Project Location:



To accommodate the proposed retail development, the eastbound left through lane on SR 0003 will be lengthened. And, a left turn lane for westbound SR 0003 is proposed at the proposed signal for Langford Run Road.

Additionally, on SR 8037 (Ramp S-WC), the I-476 southbound off-ramp, the westbound leg of the ramp will be removed and the eastbound leg (Ramp S-WC Spur) will be widened and restriped include left and right turn movements onto SR 0003 at a single intersection.

Langford Run Road, a local road, will also be widened. Langford Run Road intersects SR 0003 680 feet west of the existing signalized intersection of Ramp S-WC Spur with SR 0003.

A new signal with adaptive signal control will be added to the intersection of SR 0003 and Langford Run Road and the existing signal at the intersection of Ramp S-WC Spur and SR 0003 will be reconfigured with adaptive signal control.

SR 0003, West Chester Pike, is a two lane divided Urban-Other Principal Arterial highway, SR 8037, the interchange Ramps, are Urban-Interstate, and Langford Run Road is a local road.

The retail development site is an undeveloped parcel that is currently forested adjacent to the southwest quadrant of the I-476/SR 0003 interchange.

Existing Pavement Structures:

- SR 0003, West Chester Pike:
 - o Superpave Asphalt Mixture Design, HMA Wearing Course, 12.5 MM Mix, 3 ½" Depth, Typ.
 - o Reinforced Cement Concrete Pavement, 10" Thick, Typ.
 - o Subbase, 8" Depth
- SR 8037, Ramp S-WC and Ramp S-WC Spur
 - o Superpave Asphalt Mixture Design, HMA Wearing Course, PG 64-22, 10 to <30 Million ESALs, 9.5 MM Mix, 1 ½" Depth, SRL-E,
 - o Bituminous Binder course ID-2, 5.0" Depth,
 - o Bituminous Concrete Base Course, 8.5" Depth,
 - o Subbase, 8" Depth.
- Langford Run Road
 - o Superpave Asphalt Mixture Design, HMA Wearing Course, PG 64-22, 3 to 10 Million ESALs, 9.5 MM Mix, 1 ½" Depth, SRL-H,
 - o Superpave Asphalt Mixture Design, HMA Binder Course, PG 64-22, 3 to 10 Million ESALs, 19 MM Mix, 2" Depth,
 - o Superpave Asphalt Mixture Design, HMA Base Course, PG 64-22, 3 to 10 Million ESALs, 37.5 MM Mix, 6" Depth,
 - o Subbase, 6" Depth (No. 2A).

Sources of existing pavements:

- SR 0003, West Chester Pike:
 - o Plans for Legislative Route 1010, Section 500 by the Delta Group, May 22, 1987, Approved June 8, 1987, Project Nos. 008-4768-084 and 044-4768-085 and
 - o Roadway Management Information System
- SR 8037, Ramp S-WC and Ramp S-WC Spur
 - o Roadway Management Information System
- Langford Run Road
 - o Site Development Plans

RECOMMENDATIONS

Proposed widened pavements will match the depths of the existing pavements for cross section continuity.

- SR 0003, West Chester Pike:
 - o Superpave Asphalt Mixture Design, HMA Wearing Course, PG 64-22, 3 to <10 Million ESALs, 12.5 MM Mix, 2" Depth, SRL-E,
 - o Superpave Asphalt Mixture Design, HMA Wearing Course (Leveling), PG 64-22, 3 to <10 Million ESALs, 12.5 MM Mix, 1 ½" Depth, SRL-E,
 - o Reinforced Cement Concrete Pavement, 10" Depth,
 - o Subbase, 8" Depth

- SR 8037, Ramp S-WC
 - o Superpave Asphalt Mixture Design, HMA Wearing Course, PG 64-22, 10 to <30 Million ESALs, 9.5 MM Mix, 1 ½" Depth, SRL-E,
 - o Superpave Asphalt Mixture Design, HMA Binder Course (Leveling), PG 64-22, 10 to <30 Million ESALs, 19 MM Mix, (Build-up Areas),
 - o Superpave Asphalt Mixture Design, HMA Binder Course, PG 64-22, 10 to <30 Million ESALs, 19 MM Mix, 5" Depth,
 - o Superpave Asphalt Mixture Design, HMA Base Course, PG 64-22, 10 to <30 Million ESALs, 37.5 MM Mix, 8 ½" Depth,
 - o Subbase, 8" Depth (No. 2A).
- Langford Run Road
 - o Superpave Asphalt Mixture Design, HMA Wearing Course, PG 64-22, 3 to10 Million ESALs, 9.5 MM Mix, 1 ½" Depth, SRL-H,
 - o Superpave Asphalt Mixture Design, HMA Binder Course, PG 64-22, 3 to10 Million ESALs, 19 MM Mix, 2" Depth,
 - o Superpave Asphalt Mixture Design, HMA Base Course, PG 64-22, 3 to10 Million ESALs, 37.5 MM Mix, 6" Depth,
 - o Subbase, 6" Depth (No. 2A).

Appendix A

Existing Plans Existing Pavement RMS



COMMONWEALTH OF PENNSYLVANIA



DEPARTMENT OF TRANSPORTATION

DRAWINGS
FOR
CONSTRUCTION
OFLEG. ROUTE 1010 SECTION 500IN DELAWARE COUNTY

Southbound @ From Sta. 462+80.30 To Sta. 694+30.00
Northbound @ From Sta. 462+73.56 To Sta. 693+71.32 Length 23283.28 Ft. 4.410 Mi.

ALSO:

LEG. ROUTE 133 SPUR A SECTION 2From Sta. 75+00.00 To Sta. 78+00.86LEG. ROUTE 23050 SECTION 500From Sta. 0+00.00 To Sta. 11+00.00LEG. ROUTE 23084 SECTION 500From Sta. 48+00.00 To Sta. 54+36.00LEG. ROUTE 23058 SECTION 500From Sta. 1+00.00 To Sta. 24+00.00LEG. ROUTE 133 SECTION 10From Sta. 336+00.00 To Sta. 384+00.00

PROJECT NO'S

008-4768-084 & 044-4768-085

DISTRICT	COUNTY	TOWNSHIP	BOROUGH	ROUTE	SECTION	TOTAL SHEETS
F.A.I. 6-0	DELAWARE	MARPLE HAVERFORD RADNOR		1010	500	205
STATE PROJECT NUMBER						
SYS	L.R. or W.O.	SPUR	PHA	SECTION	DIST.	CO.
1	1	0	1	0	0	7

ALSO INCLUDED:

LR1010 SECTION 500
ALSO INCLUDED:
415 SHEETS-CROSS SECTIONS (UPON REQUEST)
32 SHEETS-SOIL PROFILE & TEST BORINGS
16 SHEETS-SOILS APPENDIX-A
43 SHEETS-SOILS APPENDIX-B
16 SHEETS-TRAFFIC SIGNAL PLANS
23 SHEETS-TRAFFIC CONTROL PLANS
19 SHEETS-PAVEMENT MARKING PLANS
17 SHEETS-CROSS SECTIONS W/C PIKE TEMPORARY ROADWAY
20 SHEETS-LIGHTING PLANS
32 SHEETS-SIGNING, & SIGN
LIGHTING PLANS,
* TOGETHER WITH THE CONSTRUCTION AND
ERECTION OF SIGNS (AND SIGN LIGHTING)
AND MARKERS FOR ALL INTERSTATE AND
LEGISLATIVE ROUTES AS SHOWN ON THE
DETAIL SHEETS COMPRISING THESE PLANS".
29 SHEETS-UTILITY RELOCATION PLANS
24 SHEETS-ROADSIDE DEVELOPMENT PLANS
11 SHEETS-EROSION & SEDIMENTATION CONTROL PLANS
2 SHEETS-STAGE CONSTRUCTION PLAN
2 SHEETS-DARBY CREEK RELOCATION PLAN
28 SHEETS-SOUND BARRIER WALL PLANS
1 SHEETS-PADOT-DELAWARE CO. WINTER MAINTENANCE
STOCKPILE NO. 11

6 SHEETS-STRUCTURE PLANS S#-16843
5 SHEETS-STRUCTURE PLANS S#-16844
6 SHEETS-STRUCTURE PLANS S#-16845
6 SHEETS-STRUCTURE PLANS S#-16847
4 SHEETS-STRUCTURE PLANS S#-16848
4 SHEETS-STRUCTURE PLANS S#-16849
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ESTABLISHED AS A LIMITED ACCESS HIGHWAY FROM STATION 539+74.00 TO STATION 511+92.00 AND STATION 521+43.00 TO STATION 527+57.00 SOUTHBOUND AND FROM STATION 509+63.00 TO STATION 511+81.00 AND STATION 521+65.00 TO STATION 527+24.00 NORTHBOUND BY PLAN FOR LR1010 SECTION 500(T) R/W APPROVED BY THOMAS D. LARSON ON BEHALF OF GOVERNOR THORNBURGH ON AUGUST 19, 1985.

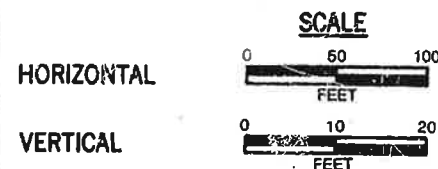
ESTABLISHED AS A LIMITED ACCESS HIGHWAY FROM STATION 461+92.42 TO STATION 540+22.00 SOUTHBOUND AND FROM STATION 462+11.55 TO STATION 540+14.00 NORTHBOUND BY PLAN FOR LR1010 SECTION 500 R/W APPROVED BY THOMAS D. LARSON ON BEHALF OF GOVERNOR THORNBURGH ON DECEMBER 16, 1985.

ESTABLISHED AS A LIMITED ACCESS HIGHWAY FROM STATION 534+51.00 TO STATION 663+00.00 SOUTHBOUND AND FROM STATION 533+91.00 TO STATION 663+00.00 NORTHBOUND BY PLAN FOR LR1010 SECTION 500 R/W APPROVED BY GOVERNOR SCRANTON AND FILED ON DECEMBER 20, 1966 AND MARCH 24, 1966.

ESTABLISHED AS A LIMITED ACCESS HIGHWAY FROM STATION 663+00.00 TO STATION 694+30.00 SOUTHBOUND AND FROM STATION 663+00.00 TO STATION 693+71.32 NORTHBOUND BY PLAN FOR LR1010 C-1 R/W APPROVED BY GOVERNOR SHAFER ON DECEMBER 4, 1968.

PLAN PREPARATION
DELTA GROUP, INC.
AMMANN & WHITNEY PENNSYLVANIA, INC.
DELON HAMPTON & ASSOCIATES
ANG ASSOCIATES, INC.

	PREPARED BY DELTA GROUP CONSULTANTS PHILADELPHIA, PA 19103 <i>John Smyth</i> DATE <u>5/22/87</u>	RECOMMENDED <u>May 28</u> 19 <u>87</u> <i>Robert R. [Signature]</i> DISTRICT ENGINEER RECOMMENDED <u>June 8</u> 19 <u>87</u> <i>Willie [Signature]</i> DEPUTY SECRETARY APPROVED <u>June 8</u> 19 <u>87</u> <i>Thomas D. Larson</i> SECRETARY OF TRANSPORTATION (On behalf of the Governor as well as himself)
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DESIGN DESIGNATION

HIGHWAY CLASSIFICATION	INTERSTATE	TRAFFIC DATA
DESIGN SPEED	60 mph	CURRENT A.D.T. - 1986-0
PAVEMENT WIDTH	(2) 24' LANES (2) 36' LANES	DESIGN YEAR A.D.T. - 2008-63,200
SHOULDER WIDTH	RT-10' LT-4' TO 10'	D.H.V. - 5880 (9% ADT)
MEDIAN WIDTH, MAXIMUM	60 FEET	D - 50% ADT 50% PEAK HOUR
MINIMUM	24 FEET	T - 10% ADT 7% PEAK HOUR

CROSS SECTION KEY TO DESIGNATIONS

- ① CONCRETE MEDIAN BARRIER RC-57
- ② SPECIAL CONCRETE MEDIAN BARRIER SEE SHEET 18 OF 205
- ③ SPECIAL WOOD POST BLOCKED OUT CORRUGATED BEAM GUIDE RAIL SEE SHEET 20 OF 205
- ④ PLAIN CEMENT CONCRETE CURB GUTTER RC-64
- ⑤ PLAIN CEMENT CONCRETE CURB RC-64
- ⑥ SUBSURFACE DRAIN RC-30
- ⑦ TOP OF CUT SLOPE ROUNDED TO EXISTING GROUND AS PER STANDARD RC-10 ROUNDING
- ⑧ RETAINING WALL SEE STRUCTURE SHEETS

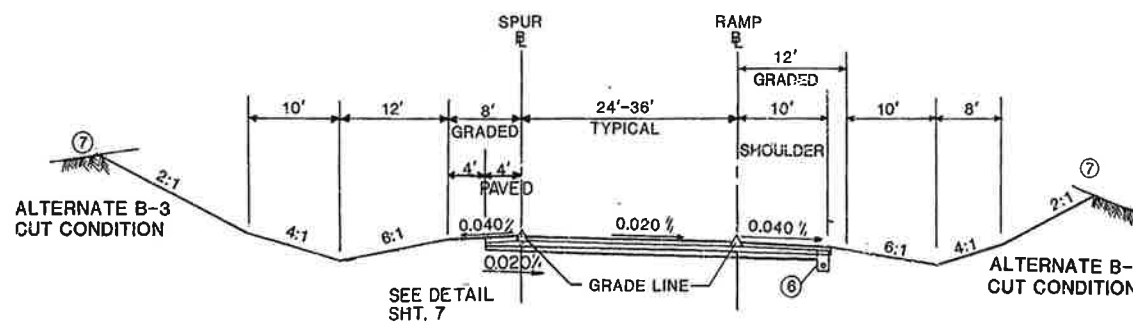
RAMPS		
SUPERELEVATED SECTIONS: STATIONS	WEST	EAST
WC-S1 ONE LANE:		
90+00 - 93+00	A-1 CUT	(SB ML)
93+00 - 97+11	A-1 FILL	D-1 FILL
WC-S2 ONE LANE:		
170+52 - 176+10	A-1 FILL	(SB ML)
176+10 - 178+50	B-1 FILL	(SB ML)
178+50 - 183+50	B-1 CUT	(SB ML)
186+60 - 189+70		
	B-2 CUT	-
189+70 - 191+57	B-2 CUT	B-4 CUT
192+50 - 195+00	B-1 CUT	B-4 CUT
N-WC ONE LANE:		
15+98 - 19+50	(NB ML)	A-1 FILL
19+50 - 21+00	(NB ML)	E-1 FILL
N-WC TWO LANE:		
23+00 - 25+50	B-3 CUT	B-1 CUT
S-WC ONE LANE:		
140+00 - 142+50	B-1 CUT	(SB ML)
142+50 - 143+50	A-1 CUT	(SB ML)
143+50 - 147+60	A-1 FILL	(SB ML)
S-WC TWO LANE:		
137+50 - 138+60	B-2 CUT	-
138+60 - 140+00	B-1 CUT	-
WC-N ONE LANE:		
53+50 - 55+50	B-3 CUT	B-1 CUT
55+50 - 57+30	-	B-1 CUT

RAMPS		
TANGENT SECTIONS: STATIONS	WEST	EAST
WC-S1 ONE LANE:		
97+12 - 99+00	A-1 FILL	D-1 FILL
99+00 - 102+00	B-1 FILL	B-2 FILL
102+00 - 104+00	B-1 CUT	B-2 FILL
N-WC TWO LANE:		
26+00 - 29+00	B-3 CUT	B-1 CUT
S-WC TWO LANE:		
131+20 - 132+50	B-2 CUT	-
133+00 - 137+50	B-2 CUT	B-4 CUT
WC-N ONE LANE:		
57+30 - 61+00	B-3 CUT	B-1 CUT
61+00 - 62+00	B-4 CUT	B-1 CUT
64+00 - 66+00	-	C-1 CUT
66+50 - 67+95	(NB ML)	A-1 FILL
67+95 - 69+73	(NB ML)	C-1 FILL

RAMPS:			MULTI-LANE		
SINGLE LANE	LIMITING STATIONS	PAVEMENT DESIGN	RAMP N-WC SUPERELEVATED OR TANGENT	LIMITING STATIONS	PAVEMENT DESIGN
RAMP WC-S1 SUPERELEVATED OR TANGENT	STA 88+04.68 TO STA 101+63.22 STA 102+00.00 TO STA 109+84.12 SPUR STA 10104+00.00 TO STA 10107+20.72	3.5" ID-2 7.5" BCBC 8" SUBBASE	RAMP N-WC TANGENT	STA 23+00.00 TO STA 26+49.86 SPUR STA 1029+05.14 TO STA 1030+50.07	3.5" ID-2 7.5" BCBC 8" SUBBASE
RAMP WC-S1 TANGENT	STA 101+63.22 TO STA 102+00.00		RAMP S-WC SUPERELEVATED OR TANGENT	STA 136+51.93 TO STA 138+59.45 SPUR STA 10127+01.02 TO STA 10127+76.01 SPUR STA 10128+60.54 TO STA 10132+97.39	
RAMP WC-S2 SUPERELEVATED OR TANGENT	STA 186+00.00 TO STA 197+53.75		RAMP S-WC TANGENT	STA 133+28.00 TO STA 136+51.93	
RAMP N-WC SUPERELEVATED OR TANGENT	STA 20+80.00 TO STA 23+00.00 STA 28+23.31 TO STA 31+95.98		RAMP WC-N TANGENT	STA 57+00.00 TO STA 62+72.24	
RAMP S-WC SUPERELEVATED OR TANGENT	STA 124+06.60 TO STA 129+16.46 STA 138+59.45 TO STA 140+00.00				
RAMP S-WC TANGENT	STA 129+16.46 TO STA 133+28.00				
RAMP WC-N SUPERELEVATED OR TANGENT	STA 50+71.60 TO STA 57+00.00 STA 66+05.00 TO STA 67+00.00 SPUR STA 1053+38.14 TO STA 1057+00.00				
RAMP WC-N TANGENT	STA 62+72.24 TO STA 66+05.00				

SHOULDER PAVEMENT DESIGN

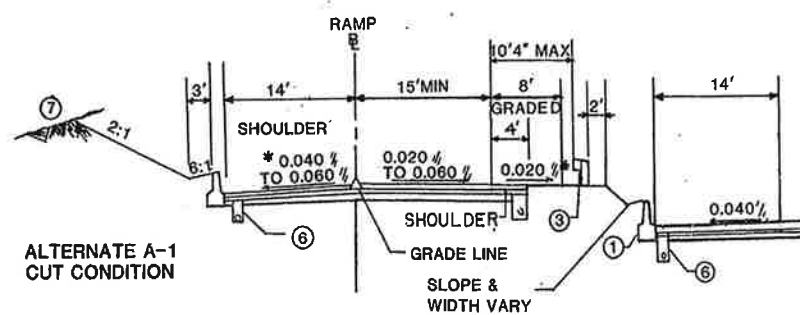
ALL RAMP SHOULDERS ARE FULL DEPTH PAVEMENT.
SHOULDER DESIGN: 3.5" ID-2, 7.5" BCBC, 8" SUBBASE



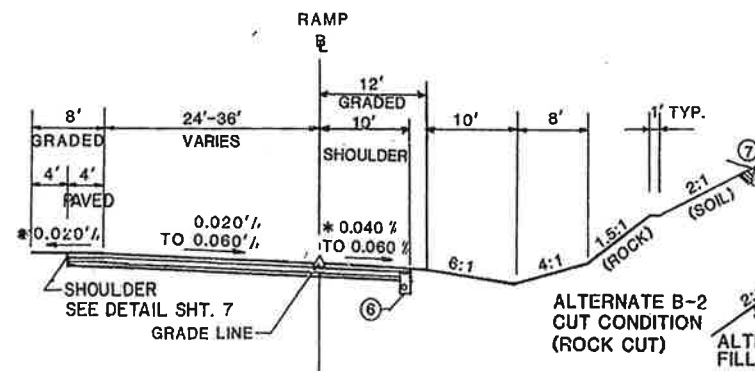
TYPICAL TANGENT SECTION
MULTIPLE LANE RAMP SHOWING EDGE CONDITIONS ON BOTH SIDES

NOTES

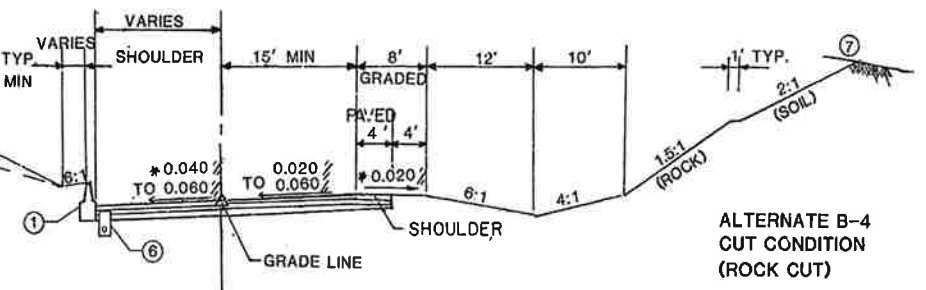
- * SHOULDER SLOPE CHANGES FROM 0.040'/' DURING SUPERELEVATION TRANSITION
- * SHOULDER SLOPE=0.040'/' IF S.E.<0.040'/'
SHOULDER SLOPE=S.E. IF S.E.≥0.040'/'
- NOISE MITIGATION MEASURES NOT SHOWN FOR CLARITY



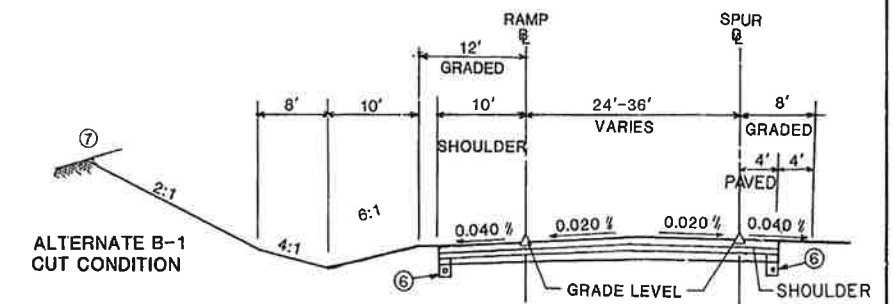
SPECIAL SUPERELEVATED SECTION
RAMP WC-S1



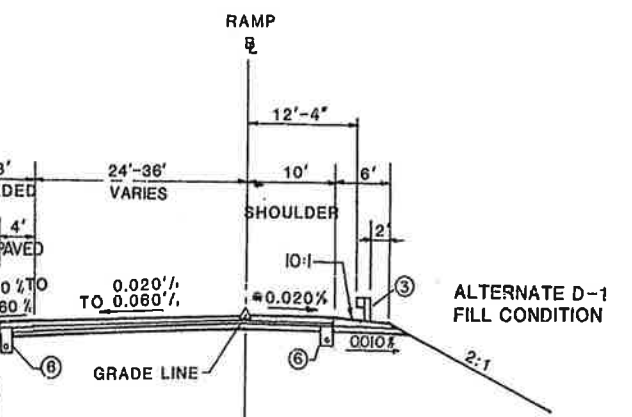
TYPICAL SUPERELEVATED SECTION
MULTIPLE LANE RAMP



TYPICAL SUPERELEVATED SECTION
ONE LANE RAMP
SHOWING EDGE CONDITIONS ON BOTH SIDES



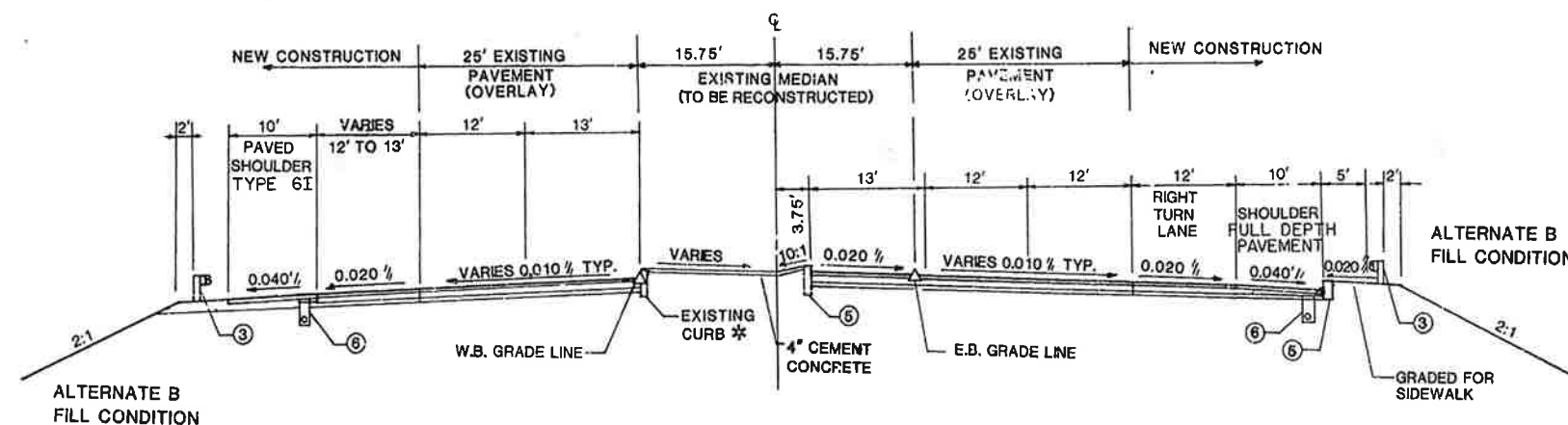
TYPICAL TANGENT SECTION
MULTIPLE LANE RAMP (WITH CROWN)



TYPICAL SUPERELEVATED SECTION
MULTIPLE LANE RAMP

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	DELAWARE	L.R. 1010	500	10 OF 205
RADNOR TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	

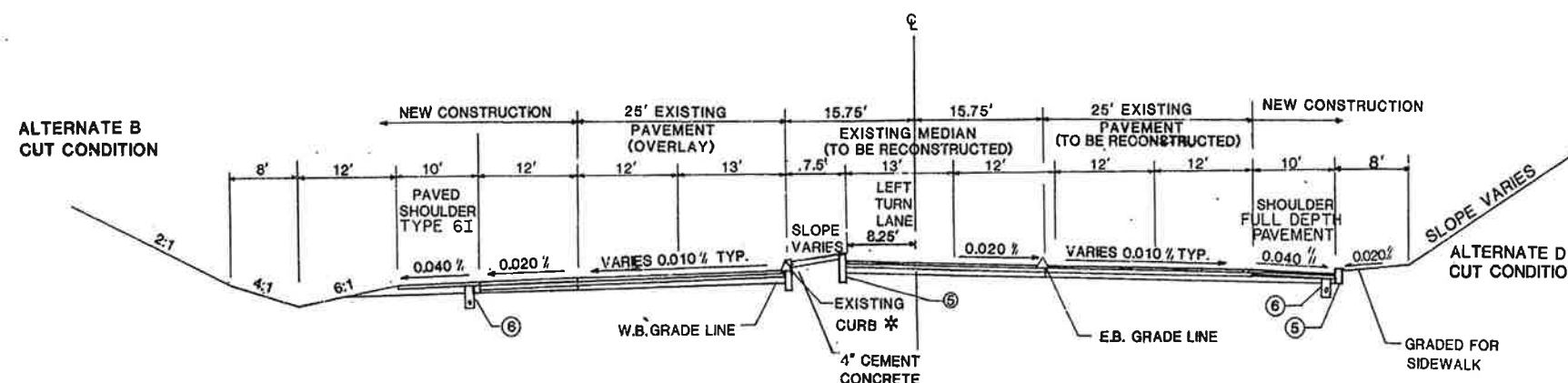
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	DELAWARE	L.R. 1010	500	12 OF 205
MARPLE TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	



TYPICAL CROSS SECTION
WEST CHESTER PIKE L.R. 133
SINGLE RIGHT TURN LANE
STA. 361+00 TO STA. 363+50

NOTES: TRANSITION FROM PROPOSED BRIDGE CROSS SLOPE
TO EXISTING CROSS SLOPE AT E.B. L.R. 133
STATIONS 352+00 AND 360+00.

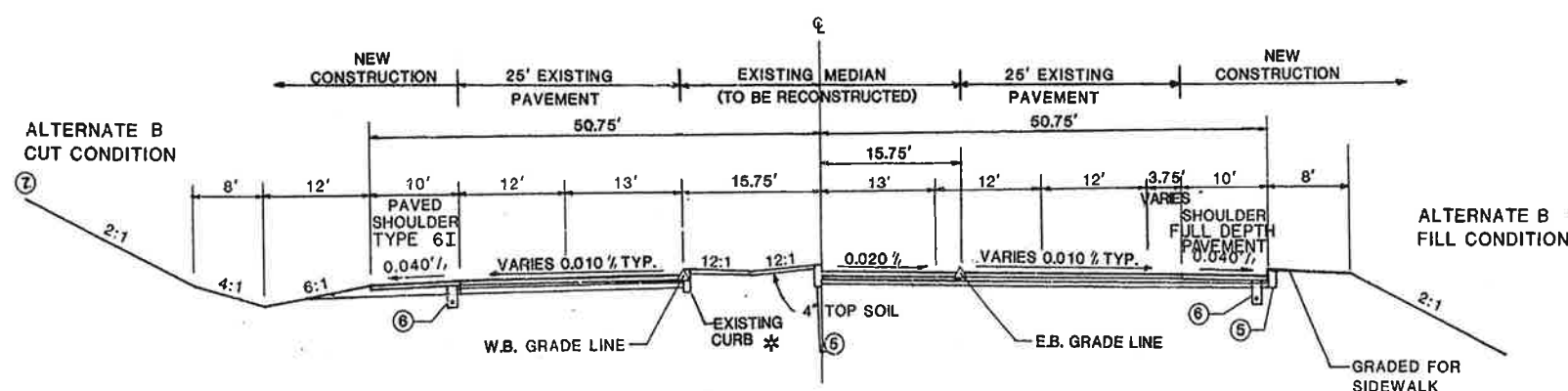
MEDIAN CURBS SHOULD BE TRANSITIONED TO KEEP
THE TOPS OF CURBS LEVEL AT MEDIAN BREAKS.



TYPICAL CROSS SECTION
WEST CHESTER PIKE L.R. 133
SINGLE LEFT TURN LANE
STA. 354+00 TO STA. 358+00

* NOTE: TAPER BITUMINOUS OVERLAY IN 2' TO EXISTING CURB TO RETAIN A 6\"/>

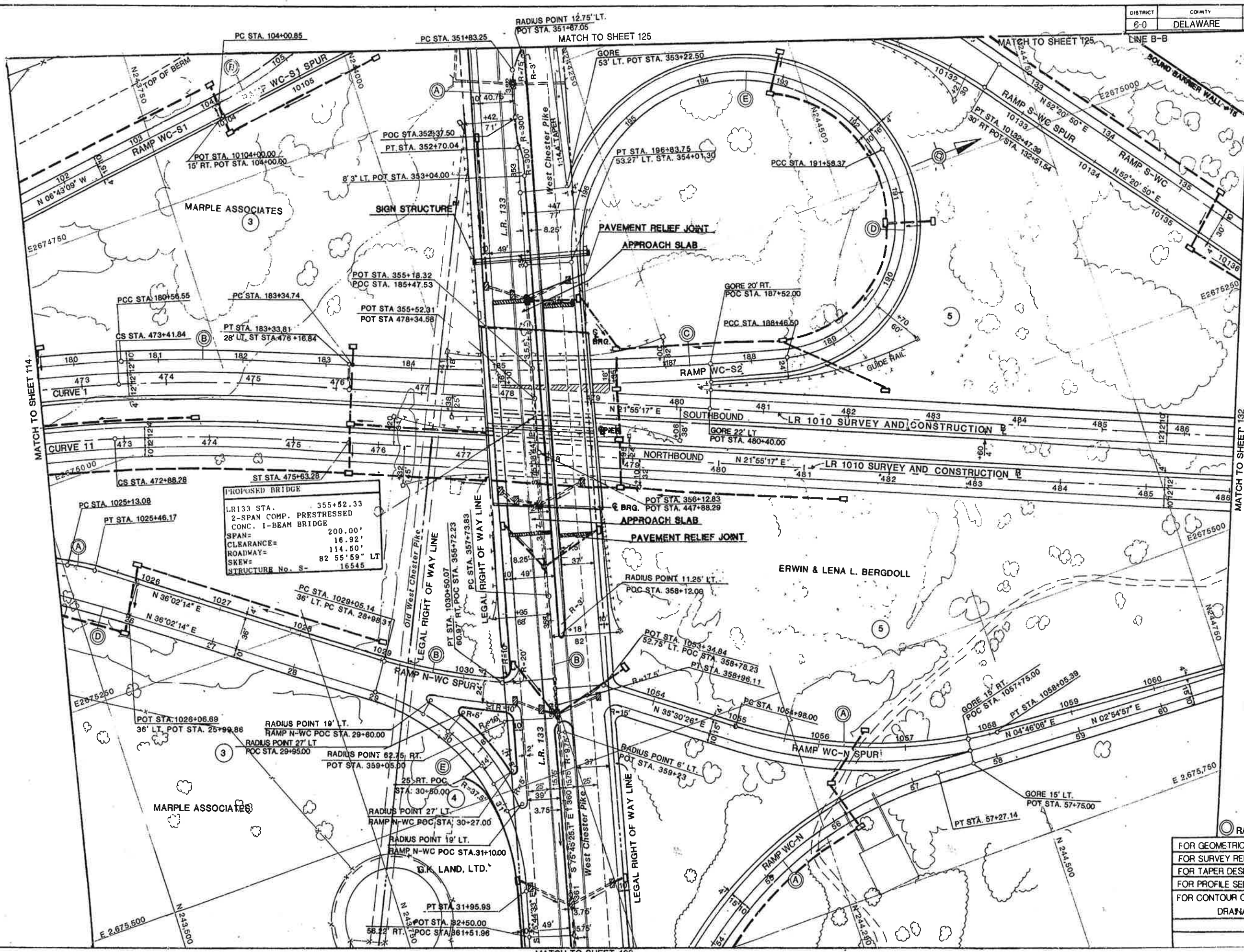
ROAD	LIMITING STATIONS	PAVEMENT DESIGN
L.R. 133	STA 342+00.00 TO STA 343+05.00	3.5\"/>



TYPICAL CROSS SECTION
WEST CHESTER PIKE L.R. 133
NO TURN LANES
STA. 348+50 TO STA 350+50

KEY TO NUMBER DESIGNATIONS SECTION 500

- | | | |
|---|---|----------------------|
| ① | CONCRETE MEDIAN BARRIER | RC-57 |
| ② | SPECIAL CONCRETE MEDIAN BARRIER | SEE SHEET 18 OF 205 |
| ③ | SPECIAL WOOD POST BLOCKED OUT
CORRUGATED BEAM GUIDE RAIL | SEE SHEET 20 OF 205 |
| ④ | PLAIN CEMENT CONCRETE CURB GUTTER | RC-64 |
| ⑤ | PLAIN CEMENT CONCRETE CURB | RC-64 |
| ⑥ | SUBSURFACE DRAIN | RC-30 |
| ⑦ | TOP OF CUT SLOPE ROUNDED TO EXISTING GROUND
AS PER STANDARD RC-10 ROUNDING | |
| ⑧ | RETAINING WALL | SEE STRUCTURE SHEETS |

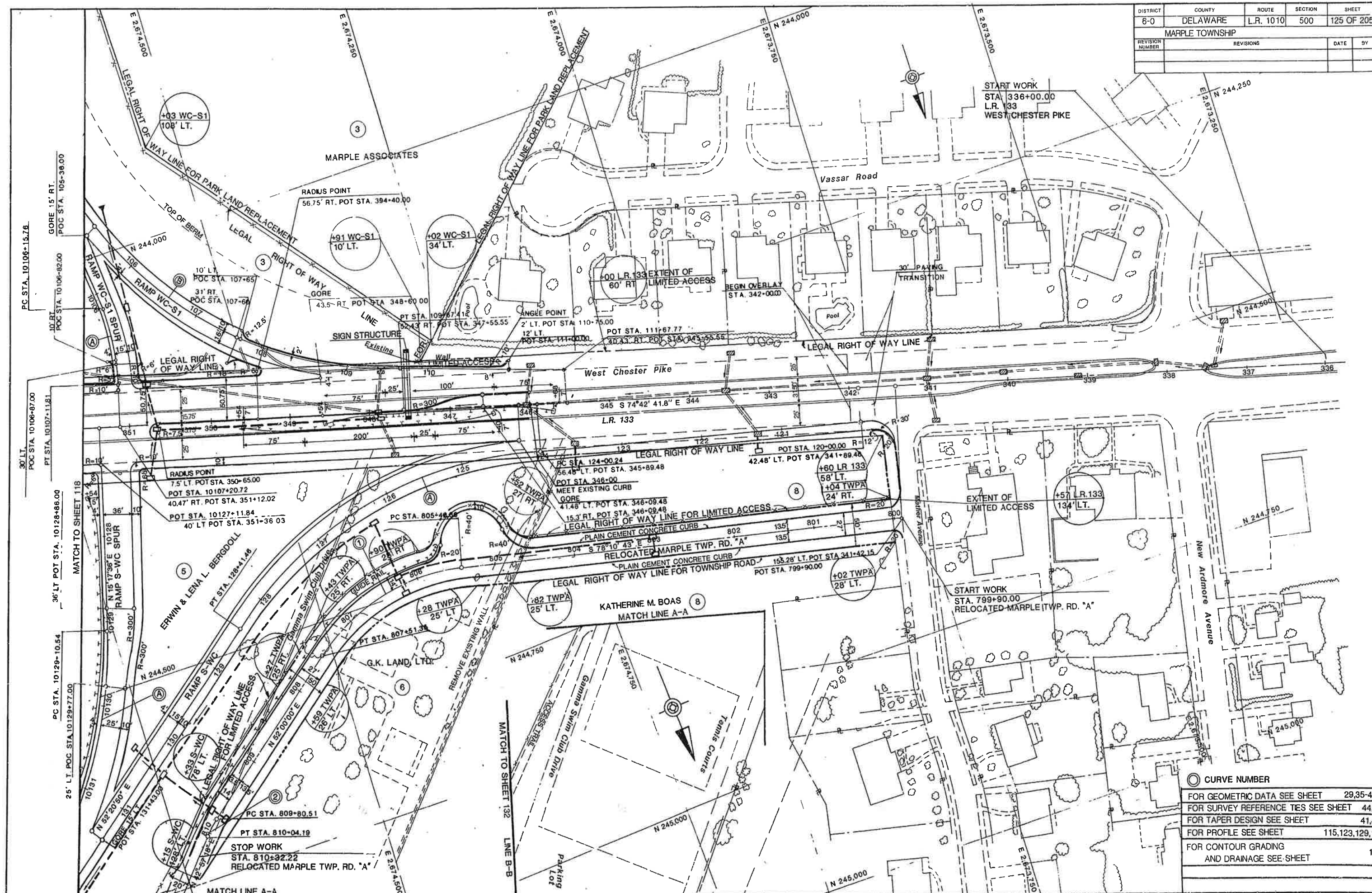


PROPOSED BRIDGE
 LR133 STA. 355+52.33
 2-SPAN COMP. PRESTRESSED
 CONC. I-BEAM BRIDGE
 SPAN= 200.00'
 CLEARANCE= 16.92'
 ROADWAY= 114.50'
 SKEW= 82° 55' 59" LT
 STRUCTURE No. S- 16545

○ RAMP CURVE NUMBER

FOR GEOMETRIC DATA SEE SHEET
FOR SURVEY REFERENCE TIES SEE SHEET
FOR TAPER DESIGN SEE SHEET
FOR PROFILE SEE SHEET
FOR CONTOUR GRADING AND DRAINAGE SEE SHEET

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	DELAWARE	L.R. 1010	500	125 OF 205
MARPLE TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	



○ CURVE NUMBER	
FOR GEOMETRIC DATA SEE SHEET	29,35-40
FOR SURVEY REFERENCE TIES SEE SHEET	44,45
FOR TAPER DESIGN SEE SHEET	41,42
FOR PROFILE SEE SHEET	115,123,129,130
FOR CONTOUR GRADING AND DRAINAGE SEE SHEET	173

SEGMENT OFFSET -----LANES-----										- NOTES: NO -	
COUNTY NO/NAME	SR	NO.	LENG	FROM	TO	THRU	PARK	TURN	BIKE	--RANGE	TO---
-----										SEGMENT: N.A.	
23 DELAWARE	0003	0120	3696	0000	2281	03	N	L	N	OFFSET: N.A.	
S										SURF...: 62	
E								DEPTH	WIDTH	TRTMT.: H	
L NO	TYPE	CODE	-----LAYER DESCRIPTION-----			YEAR	(IN)	(FT)	SN....: 4.5		
01	BW	HD2E0	HEAVY DUTY	BIT WEAR	CRSE	ID2	1998	+1.50	33	VERIFICATION INFO	
02	BW	LMWBS	LAYTEX	MODIFIED	SCRATCH	CRSE	1998	+.37	25	DATE:	
03	CW	RCC00	REINFORCED	CEMENT CONC	PVMT		1956	+10.00	25	/ /	
										VER IND:	
										VER ID.:	
										--- MAXIMUM ---	
										AADT...: 16,434	
										TRK %.: 05	
										ESAL...: 000284	
										IRI...: 167	
TOTAL +11.87 PAVED +11.50											

ACTION: I A B D E F G H I J K N P Q R S U UO V X Y

MESSAGES: 212 PRESS ENTER TO DISPLAY MORE RECORDS

ROADWAY MANAGEMENT INFORMATION SYSTEM 06/18/2013 11:40:20

PAVEMENT HISTORY

ACTION: I A B D E F G H I J K N P Q R S U UO V X Y
MESSAGES: 212 PRESS ENTER TO DISPLAY MORE RECORDS

SEGMENT OFFSET -----LANES-----										- NOTES: NO -		
COUNTY NO/NAME	SR	NO.	LENG	FROM	TO	THRU	PARK	TURN	BIKE	--RANGE	TO---	
-----										SEGMENT: N.A.		
23 DELAWARE	0003	0120	3696	2341	2899	02	N	N	N	OFFSET: N.A.		
S										SURF...: 62		
E										TRTMT.: H		
L NO	TYPE	CODE	-----LAYER DESCRIPTION-----			YEAR	(IN)	(FT)		SN....: 3.9		
01	BW	SPWE1	SPAV, HMA WRG, 12.5MM, E			2001	+1.50	24		VERIFICATION INFO		
02	**	MILL0	MILLING (AVERAGE DEPTH)			2001	-1.50	24		DATE:		
03	CW	RCC00	REINFORCED CEMENT CONC PVMT			1956	+10.00	25		/ /		
										VER IND:		
										VER ID.:		
										--- MAXIMUM ---		
										AADT...: 16,434		
										TRK %.: 05		
										ESAL...: 000284		
										IRI...: 167		
TOTAL										+10.00	PAVED	+10.00

ACTION: I A B D E F G H I J K N P Q R S U UO V X Y
MESSAGES: 212 PRESS ENTER TO DISPLAY MORE RECORDS

ROADWAY MANAGEMENT INFORMATION SYSTEM 06/18/2013 11:40:30

PAVEMENT HISTORY

ACTION: I A B D E F G H I J K N P Q R S U UO V X Y
MESSAGES: 212 PRESS ENTER TO DISPLAY MORE RECORDS

SEGMENT OFFSET -----LANES-----										- NOTES: NO -	
COUNTY NO/NAME	SR	NO.	LENG	FROM	TO	THRU	PARK	TURN	BIKE	--RANGE	TO---
-----										SEGMENT: N.A.	
23 DELAWARE	0003	0120	3696	3111	3353	03	N	N	N	OFFSET: N.A.	
S										SURF...: 62	
E								DEPTH	WIDTH	TRTMT.: H	
L NO	TYPE	CODE	-----LAYER DESCRIPTION-----				YEAR	(IN)	(FT)	SN....: 3.9	
01	BW	SPWE1	SPAV, HMA WRG, 12.5MM, E				2001	+1.50	36	VERIFICATION INFO	
02	**	MILL0	MILLING (AVERAGE DEPTH)				2001	-1.50	36	DATE:	
03	CW	RCC00	REINFORCED CEMENT CONC PVMT				1956	+10.00	25	/ /	
										VER IND:	
										VER ID.:	
										--- MAXIMUM ---	
										AADT...: 22,736	
										TRK %.: 07	
										ESAL...: 001906	
										IRI...: 167	
TOTAL +10.00 PAVED +10.00											

ACTION: I
A B D E F G H I J K N P Q R S U UO V X Y

MESSAGES: 212 PRESS ENTER TO DISPLAY MORE RECORDS

		SEGMENT		OFFSET		-----LANES-----		- NOTES: NO -	
COUNTY NO/NAME	SR	NO.	LENG	FROM	TO	THRU	PARK	TURN	BIKE
-----									SEGMENT: N.A.
23 DELAWARE	0003	0120	3696	3353	3663	03	N	L	N
S									OFFSET: N.A.
E									SURF...: 62
									DEPTH WIDTH
L NO	TYPE	CODE	-----LAYER DESCRIPTION-----			YEAR	(IN)	(FT)	TRTMT.: H
01	BW	SPWE1	SPAV, HMA WRG, 12.5MM, E			2001	+1.50	48	SN.....: 3.9
02	**	MILL0	MILLING (AVERAGE DEPTH)			2001	-1.50	48	VERIFICATION INFO
03	CW	RCC00	REINFORCED CEMENT CONC PVMT			1956	+10.00	25	DATE:
									/ /
									VER IND:
									VER ID.:
									--- MAXIMUM ---
									AADT...: 22,736
									TRK %.: 07
									ESAL...: 001906
									IRI...: 167
TOTAL +10.00 PAVED +10.00									

ACTION: I A B D E F G H I J K N P Q R S U UO V X Y

MESSAGES: 212 PRESS ENTER TO DISPLAY MORE RECORDS

SEGMENT OFFSET -----LANES-----										- NOTES: NO -	
COUNTY NO/NAME	SR	NO.	LENG	FROM	TO	THRU	PARK	TURN	BIKE	--RANGE	TO---
-----										SEGMENT: N.A.	
23 DELAWARE	0003	0121	3718	0000	2364	02	N	L	N	OFFSET:	N.A.
S										SURF...:	62
E								DEPTH	WIDTH	TRTMT.:	H
L NO	TYPE	CODE	-----LAYER DESCRIPTION-----			YEAR	(IN)	(FT)	SN....:	4.5	
01	BW	HD2E0	HEAVY DUTY BIT WEAR CRSE ID2			1998	+1.50	33	VERIFICATION INFO		
02	BW	LMWBS	LAYTEX MODIFIED SCRATCH CRSE			1998	+.38	33	DATE:		
03	CW	RCC00	REINFORCED CEMENT CONC PVMT			1962	+10.00	33	/	/	
										VER IND:	
										VER ID.:	
										--- MAXIMUM ---	
										AADT...:	16,133
										TRK %.:	04
										ESAL...:	000338
										IRI...:	244
TOTAL +11.88 PAVED +11.50											

ACTION: I
A B D E F G H I J K N P Q R S U UO V X Y

MESSAGES: 212 PRESS ENTER TO DISPLAY MORE RECORDS

SEGMENT OFFSET -----LANES-----										- NOTES: NO -	
COUNTY NO/NAME	SR	NO.	LENG	FROM	TO	THRU	PARK	TURN	BIKE	--RANGE	TO---
-----										SEGMENT: N.A.	
23 DELAWARE	0003	0121	3718	2364	3718	02	N	N	N	OFFSET: N.A.	
S										SURF...: 62	
E								DEPTH	WIDTH	TRTMT.: H	
L NO	TYPE	CODE	-----LAYER DESCRIPTION-----				YEAR	(IN)	(FT)	SN....: 4.5	
01	BW	SPWE1	SPAV, HMA WRG, 12.5MM, E				2001	+1.50	33	VERIFICATION INFO	
02	**	MILL0	MILLING (AVERAGE DEPTH)				2001	-1.50	33	DATE:	
03	BW	HD2E0	HEAVY DUTY BIT WEAR CRSE ID2				1998	+1.50	33	/ /	
04	BW	LMWBS	LAYTEX MODIFIED SCRATCH CRSE				1998	+.38	25	VER IND:	
05	CW	RCC00	REINFORCED CEMENT CONC PVMT				1962	+10.00	33	VER ID.:	
										--- MAXIMUM ---	
										AADT...: 22,313	
										TRK %.: 07	
										ESAL...: 001874	
										IRI...: 244	
TOTAL							+11.88	PAVED	+11.88		

ACTION: I A B D E F G H I J K N P Q R S U UO V X Y

MESSAGES: 214 END OF RECORDS TO DISPLAY

SEGMENT OFFSET -----LANES-----										- NOTES: NO -					
COUNTY NO/NAME		SR	NO.	LENG	FROM	TO	THRU	PARK	TURN	BIKE	--RANGE	TO---			
-----											SEGMENT:	N.A.			
23 DELAWARE		8037	0510	1300	0000	0235	01	N	N	N	OFFSET:	N.A.			
											SURF...:	61			
											DEPTH	WIDTH	TRTMT.: H		
L	NO	TYPE	CODE	-----LAYER DESCRIPTION-----			YEAR	(IN)	(FT)	SN....: 5.6					
	01	BW	SPWE3	SPAV,HMA WRG,64-22, 9.5MM,E			2006	+1.50	15	VERIFICATION INFO					
	02	**	MILL0	MILLING (AVERAGE DEPTH)			2006	-1.50	15	DATE:					
	03	BW	ID2E0	BITUMINOUS WEARING CRSE ID-2			1991	+1.50	15	/ /					
	04	BB	ID2B0	ID-2 BINDER COURSE			1991	+5.00	15	VER IND:					
	05	BC	BCBC0	BITUM CONCRETE BASE COURSE			1991	+8.50	15	VER ID.:					
	06	SB	SUB20	2A SUBBASE			1991	+8.00	15	--- MAXIMUM ---					
											AADT...:	12,498			
											TRK %..:	07			
											ESAL...:	000664			
											IRI...:	NO TEST			
TOTAL											+23.00	PAVED	+15.00		

ACTION: I
A B D E F G H I J K N P Q R S U UO V X Y

MESSAGES: 212 PRESS ENTER TO DISPLAY MORE RECORDS

SEGMENT OFFSET -----LANES-----										- NOTES: NO -	
COUNTY NO/NAME	SR	NO.	LENG	FROM	TO	THRU	PARK	TURN	BIKE	--RANGE	TO---
-----										SEGMENT:	N.A.
23 DELAWARE	8037	0510	1300	0235	0782	02	N	N	N	OFFSET:	N.A.
S										SURF...:	61
E								DEPTH	WIDTH	TRTMT.:	H
L NO	TYPE	CODE	-----LAYER DESCRIPTION-----			YEAR	(IN)	(FT)	SN....:	5.6	
01	BW	SPWE3	SPAV, HMA WRG, 64-22, 9.5MM, E			2006	+1.50	30	VERIFICATION INFO		
02	**	MILL0	MILLING (AVERAGE DEPTH)			2006	-1.50	30	DATE:		
03	BW	ID2E0	BITUMINOUS WEARING CRSE ID-2			1991	+1.50	30	/ /		
04	BB	ID2B0	ID-2 BINDER COURSE			1991	+5.00	30	VER IND:		
05	BC	BCBC0	BITUM CONCRETE BASE COURSE			1991	+8.50	30	VER ID.:		
06	SB	SUB20	2A SUBBASE			1991	+8.00	30	--- MAXIMUM ---		
										AADT...:	12,498
										TRK %.: 07	
										ESAL...:	000664
										IRI...:	NO TEST
TOTAL +23.00 PAVED +15.00											

ACTION: I
A B D E F G H I J K N P Q R S U UO V X Y

MESSAGES: 212 PRESS ENTER TO DISPLAY MORE RECORDS

SEGMENT OFFSET -----LANES-----										- NOTES: NO -			
COUNTY NO/NAME		SR	NO.	LENG	FROM	TO	THRU	PARK	TURN	BIKE	--RANGE	TO---	
-----											SEGMENT:	N.A.	
23 DELAWARE		8037	0510	1300	0782	0950	02	N	N	N	OFFSET:	N.A.	
											SURF...:	61	
											DEPTH	WIDTH	TRTMT.: H
L	NO	TYPE	CODE	-----LAYER DESCRIPTION-----			YEAR	(IN)	(FT)	SN....: 5.6			
	01	BW	SPWE3	SPAV, HMA WRG, 64-22, 9.5MM, E			2006	+1.50	35	VERIFICATION INFO			
	02	**	MILL0	MILLING (AVERAGE DEPTH)			2006	-1.50	35	DATE:			
	03	BW	ID2E0	BITUMINOUS WEARING CRSE ID-2			1991	+1.50	35	/ /			
	04	BB	ID2B0	ID-2 BINDER COURSE			1991	+5.00	35	VER IND:			
	05	BC	BCBC0	BITUM CONCRETE BASE COURSE			1991	+8.50	35	VER ID.:			
	06	SB	SUB20	2A SUBBASE			1991	+8.00	35	--- MAXIMUM ---			
											AADT...:	12,498	
											TRK %..:	07	
											ESAL...:	000664	
											IRI...:	NO TEST	
TOTAL +23.00 PAVED +15.00													

ACTION: I
A B D E F G H I J K N P Q R S U UO V X Y

MESSAGES: 212 PRESS ENTER TO DISPLAY MORE RECORDS

SEGMENT OFFSET -----LANES-----										- NOTES: NO -			
COUNTY NO/NAME		SR	NO.	LENG	FROM	TO	THRU	PARK	TURN	BIKE	--RANGE	TO---	
-----											SEGMENT:	N.A.	
23 DELAWARE		8037	0510	1300	0950	1038	01	N	N	N	OFFSET:	N.A.	
											SURF...:	61	
											DEPTH	WIDTH	TRTMT.: H
L	NO	TYPE	CODE	-----LAYER DESCRIPTION-----			YEAR	(IN)	(FT)	SN....: 5.6			
	01	BW	SPWE3	SPAV, HMA WRG, 64-22, 9.5MM, E			2006	+1.50	25	VERIFICATION INFO			
	02	**	MILL0	MILLING (AVERAGE DEPTH)			2006	-1.50	25	DATE:			
	03	BW	ID2E0	BITUMINOUS WEARING CRSE ID-2			1991	+1.50	25	/ /			
	04	BB	ID2B0	ID-2 BINDER COURSE			1991	+5.00	25	VER IND:			
	05	BC	BCBC0	BITUM CONCRETE BASE COURSE			1991	+8.50	25	VER ID.:			
	06	SB	SUB20	2A SUBBASE			1991	+8.00	25	--- MAXIMUM ---			
											AADT...:	12,498	
											TRK %..:	07	
											ESAL...:	000664	
											IRI...:	NO TEST	
TOTAL +23.00 PAVED +15.00													

ACTION: I
A B D E F G H I J K N P Q R S U UO V X Y

MESSAGES: 212 PRESS ENTER TO DISPLAY MORE RECORDS

SEGMENT OFFSET -----LANES-----										- NOTES: NO -			
COUNTY NO/NAME		SR	NO.	LENG	FROM	TO	THRU	PARK	TURN	BIKE	--RANGE	TO---	
-----											SEGMENT:	N.A.	
23 DELAWARE		8037	0510	1300	1038	1300	01	N	L	N	OFFSET:	N.A.	
											SURF...:	61	
											DEPTH	WIDTH	TRTMT.: H
L	NO	TYPE	CODE	-----LAYER DESCRIPTION-----			YEAR	(IN)	(FT)	SN....: 5.6			
	01	BW	SPWE3	SPAV,HMA WRG,64-22, 9.5MM,E			2006	+1.50	36	VERIFICATION INFO			
	02	**	MILL0	MILLING (AVERAGE DEPTH)			2006	-1.50	36	DATE:			
	03	BW	ID2E0	BITUMINOUS WEARING CRSE ID-2			1991	+1.50	36	/ /			
	04	BB	ID2B0	ID-2 BINDER COURSE			1991	+5.00	36	VER IND:			
	05	BC	BCBC0	BITUM CONCRETE BASE COURSE			1991	+8.50	36	VER ID.:			
	06	SB	SUB20	2A SUBBASE			1991	+8.00	36	--- MAXIMUM ---			
											AADT...:	12,498	
											TRK %..:	07	
											ESAL...:	000664	
											IRI...:	NO TEST	
TOTAL +23.00 PAVED +15.00													

ACTION: I
A B D E F G H I J K N P Q R S U UO V X Y

MESSAGES: 214 END OF RECORDS TO DISPLAY

SEGMENT OFFSET -----LANES-----										- NOTES: NO -	
COUNTY NO/NAME	SR	NO.	LENG	FROM	TO	THRU	PARK	TURN	BIKE	--RANGE	TO---
-----										SEGMENT: N.A.	
23 DELAWARE	8037	0520	0545	0000	0545	01	N	N	N	OFFSET: N.A.	
S										SURF...: 61	
E											
							DEPTH	WIDTH	TRTMT.: H		
L NO	TYPE	CODE	-----LAYER DESCRIPTION-----			YEAR	(IN)	(FT)	SN....: 5.6		
01	BW	SPWE3	SPAV, HMA WRG, 64-22, 9.5MM, E			2006	+1.50	16	VERIFICATION INFO		
02	**	MILL0	MILLING (AVERAGE DEPTH)			2006	-1.50	16	DATE:		
03	BW	ID2E0	BITUMINOUS WEARING CRSE ID-2			1991	+1.50	16	/ /		
04	BB	ID2B0	ID-2 BINDER COURSE			1991	+5.00	16	VER IND:		
05	BC	BCBC0	BITUM CONCRETE BASE COURSE			1991	+8.50	16	VER ID.:		
06	SB	SUB20	2A SUBBASE			1991	+8.00	16	--- MAXIMUM ---		
										AADT...: 3,058	
										TRK %.: 07	
										ESAL...: 000162	
										IRI...: NO TEST	
TOTAL +23.00 PAVED +15.00											

ACTION: I A B D E F G H I J K N P Q R S U UO V X Y

MESSAGES: 214 END OF RECORDS TO DISPLAY

Appendix B

Proposed Plans



HOP	DISTRICT	COUNTY	TOWNSHIP	MUNICIPALITY	ROUTE	SECTION	TOTAL SHEETS
	6-0	DELAWARE	MARPLE		0003		61

PennDOT E-PERMITTING SYSTEM #42543

NATIONAL REALTY CORPORATION

DRAWINGS

FOR

CONSTRUCTION

OF

STATE ROUTE 0003

IN DELAWARE COUNTY

FROM STA 338+25.00 TO STA 352+70.00 LENGTH 1345.00 FT 0.255 MI

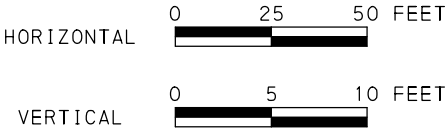
FROM SEG 0120 OFFSET 2056 TO SEG 0120 OFFSET 3501

FROM SEG 0121 OFFSET 2072 TO SEG 0121 OFFSET 3517

PLANS PREPARED FOR:

NATIONAL REALTY CORPORATION
1604 WALNUT STREET
PHILADELPHIA, PA 19103

SCALE



DESIGN DESIGNATION

HIGHWAY CLASSIFICATION - URBAN PRINCIPAL ARTERIAL
DESIGN SPEED - 40 MPH (POSTED)

TRAFFIC DATA

CURRENT ADT - 45,049 (PENNDOT RMS TRAFFIC DATA)

EXISTING TOPOGRAPHIC FEATURES, PROPERTY LINES, RIGHT-OF-WAY LINES, AND STAKE OUT OF GEOMETRIC ALIGNMENTS ARE ACCURATE AND IN ACCORDANCE WITH INDUSTRY STANDARDS. SURVEY WAS CONDUCTED, IN JULY 2013 BY CHESTER VALLEY ENGINEERS 83 CHESTNUT ROAD PAOLI, PA 19301	
REGISTERED PROFESSIONAL SURVEYOR DATE:	

DESIGNED BY: GRS
DRAWN BY: LBW
CHECKED BY: TGS

REGISTERED PROFESSIONAL ENGINEER DATE:

NO.	REVISION	DATE
1	ADDRESSING DECEMBER 13, 2013 COMMENTS	1/2014
TITLE SHEET		
OR&A Orth – Rodgers & Associates, Inc. TRANSPORTATION ENGINEERS and PLANNERS Great Valley Office 301 Lindenwood Drive, Suite 130 Malvern, PA 19355 (610) 407-9700		
WEST CHESTER PIKE (SR 0003) MARPLE TOWNSHIP, DELAWARE COUNTY		
PennDOT EPS Application #42543		SHEET NUMBER 1 OF 61
DATE: NOVEMBER 5, 2013 PROJECT NUMBER: 2013-065		

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RECORD OF EXISTING TYPES OF ROADWAY PAVEMENT

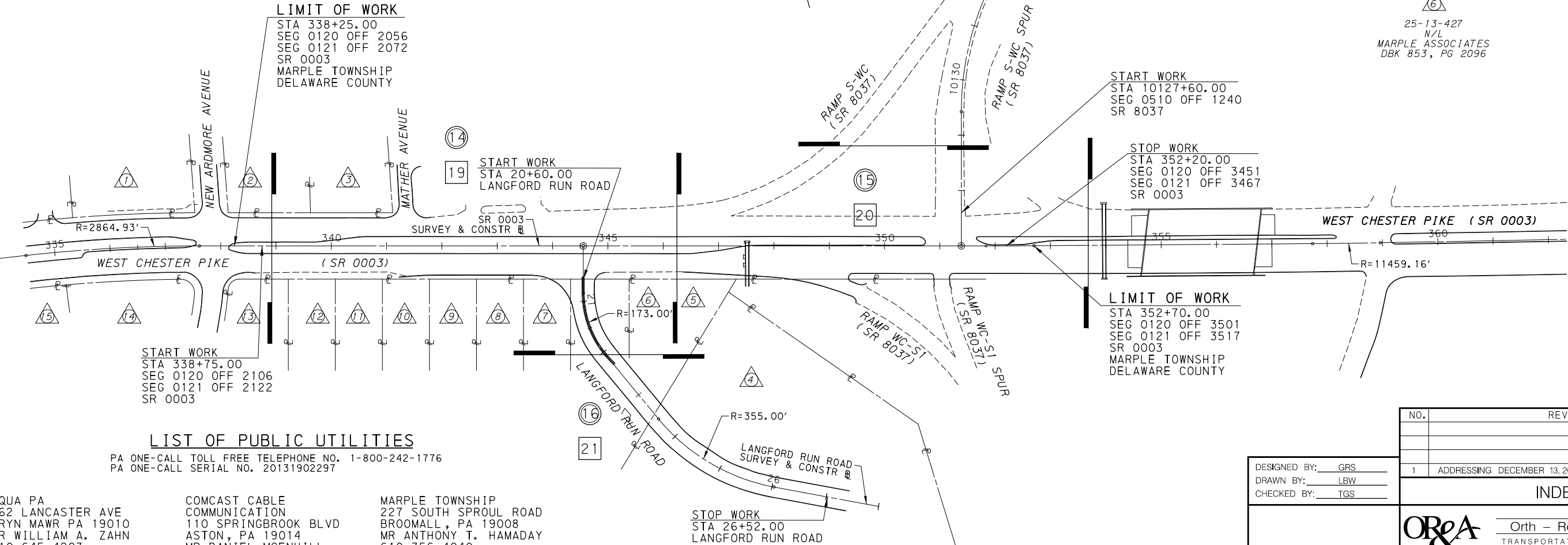
SR 0003			SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING COURSE, 12.5 MM MIX, 3 1/2" DEPTH ON REINFORCED CEMENT CONCRETE PAVEMENT, 10" DEPTH ON SUBBASE 8" DEPTH
STA 338+25.00 TO	STA 352+70.00	SEG 0120 OFF 2056	
SEG 0120 OFF 2056	SEG 0120 OFF 3501	SEG 0121 OFF 2072	
SEG 0121 OFF 2072	SEG 0121 OFF 3517		
SR 8037			SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING COURSE, PG 64-22, 10 TO <30 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-E ON BITUMINOUS BINDER COURSE 1D-2, 5.0" DEPTH ON BITUMINOUS CONCRETE BASE COURSE, 8.5" DEPTH ON SUBBASE 8" DEPTH
STA 10127+60.00 TO	STA 10139+10.00	SEG 0510 OFF 1240	
SEG 0510 OFF 1240	SEG 0510 OFF 0100		
LANGFORD RUN ROAD			SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING COURSE, PG 64-22, 3-10 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H ON SUPERPAVE ASPHALT MIXTURE DESIGN, HMA BINDER COURSE, PG 64-22, 3-10 MILLION ESALS, 19 MM MIX, 2" DEPTH ON SUPERPAVE ASPHALT MIXTURE DESIGN, HMA BASE COURSE, PG 64-22, 3-10 MILLION ESALS, 37.5 MM MIX, 6" DEPTH ON SUBBASE 6" DEPTH (NO 2A)
STA 20+60.00 TO	STA 26+52.00		

EXISTING ROADWAY PAVEMENT NOTES:

- ① EXISTING PAVEMENT DEPTHS ON SR 0003 & SR 8037 DETERMINED FROM ROADWAY MANAGEMENT INFORMATION SYSTEM PAVEMENT HISTORY AND DRAWINGS FOR CONSTRUCTION OF LR 1010 SECTION 500 APPROVED BY HOWARD YERUSALIM ON BEHALF OF THE GOVERNOR ON JUNE 8, 1987.
- ② EXISTING PAVEMENT DEPTHS ON LANGFORD RUN ROAD DETERMINED FROM LAND DEVELOPMENT PLANS FOR MARPLE ASSOCIATES PREPARED BY CHESTER VALLEY ENGINEERS INC.

SHEET INDEX BLOCK

DESCRIPTION	SHEET
TITLE SHEET	1
INDEX MAP / GENERAL NOTES	2
LOCATION MAP / GENERAL NOTES	3
TYPICAL SECTIONS	4-6
DETAILS	7-11
CURB RAMP DETAILS	12
OVERHEAD SIGN STRUCTURE PLANS	13
CONSTRUCTION PLANS	14-18
PROFILES	19-23
GRADING PLANS	24-28
SIGNING AND PAVEMENT MARKING PLANS	29-33
TRAFFIC CONTROL PLANS	34-42
CROSS SECTIONS	43-61



LIST OF PUBLIC UTILITIES

PA ONE-CALL TOLL FREE TELEPHONE NO. 1-800-242-1776
PA ONE-CALL SERIAL NO. 20131902297

AQUA PA
762 LANCASTER AVE
BRYN MAWR PA 19010
MR WILLIAM A. ZAHN
610-645-4203
wazahn@aquadamerica.com

COMCAST CABLE
COMMUNICATION
110 SPRINGBROOK BLVD
ASTON, PA 19014
MR DANIEL MCENHILL
610-461-2000

MARPLE TOWNSHIP
227 SOUTH SPROUL ROAD
BROOMALL, PA 19008
MR ANTHONY T. HAMADAY
610-356-4040
ahamaday@marpletwp.com

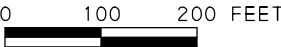
CENTRAL DEL
COUNTY AUTHORITY
212 B UNITY TERRACE
RUTLEDGE, PA 19070
MS. GENNIFER GUILIANO
610-544-9944
cdca@craftech.com

PECO
1050 SWEDSFORD ROAD
BERWYN, PA 19312
MR BILL HENSIL
610-725-7129
bhensil@peco-energy.com

VERIZON PENNSYLVANIA
180 SHEREE BLVD.
EXTON, PA 19341
MS THERESA L. BAKER
610-280-2154
theresa.l.baker@verizon.com

INDEX MAP

SCALE



LEGEND

- - CONSTRUCTION PLAN
- - PROFILE
- △ - PARCEL IDENTIFICATION NUMBER

PROPERTY OWNER INFORMATION

25-13-302 N/L RUSSELL & CECILIA MEYERS DBK 2555, PG 991	25-13-426 N/L MARPLE ASSOCIATES DBK 853, PG 2096
25-13-303 N/L KENNETH S. & KRITINE L. GROSS DBK 1912, PG 1866	25-13-425 N/L KONSTANTINOS & VASILIKI GOUVIAS DBK 4870, PG 544
25-13-322 N/L GRACE EVANGELICAL LUTHERAN CHURCH DBK 1247, PG 220	25-13-424 N/L GERALDO MARRON DBK 1366, PG 1064
25-20-40 N/L MARPLE ASSOCIATES DB 2083 PG 805	25-13-423 N/L PARVIN & TOFIGH TOSHTZAR DBK 4417, PG 1205
25-13-428 N/L MARPLE ASSOCIATES DBK 1710, PG 0126	25-13-422 N/L TODGER PEDRO & LOUISA MICELI DBK 1772, PG 1789
25-13-427 N/L MARPLE ASSOCIATES DBK 853, PG 2096	25-13-421 N/L SEAN & RACHEL CURRY DBK 5077, PG 1843
	25-13-420 N/L PARVIN & TOFIGH TOSHTZAR DBK 4844, PG 439
	25-13-338 N/L GOODHILL ASSOCIATES PARTNERSHIP DBK 2619, PG 1053
	25-13-339 N/L PECO ENERGY COMPANY (NO BK/PG LISTED)

DESIGNED BY: GRS
DRAWN BY: LBW
CHECKED BY: TGS

REGISTERED
PROFESSIONAL ENGINEER
DATE:

NO.	REVISION	DATE
1	ADDRESSING DECEMBER 13, 2013 COMMENTS	1/2014

INDEX MAP



Orth - Rodgers & Associates, Inc.
TRANSPORTATION ENGINEERS and PLANNERS
Great Valley Office 301 Lindenwood Drive, Suite 130 Malvern, PA 19355 (610) 407-9700

WEST CHESTER PIKE
(SR 0003)

MARPLE TOWNSHIP, DELAWARE COUNTY

PennDOT EPS
Application #42543

DATE: NOVEMBER 5, 2013
PROJECT NUMBER: 2013-065

SHEET NUMBER
2 OF 61

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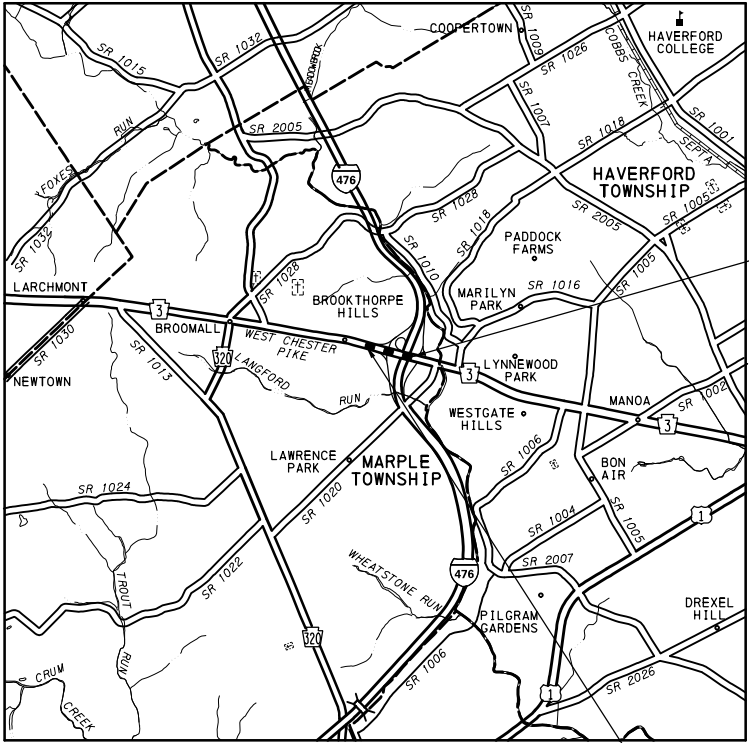
SUMMARY OF PROJECT COORDINATES
BASED ON THE PENNSYLVANIA STATE PLANE COORDINATE SYSTEM

ROUTE	STATION	POINT	NORTHING	EASTING	BEARING
SR 0003 SURVEY & CONSTR	338+00.00	POT	244594.9406	2641987.9348	S 74°42' 42" E
	351+83.25	PC	244230.2082	2643322.2330	S 74°42' 42" E
	352+26.64	PI	244218.7660	2643364.0920	S 75°08' 44" E
	352+70.04	PT	244207.6411	2643406.0364	S 75°08' 44" E
	353+00.00	POT	244199.9603	2643434.9959	
ROUTE	STATION	POINT	NORTHING	EASTING	BEARING
SR 8037 SURVEY & CONSTR	10127+00.00	POT	244241.9265	2643279.3642	N 15°17' 36" E
	10129+42.39	PC	244475.7371	2643343.2985	N 15°17' 36" E
	10131+18.33	PI	244645.4435	2643389.7039	N 52°20' 50" E
	10132+81.92	PT	244752.9189	2643528.9977	N 52°20' 50" E
	10137+27.81	PC	245025.3008	2643882.0194	N 52°20' 50" E
	10137+39.35	PI	245032.3512	2643891.1571	N 43°32' 51" E
	10137+50.84	PT	245040.7165	2643899.1086	N 43°32' 51" E
	10138+88.54	PC	245140.5210	2643993.9769	N 43°32' 51" E
	10139+79.41	PI	245206.3789	2644056.5776	N 30°15' 31" E
	10140+69.45	PT	245284.8629	2644102.3637	N 30°15' 31" E
	10141+20.25	POT	245328.7359	2644127.9583	
ROUTE	STATION	POINT	NORTHING	EASTING	BEARING
LANGFORD RUN ROAD SURVEY & CONSTR	20+00.00	POT	244422.1108	2642620.1967	S 15°17' 18" W
	20+85.56	PC	244339.5742	2642597.6352	S 15°17' 18" W
	21+47.76	PI	244279.5796	2642581.2356	S 24°15' 36" E
	22+04.98	PT	244222.8763	2642606.7904	S 24°15' 36" E
	23+56.61	PC	244084.6313	2642669.0941	S 24°15' 36" E
	24+85.49	PI	243967.1387	2642722.0451	S 64°09' 51" E
	26+03.86	PT	243910.9763	2642838.0370	S 64°09' 51" E
	27+95.91	POT	243827.2786	2643010.8974	

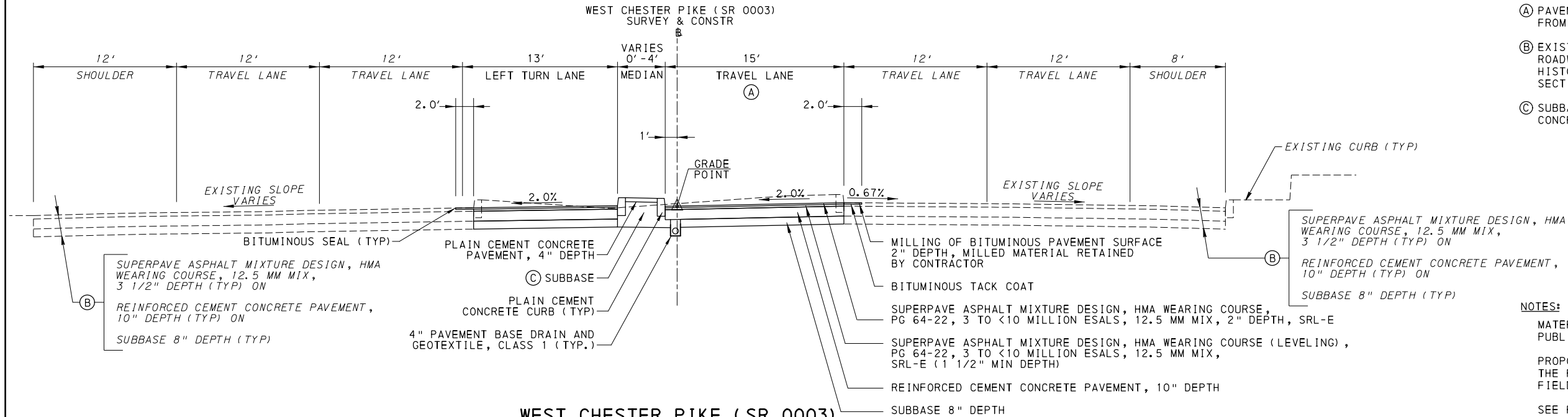
NOTE:
FOUR (4) PLACE COORDINATES ARE USED FOR COMPUTATIONAL PURPOSES ONLY AND DO NOT IMPLY A PRECISION BEYOND TWO (2) PLACES.

GENERAL NOTES CONT'D

RESET GUIDE RAIL AT NEW SIGN STRUCTURE LOCATION. CONTRACTOR SHALL CONTACT THE COUNTY MAINTENANCE MANAGER AT THE TIME OF THE GUIDE RAIL REMOVAL. ALL EXISTING SURPLUS GUIDE RAIL TO BE REMOVED, TRANSPORTATED TO AND STORED AS PER DIRECTION FROM COUNTY MAINTENANCE MANAGE OR HIS REPRESENTATIVE.



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WEST CHESTER PIKE (SR 0003)
TYPICAL SECTION

STA 344+73.00 TO STA. 348+04.00
NOT TO SCALE

TYPICAL SECTION NOTES:

- (A) PAVEMENT TRANSITIONS FROM 2.0% TO -2.0% FROM STA 347+00.00 TO STA 348+04.00
- (B) EXISTING PAVEMENT DEPTHS ON SR 0003 DETERMINED FROM ROADWAY MANAGEMENT INFORMATION SYSTEM PAVEMENT HISTORY AND DRAWINGS FOR CONSTRUCTION OF LR 1010 SECTION 500.
- (C) SUBBASE IS INCIDENTAL TO PLAIN CEMENT CONCRETE CURB

NOTES:

MATERIALS AND CONSTRUCTION TO MEET PENNDOT PUBLICATION 408/2011, LATEST EDITION.

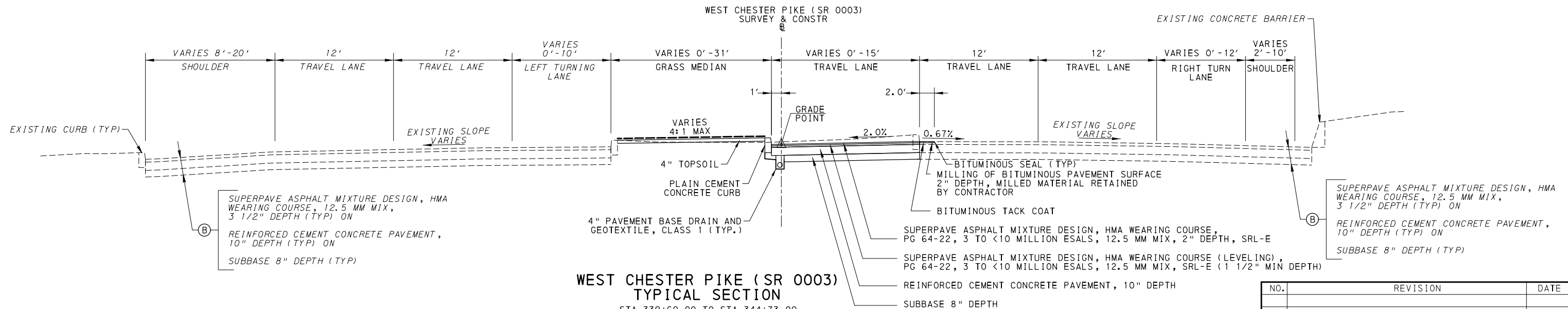
PROPOSED PAVEMENT SECTION MUST BE AS INDICATED ON THE PLAN, OR MATCH THE EXISTING AS FOUND IN THE FIELD, WHICHEVER IS GREATER.

SEE RC-20M FOR LONGITUDINAL JOINT WHEN TYING INTO EXISTING CONCRETE PAVEMENT.

SEE CROSS SECTIONS FOR ADDITIONAL EXISTING CROSS SLOPE INFORMATION.

LEGEND

----- SEEDING AND SOIL SUPPLEMENTS - FORMULA B



WEST CHESTER PIKE (SR 0003)
TYPICAL SECTION

STA 339+60.00 TO STA 344+73.00
NOT TO SCALE

DESIGNED BY: GRS
DRAWN BY: LBW
CHECKED BY: TGS

NO.	REVISION	DATE
1	ADDRESSING DECEMBER 13, 2013 COMMENTS	1/2014

TYPICAL SECTIONS

OR&A Orth - Rodgers & Associates, Inc.
TRANSPORTATION ENGINEERS and PLANNERS
Great Valley Office 301 Lindenwood Drive, Suite 130 Malvern, PA 19355 (610) 407-9700

WEST CHESTER PIKE
(SR 0003)

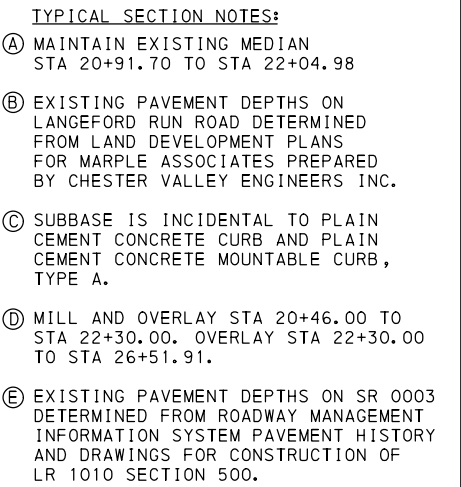
MARPLE TOWNSHIP, DELAWARE COUNTY

REGISTERED
PROFESSIONAL ENGINEER
DATE:

PennDOT EPS
Application #42543

DATE: NOVEMBER 5, 2013
PROJECT NUMBER: 2013-065

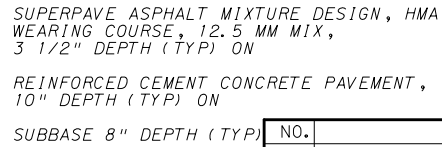
SHEET NUMBER
4 OF 61



STA 20+60.00 TO STA 26+52.00
NOT TO SCALE

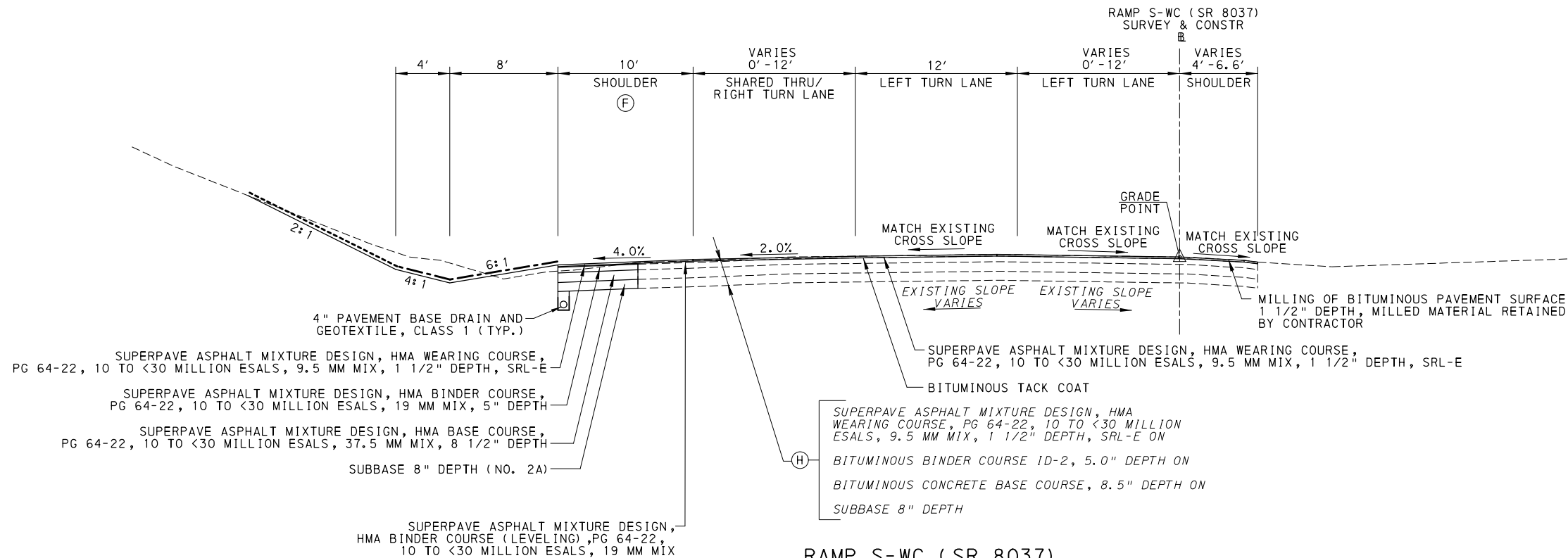
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SEEDING AND SOIL
SUPPLEMENTS - FORMULA B



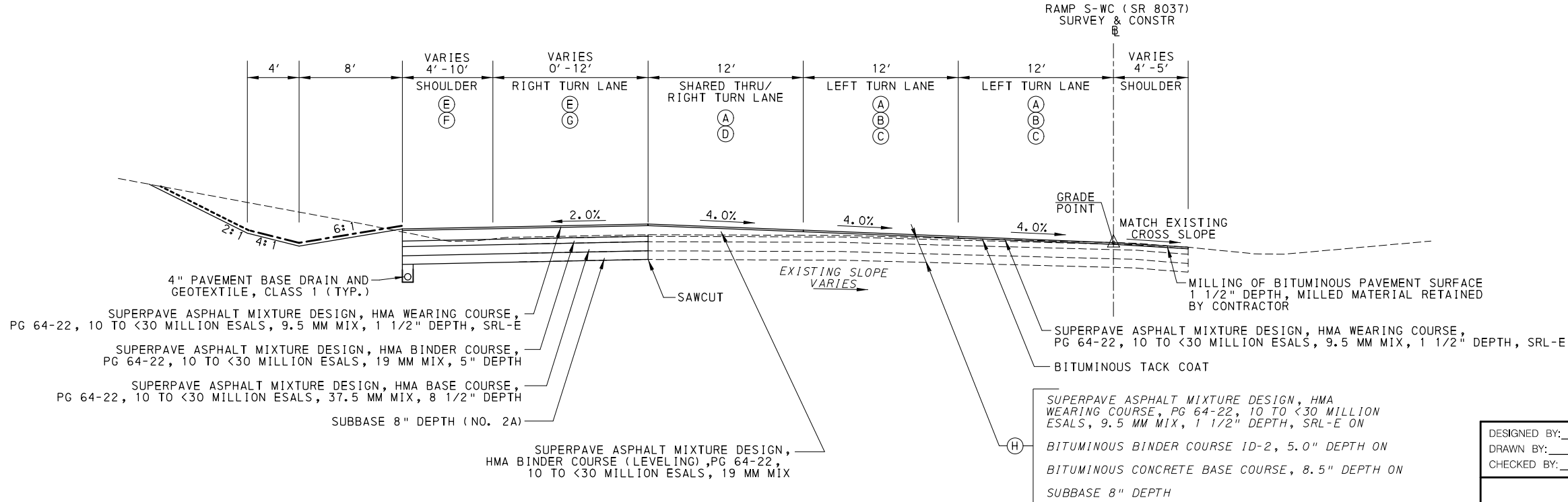
STA 348+04.00 TO STA. 350+75.00
NOT TO SCALE

SUBBASE 8" DEPTH (TYP)		REVISION		DATE
DESIGNED BY: <u>GRS</u>		1 ADDRESSING DECEMBER 13, 2013 COMMENTS		1/2014
DRAWN BY: <u>LBW</u>				
CHECKED BY: <u>TGS</u>				
TYPICAL SECTIONS				
 <u>Orth – Rodgers & Associates, Inc.</u> TRANSPORTATION ENGINEERS and PLANNERS Great Valley Office #301 Lindenwood Drive, Suite 130 Malvern, PA 19355 (610) 407-9700				
WEST CHESTER PIKE (SR 0003) MARPLE TOWNSHIP, DELAWARE COUNTY				
REGISTERED PROFESSIONAL ENGINEER		PennDOT EPS		DATE: NOVEMBER 5 2013
DATE: _____		Application #42543		SHEET NUMBER
				5 OF 61
		PROJECT NUMBER: 2013-065		



RAMP S-WC (SR 8037)
TYPICAL SECTION
STA 10134+88.92 TO STA 10136+90.00
NOT TO SCALE

- TYPICAL SECTION NOTES:**
- (A) PAVEMENT TRANSITIONS FROM EXISTING CROSS SLOPE TO 4.0% (FS) FROM STA 10127+63.00 TO STA 10129+42.39
 - (B) PAVEMENT TRANSITIONS FROM 4.0% (FS) TO 2.0% (RC) FROM STA 10132+81.92 TO STA 10133+50.92
 - (C) PAVEMENT TRANSITIONS FROM 2.0% (RC) TO EXISTING CROSS SLOPE FROM STA 10133+50.92 TO STA 10134+75.00
 - (D) PAVEMENT TRANSITIONS FROM 2.0% (RC) TO 2.0% (NC) FROM STA 10133+50.92 TO STA 10134+88.92
 - (E) PAVEMENT TRANSITIONS FROM EXISTING CROSS SLOPE TO 2.0% FROM STA 10127+63.00 TO STA 10128+89.00
 - (F) PAVEMENT TRANSITIONS 2.0% TO 4.0% FROM STA 10134+19.92 TO STA 10134+88.92
 - (G) BEGIN SAWCUT AT STATION 10129+31.00.
 - (H) EXISTING PAVEMENT DEPTHS ON SR 8037 DETERMINED FROM ROADWAY MANAGEMENT INFORMATION SYSTEM PAVEMENT HISTORY AND DRAWINGS FOR CONSTRUCTION OF LR 1010 SECTION 500.



RAMP S-WC (SR 8037)
TYPICAL SUPERELEVATED SECTION
STA 10127+63.00 TO STA 10134+88.92
NOT TO SCALE

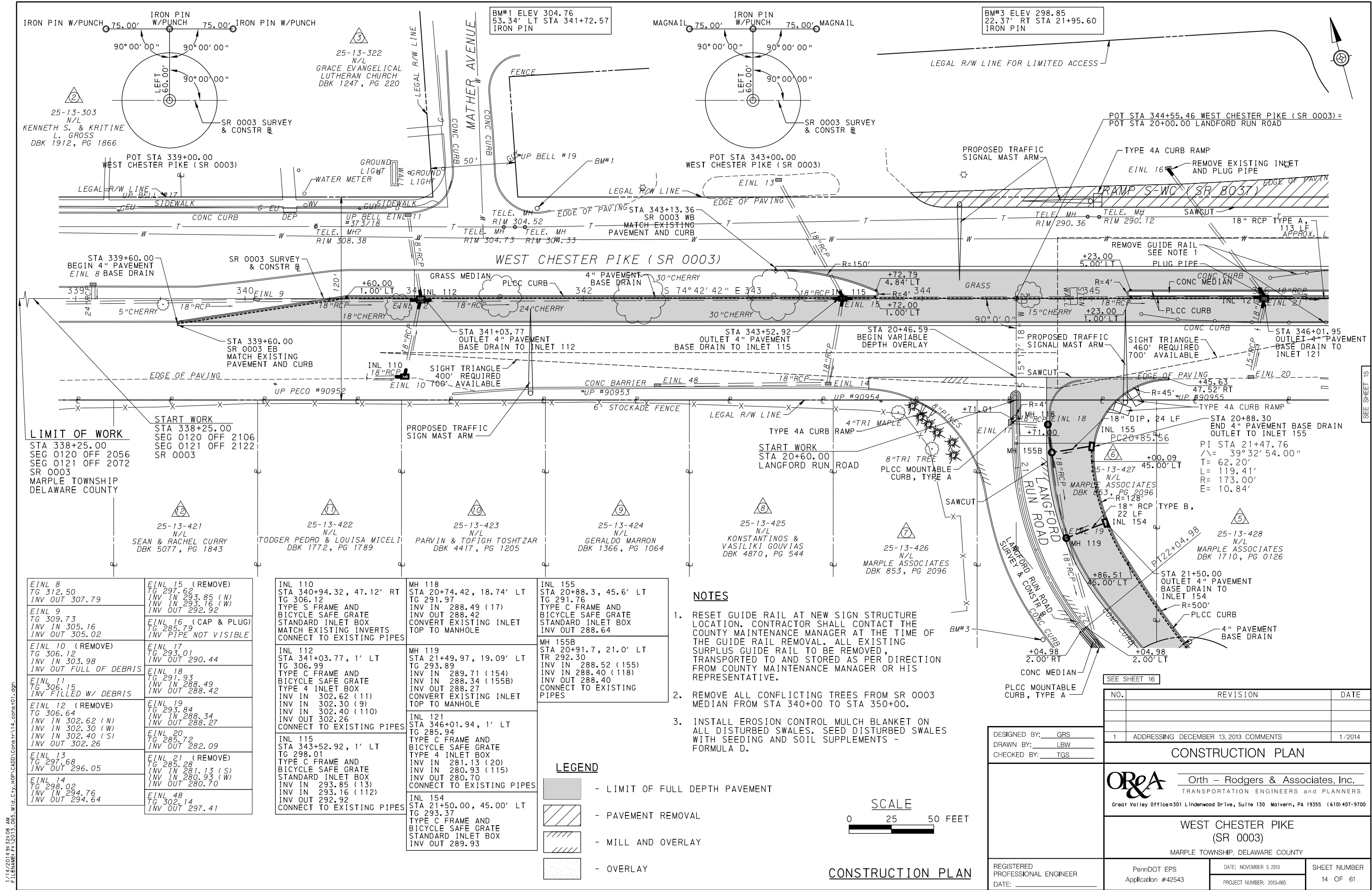
- NOTES:**
- MATERIALS AND CONSTRUCTION TO MEET PENNDOT PUBLICATION 408/2011, LATEST EDITION
- PROPOSED PAVEMENT SECTION MUST BE AS INDICATED ON THE PLAN, OR MATCH THE EXISTING AS FOUND IN THE FIELD, WHICHEVER IS GREATER.
- SEE CROSS SECTIONS FOR ADDITIONAL EXISTING CROSS SLOPE INFORMATION.

LEGEND

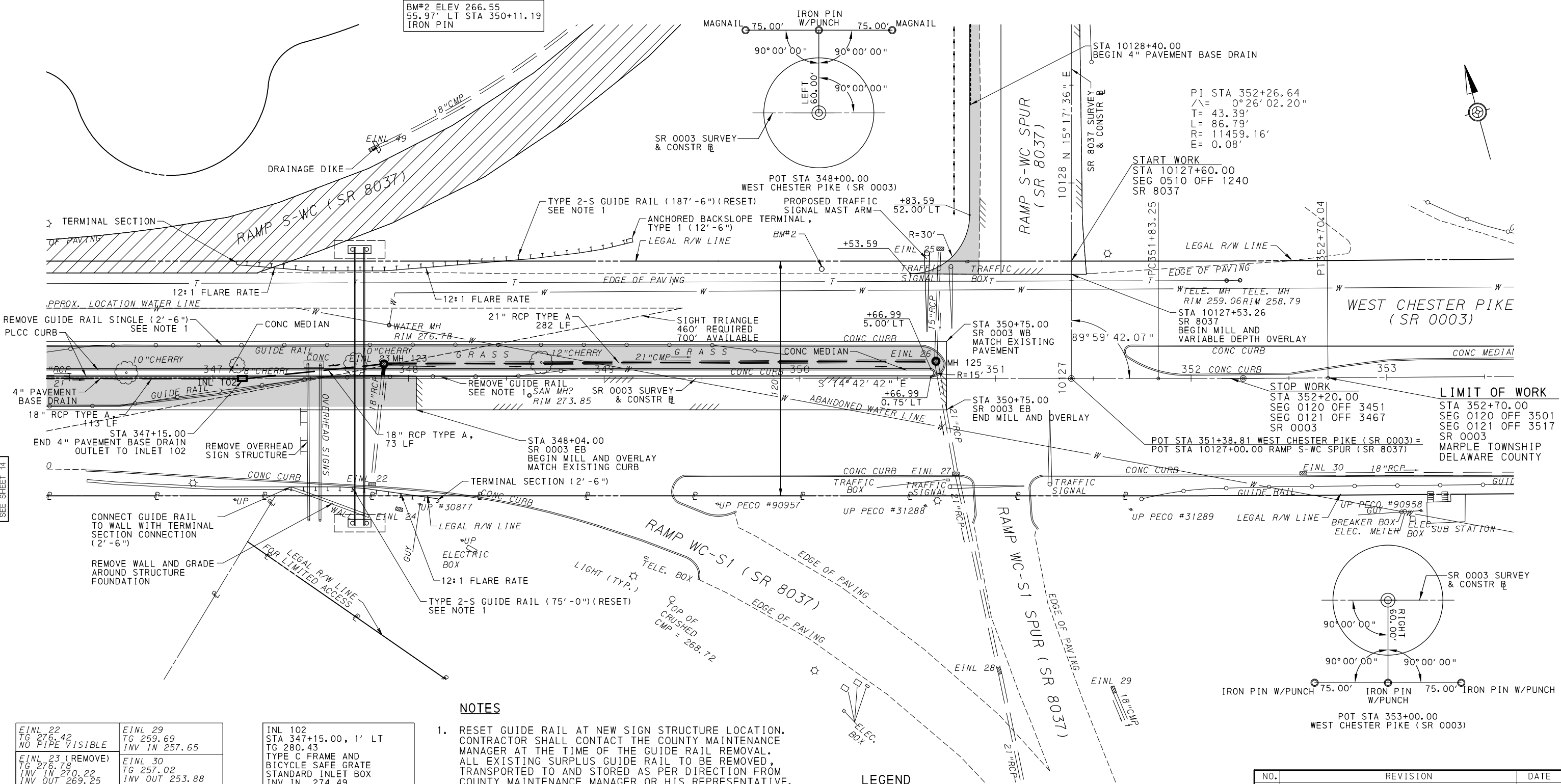
-----	SEEDING AND SOIL SUPPLEMENTS - FORMULA C
-----	SEEDING AND SOIL SUPPLEMENTS - FORMULA D

DESIGNED BY: GRS	NO.	REVISION	DATE
DRAWN BY: LBW			
CHECKED BY: TGS	1	ADDRESSING DECEMBER 13, 2013 COMMENTS	1/2014
TYPICAL SECTIONS			
Orth - Rodgers & Associates, Inc. TRANSPORTATION ENGINEERS and PLANNERS Great Valley Office 301 Lindenwood Drive, Suite 130 Malvern, PA 19355 (610) 407-9700			
WEST CHESTER PIKE (SR 0003) MARPLE TOWNSHIP, DELAWARE COUNTY			
REGISTERED PROFESSIONAL ENGINEER DATE:	PennDOT EPS Application #42543	DATE: NOVEMBER 5, 2013 PROJECT NUMBER: 2013-065	SHEET NUMBER 6 OF 61

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BM#2 ELEV 266.55
55.97' LT STA 350+11.19
IRON PIN



NOTES

- RESET GUIDE RAIL AT NEW SIGN STRUCTURE LOCATION. CONTRACTOR SHALL CONTACT THE COUNTY MAINTENANCE MANAGER AT THE TIME OF THE GUIDE RAIL REMOVAL. ALL EXISTING SURPLUS GUIDE RAIL TO BE REMOVED, TRANSPORTED TO AND STORED AS PER DIRECTION FROM COUNTY MAINTENANCE MANAGER OR HIS REPRESENTATIVE.
- REMOVE ALL CONFLICTING TREES FROM SR 0003 MEDIAN FROM STA 340+00 TO STA 350+00.
- INSTALL EROSION CONTROL MULCH BLANKET ON ALL DISTURBED SWALES. SEED DISTURBED SWALES WITH SEEDING AND SOIL SUPPLEMENTS - FORMULA D.
- REMOVE PORTION OF WALL NEEDED TO INSTALL NEW SIGN STRUCTURE FOUNDATION. REGRADE AREA AROUND NEW STRUCTURE AND INCLUDE NEW GUIDE RAIL

LEGEND

- LIMIT OF FULL DEPTH PAVEMENT
- PAVEMENT REMOVAL
- MILL AND OVERLAY
- OVERLAY

SCALE



EINL 22 TG 276.42 NO PIPE VISIBLE	EINL 29 TG 259.69 INV IN 257.65
EINL 23 (REMOVE) TG 276.78 INV IN 270.22 INV OUT 269.25	EINL 30 TG 257.02 INV OUT 253.88
EINL 24 TG 276.72 INV GRATE FILLED W/ CONC	EINL 31 TG 250.35 INV OUT 247.67
EINL 25 TG 263.31 INV OUT 261.28	EINL 32 TG 250.45 INV IN 247.30 (S) INV IN 245.39 (W) INV OUT 245.07
EINL 26 TG 265.52 INV IN 260.53 (W) INV IN 260.41 (N) INV OUT 259.10	EINL 33 TG 249.53 INV IN 242.58 INV OUT 242.31
EINL 27 TG 263.88 INV IN 258.56 INV OUT 258.26	EINL 49 TG 273.83 INV OUT 268.65
EINL 28 TG 261.55 INV IN 257.65 INV OUT 257.47	

INL 102 STA 347+15.00, 1' LT TG 280.43 TYPE C FRAME AND BICYCLE SAFE GRATE STANDARD INLET BOX INV IN 274.49 INV OUT 274.32
MH 123 STA 347+87.41, 7.42' LT TG 277.18 INV IN 270.22 (102) INV IN 270.22 (22) INV OUT 269.25 CONNECT TO EXISTING PIPES
MH 125 STA 350+69.56, 8.81' LT TG 265.20 INV IN 260.53 (123) INV IN 260.41 (25) INV OUT 259.10 CONVERT EXISTING INLET TO MANHOLE

DESIGNED BY: GRS
DRAWN BY: LBW
CHECKED BY: TGS

REGISTERED
PROFESSIONAL ENGINEER
DATE:

NO.	REVISION	DATE
1	ADDRESSING DECEMBER 13, 2013 COMMENTS	1/2014

CONSTRUCTION PLAN

OR&A Orth - Rodgers & Associates, Inc.
TRANSPORTATION ENGINEERS and PLANNERS
Great Valley Office 301 Lindenwood Drive, Suite 130 Malvern, PA 19355 (610) 407-9700

WEST CHESTER PIKE
(SR 0003)

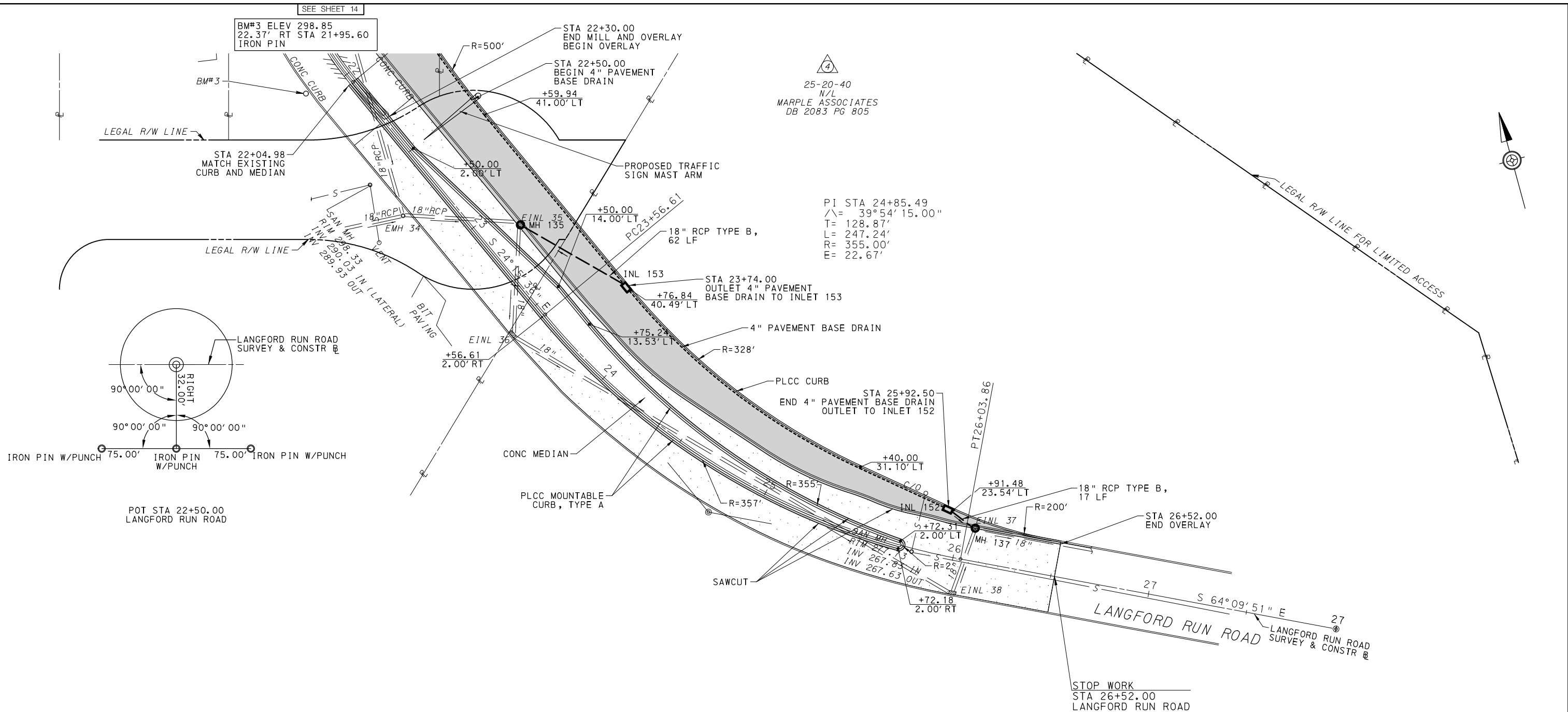
MARPLE TOWNSHIP, DELAWARE COUNTY

PennDOT EPS
Application #42543

DATE: NOVEMBER 5, 2013
PROJECT NUMBER: 2013-065

SHEET NUMBER
15 OF 61

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EMH 34 RIM 297.99 INV IN 291.19 INV IN 286.79 INV OUT 286.69
EINL 35 TG 295.66 INV IN 284.76 INV OUT 284.71
EINL 36 TG 293.91 INV IN 283.27 INV OUT 283.16
EINL 37 TG 275.20 INV IN 269.77 INV OUT 269.61
EINL 38 TG 275.75 INV IN 271.16 INV OUT 271.12

MH 135 STA 23+13.97, 19.05' LT TG 295.77 INV IN 287.62 (153) INV IN 284.76 (34) INV OUT 284.71 CONVERT EXISTING INLET TOP TO MANHOLE
MH 137 STA 26+08.31, 16.60' LT TG 275.33 INV IN 271.75 (152) INV IN 269.77 (38) INV OUT 269.61 CONVERT EXISTING INLET TOP TO MANHOLE

INL 152 STA 25+92.50, 24.14' LT TG 276.27 TYPE C FRAME AND BICYCLE SAFE GRATE STANDARD INLET BOX INV OUT 272.60
INL 153 STA 23+74.00, 40.62' LT TG 291.98 TYPE C FRAME AND BICYCLE SAFE GRATE STANDARD INLET BOX INV OUT 288.24

LEGEND

- LIMIT OF FULL DEPTH PAVEMENT
- PAVEMENT REMOVAL
- MILL AND OVERLAY
- OVERLAY

SCALE

0 25 50 FEET

DESIGNED BY: GRS
DRAWN BY: LBW
CHECKED BY: TGS

REGISTERED
PROFESSIONAL ENGINEER
DATE:

NO.	REVISION	DATE
1	ADDRESSING DECEMBER 13, 2013 COMMENTS	1/2014

CONSTRUCTION PLAN



Orth - Rodgers & Associates, Inc.
TRANSPORTATION ENGINEERS and PLANNERS
Great Valley Office 301 Lindenwood Drive, Suite 130 Malvern, PA 19355 (610) 407-9700

WEST CHESTER PIKE (SR 0003)

MARPLE TOWNSHIP, DELAWARE COUNTY

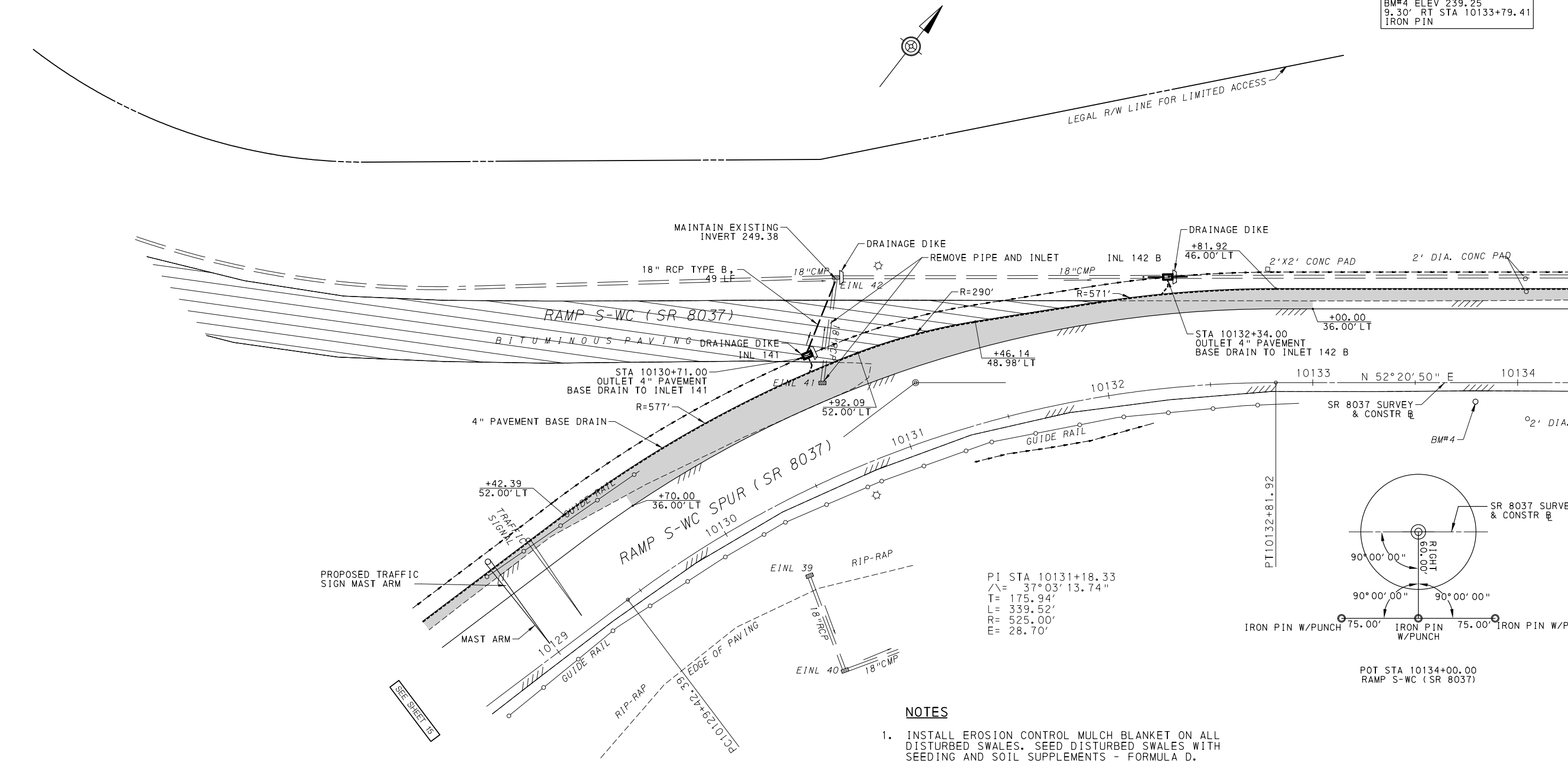
PennDOT EPS
Application #42543

DATE: NOVEMBER 5, 2013
PROJECT NUMBER: 2013-065

SHEET NUMBER
16 OF 61

CONSTRUCTION PLAN

BM#4 ELEV 239.25
9.30' RT STA 10133+79.41
IRON PIN



NOTES

1. INSTALL EROSION CONTROL MULCH BLANKET ON ALL DISTURBED SWALES. SEED DISTURBED SWALES WITH SEEDING AND SOIL SUPPLEMENTS - FORMULA D.
2. ALL EXISTING SURPLUS GUIDE RAIL TO BE REMOVED, TRANSPORTED TO AND STORED AS PER DIRECTION FROM COUNTY MAINTENANCE MANAGER OR HIS REPRESENTATIVE.

LEGEND

- LIMIT OF FULL DEPTH PAVEMENT
- PAVEMENT REMOVAL
- MILL AND OVERLAY
- OVERLAY

SCALE



EINL 39
TG 245.79
INV OUT 239.85

EINL 40
TG 243.22
INV IN 238.54
INV OUT 237.49

EINL 41
TG 254.32
INV OUT 249.63

EINL 42
TG 252.42
INV IN 249.22 (W)
INV IN 249.38 (S)
INV OUT 249.10

INL 141
STA 10130+71.00, 60' LT
TG 253.45
TYPE M FRAME AND GRATE
STANDARD INLET BOX
INV OUT 249.63

INL 142B
STA 10132+34.00, 54' LT
TG 246.69
TYPE M FRAME AND GRATE
STANDARD INLET BOX
INV IN 241.52
INV OUT 241.32
CONNECT TO EXISTING PIPE

DESIGNED BY: GRS
DRAWN BY: LBW
CHECKED BY: TGS

REGISTERED
PROFESSIONAL ENGINEER
DATE:

NO.	REVISION	DATE
1	ADDRESSING DECEMBER 13, 2013 COMMENTS	1/2014

CONSTRUCTION PLAN

OR&A Orth - Rodgers & Associates, Inc.
TRANSPORTATION ENGINEERS and PLANNERS
Great Valley Office 301 Lindenwood Drive, Suite 130 Malvern, PA 19355 (610) 407-9700

WEST CHESTER PIKE
(SR 0003)

MARPLE TOWNSHIP, DELAWARE COUNTY

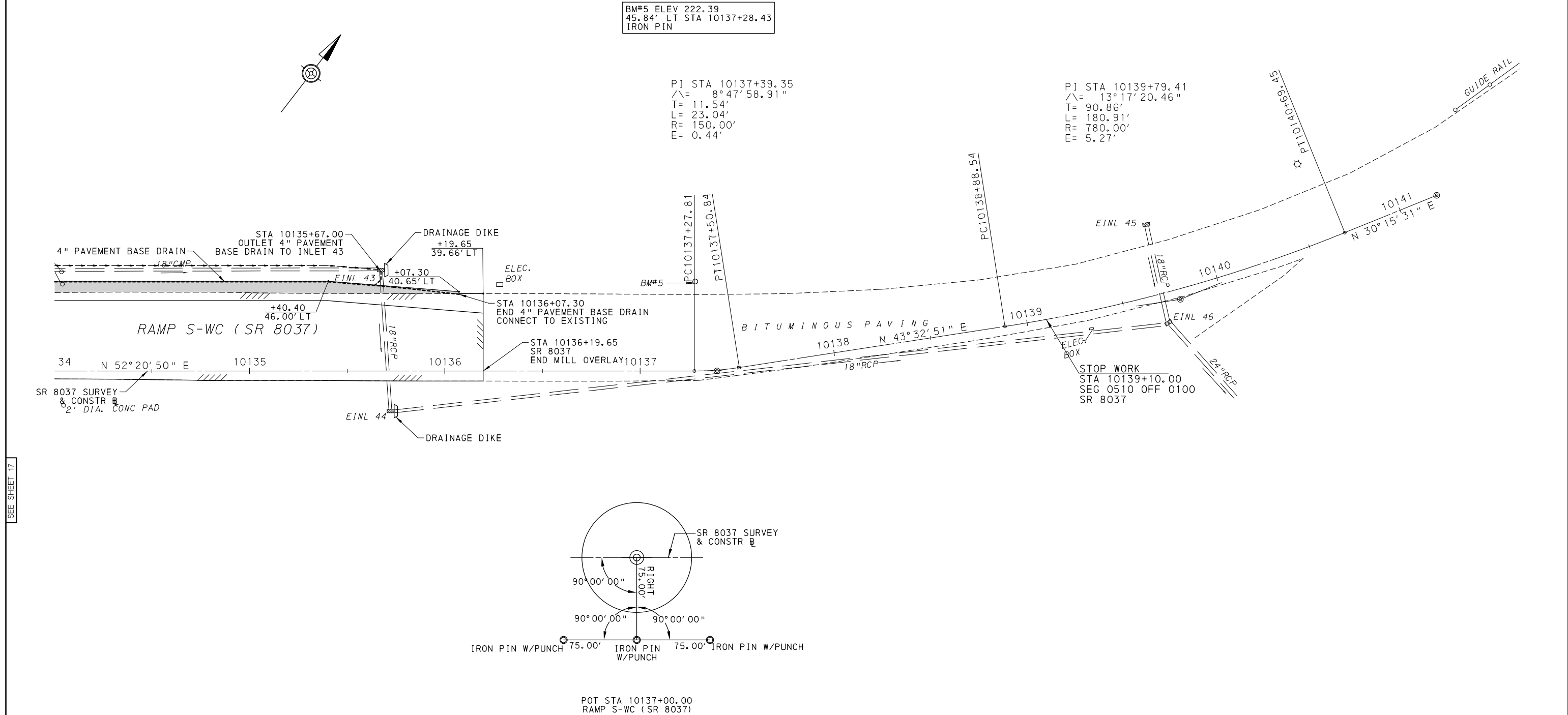
PennDOT EPS
Application #42543

DATE: NOVEMBER 5, 2013
PROJECT NUMBER: 2013-065

SHEET NUMBER
17 OF 61

1/14/2014 9:32:18 AM
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SEE SHEET 17



NOTES

1. INSTALL EROSION CONTROL MULCH BLANKET ON ALL DISTURBED SWALES. SEED DISTURBED SWALES WITH SEEDING AND SOIL SUPPLEMENTS - FORMULA D.

LEGEND

- LIMIT OF FULL DEPTH PAVEMENT
- PAVEMENT REMOVAL
- MILL AND OVERLAY
- OVERLAY

EINL 43 TG 228.99 INV IN 225.46 INV OUT 225.15
EINL 44 TG 228.47 INV IN 224.12 INV OUT 224.10
EINL 45 TG 212.26 INV OUT 209.14
EINL 46 TG 214.04 INV IN 210.34 (W) INV IN 209.02 (N) INV OUT 208.57



DESIGNED BY: GRS
DRAWN BY: LBW
CHECKED BY: TGS

NO.	REVISION	DATE
1	ADDRESSING DECEMBER 13, 2013 COMMENTS	1/2014
CONSTRUCTION PLAN		
OR&A Orth – Rodgers & Associates, Inc. TRANSPORTATION ENGINEERS and PLANNERS Great Valley Office 301 Lindenwood Drive, Suite 130 Malvern, PA 19355 (610) 407-9700		
WEST CHESTER PIKE (SR 0003) MARPLE TOWNSHIP, DELAWARE COUNTY		
REGISTERED PROFESSIONAL ENGINEER DATE:	PennDOT EPS Application #42543	DATE: NOVEMBER 5, 2013 PROJECT NUMBER: 2013-065
		SHEET NUMBER 18 OF 61