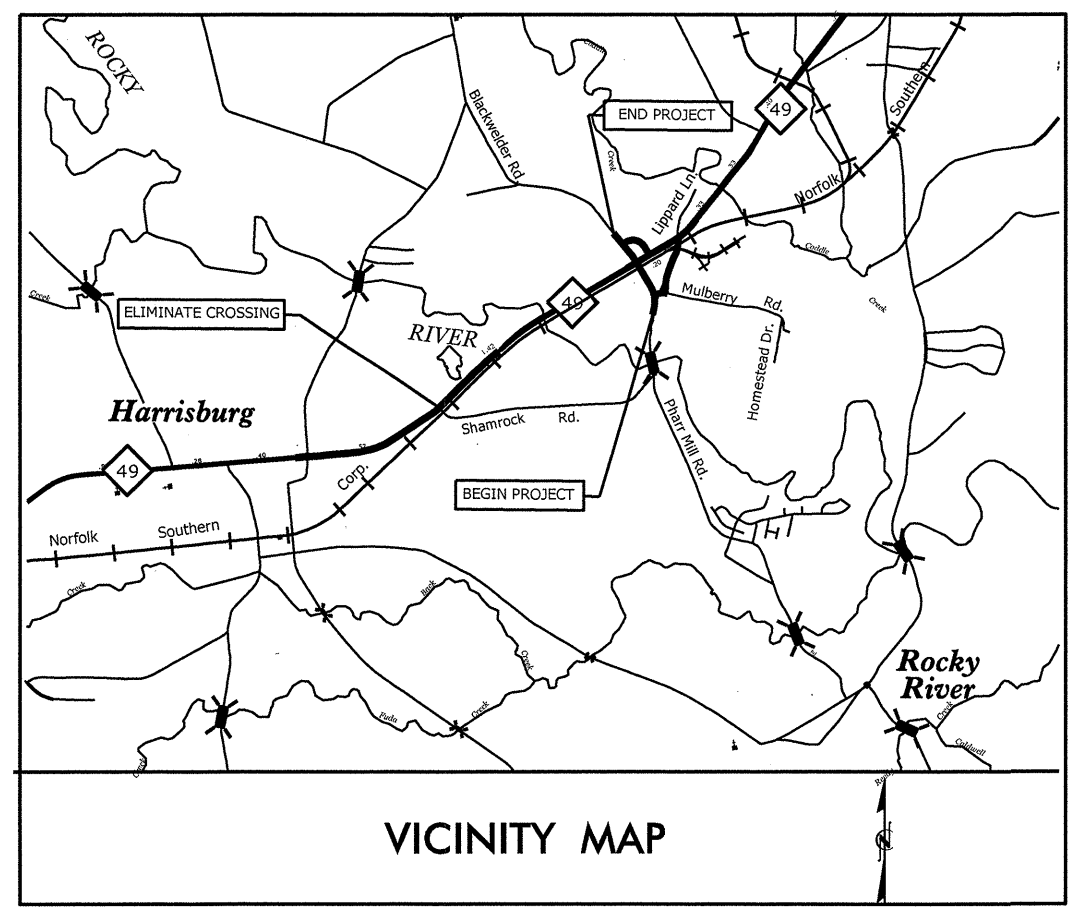


DCN: 0053DEL P10a2

TIP PROJECT: P-5208B

CONTRACT: C203145

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Index of Symbology Sheet



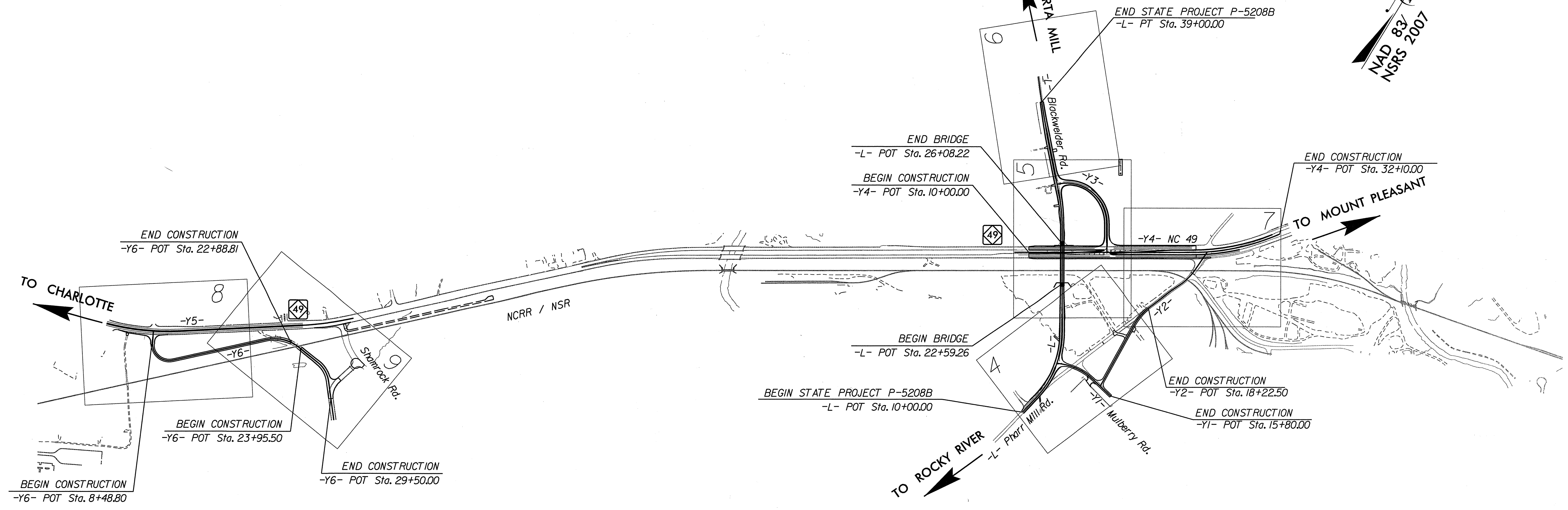
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
CABARRUS COUNTY

LOCATION: PHARR MILL ROAD /BLACKWELDER
ROAD GRADE SEPARATION OVER NCRR /NS

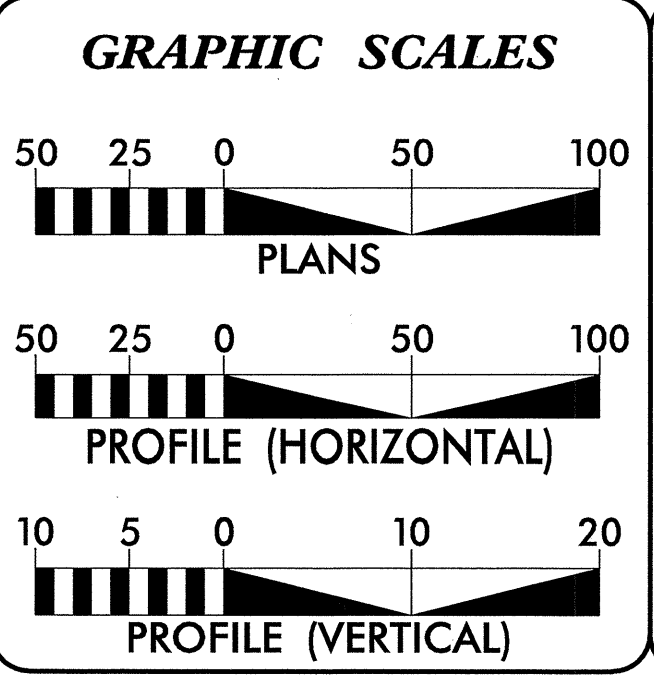
TYPE OF WORK: GRADING, DRAINAGE, PAVING,
SIGNAL, AND STRUCTURES



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	P-5208B	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
50000.1.STR05T1B		PE, Util. PE	
50000.1.STR06T3		PE, Util. PE	
43219.2.STR09P5208		ROW	
50000.3.STR02T4D	FRA-FR-HSR-0006-10-01-00	UTIL CONSTRUCT	



REVISIONS



DESIGN DATA

ADT 2013	=	3,500
ADT 2035	=	11,200
DHV	=	10 %
D	=	75 %
T	=	1 % *
V	=	50 MPH
* TTST = 2% DUAL		
FUNC CL	=	RURAL LOCAL

PROJECT LENGTH

LENGTH ROADWAY	=	0.483 Miles
LENGTH BRIDGE	=	0.066 Miles
TOTAL LENGTH	=	0.549 Miles

Prepared in the Office of:
URS Corporation - North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
TELEPHONE (919) 461-1100 FAX (919) 461-1415
NC LICENSE # C-2243

URS

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
APRIL 30, 2012

LETTING DATE:
APRIL 16, 2013

EDWARD G. EDENS, PE
PROJECT ENGINEER

JEFFREY R. HEXT
PROJECT DESIGN ENGINEER

ROADWAY DESIGN ENGINEER

2/12/13

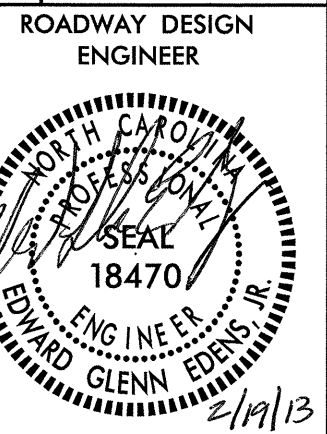
Edens
SIGNATURE

HYDRAULICS ENGINEER

2/12/13

Dial
SIGNATURE

NC DEPARTMENT OF TRANSPORTATION
RAIL DIVISION
PLANNING AND DEVELOPMENT



DCN:
0053DEL P10a2

SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1-B	CONVENTIONAL SYMBOLS
1-C THRU 1-D	SURVEY CONTROL SHEETS
1-E	CENTERLINE COORDINATE LIST SHEET
2 THRU 2A	PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEDGING DETAILS
2-B	-Y6- AT GRADE RAILROAD CROSSING DETAIL
2-C	DETAIL TO CONVERT EXISTING DI TO JB
2-D	DETAIL OF TEMPORARY CONTAINMENT OF PETROLIUM CONTAMINATED SOIL
2-E	CONCRETE ISLAND DETAIL
2-F	STANDARD EMBANKMENT MONITORING DETAIL
2-G	DETAIL OF STEEL PIPE GATE
3	SUMMARY OF QUANTITIES
3A	EARTHWORK SUMMARY
3B	PARCEL INDEX, SUMMARY OF GUARDRAIL AND PAVEMENT REMOVAL
3C	DRAINAGE SUMMARY SHEET
4 THRU 9	PLAN SHEETS
10 THRU 15	PROFILE SHEETS
TMP-1 THRU TMP-12	TRAFFIC MANAGEMENT PLANS
PMP-1 THRU PMP-8	PAVEMENT MARKING PLANS
SIGN-1 THRU SIGN-16	SIGNING PLANS
SIG-1 THRU SIG-4	SIGNAL PLANS
EC-1 THRU EC-15	EROSION CONTROL PLANS
UC-1 THRU UC-5	UTILITY CONSTRUCTION PLANS
UBO-1 THRU UBO-7	UTILITY BY OTHERS PLANS
X-1	CROSS SECTION SHEET INDEX
X-1A	CROSS SECTION SUMMARY
X-2 THRU X-47	CROSS-SECTIONS
S-1 THRU S-49	STRUCTURE PLANS

GENERAL NOTES: 2012 SPECIFICATIONS

GRADING AND SURFACING OR RESURFACING AND WIDENING:
THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN, THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. GRADE LINES MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

SUPERELEVATION:
ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 & 225.05 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:
ASPHALT AND EARTH SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01.

SIDE ROADS:
THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

UNDERDRAINS:
UNDERDRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.03 AT LOCATIONS DIRECTED BY THE ENGINEER.

DRIVEWAYS:
DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.03 AT LOCATIONS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.

STREET TURNOUT:
STREET RETURNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 848.04 USING THE RADII NOTED ON PLANS.

GUARDRAIL:
THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.

TEMPORARY SHORING:
SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC WILL BE PAID FOR AS "EXTRA WORK" IN ACCORDANCE WITH SECTION 104-7.

END BENTS:
THE ENGINEER SHALL CHECK THE STRUCTURE END BENT PLANS, DETAILS, AND CROSS-SECTION PRIOR TO SETTING OF THE SLOPE STAKES FOR THE EMBANKMENT OR EXCAVATION APPROACHING A BRIDGE.

UTILITIES:
UTILITY OWNERS ON THIS PROJECT ARE: DUKE ENERGY; UNION POWER; WINDSTREAM; PSNC; TIME WARNER CABLE; AND CITY OF HARRISBURG (WATER); ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.

RIGHT-OF-WAY MARKERS:
ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY CONTRACTOR.

2012 ROADWAY ENGLISH STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" HIGHWAY DESIGN BRANCH - N. C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N. C., DATED JANUARY, 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.03	METHOD OF CLEARING - METHOD III
225.01	GUIDE FOR GRADING SUBGRADE - INTERSTATE AND FREEWAY
225.02	GUIDE FOR GRADING SUBGRADE - SECONDARY AND LOCAL
225.04	METHOD OF OBTAINING SUPERELEVATION - TWO LANE PAVEMENT
225.05	METHOD OF OBTAINING SUPERELEVATION - DIVIDED HIGHWAYS
225.06	METHOD OF GRADING SIGHT DISTANCE AT INTERSECTIONS
225.09	GUIDE FOR SHOULDER AND DITCH TRANSITION AT GRADE SEPARATIONS
DIVISION 3 - PIPE CULVERTS	
300.01	METHOD OF PIPE INSTALLATION
310.03	CROSS PIPE END SECTION - PRECAST CONCRETE SECTION FOR 18" TO 30" PIPE
310.05	CROSS PIPE END SECTION - PREFABRICATED STEEL SECTION FOR 18" TO 30" PIPE
310.10	DRIVEWAY PIPE CONSTRUCTION
DIVISION 4 - MAJOR STRUCTURES	
422.10	REINFORCED BRIDGE APPROACH FILLS
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	METHOD OF SHOULDER CONSTRUCTION - HIGH SIDE OF SUPERELEVATED CURVE - METHOD I
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
610.01	GUIDE FOR PAVING SHOULDERS UNDER BRIDGES - METHOD I
654.01	PAVEMENT REPAIRS
DIVISION 8 - INCIDENTALS	
806.01	CONCRETE RIGHT-OF-WAY MARKER
806.02	GRANITE RIGHT-OF-WAY MARKER
815.03	PIPE UNDERDRAIN AND BLIND DRAIN
838.01	CONCRETE ENDWALL FOR SINGLE AND DOUBLE PIPE CULVERTS - 15" THRU 48" PIPE 90 SKEW
838.11	BRICK ENDWALL FOR SINGLE AND DOUBLE PIPE CULVERTS - 15" THRU 48" PIPE 90 SKEW
838.80	PRECAST ENDWALLS - 12" THRU 72" PIPE 90 SKEW
840.00	CONCRETE BASE PAD FOR DRAINAGE STRUCTURES
840.01	BRICK CATCH BASIN - 12" THRU 54" PIPE
840.02	CONCRETE CATCH BASIN - 12" THRU 54" PIPE
840.03	FRAME, GRATES AND HOOD - FOR USE ON STANDARD CATCH BASIN
840.18	CONCRETE GRATED DROP INLET TYPE 'B' - 12" THRU 36" PIPE
840.20	FRAMES AND WIDE SLOT FLAT GRATES
840.25	ANCHORAGE FOR FRAMES - BRICK OR CONCRETE OR PRECAST
840.29	FRAMES AND NARROW SLOT FLAT GRATES
840.31	CONCRETE JUNCTION BOX - 12" THRU 66" PIPE
840.32	BRICK JUNCTION BOX - 12" THRU 66" PIPE
840.35	TRAFFIC BEARING GRATED DROP INLET - FOR CAST IRON DOUBLE FRAME AND GRATES
840.45	PRECAST DRAINAGE STRUCTURE
840.46	TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE
840.54	MANHOLE FRAME AND COVER
840.66	DRAINAGE STRUCTURE STEPS
840.72	PIPE COLLAR
846.01	CONCRETE CURB, GUTTER AND CURB & GUTTER
846.04	DROP INLET INSTALLATION IN SHOULDER BERM GUTTER
848.03	DRIVEWAY TURNOUT - DROP CURB TYPE
848.04	STREET TURNOUT
852.01	CONCRETE ISLAND DETAIL
857.01	PRECAST REINFORCED CONCRETE BARRIER - 41" SINGLE FACED
862.01	GUARDRAIL PLACEMENT
862.02	GUARDRAIL INSTALLATION
862.03	STRUCTURE ANCHOR UNITS
862.04	ANCHORING END OF GUARDRAIL - B-77 AND B-83 ANCHOR UNITS
866.02	WOVEN WIRE FENCE - WITH WOOD POST
866.04	BARBED WIRE FENCE WITH WOOD POSTS (2 - 7 STRANDS)
876.01	RIP RAP IN CHANNELS
876.02	GUIDE FOR RIP RAP AT PIPE OUTLETS
876.04	DRAINAGE DITCHES WITH CLASS 'B' RIP RAP

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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

*S.U.E. = *Subsurface Utility Engineering*

DCN: 0053DEL P10a2

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EIP
Property Corner	✕
Property Monument	◻ ECM
Parcel/Sequence Number	123
Existing Fence Line	---x---x---x---
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	◻
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	---WLB---
Proposed Wetland Boundary	---WLB---
Existing Endangered Animal Boundary	---EAB---
Existing Endangered Plant Boundary	---EPB---
Known Soil Contamination: Area or Site	☠ ☠
Potential Soil Contamination: Area or Site	☠ ?

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○
Well	○ W
Small Mine	✕
Foundation	◻
Area Outline	◻
Cemetery	✝
Building	◻
School	◻
Church	✝
Dam	◻

HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	◻
Jurisdictional Stream	---JS---
Buffer Zone 1	---BZ 1---
Buffer Zone 2	---BZ 2---
Flow Arrow	←
Disappearing Stream	→
Spring	○
Wetland	---WLB---
Proposed Lateral, Tail, Head Ditch	← FLOW
False Sump	◻

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	CSX TRANSPORTATION MILEPOST 35
Switch	SWITCH
RR Abandoned	-----
RR Dismantled	-----

RIGHT OF WAY:

Baseline Control Point	◆
Existing Right of Way Marker	△
Existing Right of Way Line	-----
Proposed Right of Way Line	○
Proposed Right of Way Line with Iron Pin and Cap Marker	○
Proposed Right of Way Line with Concrete or Granite R/W Marker	▲
Proposed Right of Way Line with Concrete C/A Marker	▲
Existing Control of Access	⊗
Proposed Control of Access	⊗
Existing Easement Line	---E---
Proposed Temporary Construction Easement	---E---
Proposed Temporary Drainage Easement	---TDE---
Proposed Permanent Drainage Easement	---PDE---
Proposed Permanent Drainage / Utility Easement	---DUE---
Proposed Permanent Utility Easement	---PUE---
Proposed Temporary Utility Easement	---TUE---
Proposed Aerial Utility Easement	---AUE---
Proposed Permanent Easement with Iron Pin and Cap Marker	◆

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	---C---
Proposed Slope Stakes Fill	---F---
Proposed Curb Ramp	○
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----

VEGETATION:

Equality Symbol	⊕
Pavement Removal	XXXX
Single Tree	☼
Single Shrub	☼
Hedge	-----
Woods Line	-----

Orchard	☼ ☼ ☼ ☼
Vineyard	◻ Vineyard

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	CONC
Bridge Wing Wall, Head Wall and End Wall	CONC WW
MINOR:	
Head and End Wall	CONC HW
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	⊗
Storm Sewer	---S---

UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	⊗
Power Line Tower	⊗
Power Transformer	⊗
H-Frame Pole	●
Recorded U/G Power Line	---P---
Designated U/G Power Line (S.U.E.*)	---P---

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	⊗
Telephone Booth	⊗
Telephone Pedestal	⊗
Telephone Cell Tower	⊗
U/G Telephone Cable Hand Hole	⊗
Recorded U/G Telephone Cable	---T---
Designated U/G Telephone Cable (S.U.E.*)	---T---
Recorded U/G Telephone Conduit	---TC---
Designated U/G Telephone Conduit (S.U.E.*)	---TC---
Recorded U/G Fiber Optics Cable	---T FO---
Designated U/G Fiber Optics Cable (S.U.E.*)	---T FO---

WATER:

Water Manhole	⊗
Water Meter	○
Water Valve	⊗
Water Hydrant	⊗
Recorded U/G Water Line	---W---
Designated U/G Water Line (S.U.E.*)	---W---
Above Ground Water Line	---A/G Water---

TV:

TV Satellite Dish	☼
TV Pedestal	⊗
TV Tower	⊗
U/G TV Cable Hand Hole	⊗
Recorded U/G TV Cable	---TV---
Designated U/G TV Cable (S.U.E.*)	---TV---
Recorded U/G Fiber Optic Cable	---TV FO---
Designated U/G Fiber Optic Cable (S.U.E.*)	---TV FO---

GAS:

Gas Valve	◇
Gas Meter	◇
Recorded U/G Gas Line	---G---
Designated U/G Gas Line (S.U.E.*)	---G---
Above Ground Gas Line	---A/G Gas---

SANITARY SEWER:

Sanitary Sewer Manhole	⊗
Sanitary Sewer Cleanout	⊗
U/G Sanitary Sewer Line	---SS---
Above Ground Sanitary Sewer	---A/G Sanitary Sewer---
Recorded SS Forced Main Line	---FSS---
Designated SS Forced Main Line (S.U.E.*)	---FSS---

MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	◻
Utility Located Object	○
Utility Traffic Signal Box	⊗
Utility Unknown U/G Line	---?UTL---
U/G Tank; Water, Gas, Oil	◻
Underground Storage Tank, Approx. Loc.	⊗
A/G Tank; Water, Gas, Oil	◻
Geoenvironmental Boring	⊗
U/G Test Hole (S.U.E.*)	⊗
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

DCN:
0053DEL P10a2

CENTERLINE COORDINATE LIST

Disclaimer: This coordinate list is provided for the convenience of interested contractors and is intended for use during the project bidding process only. Coordinates are localized to this particular project and any conversion to state grid coordinates or other formats will be the responsibility of the recipient. While every effort has been made to provide up-to-date, accurate information, NCDOT makes no express guarantee as to the validity or potential for revision of this information prior to project letting.

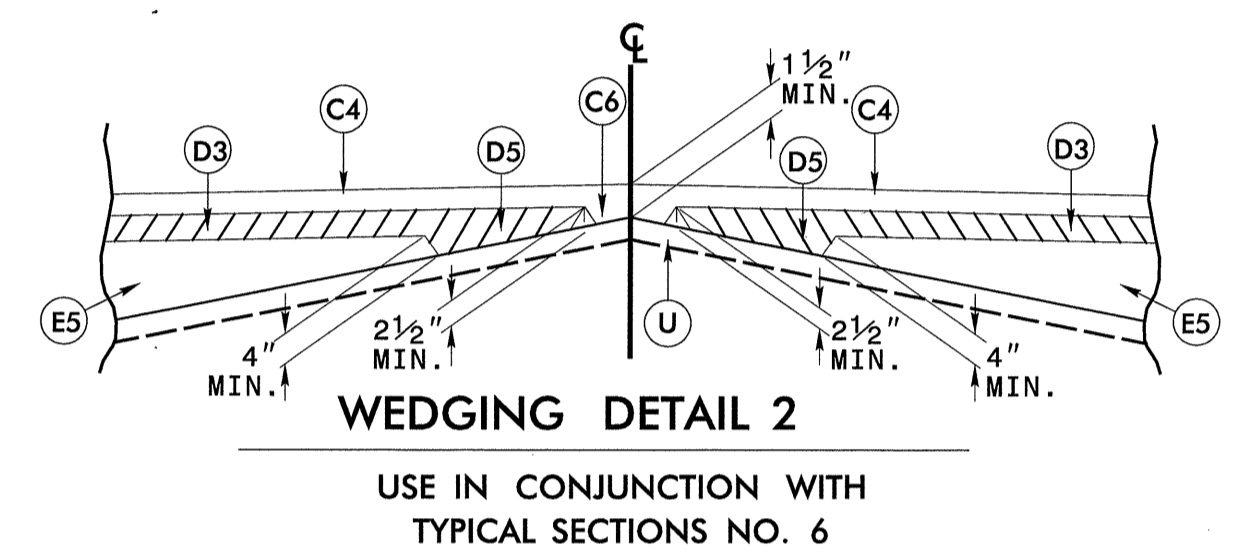
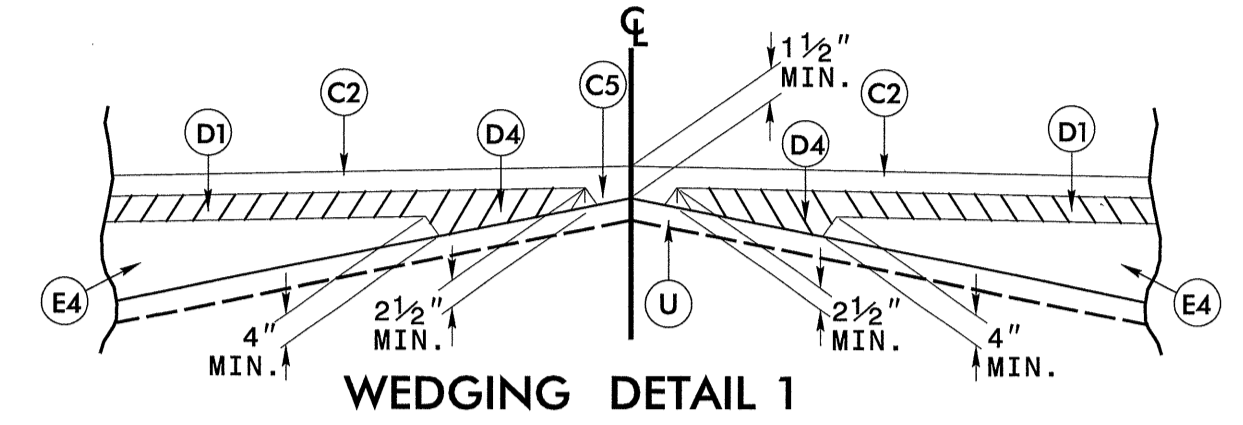
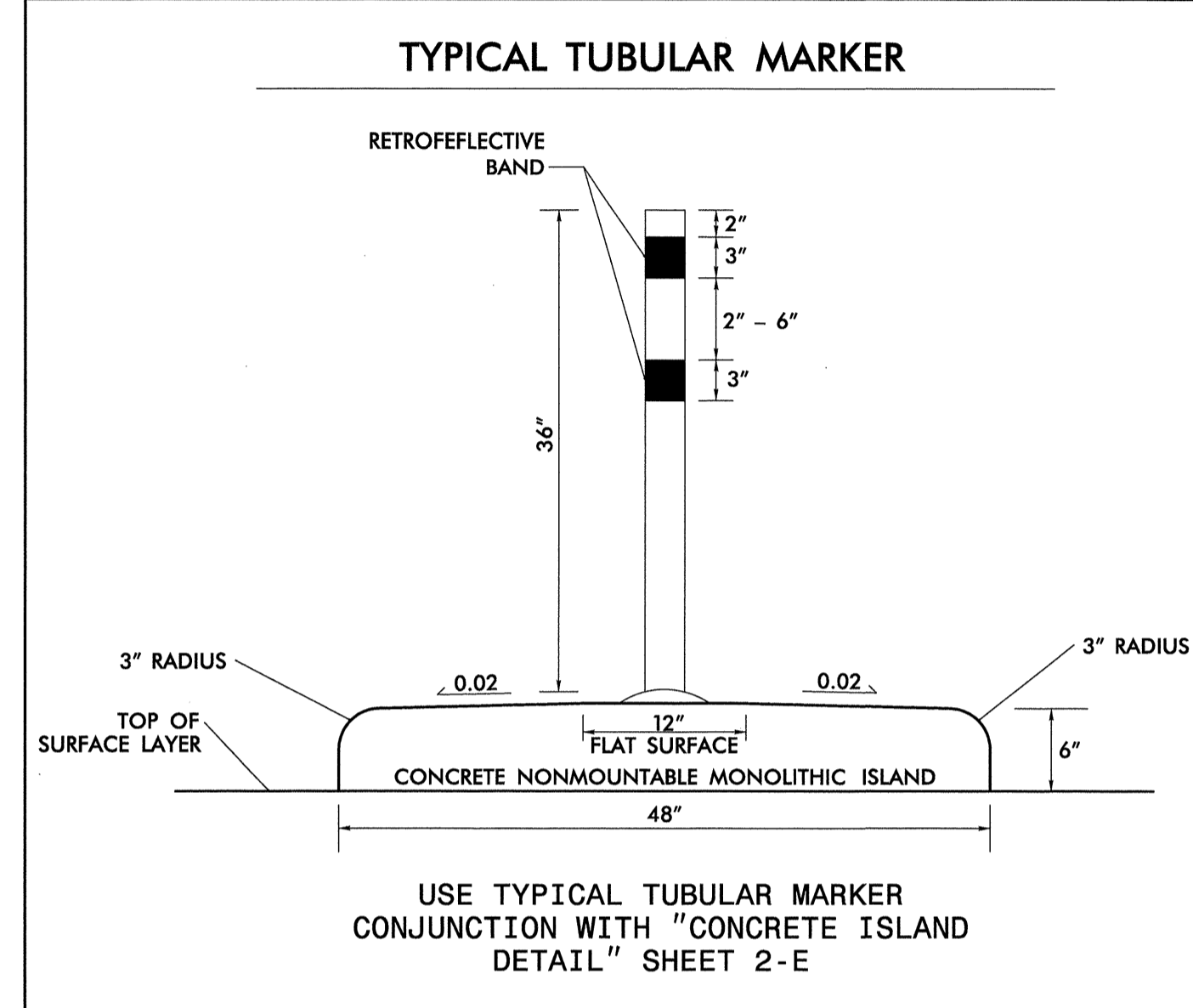
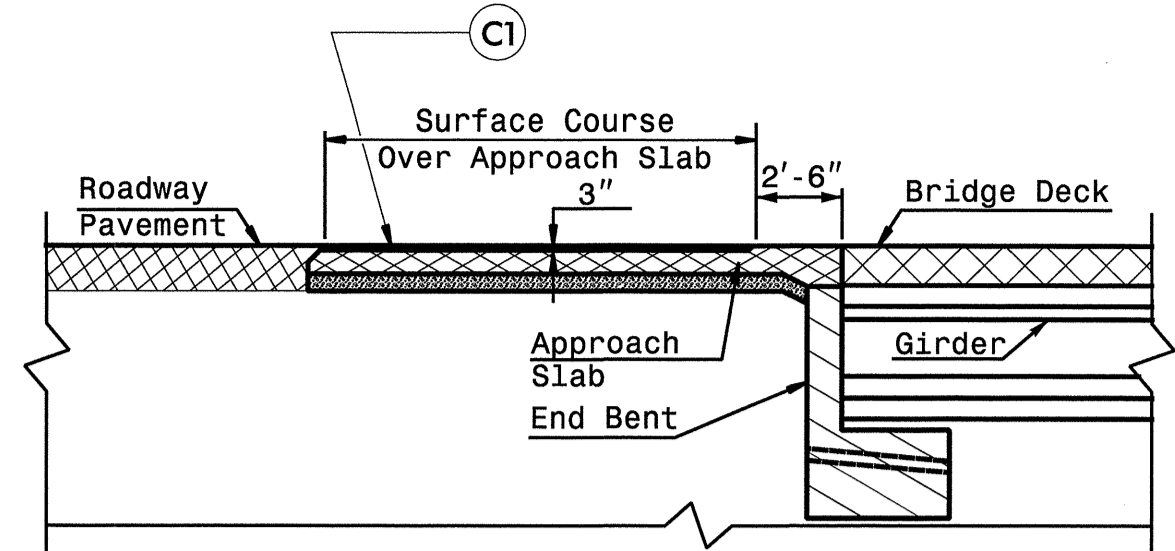
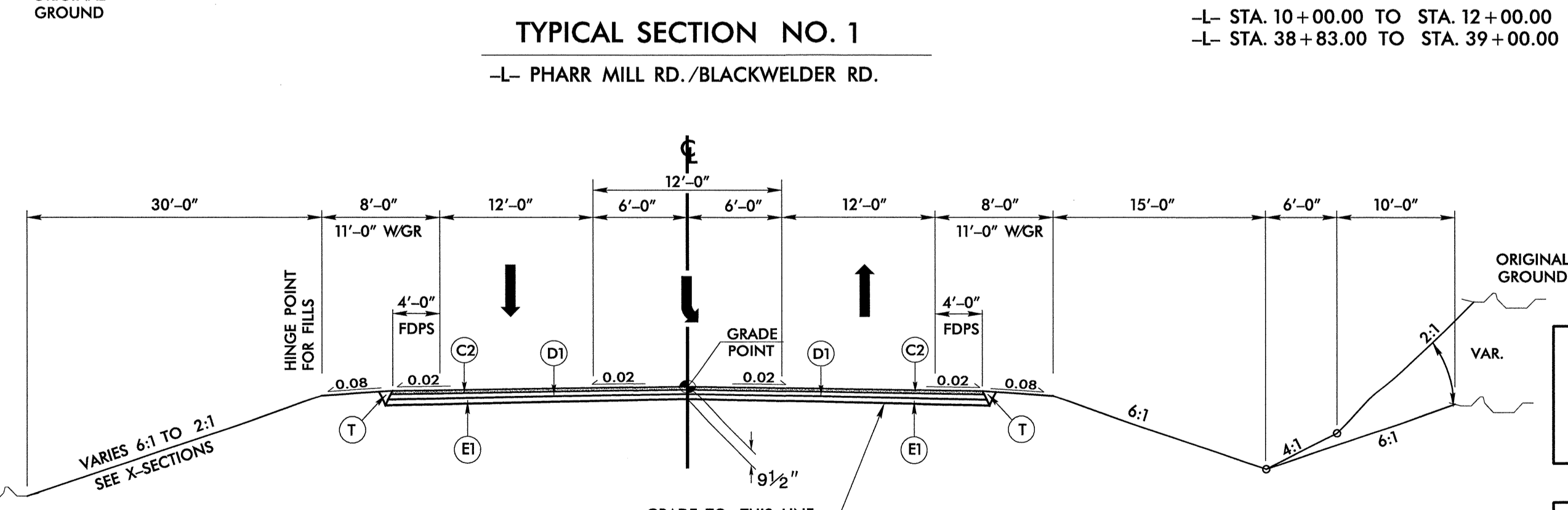
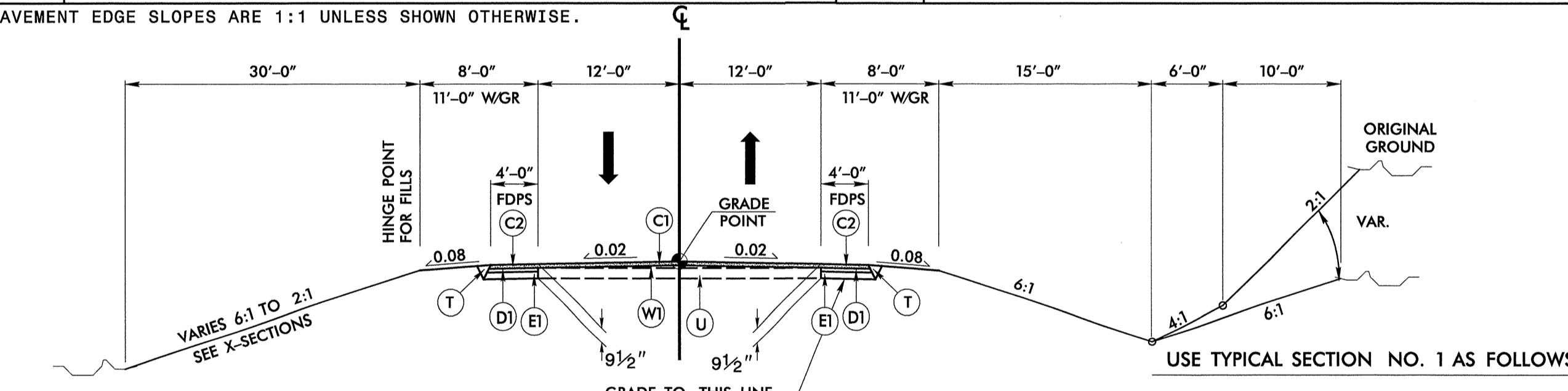
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1	L	10+00.00	580073.3065	1517447.1961
2	L	11+00.00	580171.1569	1517467.8189
3	L	12+00.00	580269.0416	1517488.2731
4	L	13+00.00	580368.1564	1517501.1079
5	L	14+00.00	580468.0925	1517502.2204
6	L	15+00.00	580567.4684	1517491.5950
7	L	16+00.00	580664.9103	1517469.3787
8	L	17+00.00	580759.0709	1517435.8787
9	L	18+00.00	580848.6485	1517391.5581
10	L	19+00.00	580934.2210	1517339.8204
11	L	20+00.00	581019.6088	1517287.7732
12	L	21+00.00	581104.9967	1517235.7260
13	L	22+00.00	581190.3845	1517183.6787
14	L	23+00.00	581275.7724	1517131.6315
15	L	24+00.00	581361.1602	1517079.5842
16	L	25+00.00	581446.5481	1517027.5370
17	L	26+00.00	581531.9359	1516975.4897
18	L	27+00.00	581617.3237	1516923.4425
19	L	28+00.00	581702.3255	1516870.7757
20	L	29+00.00	581784.4233	1516813.7066
21	L	30+00.00	581862.9139	1516751.7697
22	L	31+00.00	581937.5717	1516685.2597
23	L	32+00.00	582010.8490	1516617.2124
24	L	33+00.00	582084.1264	1516549.1652
25	L	34+00.00	582157.4038	1516481.1180
26	L	35+00.00	582230.7162	1516413.1085
27	L	36+00.00	582304.6457	1516345.7712
28	L	37+00.00	582379.3908	1516279.3405
29	L	38+00.00	582454.9405	1516213.8263
30	L	39+00.00	582531.2835	1516149.2382

DCN: 0053DEL P10a2

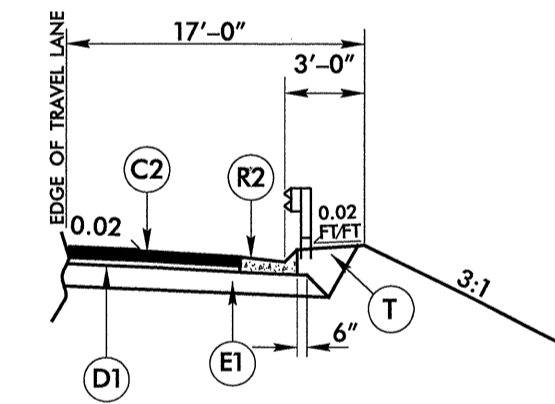
PAVEMENT DESIGN SCHEDULE

C1	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	E3	PROP. APPROX. 7" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 399 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	E4	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1", DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 4" IN DEPTH OR GREATER THAN 5.5" IN DEPTH.
C3	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	E5	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1", DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 4" IN DEPTH OR GREATER THAN 5.5" IN DEPTH.
C4	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	J	PROP. 8" AGGREGATE BASE COURSE
C5	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.	J1	PROP. 10" AGGREGATE BASE COURSE
C6	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.	L1	CLASS IV SUBGRADE STABILIZATION
D1	PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.	N1	FABRIC STABILIZATION
D2	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	R1	2'-6" CONCRETE CURB AND GUTTER.
D3	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	R2	SHOULDER BERM GUTTER.
D4	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2 1/2" IN DEPTH OR GREATER THAN 4" IN DEPTH.	T	EARTH MATERIAL.
D5	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2 1/2" IN DEPTH OR GREATER THAN 4" IN DEPTH.	U	EXISTING PAVEMENT.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	W1	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL No. 1)
E2	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	W2	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL No. 2)

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



DETAIL OF SHOULDER BERM GUTTER



PARTIAL TYPICAL SECTION NO. 2A

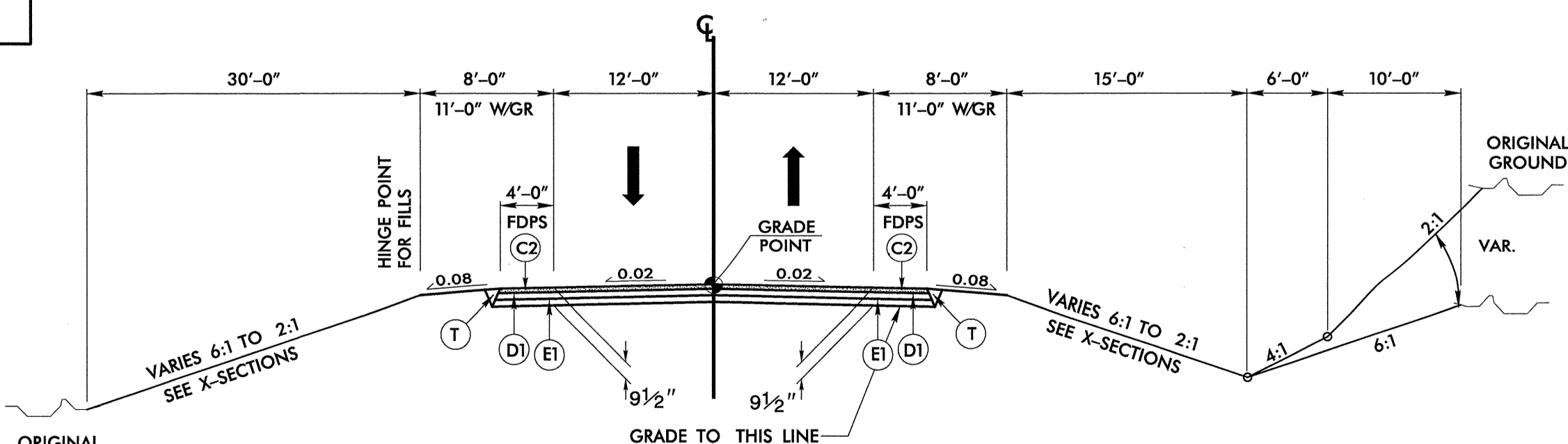
USE PARTIAL TYPICAL 2A IN CONJUNCTION WITH TYPICAL 2 & 3 AT:
 -L- STA. 18+50.00 TO STA. 22+34.00 (LT)
 -L- STA. 20+10.00 TO STA. 22+34.00 (RT)
 -L- STA. 26+33.00 TO STA. 28+50.00 (LT)
 -L- STA. 26+33.00 TO STA. 26+69.00 (RT)

TRANSITION FROM TYPICAL SECTION #1 TO TYPICAL SECTION #2:
 -L- STA. 12+00.00 TO -L- STA. 15+00.00

TRANSITION FROM TYPICAL SECTION #2 TO TYPICAL SECTION #3:
 -L- STA. 19+50.00 TO -L- STA. 22+50.00 (BEGIN BRIDGE -L- STA. 22+59.26)

TRANSITION FROM TYPICAL SECTION #3 TO TYPICAL SECTION #2:
 -Y3- STA. 12+72.65 TO -Y3- STA. 14+72.64

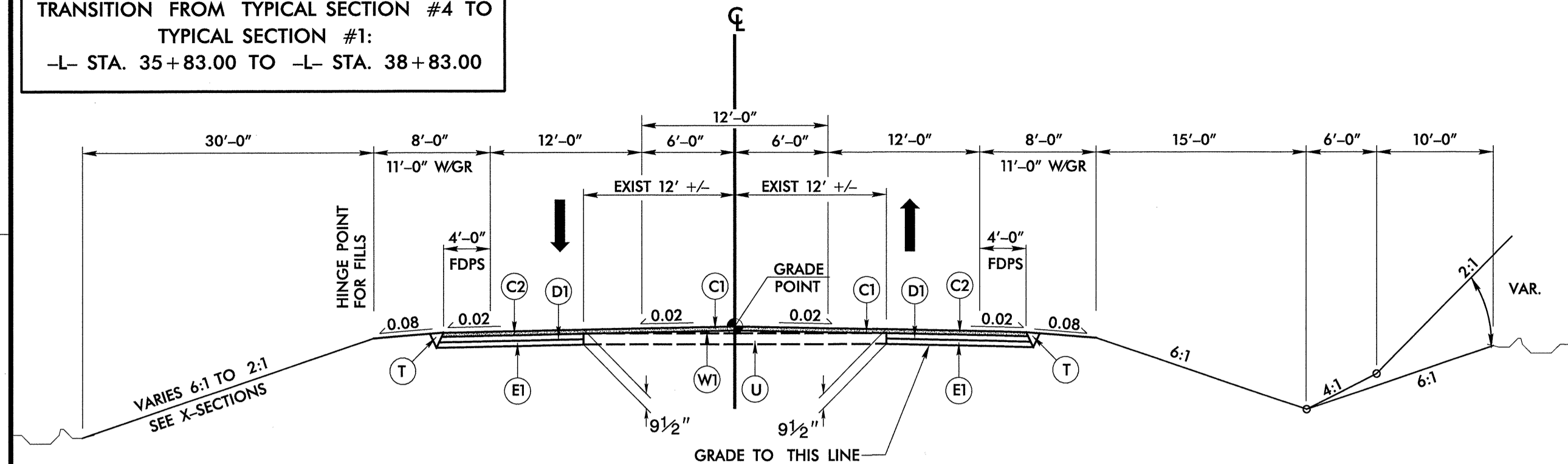
TRANSITION FROM TYPICAL SECTION #3 TO TYPICAL SECTION #4:
 -L- STA. 27+93.00 TO -L- STA. 31+91.86



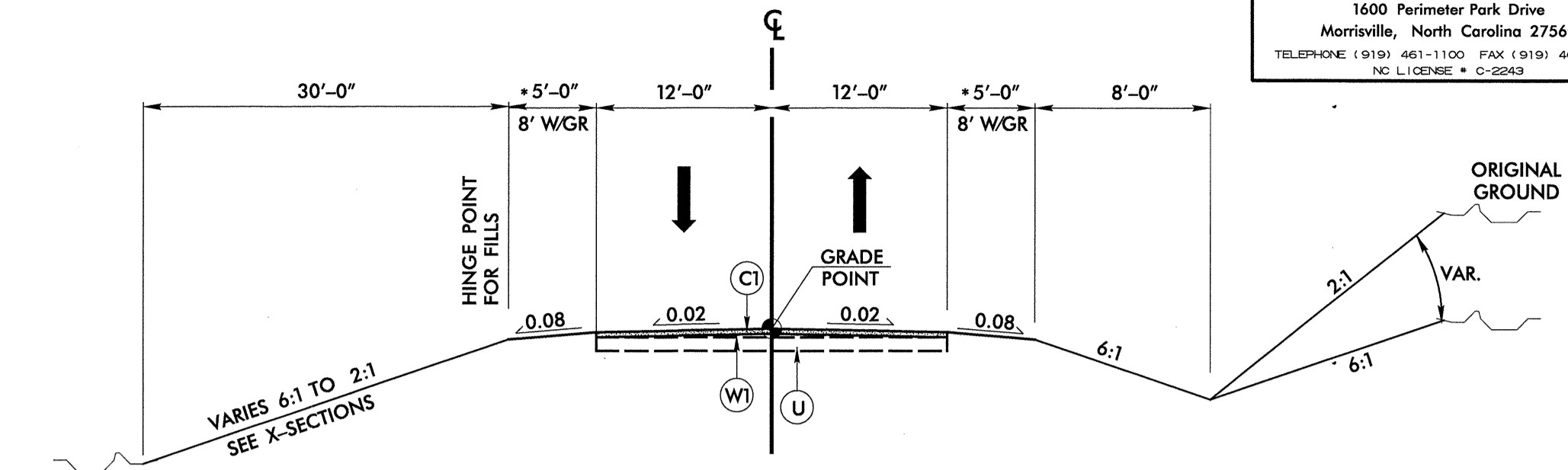
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 11/10/2015

DCN: 0053DEL P10a2

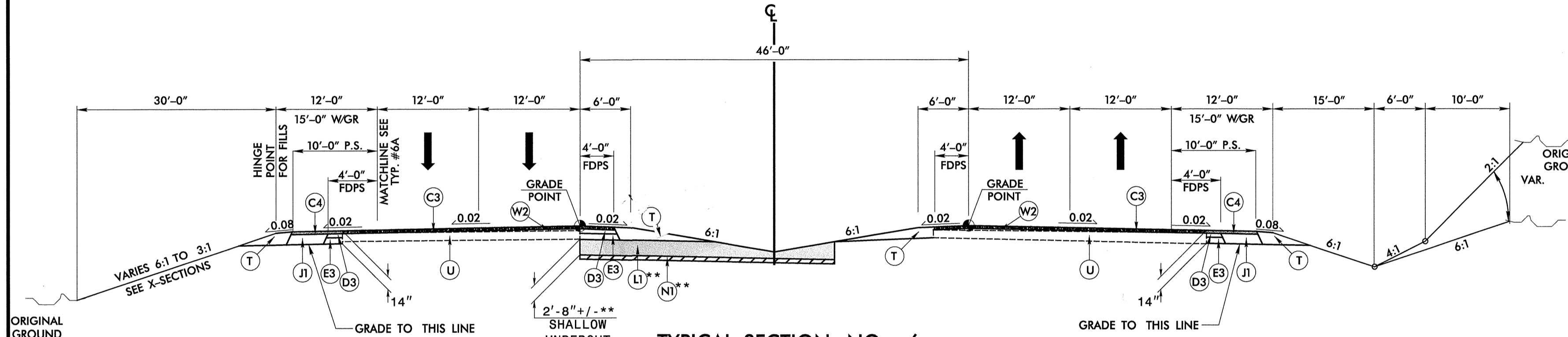
TRANSITION FROM TYPICAL SECTION #4 TO TYPICAL SECTION #1:
-L- STA. 35+83.00 TO -L- STA. 38+83.00



TYPICAL SECTION NO. 4
-L- PHARR MILL RD./BLACKWELDER RD.
USE TYPICAL SECTION NO. 4 AS FOLLOWS
-L- STA. 31+91.86 TO STA. 35+83.00

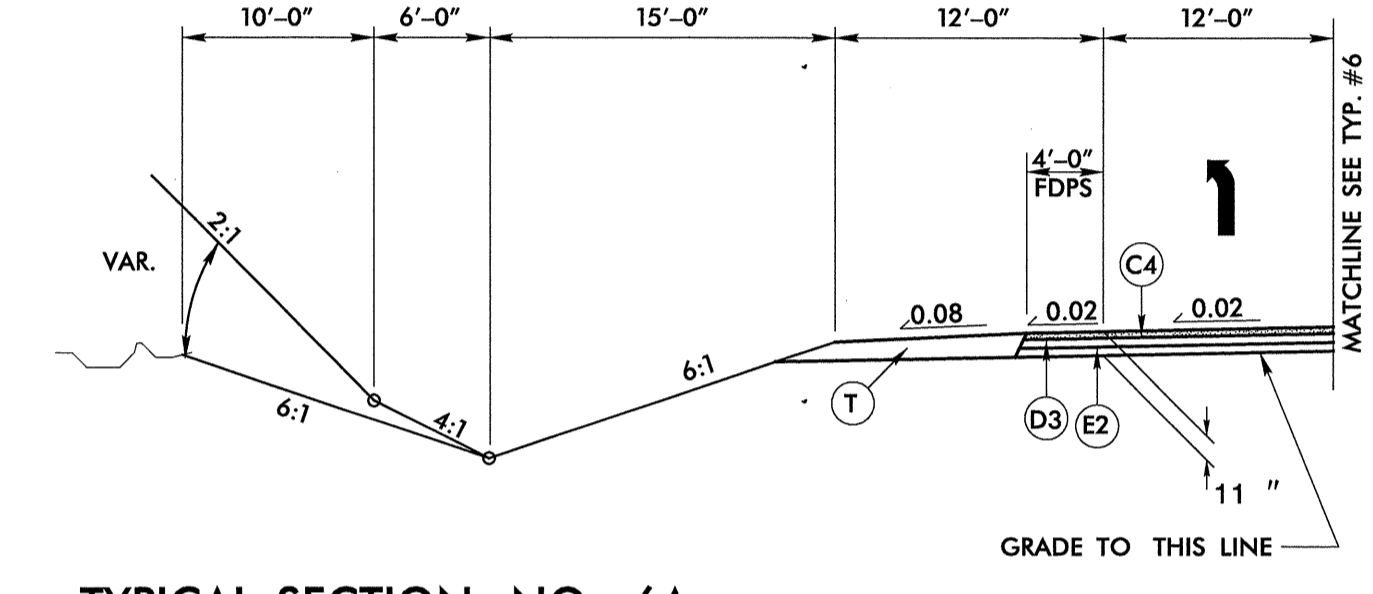


TYPICAL SECTION NO. 5
-Y1- MULBERRY RD. (SR 1159)
-Y2- PHARR MILL RD. EXT.
USE TYPICAL SECTION NO. 5 AS FOLLOWS
-Y1- STA. 15+50.00 TO STA. 15+80.00
-Y2- STA. 18+00.00 TO STA. 18+22.50
-Y2- SHOULDERS ARE 8' AND 11' WGR

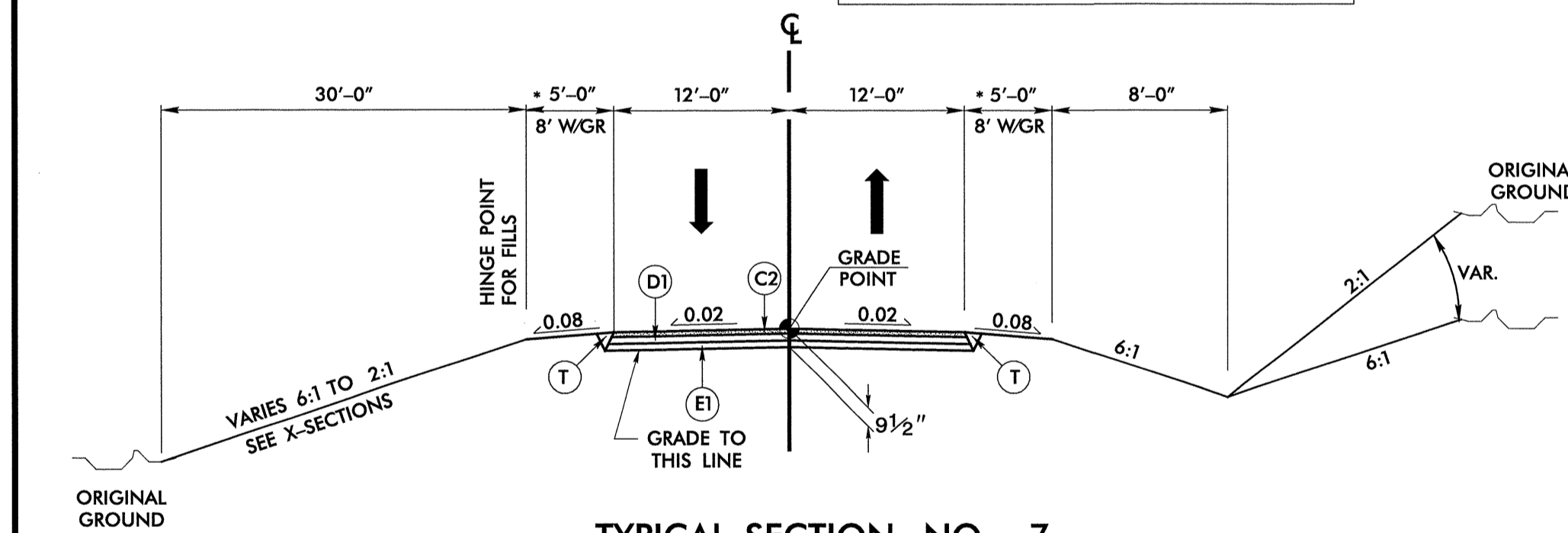


TYPICAL SECTION NO. 6
-Y4- NC 49
USE TYPICAL SECTION NO. 6 AS FOLLOWS
-Y4- STA. 10+00.00 TO STA. 25+00.00

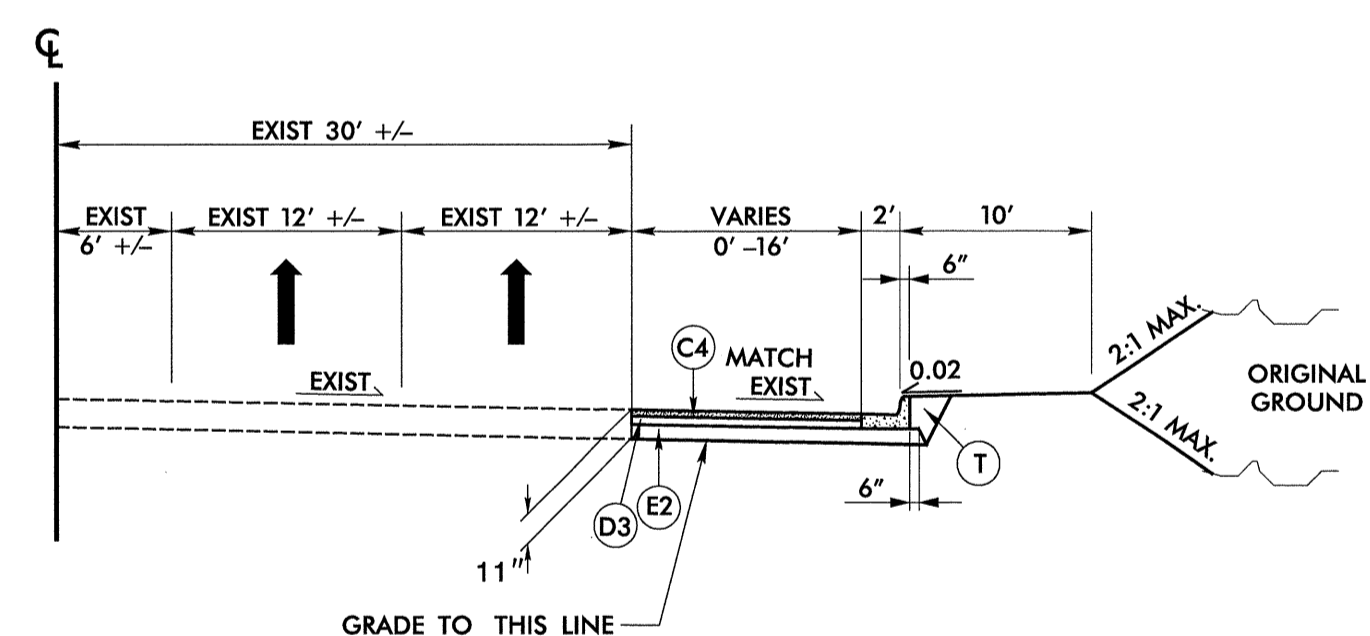
NOTE:
** SHALLOW UNDERCUT FROM
-Y4- STA. 21+00.00 TO STA. 23+00.00
(SEE CROSS - SECTIONS)



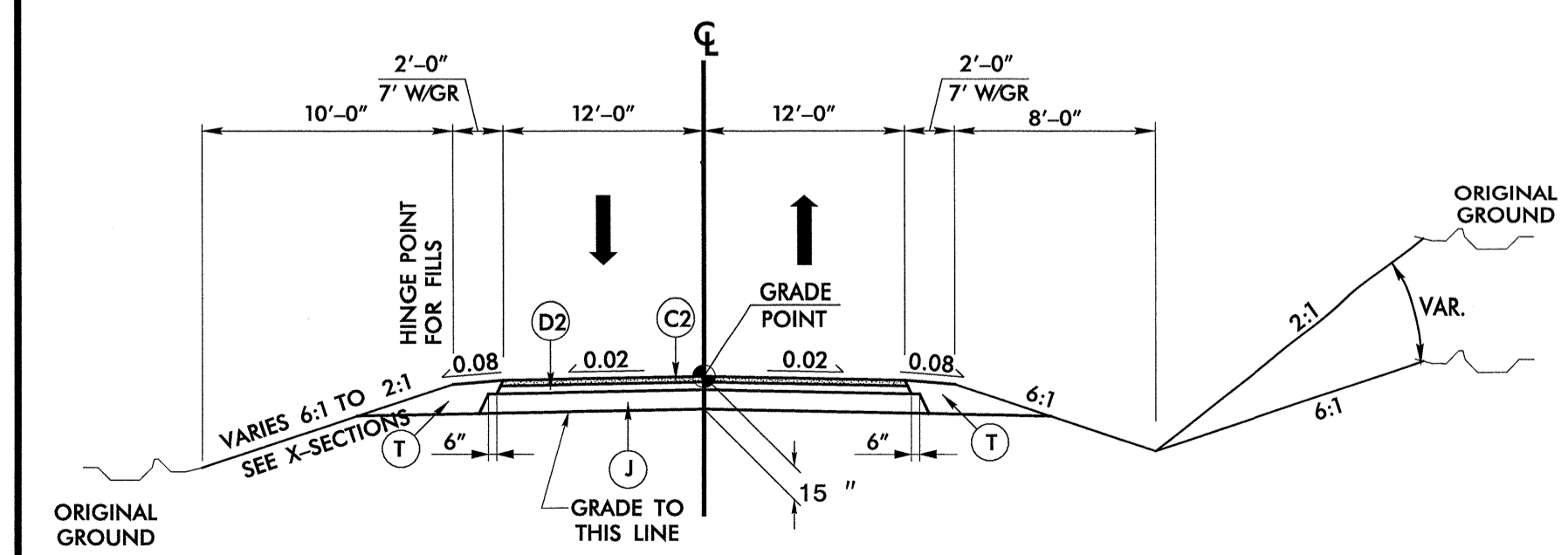
TYPICAL SECTION NO. 6A
-Y4- NC 49
USE TYPICAL SECTION NO. 6A IN CONJUNCTION
WITH TYPICAL SECTION NO. 6 ON TURN LANE ON -Y4-
(SEE PLANS FOR TURN LANE LOCATIONS).



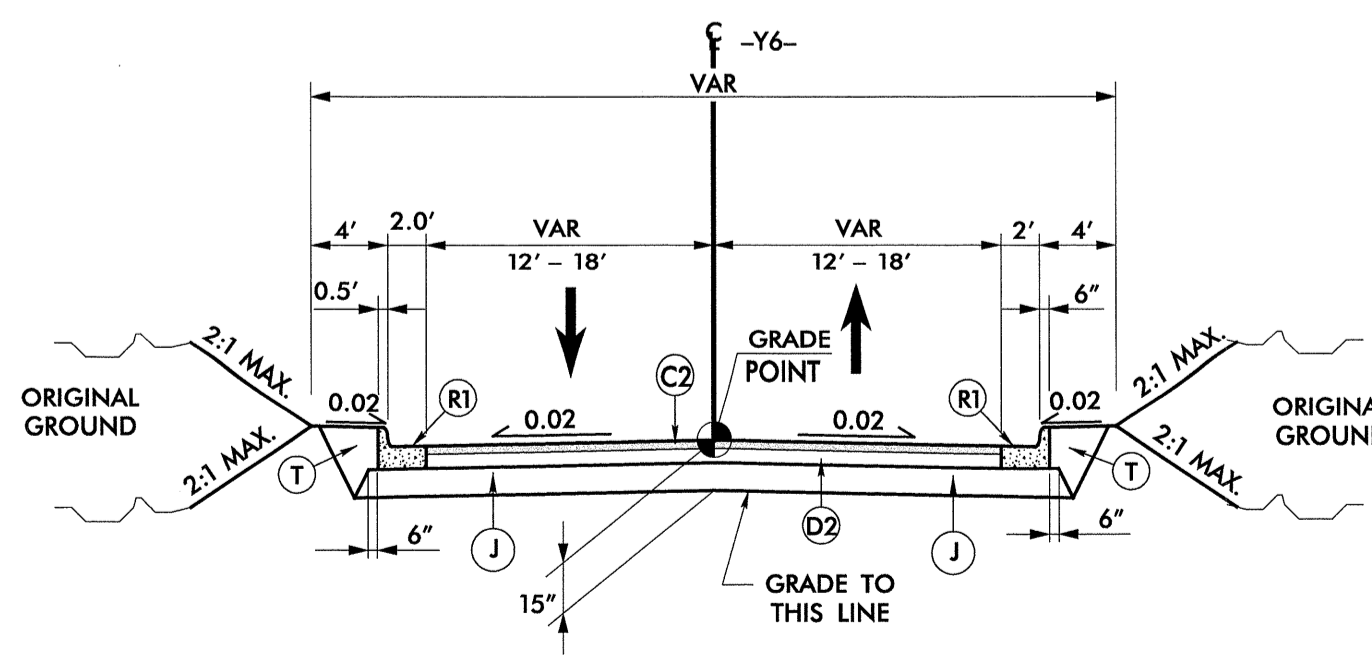
TYPICAL SECTION NO. 7
-Y2- PHARR MILL RD. EXT.
-Y2- SHOULDERS ARE 8' AND 11' WGR
USE TYPICAL SECTION NO. 7 AS FOLLOWS
-Y1- STA. 10+18.00 TO STA. 15+50.00
-Y2- STA. 10+12.00 TO STA. 18+00.00



TYPICAL SECTION NO. 8
-Y5- NC 49
USE TYPICAL SECTION NO. 8 AS FOLLOWS
-Y5- STA. 11+30.25 TO STA. 15+58.80
-Y5- STA. 28+66.48 TO STA. 31+97.98

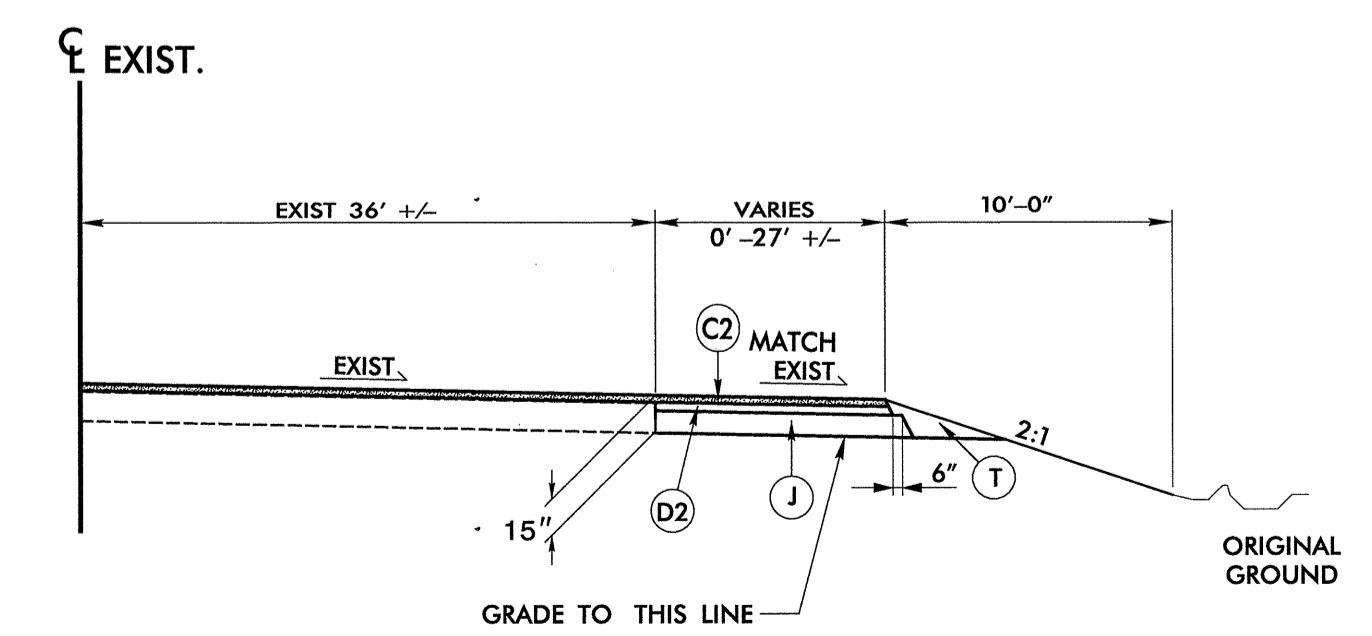


TYPICAL SECTION NO. 9
-Y6- SADDLE CREEK RD.
USE TYPICAL SECTION NO. 9 AS FOLLOWS
-Y6- STA. 8+48.80 TO STA. 22+81.61



TYPICAL SECTION NO. 10
-Y6- SADDLE CREEK RD.
USE TYPICAL SECTION NO. 10 AS FOLLOWS
-Y6- STA. 24+04.23 TO STA. 29+50.00

NOTE:
-Y6- STA. 22+81.61 TO -Y6- STA. 24+64.23
TO BE COMPLETED BY RAILROAD ROADBED
CONTRACTOR (P-3208C).



TYPICAL SECTION NO. 11
CUL-DE-SAC AT SHAMROCK CLOSING (PLAN SHEET #9)

Prepared by
URS
URS Corporation - North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
TELEPHONE (919) 461-1100 FAX (919) 461-1415
NC LICENSE # C-22643

PROJECT REFERENCE NO. P-5208B
SHEET NO. 2A
RW SHEET NO.

ROADWAY DESIGN ENGINEER
PAVEMENT ENGINEER

Professional Engineer Seal
18470
Professional Engineer Seal
031484

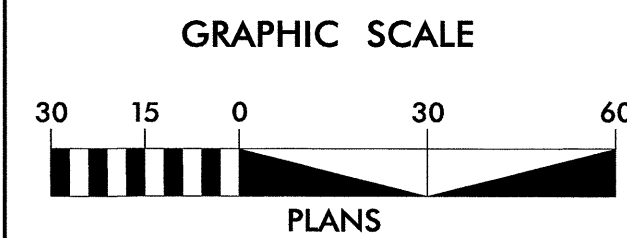
PAVEMENT SCHEDULE

C1	1 1/2" TYPE S9.5B
C2	3" TYPE S9.5B
C3	1 1/2" TYPE S9.5C
C4	3" TYPE S9.5C
C5	VAR. TYPE S9.5B
C6	VAR. TYPE S9.5C
D1	2 1/2" TYPE I19.0B
D2	4" TYPE I19.0B
D3	4" TYPE I19.0C
D4	VAR. TYPE I19.0B
D5	VAR. TYPE I19.0C
E1	4" TYPE B25.0B
E2	4" TYPE B25.0C
E3	7" TYPE B25.0C
E4	VAR. TYPE B25.0B
E5	VAR. TYPE B25.0C
J	8" ABC
J1	10" ABC
L1	CL IV SUBGRADE STAB.
N1	FABRIC STAB.
R1	2'-6" C&G
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W1	WEDGING SEE DETAIL 1
W2	WEDGING SEE DETAIL 2

2/2/2013
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 User: tjurgen
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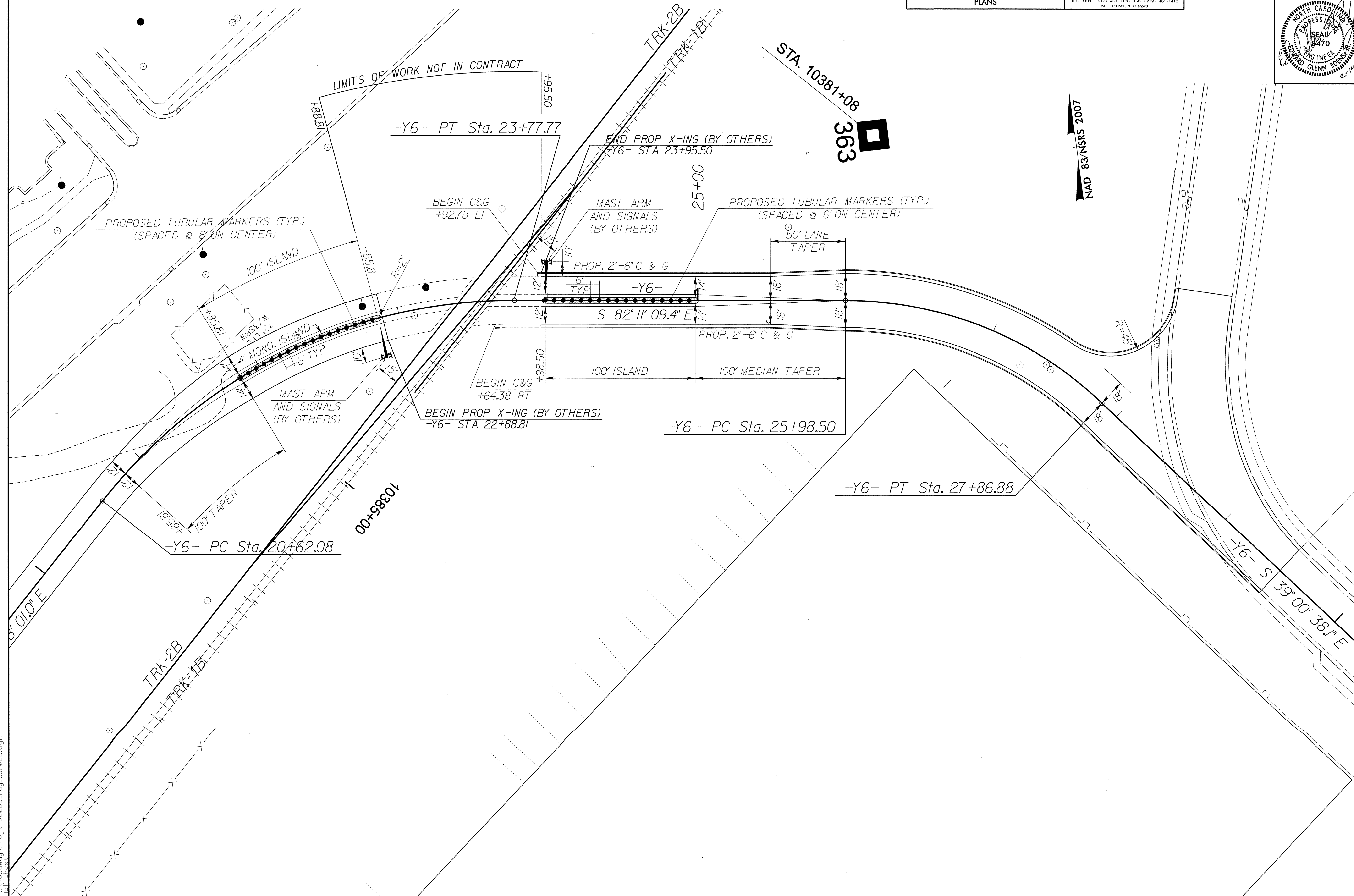
-Y6- AT GRADE RAILROAD CROSSING DETAIL

DCN:
0053DEL P10a2

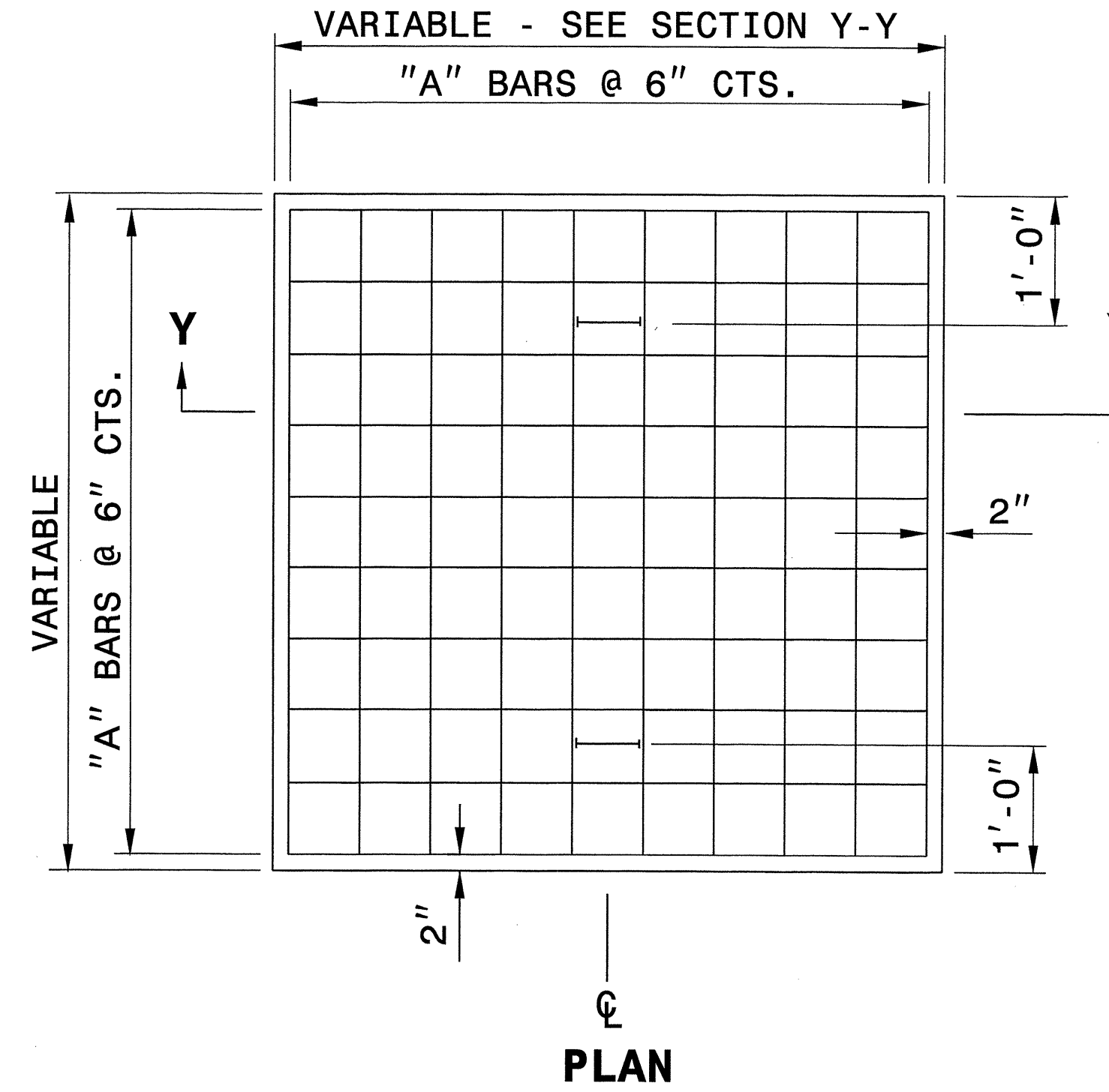
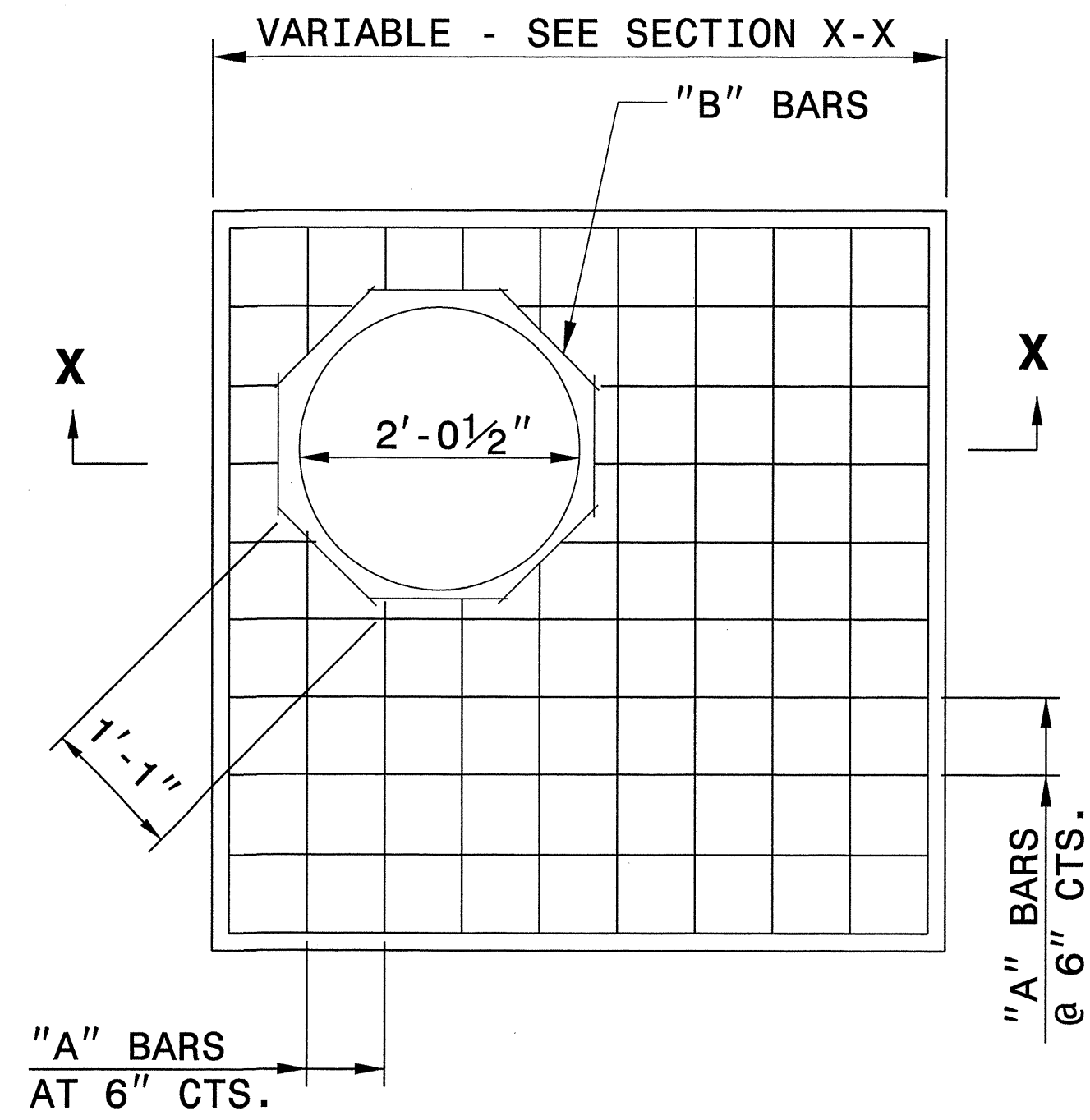
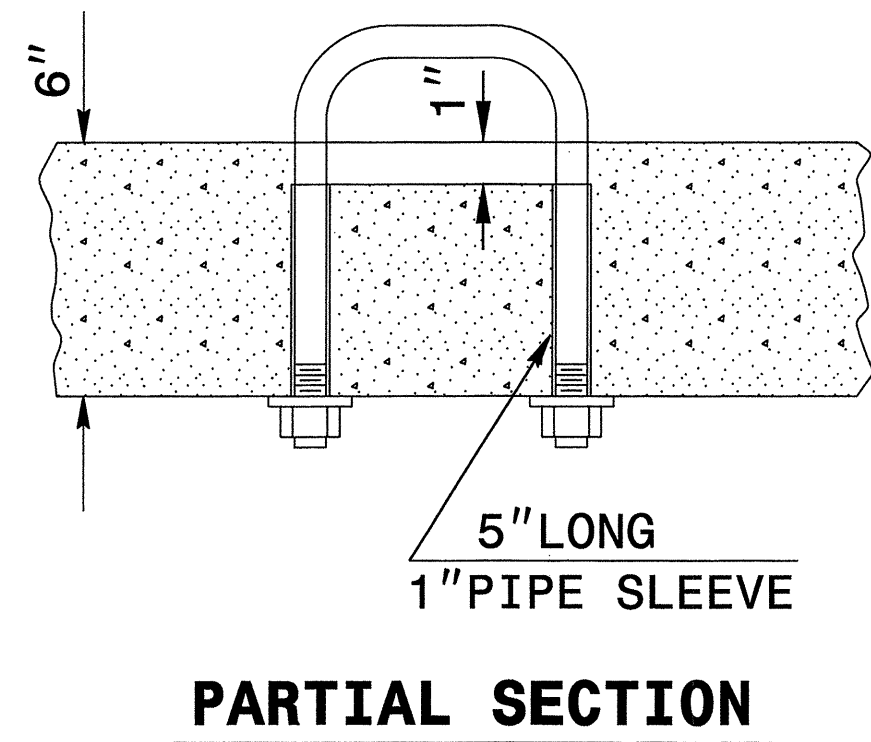


Prepared by
URS
URS Corporation - North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
TELEPHONE: 1 919 461-1100 FAX: 1 919 461-1415
NC LICENSE # C-2243

PROJECT REFERENCE NO. P-5208B	SHEET NO. 2-B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	



2/13/2013
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 User: psh02

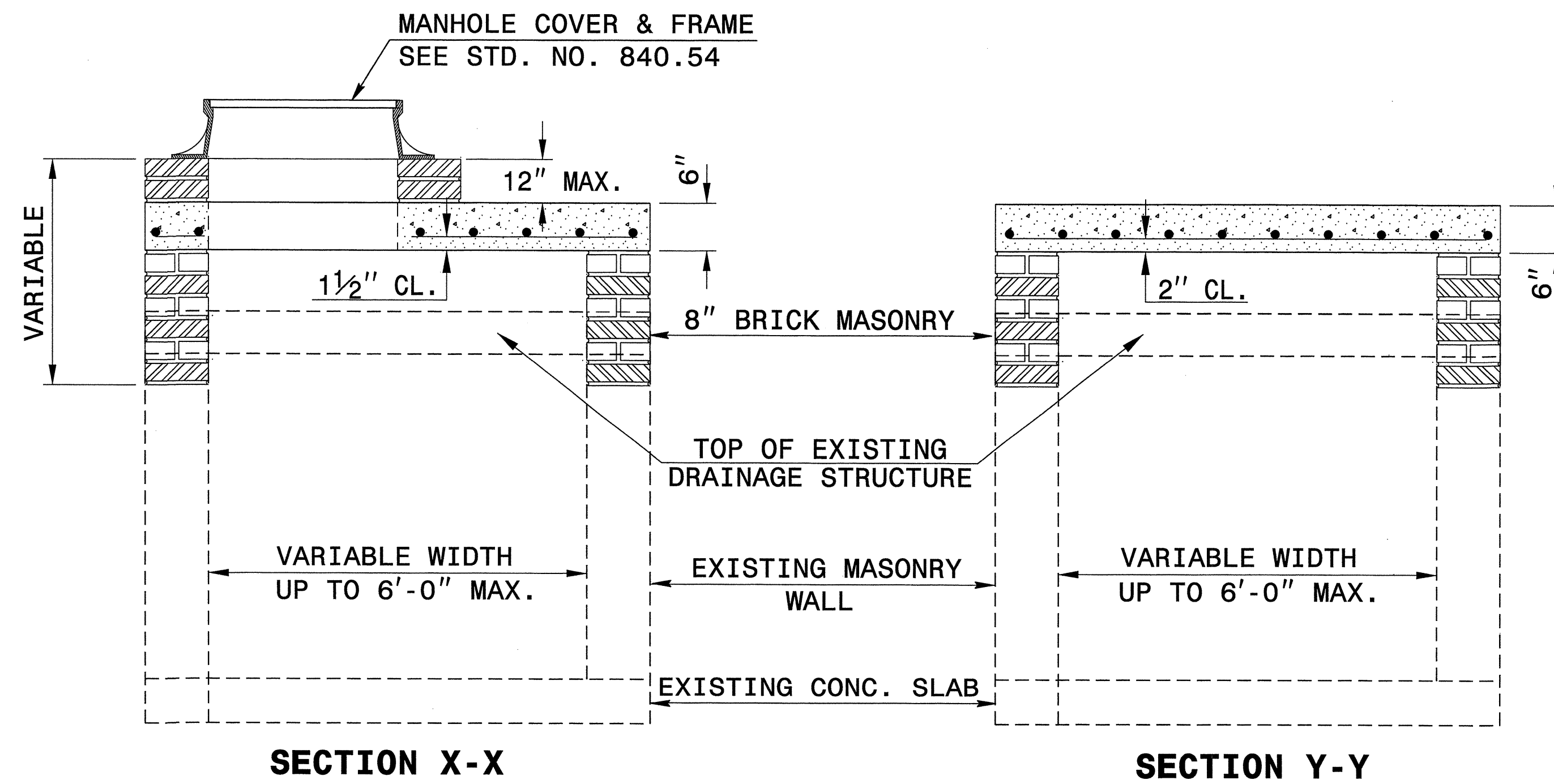
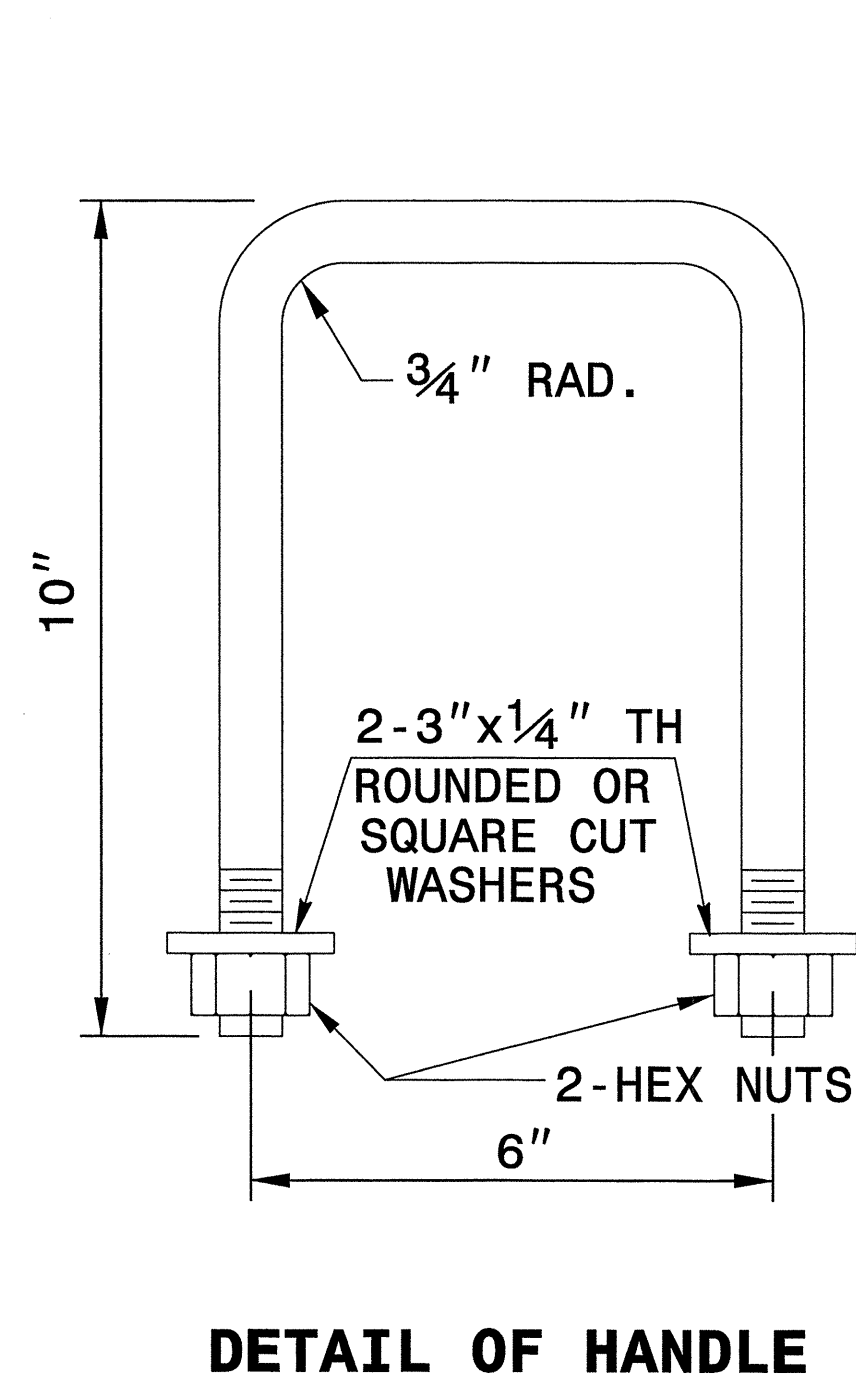


GENERAL NOTES:

CONSTRUCT IN ACCORDANCE WITH SECTION 859 OF THE STANDARD SPECIFICATIONS.

FIELD VERIFY THE DIMENSIONS FOR THE EXISTING BOXES

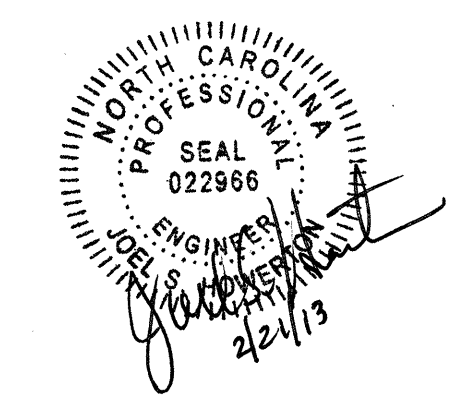
DETAIL INTENDED FOR NON-TRAFFIC BEARING DRAINAGE STRUCTURES.



BILL OF MATERIALS				
REINFORCING STEEL				
CODE	SIZE	QTY.	LENGTH	REINF. STEEL LBS.
A	#4	20	4'-6"	60.12
B	#4	8	1'-1"	5.79
TOTAL				65.91 *
MASONRY				CU YDS
TOP SLAB CONCRETE CLASS "B"				.433 *
BRICK MASONRY PER FT HT (MIN)				.4111

*** NOTE:**
 QUANTITIES BASED ON 3'-6" X 3'-6" DRAINAGE STRUCTURE. ADJUST QUANTITIES FOR LARGER STRUCTURES AND MANHOLE CONSTRUCTION.

SYSTEMS USE ONLY



CONTRACT STANDARDS AND DEVELOPMENT UNIT
 Office 919-707-6950 FAX 919-250-4119

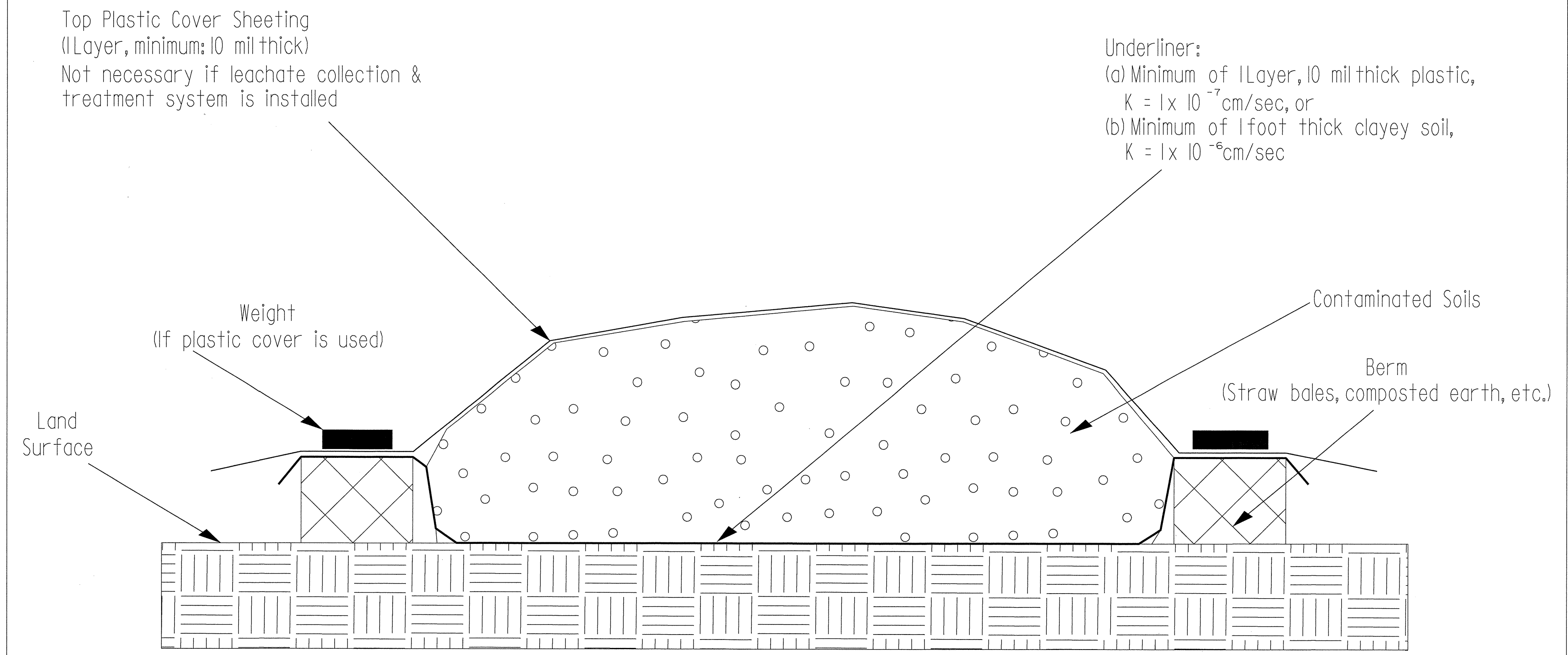
DETAIL TO CONVERT EXISTING DROP INLET OR CATCH BASIN TO JUNCTION BOX (MANHOLE OPTIONAL)

ORIGINAL BY: T.S.S. DATE: NOV. 1997
 MODIFIED BY: E.E.W DATE: 8-28-02
 CHECKED BY: DATE:
 FILE SPEC.: /usr/details/stand/boxtojbe.dgn

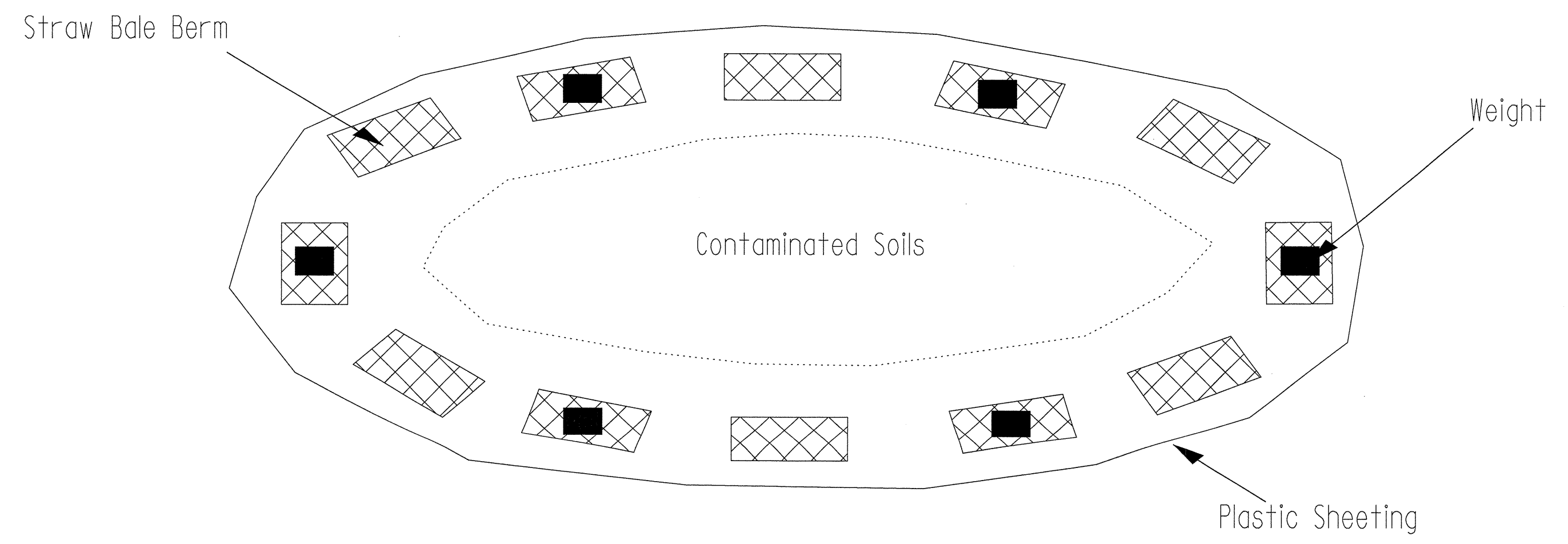
DCN: 0053DEL P10a2

Detail for Temporary Containment of Petroleum Contaminated Soil

Cross-Section View

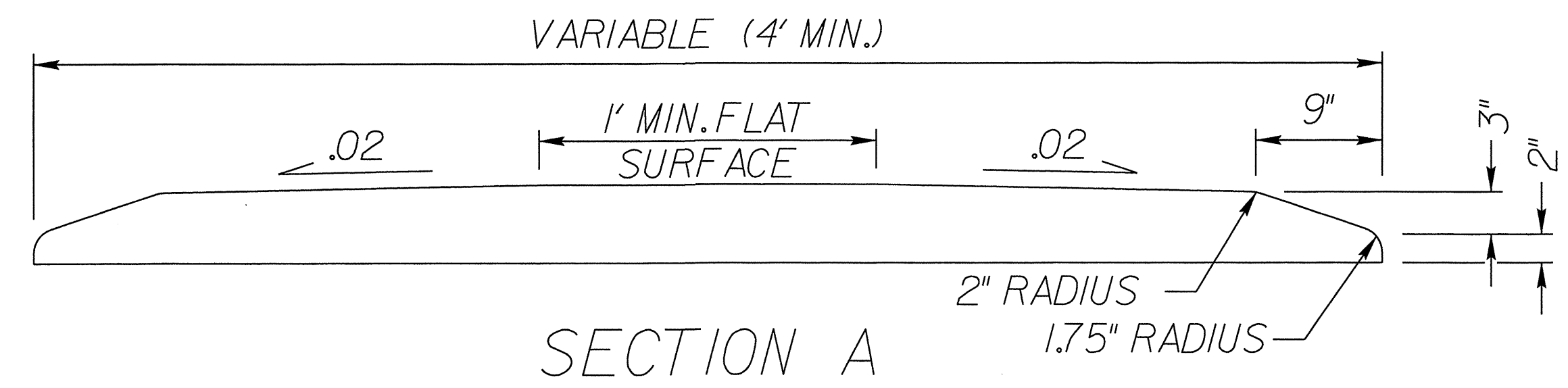


Map View

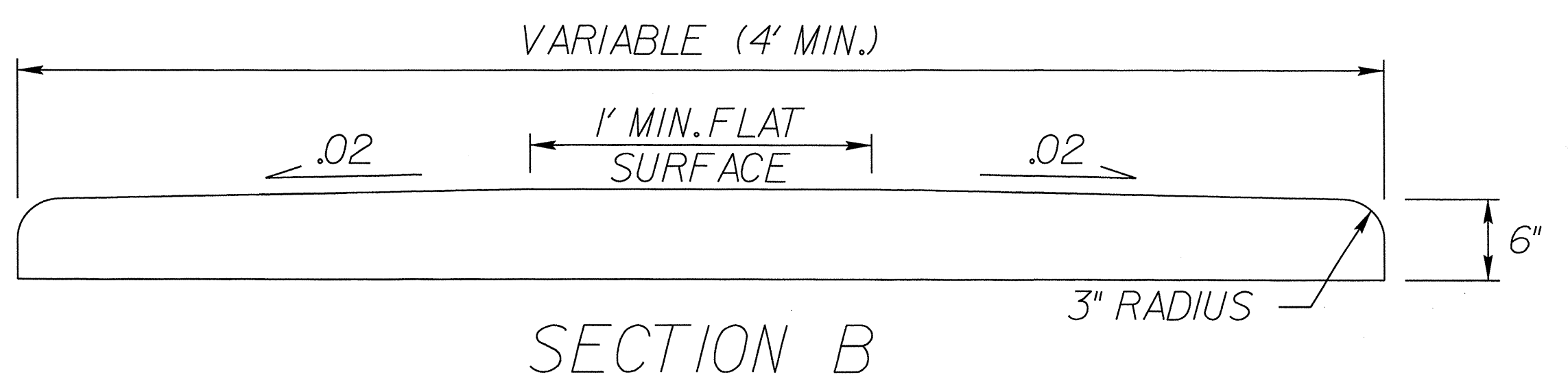
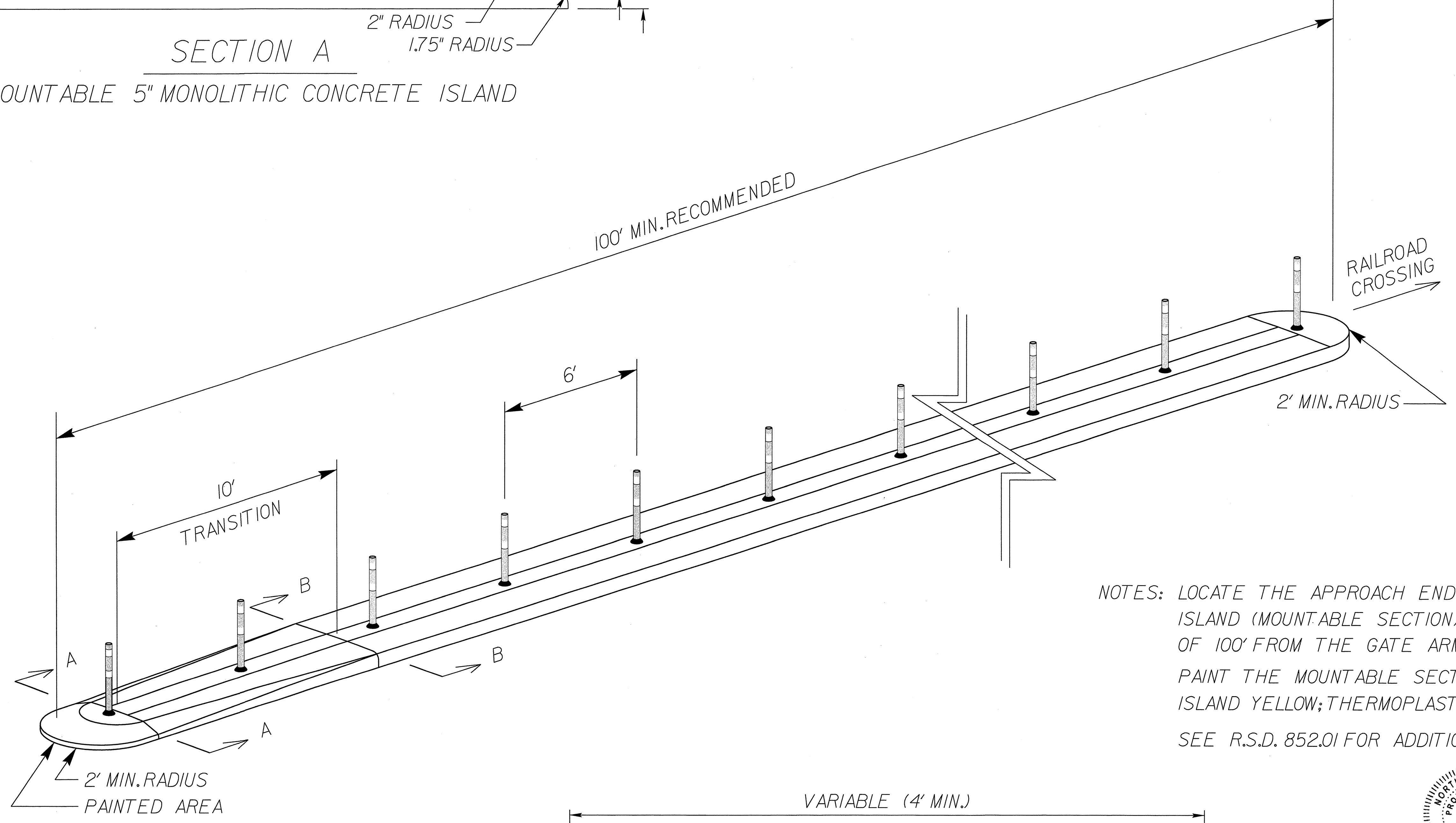


P:\2017\Projects\053DEL\053DEL_P10a2\053DEL_P10a2.dgn
Lisa Umholtz

DCN:
0053DEL P10a2
5/14/09

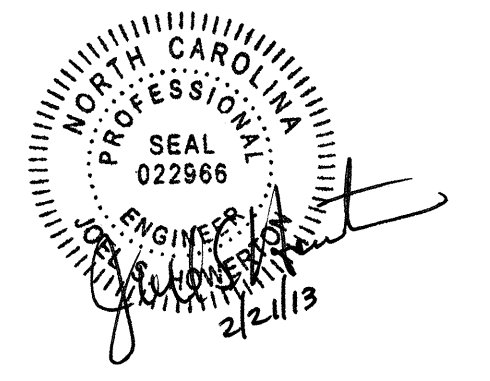


SECTION A
MOUNTABLE 5" MONOLITHIC CONCRETE ISLAND



SECTION B
NON-MOUNTABLE 6" MONOLITHIC CONCRETE ISLAND

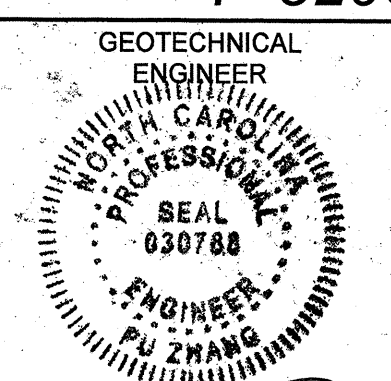
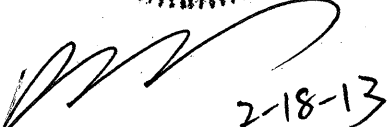
NOTES: LOCATE THE APPROACH END OF THE ISLAND (MOUNTABLE SECTION) A MINIMUM OF 100' FROM THE GATE ARM.
PAINT THE MOUNTABLE SECTION OF THE ISLAND YELLOW; THERMOPLASTIC PREFERRED.
SEE R.S.D. 852.01 FOR ADDITIONAL NOTES

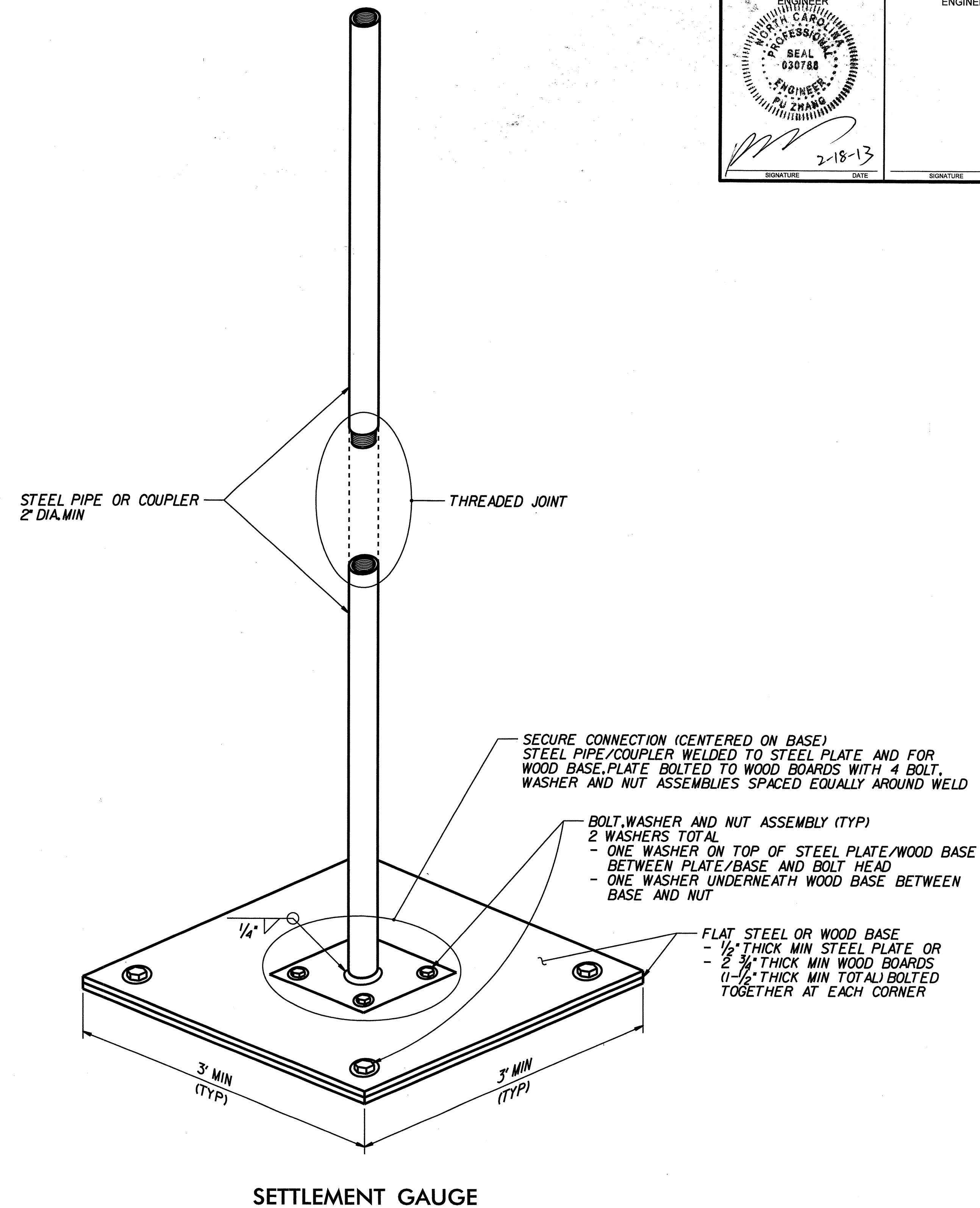
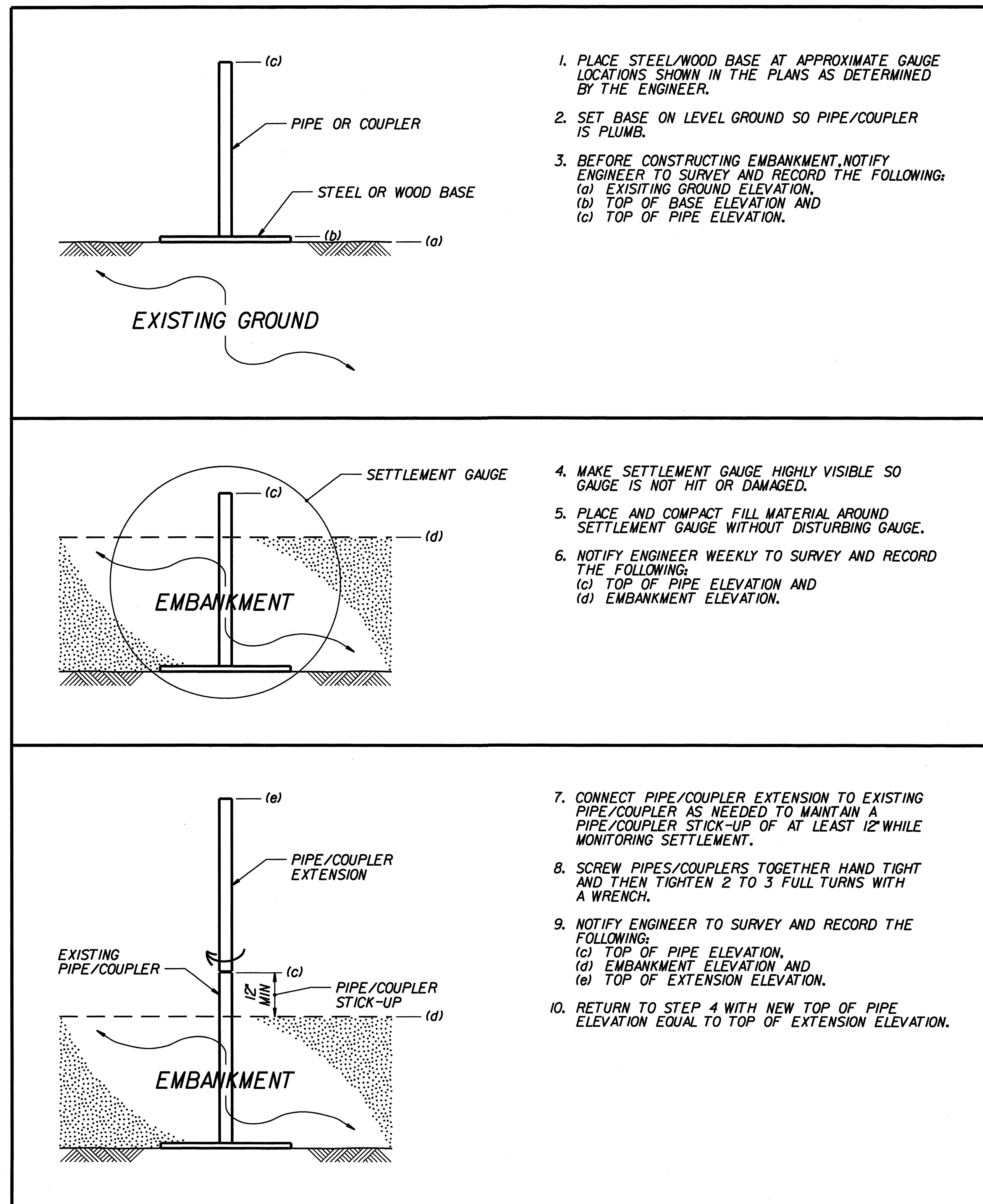


CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950	FAX 919-250-4119
CONCRETE ISLAND DETAIL	
ORIGINAL BY: KKempf	DATE: 5-15-09
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPECS: ihowerton/Non Mountable Concrete Island.dgn	

SYSTEMS DESIGN CONSULTANTS
10000 WOODLARK DRIVE
DURHAM, NC 27709
919-286-8000

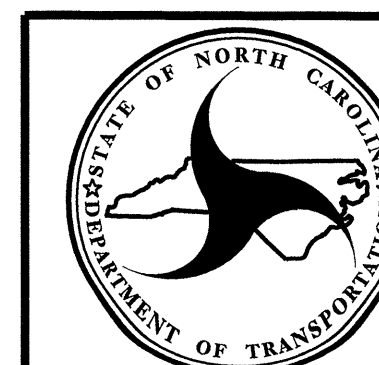
EMBANKMENT MONITORING SEQUENCE

PROJECT REFERENCE NO. P-5208B	SHEET 2-F
	ENGINEER
 SIGNATURE: _____ DATE: 2-18-13	SIGNATURE: _____ DATE: _____



NOTES:

1. SEE ROADWAY SUMMARY SHEETS FOR APPROXIMATE SETTLEMENT GAUGE LOCATIONS.
2. FOR STANDARD EMBANKMENT MONITORING, SEE EMBANKMENT SETTLEMENT GAUGES PROVISION.
3. INSTALL SETTLEMENT GAUGES AFTER CLEARING AND GRUBBING GAUGE LOCATIONS AND BEFORE CONSTRUCTING EMBANKMENTS WITH EMBANKMENT MONITORING.

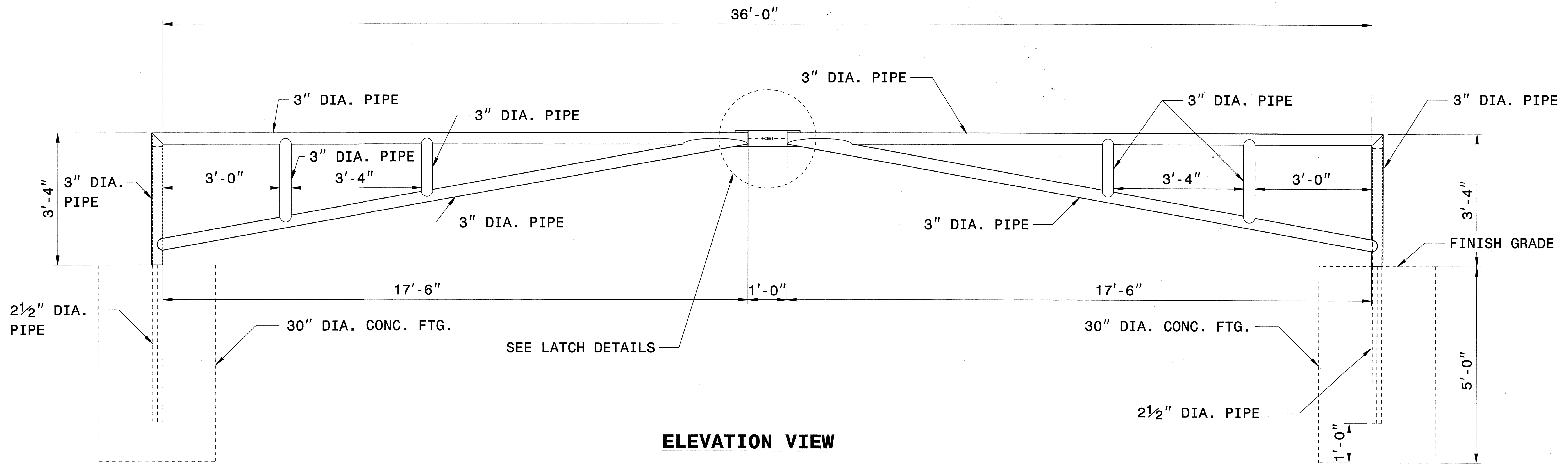


**GEOTECHNICAL
ENGINEERING UNIT**
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

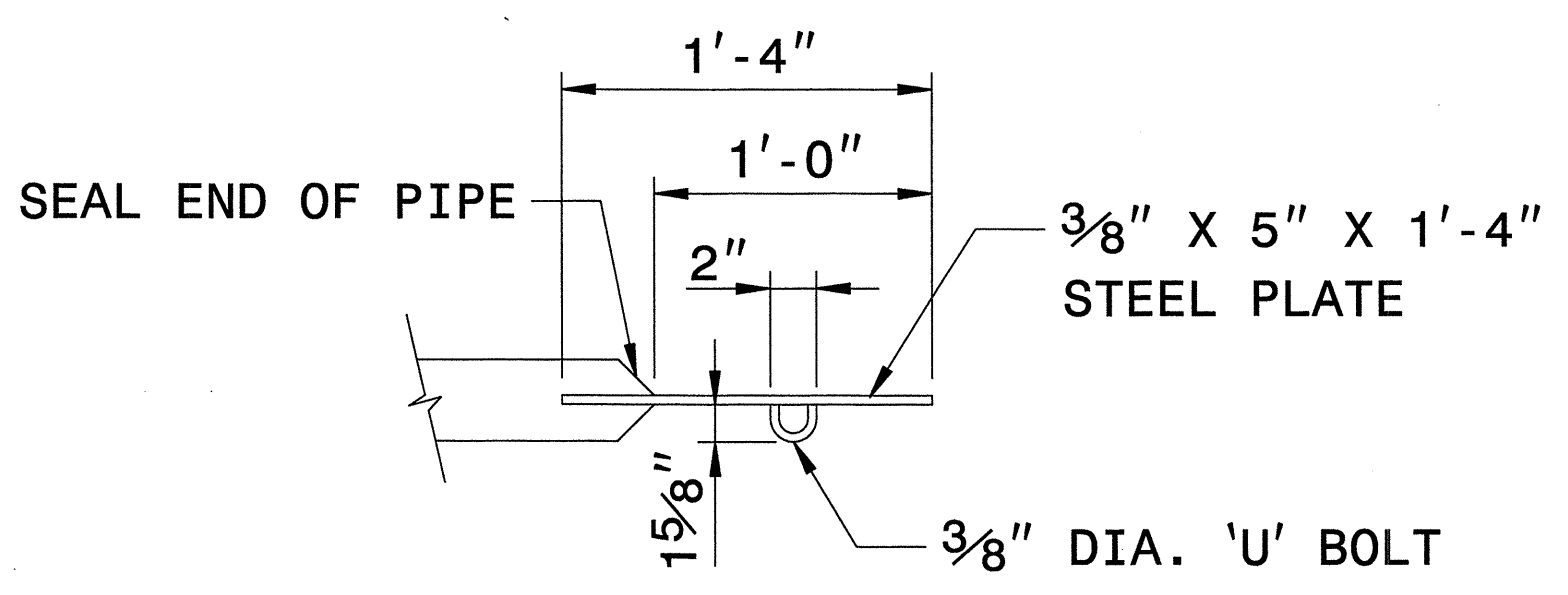
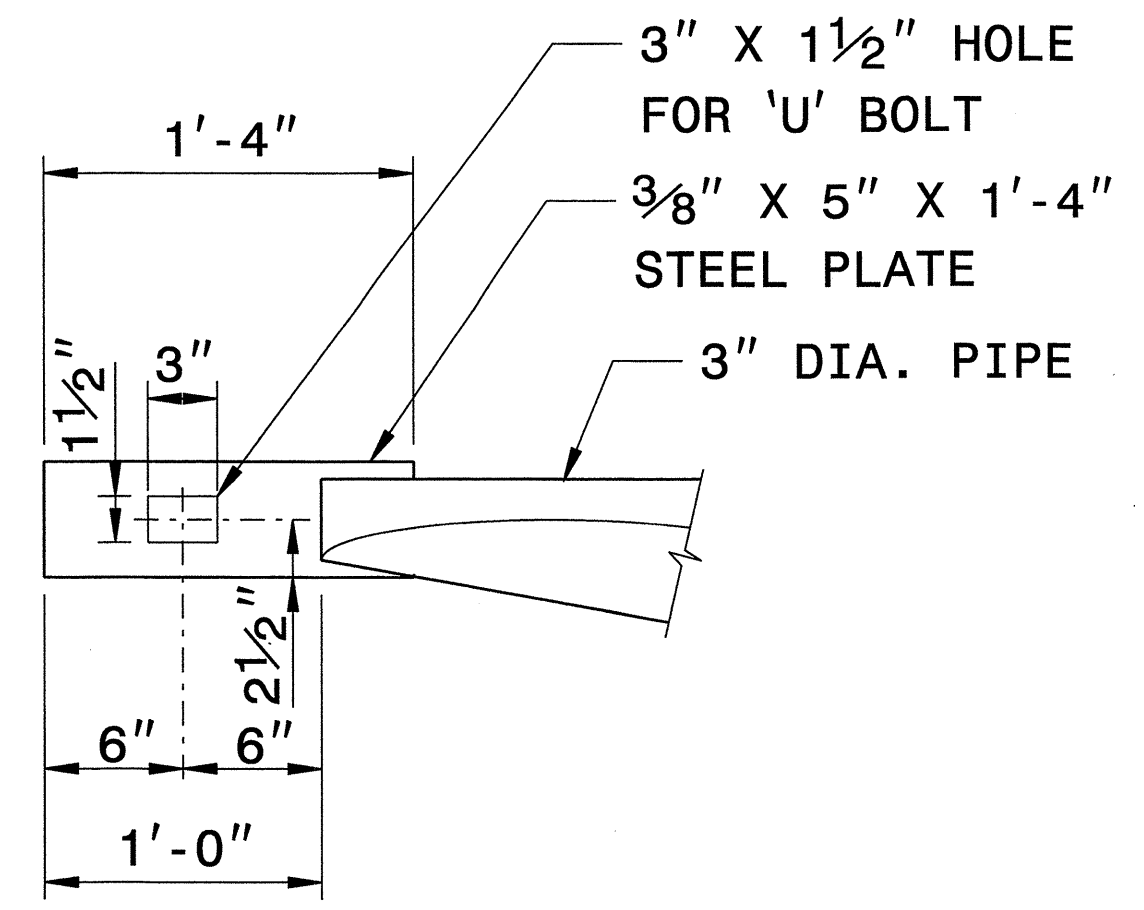
STANDARD DRAWING NO. 1804.01

STANDARD
EMBANKMENT MONITORING

DCN: 0053DEL P10a2

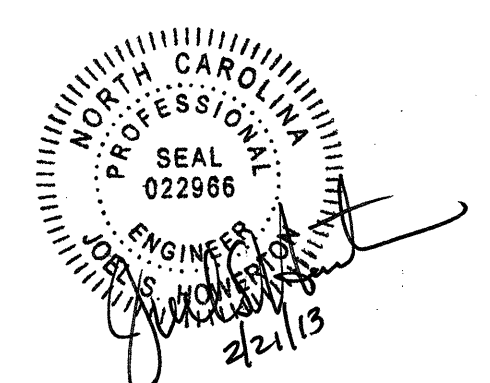


ELEVATION VIEW



LATCH DETAILS

- GENERAL NOTES:
- 1-USE ASTM A36 STEEL.
 - 2-1/4" FILLET WELDS ON ALL CONNECTIONS.
 - 3-USE CLASS 'B' CONCRETE.
 - 4-LOCATE GATE AS DIRECTED BY THE ENGINEER.
 - 5-ALL PIPE SIZES ARE O.D.
 - 6-LUBRICATE 2 1/2" DIA. PIPE BEFORE INSTALLING GATE TO INSURE SMOOTH OPERATION.



CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-250-4128 FAX 919-250-4119	
DETAIL OF STEEL PIPE GATE	
ORIGINAL BY: T. Stephenson	DATE: 6-97
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC.: s:usr/terry/pipegate.dgn	

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$DCN\$\$\$\$\$
\$\$\$\$\$USERNAMLE\$\$\$\$\$

SUMMARY OF QUANTITIES - P-5208B

ItemNumber	Sec #	Quantity	Unit	Description
7144000000-E	1705	2	EA	VEHICLE SIGNAL HEAD (12", 5 SECTION)
7264000000-E	1710	620	LF	MESSENGER CABLE (3/8")
7300000000-E	1715	870	LF	UNPAVED TRENCHING (*****) (1, 2")
7324000000-N	1716	9	EA	JUNCTION BOX (STANDARD SIZE)
7360000000-N	1720	4	EA	WOOD POLE
7372000000-N	1721	8	EA	GUY ASSEMBLY
7408000000-E	1722	1	EA	1" RISER WITH WEATHERHEAD
7420000000-E	1722	4	EA	2" RISER WITH WEATHERHEAD
7444000000-E	1725	970	LF	INDUCTIVE LOOP SAWCUT
7456000000-E	1726	3,530	LF	LEAD-IN CABLE (*****) (14-2)
7636000000-N	1745	1	EA	SIGN FOR SIGNALS
7684000000-N	1750	1	EA	SIGNAL CABINET FOUNDATION
7756000000-N	1751	1	EA	CONTROLLER WITH CABINET (TYPE 2070L, BASE MOUNTED)
7780000000-N	1751	6	EA	DETECTOR CARD (TYPE 2070L)
7948000000-N	1757	1	EA	TRAFFIC SIGNAL REMOVAL

DCN:
0053DEL_P10a2

COMPUTED BY: J. Hext DATE: 10/02/2012
 CHECKED BY: E. Edens DATE: 10/03/2012

PROJECT REFERENCE NO. SHEET NO.
 P-5208B 3-A

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

**SUMMARY OF EARTHWORK
 IN CUBIC YARDS**

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBT +%	BORROW	WASTE
SUMMARY #1					
-L- STA. 10+00.00 TO 22+59.26	908		52435	51527	
-Y1- STA. 10+00.00 TO 15+80.00	249		6324	6075	
-Y2- STA. 10+00.00 TO 18+22.50	646		5968	5322	
TOTAL SUMMARY #1	1803		64727	62924	
SUMMARY #2					
-L- STA. 26+08.22 TO 39+00.00	1719	500	13356	11637	500
-Y3- STA. 10+47.24 TO 19+08.42	11865		742	0	11123
TOTAL SUMMARY #2	13584	500	14098	11637	11623
SUMMARY #3					
-Y4- STA. 10+00.00 TO 32+10.00	6070		1004		5066
TOTAL SUMMARY #3	6070		1004		5066
SUMMARY #4					
-Y5- STA. 11+13.00 TO 14+50	139		608	469	
-Y6- STA. 9+00.00 TO 28+50	536	550	7506	6970	550
TOTAL SUMMARY #4	675	550	8114	7439	550
SUBTOTAL (SUMMARIES 1-4)	22132	1050	87943	82000	17239
LOSS DUE TO CLEARING AND GRUBBING	-3920			3920	
WASTE IN LIEU OF BORROW				-16189	-16189
SHOULDER MATERIAL			984	984	
ADDITIONAL UNDERCUT		2000	2400	2400	2000
PROJECT SUBTOTAL	18212	3050	91327	73115	3050
EST. 5% FOR REPLACING TOPSOIL ON BORROW PIT				3656	
PROJECT TOTAL	18212	3050	91327	76771	3050
SAY	18,220			76,800	3,050

EST. SHALLOW UNDERCUT = 800 CY
 EST. SHALLOW UNDERCUT BY STATIONS = 500 CY
 TOTAL SHALLOW UNDERCUT= 1,300 CY

Note: "Approximate quantities only. Unclassified excavation, fine grading, clearing and grubbing and removal of existing pavement will be paid for at the lump sum price for "Grading".

3/28/2013
 R:\Roadway\Proj\5208B\1-dj\psh03A_ewks\sum.dgn

DCN: 0053DEL P10a2

COMPUTED BY: J. Hext DATE: 11/09/12
CHECKED BY: E. Edens DATE: 11/11/12

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO. SHEET NO.
P-5208B 3-B

PARCEL INDEX SHEET

Table with columns: PARCEL NO., PROPERTY OWNERS NAMES, SHEET NO.

SUMMARY OF BRIDGE WAITING PERIODS

Table with columns: BRIDGE DESCRIPTION, END BENT No., MONTHS

SUMMARY OF SETTLEMENT GAUGES

Table with columns: GAUGE No., LINE, APPROX. STATION, APPROX. OFFSET

PAVEMENT REMOVAL SUMMARY

Table with columns: SURVEY LINE, STATION, LOCATION, YD², TOTAL, SAY:

Note: "Approximate quantities only. Unclassified excavation, fine grading, clearing and grubbing and removal of existing pavement will be paid for at the lump sum price for "Grading".

SUMMARY OF EMBANKMENT WAITING PERIODS

Table with columns: SURVEY LINE, STATION, MONTHS

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL.
TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
G = GATING IMPACT ATTENUATOR TYPE 350
NG = NON-GATING IMPACT ATTENUATOR TYPE 350

GUARDRAIL SUMMARY

Large summary table with columns: SURVEY LINE, BEG. STA., END STA., LOCATION, LENGTH, WARRANT POINT, "N" DIST., TOTAL SHOUL. WIDTH, FLARE LENGTH, W, ANCHORS, IMPACT ATTENUATOR, SINGLE FACED CONCRETE BARRIER, REMOVE EXISTING GUARDRAIL, REMOVE AND STOCKPILE EXISTING GUARDRAIL, REMARKS

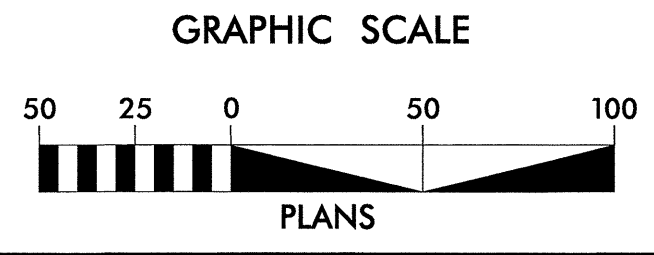
3/28/2013
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DCN: 0053DEL P10a2

-L-
 PI Sta 15+20.00
 $\Delta = 43^{\circ}15'55.2"$ (LT)
 $D = 6^{\circ}44'26.4"$
 $L = 641.85'$
 $T = 337.10'$
 $R = 850.00'$
 $\theta = 8\%$

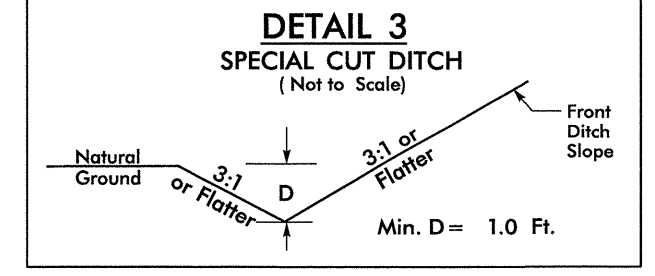
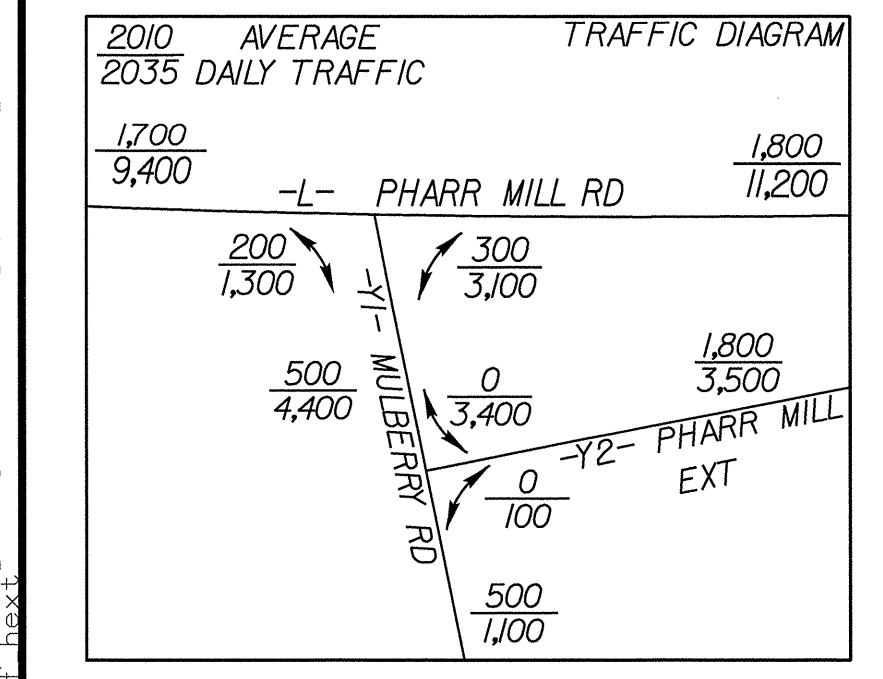
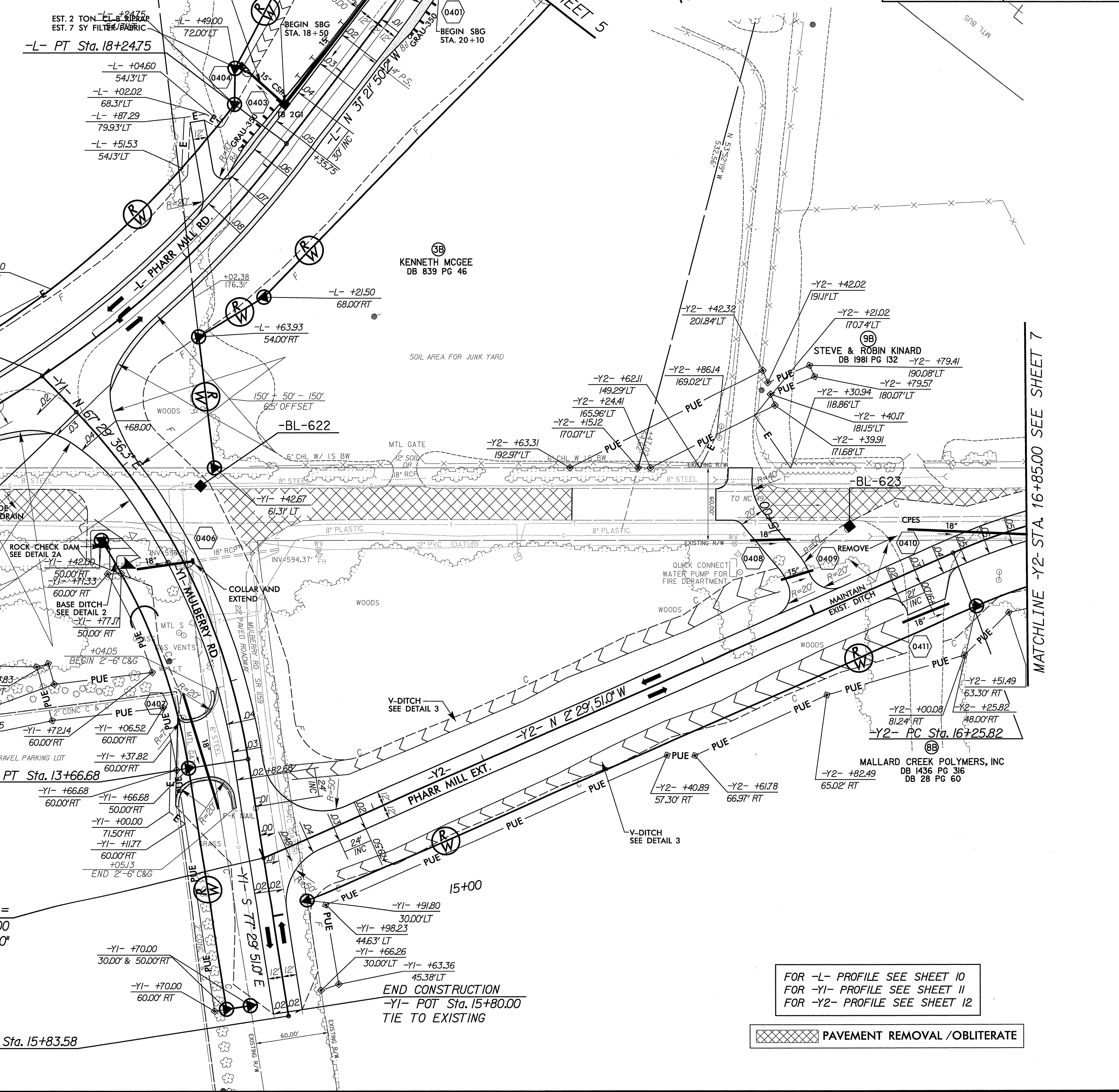
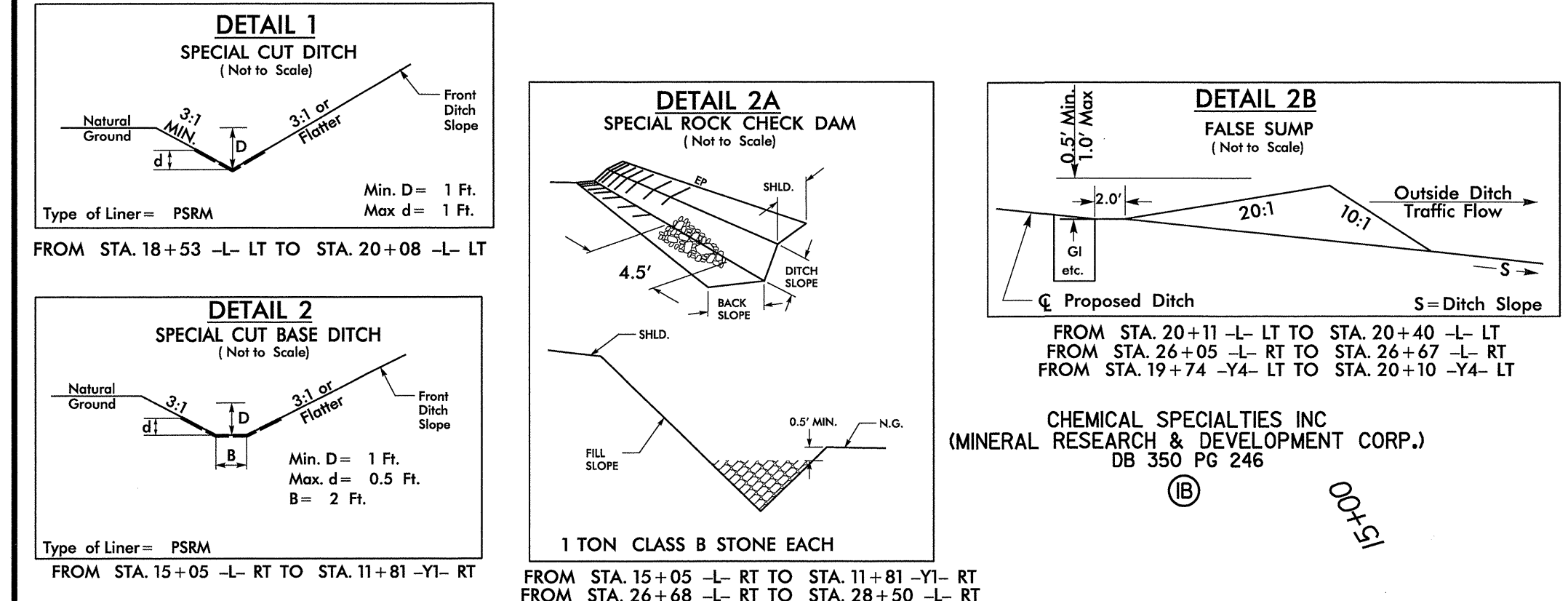
-Y1-
 PI Sta 12+09.11
 $\Delta = 35^{\circ}00'32.7"$ (RT)
 $D = 10^{\circ}44'58.8"$
 $L = 325.68'$
 $T = 168.10'$
 $R = 533.00'$
 $\theta = 4\%$

-Y2-
 PI Sta 17+25.53
 $\Delta = 23^{\circ}14'06.9"$ (RT)
 $D = 11^{\circ}48'48.8"$
 $L = 196.68'$
 $T = 99.71'$
 $R = 485.00'$
 $\theta = 6\%$



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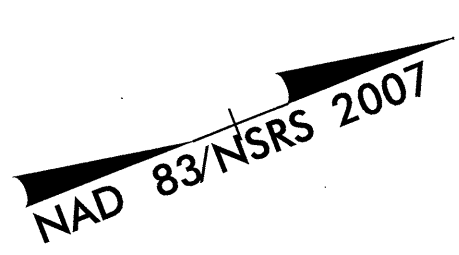
PROJECT REFERENCE NO. P-5208B	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



FOR -L- PROFILE SEE SHEET 10
 FOR -Y1- PROFILE SEE SHEET 11
 FOR -Y2- PROFILE SEE SHEET 12

PAVEMENT REMOVAL/OBLITERATE

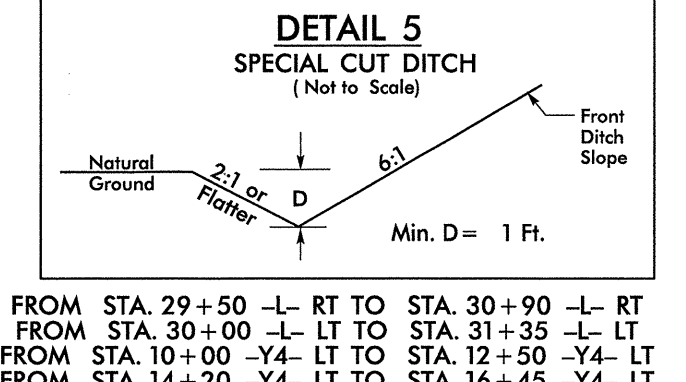
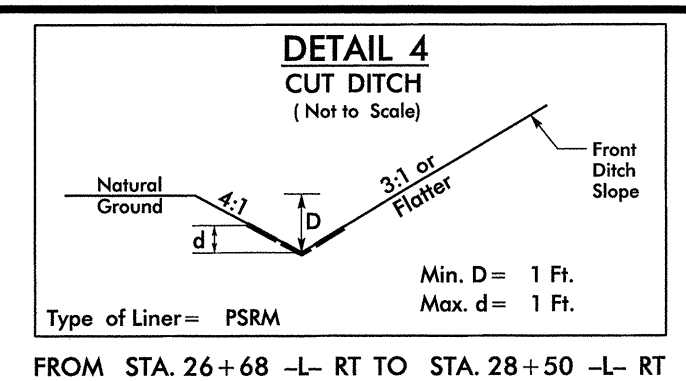
MATCHLINE -Y2- STA. 16+85.00 SEE SHEET 7



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2/28/2013
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 User: jhaxt



FROM STA. 29+50 -L- RT TO STA. 30+90 -L- RT
 FROM STA. 30+00 -L- LT TO STA. 31+35 -L- LT
 FROM STA. 10+00 -Y4- LT TO STA. 12+50 -Y4- LT
 FROM STA. 14+20 -Y4- LT TO STA. 16+45 -Y4- LT

KENNETH MCGEE
 DB 839 PG 46
 -L- POT Sta. 23+78.76 =
 -L- STA. 22+59.26 Δ = 90°00'00"

BEGIN BRIDGE
 -L- STA. 22+59.26

END SBG STA. 22+34

END SBG STA. 22+34

END SBG STA. 22+34

END SBG STA. 22+34

END SBG STA. 22+34

END SBG STA. 22+34

END SBG STA. 22+34

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END SBG STA. 22+34

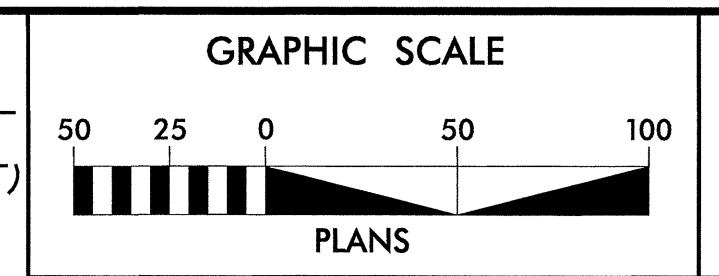
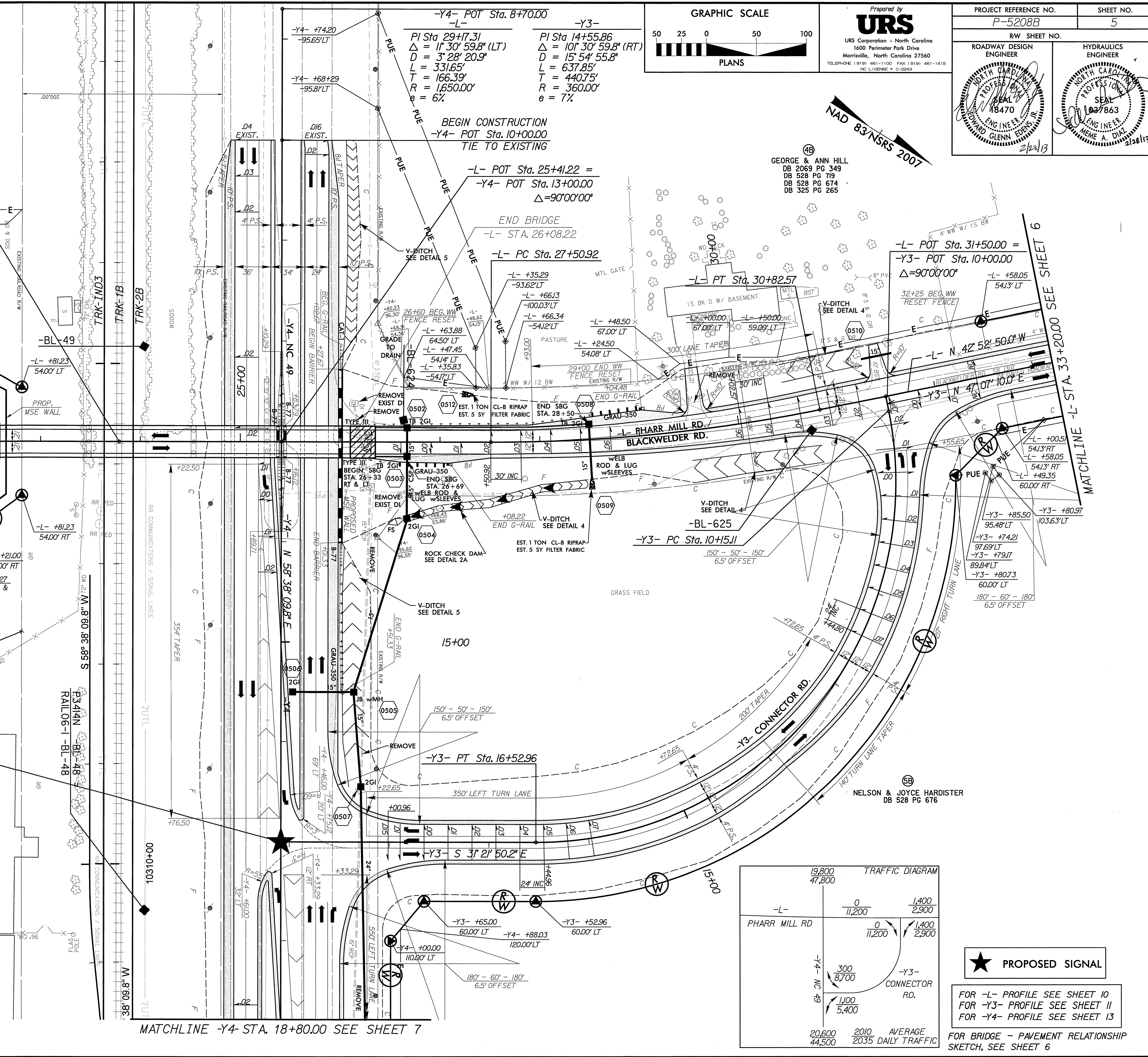
END SBG STA. 22+34

END SBG STA. 22+34

END SBG STA. 22+34

END SBG STA. 22+34

END SBG STA. 22+34



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 NO. LICENSE: C-2243

PROJECT REFERENCE NO. P-5208B	SHEET NO. 5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<i>[Signature]</i> 2/28/13	<i>[Signature]</i> 2/28/13

NAD 83/NSRS 2007

GEORGE & ANN HILL
 DB 2069 PG 349
 DB 528 PG 719
 DB 528 PG 674
 DB 325 PG 265

-L- POT Sta. 31+50.00 =
 -Y3- POT Sta. 10+00.00
 Δ = 90°00'00"

-L- STA. 26+08.22

-L- PC Sta. 27+50.92

-L- PT Sta. 30+82.57

-L- N 42°52'50.0" W

-L- N 47°07'10.0" E

-L- N 31°21'50.2" W

-L- N 31°21'50.2" W

-L- N 31°21'50.2" W

-L- N 31°21'50.2" W

-L- N 31°21'50.2" W

-L- N 31°21'50.2" W

-L- N 31°21'50.2" W

-L- N 31°21'50.2" W

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-L- N 31°21'50.2" W

-L- N 31°21'50.2" W

-L- N 31°21'50.2" W

-L- N 31°21'50.2" W

-L- N 31°21'50.2" W

	19,800 47,800	
-L-	0 11,200	1,400 2,900
PHARR MILL RD	0 11,200	1,400 2,900
-Y4- NC 49	300 8,700	100 5,400
-Y3- CONNECTOR RD.		
	20,600 44,500	2010 AVERAGE 2035 DAILY TRAFFIC

★ PROPOSED SIGNAL

FOR -L- PROFILE SEE SHEET 10
 FOR -Y3- PROFILE SEE SHEET 11
 FOR -Y4- PROFILE SEE SHEET 13

FOR BRIDGE - PAVEMENT RELATIONSHIP SKETCH, SEE SHEET 6

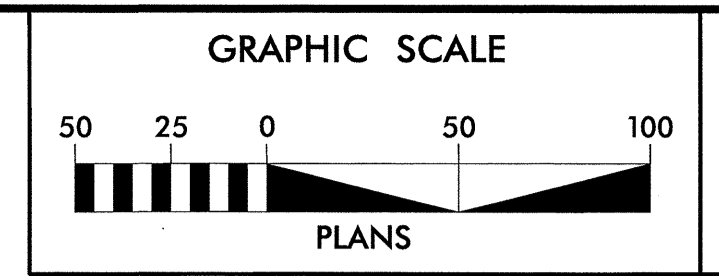
MATCHLINE -Y4- STA. 18+80.00 SEE SHEET 7

MATCHLINE -L- STA. 20+50.00 SEE SHEET 4

MATCHLINE -L- STA. 33+20.00 SEE SHEET 6

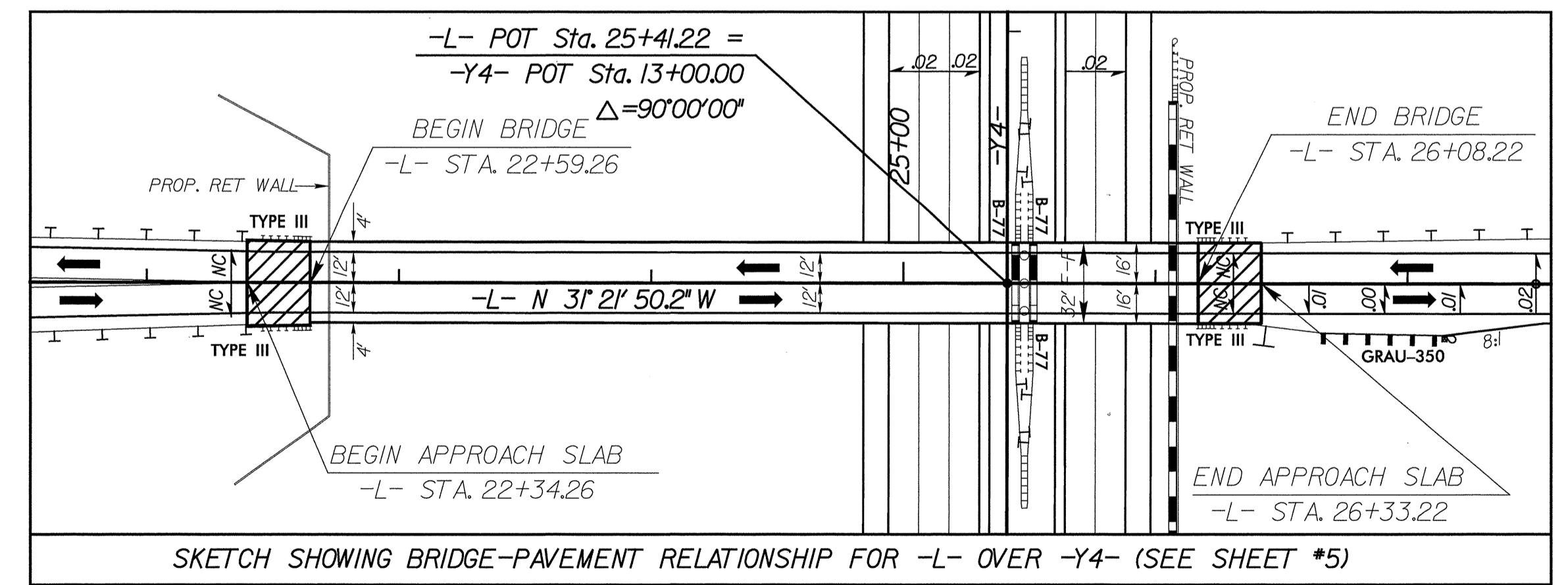
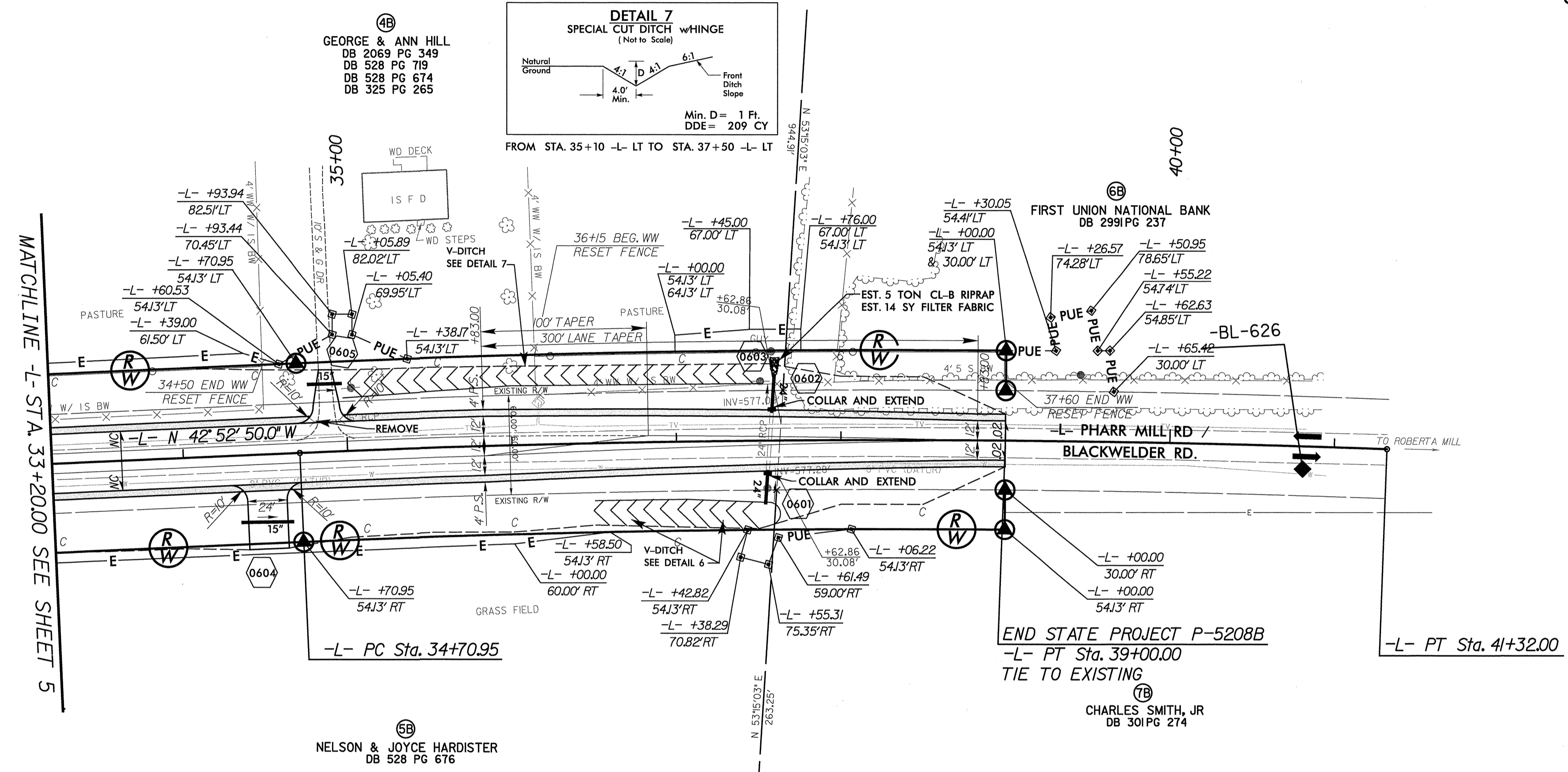
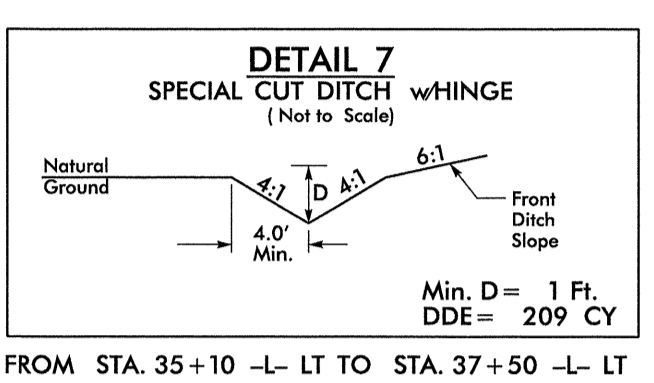
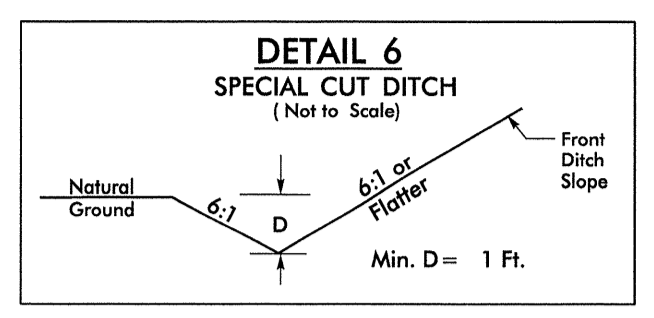
DCN: 0053DEL P10a2

-L-
 PI Sta 38+01.69
 $\Delta = 4' 37'' 10.0'' (RT)$
 $D = 0' 41'' 55.4''$
 $L = 661.12'$
 $T = 330.74'$
 $R = 8,200.00'$
 $e = NC$



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PROJECT REFERENCE NO. P-5208B	SHEET NO. 6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



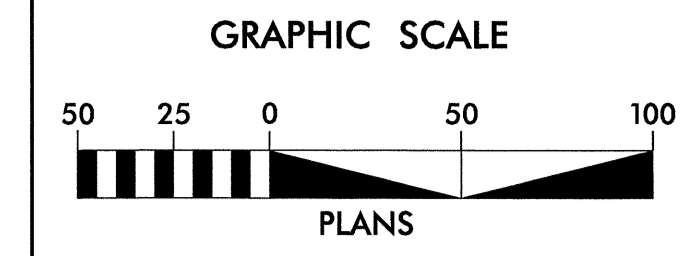
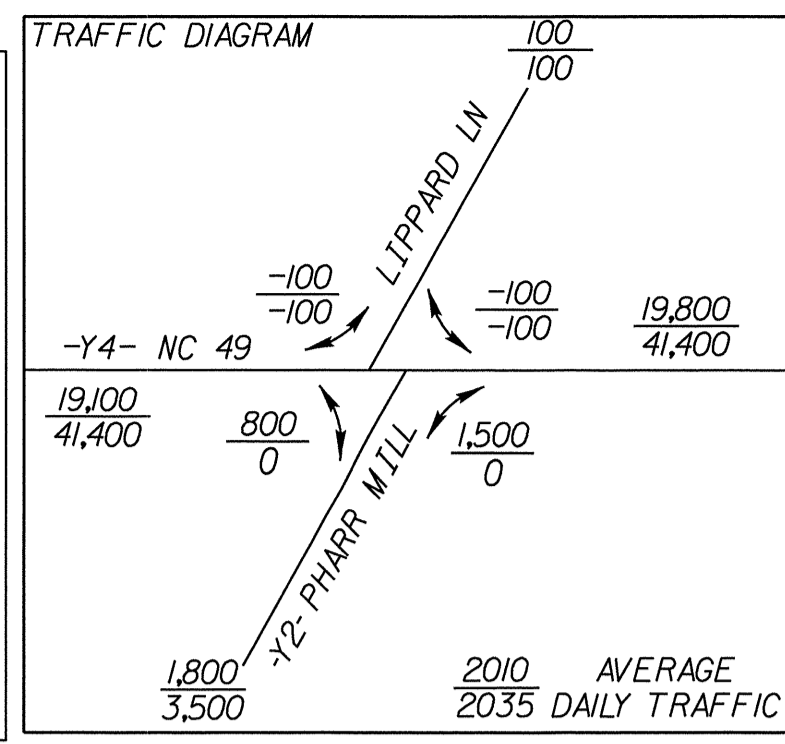
FOR -L- PROFILE SEE SHEET II

REVISIONS

2/28/2013
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DCN:
0053DEL P10a2

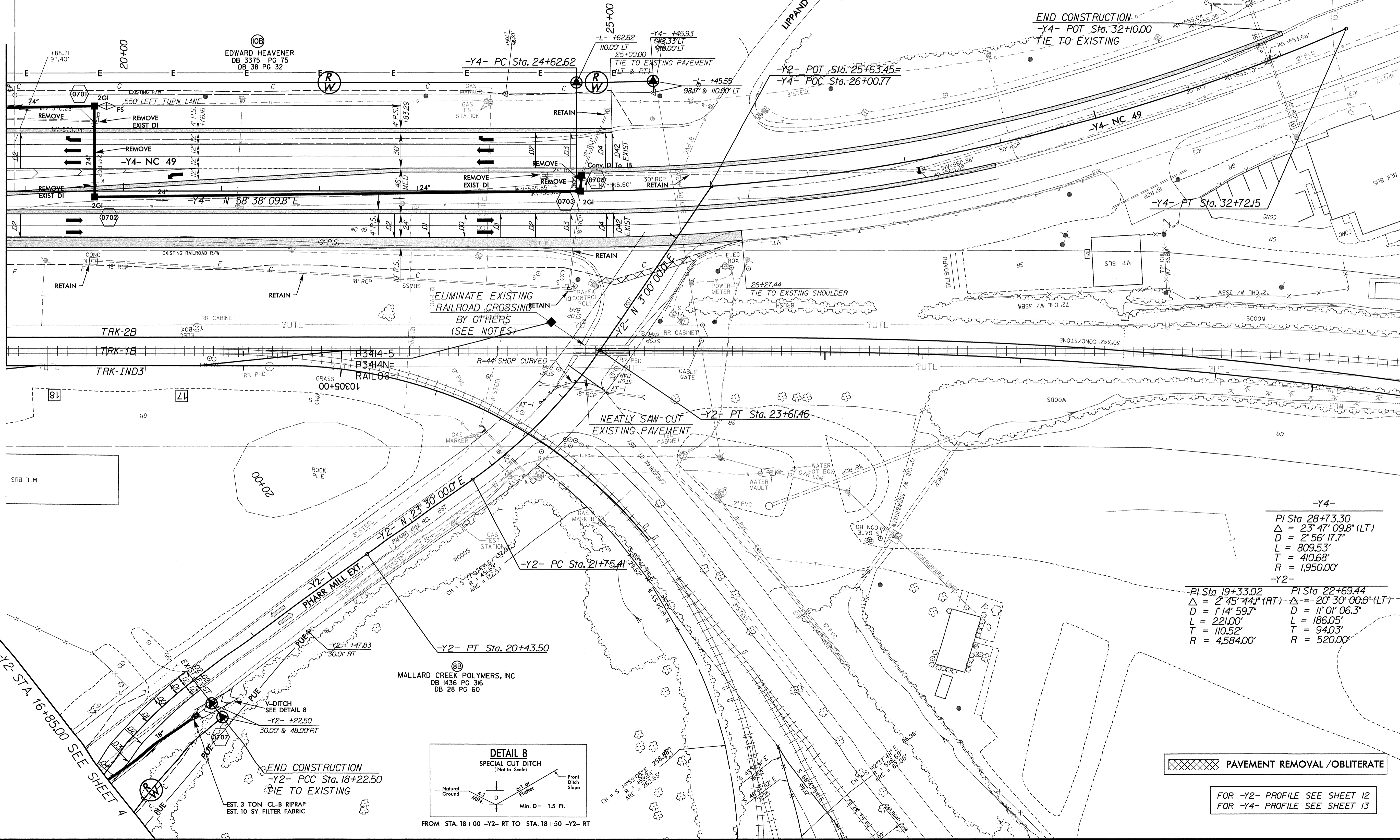
AT GRADE RAILROAD CLOSURE NOTES:
 CONTACT THE NCDOT RAIL DIVISION PROJECT ENGINEER AT 919-715-0296 TO SCHEDULE THE CLOSURE OF PHARR MILL RD.
 THE EXISTING PAVEMENT INSIDE THE NORFOLK SOUTHERN RAILROAD BALLAST LINE WILL BE REMOVED BY THE RAILROAD CONTRACTOR. THE TIMBER FLANGES WILL ALSO BE REMOVED BY THE RAILROAD CONTRACTOR. THE RAILROAD SIGNALS, SIGNAL BOX, AND OVERHEAD POWER LINE/POLES TO SERVICE THE SIGNAL BOX WILL BE REMOVED BY THE RAILROAD CONTRACTOR.
 THE EXISTING PAVEMENT INSIDE THE NORFOLK SOUTHERN RAILROAD BALLAST LINE WILL BE REMOVED BY THE RAILROAD CONTRACTOR. THE RAIL SEAL AND ASPHALT OVER THE TIES WILL ALSO BE REMOVED BY THE RAILROAD CONTRACTOR. THE EXISTING RAILROAD CROSSBUCKS SHALL BE REMOVED BY THE RAILROAD CONTRACTOR.
 CONTRACTOR SHALL SEED AND MULCH THE DISTURBED AREA OUTSIDE THE RAILROAD R/W LINE.
 CONTRACTOR SHALL CONTACT NORTH CAROLINA 811 TO LOCATE ALL UNDERGROUND UTILITIES IN THE WORK AREA.
 RAILROAD CONTRACTOR SHALL REMOVE EXISTING ROADBED AND GRADE AREA TO MATCH ADJACENT TOPOGRAPHY AND GRADE EXISTING DITCHES TO DRAIN. ANY EXISTING CULVERTS IN THE RAILROAD DITCHES SHALL BE REMOVED AS WELL.
 PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS. ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.



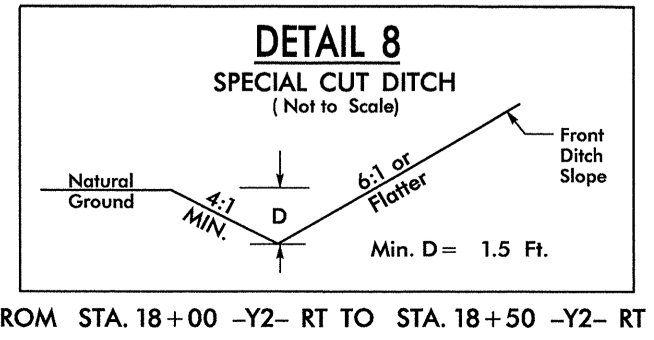
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 Morrisville, North Carolina 27560
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 NC LICENSE # C-2243

PROJECT REFERENCE NO. P-5208B	SHEET NO. 7
ROADWAY DESIGN ENGINEER [Signature]	HYDRAULICS ENGINEER [Signature]
Professional Seal: 18470	Professional Seal: 2037863

MATCHLINE -Y4- STA. 18+80.00 SEE SHEET 5



-Y4-	
PI Sta 28+73.30	PI Sta 22+69.44
$\Delta = 23^{\circ} 47' 09.8''$ (LT)	$\Delta = 20^{\circ} 30' 00.0''$ (LT)
D = 2' 56' 17.7"	D = 11' 01' 06.3"
L = 809.53'	L = 186.05'
T = 410.68'	T = 94.03'
R = 1,950.00'	R = 520.00'
-Y2-	
PI Sta 19+33.02	PI Sta 22+69.44
$\Delta = 2^{\circ} 45' 44.1''$ (RT)	$\Delta = 20^{\circ} 30' 00.0''$ (LT)
D = 1' 14' 59.7"	D = 11' 01' 06.3"
L = 221.00'	L = 186.05'
T = 110.52'	T = 94.03'
R = 4,584.00'	R = 520.00'



PAVEMENT REMOVAL / OBLITERATE

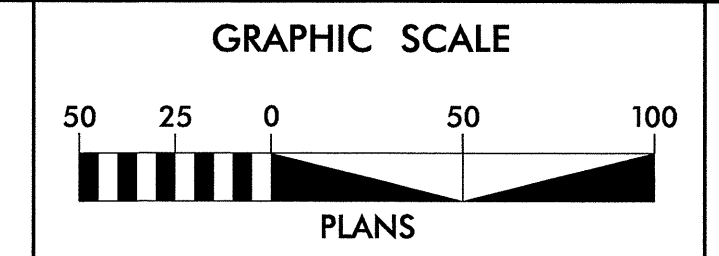
FOR -Y2- PROFILE SEE SHEET 12
 FOR -Y4- PROFILE SEE SHEET 13

REVISIONS

2/18/2013 10:10 AM P:\Projects\05208B\rdy_psh07.dgn
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MATCHLINE -Y2- STA. 16+85.00 SEE SHEET 4

DCN:
0053DEL P.10a2



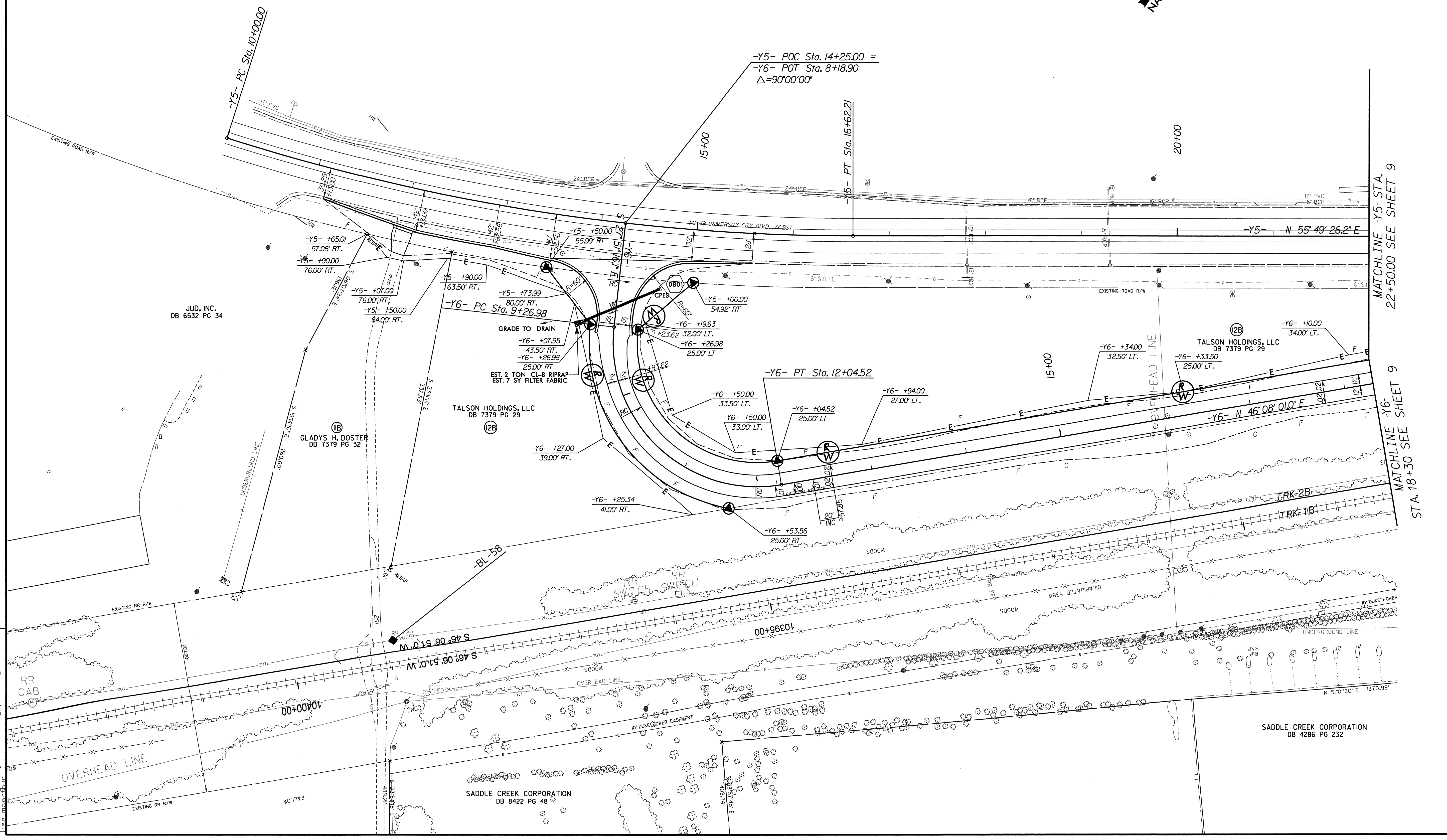
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Morrisville, North Carolina 27560
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NC LICENSE # C-2843

PROJECT REFERENCE NO. <i>P-5208B</i>		SHEET NO. 8	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

-Y5-
PI Sta 13+33.75
 $\Delta = 17^{\circ} 38' 51.0''$ (LT)
D = 2' 39' 53.7"
L = 662.21'
T = 333.75'
R = 2,150.00'
e = Exist.

-Y6-
PI Sta 11+26.08
 $\Delta = 106^{\circ} 00' 42.9''$ (LT)
D = 38' 11' 49.9"
L = 277.54'
T = 199.10'
R = 150.00'
e = RC

NAD 83 NARS 2007

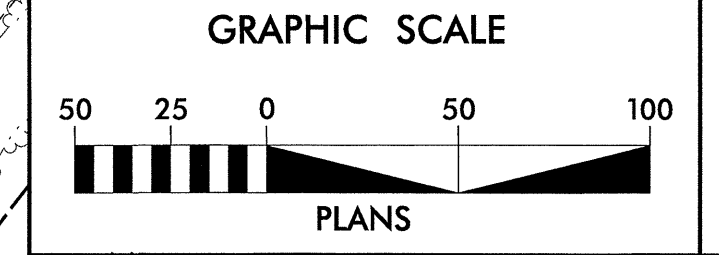
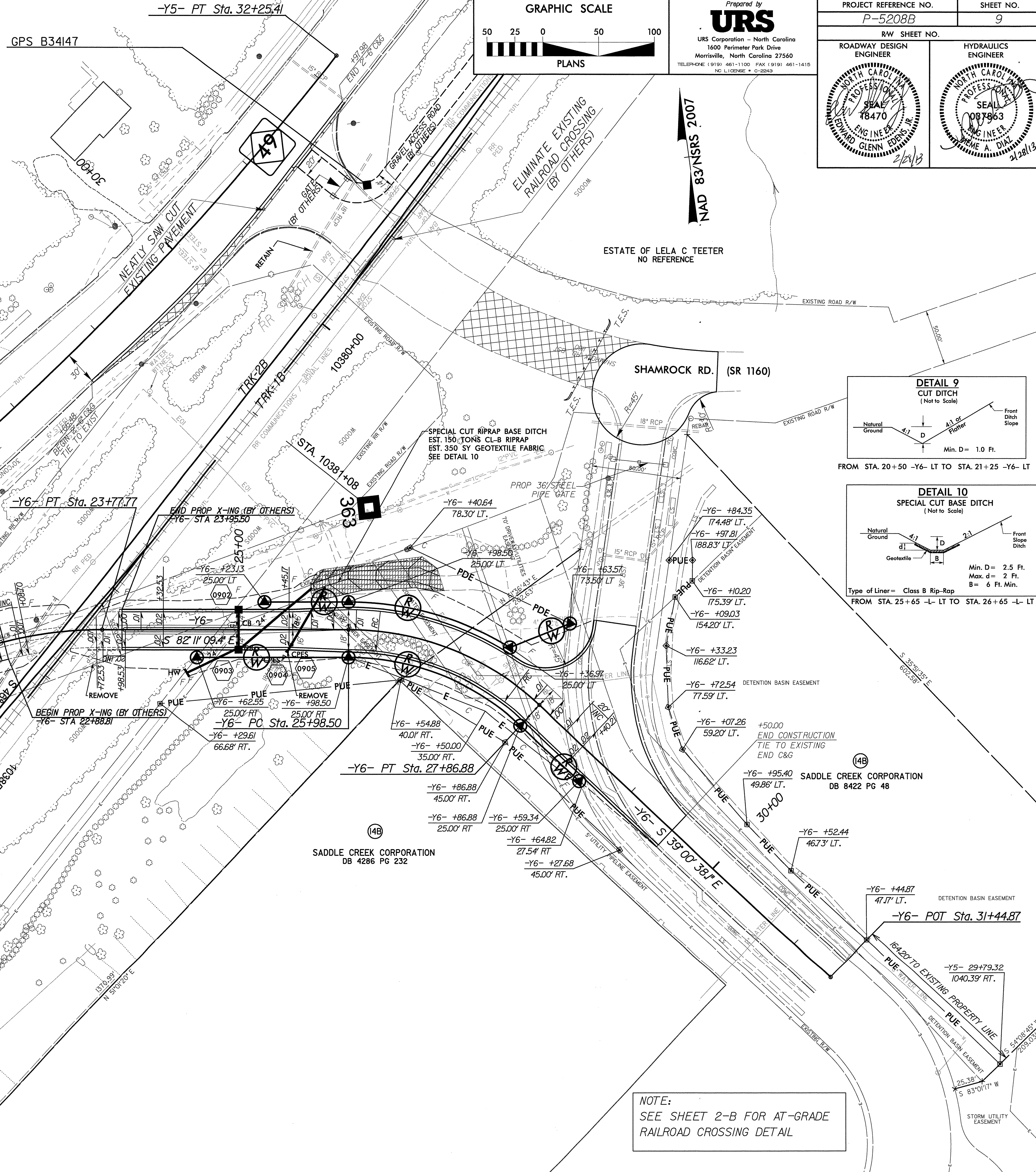


REVISIONS

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DCN: 0053DEL P10a2

AT GRADE RAILROAD CLOSURE NOTES:
 CONTACT THE NCDOT RAIL DIVISION PROJECT ENGINEER AT 919-715-0296 TO SCHEDULE THE CLOSURE OF SHAMROCK RD.
 THE EXISTING PAVEMENT INSIDE THE NORFOLK SOUTHERN RAILROAD BALLAST LINE WILL BE REMOVED BY THE RAILROAD CONTRACTOR. THE TIMBER FLANGES WILL ALSO BE REMOVED BY THE RAILROAD CONTRACTOR. THE RAILROAD SIGNALS, SIGNAL BOX, AND OVERHEAD POWER LINE/POLES TO SERVICE THE SIGNAL BOX WILL BE REMOVED BY THE RAILROAD CONTRACTOR.
 THE EXISTING PAVEMENT INSIDE THE NORFOLK SOUTHERN RAILROAD BALLAST LINE WILL BE REMOVED BY THE RAILROAD CONTRACTOR. THE RAIL SEAL AND ASPHALT OVER THE TIES WILL ALSO BE REMOVED BY THE RAILROAD CONTRACTOR. THE EXISTING RAILROAD CROSSBUCKS SHALL BE REMOVED BY THE RAILROAD CONTRACTOR.
 CONTRACTOR SHALL SEED AND MULCH THE DISTURBED AREA OUTSIDE THE RAILROAD BALLAST LINE.
 CONTRACTOR SHALL CONTACT NORTH CAROLINA 811 TO LOCATE ALL UNDERGROUND UTILITIES IN THE WORK AREA.
 CONTRACTOR SHALL REMOVE EXISTING ROADBED AND GRADE AREA TO MATCH ADJACENT TOPOGRAPHY AND GRADE EXISTING DITCHES TO DRAIN. ANY EXISTING CULVERTS IN THE RAILROAD DITCHES SHALL BE REMOVED AS WELL.
 THE CITY OF HARRISBURG SHALL REMOVE THE RR ADVANCE WARNING SIGNING ON SHAMROCK RD.
 PROVIDE PERMANENT SIGNING AS SHOWN.
 PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS. ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

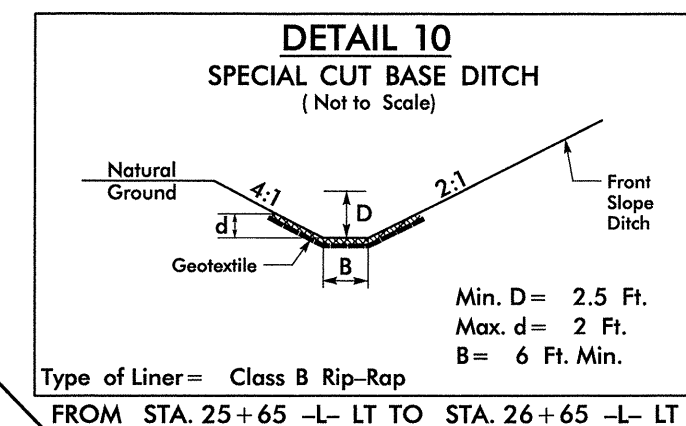
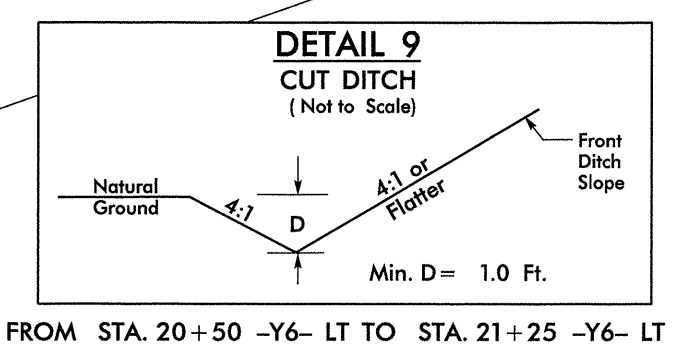


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PROJECT REFERENCE NO. P-5208B	SHEET NO. 9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-Y6-
 PI Sta 22+31.58 PI Sta 26+97.42
 $\Delta = 51^{\circ} 40' 49.5''$ (RT) $\Delta = 43^{\circ} 10' 31.3''$ (RT)
 $D = 16^{\circ} 22' 12.8''$ $D = 22^{\circ} 55' 05.9''$
 $L = 315.70'$ $L = 188.39'$
 $T = 169.50'$ $T = 98.92'$
 $R = 350.00'$ $R = 250.00'$
 $e = RC$ $e = RC$

-Y5-
 PI Sta 29+91.82
 $\Delta = 9^{\circ} 45' 27.2''$ (LT)
 $D = 2^{\circ} 05' 00.5''$
 $L = 468.33'$
 $T = 234.73'$
 $R = 2750.00'$



NOTE:
 SEE SHEET 2-B FOR AT-GRADE RAILROAD CROSSING DETAIL

REVISIONS

9/28/2013
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 rdj

MATCHLINE -Y5- STA 22+50.00 SEE SHEET 8
 MATCHLINE -Y6- STA 18+30.00 SEE SHEET 8
 STA 22+31.58
 STA 26+97.42
 STA 29+91.82
 STA 22+31.58
 STA 26+97.42
 STA 29+91.82
 STA 22+31.58
 STA 26+97.42
 STA 29+91.82

DCN: 0053DEL P10a2

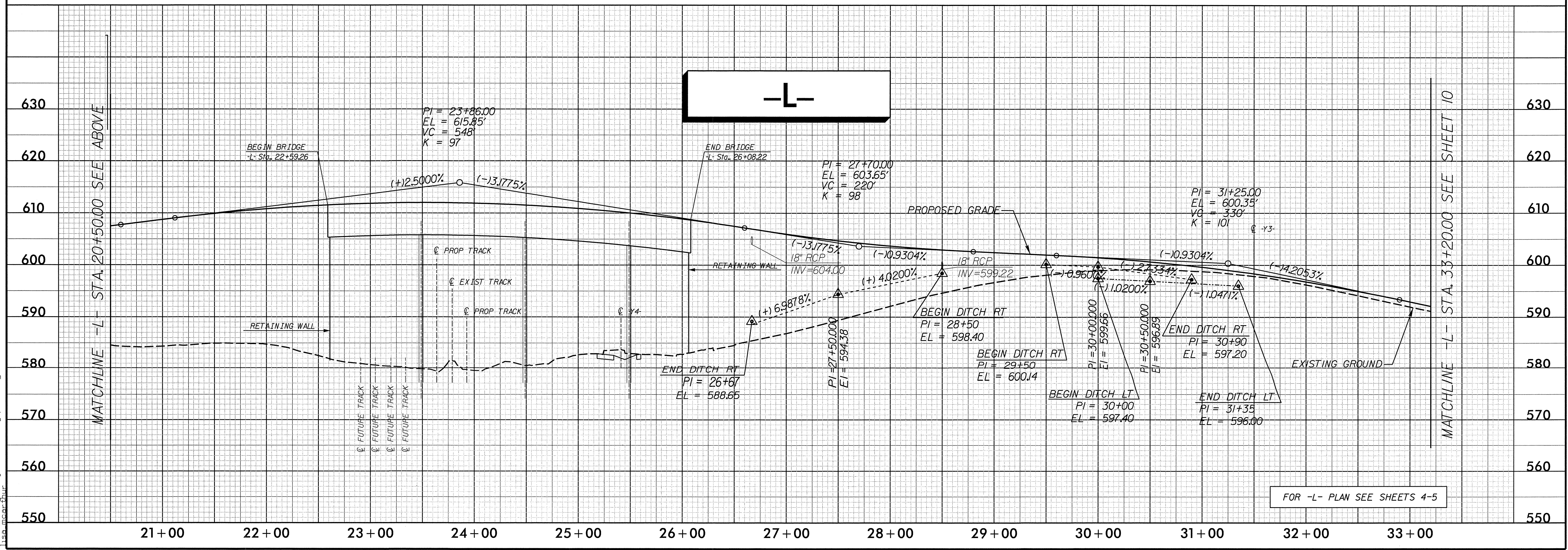
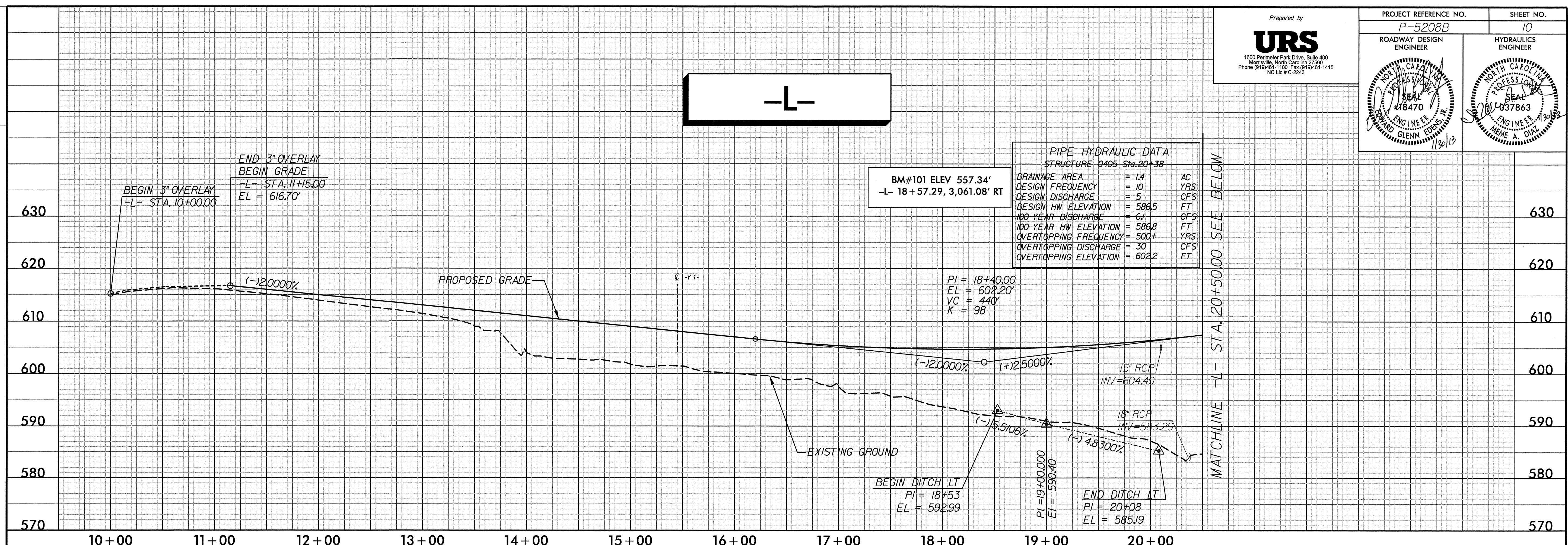
PROJECT REFERENCE NO. P-5208B SHEET NO. 10

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 1800 Perimeter Park Drive, Suite 400
 Morrisville, North Carolina 27560
 Phone (919)461-1100 Fax (919)461-1415
 NC Lic.# C-2243

ROADWAY DESIGN ENGINEER
 HYDRAULICS ENGINEER

Professional Engineer Seal: Edward Glenn Edwards, No. 18470, State of North Carolina, Exp. 12/31/13

Professional Engineer Seal: Glenn Edwards, No. 18470, State of North Carolina, Exp. 12/31/13



FOR -L- PLAN SEE SHEETS 4-5

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DCN: 0053DEL P10a2

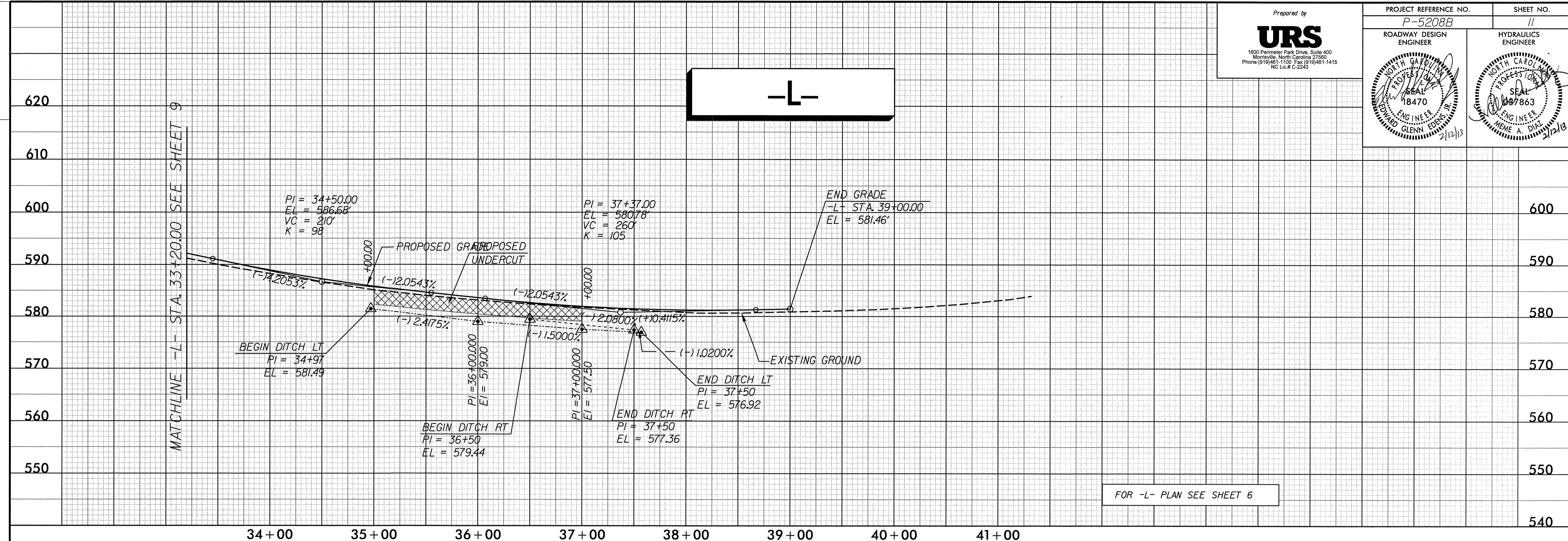
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 Morrisville, North Carolina 27560
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PROJECT REFERENCE NO.
 P-5208B

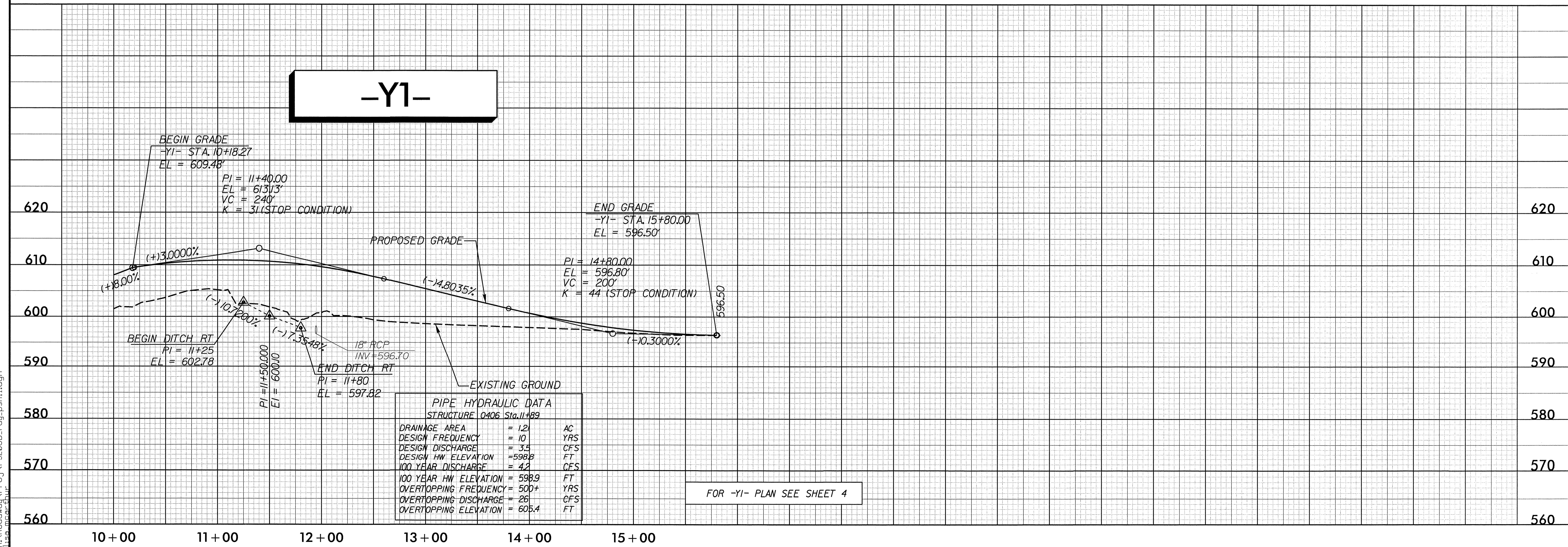
SHEET NO.
 11

ROADWAY DESIGN ENGINEER
 EDWARD GLENN EDWARDS JR.
 18470
 2/12/13

HYDRAULICS ENGINEER
 WENDELL A. DENT
 18470
 2/12/13



FOR -L- PLAN SEE SHEET 6



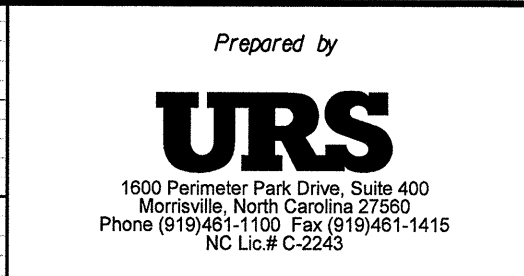
PIPE HYDRAULIC DATA
 STRUCTURE 0406 Sta. 11+89

DRAINAGE AREA	= 12	AC
DESIGN FREQUENCY	= 10	YRS
DESIGN DISCHARGE	= 3.5	CFS
DESIGN HW ELEVATION	= 598.9	FT
100 YEAR DISCHARGE	= 4.2	CFS
100 YEAR HW ELEVATION	= 598.9	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= 26	CFS
OVERTOPPING ELEVATION	= 605.4	FT

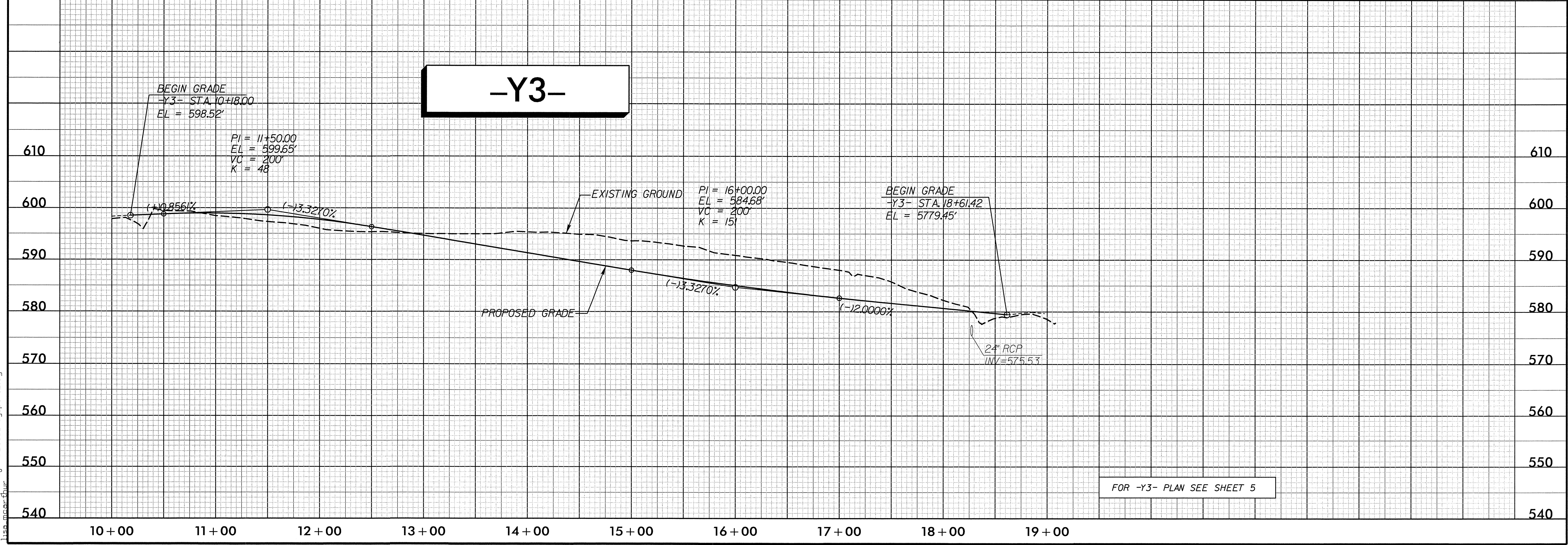
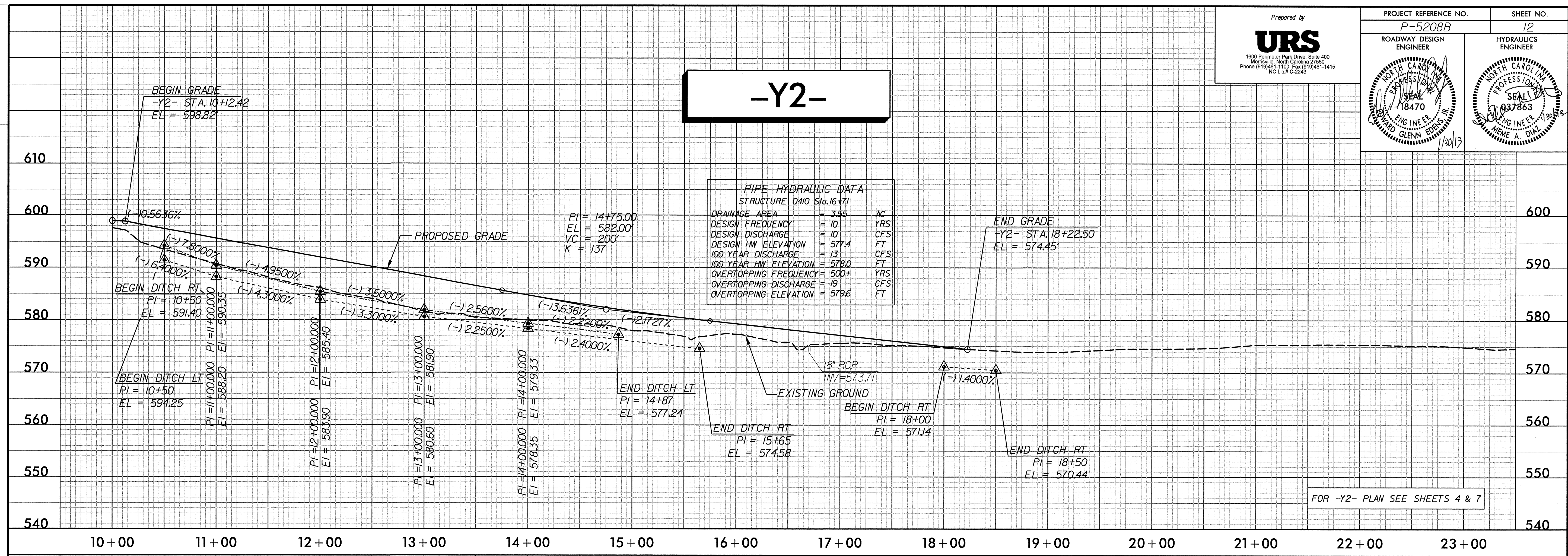
FOR -Y1- PLAN SEE SHEET 4

2/12/2013
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DCN:
0053DEL P10a2



PROJECT REFERENCE NO. P-5208B	SHEET NO. 12
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

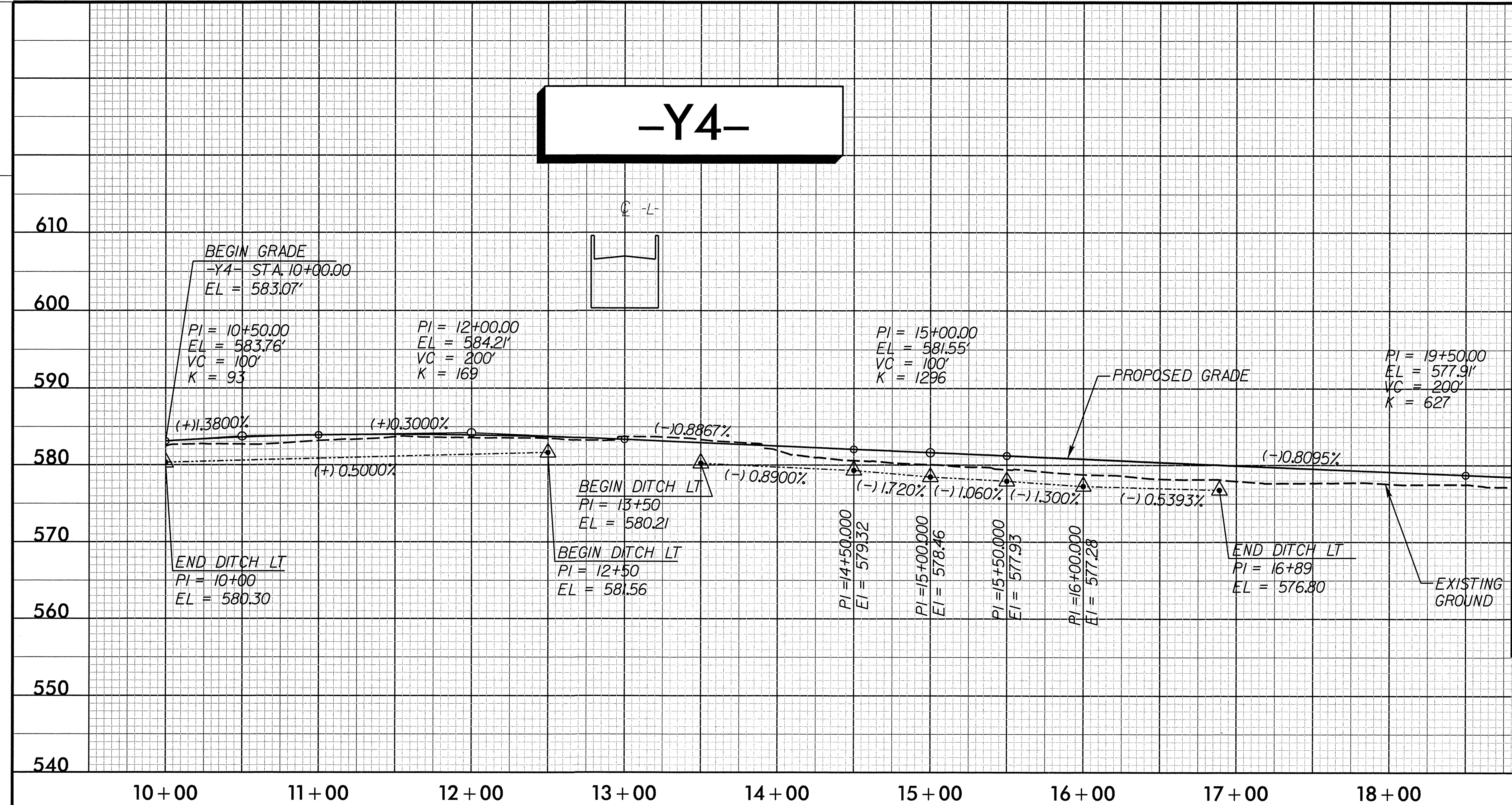


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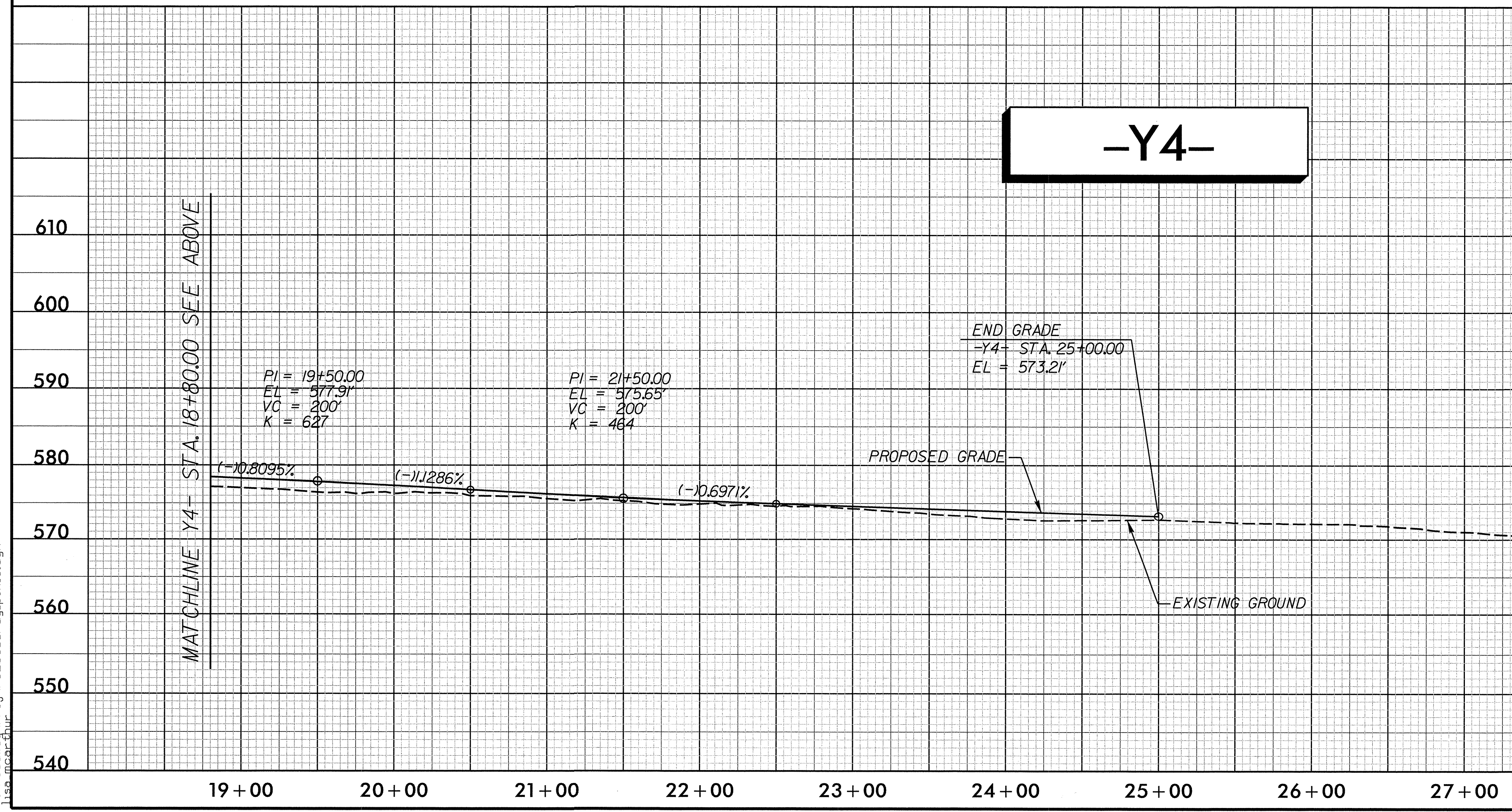
DCN: 0053DEL P10a2

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URS
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Phone (919)461-1100 Fax (919)461-1415
NC Lic # C-2243

PROJECT REFERENCE NO. <i>P-5208B</i>	SHEET NO. <i>13</i>
ROADWAY DESIGN ENGINEER <i>[Signature]</i>	HYDRAULICS ENGINEER <i>[Signature]</i>
<i>[Professional Seal]</i>	<i>[Professional Seal]</i>



FOR -L- PLAN SEE SHEET 4



FOR -Y4- PLAN SEE SHEET 7

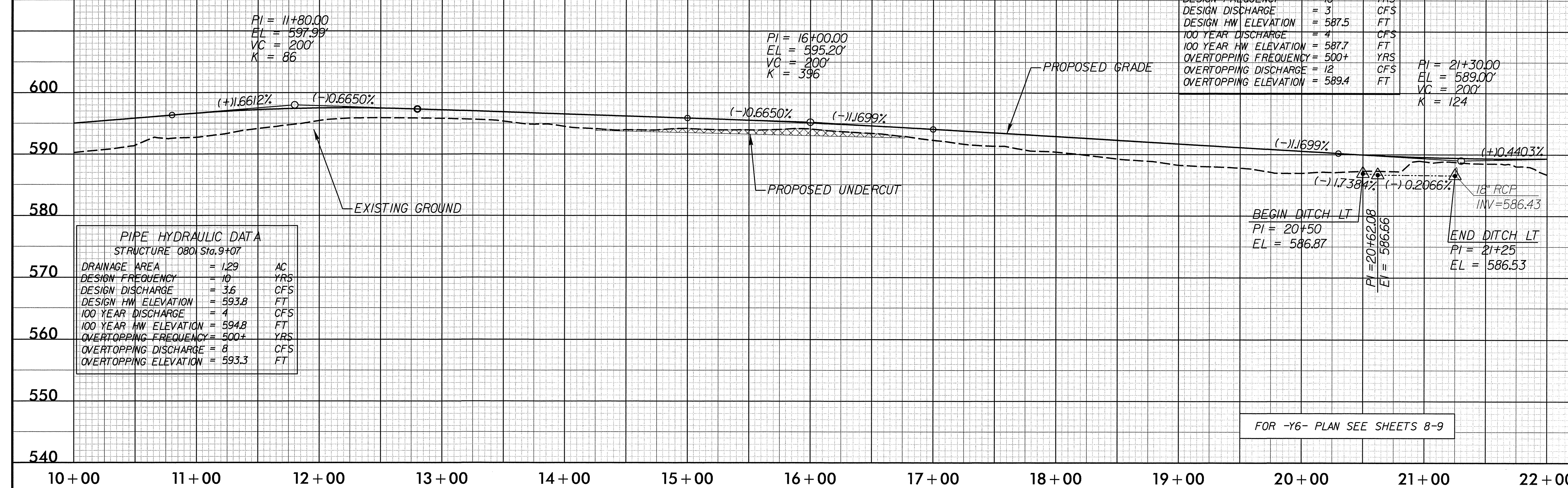
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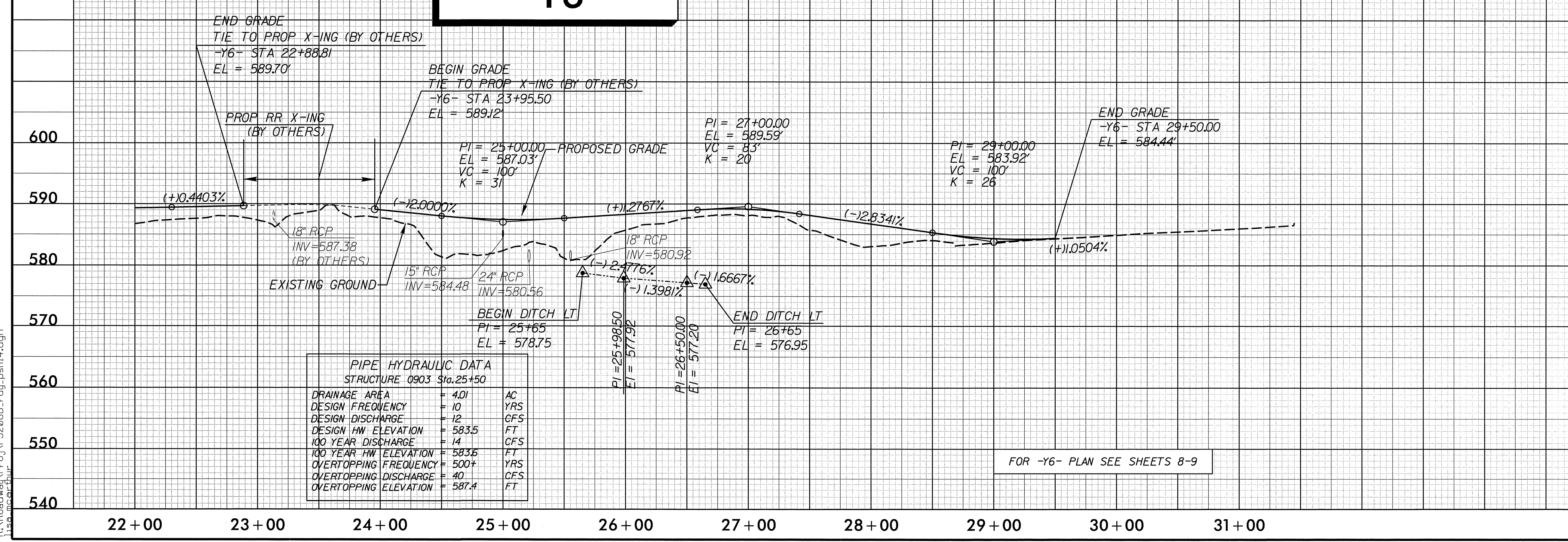
PROJECT REFERENCE NO. P-5208B	SHEET NO. 14
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-Y6-



FOR -Y6- PLAN SEE SHEETS 8-9

-Y6-



FOR -Y6- PLAN SEE SHEETS 8-9

2/12/2013 R:\Roadway\p-roj\p5208B_rdy_psh14.dgn

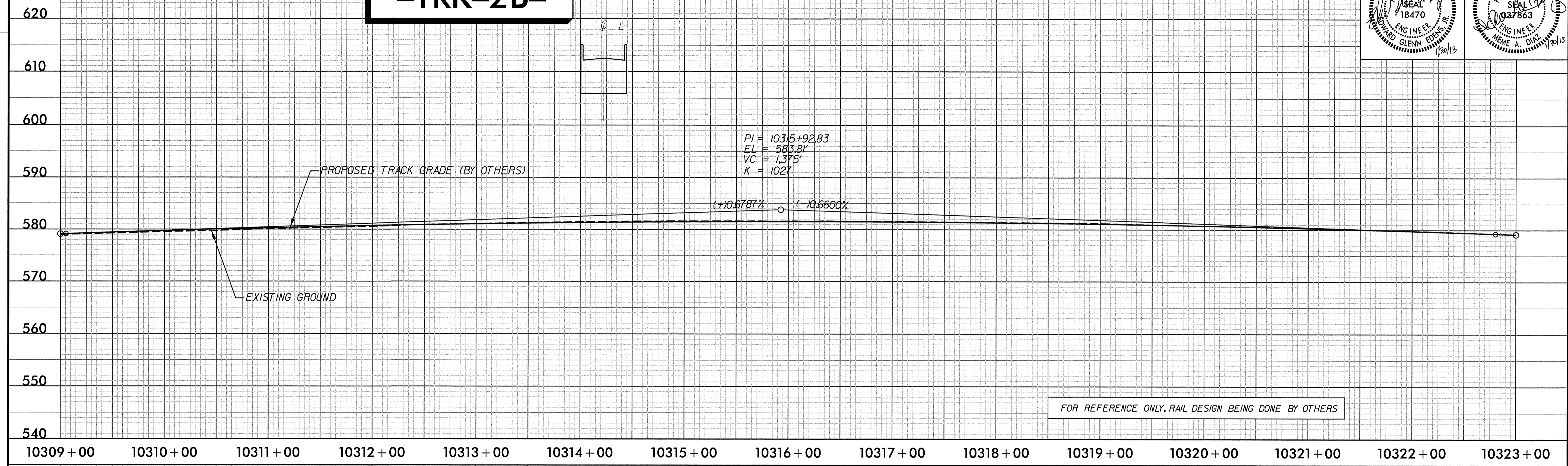
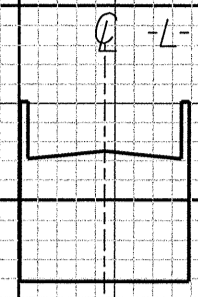
DCN:

0053DEL P10a2

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PROJECT REFERENCE NO. P-5208B	SHEET NO. 15
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER

-TRK-2B-



1/30/2013
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