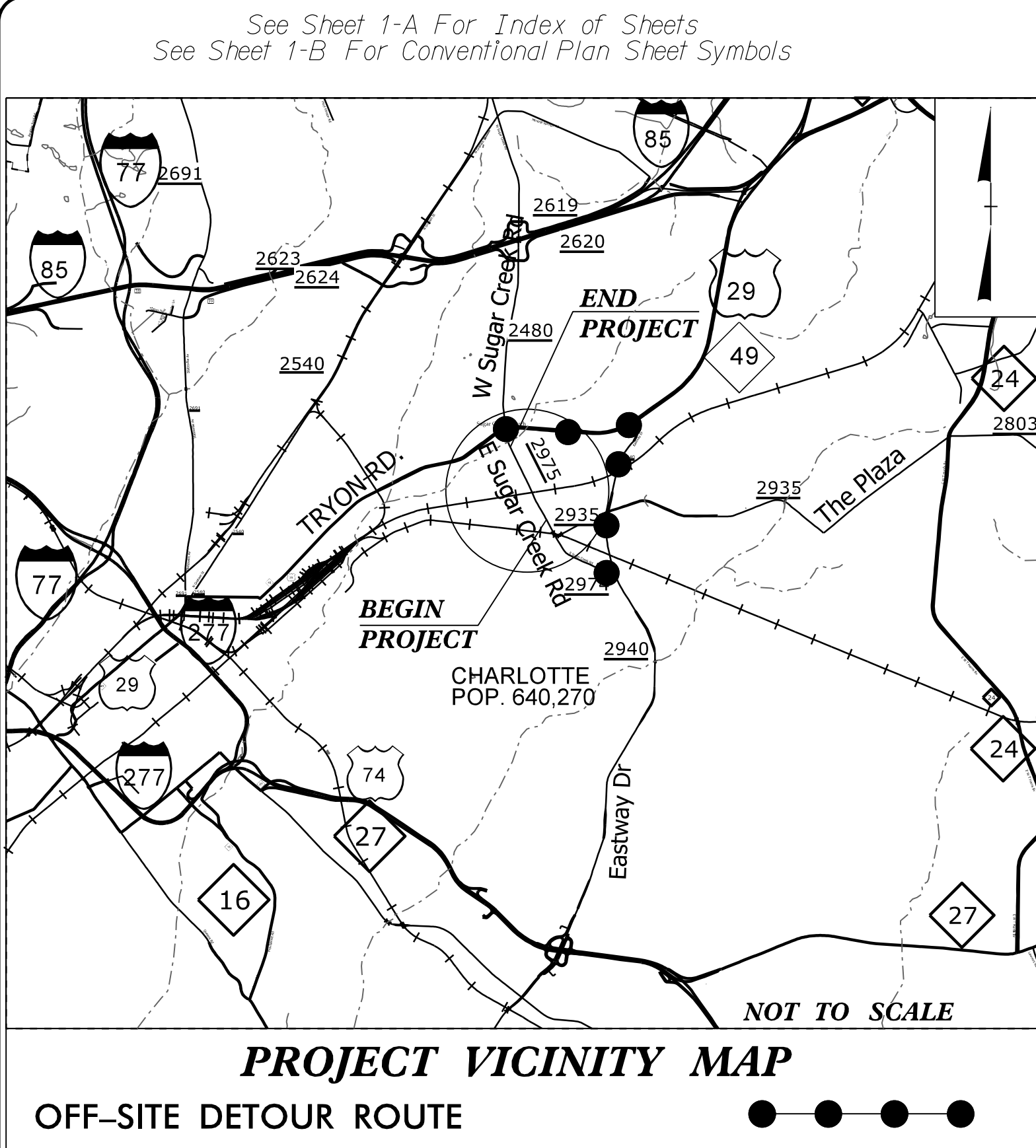


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STATE OF NORTH CAROLINA  
RAIL DIVISION



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-5008	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
41141.1.1		PE	
57500.2.FRA01		RW, UTIL-PE	
57500.3.FRA01T4A	FR-HSR-0033-11-01-00	CONST.	

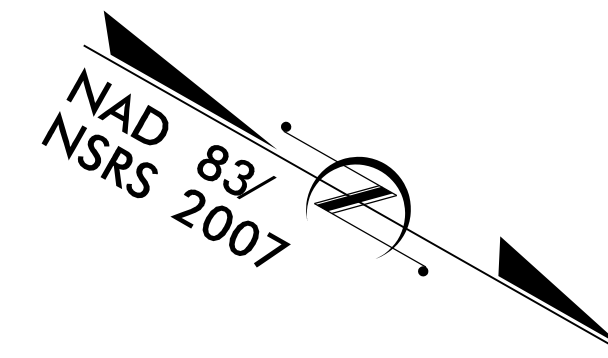
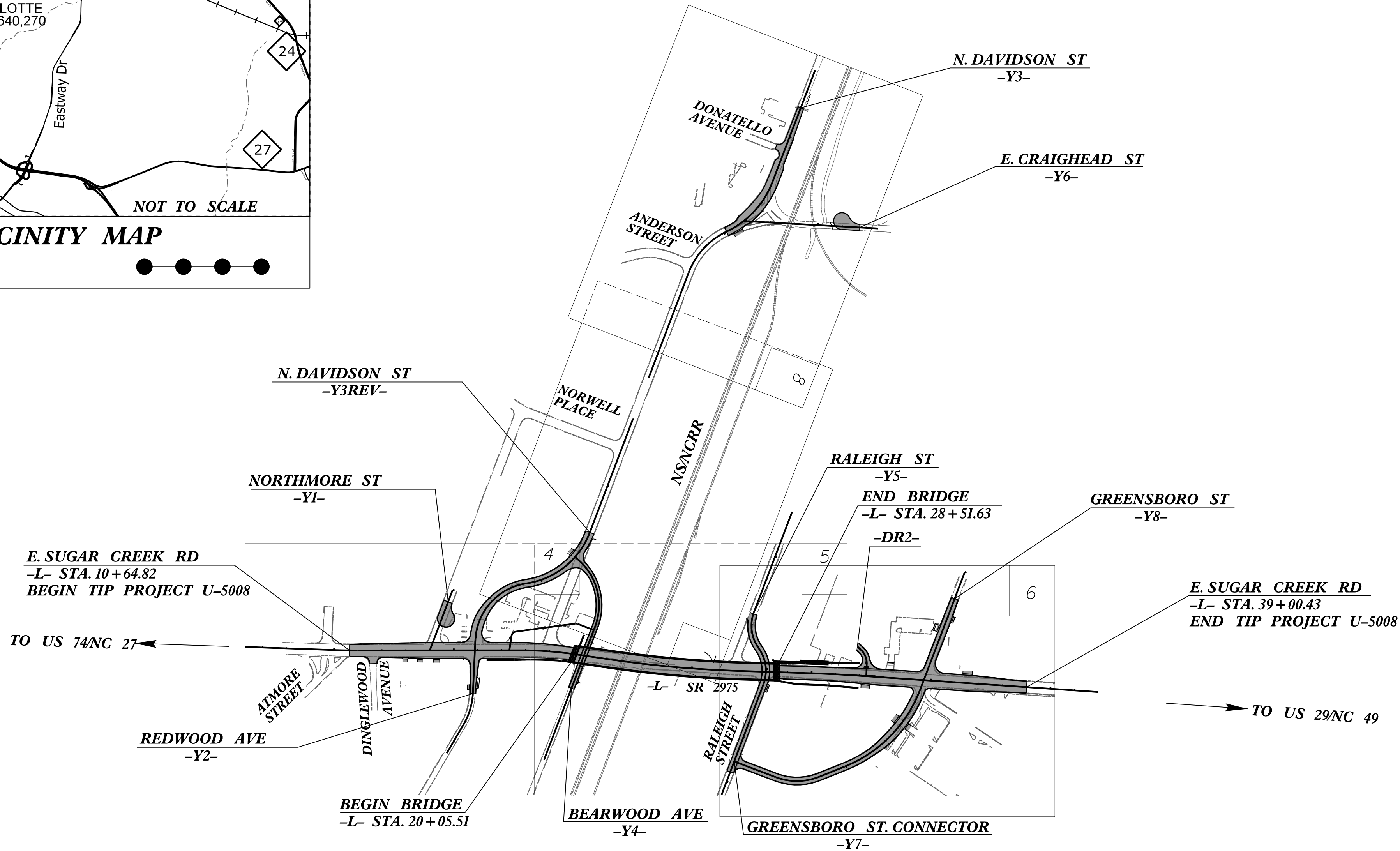
MECKLENBURG COUNTY

LOCATION: SR 2975 (EAST SUGAR CREEK ROAD) OVER NSNCRR  
CROSSING NO. 715 352H-GRADE SEPARATION

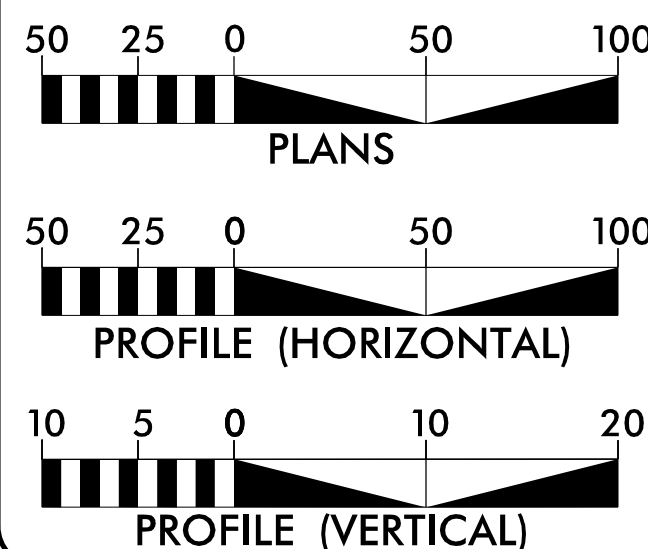
TYPE OF WORK: GRADING, DRAINAGE, PAVING, WALLS AND STRUCTURE

TIP PROJECT: U-5008

CONTRACT: C203585



GRAPHIC SCALES



DESIGN DATA

- ADT 2015 = 25,500
- ADT 2035 = 30,300
- DHV = 8 %
- D = 55 %
- T = 12 % \*
- V = 40 MPH
- \* TTST = 4% DUAL = 8%
- FUNC CLASS =
- URBAN COLLECTOR
- SUBREGIONAL TIER

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT U-5008 = 0.377 MI  
 LENGTH OF STRUCTURE TIP PROJECT U-5008 = 0.160 MI  
 TOTAL LENGTH OF TIP PROJECT U-5008 = 0.537 MI

Prepared in the Office of:



FOR THE NORTH CAROLINA DEPT. OF TRANSPORTATION  
2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:  
November 27, 2013

LETTING DATE:  
August 18, 2015

STEVE THOMAS, PE  
PROJECT ENGINEER

STEVEN L. SCOTT, PE  
PROJECT DESIGN ENGINEER

KUMAR TRIVEDI, PE  
NCDOT CONTACT

HYDRAULICS ENGINEER

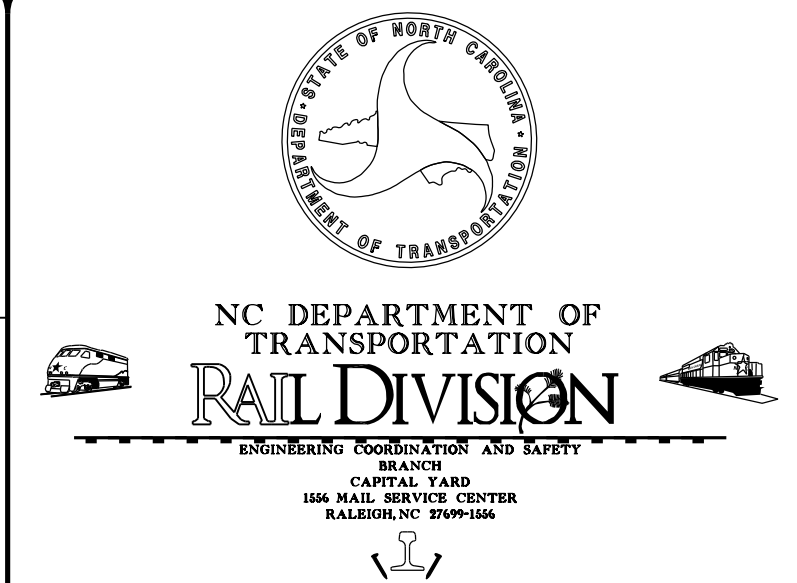
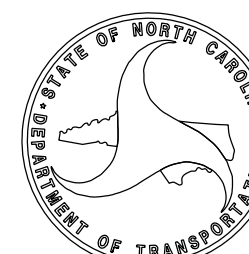
7/7/2015

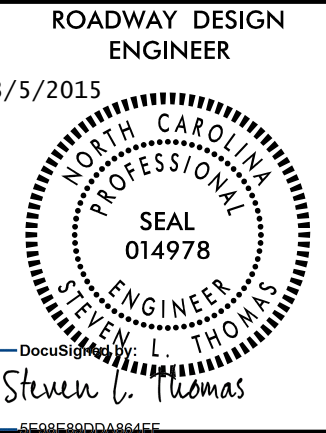
DocuSigned by:  
*Steven Bondar*  
SIGNATURE: STEVEN M. BONDI P.E.

ROADWAY DESIGN ENGINEER

7/7/2015

DocuSigned by:  
*Steven L. Thomas*  
SIGNATURE: STEVEN L. THOMAS P.E.





SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
1C-1 THRU 1C-4	SURVEY CONTROL SHEETS
1D-1	CENTERLINE COORDINATE LIST
2A-1 THRU 2A-7	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
2B-1	SOUTHERN APPROACH AT BRIDGE FOR WALL 3
2B-2	NORTHERN APPROACH AT BRIDGE FOR WALL 1 AND 2
2B-3	EAST CRAIGHEAD ROAD CROSSING CLOSURE DETAIL
2B-4	EASTWAY DRIVE AND N TRYON ST. INTERSECTION (DETOUR REMOVAL)
2B-5	THE PLAZA AND EASTWAY DRIVE INTERSECTION (DETOUR REMOVAL)
2C-1	CURB TRANSITION DETAIL
2C-2	DETAIL OF SPECIAL TRAFFIC BEARING JUCTION BOX
2C-3	EXTRA DEPTH 36" JUCTION BOX
2C-4	6" CURB DETAIL
2C-5	DETAIL OF SPECIAL PIPE GATE
2G-1	STOCKPILE CONTAINMENT DETAIL
2G-2	STANDARD EMBANKMENT MONITORING
3B-1	SUMMARY OF EARTHWORK, SUMMARY OF PAVEMENT REMOVAL, SUMMARY OF PAVEMENT BREAK UP, SUMMARY OF REMOVAL OF EXISTING GUARDRAIL, AND GUARDRAIL SUMMARY
3D-1 THRU 3D-5	SUMMARY OF DRAINAGE QUANTITIES
3G-1	SUMMARY OF SUBSURFACE DRAINAGE, SUMMARY OF BRIDGE WAITING PERIODS, SUMMARY OF SETTLEMENT GAUGES, SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION
3P-1	PARCEL INDEX SHEET
4 THRU 8	PLAN SHEETS
9 THRU 13	PROFILE SHEETS
TMP-1 THRU TMP-12	TRANSPORTATION MANAGEMENT PLANS
PMP-1 THRU PMP-9	PAVEMENT MARKING PLANS
E-1 THRU E-7	LIGHTING PLANS
EC-1 THRU EC-13	EROSION CONTROL PLANS
SIGN-1 THRU SIGN-7	SIGNING PLANS
UC-1 THRU UC-39	UTILITY CONSTRUCTION PLANS
UO-1 THRU UO-7	UTILITY BY OTHERS PLANS
X-1	CROSS-SECTION INDEX
X-1A	CROSS-SECTION SUMMARY
X-2 THRU X-56	CROSS-SECTIONS
S-1 THRU S-78	STRUCTURE PLANS
ECS-1 THRU ECS-3	ELECTRICAL CONDUIT SYSTEM
WALL-1 THRU WALL-19	WALL PLANS
SN	STRUCTURE NOTES

**GENERAL NOTES:** 2012 SPECIFICATIONS  
EFFECTIVE: 01-17-12  
REVISED: 07/30/12

**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 11.

**SUPERELEVATION:**  
ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 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.

**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 STA. 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  
Charlotte - Mecklenburg Utilities Department, Duke Energy, AT&T, Time Warner Cable  
Piedmont Natural Gas, CDOT, Level 3  
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 OTHERS.

**CURB RAMPS**  
CURB RAMPS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS. CONSTRUCT ALL CURB RAMPS IN ACCORDANCE WITH STD. 848.05 AND/OR 848.06.

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
<b>DIVISION 2 - EARTHWORK</b>	
200.02	Method of Clearing - Method 11
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superlevation - Two Lane Pavement
225.06	Method of Grading Sight Distance at Intersections
<b>DIVISION 3 - PIPE CULVERTS</b>	
300.01	Method of Pipe Installation
310.10	Driveway Pipe Construction
<b>DIVISION 6 - ASPHALT BASES AND PAVEMENTS</b>	
654.01	Pavement Repairs
<b>DIVISION 8 - INCIDENTALS</b>	
815.03	Pipe Underdrain and Blind Drain
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
840.04	Concrete Open Throat Catch Basin - 12" thru 48" Pipe
840.05	Brick Open Throat Catch Basin - 12" thru 48" Pipe
840.14	Concrete Drop Inlet - 12" thru 30" Pipe
840.15	Brick Drop Inlet - 12" thru 30" Pipe
840.16	Drop Inlet Frame and Grates - for use with Std. Dwg 840.14 and 840.15
840.17	Concrete Grated Drop Inlet Type 'A' - 12" thru 72" Pipe
840.18	Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.24	Frames and Narrow Slot Sag Grates
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.26	Brick Grated Drop Inlet Type 'A' - 12" thru 72" Pipe
840.27	Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
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
840.34	Traffic Bearing Junction Box - for Use with Pipes 42" and Under
840.45	Precast Drainage Structure
840.46	Traffic Bearing Precast Drainage Structure
840.54	Manhole Frame and Cover
840.66	Drainage Structure Steps
846.01	Concrete Curb, Gutter and Curb & Gutter
848.01	Concrete Sidewalk
848.03	Driveway Turnout - Drop Curb Type
848.04	Street Turnout
848.05	Curb Ramp - Proposed Curb & Gutter
848.06	Curb Ramp - Existing Curb & Gutter
852.01	Concrete Islands
862.01	Guardrail Placement
862.02	Guardrail Installation
876.02	Guide for Rip Rap at Pipe Outlets

0400DEL\_P30

Note: Not to Scale

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

# CONVENTIONAL PLAN SHEET SYMBOLS

## BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EP
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	○ S
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	-----
Proposed Lateral, Tail, Head Ditch	-----
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	○ IP
Proposed Right of Way Line with Concrete or Granite RW Marker	○ CM
Proposed Control of Access Line with Concrete CA Marker	○ CA
Existing Control of Access	○ CA
Proposed Control of Access	○ CA
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	○ CR
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	⊕
Pavement Removal	XXXX
VEGETATION:	
Single Tree	☼
Single Shrub	☼
Hedge	-----
Woods Line	-----

Orchard	-----
Vineyard	-----

## EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	-----
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	○ S
Storm Sewer	-----

## UTILITIES:

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

## 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	-----
Designated U/G Telephone Cable (S.U.E.*)	-----
Recorded U/G Telephone Conduit	-----
Designated U/G Telephone Conduit (S.U.E.*)	-----
Recorded U/G Fiber Optics Cable	-----
Designated U/G Fiber Optics Cable (S.U.E.*)	-----

## WATER:

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

## TV:

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

## GAS:

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

## SANITARY SEWER:

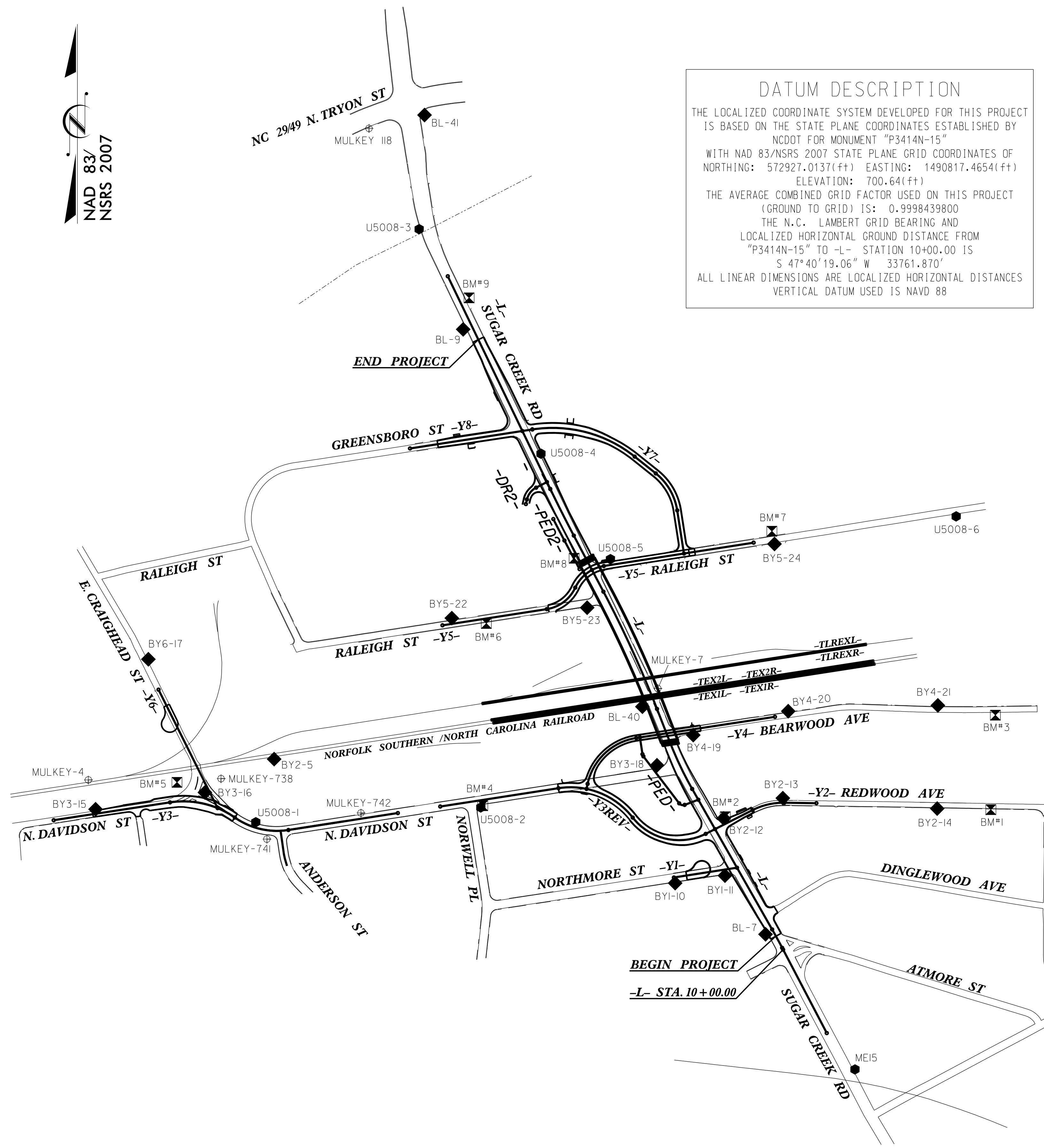
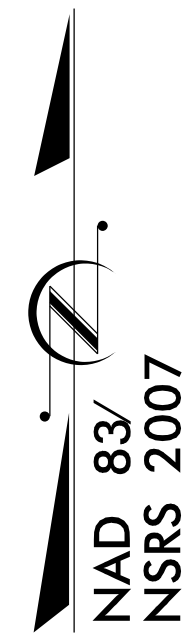
Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	-----
Above Ground Sanitary Sewer	-----
Recorded SS Forced Main Line	-----
Designated SS Forced Main Line (S.U.E.*)	-----

## MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊕
Utility Unknown U/G Line	-----
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.

# SURVEY CONTROL SHEET

PROJECT REFERENCE NO.	SHEET NO.
U-5008	1C-1
Location and Surveys	



**DATUM DESCRIPTION**

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "P3414N-15" WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF NORTHING: 572927.0137(ft) EASTING: 1490817.4654(ft) ELEVATION: 700.64(ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9998439800

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "P3414N-15" TO -L- STATION 10+00.00 IS  
S 47°40'19.06" W 33761.870'

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES  
VERTICAL DATUM USED IS NAVD 88

**NOTES:**

1. THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT: [HTTPS://CONNECT.NCDOT.GOV/RESOURCES/LOCATION/](https://connect.ncdot.gov/resources/location/)  
  
THE FILES TO BE FOUND ARE AS FOLLOWS:  
U5008\_LS\_CONTROL.TXT  
U5008\_LS\_LOCAL.TXT
2. SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
3. PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM, UTILIZING THE NCGS RTN SYSTEM (VRS).  
  
MONUMENTS USED OR SET FOR PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT:  
  - INDICATES GEODETIC CONTROL MONUMENTS FOR HORIZONTAL CONTROL
  - INDICATES BASELINE MONUMENTS FOR HORIZONTAL PROJECT CONTROL
  - ⊠ INDICATES BENCHMARKS FOR VERTICAL CONTROL
  - ⊕ INDICATES CONTROL POINT FROM CATS BLUE LINE PROJECT

**CATS BLUE LINE PROJECT DATUM NOTE:**

THE CATS BLUE LINE PROJECT USES A DIFFERENT COORDINATE SYSTEM /DATUM. FILES FROM THAT PROJECT CAN NOT BE USED IN CONJUNCTION WITH THIS PROJECT WITHOUT CONVERTING THE COORDINATES. TO CONVERT FROM CATS BLUE LINE DATUM TO U-5008 DATUM, TAKE THE FOLLOWING STEPS:

1. ROTATE ABOUT POINT "BLIREV-7" (aka MULKEY-7) 5 SECONDS COUNTERCLOCKWISE.
2. SHIFT PROJECT N -2.287 E -2.798 ELEV -0.04

NOTE: DRAWING NOT TO SCALE

0400DEL\_P30.dwg  
12/03/14  
12:03:14

SURVEY CONTROL SHEET

-Final-

PROJECT REFERENCE NO. U-5008 SHEET NO. 1C-2 Location and Surveys

Table with columns: BL POINT, DESC., NORTH, EAST, ELEVATION, L STATION, OFFSET. Rows include points LS98, LS7, LS40, LS5, LS4, LS9, LS3, LS41.

Table with columns: BY1 POINT, DESC., NORTH, EAST, ELEVATION, Y1 STATION, OFFSET. Rows include points LS10, LS11, LS27.

Table with columns: BY2 POINT, DESC., NORTH, EAST, ELEVATION, Y2 STATION, OFFSET. Rows include points LS37, LS12, LS13, LS14.

Table with columns: BY3 POINT, DESC., NORTH, EAST, ELEVATION, Y3 STATION, OFFSET. Rows include points LS15, LS16, LS1, LS2, LS18, LS28.

Table with columns: BY4 POINT, DESC., NORTH, EAST, ELEVATION, Y4 STATION, OFFSET. Rows include points LS38, LS19, LS20, LS21.

Table with columns: BY5 POINT, DESC., NORTH, EAST, ELEVATION, Y5 STATION, OFFSET. Rows include points LS22, LS23, LS35, LS24, LS6.

Table with columns: BY6 POINT, DESC., NORTH, EAST, ELEVATION, Y6 STATION, OFFSET. Rows include points LS36, LS17.

Table with columns: ADDITIONAL\_PTS POINT, DESC., NORTH, EAST, ELEVATION, L STATION, OFFSET. Rows include points LS90, LS99, M4, M5, M7, M18, M738, M741, M742.

Vertical text block containing benchmark data (BM1, BM2, BM3, BM4, BM5, BM6, BM7, BM8, BM9) with elevation and stationing information.

Table DR1 with columns: TYPE, STATION, NORTH, EAST. Rows include POT 10+00.00 and POT 10+62.09.

Table DR2 with columns: TYPE, STATION, NORTH, EAST. Rows include POT 9+66.61, POT 10+00.00, PC 10+18.37, PT 10+83.92, POT 11+04.07.

Table PED with columns: TYPE, STATION, NORTH, EAST. Rows include POT 9+48.39, PC 10+10.44, PT 10+36.11, PC 12+87.33, PT 12+97.34, POT 13+69.38.

Table PED2 with columns: TYPE, STATION, NORTH, EAST. Rows include POT 10+00.00, PC 11+37.19, PT 12+39.76.

Table L with columns: TYPE, STATION, NORTH, EAST. Rows include POT 6+00.00, PC 10+08.98, PT 10+97.68, PC 17+84.61, PT 20+00.84, PC 21+56.64, PT 27+04.74, PC 29+74.41, PT 31+96.15, POT 41+99.42.

Table Y1 with columns: TYPE, STATION, NORTH, EAST. Rows include POT 10+00.00, POT 12+71.53.

Table Y2 with columns: TYPE, STATION, NORTH, EAST. Rows include POT 10+00.00, PC 11+78.65, PT 13+18.77, POT 14+55.24.

Table Y3 with columns: TYPE, STATION, NORTH, EAST. Rows include POT 7+00.00, PC 11+99.93, PRC 14+89.87, PT 17+29.38, POT 22+00.00.

Table Y3REV with columns: TYPE, STATION, NORTH, EAST. Rows include POT 7+00.00, PC 12+08.12, PRC 15+64.32, PT 19+08.43, POT 19+52.92.

Table Y4 with columns: TYPE, STATION, NORTH, EAST. Rows include POT 10+00.00, PC 10+21.72, PT 13+24.17, POT 19+20.12.

Table Y5 with columns: TYPE, STATION, NORTH, EAST. Rows include POT 8+00.00, PC 12+48.42, PRC 14+06.82, PT 15+65.24, POT 22+09.33.

Table Y6 with columns: TYPE, STATION, NORTH, EAST. Rows include POT 6+87.32, POT 12+50.00.

Table Y7 with columns: TYPE, STATION, NORTH, EAST. Rows include POT 10+00.00, PC 10+43.11, PT 15+06.23, PC 16+20.61, PT 18+06.35, POT 19+92.06.

Table Y8 with columns: TYPE, STATION, NORTH, EAST. Rows include POT 10+00.00, POT 14+83.09.

DATUM DESCRIPTION: THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "P3414N-15" WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF NORTHING: 572927.0137(ft) EASTING: 1490817.4654(ft) ELEVATION: 700.64(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9998439800 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "P3414N-15" TO -L- STATION 10+00.00 IS S 47°40'19.06" W 33761.870' ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

NOTES: SEE SHEET 1C-1 FOR NOTES.

Vertical text on the left margin: 12/03/14 0400DEL\_P30

# SURVEY CONTROL SHEET

-Final-

PROJECT REFERENCE NO.	SHEET NO.
U-5008	1C-3
Location and Surveys	

ROW MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
L	10+19.27	-50.00	550186.3383	1465804.1012
L	10+19.27	-33.62	550193.9930	1465818.5870
L	10+50.00	35.85	550253.9203	1465865.2760
L	10+50.00	50.00	550260.6827	1465877.7011
L	10+97.68	-50.00	550253.7034	1465767.1409
L	10+97.68	50.00	550303.1737	1465854.0471
L	11+36.95	50.00	550337.3019	1465834.6201
L	11+86.95	50.00	550380.7551	1465809.8849
L	12+00.78	50.00	550462.3036	1465763.4644
L	12+80.79	55.00	550464.7860	1465767.8047
L	13+10.00	-55.00	550435.7506	1465657.7595
L	13+10.00	-50.00	550438.2241	1465662.1048
L	13+87.05	-55.00	550502.7086	1465619.6444
L	15+53.67	55.00	550701.9342	1465632.8109
L	16+19.80	47.50	550755.6931	1465593.5794
L	16+40.60	40.09	550770.1015	1465576.8457
L	28+39.25	-55.00	551807.1166	1464982.1483
L	28+74.04	55.00	551889.2611	1465063.1576
L	29+74.41	-55.00	551926.6224	1464919.0099
L	29+74.41	55.00	551978.0078	1465016.2701
L	31+96.15	-55.00	552126.3675	1464818.1549
L	31+96.15	55.00	552174.1242	1464917.2473
L	34+15.13	55.00	552371.3813	1464822.1811
L	34+89.96	55.00	552438.7985	1464789.6900
L	35+50.00	-55.00	552445.1254	1464664.5326
L	39+00.43	-55.00	552760.8094	1464512.3916
L	39+00.43	-43.48	552765.8086	1464522.7648
L	39+00.43	36.52	552800.5442	1464594.8391
L	39+00.43	55.00	552808.5660	1464611.4840

ROW MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
Y1	10+04.09	-28.99	550528.3811	1465392.6279

ROW MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
Y2	11+78.65	32.00	550757.0654	1465741.5955
Y2	11+81.18	16.22	550772.2129	1465736.5973
Y2	11+03.12	-29.10	550777.4290	1465646.6060

ROW MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
Y3	14+17.85	39.09	550753.8349	1463448.6038
Y3	14+19.08	41.24	550751.4280	1463448.7250
Y3	14+23.38	45.00	550746.4198	1463450.6174
Y3	14+40.48	-40.00	550815.1009	1463503.4632
Y3	14+89.87	40.00	550721.2476	1463504.1833
Y3	14+89.87	45.00	550717.1522	1463501.3149
Y3	14+89.87	-40.00	550786.7716	1463550.0811
Y3	16+72.04	40.00	550657.4943	1463696.4411
Y3	17+25.61	40.00	550660.8834	1463756.6881
Y3	17+29.34	40.00	550661.5038	1463760.8585
Y3	17+29.34	-40.00	550740.5606	1463748.6099
Y3	19+67.74	40.00	550698.0171	1463996.4383
Y3	19+67.74	-40.00	550777.0731	1463984.1852
Y3	19+67.74	29.79	550708.1038	1463994.8749
Y3	19+67.74	-30.20	550767.3914	1463985.6858

ROW MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
Y3REV	10+00.00	40.00	550807.3785	1464702.7462
Y3REV	10+00.00	30.39	550816.8703	1464701.2743
Y3REV	10+00.00	-40.00	550886.4335	1464690.4865
Y3REV	10+00.00	-29.85	550876.4010	1464692.0423
Y3REV	12+08.12	-40.00	550918.3266	1464896.1439
Y3REV	12+08.12	40.00	550839.2715	1464908.4036
Y3REV	12+86.93	-40.00	550921.5337	1464984.0894
Y3REV	15+64.32	40.00	550729.1807	1465186.6565
Y3REV	17+59.47	40.00	550620.0974	1465378.4786

ROW MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
Y5	12+57.78	-30.35	551670.9625	1464855.4703
Y5	12+58.36	-38.00	551678.5364	1464854.2967
Y5	14+06.82	-38.00	551747.0879	1464939.5084

ROW MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
Y7	15+06.23	35.50	552259.9251	1465204.4234
Y7	15+06.23	-35.50	552315.4421	1465248.6825
Y7	16+20.61	35.50	552188.6276	1465293.8565
Y7	16+20.61	-35.50	552244.1446	1465338.1156
Y7	18+06.35	35.50	552053.9741	1465372.0796
Y7	18+06.35	-35.50	552064.9204	1465442.2307
Y7	19+21.50	35.50	551940.1985	1465389.8331
Y7	19+21.51	-35.50	551951.1372	1465459.9854

ROW MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
Y8	11+19.13	40.00	552301.2261	1464395.4679
Y8	11+19.13	27.56	552313.5169	1464393.5605
Y8	13+75.00	-30.39	552410.0227	1464637.5188
Y8	14+37.76	40.00	552350.0903	1464710.3338

## DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "P3414N-15" WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF NORTHING: 572927.0137(FT) EASTING: 1490817.4654(FT) ELEVATION: 700.64(FT)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9998439800

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "P3414N-15" TO -L- STATION 10+00.00 IS  
S 47°40'19.06" W 33761.870'

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES  
VERTICAL DATUM USED IS NAVD 88

## NOTES:

SEE SHEET 1C-1 FOR NOTES.

0400DEL\_P30 12/03/14



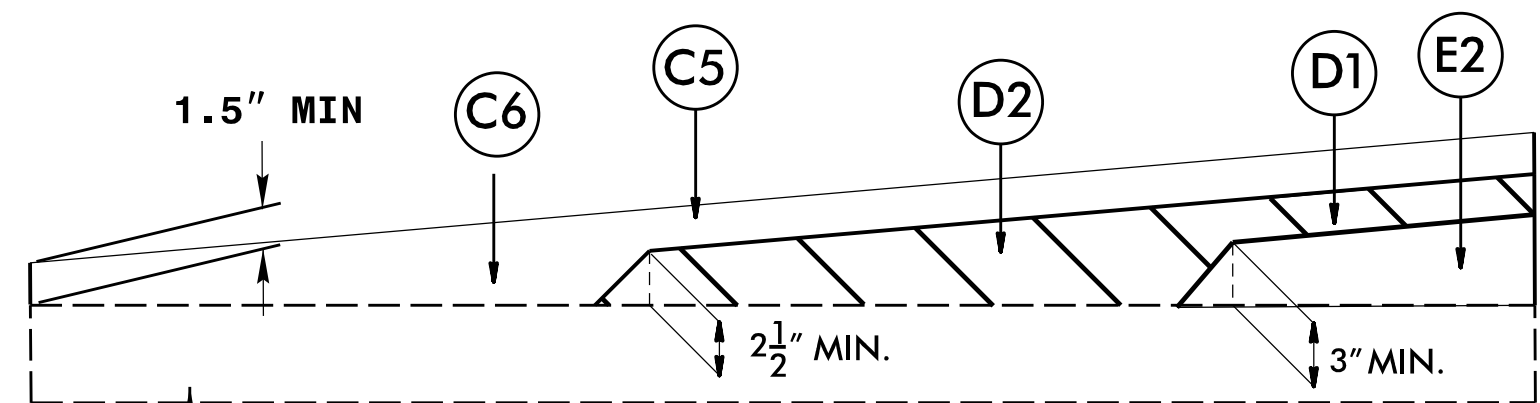




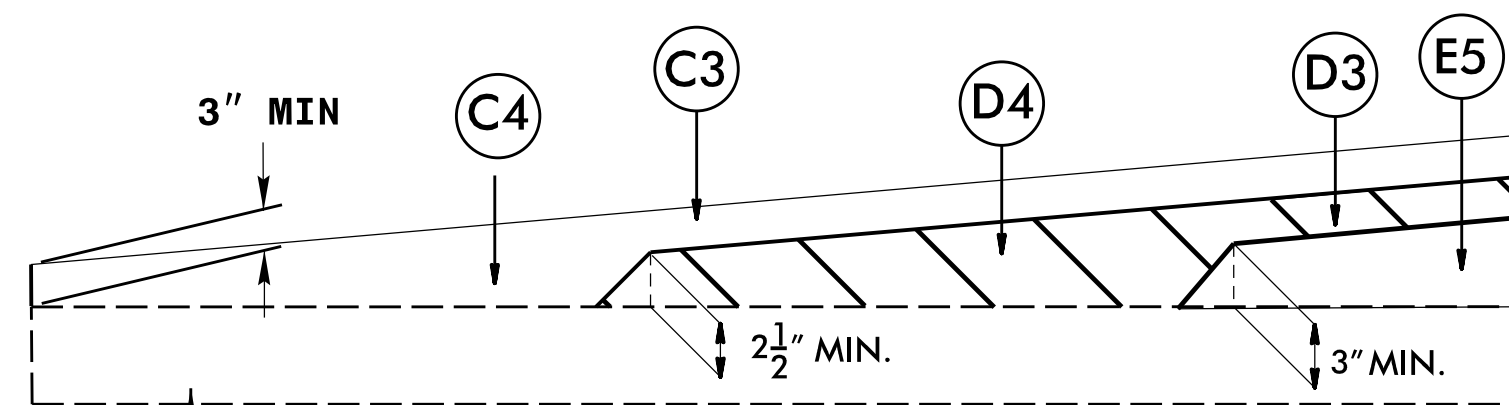
PAVEMENT SCHEDULE  
FINAL PAVEMENT DESIGN

C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	D3	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	N	GEOTEXTILE FOR SOIL STABILIZATION
C2	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.	D4	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 2½" IN DEPTH OR GREATER THAN 4" IN DEPTH.	R1	2' - 6" CONCRETE CURB AND GUTTER.
C3	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.	E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	R2	13" X 6" CONCRETE CURB.
C4	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.	E2	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 3" IN DEPTH OR GREATER THAN 5½" IN DEPTH.	R3	5" MONOLITHIC CONCRETE ISLAND.
C5	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.	E3	PROP. APPROX. 3" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.	S	4" CONCRETE SIDEWALK.
C6	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.	E4	PROP. APPROX. 7.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 427.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	T	EARTH MATERIAL
C7	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, 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 3" IN DEPTH OR GREATER THAN 5½" IN DEPTH.	U	EXISTING PAVEMENT
C8	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	E6	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	W	WEDGING (VARIABLE DEPTH ASPHALT PAVEMENT, SEE DETAILS THIS SHEET)
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	J1	PROP. 10" AGGREGATE BASE COURSE.	Y1	0" TO 1½" MILLING
D2	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 2½" IN DEPTH OR GREATER THAN 4" IN DEPTH.	L	CLASS IV SUBGRADE STABILIZATION	Y2	INCIDENTAL MILLING
				Y3	1½" MILLING

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

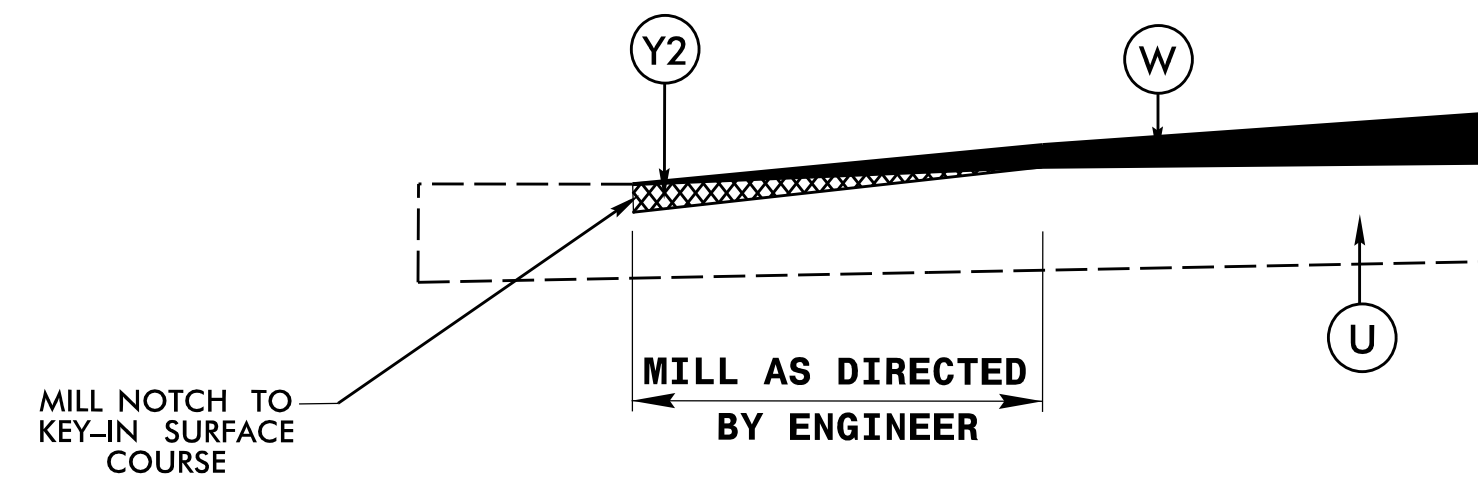


-Y8- Wedging Detail For Resurfacing



-L- Wedging Detail For Resurfacing

NOTE: MILL TO TIE TO EXISTING PAVEMENT



INCIDENTAL MILLING DETAIL

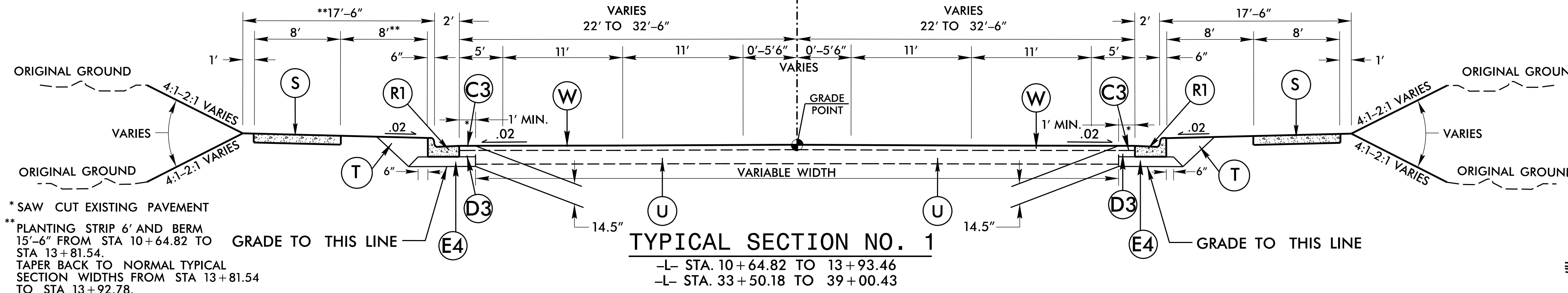
-Y8- 11+19.18  
-L- 10+64.82, -L- 39+00.43

PROJECT REFERENCE NO. <b>U-5008</b>	SHEET NO. <b>2A-1</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 3/5/2015 	PAVEMENT DESIGN ENGINEER 3/5/2015 
 <b>SEPI</b> ENGINEERING & CONSTRUCTION 1025 Wade Avenue Raleigh, NC 27605 Tel: 919-789-9977 Fax: 919-789-9591 License: C-2197	

**-L- E. SUGAR CREEK ROAD**

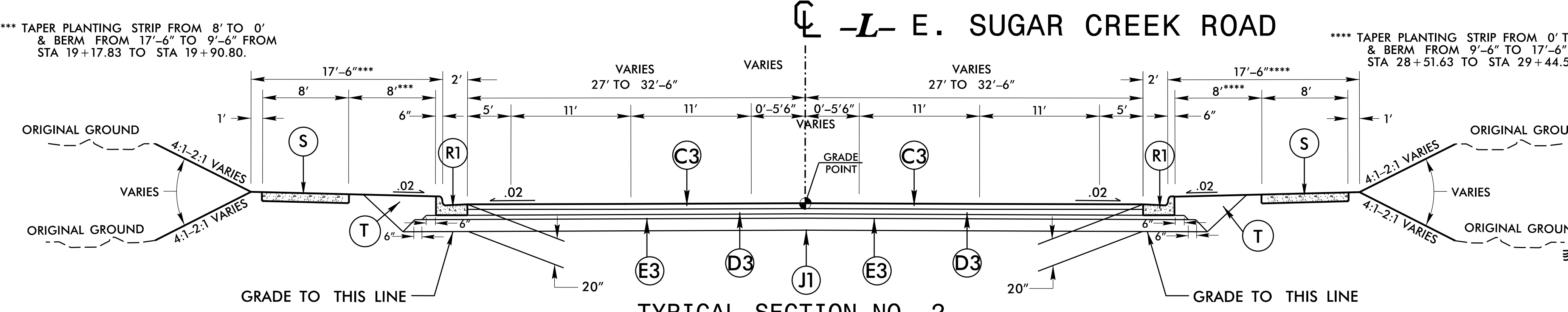
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RW SHEET NO.	
ROADWAY DESIGN ENGINEER 3/5/2015	PAVEMENT DESIGN ENGINEER 3/5/2015

**NOT TO SCALE**  
 PAVEMENT EDGE SLOPES 1:1 UNLESS SHOWN OTHERWISE

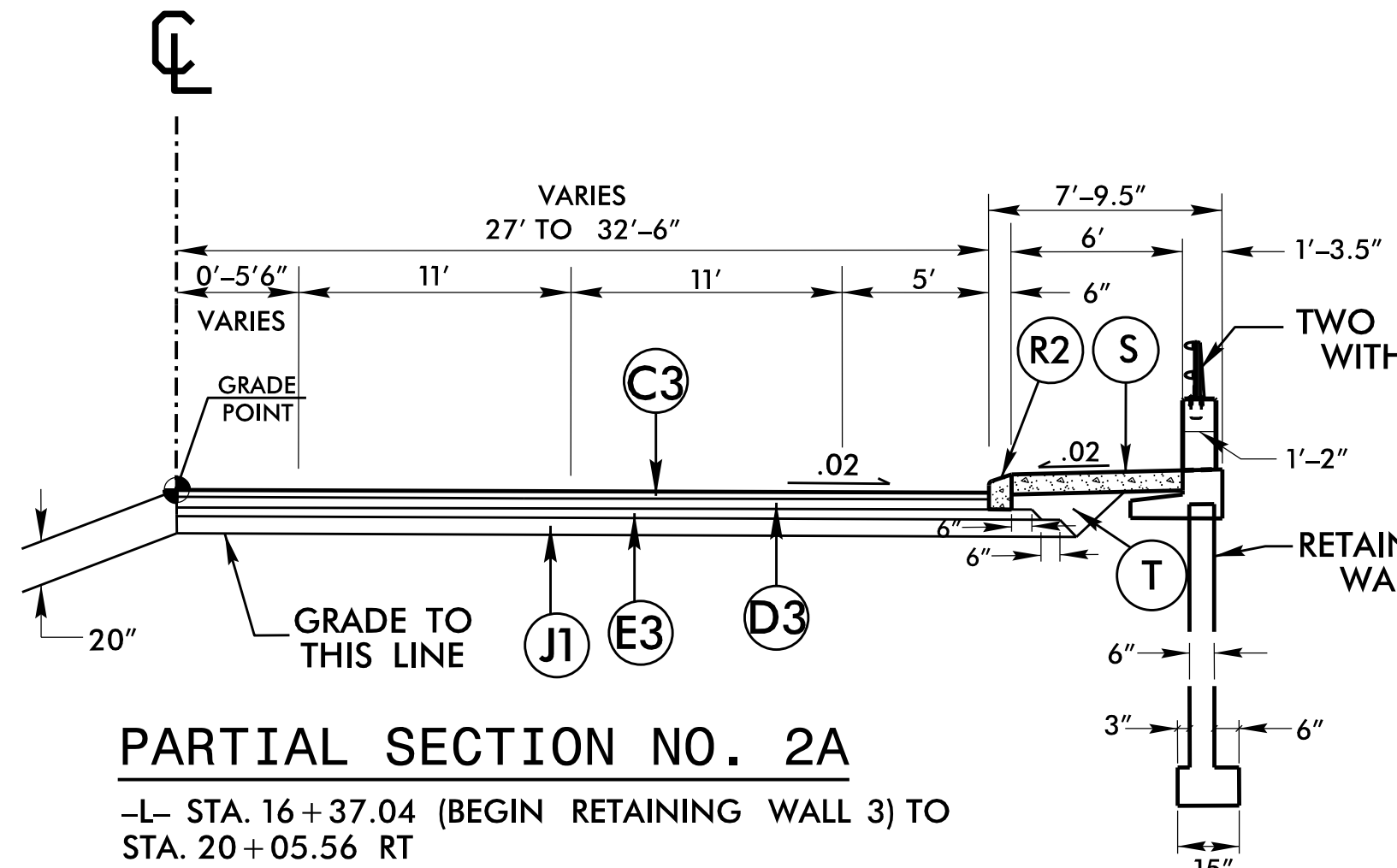
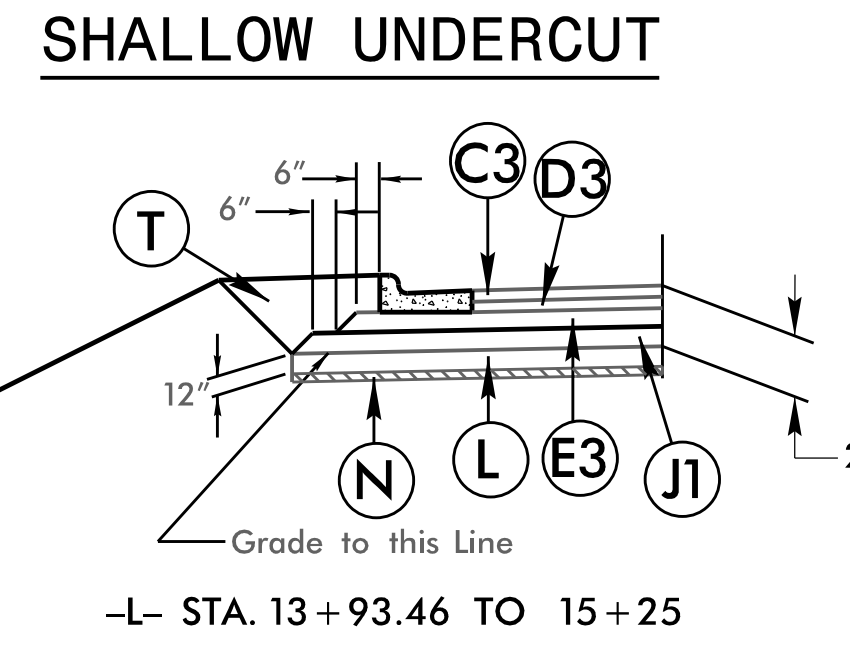
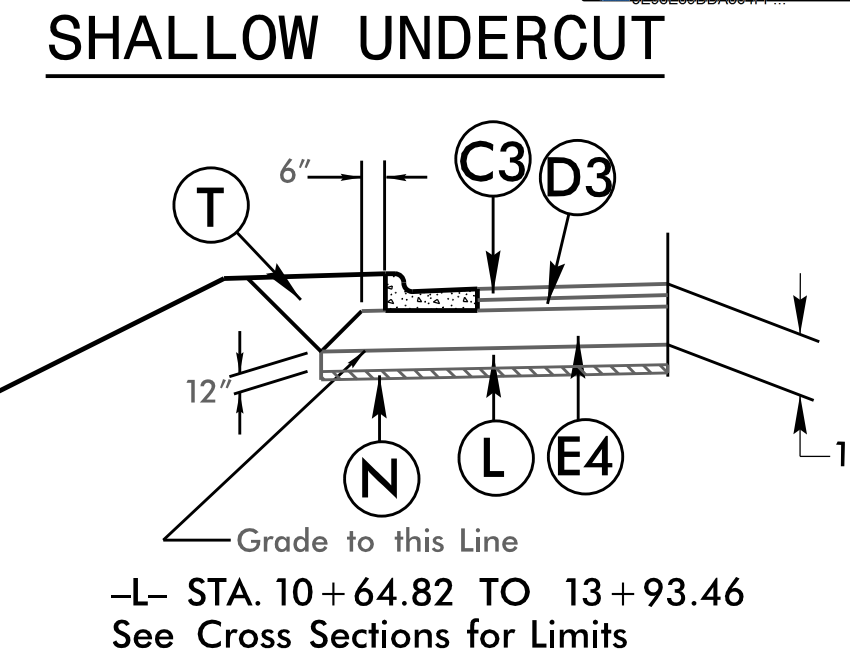


\* SAW CUT EXISTING PAVEMENT  
 \*\* PLANTING STRIP 6' AND BERM 15'-6" FROM STA 10+64.82 TO STA 13+81.54. TAPER BACK TO NORMAL TYPICAL SECTION WIDTHS FROM STA 13+81.54 TO STA 13+92.78.  
 \*\*\* TAPER PLANTING STRIP FROM 8' TO 0' & BERM FROM 17'-6" TO 9'-6" FROM STA 19+17.83 TO STA 19+90.80.

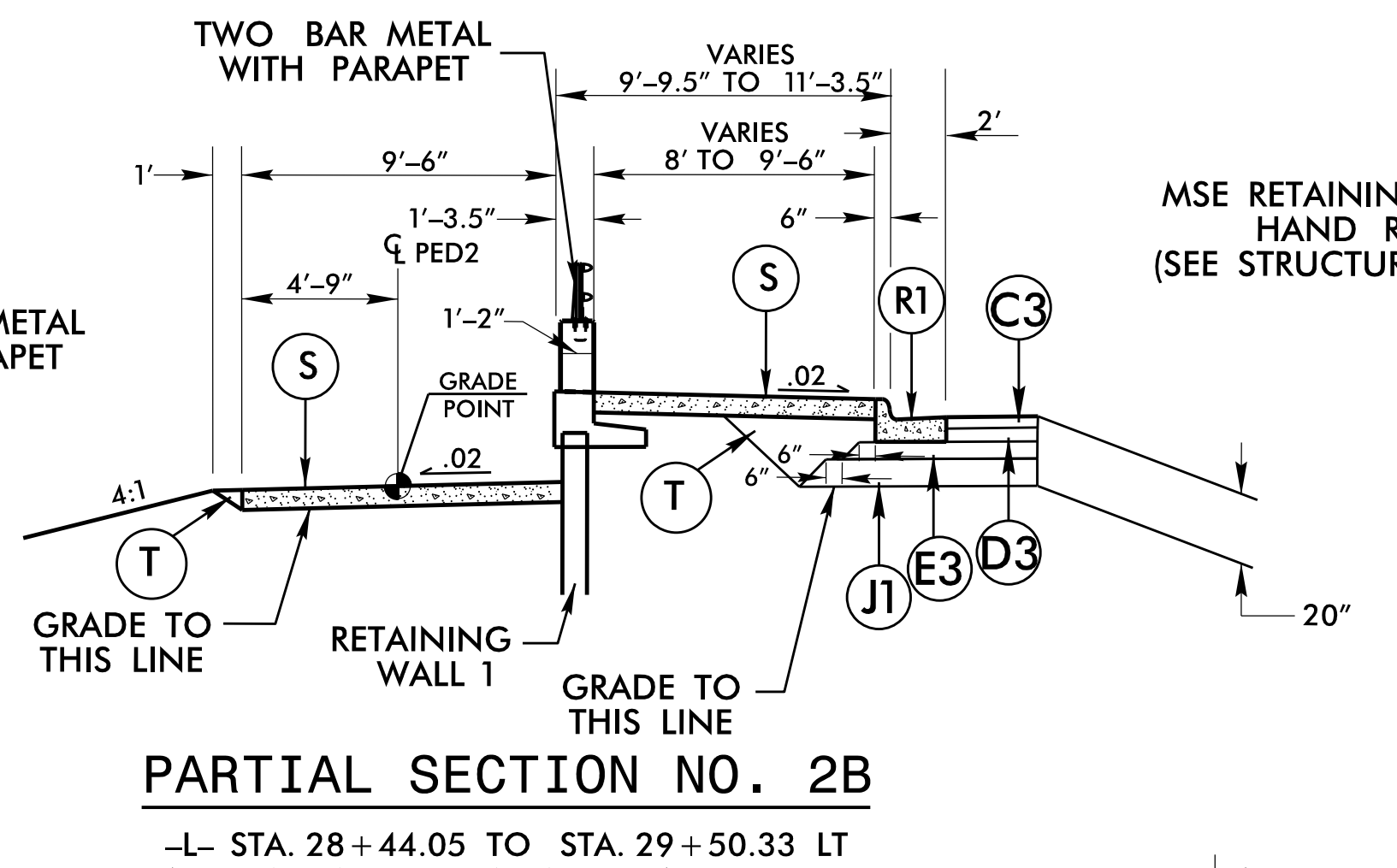
**TYPICAL SECTION NO. 1**  
 -L- STA. 10+64.82 TO 13+93.46  
 -L- STA. 33+50.18 TO 39+00.43



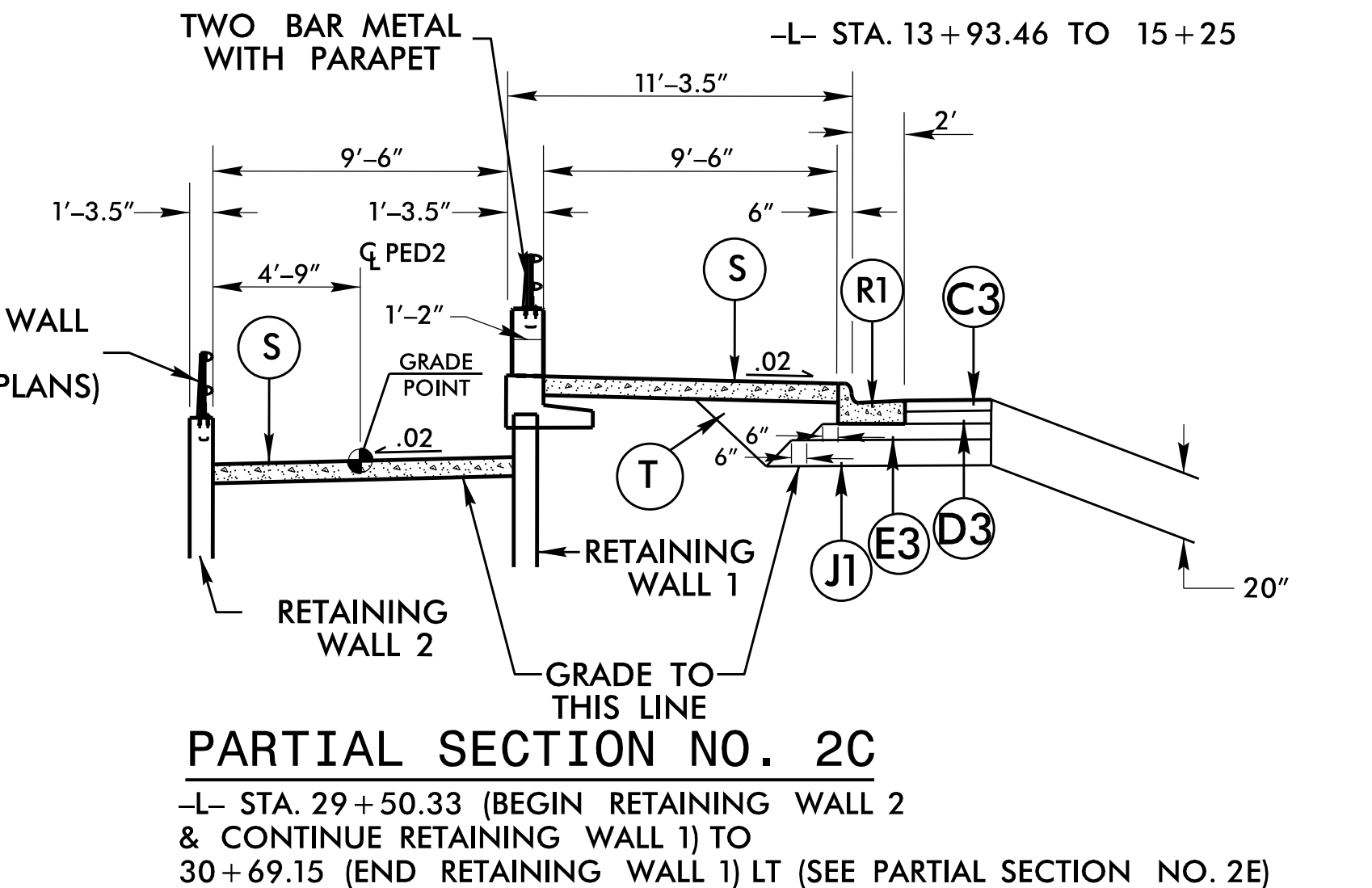
**TYPICAL SECTION NO. 2**  
 -L- STA. 13+93.46 TO 20+05.51 (BEGIN BRIDGE)  
 -L- STA. 28+51.63 (END BRIDGE) TO 33+50.18



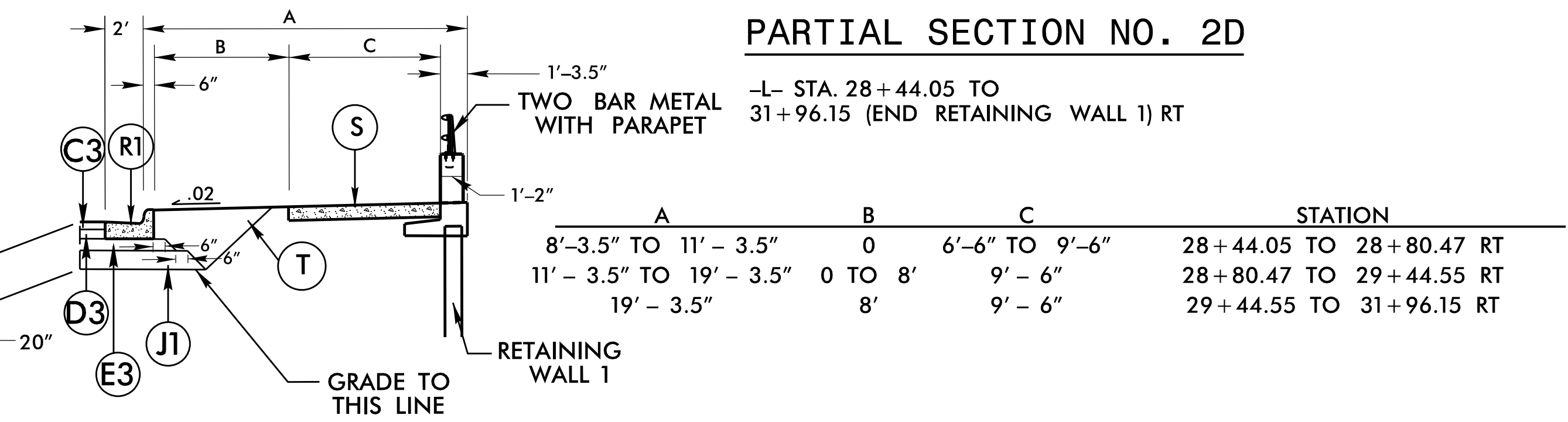
**PARTIAL SECTION NO. 2A**  
 -L- STA. 16+37.04 (BEGIN RETAINING WALL 3) TO STA. 20+05.56 RT



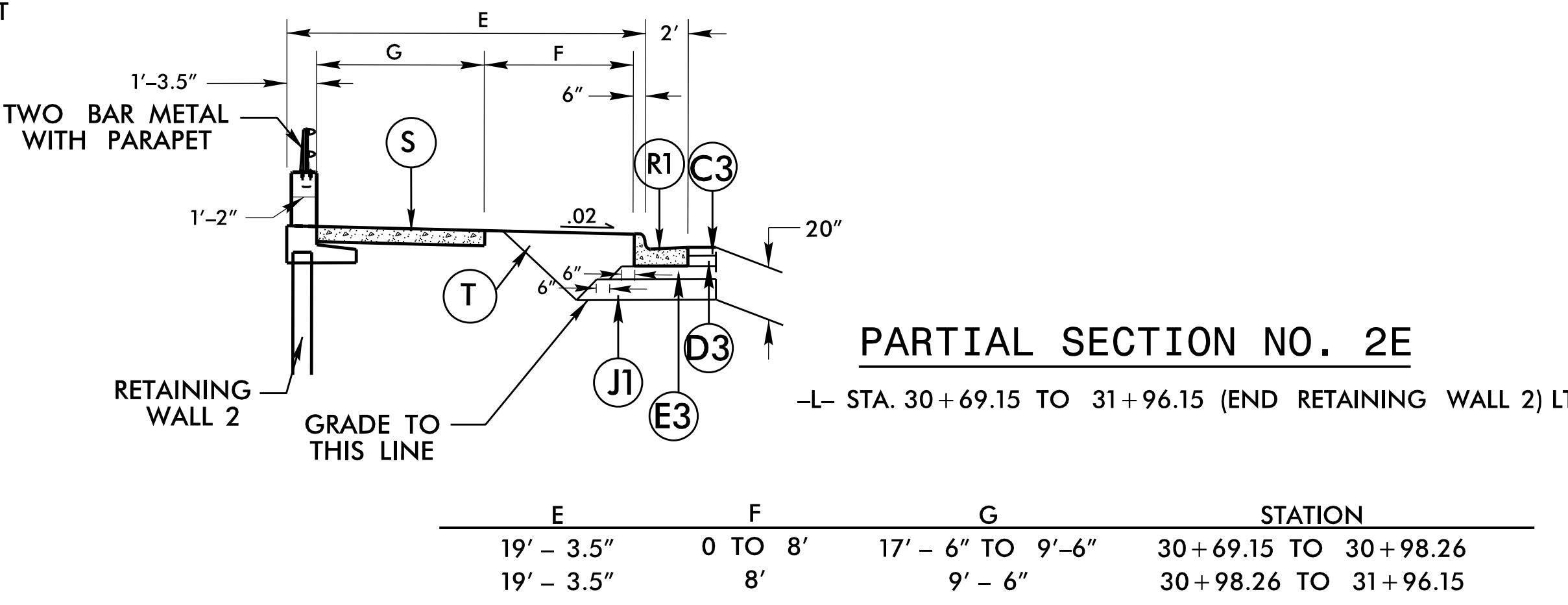
**PARTIAL SECTION NO. 2B**  
 -L- STA. 28+44.05 TO STA. 29+50.33 LT (SEE PARTIAL SECTION NO. 2C)



**PARTIAL SECTION NO. 2C**  
 -L- STA. 29+50.33 (BEGIN RETAINING WALL 2 & CONTINUE RETAINING WALL 1) TO 30+69.15 (END RETAINING WALL 1) LT (SEE PARTIAL SECTION NO. 2E)



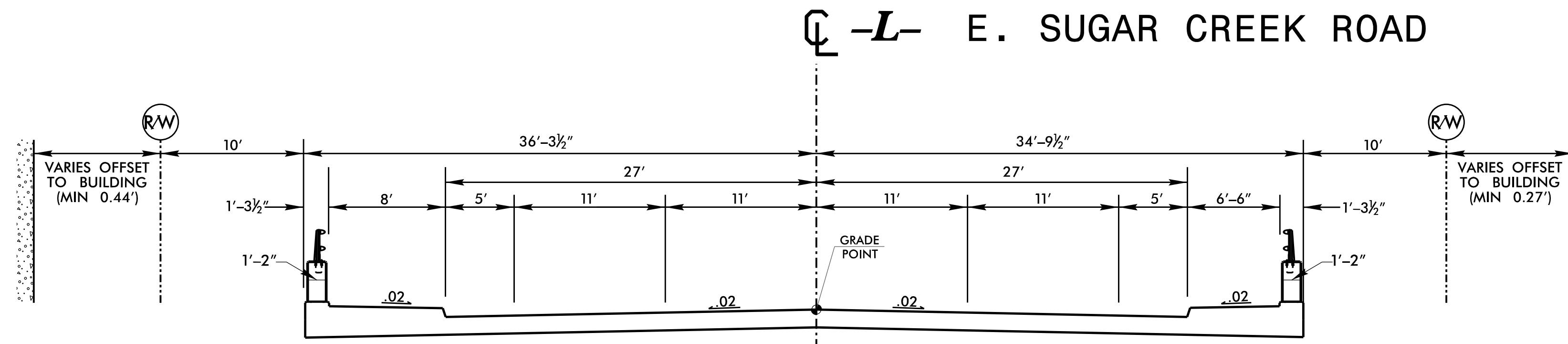
**PARTIAL SECTION NO. 2D**  
 -L- STA. 28+44.05 TO 31+96.15 (END RETAINING WALL 1) RT



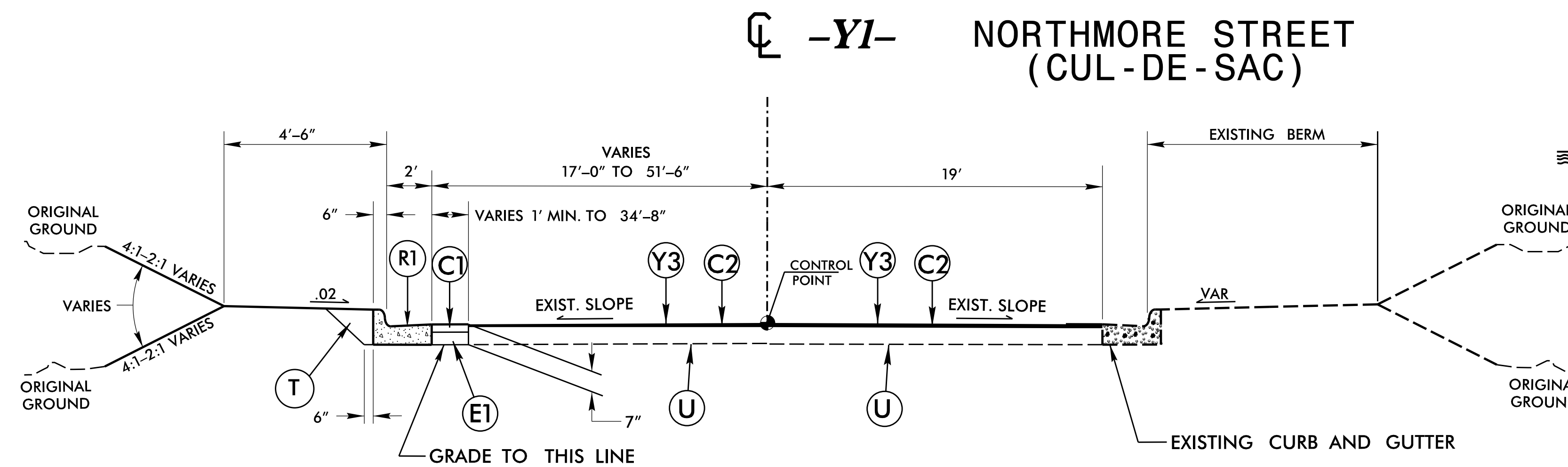
**PARTIAL SECTION NO. 2E**  
 -L- STA. 30+69.15 TO 31+96.15 (END RETAINING WALL 2) LT

C1	3" SF9.5A
C2	1 1/2" SF9.5A
C3	3" S9.5C
C4	VAR. S9.5C
C5	3" S9.5B
C6	VAR. S9.5B
C7	1 1/2" S9.5B
C8	1 1/2" S9.5C
D1	4" I19.0B
D2	VAR. I19.0B
D3	4" I19.0C
D4	VAR. I19.0C
E1	4" B25.0B
E2	VAR. B25.0B
E3	3" B25.0C
E4	7.5" B25.0C
E5	VAR. B25.0C
E6	4" B25.0C
J1	10" ABC
L	CL IV SUBGR. STAB.
N	GEOTEXTILE
R1	2'-6" C & G
R2	13"x6" CURB
R3	5" MONO-ISLAND
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	WEDGING
Y1	0" TO 1 1/2" MILLING
Y2	INCIDENTAL MILLING
Y3	1 1/2" MILLING

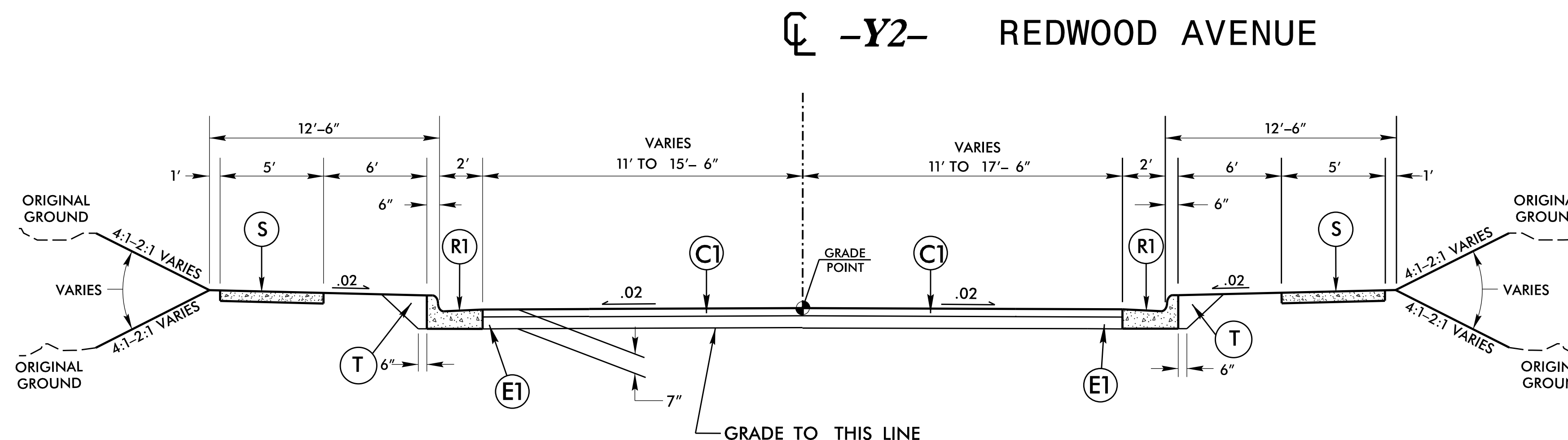
SYSTEMS DESIGN CONSULTANTS, INC.



**TYPICAL SECTION NO. 3**  
OVERPASS BRIDGE (MAXIMUM SECTION)  
-L- STA. 20+05.51 TO 28+51.63

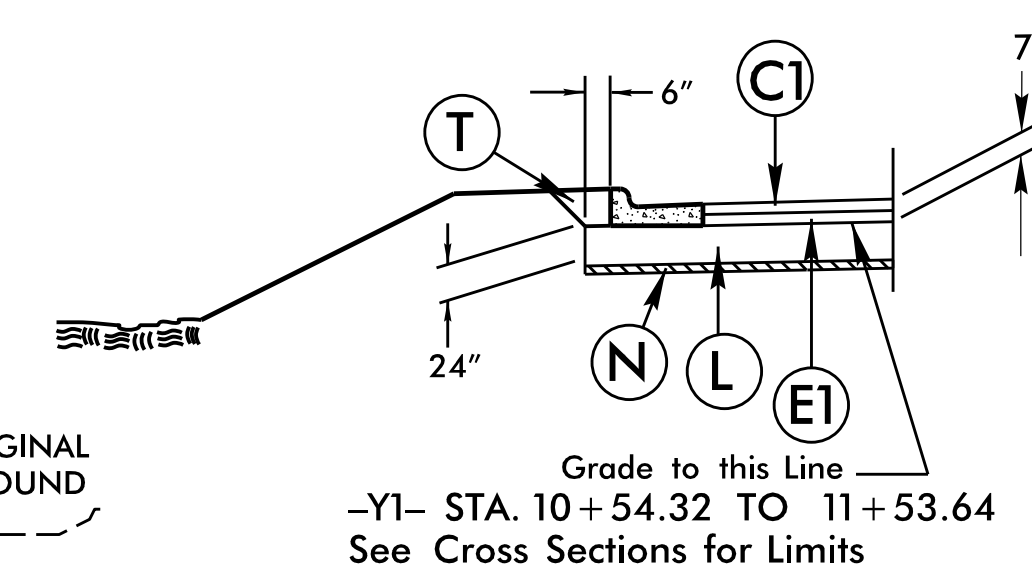


**TYPICAL SECTION NO. 4**  
-Y1- STA. 10+54.32 TO 11+53.64



**TYPICAL SECTION NO. 5**  
-Y2- STA. 10+32.50 TO 11+81.18

**SHALLOW UNDERCUT**



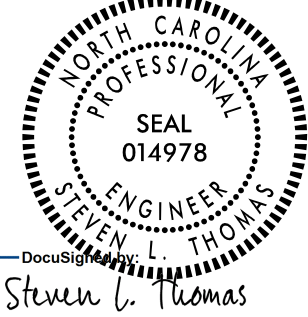
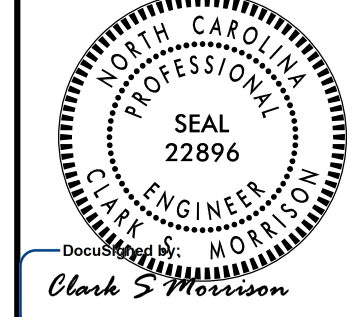
**PAVEMENT SCHEDULE**

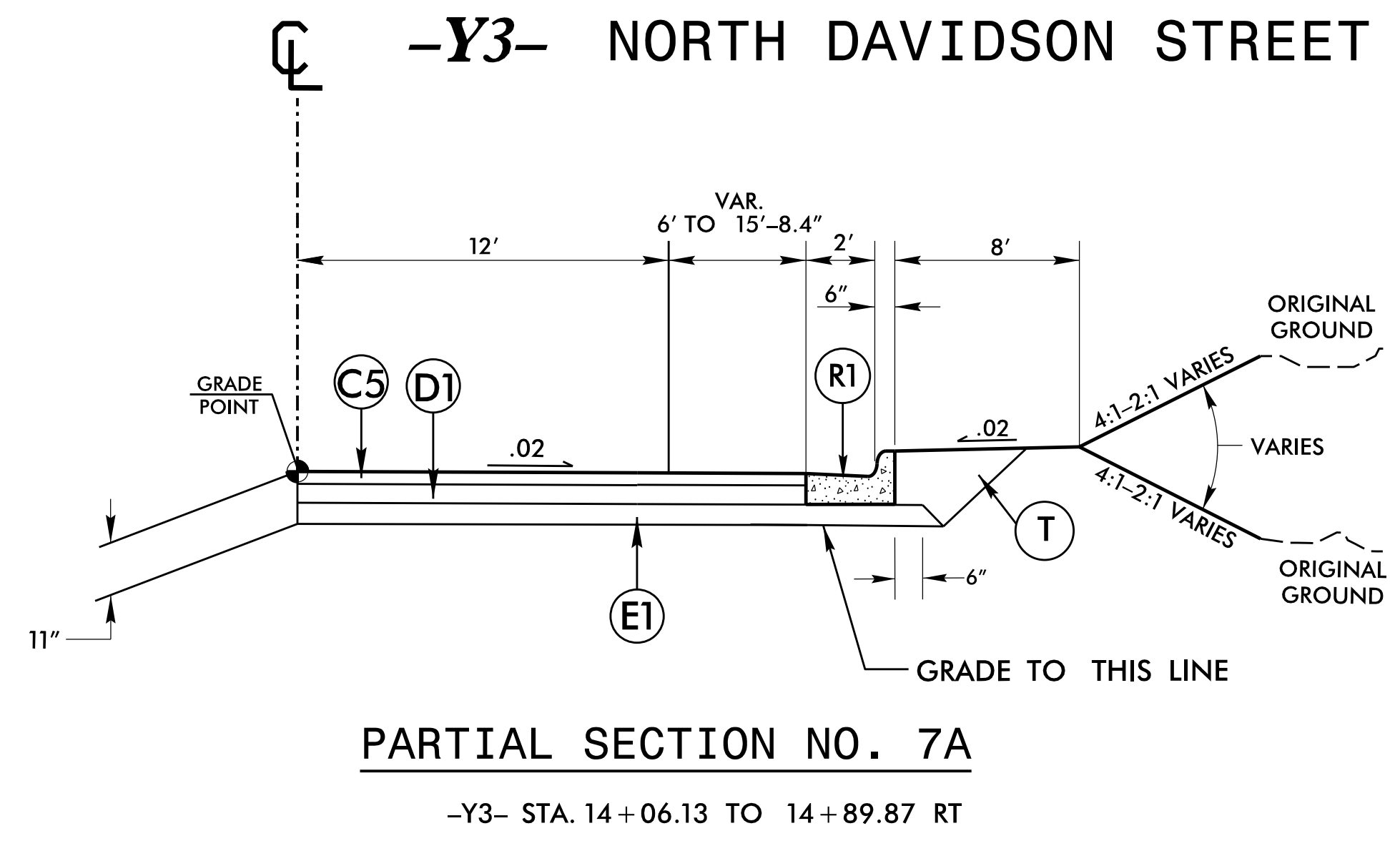
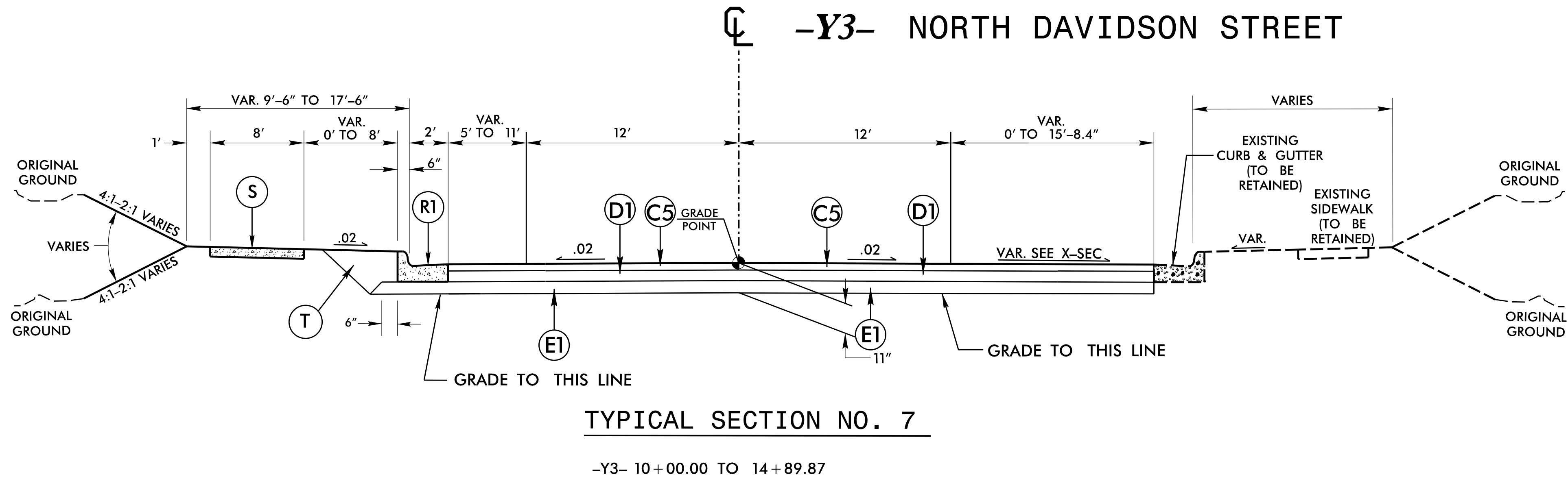
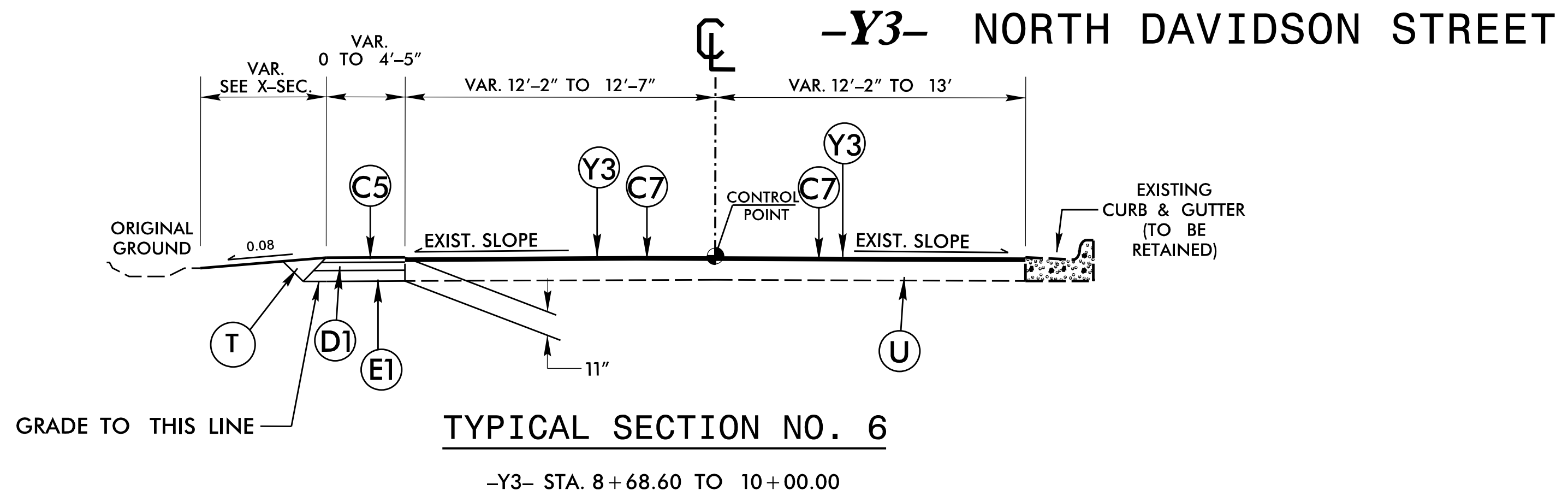
C1	3" SF9.5A
C2	1 1/2" SF9.5A
C3	3" S9.5C
C4	VAR. S9.5C
C5	3" S9.5B
C6	VAR. S9.5B
C7	1 1/2" S9.5B
C8	1 1/2" S9.5C
D1	4" I19.0B
D2	VAR. I19.0B
D3	4" I19.0C
D4	VAR. I19.0C
E1	4" B25.0B
E2	VAR. B25.0B
E3	3" B25.0C
E4	7.5" B25.0C
E5	VAR. B25.0C
E6	4" B25.0C
J1	10" ABC
L	CL IV SUBGR. STAB.
N	GEOTEXTILE
R1	2'-6" C & G
R2	13"x6" CURB
R3	5" MONO. ISLAND
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	WEDGING
Y1	0" TO 1 1/2" MILLING
Y2	INCIDENTAL MILLING
Y3	1 1/2" MILLING

PAVEMENT EDGE SLOPES 1:1 UNLESS SHOWN OTHERWISE

NOT TO SCALE

SYSTEMS DESIGN CONSULTANTS  
 10000 W. BERRY AVE.  
 SUITE 100  
 FORT WORTH, TX 76134  
 TEL: 817-335-1100  
 FAX: 817-335-1101  
 WWW.SDCON.COM

PROJECT REFERENCE NO. <b>U-5008</b>	SHEET NO. <b>2A-4</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 3/5/2015	PAVEMENT DESIGN ENGINEER 3/5/2015
 Steven L. Thomas	 Clark S. Morrison



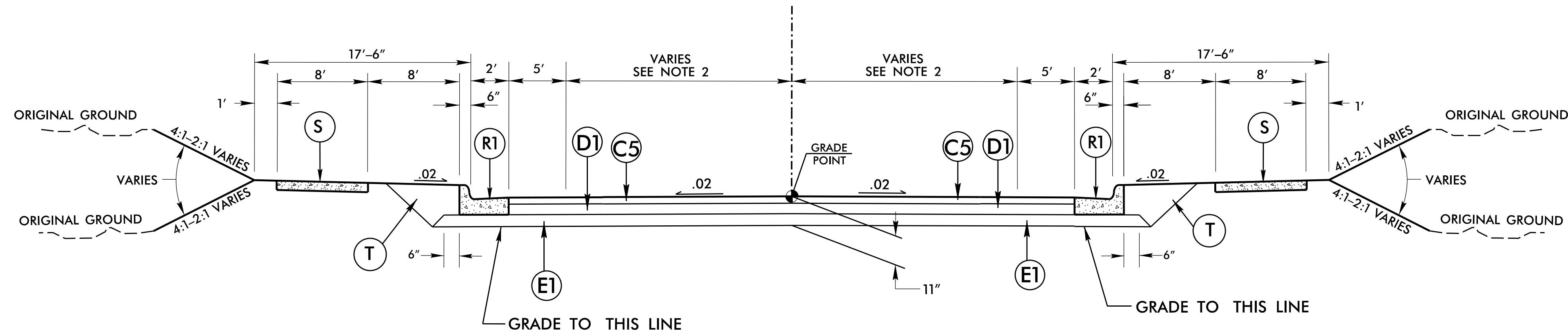
PAVEMENT SCHEDULE	
C1	3" SF9.5A
C2	1 1/2" SF9.5A
C3	3" S9.5C
C4	VAR. S9.5C
C5	3" S9.5B
C6	VAR. S9.5B
C7	1 1/2" S9.5B
C8	1 1/2" S9.5C
D1	4" I19.0B
D2	VAR. I19.0B
D3	4" I19.0C
D4	VAR. I19.0C
E1	4" B25.0B
E2	VAR. B25.0B
E3	3" B25.0C
E4	7.5" B25.0C
E5	VAR. B25.0C
E6	4" B25.0C
J1	10" ABC
L	CL IV SUBGR. STAB.
N	GEOTEXTILE
R1	2'-6" C & G
R2	13"x6" CURB
R3	5" MONO-ISLAND
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	WEDGING
Y1	0" TO 1 1/2" MILLING
Y2	INCIDENTAL MILLING
Y3	1 1/2" MILLING

PAVEMENT EDGE SLOPES 1:1 UNLESS SHOWN OTHERWISE  
**NOT TO SCALE**

DATE PLOTTED: 04/14/2015 10:51:00 AM

PROJECT REFERENCE NO. <b>U-5008</b>	SHEET NO. <b>2A-5</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 3/5/2015 <i>Steven L. Thomas</i>	PAVEMENT DESIGN ENGINEER 3/5/2015 <i>Clark S. Morrison</i>

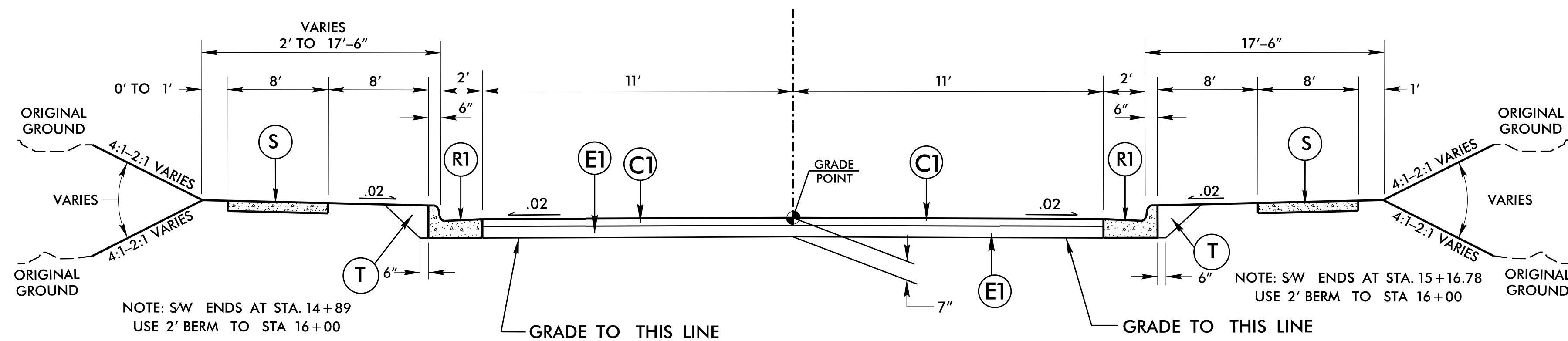
**-Y3 REV- NORTH DAVIDSON STREET**



**TYPICAL SECTION NO. 8**  
-Y3 REV- STA. 12+08.12 TO 19+20.38

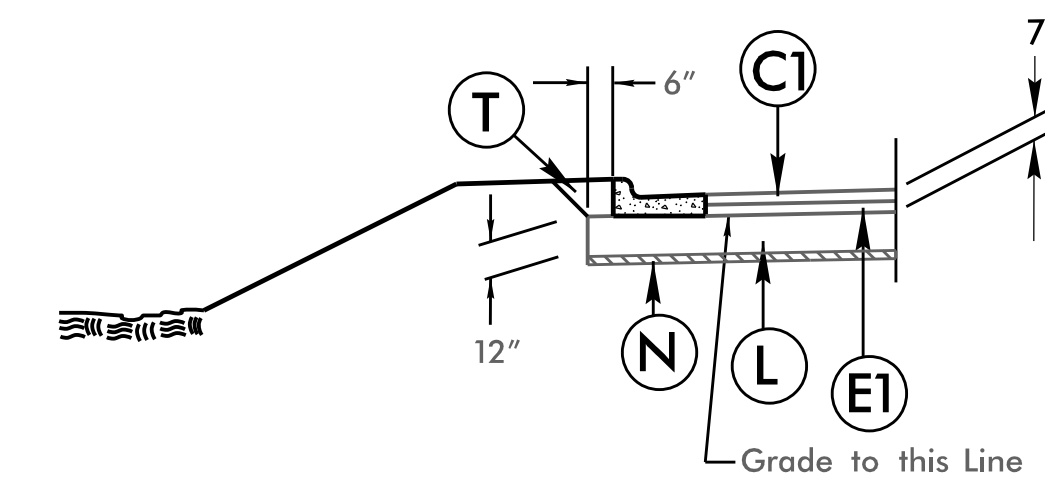
**NOTE 2:**  
- VARIES FROM 12'-2" AT STATION 13+58.91 TO 11'-0" AT STATION 15+64.32 RT AND LT.  
- VARIES FROM 11'-0" AT STATION 17+20.38 TO 16'-6" AT STATION 18+20.38 RT AND LT.

**-Y4 - BEARWOOD AVENUE**

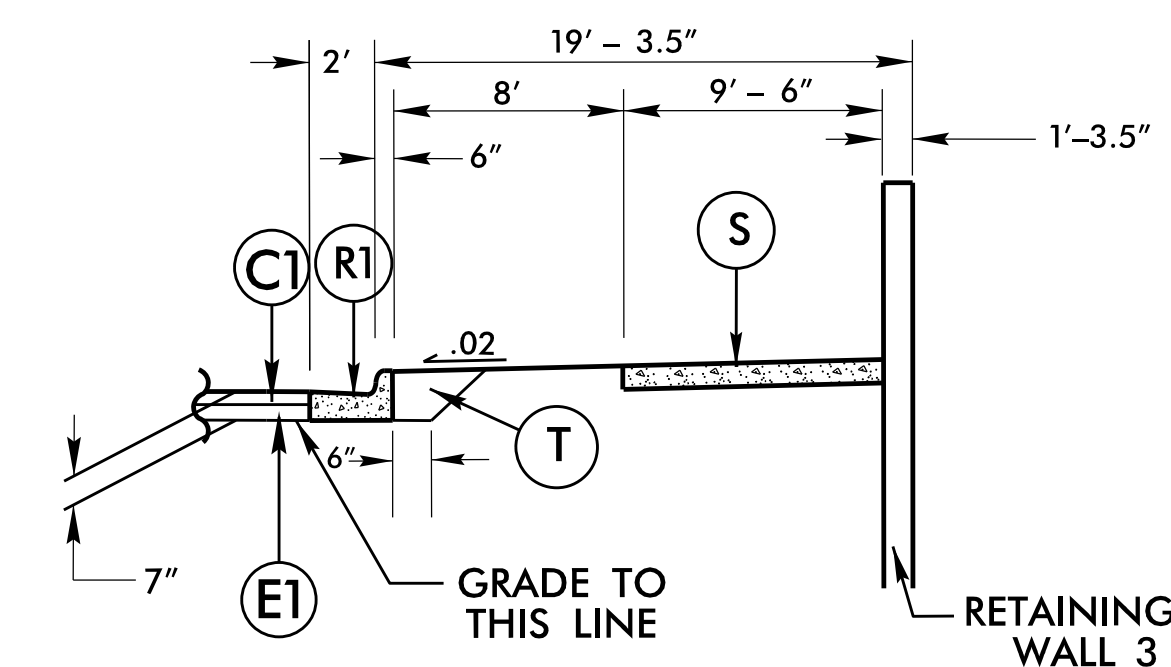


**TYPICAL SECTION NO. 9**  
-Y4- STA. 10+17.32 TO 16+00.00

**SHALLOW UNDERCUT**



-Y4 STA. 10+18 TO 16+00  
See Cross Sections for Limits

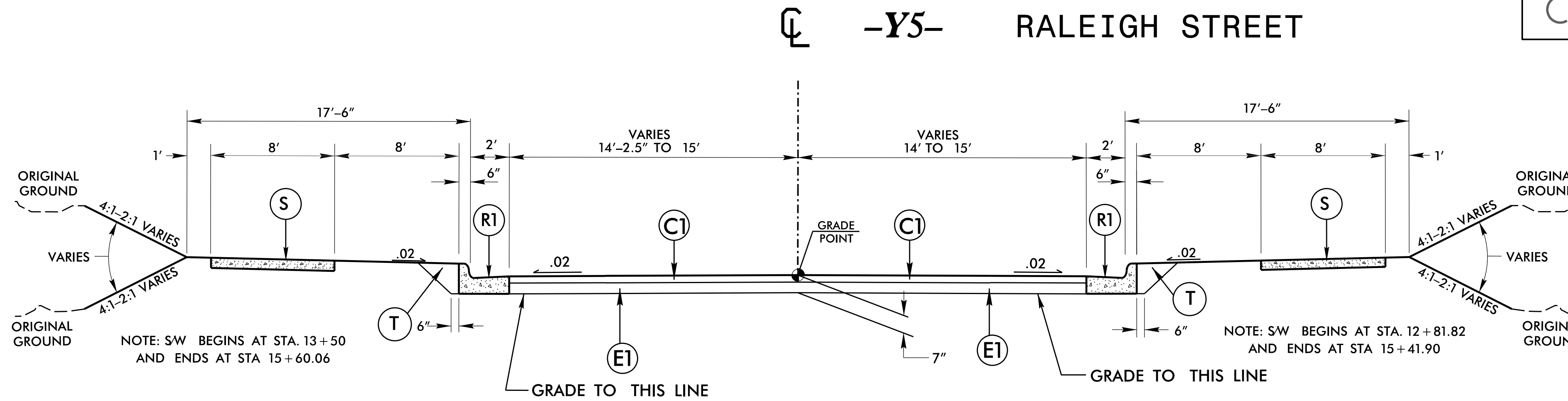


**PARTIAL SECTION NO. 9A**  
-Y4- STA. 13+72.94 TO STA. 14+95.40 RT

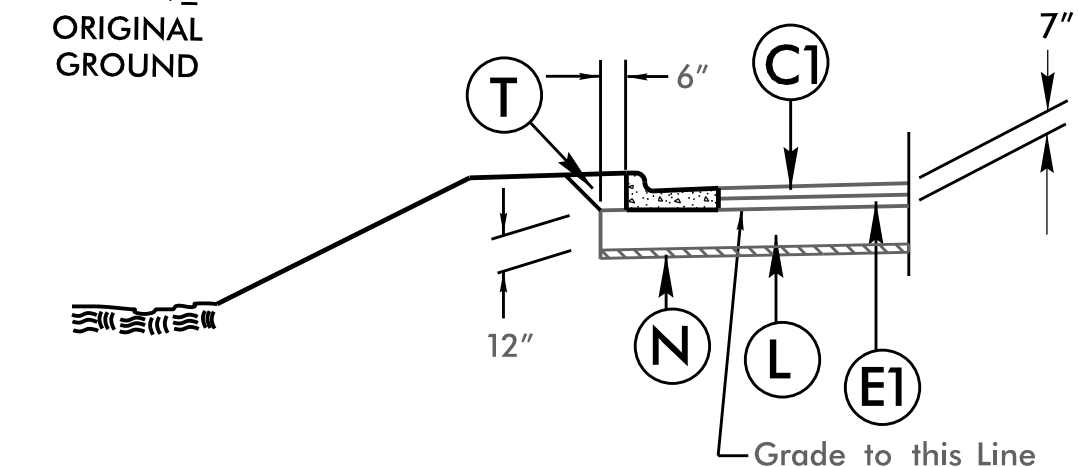
PAVEMENT SCHEDULE	
C1	3" SF9.5A
C2	1 1/2" SF9.5A
C3	3" S9.5C
C4	VAR. S9.5C
C5	3" S9.5B
C6	VAR. S9.5B
C7	1 1/2" S9.5B
C8	1 1/2" S9.5C
D1	4" I19.0B
D2	VAR. I19.0B
D3	4" I19.0C
D4	VAR. I19.0C
E1	4" B25.0B
E2	VAR. B25.0B
E3	3" B25.0C
E4	7.5" B25.0C
E5	VAR. B25.0C
E6	4" B25.0C
J1	10" ABC
L	CL IV SUBGR. STAB.
N	GEOTEXTILE
R1	2'-6" C & G
R2	13"x6" CURB
R3	5" MONO. ISLAND
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	WEDGING
Y1	0" TO 1 1/2" MILLING
Y2	INCIDENTAL MILLING
Y3	1 1/2" MILLING

PAVEMENT EDGE SLOPES 1:1 UNLESS SHOWN OTHERWISE

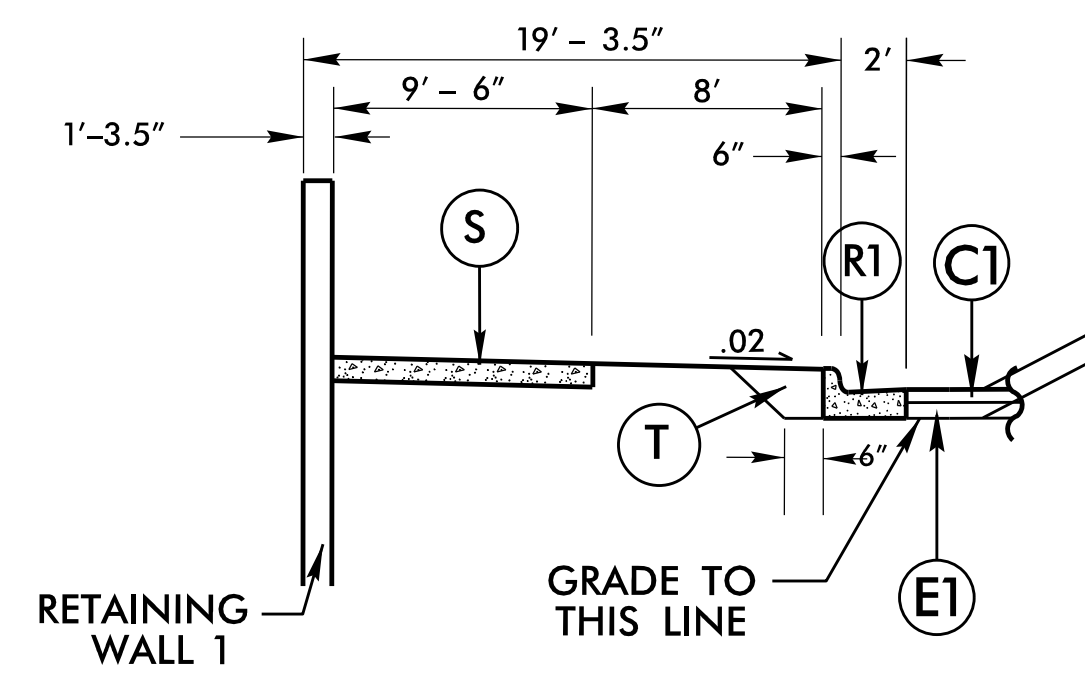
NOT TO SCALE



**SHALLOW UNDERCUT**

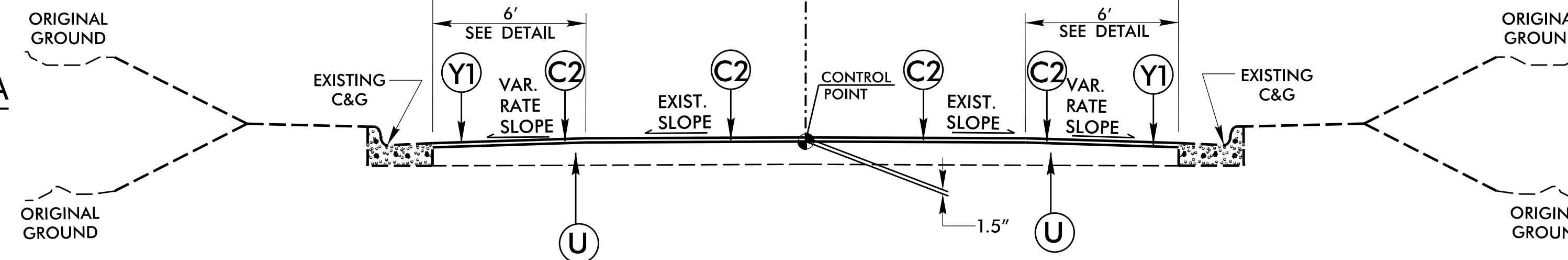


-Y5- STA. 12+56.01 TO 14+70  
See Cross Sections for Limits



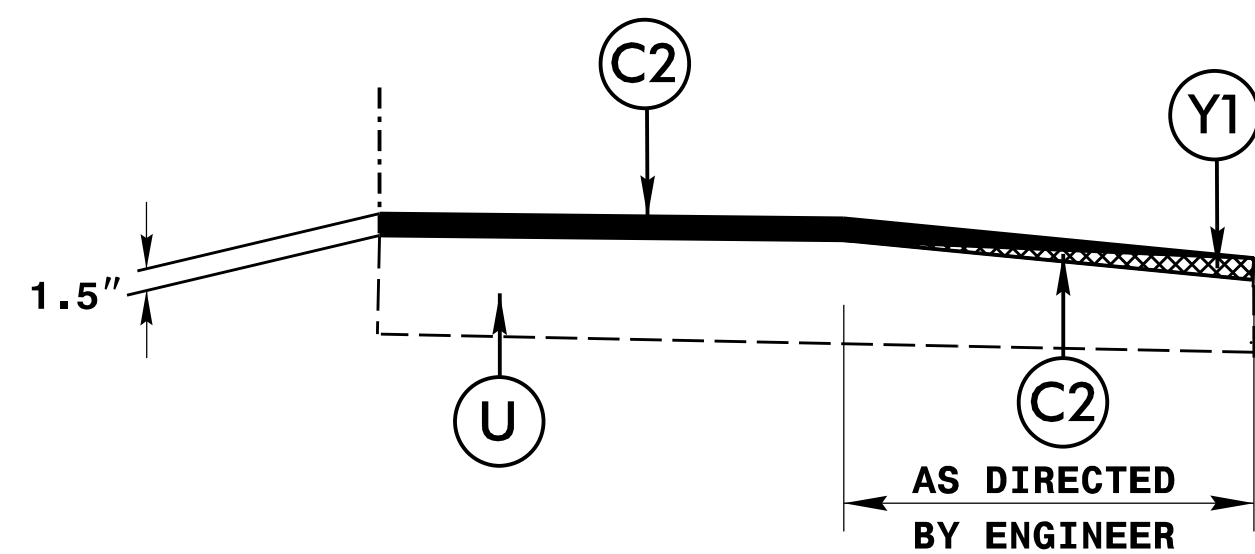
**PARTIAL SECTION NO. 10A**

-Y5- STA. 14+83.29 TO STA. 15+40.16 LT



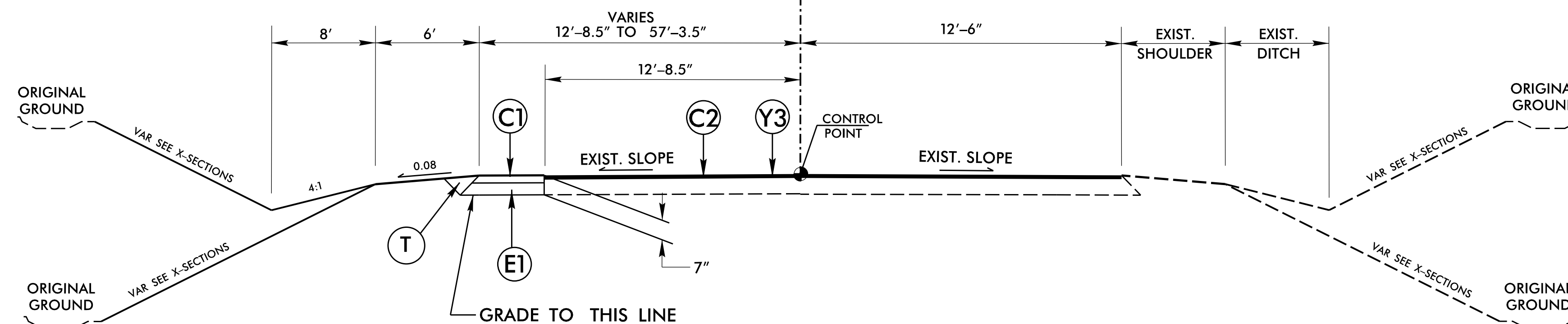
**TYPICAL SECTION NO. 11**

-Y5- STA. 15+99.86 TO 19+56.79



**-Y5- MILLING DETAIL**  
-Y5- STA. 15+99.86 TO 19+56.79

**-Y6- E CRAIGHEAD ROAD (CUL-DE-SAC)**



**TYPICAL SECTION NO. 12**

-Y6- STA. 10+63.13 TO 11+74.00

**PAVEMENT SCHEDULE**

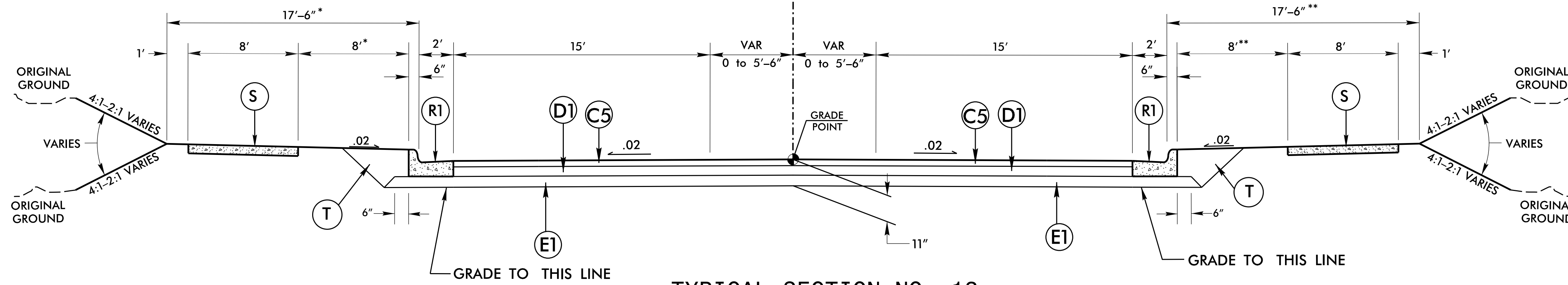
C1	3" SF9.5A
C2	1 1/2" SF9.5A
C3	3" S9.5C
C4	VAR. S9.5C
C5	3" S9.5B
C6	VAR. S9.5B
C7	1 1/2" S9.5B
C8	1 1/2" S9.5C
D1	4" I19.0B
D2	VAR. I19.0B
D3	4" I19.0C
D4	VAR. I19.0C
E1	4" B25.0B
E2	VAR. B25.0B
E3	3" B25.0C
E4	7.5" B25.0C
E5	VAR. B25.0C
E6	4" B25.0C
J1	10" ABC
L	CL IV SUBGR. STAB.
N	GEOTEXTILE
R1	2'-6" C & G
R2	13"x6" CURB
R3	5" MONO-ISLAND
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	WEDGING
Y1	0" TO 1 1/2" MILLING
Y2	INCIDENTAL MILLING
Y3	1 1/2" MILLING

PAVEMENT EDGE SLOPES 1:1 UNLESS SHOWN OTHERWISE

NOT TO SCALE

SYSTEMS DESIGN CONSULTANTS  
 10000 W. HARRIS BLVD.  
 SUITE 100  
 FORT WORTH, TX 76132  
 TEL: 817-335-1100  
 FAX: 817-335-1101  
 WWW.SDCON.COM

**-Y7- GREENSBORO STREET CONNECTOR**



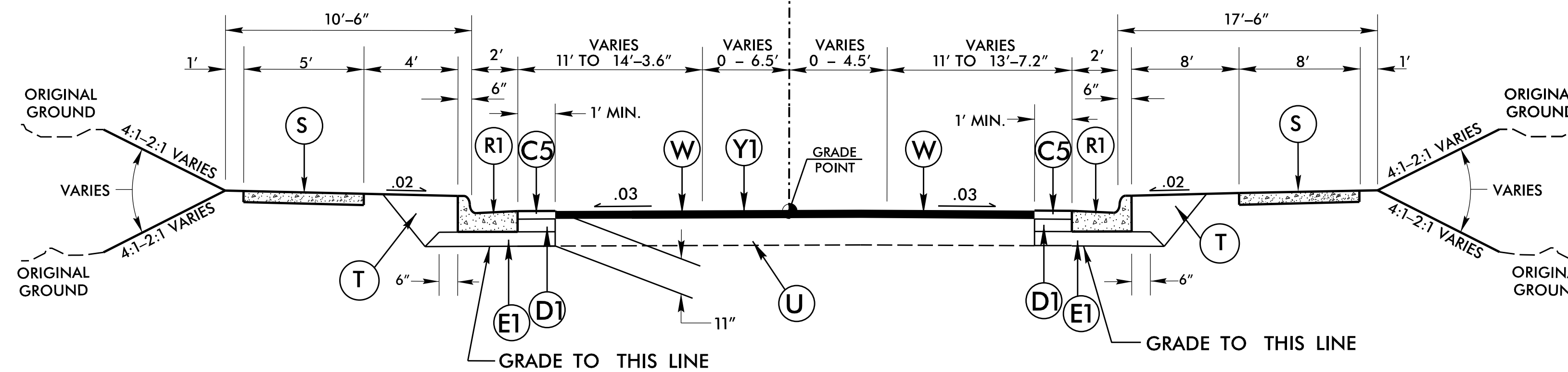
\* TAPER PLANTING STRIP TO 6' & BERM TO 15'-6" FROM 13+06.74 TO 13+39.74. TAPER BACK TO NORMAL TYPICAL SECTION WIDTHS FROM 13+79.74 TO 14+09.74.

**TYPICAL SECTION NO. 13**

-Y7- STA. 10+33.97 TO 19+78.09

\*\* TAPER PLANTING STRIP TO 6' & BERM TO 15'-6" FROM 15+78.37 TO 16+08.37. TAPER BACK TO NORMAL TYPICAL SECTION WIDTHS FROM 16+48.37 TO 16+78.37.

**-Y8- GREENSBORO STREET**

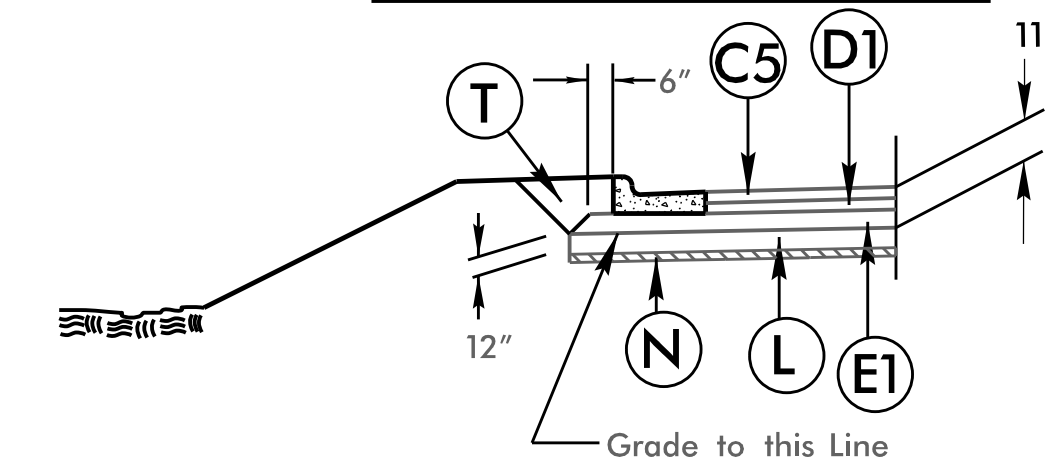


\* SAWCUT EXISTING PAVEMENT

**TYPICAL SECTION NO. 14**

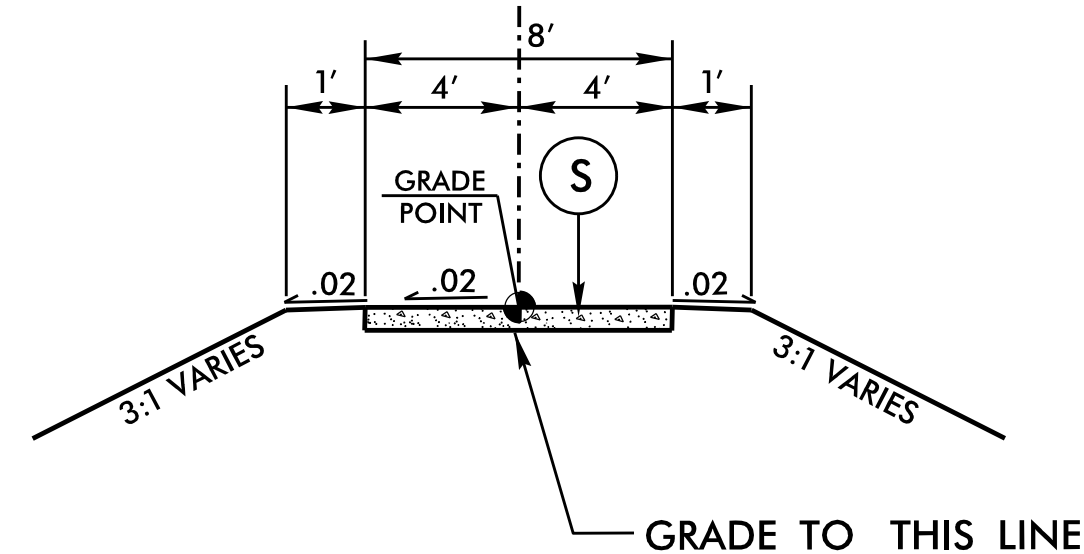
-Y8- STA. 11+19.18 TO 14+49.18

**SHALLOW UNDERCUT**



-Y7- STA. 10+34 TO 13+25  
See Cross Sections for Limits

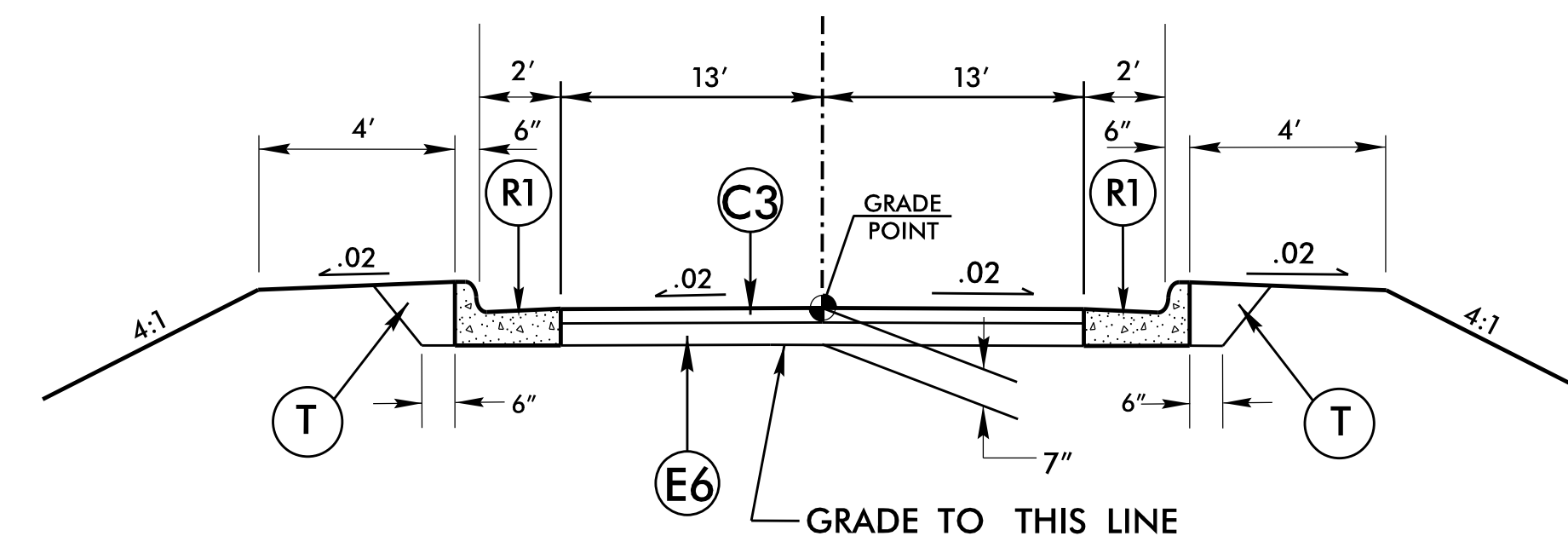
**-PED- PEDESTRIAN WALKWAY**



**TYPICAL SECTION NO. 15**

-PED- STA. 10+00.00 TO 13+39.88

**-DR2- DRIVEWAY**



**TYPICAL SECTION NO. 16**

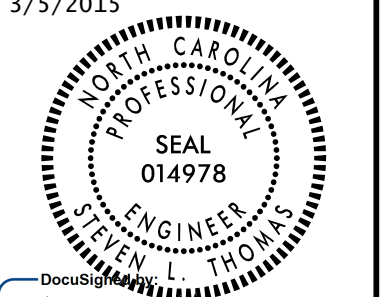
-DR2- STA. 10+00 TO 11+04.07

PAVEMENT EDGE SLOPES 1:1 UNLESS SHOWN OTHERWISE

NOT TO SCALE

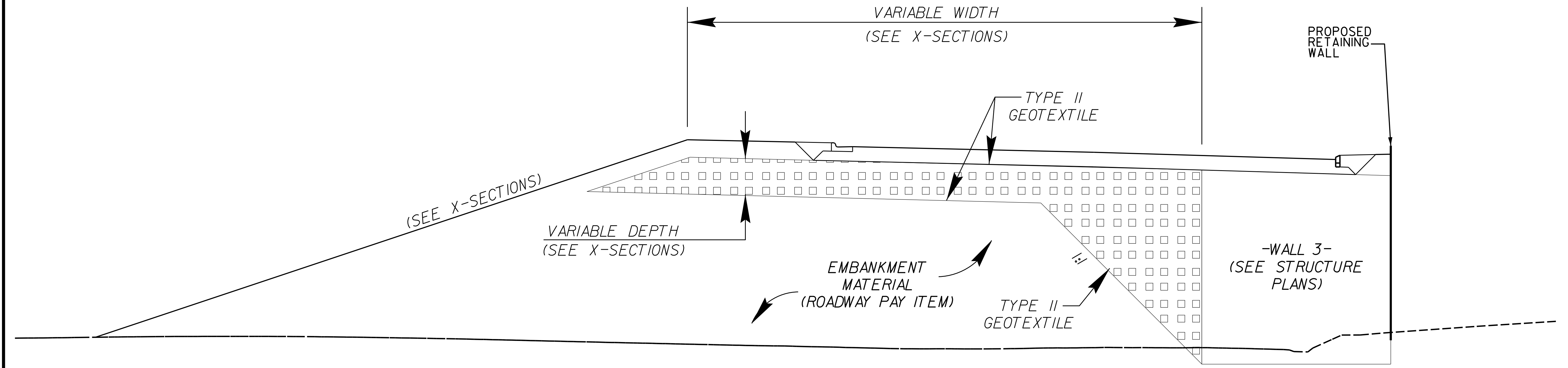
PAVEMENT SCHEDULE	
C1	3" SF9.5A
C2	1 1/2" SF9.5A
C3	3" S9.5C
C4	VAR. S9.5C
C5	3" S9.5B
C6	VAR. S9.5B
C7	1 1/2" S9.5B
C8	1 1/2" S9.5C
D1	4" I19.0B
D2	VAR. I19.0B
D3	4" I19.0C
D4	VAR. I19.0C
E1	4" B25.0B
E2	VAR. B25.0B
E3	3" B25.0C
E4	7.5" B25.0C
E5	VAR. B25.0C
E6	4" B25.0C
J1	10" ABC
L	CL IV SUBGR. STAB.
N	GEOTEXTILE
R1	2'-6" C & G
R2	13"x6" CURB
R3	5" MONO. ISLAND
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	WEDGING
Y1	0" TO 1 1/2" MILLING
Y2	INCIDENTAL MILLING
Y3	1 1/2" MILLING



PROJECT REFERENCE NO.	SHEET NO.
U-5008	2B-1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
3/5/2015	
	
Steven L. Thomas	

NOTE: FILL WITHIN THE MSE RETAINING WALL NO.3 REINFORCED ZONE AND BACKFILL WITHIN THE EMBANKMENT IMMEDIATELY BEHIND THE MSE WALL SHALL BE PLACED IN LIFTS CONCURRENTLY. LIGHTWEIGHT AGGREGATE WITHIN THE EMBANKMENT SHALL BE CONSTRUCTED FOLLOWING THE GRADES AS SHOWN ON THE CROSS SECTIONS.

 LIGHTWEIGHT AGGREGATE (ROADWAY PAY ITEM)



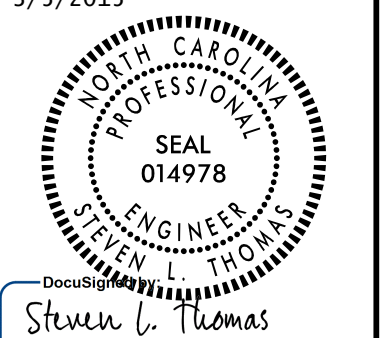
SOUTHERN APPROACH AT BRIDGE FOR WALL 3

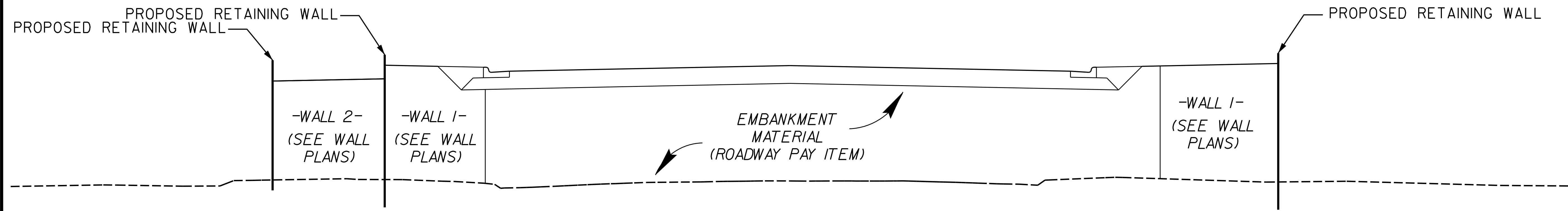
SYSTEMS DESIGN CONSULTANTS  
SERVICES

0400DEL\_P30

**SEPI**  
ENGINEERING &  
CONSTRUCTION

1025 Wade Avenue  
Raleigh, NC 27605  
Tel: 919-789-9977  
Fax: 919-789-9591  
License: C-2197

PROJECT REFERENCE NO.	SHEET NO.
U-5008	2B-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
3/5/2015	
	
Steven L. Thomas	



NORTHERN APPROACH AT BRIDGE FOR WALLS 1 & 2

SYSTEMS  
DESIGN  
CONSTRUCTION

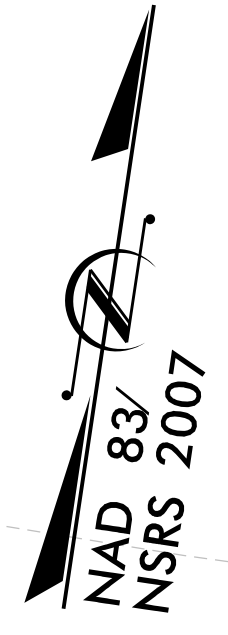
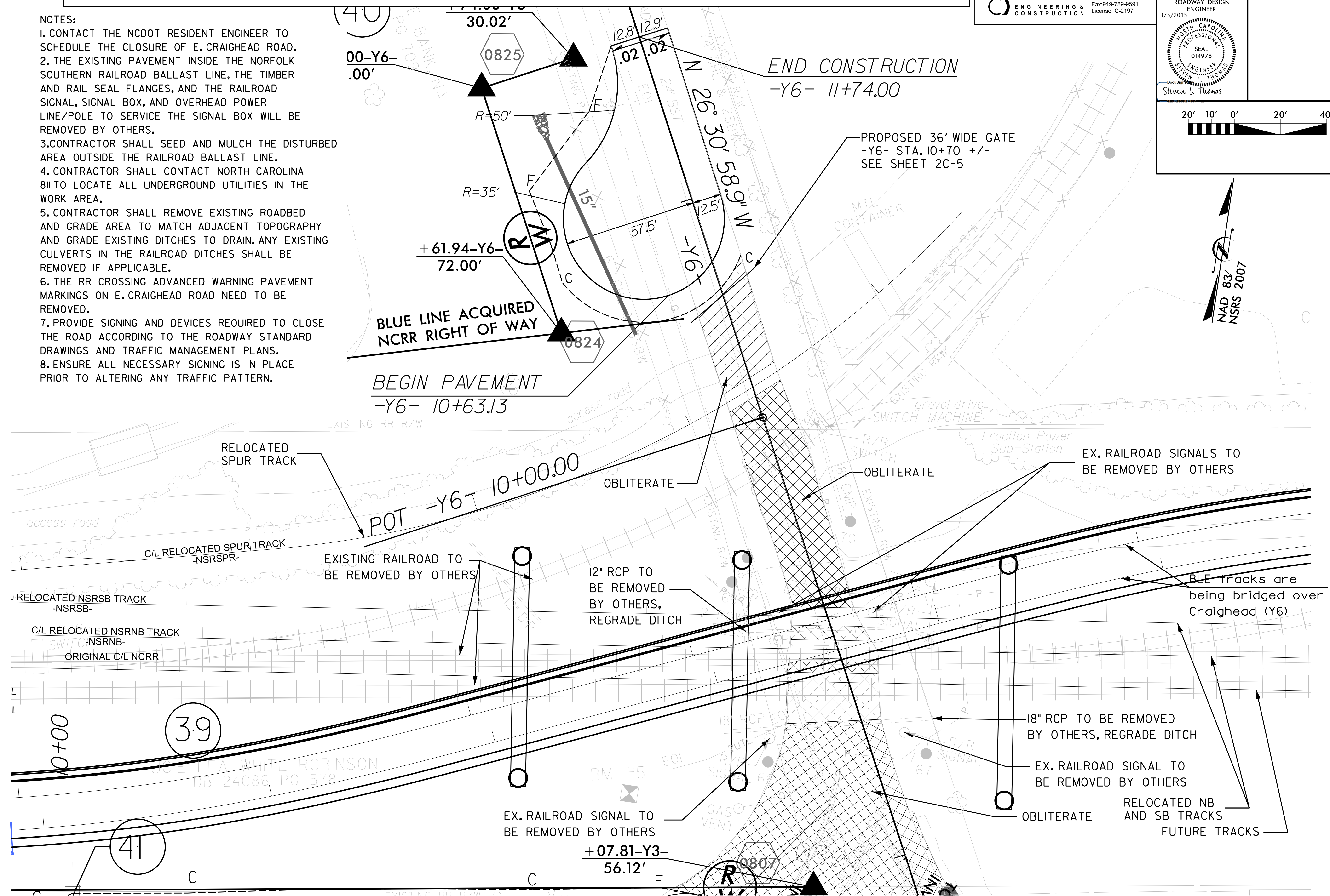
# EAST CRAIGHEAD ROAD CROSSING CLOSURE DETAIL



PROJECT REFERENCE NO. <b>U-5008</b>	SHEET NO. <b>2B-3</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 3/5/2015	

### NOTES:

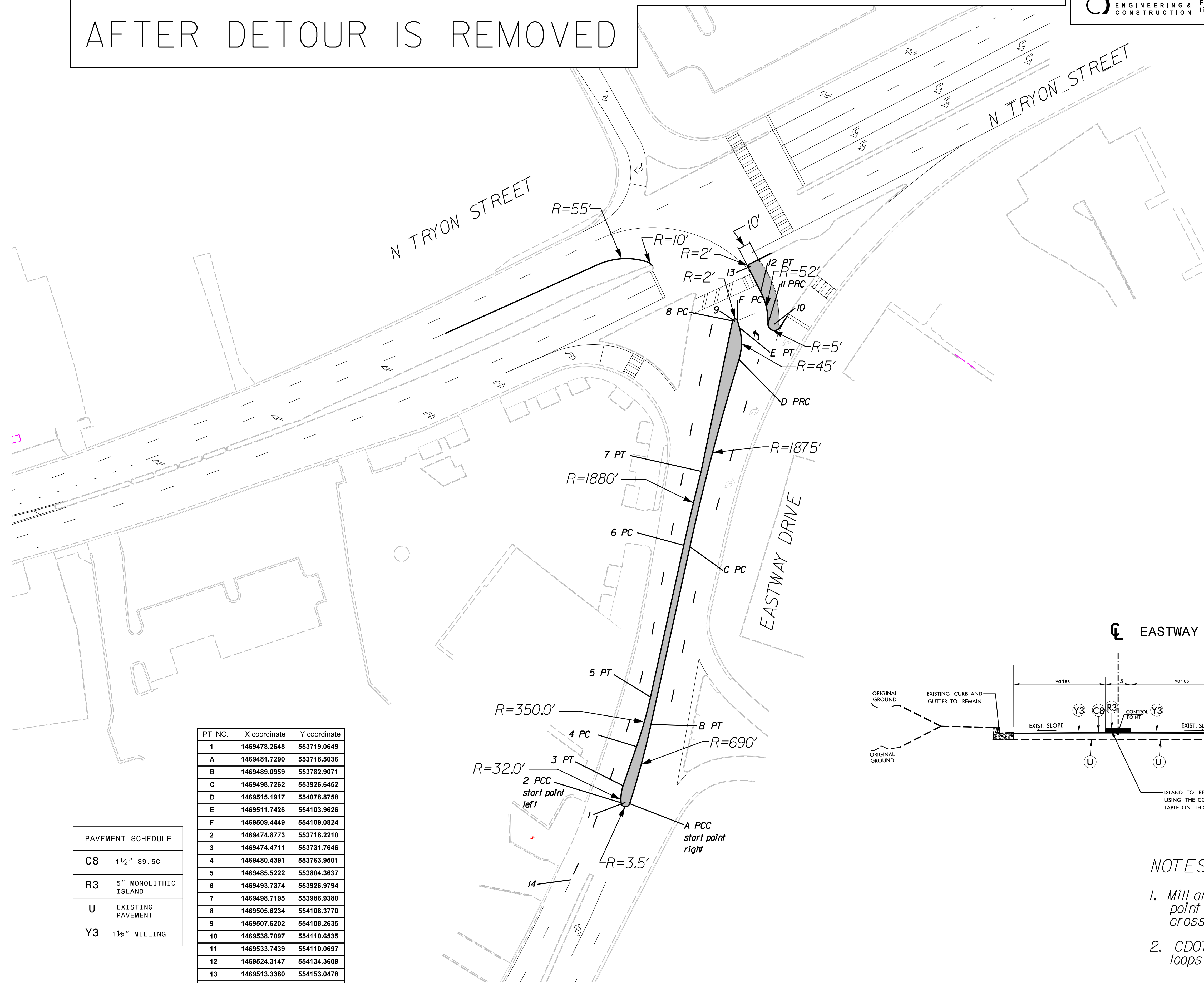
1. CONTACT THE NCDOT RESIDENT ENGINEER TO SCHEDULE THE CLOSURE OF E. CRAIGHEAD ROAD.
2. THE EXISTING PAVEMENT INSIDE THE NORFOLK SOUTHERN RAILROAD BALLAST LINE, THE TIMBER AND RAIL SEAL FLANGES, AND THE RAILROAD SIGNAL, SIGNAL BOX, AND OVERHEAD POWER LINE/POLE TO SERVICE THE SIGNAL BOX WILL BE REMOVED BY OTHERS.
3. CONTRACTOR SHALL SEED AND MULCH THE DISTURBED AREA OUTSIDE THE RAILROAD BALLAST LINE.
4. CONTRACTOR SHALL CONTACT NORTH CAROLINA 811 TO LOCATE ALL UNDERGROUND UTILITIES IN THE WORK AREA.
5. 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 IF APPLICABLE.
6. THE RR CROSSING ADVANCED WARNING PAVEMENT MARKINGS ON E. CRAIGHEAD ROAD NEED TO BE REMOVED.
7. PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC MANAGEMENT PLANS.
8. ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.



SYSTEMS DESIGN CONSULTANTS

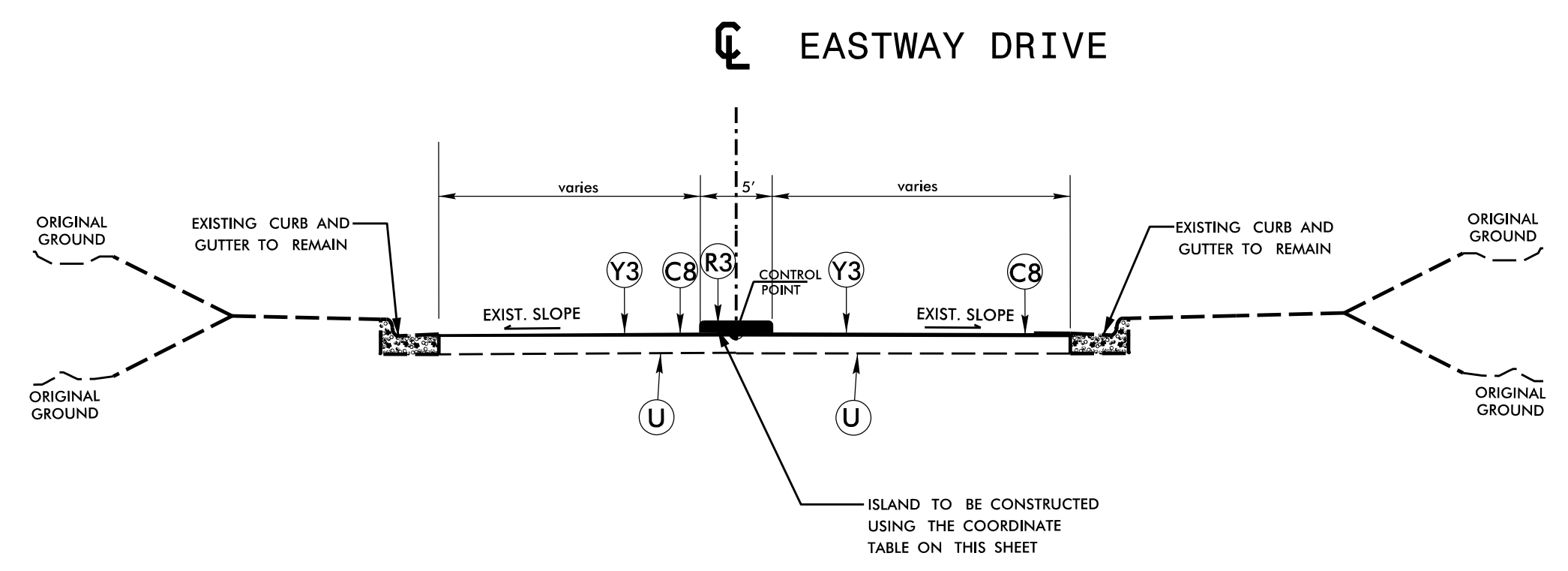
# EASTWAY DRIVE AND N TRYON ST. INTERSECTION AFTER DETOUR IS REMOVED

PROJECT REFERENCE NO. <b>U-5008</b>	SHEET NO. <b>2B-4</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 3/5/2015	PAVEMENT DESIGN ENGINEER 3/5/2015



PT. NO.	X coordinate	Y coordinate
1	1469478.2648	553719.0649
A	1469481.7290	553718.5036
B	1469489.0959	553782.9071
C	1469498.7262	553926.6452
D	1469515.1917	554078.8758
E	1469511.7426	554103.9626
F	1469509.4449	554109.0824
2	1469474.8773	553718.2210
3	1469474.4711	553731.7646
4	1469480.4391	553763.9501
5	1469485.5222	553804.3637
6	1469493.7374	553926.9794
7	1469498.7195	553986.9380
8	1469505.6234	554108.3770
9	1469507.6202	554108.2635
10	1469538.7097	554110.6535
11	1469533.7439	554110.0697
12	1469524.3147	554134.3609
13	1469513.3380	554153.0478
14	1469444.6629	553652.0362

PAVEMENT SCHEDULE	
C8	1½" S9.5C
R3	5" MONOLITHIC ISLAND
U	EXISTING PAVEMENT
Y3	1½" MILLING



- NOTES:**
1. Mill and resurface 1.5" from point 14 on Eastway Drive to existing cross walk
  2. CDOT is to replace any signal loops that were destroyed by milling

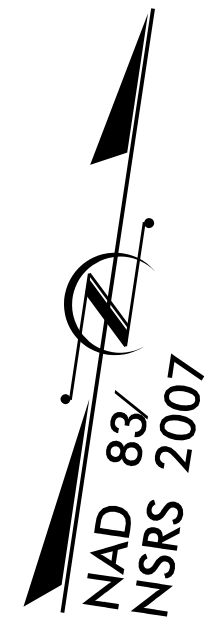
SYSTEMS DESIGN CONSULTANTS  
 10000 W. HARRIS AVE  
 SUITE 100  
 FORT WORTH, TX 76137  
 TEL: 817-335-1100  
 FAX: 817-335-1101  
 WWW.SDCON.COM

0400DEL\_P30

# THE PLAZA AND EASTWAY DRIVE INTERSECTION AFTER DETOUR IS REMOVED

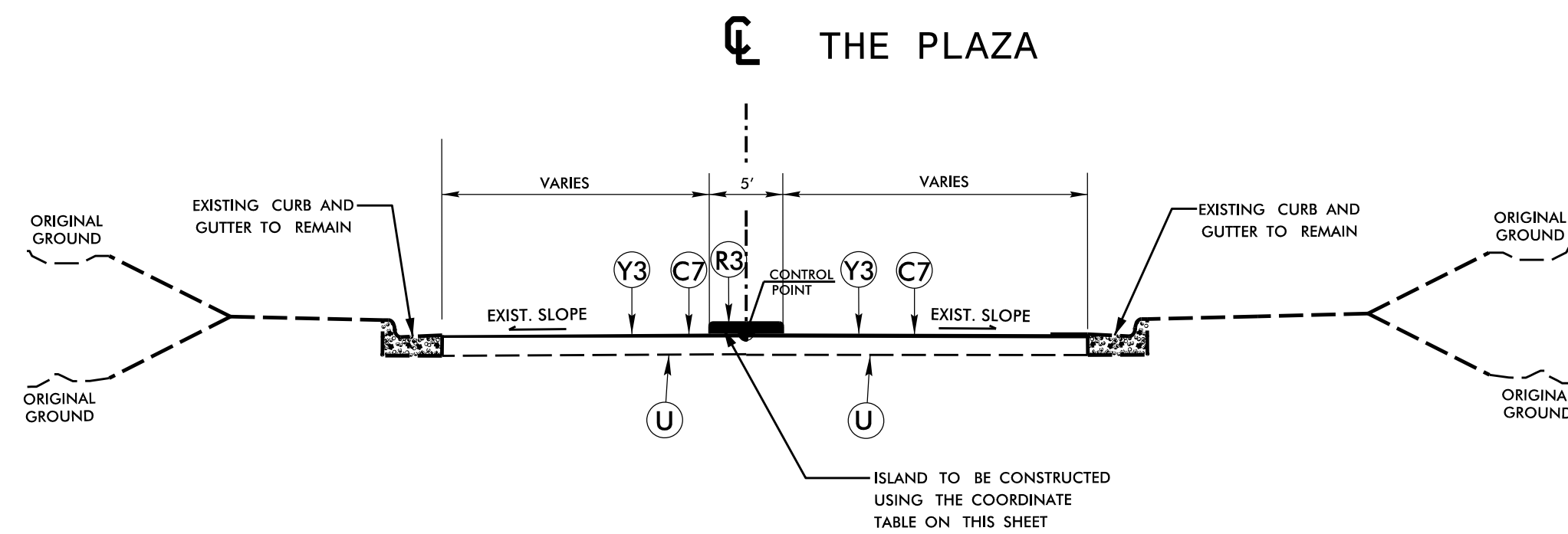
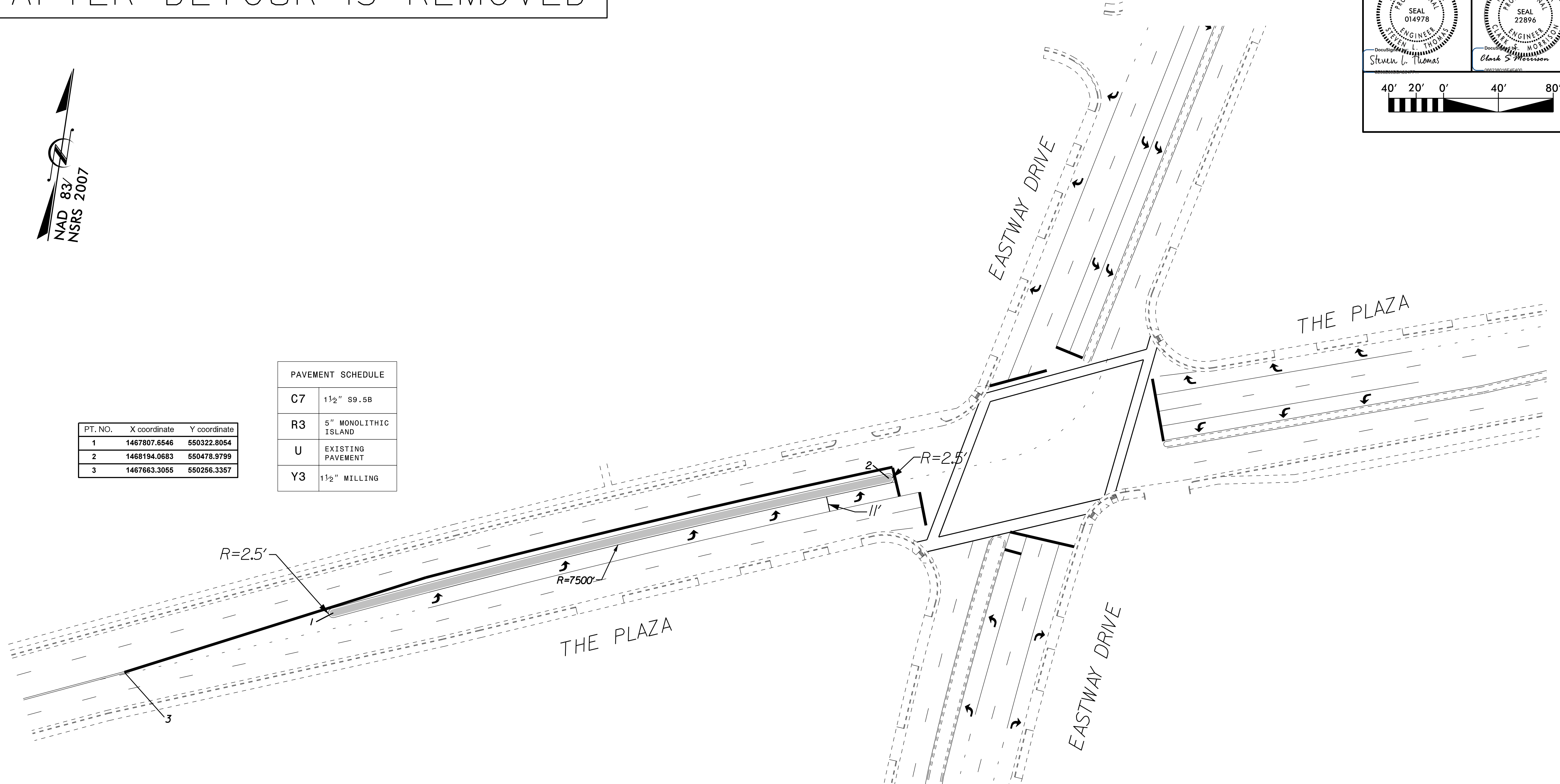
**SEPI**  
ENGINEERING & CONSTRUCTION  
1025 Wade Avenue  
Raleigh, NC 27605  
Tel: 919-789-9977  
Fax: 919-789-9591  
License: C-2197

PROJECT REFERENCE NO. <b>U-5008</b>	SHEET NO. <b>2B-5</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 3/5/2015	PAVEMENT DESIGN ENGINEER 3/5/2015
Steven L. Thomas	Clark S. Morrison



PT. NO.	X coordinate	Y coordinate
1	1467807.6546	550322.8054
2	1468194.0683	550478.9799
3	1467663.3055	550256.3357

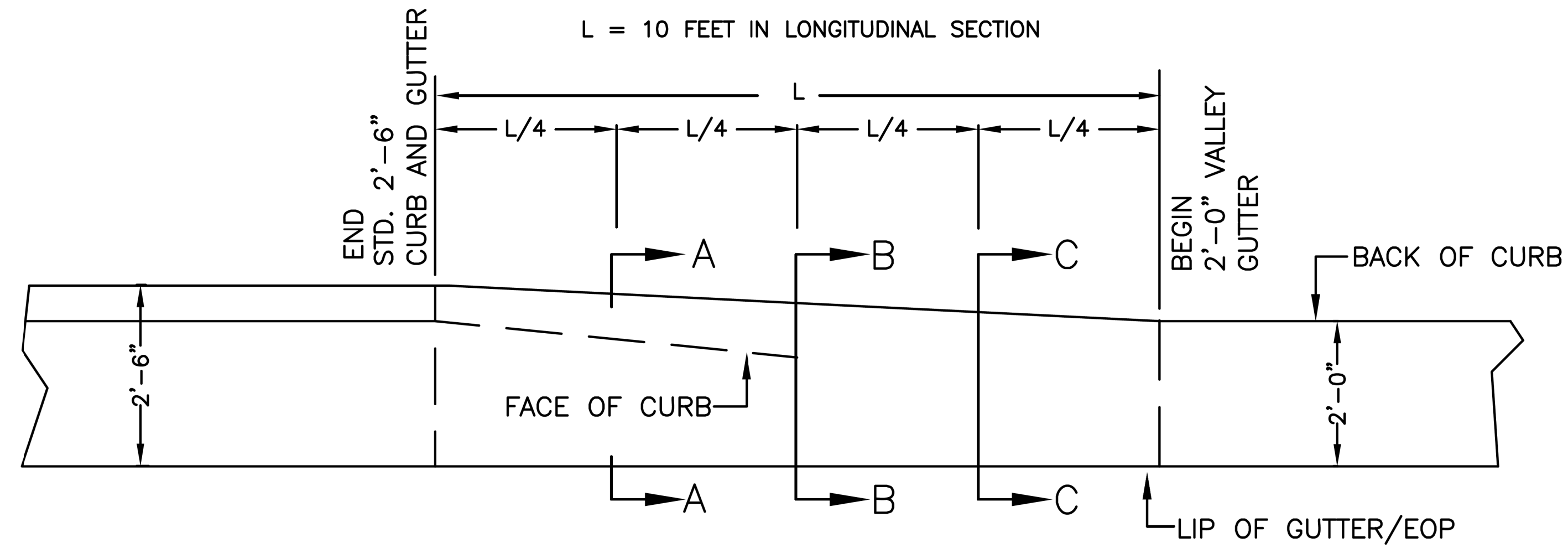
PAVEMENT SCHEDULE	
C7	1 1/2" S9.5B
R3	5" MONOLITHIC ISLAND
U	EXISTING PAVEMENT
Y3	1 1/2" MILLING



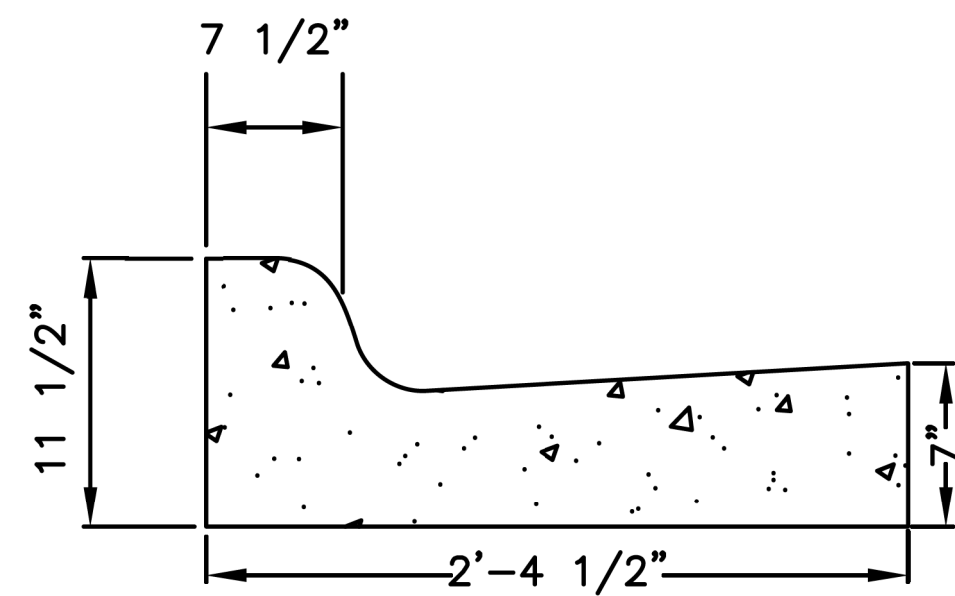
**NOTES:**

1. Mill and resurface 1.5" from point 3 on The Plaza to existing cross walk
2. CDOT is to replace any signal loops that were destroyed by milling

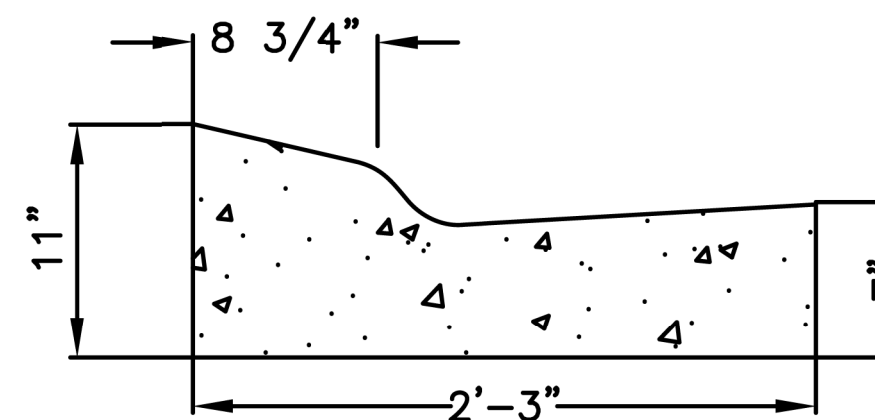
DATE PLOTTED: 04/22/2015 11:58 AM  
 PLOT SCALE: 1"=40'  
 PLOT SIZE: 11.0" X 17.0"  
 PLOT ORIENTATION: Landscape  
 PLOT DEVICE: HP DesignJet T1300



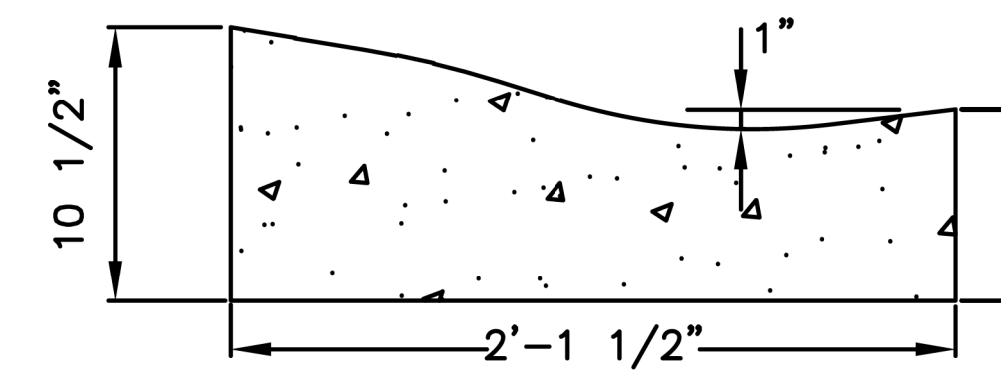
PLAN VIEW



SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

- 1. TRANSITION IS NOT TO BE LOCATED WITHIN THE CURB RADIUS.

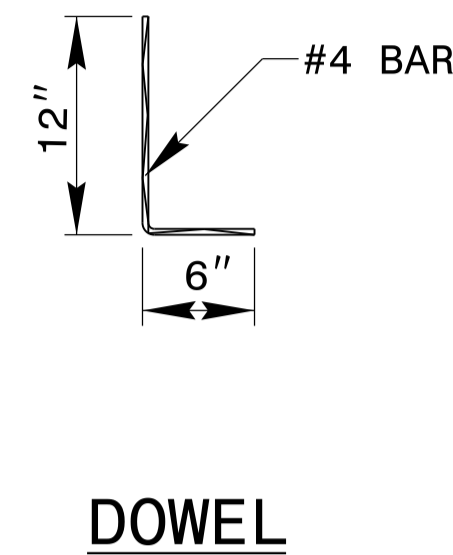
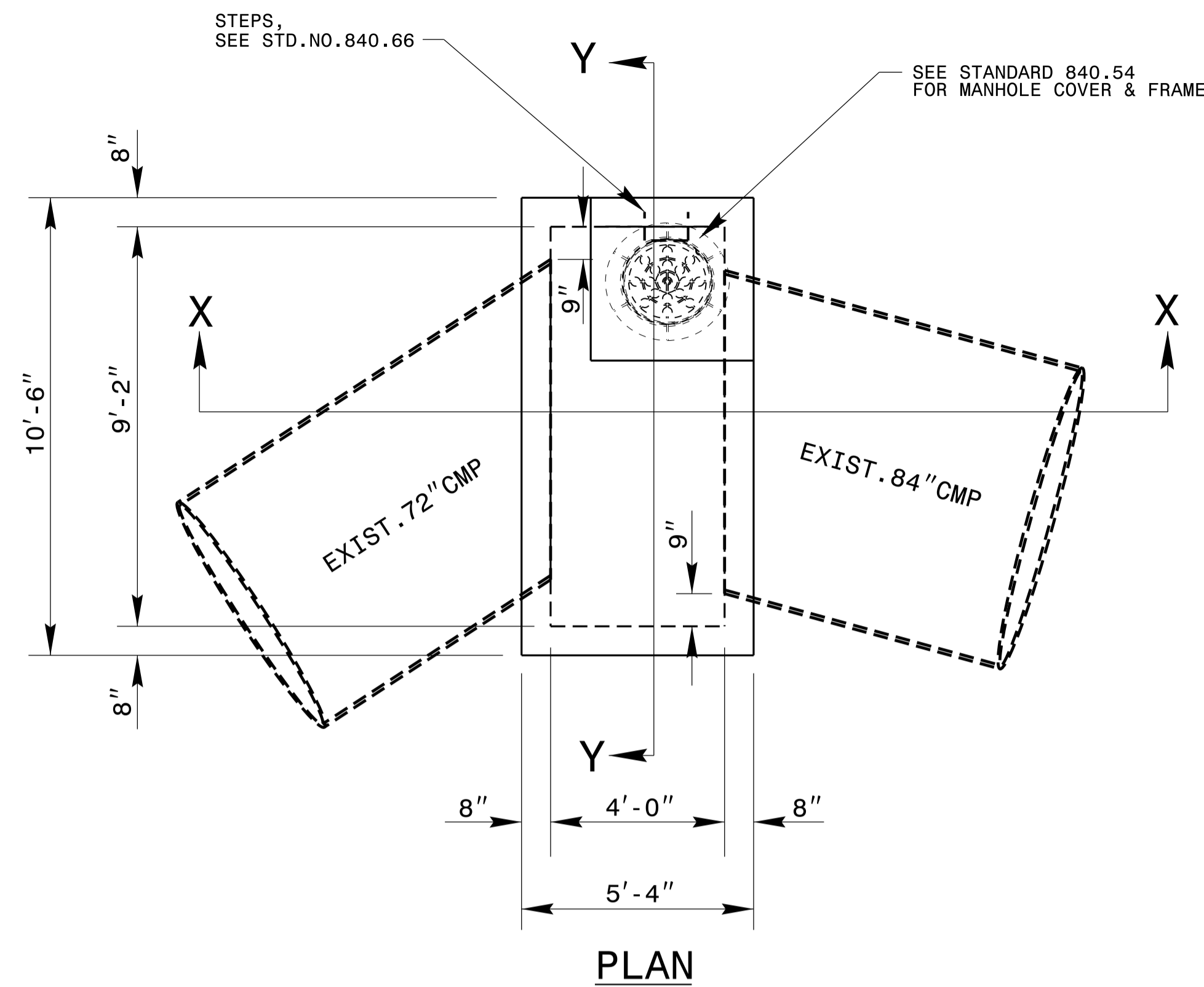
NOT TO SCALE



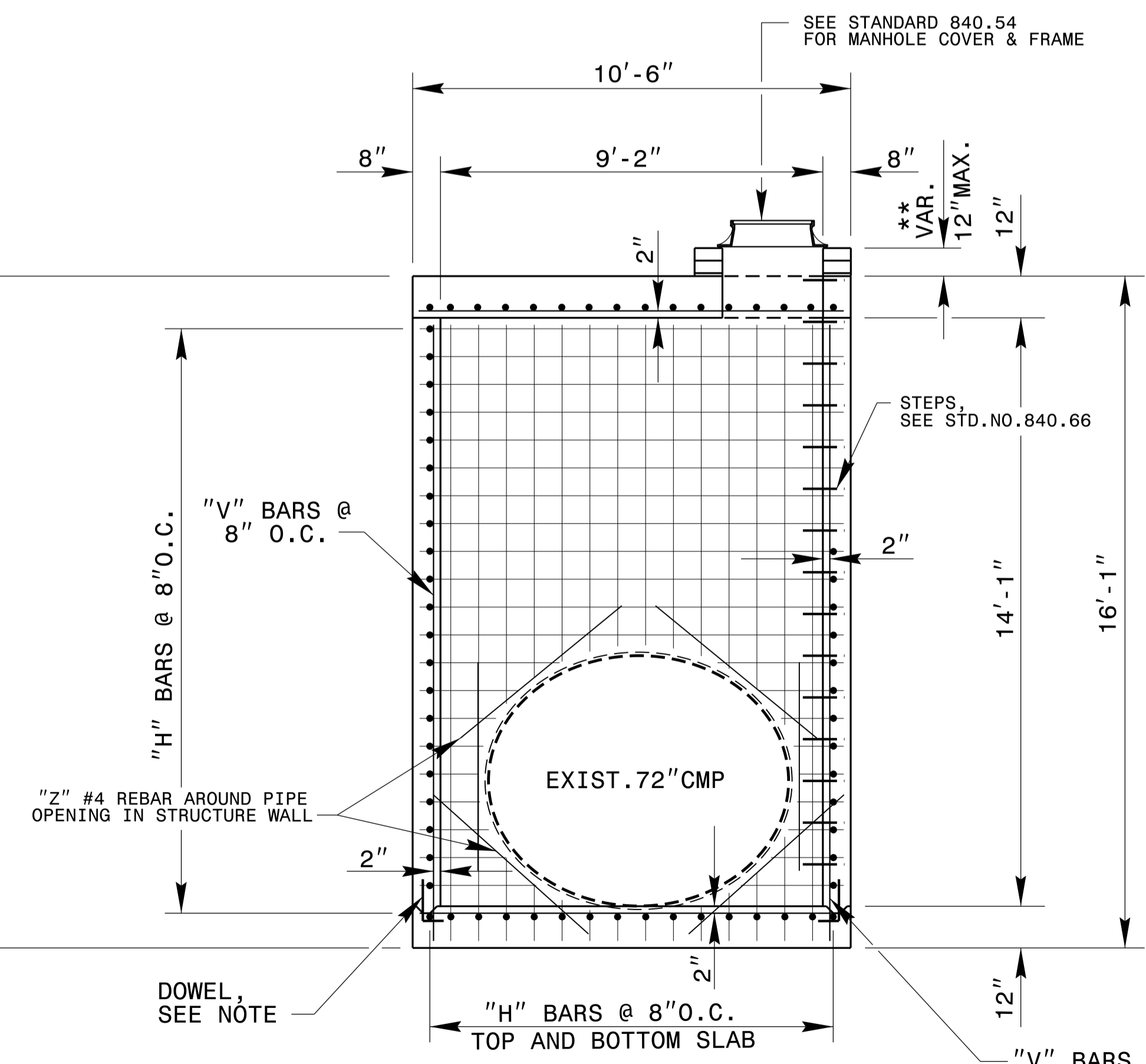
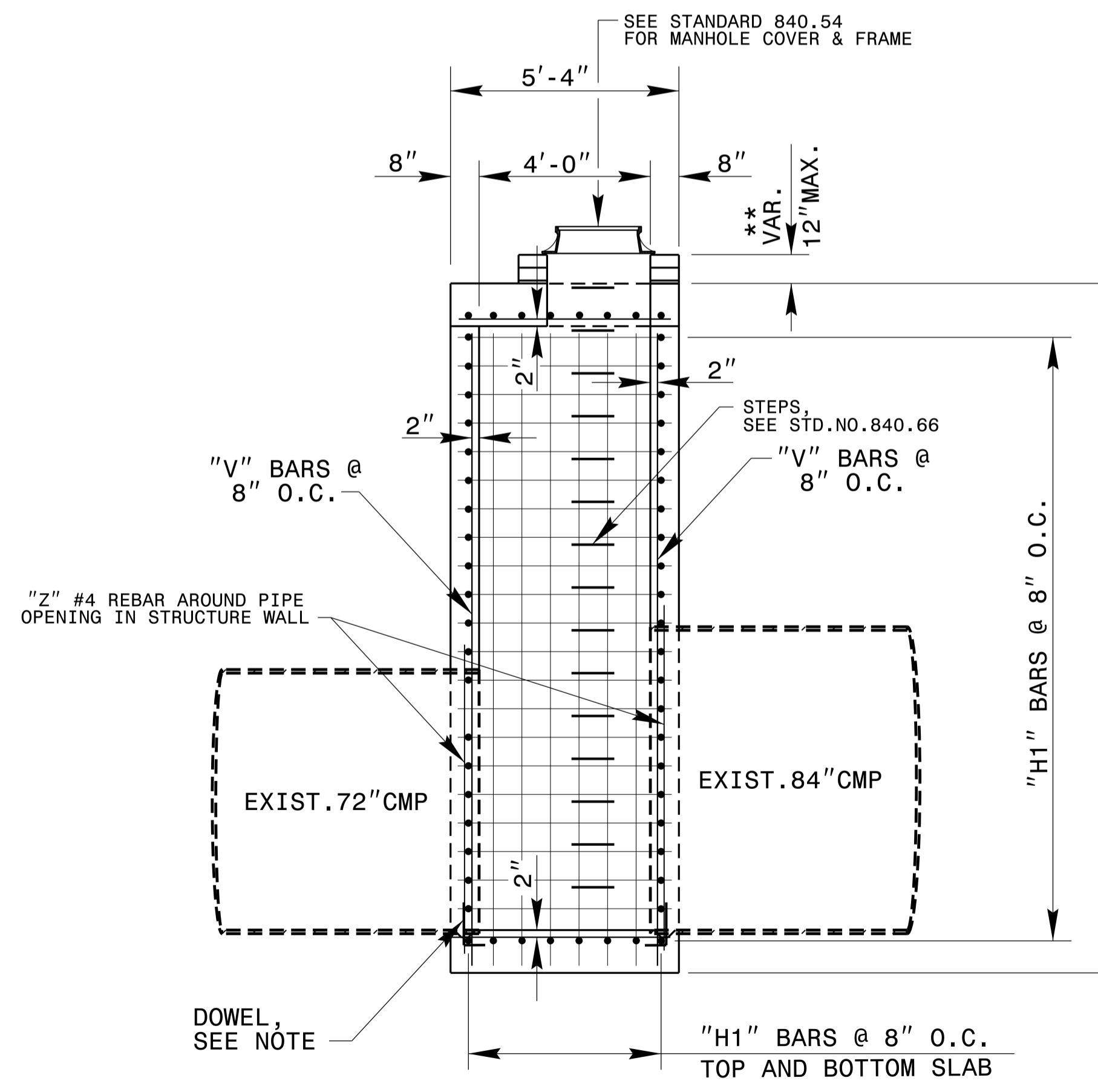
CITY OF CHARLOTTE  
 LAND DEVELOPMENT STANDARDS  
 INCLUDES CHARLOTTE ETJ

CURB TRANSITION  
 2'-6" CURB AND GUTTER TO 2'-0" VALLEY GUTTER

SYSTEMS DESIGN CONSULTANTS, INC.



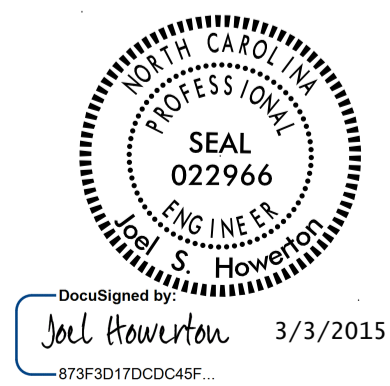
- GENERAL NOTES:**
- THE BASE SLAB TO BE CONSTRUCTED BY FORMING.
  - IF PIPE IS SET INTO BASE SLAB, SEE STD. DWG. 840.00 FOR CONSTRUCTION DETAILS.
  - CLASS 'B' CONCRETE TO BE USED THROUGHOUT.
  - CONSTRUCTION OPTIONS: MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
  - REINFORCING STEEL SHOULD BE CUT, BENT OR RELOCATED TO POSITION PIPE AS DIRECTED BY THE ENGINEER.
  - ALL EXPOSED CORNERS TO BE CHAMFERED 1".
  - SEE STD. DRAWING 840.34 FOR CONSTRUCTION OF RISER AND MANHOLE.
  - JUNCTION BOXES OVER 3'-6" IN DEPTH WITH MANHOLES WILL REQUIRE STEPS TO BE PLACED ON 12" CTRS. REFERENCE STD. NO. 840.66.
  - MAINTAIN 2" MINIMUM CONCRETE COVERAGE ON ALL STEEL.



**BILL OF MATERIAL**

REINFORCING STEEL				
BAR	NO.	SIZE	LENGTH	WEIGHT
H	74	#4	5'-0"	248
H1	58	#4	10'-2"	394
V	44	#4	14'-9"	434
Z	8	#4	5'-0"	27
TOTAL REINF. STEEL (lbs.)				1103
TOTAL CLASS "B" CONC. (cu. yds.)				14.2
DEDUCTION FOR 1- 72" CMP				-0.9
DEDUCTION FOR 1- 84" CMP				-1.0
CLASS "B" CONC. (cu. yds.)				12.3

\*\* 0.30 CU. YD. PER FOOT OF RISER HEIGHT

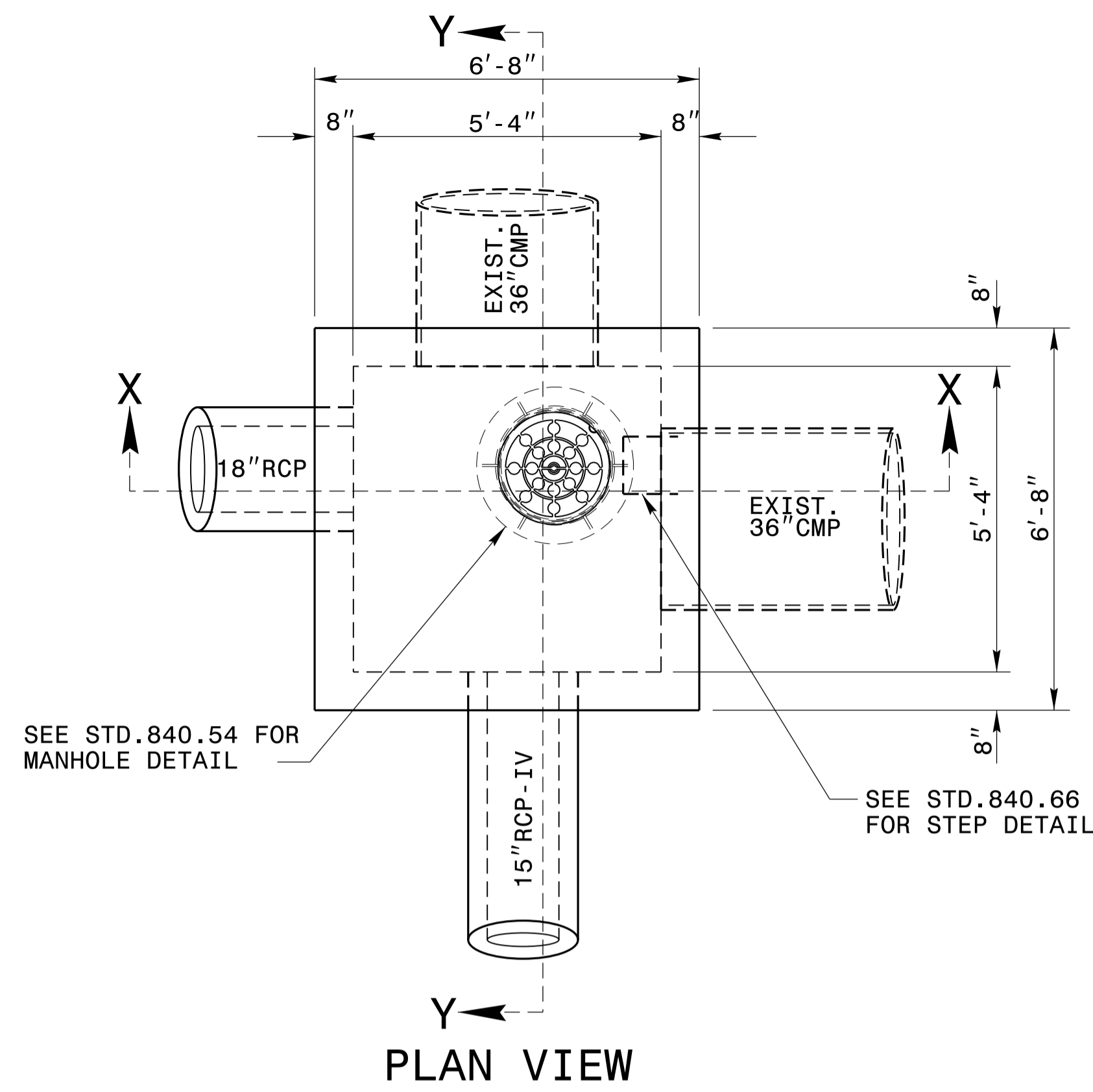


**STRUCTURE NO.0621**

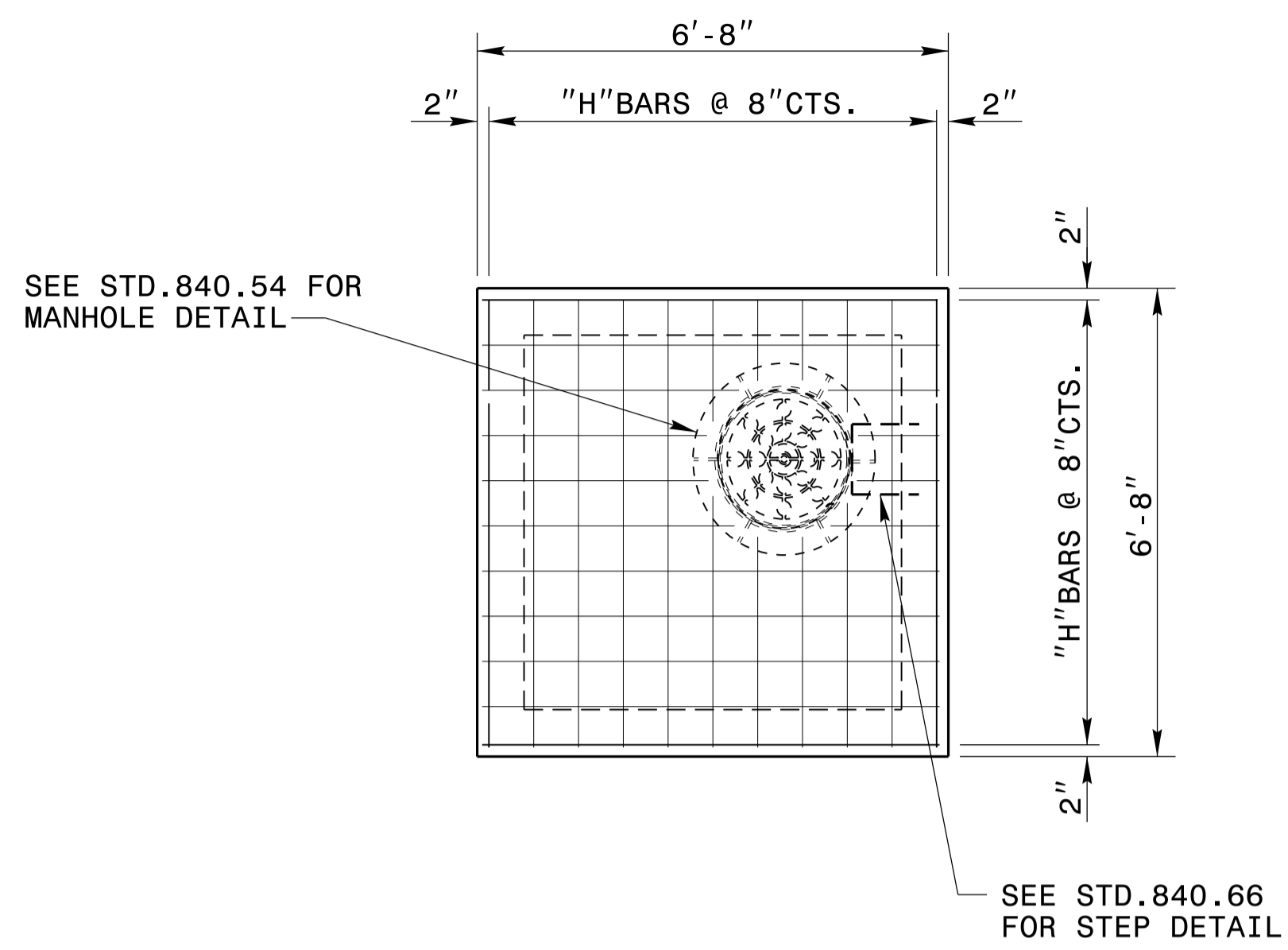
**CONTRACT SERVICES & DEVELOPMENT UNIT  
STANDARDS AND SPECIAL DESIGN**  
Office 919-707-6950 FAX 919-250-4119

**DETAIL OF SPECIAL  
TRAFFIC BEARING JUNCTION BOX**

ORIGINAL BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 MODIFIED BY: rnbritt DATE: 08-13-14  
 CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 FILE SPEC.: details/nbritt/english/urban/u5008\_84tjb.dgn



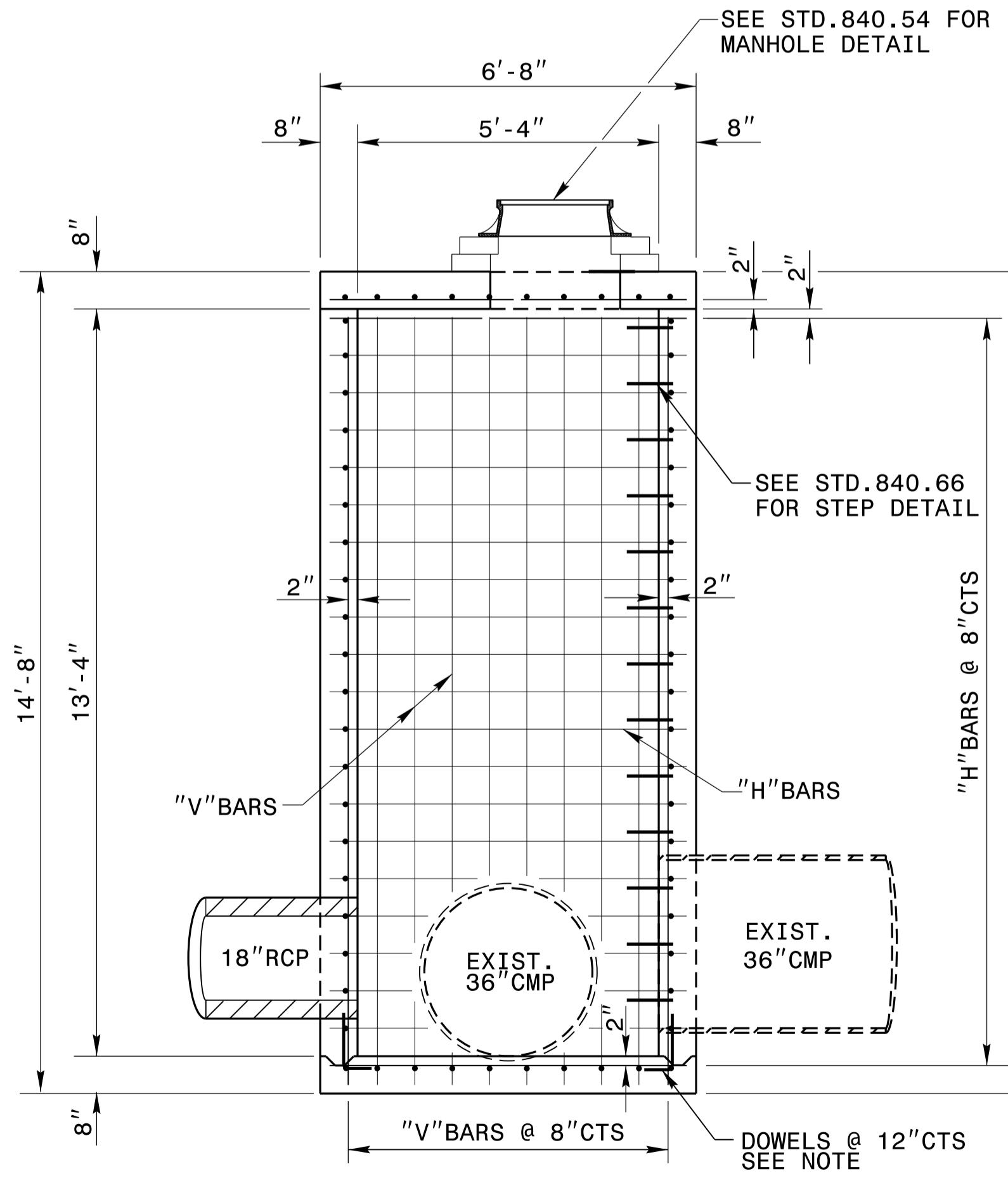
PLAN VIEW



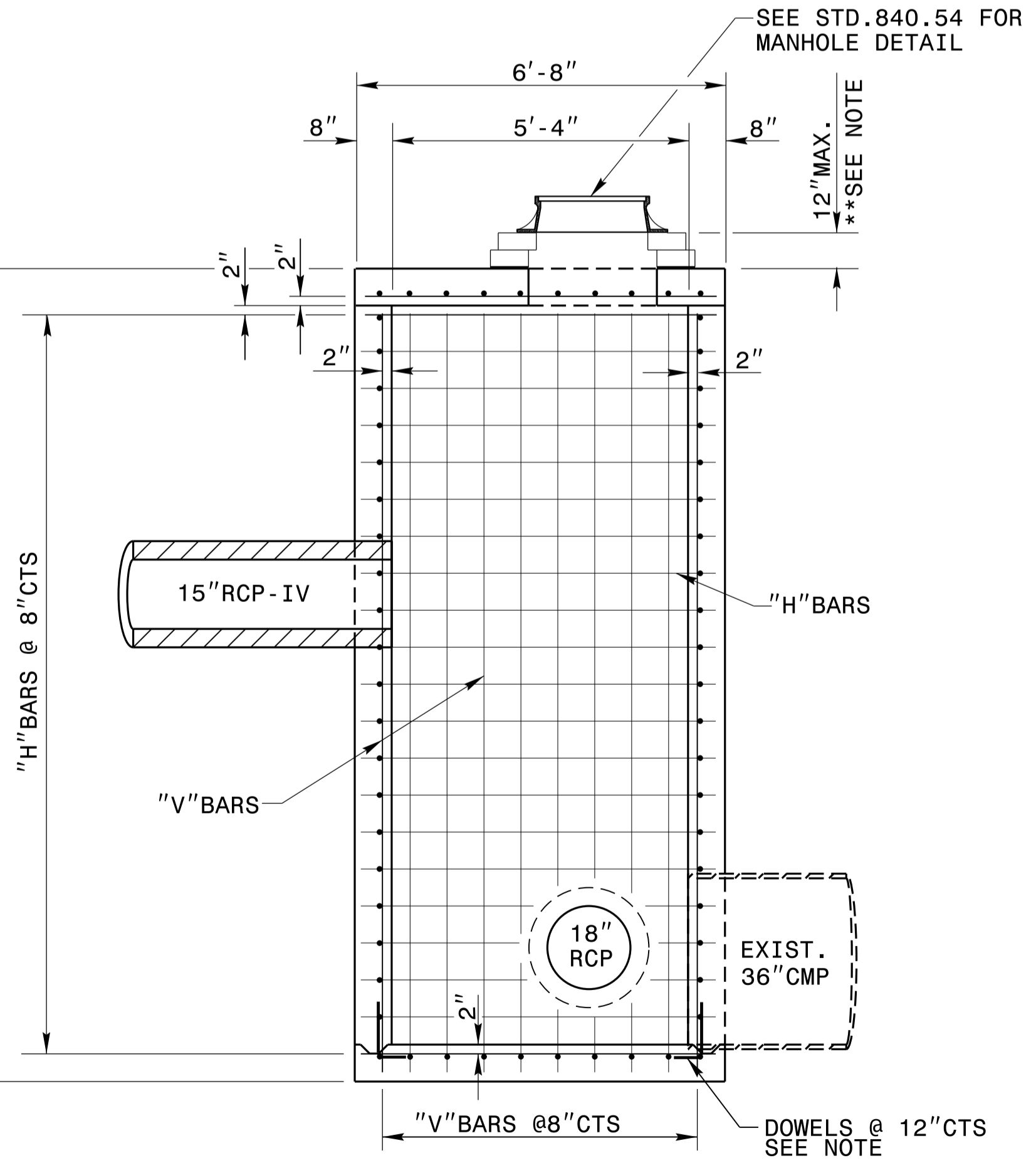
SLABS

**GENERAL NOTES:**

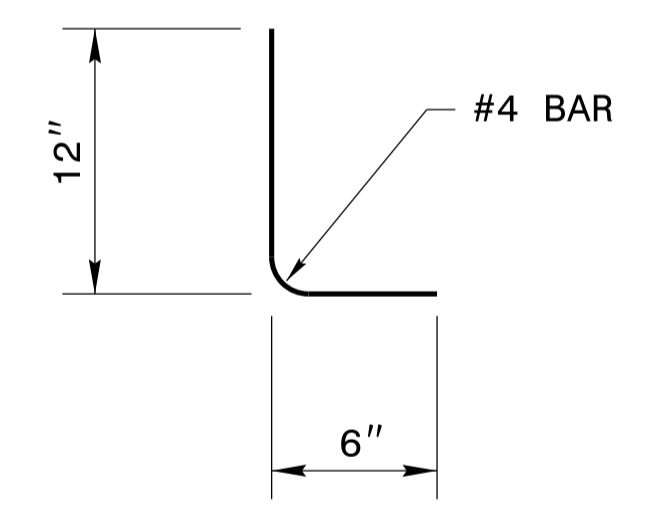
- THE BASE SLAB TO BE CONSTRUCTED BY FORMING.
- SEE STD. DWG. 840.00 FOR CONSTRUCTION OF BASE SLAB
- CLASS 'B' CONCRETE TO BE USED THROUGHOUT.
- CONSTRUCTION OPTIONS: MONOLITHIC POUR; 2" KEYWAY OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
- REINFORCING STEEL TO BE CUT, BENT OR RELOCATED TO POSITION PIPE AS DIRECTED BY THE ENGINEER.
- ALL EXPOSED CORNERS TO BE CHAMFERED 1".
- SEE STD. DRAWING 840.54 FOR CONSTRUCTION OF RISER AND MANHOLE.
- JUNCTION BOXES OVER 3'-6" IN DEPTH WITH MANHOLES WILL REQUIRE STEPS TO BE PLACED ON 12" CTRS. REFERENCE STD. NO. 840.66.
- MAINTAIN 2" MINIMUM CONCRETE COVERAGE ON ALL STEEL.



SECTION X-X



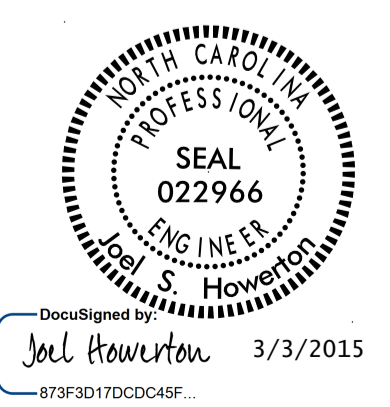
SECTION Y-Y



DOWEL

BILL OF MATERIAL					
REINFORCING STEEL					
BAR	NO.	LENGTH	LBS/FT.	QTY.	LBS
H	#4	6'-4"	0.668	124	525
V	#4	13'-8"	0.668	36	329
TOTAL WEIGHT STEEL					854
MASONRY QUANTITIES					
CLASS "B" CONCRETE (CU.YDS.)					10.1
PIPE DEDUCTIONS (CU.YDS.)					
1-15" RCP-IV					-0.1
1-18" RCP					-0.1
2-36" CMP					-0.4
TOTAL CLASS "B" CONCRETE (CU.YDS.)					9.5

\*\* 0.30 CU.YD. PER FOOT OF RISER HEIGHT.



DocuSigned by:  
Joel Howerton 3/3/2015

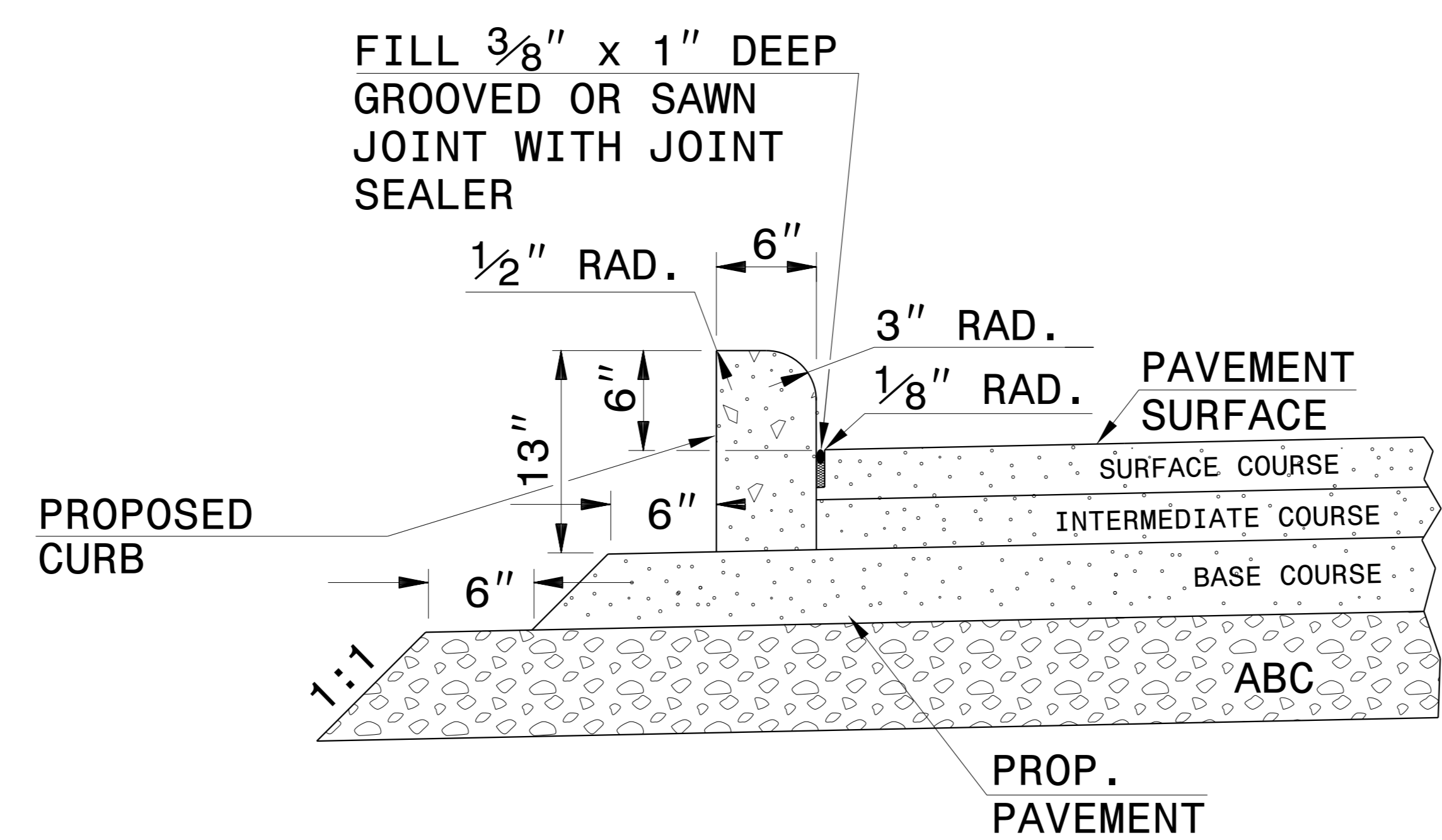
**STRUCTURE NO.0706**

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

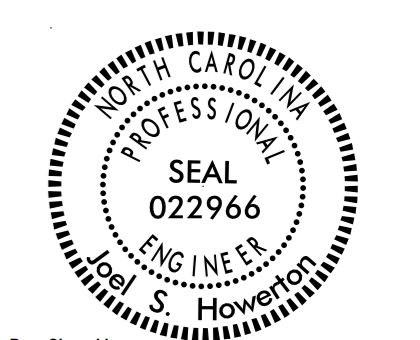
**SPECIAL EXTRA DEPTH  
36" JUNCTION BOX**

ORIGINAL BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
MODIFIED BY: rnbritt DATE: 08-13-14  
CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
FILE SPEC.: details/rnbritt/english/urban/u5008\_extra\_depth\_36jb.dgn





**GENERAL NOTES:**  
 -REFER TO STD. 846.01 FOR JOINT SPACING AND OTHER NOTES.  
 -HEIGHT ADJUSTMENTS MAY BE MADE TO CURB AS DIRECTED BY THE ENGINEER.  
 -PAVEMENT DESIGN AS SHOWN IN TYPICAL SECTIONS.



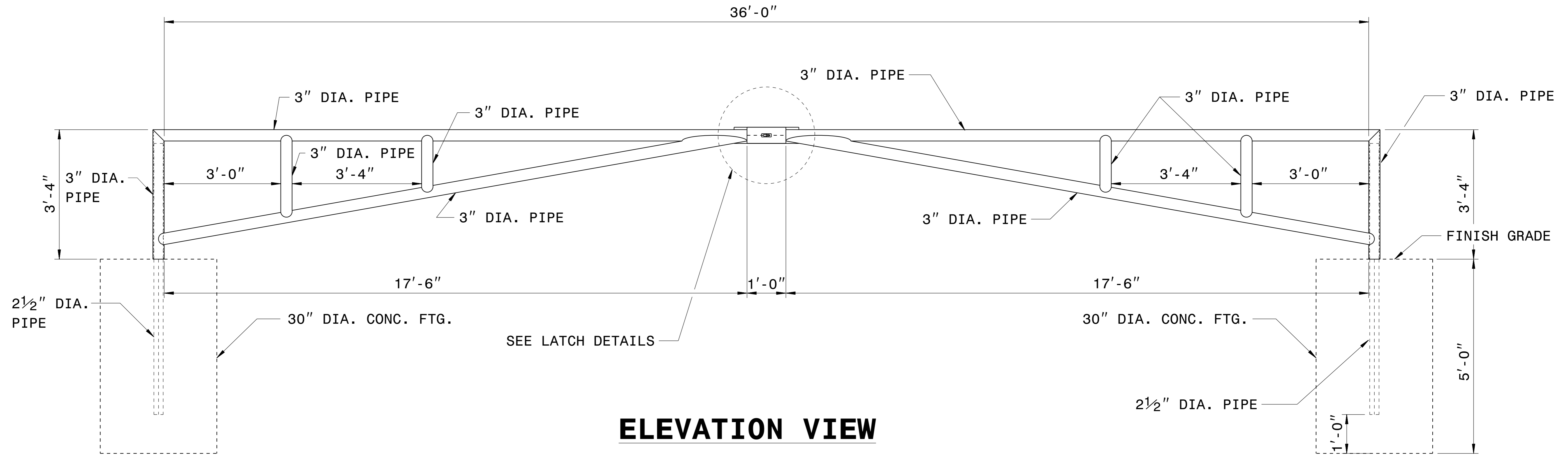
DocuSigned by:  
*Joel Howerton* 3/3/2015  
873F3D70C0C48F...

**CONTRACT STANDARDS & DEVELOPMENT UNIT  
 STANDARDS AND SPECIAL DESIGN**  
 Office 919-707-6950 FAX 919-250-4119

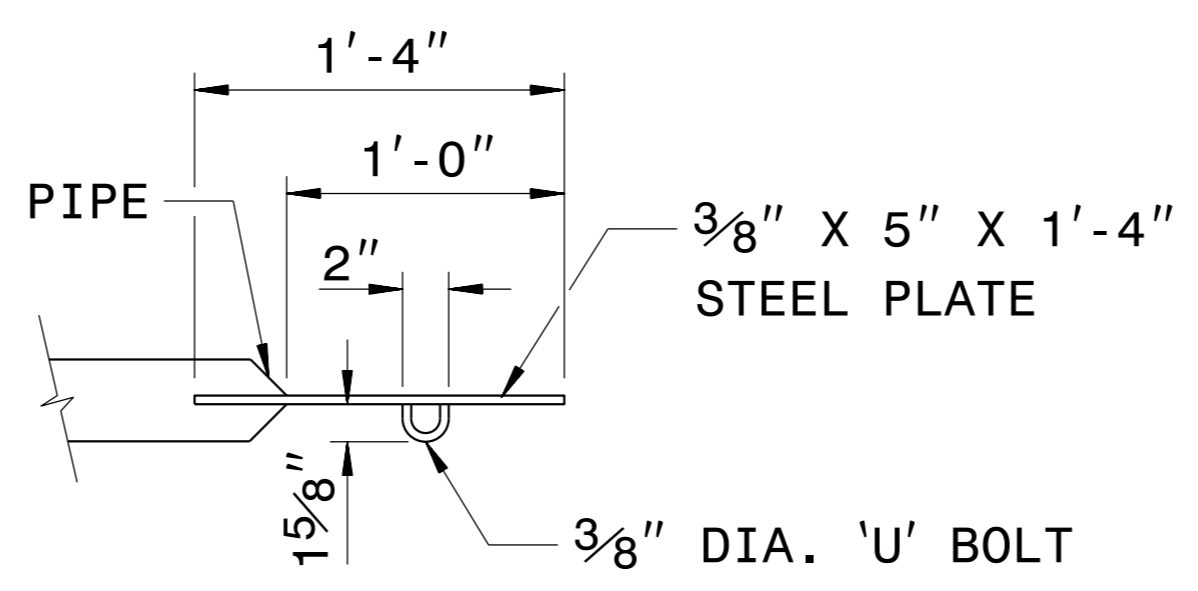
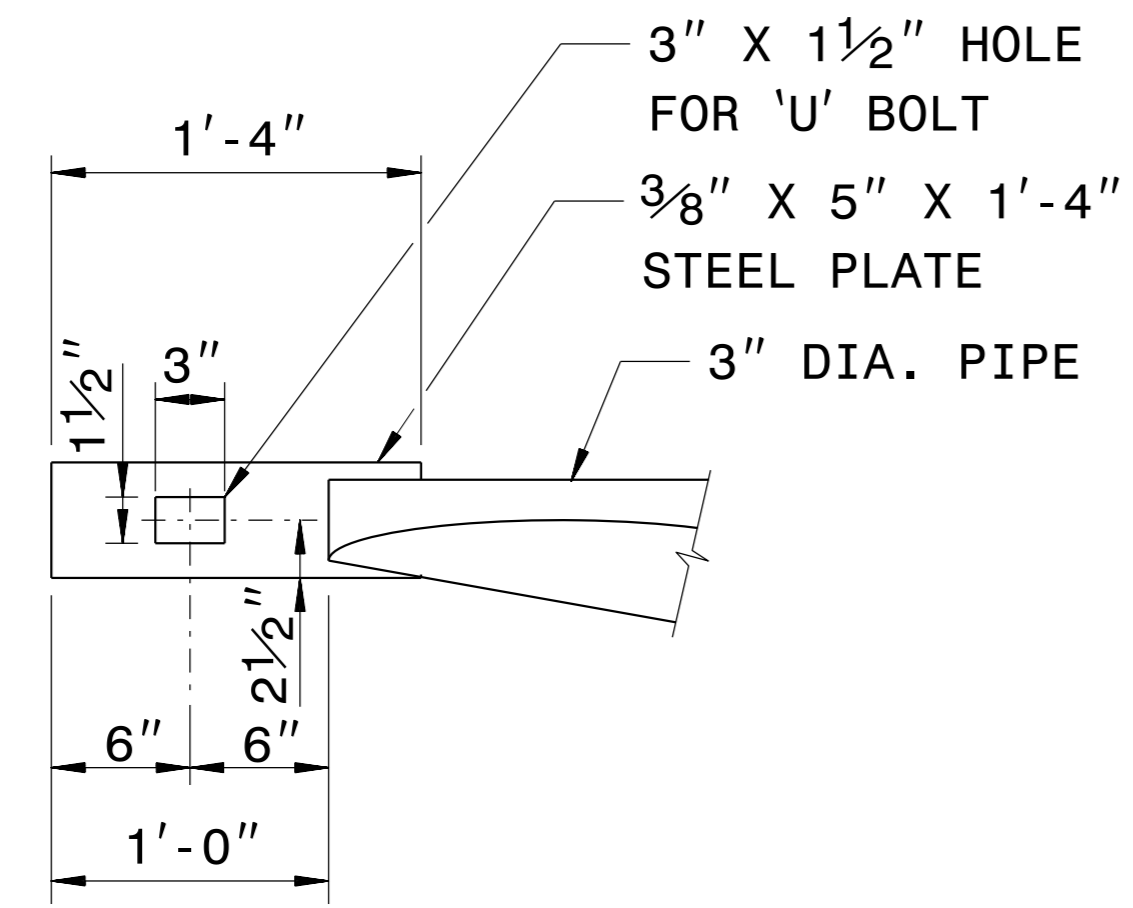
**6" CURB DETAIL**

ORIGINAL BY:	DATE:
MODIFIED BY: <i>kkemp</i>	DATE: 11-06-14
CHECKED BY:	DATE:
FILE SPEC.: <i>kkemp/english\846d01.dgn</i>	

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 3/3/2015 1:14:13 PM  
 J:\Projects\U-5008\Drawings\2C-4.dgn

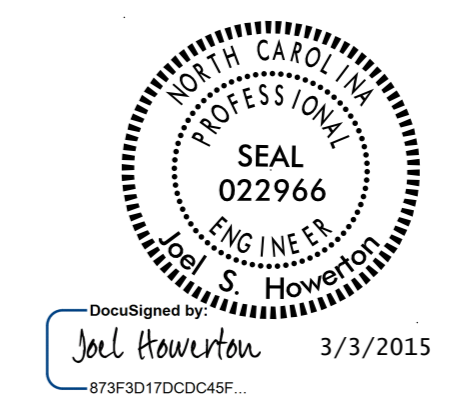


**ELEVATION VIEW**



**LATCH DETAILS**

- GENERAL NOTES:**
- 1- ALL STEEL WILL BE ASTM A36 STEEL.
  - 2- 1/4" FILLET WELDS ON ALL CONNECTIONS.
  - 3- USE CLASS 'B' CONCRETE FOR FOOTINGS.
  - 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.

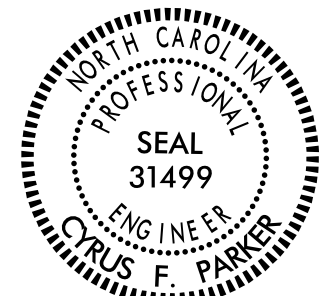


**CONTRACT STANDARDS & DEVELOPMENT UNIT**  
**STANDARDS AND SPECIAL DESIGN**  
 Office 919-707-6950 FAX 919-250-4119

**DETAIL OF**  
**STEEL PIPE GATE**

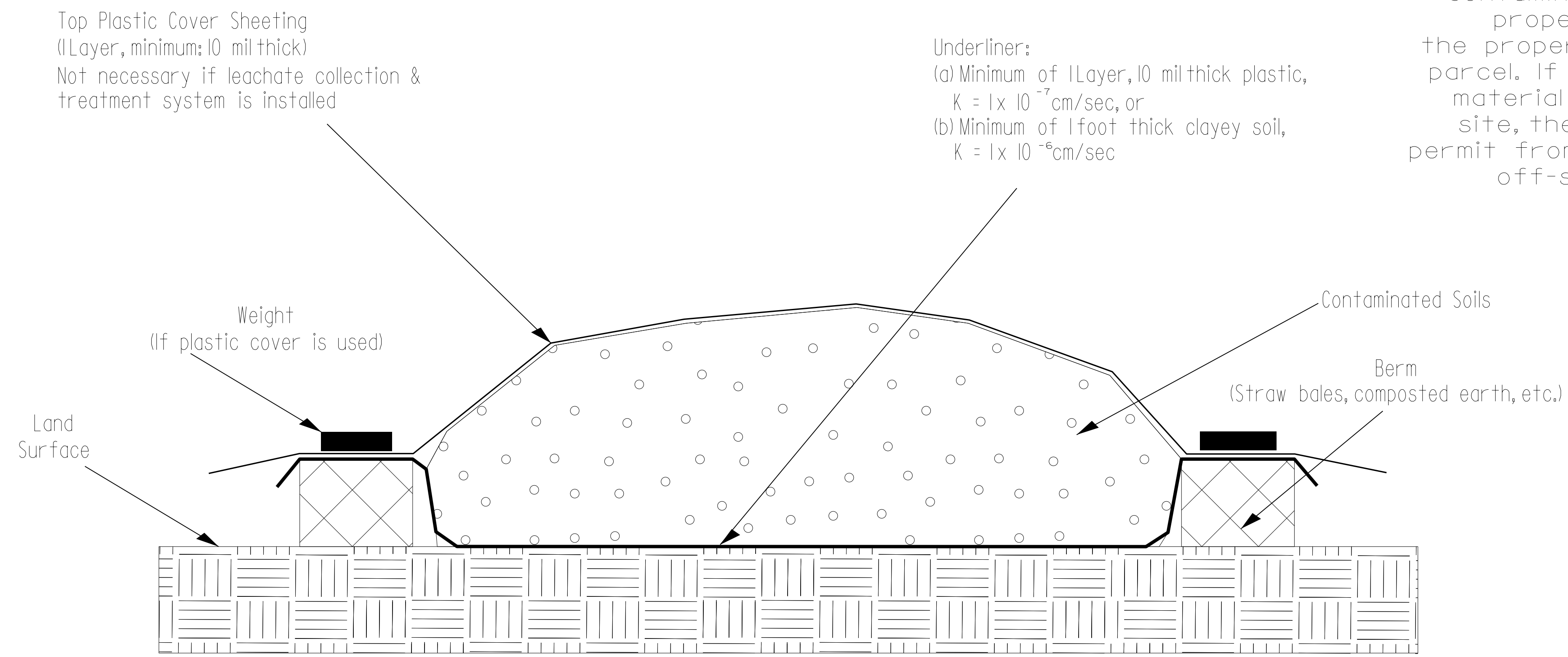
ORIGINAL BY:	DATE:
MODIFIED BY: <u>rnbritt</u>	DATE: <u>09-08-05</u>
CHECKED BY:	DATE:
FILE SPEC.: <u>details/nbritt/misc/steelpipegate.dgn</u>	

C:\TIME\DESIGN\CON\DESIGN\DESIGN\USER\NAME\$\$\$\$\$

<b>PROJECT REFERENCE NO.</b>		<b>SHEET</b>
U - 5008		2G - 1
GEOTECHNICAL ENGINEER	ENGINEER	
		
DocuSigned by: Cyrus Parker	3/3/2015	DATE
SIGNATURE	SIGNATURE	DATE

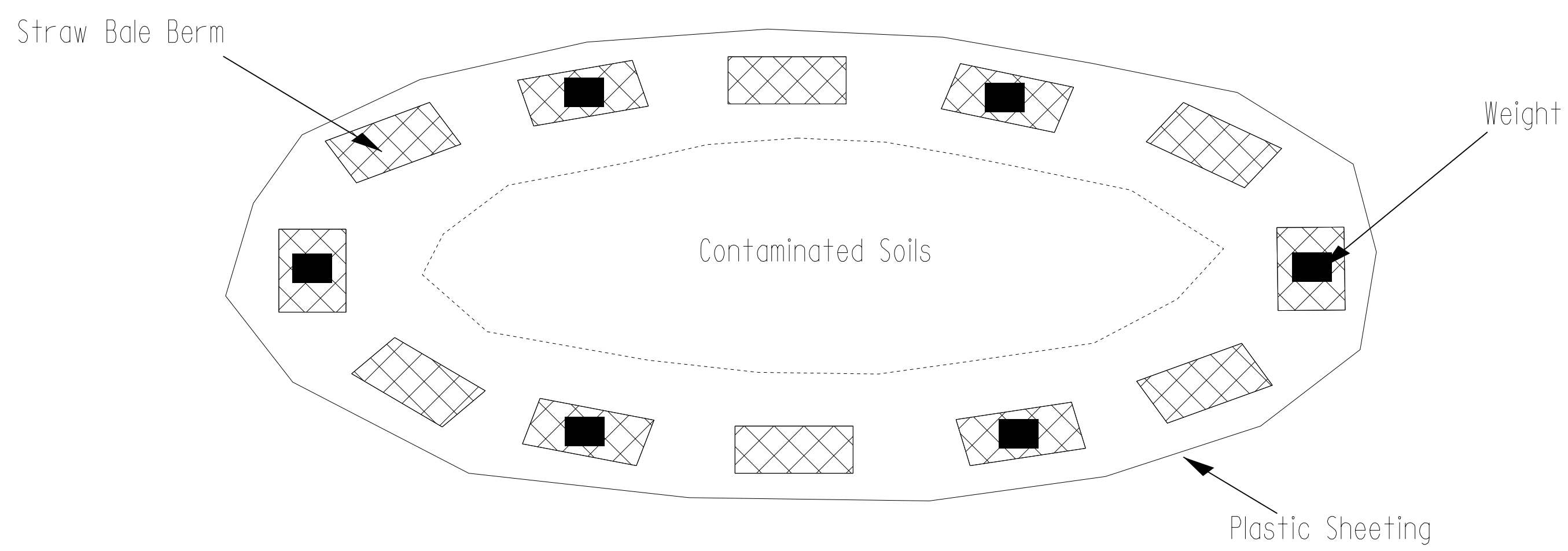
## Detail for Temporary Containment of Contaminated Soil

### Cross-Section View



**NOTE:**  
The Contractor shall stockpile all contaminated soil excavated from a property in a location within the property boundaries of the source parcel. If the volume of contaminated material exceeds available space on site, the Contractor shall obtain a permit from the NCDENR UST Section for off-site temporary storage.

### Map View



**GEOTECHNICAL ENGINEERING UNIT**

EASTERN REGIONAL OFFICE  
 WESTERN REGIONAL OFFICE  
 CONTRACT OFFICE

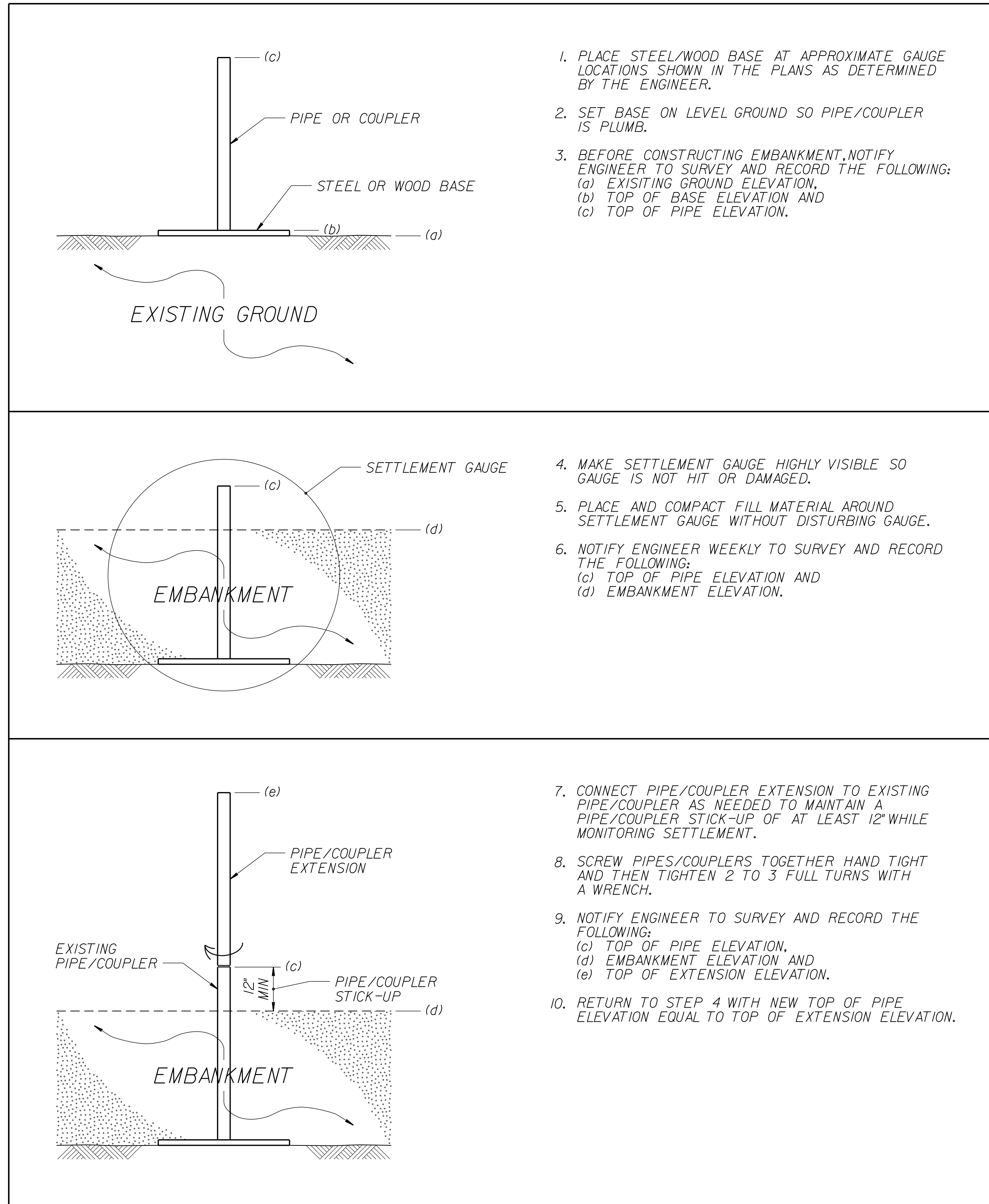
**STATE OF NORTH CAROLINA**  
**DEPARTMENT OF TRANSPORTATION**  
**RALEIGH**

**STOCKPILE CONTAINMENT DETAIL**

REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		

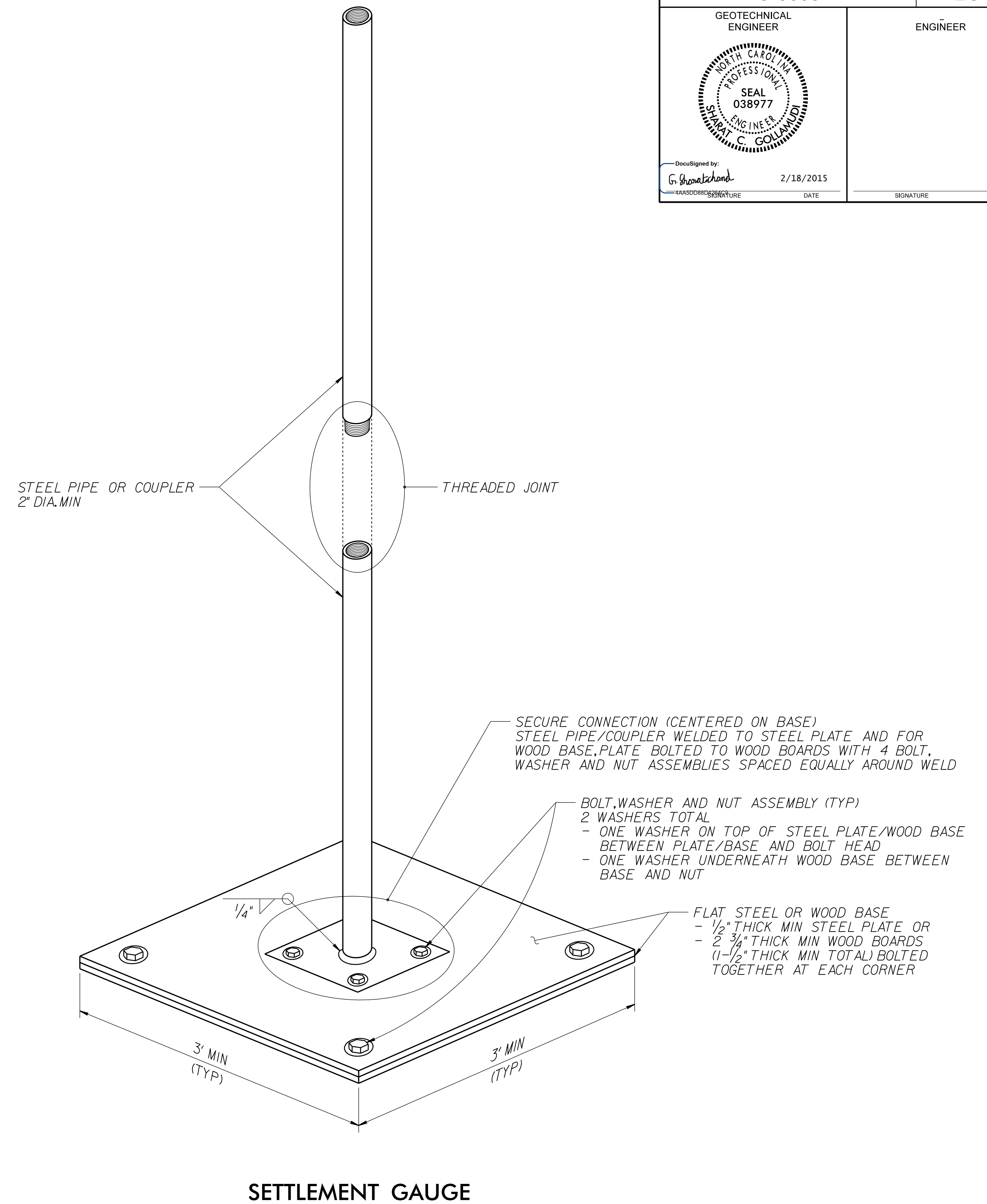
PREPARED BY:	DATE:
REVIEWED BY:	DATE:

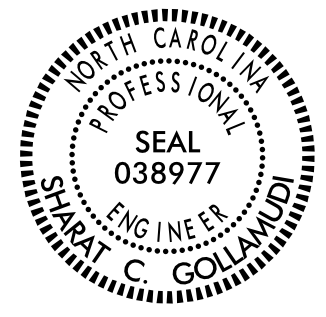
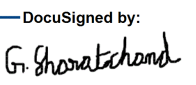
**EMBANKMENT MONITORING SEQUENCE**

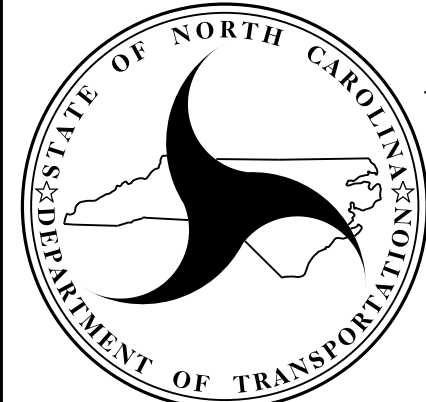


**NOTES:**

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.



<b>PROJECT REFERENCE NO.</b> U-5008	<b>SHEET NO.</b> 2G-2
GEOTECHNICAL ENGINEER 	ENGINEER
Designed by: 	DATE: 2/18/2015 SIGNATURE: _____ DATE: _____

 <p><b>NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS</b></p> <p><b>GEOTECHNICAL ENGINEERING UNIT</b></p>	<p><b>STANDARD DETAIL NO. 1804.01</b></p>
	<p><b>STANDARD EMBANKMENT MONITORING</b></p> <p>DATE: 2-19-13</p>

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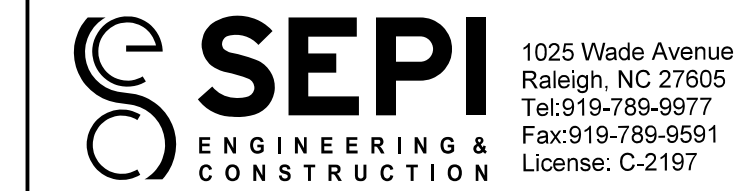
5/14/99

**SUMMARY OF EARTHWORK  
IN CUBIC YARDS**

LOCATION	UNCLASS EXCAV	UNDERCUT	EMBT + %	BORROW	WASTE
-L- STA. 10+64.82 TO 20+05.51 (Bridge)	921		37,894	37,894	921
ROADWAY LIGHTWEIGHT AGGREGATE MAT'L			-2,196	-2,196	
MAT'L INCIDENTAL TO WALL #3			-8,880	-8,880	
-Y1- STA. 10+54.31 TO 11+61.97	54		118	118	54
-Y2- STA. 10+31.50 TO 11+81.18	18		959	941	
-Y3REV- STA. 12+08.12 TO 19+21.11	1,386		1,453	67	
-Y4- STA. 10+17 TO 16+00	500		1,243	1,243	500
SUBTOTAL	2,879		30,591	29,186	1,475
-L- STA. 28+51.63 (Bridge) TO 39+00.43	838		25,840	25,002	
MAT'L INCIDENTAL TO WALLS #1 & 2			-7,716	-7,716	
-Y5- STA. 12+56.01 TO 15+84.17	381		151		230
-Y7- STA. 10+33.97 TO 19+75.98	1,002		3,550	3,041	493
-Y8- STA. 11+19.18 TO 14+49.18	166		35		131
-DR2- STA. 10+00.00 TO 11+00.00	14		341	327	
SUBTOTAL	2,401		22,201	20,654	854
-Y3- STA. 8+68.60 TO 14+89.87	1,540	2,684	3,265	3,107	4,066
-Y6- STA. 10+14.86 TO 11+24.49	77		143	66	
SUBTOTAL	1,617	2,684	3,408	3,173	4,066
TOTAL	6,897	2,684	56,200	53,013	6,395
LOSS DUE TO CLEAR & GRUB. (DEPTH OF 2")	-282		282		
WASTE IN LIEU OF BORROW			-140	-140	
ADDITIONAL UNDERCUT		4,800	5,760	5,760	4,800
PROJECT TOTAL	6,615	7,484	61,960	58,915	11,055
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT				2,946	
GRAND TOTAL	6,615	7,484		61,861	
SAY	6,800	7,500		62,000	

NOTE: EMBANKMENT INCLUDES UNDERCUT EXCAVATION

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS



PROJECT REFERENCE NO.	SHEET NO.
U-5008	3B-1
RW SHEET NO.	

**SUMMARY OF PAVEMENT BREAK UP  
IN SQUARE YARDS**

LOCATION	ASPHALT BREAK UP
-L- STA. 15+25.00 TO 20+05.15	3589.46
-L- STA. 28+51.63 TO 32+50.00	2393.76
-Y2- STA. 10+32.50 TO 11+25.00	330.53
-Y4- STA. 13+80.00 TO 15+56.15	320.08
TOTAL	6633.83
SAY	6640

**SUMMARY OF PAVEMENT REMOVAL  
IN SQUARE YARDS**

LOCATION	ASPHALT REMOVAL
-L- STA. 13+93.46 TO 15+25.00	705.49
-L- STA. 20+05.51 TO 28+51.63	5203.58
-L- STA. 32+50.00 TO 33+50.18	536.52
-Y1- STA. 11+50.00 TO 12+22.36	144.39
-Y2- STA. 11+25.00 TO 11+81.00	131.92
-Y3REV- STA. 12+08.12 TO 13+28.38	480.00
-Y4- STA. 15+56.15 TO 16+00.00	107.19
-EY3- STA. 32+79.59 TO 34+74.12	849.65
-Y5- STA. 12+56.01 TO 26+80.00 LT -L-	500.52
-Y5- STA. 15+30.00 TO 15+99.86	232.87
-Y3- STA. 10+00.00 TO 14+89.97	2150.22
-Y6- STA. 7+24.96 TO 10+70.00	1321.39
TOTAL	12,363.74
SAY	12,370

**SUMMARY OF REMOVAL OF EXISTING  
GUARDRAIL IN LINEAR FEET**

LOCATION	LINEAR FEET
-Y3- STA. 8+00.00 TO 12+41.55	441.55
TOTAL	441.55
SAY	445

**ADDITIONAL  
UNDERCUT CONTINGENCY**

LOCATION	CY
-Y3REV- CONTINGENCY	2,600
GRAVE SITE CONTINGENCY	1,000
-L- CONTINGENCY	700
OVERALL CONTINGENCY	500
TOTAL CONTINGENCY	4,800

Approximate quantities only. Unclassified Excavation, Fine Grading, Clearing and Grubbing, Breaking of Existing Pavement, and Removal of Existing Pavement will be paid for at the contract lump sum price for "Grading."

SELECT GRANULAR = 1200 CUBIC YARDS TO BE USED IN THE DISCRETION OF THE RESIDENT ENGINEER  
EST. SHALLOW UNDERCUT = 350 CUBIC YARDS TO BE USED IN THE DISCRETION OF THE RESIDENT ENGINEER  
EST. SHALLOW UNDERCUT BY STATIONS = 1,800 CUBIC YARDS  
TOTAL SHALLOW UNDERCUT = 2,150 CUBIC YARDS  
CLASS IV SUBGRADE STABILIZATION = 4,900 TONS

**GUARDRAIL SUMMARY**

SURVEY LINE	BEGINNING STATION	END STATION	LOCATION	LENGTH			WARRENT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOULDER WIDTH	FLARE LENGTH		W		ANCHORS			REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	GRAU-350	AT-1	TYPE III	
-Y3-	8+00.00	8+50.00	LT	0			12+33.54	12+54.19	3'	6'					1			TYING TO EXISING GUARDRAIL
SUBTOTAL				0														
LESS ANCHOR DEDUCTIONS																		
GRAU-350, 1 @ 50' =				-50.00'														
TOTAL				0														
SAY				0										1				

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COMPUTED BY: CM DATE: 01/30/2015
CHECKED BY: SMB DATE: 01/30/2015

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO. U-5008 SHEET NO. 3D-1

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout. See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

Table with columns: LINE & STATION, OFFSET, STRUCTURE NUMBER, TOP ELEVATION, INVERT ELEVATION, MINIMUM REQUIRED SLOPE, DRAINAGE PIPE (RCP, CSP, CAAP, HDPE, or PVC), DUCTILE IRON PIPE SEALED PIPE SYSTEM, R. C. PIPE CLASS IV, ENDWALLS, REINFORCED ENDWALLS, QUANTITIES FOR DRAINAGE STRUCTURES, FRAME, GRATES, AND HOOD, CONCRETE TRANSITIONAL SECTION, and REMARKS. Includes a SHEET TOTALS row at the bottom.

COMPUTED BY: CM DATE: 01/30/2015  
CHECKED BY: SMB DATE: 01/30/2015

PROJECT NO. U-5008 SHEET NO. 3D-2

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.  
See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

Table with columns: LINE & STATION, OFFSET, STRUCTURE NUMBER, TOP ELEVATION, INVERT ELEVATION, MINIMUM REQUIRED SLOPE, Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC), DUCTILE IRON PIPE SEALED PIPE SYSTEM, R. C. PIPE CLASS IV, ENDWALLS, REINFORCED ENDWALLS, QUANTITIES FOR DRAINAGE STRUCTURES, FRAME, GRATES, AND HOOD, CONCRETE TRANSITIONAL SECTION, and REMARKS. Includes a SHEET TOTALS row at the bottom.

ABBREVIATIONS table listing codes like C.A.A., C.B., C.S., D.I., G.D.I., H.D.P.E., J.B., M.H., N.S., P.V.C., R.C., T.B.D.I., T.B.J.B., W.S. and their corresponding descriptions.

REMARKS

STRUCTURE NUMBERS 0503, 0504, 0506, 0507  
0523, 0524 NOT USED





COMPUTED BY: CM DATE: 01/30/2015
CHECKED BY: SMB DATE: 01/30/2015

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO. U-5008 SHEET NO. 3D-4

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout. See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

Main data table with columns for Line & Station, Offset, Structure Number, Invert Elevation, Pipe Type, Quantities, Frame/Grates, and Remarks. Includes summary rows for SHEET TOTALS and PROJECT TOTALS.

ABBREVIATIONS table listing codes like C.A.A., C.B., C.S., etc. and their corresponding material descriptions.

REMARKS

COMPUTED BY: CM DATE: 01/30/2015
CHECKED BY: SMB DATE: 01/30/2015

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO. U-5008 SHEET NO. 3D-5

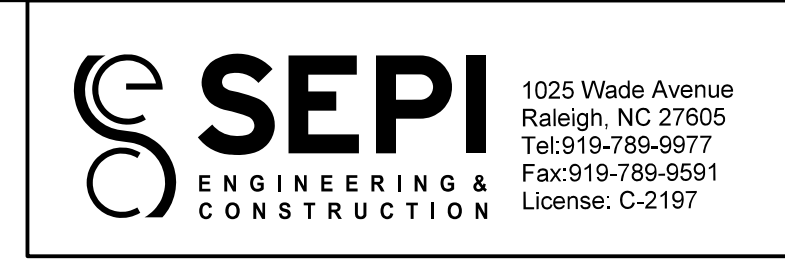
Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout. See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 54 INCHES & OVER)

Table with columns for LINE & STATION, OFFSET, STRUCTURE NUMBER, INVERT ELEVATION, MINIMUM REQUIRED SLOPE, Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC), C. S. PIPE, R. C. PIPE CLASS III, R. C. PIPE CLASS IV, R. C. PIPE CLASS V, STRUCTURAL PLATE PIPE, ENDWALLS, REINFORCED ENDWALLS, DRAINAGE STRUCTURE, QUANTITIES FOR DRAINAGE STRUCTURES, FRAME, GRATES, AND HOOD, GRATE TYPE, CONCRETE TRANSITIONAL SECTION, OPEN THROAT C.B., CONCRETE BRIDGE APPROACH D.I., D.I. STD., D.I. FRAME AND GRATES, G.D.I., G.D.I. TYPE, G.D.I. (W.S. FLAT) FRAME WITH GRATE, G.D.I. (W.S. SAG) FRAME W/ GRATE, G.D.I. (N.S. SAG) FRAME W/ GRATE, G.D.I. (N.S. FLAT) FRAME W/ GRATE, DRIVEWAY D.I., FRAME W/ GRATE FOR DRIVEWAY, J.B., T.B.D.I., STEEL FRAME WITH TWO GRATES, M.H., M.H. FRAME AND COVER, SPECIAL T.B. JUNCTION BOX, PIPE REMOVAL, REMARKS.

SHEET TOTALS and PROJECT TOTALS summary rows.

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS



**SUMMARY OF SUBSURFACE DRAINAGE**

LINE	STATION	STATION	LOCATION LT/RT/CL	DRAIN TYPE UD/BD/SD*	LF
CONTINGENCY					
-L-	16+00	20+15	RT	UD	415
-	-	-	-	UD	585
TOTAL LF:					1000

\*UD = Underdrain  
\*BD = Blind Drain  
\*SD = Subsurface Drain

**SUMMARY OF BRIDGE WAITING PERIODS**

Bridge Description	End Bent	MONTHS
BRIDGE ON SUGAR CREEK ROAD OVER BEARWOOD AVE., NCRR/NSRR AND RALEIGH ST.	End Bent No. 1	3
BRIDGE ON SUGAR CREEK ROAD OVER BEARWOOD AVE., NCRR/NSRR AND RALEIGH ST.	End Bent No. 2	1

**SUMMARY OF SETTLEMENT GAUGES**

Gauge No.	Line	Approx. Station	Approx. Offset
1	-L-	17+00	20 RT
2	-L-	18+25	20 RT
3	-L-	19+75	20 RT
4	-L-	28+65	10 RT
5	-L-	28+65	10 RT
TOTAL GAUGES (EACH):			5

**SUMMARY OF AGGREGATE SUBGRADE /STABILIZATION**

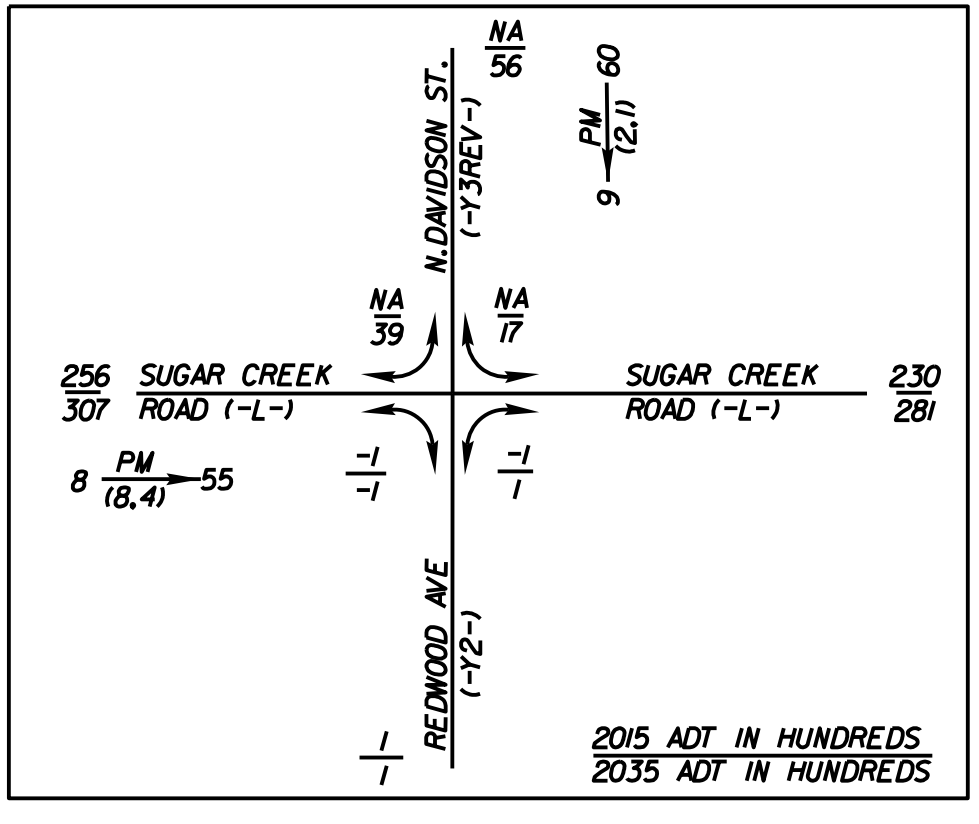
LINE	STATION	STATION	Aggregate Type * ASU/AST	Aggregate Thickness INCHES	Shallow Undercut CY	Class IV Subgrade Stabilization TONS	Geotextile for Soil Stabilization SY	Stabilizer Aggregate TONS	Class IV Aggregate Stabilization TONS
-L-	10+64	15+25	ASU	12	450	1115	1770		
-Y1-	10+54	11+62	ASU	12	100	215	340		
-Y4-	10+18	16+00	ASU	12	450	1150	1825		
-Y5-	12+56	14+70	ASU	12	325	430	680		
-Y7-	10+34	13+25	ASU	12	475	1035	1640		
CONTINGENCY									
-	-	-	ASU	12	350	955	1545	-	-
Varies	-	-	Geotextile for Embankment Stability				700		
Varies	-	-	Geotextile for Subgrade Stability				500		
TOTAL CY/TONS:					2150	4900	9000	0	0

\*ASU = Aggregate Subgrade  
\*AST = Aggregate Stabilization

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0400DEL\_P30



**-Y3REV- CURVE DATA**  
PI Sta 17+69.91  
 $\Delta = 78^\circ 51' 47.4" (LT)$   
 $D = 22^\circ 55' 04.3"$   
 $L = 344.1'$   
 $T = 205.59'$   
 $R = 250.0'$   
 $e = NC$

**-PED- CURVE DATA**  
PI Sta 10+25.39  
 $\Delta = 73^\circ 32' 25.7" (RT)$   
 $D = 286^\circ 28' 44.0"$   
 $L = 25.67'$   
 $T = 14.95'$   
 $R = 20.00'$

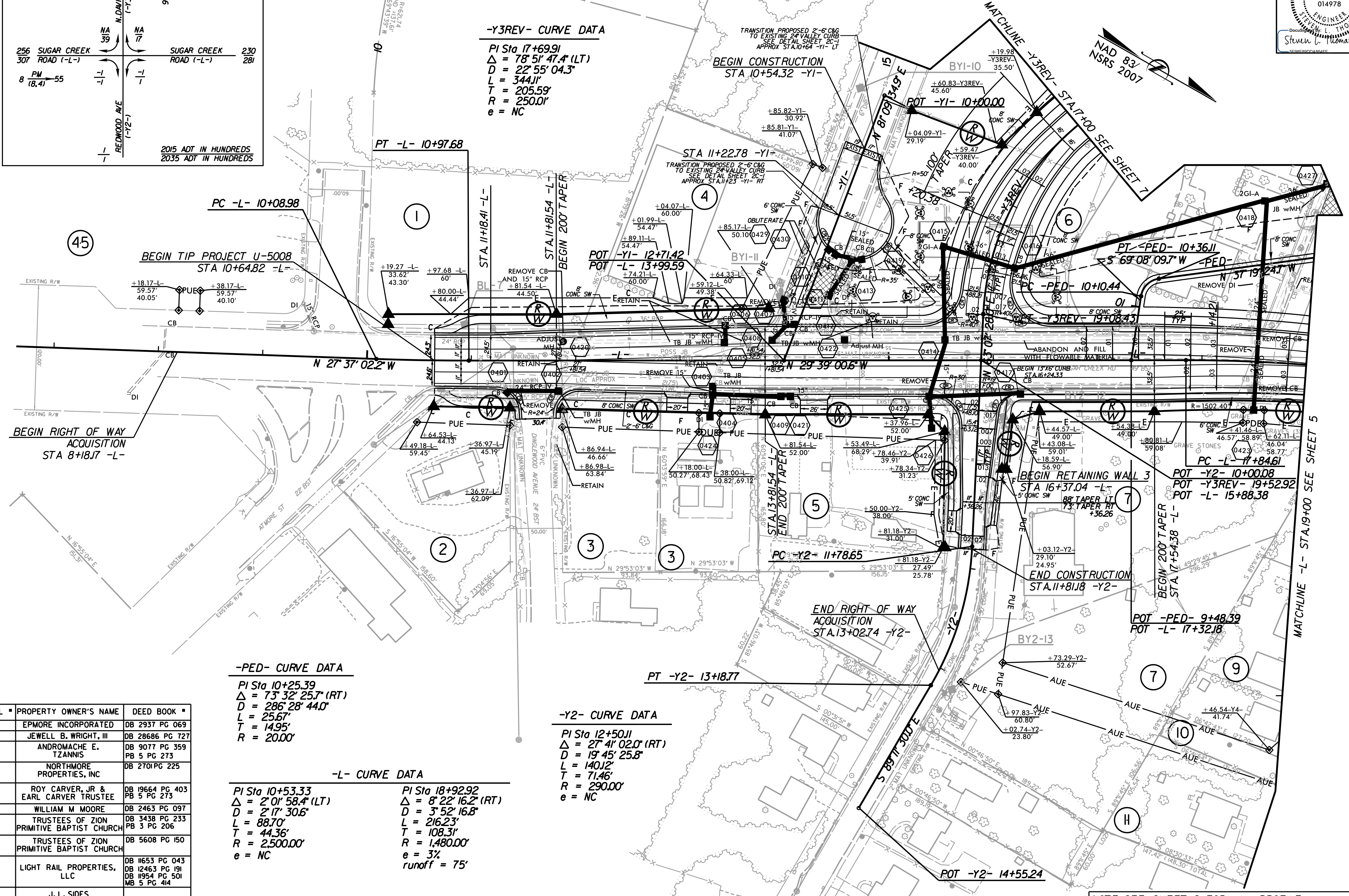
**-Y2- CURVE DATA**  
PI Sta 12+50.11  
 $\Delta = 27^\circ 41' 02.0" (RT)$   
 $D = 19^\circ 45' 25.8"$   
 $L = 140.12'$   
 $T = 71.46'$   
 $R = 290.00'$   
 $e = NC$

**-L- CURVE DATA**

PI Sta 10+53.33 $\Delta = 2^\circ 01' 58.4" (LT)$ $D = 3^\circ 52' 16.8"$ $L = 88.70'$ $T = 44.36'$ $R = 2,500.00'$ $e = NC$	PI Sta 18+92.92 $\Delta = 8^\circ 22' 16.2" (RT)$ $D = 3^\circ 52' 16.8"$ $L = 216.23'$ $T = 108.31'$ $R = 1,480.00'$ $e = 3\%$ $runoff = 75'$
--	---

PARCEL #	PROPERTY OWNER'S NAME	DEED BOOK #
1	EPMORE INCORPORATED	DB 2937 PG 069
2	JEWELL B. WRIGHT, III	DB 28686 PG T27
3	ANDROMACHE E. TZANNIS	DB 9077 PG 359 PB 5 PG 273
4	NORTHMORE PROPERTIES, INC	DB 2701 PG 225
5	ROY CARVER, JR & EARL CARVER TRUSTEE	DB 19664 PG 403 PB 5 PG 273
6	WILLIAM M MOORE	DB 2463 PG 097
7	TRUSTEES OF ZION PRIMITIVE BAPTIST CHURCH	DB 3438 PG 233 PB 3 PG 206
7	TRUSTEES OF ZION PRIMITIVE BAPTIST CHURCH	DB 5608 PG 150
9	LIGHT RAIL PROPERTIES, LLC	DB 11653 PG 043 DB 12463 PG 191 DB 11954 PG 501 MB 5 PG 414
10	J. L. SIDES PATRICIA S. PROPST	DB 9579 PG 502
11	PAUL SMITH RENEE BROWN SMITH	DB 9579 PG 502
45	STERLING DEVELOPMENT COMPANY	DB 2937 PG 120

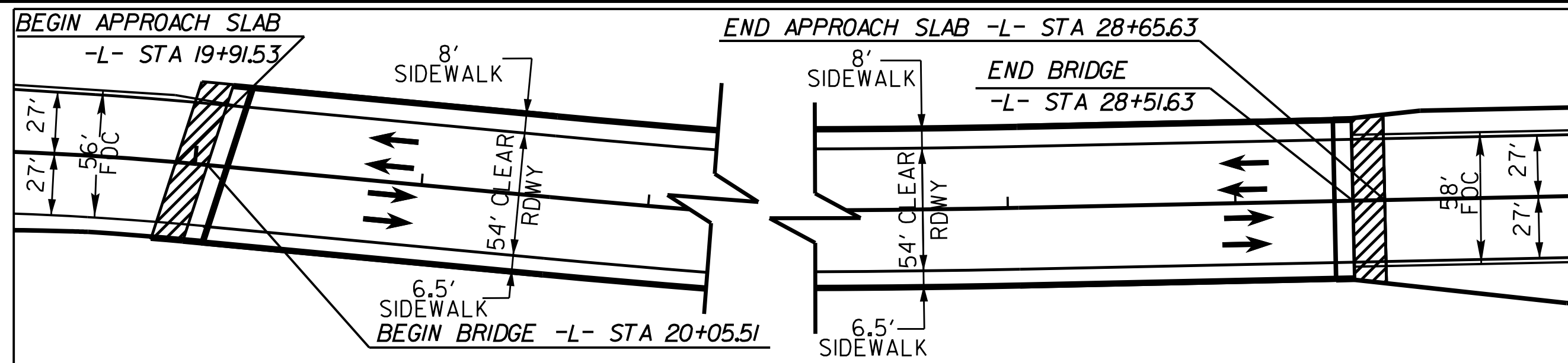
NOTE: SEE SHEET 9 FOR -L- PROFILE  
NOTE: SEE SHEET 10 FOR -Y1- & -Y2- PROFILE  
NOTE: SEE SHEET 11 FOR -Y3REV- PROFILE  
NOTE: SEE SHEET 12 FOR -PED- PROFILE  
NOTE: SEE SHEET ECS-1 THRU ECS-3 FOR ELECTRICAL CONDUIT SYSTEM  
NOTE: SEE SHEET WALL-1 THRU WALL-19 FOR WALL PLANS



REVISIONS

0400DEL\_P30

0400DEL\_P30



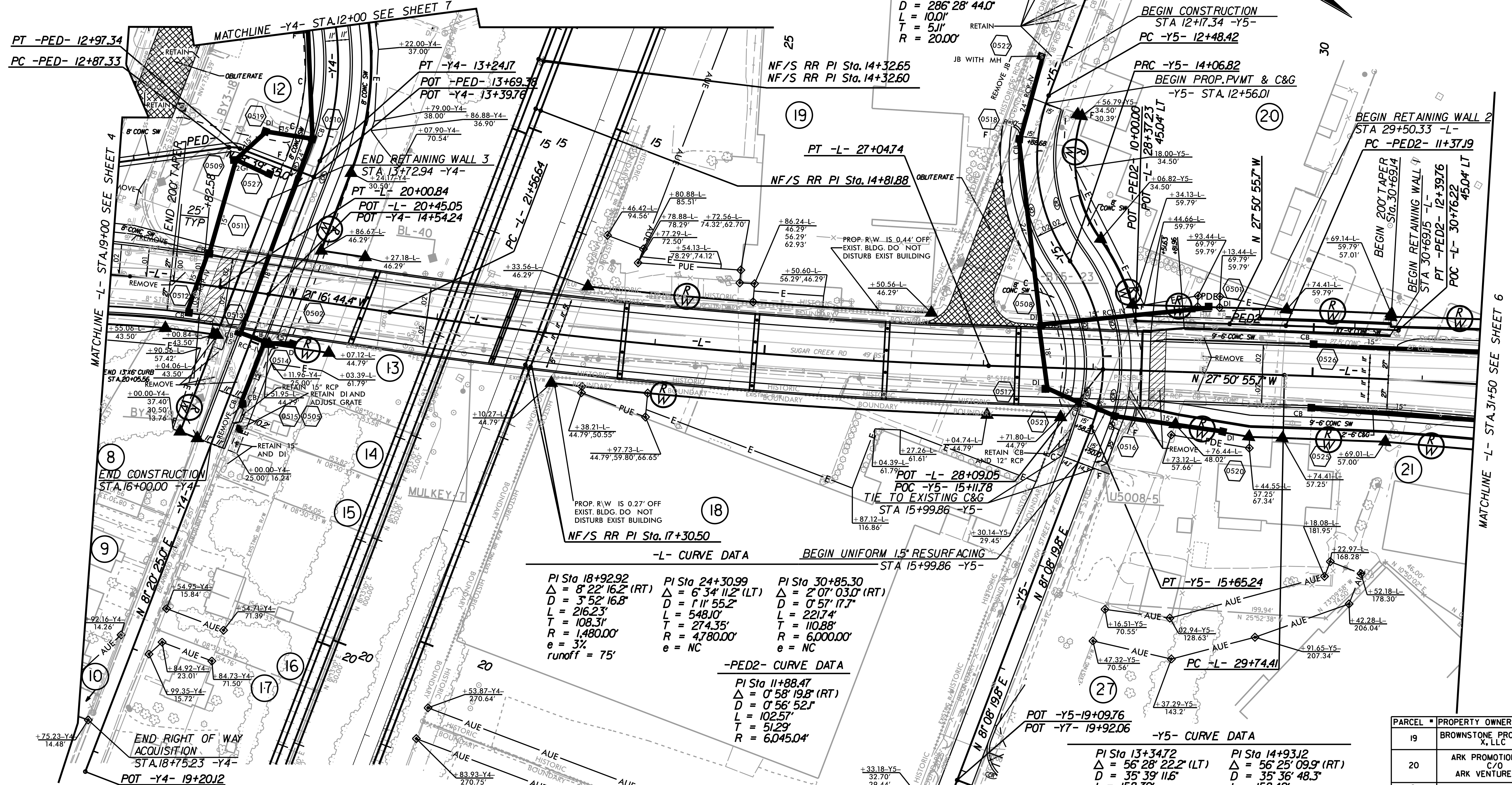
Sketch showing Dimensions of Pavement and Shoulder in Relation to Proposed Bridge Width

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BEGIN RIGHT OF WAY ACQUISITION  
STA. 9+74.30 -Y5-

PROJECT REFERENCE NO. <b>U-5008</b>	SHEET NO. <b>5</b>
R/W SHEET NO. <b>3/5/2015</b>	HYDRAULICS ENGINEER <b>3/5/2015</b>
ROADWAY DESIGN ENGINEER <b>STEVEN L. THOMAS</b>	SEAL <b>014978</b>
	SEAL <b>012786</b>



**-PED- CURVE DATA**  
PI Sta 12+92.44  
 $\Delta = 28^\circ 39' 49.7''$  (RT)  
 $D = 286' 28'' 44.0''$   
 $L = 100.0'$   
 $T = 51.1'$   
 $R = 200.0'$

**-L- CURVE DATA**

PI Sta 18+92.92 $\Delta = 8^\circ 22' 16.2''$ (RT) $D = 3^\circ 52' 16.8''$ $L = 216.23'$ $T = 108.31'$ $R = 1,480.00'$ $e = 3\%$ runoff = 75'	PI Sta 24+30.99 $\Delta = 6^\circ 34' 11.2''$ (LT) $D = 1^\circ 11' 55.2''$ $L = 548.10'$ $T = 274.35'$ $R = 4,780.00'$ $e = NC$	PI Sta 30+85.30 $\Delta = 2^\circ 07' 03.0''$ (RT) $D = 0^\circ 57' 17.7''$ $L = 221.74'$ $T = 110.88'$ $R = 6,000.00'$ $e = NC$
---	--	--

**-PED2- CURVE DATA**  
PI Sta 11+88.47  
 $\Delta = 0^\circ 58' 19.8''$  (RT)  
 $D = 0^\circ 56' 52.1''$   
 $L = 102.57'$   
 $T = 51.29'$   
 $R = 6,045.04'$

**-Y5- CURVE DATA**

PI Sta 13+34.72 $\Delta = 56^\circ 28' 22.2''$ (LT) $D = 35^\circ 39' 11.6''$ $L = 158.39'$ $T = 86.30'$ $R = 160.70'$ $e = NC$	PI Sta 14+93.12 $\Delta = 56^\circ 25' 09.9''$ (RT) $D = 35^\circ 36' 48.3''$ $L = 158.42'$ $T = 86.30'$ $R = 160.88'$ $e = NC$
---	---

**-Y4- CURVE DATA**  
PI Sta 11+94.56  
 $\Delta = 69^\circ 18' 55.3''$  (RT)  
 $D = 22^\circ 55' 05.9''$   
 $L = 302.45'$   
 $T = 172.84'$   
 $R = 250.00'$   
 $e = NC$

PARCEL #	PROPERTY OWNER'S NAME	DEED BOOK #
8	HUEY M ROWE-ANDERSON	DB 14636 PG 237 PB 5 PG 414
9	LIGHT RAIL PROPERTIES, LLC	DB 11653 PG 043 DB 12463 PG 191 DB 11954 PG 501 MB 5 PG 414
10	J. L. SIDES PATRICIA S. PROPST	
12	CHARLOTTE & NICOLETTE, INC	DB 23107 PG 405
13	AOA LEASING COMPANY	DB 5547 PG 953 PB 5 PG 414

PARCEL #	PROPERTY OWNER'S NAME	DEED BOOK #
14	LIGHT RAIL PROPERTIES, LLC	DB 10248 PG 855 MB 5 PG 414
15	CR INVESTMENTS, LLC	DB 6996 PG 330 MB 5 PG 414
16	M. C. WALLACE DOROTHY C. WALLACE	DB 2220 PG 262 MB 5 PG 414
17	ANDREW KLENK	DB 27884 PG 221 MB 5 PG 414
18	WAREHOUSE SOLUTIONS OF CHARLOTTE, LLC	DB 10766 PG 777

PARCEL #	PROPERTY OWNER'S NAME	DEED BOOK #
19	BROWNSTONE PROPERTIES X, LLC	DB 9951 PG 185
20	ARK PROMOTIONS, INC C/O ARK VENTURES, INC	DB 23195 PG 719
21	HELEN DORTON, LLC	DB 10482 PG 789
27	ECONOMY TRANSPORT GROUP, INC	DB 16914 PG 809 DB 14829 PG 237
42	CONTECH CONSTRUCTION PRODUCTS, INC	DB 8531 PG 814

NOTE: SEE SHEET 9 FOR -L- PROFILE  
NOTE: SEE SHEET 11 FOR -Y4- PROFILE  
NOTE: SEE SHEET 12 FOR -Y5-, -PED- & -PED2- PROFILE  
NOTE: SEE SHEET 5-I THRU 5-T8 FOR STRUCTURE PLANS  
NOTE: SEE SHEET ECS-I THRU ECS-3 FOR ELECTRICAL CONDUIT PLANS

REVISIONS

MATCHLINE -L- STA. 31+50 SEE SHEET 6

MATCHLINE -L- STA. 19+00 SEE SHEET 4

MATCHLINE -Y4- STA. 12+00 SEE SHEET 7

0400DEL\_P30

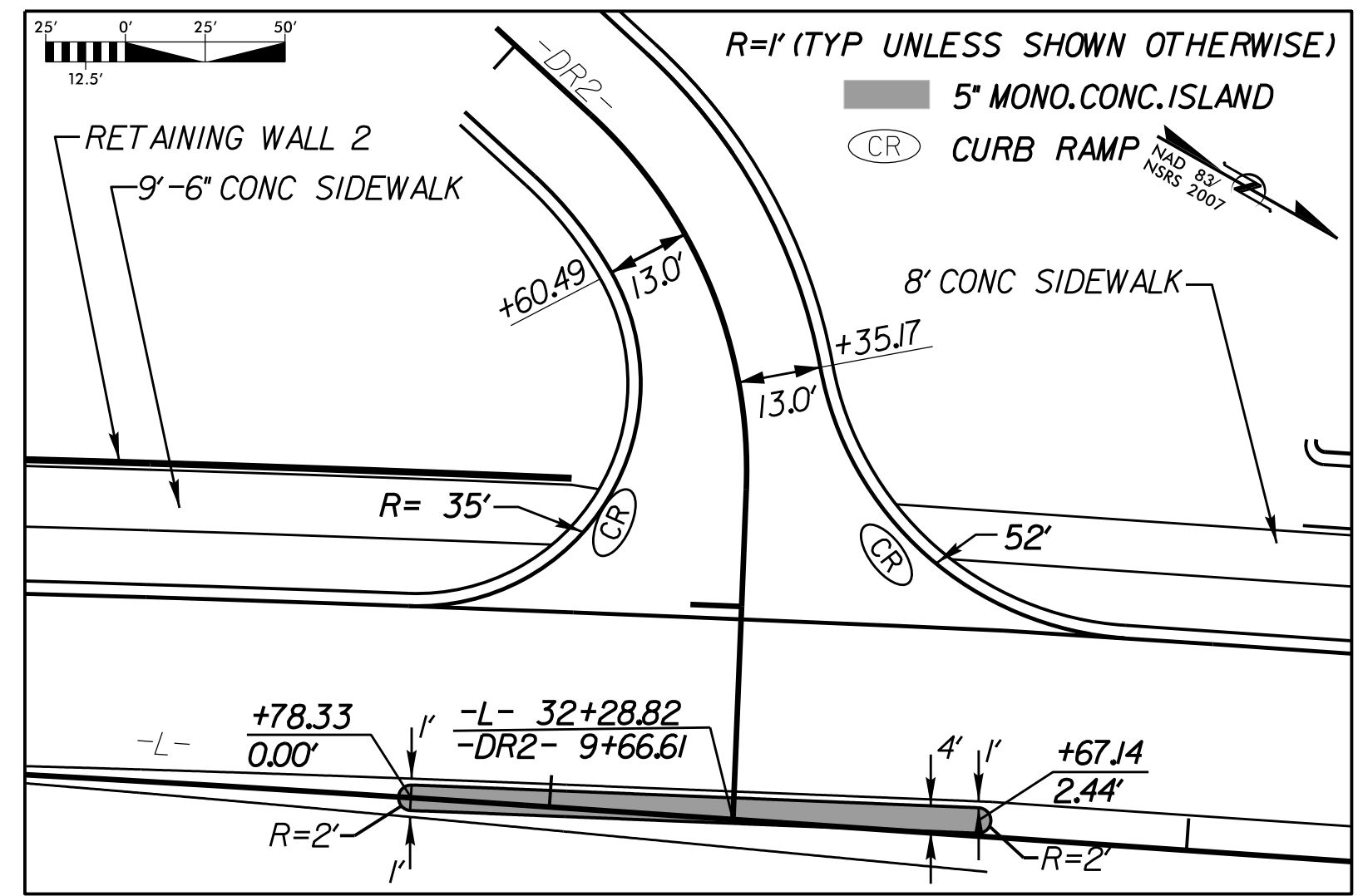
PARCEL #	PROPERTY OWNER'S NAME	DEED BOOK #
20	ARK PROMOTIONS, INC C/O ARK VENTURES, INC	DB 23915 PG 719
21	HELEN DORTON, LLC	DB 10482 PG 789
22	STAR MOUNTAIN PROPERTIES	DB 20685 PG 769
23	AJP MECKLENBURG, LLC	DB 24519 PG 504 DB 25107 PG 028
24	VIET-MY CORPORATION	DB 16755 PG 902 DB 16755 PG 906
25	VASILIOS K. BELIGRINIS, et al	DB 5547 PG 573

PARCEL #	PROPERTY OWNER'S NAME	DEED BOOK #
26	METROMONT PRESTRESS COMPANY	DB 9426 PG 410
27	ECONOMY TRANSPORT GROUP, INC	DB 16914 PG 809 DB 14829 PG 237
28	JOAL CORP	DB 7059 PG 202
29	CONCRETE SUPPLY COMPANY	DB 8485 PG 827

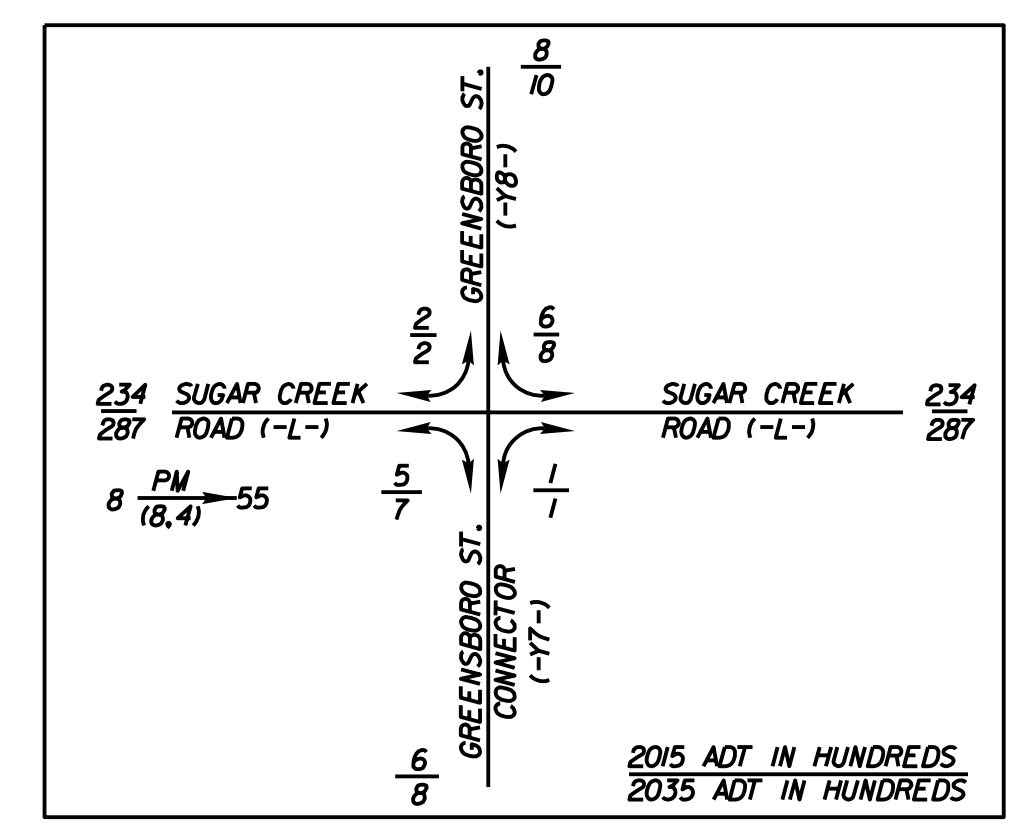
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PROJECT REFERENCE NO. <b>U-5008</b>	SHEET NO. <b>6</b>
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER 3/5/2015	3/5/2015
Professional Engineer Seal STEVEN L. THOMAS SEAL 014978	Professional Engineer Seal STEVEN L. THOMAS SEAL 012786



DRIVEWAY ISLAND AND MEDIAN DETAIL

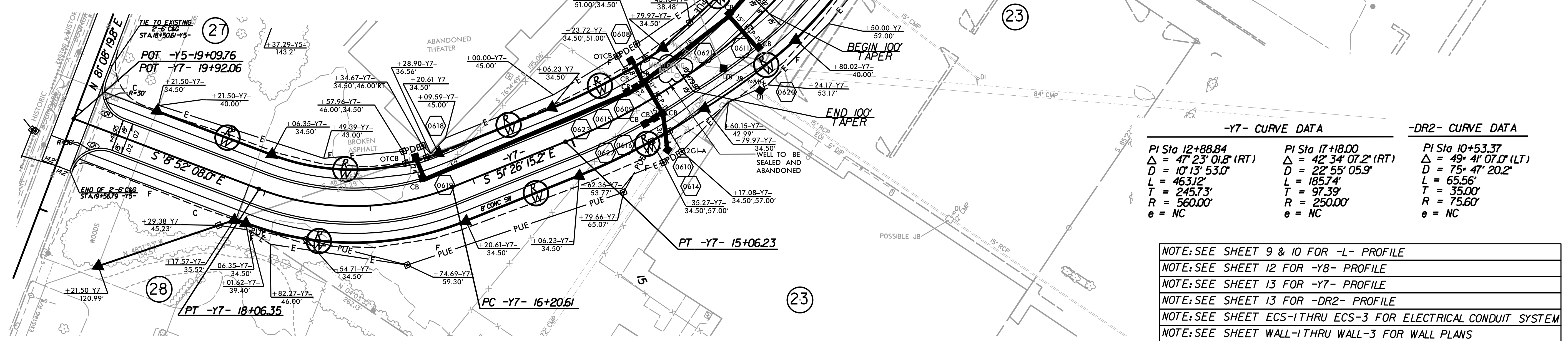


**PUE CALLOUTS**

POINT	STA.	OFFSET	LINE
1	+45.64	83.55'	L
2	+65.55	69.03'	L
3	+65.70	60.98'	L

**-DR2- BEARINGS**

1	S 13° 00' 31.2" W
2	S 62° 41' 38.2" E



-Y7- CURVE DATA	-DR2- CURVE DATA
PI Sta 12+88.84	PI Sta 17+18.00
$\Delta = 47° 23' 01.8"$ (RT)	$\Delta = 42° 34' 07.2"$ (RT)
D = 10' 13" 53.0"	D = 22° 55' 05.9"
L = 463.12'	L = 185.74'
T = 245.73'	T = 97.39'
R = 560.00'	R = 250.00'
e = NC	e = NC

NOTE: SEE SHEET 9 & 10 FOR -L- PROFILE  
 NOTE: SEE SHEET 12 FOR -Y8- PROFILE  
 NOTE: SEE SHEET 13 FOR -Y7- PROFILE  
 NOTE: SEE SHEET 13 FOR -DR2- PROFILE  
 NOTE: SEE SHEET ECS-1 THRU ECS-3 FOR ELECTRICAL CONDUIT SYSTEM  
 NOTE: SEE SHEET WALL-1 THRU WALL-3 FOR WALL PLANS

REVISIONS

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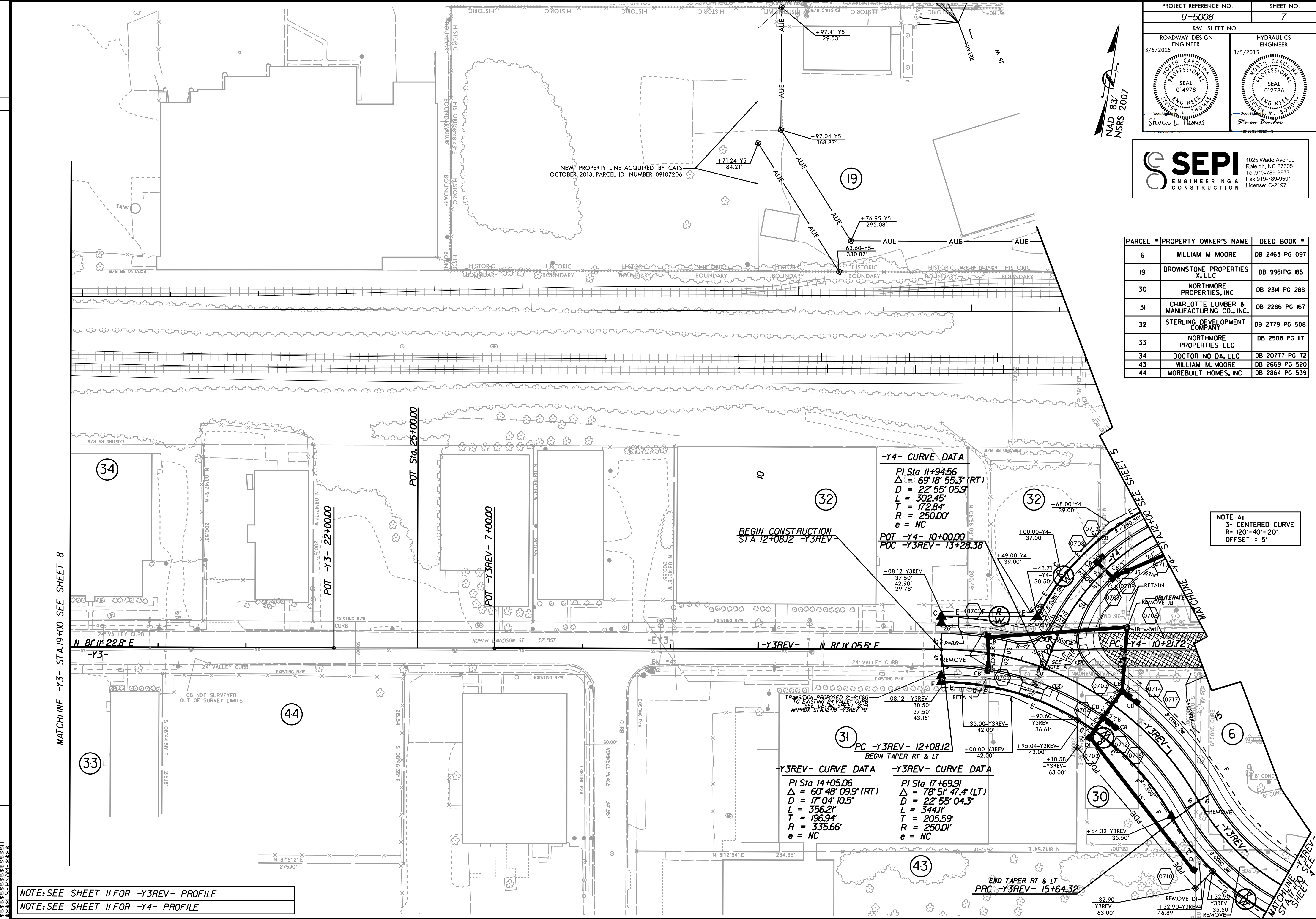
REVISIONS

PROJECT REFERENCE NO. <b>U-5008</b>	SHEET NO. <b>7</b>
R/W SHEET NO. ROADWAY DESIGN ENGINEER 3/5/2015	HYDRAULICS ENGINEER 3/5/2015
Steven L. Thomas	Steven Bonder

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PARCEL #	PROPERTY OWNER'S NAME	DEED BOOK #
6	WILLIAM M MOORE	DB 2463 PG 097
19	BROWNSTONE PROPERTIES X, LLC	DB 9951 PG 185
30	NORTHMORE PROPERTIES, INC	DB 2314 PG 288
31	CHARLOTTE LUMBER & MANUFACTURING CO., INC.	DB 2286 PG 167
32	STERLING DEVELOPMENT COMPANY	DB 2779 PG 508
33	NORTHMORE PROPERTIES LLC	DB 2508 PG 117
34	DOCTOR NO-DA, LLC	DB 20777 PG 72
43	WILLIAM M. MOORE	DB 2669 PG 520
44	MOREBUILT HOMES, INC	DB 2864 PG 539



**-Y4- CURVE DATA**  
 PI Sta 11+94.56  
 $\Delta = 69' 18'' 55.3''$  (RT)  
 $D = 22' 55'' 05.9''$   
 $L = 302.45'$   
 $T = 172.84'$   
 $R = 250.00'$   
 $e = NC$   
 POT -Y4- 10+00.00  
 POC -Y3REV- 13+28.38

**-Y3REV- CURVE DATA**  
 PI Sta 14+05.06  
 $\Delta = 60' 48'' 09.9''$  (RT)  
 $D = 17' 04'' 10.5''$   
 $L = 356.21'$   
 $T = 196.94'$   
 $R = 335.66'$   
 $e = NC$

**-Y3REV- CURVE DATA**  
 PI Sta 17+69.91  
 $\Delta = 78' 51'' 47.4''$  (LT)  
 $D = 22' 55'' 04.3''$   
 $L = 344.11'$   
 $T = 205.59'$   
 $R = 250.01'$   
 $e = NC$

NOTE A:  
 3- CENTERED CURVE  
 $R = 120'-40'-120'$   
 OFFSET = 5'

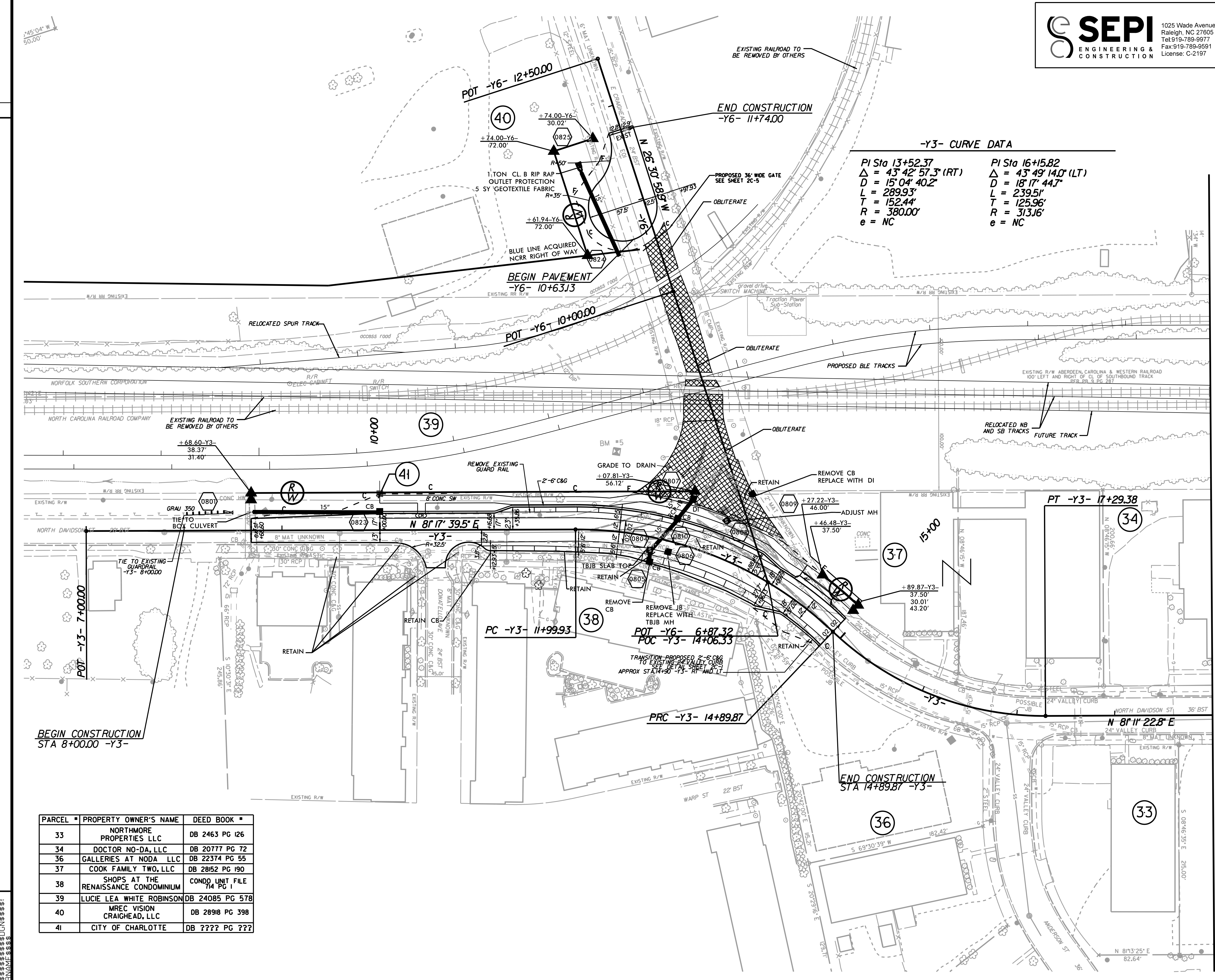
NOTE: SEE SHEET 11 FOR -Y3REV- PROFILE  
 NOTE: SEE SHEET 11 FOR -Y4- PROFILE

MATCHLINE -Y3- STA. 19+40.00 SEE SHEET 8

MATCHLINE -Y4- STA. 17+00.00 SEE SHEET 5

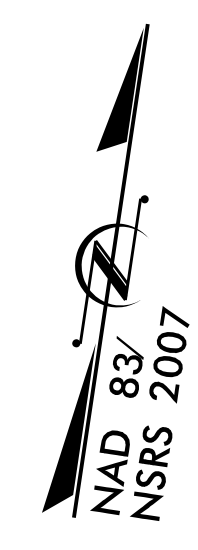


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**-Y3- CURVE DATA**

PI Sta 13+52.37	PI Sta 16+15.82
$\Delta = 43^\circ 42' 57.3''$ (RT)	$\Delta = 43^\circ 49' 14.0''$ (LT)
D = 15' 04' 40.2"	D = 18' 17' 44.7"
L = 289.93'	L = 239.51'
T = 152.44'	T = 125.96'
R = 380.00'	R = 313.16'
e = NC	e = NC

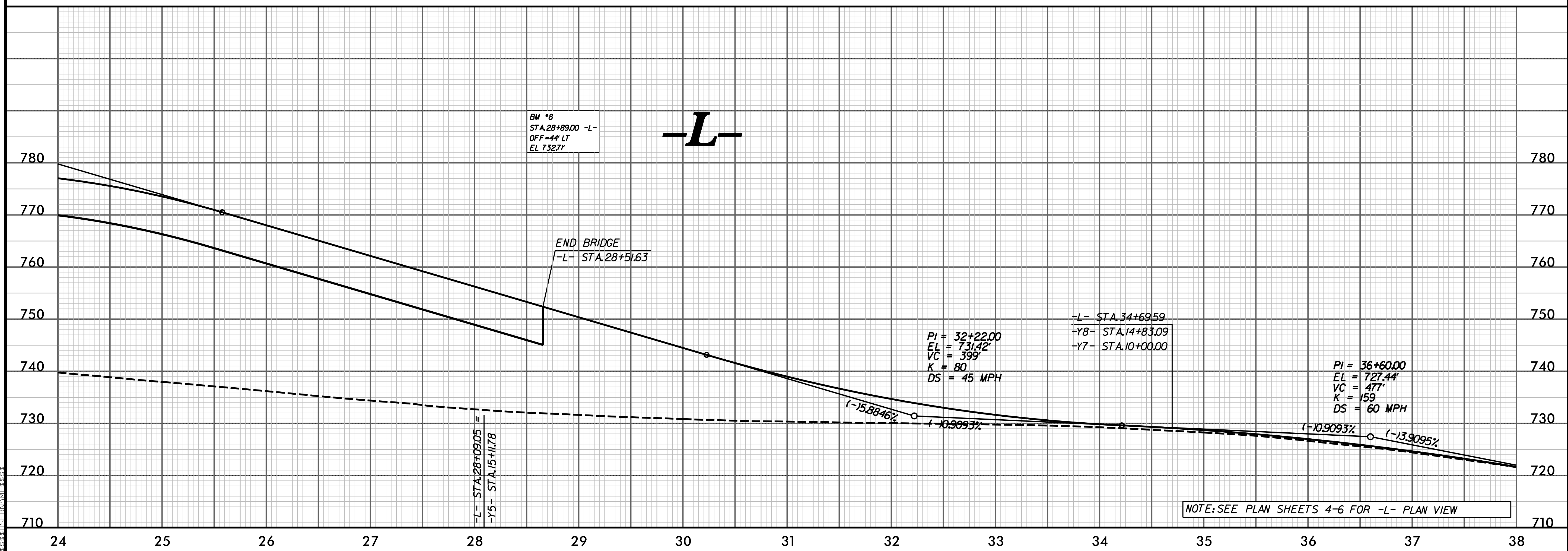
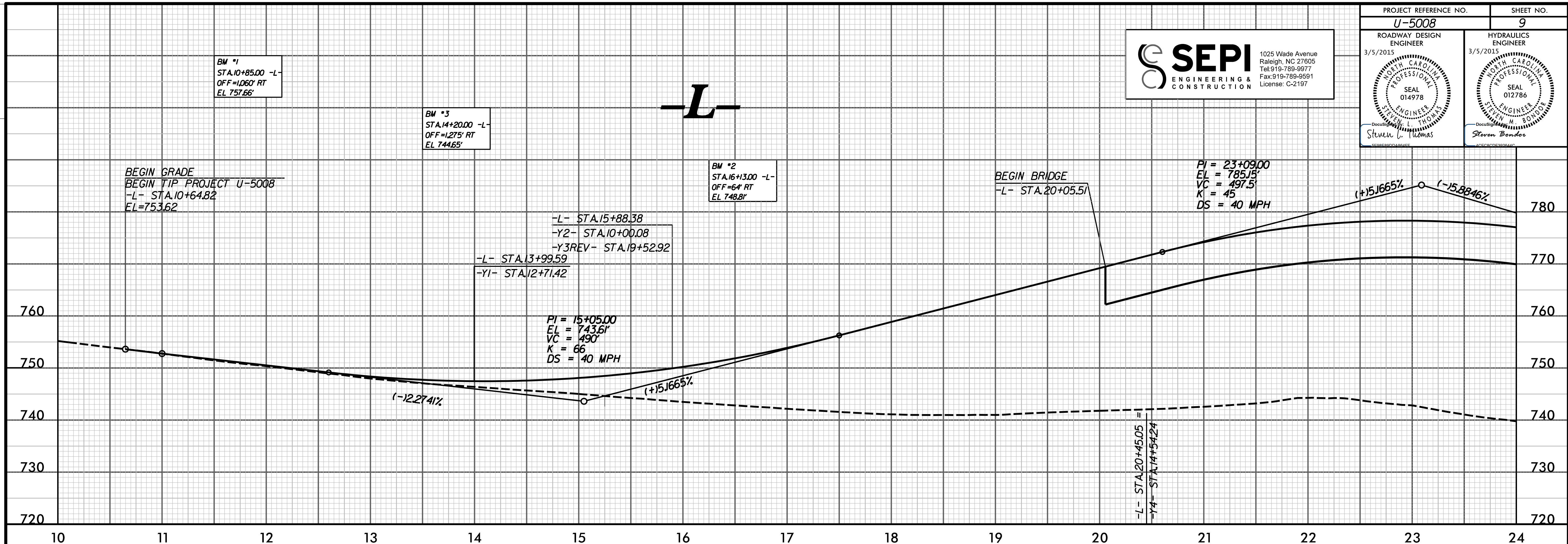
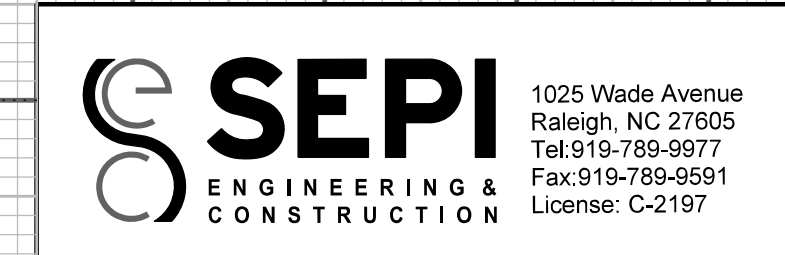


REVISIONS

PARCEL #	PROPERTY OWNER'S NAME	DEED BOOK #
33	NORTHMORE PROPERTIES LLC	DB 2463 PG 126
34	DOCTOR NO-DA, LLC	DB 20777 PG 72
36	GALLERIES AT NODA LLC	DB 22374 PG 55
37	COOK FAMILY TWO, LLC	DB 28152 PG 190
38	SHOPS AT THE RENAISSANCE CONDOMINIUM	CONDO UNIT FILE 714 PG 1
39	LUCIE LEA WHITE ROBINSON	DB 24085 PG 578
40	MREC VISION CRAIGHEAD, LLC	DB 28918 PG 398
41	CITY OF CHARLOTTE	DB ??? PG ???

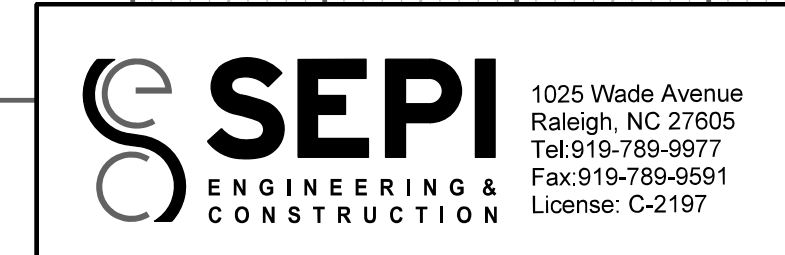
MATCHLINE -Y3- STA.19+00 SEE SHEET 7

NOTE: SEE SHEET 10 FOR -Y3- PROFILE  
 NOTE: SEE SHEET 12 FOR -Y6- PROFILE



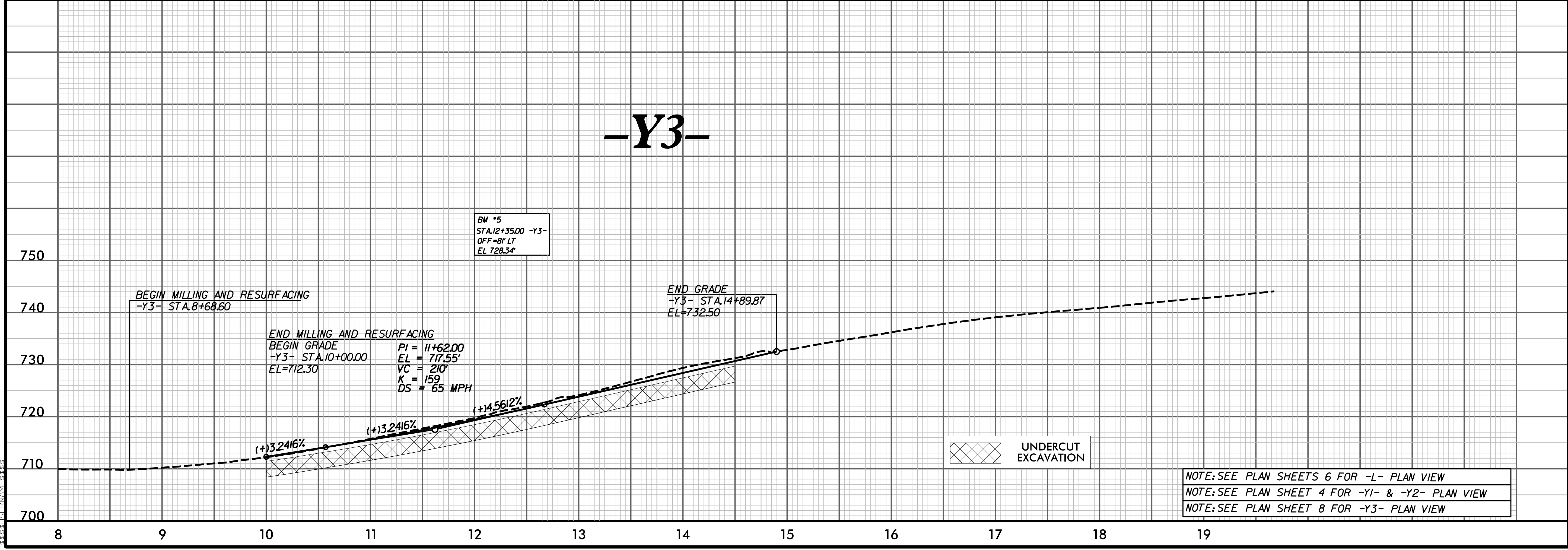
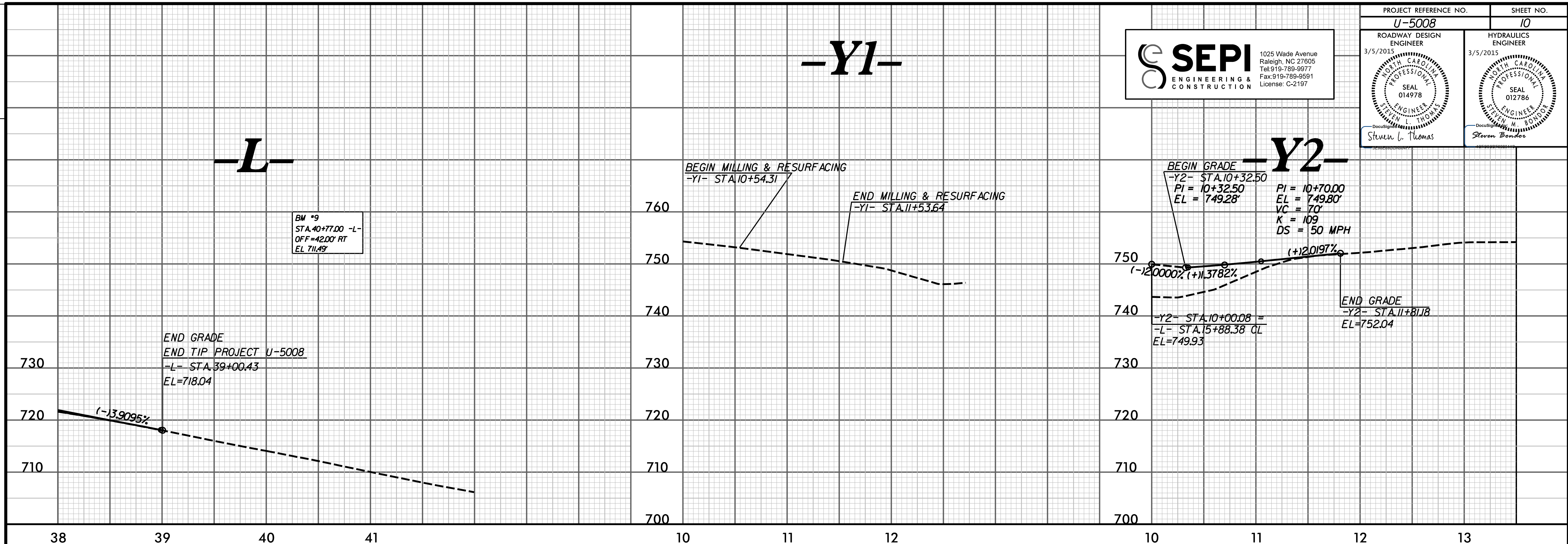
NOTE: SEE PLAN SHEETS 4-6 FOR -L- PLAN VIEW

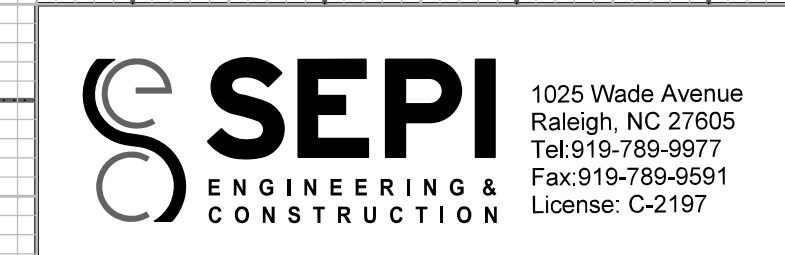
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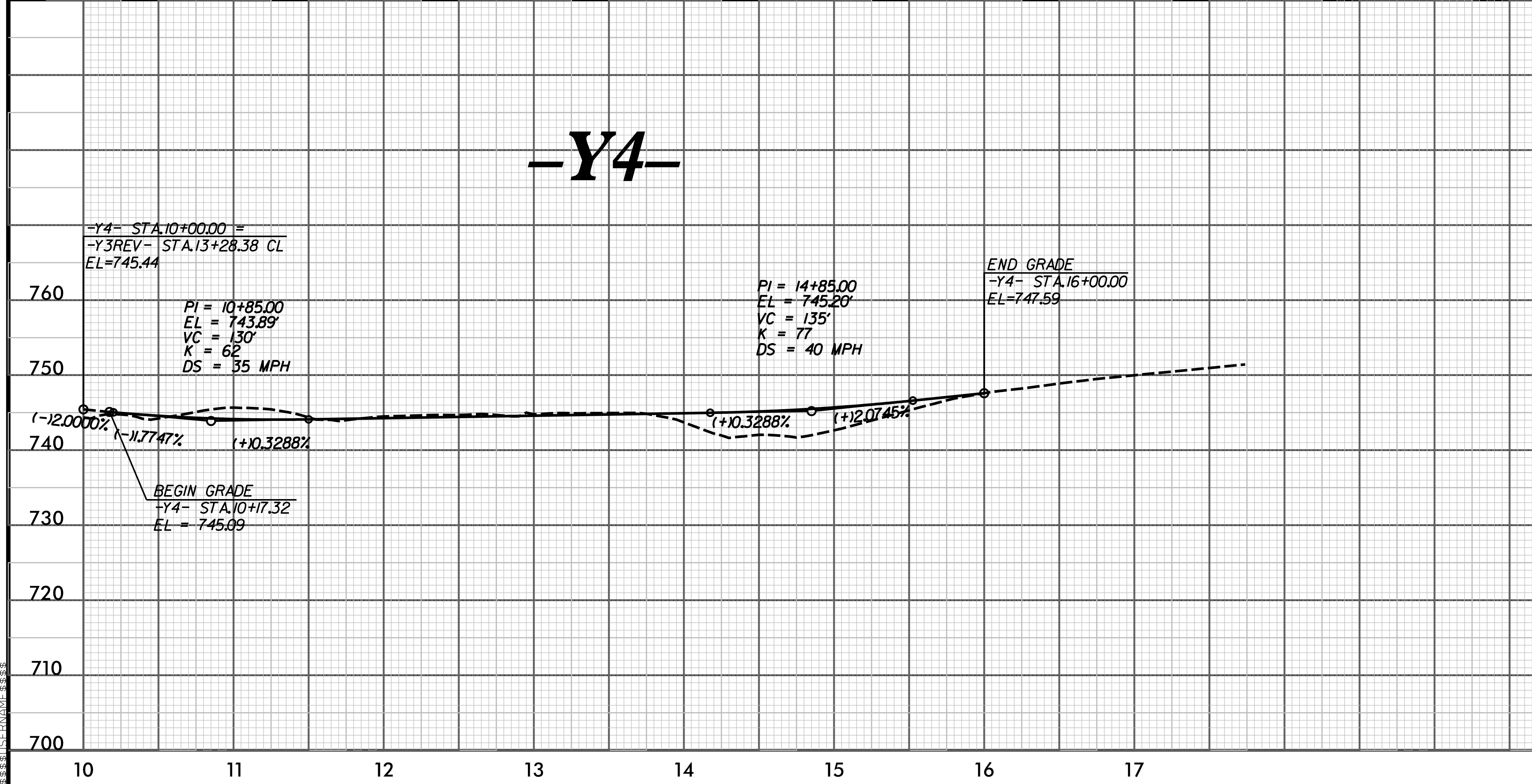
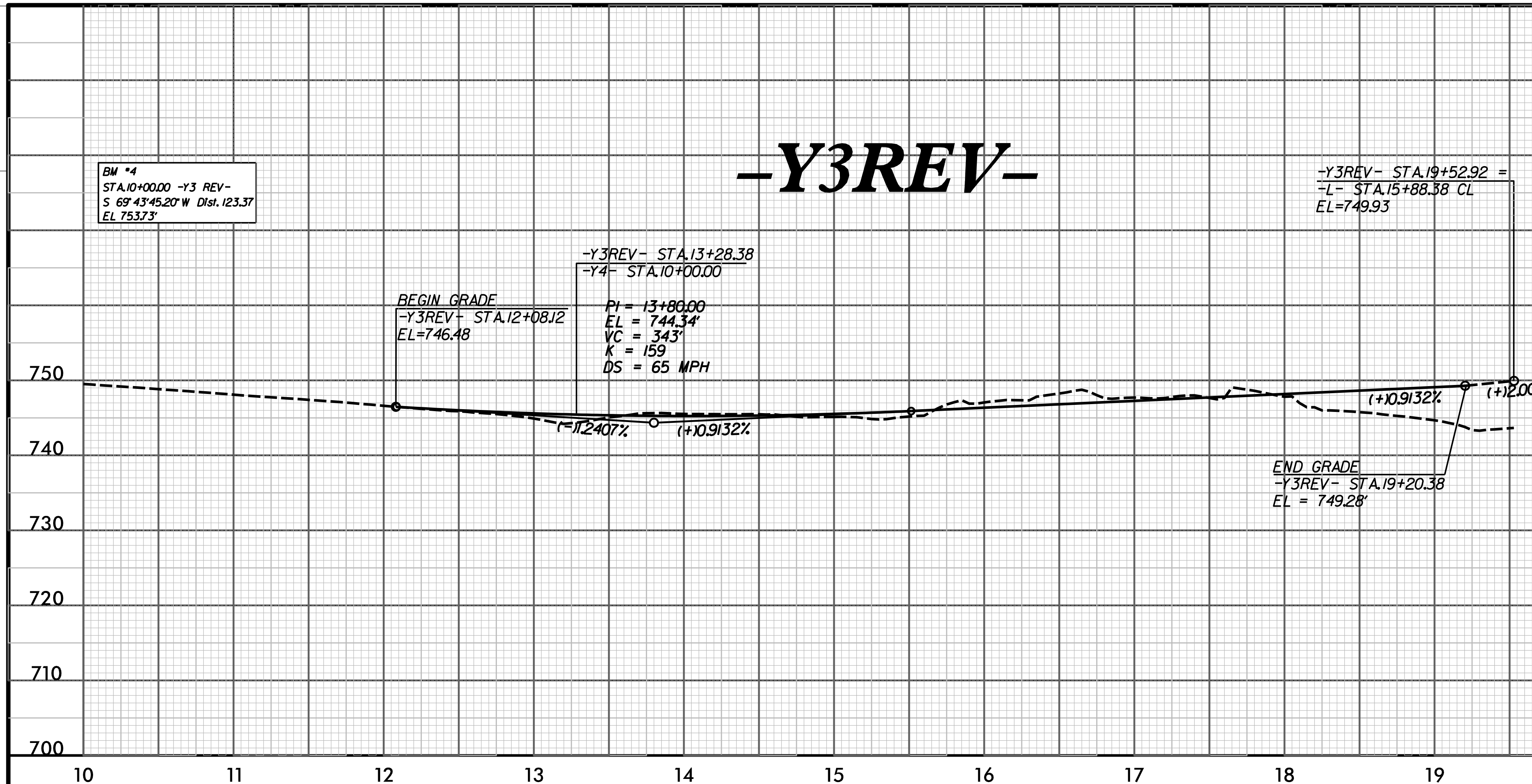
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PROJECT REFERENCE NO.	SHEET NO.
U-5008	10
ROADWAY DESIGN ENGINEER 3/5/2015	HYDRAULICS ENGINEER 3/5/2015
 Steven L. Thomas	 Steven Bondar

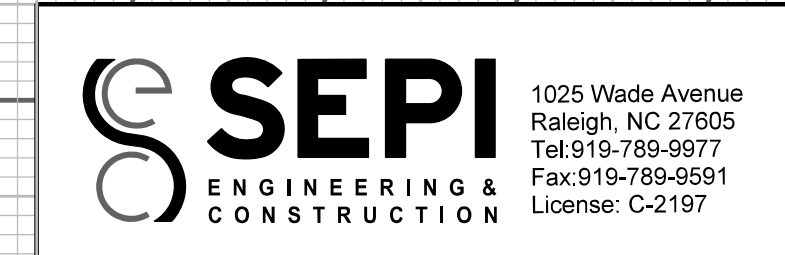




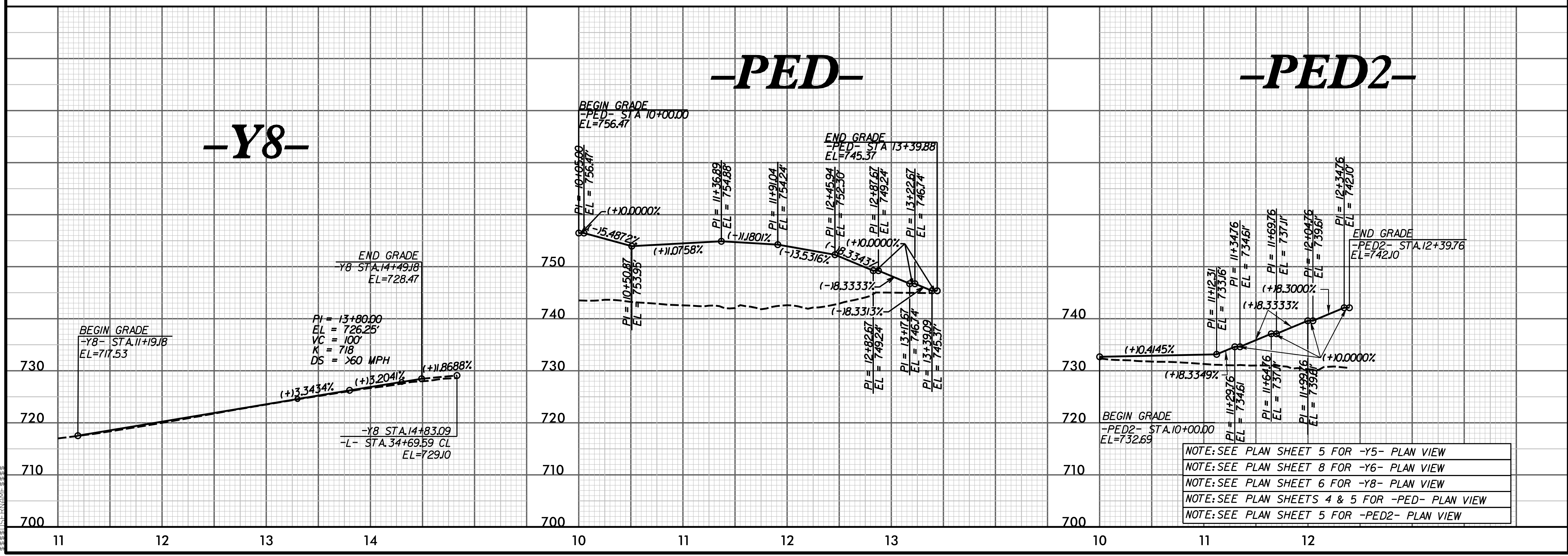
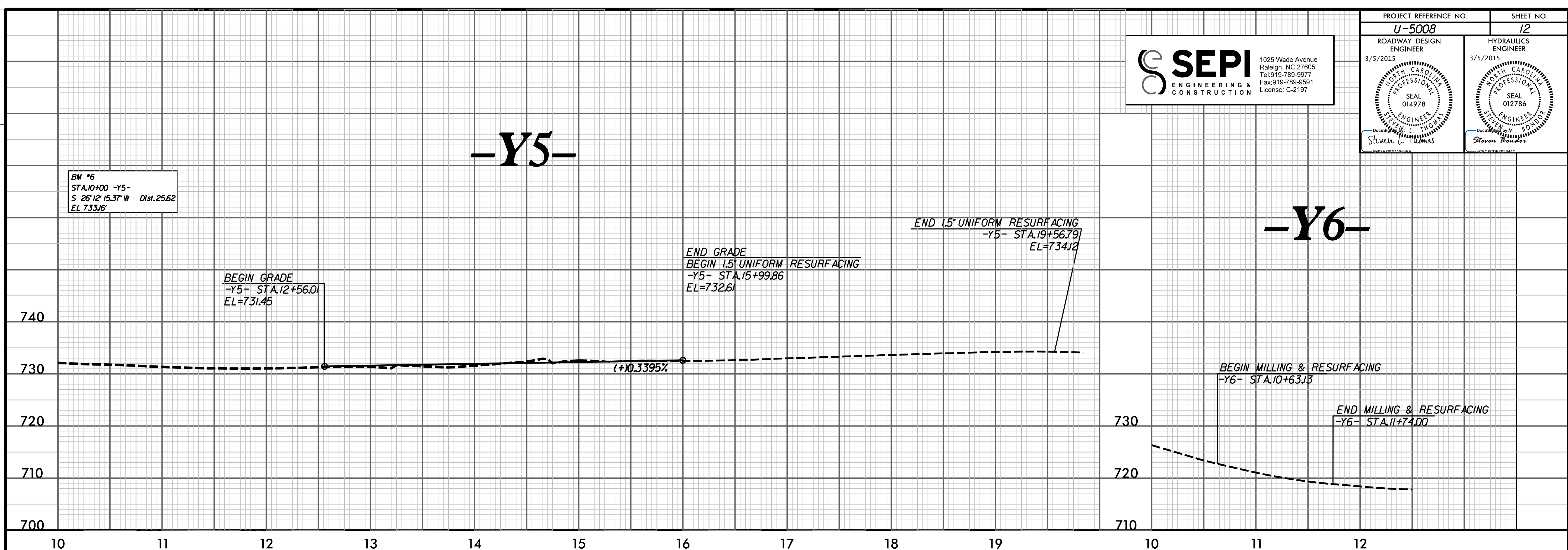
PROJECT REFERENCE NO. <b>U-5008</b>	SHEET NO. <b>11</b>
ROADWAY DESIGN ENGINEER 3/5/2015	HYDRAULICS ENGINEER 3/5/2015



NOTE: SEE PLAN SHEETS 4 & 7 FOR -Y3REV- PROFILE  
NOTE: SEE PLAN SHEETS 5 & 7 FOR -Y4- PROFILE



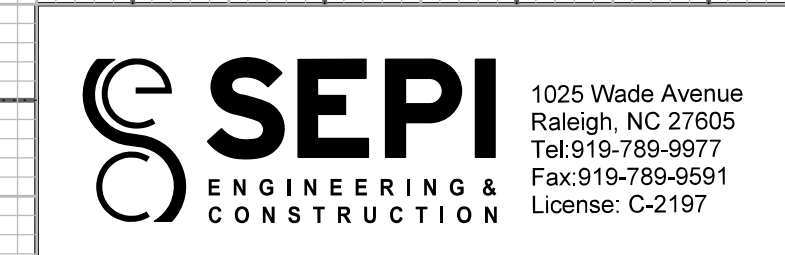
PROJECT REFERENCE NO. <b>U-5008</b>	SHEET NO. <b>12</b>
ROADWAY DESIGN ENGINEER 3/5/2015 <i>Steven L. Thomas</i>	HYDRAULICS ENGINEER 3/5/2015 <i>Steven Bondor</i>



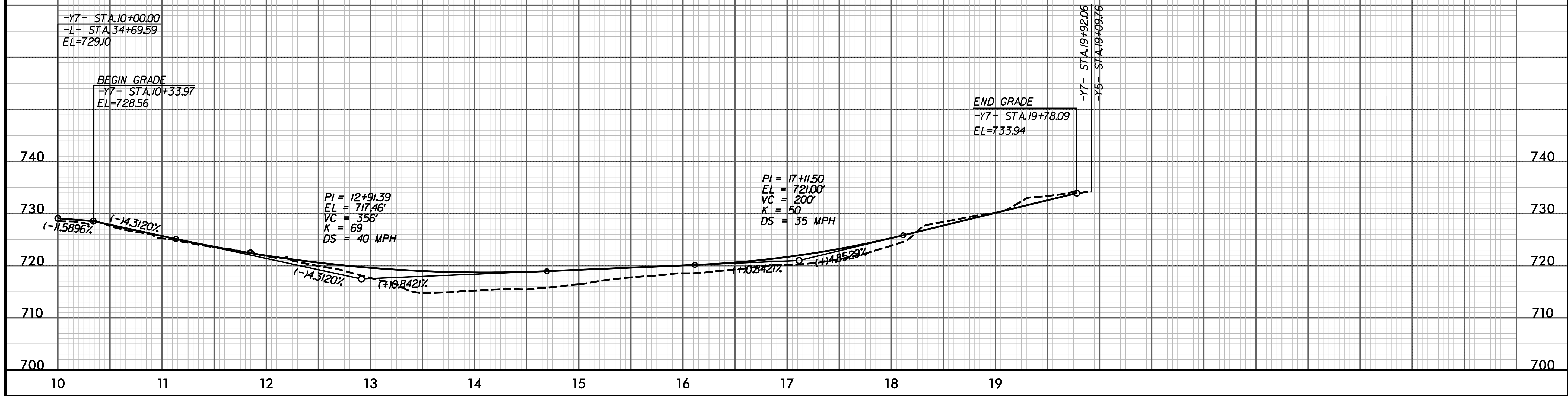
NOTE: SEE PLAN SHEET 5 FOR -Y5- PLAN VIEW  
 NOTE: SEE PLAN SHEET 8 FOR -Y6- PLAN VIEW  
 NOTE: SEE PLAN SHEET 6 FOR -Y8- PLAN VIEW  
 NOTE: SEE PLAN SHEETS 4 & 5 FOR -PED- PLAN VIEW  
 NOTE: SEE PLAN SHEET 5 FOR -PED2- PLAN VIEW

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 12

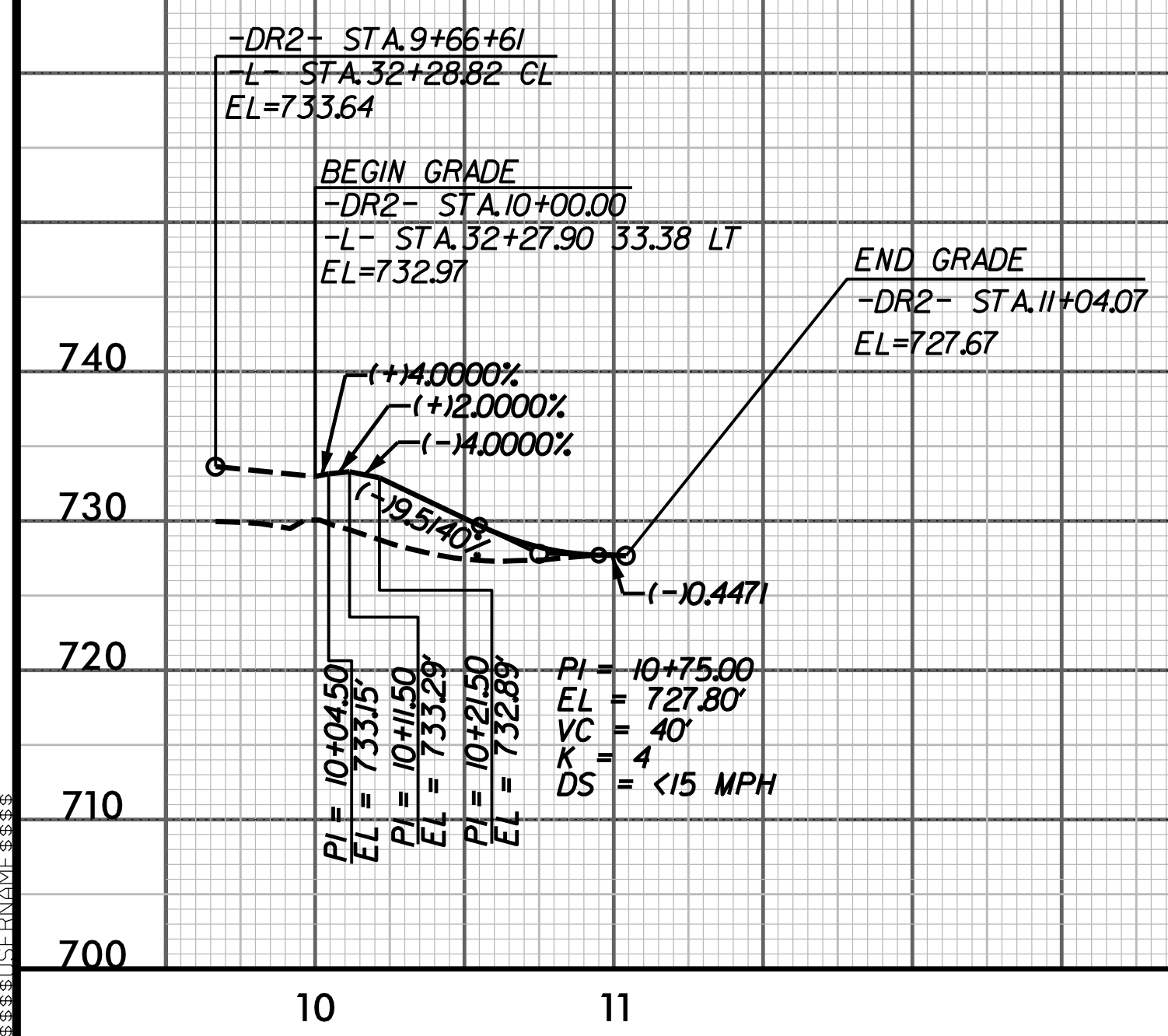
# -Y7-



PROJECT REFERENCE NO. <b>U-5008</b>	SHEET NO. <b>13</b>
ROADWAY DESIGN ENGINEER 3/5/2015 	HYDRAULICS ENGINEER 3/5/2015 



# -DR2-



NOTE: SEE PLAN SHEET 6 FOR -Y7- PLAN VIEW  
NOTE: SEE PLAN SHEET 6 FOR -DR2- PLAN VIEW