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See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Symbols

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

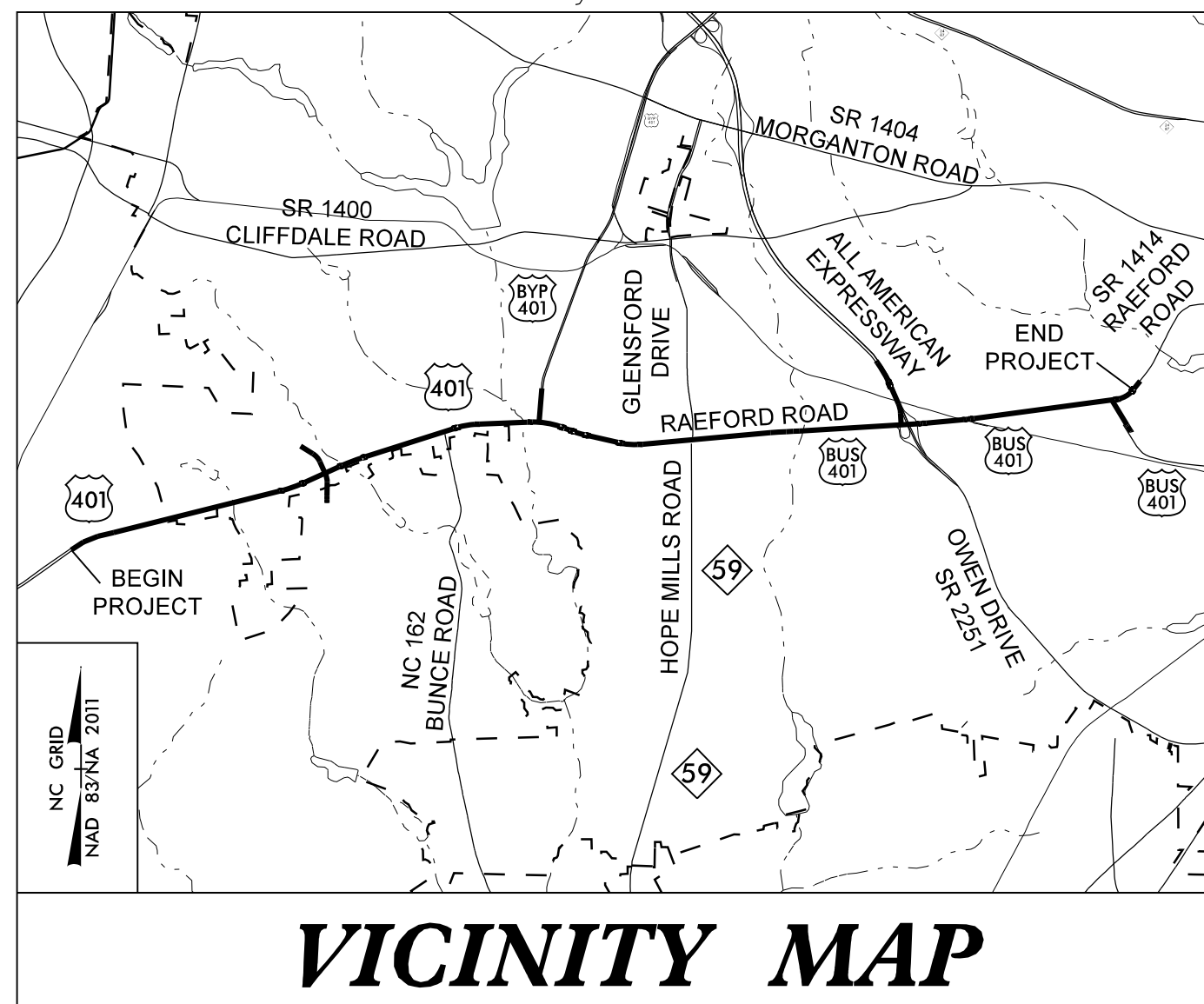
CUMBERLAND COUNTY

**LOCATION: US 401 FROM OLD RAEFORD ROAD TO EAST OF FAIRWAY DRIVE
IN FAYETTEVILLE**

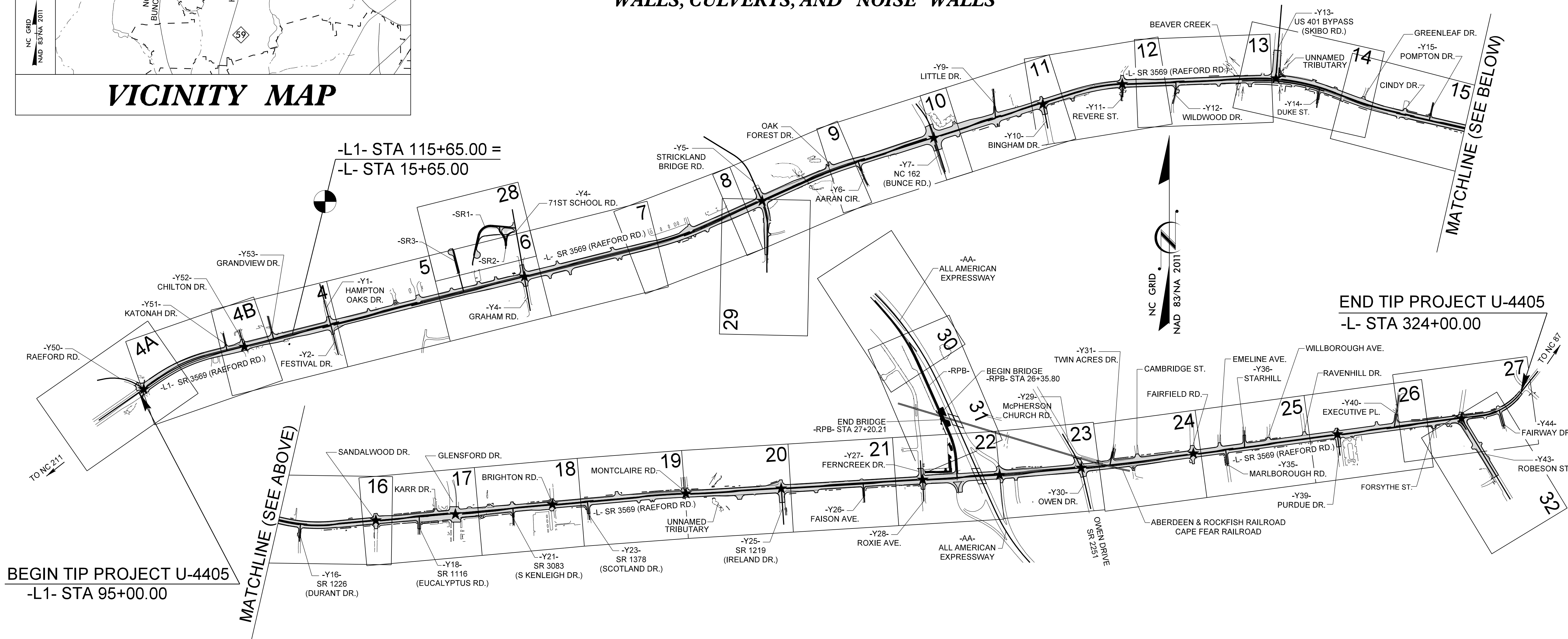
**TYPE OF WORK: GRADING, DRAINAGE, PAVING, SIGNALS, STRUCTURE, RETAINING
WALLS, CULVERTS, AND NOISE WALLS**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-4405	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
39049.1.1	STPDA-0401(230)	PE	
39049.2.1	STPDA-0401(230)	RW	
39049.2.1	STPDA-0401(230)	UTIL	
39049.3.1	STPDA-0401(230)	CONST	

TIP PROJECT: U-4405



VICINITY MAP



BEGIN TIP PROJECT U-4405
-L1- STA 95+00.00

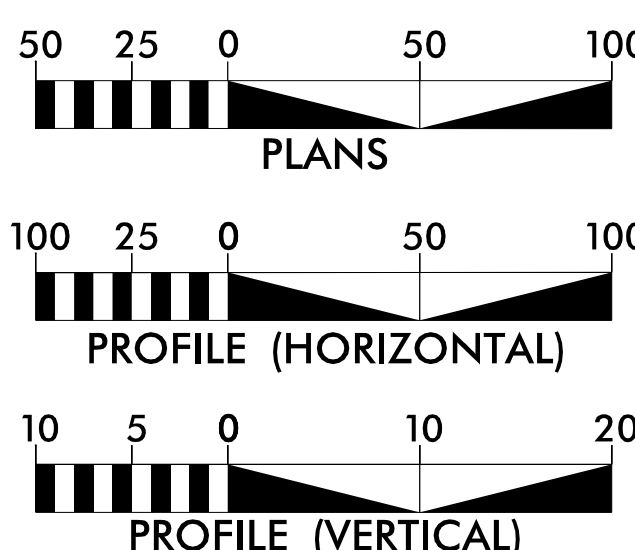
END TIP PROJECT U-4405
-L- STA 324+00.00

★ PROPOSED SIGNAL

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

CONTRACT: C204107

GRAPHIC SCALES



DESIGN DATA

ADT 2018 = 63,150
ADT 2038 = 70,975
K = 10 %
D = 60 %
T = 3 %*
V = 50 MPH
*(TTST = 1% & DUAL = 2%)
FUNC CLASS =
URBAN ARTERIAL
REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U-4405 = 6.231 MILES
TOTAL LENGTH TIP PROJECT U-4405 = 6.231 MILES

NCDOT CONTACT: LAURA SUTTON, PE CPM

Prepared In the Office of:
ATKINS
1616 EAST MILLBROOK ROAD, SUITE 160
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: **CLINTON J. MORGAN, PE**
PROJECT ENGINEER
JULY 29, 2016

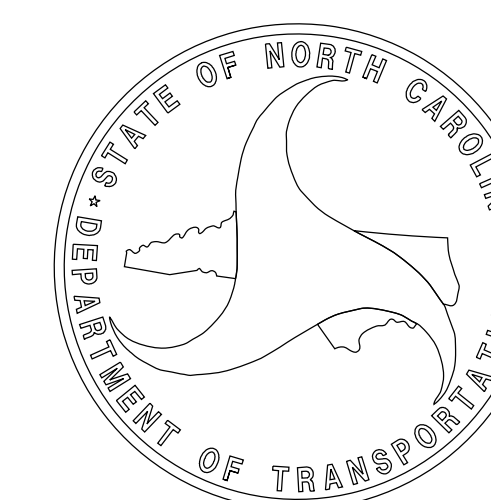
LETTING DATE: **IAN BERDEAU, PE**
PROJECT DESIGN ENGINEER
AUGUST 21, 2018

HYDRAULICS ENGINEER

DocuSigned by:
Frank F. Fleming
7/26/2018
P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER

DocuSigned by:
Clinton J. Morgan
7/25/2018
P.E.
SIGNATURE:





**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
1C-1 THRU 1C-3	SURVEY CONTROL SHEETS
1D-1 THRU 1D-4	PROPOSED ALIGNMENT CONTROL SHEETS
1E-1 THRU 1E-8	RIGHT OF WAY CONTROL SHEETS, PERMANENT EASEMENT CONTROL SHEETS
2A-1 THRU 2A-9	PAVEMENT SCHEDULE, TYPICAL SECTIONS, WEDGING DETAIL, AND MILLING DETAIL
2B-1 THRU 2B-8	INTERSECTION DETAILS
2C-1 THRU 2C-30	DETAIL OF SLOTTED DRAIN 12"THRU 36"DIAMETER PIPE, DETAIL OF 8"x12"CURB TO 2'-6"CURB & GUTTER TRANSITION SECTION, SPECIAL D1 840D14, CONCRETE GRATED DROP INLET TYPE 'A' MINIMUM DEPTH, TYPE III REINFORCED APPROACH FILLS DETAIL, EXTRA DEPTH CONCRETE CATCH BASIN, MINIMUM DEPTH CONCRETE CATCH BASIN, CONCRETE MEDIAN DROP INLET TYPE 'A' EXTRA DEPTH OVER 12' TO 25', DETAIL TO CONVERT EXISTING D1, CB, DTGB OR G1 TO JUNCTION BOX (MANHOLE OPTIONAL), CONCRETE ENDWALL FOR (3 72" RCP, W/ PIPES IN WINGWALLS), CONCRETE ENDWALL FOR (60"RCP, 66"RCP, 72" WSP, W/ WINGWALLS), CONCRETE ENDWALL FOR (3 60"RCP, 72"RCP, W/ 48"RCP IN WINGWALL), DETAIL OF CHAIN LINK FENCE ON RETAINING WALL, COAL COMBUSTION PRODUCT PLACEMENT DETAIL, DETAIL OF GUARDRAIL INSTALLATION, DETAIL OF CURB RAMPS: DIRECTIONAL RAMPS, DETAIL OF CURB RAMPS: MEDIAN OR TURN ISLANDS, DETAIL OF CURB RAMPS: PARALLEL RAMPS, DETAIL OF CURB RAMPS: SHARED LANDING, METHOD FOR PLACEMENT OF DROP INLETS IN CONCRETE ISLANDS, SPECIAL JUNCTION BOX WITH SLAB LID, DETAIL OF PIPE COLLARS, DETAIL OF 1'-6" CURB & GUTTER TRANSITION SECTION
2G-1	GEOTECHNICAL DETAIL
2H-1	STOCKPILE CONTAINMENT DETAIL
2N-1 THRU 2N-2	NOISE WALL ENVELOPE DETAILS
3B-1 THRU 3B-2	SUMMARY OF GUARDRAIL, PAVEMENT REMOVAL SUMMARY, SUMMARY OF CONCRETE BARRIER, AND EARTHWORK SUMMARY
3D-1 THRU 3D-44	DRAINAGE SUMMARY
3G-1	GEOTECHNICAL SUMMARY
3P-1 THRU 3P-2	PARCEL INDEX SHEETS
4A THRU 52	PLAN AND PROFILE SHEETS
TMP-1 THRU TMP-31	TRAFFIC MANAGEMENT PLANS
PMP-1 THRU PMP-30	PAVEMENT MARKING PLANS
EC-1 THRU EC-69	EROSION CONTROL PLANS
SIGN-1 THRU SIGN-33	SIGNING PLANS
SIG-1 THRU SIG-M8	SIGNAL PLANS
SCP-1 THRU SCP-48	SIGNAL COMMUNICATION PLANS
UO-1 THRU UO-29	UTILITIES BY OTHERS PLANS
UC-1 THRU UC-60	UTILITIY PLANS
X-0A THRU X-0J	CROSS-SECTION INDEX SHEET AND SUMMARY
X-1 THRU X-166	CROSS-SECTIONS
S-1 THRU S-26	STRUCTURES PLANS
C1-1 THRU C1-18	CULVERT 1 PLANS
C2-1 THRU C2-3	CULVERT 2 PLANS
SBW-1 THRU SBW-3	SOUND BARRIER WALL PLANS
W-1 THRU W-9	RETAINING WALL PLANS

GENERAL NOTES: 2018 SPECIFICATIONS EFFECTIVE: 01-16-2018 REVISED:

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.

SHOULDER CONSTRUCTION: ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01 OR 560.02.

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.

SUBSURFACE DRAINS: SUBSURFACE DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.02 AT LOCATIONS DIRECTED BY THE ENGINEER.

DRIVEWAYS: DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.02 USING 3 FOOT RADIUS OR RADIUS AS SHOWN ON THE PLANS. LOCATIONS OF DRIVES WILL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

STREET TURNOUT: STREET RETURNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 848.04 USING THE RADIUS 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 NOT SHOWN ON THE PLANS WILL BE PAID FOR AT THE CONTRACT PRICE FOR "TEMPORARY SHORING".

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 Fayetteville PWC (Power) Aqua NC (Water), Fayetteville PWC (Water and Sewer) Piedmont Natural Gas (Gas) CenturyLink (Communication), Spectrum (Communication), Level 3 (Communication)

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 ACCORDANCE WITH STD 848.05 and/or 848.06.

2018 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, 2018 are applicable to this project and by reference hereby are considered a part of these plans:

STD. NO.	TITLE
DIVISION 2 - EARTHWORK	
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
275.01	Rock Plating
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
310.10	Driveway Pipe Construction
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method 1
560.02	Method of Shoulder Construction - High Side of Superelevated Curve - Method 11
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
815.02	Subsurface 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
838.33	Reinforced Concrete Endwall - for Single 66" Pipe 90 Skew
838.45	Notes for Reinforced Concrete Endwall - Std. Dwg 838.21 thru 838.40
838.63	Reinforced Brick Endwall - for Single 66" Pipe 90 Skew
838.75	Notes for Reinforced Brick Endwall - Std. Dwg 838.51 thru 838.70
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
840.04	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
840.19	Concrete Grated Drop Inlet Type 'D' - 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
840.28	Brick Grated Drop Inlet Type 'D' - 12" thru 36" Pipe
840.29	Frames and Narrow Slot Flat Grates
840.30	Driveway Drop Inlet
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
840.35	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
840.71	Concrete and Brick Pipe Plug
840.72	Pipe Collar
846.01	Concrete Curb, Gutter and Curb & Gutter
846.04	Drop Inlet Installation in Shoulder Berm Gutter
848.01	Concrete Sidewalk
848.02	Driveway Turnout - Radius Type
848.04	Street Turnout
848.05	Curb Ramp - Proposed Curb & Gutter
852.01	Concrete Islands
852.04	Method for Placement of Drop Inlets in Grassed Median - Using 1'-6" Curb and Gutter
852.06	Method for Placement of Drop Inlets in Concrete Islands
857.01	Precast Reinforced Concrete Barrier - 41" Single Faced
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units (Special Detail for Type III Anchor Units Sheets 1 of 7 and 2 of 7)
862.04	Anchoring End of Guardrail - B-77 and B-83 Anchor Units
866.02	Woven Wire Fence - with Wood Post
876.01	Rip Rap in Channels
876.02	Guide for Rip Rap at Pipe Outlets
876.04	Drainage Ditches with Class 'B' Rip Rap

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

12/2/2016

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EIP
Computed 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 ---
Existing Historic Property Boundary	--- HPB ---
Known Contamination Area: Soil	☠-S-☠
Potential Contamination Area: Soil	☠-S-☠
Known Contamination Area: Water	☠-W-☠
Potential Contamination Area: Water	☠-W-☠
Contaminated Site: Known or Potential	☠?

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	○ MILEPOST 35
Switch	□ SWITCH
RR Abandoned	-----
RR Dismantled	-----

RIGHT OF WAY & PROJECT CONTROL:

Secondary Horiz and Vert Control Point	◆
Primary Horiz Control Point	○
Primary Horiz and Vert Control Point	●
Exist Permanent Easement Pin and Cap	◇
New Permanent Easement Pin and Cap	◆
Vertical Benchmark	⊠
Existing Right of Way Marker	△
Existing Right of Way Line	-----
New Right of Way Line	○ R W
New Right of Way Line with Pin and Cap	○ R W ▲
New Right of Way Line with Concrete or Granite R/W Marker	▲ R W
New Control of Access Line with Concrete C/A Marker	○ C/A
Existing Control of Access	○ C/A
New Control of Access	○ C/A
Existing Easement Line	--- E ---
New Temporary Construction Easement	--- E ---
New Temporary Drainage Easement	--- TDE ---
New Permanent Drainage Easement	--- PDE ---
New Permanent Drainage / Utility Easement	--- DUE ---
New Permanent Utility Easement	--- PUE ---
New Temporary Utility Easement	--- TUE ---
New Aerial Utility Easement	--- AUE ---

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	--- T ---
Proposed Guardrail	--- T ---
Existing Cable Guiderail	--- T ---
Proposed Cable Guiderail	--- T ---
Equality Symbol	⊕
Pavement Removal	▨

VEGETATION:

Single Tree	☼
Single Shrub	☼

Note: Not to Scale *S.U.E. = *Subsurface Utility Engineering*

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	○ S
Storm Sewer	--- S ---

UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	○ P
Power Line Tower	⊠
Power Transformer	⊠
U/G Power Cable Hand Hole	○
H-Frame Pole	●
U/G Power Line LOS B (S.U.E.*)	--- P ---
U/G Power Line LOS C (S.U.E.*)	--- P ---
U/G Power Line LOS D (S.U.E.*)	--- P ---

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	○ T
Telephone Pedestal	□ T
Telephone Cell Tower	⊕
U/G Telephone Cable Hand Hole	○ T
U/G Telephone Cable LOS B (S.U.E.*)	--- T ---
U/G Telephone Cable LOS C (S.U.E.*)	--- T ---
U/G Telephone Cable LOS D (S.U.E.*)	--- T ---
U/G Telephone Conduit LOS B (S.U.E.*)	--- TC ---
U/G Telephone Conduit LOS C (S.U.E.*)	--- TC ---
U/G Telephone Conduit LOS D (S.U.E.*)	--- TC ---
U/G Fiber Optics Cable LOS B (S.U.E.*)	--- T FO ---
U/G Fiber Optics Cable LOS C (S.U.E.*)	--- T FO ---
U/G Fiber Optics Cable LOS D (S.U.E.*)	--- T FO ---

WATER:

Water Manhole	○ W
Water Meter	○
Water Valve	⊗
Water Hydrant	⊕
U/G Water Line LOS B (S.U.E.*)	--- W ---
U/G Water Line LOS C (S.U.E.*)	--- W ---
U/G Water Line LOS D (S.U.E.*)	--- W ---
Above Ground Water Line	--- A/G Water ---

TV:

TV Pedestal	□
TV Tower	⊗
U/G TV Cable Hand Hole	○ TV
U/G TV Cable LOS B (S.U.E.*)	--- TV ---
U/G TV Cable LOS C (S.U.E.*)	--- TV ---
U/G TV Cable LOS D (S.U.E.*)	--- TV ---
U/G Fiber Optic Cable LOS B (S.U.E.*)	--- TV FO ---
U/G Fiber Optic Cable LOS C (S.U.E.*)	--- TV FO ---
U/G Fiber Optic Cable LOS D (S.U.E.*)	--- TV FO ---

GAS:

Gas Valve	◇
Gas Meter	◇
U/G Gas Line LOS B (S.U.E.*)	--- G ---
U/G Gas Line LOS C (S.U.E.*)	--- G ---
U/G Gas Line LOS D (S.U.E.*)	--- G ---
Above Ground Gas Line	--- A/G Gas ---

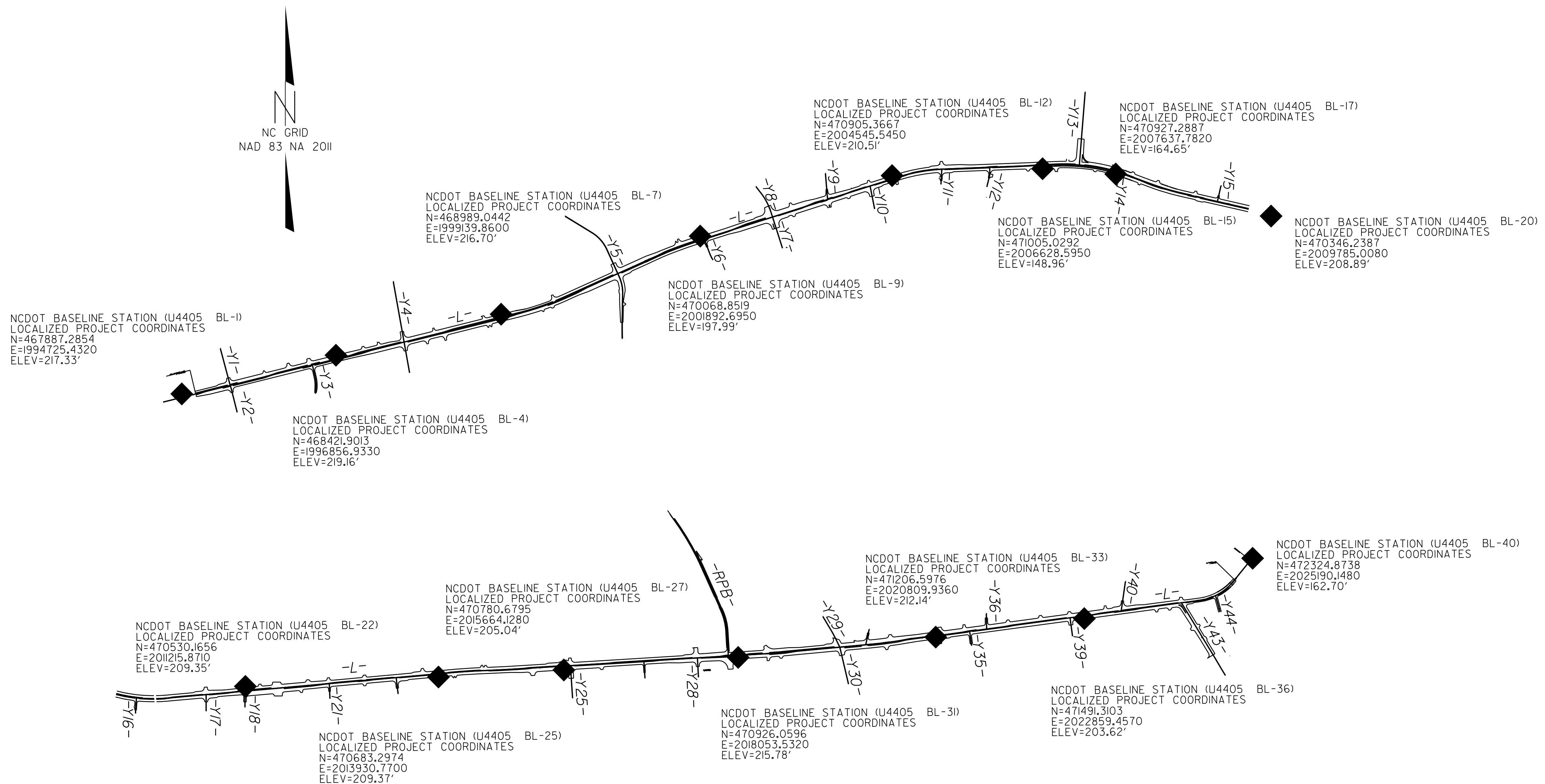
SANITARY SEWER:

Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	--- SS ---
Above Ground Sanitary Sewer	--- A/G Sanitary Sewer ---
SS Forced Main Line LOS B (S.U.E.*)	--- FSS ---
SS Forced Main Line LOS C (S.U.E.*)	--- FSS ---
SS Forced Main Line LOS D (S.U.E.*)	--- FSS ---

MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	□
Utility Unknown U/G Line LOS B (S.U.E.*)	--- 7UTL ---
U/G Tank; Water, Gas, Oil	□
Underground Storage Tank, Approx. Loc.	□ UST
A/G Tank; Water, Gas, Oil	□
Geoenvironmental Boring	⊕
U/G Test Hole LOS A (S.U.E.*)	○
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

SURVEY CONTROL SHEET U-4405



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "U3424-1" WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTHING: 470729.901(ft) EASTING: 2003980.051(ft) ELEVATION: 211.69(ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 1.0001250200

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "U3424-1" TO -L- STATION 10+00.00 IS S72°34'45.67"W 9496.53

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:
U-4405_LS_CONTROL.TXT

SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

© INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.
PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.
NETWORK ESTABLISHED FROM EXISTING HARN MONUMENTATION
SEE GPS CALIBRATION SHEET FOR HORIZONTAL AND VERTICAL COORDINATE VALUES.

NOTE: DRAWING NOT TO SCALE

SURVEY CONTROL SHEET U-4405

BL POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
501	U4405-1	467351.7800	1993272.8230	199.08	OUTSIDE PROJECT LIMITS	
502		470342.1392	2000029.3837	UNKNOW	73+11.60	1019.65 LT
1	BL-1	467887.2854	1994725.4320	217.33	13+77.19	47.30 LT
2	BL-2	468079.7036	1995412.1340	219.49	20+90.04	68.03 LT
3	BL-3	468280.4685	1996253.3870	220.64	29+54.88	59.49 LT
4	BL-4	468421.9013	1996856.9330	219.16	35+74.71	50.85 LT
5	BL-5	468640.7760	1997726.6330	215.23	44+71.53	53.01 LT
6	BL-6	468833.6921	1998515.7050	216.67	52+83.84	49.48 LT
7	BL-7	468989.0442	1999139.8600	216.70	59+27.03	49.36 LT
105	BL-105	469144.4040	1999709.7660	211.29	65+22.40	45.78 LT
504	U4405-4	469468.9590	2000469.4370	203.29	73+52.70	42.71 LT
8	BL-8	469798.5445	2001197.6680	192.13	81+51.72	43.14 LT
9	BL-9	470068.8519	2001892.6950	197.99	88+92.67	52.10 LT
10	BL-10	470237.9987	2002408.5410	210.02	94+35.52	56.76 LT
402	U3424-2	470430.9535	2002945.1840	216.09	100+05.41	77.80 LT
11	BL-11	470628.3125	2003619.4020	213.95	107+07.72	61.29 LT
401		468127.6114	1997894.8415	UNKNOW	45+01.01	483.17 RT
12	BL-12	470905.3667	2004545.5450	210.51	116+74.27	44.28 LT
13	BL-13	471054.4675	2005197.1860	208.51	123+31.88	72.05 LT
14	BL-14	470967.6351	2005880.7070	167.00	130+09.28	52.75 RT
15	BL-15	471005.0292	2006628.5950	148.96	137+58.06	44.84 RT
16	BL-16	471023.4465	2007117.5400	149.53	142+51.28	29.76 RT
17	BL-17	470927.2887	2007637.7820	164.65	147+87.88	31.12 RT
18	BL-18	470734.1707	2008204.8730	186.15	153+88.35	21.89 RT
X62		470584.6302	2008739.8865	198.15	159+41.59	30.52 RT
19	BL-19	470497.2101	2009052.6510	204.40	162+65.96	46.31 RT
20	BL-20	470346.2387	2009785.0080	208.89	170+08.24	47.14 RT
21	BL-21	470495.2559	2010659.0920	206.64	178+85.47	57.58 LT
22	BL-22	470530.1656	2011215.8710	209.35	184+43.14	42.62 LT
212	U4422-BL2	470565.1010	2011624.1450	210.28	188+52.90	40.94 LT
216	U4422-BY16	470544.2360	2012368.6470	209.05	195+92.56	46.35 RT
23	BL-23	470587.1904	2012841.2350	208.63	200+67.10	45.78 RT
24	BL-24	470626.8227	2013292.7930	209.24	205+20.39	46.64 RT
25	BL-25	470683.2974	2013930.7700	209.37	211+60.86	47.39 RT
26	BL-26	470726.6439	2014557.4770	203.56	217+91.38	47.47 RT
27	BL-27	470780.6795	2015664.1280	205.04	228+98.42	56.00 RT
28	BL-28	470818.4518	2016213.7860	210.45	234+49.36	51.90 RT
29	BL-29	470863.0465	2016775.7680	211.40	240+13.02	41.75 RT
30	BL-30	470893.2269	2017424.6840	212.77	246+62.56	51.29 RT
31	BL-31	470926.0596	2018053.5320	215.78	252+92.24	56.96 RT
460	U4414-60	470976.7950	2018674.6150	218.78	259+13.90	47.25 RT
505	U4405-5	471016.0430	2019314.0470	218.28	265+54.14	67.17 RT
X79		471040.6245	2019510.6499	UNKNOW	267+52.18	60.85 RT
32	BL-32	471107.8526	2020048.3400	212.29	272+92.38	46.26 RT
33	BL-33	471206.5976	2020809.9360	212.14	280+59.85	49.71 RT
X85		471270.0528	2021241.6814	UNKNOW	284+96.20	44.49 RT
34	BL-34	471310.2036	2021514.8650	212.35	287+72.30	41.18 RT
X88		471337.5939	2021722.0948	UNKNOW	289+81.33	41.71 RT
35	BL-35	471403.8747	2022223.5630	207.94	294+87.16	42.99 RT
36	BL-36	471491.3103	2022859.4570	203.62	301+29.03	41.26 RT
X91		471548.2234	2023293.0002	UNKNOW	305+66.29	42.76 RT
37	BL-37	471589.2387	2023605.4400	202.99	308+81.41	43.84 RT
X106		471612.7364	2023807.6573	203.84	310+84.95	47.56 RT
38	BL-38	471647.7314	2024108.8180	204.53	313+88.09	53.09 RT
39	BL-39	471789.2599	2024684.2430	199.52	319+70.39	34.75 RT
X102		472107.8715	2024985.1821	UNKNOW	324+01.70	5.30 RT
40	BL-40	472324.8738	2025190.1480	162.70	OUTSIDE PROJECT LIMITS	

.....
 BM1 ELEVATION = 217.39
 N 467812 E 1994333
 L STATION 11+00.00
 N 74°25'11.76" W DIST 140.04
 R/R SPIKE SET IN 8" PINE

.....
 BM2 ELEVATION = 221.46
 N 468509 E 1996113
 L STATION 28+74.00 315 LEFT
 BENCH TIE SET IN TREE

.....
 BM3 ELEVATION = 217.46
 N 468445 E 1998334
 L STATION 50+14.00 284 RIGHT
 BENCH TIE SET IN TREE

.....
 BM4 ELEVATION = 213.77
 N 469021 E 2000106
 L STATION 68+38.00 216 RIGHT
 BENCH TIE IN LIGHT POLE

.....
 BM5 ELEVATION = 180.47
 N 469612 E 2002119
 L STATION 89+70.00 452 RIGHT
 BENCH TIE IN POWER POLE

.....
 BM6 ELEVATION = 207.85
 N 470887 E 2003652
 L STATION 108+17.00 298 LEFT
 BENCH TIE IN POWER POLE

.....
 BM7 ELEVATION = 192.81
 N 470648 E 2005724
 L STATION 128+40.00 366 RIGHT
 BENCH TIE IN POWER POLE

.....
 BM8 ELEVATION = 171.28
 N 470724 E 2007625
 L STATION 148+38.00 229 RIGHT
 BENCH TIE IN LIGHT POLE

.....
 BM9 ELEVATION = 209.17
 N 470173 E 2009723
 L STATION 169+68.00 226 RIGHT
 BENCH TIE IN LIGHT POLE

.....
 BM10 ELEVATION = 214.73
 N 469983 E 2011727
 L STATION 189+03.00 548 RIGHT
 BENCH TIE IN LIGHT POLE

.....
 BM11 ELEVATION = 209.02
 N 470451 E 2013373
 L STATION 205+85.00 229 RIGHT
 BENCH TIE IN LIGHT POLE

.....
 BM12 ELEVATION = 200.85
 N 470526 E 2015272
 L STATION 224+91.00 286 RIGHT
 BENCH TIE IN TREE

.....
 BM13 ELEVATION = 213.28
 N 470676 E 2017543
 L STATION 247+67.00 275 RIGHT
 BENCH TIE IN POWER POLE

.....
 BM14 ELEVATION = 208.67
 N 470453 E 2019555
 L STATION 267+42.00 366 RIGHT
 BENCH TIE IN POWER POLE

.....
 BM15 ELEVATION = 212.44
 N 471655 E 2021453
 L STATION 287+57.00 309 LEFT
 BENCH TIE IN POWER POLE

.....
 BM16 ELEVATION = 206.02
 N 471380 E 2023844
 L STATION 318+90.00 283 RIGHT
 BENCH TIE IN LIGHT POLE

.....
 BM17 ELEVATION = 157.37
 N 472462 E 2025226
 L STATION 11+00.00
 N 81°20'4.78" E DIST 31113.26
 BENCH TIE IN POWER POLE

SURVEY CONTROL SHEET U-4405

BY POINT	DESC.	NORTH	EAST	ELEVATION	EY STATION	OFFSET
41	BY1-41	468088.2809	194640.2850	216.92	10-33.54	17.09 LT
E1		467887.2854	194475.4320	217.33	12-49.08	51.63 LT
BY1 POINT	DESC.	NORTH	EAST	ELEVATION	EY STATION	OFFSET
42	BY1-42	468496.0835	1995245.3730	219.97	OUTSIDE PROJECT LIMITS	
E2		468079.7036	1995412.1340	219.49	12-26.68	764.43 LT
BY2 POINT	DESC.	NORTH	EAST	ELEVATION	EY2 STATION	OFFSET
EE2		468079.7036	1995412.1340	219.49	OUTSIDE PROJECT LIMITS	
43	BY2-43	467586.3115	1995502.7460	218.61	OUTSIDE PROJECT LIMITS	
BY3 POINT	DESC.	NORTH	EAST	ELEVATION	EY3 STATION	OFFSET
44	BY3-44	468459.4648	1996169.8610	219.71	10-06.85	15.43 LT
E3		468260.4685	1996253.3870	220.64	12-01.45	49.32 LT
BY4 POINT	DESC.	NORTH	EAST	ELEVATION	EY4 STATION	OFFSET
EE3		468260.4685	1996253.3870	220.64	OUTSIDE PROJECT LIMITS	
104	BY4-104	468227.7832	1996500.2970	219.71	OUTSIDE PROJECT LIMITS	
45	BY4-45	467809.8736	1996575.0490	216.90	11-34.70	18.42 LT
BY5 POINT	DESC.	NORTH	EAST	ELEVATION	EY5 STATION	OFFSET
46	BY5-46	469468.9590	1997667.7480	215.71	OUTSIDE PROJECT LIMITS	
E5		468640.7760	1997726.5330	215.23	18-00.08	65.12 RT
47	BY5-47	468197.7928	1997915.1380	208.81	22-70.01	42.35 LT
BY6 POINT	DESC.	NORTH	EAST	ELEVATION	EY6 STATION	OFFSET
E504		469468.9590	2000469.4370	203.29	10-06.47	290.27 RT
48	BY6-48	469234.0238	2000838.2870	201.58	13-11.69	48.52 LT
49	BY6-49	468590.8986	2000799.4900	215.43	19-58.27	18.50 RT
BY7 POINT	DESC.	NORTH	EAST	ELEVATION	EY7 STATION	OFFSET
E9		470068.0519	2001892.6950	197.99	OUTSIDE PROJECT LIMITS	
50	BY7-50	469750.4980	2002045.6110	184.15	12-95.53	15.24 RT
BY8 POINT	DESC.	NORTH	EAST	ELEVATION	EY8 STATION	OFFSET
51	BY8-51	470734.2451	2002729.3742	216.13	10-54.52	39.22 LT
E402		470430.9535	2002945.1840	216.09	14-05.52	78.79 LT
52	BY8-52	469912.6522	2003082.1780	209.52	OUTSIDE PROJECT LIMITS	
BY9 POINT	DESC.	NORTH	EAST	ELEVATION	EY9 STATION	OFFSET
53	BY9-53	470874.7935	2003641.5010	206.86	10-62.67	11.69 LT
E11		470628.3125	2003619.4020	213.95	13-06.51	38.51 RT
BY10 POINT	DESC.	NORTH	EAST	ELEVATION	EY10 STATION	OFFSET
E401		470729.9010	2003980.0510	211.69	OUTSIDE PROJECT LIMITS	
54	BY10-54	470438.5203	2004345.0770	210.00	OUTSIDE PROJECT LIMITS	
BY11 POINT	DESC.	NORTH	EAST	ELEVATION	EY11 STATION	OFFSET
E13		471064.4675	2005197.1860	200.51	10-48.84	32.69 RT
55	BY11-55	470771.6583	2005235.7310	205.94	OUTSIDE PROJECT LIMITS	
BY12 POINT	DESC.	NORTH	EAST	ELEVATION	EY12 STATION	OFFSET
E14		470967.6351	2005880.7070	167.00	10-62.82	26.69 RT
56	BY12-56	470501.5323	2005846.6540	184.62	14-27.64	15.16 RT
BY13 POINT	DESC.	NORTH	EAST	ELEVATION	EY13 STATION	OFFSET
57	BY13-57	472029.3129	2007160.2360	177.58	10-96.75	48.12 RT
E16		471433.3230	2007213.7810	151.18	16-86.53	53.03 LT
E16		471023.4465	2007117.5400	149.53	OUTSIDE PROJECT LIMITS	
BY14 POINT	DESC.	NORTH	EAST	ELEVATION	EY14 STATION	OFFSET
E17		472927.2687	2007637.7820	164.65	10-48.28	38.07 RT
59	BY14-59	470743.3094	2007664.8100	171.30	OUTSIDE PROJECT LIMITS	
BY15 POINT	DESC.	NORTH	EAST	ELEVATION	EY15 STATION	OFFSET
60	BY15-60	471062.1521	2008327.8080	181.61	OUTSIDE PROJECT LIMITS	
E18		470734.1707	2008204.8730	186.15	OUTSIDE PROJECT LIMITS	
BY16 POINT	DESC.	NORTH	EAST	ELEVATION	EY16 STATION	OFFSET
E61		470832.0871	2008759.7930	195.24	OUTSIDE PROJECT LIMITS	
E62		470584.6302	2008739.8865	198.15	OUTSIDE PROJECT LIMITS	
62	BY16-62	470572.9388	2008738.9460	198.15	OUTSIDE PROJECT LIMITS	

BY17 POINT	DESC.	NORTH	EAST	ELEVATION	EY17 STATION	OFFSET
63	BY17-63	470758.0463	2009080.4020	200.58	10-11.05	11.03 RT
E19		470497.2101	2009052.6510	204.40	OUTSIDE PROJECT LIMITS	
BY18 POINT	DESC.	NORTH	EAST	ELEVATION	EY18 STATION	OFFSET
E20		470346.2387	2009785.0080	208.89	10-47.71	32.39 LT
64	BY18-64	470183.1341	2009730.2610	208.70	12-14.27	13.60 RT
BY19 POINT	DESC.	NORTH	EAST	ELEVATION	EY19 STATION	OFFSET
E21		470495.2559	2010659.0920	206.64	OUTSIDE PROJECT LIMITS	
65	BY19-65	470206.9051	2010718.7180	207.85	OUTSIDE PROJECT LIMITS	
BY20 POINT	DESC.	NORTH	EAST	ELEVATION	EY20 STATION	OFFSET
E22		470530.1656	2011215.8710	209.35	OUTSIDE PROJECT LIMITS	
66	BY20-66	470260.9596	2011252.8730	207.16	OUTSIDE PROJECT LIMITS	
BY21 POINT	DESC.	NORTH	EAST	ELEVATION	EY21 STATION	OFFSET
67	BY21-67	470636.4985	2011412.9980	211.12	10-68.10	18.93 RT
E212		470565.1010	2011624.1450	210.28	11-58.99	184.60 LT
BY22 POINT	DESC.	NORTH	EAST	ELEVATION	EY22 STATION	OFFSET
EE212		470565.1010	2011624.1450	210.28	OUTSIDE PROJECT LIMITS	
68	BY22-68	470094.8653	2011727.7050	213.99	OUTSIDE PROJECT LIMITS	
BY23 POINT	DESC.	NORTH	EAST	ELEVATION	EY23 STATION	OFFSET
E216		470544.2360	2012368.6470	209.05	10-46.03	29.46 RT
69	BY23-69	470361.6551	2012390.2070	207.16	OUTSIDE PROJECT LIMITS	
BY24 POINT	DESC.	NORTH	EAST	ELEVATION	EY24 STATION	OFFSET
70	BY24-70	470861.7936	2012898.8110	207.99	OUTSIDE PROJECT LIMITS	
E23		470587.1904	2012841.2350	208.63	10-44.36	45.26 RT
BY25 POINT	DESC.	NORTH	EAST	ELEVATION	EY25 STATION	OFFSET
E24		470626.8227	2013292.7930	209.24	205-60.24	34.49 RT
72	BY25-72	470460.9309	2013366.0500	207.81	207-33.49	19.11 LT
BY26 POINT	DESC.	NORTH	EAST	ELEVATION	EY26 STATION	OFFSET
73	BY26-73	470982.1952	2014474.5660	208.91	OUTSIDE PROJECT LIMITS	
E26		470726.6439	2014557.4770	203.56	OUTSIDE PROJECT LIMITS	
BY27 POINT	DESC.	NORTH	EAST	ELEVATION	EY27 STATION	OFFSET
E27		470780.6795	2015664.1280	205.84	10-55.53	70.53 RT
75	BY27-75	470412.2851	2015797.9990	208.05	14-31.88	38.99 LT
BY28 POINT	DESC.	NORTH	EAST	ELEVATION	EY28 STATION	OFFSET
E29		470863.0465	2016775.7680	211.40	10-41.80	26.74 LT
76	BY28-76	470660.5365	2016741.4220	209.19	OUTSIDE PROJECT LIMITS	
BY29 POINT	DESC.	NORTH	EAST	ELEVATION	EY29 STATION	OFFSET
77	BY29-77	471343.9026	2017477.3650	205.97	OUTSIDE PROJECT LIMITS	
E30		470893.2269	2017424.6840	212.77	OUTSIDE PROJECT LIMITS	
BY30 POINT	DESC.	NORTH	EAST	ELEVATION	EY30 STATION	OFFSET
EE30		470893.2269	2017424.6840	212.77	10-51.93	63.86 RT
78	BY30-78	470709.9842	2017525.1810	211.24	12-48.54	26.18 LT
BY31 POINT	DESC.	NORTH	EAST	ELEVATION	EY31 STATION	OFFSET
97	BY31-97	471561.0650	2019244.2010	218.69	OUTSIDE PROJECT LIMITS	
79	BY31-79	471130.8879	2019504.0780	215.18	14-74.25	59.09 LT
BY32 POINT	DESC.	NORTH	EAST	ELEVATION	EY32 STATION	OFFSET
E79		471130.8879	2019504.0780	215.18	OUTSIDE PROJECT LIMITS	
EE79		471040.5245	2019610.6490	UNKOWN	10-52.25	40.95 LT
80	BY32-80	470531.0746	2019546.0810	209.20	OUTSIDE PROJECT LIMITS	
BY33 POINT	DESC.	NORTH	EAST	ELEVATION	EY33 STATION	OFFSET
81	BY33-81	471300.2682	2019872.4150	211.53	10-39.67	21.17 LT
E32		471107.8526	2020048.3400	212.29	11-88.89	234.96 LT

BY34 POINT	DESC.	NORTH	EAST	ELEVATION	EY34 STATION	OFFSET
EE32		471107.8526	2020048.3400	212.29	10-51.53	51.81 RT
82	BY34-82	470953.1782	2020155.4160	213.03	OUTSIDE PROJECT LIMITS	
BY35 POINT	DESC.	NORTH	EAST	ELEVATION <td>EY35 STATION</td> <td>OFFSET</td>	EY35 STATION	OFFSET
83	BY35-83	471394.3508	2020106.5100	210.74	OUTSIDE PROJECT LIMITS	
EE32		471107.8526	2020048.3400	212.29	OUTSIDE PROJECT LIMITS	
BY36 POINT	DESC.	NORTH	EAST	ELEVATION	EY36 STATION	OFFSET
84	BY36-84	471707.3252	2020849.0470	211.04	OUTSIDE PROJECT LIMITS	
E33		471206.5976	2020809.9360	212.14	OUTSIDE PROJECT LIMITS	
BY37 POINT	DESC.	NORTH	EAST	ELEVATION	EY37 STATION	OFFSET
98	BY37-98	471572.4914	2021144.6890	213.12	OUTSIDE PROJECT LIMITS	
85	BY37-85	471396.7053	2021203.3500	213.03	11-38.92	30.89 LT
BY38 POINT	DESC.	NORTH	EAST	ELEVATION	EY38 STATION	OFFSET
EE5		471396.7053	2021203.3500	213.03	OUTSIDE PROJECT LIMITS	
EE85		471270.8528	2021241.6814	UNKOWN	10-50.71	14.33 RT
86	BY38-86	471050.3465	2021308.1670	211.58	OUTSIDE PROJECT LIMITS	
BY39 POINT	DESC.	NORTH	EAST	ELEVATION	EY39 STATION	OFFSET
87	BY39-87	471564.2232	2021453.4380	211.17	OUTSIDE PROJECT LIMITS	
E34		471310.2036	2021514.8650	212.35	OUTSIDE PROJECT LIMITS	
BY40 POINT	DESC.	NORTH	EAST	ELEVATION	EY40 STATION	OFFSET
99	BY40-99	471615.1795	2021806.1710	210.65	OUTSIDE PROJECT LIMITS	
88	BY40-88	471461.3845	2021759.5890	211.08	11-32.62	20.94 RT
E88		471337.5939	2021722.0948	UNKOWN	OUTSIDE PROJECT LIMITS	
BY41 POINT	DESC.	NORTH	EAST	ELEVATION	EY41 STATION	OFFSET
89	BY41-89	471676.3684	2022185.2180	205.69	OUTSIDE PROJECT LIMITS	
EE35		471403.8747	2022223.5638	207.94	OUTSIDE PROJECT LIMITS	
BY42 POINT	DESC.	NORTH	EAST	ELEVATION	EY42 STATION	OFFSET
E36		471491.3103	2022859.4570	203.62	10-47.98	218.18 LT
90	BY42-90	471254.1259	2022831.8648	207.24	12-52.81	36.92 RT
BY43 POINT	DESC.	NORTH	EAST	ELEVATION	EY43 STATION	OFFSET
100		468296.6206	1996318.8771	UNKOWN	OUTSIDE PROJECT LIMITS	
91	BY43-91	471681.8544	2023335.9220	201.16	13-29.43	21.08 RT
E91		471548.2234	2023293.0002	UNKOWN	OUTSIDE PROJECT LIMITS	
BY44 POINT	DESC.	NORTH	EAST	ELEVATION	EY44 STATION	OFFSET
106	BY44-106	471617.2029	2023085.0260	203.84	311-17.88	27.22 RT
E106		471612.7364	2023807.6573	203.84	311-22.55	26.01 RT
93	BY44-93	47				

PROPOSED ALIGNMENT CONTROL SHEET U-4405

6/2/99

REVISIONS

AA			
TYPE	STATION	NORTH	EAST
POT	10+00.00	468321.3093	2020090.7577
TS	10+16.42	468336.8461	2020085.4433
SC	14+16.42	468710.3877	2019942.9275
CS	20+44.75	469227.0641	2019590.3646
ST	24+44.75	469495.9649	2019294.4990
TS	26+33.22	469617.7816	2019150.6881
SC	30+33.22	469884.9968	2018853.2192
CS	36+63.22	470387.4870	2018476.5099
ST	40+63.22	470747.9474	2018303.4201
TS	53+25.18	471900.9513	2017790.4715
SC	57+25.18	472263.4795	2017621.5504
CS	68+37.69	473167.9333	2016980.5170
ST	72+37.69	473447.4100	2016694.4160
TS	95+21.03	475014.2021	2015033.4602
SC	97+21.03	475152.2815	2014888.7779
CS	139+32.69	478895.6641	2013173.9192
ST	141+32.69	479095.4074	2013163.8436
TS	152+85.42	480246.9928	2013112.4690
SC	155+85.42	480546.4735	2013095.1781
CS	181+15.42	482819.5991	2012093.5870
ST	184+15.42	483034.4589	2011884.2477
TS	188+50.70	483342.2219	2011576.4376
SC	191+50.70	483557.0817	2011367.0983
CS	210+89.56	485247.3147	2010460.3114
ST	213+89.56	485540.5508	2010397.0642
PC	251+44.82	489221.4474	2009653.4269
PT	295+40.06	493420.1021	2008376.5723
POT	322+03.51	495882.4284	2007361.2417

NS1			
TYPE	STATION	NORTH	EAST
PC	10+00.00	469917.5020	2018846.5609
PT	17+99.59	470575.7517	2018399.7627
PC	34+47.07	472078.5053	2017724.5468
PCC	43+78.60	472881.0398	2017255.1026
PCC	48+67.90	473253.2401	2016938.0897
PT	55+79.97	473754.2041	2016432.2197
POT	61+96.64	474177.5807	2015983.8449

NS2			
TYPE	STATION	NORTH	EAST
PC	10+00.00	469887.3117	2018814.9507
PT	18+32.89	470575.7547	2018353.4901
PC	33+80.77	471989.9902	2017724.3126
PT	49+36.53	473251.0101	2016830.5740
POT	62+04.49	474121.0857	2015908.2429

NS3			
TYPE	STATION	NORTH	EAST
POT	10+00.00	470916.0521	2017947.0292
PC	12+15.94	470700.5883	2017961.3011
PCC	14+42.56	470567.9925	2018115.6726
PCC	16+69.19	470724.8799	2018245.2817
PT	18+17.43	470866.7217	2018204.7214
POT	23+88.98	471388.8996	2017972.3345

RPB			
TYPE	STATION	NORTH	EAST
POT	10+00.00	473175.2111	2016890.3215
TS	11+54.49	473058.9865	2016992.1034
SC	13+04.49	472945.1227	2017089.7410
CS	18+76.07	472464.7151	2017396.9336
ST	20+26.07	472328.3141	2017459.3259
TS	28+28.86	471594.8359	2017785.6362
SC	30+28.86	471409.3204	2017860.0683
PT	32+50.40	471192.0856	2017900.5866
POT	34+68.31	470974.5802	2017913.9412

EBPGL			
TYPE	STATION	NORTH	EAST
POT	10+00.00	467872.7154	1994922.6064
TS	55+66.25	468976.4390	1999353.4548
SC	56+36.25	468993.5665	1999421.3268
CS	62+54.44	469196.2012	2000004.6499
ST	63+24.44	469224.8394	2000068.5234
PC	74+98.13	469708.2895	2001138.0167
PCC	77+22.17	469801.9592	2001341.5324
CS	82+40.64	469983.2997	2001827.0913
ST	83+40.63	470013.8900	2001922.2867
TS	111+56.65	470868.3006	2004605.5593
SC	112+06.65	470883.3049	2004653.2546
CS	117+99.47	470985.5749	2005235.6482
ST	118+49.47	470987.7181	2005285.6020
POT	127+88.04	471024.6799	2006223.4466
POT	127+99.04	471013.6975	2006224.1101
POT	130+48.91	471021.7887	2006473.8491
TS	133+63.39	471034.1731	2006788.0823
SC	134+52.39	471037.1526	2006877.0311
CS	143+06.01	470911.6270	2007717.2146
ST	143+95.00	470882.7829	2007801.3990
POT	144+73.96	470856.7472	2007875.9479
POT	144+84.97	470866.9175	2007880.1692
TS	146+88.89	470795.5126	2008071.1792
SC	147+65.89	470768.8200	2008143.4041
CS	151+48.66	470659.1174	2008509.9100
ST	152+25.66	470641.7388	2008584.9228
TS	161+52.54	470435.9191	2009488.6610
SC	162+74.54	470410.0911	2009607.8901
CS	167+53.99	470377.9632	2010085.0091
ST	168+75.98	470387.5724	2010206.6146
POT	176+45.79	470456.3403	2010973.3561
POT	179+45.87	470477.6632	2011272.6691
POT	188+41.18	470557.6419	2012164.4079
POT	191+41.21	470589.9168	2012462.6944
PC	207+35.41	470732.3263	2014050.5173
PT	212+05.47	470763.2896	2014519.5188
PC	214+23.91	470772.5485	2014737.7624
PT	216+11.80	470782.2738	2014925.3957
POT	243+00.63	470946.6484	2017609.1986
POT	245+75.58	470957.9633	2017883.9108
TS	251+61.42	470993.7771	2018468.6546
SC	252+09.42	470996.7809	2018516.5605
CS	253+33.90	471006.3324	2018640.6708
ST	253+81.90	471010.6942	2018688.4722
POT	260+91.52	471076.2029	2019395.0632
PC	262+22.94	471087.3433	2019526.0154
PT	269+47.00	471167.6613	2020245.5601
POT	272+71.48	471217.2266	2020566.2352
PC	311+79.07	471739.4584	2024438.7702
PT	315+51.63	471879.9704	2024779.3914
PC	316+52.62	471953.1060	2024849.0305
PT	317+28.59	472009.7265	2024899.6354
POT	317+51.99	472027.9792	2024914.2820

RPB2			
TYPE	STATION	NORTH	EAST
POT	10+00.00	473175.2111	2016890.3215
TS	11+54.49	473058.9865	2016992.1034
SC	13+04.49	472945.1227	2017089.7410
CS	18+76.07	472464.7151	2017396.9336
ST	20+26.07	472328.3141	2017459.3259
TS	28+28.86	471594.8359	2017785.6362
SC	30+28.86	471409.3204	2017860.0683
PT	32+50.40	471192.0856	2017900.5866
POT	34+68.31	470974.5802	2017913.9412

WBPGL			
TYPE	STATION	NORTH	EAST
POT	10+00.00	467900.8554	1994915.5967
TS	55+66.37	469004.6082	1999346.5620
SC	56+36.37	469021.7373	1999414.4336
CS	62+50.97	469223.3191	1999994.3205
ST	63+20.97	469251.9834	2000058.1822
TS	74+85.65	469732.1831	2001119.2608
SC	75+85.65	469773.1726	2001210.4738
PT	83+22.64	470031.7552	2001900.1615
POT	86+58.94	470134.0438	2002220.5285
POT	90+34.06	470253.0891	2002576.2586
POT	97+78.98	470479.1045	2003286.0628
POT	103+29.09	470635.4989	2003813.4732
TS	111+29.45	470878.3382	2004576.1087
SC	112+29.45	470908.0188	2004671.6005
CS	117+77.25	471002.5601	2005209.9851
ST	118+77.24	471007.1887	2005309.8660
POT	130+40.90	471053.0145	2006472.6184
POT	131+40.91	471058.7012	2006572.4719
TS	133+58.40	471067.2660	2006789.7883
SC	134+47.40	471070.2454	2006878.7372
CS	143+55.61	470927.0729	2007770.5836
ST	144+44.60	470896.4055	2007854.1210
TS	146+82.00	470813.2755	2008076.4960
SC	147+59.00	470786.5829	2008148.7209
CS	151+41.77	470676.8802	2008515.2268
ST	152+18.77	470659.5017	2008590.2395
TS	161+44.41	470453.9574	2009492.7686
SC	162+66.41	470428.1417	2009612.0003
CS	167+40.06	470396.4018	2010083.3561
ST	168+62.05	470405.9985	2010204.9624
POT	176+31.89	470474.7681	2010971.7234
POT	179+31.92	470507.0434	2011270.0128
POT	188+27.05	470587.0055	2012161.5675
POT	191+27.28	470608.3429	2012461.0418
PC	207+21.48	470750.7523	2014048.8647
PT	211+92.42	470781.7730	2014518.7346
PC	214+10.86	470791.0319	2014736.9783
PT	215+98.40	470800.7392	2014924.2648
POT	242+87.23	470965.1138	2017608.0677
POT	245+62.17	470987.4081	2017882.1073
TS	251+48.01	471023.2219	2018466.8512
SC	251+96.01	471026.2261	2018514.7571
CS	253+19.57	471035.7068	2018637.9475
ST	253+67.57	471040.0682	2018685.7489
POT	260+77.19	471105.5769	2019392.3399
PC	261+96.02	471117.5415	2019510.5600
PT	269+31.37	471198.8800	2020241.3568
POT	272+56.44	471235.6442	2020564.3402
PC	311+63.44	471757.7923	2024436.2967
PCC	314+27.78	471840.7878	2024685.6416
PCC	316+76.38	471989.7675	2024883.0146
PT	317+02.36	472009.7265	2024899.6354
POT	317+25.76	472027.9792	2024914.2820

RR1			
TYPE	STATION	NORTH	EAST
POT	10+00.00	471163.4240	2019613.9365
POT	10+31.32	471154.8791	2019644.0650
POT	10+62.63	471146.3342	2019674.1935
POT	11+18.00	471131.7793	2019727.6177
POT	11+62.09	471120.7635	2019770.3049
POT	11+90.59	471113.6713	2019797.9071

RR2			
TYPE	STATION	NORTH	EAST
POT	10+00.00	471136.5644	2019729.0223
POT	10+43.29	471125.6447	2019770.9132
POT	10+58.44	471121.7150	2019785.5405
POT	10+73.58	471118.0047	2019800.2219
POT	11+28.56	471105.5798	2019853.7816
POT	11+83.54	471093.1548	2019907.3412
POT	11+97.22	471090.2822	2019920.7145

NOTES:

1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
2. THE PROPOSED ALIGNMENT CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

6/2/99
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PROPOSED ALIGNMENT CONTROL SHEET U-4405

NW1

TYPE	STATION	NORTH	EAST
POT	10+00.00	473343.8035	2016693.8115
POT	11+05.00	473271.6680	2016770.1101
POT	11+35.00	473249.6938	2016790.5339
POT	13+75.00	473069.1411	2016948.6501
POT	14+50.00	473012.7017	2016998.0423
POT	15+25.00	472955.8490	2017046.9582
POT	16+00.00	472897.8529	2017094.5129
POT	16+75.00	472838.3989	2017140.2320
POT	17+50.00	472777.5305	2017184.0501
POT	18+25.00	472715.3083	2017225.9237
POT	19+00.00	472651.7944	2017265.8109
POT	19+75.00	472587.0522	2017303.6719
POT	20+50.00	472521.1464	2017339.4689
POT	21+25.00	472454.1428	2017373.1661
POT	21+85.00	472399.8390	2017398.6828
POT	22+75.00	472317.7458	2017435.5706
POT	28+30.00	471810.6625	2017661.1622

NW2

TYPE	STATION	NORTH	EAST
POT	10+00.00	471199.0401	2018385.6092
POT	10+30.00	471216.6625	2018361.3306
POT	10+75.00	471239.4976	2018322.5549
POT	11+20.00	471262.0496	2018283.6137
POT	11+65.00	471285.0750	2018244.9507
POT	12+10.00	471310.6626	2018207.9335
POT	12+55.00	471338.9345	2018172.9235
POT	13+00.00	471369.7339	2018140.1150
POT	13+45.00	471402.8897	2018109.6898
POT	13+90.00	471438.2182	2018081.8169
POT	14+35.00	471475.5233	2018056.6509
POT	14+80.00	471514.5980	2018034.3313
POT	15+25.00	471555.1738	2018014.8734
POT	15+70.00	471592.8281	2017990.2330
POT	17+20.00	471728.5607	2017926.3841
POT	17+65.00	471772.3492	2017916.0129
POT	20+95.00	472072.6949	2017779.2925
POT	21+85.00	472153.9377	2017740.5677
POT	22+75.00	472234.2412	2017699.9309
POT	23+65.00	472313.5468	2017657.3796
POT	24+55.00	472391.8090	2017612.9383
POT	25+45.00	472470.0390	2017568.4404
POT	26+35.00	472547.8639	2017523.2376
POT	27+25.00	472624.6573	2017476.3039
POT	28+15.00	472700.3808	2017427.6629
POT	29+05.00	472774.9964	2017377.3387
POT	29+95.00	472848.4666	2017325.3568
POT	30+85.00	472920.7548	2017271.7431
POT	31+75.00	472991.8245	2017216.5246
POT	32+65.00	473061.6403	2017159.7289
POT	33+55.00	473130.1671	2017101.3844
POT	34+45.00	473197.3706	2017041.5204
POT	35+35.00	473263.2171	2016980.1670
POT	36+25.00	473327.6735	2016917.3549
POT	37+15.00	473390.7076	2016853.1155
POT	41+35.00	473679.5618	2016548.2167

SR1

TYPE	STATION	NORTH	EAST
PC	10+00.00	468745.3666	1997160.8367
PT	10+42.41	468787.4531	1997161.2342
PC	13+79.80	469116.6068	1997235.3480
PT	15+95.04	469233.1079	1997394.5073
POT	18+93.99	469207.5512	1997692.3704

SR2

TYPE	STATION	NORTH	EAST
POT	10+00.00	469224.5292	1997494.4921
PC	10+18.82	469205.7109	1997494.5237
PT	10+85.18	469144.1472	1997515.8518
PC	11+07.95	469126.2330	1997529.9085
PT	12+56.39	468987.4140	1997571.9746
POT	12+94.74	468949.1816	1997569.0303

SR3

TYPE	STATION	NORTH	EAST
POT	10+00.00	468956.1877	1996907.6237
POT	15+57.07	468417.0423	1997047.7940

SR4

TYPE	STATION	NORTH	EAST
POT	10+00.00	468910.5148	1996918.6541
POT	15+10.08	468416.8449	1997047.0014

WALL1

TYPE	STATION	NORTH	EAST
POT	8+60.00	472362.6727	2017403.8718
POT	9+13.93	472313.4779	2017425.9772
POT	14+62.97	471811.8469	2017649.1431

WALL2

TYPE	STATION	NORTH	EAST
POT	11+70.55	471665.3813	2017723.6061
POT	11+88.12	471649.3243	2017730.7495
POT	12+75.79	471566.9741	2017760.8148
POT	14+36.41	471418.1980	2017821.3381
POT	14+76.93	471379.5691	2017833.5919

WALL3

TYPE	STATION	NORTH	EAST
POT	10+00.00	470954.5913	2018530.8188
POT	10+86.70	470961.1600	2018617.2690

Y1

TYPE	STATION	NORTH	EAST
POT	10+00.00	468513.9088	1995259.7094
POT	15+26.27	468005.3673	1995395.1431

Y2

TYPE	STATION	NORTH	EAST
POT	10+00.00	468006.0247	1995397.7824
POT	13+85.69	467631.9023	1995491.5511

Y3

TYPE	STATION	NORTH	EAST
POT	10+00.00	468288.4756	1996531.6686
PC	11+68.77	468124.0067	1996569.5292
PT	13+61.34	467932.6862	1996578.2622
POT	14+01.69	467892.6968	1996572.8295

Y4

TYPE	STATION	NORTH	EAST
POT	10+00.00	469439.8320	1997651.0116
POT	22+80.26	468179.3985	1997875.4384

Y5

TYPE	STATION	NORTH	EAST
POT	10+00.00	470342.1392	2000029.3837
PC	14+30.60	470117.2555	2000396.5900
PT	17+48.55	469882.3722	2000603.8608
PC	21+62.48	469505.2267	2000774.4425
PT	23+97.87	469276.5837	2000821.7307
PC	28+05.44	468869.0650	2000814.8551
PT	29+07.96	468766.5518	2000814.4393
POT	30+20.46	468654.0571	2000815.4246

Y6

TYPE	STATION	NORTH	EAST
POT	10+00.00	470031.8367	2001948.1614
PC	12+07.85	469837.2481	2002021.2163
PT	13+04.69	469750.2673	2002063.4764
POT	13+18.54	469738.4286	2002070.6598

Y7

TYPE	STATION	NORTH	EAST
POT	10+00.00	470752.7009	2002664.8048
PC	10+96.77	470676.7802	2002724.8039
PT	14+14.46	470397.7718	2002873.1163
POT	14+83.07	470332.4048	2002893.9382
POT	19+34.91	469901.8744	2003031.0786

Y9

TYPE	STATION	NORTH	EAST
POT	10+00.00	470936.2951	2003624.7251
POT	13+62.38	470575.1325	2003654.3793

Y10

TYPE	STATION	NORTH	EAST
POT	10+00.00	470762.3241	2004242.2538
POT	13+24.44	470444.0369	2004305.1368

Y11

TYPE	STATION	NORTH	EAST
POT	10+00.00	470994.4397	2005233.6352
POT	12+10.77	470784.0293	2005221.2955

Y12

TYPE	STATION	NORTH	EAST
POT	10+00.00	471020.9954	2005895.0742
PC	10+50.86	470970.1708	2005897.0603
PT	11+46.72	470875.1307	2005887.3418
POT	12+76.59	470749.0673	2005856.1092

Y13

TYPE	STATION	NORTH	EAST
POT	10+00.00	472060.7004	2007215.3310
POT	20+11.93	471051.9886	2007134.6927

Y14

TYPE	STATION	NORTH	EAST
POT	10+00.00	470947.3151	2007678.9876
POT	12+50.00	470699.6724	2007644.7369

Y15

TYPE	STATION	NORTH	EAST
POT	10+00.00	470766.3512	2009093.6231
POT	12+25.21	470546.8422	2009043.2626

Y16

TYPE	STATION	NORTH	EAST
POT	10+00.00	470396.6187	2009756.8814
PC	10+92.94	470304.0324	2009748.8133
PT	11+54.75	470242.3285	2009745.3532
POT	12+17.34	470179.7529	2009743.7815

NOTES:

1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
2. THE PROPOSED ALIGNMENT CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATINO REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

REVISIONS

6/2/09

1. ALL DATA IS TO BE CHECKED BY THE SURVEYS UNIT.
 2. ALL DATA IS TO BE CHECKED BY THE SURVEYS UNIT.
 3. ALL DATA IS TO BE CHECKED BY THE SURVEYS UNIT.
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PERMANENT EASEMENT CONTROL SHEET U-4405

PROJECT SURVEYOR

ROW MARKER PERMANENT EASEMENT - E

ALIGN	STATION	OFFSET	NORTH	EAST
L	23+41.00	-76.77	468148.8533	1995653.5339
L	25+85.00	-76.64	468207.7030	1995890.3307
L	31+33.00	-81.87	468345.2378	1996420.8168
L	32+71.00	-81.33	468378.0700	1996554.8554
L	47+24.00	-118.00	468764.8592	1997955.9077
L	23+41.00	-92.00	468163.6270	1995649.8537
L	25+85.00	-92.00	468222.6051	1995886.6186
L	31+33.00	-115.00	468377.3821	1996412.8097
L	32+71.00	-115.00	468410.7385	1996546.7177
L	49+88.00	-70.43	468782.5088	1998223.5786
L	50+44.00	-70.80	468796.4110	1998277.8269
L	52+51.00	-72.20	468847.7993	1998478.3516
L	52+79.00	-72.39	468854.7504	1998505.4758
L	53+96.00	-73.18	468883.7960	1998618.8159
L	54+47.00	-73.52	468896.4569	1998668.2205
L	58+20.00	-76.03	468989.0551	1999029.5526
L	57+92.00	-75.84	468982.1041	1999002.4285
L	61+25.00	-75.46	469062.2151	1999325.6411
L	49+88.00	-86.00	468797.6204	1998219.8143
L	50+44.00	-86.00	468811.1564	1998274.1538
L	52+51.00	-88.00	468863.1318	1998474.5323
L	52+79.00	-88.00	468869.8998	1998501.7021
L	53+96.00	-97.50	468907.3985	1998612.9365
L	54+47.00	-97.50	468919.7259	1998662.4242
L	57+92.00	-88.00	468993.8988	1998999.4904
L	58+20.00	-88.00	469000.6667	1999026.6602
L	61+25.00	-85.00	469071.4765	1999323.3331
L	83+40.00	-71.60	468999.1169	2001361.3400
L	84+58.00	-72.63	468944.1321	2001471.8791
L	81+36.00	-70.93	468917.4956	2001171.8951
L	80+15.50	-70.98	468976.8525	2001061.6882
L	80+85.00	-70.88	468976.4180	2001125.1030
L	78+87.00	-71.17	468975.0764	2000944.5260
L	83+40.00	-106.00	468930.9709	2001348.3424
L	84+58.00	-98.00	468967.7956	2001462.7366
L	83+03.48	-71.40	468884.8791	2001327.2596
L	82+20.00	-187.79	468958.9223	2001203.4768
L	81+36.00	-181.00	468918.0179	2001127.0626
L	78+53.00	-71.22	468901.1123	2000913.5259
L	86+00.00	-75.46	468997.0447	2001605.4761
L	86+51.00	-76.38	470015.2242	2001653.7917
L	92+42.00	-76.76	470198.3371	2002218.0804
L	95+36.00	-76.59	470287.3849	2002498.2706
L	95+65.00	-76.58	470296.1685	2002525.9084
L	86+51.00	-97.00	470034.6780	2001646.9528
L	86+00.00	-94.00	470014.4839	2001599.1863
L	92+21.00	-86.00	470200.7744	2002195.2654
L	92+42.00	-86.00	470207.1460	2002215.2754
L	95+36.00	-89.00	470299.2074	2002494.5060
L	95+65.00	-89.00	470308.0063	2002522.1390
L	92+21.00	-76.77	470191.9765	2002198.0668
L	133+09.00	-90.00	471122.0808	2006174.5729
L	134+74.00	-90.00	471128.5786	2006339.4449
L	135+95.00	-54.99	471098.3596	2006461.7299
L	136+74.00	-55.71	471102.1885	2006540.6403
L	133+09.00	-54.63	471086.7389	2006175.9658
L	134+74.00	-54.84	471093.4431	2006340.8297
L	135+95.00	-115.00	471158.3243	2006459.3666
L	136+74.00	-115.00	471161.4354	2006538.3053
L	137+03.00	-114.00	471161.5782	2006567.3222
L	137+33.00	-114.00	471162.7596	2006597.2989
L	137+33.00	-158.00	471206.7255	2006595.5661
L	137+71.00	-158.00	471208.2220	2006633.5367

ROW MARKER PERMANENT EASEMENT - E

ALIGN	STATION	OFFSET	NORTH	EAST
L	138+43.00	-76.00	471129.1210	2006708.7100
L	138+74.00	-76.00	471130.3418	2006739.6860
L	138+74.00	-56.00	471110.3573	2006740.4736
L	159+85.00	-55.00	470658.3779	2008801.2025
L	159+60.00	-73.00	470681.4799	2008700.8237
L	159+85.00	-73.00	470675.9285	2008805.1995
L	164+36.00	-55.00	470558.2303	2009240.9427
L	164+64.00	-55.00	470552.0127	2009268.2436
L	164+36.00	-74.00	470576.7559	2009245.1618
L	164+64.00	-74.00	470570.5384	2009272.4627
L	172+66.00	-57.35	470442.8793	2010044.8410
L	173+34.00	-54.58	470443.7629	2010111.0907
L	173+34.00	-120.00	470509.0204	2010106.5066
L	172+66.00	-123.00	470508.4843	2010042.3449
L	175+58.00	-73.00	470481.3583	2010331.5554
L	175+58.00	-56.37	470464.7960	2010333.0408
L	177+24.00	-73.00	470496.1871	2010496.8917
L	177+24.00	-55.62	470478.8729	2010498.4446
L	178+22.00	-82.00	470513.9055	2010593.6960
L	178+22.00	-55.17	470487.1834	2010596.0926
L	178+48.70	-81.00	470515.2945	2010620.3777
L	181+22.00	-59.81	470518.6030	2010894.4788
L	181+22.00	-74.00	470532.7364	2010893.2112
L	181+57.00	-74.00	470535.8630	2010928.0713
L	181+57.00	-55.00	470516.9389	2010929.7686
L	183+14.00	-76.00	470551.8798	2011084.2650
L	183+14.00	-56.98	470532.9391	2011085.9637
L	184+15.00	-76.00	470560.9021	2011184.8612
L	184+15.00	-58.67	470543.6380	2011186.4096
L	185+32.00	-79.00	470574.3417	2011301.1254
L	185+32.00	-60.00	470555.4177	2011302.8227
L	185+75.00	-78.00	470577.1869	2011344.0429
L	185+75.00	-60.00	470559.2588	2011345.6508
L	192+94.00	-79.00	470642.4111	2012060.0790
L	192+94.00	-60.00	470623.4871	2012061.7763
L	192+66.00	-79.00	470639.9099	2012032.1910
L	192+66.00	-59.96	470620.9457	2012033.8918
L	193+60.00	-79.00	470648.3069	2012125.8152
L	194+00.00	-78.00	470650.8841	2012165.7446
L	194+00.00	-59.92	470632.8755	2012167.3598
L	193+60.00	-60.00	470629.3828	2012127.5124
L	196+61.00	-75.00	470671.2112	2012425.9691
L	196+61.00	-63.25	470659.5086	2012427.0187
L	196+89.00	-74.00	470672.7164	2012453.9465
L	196+89.00	-59.19	470657.9643	2012455.2696
L	200+50.00	-55.00	470686.0405	2012815.2005
L	202+05.00	-53.00	470697.8946	2012969.7595
L	203+85.00	-65.00	470725.9260	2013147.9679
L	203+85.00	-53.00	470713.9740	2013149.0399
L	204+13.00	-65.00	470728.4273	2013175.8560
L	204+13.00	-53.00	470716.4752	2013176.9280
L	205+82.00	-65.00	470743.5240	2013344.1803
L	205+82.00	-53.00	470731.5720	2013345.2523
L	206+10.00	-65.00	470746.0253	2013372.0684
L	206+10.00	-53.00	470734.0732	2013373.1404
L	215+89.00	-53.00	470817.0259	2014350.2029
L	214+89.00	-69.00	470826.5583	2014248.7760
L	214+89.00	-51.00	470808.6012	2014250.0170
L	215+74.00	-111.88	470874.8946	2014331.5904
L	221+96.00	-153.00	470946.3497	2014950.2438
L	221+96.00	-53.00	470846.5367	2014956.3570
L	230+73.00	-55.00	470902.1460	2015831.5945
L	234+11.00	-79.00	470946.7639	2016167.4951

ROW MARKER PERMANENT EASEMENT - E

ALIGN	STATION	OFFSET	NORTH	EAST
L	234+11.00	-55.00	470922.8088	2016168.9623
L	234+39.00	-79.00	470948.4756	2016195.4428
L	234+39.00	-55.00	470924.5205	2016196.9099
L	236+36.00	-96.00	470977.4868	2016391.0351
L	236+36.00	-55.00	470936.5635	2016393.5415
L	237+39.00	-96.00	470983.7835	2016493.8424
L	237+39.00	-55.00	470942.8602	2016496.3488
L	238+95.00	-70.00	470967.3688	2016651.1401
L	239+23.00	-71.00	470970.0786	2016679.0266
L	239+23.00	-55.00	470954.1085	2016680.0047
L	238+95.00	-55.00	470952.3968	2016652.0571
L	265+55.00	-77.00	471159.6804	2019301.5900
L	265+55.00	-57.75	471140.5126	2019303.3670
L	272+99.00	-86.68	471234.5264	2019949.4598
L	272+09.00	-66.00	471213.9807	2019951.8317
L	271+81.00	-66.00	471210.7995	2019924.1060
L	281+81.00	-60.25	471335.3401	2020922.0317
L	294+44.00	-60.53	471503.4745	2022166.7272
L	299+39.00	-62.05	471557.7751	2022579.9800
L	298+55.00	-75.00	471572.7436	2022572.1063
L	298+55.00	-81.00	471578.6904	2022571.3044
L	298+81.00	-89.00	471590.0934	2022596.0020
L	298+86.00	-75.00	471576.8872	2022602.8281
L	300+75.00	-76.00	471603.1370	2022789.9990
L	300+75.00	-61.08	471588.3543	2022791.9925
L	301+03.00	-76.00	471606.8790	2022817.7479
L	301+03.00	-60.97	471591.9822	2022819.7568
L	303+64.00	-81.00	471646.7153	2023075.7383
L	303+64.00	-59.90	471625.8002	2023078.5588
L	303+92.00	-81.00	471650.4573	2023103.4871
L	303+92.00	-59.78	471629.4281	2023106.3230
L	307+34.00	-78.00	471693.1905	2023442.8201
L	307+62.00	-78.00	471696.9325	2023470.5689
L	307+62.00	-58.49	471677.6018	2023473.1758
L	310+83.00	-68.00	471729.9220	2023790.0258
L	311+11.00	-68.00	471733.6640	2023817.7746
L	312+24.00	-68.00	471748.7658	2023929.7610
L	312+24.00	-50.00	471730.9273	2023932.1666
L	312+57.00	-68.00	471753.1761	2023962.4649
L	312+57.00	-50.00	471735.3375	2023964.8705
L	313+61.00	-50.00	471749.2365	2024067.9376
L	313+61.00	-67.12	471766.2027	2024065.6496
L	19+74.00	-77.04	468060.3999	1995297.3526
L	44+37.00	-96.00	468674.1398	1997682.7356
L	44+17.00	-76.72	468650.5973	1997667.9889
L	47+32.00	-129.00	468777.4667	1997961.0116
L	47+64.00	-97.00	468754.1505	1997999.7976
L	49+83.00	-97.00	468	

PERMANENT EASEMENT CONTROL SHEET U-4405

PROJECT REFERENCE NO. U-4405	SHEET NO. 1E-4
Location and Surveys	

PROJECT SURVEYOR

ROW MARKER PERMANENT EASEMENT - E

ALIGN	STATION	OFFSET	NORTH	EAST
L	85+37.00	-139.00	470034.6664	2001523.4584
L	86+35.00	-141.00	470070.7430	2001616.9349
L	86+61.00	-114.00	470054.0848	2001650.9222
L	91+34.00	-100.00	470187.7177	2002108.1188
L	89+25.00	-120.00	470143.3621	2001902.9029
L	96+13.00	-105.00	470337.8179	2002563.0252
L	96+13.00	-134.00	470365.4487	2002554.2227
L	97+86.00	-125.00	470409.3630	2002721.7982
L	100+26.88	-96.00	470454.8143	2002960.1177
L	105+06.00	-124.00	470626.8658	2003408.1607
L	105+06.00	-97.00	470601.1386	2003416.3528
L	105+17.00	-124.00	470630.2034	2003418.6422
L	105+17.00	-97.00	470604.4761	2003426.8343
L	114+96.00	-80.00	470885.3166	2004364.8421
L	119+17.00	-106.00	471033.5922	2004767.2574
L	119+88.00	-105.00	471048.9275	2004839.7788
L	119+17.00	-73.00	471001.5121	2004774.9948
L	119+88.00	-78.00	471022.5044	2004845.3303
L	120+80.00	-86.00	471048.1354	2004937.2986
L	120+80.00	-116.00	471077.7092	2004932.2600
L	120+92.00	-117.00	471080.7777	2004944.5035
L	120+92.00	-86.00	471050.1924	2004949.5572
L	123+14.97	-90.00	471081.2028	2005178.5653
L	123+95.00	-113.00	471108.8735	2005259.6042
L	124+09.00	-113.00	471109.5160	2005273.8687
L	124+09.00	-96.00	471092.5323	2005274.6134
L	132+30.00	-91.00	471119.9689	2006095.5948
L	132+33.00	-126.00	471155.0599	2006097.2142
L	132+43.00	-125.00	471154.4545	2006107.2458
L	132+41.00	-90.00	471119.4029	2006106.6257
L	133+68.00	-73.00	471107.4174	2006234.1966
L	139+77.00	-75.00	471133.1821	2006843.3172
L	139+80.00	-100.00	471158.2631	2006845.6186
L	139+89.92	-100.00	471158.5548	2006855.7736
L	139+87.16	-75.00	471133.4860	2006853.6540
L	141+35.00	-75.00	471133.8715	2007005.5622
L	144+65.00	-69.30	471096.9067	2007342.8677
L	143+97.85	-94.98	471132.3371	2007277.9552
L	143+57.00	-90.59	471133.1873	2007235.3644
L	145+63.00	-96.00	471095.4527	2007445.2653
L	145+63.00	-121.00	471129.7717	2007452.1359
L	145+75.00	-121.00	471127.2724	2007464.4660
L	145+75.00	-71.09	471078.3768	2007454.4328
L	147+83.00	-89.00	471043.9047	2007666.9986
L	150+32.00	-85.00	470957.4399	2007907.1810
L	150+32.00	-88.00	470960.2500	2007908.2313
L	150+43.00	-88.00	470956.3967	2007918.5395
L	150+43.00	-85.00	470953.5866	2007917.4890
L	152+31.00	-87.00	470889.6560	2008094.2339
L	152+31.00	-95.00	470897.1514	2008097.0301
L	152+42.00	-95.00	470893.3325	2008107.2770
L	152+42.00	-87.00	470885.8351	2008104.4859
L	153+54.59	-88.00	470848.9657	2008208.9709
L	167+00.00	-82.00	470525.9365	2009504.3351
L	169+14.00	-83.00	470486.6997	2009708.1306
L	172+18.00	-82.00	470466.3442	2009997.9806
L	174+05.00	-84.00	470478.6852	2010178.3533
L	176+90.00	-88.00	470508.0899	2010461.6877
L	178+46.00	-94.00	470528.0014	2010616.5281
L	180+00.00	-91.00	470538.7702	2010770.1804
L	182+72.00	-83.00	470555.0999	2011041.8076
L	187+53.00	-77.00	470592.0916	2011521.4206
L	188+11.00	-77.55	470597.8221	2011579.1394

ROW MARKER PERMANENT EASEMENT - E

ALIGN	STATION	OFFSET	NORTH	EAST
L	193+61.00	-88.00	470657.3602	2012126.0072
L	154+28.00	-101.00	470838.4639	2008280.7799
L	154+08.14	-145.00	470886.2439	2008276.3233
L	157+21.00	-91.00	470752.1897	2008552.6159
L	159+24.00	-89.00	470705.0745	2008749.2753
L	159+49.36	-98.00	470708.2187	2008775.9994
L	159+51.63	-81.00	470691.1387	2008774.4393
L	207+75.00	-89.00	470784.6687	2013534.2648
L	207+75.00	-114.00	470809.5688	2013532.0316
L	207+86.00	-114.00	470810.5514	2013542.9876
L	207+86.00	-89.00	470785.6514	2013545.2209
L	212+25.00	-88.00	470823.8712	2013982.5551
L	215+88.00	-79.00	470842.9212	2014347.6636
L	220+75.00	-172.00	470957.5585	2014814.0629
L	221+73.00	-174.00	470965.9043	2014926.0030
L	222+08.00	-136.00	470930.1150	2014963.2606
L	227+67.00	-90.00	470918.3741	2015524.0272
L	228+27.00	-85.00	470917.0514	2015584.2206
L	219+56.00	-74.00	470854.9839	2014716.7957
L	235+55.18	-85.00	470961.5667	2016311.0360
L	237+57.00	-89.00	470977.8970	2016512.2367
L	239+22.00	-89.00	470987.9838	2016676.9281
L	239+32.00	-84.00	470983.6045	2016687.2150
L	245+83.00	-85.00	471024.3997	2017336.9363
L	262+33.00	-75.00	471127.9635	2018981.1496
L	269+19.70	-87.00	471203.8792	2019663.0563
L	276+84.00	-79.00	471286.5670	2020420.0468
L	281+89.00	-78.00	471353.0663	2020920.6503
L	282+46.00	-78.00	471360.6840	2020977.1390
L	282+46.00	-85.00	471367.6212	2020976.2035
L	282+58.00	-84.00	471368.2339	2020988.2295
L	282+58.00	-78.00	471362.2877	2020989.0314
L	309+14.00	-75.00	471714.2733	2023621.6063
L	316+41.00	-64.00	471800.5313	2024343.5548
L	319+38.00	-60.00	471861.5314	2024614.3566
L	322+79.00	-50.00	472047.3293	2024865.6005
L	81+36.00	-140.00	469880.5732	2001143.7627
L	133+09.00	-81.00	471113.0877	2006174.9274
L	134+74.00	-74.00	471112.5910	2006340.0750
L	135+95.00	-74.00	471117.3561	2006460.9812
L	136+74.00	-74.00	471120.4672	2006539.9199
L	137+03.00	-74.00	471121.6092	2006568.8974
L	172+66.00	-91.00	470476.5074	2010043.5615
L	173+34.00	-90.00	470479.0941	2010108.6088
L	236+36.00	-71.00	470952.5336	2016392.5634
L	237+39.00	-71.00	470958.8302	2016495.3707
L	82+53.10	-141.00	469929.2445	2001253.0912
L	144+53.00	-94.00	471123.2333	2007334.4637
L	303+64.00	-76.00	471641.7601	2023076.4065
L	303+92.00	-76.00	471645.5022	2023104.1554
L	257+87.24	-163.69	471176.7871	2018532.5360
L	60+55.00	-98.00	469067.1729	1999252.2747
L	61+39.48	-196.00	469182.5437	1999309.9659
L	61+45.48	-196.00	469184.0945	1999316.1674
L	135+40.00	-66.00	471107.1964	2006406.3389
L	135+71.00	-74.00	471116.4110	2006436.9998
L	135+40.00	-221.00	471262.0761	2006400.2348
L	135+71.00	-221.00	471263.2969	2006431.2108
L	141+53.00	-90.00	471148.3071	2007024.5975
L	230+31.75	-85.00	470929.5682	2015788.5877
L	159+60.00	-55.00	470663.9293	2008776.8266
L	44+17.00	-96.00	468669.3055	1997663.3287
L	79+26.00	-141.00	469794.7713	2000951.2839

ROW MARKER PERMANENT EASEMENT - E

ALIGN	STATION	OFFSET	NORTH	EAST
L	79+26.00	-161.00	469812.9940	2000943.0419
L	79+38.00	-162.00	469818.8504	2000953.5634
L	79+38.00	-142.00	469800.6276	2000961.8055
L	83+71.00	-157.00	469990.1223	2001358.5220
L	83+81.00	-157.00	469993.9401	2001368.0336
L	83+81.00	-140.00	469978.1586	2001374.3536
L	88+49.00	-118.00	470118.3368	2001830.9573
L	88+64.00	-125.00	470129.5963	2001843.2053
L	88+87.00	-126.00	470137.5496	2001863.8735
L	96+24.00	-105.00	470341.1533	2002573.5031
L	96+24.00	-134.00	470368.7862	2002564.7042
L	97+65.00	-107.00	470385.8399	2002707.2495
L	114+24.00	-82.00	470865.3767	2004295.6293
L	128+28.00	-104.00	471117.1277	2005693.3947
L	128+28.00	-94.00	471107.1355	2005693.7885
L	128+39.00	-104.00	471117.5609	2005704.3862
L	128+39.00	-94.00	471107.5686	2005704.7800
L	147+04.00	-85.00	471061.8372	2007587.1437
L	147+04.00	-69.09	471046.4354	2007583.1455
L	186+96.49	-229.00	470738.4357	2011451.5565
L	195+49.00	-88.00	470674.1542	2012313.2556
L	198+12.00	-88.00	470697.6480	2012575.2041
L	206+05.00	-86.00	470766.4946	2013365.2125
L	212+28.00	-112.00	470848.0432	2013983.3992
L	212+36.00	-88.00	470824.8538	2013993.5111
L	212+39.00	-111.00	470848.0299	2013994.4445
L	222+10.00	-88.00	470882.3271	2014968.1912
L	230+24.00	-85.00	470929.0944	2015780.8522
L	235+55.18	-71.00	470947.5929	2016311.8945
L	237+57.00	-71.00	470959.9306	2016513.3370
L	258+88.00	-88.00	471109.1914	2018636.7903
L	258+88.00	-97.00	471118.1565	2018635.9980
L	258+99.00	-98.00	471120.1172	2018646.7431
L	258+99.00	-85.00	471107.1691	2018647.9040
L	307+32.16	-75.00	471689.9709	2023441.3930
L	307+62.00	-75.00	471693.9594	2023470.9699
L	313+95.00	-67.00	471770.6279	2024099.3606
L	317+76.00	-72.00	471827.3239	2024471.1705
L	54+35.00	77.09	468747.4128	1998692.9807
L	54+65.00	77.08	468754.6775	1998722.0878
L	62+39.00	77.37	468942.6337	1999474.4405
L	64+83.68	78.77	469013.9823	1999713.6940
L	73+38.00	81.33	469349.8836	2000507.1575
L	73+66.00	81.42	469361.3407	2000532.7063
L	78+74.00	85.46	469567.0097	2000997.2282
L	82+34.00	81.98	469716.5795	2001322.8327
L	83+49.00	82.84	469759.4728	20014

PERMANENT EASEMENT CONTROL SHEET U-4405

PROJECT SURVEYOR

ROW MARKER PERMANENT EASEMENT - E

ALIGN	STATION	OFFSET	NORTH	EAST
L	163.14.00	55.00	470478.0675	2009097.5623
L	172.11.00	55.00	470329.2759	2009992.5466
L	172.39.00	55.00	470329.7531	2010021.3487
L	173.28.00	54.91	470334.1198	2010112.6532
L	173.56.00	54.88	470336.2233	2010141.0969
L	54.35.00	93.00	468731.9741	1998696.8264
L	62.39.00	98.00	468922.7105	1999479.8101
L	64.75.17	96.20	468994.6809	1999711.0396
L	73.38.00	98.00	469334.6924	2000514.0284
L	73.66.00	97.00	469347.1424	2000539.1281
L	83.55.00	166.00	469684.6307	2001464.6322
L	82.40.00	171.00	469637.0322	2001363.2120
L	86.92.00	87.00	469874.3775	2001746.1649
L	87.21.00	88.00	469882.6774	2001773.5495
L	120.85.00	70.00	470895.1617	2004968.2856
L	120.85.00	55.50	470909.4619	2004965.8798
L	125.36.00	55.00	470946.7517	2005407.8791
L	125.85.00	55.00	470948.6815	2005456.8448
L	126.09.00	55.00	470949.6266	2005480.8262
L	126.39.00	55.00	470950.8081	2005510.8029
L	131.12.00	56.00	470968.4360	2005983.4754
L	133.35.00	73.00	470960.2311	2006206.9719
L	136.16.00	56.00	470988.2840	2006487.0844
L	136.16.00	98.00	470946.3165	2006488.7384
L	135.11.00	95.00	470945.1792	2006383.7017
L	137.02.00	180.00	470867.7669	2006577.9009
L	138.53.00	181.00	470872.7142	2006728.8232
L	143.16.00	138.00	470910.2521	2007170.5793
L	144.08.00	137.00	470901.0808	2007257.0350
L	158.18.00	74.00	470569.6820	2008609.7255
L	158.96.00	75.00	470551.3865	2008685.5571
L	162.86.00	73.00	470466.7345	2009066.2644
L	163.14.00	73.00	470460.5169	2009093.5653
L	164.36.00	55.00	470450.9766	2009216.5165
L	164.64.00	55.00	470444.7590	2009243.8174
L	164.64.00	73.00	470427.2084	2009239.8204
L	164.36.00	73.00	470433.4260	2009212.5194
L	173.28.00	78.00	470311.0812	2010114.2191
L	173.56.00	79.00	470312.1758	2010142.9611
L	151.64.00	55.00	470780.0806	2007981.8059
L	151.64.00	74.00	470762.2835	2007975.1529
L	151.93.00	74.00	470752.1289	2008002.3169
L	151.93.00	55.00	470769.9260	2008008.9699
L	172.11.00	79.00	470305.2770	2009992.7682
L	172.39.00	78.00	470306.7596	2010021.8982
L	18.20.00	100.00	467851.3876	1995190.7116
L	18.70.00	98.00	467865.4139	1995238.7455
L	16.07.00	100.00	467799.9026	1994984.0275
L	48.55.00	143.00	468543.2629	1998146.1105
L	64.19.00	98.00	468974.9638	1999656.8862
L	77.65.00	97.00	469511.5719	2000902.6717
L	78.20.00	96.00	469535.1488	2000952.3721
L	78.30.00	92.00	469542.9144	2000959.8351
L	87.02.00	110.00	469855.8209	2001762.9444
L	83.51.88	123.00	469723.3318	2001445.6444
L	144.08.00	78.00	470959.5393	2007265.0101
L	145.63.00	75.00	470937.5852	2007413.6605
L	152.10.00	79.00	470741.4920	2008016.4919
L	154.28.00	64.00	470681.5648	2008229.7145
L	155.64.00	66.00	470639.3788	2008361.7083
L	172.13.00	92.00	470292.2980	2009994.9845
L	173.86.00	85.00	470308.6761	2010173.9310

ROW MARKER PERMANENT EASEMENT - E

ALIGN	STATION	OFFSET	NORTH	EAST
L	174.09.84	85.00	470310.7585	2010197.9758
L	174.06.56	118.00	470277.5942	2010197.5584
L	176.74.00	73.00	470346.3043	2010460.1338
L	176.74.00	55.95	470363.2845	2010458.6109
L	177.02.00	55.00	470366.7336	2010486.4139
L	177.02.00	74.00	470347.8095	2010488.1112
L	178.20.00	55.00	470377.2745	2010603.9422
L	181.16.00	55.00	470403.7162	2010898.7588
L	181.46.00	55.00	470406.3961	2010928.6388
L	181.16.00	77.00	470381.8041	2010900.7240
L	181.46.00	78.00	470383.4880	2010930.6934
L	180.77.00	85.00	470370.3522	2010862.5946
L	182.00.00	85.00	470381.3398	2010985.1029
L	182.36.00	55.81	470413.6329	2011018.3510
L	182.36.00	79.00	470390.5317	2011020.4230
L	182.64.00	79.00	470393.0329	2011048.3110
L	182.46.00	56.35	470415.5910	2011046.2878
L	186.44.00	100.00	470406.0623	2011428.6677
L	186.91.14	101.00	470409.2774	2011475.7097
L	190.27.00	94.00	470446.2516	2011809.6006
L	192.17.00	71.00	470486.1324	2011996.7864
L	192.45.00	71.00	470488.6336	2012024.6744
L	192.45.00	89.00	470470.7056	2012026.2824
L	192.17.00	89.00	470468.2043	2011998.3943
L	193.52.00	60.00	470509.1479	2012130.2640
L	193.52.00	81.00	470488.2319	2012132.1399
L	193.81.00	81.00	470490.8225	2012161.0240
L	193.81.00	60.00	470511.7385	2012159.1481
L	201.44.03	79.00	470560.9755	2012920.8206
L	201.58.00	79.00	470562.2238	2012934.7390
L	201.58.00	72.00	470569.1958	2012934.1137
L	203.65.00	72.00	470587.6921	2013140.3418
L	206.51.00	91.00	470594.3115	2013426.8400
L	206.51.00	53.83	470631.3363	2013423.5193
L	210.86.00	53.70	470670.3217	2013856.7698
L	210.86.00	76.00	470648.1100	2013858.7699
L	211.14.00	53.69	470672.8311	2013884.6561
L	211.14.00	76.00	470650.6112	2013886.6490
L	211.62.00	53.68	470677.1330	2013932.4630
L	211.62.00	79.00	470651.9111	2013934.7251
L	212.18.00	81.00	470654.9215	2013990.6798
L	212.18.00	58.00	470677.8296	2013988.6253
L	212.49.00	54.60	470683.9901	2014019.1972
L	212.49.00	60.00	470678.6068	2014019.6800
L	214.11.00	65.00	470687.2329	2014180.7277
L	217.14.00	65.00	470705.7791	2014481.1749
L	219.47.00	66.00	470714.7282	2014713.7378
L	219.47.00	71.00	470709.7327	2014713.9498
L	220.34.00	53.00	470731.6019	2014800.4211
L	220.34.00	74.00	470710.6265	2014801.4382
L	220.61.00	74.00	470711.9806	2014828.6043
L	220.61.00	183.00	470603.1232	2014834.1776
L	223.38.00	85.00	470717.4756	2015106.5277
L	225.30.00	100.00	470714.2411	2015299.0856
L	228.69.00	100.00	470734.9649	2015637.4515
L	232.75.00	66.00	470793.7211	2016040.6137
L	232.75.00	81.00	470778.7491	2016041.5307
L	233.47.00	81.00	470783.1506	2016113.3960
L	233.47.00	66.00	470798.1226	2016112.4790
L	235.89.00	55.00	470823.8960	2016353.3539
L	235.89.00	93.00	470785.9671	2016355.6770
L	236.27.00	93.00	470788.2901	2016393.6059

ROW MARKER PERMANENT EASEMENT - E

ALIGN	STATION	OFFSET	NORTH	EAST
L	236.27.00	55.00	470826.2191	2016391.2829
L	238.20.00	70.00	470823.0457	2016584.8389
L	237.07.81	100.00	470786.2431	2016474.6882
L	239.13.00	55.00	470843.7029	2016676.7480
L	243.08.25	89.00	470833.9292	2017073.3397
L	243.08.34	100.00	470822.9552	2017074.0995
L	242.95.00	76.00	470846.0948	2017059.3173
L	242.95.00	55.00	470867.0555	2017058.0335
L	243.23.00	56.62	470867.1503	2017086.0801
L	243.23.00	76.00	470847.8065	2017087.2649
L	244.08.34	95.00	470834.0590	2017173.6068
L	244.08.34	100.00	470829.0684	2017173.9125
L	245.34.00	79.00	470857.7110	2017298.0537
L	245.18.00	95.00	470840.7628	2017283.0617
L	250.42.80	86.00	470881.8283	2017806.3389
L	259.14.00	63.00	470961.1183	2018676.1449
L	261.46.52	63.00	470982.5696	2018907.7813
L	268.32.00	82.00	471027.0906	2019592.3700
L	270.99.00	74.13	471062.4102	2019858.1894
L	273.99.00	71.00	471100.6514	2020156.8532
L	277.60.00	98.00	471121.3118	2020519.0201
L	277.60.00	52.23	471166.6740	2020512.9028
L	278.07.00	98.00	471127.5930	2020565.5985
L	278.07.00	52.23	471172.9526	2020559.4816
L	277.60.00	73.00	471146.0875	2020515.6790
L	278.07.00	74.00	471151.3777	2020562.3910
L	280.47.00	111.00	471146.7842	2020805.1829
L	280.90.00	111.00	471152.5309	2020847.7971
L	280.90.00	129.00	471134.6924	2020850.2027
L	281.27.00	129.00	471139.6372	2020896.8708
L	281.37.00	109.00	471160.7943	2020894.1082
L	281.37.00	81.00	471188.5431	2020890.3662
L	281.75.42	52.65	471221.7775	2020924.6506
L	282.74.00	52.78	471234.8237	2021022.3652
L	282.74.00	66.00	471221.7178	2021024.1326
L	283.02.00	66.00	471225.4598	2021051.8814
L	283.02.00	52.81	471238.5292	2021050.1189
L	287.03.00	50.00	471294.9076	2021447.1459
L	287.03.00	73.00	471272.1139	2021450.2197
L	287.30.00	73.00	471275.7223	2021476.9775
L	287.30.00	50.00	471298.5160	2021473.9037
L	288.21.00	50.00	471310.6776	2021564.0873
L	288.21.00	73.00	471287.8839	2021567.1612
L	288.49.00	73.00	471291.6259	2021594.9100
L	288.49.00	52.91	471311.5322	2021592.2255
L	296.51.00	72.00	471399.7995	2022389.5819
L	298.11.10	52.84	471440.1830	2022545.6870
L	298.11.15	58.00	471435.0774	2022546.4273
L	299.70.00	57.34	471	

PERMANENT EASEMENT CONTROL SHEET U-4405

PROJECT SURVEYOR

ROW MARKER PERMANENT EASEMENT - E

ALIGN	STATION	OFFSET	NORTH	EAST
L	308+93.00	70.00	471567.7676	2023620.1731
L	309+04.00	54.31	471584.7827	2023628.9781
L	309+04.00	70.00	471569.2376	2023631.0744
L	309+32.00	54.26	471588.5737	2023656.7204
L	309+32.00	70.00	471572.9797	2023658.8233
L	312+56.00	60.00	471626.1907	2023978.5804
L	313+92.21	70.00	471634.4846	2024114.9092
L	313+94.43	82.41	471622.4823	2024118.7677
L	281+46.48	74.00	471196.7479	2020898.8302
L	121+15.00	70.00	470899.8139	2004997.0364
L	82+35.11	98.61	469701.7200	2001330.3755
L	48+20.00	108.00	468568.7651	1998103.6883
L	121+15.00	55.00	470914.6360	2004994.7330
L	281+34.89	74.00	471195.1980	2020887.3371
L	54+65.00	93.00	468739.2255	1998725.9369
L	78+60.10	92.00	469555.3170	2000987.2565
L	237+07.80	94.00	470792.2315	2016474.3161
L	238+00.00	70.00	470821.8230	2016564.8763
L	238+00.00	55.00	470836.7950	2016563.9593
L	238+20.00	55.00	470838.0176	2016583.9219
L	280+46.00	73.00	471184.3097	2020799.1134
L	166+67.00	84.00	470371.4055	2009435.3096
L	160+87.00	84.00	470500.1984	2008869.7900
L	159+60.00	91.00	470521.5744	2008744.4064
L	156+98.00	90.00	470581.5139	2008488.1162
L	156+71.00	64.00	470613.3236	2008467.5804
L	268+32.00	65.43	471043.5858	2019590.7802
L	268+65.00	91.00	471021.3398	2019626.2281
L	273+99.00	56.00	471115.5354	2020154.9914
L	296+51.00	52.82	471418.8060	2022387.0188
L	186+90.55	82.84	470428.1095	2011473.4239
L	81+78.00	99.00	469679.0309	2001278.9447
L	138+87.00	100.00	470954.9903	2006759.6069
L	143+88.00	56.00	470983.9028	2007248.6010
L	143+88.00	78.00	470962.0816	2007245.8017
L	150+46.00	74.00	470803.6025	2007864.6235
L	153+40.00	72.00	470702.8439	2008142.1881
L	153+40.00	77.00	470698.1301	2008140.5207
L	167+77.00	79.00	470351.9981	2009544.7587
L	172+13.00	92.00	470292.2980	2009994.9845
L	173+89.00	116.00	470278.0461	2010179.5995
L	178+57.00	252.00	470184.3673	2010658.3922
L	178+67.21	253.00	470184.2838	2010668.6555
L	180+63.00	92.00	470362.1296	2010849.2759
L	198+56.26	85.00	470529.2938	2012634.7455
L	211+49.00	78.00	470651.7458	2013921.6877
L	211+49.00	93.00	470636.8058	2013923.0277
L	212+10.00	96.00	470639.2669	2013984.0518
L	214+11.00	57.62	470694.5889	2014180.1617
L	219+90.00	72.00	470710.5751	2014757.0720
L	220+15.00	91.00	470692.7360	2014783.1103
L	221+67.00	99.00	470693.0481	2014936.7034
L	222+00.00	141.00	470653.1441	2014972.2092
L	245+08.33	97.00	470838.1752	2017273.5283
L	270+70.00	94.00	471039.5025	2019831.3948
L	280+54.90	73.00	471185.4985	2020807.9286
L	301+24.00	50.00	471484.8158	2022855.3986
L	312+56.00	67.00	471619.2535	2023979.5159
L	95+26.00	75.65	470139.2860	2002534.9337
L	95+03.00	99.00	470110.0572	2002520.1029
L	140+30.00	100.00	470959.4764	2006900.1217
L	140+51.00	79.00	470980.7048	2006920.1611

ROW MARKER PERMANENT EASEMENT - E

ALIGN	STATION	OFFSET	NORTH	EAST
L	140+50.00	58.40	471001.2987	2006919.0359
L	138+87.00	60.07	470994.8874	2006758.0345
L	83+32.50	230.00	469617.1383	2001468.5932
L	81+98.98	118.28	469669.6093	2001305.5480
L	15+88.00	80.12	467814.5985	1994960.7862
L	24+56.00	106.00	467999.2952	1995809.3030
L	24+82.00	80.15	468030.6641	1995828.2835
L	40+60.00	97.00	468395.7367	1997363.5652
L	40+37.00	73.31	468413.1616	1997335.5219
L	48+71.00	149.00	468541.3083	1998163.0863
L	48+72.00	117.00	468572.6011	1998156.3218
L	71+08.00	105.00	469233.5304	2000307.3517
L	70+83.00	80.77	469245.3019	2000274.5893
L	198+57.63	57.08	470557.2265	144+48.00
L	222+21.00	95.00	470700.3418	2014990.3578
L	222+21.00	183.00	470612.5064	2014995.7375
L	222+21.00	78.00	470717.3100	2014989.3186
L	222+21.00	125.00	470670.3979	2014992.1918
L	82+36.43	118.40	469684.0383	2001329.3499
L	83+18.72	167.80	469669.6055	2001432.6173
L	83+27.50	230.00	469615.3112	2001464.1357
L	97+41.00	-146.00	470415.7196	2002672.5479
L	137+86.00	-140.70	471191.5276	2006649.2062
L	137+86.00	-126.00	471176.8375	2006649.7852
L	137+98.75	-126.00	471177.3395	2006662.5234
L	212+18.00	53.86	470681.9527	2013988.2555
L	302+95.00	112.00	471446.2252	2023033.1506
L	303+07.00	112.00	471447.8289	2023045.0430
L	220+59.00	-53.00	470838.7129	2014820.1238
L	177+02.00	80.00	470341.8335	2010488.6472
L	215+88.00	-112.31	470876.1752	2014345.6960
L	215+74.00	-80.00	470843.0761	2014333.5178
L	216+27.00	66.00	470700.3873	2014394.9075
L	216+34.00	84.00	470682.7953	2014402.8314
L	216+45.00	80.00	470687.3778	2014413.5096
L	216+39.00	66.00	470701.0379	2014406.8106
L	221+67.00	75.00	470717.0033	2014935.2362
L	222+21.00	168.00	470627.4783	2014994.8205
L	221+25.00	198.00	470591.6886	2014900.1152
L	221+36.00	167.00	470623.2867	2014909.4969
L	220+31.00	94.00	470690.5038	2014799.3822
L	220+14.00	119.00	470664.7193	2014783.4025
L	222+43.41	198.10	470598.8001	2015019.0334
L	221+03.92	182.81	470605.6423	2014877.8153
L	220+61.00	152.15	470633.9349	2014832.6001
L	220+61.00	114.64	470671.3975	2014830.6820
L	219+56.00	-64.00	470844.9929	2014717.2195
L	219+80.00	-64.00	470846.0105	2014741.1560
L	219+80.00	-53.00	470835.0207	2014741.6295
L	220+59.00	-153.00	470938.5832	2014815.0306
L	175+86.00	-73.00	470483.8596	2010359.4434
L	175+86.00	-56.24	470467.1704	2010360.9402
L	176+62.00	-73.00	470490.6486	2010435.1396
L	176+62.00	-55.90	470473.6153	2010436.6673
L	160+83.00	-83.00	470663.9173	2008902.9734
L	185+32.00	-86.00	470581.3137	2011300.5001
L	185+43.00	-86.00	470582.2963	2011311.4562
L	185+40.00	-111.00	470606.9284	2011306.2349
L	185+50.00	-108.00	470604.8337	2011316.4629
L	192+91.00	-88.00	470651.1071	2012056.2871
L	192+91.00	-113.00	470676.0072	2012054.0538
L	193+03.00	-113.00	470677.0791	2012066.0058

ROW MARKER PERMANENT EASEMENT - E

ALIGN	STATION	OFFSET	NORTH	EAST
L	193+03.00	-88.00	470652.1791	2012068.2391
L	195+87.00	-88.00	470677.5488	2012351.1037
L	195+97.00	-88.00	470678.4421	2012361.0637
L	195+87.00	-109.00	470698.4648	2012349.2278
L	195+97.00	-109.00	470699.3581	2012359.1878
L	191+24.00	-89.00	470637.1850	2011889.8654
L	191+16.00	-107.00	470654.3984	2011880.2894
L	191+26.00	-111.00	470659.2757	2011889.8921
L	191+35.00	-89.00	470638.1677	2011900.8214
L	134+74.00	-66.00	471104.5972	2006340.3901
L	216+35.00	-73.00	470839.6170	2014395.2849
L	312+57.00	-62.00	471747.2299	2023963.2668
L	313+61.00	-62.00	471761.1289	2024066.3339
L	144+48.00	-142.00	471171.4714	2007336.5843
L	142+98.00	83.00	470966.6379	2007158.6801
L	143+09.00	87.00	470961.6604	2007168.8848
L	47+24.00	-68.65	468716.9701	1997967.8369
L	33+20.00	84.00	468229.4833	1996642.3657
L	33+20.00	76.94	468236.3298	1996640.6602
L	268+54.00	83.00	471028.2268	2019614.4542
L	310+24.00	-70.44	471724.4589	2023731.2285
L	309+75.00	-72.47	471719.9217	2023682.3968
L	309+75.00	-50.00	471697.6499	2023685.4002
L	310+24.00	-50.00	471704.1985	2023733.9607
L	61+03.00	-95.00	469075.8641	1999299.5766
L	61+03.00	-75.52	469056.9614	1999304.2852
L	61+39.00	-138.00	469126.2730	1999324.0234
L	61+45.23	-138.00	469127.7705	1999330.0122
L	225+25.00	-90.00	470903.5800	2015282.4798
L	225+25.00	-103.00	470916.5557	2015281.6951
L	225+14.00	-103.00	470915.8833	2015270.7056
L	225+14.00	-90.00	470902.9076	2015271.5004
L	227+48.00	-90.00	470917.2125	2015505.0627
L	227+48.00	-121.00	470946.6874	2015479.2125
L	227+16.00	-114.00	470939.2114	2015471.6554
L	227+35.00	-90.00	470916.4178	2015492.0870
L	229+27.00	-106.00	470944.1253	2015682.7498
L	228+50.00	-85.00	470918.4574	2015607.1776
L	292+68.00	-76.00	471495.2862	2021990.2383
L	292+68.00	-92.00	471511.1427	2021988.1000
L	292+79.00	-92.00	471512.6127	2021999.0013
L	292+79.00	-76.00	471496.7563	2022001.1396
L	292+74.00	72.69	471348.7319	2022016.0560
L	292+74.00	86.00	471335.5413	2022017.8348
L	292+85.00	86.00	471337.0114	2022028.7362
L	292+85.00	72.67	471350.2202	2022026.9549
L	319+05.00	-65.21	471854.4315	2024584.6379
L	319+38.00	-125.00	471920.6446	2024587.3266
L	319+69.00	-111.00	471919.3153	2024616.7207

PERMANENT EASEMENT CONTROL SHEET U-4405

PROJECT REFERENCE NO. U-4405	SHEET NO. 1E-7
Location and Surveys	

PROJECT
SURVEYOR

ROW MARKER PERMANENT EASEMENT - E

ALIGN	STATION	OFFSET	NORTH	EAST
L	129.67.68	60.00	470958.7558	2005839.4292
L	141.88.00	-93.23	471150.0653	2007060.9811
L	144.17.00	-171.00	471204.9372	2007308.1927
L	143.98.00	-140.00	471176.9450	2007284.0115
L	147.79.00	75.00	470887.6373	2007617.0728
L	148.99.19	81.00	470846.6187	2007726.2171
L	162.29.13	-81.00	470629.5180	2009045.0110
L	162.71.49	-82.00	470621.0869	2009086.5347
L	169.30.00	79.00	470324.0702	2009701.0142
L	169.41.78	92.00	470309.5347	2009711.4587
L	169.99.88	98.00	470296.4811	2009771.3433
L	178.79.76	111.00	470326.8369	2010668.4679
L	178.30.00	80.00	470353.2678	2010616.1354
L	179.45.00	87.00	470356.5687	2010731.3010
L	179.42.00	114.00	470329.4086	2010730.7249
L	179.29.78	113.00	470329.3131	2010718.4647
L	179.28.45	128.00	470314.2546	2010718.4845
L	178.57.00	109.00	470326.7956	2010645.6181
L	179.69.00	92.00	470353.7326	2010755.6517
L	183.90.00	87.00	470396.3205	2011174.5219
L	184.08.40	71.00	470413.8999	2011191.4157
L	185.01.00	106.00	470387.3121	2011286.7754
L	185.01.00	81.31	470411.9016	2011284.5700
L	185.29.00	81.42	470414.2959	2011312.4677
L	185.29.00	106.00	470389.8133	2011314.6635
L	185.36.00	100.00	470396.4146	2011321.0995
L	186.96.57	-78.00	470588.0464	2011465.1230
L	186.19.00	-86.00	470589.0854	2011387.1523
L	186.34.07	-100.00	470604.3760	2011400.9156
L	186.96.54	-135.00	470644.8159	2011460.0019
L	187.27.00	-78.00	470590.7650	2011495.4352
L	187.12.00	-95.00	470606.3571	2011478.9765
L	187.12.00	-136.00	470647.1932	2011475.3140
L	21.39.00	106.00	467922.6721	1995501.7028
L	20.93.59	116.00	467901.9924	1995460.0564
L	20.06.59	98.00	467898.4295	1995371.2851
L	21.29.00	116.00	467910.5515	1995494.4164
L	190.02.00	-89.00	470626.2868	2011768.3531
L	188.04.64	-229.00	470748.0966	2011559.2726
L	188.03.18	-249.18	470768.0673	2011556.0164
L	186.96.48	-248.83	470758.1861	2011449.7749
L	189.75.88	140.00	470395.8687	2011762.7908
L	190.20.00	-269.00	470807.1751	2011770.2018
L	189.79.35	-269.00	470803.5441	2011729.7177
L	195.90.30	101.00	470489.5990	2012371.2720
L	196.50.46	102.00	470493.9773	2012431.2827
L	196.61.00	102.00	470494.9188	2012441.7805
L	196.79.00	85.00	470513.4588	2012458.1899
L	201.60.00	-62.40	470703.2339	2012924.1000
L	200.96.97	-89.00	470724.1004	2012858.9455
L	201.58.09	-89.00	470729.5599	2012919.8173
L	205.02.04	71.00	470600.9245	2013276.6839
L	206.12.00	64.91	470616.8172	2013385.6649
L	217.18.59	-75.00	470845.8418	2014479.2884
L	218.17.57	-96.00	470871.0964	2014577.5532
L	218.33.00	-75.00	470850.7695	2014593.8638
L	230.63.00	100.00	470746.8246	2015831.0887
L	239.29.00	94.00	470805.7540	2016695.1022
L	240.53.00	89.00	470818.3250	2016818.5646
L	246.60.73	79.00	470865.4586	2017424.5515
L	266.08.18	-93.00	471180.5213	2019353.0650
L	32.68.00	76.92	468223.7879	1996590.1954

ROW MARKER PERMANENT EASEMENT - E

ALIGN	STATION	OFFSET	NORTH	EAST
L	32.92.00	84.00	468222.7153	1996615.1960
L	32.92.00	76.93	468229.5765	1996613.4868
L	271.81.00	-86.83	471231.4924	2019921.7464
L	271.24.70	-87.00	471225.3921	2019866.0247
L	270.52.85	-87.00	471217.6154	2019794.9129
L	273.76.56	-85.00	471252.6844	2020115.3188
L	274.42.32	-163.00	471338.2216	2020170.4428
L	274.51.00	-131.00	471307.5678	2020183.0332
L	274.78.00	-83.00	471263.3792	2020215.7836
L	274.51.00	-163.00	471339.3100	2020178.9790
L	281.42.15	-109.00	471377.5266	2020870.0750
L	280.47.77	-78.00	471334.1923	2020780.6919
L	281.49.37	-174.00	471442.9081	2020868.5414
L	281.60.00	-173.00	471443.3384	2020879.2143
L	281.57.00	-149.00	471419.1527	2020879.4487
L	283.83.00	-63.00	471364.1278	2021114.9147
L	284.12.00	-85.00	471389.8061	2021140.7144
L	284.12.00	-95.00	471399.7164	2021139.3779
L	284.20.39	-94.00	471399.8472	2021147.8303
L	283.83.00	-58.73	471359.8986	2021115.4850
L	285.14.00	-78.00	471396.5006	2021242.7349
L	284.85.00	-109.00	471423.3468	2021209.8521
L	284.75.38	-140.00	471452.7826	2021196.1718
L	284.02.67	-78.00	471481.6215	2021132.4003
L	284.14.02	-78.00	471383.1389	2021143.6518
L	284.88.00	-139.00	471453.4786	2021208.8158
L	287.25.57	-77.00	471423.7844	2021452.5390
L	287.90.98	-128.00	471483.0687	2021510.5476
L	288.03.00	-100.32	471457.2448	2021526.1574
L	288.20.00	-77.00	471436.4047	2021546.1235
L	288.06.00	-127.00	471484.0851	2021525.5669
L	290.19.79	-77.00	471463.1054	2021744.1212
L	290.86.05	-77.00	471471.9608	2021809.7877
L	291.05.00	-76.00	471473.5022	2021828.7005
L	290.94.00	-77.00	471473.0231	2021817.6656
L	294.57.00	-91.00	471535.4104	2022175.5382
L	294.57.00	-101.00	471545.3207	2022174.2018
L	294.76.98	-101.00	471547.9911	2022194.0045
L	294.75.00	-75.86	471522.8071	2022195.3965
L	295.40.40	-76.00	471531.6911	2022260.1965
L	294.50.00	-76.00	471519.6094	2022170.6057
L	299.51.48	95.00	471417.1638	2022690.4448
L	299.70.00	72.00	471442.4320	2022705.7203
L	298.58.20	58.00	471441.3650	2022593.0522
L	45.71.56	-112.00	468722.1909	1997809.4405
L	44.94.37	-133.00	468723.9101	1997729.4624
L	44.74.00	-133.00	468718.9861	1997709.6951
L	45.72.86	-129.00	468739.0005	1997806.5905
L	44.34.84	97.00	468486.3413	1997727.2930
L	305.98.90	-75.00	471672.1616	2023309.3291
L	307.10.48	-75.00	471687.0743	2023419.9138
L	310.83.75	69.00	471594.2506	2023809.0738
L	311.41.04	67.00	471603.8901	2023865.5901
L	314.31.00	-100.00	471808.1431	2024130.6274
L	314.49.00	-155.00	471865.0553	2024141.1155
L	314.38.00	-157.00	471865.5673	2024129.9469
L	314.39.00	-168.00	471876.6022	2024129.4679
L	314.66.00	-165.00	471877.2369	2024156.6220
L	315.35.00	-159.00	471880.5128	2024225.8095
L	315.27.12	-160.00	471880.4503	2024217.8635
L	315.31.00	-64.00	471785.8304	2024234.5416
L	76.93.91	-141.00	469699.1249	2000739.8157

ROW MARKER PERMANENT EASEMENT - E

ALIGN	STATION	OFFSET	NORTH	EAST
L	75.51.48	100.00	469420.8460	2000709.3619
L	75.48.00	105.00	469414.8563	2000708.2519
L	77.11.00	114.00	469473.8290	2000860.4761
L	?.???.??	?.??	467772.8934	1994146.7281
L	?.???.??	?.??	467781.4536	1994144.5958
L	?.???.??	?.??	467775.0432	1994118.8616
L	?.???.??	?.??	467838.0215	1994363.4109
L	?.???.??	?.??	467844.7895	1994390.5807
L	?.???.??	?.??	467835.0865	1994392.9977
L	?.???.??	?.??	467828.4294	1994365.8003
L	?.???.??	?.??	467942.5822	1994823.7885
L	?.???.??	?.??	467949.1992	1994822.1402
L	?.???.??	?.??	467955.9672	1994849.3099
L	?.???.??	?.??	467949.3142	1994850.9672
L	?.???.??	?.??	467926.2399	1994725.8340
L	?.???.??	?.??	467919.1073	1994697.2003
L	?.???.??	?.??	467918.1592	1994727.8470
L	?.???.??	?.??	467864.2320	1994511.4657
L	?.???.??	?.??	467872.3378	1994509.4465
L	?.???.??	?.??	467865.5699	1994482.2768
L	?.???.??	?.??	467857.5032	1994484.2862
L	88.60.00	110.00	469904.4984	2001910.8215
L	88.75.00	122.00	469897.6043	2001928.7026
L	88.94.24	122.00	469903.4361	2001947.0153
L	89.70.44	120.00	469928.4617	2002019.0163
L	89.92.00	99.00	469955.0143	2002033.1915
L	97.86.00	-174.00	470456.0531	2002706.9311
L	97.96.00	-192.00	470476.2387	2002710.9983
L	97.38.00	-229.00	470493.8967	2002644.5062
L	106.64.00	-94.04	470646.2575	2003567.8011
L	108.20.00	-91.89	470691.5403	2003717.1058

REVISIONS

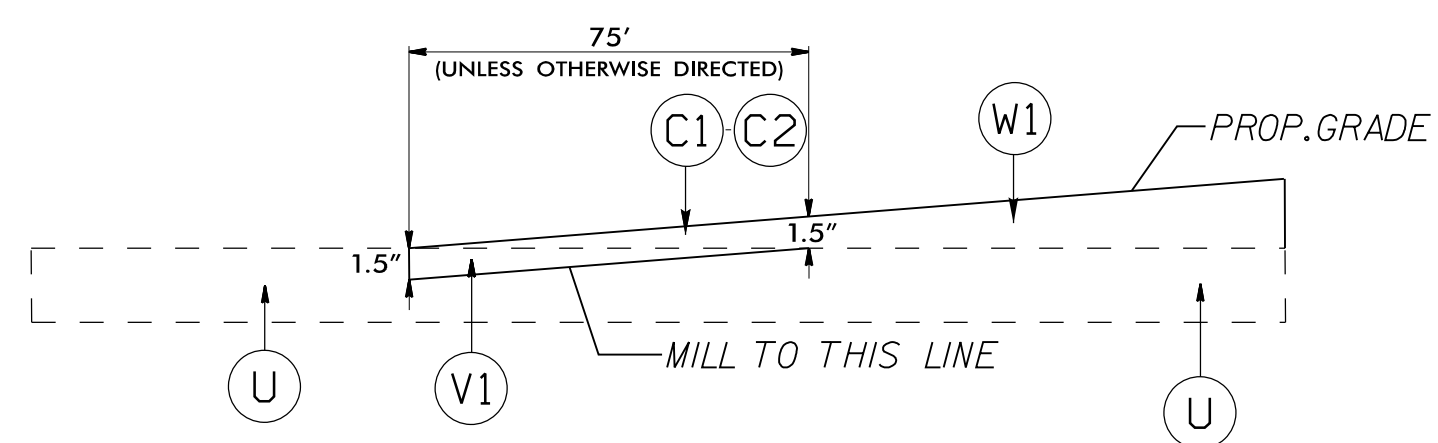
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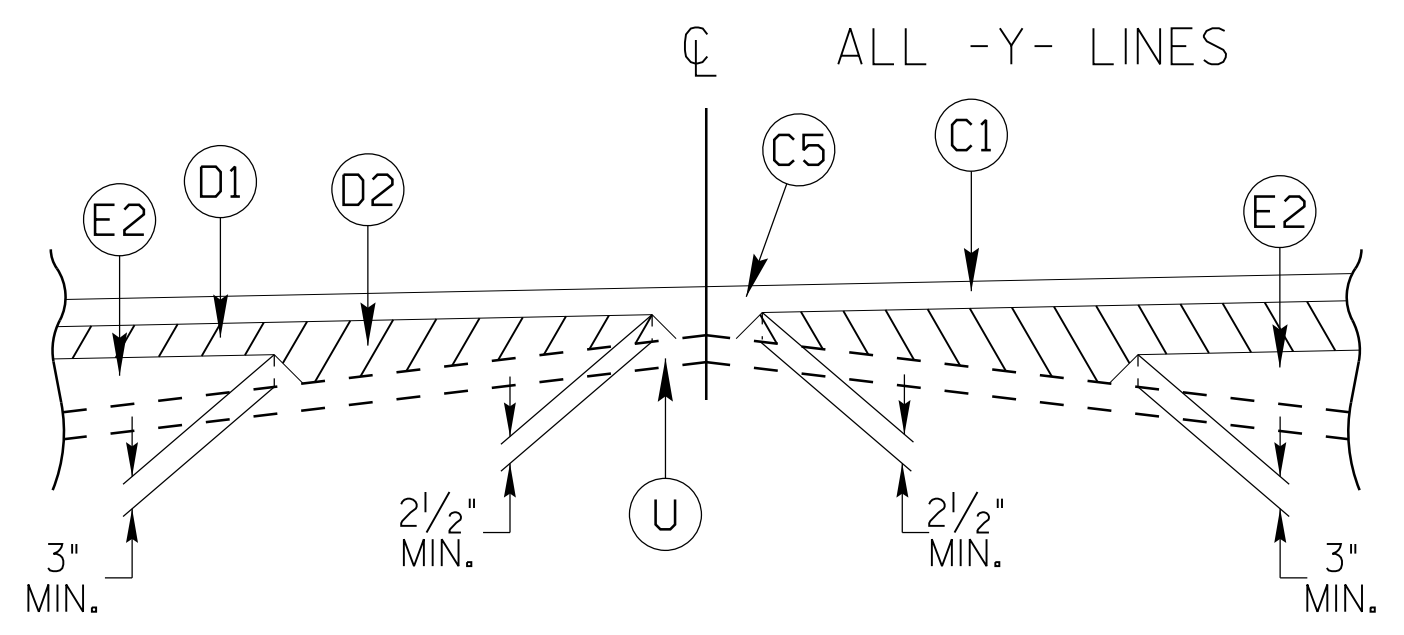
PROJECT REFERENCE NO. U-4405	SHEET NO. 2A-1
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 024929 CLAYTON J. MORRISON 6/24/2018	PAVEMENT DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 022896 CLARK W. HARRISON 6/15/2018
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

FINAL PAVEMENT SCHEDULE			
C1	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.	N1	GEOTEXTILE FOR SOIL STABILIZATION
C2	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	R1	2'-6" CONCRETE CURB AND GUTTER
C3	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	R2	1'-6" CONCRETE CURB AND GUTTER
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.	R3	8" X 12" CONCRETE CURB
C5	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 1" OR GREATER THAN 1 1/2" IN DEPTH.	R4	5" MONOLITHIC CONCRETE ISLAND (KEYED IN)
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 LESS THAN 1 1/2" OR GREATER THAN 2" IN DEPTH.	S	4" CONCRETE SIDEWALK
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	T	EARTH MATERIAL
D2	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" OR GREATER THAN 4" IN DEPTH.	U	EXISTING PAVEMENT
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	V1	INCIDENTAL MILLING
E2	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" OR GREATER THAN 5 1/2" IN DEPTH.	V2	1.5" MILLING
L1	CLASS IV SUBGRADE STABILIZATION	W1	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAILS)
		W2	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAILS)
		W3	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAILS)

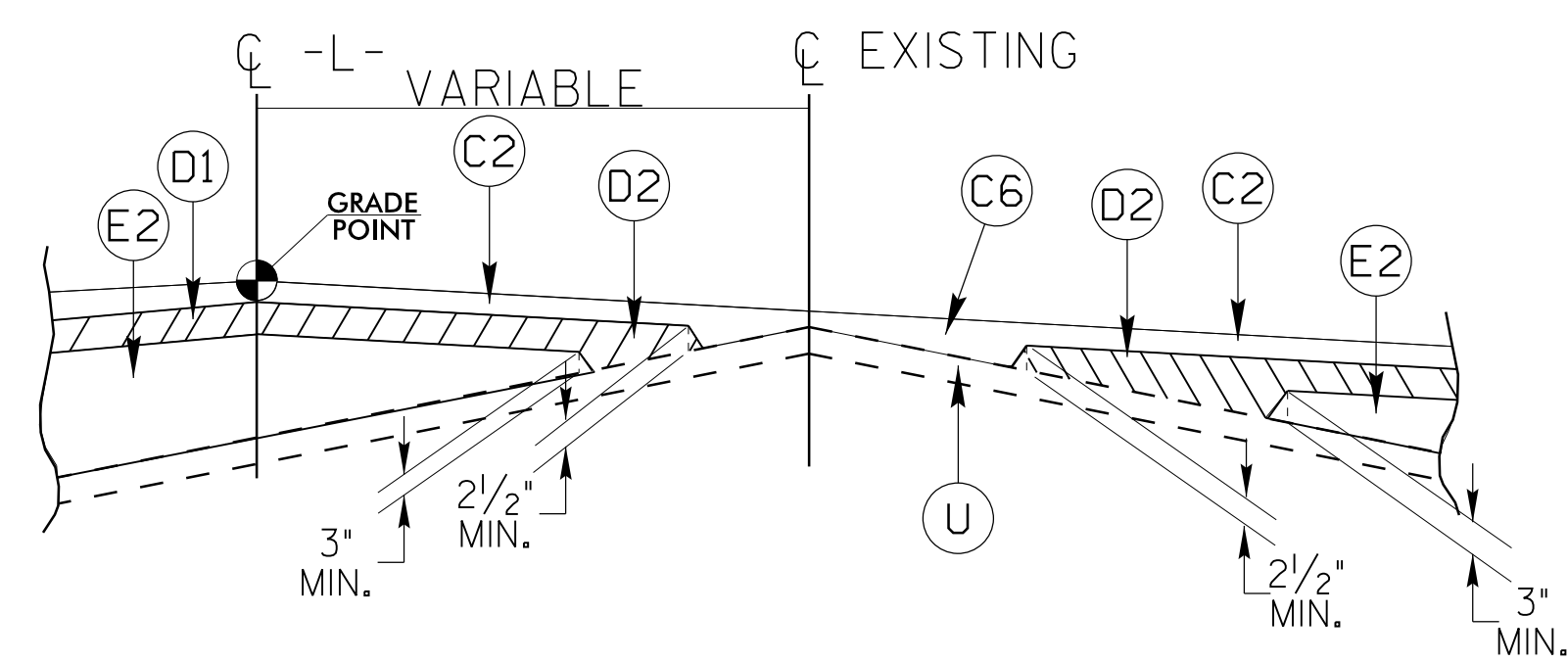
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



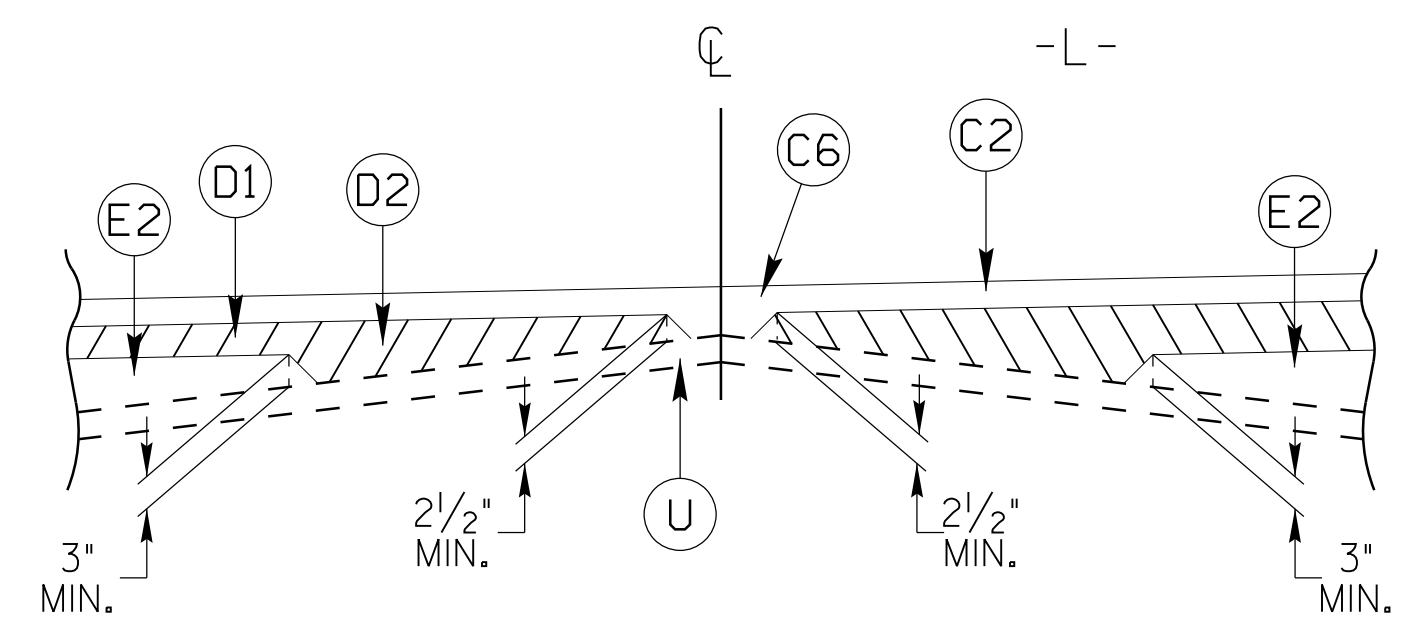
DETAIL FOR INCIDENTAL MILLING
-L- USE C2
ALL OTHER ALIGNMENTS USE C1



W3 DETAIL #2 SHOWING METHOD OF WEDGING

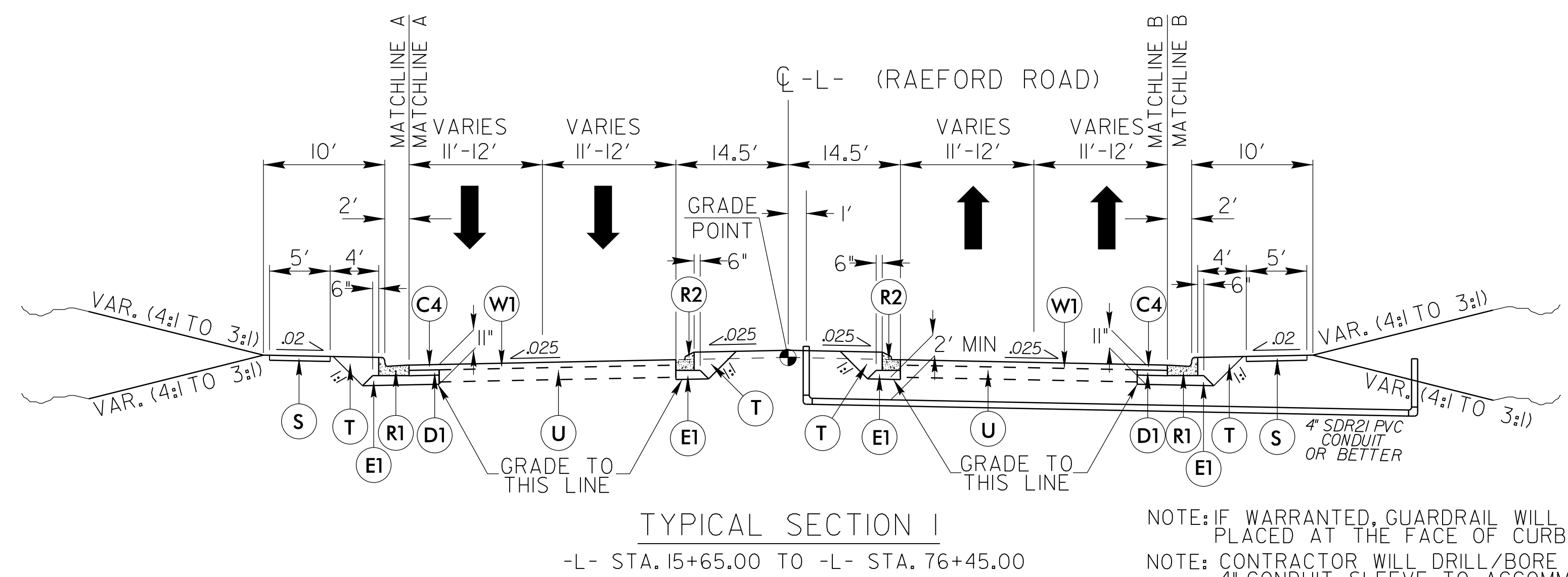
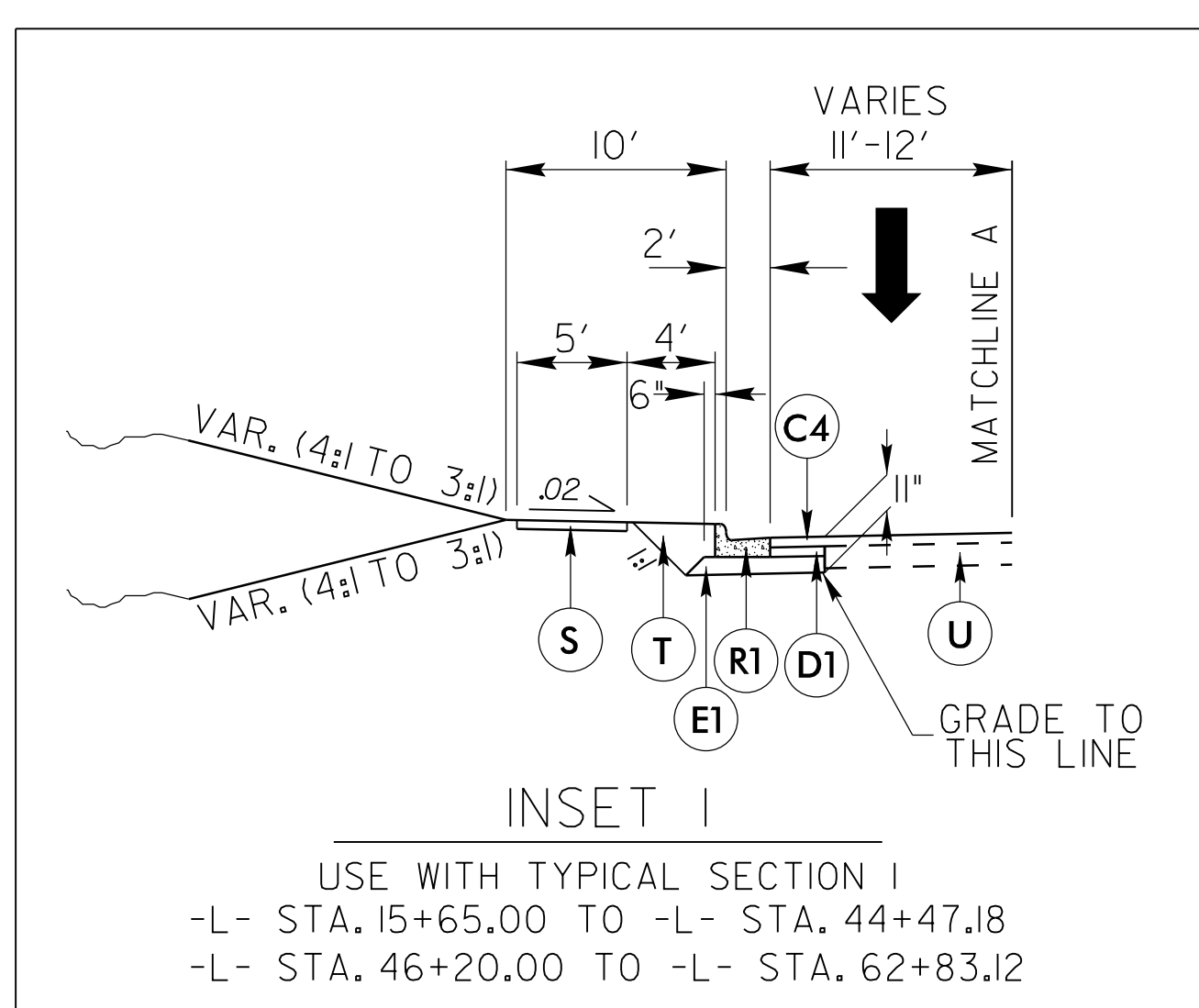


W1 DETAIL #1 SHOWING METHOD OF WEDGING



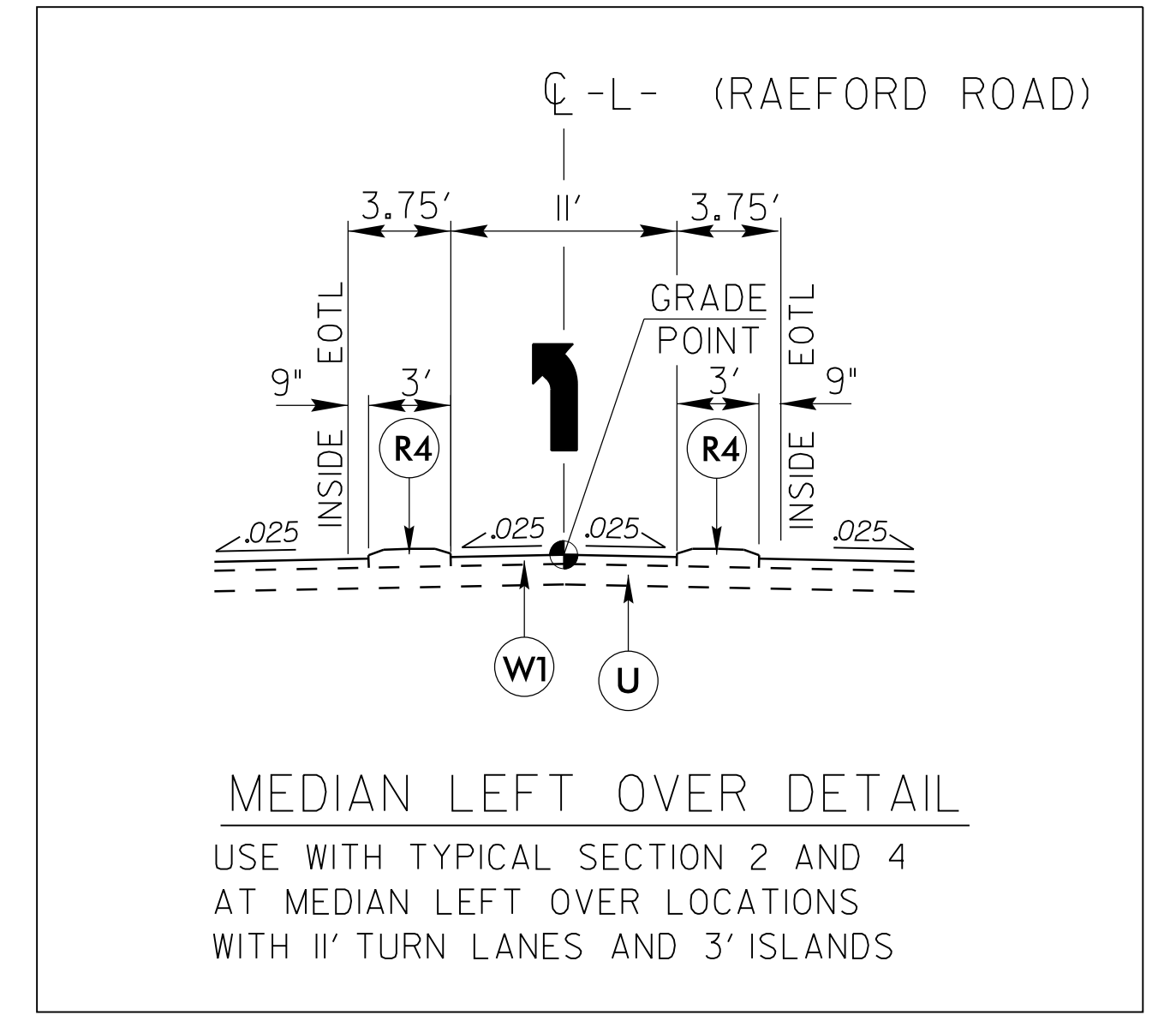
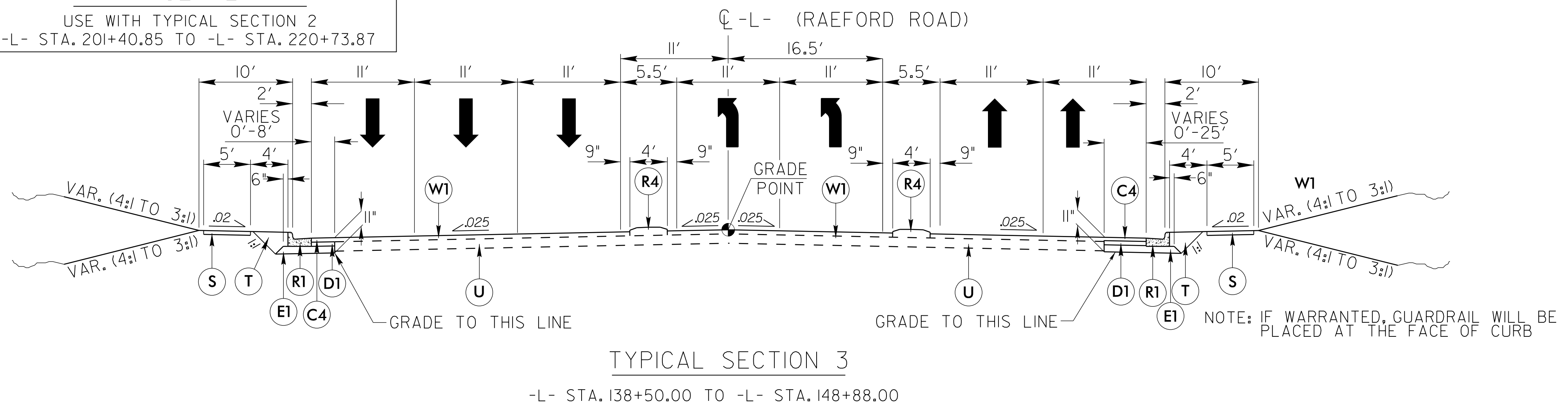
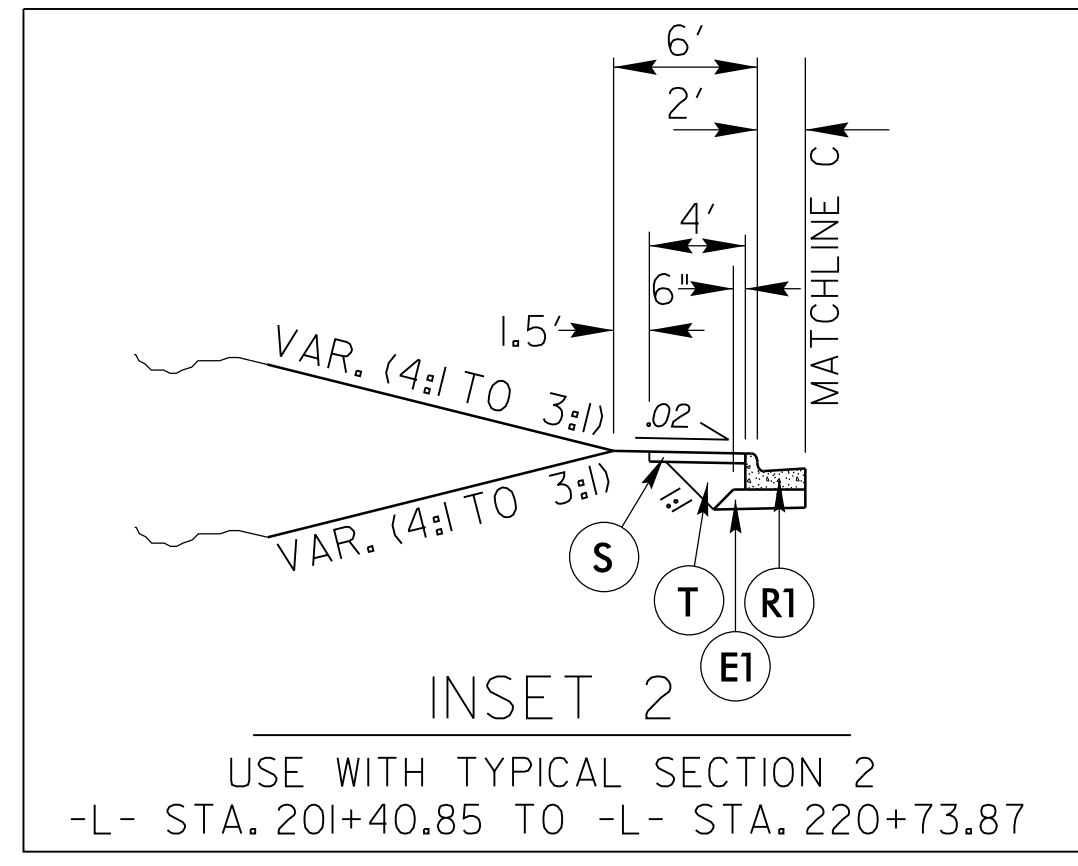
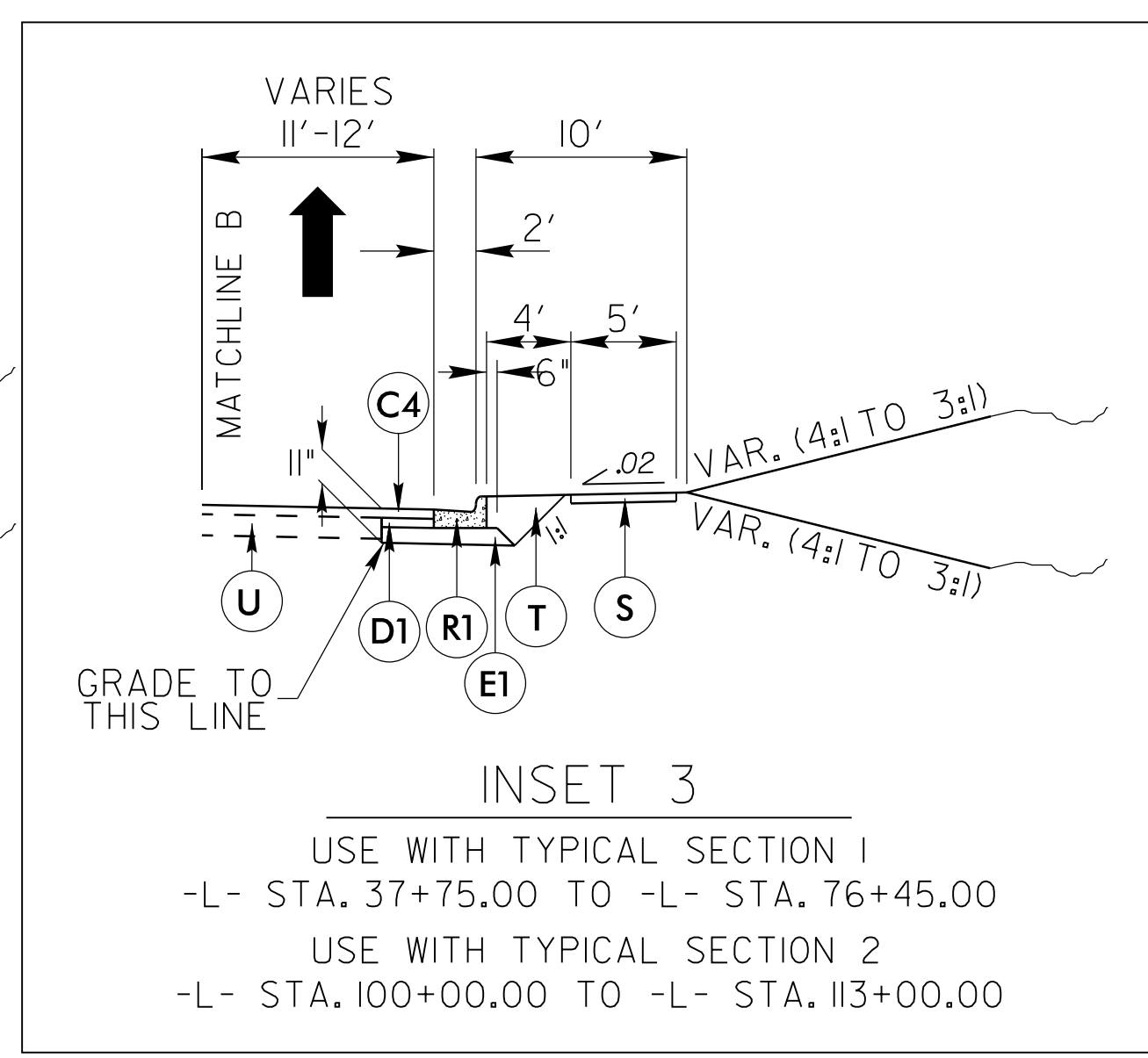
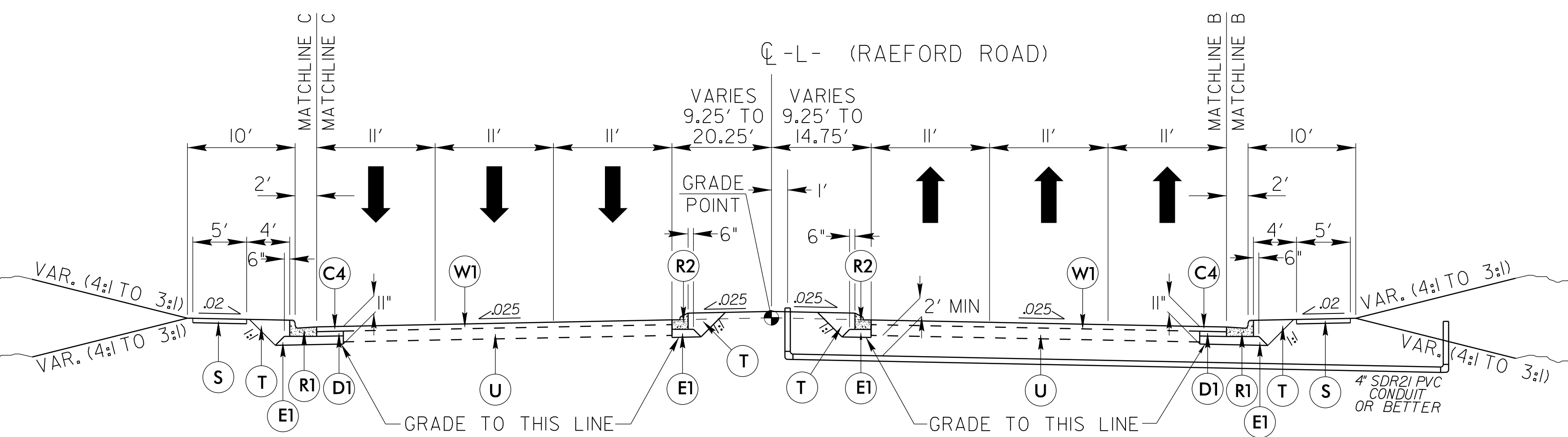
W2 DETAIL #2 SHOWING METHOD OF WEDGING

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\$\$\$\$\$SUSPENSE\$\$\$\$\$



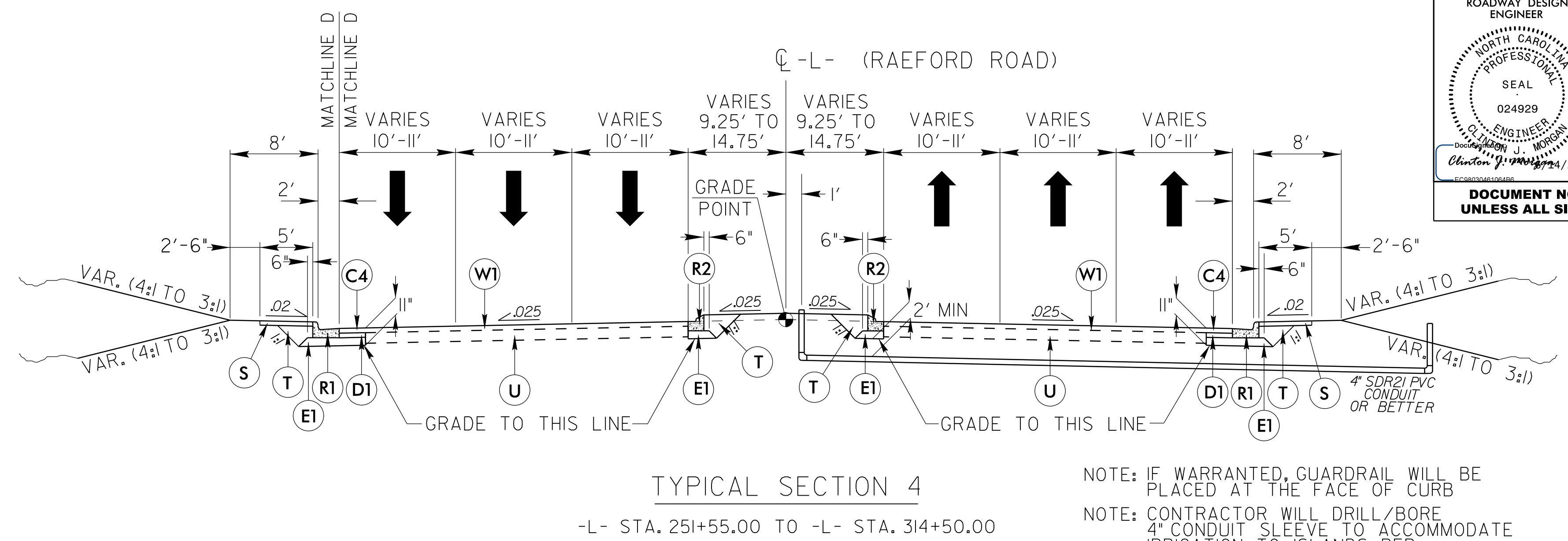
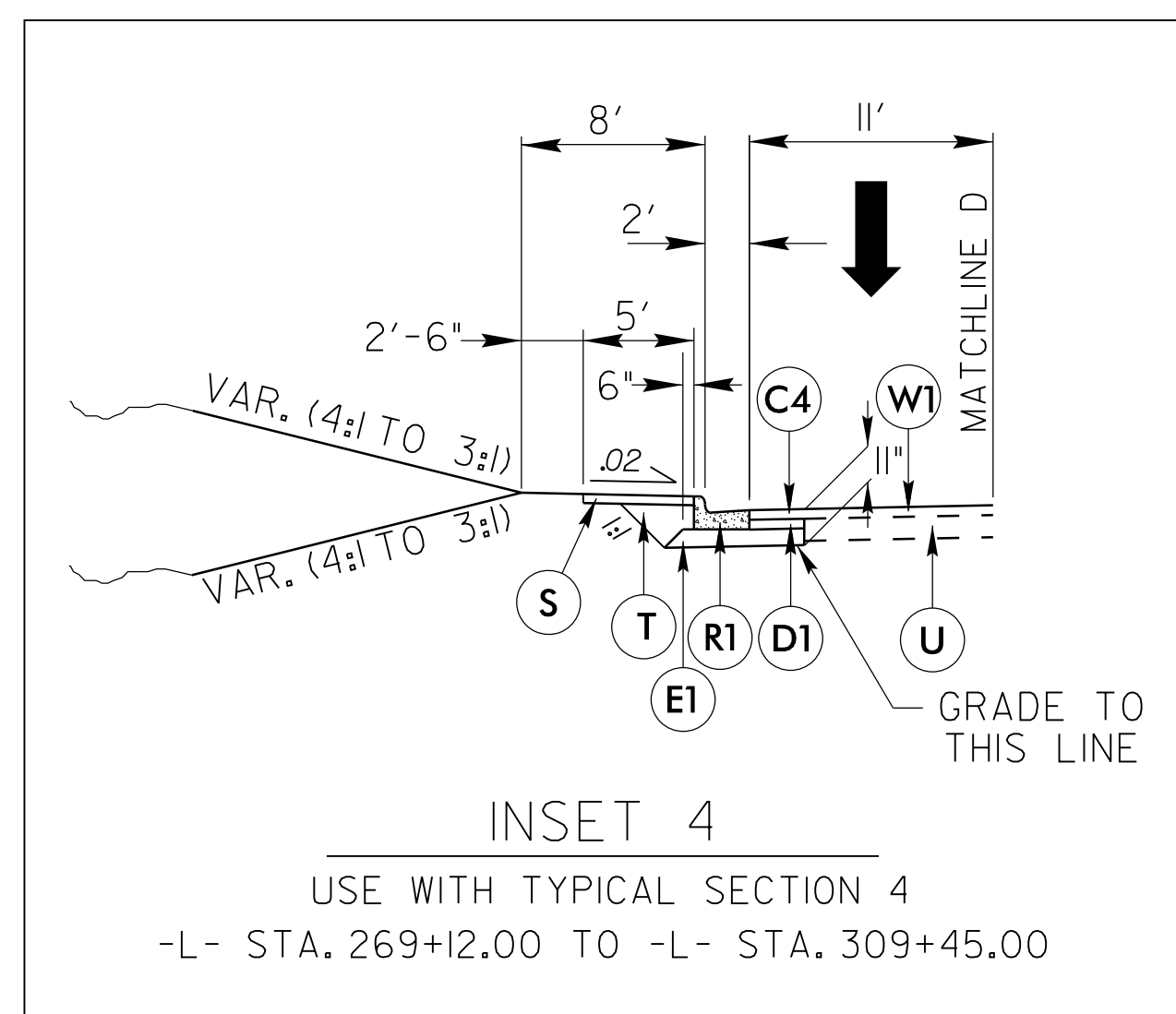
PROJECT REFERENCE NO. U-4405	SHEET NO. 2A-2
ROADWAY DESIGN ENGINEER SEAL 024929 CLAYTON J. MORRIS 06/24/2018	PAVEMENT DESIGN ENGINEER SEAL 022896 CLARK W. HUGHES 06/15/2018
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

PAVEMENT SCHEDULE	
C4	3" S9.5C
D1	4" H9.0C
E1	4" B25.0C
R1	2'-6" CURB AND GUTTER
R2	1'-6" CURB AND GUTTER
R4	MONOLITHIC ISLAND (KEYED IN)
S	SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W1	WEDGING

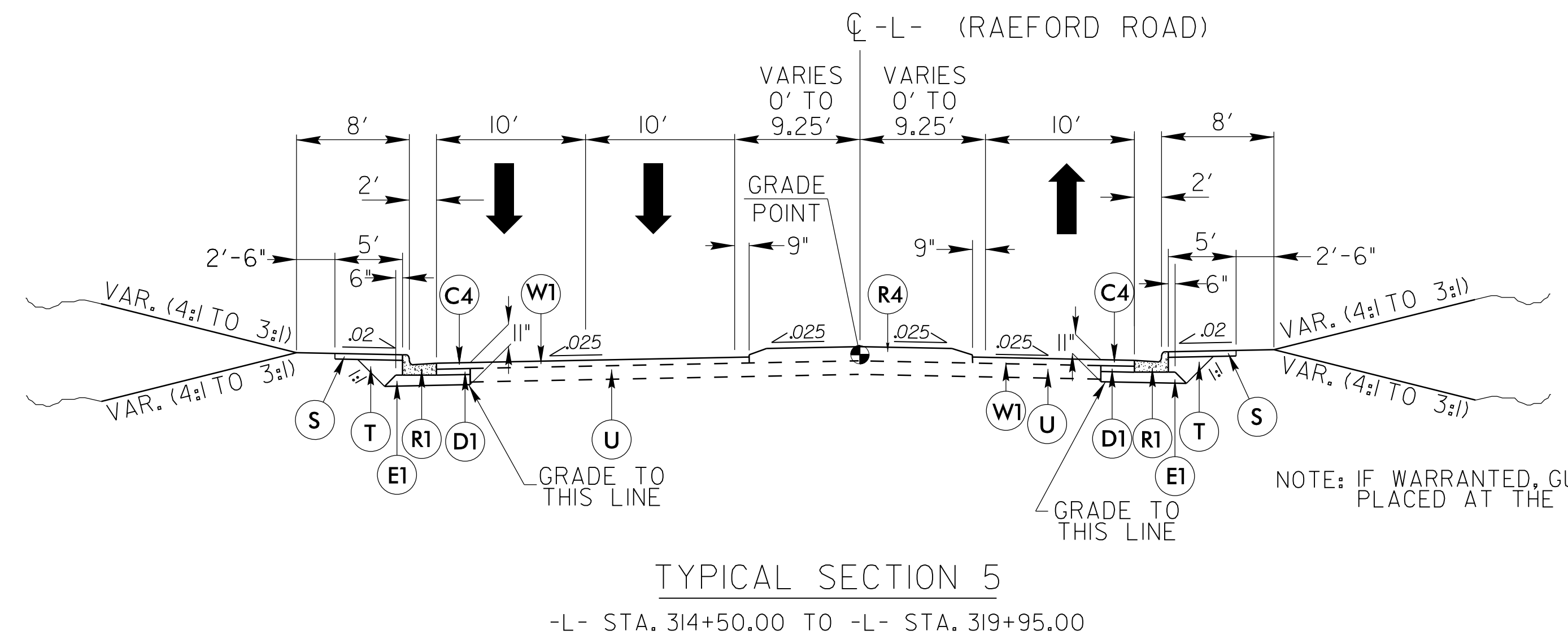


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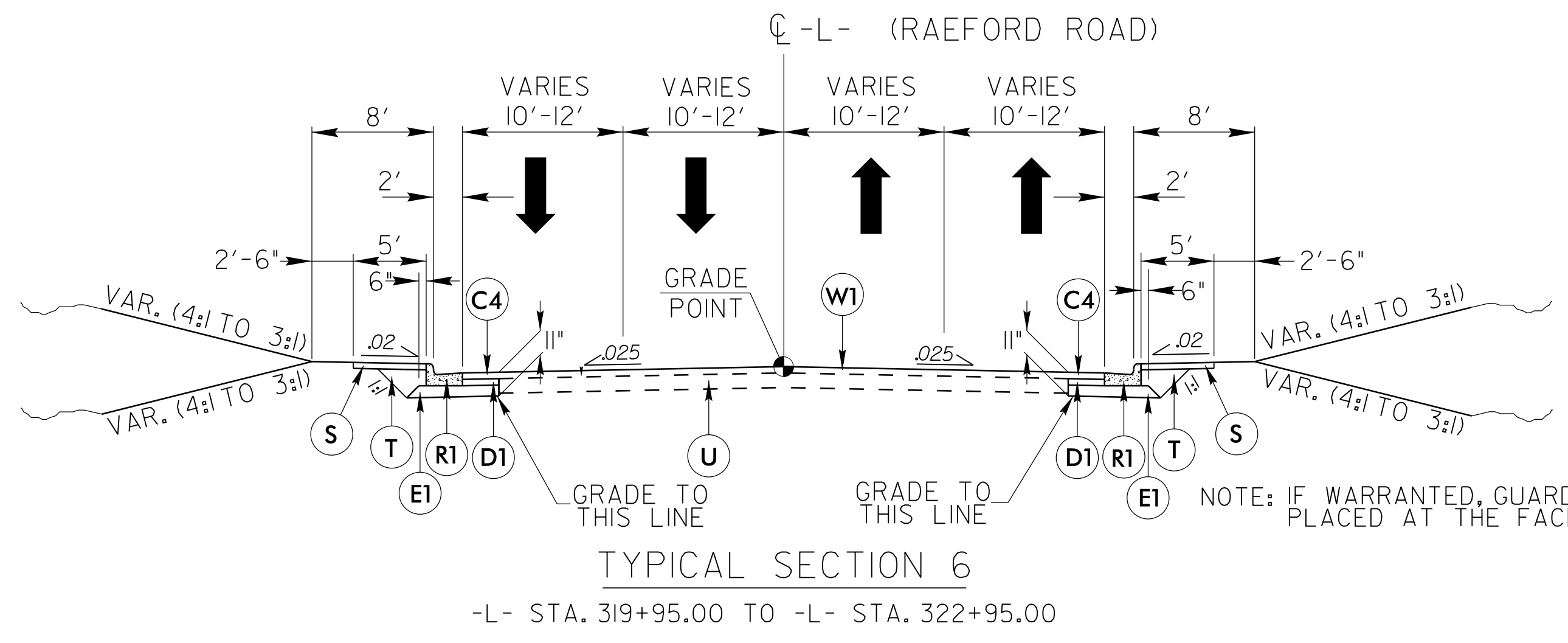
PROJECT REFERENCE NO. U-4405	SHEET NO. 2A-3
ROADWAY DESIGN ENGINEER SEAL 024929 Clark Williams	PAVEMENT DESIGN ENGINEER SEAL 022896 Clark Williams
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



NOTE: IF WARRANTED, GUARDRAIL WILL BE PLACED AT THE FACE OF CURB
NOTE: CONTRACTOR WILL DRILL/BORE 4" CONDUIT SLEEVE TO ACCOMMODATE IRRIGATION TO ISLANDS PER RESIDENT ENGINEER DIRECTION.



NOTE: IF WARRANTED, GUARDRAIL WILL BE PLACED AT THE FACE OF CURB



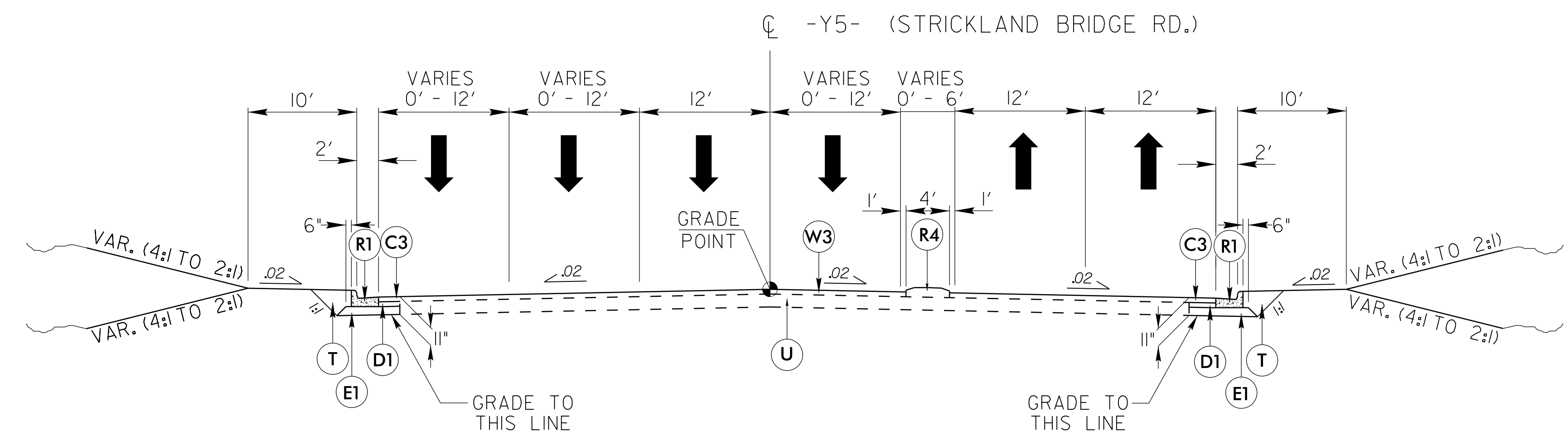
NOTE: IF WARRANTED, GUARDRAIL WILL BE PLACED AT THE FACE OF CURB

PAVEMENT SCHEDULE	
C4	3" S9.5C
D1	4" 119.0C
E1	4" B25.0C
R1	2'-6" CURB AND GUTTER
R2	1'-6" CURB AND GUTTER
R4	MONOLITHIC ISLAND (KEYED IN)
S	SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W1	WEDGING

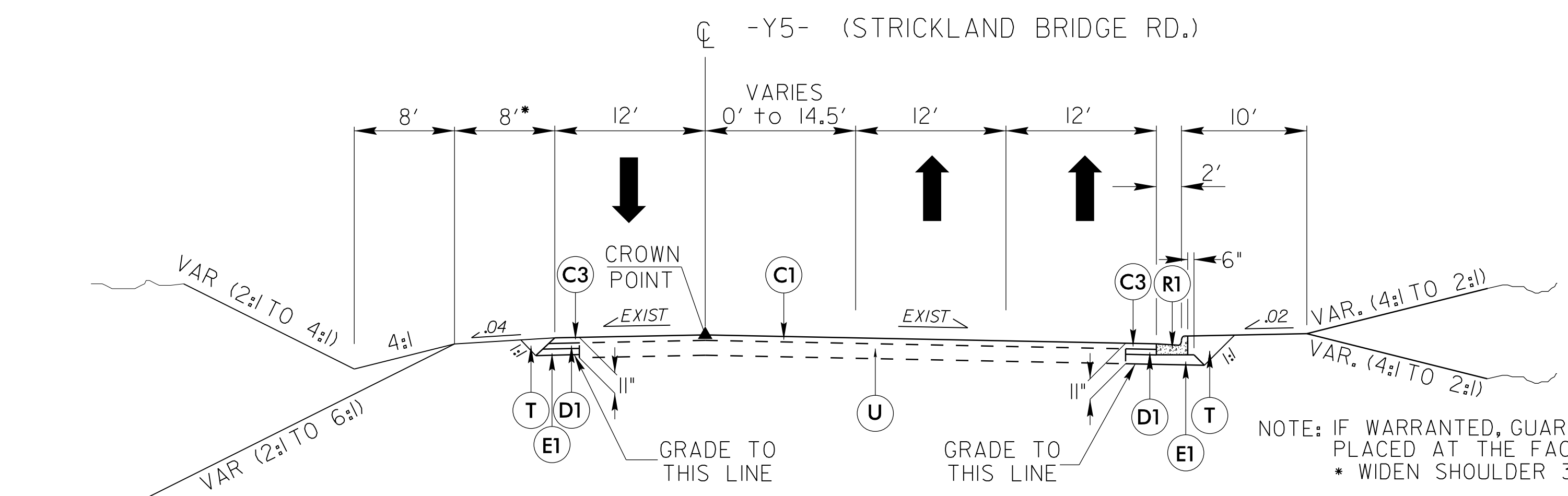
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\$\$\$\$\$SUSPENSE\$

6/2/19

PROJECT REFERENCE NO. U-4405	SHEET NO. 2A-4
ROADWAY DESIGN ENGINEER SEAL 024929 CLARENCE J. MORGAN 6/24/2018	PAVEMENT DESIGN ENGINEER SEAL 022896 CLARK W. HARRISON 6/15/2018
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



TYPICAL SECTION 7
 -Y5- STA. 19+60.00 TO -Y5- STA. 20+65.04
 -Y5- STA. 21+71.04 TO -Y5- STA. 25+55.00



TYPICAL SECTION 8
 -Y5- STA. 25+55.00 TO -Y5- STA. 28+00.00

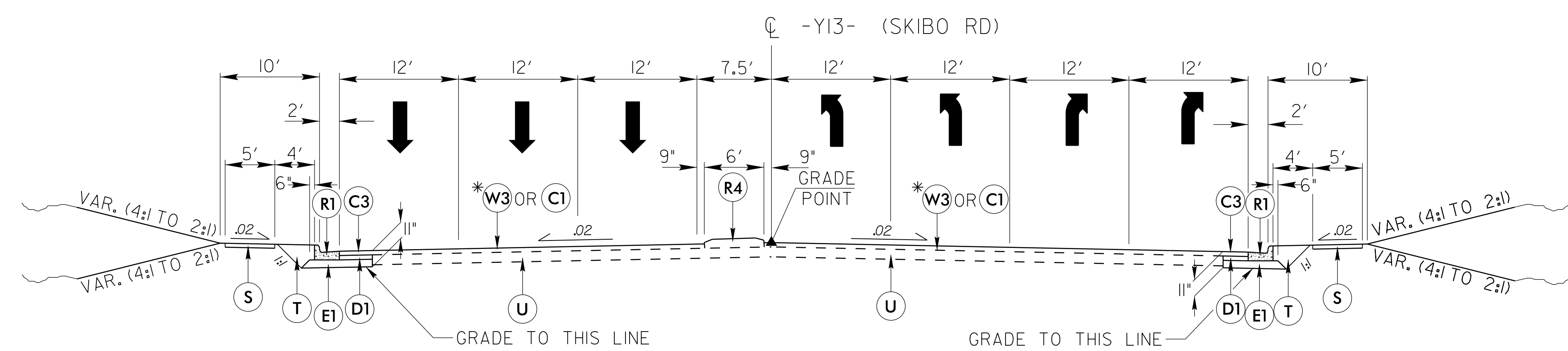
NOTE: IF WARRANTED, GUARDRAIL WILL BE PLACED AT THE FACE OF CURB
 * WIDEN SHOULDER 3' FOR GUARDRAIL

PAVEMENT SCHEDULE	
C1	1.5" S9.5B
C3	3" S9.5B
D1	4" II9.0C
E1	4" B25.0C
R1	2'-6" CURB AND GUTTER
R4	MONOLITHIC ISLAND (KEYED IN)
S	SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W3	WEDGING

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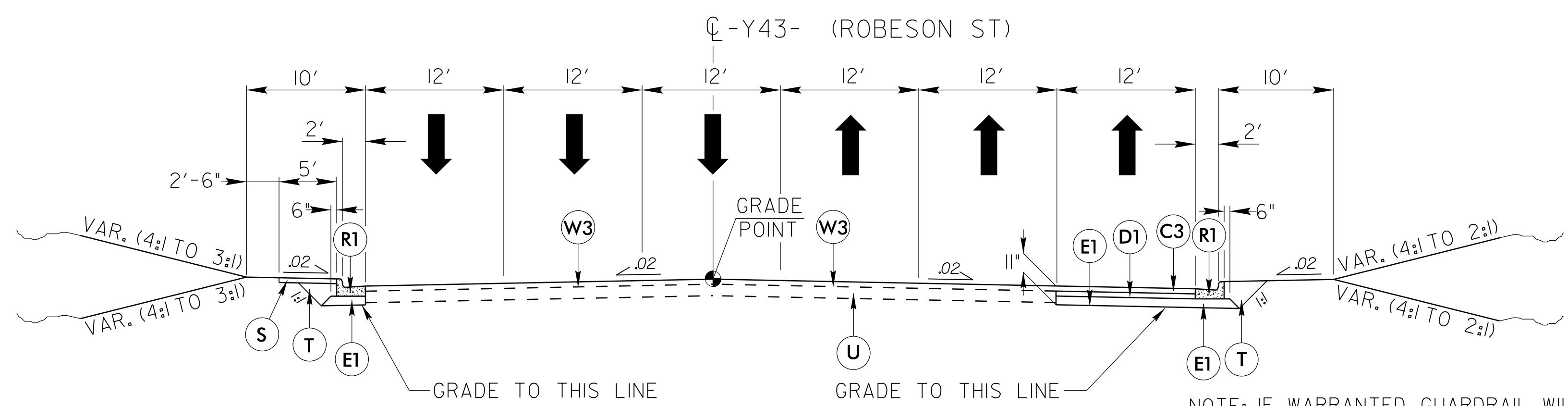
6/27/19

PROJECT REFERENCE NO. U-4405	SHEET NO. 2A-5
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 024929 CLAYTON J. MORRISON 6/24/2018	PAVEMENT DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 022896 CLARK W. MORRISON 6/15/2018
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



TYPICAL SECTION 9
-Y13- STA. 16+50.00 TO -Y13- STA. 19+67.93

NOTE: IF WARRANTED, GUARDRAIL WILL BE PLACED AT THE FACE OF CURB
* RESURFACE FROM 16+50.00 TO 18+15.00 WITH 1.5" S9.5B



TYPICAL SECTION 10
-Y43- STA. 10+33.01 TO -Y43- STA. 18+43.12

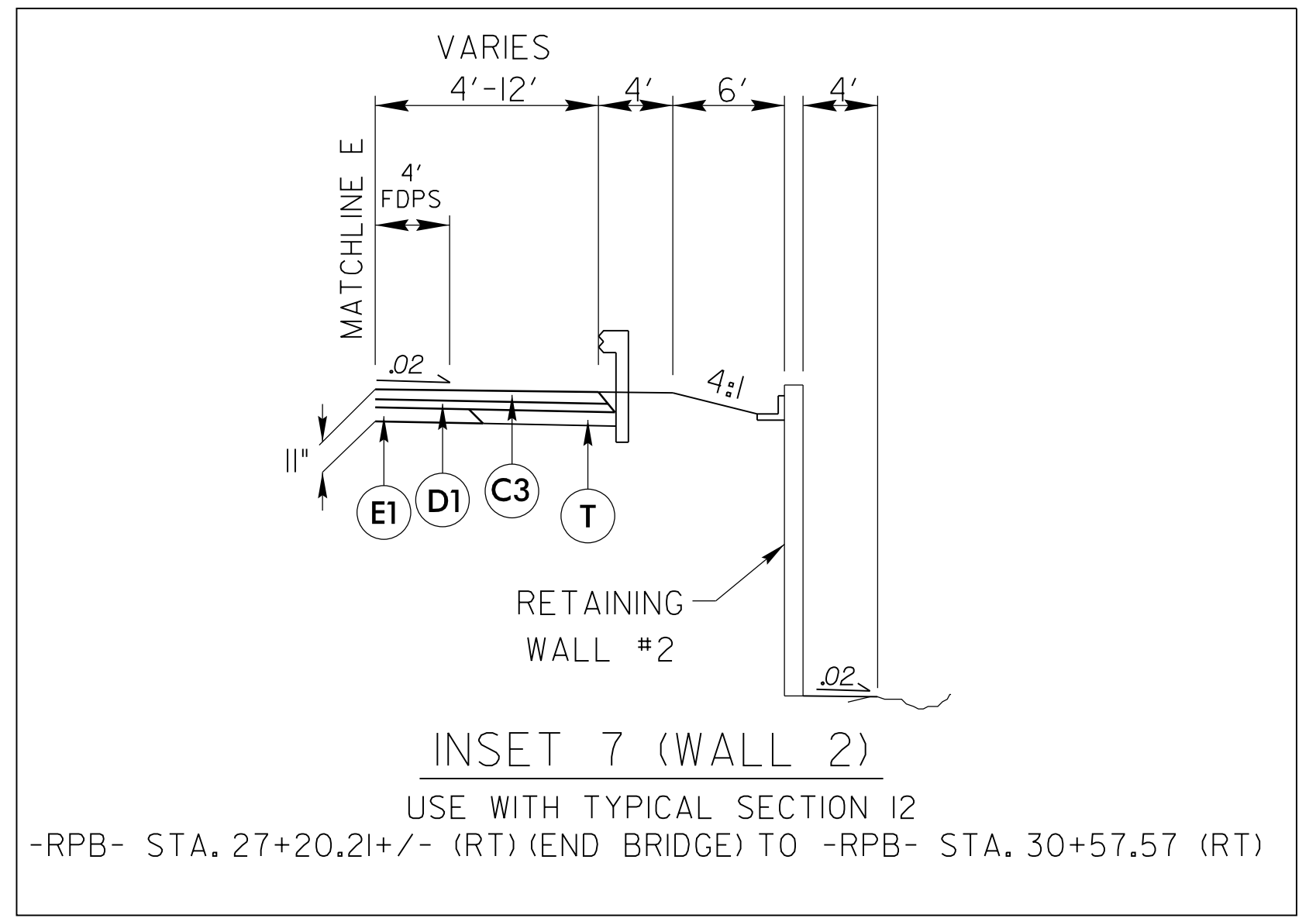
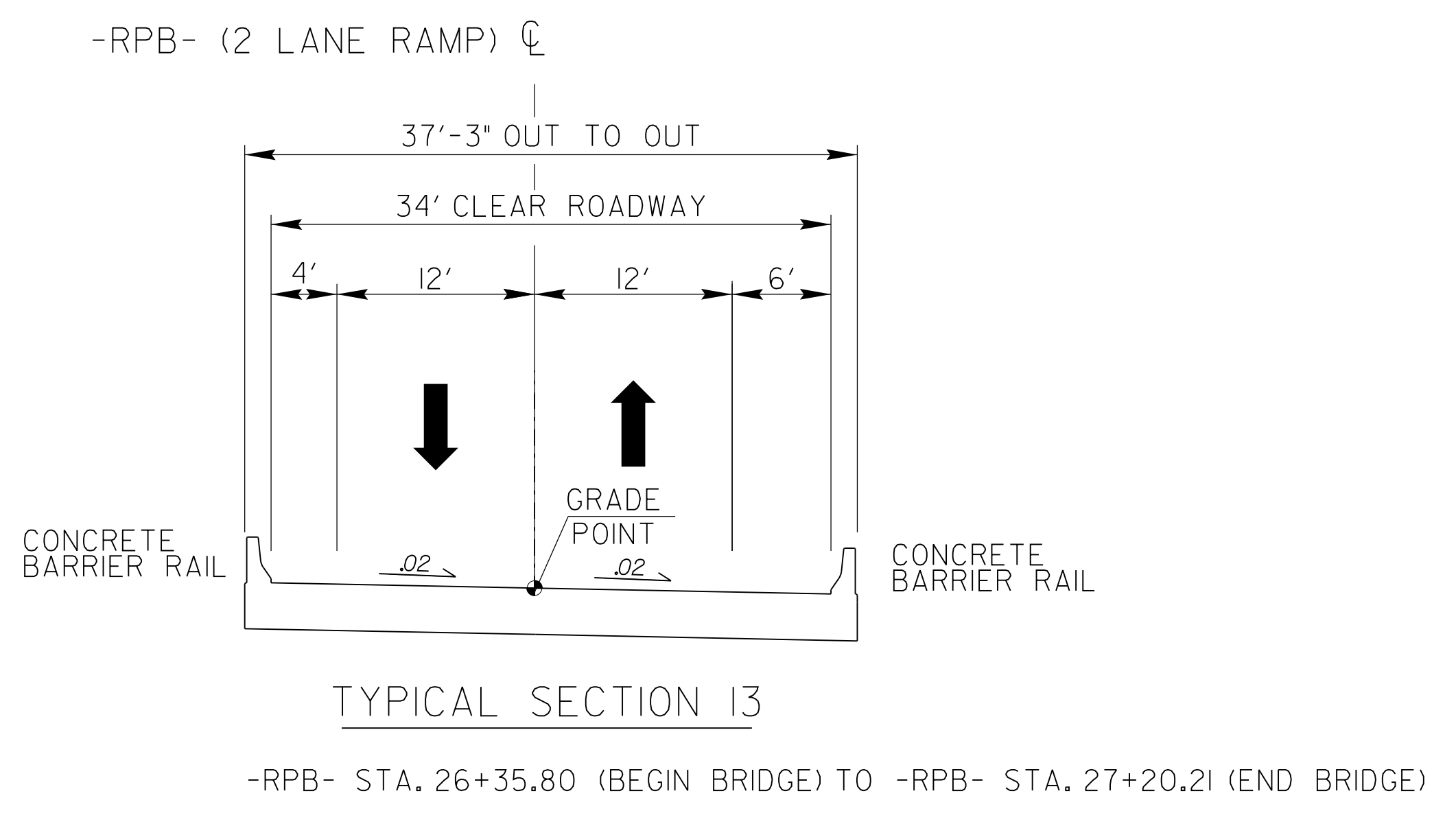
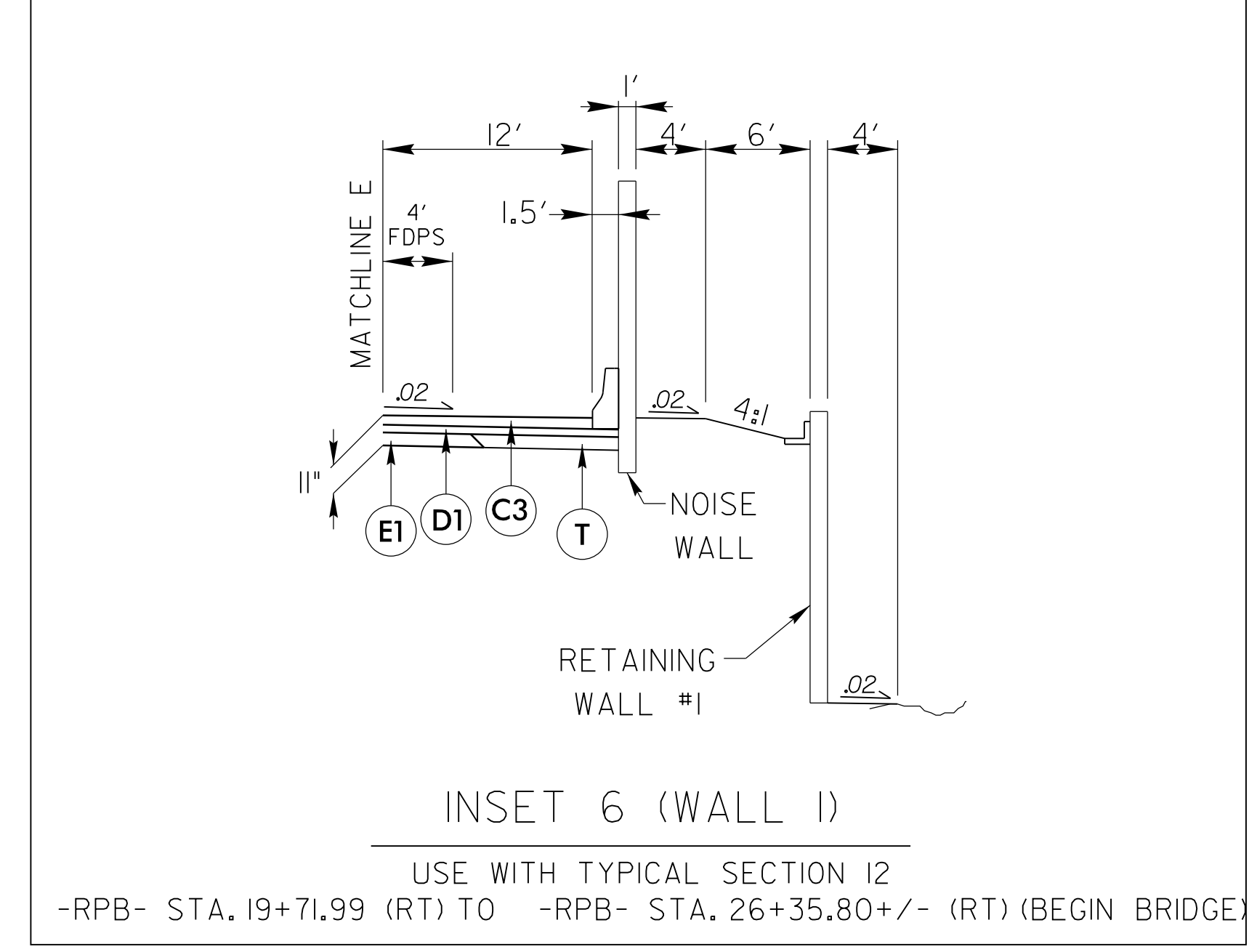
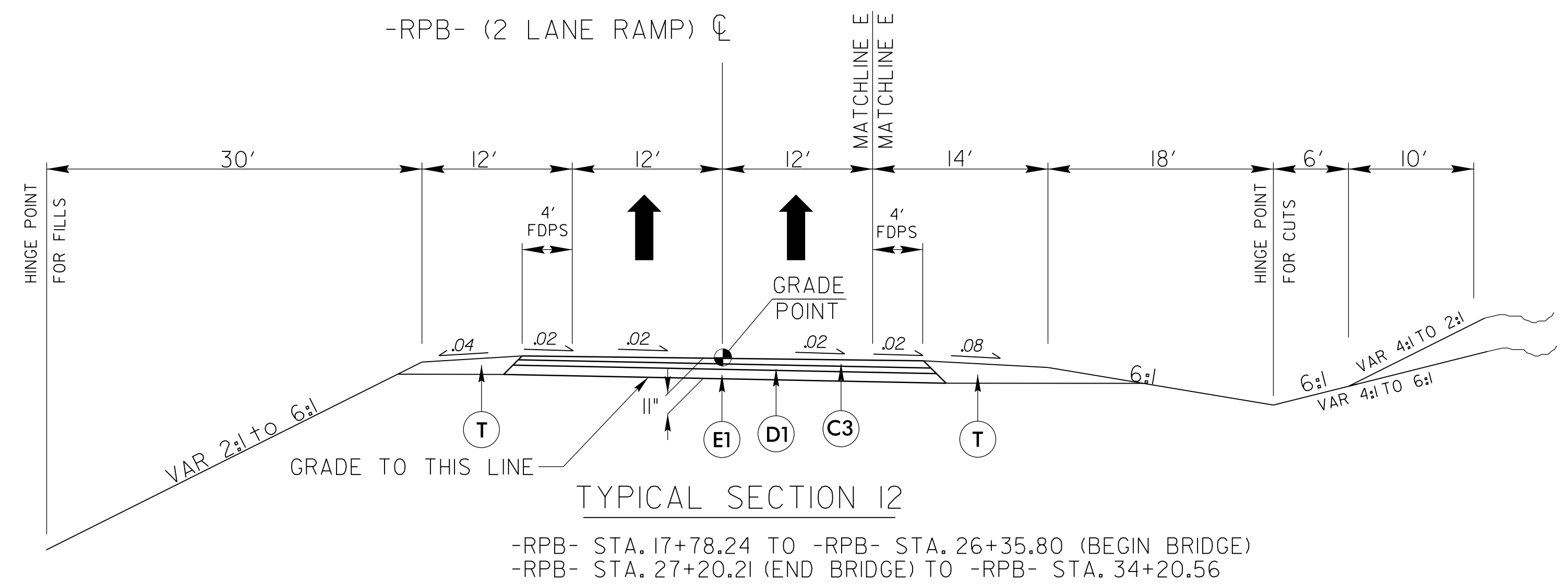
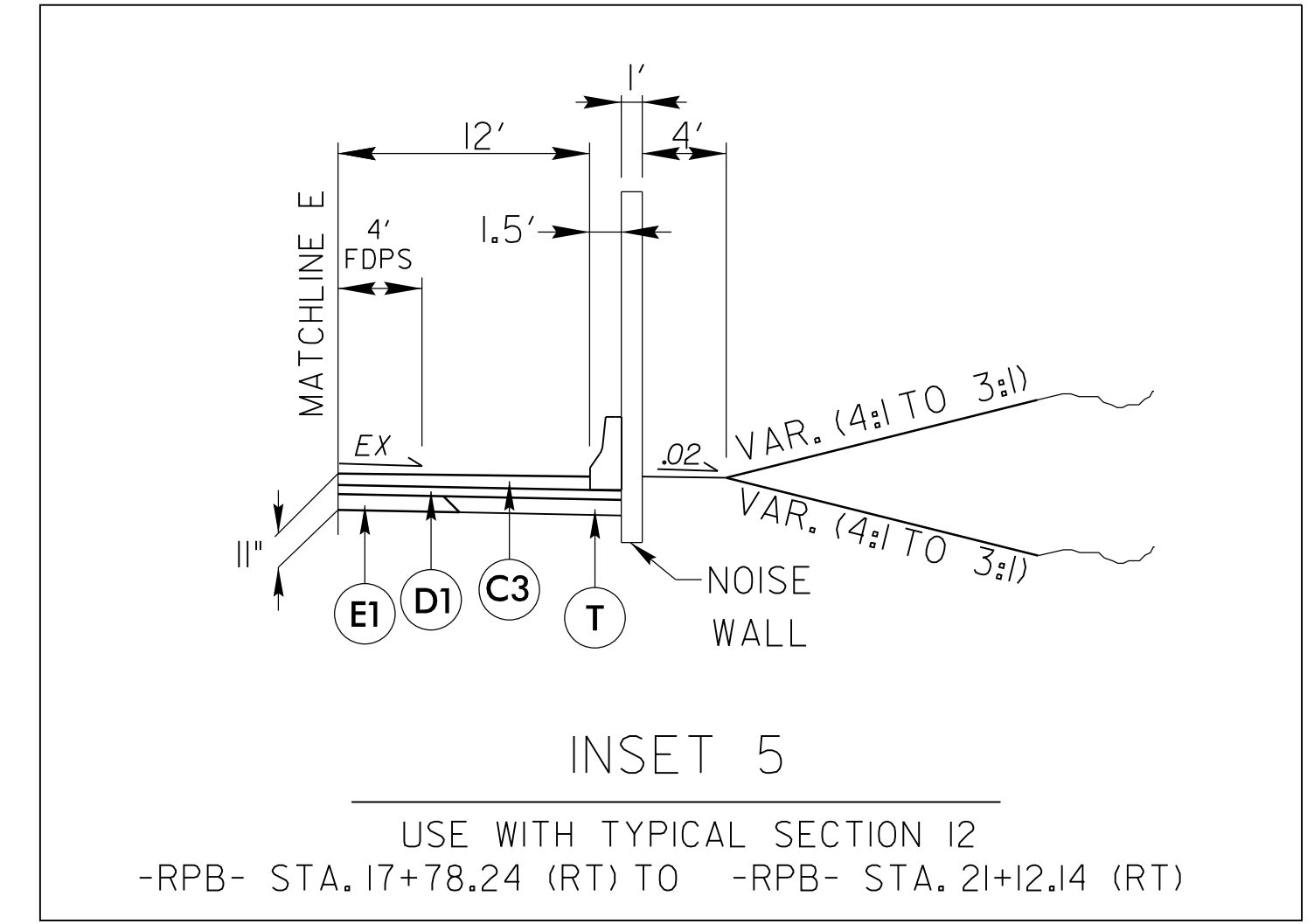
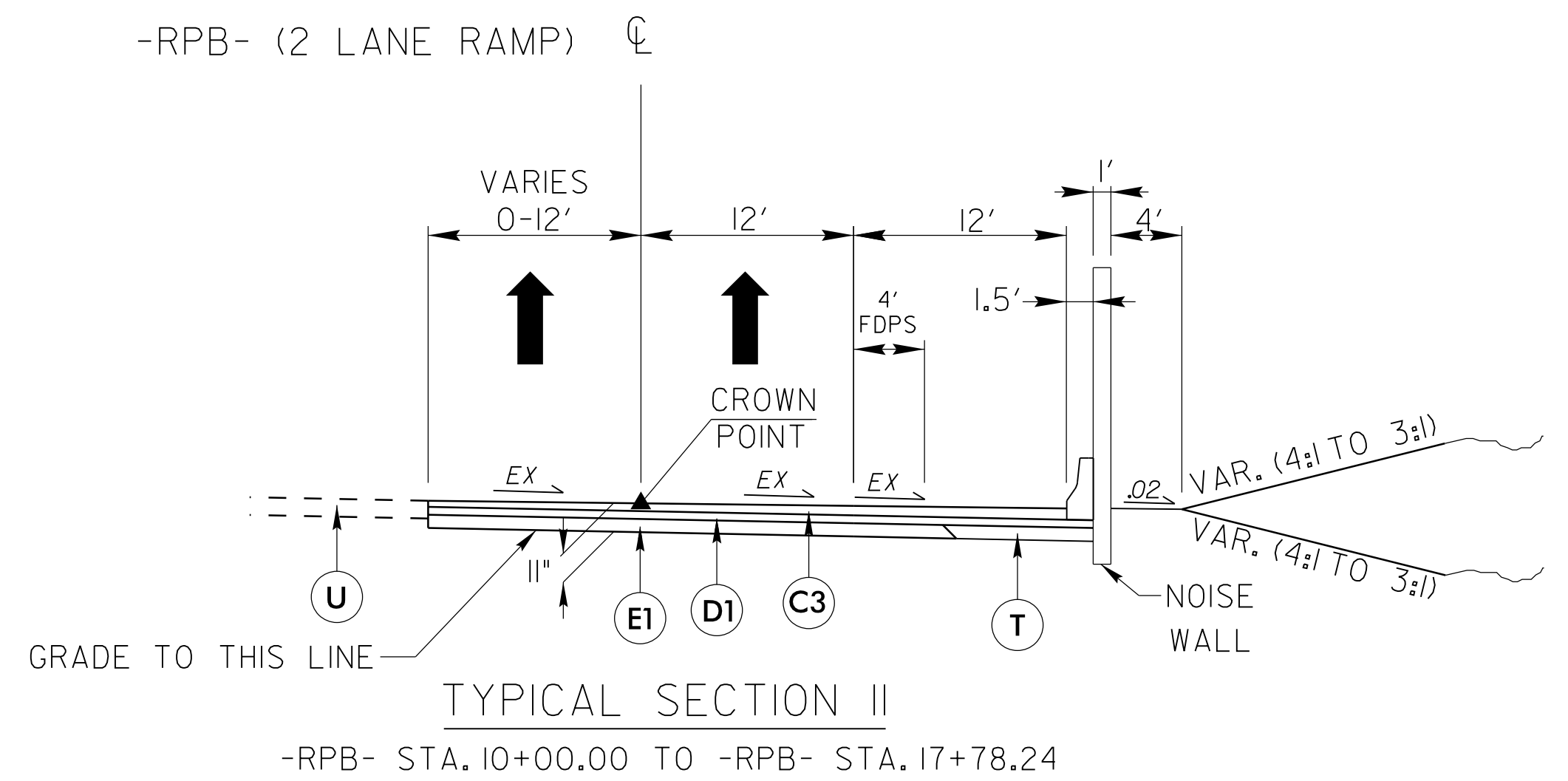
NOTE: IF WARRANTED, GUARDRAIL WILL BE PLACED AT THE FACE OF CURB

PAVEMENT SCHEDULE	
C1	1.5" S9.5B
C3	3" S9.5B
D1	4" 119.0C
E1	4" B25.0C
R1	2'-6" CURB AND GUTTER
R4	MONOLITHIC ISLAND (KEYED IN)
S	SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W3	WEDGING

14-JUN-2018 2:29 PM Roadway File: U4405_rdy_tup.dgn
\$\$\$\$\$SUSPENSE\$\$\$\$\$

6/27/99

PROJECT REFERENCE NO. U-4405	SHEET NO. 2A-6
ROADWAY DESIGN ENGINEER CLARK HARRISON NORTH CAROLINA PROFESSIONAL SEAL 024929 EXPIRES 12/31/2018	PAVEMENT DESIGN ENGINEER CLARK HARRISON NORTH CAROLINA PROFESSIONAL SEAL 022896 EXPIRES 12/31/2018
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

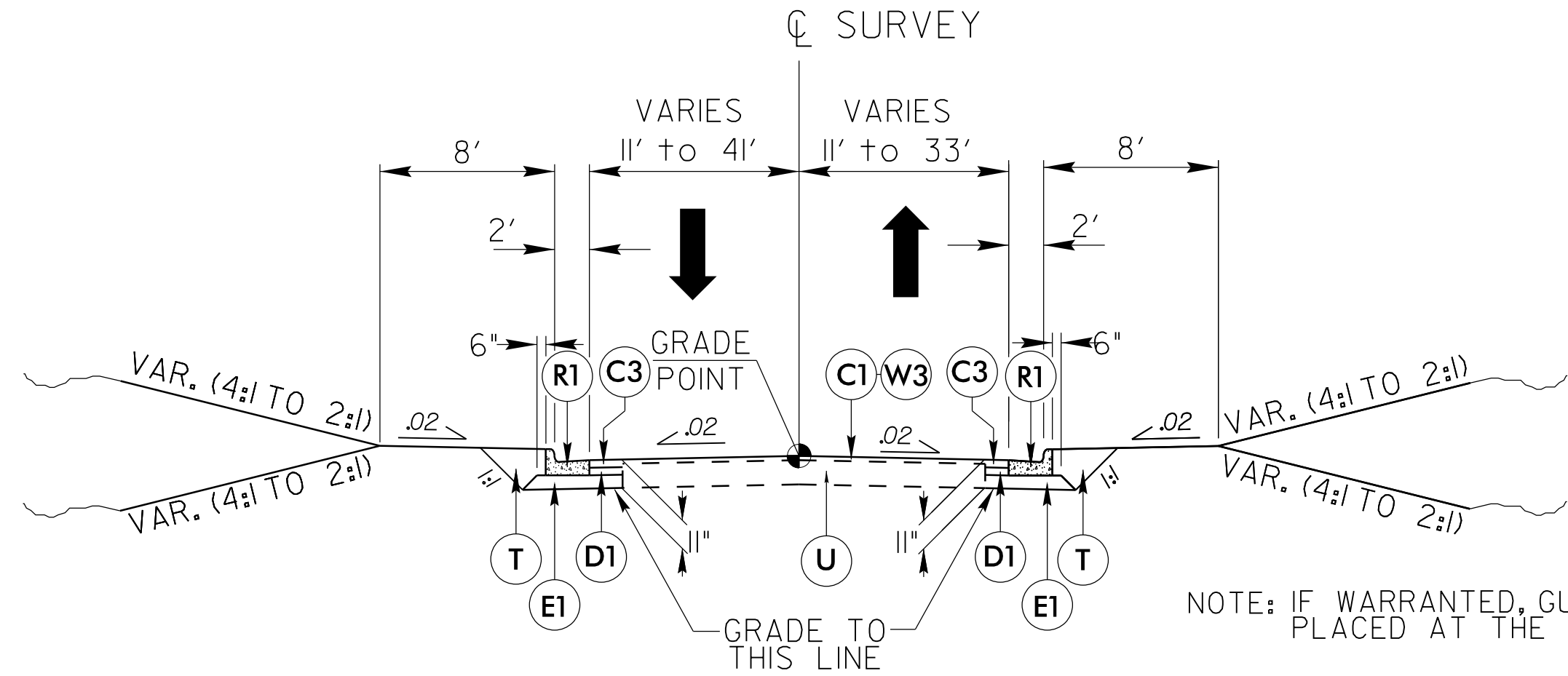


PAVEMENT SCHEDULE	
C3	3" S9.5B
D1	4" I19.0C
E1	4" B25.0C
T	EARTH MATERIAL
U	EXISTING PAVEMENT

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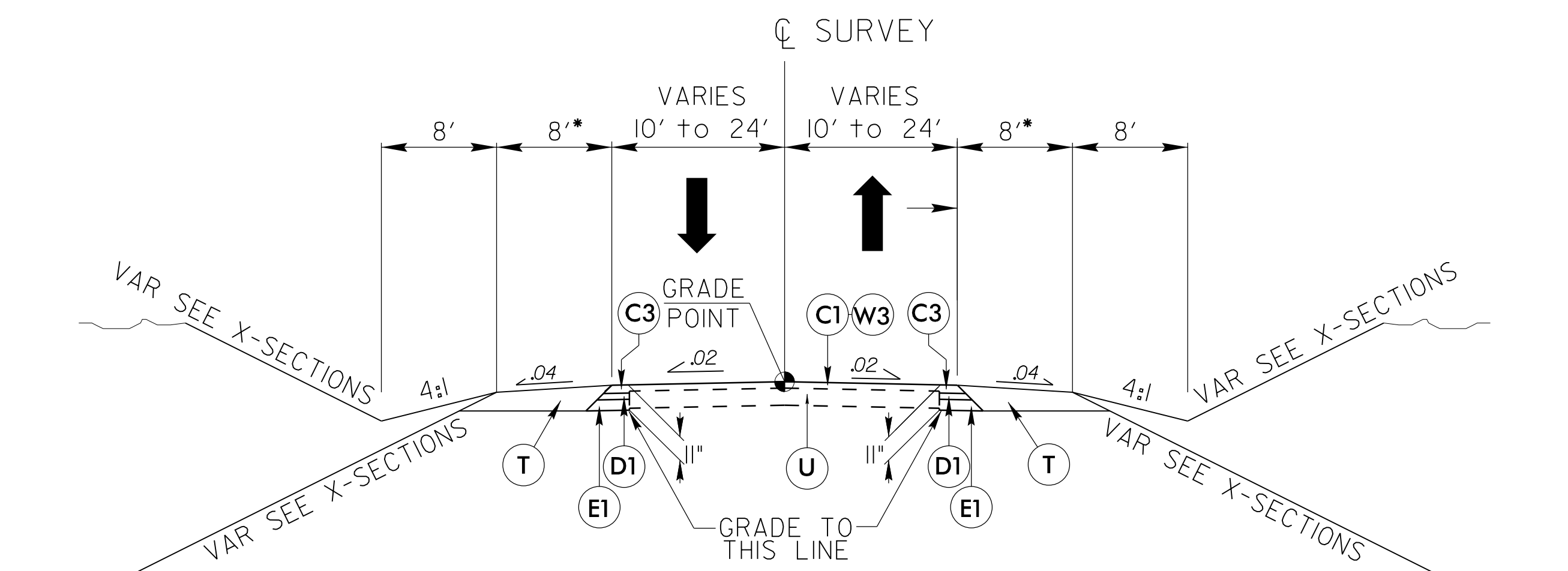
6/2/19

PROJECT REFERENCE NO. U-4405	SHEET NO. 2A-7
ROADWAY DESIGN ENGINEER CLAYTON J. MORGAN NORTH CAROLINA PROFESSIONAL SEAL 024929 EXPIRES 12/31/2018	PAVEMENT DESIGN ENGINEER CLARK W. MORRISON NORTH CAROLINA PROFESSIONAL SEAL 022896 EXPIRES 12/15/2018
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



TYPICAL SECTION 14

- | | |
|--|--|
| -Y1- STA. 14+20.00 TO -Y1- STA. 14+75.76 | -Y28- STA. 10+53.25 TO -Y28- STA. 11+20.00 |
| -Y2- STA. 10+50.50 TO -Y2- STA. 11+20.00 | -Y29- STA. 13+50.00 TO -Y29- STA. 14+29.17 |
| -Y7- STA. 13+20.00 TO -Y7- STA. 14+18.26 | -Y30- STA. 10+48.20 TO -Y30- STA. 11+15.00 |
| -Y7- STA. 15+35.76 TO -Y7- STA. 16+45.00 | -Y35- STA. 10+39.25 TO -Y35- STA. 11+75.00 |
| -Y10- STA. 10+53.59 TO -Y10- STA. 11+45.00 | -Y36- STA. 10+60.00 TO -Y36- STA. 11+61.86 |
| -Y11- STA. 10+42.52 TO -Y11- STA. 11+60.00 | -Y39- STA. 10+39.25 TO -Y39- STA. 11+50.00 |
| -Y12- STA. 10+42.25 TO -Y12- STA. 11+50.00 | -Y40- STA. 12+50.00 TO -Y40- STA. 13+56.49 |
| -Y14- STA. 10+44.61 TO -Y14- STA. 11+45.00 | -Y44- STA. 10+29.70 TO -Y44- STA. 12+00.00 |
| -Y21- STA. 10+43.54 TO -Y21- STA. 11+10.00 | -Y25- STA. 10+53.08 TO -Y25- STA. 11+75.00 |



TYPICAL SECTION 15

- | |
|--|
| -Y4- STA. 17+00.00 TO -Y4- STA. 18+12.03 |
| -Y4- STA. 18+96.22 TO -Y4- STA. 19+70.00 |
| -Y6- STA. 10+42.30 TO -Y6- STA. 11+20.00 |
| -Y9- STA. 12+15.00 TO -Y9- STA. 13+04.51 |
| -Y15- STA. 11+40.00 TO -Y15- STA. 11+82.96 |
| -Y16- STA. 10+42.27 TO -Y16- STA. 11+70.00 |
| -Y18- STA. 10+47.17 TO -Y18- STA. 11+50.00 |
| -Y23- STA. 10+42.26 TO -Y23- STA. 11+50.00 |
| -Y26- STA. 10+42.25 TO -Y26- STA. 11+60.00 |

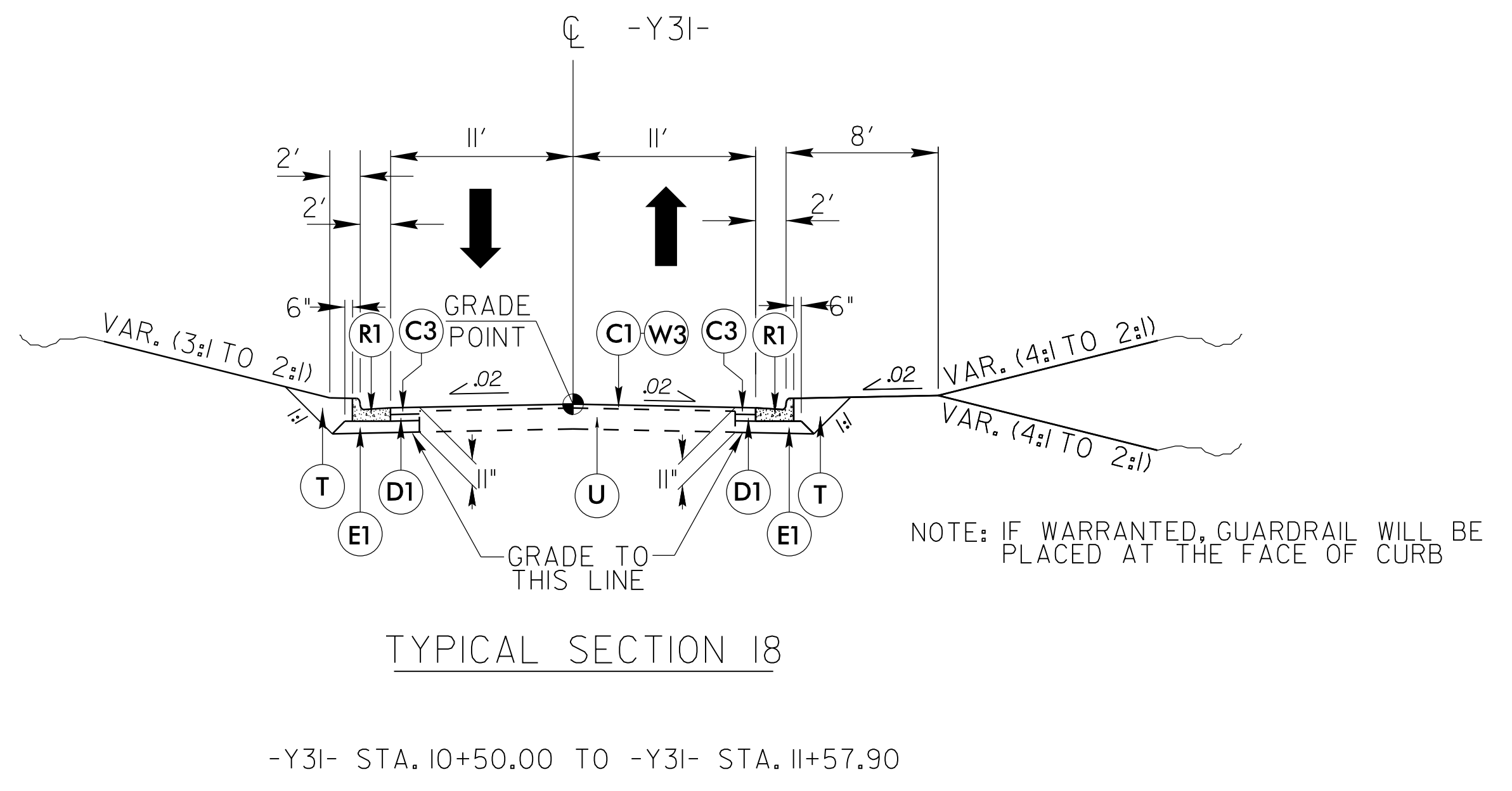
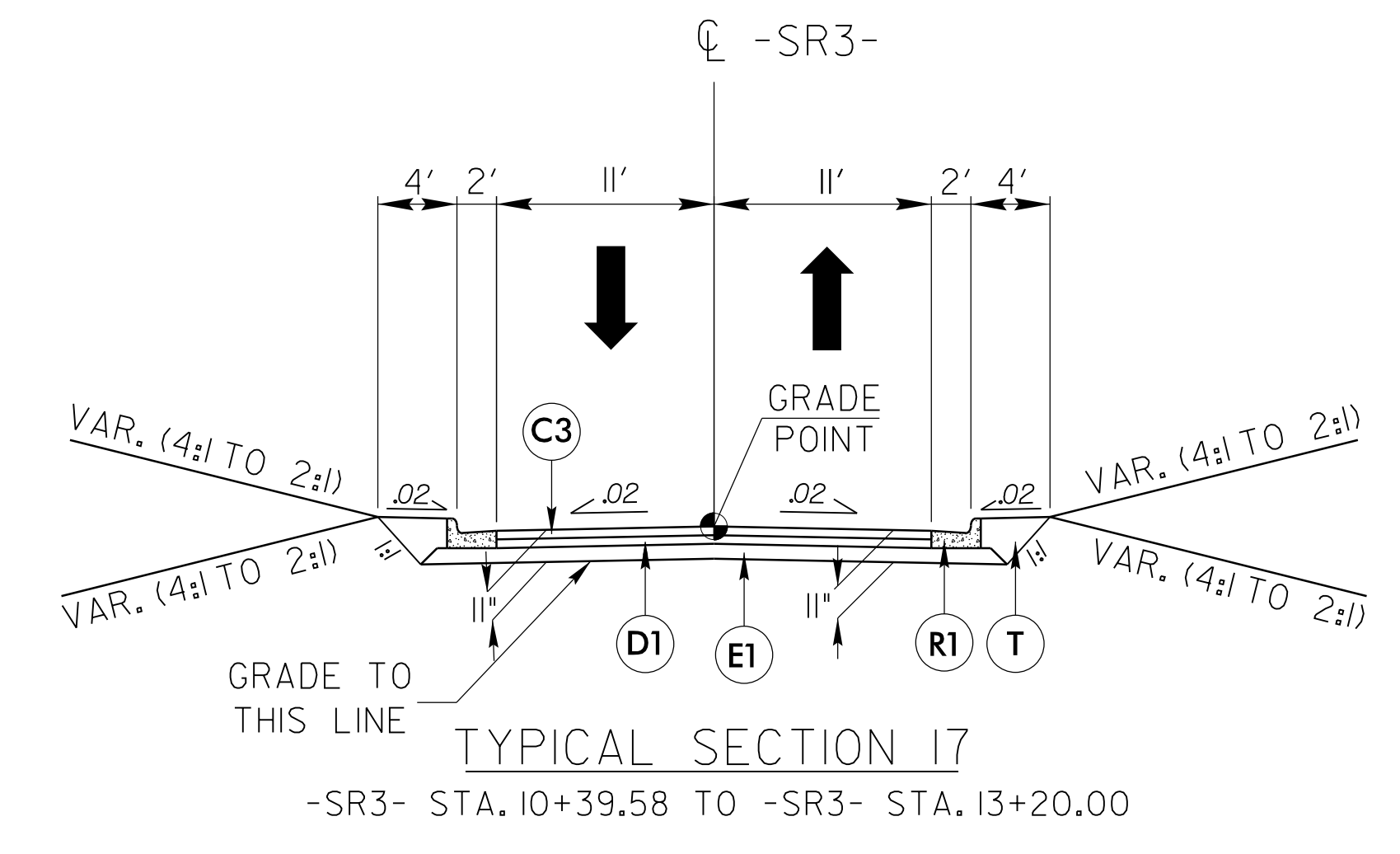
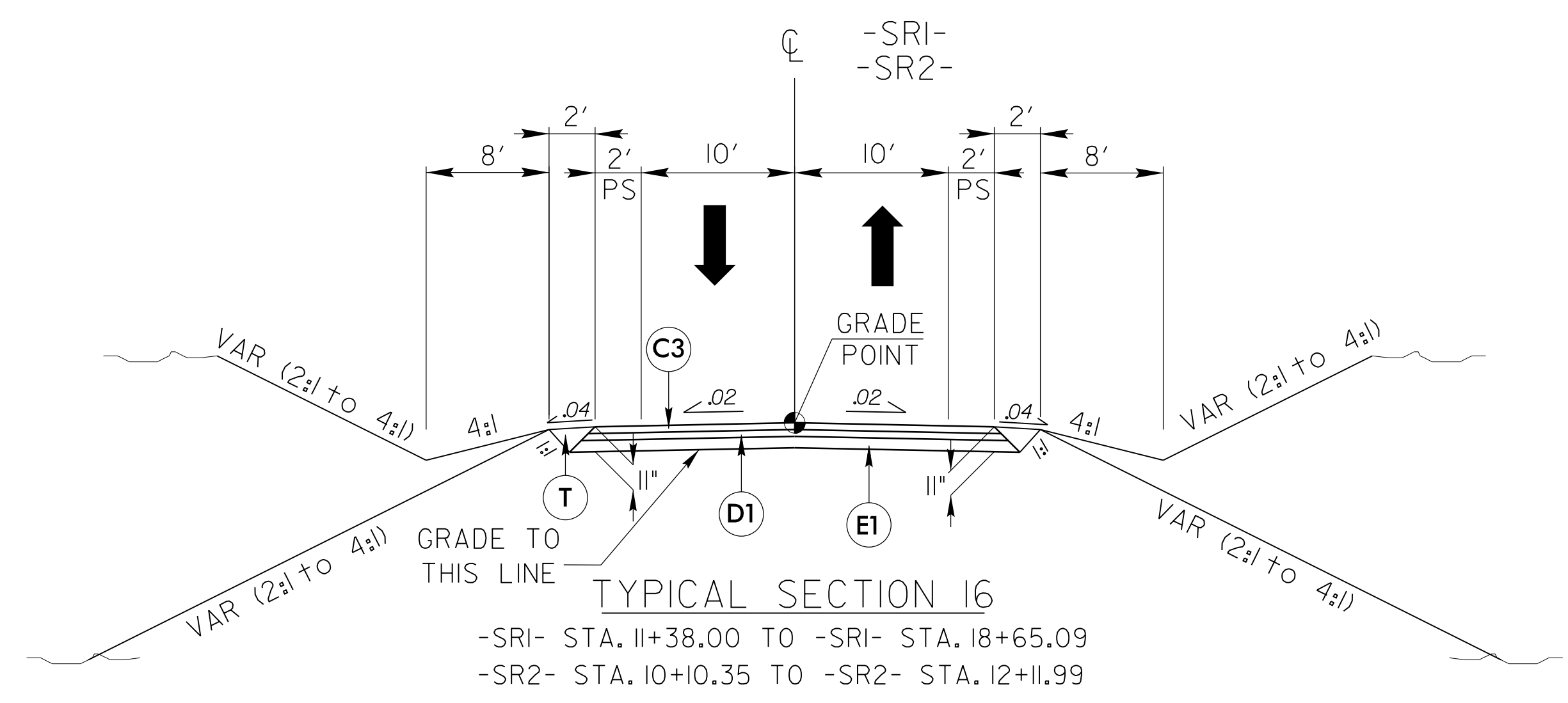
*NOTE: WIDEN SHOULDER 3' FOR GUARDRAIL

PAVEMENT SCHEDULE	
C1	1.5" S9.5B
C3	3" S9.5B
D1	4" 119.0C
E1	4" B25.0C
R1	2'-6" CURB AND GUTTER
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W3	WEDGING

14-JUN-2018 2:29 PM Roadway File: I:\4405_rdy_tup.dgn

6/27/99

PROJECT REFERENCE NO. U-4405	SHEET NO. 2A-8
ROADWAY DESIGN ENGINEER CLAYTON J. MORGAN NORTH CAROLINA PROFESSIONAL SEAL 024929 EXPIRES 12/31/2018	PAVEMENT DESIGN ENGINEER CLARK W. HARRISON NORTH CAROLINA PROFESSIONAL SEAL 022896 EXPIRES 6/15/2018
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

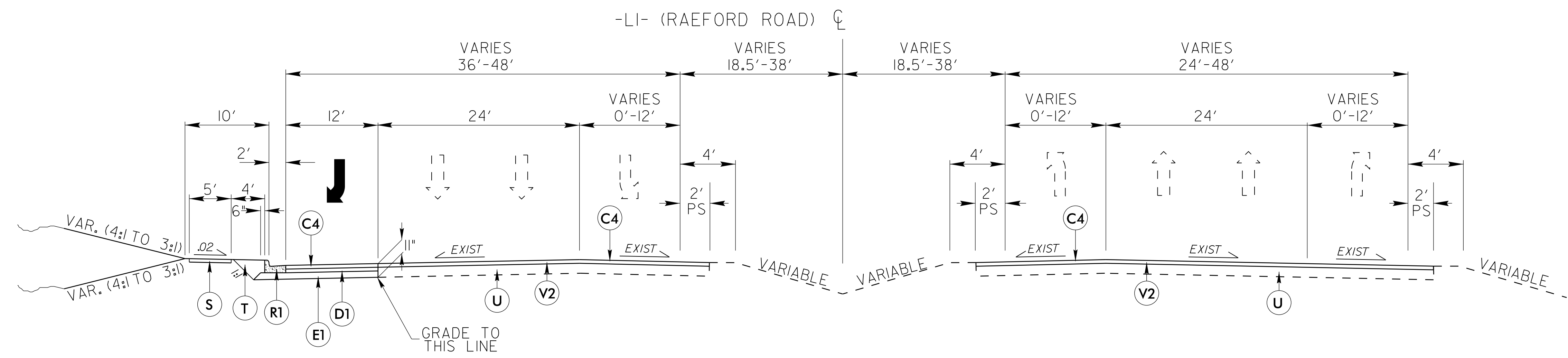


NOTE: IF WARRANTED, GUARDRAIL WILL BE PLACED AT THE FACE OF CURB

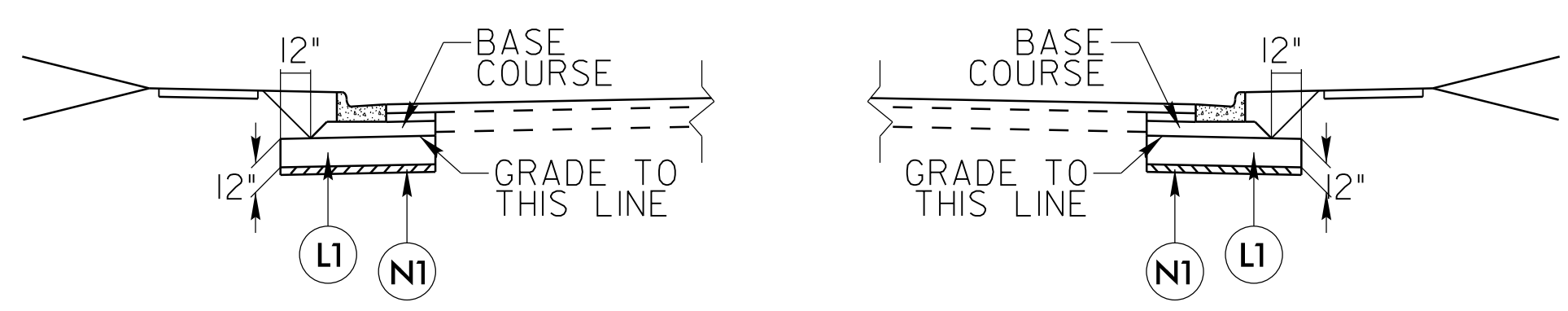
PAVEMENT SCHEDULE	
C1	1.5" S9.5B
C3	3" S9.5B
D1	4" 119.0C
E1	4" B25.0C
R1	2'-6" CURB AND GUTTER
T	EARTH MATERIAL
W3	WEDGING

14-JUN-2018 2:47:30 P:\Roadway\HCO\U4405.rdw typ.dgn

PROJECT REFERENCE NO. U-4405	SHEET NO. 2A-9
ROADWAY DESIGN ENGINEER CLAYTON J. MORRISON 024929 NORTH CAROLINA PROFESSIONAL ENGINEER DocuSign Envelope ID: 4A0A0A0A-0A0A-0A0A-0A0A-0A0A0A0A0A 6/15/2018	PAVEMENT DESIGN ENGINEER CLAYTON J. MORRISON 022896 NORTH CAROLINA PROFESSIONAL ENGINEER DocuSign Envelope ID: 4A0A0A0A-0A0A-0A0A-0A0A-0A0A0A0A0A 6/15/2018
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



TYPICAL SECTION 19
-LI- STA. 95+00.00 TO -LI- STA. 115+65.00




AGGREGATE SUBGRADE DETAIL
USE IN CONJUNCTION WITH TYPICAL SECTIONS AS DIRECTED BY THE RESIDENT ENGINEER AND AT STATIONS:
-L- STA. 19+00.00 TO -L- STA. 25+00.00
-L- STA. 70+00.00 TO -L- STA. 74+00.00
-L- STA. 102+00.00 TO -L- STA. 107+00.00
-L- STA. 146+00.00 TO -L- STA. 153+00.00

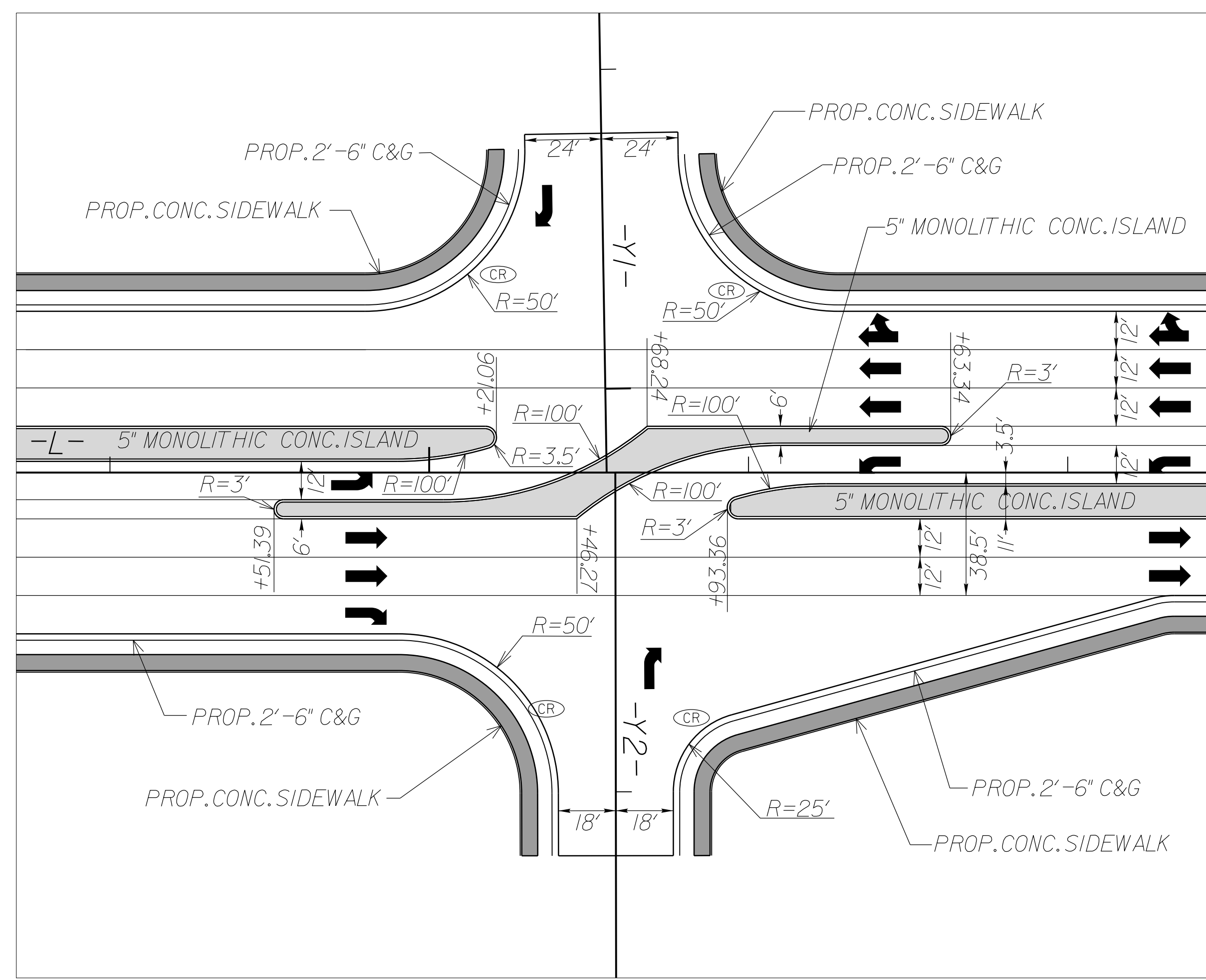
PAVEMENT SCHEDULE	
C4	3" S9.5C
D1	4" 119.0C
E1	4" B25.0C
L1	CLASS IV SUBGRADE STABILIZATION
N1	GEOTEXTILE FOR SOIL STABILIZATION
R1	2'-6" CURB AND GUTTER
S	SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V2	1.5" MILLING

8/17/99

INTERSECTION DETAILS

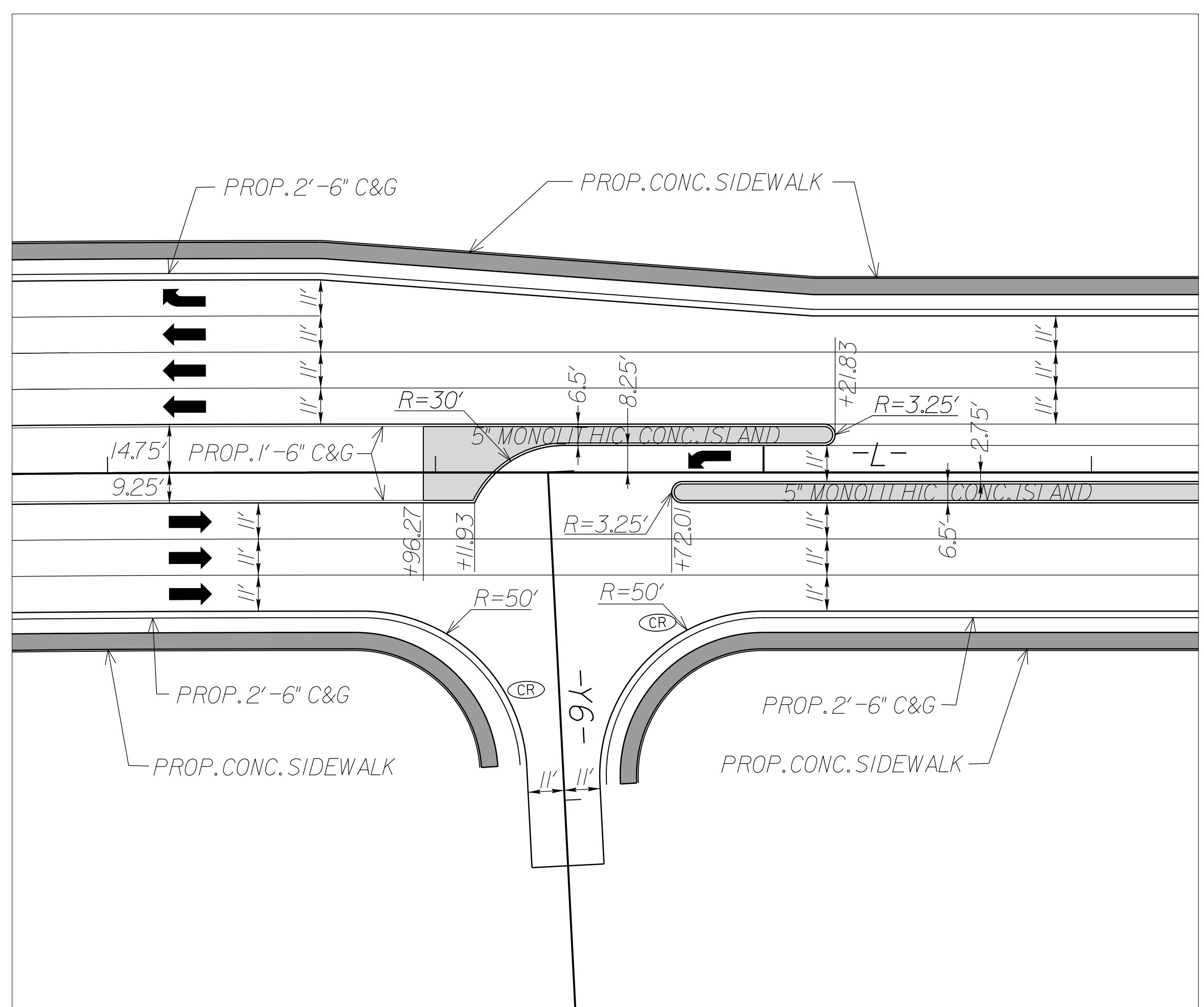
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PROJECT REFERENCE NO. U-4405	SHEET NO. 2B-1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>	



**INTERSECTION OF
RAEFORD ROAD (-L-)
AND FESTIVAL DRIVE (-Y2-)
(SEE PLAN SHEET 4)**

**INTERSECTION OF
RAEFORD ROAD (-L-)
AND ARRAN CIRCLE (-Y6-)
(SEE PLAN SHEET 10)**



NOTE: SEE PMP PLANS FOR WHEEL CHAIR RAMP AND PAVEMENT MARKING LOCATIONS

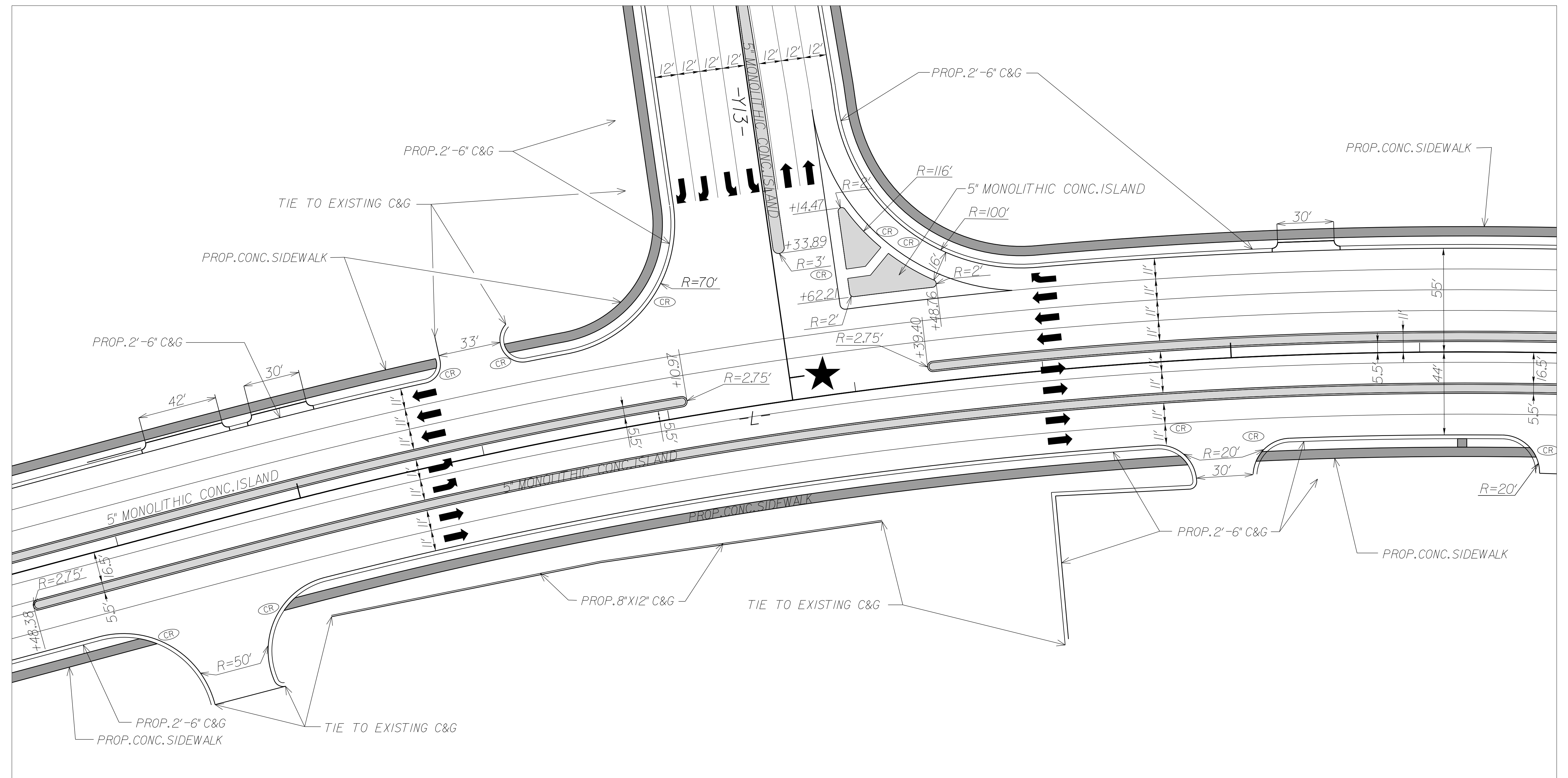
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INTERSECTION DETAILS

NOT TO SCALE

PROJECT REFERENCE NO. U-4405	SHEET NO. 2B-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



8/17/99

REVISIONS

25-APR-2018 14:04
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**INTERSECTION OF
RAEFORD ROAD (-L-)
AND SKIBO ROAD (-Y13-)
(SEE PLAN SHEET 13 AND 14)**

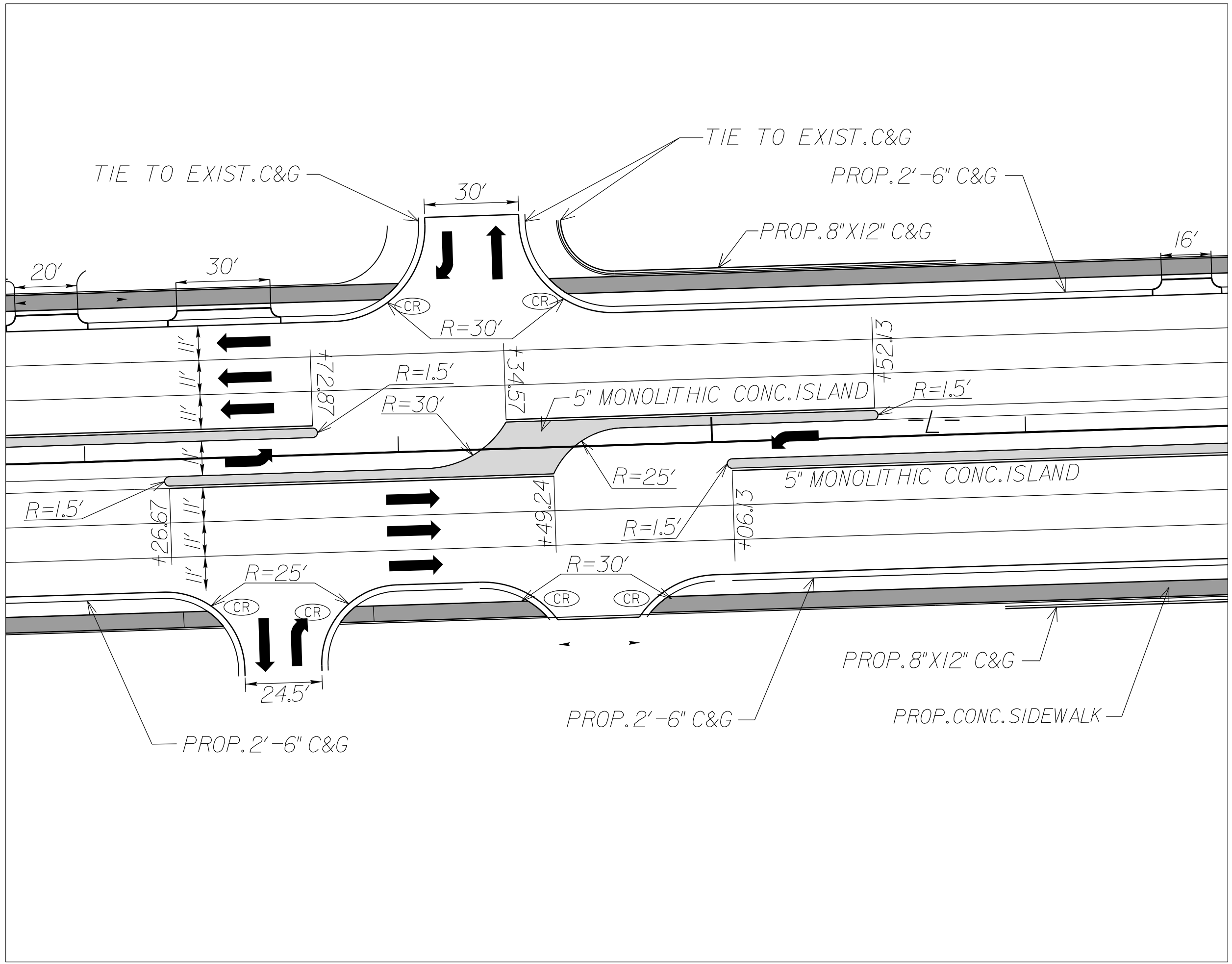
**NOTE: SEE PMP PLANS FOR WHEEL CHAIR RAMP
AND PAVEMENT MARKING LOCATIONS**

8/17/99

INTERSECTION DETAILS

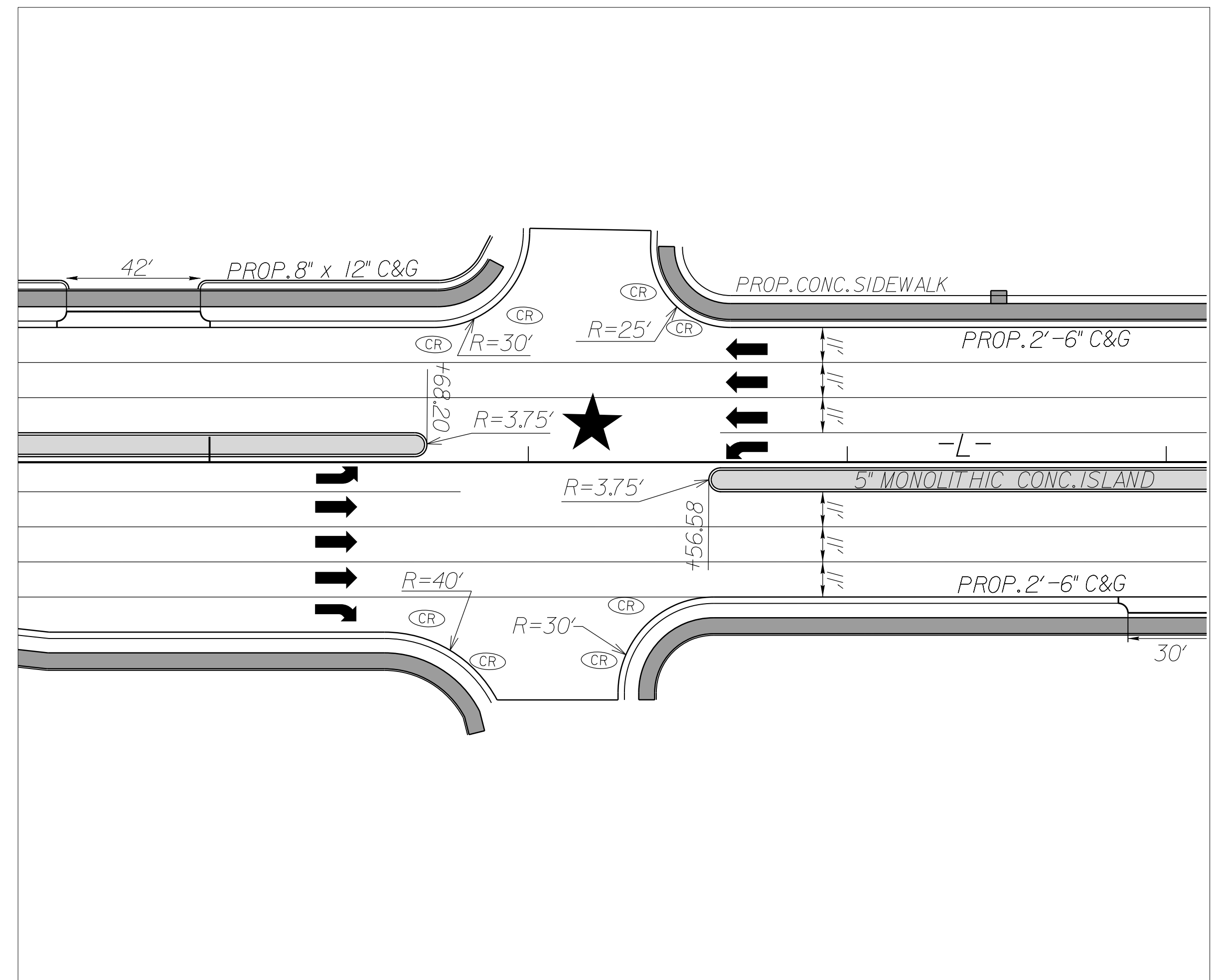
NOT TO SCALE

PROJECT REFERENCE NO. <i>U-4405</i>	SHEET NO. <i>2B-3</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



**BETWEEN
DUKE STREET (-Y14-)
AND POMPTON DRIVE (-Y15-)
ON RAEFORD ROAD (-L-)
(SEE PLAN SHEET 15)**

**BETWEEN
S KENLEIGH DRIVE (-Y21-)
AND SCOTLAND DRIVE (-Y23-)
ON RAEFORD ROAD (-L-)
(SEE PLAN SHEET 18)**



**NOTE: SEE PMP PLANS FOR WHEEL CHAIR RAMP
AND PAVEMENT MARKING LOCATIONS**

REVISIONS

17 MAY 2018 10:34
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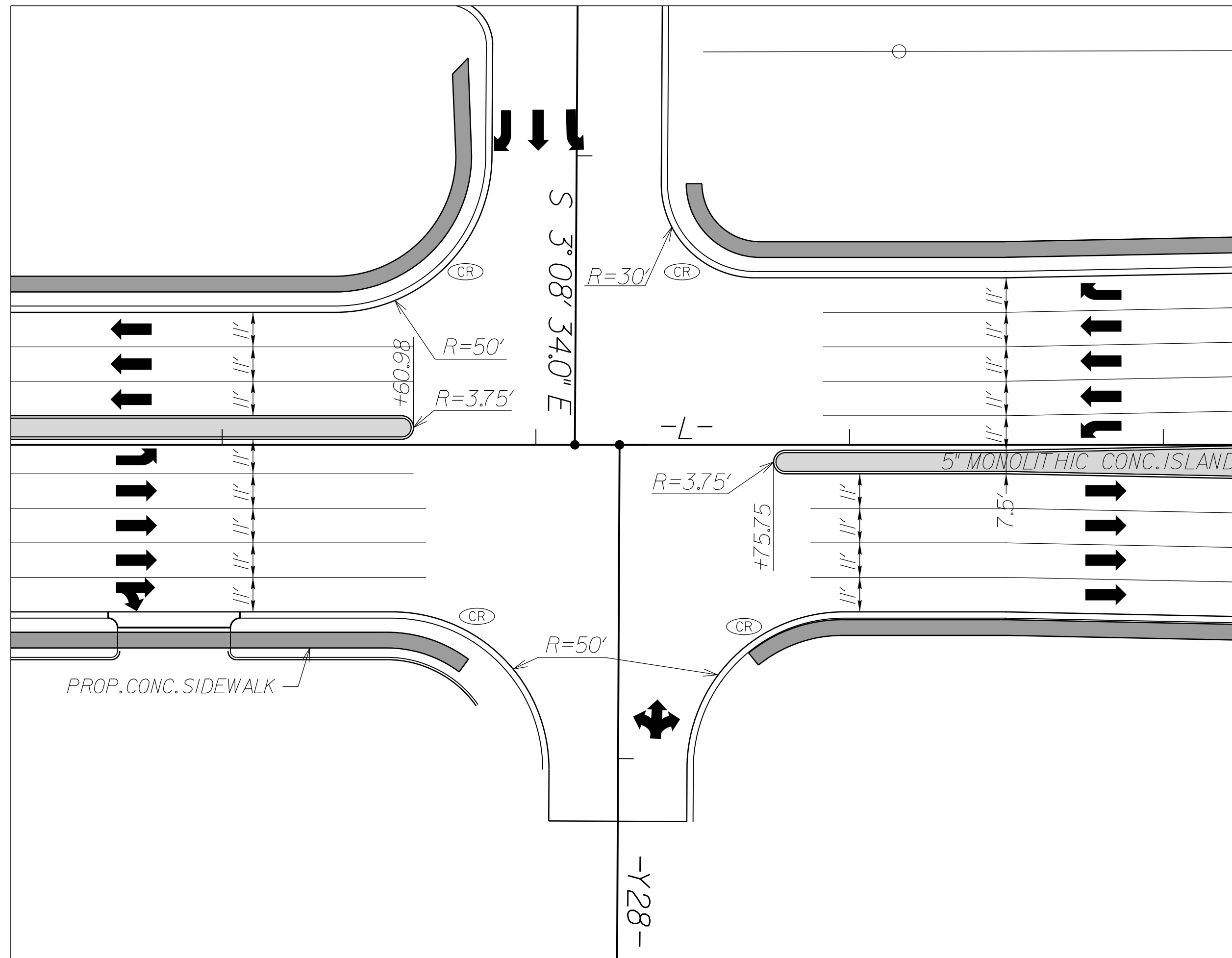
8/17/99

INTERSECTION DETAILS

NOT TO SCALE

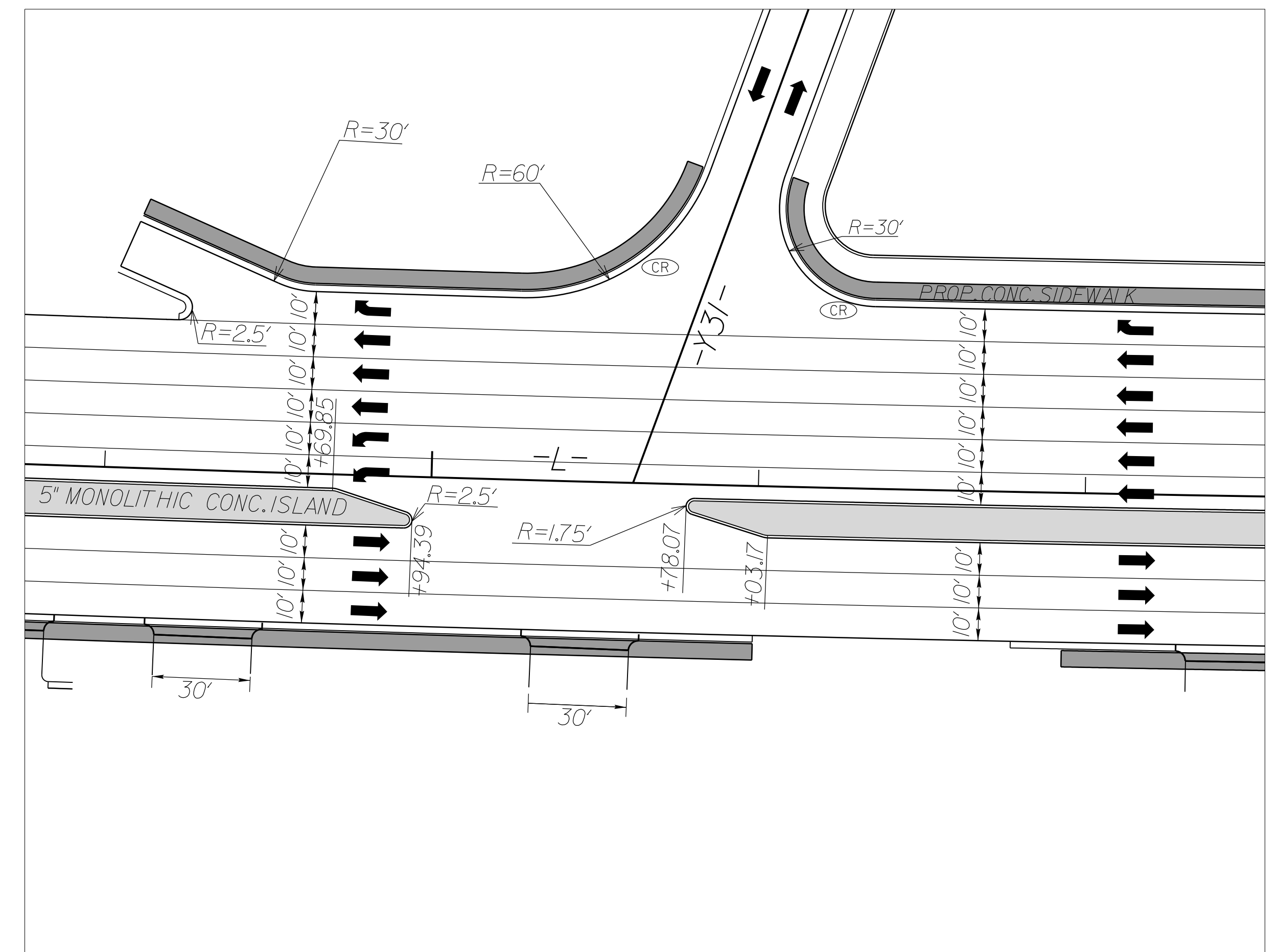
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RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>			

REVISIONS



**INTERSECTION OF
RAEFORD ROAD (-L-)
AND ROXIE AVENUE (-Y28-)
(SEE PLAN SHEET 22)**

**INTERSECTION OF
RAEFORD ROAD (-L-)
AND TWIN ACRES DRIVE (-Y31-)
(SEE PLAN SHEET 24)**



**NOTE: SEE PMP PLANS FOR WHEEL CHAIR RAMP
AND PAVEMENT MARKING LOCATIONS**

17 MAY 2018 18:54
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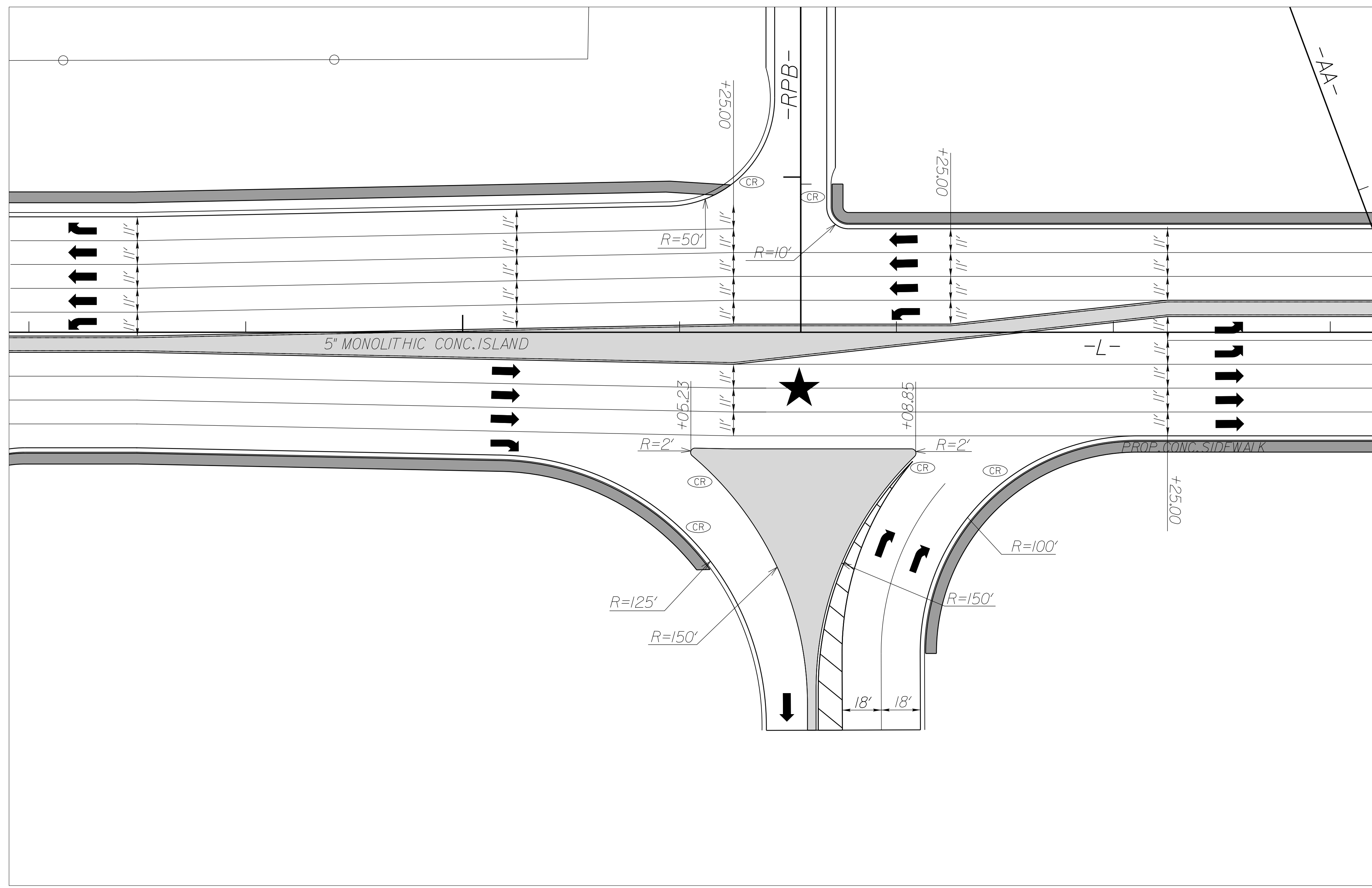
8/17/99

PROJECT REFERENCE NO. <i>U-4405</i>	SHEET NO. <i>2B-5</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

INTERSECTION DETAILS

NOT TO SCALE

REVISIONS



**INTERSECTION OF
RAEFORD ROAD (-L-)
AND SOUTH BOUND EXIT RAMP
FROM ALL AMERICAN EXPRESSWAY (-RPB-)
(SEE PLAN SHEET 22)**

**NOTE: SEE PMP PLANS FOR WHEEL CHAIR RAMP
AND PAVEMENT MARKING LOCATIONS**

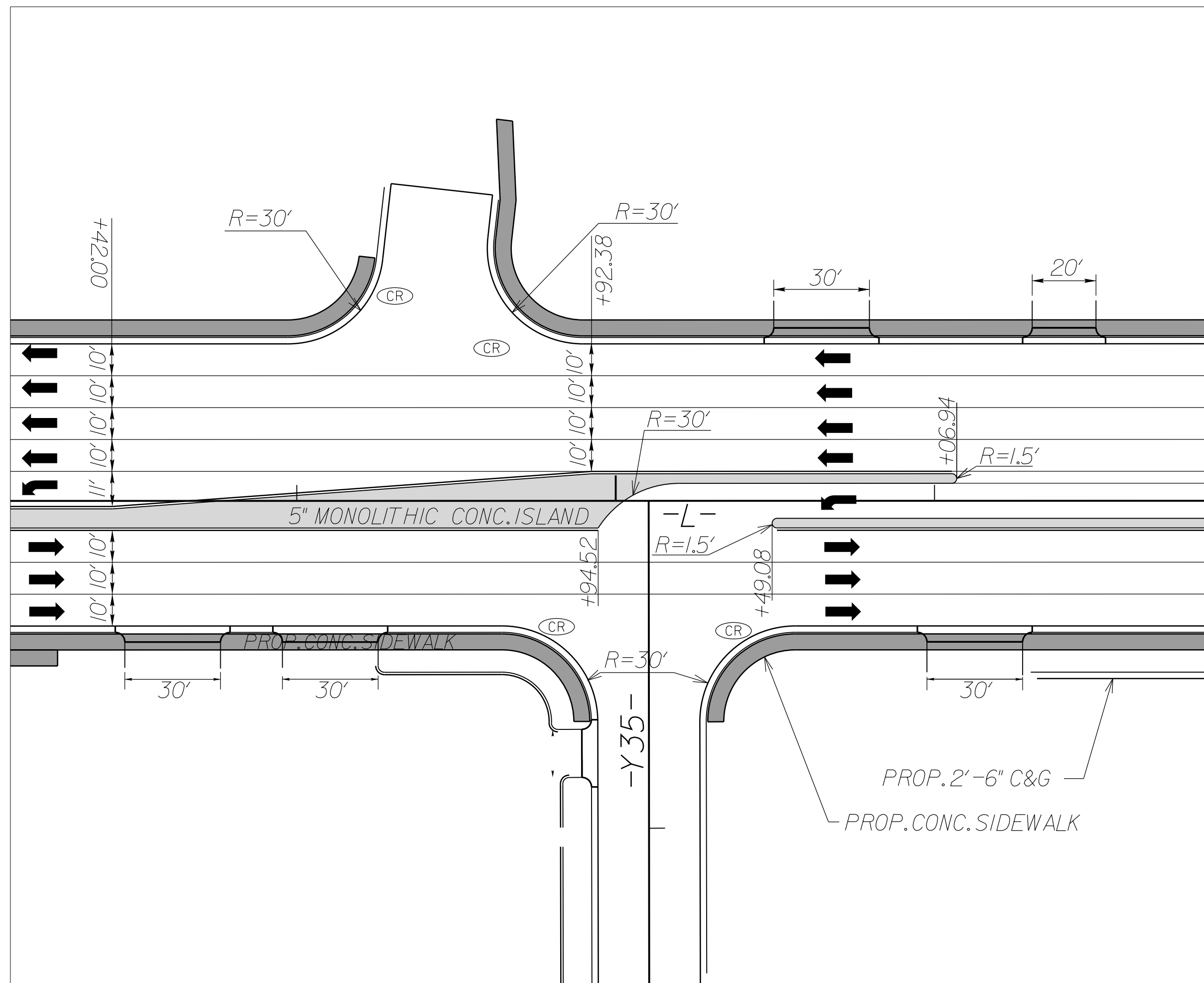
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8/17/99

INTERSECTION DETAILS

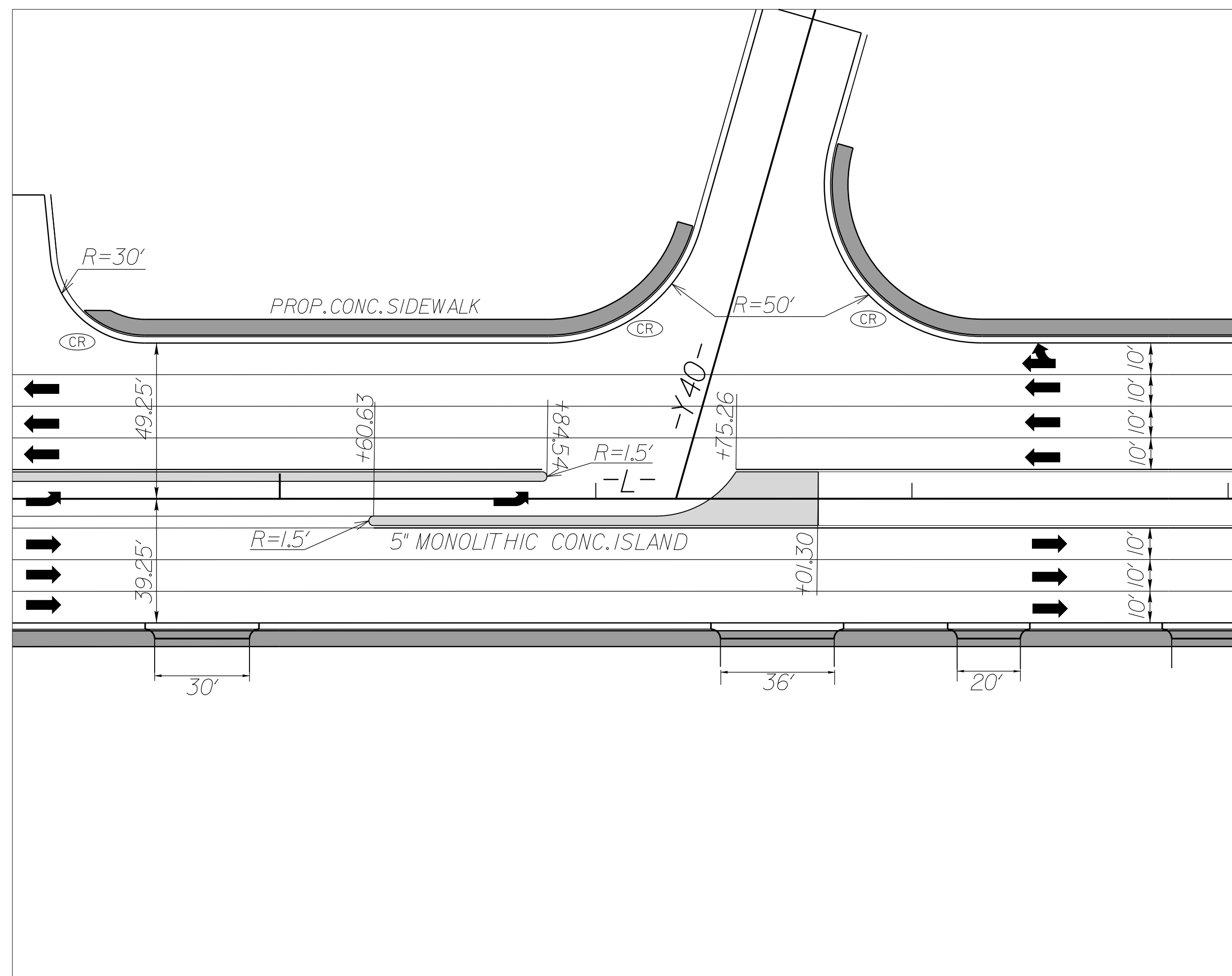
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PROJECT REFERENCE NO. U-4405	SHEET NO. 2B-6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



**INTERSECTION OF
RAEFORD ROAD (-L-)
AND MARLBOROUGH ROAD (-Y35-)
(SEE PLAN SHEET 25)**

**INTERSECTION OF
RAEFORD ROAD (-L-)
AND EXECUTIVE PLACE (-Y40-)
(SEE PLAN SHEET 26)**



**NOTE: SEE PMP PLANS FOR WHEEL CHAIR RAMP
AND PAVEMENT MARKING LOCATIONS**

REVISIONS

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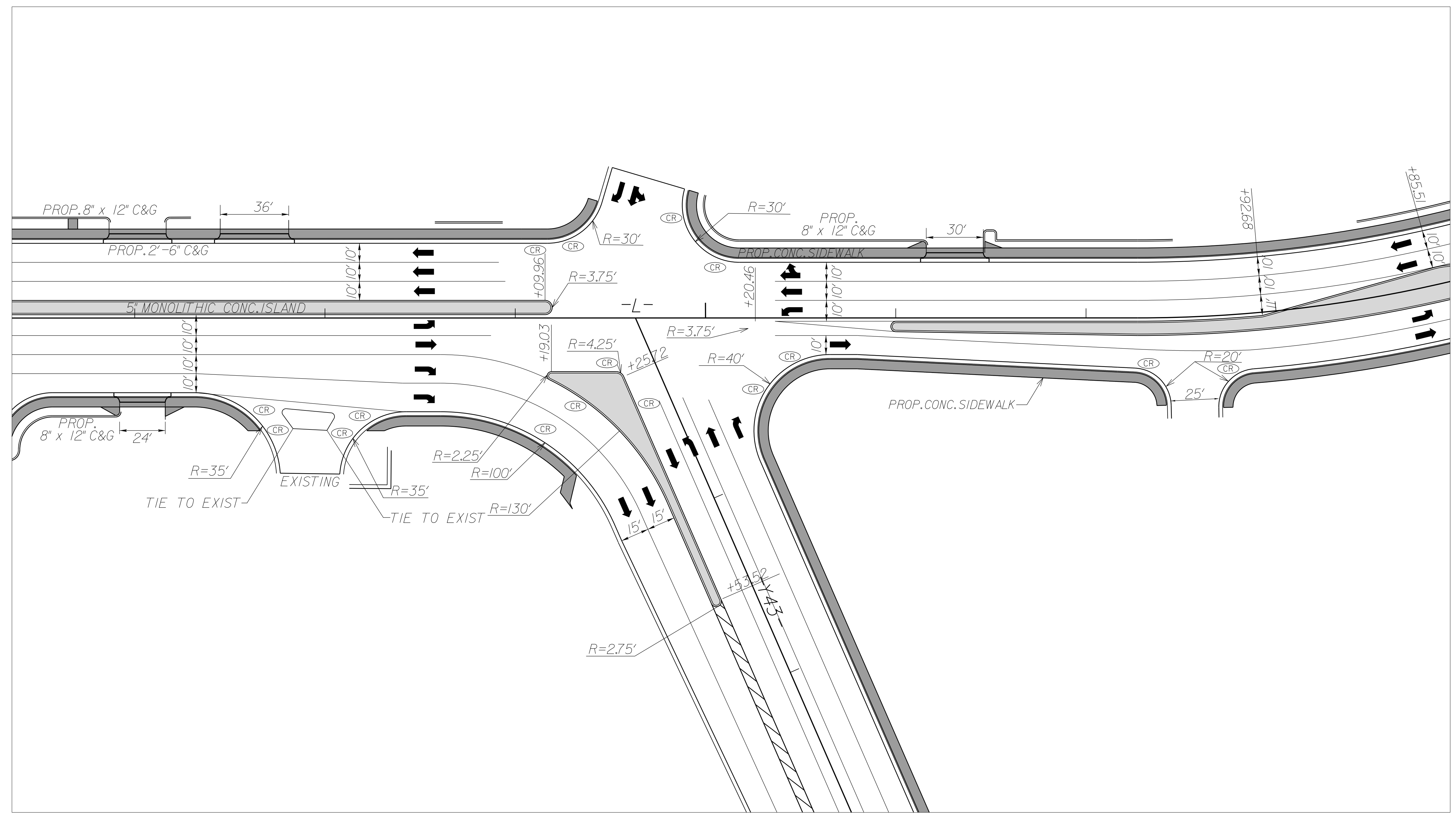
8/17/99

INTERSECTION DETAILS

NOT TO SCALE

PROJECT REFERENCE NO. U-4405	SHEET NO. 2B-7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

REVISIONS



**INTERSECTION OF
RAEFORD ROAD (-L-)
AND ROBESON STREET (-Y43-)
(SEE PLAN SHEET 27)**

**NOTE: SEE PMP PLANS FOR WHEEL CHAIR RAMP
AND PAVEMENT MARKING LOCATIONS**

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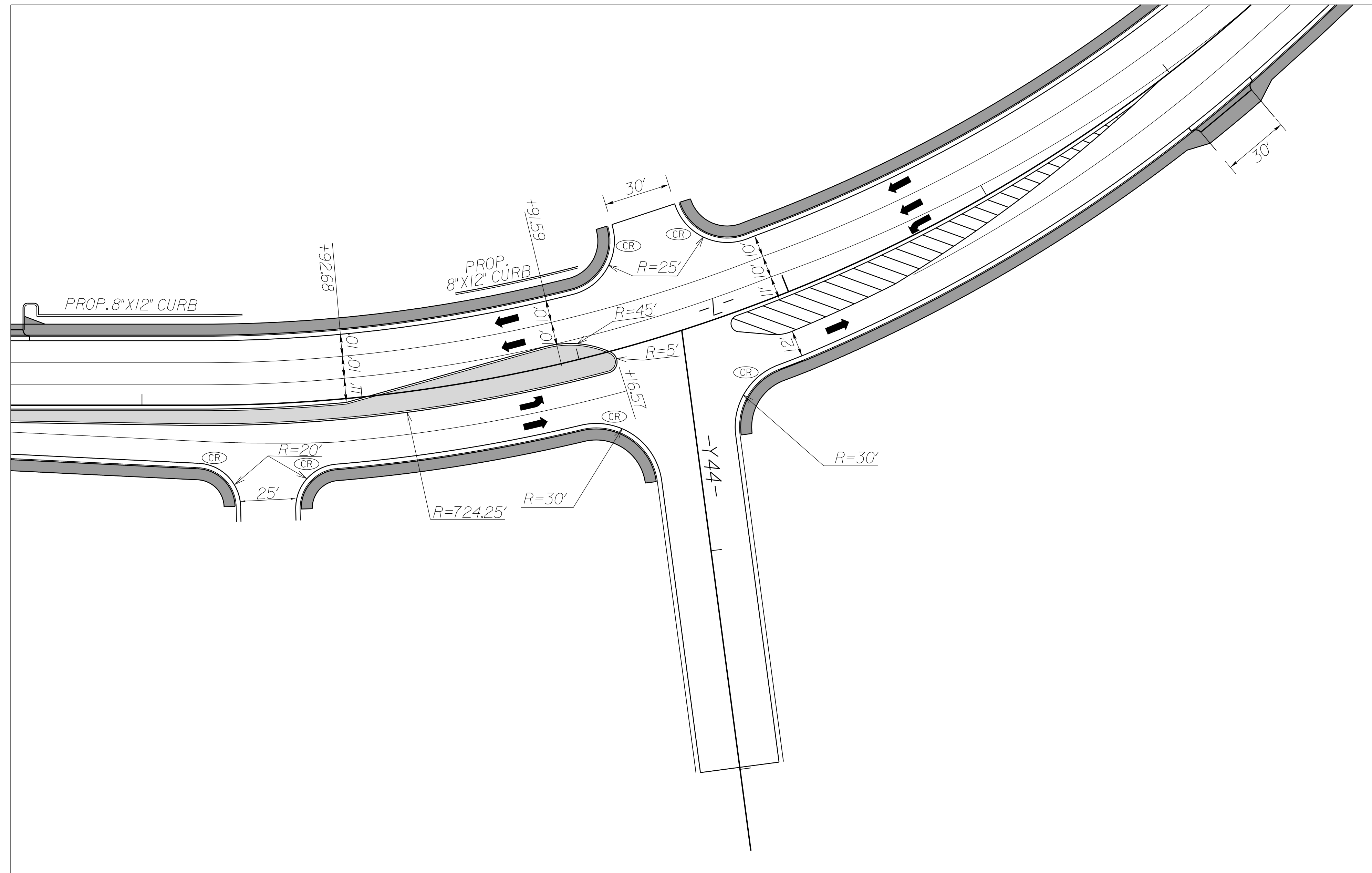
8/17/99

INTERSECTION DETAILS

NOT TO SCALE

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RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
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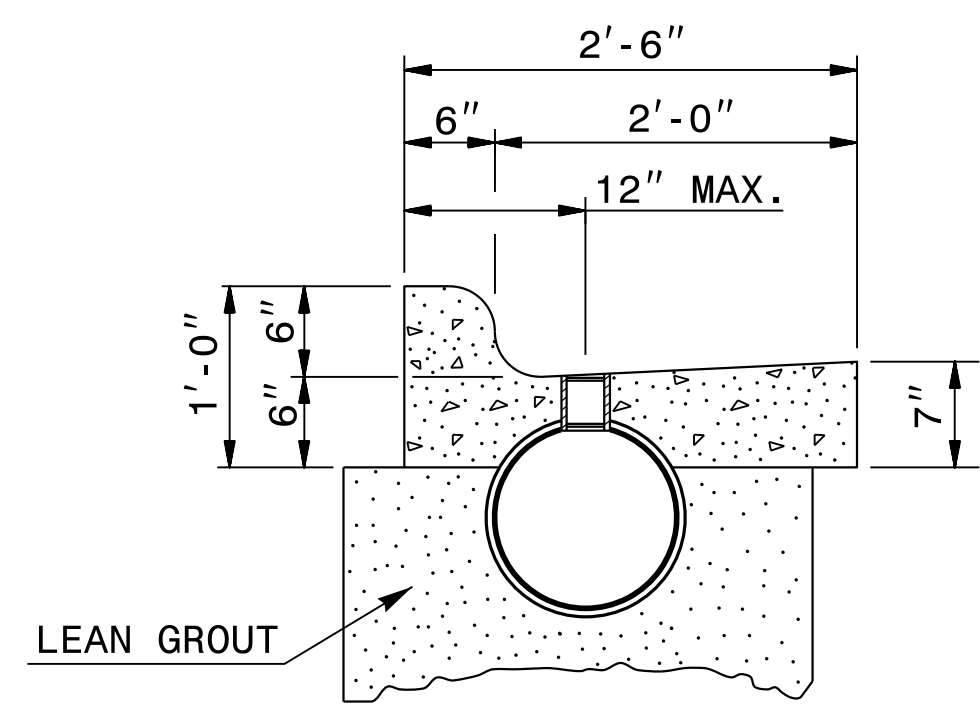
REVISIONS



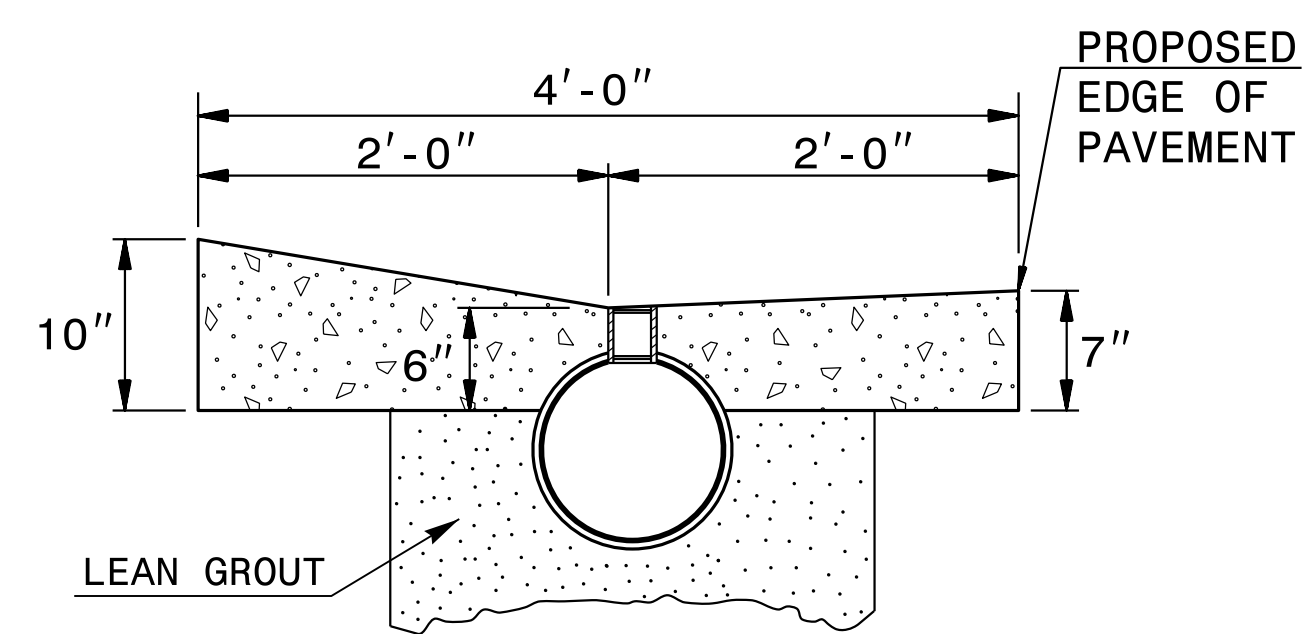
**INTERSECTION OF
RAEFORD ROAD (-L-)
AND FAIRWAY DRIVE (-Y44-)
(SEE PLAN SHEET 27)**

**NOTE: SEE PMP PLANS FOR WHEEL CHAIR RAMP
AND PAVEMENT MARKING LOCATIONS**

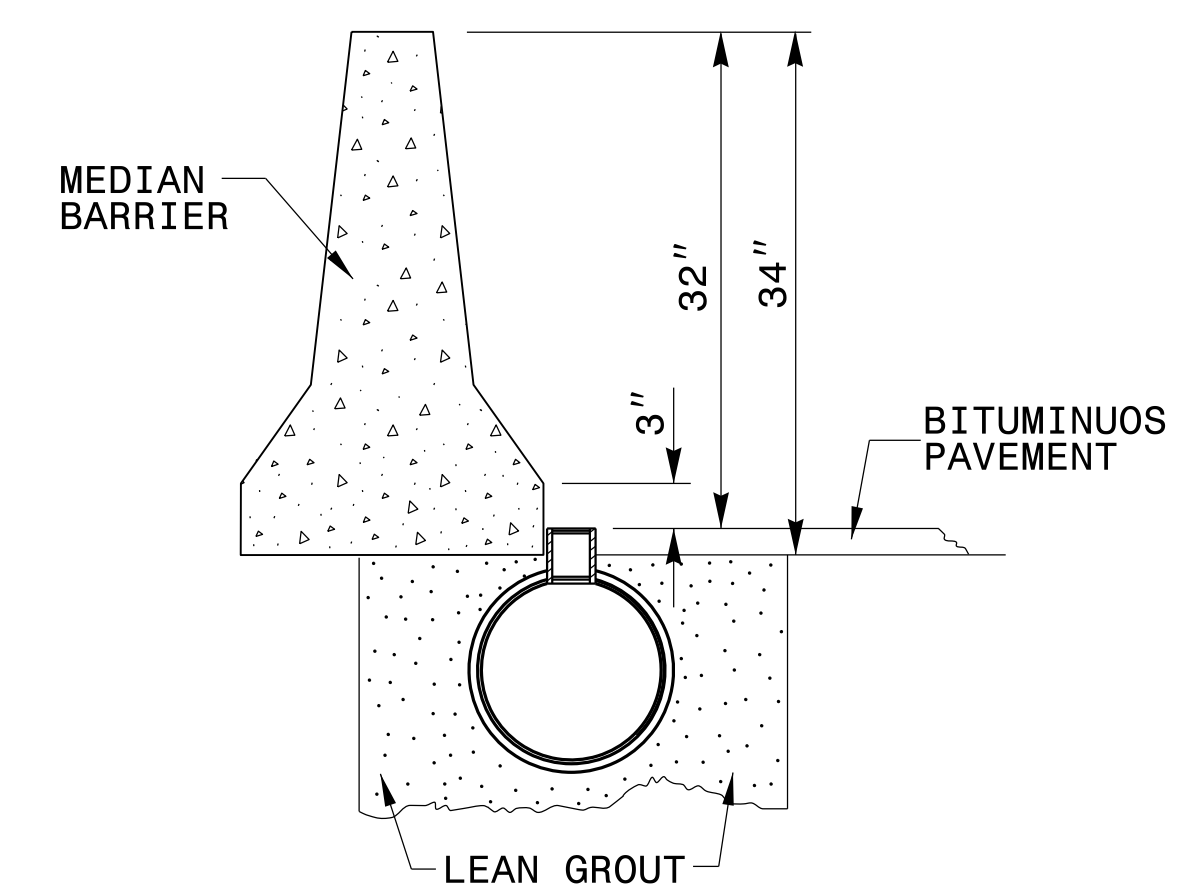
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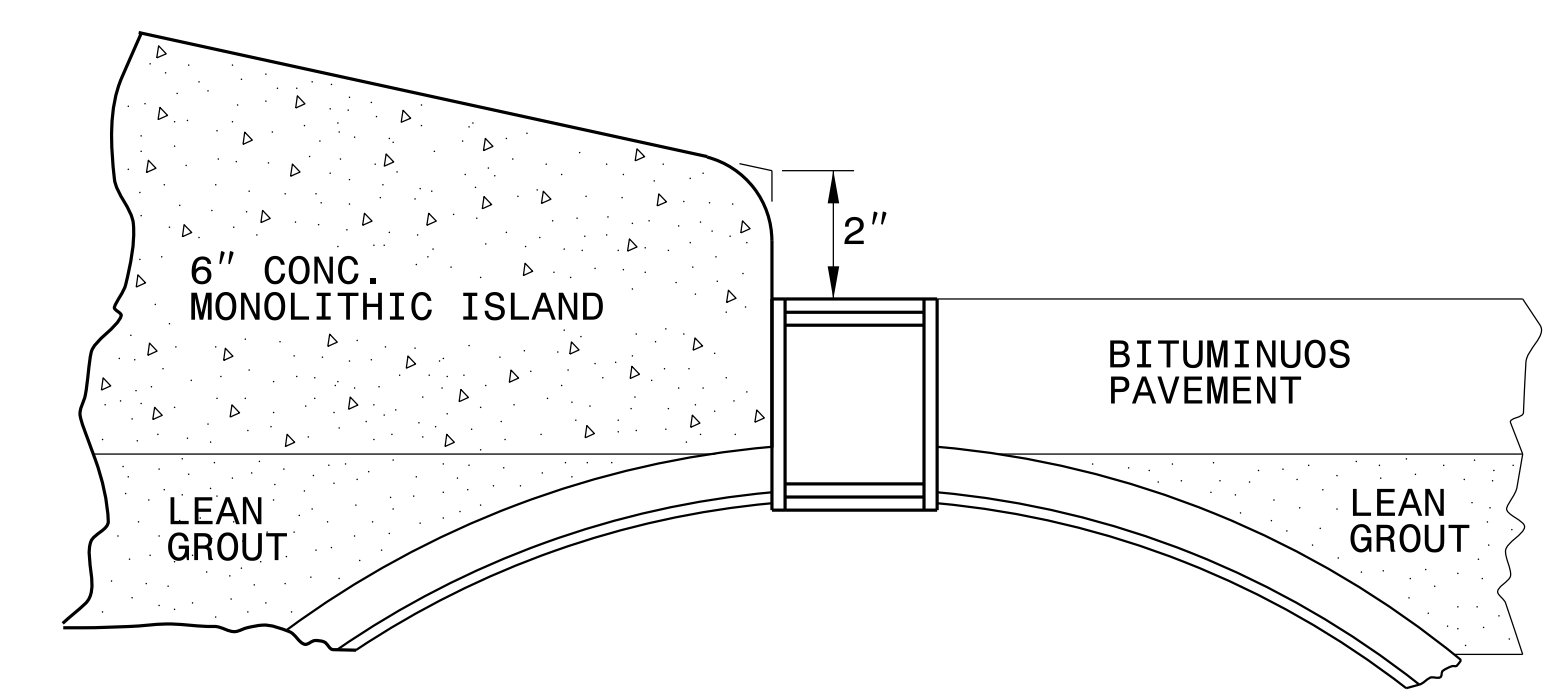
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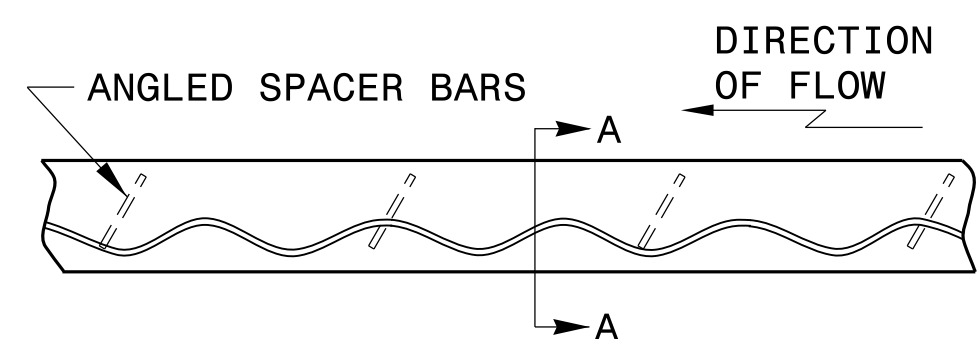
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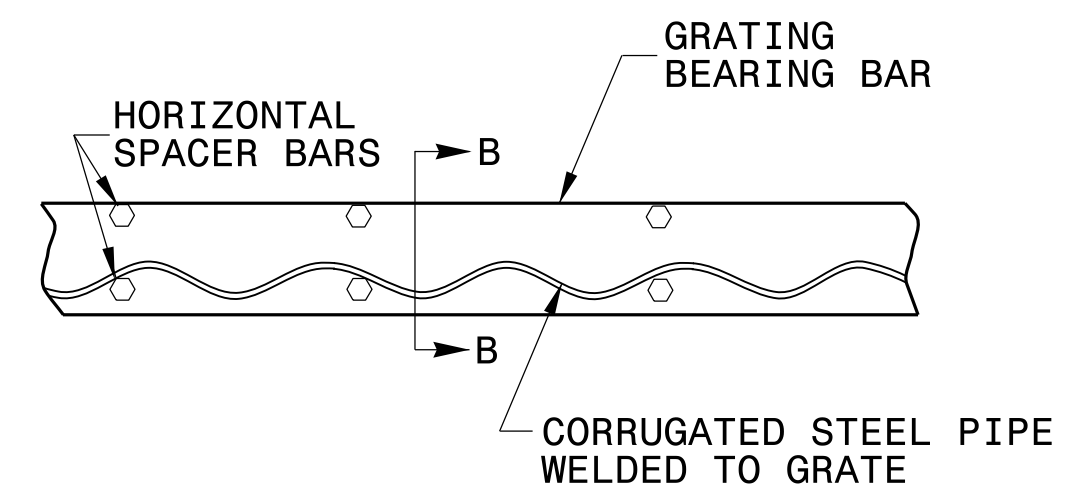
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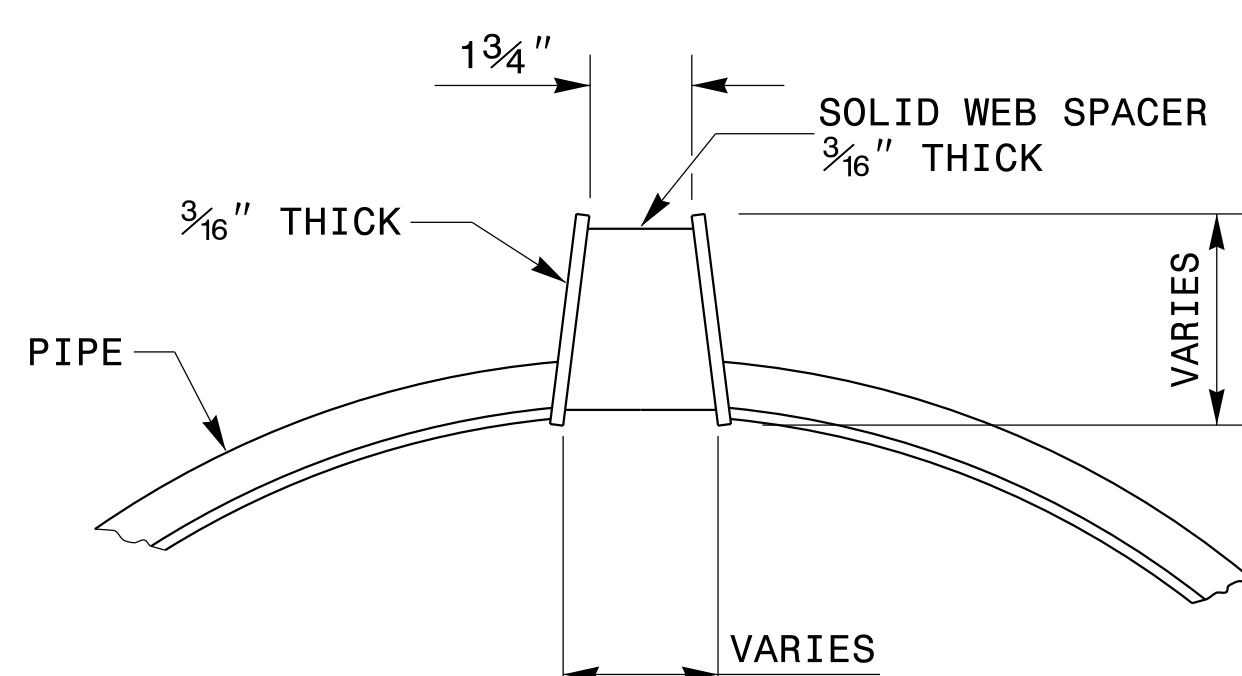
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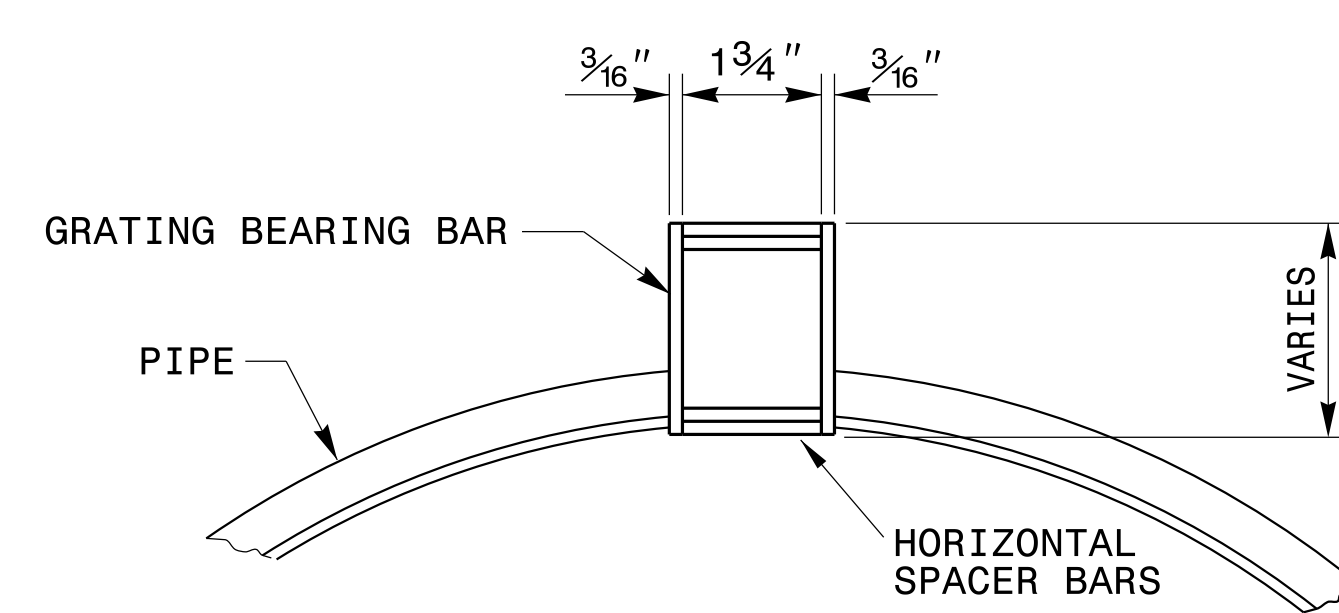
SECTION A-A



SECTION B-B

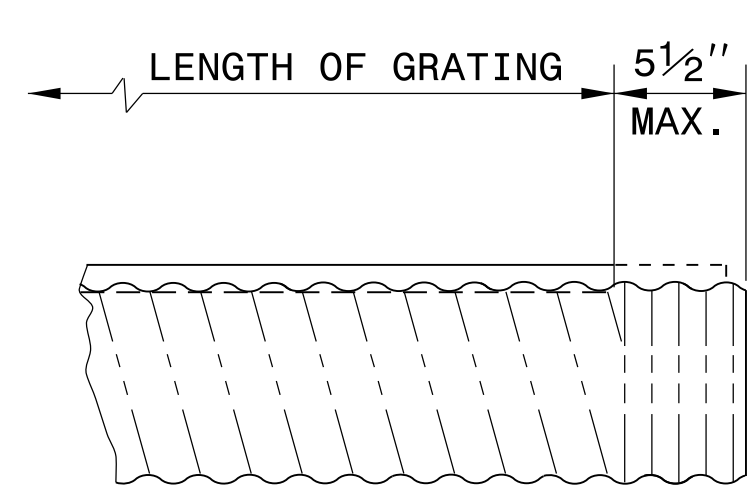


SECTION A-A

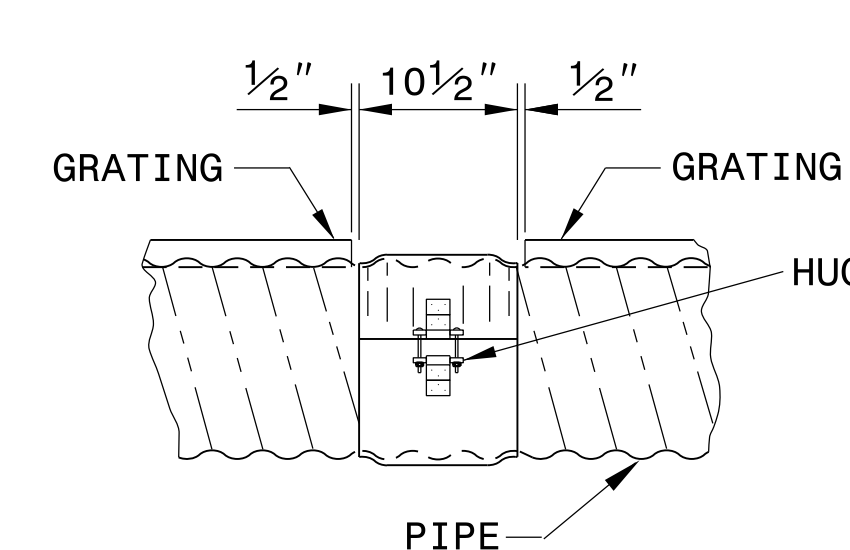


SECTION B-B

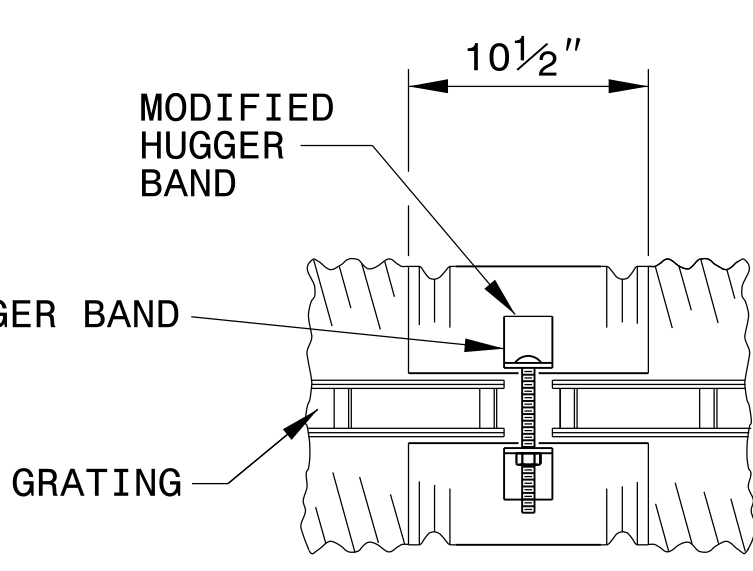
TYPICAL GRATE DETAILS



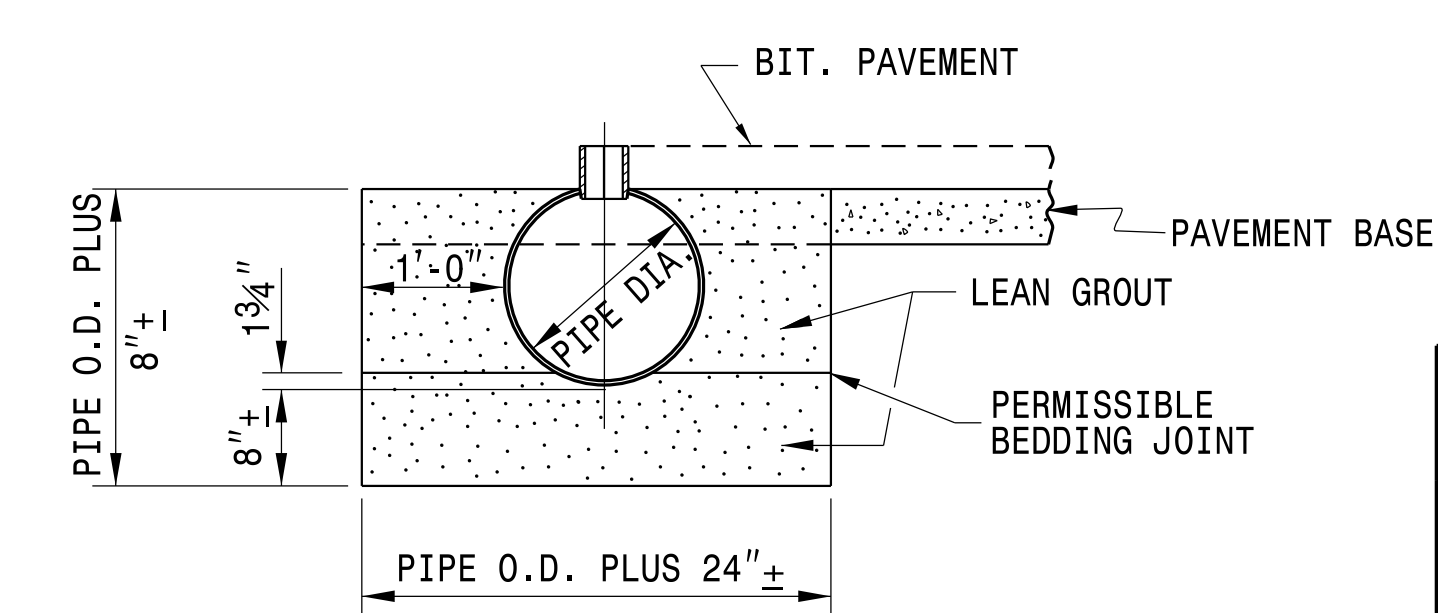
DETAIL AT END OF PIPE



TYPICAL COUPLING BAND



MODIFIED COUPLING BAND



SLOTTED DRAIN PIPE INSTALLATION

NOTES:

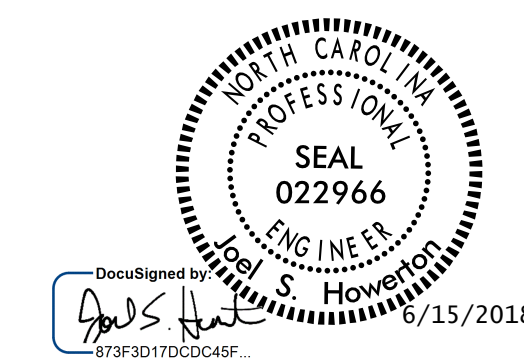
USE GRATE ASSEMBLIES FABRICATED FROM STRUCTURAL STEEL MEETING THE REQUIREMENTS OF ASTM A 570, GRADE 36 OR ASTM A 36.

HOT-DIP GALVANIZE GRATES AFTER FABRICATION TO MEET ASTM A123.

USE SLOTTED DRAIN PIPE THAT IS ADEQUATE FOR AASHTO H20 LOADING WHEN INSTALLED AS SHOWN.

USE SLOTTED DRAIN PIPE FABRICATED FROM ALUMINIZED CORRUGATED STEEL PIPE MEETING THE REQUIREMENTS OF AASHTO M274 TYPE 2.

NCDOT ALLOWS THE USE OF SIMILAR GRATE CONFIGURATIONS MEETING THE REQUIREMENTS OF THIS DETAIL, THE REQUIREMENTS OF THE SPECIAL PROVISIONS, AND THE APPROVAL OF THE ENGINEER.



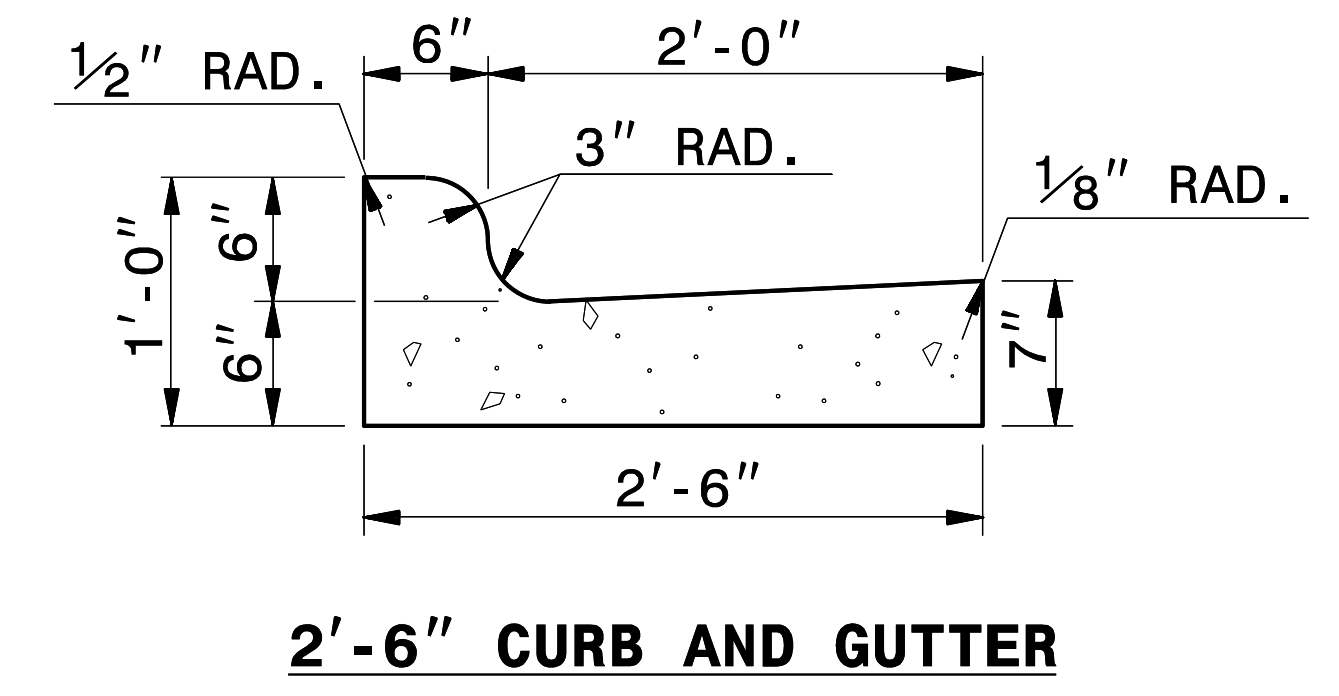
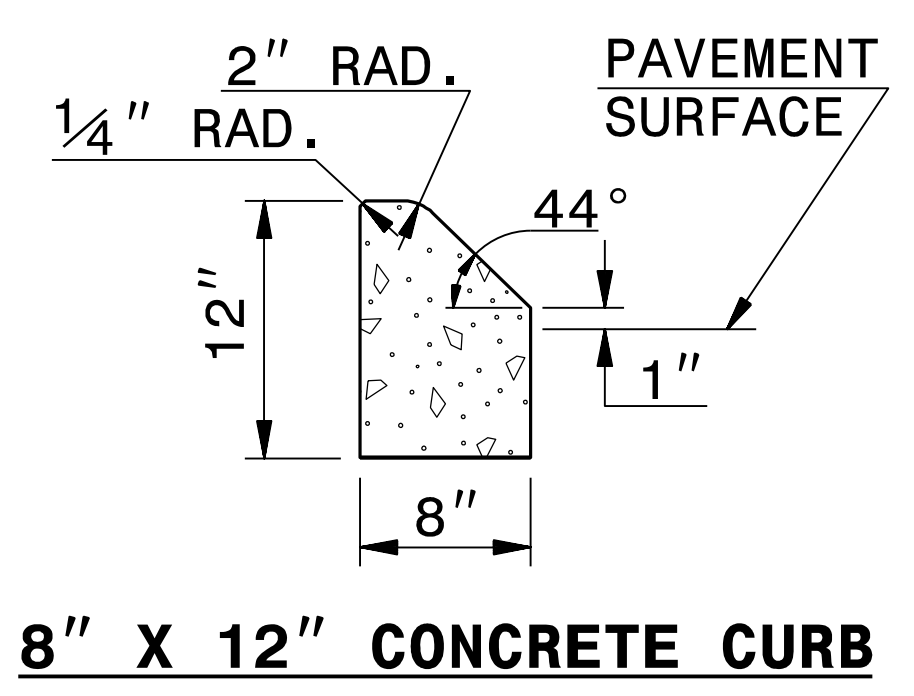
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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Office 919-707-6950 FAX 919-250-4119

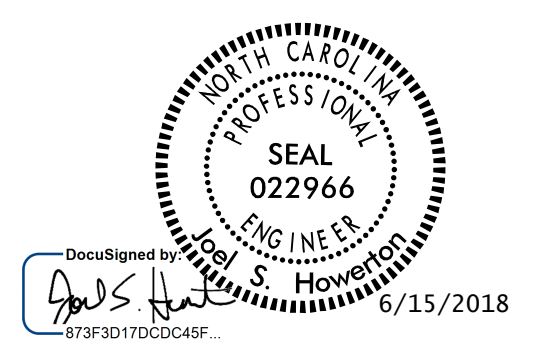
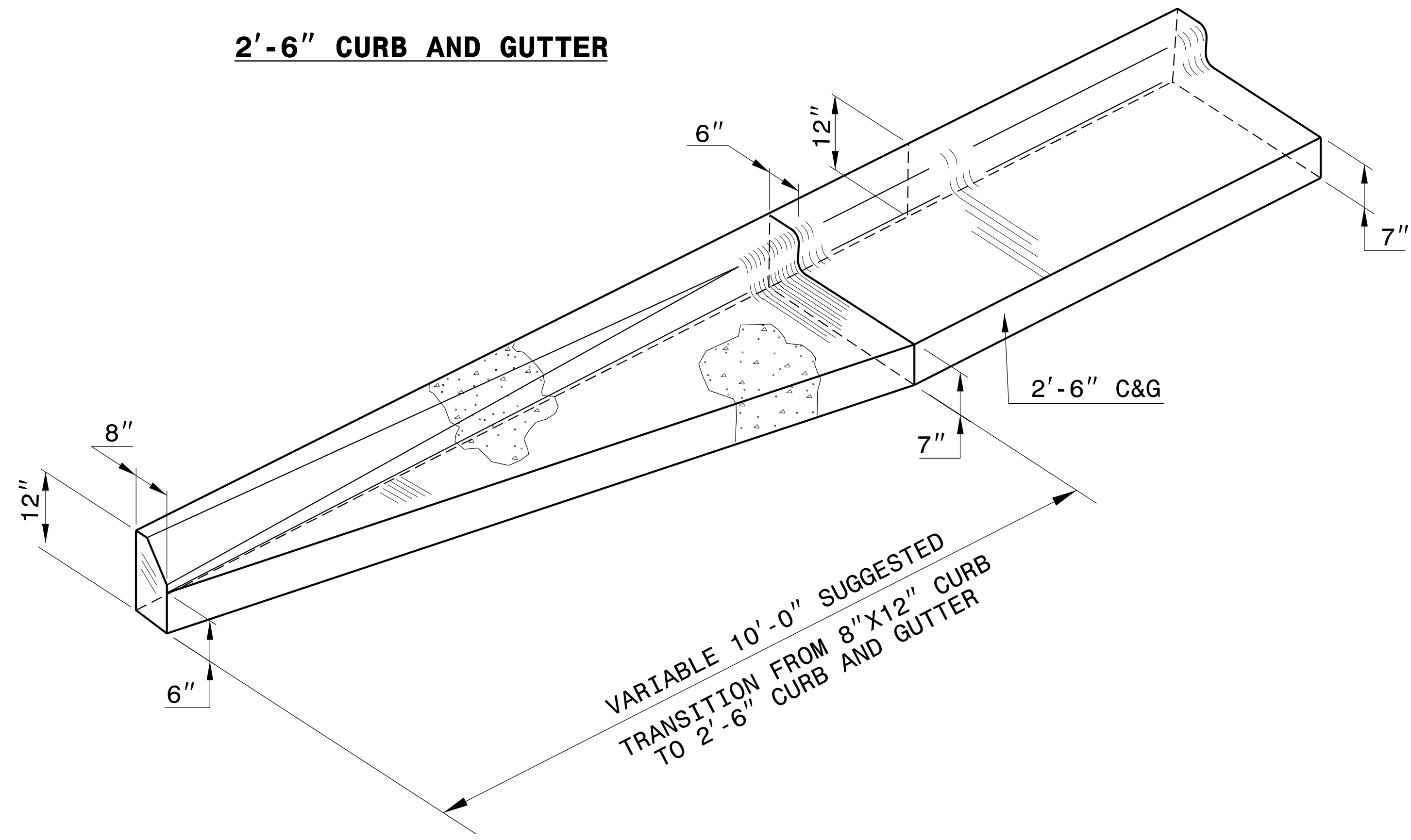
DETAILS OF SLOTTED DRAIN 12" THRU 36" DIAMETER PIPE

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MODIFIED BY: DATE:
CHECKED BY: DATE:
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*NOTE: SEE STD. DWG. 846.01 FOR GENERAL NOTES



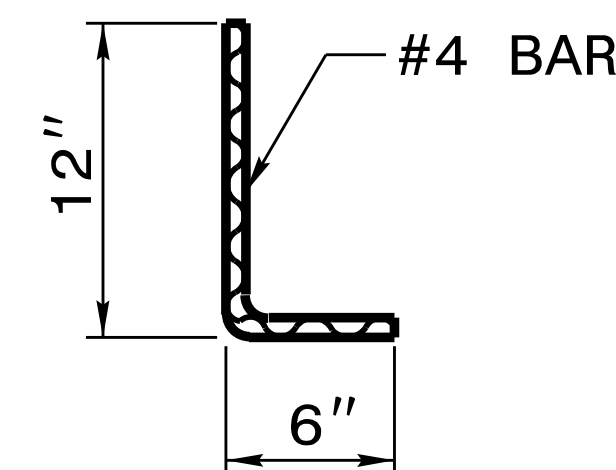
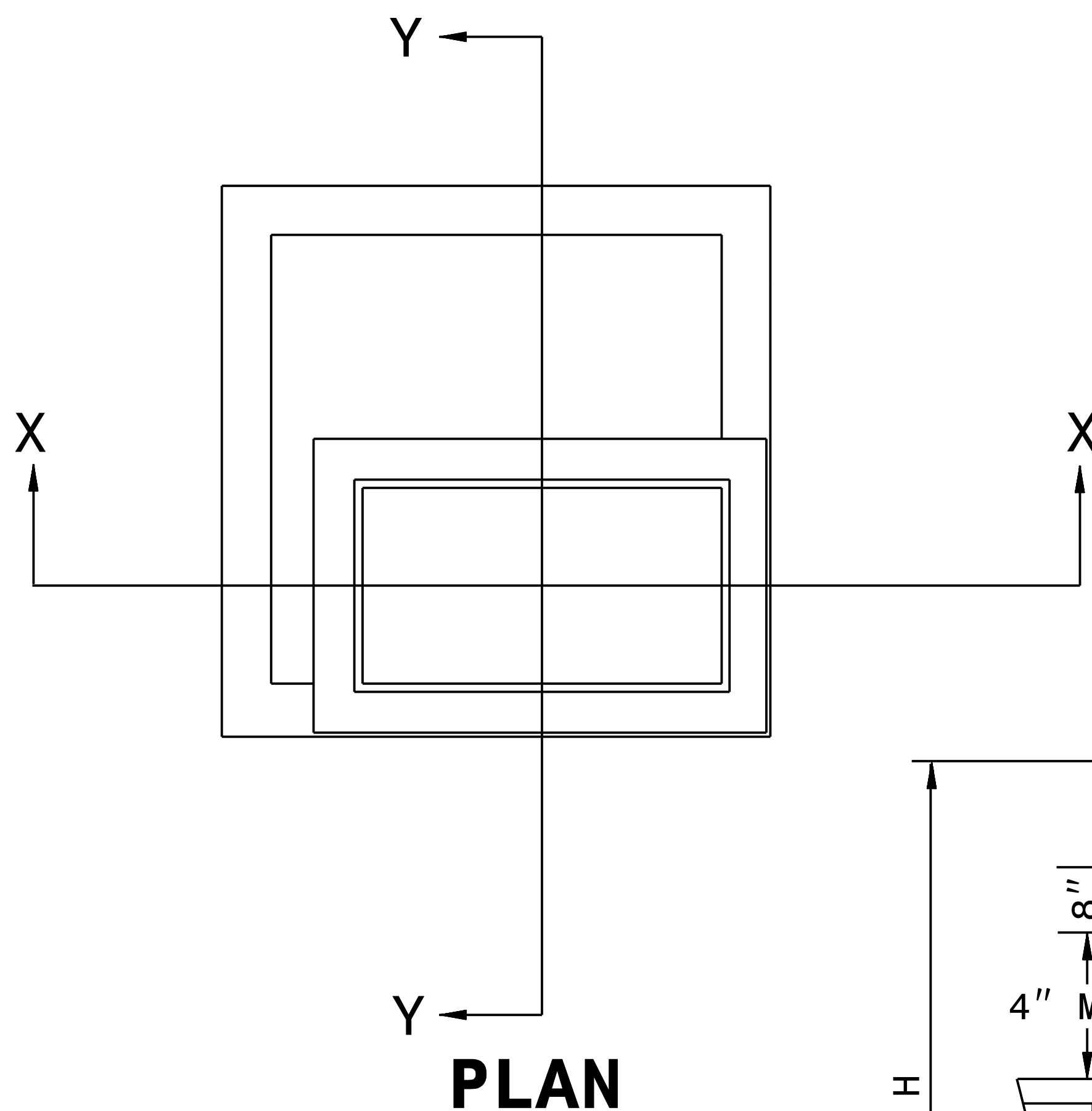
DocuSigned by:
S. Howerton
6/15/2018

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT SERVICES UNIT	
STANDARDS AND SPECIAL DESIGN	
Office 919-250-4128	FAX 919-250-4119
DETAIL OF 8"X12" CURB TO 2'-6" CURB & GUTTER TRANSITION SECTION	
ORIGINAL BY: _____	DATE: _____
MODIFIED BY: K. KEMPF	DATE: 10-20-09
CHECKED BY: _____	DATE: _____
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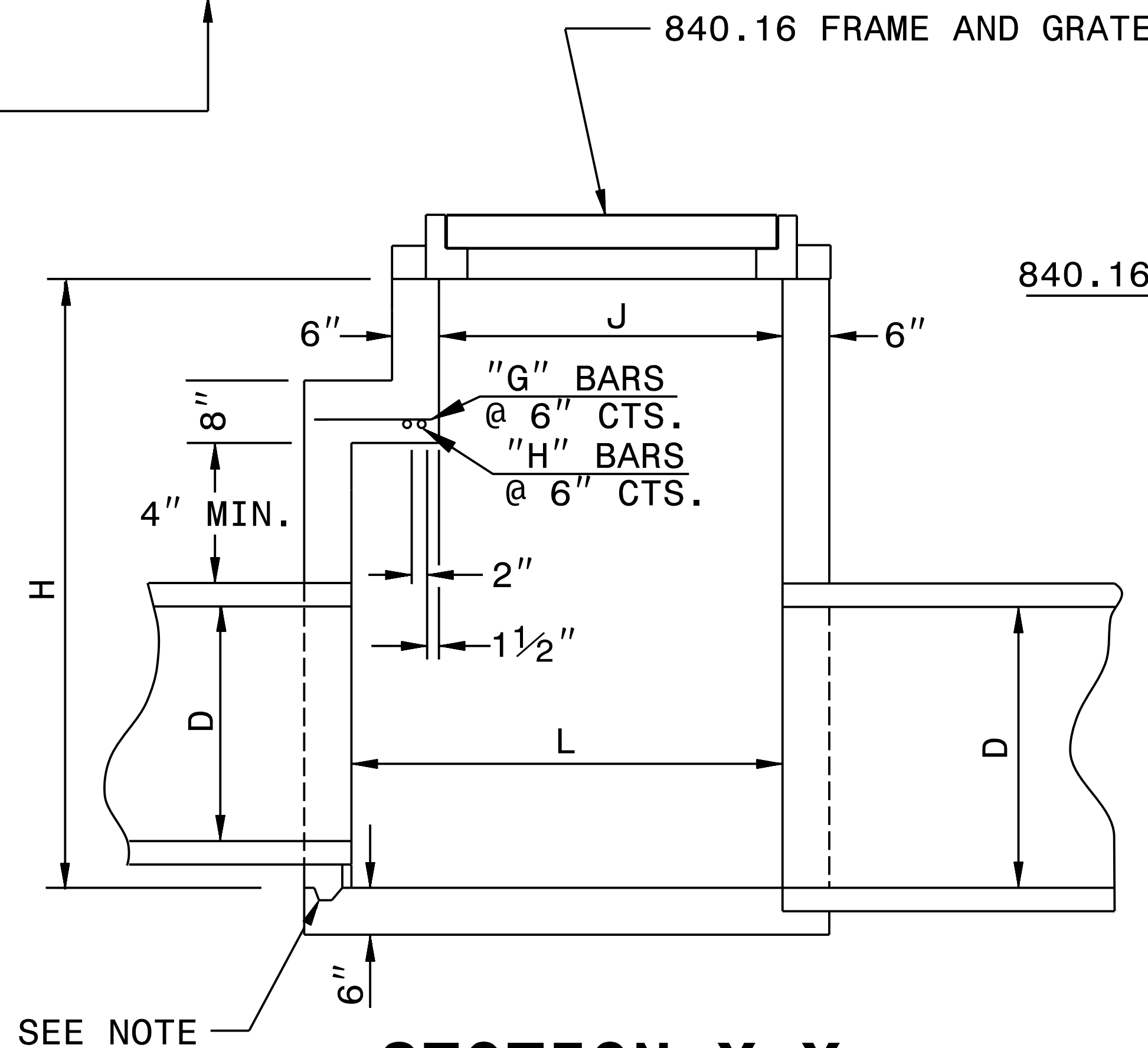
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5/14/99



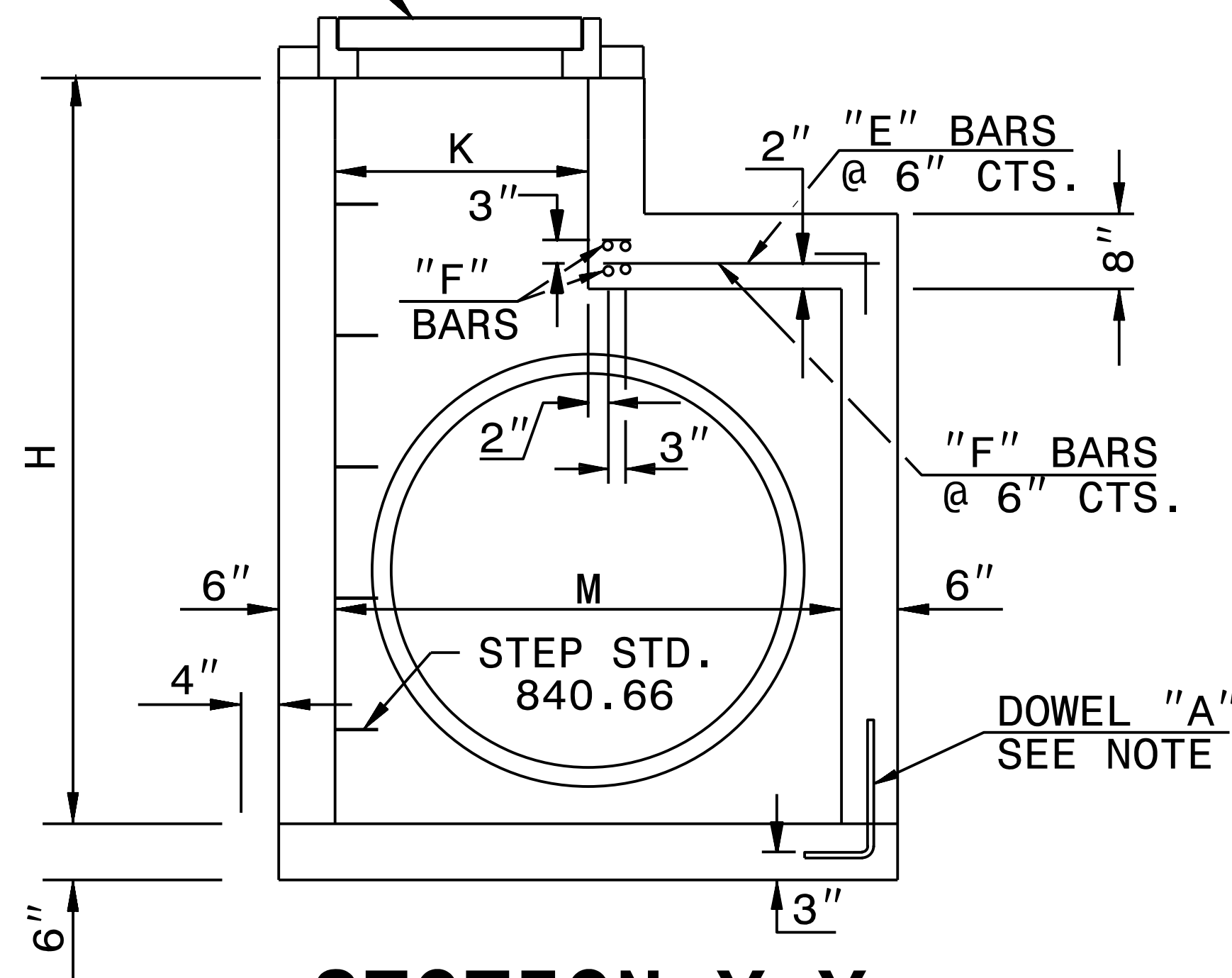
DOWEL

GENERAL NOTES:
 USE CLASS "B" CONCRETE THROUGHOUT.
 PROVIDE ALL DROP INLETS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.
 OPTIONAL CONSTRUCTION - MONOLITHIC POUR 2" KEYWAY OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
 USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
 IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.
 CONSTRUCT WITH PIPE CROWNS MATCHING.
 INSTALL 2" WEEPHOLES AS DIRECTED BY THE ENGINEER.
 INSTALL STONE DRAINS, OF A MINIMUM OF 1 CUBIC FOOT OF NO. 78M STONE IN A POROUS FABRIC BAG OR WRAP, AT EACH WEEP HOLE OR AS DIRECTED BY THE ENGINEER.
 CHAMFER ALL EXPOSED CORNERS 1".
 DRAWING NOT TO SCALE.
 DIMENSIONS MAY BE FIELD ADJUSTED AS DIRECTED BY THE ENGINEER.



SECTION X-X

840.16 FRAME AND GRATE

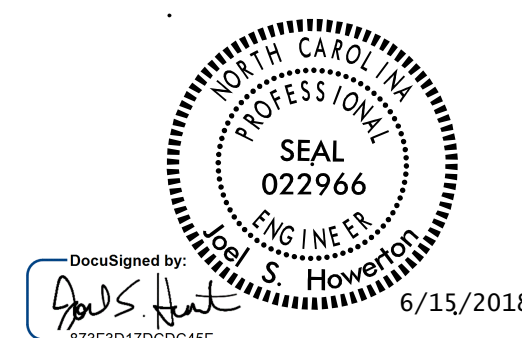


SECTION Y-Y

MIN. DIMENSIONS AND QUANTITIES FOR CONCRETE DROP INLET (BASED ON MIN. HEIGHT, H)

DIMENSIONS OF BOX AND PIPE						REINFORCING STEEL - NO. 4 BARS								CU YDS CONC. IN BOX				DEDUCTIONS FOR ONE PIPE		
PIPE D	SPAN J	WIDTH K	SPAN L	WIDTH M	HEIGHT H	BARS E		BARS F		BARS G		BARS H		TOTAL LBS.	BOTTOM SLAB	H TOTAL	H PER FT HT	TOTAL	C.S.	R.C.
						NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH							
12"	3'-0"	2'-0"	3'-8"	2'-0"	3'-9"	—	—	—	—	—	—	—	—	—	0.362	0.926	0.247	1.288	0.015	0.024
15"	3'-0"	2'-0"	3'-8"	2'-0"	4'-0"	—	—	—	—	—	—	—	—	—	0.362	0.988	0.247	1.350	0.023	0.036
18"				2'-0"	4'-3"	—	—	—	—	—	—	—	—	—	0.362	1.050	0.247	1.412	0.033	0.049
24"				2'-10"	4'-9"	8	1'-5"	6	4'-9"	—	—	—	—	27	0.444	1.362	0.278	1.806	0.059	0.085
30"			3'-8"	3'-5"	5'-3"	8	2'-0"	7	4'-9"	—	—	—	—	33	0.502	1.644	0.288	2.146	0.092	0.127
36"			4'-0"	4'-0"	5'-9"	8	2'-5"	8	4'-11"	4	0'-9"	2	4'-11"	47	0.560	1.931	0.321	2.525	0.132	0.178
42"			4'-10"	4'-10"	6'-3"	10	3'-1"	9	5'-7"		1'-5"	3	5'-7"	67	0.704	2.500	0.370	3.282	0.180	0.243
48"			5'-4"	5'-4"	6'-9"	11	3'-7"	10	6'-1"		1'-11"	4	6'-1"	87	0.823	3.013	0.407	3.920	0.235	0.317
54"			6'-0"	6'-0"	7'-3"	12	4'-1"	11	6'-7"		2'-5"	5	6'-7"	107	0.951	3.589	0.444	4.677	0.297	0.401
60"			6'-6"	6'-6"	7'-9"	13	4'-9"	12	7'-3"		3'-1"	6	7'-3"	135	1.311	4.539	0.494	5.775	0.367	0.495
66"			7'-2"	7'-2"	8'-3"	14	5'-4"	14	7'-10"		3'-7"	7	7'-10"	168	1.136	5.061	0.537	6.506	0.444	0.599
72"	3'-0"	2'-0"	7'-8"	7'-8"	8'-9"	15	5'-11"	15	8'-5"	4	4'-3"	8	8'-5"	199	1.500	5.860	0.580	7.473	0.528	0.713

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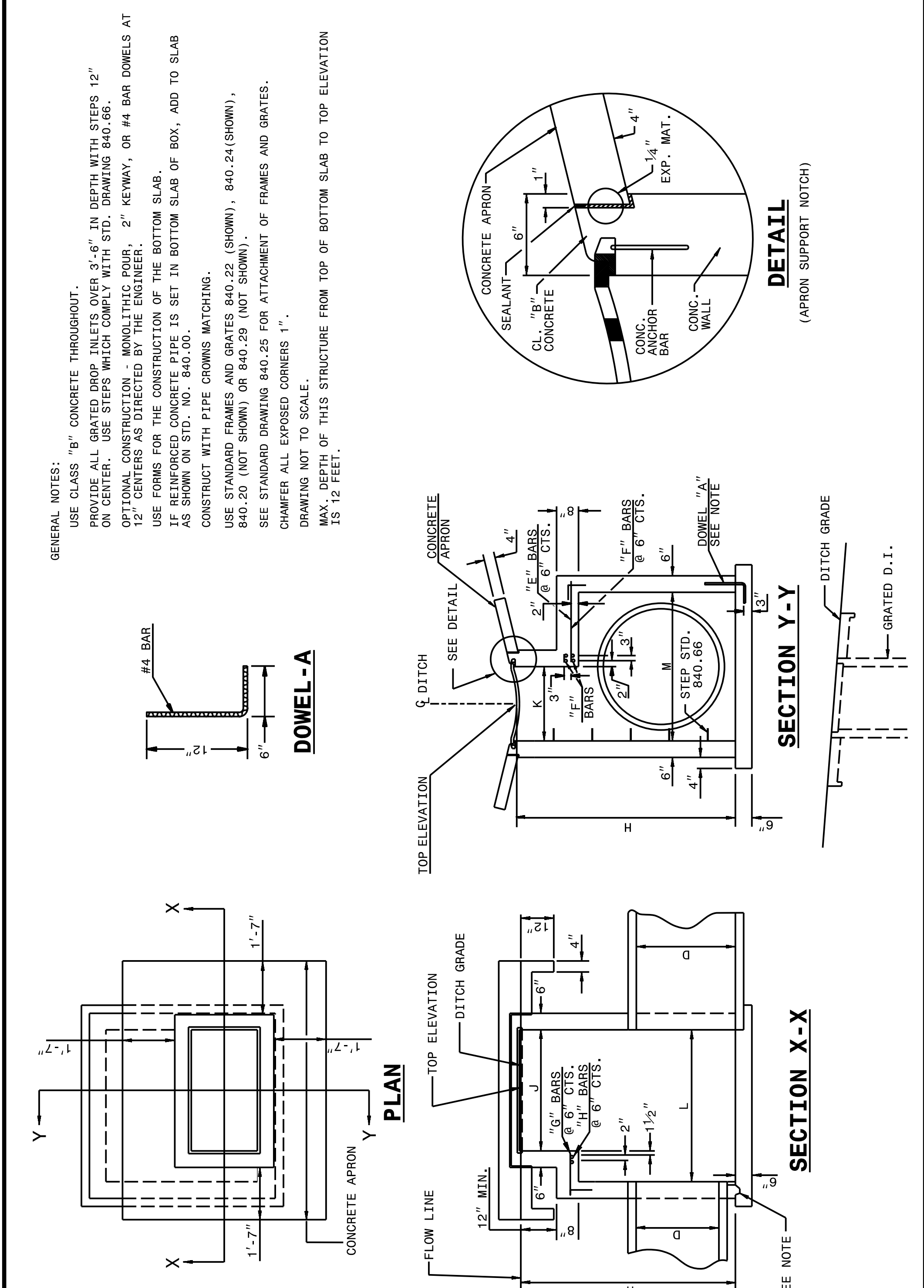
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 CHECKED BY: DATE: _____
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STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR CONCRETE GRATED DROP INLET TYPE 'A' MINIMUM DEPTH 12" THRU 72" PIPE

SHEET 1 OF 2 840d17



STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

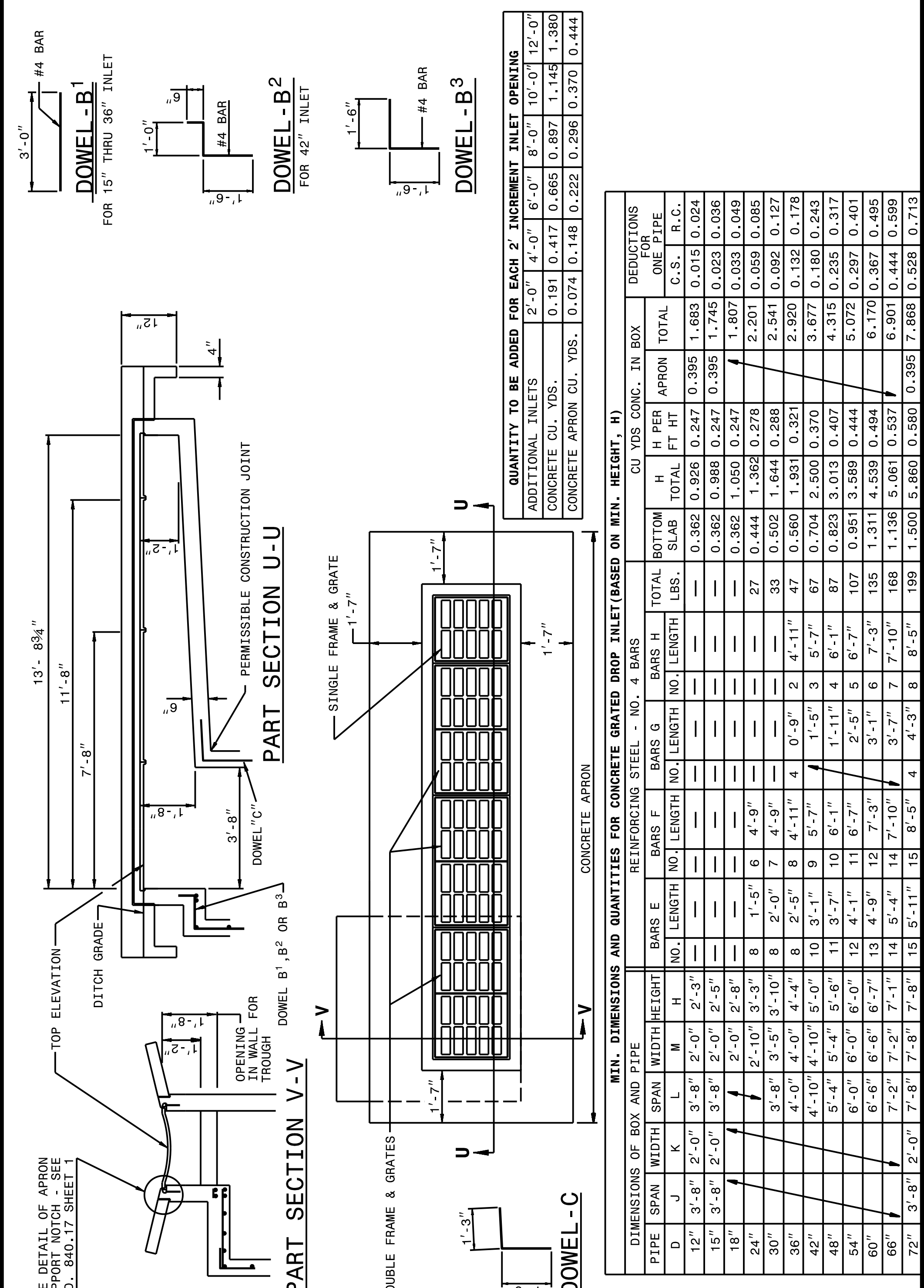
ENGLISH DETAIL DRAWING FOR CONCRETE GRATED DROP INLET TYPE 'A' MINIMUM DEPTH 12" THRU 72" PIPE

SHEET 1 OF 2 840d17

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR CONCRETE GRATED DROP INLET TYPE 'A' MINIMUM DEPTH 12" THRU 72" PIPE

SHEET 2 OF 2 840d17



STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR CONCRETE GRATED DROP INLET TYPE 'A' MINIMUM DEPTH 12" THRU 72" PIPE

SHEET 2 OF 2 840d17

QUANTITY TO BE ADDED FOR EACH 2' INCREMENT INLET OPENING

ADDITIONAL INLETS	2'-0"	4'-0"	6'-0"	8'-0"	10'-0"	12'-0"
CONCRETE CU. YDS.	0.191	0.417	0.665	0.897	1.145	1.380
CONCRETE APRON CU. YDS.	0.074	0.148	0.222	0.296	0.370	0.444

MIN. DIMENSIONS AND QUANTITIES FOR CONCRETE GRATED DROP INLET (BASED ON MIN. HEIGHT, H)

PIPE DIMENSIONS	REINFORCING STEEL - NO. 4 BARS				CU YDS CONC. IN BOX		DEDUCTIONS ONE PIPE				
	SPAN	WIDTH	HEIGHT	NO.	LENGTH	H PER TOTAL	APRON TOTAL	C.S.	R.C.		
12"	3'-8"	2'-0"	2'-3"	—	—	0.926	0.247	0.395	1.683	0.015	0.024
15"	3'-8"	2'-0"	2'-5"	—	—	0.362	0.988	0.247	0.395	1.745	0.036
18"	3'-8"	2'-0"	2'-8"	—	—	0.362	1.050	0.247	1.807	0.033	0.049
24"	3'-8"	2'-10"	3'-3"	8	1'-5"	0.444	1.362	0.278	2.201	0.059	0.085
30"	3'-8"	3'-5"	3'-10"	8	2'-0"	0.502	1.644	0.288	2.541	0.082	0.127
36"	4'-0"	4'-0"	4'-4"	8	2'-5"	0.560	1.931	0.321	2.920	0.132	0.178
42"	4'-0"	4'-10"	5'-0"	10	3'-1"	0.618	2.219	0.351	3.259	0.161	0.206
48"	5'-4"	5'-4"	5'-6"	11	3'-7"	0.676	2.507	0.380	3.607	0.180	0.243
54"	6'-0"	6'-0"	6'-2"	12	4'-1"	0.734	2.795	0.409	3.955	0.199	0.262
60"	6'-0"	6'-0"	6'-4"	13	4'-9"	0.792	3.083	0.438	4.303	0.218	0.281
66"	7'-2"	7'-2"	7'-1"	14	5'-4"	0.850	3.371	0.467	4.651	0.237	0.300
72"	7'-8"	7'-8"	7'-8"	15	5'-11"	0.908	3.659	0.496	5.000	0.256	0.319

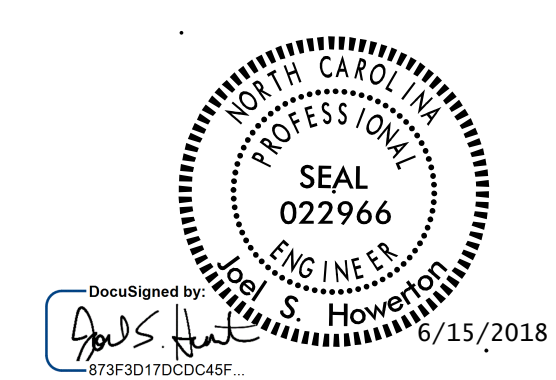
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 PLOTTING: SUCCESSFUL
 PLOTTED BY: JHWERTON

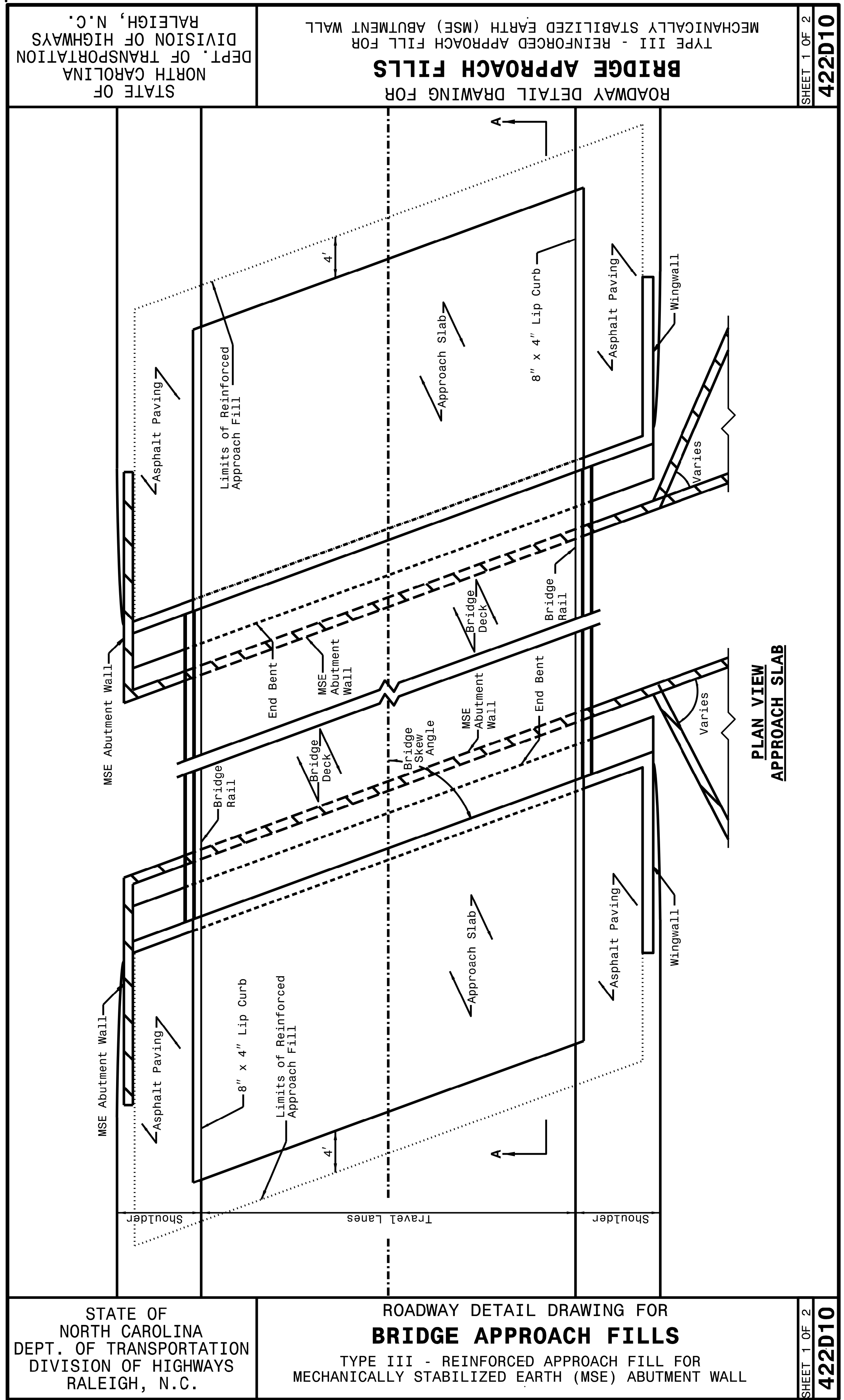
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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 Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

ORIGINAL BY: J. Howerton DATE: 1/22/14
 MODIFIED BY: DATE: _____
 CHECKED BY: DATE: _____
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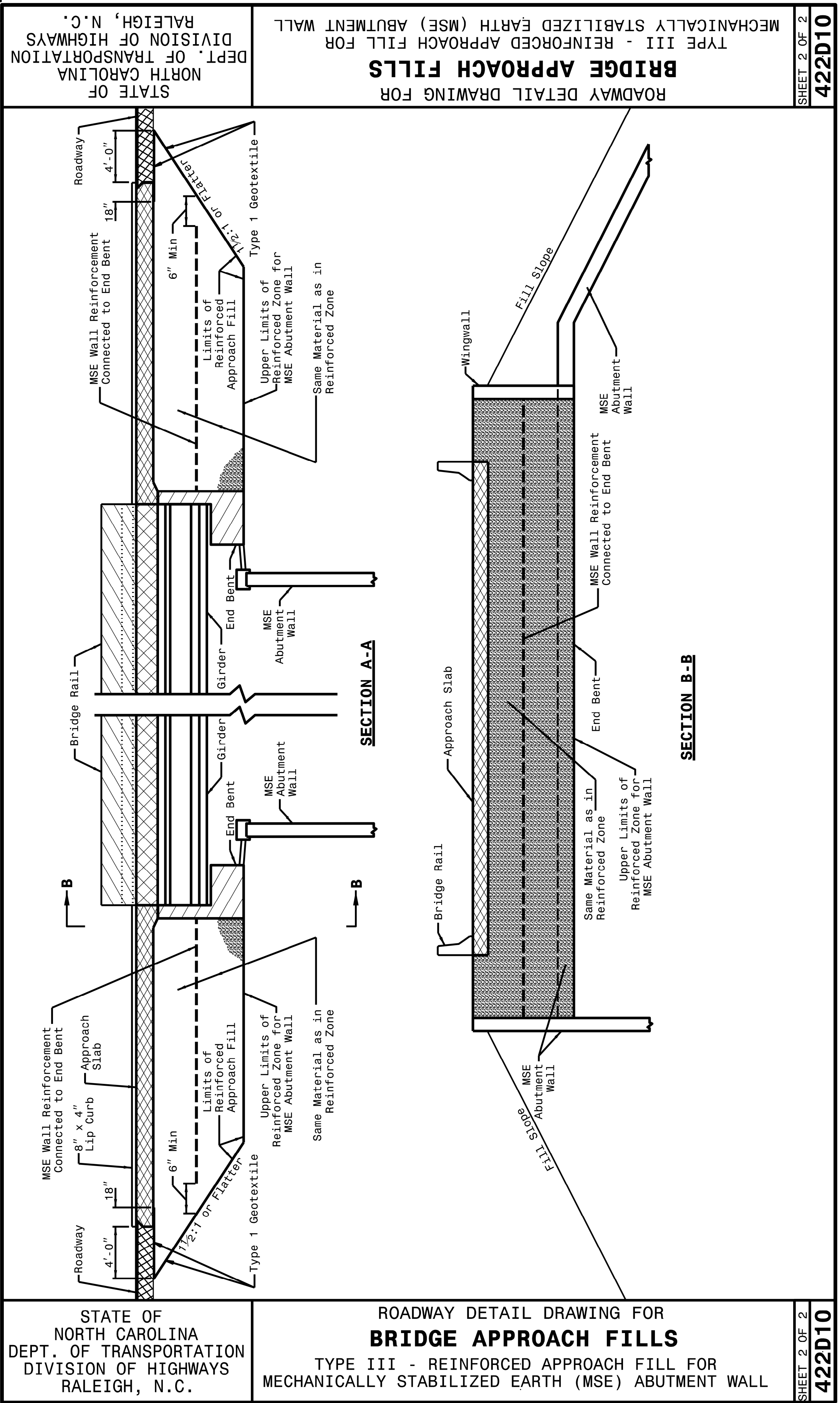




STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
BRIDGE APPROACH FILLS
TYPE III - REINFORCED APPROACH FILL FOR
MECHANICALLY STABILIZED EARTH (MSE) ABUTMENT WALL

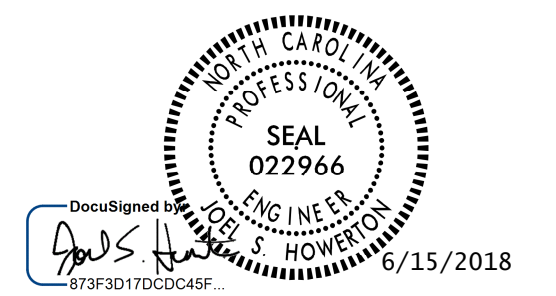
SHEET 1 OF 2
422D10



STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
BRIDGE APPROACH FILLS
TYPE III - REINFORCED APPROACH FILL FOR
MECHANICALLY STABILIZED EARTH (MSE) ABUTMENT WALL

SHEET 2 OF 2
422D10



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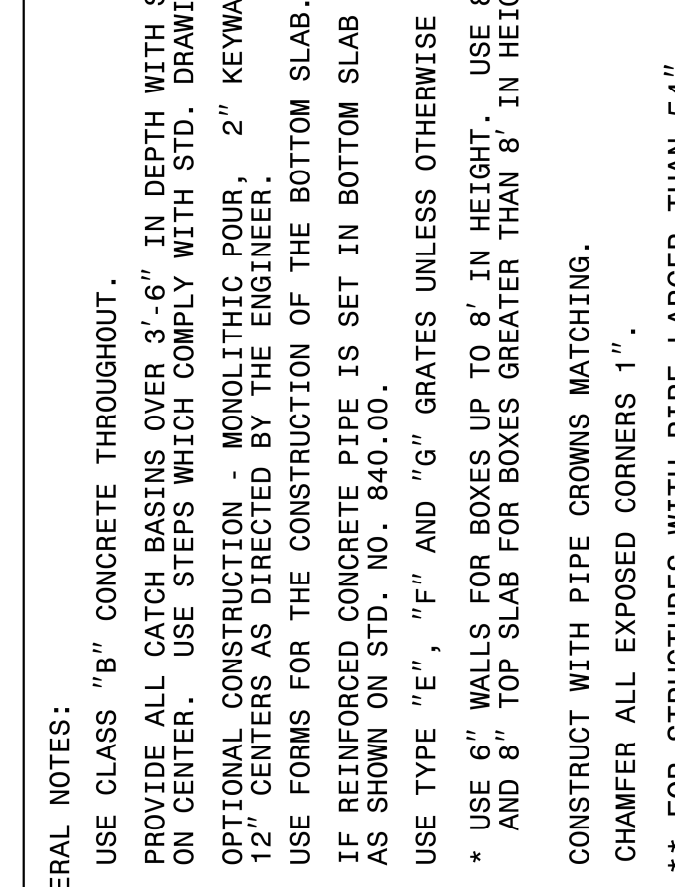
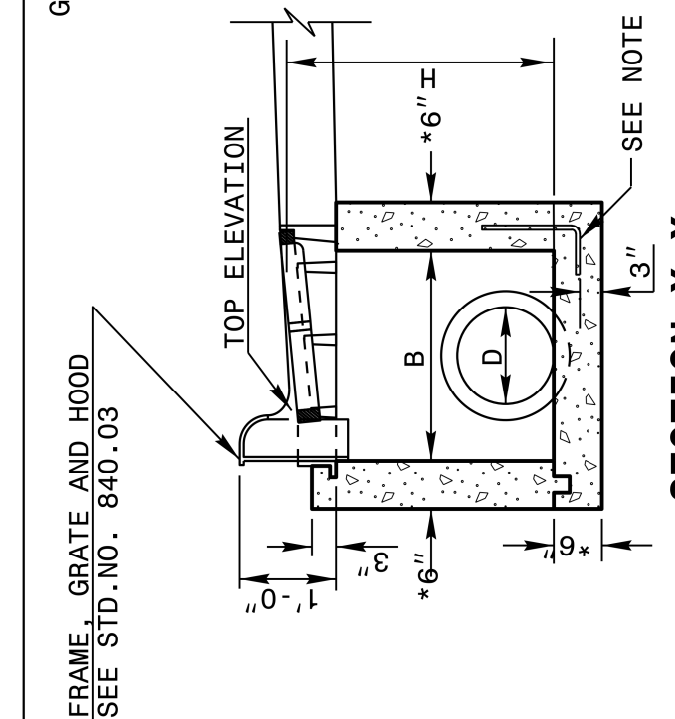
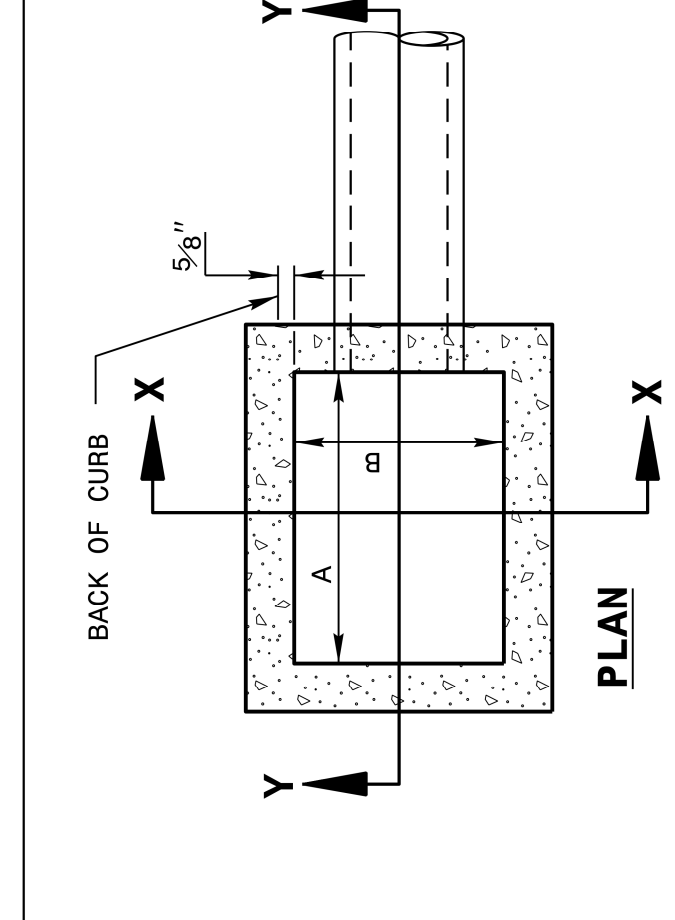
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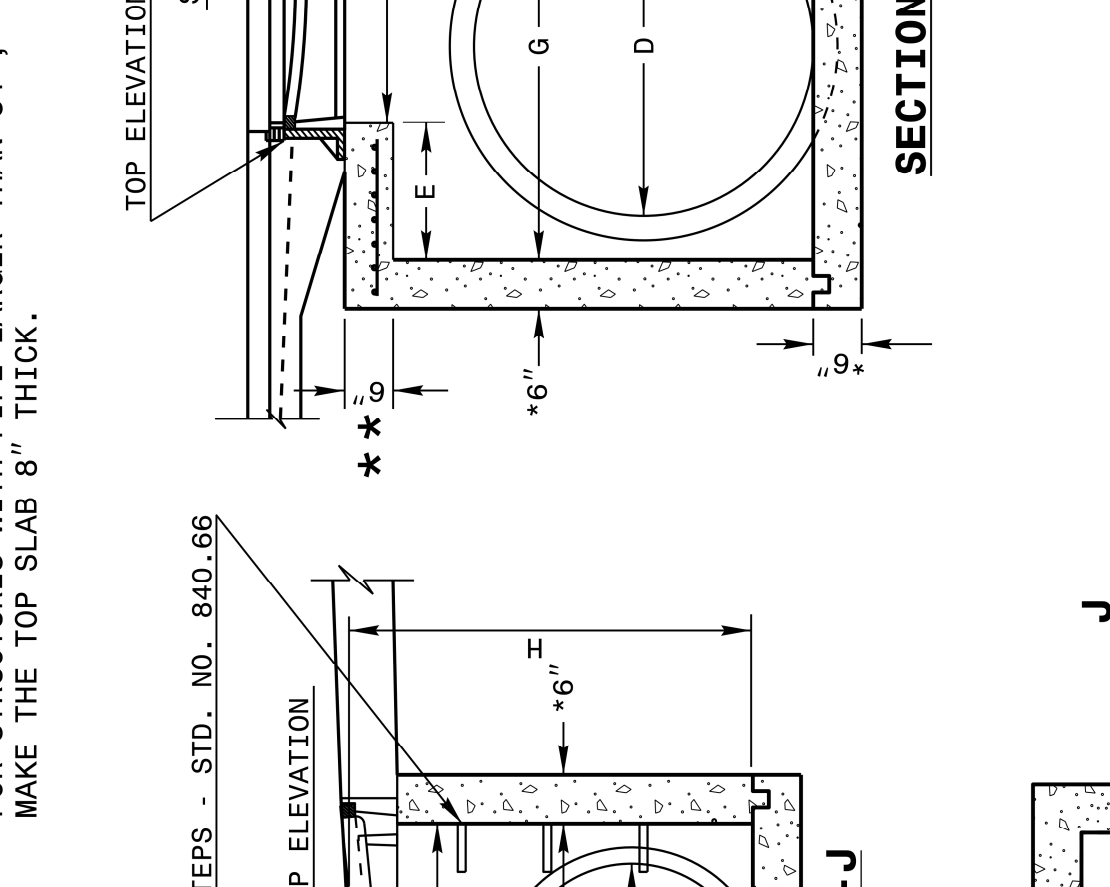
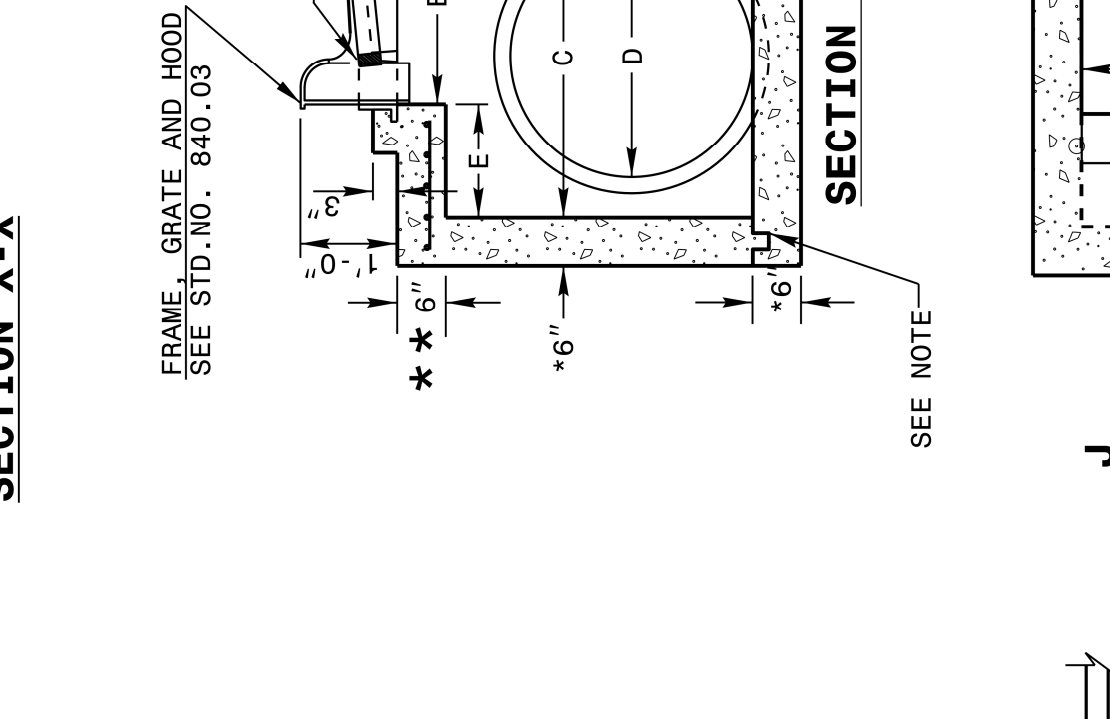
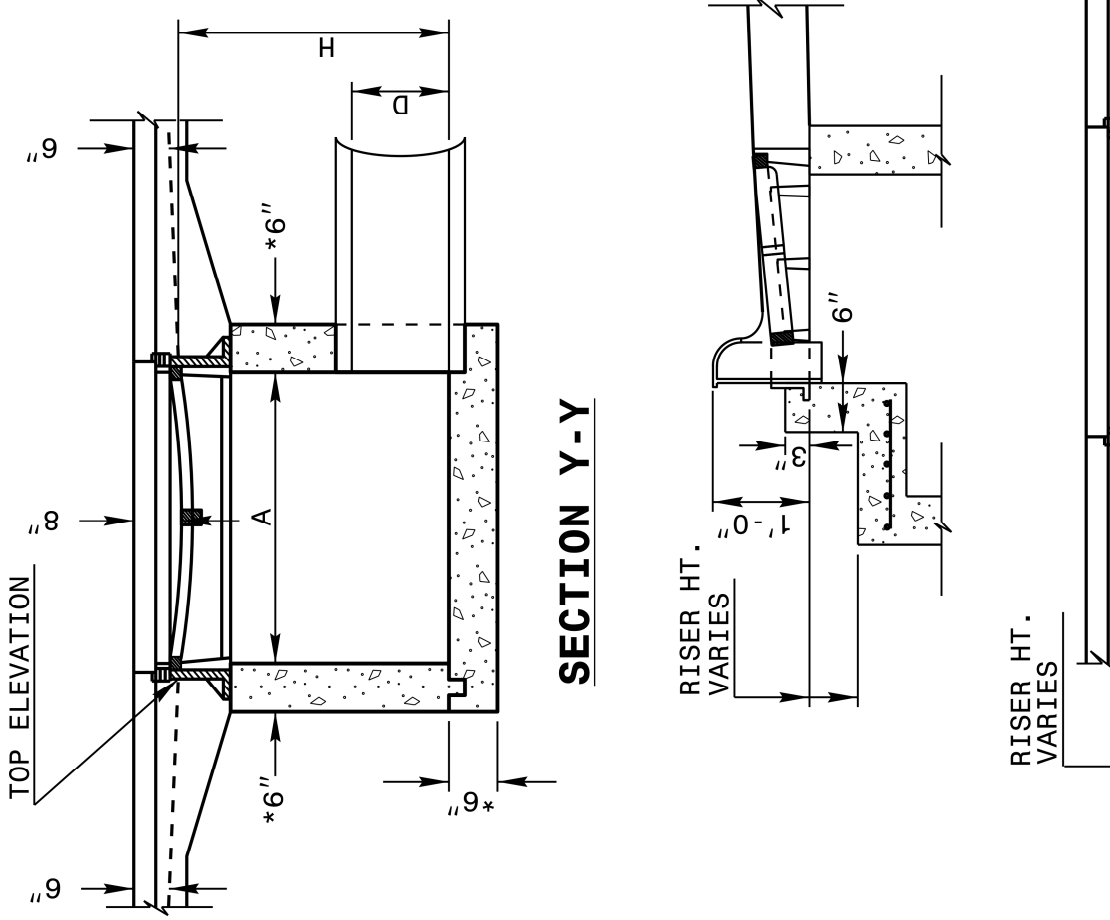
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 DIVISION OF HIGHWAYS
 RALEIGH, N.C.



ENGLISH DETAIL DRAWING FOR
**EXTRA DEPTH
 CONCRETE CATCH BASIN**
 12" THRU 84" PIPE

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 RALEIGH, N.C.

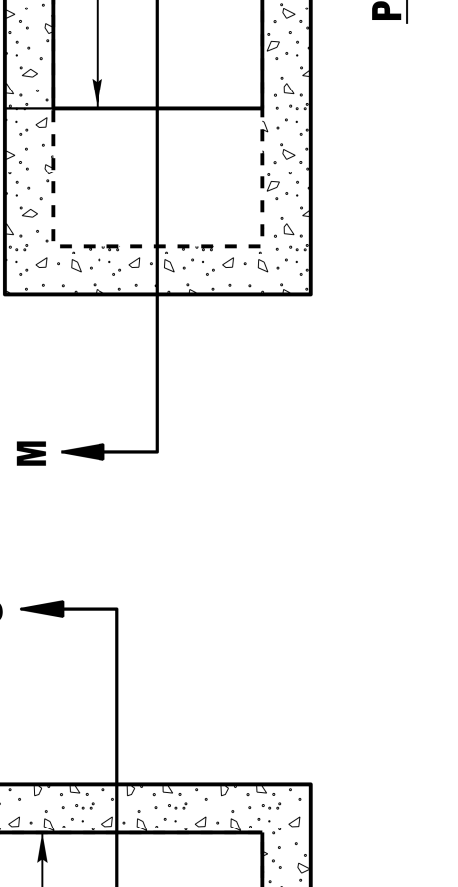
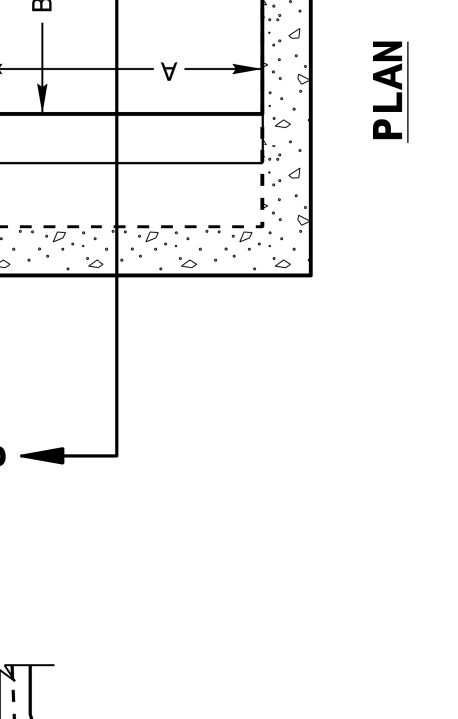
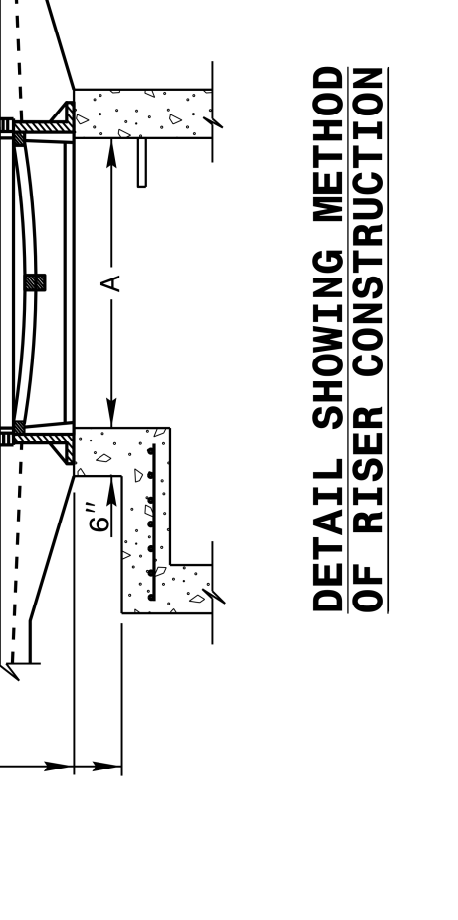
ENGLISH DETAIL DRAWING FOR
**EXTRA DEPTH
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 12" THRU 84" PIPE



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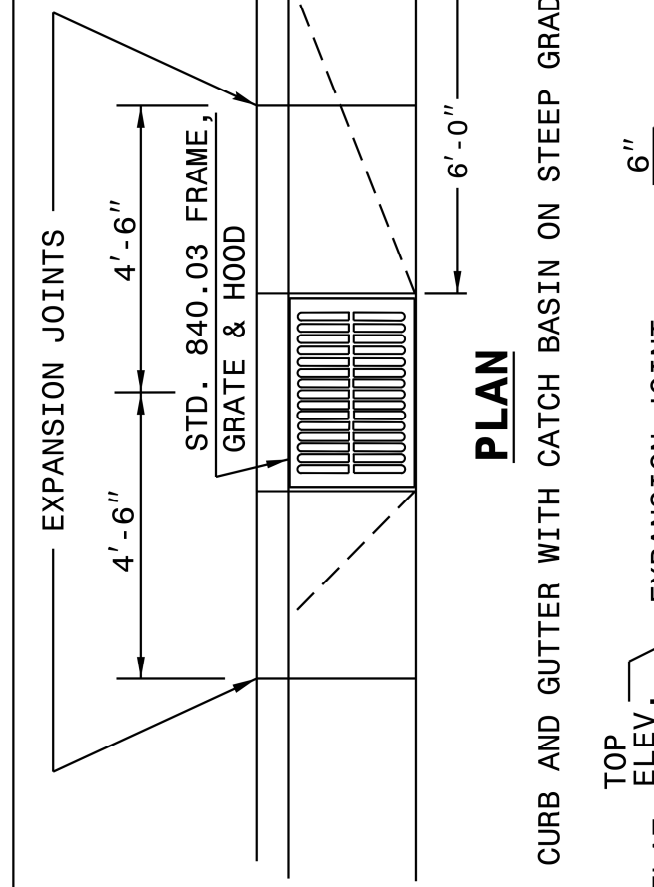
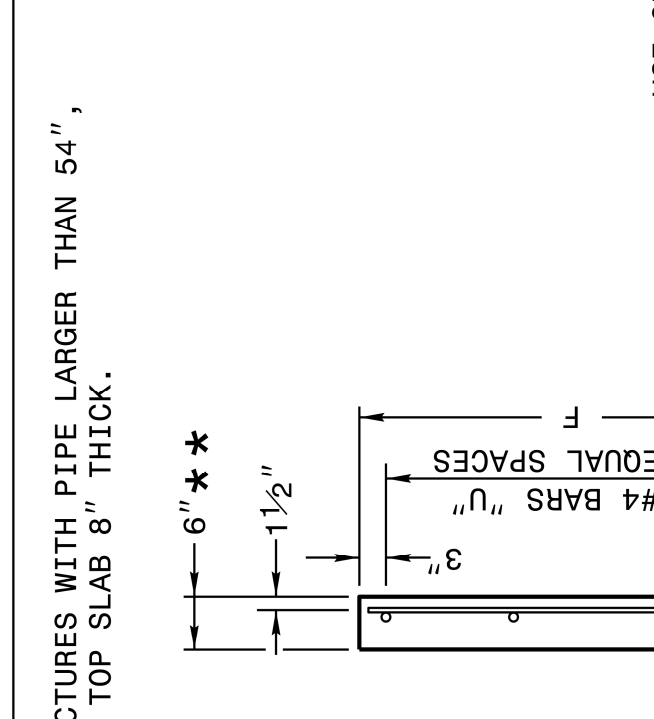
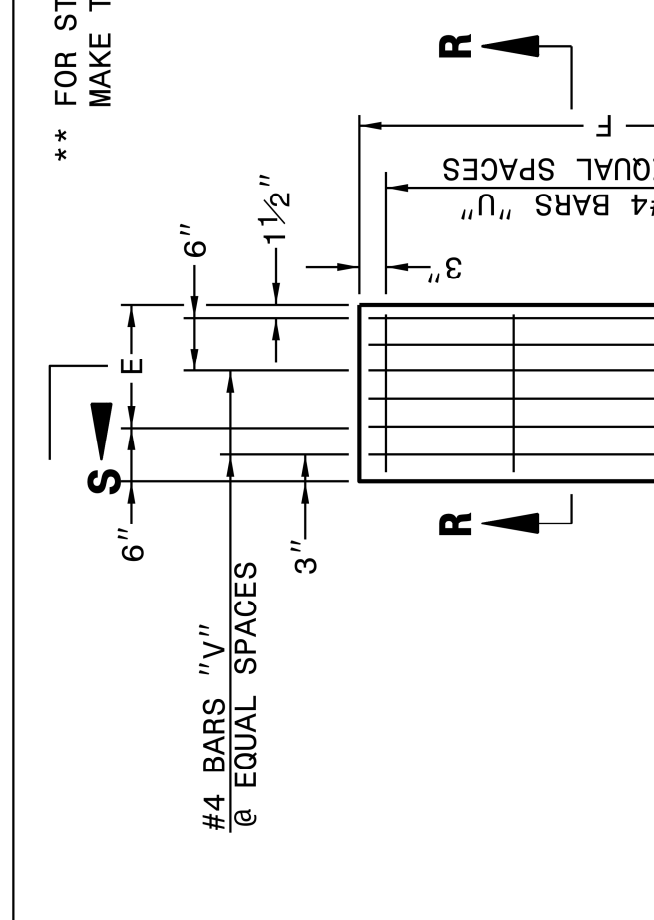
SHEET 1 OF 2
840D02



ENGLISH DETAIL DRAWING FOR
**EXTRA DEPTH
 CONCRETE CATCH BASIN**
 12" THRU 84" PIPE

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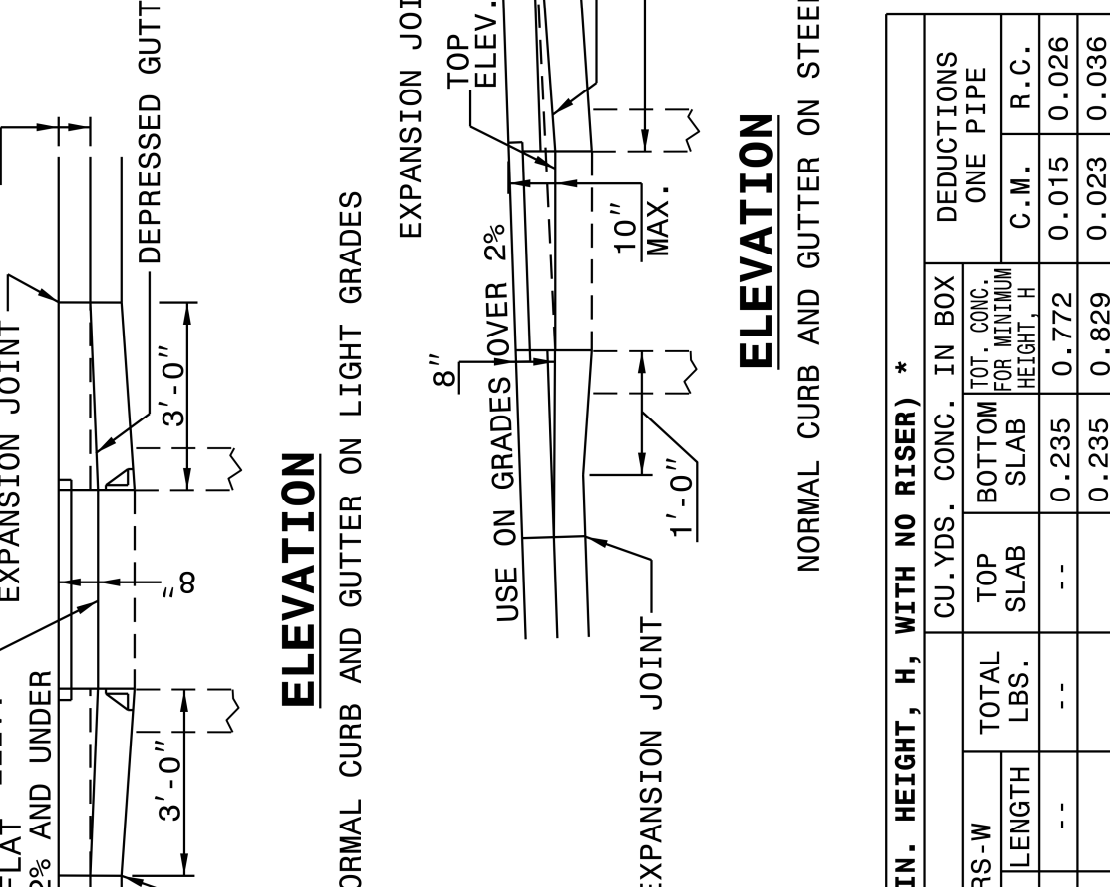
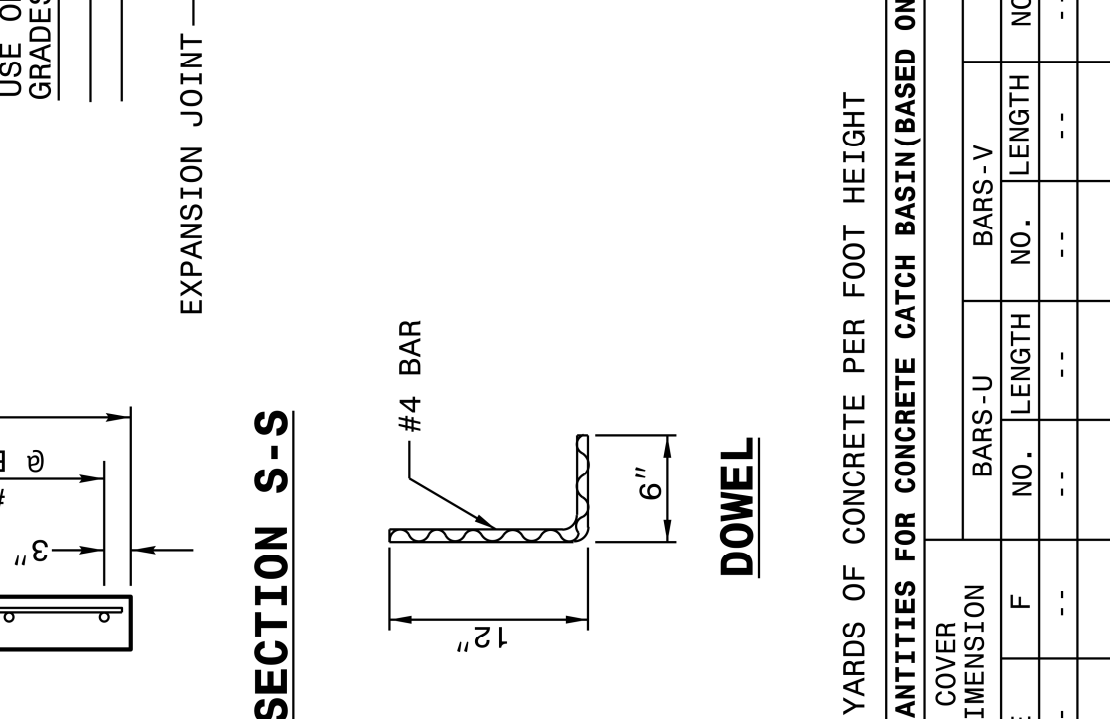
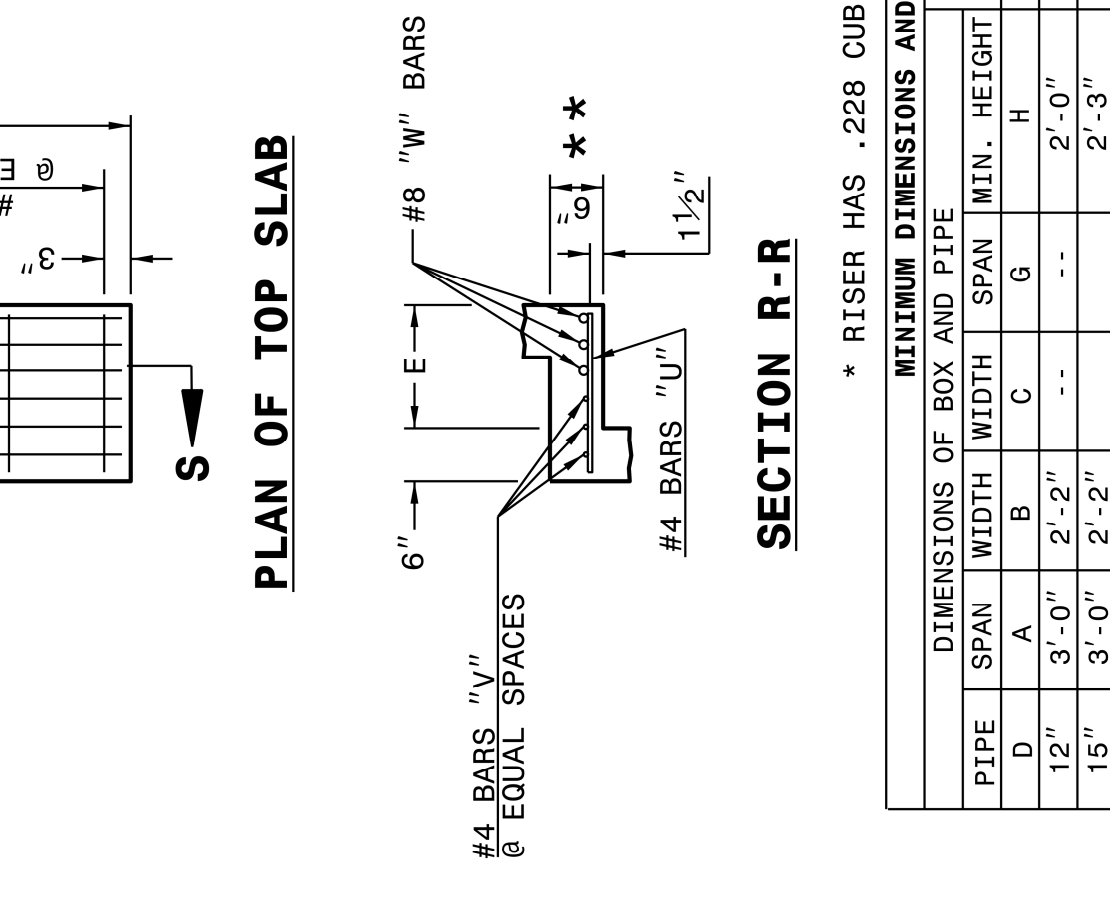
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ENGLISH DETAIL DRAWING FOR
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ENGLISH DETAIL DRAWING FOR
**EXTRA DEPTH
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 12" THRU 84" PIPE

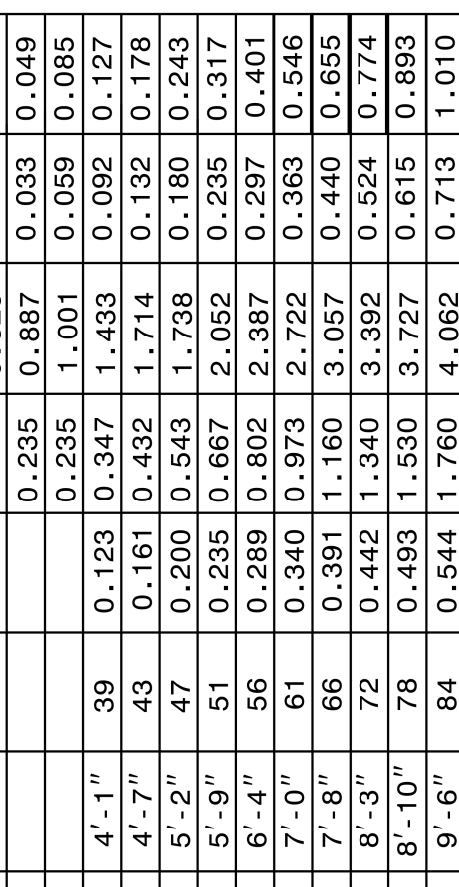


ENGLISH DETAIL DRAWING FOR
**EXTRA DEPTH
 CONCRETE CATCH BASIN**
 12" THRU 84" PIPE

STATE OF NORTH CAROLINA
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 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

SHEET 2 OF 2
840D02

MINIMUM DIMENSIONS OF BOX AND PIPE		COVER DIMENSION		DIMENSION		BARS-U		BARS-V		BARS-W		TOTAL LBS.		DEDUCTIONS	
PIPE D.	SPAN	WIDTH	MIN. HEIGHT	E	F	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	CUL.YDS. CONC. IN BOX	CONC. ONE PIPE
12"	3'-0"	2'-2"	2'-0"	2'-0"	2'-3"	0.285	0.772
15"	3'-0"	2'-2"	2'-3"	2'-3"	2'-6"	0.295	0.829
18"	3'-0"	2'-2"	3'-1"	3'-1"	3'-4"	0.235	0.687
24"	3'-0"	2'-2"	3'-10"	3'-10"	4'-4"	4	1'-5"	2	4'-1"	3	4'-1"	39	0.123	0.347	
30"	3'-0"	2'-2"	4'-6"	4'-6"	5'-5"	5	2'-5"	4	5'-2"	3	4'-7"	43	0.161	0.432	
36"	3'-0"	2'-2"	5'-0"	5'-0"	6'-0"	5	3'-1"	4	5'-9"	3	5'-2"	47	0.200	0.543	
42"	3'-0"	2'-2"	5'-7"	5'-7"	6'-7"	6	3'-8"	5	6'-4"	3	5'-9"	51	0.235	0.667	
48"	3'-0"	2'-2"	6'-3"	6'-3"	7'-3"	6	4'-4"	5	7'-0"	3	6'-4"	56	0.289	0.802	
54"	3'-0"	2'-2"	6'-11"	6'-11"	7'-6"	7	5'-0"	6	7'-8"	3	7'-8"	66	0.340	0.973	
60"	3'-0"	2'-2"	7'-6"	7'-6"	8'-6"	7	5'-6"	6	8'-3"	3	8'-3"	72	0.442	1.340	
66"	3'-0"	2'-2"	8'-1"	8'-1"	9'-1"	8	6'-2"	7	8'-10"	3	8'-10"	84	0.493	1.530	
72"	3'-0"	2'-2"	8'-9"	8'-9"	9'-9"	8	6'-10"	7	9'-6"	3	9'-6"	84	0.544	1.760	
78"	3'-0"	2'-2"	8'-9"	8'-9"	9'-9"	8	6'-10"	7	9'-6"	3	9'-6"	84	0.544	1.760	
84"	3'-0"	2'-2"	8'-9"	8'-9"	9'-9"	8	6'-10"	7	9'-6"	3	9'-6"	84	0.544	1.760	



ENGLISH DETAIL DRAWING FOR
**EXTRA DEPTH
 CONCRETE CATCH BASIN**
 12" THRU 84" PIPE

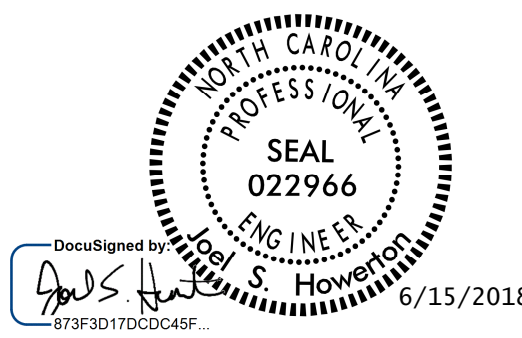
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ORIGINAL BY: 2002 Std.840.01 DATE: _____
 MODIFIED BY: E.E. WARD DATE: 3-1-02
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 FILE SPEC.: jhowerton/840d02 Extra Depth CB.dgn

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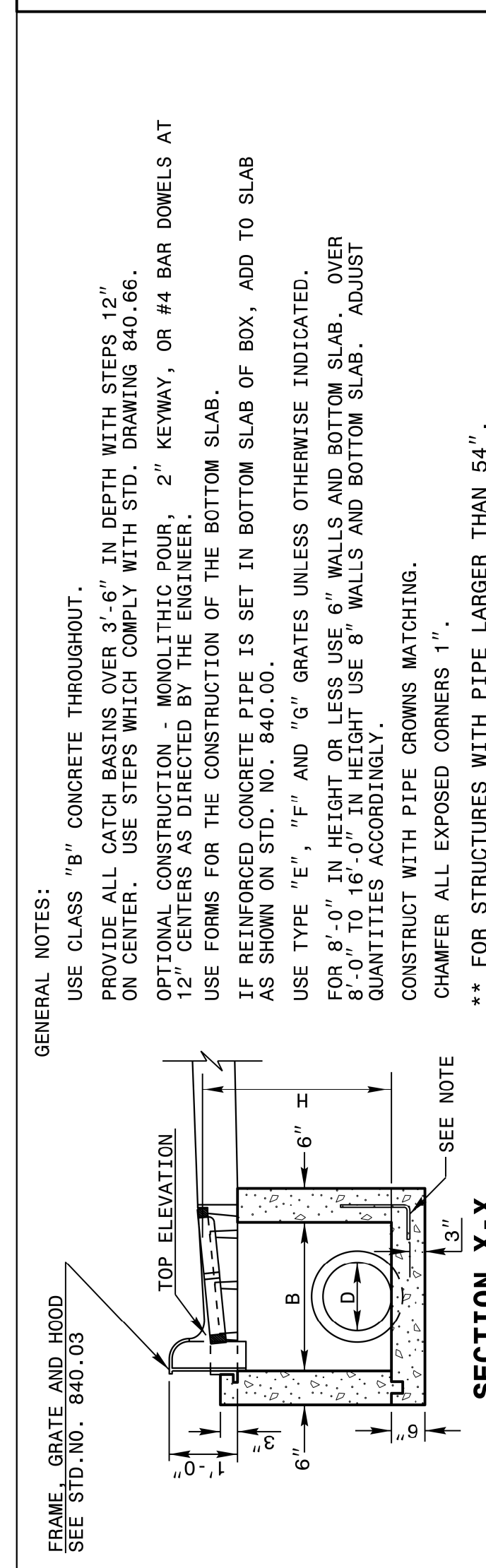
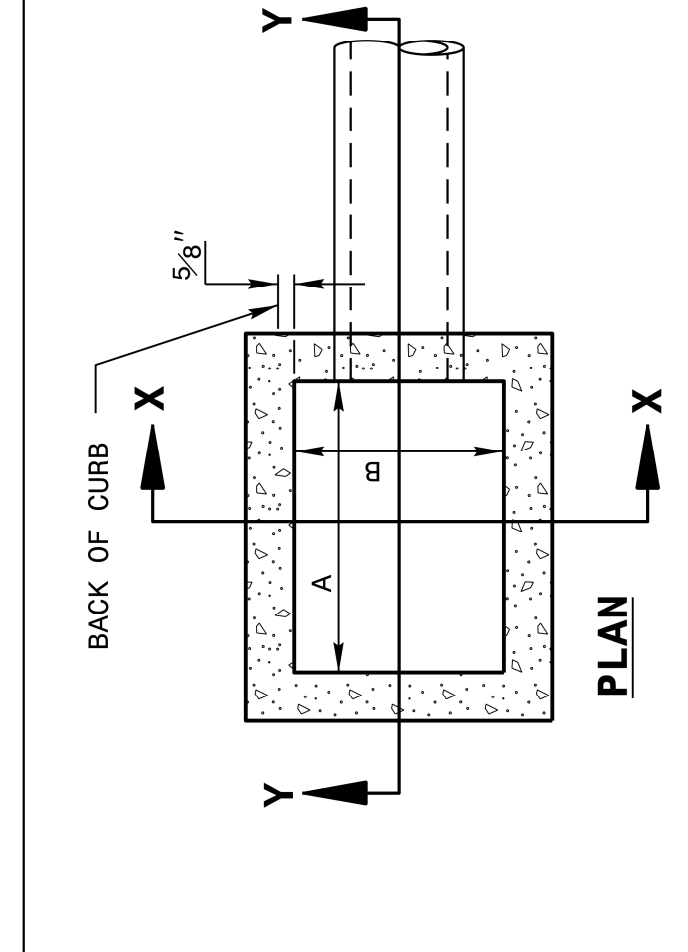


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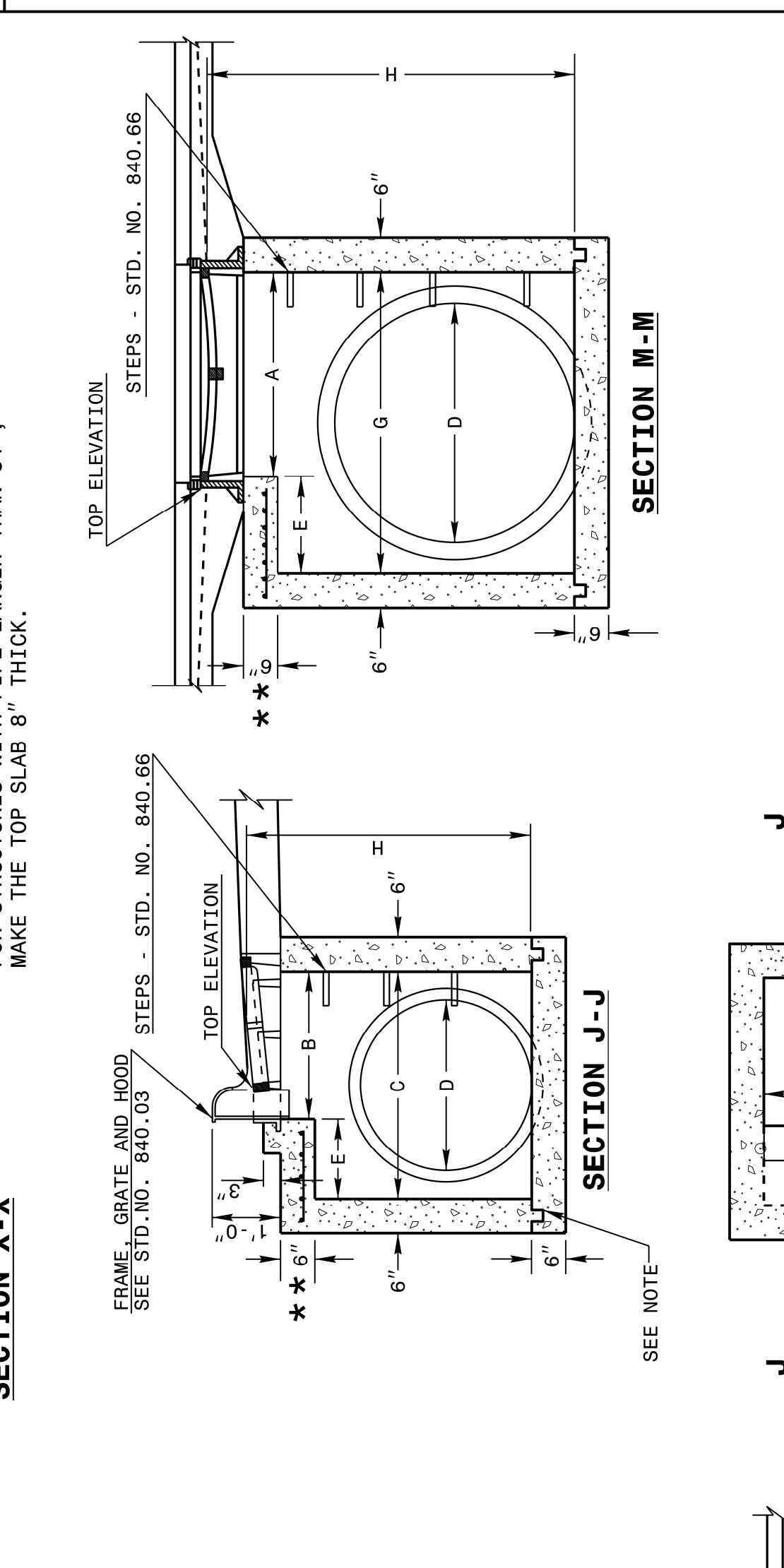
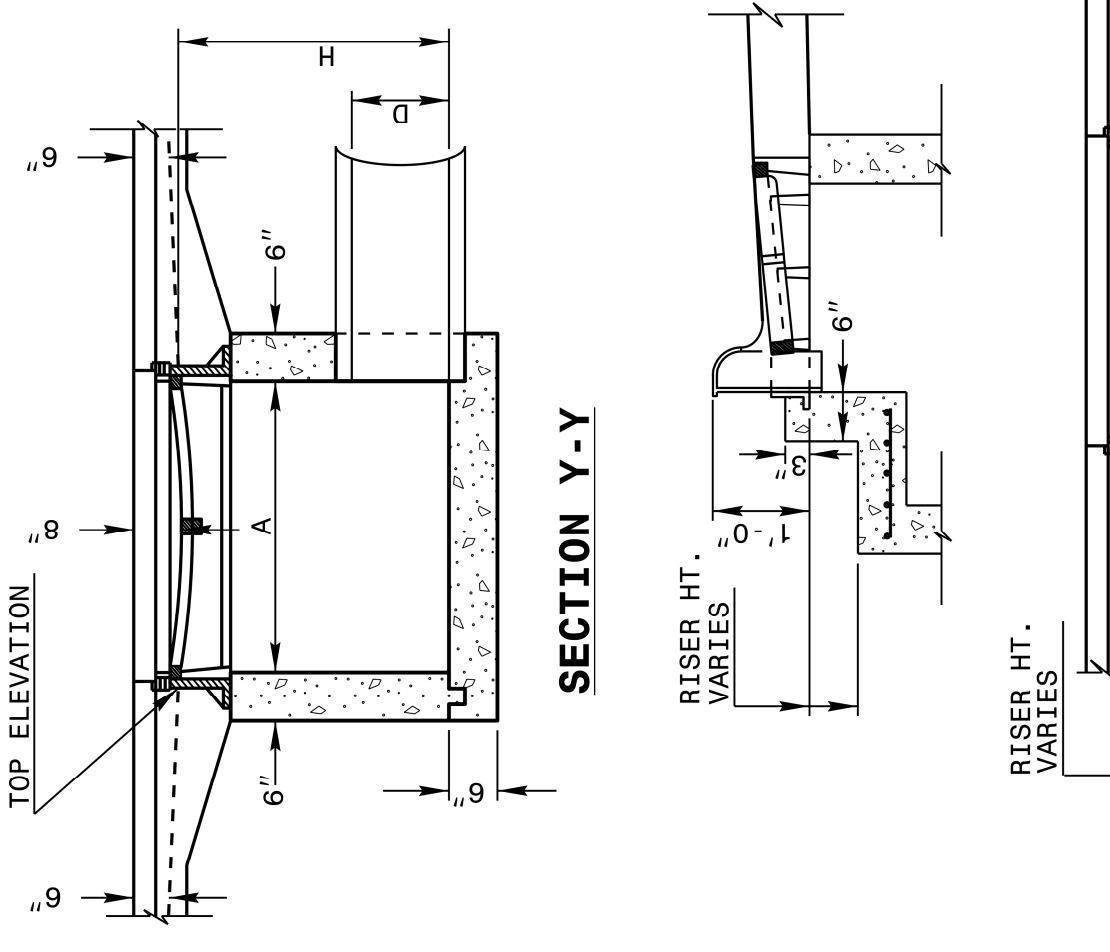
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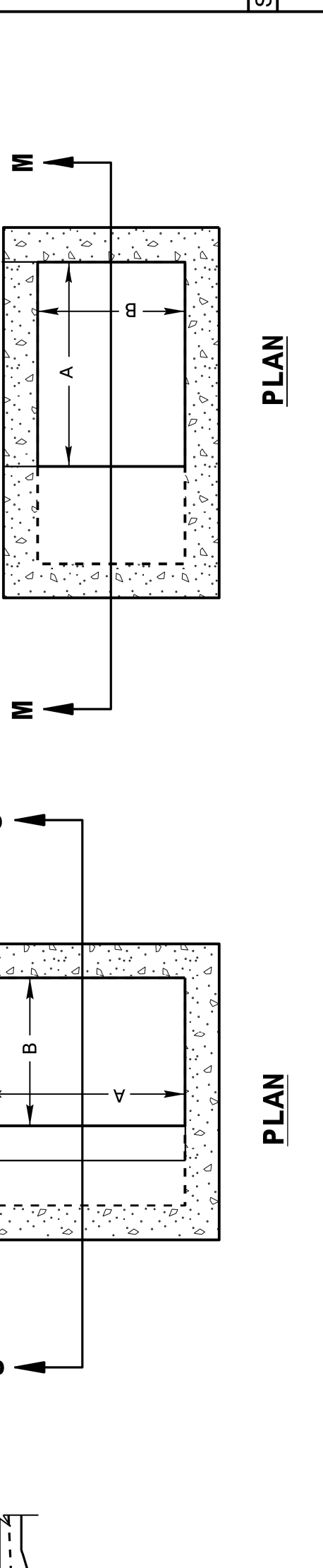
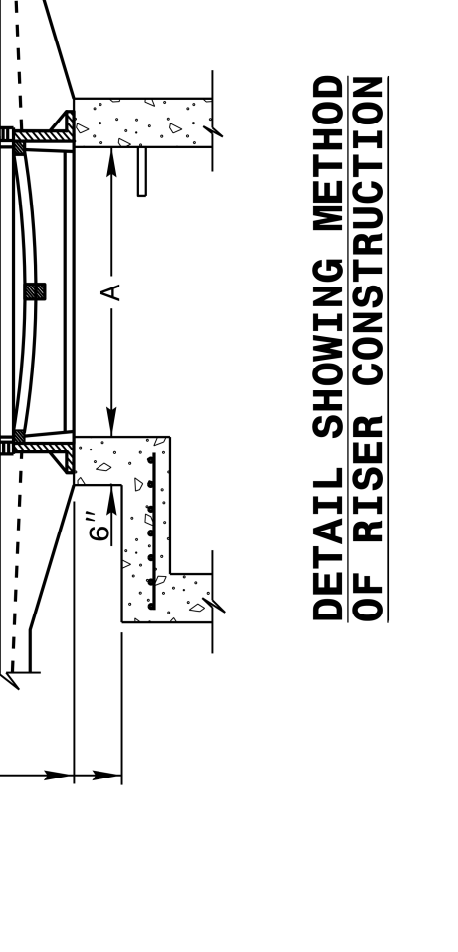
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ENGLISH DETAIL DRAWING FOR
**MINIMUM DEPTH
CONCRETE CATCH BASIN**
12" THRU 84" PIPE



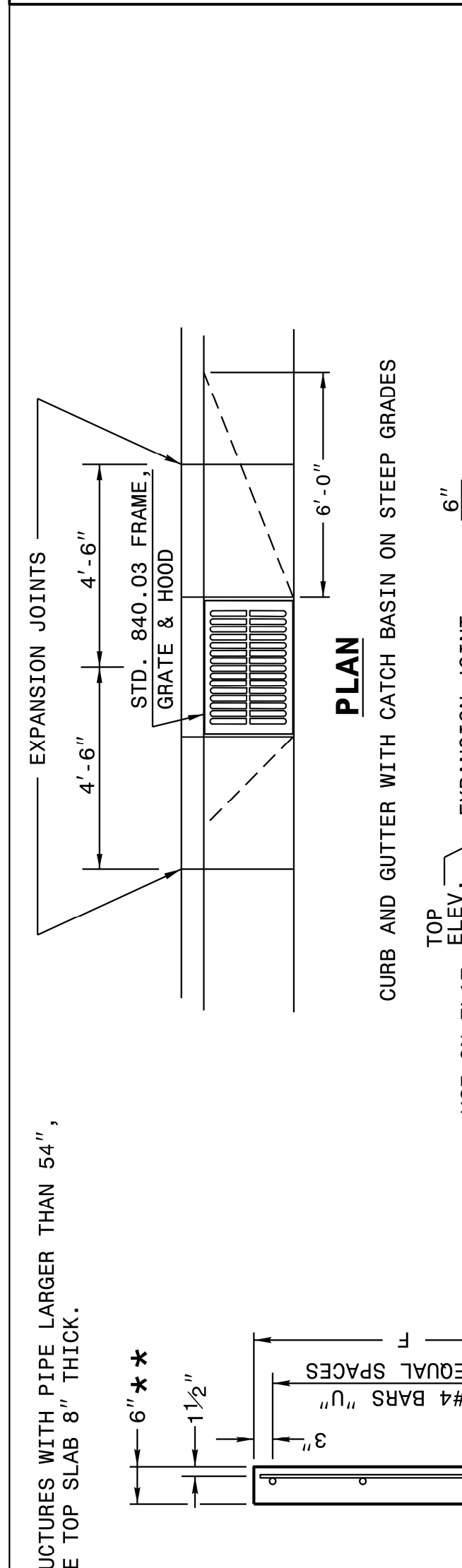
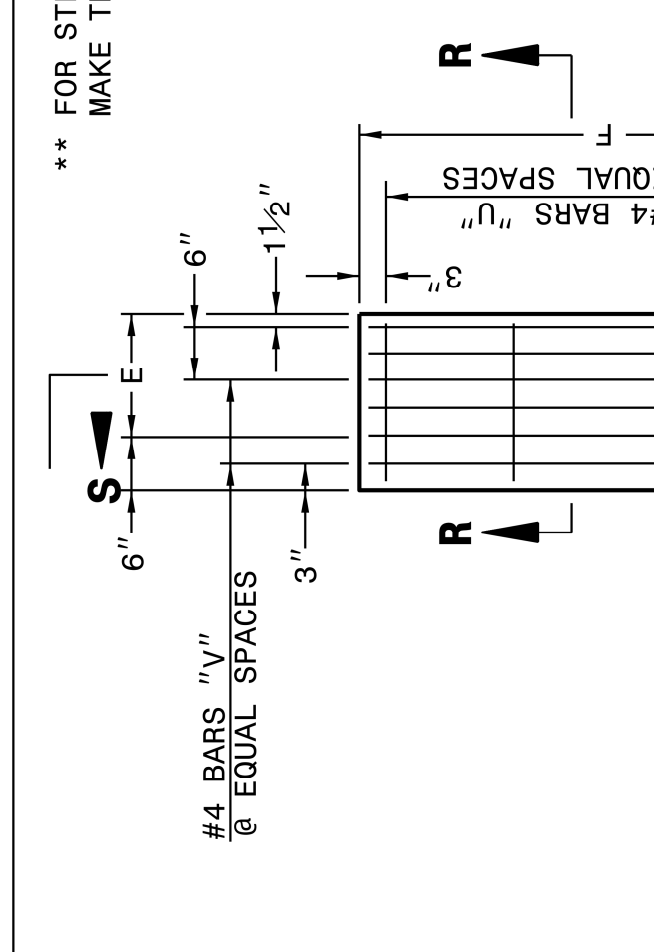
ENGLISH DETAIL DRAWING FOR
**MINIMUM DEPTH
CONCRETE CATCH BASIN**
12" THRU 84" PIPE

SHEET 1 OF 2
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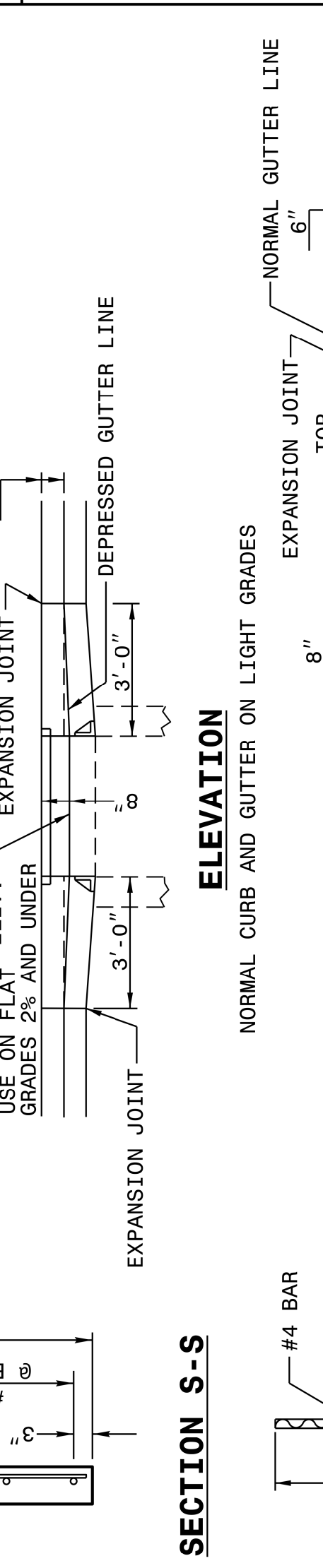
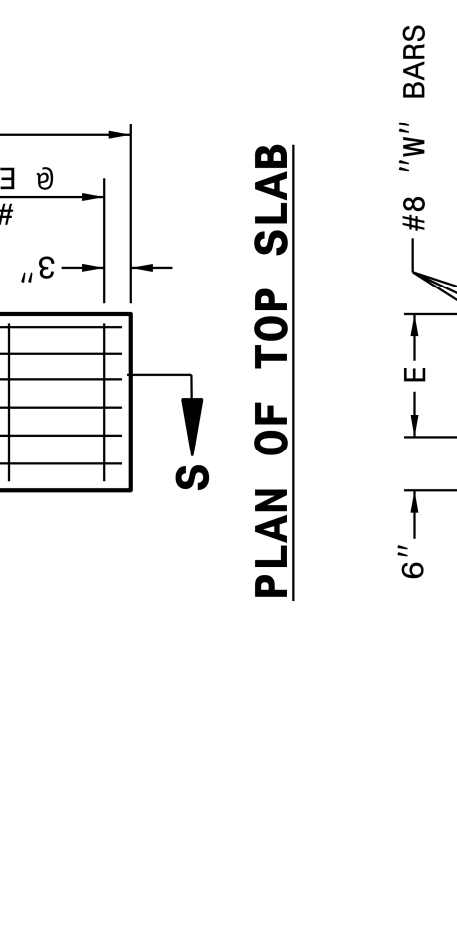
GENERAL NOTES:
 USE CLASS "B" CONCRETE THROUGHOUT.
 PROVIDE ALL CATCH BASINS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.
 OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12 CENTERS AS DIRECTED BY THE ENGINEER.
 USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
 IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.
 USE TYPE "E", "F" AND "G" GRATES UNLESS OTHERWISE INDICATED.
 FOR 8'-0" IN HEIGHT OR LESS USE 6" WALLS AND BOTTOM SLAB. OVER 8'-0" TO 16'-0" IN HEIGHT USE 8" WALLS AND BOTTOM SLAB. ADJUST QUANTITIES ACCORDINGLY.
 CONSTRUCT WITH PIPE CROWNS MATCHING.
 CHAMFER ALL EXPOSED CORNERS 1".
 ** FOR STRUCTURES WITH PIPE LARGER THAN 54", MAKE THE TOP SLAB 8" THICK.

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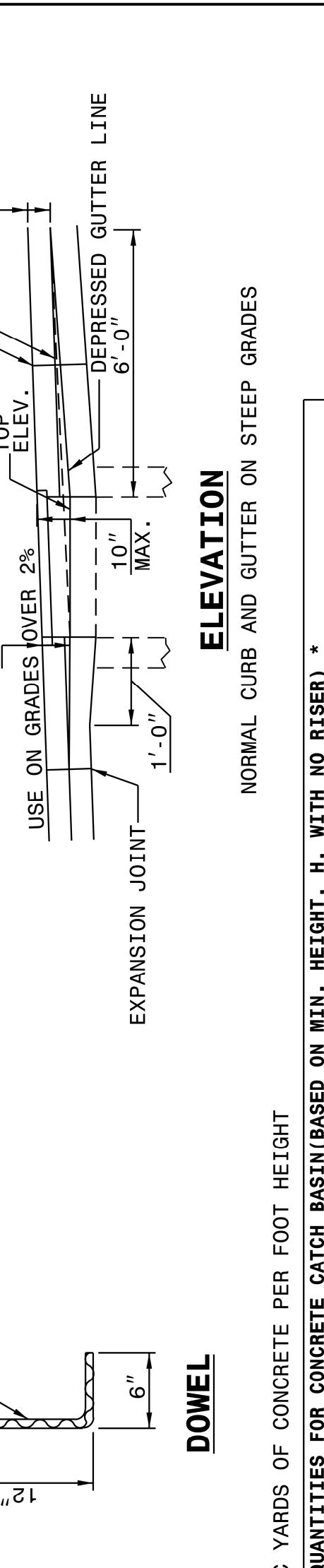
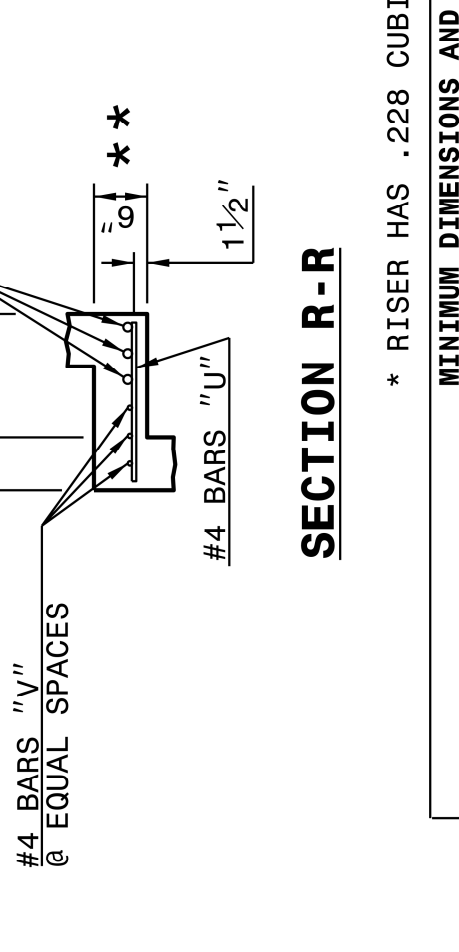
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ENGLISH DETAIL DRAWING FOR
**MINIMUM DEPTH
CONCRETE CATCH BASIN**
12" THRU 84" PIPE



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SHEET 2 OF 2
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ENGLISH DETAIL DRAWING FOR
**MINIMUM DEPTH
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12" THRU 84" PIPE

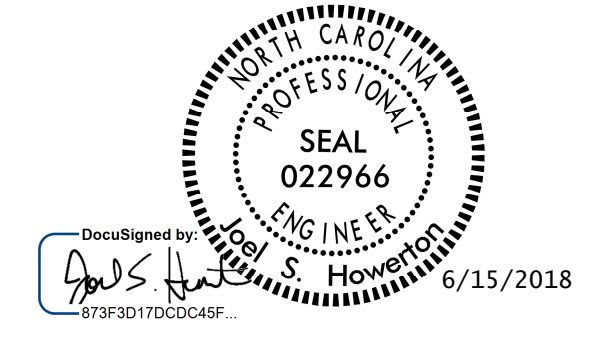
* RISER HAS .228 CUBIC YARDS OF CONCRETE PER FOOT HEIGHT

PIPE D.	DIMENSIONS OF BOX AND PIPE		COVER DIMENSION		BARS-U		BARS-V		BARS-W		TOTAL LBS.	DEDUCTIONS			
	SPAN	WIDTH	MIN.	HEIGHT	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH		TOP SLAB	BOTTOM SLAB	TOT. CONC. FOR MINIMUM HEIGHT, H	C. M.	R.C.
12"	3'-0"	2'-2"	2'-0"	2'-3"	..	..	..	..	..	..	..	0.285	0.772	0.015	0.026
15"	3'-0"	2'-2"	2'-3"	2'-6"	..	..	..	..	..	..	..	0.295	0.829	0.023	0.036
18"	3'-0"	2'-2"	3'-1"	3'-1"	..	..	..	..	..	..	..	0.295	0.887	0.033	0.049
24"	3'-0"	2'-2"	3'-4"	3'-10"	..	..	..	..	..	..	..	0.235	1.001	0.059	0.085
30"	3'-0"	2'-2"	3'-10"	4'-6"	..	..	..	..	..	..	..	0.123	0.347	1.433	0.092
36"	3'-0"	2'-2"	3'-10"	4'-11"	..	..	..	..	..	..	..	0.161	0.432	1.714	0.132
42"	3'-0"	2'-2"	4'-5"	4'-5"	..	..	..	..	..	..	..	0.200	0.543	1.738	0.180
48"	3'-0"	2'-2"	5'-0"	5'-6"	..	..	..	..	..	..	..	0.235	0.667	2.082	0.235
54"	3'-0"	2'-2"	5'-7"	6'-0"	..	..	..	..	..	..	..	0.289	0.802	2.387	0.297
60"	3'-0"	2'-2"	6'-3"	6'-3"	..	..	..	..	..	..	..	0.340	0.973	2.722	0.363
66"	3'-0"	2'-2"	6'-11"	7'-0"	..	..	..	..	..	..	..	0.391	1.160	3.057	0.440
72"	3'-0"	2'-2"	7'-6"	7'-6"	0.442	1.340	3.392	0.524
78"	3'-0"	2'-2"	8'-1"	8'-1"	0.493	1.530	3.727	0.615
84"	3'-0"	2'-2"	8'-9"	8'-6"	0.544	1.760	4.062	0.713

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