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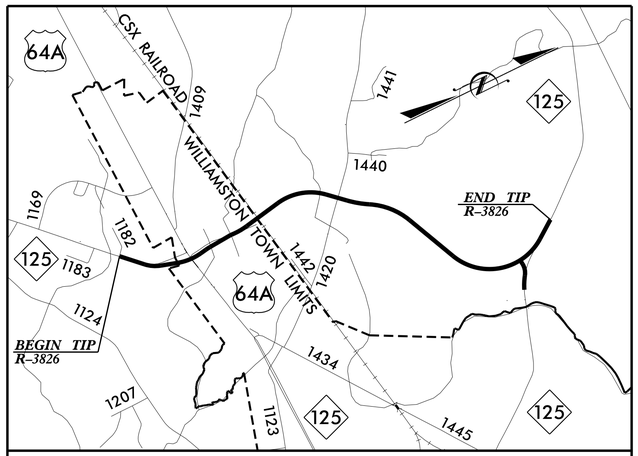
09/08/99

TIP PROJECT: R-3826

CONTRACT: C203830

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



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

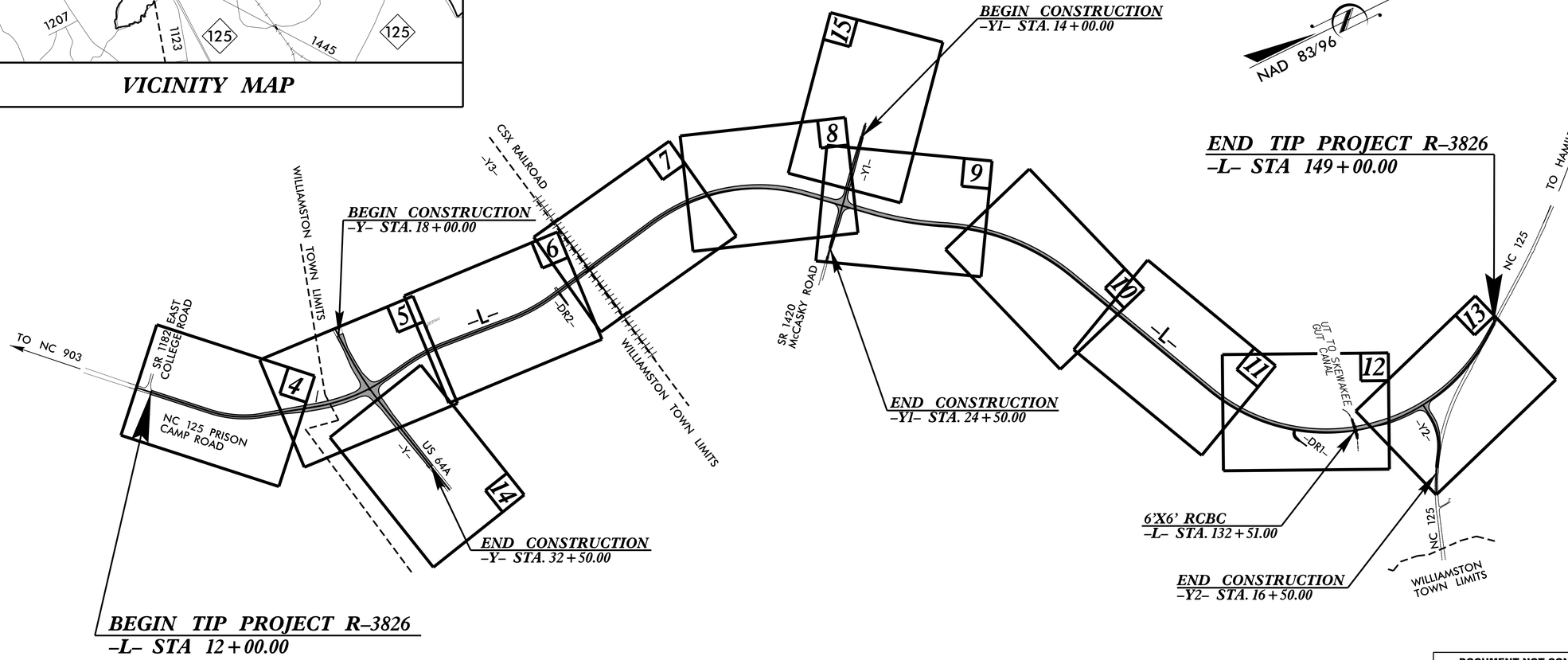
MARTIN COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-3826	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
34553.1.1	STP-0125(1)	PE
34553.4.FR1	STP-0125(1)	R/W
34553.4.FRU1	STP-0125(1)	UTILITIES
34553.2.2	STP-0125(1)	CONST

LOCATION: NC 125 FROM SR 1182 (E. COLLEGE ROAD) TO NC 125 NORTHWEST OF WILLIAMSTON

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



BEGIN TIP PROJECT R-3826
-L- STA 12+00.00

END TIP PROJECT R-3826
-L- STA 149+00.00

NAD 83/96

NOTE: THIS IS A PARTIAL CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO POINTS AS SHOWN ON PLANS.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2017 = 7,450
ADT 2037 = 11,950
D = 60 %
K = 11 %
T = 11 % *
V = 60 MPH
* (TTST 4% + DUALS 7%)
FUNC CLASS =
MAJOR COLLECTOR
REGIONAL TIER

PROJECT LENGTH

TOTAL PROJECT LENGTH TIP R-3826 = 2.595 MI.

Prepared In the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh, NC 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: JANUARY 15, 2015

LETTING DATE: JANUARY 17, 2017

GARY LOVERING, PE
PROJECT ENGINEER

SAM ST.CLAIR
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 031986 ENGINEER JAMES R. RICE
11/30/2016
DocuSigned by:
SIGNATURE
P.E.

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 025873 ENGINEER GARY R. LOVERING
11/30/2016
DocuSigned by: Gary Lovering
SIGNATURE
P.E.

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

22-NOV-2016 10:54
R:\Roadway Proj\R3826_Rdy_tsh.dgn
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-3826	1A

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 025873 ENGINEER GARY R. LOVERING 11/22/2016

DocuSigned by: Gary Lovering

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
1C-1 THRU 1C-3	SURVEY CONTROL SHEETS
1D-1	CENTERLINE COORDINATE LIST
2A-1 THRU 2A-5	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
2C-1	CONVERT DROP INLET TO JUNCTION BOX W/ MAN HOLE
2C-2	METHOD FOR PLACEMENT OF DROP INLETS IN CONCRETE ISLANDS
3B-1	SUMMARY OF EARTHWORK, REMOVAL OF EXSISTING ASPHALT, CURB AND GUTTER, SHOULDER BERM GUTTER, AND GUARDRAIL
3D-1 THRU 3D-3	DRAINAGE SUMMARIES
3G-1	SUMMARIES OF SUBSURFACE DRAINAGE AND AGGREGATE SUBGRADE/ STABILIZATION
3P-1	PARCEL INDEX SHEET
4 THRU 15	PLAN SHEETS
16 THRU 22	PROFILE SHEETS
TMP-1 THRU TMP-16B	TRAFFIC MANAGEMENT PLANS
PMP-1 THRU PMP-6	PAVEMENT MARKING PLANS
EC-1 THRU EC-27	EROSION CONTROL PLANS
RF-1	REFORESTATION PLANS
SIGN-1 THRU SIGN-17	SIGNING PLANS
SIG-1.0 THRU SIG-4.4	SIGNAL PLANS
SIG-M1 THRU SIG-M8	STANDARD DRAWINGS FOR ALL METAL POLES
UC-1 THRU UC-13	UTILITIES CONSTRUCTION PLANS
UO-1 THRU UO-9	UTILITIES BY OTHERS PLANS
X-1A THRU X-1C	CROSS-SECTION INDEX AND SUMMARY SHEETS
X-1 THRU X-62	CROSS-SECTIONS
C-1 THRU C-5	CULVERT PLANS

EFF. 01-17-2012
REV. 02-29-2016

2012 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2012 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.02	Method of Clearing - Method II
200.03	Method of Clearing - Method III
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
225.06	Method of Grading Sight Distance at Intersections
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 I
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
815.02	Subsurface Drain
815.03	Pipe Underdrain and Blind Drain
838.01	Concrete Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew
838.11	Brick Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew
838.80	Precast Endwalls - 12" thru 72" Pipe 90 Skew
840.00	Concrete Base Pad for Drainage Structures
840.01	Brick Catch Basin - 12" thru 54" Pipe
840.02	Concrete Catch Basin - 12" thru 54" Pipe
840.03	Frame, Grates and Hood - for Use on Standard Catch Basin
840.14	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
840.18	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
840.27	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
840.31	Concrete Junction Box - 12" thru 66" Pipe
840.32	Brick Junction Box - 12" thru 66" Pipe
840.45	Precast Drainage Structure
840.54	Manhole Frame and Cover
840.66	Drainage Structure Steps
846.01	Concrete Curb, Gutter and Curb & Gutter
846.04	Drop Inlet Installation in Shoulder Berm Gutter
848.02	Driveway Turnout - Radius Type
848.04	Street Turnout
852.01	Concrete Islands
852.06	Method for Placement of Drop Inlets in Concrete Islands
862.01	Guardrail Placement
862.02	Guardrail Installation
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

GENERAL NOTES:

2012 SPECIFICATIONS
EFFECTIVE: 01-17-2012
REVISED: 10-31-2014

GRADING AND SURFACING OR RESURFACING AND WIDENING:

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

CLEARING:

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III; EXCEPT METHOD II SHALL BE USED IN WETLAND AREAS LOCATED INSIDE THE PROPOSED RIGHT OF WAY.

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

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.

UNDERDRAINS:

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

DRIVEWAYS:

DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.02 USING 3' RADII OR RADII 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 RADII NOTED ON PLANS.

GUARDRAIL:

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

TEMPORARY SHORING:

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

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE

CENTURY LINK - TELECOM

SUDDEN LINK - TELECOM

PIEDMONT NATURAL GAS - GAS

DOMINION POWER - POWER

TOWN OF WILLIAMSTON - WATER AND SEWER

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.

RIGHT-OF-WAY MARKERS:

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

04/06/15

PROJECT REFERENCE NO.	SHEET NO.
R-3826	1B

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

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

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin — EIP
- Property Corner
- Property Monument — ECM
- Parcel/Sequence Number — 123
- Existing Fence Line
- 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
- Potential Contamination Area: Soil
- Known Contamination Area: Water
- Potential Contamination Area: Water
- 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 — FLOW
- False Sump

RAILROADS:

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

RIGHT OF WAY:

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

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Curb Ramp — CR
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub
- Hedge
- Woods Line
- Orchard
- Vineyard — Vineyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR:

- Head and End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB — CB
- Paved Ditch Gutter
- Storm Sewer Manhole — 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 — HH
- 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 — C
- TV Tower
- U/G TV Cable Hand Hole — HH
- 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:

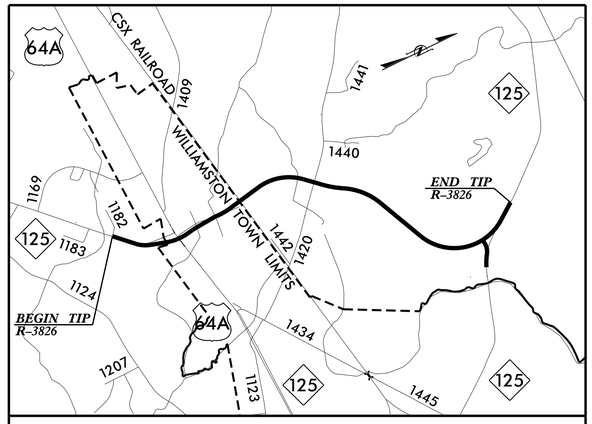
- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line — SS
- Above Ground Sanitary Sewer — A/G Sanitary Sewer
- SS Forced Main Line LOS B (S.U.E.*) — FSS
- SS Forced Main Line LOS C (S.U.E.*) — FSS
- SS Forced Main Line LOS D (S.U.E.*) — FSS

MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — S
- Utility Unknown U/G Line LOS B (S.U.E.*) — ?UTL
- 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 R-3826

PROJECT REFERENCE NO.	SHEET NO.
R-3826	1C-1
Location and Surveys	



VICINITY MAP

CONTROL

BL

POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
R38261	GPS MON R3826-1	763358.9340	2564841.2990	76.22	OUTSIDE PROJECT LIMITS	
R38262	GPS MON R3826-2	764156.7360	2565723.3950	71.71	11+50.26	34.32 RT
BL10	BL-10	764701.7235	2566216.1970	75.95	18+82.85	16.76 RT
BL11	BL-11	765325.0860	2566394.7236	74.28	25+32.70	55.99 LT
BL12	BL-12	765966.7358	2566618.3082	74.89	32+05.20	46.11 RT
BL14	BL-14	767585.9929	2566635.1365	76.95	48+31.97	60.79 RT
BL15	BL-15	768227.2691	2566479.5274	73.62	54+81.68	2.10 LT
BL16	BL-16	769005.8381	2566335.0965	76.22	62+73.33	5.85 LT
BL17	BL-17	769830.7647	2566374.2868	76.27	70+89.88	59.56 LT
BL18	BL-18	770578.2112	2566939.1688	77.41	80+15.01	29.69 LT
BL19	BL-19	771316.9060	2567570.6577	77.96	89+87.98	20.56 RT
BL20	BL-20	772012.6772	2568120.4778	77.95	98+72.42	51.39 LT
BL21	BL-21	772475.1977	2569156.3086	68.38	109+99.61	13.85 LT
BL22	BL-22	772934.2735	2570213.6552	58.76	121+48.11	31.66 RT
BL23	BL-23	773257.7400	2570657.7515	51.85	126+72.55	107.57 RT
BL24	BL-24	773729.2106	2570783.5307	39.57	131+34.12	11.92 LT
BL25	BL-25	774203.5166	2570915.3836	46.62	136+27.00	15.31 RT
BL26	BL-26	774596.2098	2571083.8731	43.77	139+89.12	201.53 RT

BY

POINT	DESC.	NORTH	EAST	ELEVATION	EY STATION	OFFSET
BY02	BY-02	766005.6863	2565859.3879	78.60	16+41.11	46.29 LT
EQBL12	BL-12	765966.7358	2566618.3082	74.89	23+93.32	45.73 RT
BY01	BY-01	766199.5987	2567618.0207	74.44	34+17.75	30.74 RT

BY1

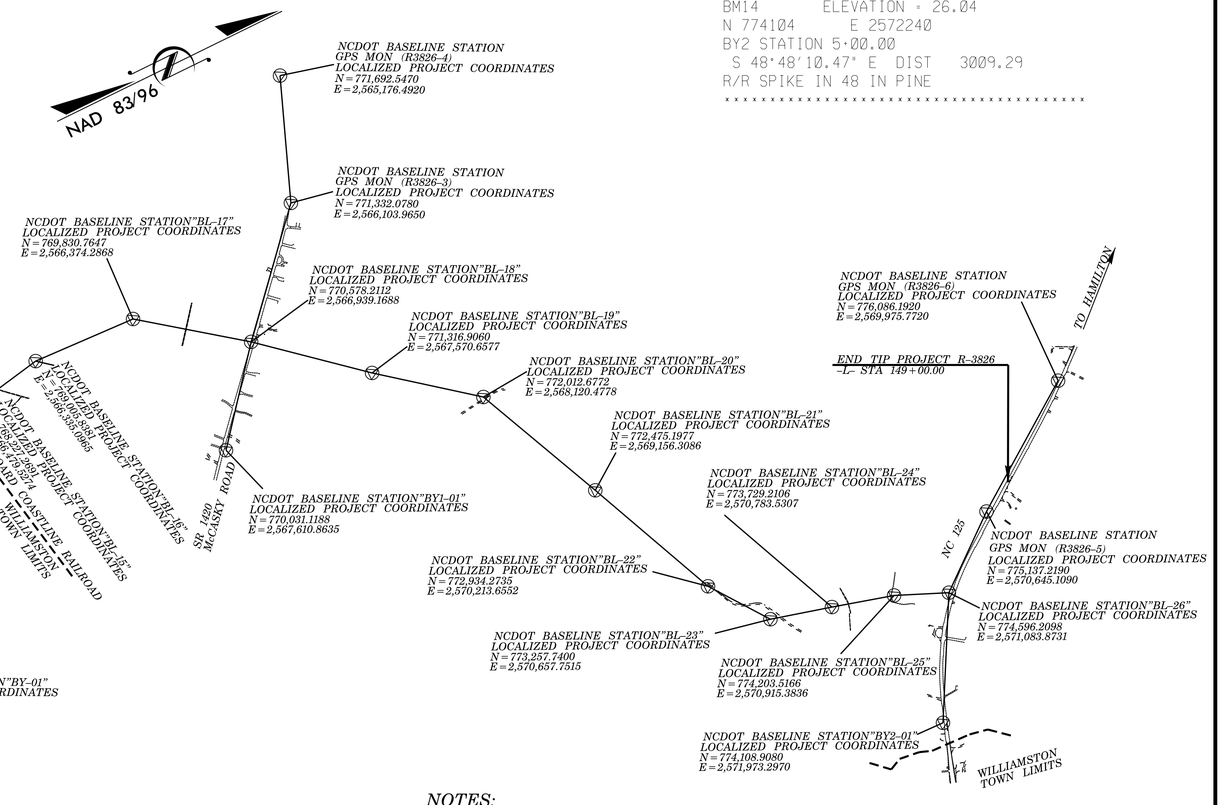
POINT	DESC.	NORTH	EAST	ELEVATION	EY1 STATION	OFFSET
R38264	GPS MON R3826-4	771692.5470	2565176.4920	76.92	OUTSIDE PROJECT LIMITS	
R38263	GPS MON R3826-3	771332.0780	2566103.9650	77.75	OUTSIDE PROJECT LIMITS	
EQBL18	BL-18	770578.2112	2566939.1688	77.41	20+19.52	13.95 RT
BY101	BY1-01	770031.1188	2567610.8635	77.93	28+85.38	26.94 LT

BY2

POINT	DESC.	NORTH	EAST	ELEVATION	EY2 STATION	OFFSET
R38266	GPS MON R3826-6	776086.1920	2569975.7720	60.03	12+94.30	17.05 RT
R38265	GPS MON R3826-5	775137.2190	2570645.1090	62.81	24+57.00	40.39 RT
EQBL26	BL-26	774596.2098	2571083.8731	43.77	31+48.43	32.44 RT
BY201	BY2-01	774108.9080	2571973.2970	19.89	41+60.38	21.48 RT

BENCHMARKS

```
**********************************************
BM10       ELEVATION = 78.24
N 764704       E 2566121
BL STATION 23+62.00 72 LEFT
R/R SPIKE IN 24 IN PINE
**********************************************
BM11       ELEVATION = 76.10
N 768323       E 2566596
BL STATION 61+30.00 132 RIGHT
R/R SPIKE IN 16 IN GUM
**********************************************
BM12       ELEVATION = 80.22
N 770973       E 2566489
BY1 STATION 20+21.00 8 RIGHT
R/R SPIKE IN 36 IN PECAN
**********************************************
BM13       ELEVATION = 34.33
N 773783       E 2570746
BL STATION 138+37.00 50 LEFT
R/R SPIKE IN 18 IN OAK
**********************************************
BM14       ELEVATION = 26.04
N 774104       E 2572240
BY2 STATION 5+00.00
 S 48°48'10.47" E  DIST    3009.29
R/R SPIKE IN 48 IN PINE
**********************************************
```



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "CASKEY"
WITH NAD 83/ (CORS96) STATE PLANE GRID COORDINATES OF NORTHING: 770,400.000(ft) EASTING: 2,569,000.000(ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99992957
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "CASKEY" TO -L- STATION 12+00.00 IS S 27° 50' 47" W 6,993.4771'
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

NOTE: DRAWING NOT TO SCALE

NOTES:

THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:
HTTP://WWW.DOH.DOT.STATE.NC.US/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT/
FILE: R3826_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 CONVENTIONAL METHODS FROM R-3620 CONTROL MONUMENTION.

06-OCT-2016 09:18
R:\LocationSurveys\r-3826_ls_lc.dgn
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-3826	1C-2
Location and Surveys	

SURVEY CONTROL SHEET R-3826

FINAL ROW /EASEMENT POINTS

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	11+86.03	-60.00	764248.04252	2565680.52317
L	12+00.00	60.00	764174.59971	2565776.44630
L	12+00.00	30.00	764195.46895	2565754.89462
L	17+61.06	-60.00	764661.13616	2566080.53595
L	17+61.06	60.00	764577.65922	2566166.74268
L	22+36.05	-60.00	765042.35638	2566304.82995
L	22+36.05	60.00	765007.54585	2566419.66995
L	24+82.98	-60.00	765278.66682	2566376.46084
L	27+22.77	60.00	765473.33463	2566560.86078
L	29+50.00	70.00	765701.52070	2566622.90993
L	29+50.00	60.00	765703.03782	2566613.02568
L	31+15.00	70.00	765872.79042	2566640.22189
L	146+00.00	-85.00	775096.30337	2570609.88672
L	149+00.00	-50.00	775357.82139	2570474.79733

CONTROL ACCESS MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	33+64.50	-48.05	766120.25496	2566515.35140
L	33+64.50	55.00	766131.23606	2566617.81769
L	35+45.00	57.60	766313.03446	2566593.56769
L	36+05.00	59.20	766372.52868	2566585.63191
L	36+35.13	60.00	766402.40297	2566581.64773
L	36+95.00	-47.45	766446.40621	2566466.92849
L	37+30.00	60.00	766492.93921	2566569.85258
L	37+55.00	-52.90	766507.39485	2566455.13671
L	37+90.00	60.00	766550.49577	2566565.17137
L	38+00.00	-57.61	766553.50588	2566447.17388
L	39+00.00	-70.00	766657.13336	2566432.20742
L	40+37.85	-70.00	766800.79274	2566439.31343
L	40+37.85	60.00	766788.78466	2566568.75765
L	40+37.85	50.00	766789.70836	2566558.80040
L	41+00.00	-60.00	766861.75469	2566455.01159
L	41+40.00	-60.00	766901.58368	2566458.70638
L	41+70.00	50.00	766921.29474	2566571.00720
L	42+00.00	-60.00	766961.32717	2566464.24857
L	42+30.00	50.00	766981.03823	2566576.54939
L	42+60.00	-60.00	767021.07066	2566469.79076
L	42+93.00	50.00	767043.76906	2566582.36887
L	43+20.00	-60.00	767080.81414	2566475.33295
L	43+53.00	50.00	767103.51264	2566587.91118
L	44+90.00	60.00	767239.00297	2566610.52280
L	44+90.00	50.00	767239.92667	2566600.56554
L	45+41.00	-60.00	767300.86932	2566495.74669
L	46+01.00	-60.00	767360.61296	2566501.28905
L	46+71.62	60.00	767419.84621	2566627.29921
L	46+71.62	-60.00	767430.93037	2566507.81199
L	47+31.00	60.00	767481.28139	2566631.85011
L	49+08.06	-60.00	767658.25972	2566512.04386
L	49+22.39	60.00	767679.72767	2566630.97268
L	49+60.31	-60.00	767708.41808	2566508.44593
L	49+70.82	60.00	767729.81655	2566626.98892
L	51+07.55	-60.00	767848.81578	2566489.52781
L	51+40.00	-60.00	767880.74314	2566483.71952
L	51+40.00	60.00	767902.22126	2566601.78175
L	52+00.00	-60.00	767939.77426	2566472.98046
L	52+00.00	60.00	767961.25237	2566591.04269
L	54+15.84	60.00	768173.60930	2566552.41029
L	54+16.00	-60.00	768152.28881	2566434.31938
L	56+15.84	60.00	768370.37986	2566516.61339
L	56+16.00	-60.00	768349.05937	2566398.52249
L	58+95.00	-60.00	768623.55134	2566348.58635
L	59+55.00	-60.00	768682.58246	2566337.84729
L	61+50.00	60.00	768895.91170	2566421.00758
L	62+10.00	60.00	768954.94282	2566410.26852
L	62+16.96	60.00	768961.79190	2566409.02252
L	62+16.96	-60.00	768940.31378	2566290.96029

CONTROL ACCESS MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	66+50.00	-60.00	769387.77524	2566270.97705
L	67+50.00	-80.00	769493.78995	2566263.82969
L	73+00.00	60.00	769971.61096	2566570.42814
L	74+00.00	75.00	770046.76956	2566631.64111
L	76+80.35	-80.00	770363.59560	2566677.50057
L	76+80.35	75.00	770259.69321	2566792.51923
L	79+25.00	75.00	770441.23674	2566956.51702
L	79+25.00	-80.00	770545.13913	2566841.49836
L	81+25.00	75.00	770589.64826	2567090.58493
L	81+70.00	-75.00	770723.59113	2567009.44145
L	83+08.62	75.00	770725.90497	2567213.67276
L	83+08.62	-75.00	770826.45567	2567102.36437
L	89+65.57	75.00	771270.82440	2567606.96716
L	89+65.57	-75.00	771344.79366	2567476.47368
L	97+90.00	75.00	771862.24888	2568127.56299
L	98+50.00	75.00	771896.17254	2568174.29625
L	98+70.00	-75.00	772030.72140	2568105.04281
L	99+30.00	-75.00	772065.24475	2568156.83962
L	102+26.11	-75.00	772212.09309	2568426.36738
L	102+26.11	75.00	772075.42748	2568488.19385
L	110+00.00	75.00	772394.40578	2569193.28614
L	110+00.00	-75.00	772531.07139	2569131.45968
L	118+46.81	-75.00	772880.10579	2569902.99012
L	118+46.81	75.00	772743.44018	2569964.81658
L	126+00.00	75.00	773217.76673	2570584.78798
L	127+00.00	95.00	773288.63263	2570664.98221
L	127+35.00	95.00	773318.79521	2570686.43655
L	127+95.00	95.00	773371.53780	2570721.71055
L	131+00.00	-75.00	773721.48091	2570712.66375
L	131+25.00	95.00	773681.97249	2570879.90613
L	133+25.00	125.00	773875.81335	2570973.59622
L	134+75.00	85.00	774040.09608	2570966.87990
L	135+00.00	-85.00	774090.48113	2570802.60977
L	138+00.00	85.00	774380.65823	2570987.57302
L	141+48.88	-85.00	774701.13239	2570770.45323
L	144+35.00	-85.00	774957.01903	2570681.10273
L	144+35.00	84.69	775026.62085	2570835.85930

ROW MARKER PERMANENT EASEMENT-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	11+85.91	-80.00	764261.86559	2565666.06847
L	15+00.00	-80.00	764487.50630	2565884.56414
L	15+00.00	-60.00	764473.59348	2565898.93192
L	26+08.00	60.00	765363.49874	2566527.56710
L	26+58.00	60.00	765411.34874	2566542.07149
L	26+58.00	80.00	765405.54699	2566561.21149
L	33+41.16	-90.00	766093.86549	2566475.83077
L	34+92.00	-60.00	766242.06204	2566485.85481
L	34+92.00	-47.76	766244.00205	2566497.93776
L	39+45.00	75.00	766699.09343	2566578.07976
L	39+45.00	60.00	766699.61040	2566563.08867
L	39+90.00	60.00	766742.87047	2566565.18989
L	39+90.00	75.00	766741.93214	2566580.16052
L	45+54.00	60.00	767302.72936	2566616.43447
L	46+03.00	75.00	767350.13432	2566635.89646
L	131+97.00	-176.00	773840.72414	2570649.39406
L	132+28.00	-158.00	773861.55468	2570675.20785
L	132+52.00	-121.82	773871.78247	2570716.27433
L	142+00.00	-90.00	774746.54236	2570752.96297
L	142+00.00	-85.00	774747.92521	2570757.76794
L	147+00.00	-90.00	775174.25140	2570555.90660
L	148+00.00	-64.72	775268.01739	2570521.18636
L	148+00.00	-90.00	775253.26833	2570500.65575

PROJECT REFERENCE NO.	SHEET NO.
R-3826	1C-3
Location and Surveys	

SURVEY CONTROL SHEET R-3826

FINAL ROW /EASEMENT POINTS

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y	20+00.00	50.00	765920.85510	2566221.35202
Y	20+00.00	60.00	765910.86149	2566221.70959
Y	21+24.62	60.00	765918.17415	2566348.71562
Y	24+60.00	-60.00	766082.87612	2566664.27495
Y	32+50.00	50.00	766144.67797	2567458.34677
Y	32+50.00	65.00	766130.02970	2567461.57602

CONTROL ACCESS MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y	21+68.00	-50.00	766031.52557	2566382.47112
Y	25+19.15	-50.00	766084.99351	2566723.10715
Y	25+19.15	-60.00	766094.75902	2566720.95431

ROW MARKER PERMANENT EASEMENT-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y	19+70.00	-50.00	766019.82313	2566187.99435
Y	19+70.00	-80.00	766049.80804	2566187.04292
Y	20+00.00	75.00	765895.87109	2566222.24593
Y	20+20.00	-80.00	766051.53494	2566236.13016
Y	20+20.00	-50.00	766021.56235	2566237.41213
Y	21+00.00	75.00	765901.32929	2566324.71345
Y	21+55.00	87.66	765893.24173	2566382.10734
Y	26+00.00	80.00	765975.44715	2566830.04674
Y	26+55.34	-50.00	766114.31272	2566856.10260
Y	26+55.40	-60.00	766124.09154	2566854.01008
Y	30+00.00	65.00	766076.20883	2567217.43813
Y	30+00.00	90.00	766051.79504	2567222.82021
Y	30+00.00	80.00	766061.56055	2567220.66738
Y	30+75.00	90.00	766067.94130	2567296.06158
Y	30+75.00	65.00	766092.35509	2567290.67950
Y	30+75.00	80.00	766077.70681	2567293.90875
Y	32+50.00	80.00	766115.38143	2567464.80528

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y1	14+00.00	20.00	770987.58048	2566474.27733
Y1	14+00.00	50.00	770965.23675	2566454.25840
Y1	14+02.00	-50.00	771038.38127	2566522.47775
Y1	14+02.00	-30.00	771023.48545	2566509.13180
Y1	18+35.53	-50.00	770749.08595	2566845.36901
Y1	18+35.53	50.00	770674.60683	2566778.63924
Y1	23+35.00	-30.00	770398.62684	2567202.25043
Y1	23+35.00	-50.00	770413.43135	2567215.69761
Y1	24+50.00	20.00	770284.29432	2567253.75844
Y1	24+50.00	50.00	770262.08755	2567233.58768

ROW MARKER PERMANENT EASEMENT-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y1	13+50.00	-30.00	771058.21438	2566470.12827
Y1	13+50.00	-60.00	771080.70725	2566489.97949
Y1	14+50.00	-60.00	771013.79889	2566564.90071
Y1	14+50.00	-50.00	771006.35098	2566558.22773
Y1	16+00.00	-60.00	770913.70424	2566676.61937
Y1	16+00.00	-50.00	770906.25633	2566669.94640
Y1	16+53.00	-50.00	770870.88955	2566709.42032
Y1	16+53.00	-60.00	770878.33746	2566716.09330
Y1	18+50.00	-60.00	770746.85113	2566862.84230
Y1	18+50.00	-50.00	770739.40744	2566856.16463
Y1	19+03.71	-59.98	770710.83549	2566902.87245

CONTROL ACCESS MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y1	18+95.00	-50.00	770709.25939	2566889.70476
Y1	18+95.00	50.00	770634.95368	2566822.78196
Y1	21+74.03	-50.00	770521.65835	2567096.54633
Y1	21+74.31	50.00	770447.45249	2567029.51228

ROW MARKER PERMANENT EASEMENT-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y2	11+32.88	60.00	774442.23345	2571033.16913
Y2	13+00.00	60.00	774432.43209	2571178.55765
Y2	13+00.00	-99.11	774586.99836	2571216.31669

CONTROL ACCESS MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y2	14+50.00	60.00	774382.14549	2571299.43439
Y2	14+50.00	49.29	774391.28270	2571305.02232

PROJ. REFERENCE NO.	SHEET NO.
R-3826	1D-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CENTERLINE COORDINATE LIST

Point #	Chain	Station	Northing (Y)	Easting (X)
1	L	50+00.00	767753.1759	2566564.2391
2	L	51+00.00	767852.1250	2566549.8925
3	L	52+00.00	767950.5133	2566532.0116
4	L	53+00.00	768048.8985	2566514.1131
5	L	54+00.00	768147.2837	2566496.2147
6	L	55+00.00	768245.6689	2566478.3163
7	L	56+00.00	768344.0541	2566460.4178
8	L	57+00.00	768442.4393	2566442.5194
9	L	58+00.00	768540.8245	2566424.6210
10	L	59+00.00	768639.2097	2566406.7225
11	L	60+00.00	768737.5949	2566388.8241
12	L	61+00.00	768835.9800	2566370.9257
13	L	62+00.00	768934.3652	2566353.0273
14	L	63+00.00	769033.0994	2566337.2550
15	L	64+00.00	769132.6150	2566327.5912
16	L	65+00.00	769232.5399	2566324.1620
17	L	66+00.00	769332.4838	2566326.9806
18	L	67+00.00	769432.0566	2566336.0362
19	L	68+00.00	769530.8694	2566351.2934
20	L	69+00.00	769628.5363	2566372.6926
21	L	70+00.00	769724.6759	2566400.1501
22	L	71+00.00	769818.9128	2566433.5589
23	L	72+00.00	769910.8791	2566472.7885
24	L	73+00.00	770000.2155	2566517.6856
25	L	74+00.00	770086.5733	2566568.0749
26	L	75+00.00	770169.6151	2566623.7597
27	L	76+00.00	770249.0168	2566684.5225
28	L	77+00.00	770324.5495	2566750.0368
29	L	78+00.00	770398.7551	2566817.0706
30	L	79+00.00	770472.9607	2566884.1044
31	L	80+00.00	770547.1663	2566951.1382
32	L	81+00.00	770621.3719	2567018.1720
33	L	82+00.00	770695.5775	2567085.2058
34	L	83+00.00	770769.7831	2567152.2396
35	L	84+00.00	770844.9110	2567218.2313
36	L	85+00.00	770922.1885	2567281.6920
37	L	86+00.00	771001.5381	2567342.5420
38	L	87+00.00	771082.8715	2567400.7137
39	L	88+00.00	771166.0984	2567456.1425
40	L	89+00.00	771251.1264	2567508.7667
41	L	90+00.00	771337.6166	2567558.9573
42	L	91+00.00	771422.4447	2567611.8923
43	L	92+00.00	771504.5211	2567669.0007
44	L	93+00.00	771583.6408	2567730.1399
45	L	94+00.00	771659.6059	2567795.1570
46	L	95+00.00	771732.2265	2567863.8895
47	L	96+00.00	771801.3212	2567936.1656
48	L	97+00.00	771866.7172	2568011.8048
49	L	98+00.00	771928.2512	2568090.6178
50	L	99+00.00	771985.7692	2568172.4077
51	L	100+00.00	772039.1275	2568256.9701
52	L	101+00.00	772088.1928	2568344.0937
53	L	102+00.00	772132.8424	2568433.5606
54	L	103+00.00	772174.2151	2568524.6001
55	L	104+00.00	772215.4327	2568615.7105
56	L	105+00.00	772256.6504	2568706.8209
57	L	106+00.00	772297.8680	2568797.9313
58	L	107+00.00	772339.0857	2568889.0417
59	L	108+00.00	772380.3033	2568980.1521
60	L	109+00.00	772421.5209	2569071.2625
61	L	110+00.00	772462.7386	2569162.3729
62	L	111+00.00	772503.9562	2569253.4833
63	L	112+00.00	772545.1739	2569344.5937
64	L	113+00.00	772586.3915	2569435.7041
65	L	114+00.00	772627.6092	2569526.8145
66	L	115+00.00	772668.8268	2569617.9249
67	L	116+00.00	772710.0444	2569709.0353
68	L	117+00.00	772751.2621	2569800.1457
69	L	118+00.00	772792.4797	2569891.2562
70	L	119+00.00	772834.4747	2569982.0048
71	L	120+00.00	772881.2989	2570070.3475
72	L	121+00.00	772933.3881	2570155.6919
73	L	122+00.00	772990.5508	2570237.7246
74	L	123+00.00	773052.5772	2570316.1444
75	L	124+00.00	773119.2395	2570390.6633
76	L	125+00.00	773190.2929	2570461.0078
77	L	126+00.00	773265.4766	2570526.9195
78	L	127+00.00	773344.5145	2570588.1563
79	L	128+00.00	773427.1163	2570644.4935
80	L	129+00.00	773512.9788	2570695.7242
81	L	130+00.00	773601.7866	2570741.6602
82	L	131+00.00	773693.2136	2570782.1329
83	L	132+00.00	773786.9242	2570816.9936
84	L	133+00.00	773882.5741	2570846.1144
85	L	134+00.00	773979.8123	2570869.3882
86	L	135+00.00	774078.2817	2570886.7298
87	L	136+00.00	774177.6206	2570898.0753
88	L	137+00.00	774277.4643	2570903.3831
89	L	138+00.00	774377.4462	2570902.6337
90	L	139+00.00	774477.1991	2570895.8300
91	L	140+00.00	774576.3568	2570882.9967
92	L	141+00.00	774674.5552	2570864.1812
93	L	142+00.00	774771.4336	2570839.4524
94	L	143+00.00	774866.6363	2570808.9012
95	L	144+00.00	774959.8138	2570772.6398
96	L	145+00.00	775050.6240	2570730.8013

Point #	Chain	Station	Northing (Y)	Easting (X)

Point #	Chain	Station	Northing (Y)	Easting (X)

Point #	Chain	Station	Northing (Y)	Easting (X)

Point #	Chain	Station	Northing (Y)	Easting (X)

6/2/99

PAVEMENT SCHEDULE

C1	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 2 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 140 LBS. PER SQ. YD. TO BE PLACED IN TWO LAYERS
C3	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. TO BE PLACED IN TWO LAYERS
C4	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 1 1/2" IN DEPTH OR GREATER THAN 2" IN DEPTH.
D1	PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
D2	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D3	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2 1/2" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP. APPROX. 5 1/2" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
E3	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5 1/2" IN DEPTH.
J1	PROP. 6" AGGREGATE BASE COURSE.
J2	PROP. 8" AGGREGATE BASE COURSE.
J3	PROP. VAR. DEPTH AGGREGATE BASE COURSE.
P	PRIME COAT AT A RATE OF .35 GAL/SY
R1	2'-6" CONCRETE CURB AND GUTTER.
R2	CONCRETE SHOULDER BERM GUTTER.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W1	VARIABLE DEPTH ASPHALT PAVEMENT (SEE DETAIL SHOWING METHOD OF WEDGING FOR -L-)
W2	VARIABLE DEPTH ASPHALT PAVEMENT (SEE DETAIL SHOWING METHOD OF WEDGING FOR -Y-)
W3	VARIABLE DEPTH ASPHALT PAVEMENT (SEE DETAIL SHOWING METHOD OF WEDGING FOR -Y1- AND -Y2-)

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

PROJECT REFERENCE NO.	SHEET NO.
R-3826	2A-1

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 025873 ENGINEER GARY R. LOVERING

12/6/2016

DocuSigned by: Gary Lovering

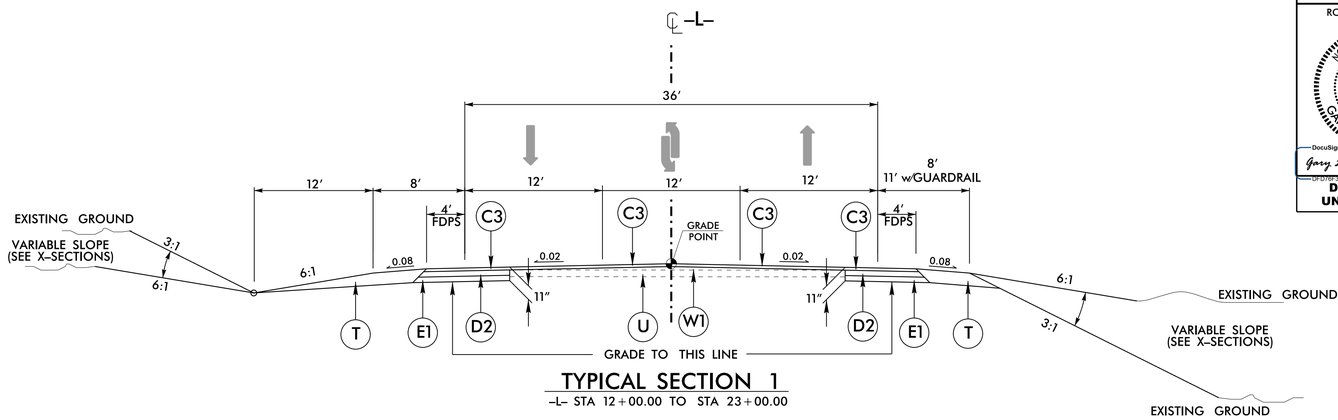
PAVEMENT DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 022896 ENGINEER CLARK S. MORRISON

12/5/2016

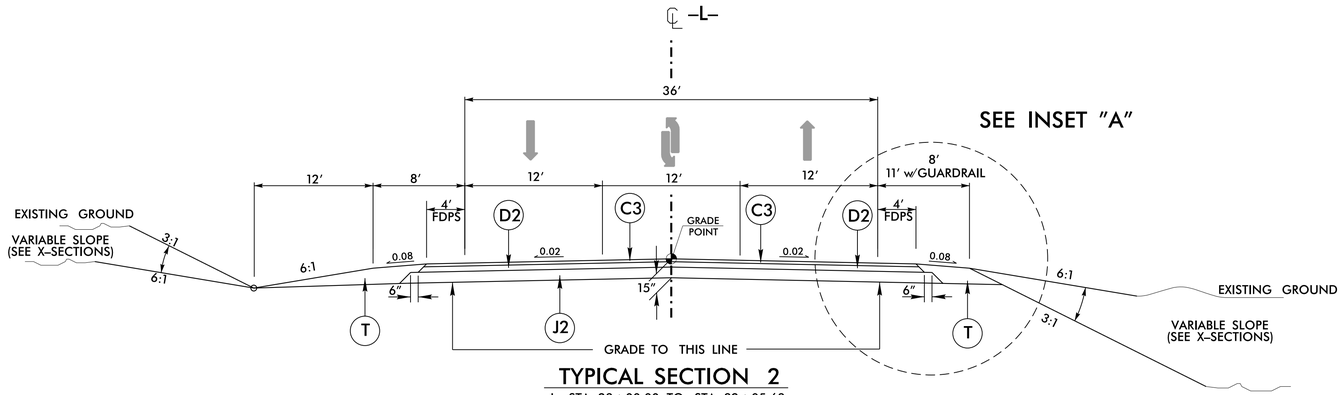
DocuSigned by: Clark Morrison

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



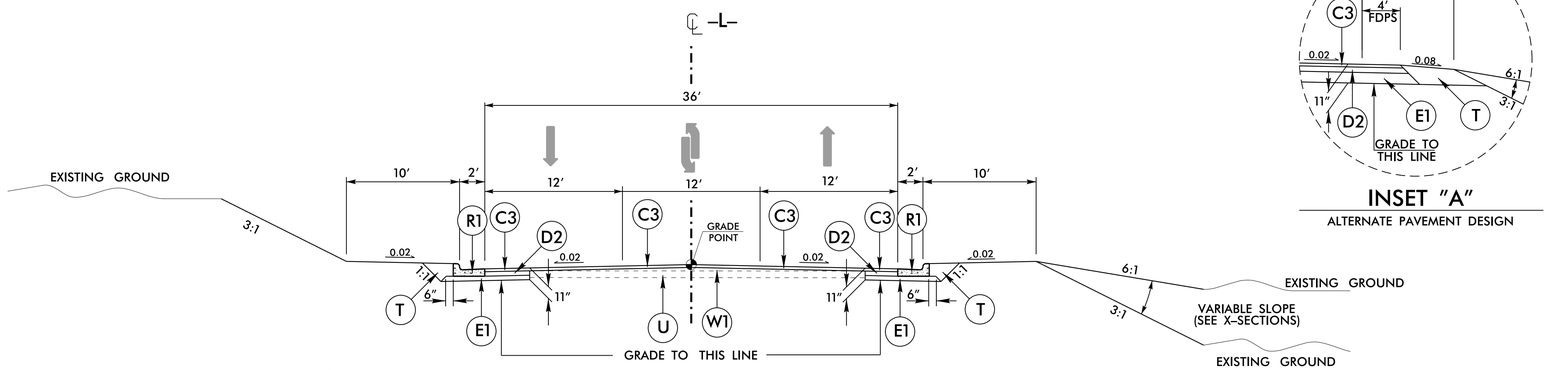
TYPICAL SECTION 1

–L– STA 12+00.00 TO STA 23+00.00



TYPICAL SECTION 2

–L– STA 23+00.00 TO STA 32+05.68
–L– STA 54+15.00 TO STA 64+00.00

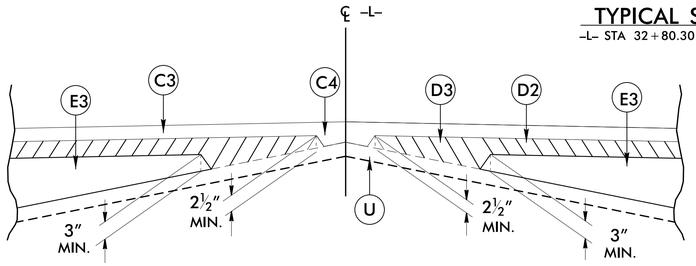


TYPICAL SECTION 3

–L– STA 32+80.30 TO STA 45+50.00

INSET "A"

ALTERNATE PAVEMENT DESIGN



W1 – Detail Showing Method of Wedging for –L–

6/2/99

PAVEMENT SCHEDULE

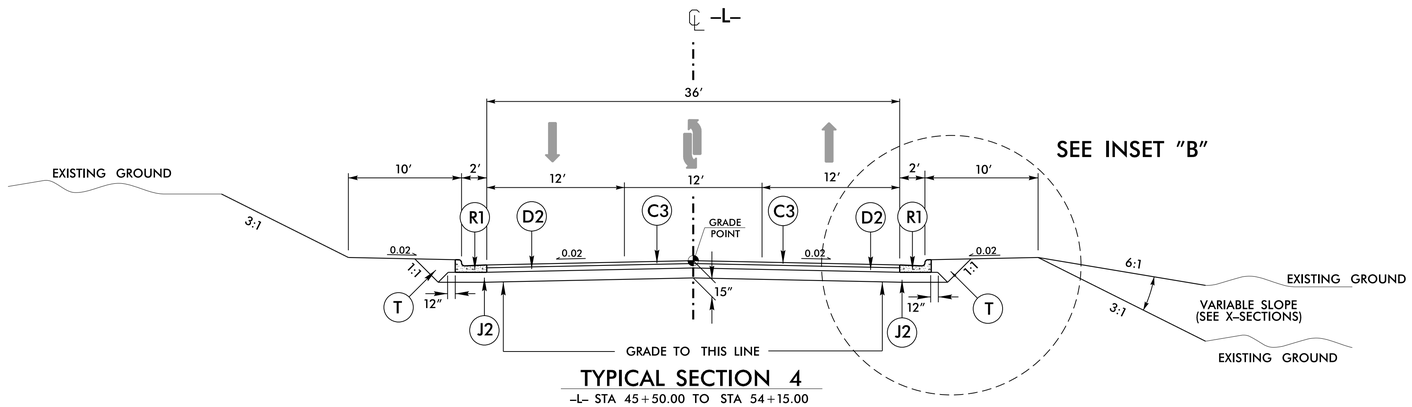
C1	1.5″ S9.5B
C2	2.5″ S9.5B
C3	3″ S9.5B
C4	VAR. S9.5B
D1	2.5″ I19.0B
D2	4″ I19.0B
D3	VAR. I19.0B
E1	4″ B25.0B
E2	5.5″ B25.0B
E3	VAR. B25.0B
J1	6″ ABC
J2	8″ ABC
J3	VAR. ABC
R1	2′-6″ C&G
R2	SHOULDER BERM GUTTER
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W1	-L- WEDGING DETAIL
W2	-Y- WEDGING DETAIL
W3	-Y1- -Y2- WEDGING DETAIL

PROJECT REFERENCE NO.	SHEET NO.
R-3826	2A-2

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 025873 ENGINEER GARY R. LOVERING
12/6/2016
DocuSigned by: Gary Lovering

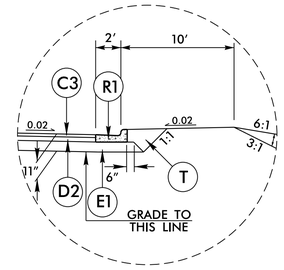
PAVEMENT DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 022896 ENGINEER CLARK S. MORRISON
12/6/2016
DocuSigned by: Clark Morrison

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



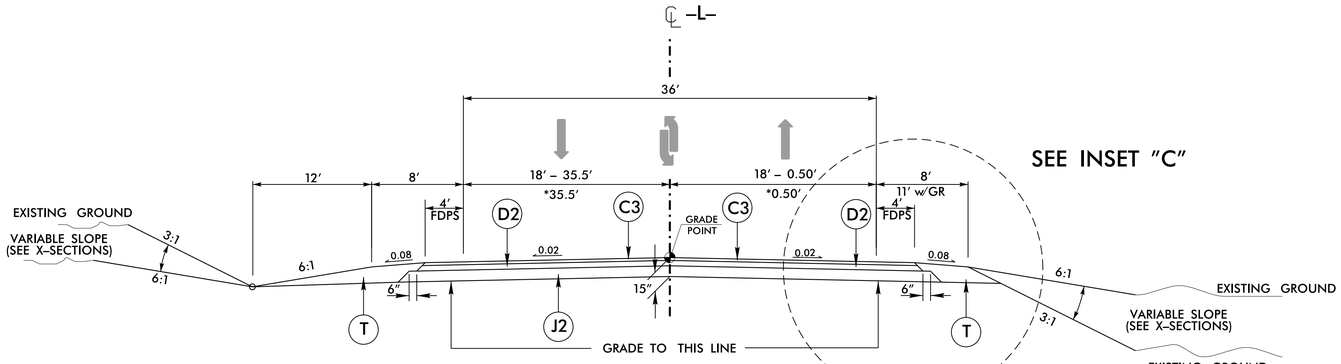
TYPICAL SECTION 4

–L– STA 45+50.00 TO STA 54+15.00



INSET "B"

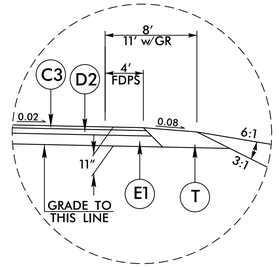
ALTERNATE PAVEMENT DESIGN



TYPICAL SECTION 5

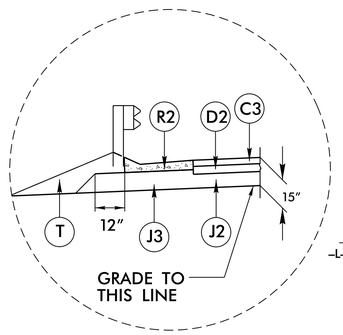
–L– STA 64+00.00 TO STA 74+00.00
*–L– STA 74+00.00 TO STA 83+08.62

NOTE: TRANSITION FROM TYPICAL SECTION 5 TO TYPICAL SECTION 6 FROM –L– STA 83+08.62 TO STA 89+65.57



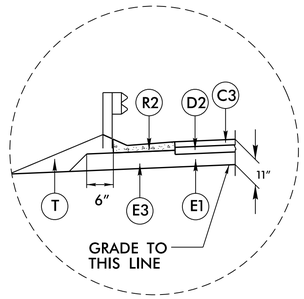
INSET "C"

ALTERNATE PAVEMENT DESIGN



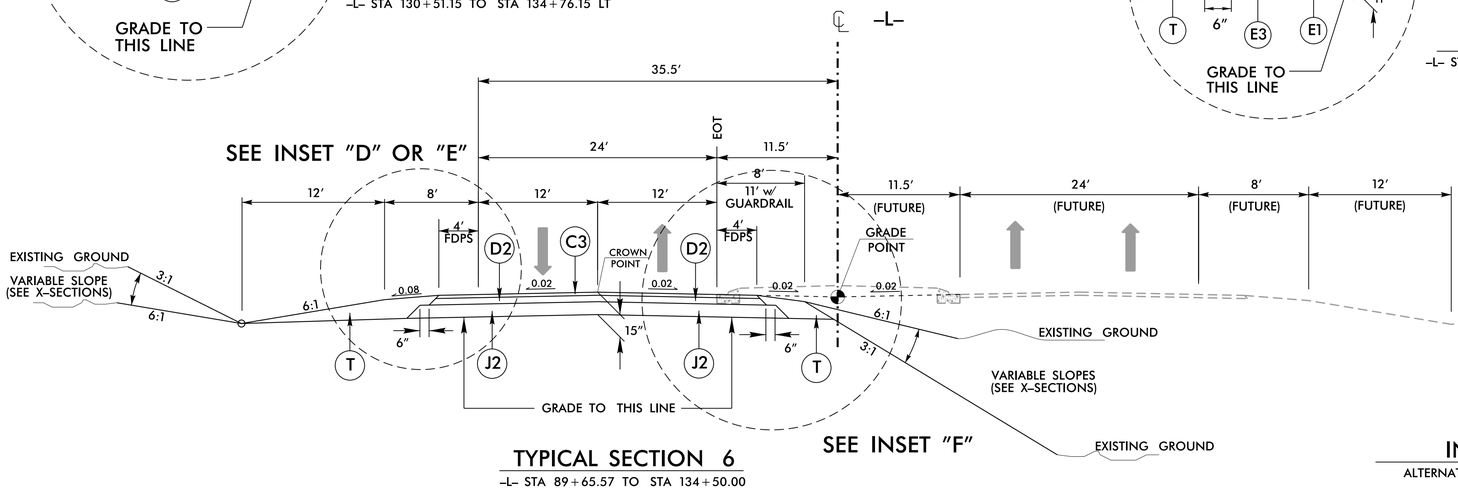
INSET "D"

–L– STA 130+51.15 TO STA 134+76.15 LT



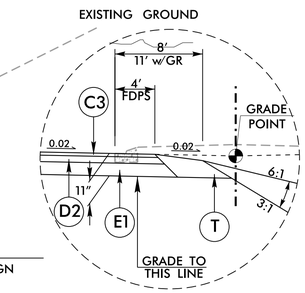
INSET "E"

–L– STA 130+51.15 TO STA 134+76.15 LT



TYPICAL SECTION 6

–L– STA 89+65.57 TO STA 134+50.00



INSET "F"

ALTERNATE PAVEMENT DESIGN

PROJECT REFERENCE NO.	SHEET NO.
R-3826	2A-3

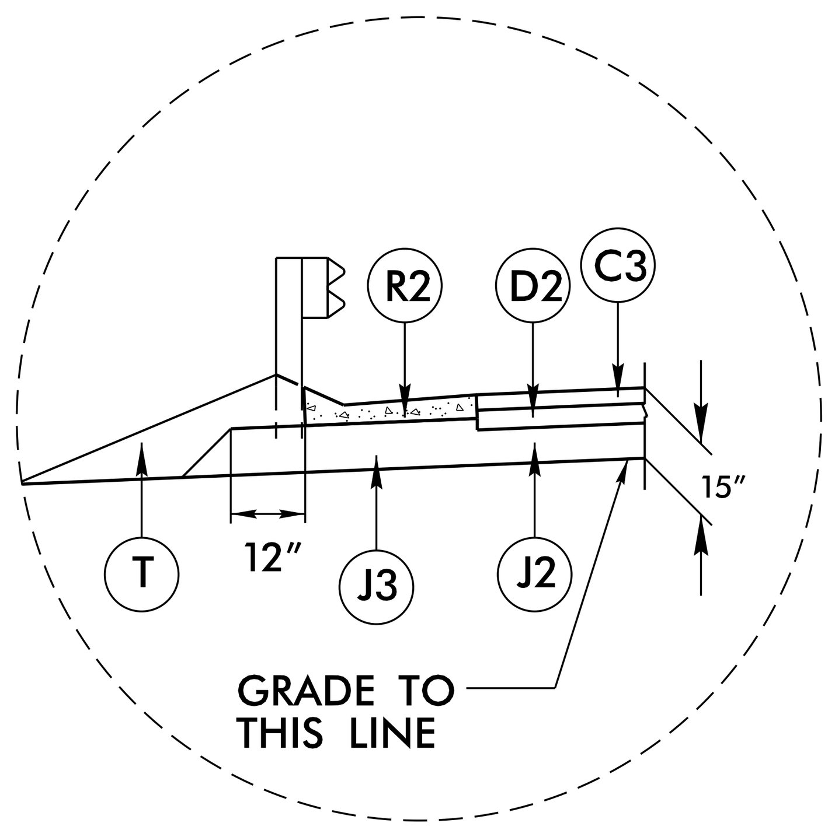
ROADWAY DESIGN ENGINEER — SEAL 025873, GARY R. LOVERING, NORTH CAROLINA PROFESSIONAL ENGINEER — DocuSigned by: Gary Lovering

PAVEMENT DESIGN ENGINEER — SEAL 022896, CLARK S. MORRISON, NORTH CAROLINA PROFESSIONAL ENGINEER — DocuSigned by: Clark Morrison

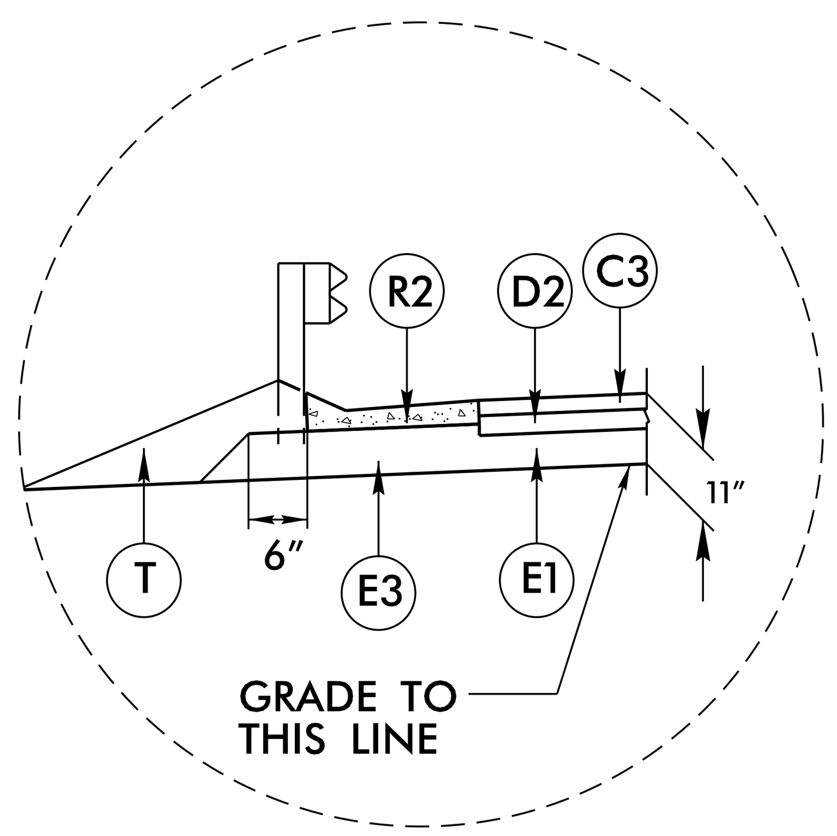
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PAVEMENT SCHEDULE

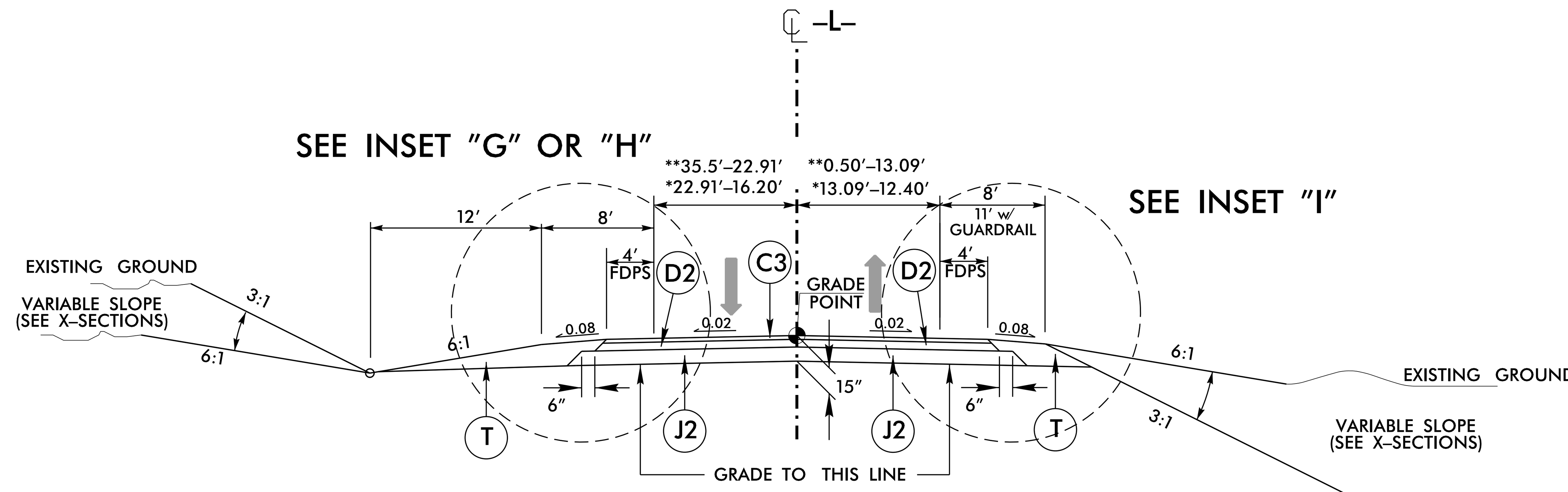
C1	1.5" S9.5B
C2	2.5" S9.5B
C3	3" S9.5B
C4	VAR. S9.5B
D1	2.5" I19.0B
D2	4" I19.0B
D3	VAR. I19.0B
E1	4" B25.0B
E2	5.5" B25.0B
E3	VAR. B25.0B
J1	6" ABC
J2	8" ABC
J3	VAR. ABC
R1	2'-6" C&G
R2	SHOULDER BERM GUTTER
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W1	-L- WEDGING DETAIL
W2	-Y- WEDGING DETAIL
W3	-Y1- -Y2- WEDGING DETAIL



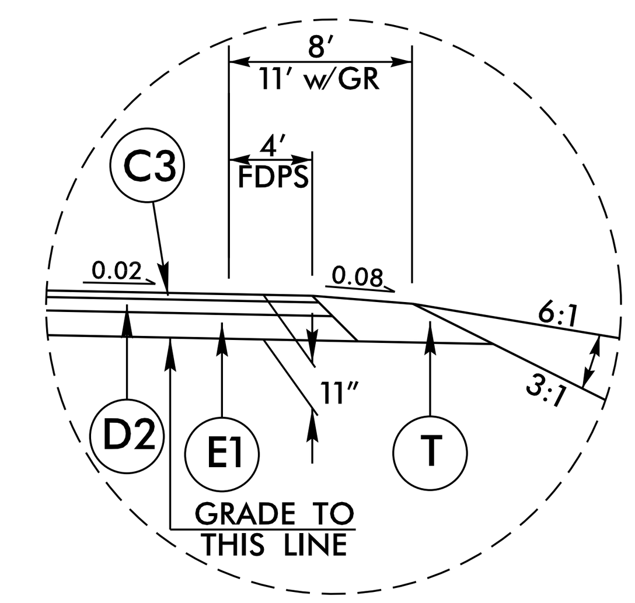
INSET "G"
-L- STA 130+51.15 TO STA 134+76.15 LT



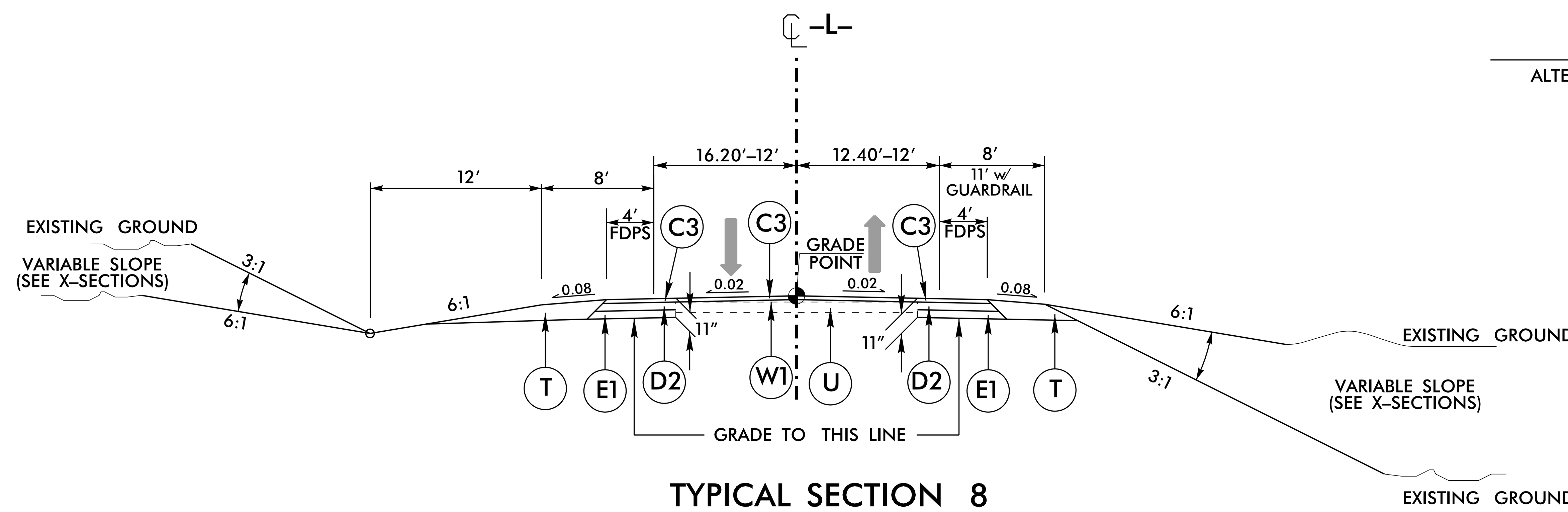
INSET "H"
-L- STA 130+51.15 TO STA 134+76.15 LT



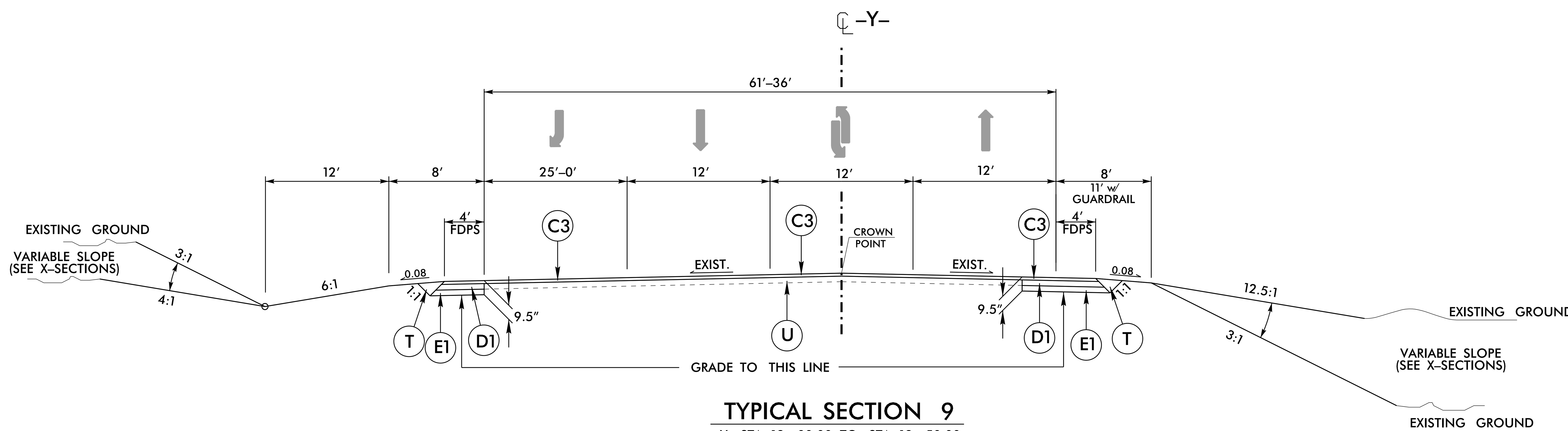
TYPICAL SECTION 7
**-L- STA 134+50.00 TO STA 142+00.00
*-L- STA 142+00.00 TO STA 146+00.00



INSET "I"
ALTERNATE PAVEMENT DESIGN



TYPICAL SECTION 8
-L- STA 146+00.00 TO STA 149+00.00



TYPICAL SECTION 9
-Y- STA 18+00.00 TO STA 19+50.00

6/2/99

05-DEC-2016 16:26
R:\Roadway\Proj\R3826_Rdy_typ.dgn
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-3826	2A-4

ROADWAY DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 025873 GARY R. LOVERING 12/6/2016 — DocuSigned by: Gary Lovering

PAVEMENT DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022896 CLARK S. MORRISON 12/6/2016 — DocuSigned by: Clark Morrison

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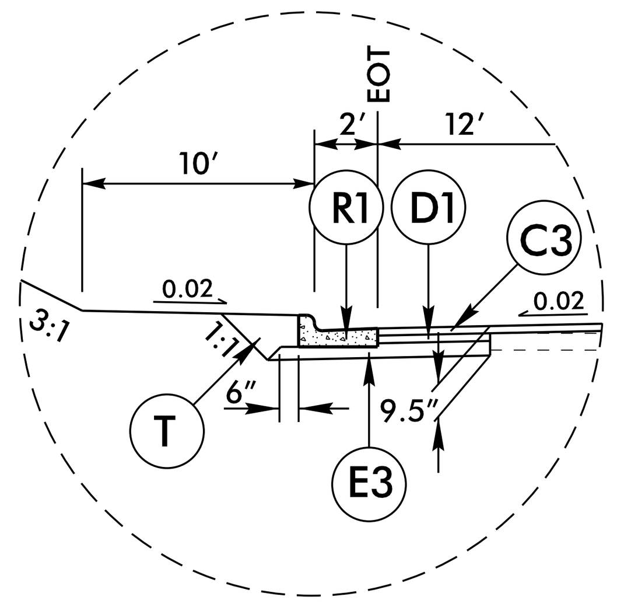
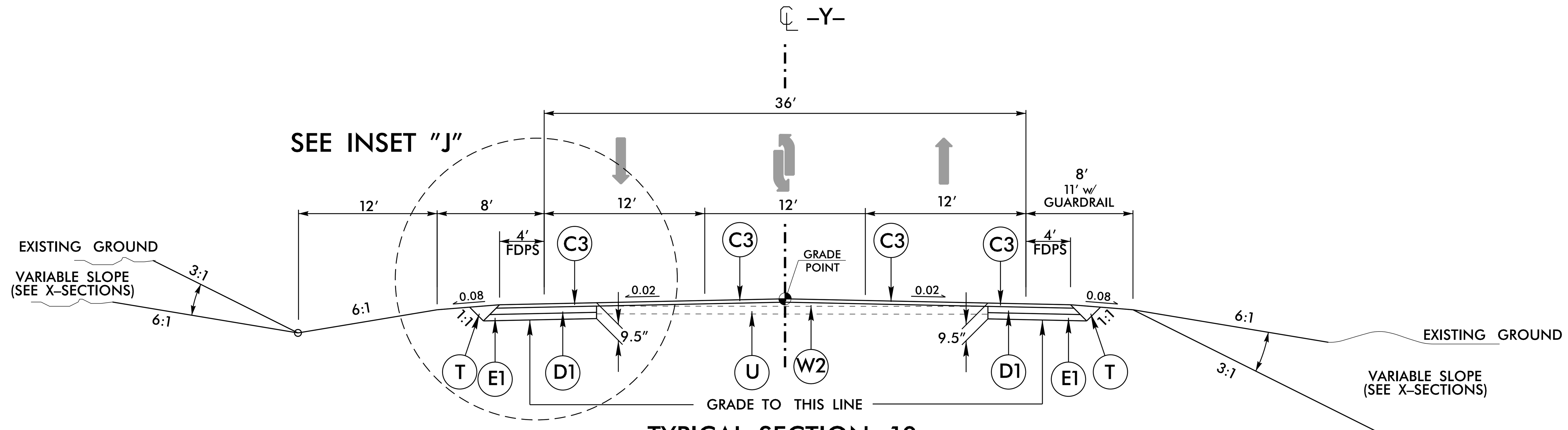
PAVEMENT SCHEDULE

C1	1.5″ S9.5B
C2	2.5″ S9.5B
C3	3″ S9.5B
C4	VAR. S9.5B
D1	2.5″ I19.0B
D2	4″ I19.0B
D3	VAR. I19.0B
E1	4″ B25.0B
E2	5.5″ B25.0B
E3	VAR. B25.0B
J1	6″ ABC
J2	8″ ABC
J3	VAR. ABC
R1	2′-6″ C&G
R2	SHOULDER BERM GUTTER
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W1	-L- WEDGING DETAIL
W2	-Y- WEDGING DETAIL
W3	-Y1- -Y2- WEDGING DETAIL



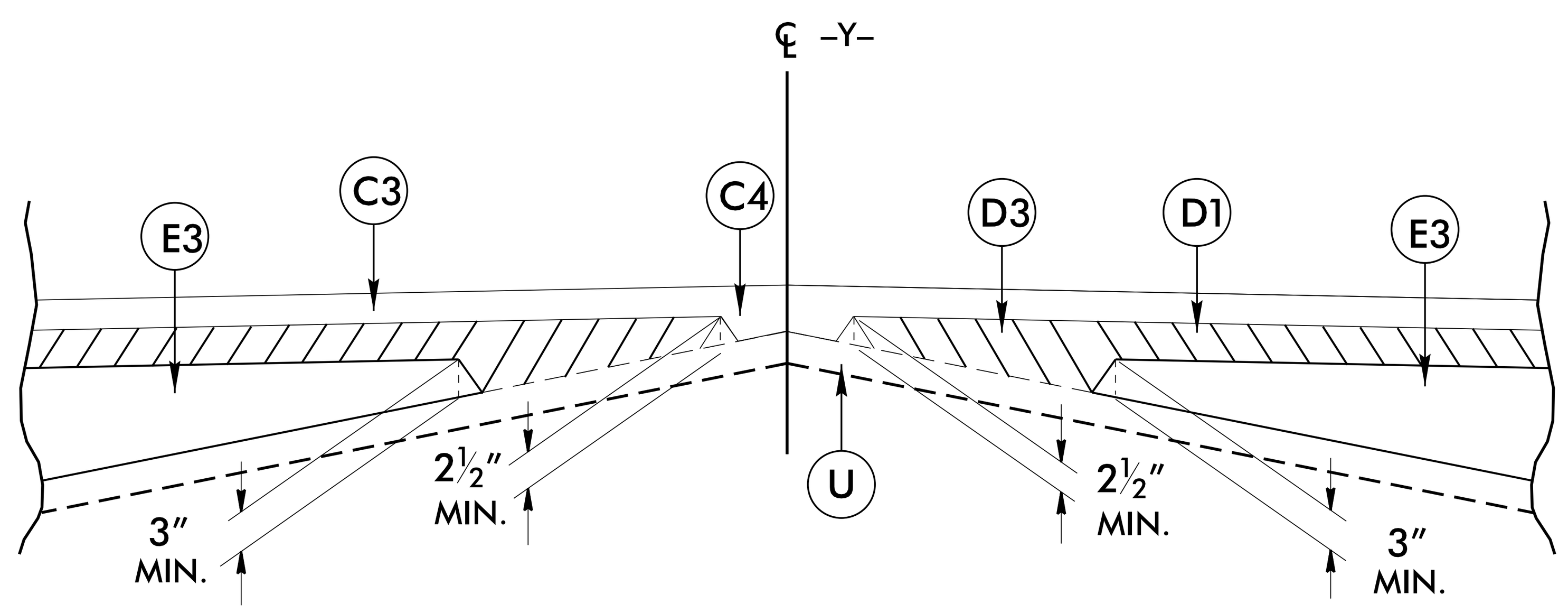
INSET "J"

-Y- STA 22+74.41 TO STA 26+69.15

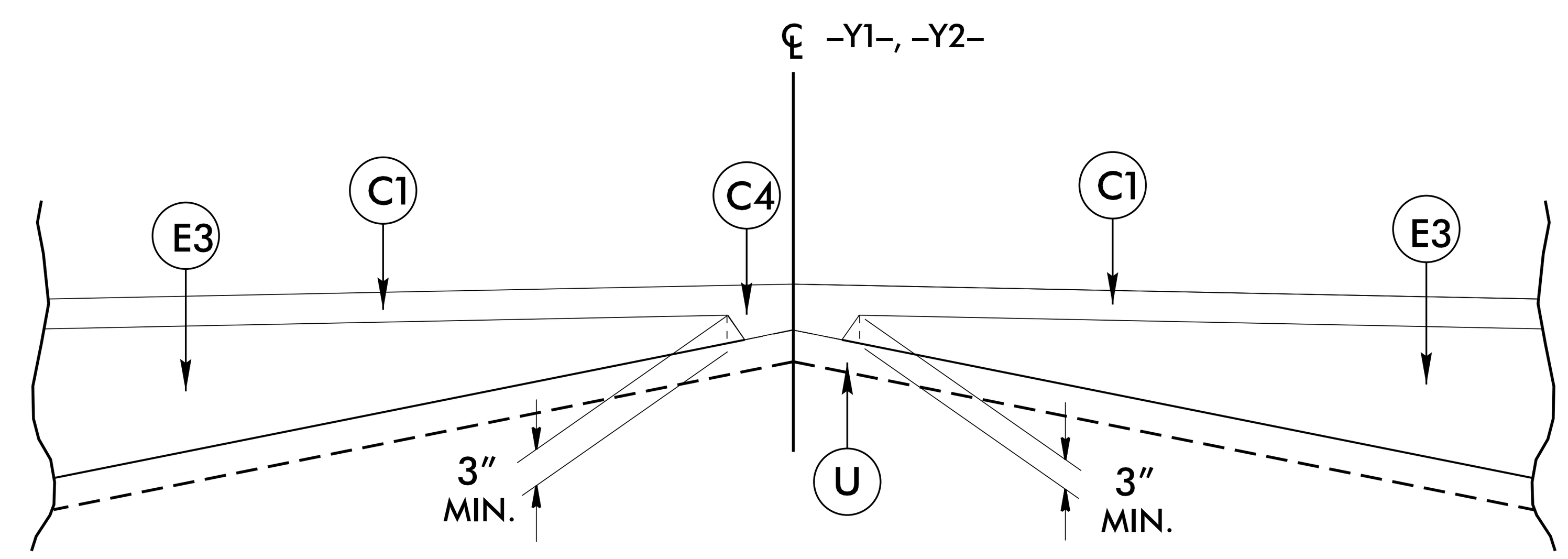


TYPICAL SECTION 10

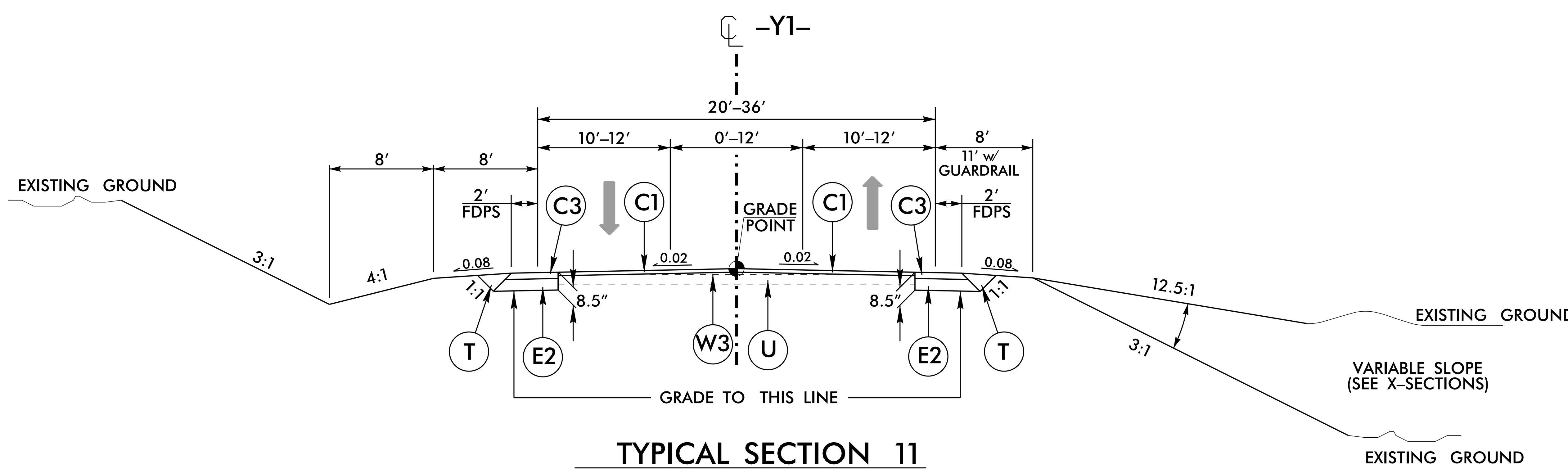
-Y- STA 19+50.00 TO STA 32+50.00



W2 – Detail Showing Method of Wedging for -Y-



W3 – Detail Showing Method of Wedging for -Y1-, -Y2-



TYPICAL SECTION 11

-Y1- STA 14+00.00 TO STA 24+50.00

PROJECT REFERENCE NO.	SHEET NO.
R-3826	2A-5

ROADWAY DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 025873 GARY R. LOVERING — 12/6/2016 — DocuSigned by: Gary Lovering

PAVEMENT DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022896 CLARK S. MORRISON — 12/6/2016 — DocuSigned by: Clark Morrison

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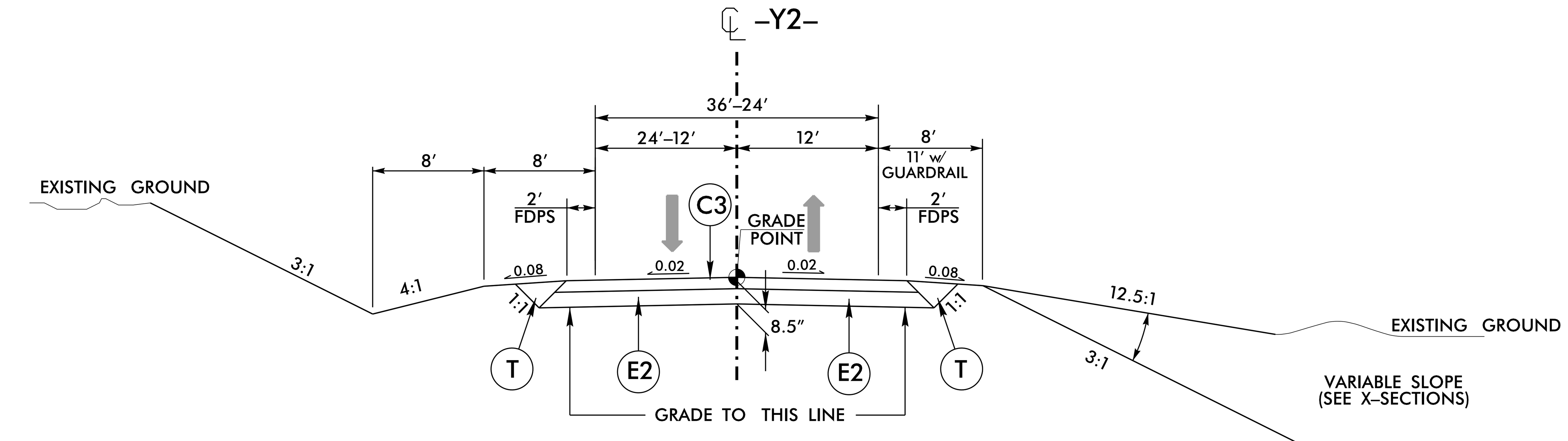
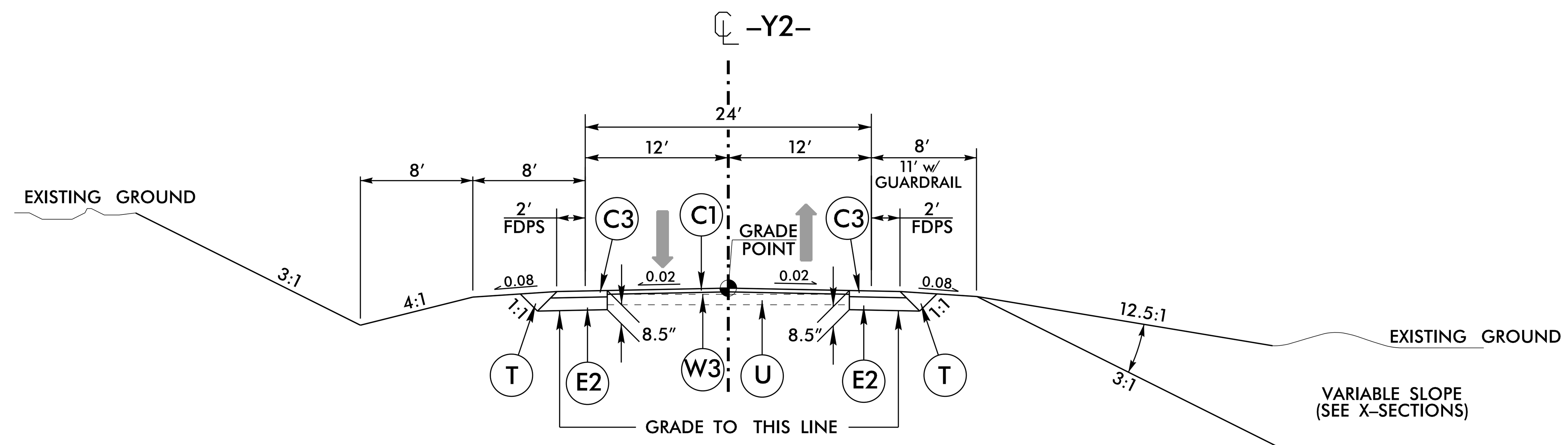
PAVEMENT SCHEDULE

C1	1.5" S9.5B
C2	2.5" S9.5B
C3	3" S9.5B
C4	VAR. S9.5B
D1	2.5" I19.0B
D2	4" I19.0B
D3	VAR. I19.0B
E1	4" B25.0B
E2	5.5" B25.0B
E3	VAR. B25.0B
J1	6" ABC
J2	8" ABC
J3	VAR. ABC
P	PRIME COAT
R1	2'-6" C&G
R2	SHOULDER BERM GUTTER
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W1	-L- WEDGING DETAIL
W2	-Y- WEDGING DETAIL
W3	-Y1- -Y2- WEDGING DETAIL



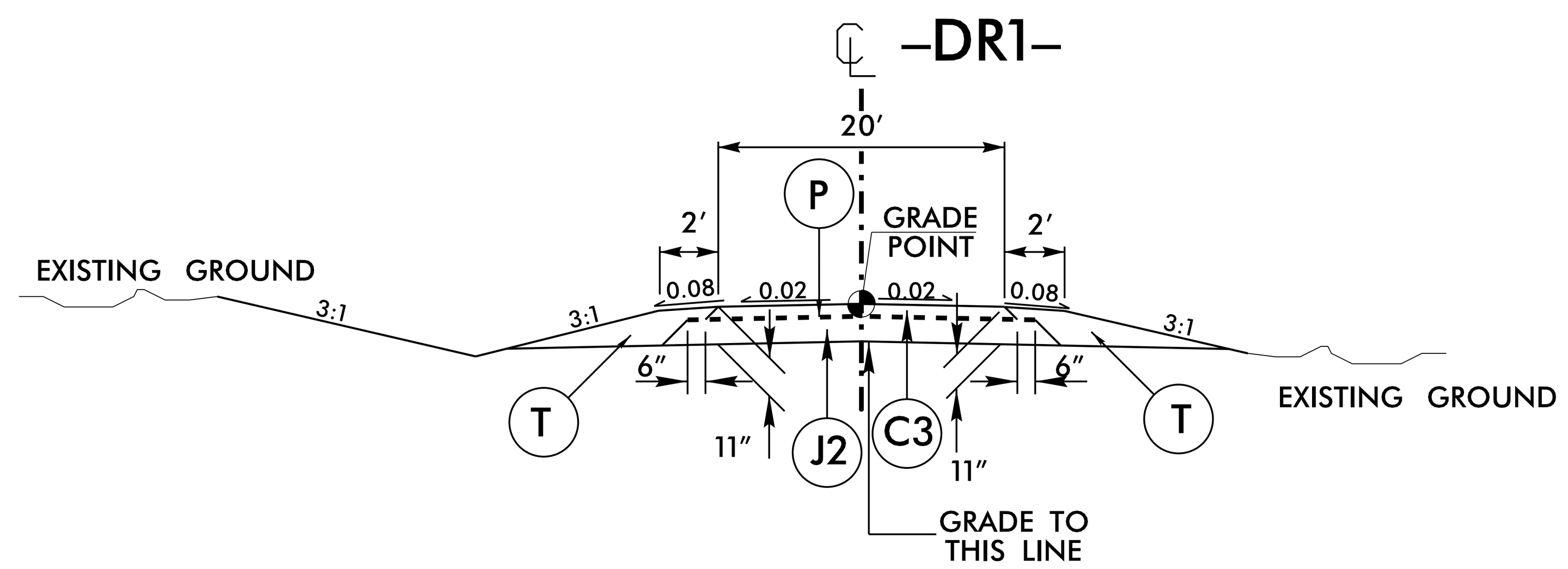
TYPICAL SECTION 12

-Y2- STA 10+12.45 TO STA 14+50.00



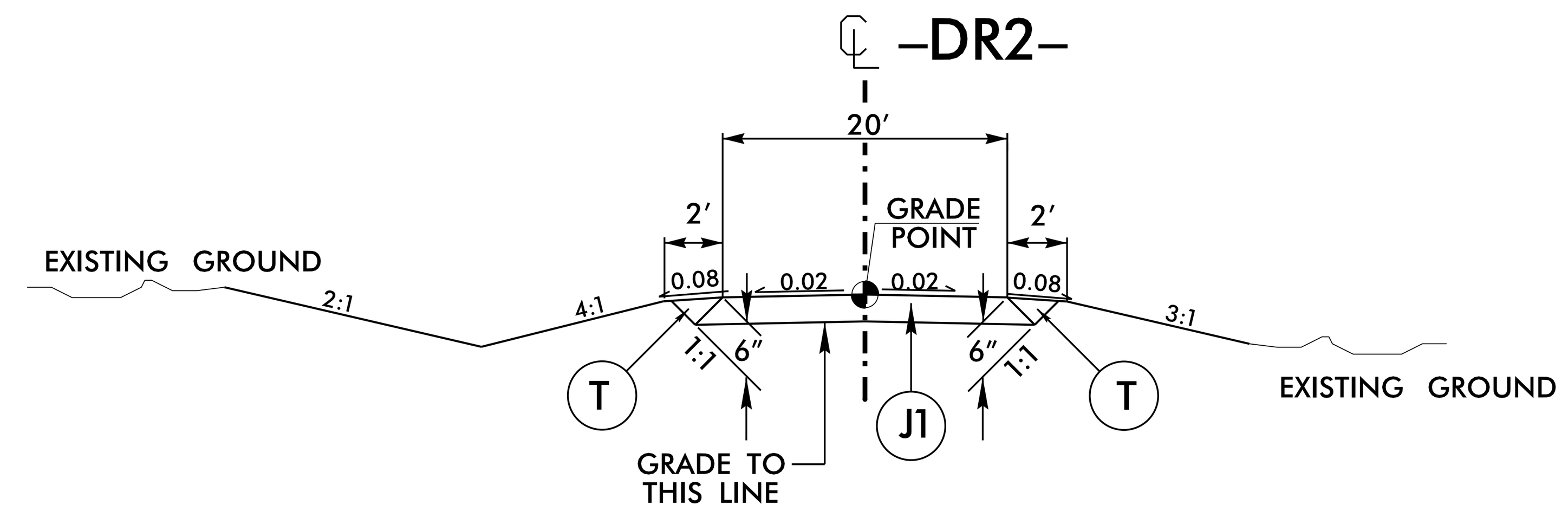
TYPICAL SECTION 13

-Y2- STA 14+50.00 TO STA 16+00.00



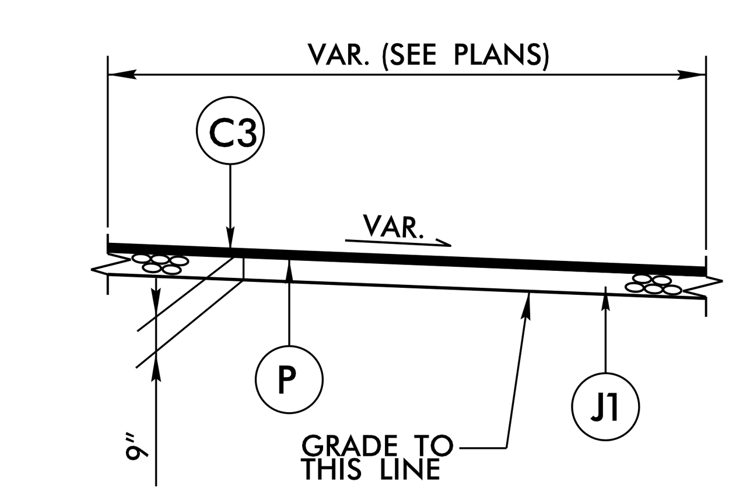
TYPICAL SECTION 14

-DR1- STA 10+00.00 TO STA 11+25.00

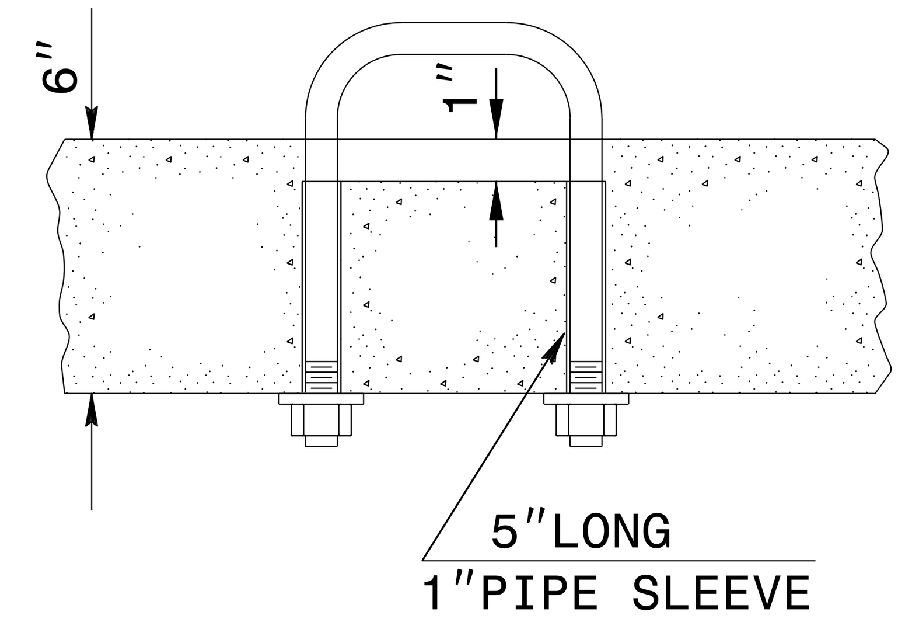


TYPICAL SECTION 15

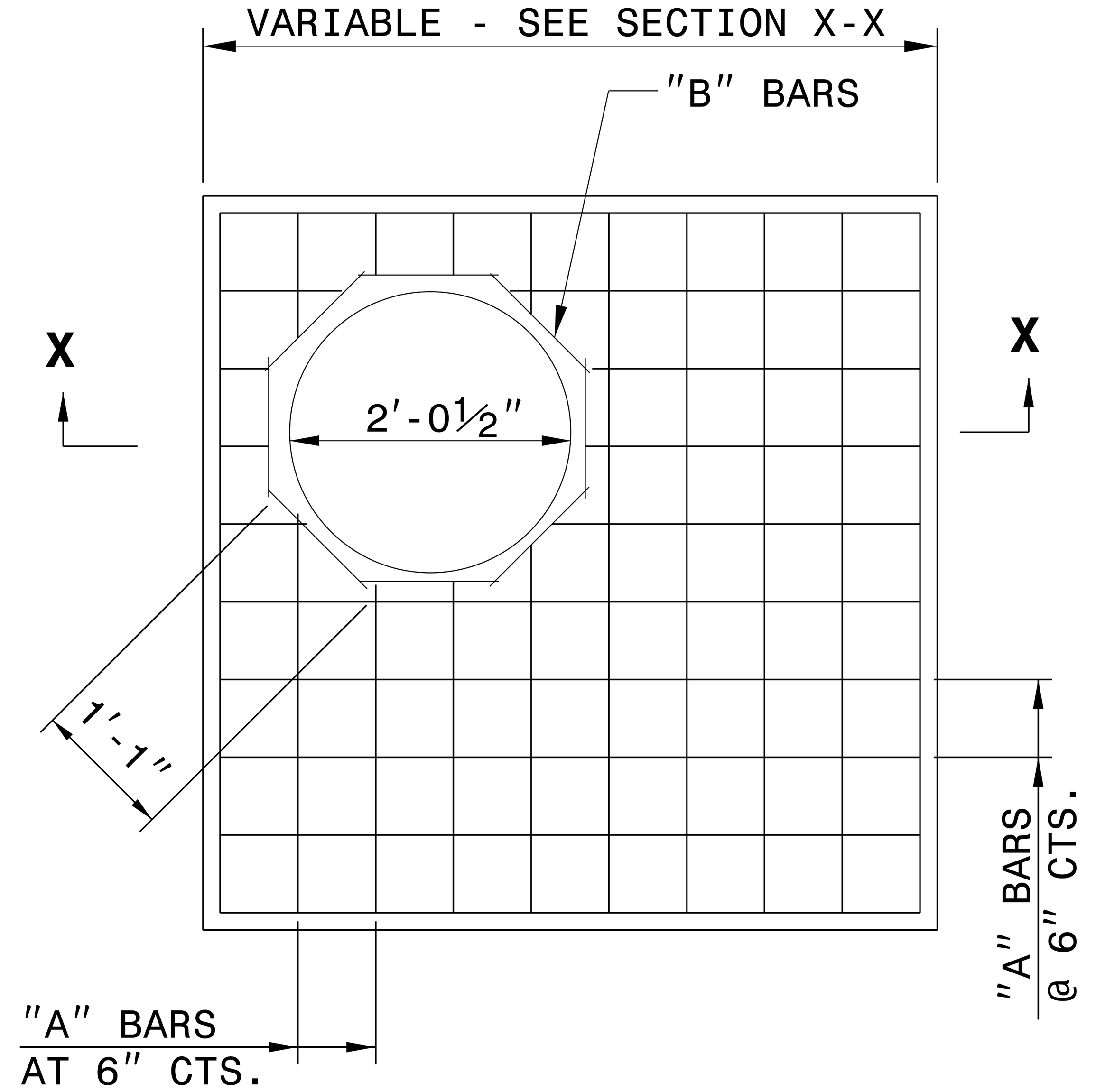
-DR2- STA 10+18.00 TO STA 11+29.00



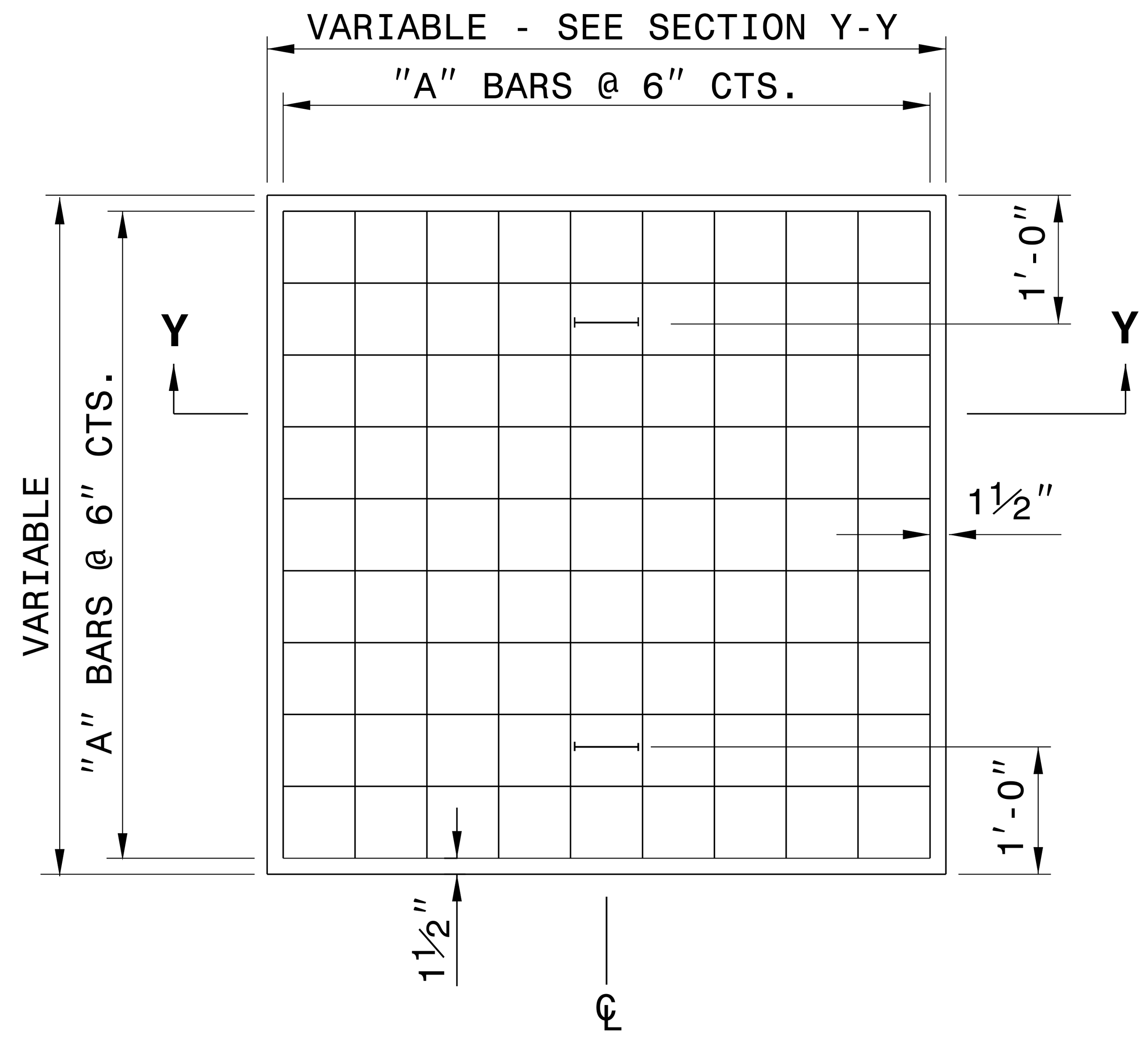
ROADWAY	REMARKS
MISC. PAVED PRIVATE DRIVES	SEE PLANS FOR LOCATIONS



PARTIAL SECTION



PLAN



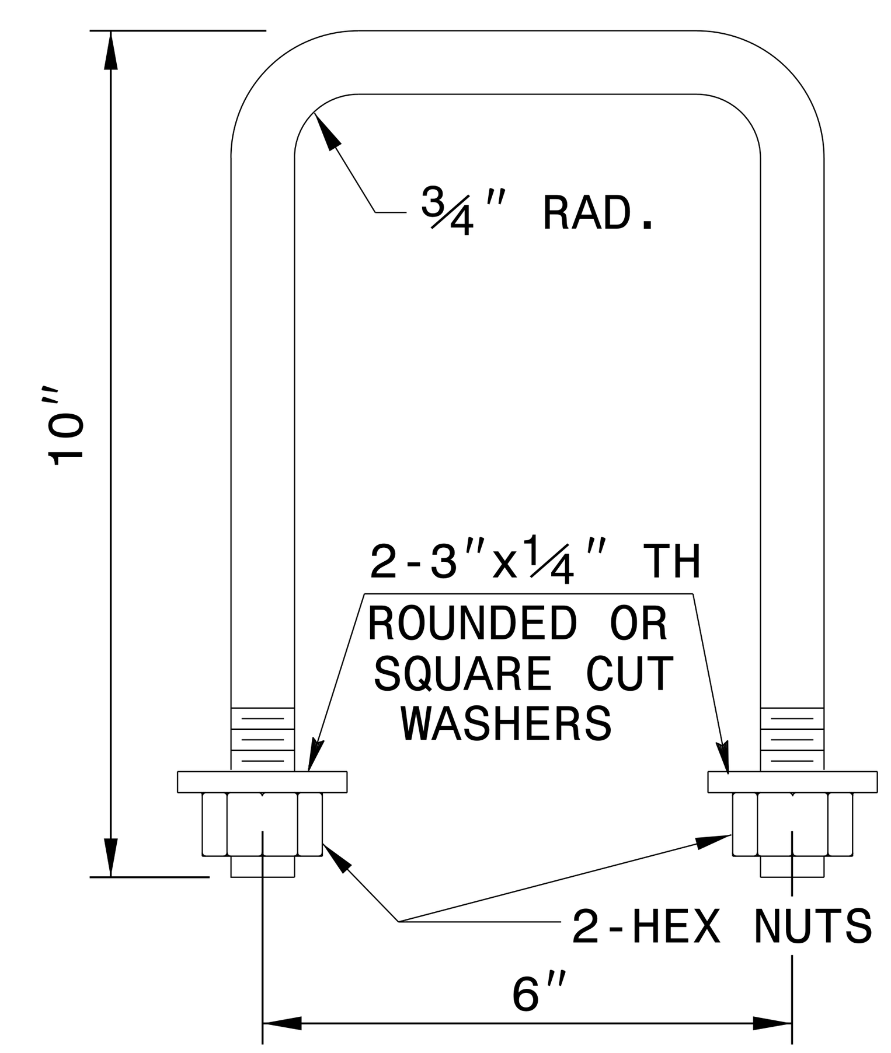
PLAN

GENERAL NOTES:

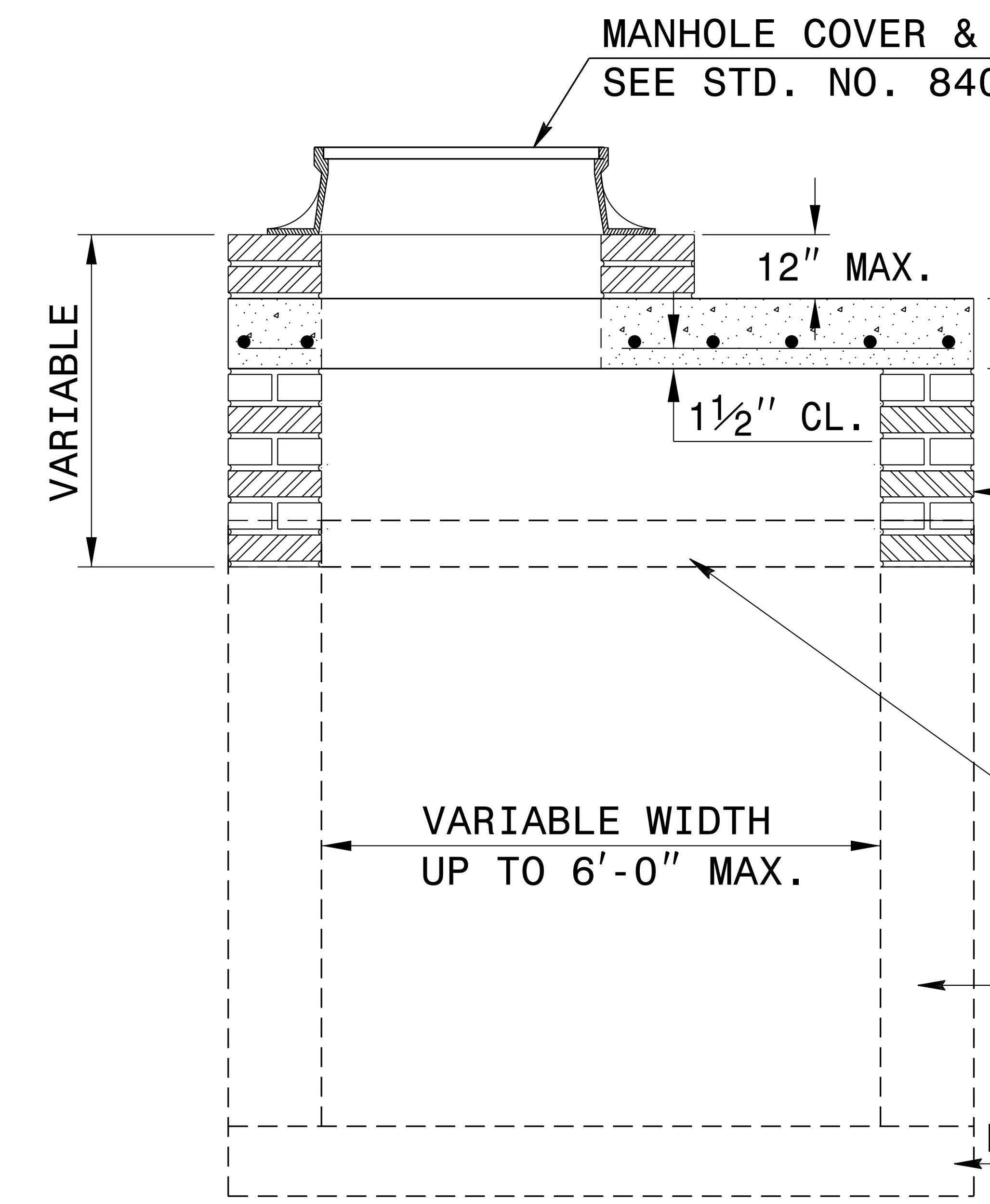
CONSTRUCT IN ACCORDANCE WITH SECTION 859 OF THE STANDARD SPECIFICATIONS.

THE DIMENSIONS FOR THE EXISTING BOXES ARE APPROXIMATE AND MAY VARY SLIGHTLY.

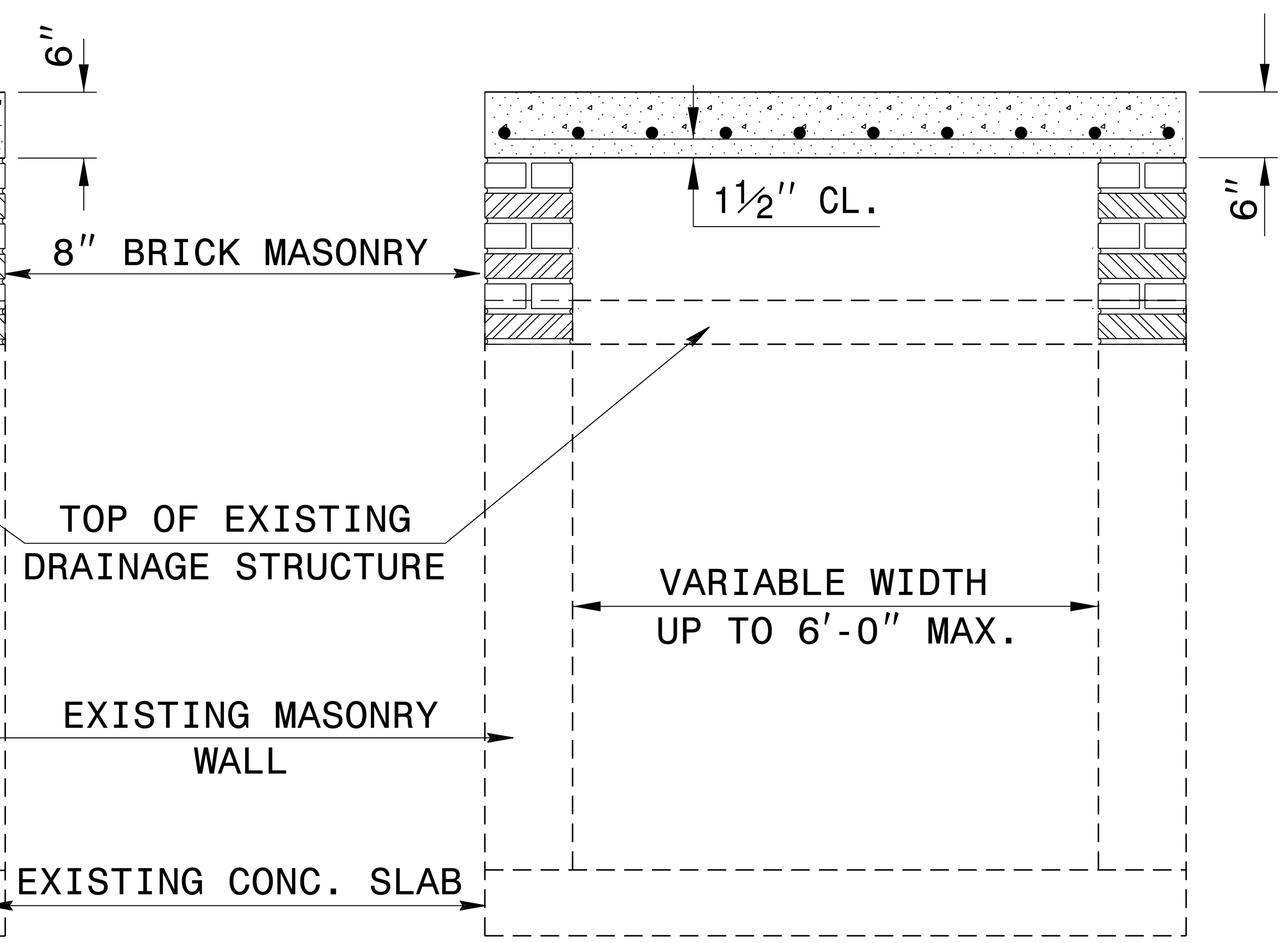
DETAIL INTENDED FOR NON-TRAFFIC BEARING DRAINAGE STRUCTURES.



DETAIL OF HANDLE



SECTION X-X



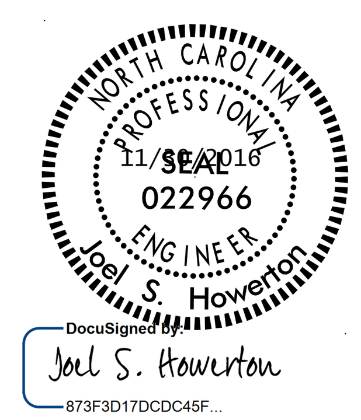
SECTION Y-Y

BILL OF MATERIALS

REINFORCING STEEL				
CODE	SIZE	QTY.	LENGTH	REINF. STEEL LBS.
A	#4	20	4'-6"	60.12
B	#4	8	1'-1"	5.79
TOTAL				65.91 *

MASONRY	CU YDS
TOP SLAB CONCRETE CLASS "B"	.4326 *
BRICK MASONRY PER FT HT (MIN)	.4111

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



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

DETAIL TO CONVERT EXISTING DI, CB, OTCB or GI TO JUNCTION BOX (MANHOLE OPTIONAL)

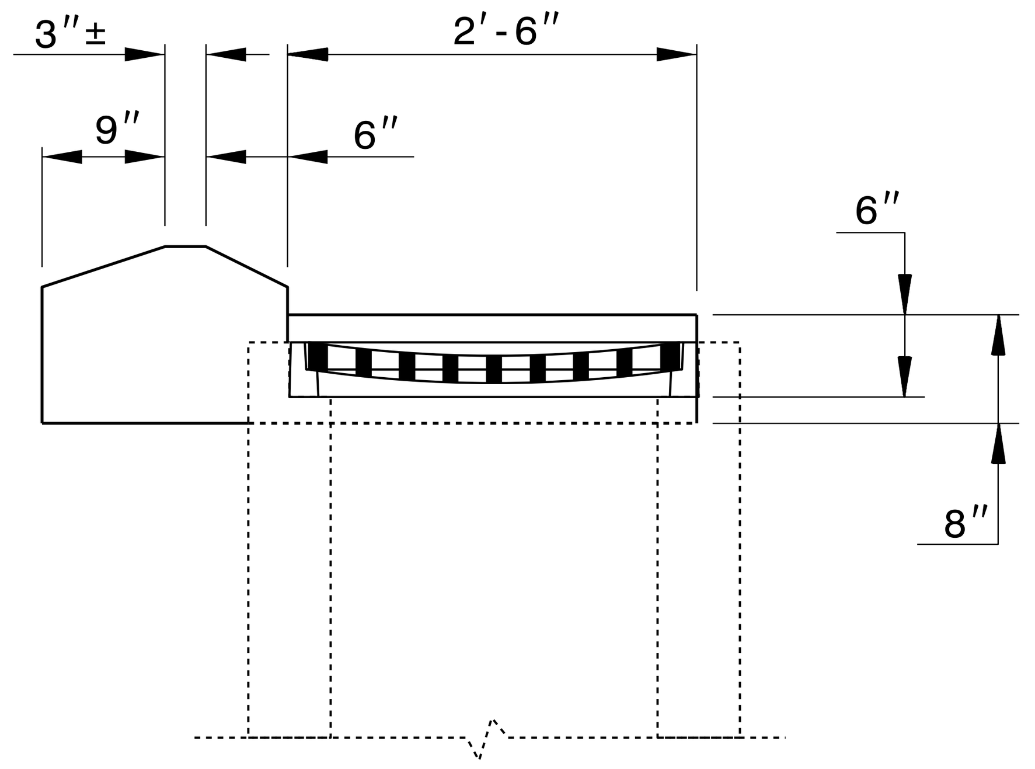
ORIGINAL BY: T.S.S. DATE: NOV.1997
MODIFIED BY: T.S.S. DATE: FEB.2000
CHECKED BY: DATE:
FILE SPEC.: ds174:/usr/details/stand/boxtojbe.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-3826	2C-2

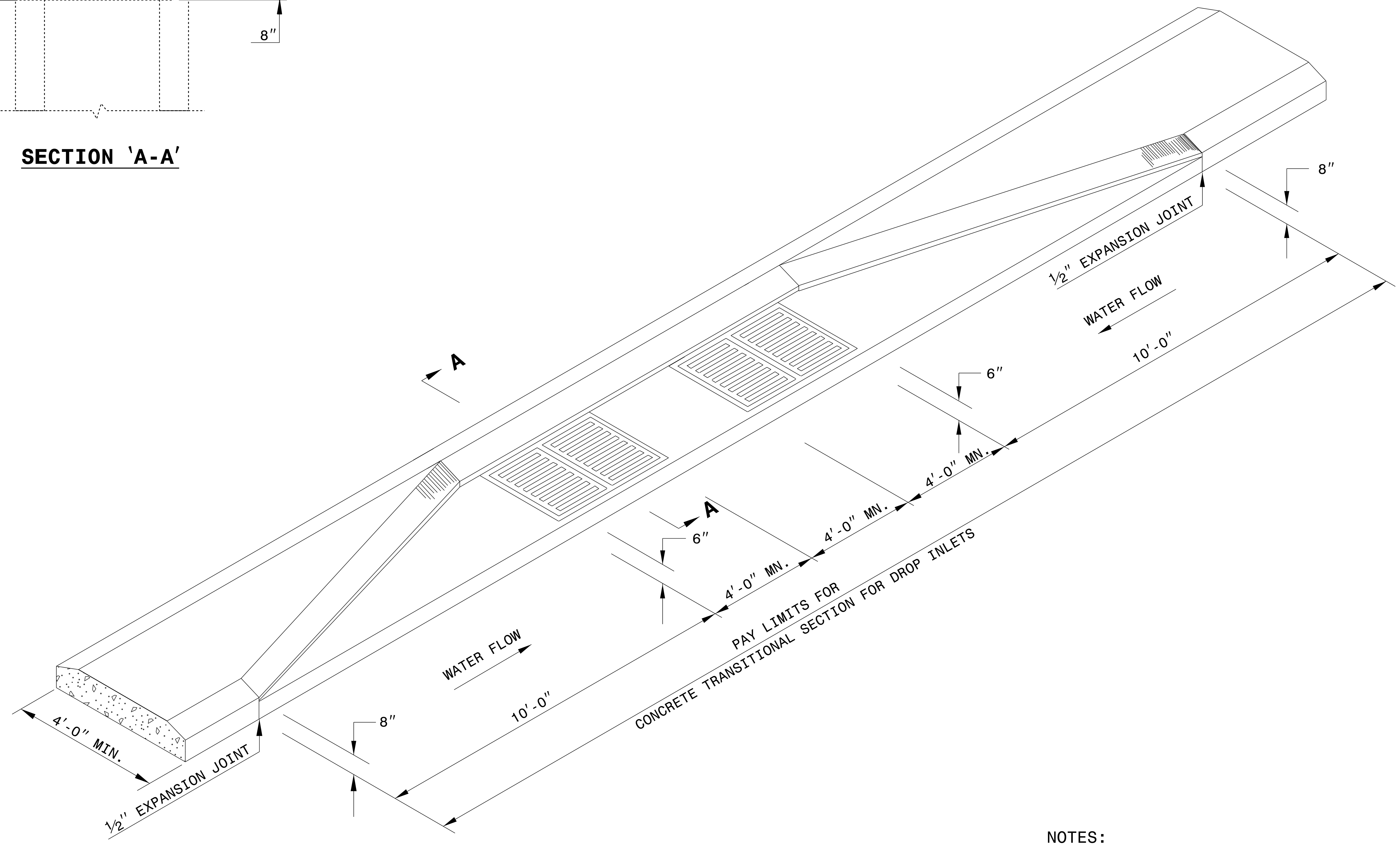
STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR

METHOD FOR PLACEMENT OF DROP INLETS IN CONCRETE ISLANDS



SECTION 'A-A'



NOTES:
-REFER TO STD. NO. 840.14 OR 840.15 FOR DRAINAGE STRUCTURE.
-REFER TO STD. NO. 840.16 FOR GRATE AND FRAME.

SHEET 1 OF 1

852D06

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

ENGLISH DETAIL DRAWING FOR
METHOD FOR PLACEMENT OF DROP INLETS IN CONCRETE ISLANDS

SHEET 1 OF 1
852D06

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022966 Joel S. Howerton 11/8/2016

DocuSigned by: Joel S. Howerton

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

SEE TITLE PLATE

ORIGINAL BY: KKEMPF DATE: 8/2/10
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: KKEMPF\ENGLISH\852D0601.DGN

COMPUTED BY: JDG	DATE:	10/6/2016
CHECKED BY: SLS	DATE:	10/11/2016

PROJECT NO.	SHEET NO.
R-3826	3B-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK

IN CUBIC YARDS

Station	Station	Uncl. Excav.	Undercut Excav.	Embank. +%	Borrow	Waste
-L- 12+00.00	-L- 32+05.65	3,956	5,561	11,561	9,777	7,733
-Y- 18+00.00	-Y- 32+50.00	2,447	2,302	4,651	2,473	2,571
	SUBTOTAL	6,403	7,863	16,212	12,250	10,304
-L- 32+80.30	-L- 55+11.50 (RR)	1,510	2,872	16,784	15,766	3,364
-DR2- 10+50.00	-DR2- 11+00.00	186	0	185	0	1
	SUBTOTAL	1,696	2,872	16,969	15,766	3,365
-L- 55+36.00 (RR)	-L- 80+10.80	3,256	4,047	26,071	24,441	5,673
-Y1- 14+00.00	-Y1- 20+13.67	1,133	1,214	1,793	780	1,334
-Y1- 20+49.17	-Y1- 24+50.00	741	947	1,500	828	1,016
	SUBTOTAL	5,130	6,208	29,364	26,049	8,023
-L- 80+46.88	-L- 109+50.00	1,309	3,208	28,676	27,502	3,343
	SUBTOTAL	1,309	3,208	28,676	27,502	3,343
-L- 109+50.00	-L- 132+50.00 (CUL)	0	623	33,139	33,139	623
-DR1- 10+00.00	-DR1- 11+25.00	29	0	344	315	0
	SUBTOTAL	29	623	33,483	33,454	623
-L- 132+50.00 (CUL)	-L- 149+00.00	3,121	4,328	28,719	27,357	6,087
-Y2- 10+50.00	-Y2- 16+00.00	288	0	6,388	6,100	0
	SUBTOTAL	3,409	4,328	35,107	33,457	6,087
	PROJECT SUBTOTAL:	17,976	25,102	159,811	148,478	31,745
SHOULDER MATERIAL				10,405	10,405	
LESS SELECT GRANULAR MATERIAL				-31,378	-31,378	
ADDITIONAL UNDERCUT (PER GEOTECH)			3,800	4,750	4,750	3,800
WASTE IN LIEU OF BORROW					-1	-1
PROJECT TOTALS:		17,976	28,902	143,588	132,254	35,544
EST 5% TO REPLACE TOP SOIL ON BORROW PIT					6,613	
GRAND TOTAL:		17,976	28,902	143,588	138,867	35,544
SAY:		**18,100**	**29,125**		**139,950**	

EARTHWORK TOTALS FOR ALTERNATE ASPHALT PAVEMENT DESIGN

	Uncl. Excav.	Undercut Excav.	Embank. +%	Borrow	Waste
PROJECT SUBTOTAL:	17,976	25,102	159,811	148,478	31,745
ADJUSTMENT FOR ALTERNATE PAVEMENT	-904	-2,547	5,312	5,570	-3,193
SHOULDER MATERIAL			7,471	7,471	
LESS SELECT GRANULAR MATERIAL			-28,194	-28,194	
ADDITIONAL UNDERCUT (PER GEOTECH)		3,800	4,750	4,750	3,800
WASTE IN LIEU OF BORROW				-1	-1
PROJECT TOTALS:	17,072	26,355	149,150	138,074	32,351
EST 5% TO REPLACE TOP SOIL ON BORROW PIT				6,904	
GRAND TOTAL:	17,072	26,355	149,150	144,978	32,351
SAY:	**17,200**	**26,550**		**146,075**	

EST. 1,300 CY DDE
CONTINGENCY ITEMS PER GEOTECHNICAL RECOMMENDATIONS:
SELECT GRANULAR MATERIAL FOR BACKFILL + CONTENGENCY = 31,378 + 2500 = 33878 CY
SELECT GRANULAR MATERIAL FOR BACKFILL + CONTENGENCY = 28,194 + 2500 = 30694 CY (ALT)
EST. 1,000 CY SHALLOW UNDERCUT
EST. 1,900 TON CLASS IV SUBGRADE STABILIZATION
-L-, -Y-, -Y1-, & -Y2- PAVEMENT STRUCTURE VOLUME = 42,360 cy
-L- (ALT.), -Y-, -Y1-, & -Y2- PAVEMENT STRUCTURE VOLUME = 29524 cy

Note: Earthwork quantities are calculated by the Roadway Design Unit. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

SHOULDER BERM GUTTER SUMMARY

LINE	Station	Station	LENGTH (LF)
-L-	130+51.15	134+76.15	425
		TOTAL:	425
		SAY:	425

2' X 6" CONCRETE CURB AND GUTTER

LINE	Station	Station	LENGTH (LF)
-L-	32+80	54+15	1992
-L-	32+80	54+15	1935
-Y-	22+74	23+33	74
-Y-	23+94	26+69	252
		TOTAL:	4253
		SAY:	4265

PAVEMENT REMOVAL SUMMARY

IN SQUARE YARDS

SURVEY LINE	Station	Station	LOCATION LT/RT/CL	ASPHALT REMOVAL	ASPHALT BREAKUP	CONCRETE REMOVAL	CONCRETE BREAKUP
-L-	23+00.00	32+06.00	LT.	2778			
-L-	33+59.00	45+50.00	RT.	1405			
-L-	45+50.00	53+92.00	RT.	2427			
-Y2-	10+00.00	14+50.00	RT.	2753			
		TOTAL:		9363			
		SAY:		9400			

GUARDRAIL SUMMARY

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL
TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL
W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL

G = GATING IMPACT ATTENUATOR TYPE 350
NG = NON-GATING IMPACT ATTENUATOR TYPE 350

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOUL WIDTH	FLARE LENGTH		W		ANCHORS									IMPACT ATTENUATOR TYPE 350		SINGLE FACED CONCRETE BARRIER	REMOVE EXISTING GUARDRAIL	REMOVE & STOCKPILE EXISTING GUARDRAIL	REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	XI MOD	XI	GRAU 350	M-350	XIII	CAT-1	VI MOD	BIC		G	NG				
-L-	62+65.60	66+01.39	LT	335.79			64+75.04	63+93.03	8	11	50	50	1	1			2												
-L-	62+63.97	66+03.02	RT	339.05			63+89.60	64+76.54	8	11	50	50	1	1			2												
-L-	129+99.79	135+27.58	LT	527.79			132+49.51	132+28.48	8	11	50	50	1	1			2												
-L-	130+24.39	135+49.39	RT	525.00			131+50.00	132+69.00	8	11	50		1				1			1									
			SUBTOTAL	1727.63													7			1									
		DEDUCTIONS FOR GRAU 350: 7 @ 50 FT		350																									
		DEDUCTIONS FOR CAT-I: 1 @ 6.25 FT		6.25																									
			TOTAL	1371.38	5 ADDITIONAL GUARDRAIL POST																									
			SAY	1375																									

COMPUTED BY: HCN DATE: 1/30/15

CHECKED BY: MTP DATE: 1/30/15

PROJECT NO.	SHEET NO.
R-3826	3D-1

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

RD-293517

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

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

STATION	LOCATION (LT, RT, OR CL)'	STRUCTURE NO. FROM	STRUCTURE NO. TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	DRAINAGE PIPE (RCP, CSP, CAAP, HDPE, or PVC) 15" HDPE	15"	24"	30"	36"	42"	48"	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE
-L- 12+00	LT																	
-L- 13+33	RT	0403																
-L- 14+02	RT	0404																
-L- 15+03	RT	0405																
-L- 19+09	RT	0408																
-L- 22+97	LT	0406																
-L- 24+27	LT	0407																
-L- 25+69	LT	0523																
-L- 27+88	RT	0525																
-L- 26+36	CL	0500			71.3	70.96												
-L- 31+50	CL	0501			73.39	72.65												
-Y- 19+80	RT	0516																
-Y- 20+87	RT	0517																
-Y- 20+63	LT	0518																
-Y- 21+50	LT	0519																
-Y- 22+60	LT	0502		77.21														
-Y- 22+62	LT	0502	0503		74.46	74.42												
-Y- 22+65	LT	0503		77.17														
-Y- 22+68	LT	0503	0504		74.17	73.88												
-L- 33+27	CL	0505	0506		73.74	70.69												
-L- 33+30	RT	0506		75.61														
-L- 33+35	RT	0506	0507		71.44	72.15			16									
-L- 33+40	RT	0507		74.9														
-Y- 24+33	LT	0506	0508		70.69	69.54												
-Y- 24+50	LT	0508		74.46														
-Y- 25+29	LT	0508	1400		69.54	68.76												
-Y- 26+01	LT	1400	0509		69.5	72.8												
-Y- 25+37	RT	0510		75.31														
-Y- 25+37	RT	0510	0511		72.31	71.66												
-L- 33+77	RT	0506	0512		71.44	72.88												
-L- 34+25	RT	0512		77.05														
-L- 35+75	RT	0521																
-L- 36+67	CL	0515			73.93	73.26												
-L- 38+25	RT	0513		76.19														
-L- 38+25	RT	0513	0514		72.02	71.83												
-L- 37+50	RT	0522																
-L- 39+60	CL	0607																
-L- 39+98	RT	0601		75.67														
-L- 39+90	RT	0601	0609		70.88	70.49												
-L- 40+88	RT	0601	0603		70.88	71.78												
-L- 41+78	RT	0603		76.4														
-L- 41+78	CL	0602	0603		71.97	71.78												
-L- 41+78	LT	0602		76.4														
-L- 41+89	LT	0602	0610		72.22	72.33												
-L- 42+00	LT	0610		76.5														
SHEET 1 TOTALS									16									

STATION	LOCATION	C.S. PIPE 15" .064	18" .064	24" .064	30" .079	36" .079	42" .109	48" .109	R.C. PIPE CLASS III 15"	18"	24"	30"	36"	42"	48"	R.C. PIPE CLASS IV 15"	18"	24"	30"	36"	42"	48"		15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	24" SIDE DRAIN PIPE	ENDWALLS STD. 838.01 838.11 OR STD. 838.80 (UNLESS NOTED OTHERWISE) CU. YARDS R.C.P.	C.S.P.
-L- 12+00	LT																											
-L- 13+33	RT																							24				
-L- 14+02	RT																							24				
-L- 15+03	RT																							24				
-L- 19+09	RT																							32				
-L- 22+97	LT																							24				
-L- 24+27	LT																							24				
-L- 25+69	LT																							28				
-L- 27+88	RT																							28				
-L- 26+36	CL										116																	
-L- 31+50	CL										140																	
-Y- 19+80	RT																							56				
-Y- 20+87	RT																							100				
-Y- 20+63	LT																							24				
-Y- 21+50	LT																							36				
-Y- 22+60	LT																											
-Y- 22+62	LT															4												
-Y- 22+65	LT																											
-Y- 22+68	LT																60											
-L- 33+27	CL										80																	
-L- 33+30	RT																											
-L- 33+35	RT																											
-L- 33+40	RT																											
-Y- 24+33	LT										64																	
-Y- 24+50	LT																											
-Y- 25+29	LT										156																	
-Y- 26+01	LT								20																			
-Y- 25+37	RT																											
-Y- 25+37	RT															40												
-L- 33+77	RT								100																			
-L- 34+25	RT																											
-L- 35+75	RT																							24				
-L- 36+67	CL																	88										
-L- 38+25	RT																											
-L- 38+25	RT								32																			
-L- 37+50	RT																									28		
-L- 39+60	CL												112														3.4	
-L- 39+98	RT																											
-L- 39+90	RT									40																		
-L- 40+88	RT									180																		
-L- 41+78	RT																											
-L- 41+78	CL									40																		
-L- 41+78	LT																											
-L- 41+89	LT								20																			
-L- 42+00	LT																											
SHEET 1 TOTALS									172	260	556		112			44	60	88						448		28	3.4	

STATION	LOCATION	QUANTITIES FOR DRAINAGE STRUCTURES PER EACH (0' THRU 5.0')	*TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL.'B') LIN. FT. A 5.0' THRU 10.0'	B 10.0' AND ABOVE	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STANDARD 840.03 TYPE OF GRATE E	F	G	CONCRETE TRANSITIONAL SECTION DROP INLET	CATCH BASIN	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR 840.26	G.D.I. TYPE "B" STD. 840.18 OR 840.27	G.D.I. TYPE "D" STD. 840.19 OR 840.28	G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.29	G.D.I. FRAME WITH TWO GRATES STD. 840.22	G.D.I. (N.S.) FRAME WITH GRATE STD. 840.24	G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24	J.B. STD. 840.31 OR 840.32	M. H. FRAME AND COVER STD. 840.54	CONVERT EXISTING DROP INLET TO JUNCTION BOX W/ MANHOLE	FLOWABLE FILL (CY)	R.C. PIPE, CLASS III ELBOWS NO. & SIZE	CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	CONC. COLLARS CL. "B" C.Y. STD. 840.72	PIPE REMOVAL LIN. FT.	REMARKS
-L- 12+00	LT																										21	REMOVE 18" RCP
-L- 13+33	RT																										24	REMOVE 15" RCP
-L- 14+02	RT																										24	REMOVE 15" RCP
-L- 15+03	RT																										24	REMOVE 15" RCP
-L- 19+09	RT																										20	REMOVE 15" RCP
-L- 22+97	LT																						3.0				30	REMOVE 15" RCP, DI; FILL 18" RCP
-L- 24+27	LT																										28	REMOVE 15" RCP
-L- 25+69	LT																										48	REMOVE 2-15" RCP
-L- 27+88	RT																										22	REMOVE 15" RCP
-L- 26+36	CL																										64	REMOVE 15" RCP, 18" RCP
-L- 31+50	CL																										163	REMOVE 18" RCP, 15" RCP, DI
-Y- 19+80	RT																										55	REMOVE 15" CMP, HW
-Y- 20+87	RT																										170	REMOVE 15" CMP, HW
-Y- 20+63	LT																										32	REMOVE 18" CMP
-Y- 21+50	LT																										39	REMOVE 18" CMP, HW
-Y- 22+60	LT	1							1		1	1																SEE DETAIL 2C-2
-Y- 22+62	LT																											
-Y- 22+65	LT	1							*		1	1																SEE DETAIL 2C-2
-Y- 22+68	LT																										27	REMOVE 18" CMP
-L- 33+27	CL																										143	REMOVE 18" RCP
-L- 33+30	RT	1			1			1																				
-L- 33+35	RT																											
-L- 33+40	RT	1												1					1									
-Y- 24+33	LT																										21	REMOVE 18" RCP, JB
-Y- 24+50	LT	1			1			1																				
-Y- 25+29	LT																										134	REMOVE 24" RCP, DI
-Y- 26+01	LT																											
-Y- 25+37	RT	1							1		1	1																
-Y- 25+37	RT																											
-L- 33+77	RT																										24	REMOVE 15" RCP
-L- 34+25	RT	1			1			1																				
-L- 35+75	RT																										25	REMOVE 15" RCP
-L- 36+67	CL																										122	REMOVE 15" RCP, 15" CMP
-L- 38+25	RT	1			1		1																					
-L- 38+25	RT																											
-L- 37+50	RT																											
-L- 39+60	CL																											REMOVE 2-36" CMP,DI
-L- 39+98	RT	1			1	1																						
-L- 39+90	RT																											
-L- 40+88	RT																											
-L- 41+78	RT	1			1			1																				
-L- 41+78	CL																											
-L- 41+78	LT	1			1	1																						
-L- 41+89	LT																											
-L- 42+00	LT	1			1		1																					
SHEET 1 TOTALS		12			8	2	2	4	2		3	3		1					1				3.0				1,260	

ABBREVIATIONS

C.B.	CATCH BASIN
N.D.I.	NARROW DROP INLET
	DROP INLET
D.I.	GRATED DROP INLET
G.D.I.	(NARROW SLOT)
G.D.I.(N.S.)	JUNCTION BOX
J.B.	MANHOLE
M.H.	TRAFFIC BEARING
T.B.D.I.	DROP INLET
	TRAFFIC BEARING
T.B.J.B.	JUNCTION BOX

RD-293517

COMPUTED BY:	HCN	DATE:	9/13/2013
CHECKED BY:	MTP	DATE:	1/30/2015

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
R-3826	3D-2

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

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

ABBREVIATIONS

- C.B. — CATCH BASIN
- N.D.I. — NARROW DROP INLET
- D.I. — DROP INLET
- G.D.I. — GRATED DROP INLET
- G.D.I.(N.S.) — GRATED DROP INLET (NARROW SLOT)
- J.B. — JUNCTION BOX
- M.H. — MANHOLE
- T.B.D.I. — TRAFFIC BEARING DROP INLET
- T.B.J.B. — TRAFFIC BEARING JUNCTION BOX

STATION	LOCATION (LT, RT, OR CL)'	STRUCTURE NO. FROM	STRUCTURE NO. TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	DRAINAGE PIPE (RCP, CSP, CAAP, HDPE, or PVC) 15" HDPE	15"	24"	30"	36"	42"	48"	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE
-L- 42+64	RT	0603	0604		71.78	72.76												
-L- 43+50	RT	0604		77.18														
-L- 45+73	LT	0617																
-L- 46+06	LT	0605		78.33														
-L- 46+06	LT	0605	0608		72.45	71.75												
-L- 46+06	LT	0605	0611		72.44	73.83												
-L- 46+65	LT	0605	0606		73.69	74.3												
-L- 47+25	LT	0606		78.47														
-L- 47+04	RT	0618																
-L- 53+50	LT	0701		78.59														
-L- 53+78	LT	0701	0702		74.42	73.92												
-L- 54+07	LT	0702		78.09														
-L- 54+07	CL	0702	0703		73.67	73.48												
-L- 54+07	RT	0703		78.08														
-L- 54+07	RT	0703	0704		73.48	73.33												
-L- 55+03	CL	0710																
-L- 59+06	CL	0711			71.56	71.8												
-L- 63+91	CL	0712									96							
-L- 64+76	CL	0713									96							
-L- 74+99	CL	0801			70.15	70.37												
-Y1- 21+00	CL	0906			72.77	72.42												
-L- 81+00	CL	0907			73.16	72.84												
-Y1- 18+75	LT	0908																
-Y1- 22+83	LT	0903	0904		75.33	74.88												
-Y1- 23+41	LT	0903		77.75														
-Y1- 24+00	LT	0902	0903		75.91	75.33												
-Y1-23+66	RT	910																
-L- 97+61	CL	1001			77.64	76.56												
-L- 98+95	LT	1002																
-L- 111+99	CL	1100			64.5	65.3												
-L- 119+06	CL	1101			58.6	59.19												
-L- 131+52	LT	1201		46.72														
-L- 131+52	CL	1201	1202		40.65	34												
-L- 132+35	LT	1201	1203		40.9	41.68												
-L- 133+19	LT	1203		45.98														
-L- 135+50	CL	1301			43.56	40.5												
-Y2- 12+25	CL	1302			41.38	40.78												
-Y2- 15+20	RT	1304																
-Y2- 15+08	LT	1305																
-Y2- 14+32	RT																	
-L- 141+00	CL	1303			47.78	46.53												
-L- 147+60	RT	1307																
-L- 148+42	RT	1308																
SHEET 2 TOTALS											192							

STATION	C.S. PIPE 15" .064	18" .064	24" .064	30" .079	36" .079	42" .109	48" .109	R.C. PIPE CLASS III 15"	18"	24"	30"	36"	42"	48"	R.C. PIPE CLASS IV 15"	18"	24"	30"	36"	42"	48"
-L- 42+64									172												
-L- 43+50																					
-L- 45+73																					
-L- 46+06																					
-L- 46+06											80										
-L- 46+06											32										
-L- 46+65								116													
-L- 47+25																					
-L- 47+04																					
-L- 53+50																					
-L- 53+78								60													
-L- 54+07																					
-L- 54+07									40												
-L- 54+07																					
-L- 54+07									28												
-L- 55+03																84					
-L- 59+06										112											
-L- 63+91																					
-L- 64+76																					
-L- 74+99										108											
-Y1- 21+00										116											
-L- 81+00										108											
-Y1- 18+75																					
-Y1- 22+83								120													
-Y1- 23+41																					
-Y1- 24+00								120													
-Y1-23+66								28													
-L- 97+61									76												
-L- 98+95																					
-L- 111+99									84												
-L- 119+06																	80				
-L- 131+52																					
-L- 131+52									96												
-L- 132+35								164													
-L- 133+19																					
-L- 135+50									124												
-Y2- 12+25										120											
-Y2- 15+20																					
-Y2- 15+08																					
-Y2- 14+32																					
-L- 141+00										112											
-L- 147+60																					
-L- 148+42																					
SHEET 2 TOTALS								608	620	676	112					84	80				

STATION	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	24" SIDE DRAIN PIPE	ENDWALLS STD. 838.01 838.11 OR STD. 838.80 (UNLESS NOTED OTHERWISE) CU. YARDS R.C.P.	C.S.P.	QUANTITIES FOR DRAINAGE STRUCTURES PER EACH (0' THRU 5.0')	*TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL.'B') LIN. FT. A 5.0' THRU 10.0'	B 10.0' AND ABOVE	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STANDARD 840.03 TYPE OF GRATE E	F	G
-L- 42+64												
-L- 43+50						1			1			1
-L- 45+73	36											
-L- 46+06						1	0.88		1		1	
-L- 46+06												
-L- 46+06												
-L- 46+65												
-L- 47+25						1			1		1	
-L- 47+04	36											
-L- 53+50						1			1			1
-L- 53+78												
-L- 54+07						1			1			1
-L- 54+07												
-L- 54+07						1			1		1	
-L- 54+07												
-L- 55+03												
-L- 59+06												
-L- 63+91												
-L- 64+76												
-L- 74+99												
-Y1- 21+00												
-L- 81+00												
-Y1- 18+75	28											
-Y1- 22+83												
-Y1- 23+41						1						
-Y1- 24+00												
-Y1-23+66												
-L- 97+61												
-L- 98+95	24											
-L- 111+99												
-L- 119+06												
-L- 131+52						1	1.07					
-L- 131+52												
-L- 132+35												
-L- 133+19						1						
-L- 135+50												
-Y2- 12+25												
-Y2- 15+20			20									
-Y2- 15+08		24										
-Y2- 14+32												
-L- 141+00												
-L- 147+60		16										
-L- 148+42		20										
SHEET 2 TOTALS	124	60	20			9	2		6		3	3

STATION	CONCRETE TRANSITIONAL SECTION DROP INLET	CATCH BASIN	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR 840.26	G.D.I. TYPE "B" STD. 840.18 OR 840.27	G.D.I. TYPE "D" STD. 840.19 OR 840.28	G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.29	G.D.I. FRAME WITH TWO GRATES STD. 840.22	G.D.I. (N.S.) FRAME WITH GRATE STD. 840.24	G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24	J.B. STD. 840.31 OR 840.32	M. H. FRAME AND COVER STD. 840.54	CONVERT EXISTING DROP INLET TO JUNCTION BOX W/ MANHOLE	FLOWABLE FILL (CY)	R.C. PIPE, CLASS III ELBOWS NO. & SIZE	CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	CONC. COLLARS CL. "B" C.Y. STD. 840.72	PIPE REMOVAL LIN. FT.	REMARKS
-L- 42+64																				
-L- 43+50																				
-L- 45+73																			40	REMOVE 12" RCP
-L- 46+06																				
-L- 46+06																				REMOVE DI, 30" CMP
-L- 46+06																				REMOVE JB, 30" CMP
-L- 46+65																				
-L- 47+25																				
-L- 47+04																			40	REMOVE 12" RCP
-L- 53+50																				
-L- 53+78																				
-L- 54+07																				
-L- 54+07																				
-L- 54+07																				
-L- 54+07																				
-L- 55+03																				
-L- 59+06																				
-L- 63+91																				
-L- 64+76																				
-L- 74+99																				
-Y1- 21+00															1.8					FILL 15" RCP
-L- 81+00																			20	REMOVE 18" CMP
-Y1- 18+75																			189	REMOVE 3-15" HDPE, HW, 3 DI
-Y1- 22+83																			122	REMOVE 2-15" HDPE, 4" HDPE, JB, 2 DI, HW
-Y1- 23+41							1				1									
-Y1- 24+00																			117	REMOVE 15" HDPE
-Y1-23+66																				
-L- 97+61																				
-L- 98+95																				
-L- 111+99																				
-L- 119+06																				
-L- 131+52						1		1												
-L- 131+52																				
-L- 132+35																				
-L- 133+19						1		1												
-L- 135+50																				
-Y2- 12+25																				
-Y2- 15+20																			25	REMOVE 18" RCP
-Y2- 15+08																			126	REMOVE 2-18" HDPE, DI
-Y2- 14+32																			20	REMOVE 18" RCP, 2 HW
-L- 141+00																				
-L- 147+60																			20	REMOVE 18" RCP
-L- 148+42																			27	REMOVE 18" RCP
SHEET 2 TOTALS						2	1	2			1				1.8				746	

COMPUTED BY: HCN	DATE: 9/13/2013	PROJECT NO.	SHEET NO.
CHECKED BY: MTP	DATE: 1/30/2015	R-3826	3D-3

RD-293517

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

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

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

ABBREVIATIONS

C.B. CATCH BASIN
N.D.I. NARROW DROP INLET
DROP INLET
D.I. GRATED DROP INLET
G.D.I. (NARROW SLOT)
G.D.I.(N.S.) JUNCTION BOX
J.B. MANHOLE
M.H. TRAFFIC BEARING
T.B.D.I. DROP INLET
TRAFFIC BEARING
T.B.J.B. JUNCTION BOX

STATION	LOCATION (LT, RT, OR CL)	STRUCTURE NO. FROM	STRUCTURE NO. TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL
-Y- 26+05	LT	1400		73.81			
-Y- 26+30	LT	1400	1401		68.76	68.51	
-Y- 26+55	LT	1401		73.46			
-Y- 26+55	LT	1401	1404		69.26	72.1	
-Y- 27+30	LT	1401	1402		68.51	65.25	
-Y- 28+05	LT	1402		70			
-Y- 28+67	LT	1402	1406		64.75	64.13	
-Y- 27+18	RT	1403					
-Y- 29+29	LT	1406		69.5			
-Y- 29+29	LT	1406	1405		63.63	66.26	
-Y- 29+39	CL	1406	1409		63.63	63.22	
-Y- 29+50	RT	1409		69.36			
-Y- 29+97	RT	1409	1412		63.22	62.89	
-Y- 26+56	RT	1407					
-Y- 29+30	RT	1408					
-Y- 30+50	LT	1410		70.14			
-Y- 30+49	LT	1410	1411		65.03	65	
-Y- 30+48	LT	1411		71.1			
-Y- 30+44	RT	1412		69.62			
-Y- 30+43	RT	1412	1413		62.89	62.62	
-Y- 31+60	RT	1416					
-Y1- 14+80	LT	1501					
-Y1- 15+24	LT	1502			76.04		
-YI- 15+24	LT	1502	1503		76.04	75.05	
-Y1- 16+25	LT	1503		78.07	75.05		
-Y1- 16+25	LT	1503	0912		75.05	74.82	
-Y1- 17+07	LT	0912		77.84	74.82		
-Y1- 17+07	LT	0911	0912		75.06	74.82	
-Y1- 17+07	LT	0911		76.73			
-Y1- 17+07	LT	0912	0913		74.82	74.67	
-Y1- 17+25	LT	0913			74.67		
SHEET 3 TOTALS							
SHEET 1 TOTALS							
SHEET 2 TOTALS							
GRAND TOTAL							

STATION	DRAINAGE PIPE (RCP, CSP, CAAP, HDPE, or PVC) 8" HDPE	15"	24"	30"	36"	42"	48"	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	C.S. PIPE 15" .064	18" .064	24" .064	30" .079	36" .079	42" .109	48" .109
-Y- 26+05																		
-Y- 26+30																		
-Y- 26+55																		
-Y- 26+55																		
-Y- 27+30																		
-Y- 28+05																		
-Y- 28+67																		
-Y- 27+18																		
-Y- 29+29																		
-Y- 29+29																		
-Y- 29+39																		
-Y- 29+50																		
-Y- 29+97																		
-Y- 26+56																		
-Y- 29+30																		
-Y- 30+50																		
-Y- 30+49		8																
-Y- 30+48																		
-Y- 30+44																		
-Y- 30+43																		
-Y- 31+60																		
-Y1- 14+80																		
-Y1- 15+24																		
-YI- 15+24																		
-Y1- 16+25																		
-Y1- 16+25																		
-Y1- 17+07																		
-Y1- 17+07	12																	
-Y1- 17+07																		
-Y1- 17+07																		
-Y1- 17+25																		
SHEET 3 TOTALS	12	8																
SHEET 1 TOTALS		16																
SHEET 2 TOTALS				192														
GRAND TOTAL	12	24		192														

STATION	R.C. PIPE CLASS III 15"	18"	24"	30"	36"	42"	48"	R.C. PIPE CLASS IV 15"	18"	24"	30"	36"	42"	48"	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	24" SIDE DRAIN PIPE	ENDWALLS STD. 838.01 838.11 OR STD. 838.80 (UNLESS NOTED OTHERWISE) CU. YARDS R.C.P.	C.S.P.
-Y- 26+05																			
-Y- 26+30			52																
-Y- 26+55																			
-Y- 26+55	20																		
-Y- 27+30			148																
-Y- 28+05																			
-Y- 28+67				120															
-Y- 27+18																	36		
-Y- 29+29																			
-Y- 29+29					12														
-Y- 29+39					80														
-Y- 29+50																			
-Y- 29+97					92														
-Y- 26+56																	24		
-Y- 29+30																	32		
-Y- 30+50																			
-Y- 30+49	8																		
-Y- 30+48																			
-Y- 30+44																			
-Y- 30+43					28														
-Y- 31+60																32			
-Y1- 14+80															16				
-Y1- 15+24																			
-YI- 15+24															104				
-Y1- 16+25																			
-Y1- 16+25															84				
-Y1- 17+07																			
-Y1- 17+07																			
-Y1- 17+07																			
-Y1- 17+07															72				
-Y1- 17+25																			
SHEET 3 TOTALS	28		200	120	212										276	32	92		
SHEET 1 TOTALS	172	260	556		112			44	60	88					448		28	3.4	
SHEET 2 TOTALS	608	620	676	112					84	80					124	60	20		
GRAND TOTAL	808	880	1432	232	324			44	144	168					848	92	140	3.4	
																		SAY 3.5	

STATION	QUANTITIES FOR DRAINAGE STRUCTURES PER EACH (0' THRU 5.0')	*TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL.'B') LIN. FT. A 5.0' THRU 10.0'	B 10.0' AND ABOVE	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STANDARD 840.03 TYPE OF GRATE E	F	G	CONCRETE TRANSITIONAL SECTION DROP INLET	CATCH BASIN	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR 840.26	G.D.I. TYPE "B" STD. 840.18 OR 840.27	G.D.I. TYPE "D" STD. 840.19 OR 840.28	G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.29	G.D.I. FRAME WITH TWO GRATES STD. 840.22	G.D.I. (N.S.) FRAME WITH GRATE STD. 840.24	G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24	J.B. STD. 840.31 OR 840.32	M. H. FRAME AND COVER STD. 840.54	CONVERT EXISTING DROP INLET TO JUNCTION BOX W/ MANHOLE
-Y- 26+05	1			1			1														
-Y- 26+30																					
-Y- 26+55	1			1			1														
-Y- 26+55																					
-Y- 27+30																					
-Y- 28+05	1	0.25											1					1			
-Y- 28+67																					
-Y- 27+18																					
-Y- 29+29	1	0.87											1					1			
-Y- 29+29																					
-Y- 29+39																					
-Y- 29+50	1	1.14																	1	1	
-Y- 29+97																					
-Y- 26+56																					
-Y- 29+30																					
-Y- 30+50	1	0.11											1					1			
-Y- 30+49																					
-Y- 30+48																				1	1
-Y- 30+44	1	1.73																	1	1	
-Y- 30+43																					
-Y- 31+60																					
-Y1- 14+80																					
-Y1- 15+24																					
-YI- 15+24																					
-Y1- 16+25	1																		1		
-Y1- 16+25																					
-Y1- 17+07	1																		1		
-Y1- 17+07																					
-Y1- 17+07	1									1	1										
-Y1- 17+07																					
-Y1- 17+25																					
SHEET 3 TOTALS	10	4.1		2			2			1	1		3					3	4	3	1
SHEET 1 TOTALS	12			8	2	2	4	2		3	3		1					1			
SHEET 2 TOTALS	9	2		6		3	3						2	1	2			1			
GRAND TOTAL	31	6.1		16	2	5	9	2		4	4		6	1	2			5	4	3	1
		SAY 7																			

STATION	FLOWABLE FILL (CY)	R.C. PIPE, CLASS III ELBOWS NO. & SIZE	CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	CONC. COLLARS CL. "B" C.Y. STD. 840.72	PIPE REMOVAL LIN. FT.	REMARKS
-Y- 26+05						
-Y- 26+30					56	REMOVE 24" RCP, DI
-Y- 26+55						REMOVE JB
-Y- 26+55						
-Y- 27+30					45	REMOVE 24" RCP, JB
-Y- 28+05					6	REMOVE 15" RCP
-Y- 28+67					127	REMOVE 24" RCP, DI
-Y- 27+18					48	REMOVE 24" RCP
-Y- 29+29					129	REMOVE 24" RCP, 36" RCP
-Y- 29+29		2 @ 36"				
-Y- 29+39	8.0					
-Y- 29+50						
-Y- 29+97						
-Y- 26+56					46	REMOVE 24" CMP
-Y- 29+30					25	REMOVE 24" RCP, 36" RCP, JB
-Y- 30+50						
-Y- 30+49						
-Y- 30+48						CONVERT DI to JB w/MH (SEE DTL 2C-1)
-Y- 30+44						
-Y- 30+43					40	REMOVE 15" CMP
-Y- 31+60					40	REMOVE 15" CMP
-Y1- 14+80					20	REMOVE 15" RCP
-Y1- 15+24					192	OPEN END PIPE
-YI- 15+24						
-Y1- 16+25						JB W/ SLAB LID
-Y1- 16+25						
-Y1- 17+07						JB W/ SLAB LID
-Y1- 17+07						
-Y1- 17+07						
-Y1- 17+07						
-Y1- 17+25						OPEN END
SHEET 3 TOTALS	8.0	2 @ 36"			774	
SHEET 1 TOTALS	3.0				1,260	
SHEET 2 TOTALS	1.8				746	
GRAND TOTAL	12.8	2 @ 36"			2,780	
	SAY 15				SAY 2800	

COMPUTED BY:	GEOTECH	DATE: 10/15/16
CHECKED BY:	SLS	DATE: 10/17/16

(4-21-15)

PROJECT NO.	SHEET NO.
R-3816	3G-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF SUBSURFACE DRAINAGE

LINE	Station	Station	Location LT/RT/CL	Drain Type* UD/BD/SD	LF
-L-	11+94	17+00	LT	UD	506
-L-	17+00	25+00	LT	UD	800
-L-	27+00	32+00	LT	UD	500
-L-	33+00	36+00	RT	UD	300
-L-	36+00	39+50	RT	UD	350
-L-	40+00	45+00	RT	UD	500
-L-	55+50	59+40	RT	UD	390
-L-	76+50	79+50	LT	UD	300
-L-	81+00	87+00	LT	UD	600
-Y-	21+00	23+17	LT	UD	217
-Y-	24+00	29+29	LT	UD	529
-Y-	29+29	32+00	LT	UD	271
-Y1-	14+00	19+83	RT	UD	583
-Y1-	21+00	25+75	RT	UD	475
CONTINGENCY				SD	1,000
			TOTAL LF:		7,321

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

SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION

LINE	Station	Station	Aggregate Type ASU TONS	Aggregate Thickness INCHES	Shallow Undercut CY	Class IV Subgrade Stabilization TONS	Geotextile for Soil Stabilization SY	Stabilizer Aggregate TONS	Class IV Aggregate Stabilization TONS
CONTINGENCY			ASU		1000	1900	2500		
			AST	3					500
	TOTAL CY/TONS/SY:				1,000	1,900	2500*		

ASU = Aggregate Subgrade, AST = Aggregate Stabilization
***Total square yards of Geotextile for Soil Stabilization is only the estimated quantity for ASU/AST and may only represent a portion of the geotextile quantity shown in the Item Sheets of the Proposal.**

PROJ. REFERENCE NO.	SHEET NO.
R-3826	3P-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PARCEL INDEX SHEET

PARCEL No.	SHEET No.	PROPERTY OWNER NAME
1	4	JOSEPH D. KEEL
2	4	BOBBY BOWEN RENTALS, LLC
3	4	MARTIN COUNTY COMMUNITY COLLEGE
4	4	DEBORAH L. BROWN
5	4	JIMMIE R. COUNCIL, ETALS
6	4,5,14	HEIRS OF DOROTHY RHODES
7	4,5	JESSE A. COUNCIL
7A	4	ARTHUR COUNCIL'S GARAGE
9	5	RUSSELL L. & MARCIA A. WELLS
10	5	GEORGE PARKER
11	5	BETTY J. ROGERSON
12	5	JAMES A. & BETTY B. ROGERSON
13	5	KIMBERLY JO WHITAKER
14	5,6	REDDICK REALTY, INC.
15	5	HEIRS OF N.L. WASHINGTON
16	5	VICKIE S. JONES
17	5	NATHAN E. STANCILL
18	5	MICHAEL R. STANCIL
19	5,6	NATHAN E. STANCILL
20	6,7	MARY ALICE T. ROBERSON
21	6	REDDICK REALTY, INC.
22	6	ROBERSON ASPHALT, LLC
23	6	CTW EQUIPMENT COMPANY, INC.
24	6	ROBERSON BUSINESS PARK
25	7	LAKE PHELPS HOLDINGS, LLC
26	7,8	JEANNE HURST FOSTER
27	8,9,15	LILLEY FAMILY, LLC
30	9,15	PEGGY O. HARRELL
31	9	BILLY S. BIGGS
32	9	RUBICEL C. OVANDO & JESUS C. CUPIL
33	9	LARRY W. & WANDA M. SPELLER
35	9,10,11,12	SIMON A. GRIFFIN
36	12,13	JOSEPH C. LEGGETT
37	13	JOSEPH B. WYNN JR.
38	13	FELLOWSHIP BAPTIST CHURCH
39	13	SAMUEL B. WHITLEY
40	14	JOHN G. HARDISON, JR.
41	14	OAT, LLC
42Z	14	MELVIN E. GARDNER, JR.
43	15	KRISTEN A. HOPKINS
45	15	MICHAEL J. HARRISON

PARCEL No.	SHEET No.	PROPERTY OWNER NAME

PROJECT REFERENCE NO.	SHEET NO.
R-3826	4
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 025873 ENGINEER GARY R. LOVERING
11/3/2016
DocuSigned by: Gary Lovering

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 031986 ENGINEER JAMES R. RICE
11/3/2016
DocuSigned by:

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

5/14/99

REVISIONS

BEGIN TIP PROJECT R-3826
-L- STA 12+00.00

INSTALL UNDERDRAINS FROM -L- 11+94 TO 17+00, LEFT SIDE. TIE TO EXISTING DI AT 11+94 LT. UNDERDRAIN SHALL BE PLACED 6 FT BELOW SUBGRADE AT PROPOSED EOP.

INSTALL UNDERDRAINS FROM -L- STA. 17+00 TO 25+00, LEFT SIDE. OUTLET UNDERDRAIN INTO DITCH AT STA. 25+00 LT. UNDERDRAIN SHALL BE PLACED 6 FT BELOW SUBGRADE AT PROPOSED EOP.

NAD 83/96

15

20

-L- PC Sta. 17+61.06

-L- PT Sta. 22+60.05

MATCHLINE -L- STA 25+00.00 SEE SHEET 5

(3) MARTIN COUNTY COMMUNITY COLLEGE DB P-8 PG 242

(7) JESSE A. COUNCIL DB R-10 PG 705

(7A) ARTHUR COUNCIL'S GARAGE DB R-10 PG 705

(7) JESSE A. COUNCIL DB R-10 PG 705

VIRGINIA ELECTRIC AND POWER COMPANY DB T-12 PG 7

VIRGINIA ELECTRIC AND POWER COMPANY DB U-12 PG 22

MARIE BOWEN ANDERSON DB M-17 PG 56

(1) JOSEPH D. KEEL DB H-9 PG 643

(2) BOBBY BOWEN RENTALS, LLC DB P-25 PG 262

(5) JIMMIE R. COUNCIL, ETALS DB B-17 PG 428

(6) HEIRS OF DOROTHY RHODES DB K-12 PG 309 DB D-13 PG 758 MB 12 PG 46

HEIRS OF DOROTHY RHODES DB K-12 PG 309

(4) DEBORAH L. BROWN DB T-25 PG 11

BL-R38262

BL-10

NC 125 PRISON CAMP RD

N 44°04'42.0" E

N 42°54'18" E 171.93'

N 42°53'00" E 176.25'

N 16°51'47.5" E

S 18°04'20" W 233.48'

S 21°36'06" W 168.64'

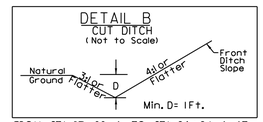
N 44°07'20" E 111.14'

N 44°07'20" E 123.53'

N 44°47'59" E 134.62'

-L-
PI Sta 20+03.13
Δ = 27°12'54.4" (LT)
D = 5°43'46.5"
L = 474.99'
T = 242.07'
R = 1,000.00'
SE = SEE PLANS

DETAIL B
CUT DITCH
(Not to Scale)



FROM STA. 17+00 -L- TO STA. 26+34 -L- LT
FROM STA. 12+00 -L- TO STA. 13+00 -L- RT
FROM STA. 14+00 -L- TO STA. 26+36 -L- RT

DRIVEWAY RADII ARE 15' UNLESS OTHERWISE NOTED. NOTED RADII ARE FOR BOTH SIDES.

FOR -L- PROFILE, SEE SHEET 16

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PROJECT REFERENCE NO.	SHEET NO.
R-3826	5
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER — NORTH CAROLINA — PROFESSIONAL — SEAL 025873 — ENGINEER — GARY R. LOVERING
DocuSigned by: Gary Lovering — 11/3/2016

HYDRAULICS ENGINEER — NORTH CAROLINA — PROFESSIONAL — SEAL 031986 — ENGINEER — JAMES R. RICE
DocuSigned by: — 11/3/2016

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/96

REVISIONS 5/14/99

BEGIN CONSTRUCTION
BEGIN RESURFACING
-Y- STA 18+00.00

END RESURFACING
BEGIN GRADE
-Y- STA 19+50.00

DETAIL C
HEAD DITCH
(Not to Scale)
Natural Ground — 4:1 — D — 4:1 — Natural Ground
Min. D=1 Ft.
STA. 26+34 -L- LT
DDE=16 CY

DETAIL B
CUT DITCH
(Not to Scale)
Natural Ground — 3:1 or Flatter — D — 4:1 or Flatter — Front Ditch Slope
Min. D= 1Ft.

FROM STA. 26+34 -L- TO STA. 30+20 -L- LT
FROM STA. 30+60 -L- TO STA. 31+50 -L- LT
FROM STA. 37+50 -L- TO STA. 39+61 -L- LT
FROM STA. 26+36 -L- TO STA. 29+00 -L- RT
FROM STA. 29+00 -L- TO STA. 31+50 -L- RT
FROM STA. 33+40 -L- TO STA. 35+00 -L- RT
FROM STA. 35+00 -L- TO STA. 36+80 -L- RT
FROM STA. 19+00 -Y- TO STA. 22+70 -Y- RT

DETAIL G
2' BASE SDG
(Not to Scale)
Natural Ground — 3:1 or Flatter — D — 4:1 or Flatter — Front Ditch Slope
B
Min. D= 1Ft.
B= 2 Ft.

FROM STA. 19+50 -Y- TO STA. 23+15 -Y- LT
FROM STA. 24+00 -Y- TO STA. 28+50 -Y- RT
FROM STA. 36+80 -L- TO STA. 39+63 -L- RT

-Y-
PI Sta 22+54.54
△ = 10° 36' 53.1" (LT)
D = 2° 00' 00.0"
L = 530.74'
T = 266.13'
R = 2,864.79'
SE = SEE PLANS

-Y- PC Sta. 19+88.41

WILLIAMSTON TOWN LIMITS

JAMES A. BETTY & B. ROGERSON
DB D-10 PG 520
12

KIMBERLY JO WHITAKER
DB L-15 PG 157
13

REDDICK REALTY, INC.
DB K-14 PG 62
14
14Z

7
JESSE A. COUNCIL
DB R-10 PG 705

11
BETTY J. ROGERSON
WB 10-E PG 60

INSTALL UNDERDRAINS FROM -L- STA. 27+00 TO 32+00, LEFT SIDE. OUTLET UNDERDRAIN INTO DITCH AT STA. 27+00 LT. UNDERDRAIN SHALL BE PLACED 6 FT BELOW SUBGRADE AT PROPOSED EOP

CONTAMINATED SOIL IS NOT ANTICIPATED TO BE ENCOUNTERED SPEC SEC. 107-25

INSTALL UNDERDRAINS FROM -Y- STA. 21+00 TO 23+17, LEFT SIDE. TIE TO PROPOSED 2GI AT STA. 23+17 LT. UNDERDRAIN SHALL BE PLACED 6 FT BELOW SUBGRADE AT PROPOSED EOP.

CAP LINES AND PLUG TROUGH AT ROW AFTER REMOVING PORTION OF CONCRETE SLAB WITHIN ROW

600' TAPER LT (LANE DROP)

-L- PC Sta. 27+22.77

SEAL WELL

-L- POC Sta. 32+44.05
-Y- POC Sta. 23+53.79

-L- PT Sta. 34+48.40
-Y- PT Sta. 25+19.15

PROP. CONC. 5" MONOLITHIC ISLAND (KEYED-IN)

PI Sta 30+91.93
△ = 25° 59' 04.7" (LT)
D = 3° 34' 51.6"
L = 725.63'
T = 369.16'
R = 1,600.00'
SE = SEE PLANS

PI Sta 38+37.56
△ = 14° 25' 17.0" (RT)
D = 3° 34' 51.6"
L = 402.72'
T = 202.43'
R = 1,600.00'
SE = SEE PLANS

6
HEIRS OF DOROTHY RHODES
DB K-12 PG 309
DB D-13 PG 758
MB 12 PG 46

9
RUSSELL L. & MARCIA A. WELLS
DB O-18 PG 921

10
GEORGE PARKER
DB E-20 PG 1

15
HEIRS OF N.L. WASHINGTON
DB X-5 PG 259

16
VICKIE S. JONES
DB O-4 PG 223

17
NATHAN E. STANCILL
DB N-7 PG 419

18
MICHAEL R. STANCIL
DB E-14 PG 860

19
NATHAN E. STANCILL
DB M-11 PG 276

SEE SHEET 4 MATCHLINE -L- STA 25+00.00

MATCHLINE -Y- STA 26+00.00 SEE SHEET 14

MATCHLINE -L- STA 39+00.00 SEE SHEET 6

INSTALL UNDERDRAINS FROM -L- STA. 36+00 TO 39+50, RIGHT SIDE. OUTLET UNDERDRAIN INTO DITCH AT STA. 39+50 RT. UNDERDRAIN SHALL BE PLACED 6 FT BELOW SUBGRADE AT PROPOSED EOP.

INSTALL UNDERDRAINS FROM -Y- STA. 24+00 TO 29+29, LEFT SIDE. TIE TO PROPOSED 2GI AT STA. 29+29 LT. UNDERDRAIN SHALL BE PLACED 6 FT. BELOW SUBGRADE AT PROPOSED EOP.

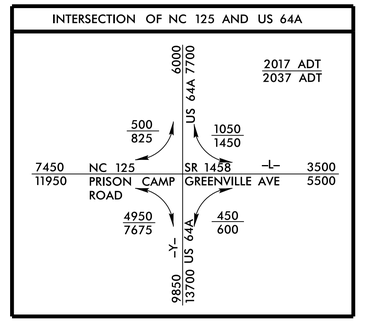
INSTALL UNDERDRAINS FROM -L- STA. 33+00 TO 36+00, RIGHT SIDE. TIE TO PROPOSED 2GI AT STA. 33+40 RT. UNDERDRAIN SHALL BE PLACED 6 FT BELOW SUBGRADE AT PROPOSED EOP.

PAVEMENT REMOVAL

REVISED SIGNAL

DRIVEWAY RADII ARE 15' UNLESS OTHERWISE NOTED. NOTED RADII ARE FOR BOTH SIDES.

INTERSECTION OF NC 125 AND US 64A



FOR -L- PROFILE, SEE SHEET 16
FOR -Y- PROFILE, SEE SHEET 21

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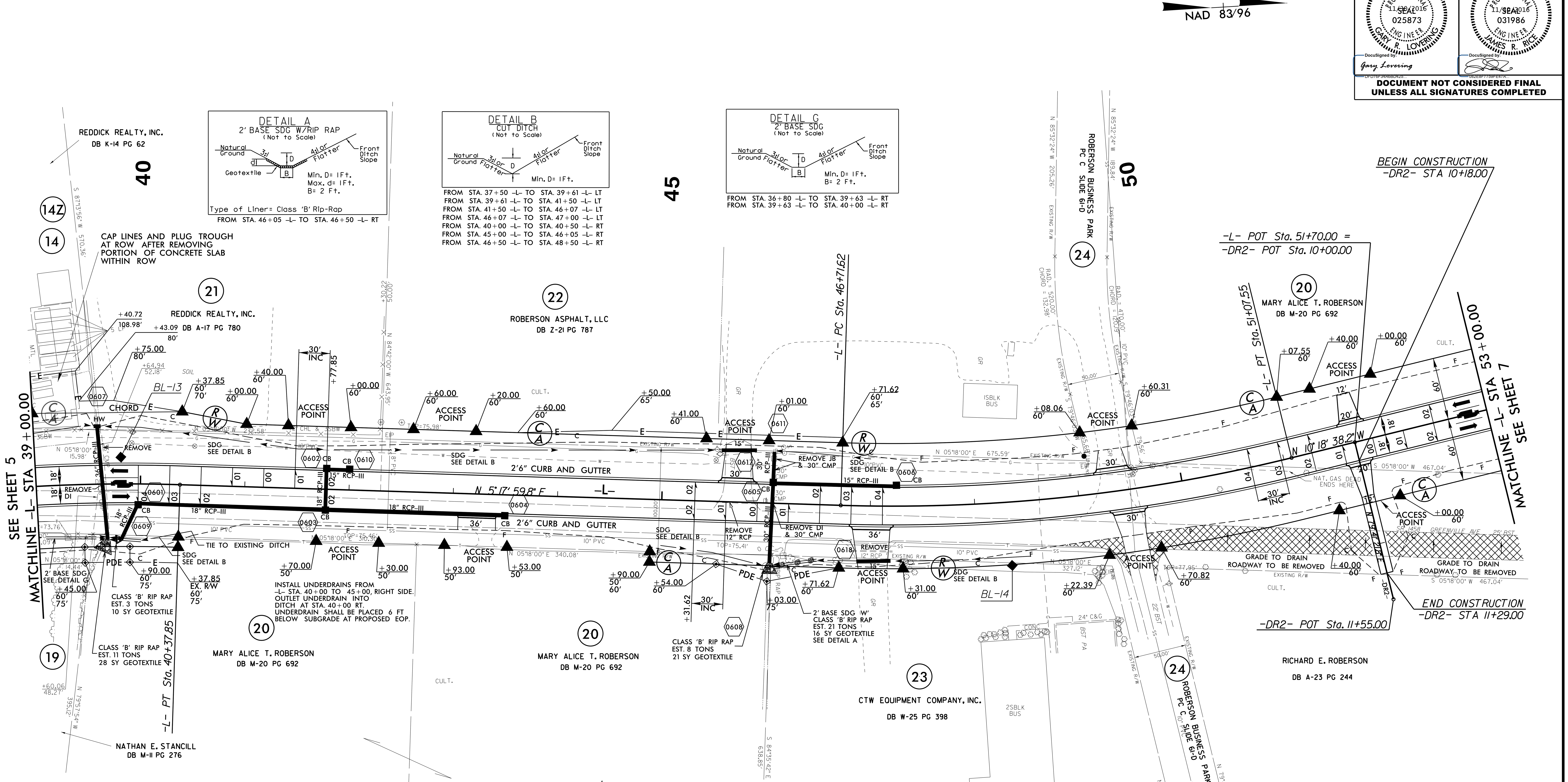
PROJECT REFERENCE NO.	SHEET NO.
R-3826	6
RW SHEET NO.	

ROADWAY DESIGN ENGINEER — SEAL 025873, GARY R. LOVERING, 11/22/2016 — DocuSigned by: Gary Lovering

HYDRAULICS ENGINEER — SEAL 031986, JAMES R. RICE, 11/22/2016 — DocuSigned by

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS



NAD 83/96
DETAIL A
2' BASE SDG W/RIP RAP
(Not to Scale)
Type of Liner= Class 'B' Rip-Rap
FROM STA. 46+05 -L- TO STA. 46+50 -L- RT
DETAIL B
CUT DITCH
(Not to Scale)
FROM STA. 37+50 -L- TO STA. 39+61 -L- LT
FROM STA. 39+61 -L- TO STA. 41+50 -L- LT
FROM STA. 41+50 -L- TO STA. 46+07 -L- LT
FROM STA. 46+07 -L- TO STA. 47+00 -L- LT
FROM STA. 40+00 -L- TO STA. 40+50 -L- RT
FROM STA. 45+00 -L- TO STA. 46+05 -L- RT
FROM STA. 46+50 -L- TO STA. 48+50 -L- RT
DETAIL G
2' BASE SDG
(Not to Scale)
FROM STA. 36+80 -L- TO STA. 39+63 -L- RT
FROM STA. 39+63 -L- TO STA. 40+00 -L- RT
BEGIN CONSTRUCTION
-DR2- STA 10+18.00
-L- POT Sta. 51+70.00 = -DR2- POT Sta. 10+00.00
END CONSTRUCTION
-DR2- STA 11+29.00
-DR2- POT Sta. 11+55.00
MATCHLINE -L- STA 39+00.00 SEE SHEET 5
MATCHLINE -L- STA 53+00.00 SEE SHEET 7
REDDICK REALTY, INC.
DB K-14 PG 62
REDDICK REALTY, INC.
DB A-17 PG 780
ROBERSON ASPHALT, LLC
DB Z-21 PG 787
ROBERSON BUSINESS PARK
PC C SLIDE 61-D
MARY ALICE T. ROBERSON
DB M-20 PG 692
RICHARD E. ROBERSON
DB A-23 PG 244
CTW EQUIPMENT COMPANY, INC.
DB W-25 PG 398
NATHAN E. STANCILL
DB M-11 PG 276
CAP LINES AND PLUG TROUGH AT ROW AFTER REMOVING PORTION OF CONCRETE SLAB WITHIN ROW
INSTALL UNDERDRAINS FROM -L- STA. 40+00 TO 45+00, RIGHT SIDE. OUTLET UNDERDRAIN INTO DITCH AT STA. 40+00 RT. UNDERDRAIN SHALL BE PLACED 6 FT BELOW SUBGRADE AT PROPOSED EOP.
CLASS 'B' RIP RAP EST. 3 TONS 10 SY GEOTEXTILE
CLASS 'B' RIP RAP EST. 11 TONS 28 SY GEOTEXTILE
CLASS 'B' RIP RAP EST. 8 TONS 21 SY GEOTEXTILE
2' BASE SDG 'W' CLASS 'B' RIP RAP EST. 21 TONS 16 SY GEOTEXTILE SEE DETAIL A
2'6" CURB AND GUTTER
GRADE TO DRAIN ROADWAY TO BE REMOVED
-L- PC Sta. 46+71.62
-L- PT Sta. 40+37.85
-L- PT Sta. 51+07.55

-L-

PI Sta 38+37.56	PI Sta 48+90.94
Δ = 14° 25' 17.0" (RT)	Δ = 15° 36' 38.0" (LT)
D = 3° 34' 51.6"	D = 3° 34' 51.6"
L = 402.72'	L = 435.93'
T = 202.43'	T = 219.32'
R = 1,600.00'	R = 1,600.00'
SE = SEE PLANS	SE = SEE PLANS

PAVEMENT REMOVAL

DRIVEWAY RADII ARE 15' UNLESS OTHERWISE NOTED. NOTED RADII ARE FOR BOTH SIDES.

FOR -L- PROFILE, SEE SHEET 17

FOR -DR2- PROFILE, SEE SHEET 22

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PROJECT REFERENCE NO.	SHEET NO.
R-3826	7
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 025873 ENGINEER GARY R. LOVERING
11/3/2016
DocuSigned by: Gary Lovering

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 031986 ENGINEER JAMES R. RICE
11/3/2016
DocuSigned by:

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/96

REVISIONS 5/14/99

SEE SHEET 6 MATCHLINE -L- STA 53+00.00

WILLIAMSTON TOWN LIMITS

-Y3- POT Sta. 10+00.00

-L- POT Sta. 55+16.04 = -Y3- POT Sta. 11+84.98

-Y3- POT Sta. 13+57.66

-L-
PI Sta 70+04.32
Δ = 52° 24' 13.5" (RT)
D = 3° 34' 51.6"
L = 1,463.39'
T = 787.36'
R = 1,600.00'
SE = SEE PLANS

20 MARY ALICE T. ROBERSON DB M-20 PG 692

25 LAKE PHELPS HOLDINGS, LLC DB B-25 PG 314

26 JEANNE HURST FOSTER DB 0-7 PG 626

END C&G AT RR R/W – BEGIN 4' PS

2'6" CURB AND GUTTER

CLASS 'B' RIP RAP EST. 2 TONS 7 SY GEOTEXTILE

RR GATES TO BE INSTALLED BY OTHERS

CSX RAILROAD

MONO. CONC. ISL.

BL-15

END C&G AT RR R/W – BEGIN 4' PS

CENTERLINE TRACK #2 -L- STA 55+31.35

BM#11

BEGIN WW FENCE

END WW FENCE

ACCESS POINT

SDG SEE DETAIL B

INSTALL UNDERDRAINS FROM STA. 55+50 TO 59+40, RIGHT SIDE. TIE TO EXISTING DITCH AT STA. 59+40 RT. UNDERDRAIN SHALL BE PLACED 6 FT BELOW SUBGRADE AT PROPOSED EOP.

1000' TAPER LT/RT

BL-16

GRAU 350

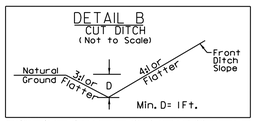
30' INC.

SET EQUALIZER PIPES AT EXISTING GROUND ELEVATION DO NOT BURY

-L- PC Sta. 62+16.96

WOODS

DETAIL B
CUT DITCH
(Not to Scale)



FROM STA. 56+00 -L- TO STA. 58+66 -L- LT
FROM STA. 58+66 -L- TO STA. 62+00 -L- LT
FROM STA. 55+50 -L- TO STA. 59+40 -L- RT
FROM STA. 59+40 -L- TO STA. 63+00 -L- RT

PAVEMENT REMOVAL

DRIVEWAY RADII ARE 15' UNLESS OTHERWISE NOTED. NOTED RADII ARE FOR BOTH SIDES.

FOR -L- PROFILE, SEE SHEET 17

SEE SHEET 8 MATCHLINE -L- STA 67+00.00

RAILROAD MILEPOST MARKER No.165

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PROJECT REFERENCE NO.	SHEET NO.
R-3826	8
R/W SHEET NO.	

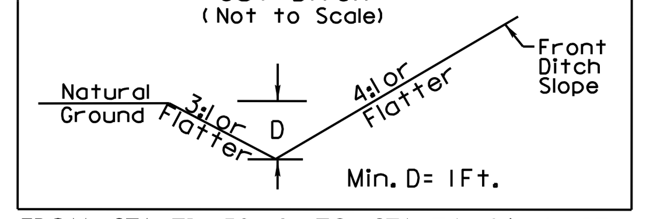
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 025873 ENGINEER GARY R. LOVERING 11/22/2016	NORTH CAROLINA PROFESSIONAL SEAL 031986 ENGINEER JAMES R. RICE 11/22/2016
DocuSigned by: Gary Lovering	DocuSigned by:

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS

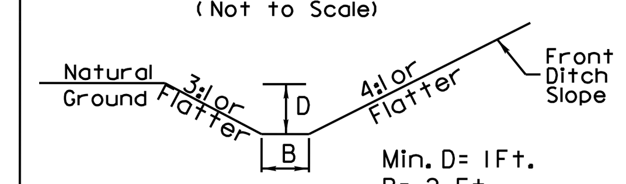
NAD 83/96

DETAIL B
CUT DITCH
(Not to Scale)



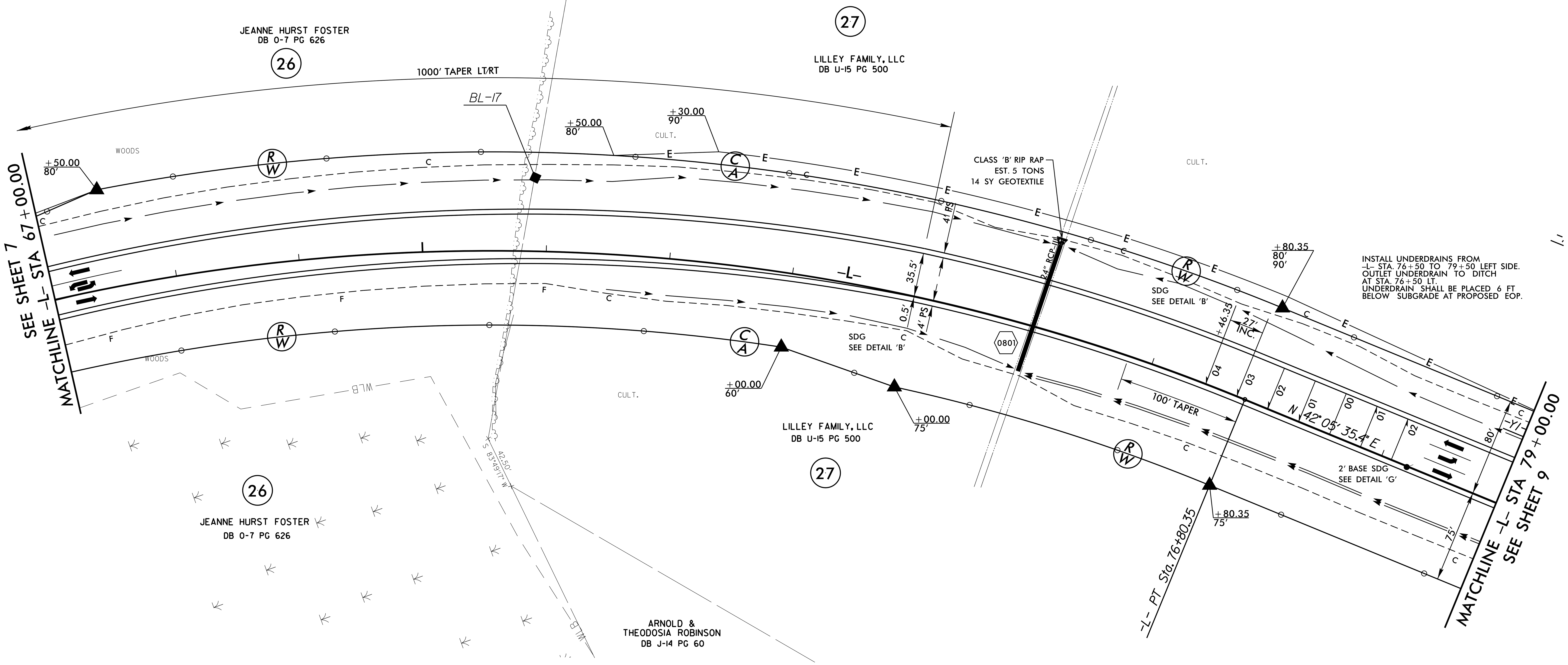
FROM STA. 71+50 -L- TO STA. 74+96 -L- RT
FROM STA. 74+96 -L- TO STA. 79+50 -L- LT
FROM STA. 67+00 -L- TO STA. 75+03 -L- LT
FROM STA. 75+03 -L- TO STA. 79+50 -L- LT

DETAIL G
2' BASE SDG
(Not to Scale)



FROM STA. 74+96 -L- TO STA. 79+50 -L- RT

-L-
PI Sta 70+04.32
Δ = 52° 24' 13.5" (RT)
D = 3° 34' 51.6"
L = 1,463.39'
T = 787.36'
R = 1,600.00'
SE = SEE PLANS



INSTALL UNDERDRAINS FROM -L- STA. 76+50 TO 79+50 LEFT SIDE. OUTLET UNDERDRAIN TO DITCH AT STA. 76+50 LT. UNDERDRAIN SHALL BE PLACED 6 FT BELOW SUBGRADE AT PROPOSED EOP.

DRIVEWAY RADII ARE 15' UNLESS OTHERWISE NOTED. NOTED RADII ARE FOR BOTH SIDES.

FOR -L- PROFILE, SEE SHEET 18

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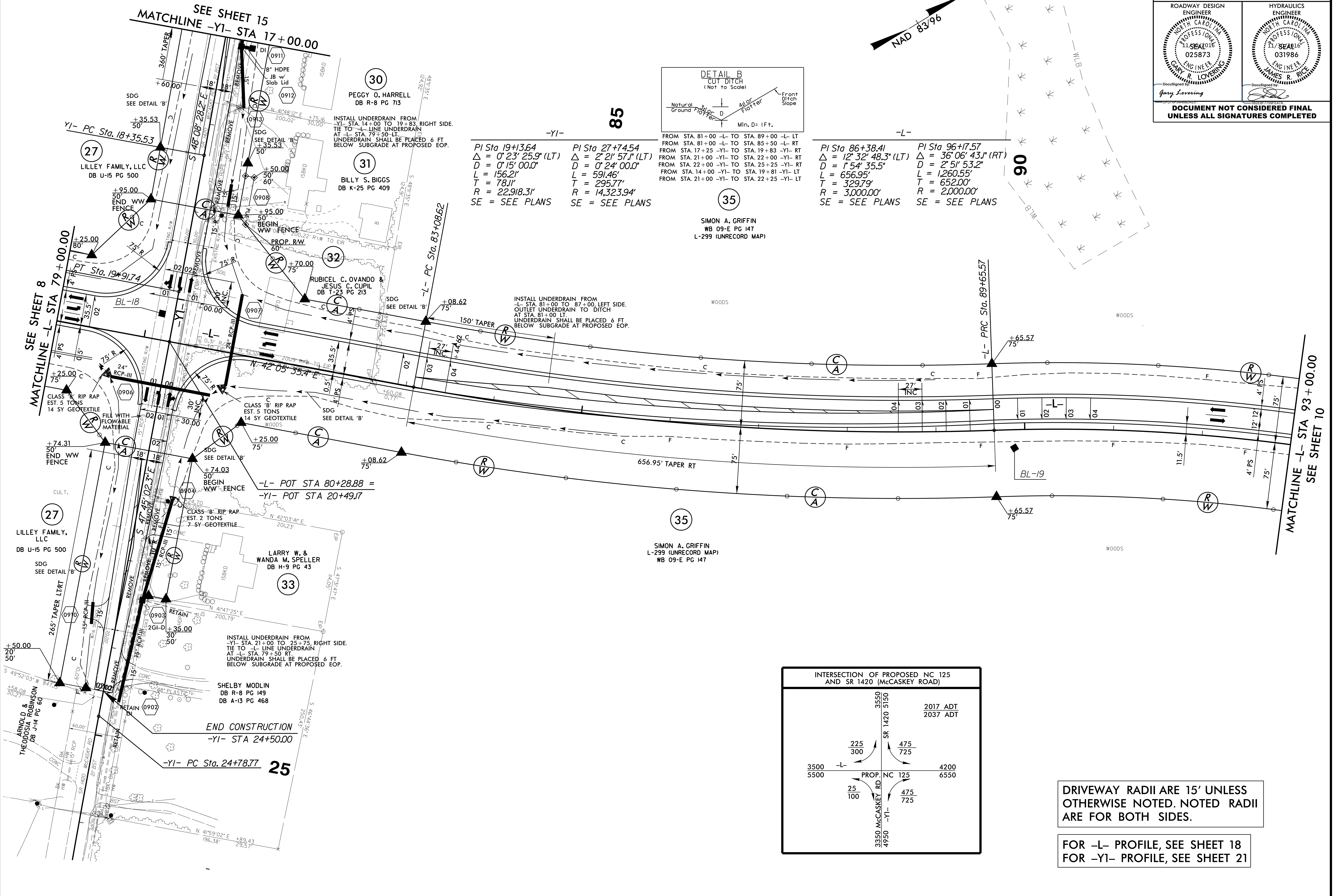
PROJECT REFERENCE NO.	SHEET NO.
R-3826	9
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER — SEAL 025873 — GARY R. LOVERING — Gary Lovering — 11/22/2016

HYDRAULICS ENGINEER — SEAL 031986 — JAMES R. RICE — 11/22/2016

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



DETAIL B
CUT DITCH
(Not to Scale)

Natural Ground — 3:1 or Flatter — D — 4:1 or Flatter — Front Ditch Slope — Min. D= 1 Ft.

FROM STA. 81+00 -L- TO STA. 89+00 -L- LT
FROM STA. 81+00 -L- TO STA. 85+50 -L- RT
FROM STA. 17+25 -Y1- TO STA. 19+83 -Y1- RT
FROM STA. 21+00 -Y1- TO STA. 22+00 -Y1- RT
FROM STA. 22+00 -Y1- TO STA. 25+25 -Y1- RT
FROM STA. 14+00 -Y1- TO STA. 19+81 -Y1- LT
FROM STA. 21+00 -Y1- TO STA. 22+25 -Y1- LT

-Y1-

PI Sta 19+13.64	PI Sta 27+74.54
Δ = 0° 23' 25.9" (LT)	Δ = 2° 21' 57.1" (LT)
D = 0° 15' 00.0"	D = 0° 24' 00.0"
L = 156.21'	L = 591.46'
T = 78.11'	T = 295.77'
R = 22,918.31'	R = 14,323.94'
SE = SEE PLANS	SE = SEE PLANS

-L-

PI Sta 86+38.41	PI Sta 96+17.57
Δ = 12° 32' 48.3" (LT)	Δ = 36° 06' 43.1" (RT)
D = 1° 54' 35.5"	D = 2° 51' 53.2"
L = 656.95'	L = 1,260.55'
T = 329.79'	T = 652.00'
R = 3,000.00'	R = 2,000.00'
SE = SEE PLANS	SE = SEE PLANS

INTERSECTION OF PROPOSED NC 125 AND SR 1420 (McCASKEY ROAD)

2017 ADT
2037 ADT

SR 1420: 3550 / 5150 (north); 3350 / 4950 (south, McCASKEY RD -Y1-)
-L-: 3500 / 5500 (west); PROP. NC 125: 4200 / 6550 (east)
Turning movements: 225/300; 475/725; 25/100; 475/725

DRIVEWAY RADII ARE 15' UNLESS OTHERWISE NOTED. NOTED RADII ARE FOR BOTH SIDES.

FOR -L- PROFILE, SEE SHEET 18
FOR -Y1- PROFILE, SEE SHEET 21

REVISIONS

5/14/99

22-NOV-2016 10:55
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PROJECT REFERENCE NO.	SHEET NO.
R-3826	10
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER — SEAL 025873, GARY R. LOVERING, NORTH CAROLINA PROFESSIONAL ENGINEER, 11/22/2016 — DocuSigned by: Gary Lovering

HYDRAULICS ENGINEER — SEAL 031986, JAMES R. RICE, NORTH CAROLINA PROFESSIONAL ENGINEER, 11/22/2016 — DocuSigned by

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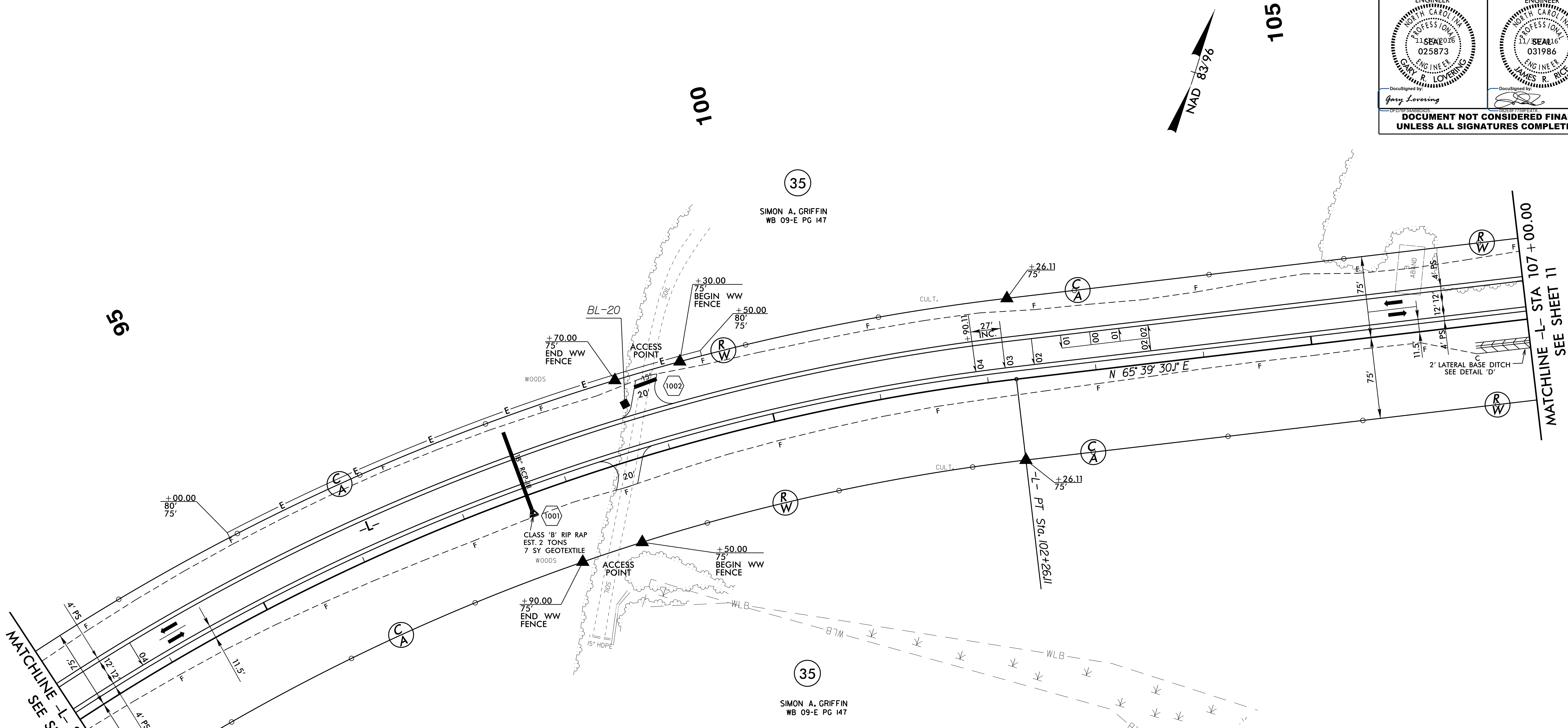
REVISIONS

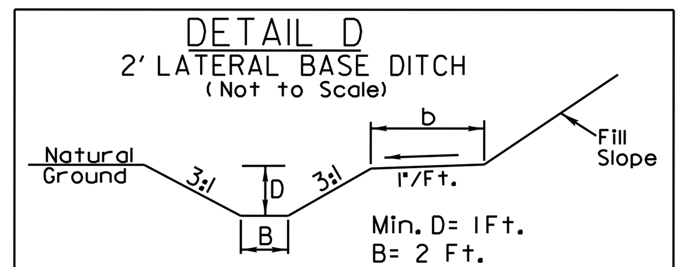
5/14/99



-L-

PI Sta 96+17.57
Δ = 36° 06' 43.1" (RT)
D = 2° 51' 53.2"
L = 1,260.55'
T = 652.00'
R = 2,000.00'
SE = SEE PLANS

DETAIL D
2' LATERAL BASE DITCH
(Not to Scale)



FROM STA. 106+50 -L- TO STA. 119+00 -L- RT

DRIVEWAY RADII ARE 15' UNLESS OTHERWISE NOTED. NOTED RADII ARE FOR BOTH SIDES.

FOR -L- PROFILE, SEE SHEET 19

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PROJECT REFERENCE NO.	SHEET NO.
R-3826	11
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 025873 ENGINEER GARY R. LOVERING
11/30/2016
DocuSigned by: Gary Lovering

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 031986 ENGINEER JAMES R. RICE
11/30/2016
DocuSigned by:

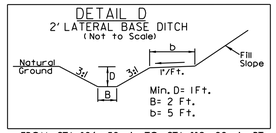
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/96

REVISIONS

5/14/99

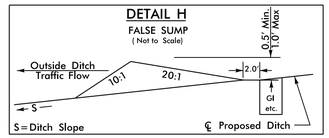
DETAIL D
2' LATERAL BASE DITCH
(Not to Scale)



Min. D= 1Ft.
B= 2 Ft.
b= 5 Ft.

FROM STA. 106+50 -L- TO STA. 119+00 -L- RT

DETAIL H
FALSE SUMP
(Not to Scale)



35
SIMON A. GRIFFIN
WB 09-E PG 147
L-299 (UNRECORD MAP)

-L-

PI Sta 138+60.98
△ = 101° 21' 05.8" (LT)
D = 3° 28' 20.9"
L = 2,918.72'
T = 2,014.17'
R = 1,650.00'
SE = SEE PLANS

35
SIMON A. GRIFFIN
WB 09-E PG 147
L-299 (UNRECORD MAP)

DRIVEWAY RADII ARE 15' UNLESS OTHERWISE NOTED. NOTED RADII ARE FOR BOTH SIDES.

FOR -L- PROFILE, SEE SHEET 19

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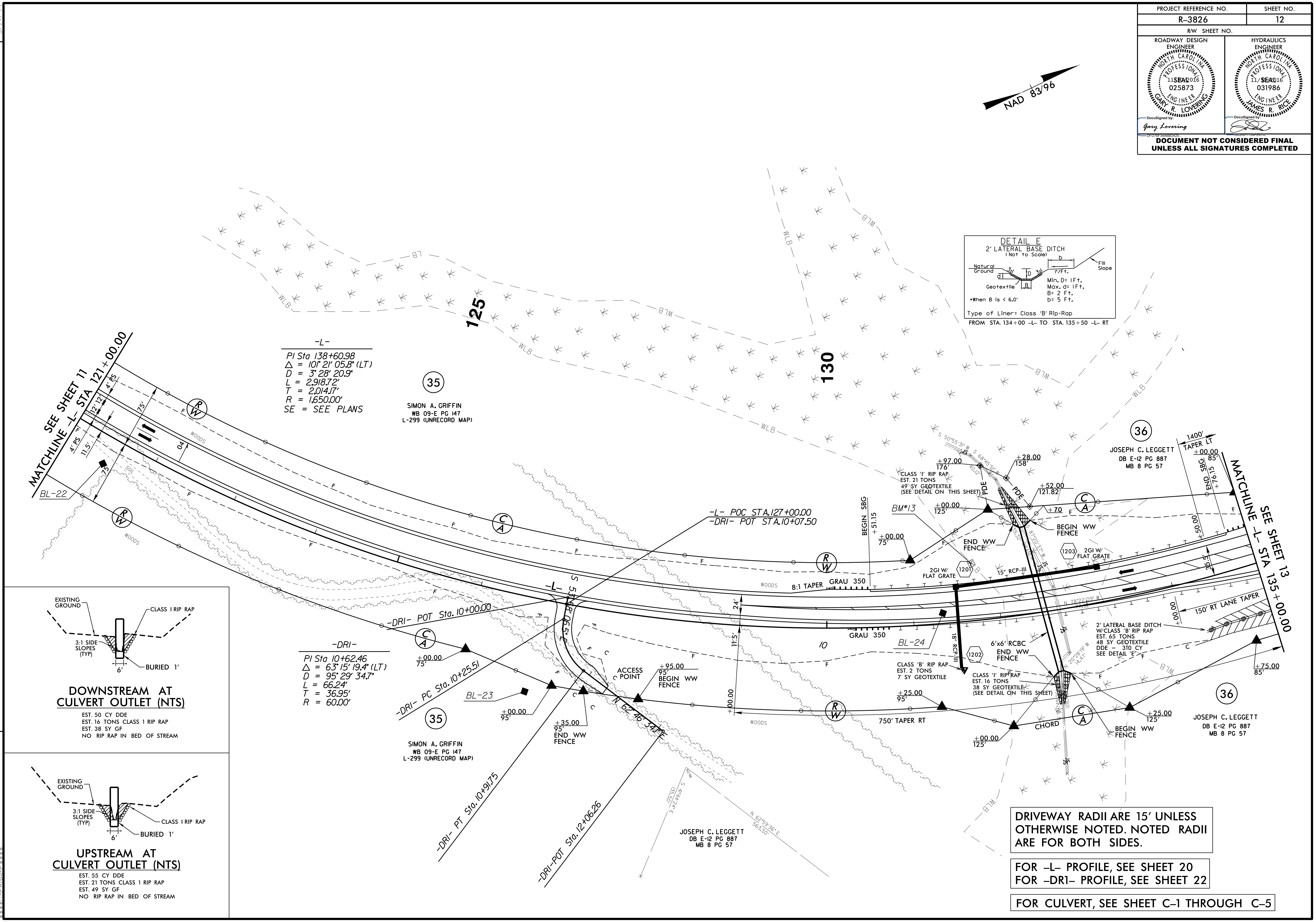

PROJECT REFERENCE NO. R-3826
SHEET NO. 12
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 025873 ENGINEER GARY R. LOVERING
HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 031986 ENGINEER JAMES R. RICE
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
NAD 83/96
REVISIONS
-L-
PI Sta 138+60.98
△ = 101° 21' 05.8" (LT)
D = 3° 28' 20.9"
L = 2,918.72'
T = 2,014.17'
R = 1,650.00'
SE = SEE PLANS
35
SIMON A. GRIFFIN
WB 09-E PG 147
L-299 (UNRECORD MAP)
125
130
SEE SHEET 11
MATCHLINE -L- STA 121+00.00
BL-22
BL-23
BL-24
-L- POC STA.127+00.00
-DRI- POT STA.10+07.50
-DRI- POT Sta. 10+00.00
-DRI-
PI Sta 10+62.46
△ = 63° 15' 19.4" (LT)
D = 95° 29' 34.7"
L = 66.24'
T = 36.95'
R = 60.00'
-DRI- PC Sta. 10+25.51
-DRI- PT Sta. 10+91.75
-DRI-POT Sta. 12+06.26
ACCESS POINT
+95.00 95' BEGIN WW FENCE
+35.00 95' END WW FENCE
N 62° 46' 34.1" E
JOSEPH C. LEGGETT
DB E-12 PG 887
MB 8 PG 57
DETAIL E
2' LATERAL BASE DITCH
(Not to Scale)
Natural Ground
Geotextile
Fill Slope
Min. D= 1 Ft.
Max. d= 1 Ft.
B= 2 Ft.
b= 5 Ft.
*When B is < 6.0'
Type of Liner= Class 'B' Rip-Rap
FROM STA. 134+00 -L- TO STA. 135+50 -L- RT
36
JOSEPH C. LEGGETT
DB E-12 PG 887
MB 8 PG 57
1400' TAPER LT
BEGIN SBG +51.15
END SBG +76.15
BM#13
CLASS 'I' RIP RAP
EST. 21 TONS
49 SY GEOTEXTILE
(SEE DETAIL ON THIS SHEET)
PDE
END WW FENCE
BEGIN WW FENCE
1201 2GI W/ FLAT GRATE
1203 2GI W/ FLAT GRATE
15" RCP-III
18" RCP-III
1202
8:1 TAPER
GRAU 350
150' RT LANE TAPER
2' LATERAL BASE DITCH
W/CLASS 'B' RIP RAP
EST. 65 TONS
48 SY GEOTEXTILE
DDE = 310 CY
SEE DETAIL 'E'
6'x6' RCBC
CLASS 'B' RIP RAP
EST. 2 TONS
7 SY GEOTEXTILE
CLASS 'I' RIP RAP
EST. 16 TONS
38 SY GEOTEXTILE
(SEE DETAIL ON THIS SHEET)
750' TAPER RT
CHORD
SEE SHEET 13
MATCHLINE -L- STA 135+00.00
EXISTING GROUND
CLASS I RIP RAP
3:1 SIDE SLOPES (TYP)
BURIED 1'
DOWNSTREAM AT CULVERT OUTLET (NTS)
EST. 50 CY DDE
EST. 16 TONS CLASS 1 RIP RAP
EST. 38 SY GF
NO RIP RAP IN BED OF STREAM
UPSTREAM AT CULVERT OUTLET (NTS)
EST. 55 CY DDE
EST. 21 TONS CLASS 1 RIP RAP
EST. 49 SY GF
NO RIP RAP IN BED OF STREAM
DRIVEWAY RADII ARE 15' UNLESS OTHERWISE NOTED. NOTED RADII ARE FOR BOTH SIDES.
FOR -L- PROFILE, SEE SHEET 20
FOR -DR1- PROFILE, SEE SHEET 22
FOR CULVERT, SEE SHEET C-1 THROUGH C-5

PROJECT REFERENCE NO.	SHEET NO.
R-3826	13
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER — SEAL 025873 — GARY R. LOVERING — 11/18/2016

HYDRAULICS ENGINEER — SEAL 031986 — JAMES R. RICE — 11/18/2016

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

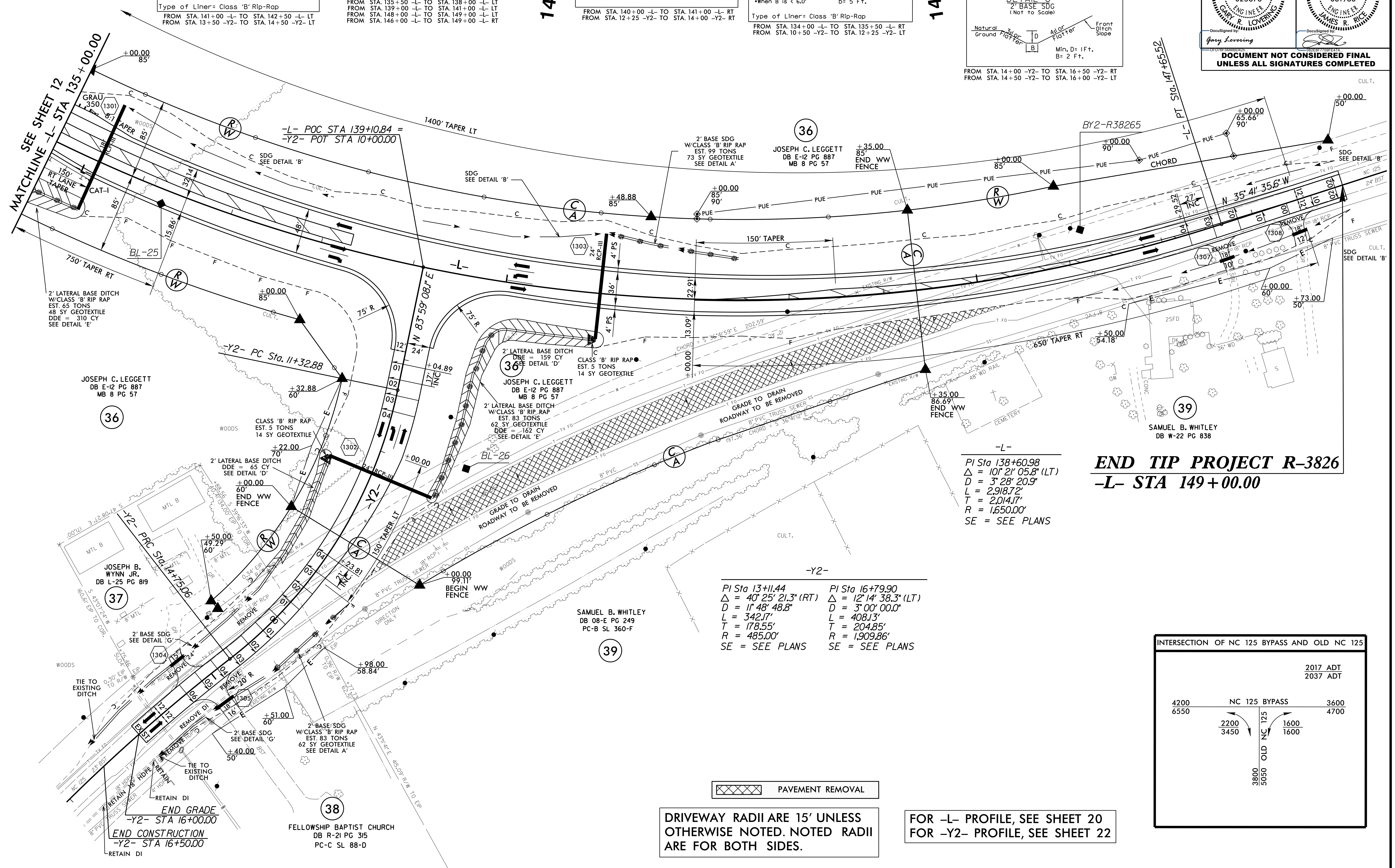
DETAIL A
2' BASE SDG W/RIP RAP (Not to Scale)
Type of Liner= Class 'B' Rip-Rap
FROM STA. 141+00 -L- TO STA. 142+50 -L- LT
FROM STA. 13+50 -Y2- TO STA. 14+50 -Y2- LT

DETAIL B
CUT DITCH (Not to Scale)
FROM STA. 135+50 -L- TO STA. 138+00 -L- LT
FROM STA. 139+00 -L- TO STA. 141+00 -L- LT
FROM STA. 148+00 -L- TO STA. 149+00 -L- LT
FROM STA. 146+00 -L- TO STA. 149+00 -L- RT

DETAIL D
2' LATERAL BASE DITCH (Not to Scale)
FROM STA. 140+00 -L- TO STA. 141+00 -L- RT
FROM STA. 12+25 -Y2- TO STA. 14+00 -Y2- RT

DETAIL E
2' LATERAL BASE DITCH (Not to Scale)
Type of Liner= Class 'B' Rip-Rap
FROM STA. 134+00 -L- TO STA. 135+50 -L- RT
FROM STA. 10+50 -Y2- TO STA. 12+25 -Y2- LT

DETAIL G
2' BASE SDG (Not to Scale)
FROM STA. 14+00 -Y2- TO STA. 16+50 -Y2- RT
FROM STA. 14+50 -Y2- TO STA. 16+00 -Y2- LT



END TIP PROJECT R-3826
-L- STA 149+00.00

-L-
PI Sta 138+60.98
Δ = 101° 21' 05.8" (LT)
D = 3° 28' 20.9"
L = 2,918.72'
T = 2,014.17'
R = 1,650.00'
SE = SEE PLANS

-Y2-

PI Sta 13+11.44	PI Sta 16+79.90
Δ = 40° 25' 21.3" (RT)	Δ = 12° 14' 38.3" (LT)
D = 11° 48' 48.8"	D = 3° 00' 00.0"
L = 342.17'	L = 408.13'
T = 178.55'	T = 204.85'
R = 485.00'	R = 1,909.86'
SE = SEE PLANS	SE = SEE PLANS

INTERSECTION OF NC 125 BYPASS AND OLD NC 125

2017 ADT / 2037 ADT

NC 125 BYPASS: 4200 / 6550 (west); 3600 / 4700 (east)
Turning: 2200 / 3450; 1600 / 1600
OLD NC 125: 3800 / 5050

PAVEMENT REMOVAL

DRIVEWAY RADII ARE 15' UNLESS OTHERWISE NOTED. NOTED RADII ARE FOR BOTH SIDES.

FOR -L- PROFILE, SEE SHEET 20
FOR -Y2- PROFILE, SEE SHEET 22

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-3826	14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 025873 GARY R. LOVERING 11/22/2016

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 031986 JAMES R. RICE 11/22/2016

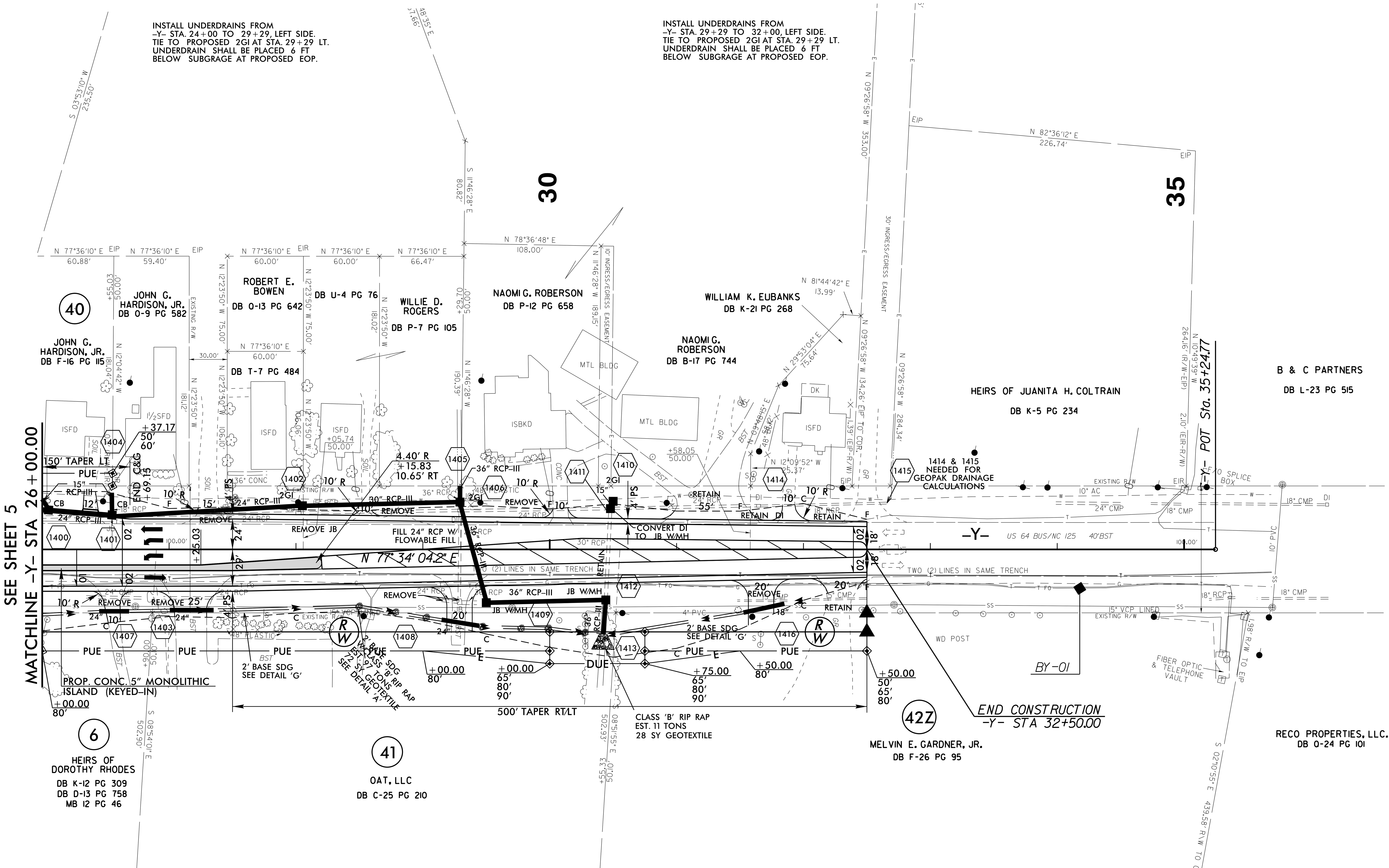
DocuSigned by: Gary Lovering

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

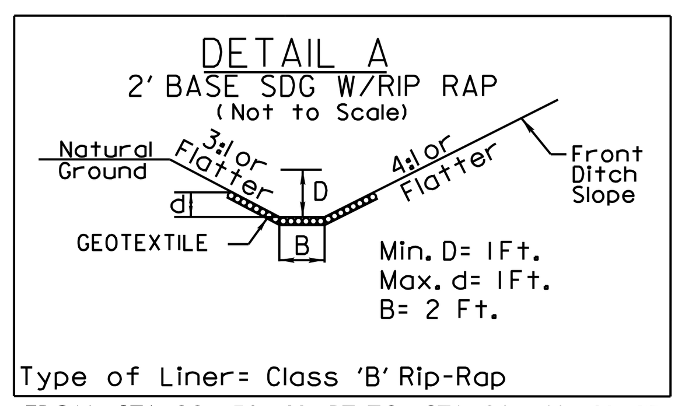
NAD 83/96

INSTALL UNDERDRAINS FROM -Y- STA. 24+00 TO 29+29, LEFT SIDE. TIE TO PROPOSED 2GI AT STA. 29+29 LT. UNDERDRAIN SHALL BE PLACED 6 FT BELOW SUBGRADE AT PROPOSED EOP.

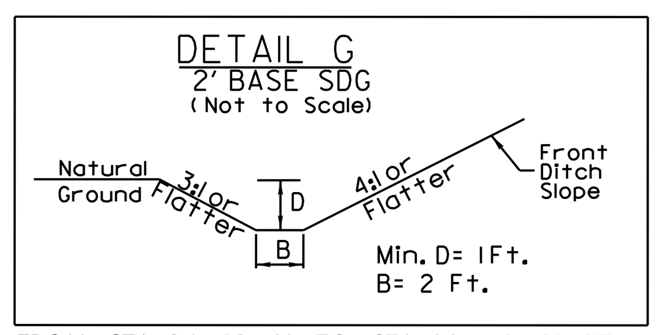
INSTALL UNDERDRAINS FROM -Y- STA. 29+29 TO 32+00, LEFT SIDE. TIE TO PROPOSED 2GI AT STA. 29+29 LT. UNDERDRAIN SHALL BE PLACED 6 FT BELOW SUBGRADE AT PROPOSED EOP.



SEE SHEET 5
MATCHLINE -Y- STA 26+00.00
30
35
JOHN G. HARDISON, JR. DB O-9 PG 582
JOHN G. HARDISON, JR. DB F-16 PG 115
ROBERT E. BOWEN DB O-13 PG 642
DB U-4 PG 76
DB T-7 PG 484
WILLIE D. ROGERS DB P-7 PG 105
NAOMI G. ROBERSON DB P-12 PG 658
NAOMI G. ROBERSON DB B-17 PG 744
WILLIAM K. EUBANKS DB K-21 PG 268
HEIRS OF JUANITA H. COLTRAIN DB K-5 PG 234
B & C PARTNERS DB L-23 PG 515
HEIRS OF DOROTHY RHODES DB K-12 PG 309 DB D-13 PG 758 MB 12 PG 46
OAT, LLC DB C-25 PG 210
MELVIN E. GARDNER, JR. DB F-26 PG 95
RECO PROPERTIES, LLC. DB O-24 PG 101
1414 & 1415 NEEDED FOR GEOPAK DRAINAGE CALCULATIONS
-Y- US 64 BUS/NC 125 40'BST
N 77° 34' 04.2" E
FILL 24" RCP W/ FLOWABLE FILL
CONVERT DI TO JB W/MH
TWO (2) LINES IN SAME TRENCH
PROP. CONC. 5" MONOLITHIC ISLAND (KEYED-IN)
500' TAPER RT/LT
150' TAPER LT
2' BASE SDG SEE DETAIL 'G'
CLASS 'B' RIP RAP EST. 11 TONS 28 SY GEOTEXTILE
END CONSTRUCTION -Y- STA 32+50.00
-Y- POT Sta. 35+24.77
BY-01
FIBER OPTIC & TELEPHONE VAULT



FROM STA. 28+50 -Y- RT TO STA. 30+40 -Y- RT



FROM STA. 24+13 -Y- TO STA. 28+50 -Y- RT
FROM STA. 30+40 -Y- TO STA. 32+00 -Y- RT

DRIVEWAY RADII ARE 15' UNLESS OTHERWISE NOTED. NOTED RADII ARE FOR BOTH SIDES.

FOR -Y- PROFILE, SEE SHEET 21

REVISIONS

5/14/99

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PROJECT REFERENCE NO.	SHEET NO.
R-3826	15
R/W SHEET NO.	

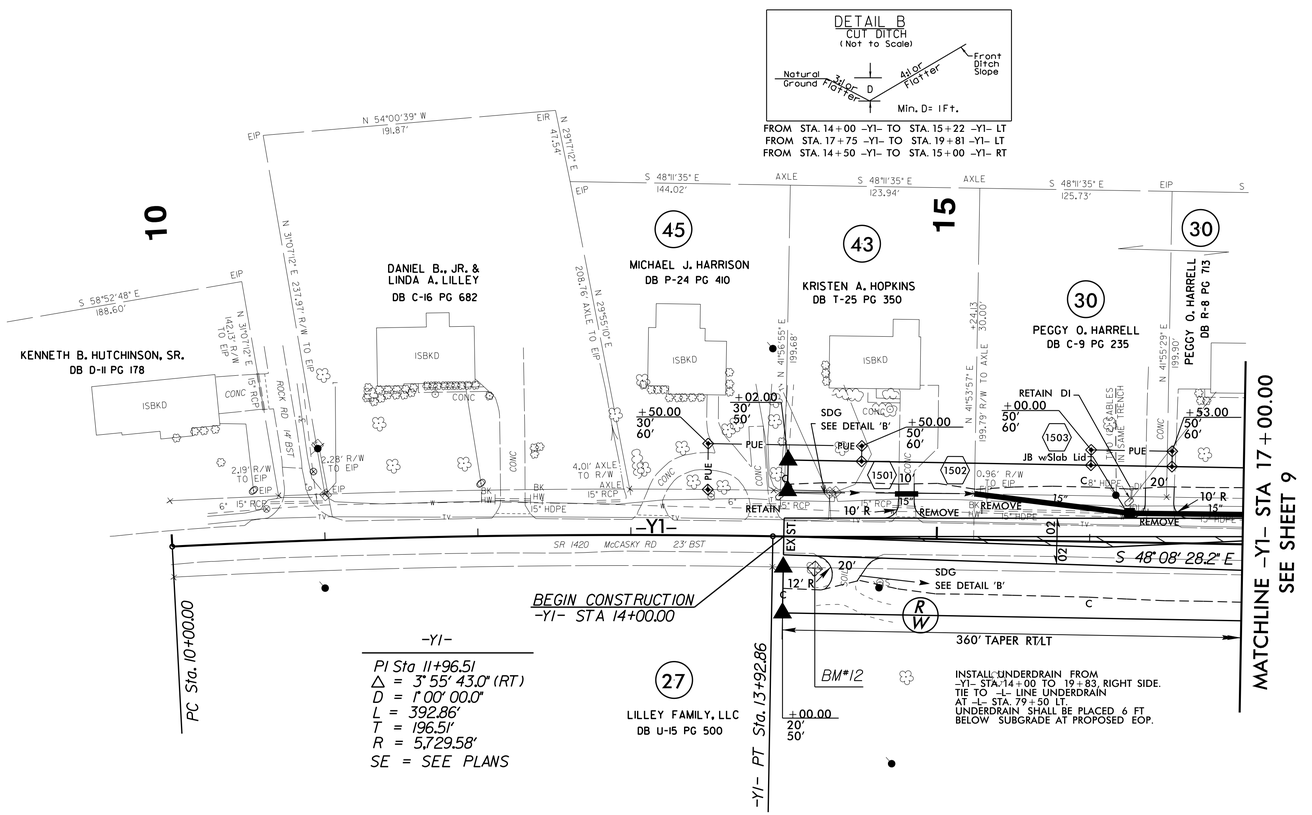
ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 025873 ENGINEER GARY R. LOVERING
11/SEP/2016
DocuSigned by: Gary Lovering

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 031986 ENGINEER JAMES R. RICE
11/SEP/2016
DocuSigned by:

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/96

REVISIONS 5/14/99



DRIVEWAY RADII ARE 15' UNLESS OTHERWISE NOTED. NOTED RADII ARE FOR BOTH SIDES.

FOR -Y1- PROFILE, SEE SHEET 21

PROJECT REFERENCE NO.	SHEET NO.
R-3826	16

ROADWAY DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 025873 GARY R. LOVERING — 11/28/2016 — DocuSigned by: Gary Lovering

HYDRAULICS ENGINEER — NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 031986 JAMES R. RICE — 11/28/2016 — DocuSigned by

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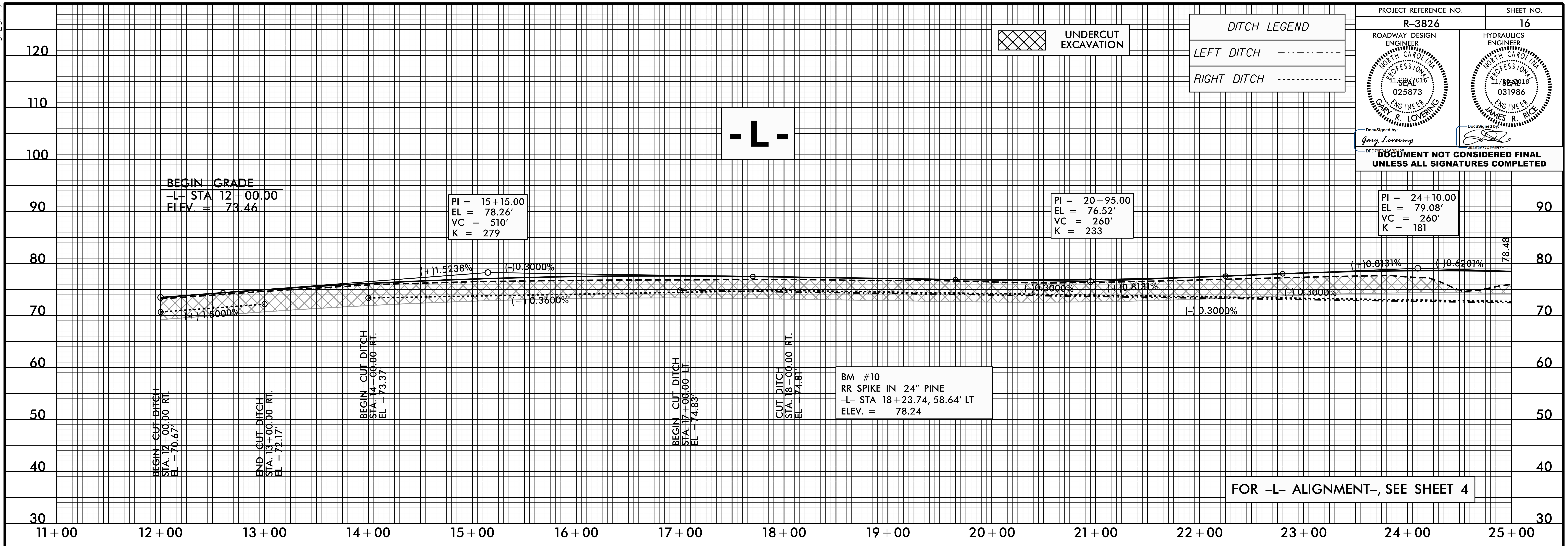
DITCH LEGEND

LEFT DITCH	—·-·—·-·—
RIGHT DITCH	- - - - - - -

-L-



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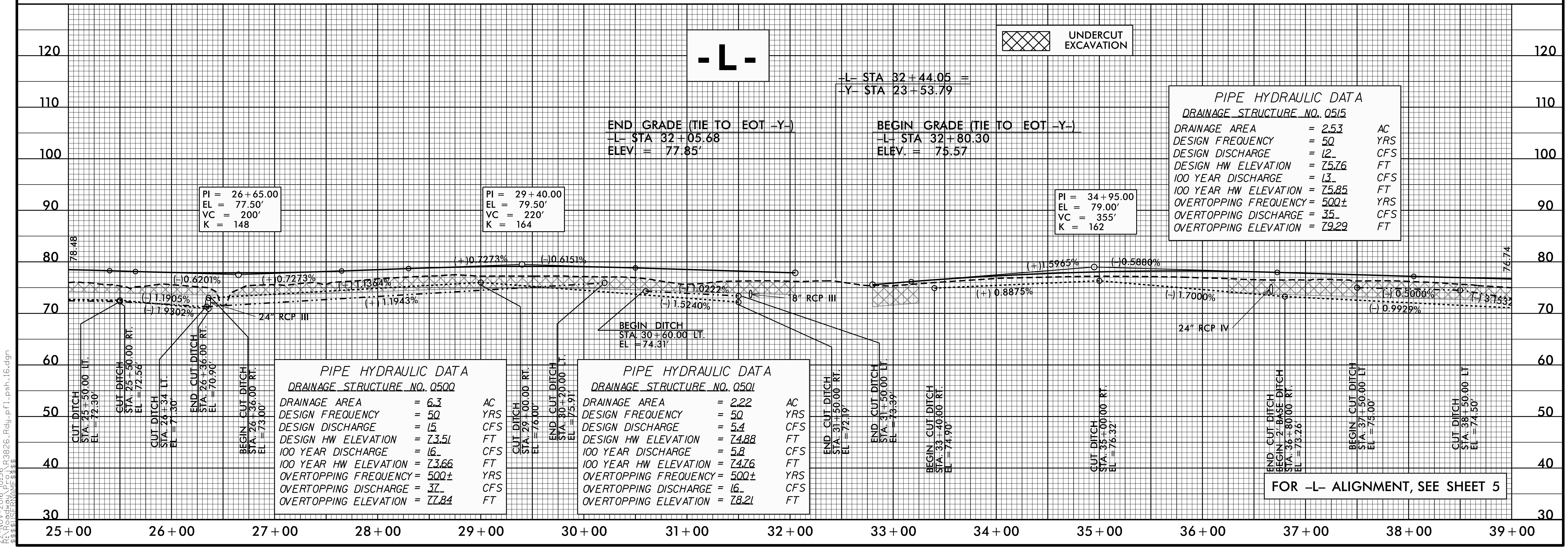


PIPE HYDRAULIC DATA

DRAINAGE STRUCTURE NO. 0500

DRAINAGE AREA	= 6.3	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 15	CFS
DESIGN HW ELEVATION	= 73.51	FT
100 YEAR DISCHARGE	= 16	CFS
100 YEAR HW ELEVATION	= 73.66	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= 37	CFS
OVERTOPPING ELEVATION	= 77.84	FT

PIPE HYDRAULIC DATA

DRAINAGE STRUCTURE NO. 0501

DRAINAGE AREA	= 2.22	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 5.4	CFS
DESIGN HW ELEVATION	= 74.88	FT
100 YEAR DISCHARGE	= 5.8	CFS
100 YEAR HW ELEVATION	= 74.76	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= 16	CFS
OVERTOPPING ELEVATION	= 78.21	FT

PIPE HYDRAULIC DATA

DRAINAGE STRUCTURE NO. 0515

DRAINAGE AREA	= 2.53	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 12	CFS
DESIGN HW ELEVATION	= 75.76	FT
100 YEAR DISCHARGE	= 13	CFS
100 YEAR HW ELEVATION	= 75.85	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= 35	CFS
OVERTOPPING ELEVATION	= 79.29	FT

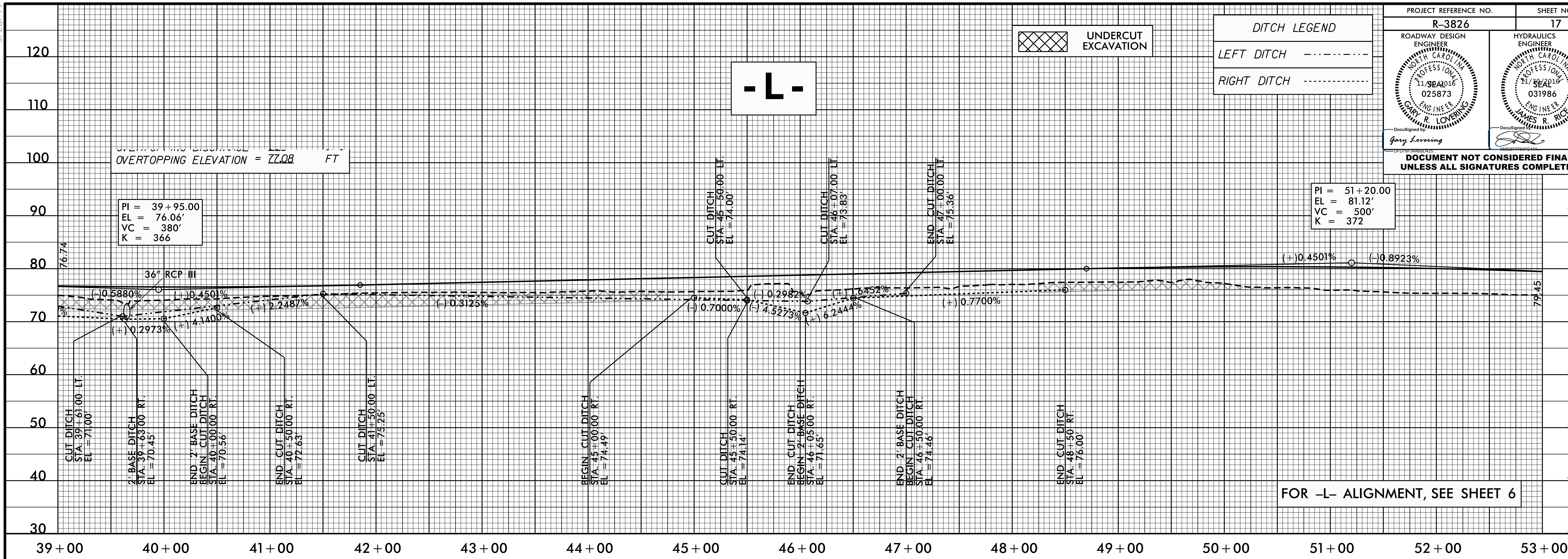
PROJECT REFERENCE NO.	SHEET NO.
R-3826	17

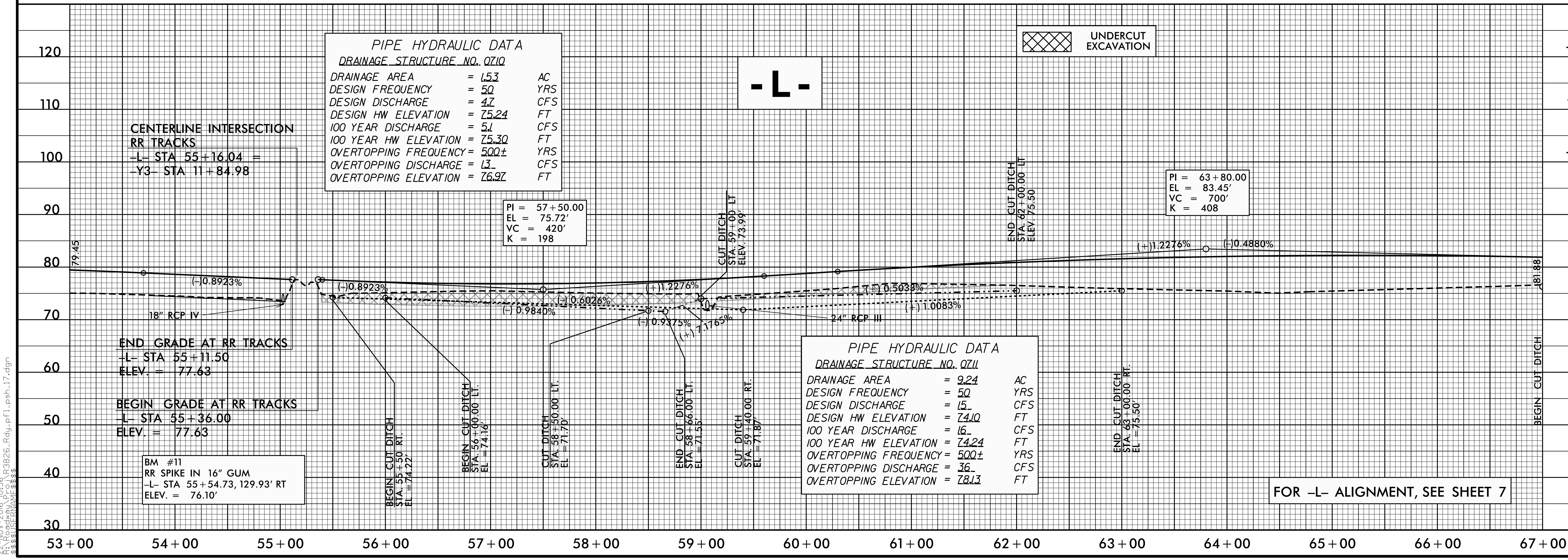
ROADWAY DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 025873 GARY R. LOVERING 11/30/2016 — DocuSigned by: Gary Lovering DFD76F34A6BD425...

HYDRAULICS ENGINEER — NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 031986 JAMES R. RICE 11/30/2016 — DocuSigned by: 082E8F7759FE47A...

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DITCH LEGEND
LEFT DITCH
RIGHT DITCH





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PROJECT REFERENCE NO.	SHEET NO.
R-3826	18

ROADWAY DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 025873 GARY R. LOVERING — 11/30/2016 — DocuSigned by: Gary Lovering

HYDRAULICS ENGINEER — NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 031986 JAMES R. RICE — 11/30/2016 — DocuSigned by

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DITCH LEGEND
LEFT DITCH -·-·-·-
RIGHT DITCH ---------

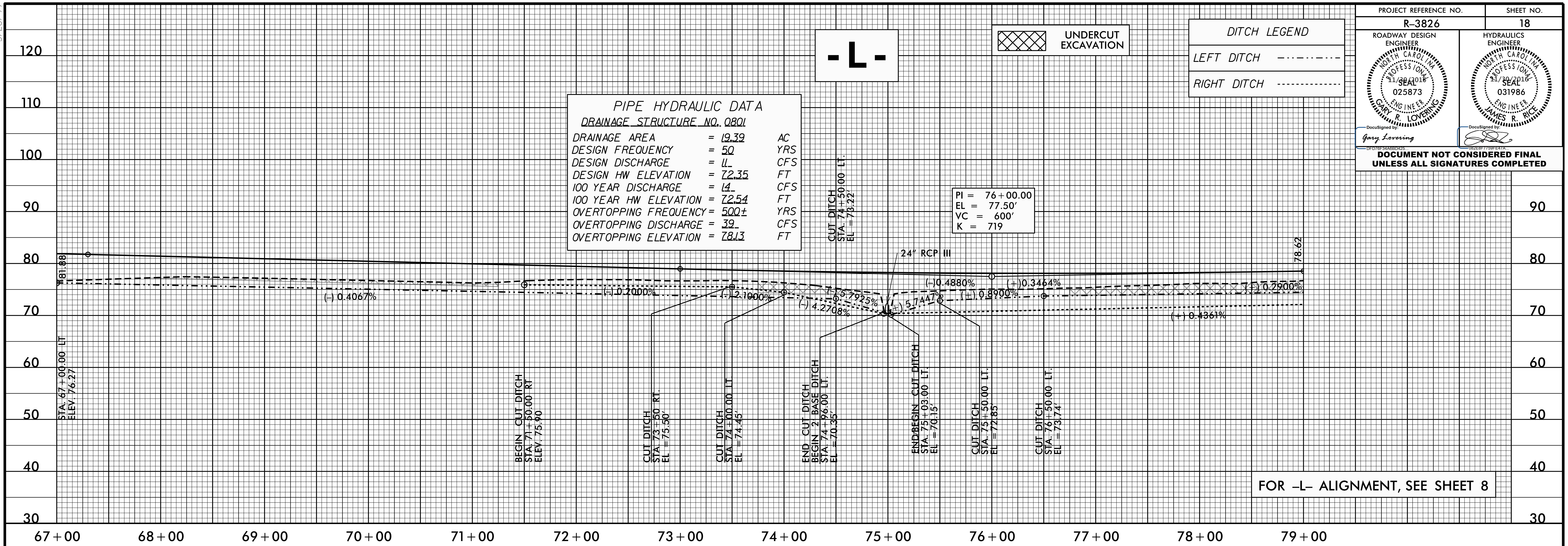
UNDERCUT EXCAVATION

-L-

PIPE HYDRAULIC DATA

DRAINAGE STRUCTURE NO. 0801

DRAINAGE AREA	=	19.39	AC
DESIGN FREQUENCY	=	50	YRS
DESIGN DISCHARGE	=	11	CFS
DESIGN HW ELEVATION	=	72.35	FT
100 YEAR DISCHARGE	=	14	CFS
100 YEAR HW ELEVATION	=	72.54	FT
OVERTOPPING FREQUENCY	=	500±	YRS
OVERTOPPING DISCHARGE	=	39	CFS
OVERTOPPING ELEVATION	=	78.13	FT



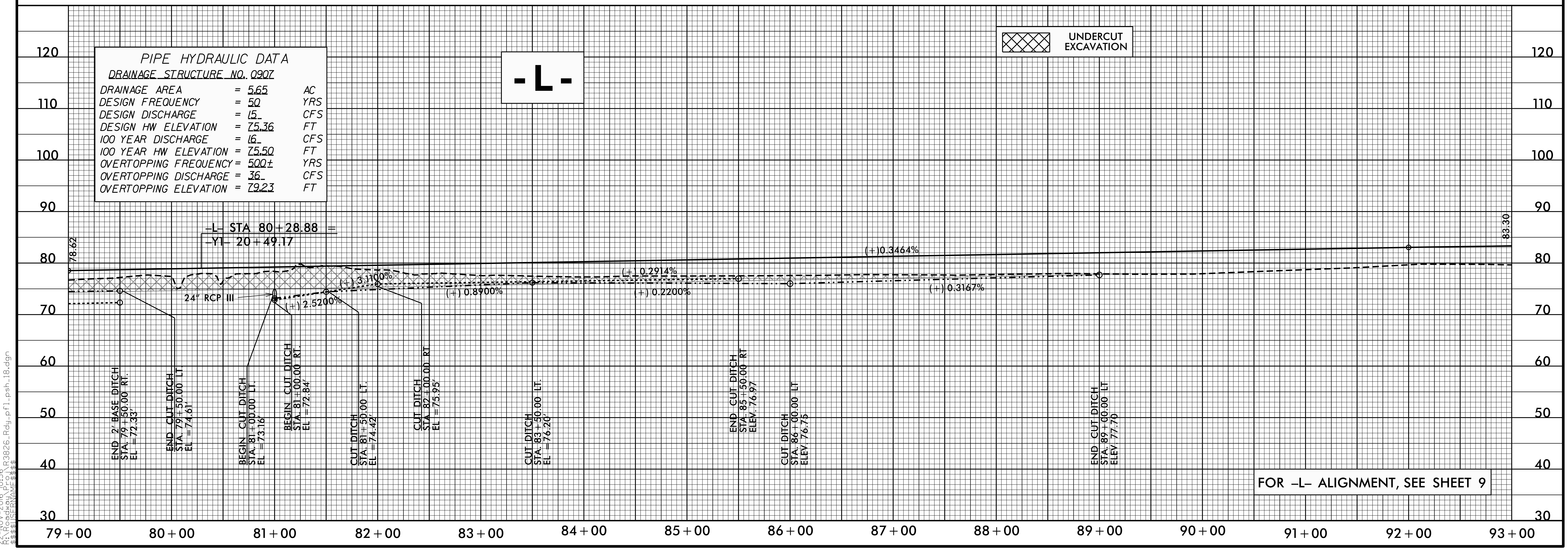
UNDERCUT EXCAVATION

-L-

PIPE HYDRAULIC DATA

DRAINAGE STRUCTURE NO. 0907

DRAINAGE AREA	=	5.65	AC
DESIGN FREQUENCY	=	50	YRS
DESIGN DISCHARGE	=	15	CFS
DESIGN HW ELEVATION	=	75.36	FT
100 YEAR DISCHARGE	=	16	CFS
100 YEAR HW ELEVATION	=	75.50	FT
OVERTOPPING FREQUENCY	=	500±	YRS
OVERTOPPING DISCHARGE	=	36	CFS
OVERTOPPING ELEVATION	=	79.23	FT



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5/28/99

PROJECT REFERENCE NO.	SHEET NO.
R-3826	19

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 025873 ENGINEER GARY R. LOVERING
11/3/2016
DocuSigned by: Gary Lovering

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 031986 ENGINEER JAMES R. RICE
11/3/2016
DocuSigned by:

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DITCH LEGEND

LEFT DITCH ----·----·----

RIGHT DITCH ----------

-L-

PI = 94+00.00
EL = 83.73'
VC = 400'
K = 551

83.30

(+)0.3464%

(–)0.3796%

18" RCP III

PIPE HYDRAULIC DATA
DRAINAGE STRUCTURE NO. 1001

DRAINAGE AREA	= 2.81	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 5.4	CFS
DESIGN HW ELEVATION	= 79.12	FT
100 YEAR DISCHARGE	= 5.8	CFS
100 YEAR HW ELEVATION	= 79.01	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= 23	CFS
OVERTOPPING ELEVATION	= 83.91	FT

PI = 106+00.00
EL = 79.18'
VC = 400'
K = 349

(–)0.3796%

(–)1.5257%

77.51

FOR –L– ALIGNMENT, SEE SHEET 10

BEGIN 2' LATERAL BASE DITCH
STA. 106+50.00 RT.
EL = 72.84'

-L-

PIPE HYDRAULIC DATA
DRAINAGE STRUCTURE NO. 1100

DRAINAGE AREA	= 3.61	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 6.7	CFS
DESIGN HW ELEVATION	= 66.78	FT
100 YEAR DISCHARGE	= 7.2	CFS
100 YEAR HW ELEVATION	= 66.86	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= 21	CFS
OVERTOPPING ELEVATION	= 72.12	FT

77.51

PI = 113+00.00
EL = 68.50'
VC = 900'
K = 984

(–)1.4236%

18" RCP III

(–)1.5257%

(–)0.6112%

(–) 0.8314%

PIPE HYDRAULIC DATA
DRAINAGE STRUCTURE NO. 1101

DRAINAGE AREA	= 8.79	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 15	CFS
DESIGN HW ELEVATION	= 61.29	FT
100 YEAR DISCHARGE	= 16	CFS
100 YEAR HW ELEVATION	= 61.38	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= 35	CFS
OVERTOPPING ELEVATION	= 64.53	FT

63.61

24" RCP IV

2' LATERAL BASE DITCH
STA. 112+00.00 RT.
EL = 65.01'

FOR –L– ALIGNMENT, SEE SHEET 11

END 2' LATERAL BASE DITCH
STA. 119+00.00 RT.
EL = 59.19'

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PROJECT REFERENCE NO.	SHEET NO.
R-3826	20

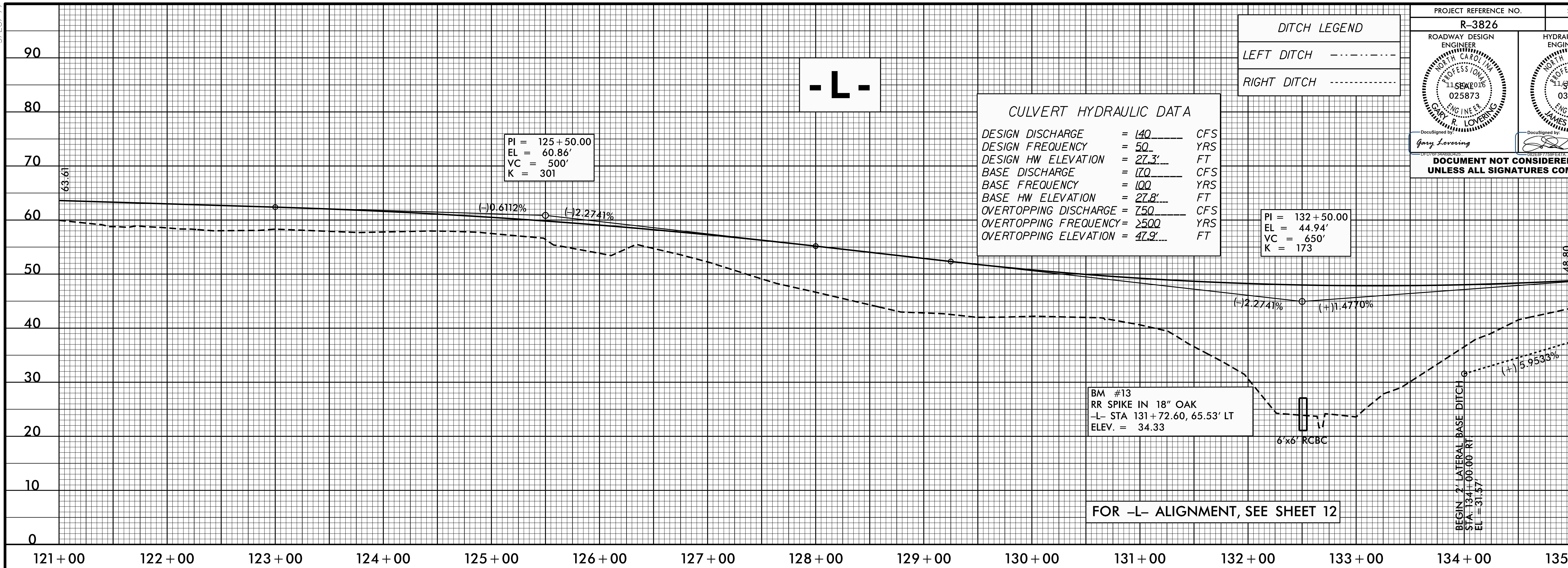
ROADWAY DESIGN ENGINEER — SEAL 025873, GARY R. LOVERING, 11/22/2016 — DocuSigned by: Gary Lovering

HYDRAULICS ENGINEER — SEAL 031986, JAMES R. RICE, 11/22/2016 — DocuSigned by:

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DITCH LEGEND	
LEFT DITCH	—··—··—
RIGHT DITCH	- - - - - -

-L-

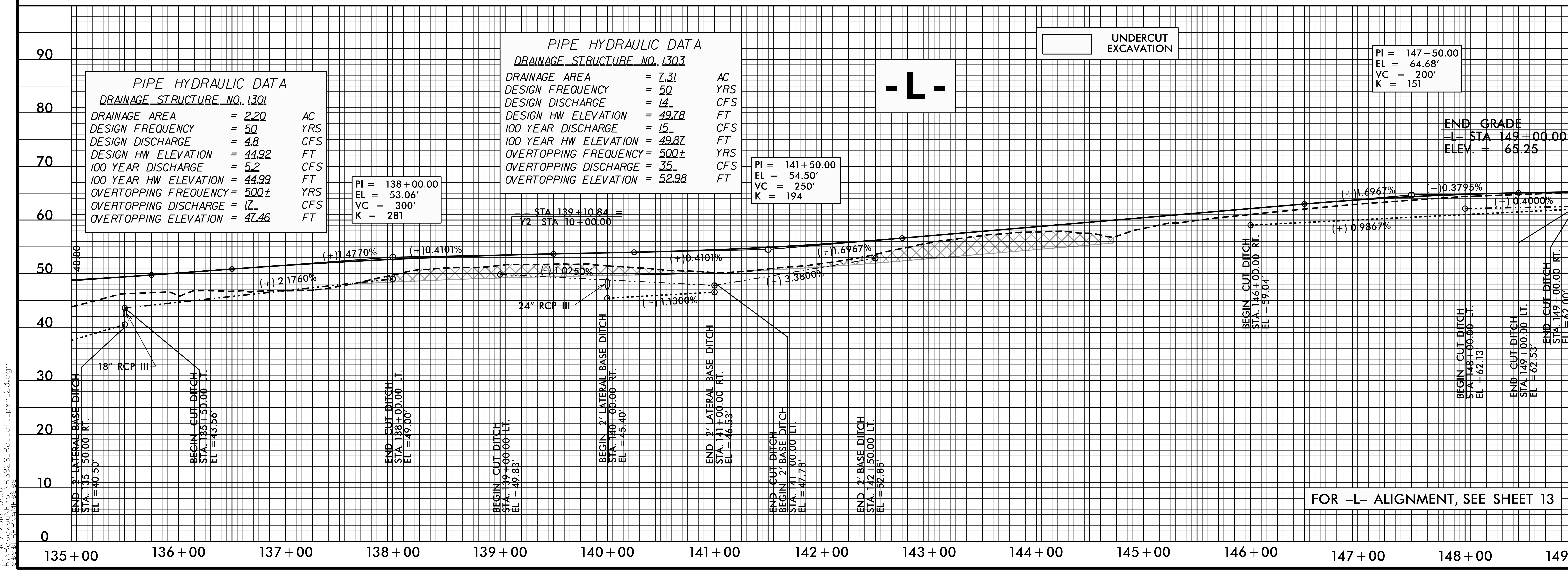


63.61
PI = 125+50.00
EL = 60.86'
VC = 500'
K = 301
(-)0.6112%
(-)2.2741%
PI = 132+50.00
EL = 44.94'
VC = 650'
K = 173
(-)2.2741%
(+)1.4770%
48.80
(+)5.9533%
BM #13
RR SPIKE IN 18" OAK
-L- STA 131+72.60, 65.53' LT
ELEV. = 34.33
6'x6' RCBC
BEGIN 2' LATERAL BASE DITCH
STA. 134+00.00 RT.
EL = 31.57'
FOR -L- ALIGNMENT, SEE SHEET 12
121+00
122+00
123+00
124+00
125+00
126+00
127+00
128+00
129+00
130+00
131+00
132+00
133+00
134+00
135+00

CULVERT HYDRAULIC DATA

DESIGN DISCHARGE	=	140	CFS
DESIGN FREQUENCY	=	50	YRS
DESIGN HW ELEVATION	=	27.3'	FT
BASE DISCHARGE	=	170	CFS
BASE FREQUENCY	=	100	YRS
BASE HW ELEVATION	=	27.8'	FT
OVERTOPPING DISCHARGE	=	750	CFS
OVERTOPPING FREQUENCY	=	>500	YRS
OVERTOPPING ELEVATION	=	47.9'	FT

-L-



UNDERCUT EXCAVATION
48.80
PI = 138+00.00
EL = 53.06'
VC = 300'
K = 281
-L- STA 139+10.84 =
-Y2- STA 10+00.00
PI = 141+50.00
EL = 54.50'
VC = 250'
K = 194
PI = 147+50.00
EL = 64.68'
VC = 200'
K = 151
END GRADE
-L- STA 149+00.00
ELEV. = 65.25
(+)2.1760%
(+)1.4770%
(+)0.4101%
(-)1.0250%
(+)0.4101%
(+)1.1300%
(+)3.3800%
(+)1.6967%
(+)1.6967%
(+)0.3795%
(+)0.4000%
(+)0.9867%
18" RCP III
24" RCP III
END 2' LATERAL BASE DITCH
STA. 135+50.00 RT.
EL = 40.50'
BEGIN CUT DITCH
STA. 135+50.00 LT.
EL = 43.56'
END CUT DITCH
STA. 138+00.00 LT.
EL = 49.00'
BEGIN CUT DITCH
STA. 139+00.00 LT.
EL = 49.83'
BEGIN 2' LATERAL BASE DITCH
STA. 140+00.00 RT.
EL = 45.40'
END 2' LATERAL BASE DITCH
STA. 141+00.00 RT.
EL = 46.53'
END CUT DITCH
BEGIN 2' BASE DITCH
STA. 141+00.00 LT.
EL = 47.78'
END 2' BASE DITCH
STA. 142+50.00 LT.
EL = 52.85'
BEGIN CUT DITCH
STA. 146+00.00 RT.
EL = 59.04'
BEGIN CUT DITCH
STA. 148+00.00 LT.
EL = 62.13'
END CUT DITCH
STA. 149+00.00 LT.
EL = 62.53'
END CUT DITCH
STA. 149+00.00 RT.
EL = 62.00'
FOR -L- ALIGNMENT, SEE SHEET 13
135+00
136+00
137+00
138+00
139+00
140+00
141+00
142+00
143+00
144+00
145+00
146+00
147+00
148+00
149+00

PIPE HYDRAULIC DATA

DRAINAGE STRUCTURE NO. 1301

DRAINAGE AREA	=	2.20	AC
DESIGN FREQUENCY	=	50	YRS
DESIGN DISCHARGE	=	4.8	CFS
DESIGN HW ELEVATION	=	44.92	FT
100 YEAR DISCHARGE	=	5.2	CFS
100 YEAR HW ELEVATION	=	44.99	FT
OVERTOPPING FREQUENCY	=	500±	YRS
OVERTOPPING DISCHARGE	=	17	CFS
OVERTOPPING ELEVATION	=	47.46	FT

PIPE HYDRAULIC DATA

DRAINAGE STRUCTURE NO. 1303

DRAINAGE AREA	=	7.31	AC
DESIGN FREQUENCY	=	50	YRS
DESIGN DISCHARGE	=	14	CFS
DESIGN HW ELEVATION	=	49.78	FT
100 YEAR DISCHARGE	=	15	CFS
100 YEAR HW ELEVATION	=	49.87	FT
OVERTOPPING FREQUENCY	=	500±	YRS
OVERTOPPING DISCHARGE	=	35	CFS
OVERTOPPING ELEVATION	=	52.98	FT

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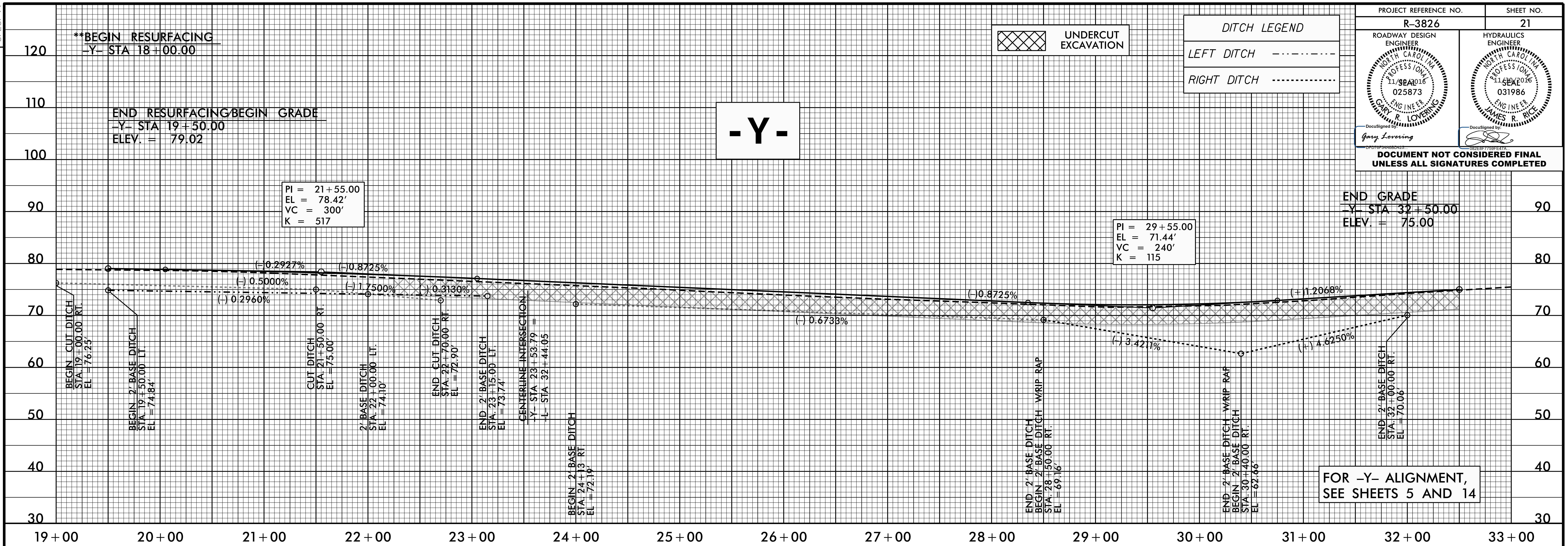
PROJECT REFERENCE NO.	SHEET NO.
R-3826	21

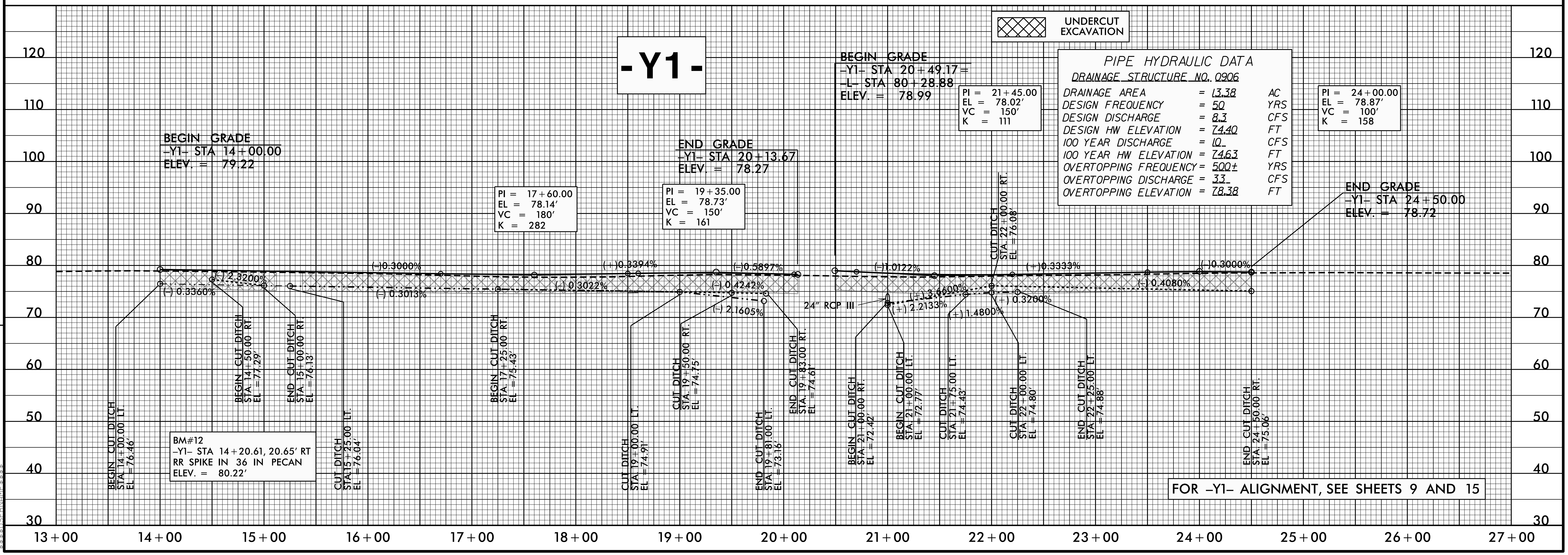
ROADWAY DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 025873 ENGINEER GARY R. LOVERING — 11/30/2016 — DocuSigned by: Gary Lovering

HYDRAULICS ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 031986 ENGINEER JAMES R. RICE — 11/30/2016 — DocuSigned by

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS





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PROJECT REFERENCE NO.	SHEET NO.
R-3826	22

ROADWAY DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 025873 GARY R. LOVERING — 11/30/2016 — DocuSigned by: Gary Lovering DFD76F34A6BD425...

HYDRAULICS ENGINEER — NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 031986 JAMES R. RICE — 11/30/2016 — DocuSigned by: 082E8F7759FE47A...

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DITCH LEGEND	
LEFT DITCH	— · · — · · —
RIGHT DITCH	- - - - - - - -

REVISIONS

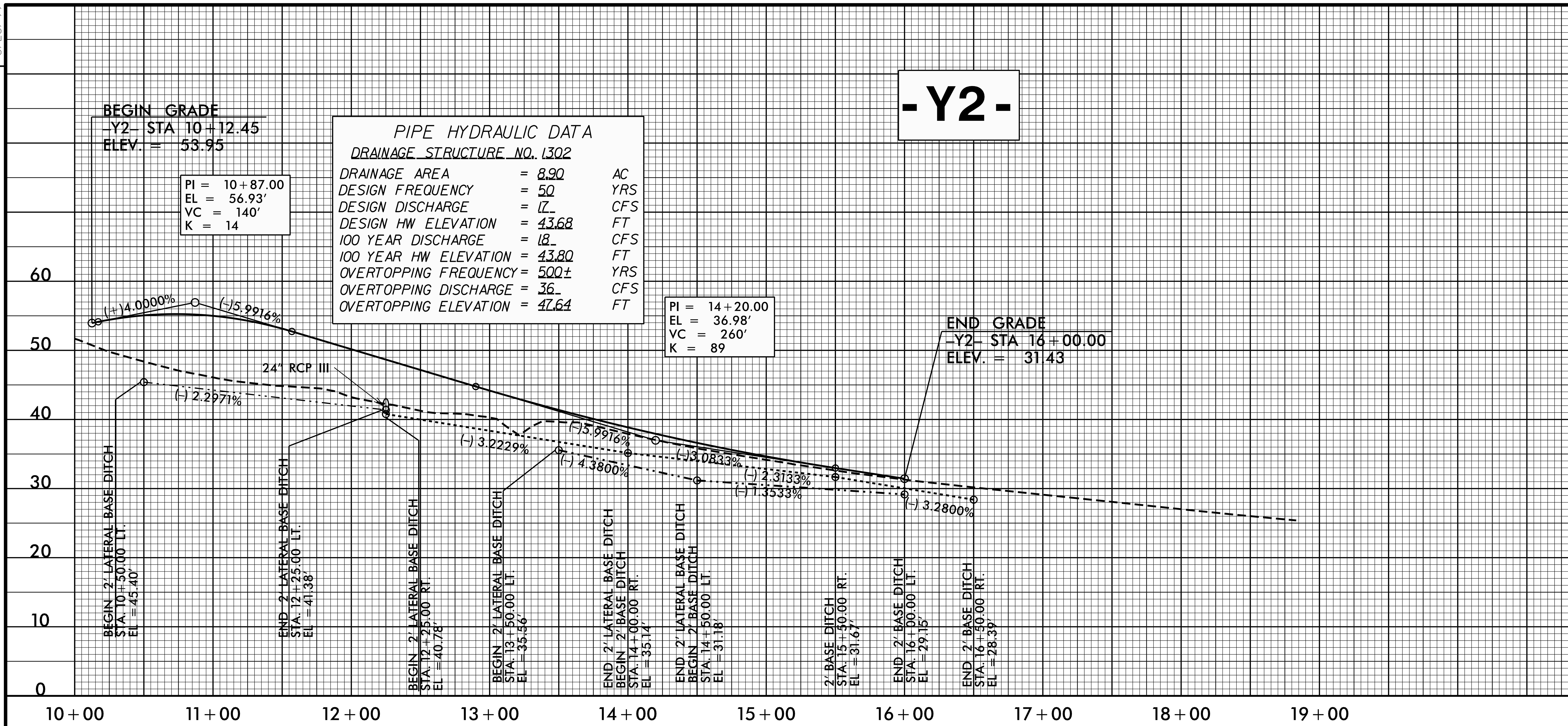
RW REVISION (09/12/16) - DRIVEWAY ADDED AT -L- STA. 127+00.00. - JDG

-Y2-

PIPE HYDRAULIC DATA

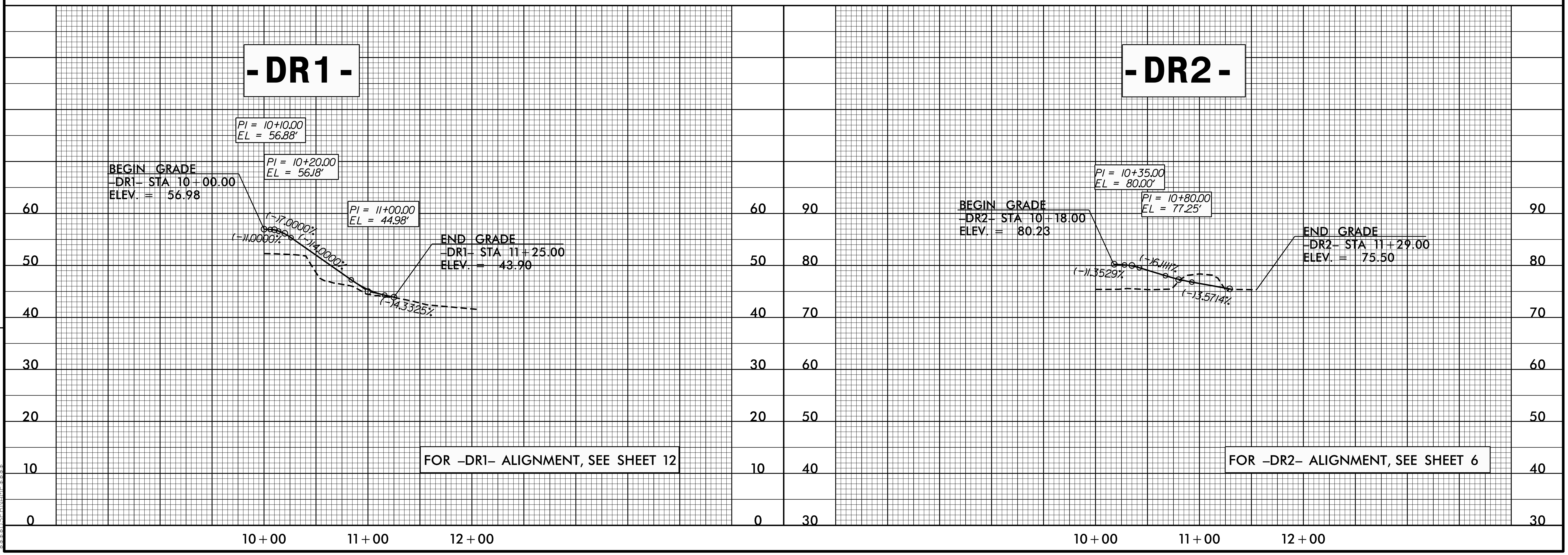
DRAINAGE STRUCTURE NO. 1302

DRAINAGE AREA	=	8.90	AC
DESIGN FREQUENCY	=	50	YRS
DESIGN DISCHARGE	=	17	CFS
DESIGN HW ELEVATION	=	43.68	FT
100 YEAR DISCHARGE	=	18	CFS
100 YEAR HW ELEVATION	=	43.80	FT
OVERTOPPING FREQUENCY	=	500±	YRS
OVERTOPPING DISCHARGE	=	36	CFS
OVERTOPPING ELEVATION	=	47.64	FT



-DR1-

-DR2-



FOR -DR1- ALIGNMENT, SEE SHEET 12

FOR -DR2- ALIGNMENT, SEE SHEET 6

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