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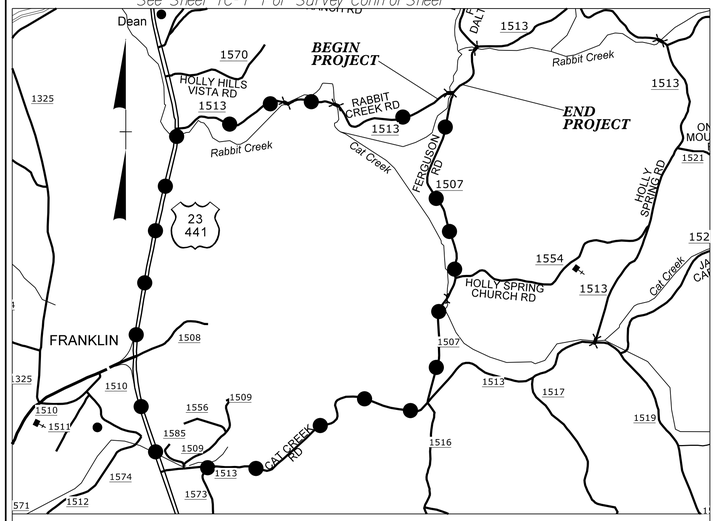
09/08/99

TIP PROJECT: B–5406

CONTRACT: C204012

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Symbols
See Sheet 1C-1 For Survey Control Sheet



VICINITY MAP

OFF–SITE DETOUR

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

MACON COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B–5406	1	

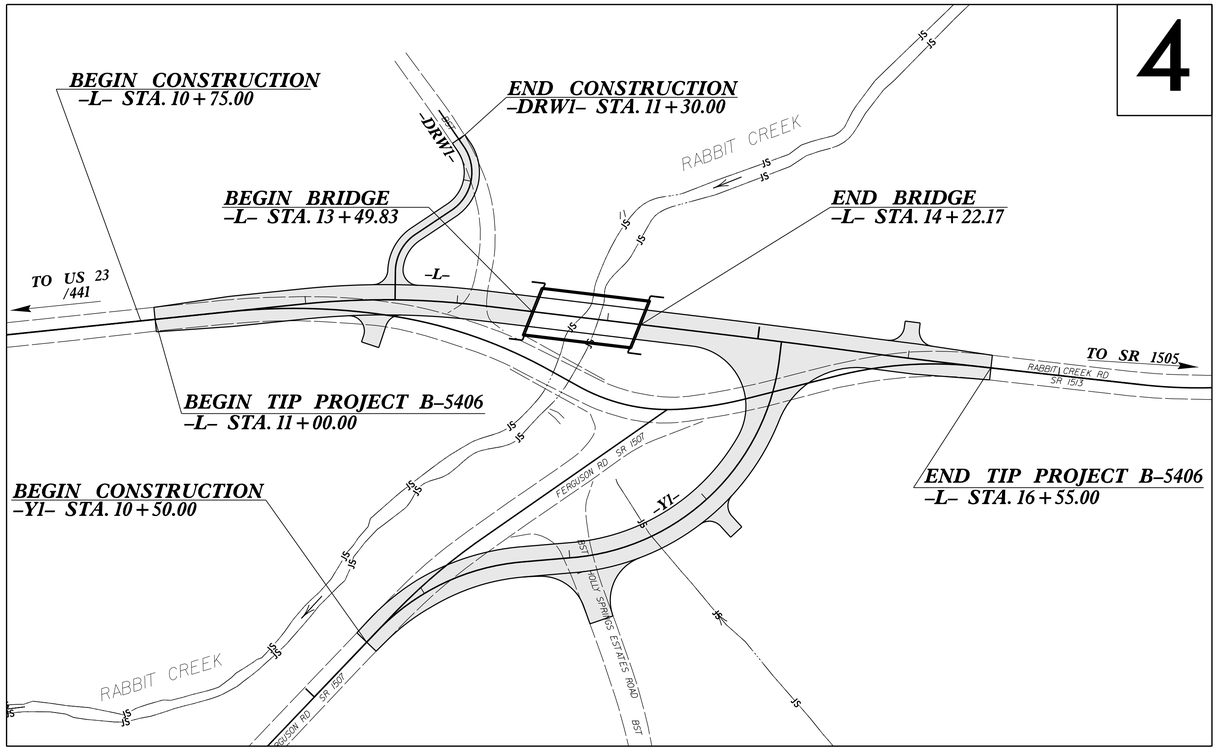
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
46121.1.1	BRZ–1513(7)	PE
46121.2.1		R/W, UTIL.
46121.3.1		CONST.

LOCATION: REPLACE BRIDGE NO. 67 OVER RABBIT CREEK ON SR 1513 (RABBIT CREEK ROAD)

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

NAD 83/NA 2011

4



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 2018 = 645
ADT 2038 = 880
K = 10 %
D = 65 %
T = 4 % *
V = 40 MPH
* TTST = 1% + DUALS = 3%
FUNC CLASS =
RURAL LOCAL
SUBREGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY T.I.P. PROJECT B–5406 = 0.091

LENGTH STRUCTURE T.I.P. PROJECT B–5406 = 0.014

TOTAL LENGTH OF T.I.P. PROJECT B–5406 = 0.105

Prepared In the Office of:

LOCHNER
H. W. LOCHNER, INC
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
(919)–571–7111
NC License Number F–0159

ECOLOGICAL ENGINEERING
NC FIRM LICENSE No: F-1148
1151 SE Cary Parkway
Suite 101
Cary, NC 27518
(919) 557-0929

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
FEBRUARY 17, 2017

LETTING DATE:
FEBRUARY 20, 2018

BRIAN K. EASON, PE
PROJECT ENGINEER

BRIAN R. PEASE, EI
PROJECT DESIGN ENGINEER

DAVID STUTTS, PE
NCDOT CONTACT

HYDRAULICS ENGINEER

DocuSigned by:
Frank F Fleming
9AD721AA9FA4A6...
SIGNATURE: 12/21/2017

NORTH CAROLINA PROFESSIONAL SEAL 20147 ENGINEER FRANK F. FLEMING P.E.

ROADWAY DESIGN ENGINEER

DocuSigned by:
Brian K. Eason
9AF015AD7ACC48F...
SIGNATURE: 12/21/2017

NORTH CAROLINA PROFESSIONAL SEAL 25523 ENGINEER BRIAN K. EASON P.E.

STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION ·

12/10/2017
B5406_RDY_PSH_01.dgn
BEASON

8/17/99

LOCHNER
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NC License Number F-0159

PROJECT REFERENCE NO.	SHEET NO.
B-5406	1-A

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 25523 ENGINEER BRIAN K PEARSON

DocuSigned by: Brian K Pearson
9AF015AD7ACC48F...
12/21/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

INDEX OF SHEETS B-5406

SHEET NUMBER	
1	TITLE SHEET
1A	INDEX OF SHEETS
1B	CONVENTIONAL SYMBOLS
1C-1	SURVEY CONTROL SHEET
1D	CENTERLINE COORDINATE LIST
2A-1 thru 2A-2	PAVEMENT SCHEDULE, TYPICAL SECTIONS, and WEDGING DETAILS
2B-1	PROPOSED FENCE LOCATION DETAIL, INTERSECTION DETAIL AND -DRW1- ALIGNMENT DETAIL
3B-1	SUMMARY OF EARTHWORK, FENCE SUMMARY, SHOULDER BERM GUTTER SUMMARY, GUARDRAIL SUMMARY, and REMOVAL OF EXISTING ASPHALT SUMMARY
3D-1	DRAINAGE SUMMARY
3G-1	SUMMARY OF AGGREGATE SUNGRADE STABILIZATION, SUMMARY OF SUBSURFACE DRAINAGE
4	PLAN
5	PROFILE
TMP-1 thru TMP-8	TRANSPORTATION MANAGEMENT PLANS
PMP-1 thru PMP-2	PAVEMENT MARKING PLANS
EC-1 thru EC-5	EROSION CONTROL PLANS
RF-1	REFORESTATION DETAIL SHEET
SIGN-1 thru SIGN-2	SIGNING PLANS
UO-1 thru UO-2	UTILITY BY OTHERS PLANS
X-1A	CROSS SECTION SUMMARY
X-1 thru X-17	CROSS-SECTIONS
S-1 thru S-18	STRUCTURE PLANS

EFF. 01-16-2018
REV.

2018 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2018 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.02	Method of Clearing - Method II
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
310.10	Driveway Pipe Installation
DIVISION 4 - MAJOR STRUCTURES	
422.02	Bridge Approach Fills - Type II Modified Approach Fill
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 8 - INCIDENTALS	
815.02	Subsurface Drain
838.01	Concrete Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew
838.11	Brick Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew
838.80	Precast Endwalls - 12" thru 72" Pipe 90 Skew
840.00	Concrete Base Pad for Drainage Structures
840.18	Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.24	Frames and Narrow Slot Sag Grates
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.27	Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.29	Frames and Narrow Slot Flat Grates
840.35	Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates
840.45	Precast Drainage Structure
840.46	Traffic Bearing Precast Drainage Structure
846.01	Concrete Curb, Gutter and Curb & Gutter
846.04	Drop Inlet Installation in Shoulder Berm Gutter
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
866.02	Woven Wire Fence with Wood Post
876.02	Guide for Rip Rap at Pipe Outlets
876.04	Drainage Ditches with Class 'B' Rip Rap

GENERAL NOTES:

2018 SPECIFICATIONS
EFFECTIVE: 01-16-2018
REVISED:

GRADING AND SURFACING OR RESURFACING AND WIDENING:

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

CLEARING:

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

SAFETY CLEARING:

THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE AREAS IN THE PLANS DESIGNATED SAFETY CLEARING. THE LIMITS ARE AS SHOWN AND THE CLEARING AND GRUBBING IS CONSIDERED A PART OF THE LUMP SUM ITEM FOR "CLEARING AND GRUBBING".

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.

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

SUBSURFACE PLANS:

NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

END BENTS:

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

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE

DUKE ENERGY (POWER)

FRONTIER COMMUNICATIONS (TELEPHONE)

MORRIS BROADBAND (CATV)

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

RIGHT-OF-WAY MARKERS:

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

ROCK:

ROCK BLASTING MAY BE REQUIRED FOR EXCAVATION ON THE PROJECT. SEE SECTION 220 OF THE STANDARD SPECIFICATIONS AND IF APPLICABLE, ROCK BLASTING PROVISION.

12/13/2017
B5406_RDY_PSH_01-A.dgn
BPEARSON

12/2/2016

PROJECT REFERENCE NO.	SHEET NO.
B-5406	1-B

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
- Computed 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 — S
- Potential Contamination Area: Soil — S
- Known Contamination Area: Water — W
- Potential Contamination Area: Water — W
- Contaminated Site: Known or Potential

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign — S
- Well — W
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

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

RAILROADS:

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

RIGHT OF WAY & PROJECT CONTROL:

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

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Curb Ramp — CR
- Existing Metal Guardrail
- 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 B-5406
-FINAL-

BL

POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
1	BL-1	559053.2460	703030.1670	2104.35	OUTSIDE PROJECT LIMITS	
2	BL-2	559184.2330	703247.1720	2094.60	OUTSIDE PROJECT LIMITS	
3	BL-3	559353.1310	703411.9260	2082.60	11+87.96	8.61 LT
4	BL-4	559445.4000	703647.1590	2073.70	14+38.15	36.90 RT
5	BL-5	559570.4870	703831.7690	2083.94	16+59.88	13.22 RT
6	BL-6	559710.3360	704021.5900	2093.00	OUTSIDE PROJECT LIMITS	

BY1

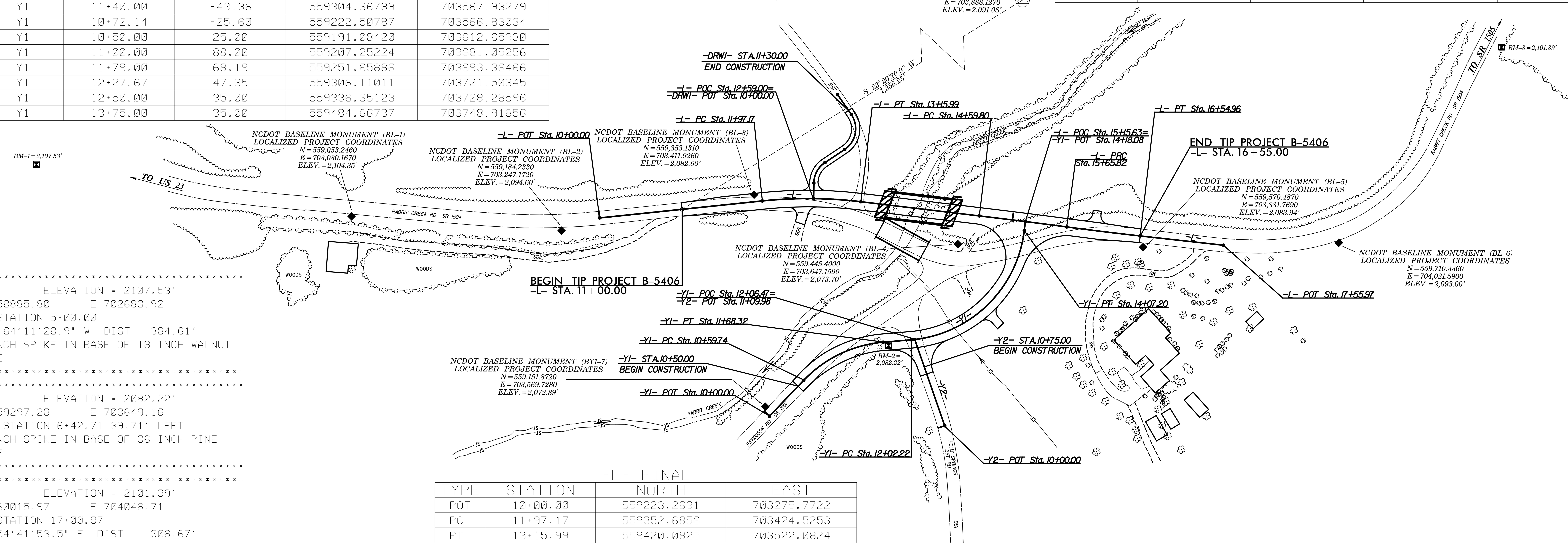
POINT	DESC.	NORTH	EAST	ELEVATION	Y1 STATION	OFFSET
44	BL-4	559445.4000	703647.1590	2073.70	13+55.88	73.01 LT
7	BY1-7	559151.8720	703569.7280	2072.89	10+04.83	11.61 LT

-FINAL- ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y1	11+85.00	-85.00	559372.93631	703599.58823
Y1	11+40.00	-43.36	559304.36789	703587.93279
Y1	10+72.14	-25.60	559222.50787	703566.83034
Y1	10+50.00	25.00	559191.08420	703612.65930
Y1	11+00.00	88.00	559207.25224	703681.05256
Y1	11+79.00	68.19	559251.65886	703693.36466
Y1	12+27.67	47.35	559306.11011	703721.50345
Y1	12+50.00	35.00	559336.35123	703728.28596
Y1	13+75.00	35.00	559484.66737	703748.91856

-FINAL- ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	10+50.00	-10.00	559263.62671	703306.92960
L	11+00.00	-55.00	559330.39515	703315.11345
L	11+97.17	-55.00	559394.17893	703388.42402
L	13+15.99	-55.00	559468.53051	703496.04798
L	13+15.99	-40.00	559455.31742	703503.14827
L	14+59.80	-40.00	559523.38701	703629.82061
L	15+65.82	-40.00	559573.20060	703724.01151
L	16+95.00	-40.00	559634.03495	703836.99246
L	16+95.00	-10.00	559607.72646	703851.40994
L	16+70.00	10.00	559578.17291	703839.09785
L	16+70.00	25.00	559565.01867	703846.30659
L	16+00.00	25.00	559531.54059	703784.45529
L	13+50.00	50.18	559391.98033	703575.78872
L	13+15.99	31.55	559392.28896	703537.01771
L	11+97.17	35.00	559326.28070	703447.49880
L	10+50.00	10.00	559248.53821	703320.05733



BM1 ELEVATION = 2107.53'
N 558885.80 E 702683.92
BL STATION 5+00.00
S 64°11'28.9" W DIST 384.61'
8 INCH SPIKE IN BASE OF 18 INCH WALNUT TREE

BM2 ELEVATION = 2082.22'
N 559297.28 E 703649.16
BY1 STATION 6+42.71 39.71' LEFT
8 INCH SPIKE IN BASE OF 36 INCH PINE TREE

BM3 ELEVATION = 2101.39'
N 560015.97 E 704046.71
BL STATION 17+00.87
N 04°41'53.5" E DIST 306.67'
8 INCH SPIKE IN BASE OF 30 INCH CEDAR TREE

-L- FINAL

TYPE	STATION	NORTH	EAST
POT	10+00.00	559223.2631	703275.7722
PC	11+97.17	559352.6856	703424.5253
PT	13+15.99	559420.0825	703522.0824
PC	14+59.80	559488.1521	703648.7547
PRC	15+65.82	559537.7178	703742.4770
PT	16+54.96	559579.7130	703821.1000
POT	17+55.97	559628.2586	703909.6843

-Y1- FINAL

TYPE	STATION	NORTH	EAST
POT	10+00.00	559145.3680	703580.4874
PC	10+59.74	559204.4373	703589.3893
PT	11+68.32	559297.0656	703641.3854
PC	12+02.22	559318.8374	703667.3729
PT	14+07.20	559504.8216	703703.1748
POT	14+18.08	559514.4067	703698.0241

-Y2- FINAL

TYPE	STATION	NORTH	EAST
POT	10+00.00	559257.3167	703759.8157
POT	11+09.98	559321.6148	703670.5942

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "GPS-102"
WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF
NORTHING: 560533.2580(ft) EASTING: 703888.1270(ft)
ELEVATION: 2091.08(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99977748
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "GPS-102" TO -L- STATION 11+00.00 IS
S 23°20'20.9" W 1355.25'
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

GEOID MODEL: G12NC
NOTE: DRAWING NOT TO SCALE

NOTES:

1. *THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:*
   HTTPS://CONNECT.NCDOT.GOV/RESOURCES/LOCATION/

   THE FILES TO BE FOUND ARE AS FOLLOWS:
   B-5406_LS_CONTROL.TXT

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

△ *INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.*
PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.

6/2/99

PROJ. REFERENCE NO.	SHEET NO.
B-5406	1-D

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CENTERLINE COORDINATE LIST

Point #	Chain	Station	Northing (Y)	Easting (X)
1	L	10+00.00	559223.2631	703275.7722
2	L	10+50.00	559256.0825	703313.4935
3	L	11+00.00	559288.9018	703351.2147
4	L	11+50.00	559321.7211	703388.9359
5	L	12+00.00	559354.5348	703426.6621
6	L	12+50.00	559385.3297	703466.0301
7	L	13+00.00	559412.3016	703508.1096
8	L	13+50.00	559436.1794	703552.0376
9	L	14+00.00	559459.8471	703596.0812
10	L	14+50.00	559483.5147	703640.1249
11	L	15+00.00	559507.0933	703684.2162
12	L	15+50.00	559530.4011	703728.4512
13	L	16+00.00	559553.6215	703772.7321
14	L	16+50.00	559577.3334	703816.7516
15	L	17+00.00	559601.3599	703860.6005
16	L	17+50.00	559625.3890	703904.4480
17	L	17+55.97	559628.2581	703909.6834
18	Y1	10+00.00	559145.3680	703580.4874
19	Y1	10+50.00	559194.8097	703587.9384
20	Y1	11+00.00	559242.9746	703600.6292
21	Y1	11+50.00	559284.4765	703628.0978
22	Y1	12+00.00	559317.4131	703665.6728
23	Y1	12+50.00	559354.7910	703698.5374
24	Y1	13+00.00	559400.8562	703717.3773
25	Y1	13+50.00	559450.5501	703720.1078
26	Y1	14+00.00	559498.4021	703706.4285
27	Y1	14+18.08	559514.4075	703698.0236

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

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

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

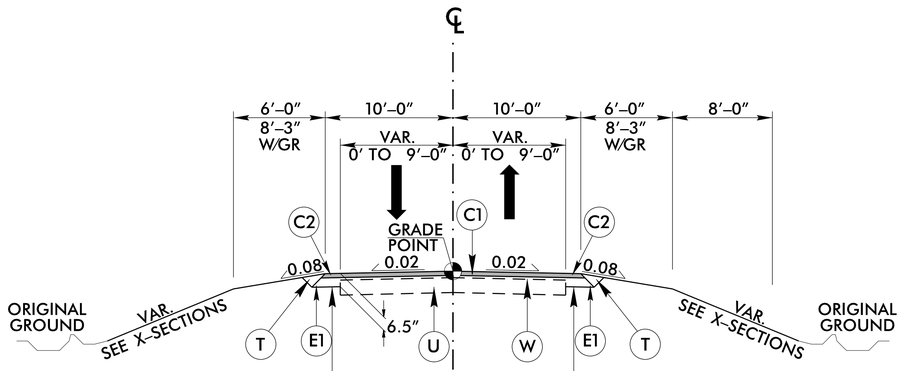
Point #	Chain	Station	Northing (Y)	Easting (X)

5/14/99

PAVEMENT SCHEDULE

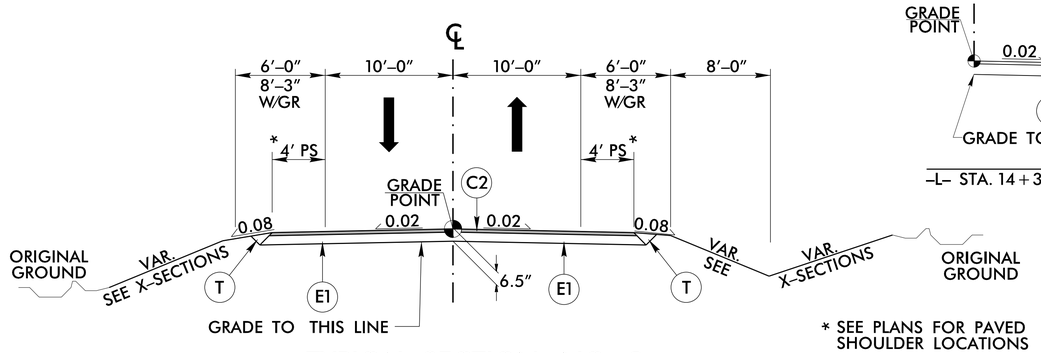
C1	PROP. APPROX. 1.25″ ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.	R1	SHOULDER BERM GUTTER
C2	PROP. APPROX. 2.5″ ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	T	EARTH MATERIAL.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 110 LBS PER SQ YD PER 1″ DEPTH TO BE PLACED IN LAYERS NOT TO EXCEED 1 1/2″ IN DEPTH	U	EXISTING PAVEMENT.
E1	PROP. APPROX. 4″ ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	V	MILLING (VARIABLE DEPTH-SEE DETAIL)
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1″ DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3″ IN DEPTH OR GREATER THAN 5½″ IN DEPTH.	W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL)

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



TYPICAL SECTION NO.1

USE TYPICAL SECTION NO. 1
–L– STA. 11+00.00 TO STA. 12+73.72
–L– STA. 15+93.54 TO STA. 16+55.00

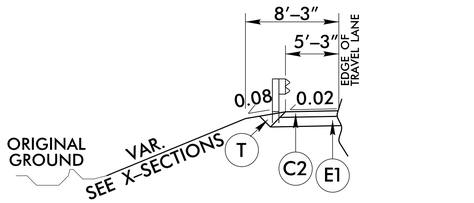


TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2
–L– STA. 12+73.72 TO STA. 13+49.83 (BEG. BRIDGE)
–L– STA. 14+22.17 (END BRIDGE) TO STA. 15+93.54

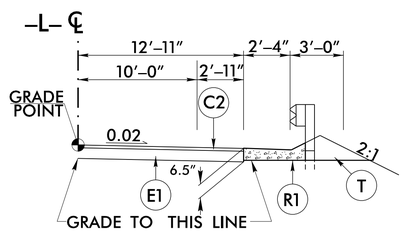
* SEE PLANS FOR PAVED SHOULDER LOCATIONS

DETAIL A
PAVED SHOULDER WITH GUARDRAIL

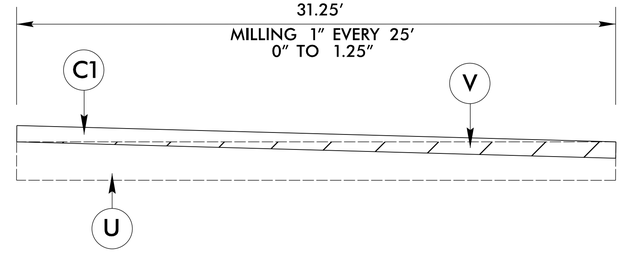


USE DETAIL A
–L– STA. 12+95.74 TO STA. 13+45.74 RT
–L– STA. 13+03.92 TO STA. 13+53.92 LT
–L– STA. 14+18.08 RT TO –Y1– STA. 13+41.85 LT
–L– STA. 14+26.26 TO STA. 15+13.76 LT

DETAIL B
SHOULDER BERM GUTTER

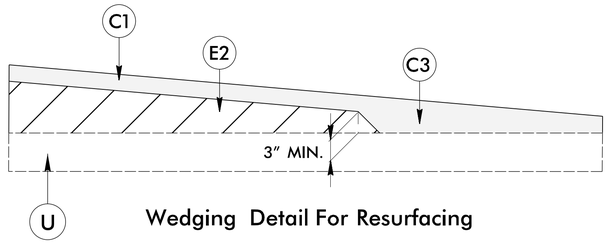


USE DETAIL B
–L– STA. 14+30.33 TO STA. 14+42.00 RT



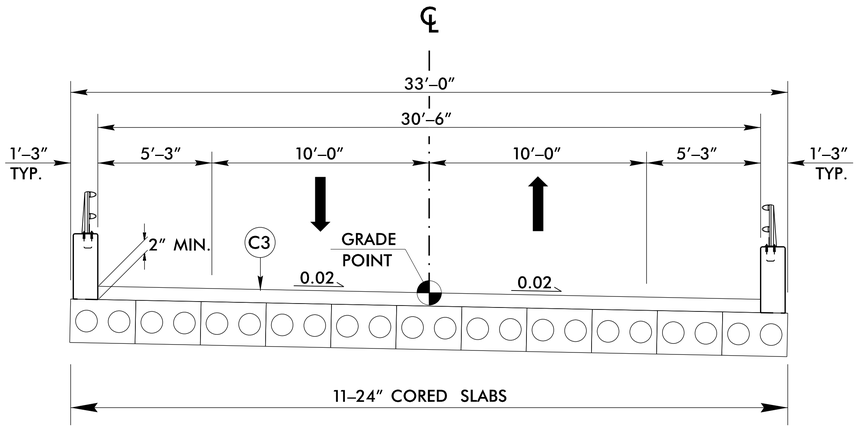
MILLING DETAIL

USE MILLING DETAIL AT RESURFACING TIES



Wedging Detail For Resurfacing

WEDGING DETAIL



TYPICAL SECTION NO. 3

USE TYPICAL SECTION NO. 3
–L– STA. 13+49.83 (BEGIN BRIDGE) TO STA. 14+22.17 (END BRIDGE)

LOCHNER
H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
(919)-571-7111
NC License Number F-0159

PROJECT REFERENCE NO.	SHEET NO.
B-5406	2A-1
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 25523 ENGINEER BRIAN K. EASON
DocuSigned by: Brian K. Eason 9AF015AD7ACC48F...
12/21/2017

PAVEMENT DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 022896 ENGINEER CLARK S. MORRISON
DocuSigned by: Clark Morrison B0A110DD1E004C4...
12/22/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

5/14/99

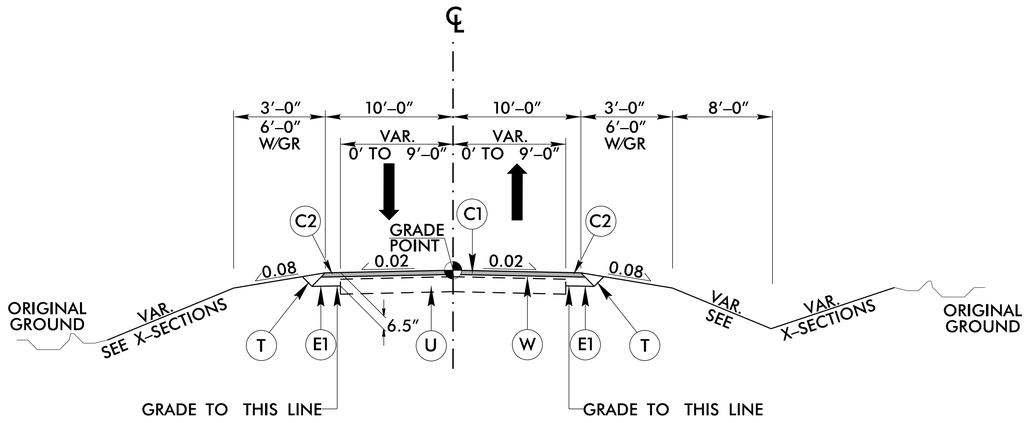
LOCHNER
H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
(919)-571-7111
NC License Number F-0159

PROJECT REFERENCE NO.	SHEET NO.
B-5406	2A-2
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 25523 BRIAN K. EASON
Brian K. Eason
9AF015AD7ACC48F...
12/21/2017

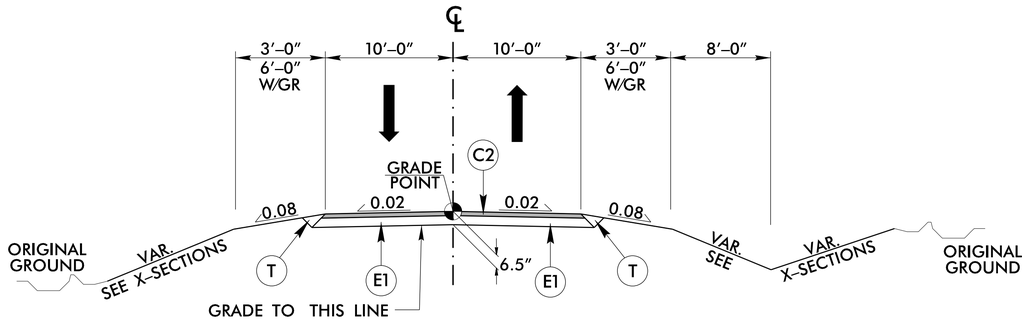
PAVEMENT DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022896 CLARK S. MORRISON
DocuSigned by: Clark Morrison
B0A110DD1E004C4...
12/22/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



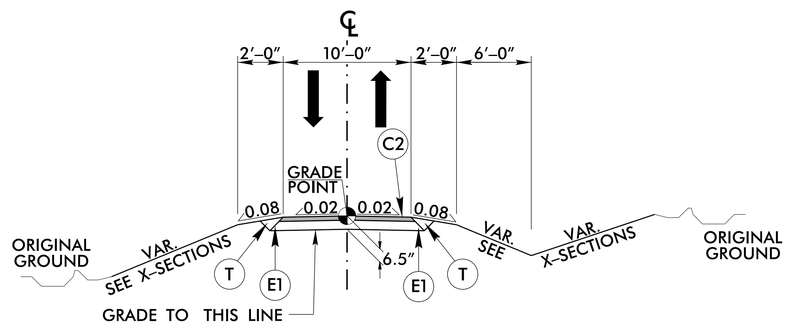
TYPICAL SECTION NO. 4

USE TYPICAL SECTION NO. 4
–Y1– STA. 10+50.00 TO STA. 11+20.00



TYPICAL SECTION NO. 5

USE TYPICAL SECTION NO. 5
–Y1– STA. 11+20.00 TO STA. 14+08.08



TYPICAL SECTION NO. 6

USE TYPICAL SECTION NO. 6
–DRW1– STA. 10+10.00 TO STA. 11+30.00

PAVEMENT SCHEDULE	
C1	1.25″ TYPE SF9.5A
C2	2.5″ TYPE SF9.5A
C3	VAR. TYPE SF9.5A
E1	4″ TYPE B25.0B
E2	VAR. TYPE B25.0B
R1	SHOULDER BERM GUTTER
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V	MILLING (VARIABLE DEPTH SEE DETAIL)
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL)

12/19/2017
B-5406_RDY_PSH_02A.dgn
BRASON

USE SHEET 2B-1 AS FOLLOWS:
PROPOSED FENCING LOCATION DETAIL
INTERSECTION DIMENSIONING DETAIL
-DRW1- ALIGNMENT DETAIL

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ECOLOGICAL ENGINEERING
NC FIRM LICENSE No: F-1148
1151 SE Cary Parkway
Suite 101
Cary, NC 27518
(919) 557-0929

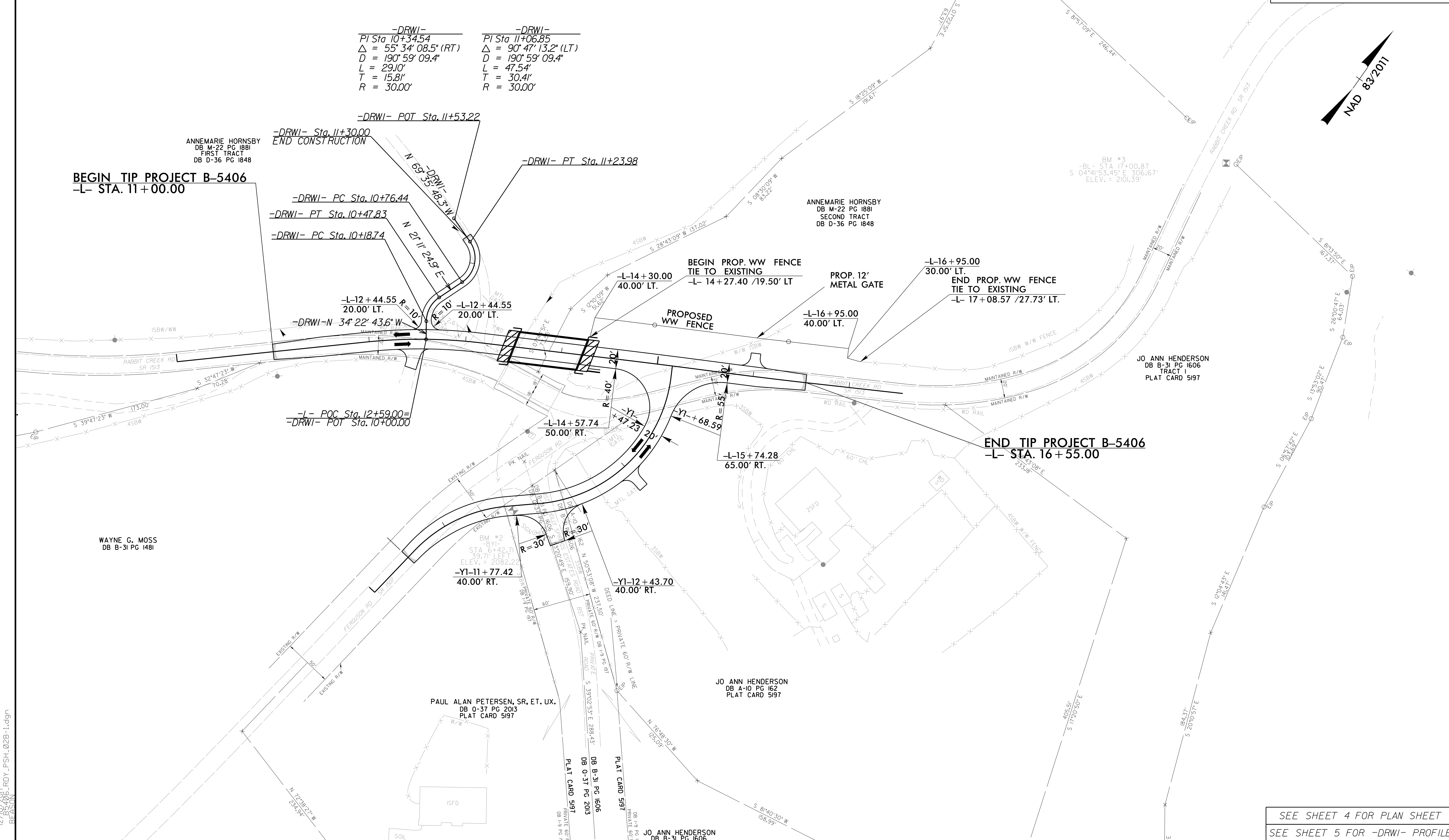
PROJECT REFERENCE NO.	SHEET NO.
B-5406	2B-1
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 25523 ENGINEER

12/21/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



-DRW1-
PI Sta 10+34.54
△ = 55° 34' 08.5" (RT)
D = 190° 59' 09.4"
L = 29.10'
T = 15.81'
R = 30.00'
-DRW1-
PI Sta 11+06.85
△ = 90° 47' 13.2" (LT)
D = 190° 59' 09.4"
L = 47.54'
T = 30.41'
R = 30.00'
-DRW1- POT Sta. 11+53.22
-DRW1- Sta. 11+30.00
END CONSTRUCTION
-DRW1- PT Sta. 11+23.98
ANNEMARIE HORNSBY
DB M-22 PG 1881
FIRST TRACT
DB D-36 PG 1848
BEGIN TIP PROJECT B-5406
-L- STA. 11+00.00
-DRW1- PC Sta. 10+76.44
-DRW1- PT Sta. 10+47.83
-DRW1- PC Sta. 10+18.74
N 69°35' 48.3" W
N 21° 11' 24.9" E
-L-12+44.55
20.00' LT.
-DRW1-N 34° 22' 43.6" W
R=10'
-L- POC Sta. 12+59.00=
-DRW1- POT Sta. 10+00.00
-L-14+30.00
40.00' LT.
BEGIN PROP. WW FENCE
TIE TO EXISTING
-L- 14+27.40 /19.50' LT
PROPOSED
WW FENCE
PROP. 12'
METAL GATE
-L-16+95.00
30.00' LT.
END PROP. WW FENCE
TIE TO EXISTING
-L- 17+08.57 /27.73' LT.
-L-16+95.00
40.00' LT.
ANNEMARIE HORNSBY
DB M-22 PG 1881
SECOND TRACT
DB D-36 PG 1848
NAD 83/2011
BM #3
-L-14+57.74
50.00' RT.
-Y1- +47.23
-Y1- +68.59
R=40'
R=55'
-L-15+74.28
65.00' RT.
END TIP PROJECT B-5406
-L- STA. 16+55.00
JO ANN HENDERSON
DB B-31 PG 1606
TRACT 1
PLAT CARD 5197
WAYNE G. MOSS
DB B-31 PG 1481
R=30'
-Y1-11+77.42
40.00' RT.
-Y1-12+43.70
40.00' RT.
JO ANN HENDERSON
DB A-10 PG 162
PLAT CARD 5197
PAUL ALAN PETERSEN, SR. ET. UX.
DB O-37 PG 2013
PLAT CARD 5197
PLAT CARD 5197
DB B-31 PG 1606
DB O-37 PG 2013
JO ANN HENDERSON
DB B-31 PG 1606
TRACT 1
RABBIT CREEK RD
SR 1513
FERGUSON RD

SEE SHEET 4 FOR PLAN SHEET
SEE SHEET 5 FOR -DRW1- PROFILE

8/17/99

REVISIONS

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

LOCHNER
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(919)571–7111
NC License Number F–0159

ECOLOGICAL ENGINEERING
NC FIRM LICENSE No: F-1148
1151 SE Cary Parkway
Suite 101
Cary, NC 27518
(919) 557-0929

PROJECT REFERENCE NO.	SHEET NO.
B–5406	3B–1
R/W SHEET NO.	

SUMMARY OF EARTHWORK

STATION	STATION	UNCLASSIFIED EXCAVATION CY	EMBANK +% CY	BORROW CY	WASTE CY
SUMMARY 1					
–L– 11+00.00 LT	–L–13+49.83 LT BEGIN BRIDGE	531	207	0	324
–DRW1– 10+10.00	11+30.00	277	12	0	265
SUMMARY 1 TOTAL		808	219	0	589
SUMMARY 2					
–L– 11+00.00 RT	–L–13+49.83 RT BEGIN BRIDGE	1	258	257	0
SUMMARY 2 TOTAL		1	258	257	0
SUMMARY 3					
–L– 14+22.17 LT END BRIDGE	–L– 16+55 LT	20	983	963	0
SUMMARY 3 TOTAL		20	983	963	0
SUMMARY 4					
–L– 14+22.17 RT END BRIDGE	–L– 16+55 RT	0	451	451	0
–Y1– 10+50.00	14+08.08	1,861	1,219	0	642
SUMMARY 4 TOTAL		1,861	1,670	451	642
PROJECT SUB–TOTALS		2,690	3,129	1,671	1,231
LOSS DUE TO CLEARING & GRUBBING		–50		50	
WASTE IN LIEU OF BORROW				–1,231	–1,231
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT				25	
GRAND TOTAL		2,640		515	
SAY		2,700		600	

DDE = 550 CY
UNDERCUT (CONTINGENCY) = 350 CY
SELECT GRANULAR MATERIAL = 350 CY

NOTE: These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

NOTE: Approximate quantities only. Unclassified Excavation, Borrow Excavation Clearing and Grubbing, and Removal of Existing Asphalt Pavement will be paid for at the contract lump sum price for grading.

FENCE SUMMARY

LINE	STATION	STATION	SIDE	47" WOVEN WIRE LENGTH (FT)
–L–	14+27.40	17+08.57	LT.	309.10′
			TOTAL	309.10
			SAY	310.00′

SHOULDER BERM GUTTER SUMMARY

LINE	STATION	STATION	SIDE	LENGTH (FT)
–L–	14+30.33	14+42.00	RT.	11.67′
		TOTAL		11.67′
		SAY		15.00′

REMOVAL OF EXISTING ASPHALT PAVEMENT

LINE	STATION	STATION	SIDE	SY
–L–	12+86	13+44	RT.	31.88
–DRW1–	10+76	11+11	LT.	51.00
–Y1–	10+64	13+67	LT.	638.44
			TOTAL	721.32
			SAY	730

GUARDRAIL SUMMARY

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 GUARDRAIL	REMOVE EXISTING GUARDRAIL	REMOVE AND STOCKPILE EXISTING GUARDRAIL	REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	XI MOD	XI	GREU, TL–2	GREU, MEDIAN	TYPE III	CAT–1	VI MOD	BIC	AT–1	EA	G	NG				
–L–	12+95.74	13+45.74	RT	50.00′			13+45.74 (BRIDGE)		5.33′	8.25′	25.00′		0.50′				1		1										
–L–	13+03.92	13+53.92	LT	50.00′				13+53.92 (BRIDGE)	5.33′	8.25′		25.00′		0.50′			1		1										
–L–/–Y1–	14+18.08	13+41.85	RT/LT	50.00′	75.00′			14+18.08 (BRIDGE)	5.33′	8.25′		6.25′		1.00′					1				1						
–L–	14+26.26	15+13.76	LT	87.50′			14+26.26 (BRIDGE)		5.33′	8.25′	25.00′		0.50′				1		1										
			SUB–TOTAL	237.50′	75.00′												3		4				1						
	LESS ANCHORS:																												
		GREU, TL–2	3@25.00	–75.00′																									
		TYPE–III	4@18.75	–75.00′																									
		AT–1	1@6.25	–6.25′																									
			TOTAL	81.25′	75.00′																								
			SAY	87.50′	75.00′												3		4				1						

ADDITIONAL GUARDRAIL POSTS= 5 EA.

1/12/2018
B5406_RDY_PSH_03B-1.dgn
BEASLEY

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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUB–REGIONAL & REGIONAL
LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48" & UNDER)

STATION / SIZE / THICKNESS OR GAUGE	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"	DRAINAGE PIPE 18"	DRAINAGE PIPE 24"	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	DO NOT USE PVC	CLASS III PIPE (UNLESS NOTED OTHRWISE) 12"	CLASS III 15"	CLASS III 18"	CLASS III 24"	CLASS III 30"	CLASS III 36"	CLASS III 42"	CLASS III 48"	CLASS III	C.S. PIPE (UNLESS OTHERWISE NOTED) 12" .064	C.S. 15" .064	C.S. 18" .064	C.S. 24" .064	C.S. 30" .079	C.S. 36" .079	C.S. 42" .109	C.S. 48" .109	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	24" SIDE DRAIN PIPE	ENDWALLS STD. 838.01, STD. 838.11 OR STD. 838.80 (UNLESS NOTED OTHERWISE) CU. YDS. R.C.P.	ENDWALLS CU. YDS. 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'	LIN. *FT. B 10.0' AND ABOVE	G.D.I. TYPE "B" STD. 840.18 OR 840.27	G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24	G.D.I. FRAME (N.S. FLAT) W/2 GRATES STD. 840.29	T.B.D.I. STD. 840.35				CORR. STEEL ELBOWS NO. & SIZE	CONC. COLLARS CL. "B" C.Y. STD 840.72	CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	PIPE REMOVAL LIN.FT.	REMARKS
12 + 68 –L–	LT	0401																																48																	56	EXISTING 18" CMP
14 + 38 –L–	RT	0402		2078.61																																		1					1	1								
14 + 38 –L–	RT	0402	0403		2075.86	2073.00																				20																						2 @ 15"				
12 + 58 –Y1–	CL	0404																				56														4.5															52	EXISTING 36" CMP
11 + 99 –Y1–	RT	0405	0406																								16																					2 @ 18"				
11 + 92 –Y1–	RT	0406		2075.50																																		1			1	1										
11 + 82 –Y1–	RT	0406	0407		2072.50	2070.50												52																																	50	EXISTING 18" CMP
13 + 00 –Y1–	RT	0408																																	28																20	EXISTING 15" CMP
TOTALS																		52				56				20	16							48	28	4.5		2			1	1	1	1				2 @ 15" 2 @ 18"			178	

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

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

REVISIONS

COMPUTED BY: JCK DATE: 12/17 CHECKED BY: SCC DATE: 12/8/17	(2-16-16)	B-5406 46121	SHEET NO. 3G-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF SUBSURFACE DRAINAGE

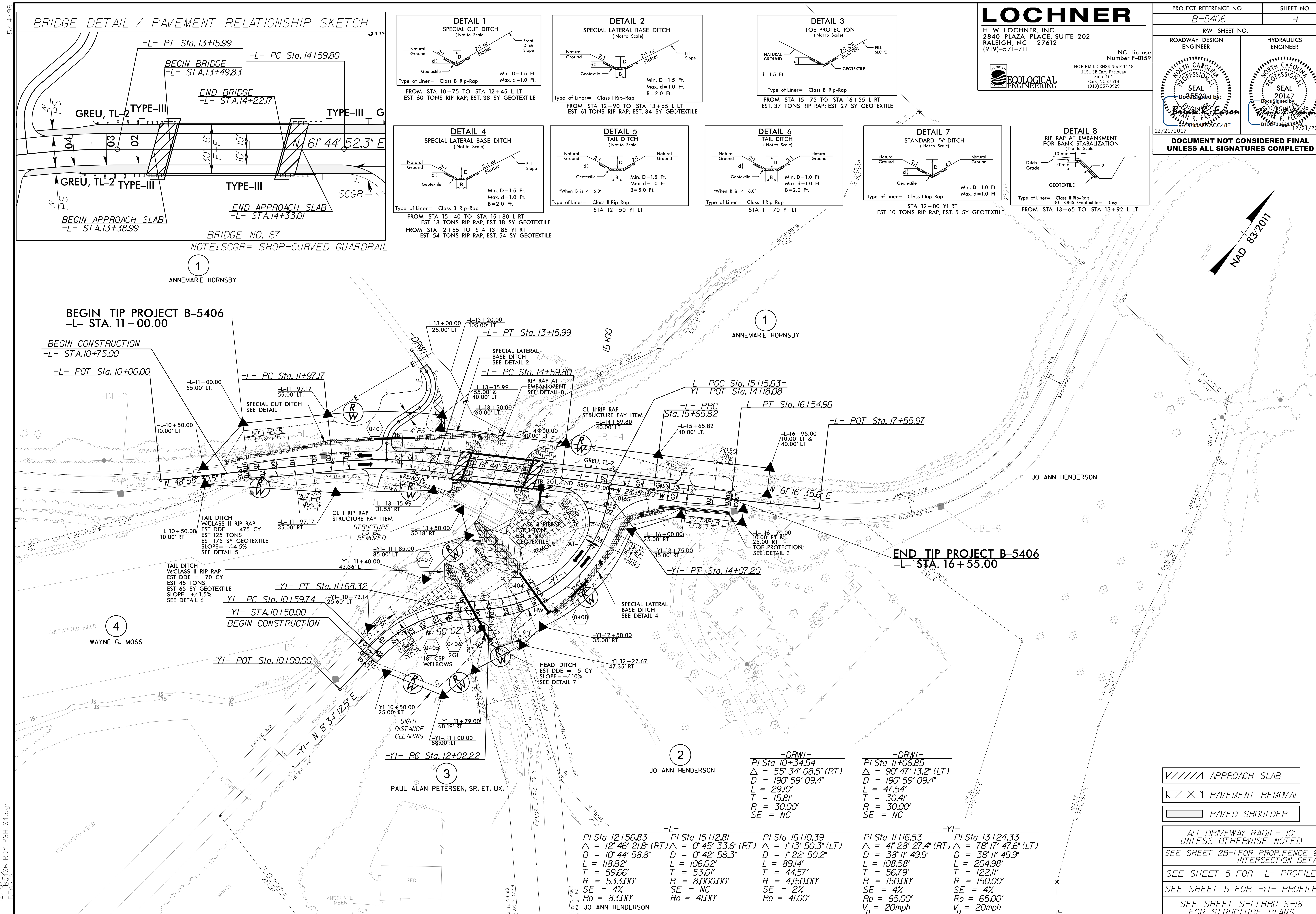
LINE	Station	Station	Location LT/RT/CL	Drain Type* UD/BD/SD	LF
CONTINGENCY				SD	200
				TOTAL LF:	200

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

SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION

LINE	Station	Station	Aggregate Type* ASU/AST	Aggregate Thickness INCHES	Shallow Undercut CY	Class IV Subgrade Stabilization TONS	Geotextile for Soil Stabilization SY	Stabilizer Aggregate TONS	Class IV Aggregate Stabilization TONS
CONTINGENCY			ASU	18	50	100	250		
			TOTAL CY/TONS/SY:		50	100	250**	0	0

*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.



5/28/99

LOCHNER
H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
(919)571-7111
NC License Number F-0159

ECOLOGICAL ENGINEERING
NC FIRM LICENSE No: F-1148
1151 SE Cary Parkway
Suite 101
Cary, NC 27518
(919) 557-0929

PROJECT REFERENCE NO.	SHEET NO.
B-5406	5

ROADWAY DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 25523 ENGINEER — 12/21/2017

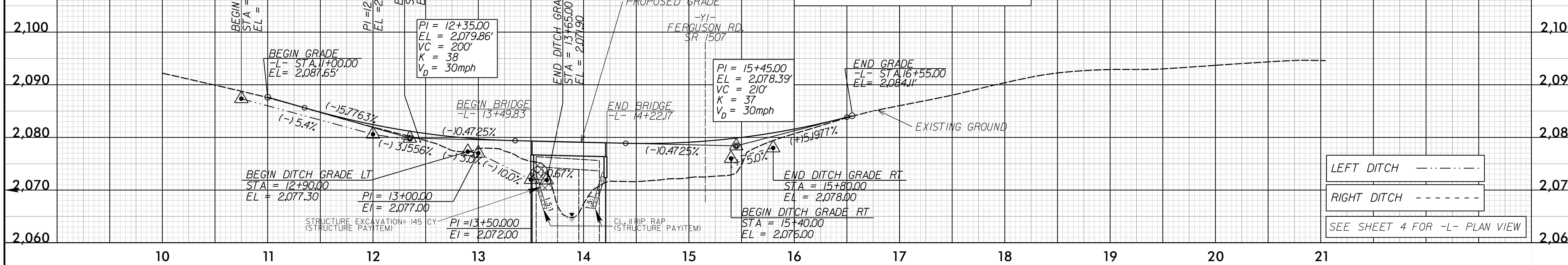
HYDRAULICS ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 20147 ENGINEER — 12/21/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	1200	CFS
DESIGN FREQUENCY	=	25	YR
DESIGN HW ELEVATION	=	2072.2	FT
BASE DISCHARGE	=	2000	CFS
BASE FREQUENCY	=	100	YR
BASE HW ELEVATION	=	2073.29	FT
OVERTOPPING DISCHARGE	=	6191	CFS
OVERTOPPING FREQUENCY	=	500+	YR
OVERTOPPING ELEVATION	=	2079.1	FT
DATE OF SURVEY	=	2/1/2016	
W.S.ELEVATION AT DATE OF SURVEY	=	1964.2	FT

CL STA.13+86.00 -L-
1@ 70' 24" CORED SLAB
W/ 4'-0" CAPS
GP = 2079.14'
SKEW = 105°

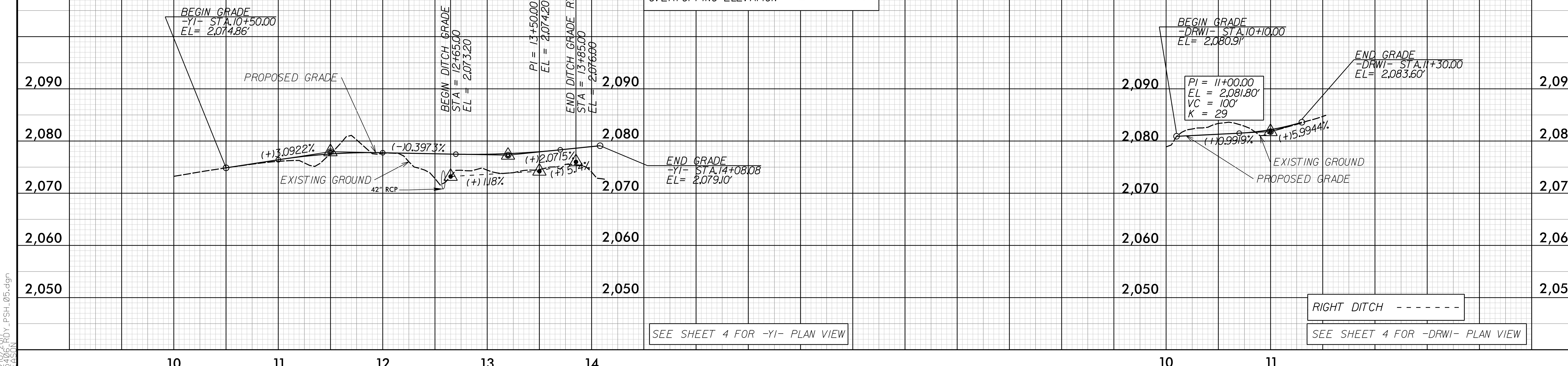


PIPE HYDRAULIC DATA

42" RCP Sta. 12+58

DRAINAGE AREA	=	20.9	AC
DESIGN FREQUENCY	=	25	YR
DESIGN DISCHARGE	=	50	CFS
DESIGN HW ELEVATION	=	2076.3	FT
100 YEAR DISCHARGE	=	65	CFS
100 YEAR HW ELEVATION	=	2076.9	FT
OVERTOPPING FREQUENCY	=	500	YR
OVERTOPPING DISCHARGE	=	83	CFS
OVERTOPPING ELEVATION	=	2077.8	FT

BM #2
-Y1-
STA 11+74.41
-BY1-
STA 6+42.71
39.71' LEFT
ELEV. = 2082.22'



12/10/2017
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