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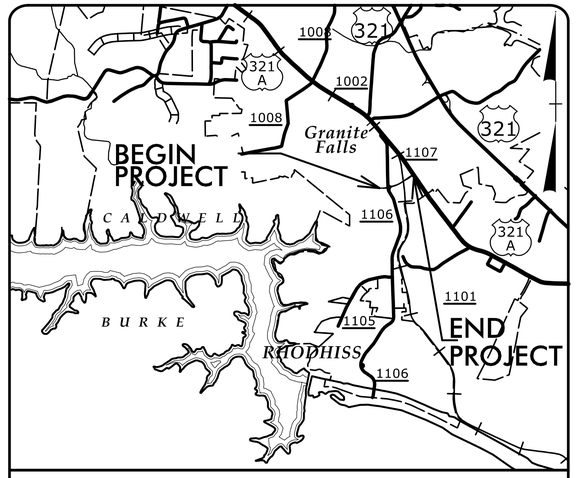
09/08/99

TIP PROJECT: U-5776

CONTRACT: DK00249

See Sheet 1A For Index of Sheets
See Sheet 1B For Connventional Plan Sheet Symbols



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

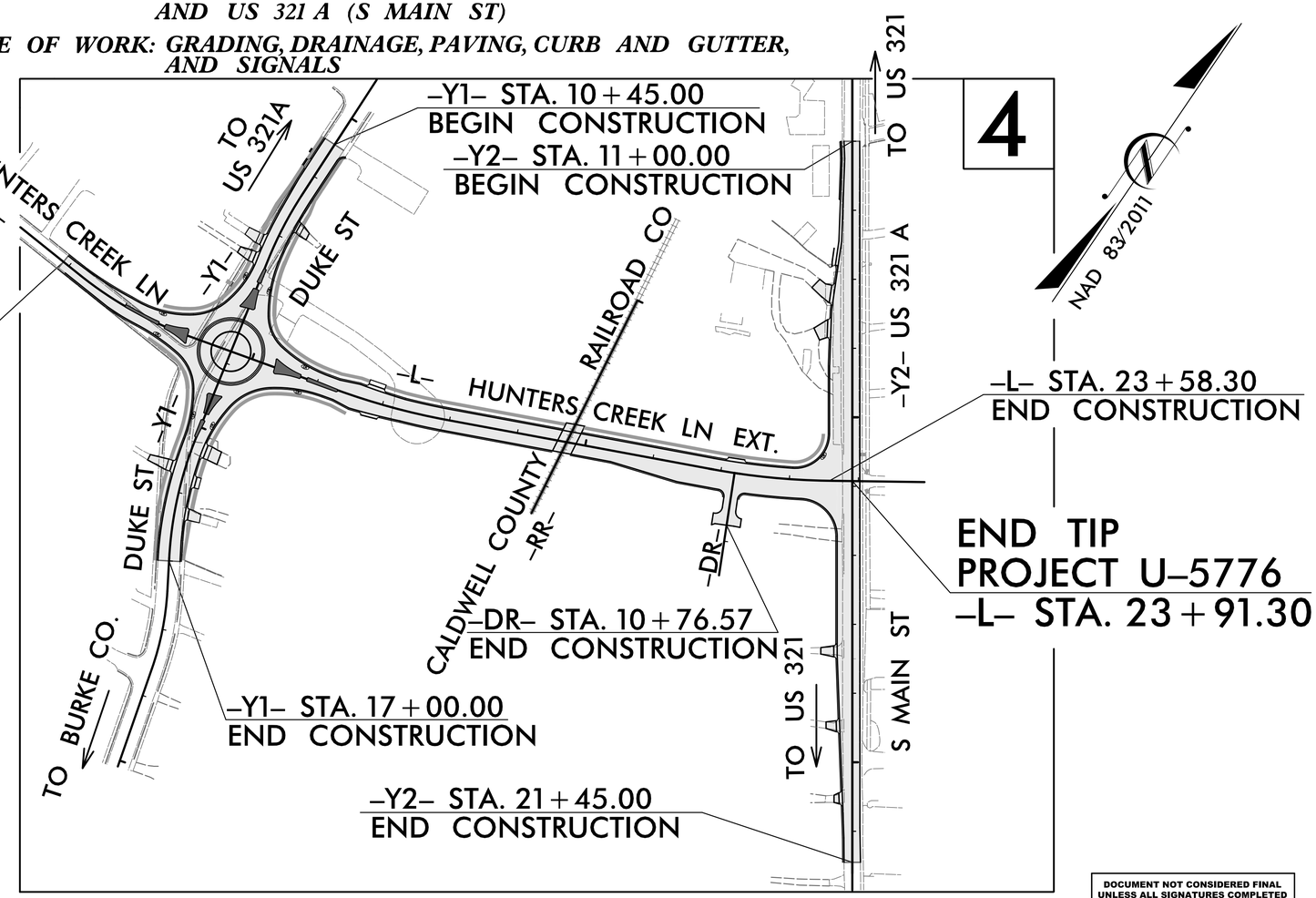
CALDWELL COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-5776	1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
50187.1.1	N/A	PE
50187.2.1	N/A	R/W & UTIL
50187.3.1	N/A	CONST.

LOCATION: REALIGNMENT OF INTERSECTION OF SR 1106 (DUKE ST) AND US 321 A (S MAIN ST)

TYPE OF WORK: GRADING, DRAINAGE, PAVING, CURB AND GUTTER, AND SIGNALS



BEGIN TIP
PROJECT U–5776
–L– STA. 11+90.00

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DESIGN EXCEPTION REQUIRED FOR VERTICAL CURVATURE AND VERTICAL SSD.

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 2015 = N/A
ADT 2040 = 8400
K = 8 %
D = 55 %
T = 3 % *
V = 40 MPH
*TTST = 1% DUAL = 2%
FUNC CLASS =
URBAN COLLECTOR
REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U–5776 = 0.228 MILES
TOTAL LENGTH TIP PROJECT U–5776 = 0.228 MILES

NCDOT CONTACT: RAMIE SHAW

PLANS PREPARED BY:
TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

PLANS PREPARED FOR:
NORTH CAROLINA DEPARTMENT OF TRANSPORATION
DIVISION 11
801 Statesville Rd
North Wilkesboro, NC 28659

RIGHT OF WAY DATE:
DECEMBER 30, 2016

LETTING DATE:
JULY 19, 2018

2018 STANDARD SPECIFICATIONS

JIMMY L. TERRY, PE
PROJECT ENGINEER

SANDRA G. MELVIN
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER
6/15/2018 7:04:33 AM EDT
NORTH CAROLINA PROFESSIONAL SEAL 038697 ENGINEER DAVID B. PETTY
DocuSigned by: David B Petty
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P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER
6/15/2018 5:17:1 AM EDT
NORTH CAROLINA PROFESSIONAL SEAL 35018 ENGINEER JIMMY L. TERRY
DocuSigned by: Jimmy Terry
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P.E.
SIGNATURE:

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

6/14/2018
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User:smelvin

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8/17/99

PROJECT REFERENCE NO.	SHEET NO.
U-5776	1A

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 35018 ENGINEER JIMMY L. TERRY

6/15/2018 11:11 AM PDT

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	SURVEY CONTROL SHEETS
2A-1	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
2B-1	ROADWAY DETAIL - ROUNDABOUT LAYOUT
2B-2	ROADWAY DETAIL - CLOSURE OF RAILROAD CROSSING
2D-1	DRAINAGE DETAILS
2H-1	GEOENVIRONMENTAL DETAIL - STOCKPILE CONTAINMENT DETAIL
3B-1	EARTHWORK SUMMARY, ASPHALT PAVEMENT REMOVAL AND BREAKING OF ASPHALT PAVEMENT
3D-1 THRU 3D-2	DRAINAGE SUMMARIES
3G-1	GEOTECHNICAL SUMMARIES
3P-1	PARCEL INDEX SHEET
4	PLAN SHEET
5 THRU 6	PROFILE SHEETS
TMP-1 THRU TMP-6	TRAFFIC MANAGEMENT PLANS
PMP-1 THRU PMP-3	PAVEMENT MARKING PLANS
EC-1 THRU EC-5	EROSION CONTROL PLANS
RF-1	REFORESTATION PLANS
SIGN-1 THRU SIGN-6	SIGNING PLANS
SIG-1.0 THRU SIG-1.3	SIGNAL PLANS
UC-1 THRU UC-6	UTILITIES CONSTRUCTION PLANS
UO-1 THRU UO-2	UTILITIES BY OTHERS PLANS
X-1A	CROSS-SECTION INDEX SHEET
X-1B	CROSS-SECTION SUMMARY SHEET
X-1 THRU X-14	CROSS-SECTIONS

GENERAL NOTES

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

GRADE LINE:
GRADING AND SURFACING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AS DIRECTED 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.

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.

DRIVEWAYS:

DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.02 USING 3 FOOT 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.

SUBSURFACE PLANS:

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

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE PIEDMONT NATURAL GAS, TOWN OF GRANITE FALLS, CENTURY LINK, AND CHARTER COMMUNICATIONS

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 CONTRACT.

CURB RAMPS

CURB RAMPS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS.
CONSTRUCT ALL CURB RAMPS ACCORDANCE WITH STD 848.05 and/or 848.06.

STANDARD DRAWINGS

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
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	
806.01	Concrete Right-of-Way Marker
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
840.01	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
840.17	Concrete Grated Drop Inlet Type 'A' - 12" thru 72" Pipe
840.19	Concrete Grated Drop Inlet Type 'D' - 12" thru 36" Pipe
840.24	Frames and Narrow Slot Sag Grates
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.26	Brick Grated Drop Inlet Type 'A' - 12" thru 72" Pipe
840.28	Brick Grated Drop Inlet Type 'D' - 12" thru 36" Pipe
840.31	Concrete Junction Box - 12" thru 66" Pipe
840.32	Brick Junction Box - 12" thru 66" Pipe
840.45	Precast Drainage Structure
840.66	Drainage Structure Steps
840.71	Concrete and Brick Pipe Plug
840.72	Pipe Collar
846.01	Concrete Curb, Gutter and Curb & Gutter
848.01	Concrete Sidewalk
848.02	Driveway Turnout - Radius Type
848.04	Street Turnout
848.05	Curb Ramp - Proposed Curb & Gutter
852.01	Concrete Islands
852.06	Method for Placement of Drop Inlets in Concrete Islands
876.01	Rip Rap in Channels
876.02	Guide for Rip Rap at Pipe Outlets

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04/06/15

PROJECT REFERENCE NO.	SHEET NO.
U-5776	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
- 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.

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PROJECT REFERENCE NO.	SHEET NO.
U-5776	IC-1

SURVEY CONTROL SHEET U-5776

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "GPS D0004-1" WITH NAD 83/2001 STATE PLANE GRID COORDINATES OF NORTHING: 753360.462(ft) EASTING: 1279070.437(ft) ELEVATION: 1189.87(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99986587
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "GPS D0004-1" TO -L- STATION 11+90.00 IS S 8° 47' 45' E 1512.45 FEET
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

BL

POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
1	BL-1	752018.2209	1279561.3497	1180.55	14+84.00	123.01 LT
2	BL-2	752012.4453	1279854.5079	1166.21	17+72.21	35.66 LT
3	BL-3	752132.5421	1280023.8115	1154.58	19+76.35	77.89 LT
4	BL-4	752384.0228	1280353.2296	1165.35	24+06.77	155.18 LT

BY1

POINT	DESC.	NORTH	EAST	ELEVATION	Y2 STATION	OFFSET
10	BY-10	751845.1642	1280679.5907	1148.37	20+66.60	15.46 RT
11	BY-11	752712.4410	1280128.9575	1170.17	10+39.80	16.88 LT

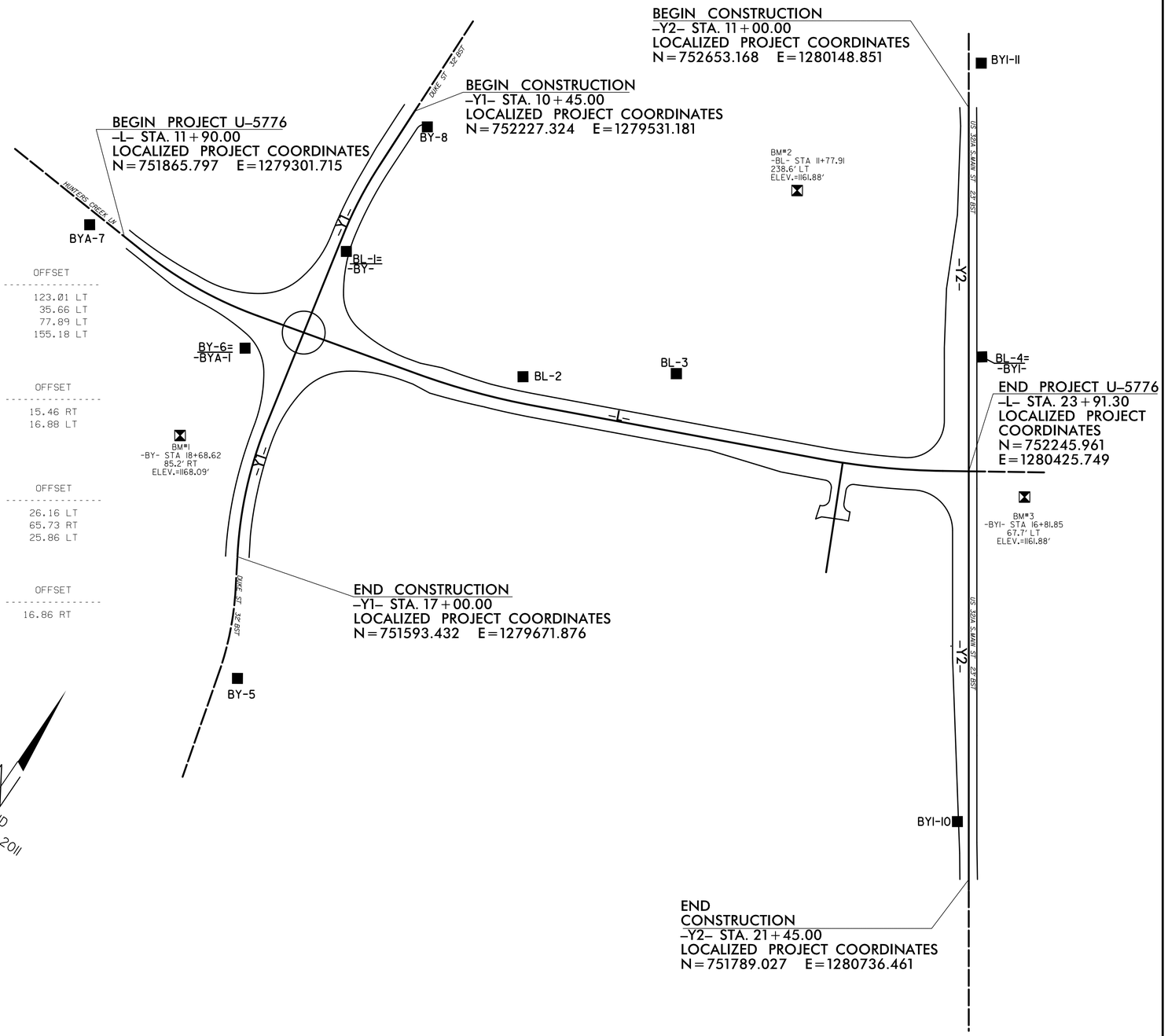
BY

POINT	DESC.	NORTH	EAST	ELEVATION	Y1 STATION	OFFSET
5	BY-5	751457.2535	1279764.4390	1152.22	18+58.67	26.16 LT
6	BY-6	751832.8247	1279521.5757	1173.36	14+30.87	65.73 RT
8	BY-8	752219.2656	1279557.2172	1185.33	10+53.61	25.86 LT

BYA

POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
7	BYA-7	751852.6791	1279253.5995	1176.56	11+43.06	16.86 RT

****
BM1 ELEVATION - 1168.09
N 751686 E 1279515
Y1 STATION 15+64.00 105 RIGHT
RR SPIKE IN BASE 36" PINE
****
****
BM2 ELEVATION - 1161.88
N 752430 E 1280020
Y2 STATION 12+12.00 232 RIGHT
RR SPIKE IN BASE 17" OAK
****
****
BM3 ELEVATION - 1161.88
N 752260 E 1280508
Y2 STATION 16+27.00 76 LEFT
RR SPIKE FLUSH IN BST P/A
****



NOTE: DRAWING NOT TO SCALE

REVISIONS

8/17/99

6/14/2018
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jsarsmelvin

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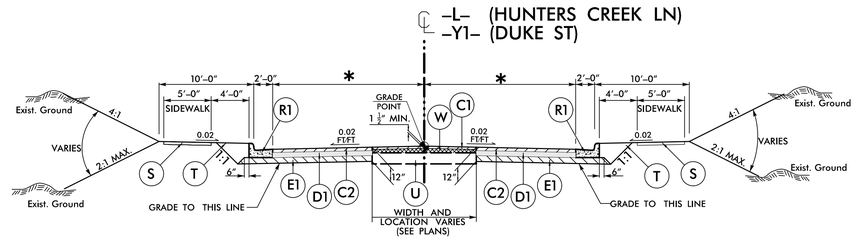
6/2/99

PAVEMENT SCHEDULE

C1	PROP. APPROX. 1 ½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C4	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2½" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5½" IN DEPTH.
J1	PROP. 10" AGGREGATE BASE COURSE.
J2	PROP. 4" AGGREGATE BASE COURSE.
J3	PROP. 8" AGGREGATE BASE COURSE.
P1	PRIME COAT AT THE RATE OF .35 GAL. PER SQ. YD.
R1	2'-6" CONCRETE CURB AND GUTTER.
R2	EXPRESSWAY GUTTER
R3	7" MONOLITHIC CONCRETE TRUCK APRON.
R4	9" X 18" CONCRETE CURB
R5	5" MONOLITHIC CONCRETE ISLAND
S	CONCRETE SIDEWALK.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	MILLING EXISTING PAVEMENT, SEE THIS SHEET FOR DETAIL
W	WEDGING EXISTING PAVEMENT, SEE THIS SHEET FOR DETAILS

PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1

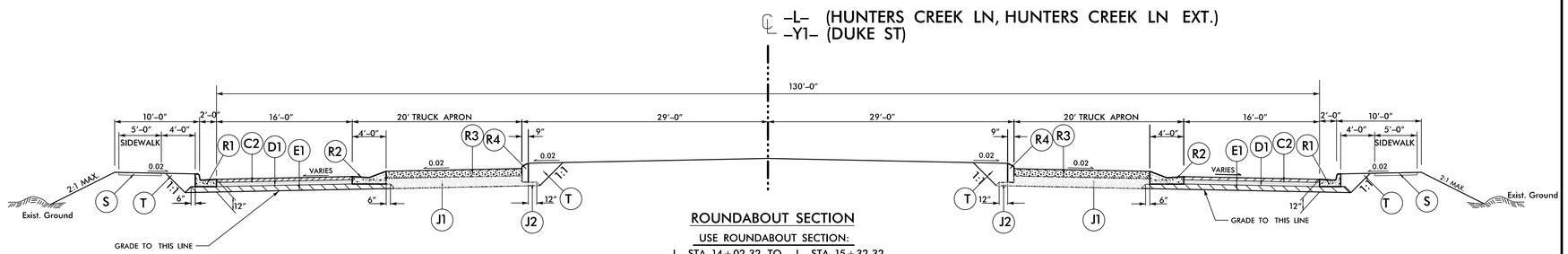
*	STA. TO STA.
11'–0"	–L– STA. 11+90.00 TO –L– STA. 12+02.00
11'–0" TO 15'–0"	–L– STA. 12+02.00 TO –L– STA. 13+02.00
VARIES (SEE PLANS)	–L– STA. 13+02.00 TO –L– STA. 14+02.32 –Y1– STA. 12+38.11 TO –Y1– STA. 13+16.53 RT –Y1– STA. 12+34.49 TO –Y1– STA. 13+16.53 LT –Y1– STA. 14+46.53 TO –Y1– STA. 15+23.94 RT –Y1– STA. 14+46.53 TO –Y1– STA. 15+33.63 LT
TAPER FROM EXISTING TO 15'–0"	–Y1– STA. 10+45.00 TO –Y1– STA. 11+61.31 RT –Y1– STA. 10+45.00 TO –Y1– STA. 11+33.19 LT –Y1– STA. 15+48.00 TO –Y1– STA. 17+00.00
15'–0"	–Y1– STA. 11+61.31 TO –Y1– STA. 12+38.11 RT –Y1– STA. 11+33.19 TO –Y1– STA. 12+34.49 LT –Y1– STA . 15+23.94 TO –Y1– STA. 15+48.00 RT –Y1– STA 15+33.63 TO –Y1– STA. 15+48.00 LT

NOTE: USE FULL DEPTH PAVEMENT FROM –Y1– STA. 14+46.53 TO –Y1– STA 15+25

PROJECT REFERENCE NO.	SHEET NO.
U-5776	2A-1
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

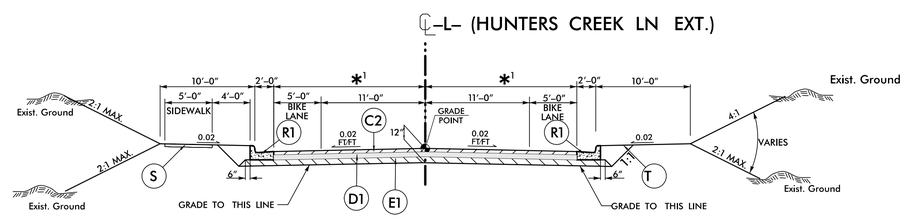
TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275



ROUNDABOUT SECTION

USE ROUNDABOUT SECTION:

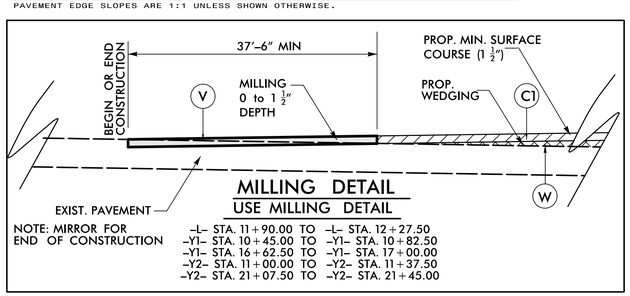
–L– STA. 14+02.32 TO –L– STA. 15+32.32
–Y1– STA. 13+16.53 TO –Y1– STA. 14+46.53



TYPICAL SECTION NO. 3

USE TYPICAL SECTION NO. 3

*1	STA. TO STA.
VARIES (SEE PLANS)	–L– STA. 15+32.32 TO –L– STA. 16+30.00
15'–0" TO 16'–0"	–L– STA. 16+30.00 TO –L– STA. 17+30.00
16'–0"	–L– STA. 17+30.00 TO –L– STA. 19+59.33 RT –L– STA.19+86.37 TO –L– STA. 20+40.00 RT –L– STA. 17+30.00 TO –L– STA. 19+59.33 LT –L– STA.19+86.37 TO –L– STA. 20+40.00 LT
16'–0' TO 27'–0"	–L– STA. 20+40.00 TO –L– STA. 21+40.00 RT
27'–0"	–L– STA. 21+40.00 TO –L– STA. 23+58.30 RT

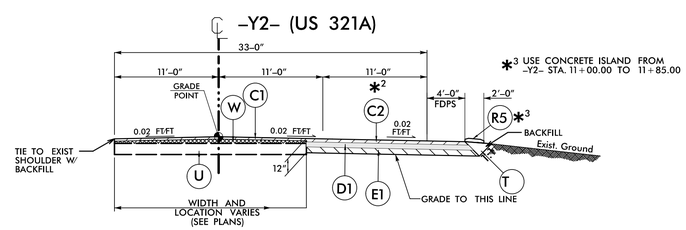


MILLING DETAIL

USE MILLING DETAIL

NOTE: MIRROR FOR END OF CONSTRUCTION

–L– STA. 11+90.00 TO –L– STA. 12+27.50
–Y1– STA. 10+45.00 TO –Y1– STA. 10+82.50
–Y1– STA. 16+62.50 TO –Y1– STA. 17+00.00
–Y2– STA. 11+00.00 TO –Y2– STA. 11+37.50
–Y2– STA. 21+07.50 TO –Y2– STA. 21+45.00

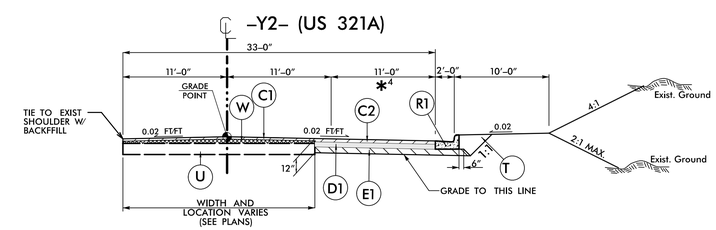


TYPICAL SECTION NO. 4

USE TYPICAL SECTION NO. 4

–Y2– STA. 11+00.00 TO –Y2– STA. 12+80.37

*2 WIDTH VARIES FROM 11'–0" TO 14'–11"
–Y2– STA. 12+45.00 TO 12+80.37

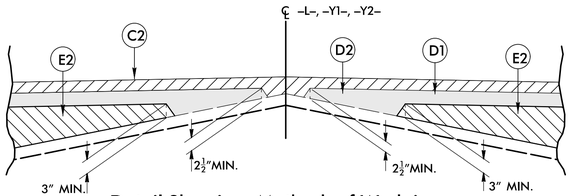


TYPICAL SECTION NO. 5

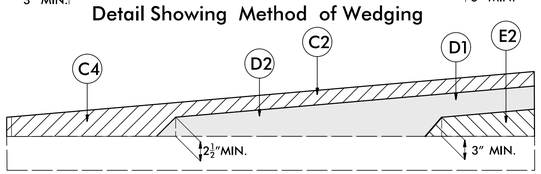
USE TYPICAL SECTION NO. 5

–Y2– STA. 12+80.37 TO –Y2– STA. 21+45.00

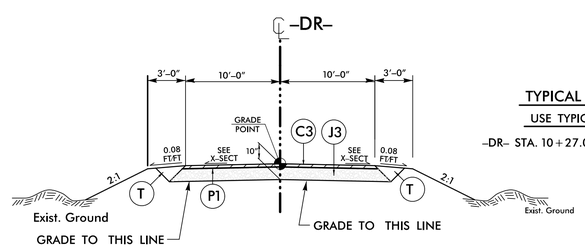
*4 WIDTH VARIES FROM 14'–11" TO 22'–0"
–Y2– STA. 12+80.37 TO 15+23.97



Detail Showing Method of Wedging



Wedging Detail For Resurfacing



TYPICAL SECTION NO. 6

USE TYPICAL SECTION NO. 6

–DR– STA. 10+27.00 TO –DR– STA. 10+76.57

6/14/2018
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(jsessoms)VID

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PROJECT REFERENCE NO.	SHEET NO.
U-5776	2B-1
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 35018 ENGINEER JIMMY L. TERRY

6/15/2018 9:47:11 AM PDT

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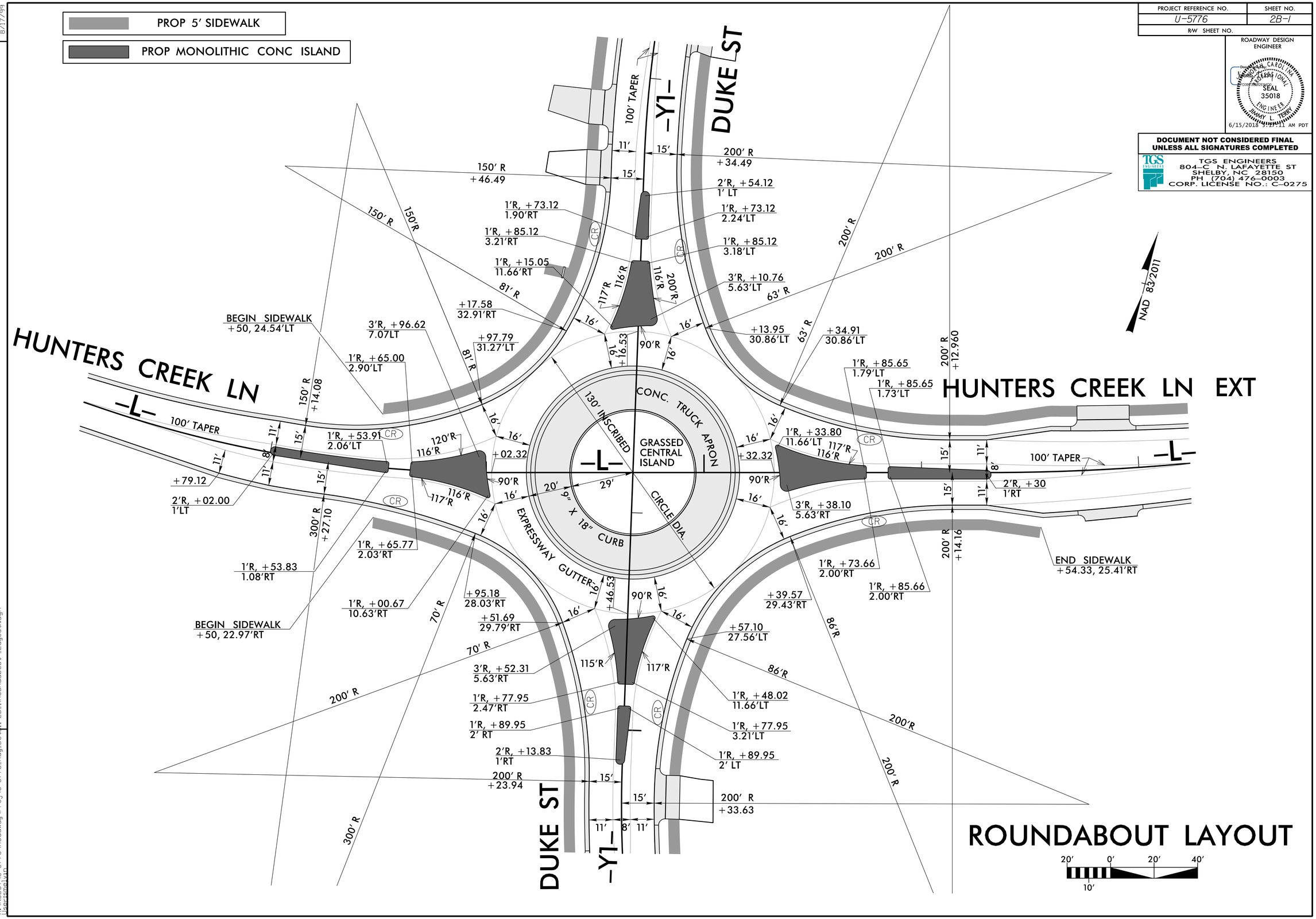
TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

8/17/99

REVISIONS



ROUNDABOUT LAYOUT

20' 0' 20' 40'
10'

6/14/2018
8:\WCDOT\U-5776\Roadway\Proj\U-5776_Rdy_Detail 2B.1(Roundabout_Layout).dgn
User:smelvin

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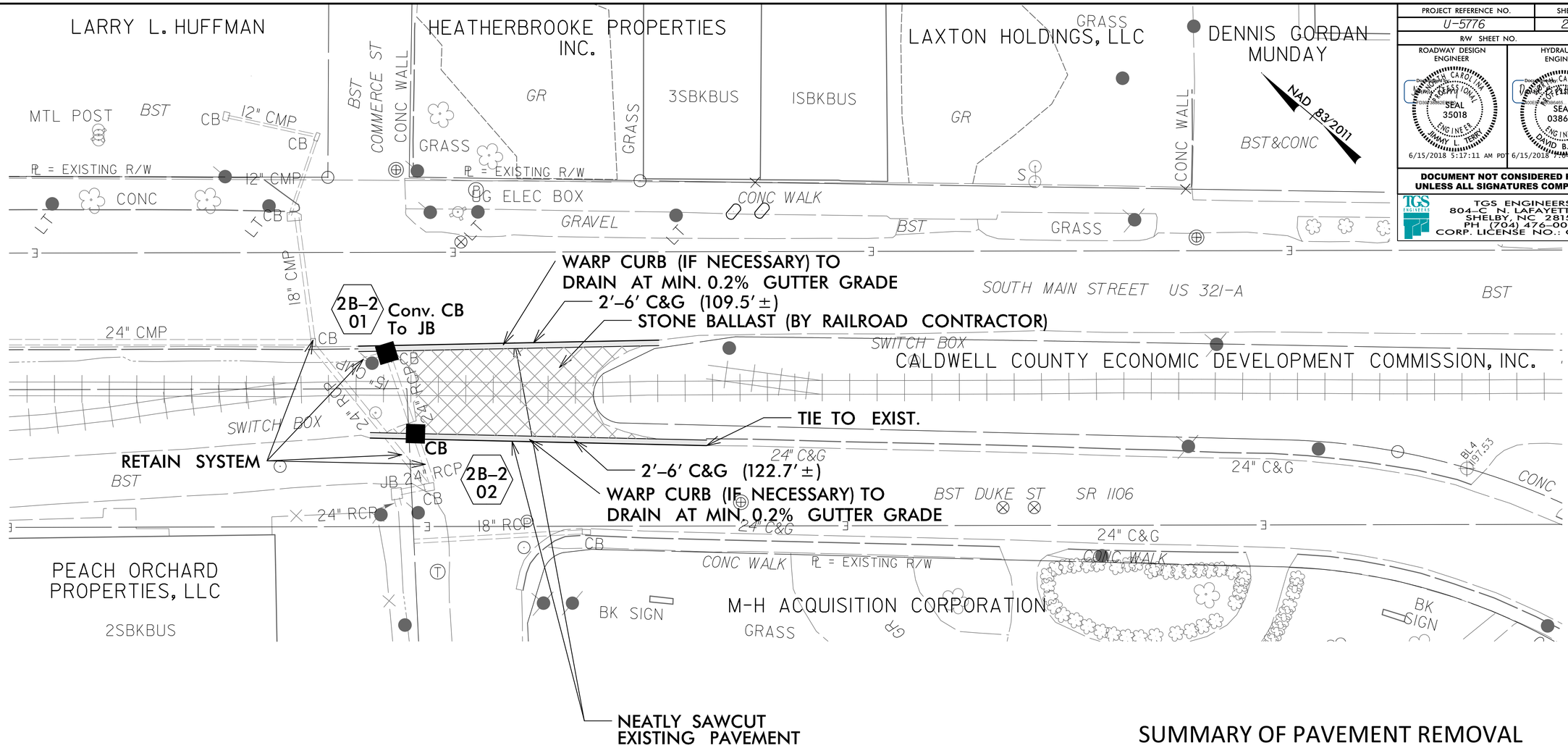
PROJECT REFERENCE NO.	SHEET NO.
U-5776	2B-2
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER: NORTH CAROLINA PROFESSIONAL SEAL 35018 ENGINEER JIMMY L. IZBRY — 6/15/2018 5:17:11 AM PDT

HYDRAULICS ENGINEER: NORTH CAROLINA PROFESSIONAL SEAL 038697 ENGINEER DAVID B. PETTY — 6/15/2018 7:04:23 AM PDT

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275



NOTES:

ALL THE EXISTING PAVEMENT ON EACH SIDE OF EXISTING TRACK CENTERLINE WILL BE REMOVED BY THE RAILROAD CONTRACTOR.

CONTRACTOR SHALL SEED AND MULCH THE DISTURBED AREA OUTSIDE THE RAILROAD BALLAST LINE.

CONTRACTOR SHALL CONTACT NORTH CAROLINA 811 TO LOCATE ALL UNDERGROUND UTILITIES IN THE WORK AREA.

THE RR CROSSING ADVANCE WARNING PAVEMENT MARKINGS ON DUKE STREET TO THE SOUTH NEED TO BE REMOVED.

REVISE THE PAVEMENT MARKINGS AND MARKERS FOR US 321A, DUKE ST, CENTRAL AVE, AND COMMERCE ST ACCORDING TO THE FINAL PAVEMENT MARKING PLANS.

REMOVE THE SIGNAL SYSTEM AT THE INTERSECTION.

PROVIDE PERMANENT SIGNING FOR US 321A, DUKE ST, CENTRAL AVE, AND COMMERCE ST ACCORDING TO THE SIGNING PLANS.

PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.

ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

SUMMARY OF PAVEMENT REMOVAL

IN SQUARE YARDS

ITEM	QUANTITY
ASPHALT	230

PAVEMENT REMOVAL

CLOSURE OF RAILROAD CROSSING

20' 0' 20' 40'
10'

REVISIONS

8/17/99

6/14/2018
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PROJECT REFERENCE NO.	SHEET NO.
U-5776	2D-1
R/W SHEET NO.	

HYDRAULICS ENGINEER

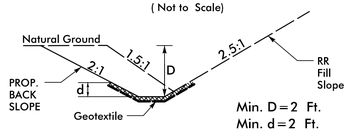
DOCUSIGNED BY: DAVID B. PETTY
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 038697
6/15/2018 7:04:23 AM PDT

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

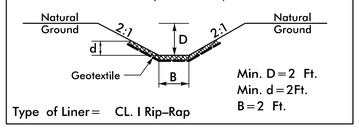
DRAINAGE DETAILS

DETAIL A
SPECIAL LATERAL BASE DITCH
(Not to Scale)



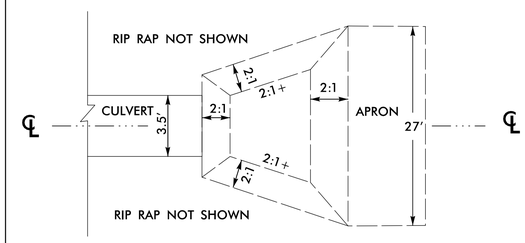
FROM –L– STA. 19+34 TO 19+44, 96' TO 38' RT
S = 0.5% TO DAYLIGHT
EST. DDE = 50 CY
EST. GEOTEXTILE = 120 SY
EST. CL. I RIP RAP = 80 TONS
FROM –L– STA. 19+72 TO 20+00, 55' TO 140' LT
S = 4% TO DAYLIGHT
EST. DDE = 35 CY
EST. GEOTEXTILE = 80 SY
EST. CL. I RIP RAP = 60 TONS

DETAIL B
STANDARD BASE DITCH
(Not to Scale)

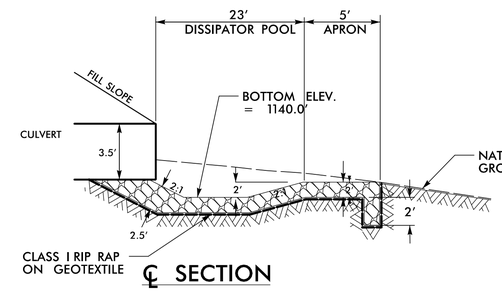


FROM –L– STA. 20+20 TO 20+50, 78' TO 47' LT
SEE DITCH GRADE SHEET 5
EST. DDE = 35 CY
EST. GEOTEXTILE = 60 SY
EST. CL. I RIP RAP = 45 TONS

DETAIL C
RIP-RAPPED ENERGY DISSIPATOR BASIN



PLAN



℄ SECTION

7/08

FROM –L– STA. 20+43 TO 20+76 RT
EST. DDE = 45 CY
EST. GEOTEXTILE = 100 SY
EST. CL. I RIP RAP = 90 TONS

REVISIONS

8/17/99

6/14/2018
X:\NCDOT\U-5776\Roadway\Proj\U-5776 DETAIL 2D_1(Drainage Details).dgn
User:smelvin

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PROJECT REFERENCE NO.	SHEET
U-5776	2H-1

GEOENVIRONMENTAL ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 31499 ENGINEER CYRUS F. PARKER

DocuSigned by: Cyrus Parker C96490AF5E924DF... 4/18/2017

SIGNATURE DATE

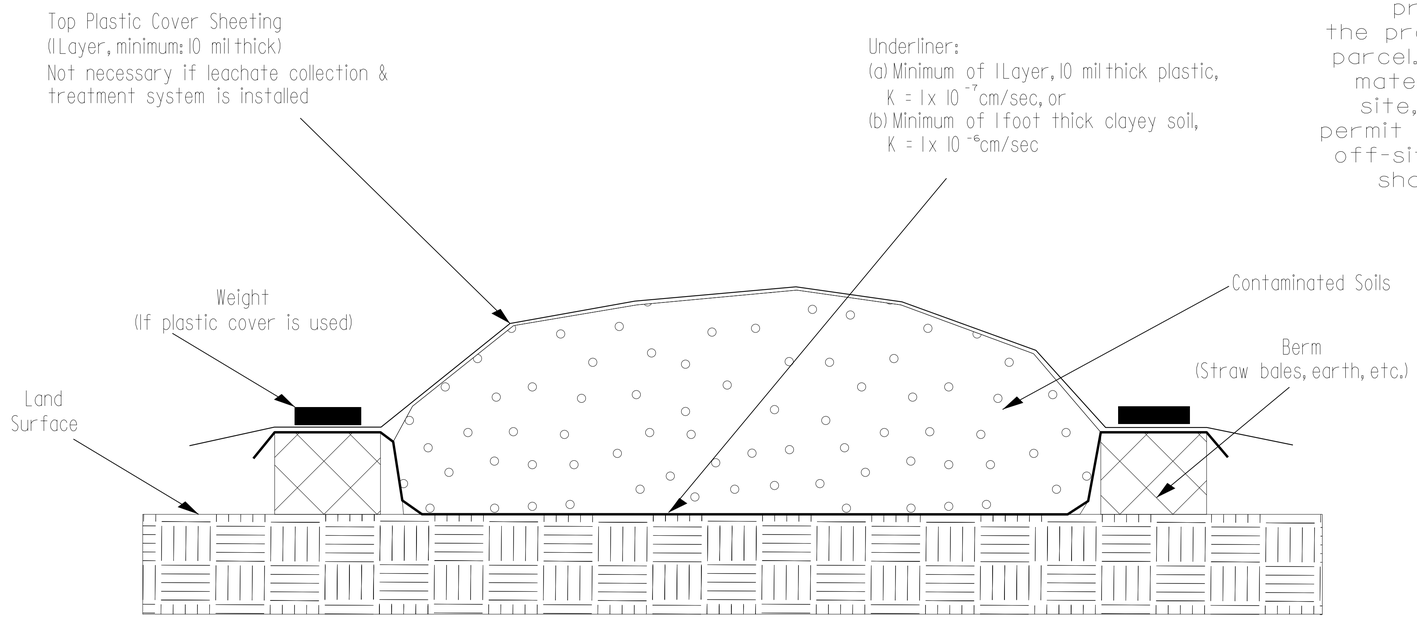
ENGINEER

SIGNATURE DATE

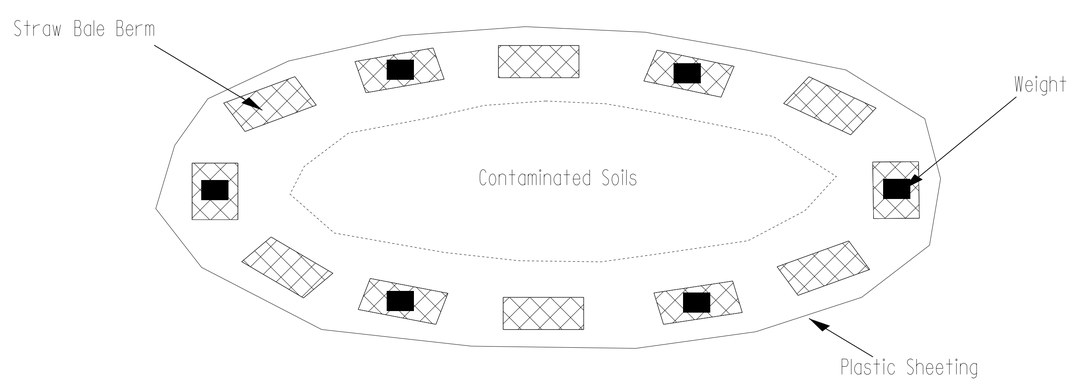
Detail for Temporary Containment of Contaminated Soil

Cross-Section View

NOTE:
The Contractor shall stockpile all contaminated soil excavated from a property in a location within the property boundaries of the source parcel. If the volume of contaminated material exceeds available space on site, the Contractor shall obtain a permit from the NCDEQ UST Section for off-site temporary storage. Stockpile shall be removed within 45 days.



Map View



PREPARED BY:	DATE:
REVIEWED BY:	DATE:

GEOTECHNICAL ENGINEERING UNIT

☐ EASTERN REGIONAL OFFICE
☐ WESTERN REGIONAL OFFICE
☒ CONTRACT OFFICE

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STOCKPILE CONTAINMENT DETAIL

REVISIONS

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

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COMPUTED BY: SGM DATE: 4/9/2018
CHECKED BY: JLT DATE: 4/20/2018

PROJECT NO.	SHEET NO.
U-5776	3B-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK

IN CUBIC YARDS

Station	Station	Uncl. Excav.	Embank. +15%	Borrow	Waste
-L- 11+90.00	-L- 15+32.32	525	536	11	
-Y1- 10+45.00	-Y1- 13+16.53	145	346	201	
-Y1- 14+46.53	-Y1- 17+00.00	115	224	109	
SUBTOTAL 1:		785	1,106	321	
-L- 15+32.32	-L- 19+59.33	2,685	577		2,108
SUBTOTAL 2:		2,685	577		2,108
-L- 19+86.37	-L- 23+58.30	345	7,119	6,774	
-Y2- 11+00.00	-Y2- 21+45.00	528	159		369
-DR- 10+27.00	-DR- 10+76.57	26	51	25	
SUBTOTAL 3:		899	7,329	6,799	369
TOTAL:		4,369	9,012	7,120	2,477
LOSS DUE TO CLEARING & GRUBBING		-275		275	
WASTE IN LIEU OF BORROW				-2,477	-2,477
PROJECT TOTALS:		4,094	9,012	4,918	0
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT				246	
GRAND TOTALS:		4,094	9,012	5,164	
SAY:		**4,300**		**5,400**	

EST. DDE: 170 CY
TOTAL SHALLOW UNDERCUT = 500 CUBIC YARDS
CLASS IV SUBGRADE STABILIZATION = 1,000 TONS
PER GEOTECH RECOMMENDATION, ESTIMATED 300 CUBIC YARDS OF
UNDERCUT TO BE USED IN THE DISCRETION OF THE RESIDENT ENGINEER.

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

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.

PAVEMENT REMOVAL SUMMARY

IN SQUARE YARDS

SURVEY LINE	Station	Station	LOCATION LT/RT/CL	ASPHALT REMOVAL	ASPHALT BREAKUP	CONCRETE REMOVAL	CONCRETE BREAKUP
-L-	11+90	12+30	LT	3.21			
-L-	11+90	14+11	RT	118.15			
-Y1-	10+63	11+72	LT	11.29			
-Y1-	10+45	13+17	RT	139.64			
-Y1-	12+75		LT	1,242.16			
-Y1-	13+17	14+47	RT	448.59			
-Y1-	14+47	17+00	RT	458.17			
-L-	13+50	14+11	RT		57.48		
-Y1-	12+50	13+22	RT		64.08		
-Y1-	14+26	15+15	RT		82.35		
		TOTAL:		2,421.21	203.91		
		SAY:		**2,430**	**210**		

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TGSDAVID-LAPTOP

COMPUTED BY:	Austin R. Turner, EI	DATE:	4/26/2017
CHECKED BY:	David Petty, PE	DATE:	4/24/2018

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
U-5776	3D-1

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

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

| LINE & STATION / SIZE / THICKNESS OR GAUGE | OFFSET | STRUCTURE NUMBER FROM | STRUCTURE NUMBER TO | TOP ELEVATION FT. | INVERT ELEVATION FT. | INVERT ELEVATION FT. | MINIMUM REQUIRED SLOPE % | Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC) 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | DO NOT USE RCP | DO NOT USE CSP | DO NOT USE CAAP | DO NOT USE HDPE | DO NOT USE PVC | C. S. PIPE 12 .064 | 15 .064 | 18 .064 | 24 .064 | 30 .079 | 36 .079 | 42 .109 | 48 .109 | R. C. PIPE CLASS III 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | R. C. PIPE CLASS IV 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | 30" Welded Steel Pipe, 0.500" Thick, Grade B in soil | 18" SIDE DRAIN PIPE | 24" SIDE DRAIN PIPE | ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY | REINFORCED ENDWALLS CY | DRAINAGE STRUCTURE MASONRY CY | QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) A: 0' THRU 5' EACH | B: 5' THRU 10' LIN. FT. | 10' AND ABOVE LIN. FT. | C.B. STD. 840.01 OR STD. 840.02 | FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E | F | G | CONCRETE TRANSITIONAL SECTION D.I. STD. 852.04 OR STD. 852.06 | C.B. STD. 852.05 | OPEN THROAT C.B. STD. 840.04 OR STD. 840.05 | CONVERT CB TO JB w/Slab Lid std. 840.31 or 840.32 | 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 STD. 840.26 | G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27 | G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28 | G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.20 | G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20 | G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22 | G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22 | G.D.I. (N.S. SAG) FRAME W/ GRATE STD. 840.24 | G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24 | G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29 | ENERGY DISSIPATION BASIN | FLOWABLE FILL CY | CONCRETE COLLARS CL. "B" STD. 840.72 CY | CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY | PIPE REMOVAL LIN. FT. | REMARKS |
|---|---|---|---

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TGSDAVID-LAPTOP

COMPUTED BY:	Austin R. Turner, EI	DATE:	4/26/2017
CHECKED BY:	David Petty, PE	DATE:	4/24/2018

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
U-5776	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)

LINE & STATION / SIZE / THICKNESS OR GAUGE	OFFSET	STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC) 12	15	18	24	30	36	42	48	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	DO NOT USE PVC
		0425	0426		1152.9	1151.2														
L 19+58	18 LT	0426		1154.2																
		0426	0428		1149.9	1149.3	1.1													
L 19+71	56 LT	0427	0426		1151.0	1149.9	0.9													
L 19+48	18 RT	0428		1153.5																
		0428	0429		1149.3	1149.1	1.3													
L 20+00	18 RT	0430		1153.5																
		0430	0431		1150.5	1150.3														
L 20+00	18 LT	0431		1154.2																
		0431	0433		1150.2	1150.0														
L 20+50	47 LT	0432		1147.5																
		0432	0433		1144.0	1143.7														
L 20+50	18 LT	0433		1154.2																
		0433	0434		1143.6	1142.8														
L 20+85	18 LT	0435		1154.5																
		0435	0433		1151.4	1151.1														
L 22+44	29 RT	0436		1158.2																
		0436	0437		1155.2	1155.0														
L 22+44	18 LT	0437		1158.6																
		0437	0435		1155.0	1151.5														
L 23+10	18 LT	0438		1161.1																
		0438	0437		1158.0	1155.5														
Y2 15+24	35 RT	0439		1164.1																
		0439	0438		1161.1	1158.1														
Y2 20+30	17 RT	0440		1149.1																
		0440	0441		1146.1	1144.2														
Y2 21+31	14 RT	0441		1147.2																
		0441	0442		1144.1	1143.8			24								X	X		
Y2 21+57	20 RT	0442		1146.0																
		0442	0443		1143.8	1143.7														
Y1 13+13	9 RT	0445		1178.3																
		0445	0404		1175.2	1174.7														
L 19+20	18 RT	0446		1153.8																
		0446	0428		1150.8	1150.5														
		2B-201		1195.7																
		2B-201			1192.7															
		2B-202		1194.7																
		2B-202			1190.9															
Y1 12+24	8 LT																			
Y1 12+31	25 RT																			
Y1 11+54	17 RT																			
Y1 13+25	41 RT																			
Y1 14+80	49 RT																			
Y1 16+13	24 RT																			
Y1 15+28	26 RT																			
SHEET TOTALS									24											
PROJECT TOTALS									68											

LINE & STATION	C. S. PIPE 12	15	18	24	30	36	42	48	R. C. PIPE CLASS III 12	15	18	24	30	36	42	48	R. C. PIPE CLASS IV 12	15	18	24	30	36	42	48
SIZE																								
THICKNESS OR GAUGE	.064	.064	.064	.064	.079	.079	.109	.109																
																	96							
L 19+58																								
L 19+71																								
L 19+48																								
L 20+00																								
																	36							
L 20+00																								
																	48							
L 20+50																								
																						32		
L 20+50																								
																						72		
L 20+85																								
																	36							
L 22+44																								
																	44							
L 22+44																								
																	156							
L 23+10																								
																	64							
Y2 15+24																								
																	68							
Y2 20+30																								
																	100							
Y2 21+31																								
Y2 21+57																								
																		4						
Y1 13+13																								
																	40							
L 19+20																								
																	28							
Y1 12+24																								
Y1 12+31																								
Y1 11+54																								
Y1 13+25																								
Y1 14+80																								
Y1 16+13																								
Y1 15+28																								
SHEET TOTALS																	716	4				104		
PROJECT TOTALS																	1752	328	32			104		

LINE & STATION	30" Welded Steel Pipe, 0.500" Thick, Grade B in soil	18" SIDE DRAIN PIPE	24" SIDE DRAIN PIPE	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY	QUANTITIES FOR DRAINAGE STRUCTURES NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B) A: 0' THRU 5' EACH	B: 5' THRU 10' LIN. FT.	10' AND ABOVE LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G	CONCRETE TRANSITIONAL SECTION D.I. STD. 852.04 OR STD. 852.06	C.B. STD. 852.05	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	CONVERT CB TO JB w/Slab Lid std. 840.31 or 840.32	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 STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.20	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ GRATE STD. 840.24	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29	ENERGY DISSIPATION BASIN	FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
L 19+58							1			1			1																											
	36																																							
L 19+71	40																																							
L 19+48							1			1			1																											
	24																																							
L 20+00							1			1			1																											
L 20+00							1			1			1																											
L 20+50				4.500																																				
L 20+50							1	5.0	0.6	1			1																											
																																		1							
L 20+85							1			1			1																											
L 22+44							1			1			1																											
L 22+44							1			1			1																											
L 23+10							1			1			1																											
Y2 15+24							1			1			1																											
Y2 20+30							1			1			1																											
Y2 21+31							1			1			1																											
Y2 21+57							1																		1							1									
																																						0.4465			
Y1 13+13							1																				1	1												
L 19+20							1			1			1																											
							1																			1														SEE SHEET 2B-2 FOR STRUCTURE LOCATION
																																								RETAIN EXISTING 24" RCP
							1			1			1																											SEE SHEET 2B-2 FOR STRUCTURE LOCATION
																																								RETAIN EXISTING 24" RCP
Y1 12+24																																						0.045		
Y1 12+31																																						0.045		
Y1 11+54																																							159	
Y1 13+25																																							187	
Y1 14+80																																							120	
Y1 16+13																																							159	
Y1 15+28																																							36	
SHEET TOTALS				4.500			17	5.0	0.6	14			11	3												1	1	1			1					1		1		0.4465	0.090	661	
PROJECT TOTALS				4.500			43	5.8		34			20	14												1	6	6	1		1					2		1		0.4465	0.090	661	

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

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COMPUTED BY: JP Rogers DATE:	(11-19-13)	PROJECT NO.	SHEET NO.
CHECKED BY: DATE:		U-5776	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	500
				TOTAL LF:	500

***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		500	1000	1500		
			TOTAL CY/TONS/SY:		500	1000	1500	0	0

***ASU = Aggregate Subgrade**

***AST = Aggregate Stabilization**

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PROJ. REFERENCE NO.	SHEET NO.
U-5776	3P-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PARCEL INDEX SHEET

PARCEL No.	SHEET No.	PROPERTY OWNER NAME
1	4	GREY JOHNSON & DEBORAH JOHNSON
2	4	ANNIE C. BURCH
3	4	RALPH P. ANTHONY & PEARL C. ANTHONY
4	4	BARTON B. POTTER & PATSY POTTER
5	4	KRISTIN N. POOVEY
6	4	EDDIE L. COFFEY
7	4	B.A. BROOKS & JANELLE C. BROOKS
8	4	SCOTT A. COOK & EMILY B. COOK
9	4	WILLIAM W. WEAVER, LINDA M. WEAVER & ROBERT C. CANNON
10	4	OLD GRANITE SQUARE HOA, INC.
11	4	HHA DEVELOPMENT, LLC
12	4	PAUL'S CLASSIC & CUSTOM GOLF CARTS, LLC
13	4	W. CORPENING INVESTMENT LIMITED PARTNERSHIP
14	4	JOHN C. GRITZ, JR. & AUDREY M. N. GRITZ
15	4	WILLIAM A. TUCKER & NANCY S. TUCKER
16	4	HERBERT WILLIAM BOGER
17	4	RICHARD L. MANN & JOANNETTE G. MANN
18	4	WILLIAM JACOB BURNS, JR & LORRAINE CANNON BURNS
19	4	MATTHEW L. LAWS & TONYA B. LAWS
20	4	RYAN DAVIS & JOY DAVIS
21	4	RICHARD LAYMON NIX

PARCEL No.	SHEET No.	PROPERTY OWNER NAME

DocuSign Envelope ID: 5E5BA466-1BB3-403C-885E-FEBC45E19F26

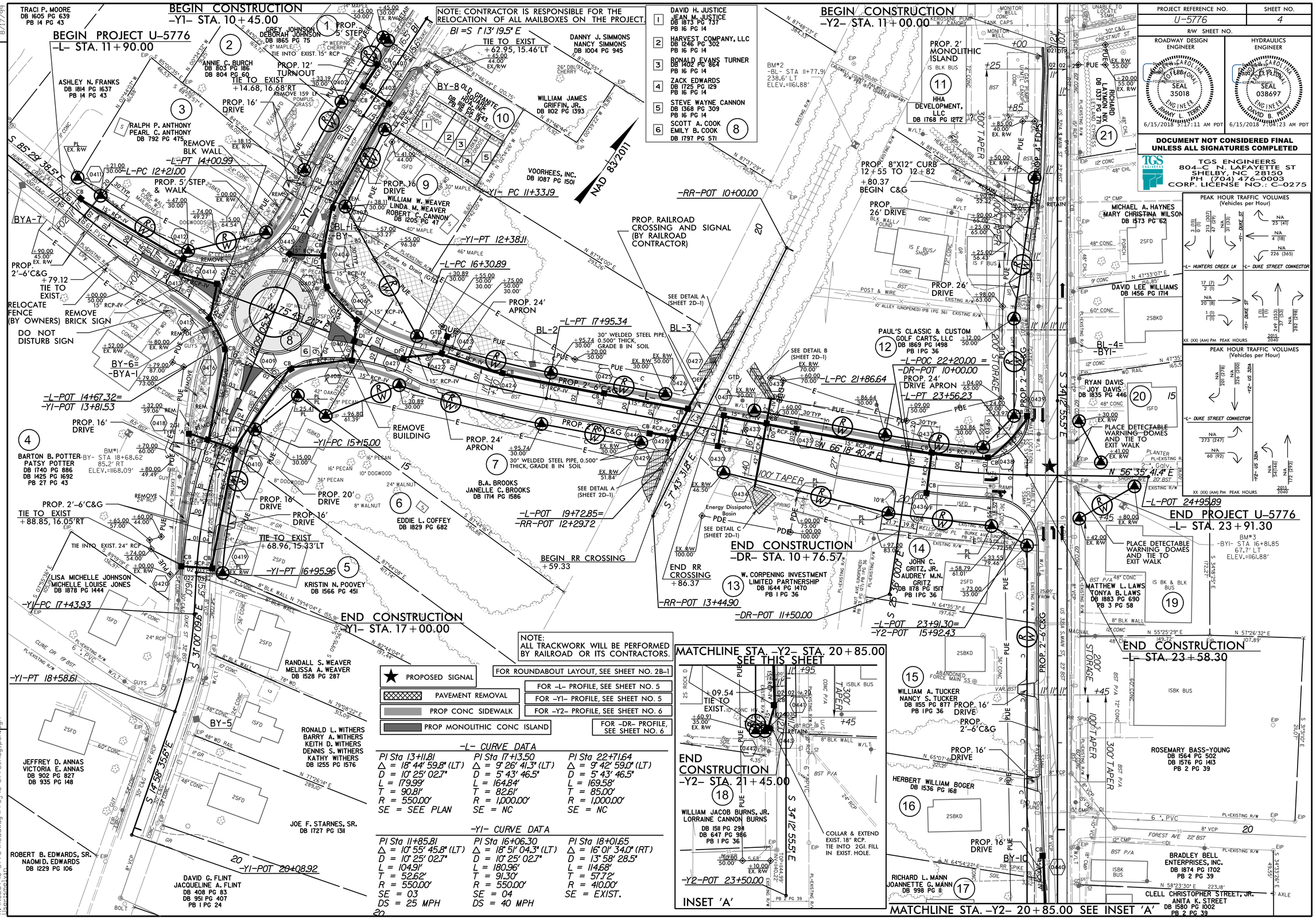
PROJECT REFERENCE NO.	SHEET NO.
U-5776	4
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER — SEAL 35018 — JIMMY TERRY — 6/15/2018 5:17:11 AM PDT

HYDRAULICS ENGINEER — SEAL 038697 — DAVID B. PETTY — 6/15/2018 7:04:23 AM PDT

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275



-L- CURVE DATA

PI Sta 13+11.81	PI Sta 17+13.50	PI Sta 22+71.64
Δ = 18° 44' 59.8" (LT)	Δ = 9° 26' 41.3" (LT)	Δ = 9° 42' 59.0" (LT)
D = 10° 25' 02.7"	D = 5° 43' 46.5"	D = 5° 43' 46.5"
L = 179.99'	L = 164.84'	L = 169.58'
T = 90.81'	T = 82.61'	T = 85.00'
R = 550.00'	R = 1,000.00'	R = 1,000.00'
SE = SEE PLAN	SE = NC	SE = NC

-Y1- CURVE DATA

PI Sta 11+85.81	PI Sta 16+06.30	PI Sta 18+01.65
Δ = 10° 55' 45.8" (LT)	Δ = 18° 51' 04.3" (LT)	Δ = 16° 01' 34.0" (RT)
D = 10° 25' 02.7"	D = 10° 25' 02.7"	D = 13° 58' 28.5"
L = 104.91'	L = 180.96'	L = 114.68'
T = 52.62'	T = 91.30'	T = 57.72'
R = 550.00'	R = 550.00'	R = 410.00'
SE = 03	SE = 04	SE = EXIST.
DS = 25 MPH	DS = 40 MPH	

REVISIONS

8/17/99

6/14/2018
R:\NCDOT\U-5776\Roadway\Proj\U-5776_Rdy_psh_sign
User:smeyer,VD

DocuSign Envelope ID: 5E5BA466-1BB3-403C-885E-FEBC45E19F26

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
U-5776	5

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 35018 ENGINEER JIMMY L. TERRY
6/15/2018 3:47:11 AM PDT

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 038697 ENGINEER DAVID B. PETTY
6/15/2018 7:04:23 AM PDT

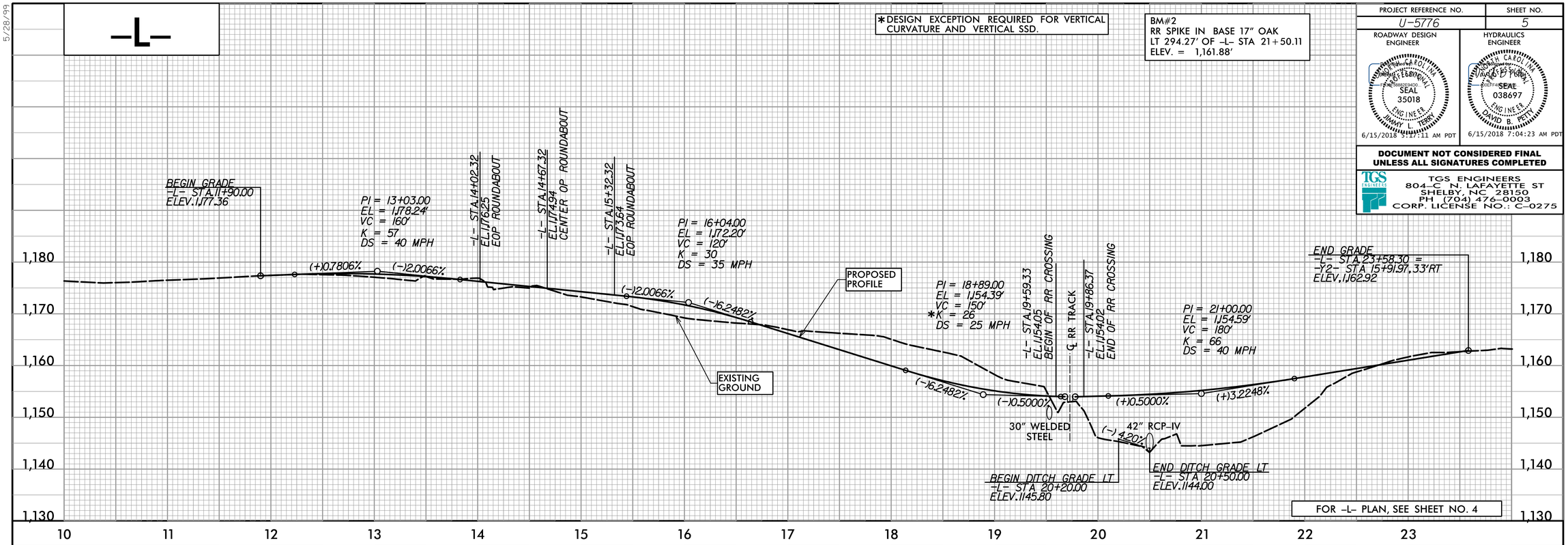
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

-L-

*DESIGN EXCEPTION REQUIRED FOR VERTICAL CURVATURE AND VERTICAL SSD.

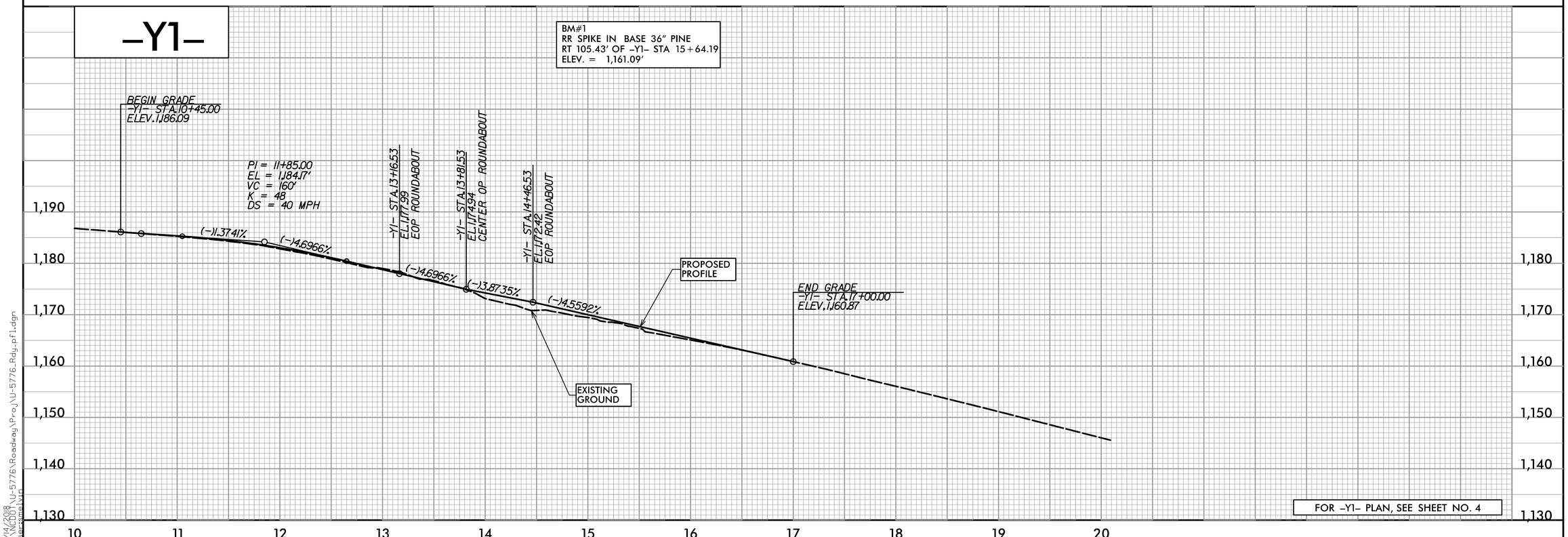
BM#2
RR SPIKE IN BASE 17" OAK
LT 294.27' OF -L- STA 21+50.11
ELEV. = 1,161.88'



FOR -L- PLAN, SEE SHEET NO. 4

-Y1-

BM#1
RR SPIKE IN BASE 36" PINE
RT 105.43' OF -Y1- STA 15+64.19
ELEV. = 1,161.09'



FOR -Y1- PLAN, SEE SHEET NO. 4

6/14/2018
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R:\U-5776\Roadway\Proj\U-5776_Rdy_pfl.dgn
jlsemplyn

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5/28/99

PROJECT REFERENCE NO.	SHEET NO.
U-5776	6

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 35018 ENGINEER JIMMY L. TERRY

6/15/2018 9:47:11 AM PDT

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 038697 ENGINEER DAVID B. PETTY

6/15/2018 9:04:23 AM PDT

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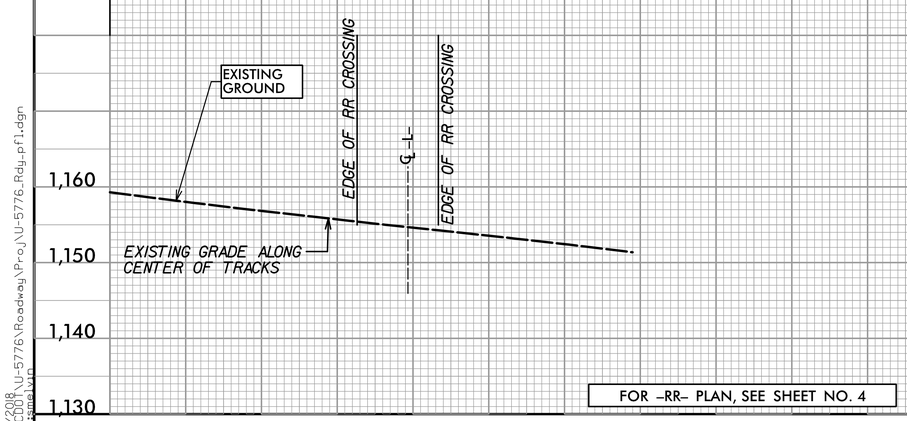
TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

-Y2-

BM#3
RR SPIKE FLUSH IN BST P/A
LT 75.51' OF -Y2- STA 16+27.27
ELEV. = 1,161.88'

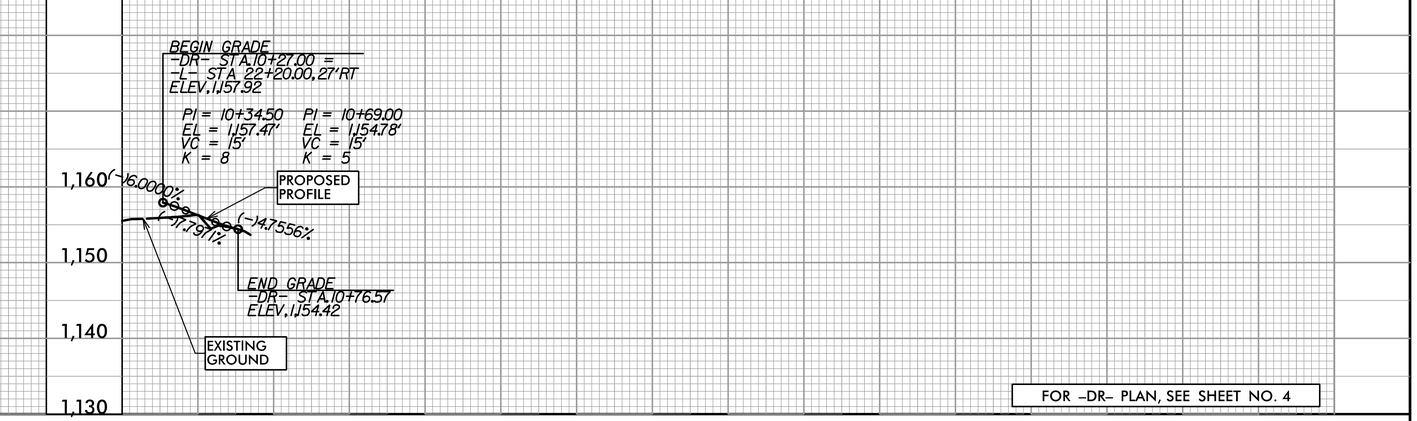
FOR -Y2- PLAN, SEE SHEET NO. 4

-RR-



FOR -RR- PLAN, SEE SHEET NO. 4

-DR-



FOR -DR- PLAN, SEE SHEET NO. 4

6/14/2018
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jlsersimpson

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