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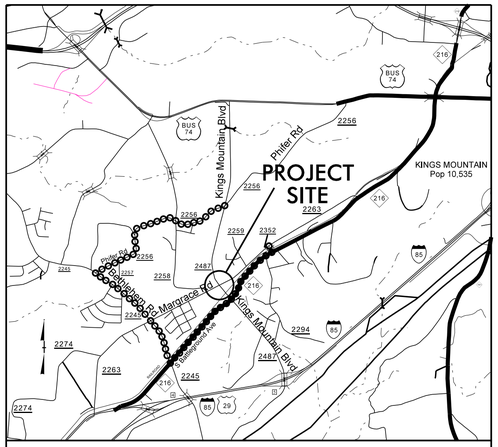
This file or an individual page shall not be considered a certified document.

09/08/99

TIP PROJECT: W-5712B

CONTRACT: DL00191

See Sheet 1A For Index of Sheets



VICINITY MAP
(NOT TO SCALE)

~~~~~~~~~~~ = DETOUR

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

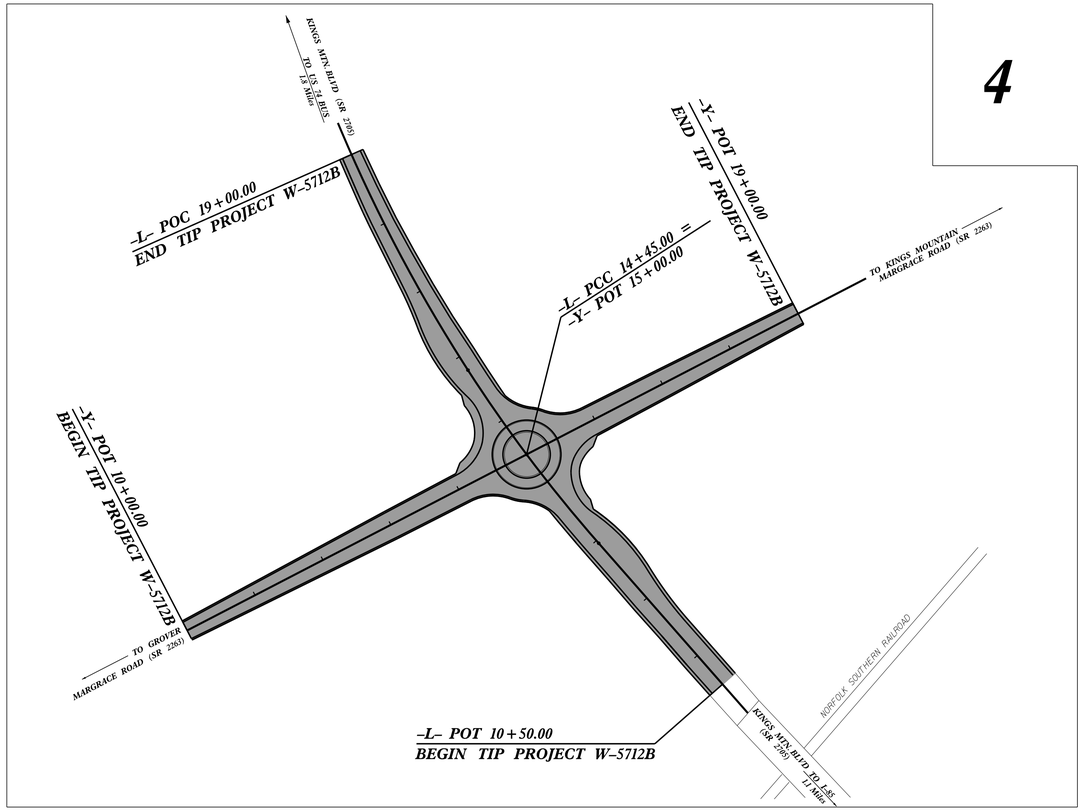
CLEVELAND COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5712B	1	5

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
44858.1.2	HSIP-2263(002)	PE
44858.2.2		R/W
44858.3.2		CONST

LOCATION: INTERSECTION OF KINGS MOUNTAIN BLVD. (SR 2705) AND MARGRACE ROAD (SR 2263)

TYPE OF WORK: GRADING, PAVING, CONCRETE, CURBING AND PAVEMENT MARKINGS



NAD 83/
NSRS 2007

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES

25 12.5 0 25 50
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

50 25 0 50 100
PROFILE (VERTICAL)

DESIGN DATA

ADT 2018 = 5706
ADT 2038 = 8000
K = 19 %
D = 53 %
T = 4 % *
V = 50 MPH
* TTST =1 DUAL 3
FUNC CLASS =
MINOR ARTERIAL

PROJECT LENGTH

LENGTH ROADWAY PROJECT W-5712B = 0.331 MILE

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

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JULY 29, 2018

LETTING DATE:
NOVEMBER 13, 2018

B. K. SOWELL, PE
PROJECT ENGINEER

R. E. HUMPHRIES, PLS
PROJECT DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 043888 ENGINEER BRYAN K.D. SOWELL

ROADWAY DESIGN ENGINEER

DocuSigned by: Bryan Sowell 79EABDC0D6EA4D1...

10/12/2018

P.E.

SIGNATURE:

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

12-OCT-2018 14:53
R:\Roadway\Proj\Plansheets\W-5712B_Rdy_tsh.dgn
$$$$USERNAME$$$$
~~~~~~~~~~~

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
W-5712B	1-A

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 043888 ENGINEER BRYAN K.D. SOMMELL

DocuSigned by: Bryan Sommell 10/12/2018

-79EABOCODDEA4D1...

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1-B	CONVENTIONAL SYMBOLS
RW-1 THRU RW-4	SURVEY CONTROL & PROPOSED ALIGNMENT CONTROL SHEETS
2A-1 THRU 2A-2	PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEDGING DETAILS
2B-1 THRU 2B-5	ROADWAY DETAILS AND SHEAR POINT DIAGRAM
3B	EARTHWORK SUMMARY
4	PLAN SHEET
5	PROFILE SHEET
TCP-1 THRU TCP- 5	TRAFFIC CONTROL PLANS
PM-1	PAVEMENT MARKING PLANS
EC-1 THRU EC-2	EROSION CONTROL PLANS
SIGN-1 THRU SIGN-4	SIGNING PLANS
X-1 THRU X-34	CROSS-SECTIONS

GENERAL NOTES: 2018 SPECIFICATIONS
EFFECTIVE: 01-16-18

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.

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.

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 DUKE POWER, AT&T, TIME WARNER CABLE,
CITY OF KINGS MOUNTAIN, LEVEL 3, AND CLEVELAND COUNTY WATER
ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

EFF. 01-16-18

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 16, 2018 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
225.04	Method of Obtaining Superelevation - Two Lane Pavement
DIVISION 3 - PIPE CULVERTS	
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 8 - INCIDENTALS	
852.01	Concrete Islands
862.02	Guardrail Installation

12/2/2016

PROJECT REFERENCE NO.	SHEET NO.
W-5712B	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
- 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 — C/A
- Existing Control of Access — C/A
- New Control of Access — C/A
- Existing Easement Line — E
- New Temporary Construction Easement — E
- New Temporary Drainage Easement — TDE
- New Permanent Drainage Easement — PDE
- New Permanent Drainage / Utility Easement — DUE
- New Permanent Utility Easement — PUE
- New Temporary Utility Easement — TUE
- New Aerial Utility Easement — AUE

ROADS AND RELATED FEATURES:

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

09/08/99

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5712B	RW01	

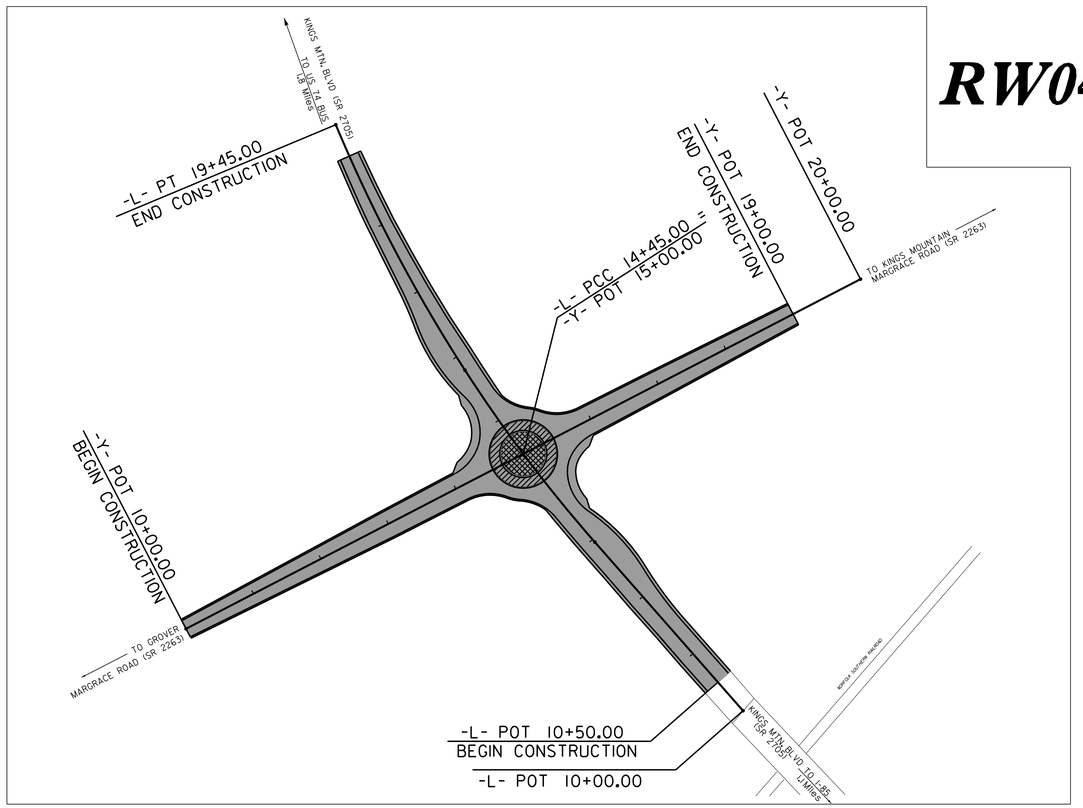
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SURVEY CONTROL, EXISTING CENTERLINES, RIGHT OF WAY, EASEMENTS AND PROPERTY TIES

CLEVELAND COUNTY

TIP PROJECT: W-5712B

RW04



NAD 83/
NSRS 2007

GRAPHIC SCALE

50 25 0 50 100

PLANS

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT
IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY
NCDOT FOR MONUMENT "W5712B-1"
WITH NAD 83/NSRS 2011 STATE PLANE GRID COORDINATES OF
NORTHING: 541,018.203(ft) EASTING: 1,288,695.751(ft)
ELEVATION: 1,039.480(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT
(GROUND TO GRID) IS: 0.999828
THE N.C. LAMBERT GRID BEARING AND
LOCALIZED HORIZONTAL GROUND DISTANCE FROM
"W5712B-1" TO -L- STATION 10+00.00 IS
S 48-39'57.0" E 499.13(ft)
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

Prepared in the Office of:

DIVISION OF HIGHWAYS

1000 Birch Ridge Dr., Raleigh NC, 27610

2017 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

LETTING DATE:

PROFESSIONAL LAND SURVEYOR

SIGNATURE:

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

30-AUG-2018 08:48
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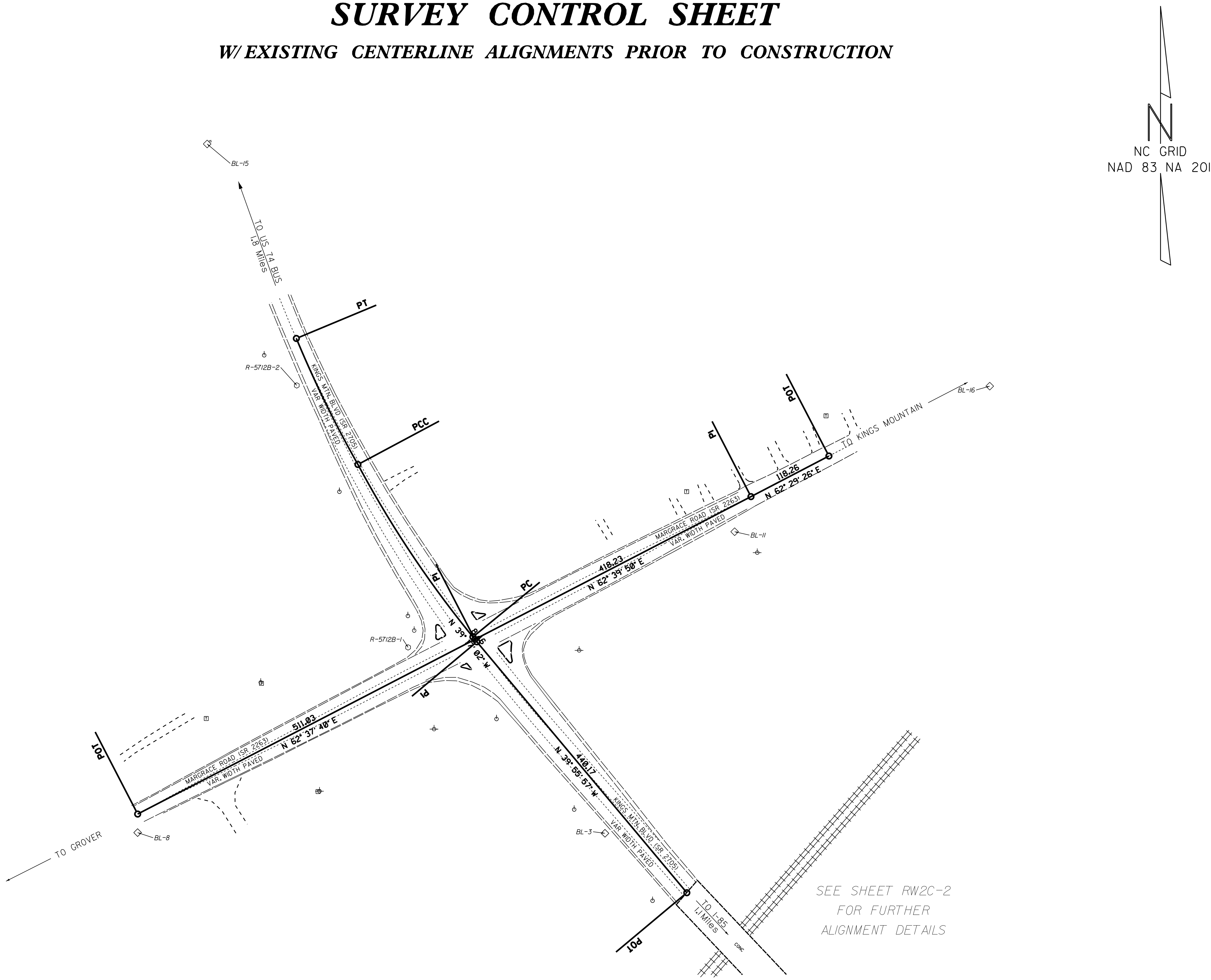
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
W-5712B	RW2C-1
Location and Surveys	

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION



NOTES:

1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.

2. THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

REVISIONS

6/2/99

27-JUN-2018 10:12
C:\Users\rbrackett\Documents\DDC\District 1\Cleveland\W-5712B_Margrace\SURVEY_Todd\ROW\W-5712B_LS_RW2C-1.dgn
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6/2/99

REVISIONS

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

BL

POINT	DESC.	NORTH	EAST	ELEVATION
3	BL-3	540768.1300	1288960.6640	1040.67
1	W-5712B-1	541018.2030	1288695.7510	1039.48
2	W-5712B-2	541370.6350	1288545.9530	1027.13
15	BL-15	541695.4330	1288425.2870	1012.43

BY

POINT	DESC.	NORTH	EAST	ELEVATION
8	BL-8	540769.0220	1288331.7300	1026.69
A1	BL-1	541018.2030	1288695.7510	1039.48
11	BL-11	541173.8140	1289135.1630	1030.94
16	BL-16	541369.6280	1289478.4520	1036.83

BM1 ELEVATION - 1040.27
N 541060 E 1288696
BENCH TIE SET IN POWER POLE

BM2 ELEVATION - 1035.15
N 541227 E 1288603
BENCH TIE SET IN POWER POLE

EL

POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	540688.188	1289070.852							
LINE			N 39°55'56.7" W	440.17					
POT	541025.710	1288788.315							
LINE			N 39°17'02.4" W	8.46					
PC	541032.258	1288782.958							
CURVE			N 33°41'53.9" W	278.84	11°10'17.0"(RT)	04°00'00.0"	279.28	140.09	1432.39
PCC	541264.247	1288628.251							
CURVE			N 26°02'49.5" W	188.75	06°52'11.9"(RT)	03°38'14.9"	188.87	94.55	1575.15
PT	541433.829	1288545.368							

EY

POINT	N	E	BEARING	DIST
POT	540794.026	1288331.820		
LINE			N 62°37'39.6" E	511.03
POT	541028.984	1288785.636		
LINE			N 62°39'49.8" E	418.23
POT	541221.041	1289157.163		
LINE			N 62°29'26.4" E	118.26
POT	541275.665	1289262.054		

NOTES:

1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.

2. THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
W-5712B	RWD2-1
Location and Surveys	

PROPOSED ALIGNMENT CONTROL SHEET

L

TYPE	STATION	NORTH	EAST
POT	10+00.00	540688.5547	1289070.5294
PC	12+95.31	540910.4119	1288875.6323
PCC	14+45.00	541026.5890	1288781.2924
PCC	15+79.33	541136.8207	1288704.5802
PT	19+45.00	541459.9964	1288534.4922

Y

TYPE	STATION	NORTH	EAST
POT	10+00.00	540796.4713	1288337.3939
POT	15+00.00	541026.5890	1288781.2924
POT	20+00.00	541256.7067	1289225.1909

CIRCULAR ALIGNMENT

TYPE	STATION	NORTH	EAST
PC	10+00.00	540981.5890	1288781.2924
PT	12+82.74	540981.5890	1288781.2924

REVISIONS

NOTES:

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

RIGHT OF WAY CONTROL SHEET

ROW MARKER IRON PIN AND CAP - E

ALIGN	STATION	OFFSET	NORTH	EAST
L	10+60.88	112.16	540808.31800	1289114.60800
L	13+55.99	-90.68	540898.94800	1288766.33600
L	15+85.37	-92.05	541092.25000	1288623.80600

ROW MARKER IRON PIN AND CAP - E

ALIGN	STATION	OFFSET	NORTH	EAST
Y	18+94.63	-39.75	541243.50400	1289113.34800
Y	18+61.76	61.87	541138.15300	1289130.93700
Y	16+97.84	-69.45	541179.29700	1288924.97300
Y	13+96.51	90.58	540898.54200	1288731.10600
Y	13+66.56	-79.62	541035.85600	1288626.17900
Y	12+38.56	-79.70	540977.02500	1288512.50500
Y	OUTSIDE PROJECT LIMITS		541253.78400	1289329.65800
Y	OUTSIDE PROJECT LIMITS		541325.65200	1289292.53500
Y	OUTSIDE PROJECT LIMITS		541333.96300	1289288.22400
Y	OUTSIDE PROJECT LIMITS		540780.11800	1288171.13800

NOTES:

1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.

REVISIONS

6/2/99

$$$$SYSTIME$$$$
$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
W-5712B	RW04
LOCATION AND SURVEYS	

PROJECT SURVEYOR

-L-	-L-	-L-
PI 13+70.19	PI 15+12.19	PI 17+62.64
Δ 4° 26' 30" (RT)	Δ 4° 02' 40" (RT)	Δ 10° 06' 33" (RT)
D 2° 58' 02"	D 3° 00' 40"	D 2° 45' 52"
R 1,931.00	R 1,902.88	R 2,072.57
Lc 149.69	Lc 134.33	Lc 365.68
T 74.88	T 67.19	T 183.31

NOTES:

1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.

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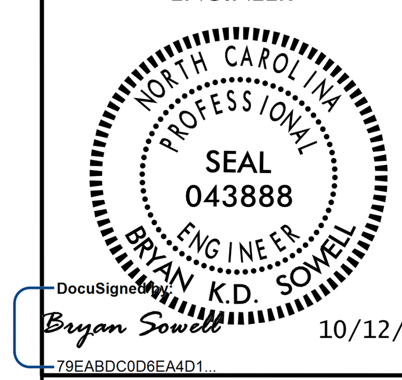
PROJECT REFERENCE NO.	SHEET NO.
W-5712B	2A-1

RW SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER



Bryan Sowell 10/12/2018

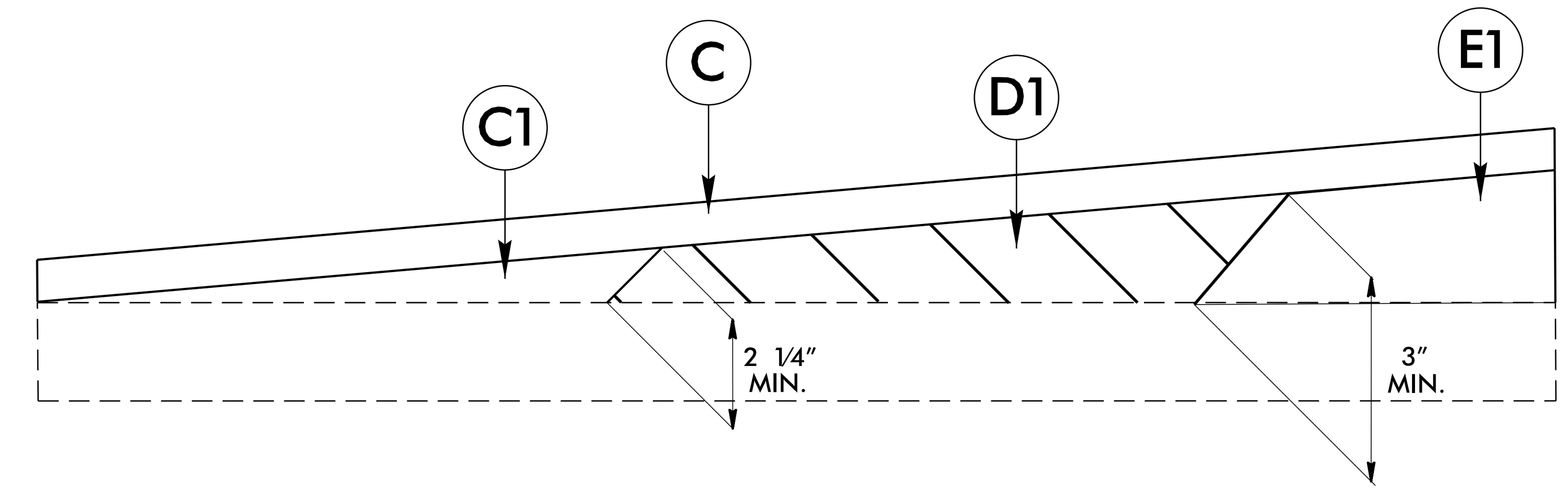
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

8/17/99

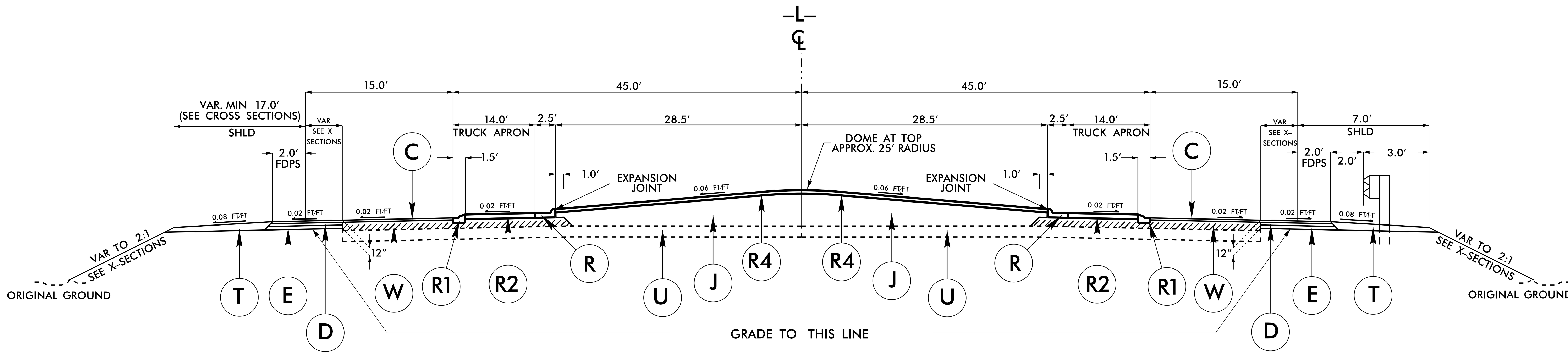
PAVEMENT SCHEDULE

C	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.
C1	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF112 LBS. PER SQ. YD. PER 1″ DEPTH,TO BE PLACED IN LAYERS NOT TO EXCEED 1½″ IN DEPTH.
C2	PROP. APPROX. 1.5″ ASPHALT CONCRETE SURFACE COURSE TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D	PROP. APPROX. 4.0″ ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D1	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 2¼″ IN DEPTH OR GREATER THAN 4″ IN DEPTH.
E	PROP. APPROX. 5″ ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT ANAVERAGE RATE OF 570 LBS. PER SQ. YD.
E1	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.
J	PROP. VARIABLE DEPTH COMPACTED AGGREGATE BASE COURSE.
R	2′-6″ CONCRETE CURB AND GUTTER.
R1	1′-6″ CONCRETE CURB AND GUTTER.
R2	7″ MONOLITHIC CONCRETE TRUCK APRON REFER TO STD. DRAWING 852.01
R3	5″ MONOLITHIC CONCRETE ISLAND. (KEYED IN)
R4	4″ CONCRETE ISLAND CAP
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	VAR. MILLING DEPTH 0.0″ TO 2.0″
V1	VAR. MILLING DEPTH 1.5″ TO 3″
W	WEDGING

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

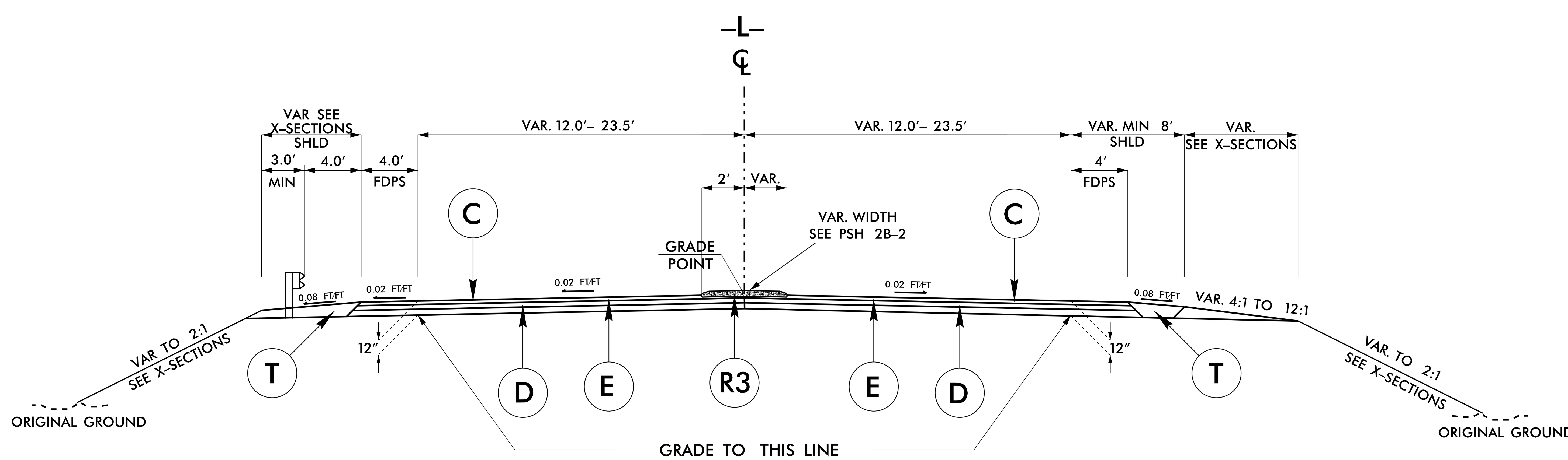


WEDGING DETAIL



TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1
WITHIN THE OUTSIDE DIAMETER (O.D.)
OF THE PROPOSED ROUNDABOUT



TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2
LINE -L- 10+50 TO 13+85 (APPROACH OF O.D. PROPOSED ROUNDABOUT

12-OCT-2018 14:56
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PROJECT REFERENCE NO.	SHEET NO.
W-5712B	2A-2
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 043888 ENGINEER BRYAN K.D. SOWELL

DocuSigned by: Bryan Sowell 10/12/2018
3EABDC0D6EA4D1...

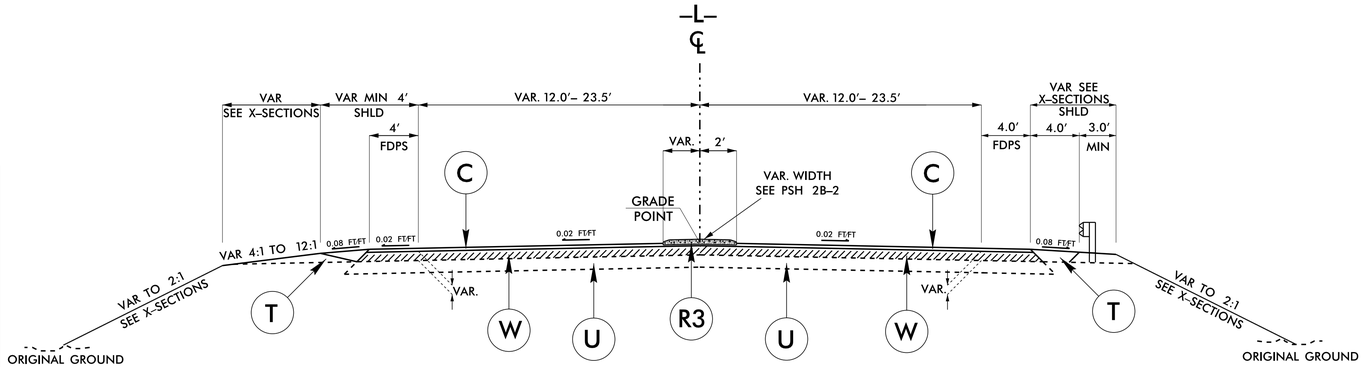
HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PAVEMENT SCHEDULE

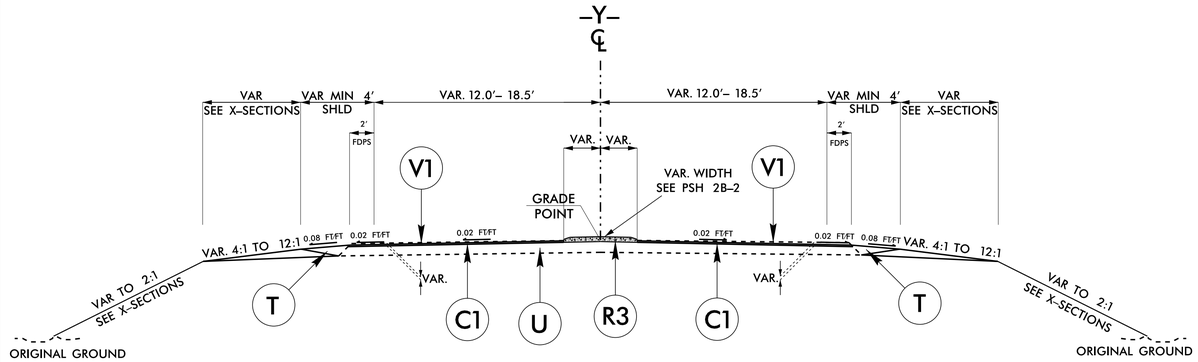
C	PROP. APPROX. 3″ ASPHALT CONCRETE SURFACE COURSE TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C1	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF112 LBS. PER SQ. YD. PER 1″ DEPTH,TO BE PLACED IN LAYERS NOT TO EXCEED 1½″ IN DEPTH.
C2	PROP. APPROX. 1.5″ ASPHALT CONCRETE SURFACE COURSE TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D	PROP. APPROX. 4.0″ ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D1	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 2¼″ IN DEPTH OR GREATER THAN 4″ IN DEPTH.
E	PROP. APPROX. 5″ ASPHALT CONCRETE BASE COURSE,TYPE B25.0C, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
E1	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.
J	PROP. VARIABLE DEPTH COMPACTED AGGREGATE BASE COURSE.
R	2′-6″ CONCRETE CURB AND GUTTER.
R1	1′-6″ CONCRETE CURB AND GUTTER.
R2	7″ MONOLITHIC CONCRETE TRUCK APRON REFER TO STD. DRAWING 852.01
R3	5″ MONOLITHIC CONCRETE ISLAND. (KEYED IN)
R4	4″ CONCRETE ISLAND CAP
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	VAR. MILLING DEPTH 0.0″ TO 2.0″
V1	VAR. MILLING DEPTH 1.5″ TO 3″
W	WEDGING

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



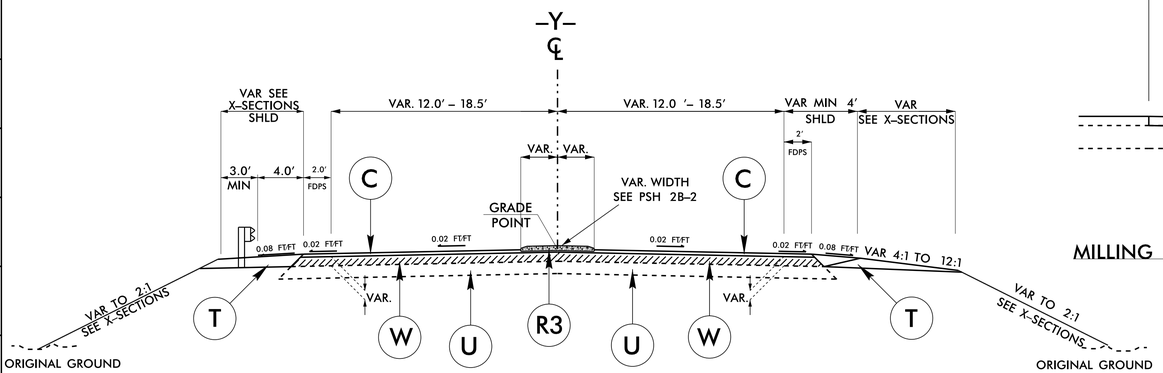
TYPICAL SECTION NO. 3

USE TYPICAL SECTION NO. 3
LINE –L– 15+05 TO 19+00 (FROM APPROACH TO O.D. PROPOSED ROUNDABOUT)



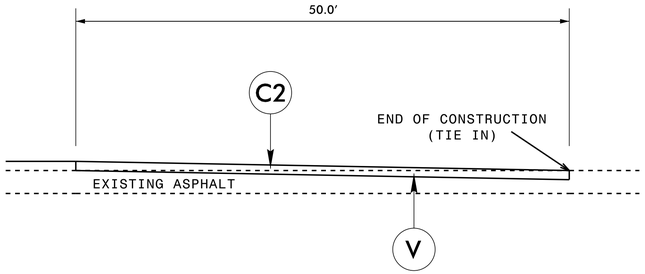
TYPICAL SECTION NO. 4

USE TYPICAL SECTION NO. 4
LINE –Y– 10+00 TO 14+40 (APPROACH TO O.D. OF PROPOSED ROUNDABOUT)



TYPICAL SECTION NO. 5

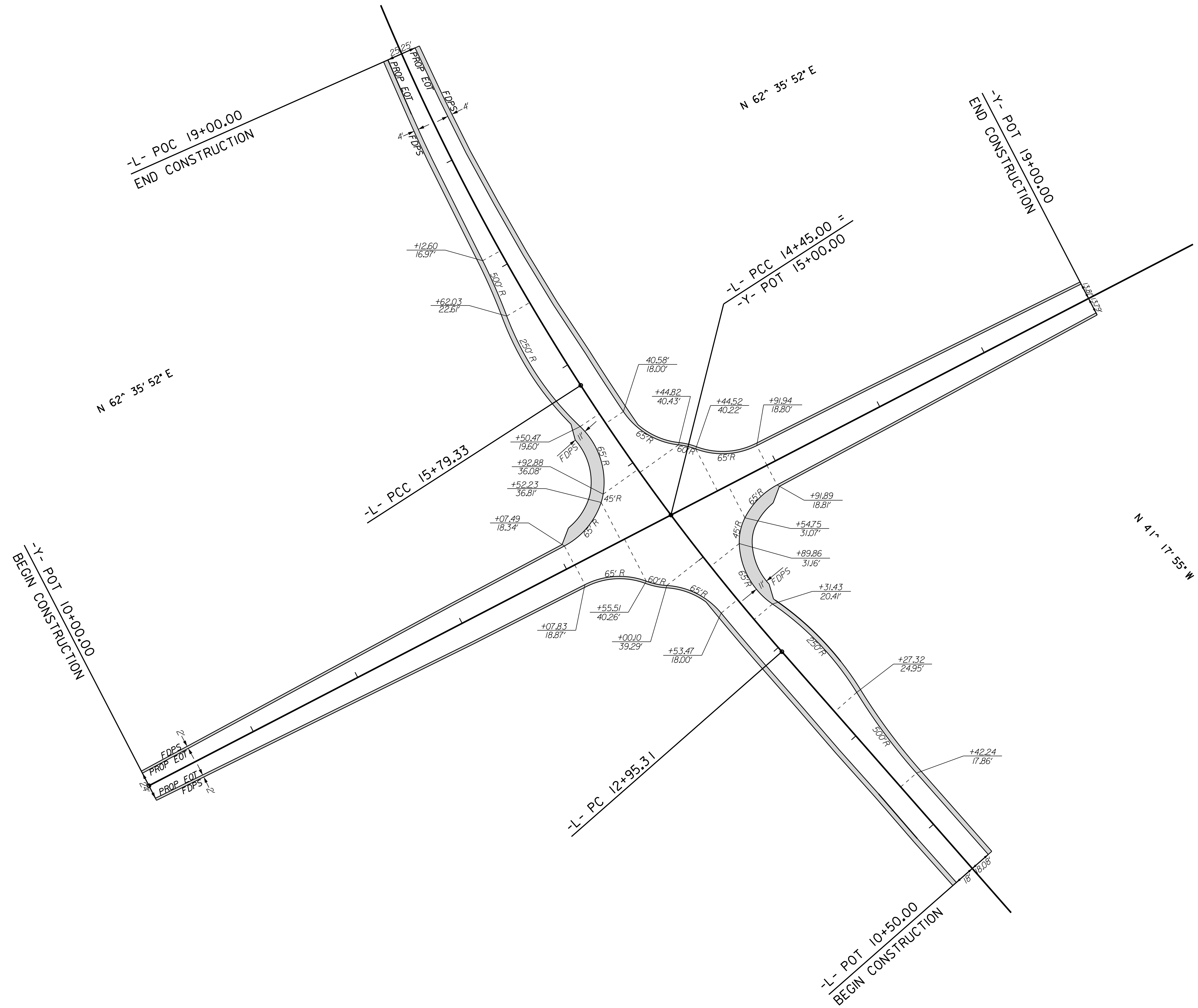
USE TYPICAL SECTION NO. 5
LINE –Y– 15+60 TO 19+00 (FROM APPROACH TO O.D. PROPOSED ROUNDABOUT)



MILLING DETAIL TO TIE IN AT BEGIN AND END CONSTRUCTION

EOT DETAILS

PROJECT REFERENCE NO.	SHEET NO.
W-5712B	2B-1
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



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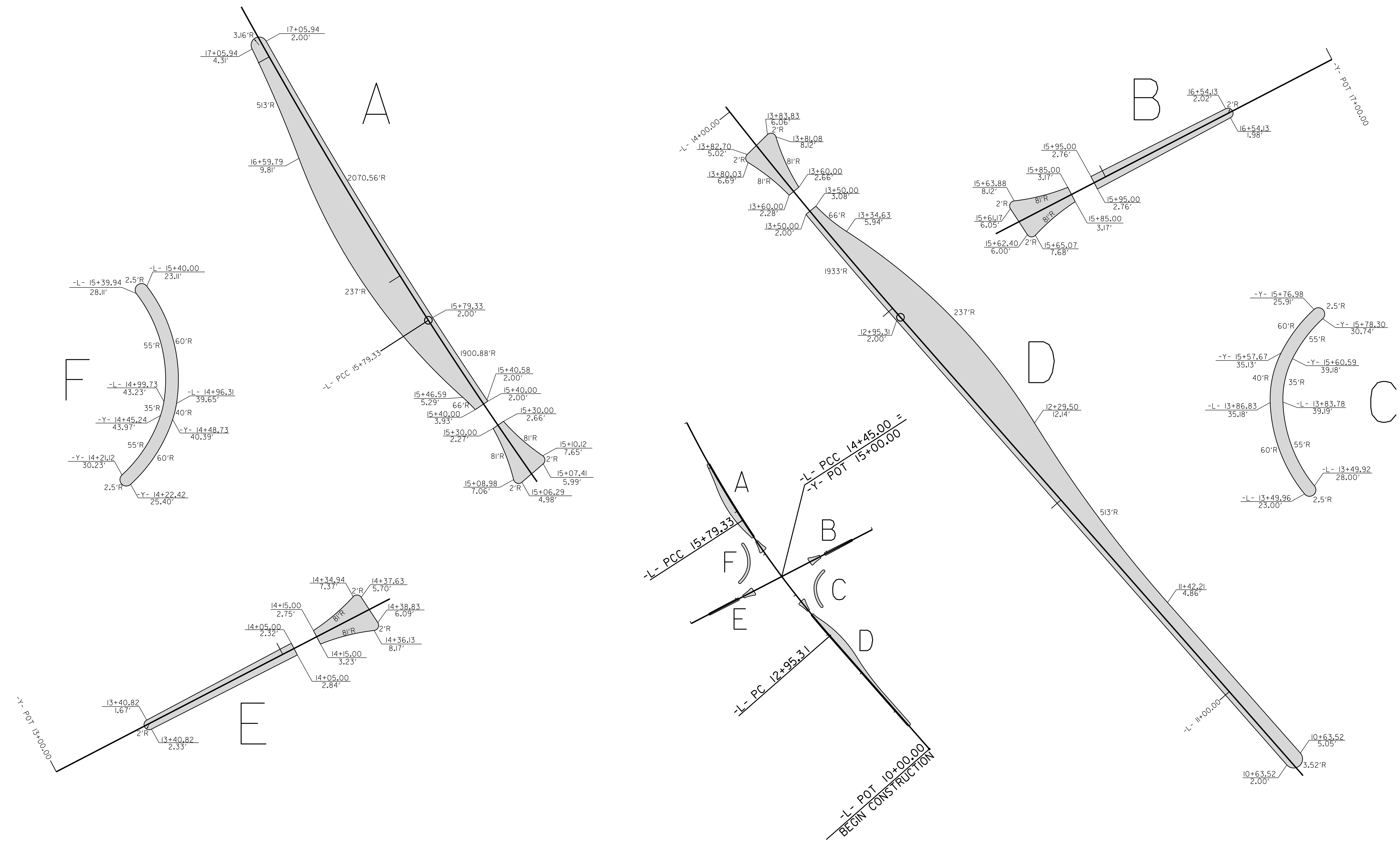
PROJECT REFERENCE NO.	SHEET NO.
W-5712B	2B-2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MONOLITHIC CONCRETE ISLAND DETAILS



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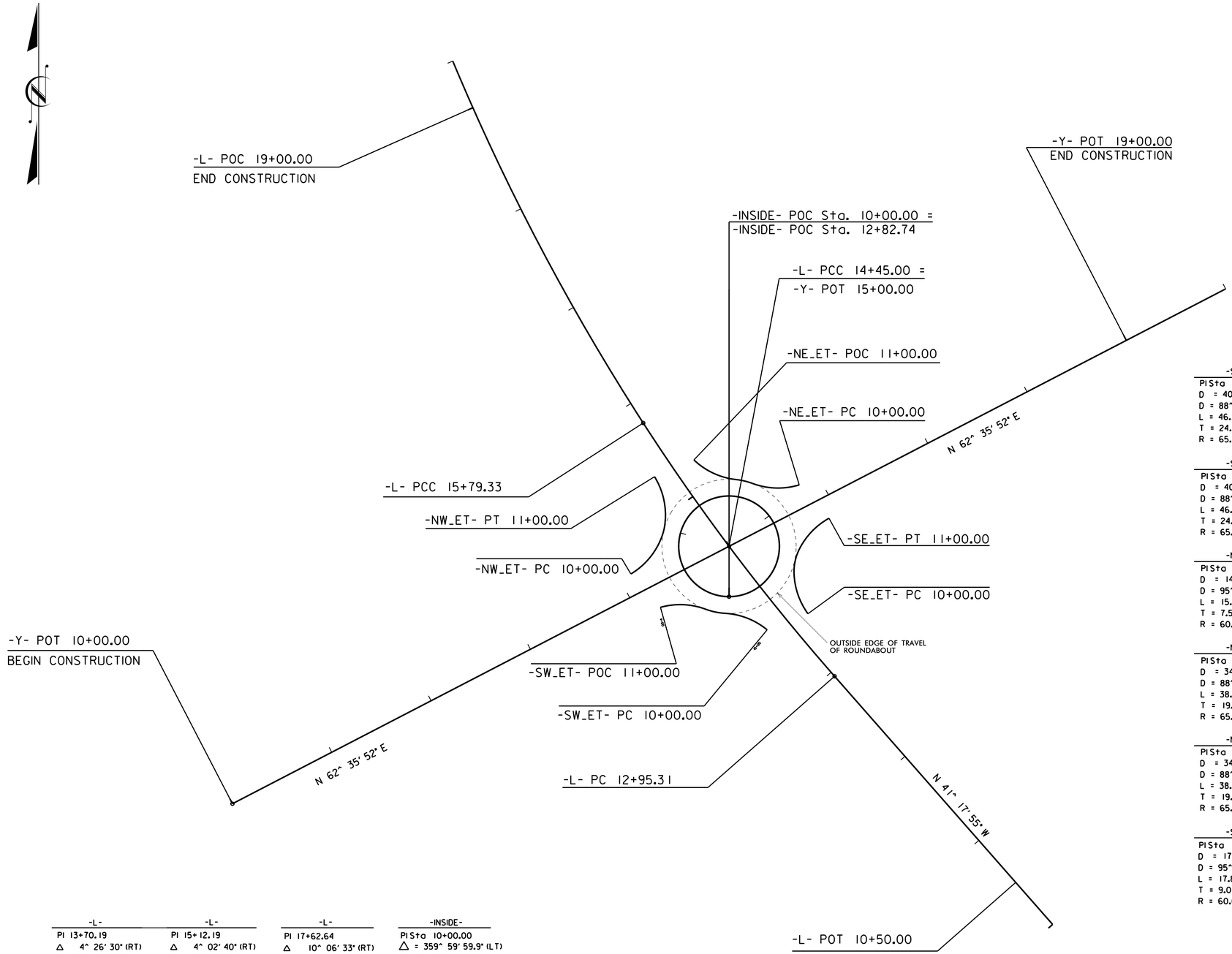
PROJECT REFERENCE NO.	SHEET NO.
W-5712B	2B-3
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

ALIGNMENT DETAIL



-L-	
PI	13+70.19
△	4^ 26' 30" (RT)
D	2^ 58' 02"
R	1,931.00
Lc	149.69
T	74.88

-L-	
PI	15+12.19
△	4^ 02' 40" (RT)
D	3^ 00' 40"
R	1,902.88
Lc	134.33
T	67.19

-L-	
PI	17+62.64
△	10^ 06' 33" (RT)
D	2^ 45' 52"
R	2,072.57
Lc	365.68
T	183.31

-INSIDE-	
PI Sta	10+00.00
△	= 359^ 59' 59.9" (LT)
D	= 127^ 19' 26.2"
L	= 282.74'
T	= 0.00'
R	= 45.00'

-SE-ET-	
PI Sta	10+24.21
D	= 40^ 51' 51.5" (LT)
D	= 88^ 08' 50.5"
L	= 46.36'
T	= 24.21'
R	= 65.00'

-SE-ET-	
PI Sta	10+50.01
D	= 9^ 16' 17.4" (LT)
D	= 127^ 19' 26.2"
L	= 7.28'
T	= 3.65'
R	= 45.00'

-SE-ET-	
PI Sta	10+77.86
D	= 40^ 51' 51.5" (LT)
D	= 88^ 08' 50.5"
L	= 46.36'
T	= 24.21'
R	= 65.00'

-NE-ET-	
PI Sta	10+22.04
D	= 37^ 27' 33.0" (RT)
D	= 88^ 08' 50.5"
L	= 42.50'
T	= 22.04'
R	= 65.00'

-NE-ET-	
PI Sta	10+50.04
D	= 14^ 19' 53.1" (LT)
D	= 95^ 29' 34.7"
L	= 15.01'
T	= 7.54'
R	= 60.00'

-NE-ET-	
PI Sta	10+79.54
D	= 37^ 27' 33.0" (RT)
D	= 88^ 08' 50.5"
L	= 42.50'
T	= 22.04'
R	= 65.00'

-NE-ET-	
PI Sta	10+19.94
D	= 34^ 06' 09.3" (RT)
D	= 88^ 08' 50.5"
L	= 38.69'
T	= 19.94'
R	= 65.00'

-NE-ET-	
PI Sta	10+50.24
D	= 28^ 48' 19.4" (RT)
D	= 127^ 19' 26.2"
L	= 22.62'
T	= 11.56'
R	= 45.00'

-NE-ET-	
PI Sta	10+81.25
D	= 34^ 06' 09.3" (RT)
D	= 88^ 08' 50.5"
L	= 38.69'
T	= 19.94'
R	= 65.00'

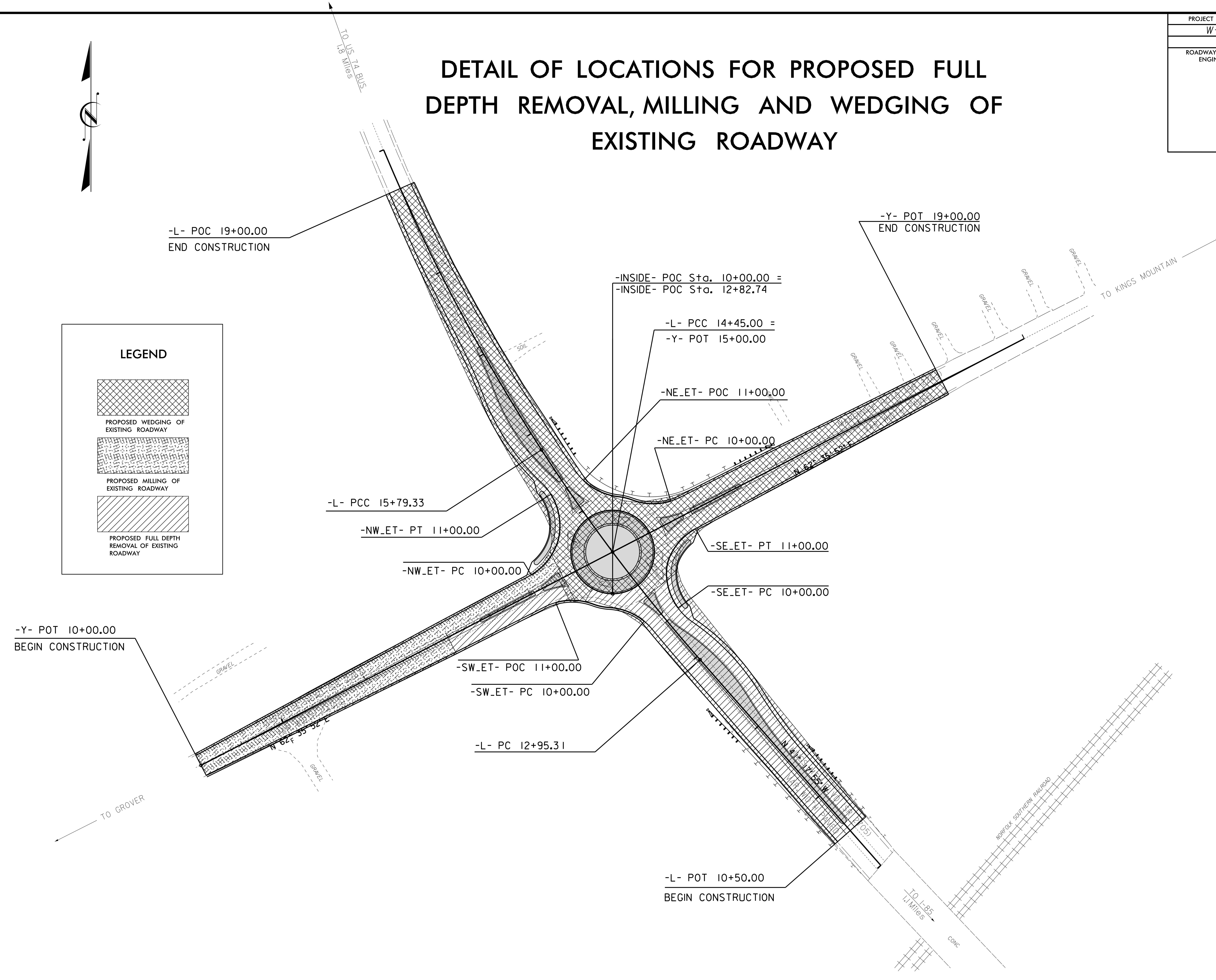
-SW_ET-	
PI Sta	10+21.24
D	= 36^ 11' 21.7" (LT)
D	= 88^ 08' 50.5"
L	= 41.06'
T	= 21.24'
R	= 65.00'

-SW_ET-	
PI Sta	10+50.07
D	= 17^ 04' 57.7" (RT)
D	= 95^ 29' 34.7"
L	= 17.89'
T	= 9.01'
R	= 60.00'

-SW-ET-	
PI Sta	10+80.18
△	= 36^ 11' 21.7" (LT)
D	= 88^ 08' 50.5"
L	= 41.06'
T	= 21.24'
R	= 65.00'

PROJECT REFERENCE NO.	SHEET NO.
W-5712B	2B-4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DETAIL OF LOCATIONS FOR PROPOSED FULL DEPTH REMOVAL, MILLING AND WEDGING OF EXISTING ROADWAY



TO US 74 BUS. 1.8 Miles
-L- POC 19+00.00
END CONSTRUCTION
-Y- POT 19+00.00
END CONSTRUCTION
TO KINGS MOUNTAIN
-INSIDE- POC Sta. 10+00.00 =
-INSIDE- POC Sta. 12+82.74
-L- PCC 14+45.00 =
-Y- POT 15+00.00
-NE_ET- POC 11+00.00
-NE_ET- PC 10+00.00
LEGEND
PROPOSED WEDGING OF EXISTING ROADWAY
PROPOSED MILLING OF EXISTING ROADWAY
PROPOSED FULL DEPTH REMOVAL OF EXISTING ROADWAY
-L- PCC 15+79.33
-NW_ET- PT 11+00.00
-NW_ET- PC 10+00.00
-SE_ET- PT 11+00.00
-SE_ET- PC 10+00.00
-Y- POT 10+00.00
BEGIN CONSTRUCTION
-SW_ET- POC 11+00.00
-SW_ET- PC 10+00.00
-L- PC 12+95.31
TO GROVER
-L- POT 10+50.00
BEGIN CONSTRUCTION
TO I-85 1.1 Miles
NORFOLK SOUTHERN RAILROAD
CONC
GRAVEL
SOIL

8/17/99

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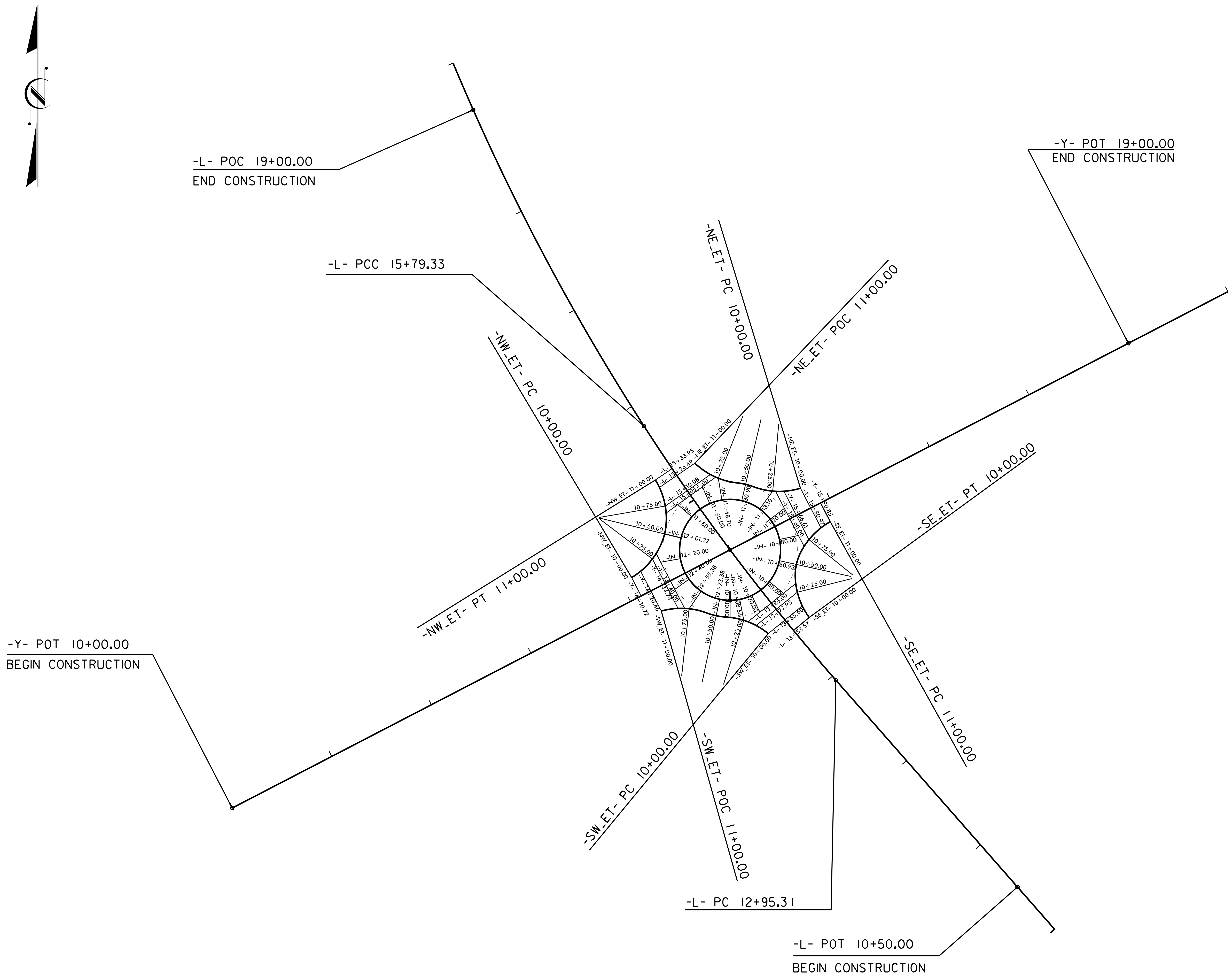
PROJECT REFERENCE NO.	SHEET NO.
W-5712B	2B-5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99

SHEAR POINT DIAGRAM



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12/06/07

COMPUTED BY: JSC	DATE:
CHECKED BY:	DATE:

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
W-5712B	3B-1

SUMMARY OF EARTHWORK

STATION	STATION	UNCL. EXCAV.	EMBANK. +%	BORROW	WASTE
RT -L- 10+50	RT -L- 19+45	13	219	206	0
LT -L- 10+50	LT -L- 19+45	126	81	0	45
RT -Y- 10+00	RT -Y- 19+00	25	219	194	0
LT -Y- 10+00	LT -Y- 19+00	19	154	135	0
SUBTOTALS:		183	671	533	0
NW-ET 10+00	NW-ET 11+00	15	0	0	15
NE-ET 10+00	NE-ET 11+00	0	201	201	0
SE-ET 10+00	SE-ET 11+00	0	46	46	85
SW-ET 10+00	SW-ET 11+00	85	0	0	0
SUBTOTALS:		100	247	247	145
SUBTOTALS:					
SUBTOTALS:					
PROJECT TOTALS:		283	918	780	145
MATERIAL FOR SHOULDER CONSTRUCTION			541	541	
WASTE IN LIEU OF BORROW				-145	-145
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT				59	
GRAND TOTALS:		283	1459	1175	
SAY:		300	1500	1200	

PAVEMENT REMOVAL SUMMARY

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	YD^2
-L-	10+50	13+85	RT & LT	1945
-L-	15+06	18+10	LT	105
-Y-	13+00	14+35	RT	318
-Y-	15+56	16+15	LT	12
-IN-	12+60	10+20	RT	106
			TOTAL:	2486
			SAY:	2500

"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

GUARDRAIL SUMMARY

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOUL. WIDTH	FLARE LENGTH		W		GUARDRAIL END UNITS									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	GRAU 350	TL-3	XIII	CAT-1	VI MOD	BIC	AT-1	EA	G	NG				
-L-	10+50	12+50	LT	150'														1										180'		
-L-	10+50	11+50	RT	50'														1										60'		
-Y- TO -L-	17+08	16+04	RT TO LT	50'	142.2'													2												

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.

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-L-		-L-		-L-	
PI	13+70.19	PI	15+12.19	PI	17+62.64
Δ	4° 26' 30" (RT)	Δ	4° 02' 40" (RT)	Δ	10° 06' 33" (RT)
D	2° 58' 02"	D	3° 00' 40"	D	2° 45' 52"
R	1,931.00	R	1,902.88	R	2,072.57
Lc	149.69	Lc	134.33	Lc	365.68
T	74.88	T	67.19	T	183.31

PROJECT REFERENCE NO.	SHEET NO.
W-5712B	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 043888 ENGINEER BRYAN K. SOWELL

DocuSigned by: Bryan Sowell 10/12/2018

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PROJECT REFERENCE NO.	SHEET NO.
W-5712B	5

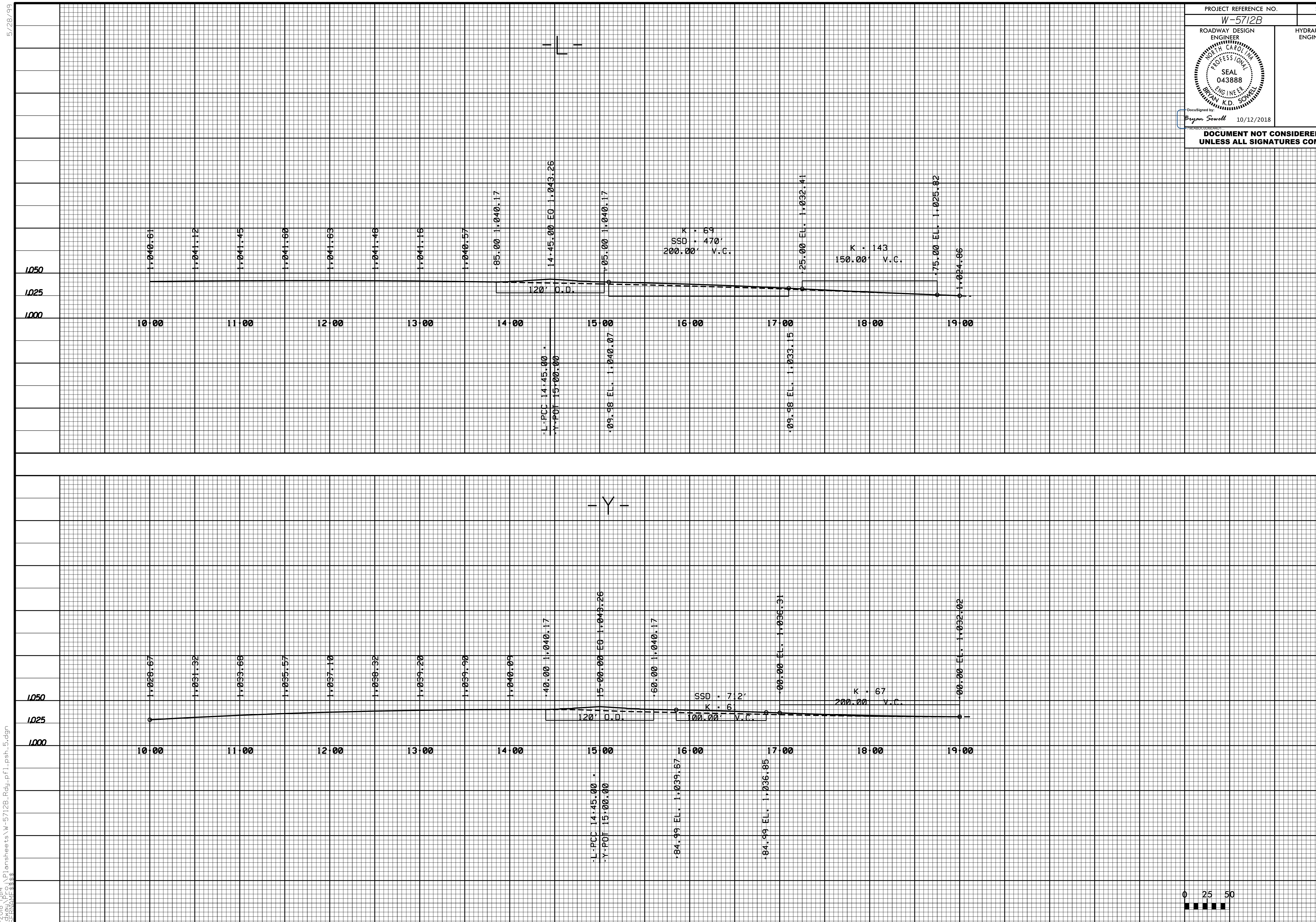
ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 043888 ENGINEER BRYAN K.D. SOWELL

DocuSigned by: Bryan Sowell 10/12/2018

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



NOTE: SCALE 1:1

5/28/99

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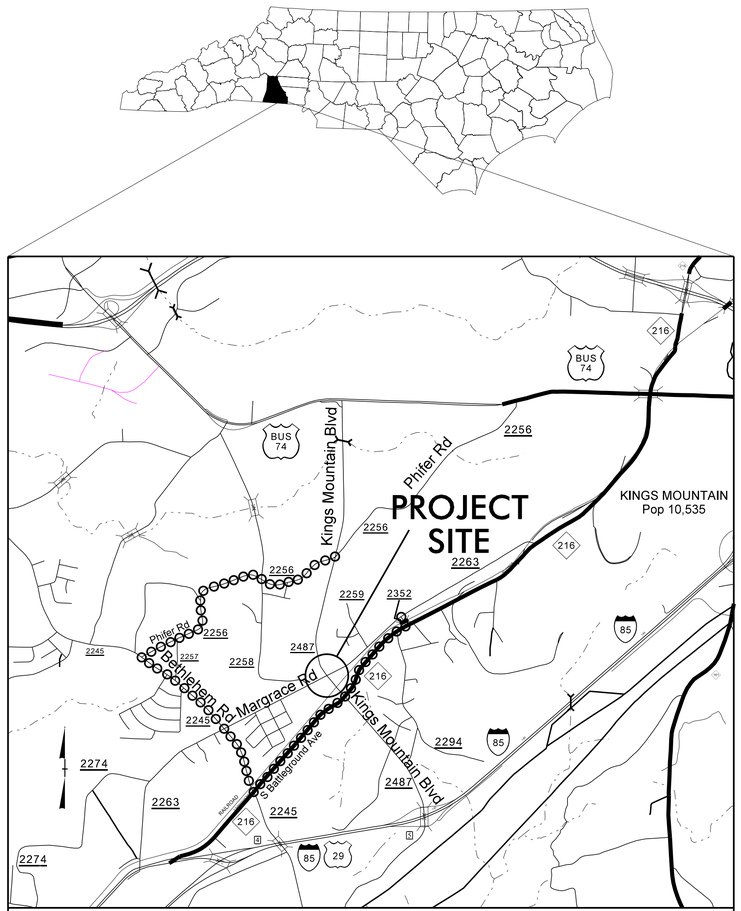
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

CLEVELAND COUNTY



VICINITY MAP
(NOT TO SCALE)

oooooooooo = DETOUR

INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
TMP-1B	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES, AND LOCAL NOTES)
TMP-2	OFFSITE DETOUR
TMP-3	SIGN DESIGN

SHEET NO.
TMP-1

W-5712B

TIP PROJECT:

WORK ZONE SAFETY & MOBILITY
"from the MOUNTAINS to the COAST"

PLANS PREPARED BY:

NCDOT CONTACTS:

PROJECT ENGINEER

PROJECT DESIGN ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

NORTH CAROLINA PROFESSIONAL SEAL 043888 ENGINEER BRYAN K.D. SOWELL

DocuSigned by:
Bryan Sowell
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10/12/2018

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PROJ. REFERENCE NO.	SHEET NO.
W-5712B	TMP-1A

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - 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
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUM
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1170.01	POSITIVE PROTECTION
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM
- SKINNY DRUM
- TUBULAR MARKER
- FLAGGER

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

- CRYSTAL/CRYSTAL
- CRYSTAL/RED
- YELLOW/YELLOW

PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

NORTH CAROLINA PROFESSIONAL SEAL 043888 ENGINEER BRYAN K.D. SOWELL

DocuSigned by: Bryan Sowell

10/12/2018

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

ROADWAY STANDARD DRAWINGS & LEGEND

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PROJ. REFERENCE NO.	SHEET NO.
W-5712B	TMP-1B

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
KINGS MOUNTAIN BLVD.	FROM 7:00 AM TO 8:00 AM AND 3:00 PM TO 4:00 PM
MARGRACE RD.	FROM 7:00 AM TO 8:00 AM AND 3:00 PM TO 4:00 PM

B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

ROAD NAME

KINGS MOUNTAIN BLVD. & MARGRACE RD.

HOLIDAY

1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
2. FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31st TO 8:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 8:00 P.M. THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 8:00 P.M. MONDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 8:00 P.M. TUESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 8:00 P.M. THE DAY AFTER INDEPENDENCE DAY.

   IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 6:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 8:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
6. FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 8:00 P.M. TUESDAY.
7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 8:00 P.M. MONDAY.
8. FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 8:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

C) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL OR AS DIRECTED BY THE ENGINEER.

LANE AND SHOULDER CLOSURE REQUIREMENTS

F) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.

G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.

H) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

I) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

J) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

K) DO NOT INSTALL MORE THAN ONE LANE CLOSURE IN ANY ONE DIRECTION ON COX RD..

L) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

PAVEMENT EDGE DROP OFF REQUIREMENTS

M) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP–OFF AS FOLLOWS:

BACKFILL DROP–OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP–OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.

N) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8–11) 100 FT. IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

O) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

P) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

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

PROVIDE SIGNING REQUIRED FOR THE OFF–SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.

R) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF–SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.

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

TRAFFIC CONTROL DEVICES

T) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON–CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.

U) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11–2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

PAVEMENT MARKINGS AND MARKERS

V) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.

W) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

X) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

MISCELLANEOUS

Y) LAW ENFORCEMENT SHALL BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.

Z) ALL CURB RAMP LOCATIONS SHALL BE DERIVED FROM STATIONING SHOWN ON PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER IN COORDINATION WITH THE SIGNING AND DELINEATION UNIT.

LOCAL NOTES

MAINTAIN DRIVEWAY ACCESS TO ALL PARCELS DURING CONSTRUCTION.

MANAGEMENT STRATEGIES

CONSTRUCTION OF ROUNDABOUT AT KINGS MOUNTAIN BLVD. AND MARGRACE RD. MAY BE CONSTRUCTED WITH A ROAD CLOSURE ADHERING TO THE DATES AND TIMES SET FORTH IN ICT 2 OF THE CONTRACT. ALL WORK TO BE COMPLETED OUTSIDE THE DATES AND TIMES REFERENCED IN ICT 2 MUST BE COMPLETED UNDER LANE CLOSURES ADHERING TO THE TIME RESTRICTIONS SET FORTH IN ICT 1.

NORTH CAROLINA PROFESSIONAL SEAL 043888 ENGINEER BRYAN K.D. SOWELL

DocuSigned by: Bryan Sowell 7BEABDC0DBEA4D1...

10/12/2018

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

TRANSPORTATION OPERATIONS PLAN

12-OCT-2018 15:01
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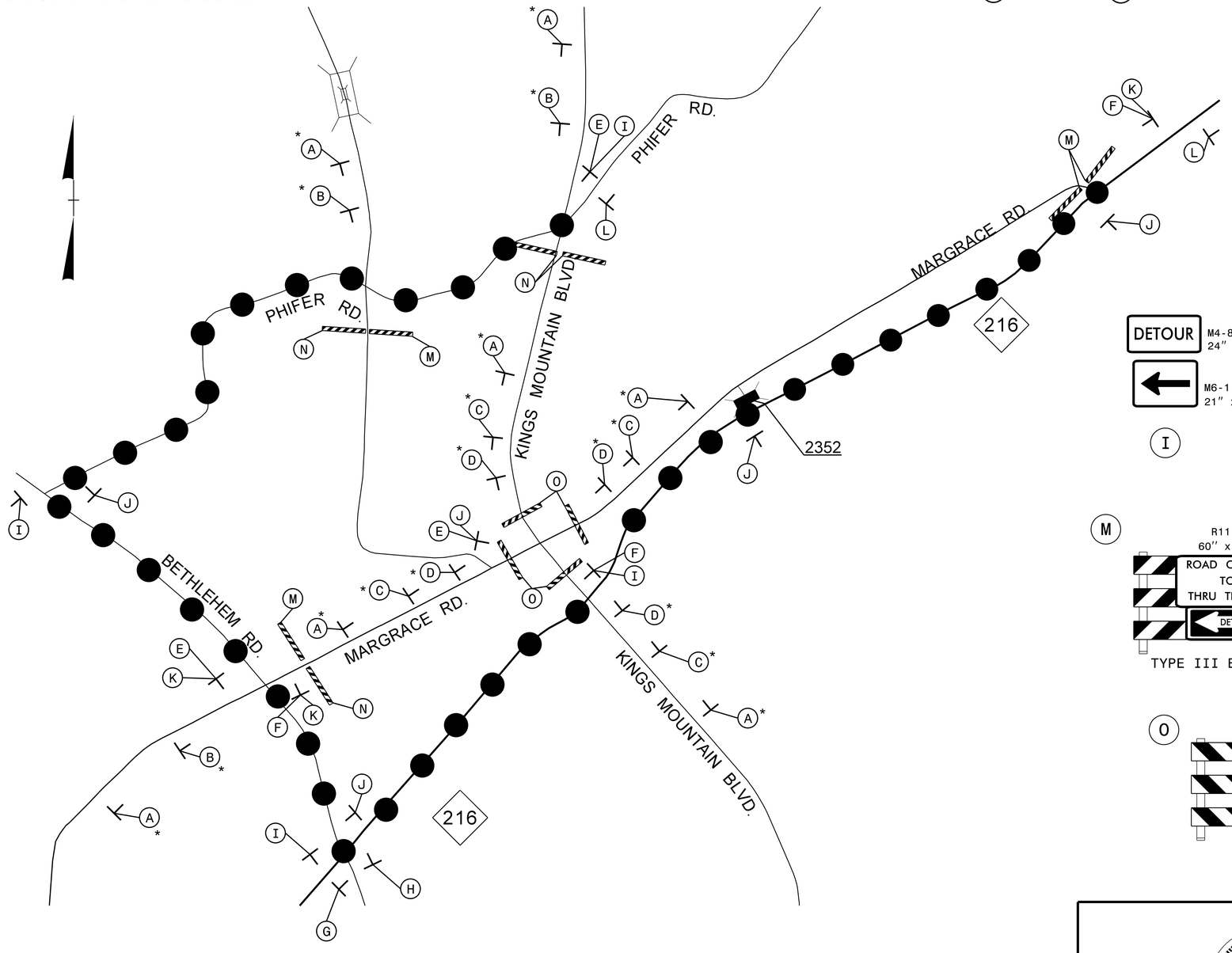
$$$$USERNAME$$$$

PROJ. REFERENCE NO.	SHEET NO.
W-5712B	TMP-2

DETOUR : CLOSURE OF KINGS MOUNTAIN BLVD. AND MARGRACE RD. INTERESECTION.

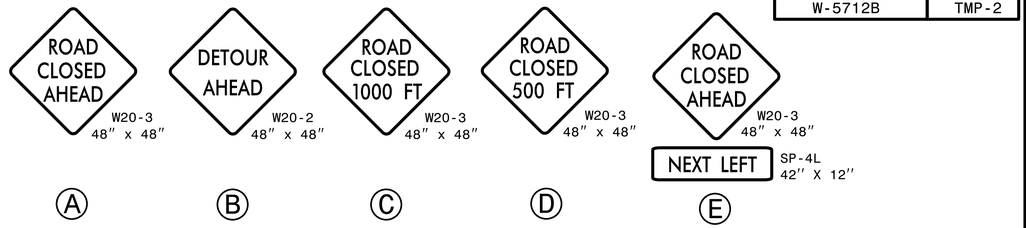
NOTE : SEE STD. DRAWING 1101.03
SHEET 1 OF 9 FOR SIGN SPACING.

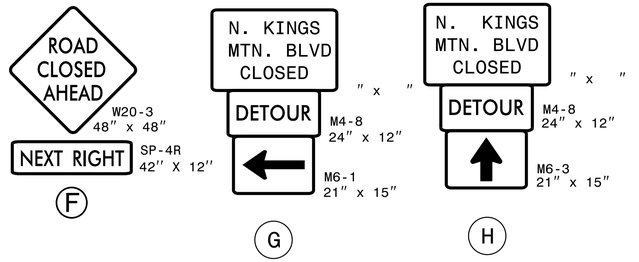
NOTE : DRAWING NOT TO SCALE

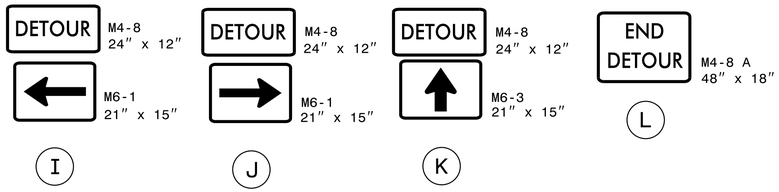


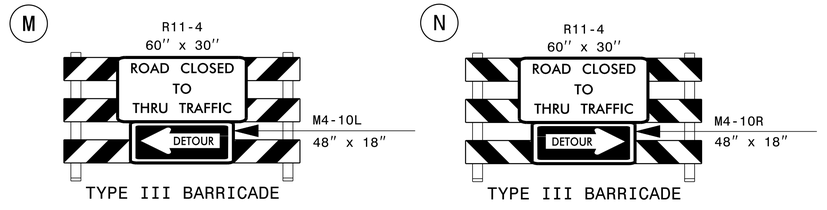
* SIGNS TO BE PLACED ON BOTH SIDES OF THE ROAD

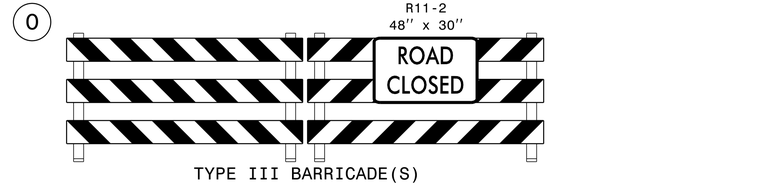
DETOUR ROUTE

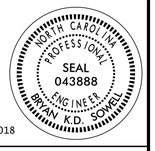












DocuSigned by:
Bryan Sowell
10/12/2018

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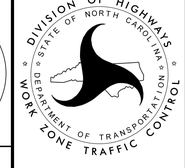

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PROJECT REFERENCE NO.	SHEET NO.
W-5712B	PMP-1

RW SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 043888 ENGINEER BRYAN K.D. SOWELL

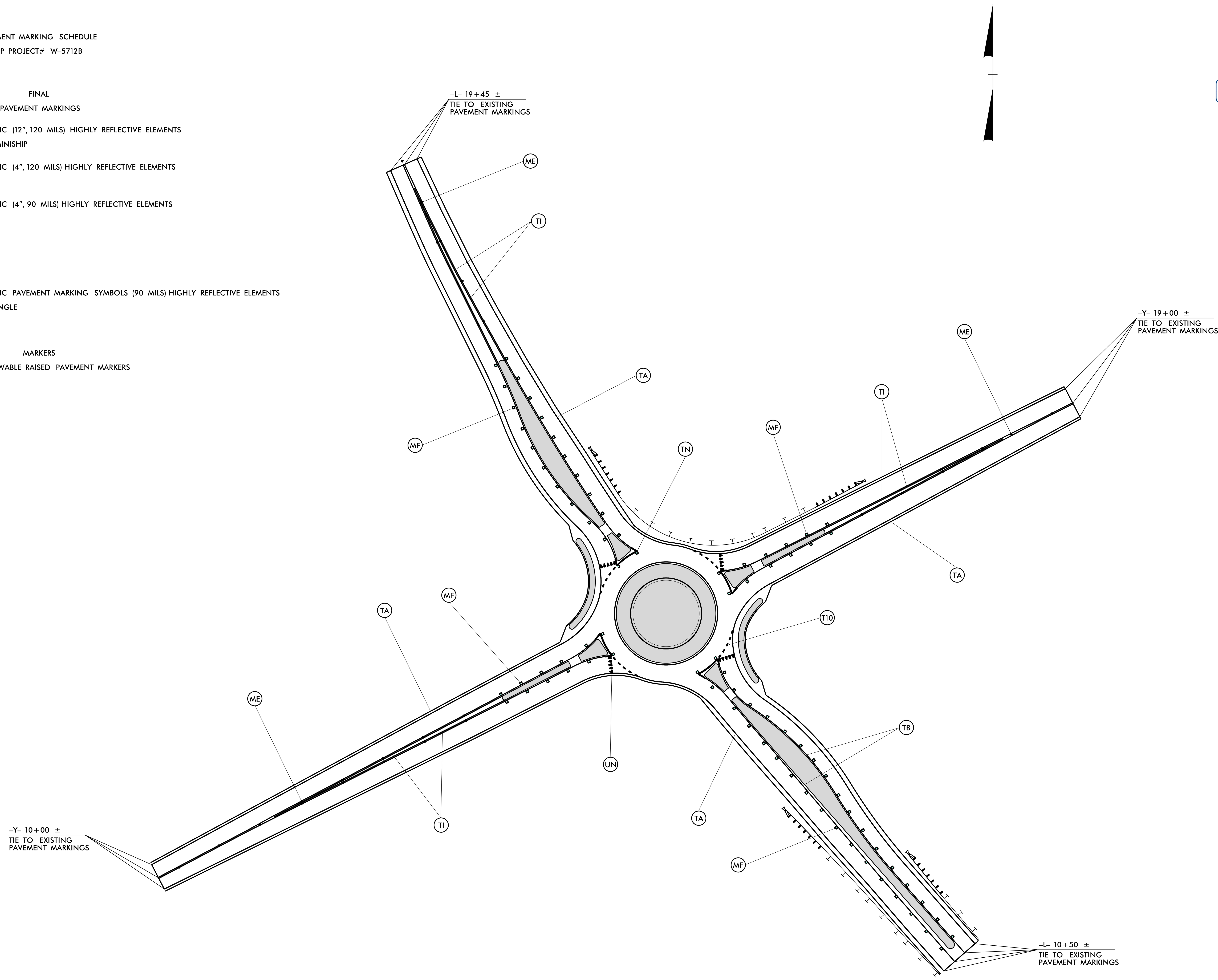
DocuSigned by: Bryan Sowell 10/12/2018

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PAVEMENT MARKING SCHEDULE

TIP PROJECT# W-5712B

SYMBOL	DESCRIPTION
	FINAL
	PAVEMENT MARKINGS
	THERMOPLASTIC (12", 120 MILS) HIGHLY REFLECTIVE ELEMENTS
T10	3 FT. - 3 FT./SP WHITE MINISHIP
	THERMOPLASTIC (4", 120 MILS) HIGHLY REFLECTIVE ELEMENTS
TI	YELLOW DOUBLE CENTER
	THERMOPLASTIC (4", 90 MILS) HIGHLY REFLECTIVE ELEMENTS
TA	WHITE EDGELINE
TB	YELLOW EDGELINE
TN	WHITE GORELINE
	THERMOPLASTIC PAVEMENT MARKING SYMBOLS (90 MILS) HIGHLY REFLECTIVE ELEMENTS
UN	24" YIELD LINE TRIANGLE
	MARKERS
	SNOWPLOWABLE RAISED PAVEMENT MARKERS
ME	YELLOW & YELLOW
MF	CRYSTAL & RED



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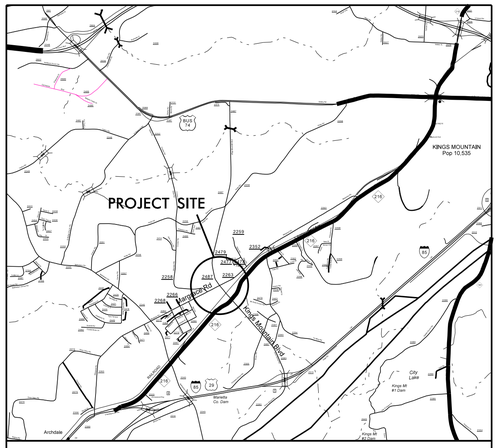
TIP PROJECT: W-5712B



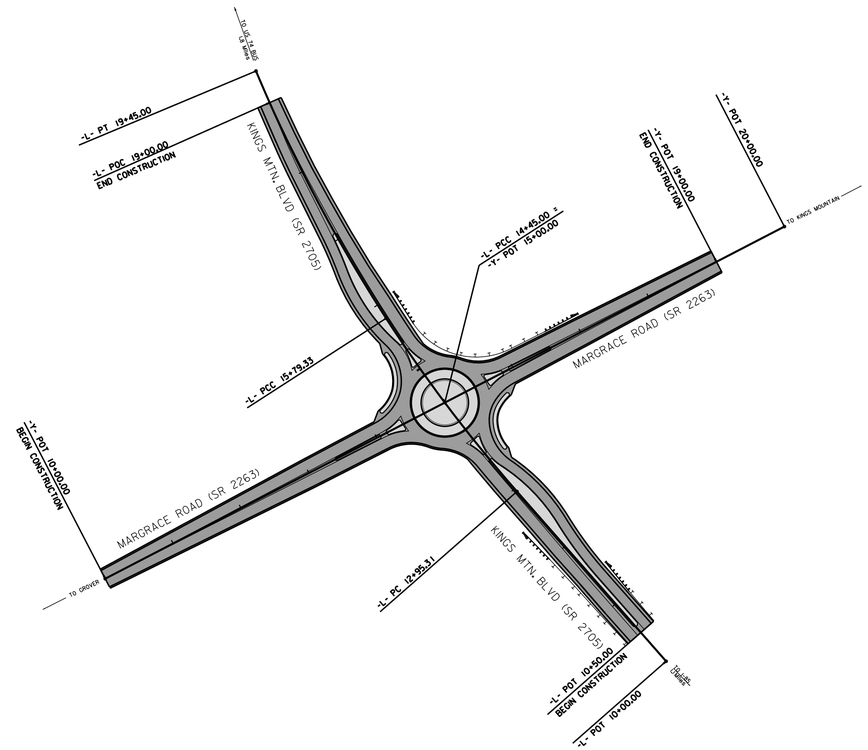
VICINITY MAP
(NOT TO SCALE)

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5712B	EC-1	2

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
44858.1.2	HSIP-2263(002)	PE
44858.1.2		R/W
44858.3.2		CONST



GRAPHIC SCALE

50 0 100

PLANS

ROADSIDE ENVIRONMENTAL UNIT
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY.

Prepared In the Office of:

DIVISION 12 DDC

1710 E. Marion St.
Shelby, NC 28150

2018 STANDARD SPECIFICATIONS

Designed by:

J.S. CARPENTER *3877*

NAME *LEVEL III CERTIFICATION NO.*

Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"– Roadway Design Unit – N. C. Department of Transportation – Raleigh, N. C., dated January 2012 and the latest revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

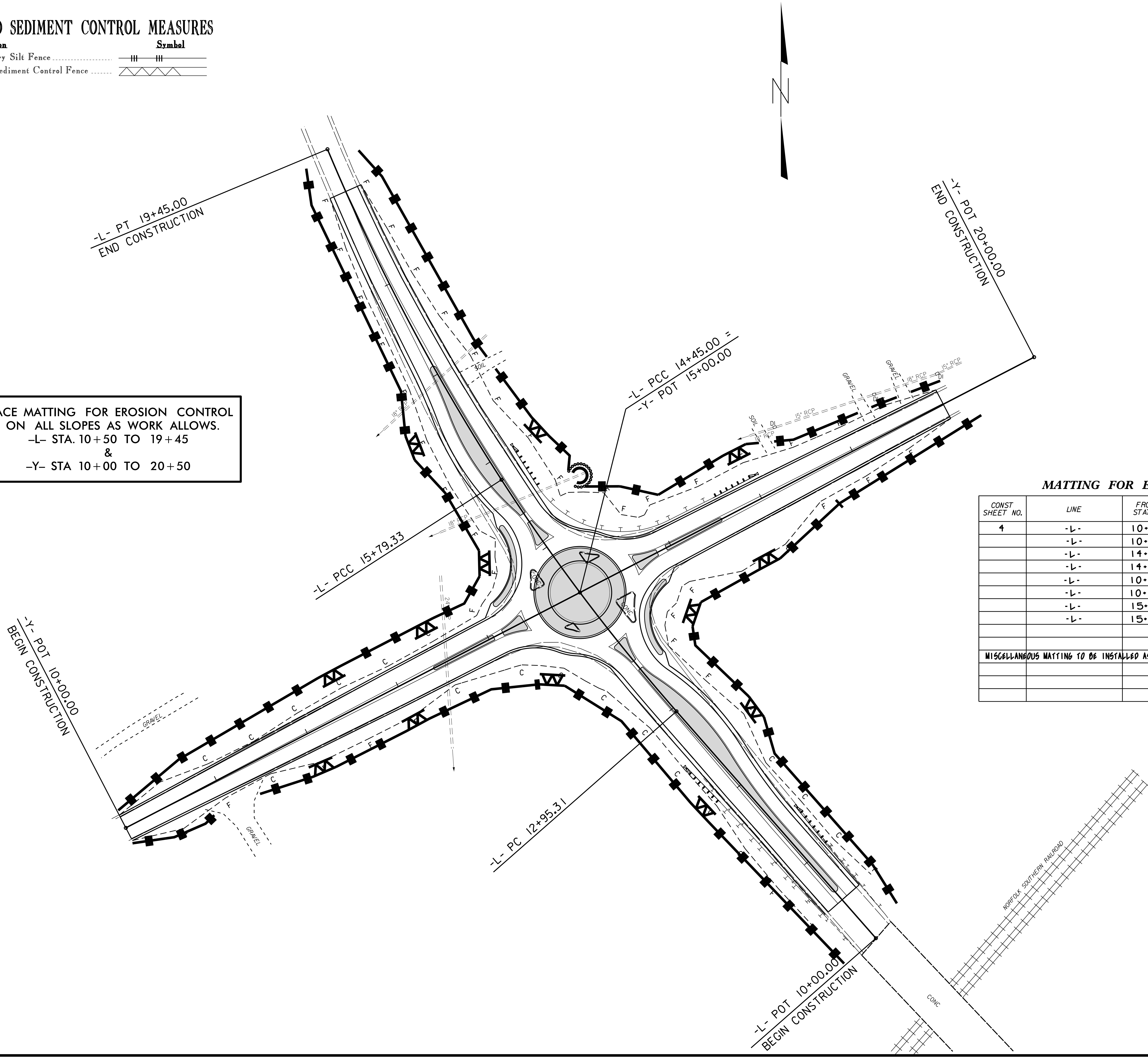
1604.01	Railroad Erosion Control Detail	1632.01	Rock Inlet Sediment Trap Type A
1605.01	Temporary Silt Fence	1632.02	Rock Inlet Sediment Trap Type B
1606.01	Special Sediment Control Fence	1632.03	Rock Inlet Sediment Trap Type C
1607.01	Gravel Construction Entrance	1633.01	Temporary Rock Silt Check Type A
1622.01	Temporary Berms and Slope Drains	1633.02	Temporary Rock Silt Check Type B
1630.01	Riser Basin	1634.01	Temporary Rock Sediment Dam Type A
1630.02	Silt Basin Type B	1634.02	Temporary Rock Sediment Dam Type B
1630.03	Temporary Silt Ditch	1635.01	Rock Pipe Inlet Sediment Trap Type A
1630.04	Stilling Basin	1635.02	Rock Pipe Inlet Sediment Trap Type B
1630.05	Temporary Diversion	1640.01	Coir Fiber Baffle
1630.06	Special Stilling Basin	1645.01	Temporary Stream Crossing
1631.01	Matting Installation		

PROJECT REFERENCE NO.	SHEET NO.
W-5712B	EC-2

EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	

PLACE MATTING FOR EROSION CONTROL
ON ALL SLOPES AS WORK ALLOWS.
–L– STA. 10+50 TO 19+45
&
–Y– STA 10+00 TO 20+50



MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L-	10+50	14+00	RT	400
	-L-	10+50	14+00	LT	400
	-L-	14+90	19+45	RT	600
	-L-	14+90	19+45	LT	400
	-L-	10+00	14+55	RT	400
	-L-	10+00	14+55	LT	400
	-L-	15+45	19+00	RT	650
	-L-	15+45	19+00	LT	650
				SUBTOTAL	3900
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					
				TOTAL	3900
				SAY	4000

JOSH CARPENTER
LEVEL III NAME

3877
LEVEL III CERTIFICATION NO.

8/17/99

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09/08/99

TIP PROJECT: W-5712B

CONTRACT: DL00191

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE PROJECT REFERENCE NO.	SHEET NO.
W-5712B	1

SINGING PLANS CLEVELAND COUNTY

LOCATION: ROUNDABOUT AT INTERSECTION OF KINGS MOUNTAIN BLVD. (SR 2705) AND MARGRACE ROAD (SR 2263)

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS THEY APPEAR IN "ROADWAY STANDARD DRAWINGS" – PROJECT SERVICES UNIT – N.C. DEPARTMENT OF TRANSPORTATION – RALEIGH, N.C., DATED JANUARY 2018 ARE ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE AR HEREBY CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
903.10	GROUND MOUNTED SIGN SUPPORTS
904.10	ORIENTATION OF GROUND MOUNTED SIGNS
904.50	MOUNTING OF TYPE D , E, AND F SIGNS ON U CHANNEL POSTS

GENERAL NOTES

ALL SIGNS FURNISHED BY CONTRACTOR.

WHEN NOT STATIONED OR DIMENSIONED ON PLANS, SEE ROADWAY STANDARD DRAWINGS FOR SPACING REQUIREMENTS, OR FIELD LOCATE BY THE ENGINEER.

THE BACKGROUND FOR TYPE E SIGNS SHALL BE GRADE C REFLECTIVE SHEETING UNLESS OTHERWISE NOTED.

PAY ITEM NOTES

1 SIGN ERECTION, TYPE D, E OR F.
2 DISPOSAL OF SIGN SYSTEM, U–CHANNEL.
3 SIGN ERECTION, RELOCATE TYPE, E (GROUND MOUNTED)
4 DISPOSAL OF SIGN TYPE, E

INDEX

SUMMARY OF QUANTITIES

ITEM NO.		ITEM DESCRIPTION	QUANTITY	UNIT
DESC. NO.	SECT. NO.			
4025000000–E	901	CONTRACTOR FURNISHED, TYPE E SIGN	296	SF
4072000000–E	903	SUPPORTS, 3–LB STEEL U–CHANNEL	315	LF
4102000000–E	904	SIGN ERECTION, TYPE	24	EA
4116100000–E	904	SIGN ERECTION, RELOCATE, TYPE E (GROUND MOUNTED)	4	EA
4192000000–E	907	DISPOSAL OF SUPPORT, U–CHANNEL	7	EA
4238000000–E	907	DISPOSAL OF SIGN D, E, OR F	5	EA

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

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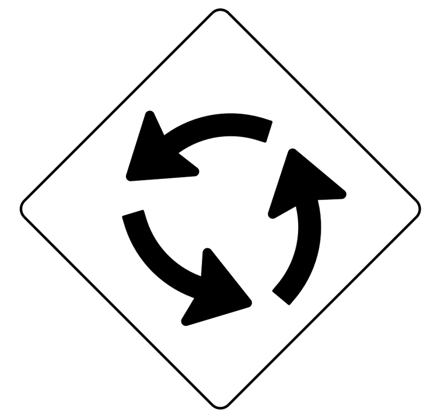
PROJECT REFERENCE NO.	SHEET NO.
W-5712B	SIGN-2

401 QUANTITY REQ'D 4

SIZE:48" X 48"
COPY COLOR: BLACK 7" C (NON-REFL)
BACKGROUND COLOR: ORANGE (REFL)
MARGIN:0.75"
BORDER:1.25"
RADIUS:3.00"

ONE "U" POST PER SIGN
UNLESS OTHERWISE NOTED

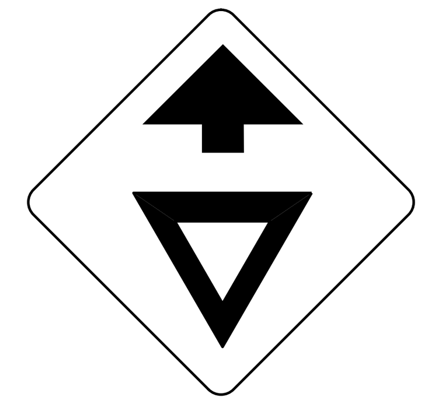
402 QUANTITY REQ'D 4



48" X 48"
W2-6

ONE "U" POST PER SIGN
UNLESS OTHERWISE NOTED

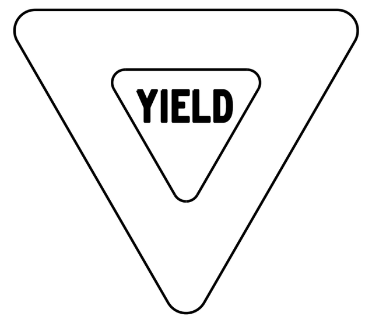
403 QUANTITY REQ'D 4



48" X 48"
W3-2A

ONE "U" POST PER SIGN
UNLESS OTHERWISE NOTED

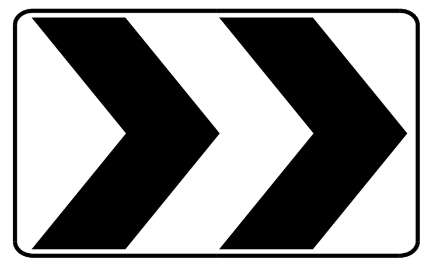
404 QUANTITY REQ'D 4



48" X 48" X 48"
R1-2

ONE "U" POST PER SIGN
UNLESS OTHERWISE NOTED

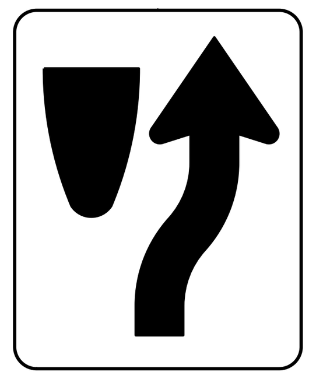
405 QUANTITY REQ'D 4



30" X 24"
R6-4

ONE "U" POST PER SIGN
UNLESS OTHERWISE NOTED

406 QUANTITY REQ'D 4



24" X 30"
R4-7

ONE "U" POST PER SIGN
UNLESS OTHERWISE NOTED

TYPE E SIGNS

8/17/99

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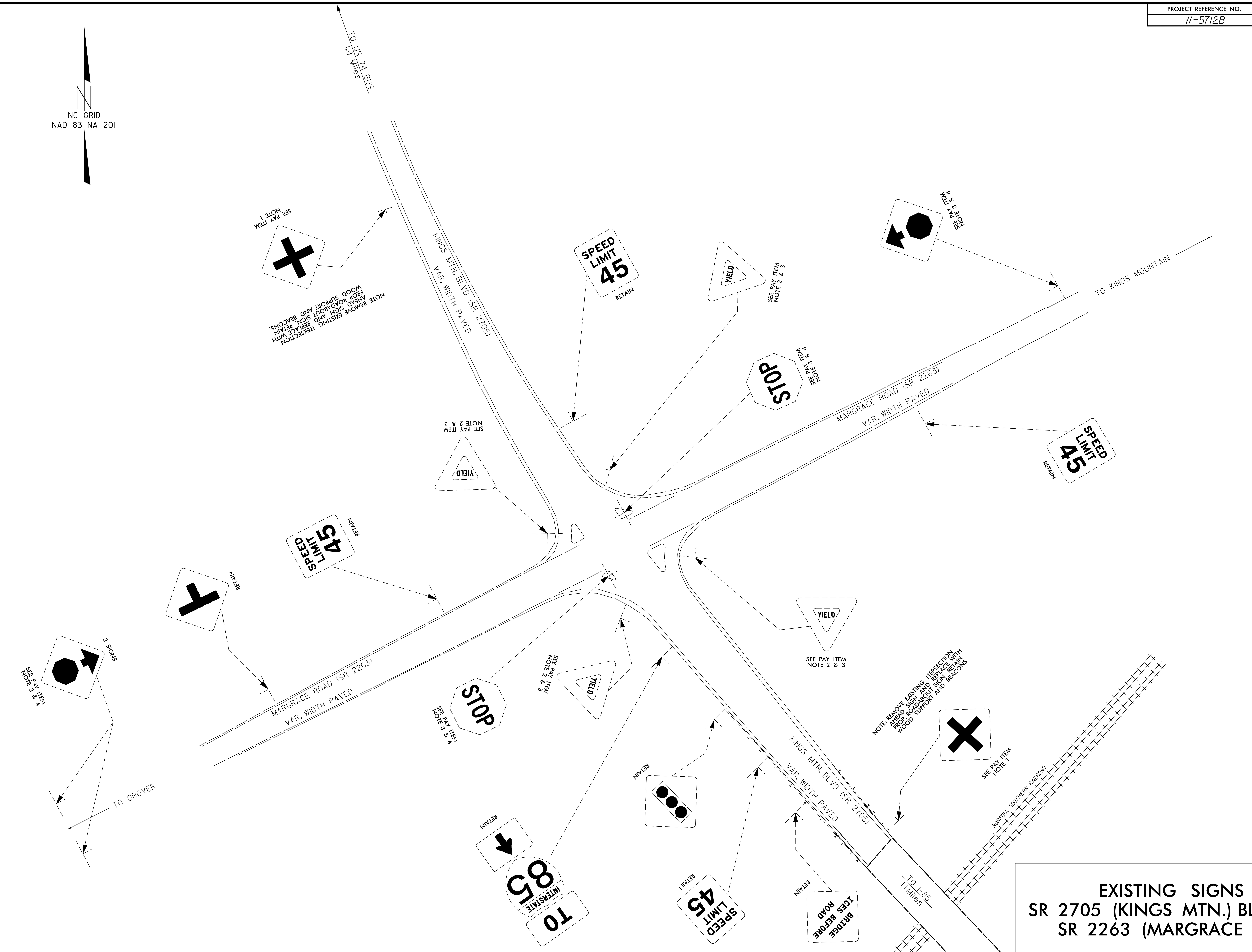
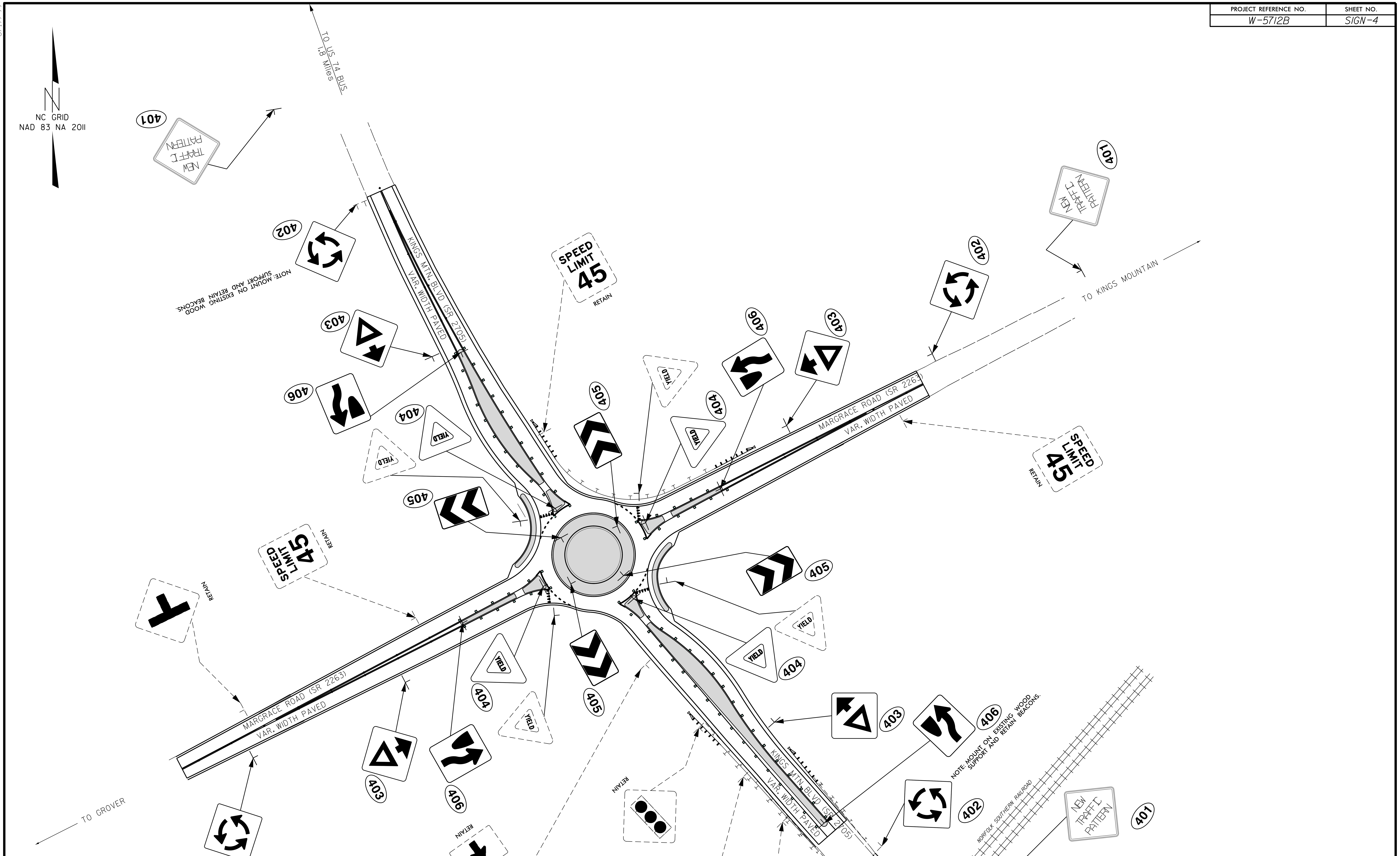
PROJECT REFERENCE NO.	SHEET NO.
W-5712B	SIGN-3



NC GRID
NAD 83 NA 2011
TO US 74 BUS
1.8 Miles
KINGS MTN. BLVD (SR 2705)
VAR. WIDTH PAVED
MARGRACE ROAD (SR 2263)
VAR. WIDTH PAVED
TO KINGS MOUNTAIN
TO GROVER
TO I-85
1.1 Miles
NORFOLK SOUTHERN RAILROAD
SEE PAY ITEM NOTE 1
NOTE: REMOVE EXISTING ITERSECTION AHEAD SIGN AND REPLACE WITH PROP ROADABOUT SIGN. RETAIN WOOD SUPPORT AND BEACONS.
SPEED LIMIT 45
RETAIN
YIELD
SEE PAY ITEM NOTE 2 & 3
STOP
SEE PAY ITEM NOTE 3 & 4
2 SIGNS
TO INTERSTATE 85
BRIDGE ICES BEFORE ROAD
NOTE: REMOVE EXISTING ITERSECTION AHEAD SIGN AND REPLACE WITH PROP ROADABOUT SIGN. RETAIN WOOD SUPPORT AND BEACONS.

EXISTING SIGNS
SR 2705 (KINGS MTN.) BLVD AT SR 2263 (MARGRACE RD.)

PROJECT REFERENCE NO.	SHEET NO.
W-5712B	SIGN-4



FINAL SIGNING
SR 2705 (KINGS MTN BLVD.) AT
SR 2263 (MARGRACE RD.)

19-SEP-2018 13:52
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$$$$USERNAME$$$$
8/17/99

6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5712B	X-1

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

1045 1040 1035 1030 1025 1020 1015 1010

0.08 0.02 0.02 0.08

1041.43

11+00.00

1045 1040 1035 1030 1025 1020 1015 1010

0.08 0.02 0.02 0.08

1041.12

10+50.00

1005

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

19-SEP-2018 14:02
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$$$$USERNAME$$$$

6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5712B	X-2

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1045 1040 1035 1030 1025 1020 1015 1010

0.08 0.02 0.02 0.08

1041.60

12+00.00

0.08 0.02 0.02 0.08

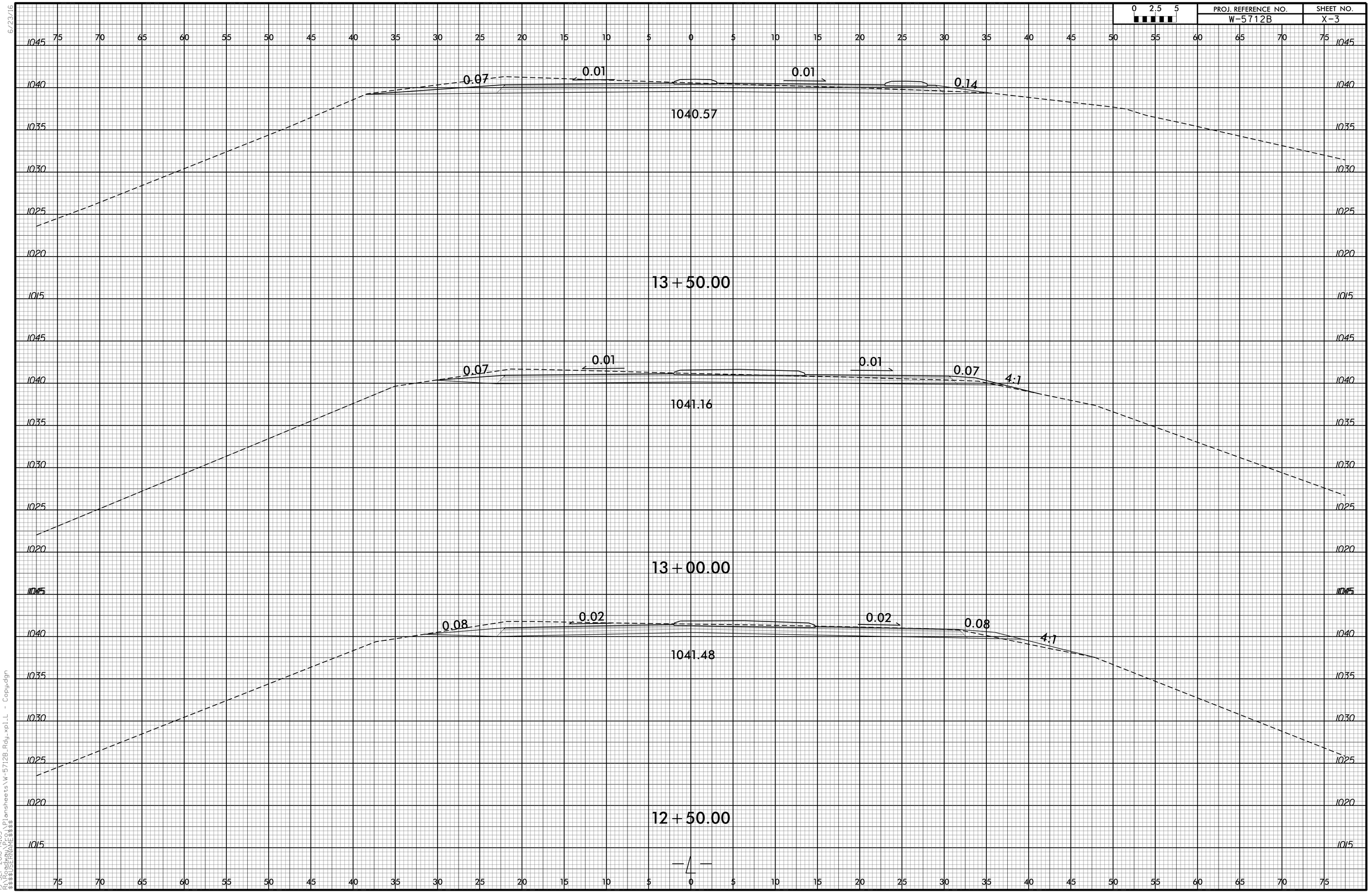
1041.59

11+50.00

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5712B	X-3



6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5712B	X-4

SW_ET SHEAR LINE

SE_ET SHEAR LINE

0.01 0.01

1040.15

13+77.93

SW_ET 10+00.00 SHEAR LINE

SHEAR LINE SE_ET

0.01 0.01

1040.35

13+65.60

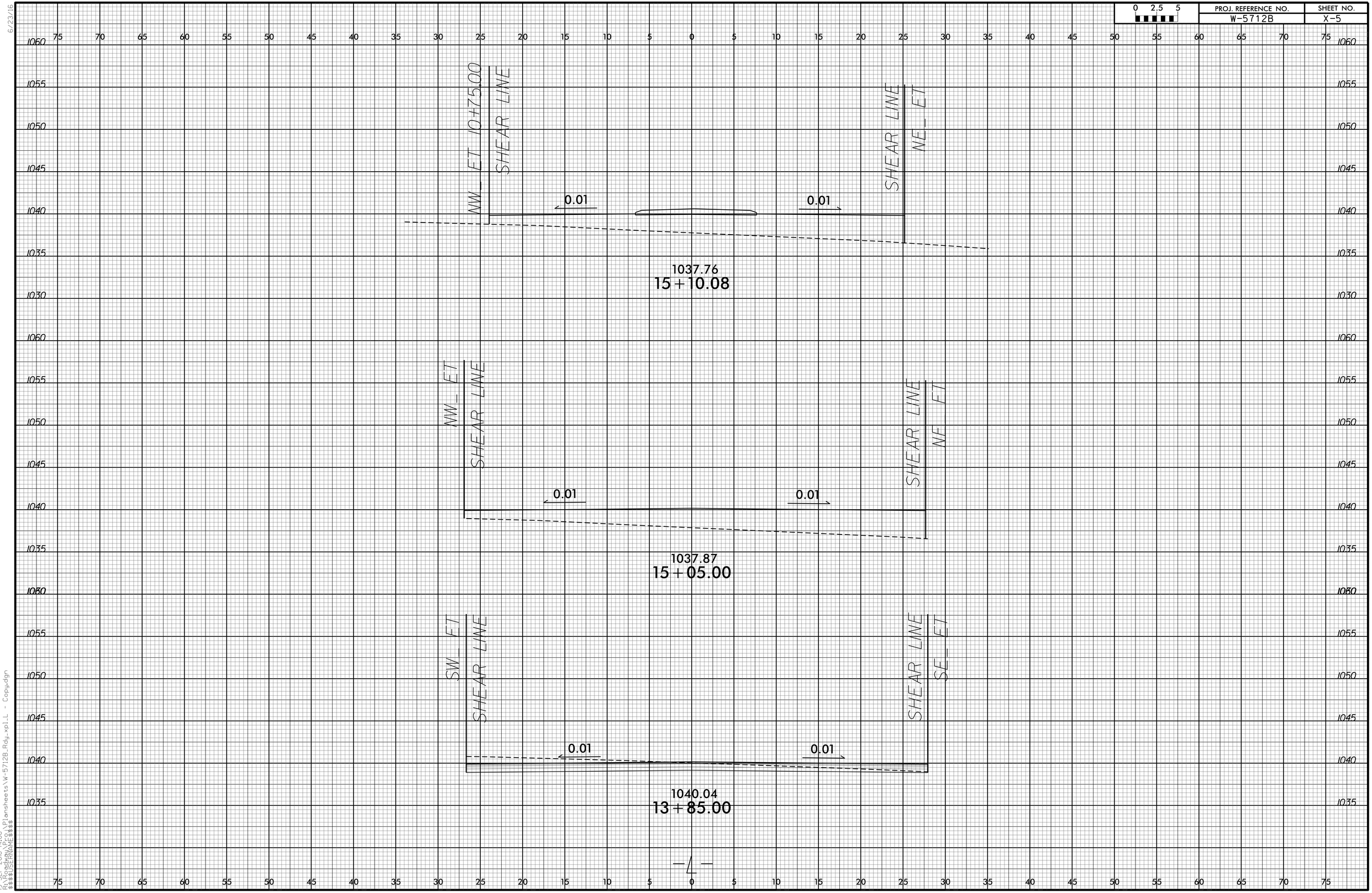
SHEAR LINE SE_ET 10+00.00

0.07 0.01 0.01

1040.52

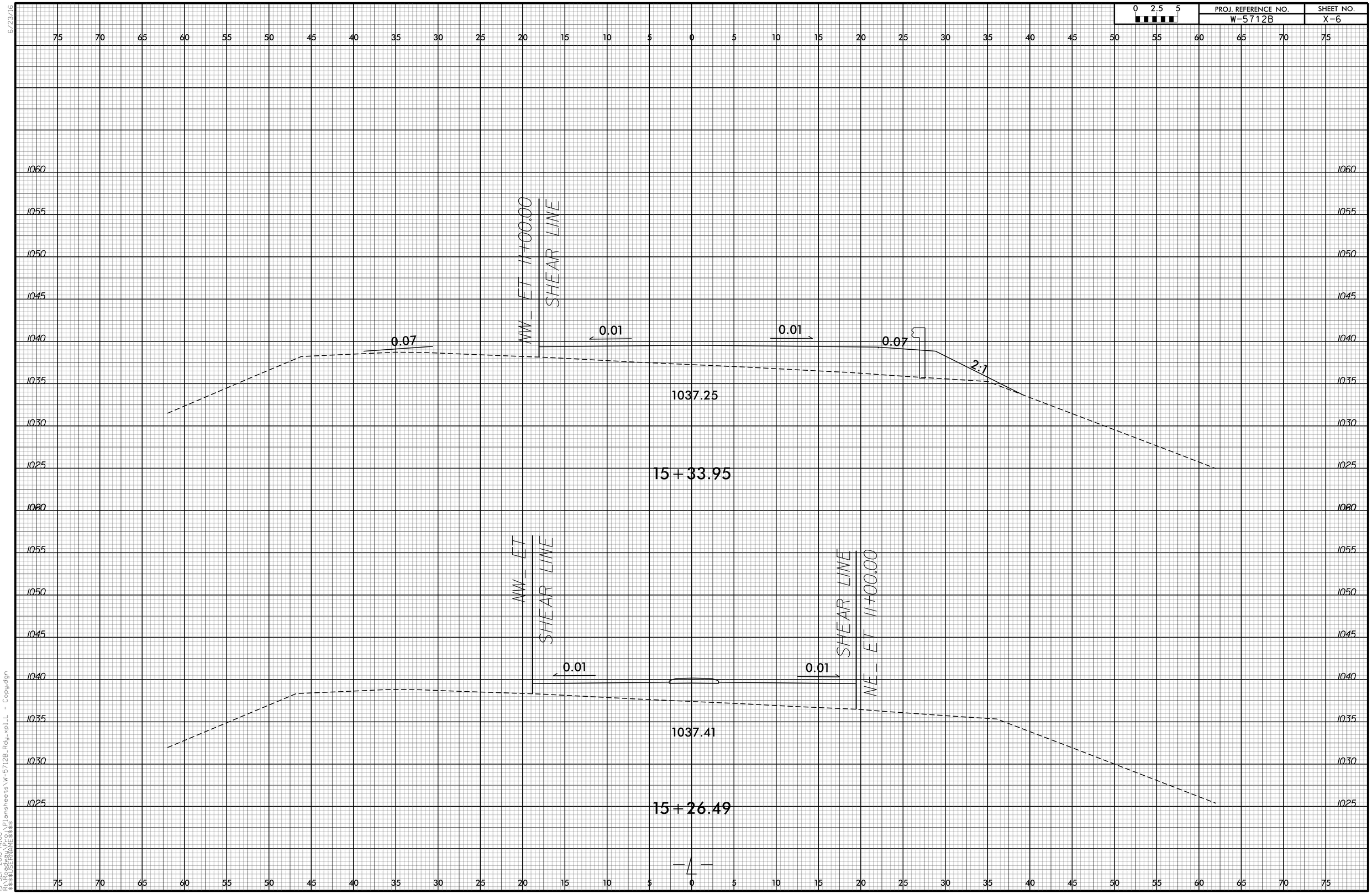
13+53.57

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5712B	X-5



6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5712B	X-6



6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5712B	X-7

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

1040
1035
1030
1025
1020

4:1 0.03 0.03 0.03 0.08 3:1

1034.16

16+50.00

4:1 0.04 0.02 0.02 0.08 2:1

1035.59

16+00.00

4:1 0.07 0.01 0.01 0.07 2:1

1036.87

15+50.00

6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5712B	X-8

EXISTING

EXISTING

1024.86

19+00.00

4:1 0.01

0.05

0.05

0.08 4:1

1026.83

18+50.00

5:1 0.01

0.05

0.05

0.08 5:1

1028.72

18+00.00

5:1 0.01

0.05

0.05

0.08

5:1

1030.66

17+50.00

5:1 0.02

0.04

0.04

0.08

5:1

1032.54

17+00.00

6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5712B	X-9

11+00.00

0.08 0.02 0.02 0.08

1033.66

11+00.00

0.08 0.02 0.02 0.08 7:1

1031.32

10+50.00

EXISTING EXISTING

1028.67

10+00.00

19-SEP-2018 14:18
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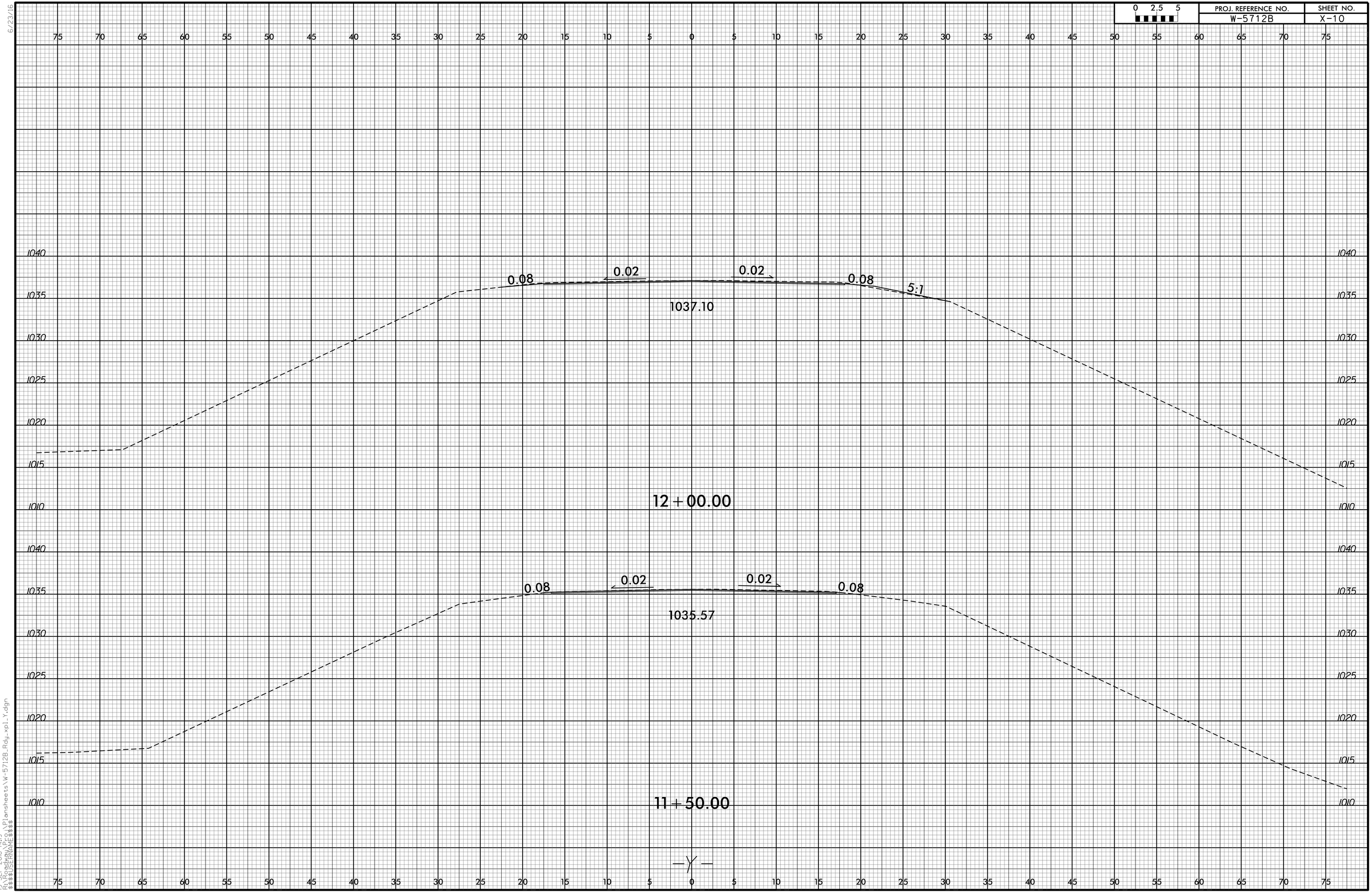
6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5712B	X-10



6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5712B	X-11

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

1045
1040
1035
1030
1025
1020
1015
1010

0.08 0.02 0.02 0.08 5:1

1039.20

13+00.00

0.08 0.02 0.02 0.08 5:1

1038.31

12+50.00

—Y—

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

6/23/16

19-SEP-2018 14:22
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6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5712B	X-13

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

1060 1055 1050 1045 1040 1035

NW_ ET 10+25.00 SHEAR LINE

SW_ ET SHEAR LINE

0.01 0.01

1040.04
14+34.78

NW_ ET SHEAR LINE

SHEAR LINE SW_ ET 11+00.00

0.01 0.01

1040.07
14+20.46

NW_ ET 10+00.00 SHEAR LINE

0.01 0.01 0.07

1040.10
14+10.72

—Y—

19-SEP-2018 14:21
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$$$$USERNAME$$$$

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

PROJ. REFERENCE NO.	SHEET NO.
W-5712B	X-14

6/23/16

19-SEP-2018 14:23
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PROJ. REFERENCE NO.	SHEET NO.
W-5712B	X-15

6/23/16

19-SEP-2018 14:23
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PROJ. REFERENCE NO.	SHEET NO.
W-5712B	X-16

6/23/16

19-SEP-2018 14:24
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6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5712B	X-17

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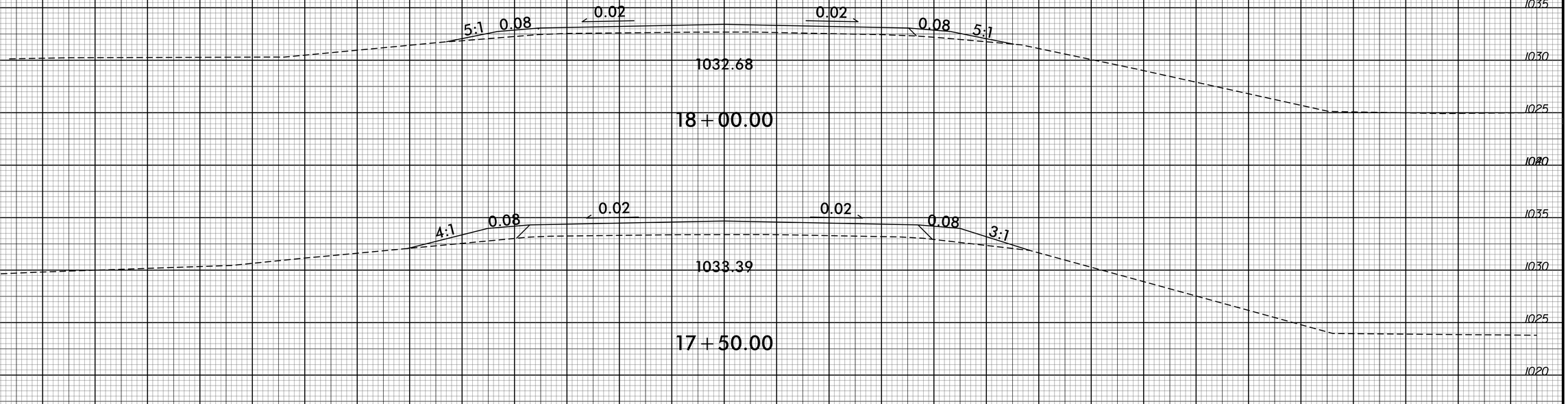
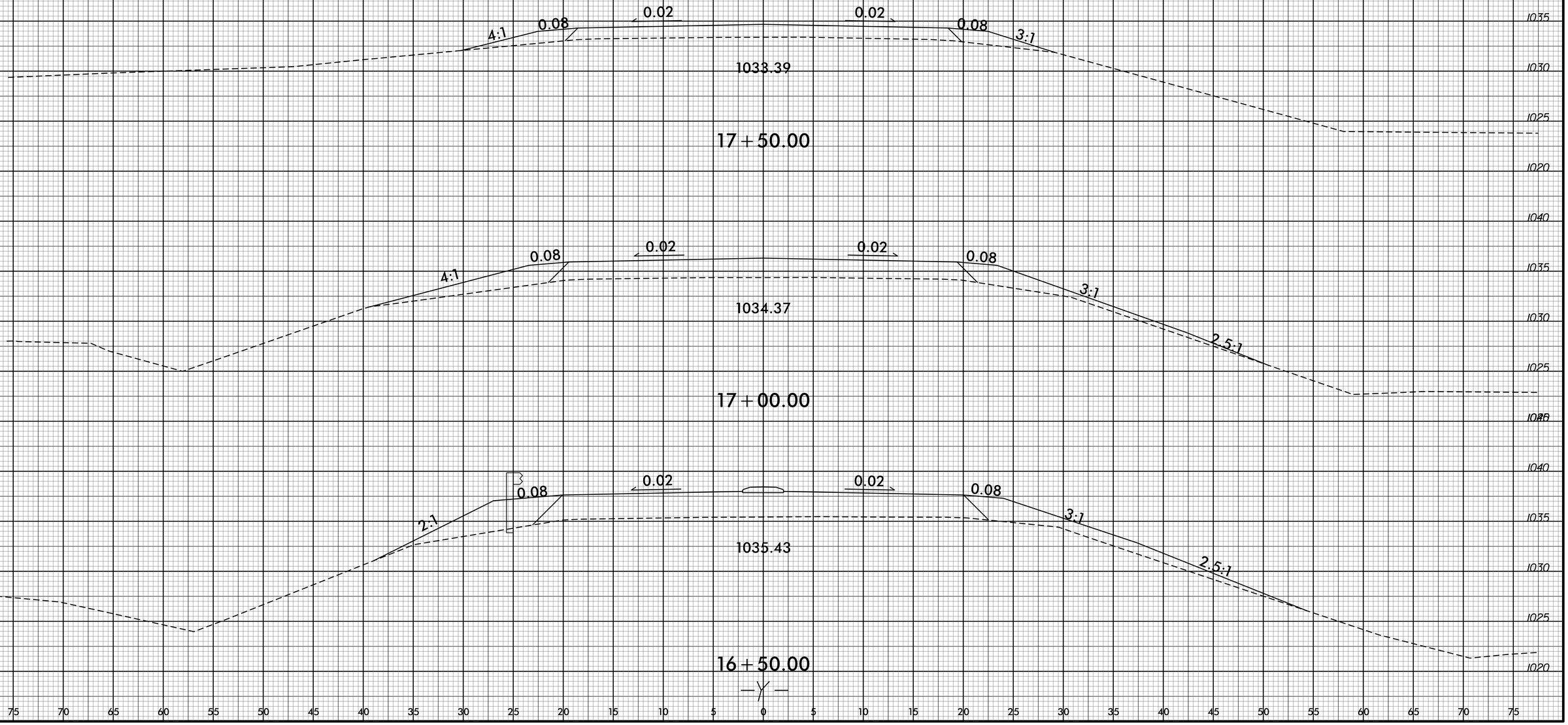
1040 1035 1030 1025 1020





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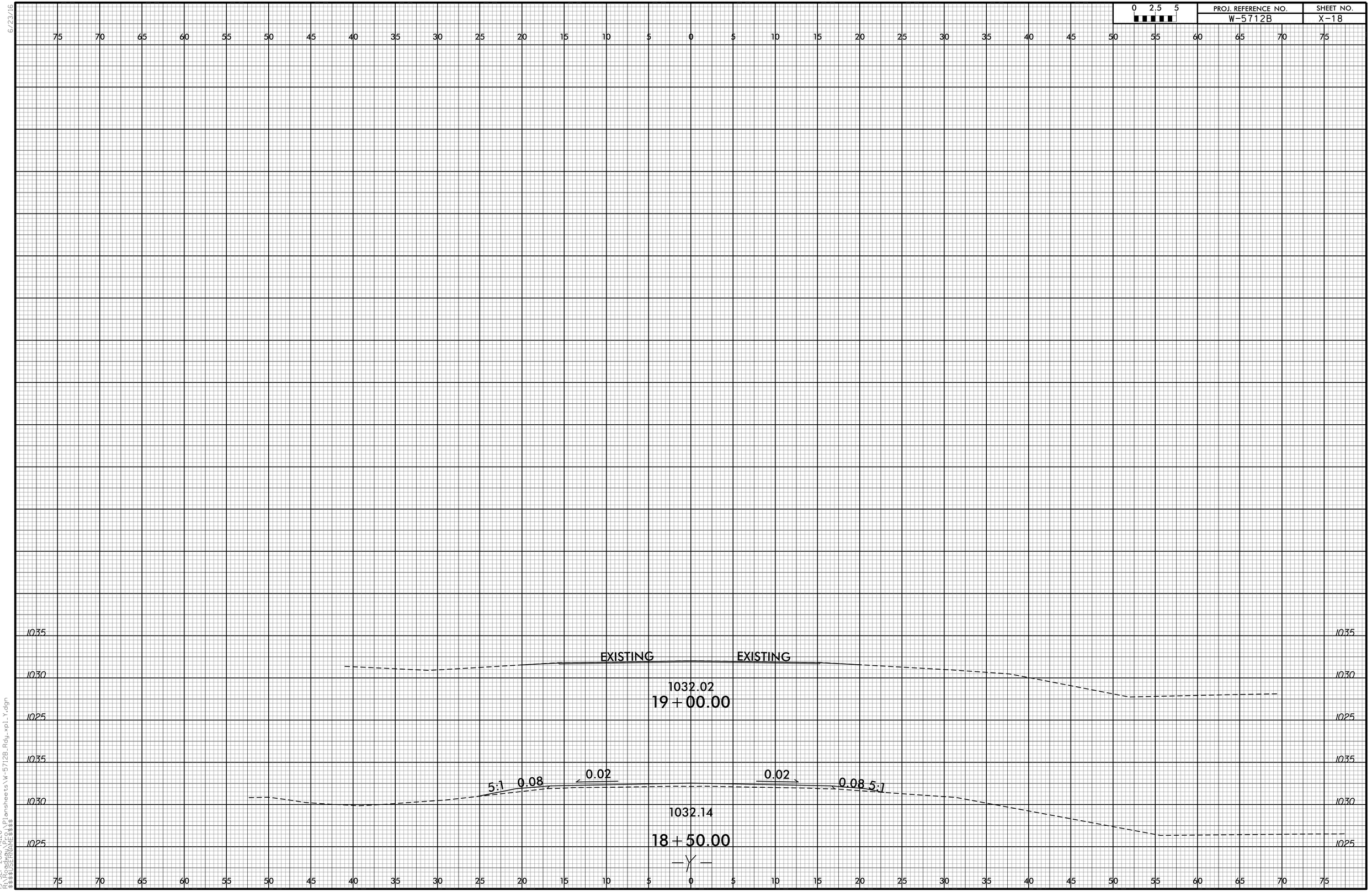
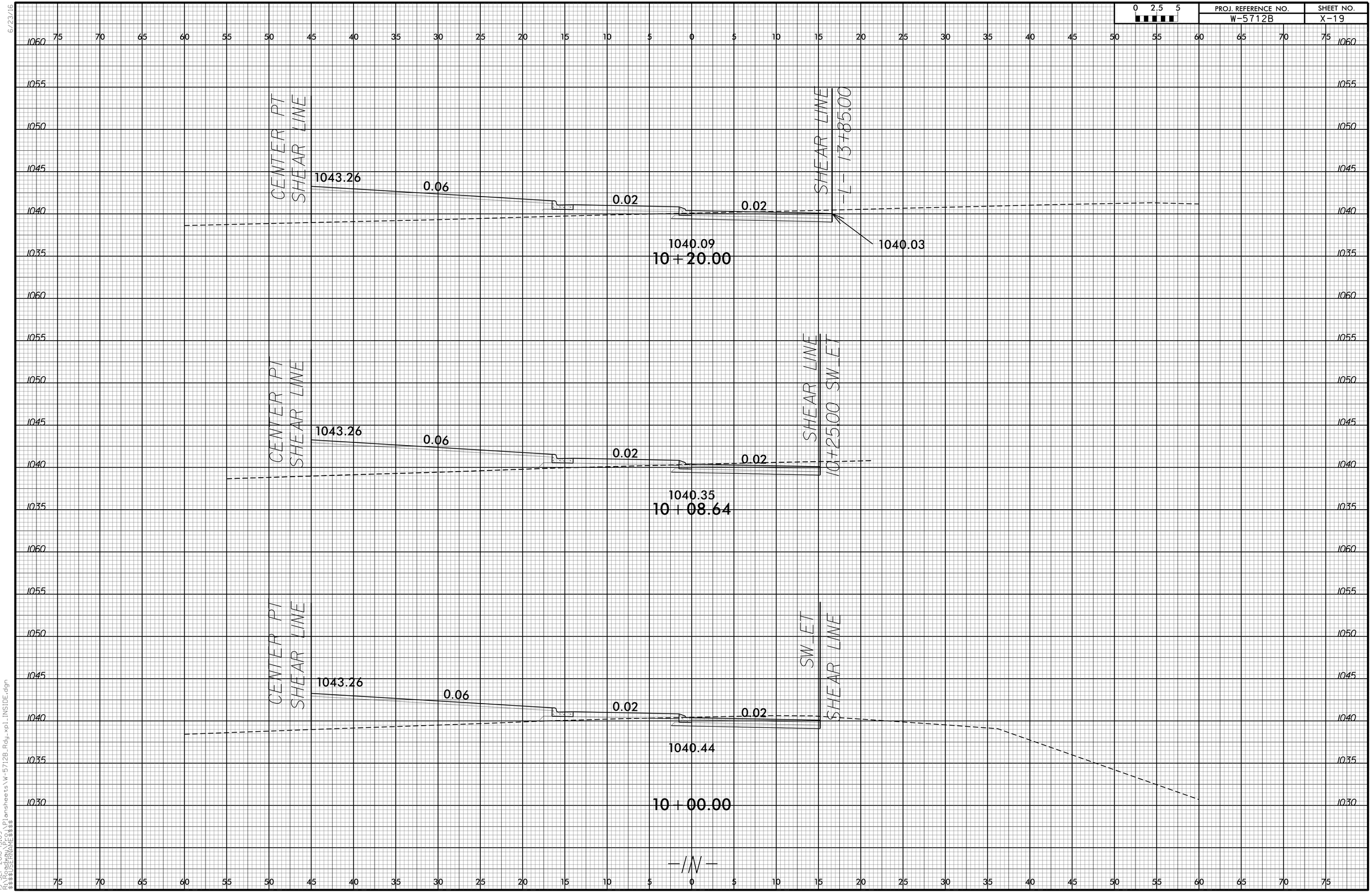
6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5712B	X-18



6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5712B	X-19




PROJ. REFERENCE NO.
W-5712B
SHEET NO.
X-20
0 2.5 5
CENTER PT
SHEAR LINE
1043.26
0.06
0.02
0.02
SHEAR LINE
-Y- 15+60.00
1040.00
1037.82
10+80.00
CENTER PT
SHEAR LINE
1043.26
0.06
0.02
0.02
SHEAR LINE
SW_ET 10+50.00
1038.86
10+60.93
CENTER PT
SHEAR LINE
1043.26
0.06
0.02
0.02
SHEAR LINE
-L- 13+85.00
1040.02
1039.37
10+40.00
-IN-
6/23/16
19-SEP-2018 15:12
R:\Roadway\Proj\Plansheets\W-5712B_Rdy_xpl_INSIDE.dgn
$$$$USERNAME$$$$

PROJ. REFERENCE NO.
W-5712B
SHEET NO.
X-21
0 2.5 5
CENTER PT
SHEAR LINE
1043.26
0.06
0.02
0.02
SHEAR LINE
INE_ET 10+50.00
1037.07
11+30.90
CENTER PT
SHEAR LINE
1043.26
0.06
0.02
0.02
0.01
SHEAR LINE
INE_ET 10+25.00
1037.29
11+13.10
CENTER PT
SHEAR LINE
1043.26
0.06
0.02
0.02
SHEAR LINE
-Y- 15+60.00
1040.06
1037.45
11+00.00
-IN-

PROJ. REFERENCE NO.	SHEET NO.
W-5712B	X-22

6/23/16

19-SEP-2018 15:13
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PROJ. REFERENCE NO.	SHEET NO.
W-5712B	X-23

PROJ. REFERENCE NO.	SHEET NO.
W-5712B	X-24

0 2.5 5

6/23/16

19-SEP-2018 15:15
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$$$$USERNAME$$$$

6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5712B	X-25

-IN- 11+13.10 SHEAR LINE

0.02 0.08 2:1

1036.40

10+25.00

-Y- 15+80.97 SHEAR LINE

0.01 0.07 2:1

1036.37

10+00.00

-NE_ET-

6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5712B	X-26

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

1055 1050 1045 1040 1035 1030 1025 1020

-IN- 11+48.70 SHEAR LINE

0.02 0.08

1036.54

2:1

10+75.00

-IN- 11+30.90 SHEAR LINE

0.02 0.08

1036.19

2:1

10+50.00

-NE_ET-

19-SEP-2018 15:27
P:\Projects\...\Plansheets\W-5712B_Rdy_xpl_NE-ET.dgn
$$$$USERNAME$$$$

6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5712B	X-27

-L- 15+26.49

SHEAR LINE

0.01

0.07

2:1

1036.49

11+00.00

-NE_ET-

6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5712B	X-28

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

1055 1050 1045 1040 1035 1030 1025 1080 1055 1050 1045 1040 1035 1030 1025 1020

SHEAR LINE -Y- 14+34.78

0.07 0.01

1039.55

10+25.00

SHEAR LINE -Y- 14+10.72

0.07 0.01

1039.77

10+00.00

-NW_ET-

19-SEP-2018 15:33
C:\Users\...\Plansheets\W-5712B_Rdy_xpl_NW-ET.dgn
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6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5712B	X-29

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

1055 1050 1045 1040 1035 1030 1025 1020

SHEAR LINE
-L- 15+10.08

0.07 0.01

1038.77

10+75.00

SHEAR LINE
-N- 12+01.32

0.08 0.02

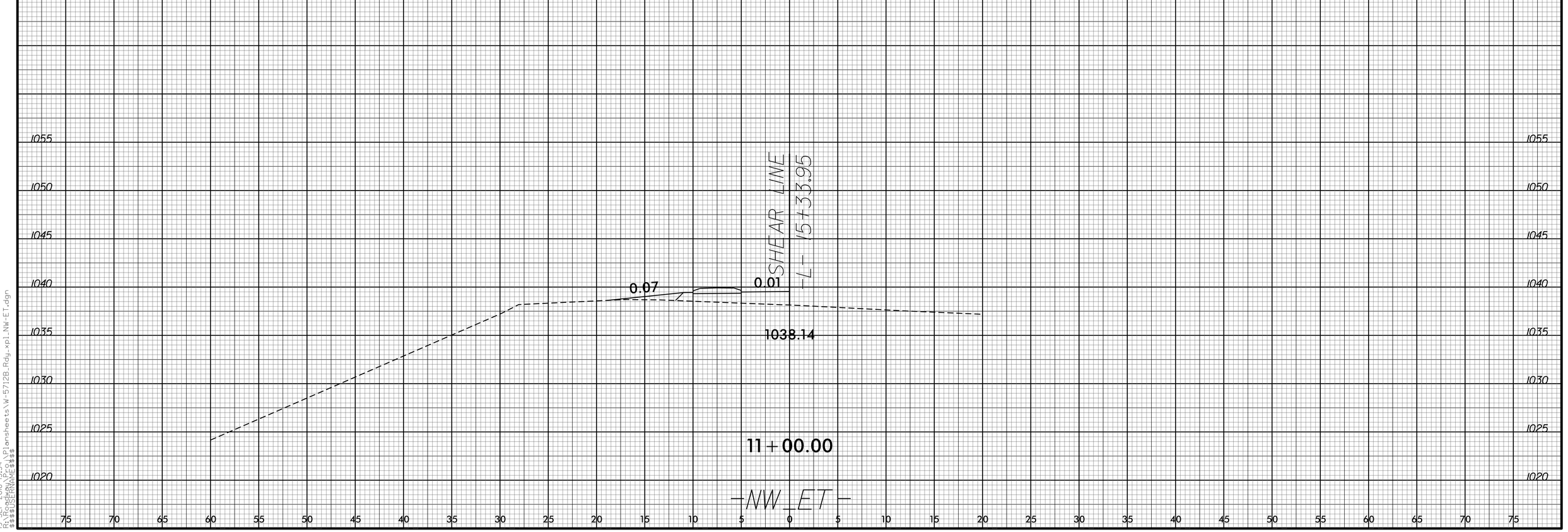
1039.37

10+50.00

-NW_ET-

6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5712B	X-30



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W-5712B	X-31

6/23/16

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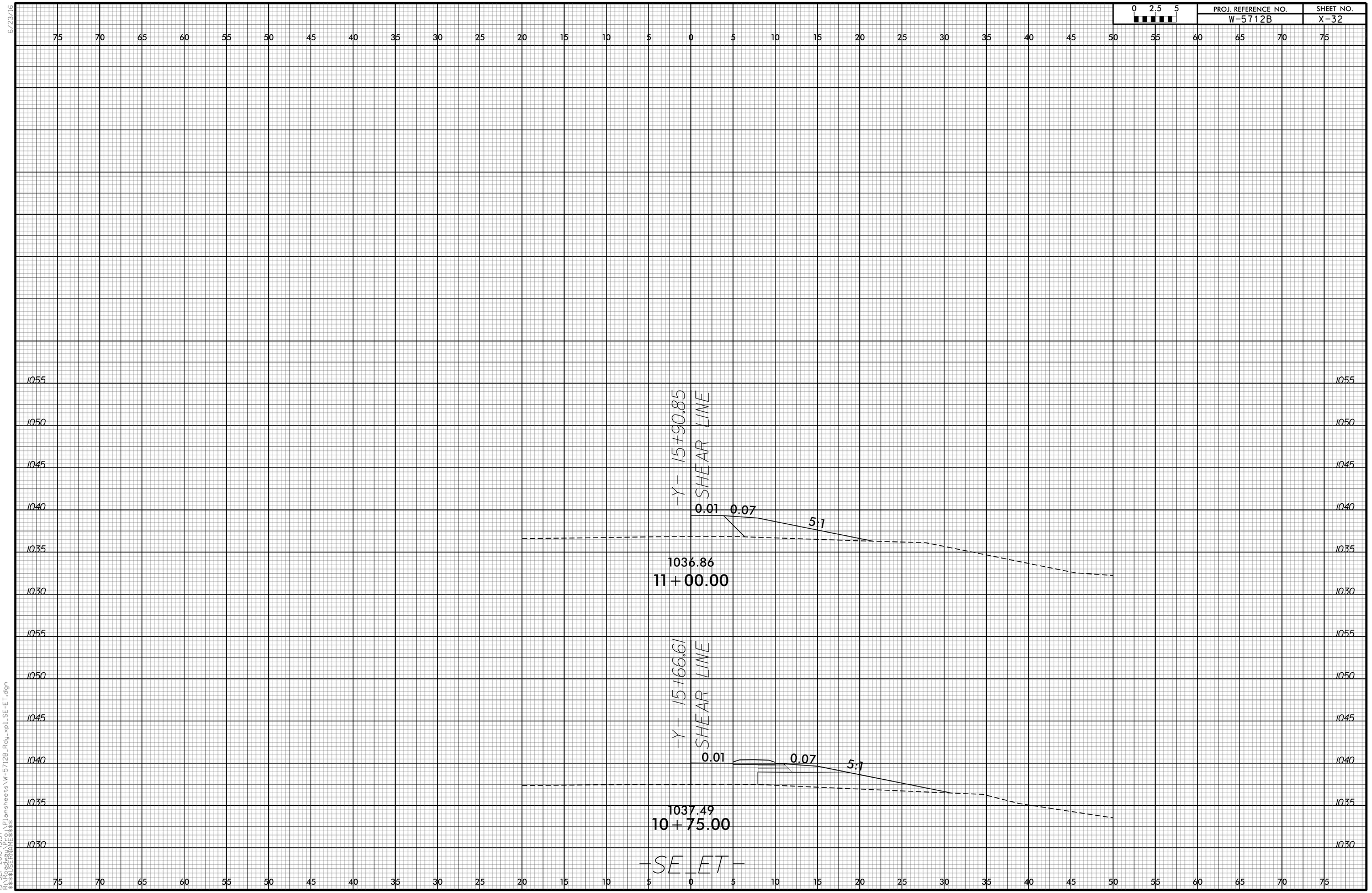
6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5712B	X-32



6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5712B	X-33

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1060 1055 1050 1045 1040 1035 1030 1025 1080 1055 1050 1045 1040 1035 1030 1025 1020

SHEAR LINE -IN- 10+08.64

0.08 0.02

1040.74

10+25.00

SHEAR LINE -L- 13+65.60

0.07 0.01

1041.00

10+00.00

-SW_ET-

6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5712B	X-34

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

1060 1055 1050 1045 1040 1035 1030 1025 1080

SHEAR LINE -IN- 12+55.38

0.08 0.02

1040.38

10+75.00

SHEAR LINE -IN- 12+73.38

0.08 0.02

1040.36

10+50.00

-SW_ET-

19-SEP-2018 15:40
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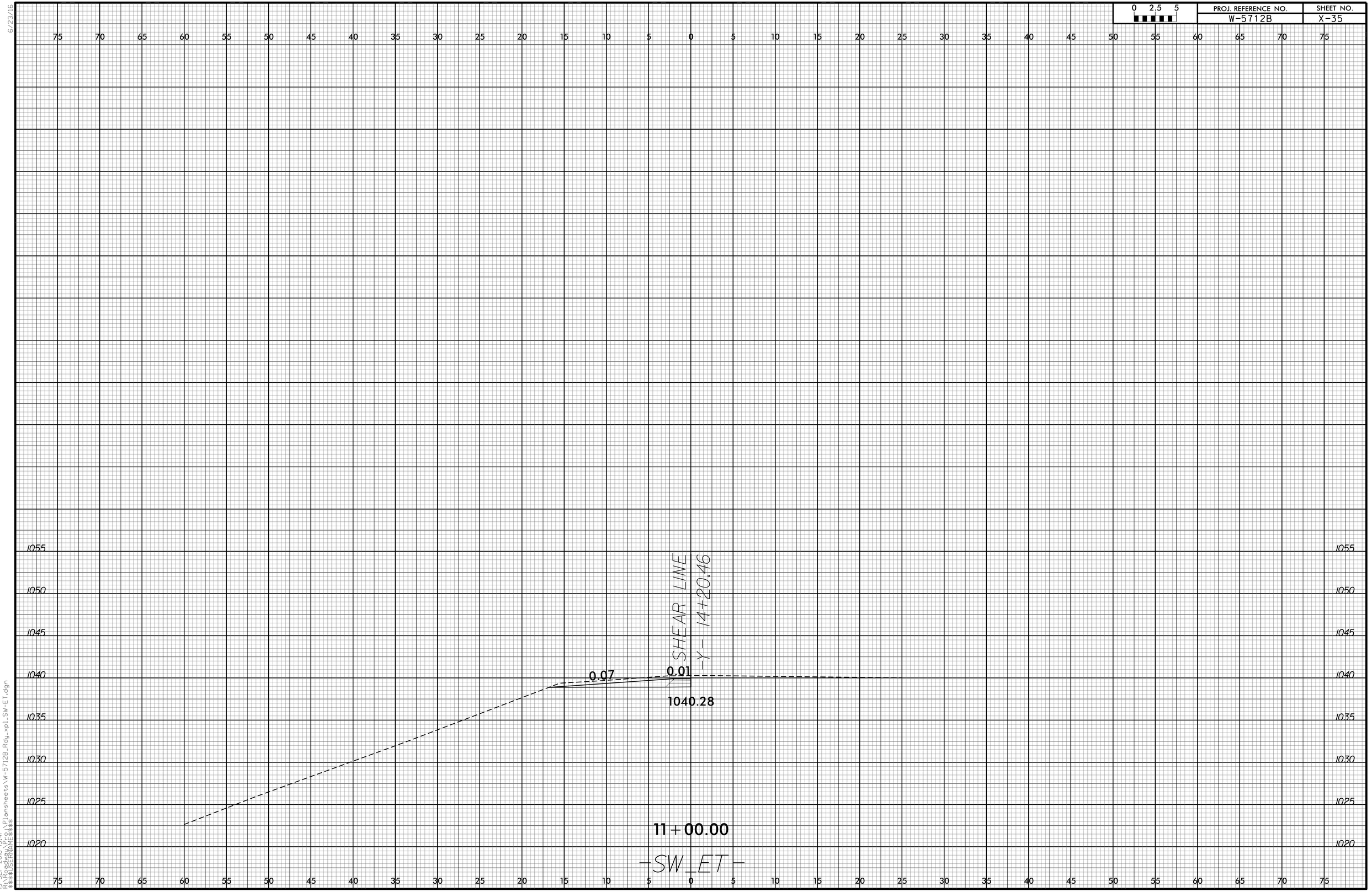
6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5712B	X-35



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PLOTTED BY: $$$$NAME$$$$
$$$$DATE$$$$