STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-3346	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
33004.1.1	BRZ-1734(3)	P.E.
33004.2.1	BRZ-1734(3)	R/W & UTILITIES
33004.3.FD1	BRZ-1734(3)	CONST.

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

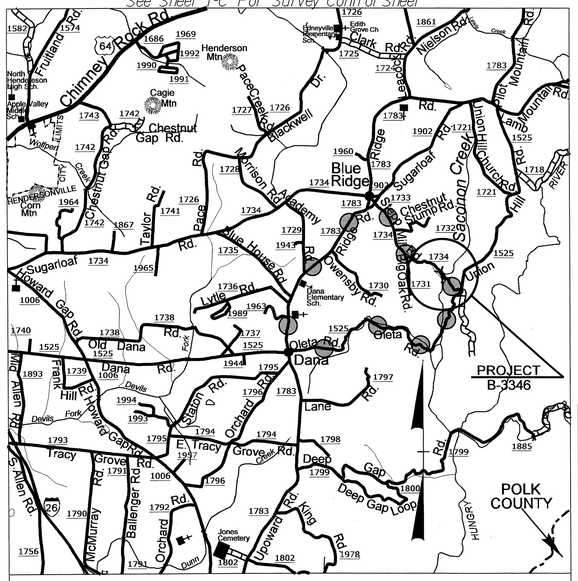
HENDERSON COUNTY

LOCATION: BRIDGE NO. 42 OVER SACONON CREEK ON SR 1734 (STEPP MILL ROAD)

TYPE OF WORK: GRADING, DRAINAGE, PAVING, STRUCTURE, RETAINING WALL, AND EXISTING STRUCTURE RETROFIT

NAD 83/95

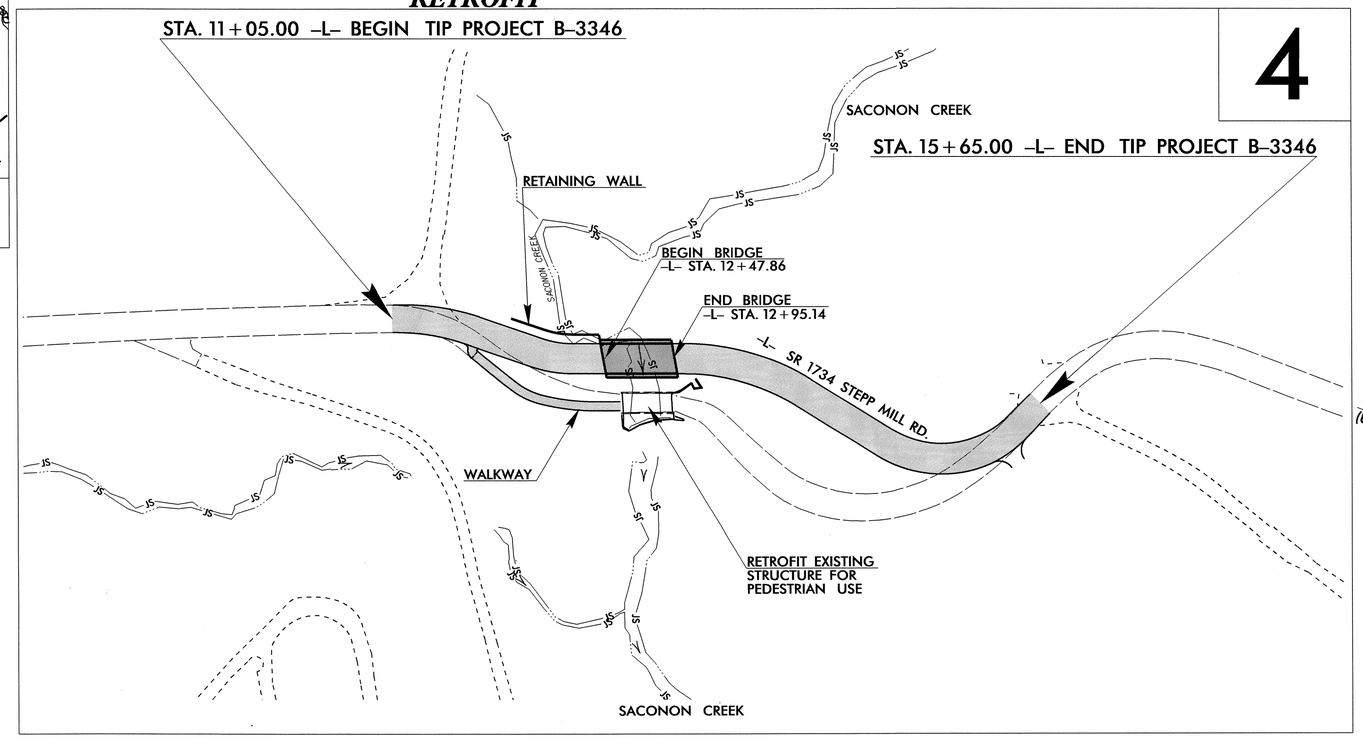
See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols
See Sheet 1-C For Survey Control Sheet



VICINITY MAP

DETOUR ROUTE

TO BLUE RIDGE



4

DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED AND SUPERELEVATION.

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 2014 = 580
ADT 2035 = 900
DHV = 12 %
D = 60 %
T = 12 % *
V = 15 MPH
*TTST 1% DUAL 11%

FUNC CLASS = RURAL LOCAL
SUB REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-3346 = 0.078 MILES
LENGTH STRUCTURE TIP PROJECT B-3346 = 0.009 MILES
TOTAL LENGTH OF TIP PROJECT B-3346 = 0.087 MILES

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

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
MARCH 1, 2013

LETTING DATE:
FEBRUARY 18, 2014

JAMES A. SPEER, PE
PROJECT ENGINEER

DANIEL W. GARDNER, JR., PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER
SIGNATURE: 11/13

ROADWAY DESIGN ENGINEER
SIGNATURE: 11/14/13

TIP PROJECT: B-3346

CONTRACT: C203347

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09/08/99

PROJECT REFERENCE NO.	SHEET NO.
B-3346	1-A

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 33871 ENGINEER DANIEL W. GARDNER

11/14/13

Daniel W. Gardner Jr

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS. GENERAL NOTES. AND LIST OF STANDARD DRAWINGS
1-B	CONVENTIONAL PLAN SHEET SYMBOLS
1-C	SURVEY CONTROL SHEET
1-D	CENTERLINE COORDINATE LIST
2	PAVEMENT SCHEDULE. WEDGING DETAIL.AND TYPICAL SECTIONS
2-A	T-101 ANCHOR UNIT DETAIL
3-A	DRAINAGE SUMMARY. GUARDRAIL SUMMARY. EARTHWORK SUMMARY. PAVEMENT REMOVAL SUMMARY. AND SUBSURFACE DRAINAGE SUMMARY
4	PLAN SHEET
5	PROFILE SHEET
TMP-1 THRU TMP-3	TRANSPORTATION MANAGEMENT PLANS
EC-1 THRU EC-5	EROSION CONTROL PLANS
RF-1	REFORESTATION PLANS
SIGN-1 THRU SIGN-2	SIGNING PLANS
PMP-1 THRU PMP-2	PAVEMENT MARKING PLANS
UO-1 THRU UO-2	UTILITIES BY OTHERS PLANS
X-1	CROSS SECTION SUMMARY
X-2 THRU X-11	CROSS SECTIONS
S-1 THRU S-23	STRUCTURE PLANS
W-1 THRU W-6	RETAINING WALL PLANS

GENERAL NOTES:

2012 SPECIFICATIONS
EFFECTIVE: 01-17-2012
REVISED: 07-30-2012

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
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

UNDERDRAINS:

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

GUARDRAIL:

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

TEMPORARY SHORING:

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

SUBSURFACE PLANS:

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

END BENTS:

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

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE

Duke Energy - Power Distribution

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

RIGHT-OF-WAY MARKERS:

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

ROCK

ROCK IS ANTICIPATED BETWEEN L STA. 13+55.00 TO STA. 13+84.22 AND L STA. 14+48.90 TO STA. 14+80.00. BLASTING MAY BE REQUIRED FOR EXCAVATION ON THE PROJECT. SEE SECTION 220 OF THE STANDARD SPECIFICATIONS AND IF APPLICABLE. ROCK BLASTING PROVISION.

EFF. 01-17-2012
REV. 10-30-2012

2012 ROADWAY ENGLISH STANDARD DRAWINGS

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

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.02	Method of Clearing - Method II
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
DIVISION 4 - MAJOR STRUCTURES	
422.11	Reinforced Bridge Approach Fills - Sub Regional Tier
DIVISION 5 - SUBGRADE. BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 8 - INCIDENTALS	
815.03	Pipe Underdrain and Blind Drain
840.00	Concrete Base Pad for Drainage Structures
840.18	Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.22	Frames and Wide Slot Sag Grates
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.27	Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.45	Precast Drainage Structure
840.66	Drainage Structure Steps
840.71	Concrete and Brick Pipe Plug
862.01	Guardrail Placement
862.02	Guardrail Installation
876.01	Rip Rap in Channels
876.02	Guide for Rip Rap at Pipe Outlets

8/17/99

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12/05/11

PROJECT REFERENCE NO.	SHEET NO.
B-3346	1-B

Note: Not to Scale

****S.U.E. = Subsurface Utility Engineering***

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

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 — 23
- 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
- Known Soil Contamination: Area or Site
- Potential Soil Contamination: Area or Site

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
- Recorded U/G Power Line — P
- Designated U/G Power Line (S.U.E.*) — P

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole — T
- Telephone Booth
- Telephone Pedestal — T
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole — HH
- Recorded U/G Telephone Cable — T
- Designated U/G Telephone Cable (S.U.E.*) — T
- Recorded U/G Telephone Conduit — TC
- Designated U/G Telephone Conduit (S.U.E.*) — TC
- Recorded U/G Fiber Optics Cable — T FO
- Designated U/G Fiber Optics Cable (S.U.E.*) — T FO

WATER:

- Water Manhole — W
- Water Meter
- Water Valve
- Water Hydrant
- Recorded U/G Water Line — W
- Designated U/G Water Line (S.U.E.*) — W
- Above Ground Water Line — A/G Water

TV:

- TV Satellite Dish
- TV Pedestal — C
- TV Tower
- U/G TV Cable Hand Hole — HH
- Recorded U/G TV Cable — TV
- Designated U/G TV Cable (S.U.E.*) — TV
- Recorded U/G Fiber Optic Cable — TV FO
- Designated U/G Fiber Optic Cable (S.U.E.*) — TV FO

GAS:

- Gas Valve
- Gas Meter
- Recorded U/G Gas Line — G
- Designated U/G Gas Line (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
- Recorded SS Forced Main Line — FSS
- Designated SS Forced Main Line (S.U.E.*) — FSS

MISCELLANEOUS:

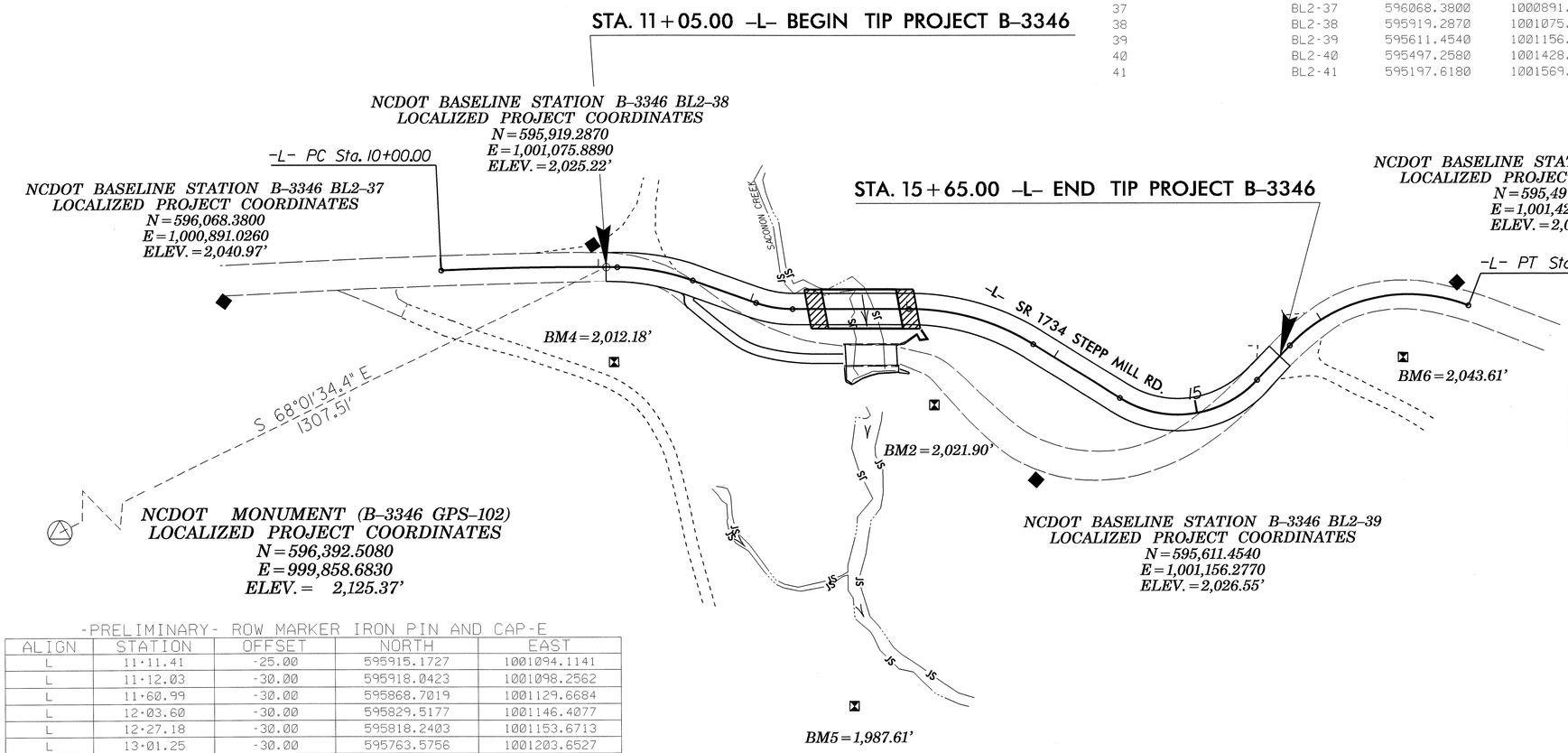
- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — S
- Utility Unknown U/G Line — ?UTL
- U/G Tank; Water, Gas, Oil
- Underground Storage Tank, Approx. Loc. — UST
- A/G Tank; Water, Gas, Oil
- Geoenvironmental Boring
- U/G Test Hole (S.U.E.*)
- Abandoned According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

PROJECT REFERENCE NO.	SHEET NO.
B-3346	1-C
Location and Surveys	

SURVEY CONTROL SHEET B-3346
-PRELIMINARY-

BL2

POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
37	BL2-37	596068.3800	1000891.0260	2040.97	OUTSIDE PROJECT LIMITS	
38	BL2-38	595919.2870	1001075.8890	2025.22	10+96.29	14.23 LT
39	BL2-39	595611.4540	1001156.2770	2026.55	14+30.28	71.75 RT
40	BL2-40	595497.2580	1001428.7150	2049.43	16+86.71	11.71 LT
41	BL2-41	595197.6180	1001569.1340	2081.52	OUTSIDE PROJECT LIMITS	




```
*****************************************
BM2        ELEVATION = 2021.90
N 595691       E 1001148
L STATION 13+28.00 59 RIGHT
BM2
*****************************************

*****************************************
BM4        ELEVATION = 2012.18
N 595859       E 1001030
L STATION 11+10.00 60 RIGHT
BM4
*****************************************

*****************************************
BM5        ELEVATION = 1987.61
N 595600       E 1000972
L STATION 12+66.00 251 RIGHT
BM5
*****************************************

*****************************************
BM6        ELEVATION = 2043.61
N 595491       E 1001371
L STATION 16+53.00 40 RIGHT
BM6
*****************************************

*****************************************
BM7        ELEVATION = 2101.17
N 595026       E 1001668
L STATION 16+98.00
 S 28°14'45.74" E  DIST    517.64
BM7
*****************************************
```

-PRELIMINARY- ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	11+11.41	-25.00	595915.1727	1001094.1141
L	11+12.03	-30.00	595918.0423	1001098.2562
L	11+60.99	-30.00	595868.7019	1001129.6684
L	12+03.60	-30.00	595829.5177	1001146.4077
L	12+27.18	-30.00	595818.2403	1001153.6713
L	13+01.25	-30.00	595763.5756	1001203.6527
L	13+84.22	-30.00	595675.6819	1001247.6526
L	14+48.90	-30.00	595612.1365	1001259.7146
L	15+43.99	-30.00	595579.6083	1001298.0220
L	15+74.24	-30.00	595578.8589	1001328.2627
L	15+74.24	-25.00	595573.8604	1001328.1388

-PRELIMINARY- ROW MARKER PERMANENT EASEMENT-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	12+80.00	-30.00	595779.2615	1001189.3107
L	12+80.00	-50.00	595792.7572	1001204.0709
L	13+01.25	-50.00	595777.0744	1001218.4101
L	13+25.00	-30.00	595741.1149	1001221.1394

PRELIMINARY -L-

TYPE	STATION	NORTH	EAST
PC	10+00.00	595979.3689	1000998.8864
PCC	11+12.03	595898.0333	1001075.9035
PT	11+60.99	595856.9164	1001102.0803
PC	12+03.60	595817.7321	1001118.8197
PT	12+27.18	595797.9967	1001131.5309
PC	13+01.25	595743.3320	1001181.5123
PT	13+84.22	595670.0872	1001218.1789
PC	14+48.90	595606.5419	1001230.2409
PT	15+43.99	595549.6175	1001297.2787
PC	15+74.24	595548.8681	1001327.5194
PT	16+97.61	595481.9767	1001422.7711

PRELIMINARY -Y1-

TYPE	STATION	NORTH	EAST
POT	10+00.00	595855.6246	1001102.6321
PC	10+10.97	595851.3145	1001092.5429
PCC	10+15.78	595847.4908	1001090.1169
PCC	10+37.02	595826.2862	1001091.2418
PCC	10+50.91	595812.4516	1001092.4835
PCC	10+70.18	595794.1707	1001098.1789
PT	11+04.92	595765.9434	1001118.2779
POT	11+22.21	595753.2071	1001129.9737

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "B3346 GPS-2"
WITH NAD 83/95 STATE PLANE GRID COORDINATES OF
NORTHING: 596392.5080(ft) EASTING: 999858.6500(ft)
ELEVATION: 2125.37(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99977603
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B3346 GPS-2" TO -L- STATION 11+05.00 IS
S 68°01'34.4" E 1307.51'
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NGVD 29

NOTE: DRAWING NOT TO SCALE

NOTES:

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

THE FILES TO BE FOUND ARE AS FOLLOWS:
B3346_LS_CONTROL.TXT

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

INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.
PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.
NETWORK ESTABLISHED FROM NGS ONLINE POSITIONING SERVICE (OPUS)

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PROJ. REFERENCE NO.	SHEET NO.
B-3346	1-D

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CENTERLINE COORDINATE LIST

Point #	Chain	Station	Northing (Y)	Easting (X)
1	L	10+00.00	595979.3689	1000998.8864
2	L	10+50.00	595943.6013	1001033.8227
3	L	11+00.00	595906.9715	1001067.8540
4	L	11+50.00	595866.8540	1001097.3976
5	L	12+00.00	595821.0409	1001117.4062
6	L	12+50.00	595781.1583	1001146.9267
7	L	13+00.00	595744.2577	1001180.6660
8	L	13+50.00	595702.6891	1001208.0352
9	L	14+00.00	595654.5817	1001221.1221
10	L	14+50.00	595605.4605	1001230.4550
11	L	15+00.00	595564.0050	1001256.4731
12	L	15+50.00	595549.4686	1001303.2889
13	L	16+00.00	595545.0926	1001352.9381
14	L	16+50.00	595520.9905	1001396.2070
15	L	16+97.61	595481.9767	1001422.7711

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

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

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

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

PROJECT REFERENCE NO.	SHEET NO.
B-3346	2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

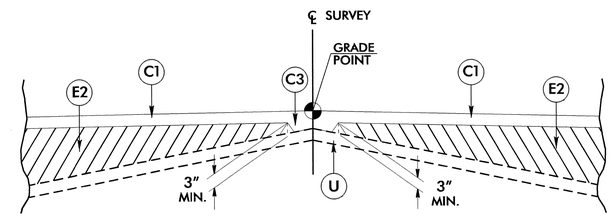
NORTH CAROLINA PROFESSIONAL SEAL 33871 ENGINEER DANIEL W. GARDNER III 11/14/13

NORTH CAROLINA PROFESSIONAL SEAL 22886 ENGINEER CLARK S. MORRISON 11/15/13

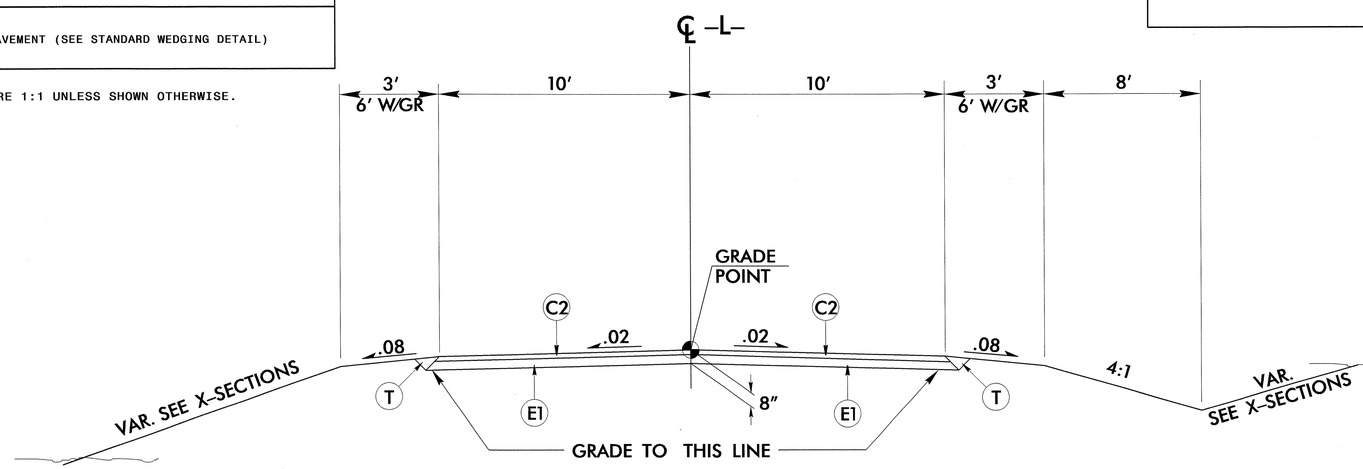
PAVEMENT SCHEDULE

C1	PROP. APPROX. 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C2	PROP. APPROX. 2½" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	PROP. APPROX. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 110 LBS. PER 1" DEPTH TO BE PLACED IN LAYERS NOT TO EXCEED 1½" IN DEPTH.
E1	PROP. APPROX. 5½" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
E2	PROP. APPROX. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5½" IN DEPTH.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL)

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



Detail Showing Method of Wedging



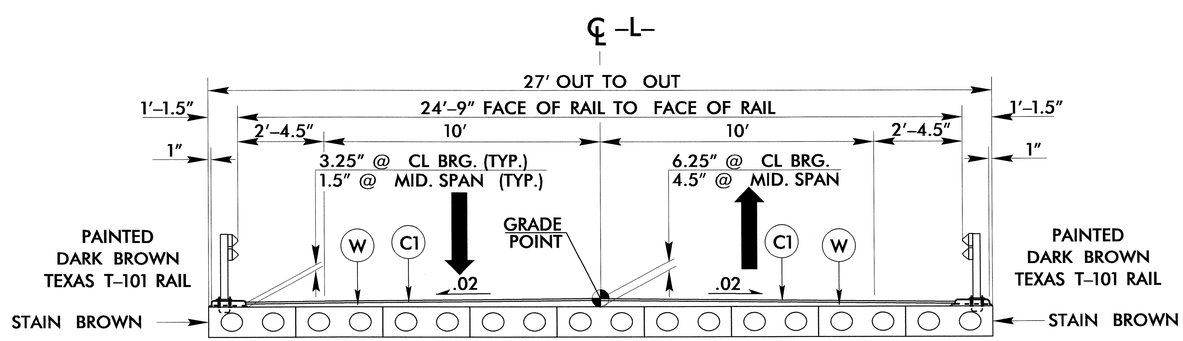
TYPICAL SECTION NO. 1

NOTE: TRANSITION FROM EXISTING TO TYPICAL SECTION NO. 1
-L- STA 11+05.00 TO STA. 11+55.00

USE TYPICAL SECTION NO. 1 AS FOLLOWS

-L- STA 11+55.00 TO STA 12+47.86 (BEGIN BRIDGE)
-L- STA 12+95.14 (END BRIDGE) TO STA 15+15.00

NOTE: TRANSITION FROM TYPICAL SECTION NO. 1 TO EXISTING
-L- STA 15+15.00 TO STA. 16+65.00



NOTE: EXPOSED EDGES OF CONCRETE CORED SLABS WILL BE STAINED BROWN

TYPICAL SECTION NO. 2

NOTE: EXISTING BRIDGE WILL BE REHABILITATED AND CONVERTED TO A PEDESTRIAN BRIDGE. SEE STRUCTURE PLANS.

USE TYPICAL SECTION NO. 2 AS FOLLOWS

-L- STA. 12+47.86 (BEGIN BRIDGE) TO STA. 12+95.14 (END BRIDGE)

6/2/99

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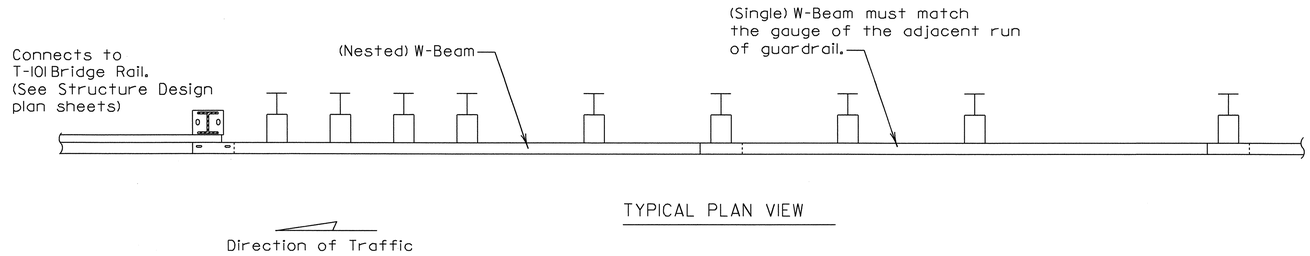
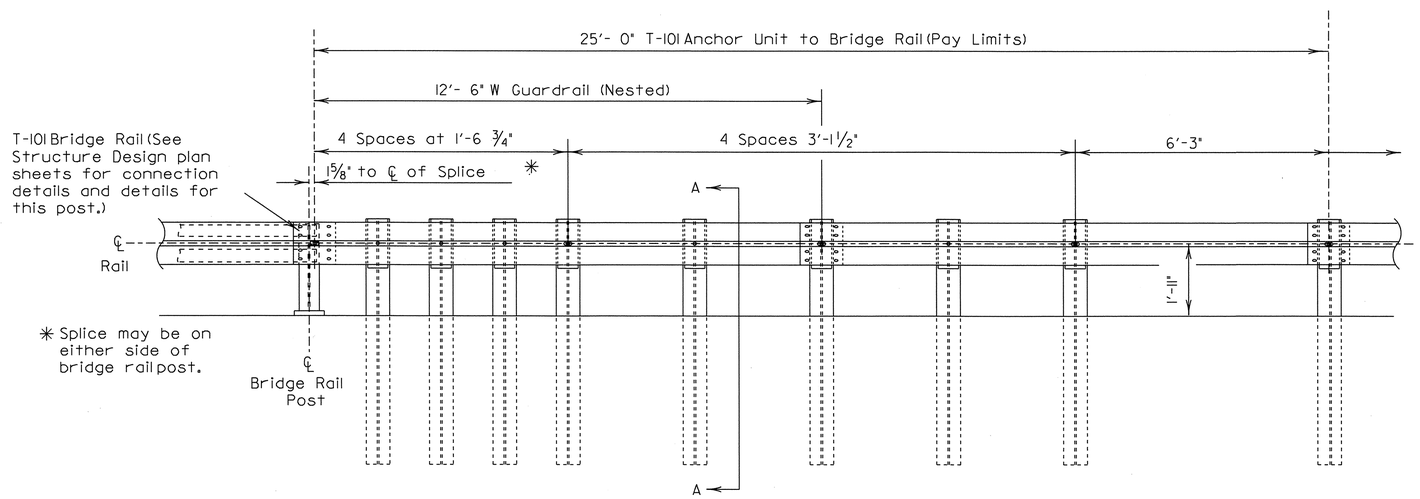
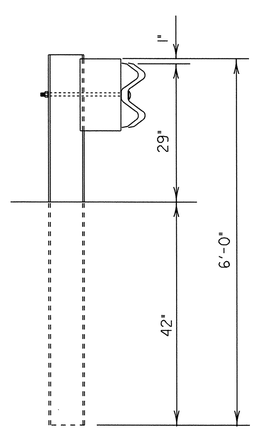
PROJECT REFERENCE NO.	SHEET NO.
B-3346	2-A



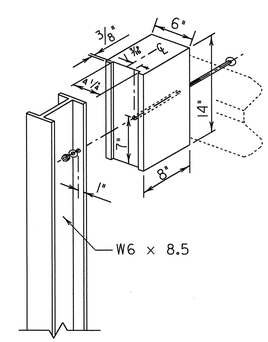
TYPICAL PLAN VIEW



TYPICAL ELEVATION VIEW



SECTION A-A



COMPOSITE BLOCK
STEEL POST DETAIL

NORTH CAROLINA PROFESSIONAL SEAL 022966 ENGINEER JOEL S. HOWARD
11/18/13

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

T-101 ANCHOR UNIT

ORIGINAL BY:		DATE:	
MODIFIED BY:	rabnitt	DATE:	10-27-11
CHECKED BY:		DATE:	10/9/13
FILE SPEC.:			

*** SYSTIME= 11:01 ***
*** USER NAME= ***

6/21/00

COMPUTED BY: D. W. GARDNER	DATE: 10/07/11
CHECKED BY: M. T. POTTS	DATE: 02/19/13

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
B-3346	3-A

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

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

STATION / SIZE / THICKNESS OR GAUGE	LOCATION (LT,RT, OR CL)	STRUCTURE NO. FROM	STRUCTURE NO. TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	DRAINAGE PIPE (RCP, CSP, CAAP, HDPE, or PVC) 12"	15"	18"	24"	30"	36"	42"	48"	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	C.S. PIPE 12" .064	15" .064	18" .064	24" .064	36" .079	42" .109	48" .109	R.C. PIPE (CLASS III) 15"	18"	24"	30"	36"	42"	48"	R.C. PIPE (CLASS IV) 12"	15"	18"	24"	30"	36"	42"	48"	** R. C. PIPE (CLASS V)	** R. C. PIPE CULVERTS, CONTRACTOR DESIGN PIPE	** R. C. PIPE CULVERTS, CONTRACTOR DESIGN PIPE	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	ENDWALLS STD. 838.01, STD. 838.11 OR STD. 838.80 (UNLESS NOTED OTHERWISE) CU. YDS. R.C.P.	C.S.P.	QUANTITIES FOR DRAINAGE STRUCTURES PER EACH (0' THRU 5.0')	* TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL.'B') LIN. *FT. A 5.0' THRU 10.0'	B 10.0' AND ABOVE	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES AND HOOD STANDARD 840.03 TYPE OF GRATE E	F	G		CONCRETE TRANSITIONAL SECTION CATCH BASIN	DROP INLET	G.D.I. TYPE "B" STD. 840.18 OR 840.27	G.D.I. FRAME WITH TWO GRATES STD. 840.22							CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	PIPE REMOVAL LIN.FT.	REMARKS
-L- STA 13+25.00	RT.	0401		2019.3																																													1										1	1							0.262		PLUG 36" CMP
		0401	0402		2016.5	2016.3																													48																																		
-L- STA 13+25.00	LT.	0402		2019.3																																													1										1	1									
		0402	OUT		2016.3	2016.0			36																																																												
TOTAL									36																										48														2										2	2							0.262		
SAY																																																																			0.5		

ABBREVIATIONS

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

"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 STRAIGHT	LENGTH SHOP CURVED	LENGTH DOUBLE FACED	WARRANT POINT APPROACH END	WARRANT POINT TRAILING END	"N" DIST. FROM E.O.L.	TOTAL SHOUL. WIDTH	FLARE LENGTH APPROACH END	FLARE LENGTH TRAILING END	W APPROACH END	W TRAILING END	PAINTED DARK BROWN GUARDRAIL ANCHORS TYPE* T-101	GRAU 350 TL-2	TERMINAL SECTIONS								IMPACT ATTENUATOR TYPE 350 EA	G	NG	SINGLE FACED GUARDRAIL	REMOVE EXISTING GUARDRAIL	REMOVE AND STOCKPILE EXISTING GUARDRAIL	REMARKS
-L-	11+70.65	12+45.65	LT.	75				12+45.65	2.375'	6'					1	1															PAINTED DARK BROWN GUARDRAIL AND ANCHOR UNITS
-L-	12+00.05	12+50.05	RT.	50			12+50.05		2.375'	6'					1	1															PAINTED DARK BROWN GUARDRAIL AND ANCHOR UNITS
-L-	12+92.96	13+42.96	LT.	50			12+92.96		2.375'	6'					1	1															PAINTED DARK BROWN GUARDRAIL AND ANCHOR UNITS
-L-	12+97.36	13+47.36	RT.	50				12+97.36	2.375'	6'					1	1													65		PAINTED DARK BROWN GUARDRAIL AND ANCHOR UNITS
-L-	13+60.00/14+60.00		RT.	50													4														GUARDRAIL BARRICADE – PAINTED DARK BROWN
			SUB-TOTAL	275											4	4	4												65		
		LESS DEDUCTIONS FOR ANCHORS																													
		GRAU-350 TL-2 4 @ 25 =		-100																											
		TYPE T-101 4 @ 25 =		-100																											
			PROJECT TOTAL	75											4	4	4												65		
ADDITIONAL GUARDRAIL POSTS = 5 EA.			SAY	100											4	4	4												65		

*SEE DETAIL SHEET 2-A

SUMMARY OF EARTHWORK
IN CUBIC YARDS

STATION	STATION	UNCL. EXCAV.	UNDERCUT	EMBANK. +%	BORROW	WASTE
SUMMARY NO. 1						
-L- 11+05.00	-L- 12+47.86 (BB)	28		721	693	
TOTAL SUMMARY NO. 1		28		721	693	
SUMMARY NO. 2						
-L- 12+95.14 (EB)	-L- 15+65.00	7023		11		7012
TOTAL SUMMARY NO. 2		7023		11		7012
SUMMARY TOTALS		7051		732	693	7012
LOSS DUE TO C & G		-226				-226
WASTE IN LIEU OF BORROW					-693	-693
ADJUST FOR ROCK WASTE SWELL						197
ADJUST FOR UNCOMPACTED ROCK WASTE						148
PROJECT TOTAL		6825		732		6438
GRAND TOTAL		6825		732		6438
SAY		6900				
DDE = 540 CY						
UNDERCUT CONTINGENCY = 350 CY						
SELECT GRANULAR MATERIAL, CLASS III = 130 CY						

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.

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

PAVEMENT REMOVAL SUMMARY

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	YD²
-L-	11+05.00	12+59.00	RT.	221.81
-L-	12+95.00	15+65.00	RT.	556.84
			TOTAL:	778.64
			SAY:	790

SUMMARY OF SUBSURFACE DRAINAGE

LINE	STATION	STATION	LOCATION LT/RT/CL	DRAIN TYPE* UD/BD/SD	LF
	CONTINGENCY			UD	100
				TOTAL LF:	100

*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		(GEOTECH)			53	101	290		
CONTINGENCY		(ROADSIDE)					100		
			TOTAL CY/TONS/SY:		53	101	390		

*ASU = AGGREGATE SUBGRADE
*AST = AGGREGATE STABILIZATION

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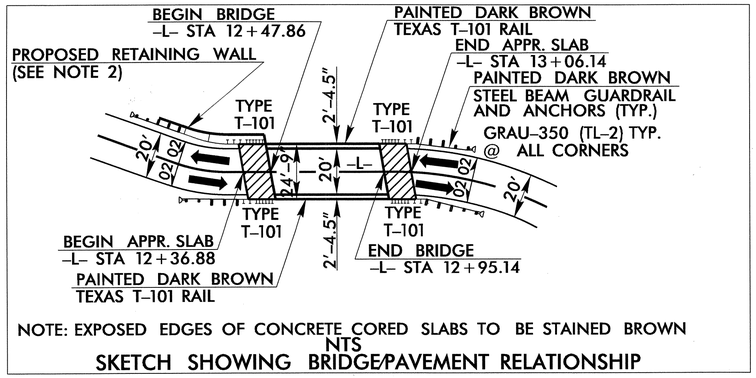
PROJECT REFERENCE NO.	SHEET NO.
B-3346	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

ENGINEER'S SEAL 33871 NORTH CAROLINA PROFESSIONAL DANIEL W. GARDNER 11/14/13

ENGINEER'S SEAL 20870 NORTH CAROLINA PROFESSIONAL MARC T. SHOWN 11/14/13



NOTE: EXPOSED EDGES OF CONCRETE CORED SLABS TO BE STAINED BROWN

NTS

SKETCH SHOWING BRIDGE/PAVEMENT RELATIONSHIP

DETAIL A
CHANNEL CHANGE
(Not to Scale)

Natural Ground — 2:1 — D — 2:1 — Natural Ground; d1; Filter Fabric; B

When B is > 6.0' Std. No. 876.01

Min. D = 4 Ft.
Max. d = 4 Ft.
B = 5 Ft.

Type of Liner = CLASS 'B' Rip-Rap

UTILITY OWNERS

DUKE ENERGY CORPORATION
526 S. CHURCH STREET
P.O. BOX 1006 EC100
CHARLOTTE, N.C. 28202

BELLSOUTH TELECOMUNICATIONS, INC.
601 W. CHESTNUT ST.
LOUISVILLE, KY. 40202-2034

-L-		
PI Sta 10+56.03	PI Sta 11+36.73	PI Sta 12+15.50
Δ = 3° 12' 33.8" (RT)	Δ = 18° 42' 04.2" (RT)	Δ = 19° 18' 19.9" (LT)
D = 2° 51' 53.2"	D = 38° 11' 49.9"	D = 81° 51' 04.0"
L = 112.03'	L = 48.96'	L = 23.59'
T = 56.03'	T = 24.70'	T = 11.91'
R = 2,000.00'	*R = 150.00'	*R = 70.00'
SE = SEE PLANS	SE = SEE PLANS	SE = SEE PLANS

-L-		
PI Sta 13+43.83	PI Sta 15+05.41	PI Sta 16+44.16
Δ = 31° 41' 22.8" (RT)	Δ = 77° 49' 57.2" (LT)	Δ = 67° 19' 06.5" (RT)
D = 38° 11' 49.9"	D = 81° 51' 04.0"	D = 54° 34' 02.7"
L = 82.96'	L = 95.09'	L = 123.37'
T = 42.57'	T = 56.52'	T = 69.92'
*R = 150.00'	*R = 70.00'	R = 105.00'
SE = SEE PLANS	SE = SEE PLANS	SE = SEE PLANS

*DESIGN EXCEPTION REQUIRED FOR SUPERELEVATION

NAD 83/95

-L- PCC Sta. 11+12.03

BEGIN TIP PROJECT B-3346
-L- STA. 11+05.00

(HISTORIC PROPERTY)
CAROLYN K. JUSTUS
DB 586 PG 571
1

-BL2- 37

-L- PC Sta. 10+00.00

-BL2- 38

REMOVE AND RELOCATE FORSYTHIA

SEE NOTE 1

6' PAVED WALKWAY (SEE INSET A)

SEE NOTE 3

CHANNEL CHANGE SEE DETAIL 'A' @ 375 CY DDE @ 70 TONS @ 160 SY FABRIC

DO NOT DISTURB LILACS

-L- PT Sta. 11+60.99

S 23° 07' 55.2" E

-L- PC Sta. 12+03.60

-L- PT Sta. 12+27.18

RETAINING WALL SEE NOTE 2

CHANNEL CHANGE SEE DETAIL 'A'
@ 165 CY DDE
@ 30 TONS
@ 70 SY FABRIC

CL 'B' RIP RAP
EST. 1 TON
EST. 5 SY FABRIC

50' TAPER L.T. & RT.

GRAU-350 (TL-2) TYP.

-L- PC Sta. 13+01.25

-L- PT Sta. 13+84.22

S 10° 44' 52.3" E

-L- PC Sta. 14+48.90

S 88° 34' 49.5" E

END TIP PROJECT B-3346
-L- STA. 15+65.00

-BL2- 40

-L- PT Sta. 16+97.61

CHARLES A. JUSTUS
JANICE JUSTUS
DB 768 PG 850
2

-L- PT Sta. 15+43.99

-L- PC Sta. 15+74.24

GUARDRAIL BARRICADE

SEAL ABANDONED WELL

-BL2- 39

REMOVE EXISTING PAVEMENT AND GRADE TO DRAIN AS DIRECTED BY THE ENGINEER

KENNETH WAYNE WALDEN
DB 778 PG 681

DALE & CRYSTAL SMITH
DB 1371 PG 1

WILLARD M. WILLIAMS
DB 1364 PG 202

8" STEEL PIPE PART OF ABANDONED OVERFLOW SYSTEM FOR DAM

48" ROCK WALL

BM #4 SEE SHEET 1-C ELEV. 2012.18

BM #2 SEE SHEET 1-C ELEV. 2021.90

BM #5 SEE SHEET 1-C ELEV. 1987.61

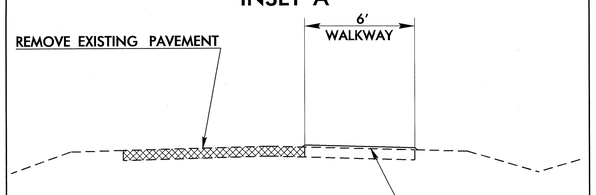
BM #6 SEE SHEET 1-C ELEV. 2043.61

NOTE 1: DO NOT DISTURB BUILDING LOCATED AT -L- STA 11+45 RT. TIE FILL SLOPES SO THEY WILL NOT IMPACT BUILDING FOUNDATION.

NOTE 2: THE EXPOSED PART OF THE RETAINING WALL SHALL BE STAINED AND/OR STAMPED WITH A PATTERN SIMILAR TO THE FRONT OF THE MILL HOUSE.

NOTE 3: CONVERT EXISTING BRIDGE TO PEDESTRIAN BRIDGE. REMOVE 3 BEAMS, REPLACE DECK, ADD PEDESTRIAN SAFE RAILS, SANDBLAST LEAD PAINT FROM BEAMS AND REPAINT. SEE STRUCTURE PLAN SHEETS S-21 THRU S-23.

INSET A



PROPOSED WALKWAY

SEE SHEET 5 FOR -L- PROFILE
SEE SHEETS S-1 THRU S-23 FOR STRUCTURE PLANS
SEE SHEETS W-1 THRU W-6 FOR RETAINING WALL PLANS

REVISIONS

5/14/99

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PROJECT REFERENCE NO.	SHEET NO.
B-3346	5

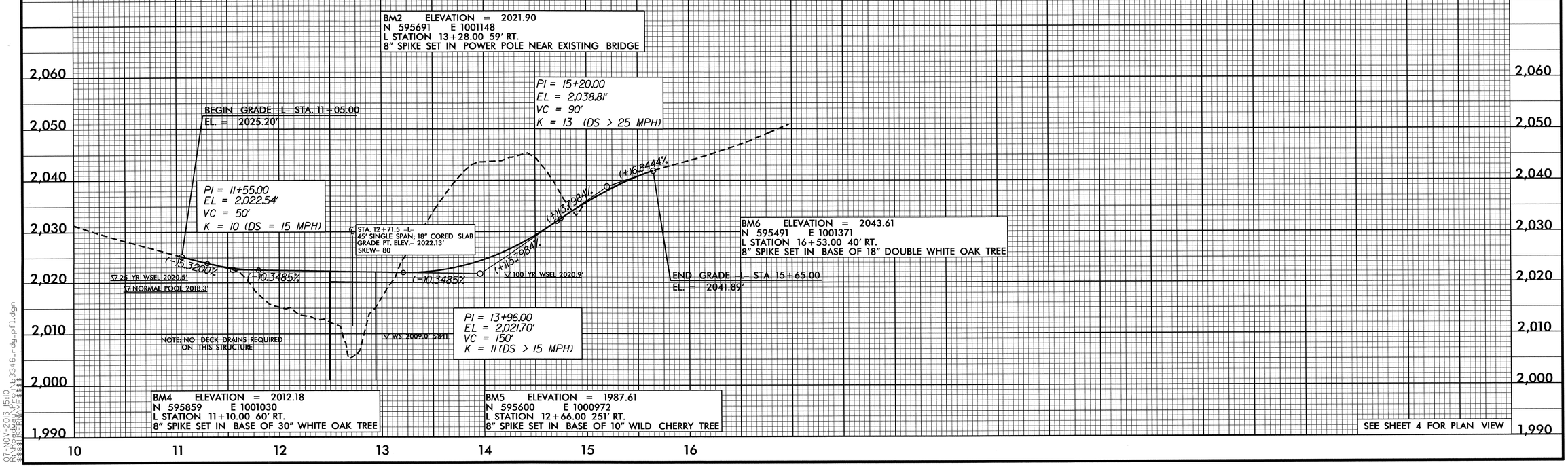
ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 33871 ENGINEER DANIEL W. GARDNER, JR.
Daniel W. Gardner Jr. 11/14/13

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 20670 ENGINEER MARC T. SHOWN
11/14/13

-L-

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	415	CFS
DESIGN FREQUENCY	=	25	YRS
DESIGN HW ELEVATION	=	2020.50	FT
BASE DISCHARGE	=	600	CFS
BASE FREQUENCY	=	100	YRS
BASE HW ELEVATION	=	2020.90	FT
OVERTOPPING DISCHARGE	=	N/A	CFS
OVERTOPPING FREQUENCY	=	500	YRS
OVERTOPPING ELEVATION	=	2021.95	FT
	=		FT
DATE OF SURVEY	=	05/08/11	
W.S. ELEVATION AT DATE OF SURVEY	=	2009.00	FT



SEE SHEET 4 FOR PLAN VIEW

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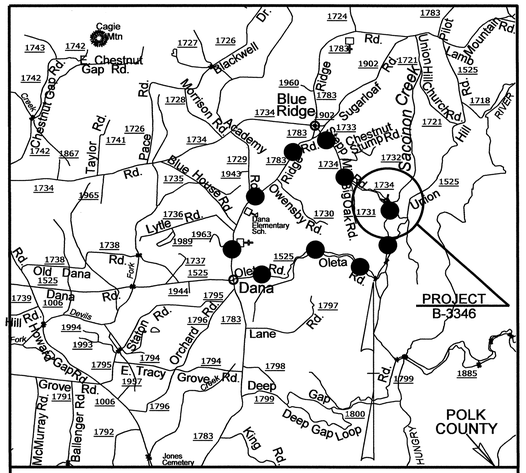
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

HENDERSON COUNTY



VICINITY MAP

OFF-SITE DETOUR ROUTE

LOCATION: REPLACE BRIDGE NO. 42 OVER SACONON CREEK ON SR 1734 (STEPP MILL ROAD).

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	SPECIAL SIGN DESIGN(S)
TMP-3	TEMPORARY TRAFFIC CONTROL PHASING AND DETAIL

SHEET NO.
TMP-1

B-3346

TIP PROJECT:

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

N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 773-2800 FAX: (919) 771-2745

J. S. BOURNE, P.E. — STATE TRAFFIC MANAGEMENT ENGINEER
G. L. GETTIER, P.E. — TRAFFIC CONTROL PROJECT ENGINEER
J. W. GILSTRAP — TRAFFIC CONTROL PROJECT DESIGN ENGINEER
S. N. GREEN — TRAFFIC CONTROL DESIGN ENGINEER

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

APPROVED:
DATE:

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 8973 ENGINEER G. L. GETTIER
16 AUG 13

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PROJ. REFERENCE NO.	SHEET NO.
B-3346	TMP-1A

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.03	TEMPORARY ROAD CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1145.01	BARRICADES

LEGEND

GENERAL

DIRECTION OF TRAFFIC FLOW

EXIST. PVMT.

NORTH ARROW

TRAFFIC CONTROL DEVICES

BARRICADE (TYPE III)

CONE

DRUM

SKINNY DRUM

TEMPORARY SIGNING

STATIONARY SIGN

TEMPORARY PAVEMENT MARKING

N/A

APPROVED: _____ DATE: _____

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 8973 ENGINEER G. L. GETTIER

16 AUG 13

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.
B-3346	TMP-1B

MANAGEMENT STRATEGIES

CONSTRUCTION

REMOVE EXISTING STRUCTURE AND APPROACH ROADWAYS AND REPLACE PROPOSED STRUCTURE AND APPROACH ROADWAYS ALONG THE PROPOSED ROADWAY ALIGNMENT AS SHOWN IN THE CONSTRUCTION PLANS.

TMP DESIGN PARAMETERS

TRAFFIC WILL BE DETOURED OFFSITE DURING THE CONSTRUCTION PERIOD.

THE OFFSITE DETOUR WILL INCLUDE SR 1525, SR 1783 & SR 1733. (SEE SHEET TMP-3).

TRAFFIC SHALL BE MAINTAINED TO SACANON LANE DURING CONSTRUCTION.

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, OF 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 AS DIRECTED BY THE ENGINEER.

TRAFFIC PATTERN ALTERATIONS

A) NOTIFY THE ENGINEER THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

B) 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.

C) 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.

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

TRAFFIC CONTROL DEVICES

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

PAVEMENT MARKINGS AND MARKERS

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

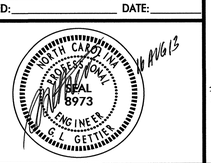
APPROVED: _____ DATE: _____

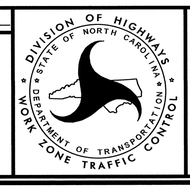
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 8973 ENGINEER G. L. GETTIER

16 AUG 13

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





TRANSPORTATION OPERATIONS & PROJECT NOTES

15-AUG-2013 12:23
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sngreen AT TE265817

PROJ. REFERENCE NO.	SHEET NO.
B-3346	TMP-2

SIGN NUMBER: SP13135
TYPE: D
QUANTITY: 1

SIGN WIDTH: 3'-6"
HEIGHT: 2'-0"
TOTAL AREA: 7.0 Sq.Ft.

BORDER TYPE: FLUSH
RECESS: 0.47"
WIDTH: 0.63"
RADII: 1.5"

NO. Z BARS:
LENGTH:

BACKG COLOR: Fluorescent Orange
COPY COLOR: Black

SYMBOL	X	Y	WID	HT

MAT'L:
0.080" (2.0 mm) ALUMINUM

DESIGN BY: none
PROJECT ID: B-3346
CHECKED BY:
DIV: 14
DATE: May 07, 2013

USE NOTES:

1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be Type VII, VIII, or IX (prismatic) fluorescent orange retroreflective sheeting.

BORDER
R=1.5"
TH=0.63"
IN=0.47"

Panel Style: construction_guide.ssi
M.U.T.C.D.: 2009 Edition

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

																											Series/Size Text Length
		S	T	E	P	P		M	I	L	L																C 2000
	4.3	3.3	3.3	3.4	3.8	2.8	5	4.4	1.8	3.3	2.6	4.3															33.5
		R	O	A	D																						C 2000
	14.1	3.5	3.5	3.9	2.8	14.1																					13.8

FILENAME: Sign Design

NORTH CAROLINA D.O.T. SIGN DETAIL

THE SPECIAL SIGN DESIGNS SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM SIGNING AND DELINEATION. THE DOCUMENT WAS SUBMITTED TO THE WZTC SECTION ON MAY 8, 2013 AND SEALED BY A PROFESSIONAL ENGINEER, RONALD W. KING, LICENSE # 022959.

APPROVED: DATE:

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 8973 ENGINEER G. L. GETTIER 16AUG13

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

SPECIAL SIGN DESIGN

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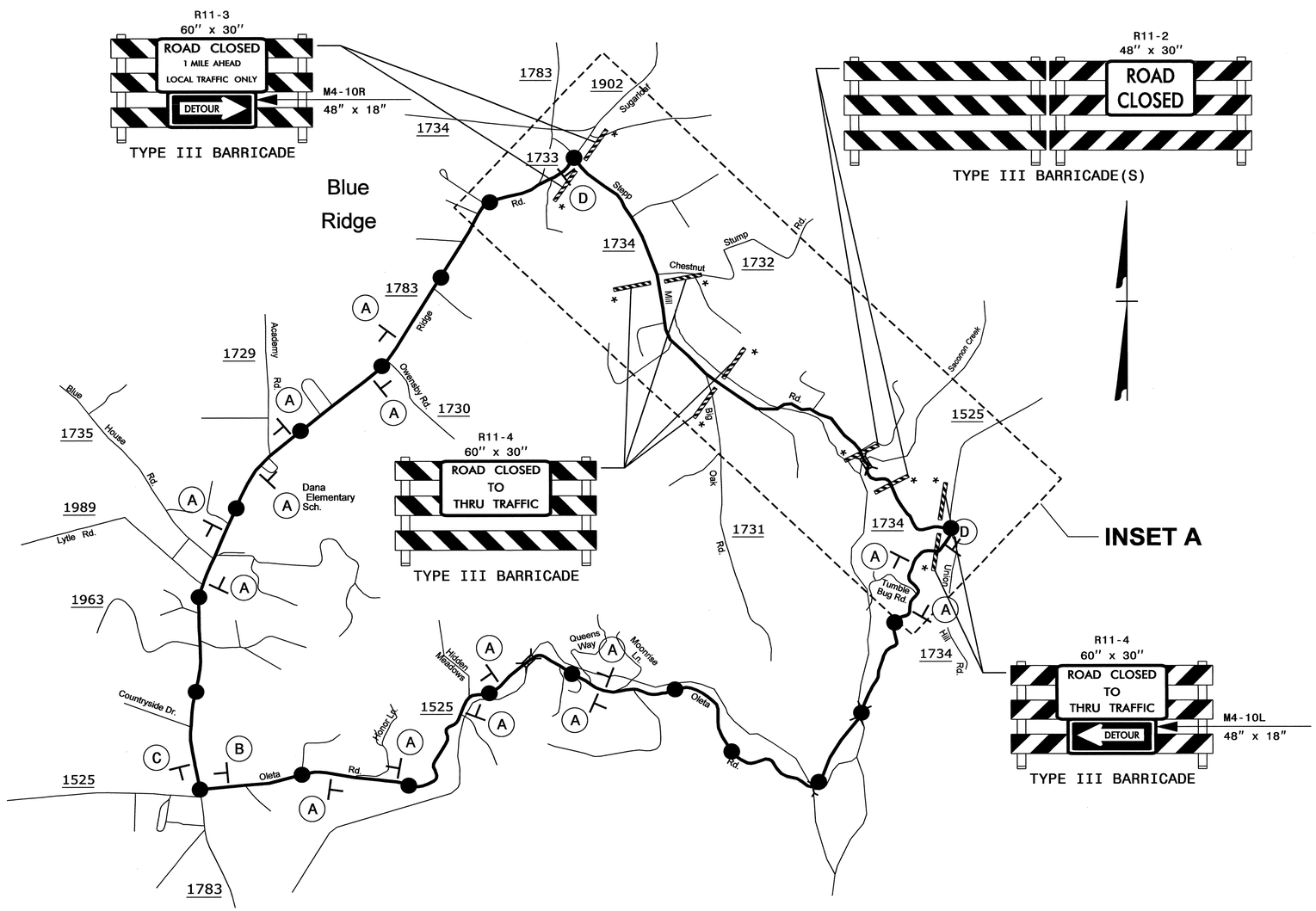
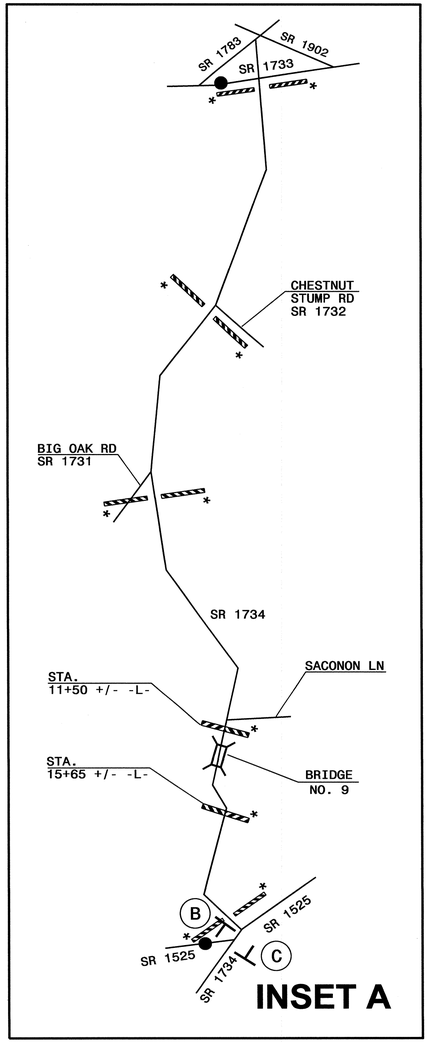
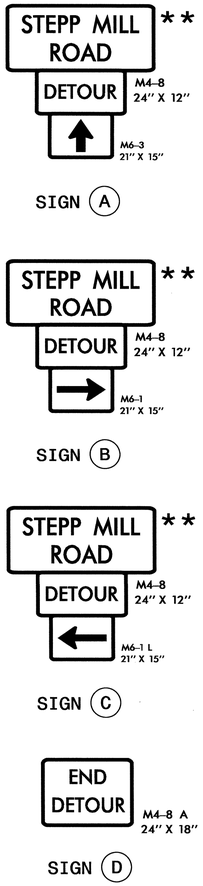
sngreen AT TE265817

PROJ. REFERENCE NO.	SHEET NO.
B-3346	TMP-3







PHASING

STEP 1: - INSTALL OFF-SITE DETOUR ROUTE SIGN ASSEMBLIES FOR THE CLOSING OF SR 1734 (STEPP MILL ROAD, -L-).

- USING ROADWAY STANDARD DRAWING NO. 1101.03, SHEET 1 OF 9, CLOSE SR 1734 (STEPP MILL ROAD, -L-) TO THRU TRAFFIC.

STEP 2: - CONSTRUCT THE PROPOSED STRUCTURE AND ROADWAY UP TO AND INCLUDING THE FINAL LAYER OF SURFACE COURSE AND PLACE THE FINAL PAVEMENT MARKINGS ON SR 1734 (STEPP MILL ROAD, -L-) FROM STATION 11+05 +/- -L- TO STATION 15+65 +/- -L-. (SEE CONSTRUCTION PLANS AND FINAL PAVEMENT MARKING PLANS).

NOTE: REMOVE EXISTING SR 1734 (STEPP MILL ROAD, -L-) AND CONSTRUCT WALKWAY AND MODIFICATIONS TO EXISTING BRIDGE PRIOR TO PLACING FINAL LAYER OF SURFACE COURSE, AS DIRECTED BY THE ENGINEER. (SEE CONSTRUCTION PLANS).

STEP 3: - REMOVE ALL TRAFFIC CONTROL DEVICES, SIGNING AND DETOUR ROUTE SIGNING.

- OPEN TO FINAL TRAFFIC PATTERN.

NOTES:

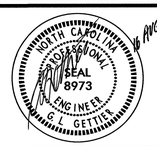
- ALL DETOUR SIGN LOCATIONS ARE APPROXIMATE.
- ALL DETOUR SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE NOTED.

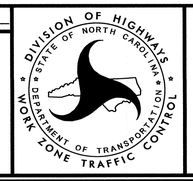
* SEE ROADWAY STANDARD DRAWING NO. 1101.03, SHEET 1 OF 9, FOR ADDITIONAL WORK ZONE SIGNS.

** SEE TMP-2 FOR SIGN DESIGN.

APPROVED:_____ DATE:_____

SEAL





TEMPORARY TRAFFIC CONTROL
PHASING AND DETAIL

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TIP PROJECT: B-3346

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-3346	EC-1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION

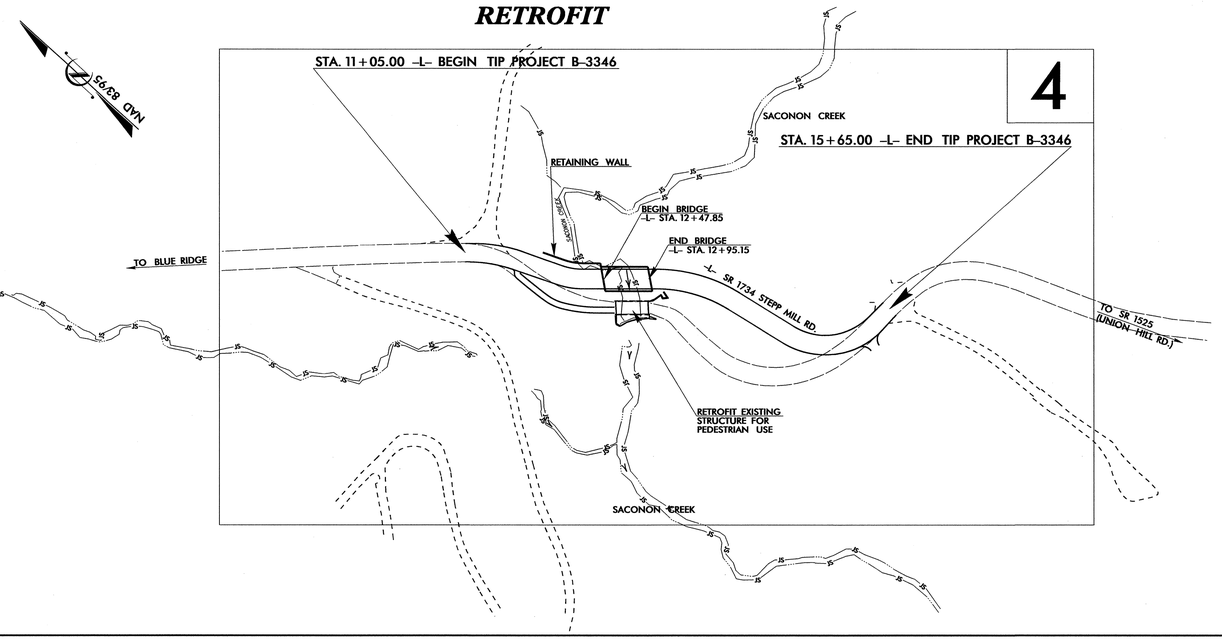
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

HENDERSON COUNTY

LOCATION: BRIDGE NO. 42 OVER SACONON CREEK ON SR 1734 (STEPP MILL ROAD)

TYPE OF WORK: GRADING, DRAINAGE, PAVING, STRUCTURE, RETAINING WALL, AND EXISTING STRUCTURE RETROFIT



EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TSD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	
1633.02	Temporary Rock Silt Check Type-B	
	Wattle / Coir Fiber Wattle	EW CFW
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	
1634.01	Temporary Rock Sediment Dam Type-A	
1634.02	Temporary Rock Sediment Dam Type-B	
1635.01	Rock Pipe Inlet Sediment Trap Type-A	
1635.02	Rock Pipe Inlet Sediment Trap Type-B	
1630.04	Stilling Basin	
1630.06	Special Stilling Basin	
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	S
	Tiered Skimmer Basin	S
	Infiltration Basin	

THIS PROJECT CONTAINS EROSION CONTROL PLANS FOR CLEARING AND GRUBBING PHASE OF CONSTRUCTION.

THIS PROJECT HAS BEEN DESIGNED TO SENSITIVE WATERSHED STANDARDS.

ENVIRONMENTALLY SENSITIVE AREA(S) EXIST ON THIS PROJECT

Refer To E. C. Special Provisions for Special Considerations.

GRAPHIC SCALE

0
PLANS

0
PROFILE (HORIZONTAL)

0
PROFILE (VERTICAL)

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:

ROADSIDE ENVIRONMENTAL UNIT
1 South Wilmington St.
Raleigh, NC 27611

2012 STANDARD SPECIFICATIONS

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		

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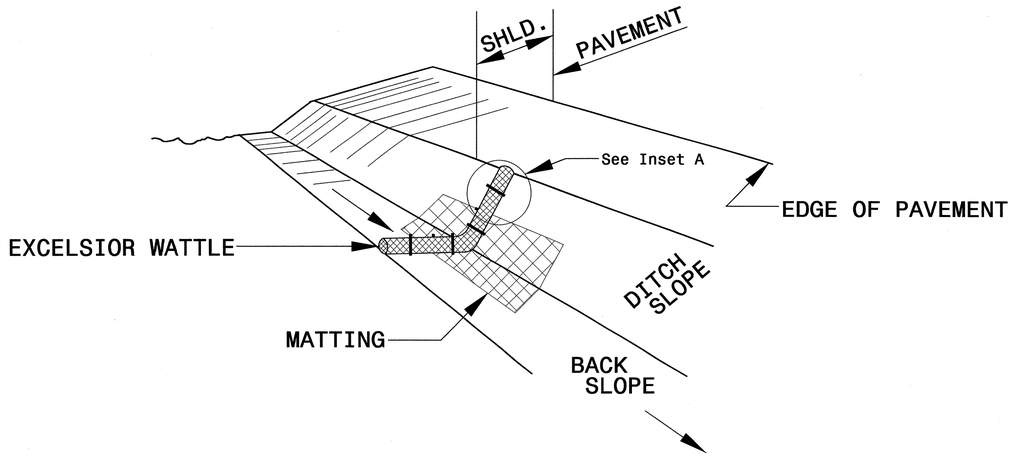
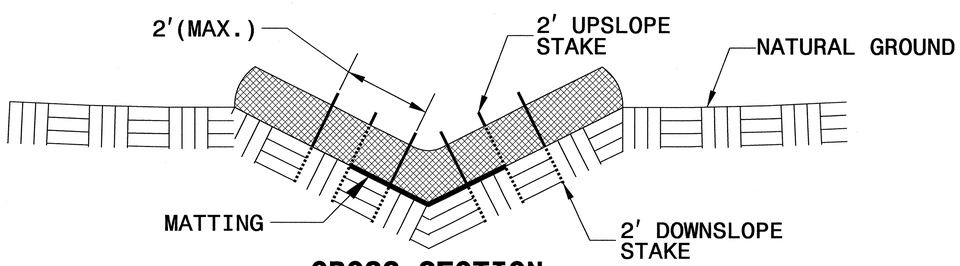
PROJECT REFERENCE NO.	SHEET NO.
B-3346	EC-2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

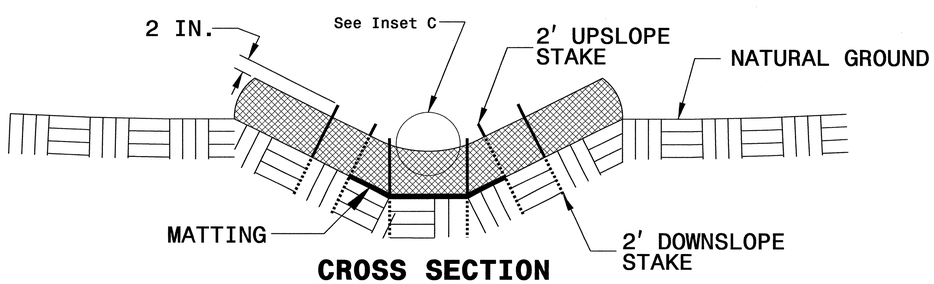
WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

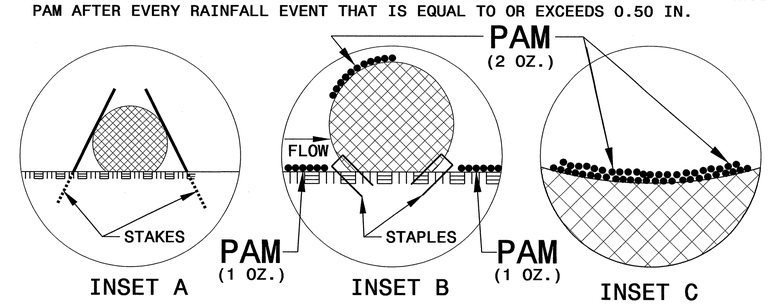
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

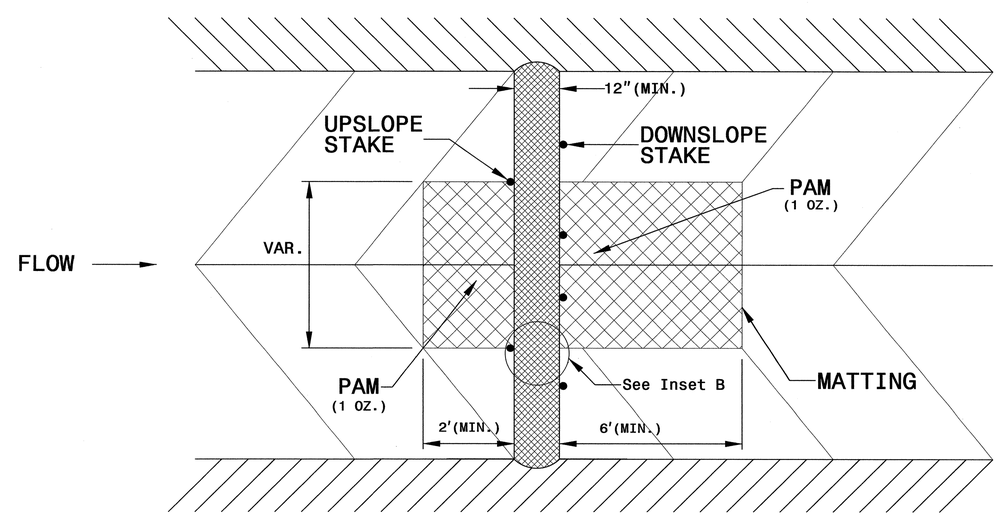
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.

INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.

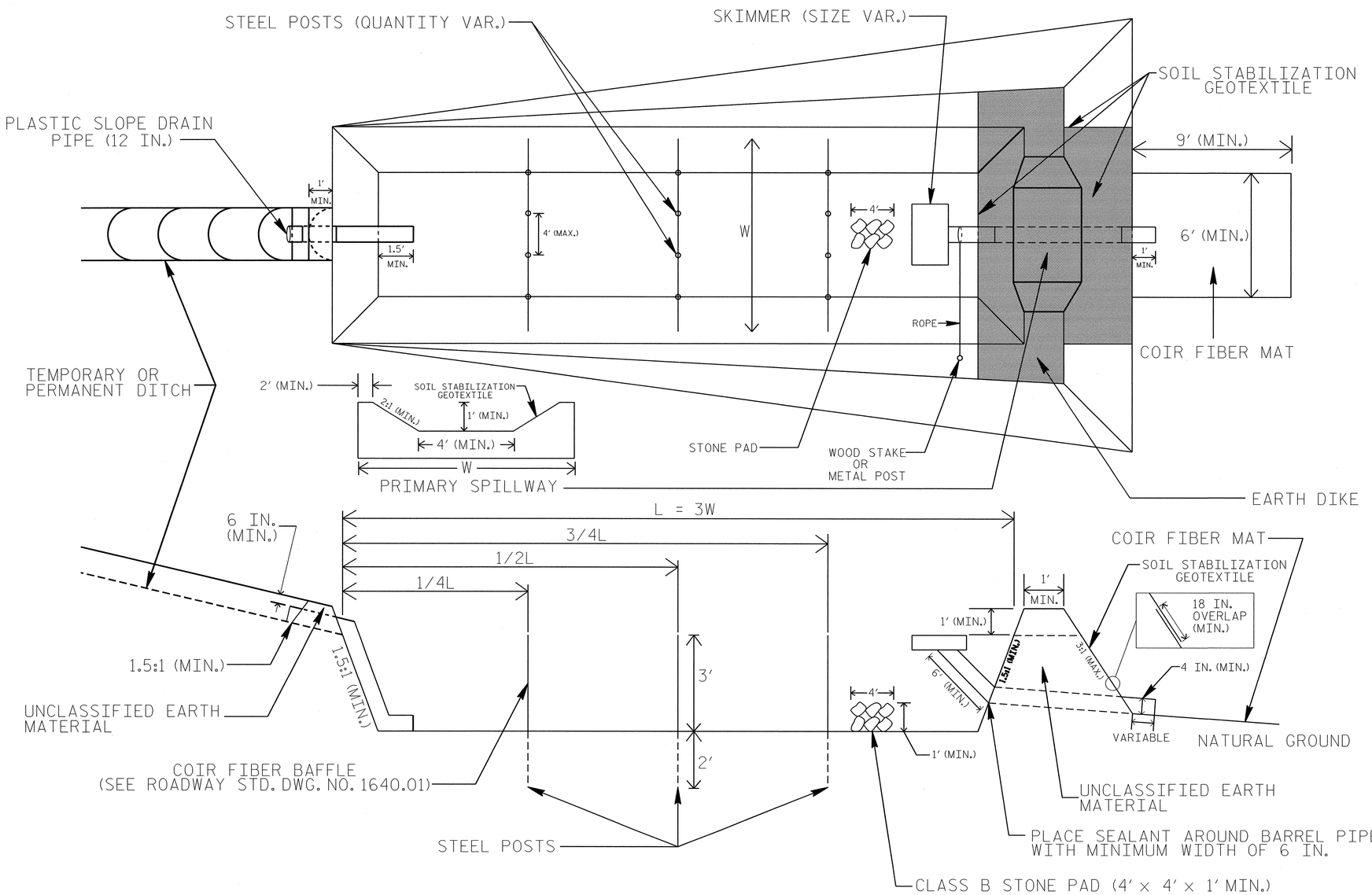


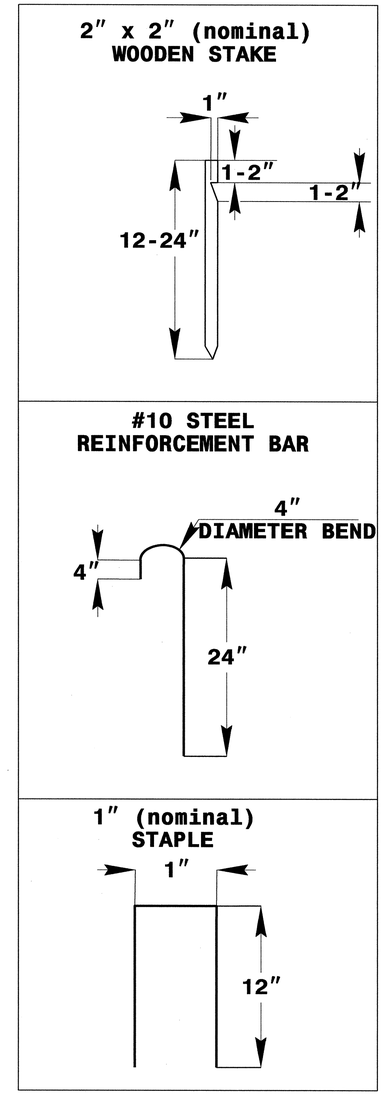


TOP VIEW

PROJECT REFERENCE NO.	SHEET NO.
B-3346	EC-2A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SKIMMER BASIN WITH BAFFLES DETAIL





COIR FIBER MAT ANCHOR OPTIONS

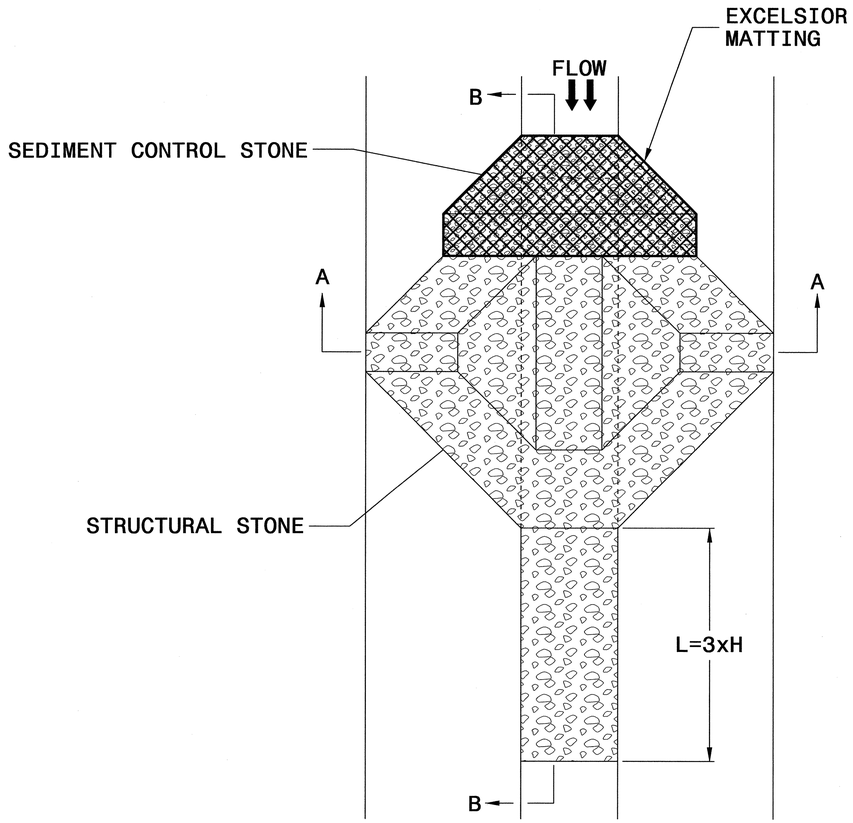
NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES.
2. LIMIT EARTH DIKE HEIGHT TO 5 FT.
3. FOR BASIN DEPTH OF 3 FT., THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
4. DETERMINE PRIMARY SPILLWAY WEIR LENGTH (FT.) USING Q/0.4, WHERE Q IS FLOW RATE (CFS) INTO BASIN.
5. PLASTIC SLOPE DRAIN PIPE AT INLET OF BASIN MAY BE REPLACED BY FILTRATION GEOTEXTILE OR TARP AS DIRECTED.
6. SOIL STABILIZATION GEOTEXTILE FOR PRIMARY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
B-3346	EC-2B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY ROCK SILT CHECK TYPE 'A' WITH EXCELSIOR MATTING AND POLYACRYLAMIDE (PAM)



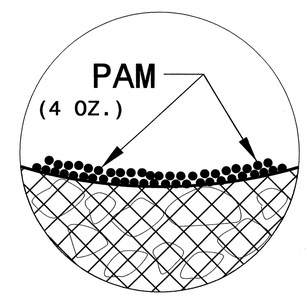
PLAN

NOTES

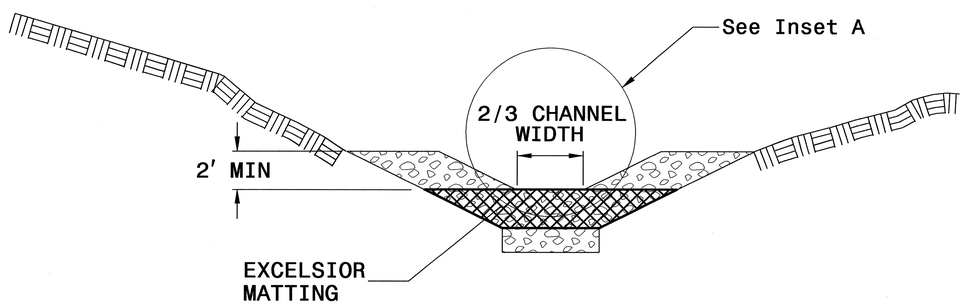
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH ROCK SILT CHECK.

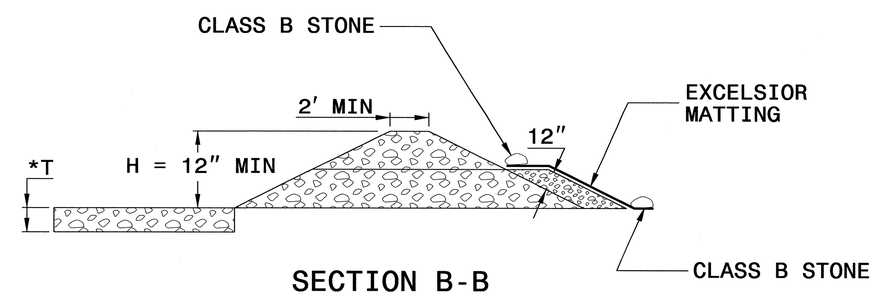
INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION A-A



SECTION B-B

*T = 12" MIN., 18" MAX.

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
B-3346	EC-3
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

PERMANENT SOIL REINFORCEMENT MAT

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L-	13+30	15+55	LT	240
4	-L-	13+30	15+15	RT	195
				SUBTOTAL	435
	ADDITIONAL	PSRM TO	BE INSTALLED		0
				TOTAL	435
				SAY	450

PERMANENT SOIL REINFORCEMENT MAT

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)

PROJECT REFERENCE NO.	SHEET NO.
B-3346	EC-3A
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

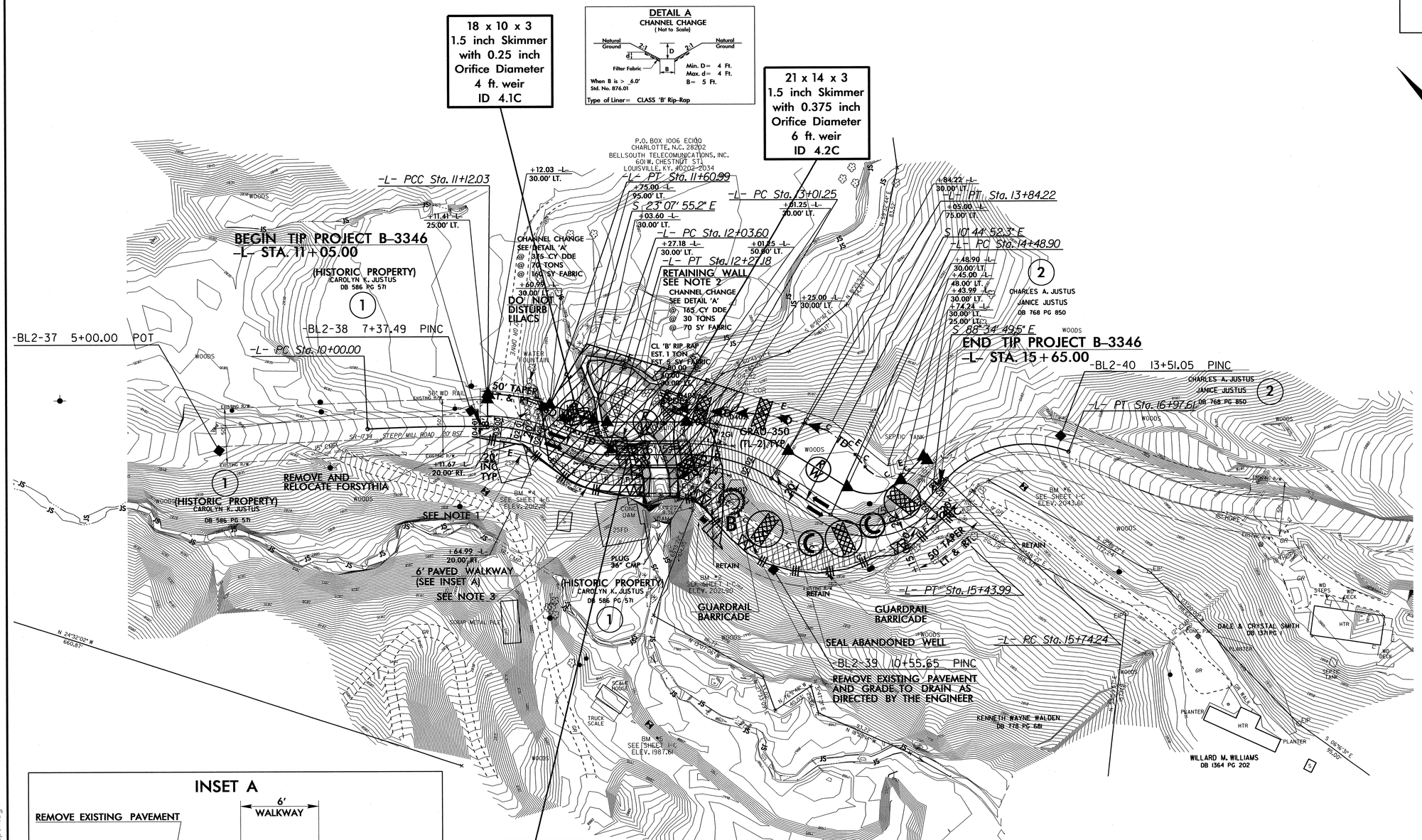
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

PROJECT REFERENCE NO.	SHEET NO.
B-3346	EC-4/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

5/14/99

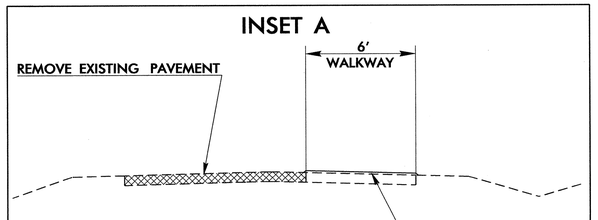


DETAIL A

CHANNEL CHANGE
(Not to Scale)

Type of Liner= CLASS 'B' Rip-Rap

INSET A



PROPOSED WALKWAY

NOTE 1: DO NOT DISTURB BUILDING LOCATED AT -L- STA 11+45 RT. TIE FILL SLOPES SO THEY WILL NOT IMPACT BUILDING FOUNDATION.

NOTE 2: THE EXPOSED PART OF THE RETAINING WALL SHALL BE STAINED AND/OR STAMPED WITH A PATTERN SIMILAR TO THE FRONT OF THE MILL HOUSE.

NOTE 3: CONVERT EXISTING BRIDGE TO PEDESTRIAN BRIDGE. REMOVE 3 BEAMS, REPLACE DECK, ADD PEDESTRIAN SAFE RAILS, SANDBLAST LEAD PAINT FROM BEAMS AND REPAINT. SEE STRUCTURE PLANS SHEET S-?.

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

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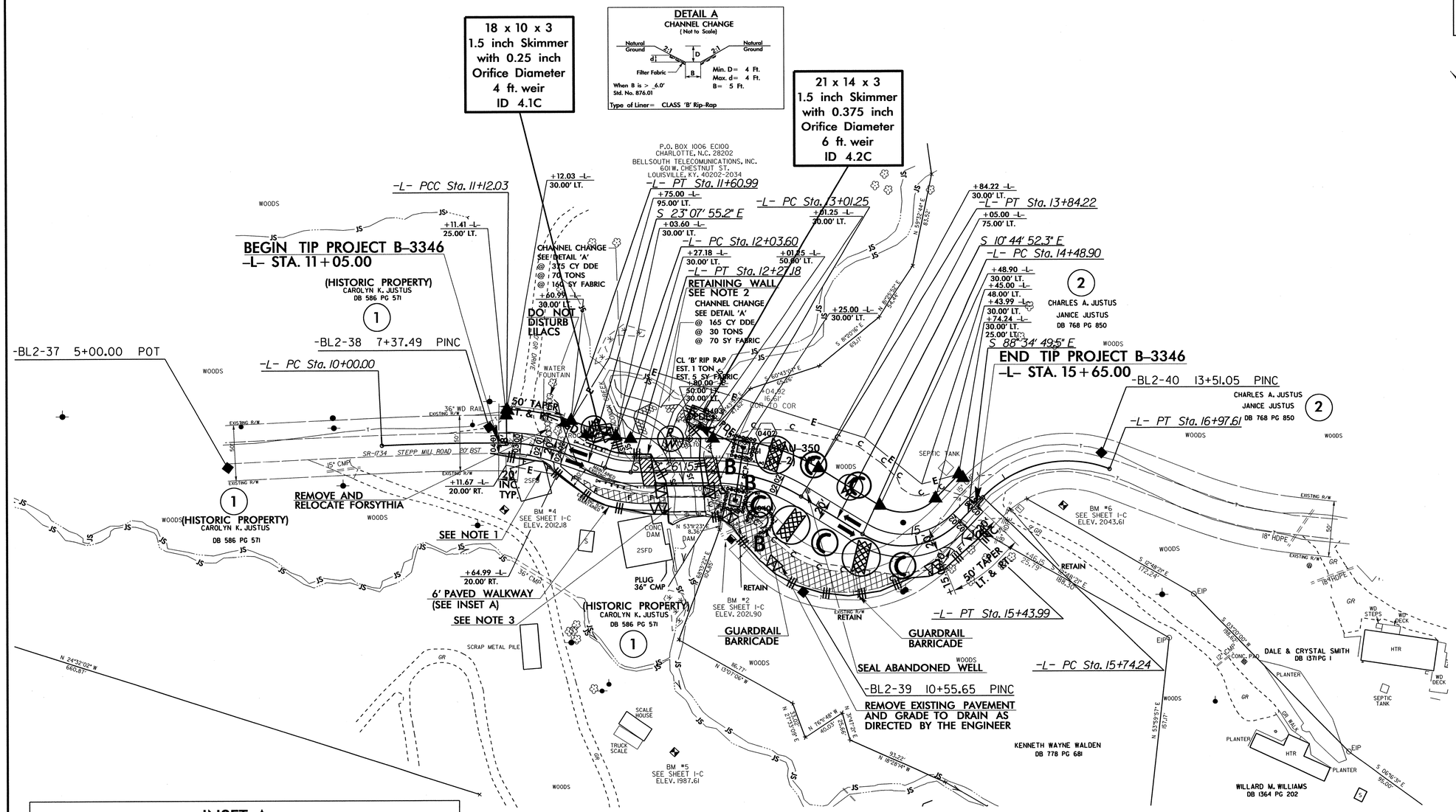
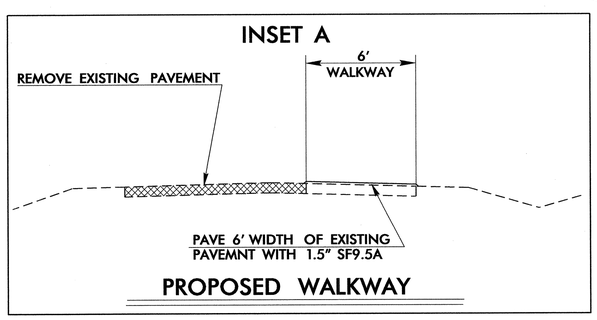
PROJECT REFERENCE NO.	SHEET NO.
B-3346	EC-5/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER





NOTE 1: DO NOT DISTURB BUILDING LOCATED AT -L- STA 11+45 RT. TIE FILL SLOPES SO THEY WILL NOT IMPACT BUILDING FOUNDATION.

NOTE 2: THE EXPOSED PART OF THE RETAINING WALL SHALL BE STAINED AND/OR STAMPED WITH A PATTERN SIMILAR TO THE FRONT OF THE MILL HOUSE.

NOTE 3: CONVERT EXISTING BRIDGE TO PEDESTRIAN BRIDGE. REMOVE 3 BEAMS, REPLACE DECK, ADD PEDESTRIAN SAFE RAILS, SANDBLAST LEAD PAINT FROM BEAMS AND REPAINT. SEE STRUCTURE PLANS SHEET S-2.

5/14/99

18-OCT-2013 07:35
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wjchandler BENTLEY MicroStation V8 2004 (07.00.00.42)

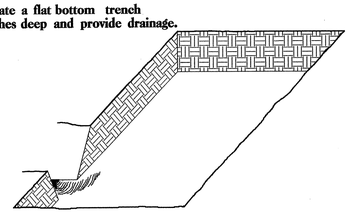
PROJECT REFERENCE NO.	SHEET NO.
B-3346	RF-1
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PLANTING DETAILS

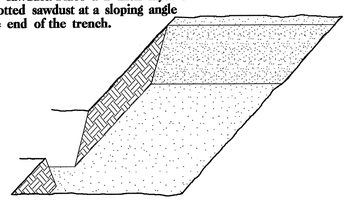
SEEDLING / LINER BAREROOT PLANTING DETAIL

HEALING IN

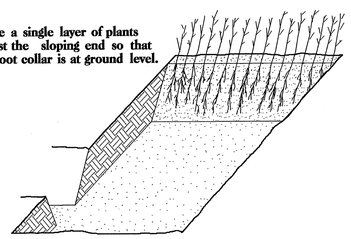
1. Locate a healing-in site in a shady, well protected area.
2. Excavate a flat bottom trench 12 inches deep and provide drainage.



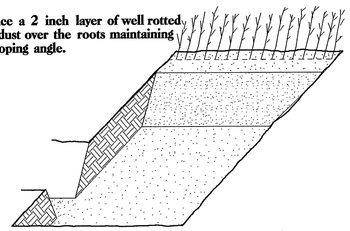
3. Backfill the trench with 2 inches well rotted sawdust. Place a 2 inch layer of well rotted sawdust at a sloping angle at one end of the trench.



4. Place a single layer of plants against the sloping end so that the root collar is at ground level.

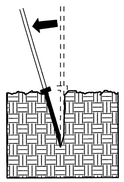


5. Place a 2 inch layer of well rotted sawdust over the roots maintaining a sloping angle.

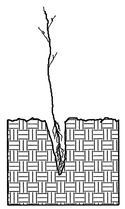


6. Repeat layers of plants and sawdust as necessary and water thoroughly.

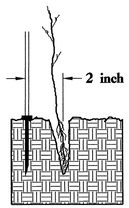
DIBBLE PLANTING METHOD
USING THE KBC PLANTING BAR



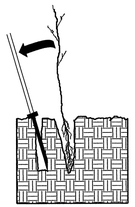
1. Insert planting bar as shown and pull handle toward planter.



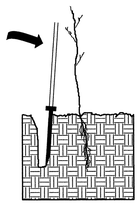
2. Remove planting bar and place seedling at correct depth.



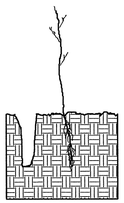
3. Insert planting bar 2 inches toward planter from seedling.



4. Pull handle of bar toward planter, firming soil at bottom.



5. Push handle forward firming soil at top.



6. Leave compaction hole open. Water thoroughly.

PLANTING NOTES:

PLANTING BAG
During planting, seedlings shall be kept in a moist canvas bag or similar container to prevent the root systems from drying.

KBC PLANTING BAR
Planting bar shall have a blade with a triangular cross section, and shall be 12 inches long, 4 inches wide and 1 inch thick at center.

ROOT PRUNING
All seedlings shall be root pruned, if necessary, so that no roots extend more than 10 inches below the root collar.

REFORESTATION

☐ TREE REFORESTATION SHALL BE PLANTED 6 FT. TO 10 FT. ON CENTER, RANDOM SPACING, AVERAGING 8 FT. ON CENTER, APPROXIMATELY 680 PLANTS PER ACRE.

REFORESTATION

MIXTURE, TYPE, SIZE, AND FURNISH SHALL CONFORM TO THE FOLLOWING:

40% SALIX NIGRA	BLACK WILLOW	12 in - 18 in BR
30% ALNUS SERRULATA	TAG ALDER	12 in - 18 in BR
30% LIRIODENDRON TULIPIFERA	TULIP POPLAR	12 in - 18 in BR

REFORESTATION DETAIL SHEET

N.C.D.O.T. - ROADSIDE ENVIRONMENTAL UNIT

T.I.P.: B-3346

CONTRACT: C203347

TIP NO.	SHEET NO.
B-3346	SIGN-1

APPROVED: RLW
DATE: 10/14/13

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022959 ENGINEER RONALD W. KING

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

SIGNING PLAN
HENDERSON COUNTY

LOCATION: BRIDGE No. 42 OVER SACONO CREEK ON SR 1734 (STEPP MILL ROAD)

GENERAL NOTES

- SIGNS FURNISHED BY STATE
- IF REMOVAL OR RELOCATION OF SIGNS ON PRIVATE STREET (NON-STATE MAINTAINED) IS REQUIRED DUE TO CONSTRUCTION, THE CONTRACTOR SHALL INFORM THE ENGINEER. THE WORK WILL BE COMPLETED BY OTHERS.
- WHEN NOT STATIONED OR DIMENSIONED ON PLANS, ALL 'E' AND 'F' SIGNS SHALL BE FIELD LOCATED BY THE ENGINEER
- ALL EXISTING SIGNS ON "U" CHANNEL POST WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISPOSED OF UNLESS OTHERWISE NOTED ON PLANS.
- WHEN EXISTING SIGNS ARE REMOVED AND INSTALLED ON NEW SUPPORTS, THE RE-ERECTION SHALL IMMEDIATELY FOLLOW THE REMOVAL.
- THE BACKGROUND FOR TYPE E & F SIGNS SHALL BE TYPE C REFLECTIVE SHEETING.
- SEE ROADWAY PLANS FOR GUARD/GUIDE RAIL DETAILS.

SUMMARY OF QUANTITIES

ITEM NO. DESC. NO.	ITEM NO. SECT. NO.	ITEM DESCRIPTION	QUANTITY	UNIT
4072000000	903	SUPPORTS, 3 LB STEEL U-CHANNEL	30	L.F.
4102000000	904	SIGN ERECTION, TYPE E	4	EA.
4155000000	907	DISPOSAL OF SIGN SYSTEM, U-CHANNEL	8	EA.

E SIGNS

(401) QUANTITY REQ'D 2

36 X 36
W5-2A

ONE "U" POST PER SIGN

(401) QUANTITY REQ'D 2

18 X 18
W13-1P

MOUNT BELOW SIGN 401
IN 2 INSTALLATIONS

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

904.10	ORIENTATION OF GROUND MOUNTED SIGNS
904.50	MOUNTING OF TYPE 'D', 'E' AND 'F' SIGNS ON 'U' CHANNEL POSTS

INDEX

SHEET NO.	DESCRIPTION
SIGN-1	TITLE SHEET & E SIGNS
SIGN-2	SIGN DETAIL SHEET

PLAN PREPARED BY: N.C.D.O.T. SIGNING AND DELINEATION UNIT

K. L JORDAN — SIGNING & DELINEATION REGIONAL ENGINEER

J. G. MARTINEZ — SIGNING & DELINEATION PROJECT DESIGN ENGINEER

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

08-OCT-2013 14:58
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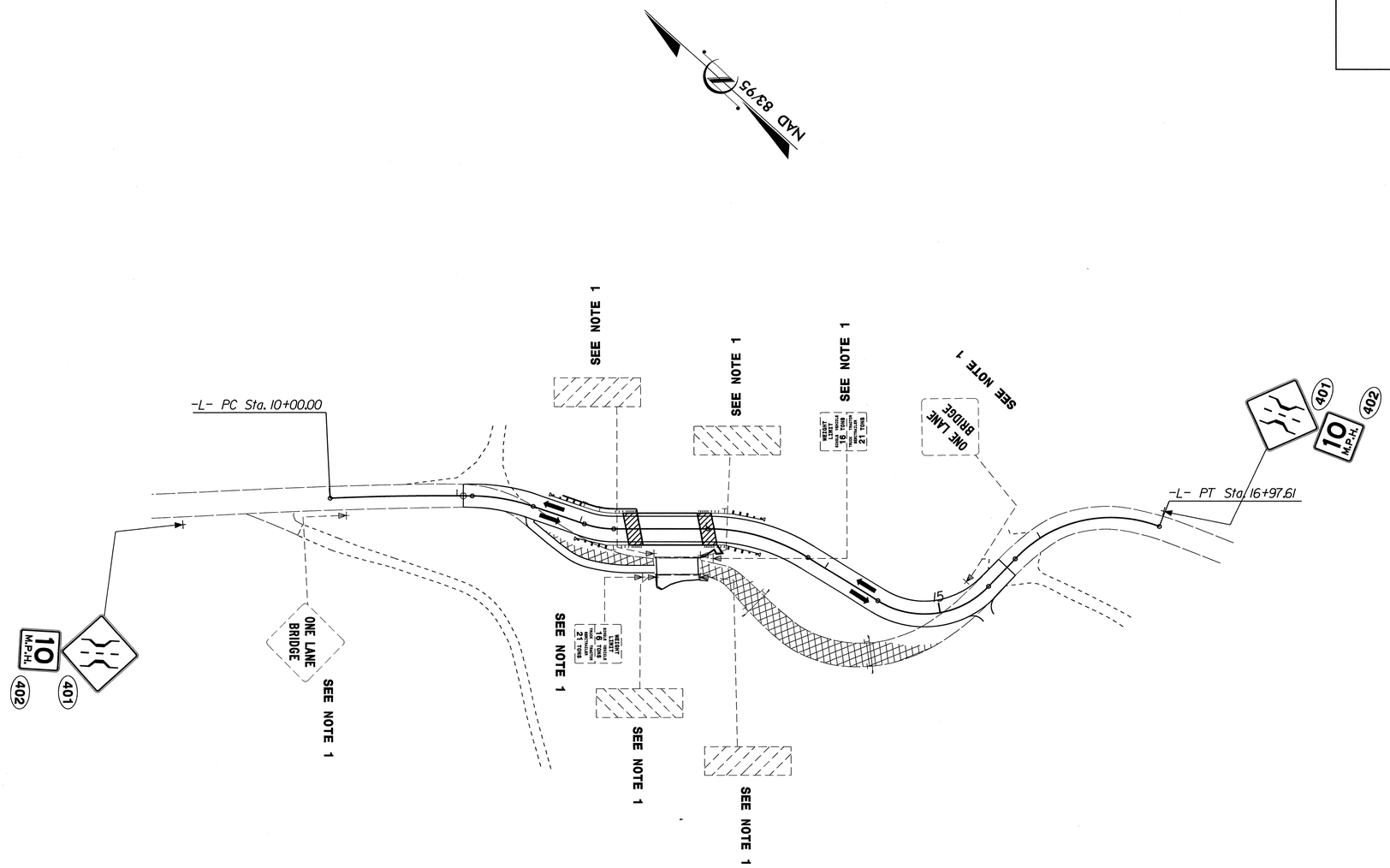
jgmartinez AT TE27440

TIP NO.	SHEET NO.
B-3346	SIGN-2

APPROVED:
DATE: 10/17/13

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022959 ENGINEER RONALD W. KING



PROJECT NOTES

1 DISPOSAL OF SIGN SYSTEM, U-CHANNEL

EXISTING AND PROPOSED SIGNS

08-OCT-2013 14:59
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jgmartinez AT TE274401

TIP NO.	SHEET NO.
B-3346	PMP-1

APPROVED: [signature]

DATE: 10/14/13

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022959 ENGINEER RONALD W. KING

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING PLAN

HENDERSON COUNTY

LOCATION: BRIDGE No. 42 OVER SACONON CREEK ON SR 1734 (STEPP MILL ROAD)

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTILANE ROADWAYS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1253.01	RAISED PAVEMENT MARKERS - SNOWPLOWABLE
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION

PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION	FINAL PAVEMENT MARKINGS
		PAINT(4")
PA	WHITE EDGELINE (2X)	
PI	YELLOW DOUBLE CENTER (2X)	

NOTE: FOR EACH PAINT PAVEMENT MARKING ITEM, 1X IMPLIES A SINGLE APPLICATION, 2X IMPLIES TWO APPLICATIONS, AND 3X IMPLIES THREE APPLICATIONS.

GENERAL NOTES

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.

A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME	MARKING	MARKER
-L-	PAINT	NONE

B) PLACE TWO APPLICATIONS OF PAINT PAVEMENT MARKINGS ON THE FINAL WEARING SURFACE. PLACE THE SECOND APPLICATION OF PAINT UPON SUFFICIENT DRYING TIME OF THE FIRST.

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

D) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.

E) PASSING ZONES WILL BE DETERMINED IN THE FIELD AND MUST BE APPROVED BY THE ENGINEER.

INDEX

SHEET NO.	DESCRIPTION
PMP-1	PAVEMENT MARKING PLAN TITLE AND SCHEDULE SHEET
PMP-2	PAVEMENT MARKING DETAIL

PLAN PREPARED BY: N.C.D.O.T. SIGNING AND DELINEATION UNIT

K. L. JORDAN — SIGNING & DELINEATION REGIONAL ENGINEER

J. G. MARTINEZ — SIGNING & DELINEATION PROJECT DESIGN ENGINEER

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

T.I.P.: B-3346

CONTRACT: C203347

14-OCT-2013 14:36
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jgmartinez AT TE274401

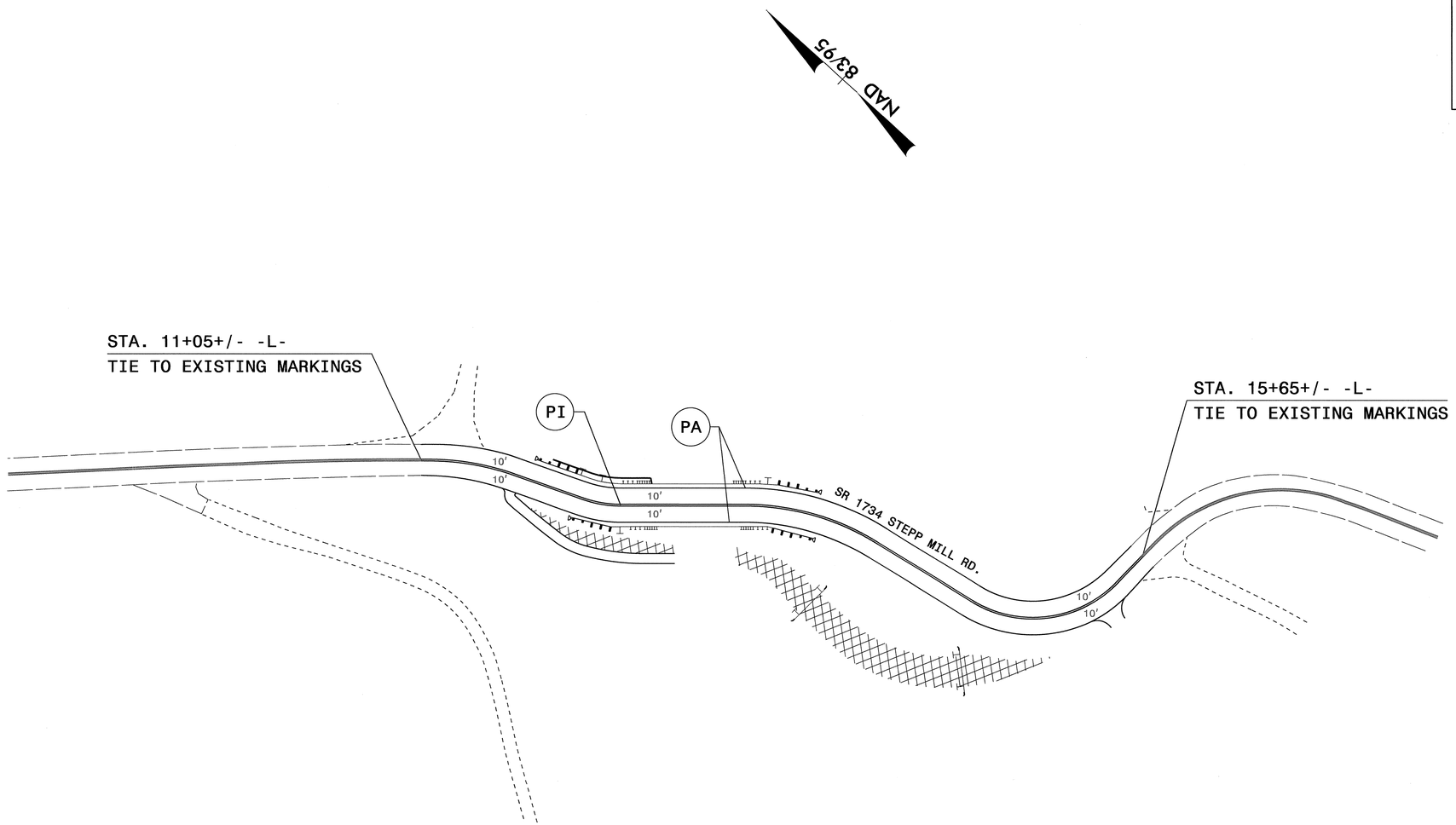
TIP NO.	SHEET NO.
B-3346	PMP-2

APPROVED: RWK

DATE: 10/14/13

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022959 ENGINEER RONALD W. KING



PROJECT NOTES

PA WHITE EDGELINE (4")
PI YELLOW DOUBLE YELLOW (4")

SR 1734 STEPP MILL RD.
PAVEMENT MARKING DETAIL

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jgmartinez AT TE27440I

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TIP PROJECT: B-3346

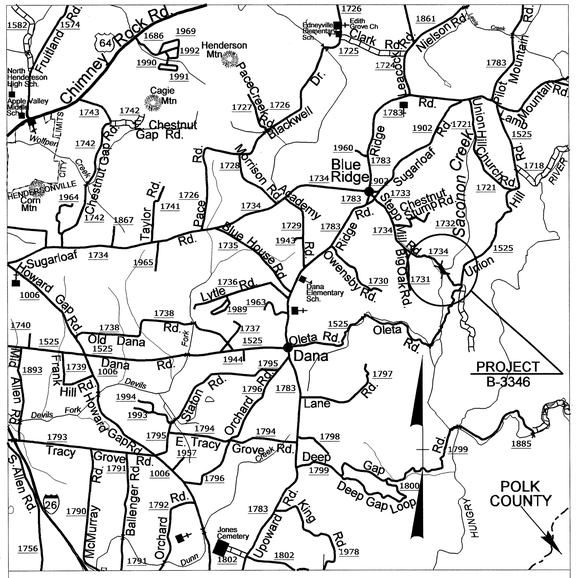
T.I.P. NO.	SHEET NO.
B-3346	UO-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITIES BY OTHERS PLANS
HENDERSON COUNTY

LOCATION: BRIDGE NO. 42 OVER SACONON CREEK ON SR 1734 (STEPP MILL ROAD)

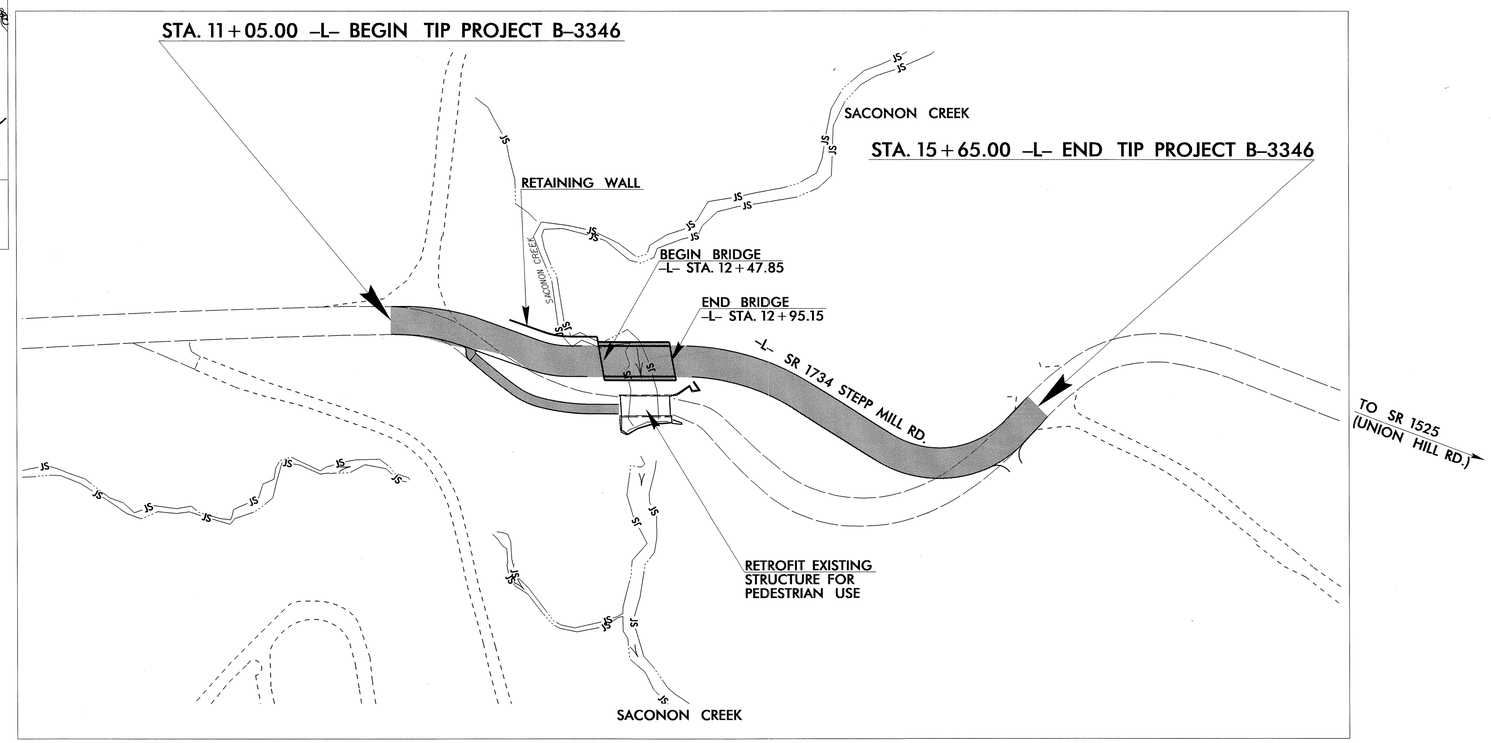
TYPE OF WORK: AERIAL POWER AND TELEPHONE



VICINITY MAP

DETOUR ROUTE

TO BLUE RIDGE



NAD 83/95

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2	UTILITIES BY OTHERS PLAN SHEET

UTILITY OWNERS ON PROJECT

(1) AT&T - TELEPHONE
(2) DUKE ENERGY - POWER DISTRIBUTION

PREPARED IN THE OFFICE OF:
DIVISION OF HIGHWAYS
UTILITIES ENGINEERING SECTION
1555 MAIL SERVICES CENTER
RALEIGH NC 27699-1555
PHONE (919) 707-6690
FAX (919) 250-4119

Roger Worthington, P.E. — UTILITIES SECTION ENGINEER
Carl Barclay, P.E. — UTILITIES SQUAD LEADER PROJECT ENGINEER
James E. Swinson — UTILITIES PROJECT DESIGNER

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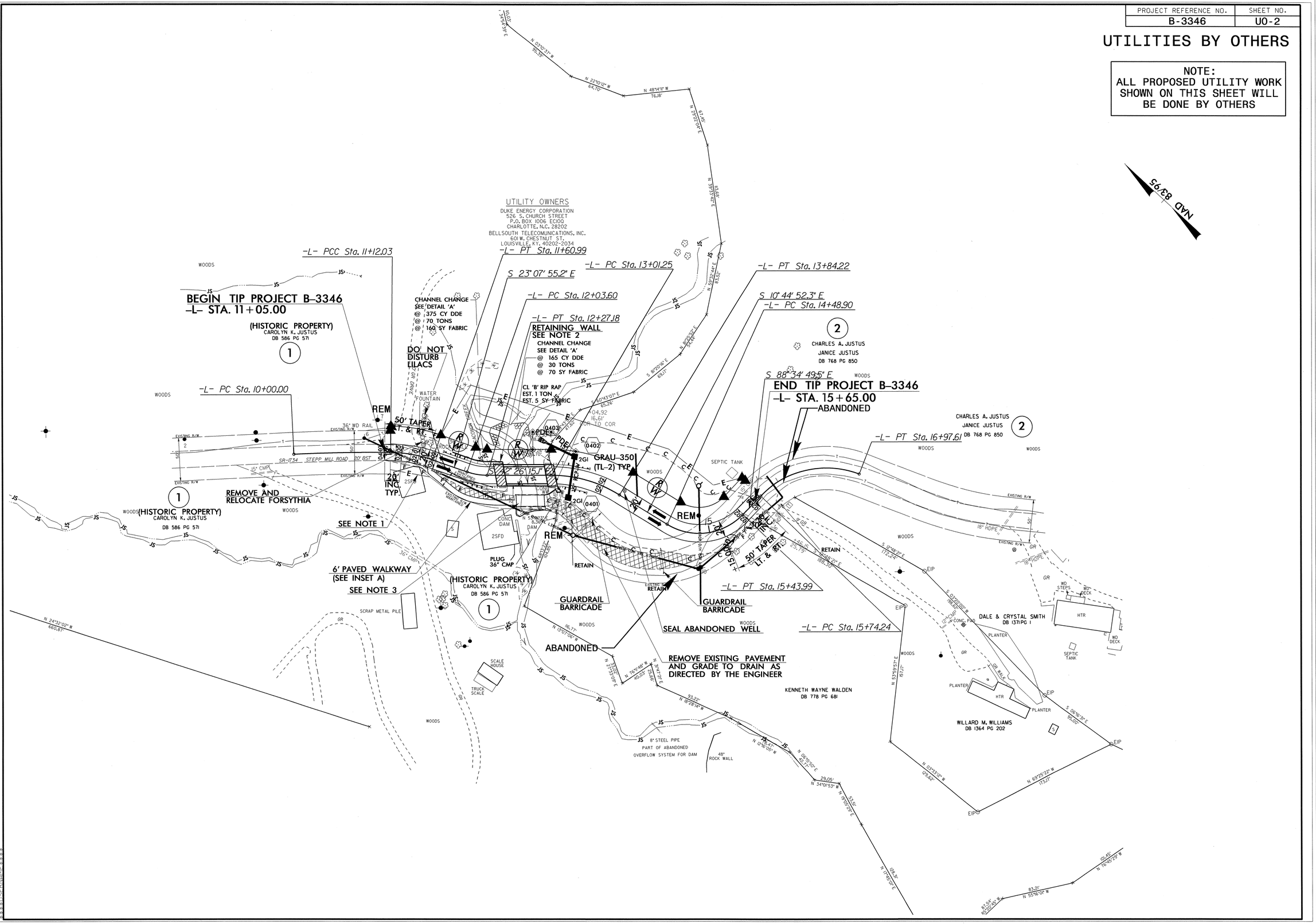
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
B-3346	U0-2

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS



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PROJ. REFERENCE NO.	SHEET NO.
B-3346	X-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CROSS-SECTION SUMMARY

Approximate quantities only. Fine grading, clearing and grubbing, and removal of existing pavement will be paid for at the lump sum price for "Grading".

NOTE: EMBANKMENT COLUMN DOES NOT INCLUDE BACKFILL FOR UNDERCUT

Station L	Uncl. Exc. (cu. yd.)	Embt (cu. yd.)
11+05.00	0	0
11+30.00	12	0
11+55.00	14	10
11+80.00	2	61
12+03.60	0	132
12+27.18	0	207
12+47.86	0	217

Station L	Uncl. Exc. (cu. yd.)	Embt (cu. yd.)
12+95.14	0	0
13+30.00	490	0
13+55.00	582	1
13+84.22	1260	2
14+05.00	1143	1
14+30.00	1326	1
14+48.90	828	1
14+80.00	853	1
15+05.00	324	1
15+15.00	78	1
15+30.00	74	2
15+55.00	62	3
15+65.00	8	0

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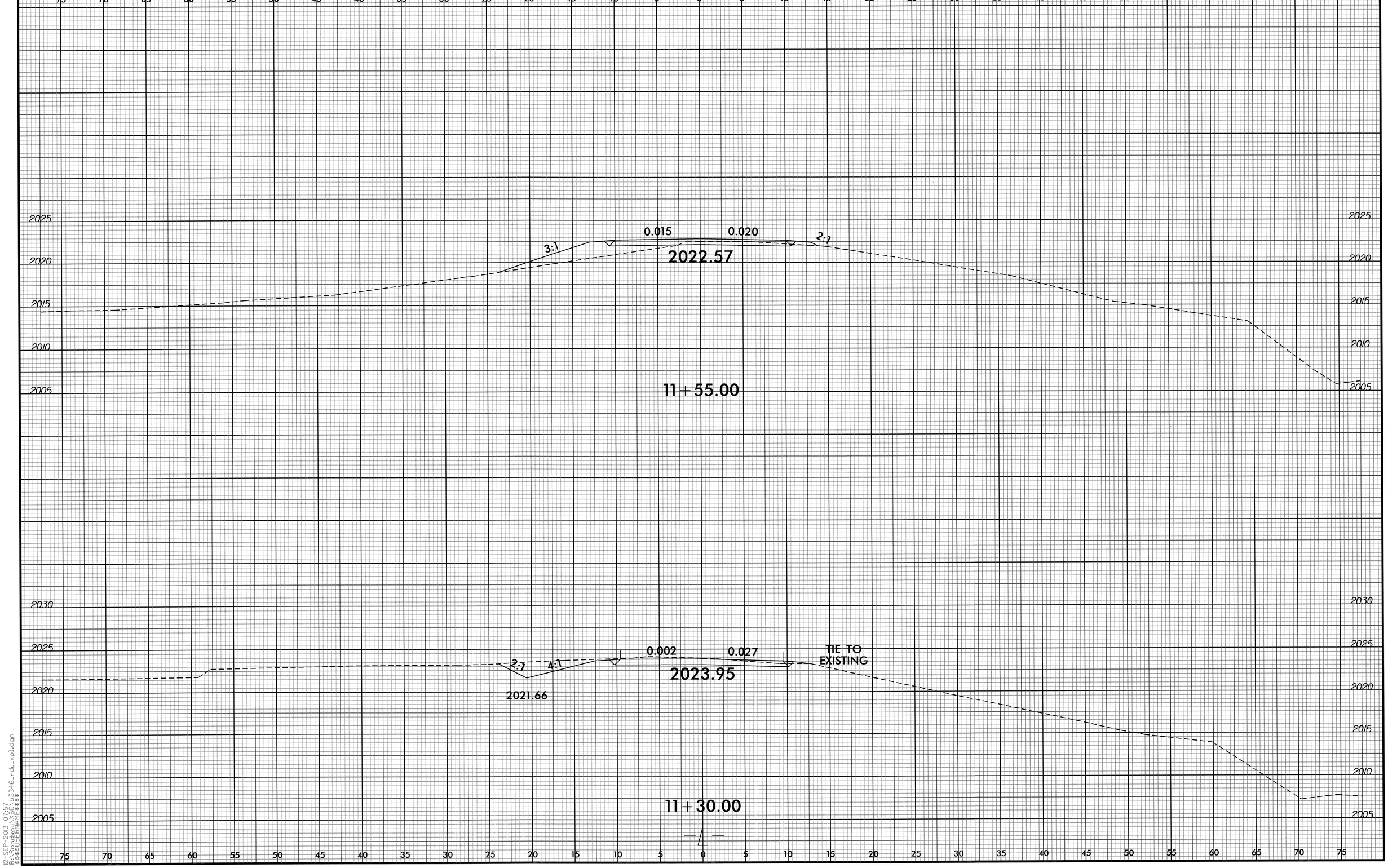

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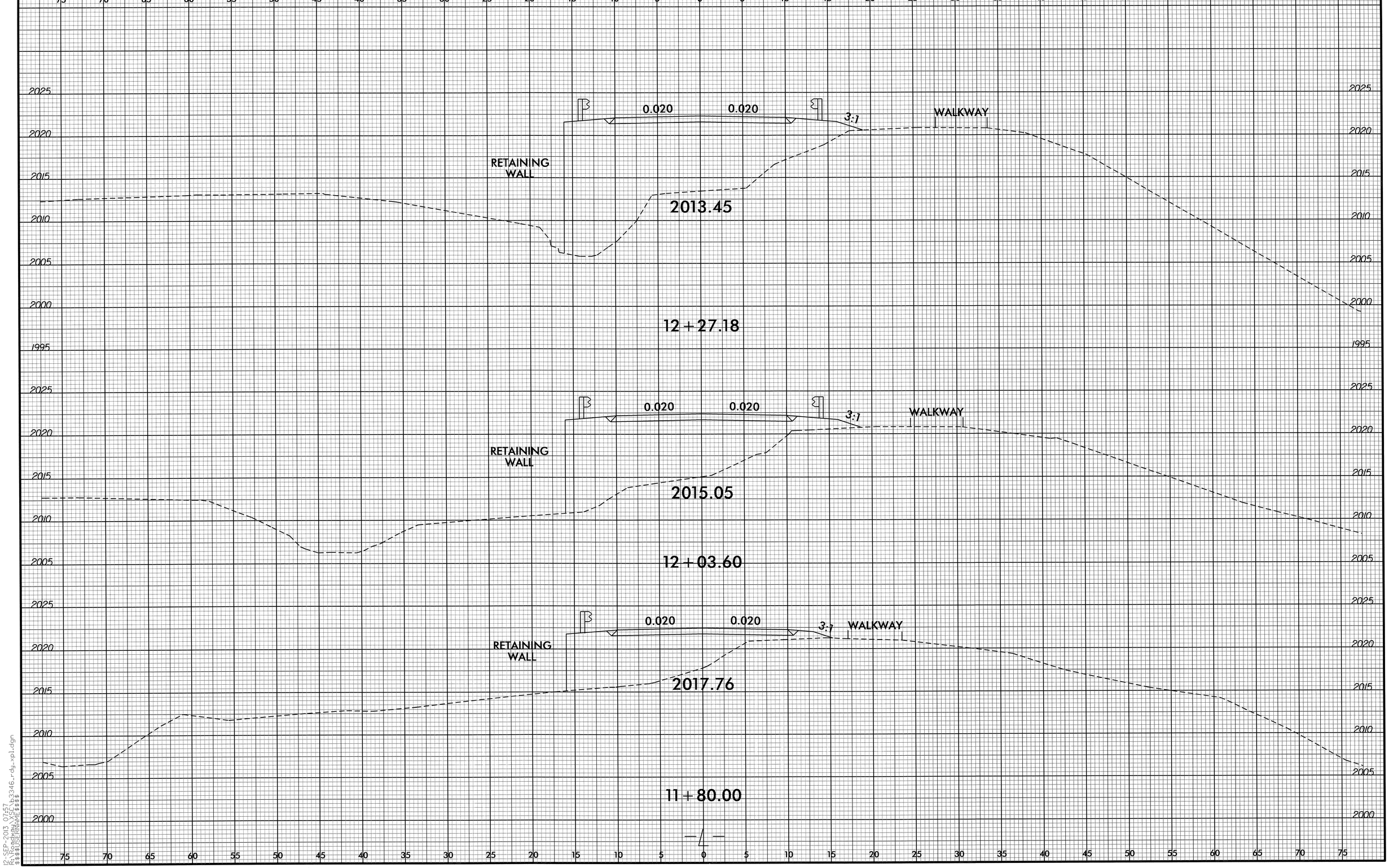

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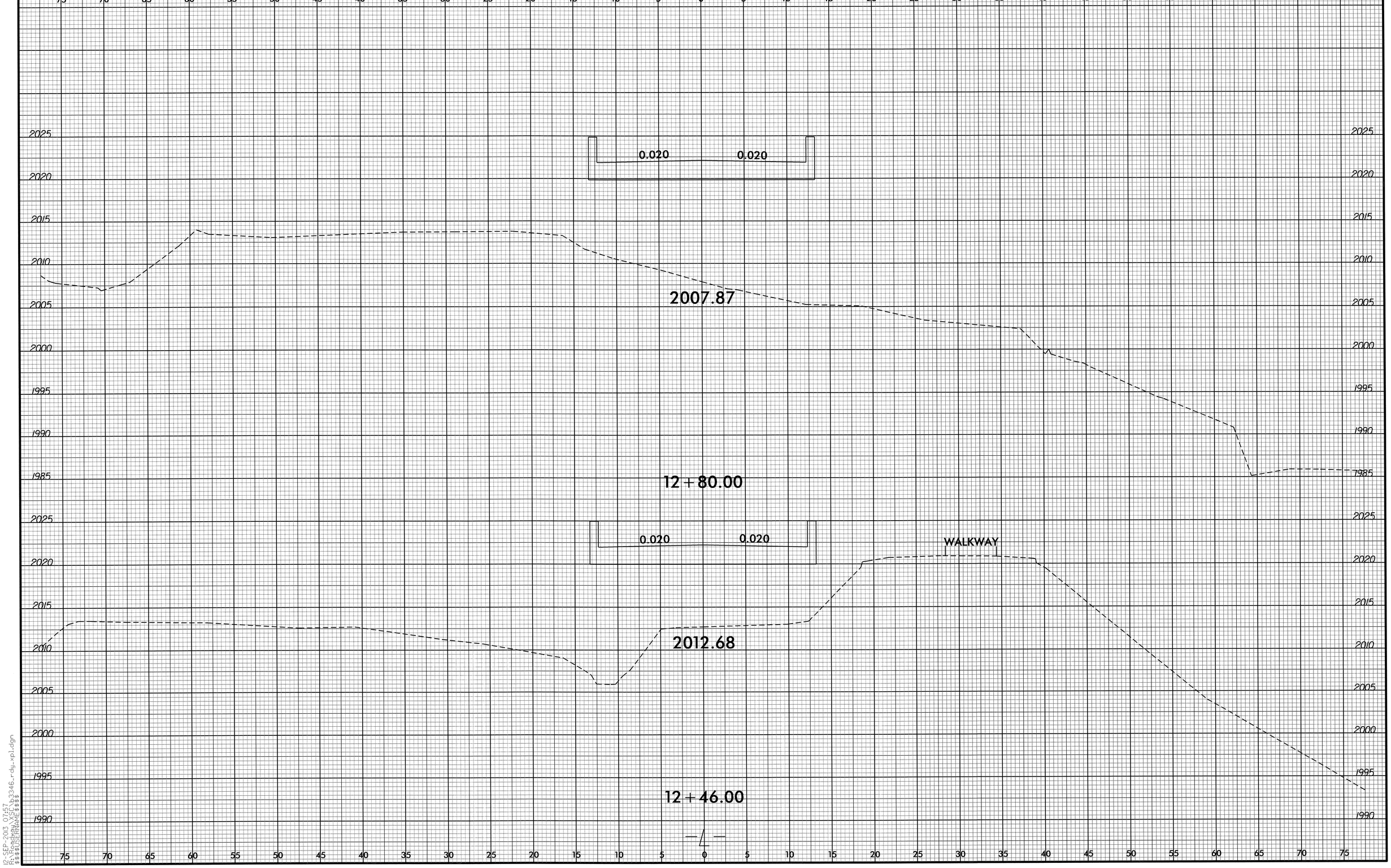

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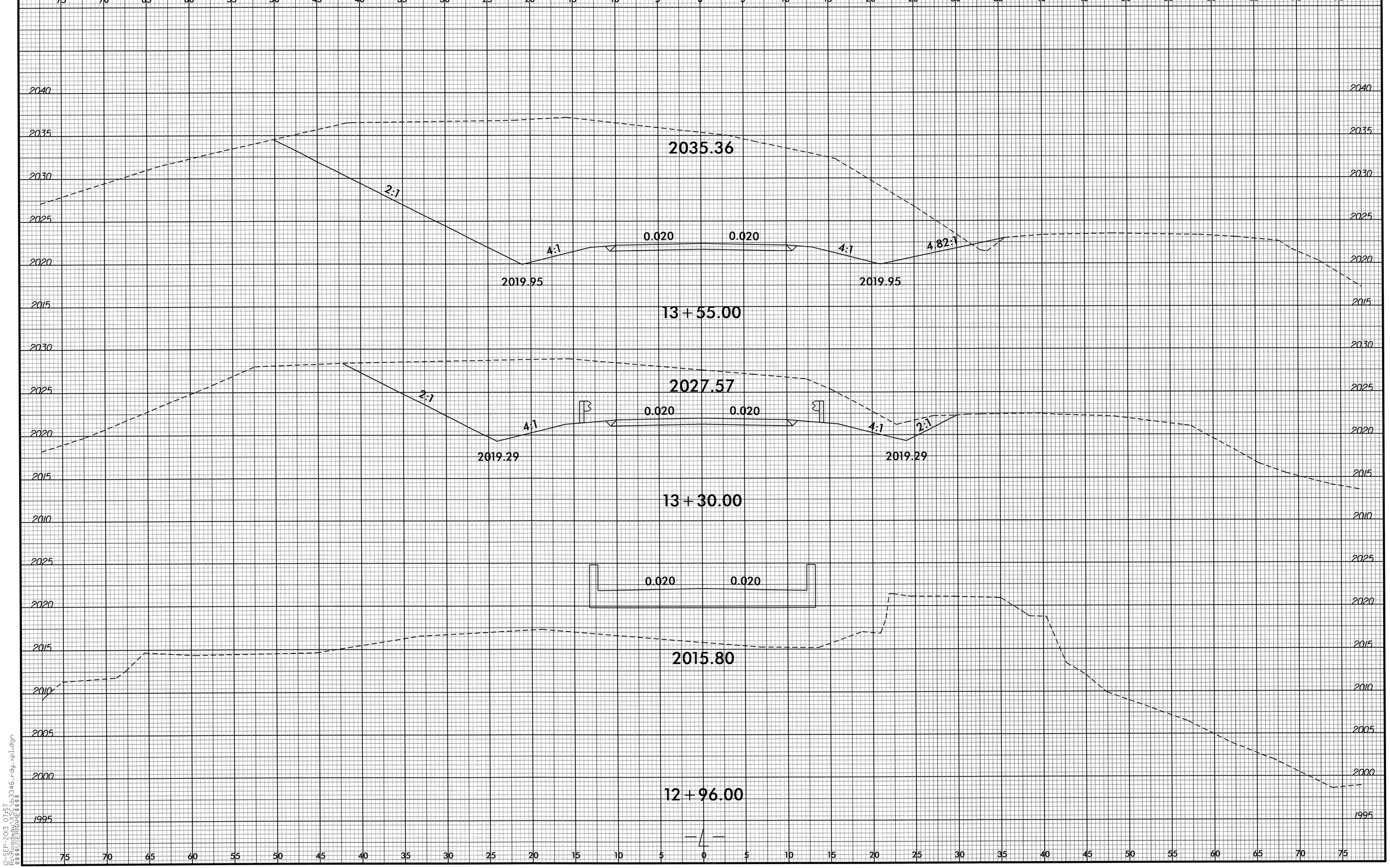

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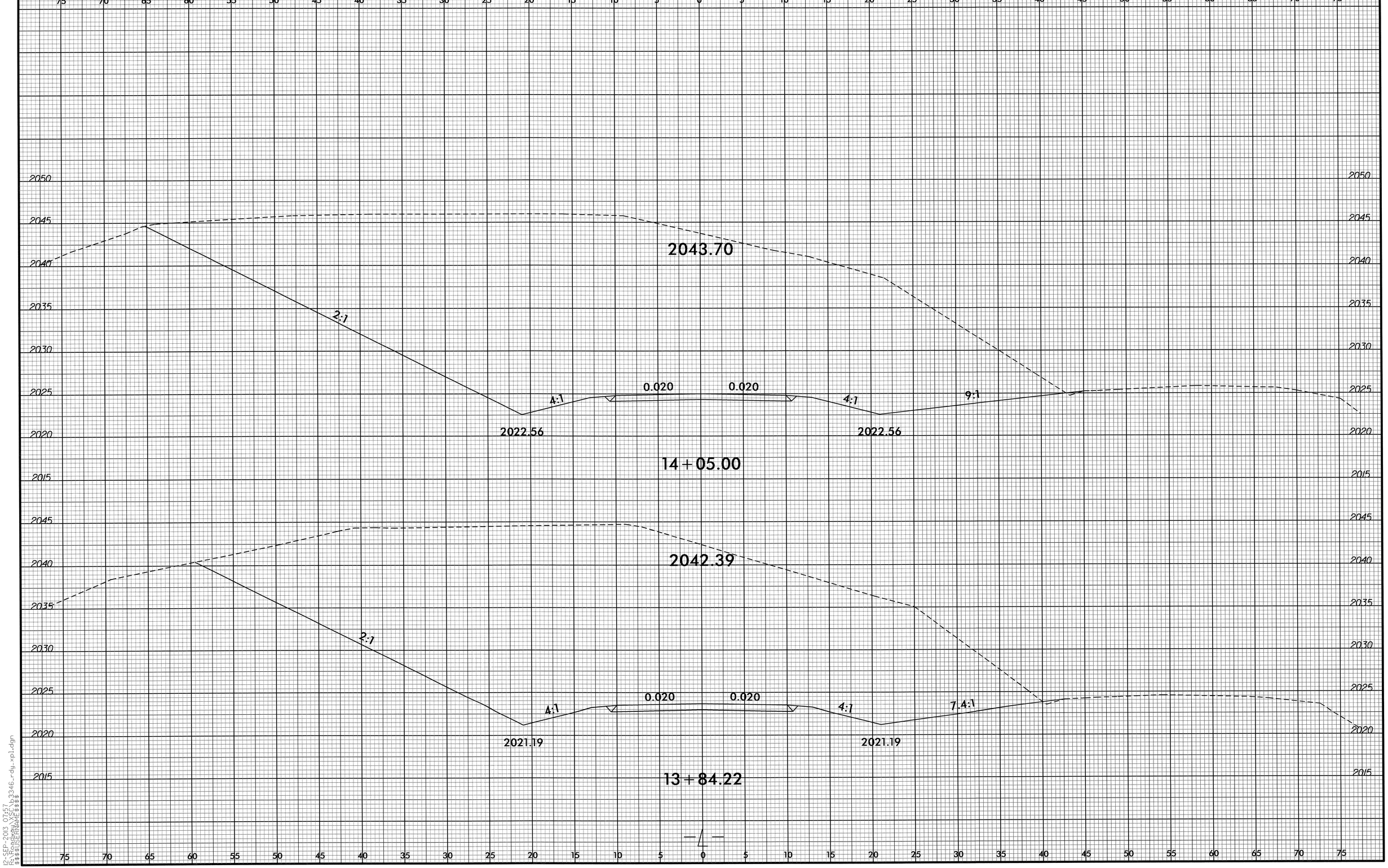

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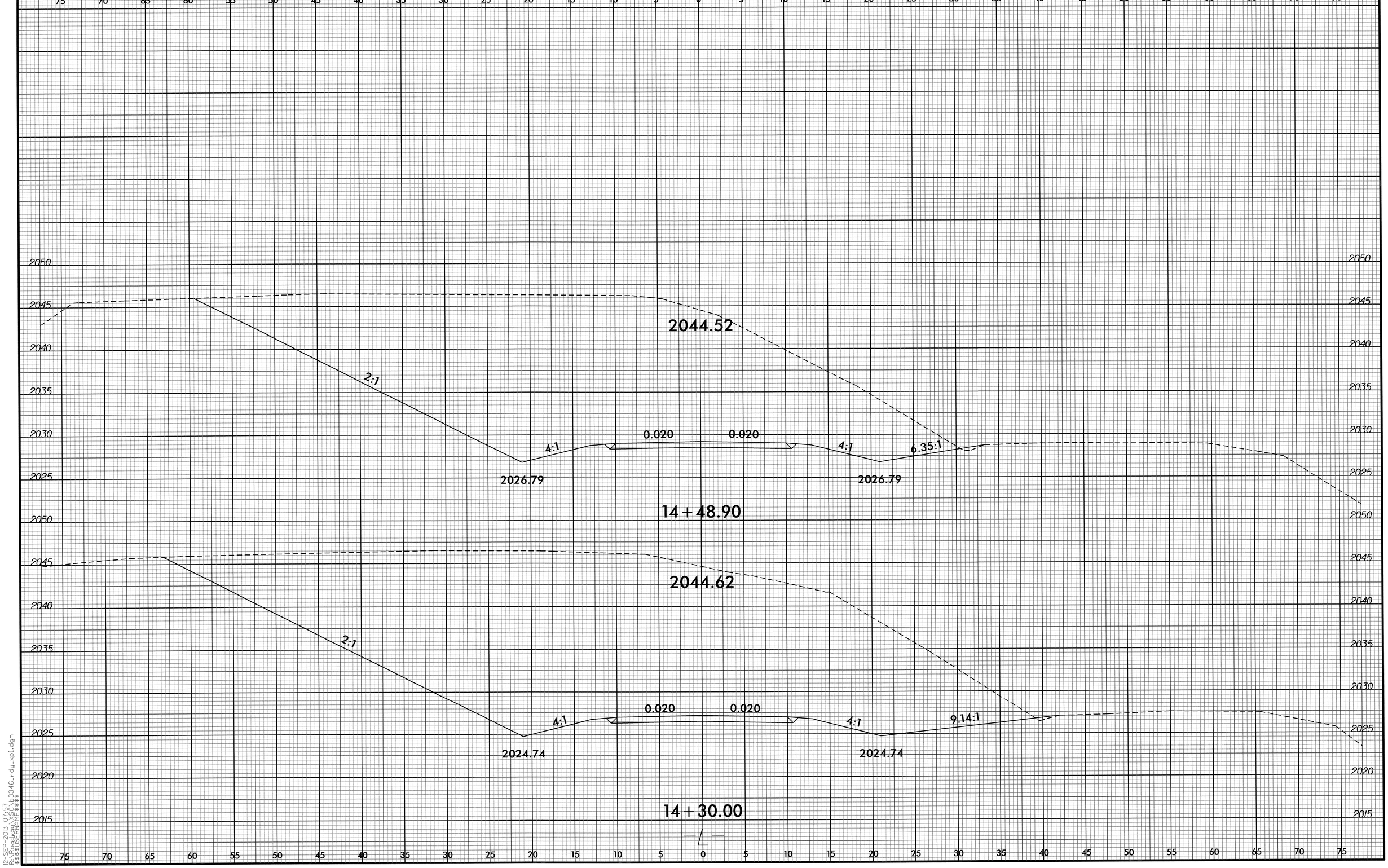

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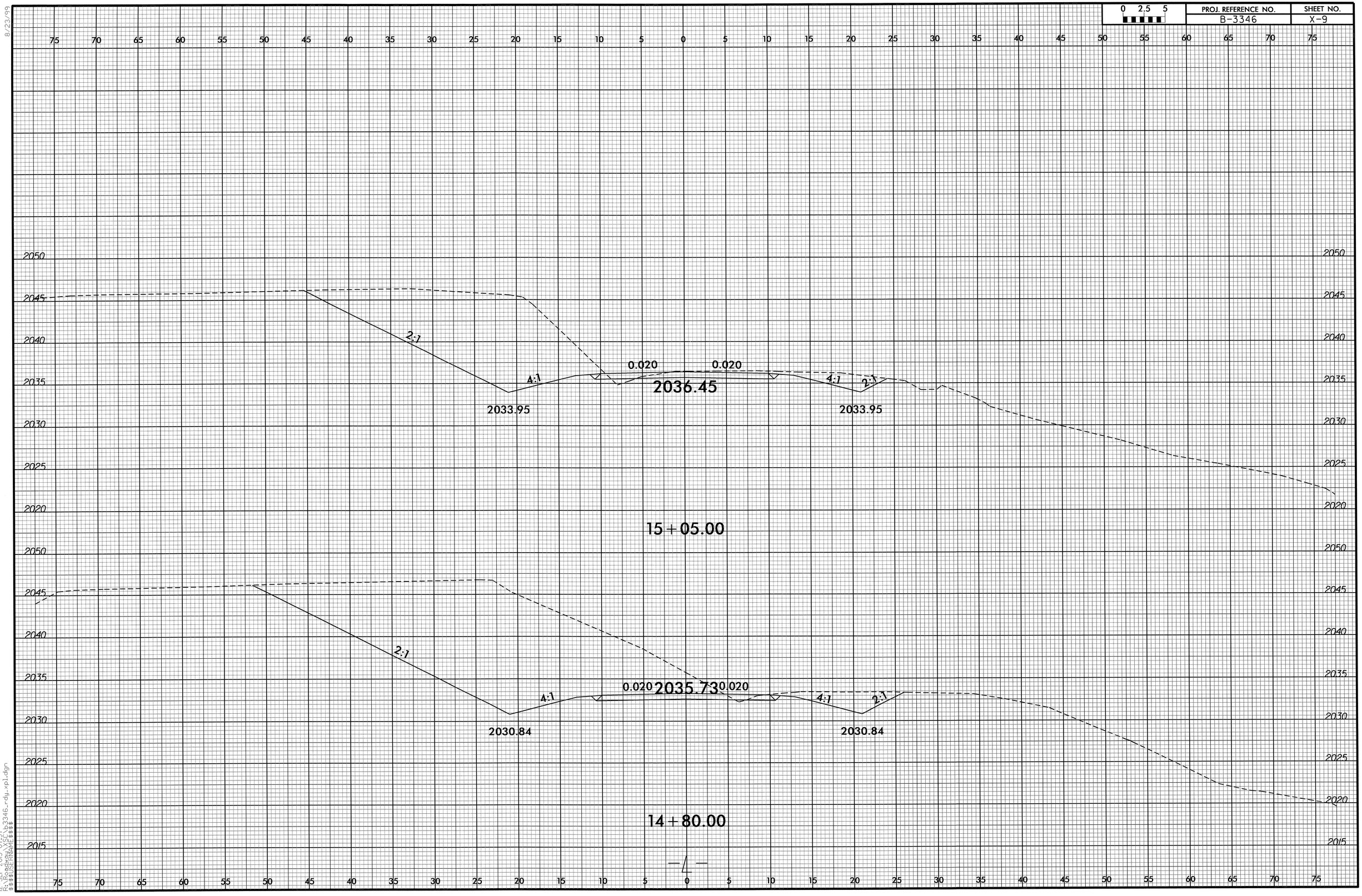

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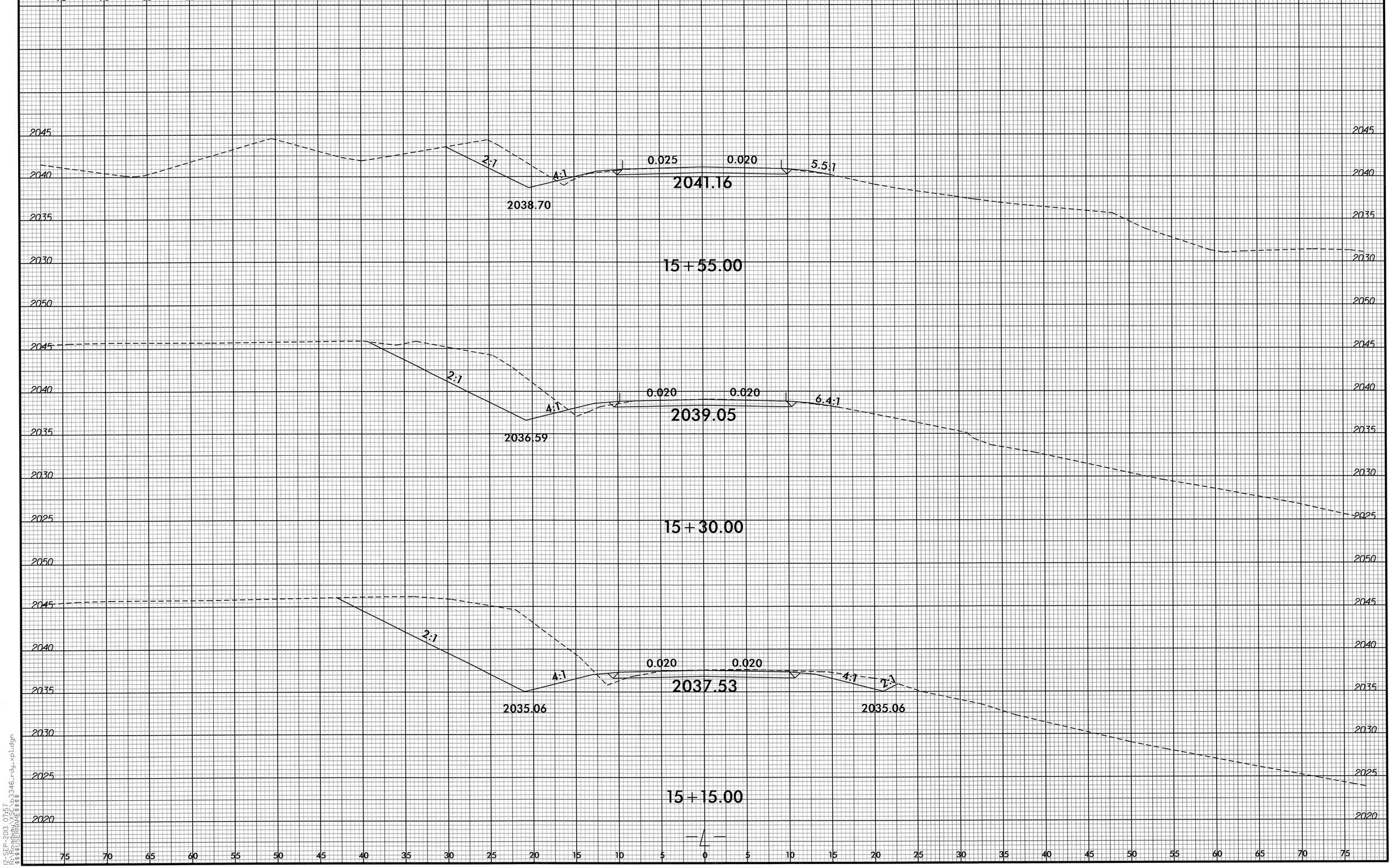

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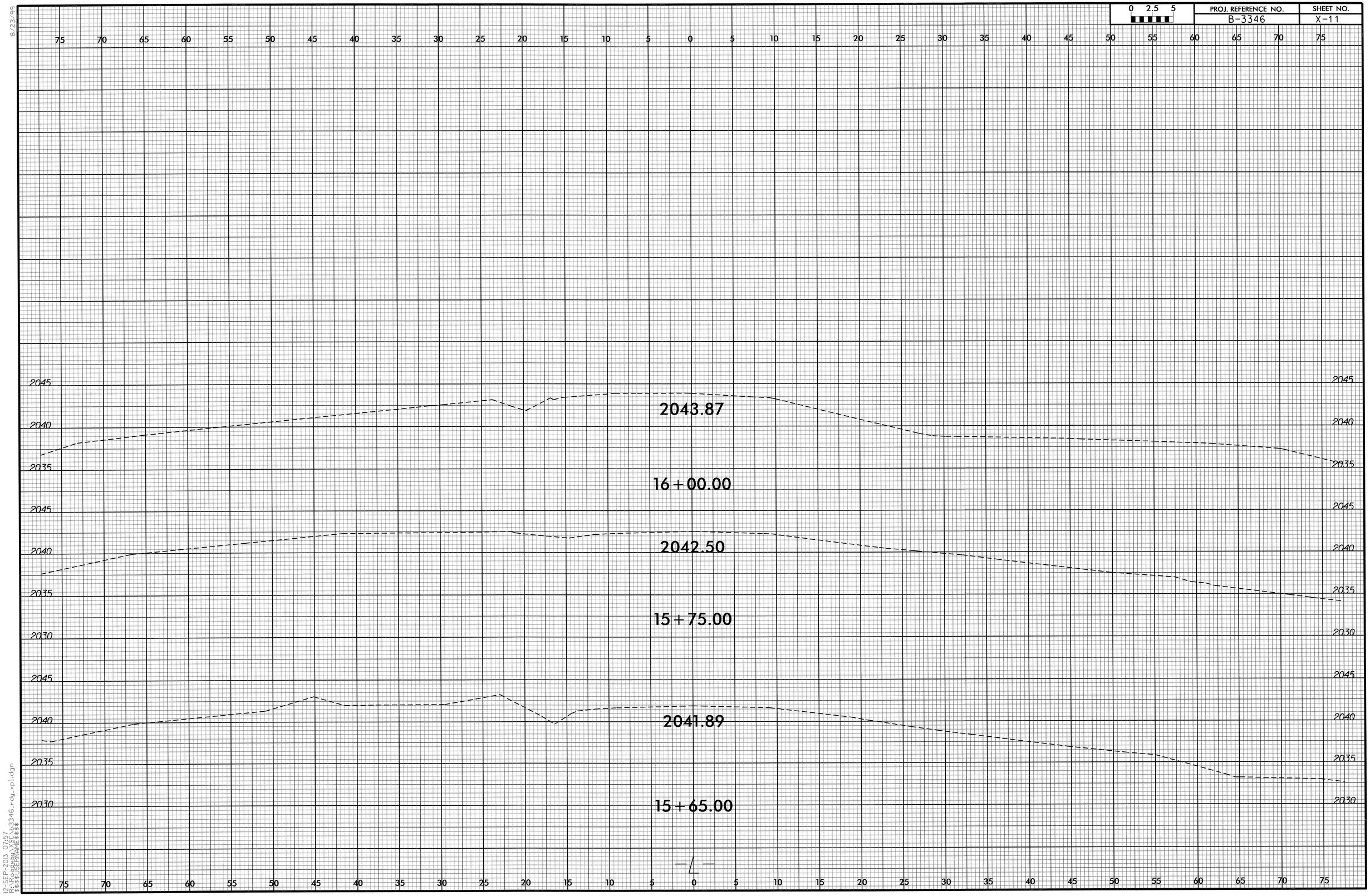

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