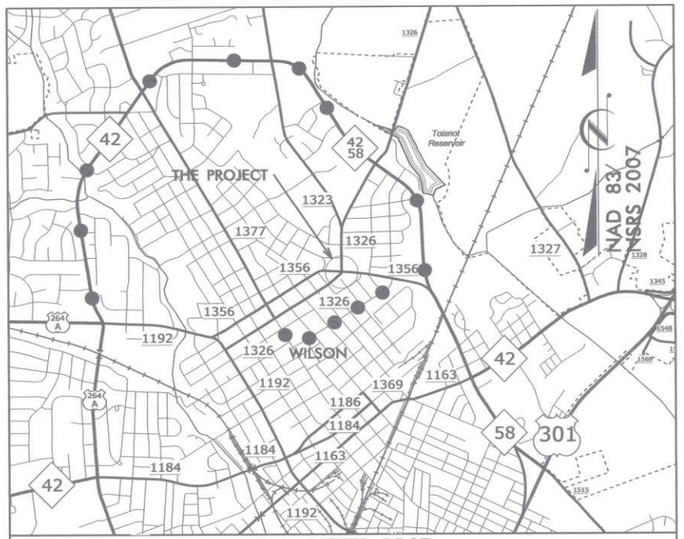
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	59024	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
59024		PE
59024		CONST

See Sheet 1-A For Index of Sheets



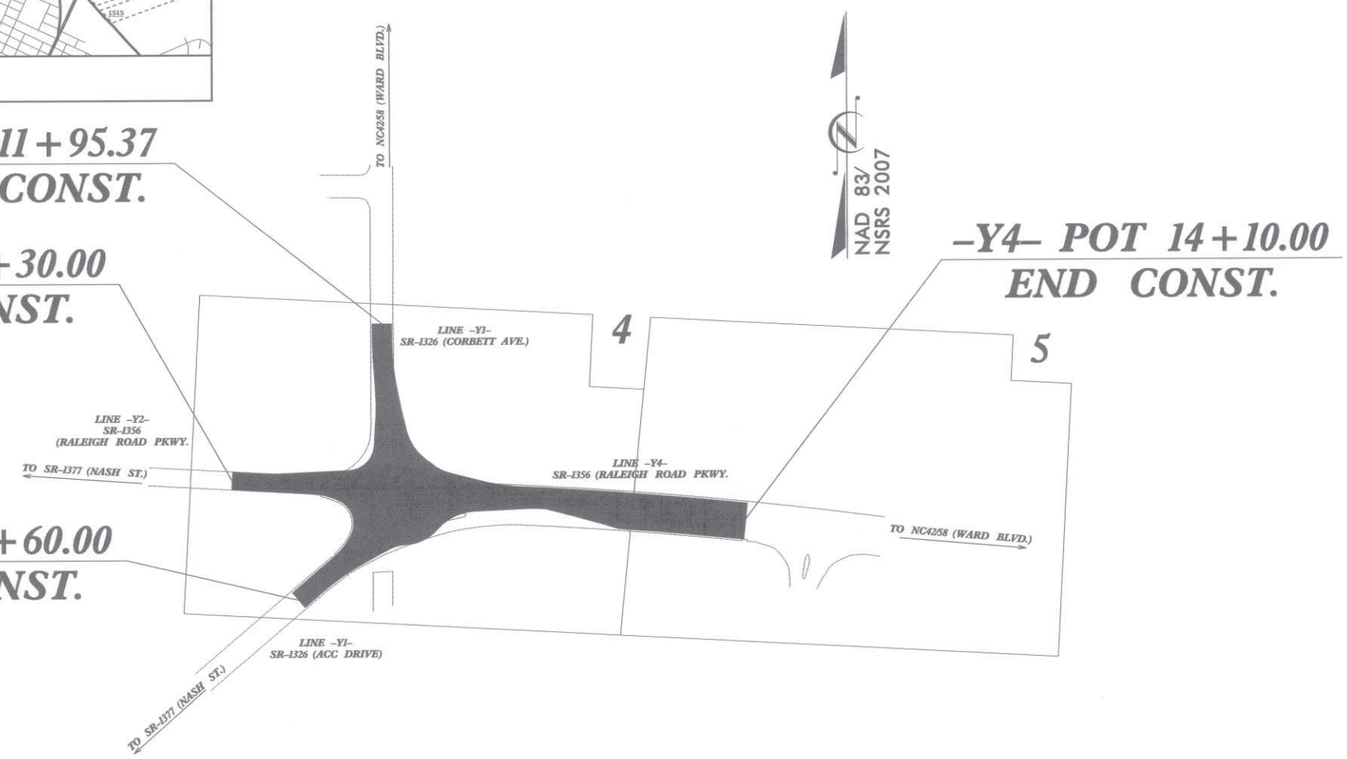
VICINITY MAP
DETOUR ROUTES

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

WILSON COUNTY

LOCATION: INTERSECTION OF SR-1356 (RALEIGH ROAD PKWY.) AND SR-1326 (ACC DRIVE – CORBETT AVE.)

TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND CULVERT EXTENSION.



THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF THE CITY OF WILSON

CONTRACT: DD00039

GRAPHIC SCALES

20 10 0 20 40
PLANS

20 10 0 20 40
PROFILE (HORIZONTAL)

4 2 0 4 8
PROFILE (VERTICAL)

Prepared In the Office of:
DIVISION OF HIGHWAYS
Division 4 DDC
509 Ward Blvd., Wilson NC, 27895

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

LETTING DATE:
August 7, 2012

JOHN ROUSE, PE
PROJECT ENGINEER

J. C. CAULEY, PLS
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 20106 ENGINEER ROBERT S. BARTLETT
SIGNATURE: 7/17/12 P.E.

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 18537 ENGINEER JERRY F. FAGLE
SIGNATURE: 7/17/12 P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

P.E.
STATE HIGHWAY DESIGN ENGINEER

17-JUL-2012 07:48
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$$$$USERNAME$$$$

PROJ. REFERENCE NO.	SHEET NO.
59024	1-A

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

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
1-C	SURVEY CONTROL SHEET
2 THRU 2-A	PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEDGING DETAILS
2-B	ROUND-ABOUT DETAIL
2-C	DETAIL FOR CURB RAMPS - PARALLEL RAMP
3	SUMMARY OF QUANTITIES
3-A	SUMMARY OF DRAINAGE QUANTITIES
3-B	SUMMARIES OF EARTHWORK AND ASPHALT PAVEMENT REMOVAL
4 THRU 5	PLAN SHEET
6	PROFILE SHEET
PM-1 THRU PM-4	PAVEMENT MARKING PLANS
EC-1 THRU EC-7	EROSION CONTROL PLANS
RF-1	REFORESTATION PLANS
SIGN-1 THRU SIGN-4	SIGNING PLANS
X-1A	CROSS-SECTION SUMMARY
X-1 THRU X-16	CROSS-SECTIONS
C-1 THRU C-4	CULVERT PLANS

GENERAL NOTES: 2012 SPECIFICATIONS
EFFECTIVE: 01-17-12
REVISED: 11/01/11

GRADING AND SURFACING OR RESURFACING AND WIDENING:

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

CLEARING:

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

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.

SIDE ROADS:

THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

DRIVEWAYS:

DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.02 USING 3' RADII OR RADII AS SHOWN ON THE PLANS. LOCATIONS OF DRIVES WILL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

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.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE CITY OF WILSON, CENTURYLINK

AND TIME WARNER

RIGHT-OF-WAY MARKERS:

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

CURB RAMPS

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

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	
200.03	Method of Clearing - Method III
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
225.06	Method of Grading Sight Distance at Intersections
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
840.00	Concrete Base Pad for Drainage Structures
840.01	Brick Catch Basin - 12" thru 54" Pipe
840.02	Concrete Catch Basin - 12" thru 54" Pipe
840.03	Frame, Grates and Hood - for Use on Standard Catch Basin
840.14	Concrete Drop Inlet - 12" thru 30" Pipe
840.15	Brick Drop Inlet - 12" thru 30" Pipe
840.16	Drop Inlet Frame and Grates - for use with Std. Dwg 840.14 and 840.15
840.19	Concrete Grated Drop Inlet Type 'D' - 12" thru 36" Pipe
840.24	Frames and Narrow Slot Sag Grates
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.28	Brick Grated Drop Inlet Type 'D' - 12" thru 36" Pipe
840.34	Traffic Bearing Junction Box - for Use with Pipes 42" and Under
840.45	Precast Drainage Structure
840.46	Traffic Bearing Precast Drainage Structure
840.54	Manhole Frame and Cover
840.66	Drainage Structure Steps
840.71	Concrete and Brick Pipe Plug
840.72	Pipe Collar
846.01	Concrete Curb, Gutter and Curb & Gutter
848.01	Concrete Sidewalk
848.02	Driveway Turnout - Radius Type
848.04	Street Turnout
848.05	Curb Ramp - Proposed Curb & Gutter
852.01	Concrete Islands

HP4500

04/16/11

PROJECT REFERENCE NO.	SHEET NO.
59024	1B

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 — 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
- Known Soil Contamination: Boundary or Site
- Potential Soil Contamination: Boundary 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 Marker — RW
- 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
- Curb Cut Future Ramp — CCFR
- 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
- 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.

HP4500

6/2/99

PROJECT REFERENCE NO.	SHEET NO.
59024	1-C
Location and Surveys	

SURVEY CONTROL SHEET SR-1356

BASELINE DATA

BL

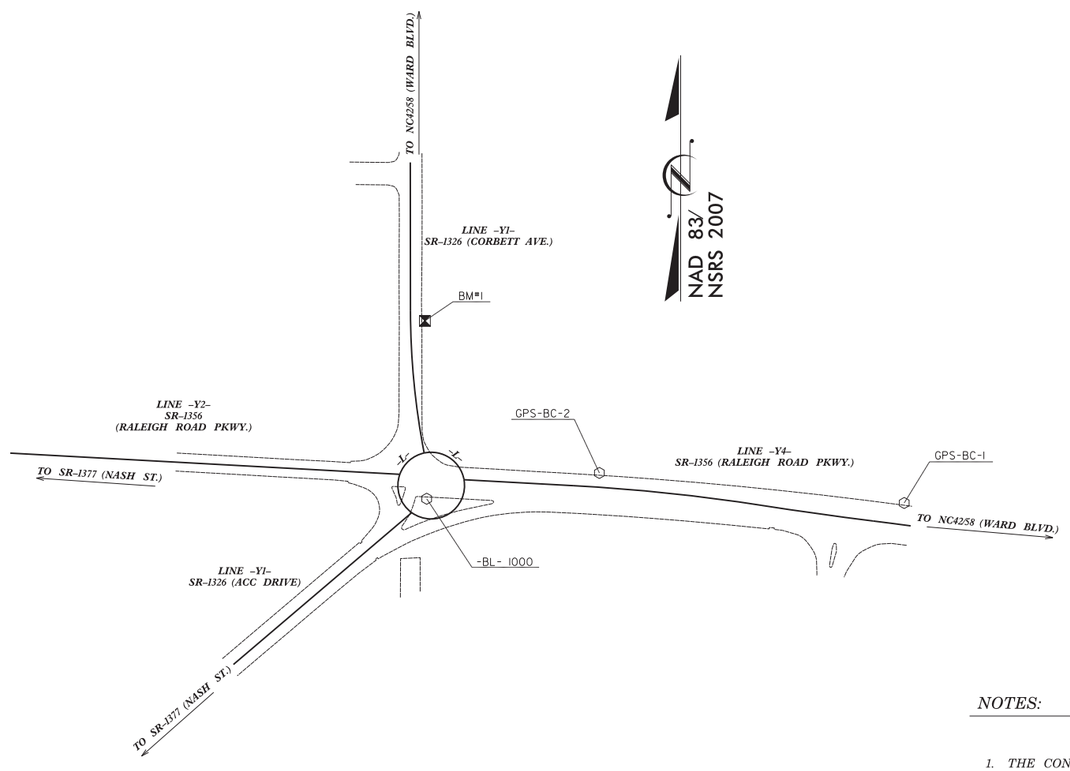
POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
1000	-BL- 1000	725263.5446	2323105.4897	111.44	11+14.355	25.64 LT

BL

POINT	DESC.	NORTH	EAST	ELEVATION	Y4 STATION	OFFSET
2	GPS BC-2	725297.5950	2323333.4500	110.58	11+77.702	18.84 LT
1	GPS BC-1	725257.9480	2323735.8700	109.12	15+80.780	28.80 LT

BENCHMARK DATA

```
*************************************
BM1       ELEVATION = 111.99
N 725476      E 2323150
Y1 STATION 12+34.000 65 LEFT
RR SPIKE IN BASE OF 54" WILLOW OAK
*************************************
```



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "GPS BC-2"
WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF
NORTHING: 725297.595(ft) EASTING: 2323333.450(ft)
ELEVATION: 110.58(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99990869
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "GPS BC-2" TO -L- Y4 STATION 10+00.00 IS
S 87°08'30.2" W 178.92'
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

NOTE: DRAWING NOT TO SCALE

NOTES:

1. *THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:*
   HTTP://WWW.NCDOT.ORG/DOH/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT/

   THE FILES TO BE FOUND ARE AS FOLLOWS:
   SR-1356_LS_CONTROL_120709.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.

11-JUL-2012 10:42
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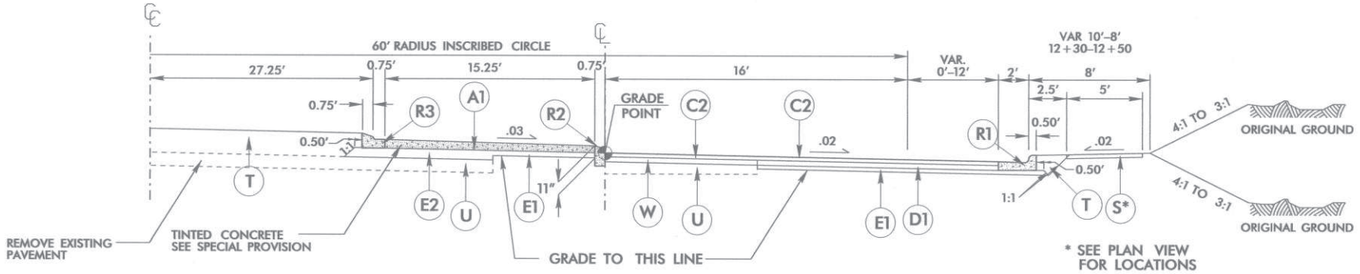
PROJECT REFERENCE NO.	SHEET NO.
59024	2

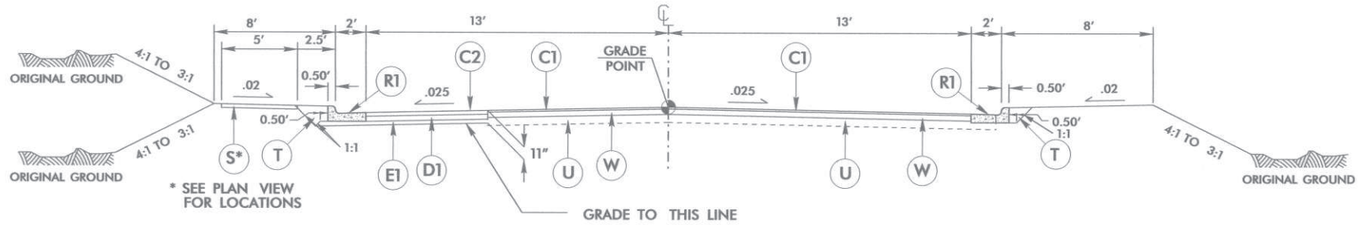
ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 18537 ENGINEER JERRY P. TAYLOR



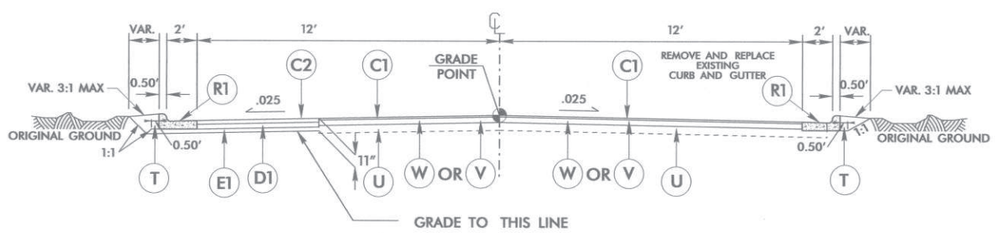
TYPICAL SECTION NO. 1

–L– STA. 10+00.00 TO 12+76.46



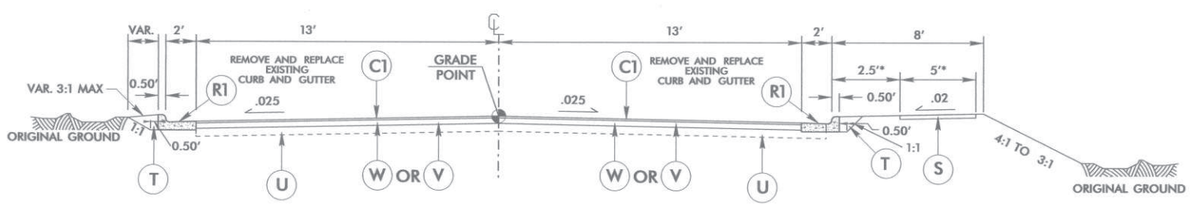
TYPICAL SECTION NO. 2

–Y1– 11+95.37 TO 13+68.71



TYPICAL SECTION NO. 3

–Y2– 13+30.00 TO 14+97.16



* TRANSITION FROM EXISTING FROM 11+60 TO 12+00

TYPICAL SECTION NO. 4

–Y3– 11+60.00 TO 12+91.84

PAVEMENT SCHEDULE	
A1	7" PORTLAND CEMENT CONCRETE PAVEMENT.
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
D1	PROP. APPROX. 4 " ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2½" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5½" IN DEPTH.
R1	2'-6" CONCRETE CURB AND GUTTER.
R2	9"x18" CONCRETE CURB.
R3	1'-6" CONCRETE CURB AND GUTTER.
R4	5" MONOLITHIC CONCRETE ISLAND (KEYED IN).
S	4" CONCRETE SIDEWALK.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	MILL TO 1.5" BELOW GRADE (0" TO 3")
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL).

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

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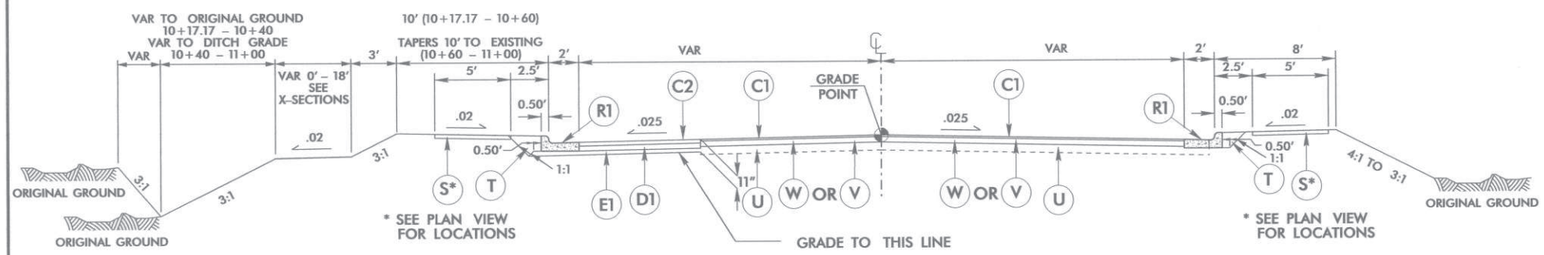
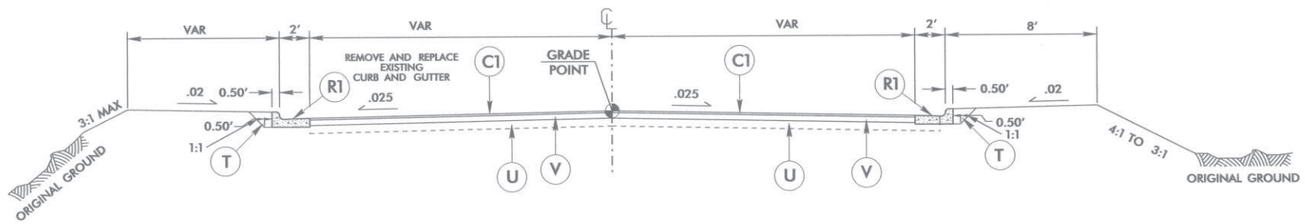


TYPICAL SECTION NO. 5

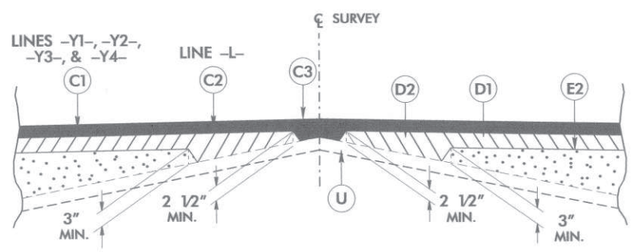
–Y4– 10+17.17 TO 11+00.00



TYPICAL SECTION NO. 6

–Y4– 11+00.00 TO 12+44.96

MILL AND RESURFACE WITH 1.5" S9.5B FROM 12+44.96 TO 14+10



STANDARD WEDGING DETAIL

PROJECT REFERENCE NO.	SHEET NO.
59024	2A

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 19537 ENGINEER GARY L. PAGE

PAVEMENT SCHEDULE

A1	7" CONC PAVE
C1	1½" S9.5B
C2	3" S9.5B
C3	VAR. S9.5B
D1	4" I19.0B
D2	VAR. I19.0B
E1	4" B25.0B
E_	VAR. B25.0B
R1	2'-6" C & G
R2	9"x18" CURB
R3	1'-6" C & G
R3	ISLAND
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXIST PAVEMENT
V	MILLING
W	WEDGING

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PROJECT REFERENCE NO.	SHEET NO.
59024	2B

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 18937 ENGINEER KEVIN P. NAGLE

LINE -L-

PI Sta 12+51.37
△ = 92° 01' 23.9" (LT)
D = 130° 13' 03.6"
L = 70.67'
T = 45.58'
R = 44.00'

PI Sta 10+24.42
△ = 58° 04' 05.5" (LT)
D = 130° 13' 03.7"
L = 44.59'
T = 24.42'
R = 44.00'

PI Sta 10+77.75
△ = 74° 00' 13.1" (LT)
D = 130° 13' 03.6"
L = 56.83'
T = 33.16'
R = 44.00'

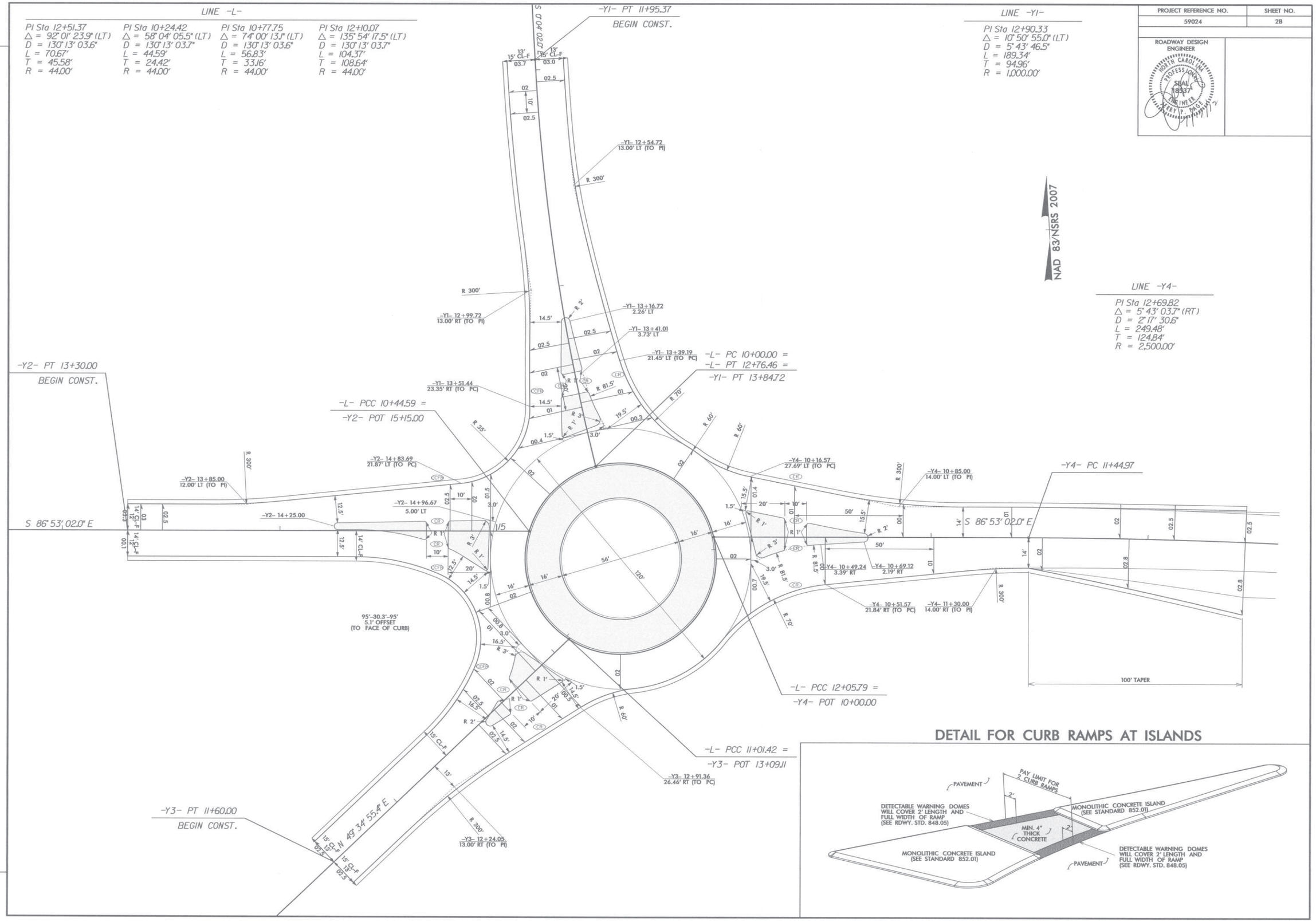
PI Sta 12+10.07
△ = 135° 54' 17.5" (LT)
D = 130° 13' 03.7"
L = 104.37'
T = 108.64'
R = 44.00'

LINE -Y1-

PI Sta 12+90.33
△ = 10° 50' 55.0" (LT)
D = 5° 43' 46.5"
L = 189.34'
T = 94.96'
R = 1,000.00'

LINE -Y4-

PI Sta 12+69.82
△ = 5° 43' 03.7" (RT)
D = 2° 17' 30.6"
L = 249.48'
T = 124.84'
R = 2,500.00'



DETAIL FOR CURB RAMPS AT ISLANDS

REVISIONS

16-JUL-2012 10:10
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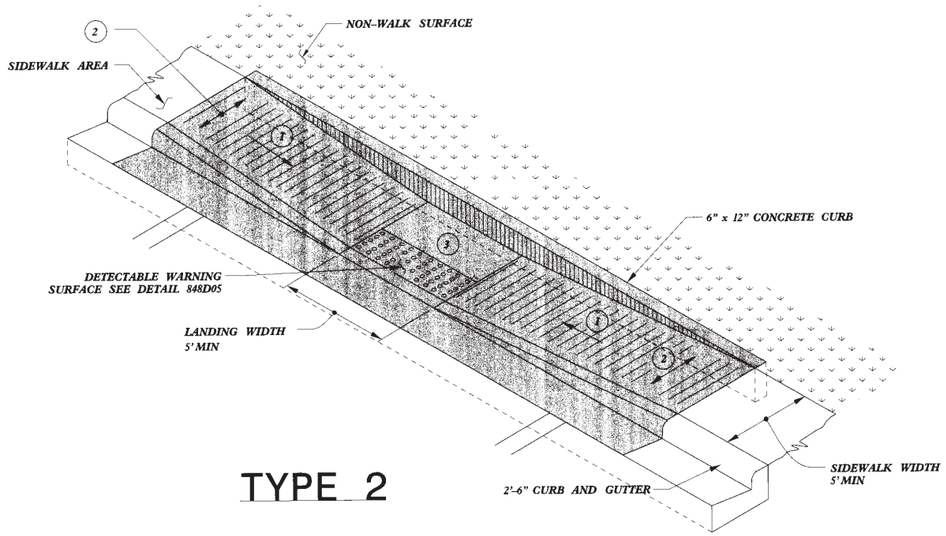
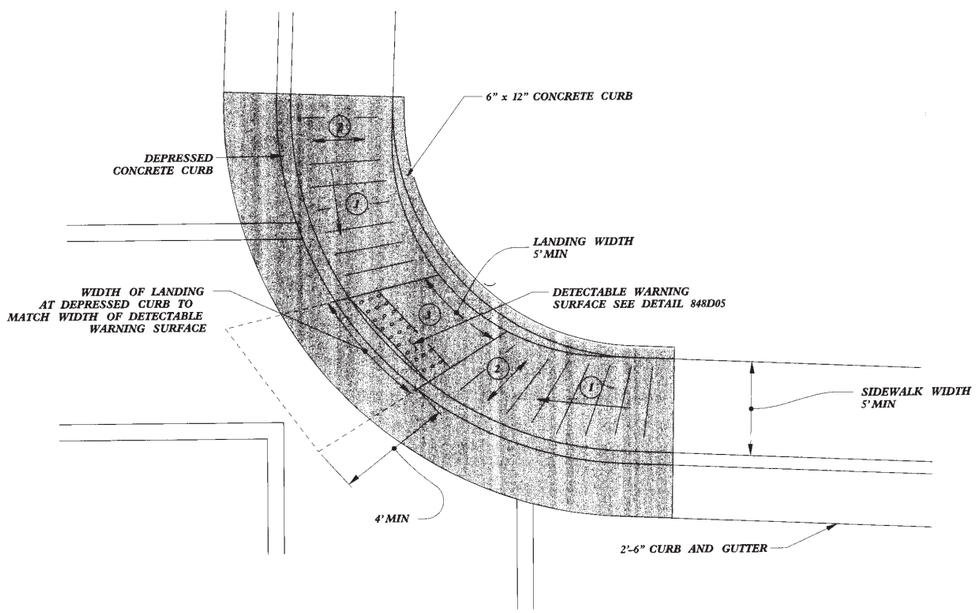
PROJECT REFERENCE NO.	SHEET NO.
59024	2C



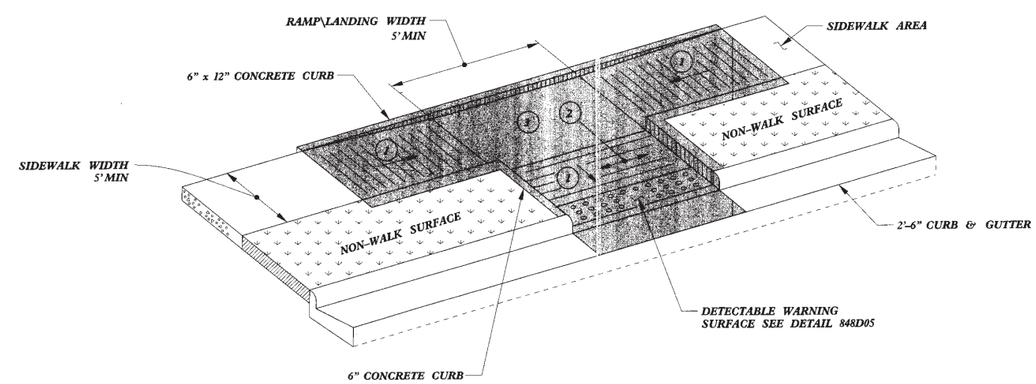
TYPE 2

PAY LIMITS FOR 1 CURB RAMP

1. 8.33% (12:1) MAX RAMP SLOPE
2. CROSS SLOPE: 2.00%
3. CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.



TYPE 2A



TYPE 3

REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

NORTH CAROLINA PROFESSIONAL SEAL 022966 ENGINEER JOEL S. HOWERTON 6/27/12

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

CURB RAMPS

Parallel Ramps

ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
MODIFIED BY: DATE:
CHECKED BY: DATE: 6/26/12
FILE SPEC. sdds/2012CurbRamp/CurbRampDetails.dgn

5/14/99
$$$$$$$$$$TIME$$$$
$$$$$$$$$$RUN$$$$$$$$$$$$$$$$
$$$$$$$$$$FILENAME$$$$

PROJ. REFERENCE NO.	SHEET NO.
59024	3

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
SUMMARY OF QUANTITIES

0000100000-N	800	1	LS	MOBILIZATION
0043000000-N	226	1	LS	GRADING
0050000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUBBING
0057000000-E	226	100	CY	UNDERCUT EXCAVATION
0134000000-E	240	10	CY	DRAINAGE DITCH EXCAVATION
0156000000-E	250	850	SY	REMOVAL OF EXISTING ASPHALT PAVEMENT
0318000000-E	300	70	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES
0320000000-E	300	220	SY	FOUNDATION CONDITIONING GEOTEXTILE
0335200000-E	305	24	LF	15" DRAINAGE PIPE
0335300000-E	305	16	LF	24" DRAINAGE PIPE
0366000000-E	310	144	LF	15" RC PIPE CULVERTS, CLASS III
0372000000-E	310	48	LF	18" RC PIPE CULVERTS, CLASS III
0378000000-E	310	88	LF	24" RC PIPE CULVERTS, CLASS III
0384000000-E	310	84	LF	30" RC PIPE CULVERTS, CLASS III
0390000000-E	310	124	LF	36" RC PIPE CULVERTS, CLASS III
0396000000-E	310	68	LF	42" RC PIPE CULVERTS, CLASS III
0448200000-E	310	44	LF	15" RC PIPE CULVERTS, CLASS IV
0995000000-E	340	681	LF	PIPE REMOVAL
1099500000-E	505	100	CY	SHALLOW UNDERCUT
1099700000-E	505	200	TON	CLASS IV SUBGRADE STABILIZATION
1220000000-E	545	100	TON	INCIDENTAL STONE BASE
1308000000-E	607	2350	SY	MILLING ASPHALT PAVEMENT, ***" TO *******" (0"TO3")
1330000000-E	607	250	SY	INCIDENTAL MILLING
1489000000-E	610	390	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B
1498000000-E	610	200	TON	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0B
1519000000-E	610	490	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5B
1575000000-E	620	60	TON	ASPHALT BINDER FOR PLANT MIX
1693000000-E	654	300	TON	ASPHALT PLANT MIX, PAVEMENT REPAIR
1891000000-E	SP	380	SY	GENERIC PAVING ITEM (7" TINTED PORTLAND CONCRETE APRON)
2253000000-E	840	1	CY	PIPE COLLARS
2264000000-E	840	1	CY	PIPE PLUGS
2286000000-N	840	13	EA	MASONRY DRAINAGE STRUCTURES
2308000000-E	840	13	LF	MASONRY DRAINAGE STRUCTURES
2364000000-N	840	1	EA	FRAME WITH TWO GRATES, STD 840.16
2374000000-N	840	6	EA	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (E)
2374000000-N	840	1	EA	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (G)
2396000000-N	840	4	EA	FRAME WITH COVER, STD 840.54
2535000000-E	846	280	LF	*"X *" CONCRETE CURB (9"X18")
2542000000-E	846	180	LF	1'-6" CONCRETE CURB & GUTTER
2549000000-E	846	1320	LF	2'-6" CONCRETE CURB & GUTTER
2591000000-E	848	250	SY	4" CONCRETE SIDEWALK
2605000000-N	848	12	EA	CONCRETE CURB RAMP
2612000000-E	848	220	SY	6" CONCRETE DRIVEWAY
2655000000-E	852	210	SY	5" MONOLITHIC CONCRETE ISLANDS (KEYED IN)
2830000000-N	858	4	EA	ADJUSTMENT OF MANHOLES
2845000000-N	858	9	EA	ADJUSTMENT OF METER BOXES OR VALVE BOXES
3656000000-E	876	675	SY	GEOTEXTILE FOR DRAINAGE
4072000000-E	903	551	LF	SUPPORTS, 3-LB STEEL U-CHANNEL
4102000000-N	904	44	EA	SIGN ERECTION, TYPE E
4155000000-N	907	4	EA	DISPOSAL OF SIGN SYSTEM, UCHANNEL
4589000000-N	SP	1	LS	GENERIC TRAFFIC CONTROL ITEM (TRAFFIC CONTROL)
4685000000-E	1205	1699	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)
4686000000-E	1205	2478	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)
4690000000-E	1205	16	LF	THERMOPLASTIC PAVEMENT MARKING LINES (6", 120 MILS)
4695000000-E	1205	477	LF	THERMOPLASTIC PAVEMENT MARKING LINES (8", 90 MILS)
4697000000-E	1205	315	LF	THERMOPLASTIC PAVEMENT MARKING LINES (8", 120 MILS)
4702000000-E	1205	49	LF	THERMOPLASTIC PAVEMENT MARKING LINES (12", 120 MILS)
4710000000-E	1205	500	LF	THERMOPLASTIC PAVEMENT MARKING LINES (24", 120 MILS)
4721000000-E	1205	8	EA	THERMOPLASTIC PAVEMENT MARKING CHARACTER (120 MILS)
4725000000-E	1205	26	EA	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)
4850000000-E	1205	1310	LF	REMOVAL OF PAVEMENT MARKING LINES (4")
4875000000-N	1205	2	EA	REMOVAL OF PAVEMENT MARKING SYMBOLS & CHARACTERS
6000000000-E	1605	2710	LF	TEMPORARY SILT FENCE
6006000000-E	1610	340	TON	STONE FOR EROSION CONTROL, CLASS A
6009000000-E	1610	50	TON	STONE FOR EROSION CONTROL, CLASS B
6012000000-E	1610	165	TON	SEDIMENT CONTROL STONE
6015000000-E	1615	1	ACR	TEMPORARY MULCHING
6018000000-E	1620	50	LB	SEED FOR TEMPORARY SEEDING
6021000000-E	1620	0.25	TON	FERTILIZER FOR TEMPORARY SEEDING
6024000000-E	1622	200	LF	TEMPORARY SLOPE DRAINS
6030000000-E	1630	70	CY	SILT EXCAVATION
6036000000-E	1631	1500	SY	MATTING FOR EROSION CONTROL
6042000000-E	1632	510	LF	1/4" HARDWARE CLOTH
6070000000-N	1639	2	EA	SPECIAL STILLING BASINS
6087000000-E	1660	0.5	ACR	MOWING
6090000000-E	1661	50	LB	SEED FOR REPAIR SEEDING
6093000000-E	1661	0.25	TON	FERTILIZER FOR REPAIR SEEDING
6096000000-E	1662	50	LB	SEED FOR SUPPLEMENTAL SEEDING
6111000000-E	SP	35	LF	IMPERVIOUS DIKE
6114500000-N	1667	20	MHR	SPECIALIZED HAND MOWING
6123000000-E	1670	0.1	ACR	REFORESTATION
6133000000-N	SP	1	LS	GENERIC EROSION CONTROL ITEM (DIVERSION PUMPING)
6133000000-N	SP	1	LS	GENERIC EROSION CONTROL ITEM (ROADWAY CONSTUCTION)
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM (SIGNAL REMOVAL)
8049000000-N	SP	1	LS	REMOVAL OF EXISTING STRUCTURE AT STATION ********** (-Y4-13+02 LT)
8133000000-E	414	139	TON	FOUNDATION CONDITIONING MATERIAL, BOX CULVERT
8196000000-E	420	139.5	CY	CLASS A CONCRETE (CULVERT)
8245000000-E	425	19932	LB	REINFORCING STEEL (CULVERT)

COMPUTED BY: D.R.ETHRIDGE DATE: 7/11/2012
CHECKED BY: DATE:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
59024	3-A

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

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

| STATION | LOCATION (LT, RT, OR CL) | STRUCTURE NO. FROM | STRUCTURE NO. TO | TOP ELEVATION | INVERT ELEVATION | INVERT ELEVATION | SLOPE CRITICAL | DRAINAGE PIPE (RCP, CSP, CAAP, HDPE, or PVC) SIZE / THICKNESS OR GAUGE 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" | 15" | 18" | 24" | 30" | 36" | 42" | 48" | R.C. PIPE CLASS III 12" | 15" | 18" | 24" | 30" | 36" | 42" | 48" | R.C. PIPE CLASS IV 12" | 15" | 18" | 24" | 30" | 36" | 42" | 48" | ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CU. YARDS R.C.P. | C.S.P. | QUANTITIES FOR DRAINAGE STRUCTURES "TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL. 'B') PER EACH (0' THRU 5.0') | LIN. FT. A 5.0' THRU 10.0' | LIN. FT. B 10.0' AND ABOVE | C.B. STD. 840.01 OR STD. 840.02 | FRAME, GRATES, AND HOOD STANDARD 840.03 TYPE OF GRATE E | F | G | CONCRETE TRANSITIONAL SECTION DROP INLET | CATCH BASIN | D.I. STD. 840.14 OR STD. 840.15 | D.I. FRAME & GRATE STD. 840.16 | GRATED D.I. TYPE "D" STD. 840.19 OR 840.28 | FRAME & NARROW SLOT SAG GRATE STD. 840.24 | T.B.J.B. STD. 840.34 | M.H. FRAME & COVER STD. 840.54 | CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71 | CONC. COLLARS CL. "B" C.Y. STD. 840.72 | PIPE REMOVAL LIN. FT. | REMARKS |
|---|---|---

PROJ. REFERENCE NO.	SHEET NO.
59024	3-B

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK

Volumes in Cubic Yards

STATION TO STATION	Uncl. Excav.	Undercut	Embank +%	Borrow	Waste
L 10+00.00 TO 12+76.11	10		755	750	5
Y1 11+97.00 TO 13+68.71	30		98	83	15
Y2 13+30.00 TO 14+97.16	44				44
Y4 10+17.17 TO 12+50.00	45		338	316	23
SUBTOTAL	146		1213	1163	96
TOTAL	146		1213	1163	96
PROJECT TOTAL	146		1213	1141	74
ATE TO REPLACE TOPSOIL ON BORROW PIT				58	
GRAND TOTAL	146		1213	1199	74
ESTIMATED UNDERCUT		100			
SAY	200	100		1200	

REMOVAL OF EXISTING ASPHALT PAVEMENT

STATION TO STATION	LOC	SQUARE YARDS
L 10+00.00 TO 12+76.46	LT	273.67
Y1 11+95.37 TO 13+77.88	RT	122.05
Y4 9+89.49 TO 12+45.15	RT	449.11
	TOTAL	844.83
	SAY	850.00

Approximate quantities only. Unclassified excavation, borrow excavation, shoulder borrow, fine grading, clearing and grubbing and breaking of existing pavement will be paid for at the contract lump sum price

Embankment column does not include backfill for Undercut.

Earthwork quantities are calculated by Division Four DDC.

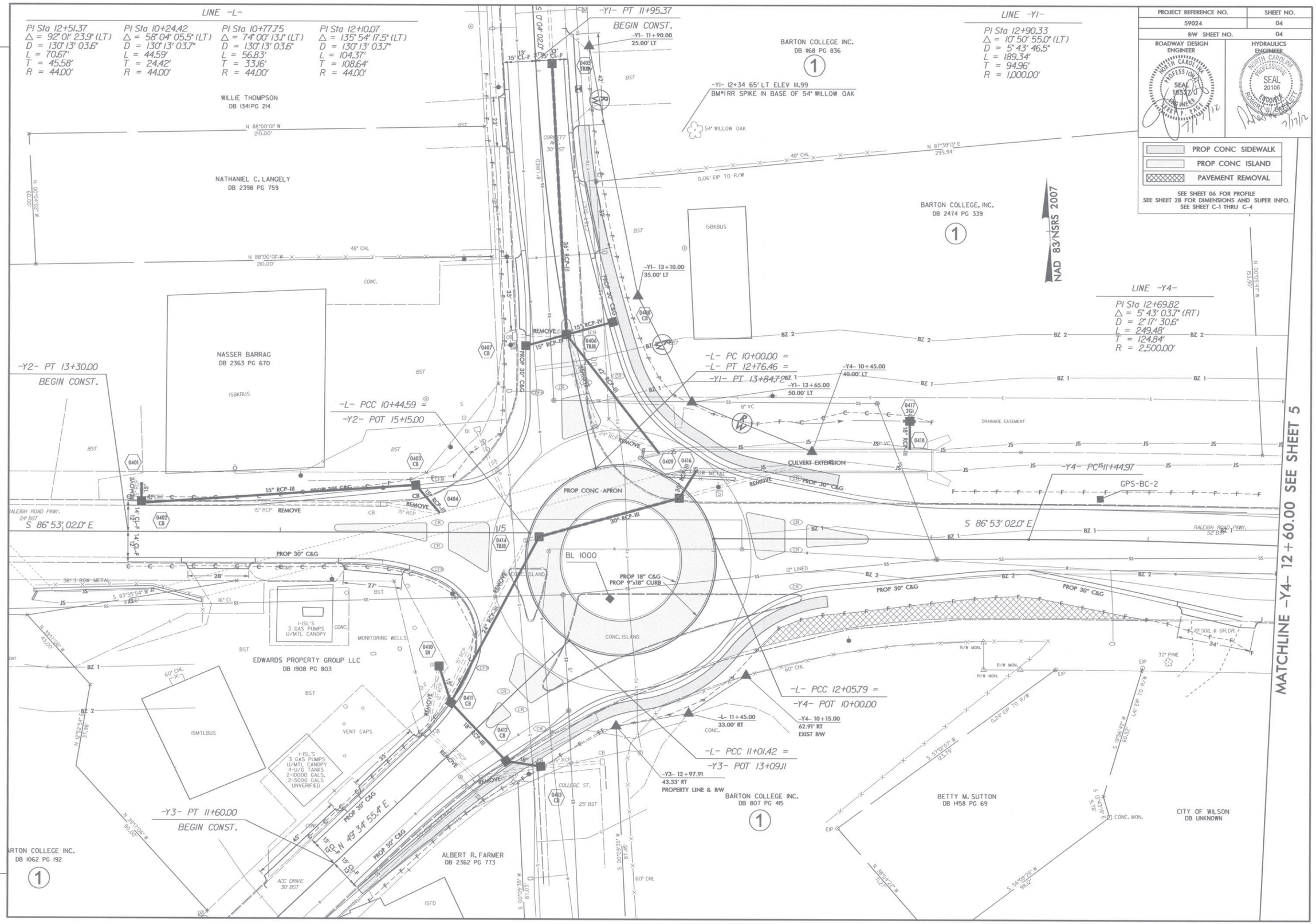
PROJECT REFERENCE NO.	SHEET NO.
59024	04
R/W SHEET NO.	04

ROADWAY DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 18537 ENGINEER JEFFREY P. PAGE — 7/17/12

HYDRAULICS ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 20106 ENGINEER ROBERT S. ALLEN — 7/17/12

PROP CONC SIDEWALK
PROP CONC ISLAND
PAVEMENT REMOVAL

SEE SHEET 06 FOR PROFILE
SEE SHEET 2B FOR DIMENSIONS AND SUPER INFO.
SEE SHEET C-1 THRU C-4



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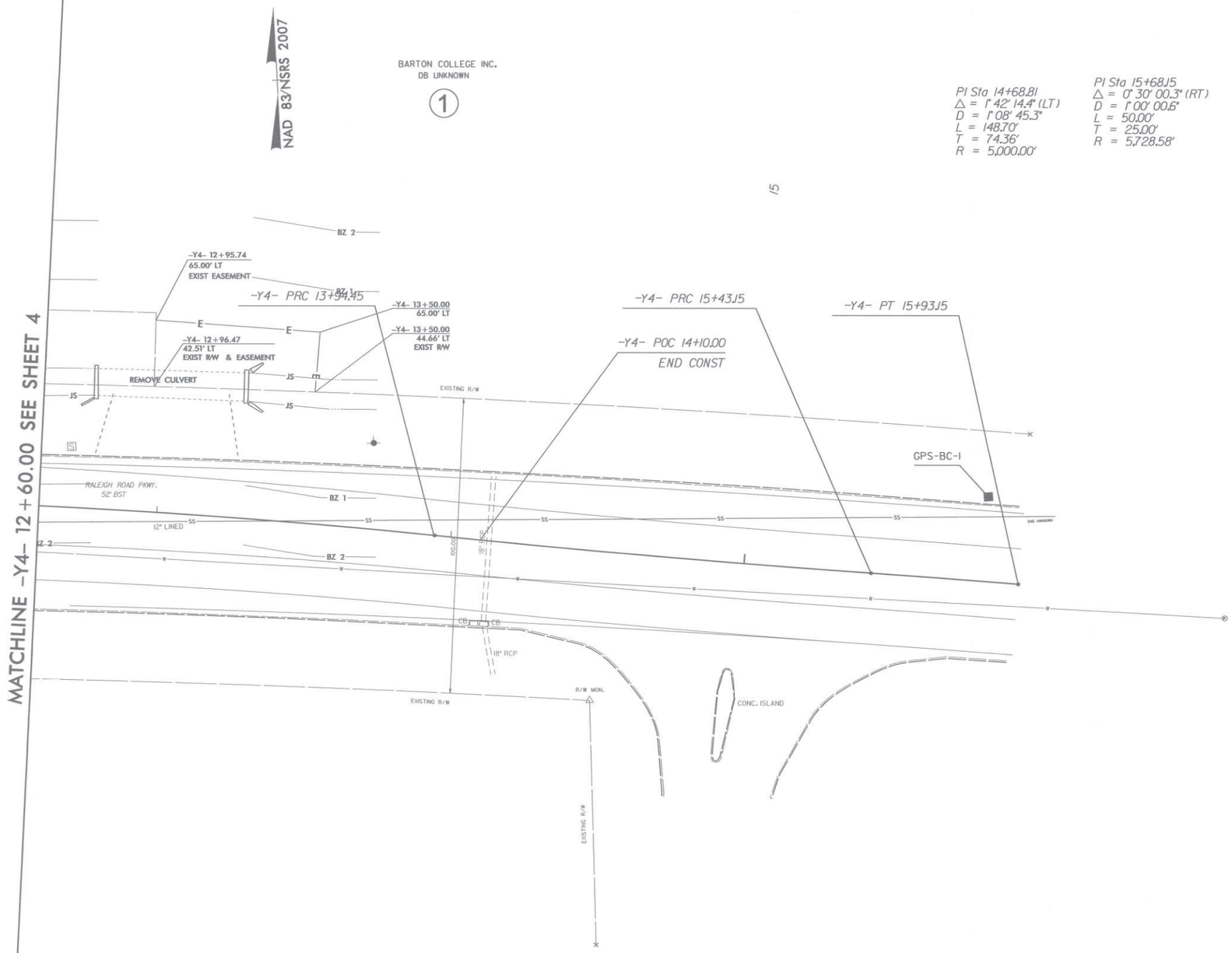
59024	05
R/W SHEET NO.	05
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



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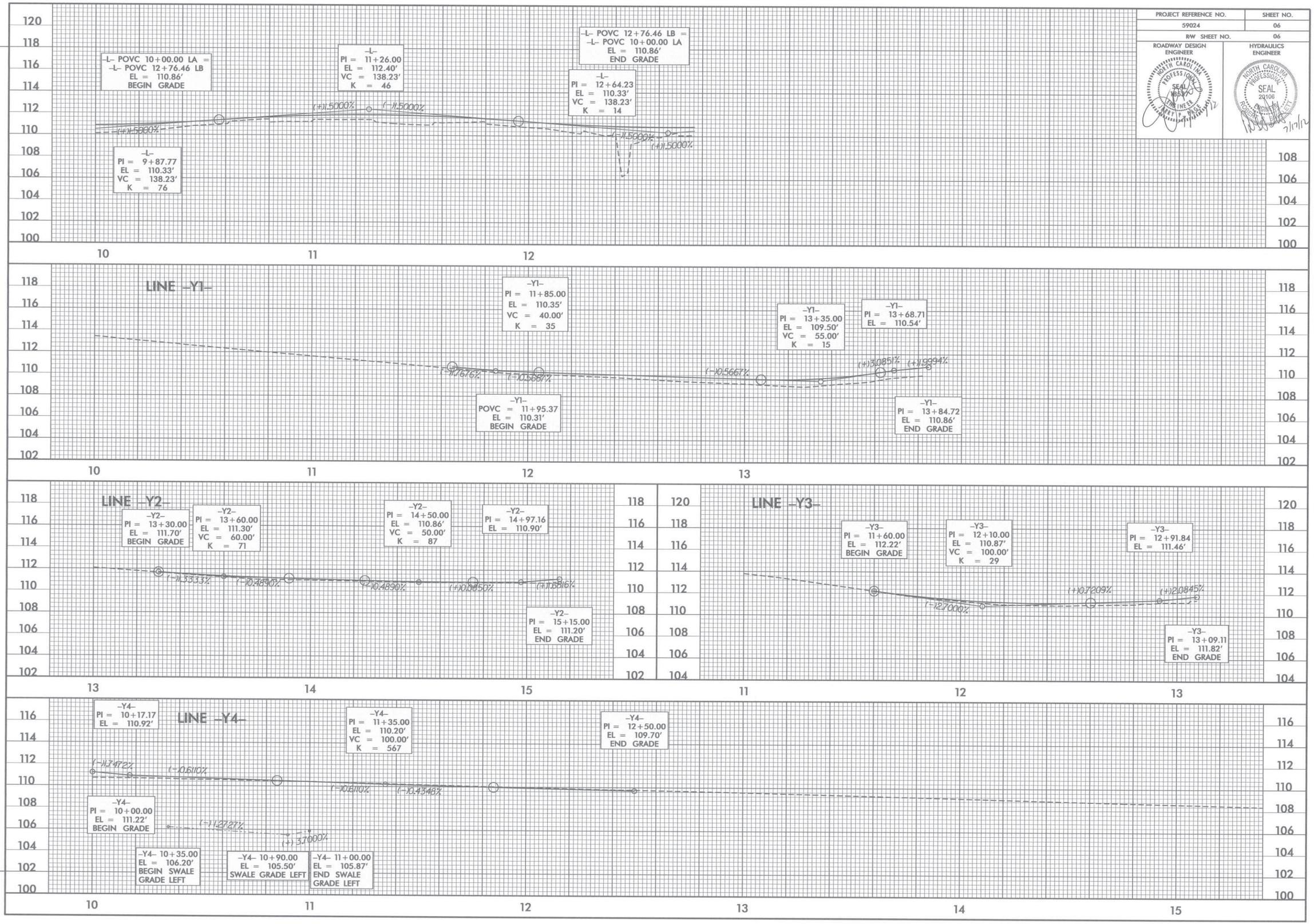
PROJECT REFERENCE NO.	SHEET NO.
59024	06
R/W SHEET NO.	06

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER



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TIP NO.	SHEET NO.
WBS-59024	PMP-1

APPROVED: [illegible] 6/26/12

DATE:

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022959 ENGINEER RONALD W. KING

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING PLAN
WILSON COUNTY
LOCATION: INTERSECTION OF SR-1356 (RALEIGH ROAD PKWY.) AND SR-1326 (ACC – CORBETT AVE.)

WBS: 59024

CONTRACT:

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 - 2 LANE AND MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOL AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS

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
ALL	THERMOPLASTIC	NONE

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

C) REMOVE ANY CONFLICTING PAVEMENT MARKINGS AND MARKERS.

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

E) STOPBAR LOCATION AT NON-SIGNALIZED INTERSECTIONS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER.

F) SEE ROADWAY PLANS FOR ALTERNATE CURB RAMP DESIGNS.

PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION
THERMOPLASTIC (4", 120 MILS)	
T9	2 FT. - 6 FT./SP YELLOW MINISKIP
TC	10 FT. WHITE SKIP
TD	3 FT. - 9 FT./SP WHITE MINISKIP
TI	YELLOW DOUBLE CENTER
THERMOPLASTIC (4", 90 MILS)	
TA	WHITE EDGELINE
TB	YELLOW EDGELINE
THERMOPLASTIC (8", 120 MILS)	
T13	3 FT. - 9 FT./SP WHITE MINISKIP
TR	WHITE SOLID LANE LINE
THERMOPLASTIC (8", 90 MILS)	
TN	WHITE GORELINE
TO	WHITE DIAGONAL
TP	YELLOW DIAGONAL
THERMOPLASTIC (12", 120 MILS)	
T10	3 FT. - 3FT./SP WHITE MINISKIP
THERMOPLASTIC (24", 120 MILS)	
T3	WHITE CROSSWALK LINE
THERMOPLASTIC PAVEMENT MARKING SYMBOLS (90 MILS)	
UA	LEFT TURN ARROW
UB	RIGHT TURN ARROW
UI	ALPHANUMERIC CHAR. - ONLY
UN	24" YIELD LINE TRIANGLE

INDEX

SHEET NO.	DESCRIPTION
PMP-1	PAVEMENT MARKING PLAN TITLE SHEET
PMP-2	REVISED PAVEMENT MARKING STANDARD
PMP-3-4	PAVEMENT MARKING DETAIL

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

AYMAN ALQUDWAH, P.E. — SIGNING & DELINEATION REGIONAL ENGINEER

ERIC WARD — SIGNING & DELINEATION DESIGN ENGINEER

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

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TIP NO.	SHEET NO.
WBS-59024	PMP-2

APPROVED: 6/26/12

DATE:

SEAL

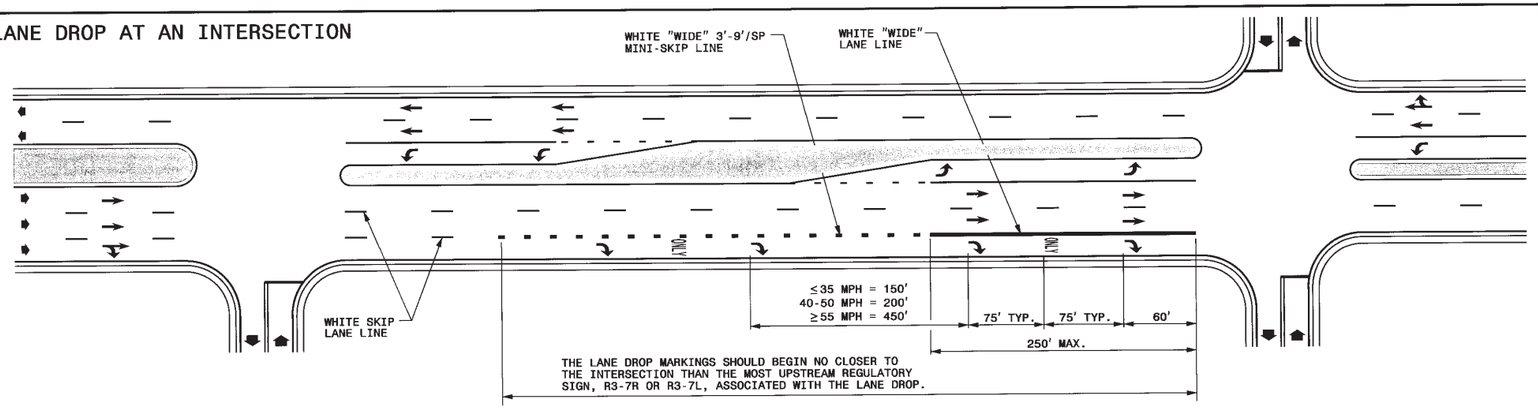
NORTH CAROLINA PROFESSIONAL SEAL 022959 ENGINEER RONALD W. KING

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

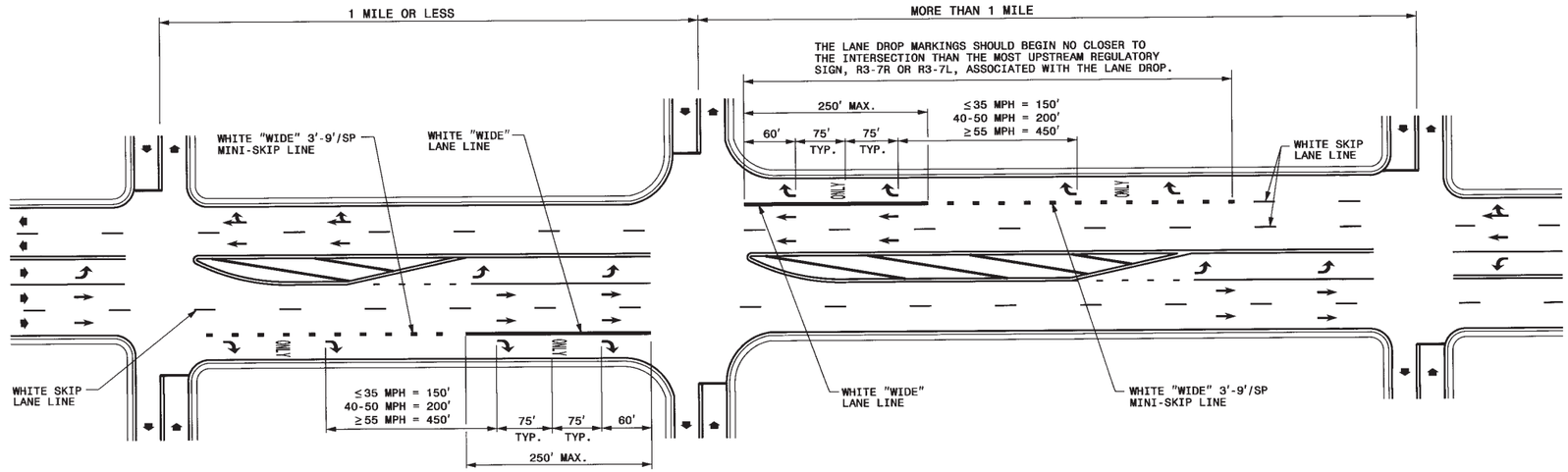
1-12

ENGLISH DETAIL DRAWING FOR
PAVEMENT MARKINGS
LANE DROPS

LANE DROP AT AN INTERSECTION



LANE DROP AT AN INTERSECTION WITH AN AUXILIARY LANE



GENERAL NOTES:

1- USE THE GUIDANCE SHOWN ON THE ABOVE DETAILS IN CONJUNCTION WITH INTERSECTION GUIDANCE SHOWN ON ROADWAY STANDARD DRAWING 1205.04.

2- LANE LINES INDICATED AS "WIDE" SHALL BE AT LEAST TWICE THE WIDTH OF THE NORMAL LINE.

LEGEND

W = WIDTH OF TRAVEL LANE

DIRECTION OF TRAFFIC FLOW

ONLY PAVEMENT MARKING SYMBOLS & CHARACTERS

SHEET 1 OF 3

1205D06

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

1-12

ENGLISH DETAIL DRAWING FOR
PAVEMENT MARKINGS
LANE DROPS

SHEET 1 OF 3

1205D06

REVISED PAVEMENT MARKING ROADWAY STANDARD DRAWING

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TIP NO.	SHEET NO.
WBS-59024	PMP-3

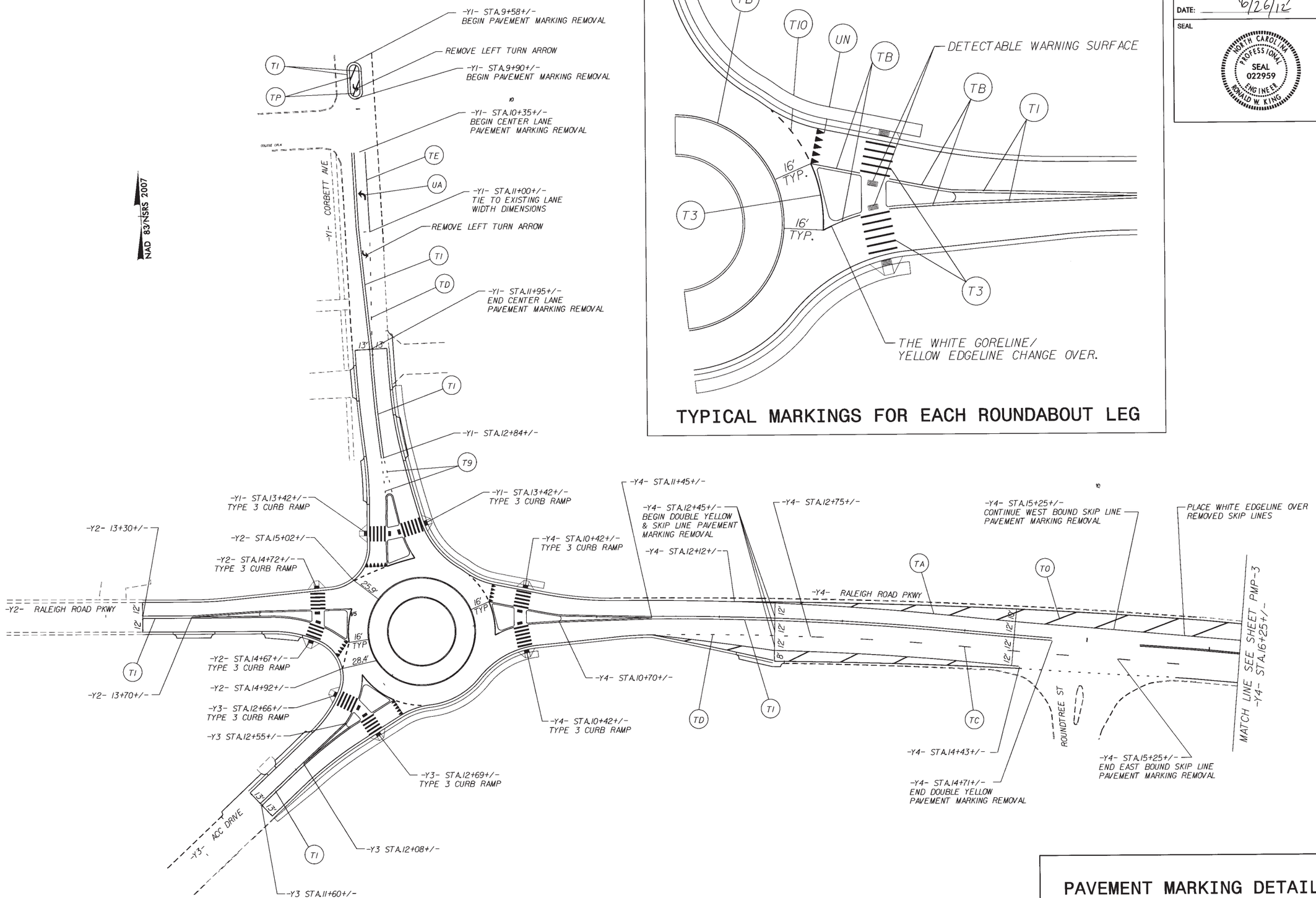
APPROVED: 6/26/12

DATE:

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022959 ENGINEER RONALD W. KING

TYPICAL MARKINGS FOR EACH ROUNDABOUT LEG



PAVEMENT MARKING DETAIL

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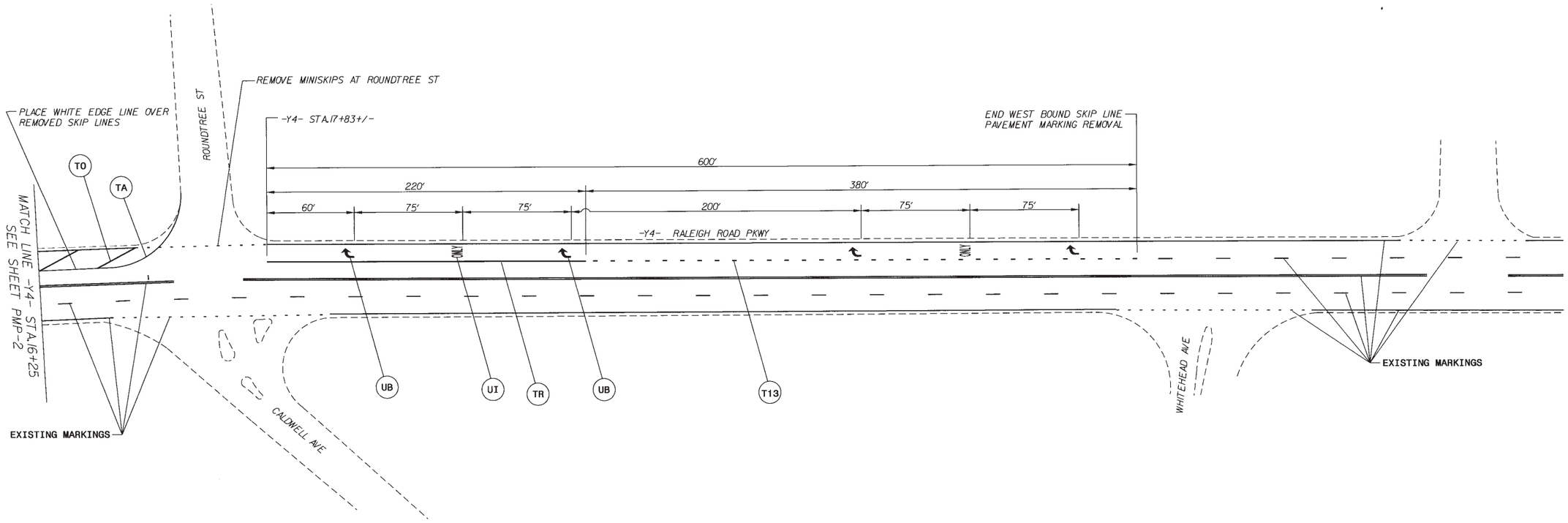
DATE: 6/26/12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022959 ENGINEER RONALD W. KING



PAVEMENT MARKING DETAIL

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WBS: 59024

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

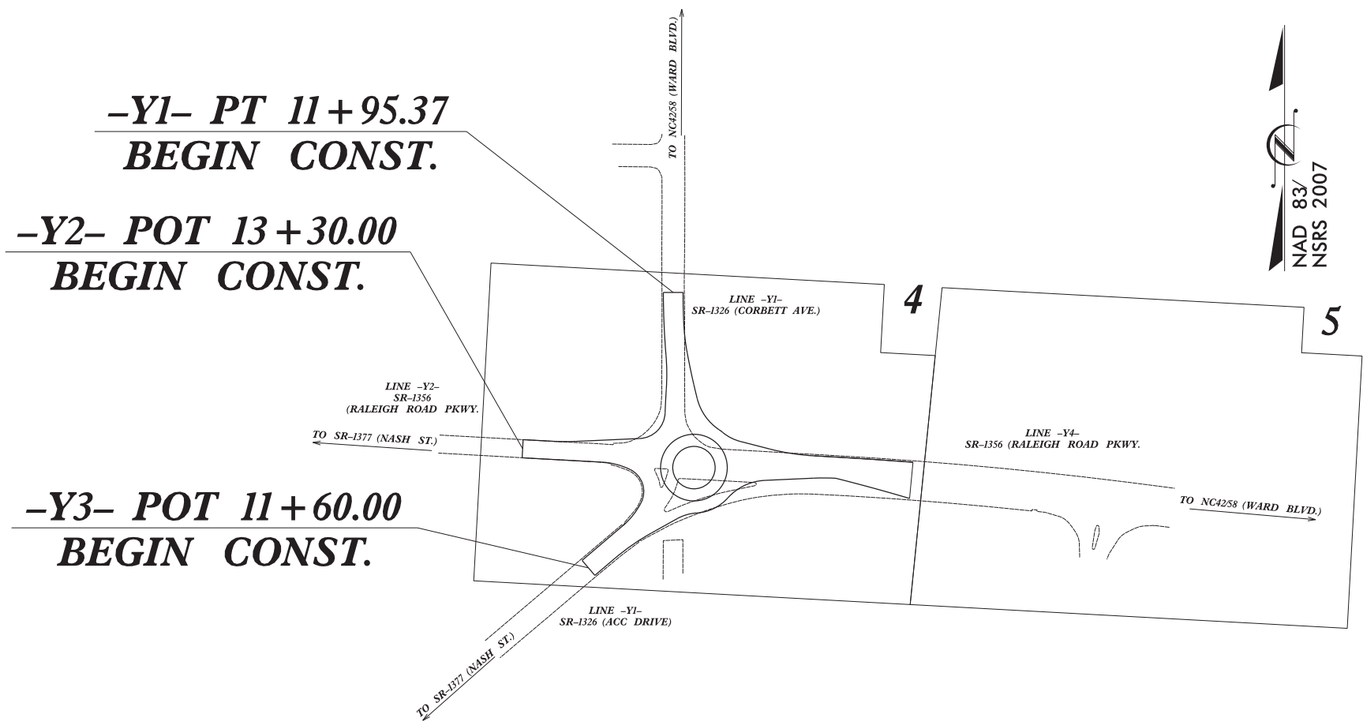
WILSON COUNTY

LOCATION: INTERSECTION OF SR–1356 (RALEIGH ROAD PKWY.) AND SR–1326 (ACC DRIVE – CORBETT AVE.)

TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND CULVERT EXTENSION.

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	59024	EC-1	

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



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	
	Tiered Skimmer Basin	
	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		

HP4500
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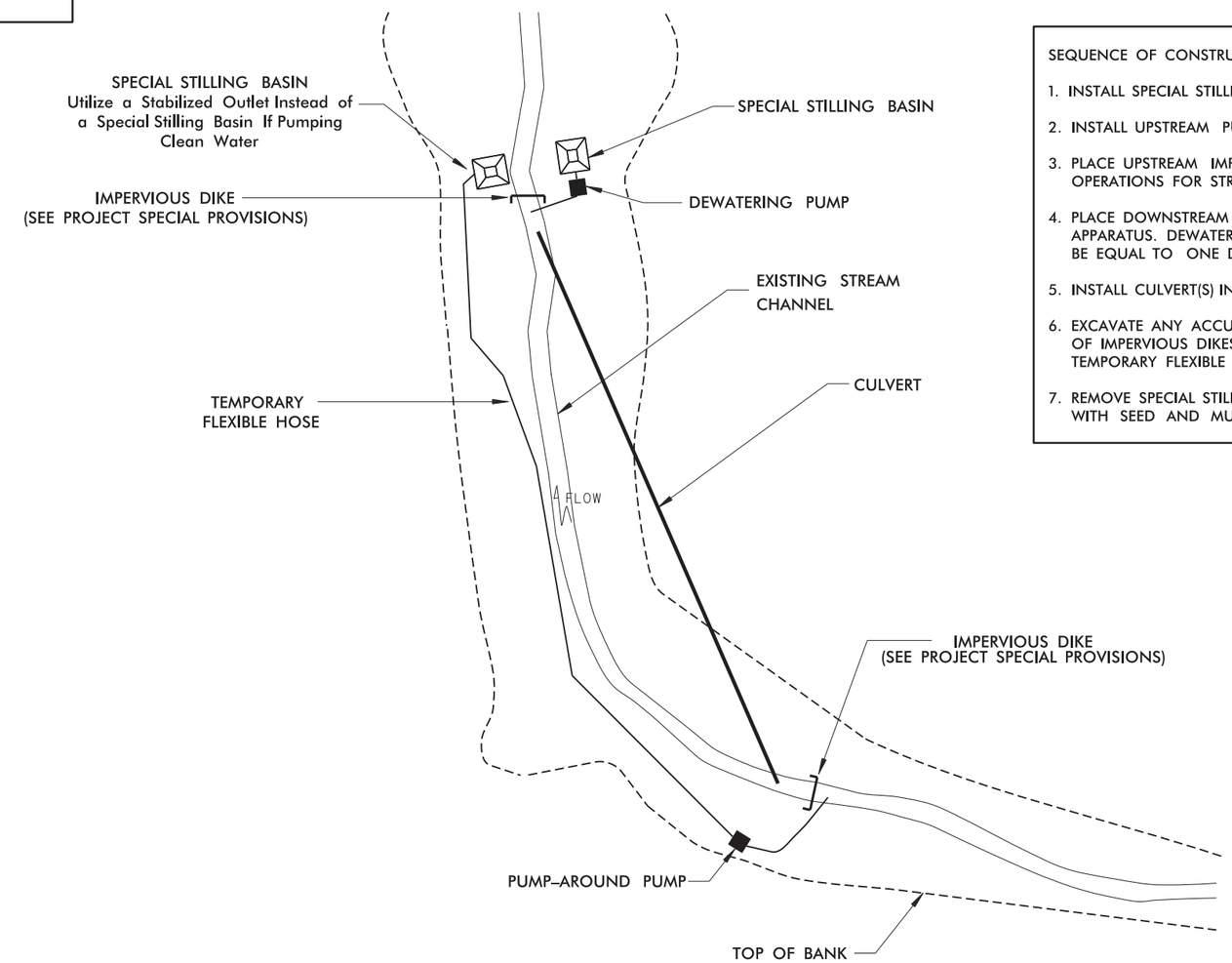
HP4500

PROJECT REFERENCE NO.	SHEET NO.
59024	EC-2
R/W SHEET NO.	____

EXAMPLE OF PUMP–AROUND OPERATION

NOTES:
1) All excavation shall be performed in only dry or isolated areas of the work zone.
2) Impervious dikes are to be used to isolate work from stream flow when necessary.
3) Maintenance of stream flow operations shall be incidental to the work. This includes polyethylene sheeting, diversion pipes, pumps and hoses.
4) Pumps and hoses shall be of sufficient size to dewater the work area.



SEQUENCE OF CONSTRUCTION FOR TYPICAL WORK AREA

1. INSTALL SPECIAL STILLING BASIN(S).
2. INSTALL UPSTREAM PUMP AND TEMPORARY FLEXIBLE HOSE.
3. PLACE UPSTREAM IMPERVIOUS DIKE AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
4. PLACE DOWNSTREAM IMPERVIOUS DIKE AND PUMPING APPARATUS. DEWATER ENTRAPPED AREA. AREA TO BE DEWATERED SHALL BE EQUAL TO ONE DAY'S WORK.
5. INSTALL CULVERT(S) IN ACCORDANCE WITH THE PLANS.
6. EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES. REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSE. (DOWNSTREAM IMPERVIOUS DIKES FIRST).
7. REMOVE SPECIAL STILLING BASIN(S) AND BACKFILL. STABILIZE DISTURBED AREA WITH SEED AND MULCH.

HP4500

PROJECT REFERENCE NO.	SHEET NO.
59024	EC-3

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.

HP4500

PROJECT REFERENCE NO.	SHEET NO.
59024	EC-4/CONST.4
R/W SHEET NO.	04

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.

PROP CONC SIDEWALK
PROP CONC ISLAND
PAVEMENT REMOVAL

SEE SHEET 06 FOR PROFILE
SEE SHEET 2B FOR DIMENSIONS AND SUPER INFO.

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

WILLIE THOMPSON
DB 1341 PG 214

NATHANIEL C. LANGELY
DB 2398 PG 759

NASSER BARRAG
DB 2363 PG 670

EDWARDS PROPERTY GROUP LLC
DB 1908 PG 803

BARTON COLLEGE INC.
DB 1062 PG 192

ALBERT R. FARMER
DB 2362 PG 773

BARTON COLLEGE INC.
DB 807 PG 415

BETTY M. SUTTON
DB 1458 PG 69

CITY OF WILSON
DB UNKNOWN

BARTON COLLEGE INC.
DB 1168 PG 836

BARTON COLLEGE, INC.
DB 2474 PG 339

-Y1- PT 11+95.37
BEGIN CONST.

-Y2- PT 13+30.00
BEGIN CONST.

-Y3- PT 11+60.00
BEGIN CONST.

-L- PCC 10+44.59 =
-Y2- POT 15+15.00

-L- PC 10+00.00 =
-L- PT 12+76.46 =
-Y1- PT 13+84.72

-L- PCC 12+05.79 =
-Y4- POT 10+00.00

-L- PCC 11+01.42 =
-Y3- POT 13+09.11

-Y1- 11+90.00
25.00' LT

-Y1- 12+34 65' LT ELEV 111.99
BM#1 IRR SPIKE IN BASE OF 54" WILLOW OAK

-Y1- 13+10.00
35.00' LT

-Y4- 10+45.00
40.00' LT

-Y1- 13+65.00
50.00' LT

-L- 11+45.00
33.00' RT

-Y4- 10+15.00
62.91' RT
EXIST R/W

-Y3- 12+97.91
43.33' RT
PROPERTY LINE & R/W

-Y4- PC 11+44.91

MATCHLINE -Y4- 12+60.00 SEE SHEET 5

NAD 83/NSRS 2007

N 88°00'01" W
210.00'

N 87°39'13" E
299.94'

S 86°53'02.0" E

N 49°34'55.4" E

S 83°35'54" W

N 00°05'41" W
155.90'

N 00°04'20" W
60.00'

N 39°17'45" W
90.00'

N 12°52'54" E
37.98'

S 00°09'35" W
87.45'

S 19°56'42" W
60.52'

S 57°01'07" W
12.17'

S 13°43'19" E
9.78'

S 56°08'25" W
98.02'

N 38°04'22" W
71.27'

S 88°09'35" W
87.18'

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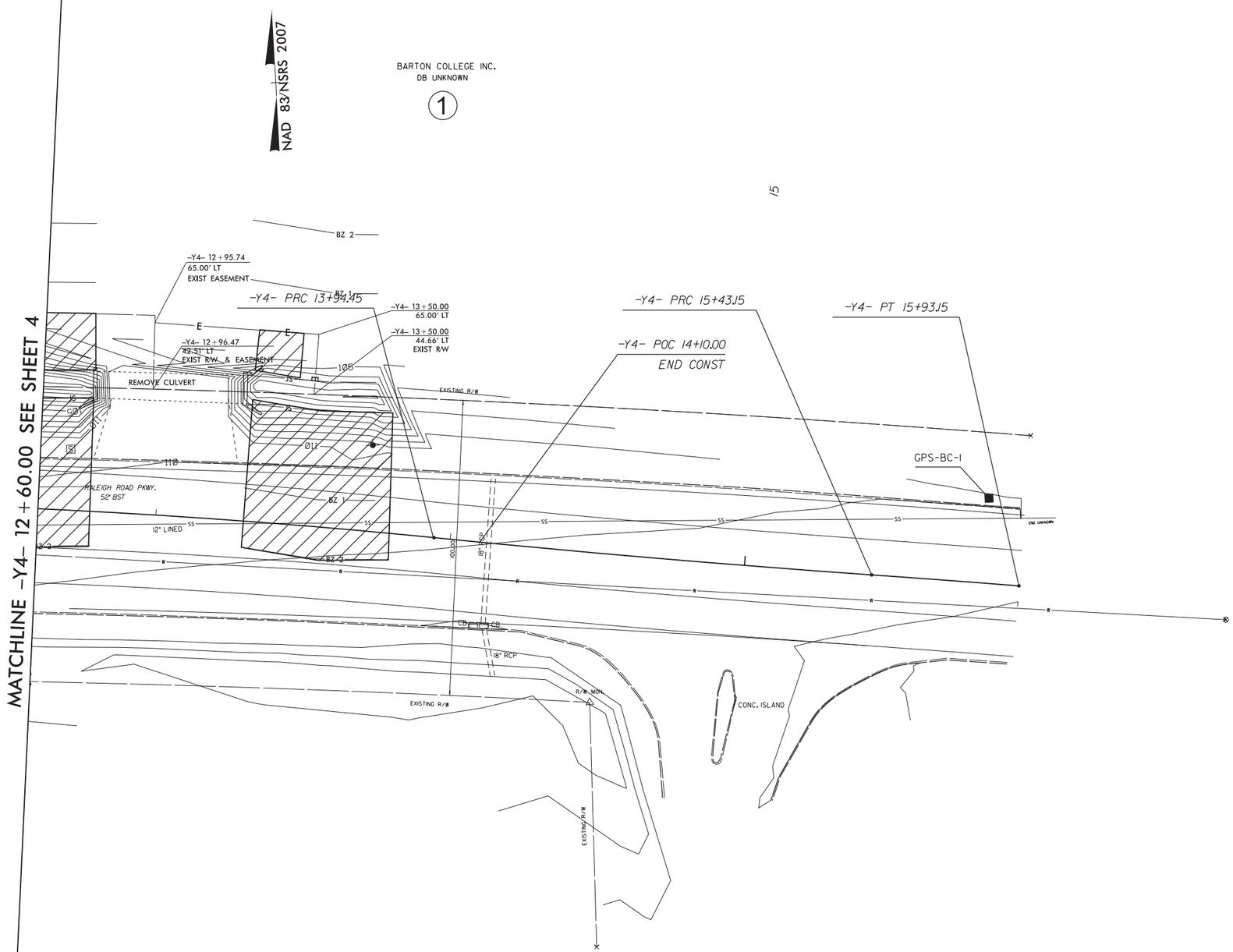
HP45500

PROJECT REFERENCE NO.	SHEET NO.
59024	EC-5/CONST.5
R/W SHEET NO.	05

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 5

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



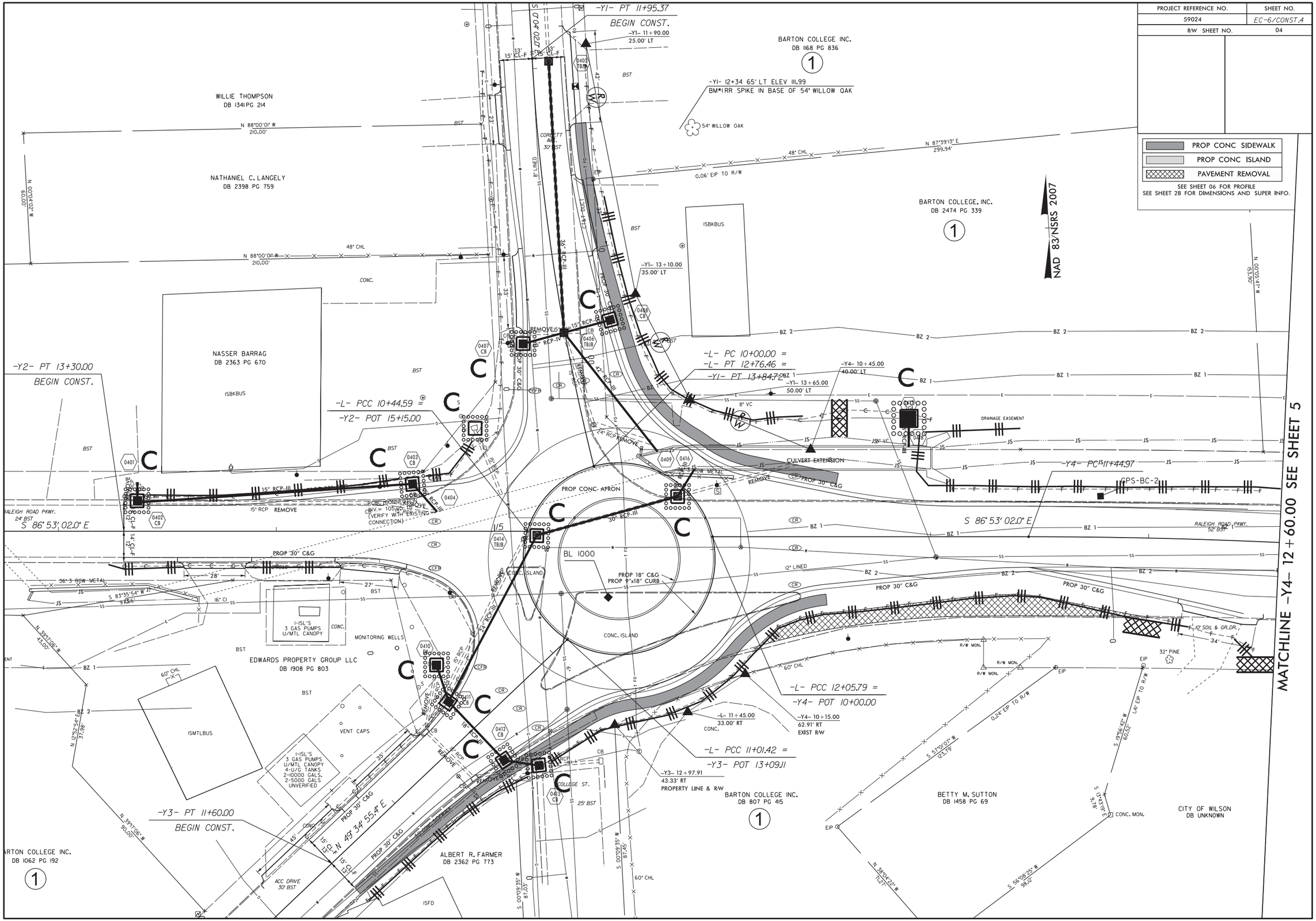
ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

HP45500

PROJECT REFERENCE NO.	SHEET NO.
59024	EC-6/CONST.4
R/W SHEET NO.	04

PROP CONC SIDEWALK
PROP CONC ISLAND
PAVEMENT REMOVAL

SEE SHEET 06 FOR PROFILE
SEE SHEET 2B FOR DIMENSIONS AND SUPER INFO.



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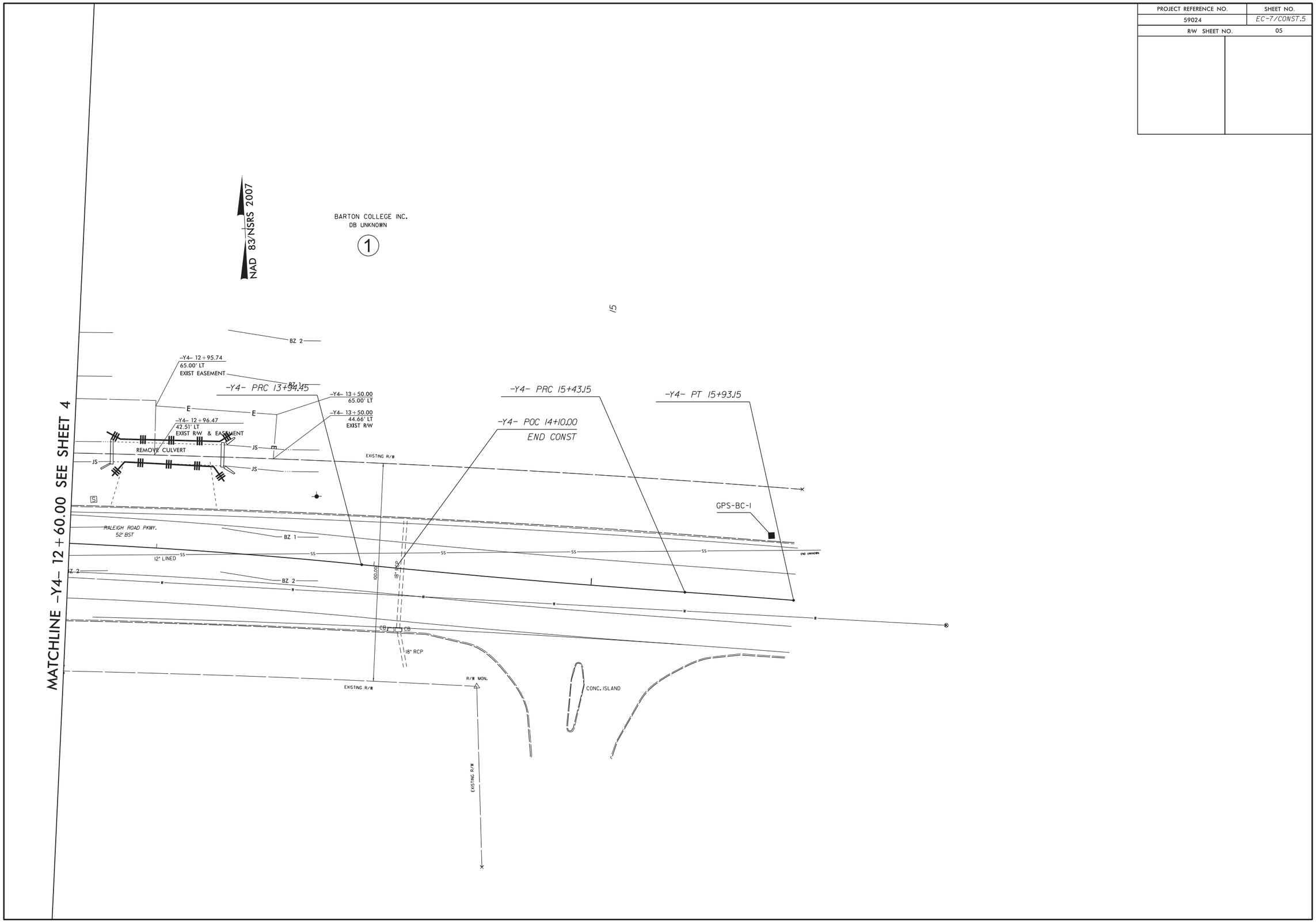
HP45500

PROJECT REFERENCE NO.	SHEET NO.
59024	EC-7/CONST.5
R/W SHEET NO.	05



HP4500

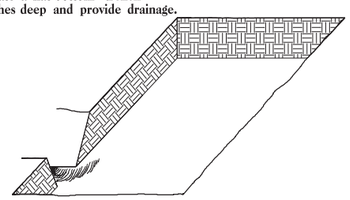
PROJECT REFERENCE NO.	SHEET NO.
59024	RF-1
R/W SHEET NO.	

PLANTING DETAILS

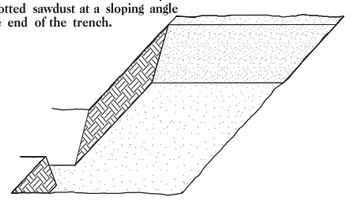
SEEDLING / LINER BAREROOT PLANTING DETAIL

HEALING IN

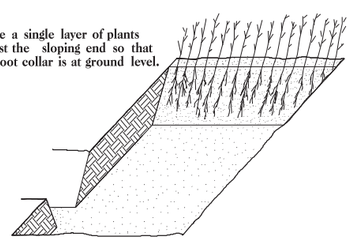
1. Locate a healing-in site in a shady, well protected area.
2. Excavate a flat bottom trench 12 inches deep and provide drainage.



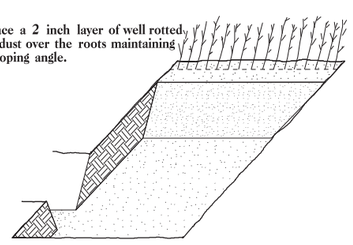
3. Backfill the trench with 2 inches well rotted sawdust. Place a 2 inch layer of well rotted sawdust at a sloping angle at one end of the trench.



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

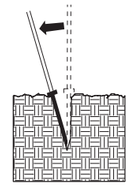


5. Place a 2 inch layer of well rotted sawdust over the roots maintaining a sloping angle.

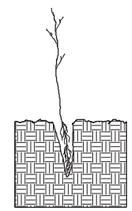


6. Repeat layers of plants and sawdust as necessary and water thoroughly.

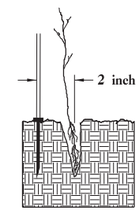
DIBBLE PLANTING METHOD
USING THE KBC PLANTING BAR



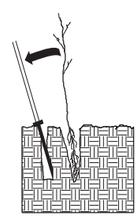
1. Insert planting bar as shown and pull handle toward planter.



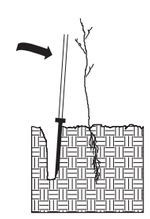
2. Remove planting bar and place seedling at correct depth.



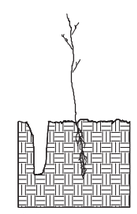
3. Insert planting bar 2 inches toward planter from seedling.



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.

☐ 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:

REFORESTATION DETAIL SHEET

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

TIP NO.	SHEET NO.
WBS-59024	SIGN-1

APPROVED:
DATE: 6/26/12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022959 ENGINEER RONALD W. KING

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

SIGNING PLAN
WILSON COUNTY

LOCATION: INTERSECTION OF SR-1356 (RALEIGH ROAD PKWY.) AND SR-1326 (ACC - CORBETT AVE.)

WBS-59024

CONTRACT:

PAY ITEM NOTES

1	DISPOSAL OF SIGN SYSTEM, U-CHANNEL

SUMMARY OF QUANTITIES

ITEM NO. DESC. NO.	ITEM NO. SECT. NO.	ITEM DESCRIPTION	QUANTITY	UNIT
4072000000	903	SUPPORTS, 3 LB U-CHANNEL	551	L.F.
4102000000	904	SIGN ERECTION, TYPE E	44	EA.
4155000000	907	DISPOSAL OF SIGN SYSTEM, U-CHANNEL	4	EA.

GENERAL NOTES

- SIGNS FURNISHED BY STATE
- ALL TYPE 'D' SIGNS SHALL BE MOUNTED ON TWO U-CHANNEL POSTS UNLESS OTHERWISE INDICATED ON THE PLANS.
- 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.
- SIGNING PLANS DO NOT INCLUDE TEMPORARY CONSTRUCTION SIGNING OR PAVEMENT MARKINGS. SEE TRAFFIC CONTROL PLANS.
- WHEN NOT STATIONED OR DIMENSIONED ON PLANS, ALL 'E' AND 'F' SIGNS SHALL BE FIELD LOCATED BY THE ENGINEER
- ALL EXISTING SIGNS ON WOOD 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.

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

INDEX

SHEET NO.	DESCRIPTION
SIGN - 1	TITLE SHEET - SUMMARY OF QUANTITIES, ROADWAY STANDARD DRAWINGS, INDEX, & NOTES
SIGN - 2	TYPE "E" SIGN
SIGN - 3 & 4	SIGN DETAIL SHEET

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

Ayman I Alqudwah, P.E. — SIGNING & DELINEATION REGIONAL ENGINEER

Eric E Ward — SIGNING & DELINEATION DESIGN ENGINEER

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

26-JUN-2012 14:43
S:\S&DU\Regional\Eastern\Eric\Wilson Roundabout\Wilson Roundabout Signing Title Sheet.dgn
erward AT TE247905

TIP NO.	SHEET NO.
WBS-59024	SIGN-2

APPROVED: RWK

DATE: 6/26/12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022959 ENGINEER RONALD W. KING

(401) QUANTITY REQ'D 4

24 X 36
R2-1

ONE "U" POST PER SIGN

(406) QUANTITY REQ'D 3

24 X 30
R4-7

ONE "U" POST PER SIGN

(411) QUANTITY REQ'D 1

30 X 36
R2-1

ONE "U" POST PER SIGN

(402) QUANTITY REQ'D 8

36 X 36 X 36
R1-2

ONE "U" POST PER SIGN

(407) QUANTITY REQ'D 1

18 X 30
R4-7c

ONE "U" POST PER SIGN

(403) QUANTITY REQ'D 8

36 X 36
W11-2

YELLOW/GREEN REFLECTIVE SHEETING

ONE "U" POSTS PER SIGN

(408) QUANTITY REQ'D 4

30 X 30
W2-6

ONE "U" POST PER SIGN

(404) QUANTITY REQ'D 8

24 X 12
W16-7PL

YELLOW/GREEN REFLECTIVE SHEETING

MOUNT BELOW SIGN 403
IN 8 INSTALLATIONS

(409) QUANTITY REQ'D 2

36 X 36
R3-7

ONE "U" POST PER SIGN

(405) QUANTITY REQ'D 4

30 X 24
R6-4

ONE "U" POST PER SIGN

(410) QUANTITY REQ'D 1

36 X 36
W3-5

ONE "U" POST PER SIGN

TYPE "E" SIGNS

26-JUN-2012 15:19
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ericeco

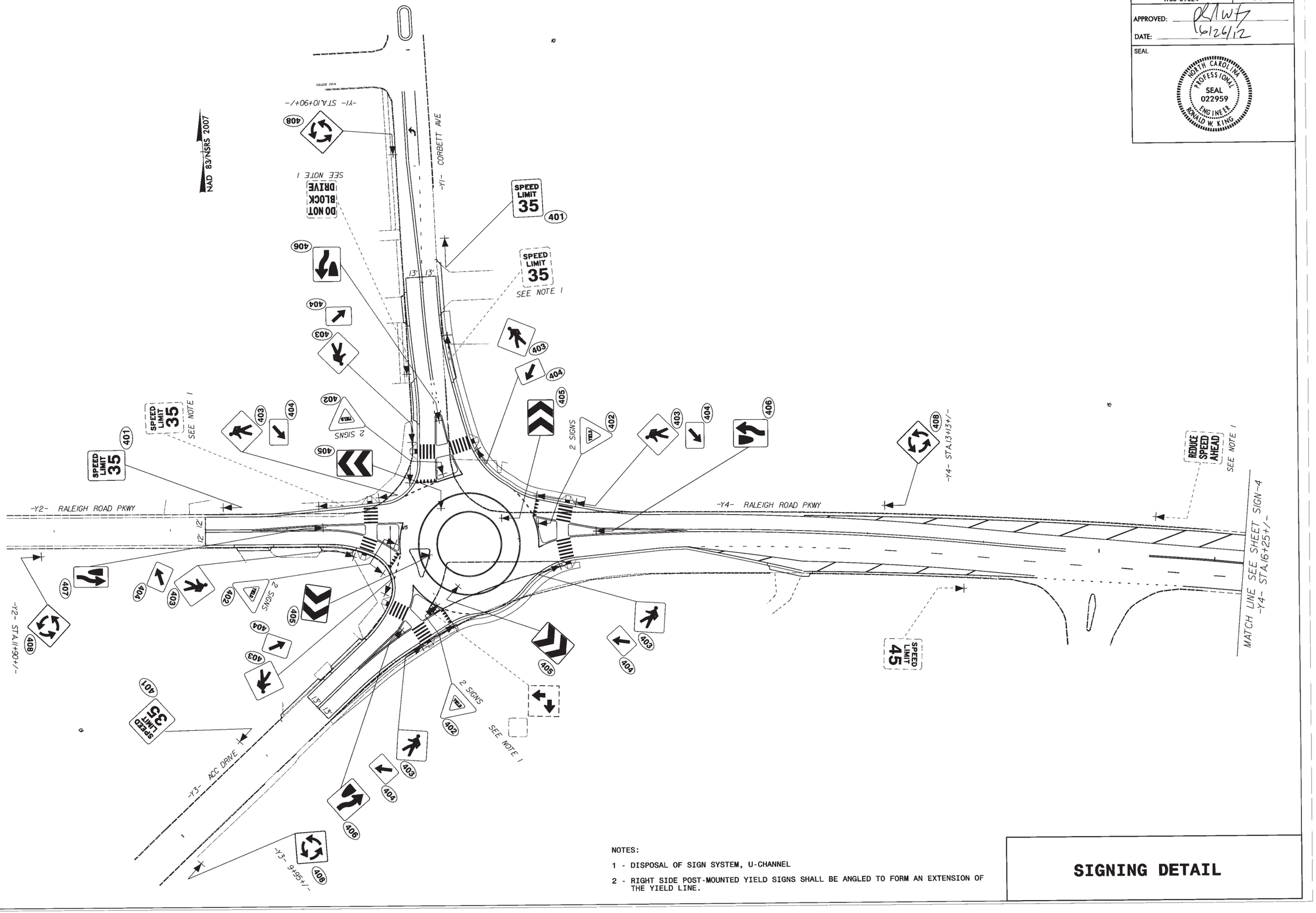
TIP NO.	SHEET NO.
WBS-59024	SIGN-3

APPROVED: RWK

DATE: 6/26/12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022959 ENGINEER RONALD W. KING



NOTES:

1 - DISPOSAL OF SIGN SYSTEM, U-CHANNEL

2 - RIGHT SIDE POST-MOUNTED YIELD SIGNS SHALL BE ANGLED TO FORM AN EXTENSION OF THE YIELD LINE.

SIGNING DETAIL

26-JUN-2012 14:41
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ericwm3 At 1:247.905

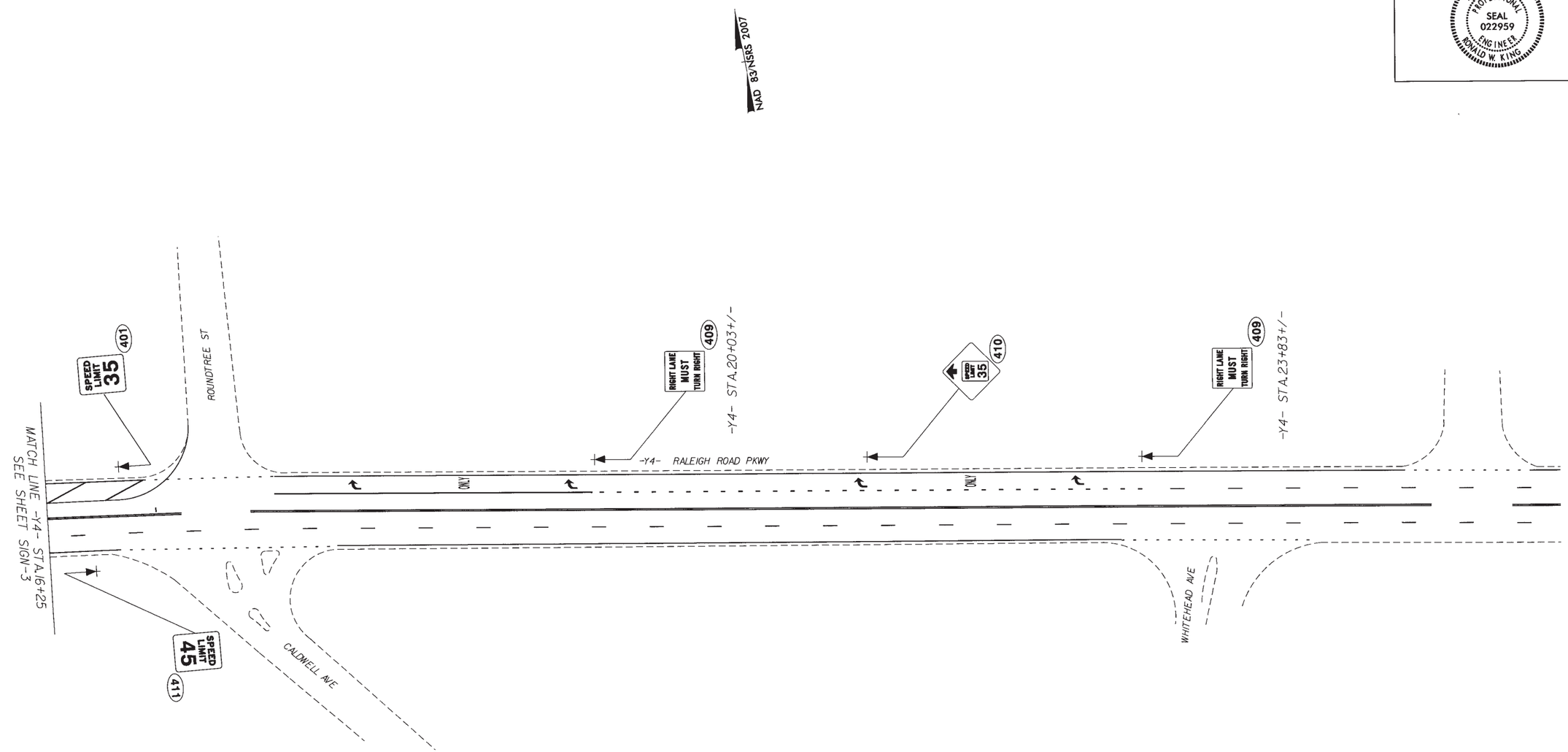
TIP NO.	SHEET NO.
WBS-59024	SIGN-4

APPROVED: 6/26/12

DATE:

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022959 ENGINEER RONALD W. KING



NOTES:

1 - DISPOSAL OF SIGN SYSTEM, U-CHANNEL

2 - RIGHT SIDE POST-MOUNTED YIELD SIGNS SHALL BE ANGLED TO FORM AN EXTENSION OF THE YIELD LINE.

SIGNING DETAIL

26-JUN-2012 16:01
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erickward AT TE247905

PROJ. REFERENCE NO.	SHEET NO.
59024	X-1A

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
CROSS-SECTION SUMMARY

Approximate quantities only. Unclassified excavation, borrow excavation, shoulder borrow, fine grading, clearing and grubbing and breaking of existing pavement will be paid for at the contract lump sum price

STATION L	UNCLASSIFIED EXCAVATION (CU YD)	EMBANKMENT (CU YD)	
10+20		31	
10+40		31	
10+60		31	
10+80	1	32	
11+00	1	32	
11+20		35	
11+40	1	39	
11+60	1	40	
11+80		36	
12+00		32	
12+20	3	33	
12+40	3	99	
12+60		103	

STATION Y1	UNCLASSIFIED EXCAVATION (CU YD)	EMBANKMENT (CU YD)	
12+00		1	
12+20	1	5	
12+40	1	6	
12+60	1	7	
12+80	3	7	
13+00	5	7	
13+20	7	7	
13+40	7	8	
13+60	4	16	

STATION Y2	UNCLASSIFIED EXCAVATION (CU YD)	EMBANKMENT (CU YD)	
13+40	2		
13+60	4		
13+80	4		
14+00	5		
14+20	7		
14+40	8		
14+60	8		
14+80	5		

STATION Y3	UNCLASSIFIED EXCAVATION (CU YD)	EMBANKMENT (CU YD)	
11+80	3	1	
12+00	3	1	
12+20	3	1	
12+40	2	2	
12+60	3	4	
12+80	2	5	

STATION Y4	UNCLASSIFIED EXCAVATION (CU YD)	EMBANKMENT (CU YD)	
10+20	1	8	
10+40	5	55	
10+60	6	55	
10+80	4	55	
11+00	3	49	
11+20	3	25	
11+40	3	4	
11+60	3	4	
11+80	3	4	
12+00	4	3	
12+20	4	3	
12+40	4	3	

STATION	UNCLASSIFIED EXCAVATION (CU YD)	EMBANKMENT (CU YD)	

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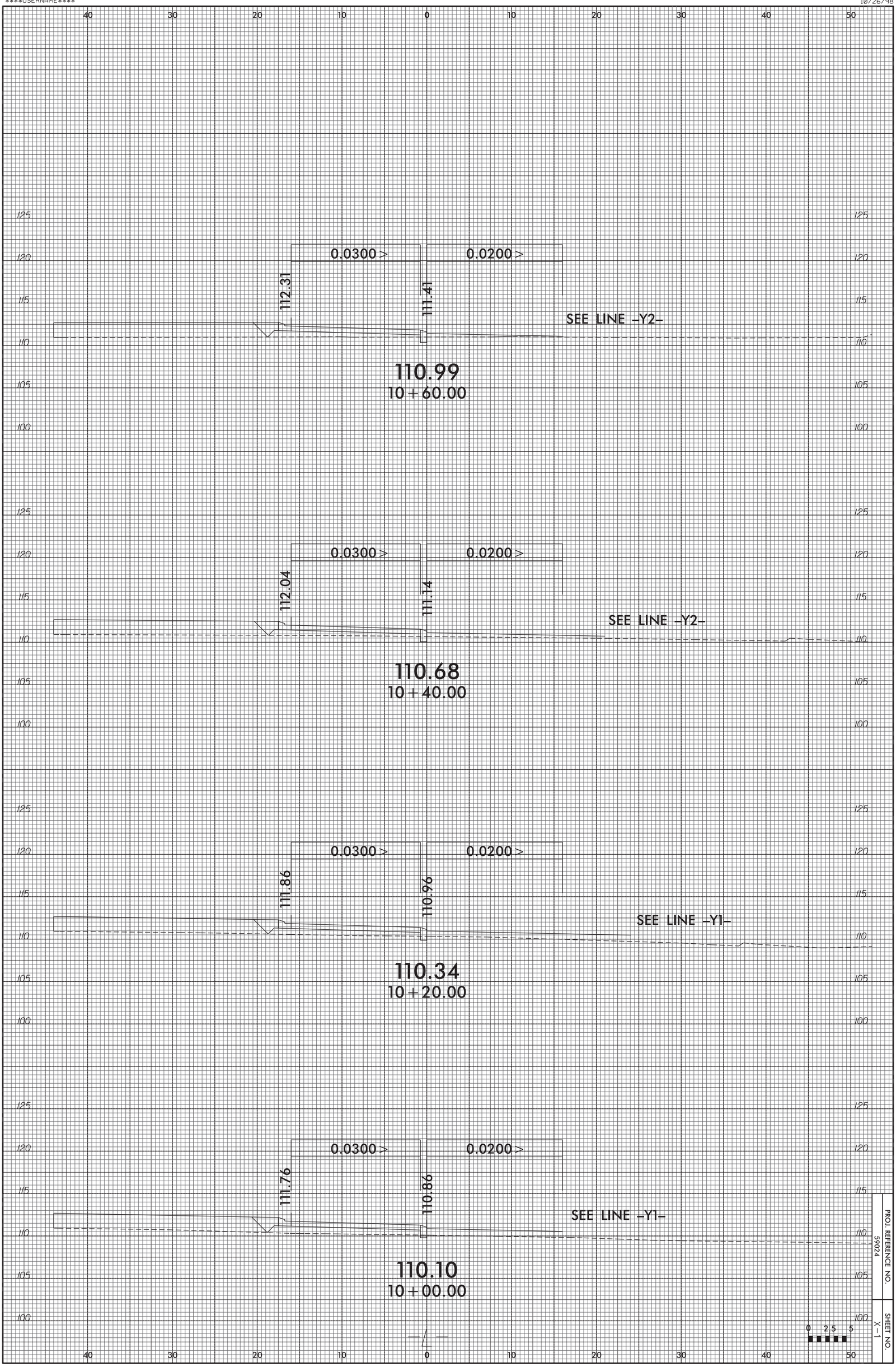
10/26/98



PROJ. REFERENCE NO.
59024

SHEET NO.
X-1

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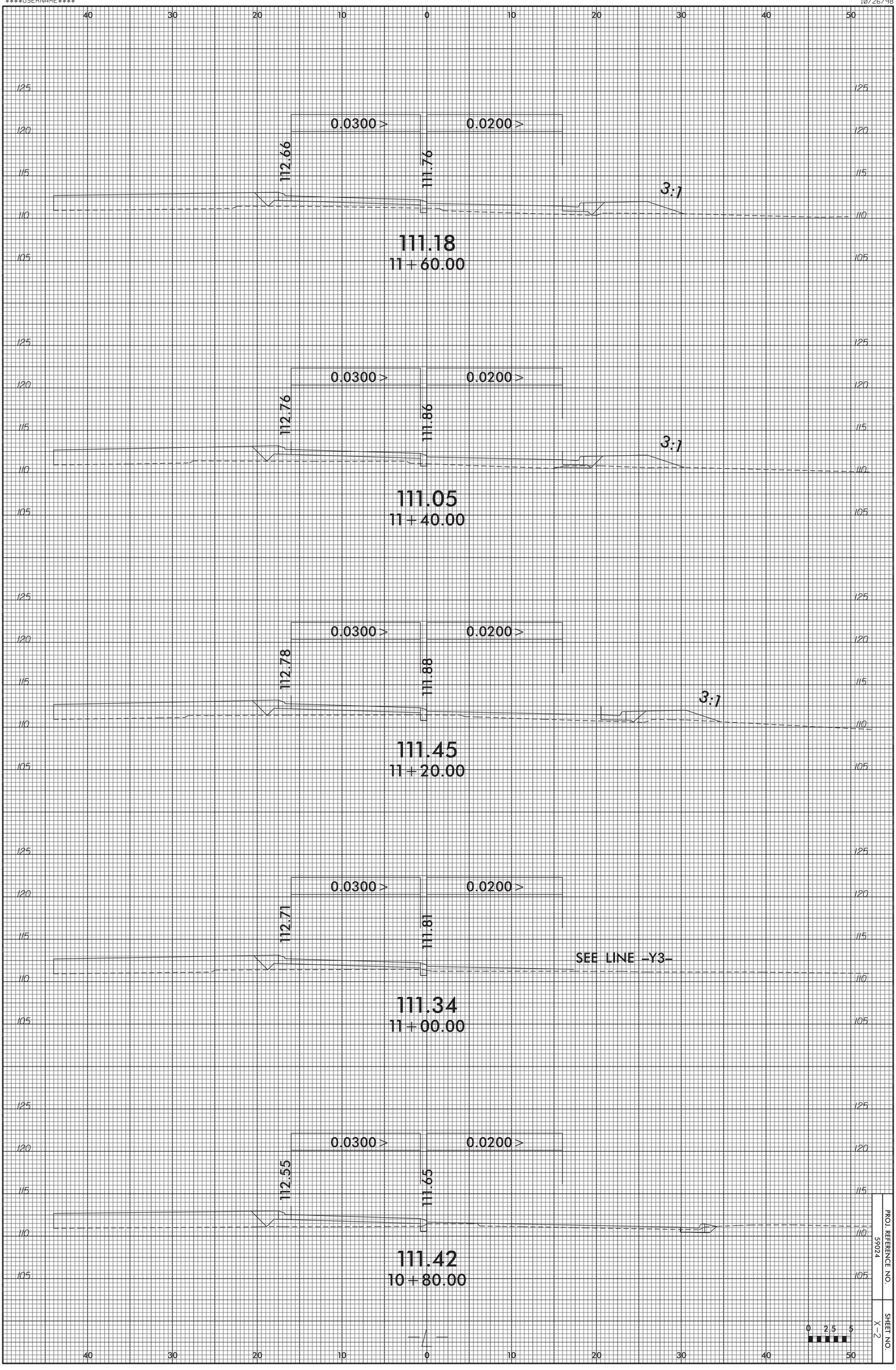

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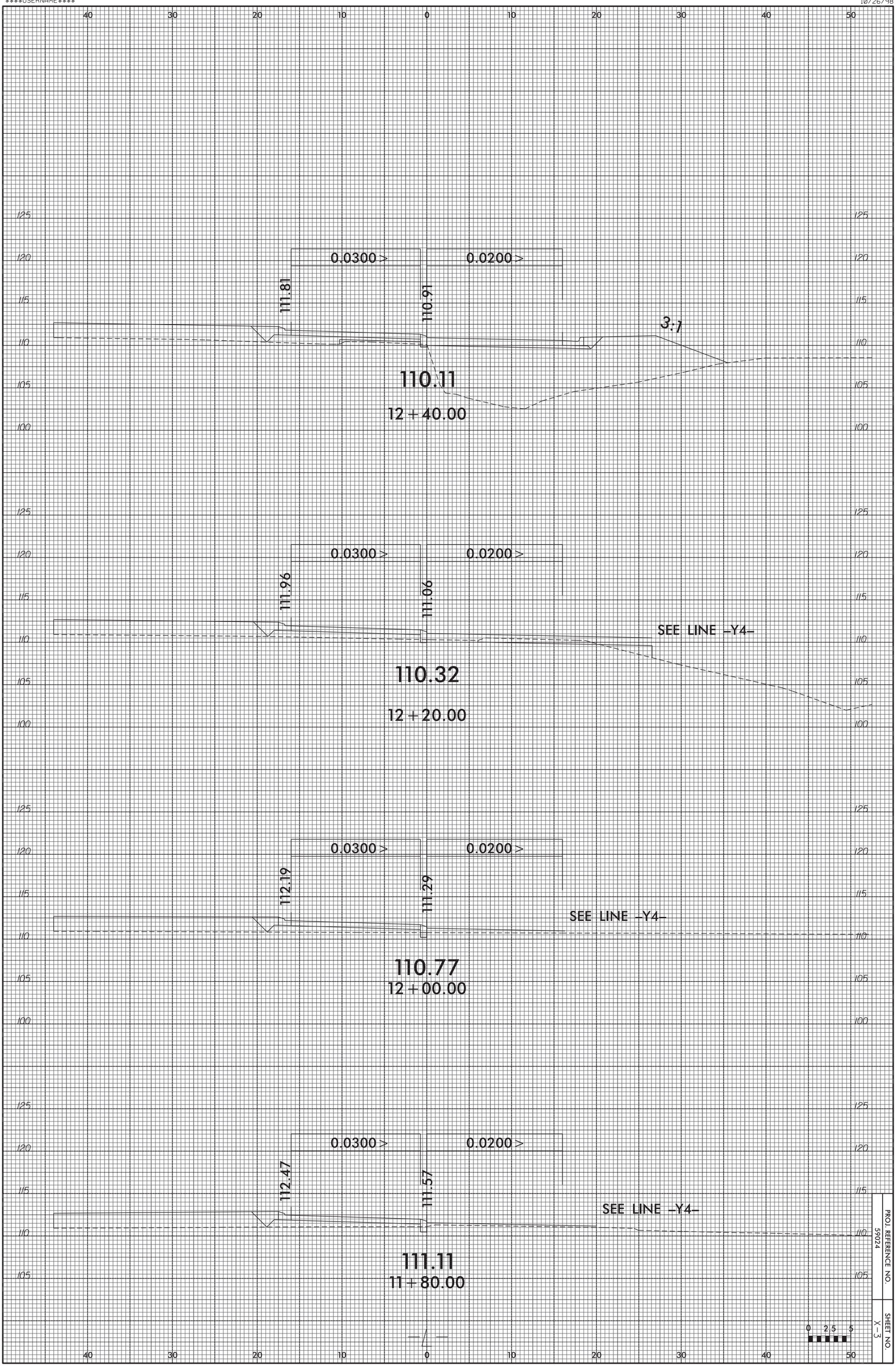

PROJ. REFERENCE NO.
59024

SHEET NO.
X-3

PROJ. REFERENCE NO.	SHEET NO.
59024	X-4

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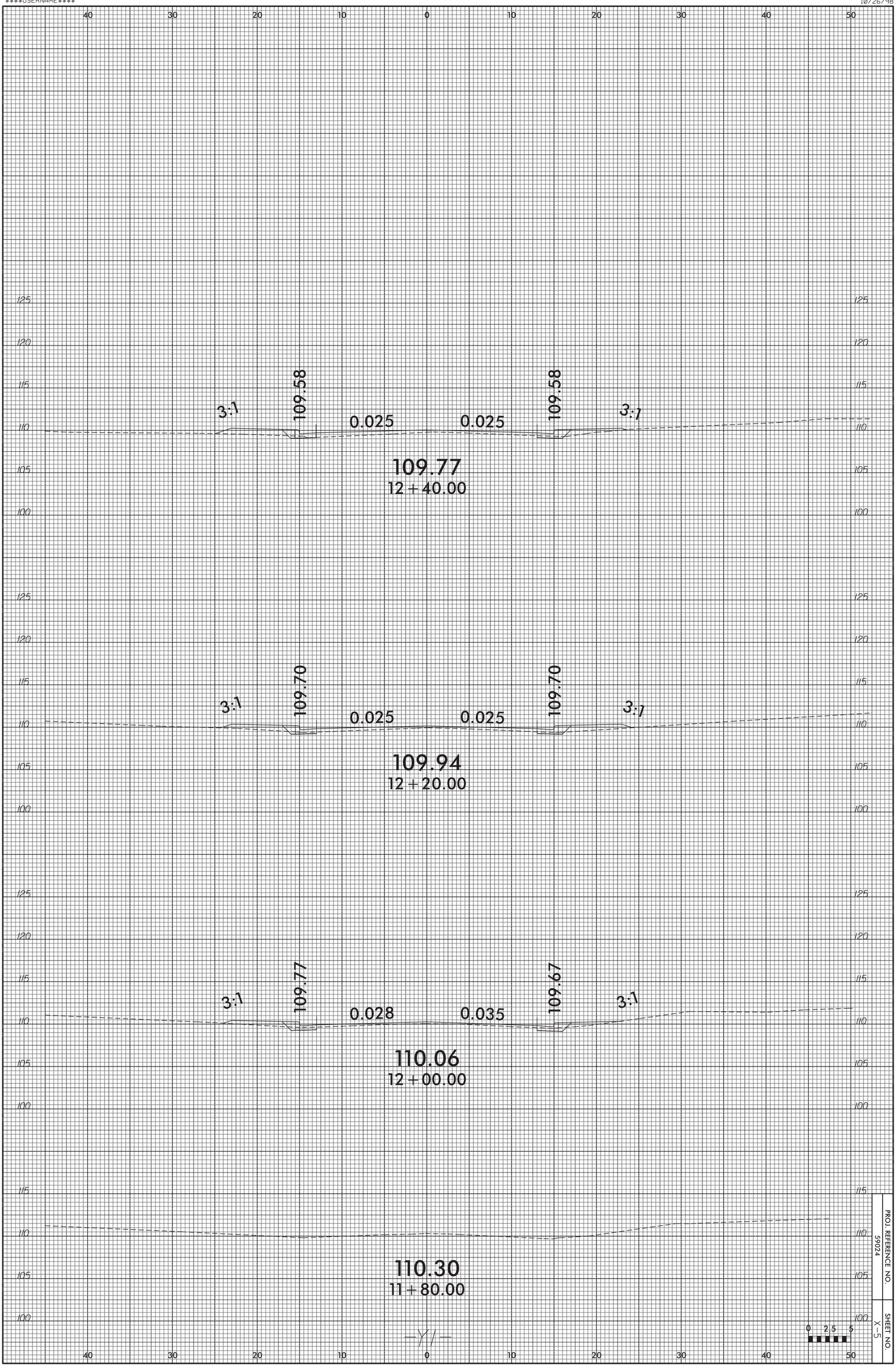

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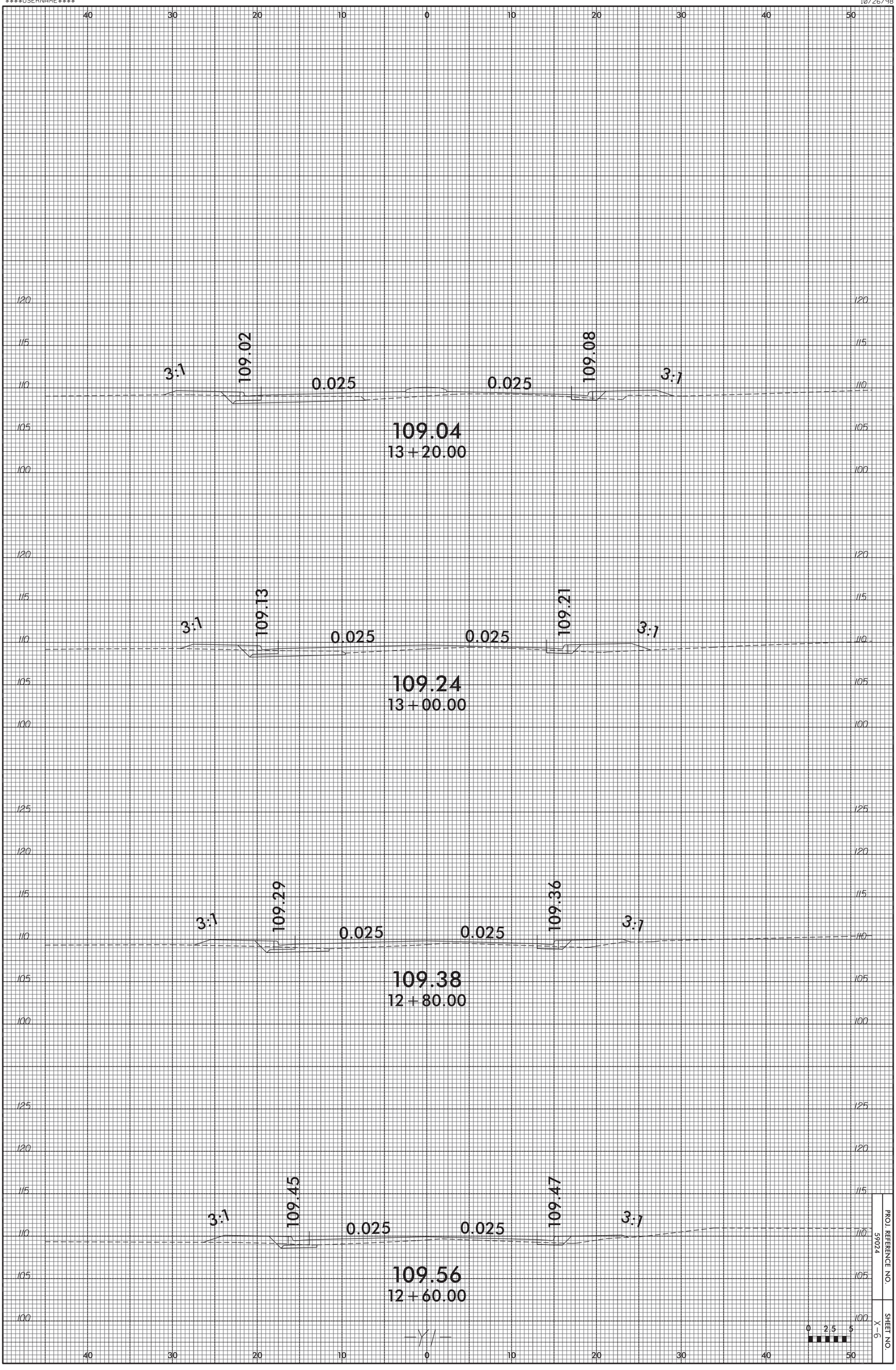

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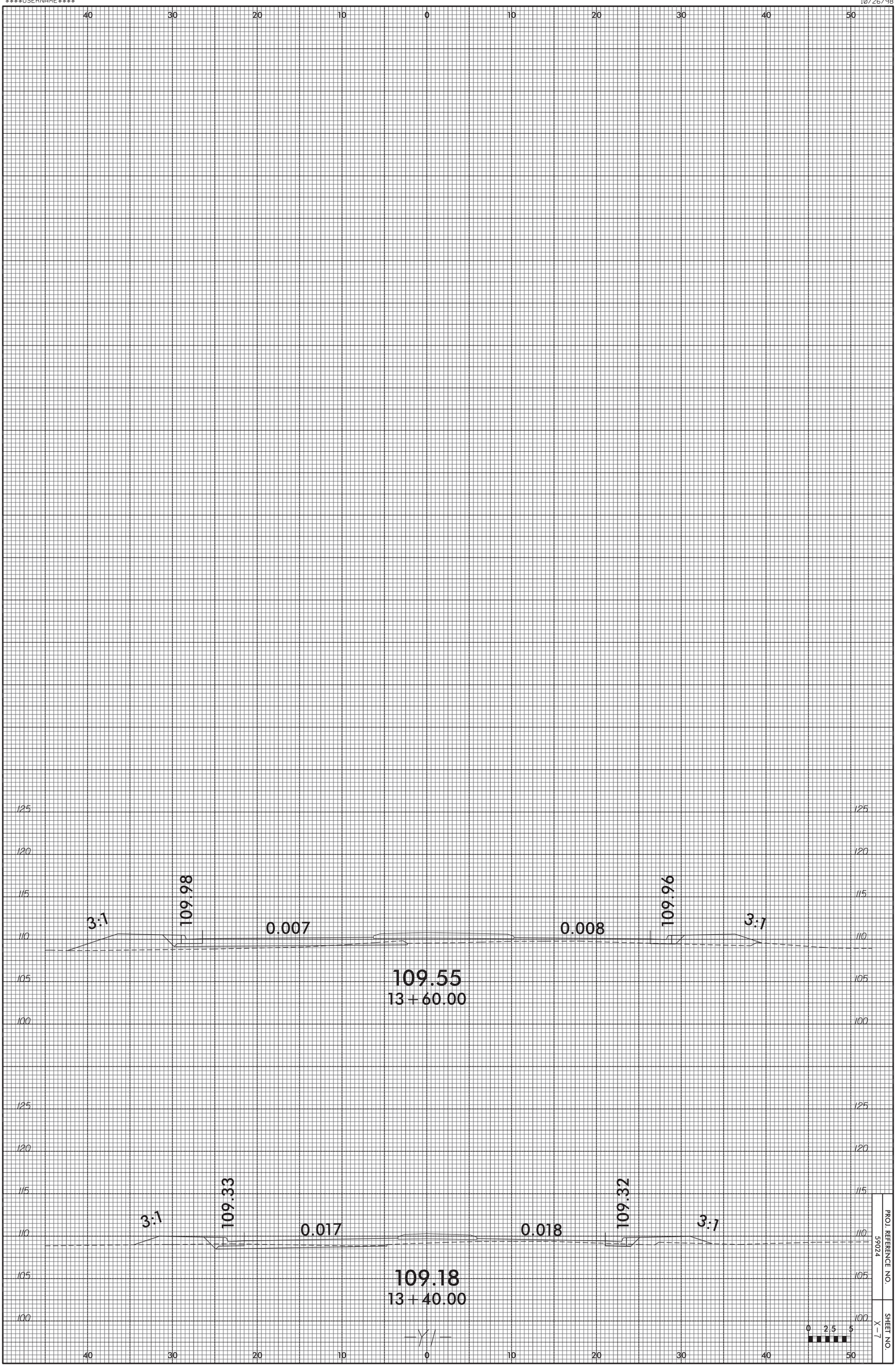

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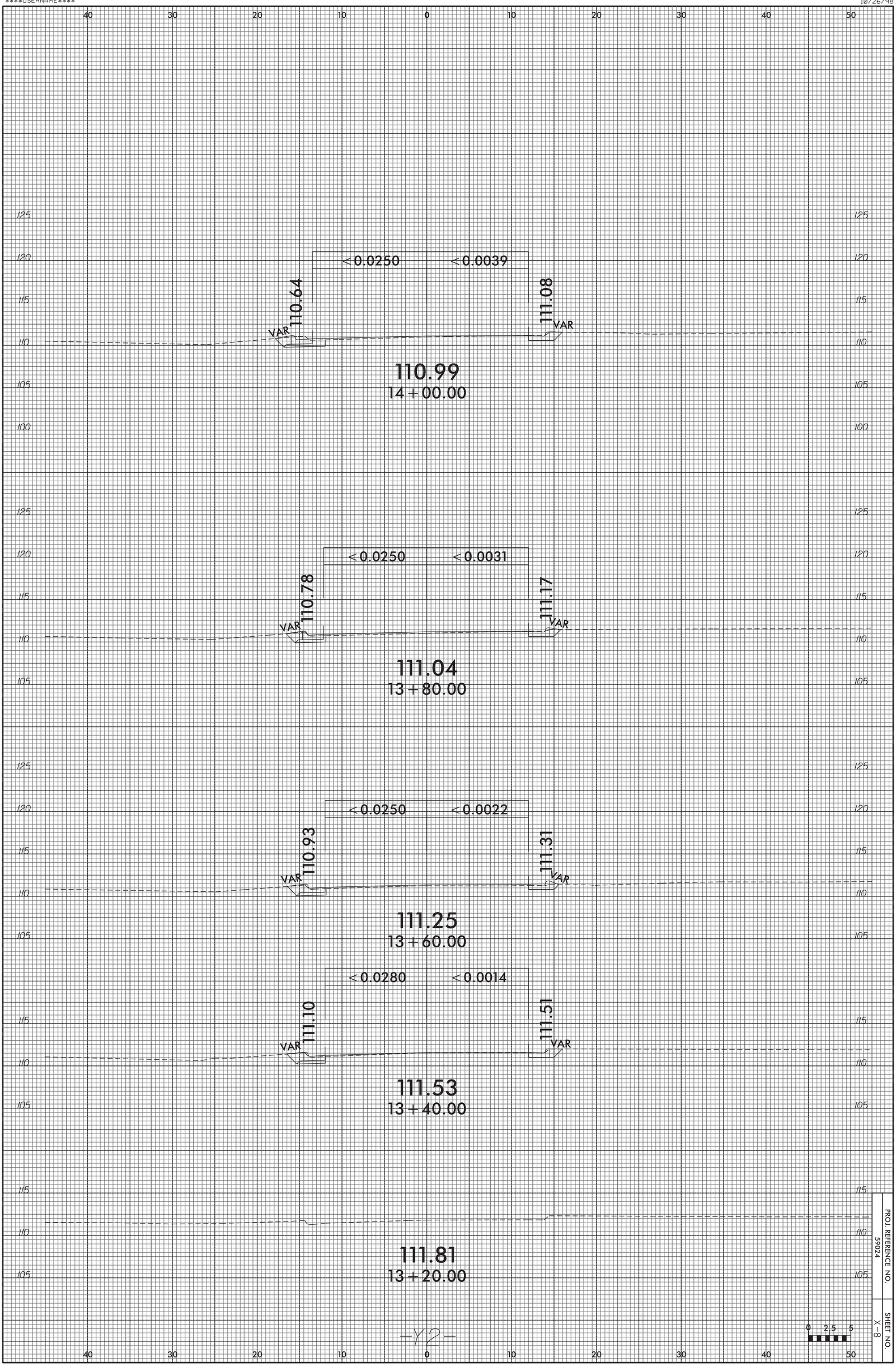

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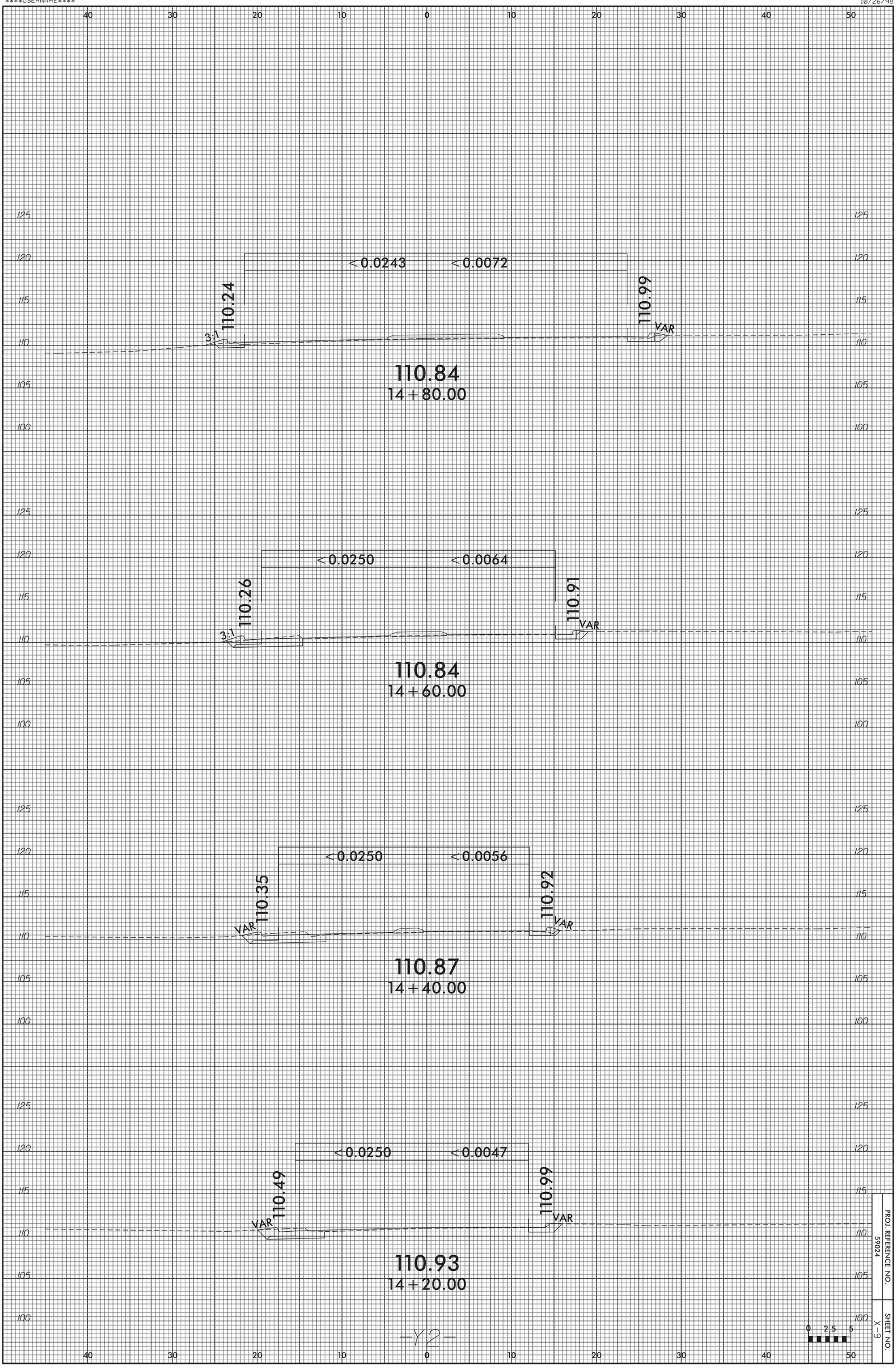

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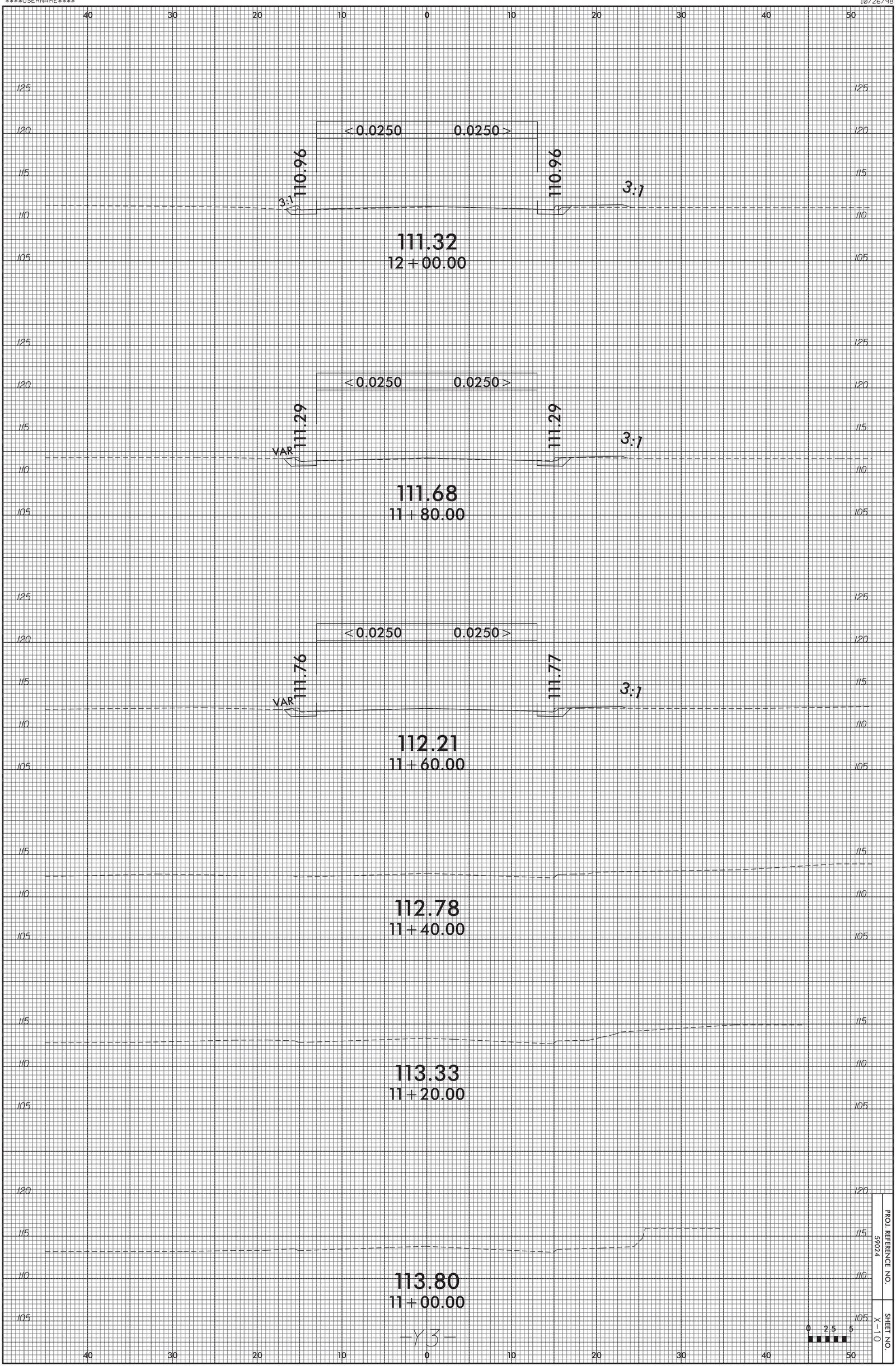

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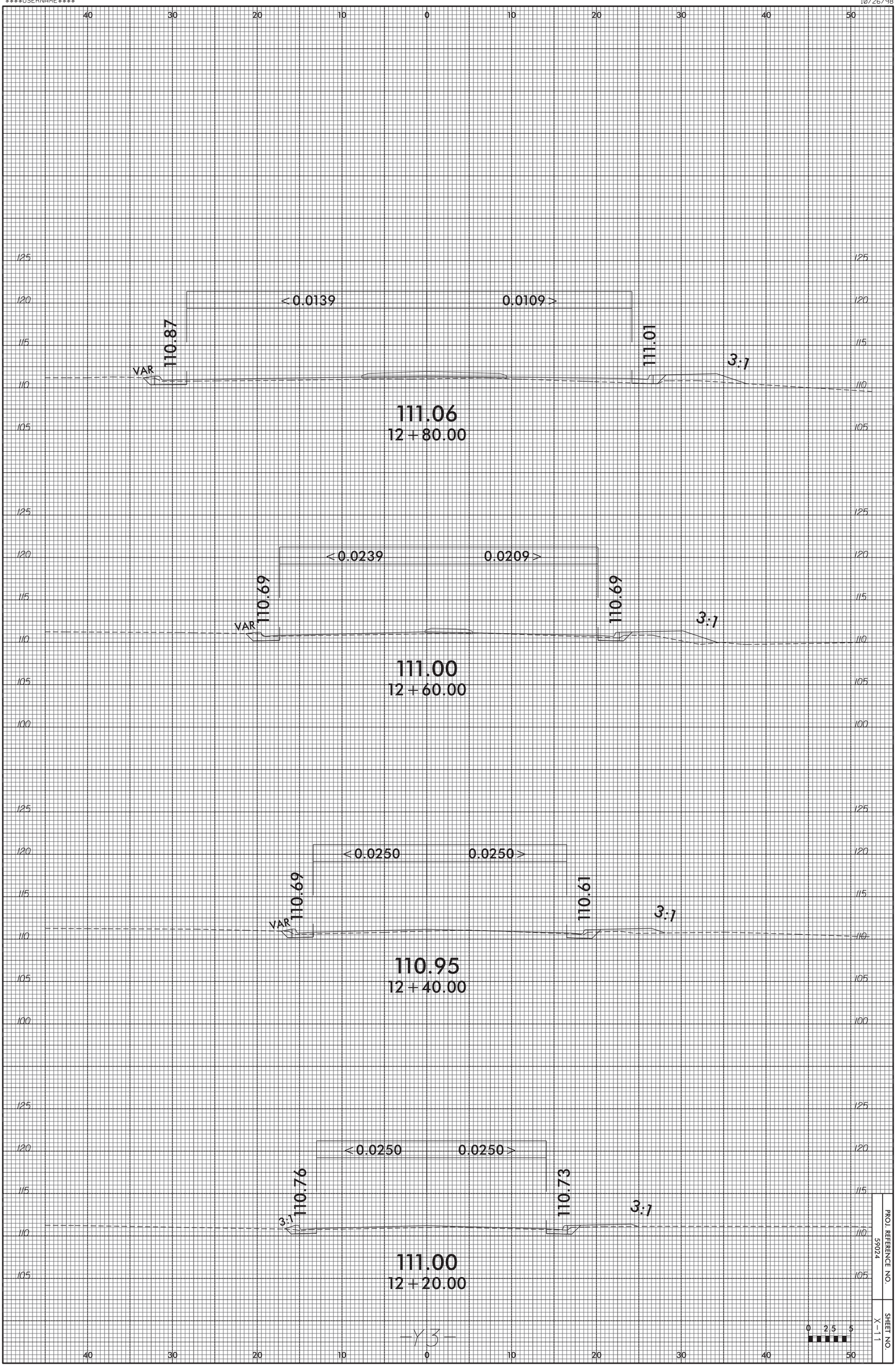

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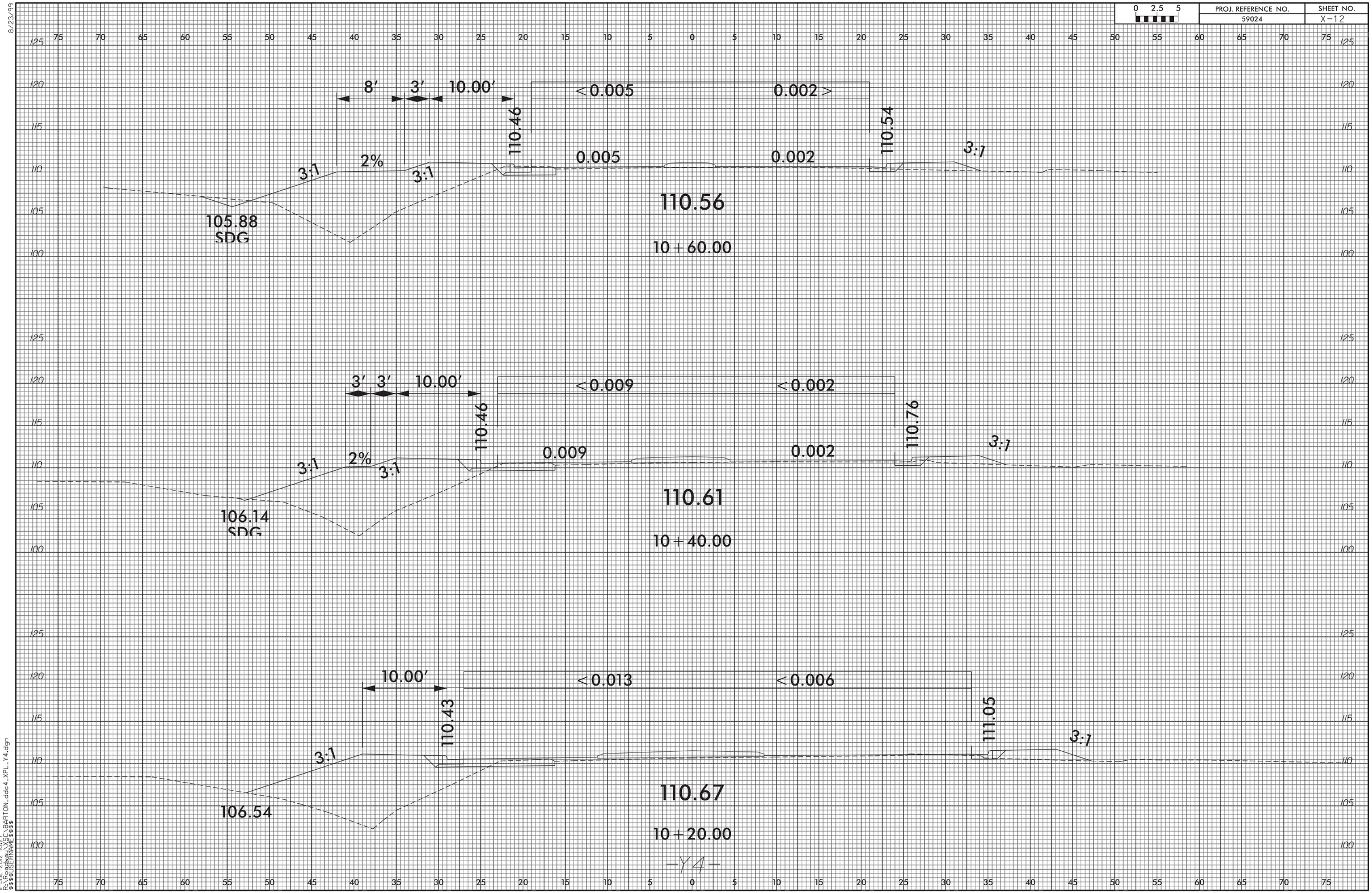

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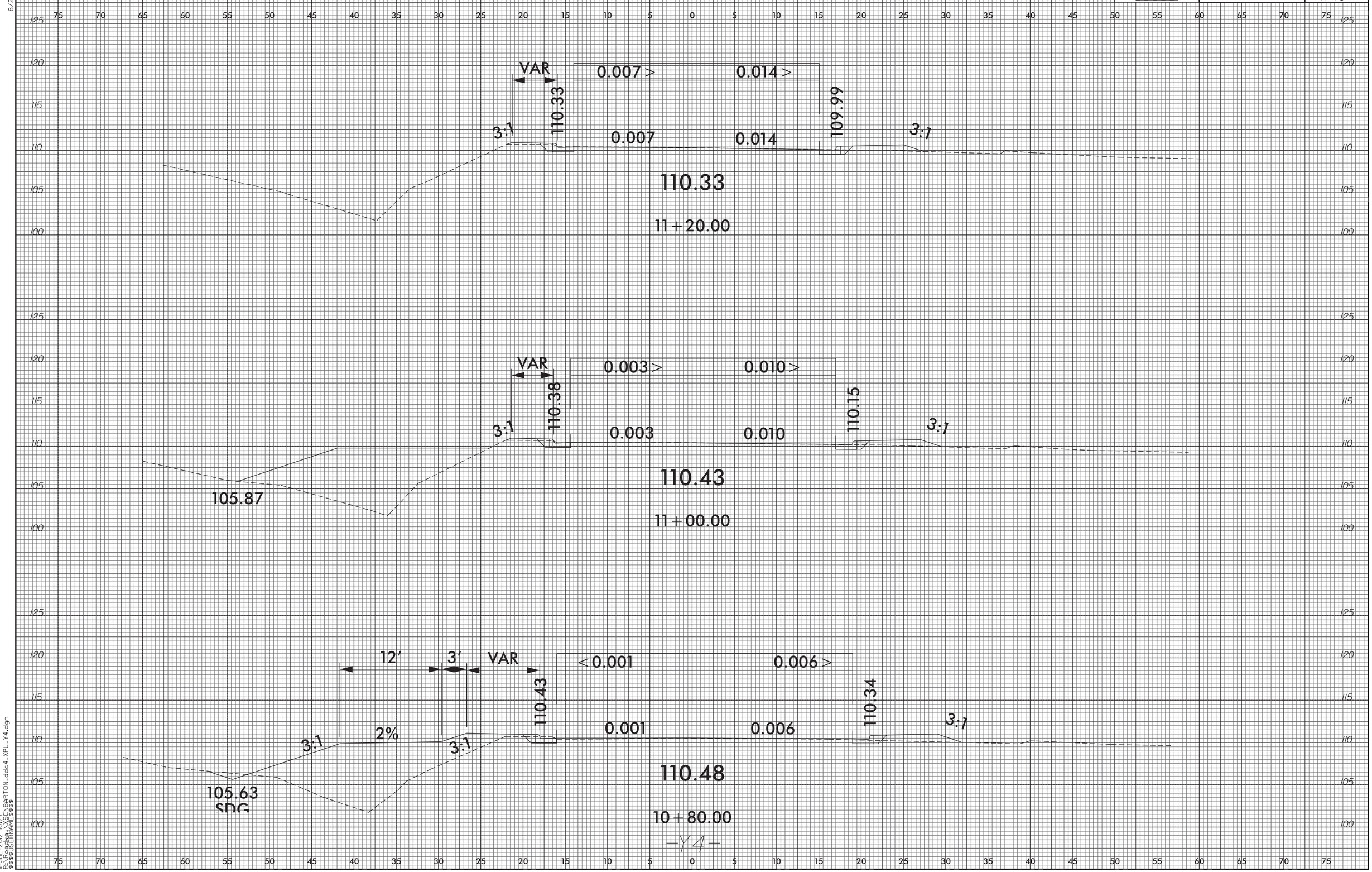

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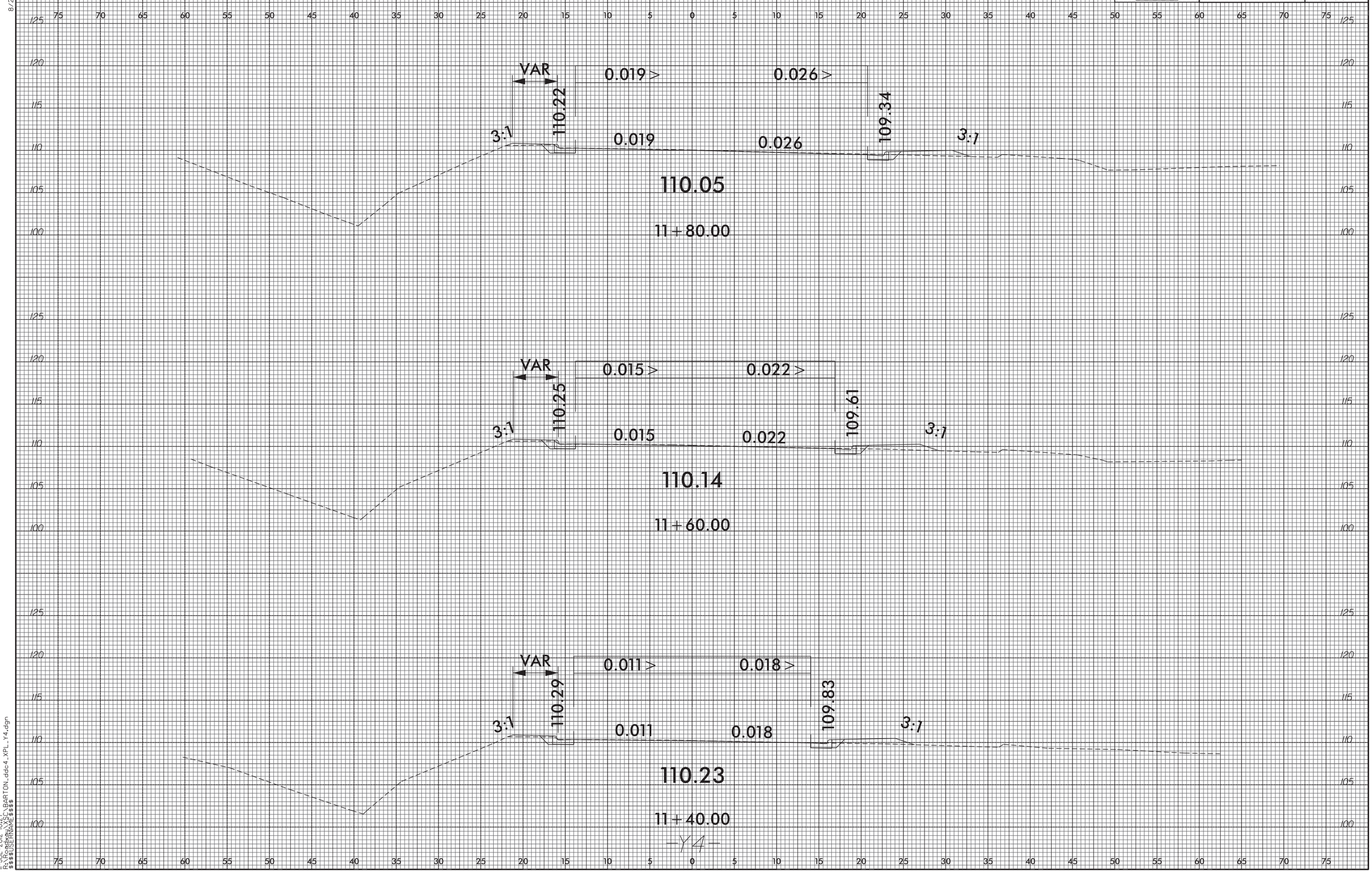

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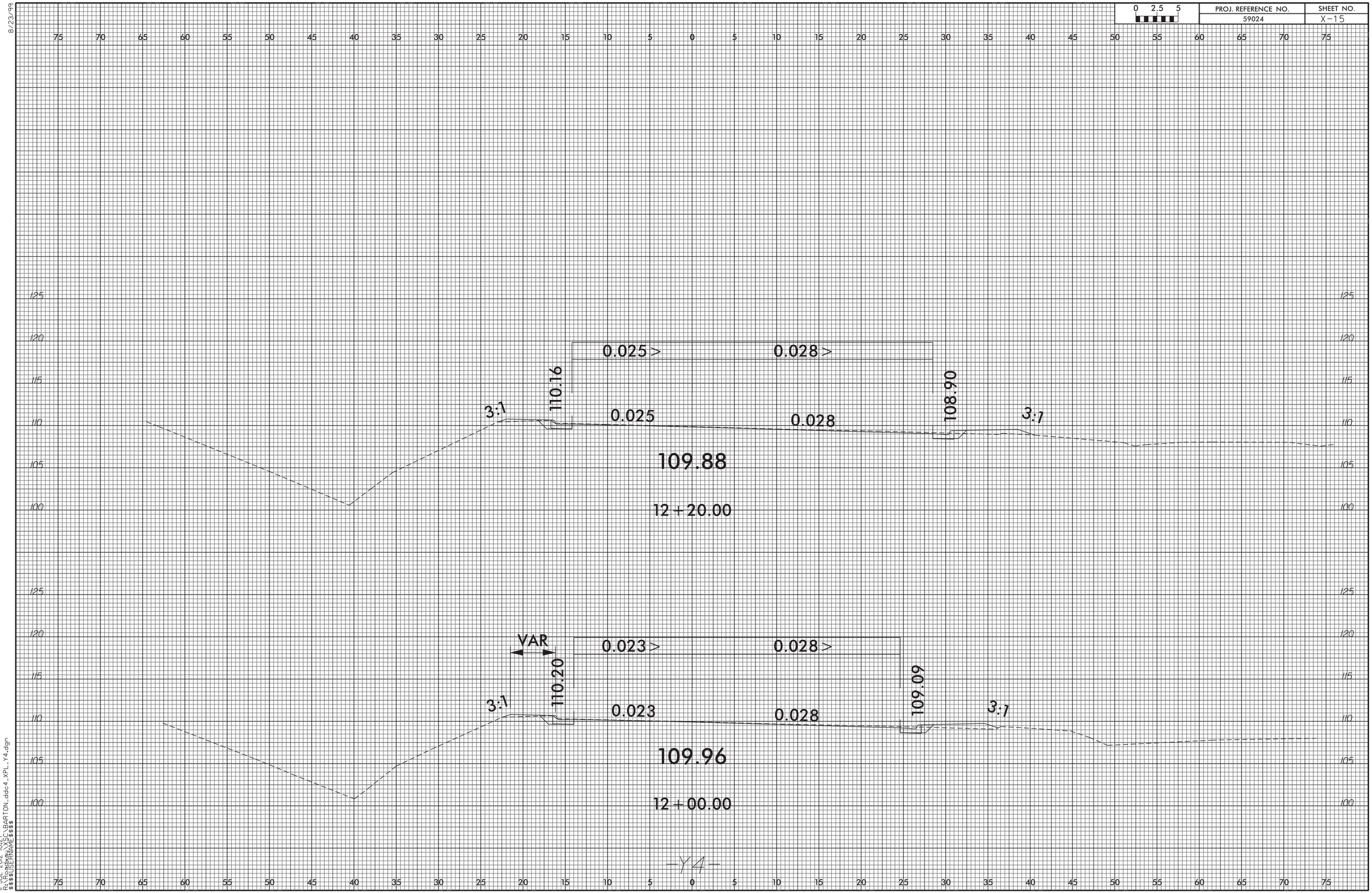

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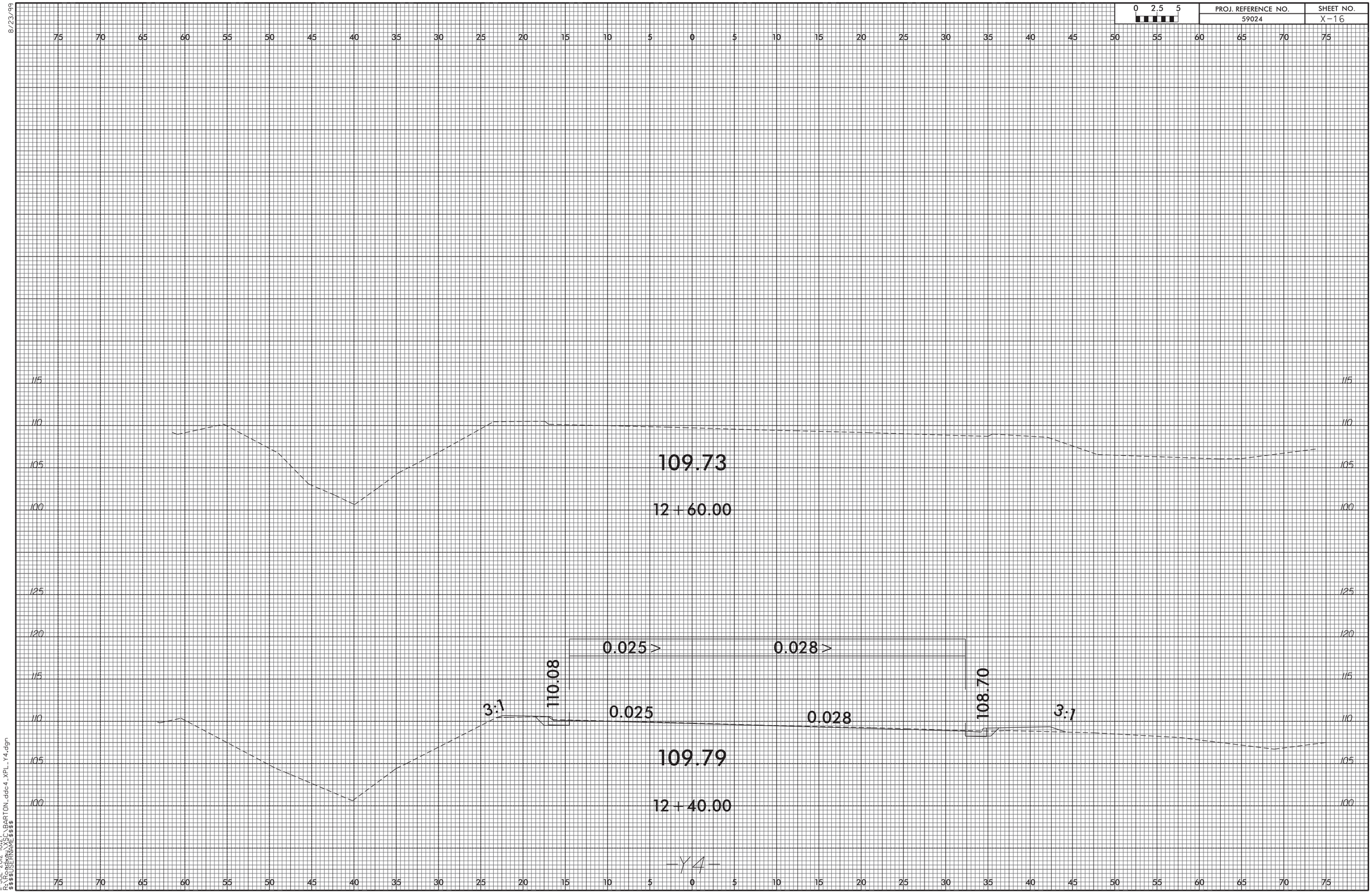
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12+60.00
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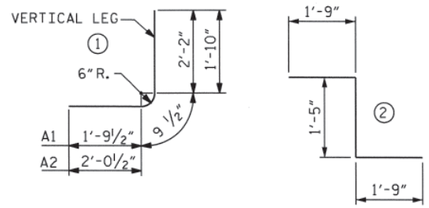


BAR TYPES

DIMENSIONS ARE OUT TO OUT.

BAR SCHEDULE

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
A1	358	#5	1	4'-9"	1774
A2	358	#5	1	4'-8"	1743
A100	214	#6	STR	10'-11"	3509
A101	1	#6	STR	10'-3"	15
A102	1	#6	STR	9'-6"	14
A103	1	#6	STR	8'-10"	13
A104	1	#6	STR	8'-1"	12
A105	1	#6	STR	7'-5"	11
A106	1	#6	STR	6'-8"	10
A107	1	#6	STR	6'-0"	9
A108	1	#6	STR	5'-3"	8
A109	1	#6	STR	4'-7"	7
A110	1	#6	STR	3'-10"	6
A111	1	#6	STR	3'-2"	5
A112	1	#6	STR	2'-6"	4
A113	1	#6	STR	1'-9"	3
A200	231	#6	STR	10'-11"	3788
A201	1	#6	STR	10'-3"	15
A202	1	#6	STR	9'-6"	14
A203	1	#6	STR	8'-10"	13
A204	1	#6	STR	8'-1"	12
A205	1	#6	STR	7'-5"	11
A206	1	#6	STR	6'-8"	10
A207	1	#6	STR	6'-0"	9
A208	1	#6	STR	5'-3"	8
A209	1	#6	STR	4'-7"	7
A210	1	#6	STR	3'-10"	6
A211	1	#6	STR	3'-2"	5
A212	1	#6	STR	2'-6"	4
A213	1	#6	STR	1'-9"	3
B1	407	#4	STR	7'-2"	1948
B2	330	#5	STR	5'-4"	1836
B3	34	#4	STR	8'-5"	191
B4	28	#5	STR	6'-7"	192
C1	190	#4	STR	28'-2"	3575
C2	12	#4	STR	9'-8"	77
D1	24	#6	STR	2'-6"	90
E1	16	#5	STR	4'-0"	67
E2	16	#5	STR	5'-2"	86
E3	16	#5	STR	6'-4"	106
G1	2	#4	STR	11'-0"	15
S1	6	#8	STR	14'-1"	226
Z1	24	#4	2	4'-11"	79
REINFORCING STEEL				= 19,536	LBS.

TOTAL STRUCTURE QUANTITIES

CLASS A CONCRETE		
BARREL @ 1.017 CY/FT	119.9 C.Y.	
BARREL @ 1.079 CY/FT	10.8 C.Y.	
WINGS ETC.	8.8 C.Y.	
TOTAL	139.5 C.Y.	
REINFORCING STEEL		
BARREL	19,536	LBS.
WINGS ETC.	396	LBS.
TOTAL	19,932	LBS.
CULVERT EXCAVATION	LUMP SUM	
FOUNDATION CONDITIONING MATERIAL	139	TONS

NOTES

ASSUMED LIVE LOAD ----------HS20-44 OR ALTERNATE LOADING.

DESIGN FILL----------2.00 FT.

FOR OTHER DESIGN DATA AND NOTES SEE STANDARD NOTE SHEET.

3" Ø WEEP HOLES INDICATED TO BE IN ACCORDANCE WITH THE SPECIFICATIONS.

CONCRETE IN CULVERTS TO BE POURED IN THE FOLLOWING ORDER:

1. WING FOOTINGS AND FLOOR SLAB INCLUDING 4" OF ALL VERTICAL WALLS.
2. THE REMAINING PORTIONS OF THE WALLS AND WINGS FULL HEIGHT FOLLOWED BY ROOF SLAB AND HEADWALLS.

THE RESIDENT ENGINEER SHALL CHECK THE LENGTH OF CULVERT BEFORE STAKING IT OUT TO MAKE CERTAIN THAT IT WILL PROPERLY TAKE CARE OF THE FILL.

DIMENSIONS FOR WING LAYOUT AS WELL AS ADDITIONAL REINFORCING STEEL EMBEDDED IN BARREL ARE SHOWN ON WING SHEET.

TRANSVERSE CONSTRUCTION JOINTS SHALL BE USED IN THE BARREL, SPACED TO LIMIT THE POURS TO A MAXIMUM OF 70 FT. LOCATION OF JOINTS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER.

NO PRECAST REINFORCED BOX CULVERT OPTION WILL BE ALLOWED.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

DOWELS SHALL BE USED TO CONNECT THE CULVERT EXTENSION TO THE EXISTING CULVERT AS SHOWN. FOR NOTE REGARDING SETTING OF DOWELS, SEE SHEET SN.

IF APPROVED BY THE ENGINEER, THE CONTRACTOR MAY USE THE EXISTING WINGS AS TEMPORARY SHORING FOR THE CONSTRUCTION OF THE CULVERT EXTENSIONS. IN THIS CASE, THE BOTTOM SLAB OF THE EXTENSION SHALL BE POURED AT LEAST 72 HOURS PRIOR TO CUTTING THE WINGS. THE WINGS MAY BE CUT EARLIER PROVIDED THE SLAB CONCRETE STRENGTH HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 1500 PSI.

THE DRAINAGE PIPES THROUGH THE SIDEWALL OF THE CULVERT SHALL BE LOCATED BY THE ENGINEER. THE REINFORCING STEEL SHALL BE FIELD BENT AS NECESSARY TO CLEAR PIPE.

THESE PLANS ARE FOR STRUCTURAL DETAILS ONLY. NO HYDRAULIC SURVEY OR HYDRAULIC DATA WAS PROVIDED FOR THE DEVELOPMENT OF THESE PLANS.

PROJECT NO. 59024

WILSON COUNTY

STATION: 12+52.80 -L-

SHEET 1 OF 4

NORTH CAROLINA PROFESSIONAL SEAL 14092 ENGINEER LUCY CHARLES HIN

6/28/12

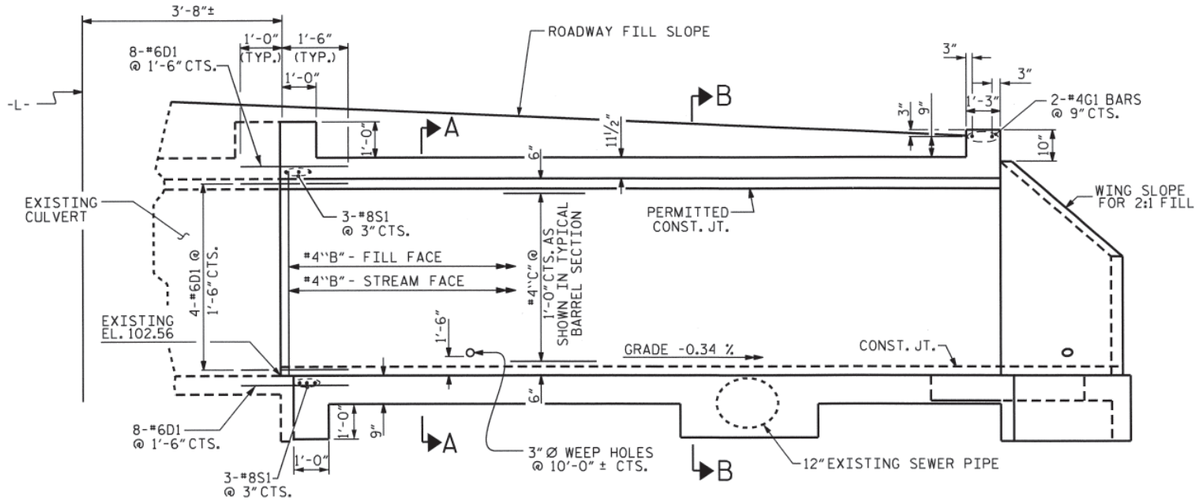
THESE PLANS ARE FOR STRUCTURAL DETAILS ONLY. NO HYDRAULIC ANAYSIS WAS PROVIDED, THEREFORE; I HEARBY ASSUME NO RESPONSIBLILY FOR ANY HYDRAULIC ISSUES WITH THE EXTENSION OF THIS CULVERT.

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SINGLE 10 FT. X 6 FT. CONCRETE BOX CULVERT EXTENSION

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-1
1			3			TOTAL SHEETS
2			4			4

DRAWN BY : J.D.H. DATE : 6/1/12
CHECKED BY : B.N.G. DATE : 6/6/12



CULVERT SECTION

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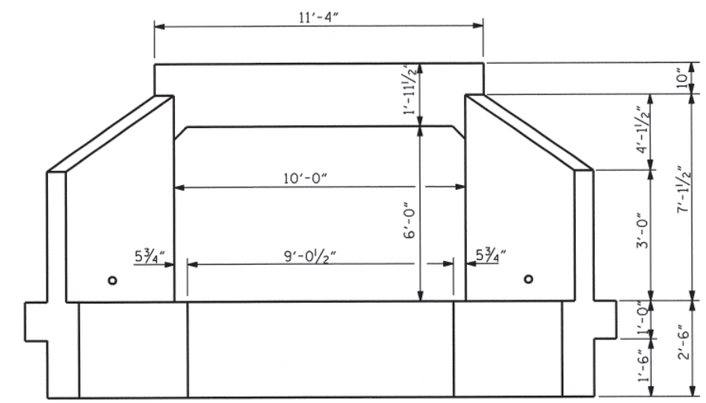

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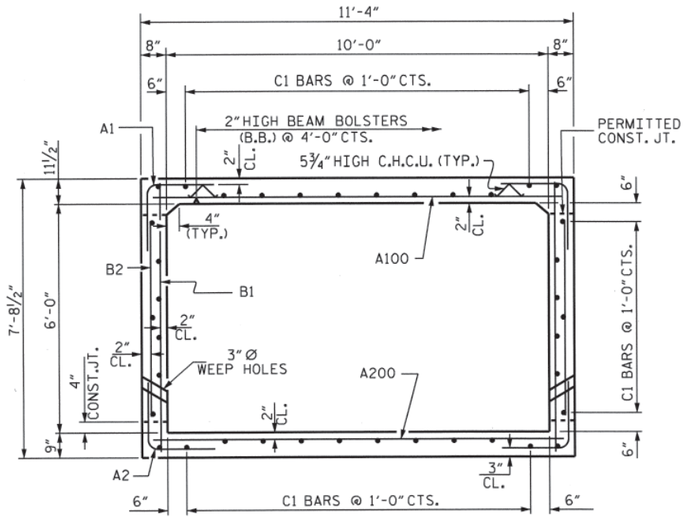
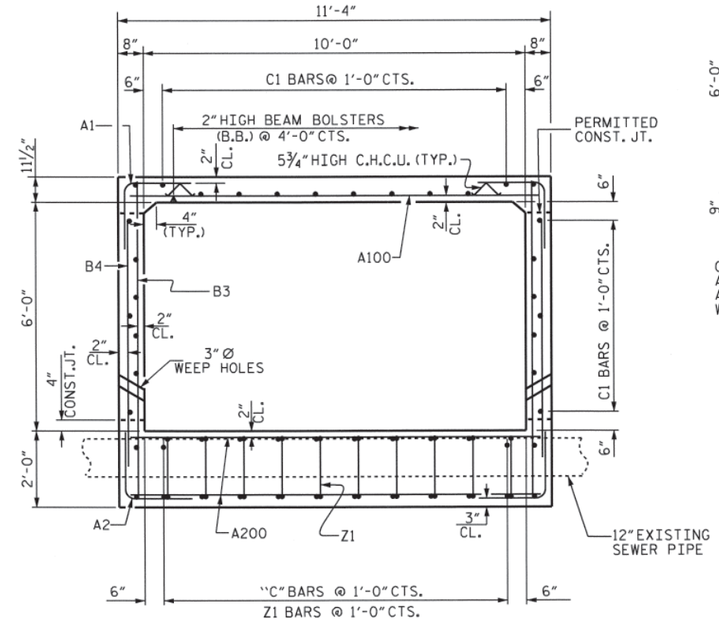


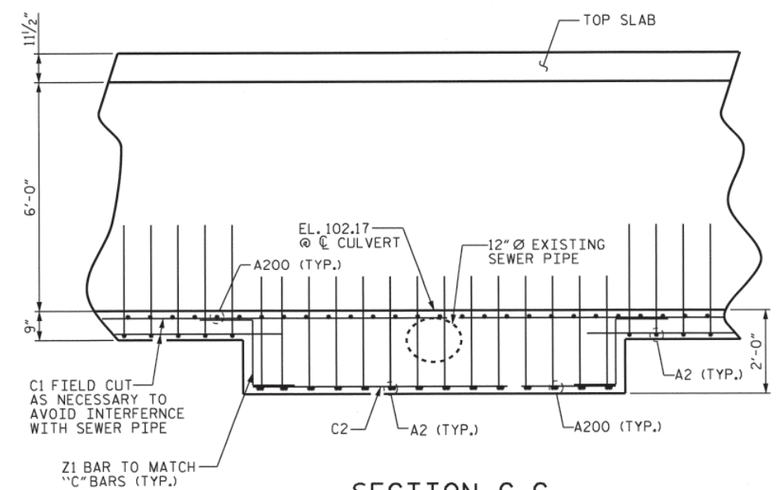
SECTION A-A

THERE ARE 38 "C" BARS IN SECTION OF BARREL



SECTION B-B

THERE ARE 50 "C" BARS IN SECTION OF BARREL



SECTION C-C

PROJECT NO. 59024

WILSON COUNTY

STATION: 12+52.80 -L-

SHEET 2 OF 4

NORTH CAROLINA PROFESSIONAL SEAL 19091 ENGINEER BUCK CHARLES HUNT

6/28/12

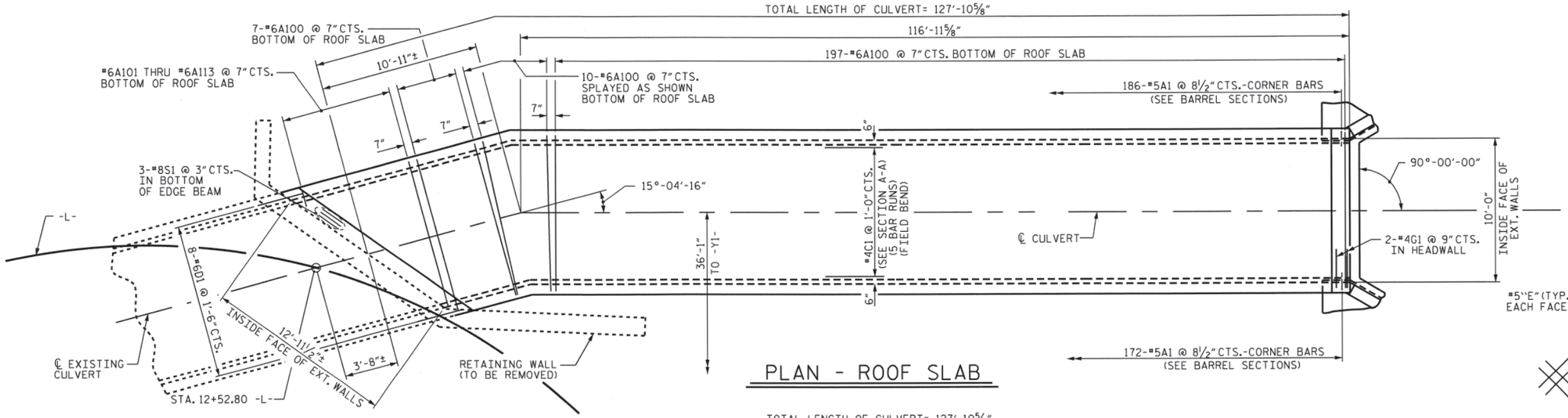
THESE PLANS ARE FOR STRUCTURAL DETAILS ONLY. NO HYDRAULIC ANAYSIS WAS PROVIDED, THEREFORE; I HEARBY ASSUME NO RESPONSIBLILY FOR ANY HYDRAULIC ISSUES WITH THE EXTENSION OF THIS CULVERT.

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

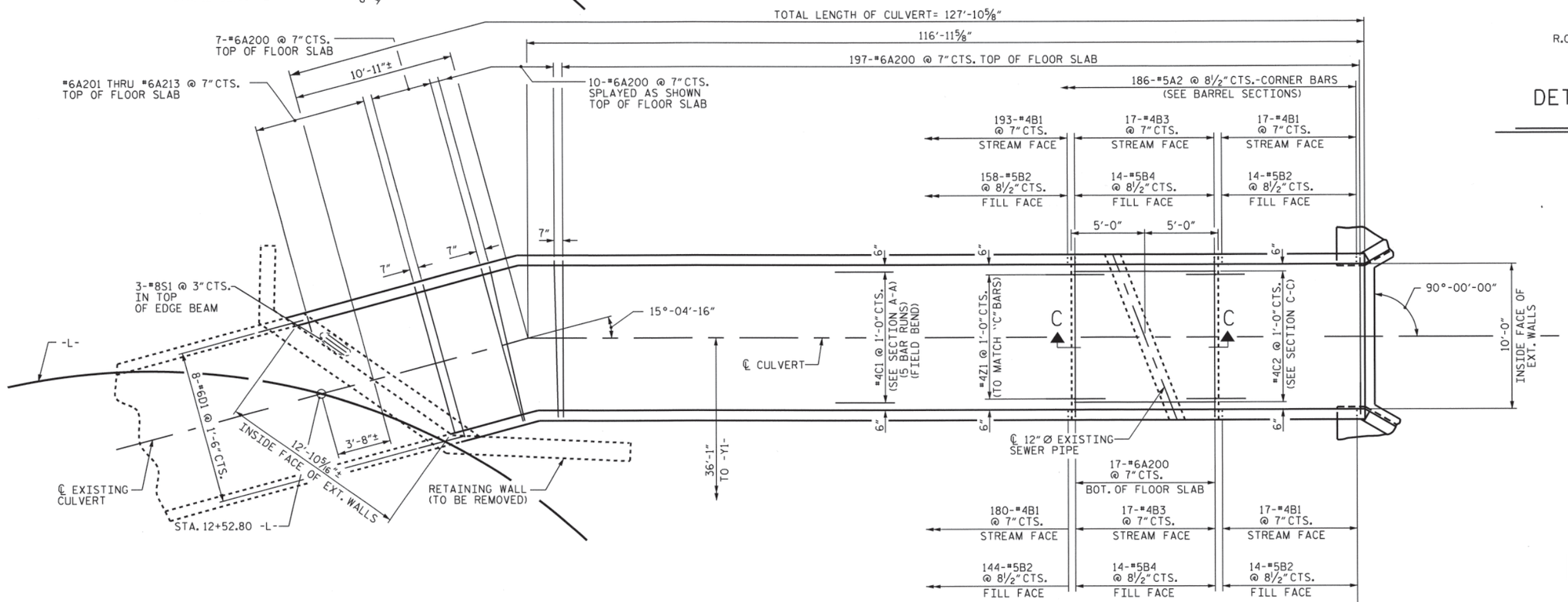
SINGLE 10 FT. X 6 FT. CONCRETE BOX CULVERT EXTENSION

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-2
1			3			TOTAL SHEETS
2			4			4

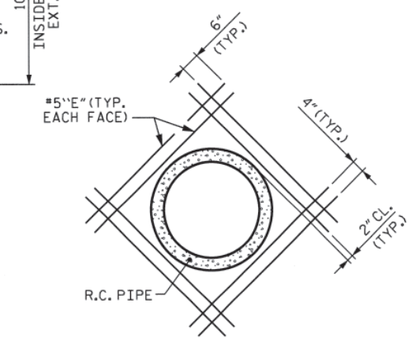
DRAWN BY : J.D.H. DATE : 6/1/12
CHECKED BY : B.N.C. DATE : 6/6/12



PLAN - ROOF SLAB



PLAN - FLOOR SLAB



DETAIL OF REINFORCING AROUND PIPE

PIPE SIZE	#5 "E" LENGTH	BAR
18"	4'-0"	E1
30"	5'-2"	E2
42"	6'-4"	E3

PROJECT NO. 59024

WILSON COUNTY

STATION: 12+52.80 -L-

SHEET 3 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SINGLE 10 FT. X 6 FT. CONCRETE BOX CULVERT EXTENSION

NORTH CAROLINA PROFESSIONAL SEAL 28098 ENGINEER BUCK CHARLES HUNT

6/21/12

THESE PLANS ARE FOR STRUCTURAL DETAILS ONLY. NO HYDRAULIC ANAYSIS WAS PROVIDED, THEREFORE; I HEARBY ASSUME NO RESPONSIBLILY FOR ANY HYDRAULIC ISSUES WITH THE EXTENSION OF THIS CULVERT.

REVISIONS							SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:		C-3
1			3				TOTAL SHEETS
2			4				4

DRAWN BY : J.D.H. DATE : 6/1/12
CHECKED BY : B.N.C. DATE : 6/6/12

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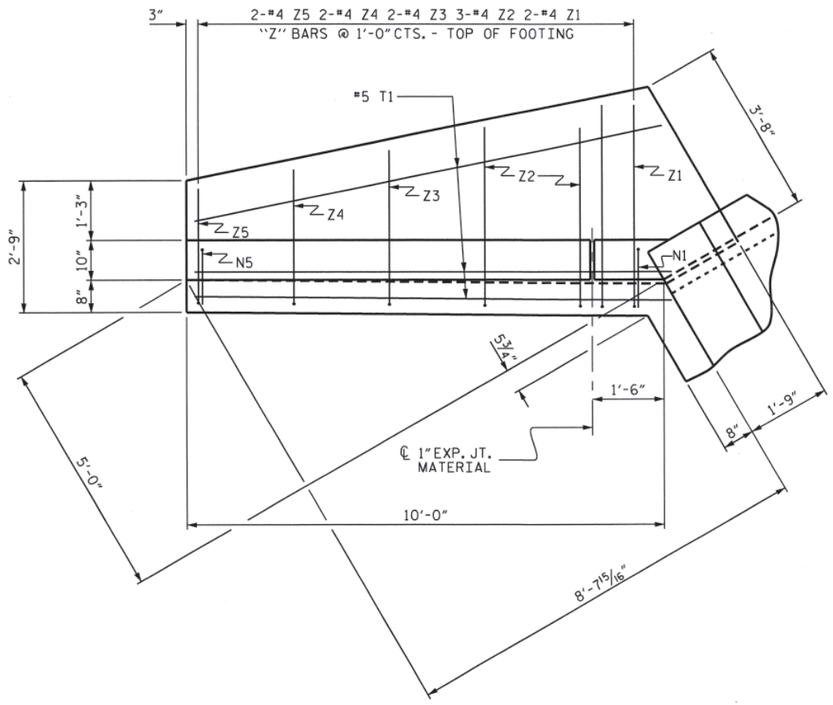

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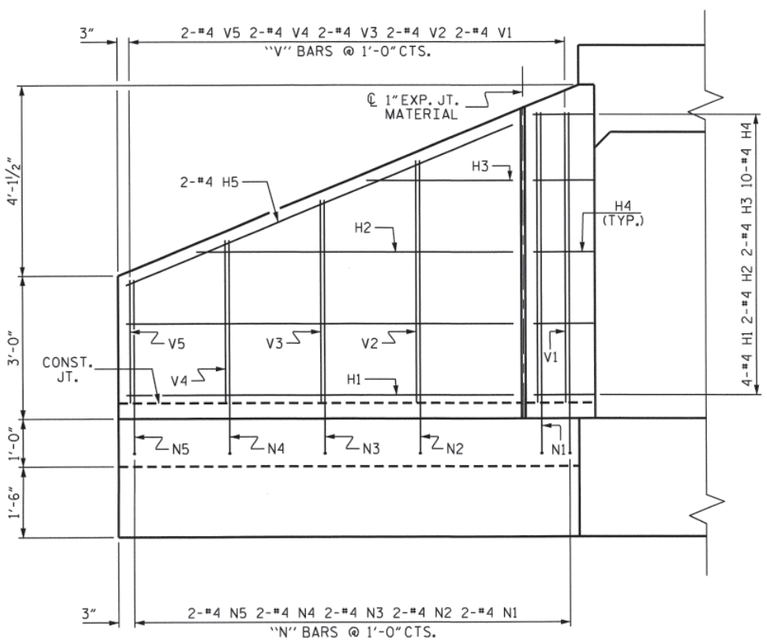
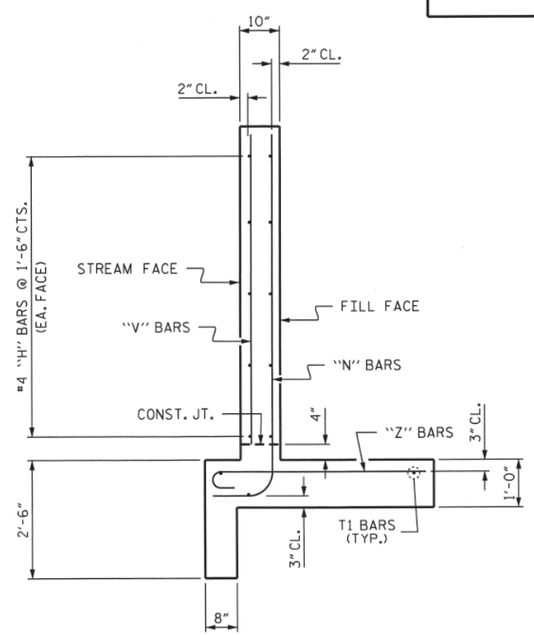


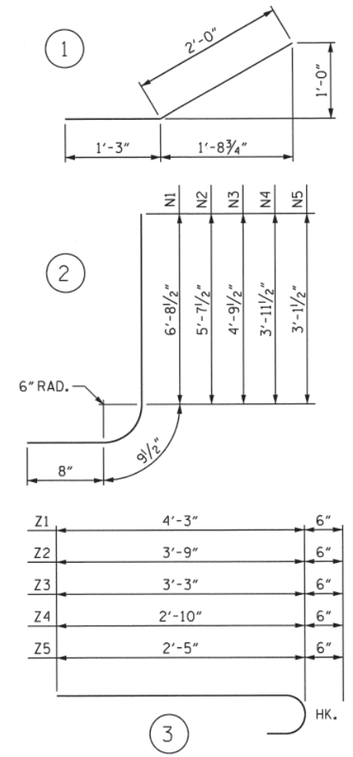
ELEVATION



TYPICAL WING SECTION

BAR TYPES

ALL BAR DIMENSIONS ARE OUT TO OUT.



BILL OF MATERIAL

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
H1	8	#4	STR	8'-1"	43
H2	4	#4	STR	6'-8"	18
H3	4	#4	STR	3'-1"	8
H4	20	#4	1	3'-3"	43
H5	4	#4	STR	8'-9"	23
N1	4	#4	2	8'-2"	22
N2	4	#4	2	7'-1"	19
N3	4	#4	2	6'-3"	17
N4	4	#4	2	5'-5"	14
N5	4	#4	2	4'-7"	12
T1	6	#5	STR	10'-0"	63
V1	4	#4	STR	6'-1"	16
V2	4	#4	STR	5'-1"	14
V3	4	#4	STR	4'-3"	11
V4	4	#4	STR	3'-5"	9
V5	4	#4	STR	2'-7"	7
Z1	4	#4	3	4'-9"	13
Z2	6	#4	3	4'-3"	17
Z3	4	#4	3	3'-9"	10
Z4	4	#4	3	3'-4"	9
Z5	4	#4	3	2'-11"	8

REINFORCING STEEL FOR 2 WINGS	396	LBS
CLASS A CONCRETE		
2 WINGS	6.9	CY
1 HEADWALL	0.5	CY
END CURTAIN WALL	0.3	CY
2 EDGE BEAMS	1.1	CY
TOTAL	8.8	CY

THESE PLANS ARE FOR STRUCTURAL DETAILS ONLY. NO HYDRAULIC ANAYSIS WAS PROVIDED, THEREFORE; I HEARBY ASSUME NO RESPONSIBLILY FOR ANY HYDRAULIC ISSUES WITH THE EXTENSION OF THIS CULVERT.

PROJECT NO. 59024

WILSON COUNTY

STATION: 12+52.80 -L-

SHEET 4 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD WINGS FOR CONCRETE BOX CULVERT

H = 6'-0" SLOPE = 2:1

90° SKEW

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-4
1			3			TOTAL SHEETS
2			4			4

STD. NO. CW9006

ASSEMBLED BY : J.D.H.	DATE : 6/1/12
CHECKED BY : B.N.G.	DATE : 6/6/12
DRAWN BY : CCJ 10/99	
CHECKED BY : RWW 03/00	

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STANDARD NOTES

DESIGN DATA:

SPECIFICATIONS	A.A.S.H.T.O. (CURRENT)
LIVE LOAD	SEE PLANS
IMPACT ALLOWANCE	SEE A.A.S.H.T.O.
STRESS IN EXTREME FIBER OF	
STRUCTURAL STEEL - AASHTO M270 GRADE 36	20,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50W	27,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50	27,000 LBS. PER SQ. IN.
REINFORCING STEEL IN TENSION	
GRADE 60	24,000 LBS. PER SQ. IN.
CONCRETE IN COMPRESSION	1,200 LBS. PER SQ. IN.
CONCRETE IN SHEAR	SEE A.A.S.H.T.O.
STRUCTURAL TIMBER - TREATED OR	
UNTREATED - EXTREME FIBER STRESS	1,800 LBS. PER SQ. IN.
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER	375 LBS. PER SQ. IN.
EQUIVALENT FLUID PRESSURE OF EARTH	30 LBS. PER CU. FT. (MINIMUM)

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2012 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N. C. DEPARTMENT OF TRANSPORTATION.

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED 3/4" WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 1-1/2" RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A 1/4" FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A 1/4" RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 12" INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT, ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE.

ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.

IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.

WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE 7/8" Ø SHEAR STUDS FOR THE 3/4" Ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF 7/8" Ø STUDS ALONG THE BEAM AS SHOWN FOR 3/4" Ø STUDS BASED ON THE RATIO OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".

EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST 5/16" IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.

WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 1/16 INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.

METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

SPECIAL NOTES:

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.

ENGLISH

JANUARY, 1990