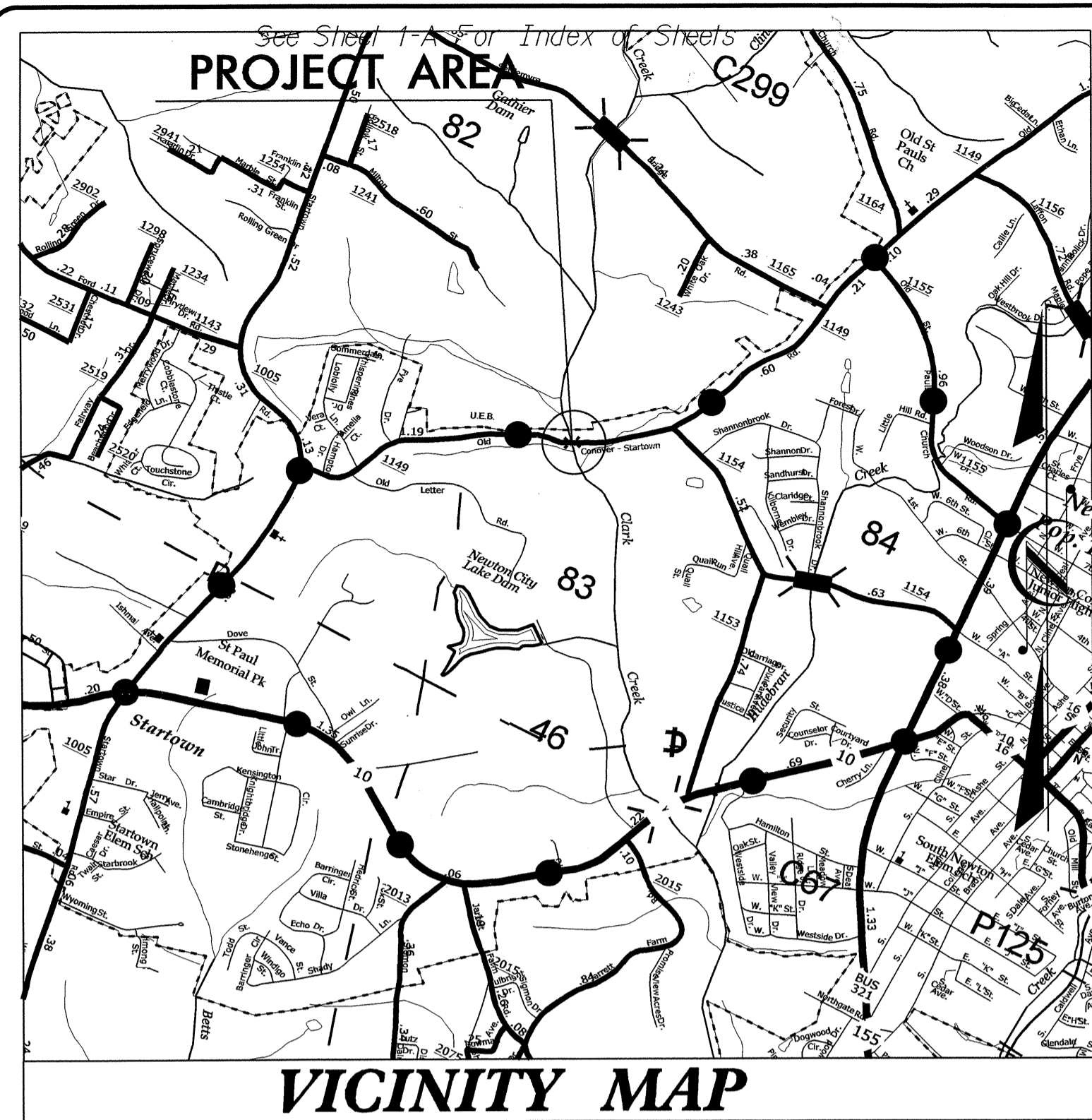


09/08/09

TIP PROJECT: B-5101

CONTRACT: C203299



VICINITY MAP
OFFSITE DETOUR

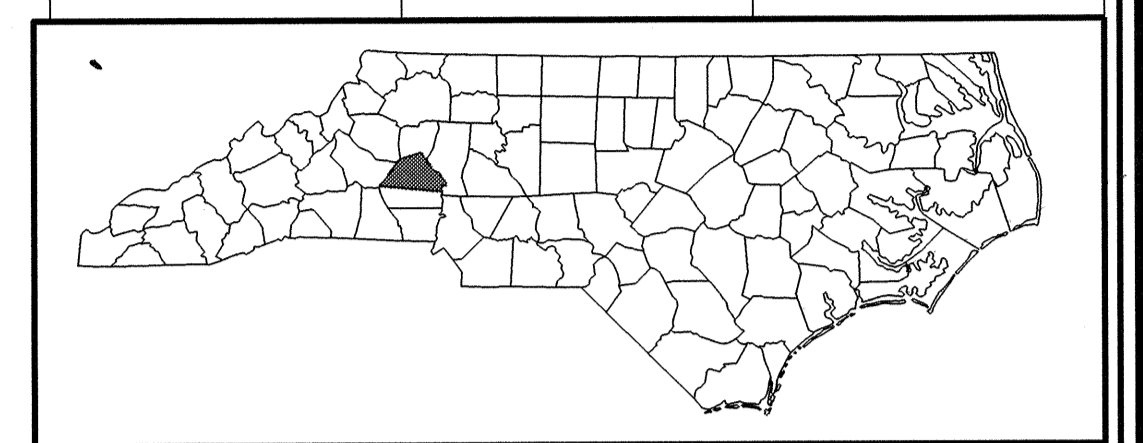
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CATAWBA COUNTY

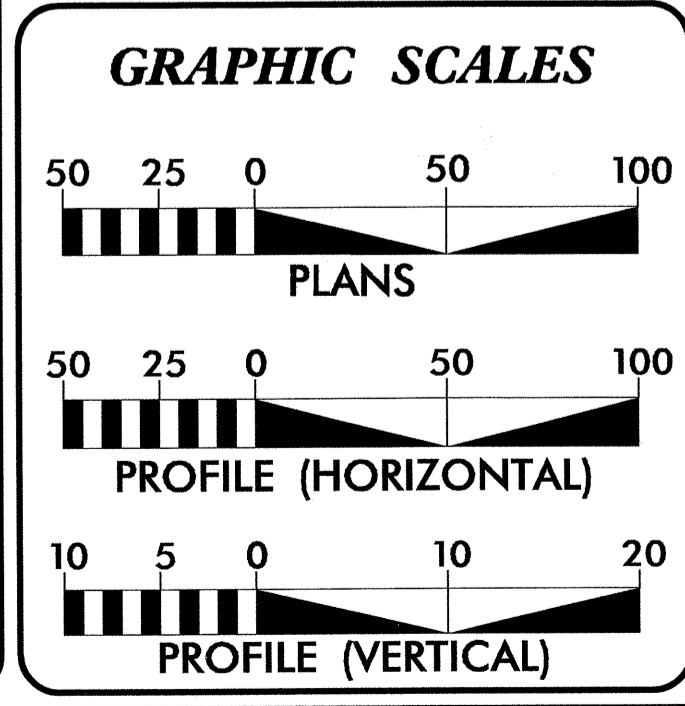
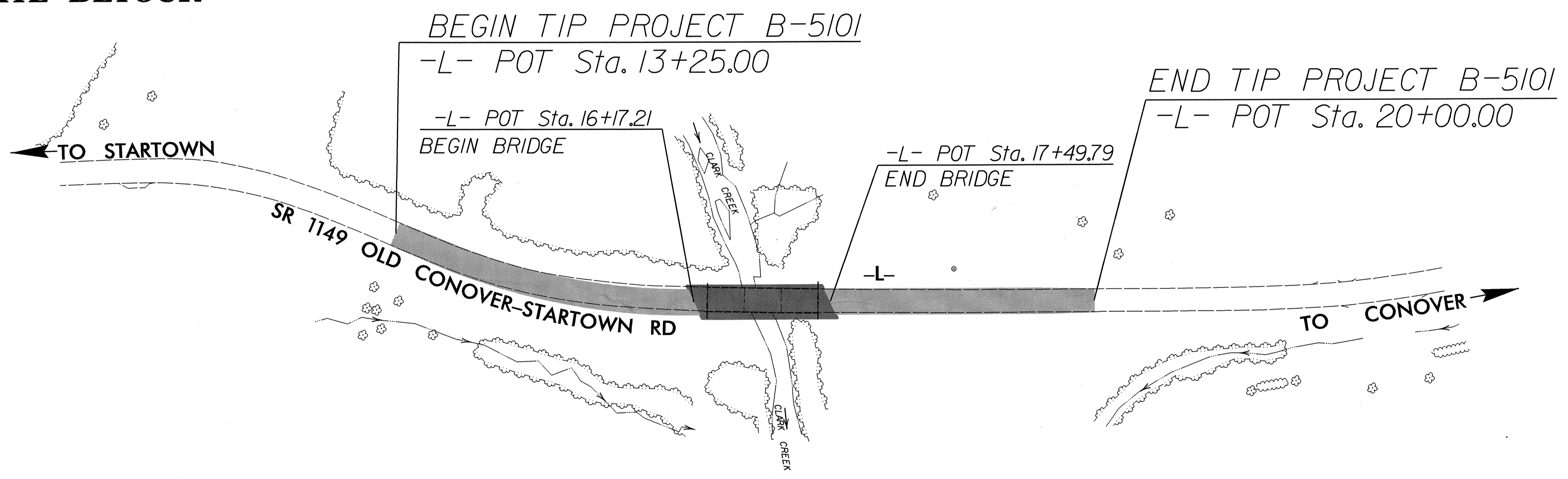
LOCATION: BRIDGE NO. 83 OVER CLARK CREEK
ON SR 1149

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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5101	1	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
42223.1.1	BRZ-1149(5)	PE	
42223.2.1	BRZ-1149(5)	RW, UTL.	
42223.3.FD1	BRZ-1149(5)	CONST.	



NAD 83/NSRS 2007



DESIGN DATA

ADT 2014 = 6654
ADT 2035 = 9400
DHV = 11%
D = 65%
T = 4% *
V = 50 MPH
* TTST 1% = DUAL 3%
FUNC CLASS =
URBAN MINOR ARTERIAL
SUBREGIONAL TIER

PROJECT LENGTH

Length Roadway TIP Project B-5101 = 0.103 mi
Length Structure TIP Project B-5101 = 0.025 mi
Total Length TIP Project B-5101 = 0.128 mi

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

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JULY 20, 2012

LETTING DATE:
JANUARY 21, 2014

JASON MOORE, P.E.
PROJECT ENGINEER

JEANIE TYSON
PROJECT DESIGN ENGINEER

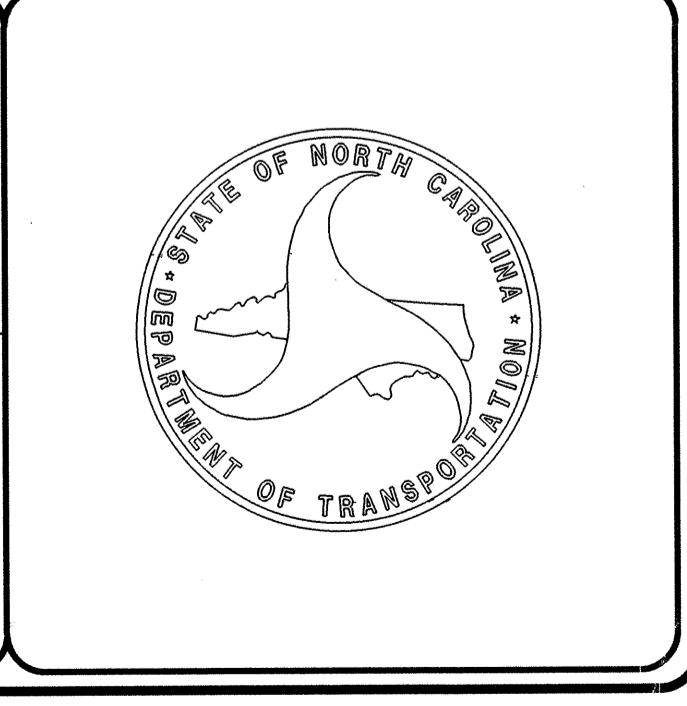
HYDRAULICS ENGINEER

10/14/13 P.E.

ROADWAY DESIGN ENGINEER

10/17/13 P.E.

Professional Engineer Seals for Amy A. Billies and Andrew J. Moore.



01-OCT-2013 12:18
R:\Roadway\Projects\B5101_rdy_tsh.dgn
\$\$\$\$\$USERNAME\$\$\$\$\$

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	○ EP
Property Corner	✕
Property Monument	□ ECM
Parcel/Sequence Number	⑫③
Existing Fence Line	-x-x-x-
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-

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	-----
RR Signal Milepost	○
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	-----
Proposed Right of Way Line with Iron Pin and Cap Marker	-----
Proposed Right of Way Line with Concrete or Granite Marker	-----
Existing Control of Access	⊗
Proposed Control of Access	⊗
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 Wheel Chair Ramp	WCR
Existing Metal Guardrail	T T T T
Proposed Guardrail	T T T T
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	⊙
Storm Sewer	-S-

UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	⊙
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	⊙
Telephone Booth	□
Telephone Pedestal	⊙
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	⊙
Water Meter	○
Water Valve	⊗
Water Hydrant	⊕
Recorded U/G Water Line	-----
Designated U/G Water Line (S.U.E.*)	-----
Above Ground Water Line	-----

TV:

TV Satellite Dish	⊕
TV Pedestal	⊙
TV Tower	⊗
U/G TV Cable Hand Hole	□
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	-----

SANITARY SEWER:

Sanitary Sewer Manhole	⊙
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	-SS-
Above Ground 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	⊕
Utility Unknown U/G Line	-?UL-
U/G Tank; Water, Gas, Oil	□
AG Tank; Water, Gas, Oil	□
U/G Test Hole (S.U.E.*)	⊕
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

SURVEY CONTROL SHEET B-5101

FINAL

ROW MARKER PERMANENT EASEMENT-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	15+75.00	-40.00	704154.4304	1330490.7287
L	15+75.00	-28.62	704143.9181	1330495.0927
L	15+87.00	44.00	704081.9065	1330534.7802
L	15+89.00	21.19	704103.6303	1330527.5096
L	15+95.00	-40.00	704161.8733	1330507.8465
L	15+95.00	-28.85	704151.7256	1330512.4613
L	15+97.00	45.00	704085.3919	1330544.9896
L	16+00.00	21.16	704108.3615	1330537.8683
L	17+80.00	-25.09	704228.9087	1330679.7806
L	17+80.00	-40.00	704242.3120	1330673.2438
L	18+00.00	-40.00	704251.0790	1330691.2199
L	18+00.00	-25.07	704237.6590	1330697.7649

		L	
TYPE	STATION	NORTH	EAST
POT	10+00.00	703984.1533	1329953.6917
PC	10+63.38	704014.1868	1330009.4994
PT	12+64.20	704067.4190	1330201.4166
PC	13+67.37	704072.3104	1330304.4696
PT	16+11.17	704132.3531	1330539.0327
PC	21+17.45	704354.2821	1330994.0814
PT	23+72.31	704489.3917	1331209.6079
POT	27+33.70	704712.7165	1331493.7398

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/](http://www.ncdot.org/doh/preconstruct/highway/location/project/)

THE FILES TO BE FOUND ARE AS FOLLOWS:
B5101_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.

DATUM DESCRIPTION

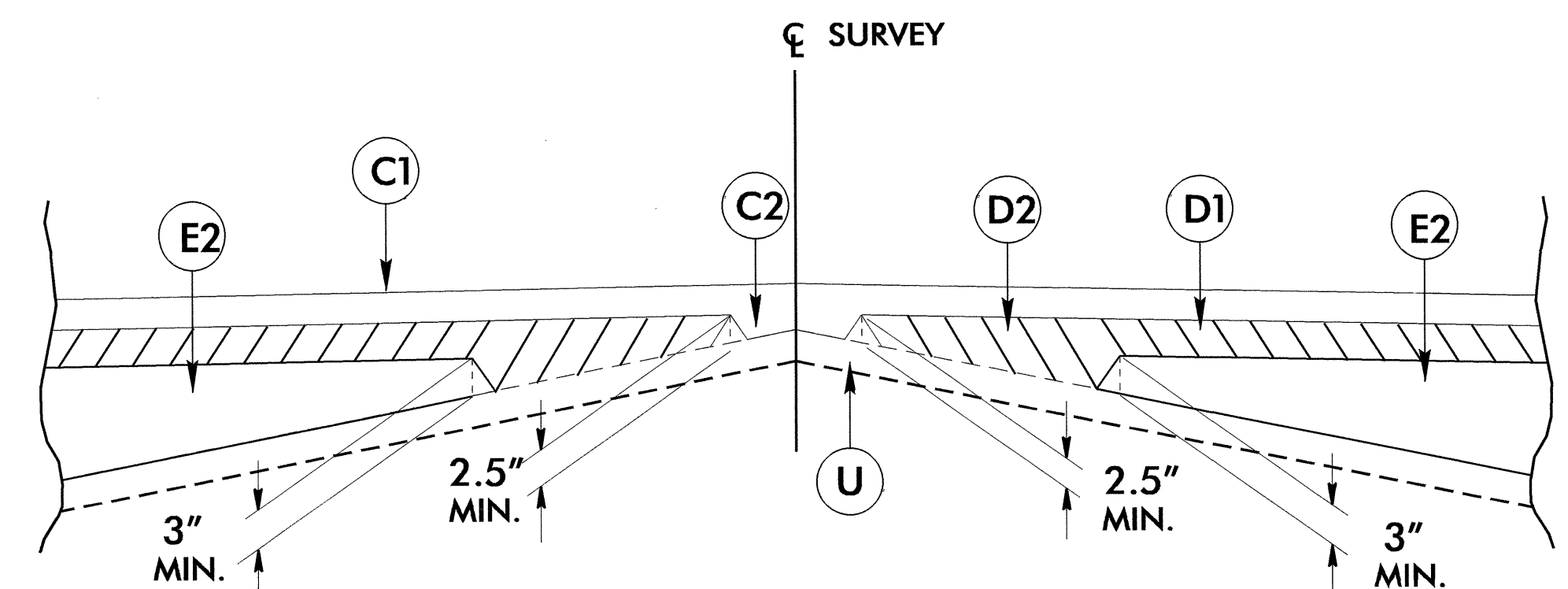
THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "B5101-2"
WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF
NORTHING: 704376.878(++) EASTING: 1331146.795(++)
ELEVATION: 854.24(++)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99986279
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B5101-2" TO -L- STATION 10+00.00 IS
S71°46'49.5"W 1256.08'
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

NOTE: DRAWING NOT TO SCALE

6/2/09

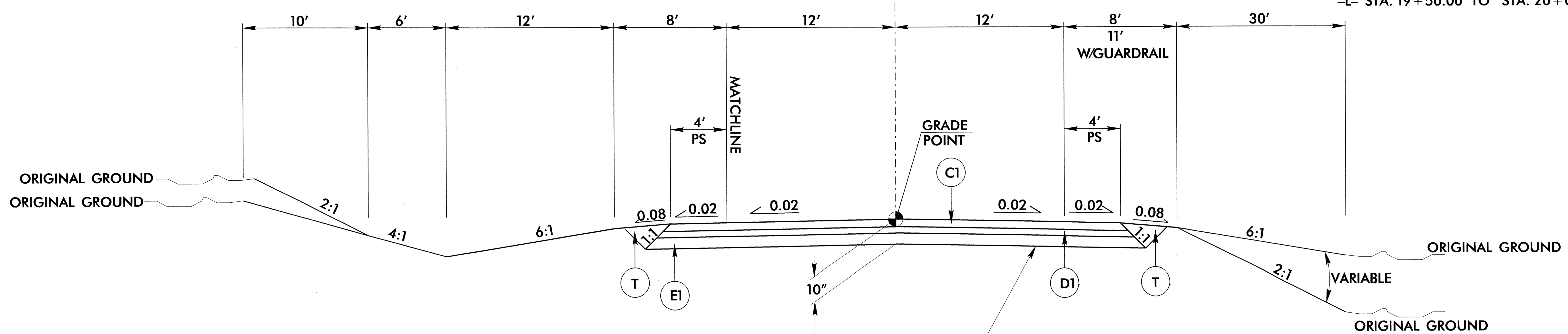
PAVEMENT SCHEDULE	
FINAL PAVEMENT DESIGN	
C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1.5" IN DEPTH.
D1	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 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 2.5" OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 4.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 513 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 GREATER THAN 5.5" IN DEPTH OR LESS THAN 3" IN DEPTH.
R	SHOULDER BERM GUTTER.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.

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



Detail Showing Method of Wedging

PROJECT REFERENCE NO. B-5101	SHEET NO. 2
ROADWAY DESIGN ENGINEER ANDREW JASOM MOORE	PAVEMENT DESIGN ENGINEER CLARK S. MORRISON

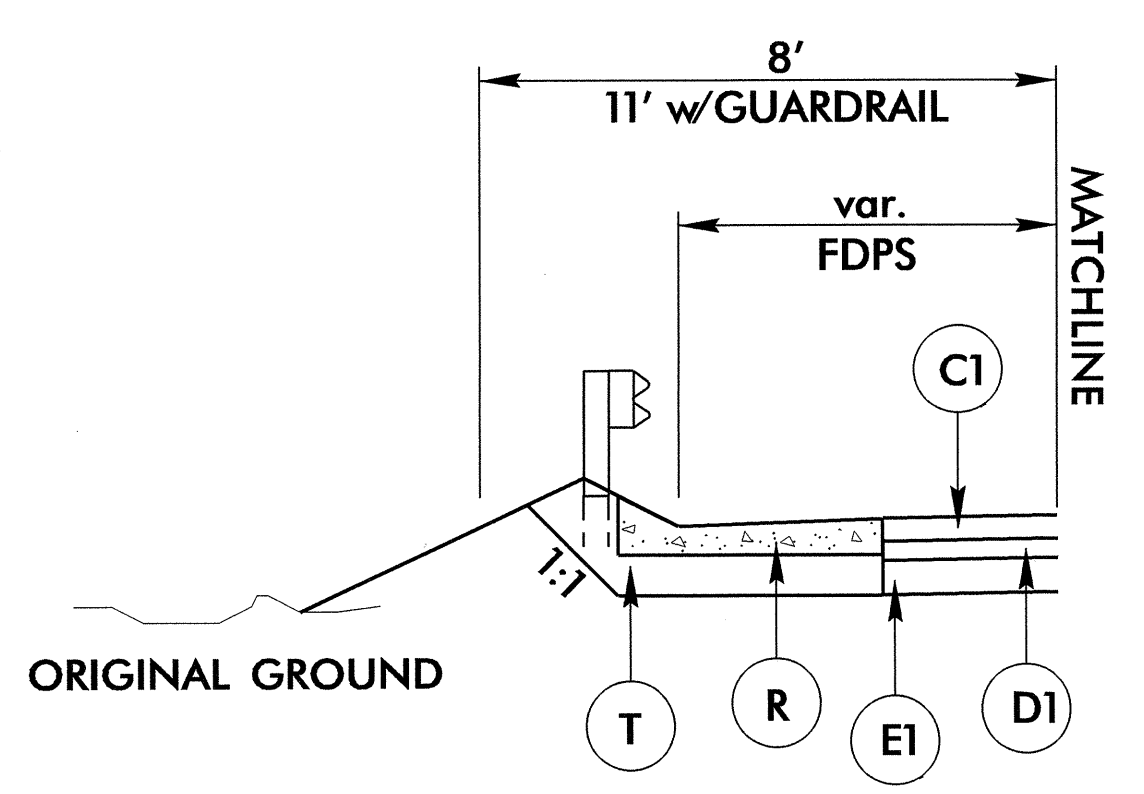


TYPICAL SECTION No. 1

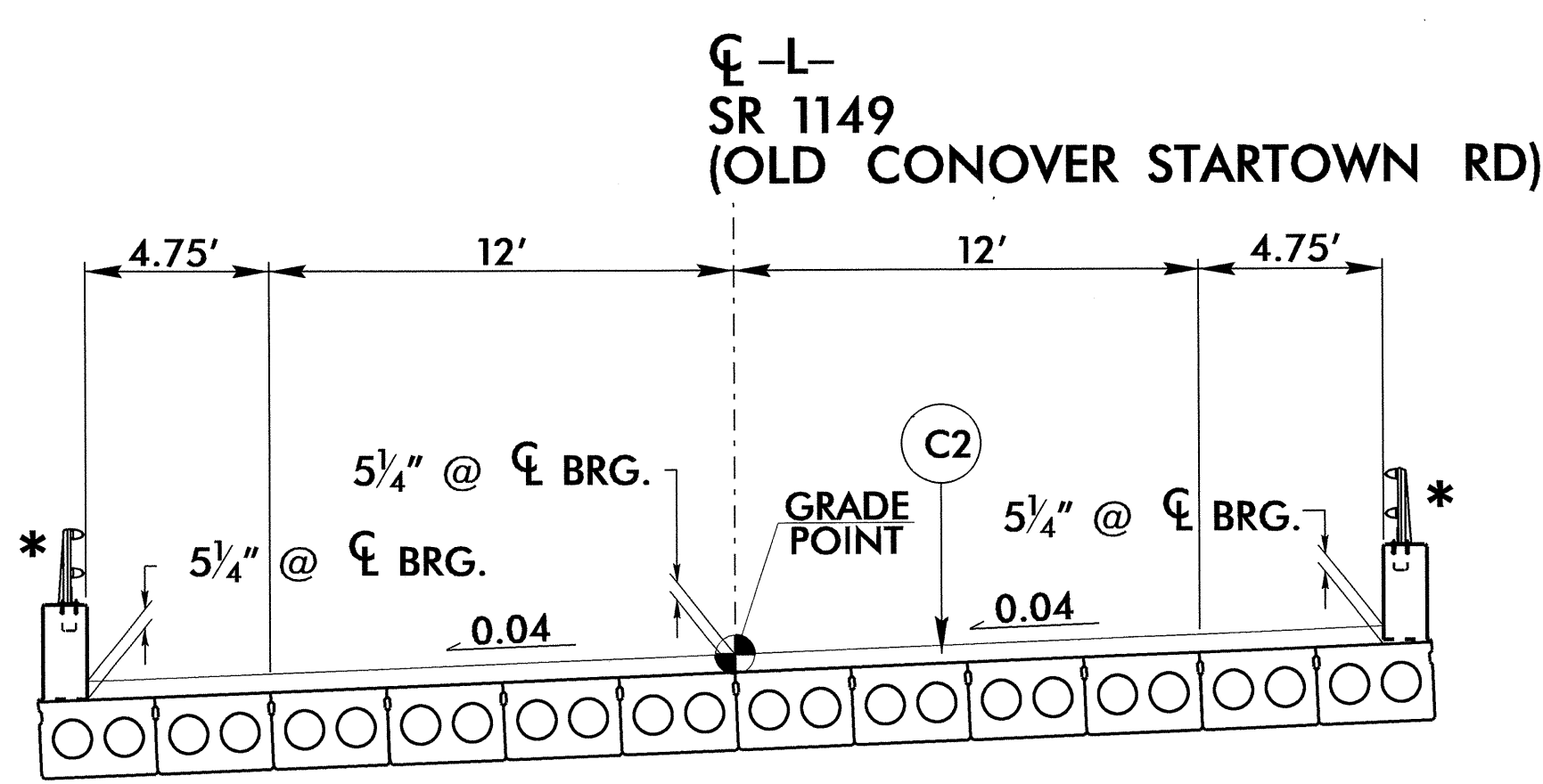
NOTE: TRANSITION FROM EXISTING TO TYPICAL SECTION NO. 1
 -L- STA. 13+25.00 TO STA. 13+75.00
 TRANSITION FROM TYPICAL SECTION NO. 1 TO EXISTING
 -L- STA. 19+50.00 TO STA. 20+00.00

USE INSET A AS FOLLOWS:

- L- STA 15+80.00 TO 16+00.00 LT
- L- STA 17+55.00 TO 17+90.00 LT



INSET A



BRIDGE TYPICAL SECTION

USE TYPICAL SECTION No. 1

- L- STA 13+75.00 TO 16+17.21 (BEGIN BRIDGE)
- L- STA 17+49.79 (END BRIDGE) TO 19+50.00

USE BRIDGE TYPICAL SECTION

- L- STA 16+17.21 TO 17+49.79
- *BICYCLE SAFE RAIL REQUIRED

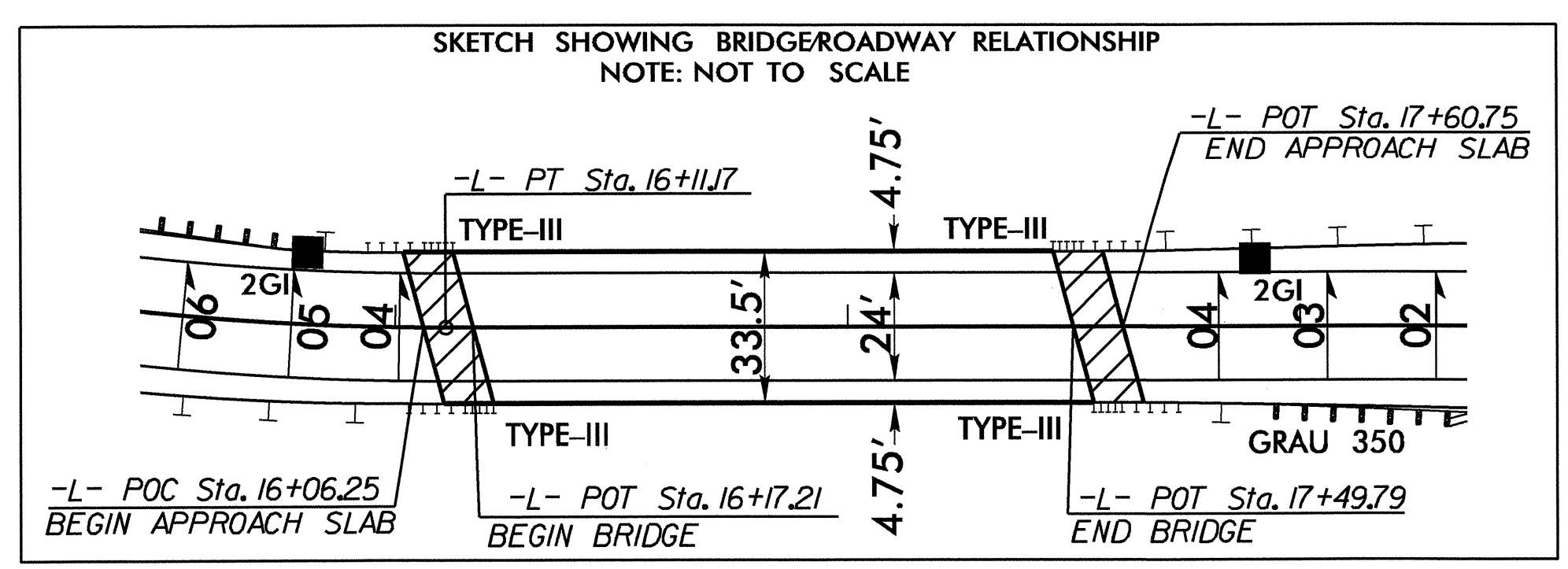
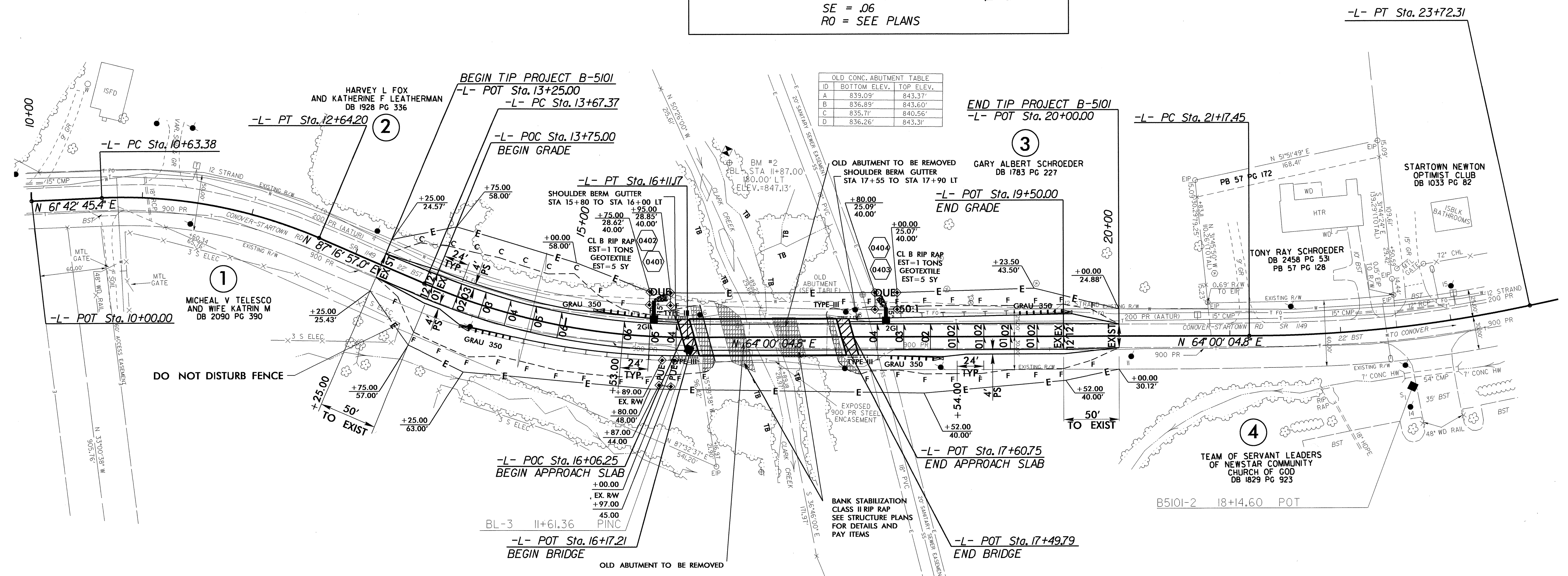
10-OCT-2013 10:07 R:\Roadway\Projects\B5101\rdy_typ.dgn

NAD 83/NSRS 2007

-L-

PI Sta 11+65.49 Δ = 25° 34' 11.5" (RT) D = 12° 43' 56.6" L = 200.83' T = 102.11' R = 450.00'	PI Sta 14+90.98 Δ = 23° 16' 52.2" (LT) D = 9° 32' 57.5" L = 243.80' T = 123.61' R = 600.00'	PI Sta 22+45.36 Δ = 12° 10' 06.0" (LT) D = 4° 46' 28.7" L = 254.85' T = 127.91' R = 1,200.00'
---	--	--

SE = .06
RO = SEE PLANS

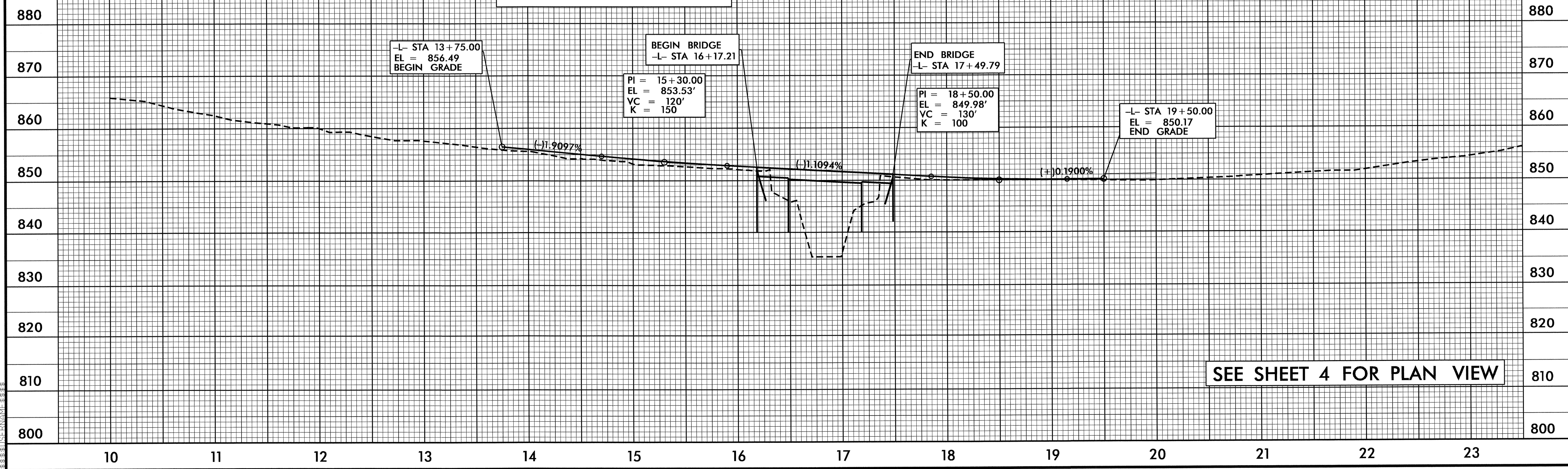


SEE SHEET 5 FOR -L- PROFILE
SEE SHEET S-1 THRU S-26 FOR STRUCTURE DESIGN
TRAFFIC IS TO BE MAINTAINED ON AN OFFSITE DETOUR

16-OCT-2013 15:35
R:\Roadway\B5101\B5101_rdy_psh.dgn
\$\$\$\$\$USERNAME\$\$\$\$\$

-L- SR 1149

BRIDGE HYDRAULIC DATA		
DESIGN DISCHARGE	= 3171	CFS
DESIGN FREQUENCY	= 10	YRS
DESIGN HW ELEVATION	= 847.60	FT
BASE DISCHARGE	= 6521	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 850.68	FT
OVERTOPPING DISCHARGE	= 5100+	CFS
OVERTOPPING FREQUENCY	= 10+	YRS
OVERTOPPING ELEVATION	= 850.08	FT
	=	FT
DATE OF SURVEY	= 08/10/11	
W.S. ELEVATION AT DATE OF SURVEY	= 835.10	FT



SEE SHEET 4 FOR PLAN VIEW

5/14/99
 10-OCT-2013 10:07
 R:\Projects\RD266447\10-10-2013\RD266447_10-10-2013\RD266447_10-10-2013_rdy_pfl.dgn
 RD266447 10/10/2013 b5101_rdy_pfl scalhoun RD-Oce860-34

MANAGEMENT STRATEGIES

TRAFFIC WILL BE MAINTAINED OFFSITE DURING CONSTRUCTION.
 TRAFFIC WILL FOLLOW SR 1005, NC 10, BUS US 321 AND SR 1155.

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 UNDESIRE OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

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

TRAFFIC PATTERN ALTERATIONS

- A) NOTIFY THE ENGINEER TWENTY ONE (21) 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.

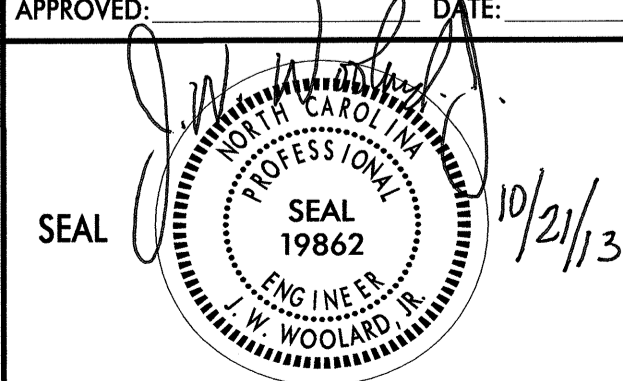

TRAFFIC CONTROL DEVICES

- 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.

10/21/2013
 P:\Projects-B\B5101\TrafficControl\TCP\B5101_TC_TMP - TMP_1A.dgn
 User: jwoolard

APPROVED: _____ DATE: 10/21/13 		<h1 style="margin: 0;">TRANSPORTATION OPERATIONS PLAN</h1>
---	---	--

SIGN NUMBER: SP13150	BACKG COLOR: Fluorescent Orange	DESIGN BY: DHB	CHECKED BY:	DATE: Sep 18, 2013
TYPE: STATIONARY	COPY COLOR: Black	PROJECT ID: B-5101	DIV: 12	
QUANTITY: SEE PLANS				
SIGN WIDTH: 4'-0"				
HEIGHT: 2'-0"				
TOTAL AREA: 8.0 Sq.Ft.				
BORDER TYPE: INSET				
RECESS: 0.38"				
WIDTH: 0.63"				
RADII: 1.5"				
NO. Z BARS:				
LENGTH:				
	MAT'L: 0.080" (2.0 mm) ALUMINUM			

USE NOTES: 1,2

- Legend and border shall be direct applied black non-reflective sheeting.
- Background shall be NC GRADE B fluorescent orange retroreflective sheeting.

BORDER
R=1.5"
TH=0.63"
IN=0.38"

Spacing Factor is 0.7

LETTER POSITIONS

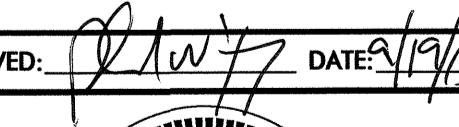
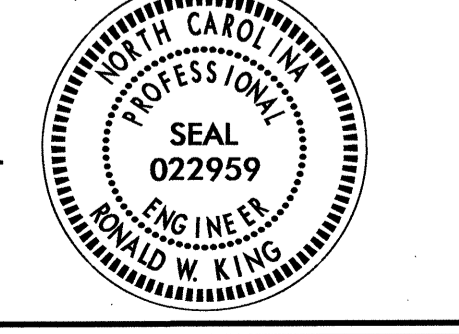

Letter spacings are to start of next letter

	O	L	D																					Series/Size Text Length
	20.2	2.9	2.4	2.2	20.2																			C 2000 7.6
		3.2	2.7	2.9	2.8	2.7	2.9	2.5	2.5	1.7	2.5	2.2	3	2.5	2.4	2.7	3.4	2.2	3.2					C 2000 41.6
			18.7	2.7	2.7	3	2.2	18.7																C 2000 10.5

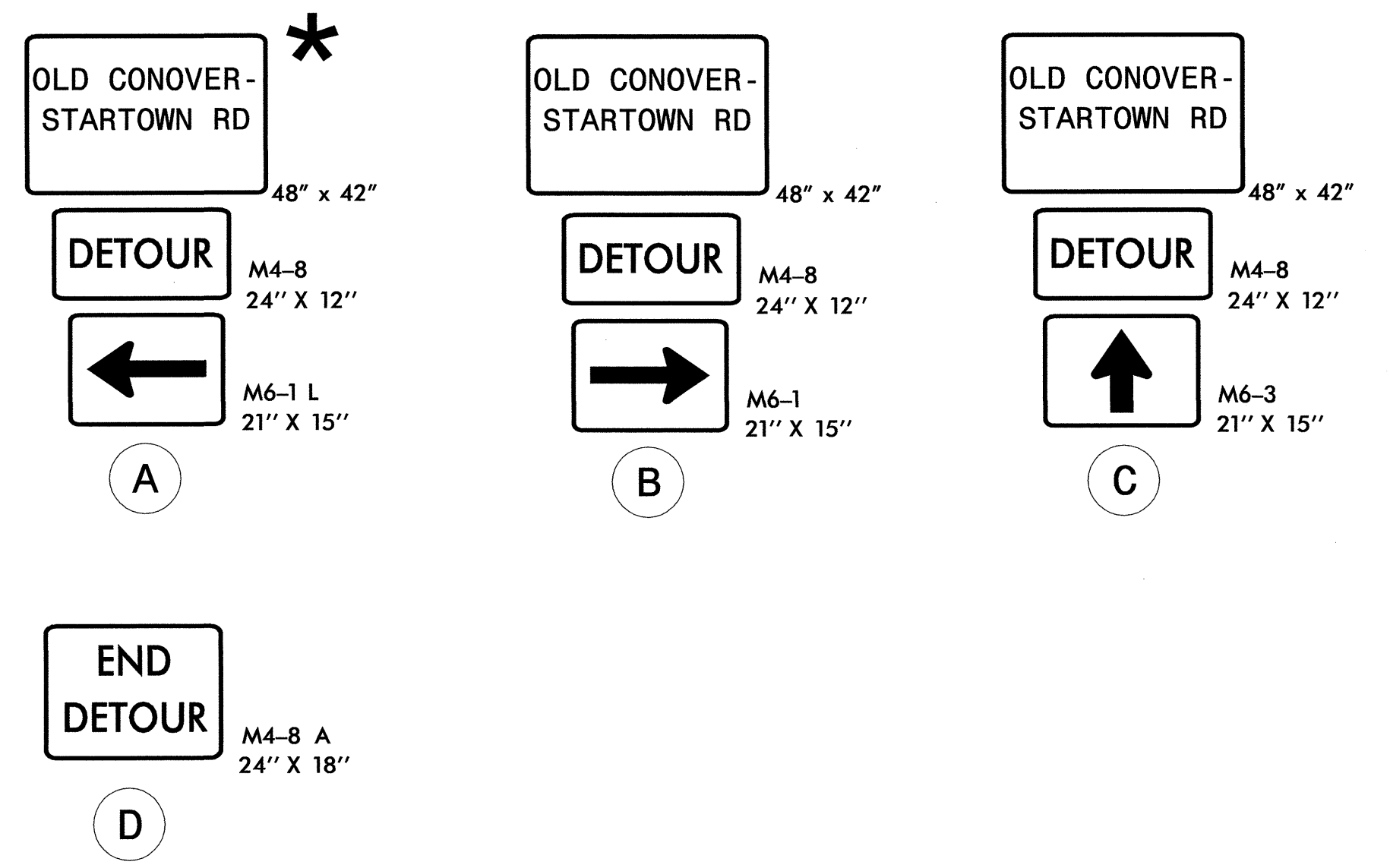
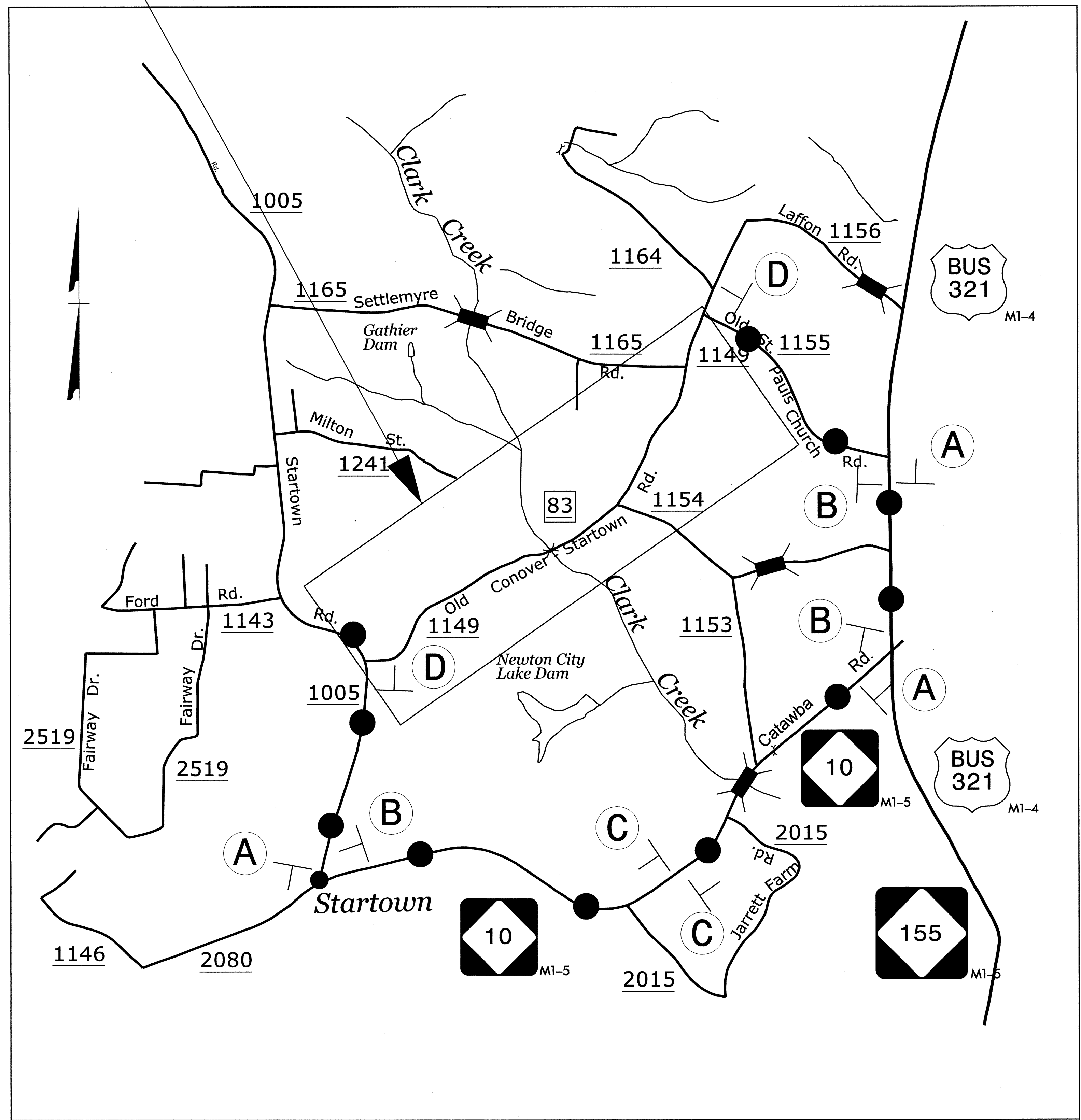
FILENAME: Guidesign_English

NORTH CAROLINA D.O.T. SIGN DETAIL

19-SEP-2013 08:57
 \\D:\Users\jgibson\My Documents\Projects-B\B5101\Traffic\Signing\CADD\Sign_Designs\Guidesign_English.dgn
 dibeard AT TE265832

APPROVED:  DATE: 9/13/13	SPECIAL SIGN DESIGN	
		
SCALE: NONE		REVISIONS
DATE: 9/13		
DWG. BY: DHB		
DESIGN BY: DHB		
REVIEWED BY: KLJ		

SEE RSD 1101.03, SHEET 1 OF 9 FOR ROAD CLOSURE SIGNS AND DEVICES



PHASING

- STEP 1) INSTALL ALL OFFSITE DETOUR SIGNS AND ROAD CLOSURE SIGNING AS SHOWN ABOVE NO MORE THAN 3 DAYS PRIOR TO ROAD CLOSURE. IF ROAD IS NOT CLOSED WITHIN THE SAME WORKING PERIOD AS SIGN INSTALLATION, COVER ALL SIGNING.
- STEP 2) UNCOVER SIGNING IF NEEDED. DETOUR TRAFFIC OFFSITE AND CLOSE -L- (SR 1149 OLD CONOVER-STARTOWN RD.). BEHIND ROAD CLOSURE, CONSTRUCT -L-, INCLUDING NEW STRUCTURE, UP TO BUT NOT INCLUDING THE FINAL LIFT OF SURFACE COURSE.
- STEP 3) PLACE THE FINAL LIFT OF SURFACE COURSE, PAVEMENT MARKINGS, AND MARKERS (SEE PAVEMENT MARKING PLAN).
- STEP 4) REMOVE ALL TRAFFIC CONTROL DEVICES, ROAD CLOSURE SIGNING, AND OPEN -L- TO TRAFFIC. REMOVE ALL OFFSITE DETOUR SIGNING.

* SEE TMP-2 FOR SPECIAL SIGN DESIGN

9/18/2013
 P:\TIP\Projects-B\B5101\TrafficControl\TIP\B5101.TC.TMP - TMP_3.dgn
 User: jwoolard

APPROVED:	DATE: 9/27/13		<p style="text-align: center; font-size: 24pt; font-weight: bold;">OFFSITE DETOUR</p>
SEAL			

TIP PROJECT: B-5101

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS
 PLAN FOR PROPOSED
 HIGHWAY EROSION CONTROL
CATAWBA COUNTY

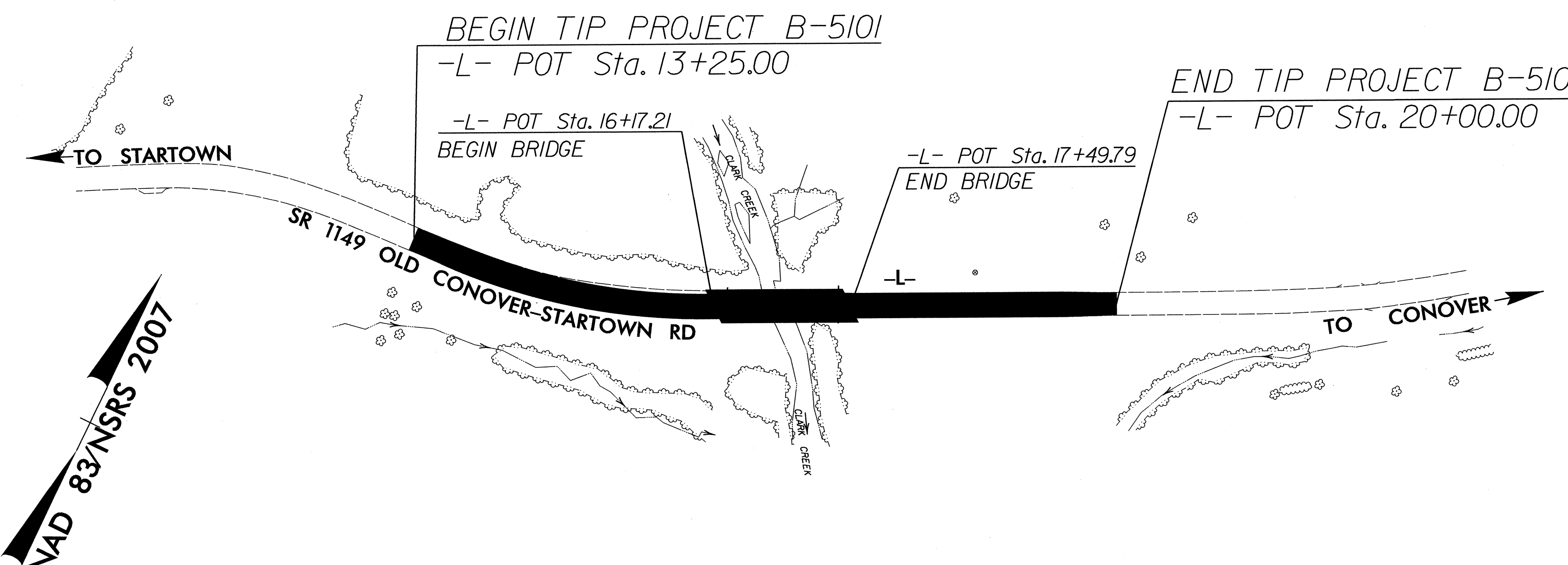
LOCATION: BRIDGE NO. 83 OVER CLARK CREEK ON SR 1149
TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5101	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	III III III
1606.01	Special Sediment Control Fence	△△△△△
1622.01	Temporary Berms and Slope Drains	T
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	⌒
	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.



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

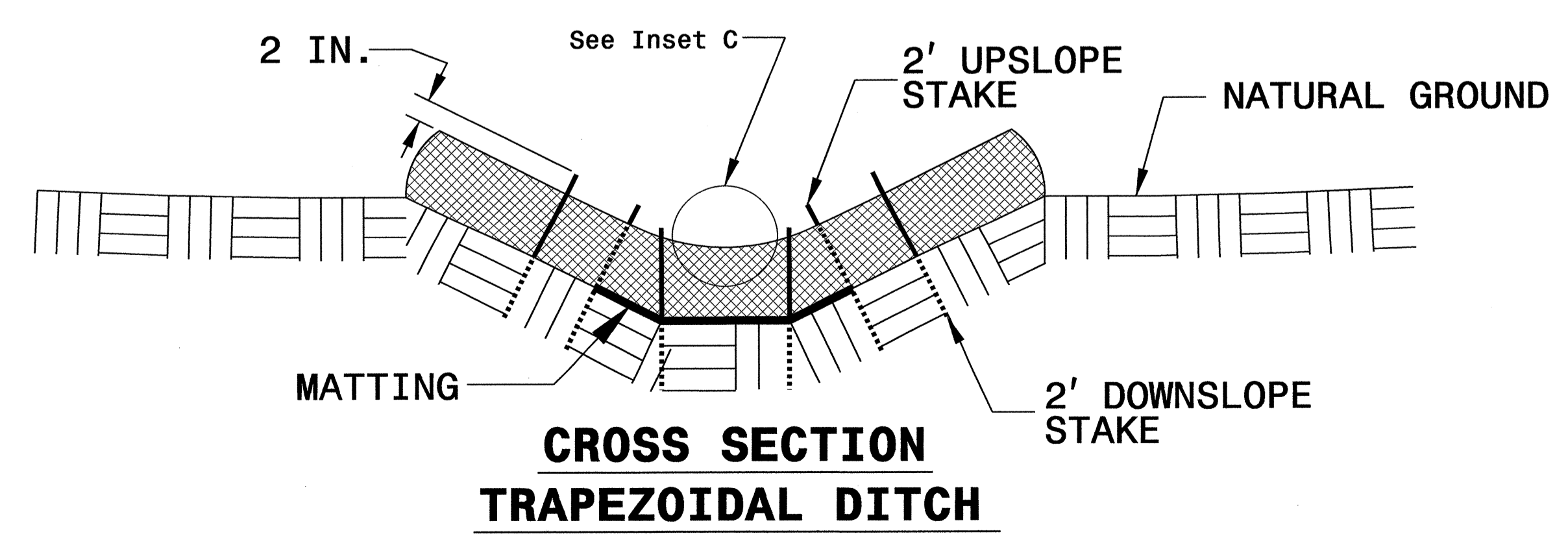
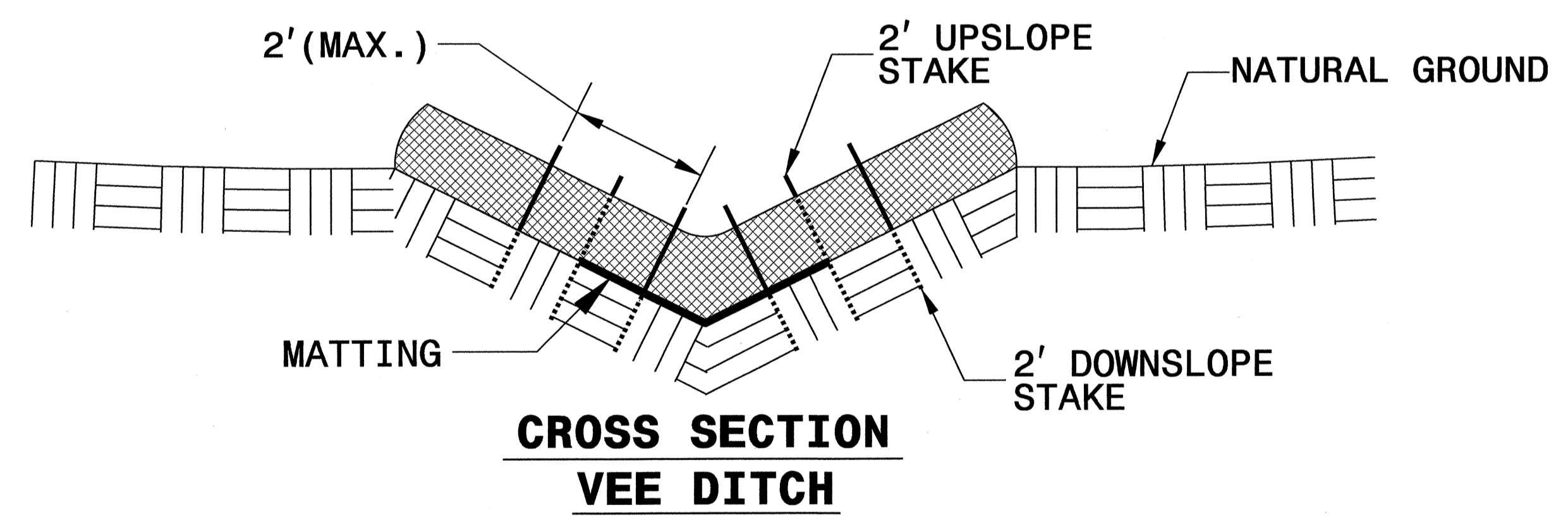
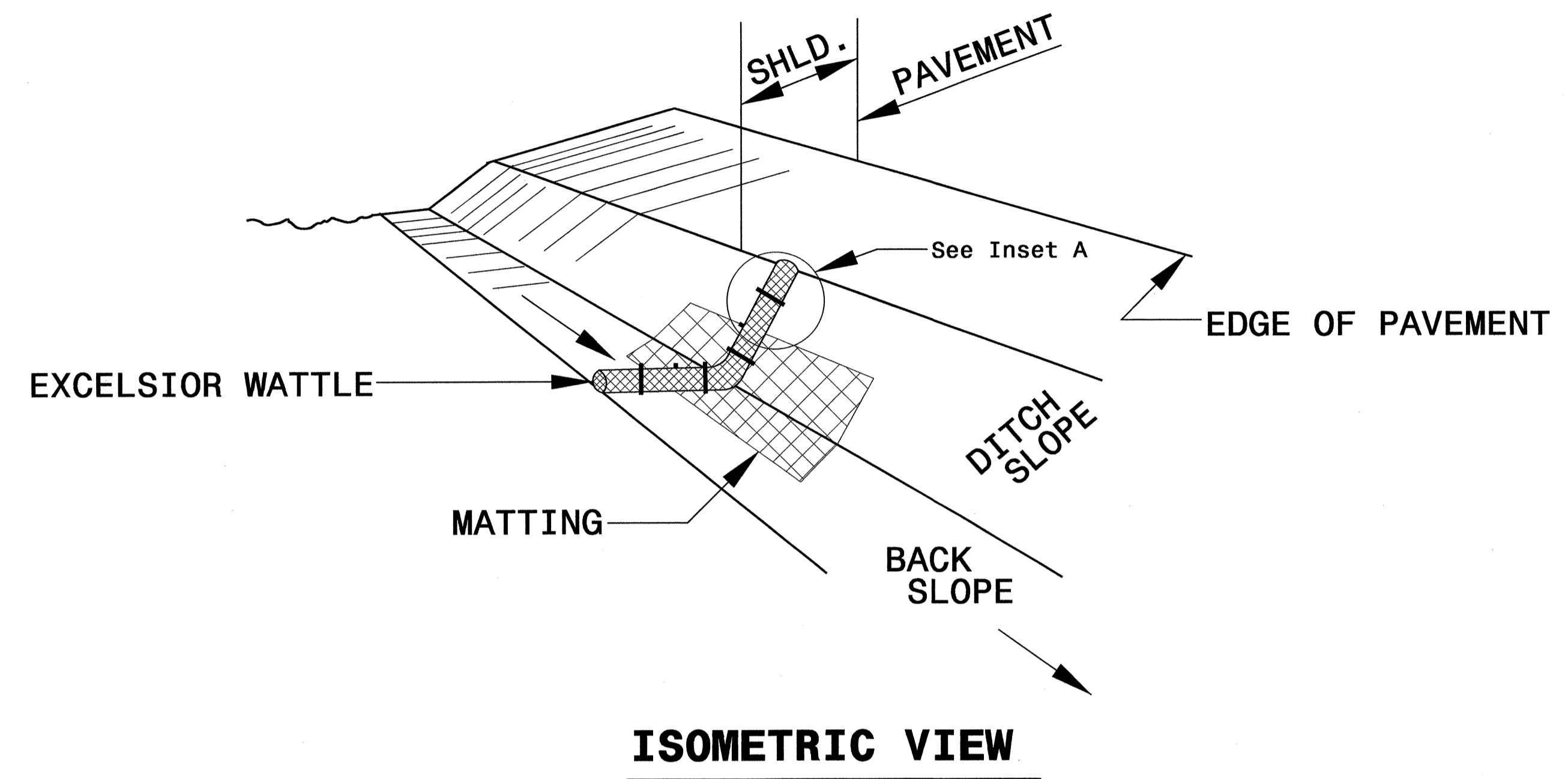
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

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	

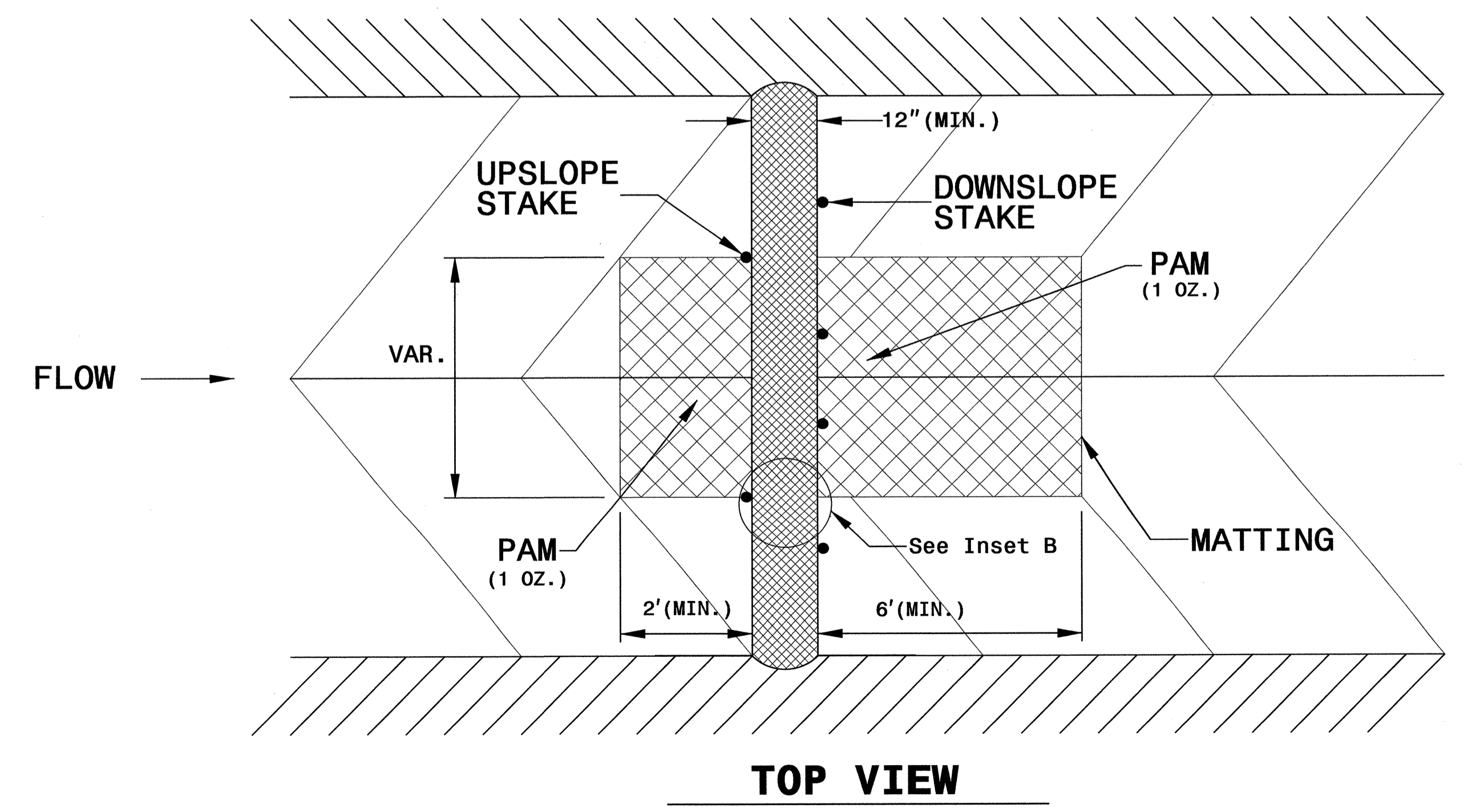
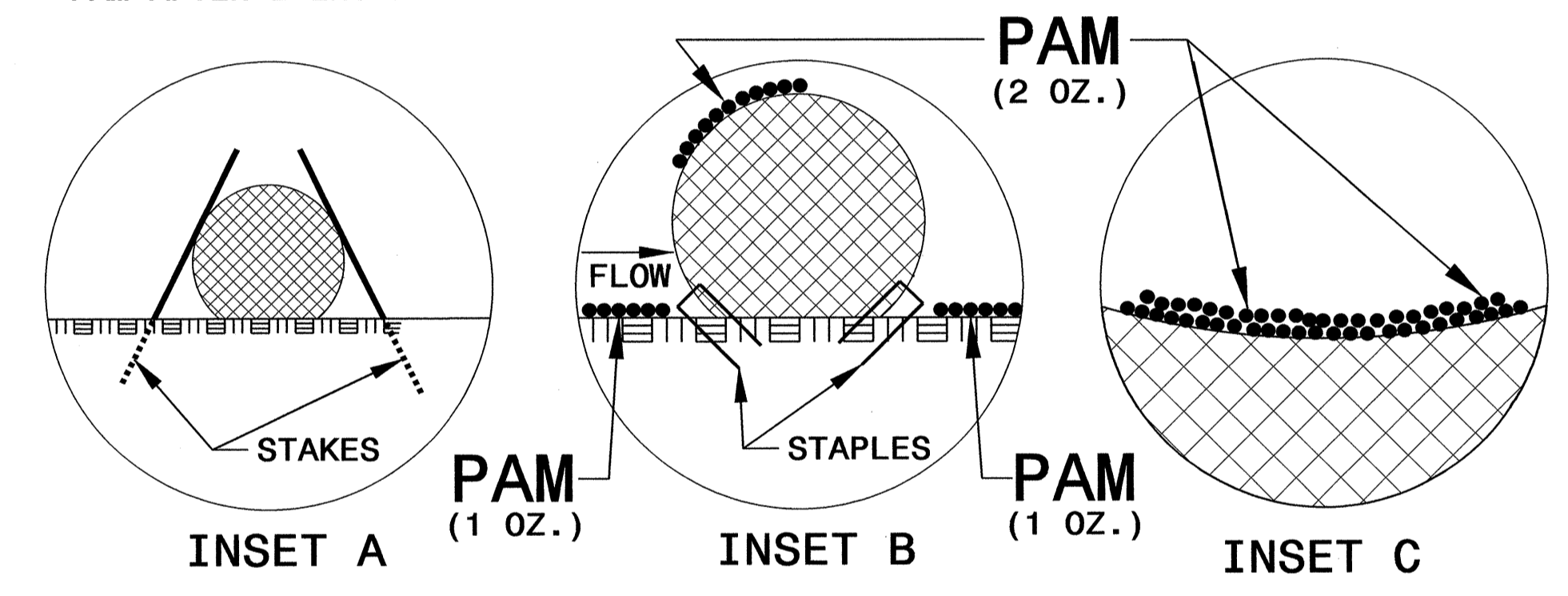
07-OCT-2013 10:49 AM B-5101-EC-1.dgn

PROJECT REFERENCE NO. B-5101	SHEET NO. EC-02
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



- 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 EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. <i>B-5101</i>	SHEET NO. <i>EC-3A</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL STABILIZATION TIMEFRAMES

<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
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.

8/17/99

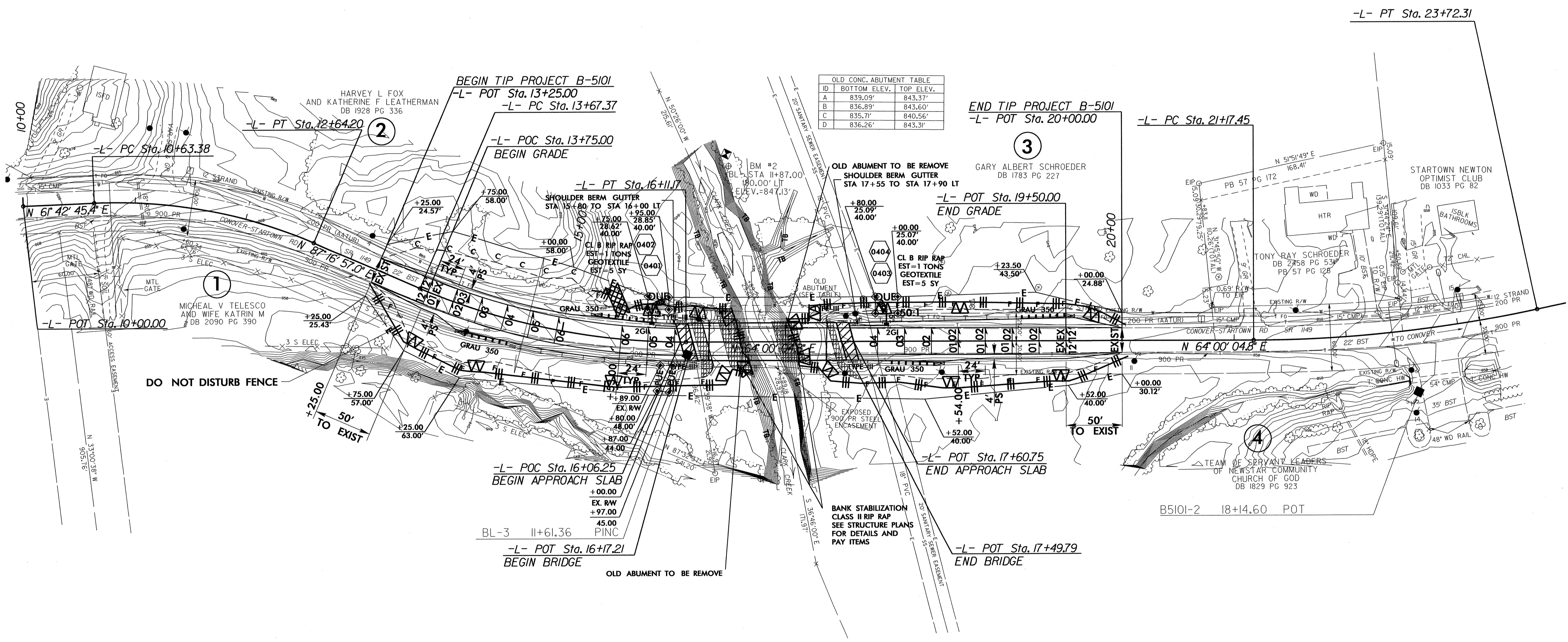
NOTE: UTILIZE SPECIAL STILLING AS STILLING BASIN WHERE APPLICABLE.

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

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 04

PROJECT REFERENCE NO.	SHEET NO.
B-5101	EC-04/CONST.04
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

NAD 83/NSRS 2007



ID	BOTTOM ELEV.	TOP ELEV.
A	839.09'	843.37'
B	836.89'	843.60'
C	835.71'	840.56'
D	836.26'	843.31'

OLD ABUTMENT TO BE REMOVE
SHOULDER BERM GUTTER
STA 17+55 TO STA 17+90 LT

CL B RIP RAP
EST-1 TONS
GEOTEXTILE
EST-5 SY

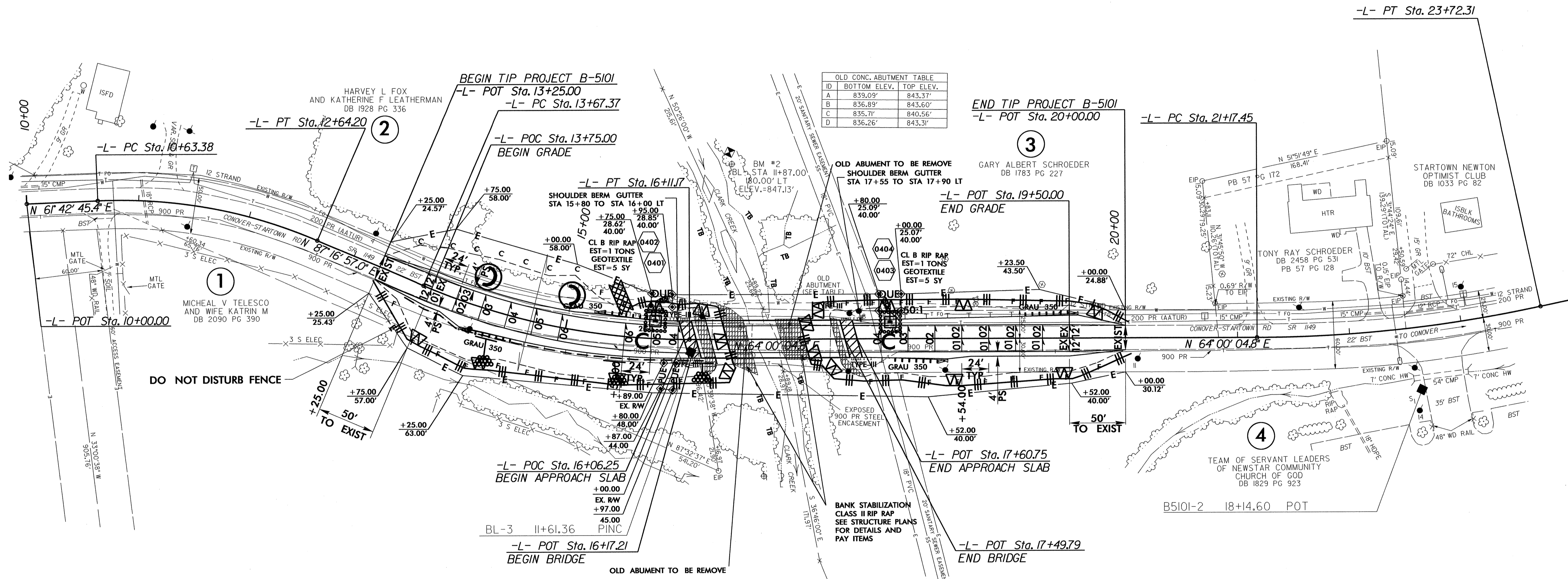
BANK STABILIZATION
CLASS II RIP RAP
SEE STRUCTURE PLANS
FOR DETAILS AND
PAY ITEMS

07-OCT-2013 10:50
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R170727

NOTE: UTILIZE SPECIAL STILLING AS STILLING BASIN WHERE APPLICABLE.

PROJECT REFERENCE NO.	SHEET NO.
B-5101	EC-05/CONST.04
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/NSRS 2007



OLD CONC. ABUTMENT TABLE

ID	BOTTOM ELEV.	TOP ELEV.
A	839.09'	843.37'
B	836.89'	843.60'
C	835.71'	840.56'
D	836.26'	843.31'

**STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION**

**SIGNING PLAN
CATAWBA COUNTY**

LOCATION: BRIDGE No. 83 ON SR 1149
OVER CLARK CREEK

TIP NO. B-5101	SHEET NO. SIGN-1
APPROVED: <i>[Signature]</i>	
DATE: 9/20/13	
SEAL:	



T.I.P.: B-5101

CONTRACT: C203299

SUMMARY OF QUANTITIES

ITEM NO.		ITEM DESCRIPTION	QUANTITY	UNIT
DESC. NO.	SECT. NO.			
4072000000	903	SUPPORTS, 3 LB STEEL U-CHANNEL	60	L.F.
4096000000	904	SIGN ERECTION, TYPE D	2	EA.
4102000000	904	SIGN ERECTION, TYPE E	2	EA.
4155000000	907	DISPOSAL OF SIGN SYSTEM, U-CHANNEL	8	EA.

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:

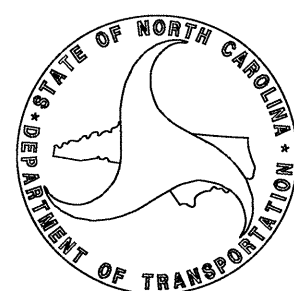
STD. NO.	TITLE
904.10	ORIENTATION OF GROUND MOUNTED SIGNS
904.50	MOUNTING OF TYPE 'D', 'E' AND 'F' SIGNS ON 'U' CHANNEL POSTS

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.
- . THE BACKGROUND FOR TYPE E & F SIGNS SHALL BE TYPE C REFLECTIVE SHEETING.
- . SEE ROADWAY PLANS FOR GUARD/GUIDE RAIL DETAILS.

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

KELVIN L. JORDAN SIGNING & DELINEATION REGIONAL ENGINEER
DERRICK H. BEARD SIGNING & DELINEATION PROJECT DESIGN ENGINEER



SIGN DESIGN

SIGN NUMBER: 301, 302 TYPE: D QUANTITY: 2 SIGN WIDTH: 2'-6" HEIGHT: 2'-0" TOTAL AREA: 5.0 Sq.Ft.	BACKG COLOR: Green COPY COLOR: White SYMBOL X Y WID HT MAT'L: 0.125" (3.2 mm) ALUMINUM	DESIGN BY: DHB PROJECT ID: B-5101	CHECKED BY: KLJ DIV: 12	DATE: Aug 20, 2013
---	--	--------------------------------------	----------------------------	--------------------

BORDER R=3" TH=0.75"

Spacing Factor is 1 unless specified otherwise

USE NOTES: 1,2

- Legend and border(except those that are colored black) shall be direct applied Grade C sheeting.
- Background shall be Grade C reflective sheeting.

LETTER POSITIONS

Letter spacings are to start of next letter

		C l a r k						Series/Size
		C r e e k						Text Length
5.7	5.3	1.9	4.6	3	3.8	5.7	D 2000	
4.8	5.3	2.8	4.1	4.4	3.8	4.8	D 2000	
							20.4	

FILENAME: Guidesign_Englsh

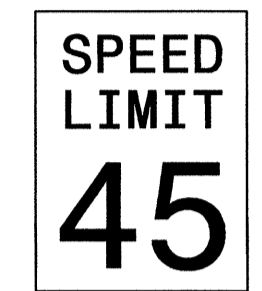
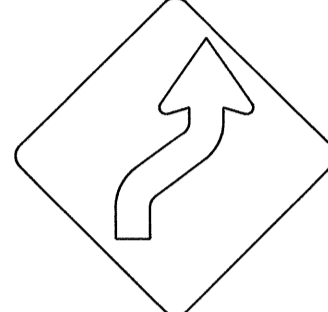

NORTH CAROLINA D.O.T. SIGN DETAIL

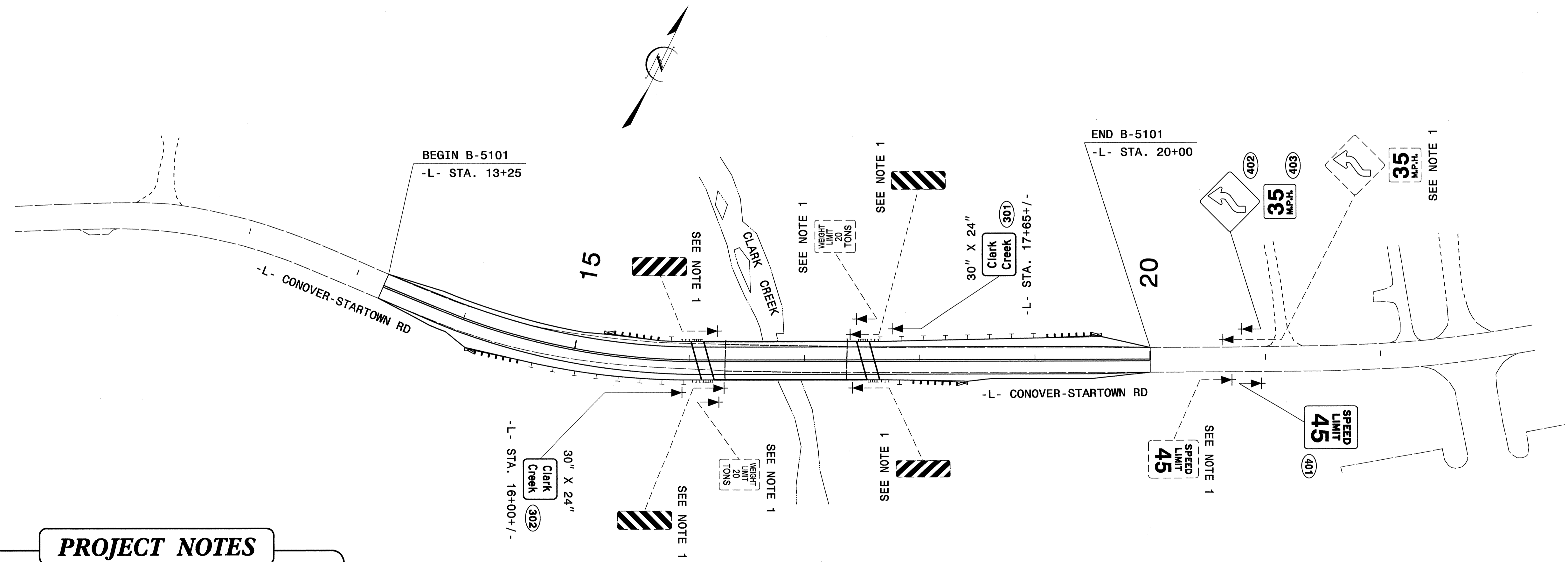
INDEX

SHEET NO.	DESCRIPTION
SIGN-1	TITLE SHEET & SIGN DESIGN
SIGN-2	PROPOSED & EXISTING SIGNS, "E" SIGNS

TIP NO. B-5101	SHEET NO. SIGN-2
APPROVED: <i>R/W</i>	
DATE: 9/20/13	
SEAL	

"E" SIGNS

<p>(401) QUANTITY REQ'D . 1 .</p>  <p>24" X 30" R2-1</p> <p>ONE "U" POST PER SIGN</p>	<p>(402) QUANTITY REQ'D . 1 .</p>  <p>30" X 30" W1-4</p> <p>ONE "U" POST PER SIGN</p>	<p>(403) QUANTITY REQ'D . 1 .</p>  <p>18" X 18" W13-1P</p> <p>MOUNT BELOW SIGN 402 IN ONE ASSEMBLY</p>
--	--	---

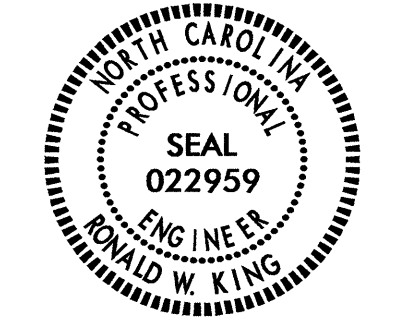


PROJECT NOTES

- DISPOSAL OF SIGN SYSTEM, U-CHANNEL

**PROPOSED & EXISTING SIGNS,
"E" SIGNS**

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 AT: TE265832
 chbeard

TIP NO. B-5101	SHEET NO. PMP-1
APPROVED: <i>[Signature]</i>	
DATE: 9/20/13	
SEAL	
	

**STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING PLAN
CATAWBA COUNTY**

LOCATION: BRIDGE No. 83 ON SR 1149
OVER CLARK CREEK

T.I.P.: B-5101

CONTRACT: C203299

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
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION

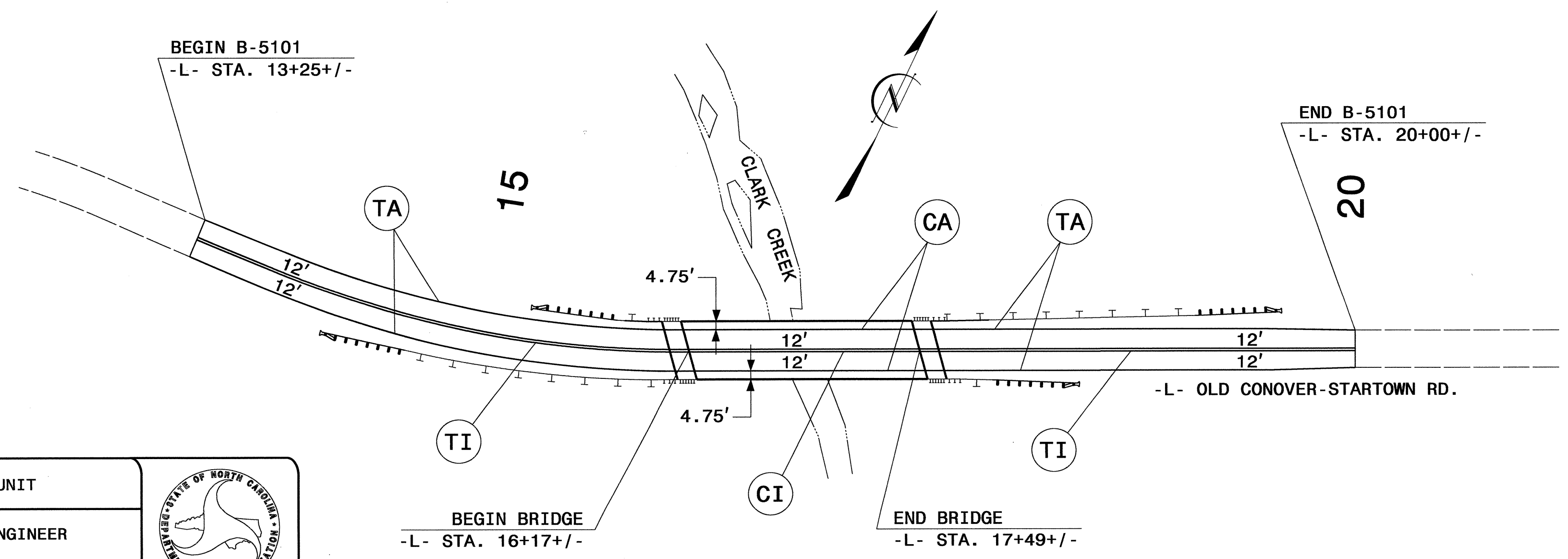
GENERAL NOTES

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- OLD CONOVER-STARTOWN RD. | THERMOPLASTIC | PERM. RAISED |
| BRIDGE | COLD APPLIED PLASTIC, II OR III | PERM. RAISED |
- D) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
 - E) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.
 - F) PASSING ZONES WILL BE DETERMINED IN THE FIELD AND MUST BE APPROVED BY THE ENGINEER.
 - H) REMOVE ALL RESIDUE AND SURFACE LAITANCE BY ACCEPTABLE METHODS ON CONCRETE BRIDGE DECKS PRIOR TO PLACING COLD APPLIED PLASTIC PAVEMENT MARKING MATERIAL.
 - K) TYPE III COLD APPLIED PLASTIC MAY BE USED IN LIEU OF TYPE II COLD APPLIED PLASTIC. IF TYPE III COLD APPLIED PLASTIC IS USED, IT SHALL BE PAID FOR USING THE TYPE II COLD APPLIED PLASTIC PAY ITEM.

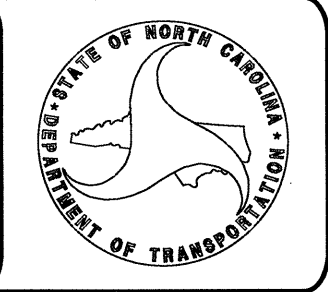
PAVEMENT MARKING SCHEDULE

SYMB	DESCRIPTION
	FINAL PAVEMENT MARKINGS
	COLD APPLIED PLASTIC (4") Type 2 OR 3
CA	WHITE EDGELINE
CI	YELLOW DOUBLE CENTER
	THERMO (4", 120 MILS)
TI	YELLOW DOUBLE CENTER
	THERMO (4", 90 MILS)
TA	WHITE EDGELINE
	MARKERS
	PERMANENT RAISED PAVEMENT MARKERS
MB	CRYSTAL & RED



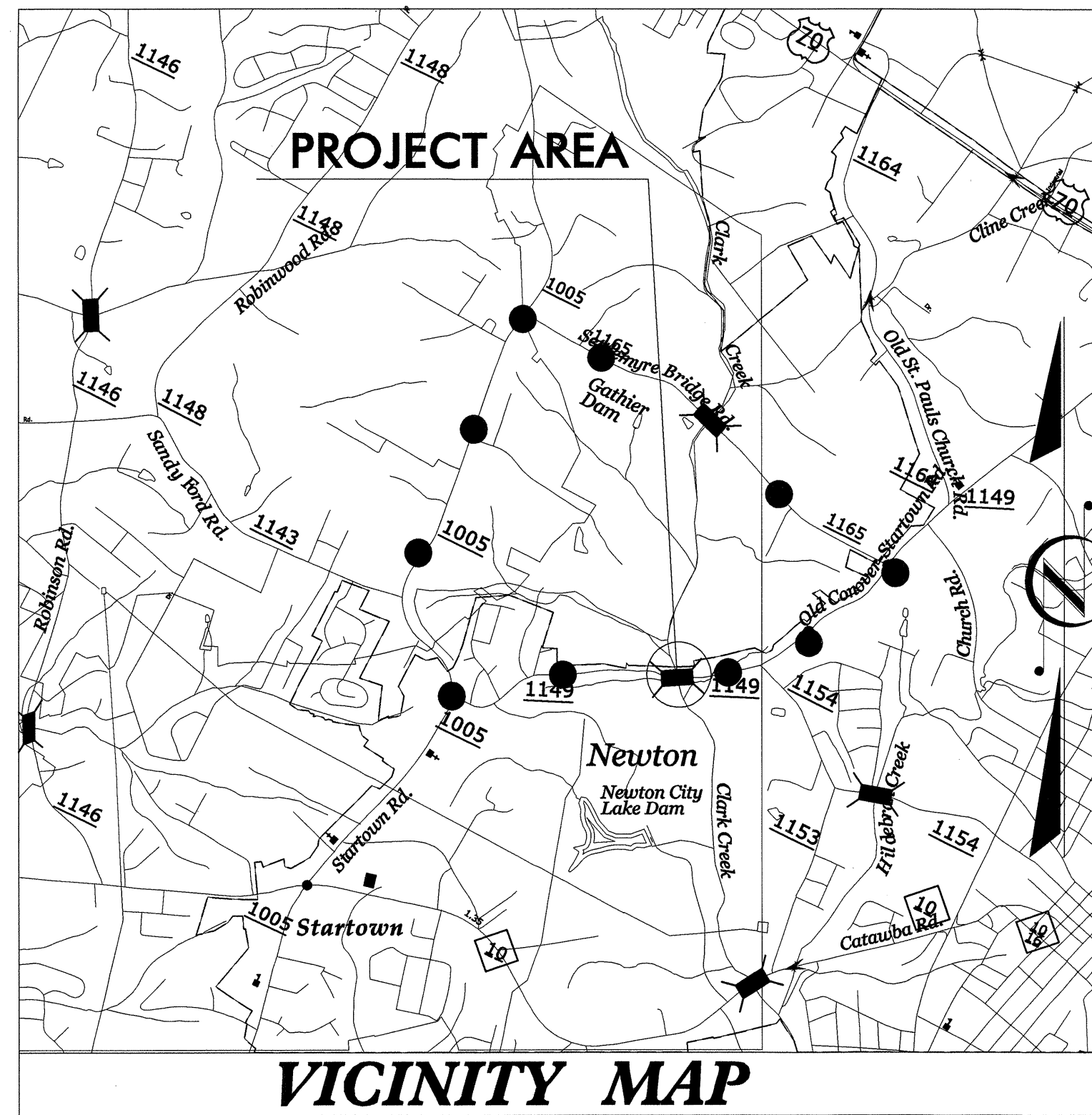
PLAN PREPARED BY: N.C.D.O.T. SIGNING AND DELINEATION UNIT

KELVIN L. JORDAN SIGNING & DELINEATION REGIONAL ENGINEER
DERRICK H. BEARD SIGNING & DELINEATION PROJECT DESIGN ENGINEER



K:\SEP-2013\09-27\Projects\B5101\Traffic\Signing\CADD\VPMP\B-5101L.BASE.dgn
dhbeard

TIP PROJECT: B-5101

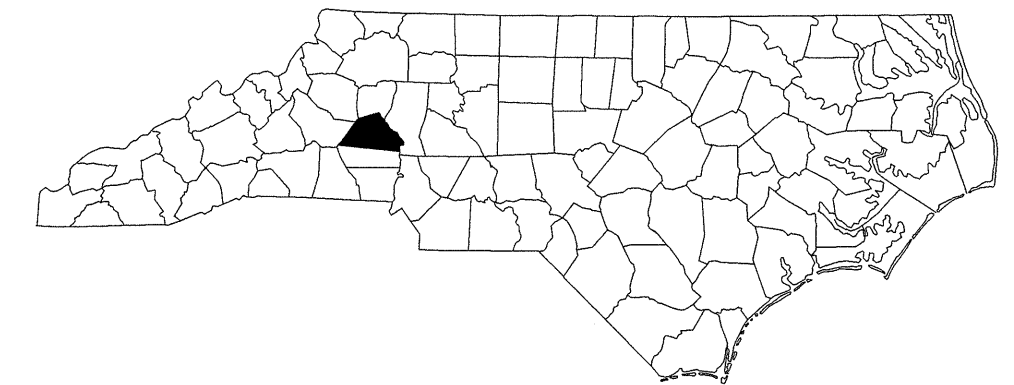


**VICINITY MAP
DETOUR**

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

**UTILITIES BY OTHERS PLANS
CATAWBA COUNTY**

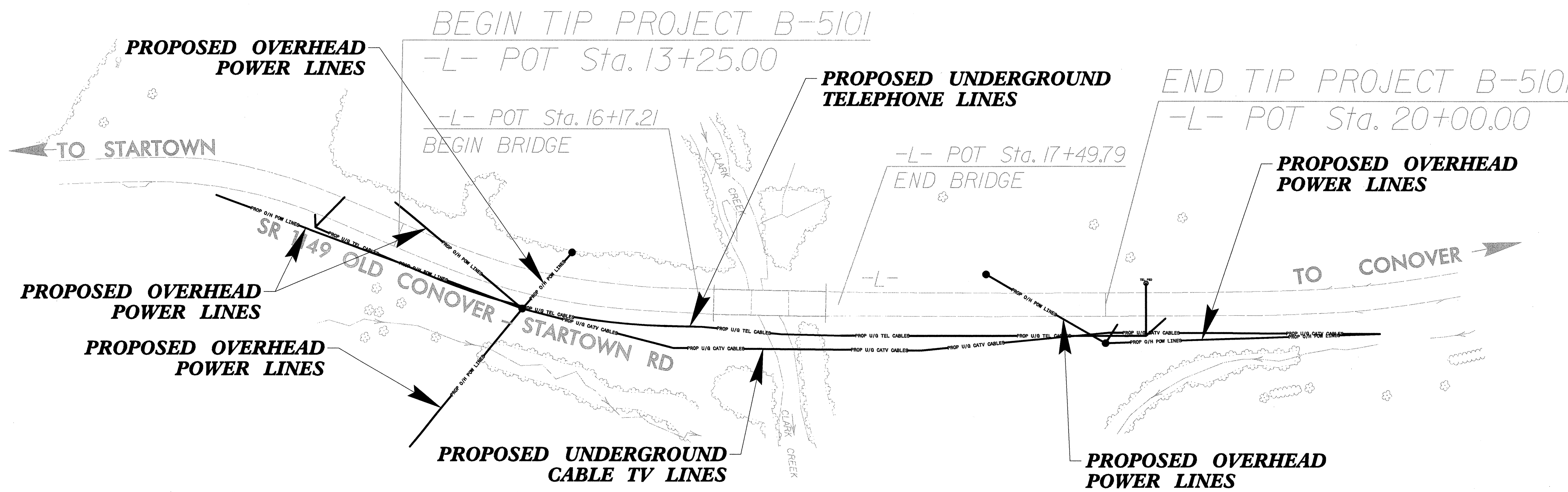
T.I.P. NO.	SHEET NO.
B-5101	UO-1



**LOCATION: BRIDGE NO. 83 ON SR 1149
OVER CLARK CREEK**

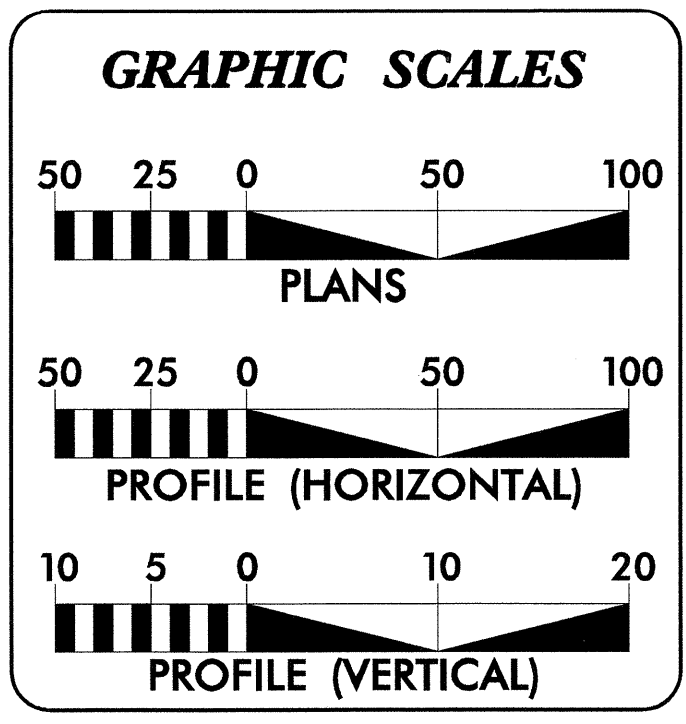
TYPE OF WORK: UTILITIES BY OTHERS

NAD 83/NSRS 2007



THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF NEWTON.

CONTRACT:

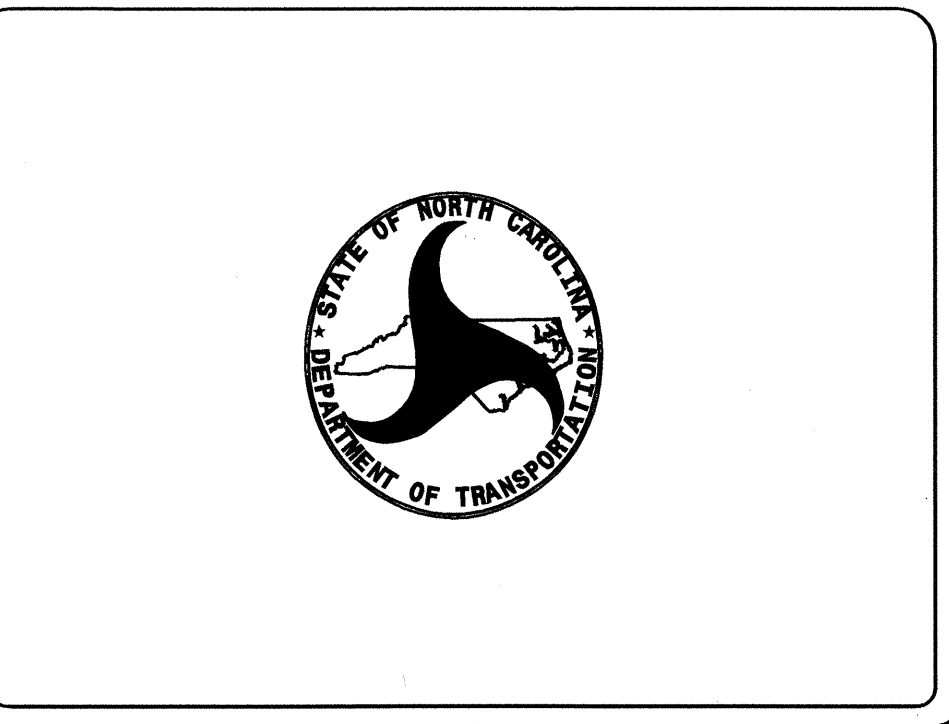


INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2	UTILITY SYMBOLOGY SHEET
UO-3	UBO PLAN SHEET

- PRIVATE UTILITY OWNERS ON PROJECT**
- (1) POWER - DUKE ENERGY
 - (2) TELECOMMUNICATIONS - AT&T
 - (3) CABLE TV - CHARTER

HINDE ENGINEERING
License No. C-2639
7520 E. Independence Blvd., Suite 230 Charlotte, NC 28227



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITIES BY OTHERS

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

UTILITIES PLAN SHEET SYMBOLS

PROPOSED WATER SYMBOLS

Water Line (Sized as Shown)	----- 12" WL -----
11¼ Degree Bend	----- ++ -----
22½ Degree Bend	----- +X -----
45 Degree Bend	----- +X -----
90 Degree Bend	----- + -----
Plug	----- -----
Tee	----- + -----
Cross	----- + -----
Reducer	----- ▶ -----
Gate Valve	----- GV -----
Butterfly Valve	----- BV -----
Tapping Valve	----- TV -----
Line Stop	----- LS -----
Line Stop with Bypass	----- LS/BP -----
Blow Off	----- BO -----
Fire Hydrant	----- FH -----
Relocate Fire Hydrant	----- RFH -----
Remove Fire Hydrant	----- REM FH -----
Water Meter	----- WM -----
Relocate Water Meter	----- RWM -----
Remove Water Meter	----- REM WM -----
Water Pump Station	----- PS(W) -----
RPZ Backflow Preventer	----- PRPZ -----
DCV Backflow Preventer	----- PBFP -----
Relocate RPZ Backflow Preventer	----- RRPZ -----
Relocate DCV Backflow Preventer	----- RDBFP -----

PROPOSED SEWER SYMBOLS

Gravity Sewer Line (Sized as Shown)	----- 12" SS -----
Force Main Sewer Line (Sized as Shown)	----- 12" FSS -----
Manhole (Sized per Note)	----- • -----
Sewer Pump Station	----- PS(SS) -----

PROPOSED MISCELLANEOUS UTILITIES SYMBOLS

Power Pole	----- ○ -----
Telephone Pole	----- ○ -----
Joint Use Pole	----- ○ -----
Telephone Pedestal	----- TEL PED -----
Utility Line by Others (Type as Shown)	----- PROP O/H POW LINES -----
Trenchless Installation	----- 12" TL INSTALL -----
Encasement by Open Cut	----- 24" ENCAR BY OC -----
Encasement	----- 24" ENCASEMENT -----

Thrust Block	----- -----
Air Release Valve	----- AR -----
Utility Vault	----- UV -----
Concrete Pier	----- CP -----
Steel Pier	----- SP -----
Plan Note	----- NOTE -----
Pay Item Note	----- PAY ITEM -----

EXISTING UTILITIES SYMBOLS

Power Pole	----- • -----	*Underground Power Line	----- P -----
Telephone Pole	----- • -----	*Underground Telephone Cable	----- T -----
Joint Use Pole	----- • -----	*Underground Telephone Conduit	----- TC -----
Utility Pole	----- • -----	*Underground Fiber Optics Telephone Cable	----- T FO -----
Utility Pole with Base	----- □ -----	*Underground TV Cable	----- TV -----
H-Frame Pole	----- •-----• -----	*Underground Fiber Optics TV Cable	----- TV FO -----
Power Transmission Line Tower	----- ⊠ -----	*Underground Gas Pipeline	----- G -----
Water Manhole	----- ⊙ -----	Aboveground Gas Pipeline	----- A/G Gas -----
Power Manhole	----- ⊙ -----	*Underground Water Line	----- W -----
Telephone Manhole	----- ⊙ -----	Aboveground Water Line	----- A/G Water -----
Sanitary Sewer Manhole	----- ⊙ -----	*Underground Gravity Sanitary Sewer Line	----- SS -----
Hand Hole for Cable	----- ⊠ -----	Aboveground Gravity Sanitary Sewer Line	----- A/G Sanitary Sewer -----
Power Transformer	----- ⊠ -----	*Underground SS Forced Main Line	----- FSS -----
Telephone Pedestal	----- ⊠ -----	Underground Unknown Utility Line	----- ?UTL -----
CATV Pedestal	----- ⊠ -----	SUE Test Hole	----- ⊕ -----
Gas Valve	----- ◇ -----	Water Meter	----- ○ -----
Gas Meter	----- ◇ -----	Water Valve	----- ⊙ -----
Located Miscellaneous Utility Object	----- ○ -----	Fire Hydrant	----- ⊕ -----
Abandoned According to Utility Records	----- AATUR -----	Sanitary Sewer Cleanout	----- ⊙ -----
End of Information	----- E.O.I. -----		

*For Existing Utilities
Utility Line Drawn from Record (Type as Shown) -----
Designated Utility Line (Type as Shown) -----

NORTH CAROLINA
DEPT. OF TRANSPORTATION
ENGINEERING DIVISION
RALEIGH, NORTH CAROLINA

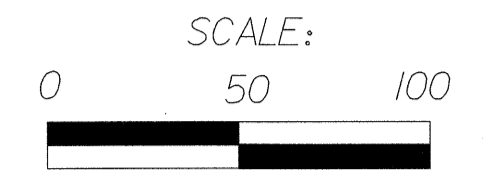
BRIDGE NO. 83 ON SR 1149
OVER CLARK CREEK

Designed By:	Checked By:	Date:	Sheet:	Of:
OTHERS	OTHERS	9-30-13	UO-2	UO-3

HINDE ENGINEERING
License No. C-2639
7520 E. Independence Blvd., Suite 230 Charlotte, NC 28227

UTILITIES BY OTHERS

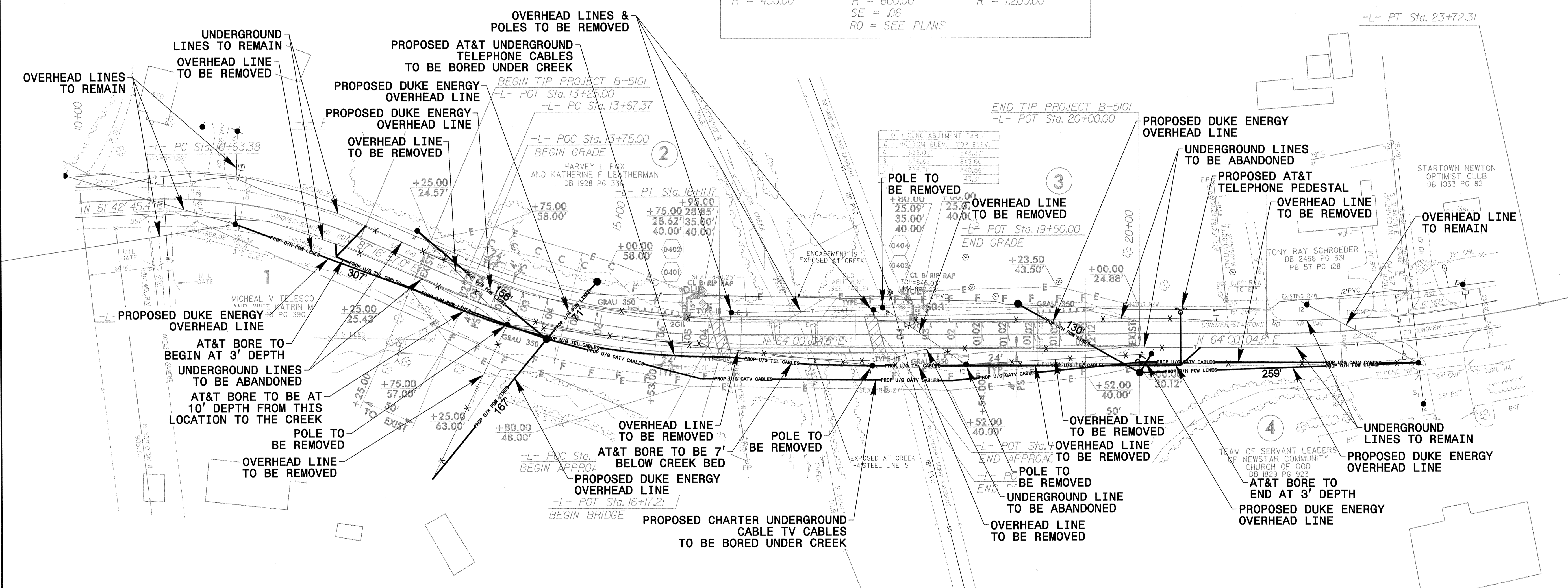
NOTE:
ALL PROPOSED UTILITY WORK
SHOWN ON THIS SHEET WILL
BE DONE BY OTHERS



NAD 83/NSRS 2007

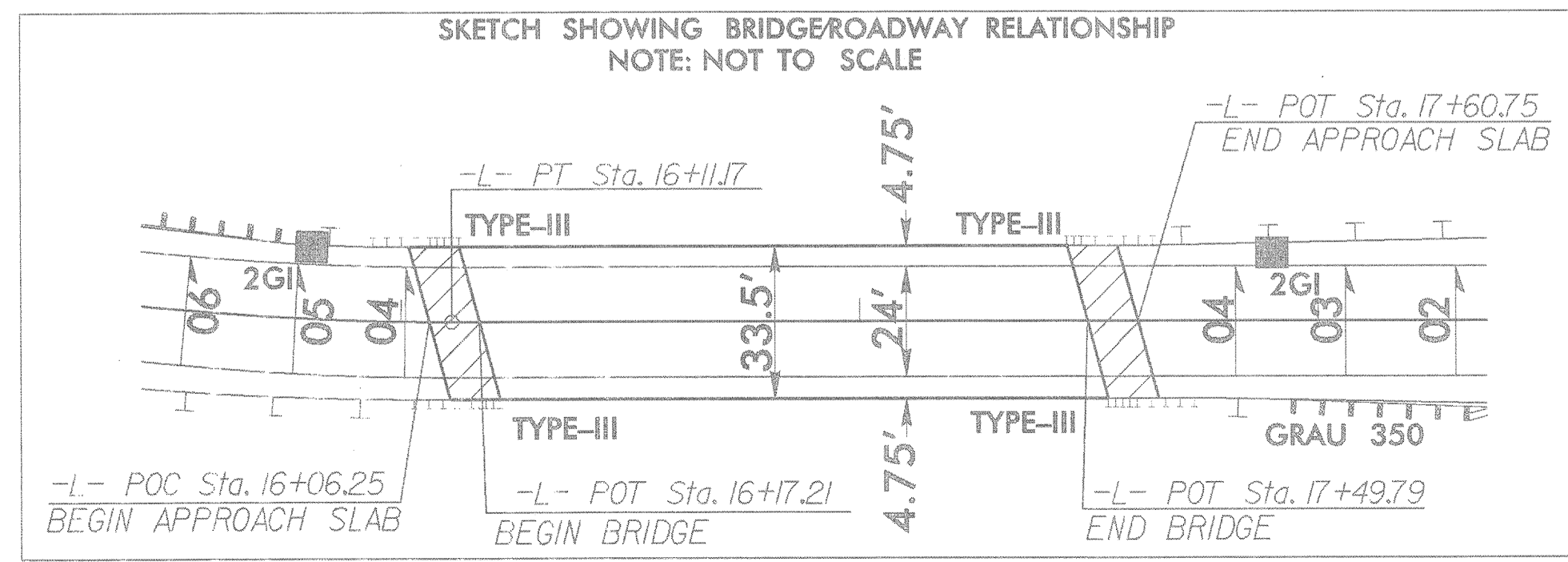
-L-

PI Sta 11+65.49 Δ = 25° 34' 11.5" (RT) D = 12' 43' 56.6" L = 200.83' T = 102.11' R = 450.00'	PI Sta 14+90.98 Δ = 23° 16' 52.2" (LT) D = 9' 32' 57.5" L = 243.80' T = 123.61' R = 600.00' SE = .06 RO = SEE PLANS	PI Sta 22+45.36 Δ = 12° 10' 06.0" (LT) D = 4' 46' 28.7" L = 254.85' T = 127.91' R = 1,200.00'
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CH. CONC. ABUTMENT TABLE

ID	ADJUTOM. ELEV.	TOP ELEV.
A	839.09'	843.37'
B	838.29'	843.66'
C	835.71'	840.56'
D	835.31'	833.31'



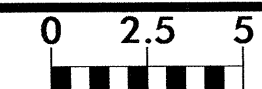
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BRIDGE NO. 83 ON SR 1149
OVER CLARK CREEK

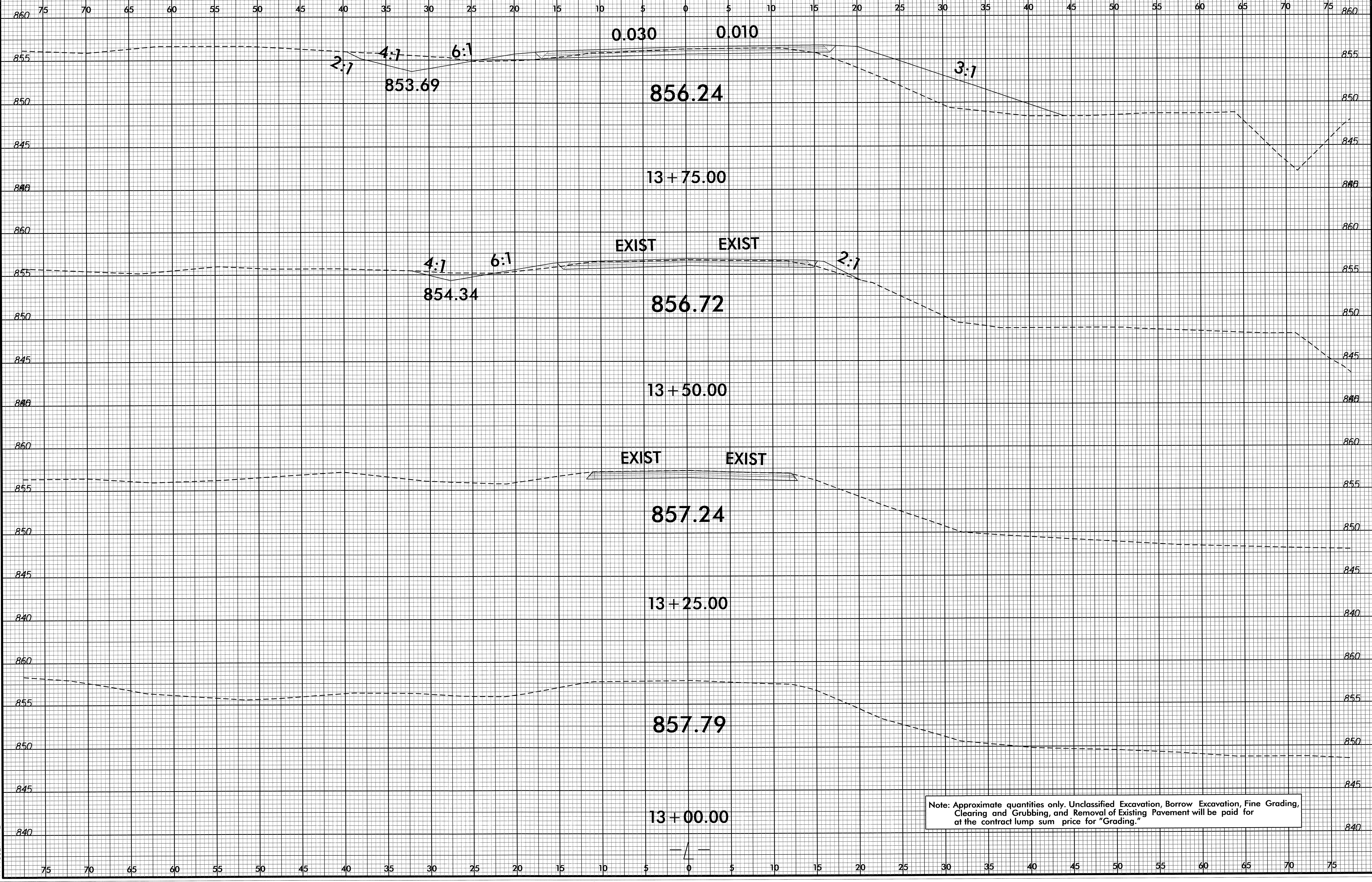
Designed By: OTHERS	Checked By: OTHERS	Date: 9-30-13	Sheet: UO-3	Of: UO-3
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8/23/99



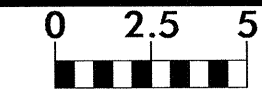
PROJ. REFERENCE NO.	SHEET NO.
B-5101	X-2



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

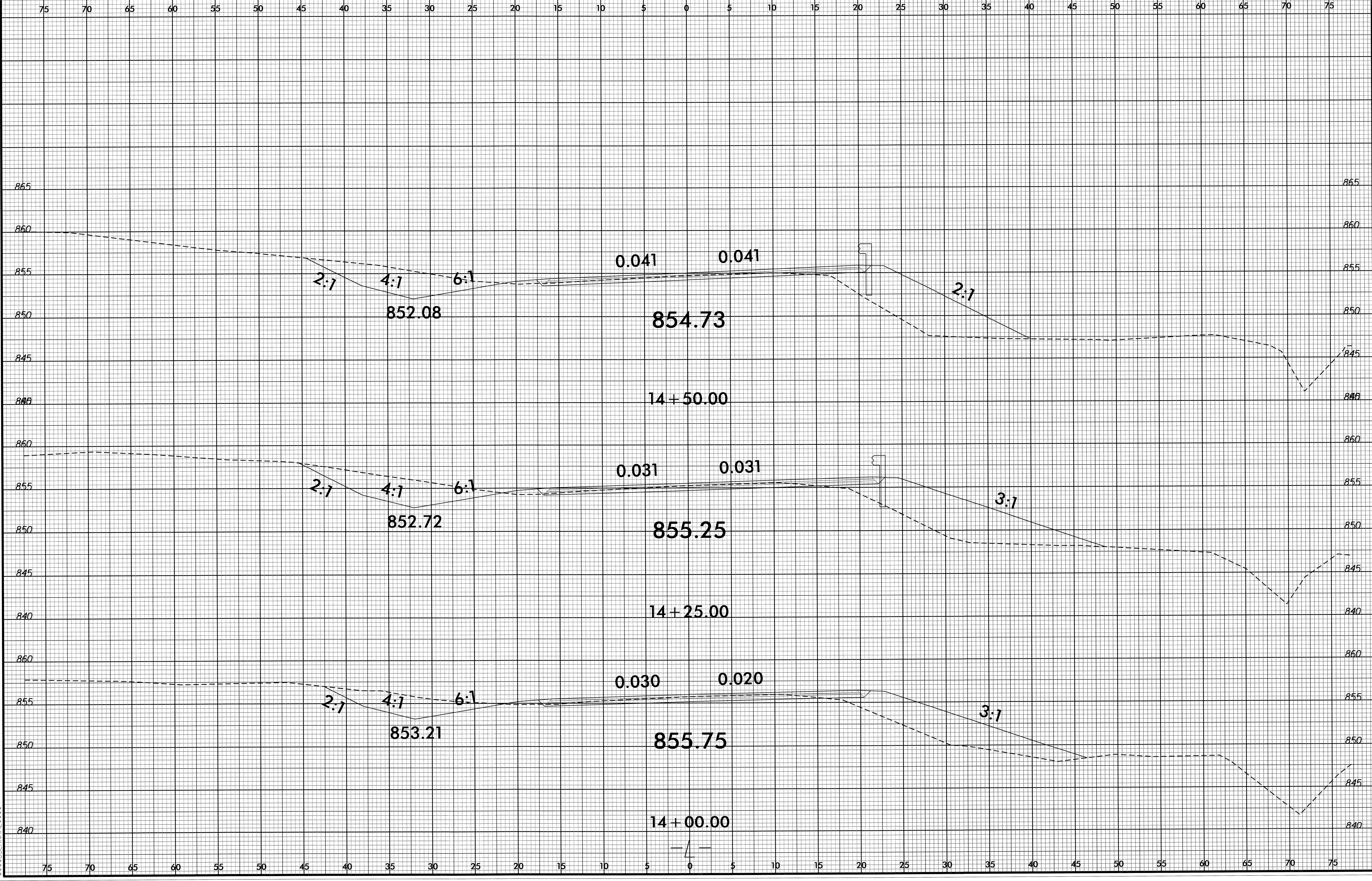
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8/23/99

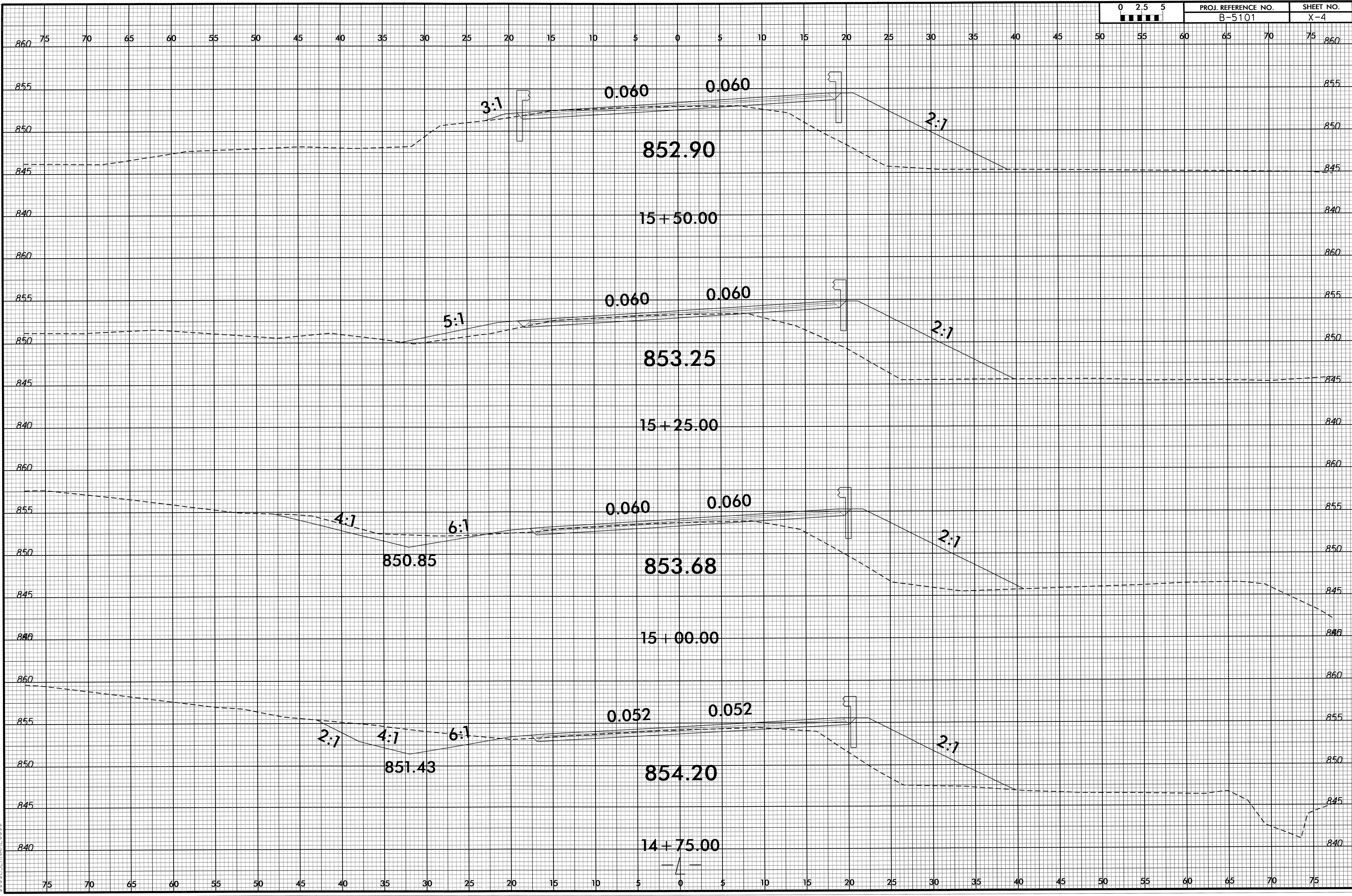
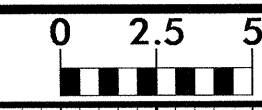


PROJ. REFERENCE NO.
B-5101

SHEET NO.
X-3



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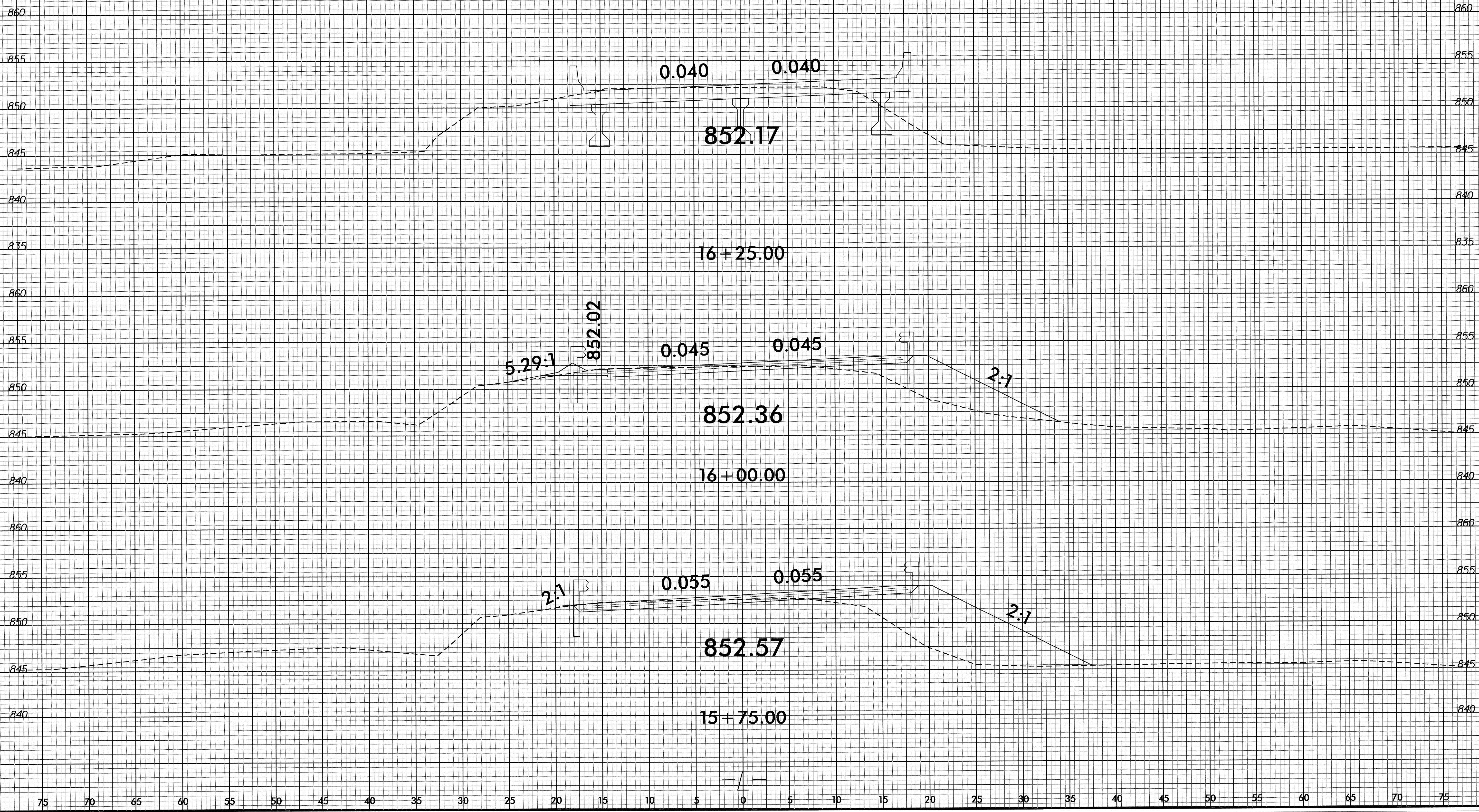
8/23/99

0 2.5 5

PROJ. REFERENCE NO.
B-5101

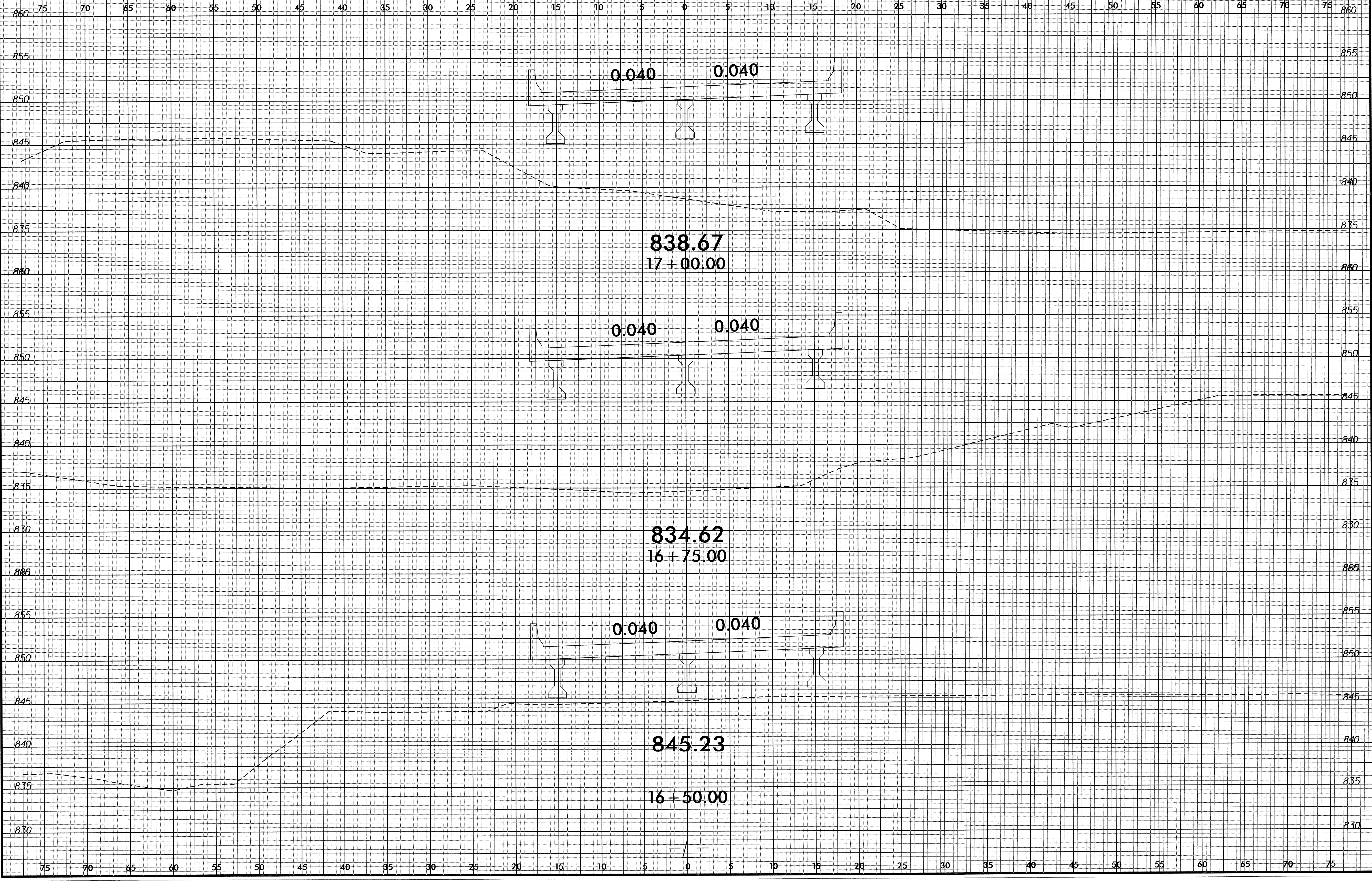
SHEET NO.
X-5

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



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8/23/99



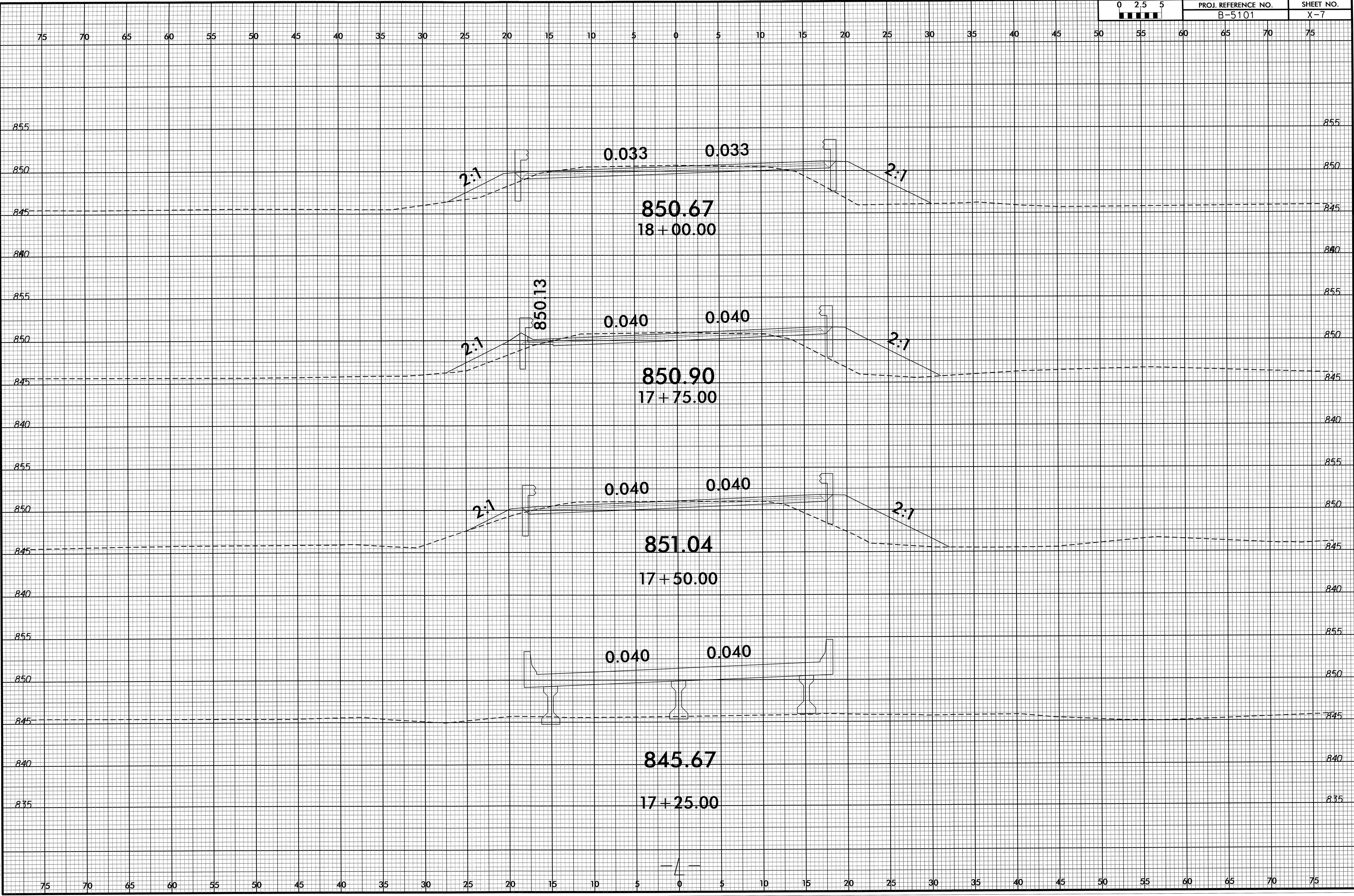
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8/23/99

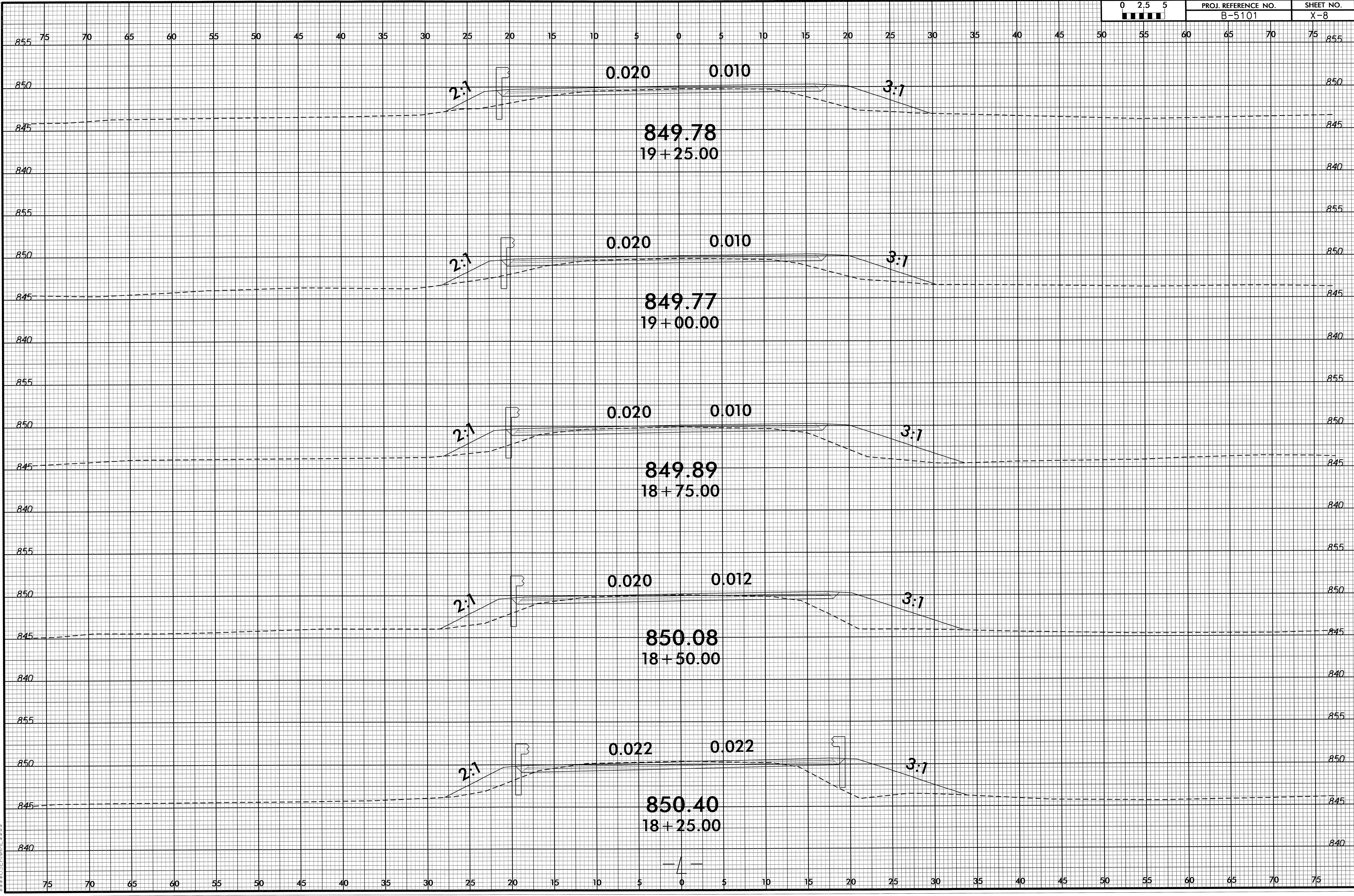
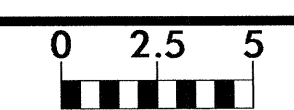
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PROJ. REFERENCE NO.
B-5101

SHEET NO.
X-7



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8/23/13
20-SEP-2013 08:59
\\P001\X6\B5101_Rdy_xpl.dgn
\$\$\$\$\$USE FRAMES\$\$\$\$\$

