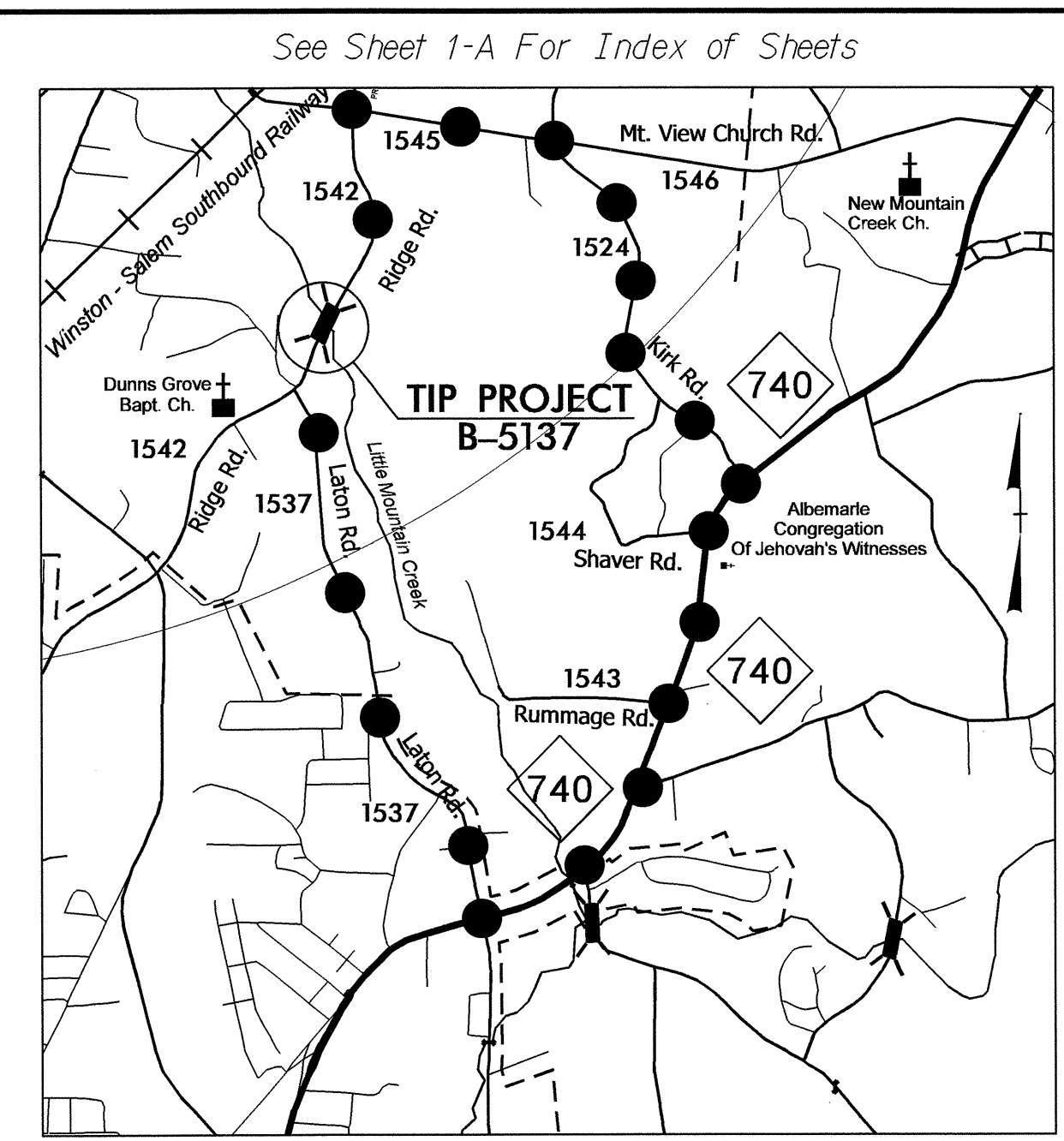


09/08/99

TIP PROJECT: B-5137

CONTRACT: C203355



OFFSITE DETOUR

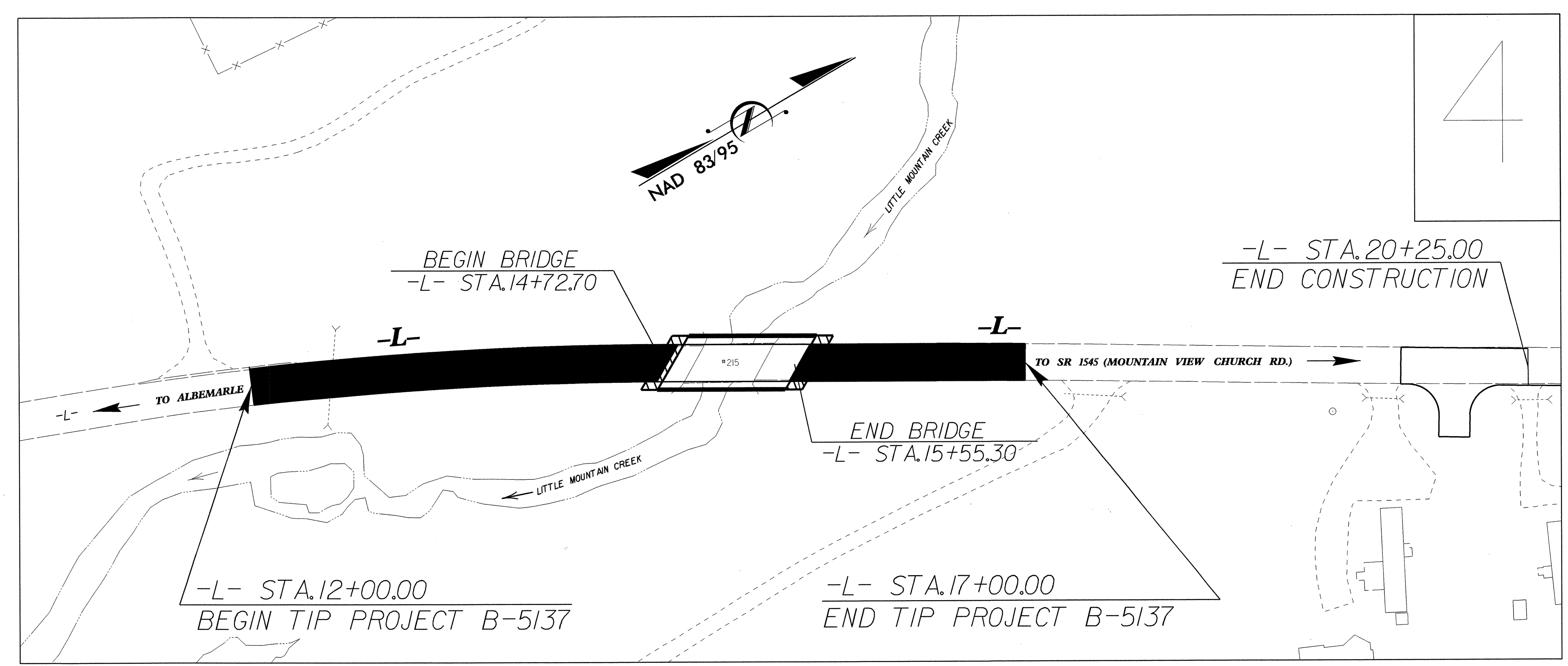
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STANLY COUNTY

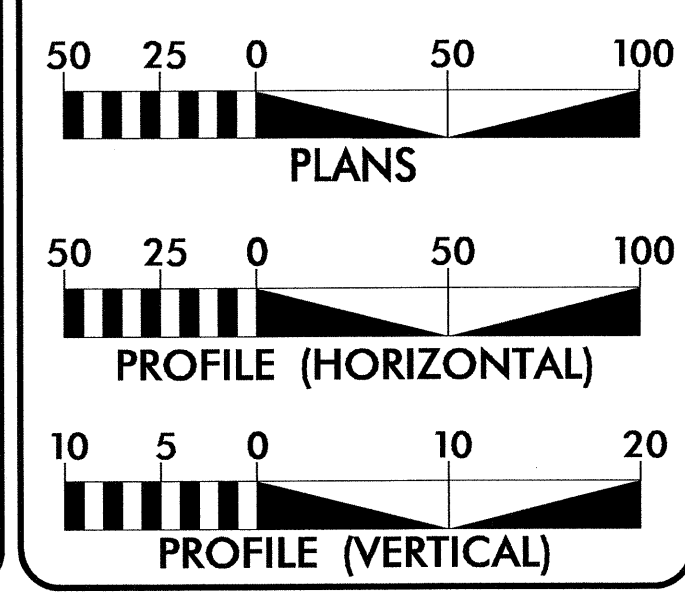
LOCATION: REPLACE BRIDGE NO. 215 OVER LITTLE MOUNTAIN CREEK ON SR 1542 (RIDGE RD.)

TYPE OF WORK: GRADING, PAVING, DRAINAGE & STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5137	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
42296.1.1	BRZ-1542(7)	P.E.	
42296.2.1	BRZ-1542(7)	RW & UTIL.	
42296.3.FD1	BRZ-1542(7)	CONST	



GRAPHIC SCALES



DESIGN DATA

ADT 2014 = 1573
ADT 2035 = 2300
K = 60 %
D = 10 %
T = 5 % *
V = 50 MPH
* TTST = 1% DUAL 4%
FUNC CLASS =
RURAL COLLECTOR
SUBREGIONAL TIER

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT B-5137 = 0.079 MILES
LENGTH OF STRUCTURE TIP PROJECT B-5137 = 0.016 MILES
TOTAL LENGTH OF TIP PROJECT B-5137 = 0.095 MILES

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

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
AUGUST 17, 2012

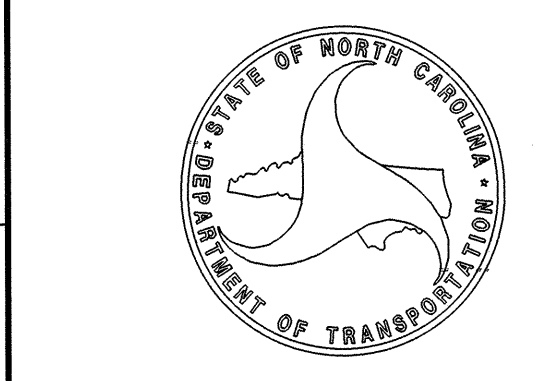
LETTING DATE:
FEBRUARY 18, 2014

G. E. BREW, PE
PROJECT ENGINEER

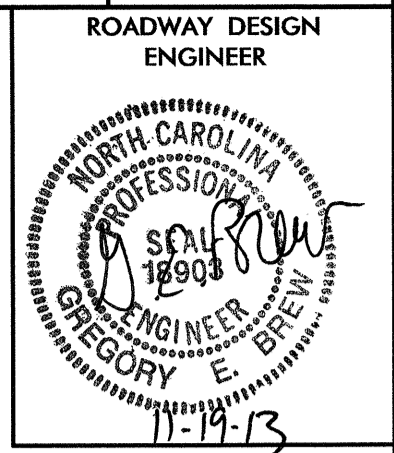
W. T. BEST
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

W. Salem Carl
SIGNATURE: 1/14/14
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022000
ROADWAY DESIGN ENGINEER
1-14-14
Gregory E. Best
SIGNATURE: 1-14-14
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 18903



14-JAN-2014 14:06
R:\Roadway\Projects\B-5137_Rdy_tsh.dgn
\$\$\$\$\$USERNAME\$\$\$\$\$



SHEET NUMBER	INDEX OF SHEETS	SHEET
1	TITLE SHEET	
1-A	INDEX OF SHEETS, GENERAL NOTES AND LIST OF STANDARD DRAWINGS	
1-B	CONVENTIONAL SYMBOLS	
1-C THRU 1-E	SURVEY CONTROL SHEET	
2	PAVEMENT SCHEDULE, TYPICAL SECTIONS AND WEDGING DETAIL, AND MISCELLANEOUS DETAILS	
3	SUMMARY OF QUANTITIES	
3-A	SUMMARY OF DRAINAGE QUANTITIES	
3-B	SUMMARY OF GUARDRAIL, ASPHALT PAVEMENT REMOVAL SUMMARY, AND EARTHWORK SUMMARY	
4	PLAN SHEET	
5	PROFILE SHEET	
TMP-1 THRU TMP-3	TRANSPORTATION MANAGEMENT PLANS	
EC-1 THRU EC-5	EROSION CONTROL PLANS	
X-1A	CROSS-SECTIONS SUMMARY	
X-1 THRU X-6	CROSS-SECTIONS	
S-1 THRU S-19	STRUCTURE PLANS	

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

2012 ROADWAY ENGLISH STANDARD DRAWINGS
 EFF. 01-17-2012
 REV. 10-30-2012

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 Super-elevation - Two Lane Pavement
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
310.10	Driveway Pipe Construction
DIVISION 4 - MAJOR STRUCTURES	
422.11	Reinforced Bridge Approach Fills - Sub Regional Tier
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Super-elevated Curve - Method I
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
840.00	Concrete Base Pad for Drainage Structures
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.29	Frames and Narrow Slot Flat Grates
840.35	Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates
840.46	Traffic Bearing Precast Drainage Structure
840.66	Drainage Structure Steps
846.01	Concrete Curb, Gutter and Curb & Gutter
846.04	Drop Inlet Installation in Shoulder Berm Gutter
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
876.01	Rip Rap in Channels
876.02	Guide for Rip Rap at Pipe Outlets
876.04	Drainage Ditches with Class 'B' Rip Rap

GRADE LINE:
 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. WHEN 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 ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:
 ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01

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

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

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

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

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

UTILITIES:
 UTILITY OWNERS ON THIS PROJECT ARE CITY OF ALBERMARLE, WINDSTREAM, AND TIME WARNER CABLE.
 ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

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

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EP
Property Corner	-----
Property Monument	□ ECM
Parcel/Sequence Number	(23)
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-
Known Soil Contamination: Area or Site	☠ ☠
Potential Soil Contamination: Area or Site	☠ ?

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○ S
Well	○ W
Small Mine	✕
Foundation	□
Area Outline	□
Cemetery	□ †
Building	□
School	□
Church	□
Dam	▬

HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	□
Jurisdictional Stream	-JS-
Buffer Zone 1	-BZ 1-
Buffer Zone 2	-BZ 2-
Flow Arrow	←
Disappearing Stream	→
Spring	○
Wetland	⬇
Proposed Lateral, Tail, Head Ditch	→ FLOW
False Sump	▽

RAILROADS:

Standard Gauge	-----
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 RW Marker	○ RW ●
Proposed Control of Access Line with Concrete CA Marker	○ CA
Existing Control of Access	○ CA
Proposed Control of Access	○ CA
Existing Easement Line	-E-
Proposed Temporary Construction Easement	-E-
Proposed Temporary Drainage Easement	-TDE-
Proposed Permanent Drainage Easement	-PDE-
Proposed Permanent Drainage / Utility Easement	-DUE-
Proposed Permanent Utility Easement	-PUE-
Proposed Temporary Utility Easement	-TUE-
Proposed Aerial Utility Easement	-AUE-
Proposed Permanent Easement with Iron Pin and Cap Marker	◆

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	-C-
Proposed Slope Stakes Fill	-F-
Proposed Curb Ramp	○ CR
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	⊕
Pavement Removal	▨

VEGETATION:

Single Tree	☼
Single Shrub	☼
Hedge	-----
Woods Line	-----

Orchard	☼ ☼ ☼ ☼
Vineyard	□ Vineyard

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	CONC
Bridge Wing Wall, Head Wall and End Wall	CONC WW
MINOR:	
Head and End Wall	CONC HW
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	□ CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	○ S
Storm Sewer	-S-

UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	⊕
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	-W-
Designated U/G Water Line (S.U.E.*)	-W-
Above Ground Water Line	-A/G Water-

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	-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	⊕
Utility Unknown U/G Line	-UTL-
U/G Tank; Water, Gas, Oil	□
Underground Storage Tank, Approx. Loc.	⊕
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.

SURVEY CONTROL SHEET FINAL PLANS

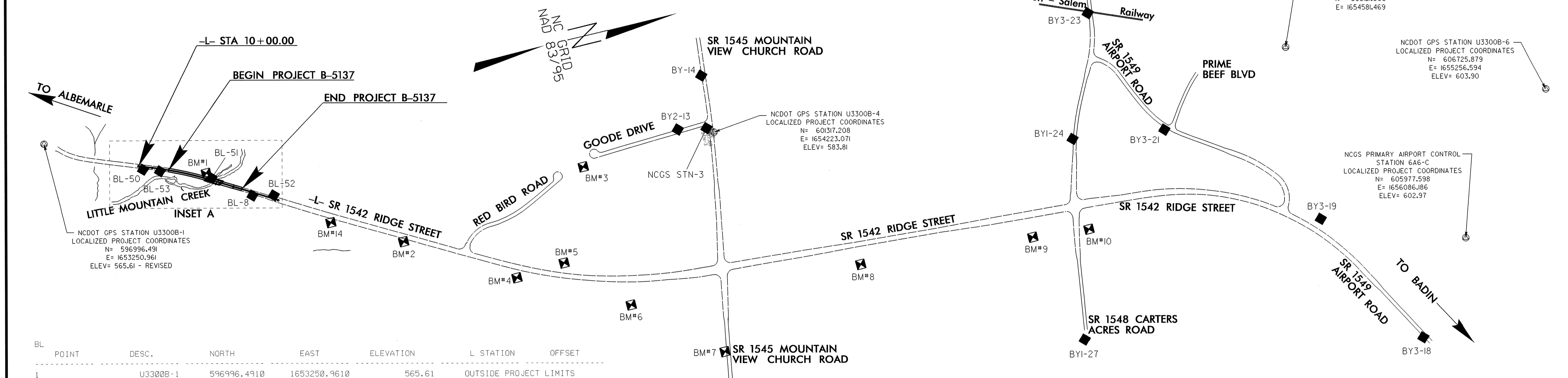
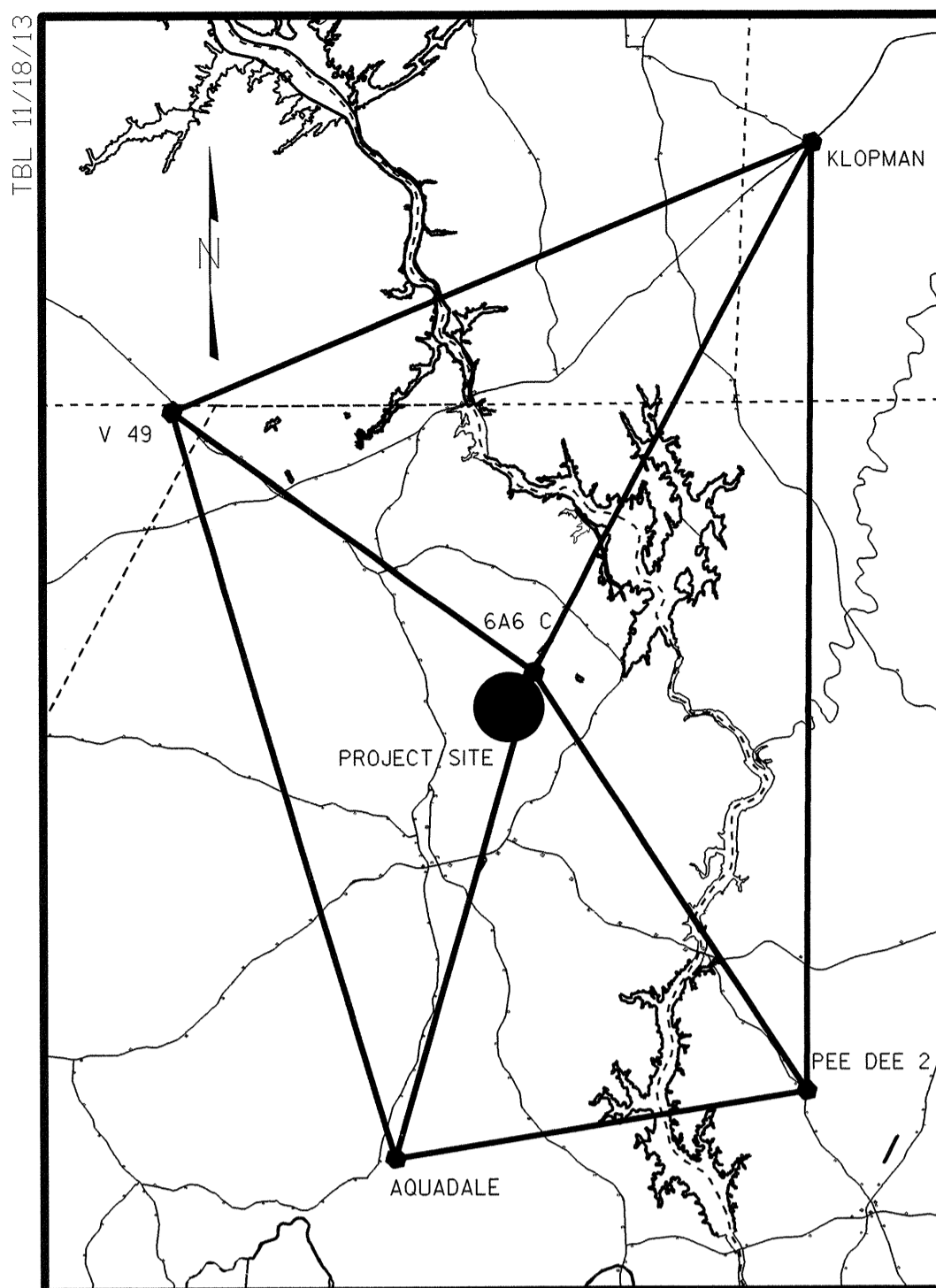
NOTES:

1. THE SITE CALIBRATION SHOWN IS BASED UPON A NETWORK TIED TO THE HARN (HIGH ACCURACY REFERENCE NETWORK) NAD 8395 ADJUSTMENT. THIS CALIBRATION WILL ALLOW THE END USER TO WORK WITHIN THE SAME COORDINATE SYSTEM WHEN USING RTK (REAL TIME KINEMATIC) GPS AND A LOCAL BASE STATION. IF ANOTHER SYSTEM SUCH AS VRS (VIRTUAL REFERENCE STATION) IS USED, ADDITIONAL FIELD TIES MAY BE NEEDED TO REDUCE POSSIBLE ERRORS, OR BIASES.
2. THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:
[HTTPS://CONNECT.NCDOT.GOV/RESOURCES/LOCATION](https://connect.ncdot.gov/resources/location)

THE FILES TO BE FOUND ARE AS FOLLOWS:
B5137_LS_GPSALIB.PDF
B5137_LS_WGS84.TXT
B5137_LS_LOCAL.TXT
B5137_LS_CONTROL.TXT
3. THIS PROJECT USES THE SAME DATUM AND COORDINATE SYSTEM AS TIP PROJECT U-3300B.
4. THE ELEVATION OF U3300B-1 WAS REVISED BASED ON LEVELS RUN FOR B-5137 PROJECT.

THE WGS84 AND LOCAL FILES ARE COMMA DELIMITED AND CAN BE USED TO REPRODUCE THE SITE CALIBRATION (SEE SHEET 1D) FOR THE END USER'S GPS EQUIPMENT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

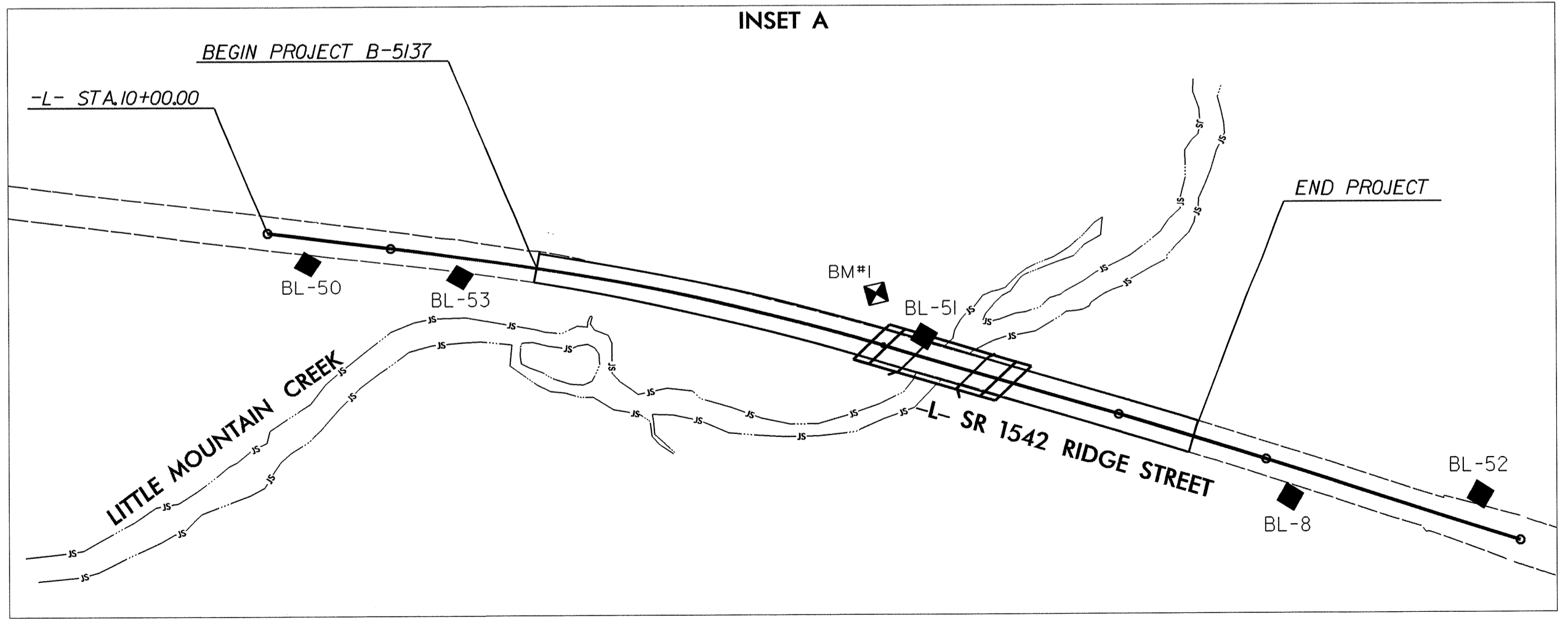
- ⊙ INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.
 - INDICATES LOCAL CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.
 - ▲ INDICATES BENCHMARKS USED OR SET FOR VERTICAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.
- PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM. NETWORK ESTABLISHED FROM EXISTING HARN MONUMENTATION. SEE SHEET 1D FOR BENCHMARK DESCRIPTIONS.



POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
1	U3300B-1	596996.4910	1653250.9610	565.61	OUTSIDE PROJECT LIMITS	
50	BL-50	597590.9687	1653570.0199	549.04	10+31.97	19.43 RT
51	BL-51	598018.7883	1653732.1194	542.83	14+89.05	14.92 LT
8	BL-8	598252.9080	1653909.7580	552.59	17+80.95	20.43 RT
52	BL-52	598389.3419	1653941.5076	554.05	19+14.35	22.31 LT

POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
3	U3300B-3	600995.4750	1655983.5990	603.43	OUTSIDE PROJECT LIMITS	
4	U3300B-4	601317.2080	1654223.0710	583.81	OUTSIDE PROJECT LIMITS	
5	U3300B-5	605121.0060	1654581.4690	UNKNOWN	OUTSIDE PROJECT LIMITS	
6	U3300B-6	606725.8790	1655256.5940	603.90	OUTSIDE PROJECT LIMITS	
7	6A6 C	605977.5980	1656086.1860	602.97	OUTSIDE PROJECT LIMITS	
13	BY2-13	601088.6810	1654149.6290	588.77	OUTSIDE PROJECT LIMITS	
14	BY-14	601324.3830	1653841.4270	586.07	OUTSIDE PROJECT LIMITS	
18	BY3-18	605549.4870	1656654.0520	597.32	OUTSIDE PROJECT LIMITS	
19	BY3-19	605076.7240	1655735.4950	602.49	OUTSIDE PROJECT LIMITS	
21	BY3-21	604213.0210	1654917.1210	584.02	OUTSIDE PROJECT LIMITS	
23	BY3-23	603903.0140	1654054.1500	583.01	OUTSIDE PROJECT LIMITS	
24	BY1-24	603609.7250	1654831.9090	586.74	OUTSIDE PROJECT LIMITS	
25	BY3-25	604018.5090	1653502.7420	591.00	OUTSIDE PROJECT LIMITS	
27	BY1-27	603372.3950	1656134.6910	602.38	OUTSIDE PROJECT LIMITS	
502	STN-3	601275.5360	1654185.2800	587.68	OUTSIDE PROJECT LIMITS	

DATUM DESCRIPTION
 THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "6A6 C" WITH NAD 1983/95 STATE PLANE GRID COORDINATES OF NORTHING: 605977.598(±) EASTING: 1656086.186(±) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9998525
 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "6A6 C" TO "L- STATION 10+00.00 IS 5 16°50'28.5" W 8786.514 (±)
 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88



NOTE: DRAWING NOT TO SCALE

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GPS CALIBRATION SHEET FINAL PLANS

PROJECT REFERENCE NO. B-5137	SHEET NO. 1 D
Location and Surveys	

GPS Calibration Report

Project : U-3300B & B-5137

TIP Number	B-5137	Date	5/8/2006 Revised 11/30/2011
User name	dstaples & jjeffreys	Zone	North Carolina 3200
Coordinate System	US State Plane 1983		
Horizontal Datum	NAD 1983 (Comus)		
Vertical Datum	NAVD 88	Geoid Model	Geoid03 (Comus) NC Sub Grid
Coordinate Units	US survey feet		
Distance Units	US survey feet		
Height Units	US survey feet		

LOCAL SITE INFORMATION

Localized around	6A6 C
Latitude	N/A
Longitude	N/A
Site Scale Factor	N/A
Height	N/A

Datum Transformation Parameters

Warning: Datum parameter calculation did not converge

Method	Three Parameter	
Translation along x axis		13.728sft
Translation along y axis		-80.177sft
Translation along z axis		57.042sft

Updated Default Projection (Transverse Mercator) Definition

Updated default projection not requested

Horizontal Adjustment Parameters

Northing coordinate of rotation center	602043.900sft	
Easting coordinate of rotation center	1655847.056sft	
Rotation about the center point	0°00'00"	
Translation north	0.045sft	
Translation east	0.163sft	
Scale factor	1.00015228	

Vertical Adjustment Parameters

Northing coordinate of origin point	605977.602sft	
Easting coordinate of origin point	1656086.195sft	
Vertical separation at origin	-0.086sft	
Slope north	-1.046ppm	
Slope east	0.249ppm	

Geoid Model Definition

Geoid03 (Comus) NC Sub Grid

Residual Differences Between GPS (WGS84) And Local Coordinates

Summary			
	Maximum error	Root Mean Square error	Point
Horizontal	0.016sft	0.002	V 49_GPS
Vertical	0.026sft	0.005	U3300B-6_GPS
Three-dimensional	0.027sft	0.005	U3300B-6_GPS

Point Residuals					
WGS84 Coordinates		Calculated point FOR DISPLAY ONLY		Local Coordinates	
Point	6A6 C GPS	Northing	605977.602sft	Point 6A6 C	
Latitude	35°24'34.33818"N	Easting	1656086.195sft	Northing	605977.598sft
Longitude	80°09'15.25166"W	Elevation	602.947sft	Easting	1656086.186sft
Height	503.608sft	Horz error	0.010sft	Elevation	602.971sft
		Vert error	0.024sft	Utilized	Horz and Vert
		3D error	0.026sft	Quality	Survey quality
Point	AQUADALE_GPS	Northing	541765.494sft	Point AQUADALE	
Latitude	35°13'57.16645"N	Easting	1637768.577sft	Northing	541765.498sft
Longitude	80°12'47.03686"W	Elevation	568.432sft	Easting	1637768.587sft
Height	468.825sft	Horz error	0.011sft	Elevation	568.631sft
		Vert error	?	Utilized	Horizontal
		3D error	0.011sft	Quality	Survey quality
Point	KLOPMAN_GPS	Northing	674633.090sft	Point KLOPMAN	
Latitude	35°35'57.26327"N	Easting	1692707.819sft	Northing	674633.090sft
Longitude	80°02'01.51583"W	Elevation	556.096sft	Easting	1692707.819sft
Height	456.891sft	Horz error	0.001sft	Elevation	556.200sft
		Vert error	?	Utilized	Horizontal
		3D error	0.001sft	Quality	Survey quality
Point	PEE DEE 2_GPS	Northing	550736.196sft	Point PEE DEE 2	
Latitude	35°15'31.92111"N	Easting	1691752.996sft	Northing	550736.193sft
Longitude	80°01'57.47147"W	Elevation	437.801sft	Easting	1691753.006sft
Height	337.815sft	Horz error	0.010sft	Elevation	437.939sft
		Vert error	?	Utilized	Horizontal
		3D error	0.010sft	Quality	Survey quality
Point	V 49_GPS	Northing	639675.904sft	Point V 49	
Latitude	35°30'01.74841"N	Easting	1608676.724sft	Northing	639675.916sft
Longitude	80°18'53.30876"W	Elevation	725.445sft	Easting	1608676.735sft
Height	625.781sft	Horz error	0.016sft	Elevation	725.612sft
		Vert error	?	Utilized	Horizontal
		3D error	0.016sft	Quality	Survey quality
Point	U3300B-1_GPS	Northing	596996.490sft	Point U3300B-1	
Latitude	35°23'05.19516"N	Easting	1653250.963sft	Northing	596996.491sft
Longitude	80°09'48.22799"W	Elevation	565.577sft	Easting	1653250.961sft
Height	466.215sft	Horz error	0.002sft	Elevation	565.570sft
		Vert error	0.007sft	Utilized	Horz and Vert
		3D error	0.007sft	Quality	Survey quality

Point	U3300B-2_GPS	Northing	598539.047sft	Point U3300B-2	
Latitude	35°23'20.54014"N	Easting	1654031.379sft	Northing	598539.045sft
Longitude	80°09'39.02177"W	Elevation	555.289sft	Easting	1654031.380sft
Height	455.932sft	Horz error	0.003sft	Elevation	555.290sft
		Vert error	0.001sft	Utilized	Horz and Vert
		3D error	0.003sft	Quality	Survey quality
Point	U3300B-3_GPS	Northing	600995.477sft	Point U3300B-3	
Latitude	35°23'45.05735"N	Easting	1655983.604sft	Northing	600995.475sft
Longitude	80°09'15.79103"W	Elevation	603.443sft	Easting	1655983.599sft
Height	504.090sft	Horz error	0.006sft	Elevation	603.430sft
		Vert error	0.013sft	Utilized	Horz and Vert
		3D error	0.015sft	Quality	Survey quality
Point	U3300B-4_GPS	Northing	601317.210sft	Point U3300B-4	
Latitude	35°23'48.03603"N	Easting	1654223.076sft	Northing	601317.208sft
Longitude	80°09'37.09894"W	Elevation	583.788sft	Easting	1654223.071sft
Height	484.442sft	Horz error	0.005sft	Elevation	583.810sft
		Vert error	0.022sft	Utilized	Horz and Vert
		3D error	0.022sft	Quality	Survey quality
Point	U3300B-5_GPS	Northing	605121.008sft	Point U3300B-5	
Latitude	35°24'25.69379"N	Easting	1654581.474sft	Northing	605121.006sft
Longitude	80°09'33.30690"W	Elevation	587.809sft	Easting	1654581.469sft
Height	488.474sft	Horz error	0.006sft	Elevation	587.949sft
		Vert error	?	Utilized	Horizontal
		3D error	0.006sft	Quality	Survey quality
Point	U3300B-6_GPS	Northing	606725.882sft	Point U3300B-6	
Latitude	35°24'41.64251"N	Easting	1655256.599sft	Northing	606725.879sft
Longitude	80°09'25.37802"W	Elevation	603.926sft	Easting	1655256.594sft
Height	504.592sft	Horz error	0.005sft	Elevation	603.900sft
		Vert error	0.026sft	Utilized	Horz and Vert
		3D error	0.027sft	Quality	Survey quality

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "6A6 C" WITH NAD 1983/95 STATE PLANE GRID COORDINATES OF NORTHING: 605977.598(fft) EASTING: 1656086.186(fft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9998525 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "6A6 C" TO L- STATION 10+00.00 IS S 16°50'28.5" W 8786.514 (fft) ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

BM1 ELEVATION + 540.82 N 597992 E 1653693 L STATION 14+47 36 LEFT RR SPIKE IN 20' OAK	BM3 ELEVATION + 559.46 N 600424 E 1654242 L STATION 19+52.21 N 07°24'18.5" E DIST 2030.18 RR SPIKE IN 31' OAK	BM5 ELEVATION + 576.77 N 600149 E 1654830 L STATION 19+52.21 N 26°02'46.0" E DIST 1934.70 RR SPIKE IN 10' OAK	BM7 ELEVATION + 596.69 N 601044 E 1655644 L STATION 19+52.21 N 32°16'43.3" E DIST 3114.96 RR SPIKE IN POWER POLE
BM2 ELEVATION + 585.95 N 599152 E 1654441 L STATION 19+52.21 N 31°51'24.0" E DIST 872.72 RR SPIKE IN 24' OAK	BM4 ELEVATION + 597.24 N 599823 E 1654849 L STATION 19+52.21 N 31°35'40.5" E DIST 1658.73 RR SPIKE IN 12' OAK	BM6 ELEVATION + 597.22 N 600514 E 1655201 L STATION 19+52.21 N 30°07'03.1" E DIST 2432.48 RR SPIKE IN 24' OAK	BM8 ELEVATION + 595.38 N 602051 E 1655303 L STATION 19+52.21 N 19°58'13.3" E DIST 3873.52 RR SPIKE IN 10' PINE
			BM9 ELEVATION + 600.46 N 603200 E 1655400 L STATION 19+52.21 N 16°30'59.9" E DIST 4995.74 RR SPIKE IN 7' PINE
			BM10 ELEVATION + 592.08 N 603573 E 1655438 L STATION 19+52.21 N 15°46'17.9" E DIST 5364.50 RR SPIKE IN 9' OAK
			BM14 ELEVATION + 564.56 N 598715 E 1654204 L STATION 19+52.21 N 36°20'37.8" E DIST 377.73 RR SPIKE IN TEL POLE

SEE SHEET 1C FOR NOTES.

TBL11/18/13
18-NOV-2013 11:4
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137-1s-1D.dgn

SURVEY CONTROL SHEET FINAL PLANS

PROJECT REFERENCE NO.	SHEET NO.
B-5137	1E
Location and Surveys	

L

TYPE	STATION	NORTH	EAST
POT	10+00.00	597567.9281	1653540.5471
PC	10+91.38	597653.4106	1653572.8419
PT	14+62.16	597988.0431	1653731.5625
PC	16+42.81	598144.4076	1653822.0395
PT	17+56.14	598242.0961	1653879.4922
POT	19+52.21	598410.3909	1653980.0813

ROW MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
L	12+00.00	30.00	597742.1317	1653641.1707
L	12+00.00	-30.00	597765.9971	1653586.1212
L	14+35.00	-45.00	597986.5257	1653678.8856
L	14+35.00	-30.00	597979.1692	1653691.9578
L	14+62.16	30.00	597973.0182	1653757.5289
L	16+00.00	-45.00	598129.8892	1653761.6484
L	16+00.00	-30.00	598122.3768	1653774.6316
L	16+99.27	-30.20	598208.4802	1653824.4535
L	16+99.69	29.80	598178.4304	1653876.3862

PERMANENT DRAINAGE EASEMENT

ALIGN	STATION	OFFSET	NORTH	EAST
L	14+27.00	30.00	597942.8564	1653740.3868
L	14+27.00	48.00	597934.0838	1653756.1043
L	16+50.00	55.00	598123.0392	1653873.2225
L	16+85.00	29.89	598165.7618	1653869.0558

TBL11/18/13

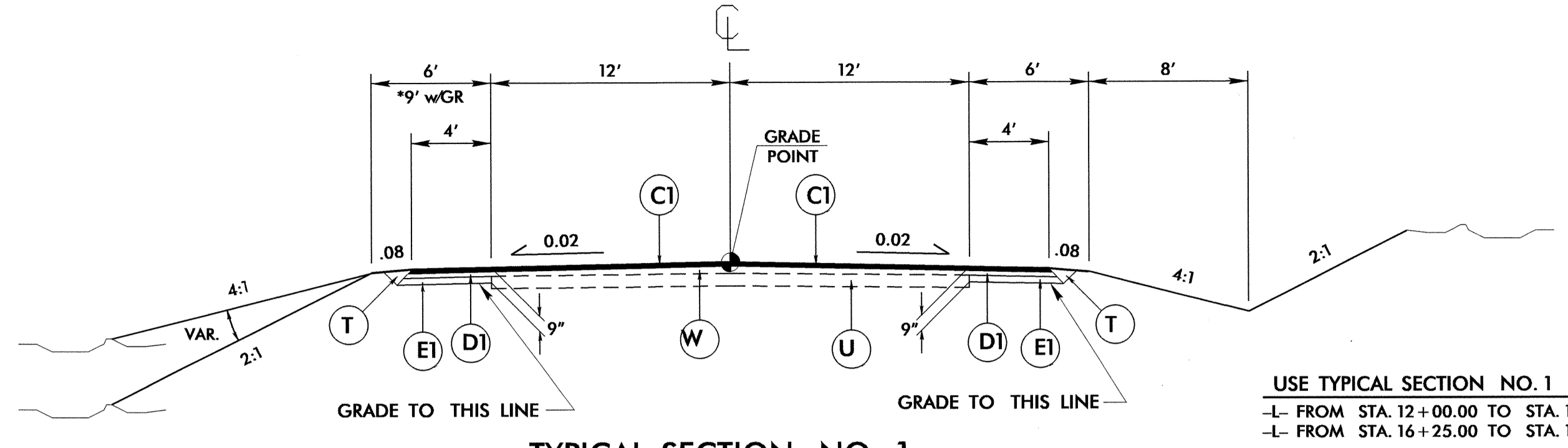
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6/2/09

PROJECT REFERENCE NO. B-5137	SHEET NO. 2
ROADWAY DESIGN ENGINEER <i>Gregory E. Biew</i>	PAVEMENT DESIGN ENGINEER <i>Clark S. Morrison</i>

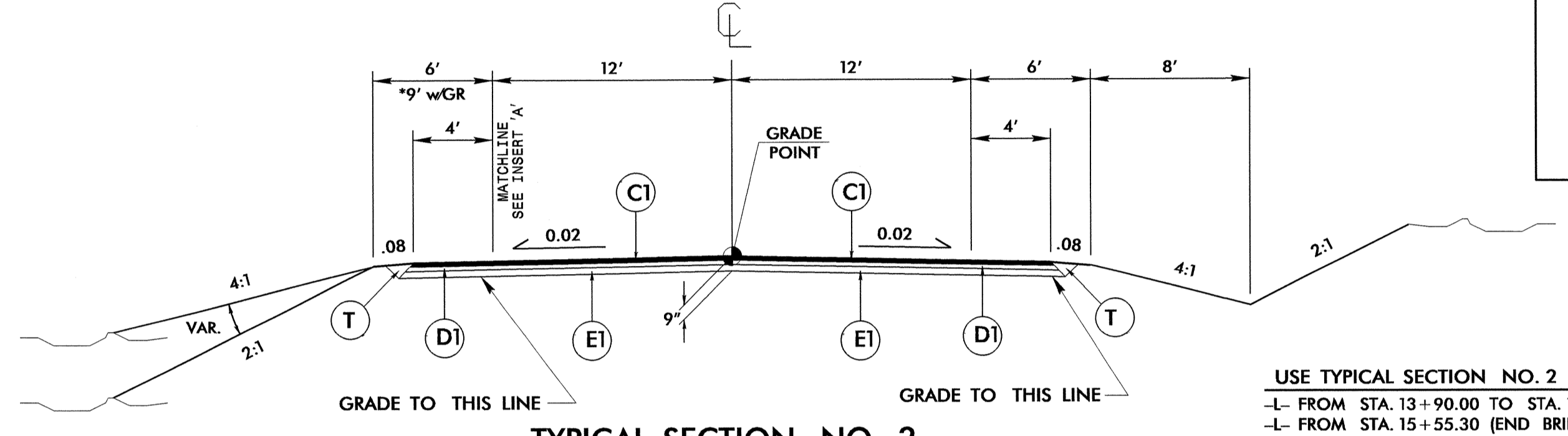
C1	PROP. APPROX. 2½" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1½" IN DEPTH.
D1	PROP. APPROX. 2½" 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 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	CONCRETE SHOULDER BERM GUTTER
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V	INCIDENTAL MILLING BITUMINOUS PAVEMENT.
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL)

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



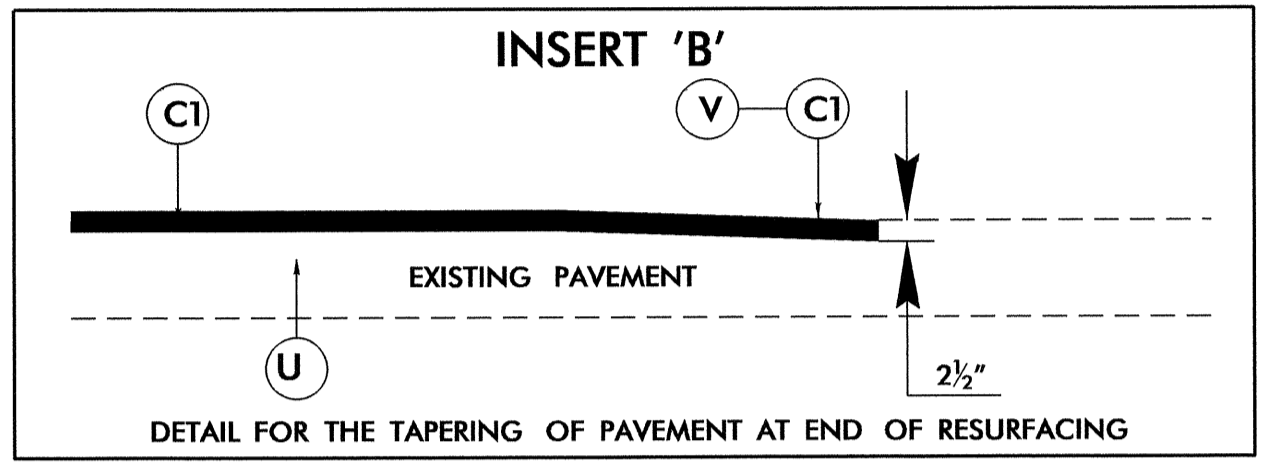
TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1
 -L- FROM STA. 12+00.00 TO STA. 13+90.00
 -L- FROM STA. 16+25.00 TO STA. 17+00.00

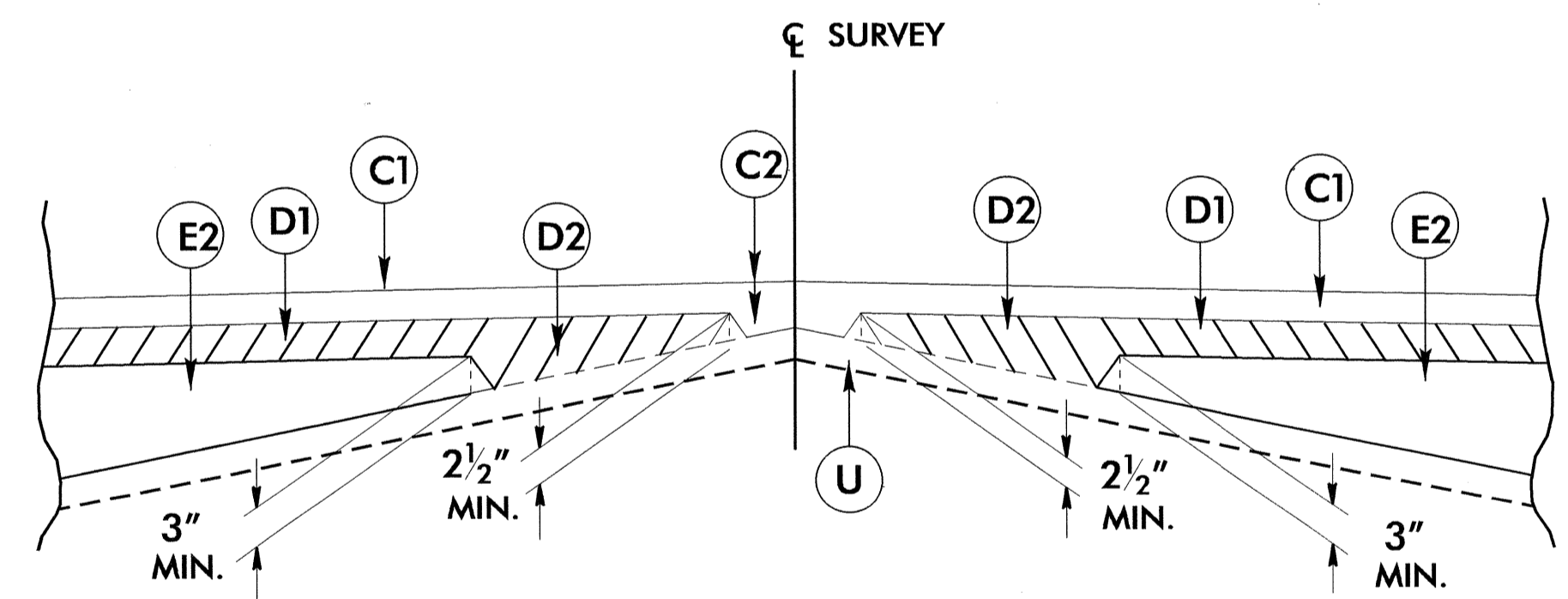


TYPICAL SECTION NO. 2

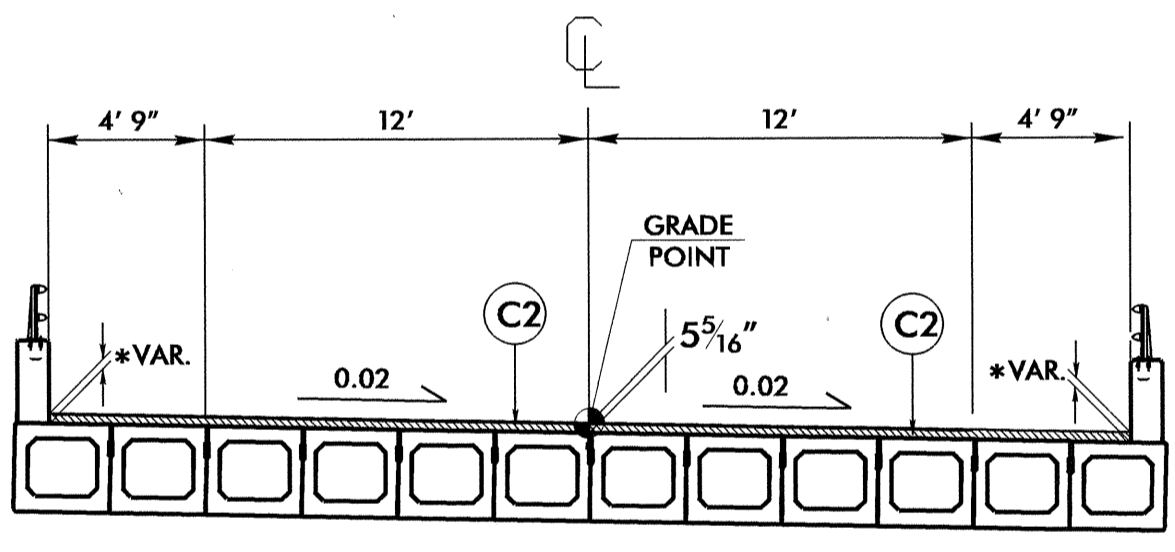
USE TYPICAL SECTION NO. 2
 -L- FROM STA. 13+90.00 TO STA. 14+72.70 (BEGIN BRIDGE)
 -L- FROM STA. 15+55.30 (END BRIDGE) TO STA. 16+25.00



USE INSERT 'B' IN CONJUNCTION WITH TYPICAL SECTION NO. 1
 -L- FROM STA. 12+00.00 TO STA. 12+25.00
 -L- FROM STA. 16+75.00 TO STA. 17+00.00
 -L- FROM STA. 19+42.73 TO STA. 20+17.73

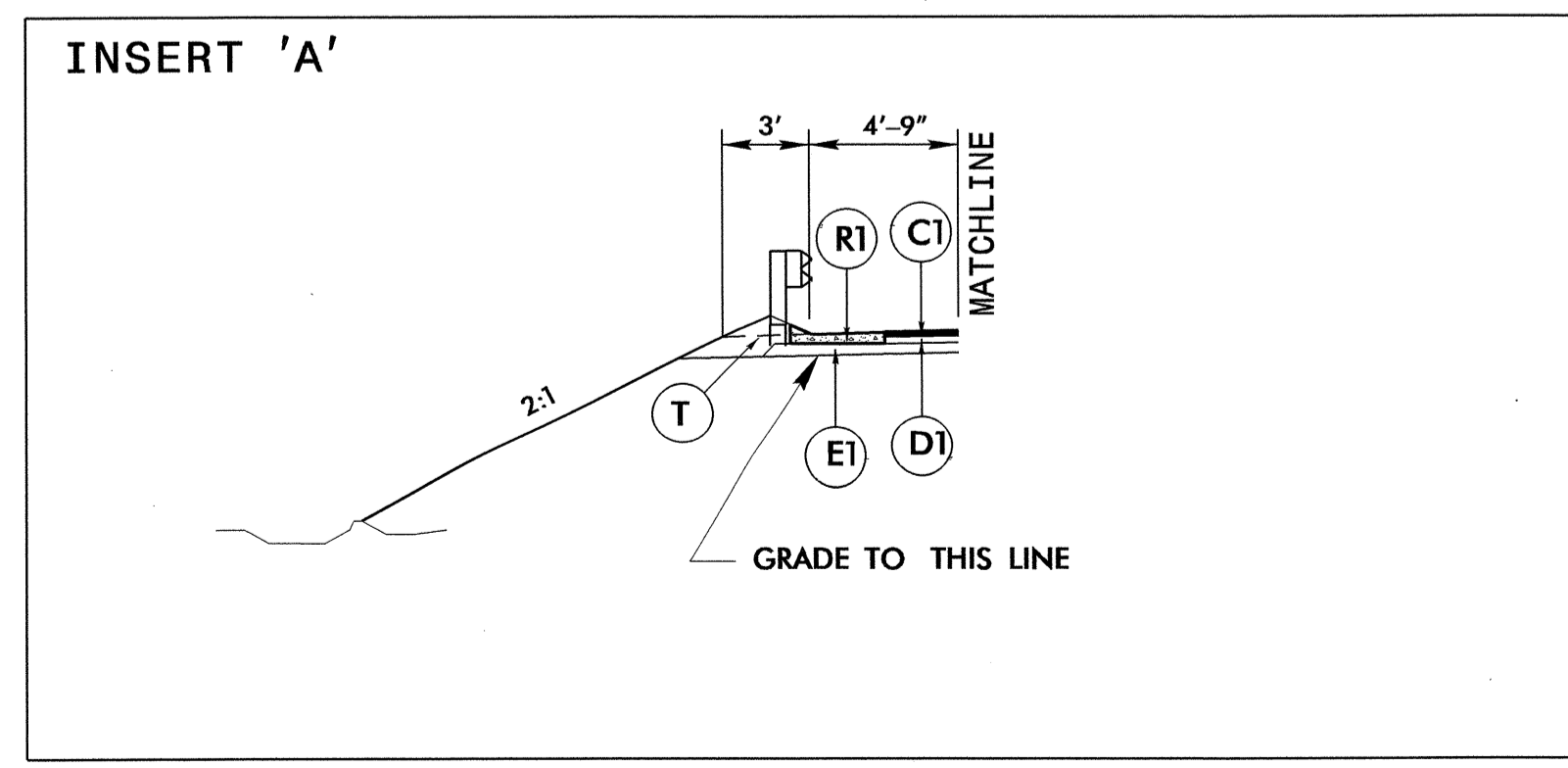


Detail Showing Method of Wedging

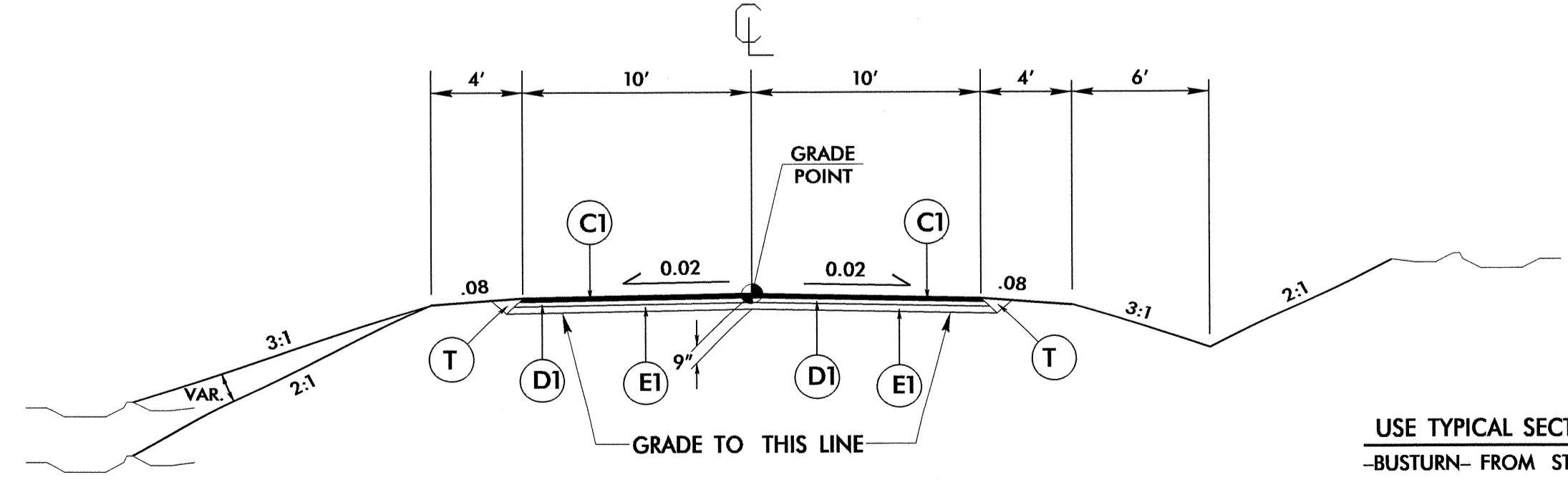


TYPICAL SECTION NO. 3

USE TYPICAL SECTION NO. 3
 -L- FROM STA. 14+72.70 (BEGIN BRIDGE) TO STA. 15+55.30 (END BRIDGE)



USE INSERT 'A' IN CONJUNCTION WITH TYPICAL SECTION NO. 2
 -L- FROM STA. 14+35.00 TO STA. 14+53.78 -RT-
 -L- FROM STA. 15+56.27 TO STA. 16+10.00 -RT-



TYPICAL SECTION NO. 4

USE TYPICAL SECTION NO. 4
 -BUSTURN- FROM STA. 10+12.00 TO STA. 10+46.00

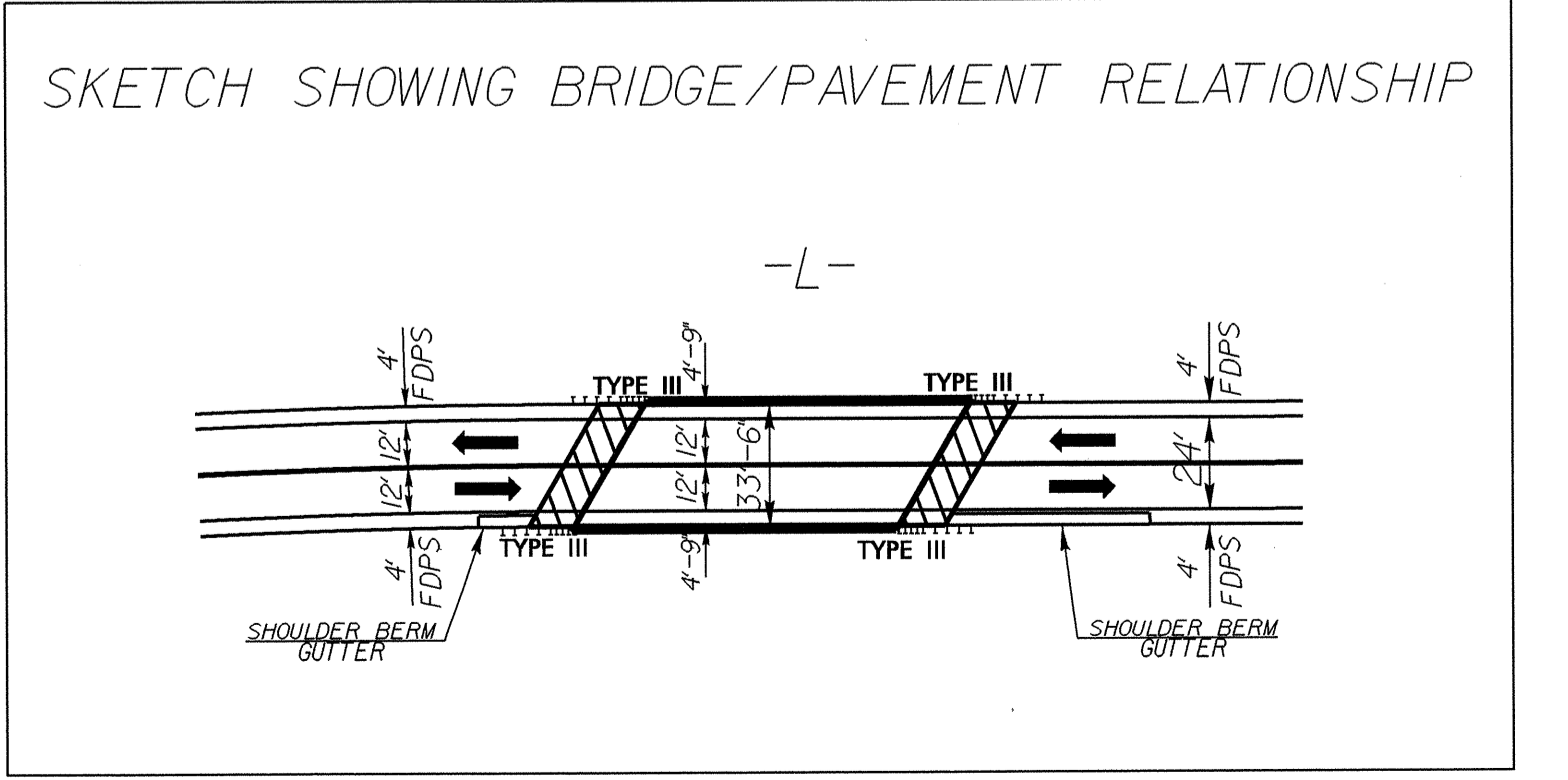
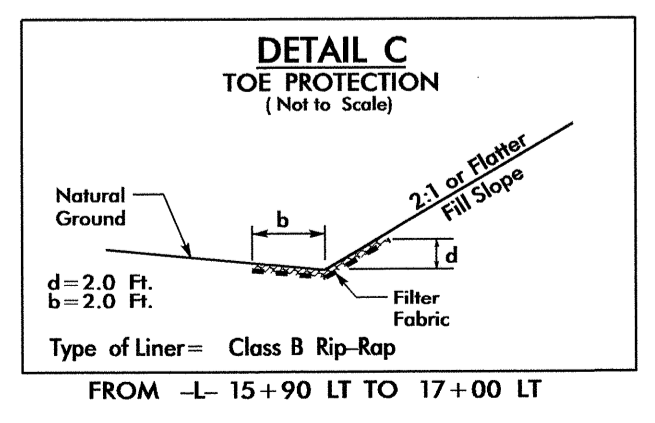
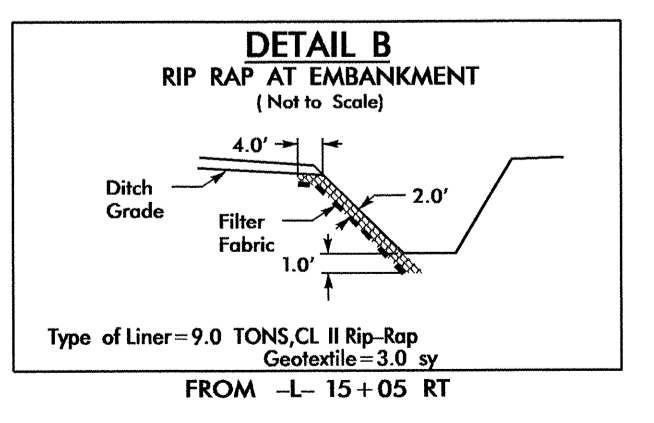
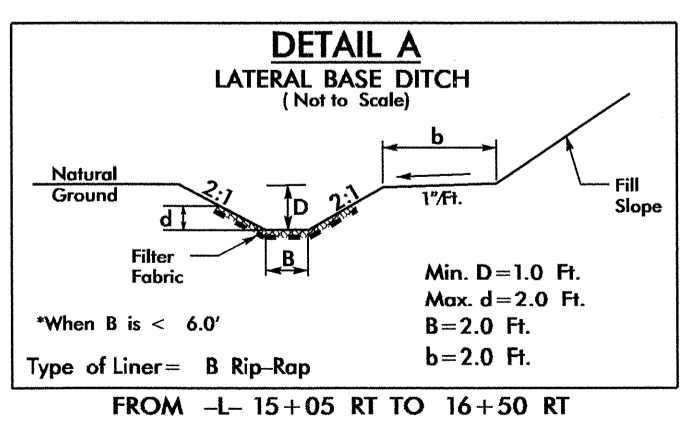
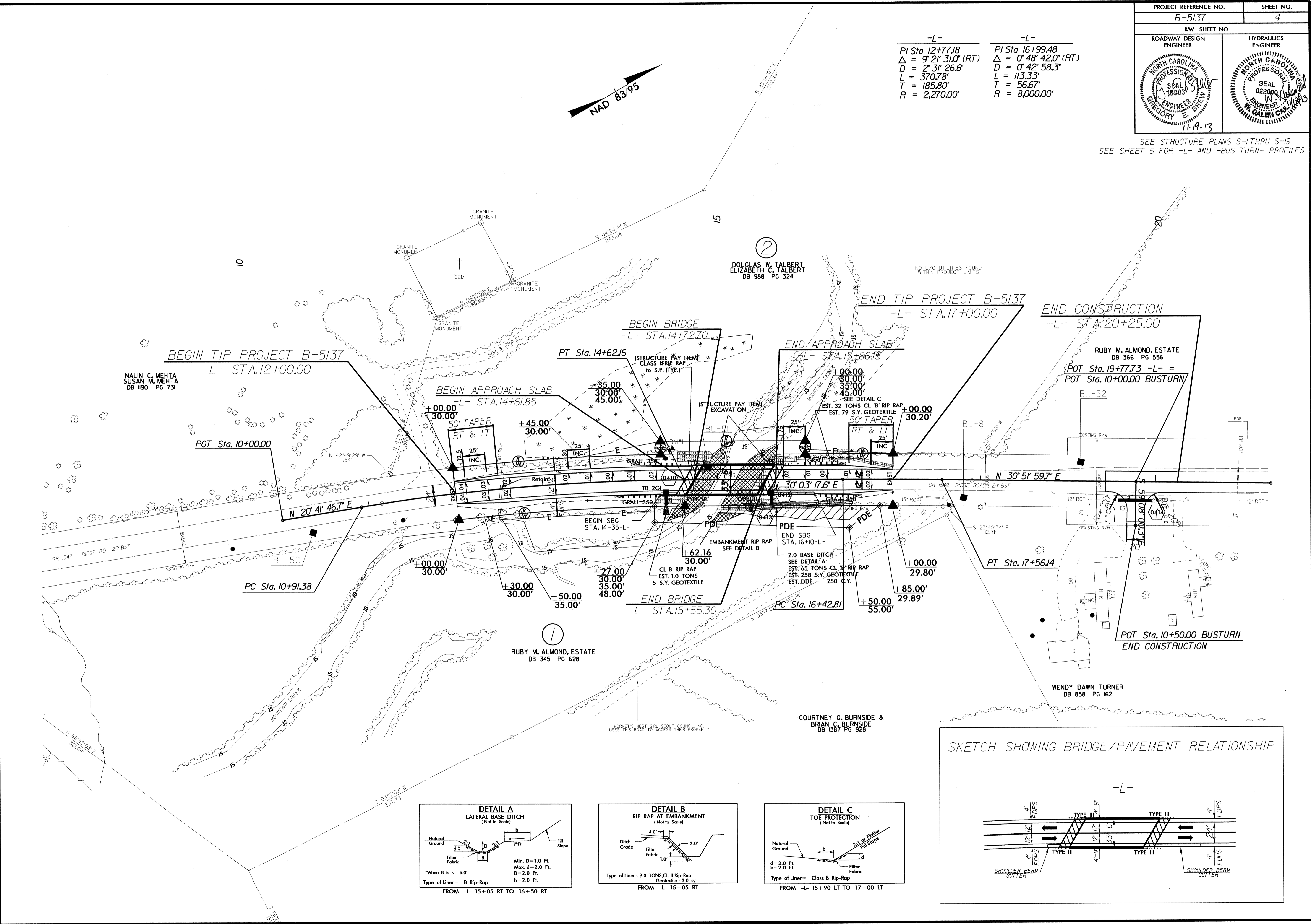
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 13-NOV-2013 14:05

-L-
 PI Sta 12+77.18
 $\Delta = 9^{\circ} 21' 31.0''$ (RT)
 $D = 2^{\circ} 31' 26.6''$
 $L = 370.78'$
 $T = 185.80'$
 $R = 2,270.00'$

-L-
 PI Sta 16+99.48
 $\Delta = 0^{\circ} 48' 42.0''$ (RT)
 $D = 0^{\circ} 42' 58.3''$
 $L = 113.33'$
 $T = 56.67'$
 $R = 8,000.00'$

SEE STRUCTURE PLANS S-1 THRU S-19
 SEE SHEET 5 FOR -L- AND -BUS TURN- PROFILES

8/17/99
 REVISIONS
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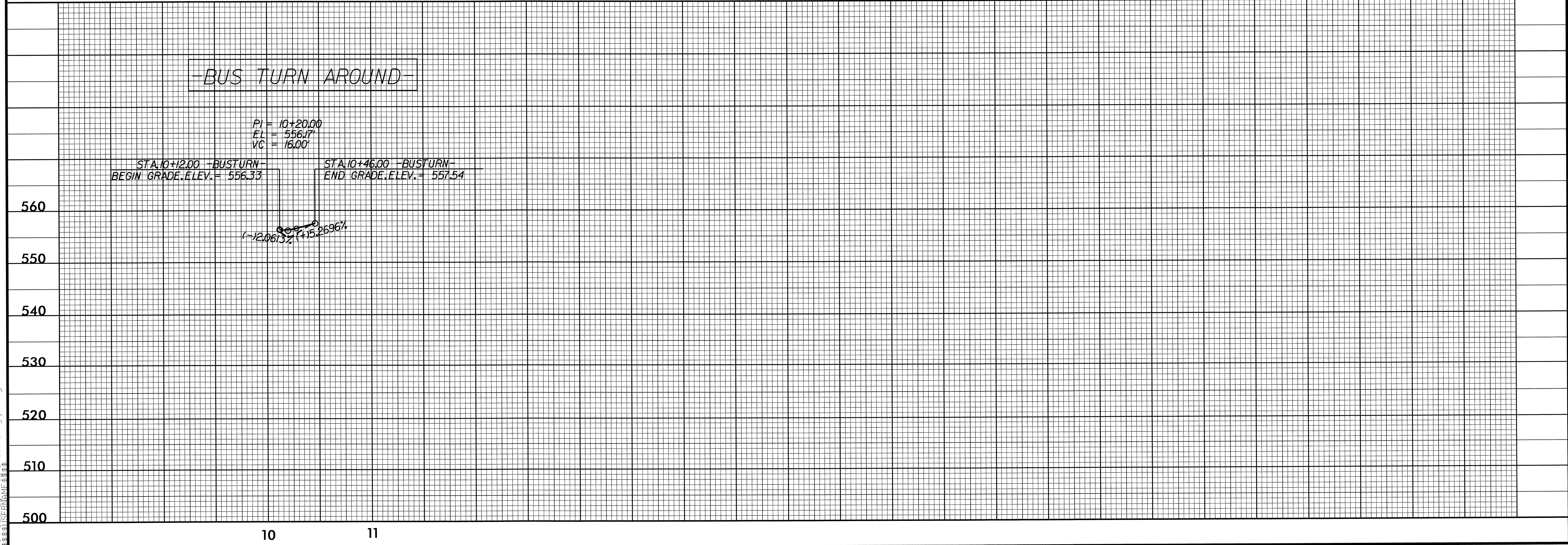
5/28/99

BRIDGE HYDRAULIC DATA		
DESIGN DISCHARGE	= 1620	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 542.4	FT
BASE DISCHARGE	= 2320	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 543.46	FT
OVERTOPPING DISCHARGE	= 2320	CFS
OVERTOPPING FREQUENCY	= 100	YRS
OVERTOPPING ELEVATION	= 543.3	FT
DATE OF SURVEY	=	FT
W.S.ELEVATION AT DATE OF SURVEY	= 535.6	FT

PROJECT REFERENCE NO. B-5137	SHEET NO. 5
ROADWAY DESIGN ENGINEER GREGORY E. BRIN	HYDRAULICS ENGINEER W. GALEN CAMP
PROFESSIONAL SEAL GREGORY E. BRIN 11-19-13	PROFESSIONAL SEAL W. GALEN CAMP 11-19-13

560
550
540
530
520
510
500

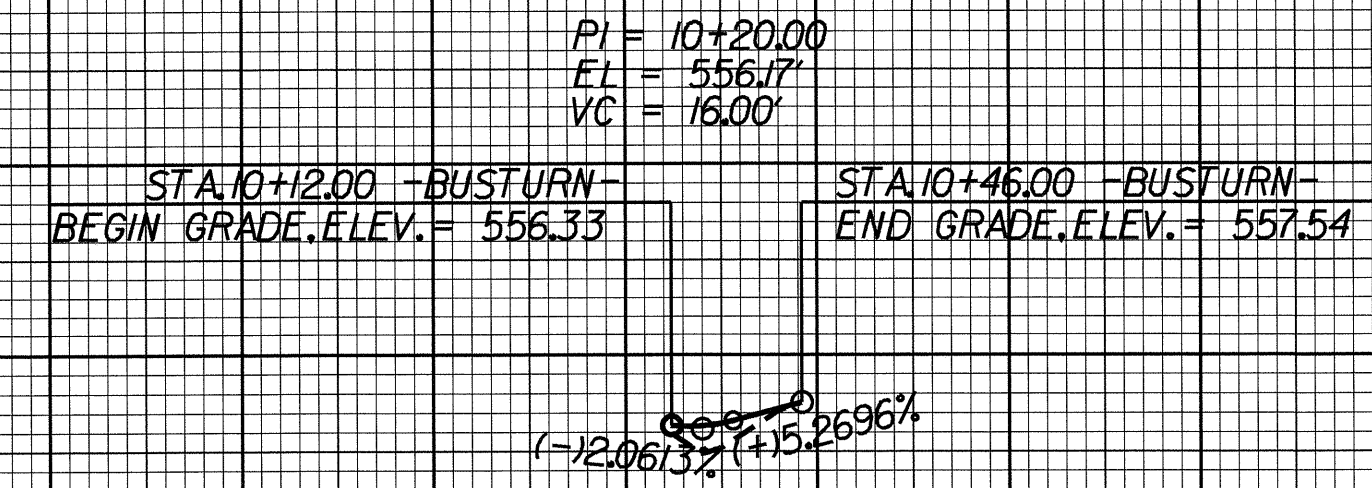
10 11 12 13 14 15 16 17 18 19 20



BUS TURN AROUND

560
550
540
530
520
510
500

10 11

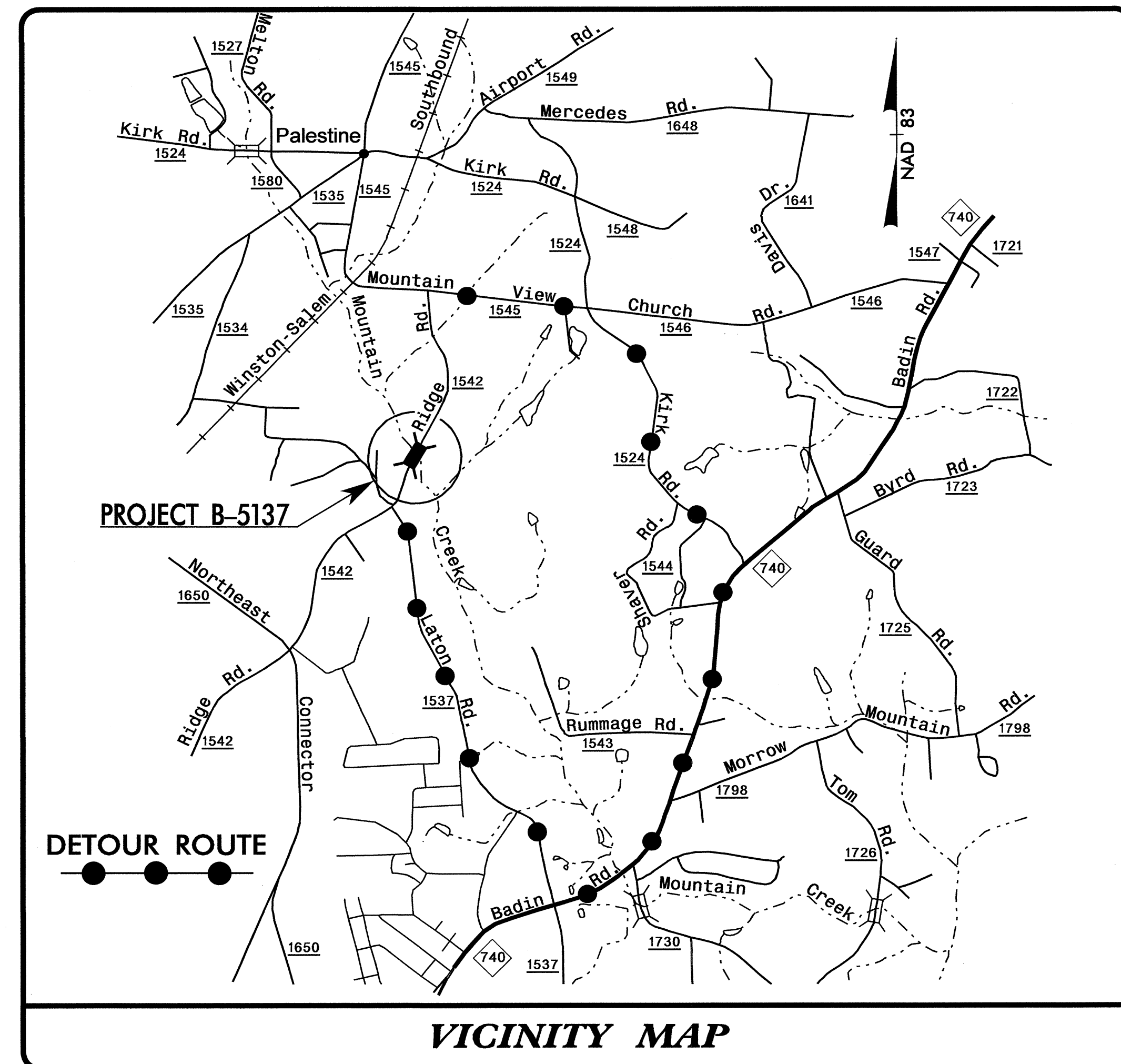
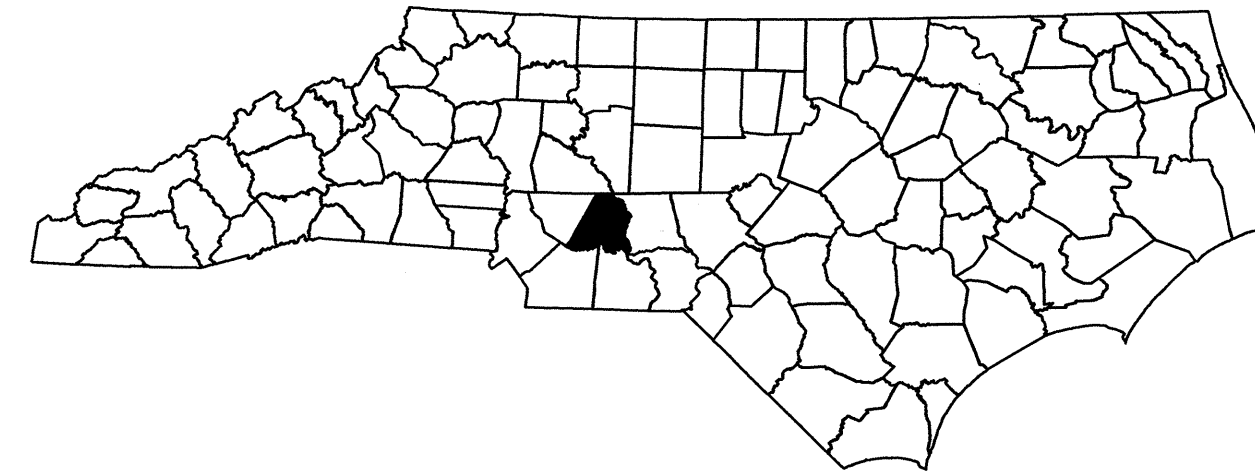


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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

STANLY COUNTY



VICINITY MAP

INDEX OF SHEETS

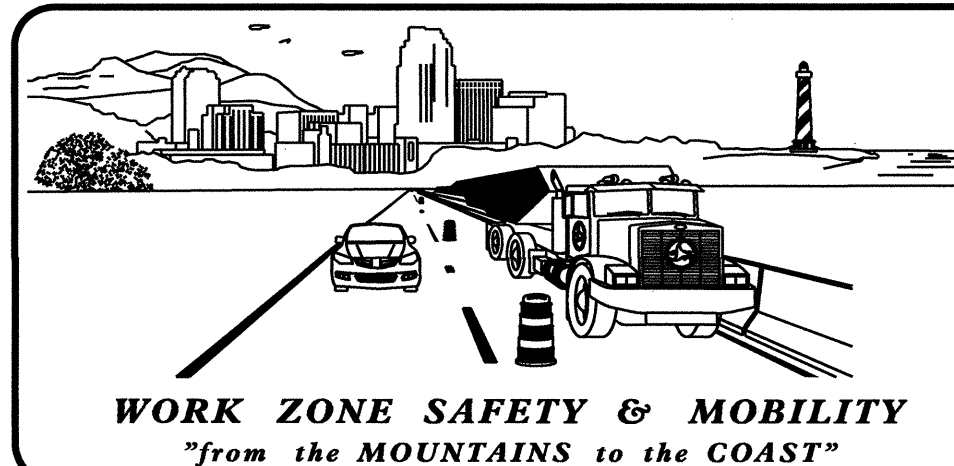
SHEET NO.	TITLE
TMP-1	TITLE SHEET, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, AND TEMPORARY PAVEMENT MARKINGS
TMP-1B	TRANSPORTATION OPERATIONS PLAN: (TRANSPORTATION OPERATIONS AND GENERAL NOTES)
TMP-2	SPECIAL SIGN DESIGN - RIDGE ROAD
TMP-3	TEMPORARY TRAFFIC CONTROL PHASING AND OFF-SITE DETOUR - RIDGE ROAD - SR 1542

SHEET NO.
TMP-1

B-5137

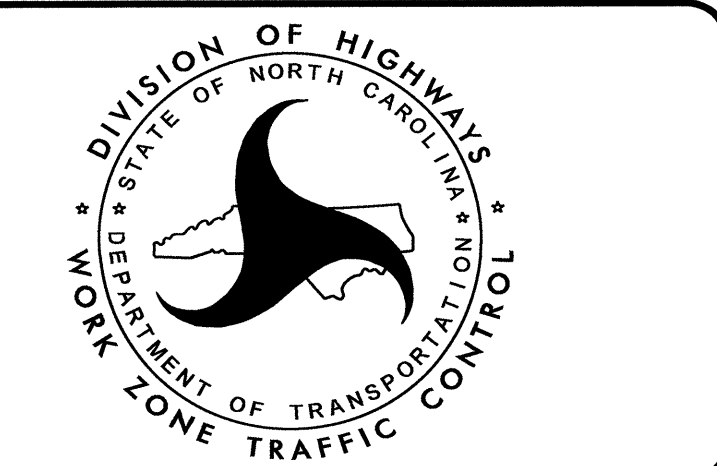
TIP PROJECT:

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

J. S. BOURNE, P.E. STATE TRAFFIC MANAGEMENT ENGINEER
G. L. GETTIER, P.E. TRAFFIC CONTROL PROJECT ENGINEER
J. W. WOOLARD, P.E. TRAFFIC CONTROL PROJECT DESIGN ENGINEER
S. B. COATS TRAFFIC CONTROL DESIGN ENGINEER



APPROVED: _____
DATE: _____

SEAL

ROADWAY STANDARD DRAWINGS

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

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

LEGEND

GENERAL

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

- WORK AREA
- REMOVAL
- USER DEFINED (IF NEEDED)
- USER DEFINED (IF NEEDED)

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM SKINNY DRUM TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW BOARD
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

PAVEMENT MARKERS

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

PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

TEMPORARY PAVEMENT MARKINGS

NONE

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 SCOOT AT 12265846

APPROVED: SEAL	DATE: 10/21/13		ROADWAY STANDARD DRAWINGS & LEGEND
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TRANSPORTATION OPERATIONS

CONSTRUCTION

REMOVE AND REPLACE EXISTING STRUCTURE AND ROADWAY APPROACHES ALONG EXISTING ROADWAY ALIGNMENT AS SHOWN IN THE CONSTRUCTION PLANS.

TMP DESIGN PARAMETERS

TRAFFIC WILL BE DETOURED OFF-SITE DURING THE CONSTRUCTION PERIOD.

THE OFF-SITE DETOUR WILL INCLUDE SR 1537 (LATON RD.), NC 740 (BADIN RD.), SR 1524 (KIRK RD.), AND SR 1545 (MOUNTAIN VIEW CHURCH RD.) (SEE SHEET TMP-3).

GENERAL NOTES

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

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

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

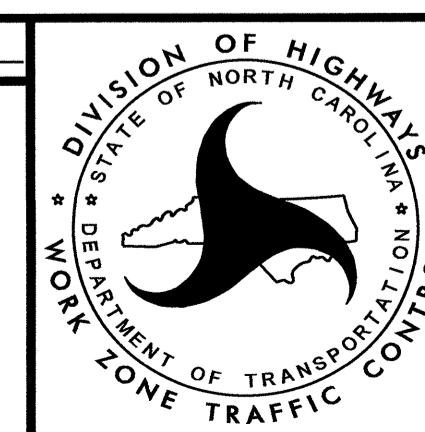
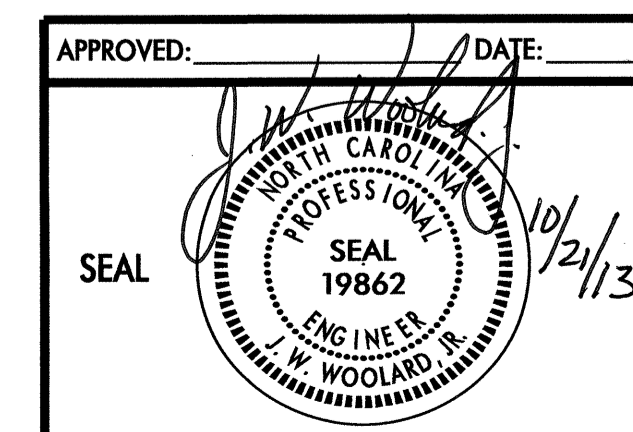
E) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

PAVEMENT MARKINGS AND MARKERS

F) STATE FORCES WILL INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE.

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

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**TRANSPORTATION
OPERATIONS
PLAN**

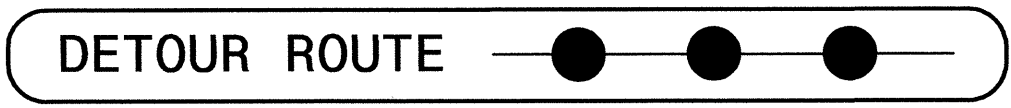
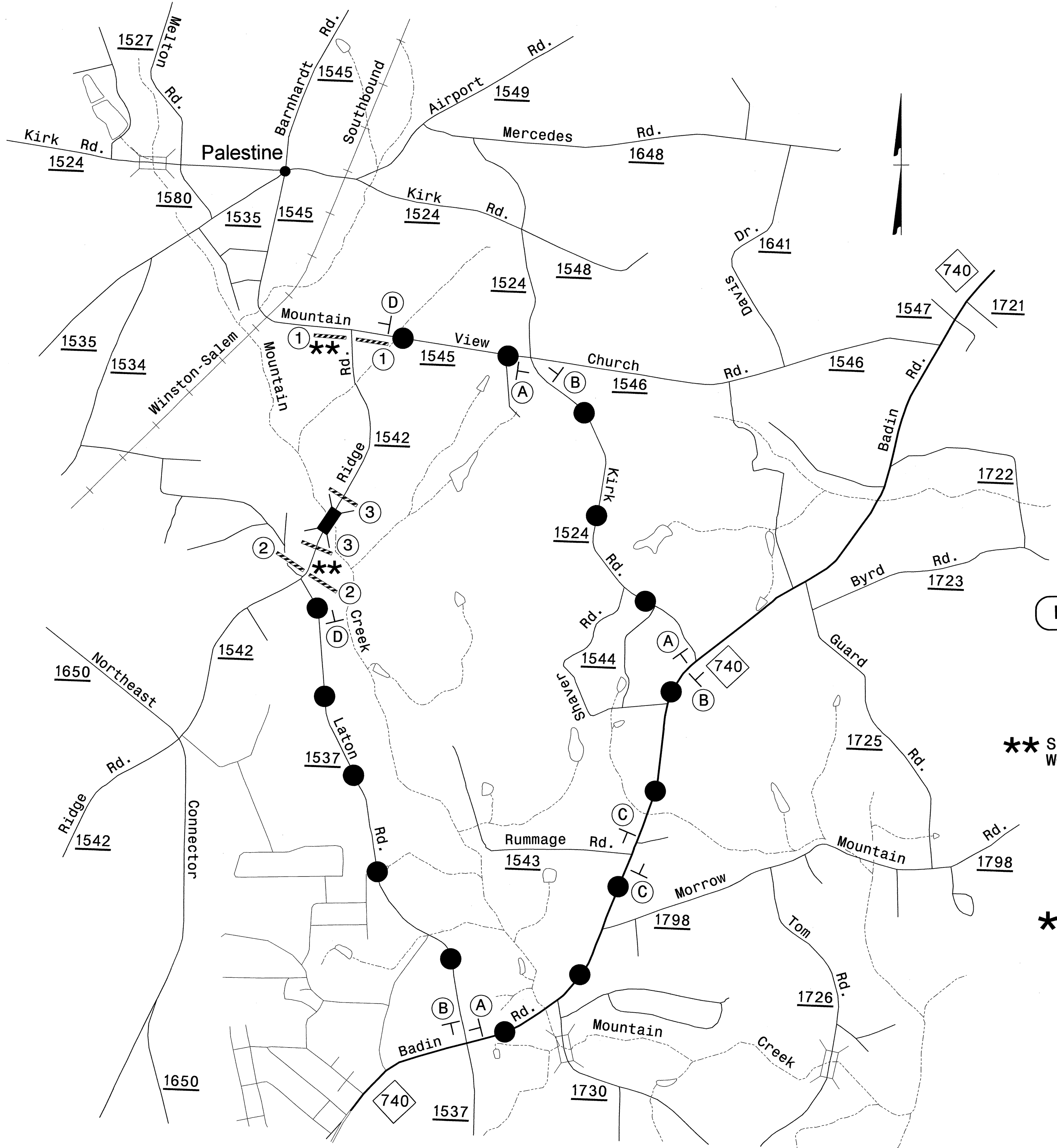
TEMPORARY TRAFFIC CONTROL PHASING

PHASE I

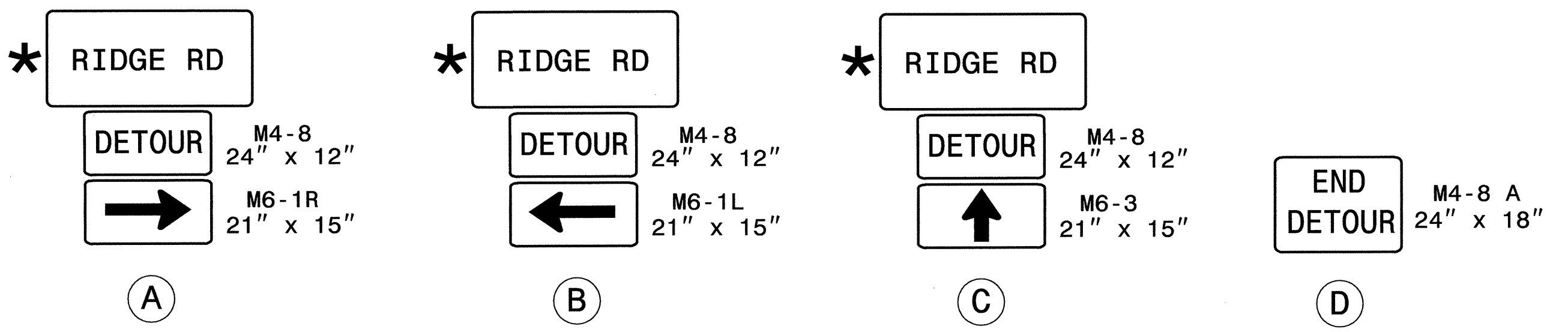
- STEP 1. USING RSD 1101.02 (SHEET 1 OF 15), CONSTRUCT BUS TURN AROUND AS SHOWN IN THE CONSTRUCTION PLANS
- STEP 2. INSTALL ALL OFF-SITE DETOUR SIGNING (SEE TMP-3).
- USING RSD 1101.03 (SHEET 1 OF 9), CLOSE SR 1542 (RIDGE ROAD) FROM STA. 12+00+/- -L- TO STA. 17+00+/- -L-.

PHASE II

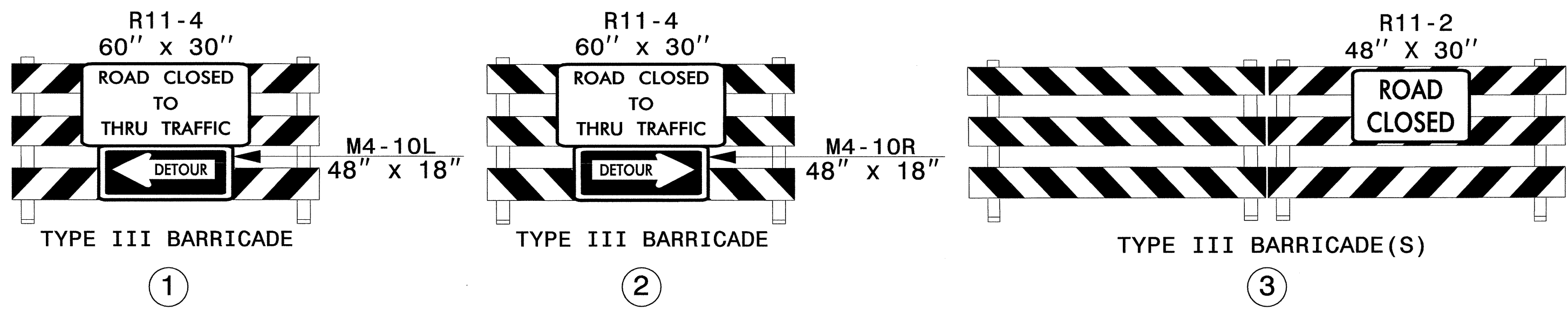
- STEP 1. REMOVE EXISTING BRIDGE. CONSTRUCT NEW BRIDGE AND ROADWAY APPROACHES, DRAINAGE, AND GUARDRAIL, UP TO AND INCLUDING THE FINAL SURFACE COURSE AS FOLLOWS (SEE CONSTRUCTION PLANS):
STA. 12+00+/- -L- TO STA. 17+00+/- -L-
- STEP 2. AFTER STATE FORCES HAVE PLACED THE FINAL PAVEMENT MARKINGS AND MARKERS, REMOVE ALL TYPE III BARRICADES AND DETOUR SIGNING. REOPEN SR 1542 (RIDGE ROAD) TO A 2-LANE, 2-WAY TRAFFIC PATTERN.

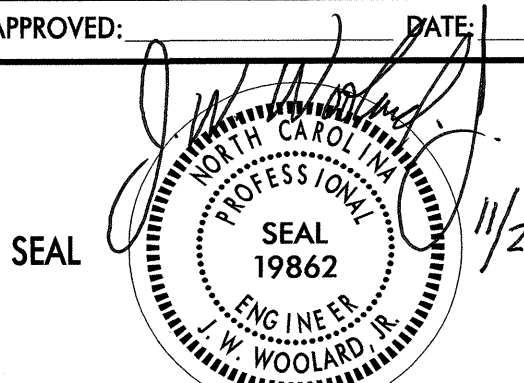
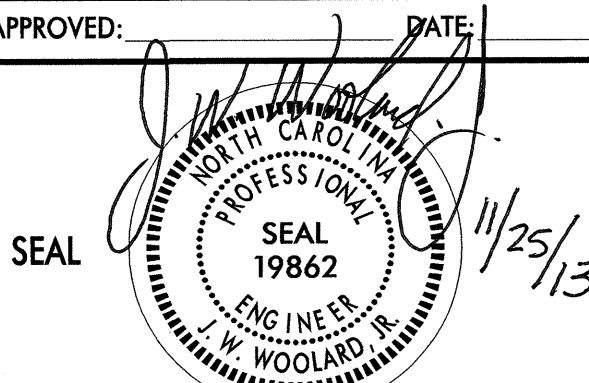
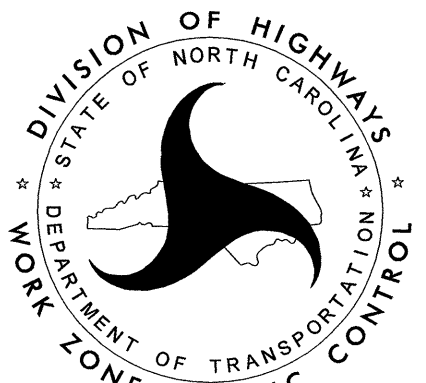


** SEE RSD 1101.03, SHEET 1 OF 9, FOR ADDITIONAL WORK ZONE SIGNS AND LOCATIONS



* SEE SHEET TMP-2 FOR SIGN DESIGN



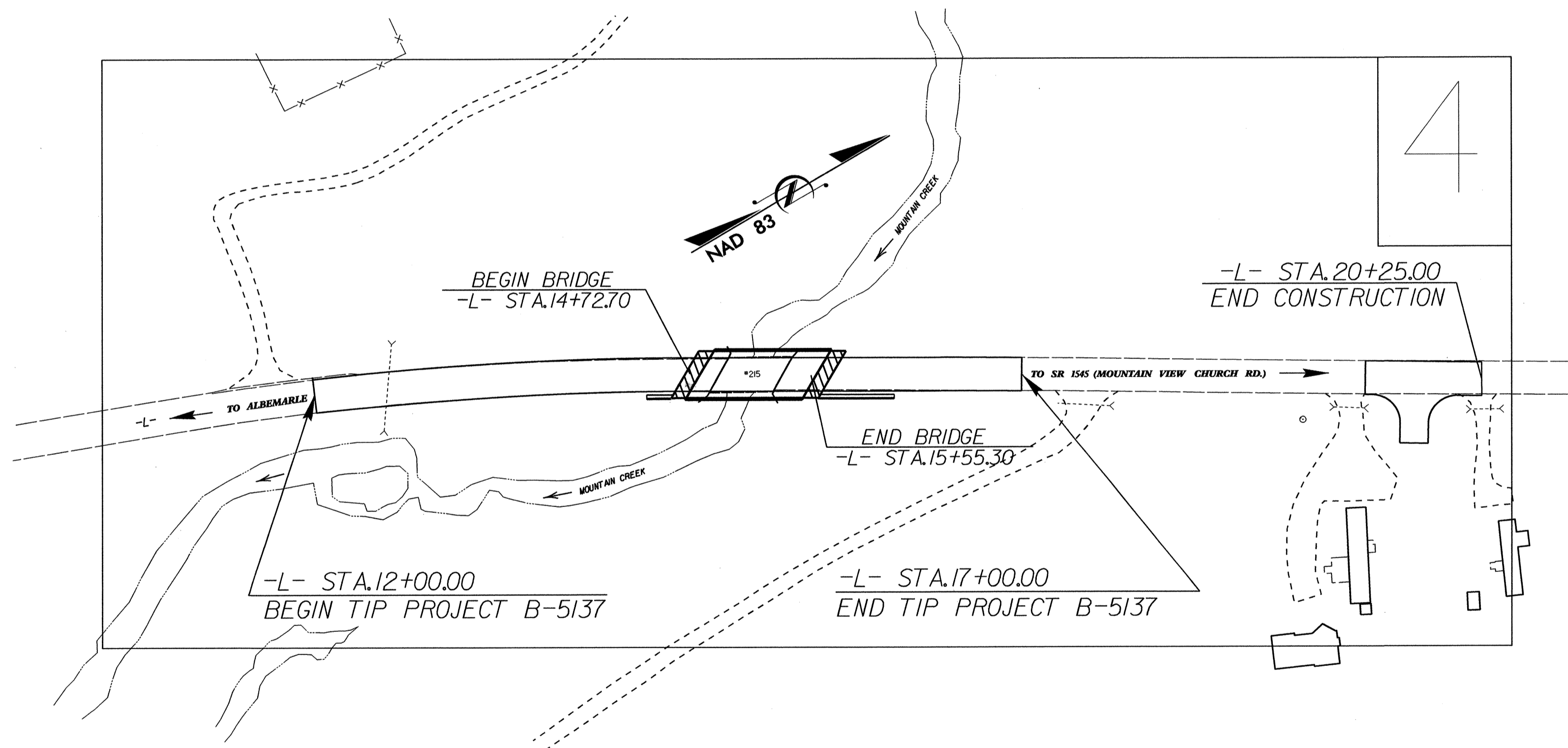
APPROVED: 	DATE: 11/25/13			TEMPORARY TRAFFIC CONTROL PHASING AND OFF-SITE DETOUR RIDGE ROAD SR 1542
SEAL				

TIP PROJECT: B-5137

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

**LOCATION: REPLACE BRIDGE NO. 215 OVER LITTLE MOUNTAIN CREEK
 ON SR 1542 (RIDGE RD.)**

TYPE OF WORK: GRADING, PAVING, DRAINAGE & STRUCTURE



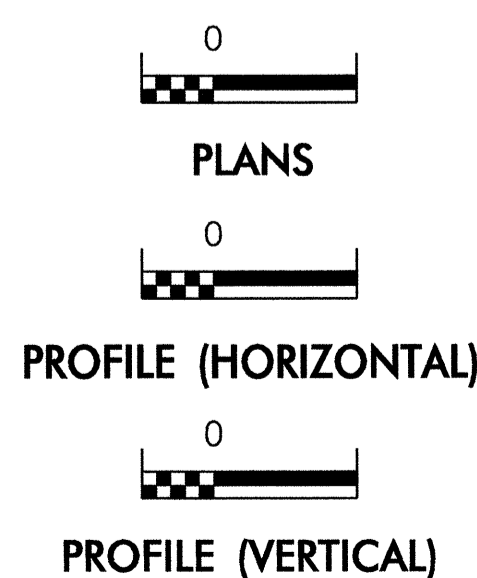
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5137	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TSO
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	TSF
1606.01	Special Sediment Control Fence	SSCF
1622.01	Temporary Berms and Slope Drains	TBSD
1630.02	Silt Basin Type B	SB
1633.01	Temporary Rock Silt Check Type-A	TRSCA
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	TRSCA-PAM
1633.02	Temporary Rock Silt Check Type-B	TRSCB
	Wattle/Coir Fiber Wattle	WCFW
	Wattle/Coir Fiber Wattle with Polyacrylamide (PAM)	WCFW-PAM
1634.01	Temporary Rock Sediment Dam Type-A	TRSDA
1634.02	Temporary Rock Sediment Dam Type-B	TRSDB
1635.01	Rock Pipe Inlet Sediment Trap Type-A	RPISTRA
1635.02	Rock Pipe Inlet Sediment Trap Type-B	RPISTRB
1630.04	Stilling Basin	SB
1630.06	Special Stilling Basin	SSB
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	SKB
	Tiered Skimmer Basin	TSKB
	Infiltration Basin	IB

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

GRAPHIC SCALE



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

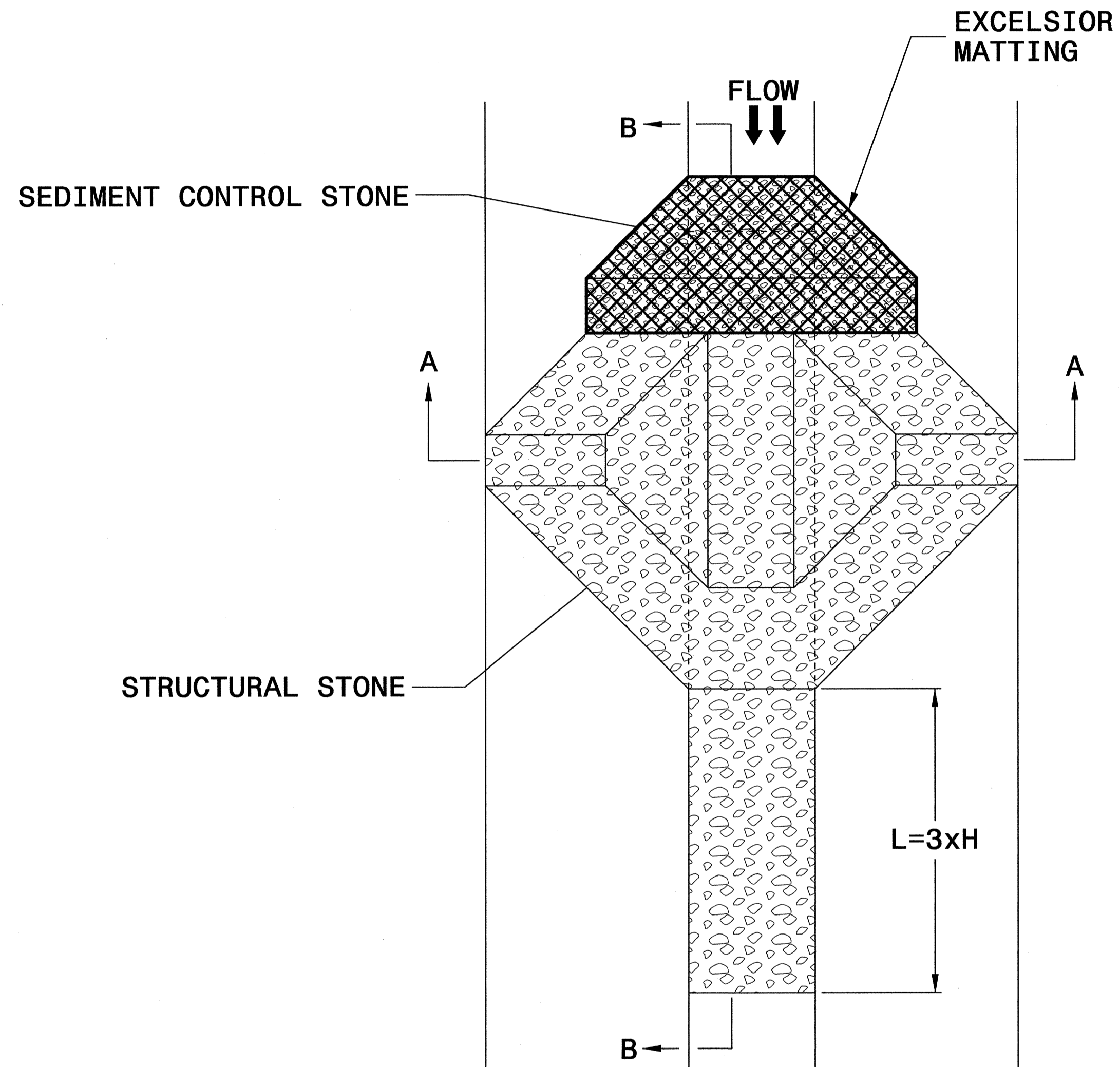
Roadway Standard Drawings

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	

PROJECT REFERENCE NO. B-5137	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



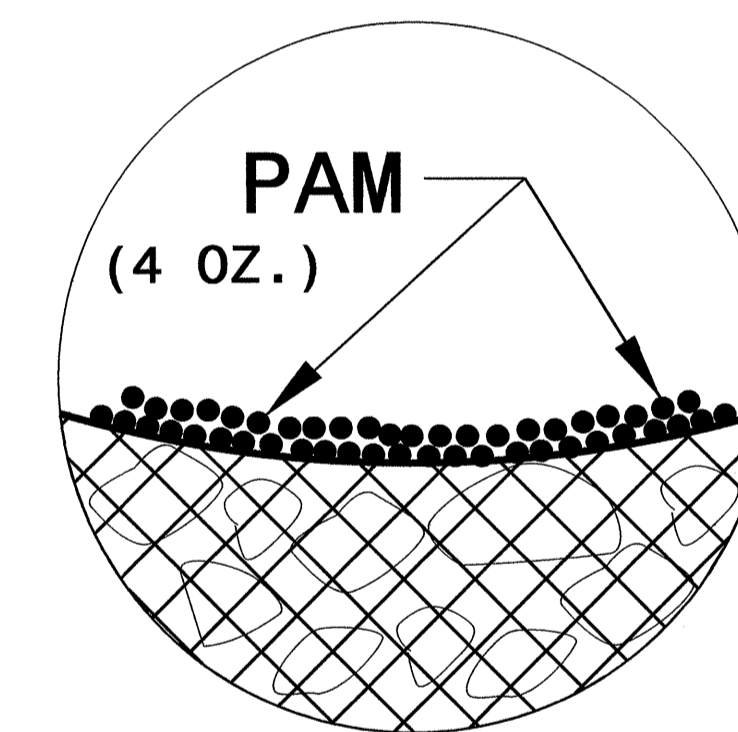
PLAN

NOTES

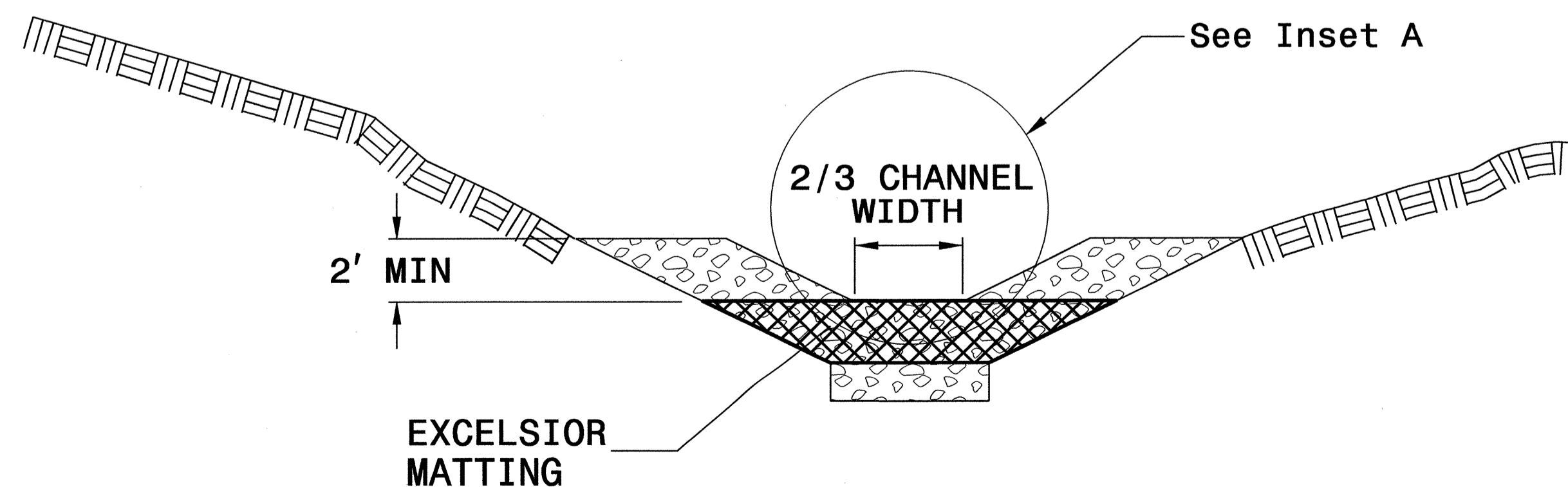
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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

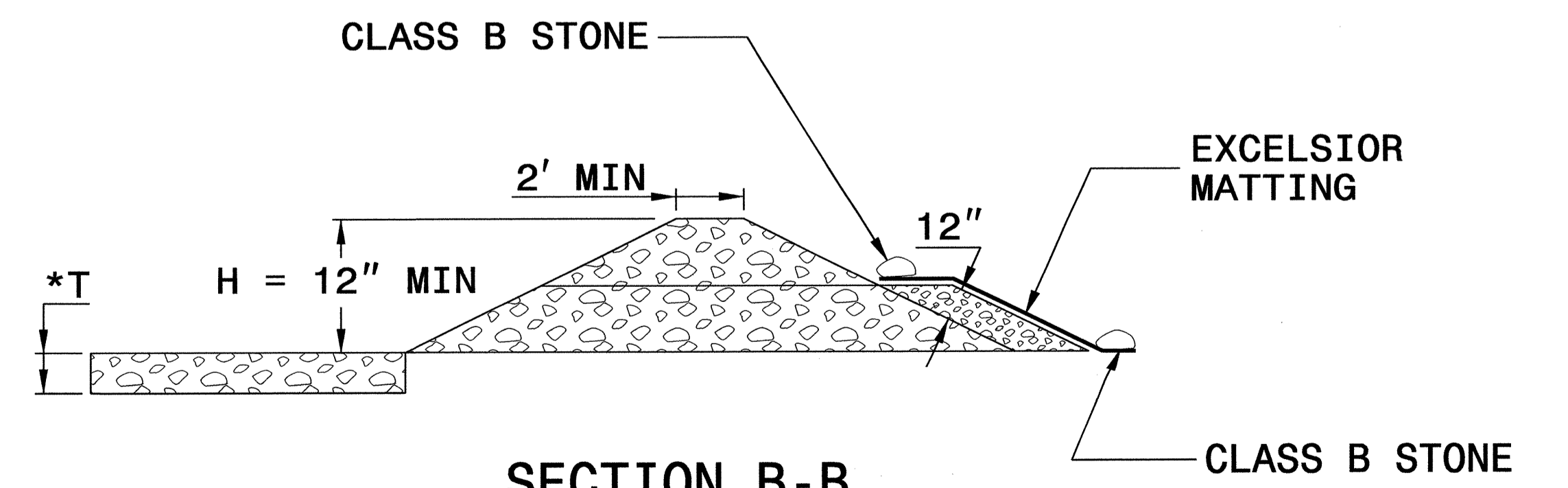
INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION A-A



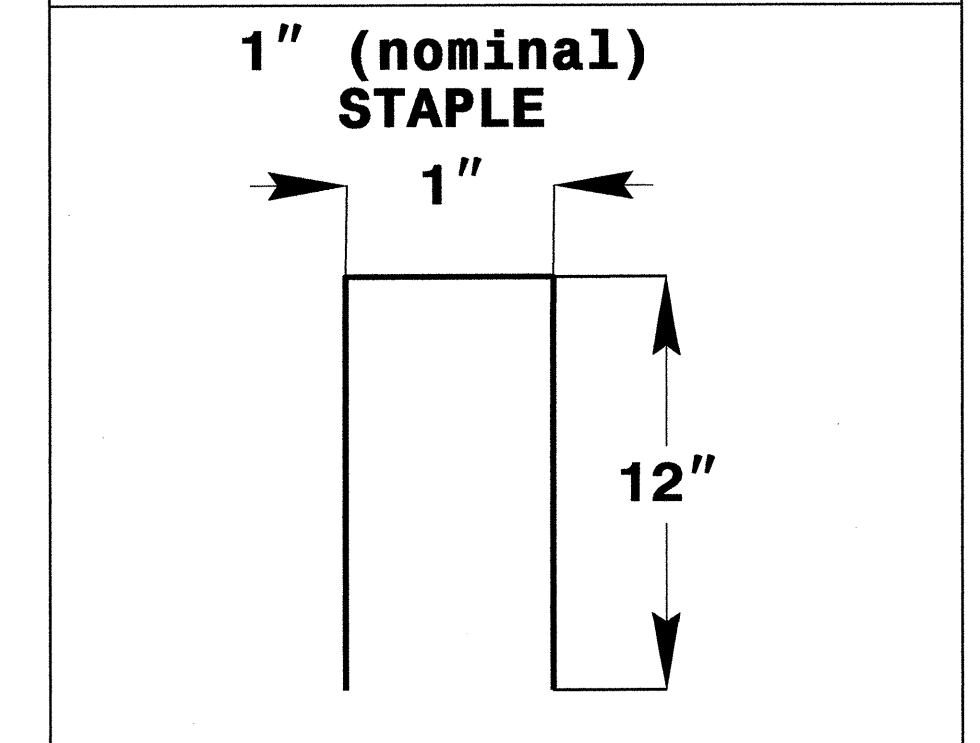
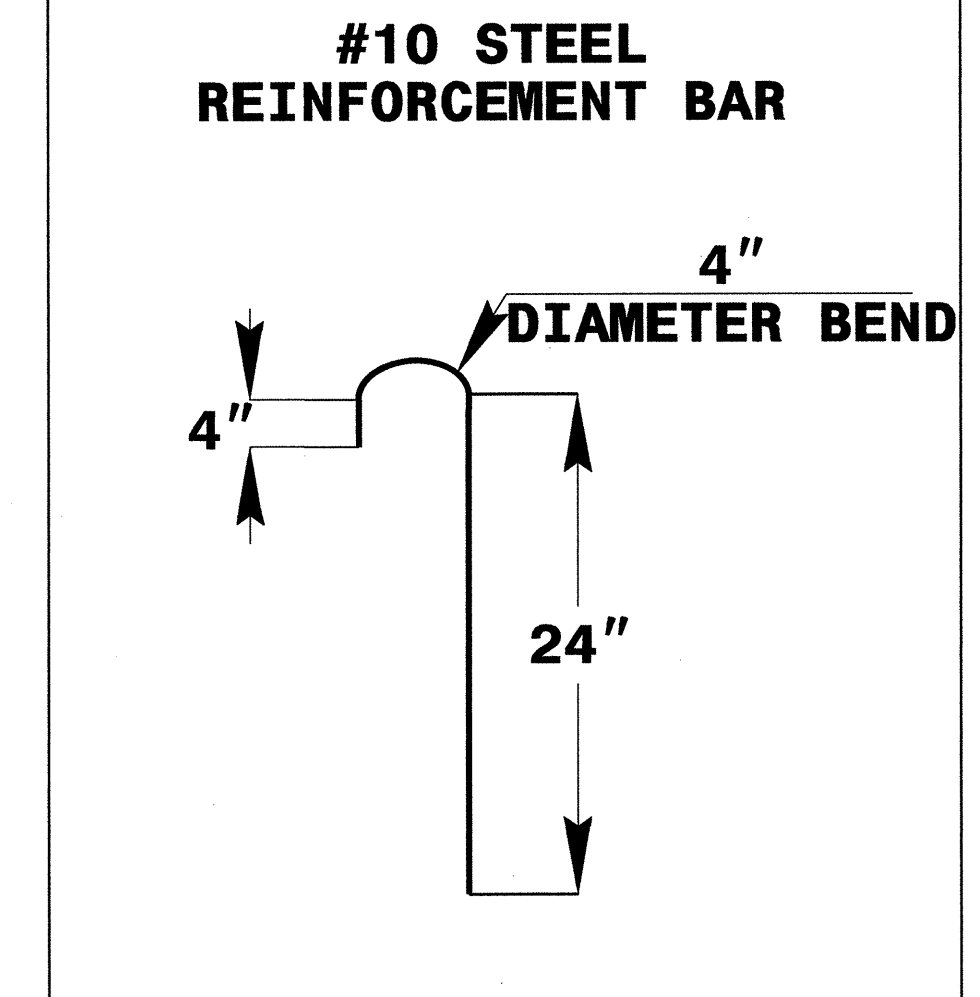
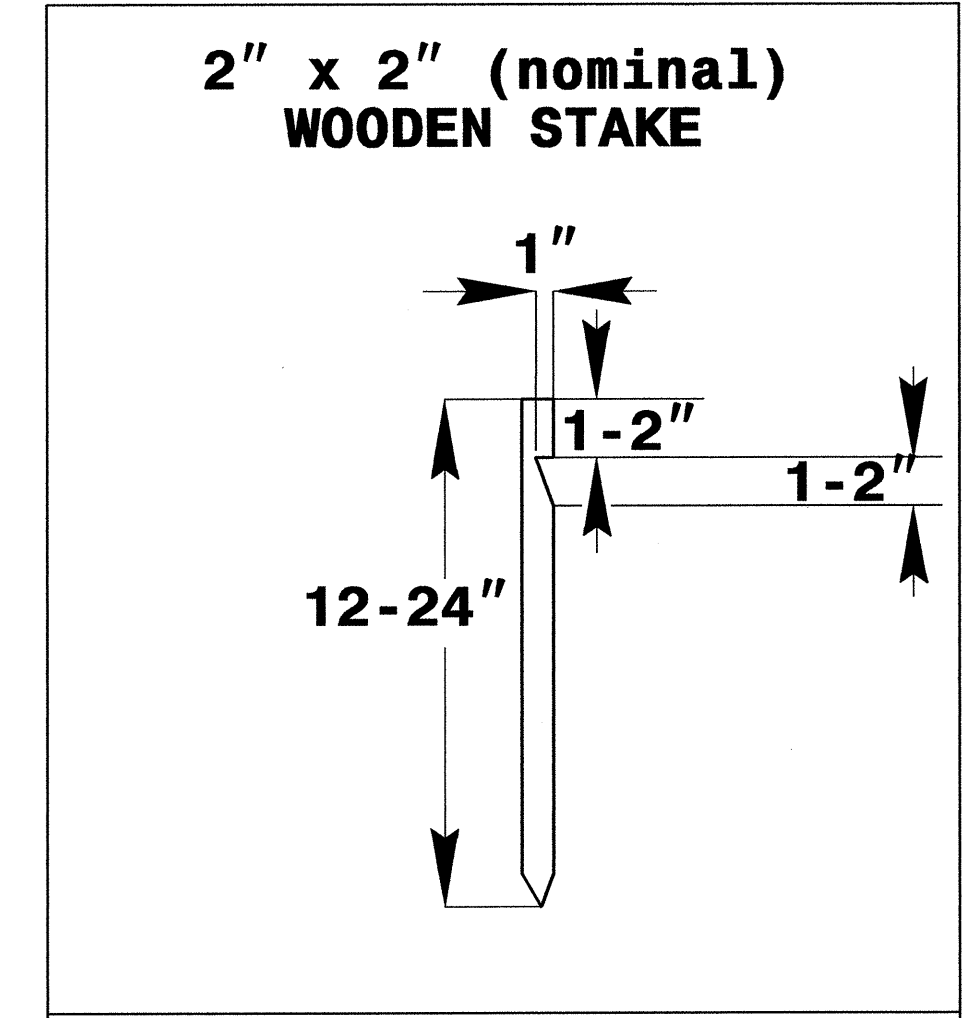
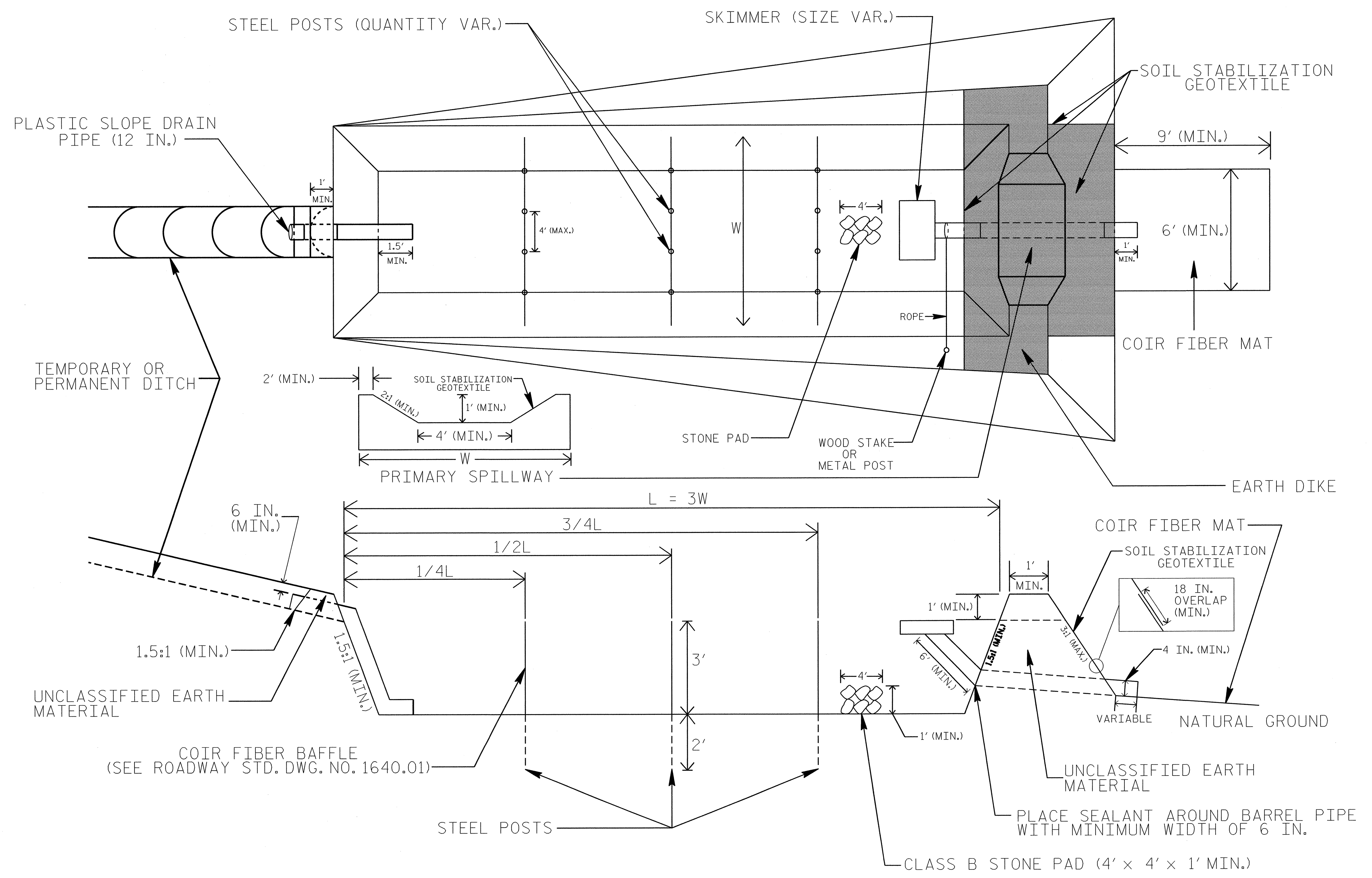
SECTION B-B

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

NOT TO SCALE

PROJECT REFERENCE NO. B-5137	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SKIMMER BASIN WITH BAFFLES DETAIL



COIR FIBER MAT ANCHOR OPTIONS

NOTES

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

NOT TO SCALE

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. <i>B-5137</i>	SHEET NO. <i>EC-3</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.

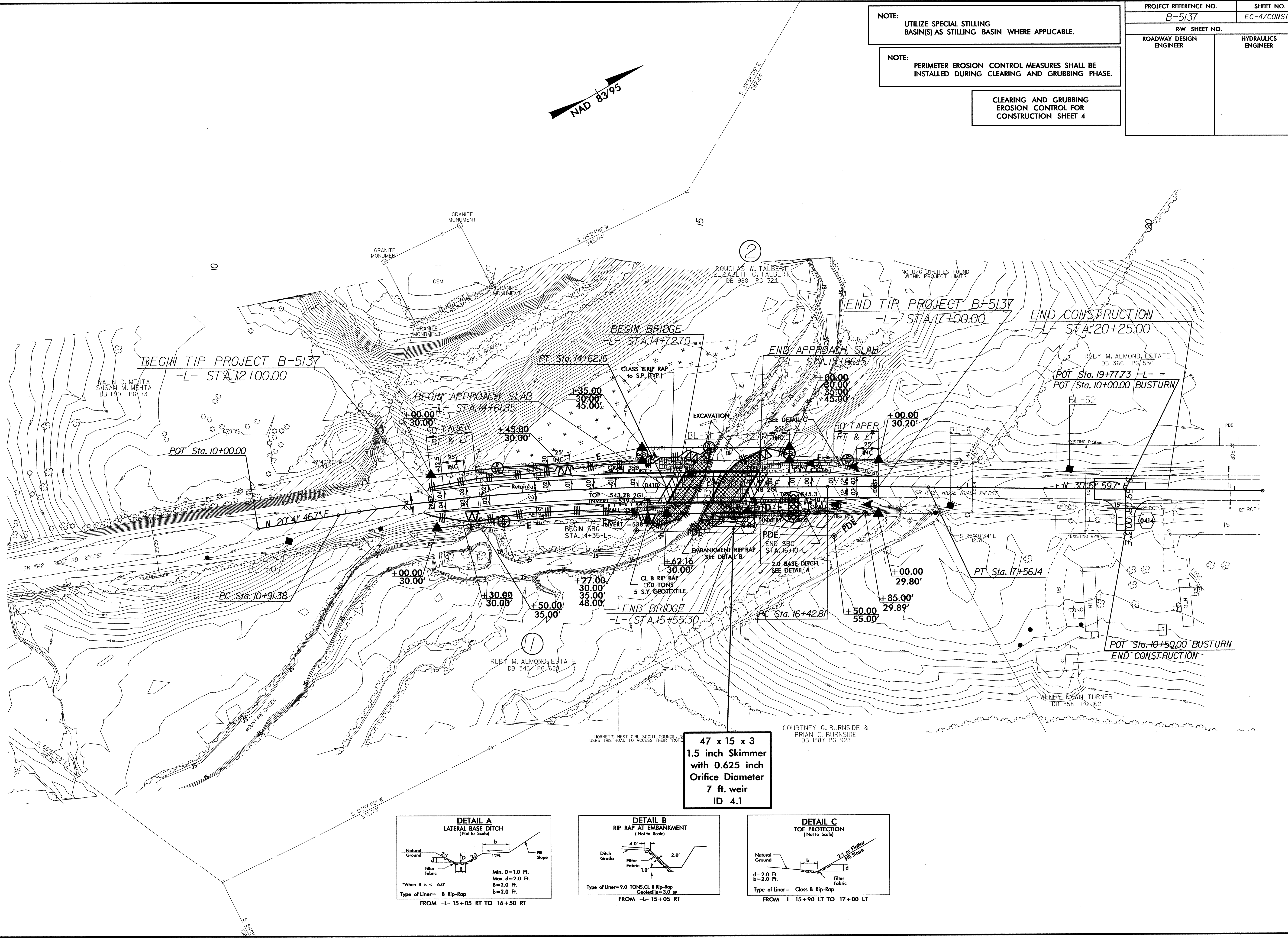
8/17/99

PROJECT REFERENCE NO.	SHEET NO.
B-5137	EC-4/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

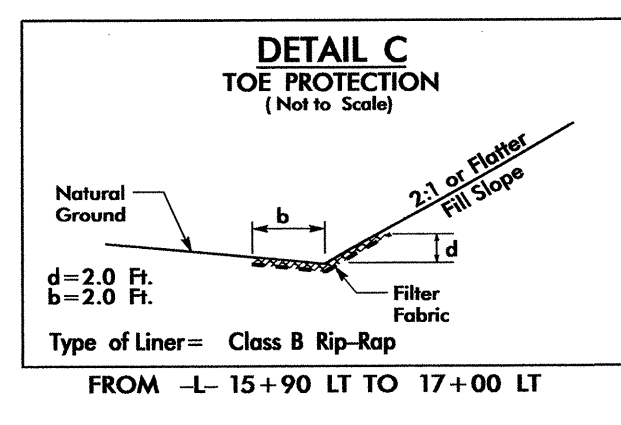
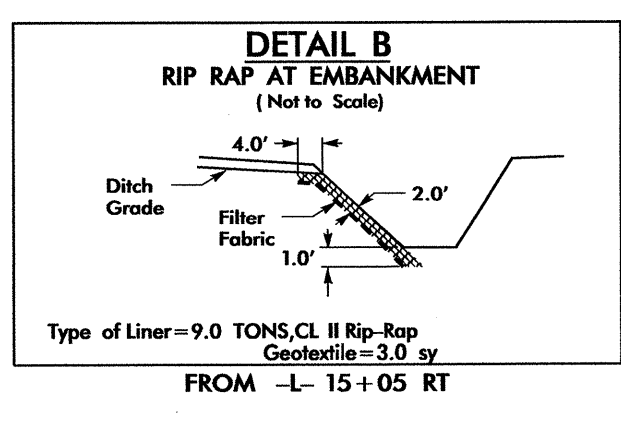
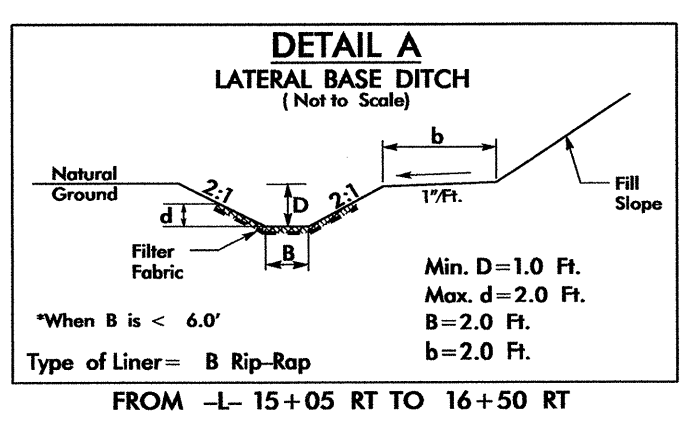
NOTE: UTILIZE SPECIAL STILLING BASIN(S) AS STILLING BASIN WHERE APPLICABLE.

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4



47 x 15 x 3
1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
7 ft. weir
ID 4.1

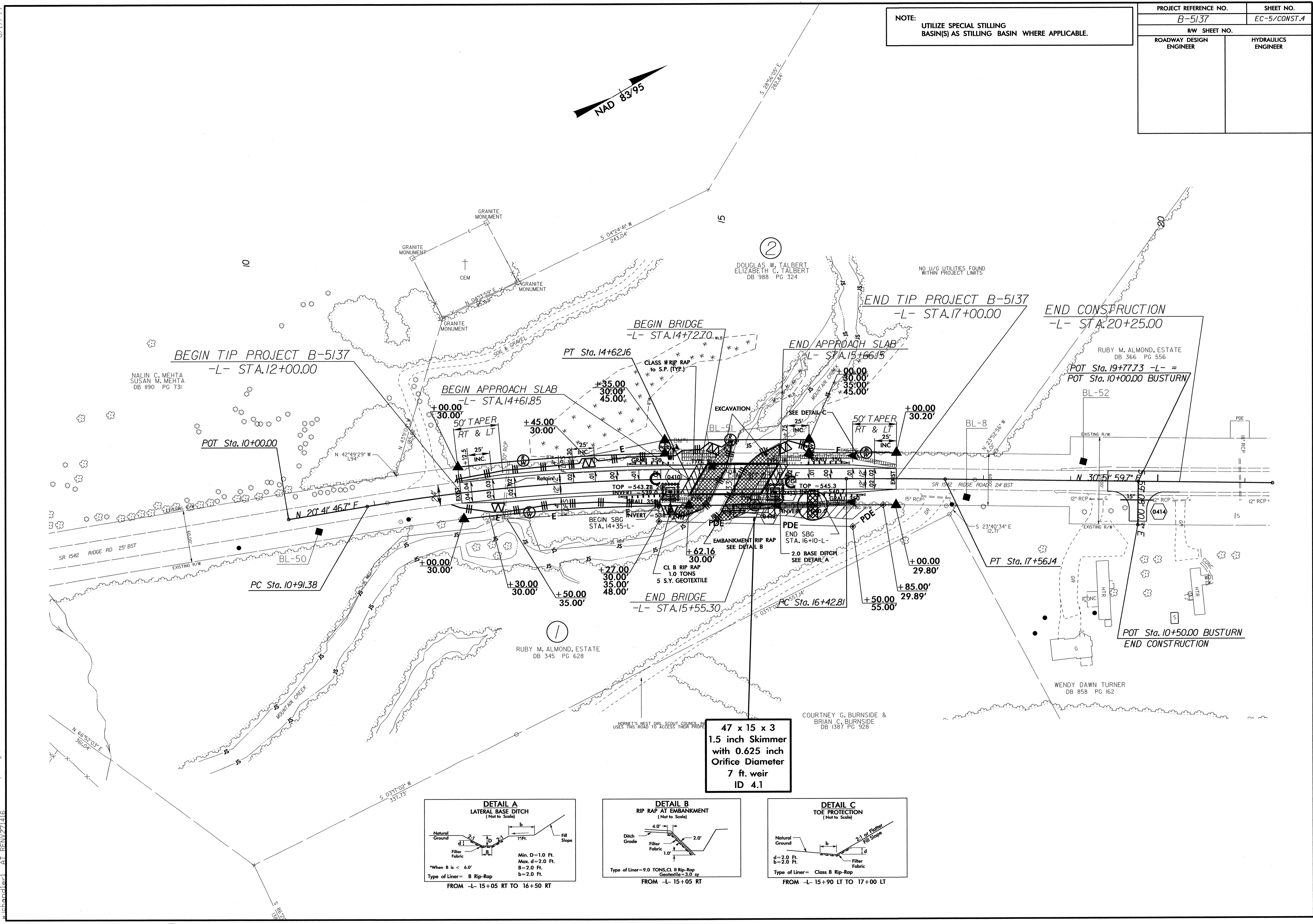


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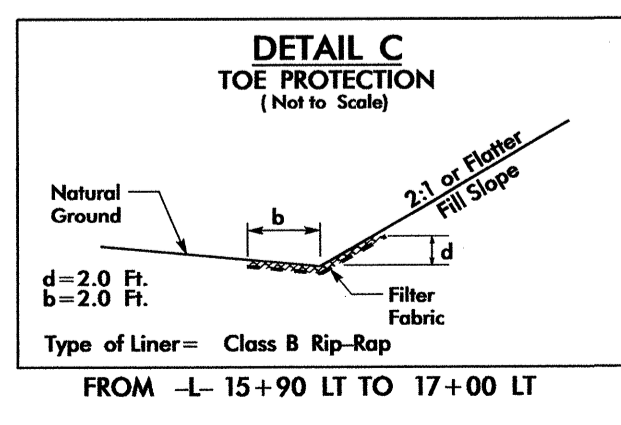
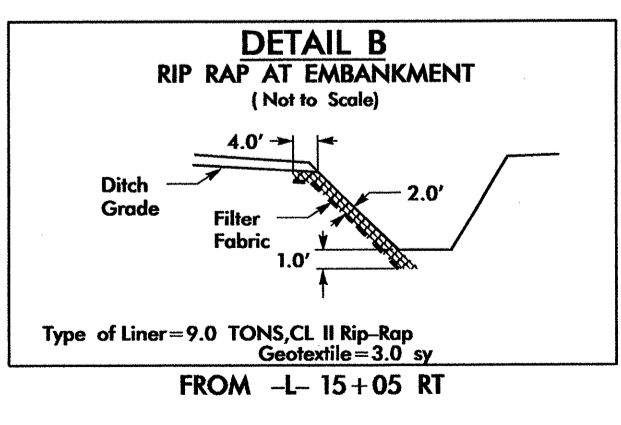
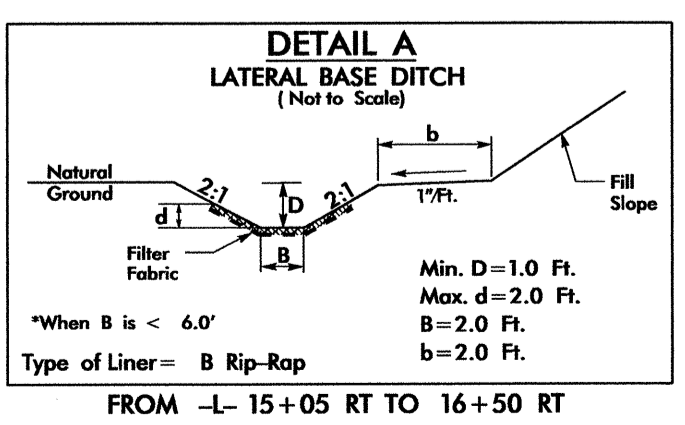
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PROJECT REFERENCE NO.	SHEET NO.
B-5137	EC-5/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE:
UTILIZE SPECIAL STILLING
BASIN(S) AS STILLING BASIN WHERE APPLICABLE.

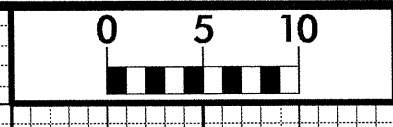


47 x 15 x 3
1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
7 ft. weir
ID 4.1

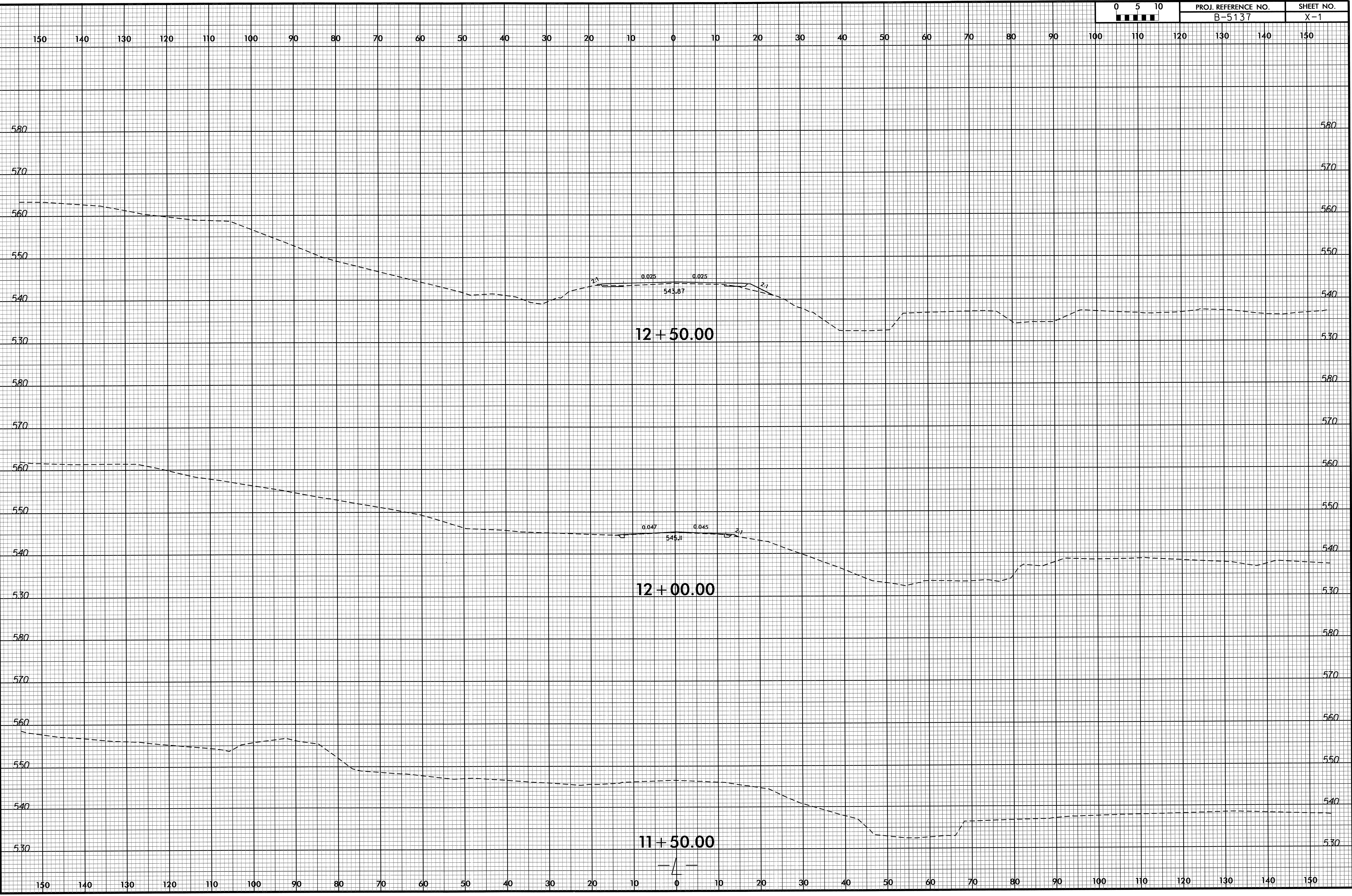


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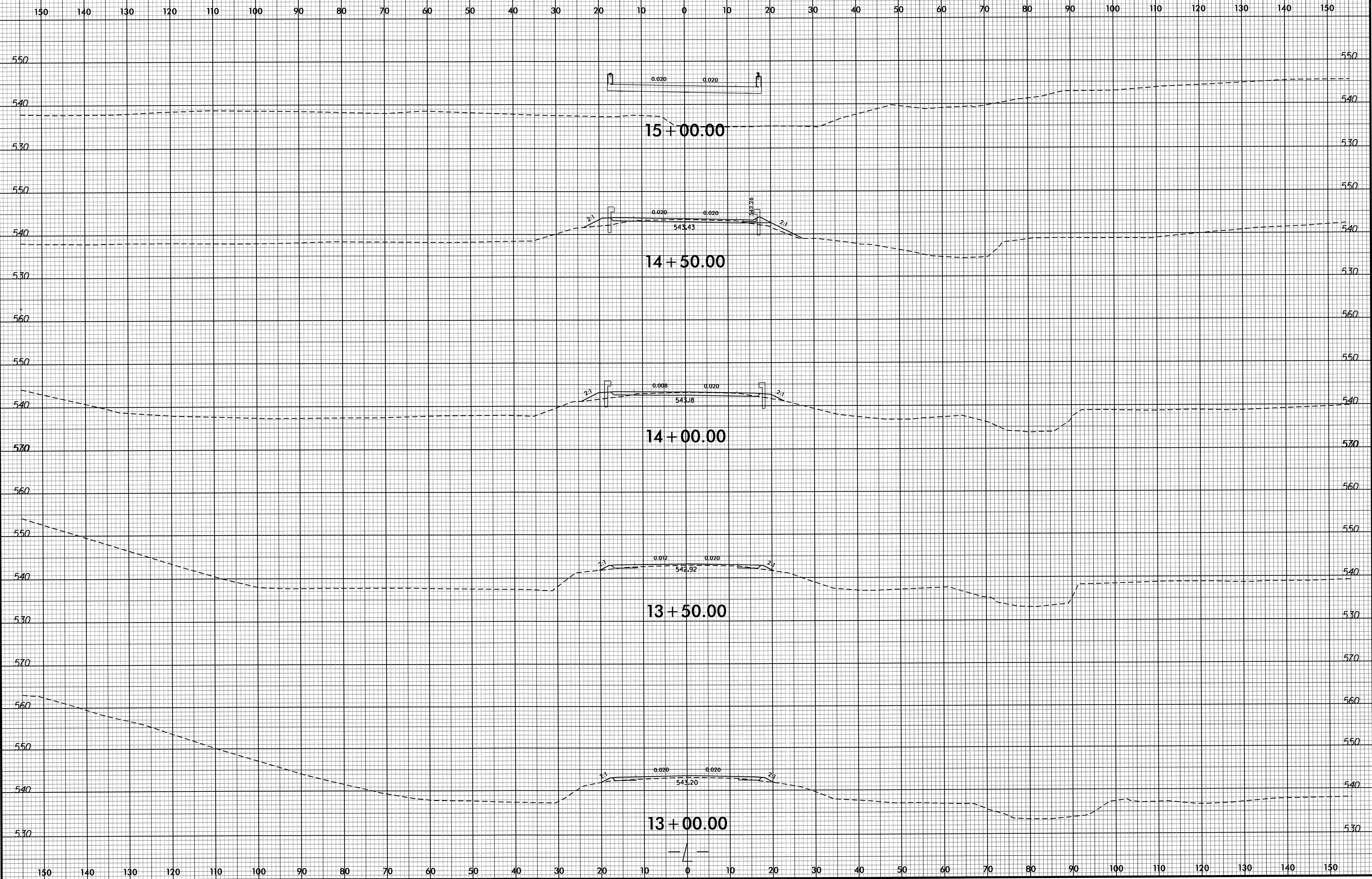
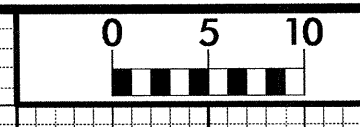
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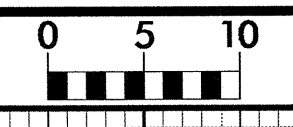
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B-5137	X-1



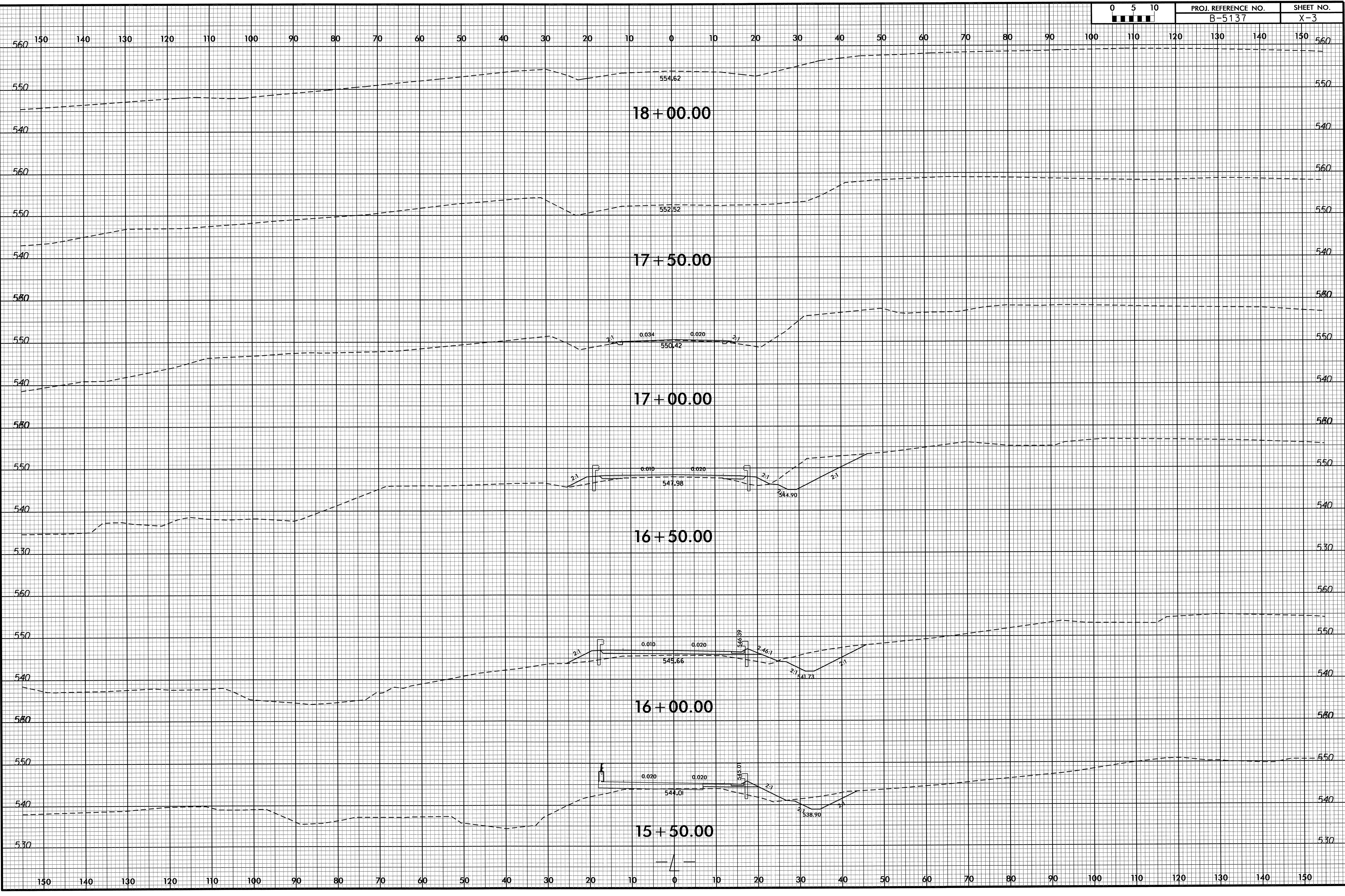
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8/23/99



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B-5137	X-3



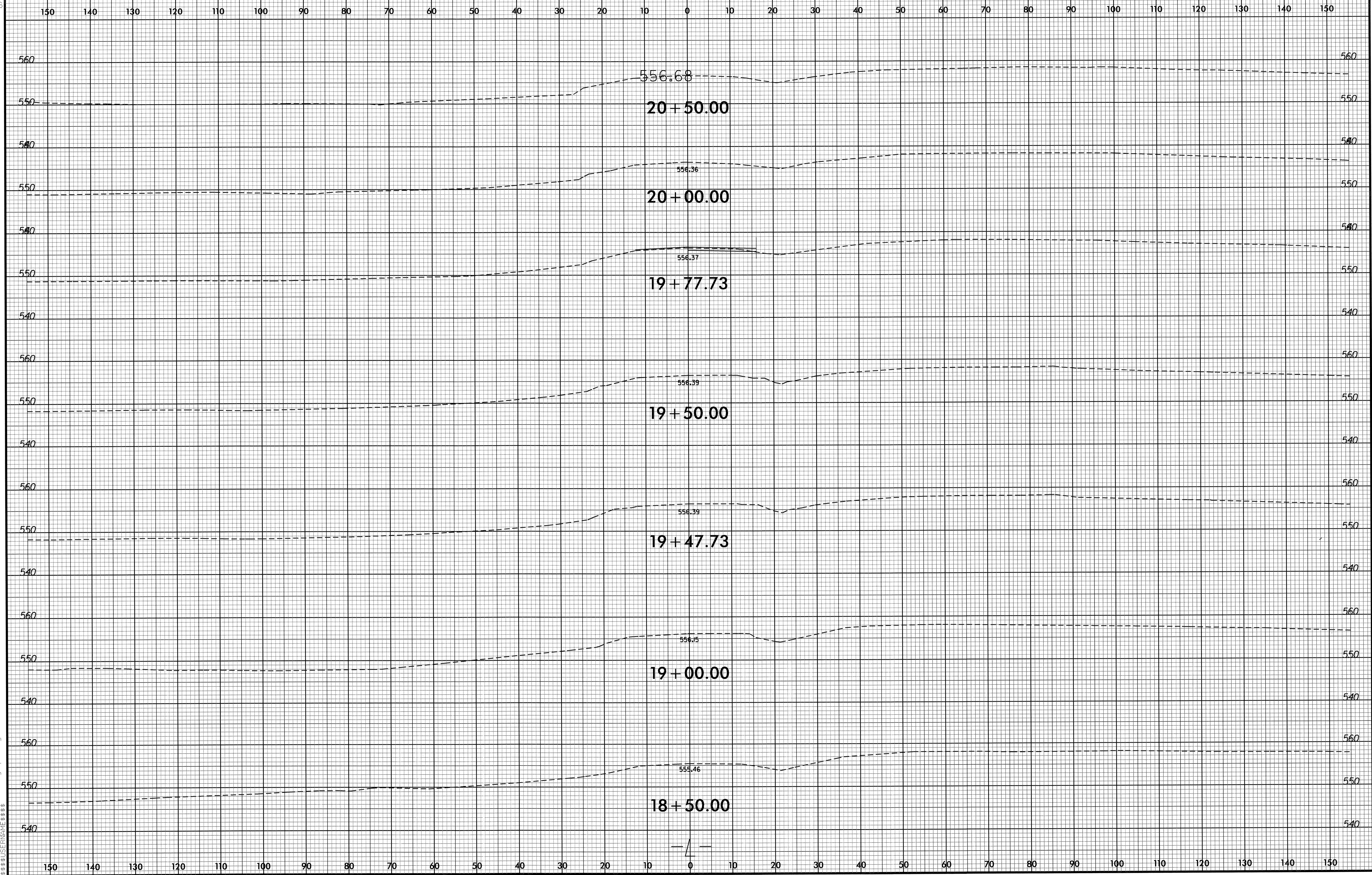
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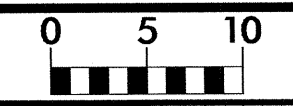
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B-5137

SHEET NO.
X-4



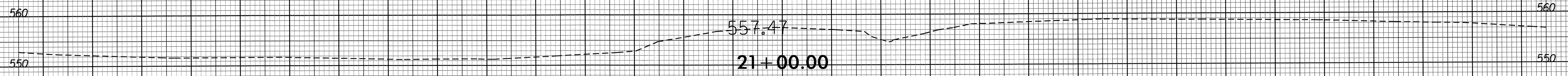
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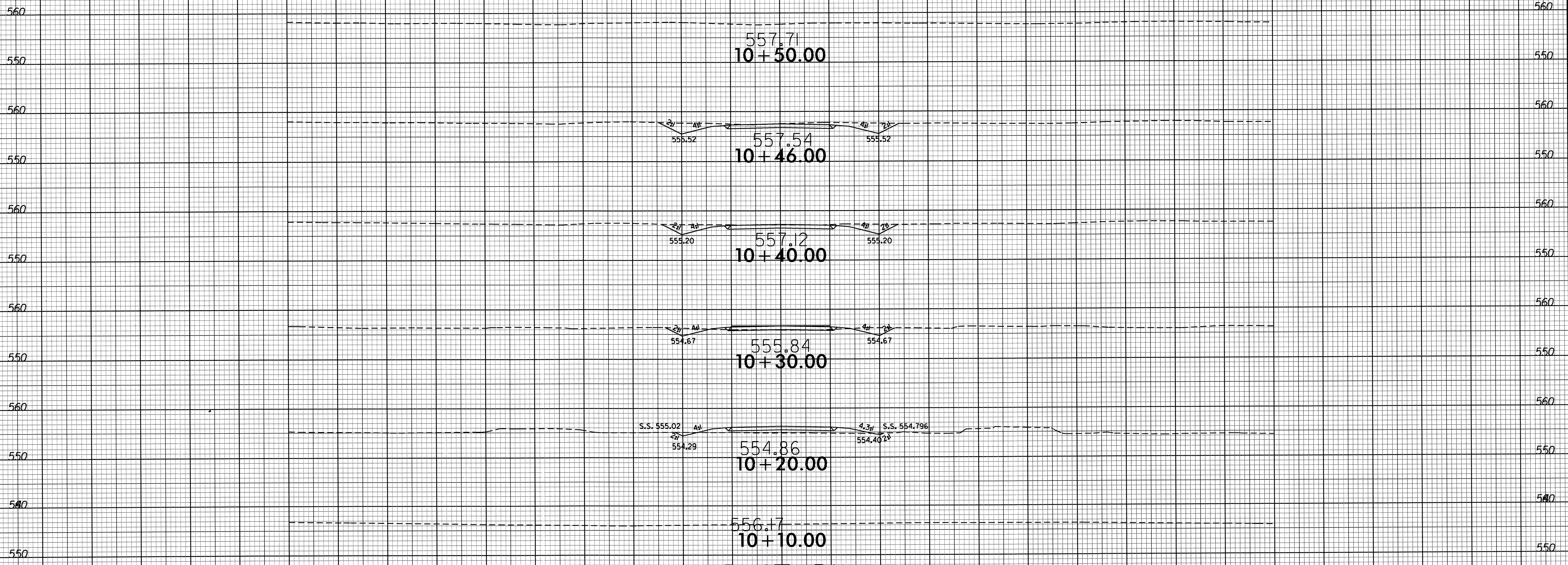
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B-5137

SHEET NO.
X-6

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-BUSTURN-

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