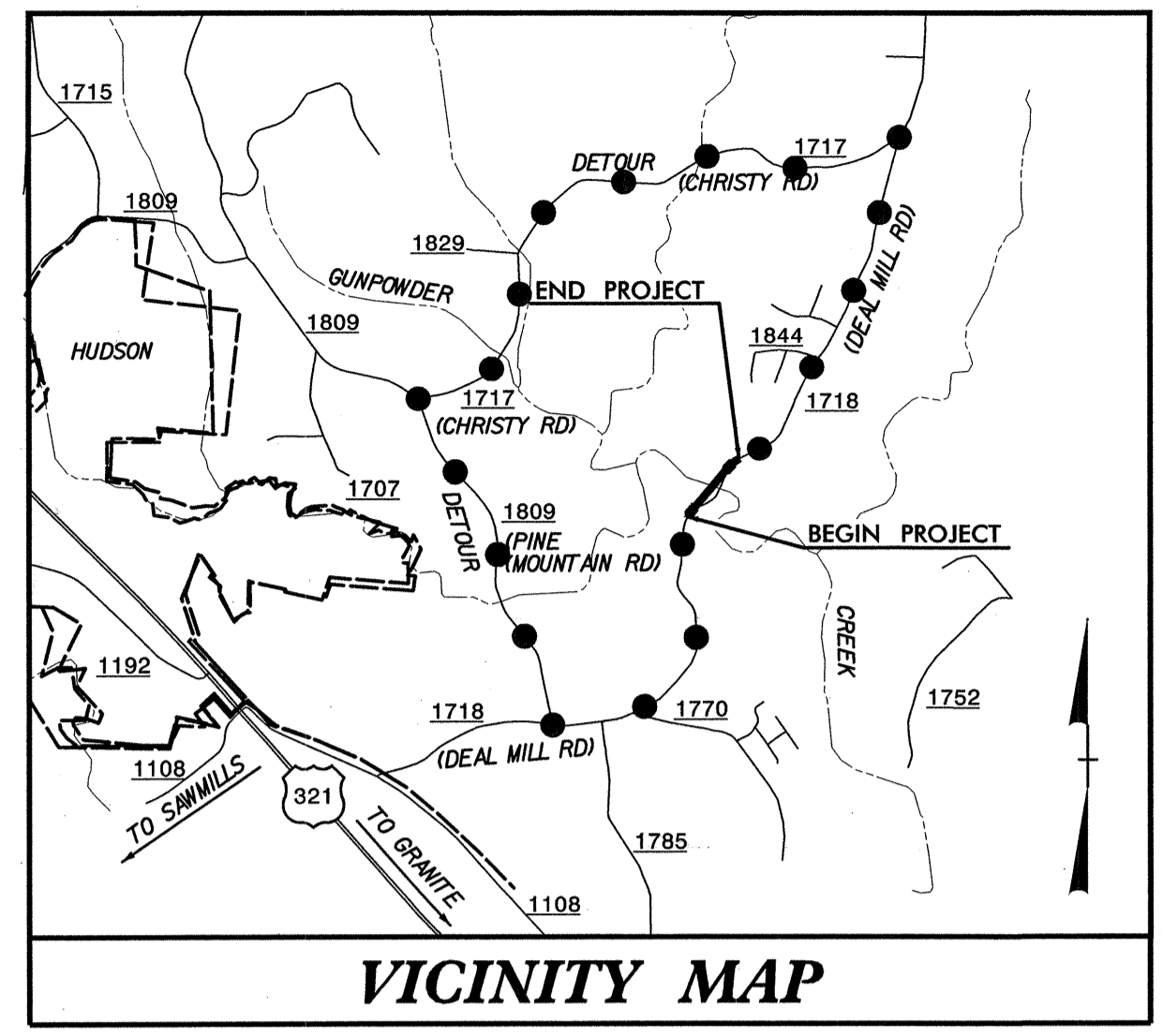


CONTRACT: C 201468 TIP PROJECT: B-3126

See Sheet I-A For Index of Sheets
See Sheet I-B For Symbology

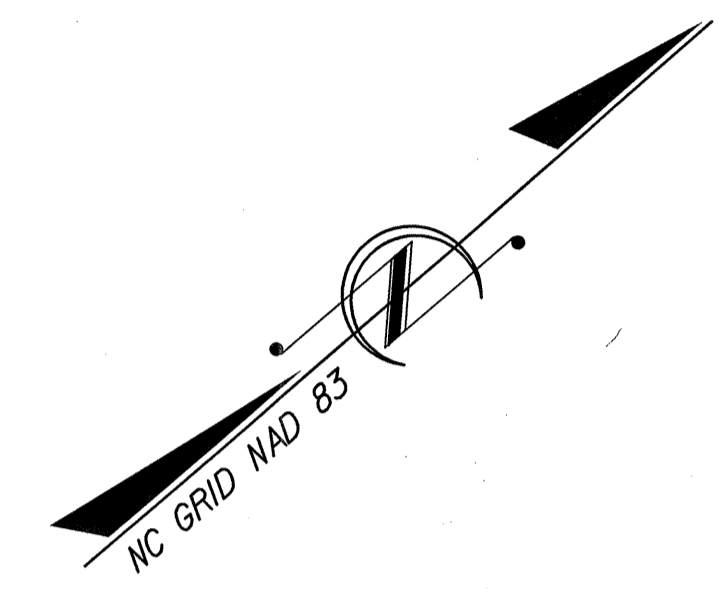
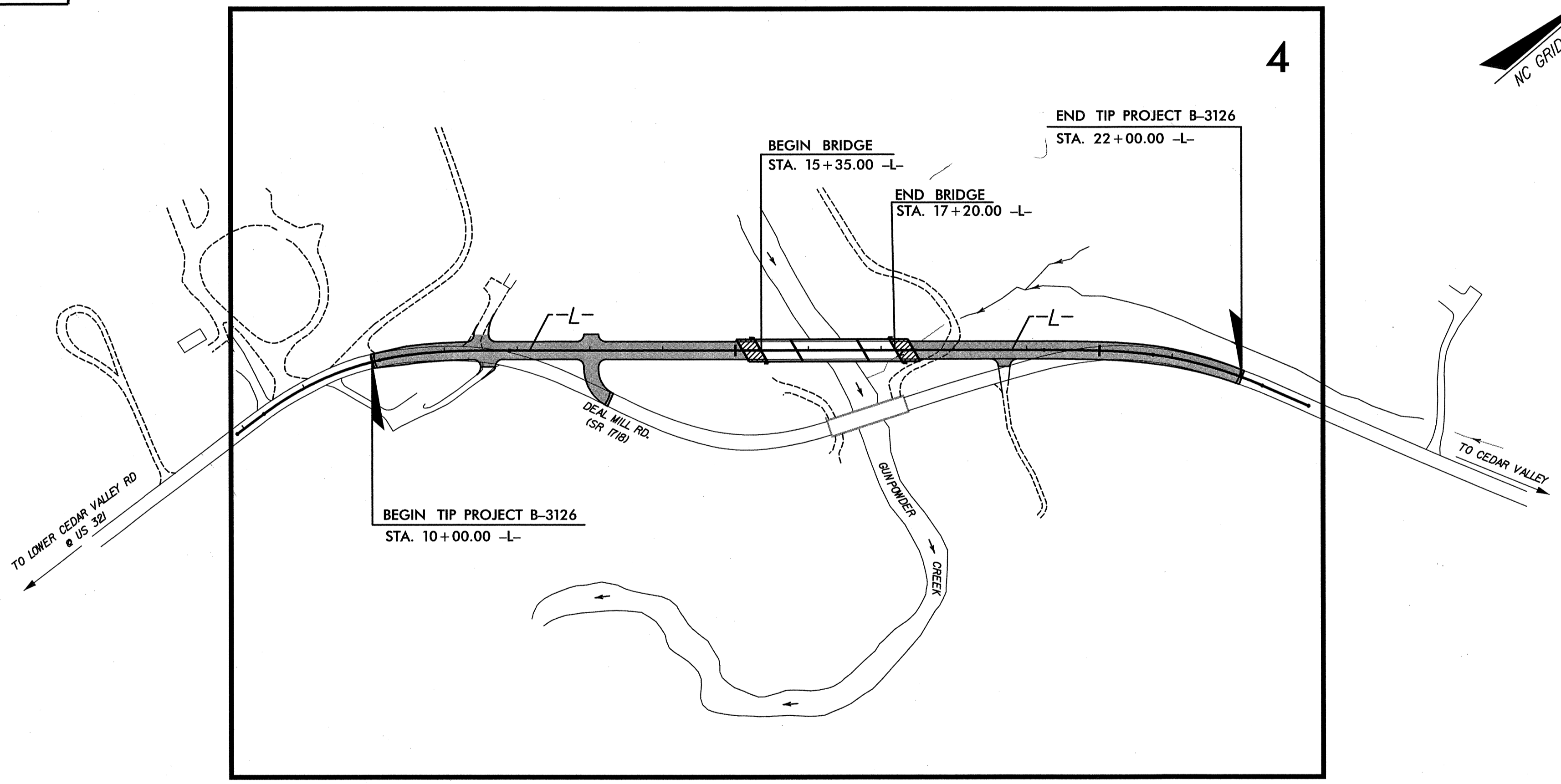


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
CALDWELL COUNTY

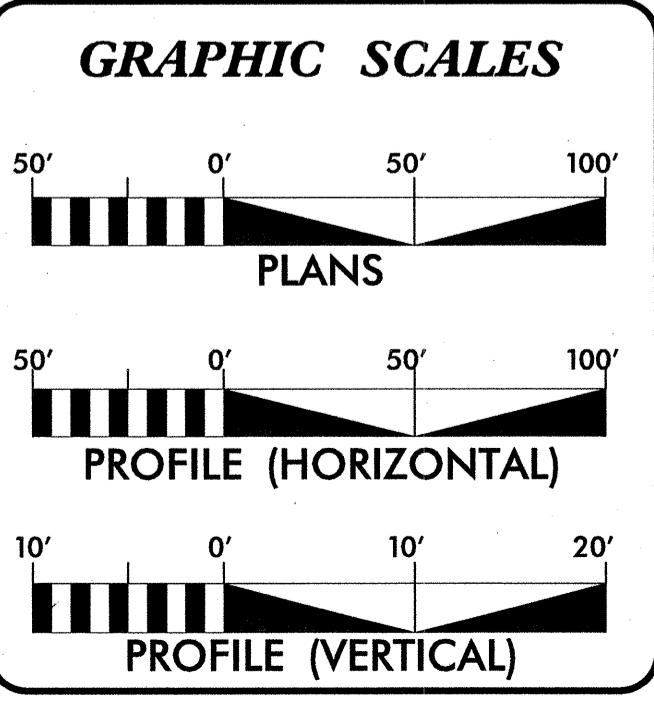
LOCATION: BRIDGE #90 OVER GUNPOWDER CREEK ON SR 1718

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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-3126	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
32880.1.1	BRZ-1718(3)	PE	
32880.2.2	BRZ-1718(3)	RW & UTIL.	
32880.3.1	BRZ-1718(6)	CONSTR.	



* DESIGN EXCEPTION FOR HORIZONTAL AND VERTICAL ALIGNMENT, AND HORIZONTAL AND VERTICAL STOPPING SIGHT DISTANCE REQUIRED.



DESIGN DATA

ADT = 2,800 (2007)
ADT = 4,350 (2027)
DHV = 10 %
D = 65 %
T = 4 % (1%TTST + 3%DUAL)
V = 60 MPH *

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT B-3126	=	0.192 MI.
LENGTH OF STRUCTURE TIP PROJECT B-3126	=	0.035 MI.
TOTAL LENGTH OF TIP PROJECT B-3126	=	0.227 MI.

Prepared In the Office of:

Stantec Consulting Inc.
801 Jones Franklin Road, Suite 300
Raleigh, NC U.S.A. 27606
Tel. 919.851.6866 Fax. 919.851.7024
www.stantec.com

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
MARCH 21, 2005

LETTING DATE:
JULY 17, 2007

NCDOT-CONTACT: CATHY S. HOUSER P.E.
PROJECT ENGINEER - ROADWAY DESIGN

G. SCOTT BOYLES, P.E.
PROJECT ENGINEER

KEITH HUDSON
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

James C. Davis
SIGNATURE: 4-18-07

ROADWAY DESIGN ENGINEER

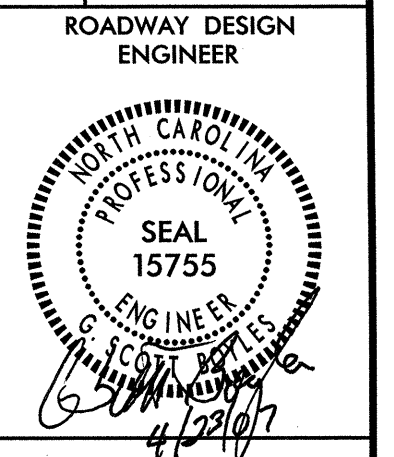
G. Scott Boyles
SIGNATURE: 4/17/07

**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**

Keith Hudson P.E.
STATE DESIGN ENGINEER

**DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION**

APPROVED
DIVISION ADMINISTRATOR



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ROADWAY STANDARD DRAWINGS

INDEX OF SHEETS

GENERAL NOTES

EFF. 07-18-06
REV. 01-02-07

GENERAL NOTES: 2006 SPECIFICATIONS
EFFECTIVE: 07-18-06
REVISED: 07-18-06

SHEET NO.	DESCRIPTION
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL SHEETS, AND LIST OF STANDARDS
1-B	CONVENTIONAL SYMBOLS
1-C	SURVEY CONTROL SHEET
1-D	CENTERLINE COORDINATES LISTING
2	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
2-A THRU 2-C	HYDRAULIC / NATURAL STREAM DETAILS
2-D	ANCHORAGE FOR FRAMES DETAIL
3	SUMMARY OF QUANTITIES
3-A	DRAINAGE SUMMARY
3-B	EARTHWORK SUMMARY, PAVEMENT REMOVAL AND GUARDRAIL SUMMARY
3-C	PARCEL INDEX SHEET
4	PLAN SHEET
5	PROFILE SHEET
TCP-1 THRU TCP-7	TRAFFIC CONTROL PLANS
EC THRU EC-6	EROSION CONTROL PLANS
RF-1 THRU RF-3	REFORESTATION PLAN
UC-1 THRU UC-5	UTILITY CONSTRUCTION
UO-1 THRU UO-2	UTILITY BY OTHERS
X-1	CROSS SECTION SUMMARY SHEET
X-2 THRU X-10	CROSS-SECTIONS
S-1 THRU S-34	STRUCTURE PLANS
2-E	STANDARD TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC

2006 ROADWAY STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated July 18, 2006 are applicable to this project and by reference hereby are considered a part of these plans:

STD. NO.	TITLE
DIVISION 2 - EARTHWORK	
200.03	Method of Clearing - Method III
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation - Method 'A'
310.10	Driveway Pipe Construction
DIVISION 4 - MAJOR STRUCTURES	
422.10	Reinforced Bridge Approach Fills
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 8 - INCIDENTALS	
806.01	Concrete Right-of-Way Marker
806.02	Granite Right-of-Way Marker
815.03	Pipe Underdrain and Blind Drain
816.01	Concrete Pads - for Shoulder Drain Installation
840.00	Concrete Base Pad for Drainage Structures
840.14	Concrete Drop Inlet - 12" thru 30" Pipe
840.15	Brick Drop Inlet - 12" thru 30" Pipe
840.18	Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.27	Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.29	Frames and Narrow Slot Flat Grates
840.35	Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates
840.45	Precast Drainage Structure
840.46	Traffic Bearing Precast Drainage Structure
840.66	Drainage Structure Steps
846.01	Concrete Curb, Gutter and Curb & Gutter
846.02	Drop Inlet Installation in Expressway Gutter
846.04	Drop Inlet Installation in Shoulder Berm Gutter
848.02	Driveway Turnout - Radius Type
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
862.04	Anchoring End of Guardrail - B-77 and B-83 Anchor Units
866.04	Barbed Wire Fence with Wood Posts (2 - 7 Strands)
876.02	Guide for Rip Rap at Pipe Outlets
876.04	Drainage Ditches with Class 'B' Rip Rap

GRADING AND SURFACING OR RESURFACING AND WIDENING:

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

CLEARING:

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

SAFETY CLEARING:

THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE AREAS IN THE PLANS DESIGNATED SAFETY CLEARING. THE LIMITS ARE AS SHOWN AND THE CLEARING AND GRUBBING IS CONSIDERED A PART OF THE LUMP SUM ITEM FOR "CLEARING AND GRUBBING".

SUPERELEVATION:

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:

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

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.

UNDERDRAINS:

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

DRIVEWAYS:

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

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 NOT SHOWN ON THE PLANS WILL BE PAID FOR AT THE CONTRACT PRICE FOR "TEMPORARY SHORING" OR "TEMPORARY SHORING-BARRIER SUPPORTED" DEPENDING UPON THE LOCATION OF THE SHORING.

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 Blue Ridge EMC, Sprint, Caldwell County Water District, Roanoke EMC Power. ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS

RIGHT-OF-WAY MARKERS:

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

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	○
Property Corner	-----
Property Monument	□
Parcel/Sequence Number	②③
Existing Fence Line	-----
Proposed Woven Wire Fence	-----
Proposed Chain Link Fence	-----
Proposed Barbed Wire Fence	-----
Existing Wetland Boundary	-----
Proposed Wetland Boundary	-----
Existing High Quality Wetland Boundary	-----
Existing Endangered Animal Boundary	-----
Existing Endangered Plant Boundary	-----

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○
Well	○
Small Mine	⊗
Foundation	□
Area Outline	□
Cemetery	□
Building	□
School	□
Church	□
Dam	□

HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	□
River Basin Buffer	-----
Flow Arrow	←
Disappearing Stream	-----
Spring	○
Swamp Marsh	-----
Proposed Lateral, Tail, Head Ditch	-----
False Sump	-----

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○
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	-----
Proposed Temporary Construction Easement	-----
Proposed Temporary Drainage Easement	-----
Proposed Permanent Drainage Easement	-----
Proposed Permanent Utility Easement	-----

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	-----
Proposed Slope Stakes Fill	-----
Proposed Wheel Chair Ramp	-----
Curb Cut for Future Wheel Chair Ramp	-----
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	-----

EXISTING STRUCTURES:

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

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

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	-----
Designated U/G Telephone Cable (S.U.E.*)	-----
Recorded U/G Telephone Conduit	-----
Designated U/G Telephone Conduit (S.U.E.*)	-----
Recorded U/G Fiber Optics Cable	-----
Designated U/G Fiber Optics Cable (S.U.E.*)	-----

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	-----
Designated U/G TV Cable (S.U.E.*)	-----
Recorded U/G Fiber Optic Cable	-----
Designated U/G Fiber Optic Cable (S.U.E.*)	-----

GAS:

Gas Valve	⊗
Gas Meter	⊗
Recorded U/G Gas Line	-----
Designated U/G Gas Line (S.U.E.*)	-----
Above Ground Gas Line	-----

SANITARY SEWER:

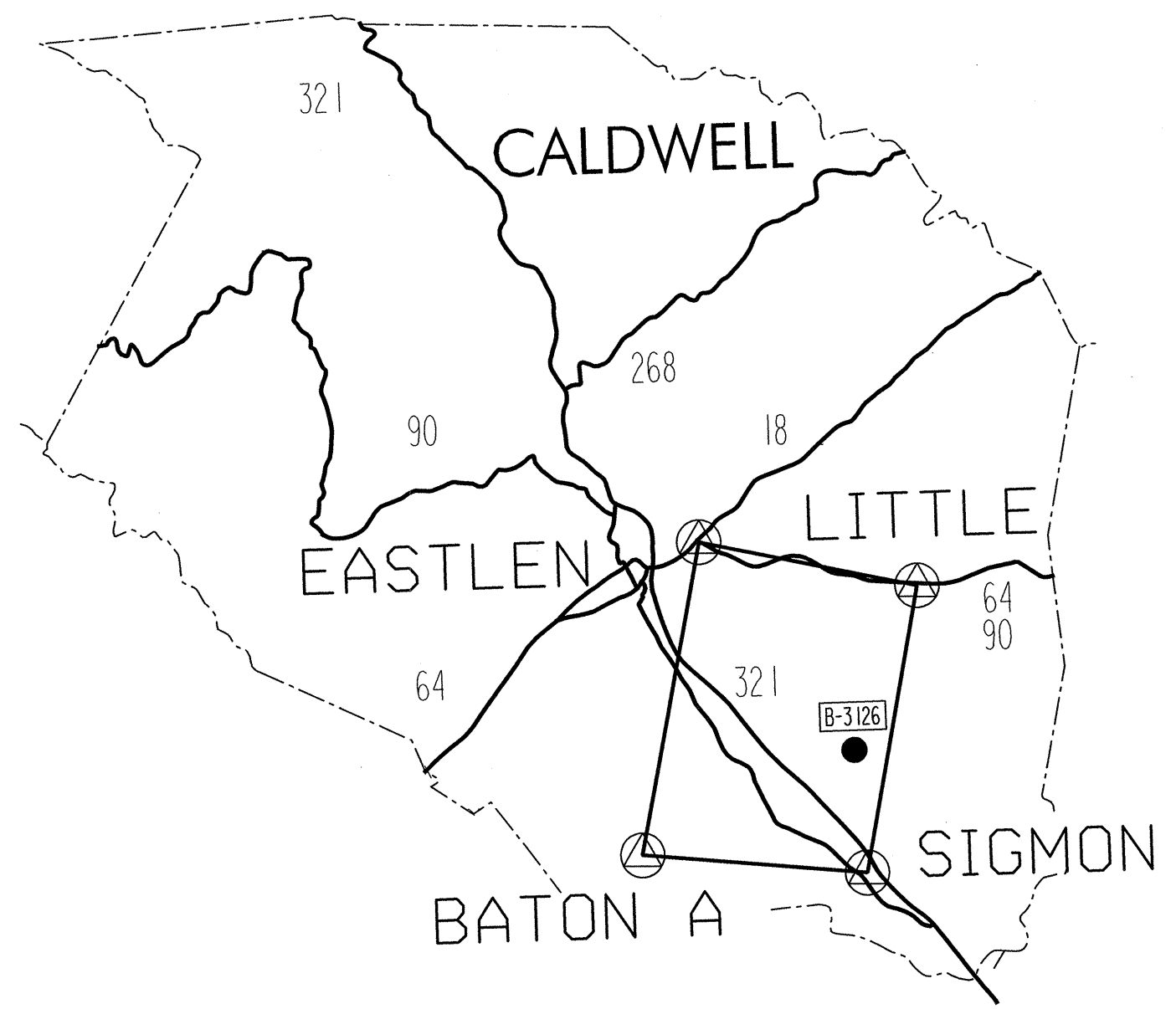
Sanitary Sewer Manhole	○
Sanitary Sewer Cleanout	○
U/G Sanitary Sewer Line	-----
Above Ground Sanitary Sewer	-----
Recorded SS Forced Main Line	-----
Designated SS Forced Main Line (S.U.E.*)	-----

MISCELLANEOUS:

Utility Pole	○
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	□
Utility Unknown U/G Line	-----
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-3126

6/2/99

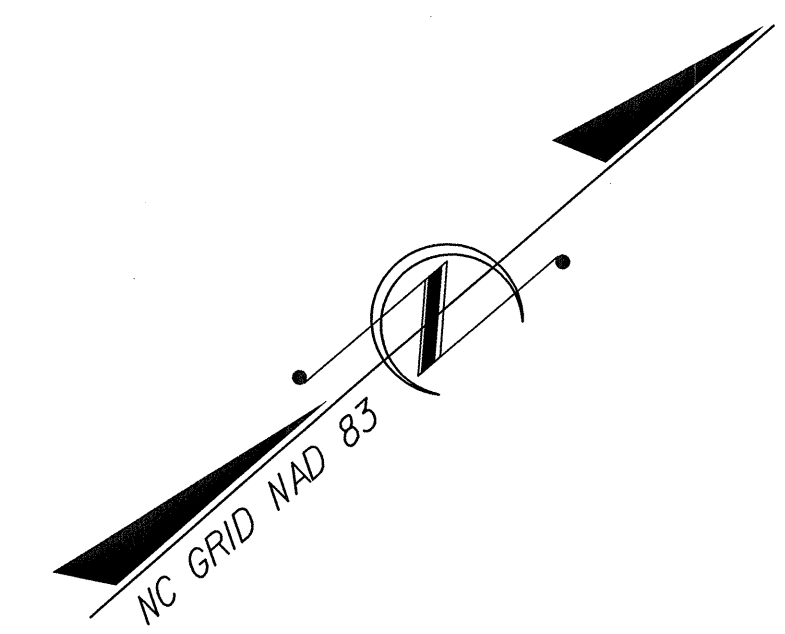


BL POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
11	GPS B3126-1	769885.0420	1277545.8540	1190.48'	OUTSIDE PROJECT LIMITS	
12	GPS B3126-2	770704.4100	1277655.3680	1148.48'	11+05.80	33.32 LT
1	BL-1	770887.9170	1278043.2470	1104.36'	14+96.35	142.31 RT
2	BL-2	771121.7500	1278166.2150	1094.77'	17+53.79	82.95 RT
3	BL-3	771393.8970	1278275.5910	1117.29'	20+30.50	14.13 LT
4	BL-4	771639.2810	1278694.8880	1156.15'	OUTSIDE PROJECT LIMITS	

 BM*1 ELEVATION = 1190.48'
 N 769885 E 1277546
 OUTSIDE PROJECT LIMITS
 GPS B3126-1 REBAR AND CAP
 -BL- STA. 5+00.00 0.00' LT/RT

 BM*2 ELEVATION = 1084.85
 N 770985 E 1278195
 L STATION 16+69 194' RIGHT
 R/R SPIKE IN BASE OF 36" MAPLE TREE
 -BL- STA. 19+12 89' RT.

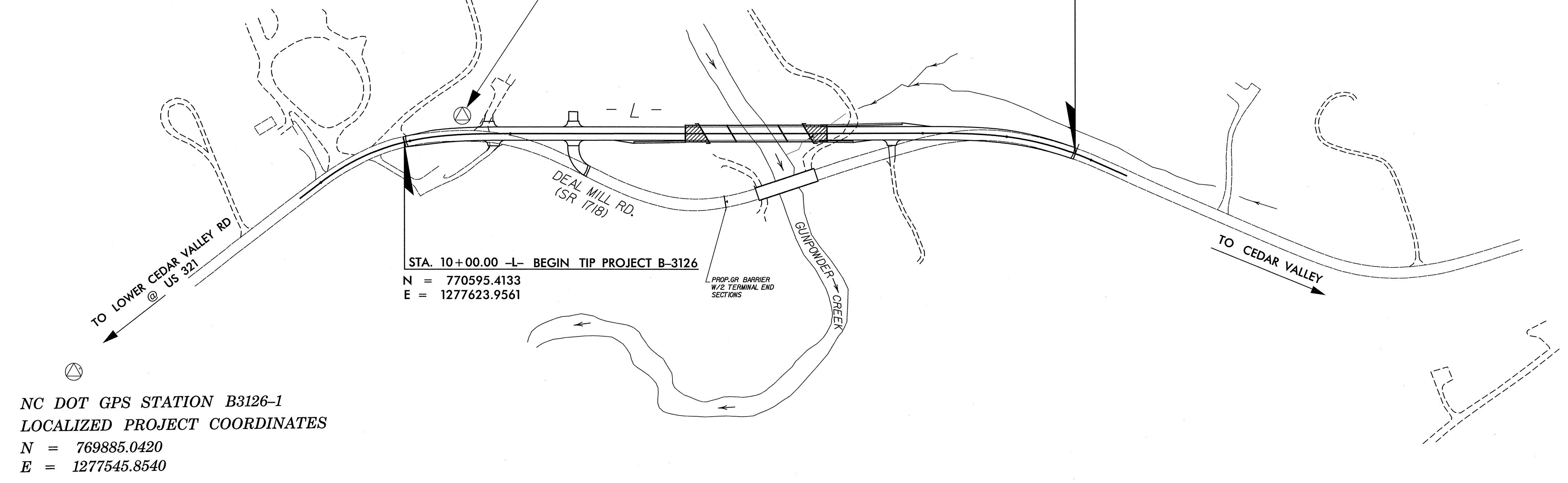
 BM*3 ELEVATION = 1155.97
 N 771672 E 1278732
 OUTSIDE PROJECT LIMITS
 R/R SPIKE IN BASE OF 12" OAK TREE
 49' BEYOND BL-4 AND 30' NORTH OF CL OF
 DEAL MILL ROAD



GPS CONTROL NETWORK

NC DOT GPS STATION B3126-2
 LOCALIZED PROJECT COORDINATES
 N = 770704.4100
 E = 1277655.3680

STA. 22+00.00 -L- END TIP PROJECT B-3126
 N = 771486.3467
 E = 1278419.9640



NC DOT GPS STATION B3126-1
 LOCALIZED PROJECT COORDINATES
 N = 769885.0420
 E = 1277545.8540

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B3126-2"
 WITH NAD 83 STATE PLANE GRID COORDINATES OF
 NORTHING: 770704.4100(F) EASTING: 1277655.3680(F)
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT
 (GROUND TO GRID) IS: 0.999874710
 THE N.C. LAMBERT GRID BEARING AND
 LOCALIZED HORIZONTAL GROUND DISTANCE FROM
 "B3126-2" TO -L- STATION 10+00.00 IS
 S 16°04'35" W 113.43'
 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
 VERTICAL DATUM USED IS NGVD 29

NOTES:

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/B3126_LS_CONTROL_050308.TXT](http://www.ncdot.org/doh/preconstruct/highway/location/project/B3126_LS_CONTROL_050308.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.

NOTE: DRAWING NOT TO SCALE

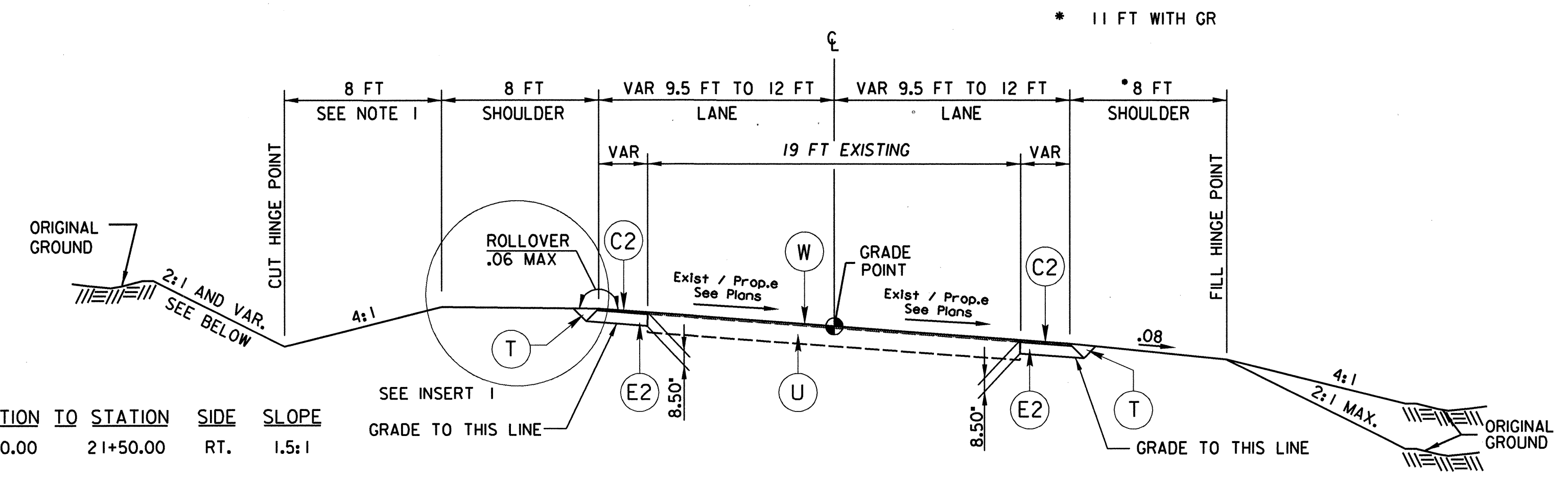
3/22/2007
 LocationSurveys\B3126_1s_1c_050308.dgn

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CENTERLINE COORDINATE LISTING

Disclaimer: This coordinate list is provided for the convenience of interested contractors and is intended for use during the project bidding process only. Coordinates are localized to this particular project and any conversion to state grid coordinates or other formats will be the responsibility of the recipient. While every effort has been made to provide up-to-date, accurate information, NCDOT makes no express guarantee as to the validity or potential for revision of this information prior to project letting.

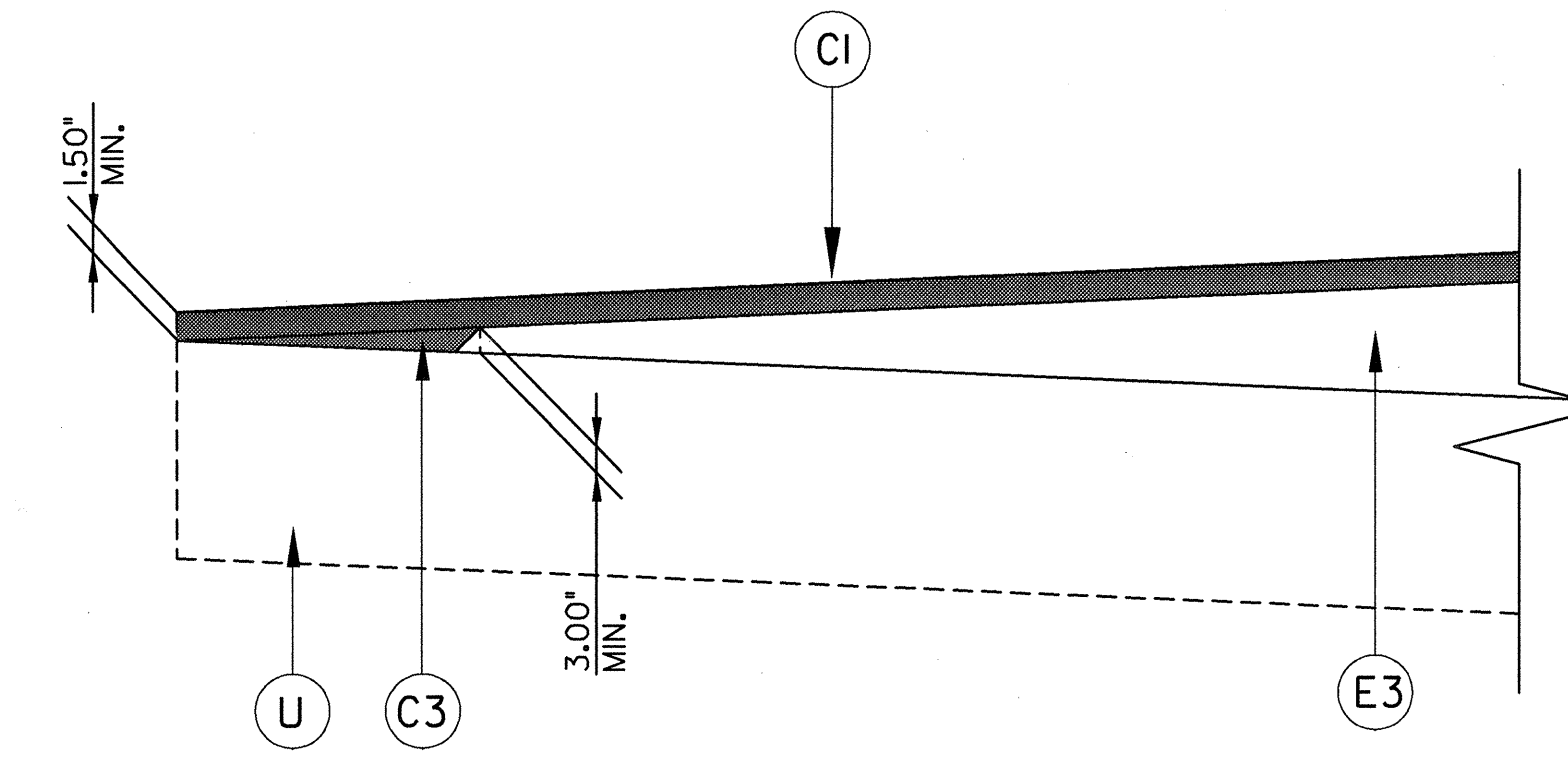
Point #	Chain	Station	Northing(Y)	Easting(X)
1	L	7+88.133	770390.5735	1277577.6186
2	L	8+00.000	770402.4154	1277578.3836
3	L	9+00.000	770501.5841	1277590.0886
4	L	10+00.000	770595.4133	1277623.9561
5	L	11+00.000	770679.3210	1277678.0818
6	L	12+00.000	770756.1586	1277742.0607
7	L	13+00.000	770831.9472	1277807.2993
8	L	14+00.000	770907.7359	1277872.5380
9	L	15+00.000	770983.5245	1277937.7767
10	L	16+00.000	771059.3131	1278003.0153
11	L	17+00.000	771135.1017	1278068.2540
12	L	18+00.000	771210.8904	1278133.4927
13	L	19+00.000	771286.6790	1278198.7314
14	L	20+00.000	771361.8927	1278264.6241
15	L	21+00.000	771430.7828	1278336.9819
16	L	22+00.000	771486.3467	1278419.9639
17	L	22+99.568	771530.0631	1278509.4085



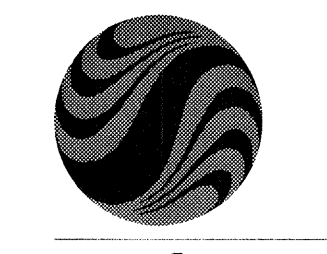
STATION TO STATION SIDE SLOPE
20+00.00 21+50.00 RT. 1.5:1

ROADWAY	FROM STATION	TO STATION	REMARKS
-L-	10+00.00	12+20.00	SEE INSERT 1
-L-	19+40.00	22+00.00	

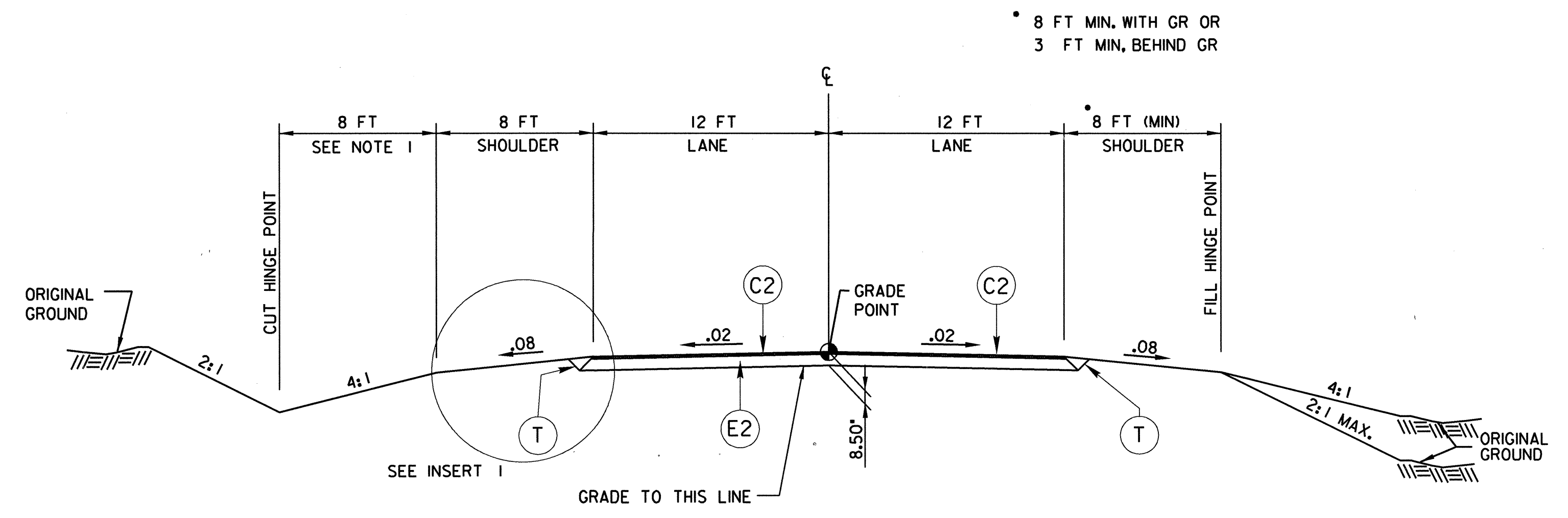
TYPICAL SECTION NO. 1
NARROW WIDENING



WEDGING DETAIL

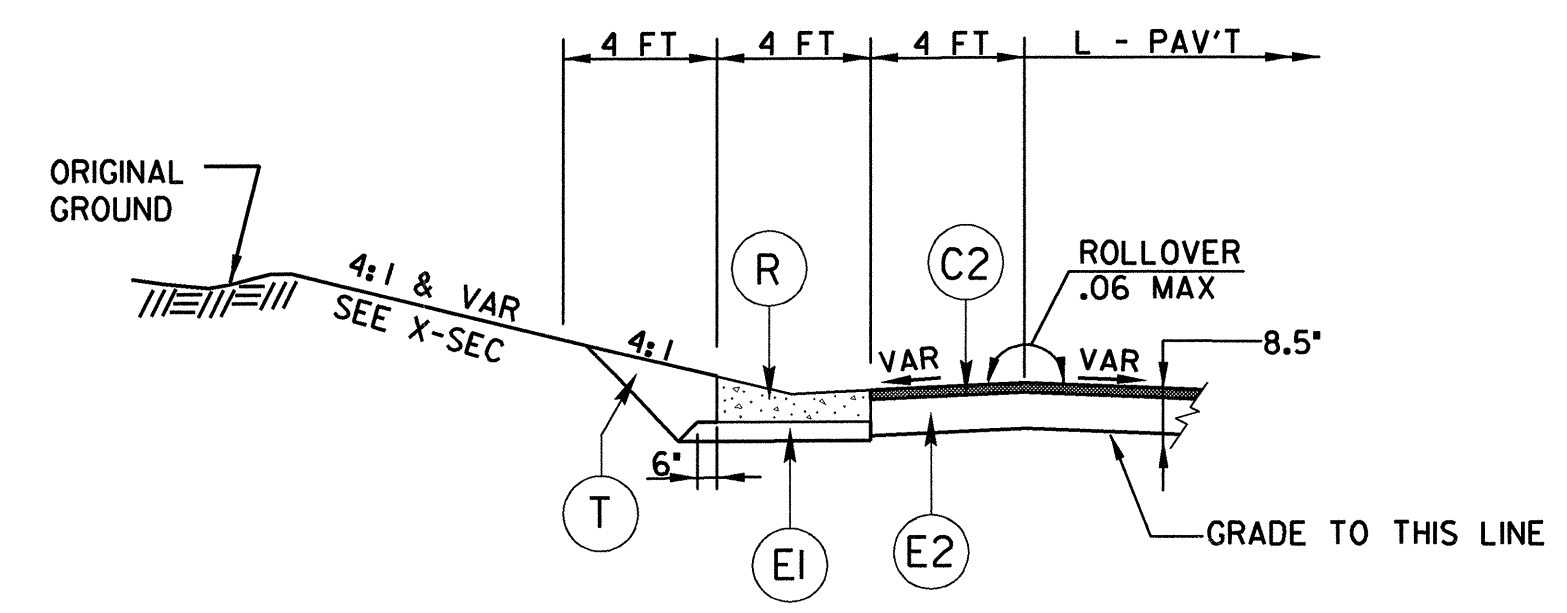


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Tel. 919.851.6866
Fax. 919.851.7024
www.stantec.com



ROADWAY	FROM STATION	TO STATION	REMARKS
-L-	12+20.00	15+35.00 (BEG BR)	SEE INSERT 1
-L-	17+20.00 (END BR)	19+40.00	

TYPICAL SECTION NO. 2



ROADWAY	STA	TO	STA	SIDE
-L-	10+25.00		12+77.00	LT.

INSERT 1

USE IN CONJUNCTION W/ TS NO'S 1&2

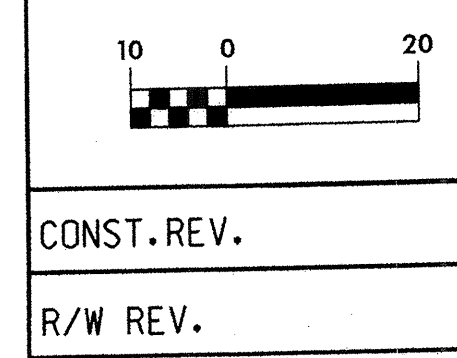
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.50" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165.0 LBS. PER SQ. YD.
C2	PROP. APPROX. 3.00" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165.0 LBS. PER SQ. YD. IN EACH OF TWO LAYERS
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1" OR GREATER THAN 1.5"
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP. APPROX. 5.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
E3	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
R	CONCRETE EXPRESSWAY GUTTER
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	PROP. VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL)

NOTES:
1. DISTANCE WILL VARY TO REACH THE DESIRED ELEVATION AS ESTABLISHED BY THE DITCH GRADE. (SEE PROFILES AND X-SECTIONS)
2. ALL PAVEMENT STRUCTURE SLOPES ARE 1:1 UNLESS OTHERWISE SPECIFIED.

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8/17/99

PROJECT REFERENCE NO. B-3126	SHEET NO. 2A
RW SHEET NO.	
HYDRAULICS ENGINEER NORTH CAROLINA PROFESSIONAL 20263 KEVIN WILLIAMS	



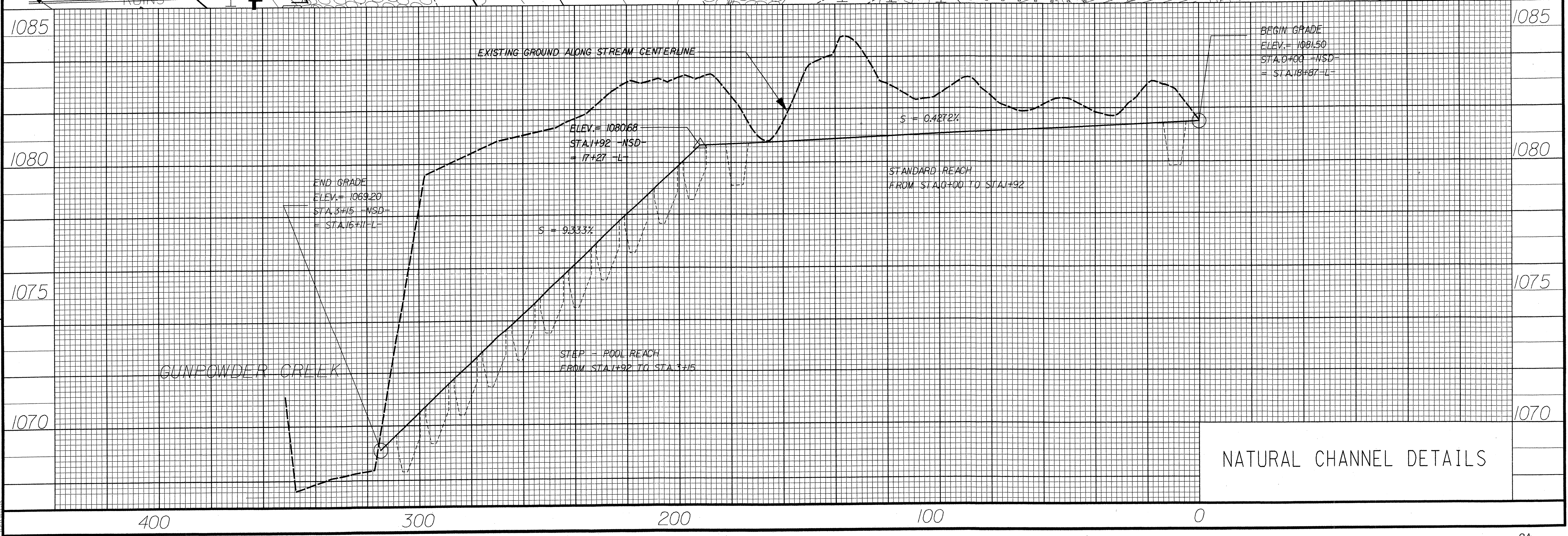
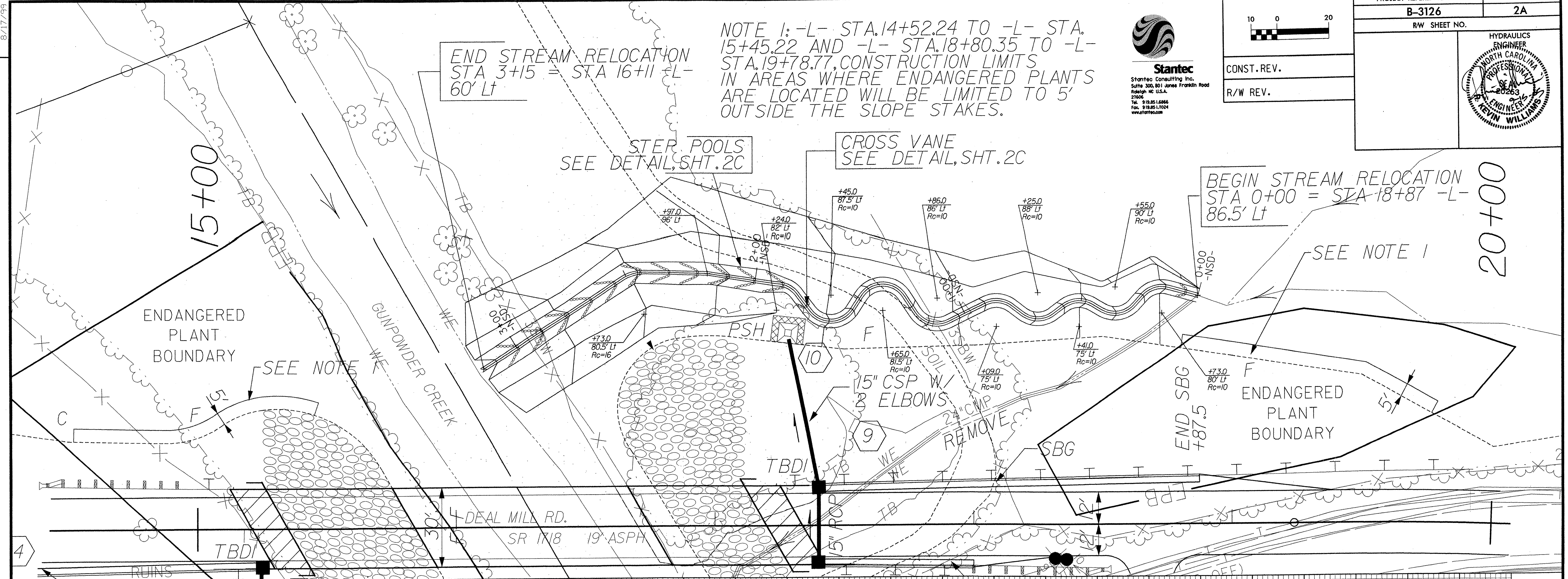
NOTE 1: -L- STA.14+52.24 TO -L- STA.15+45.22 AND -L- STA.18+80.35 TO -L- STA.19+78.77, CONSTRUCTION LIMITS IN AREAS WHERE ENDANGERED PLANTS ARE LOCATED WILL BE LIMITED TO 5' OUTSIDE THE SLOPE STAKES.

END STREAM RELOCATION
STA 3+15 = STA 16+11 -L-
60' LT

STEP POOLS
SEE DETAIL, SHT. 2C

CROSS VANE
SEE DETAIL, SHT. 2C

BEGIN STREAM RELOCATION
STA 0+00 = STA 18+87 -L-
86.5' LT

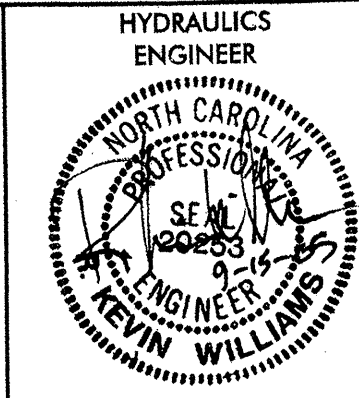


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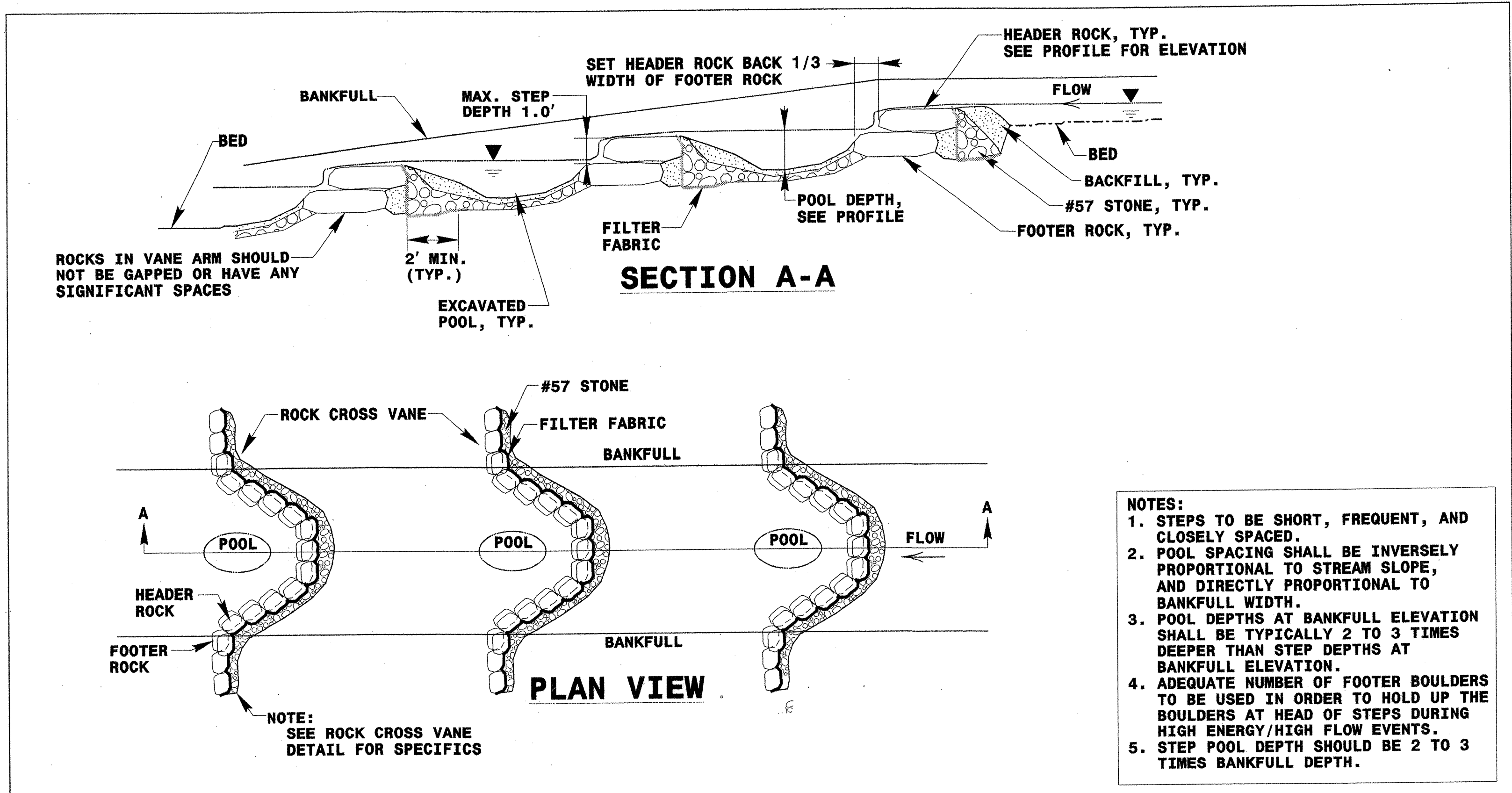
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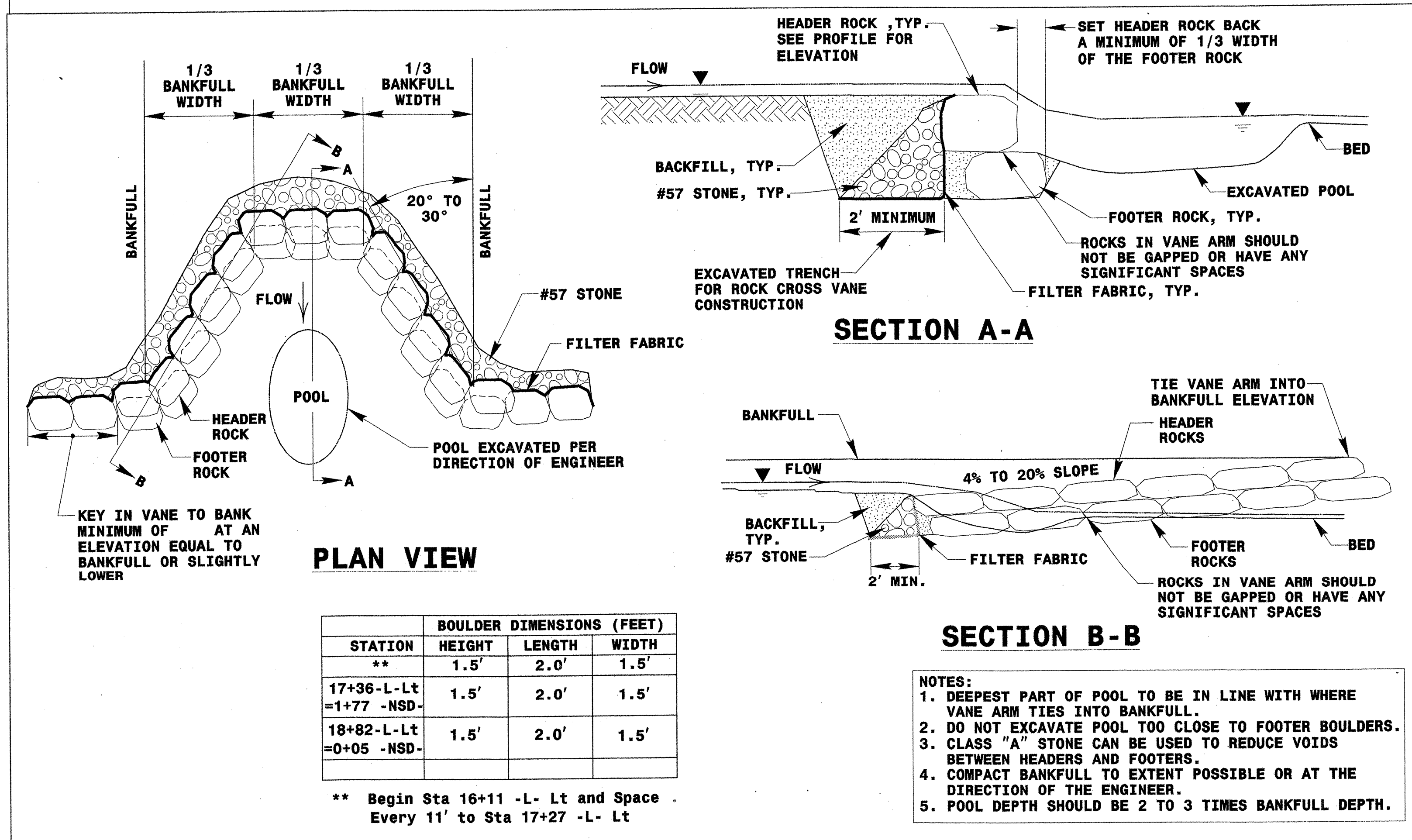
PROJECT REFERENCE NO.	SHEET NO.
B-3126	2C
RW SHEET NO.	
	

STEP POOL DETAIL
 NOT TO SCALE
 Sta 16+11 to 17+27 -L- Lt
 (Sta 3+15 to 1+92 -NSD-)



- NOTES:**
1. STEPS TO BE SHORT, FREQUENT, AND CLOSELY SPACED.
 2. POOL SPACING SHALL BE INVERSELY PROPORTIONAL TO STREAM SLOPE, AND DIRECTLY PROPORTIONAL TO BANKFULL WIDTH.
 3. POOL DEPTHS AT BANKFULL ELEVATION SHALL BE TYPICALLY 2 TO 3 TIMES DEEPER THAN STEP DEPTHS AT BANKFULL ELEVATION.
 4. ADEQUATE NUMBER OF FOOTER BOULDERS TO BE USED IN ORDER TO HOLD UP THE BOULDERS AT HEAD OF STEPS DURING HIGH ENERGY/HIGH FLOW EVENTS.
 5. STEP POOL DEPTH SHOULD BE 2 TO 3 TIMES BANKFULL DEPTH.

ROCK CROSS VANE DETAIL FOR STEP POOLS OR PER EACH
 NOT TO SCALE



- NOTES:**
1. DEEPEST PART OF POOL TO BE IN LINE WITH WHERE VANE ARM TIES INTO BANKFULL.
 2. DO NOT EXCAVATE POOL TOO CLOSE TO FOOTER BOULDERS.
 3. CLASS "A" STONE CAN BE USED TO REDUCE VOIDS BETWEEN HEADERS AND FOOTERS.
 4. COMPACT BANKFULL TO EXTENT POSSIBLE OR AT THE DIRECTION OF THE ENGINEER.
 5. POOL DEPTH SHOULD BE 2 TO 3 TIMES BANKFULL DEPTH.

STATION	BOULDER DIMENSIONS (FEET)		
	HEIGHT	LENGTH	WIDTH
**	1.5'	2.0'	1.5'
17+36-L-Lt =1+77 -NSD-	1.5'	2.0'	1.5'
18+82-L-Lt =0+05 -NSD-	1.5'	2.0'	1.5'

** Begin Sta 16+11 -L- Lt and Space Every 11' to Sta 17+27 -L- Lt

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NOTES

FOR TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC, SEE SPECIAL PROVISIONS.

SELECT THE APPROPRIATE STANDARD SHORING DESIGN FOR TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC IN LIEU OF SUBMITTING CONTRACTOR SHORING DESIGN. USE STANDARD SHORING DESIGN ONLY WHEN ALL OF THE FOLLOWING CRITERIA ARE MET:

- MAXIMUM HEIGHT OF SHORING EXCAVATION IS 11 FEET
- GROUNDWATER TABLE IS NOT ABOVE BOTTOM OF THE EXCAVATION
- BACKFILL SLOPE IS 2:1 OR FLATTER
- TRAFFIC SURCHARGE EQUAL TO 240 PSF
- SOLDIER PILE SPACING OF 6 FEET
- TIMBER LAGGING SHALL HAVE A MINIMUM THICKNESS OF 3 INCHES

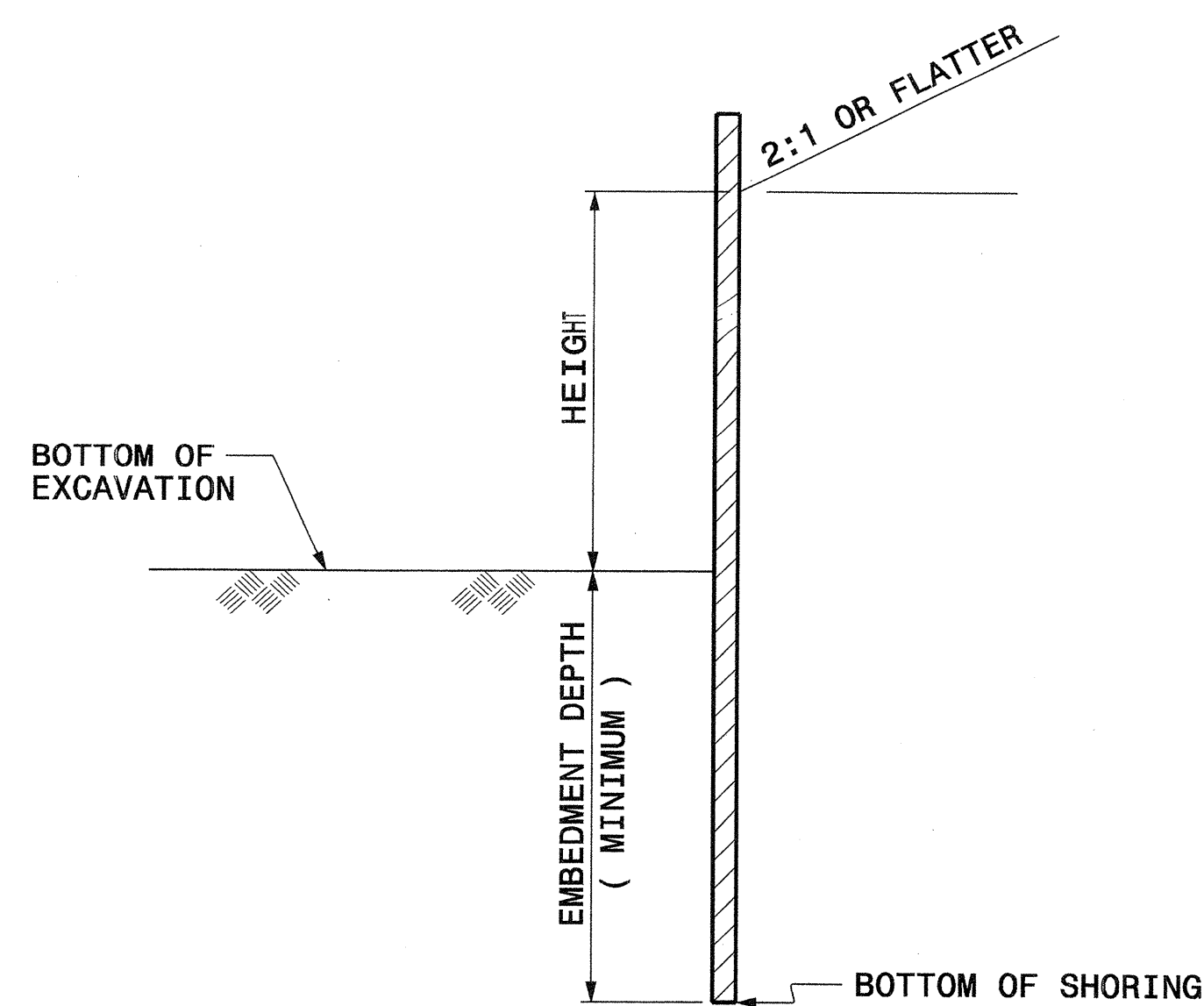
SUBMIT "STANDARD SHORING SELECTION" FORM TO ENGINEER PRIOR TO CONSTRUCTION OF SHORING.

DO NOT USE THE STANDARD SHORING DESIGNS WHEN VERY SOFT SOIL OR MUCK IS PRESENT WITHIN THE SHORING EMBEDMENT ZONE.

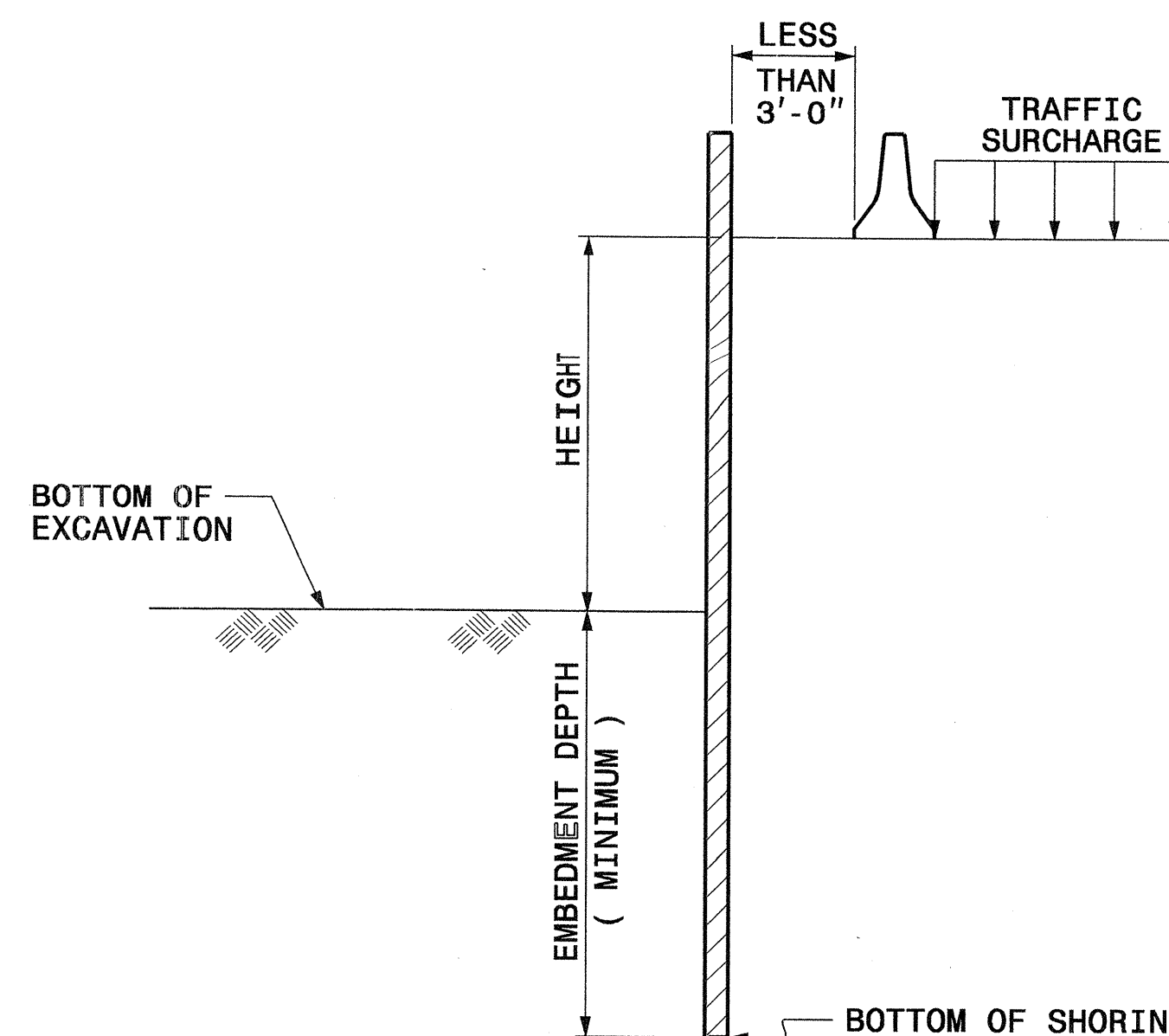
CONTRACTOR MUST VERIFY LOCATION OF GROUNDWATER TABLE PRIOR TO CONSTRUCTION OF SHORING.

THE CONTRACTOR HAS THE OPTION OF USING SOLDIER PILES SET IN DRILLED HOLES WITH A SHORTENED LENGTH EQUAL TO 75% OF THE EMBEDMENT DEPTHS SHOWN IN THE TABLE. FOR DRILLING REQUIREMENTS, SEE TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC SPECIAL PROVISION.

IF DESIGN EMBEDMENT DEPTH IS NOT ACHIEVED, THEN NOTIFY THE ENGINEER IMMEDIATELY.



TEMPORARY SHORING
(SLOPING OR LEVEL WITH TRAFFIC SURCHARGE, NO BARRIER IMPACT)

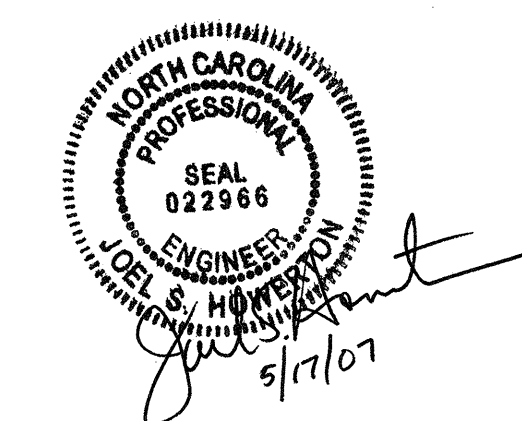


TEMPORARY SHORING - BARRIER SUPPORTED
(LEVEL WITH TRAFFIC SURCHARGE, WITH BARRIER IMPACT)

GROUNDWATER TABLE CONDITIONS

- 1) WHEN WATER TABLE IS ABOVE THE BOTTOM OF EXCAVATION, SUBMIT CONTRACTOR SHORING DESIGN TO THE ENGINEER FOR APPROVAL.
- 2) WHEN WATER TABLE IS BELOW THE BOTTOM OF EXCAVATION AND ABOVE THE BOTTOM OF SHORING, USE "WATER TABLE" CASE.
- 3) WHEN WATER TABLE IS BELOW BOTTOM OF SHORING, USE "NO WATER TABLE" CASE.

CASE	HEIGHT (FT)	TEMPORARY SHORING					TEMPORARY SHORING - BARRIER SUPPORTED				
		CANTILEVER SHEETING		DRIVEN SOLDIER PILE			CANTILEVER SHEETING		DRIVEN SOLDIER PILE		
		MINIMUM EMBEDMENT DEPTH (FT)	MINIMUM SECTION MODULUS (IN ³ / FT OF WALL)	MINIMUM EMBEDMENT DEPTH (FT)			MINIMUM EMBEDMENT DEPTH (FT)	MINIMUM SECTION MODULUS (IN ³ / FT OF WALL)	MINIMUM EMBEDMENT DEPTH (FT)		
			HP 10x42	HP 12x53	HP 14x73			HP 10x42	HP 12x53	HP 14x73	
"NO WATER TABLE"	< 6	7.5	3.0	8.0	8.0	8.0	11.0	10.0	9.5	9.5	9.5
	7	8.5	4.5	9.5	9.5	9.5	12.0	12.0	10.5	10.5	10.5
	8	10.0	6.5	10.5	10.5	10.5	12.5	14.0	11.5	11.5	11.5
	9	11.0	9.5	--	12.0	12.0	13.5	16.5	--	12.5	12.5
	10	12.5	13.0	--	--	13.5	14.0	19.5	--	13.5	13.5
	11	13.5	17.0	--	--	14.5	15.0	22.5	--	--	14.5
"WATER TABLE"	< 6	11.5	4.5	11.5	11.5	11.5	16.0	12.0	13.0	13.0	13.0
	7	13.0	7.0	13.0	13.0	13.0	17.0	14.5	14.5	14.5	14.5
	8	15.0	10.0	--	15.0	15.0	18.0	17.0	--	15.5	15.5
	9	17.0	14.0	--	17.0	17.0	19.0	20.0	--	17.0	17.0
	10	18.5	19.5	--	--	18.5	20.0	23.5	--	--	18.5
	11	20.5	26.0	--	--	--	21.0	28.0	--	--	20.0



PROJECT SERVICES UNIT
STANDARDS AND SPECIAL DESIGN
Office 919-250-4128 FAX 919-250-4119

STANDARD TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC

ORIGINAL BY: SOILS & FOUNDATIONS DATE: 10-2001
MODIFIED BY: [Signature] DATE: [Blank]
CHECKED BY: [Signature] DATE: 10/25/04
FILE SPEC.: erforward:\usr\details\stand\shoring detail.dgn

22-OCT-2004 14:43 W:\Special_Details\erforward\usr\details\stand\tempshoring.dgn erforward AT DS212260

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
SUMMARY OF QUANTITIES

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C201468

ItemNumber	Sec #	Quantity	Unit	Description	ItemNumber	Sec #	Quantity	Unit	Description	ItemNumber	Sec #	Quantity	Unit	Description	ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION	2055000000-E	815	18	EA	6" SUBDRAIN PIPE WYES, TEES, & ELBOWS	4450000000-N	1150	64	HR	FLAGGER	6042000000-E	1632	80	LF	1/4" HARDWARE CLOTH
0029000000-N	SP	Lump Sum		REINFORCED BRIDGE APPROACH FILL, STATION ***** (16+27.50)	2066000000-N	815	2	EA	CONCRETE PAD FOR SUBDRAIN PIPE OUTLET	4650000000-N	1251	60	EA	TEMPORARY RAISED PAVEMENT MARKERS	6070000000-N	SP	8	EA	SPECIAL STILLING BASINS
0050000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUB-BING	2077000000-E	815	12	LF	6" OUTLET PIPE (SUBDRAINS)	4810000000-E	1205	9,600	LF	PAINT PAVEMENT MARKING LINES (4")	6071030000-E	SP	160	LF	COIR FIBER BAFFLES
0057000000-E	226	110	CY	UNDERCUT EXCAVATION	2286000000-N	840	4	EA	MASONRY DRAINAGE STRUCTURES	4847000000-E	1205	4,800	LF	POLYUREA PAVEMENT MARKING LINES (4", *****) (STANDARD BEADS)	6071050000-E	SP	1	EA	** SKIMMER (2")
0063000000-N	SP	Lump Sum		GRADING	2367000000-N	840	4	EA	FRAME WITH TWO GRATES, STD 840.29	4900000000-N	1251	60	EA	PERMANENT RAISED PAVEMENT MARKERS	6084000000-E	1660	5.5	ACR	SEEDING & MULCHING
0106000000-E	230	17,700	CY	BORROW EXCAVATION	2556000000-E	846	332	LF	SHOULDER BERM GUTTER	5325800000-E	1510	1,302	LF	8" WATER LINE	6087000000-E	1660	2.5	ACR	MOWING
0134000000-E	240	1,700	CY	DRAINAGE DITCH EXCAVATION	2577000000-E	846	255	LF	CONCRETE EXPRESSWAY GUTTER	5648000000-N	1515	1	EA	RELOCATE WATER METER	6090000000-E	1661	50	LB	SEED FOR REPAIR SEEDING
0199000000-E	SP	600	SF	TEMPORARY SHORING	3030000000-E	862	700	LF	STEEL BM GUARDRAIL	5648000000-N	1515	1	EA	RECONNECT WATER METER	6093000000-E	1661	0.25	TON	FERTILIZER FOR REPAIR SEEDING
0318000000-E	300	80	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRS	3105000000-N	862	2	EA	STEEL BM GUARDRAIL TERMINAL SECTIONS	5649000000-N	1515	1	EA	RELOCATE FIRE HYDRANT	6096000000-E	1662	100	LB	SEED FOR SUPPLEMENTAL SEEDING
0343000000-E	310	36	LF	15" SIDE DRAIN PIPE	3150000000-N	862	5	EA	ADDITIONAL GUARDRAIL POSTS	5672000000-N	1515	1	EA	RELOCATE FIRE HYDRANT	6108000000-E	1665	4	TON	FERTILIZER TOPDRESSING
0366000000-E	310	72	LF	15" RC PIPE CULVERTS, CLASS III	3270000000-N	SP	4	EA	GUARDRAIL ANCHOR UNITS, TYPE 350	5871500000-E	1550	175	LF	TRENCHLESS INSTALLATION OF 8" IN SOIL	6114000000-N	SP	2	HR	SPECIALIZED HAND MOWING
0372000000-E	310	72	LF	18" RC PIPE CULVERTS, CLASS III	3317000000-N	862	4	EA	GUARDRAIL ANCHOR UNITS, TYPE B-77	5871510000-E	1550	175	LF	TRENCHLESS INSTALLATION OF 8" NOT IN SOIL	6117000000-N	SP	8	EA	RESPONSE FOR EROSION CONTROL
0708000000-E	310	76	LF	15" BIT COAT CS PIPE CULVERTS, TYPE B 0.064" THICK	3559000000-E	866	750	LF	** STRAND BARBED WIRE FENCE WITH POSTS (3)	6000000000-E	1605	2,200	LF	TEMPORARY SILT FENCE	6123000000-E	1670	0.1	ACR	REFORESTATION
0806000000-E	310	4	EA	15" BIT COAT CS PIPE ELBOWS, TYPE B 0.064" THICK	3635000000-E	876	50	TON	RIP RAP, CLASS II	6006000000-E	1610	75	TON	STONE FOR EROSION CONTROL, CLASS A	6126000000-E	SP	0.4	ACR	STREAMBANK REFORESTATION
0995000000-E	340	68	LF	PIPE REMOVAL	3642000000-E	876	30	TON	RIP RAP, CLASS A	6009000000-E	1610	355	TON	STONE FOR EROSION CONTROL, CLASS B					
1077000000-E	SP	75	TON	#57 STONE	3649000000-E	876	25	TON	RIP RAP, CLASS B	6012000000-E	1610	485	TON	SEDIMENT CONTROL STONE					
1220000000-E	545	50	TON	INCIDENTAL STONE BASE	3651000000-E	SP	50	TON	BOULDERS	6015000000-E	1615	4.5	ACR	TEMPORARY MULCHING					
1489000000-E	610	980	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B	3656000000-E	876	1,290	SY	FILTER FABRIC FOR DRAINAGE	6018000000-E	1620	150	LB	SEED FOR TEMPORARY SEEDING					
1525000000-E	610	445	TON	ASPHALT CONC SURFACE COURSE, TYPE SP9.5A	3659000000-N	SP	1	EA	PERFORMED SCOUR HOLES WITH LEVEL SPREADER APRON	6021000000-E	1620	0.75	TON	FERTILIZER FOR TEMPORARY SEEDING					
1560000000-E	620	72	TON	ASPHALT BINDER FOR PLANT MIX, GRADE PG 64-22	4400000000-E	1110	559	SF	WORK ZONE SIGNS (STATIONARY)	6024000000-E	1622	310	LF	TEMPORARY SLOPE DRAINS					
2000000000-N	806	28	EA	RIGHT OF WAY MARKERS	4405000000-E	1110	128	SF	WORK ZONE SIGNS (PORTABLE)	6027000000-N	1622	3	EA	INLET PROTECTION AT TEMPORARY SLOPE DRAINS					
2022000000-E	815	135	CY	SUBDRAIN EXCAVATION	4410000000-E	1110	138	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)	6029000000-E	SP	1,750	LF	SAFETY FENCE					
2033000000-E	815	105	CY	SUBDRAIN FINE AGGREGATE	4430000000-N	1130	30	EA	DRUMS	6030000000-E	1630	1,140	CY	SILT EXCAVATION					
2044000000-E	815	600	LF	6" PERFORATED SUBDRAIN PIPE	4435000000-N	1135	30	EA	CONES	6036000000-E	1631	3,200	SY	MATTING FOR EROSION CONTROL					
					4445000000-E	1145	96	LF	BARRICADES (TYPE III)	6037000000-E	SP	175	SY	COIR FIBER MAT					

5/28/99

06/13/2005
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COMPUTED BY: JTG DATE: Oct. 2006
 CHECKED BY: KFH DATE: Mar. 2007

PROJECT NO. B-3126 SHEET NO. 3B

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK

CUBIC YARDS					
STATION	STATION	UNCL. EXCAV.	EMBANK. +%	BORROW	WASTE
SUMMARY NO. 1					
10+00.00	15+81.99	773	3,014	2,241	
TOTAL SUMMARY NO. 1		773	3,014	2,241	
SUMMARY NO. 2					
16+82.12	22+00	1,391	15,366	13,975	
TOTAL SUMMARY NO. 2		1,391	15,366	13,975	
SUBTOTALS:					
		2,164	18,380	16,216	
ADJUSTMENT DUE TO:					
Est. Loss Due to Clearing & Grubbing		-550		550	
PROJECT TOTALS:					
		1,614		16,766	
Est. 5% for Replacing Top Soil on Borrow Pits				838	
GRAND TOTALS:		1,614		17,604	
SAY:		1,700		17,700	

SUMMARY OF ASPHALT PAVEMENT REMOVAL

SQUARE YARDS					
LINE	STA	STA	LOC	ASPHALT REMOVAL	ASPHALT BREAK-UP
-L-	11+00.00	13+25.00	RT	267.8	
-L-	15+70.00	16+29.00	RT	125.4	
-L-	17+35.00	20+12.00	RT	468.8	
TOTAL				862	
SAY				865	

Earthwork quantities are calculated by the Roadway Design Unit. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

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

Est. Undercut Excavation = 110 CY

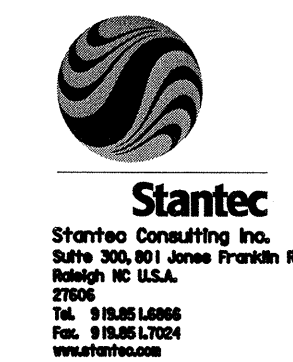
GUARDRAIL SUMMARY

W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
 G = GATING IMPACT ATTENUATOR TYPE 350
 NG = NON-GATING IMPACT ATTENUATOR TYPE 350

N' = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL.
 TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
 FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.

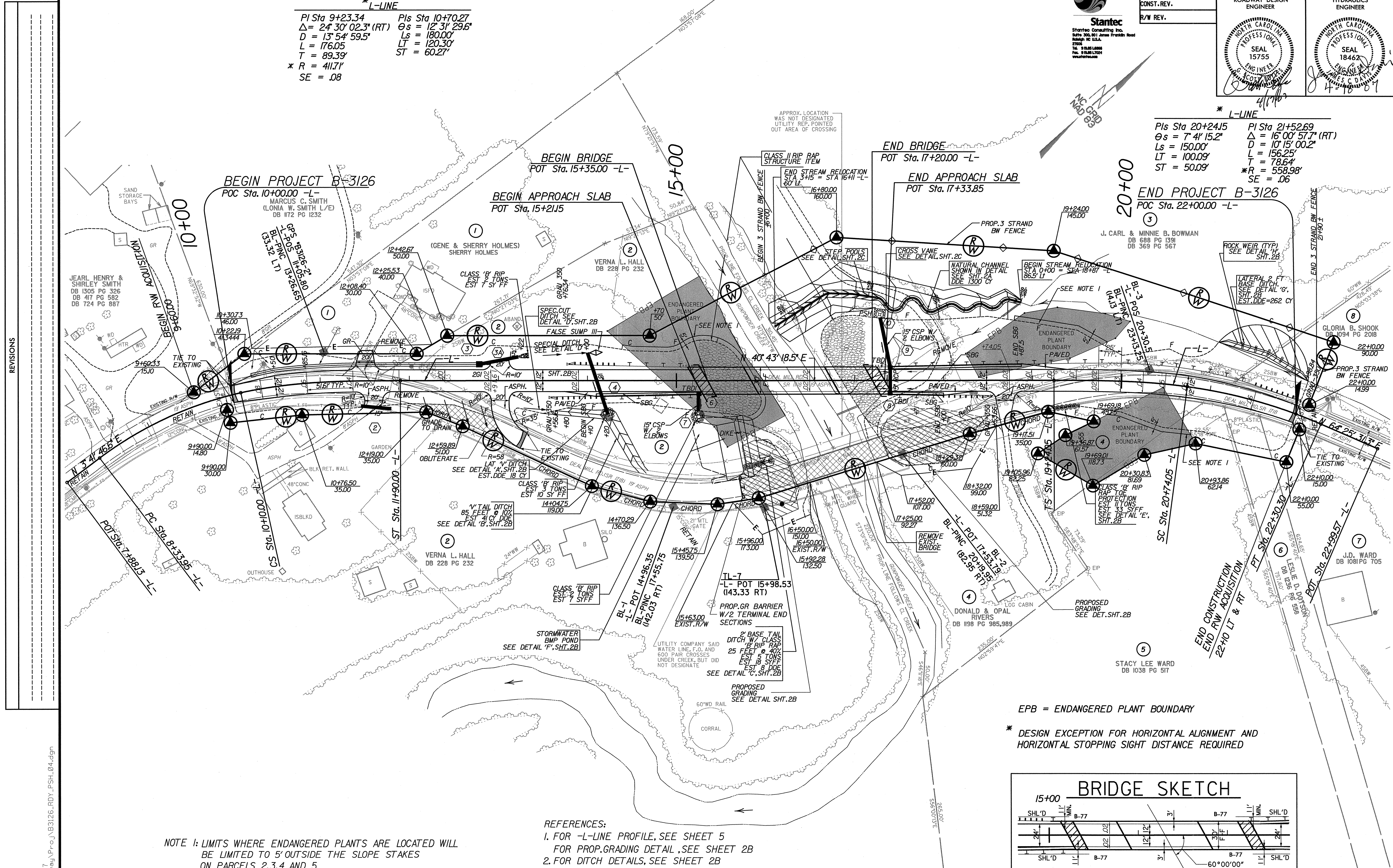
LINE	BEG. STA.	END STA.	LOC.	LENGTH			WARRANT POINT		"N" DIST FROM E.O.L.	TOTAL SHLDR WIDTH	FLARE LENGTH		W		ANCHORS					IMP. ATTEN. TYPE 350			REMOVE EXISTING GRDRAIL	REMARKS			
				STRAIGHT LIN. FT.	SHOP CURVED	DOUBLE FACED	APPR. END	TRAIL. END			APPR. END	TRAIL. END	APPR. END	TRAIL. END	B-77	GRAU 350	Term. Section	EA	G	NG							
-L-	13+76.34	15+26.34	LT	150.0				15+26.34	3'	11'	131.25		2.375	1		1											
-L-	13+56.16	15+43.66	RT	187.5			15+43.66		3'	11'	168.75		3.125	1		1											
-L-	15+70.00	---	RT	25.0			Dead End																				
-L-	17+11.34	21+98.84	LT	487.5			21+98.84		8'	11'	218.75	250	3.000	5.00	1		1										
-L-	17+28.66	18+53.66	RT	125.0				17+28.66	3'	11'	106.25		1.875	1		1											
SUB TOTAL=				975.0											4.0	4.0	2.0										
DEDUCTION FOR ANCHOR UNITS=																											
TYPE B-77 = 4 @ 18.75				-75																							
GRAU 350 = 4 @ 50				-200																							
GRAND TOTAL =				700.0											4.0	4.0	2.0										
SAY =				700.0																							

ADDITIONAL GUARDRAIL POST 5 EA.



*** L-LINE**
 PI Sta 9+23.34 Pls Sta 10+70.27
 $\Delta = 24^{\circ} 30' 02.3" (RT)$ $\Theta_s = 12^{\circ} 31' 29.6"$
 $D = 13^{\circ} 54' 59.5"$ $L_s = 180.00'$
 $L = 176.05'$ $LT = 120.30'$
 $T = 89.39'$ $ST = 60.27'$
 $* R = 411.71'$
 $SE = .08$

*** L-LINE**
 Pls Sta 20+24.15 PI Sta 21+52.69
 $\Theta_s = 7^{\circ} 41' 15.2"$ $\Delta = 16^{\circ} 00' 57.7" (RT)$
 $L_s = 150.00'$ $D = 10^{\circ} 15' 00.2"$
 $L = 100.09'$ $L = 156.25'$
 $ST = 50.09'$ $T = 78.64'$
 $* R = 558.98'$
 $SE = .06$

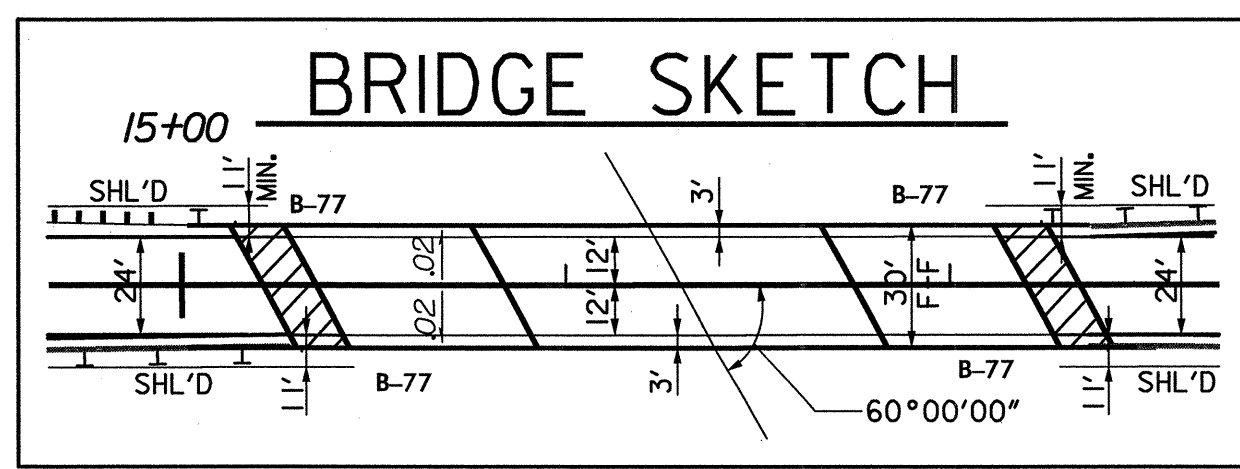


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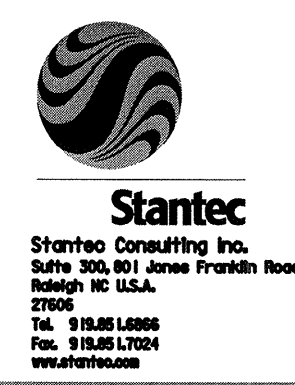
NOTE 1: LIMITS WHERE ENDANGERED PLANTS ARE LOCATED WILL BE LIMITED TO 5' OUTSIDE THE SLOPE STAKES ON PARCELS 2,3,4 AND 5

- REFERENCES:
1. FOR -L-LINE PROFILE, SEE SHEET 5 FOR PROP. GRADING DETAIL, SEE SHEET 2B
 2. FOR DITCH DETAILS, SEE SHEET 2B
 3. SEE SHEETS S-1 THRU S-34 FOR STRUCTURE PLANS

EPB = ENDANGERED PLANT BOUNDARY
 * DESIGN EXCEPTION FOR HORIZONTAL ALIGNMENT AND HORIZONTAL STOPPING SIGHT DISTANCE REQUIRED



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BM-2
RR SPIKE IN BASE OF 36'
MAPLE TREE, BL 19+12.00
89.00 RT ELEV. = 1084.85
-L- 16+69 194 RT

PROP. 18" RCP STA. 14+10

DRAINAGE AREA	0.56 Ac
DESIGN FREQUENCY	25 YR
DESIGN DISCHARGE	1.40 ft ³ /s
DESIGN HIGH WATER ELEV.	1118.51 ft
Q100 DISCHARGE	1.70 ft ³ /s
Q100 HIGH WATER ELEV.	1118.58 ft
OVERTOPPING FREQUENCY	500+ YR
OVERTOPPING DISCHARGE	13.5 ft ³ /s
OVERTOPPING ELEV.	1121.45 ft

HYDRAULIC DATA

DRAINAGE AREA	20.2 Sq. Mi.
DESIGN DISCHARGE	3400 ft ³ /s
DESIGN FREQUENCY	25 YR.
DESIGN HIGH WATER ELEV.	1079.30 ft
Q100 DISCHARGE	5000 ft ³ /s
Q100 HIGH WATER ELEV.	1081.89 ft
OVERTOPPING FREQUENCY	500+ YR
OVERTOPPING DISCHARGE	42500 ft ³ /s
OVERTOPPING ELEV.	1107.00 ft

