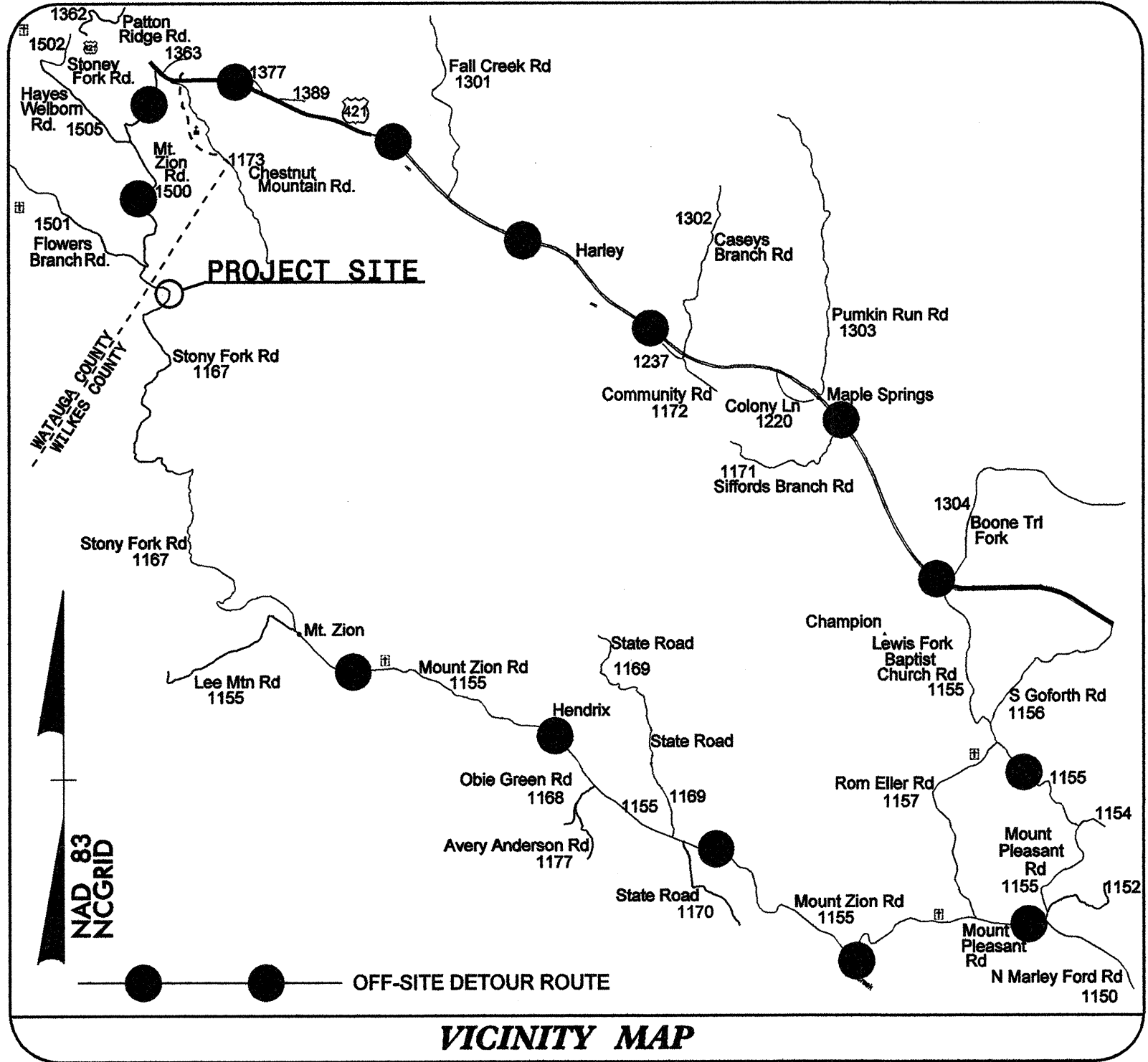


05/08/09

TIP PROJECT: B-4322

CONTRACT: C201973

See Sheet 1-A For Index of Sheets



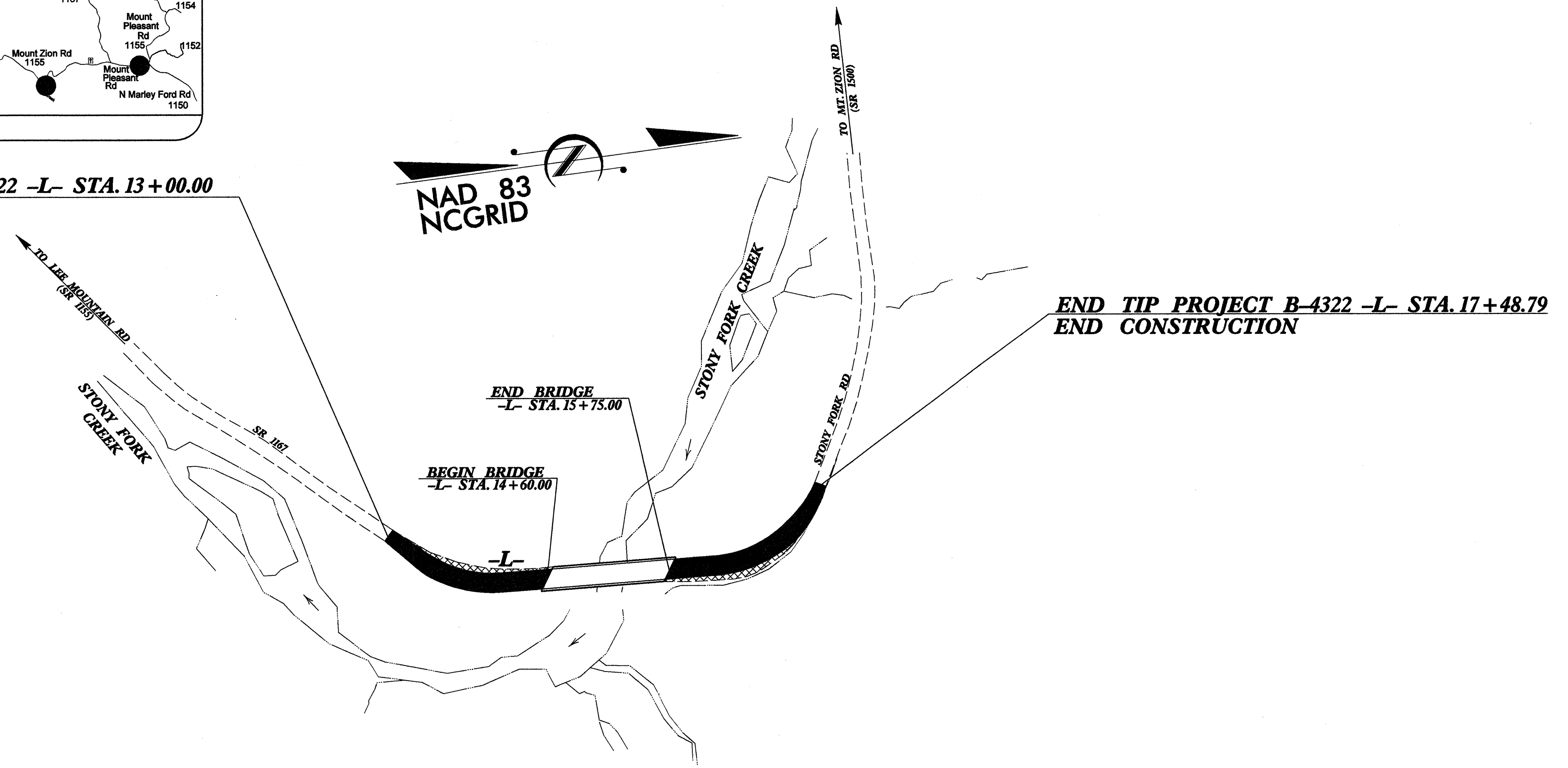
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
WILKES COUNTY

**LOCATION: BRIDGE NO. 71 OVER STONY FORK CREEK
ON SR 1167 (STONY FORK RD.)**

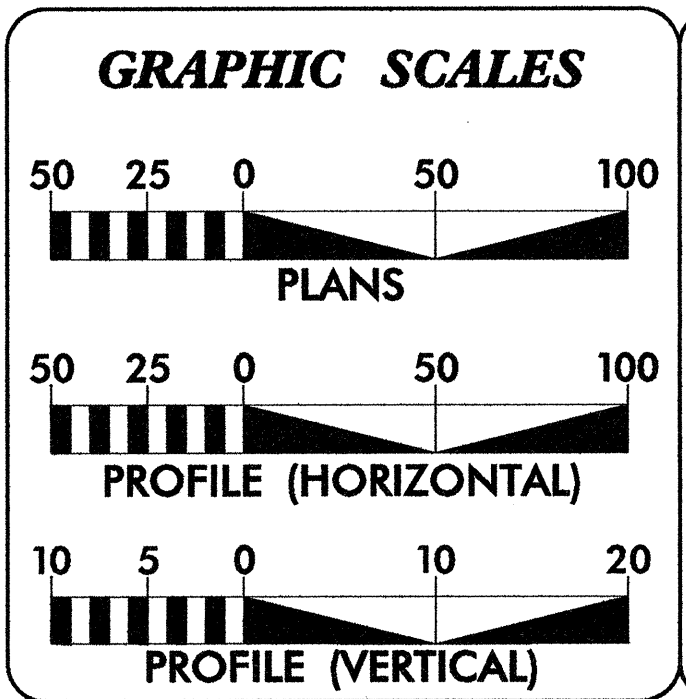
TYPE OF WORK: GRADING, DRAINAGE, PAVING & STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4322	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33659.1.1	BRZ-1167(1)	PE	
33659.2.1	BRZ-1167(1)	RW & UTIL.	
33659.3.1	BRZ-1167(1)	CONST.	

**BEGIN TIP PROJECT B-4322 -L- STA. 13+00.00
BEGIN CONSTRUCTION**



NOTE: A DESIGN EXCEPTION IS REQUIRED FOR SAG VERTICAL CURVE K, VERTICAL STOPPING SIGHT DISTANCE & SUPER ELEVATION.



DESIGN DATA

ADT 2008 =	130
ADT 2028 =	215
DHV =	12 %
D =	60 %
T =	3 % *
V =	30 MPH
* TTST 1%	DUAL 2%
FUNC. CLASS =	LOCAL

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4322	=	0.063 MILES
LENGTH STRUCTURE TIP PROJECT B-4322	=	0.022 MILES
TOTAL LENGTH TIP PROJECT B-4322	=	0.085 MILES

SUNGATE DESIGN GROUP, P.A.
915 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL: (919) 859-2243 FAX: (919) 859-6258
HYDRAULIC ENGINEERING FIRM

Prepared for the North Carolina Department Of Transportation in the Office of:

WETHERILL ENGINEERING
559 Jones Franklin Rd., Suite 164
Raleigh, N.C. 27606
Bus: 919 851 8077
Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN
BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS -
CONSTRUCTION OBSERVATION

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
July 21, 2006

LETTING DATE:
November 18, 2008

EDWARD G. WETHERILL, PE
PROJECT ENGINEER

BOB A. MAY, PE
PROJECT DESIGN ENGINEER

DOUG TAYLOR, PE
ROADWAY DESIGN - ENGINEERING
COORDINATION SECTION ENGINEER

NCDOT CONTACT

HYDRAULICS ENGINEER

ROADWAY DESIGN ENGINEER

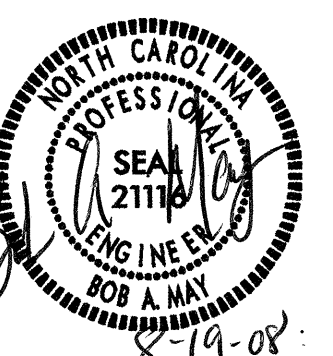
8-19-08

**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**

STATE HIGHWAY DESIGN ENGINEER

2:35:17 PM
B:\B-4322\Roadway\Proj\B-4322-rdy-tsh.dgn
8/19/2008

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS



GENERAL NOTES

GENERAL NOTES: 2006 SPECIFICATIONS
EFFECTIVE: 07-18-06
REVISED: 07-30-08

GRADE LINE:
GRADING AND SURFACING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AS DIRECTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:

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

SUPERELEVATION:

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

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.

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.

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.

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 CONTRACT.

INDEX OF SHEETS

Sheet Number	Sheet
1	Title Sheet
1-A	Index of Sheets, General Notes and List of Standards
1-B	Conventional Symbols
1-C	Survey Control Sheets
1-D	Centerline Coordinate List
2	Typical Sections, Pavement Schedule and Miscellaneous Details not covered by Roadway Standards
2-A	Detail of Anchorage for Frames
3 Thru 3-A	Summary of Quantities, Summary of Drainage, Summary of Guardrail & Summary of Earthwork
4 Thru 5	Plan and Profile Sheets
TCP-1 Thru TCP-5	Traffic Control Plans
EC-1 Thru EC-5	Erosion Control Plans
X-1A	Cross-Section Summary Sheet
X-1 Thru X-7	Cross-Sections
S-1 Thru S-22	Structure Plans

LIST OF STANDARDS

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

2006 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N.C. Department of Transportation - Raleigh, N.C., Dated 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 Superlevation - Two Lane Pavement
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation - Method 'A'
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
816.04	Markers for Drainage Structure and Concrete Pad
838.01	Concrete Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew
838.11	Brick Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew
838.80	Precast Endwalls - 12" thru 72" Pipe 90 Skew
840.00	Concrete Base Pad for Drainage Structures
840.18	Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.22	Frames and Wide Slot Sag Grates
840.27	Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.45	Precast Drainage Structure
840.66	Drainage Structure Steps
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
876.02	Guide for Rip Rap at Pipe Outlets
876.04	Drainage Ditches with Class 'B' Rip Rap

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EIP
Property Corner	-----
Property Monument	□ ECM
Parcel/Sequence Number	(23)
Existing Fence Line	-----
Proposed Woven Wire Fence	-----
Proposed Chain Link Fence	-----
Proposed Barbed Wire Fence	-----
Existing Wetland Boundary	----- WLB
Proposed Wetland Boundary	----- WLB
Existing High Quality Wetland Boundary	----- HQ WLB
Existing Endangered Animal Boundary	----- EAB
Existing Endangered Plant Boundary	----- EPB

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or UG 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	----- RBB
Flow Arrow	←
Disappearing Stream	-----
Spring	○
Swamp Marsh	-----
Proposed Lateral, Tail, Head Ditch	----- FLOW
False Sump	-----

RAILROADS:

Standard Gauge	----- CSX TRANSPORTATION
RR Signal Milepost	○ MILEPOST 35
Switch	□ SWITCH
RR Abandoned	-----
RR Dismantled	-----

RIGHT OF WAY:

Baseline Control Point	◆
Existing Right of Way Marker	△
Existing Right of Way Line	-----
Proposed Right of Way Line	-----
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	----- 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	-----

UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	○
Power Line Tower	□
Power Transformer	□
UG Power Cable Hand Hole	□
H-Frame Pole	●
Recorded UG Power Line	-----
Designated UG Power Line (S.U.E.*)	-----

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	○
Telephone Booth	□
Telephone Pedestal	□
Telephone Cell Tower	□
UG Telephone Cable Hand Hole	□
Recorded UG Telephone Cable	-----
Designated UG Telephone Cable (S.U.E.*)	-----
Recorded UG Telephone Conduit	-----
Designated UG Telephone Conduit (S.U.E.*)	-----
Recorded UG Fiber Optics Cable	-----
Designated UG Fiber Optics Cable (S.U.E.*)	-----

WATER:

Water Manhole	○
Water Meter	○
Water Valve	⊗
Water Hydrant	⊕
Recorded UG Water Line	-----
Designated UG Water Line (S.U.E.*)	-----
Above Ground Water Line	----- A/G Water

TV:

TV Satellite Dish	⊗
TV Pedestal	□
TV Tower	⊗
UG TV Cable Hand Hole	□
Recorded UG TV Cable	-----
Designated UG TV Cable (S.U.E.*)	-----
Recorded UG Fiber Optic Cable	-----
Designated UG Fiber Optic Cable (S.U.E.*)	-----

GAS:

Gas Valve	◇
Gas Meter	⊕
Recorded UG Gas Line	-----
Designated UG Gas Line (S.U.E.*)	-----
Above Ground Gas Line	----- A/G Gas

SANITARY SEWER:

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

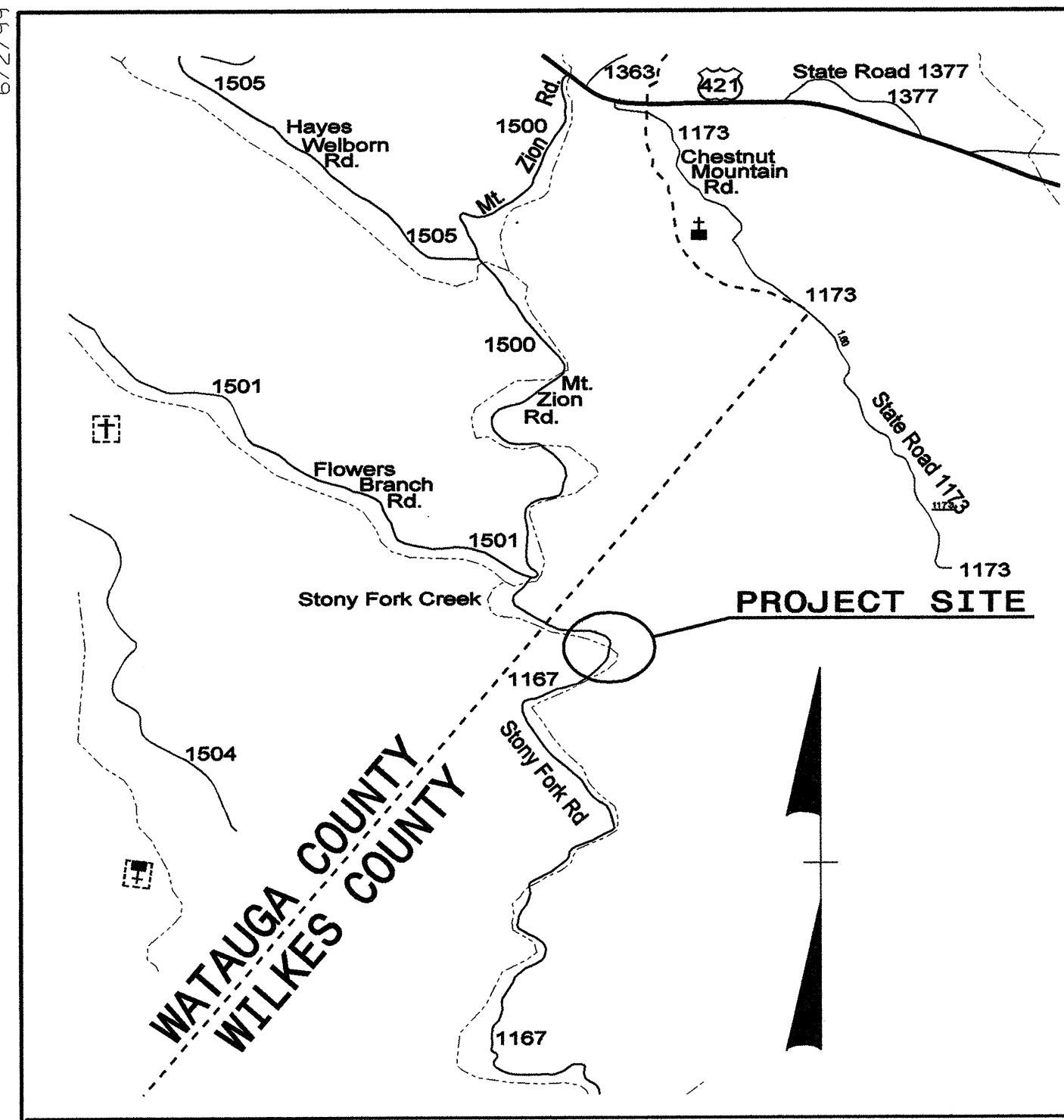
SURVEY CONTROL SHEET B-4322

BL POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
101	BL-101	895461.5683	1272860.4975	1952.42	OUTSIDE PROJECT LIMITS	
102	BL-102	895573.4334	1273025.4662	1955.93	10+52.88	6.76 RT
1	GPS B4322-1	895788.7260	1273219.7550	1960.50	13+42.17	7.47 RT
2	GPS B4322-2	896041.0316	1273245.4640	1958.65	15+96.23	6.06 LT
103	BL-103	896200.3931	1273164.3239	1980.38	17+86.53	14.86 RT
104	BL-104	896229.8394	1272907.5843	1979.48	20+45.51	9.85 LT

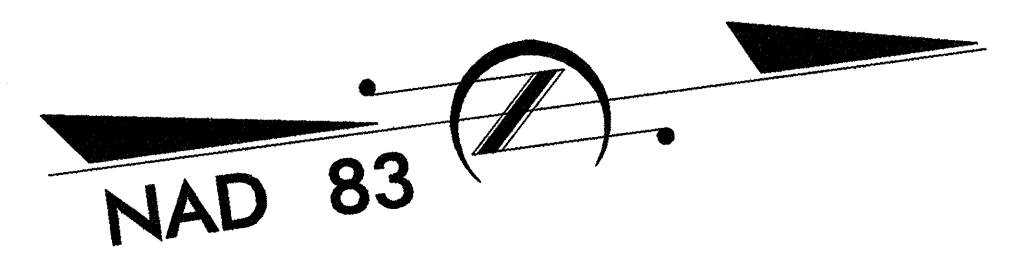
 BM #1 ELEVATION = 1947.85
 N 895488 E 1272927
 OUTSIDE PROJECT LIMITS
 R/R SPIKE IN 12" OAK

 BM #2 ELEVATION = 1957.51
 N 896010 E 1273278
 -L- STATION 15+67 28' RIGHT
 R/R SPIKE SET IN 19" WHITE PINE

 BM #3 ELEVATION = 1976.97
 N 896224 E 1272817
 OUTSIDE PROJECT LIMITS
 R/R SPIKE SET IN 24" WHITE OAK

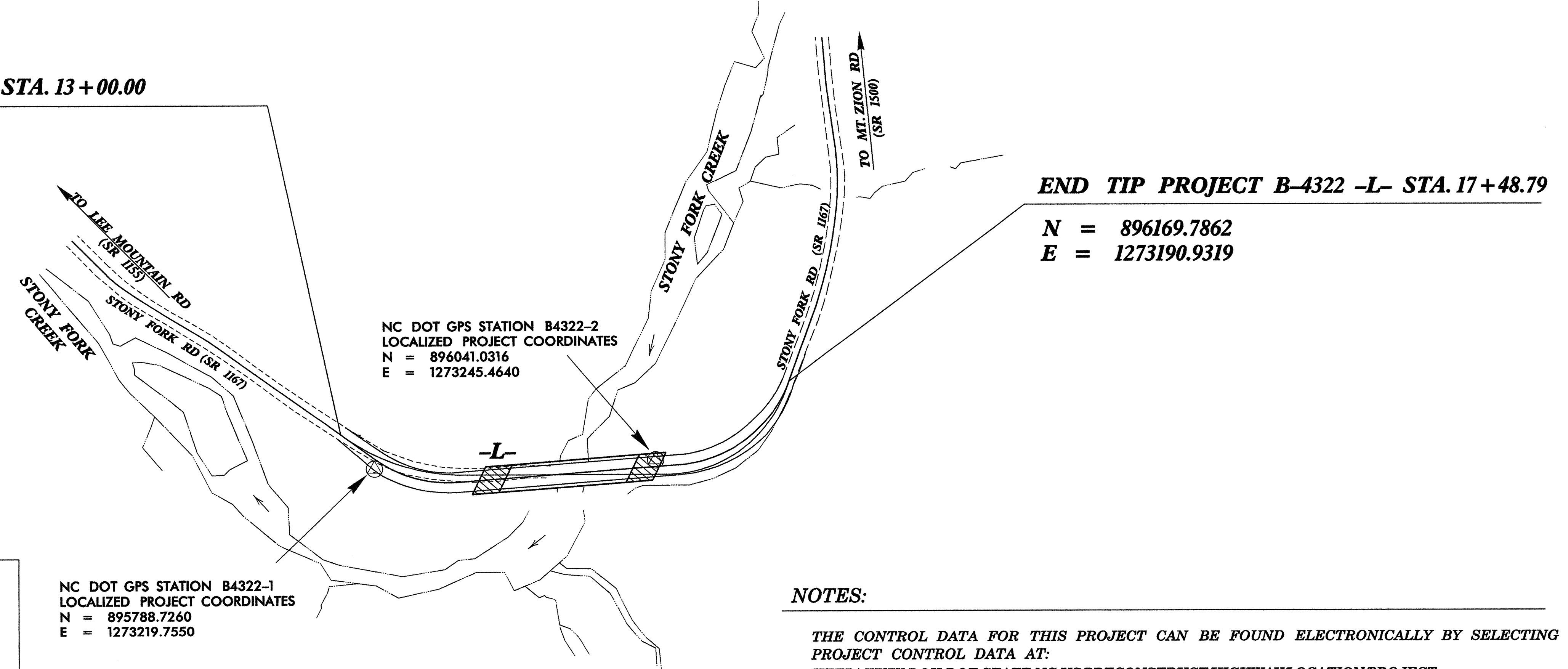


VICINITY MAP



BEGIN TIP PROJECT B-4322 -L- STA. 13+00.00

N = 895762.6843
E = 1273185.4075



END TIP PROJECT B-4322 -L- STA. 17+48.79

N = 896169.7862
E = 1273190.9319

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B4322-1" WITH NAD 83 STATE PLANE GRID COORDINATES OF NORTHING: 895788.7260(ft) EASTING: 1273219.7550(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99982509 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4322-1" TO -L- STATION 13+00 IS S 52°49'52" W 43.10' ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

NC DOT GPS STATION B4322-1
 LOCALIZED PROJECT COORDINATES
 N = 895788.7260
 E = 1273219.7550

NOTES:

THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:
[HTTP://WWW.DOH.DOT.STATE.NC.US/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT/B4322_LS_CONTROL_050216.TXT](http://www.doh.dot.state.nc.us/preconstruct/highway/location/project/B4322_LS_CONTROL_050216.TXT)
 SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT.
 IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
 © INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.
 PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.
 NETWORK ESTABLISHED FROM NGS ONLINE POSITIONING USER SERVICE (OPUS)

NOTE: DRAWING NOT TO SCALE

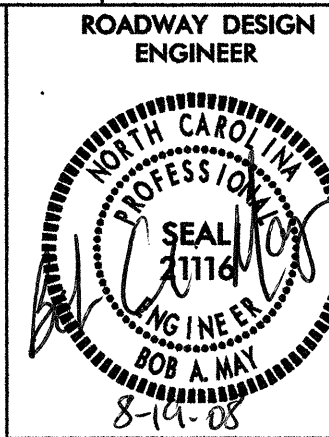
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 Roadway\Proj\B-4322-1a-1c-050502.dgn

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

WETHERILL ENGINEERING
 559 Jones Franklin Rd. Suite 164
 Raleigh, N.C. 27606
 Bus: 919 851 8077
 Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO.	SHEET NO.
B-4322	1-D



CENTERLINE COORDINATE LIST

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	lrev	10+00.00	895546.2296	1272978.9962
2	lrev	11+00.00	895613.8076	1273052.0092
3	lrev	12+00.00	895689.5310	1273117.2269
4	lrev	13+00.00	895762.6843	1273185.4075
5	lrev	14+00.00	895844.9021	1273239.4289
6	lrev	15+00.00	895944.6108	1273246.2392
7	lrev	16+00.00	896044.4604	1273251.7219
8	lrev	17+00.00	896138.8809	1273228.2159
9	lrev	18+00.00	896193.4318	1273145.5109
10	lrev	19+00.00	896230.1770	1273052.7610
11	lrev	20+00.00	896238.7711	1272953.5728
12	lrev	20+64.37	896240.6383	1272889.2482

6/2/99

PAVEMENT SCHEDULE

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.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
T	EARTH MATERIAL.

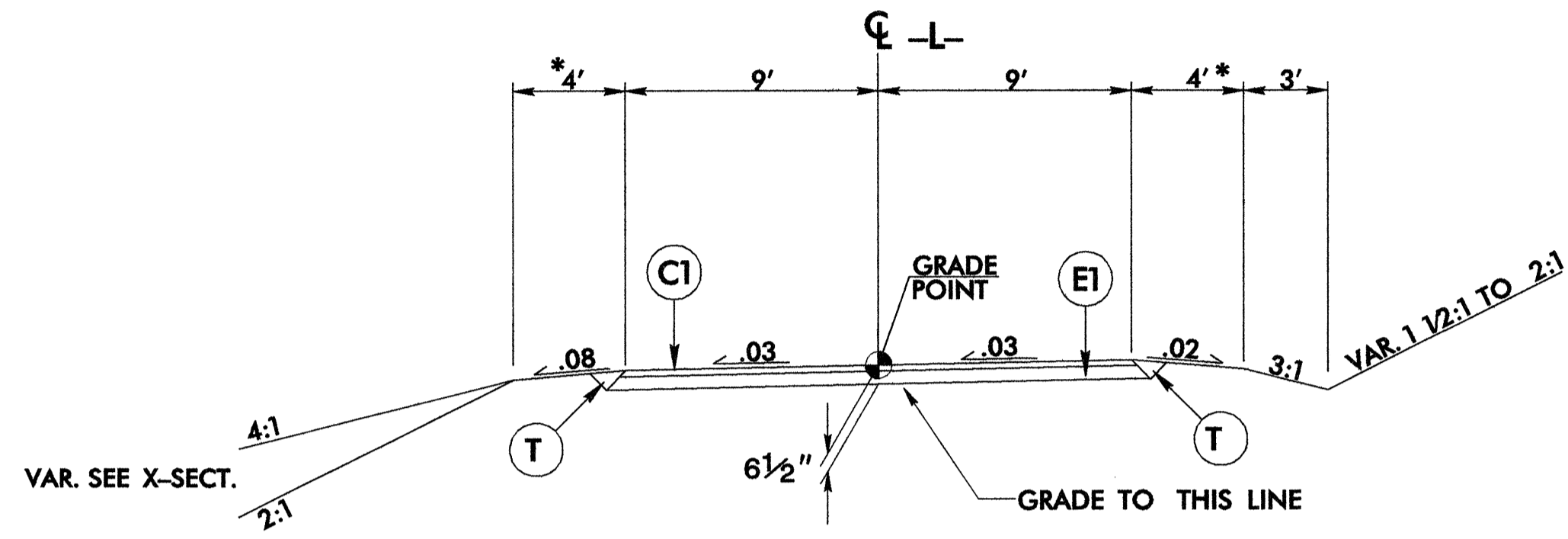
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

559 Jones Franklin Rd. Suite 164
Raleigh, N.C. 27606
Bus: 919 851 8077
Fax: 919 851 8107

WETHERILL ENGINEERING

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. B-4322	SHEET NO. 2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

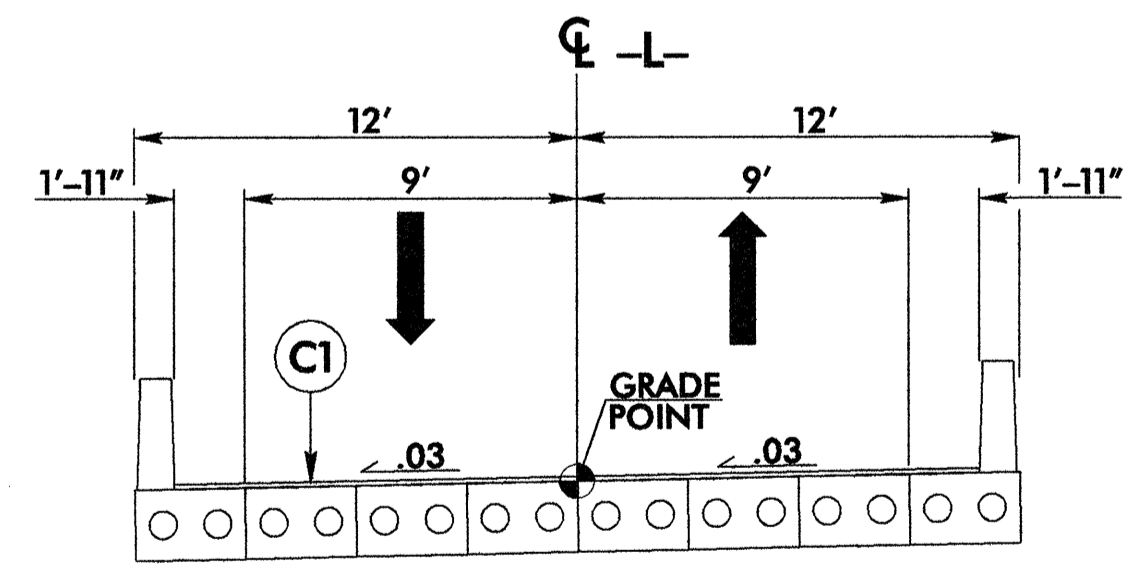


TYPICAL SECTION NO. 1

*NOTE: ADD 3' FOR GUARDRAIL

USE TYPICAL SECTION NO. 1 AS FOLLOWS:

- L- STA. 13+00.00 TO -L- STA. 14+60.00 (BEGIN BRIDGE)
- L- STA. 15+75.00 (END BRIDGE) TO -L- STA. 17+48.79



TYPICAL SECTION ON STRUCTURE

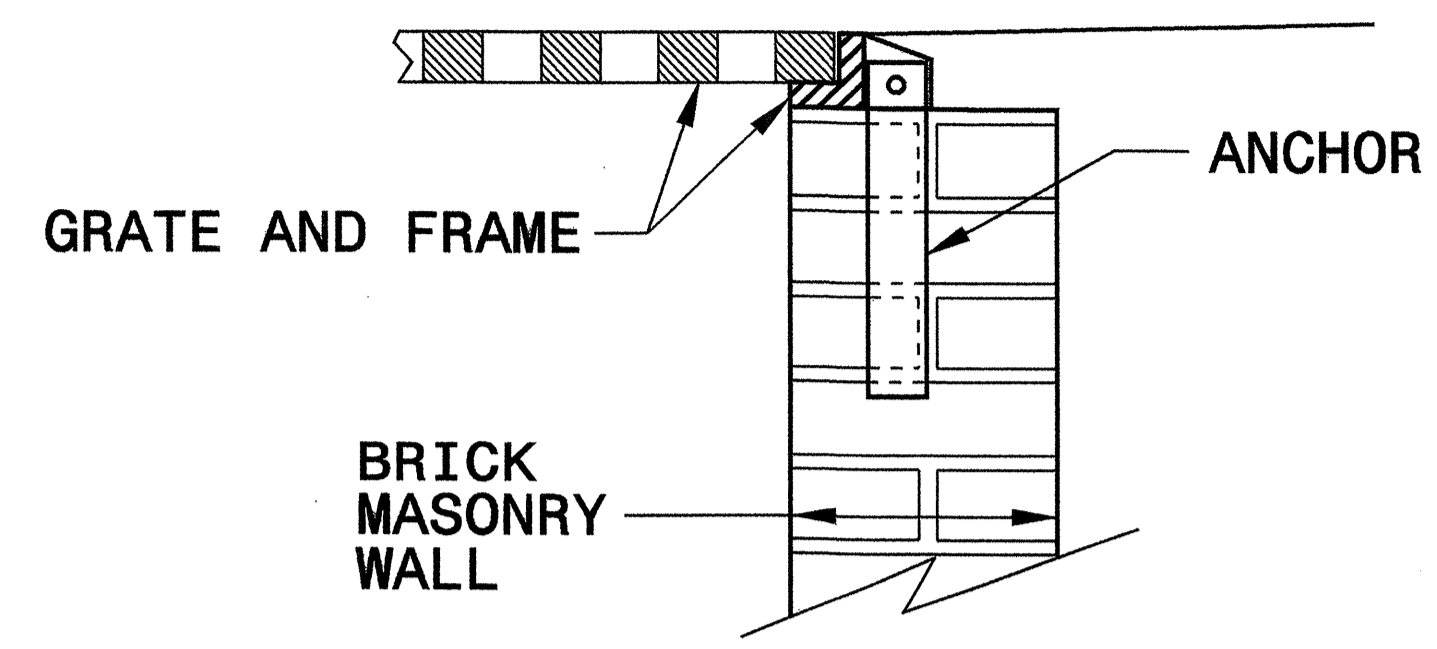
-L- STA. 14+60.00 TO -L- STA. 15+75.00

2:57:40 PM Roadway\Pro\B4322.rdy.tjp.dgn 8/16/2008

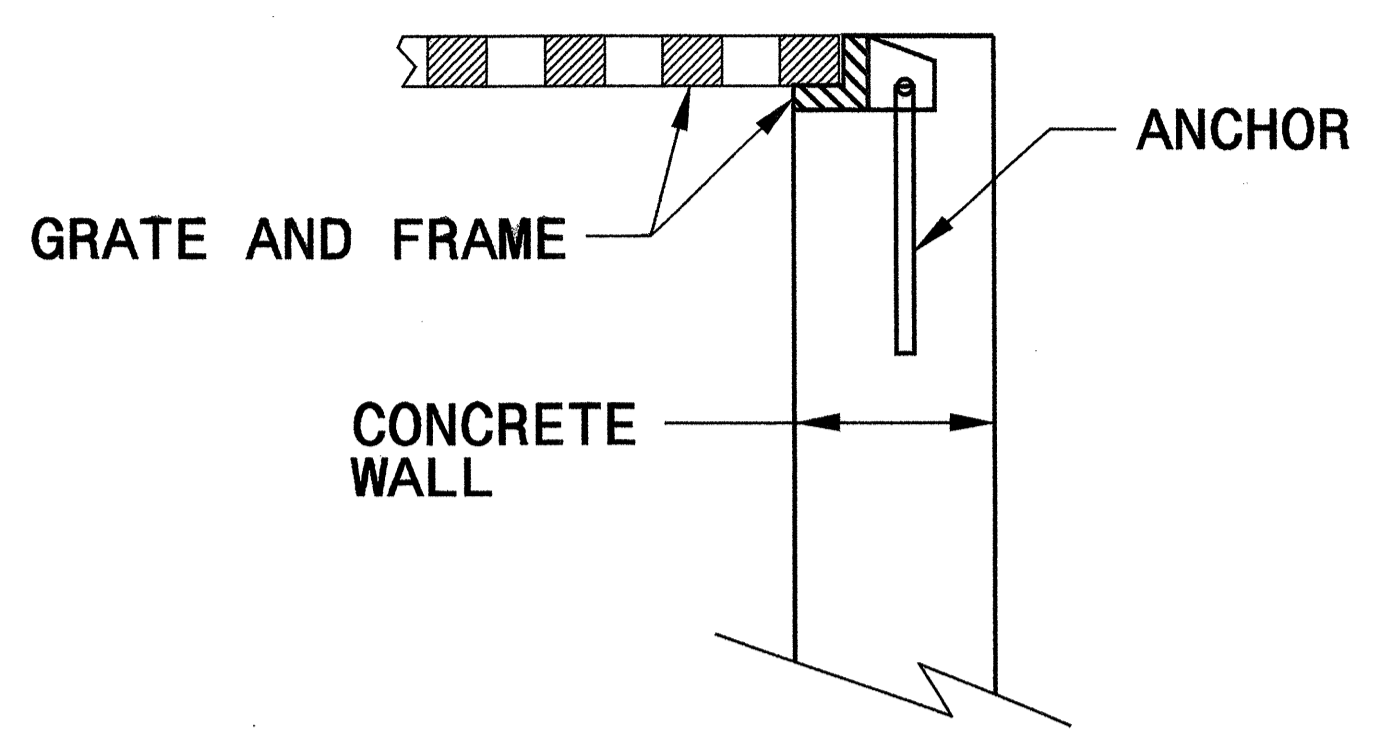
STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
ANCHORAGE FOR FRAMES
BRICK/CONCRETE/PRECAST CONCRETE

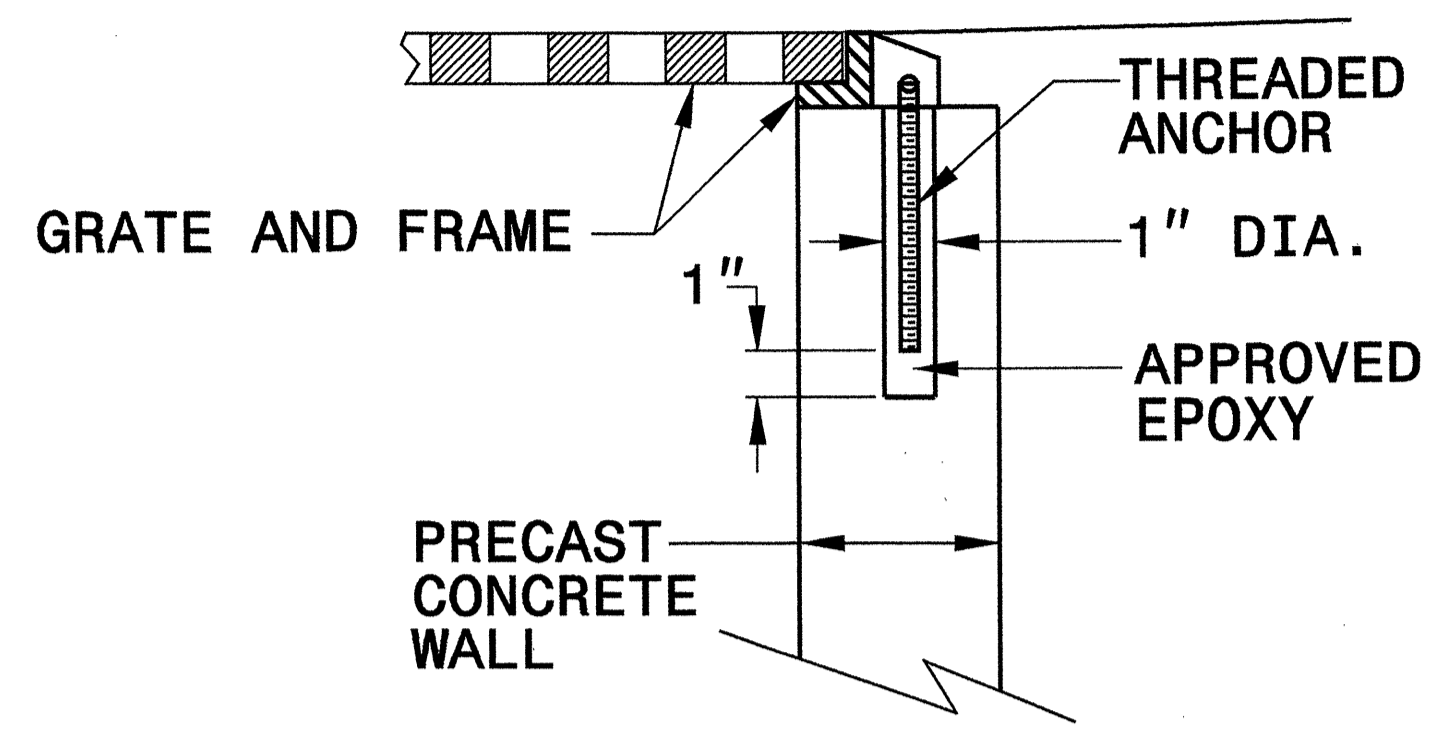
SHEET 1 OF 1
840D25



**BRICK MASONRY
CONSTRUCTION**



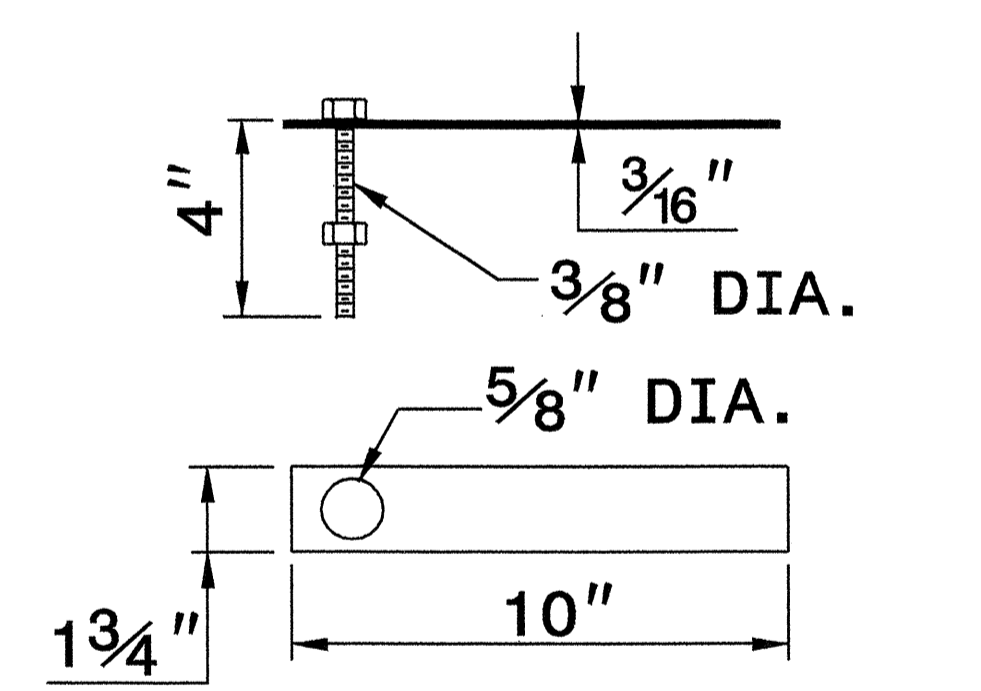
**CONCRETE
CONSTRUCTION**



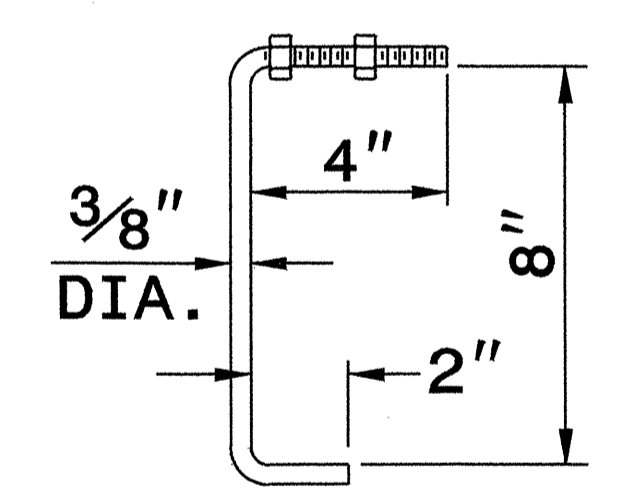
**PRECAST CONCRETE
CONSTRUCTION**

**DETAIL SHOWING ANCHORAGE OF
FRAME FOR GRATED DROP INLET**

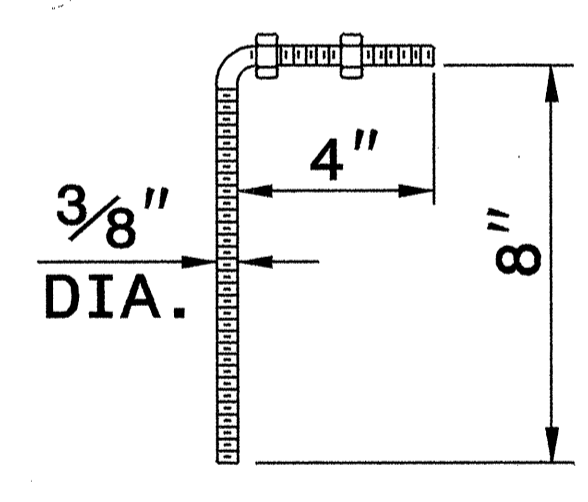
NOTE:
CONSTRUCT GRATED DROP INLET TO COINCIDE WITH NORMAL
OR SUPERELEVATED SHOULDER OR PAVEMENT SLOPE.



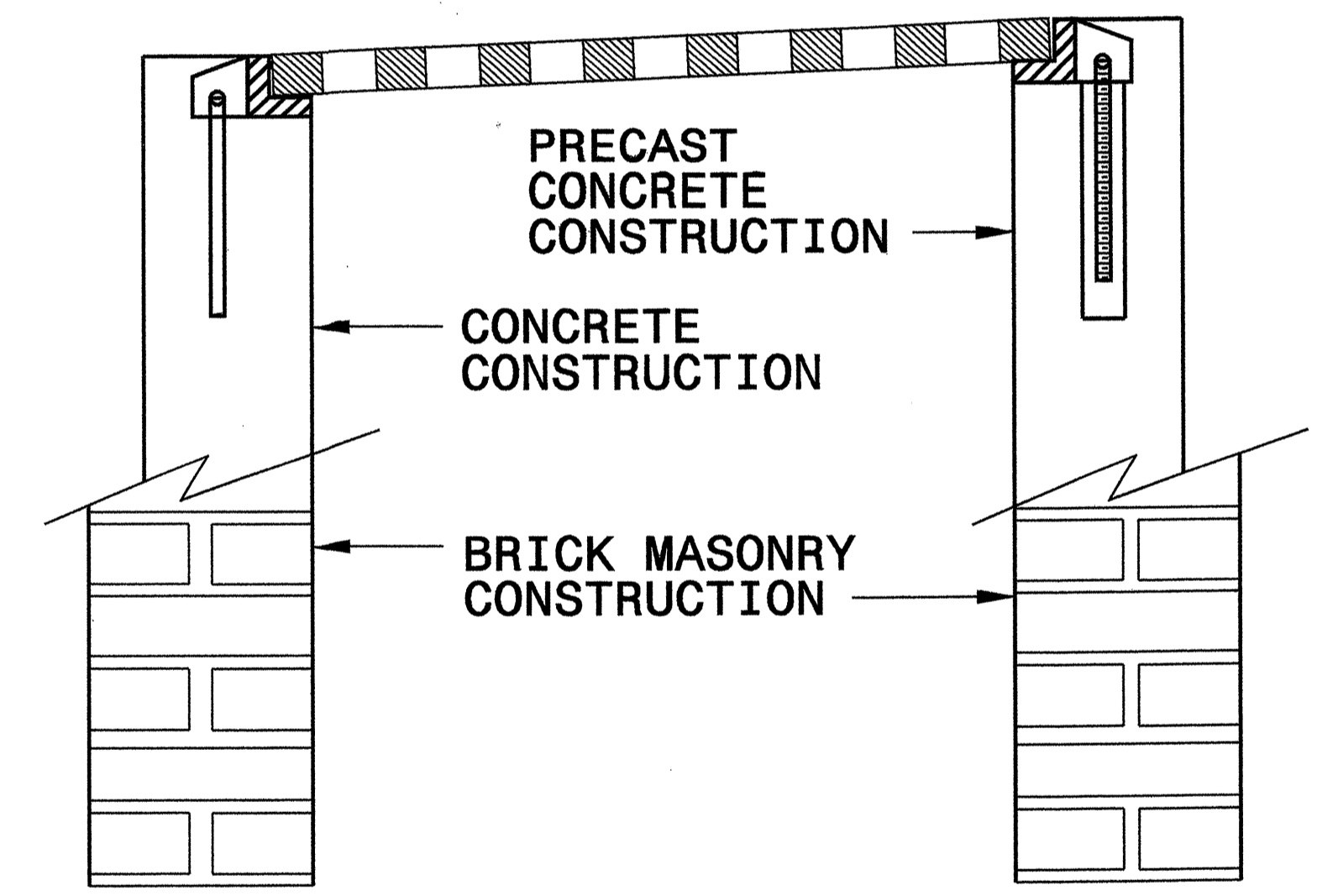
MASONRY ANCHOR
3/8" DIA. BOLT WITH PLATE



CONCRETE ANCHOR
3/8" DIA. BENT BAR



**PRECAST
CONCRETE ANCHOR**
3/8" DIA. BENT BAR



**FRAME AND GRATE INSTALLATION
FOR NORMAL CROWN AND
SUPERELEVATED SECTIONS**

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

ENGLISH DETAIL DRAWING FOR
ANCHORAGE FOR FRAMES
BRICK/CONCRETE/PRECAST CONCRETE

SHEET 1 OF 1
840D25

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

SEE PLATE FOR TITLE

ORIGINAL BY: 2006 STD 840.25 DATE: 07/18/06
 MODIFIED BY: E.E. WARD DATE: 9/25/06
 CHECKED BY: DATE:
 FILE SPEC.:

01-MAR-2007 09:04
 s:\contracts\contract_details\eroward\stds\06\stds to special details\0840d25_anchorage_for_frames\0840d25.dgn
 .jhowerton AT PS212260

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

**STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C201973**

ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION
0000400000-N	801	Lump Sum		CONSTRUCTION SURVEYING
0043000000-N	226	Lump Sum		GRADING
0050000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUB-BING
0057000000-E	226	500	CY	UNDERCUT EXCAVATION
0080000000-E	SP	600	TON	CLASS IV SUBGRADE STABILIZATION
0195000000-E	265	500	CY	SELECT GRANULAR MATERIAL
0196000000-E	270	500	SY	FABRIC FOR SOIL STABILIZATION
0318000000-E	300	11	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRS
0366000000-E	310	52	LF	15" RC PIPE CULVERTS, CLASS III
0714000000-E	310	44	LF	18" BIT COAT CS PIPE CULVERTS, TYPE B 0.064" THICK
0807000000-E	310	2	EA	18" BIT COAT CS PIPE ELBOWS, TYPE B 0.064" THICK
1220000000-E	545	45	TON	INCIDENTAL STONE BASE
1489000000-E	610	150	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B
1525000000-E	610	135	TON	ASPHALT CONC SURFACE COURSE, TYPE SF9.5A
1560000000-E	620	16	TON	ASPHALT BINDER FOR PLANT MIX, GRADE PG 64-22
2000000000-N	806	14	EA	RIGHT OF WAY MARKERS
2022000000-E	815	101	CY	SUBDRAIN EXCAVATION
2033000000-E	815	76	CY	SUBDRAIN FINE AGGREGATE
2044000000-E	815	450	LF	6" PERFORATED SUBDRAIN PIPE
2055000000-E	815	15	EA	6" SUBDRAIN PIPE WYES, TEES, & ELBOWS
2066000000-N	815	1	EA	CONCRETE PAD FOR SUBDRAIN PIPE OUTLET
2077000000-E	815	6	LF	6" OUTLET PIPE (SUBDRAINS)
2209000000-E	838	1	CY	ENDWALLS
2286000000-N	840	1	EA	MASONRY DRAINAGE STRUCTURES

ItemNumber	Sec #	Quantity	Unit	Description
2365000000-N	840	1	EA	FRAME WITH TWO GRATES, STD 840.22
3030000000-E	862	50	LF	STEEL BM GUARDRAIL
3150000000-N	862	5	EA	ADDITIONAL GUARDRAIL POSTS
3165000000-N	SP	4	EA	GUARDRAIL ANCHOR UNITS, TYPE ***** (350, TEST LEVEL II)
3317000000-N	862	4	EA	GUARDRAIL ANCHOR UNITS, TYPE B-77
3628000000-E	876	4	TON	RIP RAP, CLASS I
3649000000-E	876	12	TON	RIP RAP, CLASS B
3656000000-E	876	605	SY	FILTER FABRIC FOR DRAINAGE
4400000000-E	1110	740	SF	WORK ZONE SIGNS (STATIONARY)
4410000000-E	1110	76	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
4445000000-E	1145	120	LF	BARRICADES (TYPE III)
4810000000-E	1205	3,592	LF	PAINT PAVEMENT MARKING LINES (4")
6000000000-E	1605	400	LF	TEMPORARY SILT FENCE
6006000000-E	1610	135	TON	STONE FOR EROSION CONTROL, CLASS A
6009000000-E	1610	35	TON	STONE FOR EROSION CONTROL, CLASS B
6012000000-E	1610	115	TON	SEDIMENT CONTROL STONE
6015000000-E	1615	1.5	ACR	TEMPORARY MULCHING
6018000000-E	1620	50	LB	SEED FOR TEMPORARY SEEDING
6021000000-E	1620	1.25	TON	FERTILIZER FOR TEMPORARY SEEDING
6029000000-E	SP	250	LF	SAFETY FENCE
6030000000-E	1630	165	CY	SILT EXCAVATION
6036000000-E	1631	950	SY	MATTING FOR EROSION CONTROL
6037000000-E	SP	30	SY	COIR FIBER MAT
6038000000-E	SP	150	SY	PERMANENT SOIL REINFORCEMENT MAT
6070000000-N	SP	4	EA	SPECIAL STILLING BASINS

ItemNumber	Sec #	Quantity	Unit	Description
6071010000-E	SP	60	LF	WATTLE
6071020000-E	SP	23	LB	POLYACRYLAMIDE (PAM)
6071030000-E	SP	190	LF	COIR FIBER BAFFLES
6071050000-E	SP	5	EA	*** SKIMMER (1-1/2")
6084000000-E	1660	7.5	ACR	SEEDING & MULCHING
6087000000-E	1660	0.5	LB	MOWING
6090000000-E	1661	50	LB	SEED FOR REPAIR SEEDING
6093000000-E	1661	0.25	TON	FERTILIZER FOR REPAIR SEEDING
6096000000-E	1662	50	LB	SEED FOR SUPPLEMENTAL SEEDING
6108000000-E	1665	0.75	TON	FERTILIZER TOPDRESSING
6114000000-N	SP	5	HR	SPECIALIZED HAND MOWING
6117000000-N	SP	12	EA	RESPONSE FOR EROSION CONTROL

8/17/99

REVISIONS

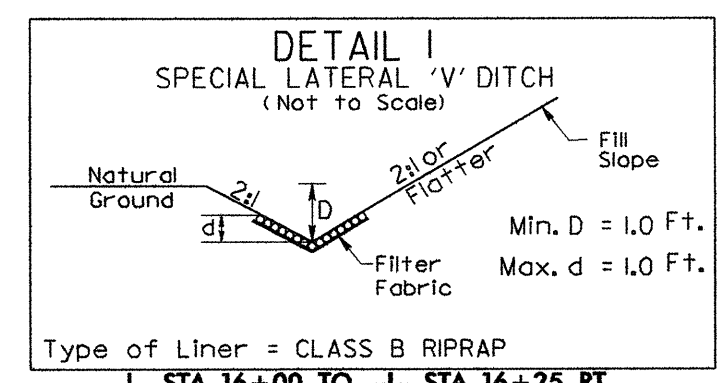
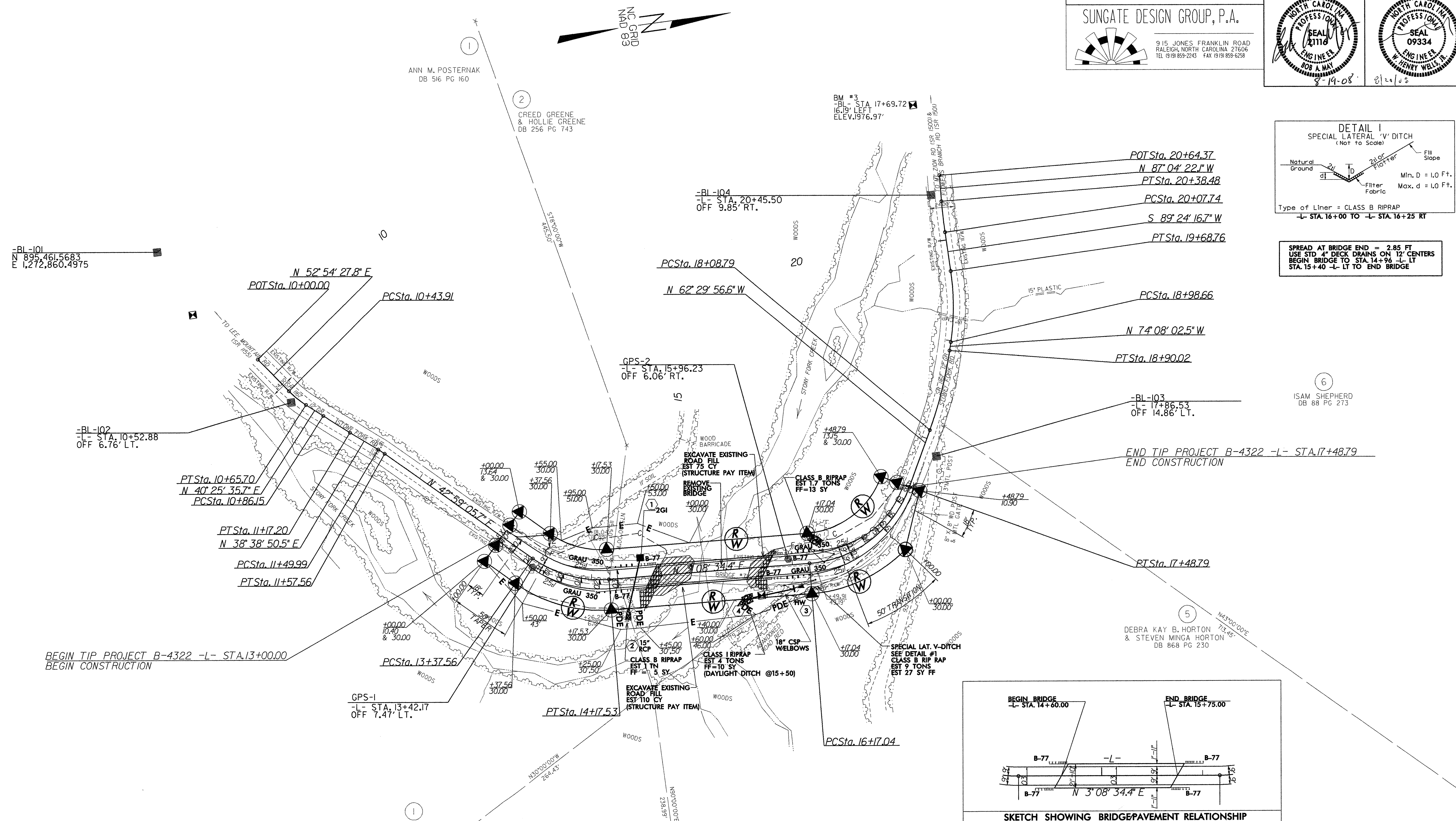
2:58:53 PM Roadway Proj\B-4322_r.dwg psh.dgn
8/16/2008

ETHERILL ENGINEERING
 559 Jones Franklin Rd. Suite 164
 Raleigh, N.C. 27606
 Bus: 919 851 8077
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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

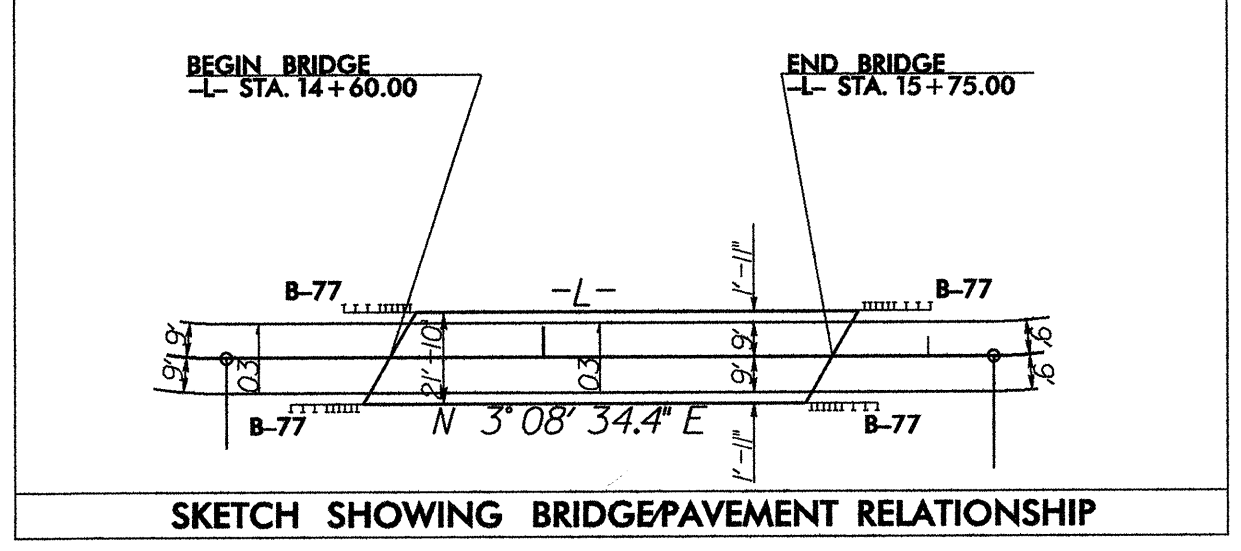
SUNGATE DESIGN GROUP, P.A.
 915 JONES FRANKLIN ROAD
 RALEIGH, NORTH CAROLINA 27606
 TEL (919) 859-2243 FAX (919) 859-6258

PROJECT REFERENCE NO. B-4322	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



SPREAD AT BRIDGE END = 2.85 FT
 USE STD 4" DECK DRAINS ON 12" CENTERS
 BEGIN BRIDGE TO STA. 14+96 -L- LT
 STA. 15+40 -L- LT TO END BRIDGE

PI Sta 13+79.24 Δ = 39° 50' 31.3" (LT) D = 49' 49" 20.7" L = 79.97' T = 41.68' R = 115.00' *SE = 0.03 RO = SEE PLANS V _{DES} = 20 MPH	PI Sta 16+91.21 Δ = 65° 38' 31.0" (LT) D = 49' 49" 20.7" L = 131.75' T = 74.17' R = 115.00' *SE = 0.03 RO = SEE PLANS V _{DES} = 20 MPH
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*NOTE: A DESIGN EXCEPTION IS REQUIRED FOR THE SUPERELEVATION.

SEE SHEET S-1 THRU S-22 FOR STRUCTURE PLANS
 SEE SHEET 5 FOR PROFILE

5/28/99

BM #1
R/R SPIKE SET IN 12" OAK
-BL- STA. 5+70.15' RT.
N 895488 E 1272927

BM #2
R/R SPIKE SET IN 19" WHITE PINE
-BL- STA. 12+16.35' RT.
N 896010 E 1273278
-L- STA. 15+67.03 28.13' RT

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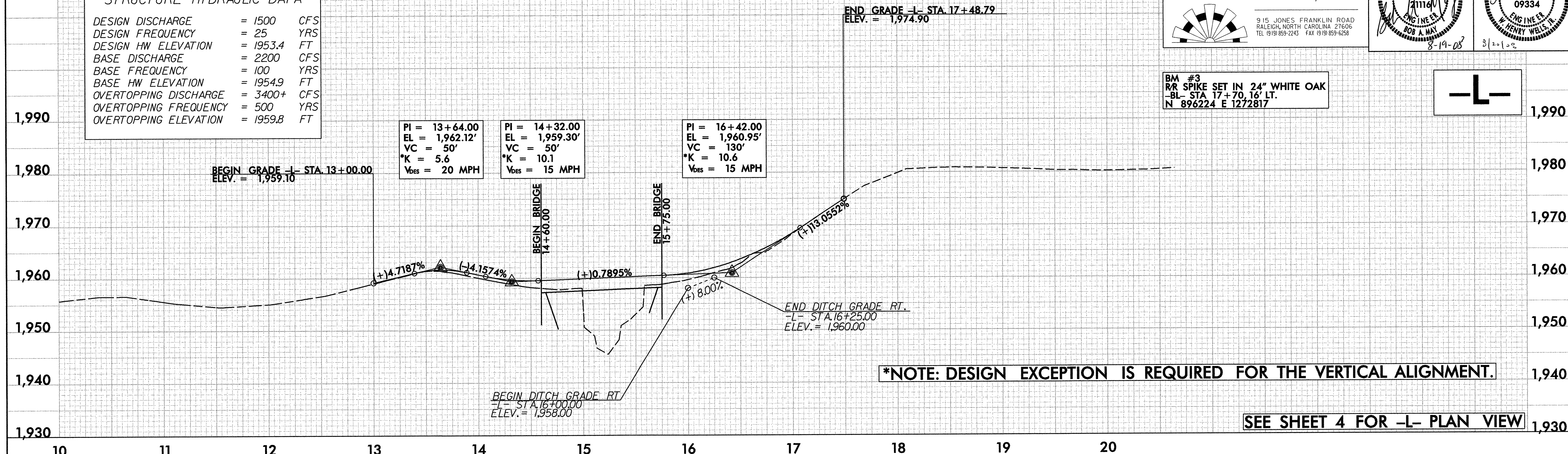
PROJECT REFERENCE NO. B-4322	SHEET NO. 5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

STRUCTURE HYDRAULIC DATA

DESIGN DISCHARGE	= 1500	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 1953.4	FT
BASE DISCHARGE	= 2200	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 1954.9	FT
OVERTOPPING DISCHARGE	= 3400+	CFS
OVERTOPPING FREQUENCY	= 500	YRS
OVERTOPPING ELEVATION	= 1959.8	FT

BM #3
R/R SPIKE SET IN 24" WHITE OAK
-BL- STA. 17+70.16' LT.
N 896224 E 1272817

-L-



SEE SHEET 4 FOR -L- PLAN VIEW

8:38:28 AM Roadway\Proj\B-4322_rdy.p1.dgn 5/18/2009