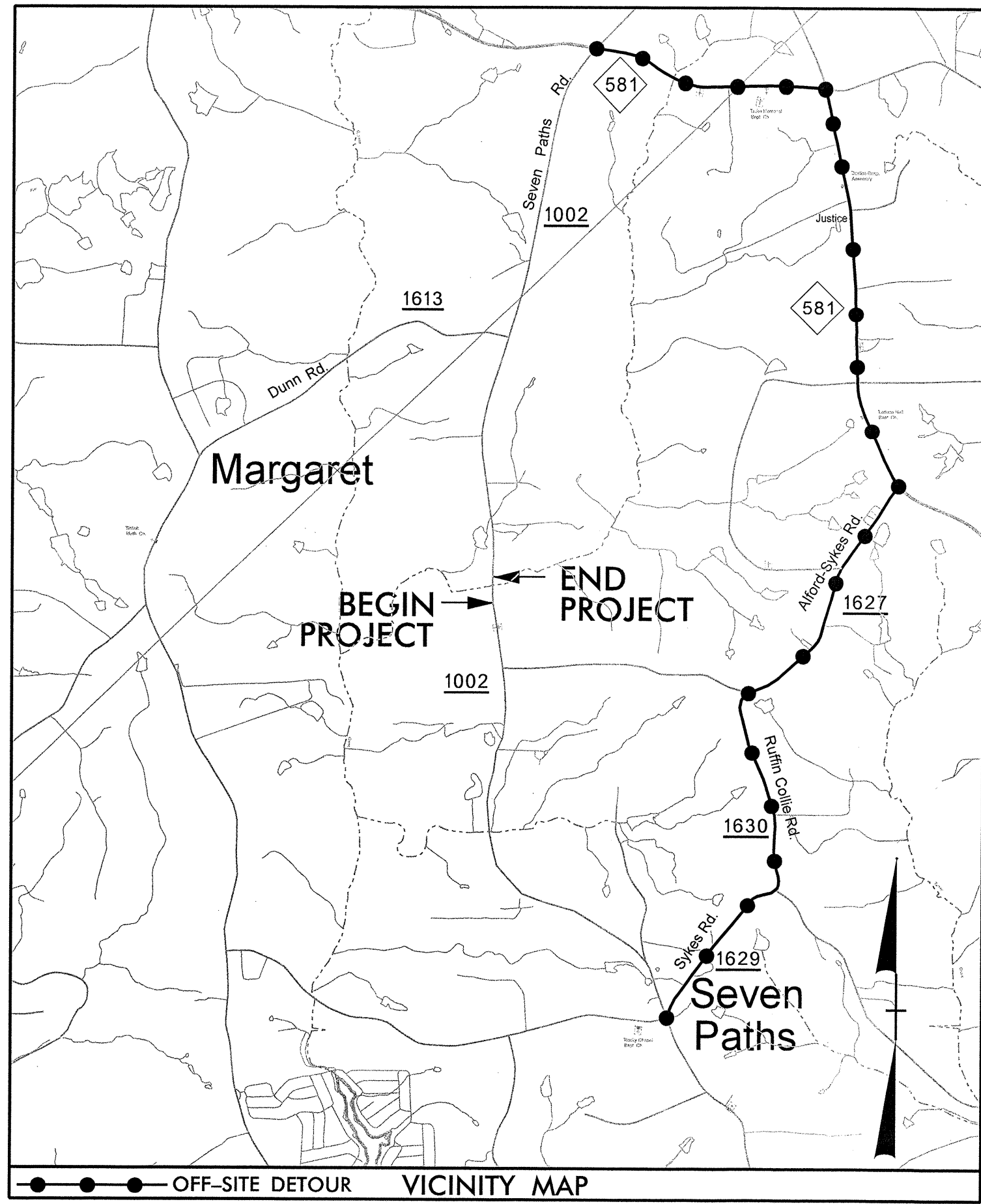


09.08/99

TIP PROJECT: B-4513

CONTRACT: C202952



See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols

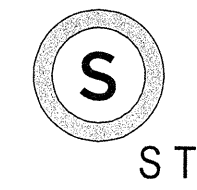
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

FRANKLIN COUNTY


LOCATION: BRIDGE NO. 73 OVER PRONG CYPRESS CREEK
ON SR 1002 (SEVEN PATHS RD.)

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

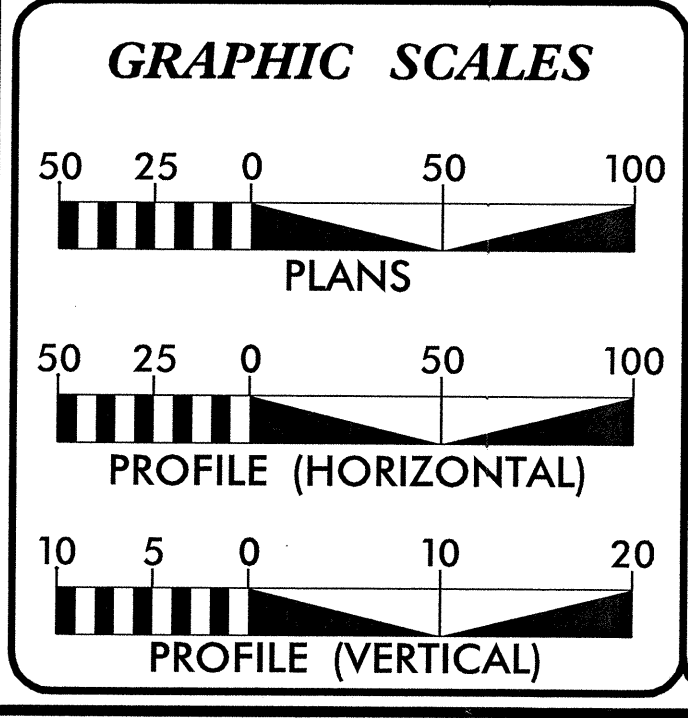
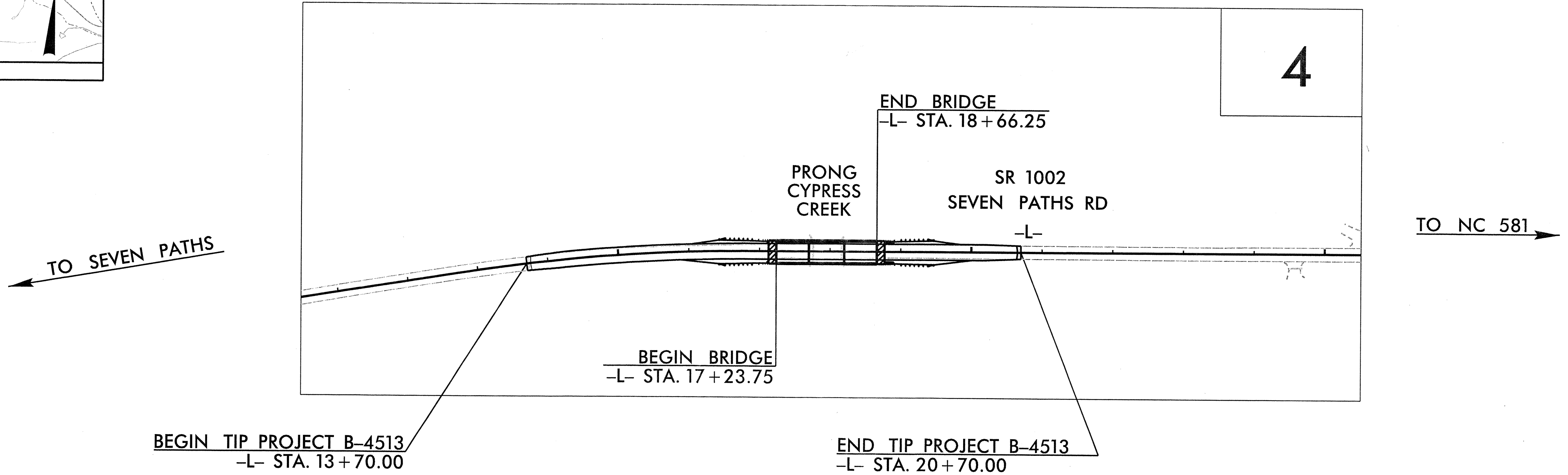
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4513	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33738.1.1	BRSTP-1002(15)	PE	
33738.2.1	BRSTP-1002(15)	RW & UTILITIES	
33738.3.1	BRSTP-1002(15)	CONST	



STEWART
STEWART ENGINEERING INC.
431 FAYETTEVILLE ST., SUITE 400
RALEIGH, NC 27601
P: 919.380.8752
F: 919.380.8752
www.stewart-eng.com
FIRM LICENSE NO. C-1051



SUNGATE DESIGN GROUP, P.A.
916 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27605
TEL: 919.858.2428 FAX: 919.858.4258
ENG FIRM LICENSE NO. C-380



DESIGN DATA

ADT 2012 = 1550
ADT 2032 = 2990
DHV = 10%
D = 60%
T = 3%*
* (TTST 1% + DUAL 2%)
V = 40 MPH
CLASS = RURAL MINOR COLLECTOR
SUBREGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4513	= 0.106 mi.
LENGTH STRUCTURE TIP PROJECT B-4513	= 0.027 mi.
TOTAL LENGTH TIP PROJECT B-4513	= 0.133 mi.

Prepared in the Office of:
STEWART ENGINEERING

For
NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

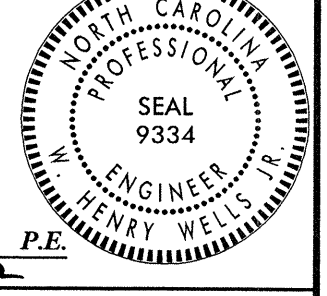
2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
NOVEMBER 7, 2011

LETTING DATE:
NOVEMBER 20, 2012

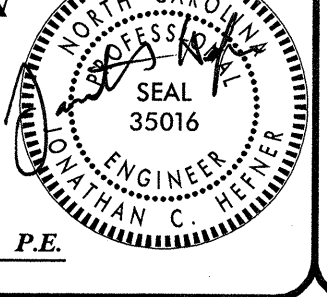
BEN CRAWFORD, PE PROJECT ENGINEER
JONATHAN HEFNER, PE PROJECT DESIGN ENGINEER
BRENDA L. MOORE, PE NCDOT CONTACT

HYDRAULICS ENGINEER

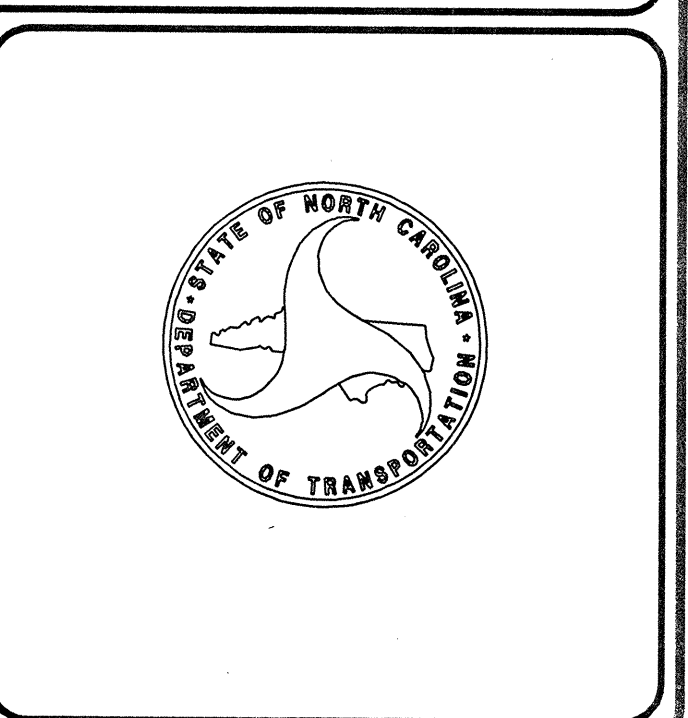


SIGNATURE: *[Signature]* 8/17/12

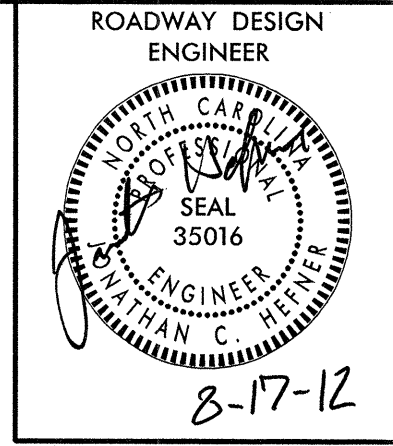
ROADWAY DESIGN ENGINEER



SIGNATURE: *[Signature]* 8/17/12



8/17/2012
C:\Roadway\Proj\B4513.RDY_TSH.dgn
USER: jhefner



INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1-B	CONVENTIONAL SYMBOLS
1-C	SURVEY CONTROL SHEET
2	PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEDGING DETAILS
3	SUMMARY OF QUANTITIES
3-A	EARTHWORK, DRAINAGE, GUARDRAIL, SHOULDER BERM GUTTER, AND ASPHALT PAVEMENT REMOVAL SUMMARIES
4	PLAN & PROFILE SHEET
TMP-1 THRU TMP-2	TRANSPORTATION MANAGEMENT PLANS
SD-1	SPECIAL SIGN DESIGN PLANS
PMP-1	PAVEMENT MARKING PLANS
EC-1 THRU EC-5	EROSION CONTROL PLANS
RF-1	REFORESTATION DETAIL SHEET
SIGN-1 THRU SIGN-2	SIGNING PLANS
UD-1 THRU UD-2	UTILITIES BY OTHERS PLANS
X-1	CROSS SECTION SUMMARY AND INDEX
X-2 THRU X-3	CROSS-SECTIONS
S-1 THRU S-21	STRUCTURE PLANS

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

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

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

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

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

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
Progress Energy - Power Distribution
Century Link - Telephone
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.

2012 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2012 are applicable to this project and by reference hereby are considered a part of these plans:

STD. NO.	TITLE
DIVISION 2 - EARTHWORK	
200.03	Method of Clearing - Method III
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
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 Superelevated Curve - Method I
DIVISION 8 - INCIDENTALS	
806.01	Concrete Right-of-Way Marker
806.02	Granite Right-of-Way Marker
840.00	Concrete Base Pad for Drainage Structures
840.25	Anchorages 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
876.04	Drainage Ditches with Class 'B' Rip Rap

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

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	-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: Boundary or Site	☠ ☠
Potential Soil Contamination: Boundary or Site	☠ ☠

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○
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	→
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	-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	○
Curb Cut Future 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	□
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 B-4513

FRANKLIN COUNTY

LOCATION: BRIDGE NO. 73 OVER PRONG CYPRESS CREEK ON SR 1002 (SEVEN PATHS RD.)

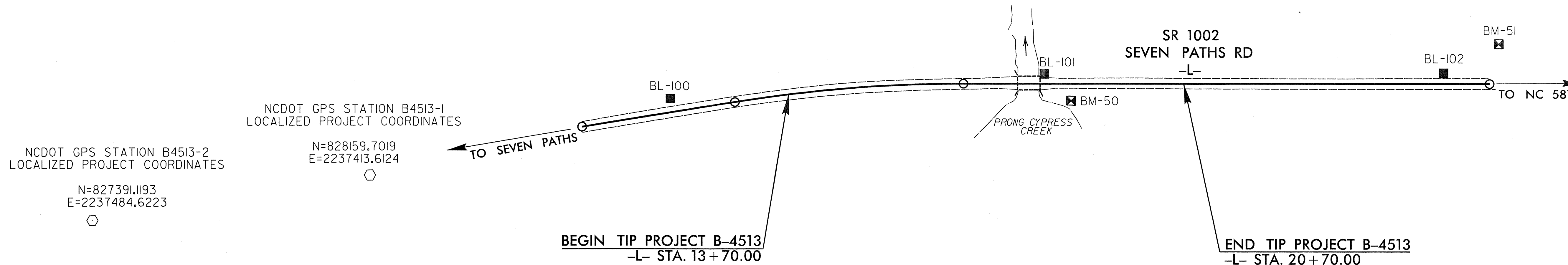
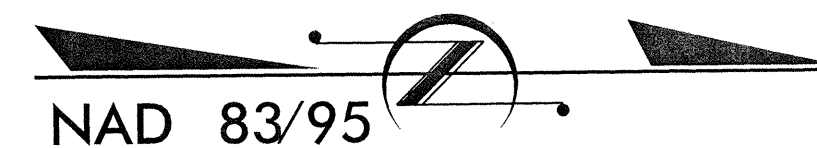
ROW MARKER CONCRETE OR GRANITE

ALIGN	STATION	OFFSET	NORTH	EAST
L	13+70.00	-30.00	82899.5159	2237250.7676
L	13+70.00	30.00	828906.0643	2237310.4091
L	14+50.00	-38.00	828979.4709	2237235.2196
L	14+50.00	48.00	828986.1813	2237320.9574
L	15+50.00	-43.00	829080.5796	2237224.2826
L	16+00.00	45.00	829133.1140	2237310.7775
L	16+80.00	40.00	829211.7598	2237305.4722
L	16+80.00	-40.00	829212.6986	2237225.4777
L	18+70.00	-40.00	829402.6883	2237227.7073
L	19+40.00	40.00	829471.7447	2237308.5233
L	20+70.00	30.00	829601.8531	2237300.0495
L	20+70.00	-30.00	829602.5572	2237240.0536

TYPE	STATION	NORTH	EAST
POT	10+00.00	828536.5353	2237332.9717
PC	12+73.79	828807.3763	2237292.8856
PT	16+80.00	829212.2292	2237265.4750
POT	26+11.50	830143.6710	2237276.4059

PERMANENT EASEMENT

ALIGN	STATION	OFFSET	NORTH	EAST
L	16+56.00	64.00	829188.0725	2237329.3144
L	18+70.00	-55.00	829402.8643	2237212.7084
L	19+00.00	-55.00	829432.8623	2237213.0604
L	19+60.00	-35.50	829492.6297	2237233.2632



CONTROL DATA

BASELINE POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
1	B4513-1	828159.7019	2237413.6124	263.00	OUTSIDE PROJECT LIMITS	
100	BL-100	828693.1844	2237285.2937	258.04	11+61.94	24.23 LT
101	BL-101	829355.5986	2237249.5045	223.55	18+23.17	17.65 LT
102	BL-102	830062.3210	2237256.4507	243.46	25+29.92	19.00 LT

BENCHMARK DATA

BM50 ELEVATION = 221.11'
 N 829402 E 2237298
 L STATION 18+71 30' RIGHT
 RRS SET IN 36 INCH SWEET GUM

BM51 ELEVATION = 241.54'
 N 830161 E 2237206
 FROM L STATION 26+12
 N 76° 17' 55.7" W DIST 71.95'
 RRS SET IN 17 INCH SWEET GUM

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B4513-1" WITH NAD 83/95 STATE PLANE GRID COORDINATES OF NORTHING: 828159.7019(±) EASTING: 2237413.6124(±) ELEVATION: 263.00(±)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99995534

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4513-1" TO -L- STATION 13+70.00 IS N 10°08'56.8" W 754.90'

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

NOTE: DRAWING NOT TO SCALE

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/B4513_ls_control.txt](http://www.ncdot.org/doh/preconstruct/highway/location/project/B4513_ls_control.txt)

SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

○ INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.

PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM. NETWORK ESTABLISHED FROM NGS ONLINE POSITIONING SERVICE (OPUS)

6/2/99

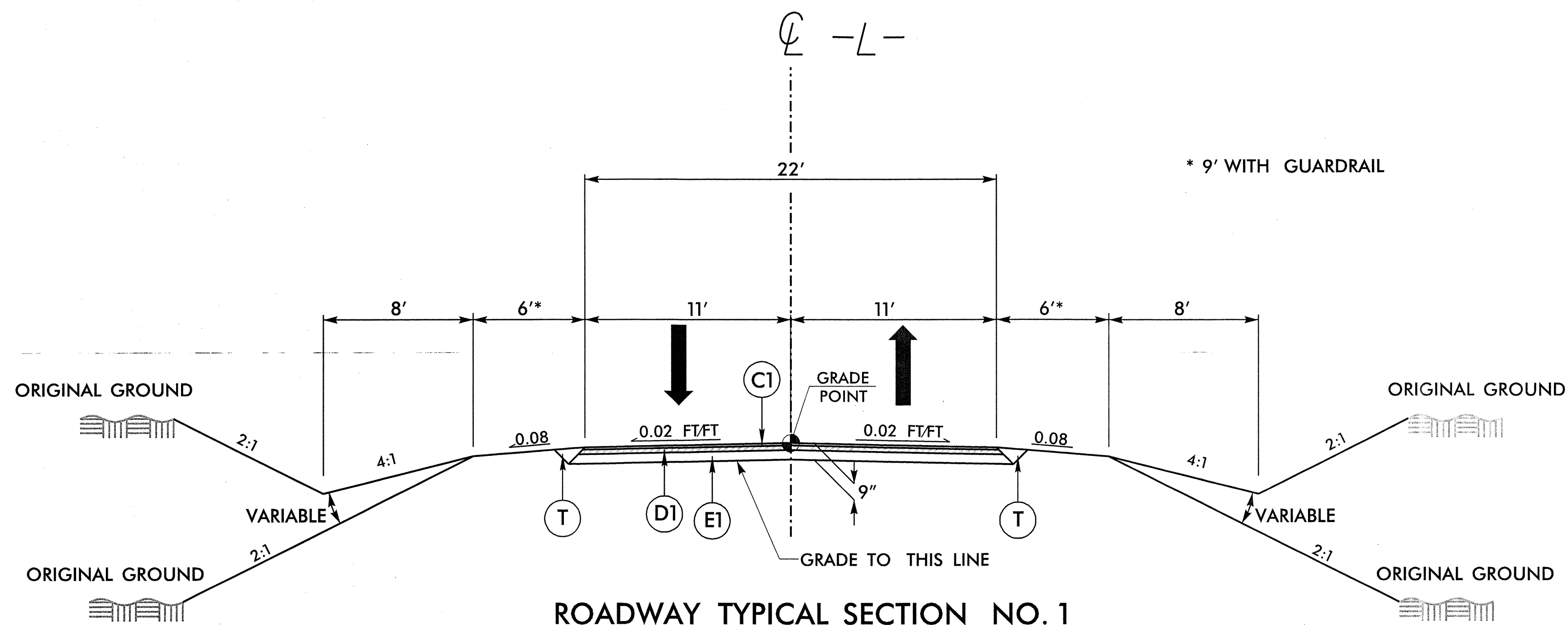
NOTE: TRANSITION FROM EXISTING TO TYPICAL SECTION NO. 2 -L- STA. 13+70.00 TO -L- STA. 14+20.00
 TRANSITION FROM TYPICAL SECTION NO. 2 TO EXISTING -L- STA. 20+20.00 TO -L- STA. 20+70.00



STEWART ENGINEERING INC.
 40 FAYETTEVILLE ST. SUITE 400
 RALEIGH, NC 27601
 P 919.840.8100
 F 919.840.8102
 www.stewarteng.com
 STATE LICENSE NO. 0-1051

SUNGATE DESIGN GROUP, P.A.
 815 JONES FARM ROAD
 RALEIGH, NC 27604
 TEL 919.840.2200 FAX 919.840.2209
 www.sungate.com

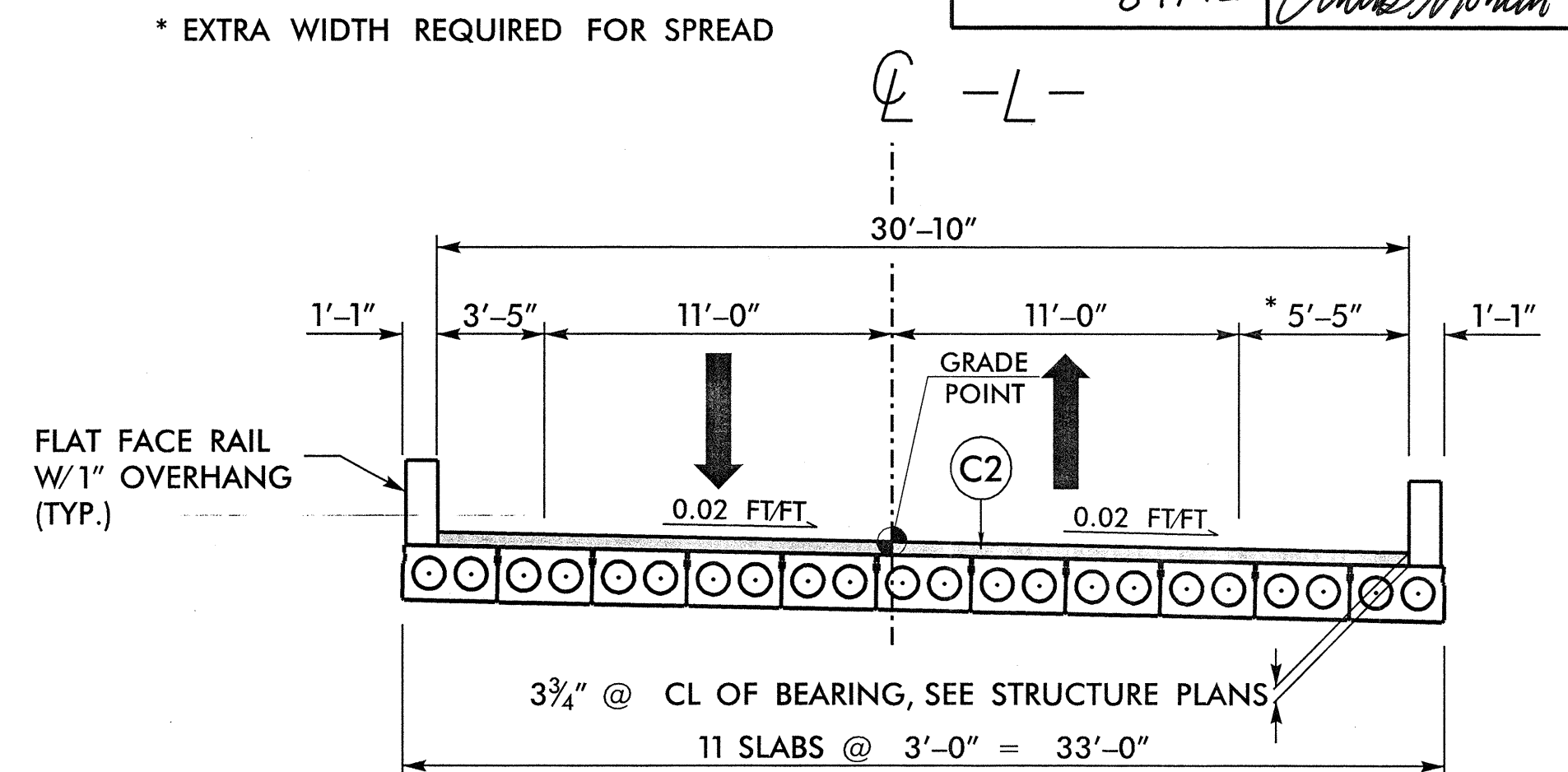
PROJECT REFERENCE NO. B-4513	SHEET NO. 2
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER
8-17-12	<i>Chris Morin</i>



ROADWAY TYPICAL SECTION NO. 1

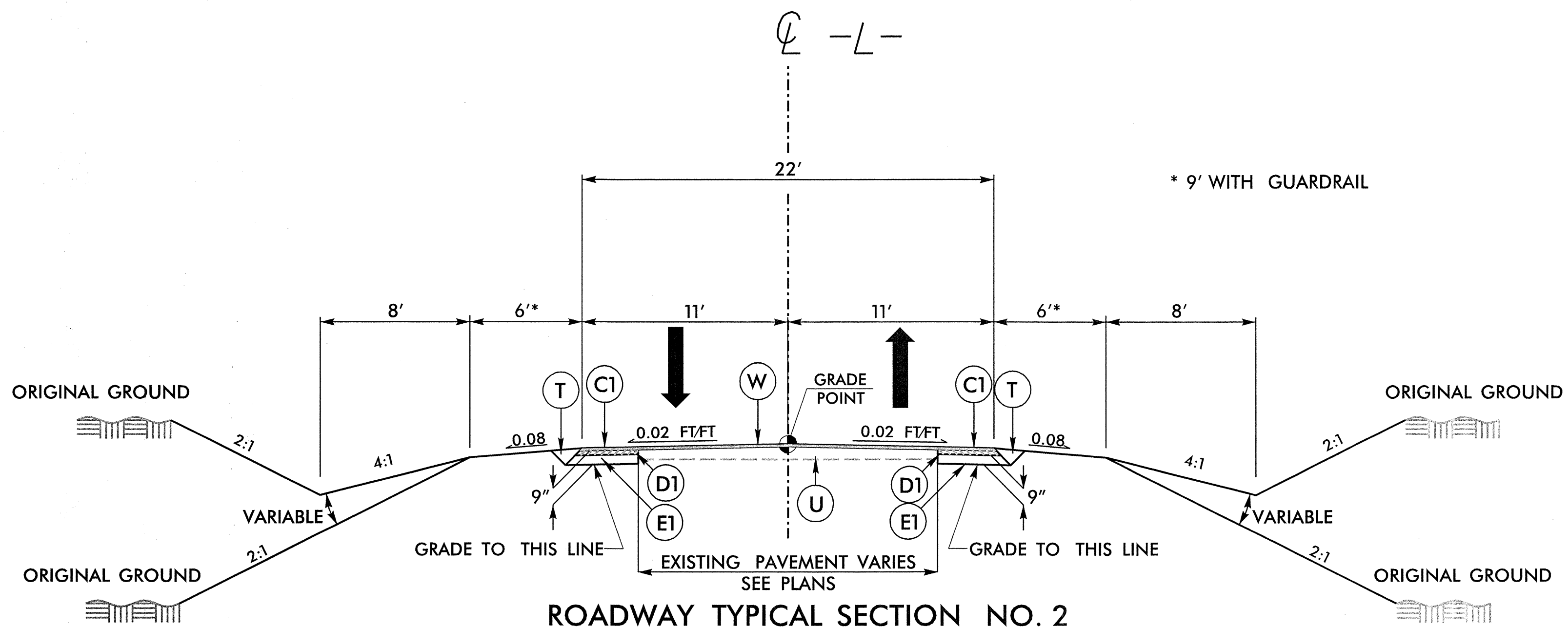
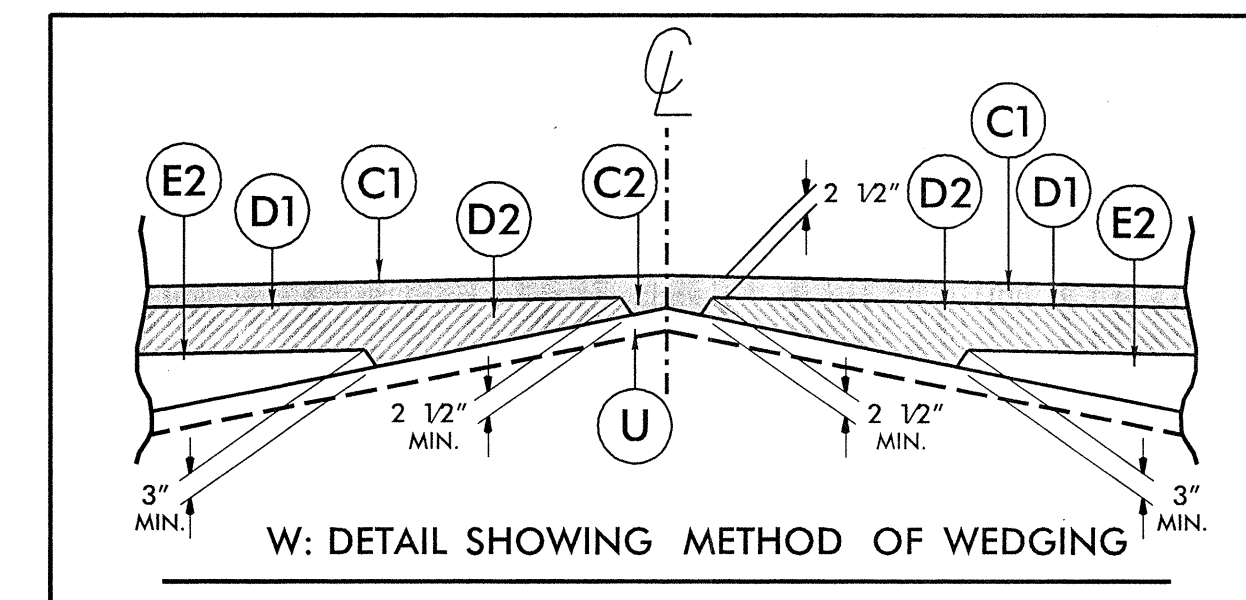
USE ROADWAY TYPICAL SECTION

-L- STA. 15+00.00 TO -L- STA. 17+23.75 (BEGIN BRIDGE)
 -L- STA. 18+66.25 (END BRIDGE) TO -L- STA. 19+50.00



BRIDGE TYPICAL SECTION

USE BRIDGE TYPICAL SECTION
 -L- STA. 17+23.75 TO -L- STA. 18+66.25
 ASSUMED BRIDGE TYPE = CORED SLAB



ROADWAY TYPICAL SECTION NO. 2

USE ROADWAY TYPICAL SECTION

-L- STA. 14+20.00 TO -L- STA. 15+00.00
 -L- STA. 19+50.00 TO -L- STA. 20+20.00

PAVEMENT SCHEDULE

C1	PROP. APPROX. 2 1/2" 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 1 1/2" IN DEPTH.
D1	PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 2 1/2" 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 5 1/2" IN DEPTH.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	WEDGING (SEE STANDARD WEDGING DETAIL)

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

8/17/2012
 C:\Users\jw\Documents\Projects\B4513_RDY_TYP.dgn
 jw

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
SUMMARY OF QUANTITIES

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C202952

ItemNumber	Sec #	Quantity	Unit	Description
000100000-N	800	Lump Sum		MOBILIZATION
003000000-N	SP	Lump Sum		BRIDGE APPROACH FILL - SUB REGIONAL TIER, STATION ***** (17+95.00)
005000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUB-BING
005700000-E	226	200	CY	UNDERCUT EXCAVATION
006300000-N	SP	Lump Sum		GRADING
010600000-E	230	1,500	CY	BORROW EXCAVATION
013400000-E	240	5	CY	DRAINAGE DITCH EXCAVATION
019500000-E	265	200	CY	SELECT GRANULAR MATERIAL
019600000-E	270	300	SY	GEOTEXTILE FOR SOIL STABILIZATION
031800000-E	300	10	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES
032000000-E	300	20	SY	FOUNDATION CONDITIONING GEOTEXTILE
033520000-E	305	16	LF	15" DRAINAGE PIPE
044820000-E	310	32	LF	15" RC PIPE CULVERTS, CLASS IV
122000000-E	545	75	TON	INCIDENTAL STONE BASE
133000000-E	607	230	SY	INCIDENTAL MILLING
148900000-E	610	260	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B
149800000-E	610	160	TON	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0B
152500000-E	610	290	TON	ASPHALT CONC SURFACE COURSE, TYPE SF9.5A
157500000-E	620	40	TON	ASPHALT BINDER FOR PLANT MIX
200000000-N	806	12	EA	RIGHT OF WAY MARKERS
228600000-N	840	2	EA	MASONRY DRAINAGE STRUCTURES
236700000-N	840	2	EA	FRAME WITH TWO GRATES, STD 840.29
255600000-E	846	29.5	LF	SHOULDER BERM GUTTER
303000000-E	862	50	LF	STEEL BM GUARDRAIL
315000000-N	862	3	EA	ADDITIONAL GUARDRAIL POSTS

ItemNumber	Sec #	Quantity	Unit	Description
321500000-N	862	4	EA	GUARDRAIL ANCHOR UNITS, TYPE III
327000000-N	SP	4	EA	GUARDRAIL ANCHOR UNITS, TYPE 350
363500000-E	876	140	TON	RIP RAP, CLASS II
364900000-E	876	217	TON	RIP RAP, CLASS B
365600000-E	876	1,780	SY	GEOTEXTILE FOR DRAINAGE
365900000-N	SP	2	EA	PREFORMED SCOUR HOLES WITH LEVEL SPREADER APRON
407200000-E	903	90	LF	SUPPORTS, 3-LB STEEL U-CHANNEL
409600000-N	904	2	EA	SIGN ERECTION, TYPE D
411610000-N	904	1	EA	SIGN ERECTION, RELOCATE, TYPE **** (GROUND MOUNTED) (E)
415500000-N	907	3	EA	DISPOSAL OF SIGN SYSTEM, U-CHANNEL
419200000-N	907	1	EA	DISPOSAL OF SUPPORT, U-CHANNEL
423800000-N	907	1	EA	DISPOSAL OF SIGN, D, E OR F
440000000-E	1110	517	SF	WORK ZONE SIGNS (STATIONARY)
441000000-E	1110	144	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
444500000-E	1145	112	LF	BARRICADES (TYPE III)
481000000-E	1205	5,600	LF	PAINT PAVEMENT MARKING LINES (4")
600000000-E	1605	760	LF	TEMPORARY SILT FENCE
600600000-E	1610	160	TON	STONE FOR EROSION CONTROL, CLASS A
600900000-E	1610	75	TON	STONE FOR EROSION CONTROL, CLASS B
601200000-E	1610	255	TON	SEDIMENT CONTROL STONE
601500000-E	1615	1	ACR	TEMPORARY MULCHING
601800000-E	1620	50	LB	SEED FOR TEMPORARY SEEDING
602100000-E	1620	1.25	TON	FERTILIZER FOR TEMPORARY SEEDING
602400000-E	1622	200	LF	TEMPORARY SLOPE DRAINS
602900000-E	SP	300	LF	SAFETY FENCE
603000000-E	1630	150	CY	SILT EXCAVATION
603600000-E	1631	2,200	SY	MATTING FOR EROSION CONTROL
603700000-E	SP	750	SY	COIR FIBER MAT
603800000-E	SP	250	SY	PERMANENT SOIL REINFORCEMENT MAT
604200000-E	1632	100	LF	1/4" HARDWARE CLOTH
604800000-E	SP	160	SY	FLOATING TURBIDITY CURTAIN
607000000-N	1639	12	EA	SPECIAL STILLING BASINS
6071012000-E	SP	40	LF	COIR FIBER WATTLE
6071030000-E	1640	110	LF	COIR FIBER BAFFLE
6071050000-E	SP	2	EA	*** SKIMMER (1-1/2")
608400000-E	1660	1	ACR	SEEDING & MULCHING
608700000-E	1660	0.5	ACR	MOWING
609000000-E	1661	50	LB	SEED FOR REPAIR SEEDING
609300000-E	1661	0.25	TON	FERTILIZER FOR REPAIR SEEDING
609600000-E	1662	50	LB	SEED FOR SUPPLEMENTAL SEEDING
610800000-E	1665	0.75	TON	FERTILIZER TOPDRESSING
611450000-N	1667	10	MHR	SPECIALIZED HAND MOWING
611700000-N	SP	13	EA	RESPONSE FOR EROSION CONTROL
612300000-E	1670	0.1	ACR	REFORESTATION

12/06/07

COMPUTED BY: JCH DATE: 9-28-11
CHECKED BY: BRC DATE: 9-28-11

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO. B-4513 SHEET NO. 3-A
STEWART ENGINEERING INC. SUNGATE DESIGN GROUP, P.A.

SUMMARY OF EARTHWORK

IN CUBIC YARDS

Table with columns: STATION, UNCL. EXCAV., EMBANK. +%, BORROW, WASTE. Includes subtotals for PROJECT SUBTOTAL and PROJECT TOTAL.

Note: 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."
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.

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

SHOULDER BERM GUTTER SUMMARY

Table with columns: SURVEY LINE, STATION, LOCATION, LENGTH. Includes a TOTAL row.

PAVEMENT REMOVAL SUMMARY

Table with columns: SURVEY LINE, STATION, LOCATION LTRVCL, YD². Includes a TOTAL row.

SUB-REGIONAL & REGIONAL
LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48" & UNDER)

Main table for pipe and structure details. Columns include STATION, LOCATION, STRUCTURE NO., DRAINAGE PIPE, C.S. PIPE, R.C. PIPE, ENDWALLS, and various structural details.

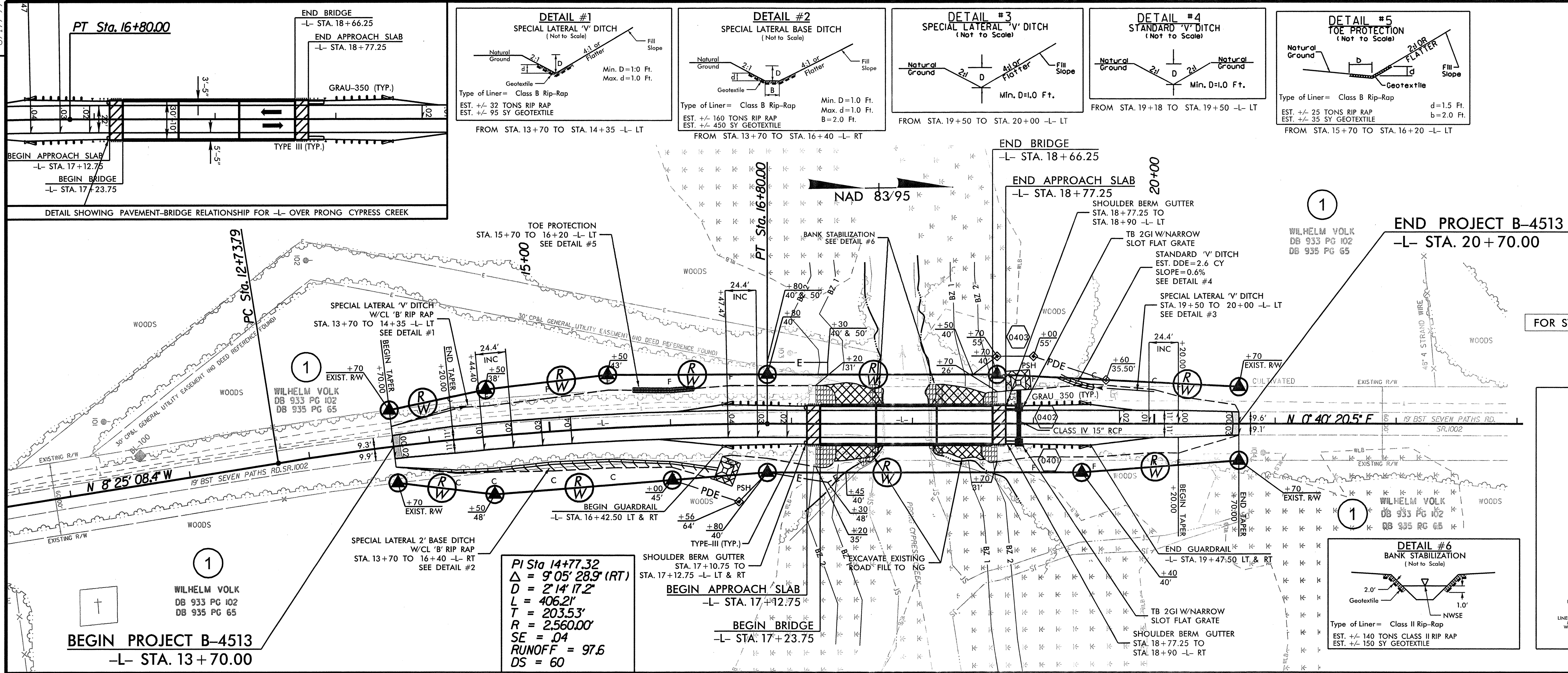
GUARDRAIL SUMMARY

Table for guardrail details. Columns include SURVEY LINE, BEG. STA., END STA., LOCATION, LENGTH, WARRANT POINT, FLARE LENGTH, W, ANCHORS, IMPACT ATTENUATOR, and REMARKS.

8/17/2012 11:58:16 AM Roadway\Proj\B4513_RDY_SUM.dgn

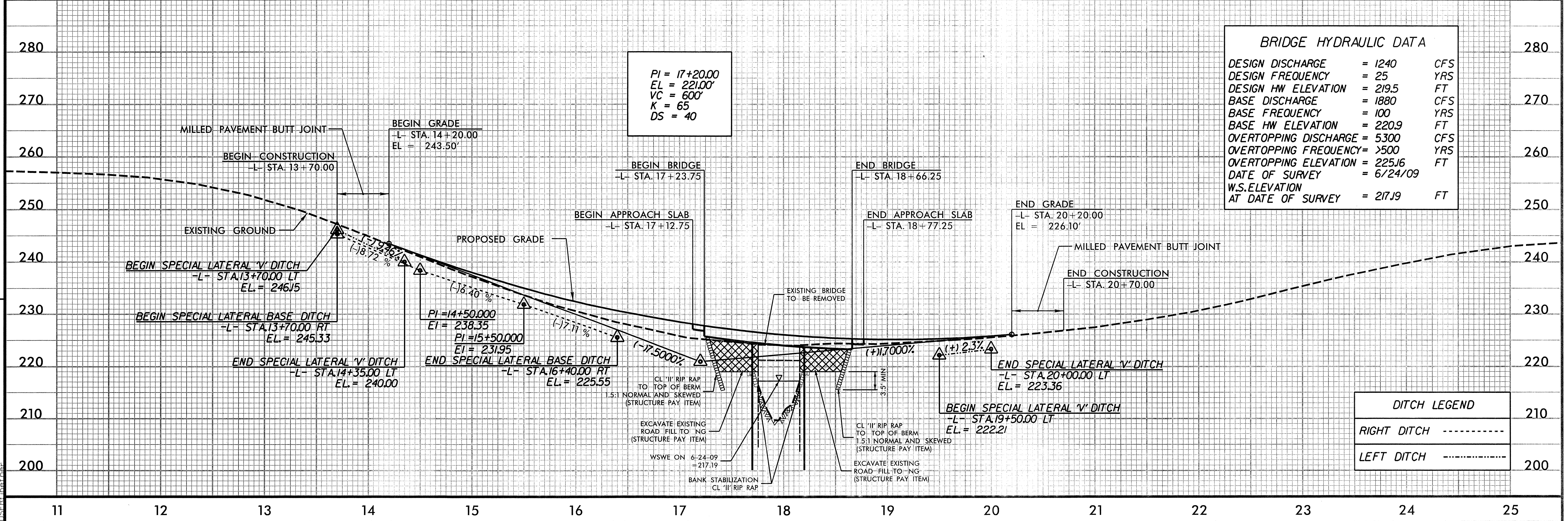
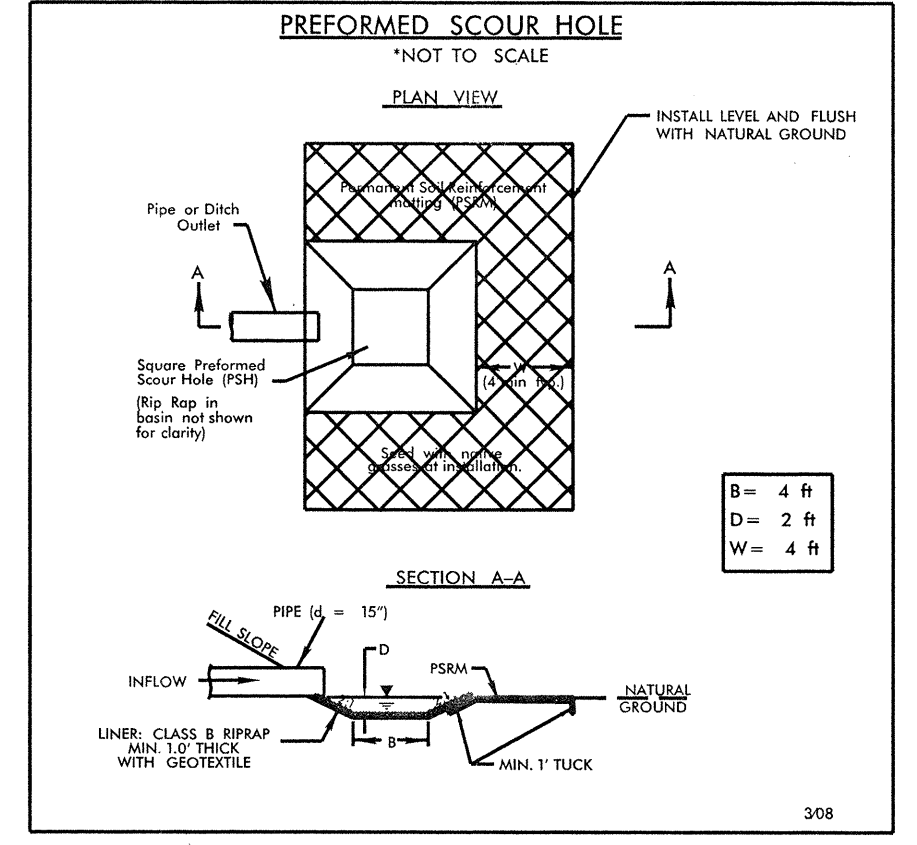
ADDITIONAL GUARDRAIL POSTS = 3

8/17/09



PROJECT REFERENCE NO. B-4513	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER

FOR STRUCTURE PLANS, SEE SHEETS S1 THRU S21



RIGHT DITCH	-----
LEFT DITCH	-----

REVISIONS

8/17/2012
S:\Roadway\Projects\B4513\RDY_PSH.dgn
USER: jmf