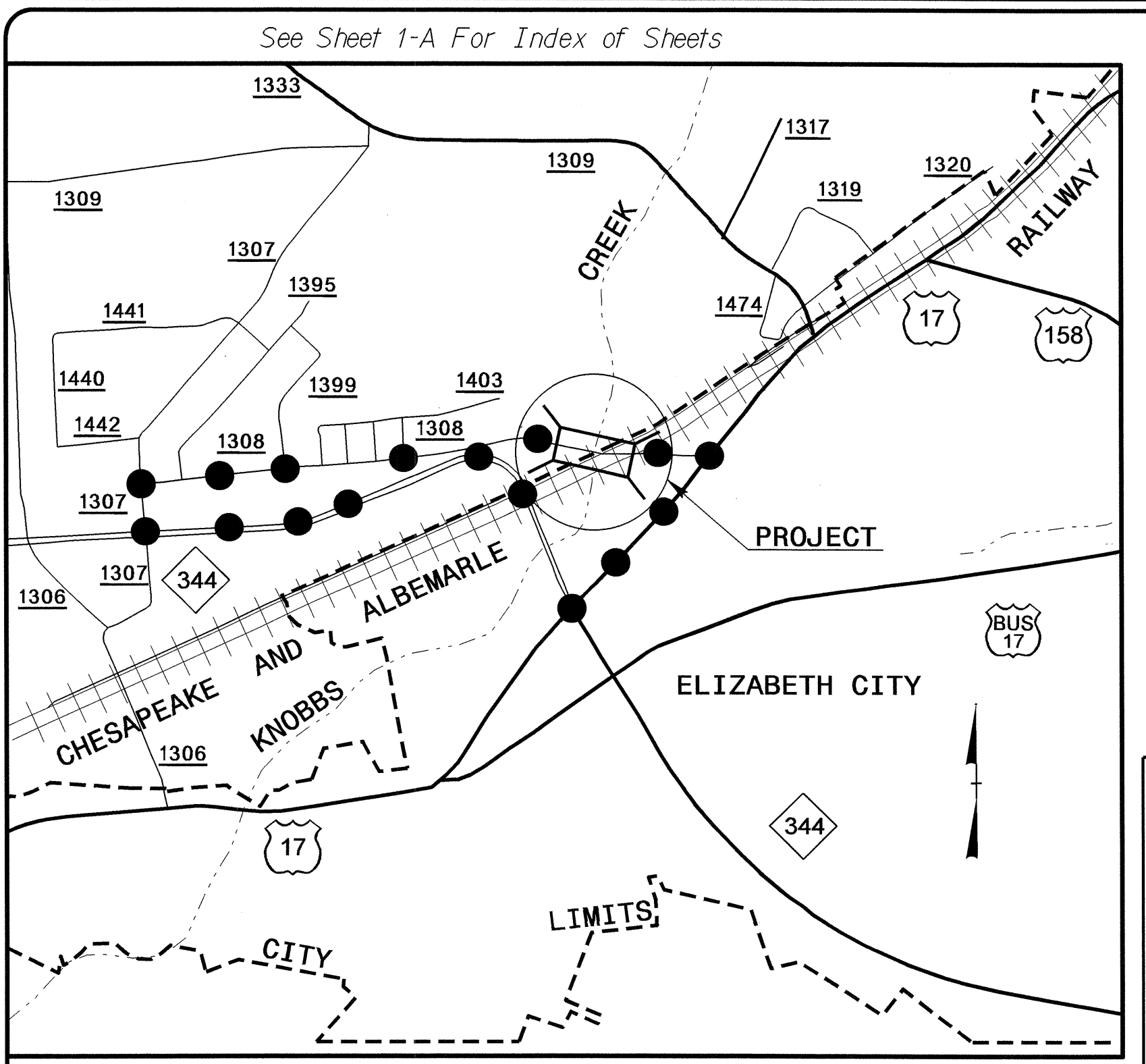


09/08/99

TIP PROJECT: B-4922

CONTRACT: C202884



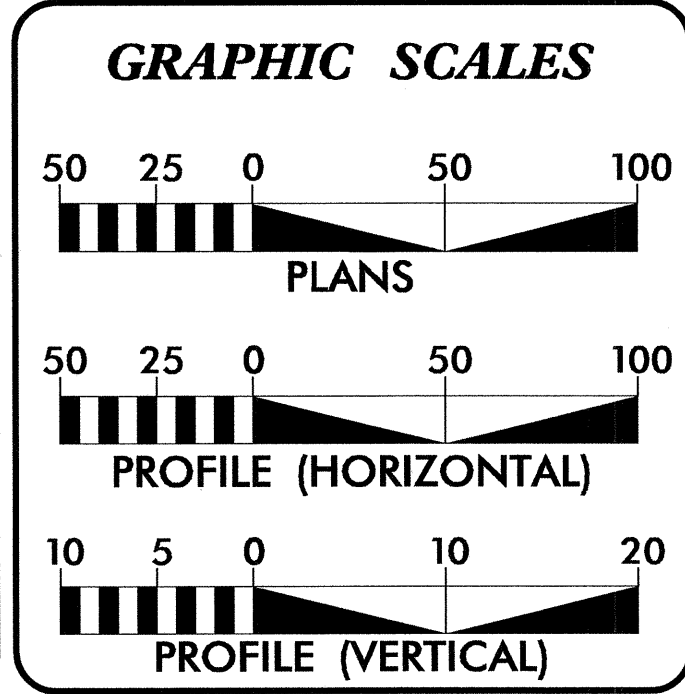
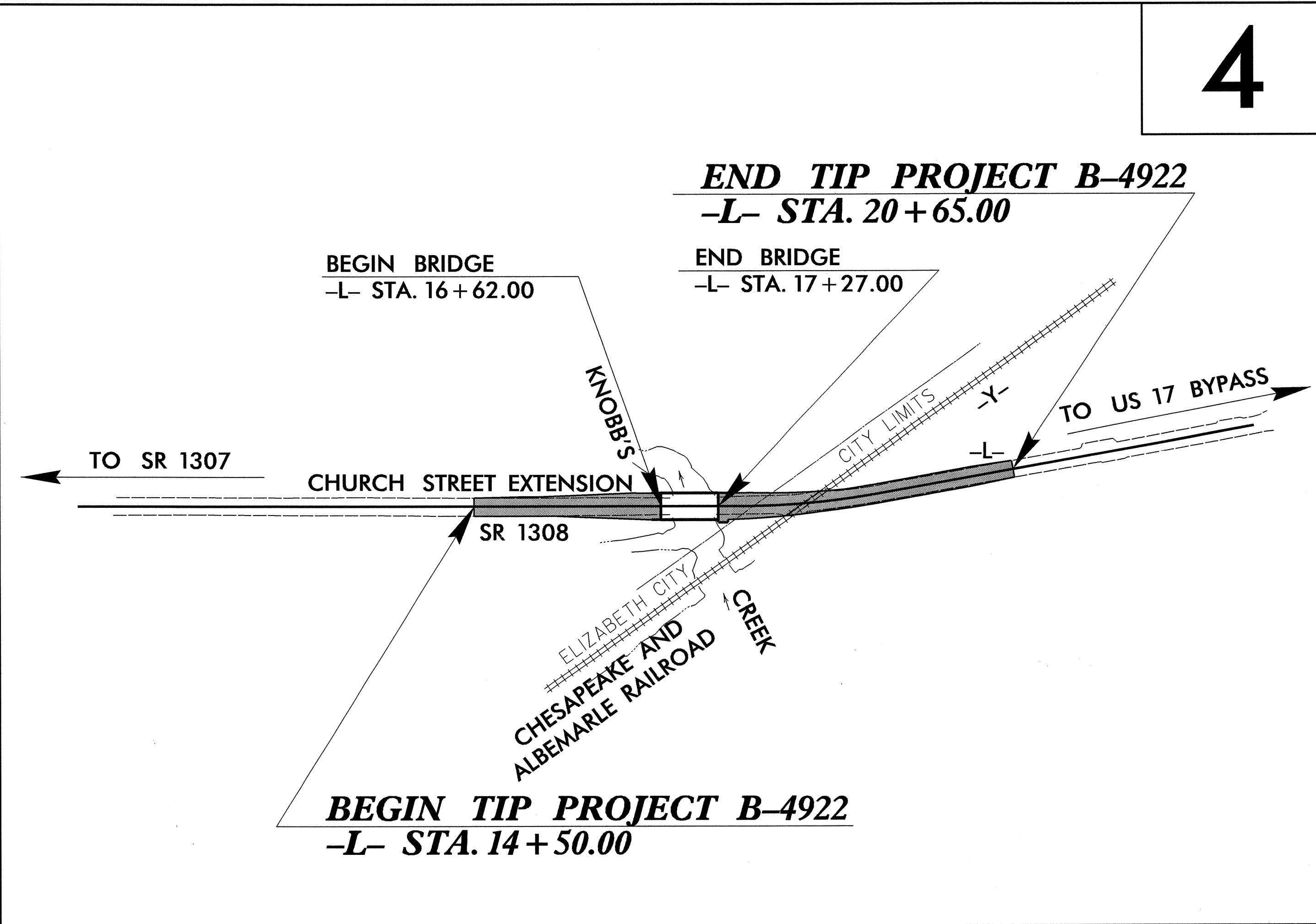
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PASQUOTANK COUNTY

LOCATION: BRIDGE NO. 23 OVER KNOBB'S CREEK ON SR 1308

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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4922	1	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
40177.1.1	BRZ-1308(8)	PE	
40177.2.1	BRZ-1308(8)	RW & UTILITY	
40177.3.1	BRZ-1308(8)	CONST.	



DESIGN DATA

ADT 2012	= 3150
ADT 2032	= 3800
DHV	= 13 %
D	= 65 %
T	= 3 % *
V	= 50 MPH
* TTST 1%	DUAL 2%
FUNC CLASS = URBAN	
COLLECTOR	
SUB-REGIONAL TIER	

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4922	= 0.104 MILES
LENGTH STRUCTURE TIP PROJECT B-4922	= 0.012 MILES
TOTAL LENGTH TIP PROJECT B-4922	= 0.116 MILES

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

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
SEPTEMBER 23, 2011

LETTING DATE:
SEPTEMBER 18, 2012

GARY LOVERING, PE
PROJECT ENGINEER

KEVIN E. MOORE, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

6/26/12

PAUL F. FIERMAN
PROFESSIONAL ENGINEER
SEAL 12575

ROADWAY DESIGN ENGINEER

KEVIN E. MOORE
PROFESSIONAL ENGINEER
SEAL 24912

SIGNATURE: Kevin E. Moore P.E.



25-APR-2012 12:28
F:\Roadway\Proj\B4922-rdy-tsh.dgn
\$\$\$\$\$USERNAME\$\$\$\$\$



SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1-B	CONVENTIONAL SYMBOLS
1-C THRU 1-D	SURVEY CONTROL SHEETS
2	PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEDGING DETAIL
3	SUMMARY OF QUANTITIES
3A	SUMMARY OF DRAINAGE, GUARDRAIL, ASPHALT PAVEMENT REMOVAL, EARTHWORK, SHOULDER BERM GUTTER, HYDRAULIC RIP RAP, AND PARCEL INDEX
4	PLAN SHEET
5	PROFILE SHEET
TMP-1 THRU TMP-3	TRAFFIC MANAGEMENT PLANS
SD-1	SPECIAL SIGN DETAILS
EC-1 THRU EC-5	EROSION CONTROL PLANS
UC-1 THRU UC-5	UTILITY CONSTRUCTION PLANS
UO-1 THRU UO-2	UTILITIES BY OTHERS PLANS
X-1A	CROSS SECTION SUMMARY SHEET
X-1 THRU X-4	CROSS-SECTIONS
S-1 THRU S-18	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.

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.

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 ELIZABETH CITY SANITARY SEWER
CITY OF ELIZABETH CITY POWER
CENTURYLINK TELEPHONE

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 OTHERS.

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
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 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
815.03	Pipe Underdrain and Blind Drain
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
840.71	Concrete and Brick Pipe Plug
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
876.02	Guide for Rip Rap at Pipe Outlets

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	⑫
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	--- FLD ---
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	○ R/W
Proposed Right of Way Line with Iron Pin and Cap Marker	○ R/W
Proposed Right of Way Line with Concrete or Granite Marker	○ R/W
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	--- T ---
Proposed Guardrail	--- T ---
Existing Cable Guiderail	--- P ---
Proposed Cable Guiderail	--- P ---
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	○ P
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	○ T
Telephone Booth	□ T
Telephone Pedestal	□ T
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	○ W
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	○ TV
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 ---

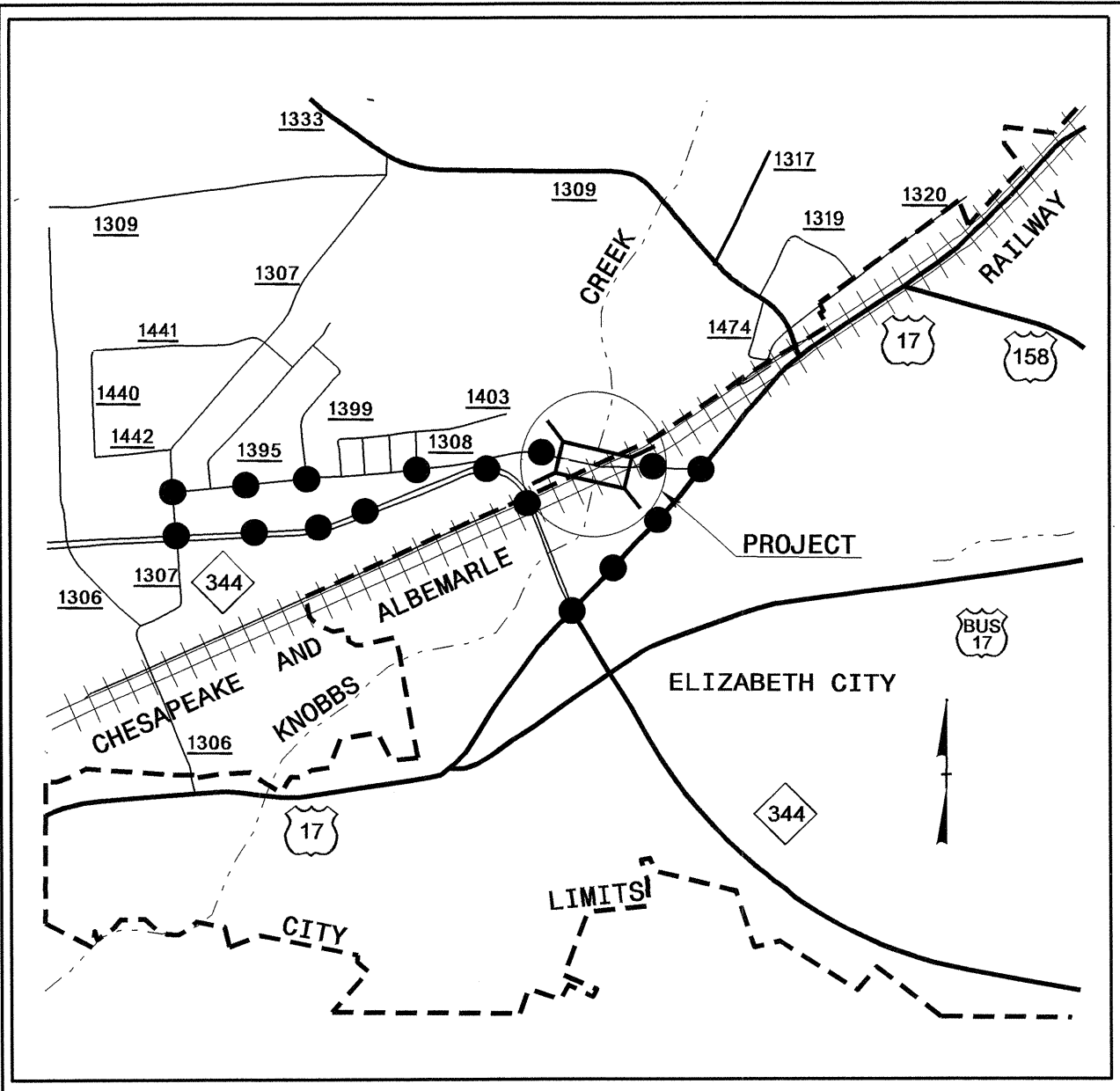
SANITARY SEWER:

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 B-4922



VICINITY MAP

BLN	POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
BL1		BL1	939362.2980	2810910.3790	5.67	11+29.59	25.74 RT
BL2		BL2	939241.4380	2811590.5370	6.59	18+19.02	17.71 RT
BL3		BL3	939275.3420	2812099.5590	3.33	23+25.88	27.83 LT

STA. 20+65.00 -L- END TIP PROJECT B-4922

LOCALIZED PROJECT COORDINATES

N = 939,251.2844
E = 2,811,838.3034

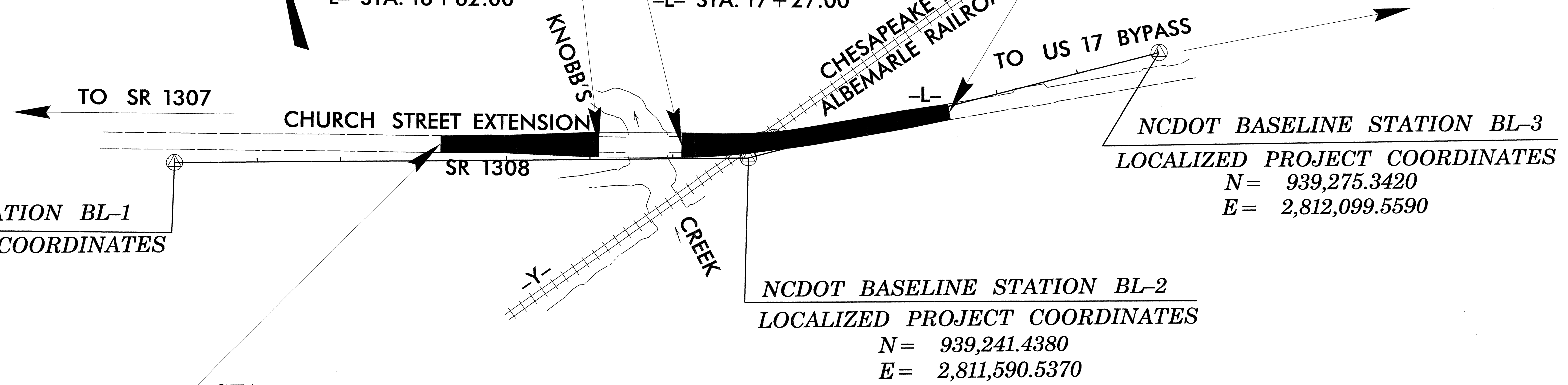
NC GRID
NAD 83 (CORS 96)

BEGIN BRIDGE

-L- STA. 16+62.00

END BRIDGE

-L- STA. 17+27.00



NCDOT BASELINE STATION BL-1
LOCALIZED PROJECT COORDINATES
N = 939,362.2980
E = 2,810,910.3790

NCDOT BASELINE STATION BL-3
LOCALIZED PROJECT COORDINATES
N = 939,275.3420
E = 2,812,099.5590

NCDOT BASELINE STATION BL-2
LOCALIZED PROJECT COORDINATES
N = 939,241.4380
E = 2,811,590.5370

STA. 14+50.00 -L- BEGIN TIP PROJECT B-4922

LOCALIZED PROJECT COORDINATES

N = 939,326.6630
E = 2,811,229.8371

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "BL-2" WITH NAD 1983 (CORS 96) STATE PLANE GRID COORDINATES OF NORTHING: 939,241.438(ft) EASTING: 2,811,590.537(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 1.000045368 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "BL-2" TO -L- STATION 14+50.00 IS N 76°42'22" W 370.63 (ft) ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

NOTES:

- THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING [HTTP://WWW.DOH.DOT.STATE.NC.US/PRECONSTRUCT/HIGHWAY/LOCATIONPROJECT](http://www.doh.dot.state.nc.us/preconstruct/highway/locationproject)
- FILE: B4922_ls_control_100503.txt
- SITE CALIBRATION PARAMETERS HAVE NOT BEEN DETERMINED 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 UTILIZING GLOBAL POSITIONING SYSTEM.

NOTE: DRAWING NOT TO SCALE

SURVEY CONTROL SHEET B-4922

DESIGN ALIGNMENTS

L			
TYPE	STATION	NORTH	EAST
POT	10+00.00	939412.1987	2810788.0411
PC	17+53.22	939269.0264	2811527.5332
PT	19+03.49	939253.6187	2811676.8149
POT	23+43.01	939247.2662	2812116.2804

Y			
TYPE	STATION	NORTH	EAST
POT	10+00.00	939186.4789	2811446.4709
POT	13+89.38	939349.2566	2811800.1982

ROW MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
L	14+50.00	50.00	939277.5746	2811220.3331
L	14+50.00	30.00	939297.2100	2811224.1347
L	14+50.00	-50.00	939375.7515	2811239.3410
L	14+50.00	-30.00	939356.1161	2811235.5395
L	16+97.45	50.00	939230.5387	2811463.2760
L	17+53.22	-50.00	939318.1149	2811537.0371
L	18+10.15	50.00	939210.4703	2811577.5457
L	18+49.86	-50.00	939305.9347	2811627.1169
L	19+03.49	50.00	939203.6239	2811676.0923
L	19+03.49	60.00	939193.6250	2811675.9477
L	20+65.00	60.00	939191.2906	2811837.4362
L	20+65.00	30.00	939221.2875	2811837.8698

PERMANENT EASEMENT MARKERS IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
L	12+87.39	30.00	939328.1188	2811064.4893
L	13+05.00	50.00	939305.1361	2811077.9767
L	19+92.34	-45.00	939297.3299	2811766.2978
L	20+25.00	-30.00	939281.8594	2811798.7412

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "BL-2" WITH NAD 1983 (CORS 96) STATE PLANE GRID COORDINATES OF NORTHING: 939,241,438(ft) EASTING: 2,811,590,537(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 1.000045368 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "BL-2" TO -L- STATION 14+50.00 IS N 76°42'22" W 370.63 (ft) ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

NOTES:

THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING [HTTP://WWW.DOH.DOT.STATE.NC.US/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT](http://www.doh.dot.state.nc.us/preconstruct/highway/location/project)

FILE: B4922_ls_control_100503.txt

SITE CALIBRATION PARAMETERS HAVE NOT BEEN DETERMINED 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 UTILIZING GLOBAL POSITIONING SYSTEM.

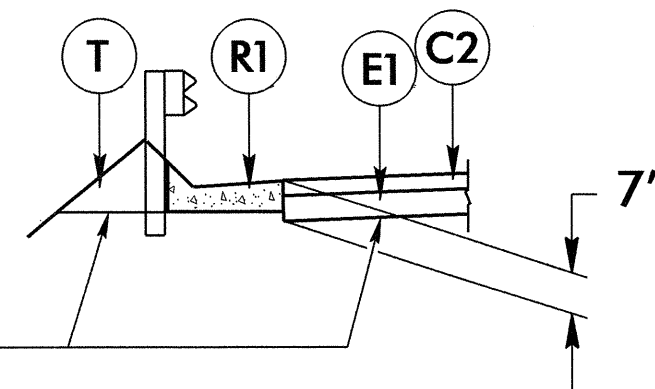
NOTE: DRAWING NOT TO SCALE

6/2/09

PAVEMENT SCHEDULE
(FINAL PAVEMENT DESIGN)

C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" 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. 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 OR GREATER THAN 5½" IN DEPTH.
R1	SHOULDER BERM GUTTER
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL)

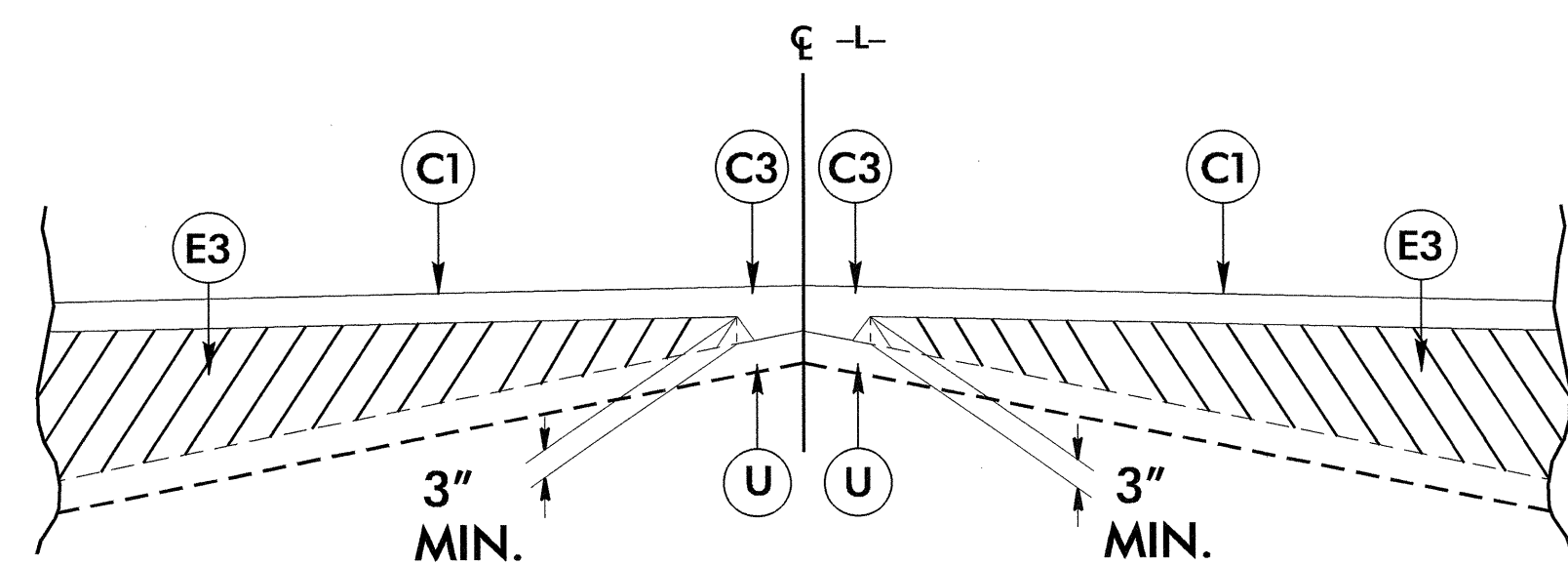
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



GRADE TO THIS LINE

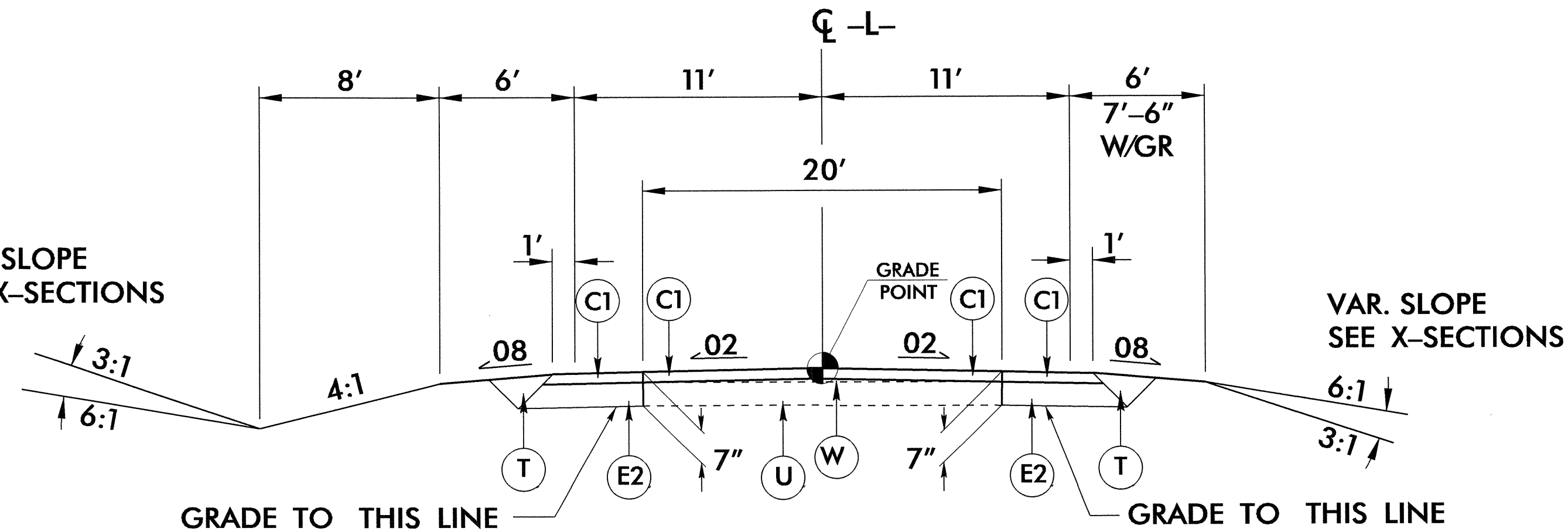
DETAIL SHOWING SHOULDER BERM GUTTER ON TOP OF SUBGRADE

- L- STA. 16+33.50 TO -L- STA. 16+51.00 (LT)
- L- STA. 16+47.00 TO -L- STA. 16+51.00 (RT)
- L- STA. 17+38.00 TO -L- STA. 17+58.25 (LT)



Standard Wedging Detail

VAR. SLOPE
SEE X-SECTIONS

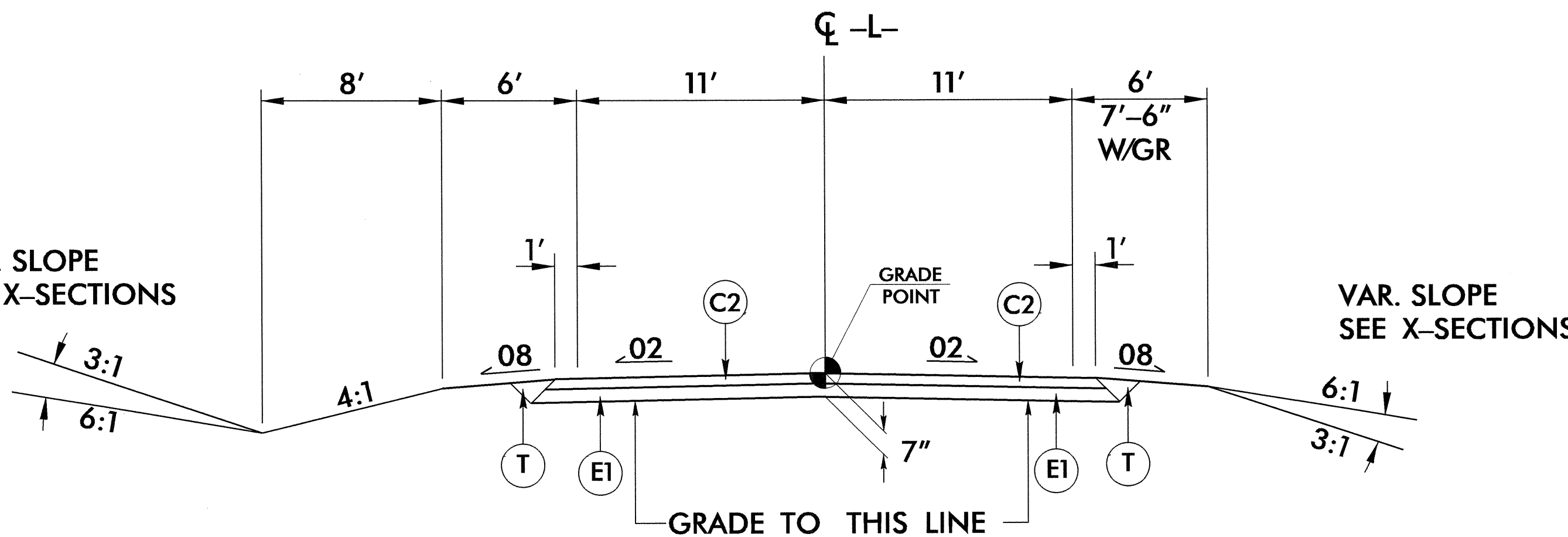


GRADE TO THIS LINE

TYPICAL SECTION NO. 1

VAR. SLOPE
SEE X-SECTIONS

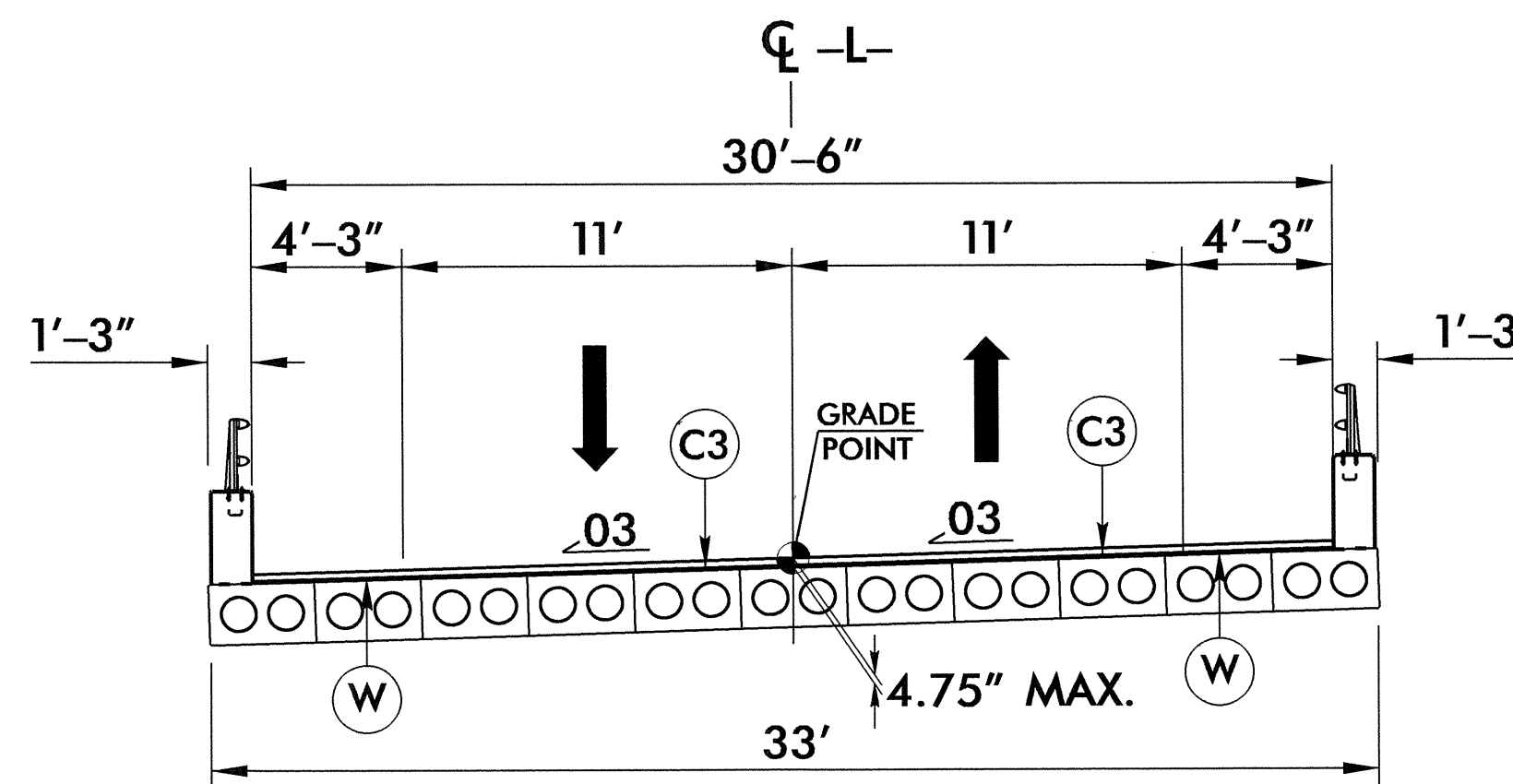
VAR. SLOPE
SEE X-SECTIONS



GRADE TO THIS LINE

TYPICAL SECTION NO. 2

VAR. SLOPE
SEE X-SECTIONS



TYPICAL SECTION ON STRUCTURE

PROJECT REFERENCE NO. B-4922	SHEET NO. 2
ROADWAY DESIGN ENGINEER KELVIN E. MOORE 6-22-12	PAVEMENT DESIGN ENGINEER CLAYTON S. MORRISON 6-22-12

USE TYPICAL SECTION NO. 1

- L- STA. 14+50.00 TO -L- STA. 16+33.50
- L- STA. 18+70.00 TO -L- STA. 20+65.00

USE TYPICAL SECTION NO. 2

- L- STA. 16+33.50 TO -L- STA. 16+62.00 (BEGIN BRIDGE)
- L- STA. 17+27.00 (END BRIDGE) TO -L- STA. 18+18.72
- L- STA. 18+38.37 TO -L- STA. 18+70.00

USE TYPICAL SECTION ON STRUCTURE

- L- STA. 16+62.00 (BEGIN BRIDGE) TO
- L- STA. 17+27.00 (END BRIDGE)

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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C202884

ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION
0029000000-N	SP	Lump Sum		REINFORCED BRIDGE APPROACH FILL, STATION ***** (16+98.50-L-)
0043000000-N	226	Lump Sum		GRADING
0050000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUB- BING
0057000000-E	226	400	CY	UNDERCUT EXCAVATION
0194000000-E	SP	400	CY	SELECT GRANULAR MATERIAL, CLASS III
0196000000-E	270	400	SY	GEOTEXTILE FOR SOIL STABILIZA- TION
0318000000-E	300	19.95	TON	FOUNDATION CONDITIONING MATE- RIAL, MINOR STRUCTURES
0320000000-E	300	69	SY	FOUNDATION CONDITIONING GEO- TEXTILE
0335200000-E	305	20	LF	15" DRAINAGE PIPE
0335400000-E	305	24	LF	24" DRAINAGE PIPE
0335850000-E	305	1	EA	*** DRAINAGE PIPE ELBOWS (24")
0378000000-E	310	64	LF	24" RC PIPE CULVERTS, CLASS III
1220000000-E	545	20	TON	INCIDENTAL STONE BASE
1330000000-E	607	120	SY	INCIDENTAL MILLING
1489000000-E	610	310	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B
1519000000-E	610	305	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5B
1575000000-E	620	35	TON	ASPHALT BINDER FOR PLANT MIX
1693000000-E	654	29	TON	ASPHALT PLANT MIX, PAVEMENT REPAIR
2022000000-E	815	44.8	CY	SUBDRAIN EXCAVATION
2033000000-E	815	33.6	CY	SUBDRAIN FINE AGGREGATE
2044000000-E	815	200	LF	6" PERFORATED SUBDRAIN PIPE
2070000000-N	815	1	EA	SUBDRAIN PIPE OUTLET
2077000000-E	815	6	LF	6" OUTLET PIPE

Summary of Quantities - B-4922

ItemNumber	Sec #	Quantity	Unit	Description
2264000000-E	840	0.232	CY	PIPE PLUGS
2275000000-E	SP	5	CY	FLOWABLE FILL
2286000000-N	840	1	EA	MASONRY DRAINAGE STRUCTURES
2367000000-N	840	1	EA	FRAME WITH TWO GRATES, STD 840.29
2556000000-E	846	44	LF	SHOULDER BERM GUTTER
3030000000-E	862	37.5	LF	STEEL BM GUARDRAIL
3150000000-E	862	5	EA	ADDITIONAL GUARDRAIL POSTS
3165000000-N	SP	1	EA	GUARDRAIL ANCHOR UNITS, TYPE ***** (350 TL-2)
3215000000-N	862	3	EA	GUARDRAIL ANCHOR UNITS, TYPE III
3270000000-N	SP	2	EA	GUARDRAIL ANCHOR UNITS, TYPE 350
3435000000-N	SP	1	EA	GENERIC GUARDRAIL ITEM IMPACT ATTENUATOR UNIT, TYPE 350 TL-2
3649000000-E	876	1	TON	RIP RAP, CLASS B
3656000000-E	876	465	SY	GEOTEXTILE FOR DRAINAGE
4400000000-E	1110	374	SF	WORK ZONE SIGNS (STATIONARY)
4410000000-E	1110	151	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
4445000000-E	1145	96	LF	BARRICADES (TYPE III)
5558000000-E	1515	2	EA	12" VALVE
5589200000-E	1515	1	EA	2" AIR RELEASE VALVE
5709600000-E	1520	258	LF	12" FORCE MAIN SEWER
5804000000-E	1530	255	LF	ABANDON 12" UTILITY PIPE
5871700000-E	1550	187	LF	TRENCHLESS INSTALLATION OF 12" IN SOIL
5871710000-E	1550	19	LF	TRENCHLESS INSTALLATION OF 12" NOT IN SOIL
6000000000-E	1605	1,650	LF	TEMPORARY SILT FENCE
6006000000-E	1610	250	TON	STONE FOR EROSION CONTROL, CLASS A

ItemNumber	Sec #	Quantity	Unit	Description
6009000000-E	1610	45	TON	STONE FOR EROSION CONTROL, CLASS B
6012000000-E	1610	100	TON	SEDIMENT CONTROL STONE
6015000000-E	1615	1.5	ACR	TEMPORARY MULCHING
6018000000-E	1620	50	LB	SEED FOR TEMPORARY SEEDING
6021000000-E	1620	0.25	TON	FERTILIZER FOR TEMPORARY SEED- ING
6024000000-E	1622	200	LF	TEMPORARY SLOPE DRAINS
6029000000-E	SP	1,000	LF	SAFETY FENCE
6030000000-E	1630	100	CY	SILT EXCAVATION
6036000000-E	1631	2,500	SY	MATting FOR EROSION CONTROL
6042000000-E	1632	325	LF	1/4" HARDWARE CLOTH
6071010000-E	SP	200	LF	WATTLE
6071020000-E	SP	10	LB	POLYACRYLAMIDE (PAM)
6084000000-E	1660	1.5	ACR	SEEDING & MULCHING
6087000000-E	1660	1	ACR	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	1	TON	FERTILIZER TOPDRESSING
6114500000-N	1667	10	MHR	SPECIALIZED HAND MOWING
6117000000-N	SP	18	EA	RESPONSE FOR EROSION CONTROL

FOR STRUCTURE PLANS, SEE SHEET S-1 THRU S-18
FOR -L- PROFILE SEE SHEET 5

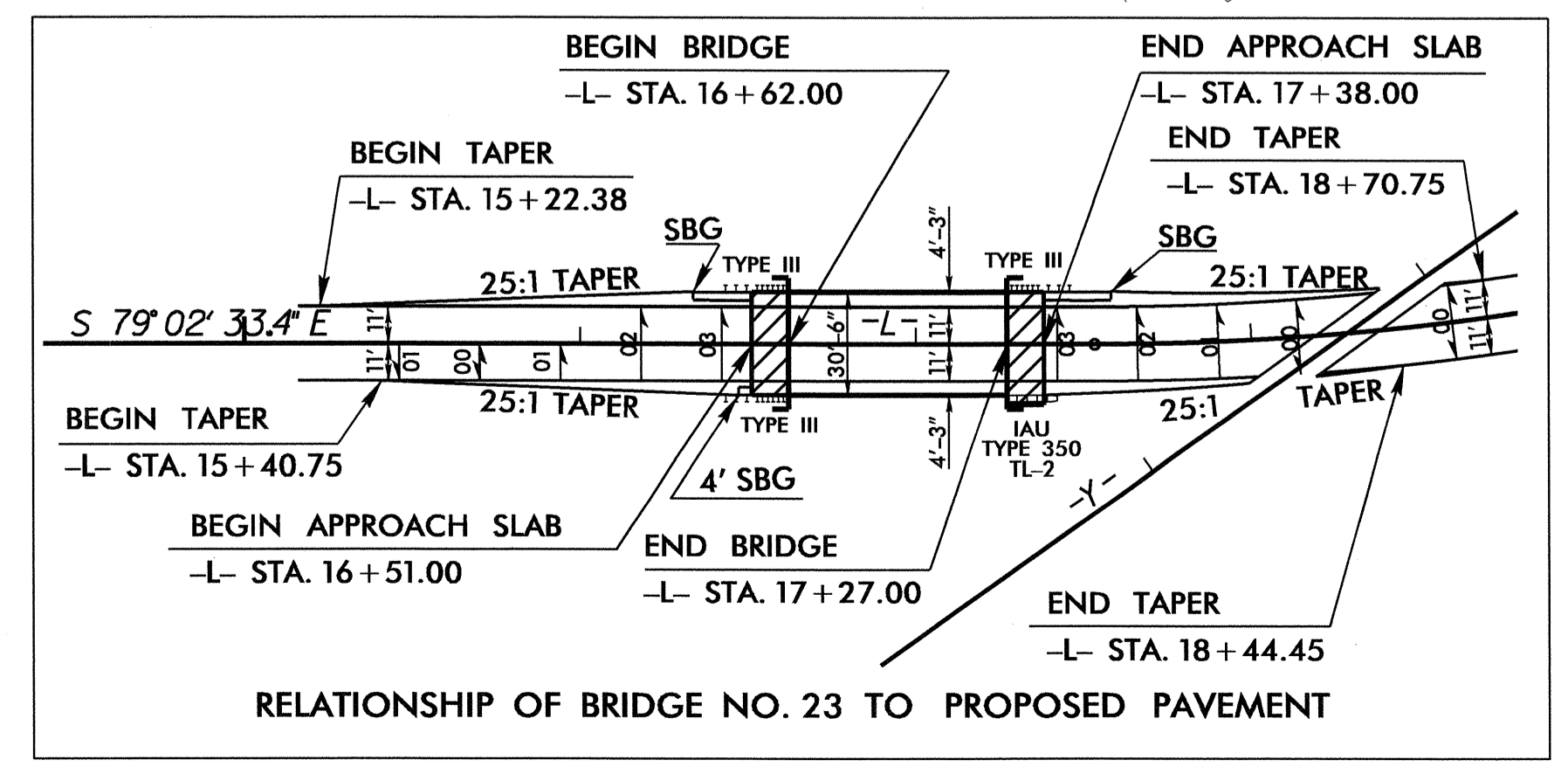
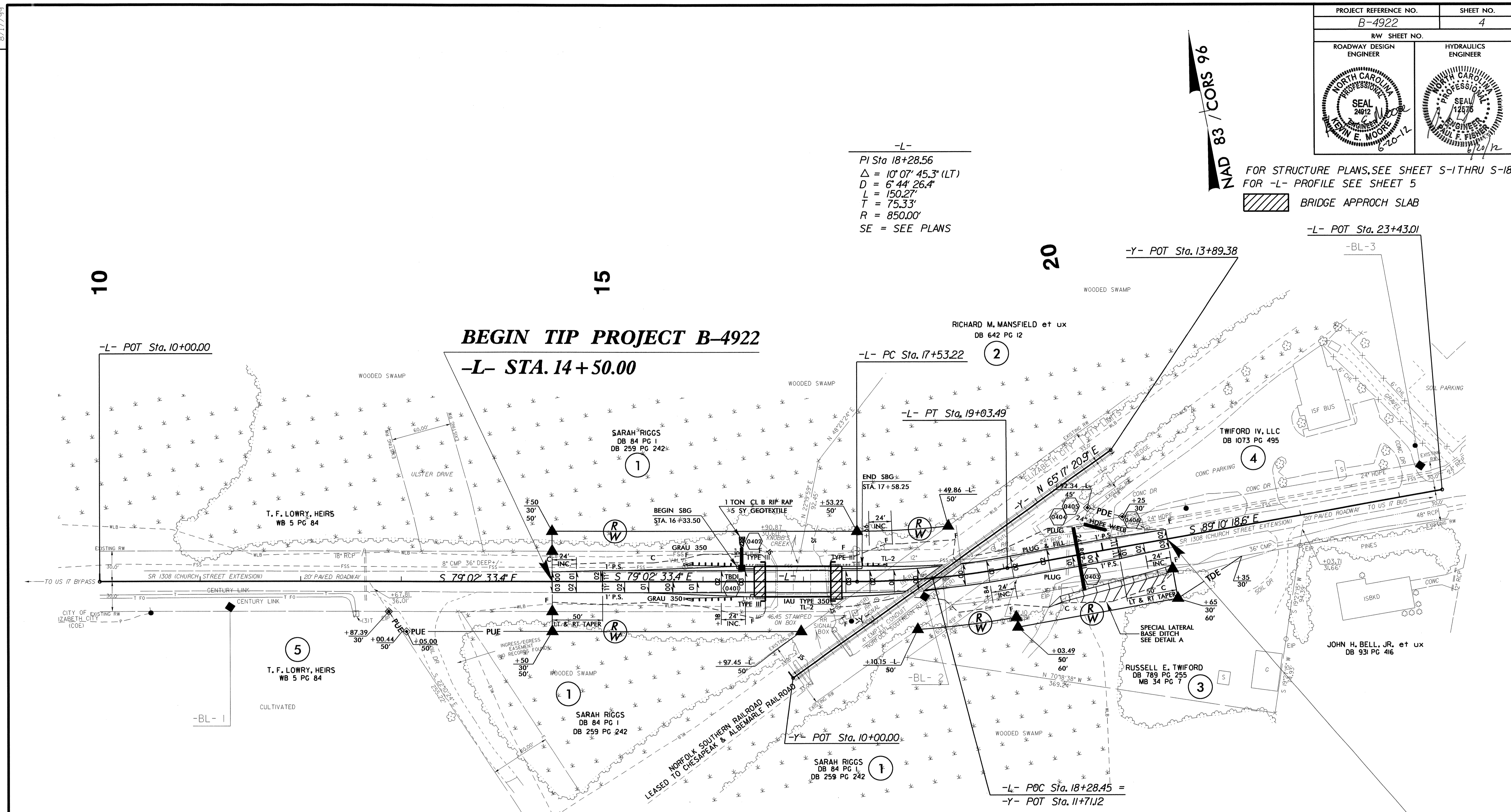
BRIDGE APPROACH SLAB

-L-
PI Sta 18+28.56
 $\Delta = 10^{\circ} 07' 45.3" (LT)$
 $D = 6^{\circ} 44' 26.4"$
 $L = 150.27'$
 $T = 75.33'$
 $R = 850.00'$
SE = SEE PLANS

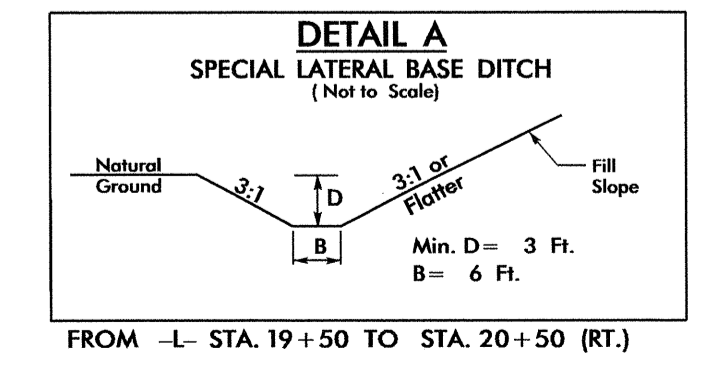
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REVISIONS



END TIP PROJECT B-4922
-L- STA. 20+65.00



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- L -

BM * 10 RR SPIKE IN BASE OF 6' CYPRESS
-L- STA. 15+82.43' LEFT
ELEVATION 2.87'

BEGIN GRADE
-L- STA. 14+50
EL. 4.41'

BEGIN BRIDGE
-L- STA. 16+62.00

PI = 15+50.00
EL = 5.05'
VC = 150'
K = 285

END BRIDGE
-L- STA. 17+27.00

PI = 17+30.00
EL = 7.15'
VC = 150'
K = 227

END GRADE
-L- STA. 18+18.72
EL. 7.60'

BEGIN GRADE
-L- STA. 18+38.37
EL. 7.64'

PI = 18+58.12
EL = 7.67'

PI = 19+10.00
EL = 7.51'
VC = 102'
K = 65

PI = 20+13.00
EL = 5.58'
VC = 104'
K = 87

END GRADE
-L- STA. 20+65.00
EL. 5.23'

-L- STA. 18+28.45 =
-Y- STA. 11+71.12

BEGIN LATERAL BASE DITCH
-L- STA. 19+50.00 ELEV. 0.00 (RT)

END LATERAL BASE DITCH
-L- STA. 20+50.00 ELEV. 0.50 (RT)

STRUCTURE HYDRAULIC DATA

DESIGN DISCHARGE	=	570	CFS
DESIGN FREQUENCY	=	25	YRS
DESIGN HW ELEVATION	=	5.1	FT
BASE DISCHARGE	=	930	CFS
BASE FREQUENCY	=	100	YRS
BASE HW ELEVATION	=	6.2	FT
OVERTOPPING DISCHARGE	=	365	CFS
OVERTOPPING FREQUENCY	=	10	YRS
OVERTOPPING ELEVATION	=	4.2	FT

BM * 11 RR SPIKE IN BASE OF 12" BLACKGUM
-L- STA. 18+91.53' RIGHT
ELEVATION 2.36'

RIGHT DITCH -----

