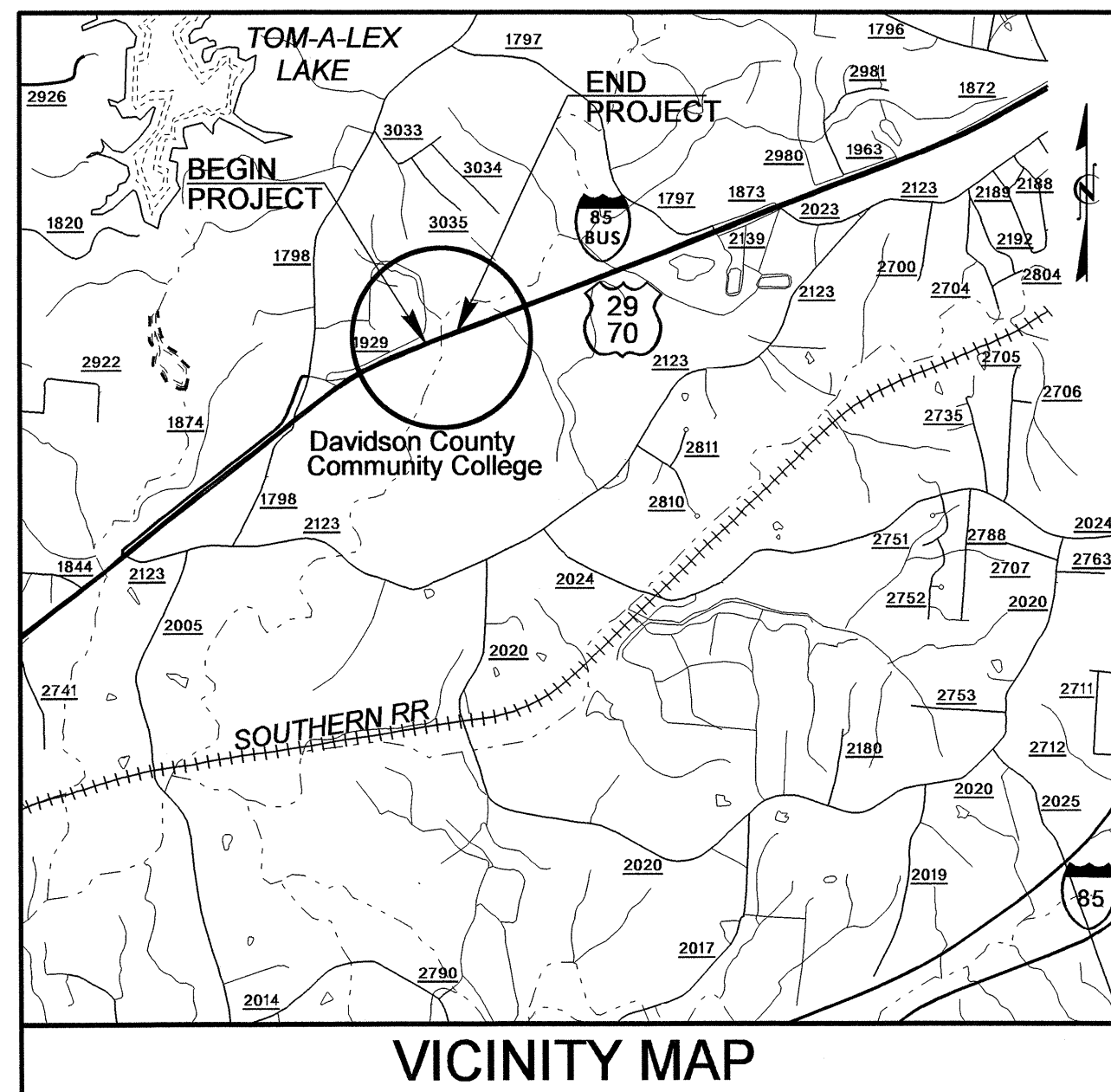


09/08/09

See Sheet 1-A For Index of Sheets



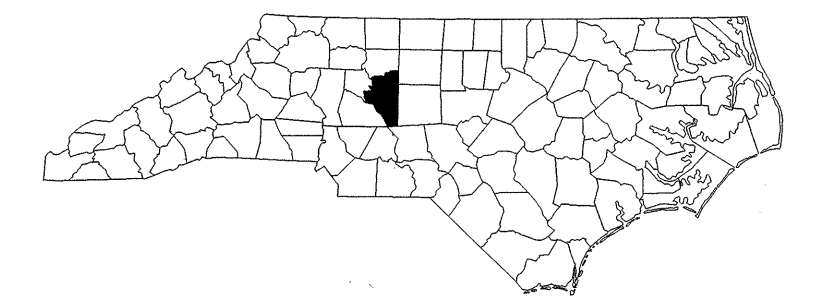
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

DAVIDSON COUNTY

LOCATION: BRIDGE 138 OVER RICH FORK CREEK ON
US 29-70/I-85 BUSINESS

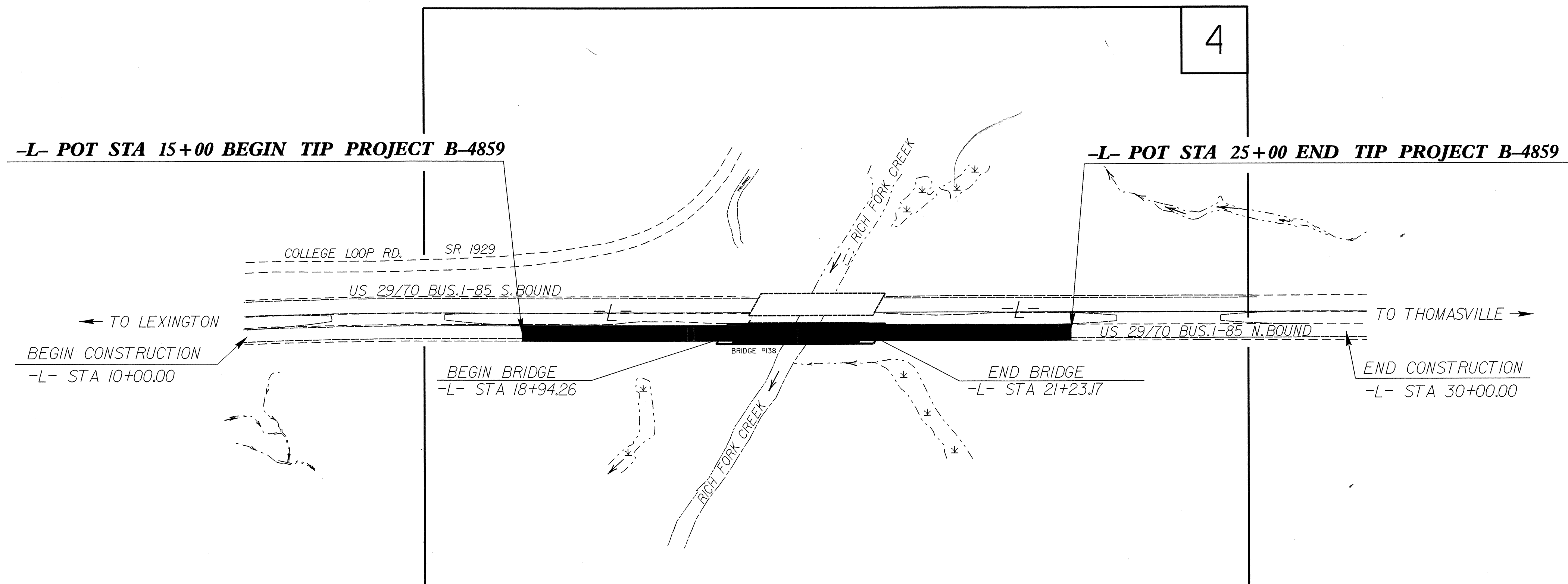
TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4859	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
37531.1.1	BRSTP-29(38)	PE	
37531.2.1	BRSTP-29(38)	RW & UTIL	
37531.3.1	BRSTP-29(38)	CONST.	

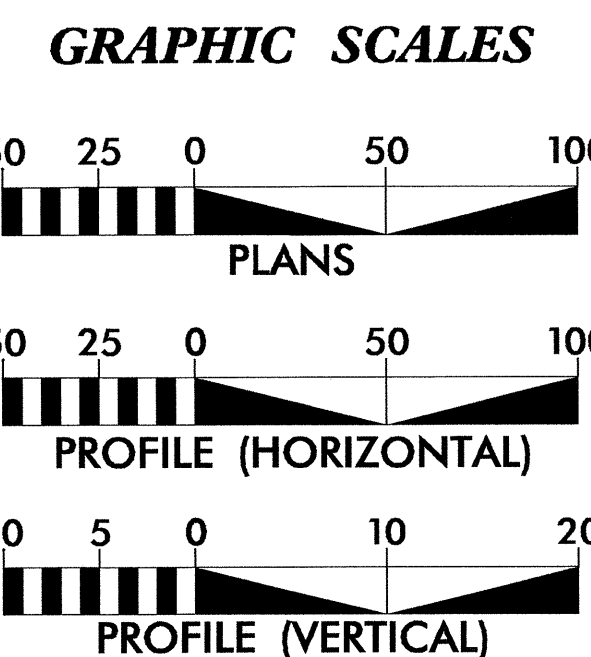


TIP PROJECT: B-4859

CONTRACT: C203085



THIS IS A CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.



DESIGN DATA

ADT 2013 = 29,600
ADT 2035 = 44,100
DHV = 10 %
D = 60 %
T = 16 % *
V = 60 MPH
* TTST 10% DUAL 6%

STATEWIDE TIER
FUNCTIONAL CLASSIFICATION
RURAL MINOR ARTERIAL

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT B-4859 = 0.146 MILES
LENGTH OF STRUCTURE TIP PROJECT B-4859 = 0.043 MILES
TOTAL LENGTH OF TIP PROJECT B-4859 = 0.189 MILES

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

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JANUARY 18, 2012

LETTING DATE:
MARCH 19, 2013

G.E. BREW, PE
PROJECT ENGINEER

I.T. YOUNIS
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

Ann A. Billings 12/17/12
SIGNATURE: ANN A. BILLINGS

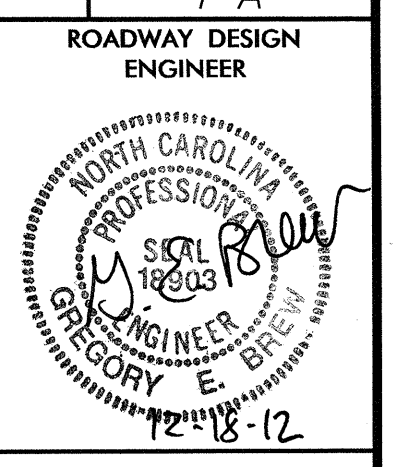
ROADWAY DESIGN ENGINEER

12-18-12
G.E. Brew
SIGNATURE: G.E. BREW

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 20329
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 18903



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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

INDEX OF SHEETS

SHEET NUMBER	SHEET
	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1-B	CONVENTIONAL SYMBOLS
2 THRU 2-A	PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEDGING DETAILS
2-B	ROCK PLATING DETAIL
2-C	CONVERT EXISTING JB TO 2GI DETAIL
3	SUMMARY OF QUANTITIES
3-A	SUMMARY OF DRAINAGE QUANTITIES
3-B	SUMMARY OF GUARDRAIL, EARTHWORK SUMMARY, AND ASPHALT PAVEMENT REMOVAL SUMMARY
4 THRU 4-B	PLAN SHEET
5	PROFILE SHEET
TMP-1 THRU TMP-8	TRANSPORTATION MANAGEMENT PLANS
PMP-1	PAVEMENT MARKING PLANS
EC-1 THRU EC-9	EROSION CONTROL PLANS
SIGN-1 THRU SIGN-2	SIGNING PLANS
X-1A	CROSS-SECTIONS SUMMARY SHEET
X-1 THRU X-9	CROSS-SECTIONS
S-1 THRU S-33	STRUCTURE PLANS

GENERAL NOTES

GENERAL NOTES: 2012 SPECIFICATIONS

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 II.

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.

LIST OF STANDARD DRAWINGS

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
200.02	Method of Clearing - Method II
225.01	Guide for Grading Subgrade - Interstate and Freeway
225.04	Method of Obtaining Superelevation - Two Lane Pavement
300.01	Method of Pipe Installation
422.10	Reinforced Bridge Approach Fills
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
840.00	Concrete Base Pad for Drainage Structures
840.22	Frames and Wide Slot Sag Grates
840.36	Traffic Bearing Grated Drop Inlet - for Steel (840.37) Double Frame and Grates
840.37	Steel Grate and Frame
840.45	Precast Drainage Structure
840.46	Traffic Bearing Precast Drainage Structure
840.66	Drainage Structure Steps
840.71	Concrete and Brick Pipe Plug
846.04	Drop Inlet Installation in Shoulder Berm Gutter
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

8/17/99

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04/16/11

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	⑫③
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 UG 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	▬
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	○
Proposed Right of Way Line with Iron Pin and Cap Marker	○
Proposed Right of Way Line with Concrete or Granite RW Marker	○
Proposed Control of Access Line with Concrete C/A 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	○ CR
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	⊕
Pavement Removal	▨

VEGETATION:

Single Tree	○
Single Shrub	○
Hedge	-----
Woods Line	-----

Orchard	○
Vineyard	□ Vineyard

EXISTING STRUCTURES:

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

UTILITIES:

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

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	-T-
Designated UG Telephone Cable (S.U.E.*)	-T-
Recorded UG Telephone Conduit	-TC-
Designated UG Telephone Conduit (S.U.E.*)	-TC-
Recorded UG Fiber Optics Cable	-T FO-
Designated UG Fiber Optics Cable (S.U.E.*)	-T FO-

WATER:

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

TV:

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

GAS:

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

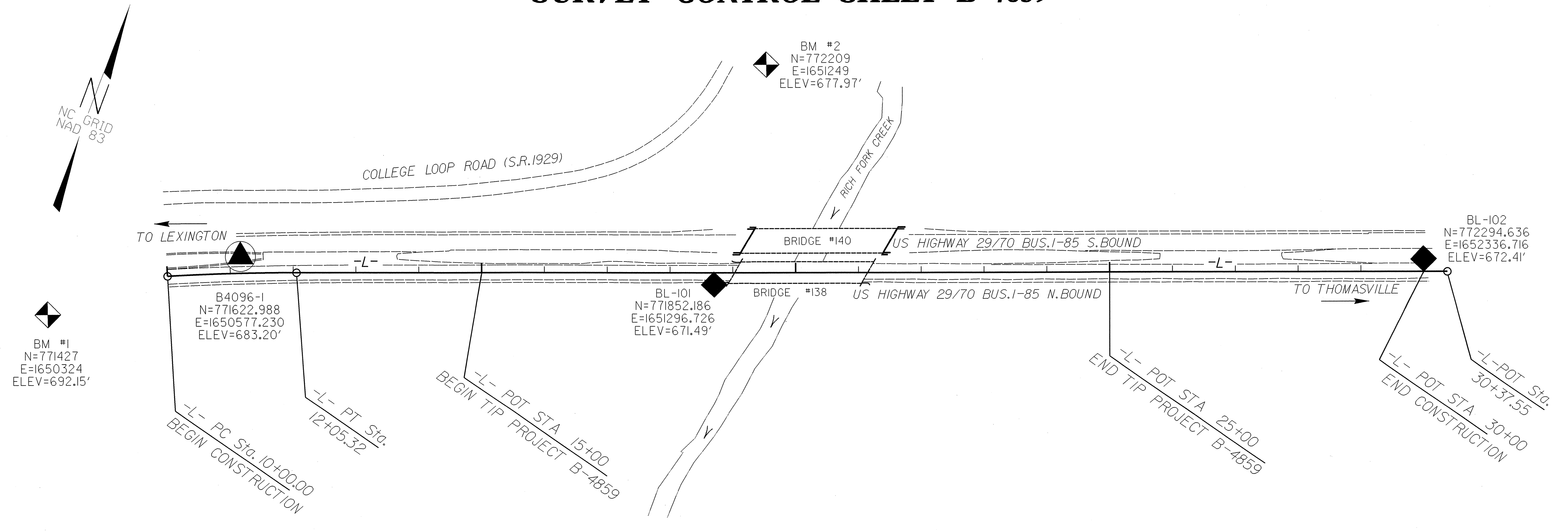
SANITARY SEWER:

Sanitary Sewer Manhole	○
Sanitary Sewer Cleanout	○
UG 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 UG Line	-UTL-
UG Tank; Water, Gas, Oil	□
Underground Storage Tank, Approx. Loc.	⊕
A/G Tank; Water, Gas, Oil	□
Geoenvironmental Boring	⊕
UG Test Hole (S.U.E.*)	⊕
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

SURVEY CONTROL SHEET B-4859



BL POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
1	B4096-1 (GPS)	771622.9876	1650577.2303	683.20	11+16.66	26.90 LT
101	BL-101	771852.1863	1651296.7256	671.49	18+69.83	18.82 RT
102	BL-102	772294.6360	1652336.7160	672.41	29+99.34	20.35 LT

NOTES:

1. 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/](http://www.ncdot.org/DOH/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT/)

THE FILES TO BE FOUND ARE AS FOLLOWS:
 B4859_LS_CONTROL_110707.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)

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B4096-1" WITH NAD 83 STATE PLANE GRID COORDINATES OF
 NORTHING: 771622.988(ft) EASTING: 1650577.230(ft)
 ELEVATION: 683.20(ft)
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: .99990194
 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4096-1" TO -L- STATION 15+00 IS
 S 72°47'26.5"W 384.8385'
 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
 VERTICAL DATUM USED IS NGVD 29

BENCHMARKS (NGVD 29)

 BM#1 ELEVATION = 692.15'
 N 771427 E 1650324
 B4859-1 TO BM#1 S 52°12'14" W 320.19'
 RR SPIKE IN BASE OF 30" BEECH TREE

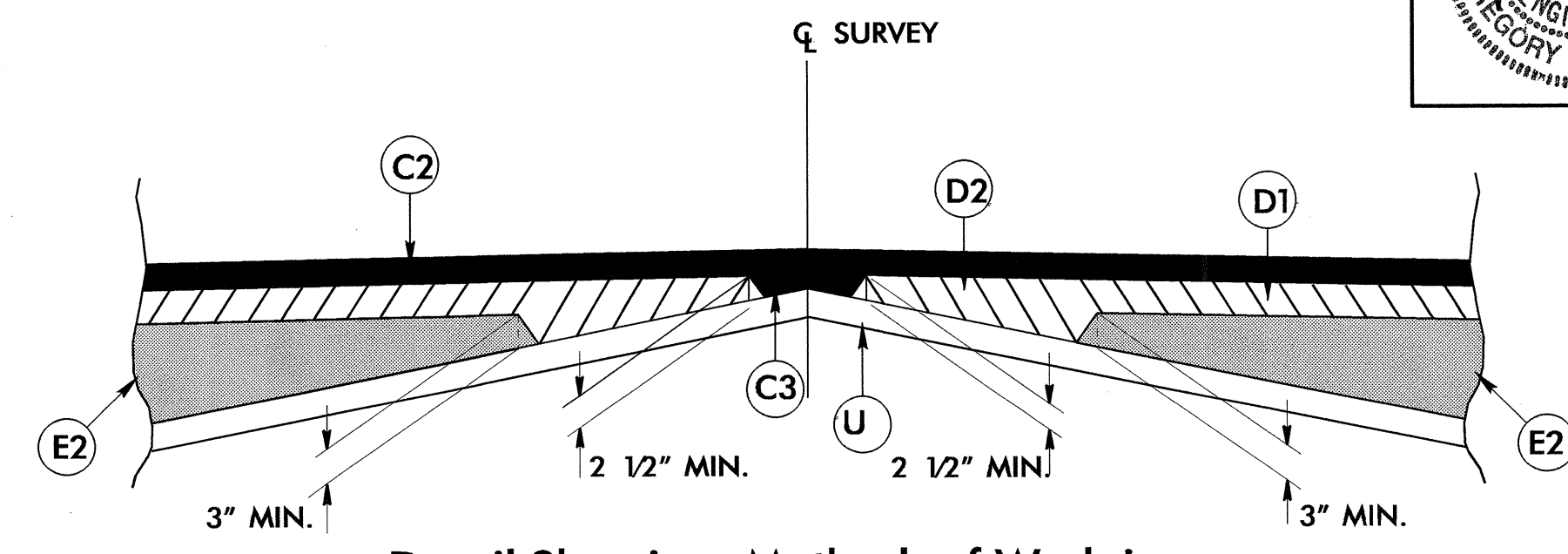
 BM#2 ELEVATION = 677.97'
 N 772209 E 1651249
 L STATION 19+54 331' LEFT
 RR SPIKE IN BASE OF 18" OAK TREE

NOTE: DRAWING NOT TO SCALE

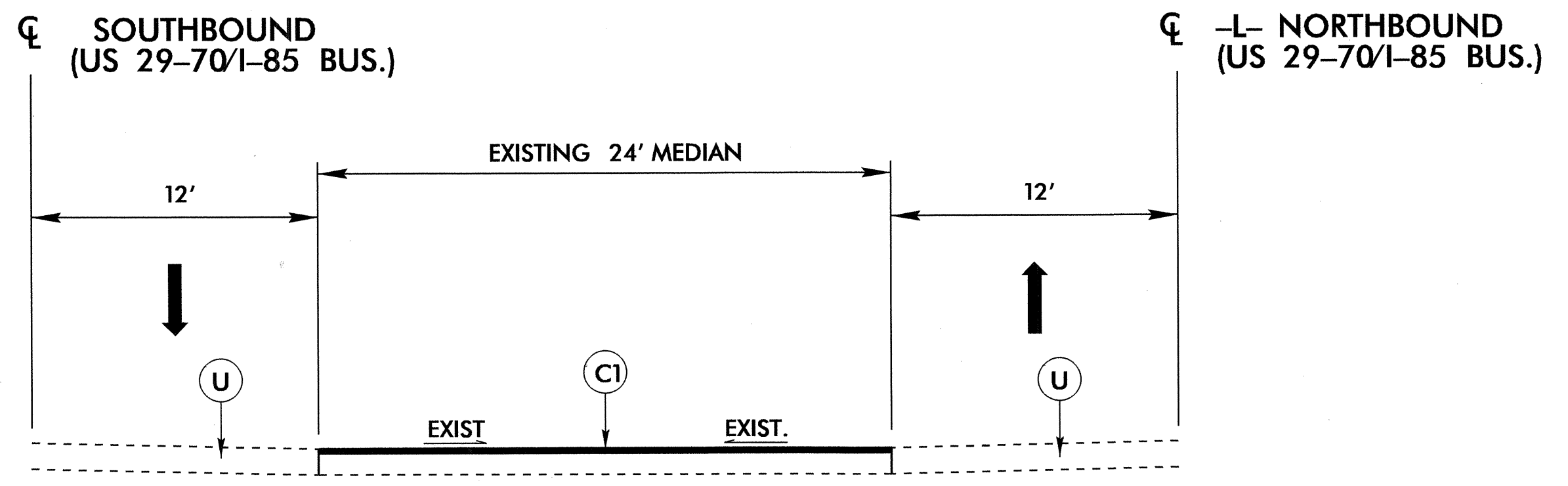
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 \$\$\$\$REFERENCE\$\$\$\$

FINAL PAVEMENT SCHEDULE			
C1	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.	E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C 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.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	R1	SHOULDER BERM GUTTER.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1 1/2" IN DEPTH.	T	EARTH MATERIAL.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	U	EXISTING PAVEMENT.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, 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.	W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL)
E1	PROP. APPROX. 10 1/2" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 599 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.		

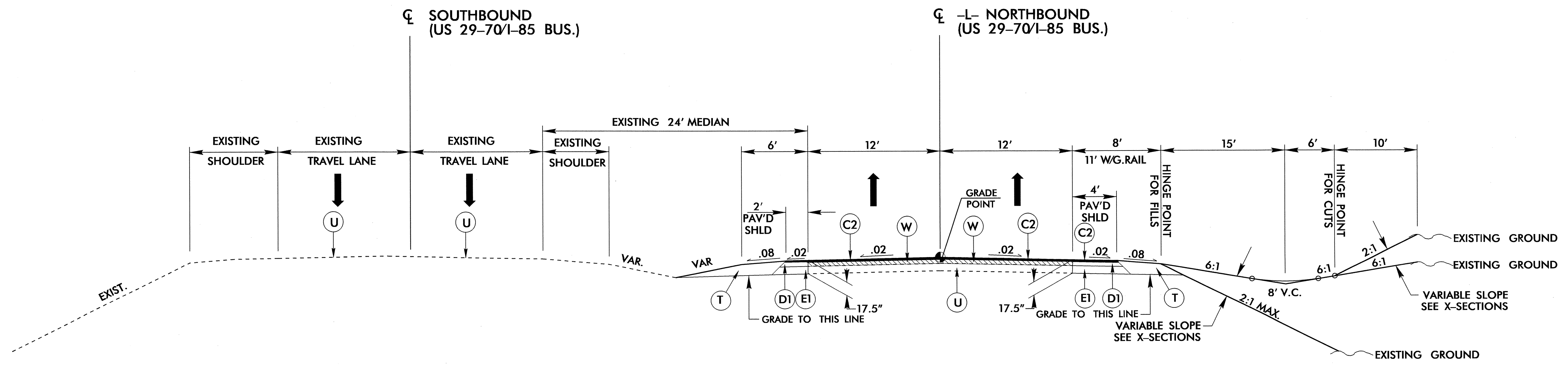
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



Detail Showing Method of Wedging
(USE WITH TYPICAL SECTION 2)



DETAIL OF TEMPORARY DETOUR OVERLAY
SEE PLANS FOR LOCATION



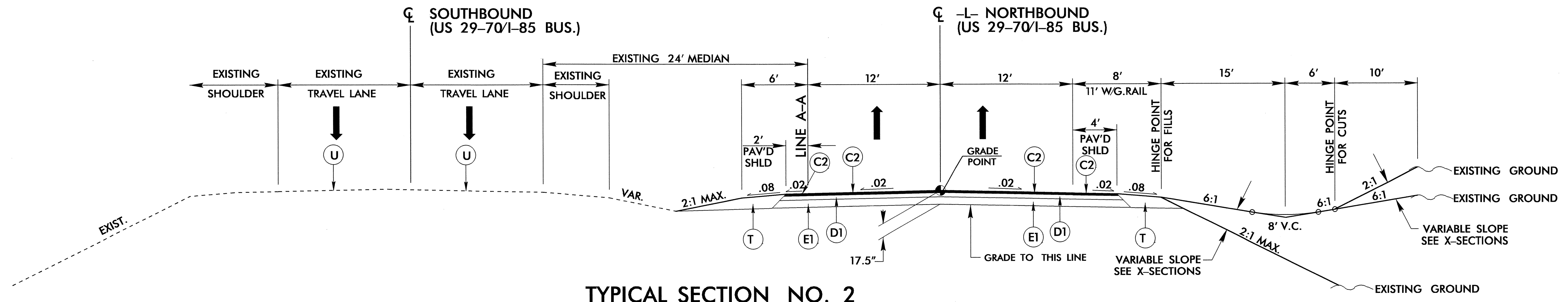
TYPICAL SECTION NO. 1
-L- STA. 15+00 TO 18+00
-L- STA. 22+50 TO 25+00

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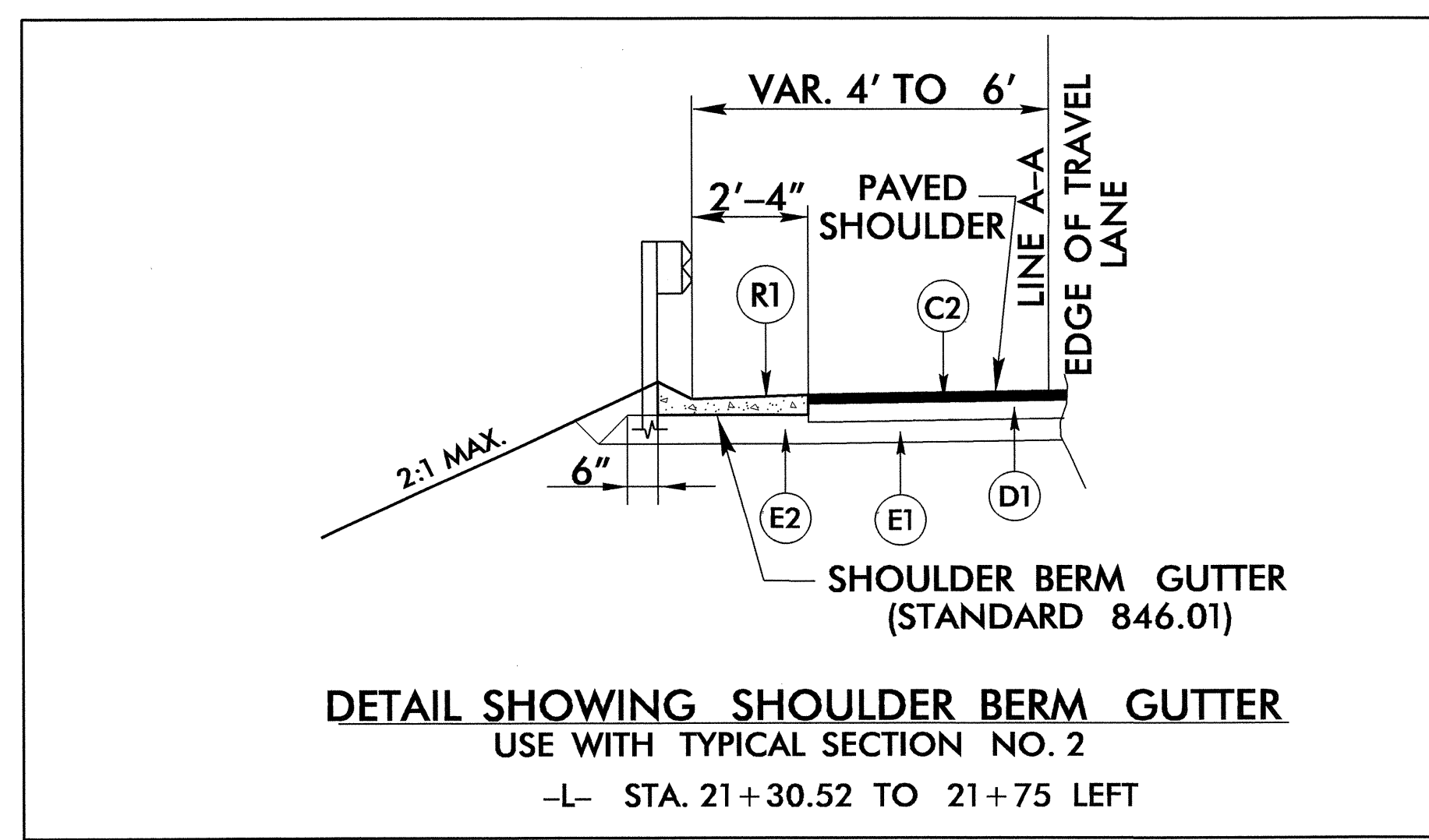
6/2/99

PROJECT REFERENCE NO. B-4859	SHEET NO. 2-A
ROADWAY DESIGN ENGINEER GREGORY E. BRIDGES 12-18-12	PAVEMENT DESIGN ENGINEER KATHARINE WITCHEL 12/18/12

PAVEMENT SCHEDULE	
C2	3" S9.5C
D1	4" I19.0C
E1	10 1/2" B25.0C
E2	VAR B25.0C
R1	SHLD BERM GUTTER
T	EARTH MATERIAL
U	EXIST. PAVEMENT

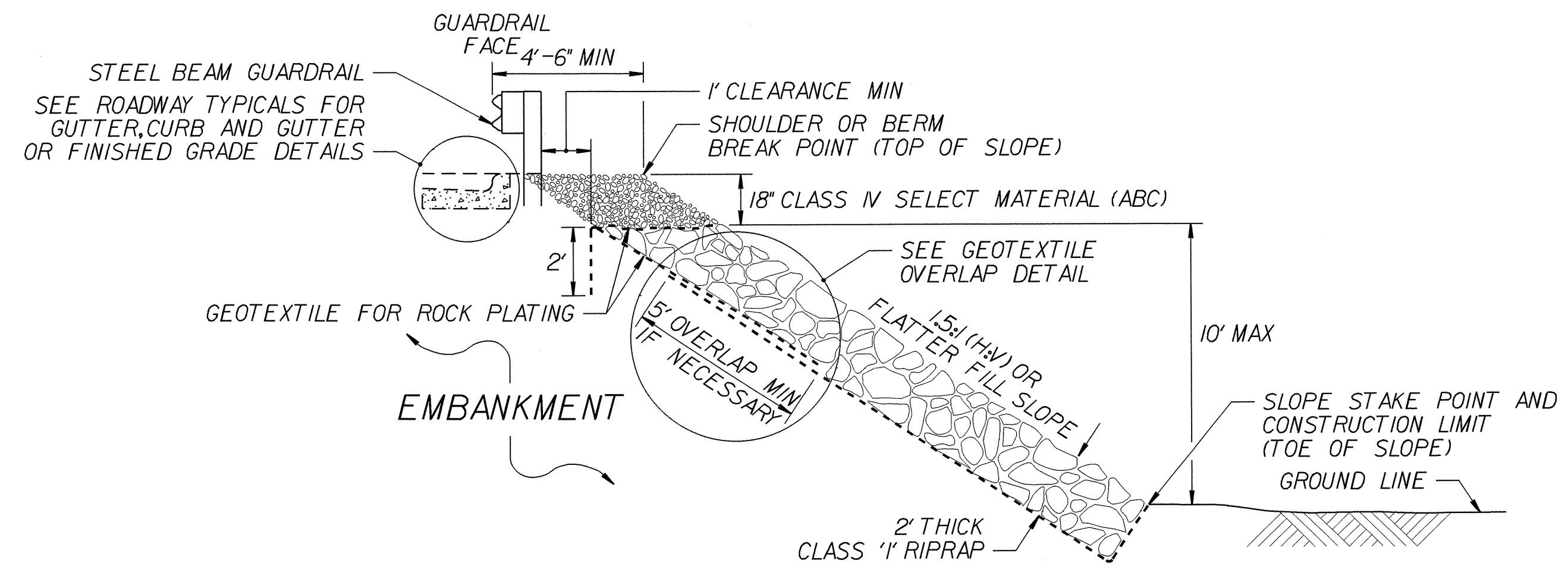


TYPICAL SECTION NO. 2
 -L- STA. 18+00 TO 18+94.26 (BEGIN BRIDGE)
 -L- STA. 21+23.17 (END BRIDGE) TO 22+50



DETAIL SHOWING SHOULDER BERM GUTTER
 USE WITH TYPICAL SECTION NO. 2
 -L- STA. 21+30.52 TO 21+75 LEFT

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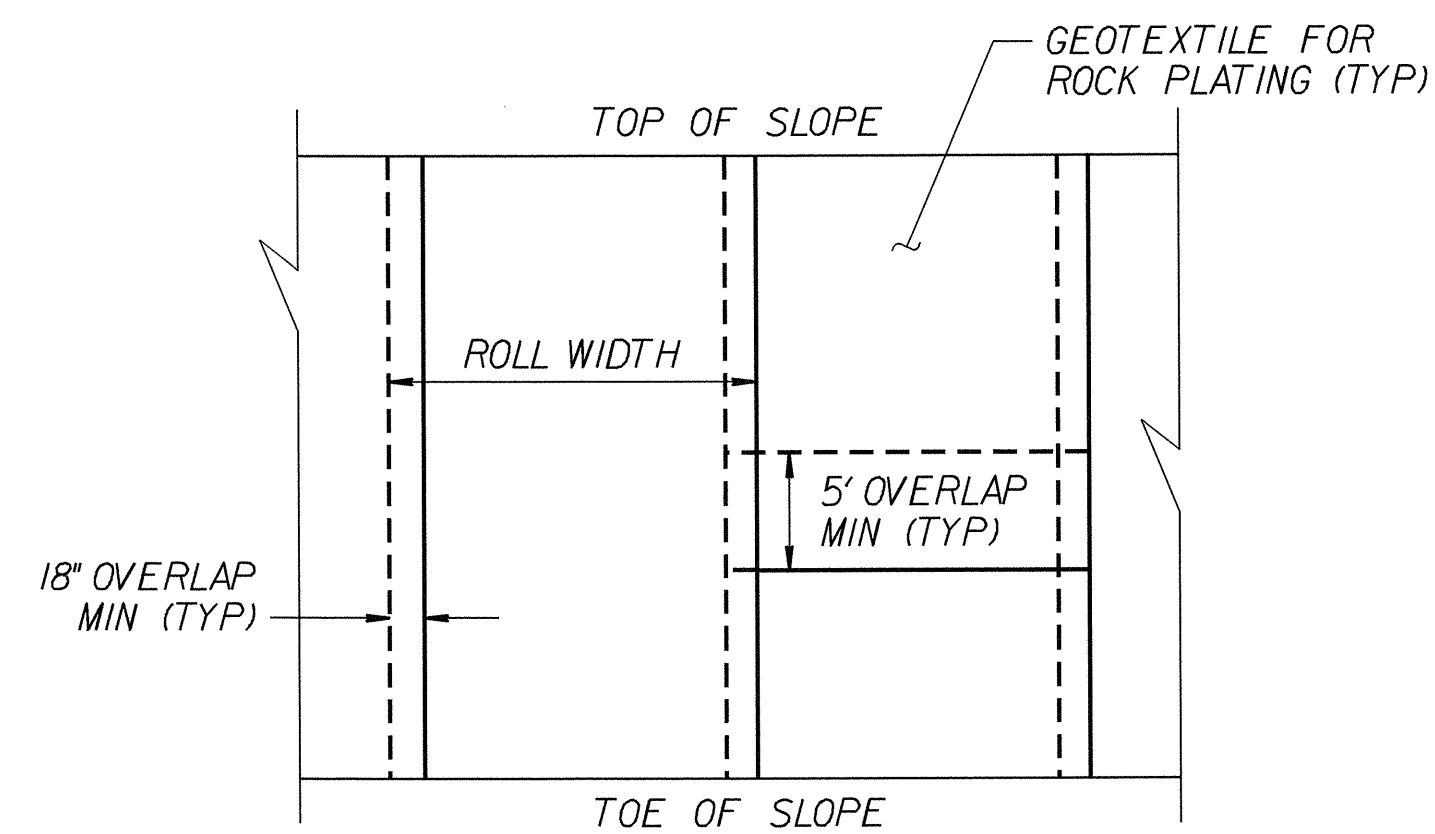


ROCK PLATING DETAIL NO. 1 - TYPICAL SECTION

**USE ROCK PLATING DETAIL NO. 1
AT THE FOLLOWING LOCATIONS:**

**-L- STA 21+20 ± TO -L STA 23+00 ± RIGHT
EXTEND ROCK PLATING LIMITS TO 1.75:1 SLOPES.**

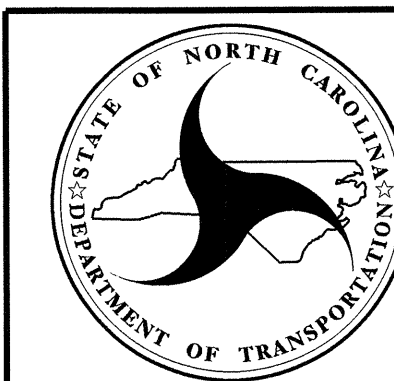
ESTIMATED QUANTITIES:	
ROCK PLATING	----- 600 SQ. YD.



**GEOTEXTILE OVERLAP DETAIL
(PLAN VIEW)**

FOR ROCK PLATING, SEE SECTION 275 OF THE STANDARD SPECIFICATIONS.

ROCK PLATING DETAIL AND LOCATION WERE RECOMMENDED BY THE GEOTECHNICAL ENGINEERING UNIT. THE RECOMMENDATIONS WERE SUBMITTED TO THE ROADWAY DESIGN UNIT ON OCTOBER 20, 2011 AND SEALED BY A PROFESSIONAL ENGINEER, JOHN FARGHER, LICENSE # 023480.
FOR ROCK PLATING, SEE SECTION 275 OF THE STANDARD SPECIFICATIONS.



**GEOTECHNICAL
ENGINEERING UNIT**

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

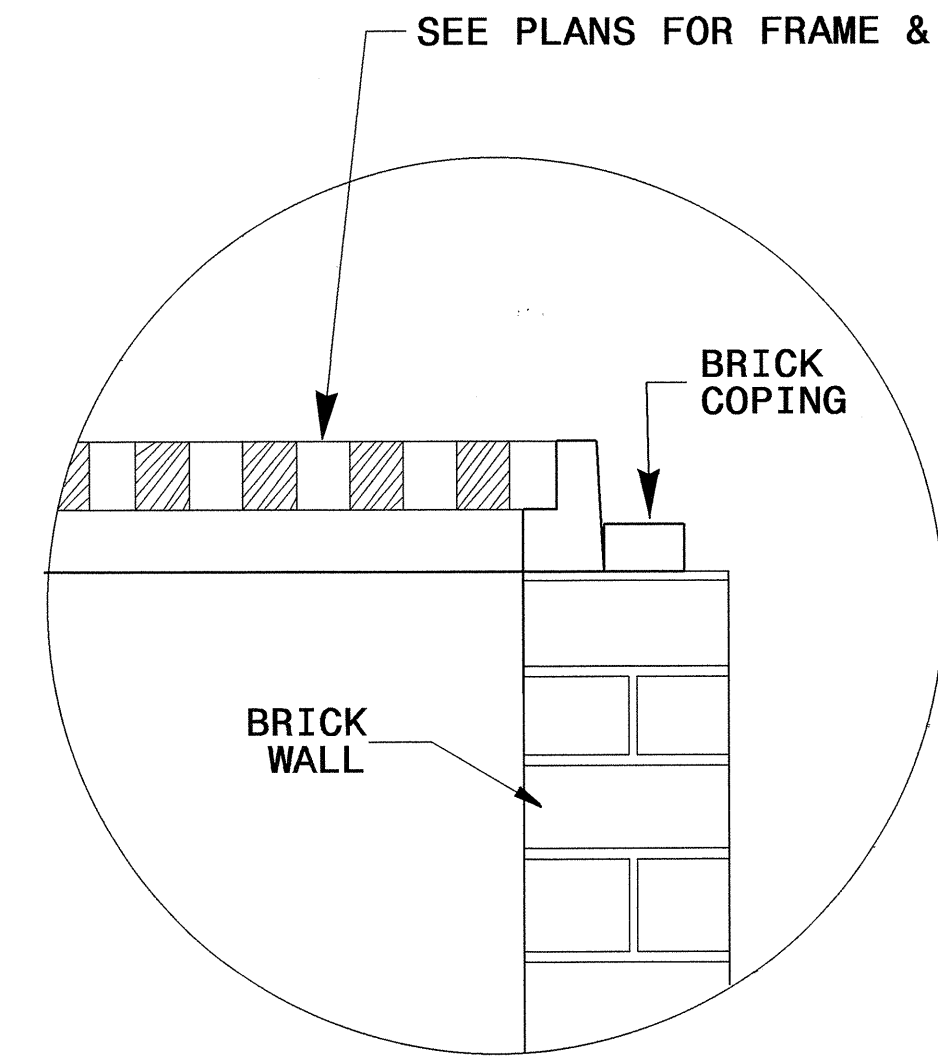
STD CELL Detail_RockPlating

ROCK PLATING DETAILS

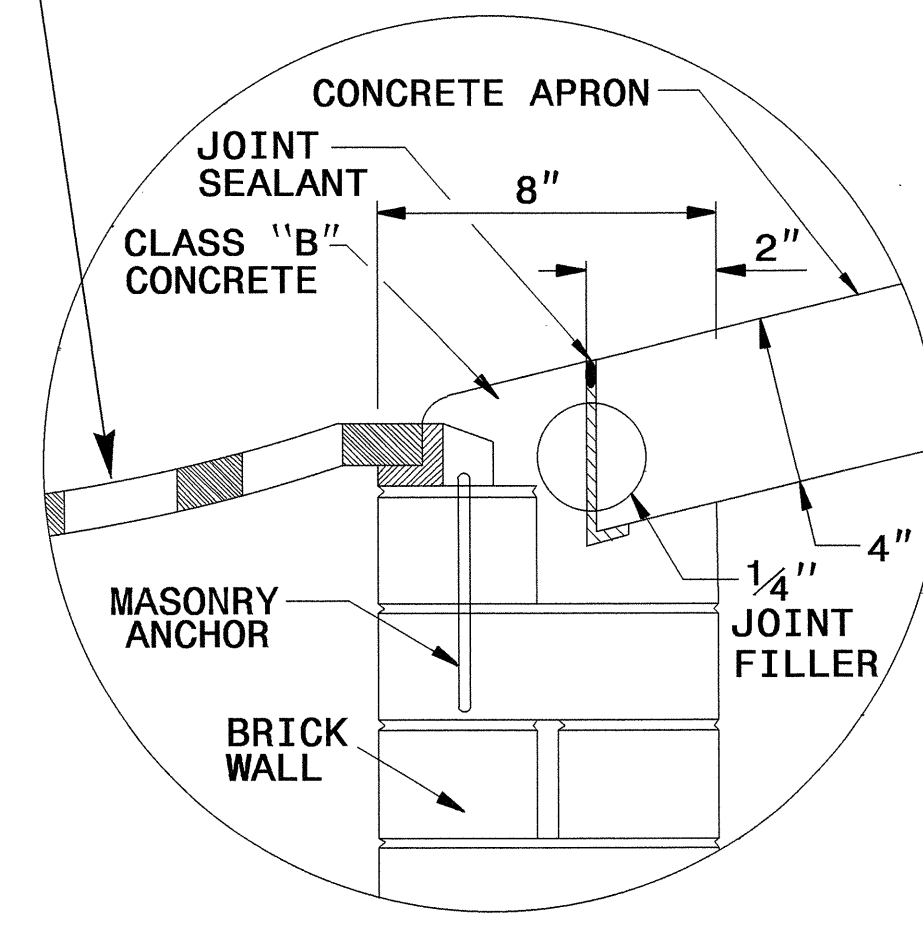
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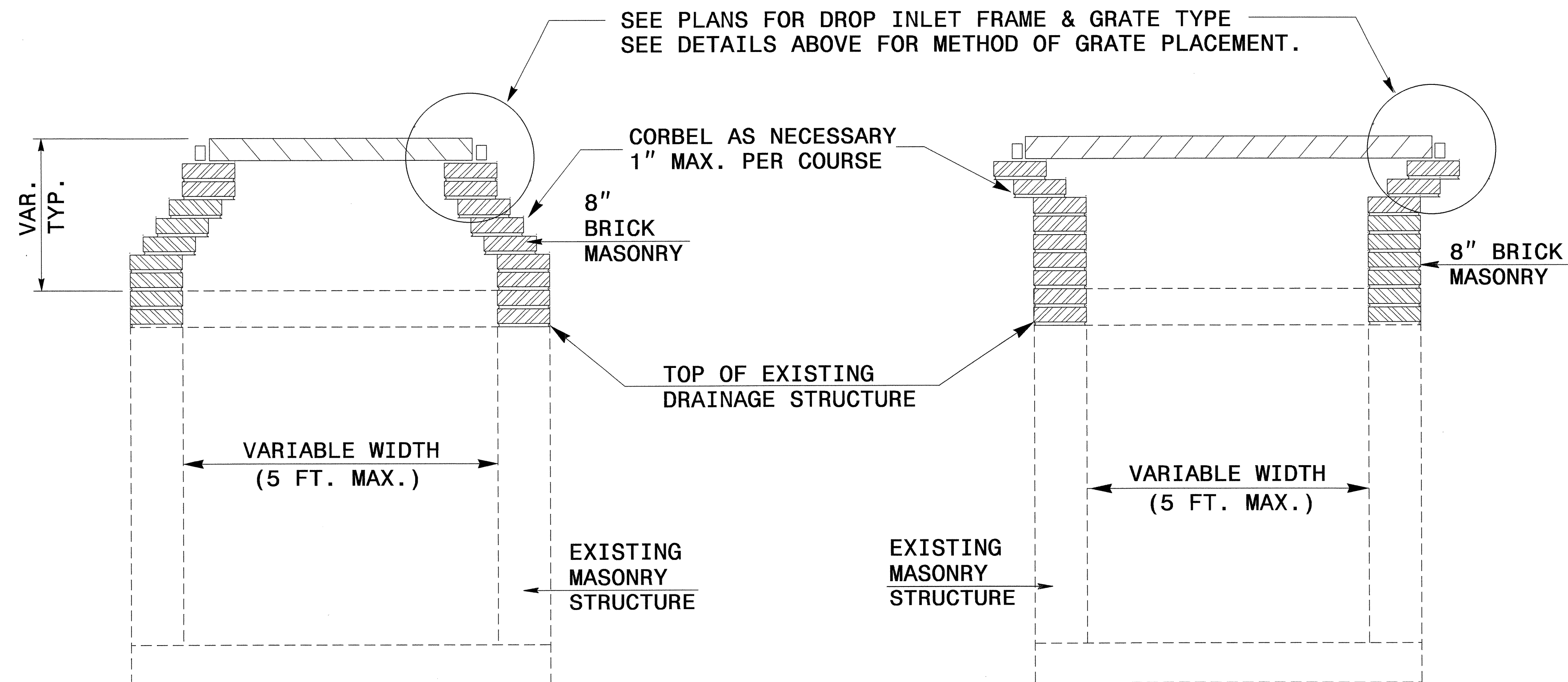
GRATE PLACEMENT DETAIL
FOR DROP INLETS



GRATE PLACEMENT DETAIL
FOR GRATED DROP INLETS

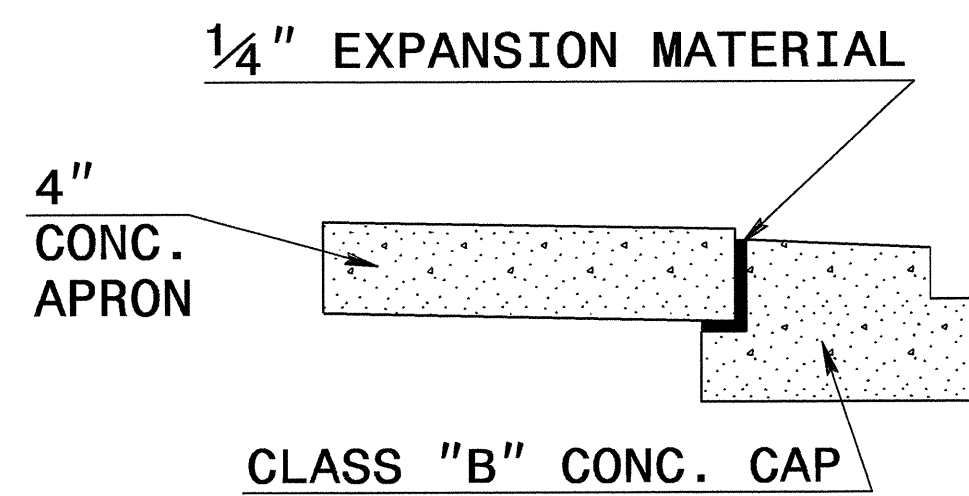
GENERAL NOTES:

- CONSTRUCT IN ACCORDANCE WITH SECTION 859 OF THE STANDARD SPECIFICATIONS.
- USE CLASS B CONCRETE.
- THE DIMENSIONS FOR THE EXISTING BOXES ARE APPROXIMATE AND MAY VARY SLIGHTLY.
- JUMBO CONCRETE BRICK WILL BE PERMITTED. 4" CONCRETE BRICK OR 8" SOLID CONCRETE BLOCK ARE REQUIRED FOR DRAINAGE STRUCTURE.
- INCLUDE 18" CONCRETE APRON IN UNIT PRICE BID PER EACH, CONVERT EXISTING CATCH BASIN TO DROP INLET.
- SPECIAL DESIGN IS REQUIRED FOR USE UNDER PAVEMENT.
- CONFIRM DIMENSIONS ON EACH INDIVIDUAL FRAME & GRATE PROPOSAL.
- SEE STD. DRAWING 840.25 FOR MASONRY ANCHORAGE.



TYPICAL SECTION

TYPICAL SECTION



EXPANSION JOINT DETAIL



CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

DETAIL TO CONVERT EXISTING CATCH BASIN OR JUNCTION BOX TO DROP INLET

ORIGINAL BY: T.S.S. DATE: NOV. 1997
 MODIFIED BY: T.S.S. DATE: FEB. 2000
 CHECKED BY: DATE:
 FILE SPEC.: s:\usr\details\stand\cbtod102.dgn

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C203085

Item Number	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION
0029000000-N	SP	Lump Sum		REINFORCED BRIDGE APPROACH FILL STATION ***** (20+08.71-L)
0043000000-N	226	Lump Sum		GRADING
0050000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUB- BING
0057000000-E	226	500	CY	UNDERCUT EXCAVATION
0196000000-E	270	300	SY	GEOTEXTILE FOR SOIL STABILIZA- TION
0223000000-E	275	600	SY	ROCK PLATING
0318000000-E	300	5	TON	FOUNDATION CONDITIONING MATE- RIAL, MINOR STRUCTURES
0320000000-E	300	10	SY	FOUNDATION CONDITIONING GEO- TEXTILE
0448200000-E	310	20	LF	15" RC PIPE CULVERTS, CLASS IV
1099500000-E	505	300	CY	SHALLOW UNDERCUT
1099700000-E	505	570	TON	CLASS IV SUBGRADE STABILIZA- TION
1220000000-E	545	100	TON	INCIDENTAL STONE BASE
1491000000-E	610	900	TON	ASPHALT CONC BASE COURSE, TYPE B25.0C
1503000000-E	610	525	TON	ASPHALT CONC INTERMEDIATE COURSE, TYPE 119.0C
1519000000-E	610	140	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5B
1523000000-E	610	500	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5C
1575000000-E	620	104	TON	ASPHALT BINDER FOR PLANT MIX
2264000000-E	840	1	CY	PIPE PLUGS
2275000000-E	SP	5	CY	FLOWABLE FILL
2286000000-N	840	2	EA	MASONRY DRAINAGE STRUCTURES
2365000000-N	840	1	EA	FRAME WITH TWO GRATES, STD 840.22
2407000000-N	840	2	EA	STEEL FRAME WITH TWO GRATES, STD 840.37
2556000000-E	846	25	LF	SHOULDER BERM GUTTER
2950000000-N	859	1	EA	CONVERT EXISTING JUNCTION BOX TO DROP INLET
3030000000-E	862	700	LF	STEEL BM GUARDRAIL
3150000000-N	862	10	EA	ADDITIONAL GUARDRAIL POSTS
3210000000-N	862	1	EA	GUARDRAIL ANCHOR UNITS, TYPE CAT-1
3270000000-N	SP	3	EA	GUARDRAIL ANCHOR UNITS, TYPE 350
3317000000-N	862	4	EA	GUARDRAIL ANCHOR UNITS, TYPE B-77
3360000000-E	863	1,055	LF	REMOVE EXISTING GUARDRAIL
3595000000-E	869	314	LF	RELAPPING GUARDRAIL
3656000000-E	876	1,000	SY	GEOTEXTILE FOR DRAINAGE
4072000000-E	903	82	LF	SUPPORTS, 3-LB STEEL U-CHANNEL
4096000000-N	904	2	EA	SIGN ERECTION, TYPE D
4155000000-N	907	5	EA	DISPOSAL OF SIGN SYSTEM, U- CHANNEL
4400000000-E	1110	810	SF	WORK ZONE SIGNS (STATIONARY)
4405000000-E	1110	384	SF	WORK ZONE SIGNS (PORTABLE)
4410000000-E	1110	36	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
4415000000-N	1115	4	EA	FLASHING ARROW BOARD
4420000000-N	1120	2	EA	PORTABLE CHANGEABLE MESSAGE SIGN
4430000000-N	1130	200	EA	DRUMS
4445000000-E	1145	48	LF	BARRICADES (TYPE III)
4480000000-N	1165	2	EA	TMA
4485000000-E	1170	1,770	LF	PORTABLE CONCRETE BARRIER
4510000000-N	SP	16	HR	LAW ENFORCEMENT
4595000000-E	SP	1,132	SF	GENERIC TRAFFIC CONTROL ITEM OVERSIZED VEHICLES DETOUR ROUTE SIGNING
4650000000-N	1251	1,328	EA	TEMPORARY RAISED PAVEMENT MARKERS
4685000000-E	1205	11,090	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)

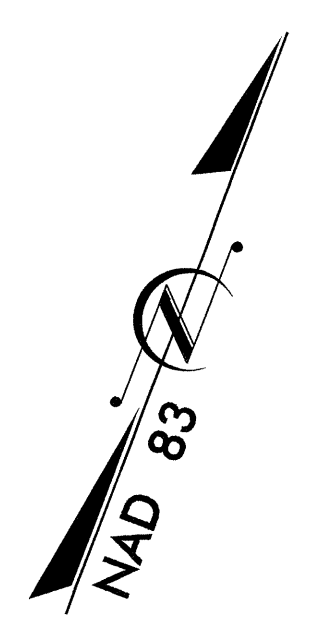
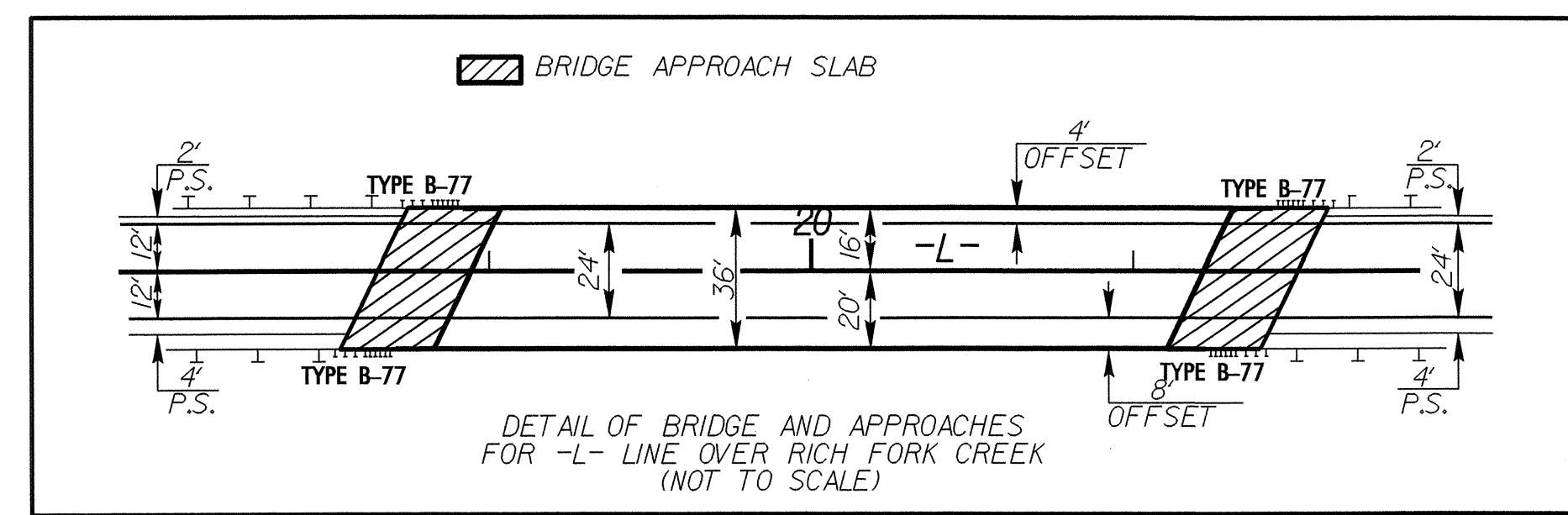
Item Number	Sec #	Quantity	Unit	Description
4686000000-E	1205	1,386	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)
4770000000-E	1205	1,024	LF	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE ** (4") (II)
4850000000-E	1205	3,411	LF	REMOVAL OF PAVEMENT MARKING LINES (4")
4900000000-N	1251	6	EA	PERMANENT RAISED PAVEMENT MARKERS
4905000000-N	1253	69	EA	SNOWPLOWABLE PAVEMENT MARKERS
6000000000-E	1605	450	LF	TEMPORARY SILT FENCE
6006000000-E	1610	225	TON	STONE FOR EROSION CONTROL, CLASS A
6009000000-E	1610	45	TON	STONE FOR EROSION CONTROL, CLASS B
6012000000-E	1610	335	TON	SEDIMENT CONTROL STONE
6015000000-E	1615	2	ACR	TEMPORARY MULCHING
6018000000-E	1620	100	LB	SEED FOR TEMPORARY SEEDING
6021000000-E	1620	1.25	TON	FERTILIZER FOR TEMPORARY SEED- ING
6024000000-E	1622	200	LF	TEMPORARY SLOPE DRAINS
6029000000-E	SP	400	LF	SAFETY FENCE
6030000000-E	1630	200	CY	SILT EXCAVATION
6036000000-E	1631	5,000	SY	MATTING FOR EROSION CONTROL
6037000000-E	SP	475	SY	COIR FIBER MAT
6042000000-E	1632	725	LF	1/4" HARDWARE CLOTH
6070000000-N	1639	8	EA	SPECIAL STILLING BASINS
6071010000-E	SP	325	LF	WATTLE
6071020000-E	SP	100	LB	POLYACRYLAMIDE (PAM)
6071030000-E	1640	100	LF	COIR FIBER BAFFLE
6071050000-E	SP	2	EA	** SKIMMER (1-1/2")
6084000000-E	1660	2	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	1.25	TON	FERTILIZER TOPDRESSING
6114500000-N	1667	10	MHR	SPECIALIZED HAND MOWING
6117000000-N	SP	18	EA	RESPONSE FOR EROSION CONTROL

5/28/99

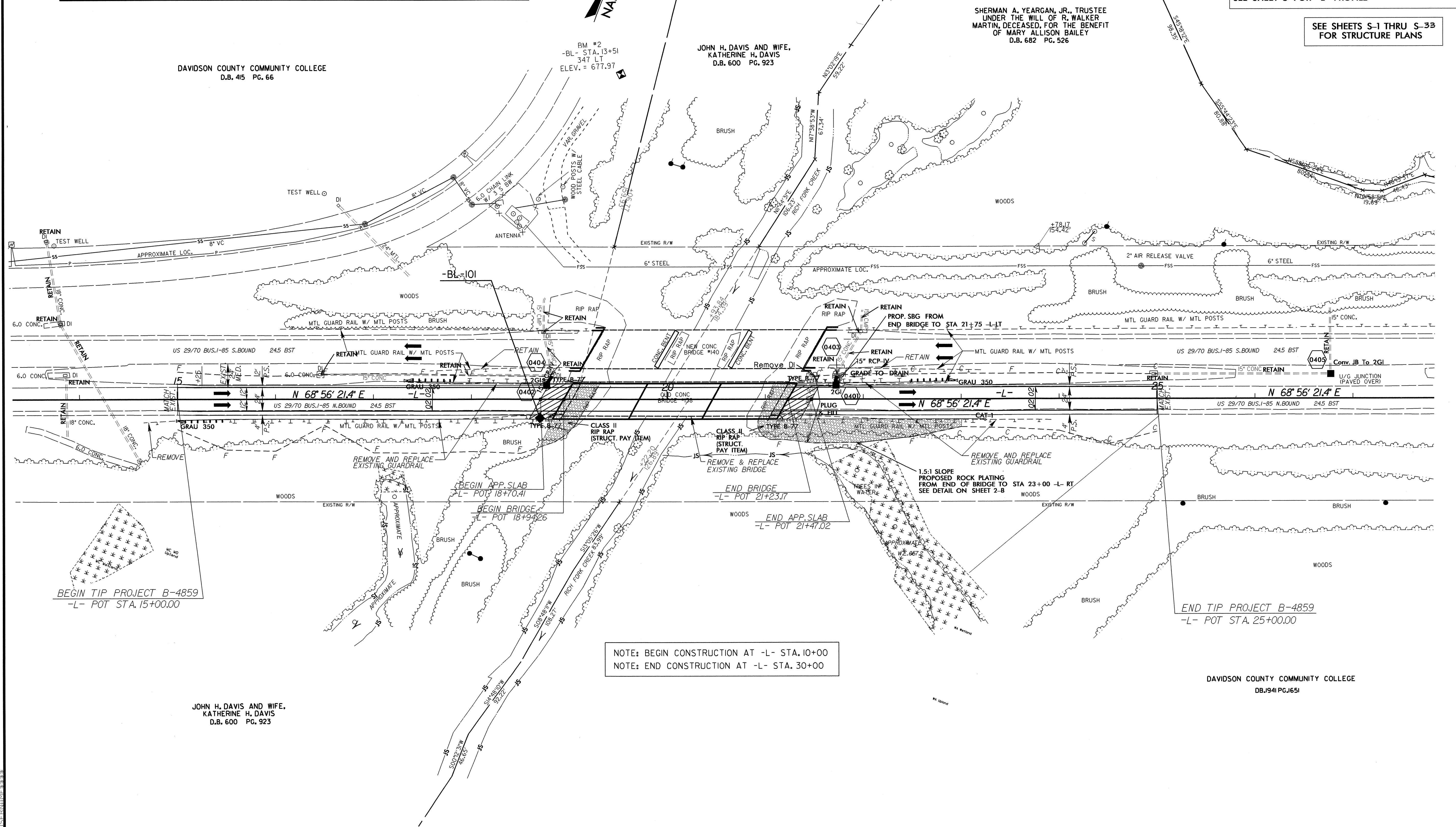
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\$\$\$\$\$REFERENCE\$\$\$\$\$

SEE SHEETS 4-A & 4-B FOR TEMPORARY DETOUR
SEE SHEET 5 FOR -L- PROFILE

SEE SHEETS S-1 THRU S-33
FOR STRUCTURE PLANS



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NOTE: BEGIN CONSTRUCTION AT -L- STA. 10+00
NOTE: END CONSTRUCTION AT -L- STA. 30+00

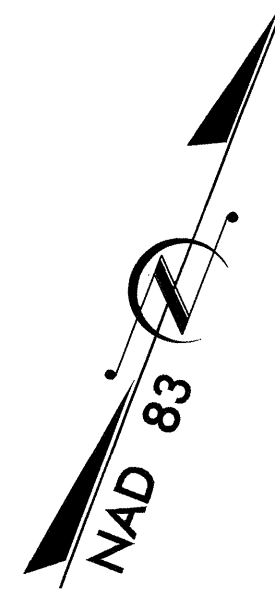
BEGIN TIP PROJECT B-4859
-L- POT STA. 15+00.00

END TIP PROJECT B-4859
-L- POT STA. 25+00.00

JOHN H. DAVIS AND WIFE,
KATHERINE H. DAVIS
D.B. 600 PG. 923

DAVIDSON COUNTY COMMUNITY COLLEGE
DBJ941 PG.1651

5/14/99



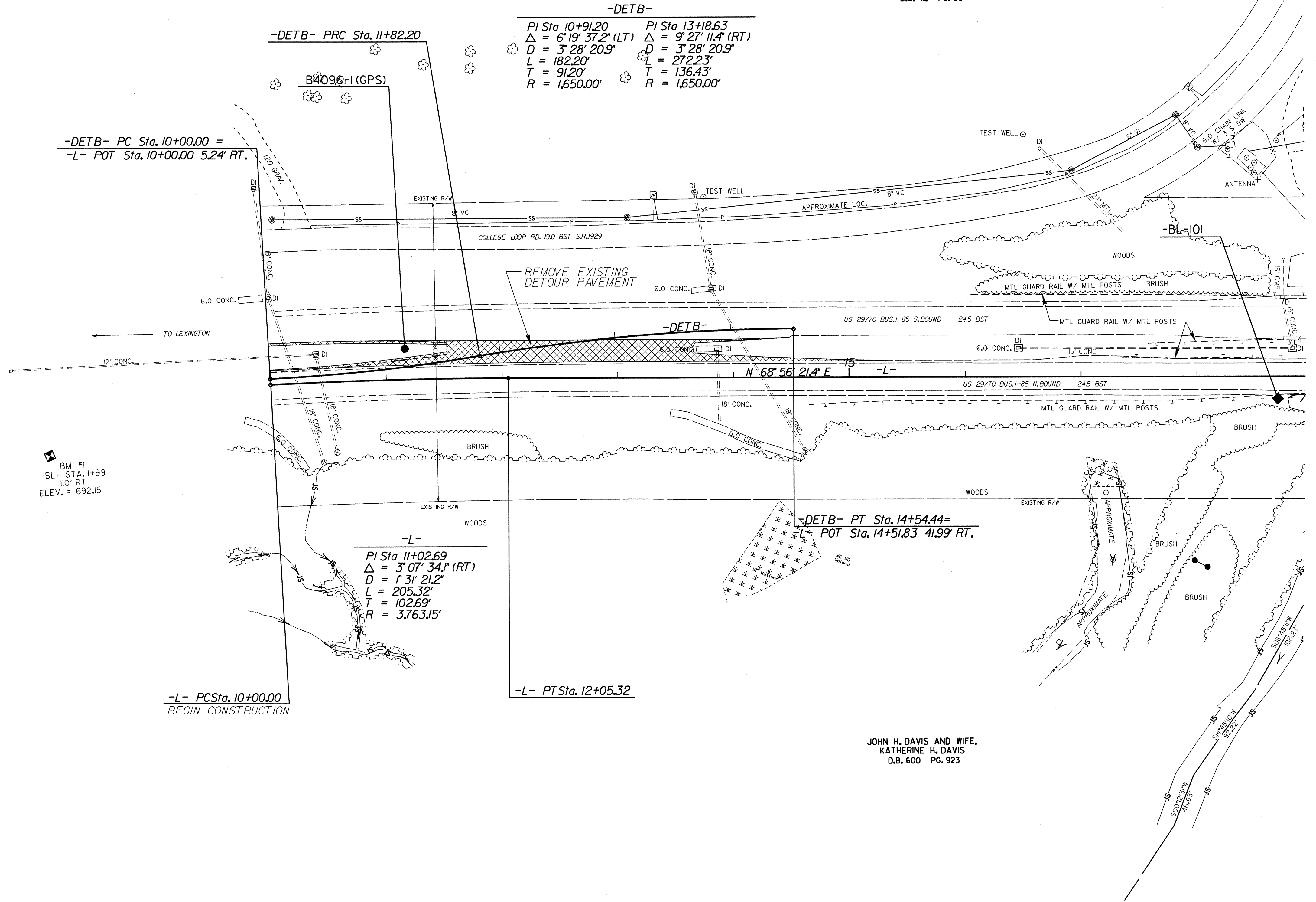
NOTE: REMOVE EXISTING DETOUR PAVEMENT AFTER THE PROJECT HAS BEEN COMPLETED

USE THIS SHEET FOR TEMPORARY TRAFFIC MAINTENANCE DURING CONSTRUCTION.

DETOUR DESIGN SPEED= 45 MPH MAX.

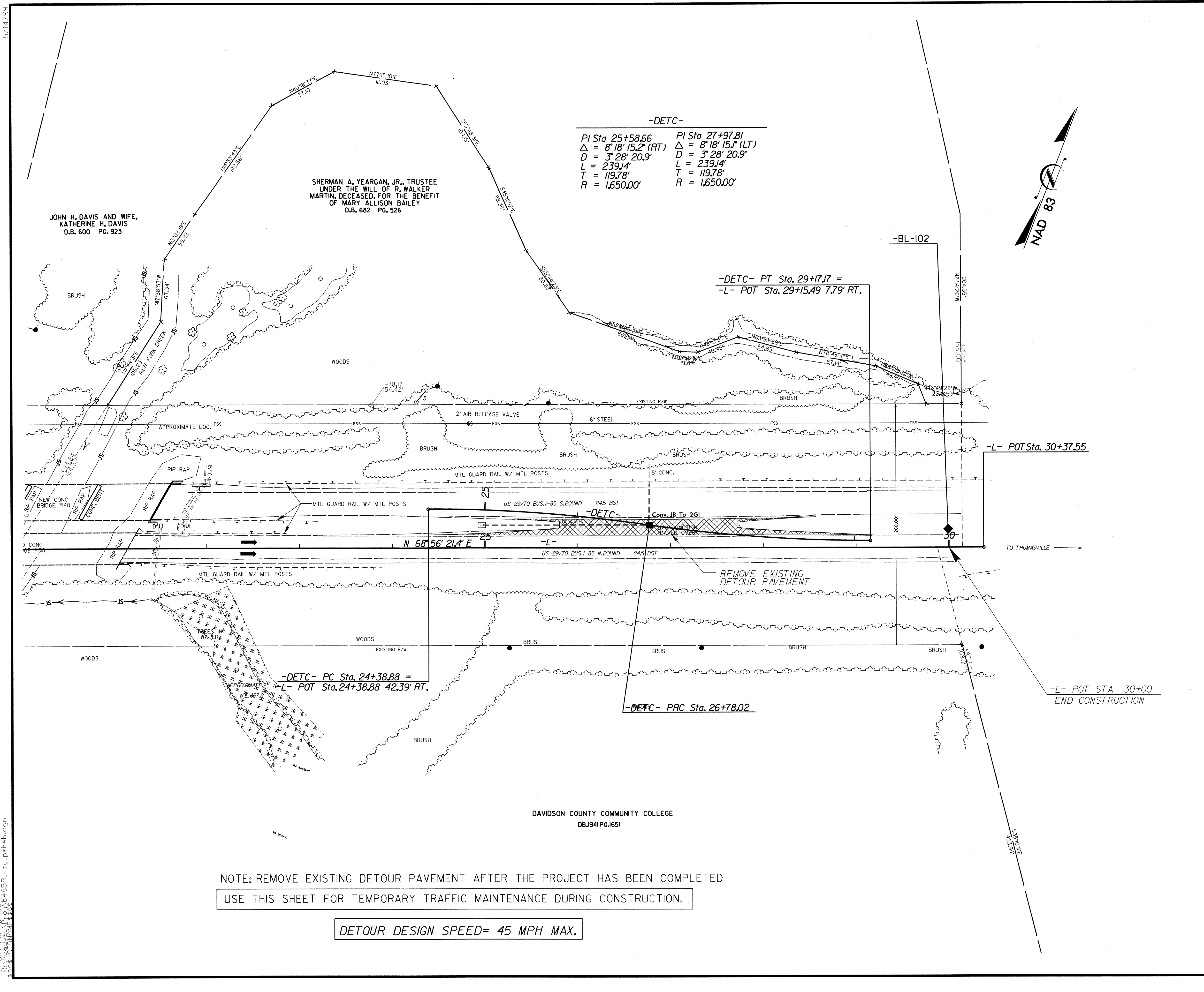
PROJECT REFERENCE NO. B-4859	SHEET NO. 4-A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER GREGORY E. BURLEN 12.18.12	HYDRAULICS ENGINEER [Signature]

DAVIDSON COUNTY COMMUNITY COLLEGE
D.B. 415 PG. 66





JOHN H. DAVIS AND WIFE,
KATHERINE H. DAVIS
D.B. 600 PG. 923

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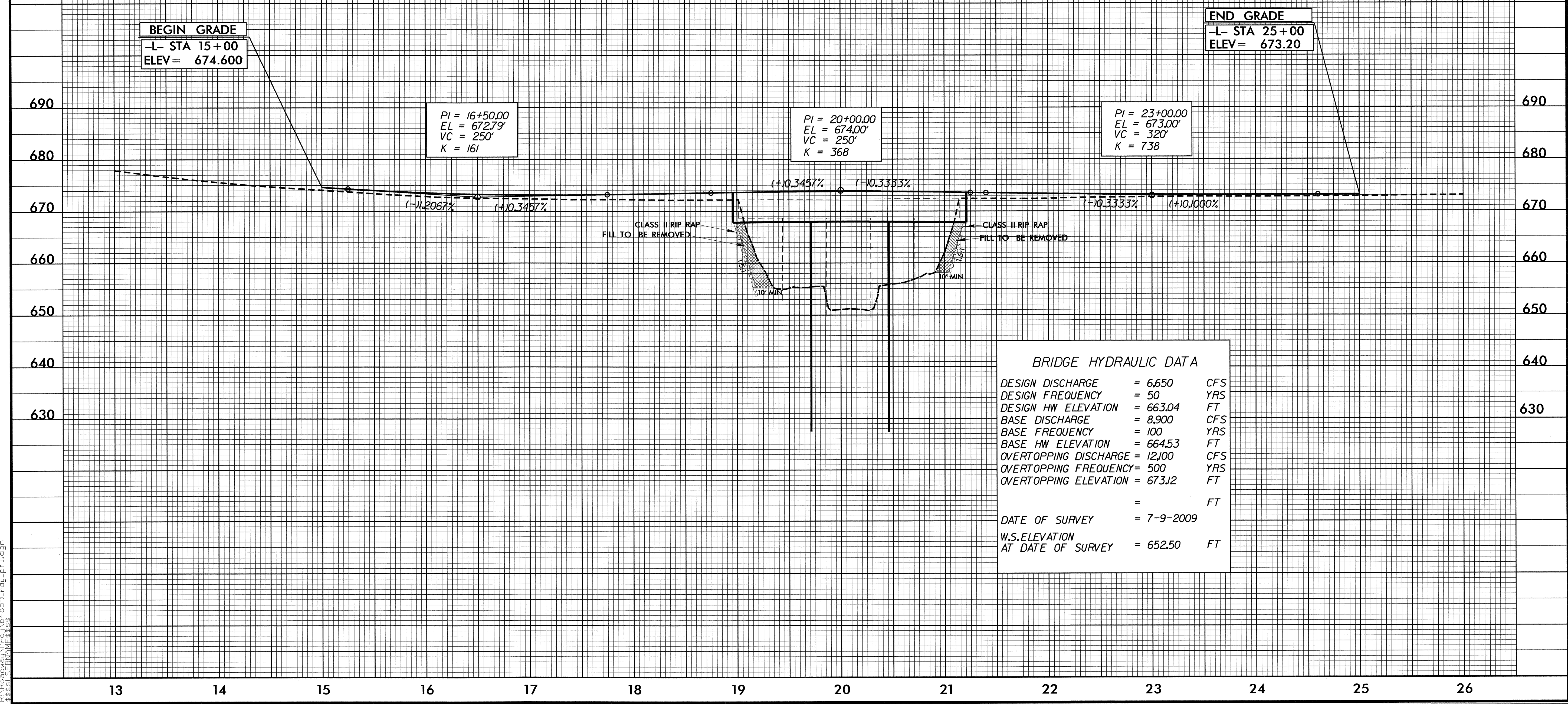
5/14/99

PROJECT REFERENCE NO. B-4859	SHEET NO. 5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	
12-15-12	

BM-2 RR SPIKE IN BASE OF 18" OAK
42' OFF EASTERN EP ON COLLEGE LOOP RD.
NORTH OF SEWAGE PUMP STATION
263' LT OF -BL- STA. 13+24 (-L- STA.
19+56.19 OFF 243.81' (LT))
ELEV.= 677.97

-L-

SEE SHEET 4 FOR PLANS



BEGIN GRADE
-L- STA 15+00
ELEV = 674.600

END GRADE
-L- STA 25+00
ELEV = 673.20

PI = 16+50.00
EL = 672.79
VC = 250'
K = 161

PI = 20+00.00
EL = 674.00
VC = 250'
K = 368

PI = 23+00.00
EL = 673.00
VC = 320'
K = 738

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	= 6,650	CFS
DESIGN FREQUENCY	= 50	YRS
DESIGN HW ELEVATION	= 663.04	FT
BASE DISCHARGE	= 8,900	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 664.53	FT
OVERTOPPING DISCHARGE	= 12,100	CFS
OVERTOPPING FREQUENCY	= 500	YRS
OVERTOPPING ELEVATION	= 673.12	FT
	=	FT
DATE OF SURVEY	= 7-9-2009	
W.S.ELEVATION AT DATE OF SURVEY	= 652.50	FT

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