

09/08/99

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

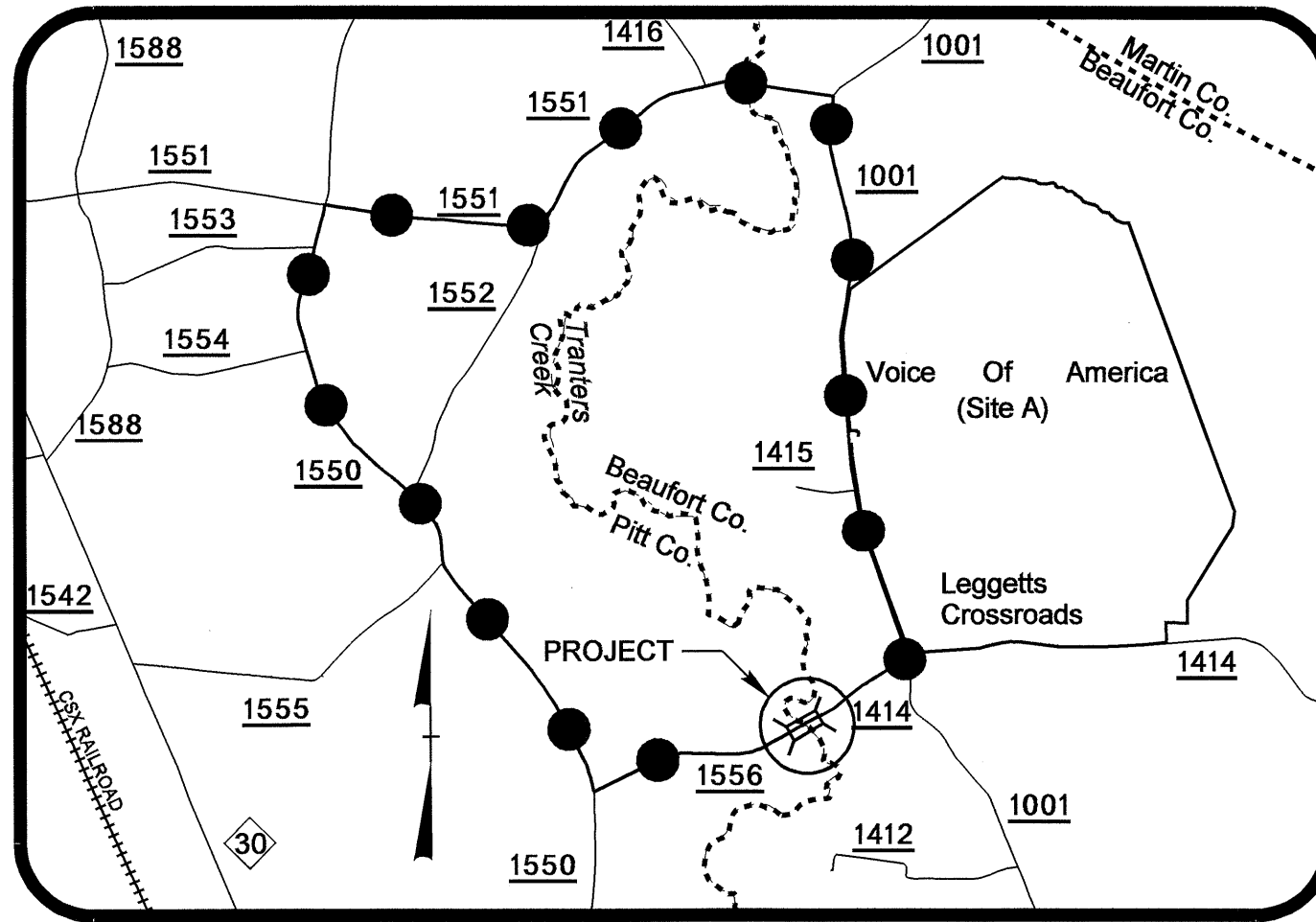
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PITT & BEAUFORT COUNTY

LOCATION: BRIDGE NO. 90 OVER TRANTERS CREEK
ON SR 1414 & SR 1556

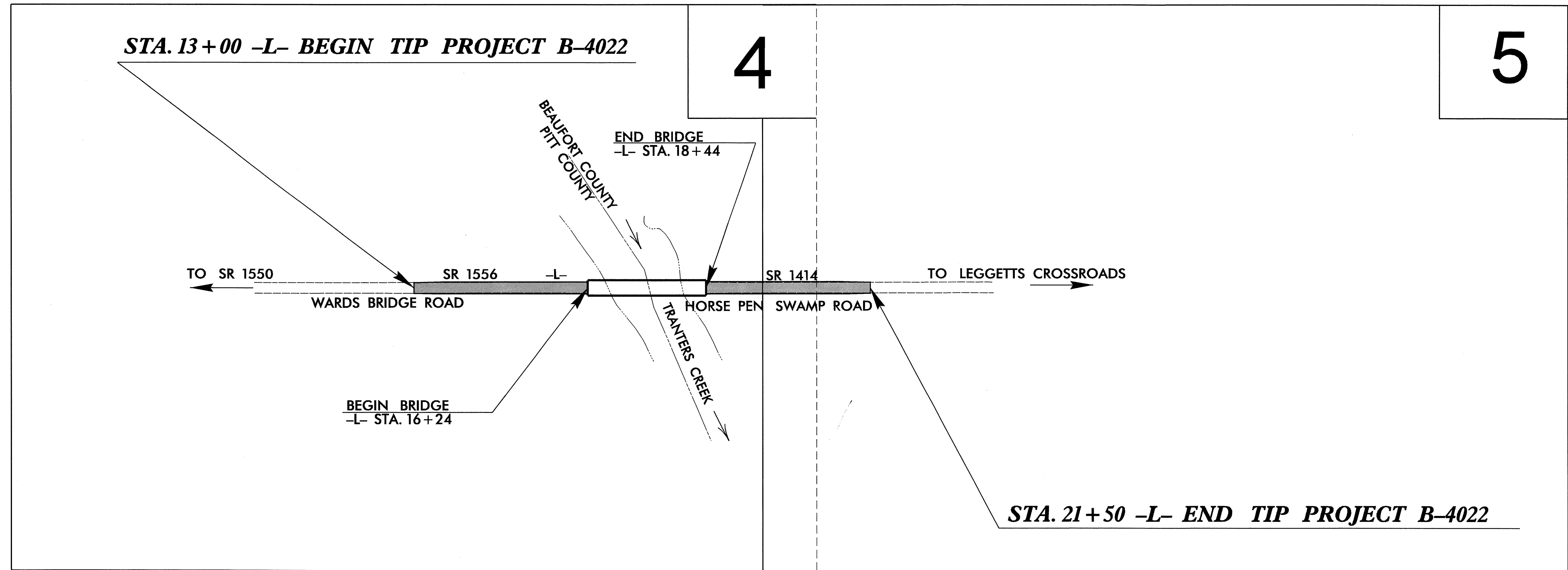
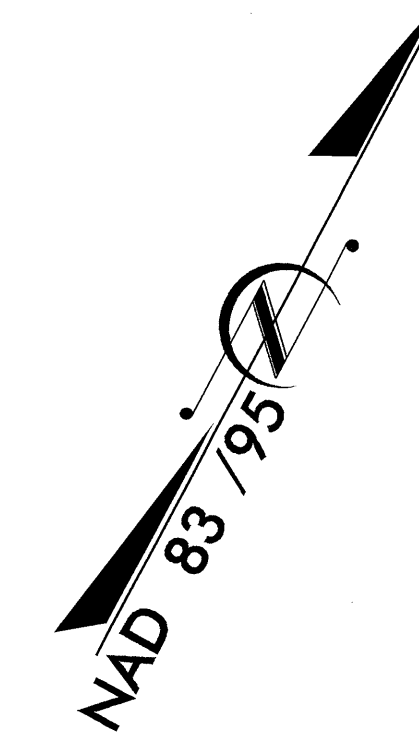
TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4022	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33389.1.1	BRZ-1414(2)	PE	
33389.2.1	BRZ-1414(2)	RW & UTIL	
33389.3.1	BRZ-1414(2)	CONST.	



VICINITY MAP

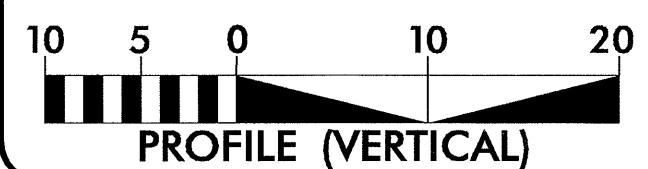
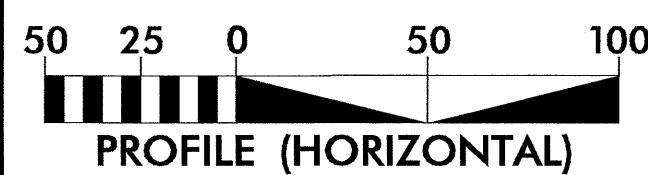
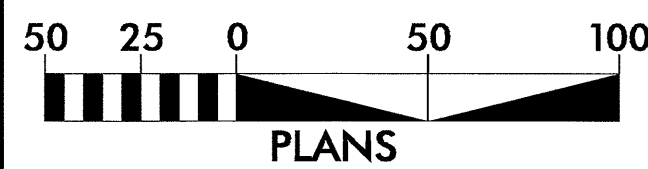
● ——— ● ——— ● ——— ● ——— DETOUR ROUTE



TIP PROJECT: B-4022

CONTRACT: C201496

GRAPHIC SCALES



DESIGN DATA

ADT 2008 = 478
 ADT 2028 = 739
 DHV = 10 %
 D = 60 %
 T = 3 % *
 V = 60 MPH
 * TTST 1% DUAL 2%
 FUNC. CLASS = RURAL LOCAL

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4022 = 0.119 MILES
 LENGTH STRUCTURE TIP PROJECT B-4022 = 0.042 MILES
 TOTAL LENGTH TIP PROJECT B-4022 = 0.161 MILES

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: GARY LOVERING, P.E.
 JUNE 3, 2005 PROJECT ENGINEER

LETTING DATE: RON McCOLLUM, P.E.
 JANUARY 15, 2008 PROJECT DESIGN ENGINEER

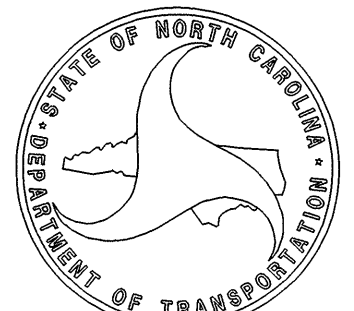
HYDRAULICS ENGINEER

Stephen R. Morgan
 SEAL 22100
 PROFESSIONAL ENGINEER
 STEPHEN R. MORGAN

ROADWAY DESIGN ENGINEER

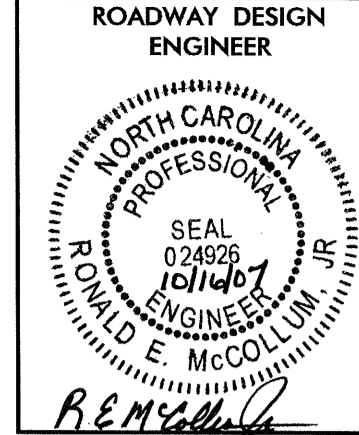
R. E. McCollum
 SEAL 101619
 PROFESSIONAL ENGINEER
 RONALD E. McCOLLUM, JR.
 P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA



at mill
 STATE HIGHWAY DESIGN ENGINEER

16-OCT-2007 12:16
 P:\PROJECTS\B-4022\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	SURVEY CONTROL SHEET
2	PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEDGING DETAIL
2-A	DETAIL FOR ANCHORAGE FOR FRAMES
3	SUMMARY OF QUANTITIES
3A	SUMMARY OF DRAINAGE QUANTITIES SUMMARY OF GUARDRAIL, EARTHWORK SUMMARY, ASPHALT PAVEMENT REMOVAL SUMMARY, SUMMARY OF HYDRAULIC RIP RAP, AND SUMMARY OF SHOULDER BERM GUTTER
3-B	PARCEL INDEX SHEET
4 THRU 5	PLAN SHEETS
6	PROFILE SHEET
TCP-1 THRU TCP-2	TRAFFIC CONTROL PLANS
EC-1 THRU EC-5	EROSION CONTROL PLANS
RF-1	REFORESTATION PLANS
UO-1 THRU UO-2	UTILITIES BY OTHERS PLANS
X-1A	CROSS-SECTION SUMMARY
X-1 THRU X-4	CROSS-SECTIONS
S-1 THRU S-25	STRUCTURE PLANS

GENERAL NOTES:

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

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.

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 EMBARO, AND EDGEcombe-MARTIN
EMC
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 OTHERS.

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 Super-elevation - Two Lane Pavement
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation - Method 'A'
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 Super-elevated Curve - Method I
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
840.00	Concrete Base Pad for Drainage Structures
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
862.04	Anchoring End of Guardrail - B-77 and B-83 Anchor Units
876.02	Guide for Rip Rap at Pipe Outlets

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

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○
Property Corner	⊗
Property Monument	EDM
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---

BUILDINGS AND OTHER CULTURE:

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

HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	▭
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	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	---C---
Proposed Slope Stakes Fill	---F---
Proposed Wheel Chair Ramp	WCR
Proposed Wheel Chair Ramp Curb Cut	WCC
Curb Cut for Future Wheel Chair Ramp	CCFR
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	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	⊗
U/G Power Cable Hand Hole	PH
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	PH
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	A/G Water

TV:

TV Satellite Dish	⊕
TV Pedestal	□
TV Tower	⊗
U/G TV Cable Hand Hole	PH
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	A/G Gas

SANITARY SEWER:

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

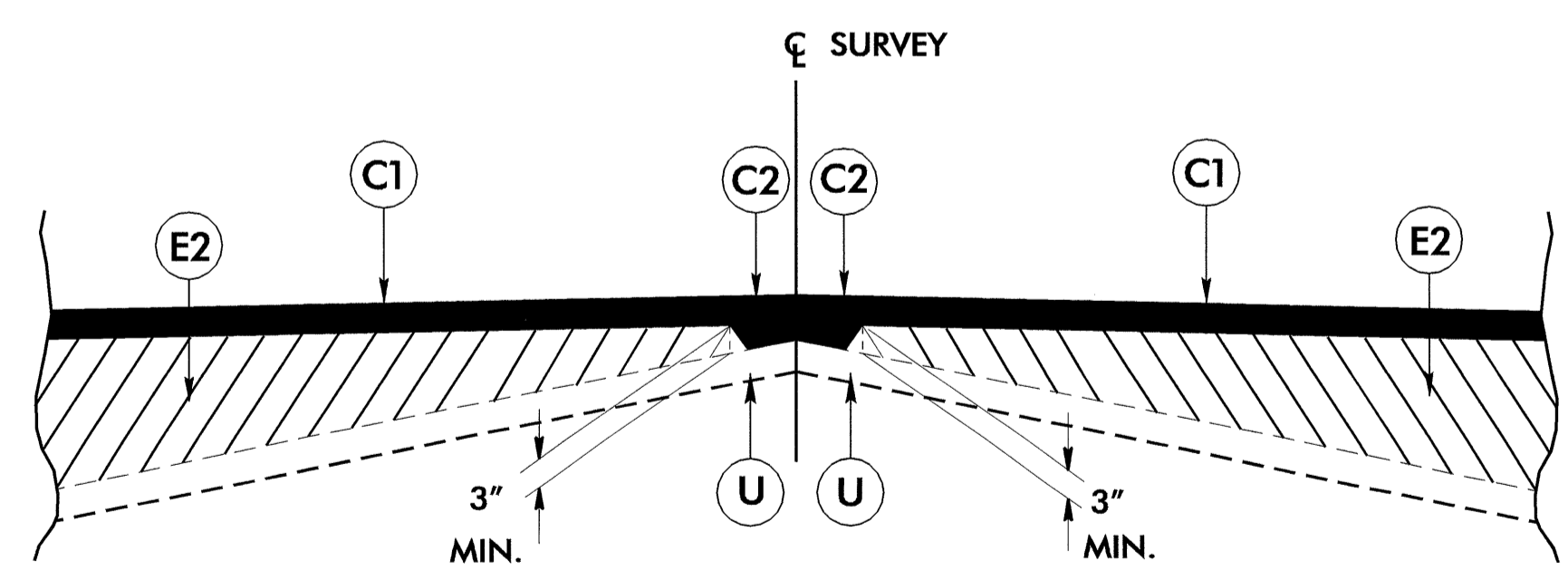
MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊕
Utility Unknown U/G Line	-----
U/G Tank; Water, Gas, Oil	▭
A/G Tank; Water, Gas, Oil	▭
U/G Test Hole (S.U.E.*)	⊕
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

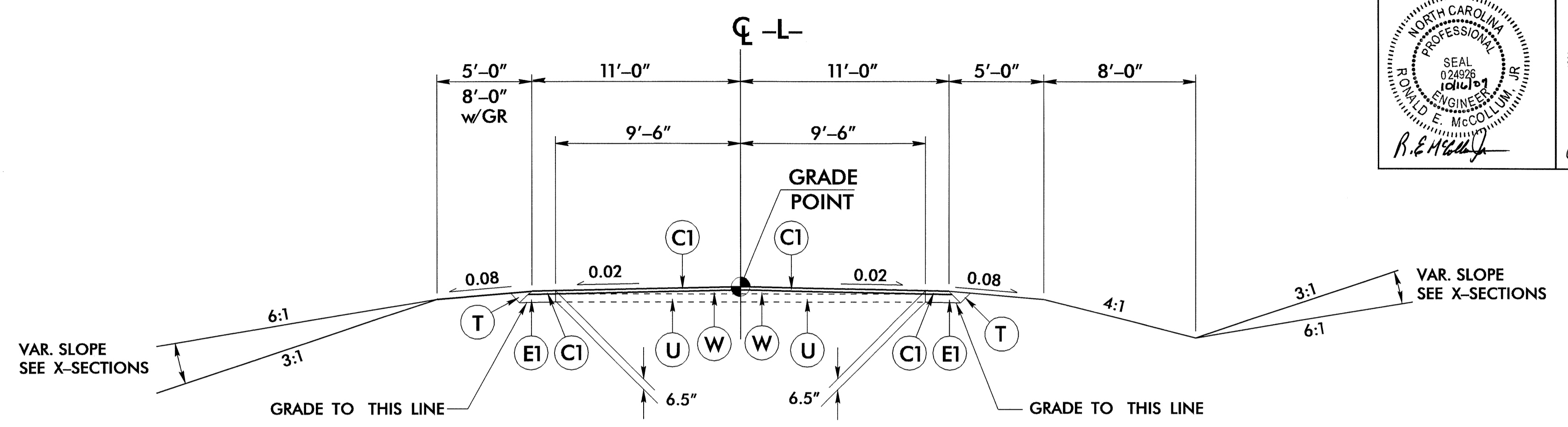
6/2/99

PAVEMENT SCHEDULE FINAL DESIGN	
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.
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 1½" 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 5½" IN DEPTH.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL)

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



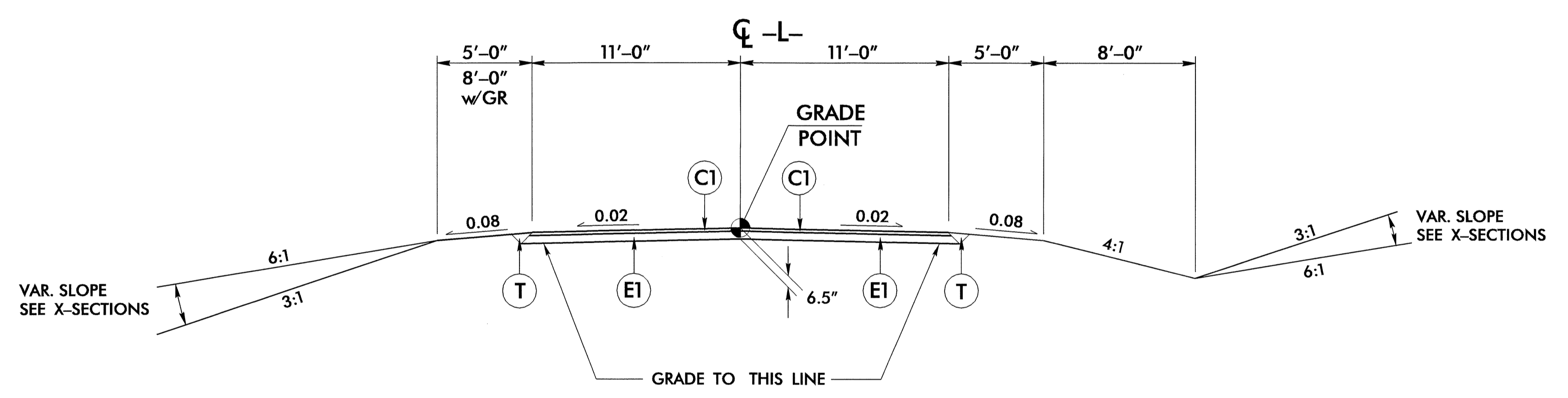
Wedging Detail



TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1

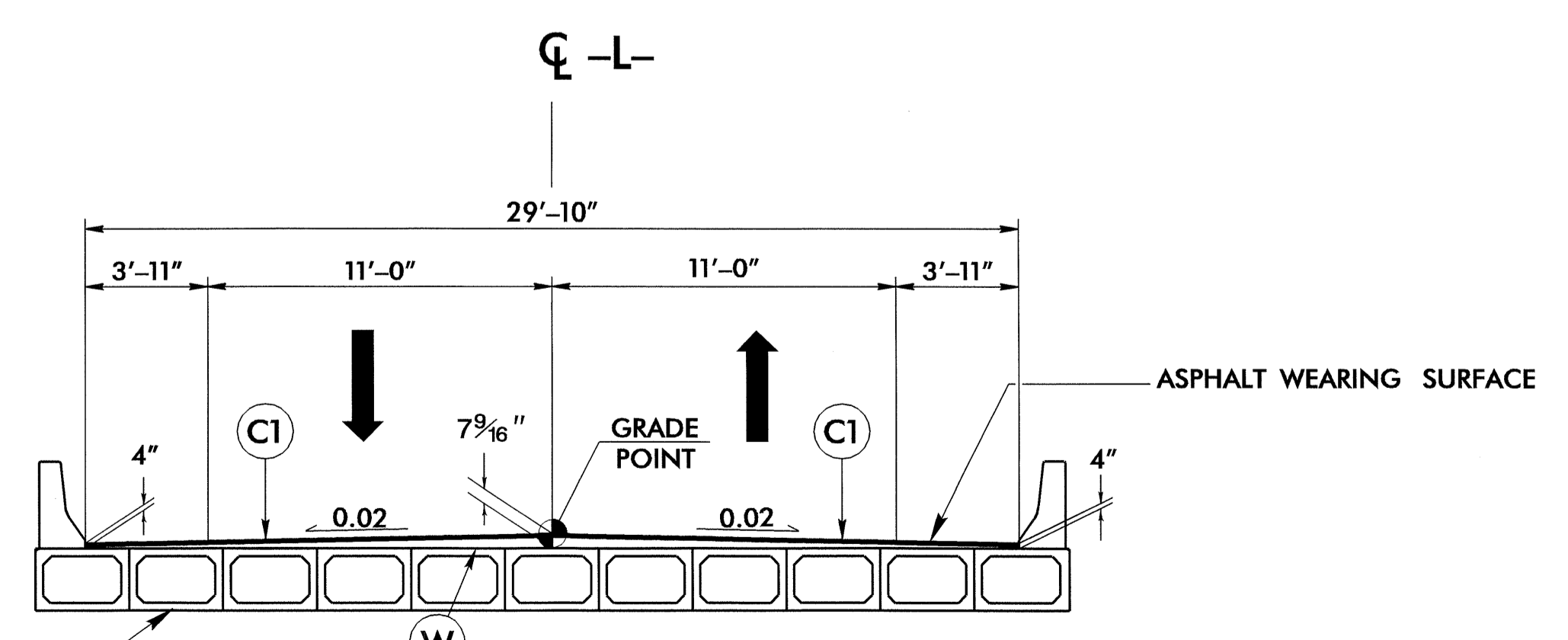
-L- STA. 13+00 TO -L- STA. 15+74
-L- STA. 18+94 TO -L- STA. 21+50



TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2

-L- STA. 15+74 TO -L- STA. 16+24 (BEG. BRIDGE)
-L- STA. 18+44 (END BRIDGE) TO -L- STA. 18+94



TYPICAL SECTION ON STRUCTURE

USE TYPICAL SECTION ON STRUCTURE

PROPOSED BOX GIRDER BRIDGE
(STRUCTURE PAY ITEM, SEE
STRUCTURE PLANS S-1 THRU S-25.)

-L- STA. 16+24 (BEG. BRIDGE) TO -L- STA. 18+44 (END BRIDGE)

PROJECT REFERENCE NO. B-4022	SHEET NO. 2
ROADWAY DESIGN ENGINEER R. E. HARRIS NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 024926 10/14/99	PAVEMENT DESIGN ENGINEER CLARK S. MORRIS NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 22898 10/14/99

25-SEP-2007 09:55 4022.rdy - typ.dgn
\$\$\$\$\$USER\$NAME\$\$\$\$\$

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

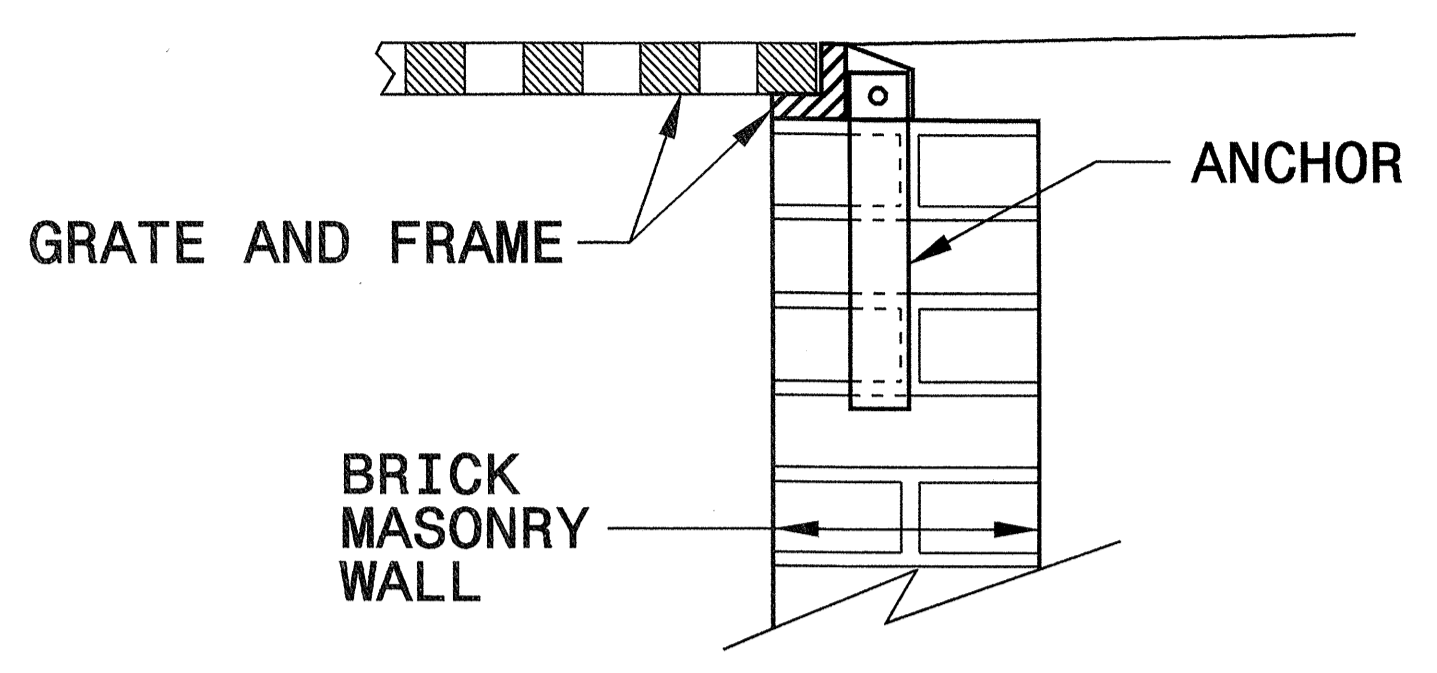
ENGLISH DETAIL DRAWING FOR
ANCHORAGE FOR FRAMES
BRICK/CONCRETE/PRECAST CONCRETE

SHEET 1 OF 1
840D25

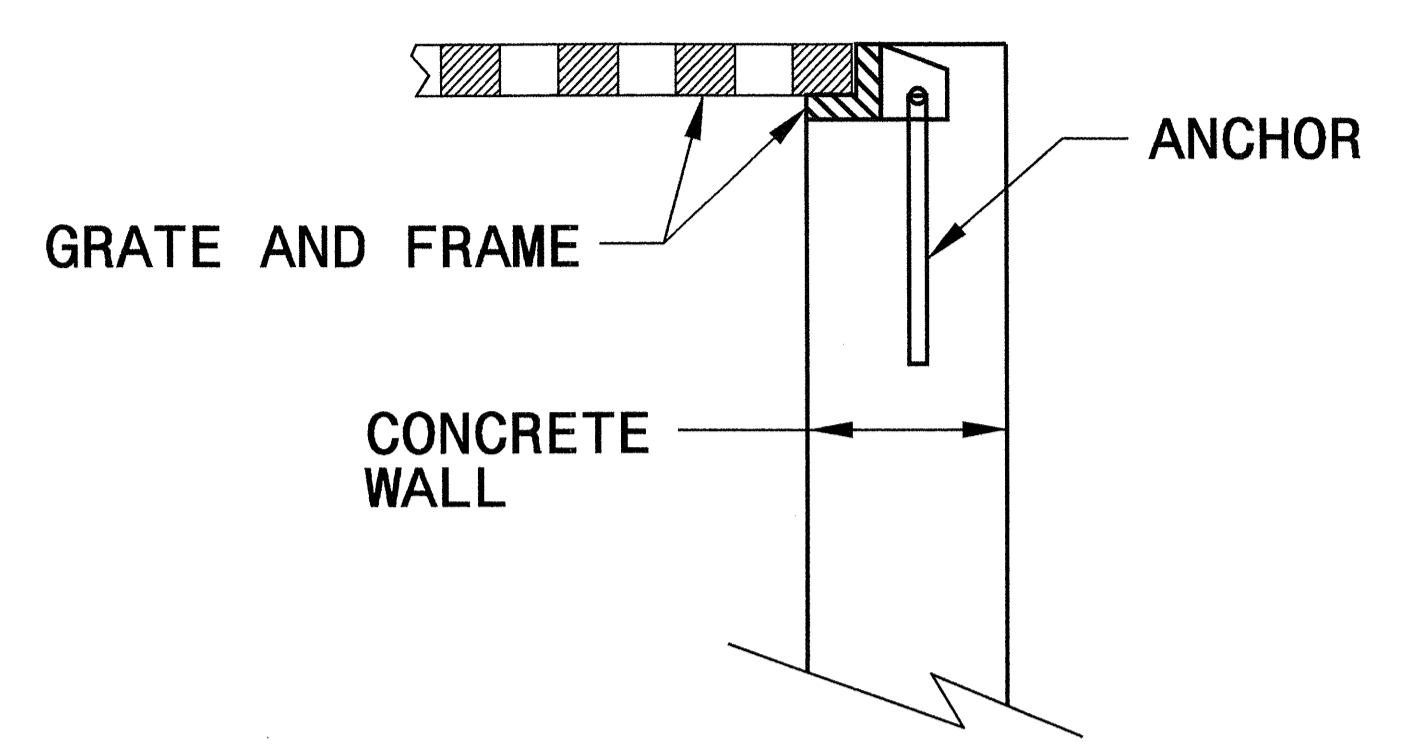
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

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

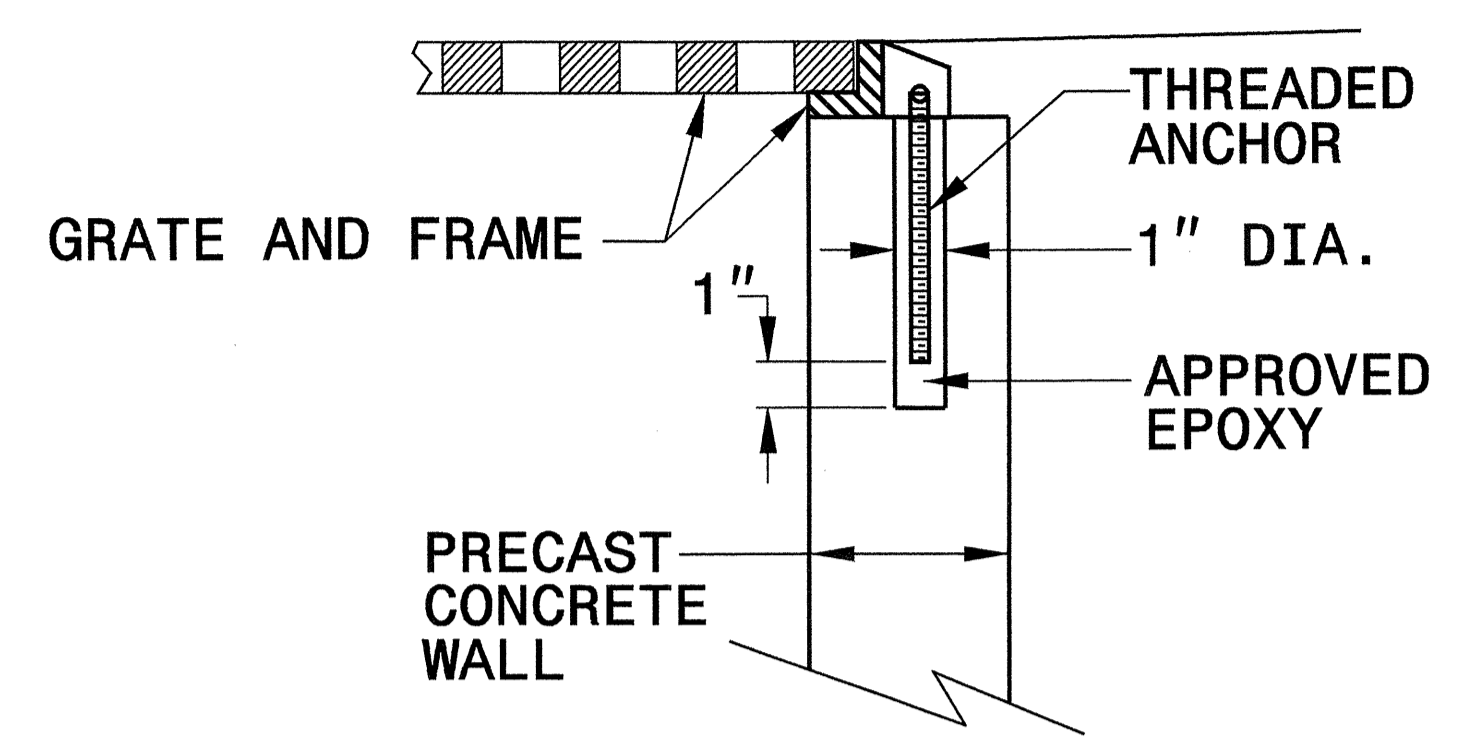
SHEET 1 OF 1
840D25



BRICK MASONRY CONSTRUCTION



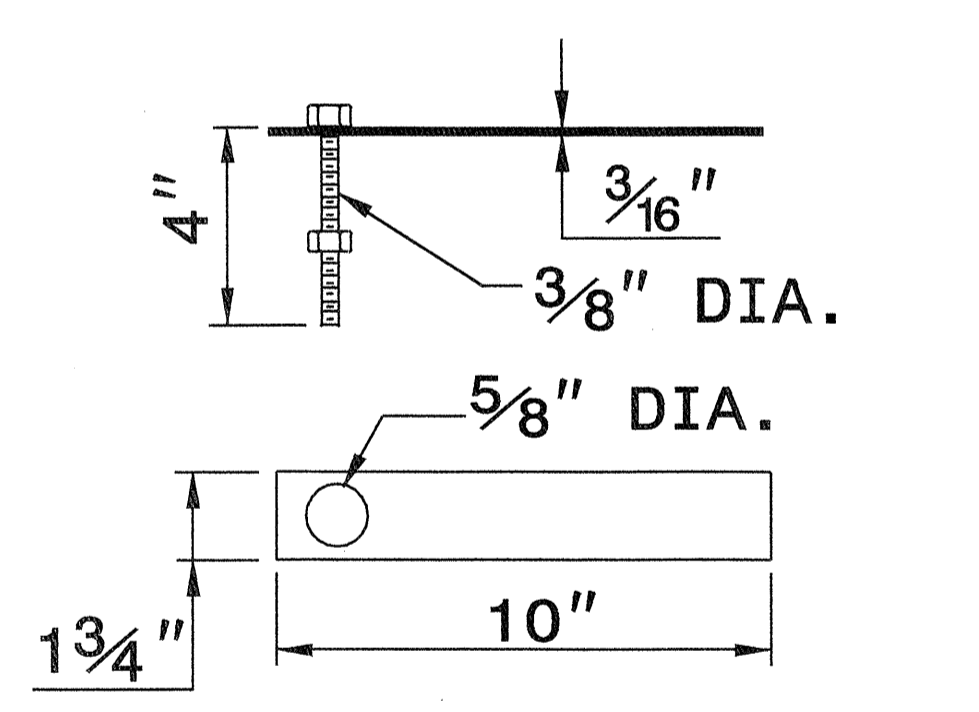
CONCRETE CONSTRUCTION



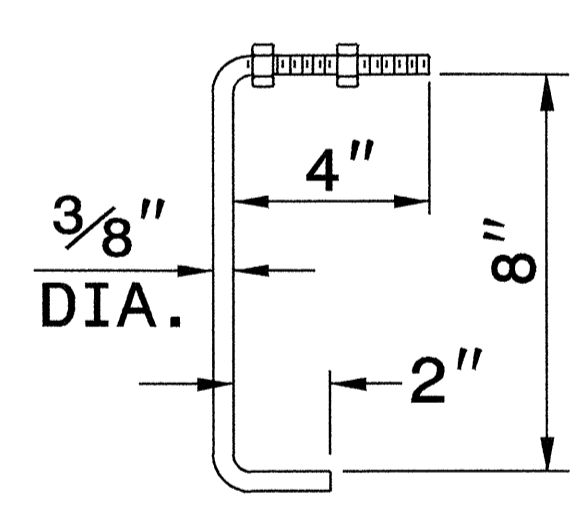
PRECAST CONCRETE CONSTRUCTION

DETAIL SHOWING ANCHORAGE OF FRAME FOR GRATED DROP INLET

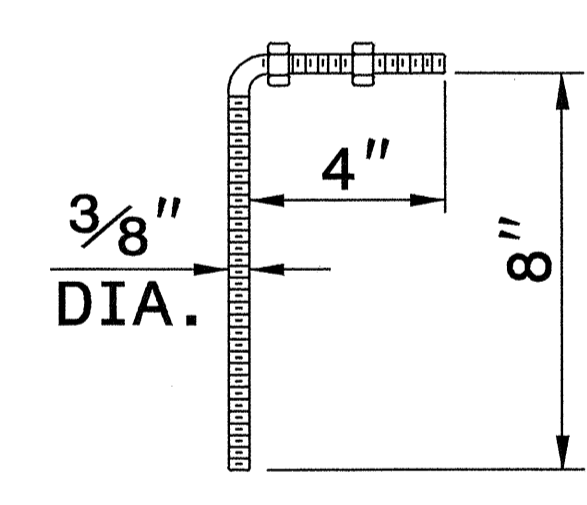
NOTE:
CONSTRUCT GRATED DROP INLET TO COINCIDE WITH NORMAL OR SUPERELEVATED SHOULDER OR PAVEMENT SLOPE.



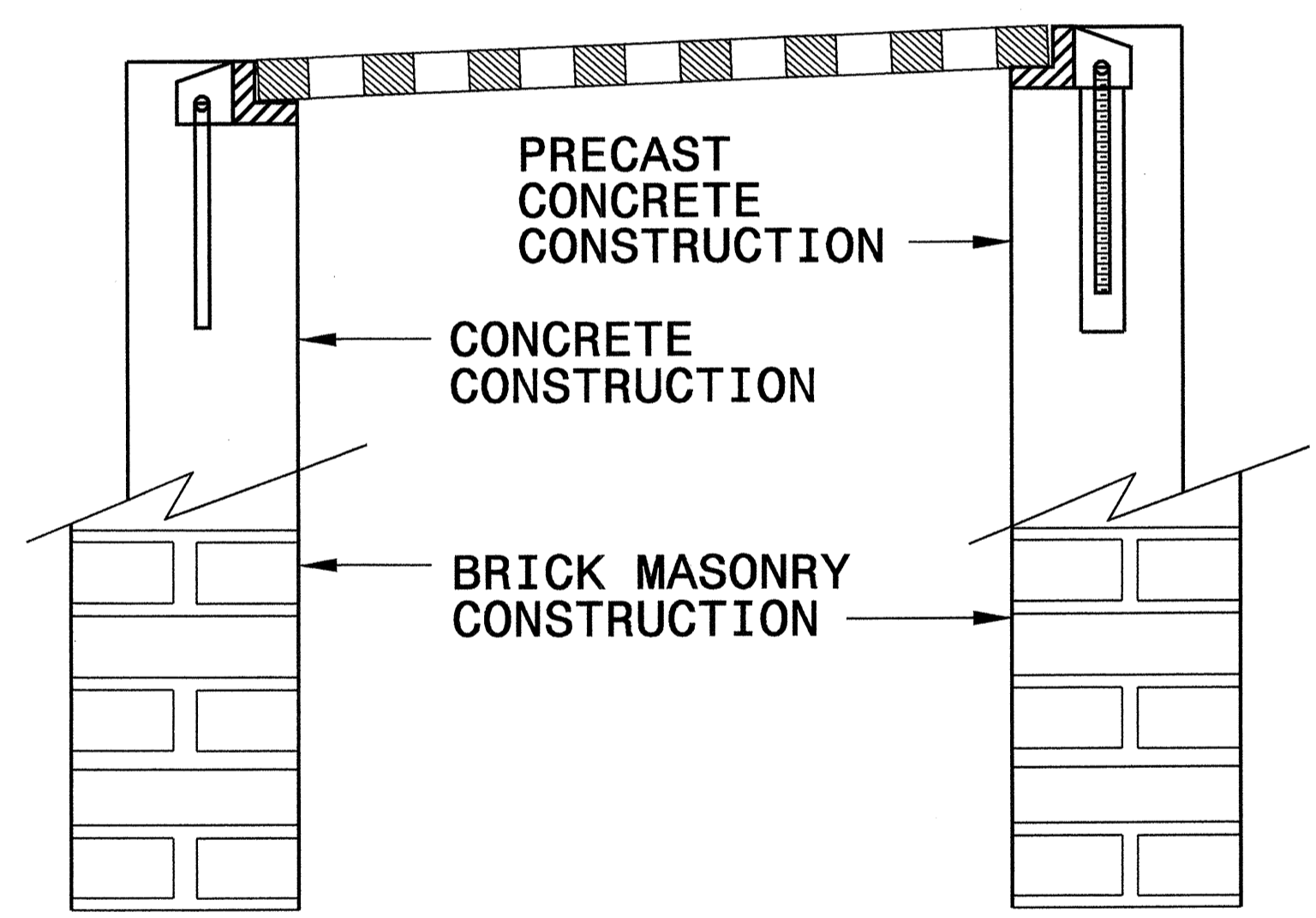
MASONRY ANCHOR
3/8" DIA. BOLT WITH PLATE



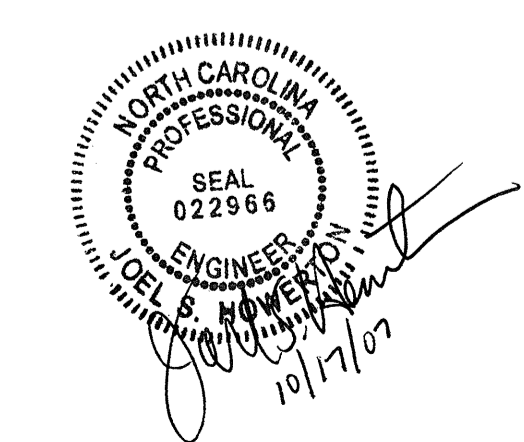
CONCRETE ANCHOR
3/8" DIA. BENT BAR



PRECAST CONCRETE ANCHOR
3/8" DIA. BENT BAR



FRAME AND GRATE INSTALLATION FOR NORMAL CROWN AND SUPERELEVATED SECTIONS



**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
C:\projects\special_details\verward\stds\06\stds to special_details\840D25_anchors\for_frames\0840d25.dgn
J.Howard - R1 P521266

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
SUMMARY OF QUANTITIES

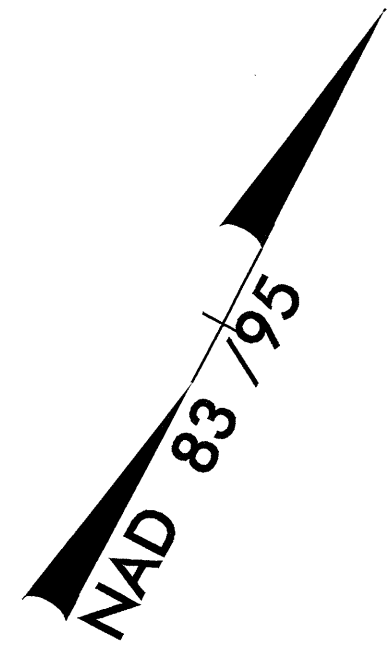
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C201496

ItemNumber	Sec #	Quantity	Unit	Description	ItemNumber	Sec #	Quantity	Unit	Description	ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION	3317000000-N	862	4	EA	GUARDRAIL ANCHOR UNITS, TYPE B-77	6114000000-N	SP	2	HR	SPECIALIZED HAND MOWING
0000400000-N	801	Lump Sum		CONSTRUCTION SURVEYING	3649000000-E	876	2	TON	RIP RAP, CLASS B	6117000000-N	SP	12	EA	RESPONSE FOR EROSION CONTROL
0029000000-N	SP	Lump Sum		REINFORCED BRIDGE APPROACH FILL, STATION ***** (17+34 -L-)	3656000000-E	876	195	SY	FILTER FABRIC FOR DRAINAGE	6123000000-E	1670	0.1	ACR	REFORESTATION
0043000000-N	226	Lump Sum		GRADING	4400000000-E	1110	440	SF	WORK ZONE SIGNS (STATIONARY)					
0050000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUB-BING	4410000000-E	1110	96	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)					
0057000000-E	226	200	CY	UNDERCUT EXCAVATION	4445000000-E	1145	48	LF	BARRICADES (TYPE III)					
0196000000-E	270	100	SY	FABRIC FOR SOIL STABILIZATION	4810000000-E	1205	6,800	LF	PAINT PAVEMENT MARKING LINES (4")					
0234000000-E	SP	100	CY	GENERIC GRADING ITEM SELECT GRANULAR MATERIAL	6000000000-E	1605	1,125	LF	TEMPORARY SILT FENCE					
0318000000-E	300	14	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRS	6006000000-E	1610	50	TON	STONE FOR EROSION CONTROL, CLASS A					
0366000000-E	310	92	LF	15" RC PIPE CULVERTS, CLASS III	6009000000-E	1610	40	TON	STONE FOR EROSION CONTROL, CLASS B					
0660000000-E	310	40	LF	***BIT COAT CS PIPE CULVERTS, TYPE A ***** THICK (15", 0.064")	6012000000-E	1610	80	TON	SEDIMENT CONTROL STONE					
0680000000-E	310	4	EA	*** BIT COAT CS PIPE ELBOWS, TYPE A ***** THICK (15", 0.064")	6015000000-E	1615	1	ACR	TEMPORARY MULCHING					
1220000000-E	545	100	TON	INCIDENTAL STONE BASE	6018000000-E	1620	50	LB	SEED FOR TEMPORARY SEEDING					
1489000000-E	610	270	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B	6021000000-E	1620	0.25	TON	FERTILIZER FOR TEMPORARY SEEDING					
1525000000-E	610	410	TON	ASPHALT CONC SURFACE COURSE, TYPE SF9.5A	6024000000-E	1622	50	LF	TEMPORARY SLOPE DRAINS					
1560000000-E	620	39	TON	ASPHALT BINDER FOR PLANT MIX, GRADE PG 64-22	6027000000-N	1622	2	EA	INLET PROTECTION AT TEMPORARY SLOPE DRAINS					
1693000000-E	654	20	TON	ASPHALT PLANT MIX, PAVEMENT REPAIR	6029000000-E	SP	160	LF	SAFETY FENCE					
2286000000-N	840	5	EA	MASONRY DRAINAGE STRUCTURES	6030000000-E	1630	55	CY	SILT EXCAVATION					
2367000000-N	840	5	EA	FRAME WITH TWO GRATES, STD 840.29	6036000000-E	1631	175	SY	MATTING FOR EROSION CONTROL					
2556000000-E	846	110	LF	SHOULDER BERM GUTTER	6042000000-E	1632	350	LF	1/4" HARDWARE CLOTH					
3030000000-E	862	550	LF	STEEL BM GUARDRAIL	6084000000-E	1660	1	ACR	SEEDING & MULCHING					
3150000000-N	862	5	EA	ADDITIONAL GUARDRAIL POSTS	6087000000-E	1660	1	ACR	MOWING					
3270000000-N	SP	4	EA	GUARDRAIL ANCHOR UNITS, TYPE 350	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					

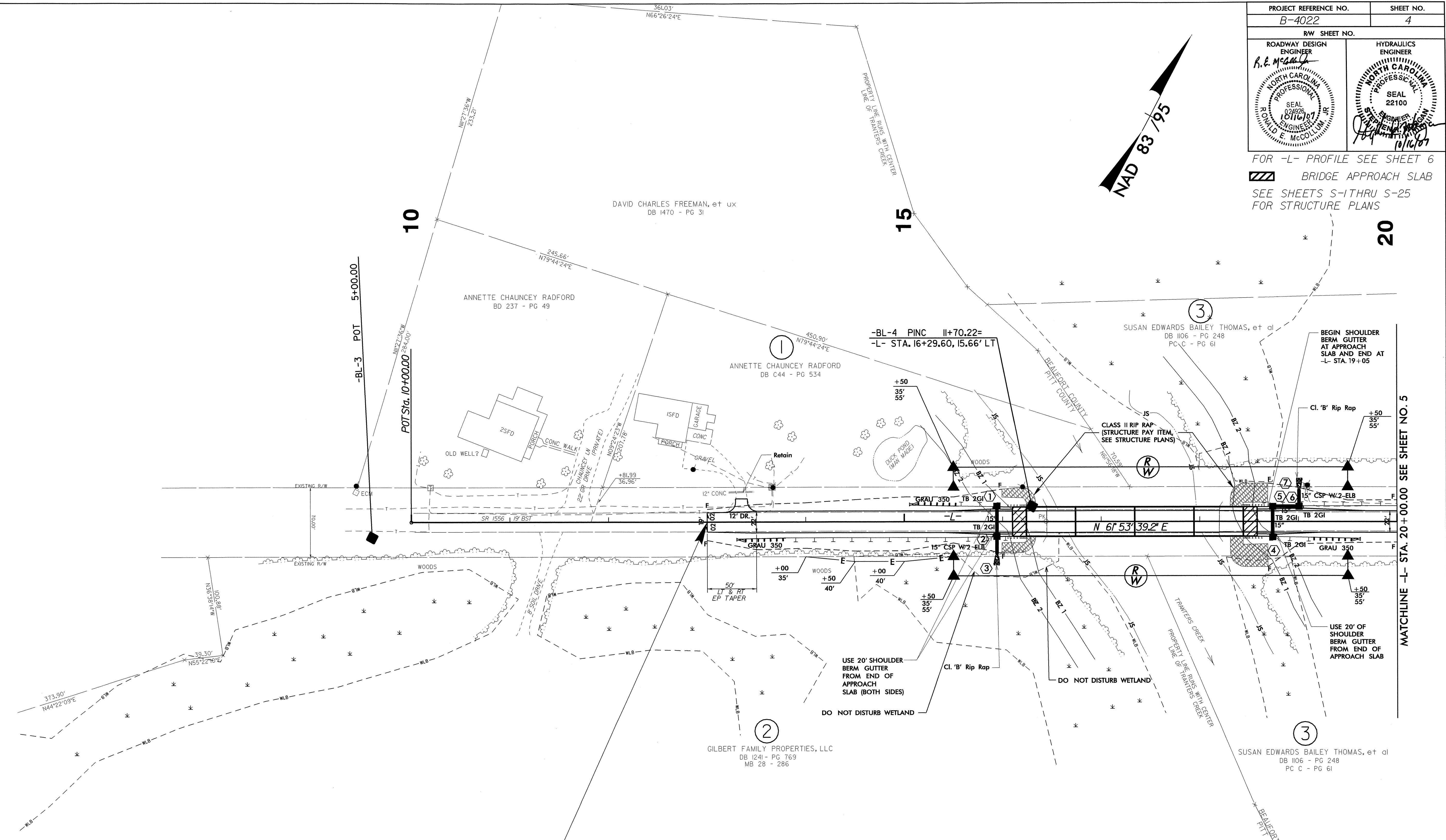
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PROJECT REFERENCE NO. B-4022	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER R.E. McCallum	HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 18116107 R. E. McCallum 10/16/07	NORTH CAROLINA PROFESSIONAL SEAL 22100 10/16/07

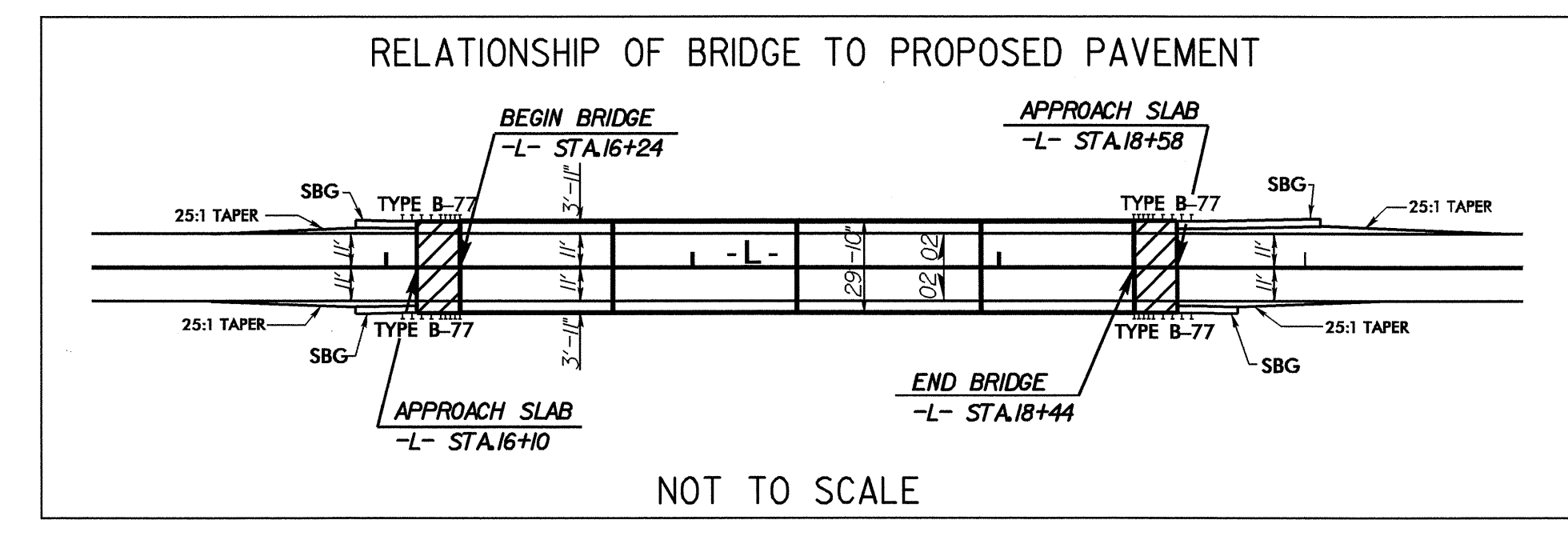
FOR -L- PROFILE SEE SHEET 6
 BRIDGE APPROACH SLAB
 SEE SHEETS S-1 THRU S-25
 FOR STRUCTURE PLANS



REVISIONS



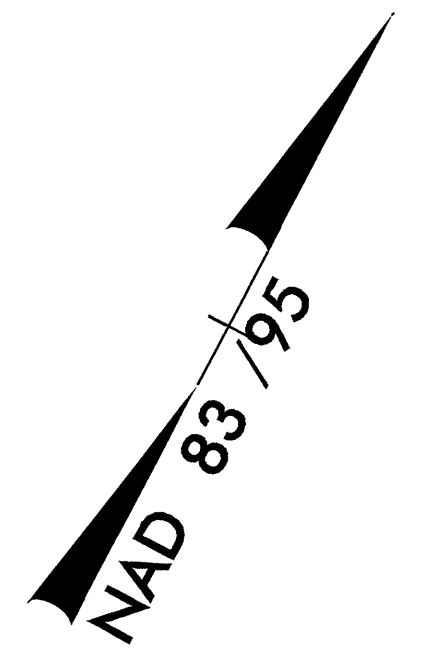
STA. 13+00 -L- BEGIN TIP PROJECT B-4022



10-OCT-2007 09:02
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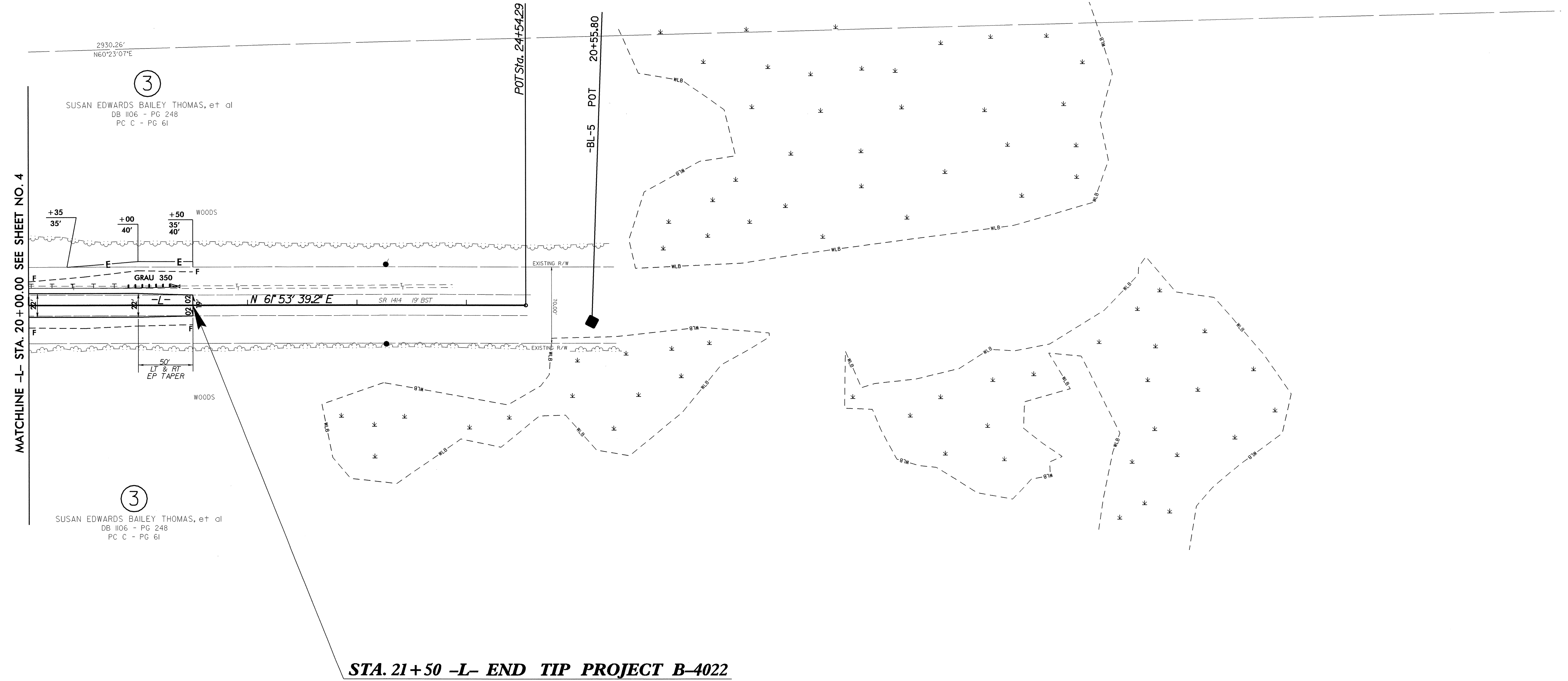
MATCHLINE -L- STA. 20+00.00 SEE SHEET NO. 5

PROJECT REFERENCE NO. B-4022	SHEET NO. 5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER SEAL 024926 10/16/07 ROBERT E. MCCOLLUM	HYDRAULICS ENGINEER SEAL 22100 STEPHEN R. ANDRSON



FOR -L- PROFILE SEE SHEET 6

20



MATCHLINE -L- STA. 20+00.00 SEE SHEET NO. 4

③
SUSAN EDWARDS BAILEY THOMAS, et al
DB 1106 - PG 248
PC C - PG 61

③
SUSAN EDWARDS BAILEY THOMAS, et al
DB 1106 - PG 248
PC C - PG 61

REVISIONS

8/17/99

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STA. 21+50 -L- END TIP PROJECT B-4022

5/14/99

PROJECT REFERENCE NO. B-4022	SHEET NO. 6
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 024928 10/14/07 E. McCOLLUM	HYDRAULICS ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 22100 10/16/07 STEPHEN W. ANDERSON

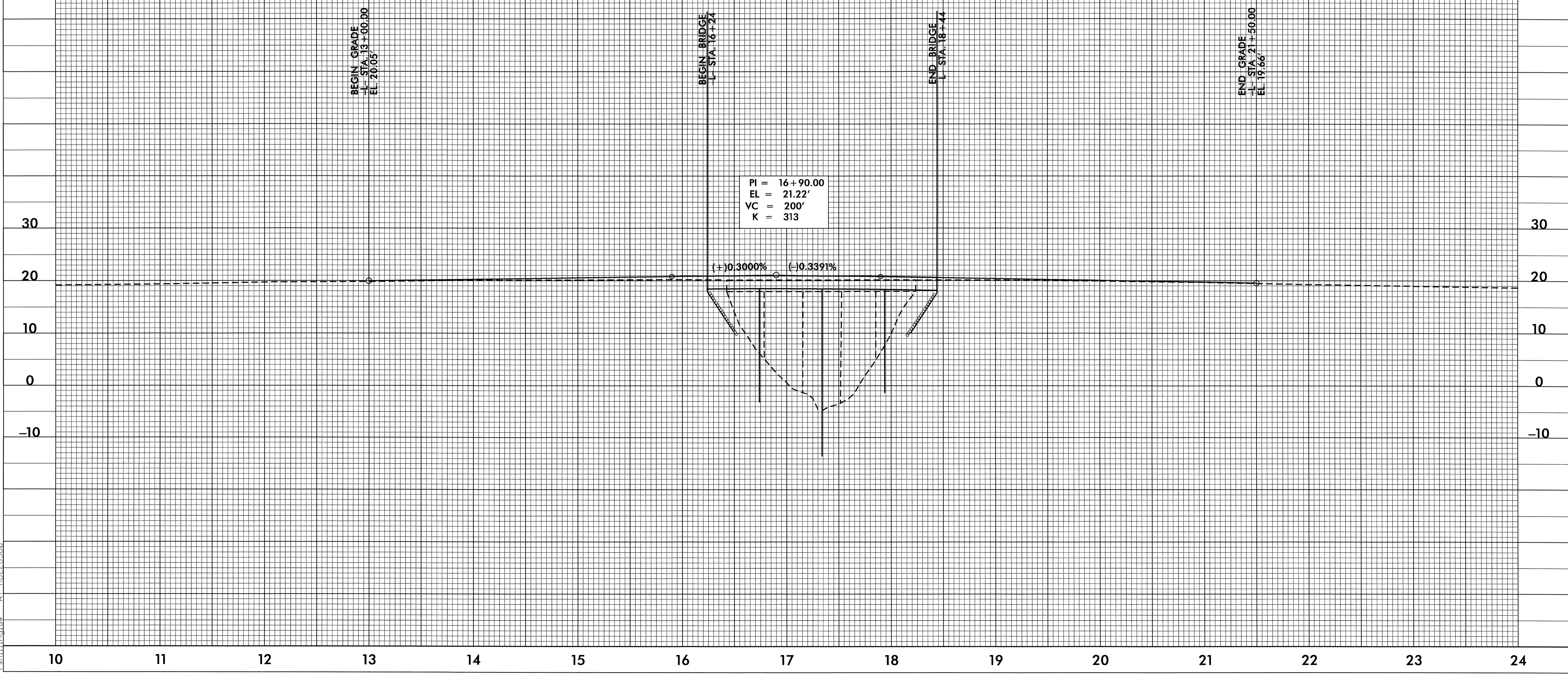
BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE = 6400 CFS
 DESIGN FREQUENCY = 25 YRS
 DESIGN HW ELEVATION = 18.1 FT
 BASE DISCHARGE = 9300 CFS
 BASE FREQUENCY = 100 YRS
 BASE HW ELEVATION = 20.8 FT
 OVERTOPPING DISCHARGE = 7800 CFS
 OVERTOPPING FREQUENCY = 50 YRS
 OVERTOPPING ELEVATION = 19.5 FT

EST. NORM. W.S. ELEV. = 10.5 FT
 DATE OF SURVEY = 02-20-03
 W.S. ELEVATION AT DATE OF SURVEY = 12.6 FT

-L-

BM *1RR SPIKE SET IN 36" OAK
 92' RIGHT OF -L- STA 16+73
 ELEV. = 14.87'



23-AUG-2007 14:47
 R:\Roadway\Proj\B-4022-rdy-fl.dgn
 rshillinglv AT 60226360