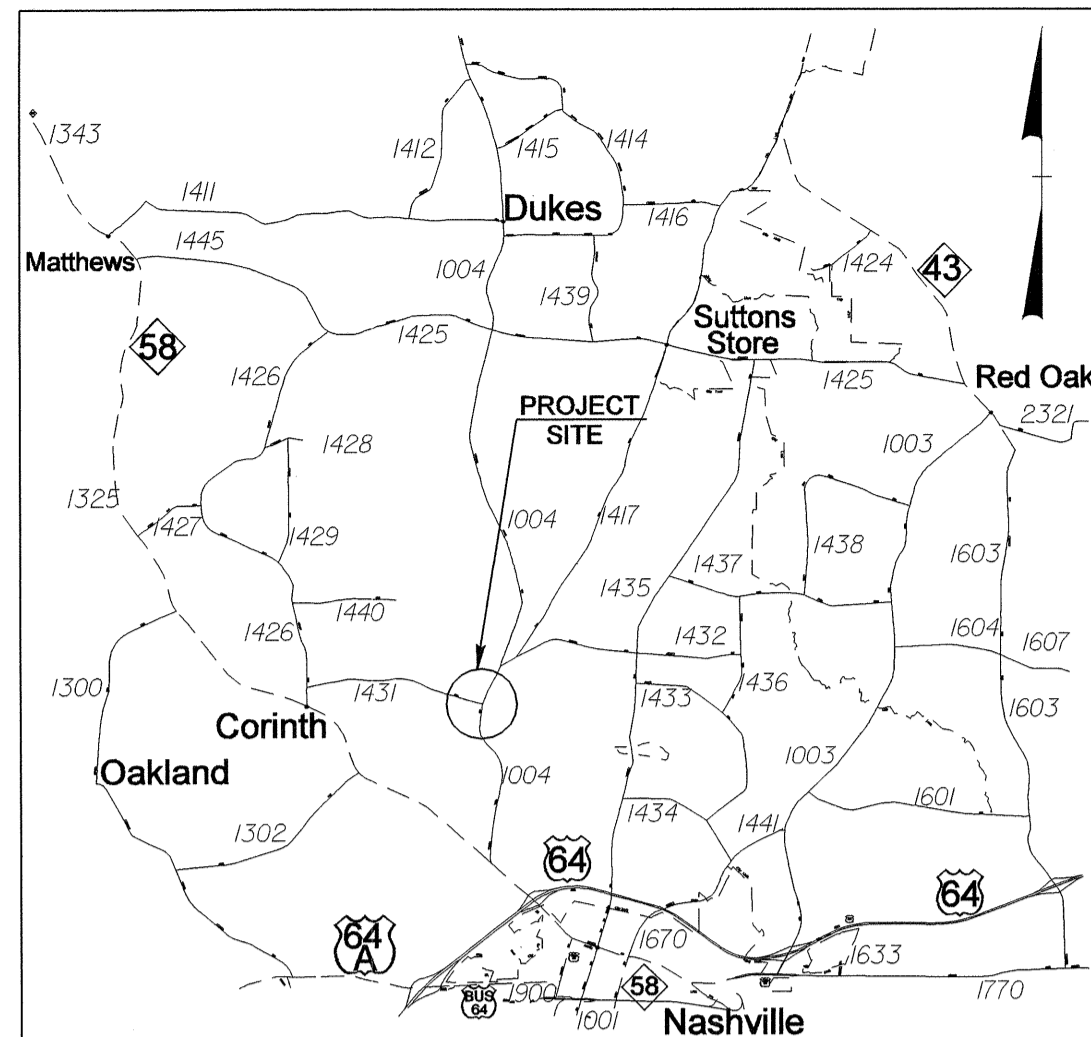


09/08/09

See Sheet 1-A For Index of Sheets



VICINITY MAP

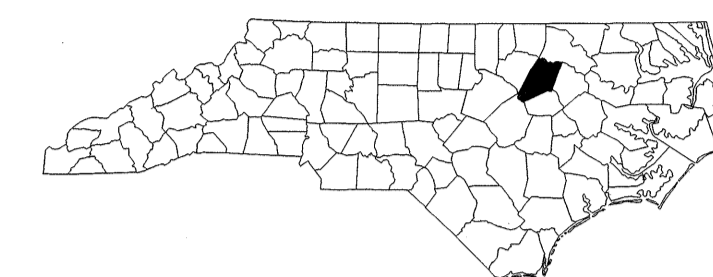
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

# NASH COUNTY

LOCATION: BRIDGE 34 ON SR 1004 OVER PIG BASKET CREEK

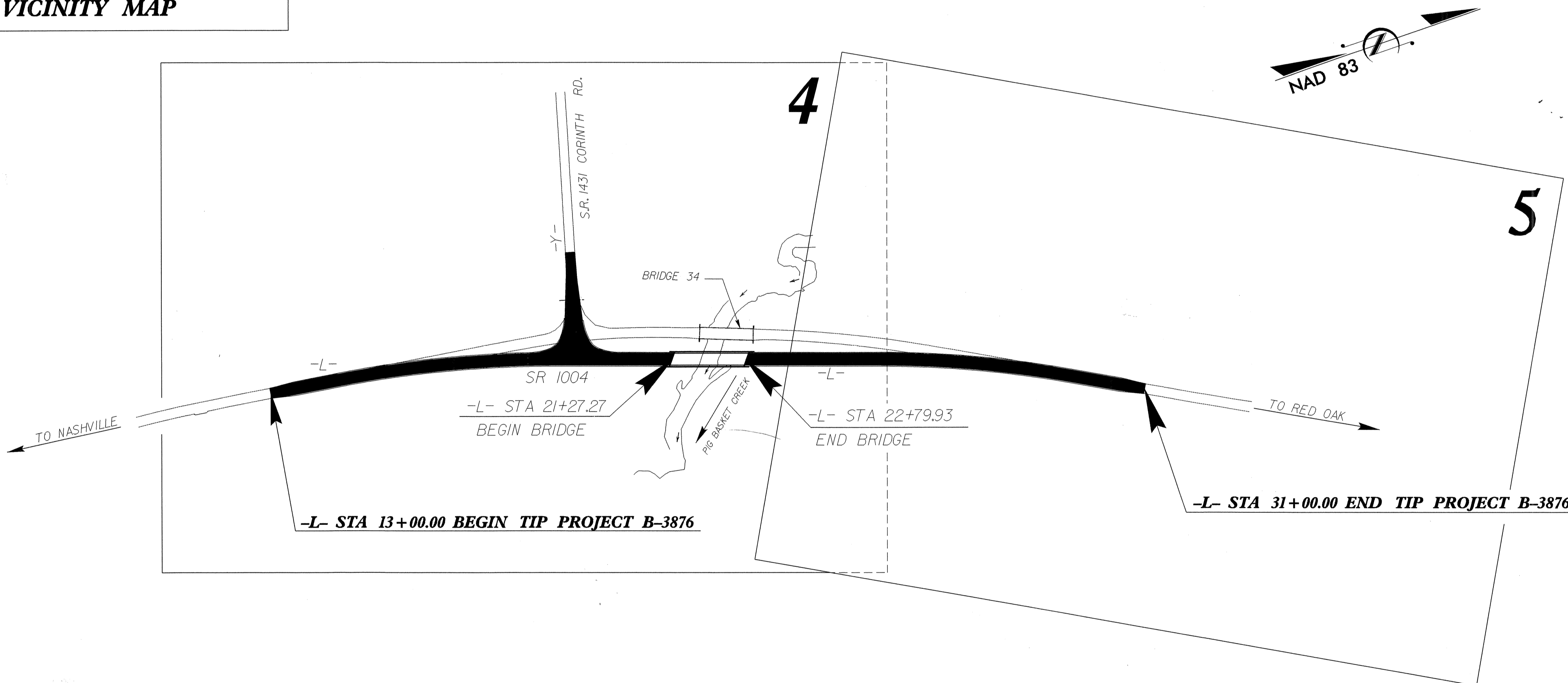
TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-3876	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33320.1.1	BRZ-1004(9)	PE	
33320.2.2	BRZ-1004(19)	RW & UTL	
33320.3.1	BRZ-1004(20)	CONST.	



TIP PROJECT: B-3876

CONTRACT: C201828



\*\* DESIGN EXCEPTION FOR SAG VERTICAL CURVE REQUIRED

**GRAPHIC SCALES**



PLANS



PROFILE (HORIZONTAL)



PROFILE (VERTICAL)

**DESIGN DATA**

ADT 2007 = 3,930  
ADT 2025 = 6,300  
DHV = 10 %  
D = 60 %  
T = 3 % \*  
V = 60 MPH  
\* TTST 1% DUAL 2%

FUNCTIONAL CLASSIFICATION  
RURAL MINOR COLLECTOR

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT B-3876 = 0.312 MILES  
LENGTH STRUCTURE TIP PROJECT B-3876 = 0.029 MILES  
TOTAL LENGTH OF TIP PROJECT B-3876 = 0.341 MILES

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:  
MAY 9, 2005

LETTING DATE:  
JULY 17, 2007

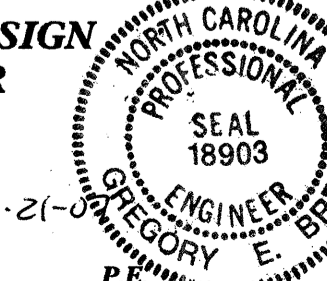
G. E. BREW, PE  
PROJECT ENGINEER

I. T. YOUNIS  
PROJECT DESIGN ENGINEER

**HYDRAULICS ENGINEER**

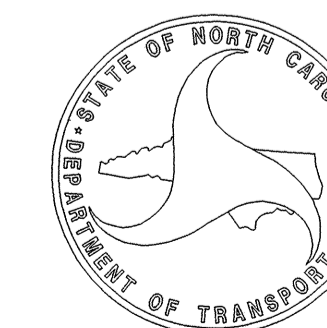


ROADWAY DESIGN ENGINEER



Signature of G. E. Brew

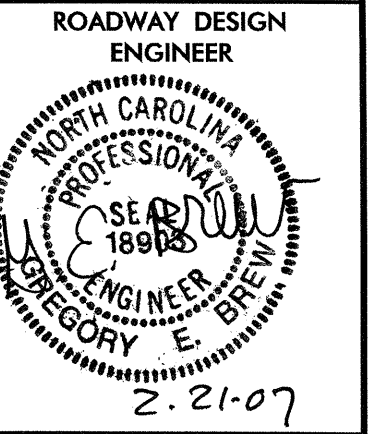
**DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA**



Signature of I. T. Younis  
STATE HIGHWAY DESIGN ENGINEER

31-JAN-2007 07:57 R:\Roadway\Proj\103876\_rdy\_tsh.dgn \$\$\$USERNAME\$\$\$

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS



EFF. 07-18-06

INDEX OF SHEETS		2006 ROADWAY STANDARD DRAWINGS
SHEET NUMBER	SHEET	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:
1	TITLE SHEET	
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS	STD.NO. TITLE
1-B	CONVENTIONAL SYMBOLS	200.03 Method of Clearing - Method III
1-C	SURVEY CONTROL SHEET	225.02 Guide for Grading Subgrade - Secondary and Local
2 THRU 2-A	PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEDGING DETAILS	225.04 Method of Obtaining Superelevation - Two Lane Pavement
2-B	DETAIL OF ANCHORAGE FOR FRAMES-BRICK/ CONCRETE/PRECAST CONCRETE	300.01 Method of Pipe Installation - Method 'A'
3	SUMMARY OF QUANTITIES	310.10 Driveway Pipe Construction
3A	SUMMARY OF DRAINAGE QUANTITIES	422.10 Reinforced Bridge Approach Fills
3B	SUMMARY OF EARTHWORK QUANTITIES AND SUMMARY ASPHALT PAVEMENT REMOVAL	560.01 Method of Shoulder Construction - High Side of Superelevated Curve - Method I
3C	SUMMARY OF GUARDRAIL	654.01 Pavement Repairs
3D	PARCEL INDEX SHEET	806.01 Concrete Right-of-Way Marker
4 THRU 5	PLAN SHEET	806.02 Granite Right-of-Way Marker
6 THRU 7	PROFILE SHEET	838.27 Reinforced Concrete Endwall - for Single 60" Pipe 90 Skew
TCP-1 THRU TCP-8	TRAFFIC CONTROL PLANS	838.57 Reinforced Brick Endwall - for Single 60" Pipe 90 Skew
EC-1 THRU EC-8	EROSION CONTROL PLANS	840.29 Frames and Narrow Slot Flat Grates
RF-1 THRU RF-2	REFORESTATION PLANS	840.35 Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates
SIGN-1 THRU SIGN-3	SIGNING PLANS	840.66 Drainage Structure Steps
UD-1 THRU UD-3	UTILITIES PLANS	846.01 Concrete Curb, Gutter and Curb & Gutter
X-1A	CROSS-SECTIONS EARTHWORK SUMMARY	862.01 Guardrail Placement
X-1 THRU X-8	CROSS-SECTIONS	862.02 Guardrail Installation
S-1 THRU S-22	STRUCTURE PLANS	862.03 Structure Anchor Units
		876.04 Drainage Ditches with Class 'B' Rip Rap

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

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  
A. PROGRESS ENERGY  
B. EMBARO  
C. TIME WARNER

RIGHT-OF-WAY MARKERS:  
ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY CONTRACT.

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

**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	○
Swamp Marsh	✱
Proposed Lateral, Tail, Head Ditch	-----
False Sump	◻

**RAILROADS:**

Standard Gauge	-----
RR Signal Milepost	CSX TRANSPORTATION 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	○ C/A
Proposed Control of Access	○ C/A
Existing Easement Line	----- E
Proposed Temporary Construction Easement	----- E
Proposed Temporary Drainage Easement	----- TDE
Proposed Permanent Drainage Easement	----- PDE
Proposed Permanent Utility Easement	----- PUE

**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	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	PH
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	⊗
Telephone Pedestal	⊗
Telephone Cell Tower	⊗
U/G Telephone Cable Hand Hole	PH
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	-----
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	----- 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

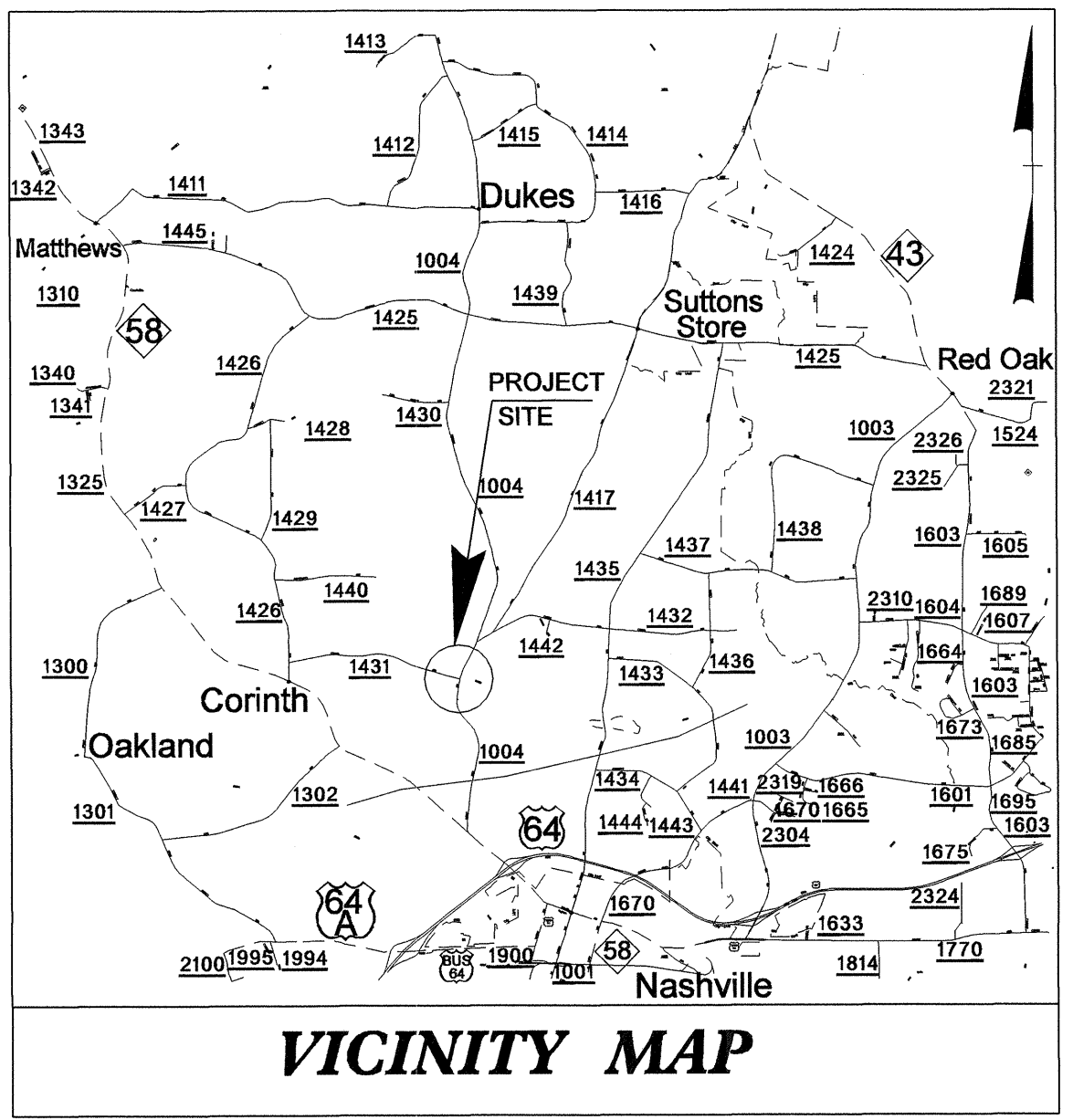
**SANITARY SEWER:**

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	----- RUTL
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.

# SURVEY CONTROL SHEET B-3876



**VICINITY MAP**

### BENCHMARK DATA

```

*****
205      ELEVATION = 172.23
N 821148      E 2300884
L STATION 12+29 66 LEFT

*****
206      ELEVATION = 150.89
N 822242      E 2301132
L STATION 23+39 103 LEFT

*****
207      ELEVATION = 152.76
N 823040      E 2301540
L STATION 32+22 58 LEFT

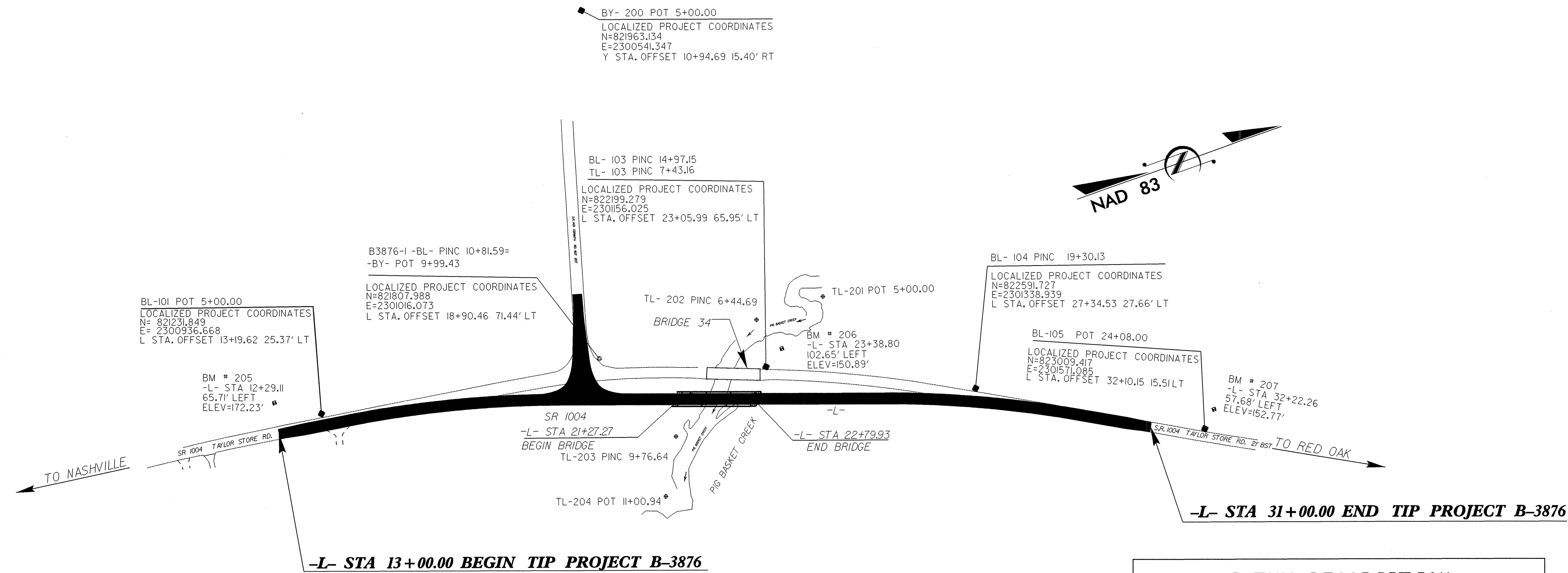
*****

```

BL POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
101	BL-101	821231.8490	2300936.6680	161.60'	13+19.62	25.37 LT
1	GPS B3876-1	821807.9880	2301016.0730	155.61'	18+90.46	71.44 LT
103	BL-103	822199.2790	2301156.0250	157.11	23+05.99	65.95 LT
104	BL-104	822591.7270	2301338.9390	155.13'	27+34.53	27.66 LT
105	BL-105	823009.4170	2301571.0850	154.70'	32+10.15	15.51 LT

BY POINT	DESC.	NORTH	EAST	ELEVATION	Y STATION	OFFSET
198	BY-200	821963.1340	2300541.3470	166.70'	10+94.68	15.40' RT
1	GPS B3876-1	821807.9880	2301016.0730	155.61'	15+93.65	36.93' RT

TL POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
200	TL-201	822357.2840	2301057.8650	148.93'	24+23.62	210.05 LT
201	TL-202	822212.5910	2301058.4680	150.42'	22+86.95	162.55 LT
202	BL-103	822199.2790	2301156.0250	157.11'	23+05.99	65.95 LT
203	TL-203	821977.8980	2301230.2290	148.95'	21+20.64	76.04 RT
204	TL-204	821917.8150	2301339.0390	148.17'	20+99.09	198.45 RT



### NOTES

1. THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:  
[HTTP://WWW.DOH.DOT.STATE.NC.US/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT/](http://www.doh.dot.state.nc.us/preconstruct/highway/location/project/)  
 FILE: B3876\_LS\_CONTROL\_041201.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 UTILIZING GLOBAL POSITIONING SYSTEM.
- NETWORK ESTABLISHED FROM EXISTING HARN MONUMENTATION.

**NOTE: DRAWING NOT TO SCALE**

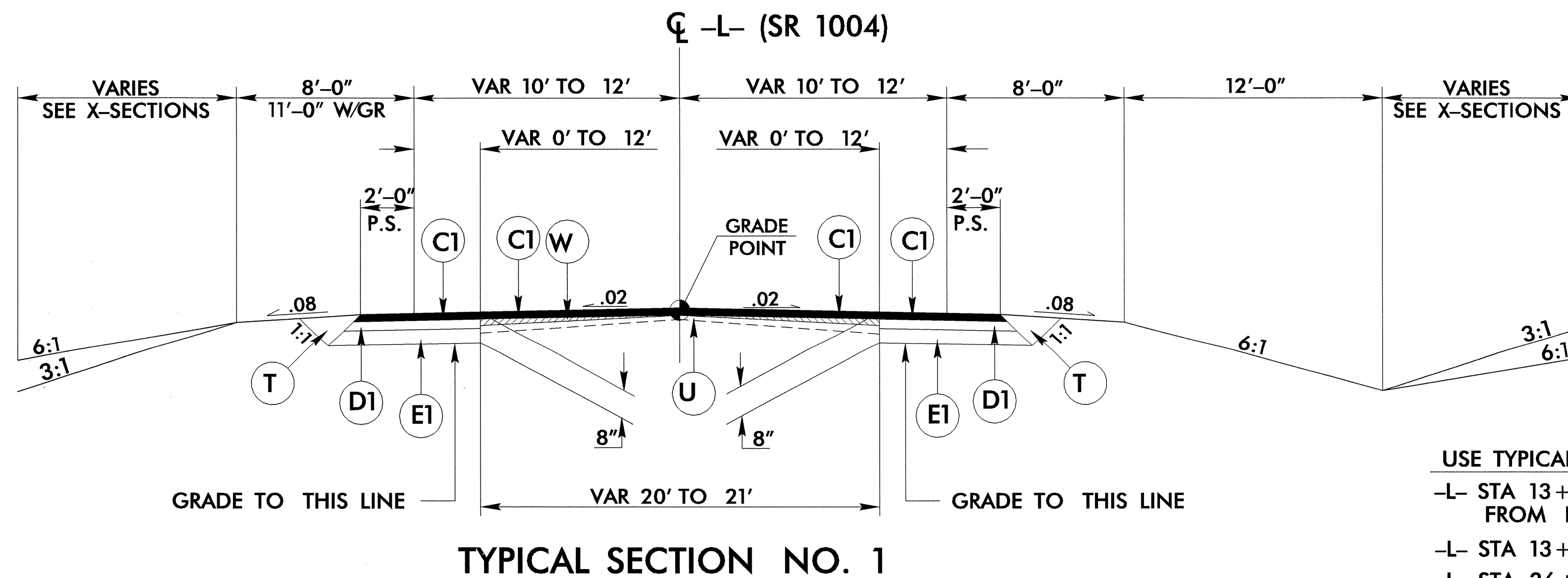
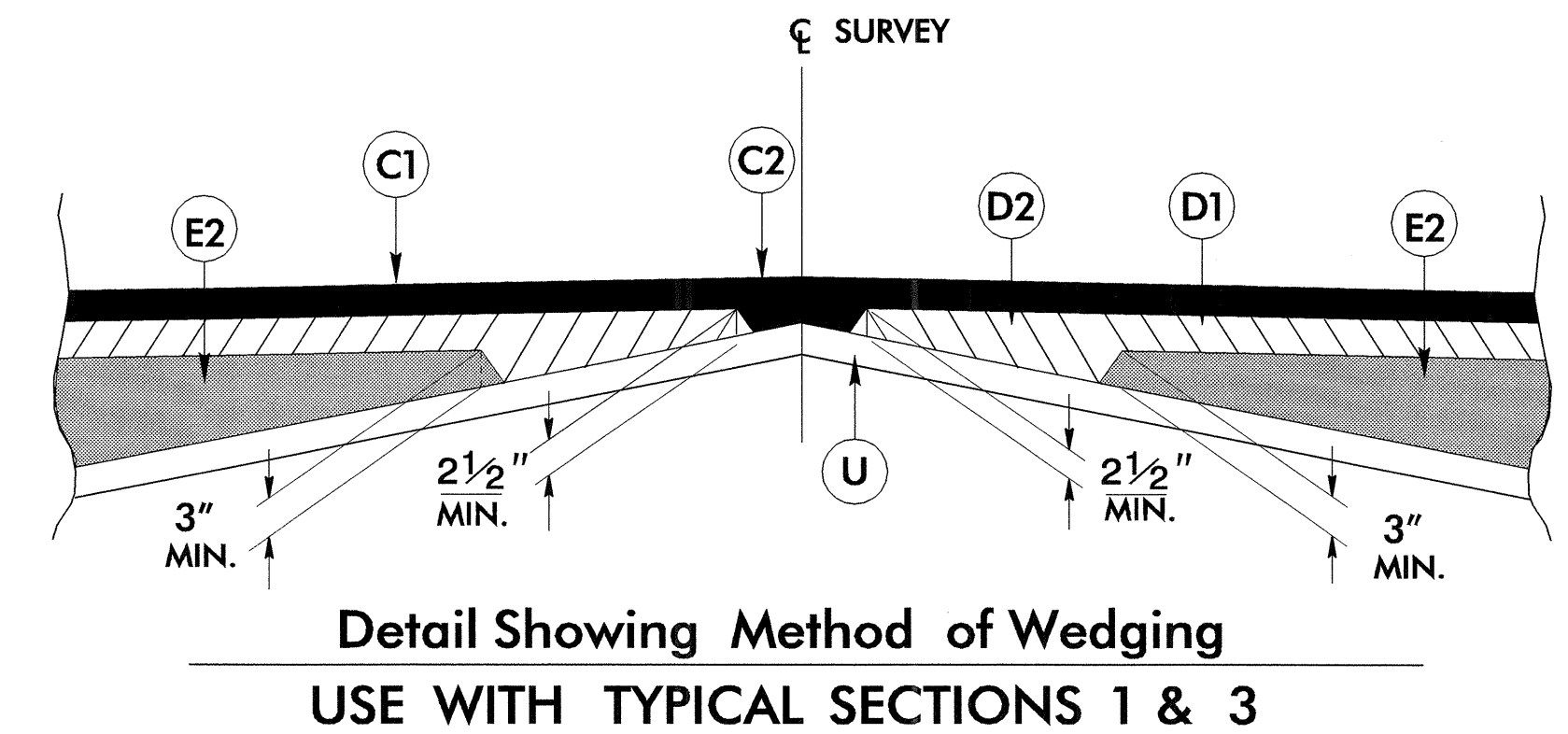
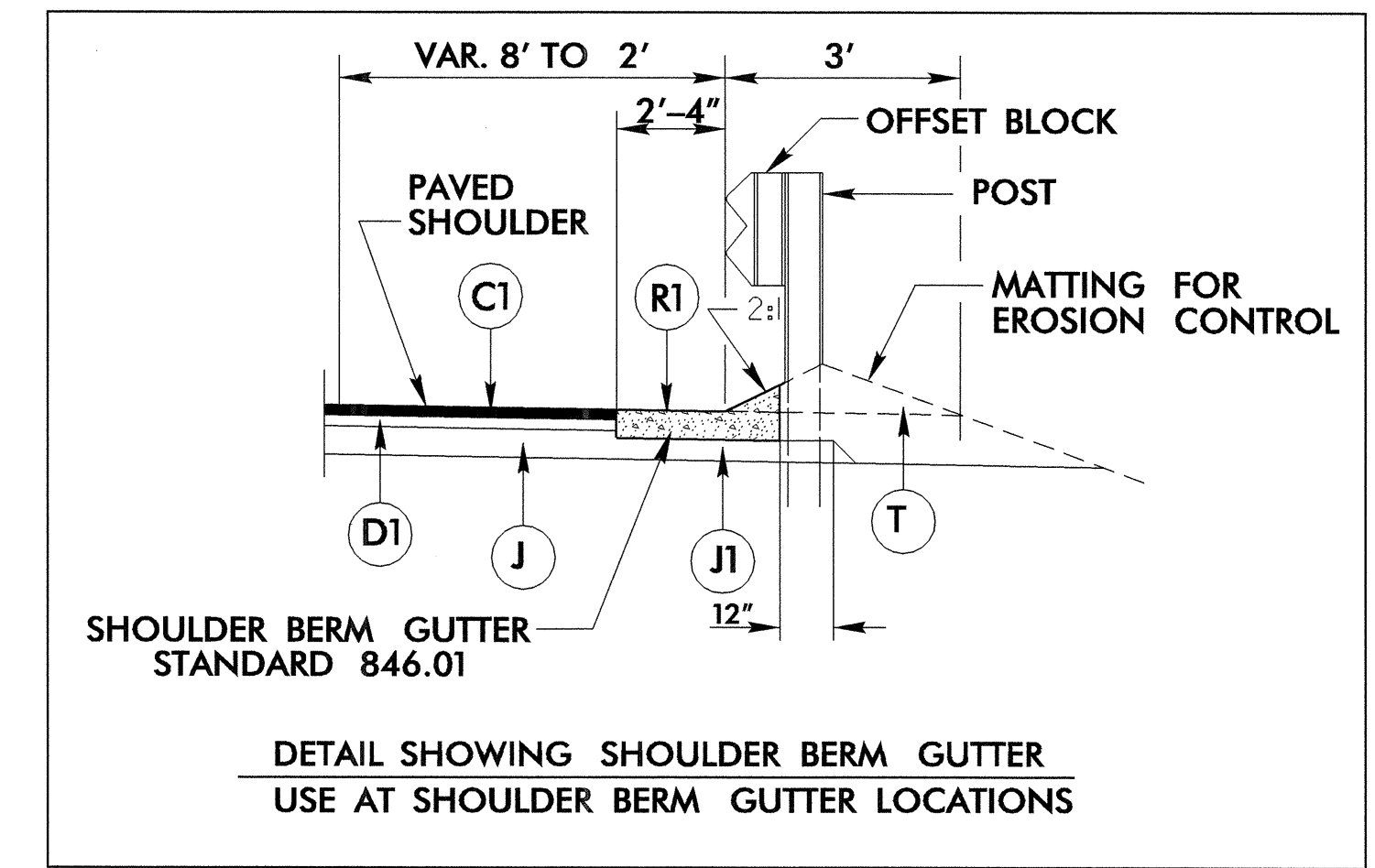
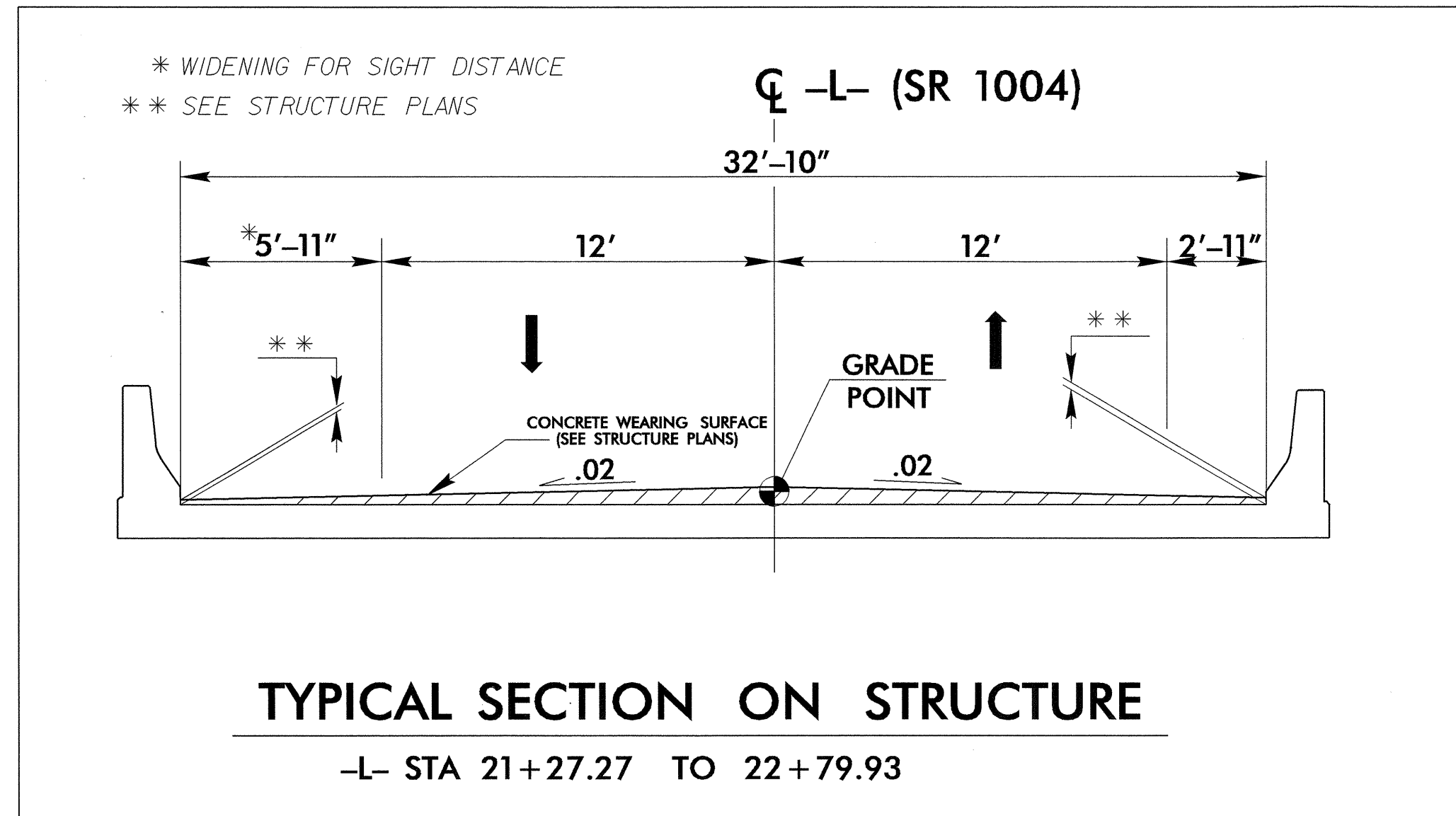
### DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B3876-1"  
 WITH NAD 1983/95 STATE PLANE GRID COORDINATES OF  
 NORTHING: 821807.9889 (ft) EASTING: 2301016.0738 (ft)  
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999892989  
 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B3876-1" TO -L- STA 13+00 IS  
 S 5° 28' 04.74" W 601.795'  
 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES  
 VERTICAL DATUM USED IS NAVD 88

6/2/99  
 31-JAN-2007 07:57  
 F:\PROJECTS\B3876-1\1c\_041201.dgn  
 \$\$\$\$

FINAL PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	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.
D1	PROP. APPROX. 2½" 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 2½" 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 5½" IN DEPTH.
J	PROP. 8" AGGREGATE BASE COURSE.
J1	PROP. VAR. DEPTH AGGREGATE BASE COURSE.
R1	SHOULDER BERM GUTTER.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	VARIABLE DEPTH ASPHALT PAVEMENT. (SEE WEDGING DETAIL)

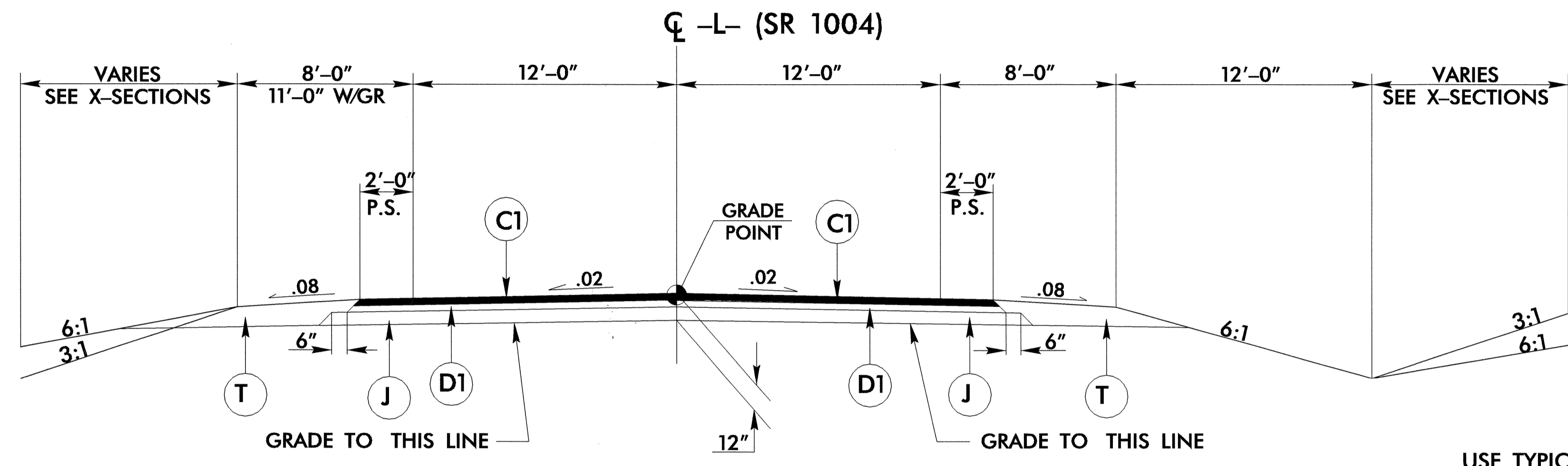
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



- USE TYPICAL SECTION NO. 1
- L- STA 13+00.00 TO 13+50.00 TRANSITION FROM EXISTING TO T.S. 1
- L- STA 13+50.00 TO 17+50.00
- L- STA 26+50.00 TO 30+50.00
- L- STA 30+50.00 TO 31+00.00 TRANSITION FROM T.S. 1 TO EXISTING

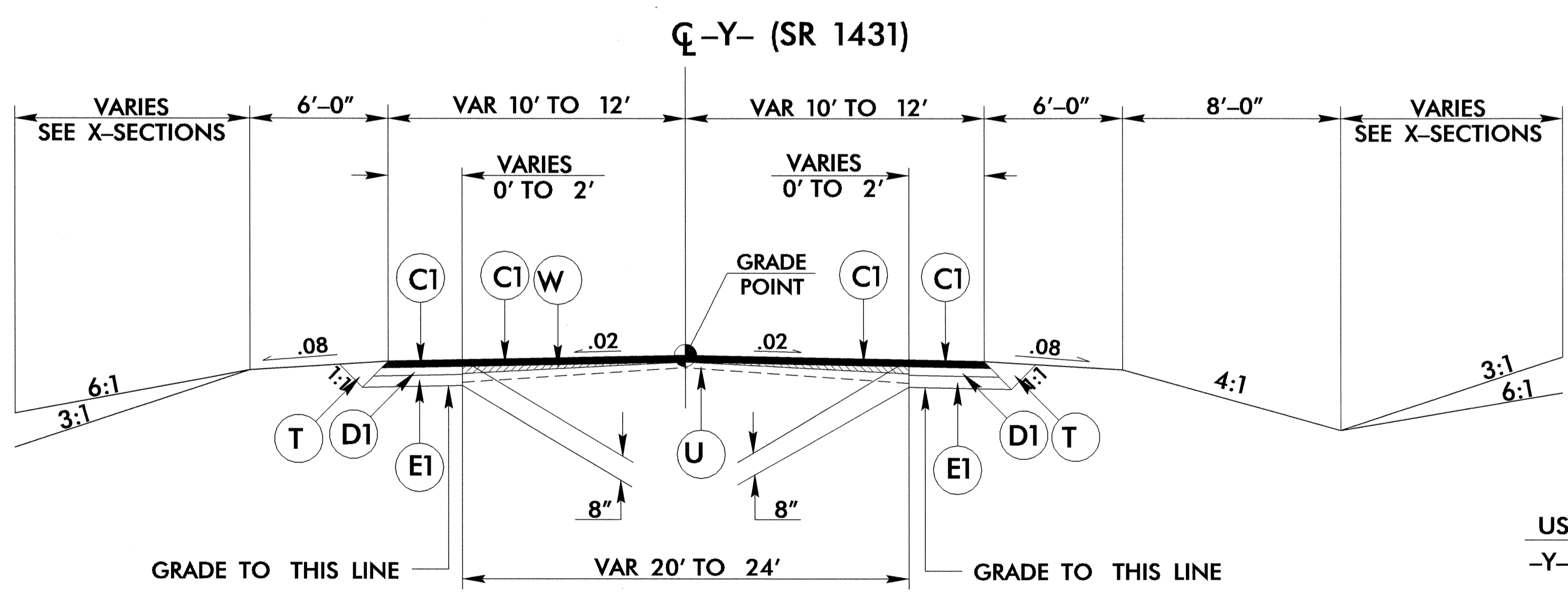
PROJECT REFERENCE NO. B-3876	SHEET NO. 2-A
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 

FINAL PAVEMENT SCHEDULE	
C1	1 1/2" S9.5B
D1	2 1/2" I19.0B
E1	4" B25.0B
J	8" ABC
T	EARTH MATERIAL
U	EXIST PAVEMENT
W	WEDGING



**TYPICAL SECTION NO. 2**

USE TYPICAL SECTION NO. 2  
 -L- STA 17+50.00 TO 21+27.27 (BEGIN BRIDGE)  
 -L- STA 22+79.93 (END BRIDGE) TO 26+50.00



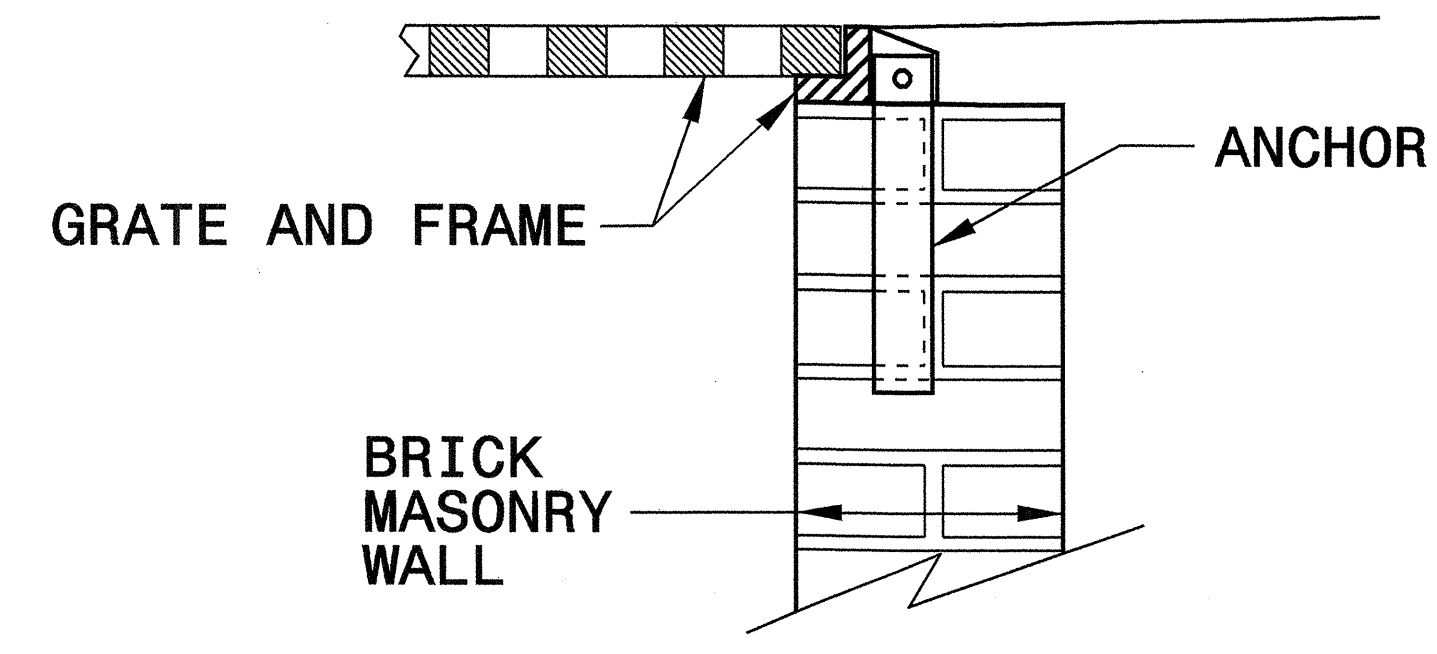
**TYPICAL SECTION NO. 3**

USE TYPICAL SECTION NO. 3  
 -Y- STA 14+50.00 TO 15+79.98

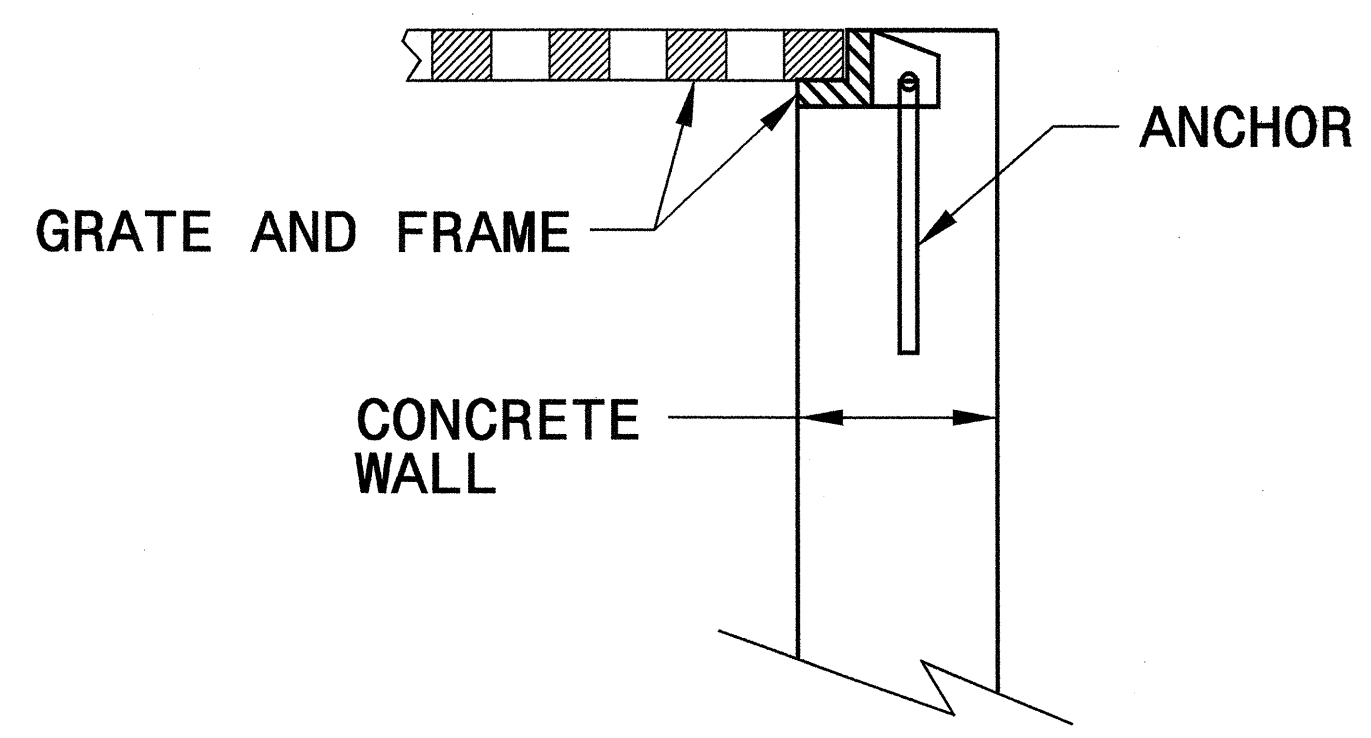
STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

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

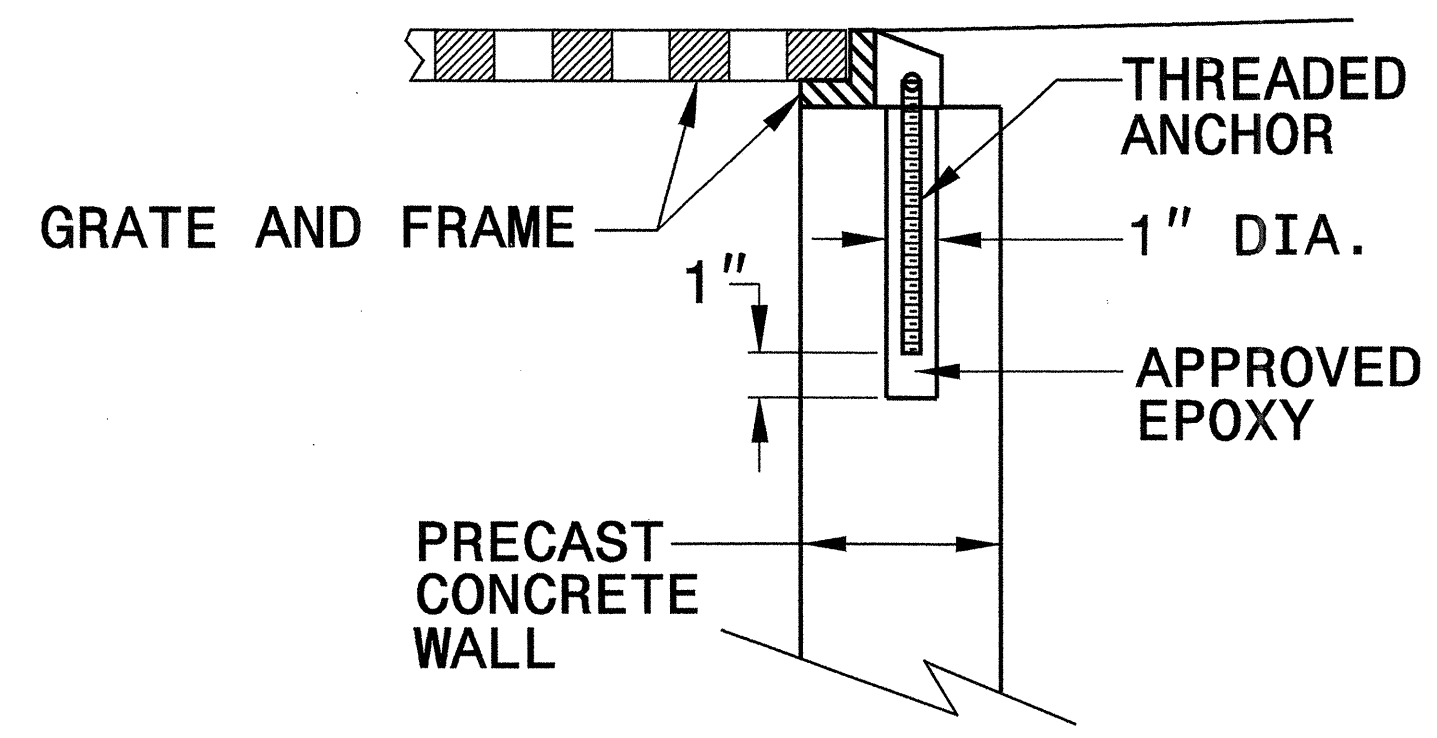
SHEET 1 OF 1  
**840D25**



**BRICK MASONRY CONSTRUCTION**



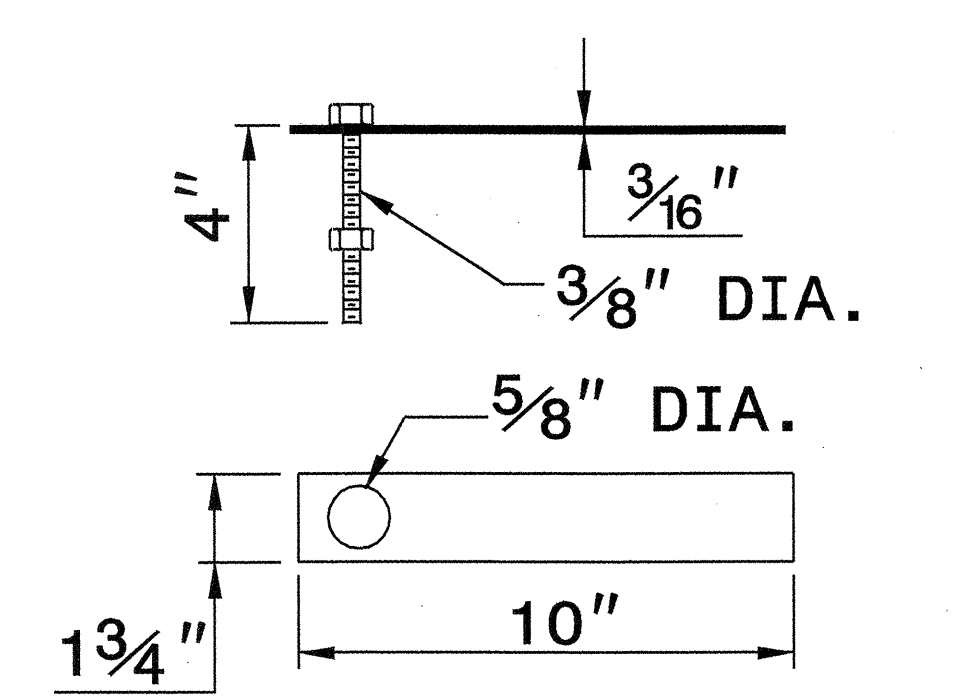
**CONCRETE CONSTRUCTION**



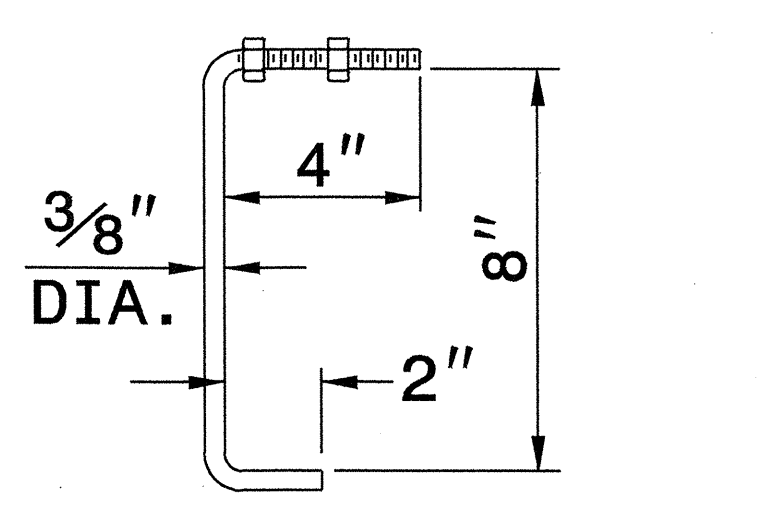
**PRECAST CONCRETE CONSTRUCTION**

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

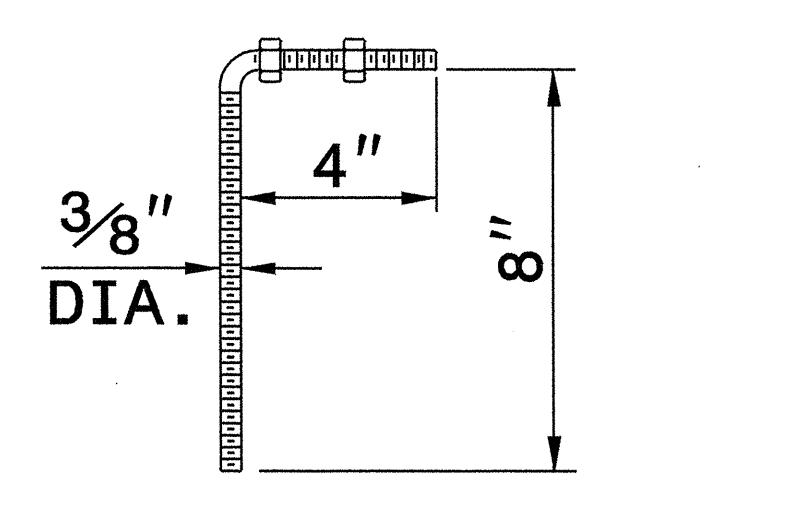
NOTE:  
CONSTRUCT GRATED DROP INLET TO COINCIDE WITH NORMAL OR SUPERELEVATED SHOULDER OR PAVEMENT SLOPE.



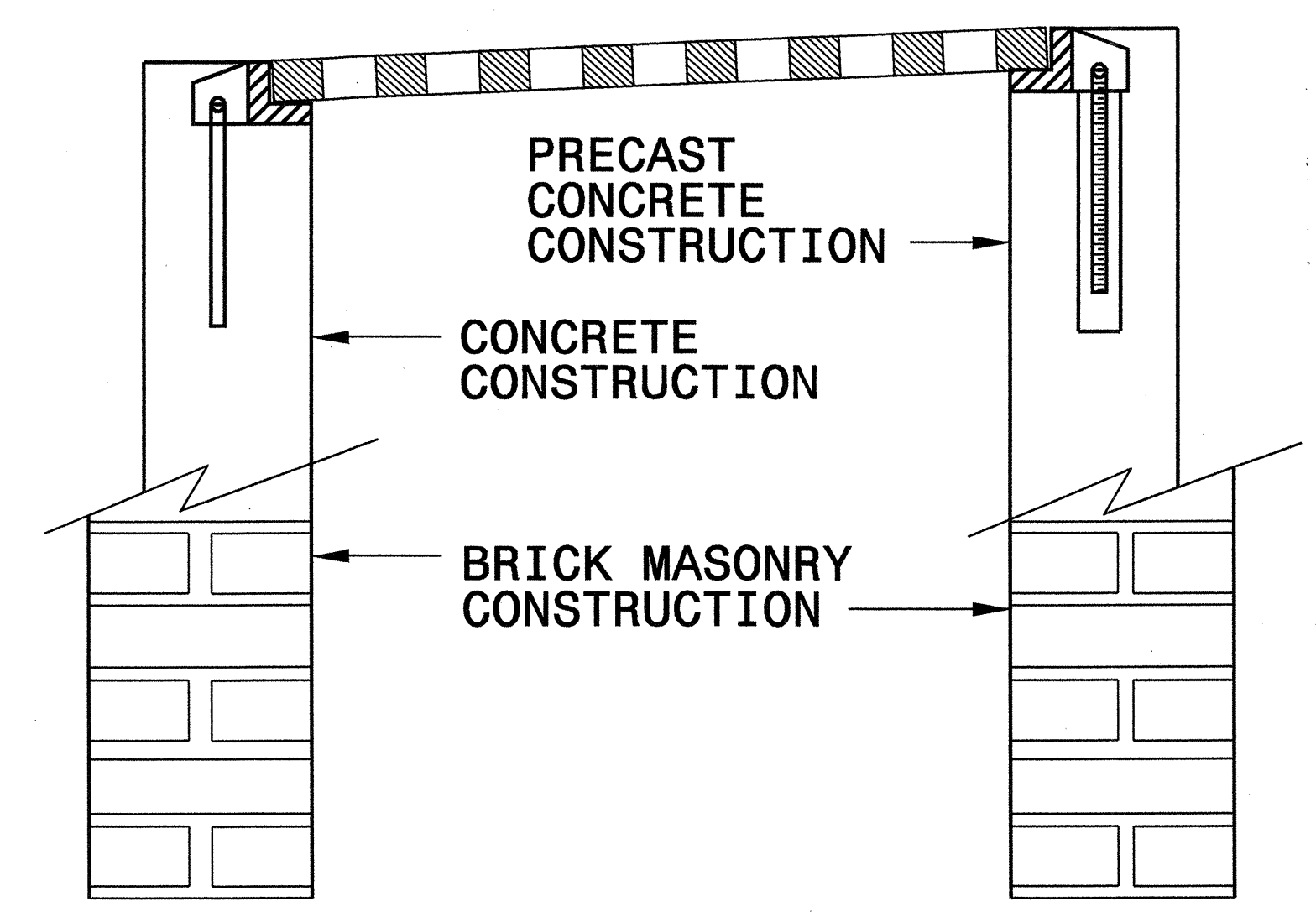
**MASONRY ANCHOR**  
3/8" DIA. BOLT WITH PLATE



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



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



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

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

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

SHEET 1 OF 1  
**840D25**

27-SEP-2006 09:01 S:\Contracts\Standards\Standards\Standards to Special Details\840D25 Anchorage for Frames\840D25.dgn ericward AT F522293



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: *[Signature]* DATE: 9/27/06  
FILE SPEC.: *[Signature]*

STATE OF NORTH CAROLINA  
SUMMARY OF QUANTITIES

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS  
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C201828

Item Number	Sec #	Quantity	Unit	Description	Item Number	Sec #	Quantity	Unit	Description	Item Number	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION	2286000000-N	840	4	EA	MASONRY DRAINAGE STRUCTURES	4810000000-E	1205	17,277	LF	PAINT PAVEMENT MARKING LINES (4")
<del>0000100000-N</del>	<del>800</del>	<del>Lump Sum</del>		<del>MOBILIZATION</del>	2367000000-N	840	4	EA	FRAME WITH TWO GRATES, STD 840.29	4835000000-E	1205	88	LF	PAINT PAVEMENT MARKING LINES (24")
0029000000-N	SP	Lump Sum		REINFORCED BRIDGE APPROACH FILL, STATION ***** (22+03.60)	2556000000-E	846	90	LF	SHOULDER BERM GUTTER	4900000000-N	1251	31	EA	PERMANENT RAISED PAVEMENT MARKERS
0043000000-N	226	Lump Sum		GRADING	3030000000-E	862	575	LF	STEEL BM GUARDRAIL	6000000000-E	1605	3,585	LF	TEMPORARY SILT FENCE
0050000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUB-BING	3150000000-N	862	5	EA	ADDITIONAL GUARDRAIL POSTS	6006000000-E	1610	115	TON	STONE FOR EROSION CONTROL, CLASS A
0057000000-E	226	350	CY	UNDERCUT EXCAVATION	3270000000-N	SP	4	EA	GUARDRAIL ANCHOR UNITS, TYPE 350	6009000000-E	1610	455	TON	STONE FOR EROSION CONTROL, CLASS B
0195000000-E	265	250	CY	SELECT GRANULAR MATERIAL	3317000000-N	862	4	EA	GUARDRAIL ANCHOR UNITS, TYPE B-77	6012000000-E	1610	165	TON	SEDIMENT CONTROL STONE
0196000000-E	270	250	SY	FABRIC FOR SOIL STABILIZATION	3649000000-E	876	3	TON	RIP RAP, CLASS B	6015000000-E	1615	3.5	ACR	TEMPORARY MULCHING
0318000000-E	300	23	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRS	3656000000-E	876	276	SY	FILTER FABRIC FOR DRAINAGE	6018000000-E	1620	150	LB	SEED FOR TEMPORARY SEEDING
0343000000-E	310	20	LF	15" SIDE DRAIN PIPE	3659000000-N	SP	2	EA	PREFORMED SCOUR HOLES WITH LEVEL SPREADER APRON	6021000000-E	1620	0.5	TON	FERTILIZER FOR TEMPORARY SEEDING
0372000000-E	310	56	LF	18" RC PIPE CULVERTS, CLASS III	4025000000-E	901	32.25	SF	CONTRACTOR FURNISHED, TYPE *** SIGN (E)	6024000000-E	1622	170	LF	TEMPORARY SLOPE DRAINS
0414000000-E	310	80	LF	60" RC PIPE CULVERTS, CLASS III	4072000000-E	903	69	LF	SUPPORTS, 3-LB STEEL U-CHANNEL	6027000000-N	1622	5	EA	INLET PROTECTION AT TEMPORARY SLOPE DRAINS
0714000000-E	310	56	LF	18" BIT COAT CS PIPE CULVERTS, TYPE B 0.064" THICK	4102000000-N	904	6	EA	SIGN ERECTION, TYPE E	6029000000-E	SP	350	LF	SAFETY FENCE
0807000000-E	310	4	EA	18" BIT COAT CS PIPE ELBOWS, TYPE B 0.064" THICK	4155000000-N	907	12	EA	DISPOSAL OF SIGN SYSTEM, U-CHANNEL	6030000000-E	1630	1,575	CY	SILT EXCAVATION
0995000000-E	340	71	LF	PIPE REMOVAL	4400000000-E	1110	104	SF	WORK ZONE SIGNS (STATIONARY)	6036000000-E	1631	670	SY	MATting FOR EROSION CONTROL
1121000000-E	520	1,210	TON	AGGREGATE BASE COURSE	4405000000-E	1110	144	SF	WORK ZONE SIGNS (PORTABLE)	6037000000-E	SP	80	SY	COIR FIBER MAT
1220000000-E	545	100	TON	INCIDENTAL STONE BASE	4410000000-E	1110	70	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)	6042000000-E	1632	80	LF	1/4" HARDWARE CLOTH
1489000000-E	610	420	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B	4430000000-N	1130	123	EA	DRUMS	6048000000-E	SP	110	SY	FLOATING TURBIDITY CURTAIN
1498000000-E	610	785	TON	ASPHALT CONC INTERMEDIATE COURSE, TYPE 119.0B	4445000000-E	1145	98	LF	BARRICADES (TYPE III)	6071030000-E	SP	470	LF	COIR FIBER BAFFLES
1519000000-E	610	570	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5B	4455000000-N	1150	60	MD	FLAGGER	6071050000-E	SP	3	EA	*** SKIMMER (2")
1560000000-E	620	90	TON	ASPHALT BINDER FOR PLANT MIX, GRADE PG 64-22	4650000000-N	1251	114	EA	TEMPORARY RAISED PAVEMENT MARKERS	6084000000-E	1660	4.5	ACR	SEEDING & MULCHING
1693000000-E	654	16	TON	ASPHALT PLANT MIX, PAVEMENT REPAIR	4685000000-E	1205	4,327	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)	6087000000-E	1660	2	ACR	MOWING
2000000000-N	806	24	EA	RIGHT OF WAY MARKERS	4686000000-E	1205	4,319	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)	6090000000-E	1661	50	LB	SEED FOR REPAIR SEEDING
2220000000-E	838	6	CY	REINFORCED ENDWALLS	4710000000-E	1205	44	LF	THERMOPLASTIC PAVEMENT MARKING LINES (24", 120 MILS)	6093000000-E	1661	0.25	TON	FERTILIZER FOR REPAIR SEEDING
										6096000000-E	1662	75	LB	SEED FOR SUPPLEMENTAL SEEDING
										6108000000-E	1665	3.25	TON	FERTILIZER TOPDRESSING
										6114000000-N	SP	2	HR	SPECIALIZED HAND MOWING
										6117000000-N	SP	8	EA	RESPONSE FOR EROSION CONTROL
										6123000000-E	1670	0.28	ACR	REFORESTATION
										6129000000-E	1670	0.52	ACR	WETLAND REFORESTATION
										6135000000-E	SP	0.52	ACR	GENERIC EROSION CONTROL ITEM DISKING
										6135000000-E	SP	0.52	ACR	GENERIC EROSION CONTROL ITEM RIPPING
										6141000000-E	SP	60	SY	GENERIC EROSION CONTROL ITEM LIVE STAKING





COMPUTED BY: JBT DATE: 9/19/05  
 CHECKED BY: KDAIY DATE: 1/19/07

PROJECT NO.  
B-3876

SHEET NO.  
3-B

## STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

### SUMMARY OF EARTHWORK

IN CUBIC YARDS

Station	Station	Uncl. Excav.	Embank. +%	Borrow C.Y.	Waste C.Y.
<b>SUMMARY No. 1</b>					
-L-	13+00.00 TO 21+27.27	126	6,281	6,155	
-L-	22+79.93 TO 31+00.00	5	4,703	4,698	
<b>SUMMARY No. 1 TOTAL</b>		<b>131</b>	<b>10,984</b>	<b>10,853</b>	
<b>SUMMARY No 2</b>					
-L-	13+00.00 TO 21+84.31	3,624	386		3,238
-L-	22+94.18 TO 31+00.00	3,689	338		3,351
-Y-	14+50.00 TO 16+50.00	138	218	80	
<b>SUMMARY No. 2 TOTAL</b>		<b>7,451</b>	<b>942</b>	<b>80</b>	<b>6,589</b>
<b>PROJECT SUBTOTALS:</b>		<b>7,582</b>	<b>11,926</b>	<b>10,933</b>	<b>6,589</b>
EST. SHOULDER MATERIAL			663	663	
EST 5% TO REPL. TOPSOIL AT BORR PIT				580	
<b>PROJECT TOTALS:</b>		<b>7,582</b>	<b>12,589</b>	<b>12,175</b>	<b>6,589</b>
<b>SAY:</b>		<b>7,600</b>		<b>12,200</b>	<b>6,589</b>
ESTIMATED UNDERCUT = 350 C.Y.					

APPROXIMATE QUANTITIES ONLY. UNCLASSIFIED EXCAVATION, BORROW EXCAVATION, FINE GRADING, CLEARING AND GRUBBING AND REMOVAL OF EXISTING PAVEMENT WILL BE PAID FOR AT THE 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.

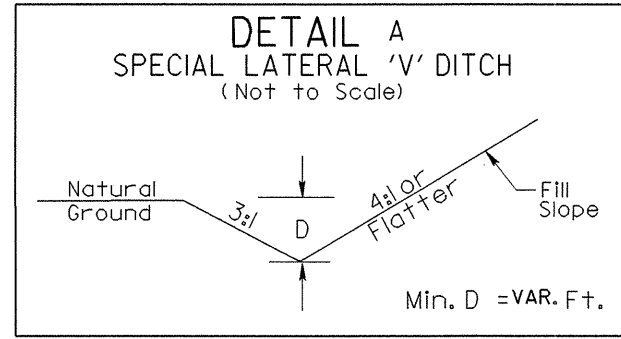
### SUMMARY OF EXISTING ASPHALT PAVEMENT REMOVAL

LINE	Station to Station	LOC LT/RT/CL	AREA SQ. YDS.
-L-	15+00.00 TO 21+83.50	LEFT	1515.36
-L-	22+93.93 TO 28+88.00	LEFT	1,013.91
		TOTAL:	2,529.27
		SAY:	2,550

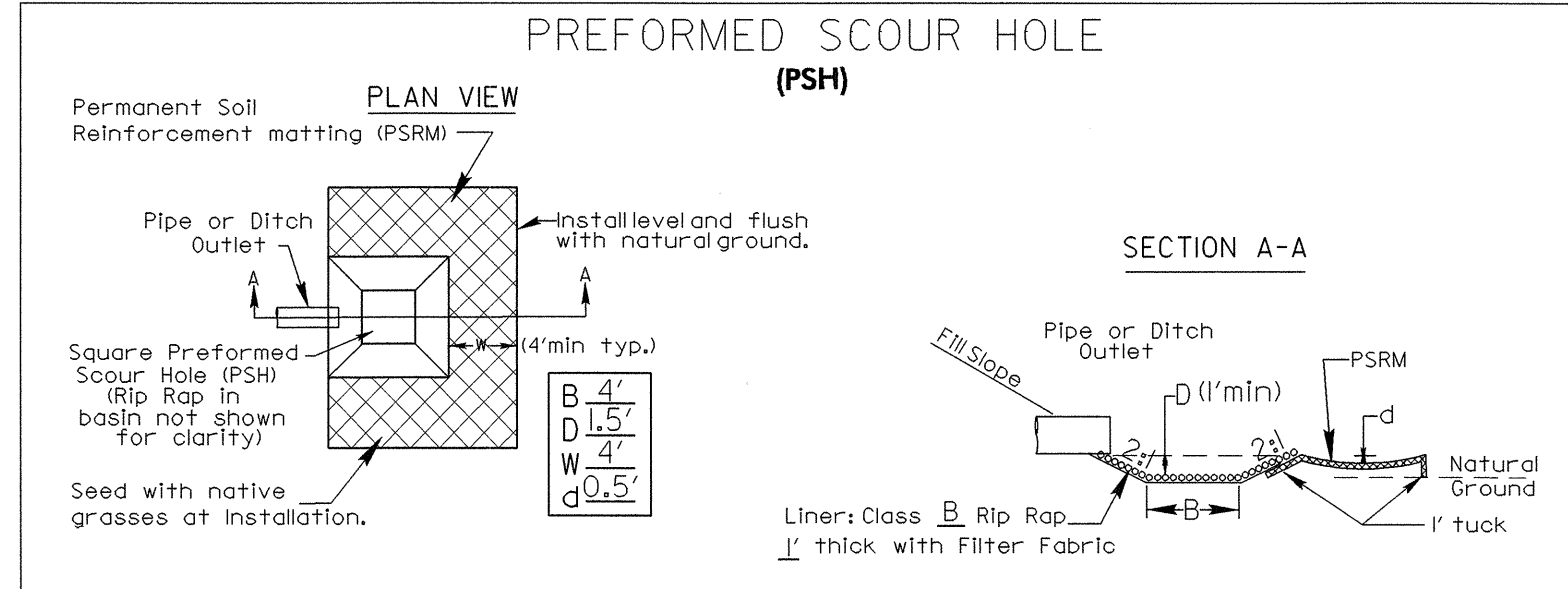




B/17/99

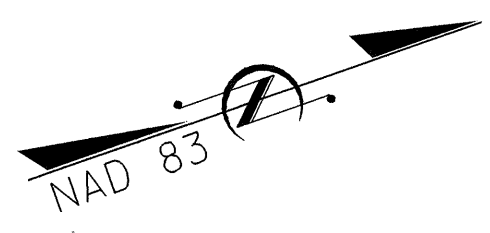


STA 14+00-L TO STA 17+50-L (RIGHT)



STA 20+71-L (RIGHT)  
 STA 20+92-L (LEFT)  
 STA 23+04-L (LEFT)

BRIDGE REMOVAL  
 PAVEMENT REMOVAL



SEE SHEET 6 FOR -L- PROFILE	PROJECT REFERENCE NO. B-3876	SHEET NO. 4
SEE SHEET 7 FOR -Y- PROFILE	RW SHEET NO.	
SEE SHEET S-1 THRU S-22 FOR STRUCTURE PLANS	ROADWAY DESIGN ENGINEER GREGORY E. BRIER	HYDRAULICS ENGINEER MAY A. BILLINGS
	3-27-07	

REVISIONS

-L-  
 PI Sta 11+08.97  
 $\Delta = 3' 17' 31.1''$  (RT)  
 $D = 2' 08' 48.6''$   
 $L = 153.34'$   
 $T = 76.69'$   
 $R = 2,668.83'$   
 $e = \text{EXISTING}$

BM # 205  
 -L- STA 12+29.11  
 65.71' LEFT  
 ELEV=172.23'

ETHEL J. DANIELS  
 D.B. 1239 PG. 711  
 P.B. 16 PG. 503

2  
 ETHEL J. DANIELS  
 D.B. 751 PG. 460

1  
 GUY W. & BEVERLY VICK  
 D.B. 877 PG. 305  
 P.B. 9 PG. 57

NOTE: USE 50' O/S FOR 3-CENTERED CURVE (120'-40'-120')

4  
 RICHARD L. & KATHERYN TYSON  
 NO DEED REFERENCE  
 P.B. 25 PG. 103

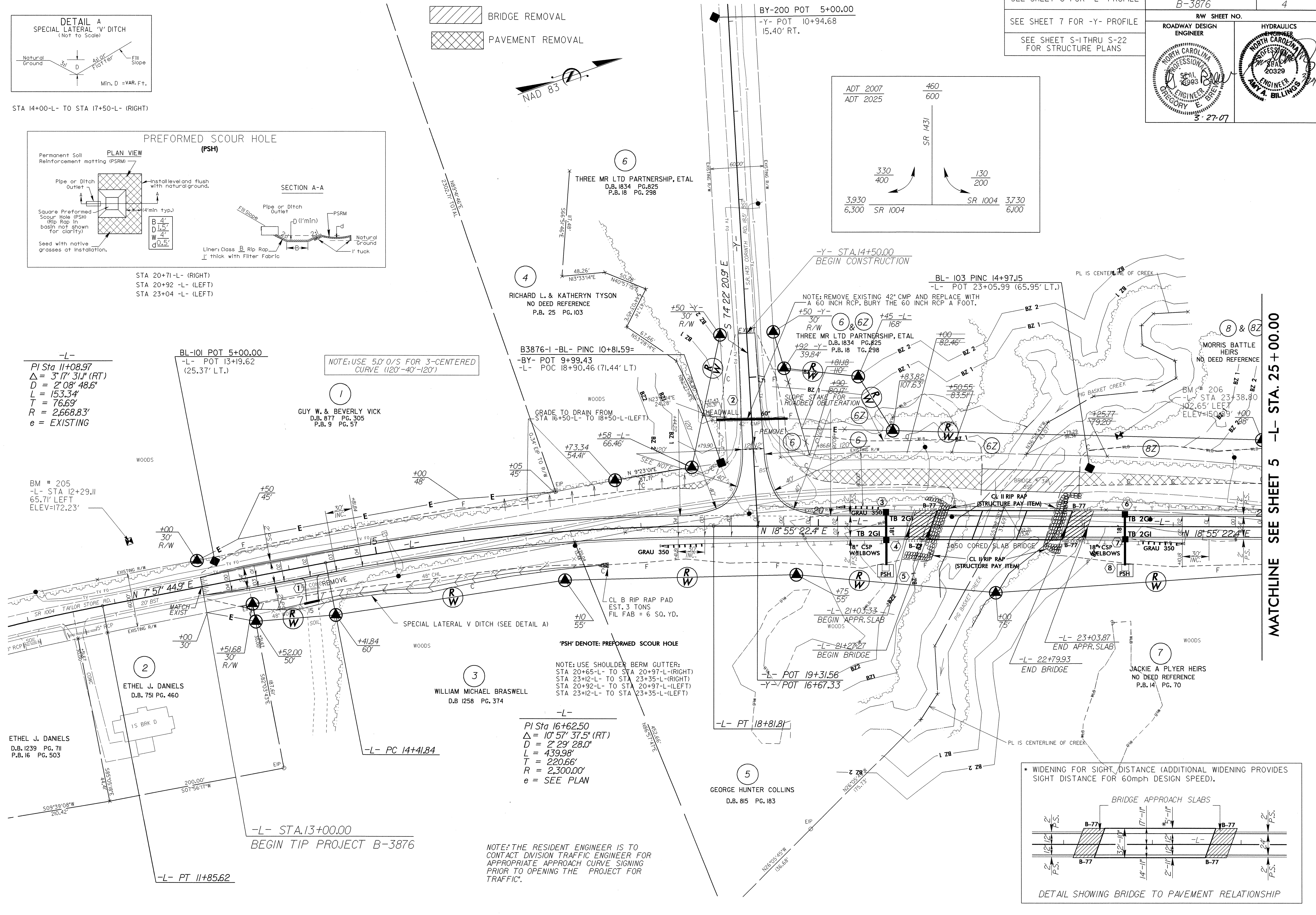
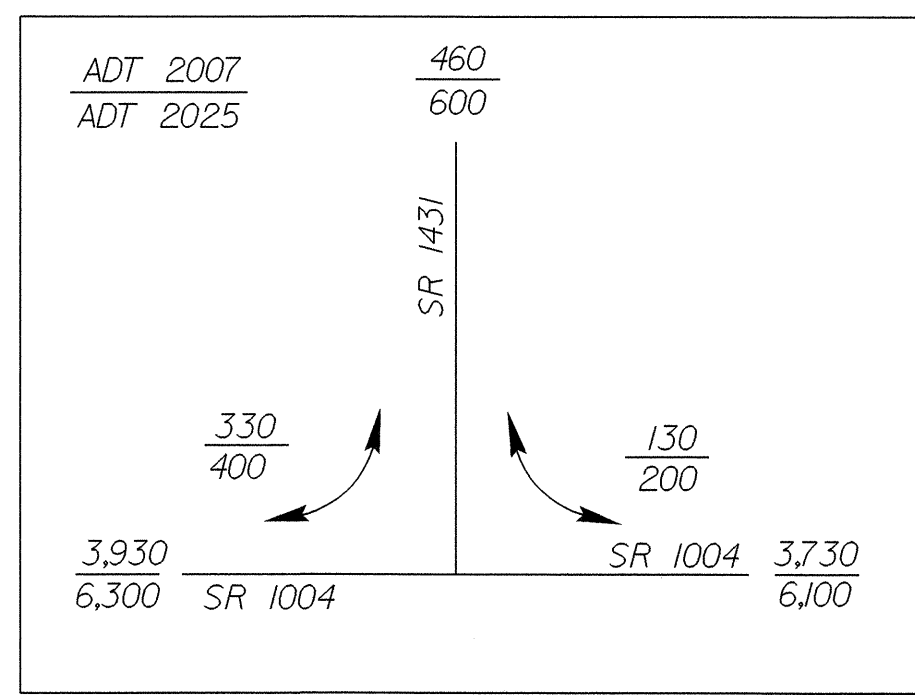
B3876-1-BL- PINC 10+81.59=  
 -BY- POT 9+99.43  
 -L- POC 18+90.46 (71.44' LT)

3  
 WILLIAM MICHAEL BRASWELL  
 D.B. 1258 PG. 374

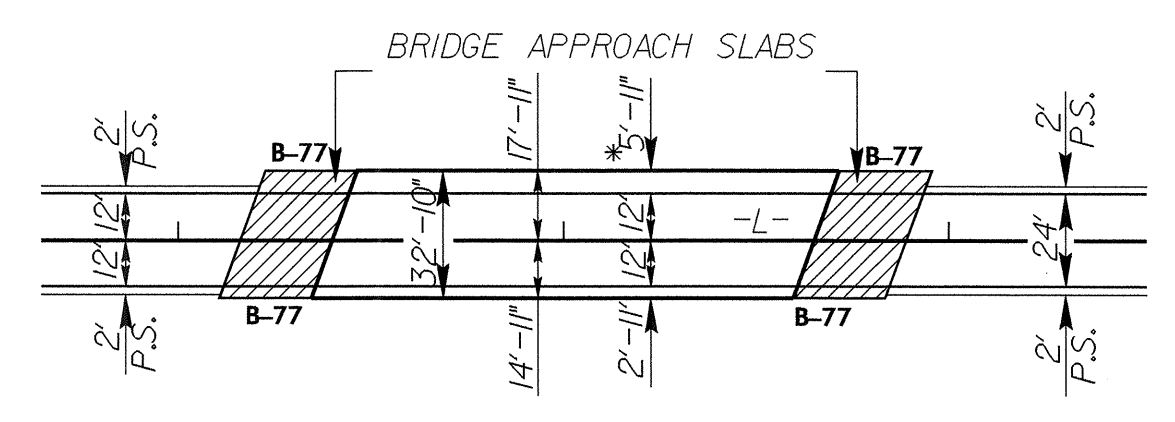
-L-  
 PI Sta 16+62.50  
 $\Delta = 10' 57' 37.5''$  (RT)  
 $D = 2' 29' 28.0''$   
 $L = 439.98'$   
 $T = 220.66'$   
 $R = 2,300.00'$   
 $e = \text{SEE PLAN}$

5  
 GEORGE HUNTER COLLINS  
 D.B. 815 PG. 183

NOTE: THE RESIDENT ENGINEER IS TO CONTACT DIVISION TRAFFIC ENGINEER FOR APPROPRIATE APPROACH CURVE SIGNING PRIOR TO OPENING THE PROJECT FOR TRAFFIC.



\* WIDENING FOR SIGHT DISTANCE (ADDITIONAL WIDENING PROVIDES SIGHT DISTANCE FOR 60MPH DESIGN SPEED).



MATCHLINE SEE SHEET 5 -L- STA. 25 + 00.00

12-MAR-2007 16:17 L:\3876-rdy-psh04.dgn



5/28/99

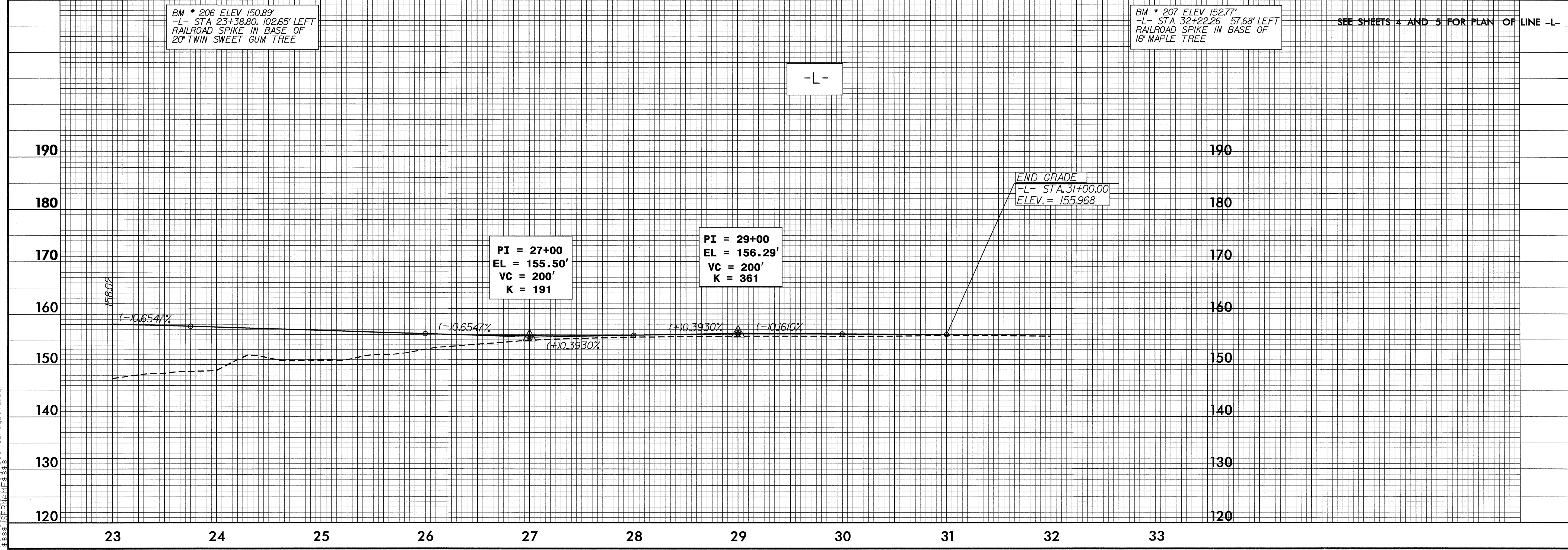
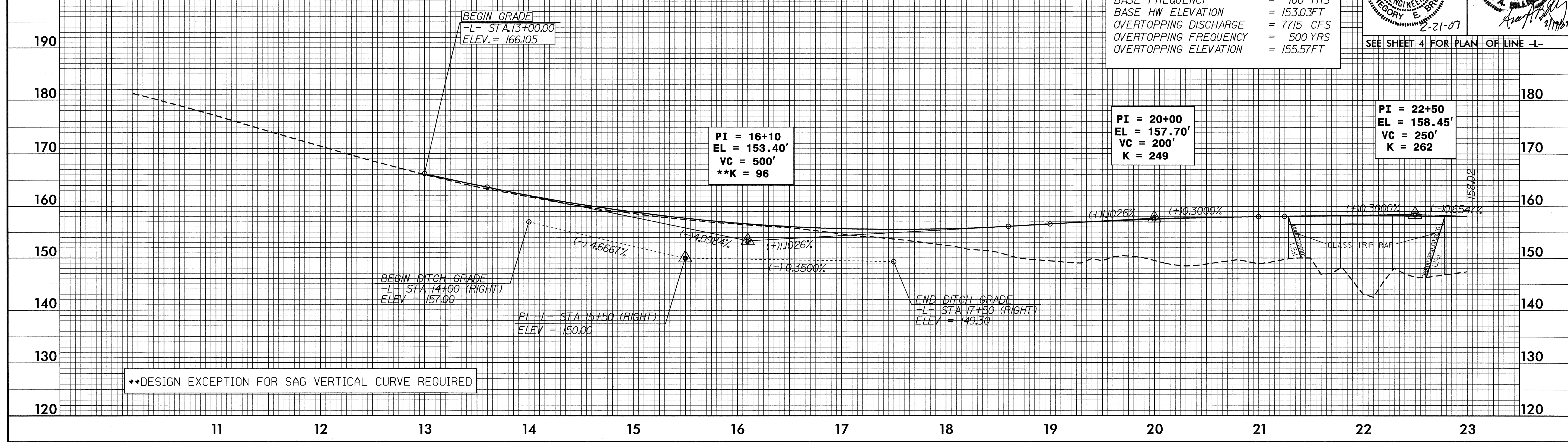
DITCH LEGEND	
RIGHT DITCH	-----
LEFT DITCH	-----

BM \* 205 ELEV 172.23'  
 -L- STA 12+29.11, 65.71' LEFT  
 RAILROAD SPIKE IN BASE OF  
 18" SWEET GUM TREE

BRIDGE HYDRAULIC DATA	
DESIGN DISCHARGE	= 3600 CFS
DESIGN FREQUENCY	= 50 YRS
DESIGN HW ELEVATION	= 152.48FT
BASE DISCHARGE	= 4300 CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 153.03FT
OVERTOPPING DISCHARGE	= 7715 CFS
OVERTOPPING FREQUENCY	= 500 YRS
OVERTOPPING ELEVATION	= 155.57FT

PROJECT REFERENCE NO. B-3876	SHEET NO. 6
ROADWAY DESIGN ENGINEER GREGORY E. BRINK	HYDRAULICS ENGINEER W. A. BRINK
PROFESSIONAL SEAL 2-21-07	PROFESSIONAL SEAL 20329

SEE SHEET 4 FOR PLAN OF LINE -L-



10

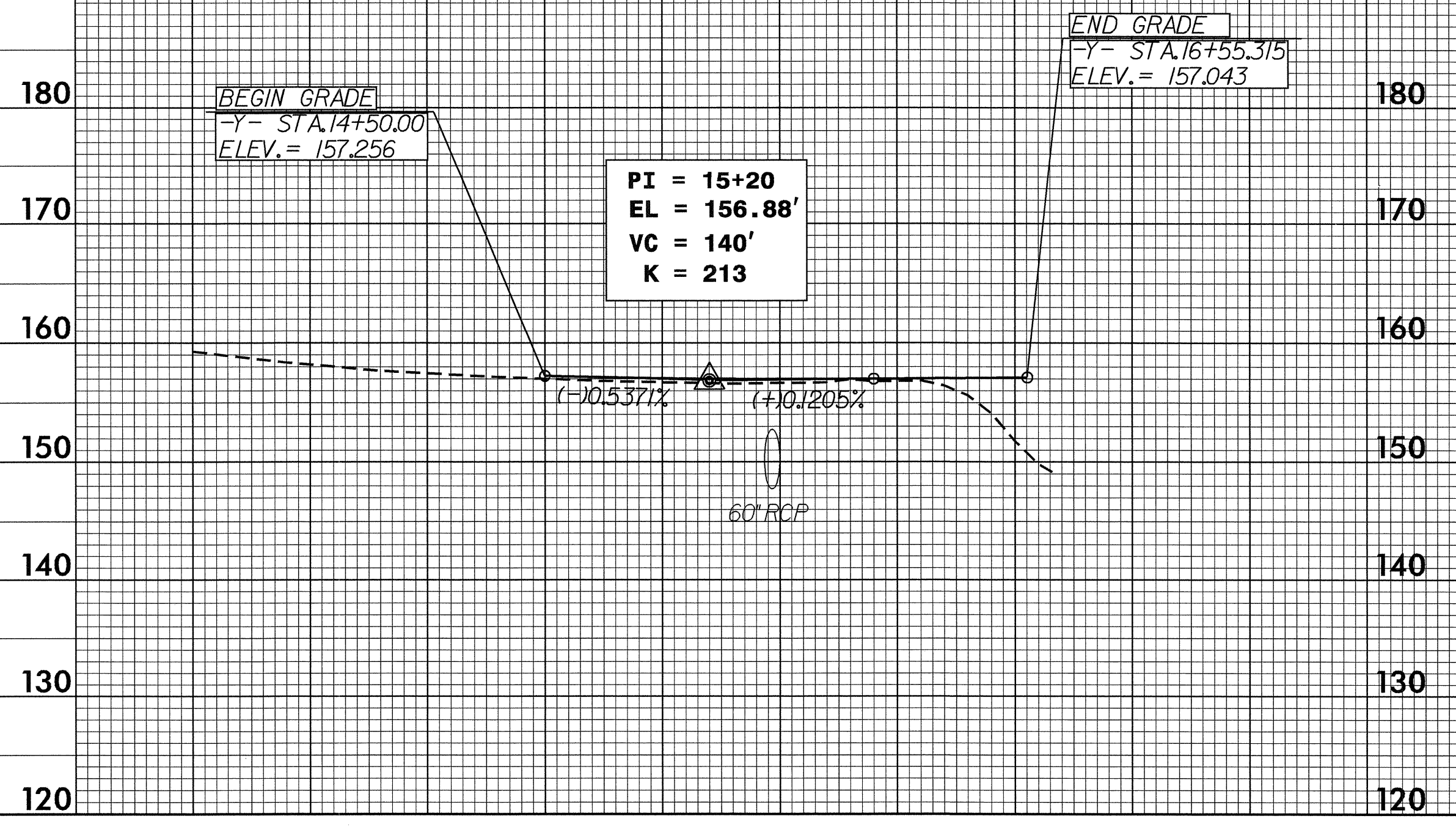
31 JAN 2007 07:57 L:\3876-rdu-pf1.dgn

5/28/99

SEE SHEET 4 FOR PLAN OF LINE -Y-

BM \* 206 ELEV 150.89  
L - STA 23+38.80, 102.65' LEFT  
RAILROAD SPIKE IN BASE OF  
20' TWIN SWEET GUM TREE

-Y-



PIPE HYDRAULIC DATA	
DRAINAGE STRUCTURE NO.9	
DRAINAGE AREA	= 256.00 AC
DESIGN FREQUENCY	= 50 YRS
DESIGN DISCHARGE	= 120 CFS
DESIGN HW ELEVATION	= 153.15 FT
100 YEAR DISCHARGE	= 145.2 CFS
100 YEAR HW ELEVATION	= 154.46 FT
OVERTOPPING FREQUENCY	= 200 YRS
OVERTOPPING DISCHARGE	= 230 CFS
OVERTOPPING ELEVATION	= 157.87 FT

PROJECT REFERENCE NO. B-3876	SHEET NO. 7
ROADWAY DESIGN ENGINEER GREGORY E. BIEW 2-21-07	HYDRAULICS ENGINEER MAY A. BILLINGS 2/21/07

31-JAN-2007 07:56  
44.46  
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