

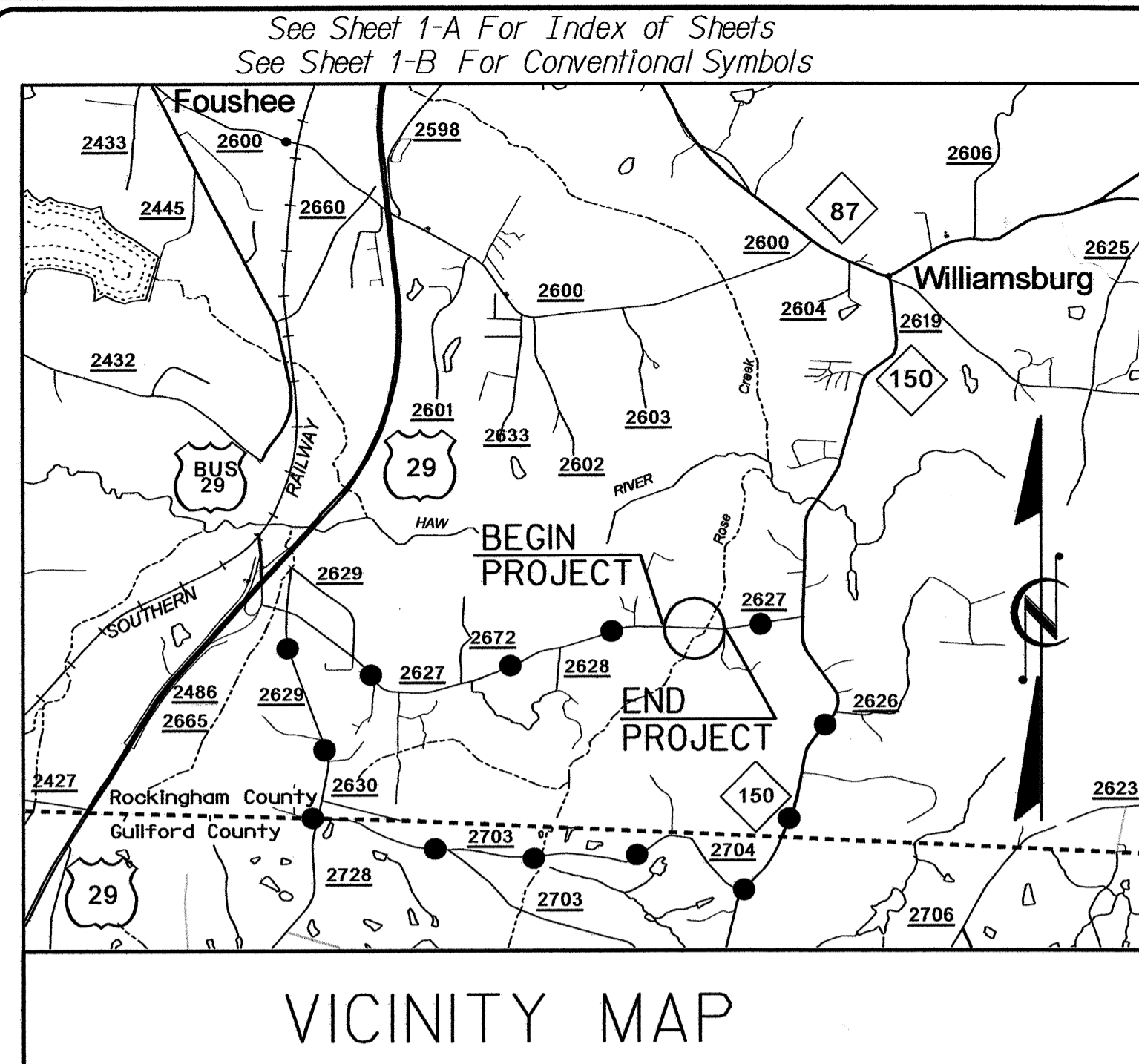
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4254	1	
WBS PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33596.1.1	BRZ-2627(1)	P.E.	
33596.2.1	BRZ-2627(1)	RW & UTIL	
33596.3.1	BRZ-2627(1)	CONST.	

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

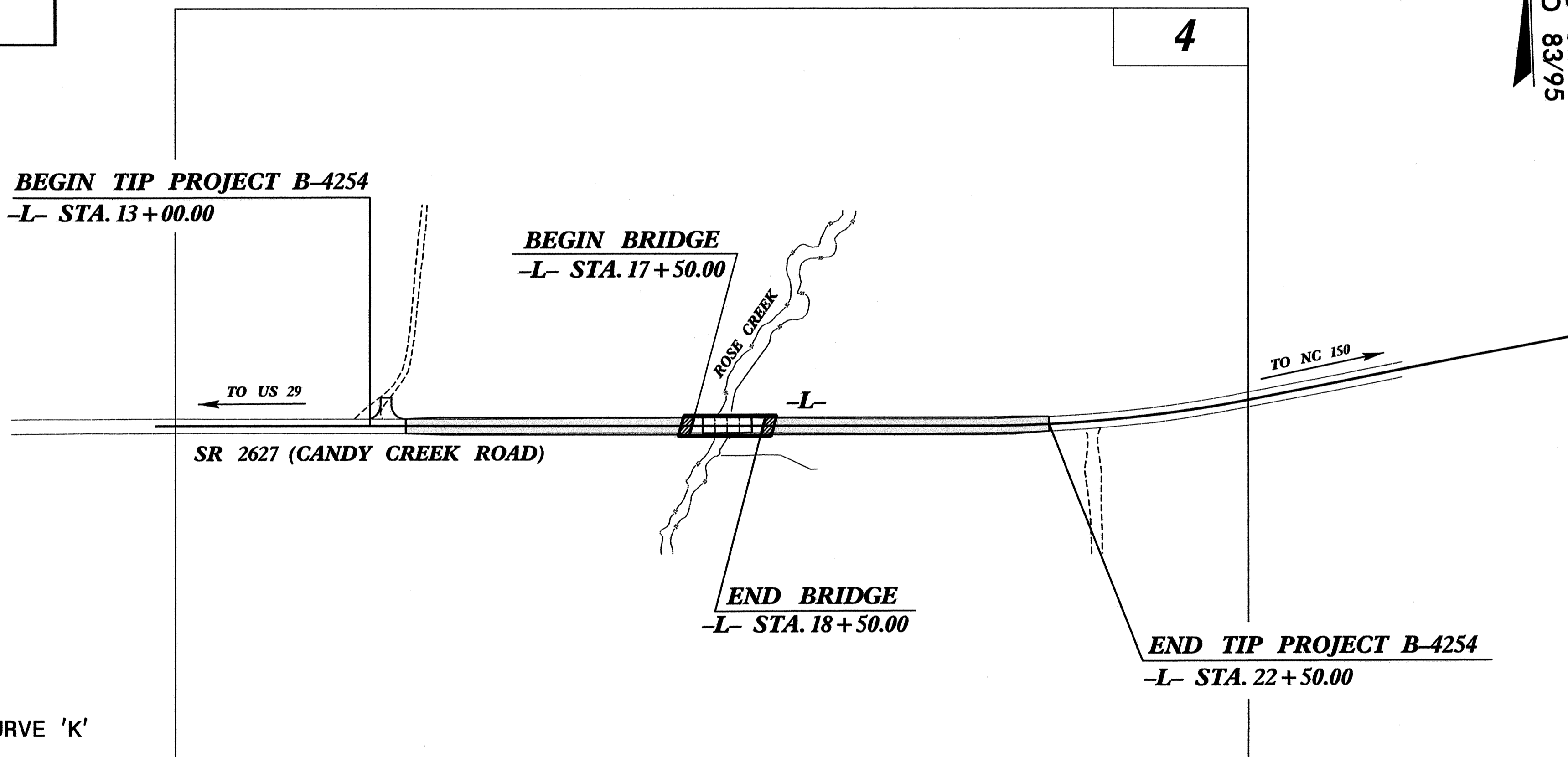
ROCKINGHAM COUNTY

**LOCATION: BRIDGE NO. 89 OVER ROSE CREEK ON
SR 2627 (CANDY CREEK ROAD)**

**TYPE OF WORK: GRADING, DRAINAGE, PAVING &
STRUCTURE**

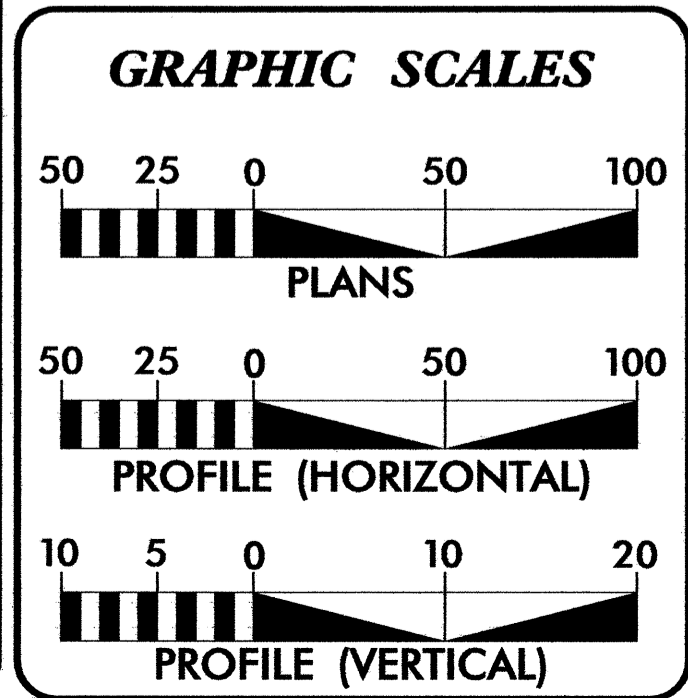


●●●● PROPOSED OFFSITE DETOUR



** DESIGN EXCEPTION REQUIRED FOR VERTICAL CURVE 'K'
FACTOR AND BRIDGE WIDTH

NCDOT CONTACT: CATHY HOUSER, P.E.
ROADWAY DESIGN - ENGINEERING COORDINATION



DESIGN DATA

ADT 2008	=	1835
ADT 2028	=	2735
DHV	=	10 %
D	=	65 %
T	=	3 % *
** V	=	60 MPH
* TTST 1%		DUAL 2%

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4254	=	0.161 MI.
LENGTH STRUCTURE TIP PROJECT B-4254	=	0.019 MI.
TOTAL LENGTH OF TIP PROJECT B-4254	=	0.180 MI.

Prepared In the Office of:
KO & ASSOCIATES, P.C.
Consulting Engineers
5121 Kingdom Way, Suite 100, Raleigh NC 27607
(919) 851-6066

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: SEPTEMBER 15, 2006

LETTING DATE: FEBRUARY 19, 2008

STEPHEN R. WHITLEY, PE
PROJECT ENGINEER

BRIAN A. WILES, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

Professional Engineer Seal: Stephen R. Whitley, No. 19732, State of North Carolina.

ROADWAY DESIGN ENGINEER

Professional Engineer Seal: Stephen R. Whitley, No. 20774, State of North Carolina.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

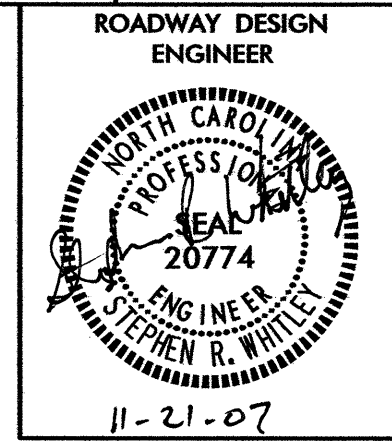
Professional Engineer Seal: Stephen R. Whitley, No. 20774, State of North Carolina.

STATE HIGHWAY DESIGN ENGINEER

CONTRACT: C201773 TIP PROJECT: B-4254
 11/20/2007 R:\Roadway\Proj\B4254_Rdy_tsh.dgn K & Associates, P.C.

8/17/99

1/21/2007
C:\Users\Group45\B4254_Ko\B4254_Roadway\Proj\B4254_Raj-tsh.dgn



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	TYPICAL SECTIONS AND PAVEMENT SCHEDULE
2-A	DETAIL (ANCHORAGE FOR FRAMES)
3	SUMMARY OF QUANTITIES
3-A	EARTHWORK SUMMARY, DRAINAGE SUMMARY, GUARDRAIL SUMMARY AND PAVEMENT REMOVAL SUMMARY
4	PLAN SHEET
5	PROFILE SHEET
TCP-1 THRU TCP-3	TRAFFIC CONTROL PLANS
EC-1 THRU EC-5	EROSION CONTROL PLANS
UO-1 THRU U-2	UTILITIES BY OTHERS
X-1	CROSS-SECTION SUMMARY
X-2 THRU X-7	CROSS-SECTIONS
S-1 THRU S-18	STRUCTURE PLANS

GENERAL NOTES: 2006 SPECIFICATIONS
EFFECTIVE: 07-18-06
REVISED: 01-02-07

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.

DRIVEWAYS:

DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.02 USING 3' RADII OR RADII AS SHOWN ON THE PLANS. LOCATIONS OF DRIVES WILL BE AS SHOWN ON THE PLANS OR AS 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 AT&T, Duke Power

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

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

2006 ROADWAY 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 Superelevation - 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 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
840.29	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
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

3/15/06













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	_____ 
Parcel/Sequence Number	_____ 
Existing Fence Line	_____ 
Proposed Woven Wire Fence	_____ 
Proposed Chain Link Fence	_____ 
Proposed Barbed Wire Fence	_____ 
Existing Wetland Boundary	_____ 
Proposed Wetland Boundary	_____ 
Existing Endangered Animal Boundary	_____ 
Existing Endangered Plant Boundary	_____ 

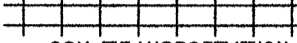
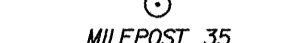
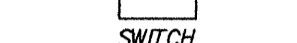
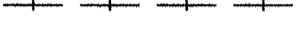

BUILDINGS AND OTHER CULTURE:

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



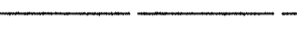

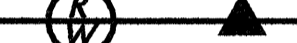








HYDROLOGY:

Stream or Body of Water	_____
Hydro, Pool or Reservoir	_____ 
Jurisdictional Stream	_____ 
Buffer Zone 1	_____ 
Buffer Zone 2	_____ 
Flow Arrow	_____ 
Disappearing Stream	_____ 
Spring	_____ 
Wetland	_____ 
Proposed Lateral, Tail, Head Ditch	_____ 
False Sump	_____ 

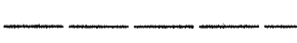







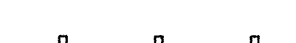
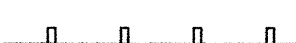



RAILROADS:

Standard Gauge	_____ 
RR Signal Milepost	_____ 
Switch	_____ 
RR Abandoned	_____ 
RR Dismantled	_____ 

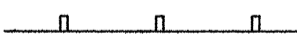
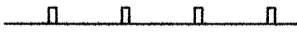




RIGHT OF WAY:

Baseline Control Point	_____ 
Existing Right of Way Marker	_____ 
Existing Right of Way Line	_____ 
Proposed Right of Way Line	_____ 
Proposed Right of Way Line with Iron Pin and Cap Marker	_____ 
Proposed Right of Way Line with Concrete or Granite Marker	_____ 
Existing Control of Access	_____ 
Proposed Control of Access	_____ 
Existing Easement Line	_____ 
Proposed Temporary Construction Easement	_____ 
Proposed Temporary Drainage Easement	_____ 
Proposed Permanent Drainage Easement	_____ 
Proposed Permanent Utility Easement	_____ 

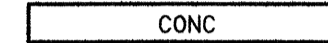
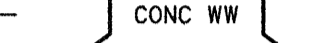
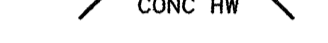






ROADS AND RELATED FEATURES:

Existing Edge of Pavement	_____ 
Existing Curb	_____ 
Proposed Slope Stakes Cut	_____ 
Proposed Slope Stakes Fill	_____ 
Proposed Wheel Chair Ramp	_____ 
Proposed Wheel Chair Ramp Curb Cut	_____ 
Curb Cut for Future Wheel Chair Ramp	_____ 
Existing Metal Guardrail	_____ 
Proposed Guardrail	_____ 
Existing Cable Guiderail	_____ 
Proposed Cable Guiderail	_____ 
Equality Symbol	_____ 
Pavement Removal	_____ 



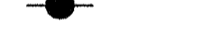






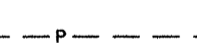

VEGETATION:

Single Tree	_____ 
Single Shrub	_____ 
Hedge	_____ 
Woods Line	_____ 
Orchard	_____ 
Vineyard	_____ 











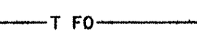
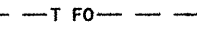

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	_____ 
Bridge Wing Wall, Head Wall and End Wall	_____ 
MINOR:	
Head and End Wall	_____ 
Pipe Culvert	_____ 
Footbridge	_____ 
Drainage Box: Catch Basin, DI or JB	_____ 
Paved Ditch Gutter	_____ 
Storm Sewer Manhole	_____ 
Storm Sewer	_____ 








UTILITIES:

POWER:	
Existing Power Pole	_____ 
Proposed Power Pole	_____ 
Existing Joint Use Pole	_____ 
Proposed Joint Use Pole	_____ 
Power Manhole	_____ 
Power Line Tower	_____ 
Power Transformer	_____ 
U/G Power Cable Hand Hole	_____ 
H-Frame Pole	_____ 
Recorded U/G Power Line	_____ 
Designated U/G Power Line (S.U.E.*)	_____ 









TELEPHONE:

Existing Telephone Pole	_____ 
Proposed Telephone Pole	_____ 
Telephone Manhole	_____ 
Telephone Booth	_____ 
Telephone Pedestal	_____ 
Telephone Cell Tower	_____ 
U/G Telephone Cable Hand Hole	_____ 
Recorded U/G Telephone Cable	_____ 
Designated U/G Telephone Cable (S.U.E.*)	_____ 
Recorded U/G Telephone Conduit	_____ 
Designated U/G Telephone Conduit (S.U.E.*)	_____ 
Recorded U/G Fiber Optics Cable	_____ 
Designated U/G Fiber Optics Cable (S.U.E.*)	_____ 






WATER:

Water Manhole	_____ 
Water Meter	_____ 
Water Valve	_____ 
Water Hydrant	_____ 
Recorded U/G Water Line	_____ 
Designated U/G Water Line (S.U.E.*)	_____ 
Above Ground Water Line	_____ 







TV:

TV Satellite Dish	_____ 
TV Pedestal	_____ 
TV Tower	_____ 
U/G TV Cable Hand Hole	_____ 
Recorded U/G TV Cable	_____ 
Designated U/G TV Cable (S.U.E.*)	_____ 
Recorded U/G Fiber Optic Cable	_____ 
Designated U/G Fiber Optic Cable (S.U.E.*)	_____ 





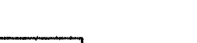
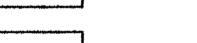




GAS:

Gas Valve	_____ 
Gas Meter	_____ 
Recorded U/G Gas Line	_____ 
Designated U/G Gas Line (S.U.E.*)	_____ 
Above Ground Gas Line	_____ 

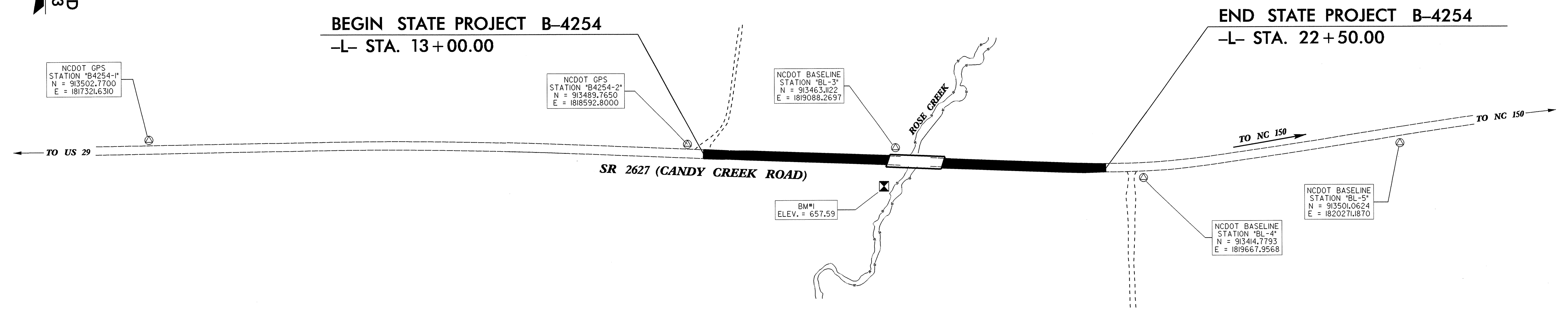
SANITARY SEWER:

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

MISCELLANEOUS:

Utility Pole	_____ 
Utility Pole with Base	_____ 
Utility Located Object	_____ 
Utility Traffic Signal Box	_____ 
Utility Unknown U/G Line	_____ 
U/G Tank; Water, Gas, Oil	_____ 
A/G Tank; Water, Gas, Oil	_____ 
U/G Test Hole (S.U.E.*)	_____ 
Abandoned According to Utility Records	_____ 
End of Information	_____ 

B-4254 SURVEY CONTROL SHEET



BASELINE DATA						
BL POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
1	B4254-1	913502.7700	1817321.6310	709.17	OUTSIDE PROJECT LIMITS	
2	B4254-2	913489.7650	1818592.8000	671.18	12+60.97	22.13 LT
BL3	BL-3	913463.1122	1819088.2697	663.33	17+57.11	15.67 LT
BL4	BL-4	913414.7793	1819667.9568	675.70	23+36.93	17.60 RT
BL5	BL-5	913501.0624	1820271.1870	709.86	29+44.83	13.62 RT

BENCHMARK DATA	
BM1	ELEVATION = 657.59
N 913387	E 1819056
L STATION 17+28 62 RIGHT	
RR SPIKE IN BASE OF 30 IN. HICKORY TREE	

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B4254-2"

WITH NAD 1983/95 STATE PLANE GRID COORDINATES OF NORTHING: 913489.765(++) EASTING: 1818592.800(++) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: .9999997

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4254-2" TO -L- STATION 13+00.00 IS S58°06'59"E 44.87'

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

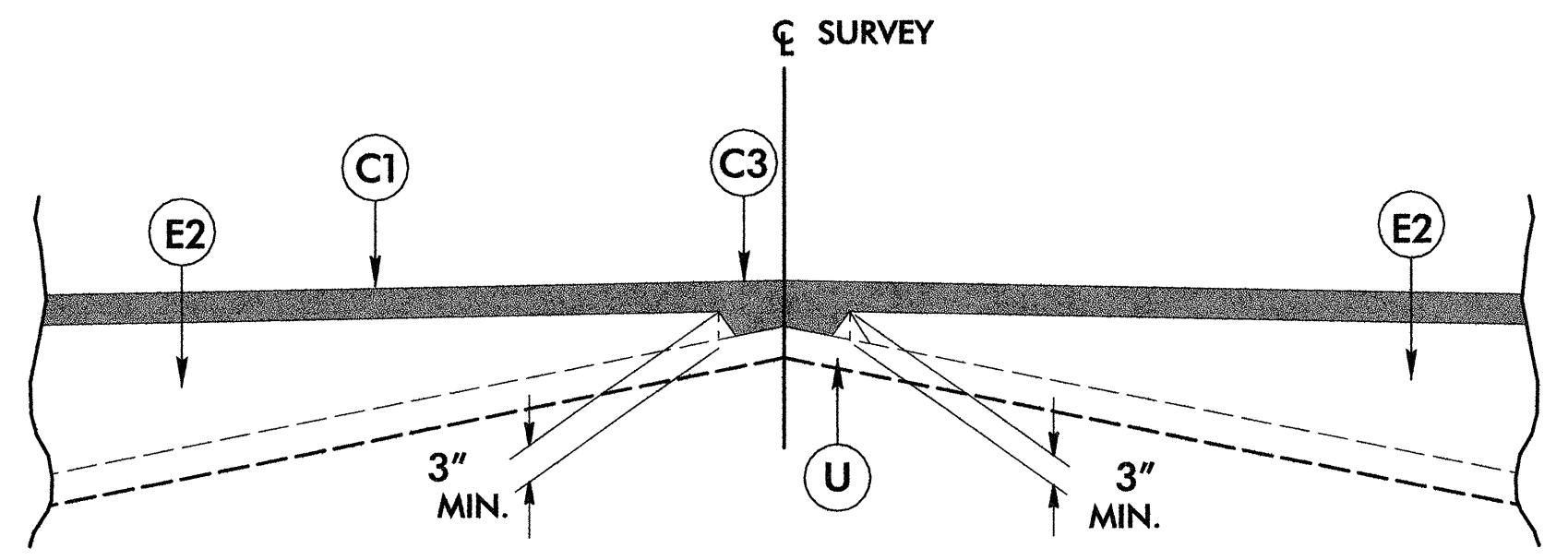
- NOTES**
- THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:
[HTTP://WWW.DOH.DOT.STATE.NC.USPRECONSTRUCT/HIGHWAY/LOCATION/PROJECT/](http://www.doh.dot.state.nc.us/preconstruct/highway/location/project/)
 THE FILES TO BE FOUND ARE AS FOLLOWS:
 b4254_ls_control_060111.txt
 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)

NOTE: DRAWING NOT TO SCALE

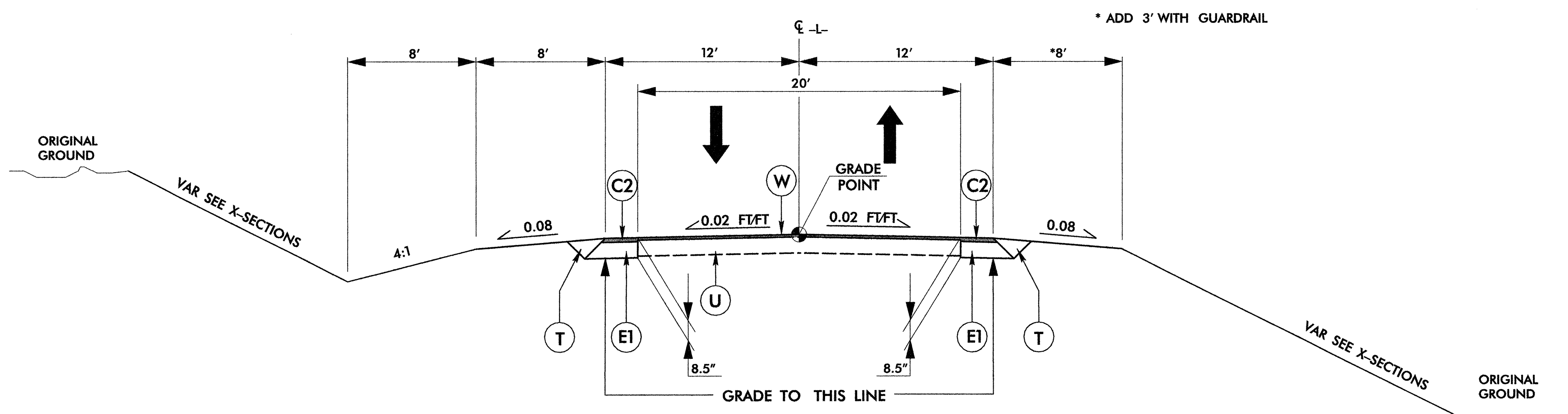
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08-NOV-2007 15:30
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PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	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. 5.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 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.
U	EXISTING PAVEMENT.
T	EARTH MATERIAL.
W	VARIABLE DEPTH ASPHALT PAVEMENT.

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



Detail Showing Method of Wedging



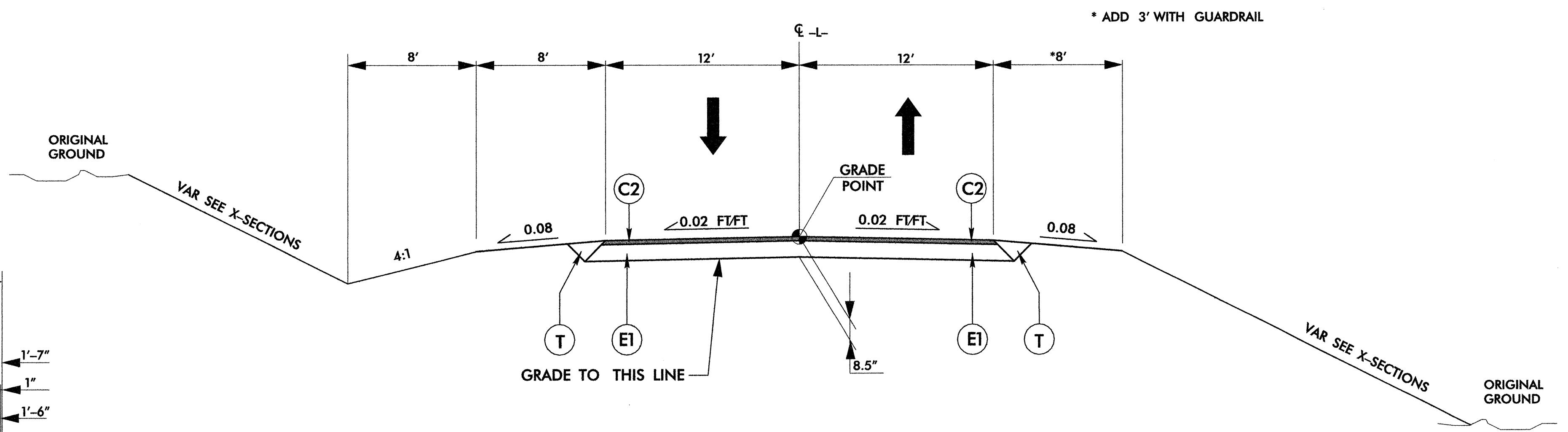
TYPICAL SECTION NO. 1
-L- (SR 2627)

TRANSITION FROM EXISTING TO TYPICAL NO. 1
-L- STA. 13+50 TO 14+00

USE TYPICAL SECTION NO. 1
-L- STA. 14+00 TO 16+86
-L- STA. 19+25 TO 22+00

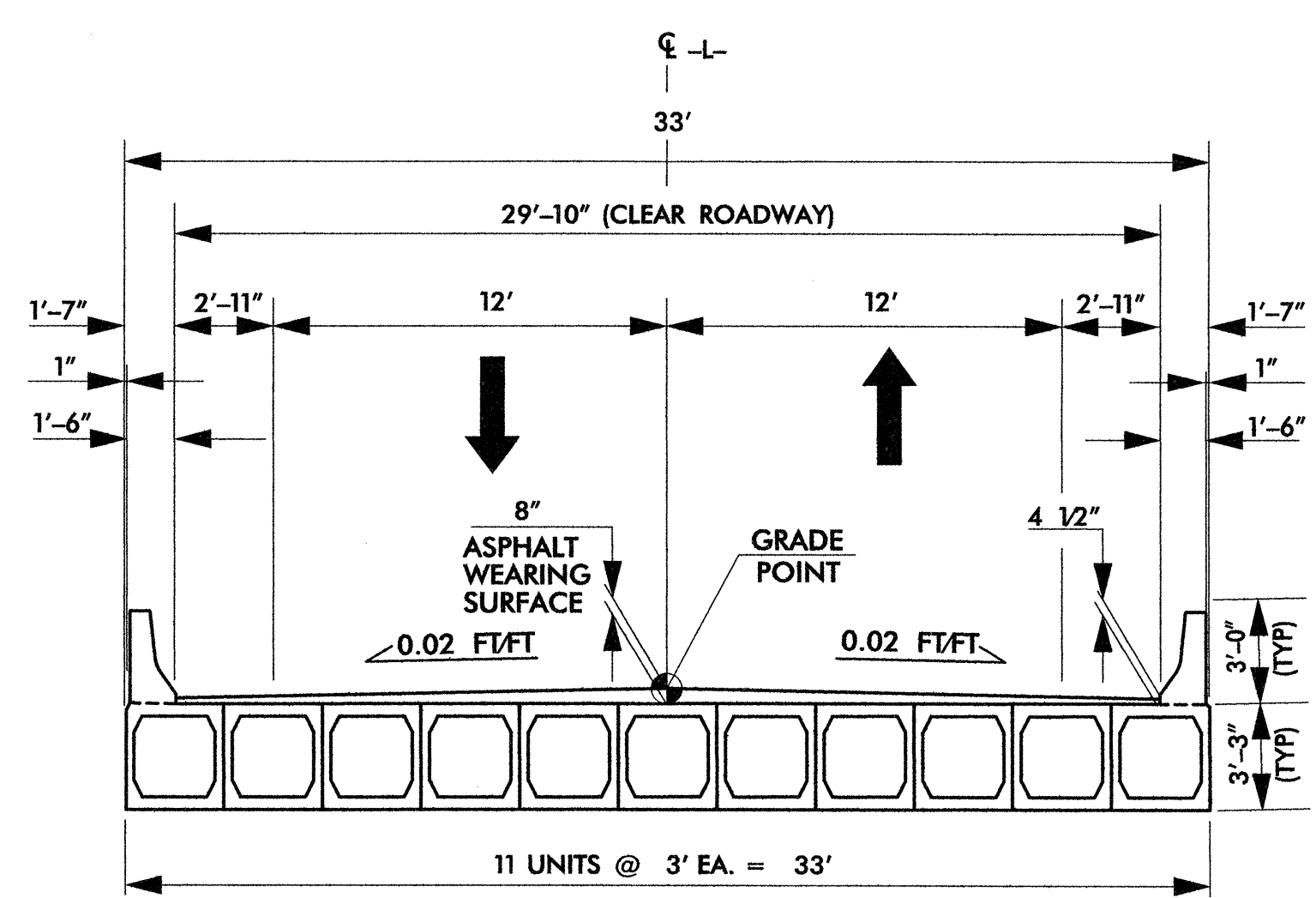
TRANSITION FROM EXISTING TO TYPICAL NO. 1
-L- STA. 22+00 TO 22+50

USE TYPICAL SECTION NO. 2
-L- STA. 16+86 TO (APPRO. SLAB) 17+36
-L- (APPRO. SLAB) STA. 18+64 TO 19+25



TYPICAL SECTION NO. 2
-L- (SR 2627)

USE TYPICAL SECTION NO. 3
-L- STA. 17+50 TO 18+50



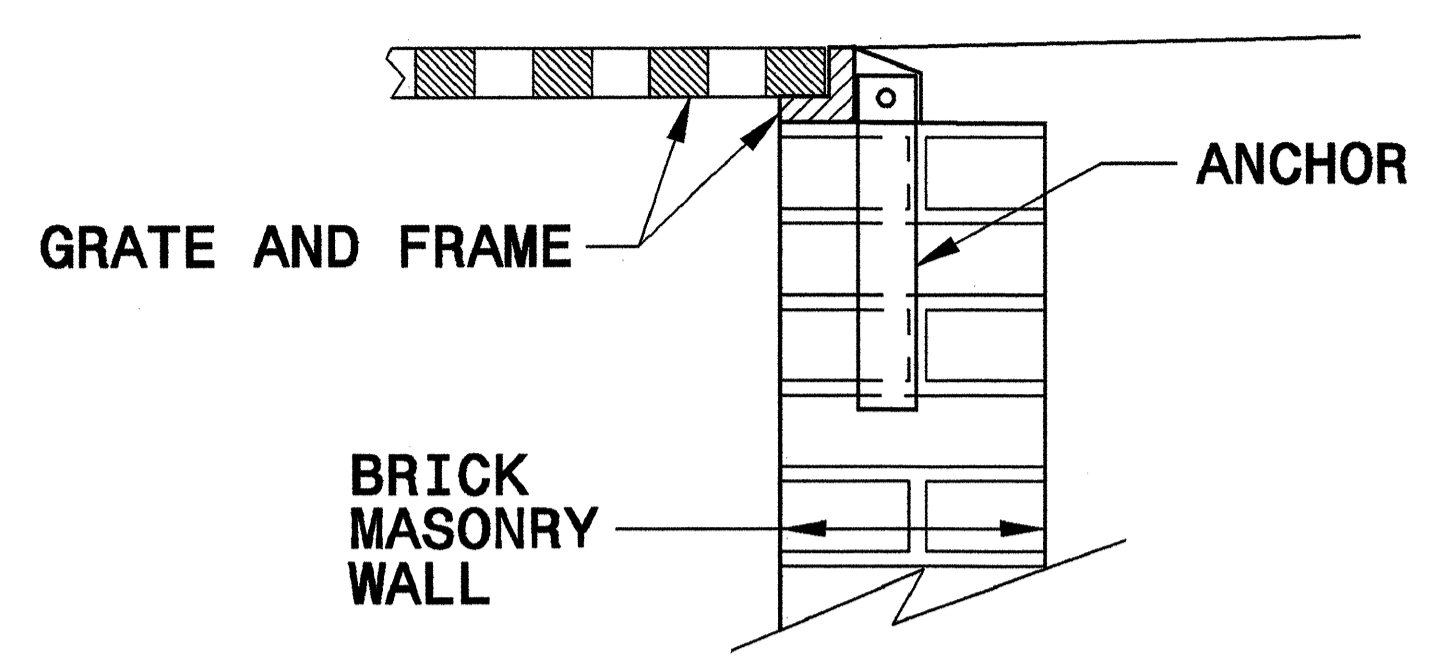
TYPICAL SECTION NO. 3
STRUCTURE ON SR 2627

7.62.29993
8/6/2007
C:\Users\pco\OneDrive\B4254-Rdy-tyr.dgn

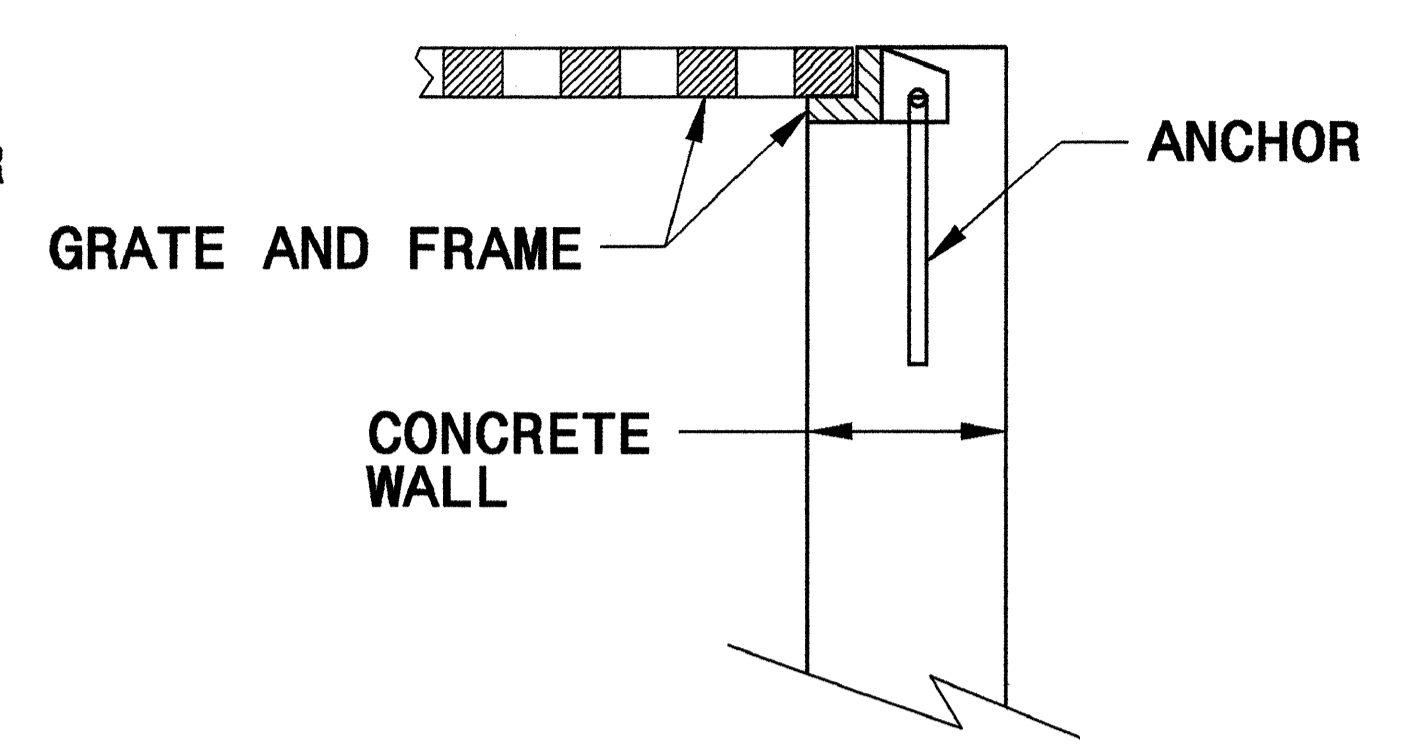
STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

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

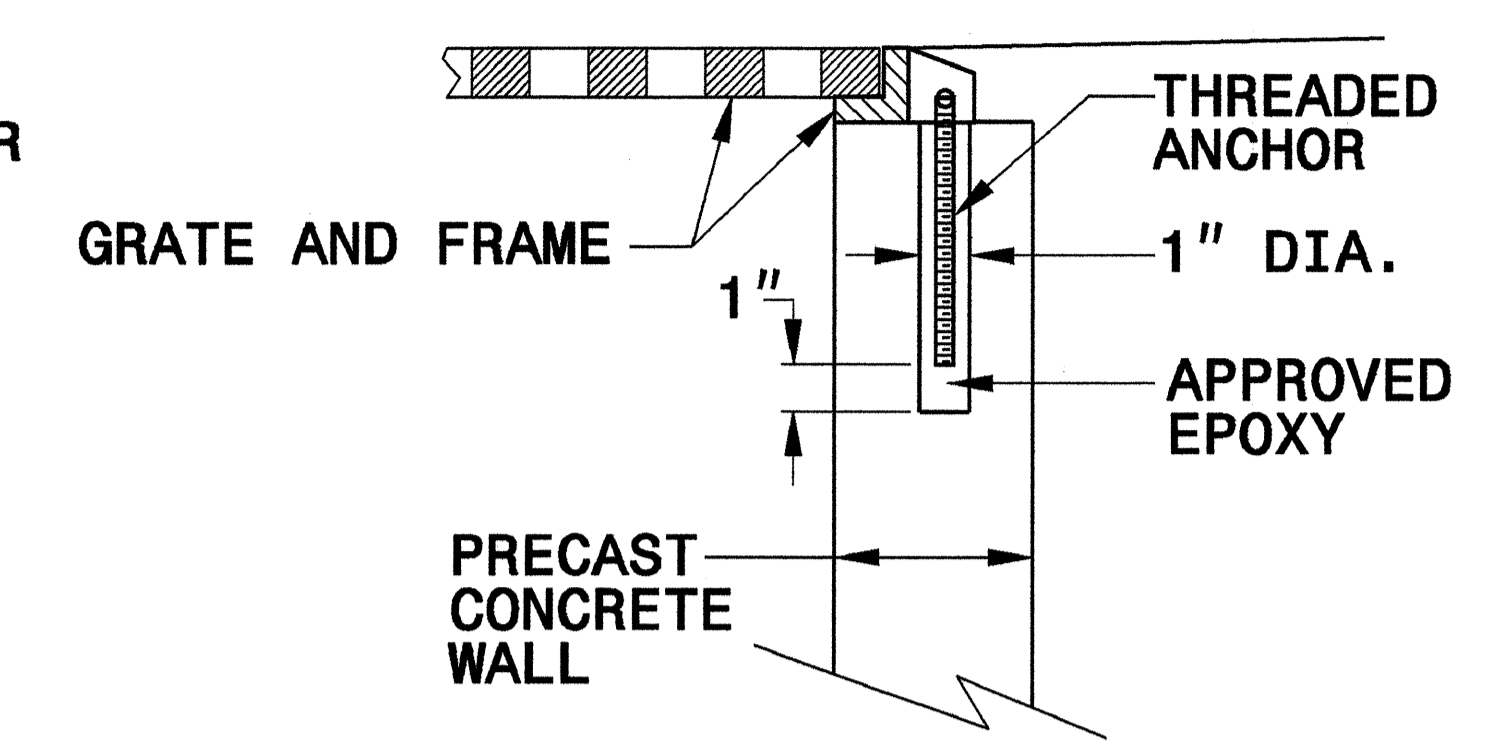
SHEET 1 OF 1
840D25



**BRICK MASONRY
CONSTRUCTION**



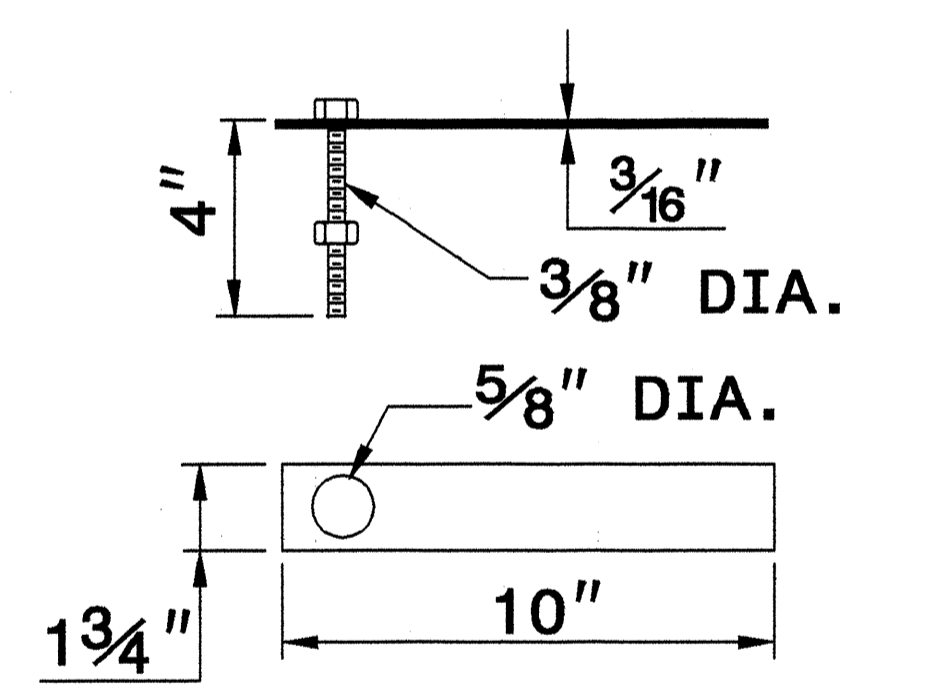
**CONCRETE
CONSTRUCTION**



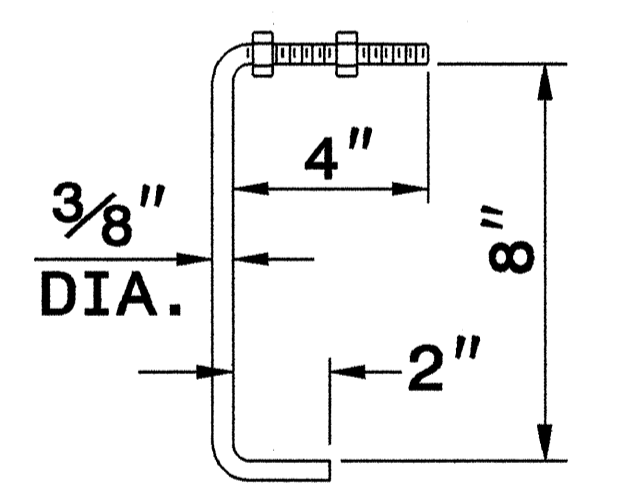
**PRECAST CONCRETE
CONSTRUCTION**

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

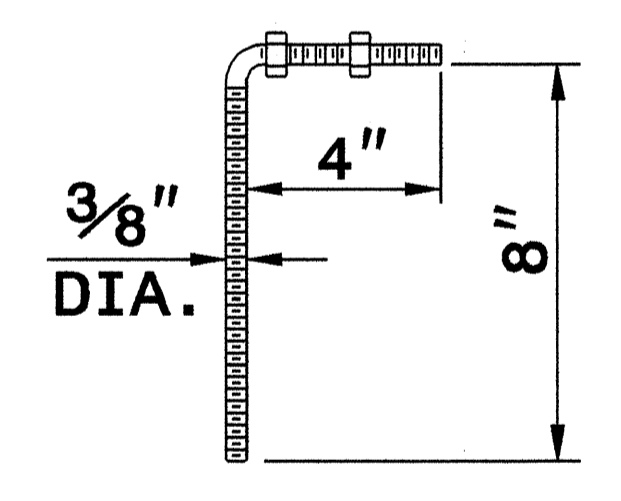
NOTE:
CONSTRUCT GRATED DROP INLET TO COINCIDE WITH NORMAL
OR SUPERELEVATED SHOULDER OR PAVEMENT SLOPE.



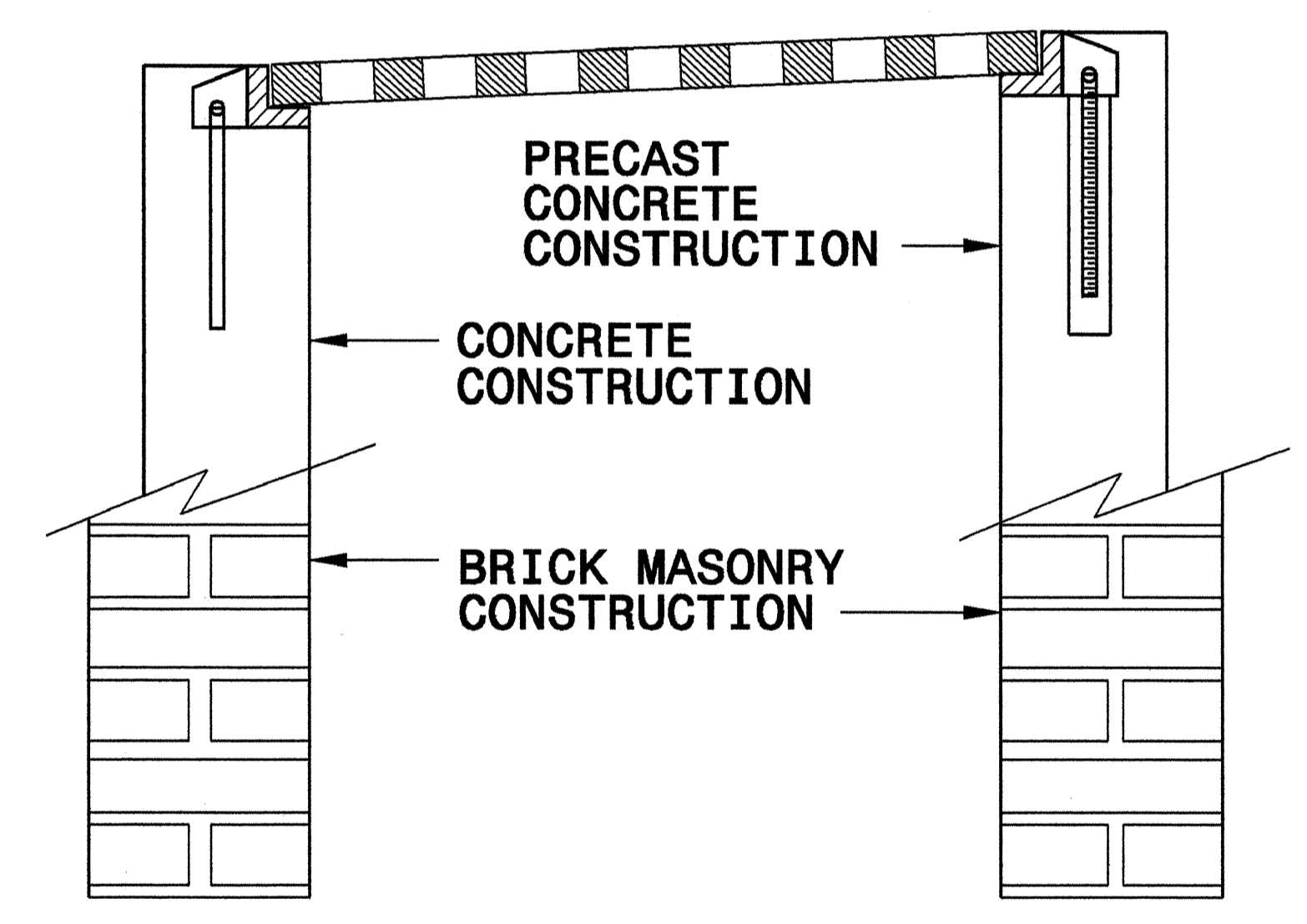
MASONRY ANCHOR
3/8" DIA. BOLT WITH PLATE



CONCRETE ANCHOR
3/8" DIA. BENT BAR



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



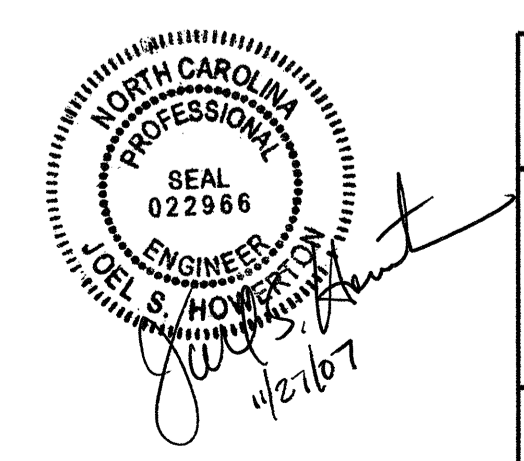
**FRAME AND GRATE INSTALLATION
FOR NORMAL CROWN AND
SUPERELEVATED SECTIONS**

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 08:59 S:\Contracts\Special Details\enward\stds\06' Stds to Special Details\840D25 Anchorage for Frames\0840d25.dgn AT P5222293



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.:

SUMMARY OF QUANTITIES

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C201773

ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION
0029000000-N	SP	Lump Sum		REINFORCED BRIDGE APPROACH FILL, STATION ***** (18+00.000)
0043000000-N	226	Lump Sum		GRADING
0050000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUBBING
0057000000-E	226	500	CY	UNDERCUT EXCAVATION
0080000000-E	SP	100	TON	CLASS IV SUBGRADE STABILIZATION
0134000000-E	240	60	CY	DRAINAGE DITCH EXCAVATION
0195000000-E	265	400	CY	SELECT GRANULAR MATERIAL
0196000000-E	270	400	SY	FABRIC FOR SOIL STABILIZATION
0318000000-E	300	10	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRS
0366000000-E	310	24	LF	15" RC PIPE CULVERTS, CLASS III
0708000000-E	310	24	LF	15" BIT COAT CS PIPE CULVERTS, TYPE B 0.064" THICK
0806000000-E	310	2	EA	15" BIT COAT CS PIPE ELBOWS, TYPE B 0.064" THICK
1121000000-E	520	35	TON	AGGREGATE BASE COURSE
1330000000-E	607	225	SY	INCIDENTAL MILLING
1489000000-E	610	220	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B
1525000000-E	610	490	TON	ASPHALT CONC SURFACE COURSE, TYPE SF9.5A
1560000000-E	620	45	TON	ASPHALT BINDER FOR PLANT MIX, GRADE PG 64-22
2022000000-E	815	45	CY	SUBDRAIN EXCAVATION
2033000000-E	815	35	CY	SUBDRAIN FINE AGGREGATE
2044000000-E	815	200	LF	6" PERFORATED SUBDRAIN PIPE
2055000000-E	815	6	EA	6" SUBDRAIN PIPE WYES, TEES, & ELBOWS
2066000000-N	815	1	EA	CONCRETE PAD FOR SUBDRAIN PIPE OUTLET
2077000000-E	815	6	LF	6" OUTLET PIPE (SUBDRAINS)

ItemNumber	Sec #	Quantity	Unit	Description
2286000000-N	840	2	EA	MASONRY DRAINAGE STRUCTURES
2367000000-N	840	2	EA	FRAME WITH TWO GRATES, STD 840.29
2556000000-E	846	84	LF	SHOULDER BERM GUTTER
3030000000-E	862	962.5	LF	STEEL BM GUARDRAIL
3150000000-N	862	5	EA	ADDITIONAL GUARDRAIL POSTS
3270000000-N	SP	4	EA	GUARDRAIL ANCHOR UNITS, TYPE 350
3317000000-N	862	4	EA	GUARDRAIL ANCHOR UNITS, TYPE B-77
3628000000-E	876	15	TON	RIP RAP, CLASS I
3649000000-E	876	75	TON	RIP RAP, CLASS B
3656000000-E	876	310	SY	FILTER FABRIC FOR DRAINAGE
4400000000-E	1110	406	SF	WORK ZONE SIGNS (STATIONARY)
4410000000-E	1110	94	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
4445000000-E	1145	64	LF	BARRICADES (TYPE III)
4810000000-E	1205	7,600	LF	PAINT PAVEMENT MARKING LINES (4")
4900000000-N	1251	12	EA	PERMANENT RAISED PAVEMENT MARKERS
6000000000-E	1605	355	LF	TEMPORARY SILT FENCE
6006000000-E	1610	75	TON	STONE FOR EROSION CONTROL, CLASS A
6009000000-E	1610	70	TON	STONE FOR EROSION CONTROL, CLASS B
6012000000-E	1610	75	TON	SEDIMENT CONTROL STONE
6015000000-E	1615	1	ACR	TEMPORARY MULCHING
6018000000-E	1620	50	LB	SEED FOR TEMPORARY SEEDING
6021000000-E	1620	0.25	TON	FERTILIZER FOR TEMPORARY SEEDING
6024000000-E	1622	25	LF	TEMPORARY SLOPE DRAINS
6029000000-E	SP	250	LF	SAFETY FENCE
6030000000-E	1630	330	CY	SILT EXCAVATION

ItemNumber	Sec #	Quantity	Unit	Description
6036000000-E	1631	800	SY	MATting FOR EROSION CONTROL
6037000000-E	SP	25	SY	COIR FIBER MAT
6042000000-E	1632	185	LF	1/4" HARDWARE CLOTH
6071030000-E	SP	105	LF	COIR FIBER BAFFLES
6071050000-E	SP	2	EA	*** SKIMMER (1-1/2")
6084000000-E	1660	1	ACR	SEEDING & MULCHING
6087000000-E	1660	0.5	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	0.75	TON	FERTILIZER TOPDRESSING
6114000000-N	SP	2.5	HR	SPECIALIZED HAND MOWING
6117000000-N	SP	12	EA	RESPONSE FOR EROSION CONTROL

10/26/98

8/29/2007
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K. X. Associates, Inc.

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

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

Table with columns for Station, Location, Structure No., Top Elevation, Invert Elevation, Slope Critical, Pipe Classifications (Class III R.C. Pipe, Bituminous Coated C.S. Pipe, Class III R.C. Pipe), Endwalls, Quantities for Drainage Structures, Frame, Grates and Hood Standard, Type of Grate, and Remarks.

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL.
TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
G = GATING IMPACT ATTENUATOR TYPE 350
NG = NON-GATING IMPACT ATTENUATOR TYPE 350

GUARDRAIL SUMMARY

Table with columns for Survey Line, Beg. Sta., End Sta., Location, Length (Straight, Shop Curved, Double Faced), Warrant Point (Approach End, Trailing End), "N" Dist. from E.O.L., Total Shoulder Width, Flare Length (Approach End, Trailing End), W (Approach End, Trailing End), Anchors (XI Mod, XI, GRAU 350, M-350, B-77, CAT-1, VI Mod, BIC, AT-1), Impact Attenuator Type 350 (EA, G, NG), Single Faced Guardrail, Remove Existing Guardrail, Remove and Stockpile Existing Guardrail, and Remarks.

SUMMARY OF EARTHWORK
IN CUBIC YARDS

Table with columns for Location, Unclassified Excavation, Undercut, EMBT + %, Borrow, and Waste. Includes Summary No. 1, Summary No. 2, Sub-total Summary Nos. 1 & 2, Project Totals, Grand Totals, and SAY.

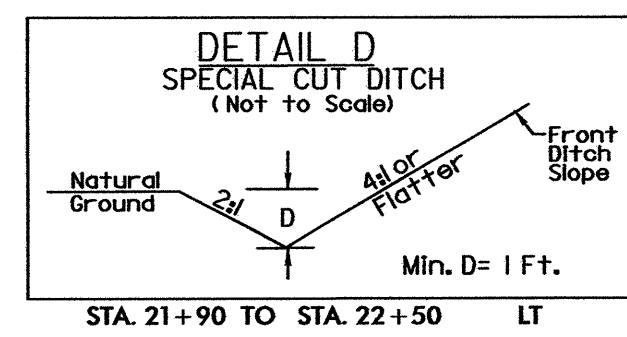
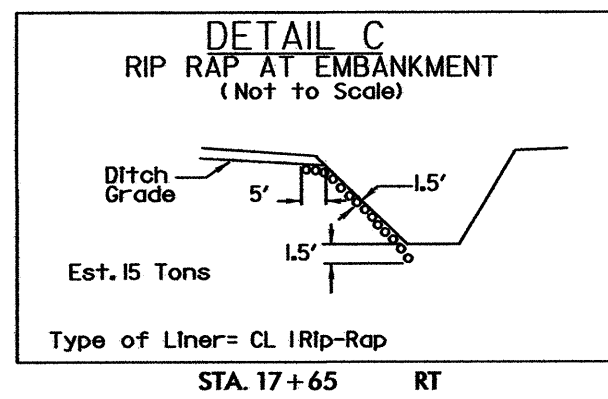
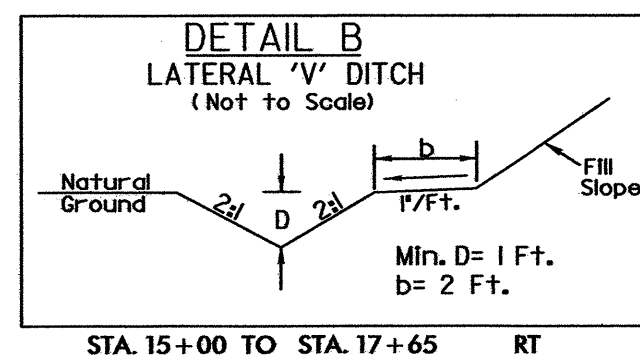
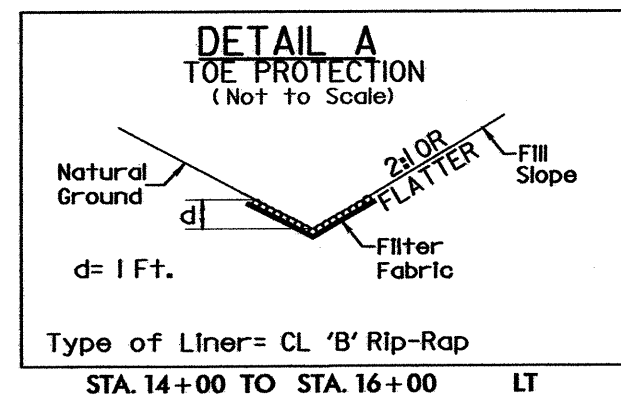
Note: Approximate quantities only. Unclassified Excavation, Borrow Excavation, Fine Grading, Clearing and Grubbing and Removal of Existing Pavement will be paid for at the contract lump sum price for "Grading."

SUMMARY OF PAVEMENT REMOVAL

Table with columns for Survey Line, Station to Station, Location, and Asphalt Removal (SY). Includes rows for 16+86 to EX. Bridge, EX. Bridge to 19+25, and a Total of 391 SY.

EST. UNDERCUT EXCAVATION = 500 CY
EST. SELECT GRANULAR MATERIAL = 400 CY

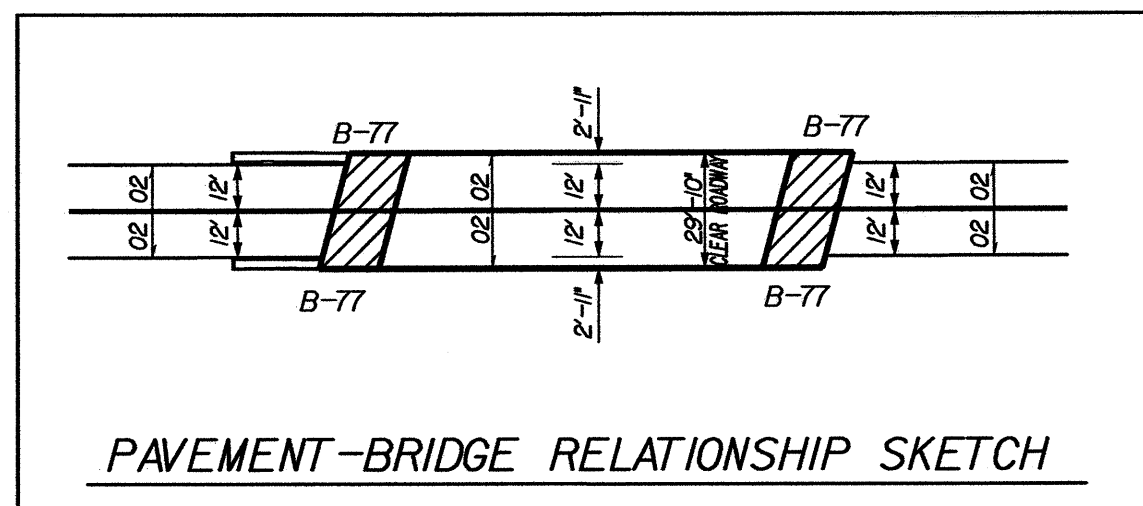
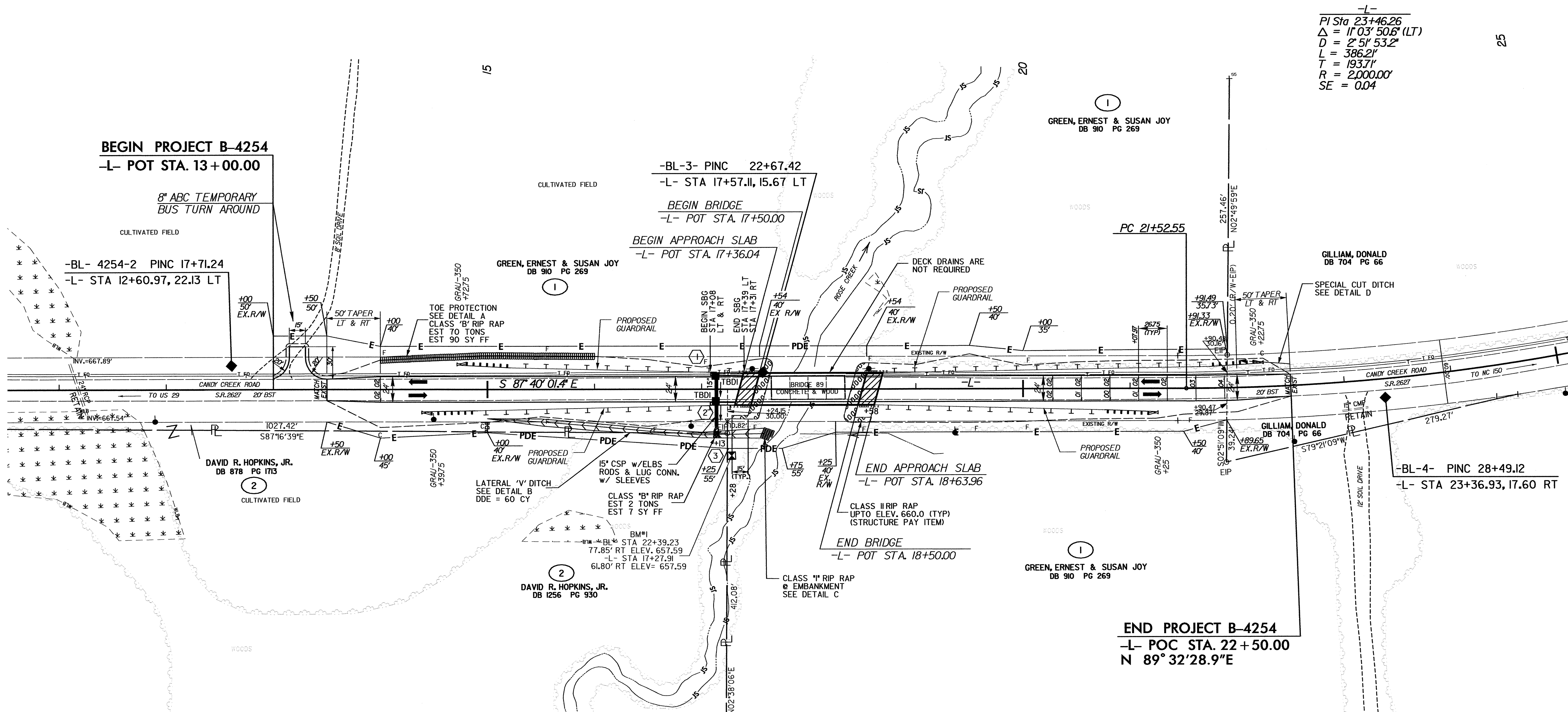
NOTE: Earthwork quantities are calculated by the Roadway Design Unit. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.



NAD 83/95

-L-
 PI Sta 23+46.26
 $\Delta = 11' 03" 50.6" (LT)$
 $D = 2' 51" 53.2"$
 $L = 386.21'$
 $T = 193.71'$
 $R = 2,000.00'$
 $SE = 0.04$

REVISIONS



NOTE:
 DESIGN EXCEPTION FOR BRIDGE WIDTH

REFERENCES:
 FOR -L- PROFILE SEE SHEET NO.5
 SEE S-1 THRU S-18 FOR STRUCTURE PLANS

8/17/99

11/9/2007
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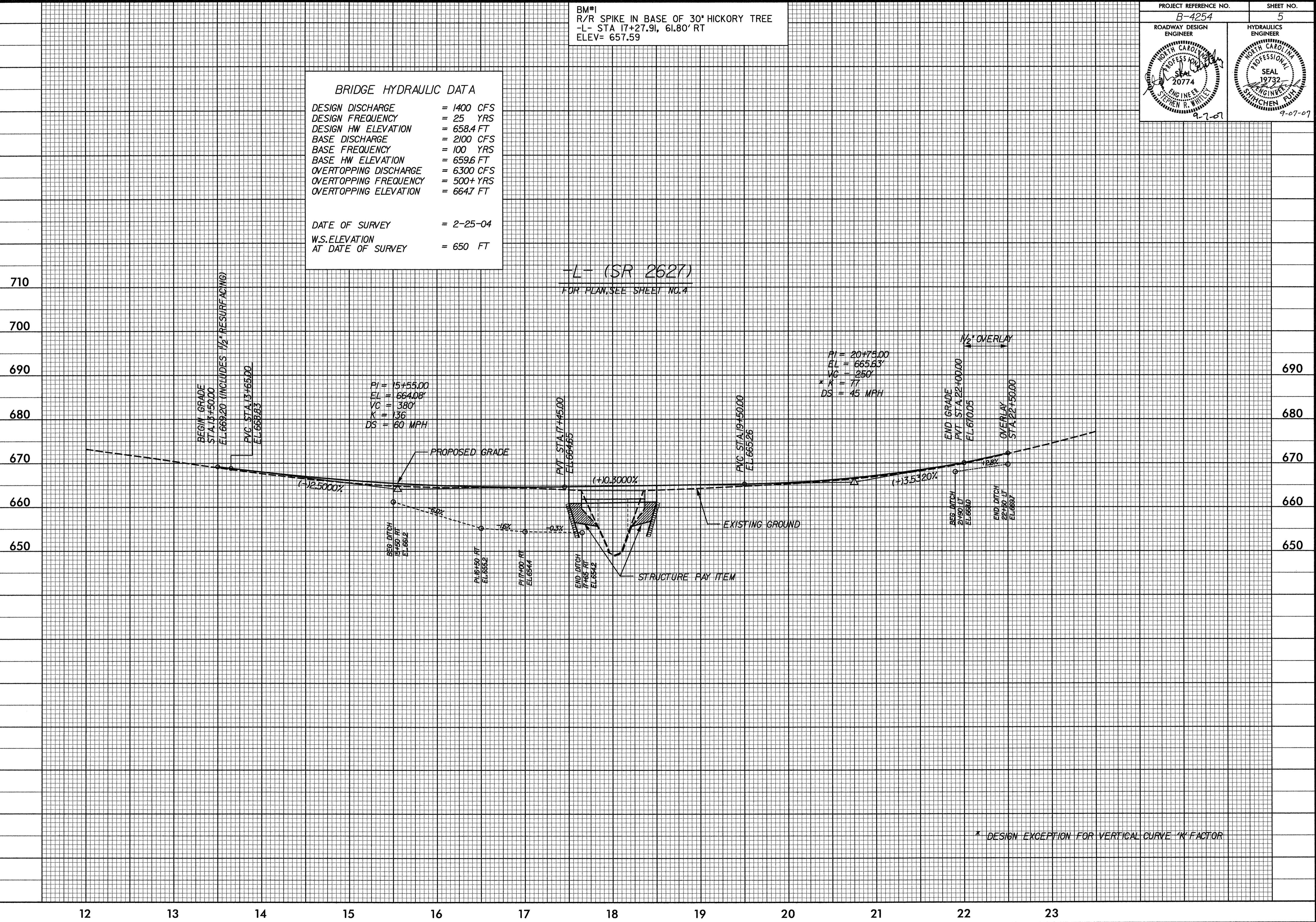
BM#1
R/R SPIKE IN BASE OF 30' HICKORY TREE
-L- STA 17+27.91, 61.80' RT
ELEV= 657.59

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE = 1400 CFS
DESIGN FREQUENCY = 25 YRS
DESIGN HW ELEVATION = 658.4 FT
BASE DISCHARGE = 2100 CFS
BASE FREQUENCY = 100 YRS
BASE HW ELEVATION = 659.6 FT
OVERTOPPING DISCHARGE = 6300 CFS
OVERTOPPING FREQUENCY = 500+ YRS
OVERTOPPING ELEVATION = 664.7 FT

DATE OF SURVEY = 2-25-04
W.S. ELEVATION AT DATE OF SURVEY = 650 FT

-L- (SR 2627)
FOR PLAN, SEE SHEET NO. 4



5/14/99
9/6/2007
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