

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

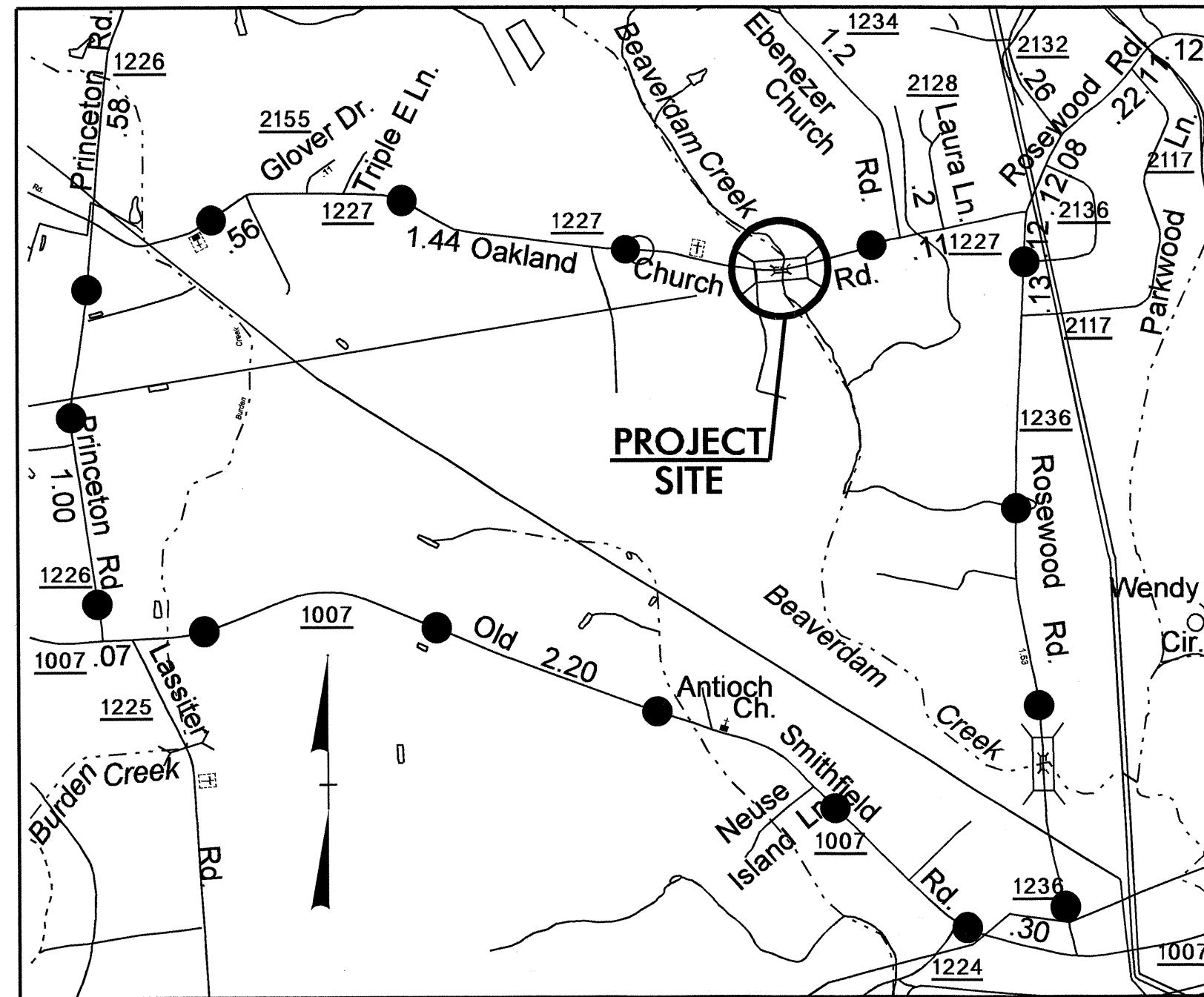
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4841	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38611.1.1	BRZ-1227(4)	P.E.	
38611.2.1	BRZ-1227(4)	RW, UTIL.	
38611.3.1	BRZ-1227(4)	CONST.	

WAYNE COUNTY

LOCATION: REPLACE BRIDGE NO. 215 OVER BEAVERDAM CREEK ON SR 1227

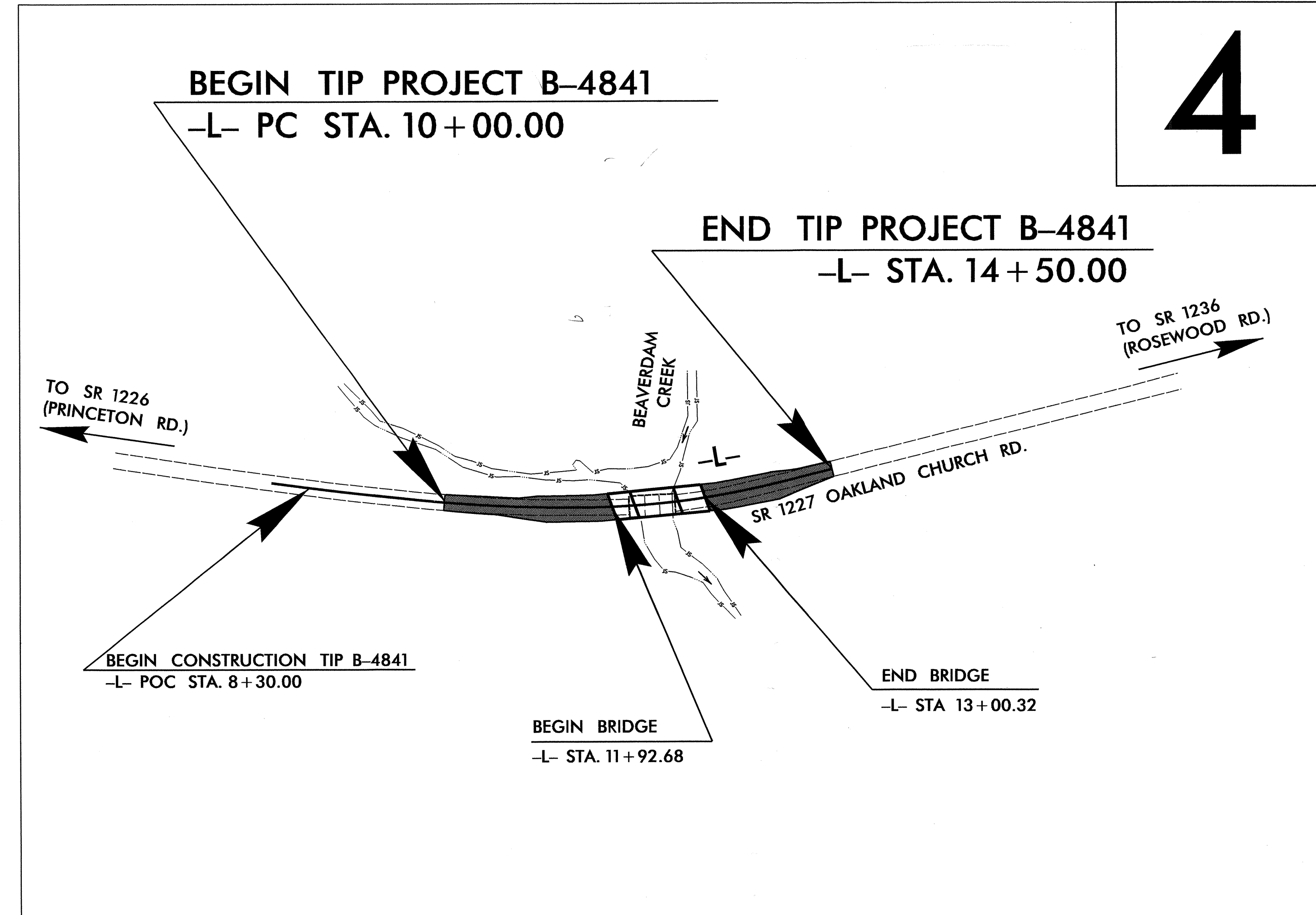
TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND STRUCTURE

TIP PROJECT: B-4841



VICINITY MAP

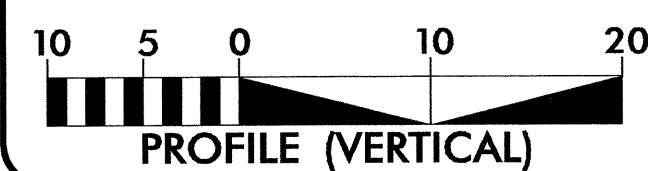
● — ● — ● — OFF-SITE DETOUR



NAD 83/95

CONTRACT: C203024

GRAPHIC SCALES



DESIGN DATA

ADT 2012 = 625
 ADT 2032 = 1,125
 DHV = 65 %
 D = 13 %
 T = 9 % *
 V = 50 MPH
 FUNC CLASS = RURAL LOCAL
 * (TTST 3% + DUAL 6%)
 SUBREGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4841 = 0.065 MI
 LENGTH STRUCTURES TIP PROJECT B-4841 = 0.020 MI
 TOTAL LENGTH TIP PROJECT B-4841 = 0.085 MI

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

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
 NOVEMBER 22, 2011

LETTING DATE:
 MARCH 19, 2013

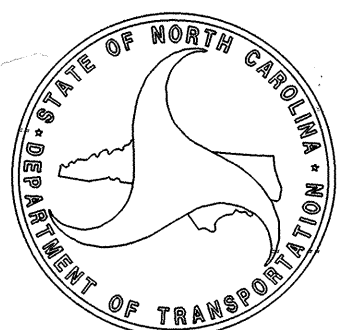
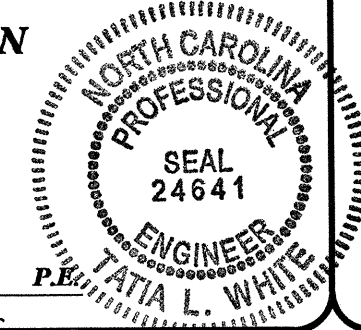
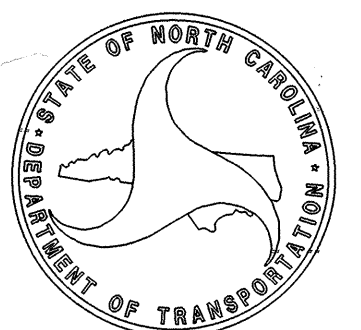
BRENDA MOORE, PE
 PROJECT ENGINEER

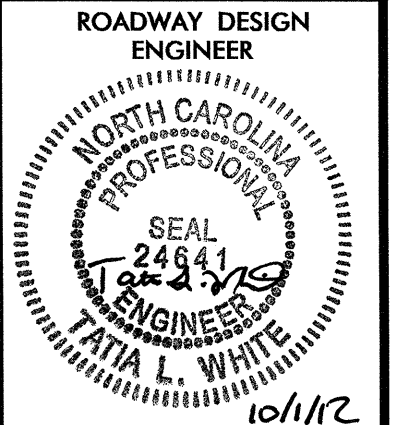
TATIA L. WHITE, PE
 PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER
 Paul A. White
 10/11/12

SIGNATURE:
 ROADWAY DESIGN ENGINEER

Tatia L. White
 10/11/12





INDEX OF SHEETS

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3	SUMMARY OF QUANTITIES
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5	PROFILE SHEET
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2012 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2012 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.02	Method of Clearing - Method II
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
DIVISION 4 - MAJOR STRUCTURES	
422.11	Reinforced Bridge Approach Fills - Sub Regional Tier
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 8 - INCIDENTALS	
806.01	Concrete Right-of-Way Marker
806.02	Granite Right-of-Way Marker
815.02	Subsurface Drain
846.01	Concrete Curb, Gutter and Curb & Gutter
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units

GENERAL NOTES:

2012 SPECIFICATIONS
EFFECTIVE: 01-17-12
REVISED: 07/30/12

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.

SUBSURFACE DRAINS:

SUBSURFACE DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.02 AT LOCATIONS DIRECTED BY THE ENGINEER.

GUARDRAIL:

THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.

TEMPORARY SHORING:

SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC WILL BE PAID FOR AS "EXTRA WORK" IN ACCORDANCE WITH SECTION 104-7.

SUBSURFACE PLANS:

NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

END BENTS:

THE ENGINEER SHALL CHECK THE STRUCTURE END BENT PLANS, DETAILS, AND CROSS-SECTION PRIOR TO SETTING OF THE SLOPE STAKES FOR THE EMBANKMENT OR EXCAVATION APPROACHING A BRIDGE.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE Fork Township Sanitary District, Tri-County EMC, AT&T
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 CONTRACT.

5/14/99

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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:

Table listing boundary symbols: 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, Known Soil Contamination: Area or Site, Potential Soil Contamination: Area or Site.

BUILDINGS AND OTHER CULTURE:

Table listing building and culture symbols: Gas Pump Vent or U/G Tank Cap, Sign, Well, Small Mine, Foundation, Area Outline, Cemetery, Building, School, Church, Dam.

HYDROLOGY:

Table listing hydrology symbols: 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:

Table listing railroad symbols: Standard Gauge, RR Signal Milepost, Switch, RR Abandoned, RR Dismantled.

RIGHT OF WAY:

Table listing right of way symbols: 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 CA 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 Drainage / Utility Easement, Proposed Permanent Utility Easement, Proposed Temporary Utility Easement, Proposed Aerial Utility Easement, Proposed Permanent Easement with Iron Pin and Cap Marker.

ROADS AND RELATED FEATURES:

Table listing road and related features symbols: Existing Edge of Pavement, Existing Curb, Proposed Slope Stakes Cut, Proposed Slope Stakes Fill, Proposed Curb Ramp, Existing Metal Guardrail, Proposed Guardrail, Existing Cable Guiderail, Proposed Cable Guiderail, Equality Symbol, Pavement Removal, Single Tree, Single Shrub, Hedge, Woods Line.

VEGETATION:

Table listing orchard and vineyard symbols: Orchard, Vineyard.

EXISTING STRUCTURES:

Table listing existing structures symbols: 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:

Table listing utility symbols: 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.*).

TELEPHONE:

Table listing telephone symbols: 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:

Table listing water symbols: 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:

Table listing TV symbols: 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:

Table listing gas symbols: Gas Valve, Gas Meter, Recorded U/G Gas Line, Designated U/G Gas Line (S.U.E.*), Above Ground Gas Line.

SANITARY SEWER:

Table listing sanitary sewer symbols: 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:

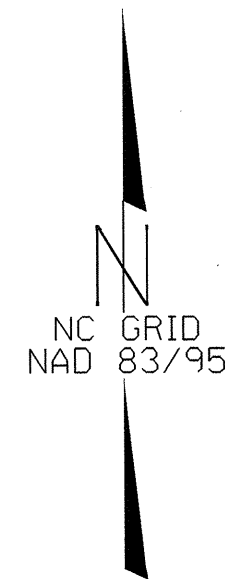
Table listing miscellaneous symbols: Utility Pole, Utility Pole with Base, Utility Located Object, Utility Traffic Signal Box, Utility Unknown U/G Line, U/G Tank; Water, Gas, Oil, Underground Storage Tank, Approx. Loc., A/G Tank; Water, Gas, Oil, Geoenvironmental Boring, U/G Test Hole (S.U.E.*), Abandoned According to Utility Records, End of Information.

SURVEY CONTROL SHEET B-4841

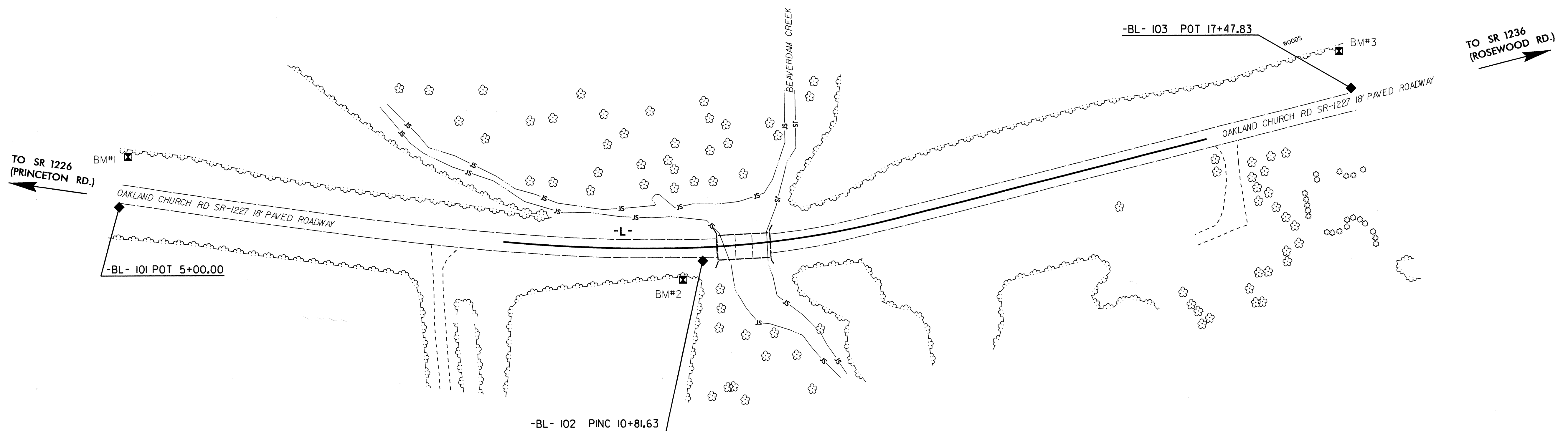
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*****
1000    ELEVATION - 107.32
N 604621    E 2263606
L STATION 10+00.00
N 77°04'21.93" W DIST 381.94
BM *1 RR SPIKE IN BASE OF 10" PINE
*****
1066    ELEVATION - 90.97
N 604499    E 2264157
L STATION 11+78.00 31 RIGHT
BM*2 RR SPIKE IN BASE OF 18" ELM
*****
1136    ELEVATION - 99.97
N 604723    E 2264809
L STATION 10+00.00
N 77°16'24.22" E DIST 851.05
BM*3 RR SPIKE IN BASE OF 18" SWEETGUM
*****

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BL	POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
101		BL-101	604571.8140	2263597.3930	103.87	OUTSIDE PROJECT LIMITS	
102		BL-102	604517.3130	2264176.4600	90.95	11+97.36	13.20 RT
103		BL-103	604686.8250	2264820.7380	97.42	OUTSIDE PROJECT LIMITS	



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "GPS B4841-2" WITH NAD 83/95 STATE PLANE GRID COORDINATES OF
 NORTHING: 604792.327(±) EASTING: 2262629.192(±)
 ELEVATION: 117.09(±)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9998766

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "GPS B4841-2" TO -L- STATION 10+00.00 IS
 S 79°14'37" E1373.71'

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.NCDOT.ORG/DOH/RECONSTRUCT/HIGHWAYLOCATIONPROJECT/](http://www.ncdot.org/DOH/RECONSTRUCT/HIGHWAYLOCATIONPROJECT/)
 THE FILES TO BE FOUND ARE AS FOLLOWS:
 B4841_LS_CONTROL_100507.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)
 SEE GPS CALIBRATION SHEET FOR HORIZONTAL AND VERTICAL COORDINATE VALUES.

NOTE: DRAWING NOT TO SCALE

6/2/99

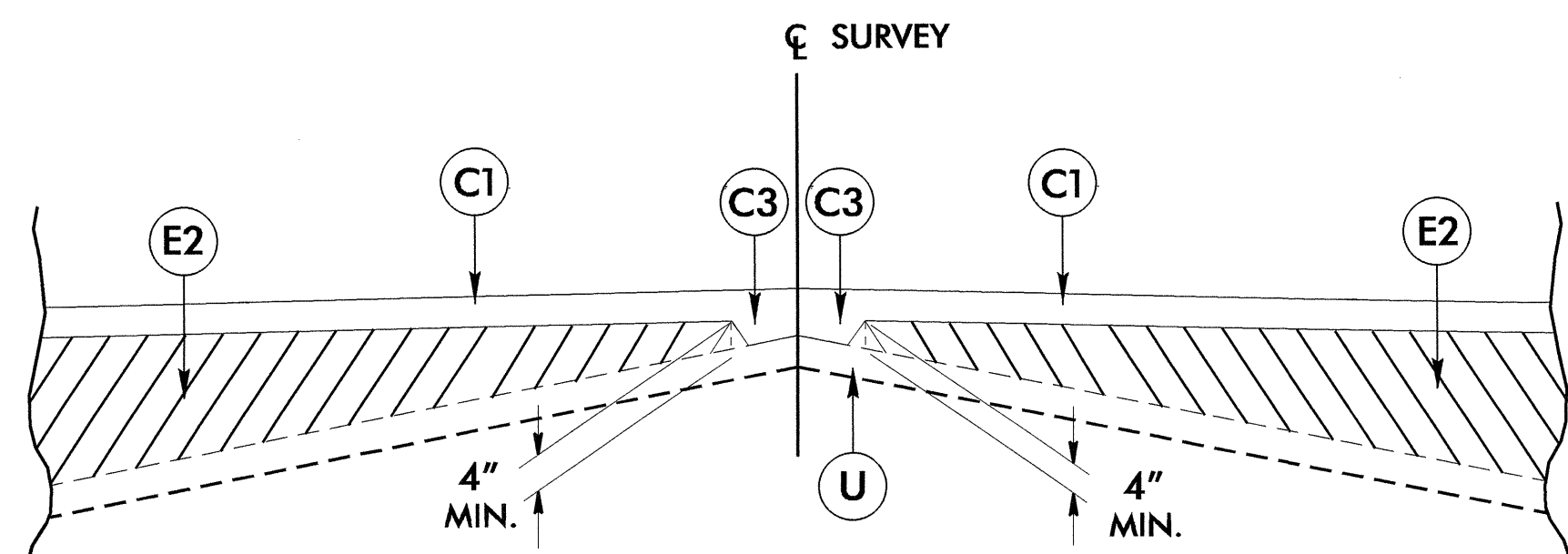
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6/2/99

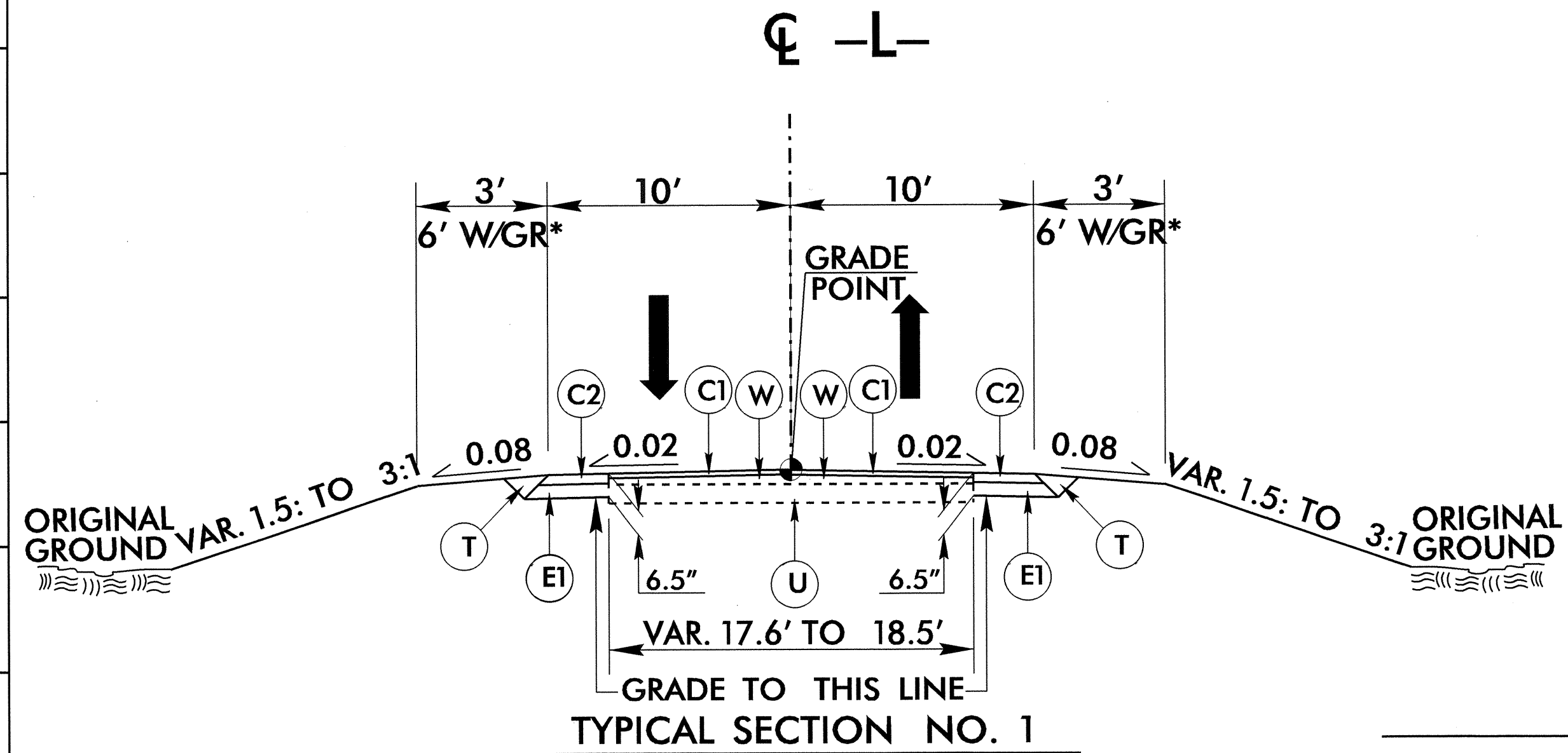
FINAL PAVEMENT SCHEDULE

C1	PROP. APPROX. 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C2	PROP. APPROX. 2 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 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 1 1/2" IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP. 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 4" IN DEPTH OR GREATER THAN 5 1/2" IN DEPTH.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	WEDGING MATERIAL.

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



Detail Showing Method of Wedging (W)

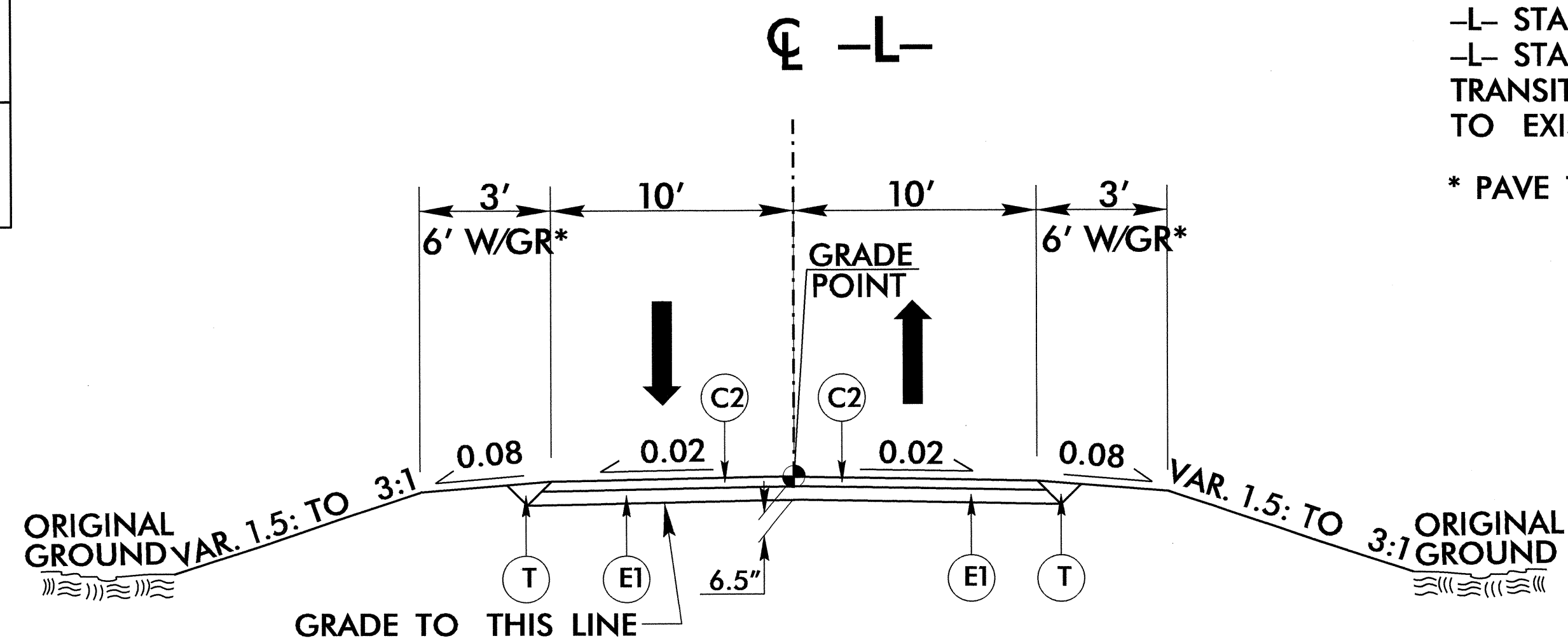


TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1 AT THE FOLLOWING LOCATIONS:

- TRANSITION FROM EXISTING AT -L- STA. 10+00.00 TO TYPICAL SECTION NO. 1 AT -L- STA. 10+50.00
- L- STA. 10+50.00 TO -L- STA. 11+60.00
- L- STA. 13+25.00 TO 14+00.00
- TRANSITION FROM TYPICAL NO. 1 AT -L- STA. 14+00.00 TO EXISTING AT -L- STA. 14+50.00

* PAVE TO THE FACE OF GUARDRAIL

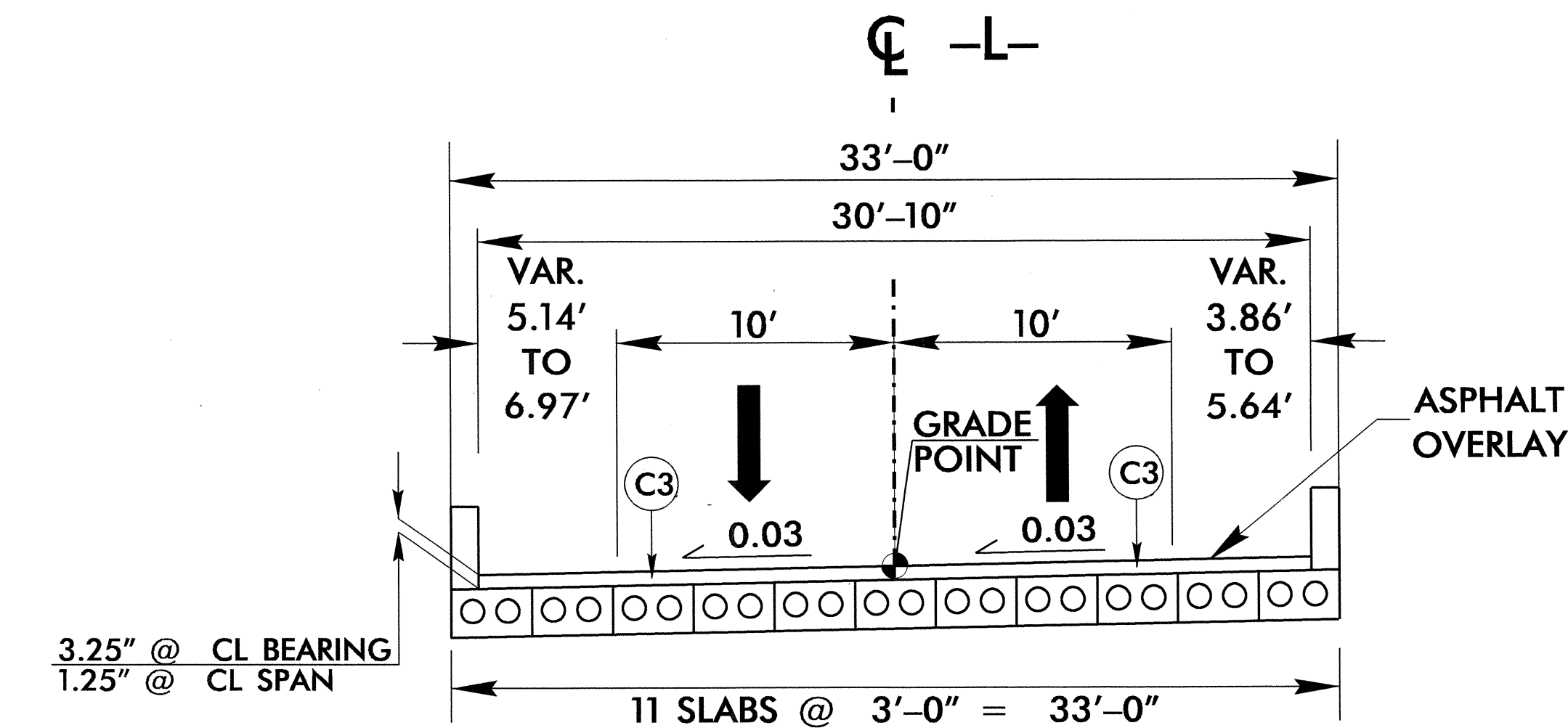


TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2 AT THE FOLLOWING LOCATIONS:

- L- STA. 11+60.00 TO -L- STA. 11+92.68 (BEGIN BRIDGE)
- L- STA. 13+00.32 (END BRIDGE) TO -L- STA. 13+25.00

* PAVE TO THE FACE OF GUARDRAIL



TYPICAL SECTION NO. 3

3.25" @ CL BEARING
1.25" @ CL SPAN

PROJECT REFERENCE NO. B-4841	SHEET NO. 2
ROADWAY DESIGN ENGINEER ATIA L. WHITE 10/1/12	PAVEMENT DESIGN ENGINEER CLARK S. MORRISON 10/1/12

01-OCT-2012 14:30 R:\ROADWAY\B4841\FD\typ.dgn

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C203024

ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION
0001000000-E	200	Lump Sum		CLEARING & GRUBBING .. ACRE(S)
0008000000-E	200	1	ACR	SUPPLEMENTARY CLEARING & GRUBBING
0022000000-E	225	30	CY	UNCLASSIFIED EXCAVATION
0030000000-N	SP	Lump Sum		BRIDGE APPROACH FILL - SUB REGIONAL TIER, STATION ***** (12+46.50)
0036000000-E	225	700	CY	UNDERCUT EXCAVATION
0106000000-E	230	200	CY	BORROW EXCAVATION
0156000000-E	250	230	SY	REMOVAL OF EXISTING ASPHALT PAVEMENT
0195000000-E	265	700	CY	SELECT GRANULAR MATERIAL
0196000000-E	270	700	SY	GEOTEXTILE FOR SOIL STABILIZATION
0996000000-N	350	1	EA	PIPE CLEAN-OUT
1011000000-N	500	Lump Sum		FINE GRADING
1220000000-E	545	5	TON	INCIDENTAL STONE BASE
1330000000-E	607	200	SY	INCIDENTAL MILLING
1489000000-E	610	140	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B
1525000000-E	610	230	TON	ASPHALT CONC SURFACE COURSE, TYPE SF9.5A
1575000000-E	620	25	TON	ASPHALT BINDER FOR PLANT MIX
2000000000-N	806	12	EA	RIGHT OF WAY MARKERS
2022000000-E	815	151.6	CY	SUBDRAIN EXCAVATION
2026000000-E	815	677	SY	GEOTEXTILE FOR SUBSURFACE DRAINS
2036000000-E	815	113.7	CY	SUBDRAIN COARSE AGGREGATE
2044000000-E	815	677	LF	6" PERFORATED SUBDRAIN PIPE
2070000000-N	815	2	EA	SUBDRAIN PIPE OUTLET
2077000000-E	815	12	LF	6" OUTLET PIPE
2556000000-E	846	35	LF	SHOULDER BERM GUTTER
3030000000-E	862	75	LF	STEEL BM GUARDRAIL

SUMMARY OF QUANTITIES - B-4841

ItemNumber	Sec #	Quantity	Unit	Description
3150000000-N	862	5	EA	ADDITIONAL GUARDRAIL POSTS
3215000000-N	862	4	EA	GUARDRAIL ANCHOR UNITS, TYPE III
3270000000-N	SP	4	EA	GUARDRAIL ANCHOR UNITS, TYPE 350
3656000000-E	876	490	SY	GEOTEXTILE FOR DRAINAGE
4026000000-E	901	24	SF	DEPARTMENT FURNISHED, TYPE *** SIGN (E)
4072000000-E	903	52	LF	SUPPORTS, 3-LB STEEL U-CHANNEL
4102000000-N	904	8	EA	SIGN ERECTION, TYPE E
4155000000-N	907	4	EA	DISPOSAL OF SIGN SYSTEM, U-CHANNEL
4158000000-N	907	2	EA	DISPOSAL OF SIGN SYSTEM, WOOD
4400000000-E	1110	407	SF	WORK ZONE SIGNS (STATIONARY)
4410000000-E	1110	119	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
4445000000-E	1145	96	LF	BARRICADES (TYPE III)
4810000000-E	1205	3,600	LF	PAINT PAVEMENT MARKING LINES (4")
6000000000-E	1605	1,150	LF	TEMPORARY SILT FENCE
6006000000-E	1610	160	TON	STONE FOR EROSION CONTROL, CLASS A
6009000000-E	1610	5	TON	STONE FOR EROSION CONTROL, CLASS B
6012000000-E	1610	70	TON	SEDIMENT CONTROL STONE
6015000000-E	1615	0.5	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	100	LF	TEMPORARY SLOPE DRAINS
6029000000-E	SP	900	LF	SAFETY FENCE
6030000000-E	1630	50	CY	SILT EXCAVATION
6036000000-E	1631	750	SY	MATting FOR EROSION CONTROL
6037000000-E	SP	300	SY	COIR FIBER MAT

ItemNumber	Sec #	Quantity	Unit	Description
6042000000-E	1632	150	LF	1/4" HARDWARE CLOTH
6048000000-E	SP	140	SY	FLOATING TURBIDITY CURTAIN
6070000000-N	1639	2	EA	SPECIAL STILLING BASINS
6071012000-E	SP	50	LF	COIR FIBER WATTLE
6084000000-E	1660	0.5	ACR	SEEDING & MULCHING
6087000000-E	1660	0.25	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	0.25	TON	FERTILIZER TOPDRESSING
6114500000-N	1667	10	MHR	SPECIALIZED HAND MOWING
6117000000-N	SP	13	EA	RESPONSE FOR EROSION CONTROL
6123000000-E	1670	0.1	ACR	REFORESTATION

COMPUTED BY: JBW 07/16/12
 CHECKED BY: PJS 08/29/12

PROJECT NO. B-4841
 SHEET NO. 3-A

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK (IN CUBIC YARDS)

Station	Station	Uncl. Excav.	Embank. +%	Borrow	Waste
10+00.00	11+92.68	3	83	80	
SUBTOTALS:		3	83	80	
13+00.32	14+50.00	16	89	73	
SUBTOTALS:		16	89	73	
PROJECT TOTALS:		19	172	153	
PROJECT TOTALS:		19	172	153	
EST. 5% TO RELPAC TOP SOIL ON BORROW PIT				8	
GRAND TOTALS:		19	172	161	
SAY:		30		200	
ESTIMATED UNDERCUT = 700 CY (PER GEOTECH REC'S DATED 11/04/10)					

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.

SUMMARY OF EXISTING ASPHALT PAVEMENT REMOVAL

LINE	Station	Station	LOC LT/RT/CL	YD ²
L	11+60	12+12	CL	104.00
L	12+65	13+25	CL	119.96
TOTAL:				223.96
SAY:				230

SUMMARY OF SUBSURFACE DRAINS

LINE	Station	Station	LOC LT/RT/CL	LF
L	12+73.00	14+50.00	LT	177
				500
TOTAL:				677.00
SAY:				677

SUMMARY OF SHOULDER BERM GUTTER

LINE	Station	Station	LOC	LF
L	11+68.69	11+76.49	LT	7.80
L	11+79.23	11+86.85	RT	7.62
L	13+08.16	13+16.02	LT	7.86
L	13+14.26	13+21.85	RT	7.59
TOTAL:				30.87
SAY:				35

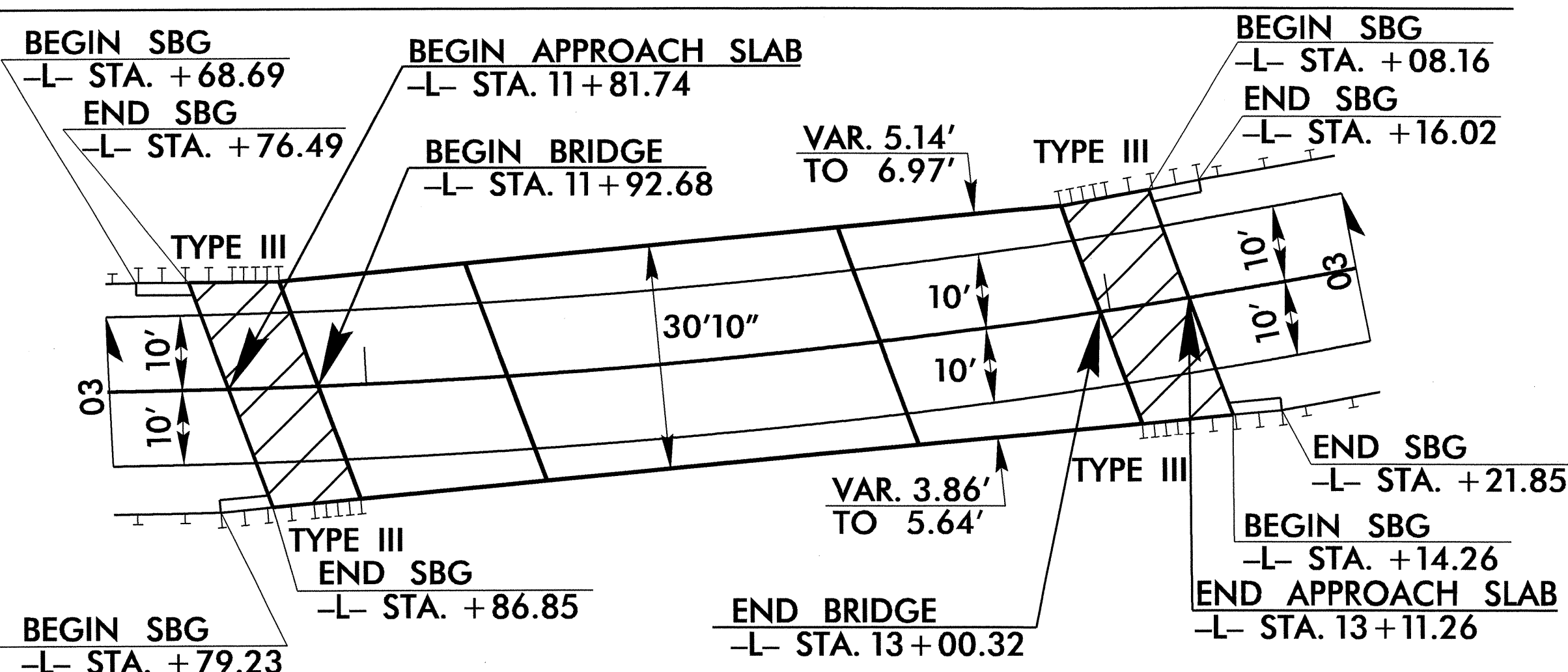
"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL
 TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
 FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
 W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
 G = GATING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

GUARDRAIL SUMMARY

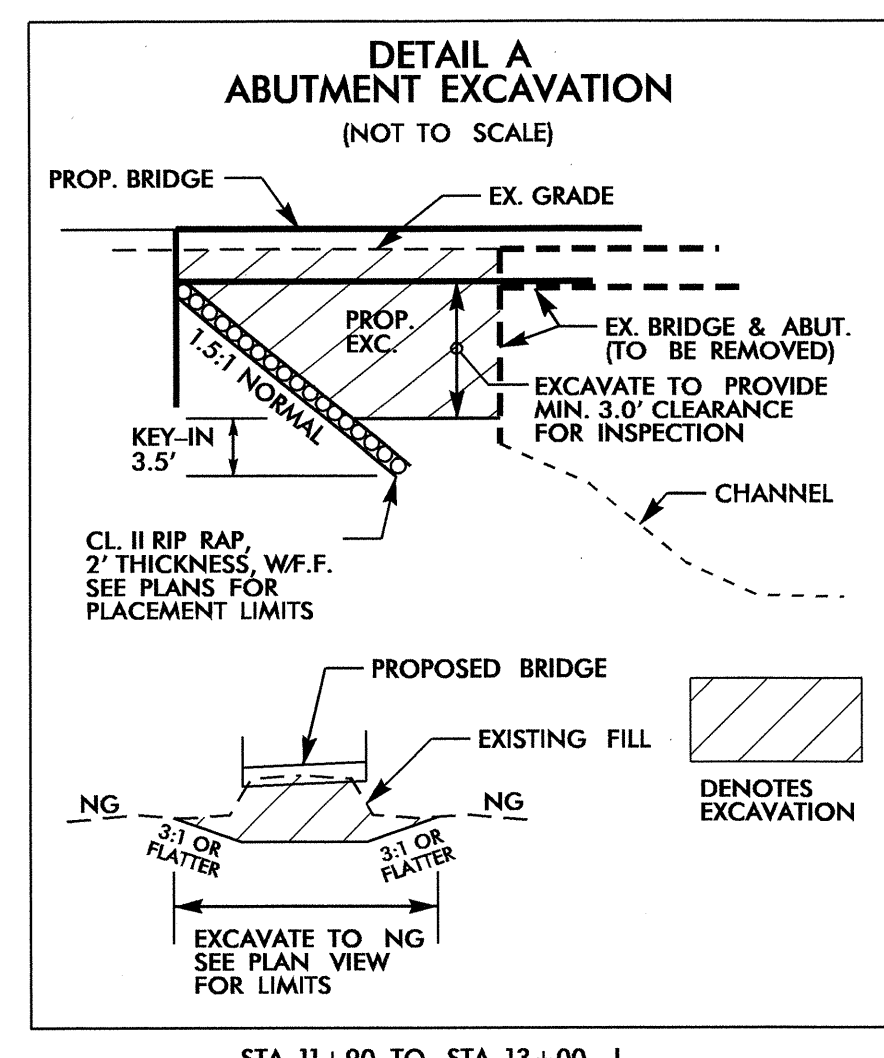
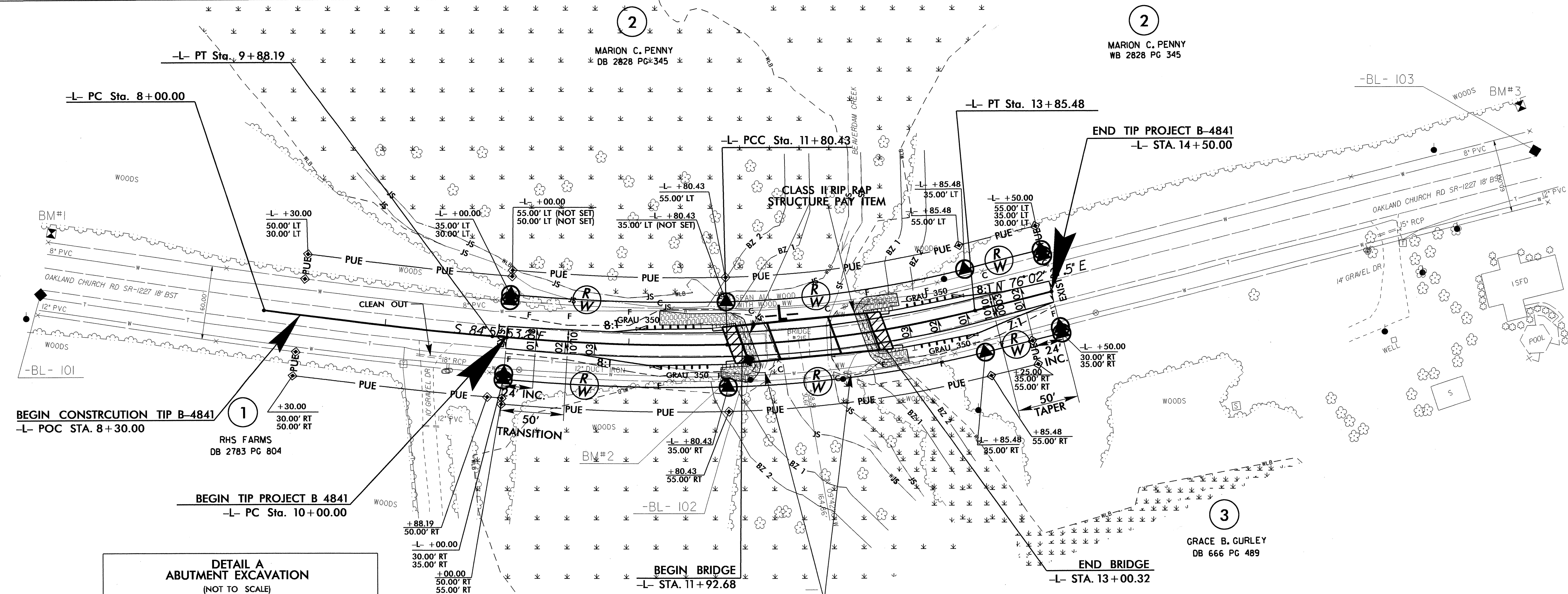
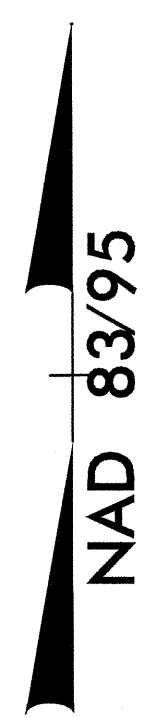
LINE	BEG. STA.	END STA.	LOC.	LENGTH			WARRANT POINT		"N" DIST FROM E.O.L.	TOTAL SHLDR WIDTH	FLAIR LENGTH		W		ANCHORS						IMP. ATTEN. TYPE 350			REMOVE EXISTING GRDRAIL	REMARKS		
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPR. END	TRAIL. END			APPR. END	TRAIL. END	APPR. END	TRAIL. END	TYPE III	XI	GRAU 350 (TL-3)	M-350	XII	CAT-1	VI MOD	EA	G			NG	
L	11+06.34	11+87.59	LT	81.25					3.6	6.6																	
L	11+16.54	11+97.79	RT	81.25				11+97.79	6.3	9.3																	
L	12+97.12	13+78.37	LT	81.25				12+97.12	4.4	7.4	50		1														
L	13+03.32	13+84.57	RT	81.25				13+03.32	7	10		50		1													
SUBTOTAL:				325.00																							
ANCHOR DEDUCTIONS:																											
				GRAU-350 (TL-3)	4 @ 50	-200.00																					
				TYPE III	4 @ 18.75	-75.00																					
TOTAL:				50.00																							
SAY:				75																							

(5 ADDITIONAL GUARDRAIL POSTS)

SKETCH OF PAVEMENT/BRIDGE RELATIONSHIP



PROJECT REFERENCE NO. B-4841	SHEET NO. 4
RAW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



PI Sta 8+94.11 $\Delta = 2' 41" 44.4" (LT)$ $D = 1' 25" 56.6"$ $L = 188.19'$ $T = 94.11'$ $R = 4,000.00'$ $SE = EXIST.$ $BK BEARING = S 82' 10" 08.80" E$	PI Sta 10+90.31 $\Delta = 6' 27" 40.0" (LT)$ $D = 3' 34" 51.6"$ $L = 180.43'$ $T = 90.31'$ $R = 1,600.00'$ $SE = 03$ $DS = 40mph$	PI Sta 12+83.37 $\Delta = 12' 37" 59.3" (LT)$ $D = 6' 09" 39.0"$ $L = 205.06'$ $T = 102.95'$ $R = 930.00'$ $SE = 03$ $DS = 30mph$
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NOTE:
 1) SEE SHEET 5 FOR -L- PROFILE
 2) SEE SHEETS S-1 THROUGH S-25 FOR STRUCTURE PLANS

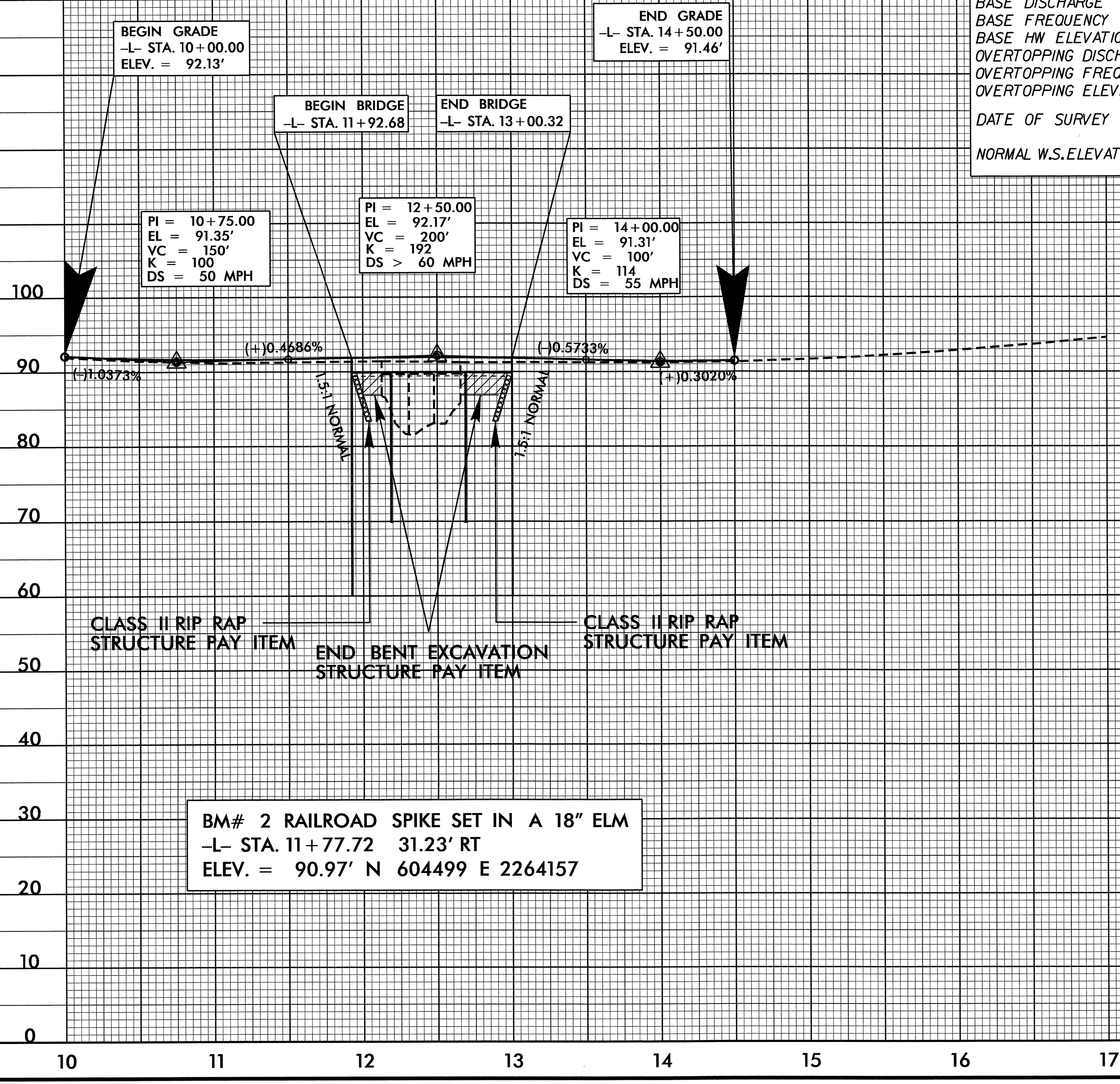
REVISIONS

8/17/99
09-OCT-2018 15:41
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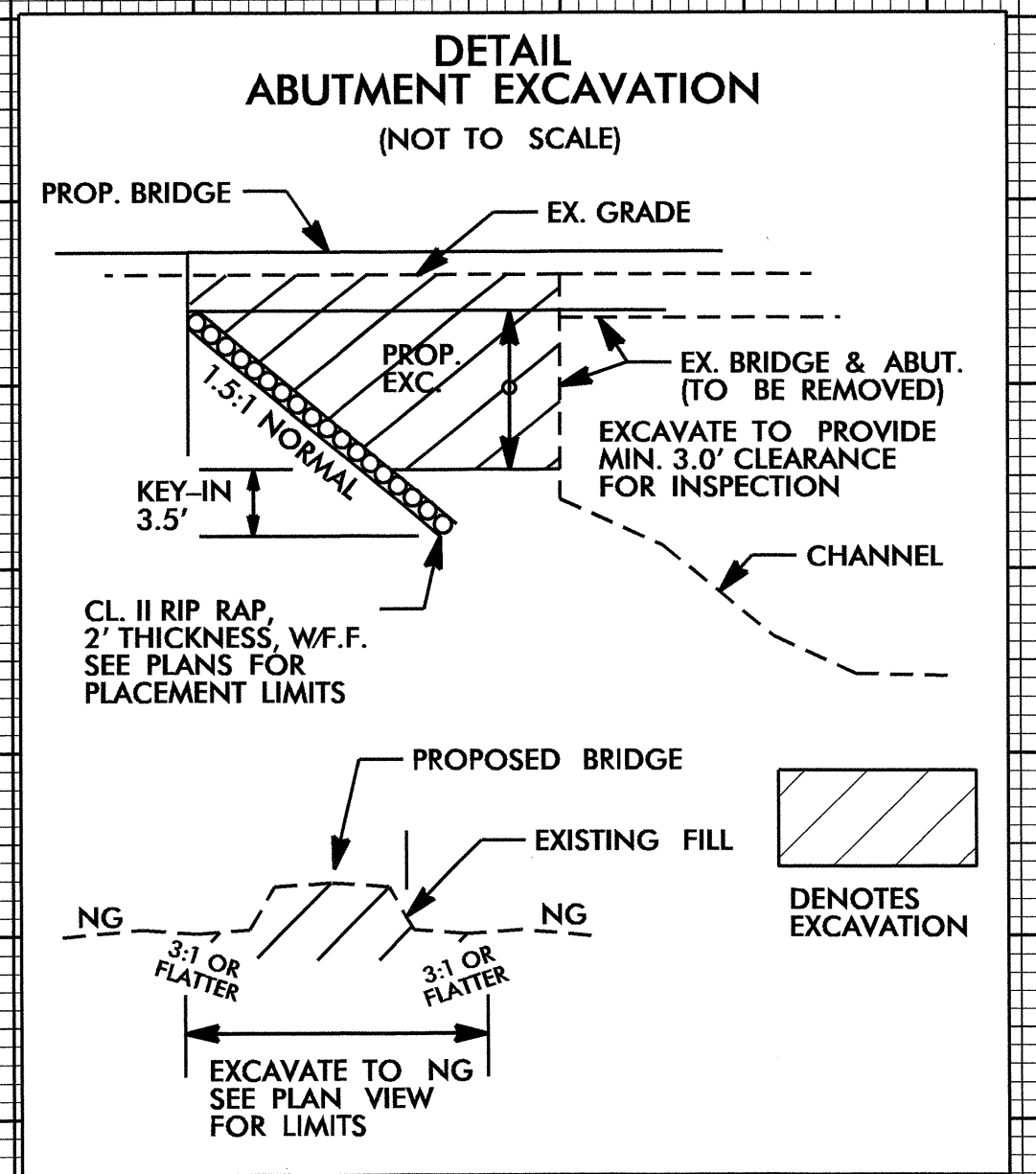
-L-

PROPOSED 21" CORED SLAB
1 @ 25', 1 @ 50', 1 @ 30'
CL -L- STA. 12+46.50
SKEW = 75 DEG.

BRIDGE HYDRAULIC DATA		
DESIGN DISCHARGE	= 1600	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 91J	FT
BASE DISCHARGE	= 2400	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 92.3	FT
OVERTOPPING DISCHARGE	= 2000	CFS
OVERTOPPING FREQUENCY	= 50	YRS
OVERTOPPING ELEVATION	= 91.4	FT
DATE OF SURVEY	= 5/11/10	
NORMAL W.S. ELEVATION	= 86.6	FT



BM# 2 RAILROAD SPIKE SET IN A 18" ELM
-L- STA. 11+77.72 31.23' RT
ELEV. = 90.97' N 604499 E 2264157



SEE SHEET 4 FOR -L- PLAN

05-SEP-2012 10:18 R:\Roadway\Proj\B4841-Rdy-pl.dgn