

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-2948	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38232.1.1	BRSTP-1104(12)	P.E.	
38232.2.1	BRSTP-1104(12)	RW & UTIL	
38232.3.1	BRSTP-1104(12)	CONSTR.	

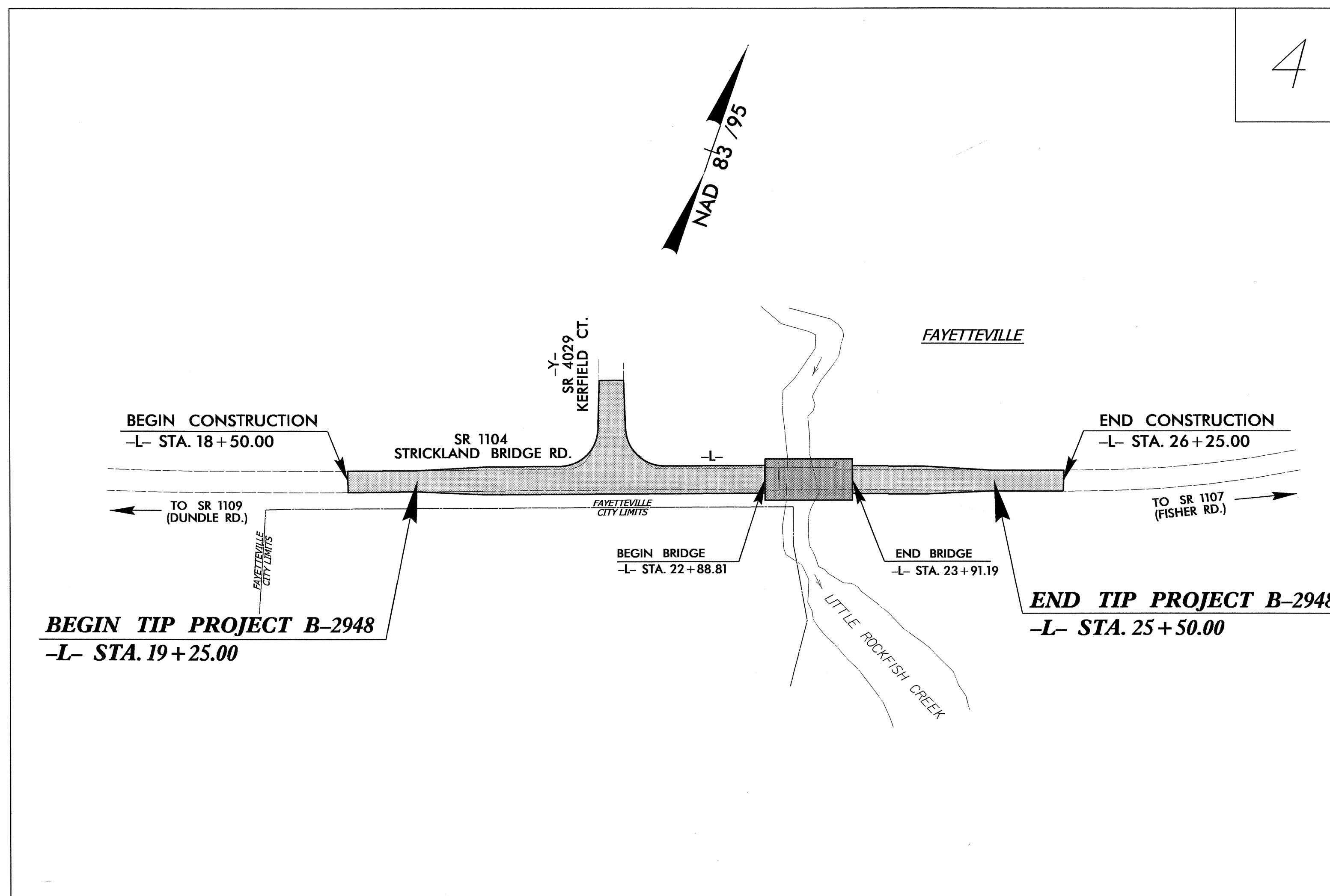
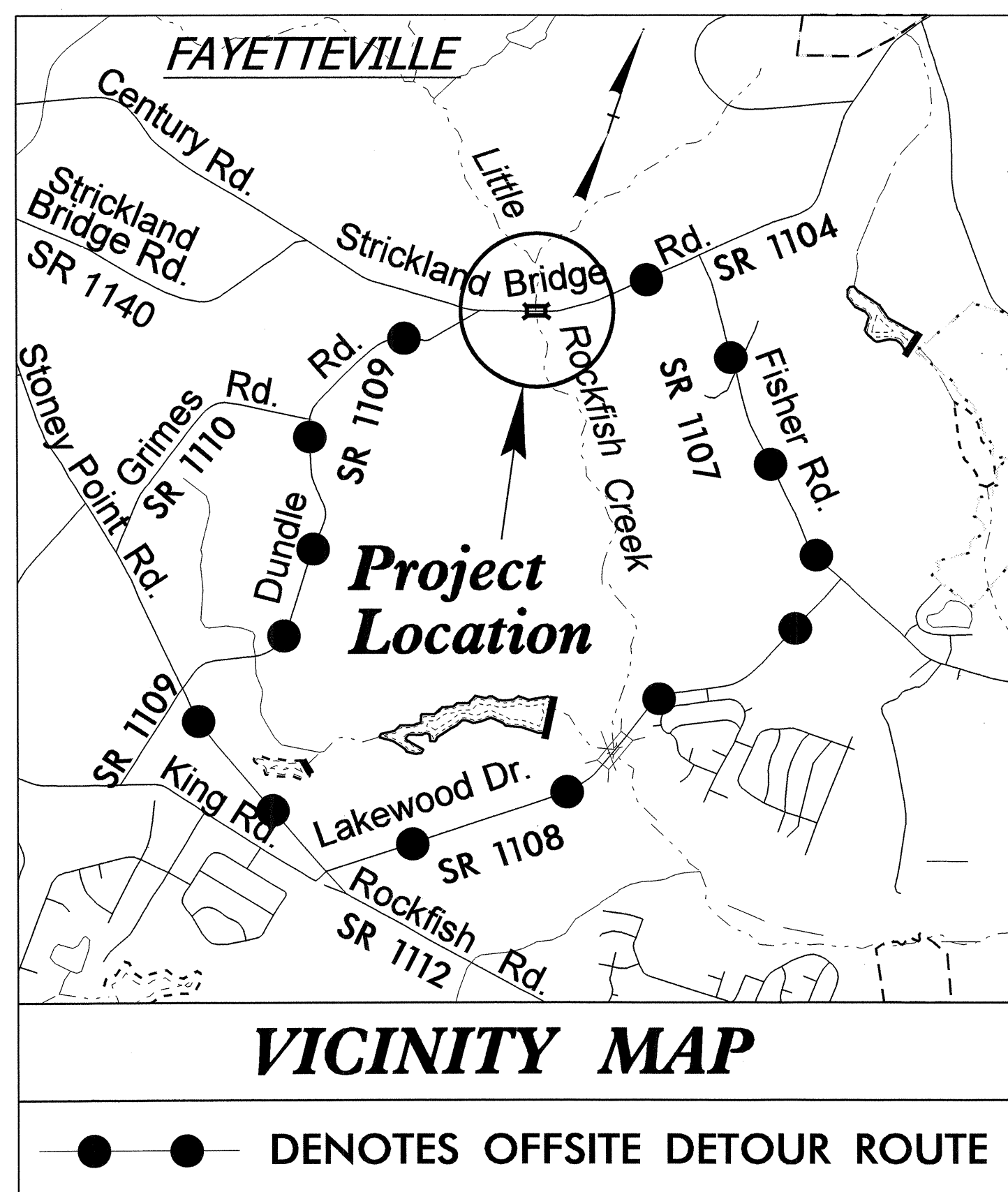
CUMBERLAND COUNTY

**LOCATION: BRIDGE NO. 78 OVER LITTLE ROCKFISH CREEK
AND APPROACHES ON SR 1104
(STRICKLAND BRIDGE ROAD)**

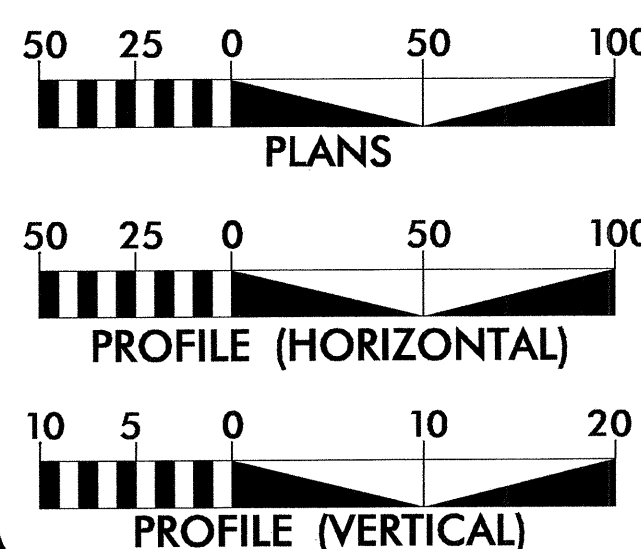
**TYPE OF WORK: GRADING, DRAINAGE, PAVING, CURB & GUTTER
AND STRUCTURE**

TIP PROJECT: B-2948

CONTRACT: C203017



GRAPHIC SCALES



DESIGN DATA

ADT 2012 = 10,330
ADT 2035 = 15,600
DHV = 10 %
D = 55 %
T = 3 % *
V = 50 MPH
*(TTST = 1% + DUAL = 2%)
FUNC CLASS =
COLLECTOR
SUB-REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJ. B-2948 = 0.099 MILES
LENGTH STRUCTURE TIP PROJ. B-2948 = 0.019 MILES
TOTAL LENGTH OF TIP PROJ. B-2948 = 0.118 MILES

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

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
NOVEMBER 17, 2011

LETTING DATE:
DECEMBER 18, 2012

REKHA PATEL, PE
PROJECT ENGINEER

SAMUEL L. ST. CLAIR
PROJECT DESIGN ENGINEER

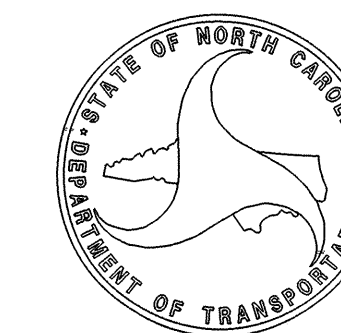
HYDRAULICS ENGINEER

[Signature]
SIGNATURE: **ALINDA M. JOHNS**
P.E.

ROADWAY DESIGN ENGINEER

[Signature]
SIGNATURE: **REKHA V. PATEL**
P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA





SHEET NUMBER	INDEX OF SHEETS	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, DETAIL FOR PAVEMENT TREATMENT, AND WEDGING DETAIL	
2-A	DETAIL OF 2'-6" CURB AND GUTTER TRANSITION SECTION	
2-B	DETAIL OF SPECIAL CATCH BASIN	
3	SUMMARY OF QUANTITIES	
3-A	GUARDRAIL SUMMARY AND DRAINAGE SUMMARY	
3-B	SUMMARY OF EARTHWORK AND REMOVAL OF EXISTING PAVEMENT SUMMARY	
4	PLAN SHEET	
5	PROFILE SHEET	
TMP-1 THRU TMP-2	TRAFFIC MANAGEMENT PLANS	
SD-1	SPECIAL SIGN DESIGN PLAN	
PMP-1 THRU PMP-2	PAVEMENT MARKING PLANS	
EC-1 THRU EC-5	EROSION CONTROL PLANS	
SIGN-1 THRU SIGN-2	SIGNING PLANS	
UC-1 THRU UC-11	UTILITIES CONSTRUCTION PLANS	
UO-1 THRU UO-7	UTILITIES BY OTHERS PLANS	
X-0	CROSS-SECTION SUMMARY SHEET	
X-1 THRU X-5	CROSS-SECTIONS	
S-1 THRU S-21	STRUCTURE PLANS	

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 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.

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.

STREET TURNOUT:

STREET RETURNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 848.04 USING THE RADII NOTED ON PLANS.

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 Lumbee River EMC (power), Piedmont Natural Gas (gas), PWC of Fayetteville (water & sewer), Century Link (telephone), and Aqua NC (water).

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.

RIGHT-OF-WAY MARKERS:

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

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	
200.03	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
DIVISION 4 - MAJOR STRUCTURES	
422.10	Reinforced Bridge Approach Fills
DIVISION 8 - INCIDENTALS	
815.03	Pipe Underdrain and Blind Drain
840.00	Concrete Base Pad for Drainage Structures
840.01	Brick Catch Basin - 12" thru 54" Pipe
840.02	Concrete Catch Basin - 12" thru 54" Pipe
840.03	Frame, Grates and Hood - for Use on Standard Catch Basin
840.14	Concrete Drop Inlet - 12" thru 30" Pipe
840.15	Brick Drop Inlet - 12" thru 30" Pipe
840.16	Drop Inlet Frame and Grates - for use with Std. Dwg 840.14 and 840.15
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.45	Precast Drainage Structure
840.66	Drainage Structure Steps
846.01	Concrete Curb, Gutter and Curb & Gutter
848.04	Street Turnout
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
876.02	Guide for Rip Rap at Pipe Outlets

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EIP
Property Corner	✕
Property Monument	□ ECM
Parcel/Sequence Number	⑫③
Existing Fence Line	---x---x---x---
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	---WLB---
Proposed Wetland Boundary	---WLB---
Existing Endangered Animal Boundary	---EAB---
Existing Endangered Plant Boundary	---EPB---
Known Soil Contamination: Area or Site	☠ ☠
Potential Soil Contamination: Area or Site	☠ ? ☠

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○ S
Well	○ W
Small Mine	✕
Foundation	▭
Area Outline	▭
Cemetery	▭ †
Building	▭
School	▭
Church	▭
Dam	▭

HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	▭
Jurisdictional Stream	---JS---
Buffer Zone 1	---BZ 1---
Buffer Zone 2	---BZ 2---
Flow Arrow	←
Disappearing Stream	→
Spring	○
Wetland	▭
Proposed Lateral, Tail, Head Ditch	→ FLOW
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	○
Proposed Control of Access	○
Existing Easement Line	---E---
Proposed Temporary Construction Easement	---E---
Proposed Temporary Drainage Easement	---TDE---
Proposed Permanent Drainage Easement	---PDE---
Proposed Permanent Drainage / Utility Easement	---DUE---
Proposed Permanent Utility Easement	---PUE---
Proposed Temporary Utility Easement	---TUE---
Proposed Aerial Utility Easement	---AUE---

Proposed Permanent Easement with Iron Pin and Cap Marker

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	---C---
Proposed Slope Stakes Fill	---F---
Proposed Curb Ramp	○ CR
Curb Cut Future Ramp	○ CCFR
Existing Metal Guardrail	---T---
Proposed Guardrail	---T---
Existing Cable Guiderail	---P---
Proposed Cable Guiderail	---P---

VEGETATION:

Equality Symbol	⊕
Pavement Removal	▭
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	⊕
Power Line Tower	⊗
Power Transformer	⊗
U/G Power Cable Hand Hole	▭
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	⊕
Telephone Booth	▭
Telephone Pedestal	⊕
Telephone Cell Tower	⊗
U/G Telephone Cable Hand Hole	▭
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	---TF0---
Designated U/G Fiber Optics Cable (S.U.E.*)	---TF0---

WATER:

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

TV:

TV Satellite Dish	☼
TV Pedestal	⊕
TV Tower	⊗
U/G TV Cable Hand Hole	▭
Recorded U/G TV Cable	---TV---
Designated U/G TV Cable (S.U.E.*)	---TV---
Recorded U/G Fiber Optic Cable	---TF0---
Designated U/G Fiber Optic Cable (S.U.E.*)	---TF0---

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	---UTL---
U/G Tank; Water, Gas, Oil	▭
Underground Storage Tank, Approx. Loc.	▭ UST
A/G Tank; Water, Gas, Oil	▭
Geoenvironmental Boring	⊗
U/G Test Hole (S.U.E.*)	⊕
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

SURVEY CONTROL SHEET B-2948

BL	POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
1	B2948	BL-1	458482.7670	1994242.9070	180.19	OUTSIDE PROJECT LIMITS	
2	B2948	BL-2	458771.5260	1995130.0230	138.66	23+05.27	18.21 RT
3	B2948	BL-3	458975.0120	1995672.7320	138.81	28+81.46	24.94 RT
4	B2948	BL-4	459282.5910	1996122.7940	152.66	OUTSIDE PROJECT LIMITS	

.....
 80 ELEVATION = 180.50
 N 458551 E 1994296
 L STATION 16+93.00
 S 81°53'23.70" W DIST 252.62
 RR SPIKE IN BASE OF 18' PINE

.....
 81 ELEVATION = 150.77
 N 459280 E 1995998
 L STATION 16+93.00
 N 64°28'43.31" E DIST 1608.42
 RR SPIKE IN BASE OF 20' PINE

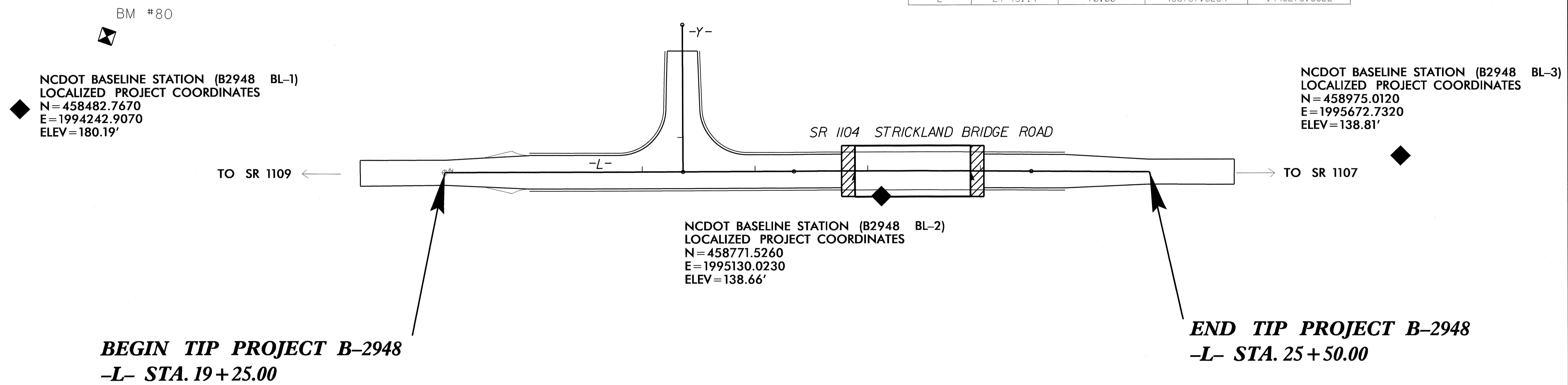
L			
TYPE	STATION	NORTH	EAST
POT	16+93.29	458586.9518	1994546.3199
PC	22+34.50	458765.5030	1995057.2268
PT	24+45.14	458833.9473	1995256.4356
PC	26+26.50	458891.9733	1995428.2612
PT	29+64.73	459040.4263	1995731.1103

Y			
TYPE	STATION	NORTH	EAST
POT	10+00.00	458856.5379	1994921.4357
POT	11+30.74	458733.0647	1994964.4077

FINAL ROW MARKER IRON PIN AND CAP-E				
ALIGN	STATION	OFFSET	NORTH	EAST
L	19+25.00	50.00	458616.1952	1994781.5525
L	19+25.00	30.00	458635.0754	1994774.9542
L	22+34.50	50.00	458718.3025	1995073.7228
L	22+34.50	55.00	458713.5829	1995075.3737
L	24+45.14	55.00	458781.8385	1995274.0333
L	25+50.00	30.00	458839.0750	1995365.3838
L	25+50.00	55.00	458815.3891	1995373.3826
L	25+50.00	-30.00	458895.9210	1995346.1867
L	25+50.00	-50.00	458914.8697	1995339.7877
L	24+45.14	-50.00	458881.3189	1995240.4380
L	24+45.14	-55.00	458886.0562	1995238.8386
L	22+34.50	-55.00	458817.4238	1995039.0820
L	20+75.00	-45.00	458755.3631	1994891.8126
L	19+46.00	-45.00	458712.8045	1994770.0351
L	19+46.00	-30.44	458699.0568	1994774.8396
L	21+80.00	-55.00	458799.4440	1994987.6347
L	21+11.00	-55.00	458776.6807	1994922.4996

FINAL ROW MARKER EXISTING IRON PIN				
ALIGN	STATION	OFFSET	NORTH	EAST
Y	10+65.16	-24.57	458803.0770	1994966.0600

FINAL ROW MARKER PERMANENT EASEMENT-E				
ALIGN	STATION	OFFSET	NORTH	EAST
L	19+25.00	65.00	458602.0350	1994786.5012
L	25+50.00	70.00	458801.1776	1995378.1819
L	22+34.50	70.00	458699.4228	1995080.3223
L	24+45.14	70.00	458767.6269	1995278.8322



DATUM DESCRIPTION
 THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "BREEZE"
 WITH NAD 1983/95 STATE PLANE GRID COORDINATES OF
 NORTHING: 455401.4875(ft) EASTING: 202426.7025(ft)
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: .999880000
 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "BREEZE" TO -L- STATION 19+25.00 IS
 N 83° 43' 27.7" 29840.4636
 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.GOV/DOHPRECONSTRUCT/HIGHWAY/LOCATION/PROJECT/](http://www.ncdot.gov/DOHPRECONSTRUCT/HIGHWAY/LOCATION/PROJECT/)
 THE FILES TO BE FOUND ARE AS FOLLOWS:
 B2948_LS_CONTROL_110822.TXT
 SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

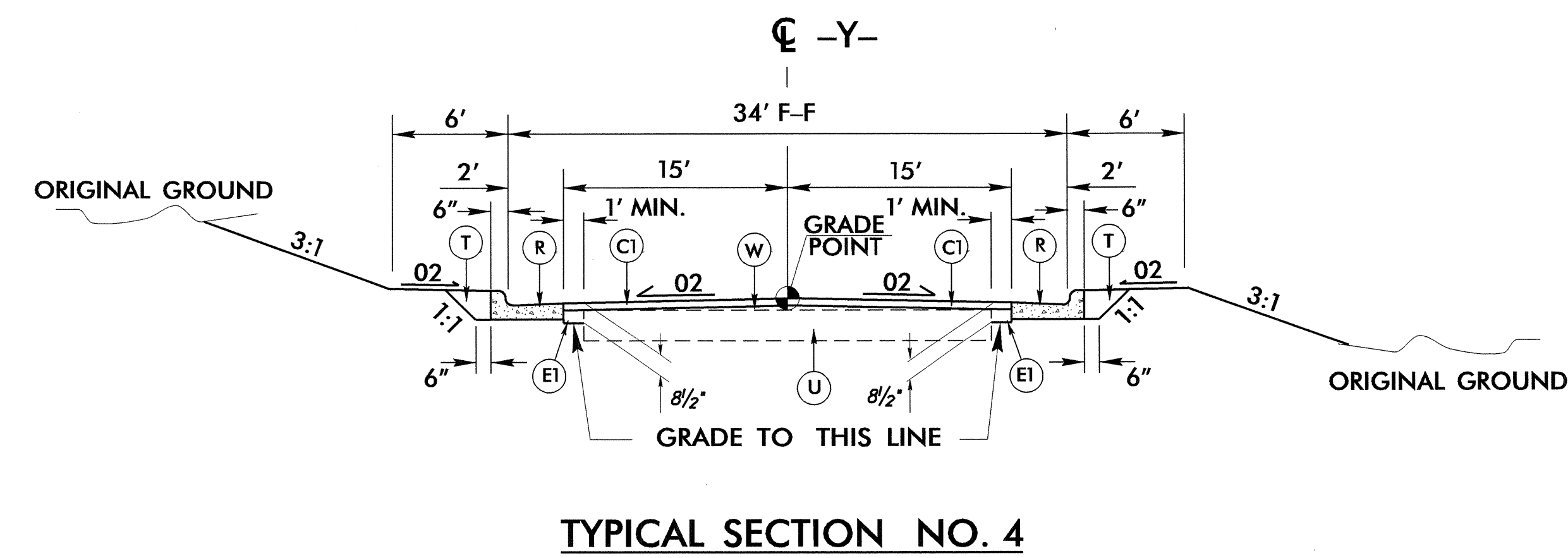
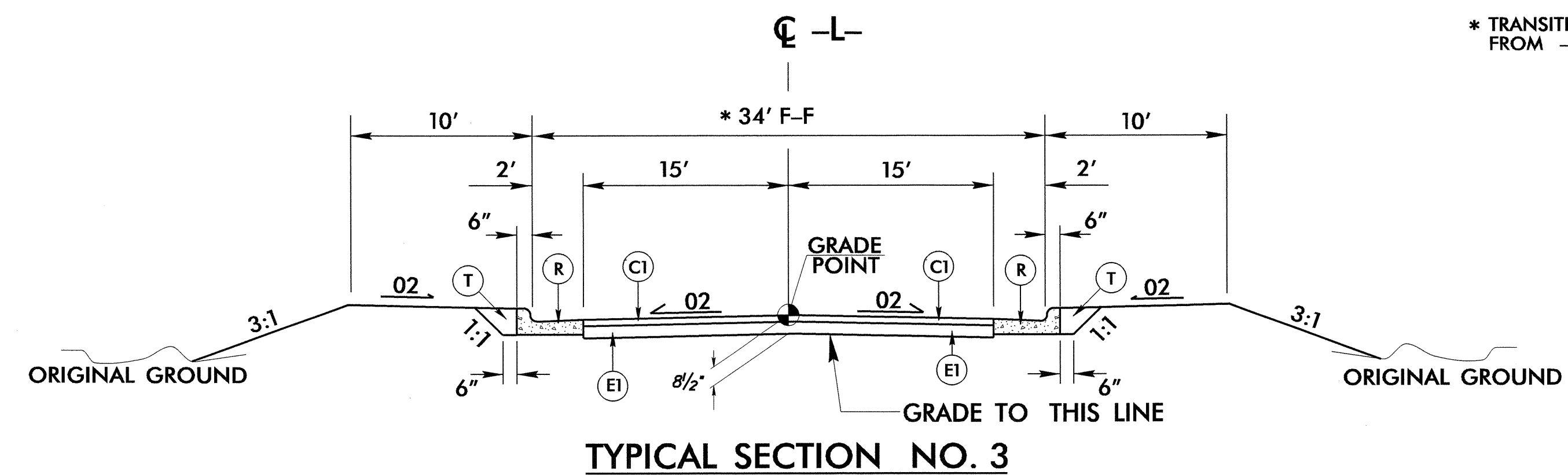
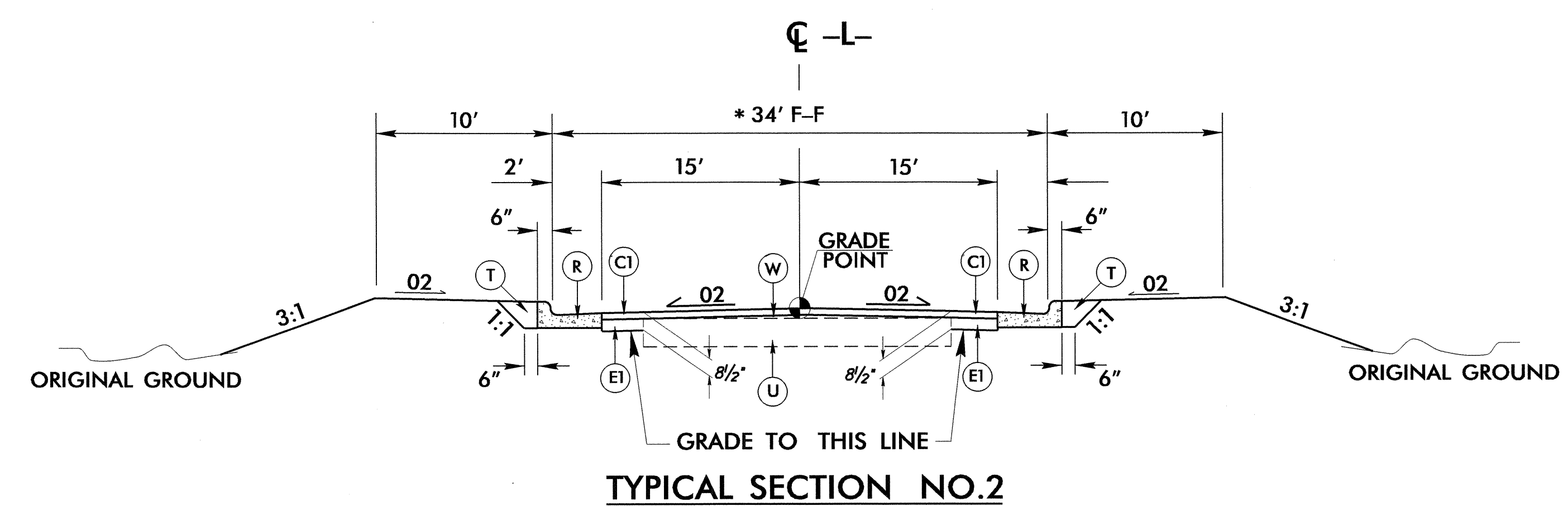
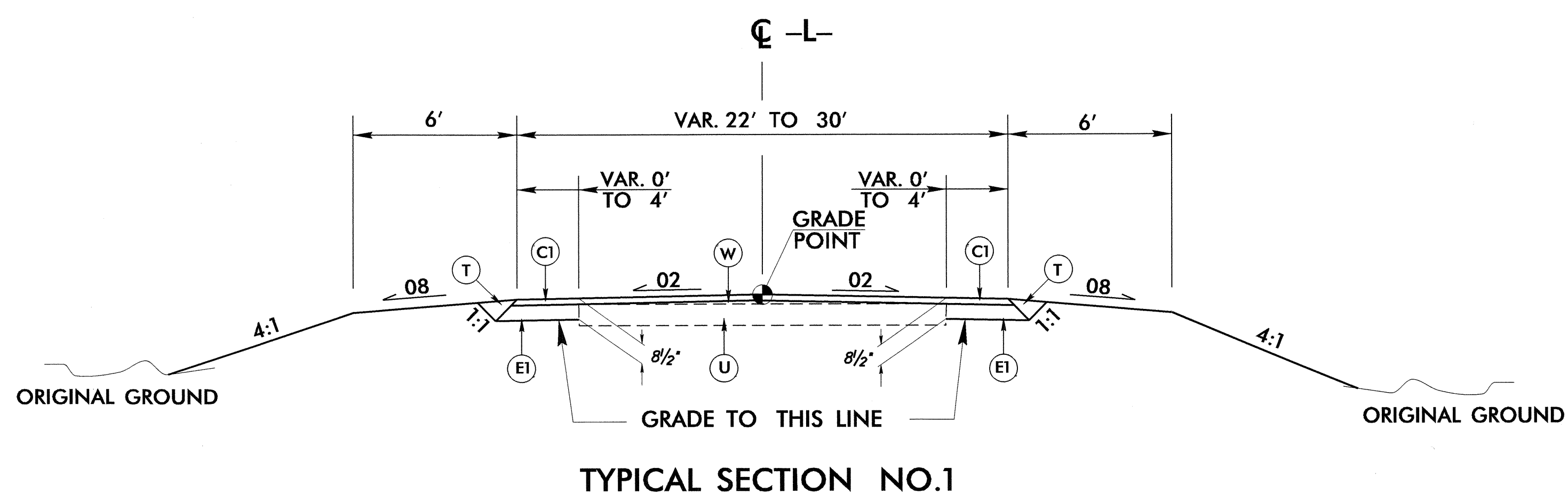
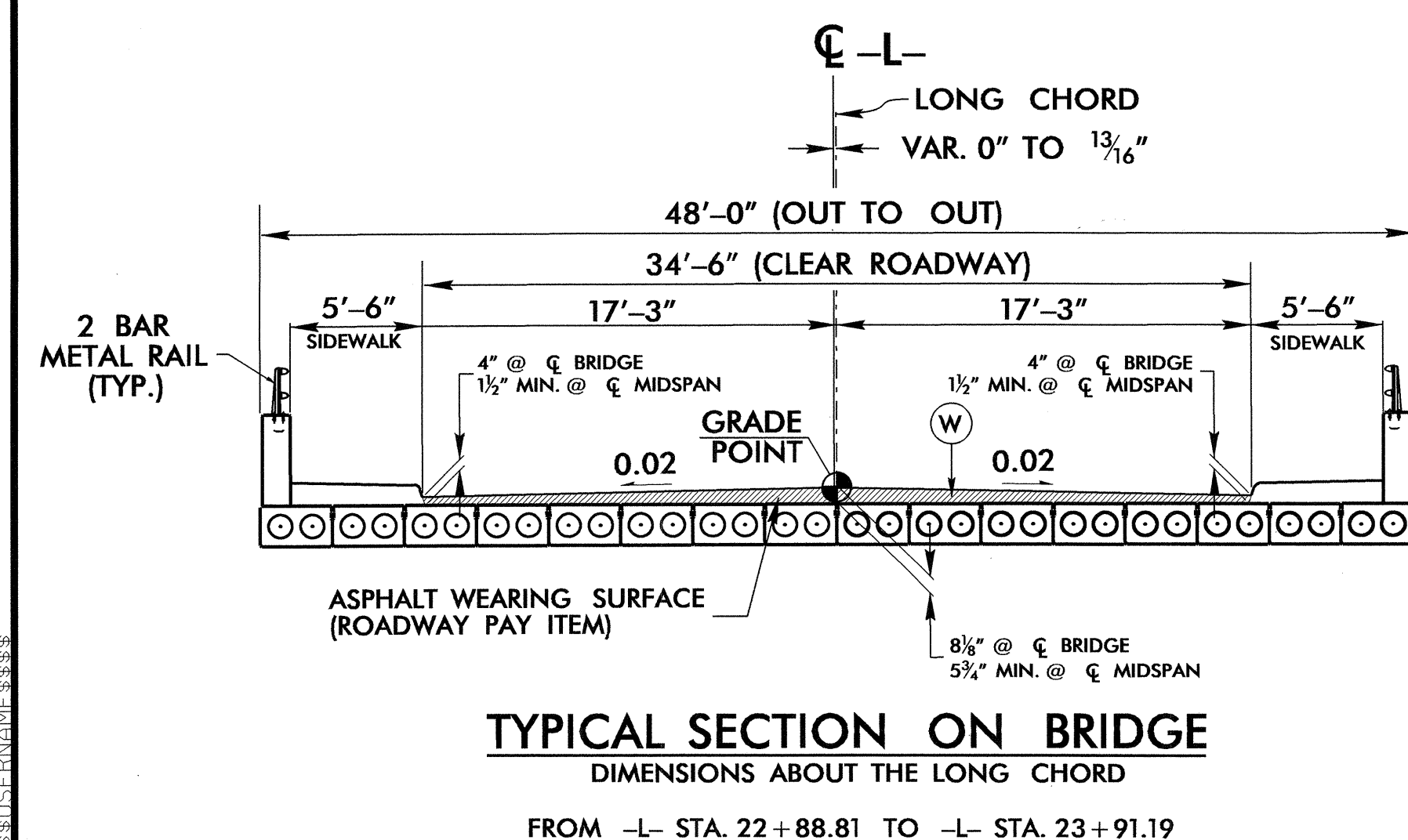
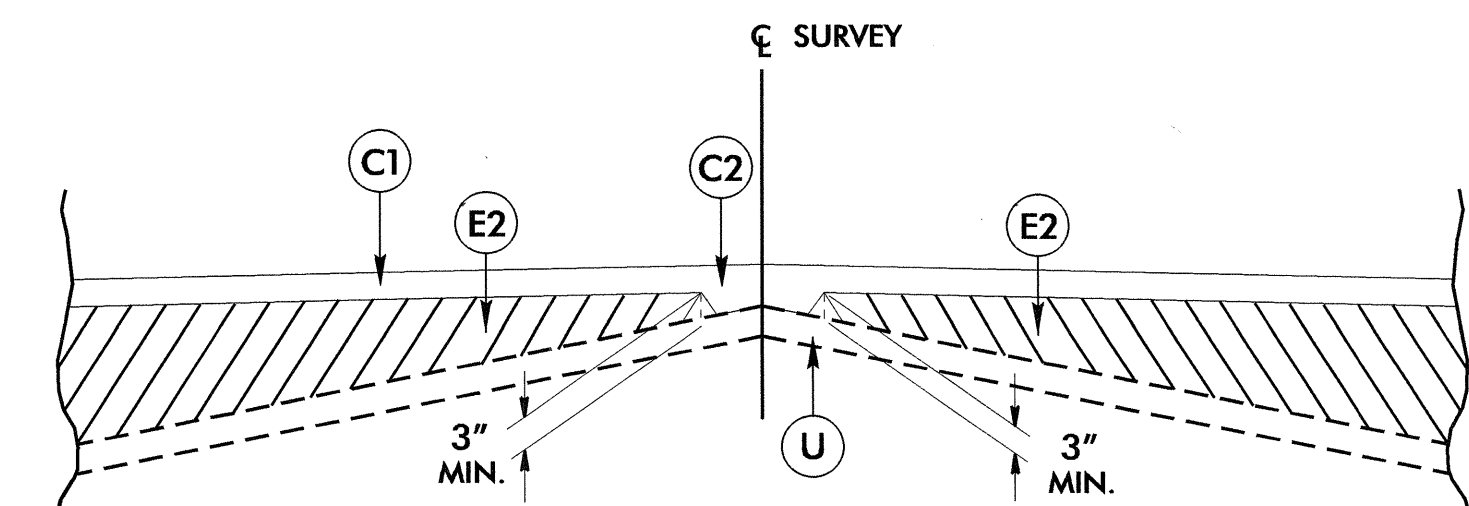
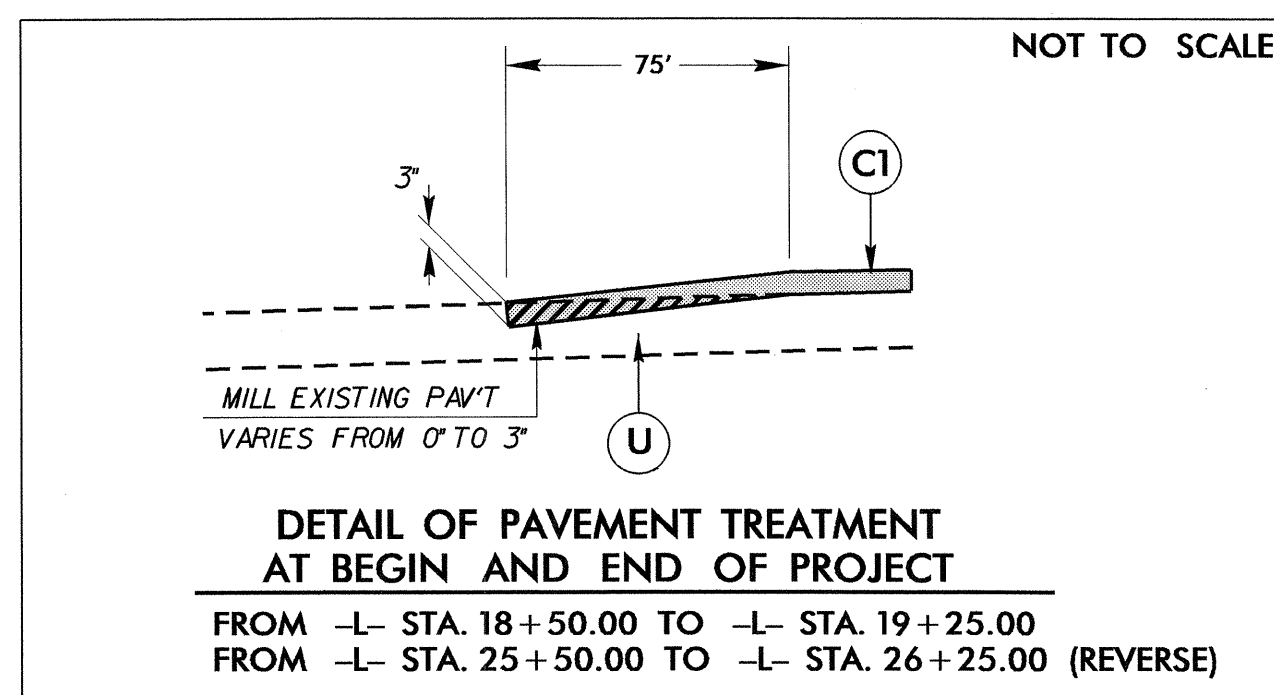
© INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.
 PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.
 NETWORK ESTABLISHED FROM EXISTING HARN MONUMENTATION
 SEE GPS CALIBRATION SHEET FOR HORIZONTAL AND VERTICAL COORDINATE VALUES.

NOTE: DRAWING NOT TO SCALE

6/22/99
 28-SEP-2012 13:57
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PAVEMENT SCHEDULE	
C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
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 1 1/2" IN DEPTH.
E1	PROP. APPROX. 5 1/2" 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 5 1/2" IN DEPTH.
R	PROP. 2'-6" CURB AND 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.



TYPICAL SECTION NO. 1
 TRANSITION FROM EXISTING TO TYP. SECT. NO. 2
 -L- STA. 19+25.00 TO -L- STA. 20+00.00
 TRANSITION FROM TYP. SECT. NO. 2 TO EXISTING
 -L- STA. 24+75.00 TO -L- STA. 25+50.00

TYPICAL SECTION NO. 2
 FROM -L- STA. 20+00.00 TO -L- STA. 22+50.00
 FROM -L- STA. 24+50.00 TO -L- STA. 24+75.00

* TRANSITION FROM 34' F-F TO 34'-6" F-F
 FROM -L- STA. 22+47.81 TO -L- STA. 22+77.81 (BEGIN APPR. SLAB)
 * TRANSITION FROM 34'-6" F-F TO 34' F-F
 FROM -L- STA. 24+02.19 (END APPR. SLAB) TO -L- STA. 24+32.19

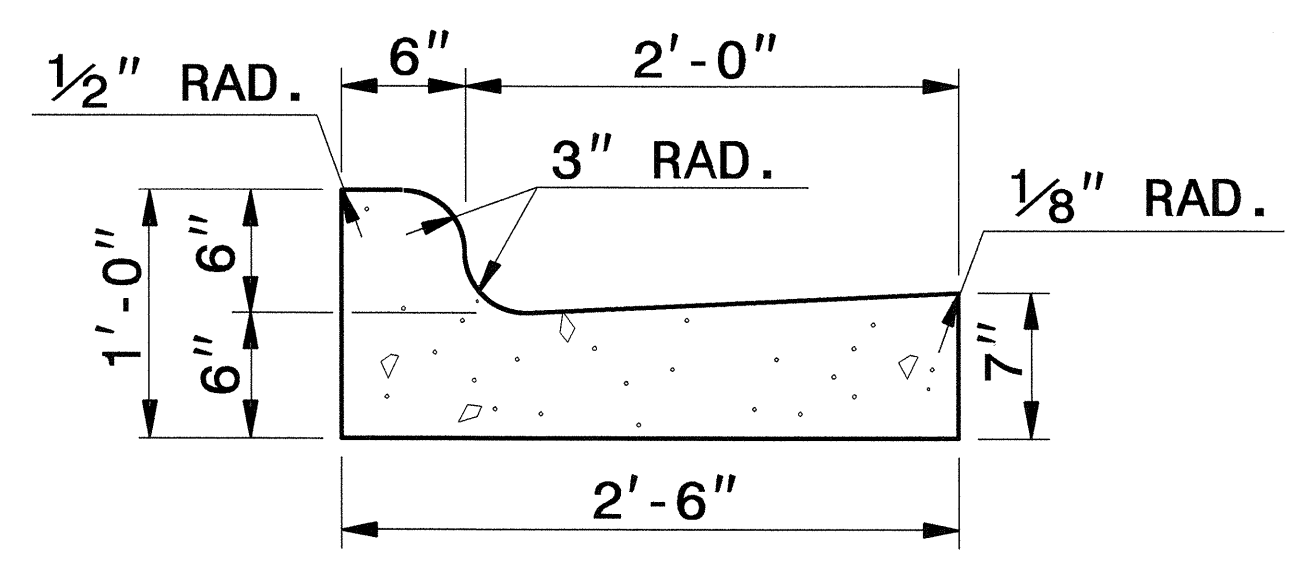
TYPICAL SECTION NO. 3
 FROM -L- STA. 22+50.00 TO -L- STA. 22+88.81 (BEGIN BRIDGE)
 FROM -L- STA. 23+91.19 (END BRIDGE) TO -L- STA. 24+50.00

TYPICAL SECTION NO. 4
 FROM -Y- STA. 10+23.00 TO -Y- STA. 11+15.74

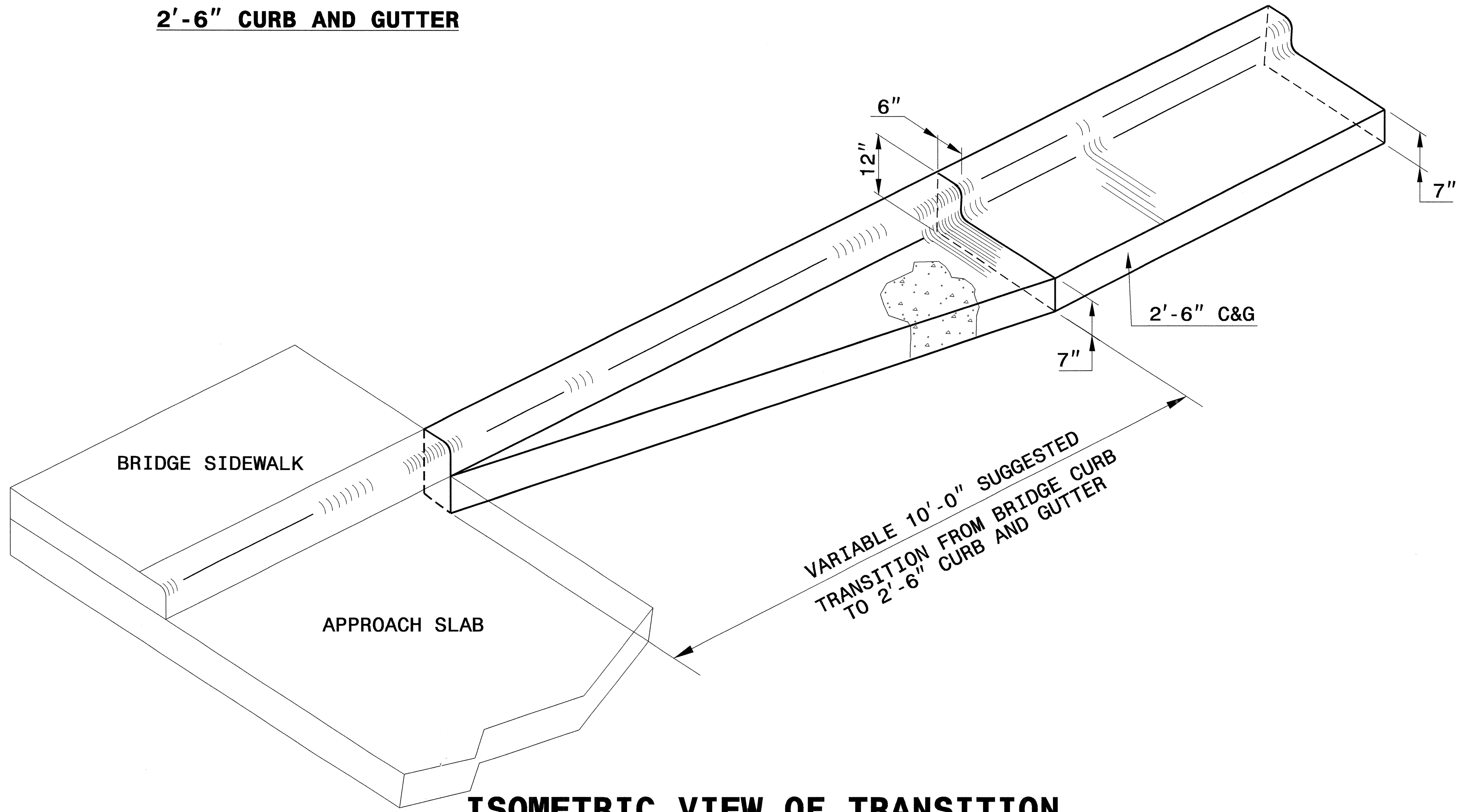
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 6/2/99

*NOTE: SEE STD. DWG. 846.01 FOR GENERAL NOTES

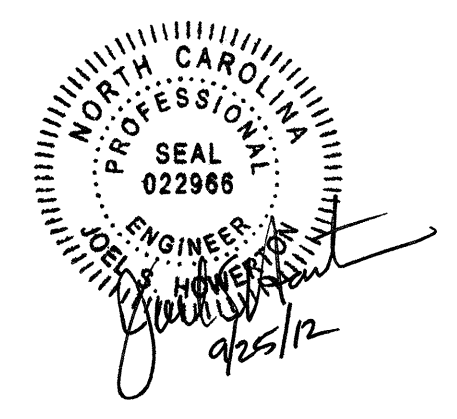
MATCH TRANSITION TO BRIDGE CURB AT SIDEWALK.



2'-6" CURB AND GUTTER

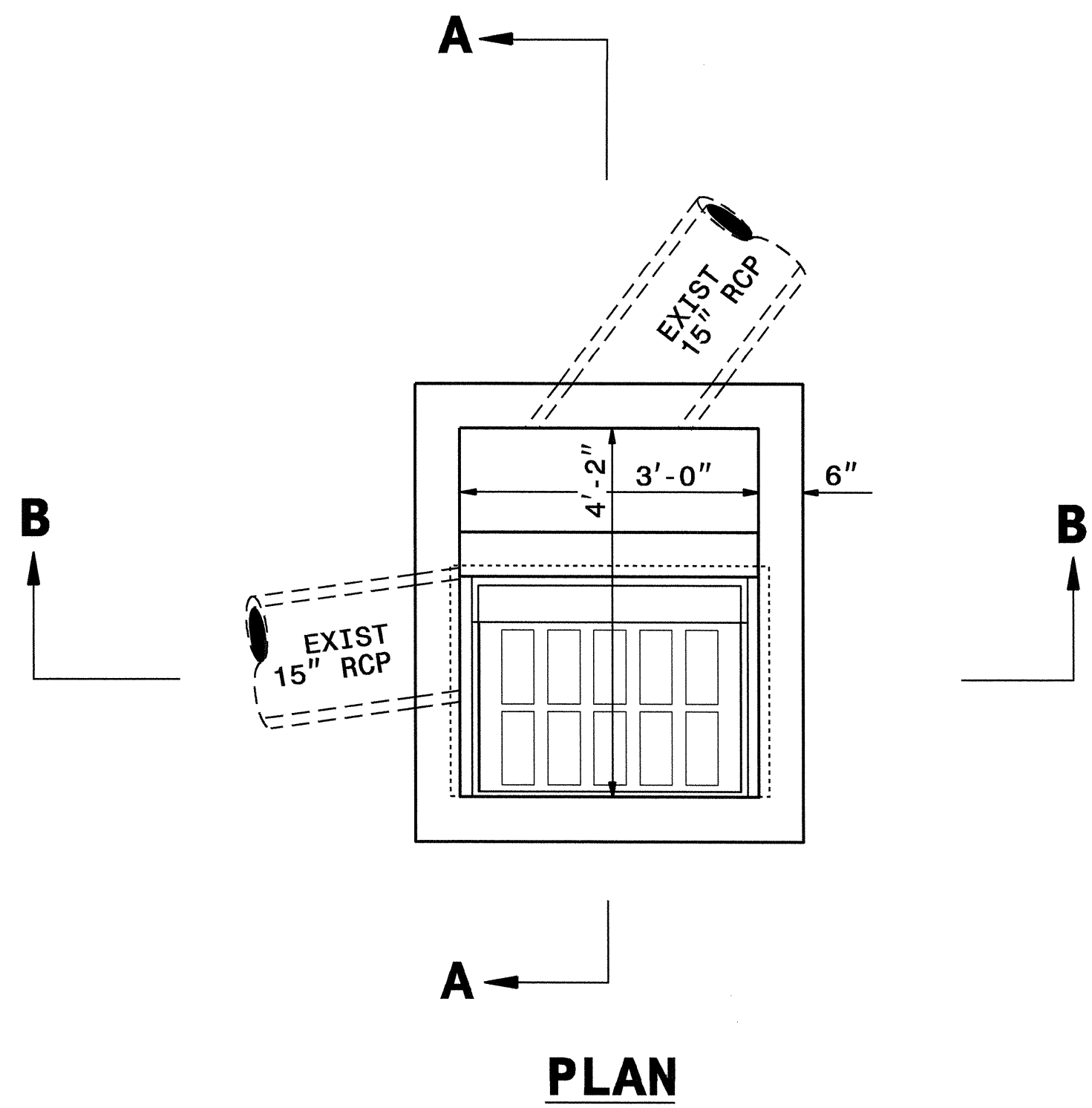


ISOMETRIC VIEW OF TRANSITION



CONTRACTS STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950 FAX 919-250-4119	
DETAIL OF BRIDGE CURB TO 2'-6" CURB & GUTTER TRANSITION SECTION	
ORIGINAL BY: K. KEMPH	DATE: 8-23-12
MODIFIED BY: <i>Jan S. Hart</i>	DATE: 8/31/12
CHECKED BY: <i>Jan S. Hart</i>	DATE: 8/31/12
FILE SPEC.: <i>g:\details\ericward\usr\details\stand\c&gtransit.dgn</i>	

24-AUG-2012 14:13
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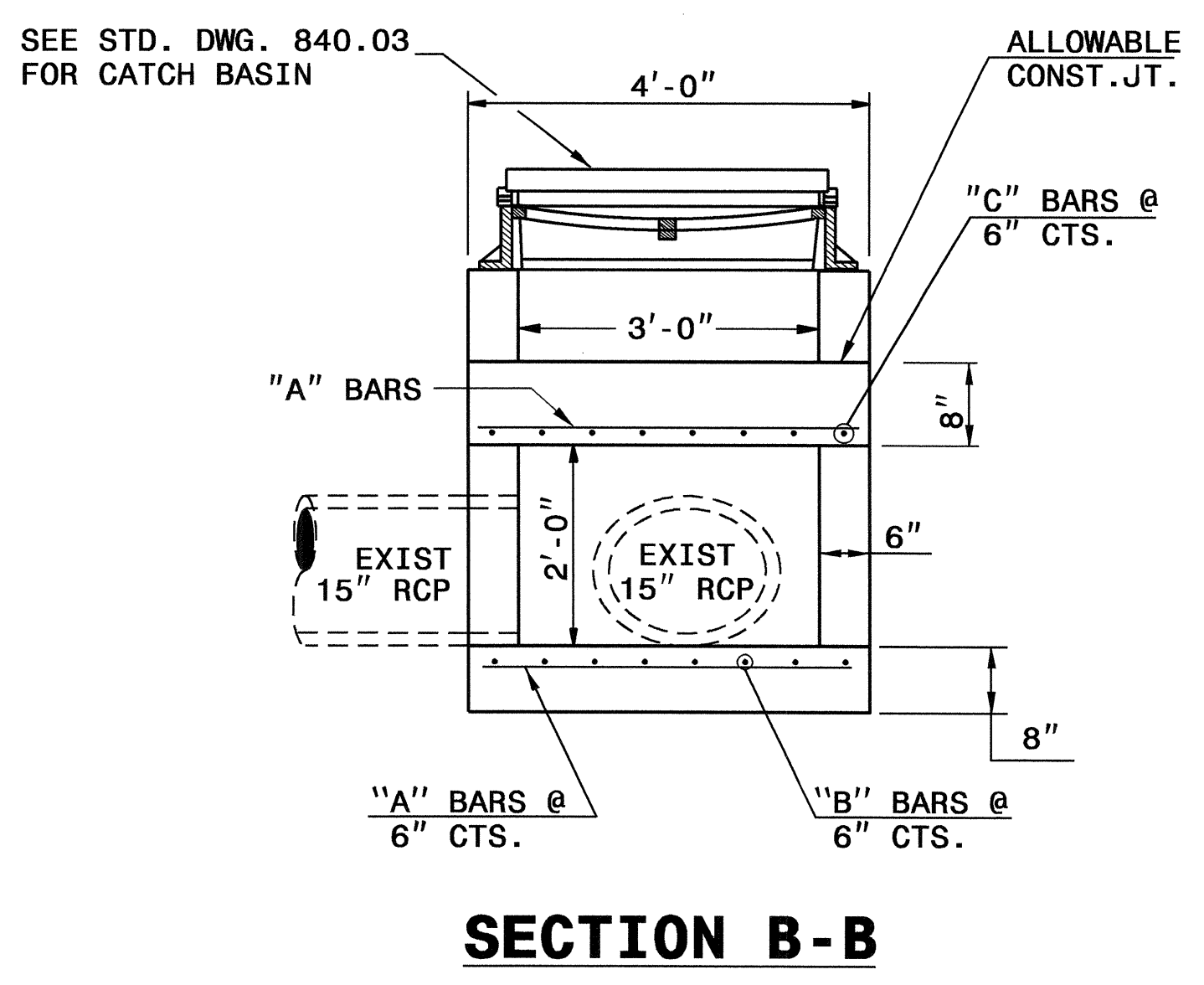


- GENERAL NOTES:
1. USE CLASS "B" CONCRETE THROUGHOUT.
 2. CONSTRUCT CONCRETE BOX IN ACCORDANCE WITH SECTION 825 OF THE STANDARD SPECIFICATIONS.
 3. USE FORMS TO CONSTRUCT THE BOTTOM SLAB.
 4. ADJUST LENGTH OF STEEL BARS AS NEEDED TO COMPENSATE FOR PIPES AND FRAME AND GRATE OPENINGS.
 5. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 400.
 6. CUT OR BEND STEEL BARS AS NEEDED TO PROVIDE 2" CLEARANCE.
 7. LOCATE FRAME AND GRATE AS FIELD CONDITIONS DICTATE AND AS DIRECTED BY THE ENGINEER.
 8. DIMENSIONS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER.

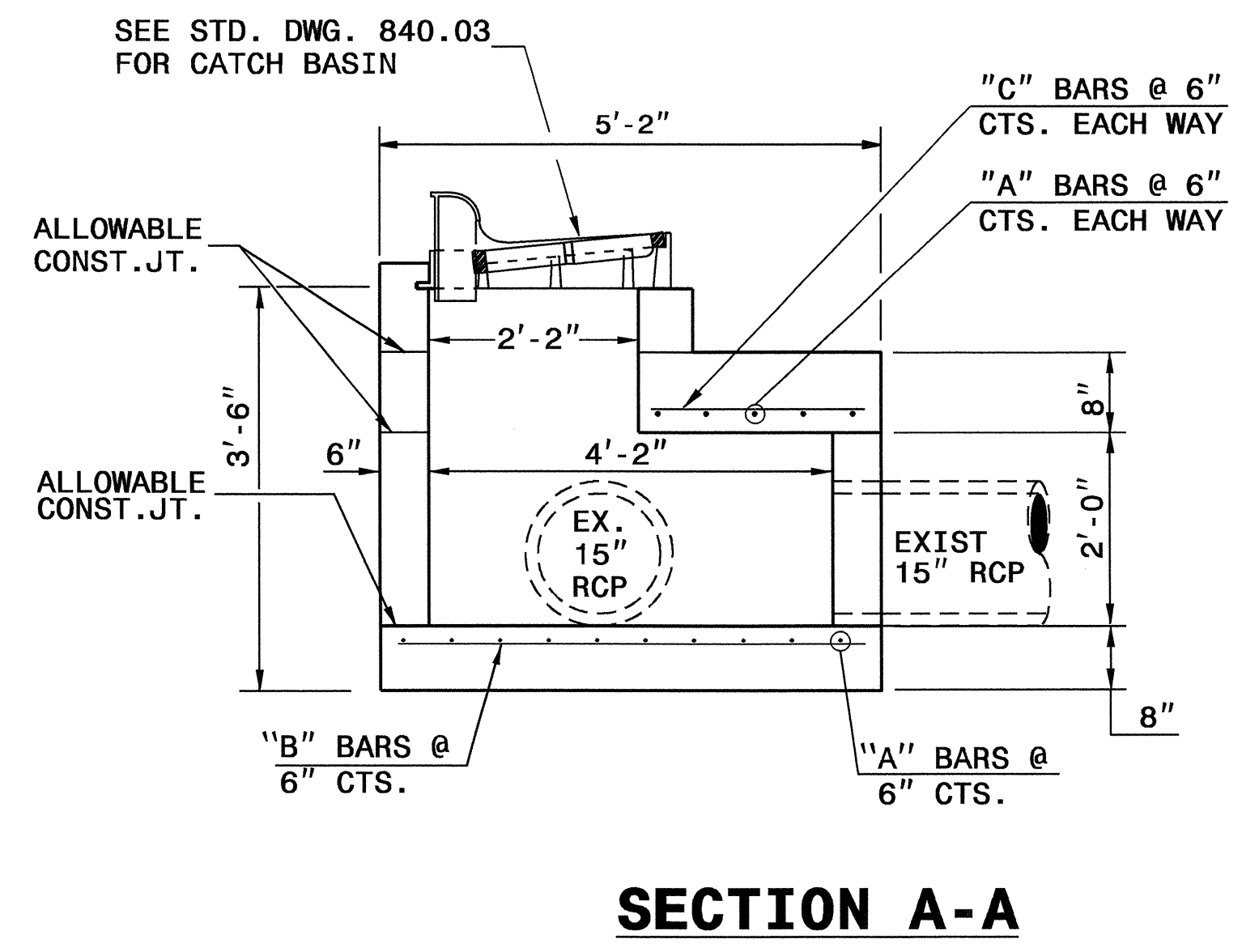
BILL OF MATERIALS

BAR	QTY	SIZE	LENGTH	WEIGHT
A	15	#5	3'-8"	57
B	8	#5	4'-10"	40
C	8	#5	2'-4"	20
TOTAL REINF. STEEL (lbs.)				117
TOTAL CONC. CU. YDS.			1.6	

NO DEDUCTIONS HAVE BEEN MADE TO ACCOMMODATE PIPES OR CATCH BASIN OPENING.



SECTION B-B



SECTION A-A



STR. NO. 403

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

DETAIL OF SPECIAL CATCH BASIN

ORIGINAL BY: _____ DATE: _____
 MODIFIED BY: K.A. KEMPF DATE: AUG 28, 2012
 CHECKED BY: _____ DATE: 8/31/12
 FILE SPEC.: G:\details\kempf\english\cb15rcpoffset.dgn

30-AUG-2012 13:31
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 Kkempf AT 050261657

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C203017

ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION
0000400000-N	801	Lump Sum		CONSTRUCTION SURVEYING
0029000000-N	SP	Lump Sum		REINFORCED BRIDGE APPROACH FILL, STATION ***** (23+40.00-L-)
0050000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUB- BING
0057000000-E	226	400	CY	UNDERCUT EXCAVATION
0063000000-N	SP	Lump Sum		GRADING
0106000000-E	230	1,380	CY	BORROW EXCAVATION
0195000000-E	265	400	CY	SELECT GRANULAR MATERIAL
0196000000-E	270	500	SY	GEOTEXTILE FOR SOIL STABILIZA- TION
0318000000-E	300	69	TON	FOUNDATION CONDITIONING MATE- RIAL, MINOR STRUCTURES
0320000000-E	300	3,916	SY	FOUNDATION CONDITIONING GEO- TEXTILE
0335200000-E	305	196	LF	15" DRAINAGE PIPE
0335400000-E	305	24	LF	24" DRAINAGE PIPE
0354000000-E	310	32	LF	**** RC PIPE CULVERTS, CLASS ***** (15", V)
0448400000-E	310	132	LF	24" RC PIPE CULVERTS, CLASS IV
0995000000-E	340	15	LF	PIPE REMOVAL
1330000000-E	607	370	SY	INCIDENTAL MILLING
1489000000-E	610	790	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B
1519000000-E	610	530	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5B
1575000000-E	620	67	TON	ASPHALT BINDER FOR PLANT MIX
2022000000-E	815	45	CY	SUBDRAIN EXCAVATION
2033000000-E	815	34	CY	SUBDRAIN FINE AGGREGATE
2044000000-E	815	200	LF	6" PERFORATED SUBDRAIN PIPE
2070000000-N	815	1	EA	SUBDRAIN PIPE OUTLET
2077000000-E	815	6	LF	6" OUTLET PIPE

SUMMARY OF QUANTITIES - B-2948

ItemNumber	Sec #	Quantity	Unit	Description
2286000000-N	840	8	EA	MASONRY DRAINAGE STRUCTURES
2308000000-E	840	4.5	LF	MASONRY DRAINAGE STRUCTURES
2364000000-N	840	1	EA	FRAME WITH TWO GRATES, STD 840.16
2374000000-N	840	2	EA	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (E)
2374000000-N	840	3	EA	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (F)
2374000000-N	840	2	EA	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (G)
2549000000-E	846	880	LF	2'-6" CONCRETE CURB & GUTTER
3030000000-E	862	62.5	LF	STEEL BM GUARDRAIL
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
3649000000-E	876	5	TON	RIP RAP, CLASS B
3656000000-E	876	510	SY	GEOTEXTILE FOR DRAINAGE
4025000000-E	901	9	SF	CONTRACTOR FURNISHED, TYPE *** SIGN (E)
4072000000-E	903	27	LF	SUPPORTS, 3-LB STEEL U-CHANNEL
4102000000-N	904	1	EA	SIGN ERECTION, TYPE E
4116100000-N	904	1	EA	SIGN ERECTION, RELOCATE, TYPE **** (GROUND MOUNTED) (E)
4155000000-N	907	6	EA	DISPOSAL OF SIGN SYSTEM, U- CHANNEL
4158000000-N	907	1	EA	DISPOSAL OF SIGN SYSTEM, WOOD
4192000000-N	907	1	EA	DISPOSAL OF SUPPORT, U-CHANNEL
4400000000-E	1110	458	SF	WORK ZONE SIGNS (STATIONARY)
4405000000-E	1110	96	SF	WORK ZONE SIGNS (PORTABLE)
4410000000-E	1110	96	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)

ItemNumber	Sec #	Quantity	Unit	Description
4435000000-N	1135	25	EA	CONES
4445000000-E	1145	80	LF	BARRICADES (TYPE III)
4455000000-N	1150	40	DAY	FLAGGER
4685000000-E	1205	850	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)
4686000000-E	1205	1,472	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)
4900000000-N	1251	9	EA	PERMANENT RAISED PAVEMENT MARKERS
5325800000-E	1510	408	LF	8" WATER LINE
5326600000-E	1510	663	LF	16" WATER LINE
5546000000-E	1515	2	EA	8" VALVE
5672000000-N	1515	1	EA	RELOCATE FIRE HYDRANT
5691500000-E	1520	413	LF	12" SANITARY GRAVITY SEWER
5775000000-E	1525	1	EA	4' DIA UTILITY MANHOLE
5781000000-E	1525	14	LF	UTILITY MANHOLE WALL, 4' DIA
5801000000-E	1530	274	LF	ABANDON 8" UTILITY PIPE
5804000000-E	1530	102	LF	ABANDON 12" UTILITY PIPE
5828000000-N	1530	2	EA	REMOVE UTILITY MANHOLE
5871500000-E	1550	143	LF	TRENCHLESS INSTALLATION OF 8" IN SOIL
5871510000-E	1550	142	LF	TRENCHLESS INSTALLATION OF 8" NOT IN SOIL
5876000000-N	SP	5	EA	STEEL PILE PIERS
6000000000-E	1605	1,150	LF	TEMPORARY SILT FENCE
6006000000-E	1610	160	TON	STONE FOR EROSION CONTROL, CLASS A
6009000000-E	1610	65	TON	STONE FOR EROSION CONTROL, CLASS B
6012000000-E	1610	130	TON	SEDIMENT CONTROL STONE
6015000000-E	1615	1	ACR	TEMPORARY MULCHING
6018000000-E	1620	50	LB	SEED FOR TEMPORARY SEEDING
6021000000-E	1620	1.25	TON	FERTILIZER FOR TEMPORARY SEED- ING

ItemNumber	Sec #	Quantity	Unit	Description
6024000000-E	1622	100	LF	TEMPORARY SLOPE DRAINS
6029000000-E	SP	100	LF	SAFETY FENCE
6030000000-E	1630	130	CY	SILT EXCAVATION
6036000000-E	1631	2,400	SY	MATTING FOR EROSION CONTROL
6037000000-E	SP	400	SY	COIR FIBER MAT
6038000000-E	SP	40	SY	PERMANENT SOIL REINFORCEMENT MAT
6042000000-E	1632	370	LF	1/4" HARDWARE CLOTH
6070000000-N	1639	2	EA	SPECIAL STILLING BASINS
6071010000-E	SP	165	LF	WATTLE
6071012000-E	SP	40	LF	COIR FIBER WATTLE
6071020000-E	SP	25	LB	POLYACRYLAMIDE (PAM)
6071030000-E	1640	40	LF	COIR FIBER BAFFLE
6071050000-E	SP	1	EA	*** SKIMMER (1-1/2')
6084000000-E	1660	1.5	ACR	SEEDING & MULCHING
6087000000-E	1660	1	ACR	MOWING
6090000000-E	1661	50	LB	SEED FOR REPAIR SEEDING
6093000000-E	1661	0.25	TON	FERTILIZER FOR REPAIR SEEDING
6096000000-E	1662	50	LB	SEED FOR SUPPLEMENTAL SEEDING
6108000000-E	1665	0.75	TON	FERTILIZER TOPDRESSING
6114500000-N	1667	10	MHR	SPECIALIZED HAND MOWING
6117000000-N	SP	15	EA	RESPONSE FOR EROSION CONTROL

SUMMARY OF EARTHWORK IN CUBIC YARDS

STATION	STATION	UNCL.★ EXCAV.	EMBANK. + %	BORROW	WASTE
-L- STA. 19+25.00	-L- STA. 22+88.81 (BB)	10	1,091	1,081	
-Y- STA. 10+23.00	-Y- STA. 11+15.74	4	65	61	
SUBTOTAL:		14	1,156	1,142	
-L- STA. 23+91.19 (EB)	-L- STA. 25+50.00	47	205	158	
SUBTOTAL:		47	205	158	
TOTAL:		61	1,361	1,300	
EST. 5% TO REPLACE TOPSOIL ON BORROW PITS				65	
GRAND TOTAL:		61	1,361	1,365	
SAY:		65		1,380	

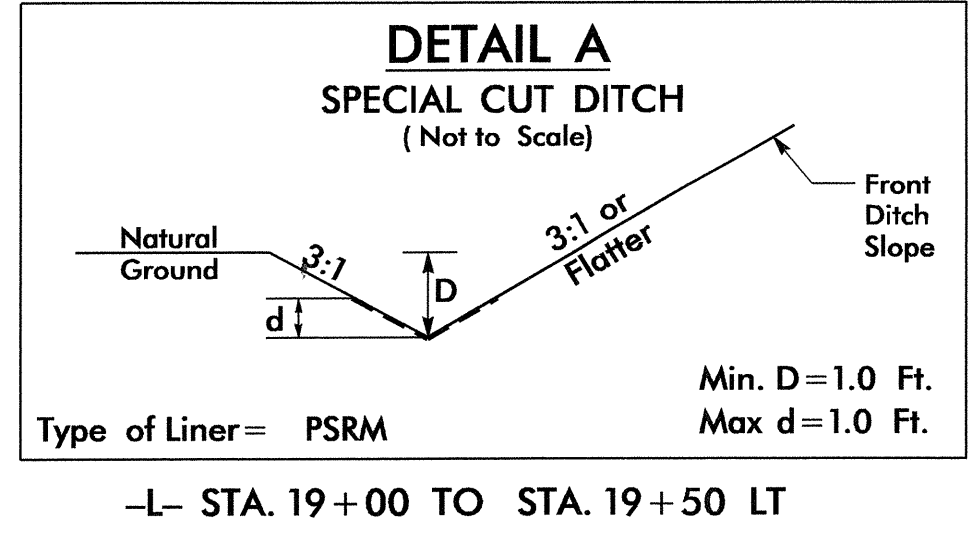
CONTINGENCY ITEMS PER GEOTECH REPORT:
EST. UNDERCUT EXCAVATION = 400 CY
EST. SELECT GRANULAR MATERIAL = 400 CY

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.

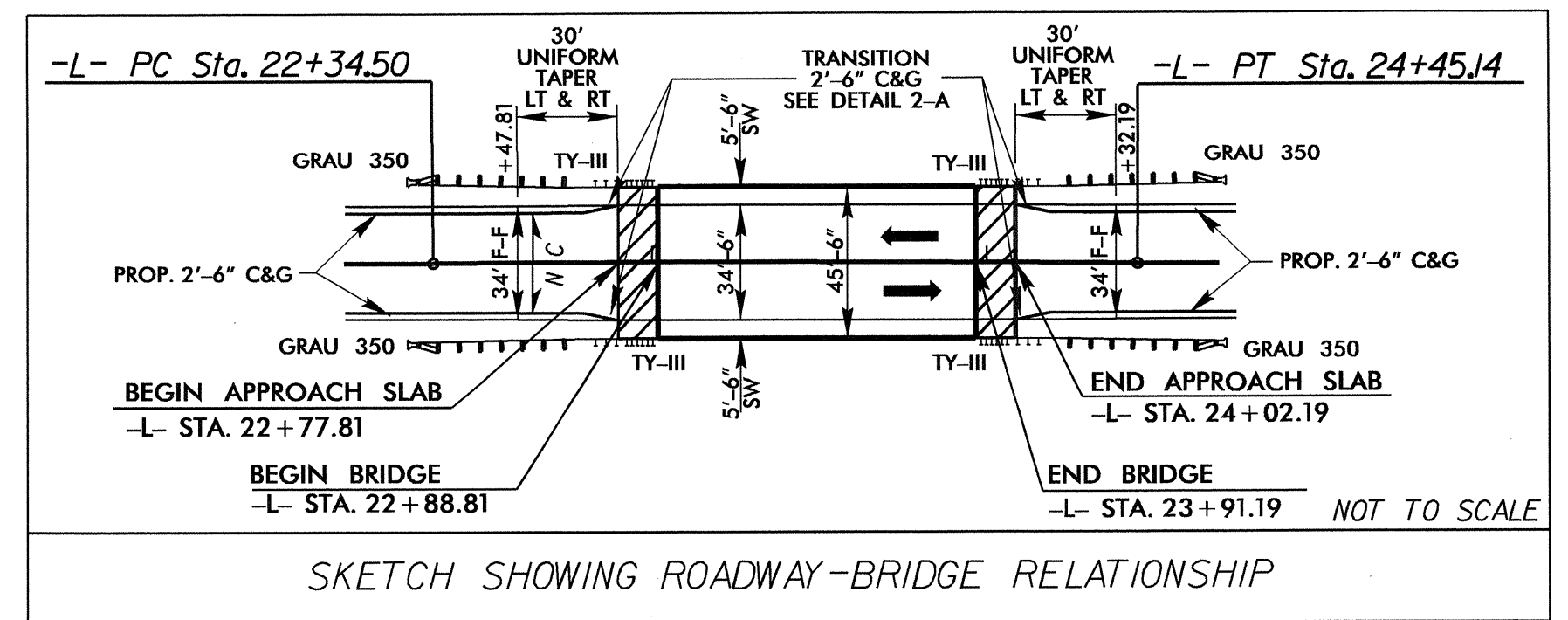
★ Note: Approximate quantities only. Unclassified Excavation, Fine Grading,
Clearing and Grubbing, and Removal of Existing Pavement will be paid
for at the contract lump sum price for "Grading". (See Project Special Provision)

REMOVAL OF EXISTING★ ASPHALT PAVEMENT

SURVEY LINE	BEG. STA.	END STA.	LOCATION (L/R/T/C/L)	SQUARE YARDS
-L-	22+50	23+17	CL	173.1
-L-	23+80	24+50	CL	165.7
			TOTAL	338.8
			SAY	340

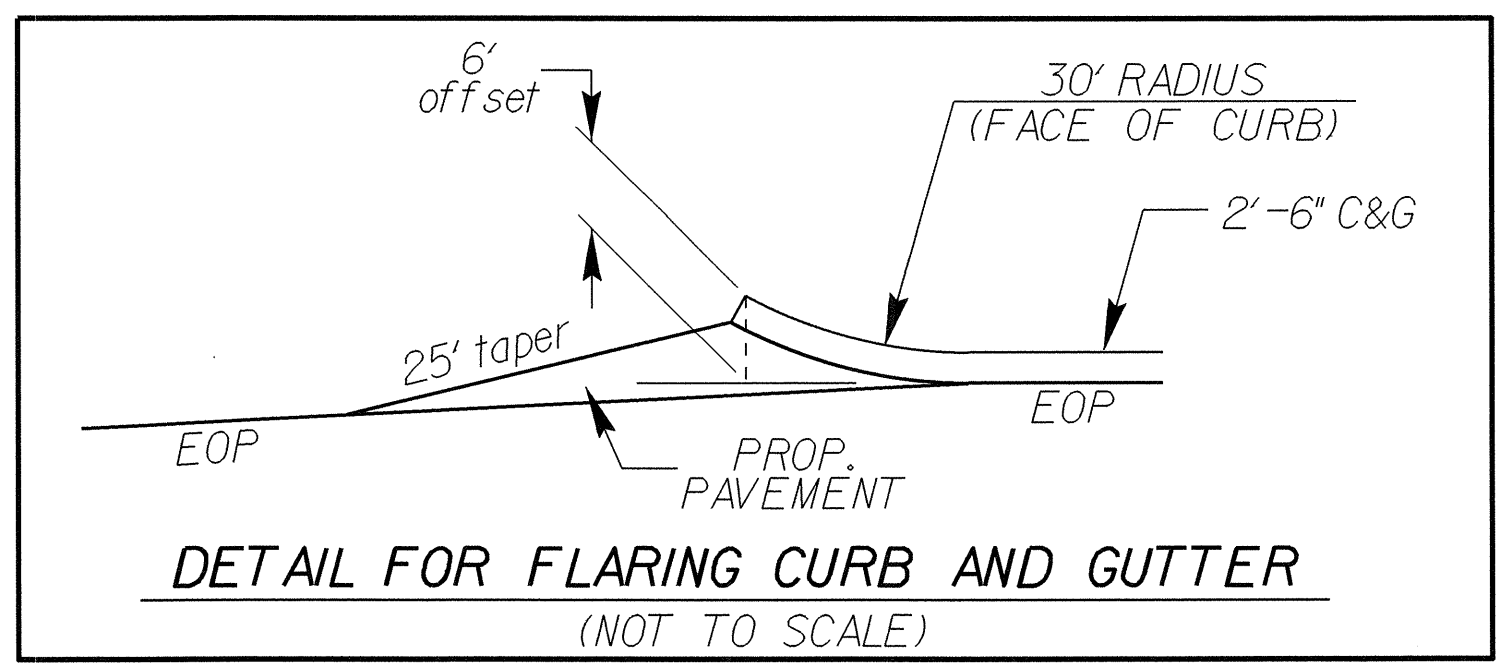
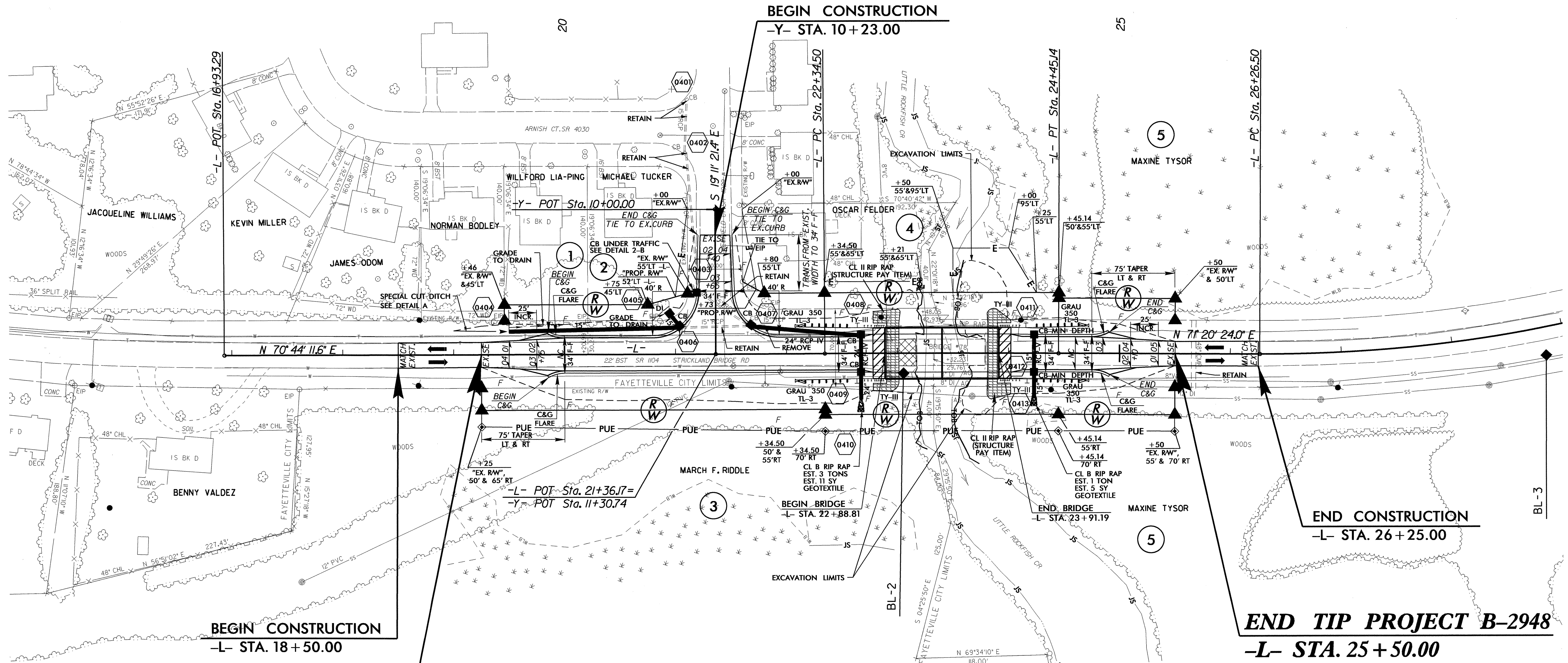


-L-
 PI Sta 23+39.82 PI Sta 27+96.57
 $\Delta = 0^\circ 36' 12.4''$ (RT) $\Delta = 14^\circ 54' 25.4''$ (LT)
 $D = 0' 17' 11.3''$ $D = 4' 24' 26.5''$
 $L = 210.64'$ $L = 338.23'$
 $T = 105.32'$ $T = 170.08'$
 $R = 20,000.00'$ $R = 1,300.00'$
 SE = NC



NO DECK DRAINS ARE REQUIRED

NAD 83/95



PAVEMENT REMOVAL

SEE SHEET 5 FOR -L- & -Y- PROFILE
 SEE SHEET S-1 THRU S-21 FOR STRUCTURE PLANS

8/17/99
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