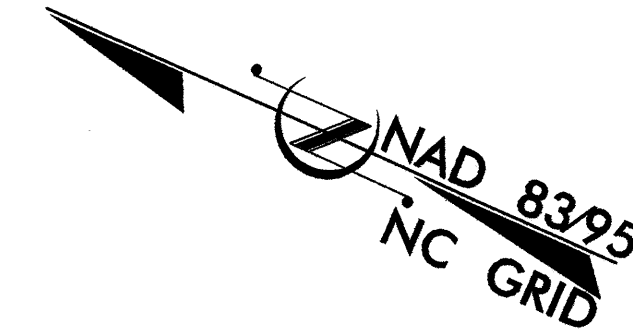
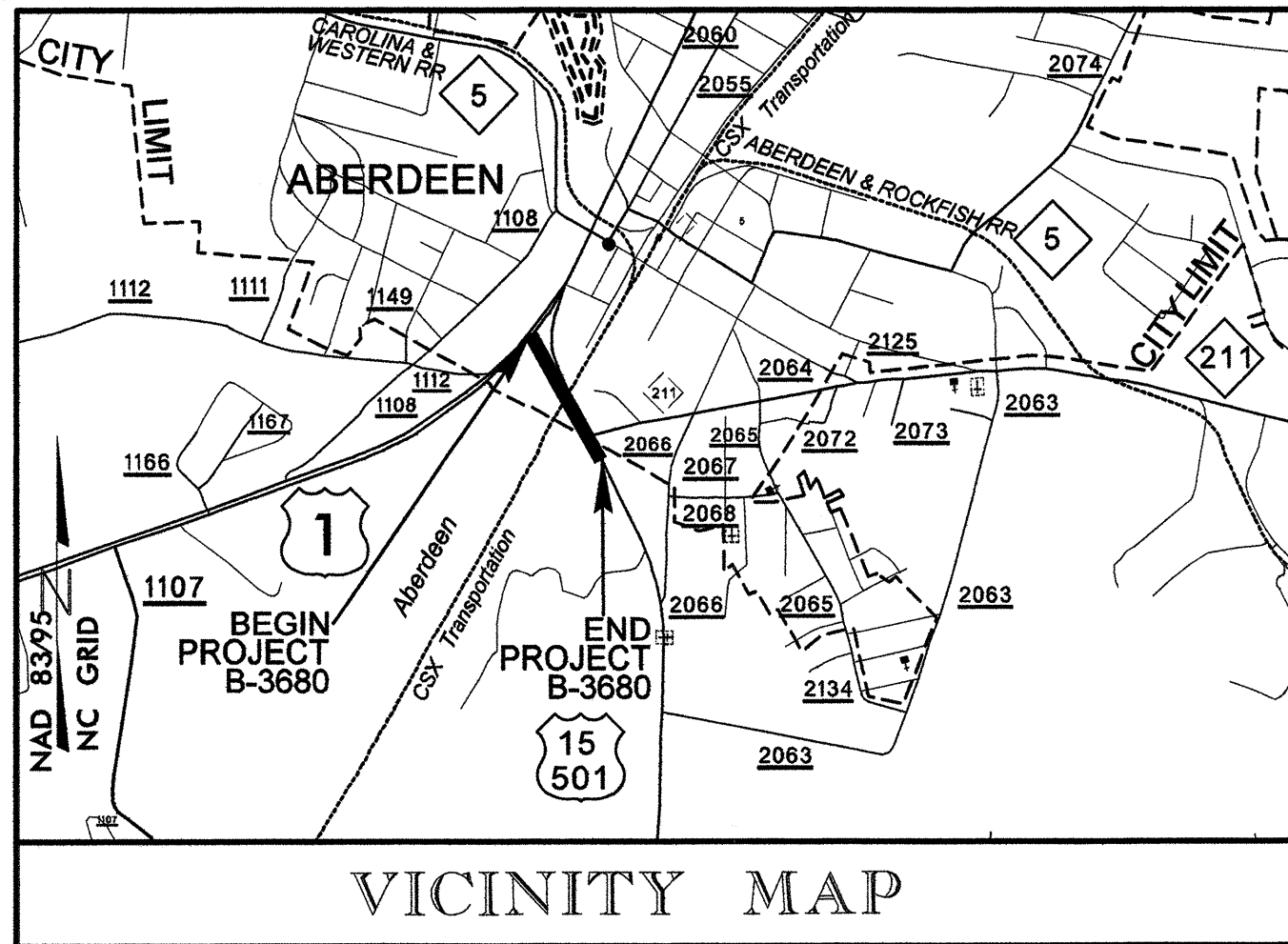


See Sheet 1-A For Index of Sheets

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

MOORE COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-3680	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33222.1.1	BRSTP-0015(11)	P.E.	
33222.2.2	BRSTP-0015(11)	ROW & UTIL.	
33222.3.1	BRSTP-0015(25)	CONSTRUCTION	

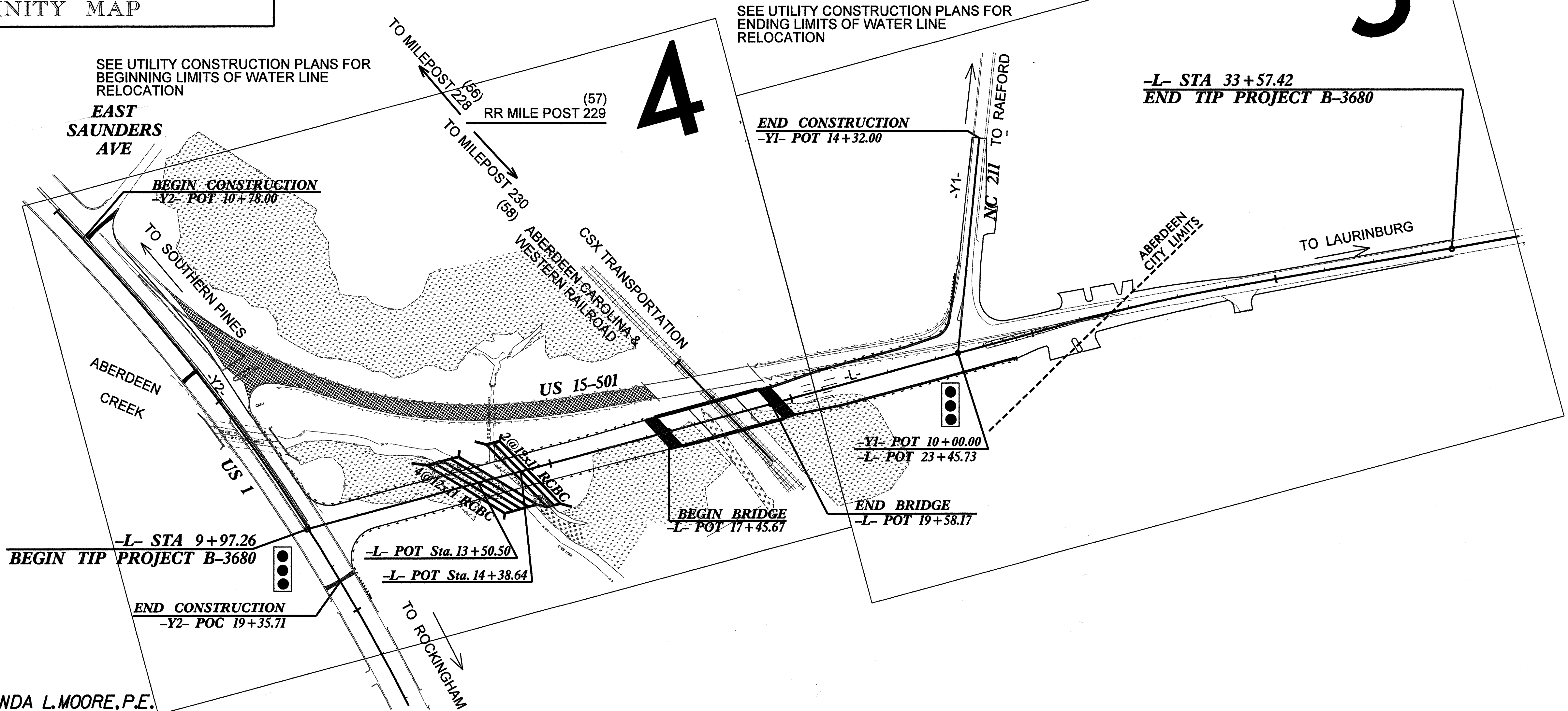


LOCATION: BRIDGE NO. 2 OVER CSX TRANSPORTATION ON US 15/501

TYPE OF WORK: GRADING, PAVING, DRAINAGE, SIGNALS, STRUCTURE, & CULVERT

TIP PROJECT: B-3680

CONTRACT: C202231



NCDOT CONTACT: BRENDA L. MOORE, P.E.

<p>GRAPHIC SCALES</p> <p>50 25 0 50 100 PLANS</p> <p>50 25 0 50 100 PROFILE (HORIZONTAL)</p> <p>5 0 5 10 PROFILE (VERTICAL)</p>	<p>DESIGN DATA URBAN ARTERIAL</p> <p>ADT 2012 = 17,160 ADT 2032 = 23,560</p> <p>DHV = 10 % D = 55 % T = 11 % * V = 50 MPH</p> <p>REGIONAL TIER * (TTST 7 % + DUAL 4 %)</p>	<p>PROJECT LENGTH</p> <p>LENGTH OF ROADWAY = 0.407 MILES</p> <p>LENGTH OF STRUCTURE = 0.040 MILES</p> <p>TOTAL LENGTH OF PROJECT = 0.447 MILES</p>	<p>Prepared in the Office of: WILBUR SMITH ASSOCIATES 421 FAYETTEVILLE STREET RALEIGH, NC 27601</p> <p>2012 STANDARD SPECIFICATIONS</p> <p>RIGHT OF WAY DATE: NOVEMBER 21, 2007</p> <p>LETTING DATE: AUGUST 21, 2012</p> <p>DAVID L. WILVER, PE PROJECT ENGINEER</p> <p>J. MATTHEW PICKENS, PE PROJECT DESIGN ENGINEER</p>	<p>HYDRAULICS ENGINEER</p> <p>6/13/12</p> <p>ROADWAY DESIGN ENGINEER</p>	
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09/05/09

FILE: R:\ncdot\183680\Roadway\Proj\183680_dwg_15101.dwg
DATE: 6/22/12 4:13:58 PM

PROJECT REFERENCE NO. B-3680	SHEET NO. 1A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL 19026 DAVID L. WILYER	HYDRAULICS ENGINEER NORTH CAROLINA PROFESSIONAL 2697 SEAD SHILIA G. DALTON
421 Fynewick Street Suite 1300 Raleigh, N.C. 27601	SUNGATE DESIGN GROUP P.A. 811 JONES FRANKLIN ROAD RALEIGH, NORTH CAROLINA 27601

GENERAL NOTES: 2012 SPECIFICATIONS
EFFECTIVE: 01-17-12
REVISED: 11/01/11

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.

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.

DRIVEWAYS:

DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.02 USING 3' RADIUS OR RADIUS 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.

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

- Progress Energy - Power (Distribution)
- Windstream - Telephone
- Time Warner Cable - Cable TV
- Piedmont Natural Gas - Gas
- Town of Aberdeen - Water and Sewer
- Moore County Public Works - Sewer

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 CONTRACT.

INDEX OF SHEETS

SHEET NUMBER SHEET

- 1 TITLE SHEET
- 1A INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
- 1B CONVENTIONAL SYMBOLS
- 1C & 1D SURVEY CONTROL SHEETS
- 1E CENTERLINE COORDINATE LIST
- 2 PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEDGING DETAILS
- 2A ROCK EMBANKMENT DETAIL
- 3 SUMMARY OF QUANTITIES
- 3A SUMMARY OF DRAINAGE QUANTITIES
- 3B GUARDRAIL SUMMARY, ASPHALT PAVEMENT REMOVAL SUMMARY
- 3C EARTHWORK SUMMARY
- 3D R/W PARCEL INDEX
- 4 THRU 7 PLAN AND PROFILE SHEET
- TMP-1 THRU TMP-9 TRANSPORTATION MANAGEMENT PLANS
- PM-1 THRU PM-3 PAVEMENT MARKING PLANS
- EC-1 THRU EC-9 EROSION CONTROL PLANS
- RF-1 THRU RF-2 REFORESTATION PLANS
- SIGN-1 THRU SIGN-7 SIGNING PLANS
- SIG-1 THRU SIG-24 SIGNAL PLANS
- UC-1 THRU UC-8 UTILITY CONSTRUCTION PLANS
- UO-1 THRU UO-3 UTILITY BY OTHERS PLANS
- X-1 THRU X-19 CROSS-SECTIONS
- S-1 THRU S-24 STRUCTURE PLANS

2012 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 January 1, 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 3 - PIPE CULVERTS | |
| 300.01 | Method of Pipe Installation |
| 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 | |
| 806.01 | Concrete Right-of-Way Marker |
| 806.02 | Granite Right-of-Way Marker |
| 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 |
| 840.18 | Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe |
| 840.19 | Concrete Grated Drop Inlet Type 'D' - 12" thru 36" Pipe |
| 840.24 | Frames and Narrow Slot Sag Grates |
| 840.25 | Anchorage for Frames - Brick or Concrete or Precast |
| 840.27 | Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe |
| 840.28 | Brick Grated Drop Inlet Type 'D' - 12" thru 36" Pipe |
| 840.29 | Frames and Narrow Slot Flat Grates |
| 840.35 | Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates |
| 840.45 | Precast Drainage Structure |
| 840.46 | Traffic Bearing Precast Drainage Structure |
| 840.66 | Drainage Structure Steps |
| 846.01 | Concrete Curb, Gutter and Curb & Gutter |
| 848.02 | Driveway Turnout - Radius Type |
| 852.01 | Concrete Islands |
| 852.06 | Method for Placement of Drop Inlets in Concrete Islands |
| 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 |
| 866.01 | Chain Link Fence - 4', 5' and 6' High Fence |
| 866.02 | Woven Wire Fence - with Wood Post |
| 876.02 | Guide for Rip Rap at Pipe Outlets |
| 876.04 | Drainage Ditches with Class 'B' Rip Rap |

EFF. 01-17-12

REVISIONS

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 symbols for 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, Known Soil Contamination: Area or Site, Potential Soil Contamination: Area or Site.

BUILDINGS AND OTHER CULTURE:

Table listing symbols for 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:

Table listing symbols for 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:

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

RIGHT OF WAY:

Table listing symbols for 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 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 symbols for roads and related features: 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.

VEGETATION:

Table listing symbols for vegetation: Single Tree, Single Shrub, Hedge, Woods Line.

Table listing symbols for orchard and vineyard.

EXISTING STRUCTURES:

Table listing symbols for 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:

Table listing symbols for 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:

Table listing symbols for 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:

Table listing symbols for 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:

Table listing symbols for gas: 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 symbols for 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:

Table listing symbols for 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, 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.

REVISIONS
07/19/11 REVISED PROJECT REFERENCE NUMBER
FILE: R:\mdeon\B3680\Roadway\Proj\B3680_RDY_pln1b.dgn DATE: 09/20/12 7:50:19 AM

SURVEY CONTROL SHEET B-4162

PROJECT REFERENCE NO.	SHEET NO.
B-4162	1C
Location and Surveys	

BL	POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
1	BL-1		627507.1980	765480.7730	2494.22	11+36.44	14.58 RT
2	BL-2		627769.0520	765647.2740	2507.25	14+45.92	14.32 RT
3	BL-3		627980.1880	765816.2280	2511.58	17+16.03	19.57 LT
4	BL-4		628090.0730	766026.1740	2511.20	19+50.37	11.29 RT
5	BL-5		628182.4870	766176.3410	2508.76	21+27.04	13.77 LT
6	BL-6		628003.2330	766350.7540	2506.33	23+74.74	12.61 LT

BY1	POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
7	BY1-7		628164.4240	765517.6360	2474.38	16+13.71	346.92 LT
8	BY1-8		628057.6050	765881.7850	2485.96	18+13.96	46.02 LT
9	BY1-9		627957.8680	766001.9560	2484.94	18+56.17	104.34 RT

.....
 BM1 ELEVATION = 2489.25
 N 627452 E 765356
 L STATION 10+11 38 LEFT
 8 INCH SPIKE IN BASE OF 18 INCH POPLAR

.....
 BM2 ELEVATION = 2522.16
 N 628025 E 765738
 L STATION 16+78 100 LEFT
 8 INCH SPIKE IN BASE OF 18 INCH POPLAR

.....
 BM3 ELEVATION = 2501.64
 N 627830 E 766324
 L STATION 25+41 40 RIGHT
 8 INCH SPIKE IN BASE OF 30 INCH POPLAR

.....
 BM4 ELEVATION = 2484.70
 N 628206 E 765506
 BY1 STATION 5+00
 N 15' 13' 32.4" W DIST 42.67
 8 INCH SPIKE IN BASE OF 18 INCH POPLAR

.....
 BM5 ELEVATION = 2488.26
 N 627869 E 766095
 BY1 STATION 10+36
 S 46' 36' 48.5" E DIST 128.66
 CHISLED X IN ROCK

NCDOT MONUMENT (B4162-GPS-102)
 LOCALIZED PROJECT COORDINATES
 N = 627724.0240
 E = 764926.313
 ELEV. = 2445.409

NCDOT BASELINE STATION B4162-BL2
 LOCALIZED PROJECT COORDINATES
 N = 627769.0520
 E = 765647.2740
 ELEV. = 2507.25

BM1
 ELEV. = 2489.25

NCDOT BASELINE STATION B4162-BL1
 LOCALIZED PROJECT COORDINATES
 N = 627507.1980
 E = 765480.7730
 ELEV. = 2494.22

NCDOT BASELINE STATION B4162-BY1-9
 LOCALIZED PROJECT COORDINATES
 N = 627957.8680
 E = 766001.9560
 ELEV. = 2484.94

BM4
 ELEV. = 2484.70

NCDOT BASELINE STATION B4162-BY1-7
 LOCALIZED PROJECT COORDINATES
 N = 628164.4240
 E = 765517.6360
 ELEV. = 2474.38

NCDOT BASELINE STATION B4162-BY1-8
 LOCALIZED PROJECT COORDINATES
 N = 628057.6050
 E = 765881.7850
 ELEV. = 2485.96

NCDOT BASELINE STATION B4162-BL4
 LOCALIZED PROJECT COORDINATES
 N = 628090.0730
 E = 766026.1740
 ELEV. = 2511.20

NCDOT BASELINE STATION B4162-BL5
 LOCALIZED PROJECT COORDINATES
 N = 628182.4870
 E = 766176.3410
 ELEV. = 2508.76

NCDOT BASELINE STATION B4162-BL6
 LOCALIZED PROJECT COORDINATES
 N = 628003.2330
 E = 766350.7540
 ELEV. = 2506.33

BM5
 ELEV. = 2488.26

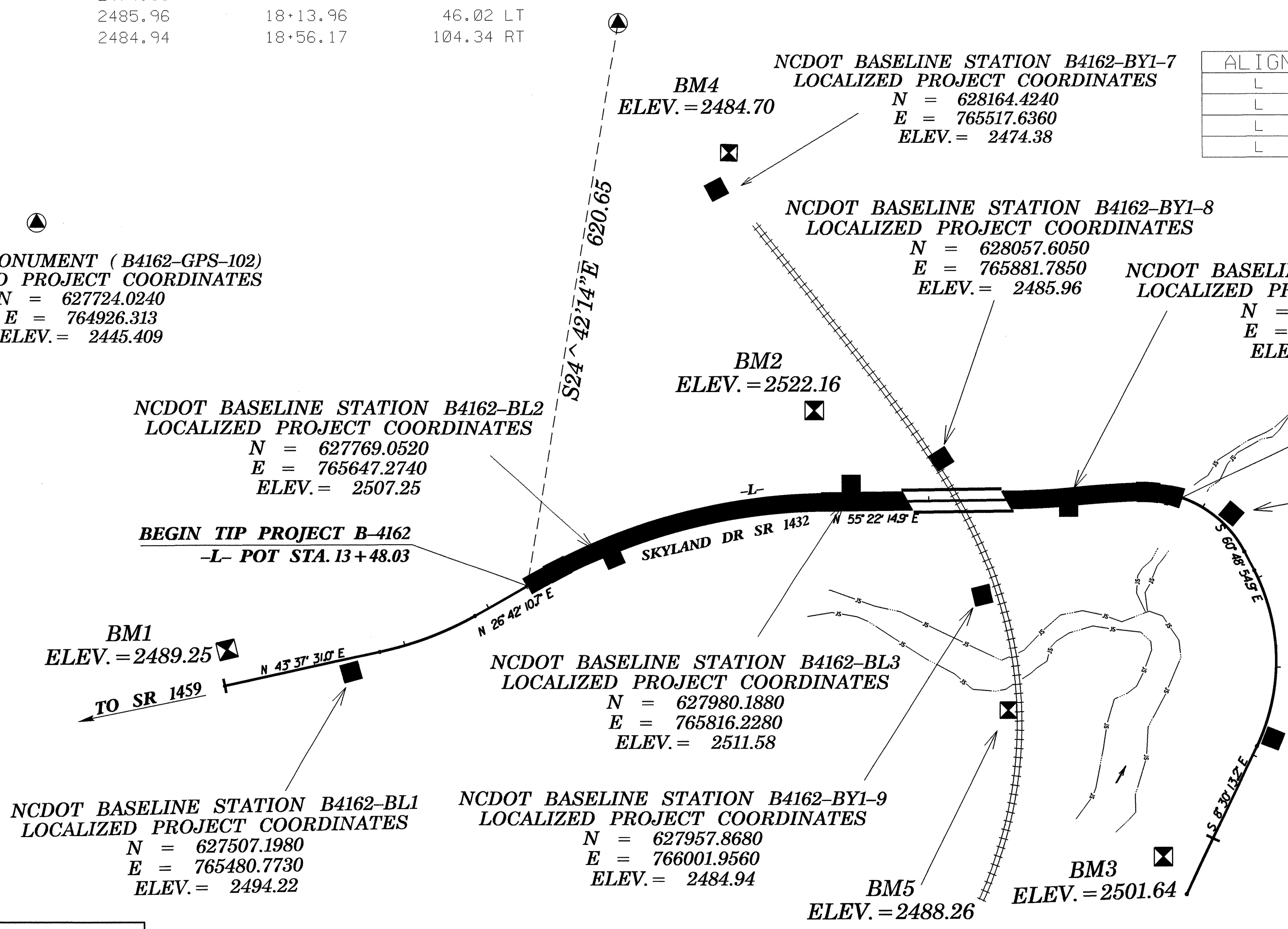
BM3
 ELEV. = 2501.64

FINAL -L-

TYPE	STATION	NORTH	EAST
POT	10+00.00	627418.4982	765376.0825
PC	11+71.79	627542.8527	765494.6084
PT	12+82.55	627633.0679	765558.1637
PC	13+73.03	627713.8996	765598.8230
PT	16+83.25	627945.4583	765800.3758
PC	19+02.10	628069.8260	765980.4607
PRC	19+56.07	628102.4465	766023.4275
PCC	20+31.60	628148.5440	766083.2464
PT	21+66.98	628155.5610	766211.3684
PC	21+90.84	628143.9281	766232.1959
PT	23+88.96	627986.5643	766340.9951
POT	25+66.69	627810.7873	766367.2767

FINAL-AUE MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	16+19.00	-30.00	627929.0681	765729.9858
L	16+72.00	-62.00	627989.3532	765755.0288
L	19+19.00	-47.00	628117.5295	765966.4415
L	19+72.00	-29.28	628135.3406	766017.3780



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B4162 GPS 101" WITH NAD 83 STATE PLANE GRID COORDINATES OF NORTHING: 628255.4140(±) EASTING: 765328.2010(±) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99975883 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "GPS 101" TO -L- STATION 13+48.03 IS S 24° 42' 14" E 620.65 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

FINAL-ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	13+73.03	-16.00	627721.0895	765584.5295
L	13+73.03	-30.00	627727.3806	765572.0226
L	16+83.25	-30.00	627970.1437	765783.3279
L	16+95.28	-30.00	627976.9842	765793.2330
L	19+29.25	-30.00	628109.6432	765984.2969
L	20+31.60	-30.00	628172.9813	766065.8448
L	20+75.00	-30.00	628195.8618	766114.7015
L	20+75.00	-16.00	628182.3222	766118.2624
L	20+75.00	16.00	628151.3746	766126.4014
L	20+75.00	30.00	628137.8350	766129.9622
L	20+31.60	30.00	628124.1067	766100.6481
L	19+51.76	30.00	628076.5112	766039.1384
L	17+33.37	30.00	627949.2563	765858.6677
L	16+83.25	30.00	627920.7729	765817.4237
L	13+73.03	30.00	627700.4187	765625.6235
L	13+73.03	16.00	627706.7098	765613.1166

NOTES:

- THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:
[HTTP://WWW.NCDOT.ORG/DOH/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT/](http://www.ncdot.org/DOH/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT/)
 THE FILES TO BE FOUND ARE AS FOLLOWS:
B4162_LS_CONTROL.TXT
 SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
 PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.
 NETWORK ESTABLISHED FROM NGS ONLINE POSITIONING SERVICE (OPUS)

NOTE: GEOID99 (CONUS)
 NOTE: DRAWING NOT TO SCALE

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SURVEY CONTROL SHEET B-3680

FINAL

ROW MONUMENTS				
ALIGN	STATION	OFFSET	NORTH	EAST
L	24+40.00	85.00	500557.1859	1871435.8443
L	23+20.00	120.00	500641.6403	1871343.6897
L	18+50.00	190.00	501007.2073	1871040.1098
L	13+04.60	-80.00	501613.5605	1870988.1401
L	13+40.00	87.00	501496.6881	1870863.7083
L	14+65.00	195.00	501333.8032	1870836.1856
L	15+50.00	135.00	501292.2393	1870931.5661
L	26+11.13	-59.49	500485.0423	1871648.1835
L	28+79.49	-48.07	500240.9860	1871768.6253
L	29+69.49	-48.26	500159.9176	1871808.9443
L	29+69.49	51.74	500115.9145	1871719.1360
L	29+69.49	65.00	500110.0824	1871707.2329
L	28+79.49	68.00	500188.7481	1871664.9776
L	26+11.14	72.00	500418.1184	1871535.0017
L	13+56.05	-220.96	501642.6667	1871135.3504
L	13+67.03	-254.19	501650.5062	1871169.4611
L	15+29.95	-218.38	501492.6381	1871223.3221
L	17+11.67	-197.67	501326.5153	1871299.8489
L	17+31.71	-160.79	501290.2602	1871278.7080
L	15+50.00	195.00	501261.1252	1870880.2639
L	10+28.72	-80.00	501849.4481	1870845.0771
L	10+87.04	87.00	501712.9743	1870732.5334
L	18+24.46	135.00	501057.5625	1871073.8948

PERMANENT EASEMENTS				
ALIGN	STATION	OFFSET	NORTH	EAST
L	20+00.00	-156.00	501059.3768	1871413.7376
L	21+60.00	-130.00	500909.0883	1871474.4777
L	21+60.00	-123.53	500904.7326	1871468.9447
L	32+05.00	-50.00	499949.1938	1871914.1249
L	32+05.00	-75.00	499960.1936	1871936.5749
L	32+35.00	-75.00	499933.2535	1871949.7747
L	32+35.00	-50.00	499922.2537	1871927.3246
L	19+05.95	-156.00	501138.7941	1871364.9654

PERMANENT EASEMENTS				
ALIGN	STATION	OFFSET	NORTH	EAST
Y1	14+20.00	50.12	500709.2020	1871881.7328
Y1	14+20.00	70.00	500689.6602	1871885.3585
Y1	13+85.00	70.00	500683.2755	1871850.9458
Y1	13+85.00	50.02	500702.9185	1871847.3013

PERMANENT EASEMENTS				
ALIGN	STATION	OFFSET	NORTH	EAST
Y2	16+80.00	-75.00	501887.3741	1870902.6878
Y2	17+05.00	-75.00	501867.6768	1870886.5331
Y2	16+80.00	-52.61	501901.5150	1870885.3342
Y2	17+05.00	-53.48	501881.3791	1870869.9334

DATUM DESCRIPTION

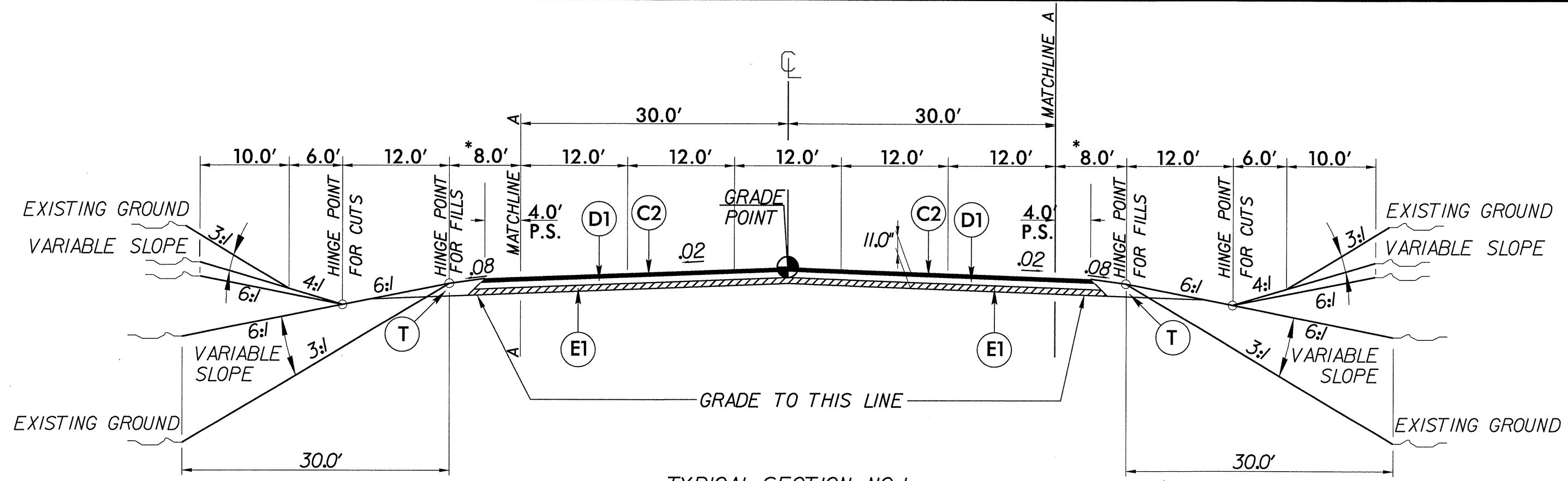
THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B3680-1" WITH NAD 83/95 STATE PLANE GRID COORDINATES OF NORTHING: 501316.9829(ff) EASTING: 1870337.1025(ff) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99986285 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B3680-1" TO L- STATION 9+97.26 IS N 39° 15' 32.8" E 668.84' ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

NOTES:

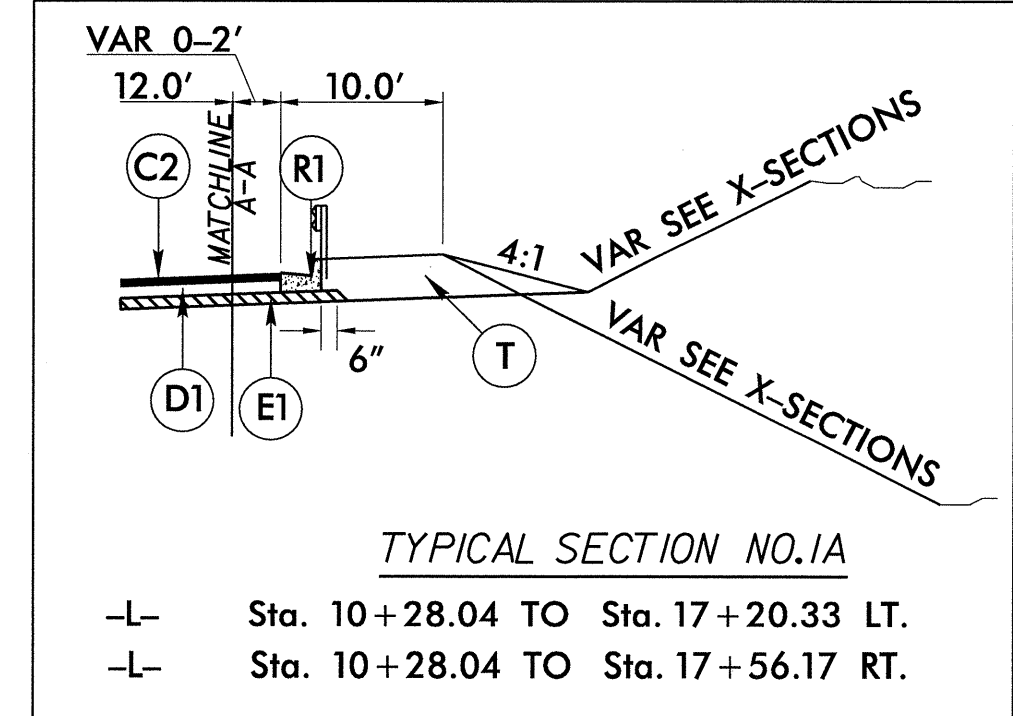
- THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT: [HTTP://WWW.NCDOT.ORG/DOH/PRECONSTRUCTION/HIGHWAY/LOCATION/PROJECT](http://www.ncdot.org/doh/preconstruction/highway/location/project) THE FILES TO BE FOUND ARE AS FOLLOWS: BSS0_LS_CONTROL.TXT
- SITE 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.

NOTE: DRAWING NOT TO SCALE

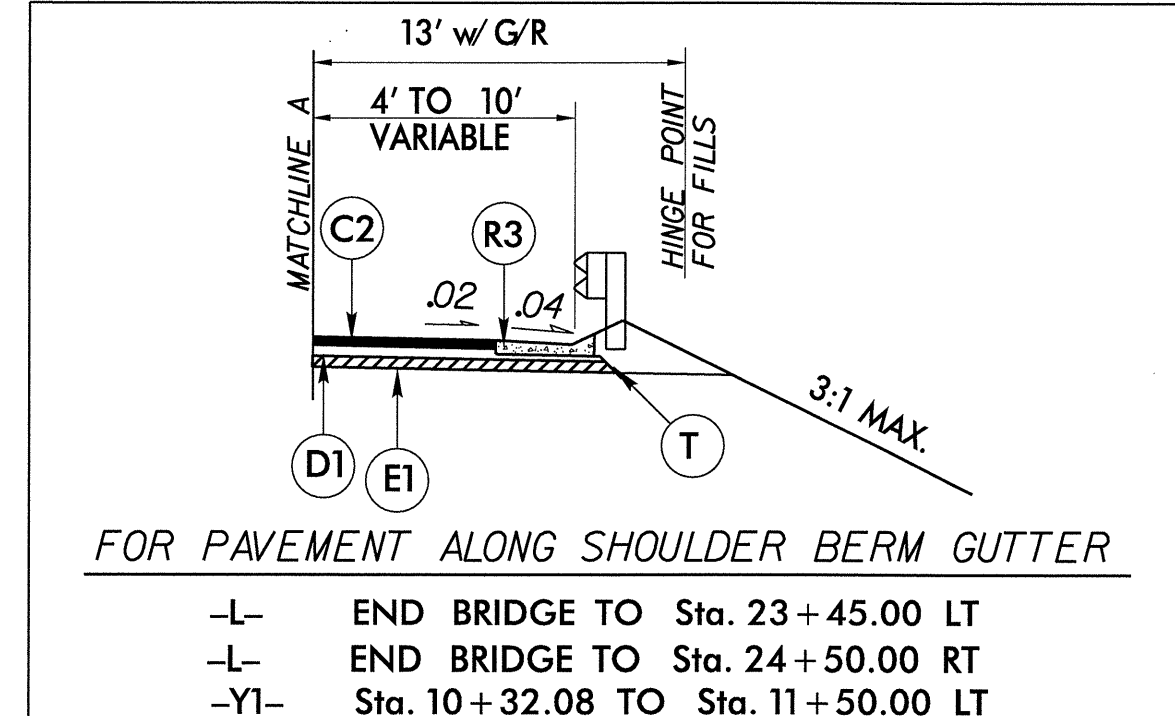
6/22/99
7/19/2012 9:34:07 AM
I:\P\CO\B\3680\RDY\eshid.dgn
USER: BJKENGIN



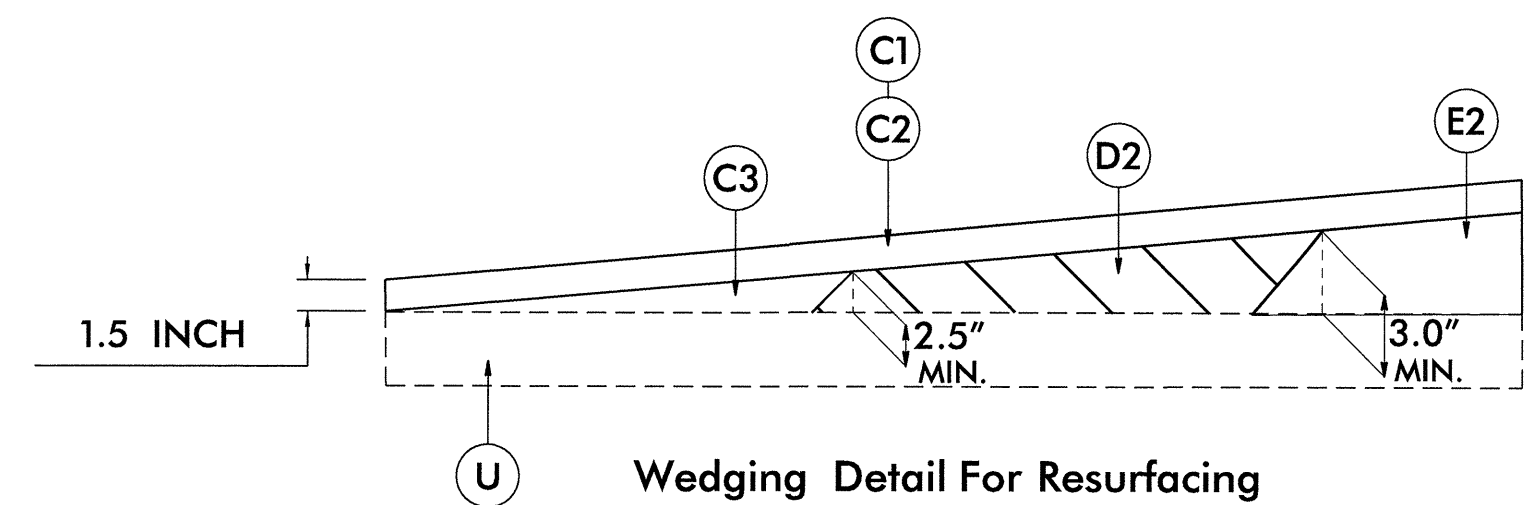
TYPICAL SECTION NO.1
 USE AT THE FOLLOWING:
 -L- Sta. 10+28.04 TO 17+45.67 (BEGIN BRIDGE)
 -L- Sta. 19+58.17 (END BRIDGE) TO Sta. 23+32.88



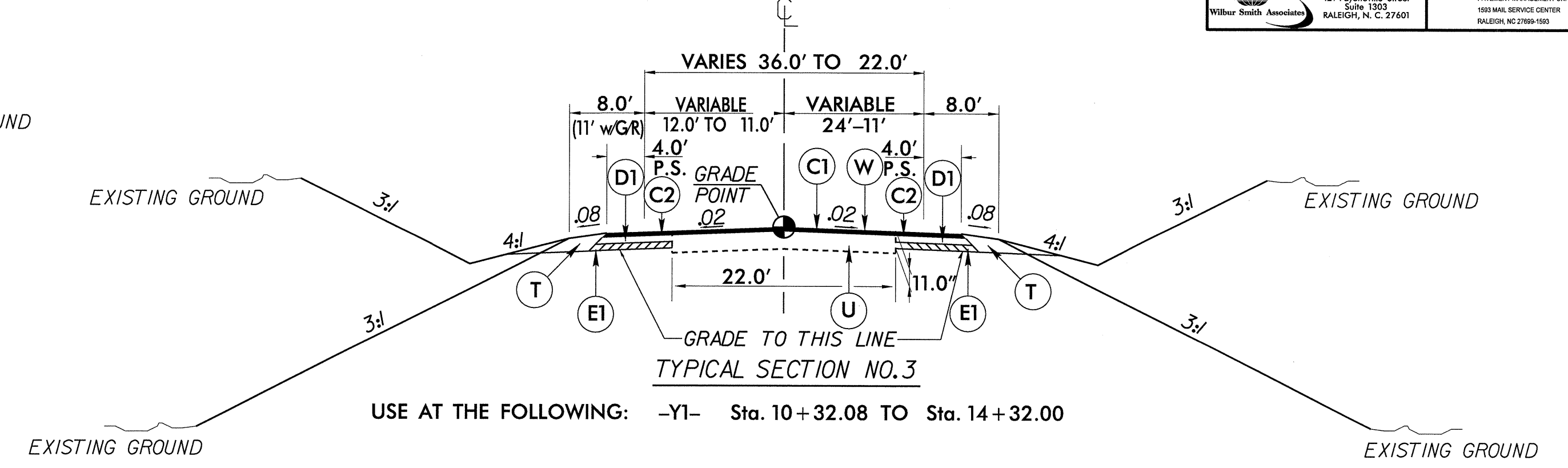
TYPICAL SECTION NO.1A
 -L- Sta. 10+28.04 TO Sta. 17+20.33 LT.
 -L- Sta. 10+28.04 TO Sta. 17+56.17 RT.



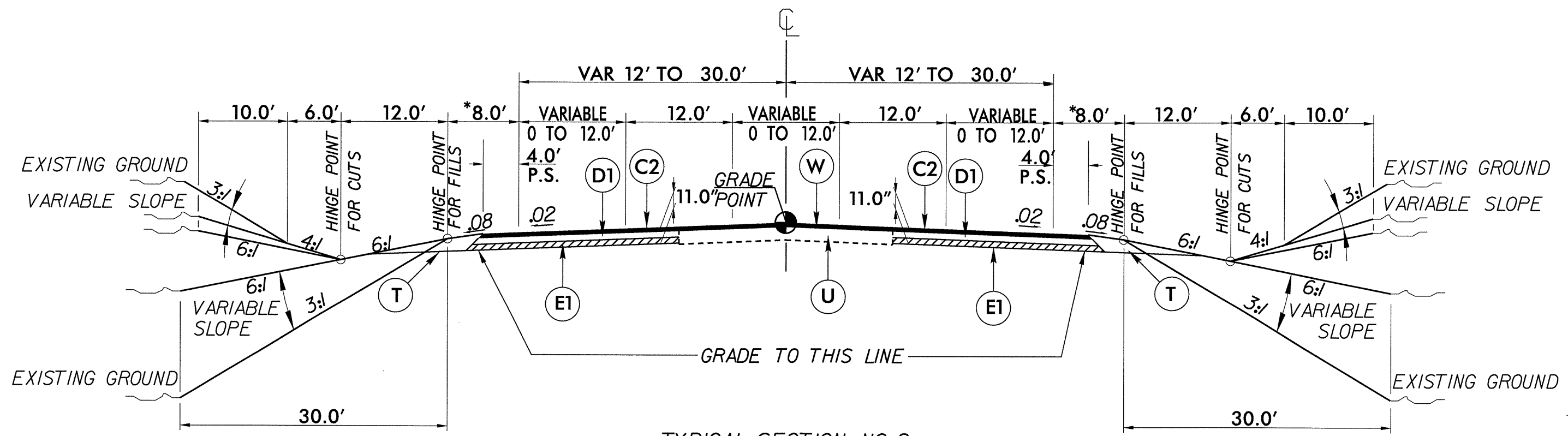
FOR PAVEMENT ALONG SHOULDER BERM GUTTER
 -L- END BRIDGE TO Sta. 23+45.00 LT
 -L- END BRIDGE TO Sta. 24+50.00 RT
 -Y1- Sta. 10+32.08 TO Sta. 11+50.00 LT



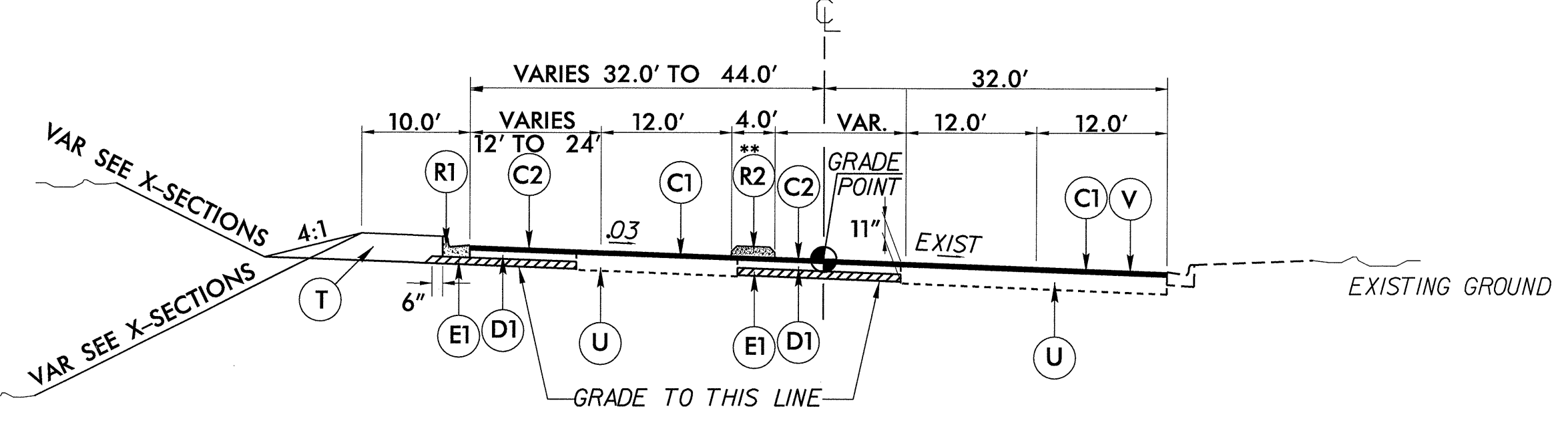
Wedging Detail For Resurfacing



TYPICAL SECTION NO.3
 USE AT THE FOLLOWING: -Y1- Sta. 10+32.08 TO Sta. 14+32.00



TYPICAL SECTION NO.2
 USE AT THE FOLLOWING: -L- Sta. 23+32.88 TO Sta. 33+57.42



TYPICAL SECTION NO.5
 USE AT THE FOLLOWING: -Y2- Sta. 10+78.00 TO Sta. 19+35.71

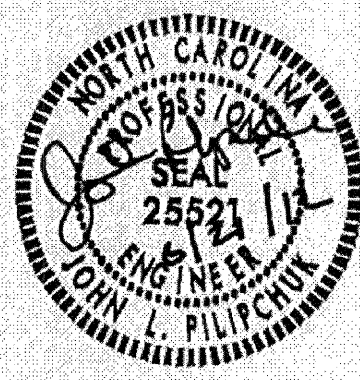
PAVEMENT SCHEDULE

ITEM	DESCRIPTION	ITEM	DESCRIPTION	ITEM	DESCRIPTION
(C1)	PROPOSED APPROXIMATE 1.5 IN. ASPHALT SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS/SY.	(E1)	PROP. APPROX. 4.0 IN. ASPHALT BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS/SY.	(T)	EARTH MATERIAL
(C2)	PROPOSED APPROXIMATE 3.0 IN. ASPHALT SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS/SY IN EACH OF TWO LIFTS.	(E2)	PROP. VAR. DEPTH ASPHALT BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS/SY/IN IN LIFTS NOT LESS THAN 3 IN. NOR GREATER THAN 5.5 IN.	(U)	EXISTING PAVEMENT
(C3)	PROP. VAR. DEPTH ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS/SY/IN. IN LIFTS NOT LESS THAN 1.5 IN. NOR GREATER THAN 2.0 IN.	(R1)	2'-6" CURB & GUTTER	(V)	MILL OUT & REPLACE EXISTING PAVEMENT AS NOTED TO A DEPTH OF 1.5"
(D1)	PROP. APPROX. 4.0 IN. ASPHALT INT. COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS/SY	(R2)	5" MONOLITHIC CONCRETE ISLAND (KEYED IN) ***	(W)	WEDGING (SEE WEDGE DETAIL ABOVE)
(D2)	PROP. VAR. DEPTH ASPHALT INT. COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS/SY/IN. IN LIFTS NOT LESS THAN 2.5 IN. NOR GREATER THAN 4.0 IN. (MAX TOTAL LAYER=4.0 IN.)	(R3)	SHOULDER BERM GUTTER		

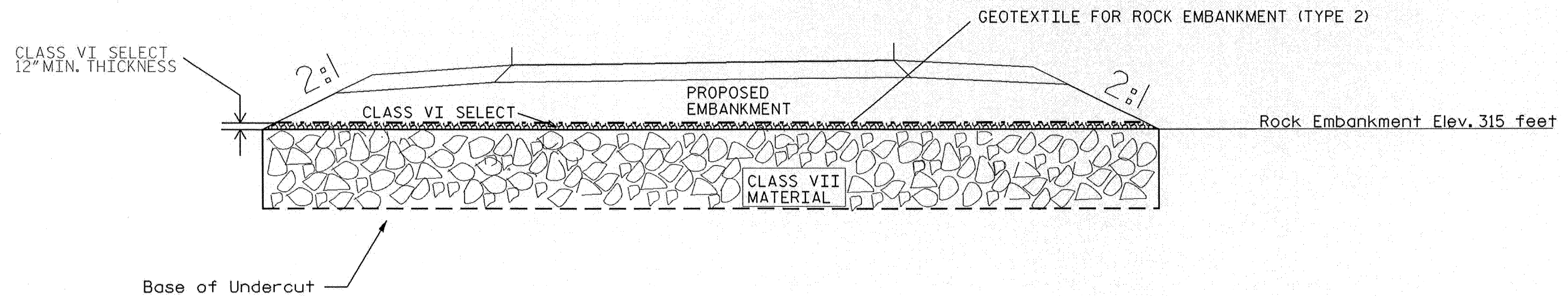
NOTES :

- * INCREASE SHLD. TO 13' WHEN GUARDRAIL IS USED (EXCEPT WHEN PLACED AT FACE OF CURB)
- ** PROPOSED ISLAND: -Y2- STA. 14+20.40 TO 17+96.21
 TIE TO EXIST. ISLAND: -Y2- STA. 10+78.00 TO 14+20.40
 REMOVE EXIST. MEDIAN ISLAND:
 -Y2- STA. 15+38.91 TO -L- STA. 18+07.63
- MILLING ALONG -Y2- REQUIRED TO MEET MINIMUM RESURFACING DEPTH OF 1.5"
- PAVEMENT EDGES ARE 1:1 UNLESS OTHERWISE NOTED.

REVISIONS

GEOTECHNICAL ENGINEER  #SIGNATURE DATE	ENGINEER #SIGNATURE DATE
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ROCK EMBANKMENT DETAIL



APPROXIMATE LOCATIONS OF ROCK EMBANKMENT	
Station 12+50 -L-	to 13+50 -L-
Station 15+00 -L-	to 17+00 -L-

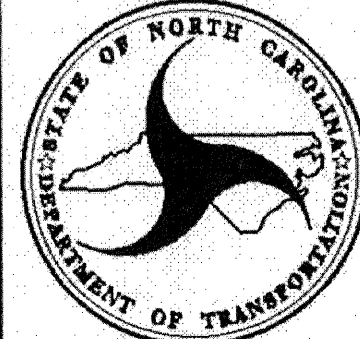
TOTAL ROCK EMBANKMENT QUANTITIES	
ROCK EMBANKMENTS	17,500 TONS
*57 STONE	2,250 TONS
GEOTEXTILE FOR ROCK EMBANKMENTS	3,500 SY

Not to Scale

PREPARED BY: C. LITTLE DATE: 6-16-12
 REVIEWED BY: J. PILIPOHUK DATE: 6-18-12

GEOTECHNICAL ENGINEERING UNIT

EASTERN REGIONAL OFFICE
 WESTERN REGIONAL OFFICE
 CONTRACT OFFICE


STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

B-3680 (MOORE CO.)
ROCK EMBANKMENT DETAIL

REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		

Summary of Quantities - B-3680

ItemNumber	Sec #	Quantity	Unit	Description
6117000000-N	SP	25	EA	RESPONSE FOR EROSION CONTROL
6120000000-E	SP	55	CY	CULVERT DIVERSION CHANNEL
6129000000-E	1670	1.67	ACR	WETLAND REFORESTATION
6135000000-E	SP	1.67	ACR	GENERIC EROSION CONTROL ITEM DISKING
6135000000-E	SP	1.67	ACR	GENERIC EROSION CONTROL ITEM RIPPING
6141000000-E	SP	400	SY	GENERIC EROSION CONTROL ITEM LIVE STAKING
7060000000-E	1705	1,550	LF	SIGNAL CABLE
7120000000-E	1705	12	EA	VEHICLE SIGNAL HEAD (12", 3 SECTION)
7132000000-E	1705	2	EA	VEHICLE SIGNAL HEAD (12", 4 SECTION)
7144000000-E	1705	1	EA	VEHICLE SIGNAL HEAD (12", 5 SECTION)
7252000000-E	1710	110	LF	MESSENGER CABLE (1/4")
7288000000-E	1715	200	LF	PAVED TRENCHING (*****) (1, 2')
7300000000-E	1715	1,200	LF	UNPAVED TRENCHING (*****) (1, 2')
7300000000-E	1715	40	LF	UNPAVED TRENCHING (*****) (2, 2')
7301000000-E	1715	120	LF	DIRECTIONAL DRILL (*****) (1, 2')
7301000000-E	1715	350	LF	DIRECTIONAL DRILL (*****) (2, 2')
7324000000-N	1716	15	EA	JUNCTION BOX (STANDARD SIZE)
7444000000-E	1725	1,200	LF	INDUCTIVE LOOP SAWCUT
7456000000-E	1726	4,600	LF	LEAD-IN CABLE (*****) (14-2)
7574500000-N	SP	1	EA	FURNISH WIRELESS RADIO MODEM
7574500000-N	SP	1	EA	FURNISH WIRELESS LIGHTNING ARRESTOR
7575142000-N	1736	3	EA	900MHZ RADIO
7588000000-N	SP	2	EA	METAL POLE WITH SINGLE MAST ARM

ItemNumber	Sec #	Quantity	Unit	Description
7590000000-N	SP	2	EA	METAL POLE WITH DUAL MAST ARM
7613000000-N	SP	4	EA	SOIL TEST
7614100000-E	SP	32	CY	DRILLED PIER FOUNDATION
7631000000-N	SP	4	EA	MAST ARM WITH METAL POLE DESIGN
7636000000-N	1745	1	EA	SIGN FOR SIGNALS
7684000000-N	1750	2	EA	SIGNAL CABINET FOUNDATION
7756000000-N	1751	2	EA	CONTROLLER WITH CABINET (TYPE 2070L, BASE MOUNTED)
7780000000-N	1751	11	EA	DETECTOR CARD (TYPE 2070L)
7901000000-N	1753	2	EA	CABINET BASE EXTENDER

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

"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

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOULDER WIDTH	FLARE LENGTH		W		ANCHORS						IMPACT ATTENUATOR TYPE 350			SINGLE FACED CONCRETE BARRIERS	REMARKS												
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	GRAU 350	CAT-1	AT-1	B-77	TYPE III	EA G NG																	
																				EA	G	NG															
-Y2-	15+50.70 Y2	17+28.88 -L-	LT	887.50	75.00			17+27	2									1																			
-Y2-	19+94 Y2	17+64.72 -L-	LT	725.00	112.50			17+64 -L-	2											1																	
-L-	19+39.12	11+56.49 Y1	LT	387.50	50.00			19+40 -L-	10	13	90		6							1																	
-L-	19+74.96	24+57.47	RT	462.50				19+76	10	13		90								1																	
SUBTOTAL				2462.50	237.50															2	2		4														
LESS ANCHOR DEDUCTIONS				-187.50																																	
GRAU 350 2 @ 50.00 =																																					
B-77 4 @ 18.75 =																																					
CAT-1 2 @ 6.25 =																																					
TOTAL				2275.00	237.50															2	2		4														
SAY				2275.00	250.00			5 ADDITIONAL GR POST												2	2		4														
REMOVE EXISTING GUARDRAIL: 2,930 LF																																					

REMOVAL OF EXISTING ASPHALT PAVEMENT SUMMARY

LINE	STATION TO STATION	LOCATION	SQUARE YARDS
-L-	STA 19+36 TO STA 23+69	LT	1,296
-Y2-, -L-	-Y1- STA 10+97 TO -L- STA 17+40	LT	4,359
		TOTAL	5,655
		SAY	5,660

REVISIONS

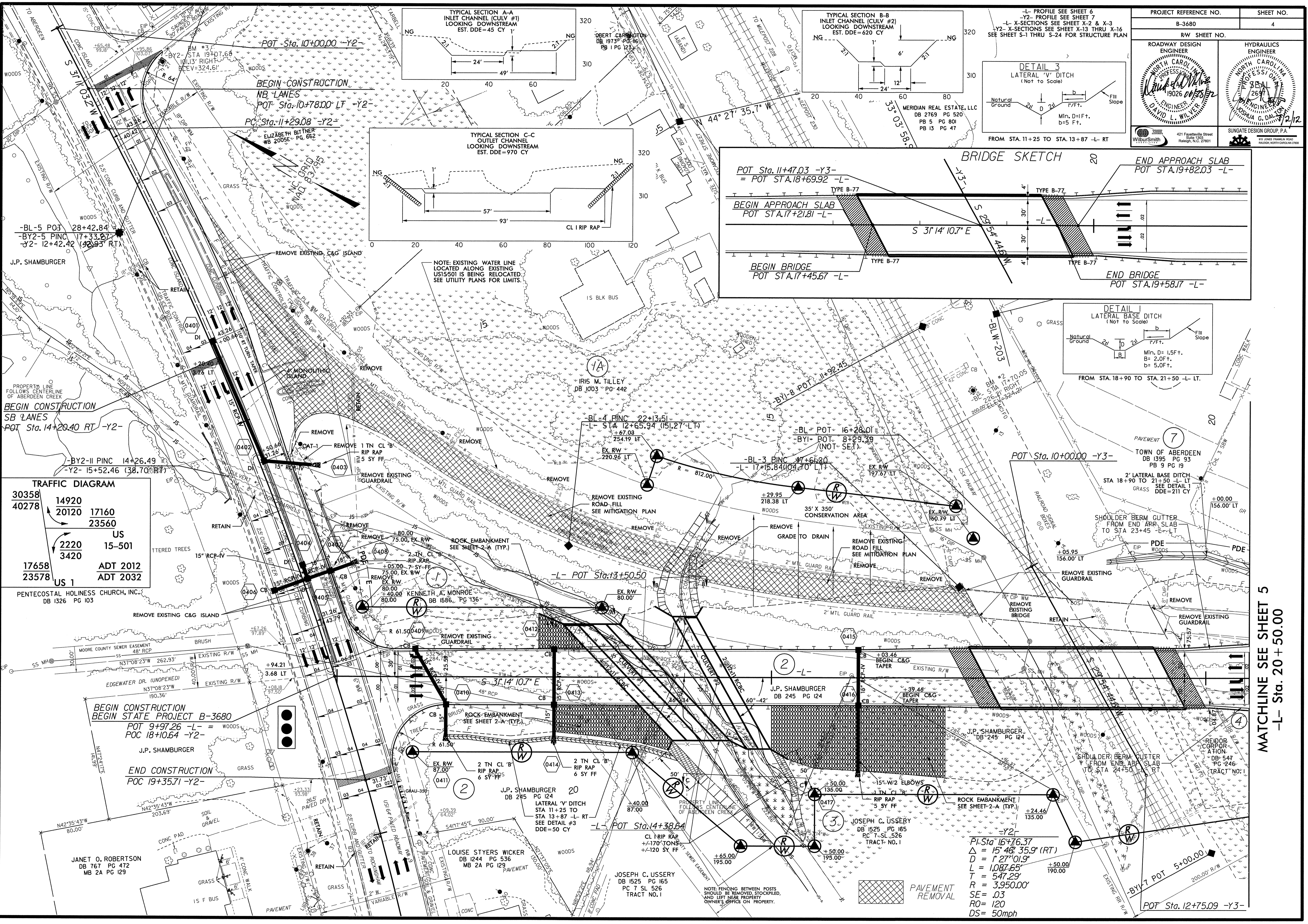
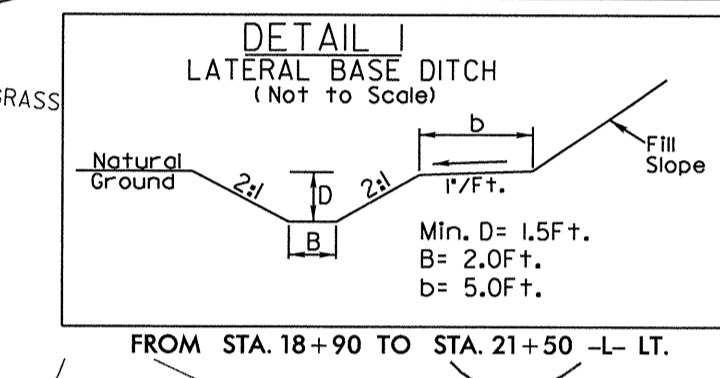
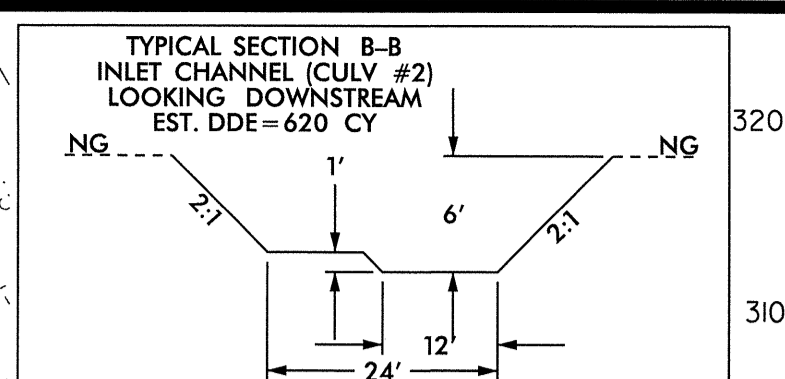
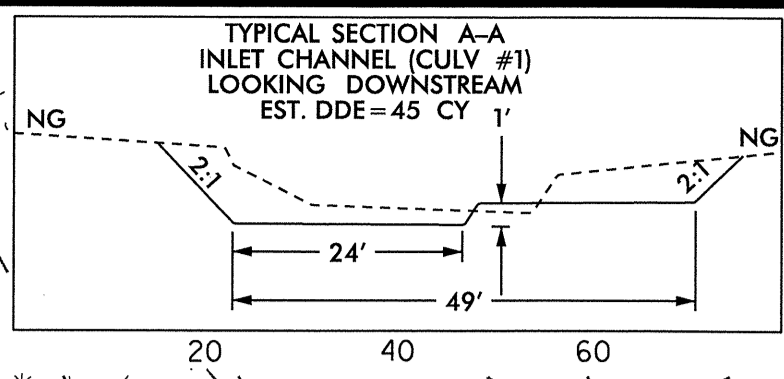
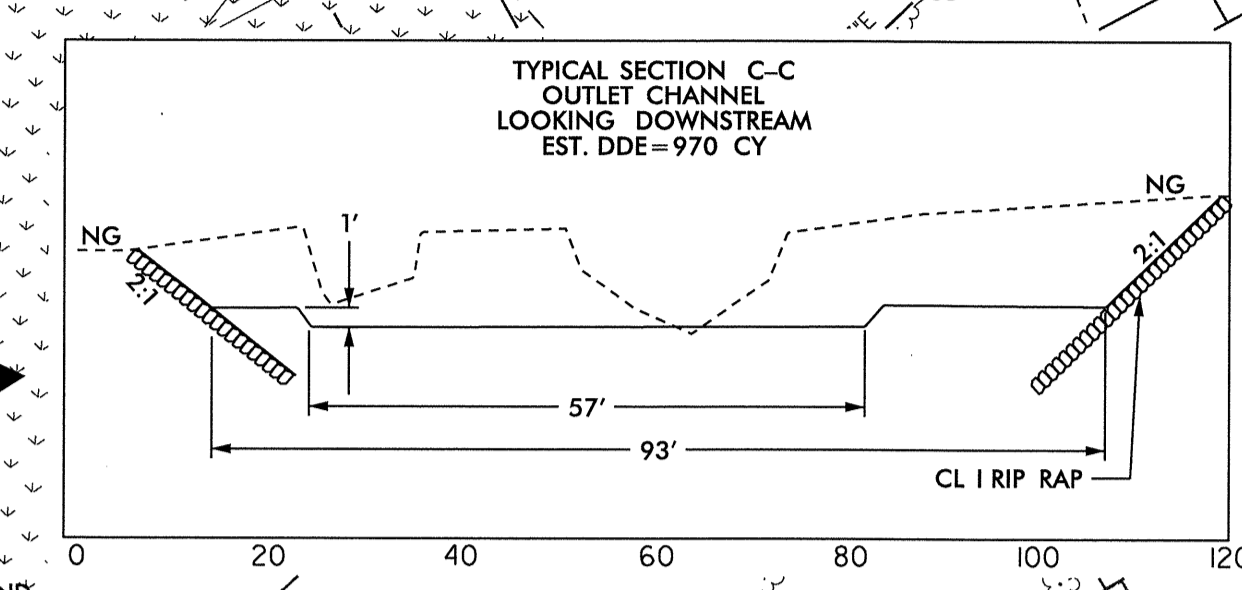
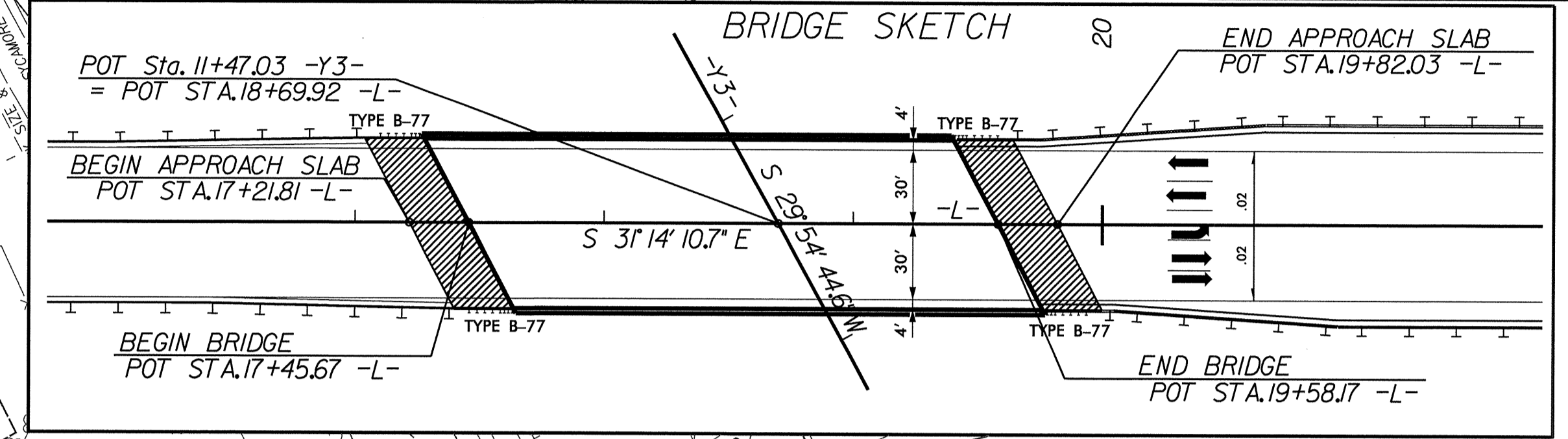
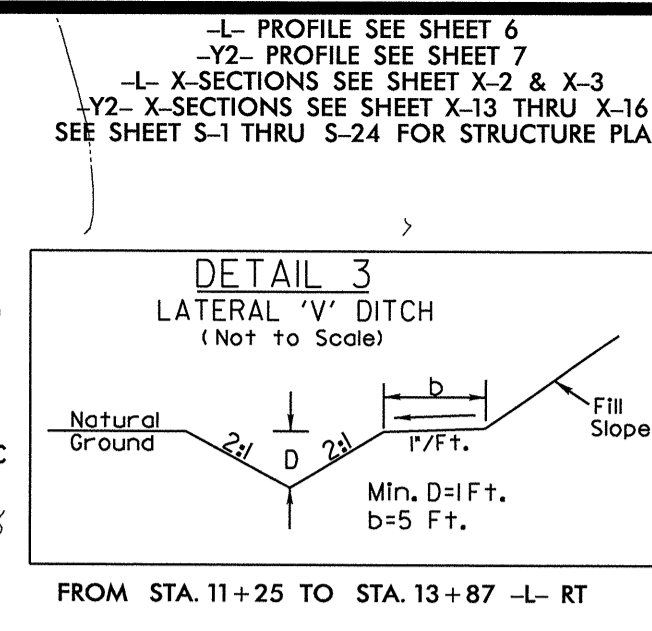
STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS
SUMMARY OF EARTHWORK
 IN CUBIC YARDS

REVISIONS

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBANKMENT +%	BORROW	WASTE
SUMMARY #1					
-L- STA 10+33.19 TO STA 17+45.67 (Begin Bridge)	39		80,504	80,465	
Y2 STA 10+78.00 TO STA 19+35.71	329		406	77	
SUBTOTAL: SUMMARY #1	368		80,910	80,542	
SUMMARY #2					
-L- STA 19+58.17 (End Bridge) TO STA 33+57.42	1,684		52,540	50,856	
Y1 STA 10+36.35 TO STA 14+32.00	596		7		589
SUBTOTAL: SUMMARY #2	2,280		52,547	50,856	589
SUMMARY #3					
EXIST -L- STA 25+00.00 TO STA 35+00.00 (REMOVE EXISTING ROADBED)	47,296				47,296
SUBTOTAL: SUMMARY #3	47,296				47,296
SUBTOTAL (SUMMARIES 1-3)	49,944		133,457	131,398	47,885
SHOULDER CONSTRUCTION					
LOSS DUE CLEARING & GRUBBING PER GEOTECH REPORT	-100		390	390	
WASTE TO BE USED IN LIEU OF BORROW				-589	-589
PROJECT TOTAL	49,844		133,847	131,299	47,296
ESTIMATE 5% TO REPLACE TOPSOIL IN BORROW PITS				6,565	
GRAND TOTAL	49,844		133,847	137,864	47,296
SAY	49,900			137,900	
DRAINAGE DITCH EXCAVATION: EST. 1,900 CY					
SHALLOW UNDERCUT EXCAVATION CONTINGENCY PER GEOTECH REPORT: 750 CY					
UNDERCUT EXCAVATION CONTINGENCY PER GEOTECH REPORT: 10,000 CY					
SELECT GRANULAR MATERIAL PER GEOTECH REPORT: 3,500 CY					

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".

EARTHWORK QUANTITIES ARE CALCULATED BY THE ROADWAY DESIGN UNIT. THESE QUANTITIES ARE BASED IN PART ON THE SUBSURFACE DATA PROVIDED BY THE GEOTECHNICAL ENGINEERING UNIT.



TRAFFIC DIAGRAM

30358	14920	17160
40278	20120	23560
US		
2220	3420	15-501
ADT 2012		
17658	23578	ADT 2032
US 1		

REVISIONS

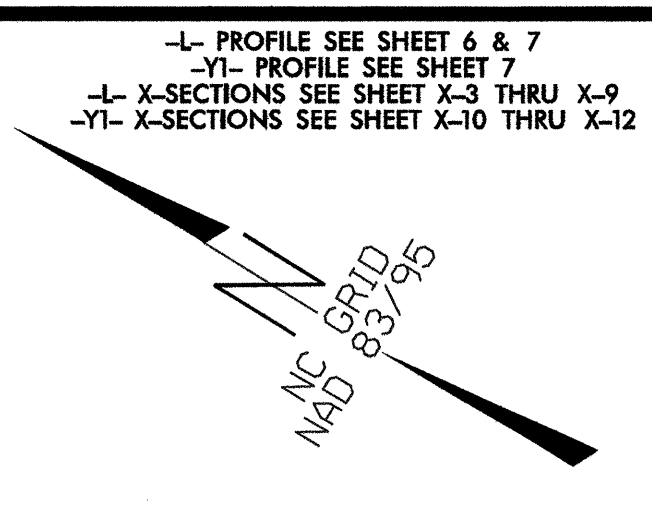
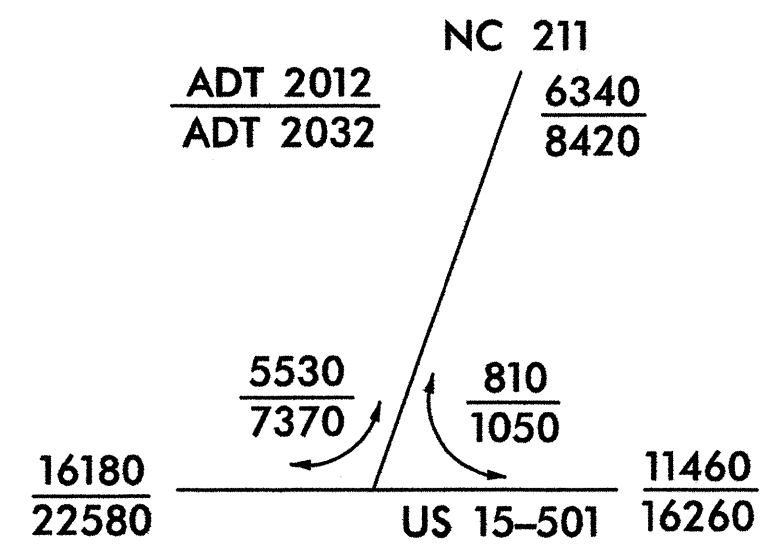
MATCHLINE SEE SHEET 5
-L- Sta. 20 + 50.00

FILE: R:\mcd\183680\Roadway\Proj\183680_RDY_P1804.dwg
DATE: 6/27/2012 4:52:16 PM

NOTE: FENCING BETWEEN POSTS SHOULD BE REMOVED, STOCKPILED, AND LEFT NEAR PROPERTY OWNERS' OFFICE ON PROPERTY.

PI- Sta 16+16.37
Δ = 15° 46' 35.9" (RT)
D = 1' 27" 01.9"
L = 1,087.65'
T = 547.29'
R = 3,950.00'
SE = .03
RO = 120
DS = 50mph

TRAFFIC DIAGRAM



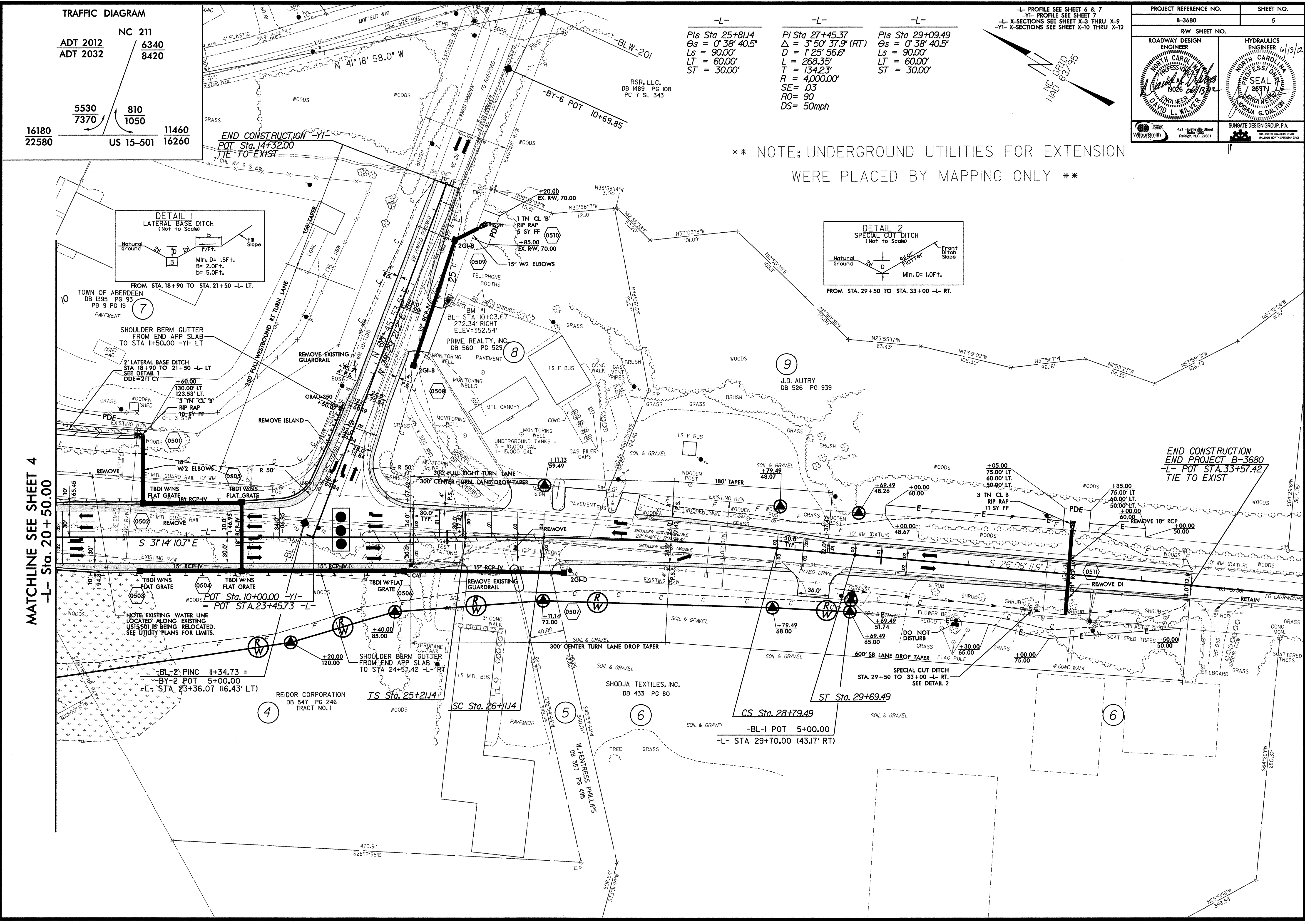
-L-	-L-	-L-
PI Sta 25+81.4	PI Sta 27+45.37	PIs Sta 29+09.49
Δs = 0° 38' 40.5"	Δ = 3° 50' 37.9" (RT)	Δs = 0° 38' 40.5"
Ls = 90.00'	D = 1' 25" 56.6"	Ls = 90.00'
LT = 60.00'	L = 268.35'	LT = 60.00'
ST = 30.00'	T = 134.23'	ST = 30.00'
	R = 4,000.00'	
	SE = .03	
	RO = 90	
	DS = 50mph	

PROJECT REFERENCE NO. B-3680	SHEET NO. 5
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 19026 DAVID L. WILVE	HYDRAULICS ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 26371 WASHA G. DIXON
421 Fayetteville Street Suite 1300 Raleigh, N.C. 27601	SUNGATE DESIGN GROUP P.A. 100 GARDEN FARMWAY ROAD WALDEN, NORTH CAROLINA 27157

**** NOTE: UNDERGROUND UTILITIES FOR EXTENSION WERE PLACED BY MAPPING ONLY ****

MATCHLINE SEE SHEET 4
-L- Sta. 20+50.00

END CONSTRUCTION
END PROJECT B-3680
-L- POT STA. 33+57.42
TIE TO EXIST



REVISIONS

FILE: R:\p001\B3680\Roadway\Proj\B3680_BDY_25K05.dgn
DATE: 6/22/2017 4:11:14 PM

PROJECT REFERENCE NO. B-3680		SHEET NO. 6	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL ENGINEERING SOCIETY 19026 06/12/12		HYDRAULICS ENGINEER NORTH CAROLINA PROFESSIONAL ENGINEERING SOCIETY 2637 12/12	
WILBURSMITH		SUNGATE DESIGN GROUP, P.A. 421 Fayetteville Street Suite 1300 Raleigh, N.C. 27601	

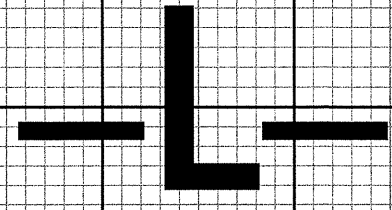
INFORMATION TO BE SHOWN ON PLANS

Design: Discharge 2900 c.f.s. Frequency 50 YR Elev. 321.9

Base Flood: Discharge 3300 c.f.s. Frequency 100 YR Elev. 322.5

Overtopping: Discharge 33300 c.f.s. Frequency 100 YR Elev. 323.0

*FROM SECTION 35013, ELEVATIONS ADJUSTED TO 88 (-0.8)



BM#2 ELEV 324.21
-BL- STA 17+70.05 (226.21' RT)
-L- STA 17+30.33 (330.62' LT)

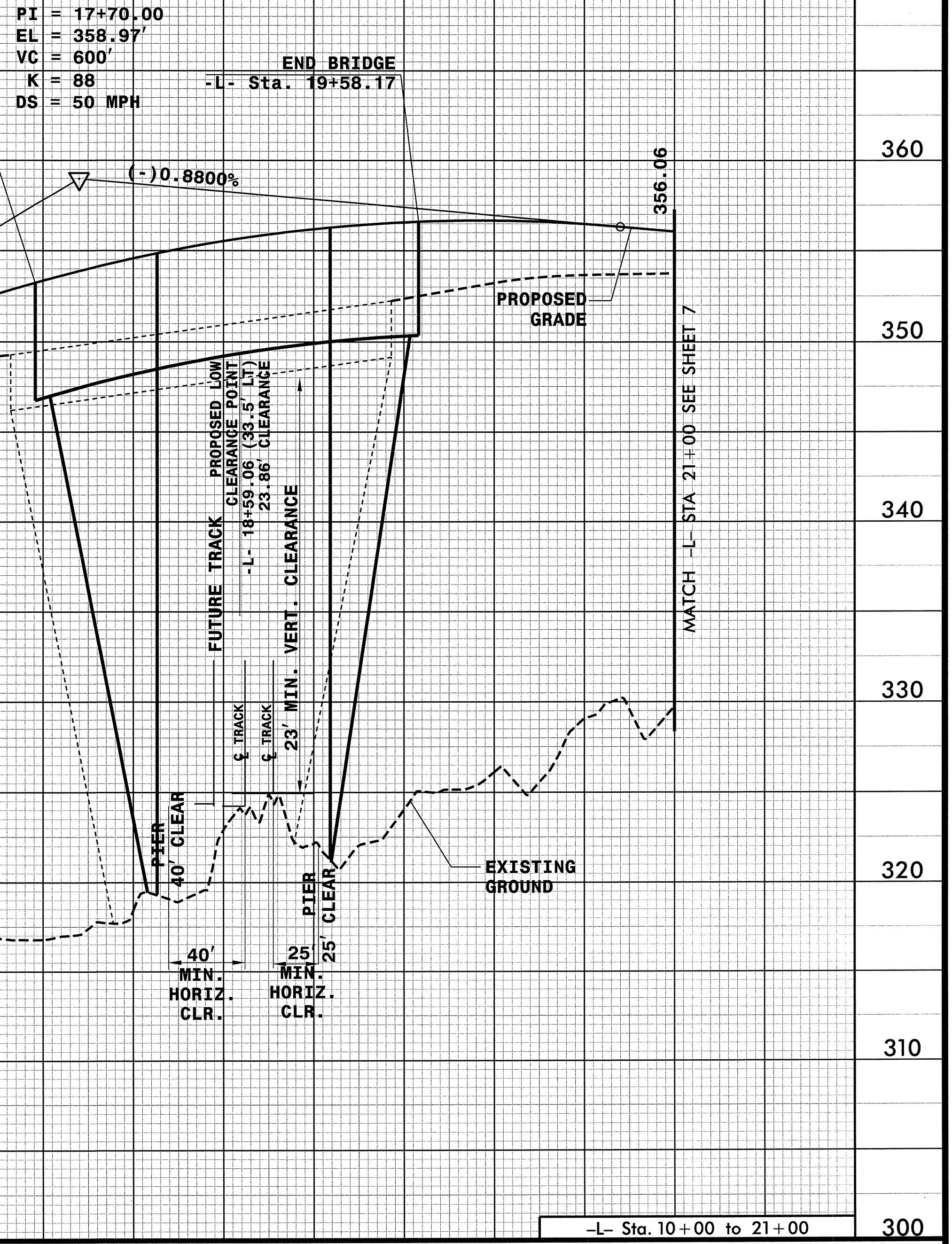
PI = 17+70.00
EL = 358.97'
VC = 600'
K = 88
DS = 50 MPH

END BRIDGE
-L- Sta. 19+58.17

-L- Sta. 9+97.26 =
-Y2- Sta 18+10.64
EL. 322.82

BEGIN GRADE
-L- Sta. 10+28.04
= -Y2- Sta 18+19.93 (29.34' LT)
EL. 323.74

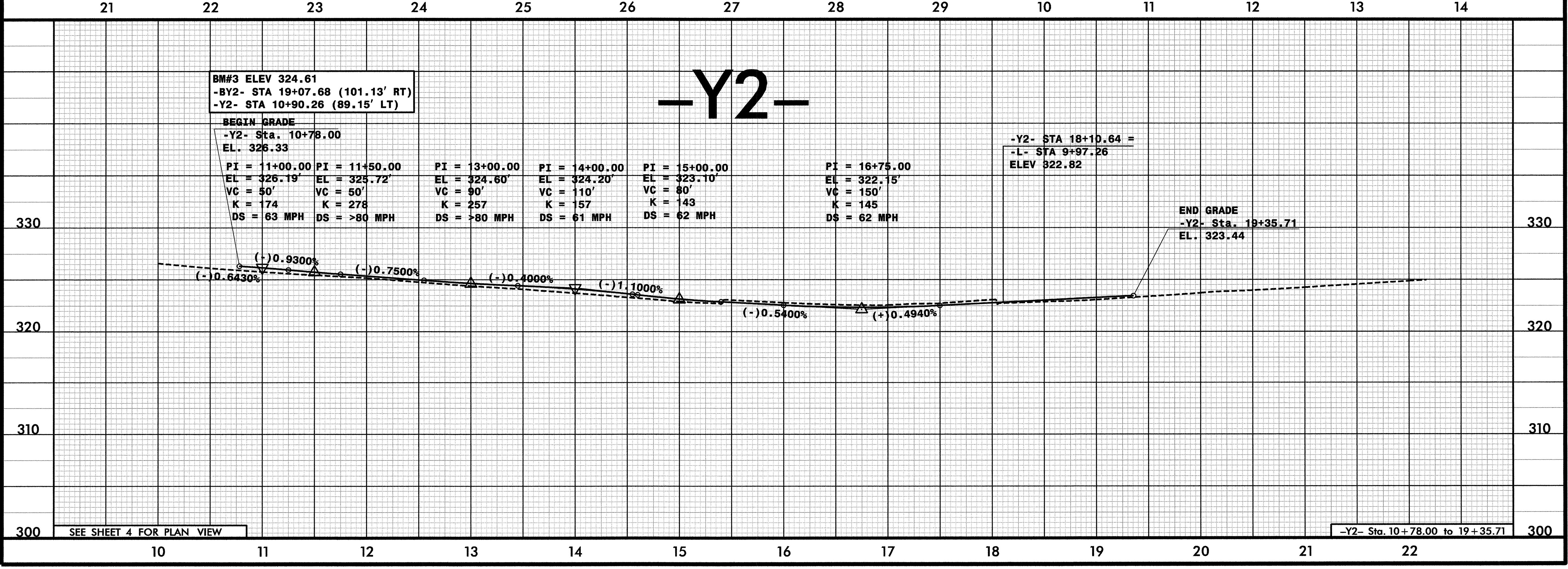
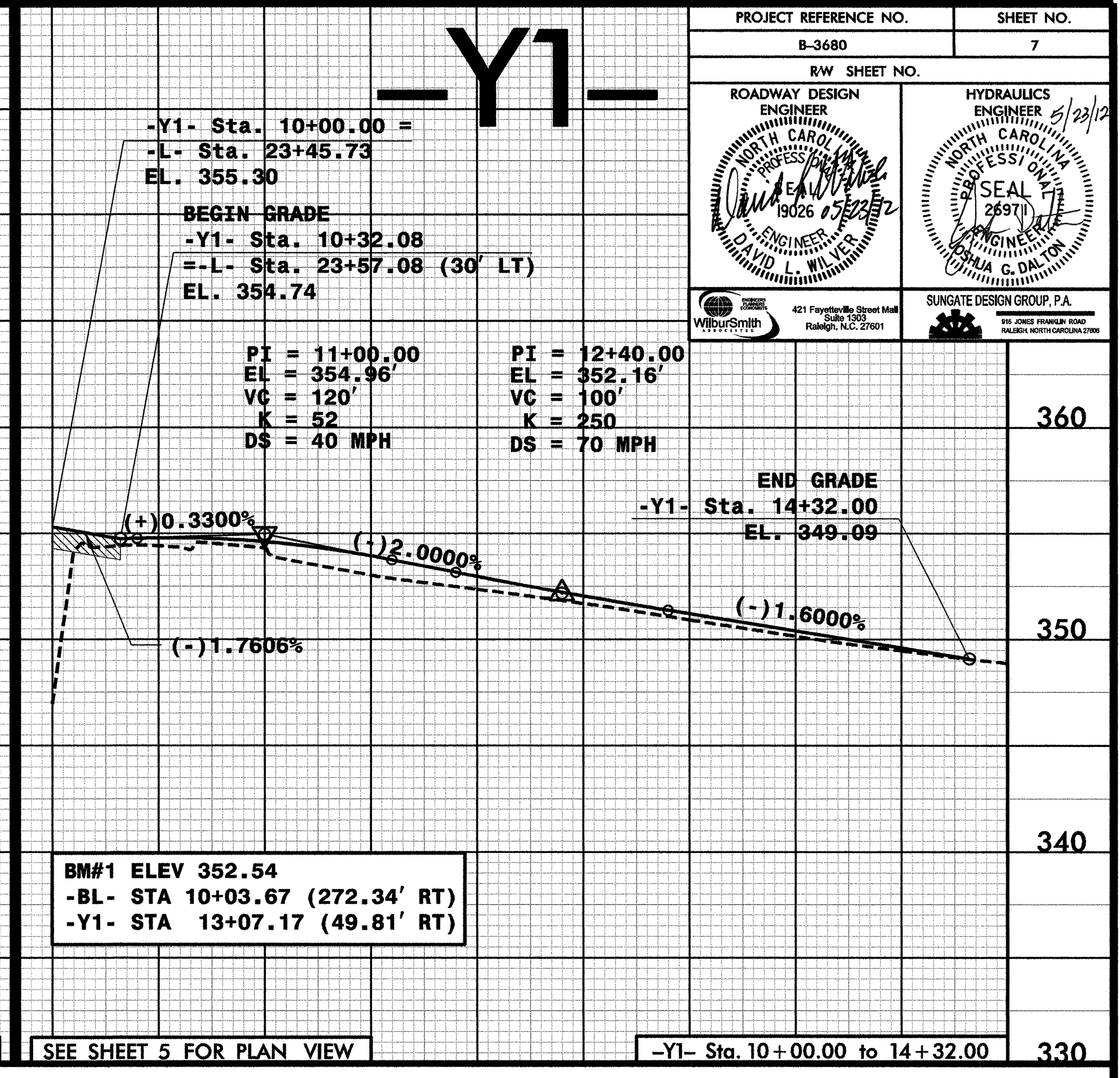
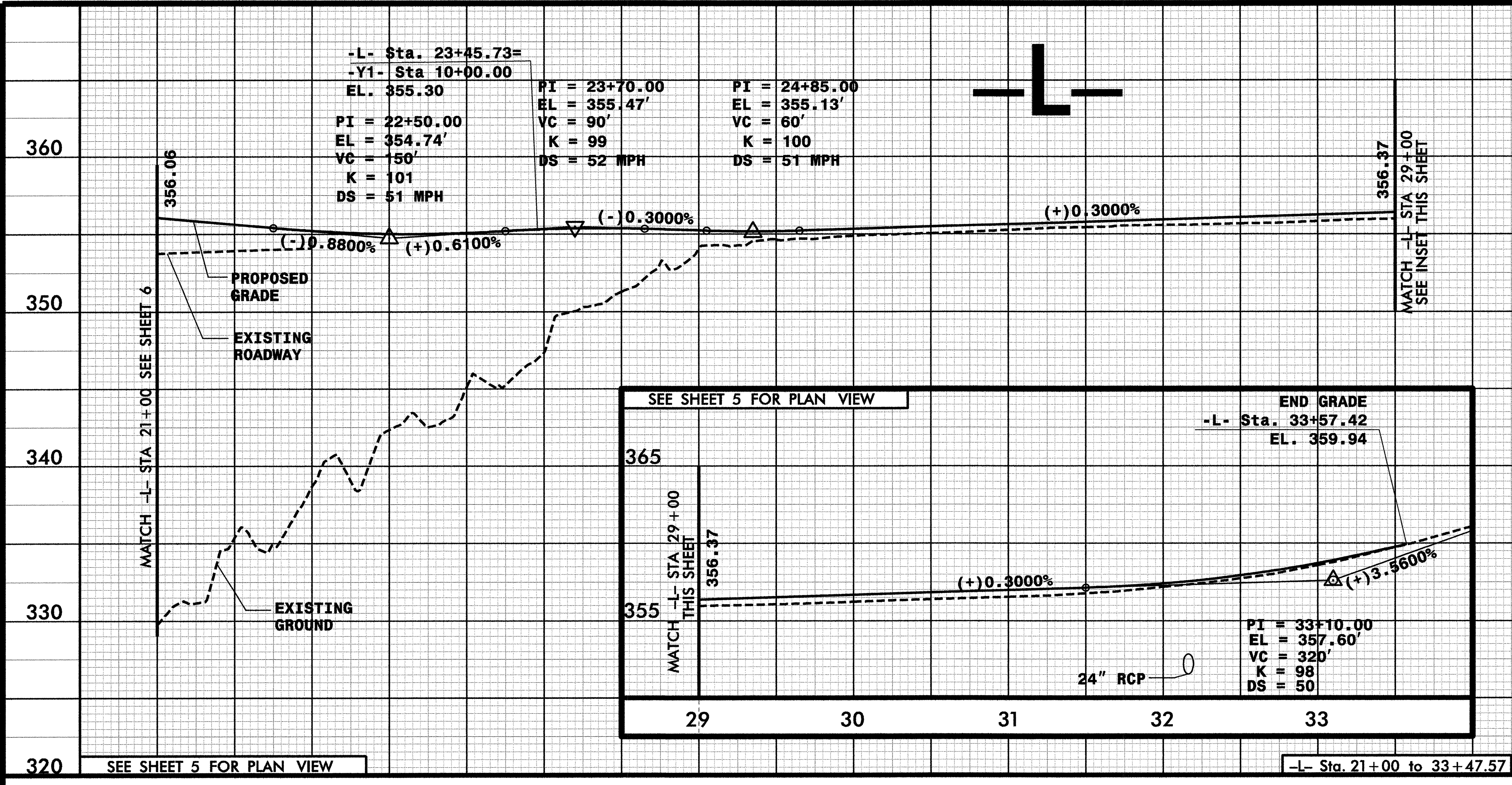
PI = 12+50.00
EL = 328.18'
VC = 400'
K = 102
DS = 55 MPH



SEE SHEET 4&5 FOR PLAN VIEW

-L- Sta. 10+00 to 21+00

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