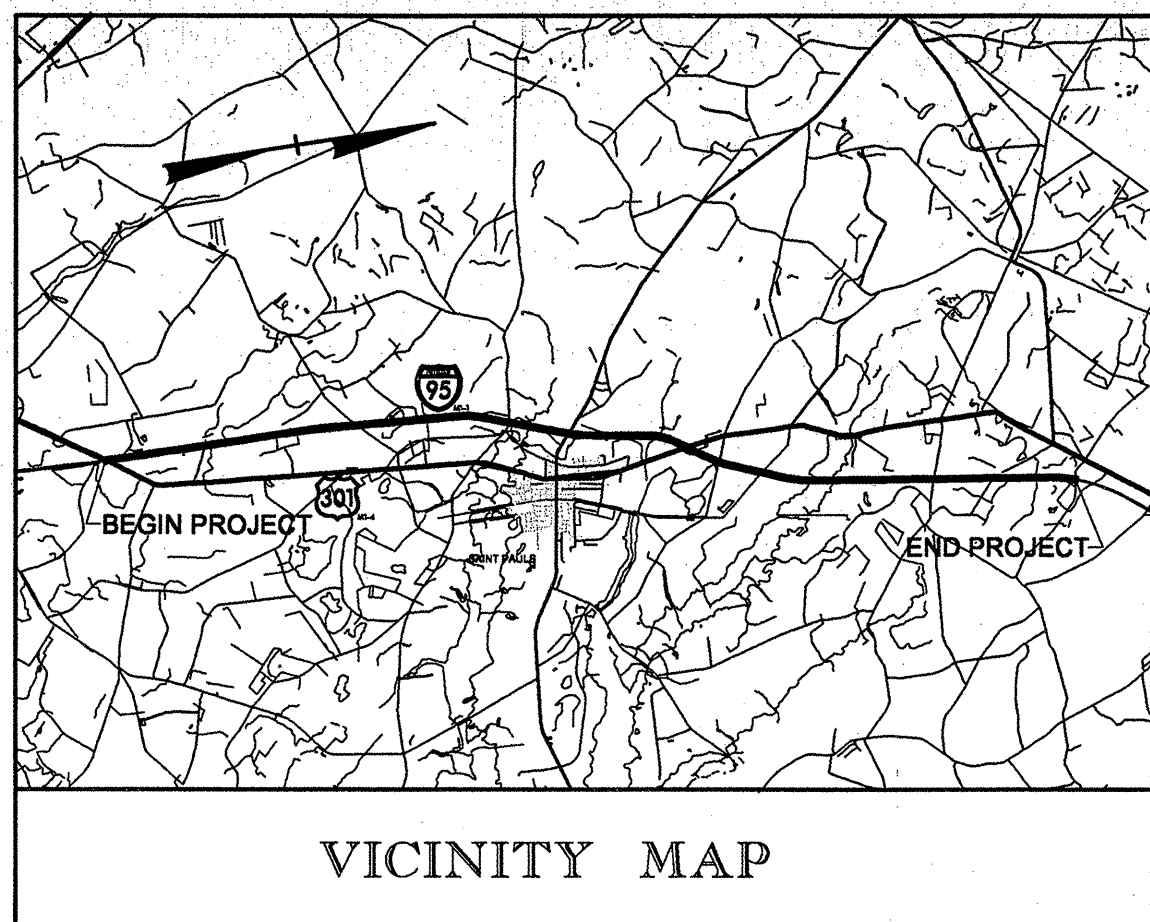


See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols



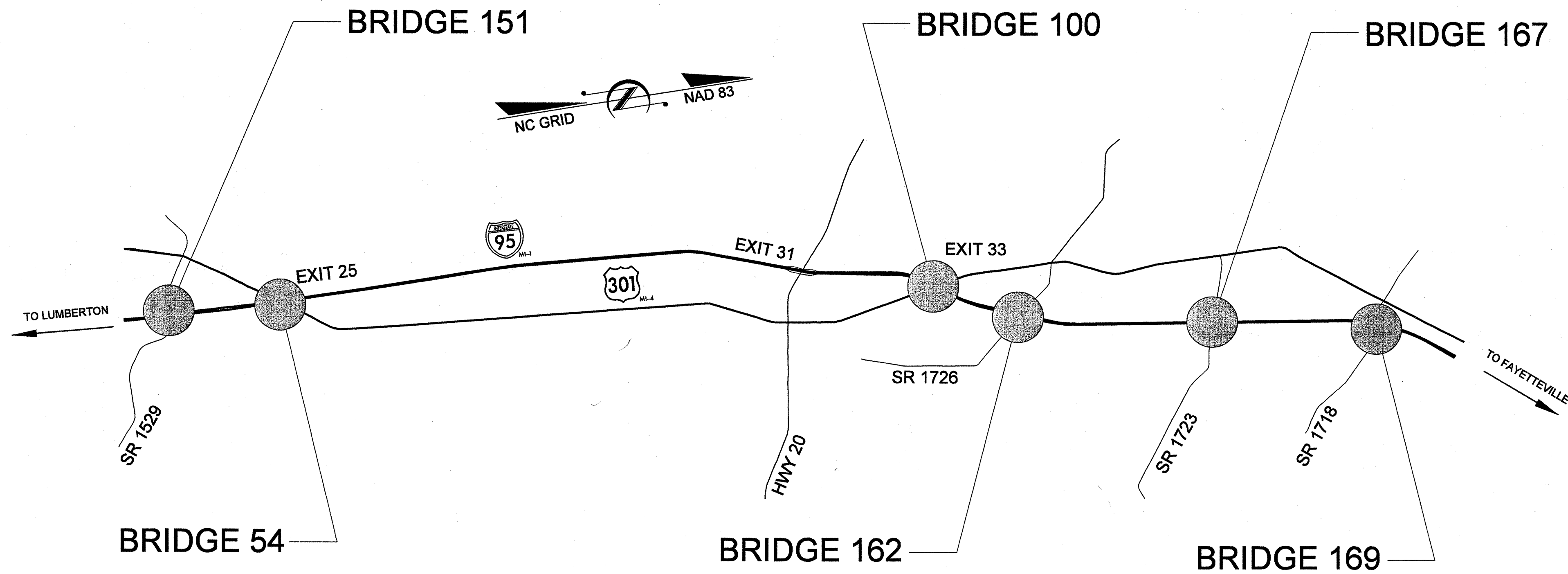
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ROBESON COUNTY

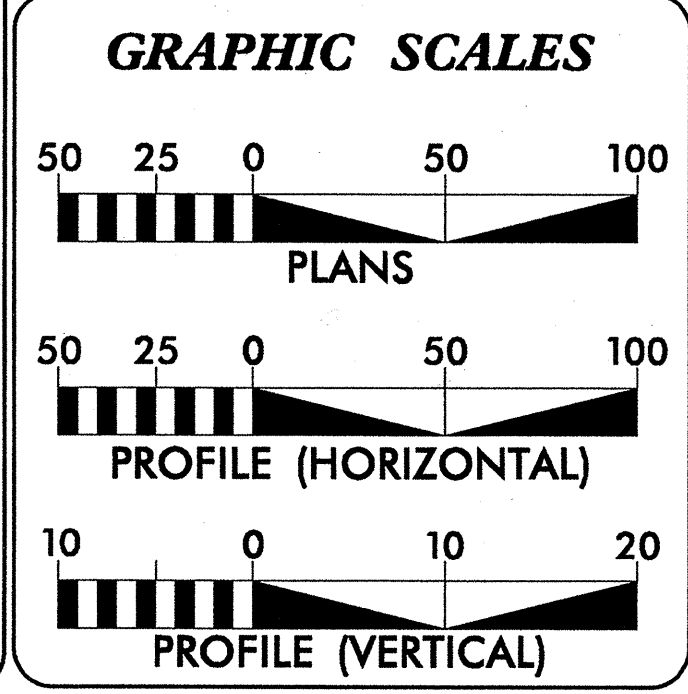
LOCATION: BRIDGES 151, 54, 100, 162, 167, AND 169
LOCATED ALONG I-95

TYPE OF WORK: JACK STRUCTURES, SPAN REPLACEMENTS,
GRADING, PAVING, AND DRAINAGE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5021	1	
WBS NO.	F.A. PROJ. NO.	DESCRIPTION	
41927.1.1	IMS-95-1 (76) 33	PE	
41927.2.1		RW & UTILITY	
41927.3.1	IMD-095-1 (78) 33	CONSTRUCTION	



CONTRACT: C202079 TIP PROJECT: B-5021



DESIGN DATA

V = 55 MPH

Prepared In the Office of:
STV/Ralph Whitehead Associates, Inc.
1000 West Morehead St., Ste. 200
Charlotte, NC 28205

For the North Carolina Department of Transportation
2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: _____

LETTING DATE:
JULY 15, 2008

JOHN N. JOHNSON, P.E.
PROJECT ENGINEER

ERIN DAY
PROJECT DESIGN ENGINEER

ROADWAY DESIGN ENGINEER

5-1-08

SIGNATURE: *John N. Johnson* P.E.

**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**

STATE HIGHWAY DESIGN ENGINEER

05/01/2008 10:05 AM N:\B-5021\RDY_TSH.dgn

GENERAL NOTES

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

GRADING:
THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AS DIRECTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:
CLEARING AND GRUBBING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II. (NCDOT STD. 200.02)

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:
EARTH 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.

SUBSURFACE PLANS:
SUBSURFACE INFORMATION IS NOT AVAILABLE ON THIS PROJECT.

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.

MAILBOXES:
THE CONTRACTOR SHALL RELOCATE ALL MAIL BOXES AS REQUIRED BY SECTION 107-12 OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES. COORDINATE THIS WORK WITH THE U.S. POSTAL SERVICE.

FENCES:
THE CONTRACTOR SHALL REMOVE AND RESET ALL FENCES, AS NOTED ON THE PLANS AND/OR AS DIRECTED BY THE ENGINEER. THIS SHALL BE CONSIDERED INCIDENTAL TO CONTRACT ITEMS.

TREES & SHRUBS:
THE CONTRACTOR SHALL PROTECT ALL TREES AND SHRUBS OUTSIDE THE CUT/FILL LINES, IN ADDITION TO THOSE THAT RECEIVE TREE/SHRUB PROTECTION BARRIERS. THE CONTRACTOR IS ALSO REQUESTED TO SAVE ALL OTHER EXISTING TREES AND SHRUBS AS DIRECTED BY THE ENGINEER.

EROSION CONTROL:
THE CONTRACTOR SHALL USE ALL REASONABLE EROSION CONTROL MEASURES TO CONTAIN ALL SEDIMENT ON SITE. CONTRACTOR'S OPERATIONS AND METHODS SHALL MINIMIZE THE DURATION OF GRADING AND DRAINAGE OPERATIONS. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED AT THE DIRECTION OF THE ENGINEER. INSTALLING AND MAINTAINING ALL REASONABLE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT ITEMS.

UTILITIES:
THE LOCATION OF EXISTING UTILITIES SHOWN ON THE PLANS IS FOR THE USE OF THE CONTRACTOR IN PROVIDING PROTECTION FOR THESE UTILITIES DURING CONSTRUCTION OPERATIONS. NCDOT AND/OR AGENT SHALL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OF LOCATION, SIZE, DEPTH, OR COMPLETENESS OF INFORMATION. BEFORE BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL CONTACT EACH OF THE UTILITY OWNERS IN THE AREA OF CONSTRUCTION RELATIVE TO THEIR UTILITY LOCATIONS. THE CONTRACTOR WILL BE REQUIRED TO PROTECT ALL UTILITIES FROM DAMAGE CAUSED BY CONSTRUCTION OPERATIONS AND/OR RELATED WORK OF THE CONTRACTOR OR HIS AGENTS. THE CONTRACTOR SHALL SAVE HARMLESS NCDOT AND THE AGENT FOR ANY INCONVENIENCE OR DELAY CAUSED BY THE OPERATIONS OF OTHERS IN PERFORMING THE ABOVE WORK. NECESSARY ADJUSTMENT OR RELOCATION OF EXISTING UTILITIES, EXCEPT FOR CONTRACT ITEMS, WILL BE PERFORMED BY OTHERS. THE CONTRACTOR SHALL COOPERATE WITH THOSE PERFORMING UNDERGROUND UTILITY CONSTRUCTION AND COORDINATE HIS WORK WITH OTHERS TO PROVIDE SATISFACTORY PROGRESS IN THE PROJECT AREA.

INDEX OF SHEETS

1	TITLE SHEET
1A	GENERAL NOTES, INDEX & STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
1C THRU 1I	SURVEY CONTROL SHEETS
2 THRU 2A	TYPICAL SECTIONS
2B	DETAIL OF GRAU TYPE BP
3	QUANTITY SUMMARY SHEET
3A	DRAINAGE SUMMARY SHEET
3B	GUARDRAIL SUMMARY SHEET
4 THRU 5	BRIDGE 151 PLAN SHEETS
6 THRU 7	BRIDGE 54 PLAN AND PROFILE SHEETS
8 THRU 9	BRIDGE 100 PLAN AND PROFILE SHEETS
10	BRIDGE 162 PLAN SHEET
11	BRIDGE 167 PLAN SHEET
12	BRIDGE 169 PLAN SHEET
TCP 1 THRU TCP 32	TRAFFIC CONTROL PLANS
SD-1 THRU SD-3	SIGNING PLANS
BR. 151 X-1 THRU BR. 151 X-12	BRIDGE 151 CROSS-SECTIONS
BR. 54 X-1 THRU BR. 54 X-8	BRIDGE 54 CROSS-SECTIONS
BR. 100 X-1 THRU BR. 100 X-5	BRIDGE 100 CROSS-SECTIONS
BR. 162 X-1 THRU BR. 162 X-7	BRIDGE 162 CROSS-SECTIONS
BR. 167 X-1 THRU BR. 167 X-5	BRIDGE 167 CROSS-SECTIONS
BR. 169 X-1 THRU BR. 169 X-4	BRIDGE 169 CROSS-SECTIONS
S-1 THRU S-62	STRUCTURE PLANS

LIST OF STANDARDS

DIVISION 2 - EARTHWORK

200.02	METHOD OF CLEARING - METHOD II
225.04	METHOD OF OBTAINING SUPERELEVATION - TWO LANE PAVEMENTS

DIVISION 4 - MAJOR STRUCTURES

422.10	REINFORCED BRIDGE APPROACH FILLS
--------	----------------------------------

DIVISION 5 - SUBGRADE BASES AND SHOULDERS

560.01	METHOD OF SHOULDER CONSTRUCTION - METHOD 1
--------	--

DIVISION 8 - INCIDENTALS

840.29	FRAMES AND NARROW SLOT FLAT GRATES
840.36	TRAFFIC BEARING GRATE DROP INLET
840.37	STEEL GRATE AND FRAME
840.71	CONCRETE AND BRICK PIPE PLUG
846.01	CONCRETE CURB, GUTTER AND CURB & GUTTER
846.04	DROP INLET INSTALLATION IN SHOULDER BERM GUTTER
852.01	CONCRETE ISLANDS
862.01	GUARDRAIL PLACEMENT
862.02	GUARDRAIL INSTALLATION
862.03	STRUCTURE ANCHOR UNITS
862.04	ANCHORING END OF GUARDRAIL

DIVISION 11 - WORK ZONE TRAFIC CONTROL

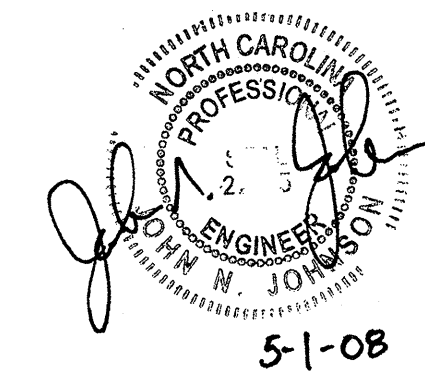
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW PANEL
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGERS
1170.01	PORTABLE CONCRETE BARRIER

DIVISION 12 - PAVEMENT MARKINGS

1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - DIVIDED AND UNDIVIDED ROADWAYS
1205.03	PAVEMENT MARKINGS - INTERCHANGE RAMP
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1261.01	GUARDRAIL AND BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATOR TYPES

DIVISION 16 - EROSION CONTROL

1605.01	TEMPORARY SILT FENCE
---------	----------------------



5-1-08

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○
Property Corner	→
Property Monument	□
Parcel/Sequence Number	⑫③
Existing Fence Line	—x—x—x—
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	WLB
Proposed Wetland Boundary	WLB
Existing Endangered Animal Boundary	EAB
Existing Endangered Plant Boundary	EPB

BUILDINGS AND OTHER CULTURE:

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

HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	□
Jurisdictional Stream	JS
Buffer Zone 1	BZ 1
Buffer Zone 2	BZ 2
Flow Arrow	←
Disappearing Stream	→
Spring	○
Wetland	WLB
Proposed Lateral, Tail, Head Ditch	FDW
False Sump	▽

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○
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	-----
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	E
Proposed Temporary Construction Easement	E
Proposed Temporary Drainage Easement	TDE
Proposed Permanent Drainage Easement	PDE
Proposed Permanent Utility Easement	PUE

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	C
Proposed Slope Stakes Fill	F
Proposed Wheel Chair Ramp	WCR
Proposed Wheel Chair Ramp Curb Cut	WCC
Curb Cut for Future Wheel Chair Ramp	CCFR
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	⊕
Pavement Removal	⊗

VEGETATION:

Single Tree	○
Single Shrub	○
Hedge	-----
Woods Line	-----
Orchard	-----
Vineyard	Vineyard

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	CONC
Bridge Wing Wall, Head Wall and End Wall	CONC WW
MINOR:	
Head and End Wall	CONC HW
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	⊗
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	PH
H-Frame Pole	●
Recorded U/G Power Line	P
Designated U/G Power Line (S.U.E.*)	P

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	⊗
Telephone Booth	⊗
Telephone Pedestal	⊗
Telephone Cell Tower	⊗
U/G Telephone Cable Hand Hole	PH
Recorded U/G Telephone Cable	T
Designated U/G Telephone Cable (S.U.E.*)	T
Recorded U/G Telephone Conduit	TC
Designated U/G Telephone Conduit (S.U.E.*)	TC
Recorded U/G Fiber Optics Cable	T FO
Designated U/G Fiber Optics Cable (S.U.E.*)	T FO

WATER:

Water Manhole	⊗
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	PH
Recorded U/G TV Cable	TV
Designated U/G TV Cable (S.U.E.*)	TV
Recorded U/G Fiber Optic Cable	TV FO
Designated U/G Fiber Optic Cable (S.U.E.*)	TV FO

GAS:

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

SANITARY SEWER:

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

MISCELLANEOUS:

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
CENTERLINE COORDINATE LIST


Point #	Chain	Station	Northing (Y)	Easting (X)
1	54	10+00.00	352160.1074	2000168.0922
2	54	10+50.00	352200.9775	2000196.8957
3	54	11+00.00	352241.8475	2000225.6991
4	54	11+50.00	352282.7175	2000254.5026
5	54	12+00.00	352323.5876	2000283.3060
6	54	12+50.00	352364.4576	2000312.1095
7	54	13+00.00	352405.3277	2000340.9130
8	54	13+50.00	352446.1977	2000369.7164
9	54	14+00.00	352487.0678	2000398.5199
10	54	14+50.00	352527.9378	2000427.3233
11	54	15+00.00	352568.8079	2000456.1268
12	54	15+50.00	352609.6779	2000484.9303
13	54	16+00.00	352650.5479	2000513.7337
14	54	16+50.00	352691.4188	2000542.5360
15	54	17+00.00	352732.3217	2000571.2929
16	54	17+50.00	352773.2489	2000600.0150
17	54	18+00.00	352814.1762	2000628.7371
18	54	18+50.00	352855.1034	2000657.4593
19	54	19+00.00	352896.0306	2000686.1814
20	54	19+50.00	352936.9579	2000714.9035
21	54	20+00.00	352977.8851	2000743.6257
22	54	20+50.00	353018.8123	2000772.3478
23	54	21+00.00	353059.7396	2000801.0700
24	54	21+50.00	353100.6668	2000829.7921
25	54	22+00.00	353141.5941	2000858.5142
26	54	22+50.00	353182.5213	2000887.2364
27	54	23+00.00	353223.4485	2000915.9585
28	54	23+50.00	353264.3758	2000944.6806
29	54	24+00.00	353305.3030	2000973.4027
30	54	24+50.00	353346.2303	2001002.1248
31	54	25+00.00	353387.1575	2001031.0016
32	54	25+50.00	353427.9333	2001059.7847
33	54	26+00.00	353468.8117	2001088.5677
34	54	26+50.00	353509.7021	2001117.3508
35	54	27+00.00	353550.5865	2001146.1338
36	54	27+50.00	353591.4709	2001174.9169
37	54	28+00.00	353632.3554	2001203.7000
38	54	28+50.00	353673.2398	2001232.4830
39	54	29+00.00	353714.1242	2001261.2661
40	54	29+50.00	353755.0086	2001290.0491
41	54	30+00.00	353795.8930	2001318.8322
42	100	10+00.00	393493.2913	2006605.4898
43	100	10+50.00	393542.4528	2006596.3712
44	100	11+00.00	393591.6143	2006587.2527
45	100	11+50.00	393640.7758	2006578.1341
46	100	12+00.00	393689.9373	2006569.0156
47	100	12+50.00	393739.0988	2006559.8970
48	100	13+00.00	393788.2602	2006550.7785
49	100	13+50.00	393837.4221	2006541.6619
50	100	14+00.00	393886.5844	2006532.6021
51	100	14+50.00	393935.7466	2006523.6067
52	100	15+00.00	393984.9087	2006514.6163
53	100	15+50.00	394034.1488	2006505.6259
54	100	16+00.00	394083.3339	2006496.6355
55	100	16+50.00	394132.5190	2006487.6451
56	100	17+00.00	394181.7040	2006478.6547
57	100	17+50.00	394230.8891	2006469.6643
58	100	18+00.00	394280.0742	2006460.6738
59	100	18+50.00	394329.2593	2006451.6834
60	100	19+00.00	394378.4444	2006442.6930
61	100	19+50.00	394427.6295	2006433.7026
62	100	20+00.00	394476.8145	2006424.7122
63	100	20+50.00	394525.9996	2006415.7218
64	100	21+00.00	394575.1845	2006406.7299
65	100	21+50.00	394624.3692	2006397.7333
66	100	22+00.00	394673.5210	2006388.7363
67	100	22+50.00	394722.6811	2006379.7404
68	100	23+00.00	394771.8412	2006370.7445
69	100	23+50.00	394821.0014	2006361.7486
70	100	24+00.00	394870.1615	2006352.7527
71	100	24+50.00	394919.3216	2006343.7569
72	100	25+00.00	394968.4818	2006334.7610
73	100	25+50.00	395017.6419	2006325.7651
74	100	26+00.00	395066.8020	2006316.7692
75	100	26+50.00	395115.9622	2006307.7733
76	100	27+00.00	395165.1223	2006298.7774
77	100	27+50.00	395214.2824	2006289.7815
78	100	28+00.00	395263.4425	2006280.7856
79	100	28+50.00	395312.6027	2006271.7897
80	151	10+00.00	345844.8861	1999591.8326

Point #	Chain	Station	Northing (Y)	Easting (X)
81	151	10+50.00	345846.6848	1999541.8002
82	151	11+00.00	345848.4836	1999691.7678
83	151	11+50.00	345850.2823	1999741.7355
84	151	12+00.00	345852.0810	1999791.7031
85	151	12+50.00	345853.8797	1999841.6707
86	151	13+00.00	345855.6785	1999891.6384
87	151	13+50.00	345857.4772	1999941.6060
88	151	14+00.00	345859.2759	1999991.5736
89	151	14+50.00	345861.0746	2000041.5413
90	151	15+00.00	345862.8734	2000091.5089
91	151	15+50.00	345864.6721	2000141.4766
92	151	16+00.00	345866.4708	2000191.4442
93	151	16+50.00	345868.2695	2000241.4118
94	151	17+00.00	345870.0682	2000291.3795
95	151	17+50.00	345871.8670	2000341.3471
96	151	18+00.00	345873.6657	2000391.3147
97	151	18+50.00	345875.4644	2000441.2824
98	151	19+00.00	345877.2631	2000491.2500
99	151	19+50.00	345879.0619	2000541.2176
100	151	20+00.00	345880.8606	2000591.1853
101	151	20+50.00	345882.6593	2000641.1529
102	151	21+00.00	345884.4580	2000691.1205
103	151	21+50.00	345886.2568	2000741.0882
104	151	22+00.00	345888.0555	2000791.0558
105	151	22+50.00	345889.8542	2000841.0235
106	151	23+00.00	345891.6529	2000891.0011
107	151	23+50.00	345893.4516	2000941.0087
108	151	24+00.00	345895.2504	2000991.0264
109	151	24+50.00	345896.9491	2001041.0441
110	151	25+00.00	345898.7478	2001091.0618
111	151	25+50.00	345899.5466	2001141.0795
112	151	26+00.00	345899.3453	2001191.0972
113	151	26+50.00	345899.1441	2001239.7360
114	151	27+00.00	345898.9428	2001288.5748
115	151	27+50.00	345898.7415	2001337.4136
116	151	28+00.00	345898.5403	2001386.2524
117	162	10+00.00	400159.1130	2008474.6335
118	162	10+50.00	400119.1548	2008504.6892
119	162	11+00.00	400079.1966	2008534.7449
120	162	11+50.00	400039.2384	2008564.8006
121	162	12+00.00	399999.2803	2008594.8562
122	162	12+50.00	399959.3221	2008624.9119
123	162	13+00.00	399919.3639	2008654.9676
124	162	13+50.00	399879.4057	2008684.0233
125	162	14+00.00	399839.4475	2008715.0790
126	162	14+50.00	399799.4893	2008745.1348
127	162	15+00.00	399759.5311	2008775.1905
128	162	15+50.00	399719.5729	2008805.2462
129	162	16+00.00	399679.6147	2008835.3019
130	162	16+50.00	399639.6565	2008865.3576
131	162	17+00.00	399599.6983	2008895.4133
132	162	17+50.00	399559.7401	2008925.4690
133	162	18+00.00	399519.7819	2008955.5247
134	162	18+50.00	399479.8237	2008985.5804
135	162	19+00.00	399439.8655	2009015.6361
136	162	19+50.00	399399.9073	2009045.6918
137	162	20+00.00	399359.9491	2009075.7475
138	162	20+50.00	399319.9909	2009105.8032
139	162	21+00.00	399279.0327	2009135.8589
140	162	21+50.00	399239.0745	2009165.9146
141	162	22+00.00	399199.1163	2009195.9703
142	162	22+50.00	399159.1581	2009225.0260
143	162	23+00.00	399119.2000	2009255.0817
144	162	23+50.00	399079.2418	2009285.1374
145	162	24+00.00	399039.2836	2009315.1931
146	162	24+50.00	399000.3254	2009345.2488
147	162	25+00.00	398960.3672	2009375.3045
148	162	25+50.00	398920.4090	2009405.3602
149	162	26+00.00	398880.4508	2009435.4159
150	162	26+50.00	398840.4926	2009465.4716
151	162	27+00.00	398800.5344	2009495.5273
152	162	27+50.00	398760.5762	2009525.5830
153	162	28+00.00	398720.6180	2009555.6387
154	167	10+00.00	411788.9905	2010525.9021
155	167	10+50.00	411773.3229	2010573.3839
156	167	11+00.00	411757.6552	2010620.8658
157	167	11+50.00	411741.9876	2010668.3476
158	167	12+00.00	411726.3200	2010715.8295
159	167	12+50.00	411710.6524	2010763.3113
160	167	13+00.00	411694.9848	2010810.7931

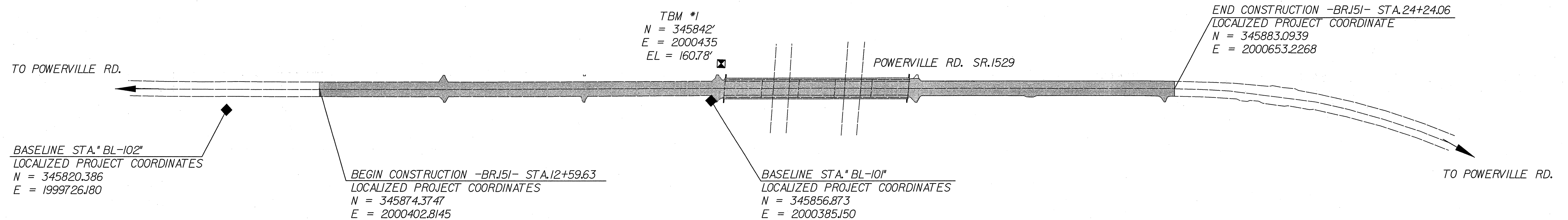
Point #	Chain	Station	Northing (Y)	Easting (X)
161	167	13+50.00	411679.1074	2010858.2055
162	167	14+00.00	411663.2845	2010905.6358
163	167	14+50.00	411647.4616	2010953.0662
164	167	15+00.00	411631.6387	2011000.4965
165	167	15+50.00	411615.8158	2011047.9268
166	167	16+00.00	411599.9929	2011095.3572
167	167	16+50.00	411584.1701	2011142.7875
168	167	17+00.00	411568.3472	2011190.2178
169	167	17+50.00	411552.5243	2011237.6482
170	167	18+00.00	411536.7014	2011285.0785
171	167	18+50.00	411520.8785	2011332.5088
172	167	19+00.00	411505.0556	2011379.9391
173	167	19+50.00	411489.2327	2011427.3695
174	167	20+00.00	411473.4099	2011474.7998
175	167	20+50.00	411457.5870	2011522.2301
176	167	21+00.00	411441.7641	2011569.6605
177	167	21+50.00	411425.9412	2011617.0908
178	167	22+00.00	411410.1183	2011664.5211
179	167	22+50.00	411394.2954	2011711.9515
180	167	23+00.00	411378.4726	2011759.3818
181	167	23+50.00	411362.6497	20

8/17/99

PLAN SCALE
NOT TO SCALE

PROJECT REFERENCE NO. B-5021	SHEET NO. 10
LOCATION AND SURVEYS	
 STV/Ralph Whitehead Associates, Inc. 1000 West Morehead St., Ste. 200 Charlotte, NC 28203	

SURVEY CONTROL SHEET -BRJ51-



REVISIONS

DATUM DESCRIPTION


THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "BL-101" WITH NAD 1983/95 STATE PLANE GRID COORDINATES OF NORTHING: 345856.873 (++) EASTING: 2000385.150 (++) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99991651 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "BL-101" TO "BL-102" STATION 533.86' IS S 89°42'57.36" W ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

POINT	-BRJ51- STATION	OFFSET	NORTHING	EASTING	ELEVATION
BL-102	11+33.38	29.32' RT.	345820.386	1999726.180	144.22'
BL-101	17+50.13	16.66' LT.	345856.873	2000385.150	165.69'

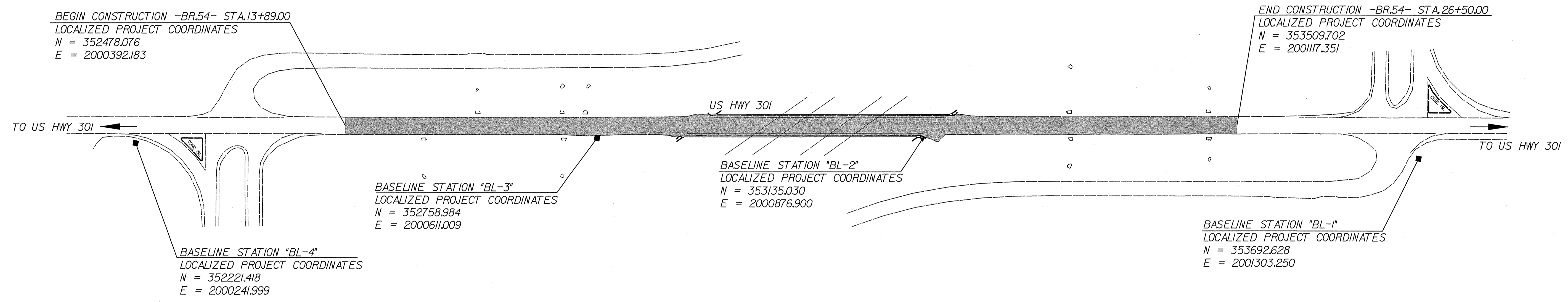
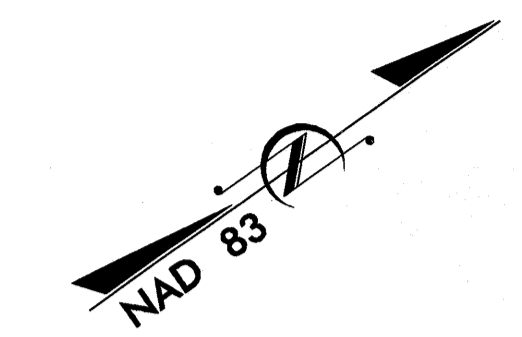
POINT	-BRJ51- STATION	OFFSET	NORTHING	EASTING	ELEVATION
BM #1	18+06.95	34.22' LT.	345842	2000435	160.78'

05/02/2008
R:\Roadway\Proj\B-5021\151.PSH_ID.dgn

PLAN SCALE
NOT TO SCALE

PROJECT REFERENCE NO. B-5021	SHEET NO. 1E
LOCATION AND SURVEYS	
 STV/Ralph Whitehead Associates, Inc. 1000 West Morehead St., Ste. 200 Charlotte, NC 28208	

SURVEY CONTROL SHEET -BR.54-



BEGIN CONSTRUCTION -BR.54- STA.13+89.00
LOCALIZED PROJECT COORDINATES
N = 352478.076
E = 2000392.183

END CONSTRUCTION -BR.54- STA.26+50.00
LOCALIZED PROJECT COORDINATES
N = 353509.702
E = 200117.351

BASELINE STATION "BL-4"
LOCALIZED PROJECT COORDINATES
N = 352221.418
E = 2000241.999

BASELINE STATION "BL-3"
LOCALIZED PROJECT COORDINATES
N = 352758.984
E = 2000611.009

BASELINE STATION "BL-2"
LOCALIZED PROJECT COORDINATES
N = 353135.030
E = 2000876.900

BASELINE STATION "BL-1"
LOCALIZED PROJECT COORDINATES
N = 353692.628
E = 2001303.250

TBM #1
N = 353379
E = 2001592
ELEV. 150.19'

DATUM DESCRIPTION
THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "SHELL" WITH NAD 1983/01 STATE PLANE GRID COORDINATES OF NORTHING: 353135.03(±) EASTING: 2000876.90(±) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99991251 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "SHELL" TO L- STATION 13+89.00 IS S 36°25'15.01" W 816.42' ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

POINT	-BR.54- STATION	OFFSET	NORTHING	EASTING	ELEVATION
BL-1	29+06.59	46.70' RT.	353692.628	2001303.250	151.66'
BL-2	22+05.19	18.82' RT.	353135.030	2000876.900	169.58'
BL-3	17+44.64	17.19' RT.	352758.984	2000611.009	166.69'
BL-4	10+92.69	25.09' RT.	352221.418	2000241.999	150.51'
POINT	-BR.54- STATION	OFFSET	NORTHING	EASTING	ELEVATION
TBM #1	28+16.89	463.35' RT.	353379	2001592	150.19'

REVISIONS

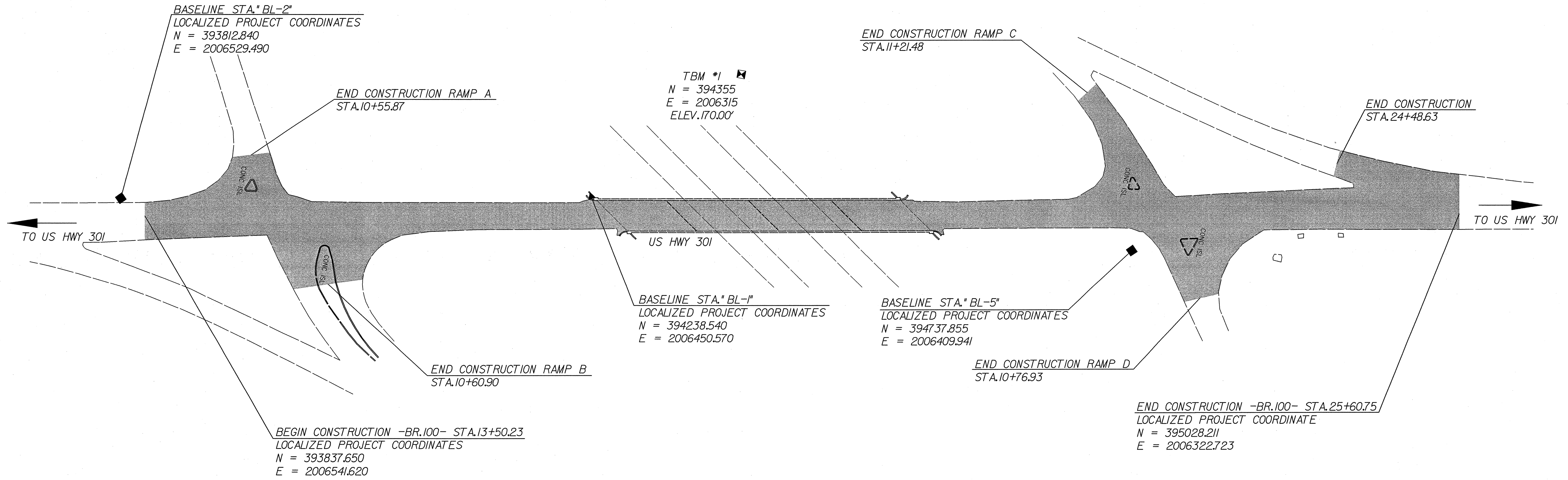
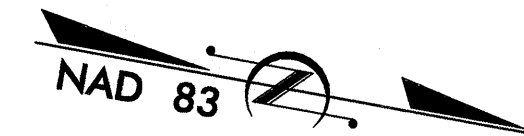
05/02/2008
R:\Roadway\Proj\Bridges\54_B-5021\FDY_54_PSH_E.dgn

8/17/99

PLAN SCALE
NOT TO SCALE

PROJECT REFERENCE NO. B-5021	SHEET NO. 1F
LOCATION AND SURVEYS	
STV / Ralph Whitehead Associates, Inc. 1000 West Morehead St., Ste. 200 Charlotte, NC 28208	

SURVEY CONTROL SHEET -BR.100-



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "ATLANTIC"

WITH NAD 1983/2001 STATE PLANE GRID COORDINATES OF
NORTHING: 394238.54(±) EASTING: 2006450.57(±)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99989534

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "ATLANTIC" TO -L- STATION 13+50.23 IS
S 12°47'45.17" E 411.10'


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

POINT	-BR.100- STATION	OFFSET	NORTHING	EASTING	ELEVATION
BL-1	17+60.96	17.41' LT.	394238.540	2006450.570	188.91'
BL-2	13+28.05	16.45' LT.	393812.840	2006529.490	178.60'
BL-3	22+59.35	32.76' RT.	394737.855	2006409.641	184.66'
POINT	-BR.100- STATION	OFFSET	NORTHING	EASTING	ELEVATION
TBM #1	18+99.64	129.66' LT.	394355	2006315	170.00'

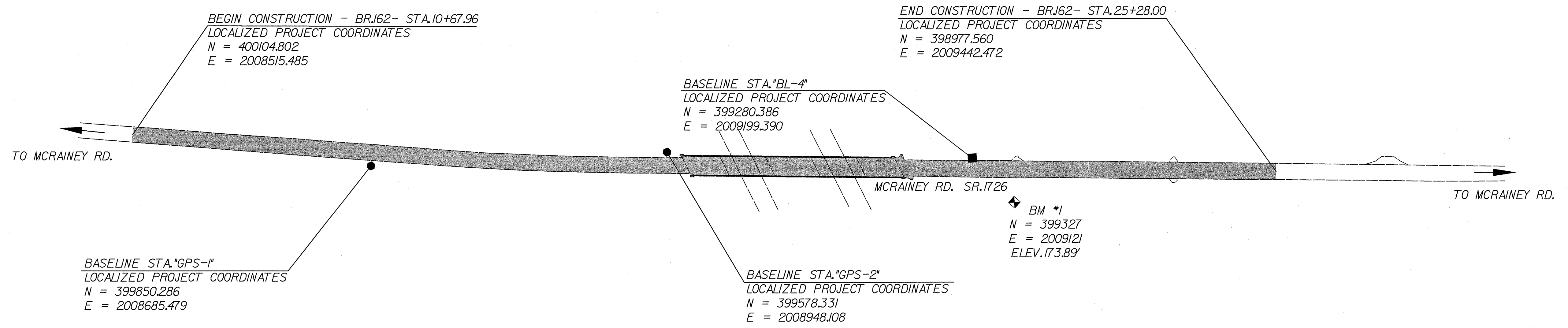
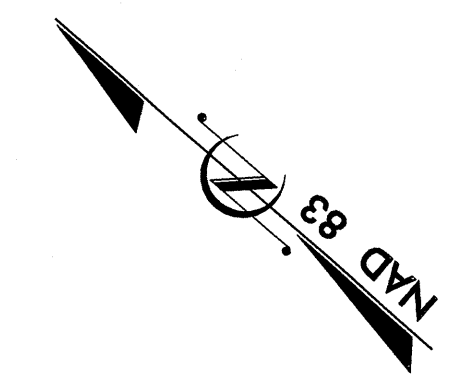
05/02/2008 R:\Roadway\Proj\Bridges\100\B-5021.RDY_100_PSH_1F.dgn

8/17/99

PLAN SCALE
NOT TO SCALE

PROJECT REFERENCE NO. B-5021	SHEET NO. 1G
LOCATION AND SURVEYS	
 STV/Ralph Whitehead Associates, Inc. 1000 West Morehead St., Ste. 200 Charlotte, NC 28208	

SURVEY CONTROL SHEET -BR.162-



REVISIONS


DATUM DESCRIPTION
 THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCOS FOR MONUMENT "GPS-2" WITH NAD 1983/2001 STATE PLANE GRID COORDINATES OF NORTHING: 399578.33(ft) EASTING: 2008948.11(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999893965 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "GPS-2" TO "L- STATION 10+67.96 IS N 39°24'41.16" W 681.42' ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

POINT	-BR.162- STATION	OFFSET	NORTHING	EASTING	ELEVATION
GPS-1	13+73.55	17.14' RT.	399850.286	2008685.479	170.81'
GPS-2	17+50.15	16.68' LT.	399578.331	2008948.108	186.30'
BL-4	21+39.90	13.15' LT.	399280.386	2009199.390	184.60'

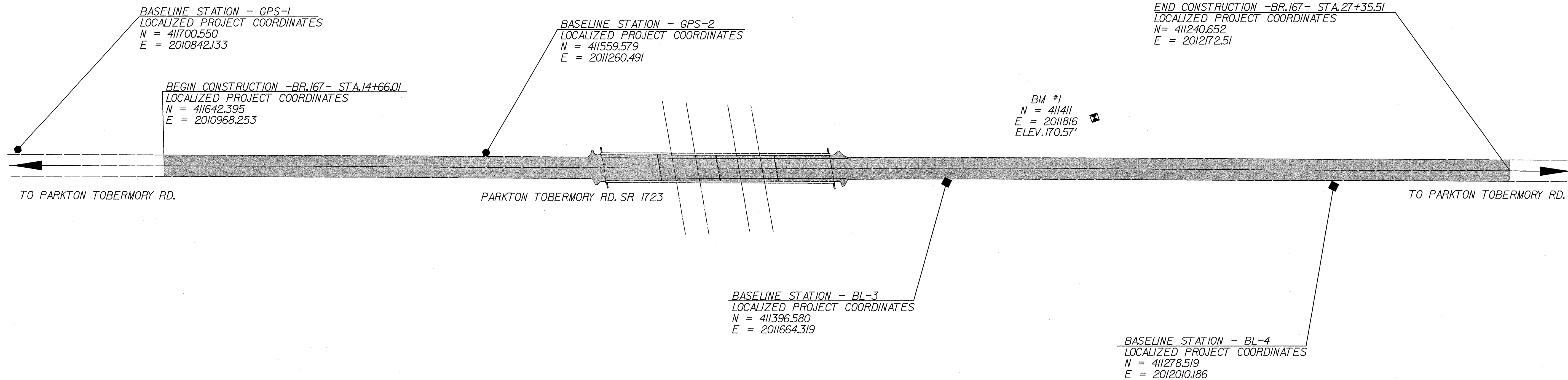
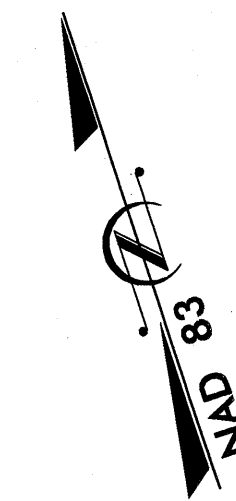
POINT	STATION	OFFSET	NORTHING	EASTING	ELEVATION
BM#1	21+94.18	42.28' RT.	399327	2009121	173.89'

8/17/99

PLAN SCALE
NOT TO SCALE

PROJECT REFERENCE NO. B-5021	SHEET NO. 1H
LOCATION AND SURVEYS	
 STV/Ralph Whitehead Associates, Inc. 1000 West Morehead St., Ste. 200 Charlotte, NC 28203	

SURVEY CONTROL SHEET -BR.167-



REVISIONS

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "GPS-1"

WITH NAD 1983/2001 STATE PLANE GRID COORDINATES OF NORTHING: 411700.55(ft) EASTING: 2010842.13(ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99989035

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "GPS-1" TO -L- STATION 14+86.01 IS

S 65°14'42.62" E 138.88'

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

POINT	-BR.167- STATION	OFFSET	NORTHING	EASTING	ELEVATION
GPS-1	13+27.97	15.25' LT.	411700.550	2010842.133	173.48'
GPS-2	17+69.44	13.92' LT.	411559.579	2011260.491	186.64'
BL-3	22+04.09	12.91' RT.	411396.580	2011664.319	187.14'
BL-4	25+69.55	15.45' RT.	411278.519	2012010.186	173.69'
POINT	-BR.167- STATION	OFFSET	NORTHING	EASTING	ELEVATION
BM#1	23+43.49	48.78' LT.	411411	2011816	170.57'

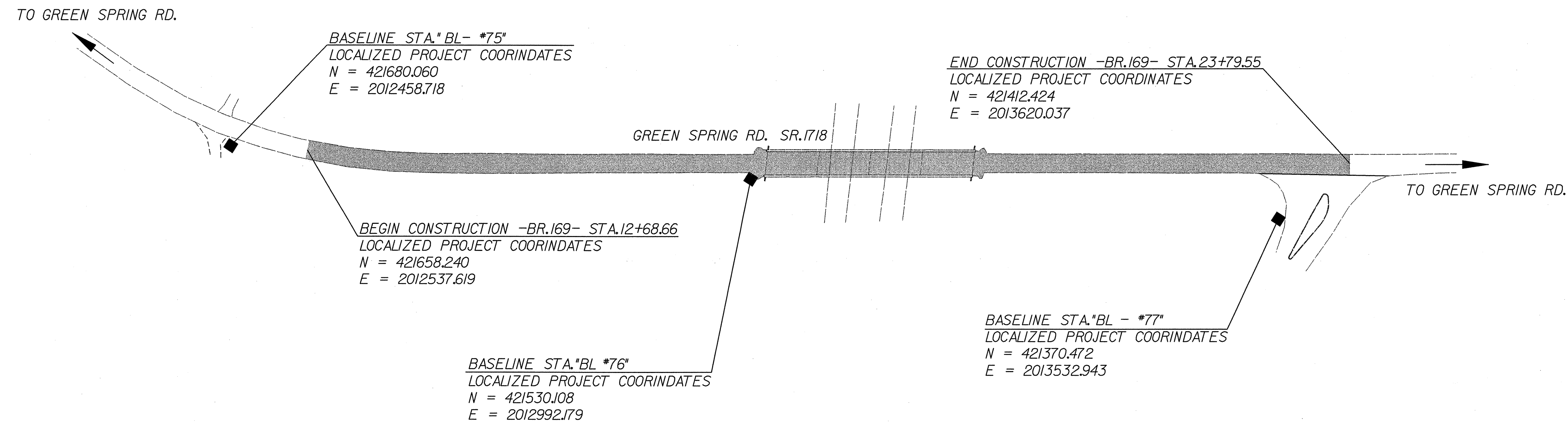
05/02/2008
R:\Roadway\Proj\Bridges\167\B-5021_RDY_167_PSH.LH.dgn

8/17/99

PLAN SCALE
NOT TO SCALE

PROJECT REFERENCE NO. B-5021	SHEET NO. 11
LOCATION AND SURVEYS	
STV / Ralph Whitehead Associates, Inc. 1000 West Morehead St., Ste. 200 Charlotte, NC 28208	

SURVEY CONTROL SHEET -BR.169-



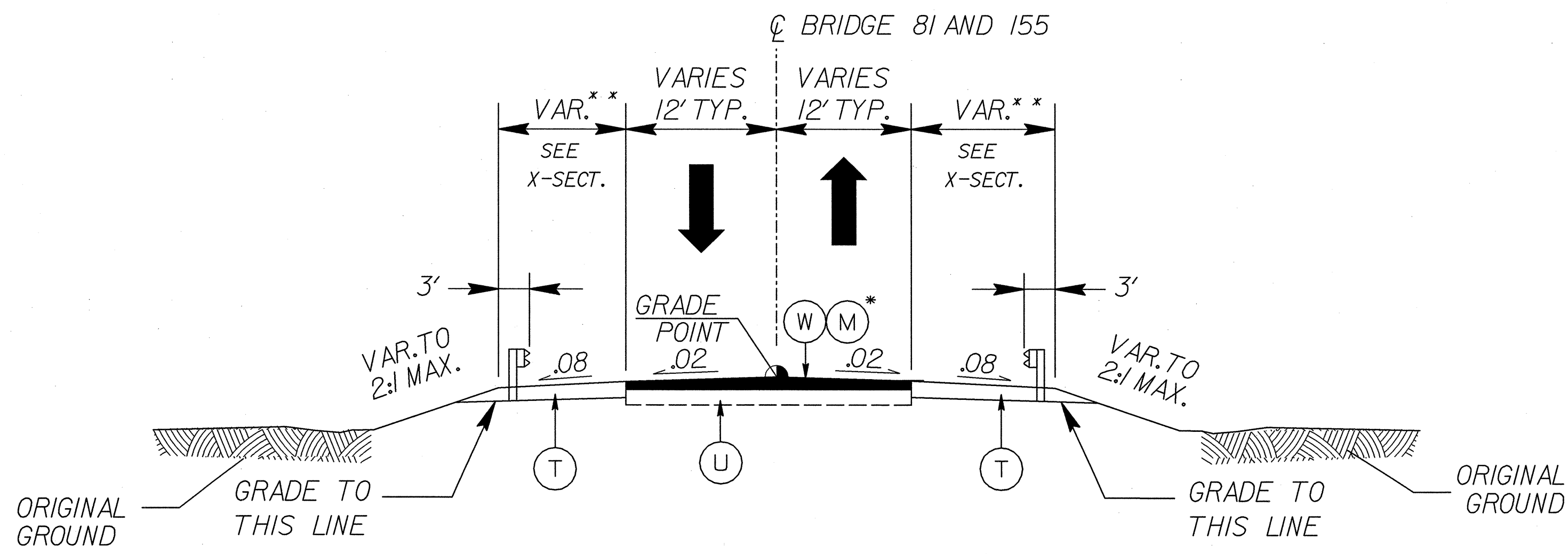
REVISIONS

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: 2024426.7025 (ft)
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999880000
 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM " " TO "L" STATION IS
 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
 VERTICAL DATUM USED IS NAVD 88

POINT	STATION	OFFSET	NORTHING	EASTING	ELEVATION
BL-75	11+90.17	18.68' RT.	421680.060	2012458.718	170.43'
BL-76	17+40.97	16.53' RT.	421530.108	2012992.179	187.15'
BL-77	23+03.24	59.41' RT.	421370.472	2013532.943	173.83'
BL-78			421270.717	2014212.978	168.73'

05/02/2008
R:\Roadway\Proj\Bridg 169\B-5021_RDY_169_PSH.II.dgn

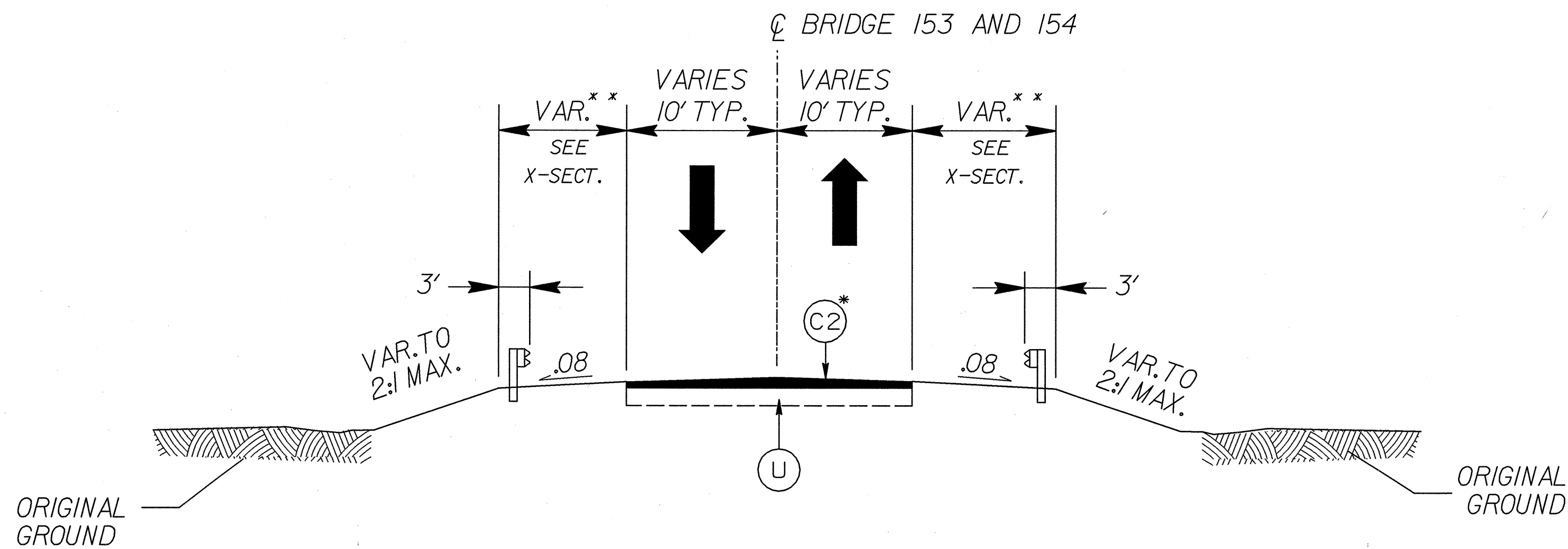
NOTES: ALL PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE NOTED.
 MAIN LINE PAVEMENT STRUCTURE TO BE USED TO THE END OF RADII ON ALL -Y- LINES.



TYPICAL SECTION NO. 1

- BRIDGE -54- STA. 13+89.00 TO STA. 18+88.60 (BRIDGE)
- BRIDGE -54- STA. 22+22.78 (BRIDGE) TO STA. 26+50.00
- BRIDGE -100- STA. 13+50.23 TO STA. 17+80.02 (BRIDGE)
- BRIDGE -100- STA. 20+60.35 (BRIDGE) TO STA. 25+60.75
- BRIDGE -162- STA. 14+04.00 TO STA. 17+74.64 (BRIDGE)
- BRIDGE -162- STA. 20+46.56 (BRIDGE) TO STA. 25+28.00

* SEE MILLING DETAIL (SHEET 2-A)
 ** SEE PLAN FOR SHOULDER BERM GUTTER LOCATIONS (SEE DETAIL SHEET 2-A)

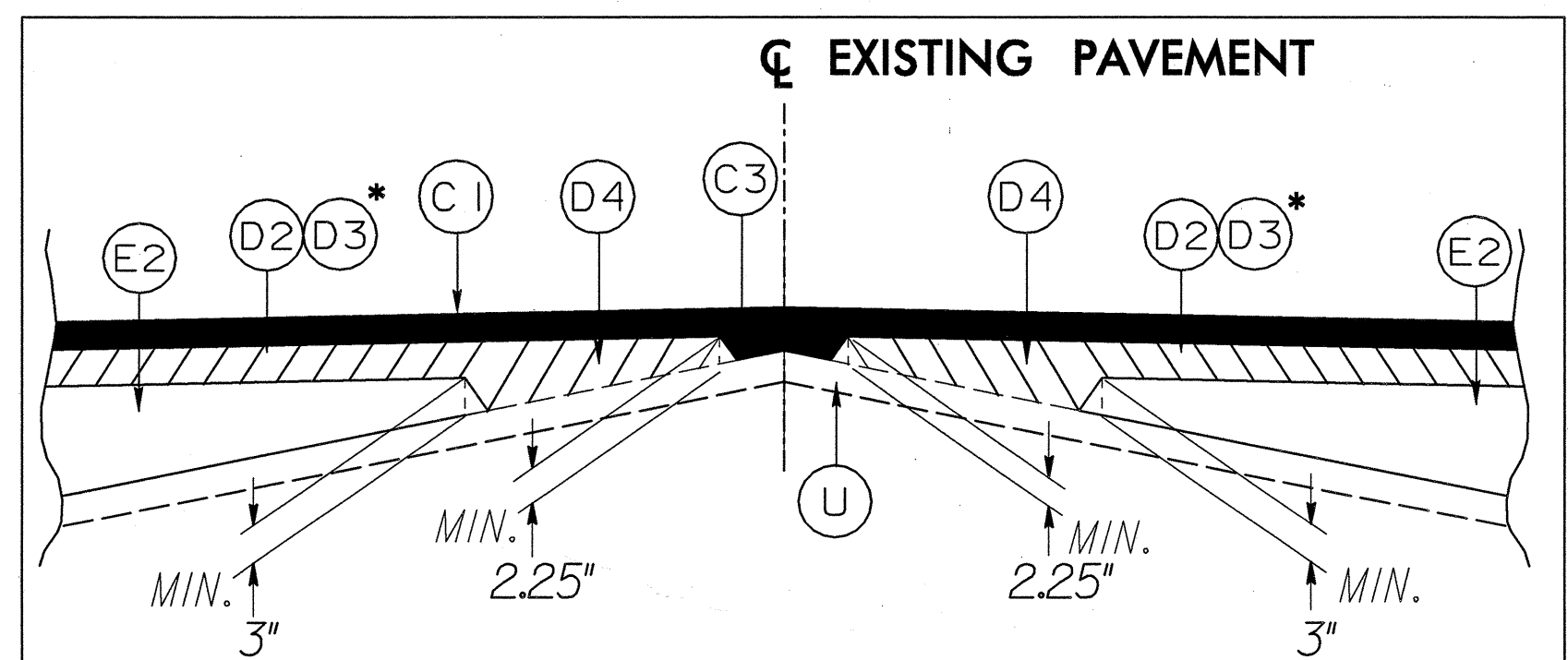


TYPICAL SECTION NO. 2

- BRIDGE -151- STA. 13+74.61 TO STA. 18+11.52 (BRIDGE)
- BRIDGE -151- STA. 20+62.08 (BRIDGE) TO STA. 23+63.37
- BRIDGE -167- STA. 15+82.90 TO STA. 18+80.83 (BRIDGE)
- BRIDGE -167- STA. 20+95.74 (BRIDGE) TO STA. 27+35.51
- BRIDGE -169- STA. 14+21.00 TO STA. 17+57.72 (BRIDGE)
- BRIDGE -169- STA. 19+77.97 (BRIDGE) TO STA. 23+00.00

* MILL 25' - 75' AS REQUIRED TO OBTAIN SMOOTH TIE-IN. SEE MILLING DETAIL (SHEET 2-A)
 ** SEE PLAN FOR SHOULDER BERM GUTTER LOCATIONS (SEE DETAIL SHEET 2-A)

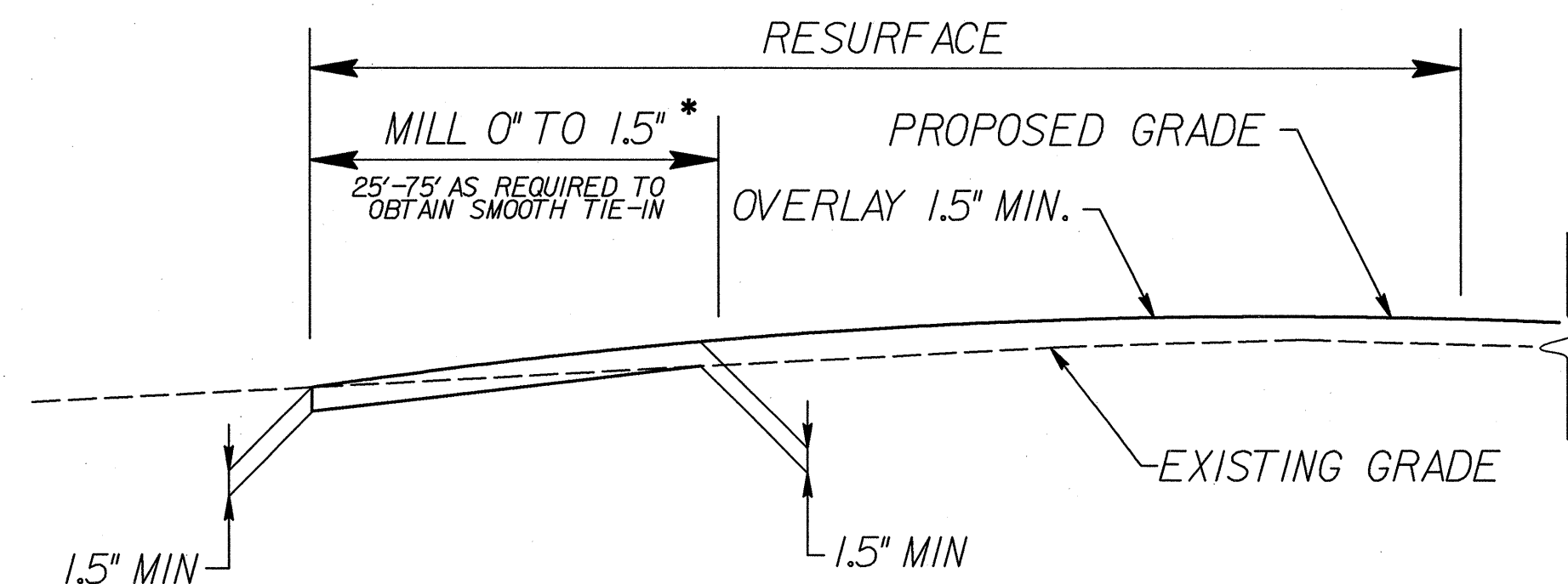
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 3.0" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YARD IN EACH OF TWO LAYERS.
C2	PROP. APPROX. 2.0" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YARD.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YARD PER 1" DEPTH TO BE PLACED IN LAYERS NOT GREATER THAN 2" IN DEPTH.
D1	PROP. APPROX. 2.0" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0 B, AT AN AVERAGE RATE OF 228 LBS. PER SQ. YARD.
D2	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0 B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YARD.
D3	PROP. APPROX. 3.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0 B, AT AN AVERAGE RATE OF 399 LBS. PER SQ. YARD.
D4	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0 B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YARD PER 1" DEPTH TO BE PLACED IN LAYERS NOT GREATER THAN 4" OR LESS THAN 2.25" IN DEPTH.
E1	PROP. APPROX. 4.5" ASPHALT CONCRETE BASE COURSE TYPE B25.0B, AT AN AVERAGE RATE OF 513 LBS. PER SQ. YARD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YARD PER 1" DEPTH TO BE PLACED IN LAYERS NOT GREATER THAN 5.5" IN DEPTH OR LESS THAN 3.0" IN DEPTH.
M	0" - 2" OF MILLING.
R	SHOULDER BERM GUTTER
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	VARIABLE DEPTH ASPHALT PAVEMENT. (SEE WEDGING DETAIL LOCATED ON THIS SHEET)



WEDGING DETAIL

* USE D2 FOR WEDGING UP TO 8.5"
 * USE D3 FOR WEDGING GREATER THAN 8.5"

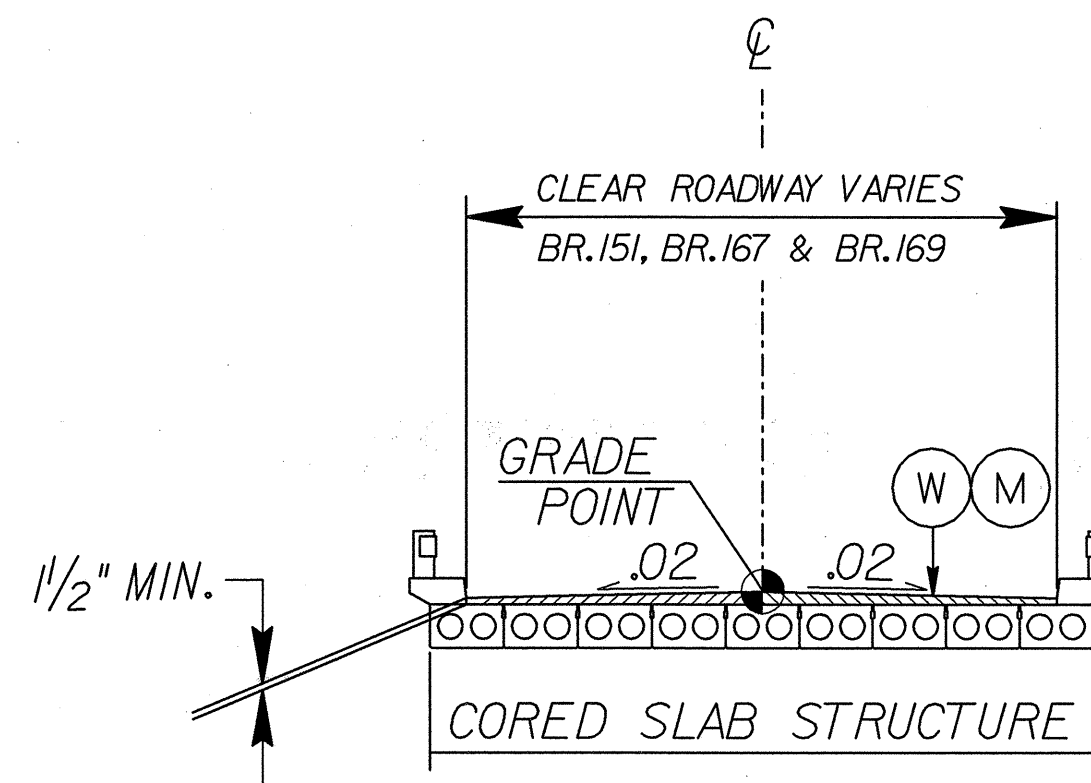
04/12/2008 13:44:48 B5021\B-5021.RDY - ttpl.dgn



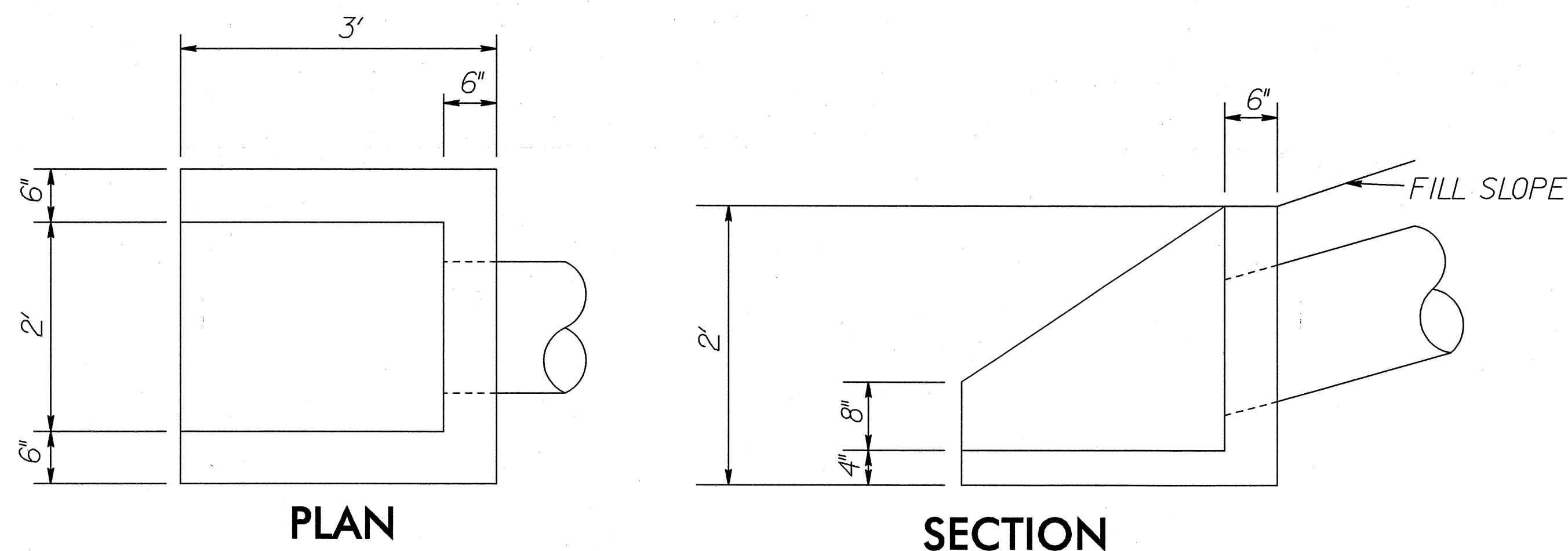
MILLING AND RESURFACING DETAIL

* BRIDGES -151-, -167- & -169-: MILL 0" TO 2"

BRIDGE -54- STA. 13+89.00 TO STA. 14+03.96	BRIDGE -162- STA. 24+98.00 TO STA. 25+28.00
BRIDGE -54- STA. 25+81.31 TO STA. 26+50.00	BRIDGE -151- AS REQUIRED TO OBTAIN SMOOTH TIE-IN
BRIDGE -100- STA. 13+50.23 TO STA. 14+70.21	BRIDGE -167- AS REQUIRED TO OBTAIN SMOOTH TIE-IN
BRIDGE -100- STA. 25+21.27 TO STA. 25+60.75	BRIDGE -169- AS REQUIRED TO OBTAIN SMOOTH TIE-IN
BRIDGE -162- STA. 14+04.00 TO STA. 15+44.92	

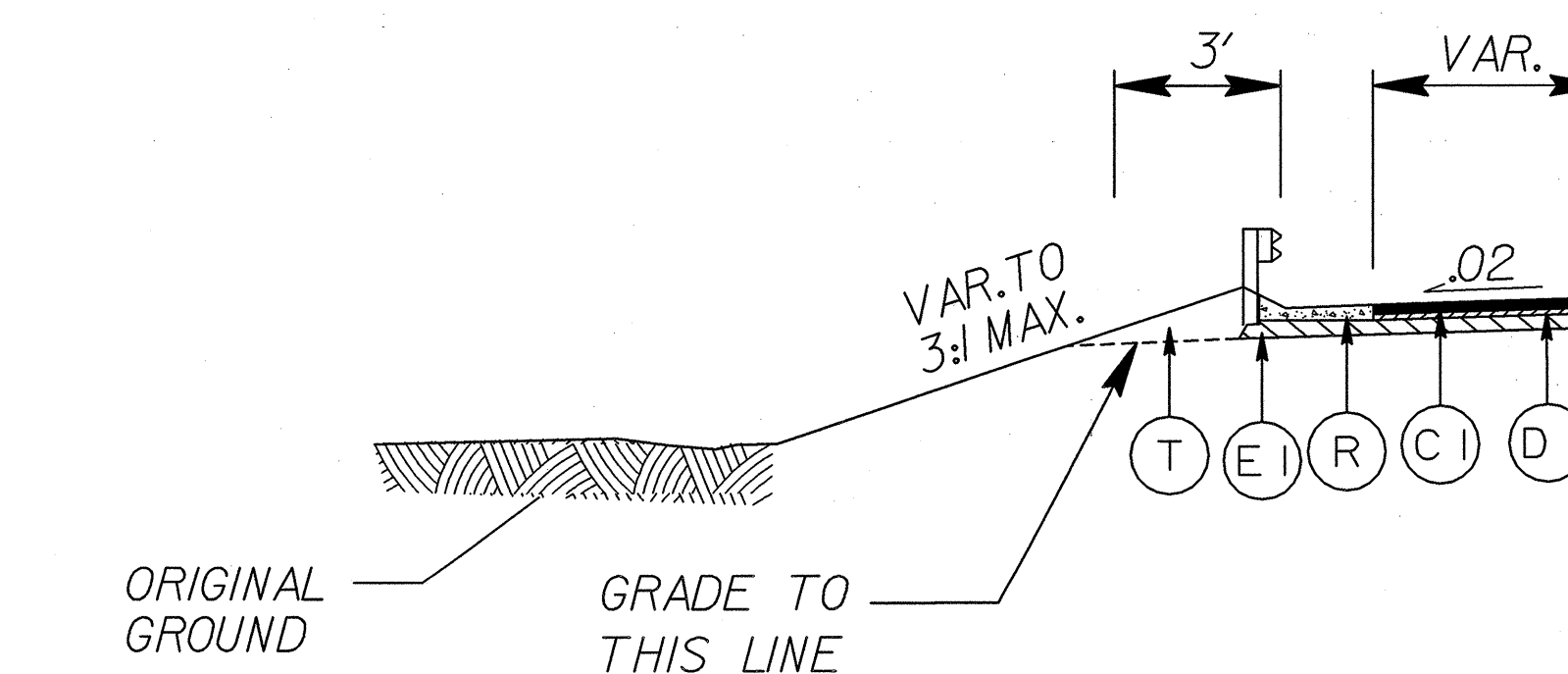


ASPHALT DETAIL FOR CORED SLAB STRUCTURES



CONCRETE APRON DETAIL

CLASS B CONCRETE



SHOULDER BERM GUTTER DETAIL

SEE PLANS FOR LOCATIONS

PAVEMENT SCHEDULE

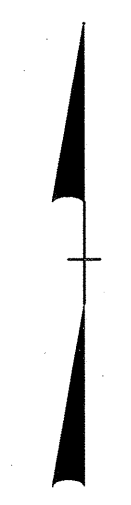
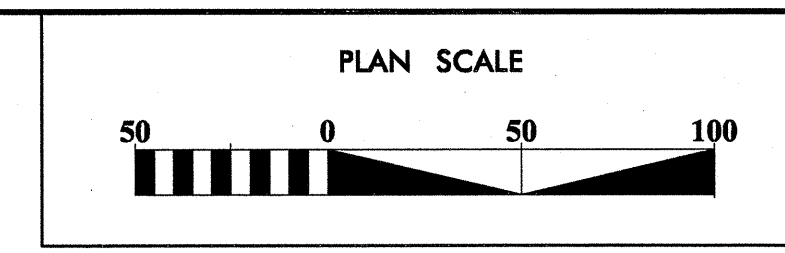
C1	3.0" S9.5B
D1	2.0" I19.0 B
E1	4.5" B25.0B
M	0"-2" VAR. MILLING.
R	SHOULDER BERM GUTTER
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	WEDGING (SEE SHEET 2)

NOTES: ALL PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE NOTED.
MAIN LINE PAVEMENT STRUCTURE TO BE USED TO THE END OF RADII ON ALL -Y- LINES.

REVISIONS

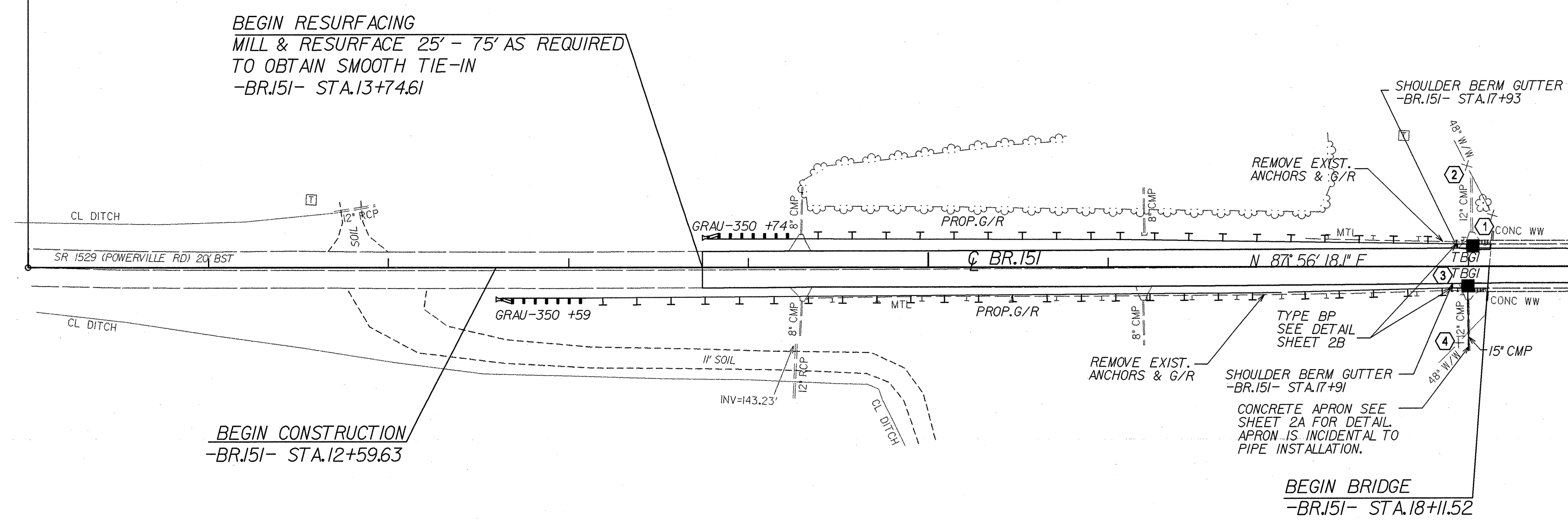
NOTES:

1. CONTRACTOR SHALL GRADE SHOULDERS TO DRAIN AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT ITEMS.
2. WHERE EXISTING PIPE IS TO BE UTILIZED, INSTALL SHOULDER BERM GUTTER, T.B.G.I. AND MODIFY OR REPLACE OUTLET PIPE AS NECESSARY TO TIE INTO EXISTING PIPE. INSTALLATION, PIPE, ELBOWS, AND CMP NECESSARY TO TIE PROPOSED T.B.G.I. TO EXISTING CMP SHALL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF THE T.B.G.I.
3. CONTRACTOR SHALL REPLACE PAVEMENT MARKINGS WITH SAME MATERIAL AS EXISTING WITHIN THE PROJECT LIMITS. PAVEMENT MARKINGS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT ITEMS.
4. CONTRACTOR SHALL ADJUST FUNNEL DRAINS AS NEEDED WITHIN THE PROJECT LIMITS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT ITEMS.
5. CONTRACTOR SHALL REMOVE AND RESET ANY SIGNS AS NECESSARY. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT ITEMS.
6. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAYS DURING CONSTRUCTION.



PROJECT REFERENCE NO. B-5021	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
 1000 West Morehead St., Ste. 200 Charlotte, NC 28208	

POT Sta. 10+00.00



BEGIN RESURFACING
MILL & RESURFACE 25' - 75' AS REQUIRED
TO OBTAIN SMOOTH TIE-IN
-BRJ51- STA.13+74.61

BEGIN CONSTRUCTION
-BRJ51- STA.12+59.63

BEGIN BRIDGE
-BRJ51- STA.18+11.52

MATCHLINE -BR.151- STA. 19+00 SEE SHEET 5

8/17/99

NOTES:

- CONTRACTOR SHALL GRADE SHOULDERS TO DRAIN AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT ITEMS.
- WHERE EXISTING PIPE IS TO BE UTILIZED, INSTALL SHOULDER BERM GUTTER, T.B.G.I. AND MODIFY OR REPLACE OUTLET PIPE AS NECESSARY TO TIE INTO EXISTING PIPE. INSTALLATION, PIPE ELBOWS, AND CMP NECESSARY TO TIE PROPOSED T.B.G.I. TO EXISTING CMP SHALL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF THE T.B.G.I.
- CONTRACTOR SHALL REPLACE PAVEMENT MARKINGS WITH SAME MATERIAL AS EXISTING WITHIN THE PROJECT LIMITS. PAVEMENT MARKINGS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT ITEMS.
- CONTRACTOR SHALL ADJUST FUNNEL DRAINS AS NEEDED WITHIN THE PROJECT LIMITS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT ITEMS.
- CONTRACTOR SHALL REMOVE AND RESET ANY SIGNS AS NECESSARY. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT ITEMS.
- CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAYS DURING CONSTRUCTION.

PLAN SCALE
0 50 100

PROFILE SCALE
25 0 50
5 0 10
HORIZ.
VERT.

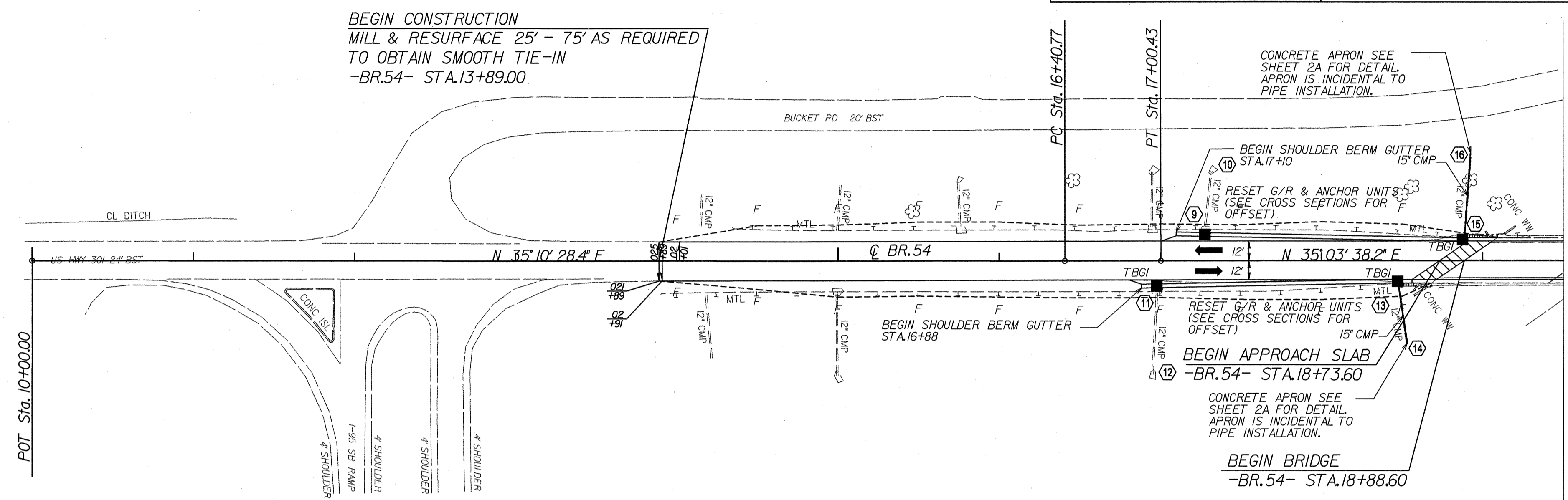
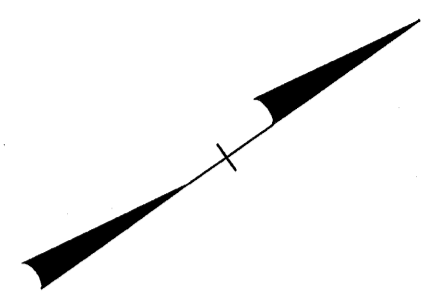
CONST. REV.
R / W REV.

PROJECT REFERENCE NO. B-5021
SHEET NO. 6

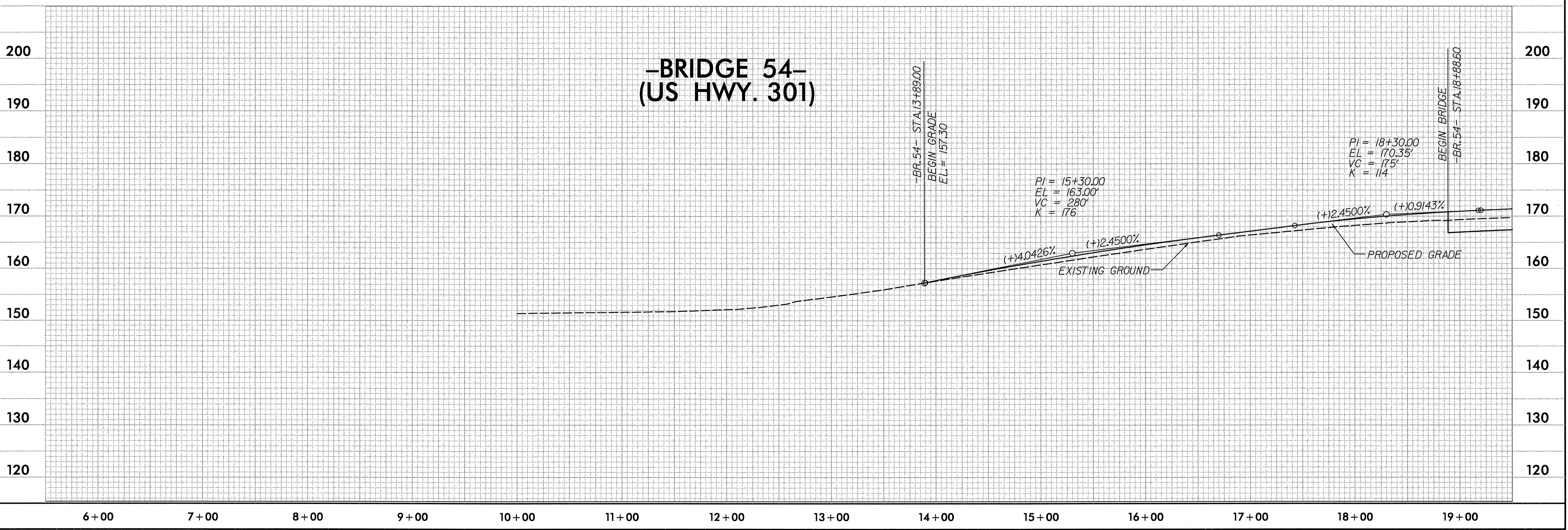
ROADWAY DESIGN ENGINEER

STV / Ralph Whitehead Associates, Inc.
1000 West Morehead St., Ste. 200
Charlotte, NC 28208

PI Sta 16+70.60
Δ = 0' 06" 50.1" (LT)
D = 0' 11" 27.5"
L = 59.65'
T = 29.83'
R = 30,000.00'



MATCHLINE -BR. 54- STA. 19 + 50.00 SEE SHEET 7



REVISIONS

05/29/2008
C:\roadway\proj\B-ridge 54\B-5021.RDY_54_PSH6.dgn
C:\roadway\proj\B-ridge 54\B-5021.RDY_54_PSH6.dgn

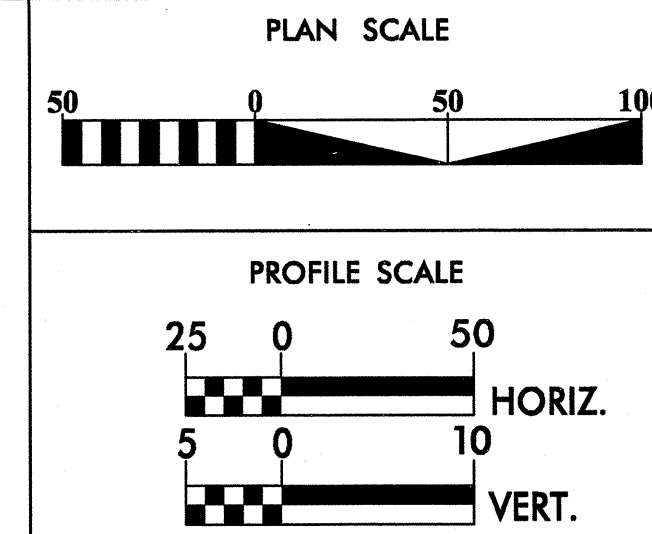
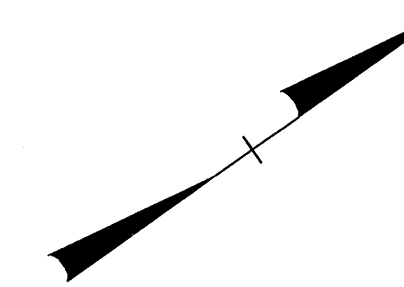
8/17/99

NOTES:

- CONTRACTOR SHALL GRADE SHOULDERS TO DRAIN AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT ITEMS.
- WHERE EXISTING PIPE IS TO BE UTILIZED, INSTALL SHOULDER BERM GUTTER, T.B.G.I. AND MODIFY OR REPLACE OUTLET PIPE, AS NECESSARY TO TIE INTO EXISTING PIPE. INSTALLATION, PIPE ELBOWS, AND CMP NECESSARY TO TIE PROPOSED T.B.G.I. TO EXISTING CMP SHALL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF THE T.B.G.I.
- CONTRACTOR SHALL REPLACE PAVEMENT MARKINGS WITH SAME MATERIAL AS EXISTING WITHIN THE PROJECT LIMITS. PAVEMENT MARKINGS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT ITEMS.
- CONTRACTOR SHALL ADJUST FUNNEL DRAINS AS NEEDED WITHIN THE PROJECT LIMITS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT ITEMS.
- CONTRACTOR SHALL REMOVE AND RESET ANY SIGNS AS NECESSARY. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT ITEMS.
- CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAYS DURING CONSTRUCTION.

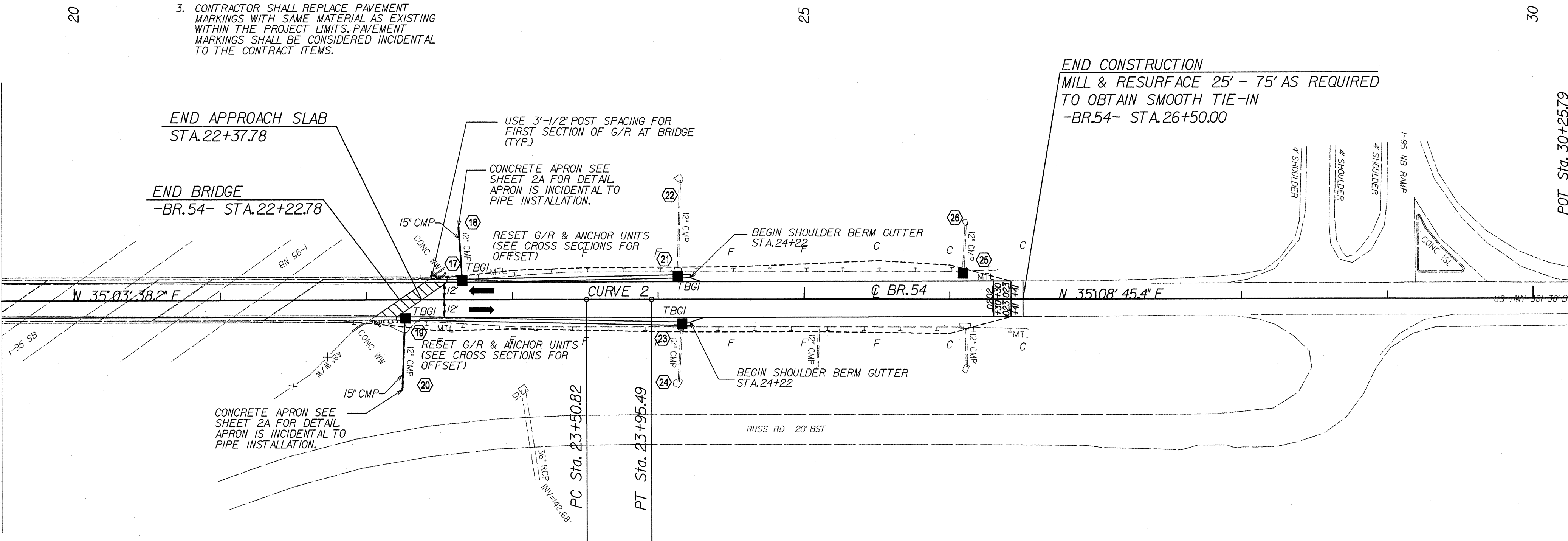
BRIDGE 54 CURVE 2

PI Sta 23+73.15
 $\Delta = 0^{\circ} 05' 07.2''$ (RT)
 $D = 0^{\circ} 11' 27.5''$
 $L = 44.68'$
 $T = 22.34'$
 $R = 30,000.00'$



PROJECT REFERENCE NO. B-5021	SHEET NO. 7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
STV / Ralph Whitehead Associates, Inc. 1000 West Morehead St., Ste. 200 Charlotte, NC 28208	

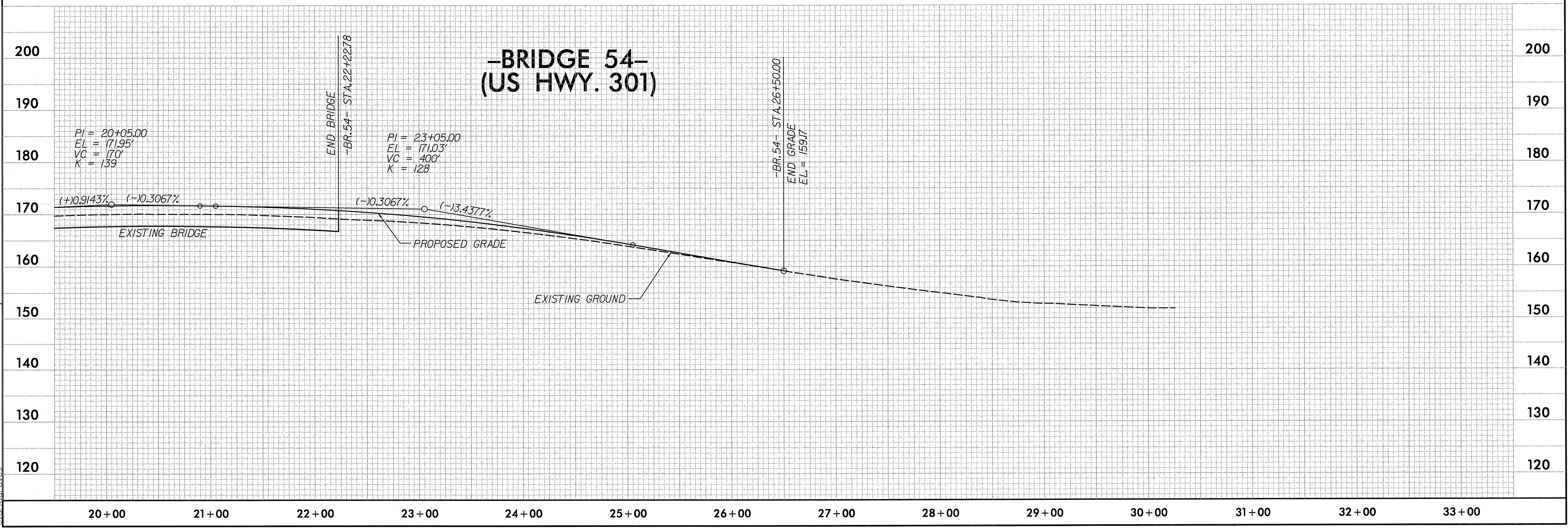
MATCHLINE -BR.54-
 STA. 19 + 50.00 SEE SHEET 6



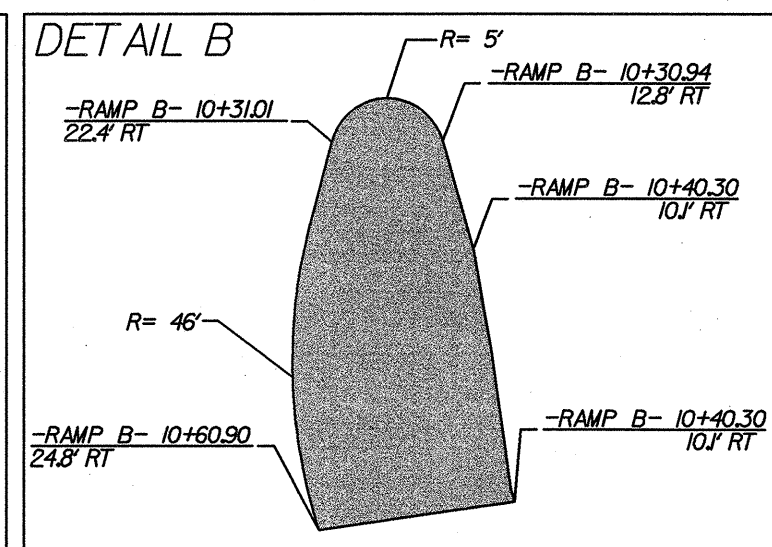
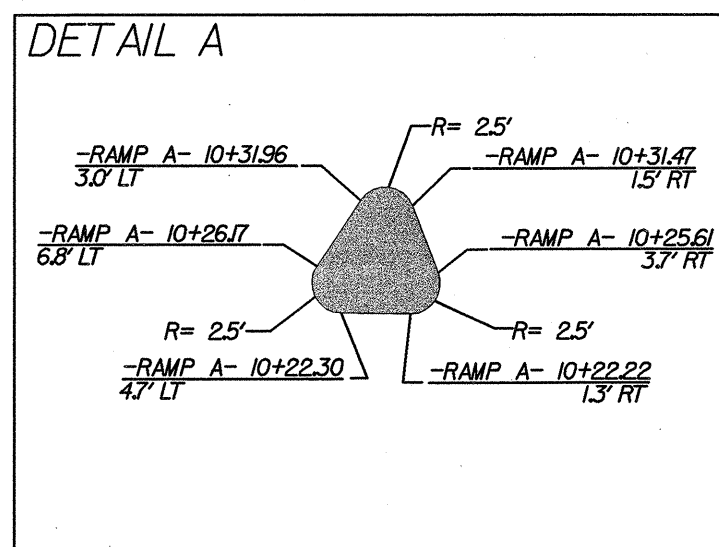
END CONSTRUCTION
 MILL & RESURFACE 25' - 75' AS REQUIRED
 TO OBTAIN SMOOTH TIE-IN
 -BR.54- STA.26+50.00

REVISIONS

05/29/2008
 T:\roadway\proj\B-ridge 54\B-5021.RDY.L54_PSH7.dgn
 Clark Groves



8/17/99



-BR.100- CURVE 1	-BR.100- CURVE 2	RAMP A CURVE 1	RAMP B CURVE 1	RAMP C CURVE 1	RAMP D CURVE 1
PI Sta 13+78.24	PI Sta 21+32.00	PI Sta 10+64.25	PI Sta 10+80.34	PI Sta 10+79.24	PI Sta 10+78.70
$\Delta = 0^{\circ}08'57.5''$ (RT)	$\Delta = 0^{\circ}09'28.3''$ (LT)	$\Delta = 17^{\circ}53'02.6''$ (LT)	$\Delta = 37^{\circ}13'03.5''$ (LT)	$\Delta = 42^{\circ}37'11.7''$ (LT)	$\Delta = 26^{\circ}53'03.1''$ (LT)
$D = 0^{\circ}11'27.5''$	$D = 0^{\circ}11'27.5''$	$D = 28^{\circ}38'52.4''$	$D = 57^{\circ}17'44.8''$	$D = 57^{\circ}17'44.8''$	$D = 57^{\circ}17'44.8''$
$L = 78.18'$	$L = 82.65'$	$L = 62.43'$	$L = 64.96'$	$L = 74.39'$	$L = 46.92'$
$T = 39.09'$	$T = 41.32'$	$T = 31.47'$	$T = 33.67'$	$T = 39.01'$	$T = 23.90'$
$R = 30,000.00'$	$R = 30,000.00'$	$R = 200.00'$	$R = 100.00'$	$R = 100.00'$	$R = 100.00'$

PLAN SCALE
0 50 100

PROFILE SCALE
25 0 50
5 0 10
HORIZ.
VERT.

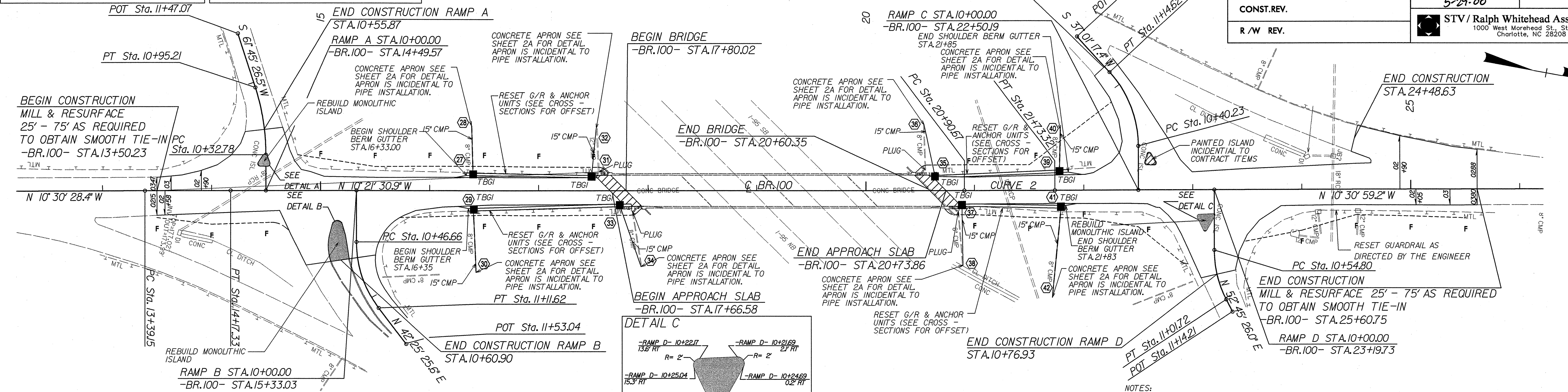
CONST. REV.
R / W REV.

PROJECT REFERENCE NO. B-5021
SHEET NO. 8

RAW SHEET NO.

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL 22115
JOHN N. JOHNSON
5-29-08

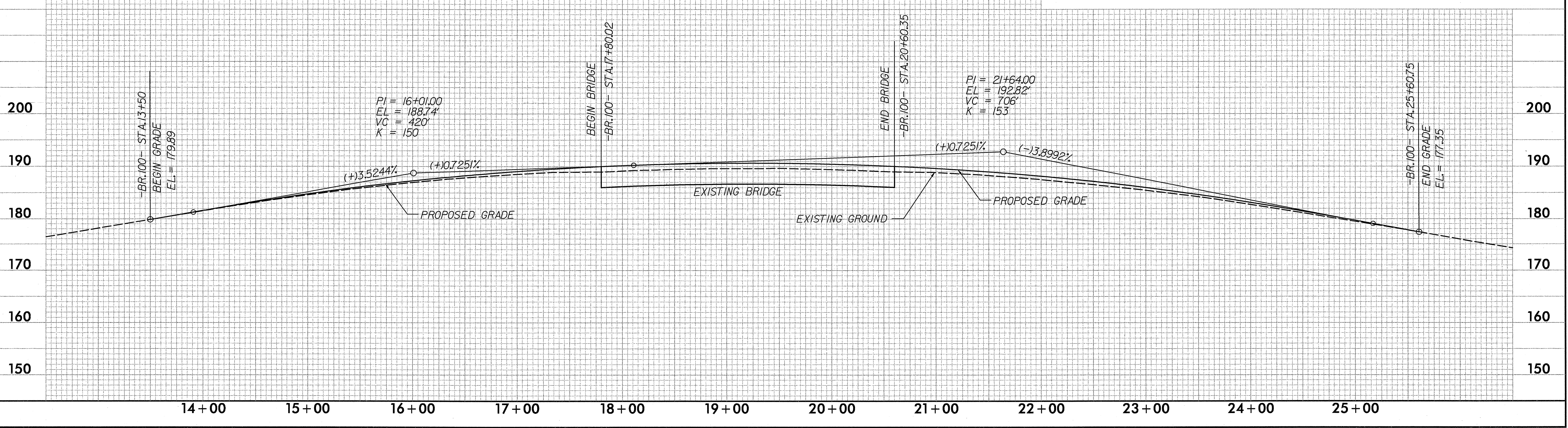
STV / Ralph Whitehead Associates, Inc.
1000 West Morehead St., Ste. 200
Charlotte, NC 28208



SEE SHEET 9 FOR RAMP PROFILES

- NOTES:
- CONTRACTOR SHALL GRADE SHOULDERS TO DRAIN AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT ITEMS.
 - CONTRACTOR SHALL REPLACE PAVEMENT MARKINGS WITH SAME MATERIAL AS EXISTING WITHIN THE PROJECT LIMITS. PAVEMENT MARKINGS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT ITEMS.
 - CONTRACTOR SHALL ADJUST FUNNEL DRAINS AS NEEDED WITHIN THE PROJECT LIMITS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT ITEMS.
 - CONTRACTOR SHALL REMOVE AND RESET ANY SIGNS AS NECESSARY. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT ITEMS.
 - CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAYS DURING CONSTRUCTION.

-BRIDGE 100- (US HWY. 301)



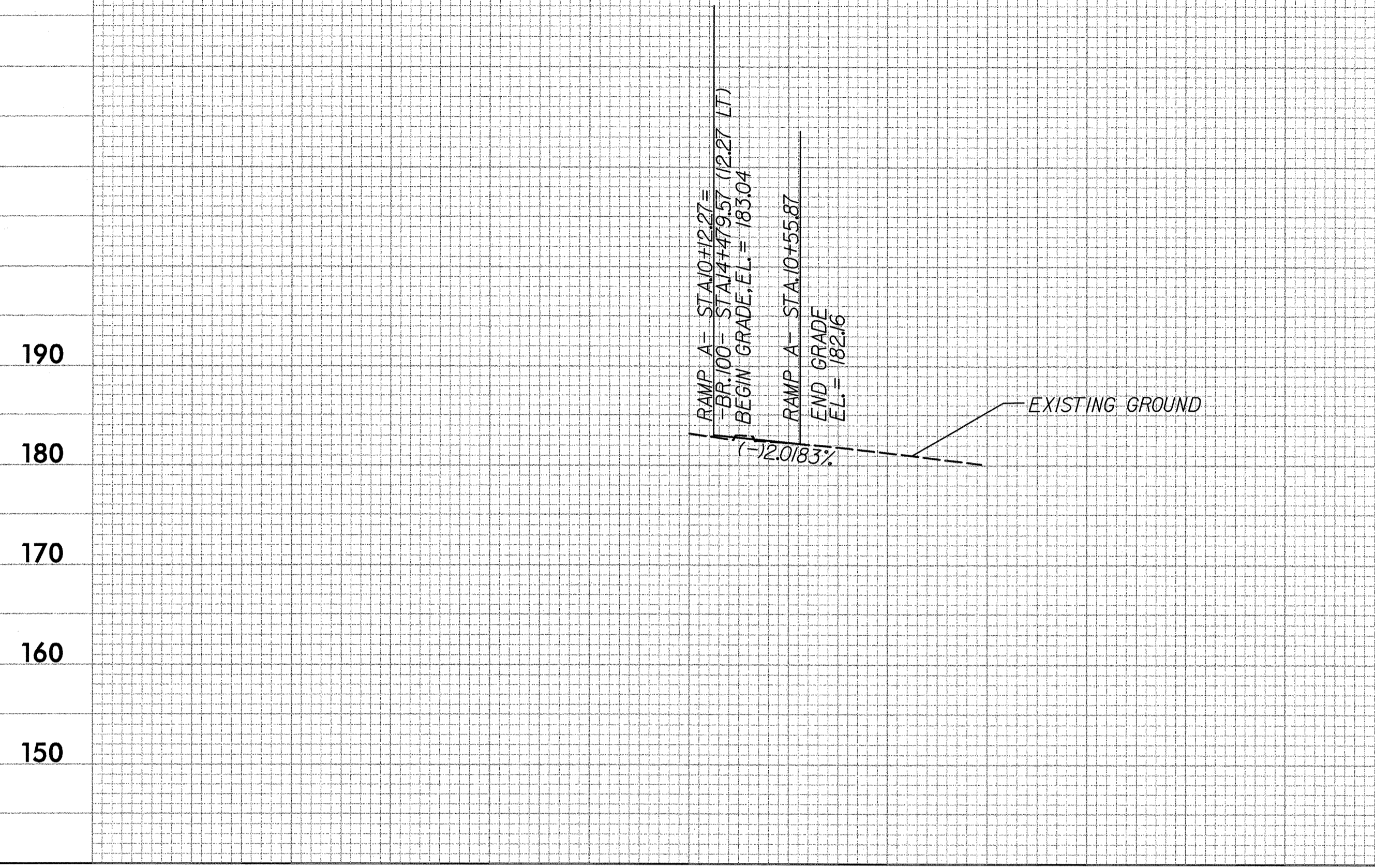
05/29/2008
C:\roadway\proj\bridge 100\B-5021_R0Y_100.PS+18.dgn
clark.dwg

5/28/99

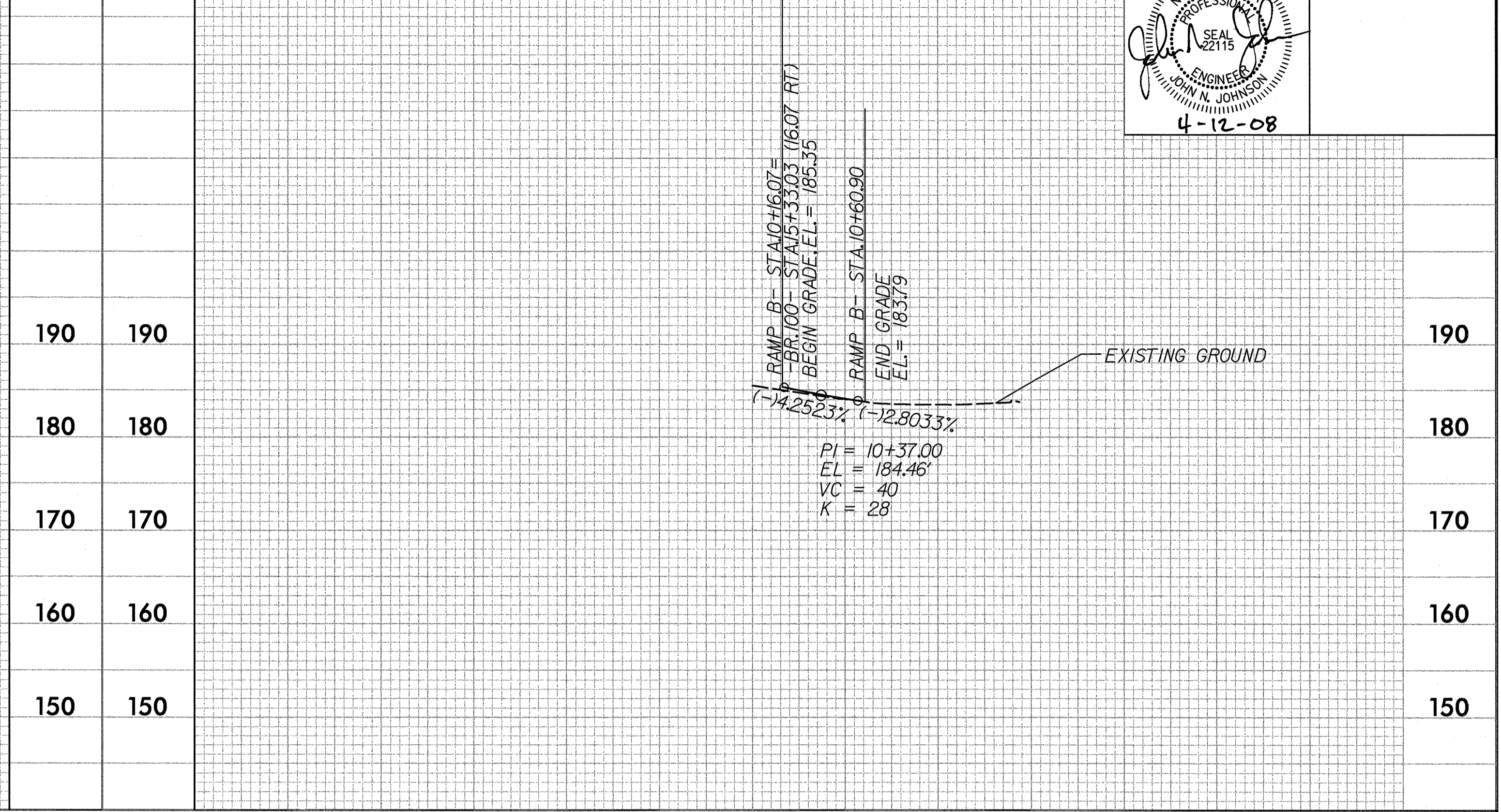
04/12/2008
n:\proj\2513448\5021\B-ridge 100\Station\Roadway\100_FDY_PFL_RAMP_Sht.dgn
clark\groves

PROJECT REFERENCE NO. B-5021	SHEET NO. 9
ROADWAY DESIGN ENGINEER	

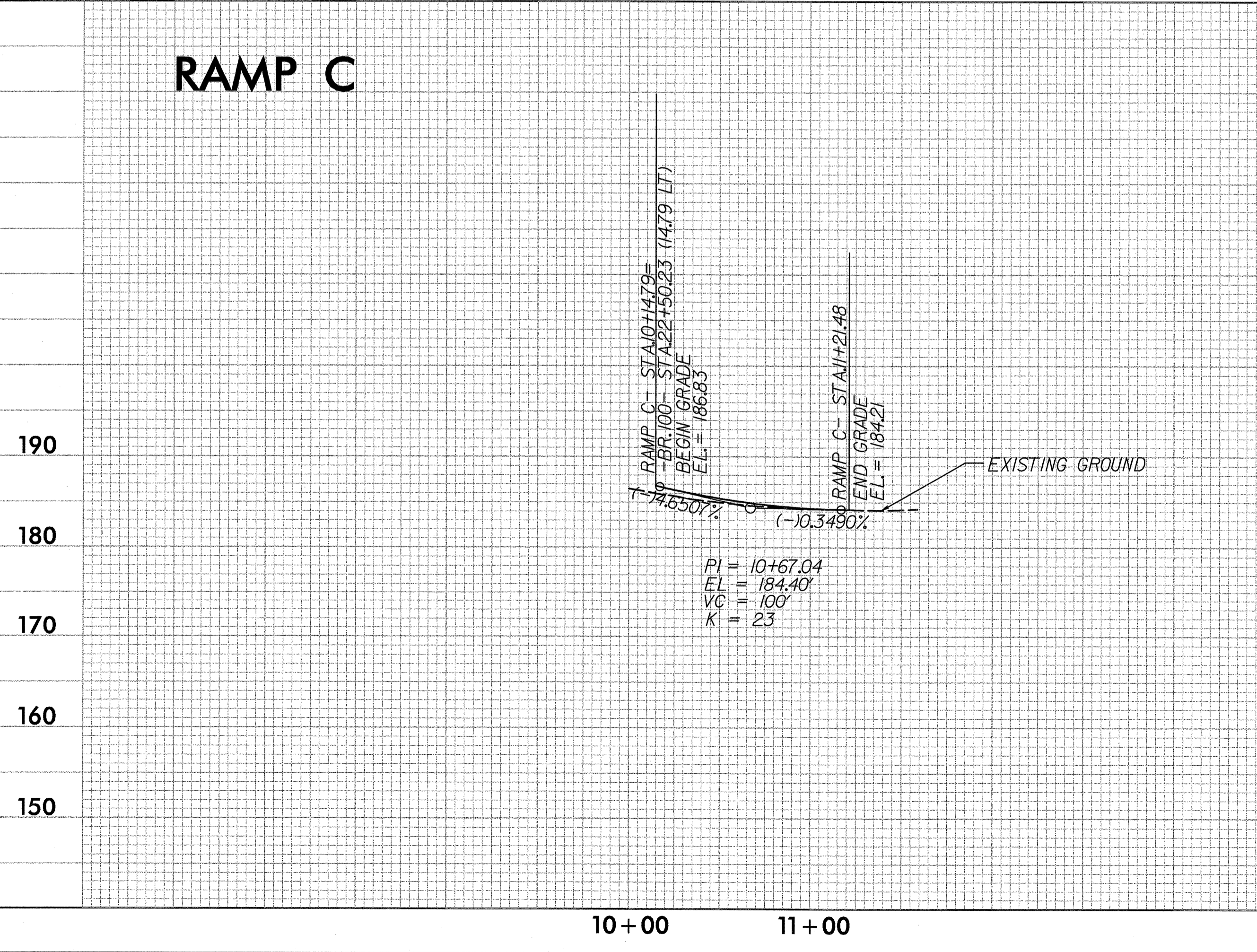
RAMP A



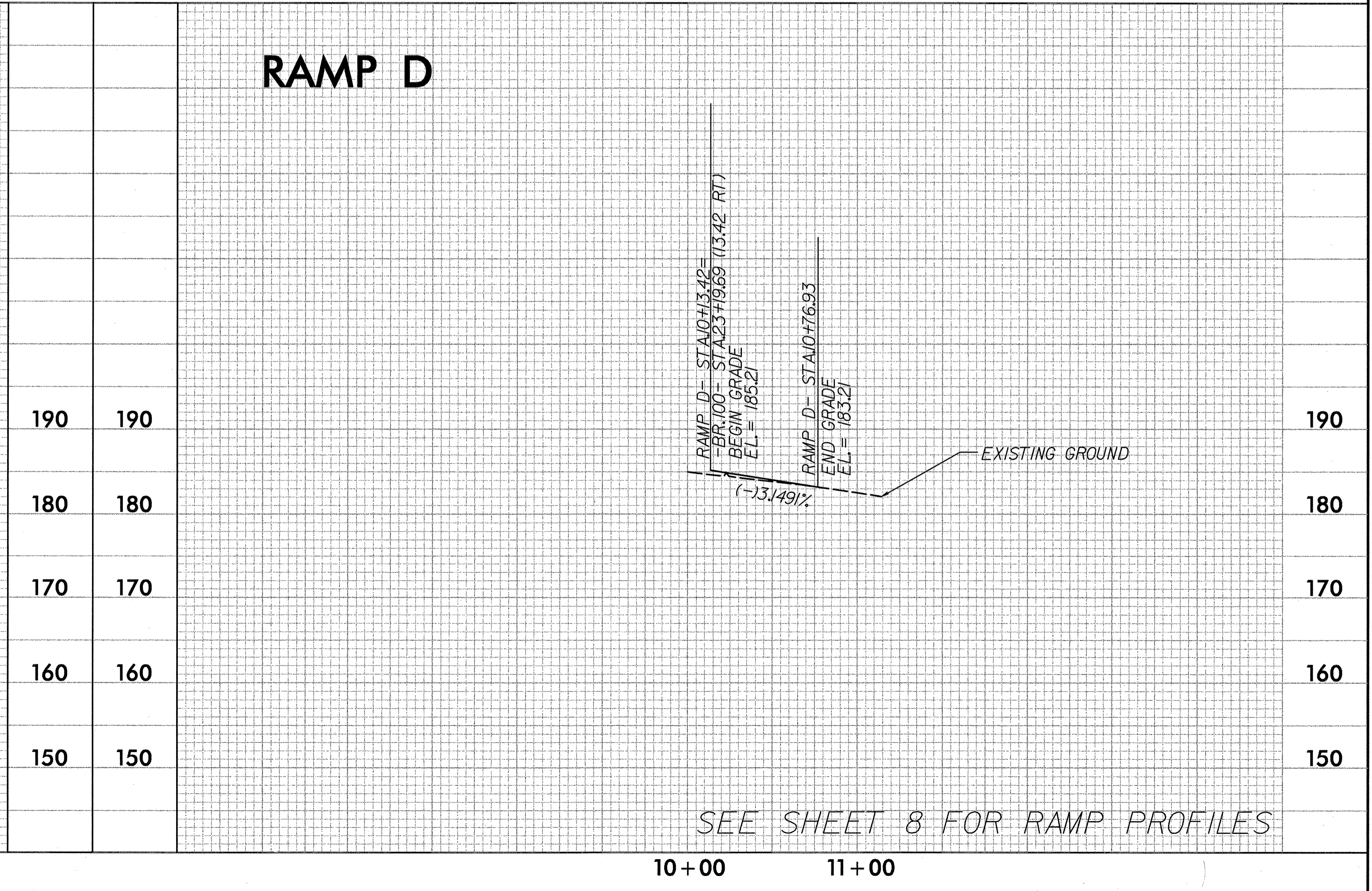
RAMP B



RAMP C



RAMP D



SEE SHEET 8 FOR RAMP PROFILES

8/17/99

05/29/2008
F:\roadway\proj\B-bridge 162\B-5021.RDY_162.PSH.dgn
Clark\glc

NOTES:

- CONTRACTOR SHALL GRADE SHOULDERS TO DRAIN AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT ITEMS.
- CONTRACTOR SHALL REPLACE PAVEMENT MARKINGS WITH SAME MATERIAL AS EXISTING WITHIN THE PROJECT LIMITS. PAVEMENT MARKINGS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT ITEMS.
- CONTRACTOR SHALL ADJUST FUNNEL DRAINS AS NEEDED WITHIN THE PROJECT LIMITS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT ITEMS.
- CONTRACTOR SHALL REMOVE AND RESET ANY SIGNS AS NECESSARY. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT ITEMS.
- CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAYS DURING CONSTRUCTION.

-BR162- CURVE 1
 PI Sta 15+55.28
 $\Delta = 3^{\circ} 42' 45.6"$ (LT)
 $D = 1^{\circ} 25' 56.6"$
 $L = 259.9'$
 $T = 129.64'$
 $R = 4,000.00'$

-BR162- CURVE 2
 PI Sta 24+26.47
 $\Delta = 0^{\circ} 07' 30.3"$ (LT)
 $D = 0^{\circ} 11' 27.5"$
 $L = 65.50'$
 $T = 32.75'$
 $R = 30,000.00'$

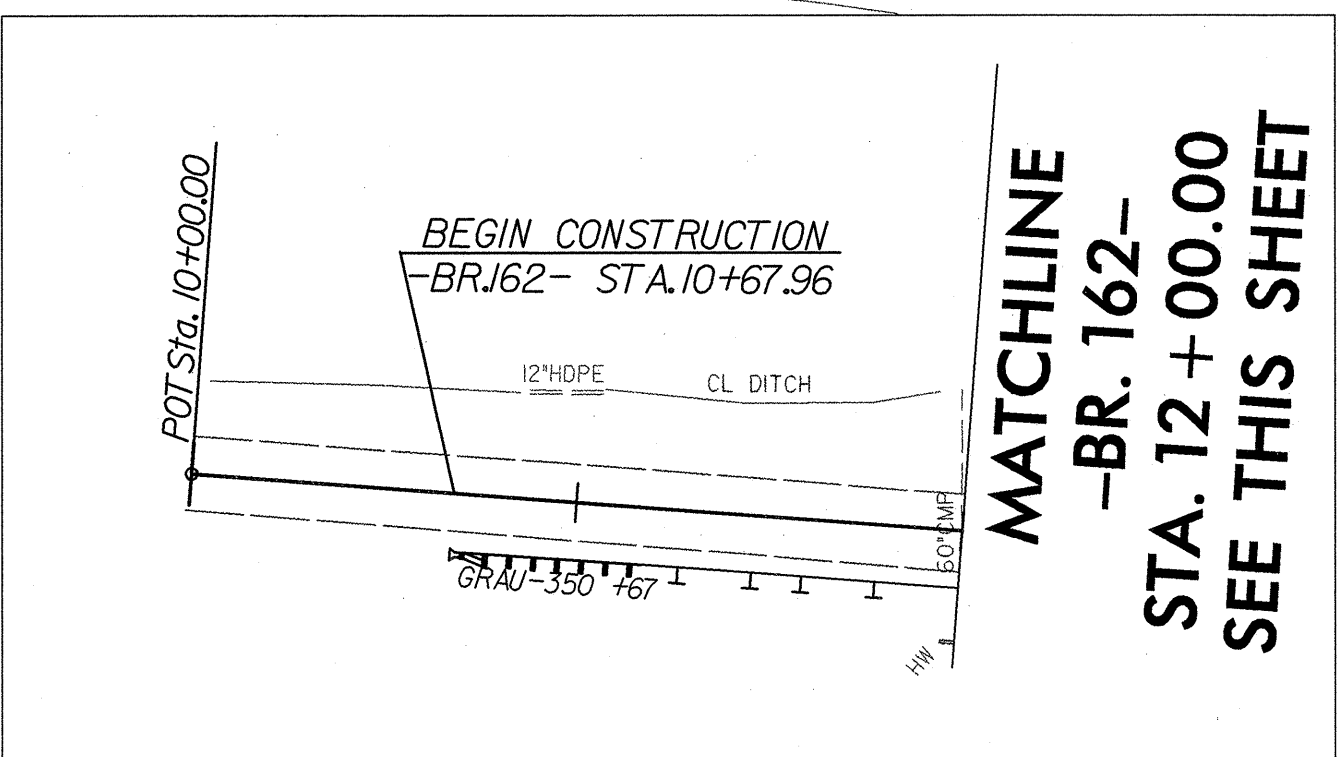
 CONST. REV. R / W REV.	PROJECT REFERENCE NO. B-5021	SHEET NO. 10
	ROADWAY DESIGN ENGINEER	
STV / Ralph Whitehead Associates, Inc. 1000 West Morehead St., Ste. 200 Charlotte, NC 28208		

BEGIN RESURFACING
 MILL & RESURFACE 25' - 75' AS REQUIRED
 TO OBTAIN SMOOTH TIE-IN
 -BR.162- STA.14+04.00

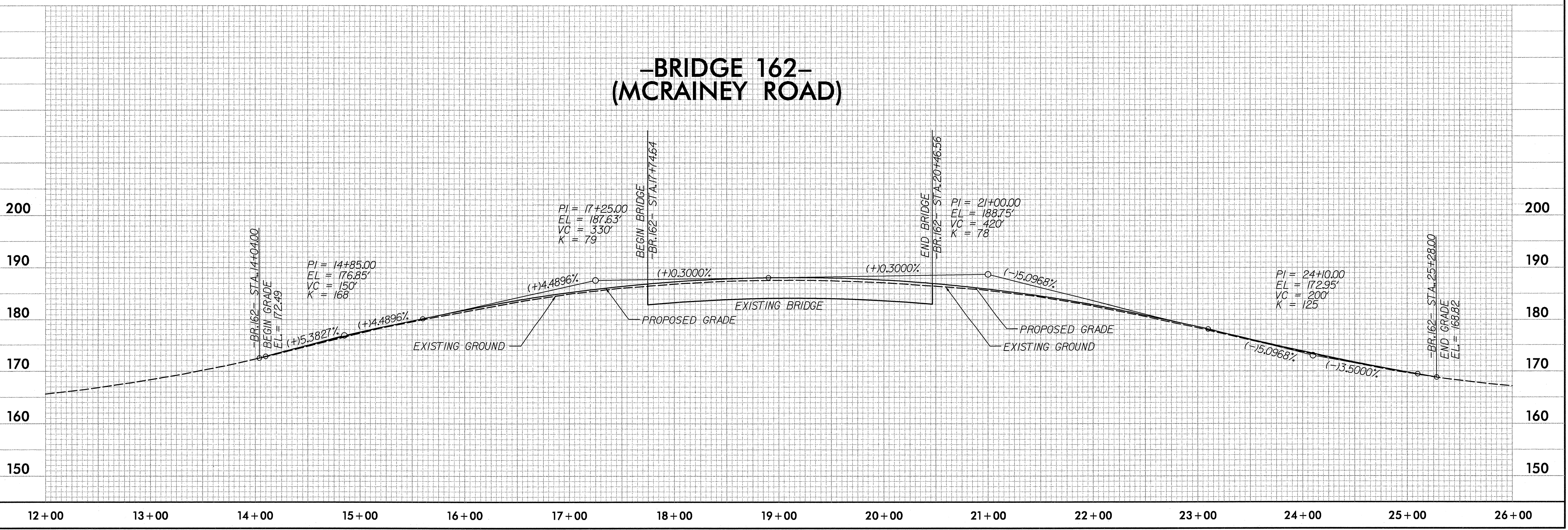
MATCHLINE -BR. 162-
 STA. 12 + 00.00 SEE THIS SHEET

CONTRACTOR SHALL COORDINATE WITH NCDOT FOR INSTALLATION OF ADVISORY SPEED SIGN. SIGN SHALL BE PROVIDED BY NCDOT AND INSTALLED BY CONTRACTOR PRIOR TO RE-OPENING ROAD. INSTALLATION OF SIGN SHALL BE INCIDENTAL TO CONTRACT ITEMS.

45 MPH
 BR-162
 STA.14+04



MATCHLINE -BR. 162-
 STA. 12 + 00.00
 SEE THIS SHEET



**-BRIDGE 162-
 (MCRAINY ROAD)**

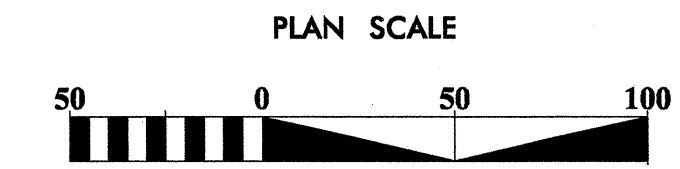
REVISIONS

8/17/99

REVISIONS

NOTES:

1. CONTRACTOR SHALL GRADE SHOULDERS TO DRAIN AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT ITEMS.
2. WHERE EXISTING PIPE IS TO BE UTILIZED, INSTALL SHOULDER BERM GUTTER, T.B.G.I. AND MODIFY OR REPLACE OUTLET PIPE AS NECESSARY TO TIE INTO EXISTING PIPE. INSTALLATION, PIPE, ELBOWS, AND CMP NECESSARY TO TIE PROPOSED T.B.G.I. TO EXISTING CMP SHALL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF THE T.B.G.I.
3. CONTRACTOR SHALL REPLACE PAVEMENT MARKINGS WITH SAME MATERIAL AS EXISTING WITHIN THE PROJECT LIMITS. PAVEMENT MARKINGS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT ITEMS.
4. CONTRACTOR SHALL ADJUST FUNNEL DRAINS AS NEEDED WITHIN THE PROJECT LIMITS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT ITEMS.
5. CONTRACTOR SHALL REMOVE AND RESET ANY SIGNS AS NECESSARY. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT ITEMS.
6. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAYS DURING CONSTRUCTION.



PROJECT REFERENCE NO. B-5021	SHEET NO. 11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
STV / Ralph Whitehead Associates, Inc. 1000 West Morehead St., Ste. 200 Charlotte, NC 28208	

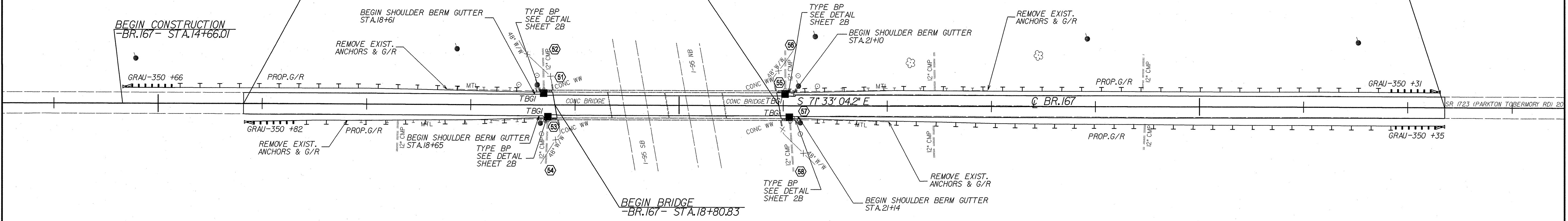
BEGIN RESURFACING
MILL & RESURFACE 25' - 75' AS REQUIRED
TO OBTAIN SMOOTH TIE-IN
-BR.167- STA.15+82.90

BEGIN CONSTRUCTION
-BR.167- STA.14+66.01

END BRIDGE
-BR.167- STA.20+95.74

BEGIN BRIDGE
-BR.167- STA.18+80.83

END CONSTRUCTION & RESURFACING
MILL & RESURFACE 25' - 75' AS REQUIRED
TO OBTAIN SMOOTH TIE-IN
-BR.167- STA.27+35.51



05/29/2008
r:\roadway\proj\Br167\Br167.dgn
167-B-5021-RDY-167_PSH11.dgn
blackdaves

8/17/99

NOTES:

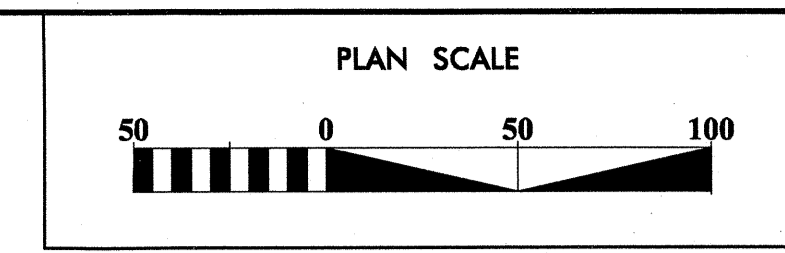
- CONTRACTOR SHALL GRADE SHOULDERS TO DRAIN AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT ITEMS.
- WHERE EXISTING PIPE IS TO BE UTILIZED, INSTALL SHOULDER BERM GUTTER, T.B.G.I. AND MODIFY OR REPLACE OUTLET PIPE AS NECESSARY TO TIE INTO EXISTING PIPE. INSTALLATION, PIPE ELBOWS, AND CMP NECESSARY TO TIE PROPOSED T.B.G.I. TO EXISTING CMP SHALL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF THE T.B.G.I.
- CONTRACTOR SHALL REPLACE PAVEMENT MARKINGS WITH SAME MATERIAL AS EXISTING WITHIN THE PROJECT LIMITS. PAVEMENT MARKINGS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT ITEMS.
- CONTRACTOR SHALL ADJUST FUNNEL DRAINS AS NEEDED WITHIN THE PROJECT LIMITS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT ITEMS.
- CONTRACTOR SHALL REMOVE AND RESET ANY SIGNS AS NECESSARY. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT ITEMS.
- CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAYS DURING CONSTRUCTION.

-BR.169- CURVE 1

PI Sta 12+25.06
 $\Delta = 35^{\circ}04'34.2"$ (LT)
 $D = 10^{\circ}05'46.2"$
 $L = 347.42'$
 $T = 179.35'$
 $R = 567.50'$

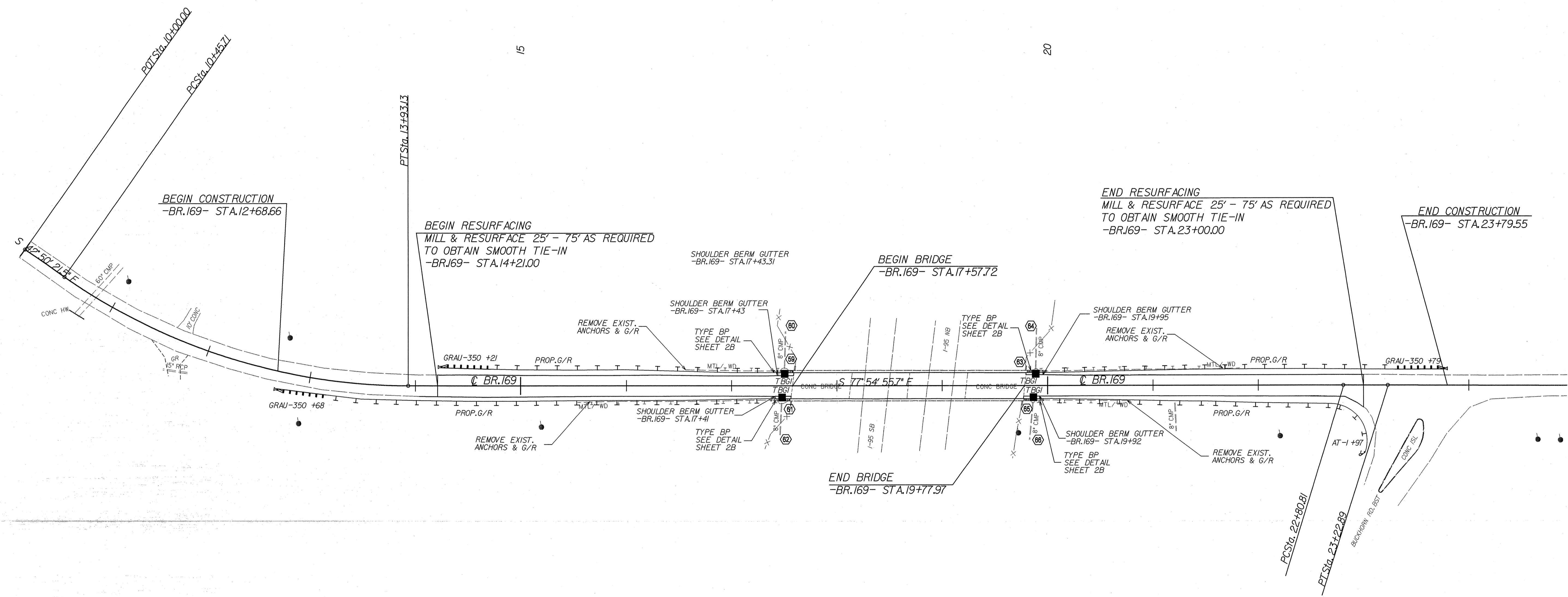
-BR.169- CURVE 2

PI Sta 23+01.85
 $\Delta = 0^{\circ}07'13.9"$ (RT)
 $D = 0^{\circ}17'11.3"$
 $L = 42.08'$
 $T = 21.04'$
 $R = 20,000.00'$



PROJECT REFERENCE NO. B-5021	SHEET NO. 12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
1000 West Morehead St., Ste. 200 Charlotte, NC 28208	

REVISIONS



05/29/2008
 P:\Roadway\Proj\Bridges\169\B-5021_RDY_169_PSH12.dgn
 c:\k\k\c\c