

SURVEY CONTROL SHEET R-4753

-FINAL-

Height 2116.515ft Horz error 0.0075ft Elevation 2210.134ft
 Vert error 0.0075ft Utilized Horz and Vert
 3D error 0.0105ft Quality Survey quality

BL	POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
1	BL-1	588614.3140	760404.0110	2158.59	OUTSIDE PROJECT LIMITS		
2	BL-2	588884.2580	760903.9010	2161.58	OUTSIDE PROJECT LIMITS		
3	BL-3	589289.3250	761150.1420	2159.56	10-18.09	27.01 RT	
4	BL-4	589920.6050	761398.2520	2135.64	16-94.40	18.77 LT	
5	BL-5	590477.2590	761703.2970	2131.20	23-22.75	29.31 LT	
6	BL-6	590628.8660	762084.6270	2127.04	27-25.29	16.39 LT	
7	BL-7	590510.3650	762472.1090	2122.98	31-28.23	17.14 LT	
8	BL-8	590199.1330	762825.4480	2136.65	35-98.24	6.44 LT	
9	BL-9	589761.6140	763092.6490	2134.20	41-09.73	19.71 LT	
10	BL-10	589388.5460	763287.9860	2129.22	45-30.07	24.43 LT	
11	BL-11	588889.8850	763525.3220	2129.49	50-80.73	33.27 LT	
12	BL-12	588232.2210	763771.3940	2139.30	57-80.24	22.35 RT	
13	BL-13	588033.8280	764253.3370	2137.78	62-82.16	57.91 LT	
14	BL-14	587473.3420	764451.2230	2138.49	68-58.56	15.89 RT	
15	BL-15	587119.7430	764544.6480	2148.91	72-29.48	3.34 RT	
16	BL-16	586770.1160	764549.0500	2151.11	75-71.50	36.25 LT	
17	BL-17	586504.3540	764373.8450	2147.46	78-76.87	23.21 LT	
18	BL-18	586381.1950	763976.1530	2142.78	82-84.82	20.99 LT	
19	BL-19	586460.0930	763500.9540	2144.71	87-00.54	116.00 RT	
20	BL-20	586248.5290	763285.9910	2143.21	88-70.84	103.98 RT	
21	BL-21	585834.4940	763638.9360	2140.06	93-02.04	3.74 RT	
22	BL-22	585561.6600	763951.6290	2135.23	97-20.19	16.68 RT	
23	BL-23	585174.9690	764308.9550	2134.08	102-45.99	35.40 LT	
24	BL-24	584581.2870	764702.7390	2159.74	109-57.62	2.21 LT	
25	BL-25	583982.7580	765140.1550	2147.67	116-98.95	1.34 LT	
26	BL-26	583493.9760	765495.1120	2165.79	123-02.62	4.10 RT	
27	BL-27	583312.3020	765727.0170	2162.88	125-65.94	76.55 RT	
28	BL-28	583420.7190	765979.4770	2155.43	128-04.84	40.77 RT	
29	BL-29	583980.1980	766222.1740	2147.59	133-15.29	23.06 LT	
30	BL-30	584081.4550	766504.6790	2140.11	136-47.63	26.78 LT	
31	BL-31	584155.6540	767157.0830	2134.53	143-00.21	16.85 LT	
32	BL-32	584127.9020	767669.8080	2140.48	148-15.01	8.90 RT	
33	BL-33	583944.4950	768318.7130	2145.39	154-89.65	25.48 LT	
34	BL-34	583577.0650	768696.5130	2141.64	160-13.41	14.11 RT	
35	BL-35	583245.4310	769052.9800	2152.51	164-96.54	22.03 LT	
36	BL-36	582713.4610	769297.1530	2159.17	170-69.49	49.91 LT	
37	BL-37	582034.7180	769247.9740	2154.08	177-40.67	13.81 LT	
38	BL-38	581567.5210	769180.9760	2165.19	182-10.33	19.20 RT	
39	BL-39	580998.2450	769281.0110	2171.13	187-85.63	16.65 RT	
40	BL-40	580406.3510	769416.1590	2193.21	193-92.01	18.83 RT	
41	BL-41	580070.3730	769517.5220	2208.07	197-42.55	15.30 RT	
42	BL-42	579557.8770	769701.4980	2193.21	202-85.41	20.25 LT	
43	BL-43	579127.4950	769791.6310	2174.66	207-23.47	20.85 LT	
44	BL-44	578803.3260	769799.8460	2158.36	210-45.56	13.60 RT	
45	BL-45	578460.5910	769866.9340	2154.94	213-92.56	16.40 LT	

BY2	POINT	DESC.	NORTH	EAST	ELEVATION	Y1REV STATION	OFFSET
47	BY2-47	590108.3850	763801.3570	2162.42	OUTSIDE PROJECT LIMITS		
48	BY2-48	589800.9880	763161.3760	2145.20	OUTSIDE PROJECT LIMITS		
49	BY2-49	589471.9620	763381.1030	2136.27	11-96.66	15.00 LT	
210	BL-10	589388.5460	763287.9860	2129.22	13-44.18	42.11 RT	

BY3	POINT	DESC.	NORTH	EAST	ELEVATION	Y2 STATION	OFFSET
50	BY3-50	588848.7020	763991.5200	2133.47	OUTSIDE PROJECT LIMITS		
51	BY3-51	588934.1400	763752.1400	2131.46	12-56.05	14.58 LT	
211	BL-11	588889.8850	763525.3220	2129.49	10-31.01	38.77 LT	

BY4	POINT	DESC.	NORTH	EAST	ELEVATION	Y3 STATION	OFFSET
222	BL-22	585561.6600	763951.6290	2135.24	10-16.17	46.38 LT	
52	BY4-52	585406.0930	763759.0430	2137.30	12-61.26	19.57 LT	
53	BY4-53	585258.9830	763481.0520	2150.74	OUTSIDE PROJECT LIMITS		

BY7	POINT	DESC.	NORTH	EAST	ELEVATION	Y4 STATION	OFFSET
56	BY7-56	578728.6730	770167.6910	2160.97	13-65.73	14.51 LT	
244	BL-44	578803.3260	769799.8460	2158.44	OUTSIDE PROJECT LIMITS		

BM3 ELEVATION = 2155.13
 N 588441 E 759883
 BL STATION 5+00.00
 S 78°02'53.0" W DIST 838.94
 BRASS DISK SET ON NW CORNER OF WW OF BRIDGE

BM2 ELEVATION = 2142.13
 N 590604 E 761895
 BL STATION 30+80.00 46 LEFT
 8" SPIKE SET IN CEDAR TREE STUMP

BM3 ELEVATION = 2130.19
 N 588953 E 763434
 BL STATION 55+32.00 55 RIGHT
 CHISELED SQUARE IN SW CORNER OF WW OF BRIDGE

BM4 ELEVATION = 2151.82
 N 587441 E 764523
 BL STATION 74+94.00 61 LEFT
 8" SPIKE SET IN ROOT OF 18" WALNUT TREE

BM5 ELEVATION = 2144.97
 N 586461 E 763488
 BL STATION 93+83.00 12 RIGHT
 CHISELED SQUARE ON EAST CORNER OF MONUMENT

BM6 ELEVATION = 2136.72
 N 585566 E 763913
 BL STATION 104+86.00 22 RIGHT
 CHISELED SQUARE ON SE CORNER OF WW ON BRIDGE

BM7 ELEVATION = 2143.89
 N 583902 E 765168
 BL STATION 125+80.00 25 RIGHT
 8" SPIKE SET IN BASE OF 20" WILD CHERRY TREE

BM8 ELEVATION = 2131.91
 N 584153 E 767129
 BL STATION 151+70.00 0 LEFT
 CHISELED SQUARE IN WEST WY OF BOX CULVERT

BM9 ELEVATION = 2149.24
 N 583481 E 768847
 BL STATION 170+88.00 32 LEFT
 8" SPIKE SET IN ROOT OF 17" POPLAR TREE

BM10 ELEVATION = 2166.53
 N 581099 E 769251
 BL STATION 196+12.00 12 RIGHT
 CHISELED SQUARE ON SOUTH END OF HW

BM11 ELEVATION = 2198.64
 N 579827 E 769659
 BL STATION 209+50.00 50 LEFT
 8" SPIKE SET IN BASE OF 20" WILD CHERRY TREE

BM12 ELEVATION = 2158.03
 N 578166 E 768960
 BL STATION 223+31.37
 S 01°15'59.0" W DIST 294.46
 BRASS DISK SET ON NE END OF CONC. RAIL ON BRIDGE

BM13 ELEVATION = 2170.42
 N 588994 E 760246
 BY1 STATION 5+07.00 15 RIGHT
 8" SPIKE SET IN BASE OF 15" RED OAK TREE

BM14 ELEVATION = 2161.79
 N 590071 E 763045
 BY2 STATION 5+53.00 21 LEFT
 8" SPIKE SET IN BASE OF 21" WHITE PINE TREE

BM15 ELEVATION = 2140.99
 N 588982 E 764880
 BY3 STATION 5+00.00
 N 33°37'38.26" E DIST 159.73
 8" SPIKE SET IN WHITE PINE TREE STUMP

BM16 ELEVATION = 2150.20
 N 585265 E 763528
 BY4 STATION 10+18.00 16 LEFT
 8" SPIKE SET IN ROOT OF 12" WHITE PINE TREE

BM17 ELEVATION = 2161.17
 N 578713 E 770246
 BY7 STATION 5+00.00
 S 79°01'10.38" E DIST 79.91
 CHISELED "X" IN SW CORNER OF CONC. HW

NOTES:

1. THE SITE CALIBRATION SHOWN IS BASED UPON A NETWORK TIED TO THE HARN (HIGH ACCURACY REFERENCE NETWORK) NAD 83/95 ADJUSTMENT. THIS CALIBRATION WILL ALLOW THE END USER TO WORK WITHIN THE SAME COORDINATE SYSTEM WHEN USING RTK (REAL TIME KINEMATIC) GPS AND A LOCAL BASE STATION. IF ANOTHER SYSTEM SUCH AS VRS (VIRTUAL REFERENCE STATION) IS USED, ADDITIONAL FIELD TIES MAY BE NEEDED TO REDUCE POSSIBLE ERRORS, OR BIASES.
 2. THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:
[HTTP://WWW.NCDOT.ORG/DOHPRECONSTRUCT/HIGHWAY/LOCATION/PROJECT/](http://www.ncdot.org/doh/preconstruct/highway/location/project/)
 THE FILES TO BE FOUND ARE AS FOLLOWS:
 R4753_LS_GPSCALIB.HTML
 R4753_LS_WGS84.TXT
 R4753_LS_LOCAL.TXT
 R4753_LS_CONTROL.TXT
 THE WGS84 AND LOCAL FILES ARE COMMA DELIMITED AND CAN BE USED TO REPRODUCE THE SITE CALIBRATION FOR THE END USER'S GPS EQUIPMENT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE 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.

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "R4753 GPS108" WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF NORTHING: 584298.1040(ft) EASTING: 767738.1110(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99977445 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "R4753 GPS108" TO -L- STATION 15+50.00 IS N 49°21'09.2" W 8,420.43' ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM IS BASED ON NGS BENCHMARK N508 (ELEV 2144.97 FT.) (NAVD 88)

GEOID MODEL - GEOID03
NOTE: DRAWING NOT TO SCALE