City Of Harrisonburg, Virginia

RESERVOIR STREET IMPROVEMENTS

VDOT PROJECT # U000-115, R30, C501
UPC # 101209

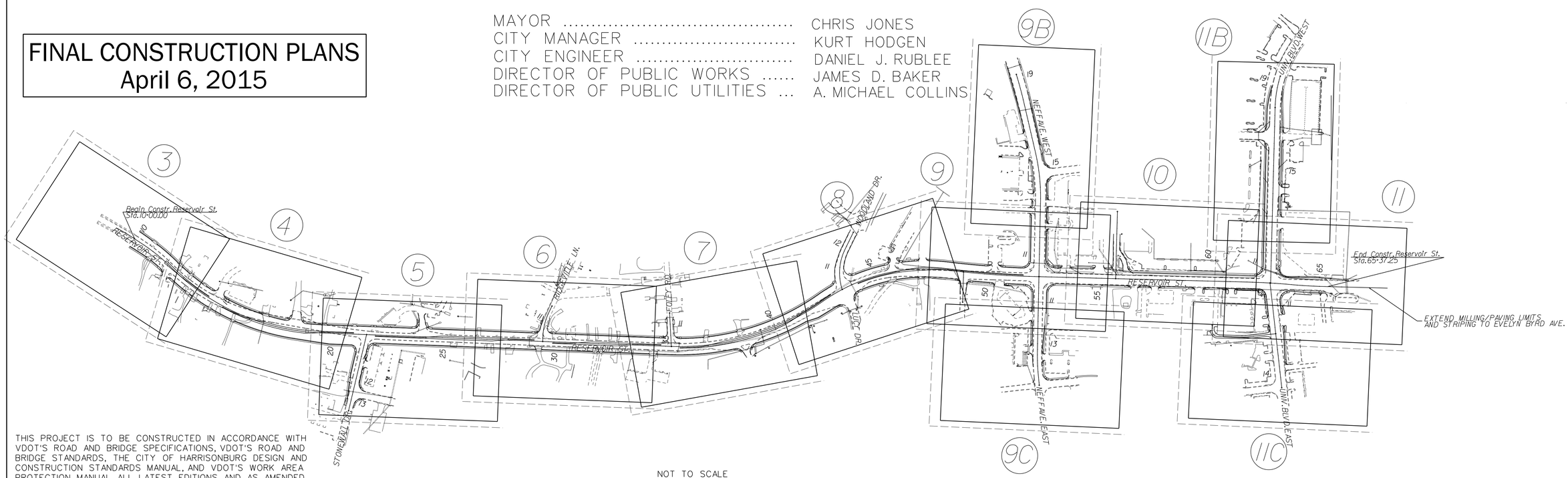
FOR INDEX OF SHEETS SEE SHEET 1B

FUNCTIONAL CLASSIFICATION AND TRAFFIC DATA	
URBAN LS COLLECTOR (GS-7) - ROLLING - 40 MPH DESIGN SPEED	
	Fr: 10+00.00 To: 43+56.89
ADT (2012)	14,500
ADT (2035)	30,000
DHV	1,255
D (%) (design hour)	51%
T (%) (design hour)	1.4%
V (MPH)	See Plan and Profile Sheets for Horizontal and Vertical Curve Speeds.
	Fr: 43+56.89 To: 65+37.25
ADT (2012)	20,000
ADT (2035)	36,000
DHV	1,652
D (%) (design hour)	50%
T (%) (design hour)	2.2%
V (MPH)	See Plan and Profile Sheets for Horizontal and Vertical Curve Speeds.

COMMONWEALTH OF VIRGINIA
RICK JAMES DeLONG
Lic. No. 031642
4/06/15
PROFESSIONAL ENGINEER

FINAL CONSTRUCTION PLANS
April 6, 2015

MAYOR ..... CHRIS JONES
CITY MANAGER ..... KURT HODGEN
CITY ENGINEER ..... DANIEL J. RUBLEE
DIRECTOR OF PUBLIC WORKS ..... JAMES D. BAKER
DIRECTOR OF PUBLIC UTILITIES ... A. MICHAEL COLLINS



NOT TO SCALE

THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH VDOT'S ROAD AND BRIDGE SPECIFICATIONS, VDOT'S ROAD AND BRIDGE STANDARDS, THE CITY OF HARRISONBURG DESIGN AND CONSTRUCTION STANDARDS MANUAL, AND VDOT'S WORK AREA PROTECTION MANUAL, ALL LATEST EDITIONS, AND AS AMENDED BY THE CONTRACT PROVISIONS AND THE COMPLETE ELECTRONIC TIF VERSION OF THE PLAN ASSEMBLY.

CONVENTIONAL SIGNS

STATE LINE
COUNTY LINE
CITY,TOWN OR VILLAGE
RIGHT OF WAY LINE
FENCE LINE
UNFENCED PROPERTY LINE
FENCED PROPERTY LINE
WATER LINE
SANITARY SEWER LINE
GAS LINE
ELECTRIC UNDERGROUND CABLE
TRAVELED WAY
GUARD RAIL
RETAINING WALL
RAILROADS
BASE OR SURVEY LINE

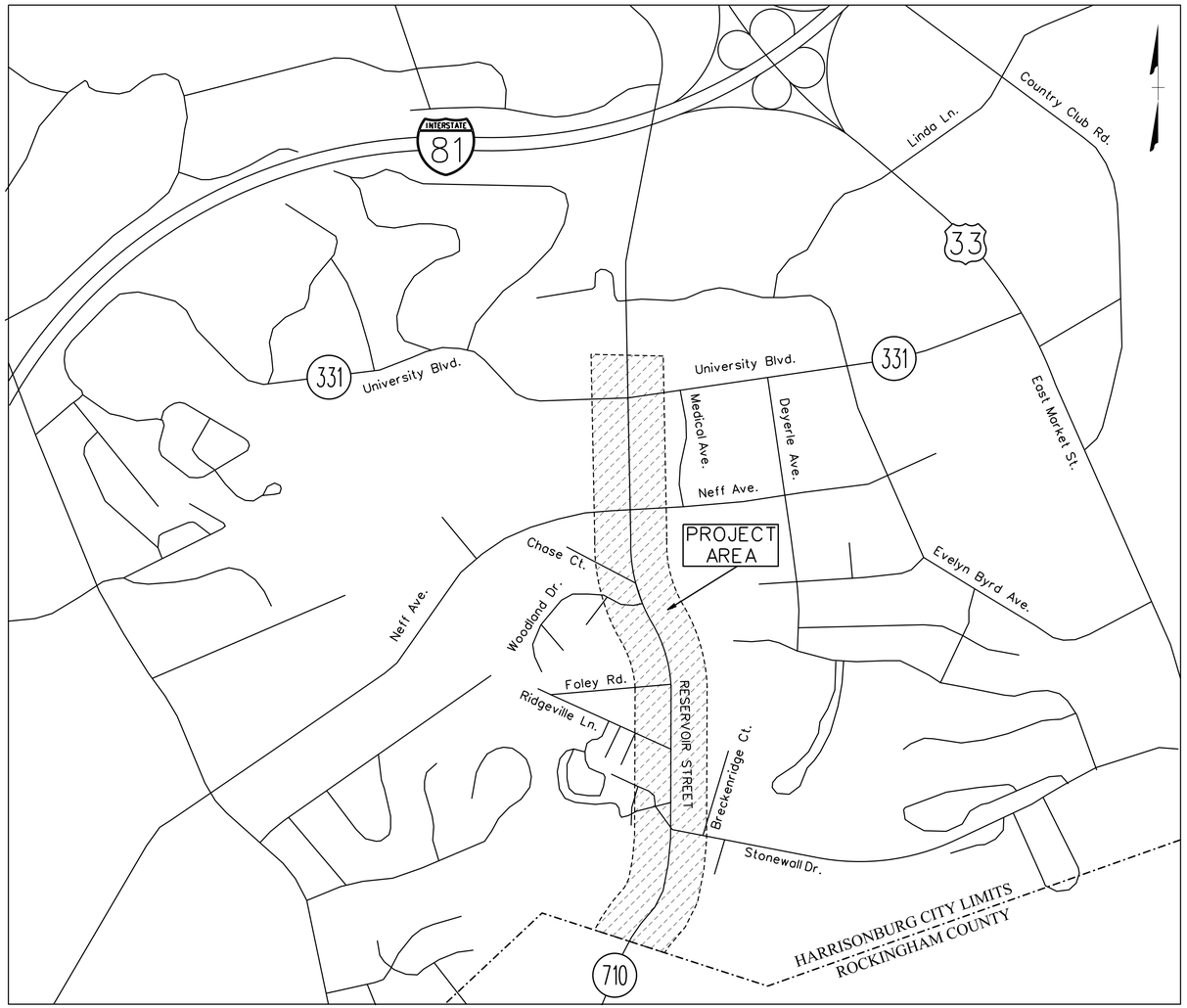
LEVEE OR EMBANKMENT
BRIDGES
CULVERTS
DROP INLET
POWER POLES
TELEPHONE OR TELEGRAPH POLES
TELEPHONE OR TELEGRAPH LINES
HEDGE
TREES
HEAVY WOODS
GROUND ELEVATION
GRADE ELEVATION

McCORMICK TAYLOR

TIER 2 PROJECT

LOCALLY ADMINISTERED PROJECTS	
NAME OF LOCALITY	
(SIGNATURE)	
NAME OF RESPONSIBLE LOCAL GOVERNMENT OFFICAL (TYPED)	
RECOMMENDED FOR APPROVAL FOR RIGHT OF WAY ACQUISITION	
DATE	TITLE OF POSITION
(SIGNATURE)	
NAME OF RESPONSIBLE LOCAL GOVERNMENT OFFICAL (TYPED)	
RECOMMENDED FOR APPROVAL FOR CONSTRUCTION	
DATE	TITLE OF POSITION

LOCATION MAP



McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = NTS

DRAWN BY CMY DATE

CHECKED BY RJD DATE

DESIGN BY CMY DATE

TAX MAP

RESERVIOR STREET

LOCATION MAP

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 1A

INDEX OF SHEETS

SHEET NO.	DESCRIPTION	STATIONS
1	TITLE SHEET	
1A	LOCATION MAP	
1B	INDEX OF SHEETS	
1C - 1C2	RIGHT OF WAY DATA SHEET	
1D	REVISION DATA SHEET	
1E - 1E1	EXISTING DRAINAGE DESCRIPTIONS	
1E1 - 1E2	EXISTING SANITARY SEWER DESCRIPTIONS	
1F	SURVEY ALIGNMENT DATA SHEET	
1G - 1G1	CONSTRUCTION ALIGNMENT DATA SHEETS	
1J - 1J(2)	TEMPORARY SIGNALIZATION PLAN	
1K(1) thru 1K(5)	TEMPORARY TRAFFIC CONTROL NOTES AND SITEWIDE CONSTRUCTION SIGNAGE	
1L(1) thru 1L(11)	TEMPORARY TRAFFIC CONTROL PLAN STAGE 1A THRU 1D	
1M(1) thru 1M(4)	TEMPORARY TRAFFIC CONTROL PLAN STAGE 2A(1) AND 2A	
1N(1) thru 1N(3)	TEMPORARY TRAFFIC CONTROL PLAN STAGE 2B	
2	GENERAL NOTES	
2A - 2A(6)	TYPICAL SECTIONS	
2B - 2B(4)	DRAINAGE DESCRIPTIONS & SUMMARIES	
2D(1) - 2D(4)	PAVEMENT SUMMARY	
2D(5)	DEMOLITION SUMMARY	
2D(6)	GRADING DIAGRAM	
2D(7)	GRADING DIAGRAM SUMMARY	
2D(8)	INCIDENTAL SUMMARY	
2D(9)	ROADSIDE DEVELOPMENT	
2E - 2E(3)	RETAINING WALL "E" TYPICAL SECTIONS, PLAN, PROFILE, STAKEOUT	
2F(1) - 2F(4)	RETAINING DETAIL SHEETS	
3	PLAN SHEET - RESERVOIR	10+00 to 13+00
3A	PROFILE SHEET - RESERVOIR	10+00 to 13+00
4	PLAN SHEET - RESERVOIR	13+00 to 20+00
4A	PROFILE SHEET - RESERVOIR	13+00 to 20+00
5	PLAN SHEET - RESERVOIR, STONEWALL	21+00 to 27+00, 10+39.97 to 13+31.33
5A	PROFILE SHEET - RESERVOIR	21+00 to 27+00
5B	PROFILE SHEET - STONEWALL	10+39.97 to 13+31.33
6	PLAN SHEET - RESERVOIR, RIDGEVILLE	27+00 to 34+00, 10+34.01 to 11+23.56
6A	PROFILE SHEET - RESERVOIR, RIDGEVILLE	27+00 to 34+00, 10+34.01 to 11+23.56
7	PLAN SHEET - RESERVOIR, FOLEY, RET. WALLS "A", "B", "C"	34+00 to 41+00, 10+34.15 to 11+45
7A	PROFILE SHEET - RESERVOIR, FOLEY	34+00 to 41+00, 10+34.15 to 11+45
7B	PROFILE SHEET - RETAINING WALLS "A", "B", "C"	
8	PLAN SHEET - RESERVOIR, WOODLAND	41+00 to 48+00, 10+35 to 12+50
8A	PROFILE SHEET - RESERVOIR, WOODLAND	41+00 to 48+00, 10+35 to 12+50
9	PLAN SHEET - RESERVOIR, NEFF WEST, NEFF EAST, LISIMI, RET. WALL "D"	48+00 to 55,00, 10+36.81 to 12+35, 10+31.21 to 11+75, 10+34.09 to 11+00
9A	PROFILE SHEET - RESERVOIR, LISIMI, RET. WALL "D"	48+00 to 55+00, 10+34.09 to 11+00
9B	PLAN SHEET - NEFF WEST	12+35 to 18+25
9C	PLAN SHEET - NEFF EAST	11+75 to 14+68.66
9D	PROFILE SHEET - NEFF WEST	10+36.81 to 18+25
9E	PROFILE SHEET - NEFF EAST	10+31.21 to 14+68.66
10	PLAN SHEET - RESERVOIR, COSTCO	55+00 to 61+00, 10+36.56 to 12+00
10A	PROFILE SHEET - RESERVOIR, COSTCO	55+00 to 61+00, 10+36.56 to 12+00
10B	PROFILE SHEET - RETAINING WALLS "F" & "G"	

SHEET NO.	DESCRIPTION	STATIONS
11	PLAN SHEET - RESERVOIR, UNIV WEST, UNIV EAST	61+00 to 65+37.25, 10+27.52 to 12+25, 10+29.10 to 11+50
11A	PROFILE SHEET - RESERVOIR	61+00 to 65+37.25
11B	PLAN SHEET - UNIVERSITY WEST	12+25 to 18+79.89
11C	PLAN SHEET - UNIVERSITY EAST, HFPA ENTRANCE	11+50 to 14+10.37, 10+24 to 13+26.18
11D	PROFILE SHEET - UNIVERSITY WEST	10+27.52 to 18+79.89
11E	PROFILE SHEET - UNIVERSITY EAST, HFPA ENTRANCE	10+29.10 to 14+10.37, 10+24 to 13+26.18
12 - 12(11C)	SIGNING AND PAVEMENT MARKING PLANS AND SUMMARIES	
13(1) - 13(9)	SIGNAL PLANS AND SUMMARIES	
14(1) - 14(4)	ENTRANCE PROFILES	
*15 - 15(11C)	WATER LINE RELOCATION PLANS / WATER & SEWER GENERAL NOTES	
*16(3) - 16(11B)	SEWER LINE RELOCATION PLANS	
17 - 17(11C)	EROSION & SEDIMENT CONTROL PLAN PHASE I	
18 - 18(11C)	EROSION & SEDIMENT CONTROL PLAN PHASE II	
19(1) - 19(3)	BMP LAYOUT & GRADING; PROFILES & CROSS SECTIONS; NOTES & DETAILS	
20(1) - 20(11)	STORM SEWER PROFILE SHEETS	

TOTAL CROSS SECTION SHEETS 11A (SEE CROSS SECTION SHEET NUMBER 1 FOR INDEX OF SHEETS)

*SHEET'S 15-15(11C) AND 16(3)-16(11B) ARE PART OF A SEPARATE WATER AND SEWER PLAN SET.
SEE SHEET 15 FOR INDEX OF THOSE SHEETS.

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = NTS

DRAWN BY	DATE
CMY	
CHECKED BY	DATE
RJD	
DESIGN BY	DATE
CMY	

TAX MAP

RESERVIOR STREET

INDEX OF SHEETS

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 1B

RIGHT OF WAY DATA

PARCEL NO.	LANDOWNER	SHEET NO.	AREA								
			TOTAL	FEE TAKING	PRESCRIPTIVE R/W	FEE REMAINDER	EASEMENTS				
							PERMANENT UTILITY	PERMANENT DRAINAGE	TEMP. CONSTRUCTION	PERMANENT ACCESS	PROFFERS
			ACRES	ACRES (SQ. FEET)	ACRES	ACRES	SQ. FEET	SQ. FEET	SQ. FEET	SQ. FEET	YES / NO
01	MARVIN J.BAKER JR., 2501 RESERVOIR ST.	3,4	3.9372	0.1565 (6819)		3.7807	7252	-	16044	-	NO
02 D-17	VIRGINIA M.MINNICK, 2567 RESERVOIR ST.	3	0.7825	0.0434 (1890)		0.7391	1255	-	6607	-	NO
03	VIRGINIA M.MINNICK, 2555 RESERVOIR ST.	3	0.9163	0.0052 (228)		0.9110	275	-	732	-	NO
04	GARY W.BODKIN AND VICKIE J.BODKIN, 2541 RESERVOIR ST.	3	0.1390	0.0000 (0)		0.1390	161	-	1504	-	NO
05	BRENT L.MUMBERT, 2521 RESERVOIR ST.	3,4	0.9604	0.0300 (1305)		0.9305	142	-	1525	-	NO
06	HARRY H.SHIFFLETT JR., AND MARY L.SHIFFLETT, 2511 RESERVOIR ST.	4	0.6397	0.0031 (136)		0.6366	181	-	1984	-	NO
07	DOGWOOD COMMONS,L.L.C., 2480 RESERVOIR ST.	4	3.8629	0.0418 (1819)		3.8211	5332	-	5332	-	NO
08	CITY OF HARRISONBURG, 2485 RESERVOIR ST.	4	0.2640	0.0396 (1725)		0.2244	-	-	1593	-	NO
09	CARMEL QUINN FALLS AND NELSON LEON FALLS, 2477 RESERVOIR ST.	4	-	0.0152 (660)		-	-	-	334	-	NO
10	CITY OF HARRISONBURG, 2465 RESERVOIR ST.	4	0.4796	0.1327 (5781)		0.3469	400	-	1284	-	NO
11	LORALEE B.HERTZLER, 2450 RESERVOIR ST.	4	0.4379	0.0000 (0)		0.4379	2516	-	2516	-	NO
12	BRENDA AND BONNIE MANNING, 2455 RESERVOIR ST.	4	0.9974	0.1133 (4937)		0.8841	-	-	818	-	NO
13	HILLMONT APARTMENTS,L.C., 739 HILLMONT CIR.	4	-	0.0000 (0)		-	-	-	516	-	NO
14	CITY OF HARRISONBURG, 2425 RESERVOIR ST.	4	0.6609	0.0877 (3821)		0.5732	-	-	892	-	NO
15	CITY OF HARRISONBURG, 2421 RESERVOIR ST.	4	0.6634	0.0836 (3643)		0.5797	15	-	1105	-	NO
16	MAHHULIKA LALL, 2416 RESERVOIR ST.	4,5	0.4840	0.0096 (420)		0.4744	1378	-	1378	-	NO
17	CITY OF HARRISONBURG, 2410 RESERVOIR ST.	5	0.5041	0.0351 (1529)		0.4690	1438	-	1438	-	NO
18	CITY OF HARRISONBURG, 2411 RESERVOIR ST.	4,5	0.4161	0.2151 (9370)		0.2010	750	-	2672	-	NO
19	JAMES & KAY ACKER & STEPHEN & SARAH JONES, 680 STONEWALL DR.	4,5	0.3419	0.0306 (1331)		0.3113	1557	-	2775	-	NO
20	PROPERTY COMBINED WITH PARCEL 19	5	0.3419	- -		-	-	-	-	-	NO
21	JAMES B.ACKER,660-674 STONEWALL DR.	5	0.7192	0.0016 (69)		0.7176	355	-	355	-	NO
22	CITY OF HARRISONBURG, 640 MERLINS WAY	5	0.1217	0.0343 (1494)		0.0874	1108	-	1108	-	NO
23	EDDIE T.ABRAMS AND PAMELA R.ABRAMS, 650 MERLINS WAY	5	0.0474	0.0011 (46)		0.0463	339	-	339	-	NO
24	LINDA CASTON STEFFEY, 660 MERLINS WAY	5	0.0474	0.0000 (0)		0.0474	91	-	91	-	NO
25	PROPERTY REMOVED, 670 MERLINS WAY	5	0.0474	- -		-	-	-	-	-	NO
26	PROPERTY REMOVED, 680 MERLINS WAY	5	0.0887	- -		-	-	-	-	-	NO
27	AVALON WOODS II OWNERS ASSOCIATION,INC.	5	-	0.0937 (4082)		-	4512	-	9270	2030	NO
28	TODD A.WILSON, 697 STONEWALL DR.	5	0.1792	0.0576 (2508)		0.1216	107	-	1282	-	NO
29	EDGAR L.BARNARD,JR., 695 STONEWALL DR.	5	0.0635	0.0000 (0)		0.0635	212	-	212	-	NO
30	DEBORAH A.ANDES, 693 STONEWALL DR.	5	0.0635	0.0000 (0)		0.0635	212	-	212	-	NO
31	JOHN A MARTZ, 691 STONEWALL DR.	5	0.0635	0.0000 (0)		0.0635	213	-	213	-	NO
32	CHADLESLIE L.L.C., 689 STONEWALL DR.	5	0.0635	0.0000 (0)		0.0635	213	-	213	-	NO
33	GARY A.GIBSON AND SHARON A.GIBSON, 687 STONEWALL DR.	5	0.0635	0.0000 (0)		0.0635	213	-	213	-	NO
34	CARL R.STRAWDERMAN AND EVELYN S.STRAWDERMAN, 685 STONEWALL DR.	5	0.0635	0.0000 (0)		0.0635	214	-	214	-	NO
35	MOLLY M.MCMAHON, 683 STONEWALL DR.	5	0.1536	0.0000 (0)		0.1536	369	-	539	-	NO
36	PROPERTY REMOVED, 2389 BRECKENRIDGE CT.	5	0.1390	0.0000 (0)		0.1390	-	-	-	-	NO
37	KRISTAN A.LACHANCE, 2414 BRECKENRIDGE CT.	5	0.2520	0.0517 (2252)		0.2003	-	-	1963	-	NO
38	STONEWALL HEIGHTS HOMEOWNER'S ASSOCIATION	5	0.5420	0.0152 (660)		0.5268	-	-	1412	-	NO
39	CITY OF HARRISONBURG, 2321 RESERVOIR ST.	5,6	0.3637	0.0884 (3852)		0.2753	299	-	1838	-	NO
40	CITY OF HARRISONBURG, 2320 RESERVOIR ST.	5,6	0.6335	0.1261 (5492)		0.5074	3479	-	-	-	NO

"D-x" = BUILDING DEMOLITION NUMBER

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = NTS
DRAWN BY DATE
CHECKED BY DATE
DESIGN BY DATE
TAX MAP

RESERVOIR STREET

RIGHT OF WAY DATA

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 1C

RIGHT OF WAY DATA

PARCEL NO.	LANDOWNER	SHEET NO.	AREA								
			TOTAL	FEE TAKING	PRESCRIPTIVE R/W	FEE REMAINDER	EASEMENTS				
							PERMANENT UTILITY	PERMANENT DRAINAGE	TEMP. CONSTRUCTION	PERMANENT ACCESS	PROFFERS
			ACRES	ACRES (SQ. FEET)	ACRES	ACRES	SQ. FEET	SQ. FEET	SQ. FEET		YES / NO
41	CITY OF HARRISONBURG, 2315 RESERVOIR ST.	6	0.2592	0.0296 (1291)		0.2295	51	-	840	-	NO
42	CITY OF HARRISONBURG, 2311 RESERVOIR ST.	6	0.1715	0.0697 (3034)		0.1019	1754	-	-	-	NO
43	CITY OF HARRISONBURG, 2261 RESERVOIR ST.	6	0.3037	0.0433 (1887)		0.2604	210	-	615	-	NO
44	MARVIN J.BAKER JR., 2410 RESERVOIR ST.	6	0.8643	0.0570 (2482)		0.8074	-	265	10154	-	NO
45	HELEN V.FOLEY,712 RIDGEVILLE LA.	6	0.8404	0.0174 (760)		0.8230	433	-	433	-	NO
46	CITY OF HARRISONBURG, 2250 RESERVOIR ST.	6	0.3079	0.0914 (3983)		0.2165	2050	-	2050	-	NO
47 D-13	MARVIN J.BAKER JR., 2251 RESERVOIR ST.	6	1.2817	0.0649 (2814)		1.2168	217	-	11294	-	NO
48 D-11	CITY OF HARRISONBURG, 2240 RESERVOIR ST.	6	0.3879	0.0534 (2324)		0.3346	2113	-	2113	-	NO
49	K&K L.L.C., 721 RIDGEVILLE LA.	6	0.5012	0.0000 (0)		0.5012	244	-	244	-	NO
50	CITY OF HARRISONBURG, 2230 RESERVOIR ST.	6	0.4100	0.0532 (2319)		0.3568	1480	-	1480	-	NO
51	CITY OF HARRISONBURG, 2225 RESERVOIR ST.	6	0.4615	0.0554 (2414)		0.4061	57	-	3592	-	NO
52	CITY OF HARRISONBURG, 2228 RESERVOIR ST.	6,7	0.3017	0.0767 (3342)		0.2250	2329	-	9800	-	NO
53	TRAVIS F.MARSHALL, 2219 RESERVOIR ST.	6	0.1069	0.0101 (442)		0.0967	425	-	1426	-	NO
54	JAMES W.MARSHALL AND HELEN SUE MARSHALL, 2217 RESERVOIR ST.	6	0.0693	0.0064 (279)		0.0629	274	-	358	-	NO
55	JAMES W.MARSHALL AND HELEN SUE MARSHALL, 2215 RESERVOIR ST.	6,7	0.0708	0.0064 (279)		0.0644	278	-	430	-	NO
56	JAMES W.MARSHALL AND HELEN SUE MARSHALL, 2211 RESERVOIR ST.	6,7	0.2488	0.0120 (524)		0.2368	531	-	972	-	NO
57	DAVID M.WELSH, 2210 RESERVOIR ST.	7	0.1974	0.0462 (2014)		0.1512	1150	350	1364	-	NO
58	JAMES W.MARSHALL AND HELEN SUE MARSHALL, 2207 RESERVOIR ST.	7	0.1022	0.0120 (523)		0.0902	543	-	894	-	NO
59	EMMANUEL ENTERPRISES,LLC, 2205 RESERVOIR ST.	7	0.0569	0.0065 (281)		0.0505	291	-	436	-	NO
60	ANA R.PRIETO, 2203 RESERVOIR ST.	7	0.0584	0.0065 (281)		0.0519	279	-	430	-	NO
61	JAMES E.COOK AND CYNTHIA D.COOK, 2201 RESERVOIR ST.	7	0.0955	0.0103 (448)		0.0852	419	-	759	-	NO
62	PROPERTY REMOVED	7	-	- -		-	-	-	-	-	NO
63	PROPERTY REMOVED	7	-	- -		-	-	-	-	-	NO
64	CHARLESTON TOWNES,LLC (NUMEROUS PROPERTIES),2221 PURPLE AND GOLD WAY	7	4.0766	0.0000 (0)		4.0766	7204	-	13454	-	NO
65	TIMOTHY B.WHITMORE, 2180 RESERVOIR ST.	7	0.2713	0.0484 (2109)		0.2229	1633	-	3818	-	NO
66	TIMOTHY B.WHITMORE, 2170 RESERVOIR ST.	7	0.2650	0.0401 (1748)		0.2249	1526	-	2929	-	NO
67 D-16	KATHY LYNN HITE, 2150 RESERVOIR ST.	7,8	-	0.7764 (33819)		-	5560	-	25276	-	NO
68	PROPERTY REMOVED	7,8	-	- -		-	-	-	-	-	NO
69	TRUSTEES OF FIRST PRESBYTERIAN CHURCH	8	0.4569	0.0047 (203)		0.4512	1435	-	1939	-	NO
70	SUNCHASE APARTMENTS,L.L.C., 1941 SUNCHASE DR.	8	19.6615	0.0137 (595)		19.6479	8610	460	11645	-	NO
71	TRUSTEES OF FIRST PRESBYTERIAN CHURCH, 2025 RESERVOIR ST.	8,9	1.0010	0.0696 (3033)		0.9314	3486	-	8110	-	NO
72	JOHN B.MANSFIELD, 1930 RESERVOIR ST.	8,9	2.1423	0.2623 (11426)		1.8800	8400	-	8400	175	NO
73	LISIMI, 410 NEFF AVE	9,9C	5.3061	0.0044 (191)		5.3017	752	2028	3495	-	NO
74	DUPONT COMMUNITY CREDIT UNION, 1991 RESERVOIR ST.	9,9C	0.4614	0.0191 (833)		0.4423	1680	642	1680	-	NO
75	ELIZABETH SWALLOW, 530 NEFF AVE	9,9B	1.4005	0.1994 (8684)		1.2011	3986	-	4260	-	NO
76	DUPONT COMMUNITY CREDIT UNION, 1925 RESERVOIR ST.	9,9C	0.8462	0.0799 (3480)		0.7663	4580	-	4646	-	NO
77	ASHBY,L.L.C., 560 NEFF AVE	9B	1.1897	0.0191 (833)		1.1706	2386	-	2386	-	NO
78	ASHBY,L.L.C., 590 NEFF AVE	9B	0.8503	0.0129 (563)		0.8374	2206	-	2206	-	NO
79	ARTHUR A.FIERRO AND ELIZABETH B.FIERRO,620 NEFF AVE	9B	0.7499	0.0021 (93)		0.7477	202	-	1151	-	NO
80	THE VISITORS OF JAMES MADISON UNIVERSITY,UNIVERSITY BLVD.	9B	-	0.0000 (0)		-	-	-	523	-	NO

"D-x" = BUILDING DEMOLITION NUMBER

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = NTS
DRAWN BY DATE
CHECKED BY DATE
DESIGN BY DATE
TAX MAP

RESERVOIR STREET

RIGHT OF WAY DATA

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 1C1

RIGHT OF WAY DATA

PARCEL NO.	LANDOWNER	SHEET NO.	AREA								
			TOTAL	FEE TAKING	PRESCRIPTIVE R/W	FEE REMAINDER	EASEMENTS				
							PERMANENT UTILITY	PERMANENT DRAINAGE	TEMP. CONSTRUCTION	PERMANENT ACCESS	PROFFERS
			ACRES	ACRES (SQ. FEET)	ACRES	ACRES	SQ. FEET	SQ. FEET	SQ. FEET		YES / NO
81	THE VISITORS OF JAMES MADISON UNIVERSITY,1981 WARWICK DR.	9B	1.2563	0.0261 (1138)		1.2301	3643	-	3643	-	NO
82	DRATHHAR PROPERTIES,563 NEFF AVE	9B	1.0000	0.0225 (980)		0.9775	1904	-	1904	-	NO
83	LITCHFORD-SHILLING PROPERTIES,L.L.C., 1880 RESERVOIR ST.B	9,9B	0.7500	0.1025 (4465)		0.6475	5026	258	4768	-	NO
84	DAVID A.RAO AND MARSHA L.GARST,420 NEFF AVE	9C	1.1556	0.0102 (445)		1.1454	2636	-	2636	-	NO
85	ANCHORAGE INVESTMENTS,L.L.C.,1967 MEDICAL AVE	9C	1.1577	0.0074 (322)		1.1503	2688	-	2688	-	NO
86	TRENTON INC.C/O WILLIAM LINDSEY, 1901 RESERVOIR ST.	9,9C,10	1.4124	0.0988 (4303)		1.3136	6887	-	6887	-	NO
87	GOWEN PROPERTIES,LLC, 1870 RESERVOIR ST.	9,9B	1.0603	0.0846 (3684)		0.9758	2521	-	6458	-	NO
88	THE PRICE COMPANY,1931 WARWICK DR.	9,9B	13.5337	0.4070 (17701)		13.1268	18815	-	44096	-	NO
89	TIMOTHY D.FERGUSON AND KATHERINE FERGUSON, 1871 RESERVOIR ST.	10	0.5519	0.0129 (561)		0.5390	1800	-	1800	-	NO
90	TIMOTHY D.FERGUSON AND KATHERINE FERGUSON, 1851 RESERVOIR ST.	10	0.7370	0.0167 (729)		0.7202	2398	-	2398	-	NO
91	HARRISONBURG FAMILY PRACTICE ASSOCIATES, 1831 RESERVOIR ST.	10,11C	1.1576	0.0194 (844)		1.1382	9705	-	13548	205	NO
92	JOHN W.DALY,498 UNIVERSITY BLVD.	10,11C	0.9580	0.0357 (1553)		0.9223	4463	-	5781	-	NO
93	PROPERTY REMOVED,1921 MEDICAL AVE	11C	1.5890	- -		-	-	-	-	-	NO
94	RALPH J.MAGRI,III AND MAXINE Z.MAGRI,451 UNIVERSITY BLVD.	11C	0.7214	0.0309 (1346)		0.6905	2547	-	3058	-	NO
95	HENRY P.DEYERLE,TRUSTEE, 1735 RESERVOIR ST.	11,11C	0.9003	0.1212 (5278)		0.7791	4306	-	4306	-	NO
96	GREAT AMERICAN PARTNERS - I,L.L.C., 1711 RESERVOIR ST.	11	2.2390	0.0000 (0)		2.2389	0	-	248	-	NO
97	PROPERTY REMOVED	11	-	- -		-	-	-	-	-	NO
98	PROPERTY REMOVED, 1700 RESERVOIR ST.	11	2.3822	- -		-	-	-	-	-	NO
99	STEICO,INC.,533 UNIVERSITY BLVD.	11B	1.9972	0.0061 (264)		1.9912	8251	-	8251	-	NO
100	AGO,L.L.C.,563 UNIVERSITY BLVD.	11B	1.4162	0.0055 (241)		1.4106	3031	-	3507	-	NO
101	SOPHIA BELL MARTIN,L.L.C.,593 UNIVERSITY BLVD.	11B	1.2407	0.0026 (115)		1.2381	1485	-	1485	-	NO
102	THE VISITORS OF JAMES MADISON UNIVERSITY,597 UNIVERSITY BLVD.	11B	0.9447	0.0024 (106)		0.9423	2510	-	2510	-	NO
103	COMMON ELEMENTS OF UNIV.PLAZA CONDO.	11B	2.6850	0.0085 (371)		2.6780	1906	-	2165	-	NO

"D-x" = BUILDING DEMOLITION NUMBER

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = NTS
DRAWN BY | DATE
CHECKED BY | DATE
DESIGN BY | DATE
TAX MAP

RESERVOIR STREET

RIGHT OF WAY DATA

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 1C2

REVISION DATA SHEET

State Project: U000-115,R30
Federal Project: NA
From: 10+00.00
To: 65+37.25
UPC Number: 101219

REV	DATE	DESCRIPTION	BY

McCORMICK TAYLOR

SCALE: 1" = NTS

DRAWN BY	DATE
CMY	
CHECKED BY	DATE
RJD	
DESIGN BY	DATE
CMY	
TAX MAP	

RESERVIOR STREET

REVISION DATA SHEET

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 1D

EXISTING DRAINAGE DESCRIPTIONS

(1) STORM GRATE
TOP=1412.97
INV. IN=1403.37
INV. OUT=1403.27

(2) STORM MANHOLE
TOP=1418.10
INV. IN=1406.95
INV. OUT=1407.05
IN PL. 380.04' - 42" RCP @ 0.97%

(3) STORM MANHOLE
TOP=1416.11
INV. IN=1410.51 (FR. 3A)
INV. IN=1408.66 (FR. 4)
INV. OUT=1408.71
IN PL. 112.26' - 42" RCP @ 1.57%

(3A) STORM INLET
TOP=1416.61
INV. IN=1411.16 (FR. 3B)
INV. IN=1412.81 (FR. 3C)
INV. IN=1411.16 (FR. UNKNOWN)
INV. OUT=1410.91
IN PL. 56.53' - TWIN 24"x36" CMP @ 0.71%

(3B) STORM MANHOLE
TOP=1425.26
INV. IN=1413.96 (FR. 3C)
INV. IN=1414.11 (12IN. RCP FROM POND STR.)
INV. OUT=1414.01
IN PL. 305.43' - 24" RCP @ 0.93%

(3C) STORM MANHOLE
TOP=1420.97
INV. IN=1416.22 (FR. 3D)
INV. IN=1416.17 (FR. 3F)
INV. OUT=1416.27
IN PL. 279.94' - 24" RCP @ 0.83%

(3D) STORM INLET TBR
TOP=1421.34
INV. IN=1416.74
INV. OUT=1416.69
IN PL. 39.52' - 24" RCP @ 1.19%

(3E) STORM INLET
TOP=1428.60
INV. IN=1422.85
INV. IN=1422.90
INV. OUT=1422.65
IN PL. 190.08' - 18" RCP @ 3.11%

(3F) END SECTION
INV. OUT=1416.61
IN PL. 14.78' - 15"RCP @ 2.98%

(3G) STORM MANHOLE
TOP=1416.79
INV. IN=1413.59 (FR. 3H)
INV. IN=1410.74 (FR. 3I)
INV. OUT=1413.34
IN PL. 54.08' - 15" RCP @ 0.98%

(3H) STORM INLET
TOP=1418.67
INV. IN=1416.46
INV. OUT=1413.92
IN PL. 14.14' - 12" RCP @ 2.33%

(3I) STORM GRATE
TOP=1422.16
INV. OUT=1418.46
IN PL. 136.74' - 12" RCP @ 5.65%

(4) STORM INLET
TOP=1415.79
INV. IN=1409.04 (FR. 5)
*INV. IN=1408.79 (FR. 4A)
INV. OUT=1408.64
IN PL. 33.41' - 42" RCP @ -0.06%

(4A) STORM INLET
*TOP= 1415.65
*INV. IN=1411.20(FR. 4C)
*INV. IN=1411.82 (FR. 4F)
*INV. =1411.15 (TO 3A)
*INV. OUT= 1409.7
IN PL. 97' - 36" RCP @ 0.94%

(4C) STORM INLET TBR
**TOP=1418.70
**INV. IN=1415.25 (FR. 4G)
**INV. IN= 1415.05 (FR. 4D)
**INV. IN= 1414.90 (FR. 10)
**INV. OUT = 1414.95
IN PL. 271' - TWIN 24" RCP @ 1.36%
22.5° BEND @ 101'
UNK. BEND @ 228'

(4D) STORM INLET TBR
TOP=1420.85
INV. IN=1418.00 (FR. 4E)
INV. IN=1417.85 (FR. UNKOWN 15IN. RCP)
INV. OUT=1417.45
IN PL. 250.15' - 18" RCP @ 0.00%

(4E) STORM INLET TBR
TOP=1425.61
INV. IN=1420.11 (FR. UNKOWN 15IN. RCP WEST)
INV. IN=1419.91 (FR. UNKOWN 15IN. RCP SOUTH)
INV. OUT=1419.91
IN PL. 138.82' - 15" RCP @ 1.38%

(4G) STORM POND STR.
TOP=1427.44
8IN. WEEP HOLE=1425.80
8IN. WEEP HOLE=1424.94
8IN. WEEP HOLE=1420.82
INV. OUT=1420.95
IN PL. 82' - 15" RCP @ 7.38%

(4H) STORM INLET TBR
*TOP=1418.42
*INV. OUT=1414.45
IN PL. 41' - 24" RCP @ 1.83%
CONNECTED WITH 28" WYE

(4I) END SECTION
*INV. IN=1413.44
IN PL. 19' - 12" RCP @ 6.53%
CONNECTED WITH 24"X12" WYE

(5) STORM INLET
TOP=1416.18
INV. IN=1410.08
INV. OUT=1410.03
IN PL. 22.95' - 24" RCP @ 4.31%

(6) STORM INLET
TOP=1415.50
INV. IN=1410.75
INV. OUT=1410.68
IN PL. 23.54' - 24" RCP @ 2.55%

(7) STORM MANHOLE
TOP=1415.94
INV. IN=1411.74 (FR. 7A)
INV. IN=1411.94 (FR. 8)
INV. OUT=1411.74
IN PL. 44.68' - 24" RCP @ 2.22%

(7A) STORM INLET TBR
TOP=1415.93
INV. OUT=1412.48
IN PL. 13.81' - 4" PVC @ 5.36%

(8) STORM INLET TBR
TOP=1418.51
INV. IN=1413.61
INV. OUT=1413.71
IN PL. 170.31' - 24" PVC @ 1.04%

(9) STORM INLET TBR
TOP=1419.96
INV. IN=1415.74
INV. OUT=1415.36
IN PL. 68.31' - 15" RCP @ 0.00%

(9A) STORM INLET TBR
TOP=1421.34
INV. IN=1417.87
INV. OUT=1417.84
IN PL. 138.43' - 18" RCP @ 3.06%

(9B) STORM INLET TBR
TOP=1427.08
INV. IN=1423.43 (8IN. CPP FR. ROOF DRAIN?)
INV. OUT=1423.33
IN PL. 1427.08' - 15" RCP @ 0.38%

(9C) POND STR.
TOP=1420.84
INV. IN=UNACCESSIBLE
INV. OUT=1417.54
IN PL. 21.25' - 15" PVC @ 8.47%

(9D) STORM GRATE
TOP=1420.96
INV. OUT=1418.06
IN PL. 24.55' - 12" CPP

(10) STORM MANHOLE TBR
TOP=1421.35
INV. IN=1416.72 (FR. 11)
INV. OUT=1416.58
IN PL. 65' - 18" RCP @ 2.53%

(10A) END SECTION
INV. OUT=1427.32

(10B) STORM INLET
TOP=1430.96
INV. IN=1427.21
INV. OUT=1427.06
IN PL. 31.27' - 30" RCP @ -0.83%

(10C) STORM INLET TBR
TOP=1431.71
INV. IN=1428.31
INV. OUT=1428.18
IN PL. 47.58' - 30" RCP @ 2.04%

(10D) STORM INLET
TOP=1432.96
INV. IN=1428.96
INV. OUT=1428.58
IN PL. 61.70' - 24"x37" ECP @ 0.44%

(10E) STORM MANHOLE
TOP=1434.05
INV. IN=1429.65 (FR. 10F)
INV. IN=1430.45 (FR. 10H)
INV. IN=1429.95 (18IN. CPP)
INV. OUT=1429.85
IN PL. 111.63' - 24" RCP @ 0.80%

(10F) STORM MANOLE
TOP=1435.85
INV. IN=1430.05
INV. OUT=1429.95
IN PL. 164.76' - 24" RCP @ 0.18%

(10G) STORM MANHOLE
TOP=1437.05
INV. IN=1429.93
INV. OUT=1430.02
IN PL. 86.95' - 24" RCP @ -0.03%

(10H) STORM INLET
TOP=1433.96
INV. OUT=1430.71
IN PL. 50.79' - @ 0.51%

(10I) END SECTION
INV. OUT=1427.21

(10J) STORM INLET
TOP=1431.28
INV. IN=1427.43 (18IN. RCP)
INV. OUT=1427.28
IN PL. 63.33' - 24" RCP @ 0.11%

(11) STORM INLET TBR
TOP=1426.57
INV. IN=1422.06
INV. IN=1421.58 (15IN. RCP FR. UNKNOWN)
INV. OUT=1421.41
IN PL. 136.77' - 15" RCP @ 3.43%

(12) STORM INLET TBR
TOP=1434.66
INV. IN=1429.70
INV. IN=1429.80 (15IN. RCP FR. UNKNOWN)
INV. OUT=1429.75
IN PL. 159.27' - 15" RCP @ 4.83%

(13) STORM INLET TBR
TOP=1443.68
INV. IN=1438.63
INV. IN=1438.73 (15IN. RCP FR. UNKNOWN)
INV. OUT=1438.61
IN PL. 158.29' - 15" RCP @ 5.63%

(14) STORM GRATE TBR
TOP=1448.51
INV. IN=1443.45 (FR. 14A)
INV. IN=1443.46 (FR. 15)
INV. OUT=1443.46
IN PL. 158.05' - 15" RCP @ 3.06%

(14A**) STORM STRUCTURE
TOP=1448.84
INV. IN= 1444.54 (FR. 14B)
INV. IN= 1444.59 (FR. 14D)
INV. OUT= 1444.36
IN PL. 60'- 15" RCP

(14B**) STORM GRATE
TOP=1449.34
INV. IN= 1443.62
INV. OUT= 1443.62
IN PL. 76'- 42" RCP

(14D**) STORM GRATE
TOP=1449.64
INV. OUT= 1445.35
IN PL. 91'- 30" RCP

(15) STORM INLET TBR
TOP=1451.20
INV. IN=1445.49 (FR. 15A)
INV. IN=1445.29 (FR. 16)
INV. OUT=1445.24
IN PL. 161.89' - 15" RCP @ 1.10%

(15A) STORM GRATE TBR
TOP=1450.99
INV. IN=1445.59
INV. OUT=1445.69
IN PL. 53.08' - 15" RCP @ 0.38%

(15B) STORM GRATE TBR
TOP=1452.07
INV. IN=1445.77
INV. OUT=1445.67
IN PL. 53.58' - 36" CMP @ 0.34%

(15C) STORM GRATE
TOP=1452.64
INV. IN=1446.08
INV. OUT=1446.06
IN PL. 84.49' - 36" CMP @ 0.34%

(15D) STORM GRATE
TOP=1452.85
INV. IN=1446.22
INV. OUT=1446.20
IN PL. 83.26' - 36" CMP @ 0.14%

(15E) STORM GRATE
TOP=1452.80
INV. OUT=1446.41
IN PL. 58.16' - 36" CMP @ 0.33%

(16) STORM INLET TBR
TOP=1452.74
INV. IN=1446.16
INV. IN=0.00 (15IN. RCP FR. UNKNOWN)
INV. OUT=1446.11
IN PL. 115.38' - 15" RCP @ 0.71%

(17) STORM INLET TBR
TOP=1452.01
INV. IN=1446.67
INV. OUT=1446.65
IN PL. 59.55' - 15" RCP @ 0.82%

(18) STORM INLET TBR
TOP=1451.90
INV. IN=1446.89
INV. OUT=1446.85
IN PL. 51.23' - 15" RCP @ 0.35%

(19) STORM GRATE TBR
TOP=1451.39
INV. OUT=1447.14
IN PL. 8.74' - 15" RCP @ 2.86%

(20) STORM GRATE
TOP=1428.26
INV. IN=1425.04
INV. OUT=1425.00

(21) STORM MANHOLE
TOP=1429.71
????? - NEEDS CLARIFICATION

(22) STORM MANHOLE TBR
TOP=1442.82
INV. IN=1436.18
INV. OUT=1436.18
IN PL. 368.66' - 24" CPP @ 0.00% TBA

(23) STORM MANHOLE TBR
TOP=1443.39
INV. IN=1436.66
INV. OUT=1436.39
IN PL. 11.22' - 24" RCP @ 1.87%

(24) STORM MANHOLE TBR
TOP=1446.57
INV. IN=1438.47
INV. OUT=1439.03
IN PL. 224.68' - 24" RCP @ 1.05%

(25) STORM MANHOLE TBR
TOP=1446.27
INV. IN=1439.27
INV. OUT=1439.18
IN PL. 42.80' - 15" RCP @ 1.66%

(26) STORM INLET TBR
TOP=1446.15
INV. IN=1440.44 (FR. 26A)
INV. IN=1440.64 (FR. 27)
INV. OUT=1440.29
IN PL. 23.59' - 15" RCP @ 4.70%

(26A) END WALL TBR
TOP OF WALL=1443.92
INV. OUT=1440.77
IN PL. 6.44' - 15" RCP @ 5.12%

(27) STORM INLET TBR
TOP=1446.06
INV. IN=1441.43
INV. OUT=1440.98
IN PL. 33.43' - 15" RCP @ 0.63%

(28) UNDERGROUND DET. FACILITY
TOP=1446.85
TOP OF WALL=1444.49
4IN. WEEP HOLE=1441.75
INV. IN=1441.76
INV. OUT=1441.76
IN PL. 13.47' - 15" RCP @ 2.45%

(29) STORM INLET
TOP=1450.94
INV. IN=1441.40
INV. OUT=1441.60
IN PL. 103.84' - 36" RCP @ -0.15%

(30) STORM INLET
TOP=1451.79
INV. OUT=1441.15
IN PL. 138.99' - 36" RCP @ -0.18%

(31) STORM INLET
TOP=1408.53
INV. IN=1400.33

(32) STORM INLET
TOP=1409.63
INV. IN=1402.18
INV. OUT=1402.03
IN PL. 177.46' - 30" RCP @ 0.96%

(33) STORM INLET
TOP=1409.55
INV. IN=1403.34 (FR. 33A)
INV. IN=1403.29 (FR. 34)
INV. OUT=1402.18
IN PL. 37.08' - 30" RCP @ 0.00%

(33A) STORM GRATE
TOP=1410.52
INV. OUT=1406.30
IN PL. 64.56' - 18" CPP @ 4.58%

(34) STORM INLET
TOP=1412.36
INV. OUT=1405.87
IN PL. 81.70' - 15" RCP @ 3.16%

(35) END SECTION
INV. OUT=1413.83

(36) STORM MANHOLE
TOP=1429.61
INV. IN=1425.03 (FR. 36A)
INV. IN=1417.11 (FR. 36B)
INV. IN=1414.62 (FR. 37)
INV. OUT=1414.18
IN PL. 66.99' - 60" RCP @ 0.52%

(36A) STORM INLET TBR
TOP=1431.03
INV. OUT=1425.03
IN PL. 19.24' - 15" RCP @ 0.00%

(36B) END SECTION
INV. OUT=1419.45
IN PL. 68.12' - 24" CMP @ 3.43%

(36C) END SECTION
INV. OUT=1424.17

(36D) YARD INLET
TOP=1430.83
THROAT=1428.35
INV. OUT=1424.72
IN PL. 0.00' - @ 0.00%

(37) STORM INLET
TOP=1425.89
INV. IN=1418.13 (FR. 37A)
INV. IN=1417.92 (FR. 37F)
INV. IN=1417.61 (FR. 38)
INV. OUT=1417.35
IN PL. 463.24' - 54" CMP @ 0.59%

(37A) STORM MANHOLE TBR
TOP=1428.14
INV. IN=1418.69
INV. OUT=1418.64
IN PL. 31.14' - 24" CPP @ 1.64%

(37B) STORM GRATE
TOP=1427.52
INV. IN=1422.35
INV. OUT=1422.37
IN PL. 136.91' - 24" CPP @ 2.69%

(37C) STORM MANHOLE
TOP=1437.93
INV. IN=1430.63
INV. OUT=1430.92 (24IN. CPP)
IN PL. 123.92' - 24" CPP @ 6.92%

(37D) END SECTION
INV. OUT=1431.93

(37E) STORM POND STR.
TOP=1439.00
INV. OUT=1432.81
IN PL. 50.79' - 18" CPP @ 1.73%

(37F) STORM INLET TBR
TOP=1425.85
INV. OUT=1420.03
IN PL. 37.11' - 18" CMP @ 5.69%

(38) STORM INLET TBR
TOP=1427.99
INV. IN=1419.85 (FR. 38A)
INV. IN=1420.29 (FR.39)
INV. OUT=1419.29
IN PL. 386.74' - 54" RCP @ 0.43%

(38A) STORM INLET TBR
TOP=1427.89
INV. IN=1419.83
INV. OUT=1419.81
IN PL. 41.93' - 15" RCP @ -0.10%

(38B) STORM INLET TBR
TOP=1428.31
INV. OUT=1420.29
IN PL. 76.79' - 15" RCP @ 0.60%

(39) STORM INLET TBR
TOP=1430.13
INV. IN=1424.05
INV. OUT=1423.60
IN PL. 231.01' - 42" RCP @ 1.43%

(40) STORM MANHOLE
TOP=1437.42
INV. IN=1431.14
INV. OUT=1430.96
IN PL. 223.17' - 36" RCP @ 3.10%

(41) STORM INLET
TOP=1442.04
INV. IN=1436.66 (FR. 42)
INV. IN=1440.40 (TWIN 12IN. CPP)
INV. OUT=1435.98
IN PL. 210.43' - 36" RCP @ 2.30%

(42) STORM INLET
TOP=1441.94
INV. IN=1437.09
INV. OUT=1437.88
IN PL. 42.23' - 27" RCP @ 2.89%

(43) STORM MANHOLE TBR
TOP=1441.42
INV. IN=1438.07
INV. OUT=1438.00
IN PL. 39.75' - 19"x30" ECP @ 2.29%

(44) STORM MANHOLE
TOP=1448.20
INV. IN=1442.65
INV. OUT=1442.58
IN PL. 221.80' - 21" RCP @ 2.03%

* = Information from As-Built plans provided by City of Harrisonburg, July 2010

** = Information from supplemental survey performed by City of Harrisonburg, May 2013

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = NTS
DRAWN BY | DATE
CHECKED BY | DATE
DESIGN BY | DATE
TAX MAP

RESERVIOR STREET

EXIST. DRAINAGE DESCRIPTION

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E. MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 1 E

EXISTING DRAINAGE DESCRIPTIONS

45 STORM INLET
TOP=1448.46
INV. IN=1444.84 (FR. 45A)
INV. IN=1442.91 (FR. 46)
INV. OUT=1442.96
IN PL. 10.96' - 21" RCP @ 2.83%

45A STORM GRATE
TOP=1448.31
INV. OUT=1445.11
IN PL. 22.04' - 12" CPP @ 1.23%

46 STORM MANHOLE
TOP=1450.89
INV. OUT=1447.74
IN PL. 104.40' - 21" RCP @ 4.63%

47 END SECTION
INV. OUT=1450.47

48 YARD INLET
TOP=1456.36
INV. IN=1451.66 (20IN. OPENING)
INV. OUT=1451.46
IN PL. 64.18' - 30" CPP @ 1.54%

49 END SECTION
INV. OUT=1458.00

50 YARD INLET
TOP=1466.49
THROAT=1465.49
INV. IN=1458.36
INV. OUT=1458.46
IN PL. 108.41' - 42" RCP @ 0.42%

51 STORM INLET
TOP=1467.45
INV. IN=1460.42 (FR. 51A)
INV. IN=1460.45 (FR. 52)
INV. OUT=1459.60
IN PL. 214.45' - 42" RCP @ 0.58%

51A STORM INLET
TOP=1468.92
INV. IN=1462.17
INV. OUT=1461.82
IN PL. 192.65' - 30" RCP @ 0.73%

51B END SECTION
INV. OUT=1463.23
IN PL. 23.33' - 24" RCP @ 4.54%

52 STORM INLET
TOP=1467.48
INV. IN=1461.02
INV. OUT=1460.98
IN PL. 37.37' - 30" RCP @ 1.42%

53 YARD INLET
TOP=1465.75
INV. OUT=1462.36
IN PL. 171.64' - 30" RCP @ 0.78%

54 END SECTION
INV. OUT=1448.75

55 YARD INLET
TOP=1455.89
INV. IN=1451.45 (15IN. CPP)
INV. OUT=1450.97
IN PL. 64.64' - 27" CPP @ 3.43%

56 END SECTION TBR
INV. OUT=1454.45

57 STORM INLET TBR
TOP=1470.98
INV. OUT=1466.88
IN PL. 124.38' - 12" CPP @ 9.99%

58 END SECTION
INV. OUT=1453.22

59 STORM INLET
TOP=1459.24
INV. IN=1453.69
INV. OUT=1453.71
IN PL. 20.39' - 30" RCP @ 2.40%

60 STORM GRATE
TOP=1459.48
INV. IN=1455.68 (FR. 61)
INV. IN=1455.73 (30IN. RCP)
INV. OUT=1455.68
IN PL. 134.14' - 30" RCP @ 1.49%

61 END SECTION
INV. OUT=1458.27
IN PL. 56.01' - 18" RCP @ 4.62%

62 END SECTION
INV. OUT=1455.88

63 STORM INLET
TOP=1461.12
INV. OUT=1457.37
IN PL. 19.99' - 15" CPP @ 7.45%

64 END SECTION
INV. OUT=1477.60

65 STORM INLET
TOP=1485.66
INV. IN=1478.71
INV. OUT=1478.80
IN PL. 11.07' - 24" CPP @ 10.84%

66 STORM MANHOLE
TOP=1491.78
INV. IN=1479.47
INV. OUT=1479.30
IN PL. 103.16' - 24" CPP @ 0.57%

67 STORM GRATE
TOP=1483.87
INV. OUT=1480.09
IN PL. 68.84' - 24" CPP @ 0.90%

68 END SECTION
INV. OUT=1489.99

69 STORM INLET
TOP=1506.61
INV. IN=1500.64
INV. OUT=1500.58
IN PL. 157.97' - 24" CPP @ 6.70%

70 YARD INLET
TOP=1506.20
INV. OUT=1503.23
IN PL. 41.48' - 24" CPP @ 6.24%

71 STORM MANHOLE (UG DET. AREA)
TOP=1501.43
TOP OF WALL=1497.83
4 IN. WEEP HOLE=1495.32
INV. IN=1495.23
INV. OUT=1495.10
IN PL. APPROX. 39.11' - 18" CPP @ APPROX. 8.08%

72 END SECTION TBR
INV. OUT=1490.62

73 STORM INLET TBR
TOP=1499.65
INV. IN=1492.55
INV. OUT=1492.15
IN PL. 103.48' - 18" RCP @ 1.48%

74 STORM INLET TBR
TOP=1500.27
INV. OUT=1492.67
IN PL. 39.91' - 15" RCP @ 0.30%

75 STORM INLET TBR
TOP=1431.91
INV. IN=1425.61
INV. OUT=1425.50
IN PL. 143.00' - 15" RCP @ 3.77%

76 STORM INLET
TOP=1433.52
INV. IN=1428.94
INV. OUT=1429.05
IN PL. 65.00' - 15" RCP @ 5.29%

77 STORM INLET
TOP=1434.47
INV. IN=1429.50(UNKNOWN)
INV. IN=1429.52(FROM 79)
INV. OUT=1429.46
IN PL. 37.20' - 15" RCP @ 1.40%

78 STORM INLET
TOP=1435.06
INV. OUT=1432.22
IN PL. - 15" RCP

79 STORM INLET TBR
TOP=1438.64
INV. OUT=1432.87
IN PL. 63.46' - 15" RCP @ 5.27%

80 STORM INLET
TOP=1431.51
INV. IN=1428.37
INV. OUT=1428.53
IN PL. 224.62' - 18" RCP @ 0.59%

81 STORM INLET
TOP=1433.91
INV. OUT=1429.08
IN PL. 58.95' - 15" RCP @ 1.20%

82 POND STRUCTURE
TOP=1432.50
4" WEEP HOLE=1428.26
INV. OUT=1425.93
IN PL. 46.18' - 15" RCP @ 6.56%

83 STORM INLET
TOP=1434.01
INV. IN=1428.63
INV. OUT=1428.59
IN PL. 22.27' - 36" RCP @ 0.31%

84 STORM INLET
TOP=1434.01
INV. IN=1428.86
INV. OUT=1428.73
IN PL. 54.33' - 36" RCP @ 0.18%

85 STORM INLET TBR
TOP=1436.74
INV. IN=1429.63
INV. OUT=1429.61
IN PL. 180.39' - 15" RCP @ 3.75%

86 STORM INLET
TOP=1434.94
INV. IN=1429.64
INV. OUT=1429.58
IN PL. 30.25' - 15" RCP @ -0.16%

87 STORM INLET
TOP=1436.34
INV. IN=1429.76(From 89)
INV. IN=1429.69(From 88)
INV. OUT=1429.66
IN PL. 142.94' - 15" RCP @ 0.01%

88 STORM INLET
TOP=1437.67
INV. IN=1430.52
INV. OUT=1430.50
IN PL. 96.28' - 36" RCP @ 0.84%

89 STORM INLET
TOP=1439.98
INV. IN=1430.59
INV. OUT=1430.56
IN PL. 115.30' - 36" RCP @ 0.69%

90 STORM INLET
TOP=1442.22
INV. IN=1430.63
INV. OUT=1430.80
IN PL. 104.94' - 36" RCP @ 0.20%

91 END-SECTION
INV=1428.52

92 STORM INLET
TOP=1442.18
INV. OUT=1436.65
IN PL. 57.40' - 15" RCP @ 1.24%

93 STORM INLET
TOP=1441.45
INV. IN=1435.94
INV. OUT=1435.68
IN PL. 195.85' - 15" RCP @ 10.90%

94 STORM INLET
TOP=1426.19
INV. IN=1421.83(From 95)
INV. IN=1414.33(From 93)
INV. OUT=1414.29

95 STORM INLET
TOP=1427.50
INV. OUT=1423.75
IN PL. 59.35' - 15" RCP @ 3.24%

AA Storm Grate
Top=1431.79
Inv. In=1425.43
Inv. Out=1425.23
In Pl. 217.30' - 18" PVC @ 0.40%

BB Storm Grate
Top=1430.52
Inv. Out=1426.05
In Pl. 66.42' - 18" PVC @ 0.93%

CC Storm Grate
Top=1430.61
Inv. In=1425.86(From DD)
Inv. In=1424.37(From AA)
Inv. Out=1424.23
In Pl. 74.14' - 18" PVC @ 1.16%

DD Storm Grate
Top=1434.76
Inv. Out=1431.13
In Pl. 30.20' - 18" PVC @ 17.45%

EE Pond Structure
Top=1426.53
Inv. Out=1420.47
In Pl. 31.20' - 24" CPP @ 1.00%

FF Drop Inlet
Top=1427.92
Inv. In=1420.16
Inv. Out=1420.16
In Pl. 43.52' - 24" RCP @ 0.37%

GG Drop Inlet
Top=1427.88
Inv. In=1420.00(Both)
Inv. Out=1419.92
In Pl. 50.14' - 36" RCP @ 1.44%

HH Buried Structure
Inaccessible

36B Storm MH
Top=1429.95
Inv. In=1419.20
Inv. Out=1419.16
In Pl. 73.34' - 36" RCP @ 2.80%

II Drop Inlet
Top=1425.03
Inv. Out=1419.78
In Pl. 18.65' - 15" RCP

JJ Storm Manhole
Top=1424.62
Inv. In=1416.15
Inv. Out=1416.15
Top of Weir Wall=1422.50
In Pl. 10.33' - 15" RCP

KK Drop Inlet
Top=1424.83
Inv. In=1420.80
Inv. Out=1420.76
Inverts Approx.
Full of Silt
In Pl. 16.60' - 15" RCP

LL Drop Inlet
Top=1426.00
Inv. In=1421.78(15" Roof Drain)
Inv. Out=1421.77
In Pl. 81.10' - 15" RCP

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = NTS
DRAWN BY | DATE
CHECKED BY | DATE
DESIGN BY | DATE
TAX MAP

RESERVIOR STREET

EXIST. DRAINAGE DESCRIPTION

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET
1 E 1

EXISTING SANITARY SEWER DESCRIPTIONS

79/61 SANITARY MANHOLE
TOP=1426.65
INV. OUT=1422.44
IN PL. 193.81' - 8" DIP @ 2.35%

79/60 SANITARY MANHOLE
TOP=1423.29
INV. IN=1417.89
INV. OUT=1417.34
IN PL. 232.29' - 8" DIP @ 4.43%

79/59 SANITARY MANHOLE
TOP=1415.84
INV. IN=1407.05
INV. OUT=1406.76
IN PL. 37.26' - 8" DIP @ 0.89%

79/15 SANITARY MANHOLE
TOP=1415.75
INV. IN=1406.45 (FR. 79-16)
INV. IN=1406.43 (FR. 79-59)
INV. OUT=1406.30
IN PL. 118.66' - 8" PVC @ 0.77%

79/14 SANITARY MANHOLE
TOP=1418.92
INV. IN=1405.52
INV. OUT=1405.39
IN PL. 206.65' - 8" PVC @ 3.69%

79/13 SANITARY MANHOLE
TOP=1416.61
INV. IN=1397.77
INV. OUT=1401.75 (BIN. PVC TO MH 79-75)

79/16 SANITARY MANHOLE (PAVED SHUT)
TOP=1420.53
INV. IN=1413.43 (FR. 79-17)
INV. IN=1413.28 (FR. 85-14)
INV. OUT=1412.11
IN PL. 365.14' - 8" PVC @ 1.55%

79/17 SANITARY MANHOLE
TOP=1435.11
INV. IN=1429.63
INV. OUT=1429.51
IN PL. 326.98' - 8" PVC @ 4.92%

79/18 SANITARY MANHOLE
TOP=1447.54
INV. IN=1440.71
INV. OUT=1440.75
IN PL. 249.89' - 8" PVC @ 4.45%

79/19 SANITARY MANHOLE
TOP=1451.00
INV. IN=1444.19
INV. OUT=1443.41
IN PL. 225.26' - 8" PVC @ 1.20%

79/20 SANITARY MANHOLE
TOP=1453.32
INV. OUT=1445.35
IN PL. 222.38' - 8" PVC @ 0.52%

85/14 SANITARY MANHOLE
TOP=1427.31
INV. IN=1414.81 (FR. 85-12 8IN. PVC)
INV. IN=1415.57 (FR. 85-15)
INV. IN=1420.11 (FR. 85-17)
INV. IN=1415.41 (FR. 85-17 DROP)
INV. OUT=1414.77
IN PL. 355.24' - 8" PVC @ 0.42%

85/15 SANITARY MANHOLE
TOP=1421.87
INV. IN=1416.07 (FR. 85-16 8IN. PVC)
INV. OUT=1415.87
IN PL. 84.34' - 8" DIP @ 0.36%

85/17 SANITARY MANHOLE
TOP=1436.04
INV. IN=1429.54 (FR. 85-18 8IN. DIP)
INV. OUT=1429.44
IN PL. 169.35' - 8" DIP @ 5.51%

80/01 SANITARY MANHOLE
TOP=1446.67
INV. IN=1433.07

80/02 SANITARY MANHOLE
TOP=1446.13
INV. OUT=1434.53
IN PL. 46.00' - 8" PVC @ 3.17%

80/91 SANITARY MANHOLE
TOP=1431.43
INV. IN=1424.45 (FR. 80-90 8IN. DIP)
INV. IN=1425.05 (UNKNOWN 8IN. PVC)
INV. OUT=1424.39
IN PL. 295.67' - 8" DIP @ 3.16%

80/06 SANITARY MANHOLE
TOP=1420.78
INV. IN=1415.05
INV. OUT=1414.86
IN PL. 301.02' - 10" DIP @ 3.70%

84/29 SANITARY MANHOLE
TOP=1411.89
INV. IN=1403.73 (FR. 80-06)
INV. IN=1404.29 (UNKNOWN 8IN. PVC)
INV. OUT=1403.65
IN PL. 70.16' - 10" DIP @ 4.60%

84/34 SANITARY MANHOLE
TOP=1409.37
INV. IN=1400.42 (FR. 84-29)
INV. IN=1399.60 (FR. 84-33)
INV. OUT=1399.50
IN PL. 137.27' - 10" DIP @ 0.52%

84/33 SANITARY MANHOLE
TOP=1410.70
INV. IN=1400.69 (FR. 84-31 10IN. PVC)
INV. IN=1400.50 (FR. 84-32 8IN. PVC)
INV. OUT=1400.45
IN PL. 122.26' - 10" PVC @ 0.70%

84/35 SANITARY MANHOLE
TOP=1408.28
INV. IN=1398.78
INV. OUT=1398.68 (TO 84-36 10IN. PVC)

80/07 SANITARY MANHOLE
TOP=1422.07
INV. IN=1414.27
INV. OUT=1414.07 (TO 84-30 10IN. PVC)

80/08 SANITARY MANHOLE
TOP=1426.95
INV. IN=1415.77
INV. OUT=1415.83
IN PL. 156.38' - 10" PVC @ 1.00%

80/10 SANITARY MANHOLE
TOP=1427.73
INV. IN=1417.13 (FR. 80-09)
INV. IN=1416.90 (FR. 80-16)
INV. OUT=1416.80
IN PL. 231.71' - 10" PVC @ 0.44%

80/09 SANITARY MANHOLE
TOP=1427.85
INV. IN=1422.09
INV. OUT=1421.93
IN PL. 79.71' - 8" PVC @ 6.02%

84/44 SANITARY MANHOLE
TOP=1445.89
INV. IN=1439.89 (FR. 84-34 8IN. PVC)
INV. OUT=1439.79
IN PL. 332.70' - 8" PVC @ 5.32%

80/16 SANITARY MANHOLE
TOP=1429.51
INV. IN=1420.84 (FR. 80-17)
INV. IN=1420.73 (FR. 80-60)
INV. OUT=1420.68
IN PL. 186.49' - 10" PVC @ 2.03%

80/17 SANITARY MANHOLE
TOP=1431.10
INV. IN=1422.73
INV. OUT=1422.60
IN PL. 68.72' - 10" PVC @ 2.56%

80/60 SANITARY MANHOLE
TOP=1431.90
INV. IN=1421.20 (FR. 80-15)
INV. IN=1425.05 (FR. 80-46)
INV. OUT=1420.95
IN PL. 52.74' - 8" PVC @ 0.42%

80/15 SANITARY MANHOLE
TOP=1442.94
INV. IN=1433.44 (FR. 80-14 8IN. PVC)
INV. OUT=1433.20
IN PL. 124.60' - 8" PVC @ 9.63%

80/46 SANITARY MANHOLE
TOP=1435.06
INV. OUT=1426.71
IN PL. 151.63' - 8" PVC @ 1.09%

80/21 SANITARY MANHOLE
TOP=1440.69
INV. IN=1432.24 (FR. 80-20)
INV. IN=1431.91 (FR. 80-26)
INV. OUT=1431.81
IN PL. 341.73' - 10" PVC @ 2.66%

80/20 SANITARY MANHOLE
TOP=1440.87
INV. IN=1436.08
INV. OUT=1436.17
IN PL. 14.07' - 8" PVC @ 27.94%

80/19 SANITARY MANHOLE
TOP=1446.72
INV. IN=1438.75
INV. OUT=1438.83
IN PL. 183.67' - 8" PVC @ 1.50%

80/18 SANITARY MANHOLE
TOP=1450.96
INV. IN=1444.66 (FR. 84-47 8IN. PVC)
INV. IN=1444.41 (FR. 84-117 8IN. PVC)
INV. OUT=1444.31
IN PL. 177.48' - 8" PVC @ 3.13%

80/26 SANITARY MANHOLE
TOP=1444.77
INV. IN=1437.38 (FR. 80-22)
INV. IN=1437.36 (FR. 80-27)
INV. OUT=1437.05
IN PL. 127.22' - 10" PVC @ 4.04%

80/22 SANITARY MANHOLE
TOP=1444.50
INV. IN=1439.25
INV. OUT=1439.15
IN PL. 79.57' - 8" PVC @ 2.22%

80/23 SANITARY MANHOLE
TOP=1456.55
INV. IN=1444.30
INV. OUT=1444.19
IN PL. 216.40' - 8" PVC @ 2.28%

80/96 SANITARY MANHOLE
TOP=1458.87
INV. IN=1445.96 (FR. 80-24 8IN. DIP)
INV. IN=1447.51 (FR. 80-97 8IN. PVC)
INV. OUT=1445.87
IN PL. 55.29' - 8" PVC @ 2.84%

80/27 SANITARY MANHOLE
TOP=1446.46
INV. IN=1440.52
INV. OUT=1440.18
IN PL. 131.64' - 8" PVC @ 2.14%

80/33 SANITARY MANHOLE
TOP=1450.20
INV. IN=1442.94 (FR. 80-28)
INV. IN=1442.96 (FR. 80-32)
INV. OUT=1442.85
IN PL. 94.86' - 8" PVC @ 2.46%

80/28 SANITARY MANHOLE
TOP=1461.85
INV. IN=1449.75 (FR. 80-29 8IN. DIP)
INV. OUT=1449.65
IN PL. 60.30' - 8" DIP @ 11.13%

80/32 SANITARY MANHOLE
TOP=14641.64
INV. IN=14626.01 (FR. 80-31 8IN. DIP)
INV. OUT=14625.83
IN PL. 198.92' - 8" DIP @ 6627.27%

81/09 SANITARY MANHOLE
TOP=1468.85
INV. IN=1460.87 (FR. 81-07)
INV. IN=1454.83 (FR. 81-07 INTERNAL DROP)
INV. IN=1458.01 (FR. 81-08)
INV. IN=1454.90 (FR. 81-08 INTERNAL DROP)
INV. IN=1454.90 (FR. 81-10)
INV. OUT=1454.68 (TO 80-31 8IN. DIP)

81/07 SANITARY MANHOLE
TOP=1472.50
INV. OUT=1466.83
IN PL. 175.73' - 8" DIP @ 3.39%

81/08 SANITARY MANHOLE
TOP=1469.09
INV. IN=1460.19 (FR. 81-15 8IN. PVC)
INV. OUT=1459.12
IN PL. 165.18' - 8" DIP @ 0.67%

81/10 SANITARY MANHOLE
TOP=1466.14
INV. IN=1461.42
INV. OUT=1461.30
IN PL. 216.34' - 8" DIP @ 2.96%

81/11 SANITARY MANHOLE
TOP=1474.16
INV. IN=1470.76
INV. OUT=1470.86
IN PL. 213.79' - 8" PVC @ 4.42%

81/12 SANITARY MANHOLE
TOP=1492.15
INV. IN=1485.45 (FR. 81-13 8IN. PVC)
INV. OUT=1485.31
IN PL. 331.99' - 8" PVC @ 4.38%

81/02 SANITARY MANHOLE
TOP=1474.83
INV. IN=1469.26
INV. OUT=1470.06 (TO. 81-01 8IN. PVC)

81/03 SANITARY MANHOLE
TOP=1486.75
INV. IN=1475.33
INV. OUT=1475.27
IN PL. 83.41' - 8" DIP @ 7.21%

81/04 SANITARY MANHOLE
TOP=1491.58
INV. IN=1483.50 (FR. 81-19)
INV. IN=1483.64 (FR. 81-20 8IN. PVC)
INV. OUT=1483.14
IN PL. 231.56' - 8" DIP @ 3.37%

81/19 SANITARY MANHOLE
TOP=1503.59
INV. IN=1491.05
INV. OUT=1490.79
IN PL. 103.18' - 8" DIP @ 7.07%

81/05 SANITARY MANHOLE
TOP=1510.95
INV. IN=1503.07
INV. OUT=1503.05
IN PL. 161.21' - 8" PVC @ 7.44%

81/06 SANITARY MANHOLE
TOP=1523.71
INV. OUT=1518.88
IN PL. 190.76' - 8" PVC @ 8.29%

81/14 SANITARY MANHOLE
TOP=1525.22
INV. OUT=1516.97 (TO MH 81-13 8IN. PVC)

85/11 SANITARY MANHOLE
TOP=1437.64
INV. OUT=1426.34
IN PL. 230.85' - 8" PVC @ 0.62%

85/12 SANITARY MANHOLE
TOP=1433.77
INV. IN=1424.90
INV. OUT=1424.80
IN PL. 313.59' - 8" PVC @ 3.19%

85/16 SANITARY MANHOLE
TOP=1437.87
INV. IN=1426.56
INV. OUT=1426.37
IN PL. 368.20' - 8" PVC @ 2.80%

85/16A SANITARY MANHOLE
TOP=1436.65
INV. OUT=1428.05
IN PL. 195.95' - 8" PVC @ 0.77%

86/01 Sanitary Manhole
Top=1519.96
Inv. In=1510.16

86/02 Sanitary Manhole
Top=1521.44
Inv. Out=1515.16
In Pl. 82.28' - 8" PVC @ 6.08%

86/03 Sanitary Manhole
Top=1432.02
Inv. Out=1423.45
In Pl. 144.74' - 8" PVC @ 3.47%

86/04 Sanitary Manhole
Top=1428.07
Inv. In=1418.42
Inv. Out=1418.24
In Pl. 30.74' - 8" PVC @ 2.41%

86/05 Sanitary Manhole
Top=1426.54
Inv. In=1417.50(a)
Inv. In=1417.18(b)
Inv. Out=1416.96
In Pl. 50.38' - 8" PVC

86/06 Sanitary Manhole
Top=1426.42
Inv. In=1418.07
Inv. Out=1417.88
In Pl. 84.22' - 8" PVC @ 0.83%

PROPERTY OWNER INFO

(REMOVED FROM SHEETS 6 & 7 FOR CLARITY)

53 TRAVIS F. MARSHALL
(D.B. 2376, PG. 403)
TM 80-A-20

54 JAMES W. MARSHALL
AND HELEN SUE MARSHALL
(D.B. 2386, PG. 313)
TM 80-A-19

55 JAMES W. MARSHALL
AND HELEN SUE MARSHALL
(D.B. 2376, PG. 233)
TM 80-A-18

56 JAMES W. MARSHALL
AND HELEN SUE MARSHALL
(D.B. 2369, PG. 798)
TM 80-A-17

58 JAMES W. MARSHALL
AND HELEN S. MARSHALL
(D.B. 2815, PG. 790)
TM 80-A-16

59 EMMANUEL ENTERPRISES LLC
(D.B. 2459, PG. 518)
TM 80-A-13

60 ANA R. PRIETO
(D.B. 2354, PG. 144)
TM 80-A-14

61 JAMES E. COOK
AND CYNTHIA D. COOK
(D.B. 1963, PG. 570)
TM 80-A-15

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = NTS
DRAWN BY | DATE
CHECKED BY | DATE
DESIGN BY | DATE
TAX MAP

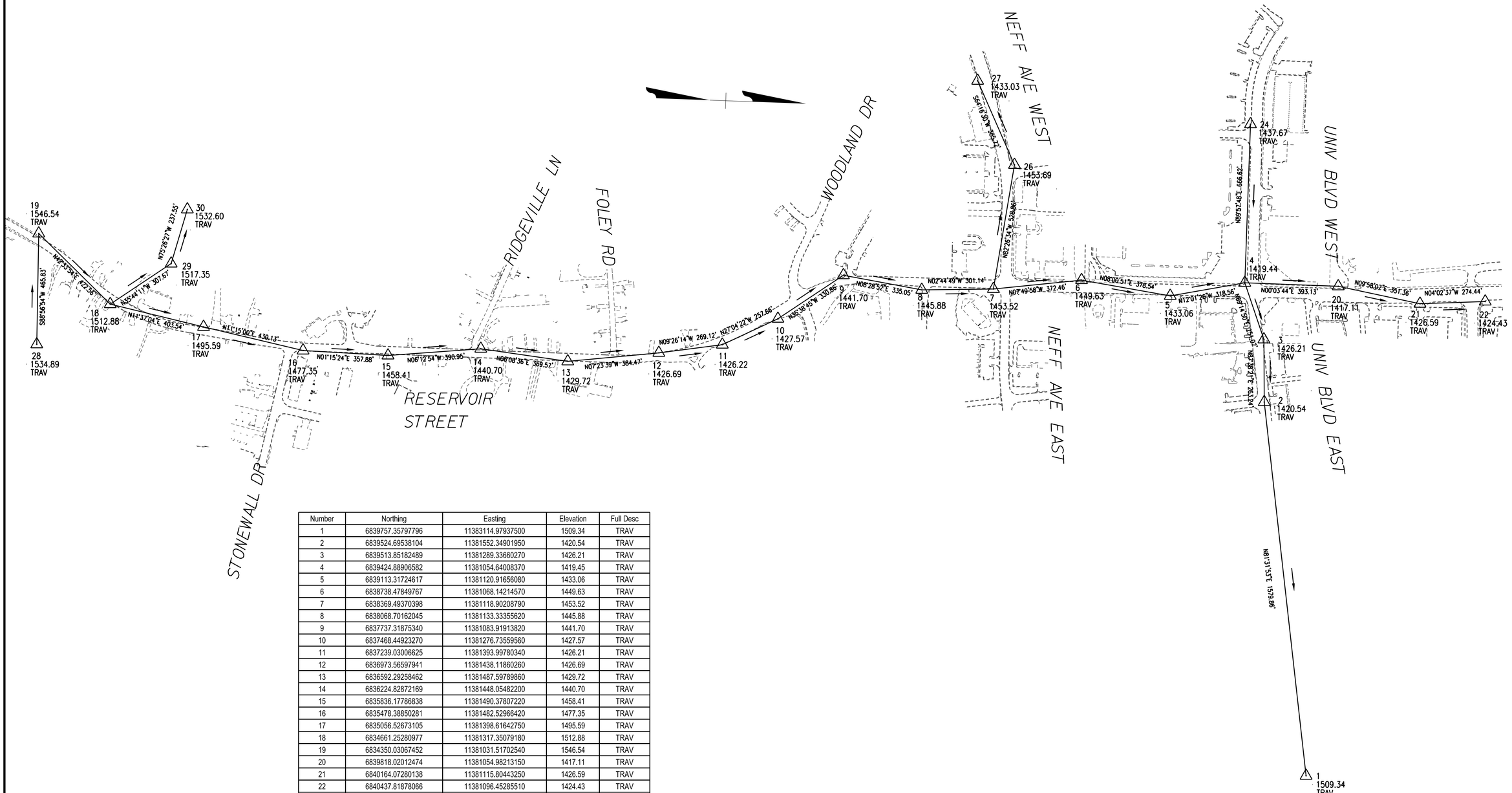
RESERVIOR STREET

EXIST. SAN. SEW. DESCRIPTION

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 1E2

SURVEY ALIGNMENT DATA



Number	Northing	Easting	Elevation	Full Desc
1	6839757.35797796	11383114.97937500	1509.34	TRAV
2	6839524.69538104	11381552.34901950	1420.54	TRAV
3	6839513.85182489	11381289.33660270	1426.21	TRAV
4	6839424.88906582	11381054.64008370	1419.45	TRAV
5	6839113.31724617	11381120.91656080	1433.06	TRAV
6	6838738.47849767	11381068.14214570	1449.63	TRAV
7	6838369.49370398	11381118.90208790	1453.52	TRAV
8	6838068.70162045	11381133.33355620	1445.88	TRAV
9	6837737.31875340	11381083.91913820	1441.70	TRAV
10	6837468.44923270	11381276.73559560	1427.57	TRAV
11	6837239.03006625	11381393.99780340	1426.21	TRAV
12	6836973.56597941	11381438.11860260	1426.69	TRAV
13	6836592.29258462	11381487.59789860	1429.72	TRAV
14	6836224.82872169	11381448.05482200	1440.70	TRAV
15	6835836.17786838	11381490.37807220	1458.41	TRAV
16	6835478.38850281	11381482.52966420	1477.35	TRAV
17	6835056.52673105	11381398.61642750	1495.59	TRAV
18	6834661.25280977	11381317.35079180	1512.88	TRAV
19	6834350.03067452	11381031.51702540	1546.54	TRAV
20	6839818.02012474	11381054.98213150	1417.11	TRAV
21	6840164.07280138	11381115.80443250	1426.59	TRAV
22	6840437.81878066	11381096.45285510	1424.43	TRAV
24	6839424.46240427	11380387.93364180	1437.67	TRAV
26	6838439.04477056	11380594.65568560	1453.69	TRAV
27	6838271.62540088	11380247.14659950	1433.03	TRAV
28	6834358.58144500	11381497.27127410	1534.89	TRAV
29	6834910.99544403	11381137.65255250	1517.35	TRAV
30	6834970.71181951	11380907.72789010	1532.60	TRAV

SCALE
0 200' 400'

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

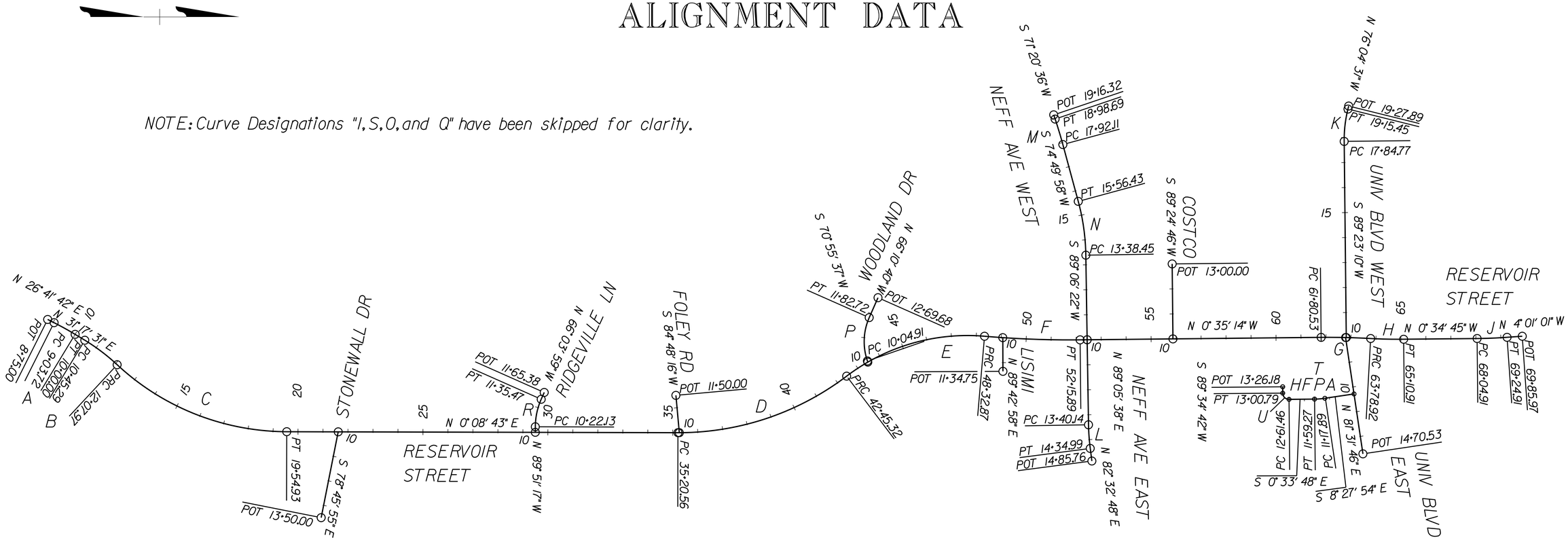
SCALE: 1" = 200'
DRAWN BY CMY DATE
CHECKED BY RJD DATE
DESIGN BY CMY DATE
TAX MAP

RESERVOIR STREET
SURVEY ALIGNMENT DATA
PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 1F

ALIGNMENT DATA

NOTE: Curve Designations "I, S, O, and Q" have been skipped for clarity.



RESERVOIR STREET

A Curve 100
PI = 9+51.89
DELTA = 4° 35' 49.25" (RT)
D = 4° 46' 29"
T = 48.17'
L = 96.28'
R = 1,200.00'
PC = 9+03.72
PT = 10+00.00
e = NC
V = 40mph
Lr = NA

B Curve 101
PI = 11+26.91
DELTA = 11° 39' 04.11" (RT)
D = 7° 09' 43"
T = 81.62'
L = 162.68'
R = 800.00'
PC = 10+45.29
PRC = 12+07.97
e = NC
V = 40mph
Lr = NA

C Curve 102
PI = 15+99.84
DELTA = 42° 47' 51.84" (LT)
D = 5° 43' 46"
T = 391.87'
L = 746.96'
R = 1,000.00'
PRC = 12+07.97
PT = 19+54.93
e = NC
V = 40mph
Lr = NA

D Curve 103
PI = 38+96.32
DELTA = 37° 19' 35.52" (LT)
D = 5° 09' 01"
T = 375.77'
L = 724.76'
R = 1,112.50'
PC = 35+20.56
PRC = 42+45.32
e = NC
V = 40mph
Lr = NA

E Curve 104
PI = 45+53.05
DELTA = 42° 04' 49.39" (RT)
D = 7° 09' 43"
T = 307.74'
L = 587.55'
R = 800.00'
PRC = 42+45.32
PRC = 48+32.87
e = NC
V = 40mph
Lr = NA

F Curve 105
PI = 50+24.53
DELTA = 5° 29' 10.61" (LT)
D = 1° 25' 57"
T = 191.65'
L = 383.01'
R = 4,000.00'
PRC = 48+32.87
PT = 52+15.89
e = NC
V = 40mph
Lr = NA

G Curve 106
PI = 62+79.76
DELTA = 3° 47' 20.24" (RT)
D = 1° 54' 35"
T = 99.23'
L = 198.39'
R = 3,000.00'
PC = 61+80.53
PRC = 63+78.92
e = NC
V = 40mph
Lr = NA

H Curve 107
PI = 64+44.94
DELTA = 3° 46' 51.96" (LT)
D = 2° 51' 53"
T = 66.02'
L = 131.99'
R = 2,000.00'
PRC = 63+78.92
PT = 65+10.91
e = NC
V = 40mph
Lr = NA

J Curve 108
PI = 68+64.93
DELTA = 3° 26' 16.01" (LT)
D = 2° 51' 53"
T = 60.02'
L = 120.00'
R = 2,000.00'
PC = 68+04.91
PT = 69+24.91
e = NC
V = 40mph
Lr = NA

UNIV BLVD WEST

K Curve 900
PI = 18+50.46
DELTA = 14° 32' 18.48" (RT)
D = 11° 07' 31"
T = 65.69'
L = 130.68'
R = 515.00'
PC = 17+84.77
PT = 19+15.45
e = Match Existing
V = 40mph
Lr = Match Existing

NEFF AVE EAST

L Curve 600
PI = 13+87.62
DELTA = 6° 32' 50.42" (LT)
D = 6° 54' 11"
T = 47.47'
L = 94.85'
R = 830.00'
PC = 13+40.14
PT = 14+34.99
e = Match Existing
V = 40mph
Lr = Match Existing

NEFF AVE WEST

M Curve 701
PI = 18+45.41
DELTA = 3° 29' 21.89" (LT)
D = 3° 16' 27"
T = 53.31'
L = 106.58'
R = 1,750.00'
PC = 17+92.11
PT = 18+98.69
e = Match Existing
V = 40mph
Lr = Match Existing

N Curve 700
PI = 14+48.01
DELTA = 14° 16' 23.50" (LT)
D = 6° 32' 53"
T = 109.55'
L = 217.97'
R = 875.00'
PC = 13+38.45
PT = 15+56.43
e = Match Existing
V = 40mph
Lr = Match Existing

WOODLAND DR.

P Curve 500
PI = 10+98.21
DELTA = 42° 53' 42.76" (RT)
D = 24° 07' 28"
T = 93.30'
L = 177.81'
R = 237.50'
PC = 10+04.91
PT = 11+82.72
e = NC
V = 40mph
Lr = NA

RIDGEVILLE LN

R Curve 300
PI = 10+79.63
DELTA = 23° 47' 18.31" (RT)
D = 20° 59' 15"
T = 57.50'
L = 113.35'
R = 273.00'
PC = 10+22.13
PT = 11+35.47'
e = NC
V = 40mph
Lr = NA

HFPA ENTR

T Curve 30
PI = 11+38.61
DELTA = 7° 54' 06.00" (RT)
D = 191° 05' 55"
T = 20.72'
L = 41.37'
R = 300.00'
PC = 11+17.89
PT = 11+59.27

U Curve 31
PI = 12+86.52
DELTA = 90° 08' 29.82" (RT)
D = 229° 10' 59"
T = 25.06'
L = 39.33'
R = 25.00'
PC = 12+61.46
PT = 13+00.79

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = NTS
DRAWN BY | DATE
CMY
CHECKED BY | DATE
RJD
DESIGN BY | DATE
CMY
TAX MAP

RESERVIOR STREET

ALIGNMENT DATA

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 1G

ALIGNMENT DATA

RESERVOIR STREET

Beginning chain MAINLINE description
==========

Point 100 N 6,834,260.9768 E 11,381,014.7526 Sta 8+75.00

Course from 100 to PC 100 N 26^ 41' 41.57" E Dist 28.7209

Curve Data

Curve 100
P.I. Station 9+51.89 N 6,834,329.6682 E 11,381,049.2930
Delta = 4^ 35' 49.25" (RT)
Degree = 4^ 46' 28.73"
Tangent = 48.1657
Length = 96.2796
Radius = 1,200.0000
External = 0.9662
Long Chord = 96.2538
Mid. Ord. = 0.9655
P.C. Station 9+03.72 N 6,834,286.6364 E 11,381,027.6551
P.T. Station 10+00.00 N 6,834,370.8273 E 11,381,074.3102
C.C. N 6,833,747.5494 E 11,382,099.7490
Back = N 26^ 41' 41.57" E
Ahead = N 31^ 17' 30.82" E
Chord Bear = N 28^ 59' 36.19" E

Course from PT 100 to PC 101 N 31^ 17' 30.82" E Dist 45.2903

Curve Data

Curve 101
P.I. Station 11+26.91 N 6,834,479.2777 E 11,381,140.2281
Delta = 11^ 39' 04.11" (RT)
Degree = 7^ 09' 43.10"
Tangent = 81.6218
Length = 162.6806
Radius = 800.0000
External = 4.1530
Long Chord = 162.4005
Mid. Ord. = 4.1316
P.C. Station 10+45.29 N 6,834,409.5293 E 11,381,097.8339
P.T. Station 12+07.97 N 6,834,539.0274 E 11,381,195.8346
C.C. N 6,833,994.0107 E 11,381,781.4597
Back = N 31^ 17' 30.82" E
Ahead = N 42^ 56' 34.93" E
Chord Bear = N 37^ 07' 02.87" E

Curve Data

Curve 102
P.I. Station 15+99.84 N 6,834,825.8907 E 11,381,462.8062
Delta = 42^ 47' 51.84" (LT)
Degree = 5^ 43' 46.48"
Tangent = 391.8729
Length = 746.9613
Radius = 1,000.0000
External = 74.0411
Long Chord = 729.7167
Mid. Ord. = 68.9370
P.C. Station 12+07.97 N 6,834,539.0274 E 11,381,195.8346
P.T. Station 19+54.93 N 6,835,217.7623 E 11,381,463.8000
C.C. N 6,835,220.2983 E 11,380,463.8032
Back = N 42^ 56' 34.93" E
Ahead = N 0^ 08' 43.09" E
Chord Bear = N 21^ 32' 39.01" E

Course from PT 102 to PC 103 N 0^ 08' 43.09" E Dist 1,565.6242

Curve Data

Curve 103
P.I. Station 38+96.32 N 6,837,159.1460 E 11,381,468.7234
Delta = 37^ 19' 35.52" (LT)
Degree = 5^ 09' 00.66"
Tangent = 375.7657
Length = 724.7614
Radius = 1,112.5000
External = 61.7470
Long Chord = 712.0126
Mid. Ord. = 58.5001
P.C. Station 35+20.56 N 6,836,783.3815 E 11,381,467.7705
P.T. Station 42+45.32 N 6,837,458.5290 E 11,381,241.6339
C.C. N 6,836,786.2028 E 11,380,355.2740
Back = N 0^ 08' 43.09" E
Ahead = N 37^ 10' 52.43" W
Chord Bear = N 18^ 31' 04.67" W

Curve Data

Curve 104
P.I. Station 45+53.05 N 6,837,703.7103 E 11,381,055.6577
Delta = 42^ 04' 49.39" (RT)
Degree = 7^ 09' 43.10"
Tangent = 307.7353
Length = 587.5530
Radius = 800.0000
External = 57.1470
Long Chord = 574.4364
Mid. Ord. = 53.3370
P.C. Station 42+45.32 N 6,837,458.5290 E 11,381,241.6339
P.T. Station 48+32.87 N 6,838,010.3213 E 11,381,081.9390
C.C. N 6,837,941.9995 E 11,381,879.0162
Back = N 37^ 10' 52.43" W
Ahead = N 4^ 53' 56.96" E
Chord Bear = N 16^ 08' 27.73" W

Curve Data

Curve 105
P.I. Station 50+24.53 N 6,838,201.2749 E 11,381,098.3066
Delta = 5^ 29' 10.61" (LT)
Degree = 1^ 25' 56.62"
Tangent = 191.6537
Length = 383.0146
Radius = 4,000.0000
External = 4.5888
Long Chord = 382.8682
Mid. Ord. = 4.5835
P.C. Station 48+32.87 N 6,838,010.3213 E 11,381,081.9390
P.T. Station 52+15.89 N 6,838,392.9185 E 11,381,096.3428
C.C. N 6,838,351.9303 E 11,377,096.5528
Back = N 4^ 53' 56.96" E
Ahead = N 0^ 35' 13.64" W
Chord Bear = N 2^ 09' 21.66" E

Course from PT 105 to PC 106 N 0^ 35' 13.64" W Dist 964.6458

Curve Data

Curve 106
P.I. Station 62+79.76 N 6,839,456.7393 E 11,381,085.4412
Delta = 3^ 47' 20.24" (RT)
Degree = 1^ 54' 35.49"
Tangent = 99.2308
Length = 198.3893
Radius = 3,000.0000
External = 1.6407
Long Chord = 198.3531
Mid. Ord. = 1.6398
P.C. Station 61+80.53 N 6,839,357.5137 E 11,381,086.4580
P.T. Station 63+78.92 N 6,839,555.8152 E 11,381,090.9835
C.C. N 6,839,388.2548 E 11,384,086.3005
Back = N 0^ 35' 13.64" W
Ahead = N 3^ 12' 06.60" E
Chord Bear = N 1^ 18' 26.48" E

Curve Data

Curve 107
P.I. Station 64+44.94 N 6,839,621.7287 E 11,381,094.6708
Delta = 3^ 46' 51.96" (LT)
Degree = 2^ 51' 53.24"
Tangent = 66.0166
Length = 131.9853
Radius = 2,000.0000
External = 1.0893
Long Chord = 131.9614
Mid. Ord. = 1.0887
P.C. Station 63+78.92 N 6,839,555.8152 E 11,381,090.9835
P.T. Station 65+10.91 N 6,839,687.7420 E 11,381,094.0034
C.C. N 6,839,667.5221 E 11,379,094.1056
Back = N 3^ 12' 06.60" E
Ahead = N 0^ 34' 45.37" W
Chord Bear = N 1^ 18' 40.62" E

Course from PT 107 to PC 108 N 0^ 34' 45.37" W Dist 294.0013

Curve Data

Curve 108
P.I. Station 68+64.93 N 6,840,041.7438 E 11,381,090.4242
Delta = 3^ 26' 16.01" (LT)
Degree = 2^ 51' 53.24"
Tangent = 60.0186
Length = 120.0012
Radius = 2,000.0000
External = 0.9004
Long Chord = 119.9832
Mid. Ord. = 0.8999
P.C. Station 68+04.91 N 6,839,981.7283 E 11,381,091.0310
P.T. Station 69+24.91 N 6,840,101.6149 E 11,381,086.2197
C.C. N 6,839,961.5083 E 11,379,091.1332
Back = N 0^ 34' 45.37" W
Ahead = N 4^ 01' 01.37" W
Chord Bear = N 2^ 17' 53.37" W

Course from PT 108 to 110 N 4^ 01' 01.37" W Dist 61.0564

Point 110 N 6,840,162.5213 E 11,381,081.9425 Sta 69+85.97

==========
Ending chain MAINLINE description

COSTCO

Beginning chain COSTCO description
==========

Point 20 N 6,838,764.4522 E 11,381,092.5354 Sta 10+00.00

Course from 20 to 21 S 89^ 24' 46.36" W Dist 299.9979

Point 21 N 6,838,761.3781 E 11,380,792.5533 Sta 13+00.00

==========
Ending chain COSTCO description

LISIMI

Beginning chain LISIMI description
==========

Point 10 N 6,838,083.3725 E 11,381,087.5272 Sta 10+00.00

Course from 10 to 11 N 89^ 42' 57.89" E Dist 134.7467

Point 11 N 6,838,084.0402 E 11,381,222.2723 Sta 11+34.75

==========
Ending chain LISIMI description

UNIVERSITY BLVD WEST

Beginning chain UNIVWEST description
==========

Point 900 N 6,839,458.1691 E 11,381,087.1153 Sta 10+00.00

Course from 900 to PC 900 S 89^ 23' 10.38" W Dist 784.7694

Curve Data

Curve 900
P.I. Station 18+50.46 N 6,839,449.0587 E 11,380,236.7027
Delta = 14^ 32' 18.48" (RT)
Degree = 11^ 07' 31.42"
Tangent = 65.6920
Length = 130.6782
Radius = 515.0000
External = 4.1728
Long Chord = 130.3279
Mid. Ord. = 4.1393
P.C. Station 17+84.77 N 6,839,449.7624 E 11,380,302.3909
P.T. Station 19+15.45 N 6,839,464.8672 E 11,380,172.9412
C.C. N 6,839,964.7329 E 11,380,296.8740
Back = S 89^ 23' 10.38" W
Ahead = N 76^ 04' 31.13" W
Chord Bear = N 83^ 20' 40.37" W

Course from PT 900 to 902 N 76^ 04' 31.13" W Dist 12.4445

Point 902 N 6,839,467.8619 E 11,380,160.8624 Sta 19+27.89

==========
Ending chain UNIVWEST description

UNIVERSITY BLVD EAST

Beginning chain UNIVEAST description
==========

Point 800 N 6,839,455.4529 E 11,381,087.0532 Sta 10+00.00

Course from 800 to 801 N 81^ 31' 45.94" E Dist 470.5254

Point 801 N 6,839,524.7620 E 11,381,552.4459 Sta 14+70.53

==========
Ending chain UNIVEAST description

NEFF AVE WEST

Beginning chain NEFFWEST description
==========

Point 700 N 6,838,421.1492 E 11,381,096.0535 Sta 10+00.00

Course from 700 to PC 700 S 89^ 06' 21.84" W Dist 338.4543

Curve Data

Curve 700
P.I. Station 14+48.01 N 6,838,414.1596 E 11,380,648.0990
Delta = 14^ 16' 23.50" (LT)
Degree = 6^ 32' 53.12"
Tangent = 109.5546
Length = 217.9750
Radius = 875.0000
External = 6.8317
Long Chord = 217.4118
Mid. Ord. = 6.7786
P.C. Station 13+38.45 N 6,838,415.8688 E 11,380,757.6403
P.T. Station 15+56.43 N 6,838,385.4962 E 11,380,542.3605
C.C. N 6,837,540.9753 E 11,380,771.2916
Back = S 89^ 06' 21.84" W
Ahead = S 74^ 49' 58.34" W
Chord Bear = S 81^ 58' 10.09" W

Course from PT 700 to PC 701 S 74^ 49' 58.34" W Dist 235.6794

Curve Data

Curve 701
P.I. Station 18+45.41 N 6,838,309.8875 E 11,380,263.4419
Delta = 3^ 29' 21.89" (LT)
Degree = 3^ 16' 26.56"
Tangent = 53.3055
Length = 106.5781
Radius = 1,750.0000
External = 0.8117
Long Chord = 106.5616
Mid. Ord. = 0.8113
P.C. Station 17+92.11 N 6,838,323.8341 E 11,380,314.8906
P.T. Station 18+98.69 N 6,838,292.8354 E 11,380,212.9374
C.C. N 6,836,634.7923 E 11,380,772.7527
Back = S 74^ 49' 58.34" W
Ahead = S 71^ 20' 36.45" W
Chord Bear = S 73^ 05' 17.40" W

Course from PT 701 to 703 S 71^ 20' 36.45" W Dist 17.6365

Point 703 N 6,838,287.1935 E 11,380,196.2276 Sta 19+16.32

==========
Ending chain NEFFWEST description

NEFF AVE EAST

Beginning chain NEFFEAST description
==========

Point 600 N 6,838,421.1490 E 11,381,096.0535 Sta 10+00.00

Course from 600 to PC 600 N 89^ 05' 38.31" E Dist 340.1441

Curve Data

Curve 600
P.I. Station 13+87.62 N 6,838,427.2782 E 11,381,483.6239
Delta = 6^ 32' 50.42" (LT)
Degree = 6^ 54' 11.18"
Tangent = 47.4748
Length = 94.8463
Radius = 830.0000
External = 1.3566
Long Chord = 94.7947
Mid. Ord. = 1.3544
P.C. Station 13+40.14 N 6,838,426.5275 E 11,381,436.1550
P.T. Station 14+34.99 N 6,838,433.4366 E 11,381,530.6976
C.C. N 6,839,256.4237 E 11,381,423.0307
Back = N 89^ 05' 38.31" E
Ahead = N 82^ 32' 47.89" E
Chord Bear = N 85^ 49' 13.10" E

Course from PT 600 to 602 N 82^ 32' 47.89" E Dist 50.7657

Point 602 N 6,838,440.0219 E 11,381,581.0343 Sta 14+85.76

==========
Ending chain NEFFEAST description

WOODLAND DRIVE

Beginning chain WOODLAND description
==========

Point 500 N 6,837,543.3065 E 11,381,185.4429 Sta 10+00.00

Course from 500 to PC 500 S 70^ 55' 36.85" W Dist 4.9107

Curve Data

Curve 500
P.I. Station 10+98.21 N 6,837,511.2129 E 11,381,092.6210
Delta = 42^ 53' 42.76" (RT)
Degree = 24^ 07' 28.34"
Tangent = 93.3029
Length = 177.8074
Radius = 237.5000
External = 17.6699
Long Chord = 173.6839
Mid. Ord. = 16.4463
P.C. Station 10+04.91 N 6,837,541.7019 E 11,381,180.8018
P.T. Station 11+82.72 N 6,837,548.8978 E 11,381,007.2671
C.C. N 6,837,766.1637 E 11,381,103.1930
Back = S 70^ 55' 36.85" W
Ahead = N 66^ 10' 40.39" W
Chord Bear = N 87^ 37' 31.77" W

Course from PT 500 to 502 N 66^ 10' 40.39" W Dist 86.9584

Point 502 N 6,837,584.0201 E 11,380,927.7172 Sta 12+69.68

==========
Ending chain WOODLAND description

STONEWALL DRIVE

Beginning chain STONEWALL description
==========

Point 200 N 6,835,423.7687 E 11,381,464.3225 Sta 10+00.00

Course from 200 to 201 S 78^ 45' 55.01" E Dist 350.0000

Point 201 N 6,835,355.5786 E 11,381,807.6155 Sta 13+50.00

==========
Ending chain STONEWALL description

RIDGEVILLE LANE

Beginning chain RIDGEVILL description
==========

Point 300 N 6,836,212.5511 E 11,381,466.3228 Sta 10+00.00

Course from 300 to PC 300 N 89^ 51' 16.91" W Dist 22.1273

Curve Data

Curve 300
P.I. Station 10+79.63 N 6,836,212.7531 E 11,381,386.6944
Delta = 23^ 47' 18.31" (RT)
Degree = 20^ 59' 14.87"
Tangent = 57.5013
Length = 113.3458
Radius = 273.0000
External = 5.9900
Long Chord = 112.5335
Mid. Ord. = 5.8614
P.C. Station 10+22.13 N 6,836,212.6073 E 11,381,444.1956
P.T. Station 11+35.47 N 6,836,236.0802 E 11,381,334.1374
C.C. N 6,836,485.6064 E 11,381,444.8879
Back = N 89^ 51' 16.91" W
Ahead = N 66^ 03' 58.59" W
Chord Bear = N 77^ 57' 37.75" W

Course from PT 300 to 302 N 66^ 03' 58.59" W Dist 29.9092

Point 302 N 6,836,248.2138 E 11,381,306.7999 Sta 11+65.38

==========
Ending chain RIDGEVILL description

FOLEY ROAD

Beginning chain FOLEY description
==========

Point 400 N 6,836,788.8071 E 11,381,467.7710 Sta 10+00.00

Course from 400 to 401 S 84^ 48' 16.46" W Dist 150.0048

Point 401 N 6,836,775.2237 E 11,381,318.3824 Sta 11+50.00

==========
Ending chain FOLEY description

HFPA ENTRANCE

Beginning chain HFPA description
==========

Point 30 N 6,839,489.0661 E 11,381,312.7568 Sta 10+00.00

Course from 30 to PC 30 S 8^ 27' 54.11" E Dist 117.8933

Curve Data

Curve 30
P.I. Station 11+38.61 N 6,839,351.9635 E 11,381,333.1614
Delta = 7^ 54' 06.00" (RT)
Degree = 19^ 05' 54.94"
Tangent = 20.7194
Length = 41.3730
Radius = 300.0000
External = 0.7146
Long Chord = 41.3403
Mid. Ord. = 0.7129
P.C. Station 11+17.89 N 6,839,372.4571 E 11,381,330.1114
P.T. Station 11+59.27 N 6,839,331.2451 E 11,381,333.3651
C.C. N 6,839,328.2954 E 11,381,033.3796
Back = S 8^ 27' 54.11" E
Ahead = S 0^ 33' 48.11" E
Chord Bear = S 4^ 30' 51.11" E

Course from PT 30 to PC 31 S 0^ 33' 48.11" E Dist 102.1906

Curve Data

Curve 31
P.I. Station 12+86.52 N 6,839,203.9988 E 11,381,334.6163
Delta = 90^ 08' 29.82" (RT)
Degree = 229^ 10' 59.22"
Tangent = 25.0619
Length = 39.3317
Radius = 25.0000
External = 10.3991
Long Chord = 35.3990
Mid. Ord. = 7.3442
P.C. Station 12+61.46 N 6,839,229.0594 E 11,381,334.3699
P.T. Station 13+00.79 N 6,839,203.8143 E 11,381,309.5551
C.C. N 6,839,228.8136 E 11,381,309.3711
Back = S 0^ 33' 48.11" E
Ahead = S 89^ 34' 41.71" W
Chord Bear = S 44^ 30' 26.80" W

Course from PT 31 to 33 S 89^ 34' 41.71" W Dist 25.3903

Point 33 N 6,839,203.6274 E 11,381,284.1655 Sta 13+26.18

==========
Ending chain HFPA description

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = NTS	
DRAWN BY	DATE
CMY	
CHECKED BY	DATE
RJD	
DESIGN BY	DATE
CMY	
TAX MAP	

RESERVIOR STREET

ALIGNMENT DATA

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET
1G1

Temporary Signal Plans General Notes

1) POLE FOUNDATION LOCATIONS SHALL BE STAKED IN THE FIELD. SOIL BORINGS AT THESE LOCATIONS SHALL BE ANALYZED TO DETERMINE THE APPROPRIATE FOUNDATION DESIGN. POLE FOUNDATION TO BE DESIGNED TO MEET PF-8 SPECIFICATIONS. BORING DATA SHALL BE PROVIDED TO INSPECTOR.

2) ELECTRICAL SERVICE SHALL BE 110 VAC. ELECTRICAL SERVICE SHALL BE STD. SE-3 TYPE B 120 VOLT SINGLE PHASE WITH 100 AMP METER BASE AND CIRCUIT BREAKER BOX, CONTAINING 1 SINGLE POLE 20 AMP BREAKER MOUNTED ON SIGNAL POLE. CONTRACTOR SHALL INSTALL METER SUPPLIED BY HARRISONBURG ELECTRIC COMMISSION. CONTRACTOR SHALL PICK-UP METER AT HARRISONBURG ELECTRIC COMMISSION. (CONTACT BRIAN O'DELL (540) 434-5361). CONTRACTOR SHALL OBTAIN AN "ELECTRIC PERMIT" FROM THE CITY OF HARRISONBURG COMMUNITY DEVELOPMENT BUILDING INSPECTION BEFORE PERFORMING ANY ELECTRICAL WORK.

3) THE ELECTRICAL POWER SHALL BE SUPPLIED BASED ON AGREEMENT BETWEEN CITY OF HARRISONBURG TRAFFIC ENGINEERING AND THE POWER COMPANY.

4) TRANSVERSE SPACING OF SIGNAL HEADS AND VIDEO DETECTORS SHALL BE VERIFIED AND ADJUSTED AS NECESSARY IN THE FIELD.

5) ALL JUNCTION BOXES SHALL BE JB-S2 UNLESS OTHERWISE INDICATED.

6) GROUND RODS SHALL BE INSTALLED IN JUNCTION BOXES SO AS TO BE READILY -ACCESSIBLE FOR FUTURE INSPECTIONS.

7) ALL JUNCTION BOX COLLARS SHALL BE MARKED TO SHOW THE NUMBER AND DIRECTIONS OF CONDUITS, SIMILAR TO THE PF-8 FOUNDATION MARKINGS.

8) MAINTAIN EMERGENCY PREEMPTION.

9) MAINTAIN VEHICLE DETECTION.

10) SIGNAL SHALL BE OPERATIONAL AT ALL TIMES OR CONTROLLED UNDER POLICE FLAGGING AS PER TTC-30.0 OF THE 2011 VIRGINIA WORK AREA PROTECTION MANUAL.

11) CONTRACTOR SHALL ENSURE PROPER HEAD LOCATIONS DURING CONSTRUCTION. SHIFT SIGNAL HEADS AS NECESSARY. CONTRACTOR SHALL SHIFT SIGNS ON MAST ARM AS NECESSARY TO MAINTAIN PROPER ALIGNMENT WITH LANE ASSIGNMENTS DURING CONSTRUCTION. COST TO BE INCLUDED IN BID FOR OTHER ITEMS.

12) PERMANENT POLES TO BE USED FOR TEMPORARY SIGNAL. REFER TO PERMANENT SIGNAL PLAN SHEETS FOR ADDITIONAL DETAILS ON LOCATIONS OF ALL POLES AND CABINET LOCATIONS.

13) CONTRACTOR SHALL REMOVE EXISTING JUNCTION BOXES.

14) PROPOSED UTILITY RELOCATIONS (OTHER THAN ELECTRIC) NOT SHOWN FOR CLARITY.

15) ALL EXISTING SIGNAL EQUIPMENT AS INDICATED ON THE PLANS SHALL BE REMOVED. ALL EXISTING EQUIPMENT THAT IS IN USABLE CONDITION SHALL BE RETURNED TO PUBLIC WORKS. REMOVAL OF EXISTING MAST ARMS AND CONTROLLERS SHALL INCLUDE REMOVING THE EXISTING FOUNDATIONS TO A MINIMUM OF TWO FEET BELOW FINAL GRADE.

16) HOLES FOR SIGNAL HEAD WIRING SHALL ONLY BE DRILLED IN FINAL/PERMANENT LOCATION. DURING THE TEMPORARY PHASE, WIRING FOR SIGNAL HEADS SHALL UTILIZE THESE HOLES AND BE NEATLY TAPED ALONG THE BACK OF THE SIGNAL ARM.

17) CONTRACTOR SHALL REINSTALL EXISTING PTZ CAMERA AT UNIVERSITY BLVD., MAINTAINING OPERATION THROUGH CONSTRUCTION. USE EXISTING CABLE FOR REINSTALLATION.

18) CONTRACTOR SHALL REINSTALL EXISTING RADIO EQUIPMENT AT BOTH EXISTING SIGNALS, MAINTAINING OPERATION THROUGH CONSTRUCTION. COORDINATE WITH PUBLIC WORKS FOR PROPER ANTENNA ALIGNMENT

19) REFER TO PERMANENT SIGNAL PLANS FOR MORE DETAILED SPECIFICATIONS.

WIRING NOTES

1) ALL VEHICULAR SIGNAL HEADS SHALL BE POWERED BY #14/4C CABLE. TWO #14/4C CABLES SHALL BE RUN TO SIGNAL HEADS WITH GREATER THAN 4 SECTIONS.

2) ALL PEDESTRIAN SIGNAL HEADS SHALL BE POWERED BY #14/4C CABLE.

3) ALL PEDESTRIAN PUSH BUTTONS SHALL BE POWERED BY #14/4C CABLE.

4) ALL EMERGENCY VEHICLE PREEMPTORS SHALL BE WIRED WITH EMERGENCY VEHICLE PREEMPTION DETECTOR CABLE AND #14/2C SHIELDED CABLE (FOR THE CONFIRMATION BEACON)

5) ALL LED-LIGHTED STREET NAME SIGNS SHALL BE POWERED BY #14/4C CABLE.

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = N.T.S

DRAWN BY	DATE
GG	
CHECKED BY	DATE
JS	
DESIGN BY	DATE
CMY	

TAX MAP

RESERVOIR STREET

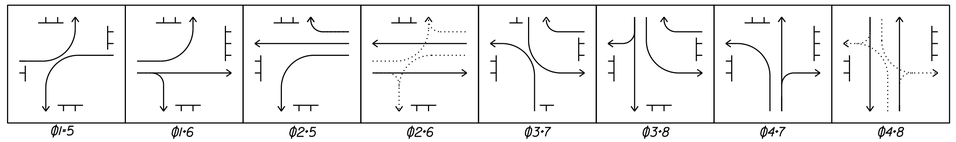
TEMP. SIGNAL PLAN NOTES

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 1J

TEMPORARY SIGNAL - RESERVOIR ST./ NEFF AVE.

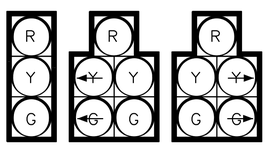
PHASING DIAGRAM



COLOR SEQUENCE CHART

PHASE / SIGNAL	Ø1·5 R/W	Ø1·6 R/W	Ø2·5 R/W	Ø2·6 R/W	Ø3·7 R/W	Ø3·8 R/W	Ø4·7 R/W	Ø4·8 R/W	FLASH
1	R/~~G~~	~~Y~~/G	R	G	R	R	R	R	Y
2	R	R	G	G	R	R	R	R	Y
2A	R	R	G	G	R/~~G~~	R/~~G~~	R	R	Y
3	R	R	R	R	R/~~G~~	~~Y~~/G	R	G	R
4	R	R	R	R	R	R	G	G	R
5	R/~~G~~	R	~~Y~~/G	G	R	R	R	R	Y
6	R	G	R	G	R	R	R	R	Y
7	R	R	R	R	R/~~G~~	R	~~Y~~/G	G	R
8	R	R	R	R	R	G	R	G	R

SIGNAL HEADS



All vehicular indications shall be 12" LED indications
Backplates and tunnel visors required on all vehicular heads

GENERAL NOTES

1) POLE FOUNDATION LOCATIONS SHALL BE STAKED IN THE FIELD. SOIL BORINGS AT THESE LOCATIONS SHALL BE ANALYZED TO DETERMINE THE APPROPRIATE FOUNDATION DESIGN. POLE FOUNDATION TO BE DESIGNED TO MEET PF-8 SPECIFICATIONS. REFER TO NOTE 5 [SHEET 13(1)] ABOUT DISTANCE ABOVE GRADE.

2) PROVIDE NEW ELECTRICAL SERVICE (SE-3,TYPE B).

3) THE ELECTRICAL POWER SHALL BE SUPPLIED BASED ON AGREEMENT BETWEEN CITY OF HARRISONBURG TRAFFIC ENGINEERING AND THE POWER COMPANY.

4) TRANSVERSE SPACING OF SIGNAL HEADS AND VIDEO DETECTORS SHALL BE VERIFIED AND ADJUSTED AS NECESSARY IN THE FIELD.

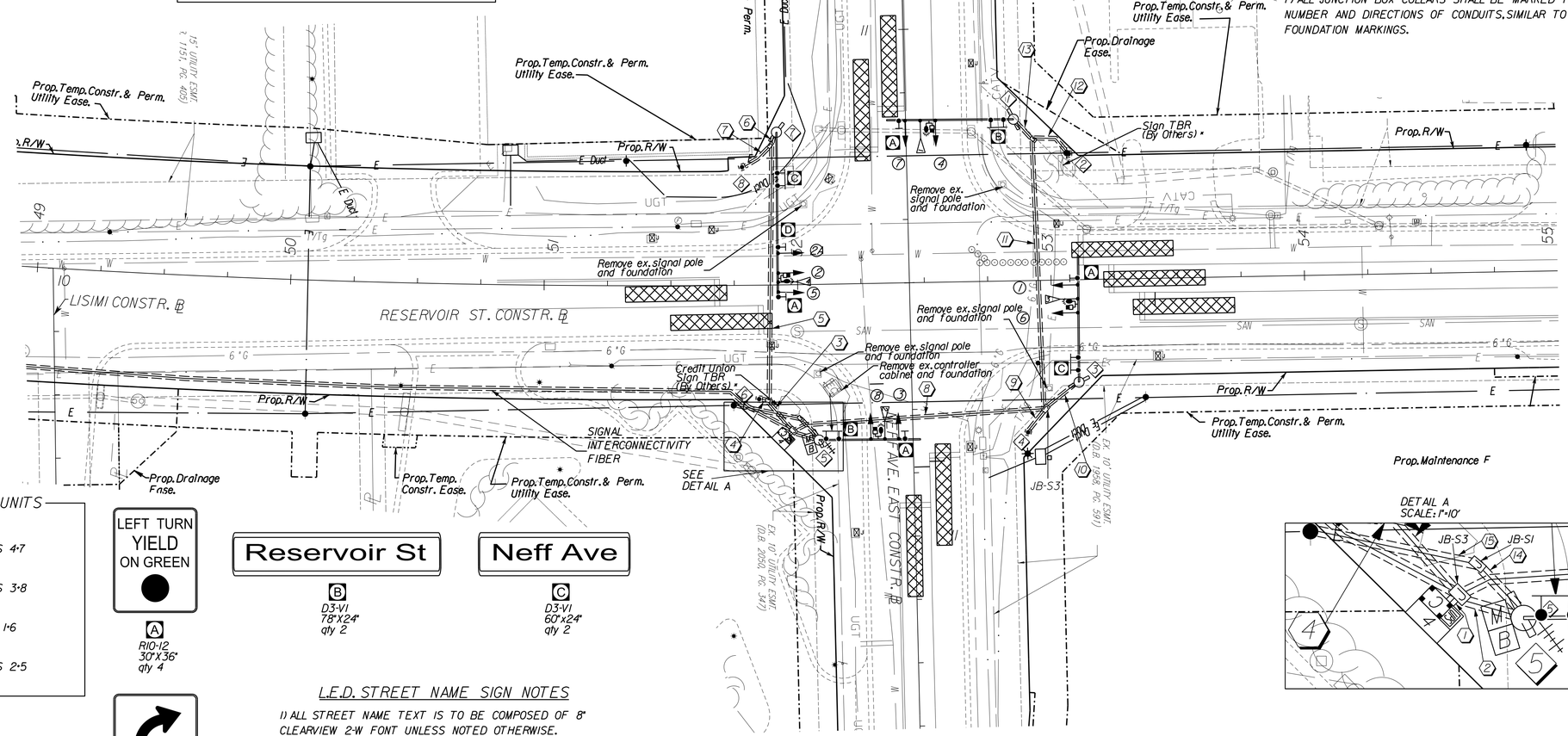
5) ALL JUNCTION BOXES SHALL BE JB-S2 UNLESS OTHERWISE INDICATED.

6) GROUND RODS SHALL BE INSTALLED IN JUNCTION BOXES SO AS TO BE READILY-ACCESSIBLE FOR FUTURE INSPECTIONS.

7) ALL JUNCTION BOX COLLARS SHALL BE MARKED TO SHOW THE NUMBER AND DIRECTIONS OF CONDUITS,SIMILAR TO THE PF-8 FOUNDATION MARKINGS.

LEGEND

- Proposed signal pole and identifier
- Proposed pedestrian pole and identifier
- Existing strain pole
- Proposed signal head
- Existing signal head
- Proposed overhead sign
- Post-mounted sign
- Sign identifier
- Existing junction box
- Proposed junction box - JB-S2 unless noted
- Existing controller cabinet
- Proposed controller cabinet
- Uninterruptible Power Supply
- Proposed conduit and identifier
- Breaker box
- Meter box
- Proposed video detector
- Proposed pedestrian signal head
- Proposed pedestrian push button
- Proposed directional antenna mast
- Proposed video detection zone
- Proposed opticom and flashing beacon



DETAIL A
SCALE: 1"=10'

IMAGE SENSING UNITS

- 1 DETECTS PHASES 4·7
- 2 DETECTS PHASES 3·8
- 3 DETECTS PHASE 1·6
- 4 DETECTS PHASES 2·5

A
R10-12
30"X36"
qty 4

D
R3-5
30"X36"
qty 1

B
D3-V1
7.8"X24"
qty 2

C
D3-V1
60"X24"
qty 2

L.E.D. STREET NAME SIGN NOTES

1) ALL STREET NAME TEXT IS TO BE COMPOSED OF 8" CLEARVIEW 2-W FONT UNLESS NOTED OTHERWISE.

* SIGN REMOVAL TO BE COMPLETED PRIOR TO SIGNAL INSTALLATION

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION.

SCALE 0 25' 50'

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = 25'
DRAWN BY GG DATE
CHECKED BY JS DATE
DESIGN BY CMY DATE
TAX MAP

RESERVOIR STREET
TEMP. SIGNAL PLAN
PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 1J(1)

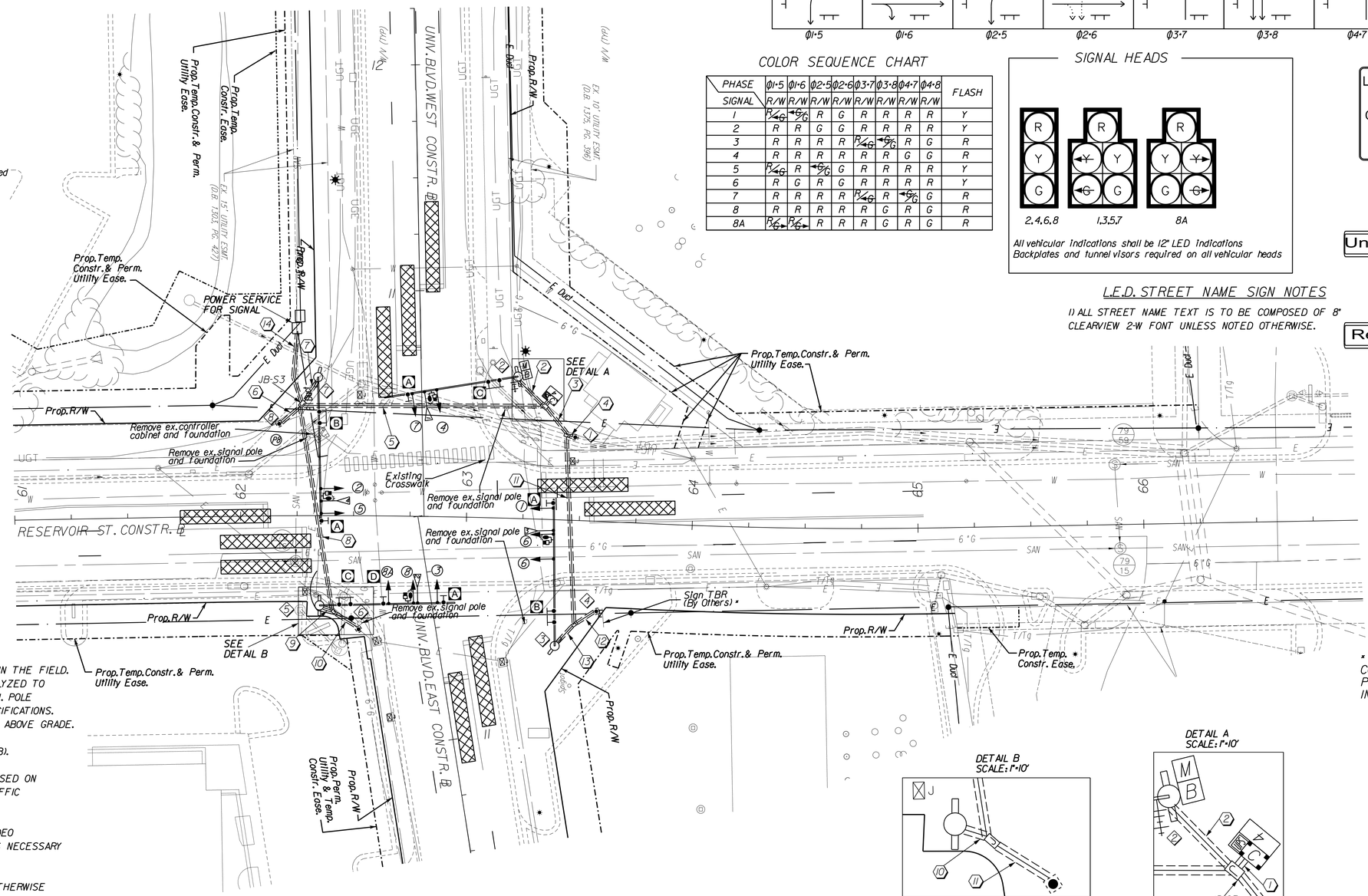
TEMPORARY SIGNAL - RESERVOIR ST./ UNIVERSITY BLVD.

LEGEND

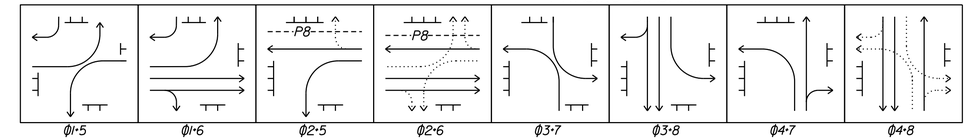
- Proposed signal pole and identifier
- Proposed pedestrian pole and identifier
- Existing strain pole
- Proposed signal head
- Existing signal head
- Mast arm-mounted sign
- Post-mounted sign
- Sign identifier
- Existing junction box
- Proposed junction box - JB-S2 unless noted
- Existing controller cabinet
- Proposed controller cabinet
- Uninterruptible Power Supply
- Proposed conduit and identifier
- Breaker box
- Meter box
- Proposed video detector
- Proposed pedestrian signal head
- Proposed pedestrian push button
- Proposed overhead sign
- Proposed directional antenna mast
- Proposed video detection zone
- Proposed opticom and flashing beacon

IMAGE SENSING UNITS

- 1 DETECTS PHASES 4·7
- 2 DETECTS PHASES 3·8
- 3 DETECTS PHASE 1·6
- 4 DETECTS PHASES 2·5



PHASING DIAGRAM



COLOR SEQUENCE CHART

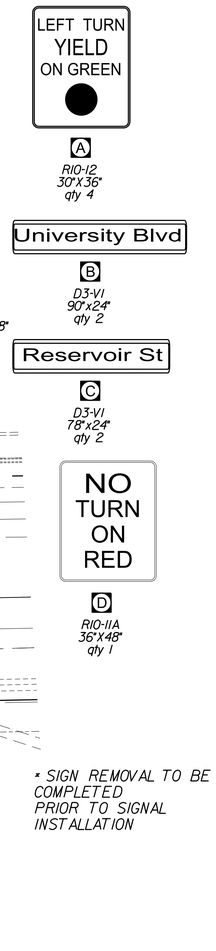
PHASE / SIGNAL	Φ1·5	Φ1·6	Φ2·5	Φ2·6	Φ3·7	Φ3·8	Φ4·7	Φ4·8	FLASH
	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W	
1	R/G	G/G	R	G	R	R	R	R	Y
2	R	R	G	G	R	R	R	R	Y
3	R	R	R	R	R/G	G/G	R	G	R
4	R	R	R	R	R	R	G	G	R
5	R/G	R	G/G	G	R	R	R	R	Y
6	R	G	R	G	R	R	R	R	Y
7	R	R	R	R	R/G	R	G/G	G	R
8	R	R	R	R	R	G	R	G	R
8A	R/G	R/G	R	R	R	G	R	G	R

SIGNAL HEADS

All vehicular indications shall be 12" LED indications
Backplates and tunnel visors required on all vehicular heads

L.E.D. STREET NAME SIGN NOTES

1) ALL STREET NAME TEXT IS TO BE COMPOSED OF 8" CLEARVIEW 2-W FONT UNLESS NOTED OTHERWISE.



* SIGN REMOVAL TO BE COMPLETED PRIOR TO SIGNAL INSTALLATION

GENERAL NOTES

1) POLE FOUNDATION LOCATIONS SHALL BE STAKED IN THE FIELD. SOIL BORINGS AT THESE LOCATIONS SHALL BE ANALYZED TO DETERMINE THE APPROPRIATE FOUNDATION DESIGN. POLE FOUNDATION TO BE DESIGNED TO MEET PF-8 SPECIFICATIONS. REFER TO NOTE 5 [SHEET 13(11)] ABOUT DISTANCE ABOVE GRADE.

2) PROVIDE NEW ELECTRICAL SERVICE (SE-3,TYPE B).

3) THE ELECTRICAL POWER SHALL BE SUPPLIED BASED ON AGREEMENT BETWEEN CITY OF HARRISONBURG TRAFFIC ENGINEERING AND THE POWER COMPANY.

4) TRANSVERSE SPACING OF SIGNAL HEADS AND VIDEO DETECTORS SHALL BE VERIFIED AND ADJUSTED AS NECESSARY IN THE FIELD.

5) ALL JUNCTION BOXES SHALL BE JB-S2 UNLESS OTHERWISE INDICATED.

6) GROUND RODS SHALL BE INSTALLED IN JUNCTION BOXES SO AS TO BE READILY-ACCESSIBLE FOR FUTURE INSPECTIONS.

7) ALL JUNCTION BOX COLLARS SHALL BE MARKED TO SHOW THE NUMBER AND DIRECTIONS OF CONDUITS,SIMILAR TO THE PF-8 FOUNDATION MARKINGS.

8) CONTRACTOR SHALL MAINTAIN EXISTING PEDESTRIAN SIGNAL OPERATION DURING CONSTRUCTION EXCEPT DURING PHASES 1A TO 1C.

DETAIL B
SCALE: 1"=10'

DETAIL A
SCALE: 1"=10'

SCALE 0 25' 50'

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = 25'
DRAWN BY | DATE
CHECKED BY | DATE
DESIGN BY | DATE
TAX MAP

RESERVOIR STREET
TEMP. SIGNAL PLAN
PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET
1J(2)

Temporary Traffic Control General Notes

1. Unless otherwise approved or directed by the Engineer, the contractor shall plan and prosecute the work in accordance with the following sequence of construction and maintenence of traffic plan. Contractor shall note that the construction Stages depicted in these plans may be constructed simultaneously.

2. Measures shall be taken to ensure adequate sight distances during construction operations. Traffic Control devices, signs, construction equipment, material storage or any other obstacle will not be allowed to interfere with sight distances for this project.

3. Equipment and/or materials shall not be placed within the established Clear Zone and/or the deflection zone of physical barriers, in accordance with the 2011 Virginia Work Area Protection Manual (WAPM) and the 2009 Manual On Uniform Traffic Control Devices.

4. All traffic control devices and signs necessary for the maintenance of traffic are to be provided, installed, maintained and removed by the Contractor.

5. All traffic control device locations shall be marked by the Contractor and reviewed by the Engineer prior to installation.

6. All work shall be accomplished in accordance with the 2011 Virginia Work Area Protection Manual, and the 2009 Manual On Uniform Traffic Control Devices.

7. All conflicting pavement markings shall be covered using Construction Pavement Marking Type E 6" or eradicated as described in the VDOT General Specifications.

8. Harrisonburg City Police participation is required as described in the Transportation Management Plan. Notification at least 2 weeks in advance. Share full schedule with Police Department at beginning of project.

9. Barrier shall be installed to current standards prior to change of traffic patterns for the next stage of work.

10. All maintenance of traffic shall be designed and installed based on posted speed limit. The speed limit in work zones shall be 30 mph.

11. All existing conflicting signs shall be removed or covered during construction, otherwise existing signing to be maintained.

12. All areas excavated deeper than 2" below existing pavement surfaces and within the clear zone, at the conclusion of each work day, shall be backfilled to form an approximate 6:1 wedge, against the existing pavement surfaces for the safety and protection of vehicular traffic. All costs associated with placing, maintaining, and removing the 6:1 wedge shall be included in the price bid for other items in the contract. No other compensation will be allowed.

13. Temporary signing to be installed per the standards specified in the Virginia Work Area Protection Manual.

14. Contractor shall coordinate with property owners at least 72 hours in advance of driveway construction or on street work affecting driveway access

15. Contractor shall have any lane closure/flagging operation completed by the noted time frames shown in the table on this sheet. All devices must be removed and traffic flow established within time frame.

16. Contractor shall provide a plan in writing to the engineer regarding equipment and personnel ingress/egress of the work zone, and equipment storage and staging areas.

17. Contractor shall protect any open trench or excavation that cross active entrances or sidewalks. Contractor may need to use plates or other protective devices when utility, drainage or other underground work occurs within work zones.

18. Contractor shall maintain proper positive drainage during all Stages of work. Provide temporary drainage devices as needed.

19. The existing sidewalk, along Reservoir St, in front of Costco is to be closed during Stage 1A(1) - Stage 1A(3) of construction. Contractor shall provide appropriate signage to notify pedestrians. Contractor shall provide protection and detour route for pedestrians when construction activities are adjacent to the sidewalk if possible.

20. Sequence of construction must be followed within each Stage, however contract may work on each Stage concurrently.

ALLOWABLE HOURS FOR LANE CLOSURE AND/OR FLAGGING OPERATIONS

Sunday	No restrictions
Monday	No restrictions
Tuesday	No restrictions
Wednesday	No restrictions
Thursday	No restrictions
Friday	No restrictions
Saturday	No restrictions

Lane Closures will not be permitted during the days listed for the following events/holidays (unless approved by the Engineer):

JMU Commencement (Saturday) - from the preceding Friday through Saturday.

JMU Homecoming (Saturday) - from the preceding Friday through Sunday.

JMU Choices (Dates to be provided by City) - on day of event.

July 4 - from July 4-July 5 (inclusive).

Thanksgiving - from the preceding Wednesday through the following Sunday.

Christmas - from December 24 to December 27 (inclusive).

NOTE: Lane Closures/Flagging Operations will be allowed at all times with prior written approval from the Engineer, at the Engineer's discretion.

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = NTS

DRAWN BY	DATE
BRG	
CHECKED BY	DATE
RJD	
DESIGN BY	DATE
CMY	

TAX MAP

RESERVIOR STREET

MOT GENERAL NOTES

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

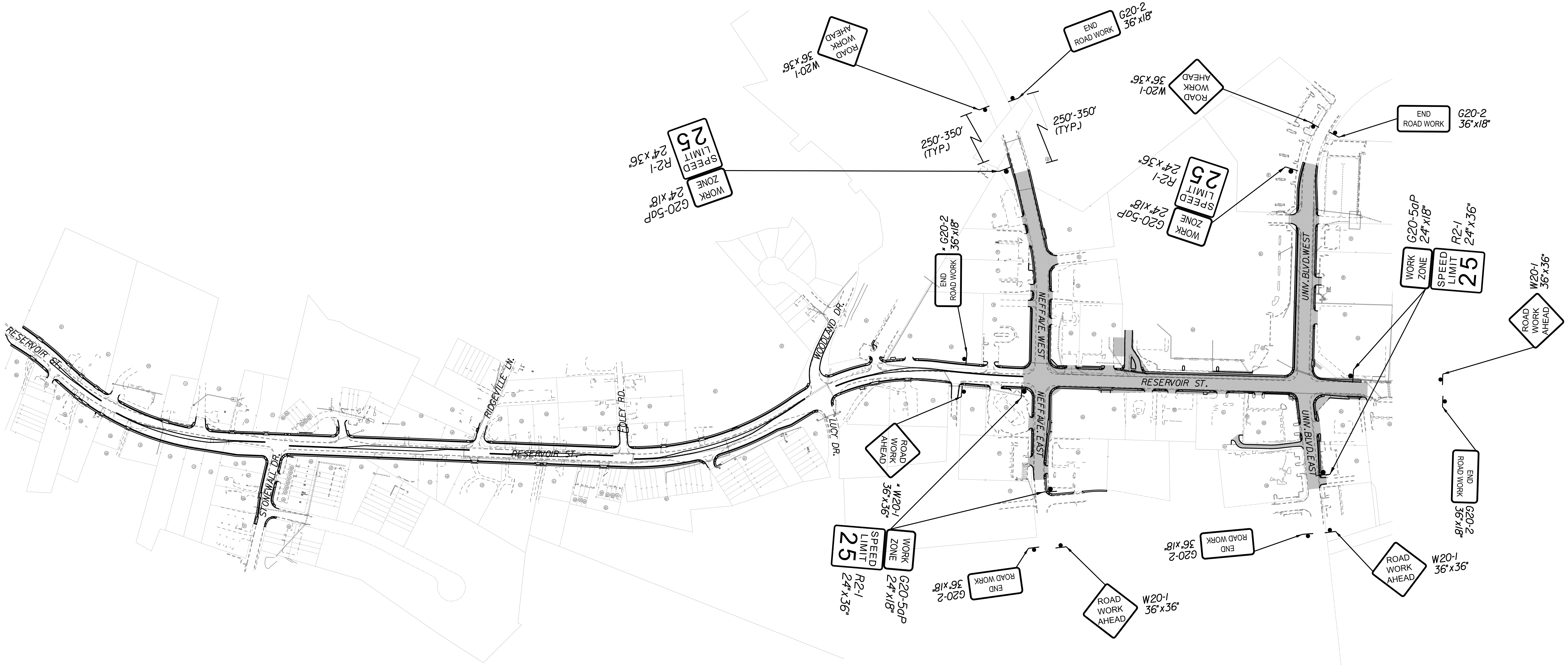
SHEET

1K(1)

Maintance Of Traffic & Sequence Of Construction

General Construction Signing - Sitewide

Stage 1



* SIGNS NEEDED ONLY IF PHASE 2 CONSTRUCTION IS NOT CONCURRENT WITH PHASE 1 CONSTRUCTION

STAGE 1 WORK AREA

SCALE 0 200' 400'

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY	SCALE: 1" = 200'		
				DRAWN BY	DATE	
				CHECKED BY	DATE	
				DESIGN BY	DATE	
				TAX MAP		

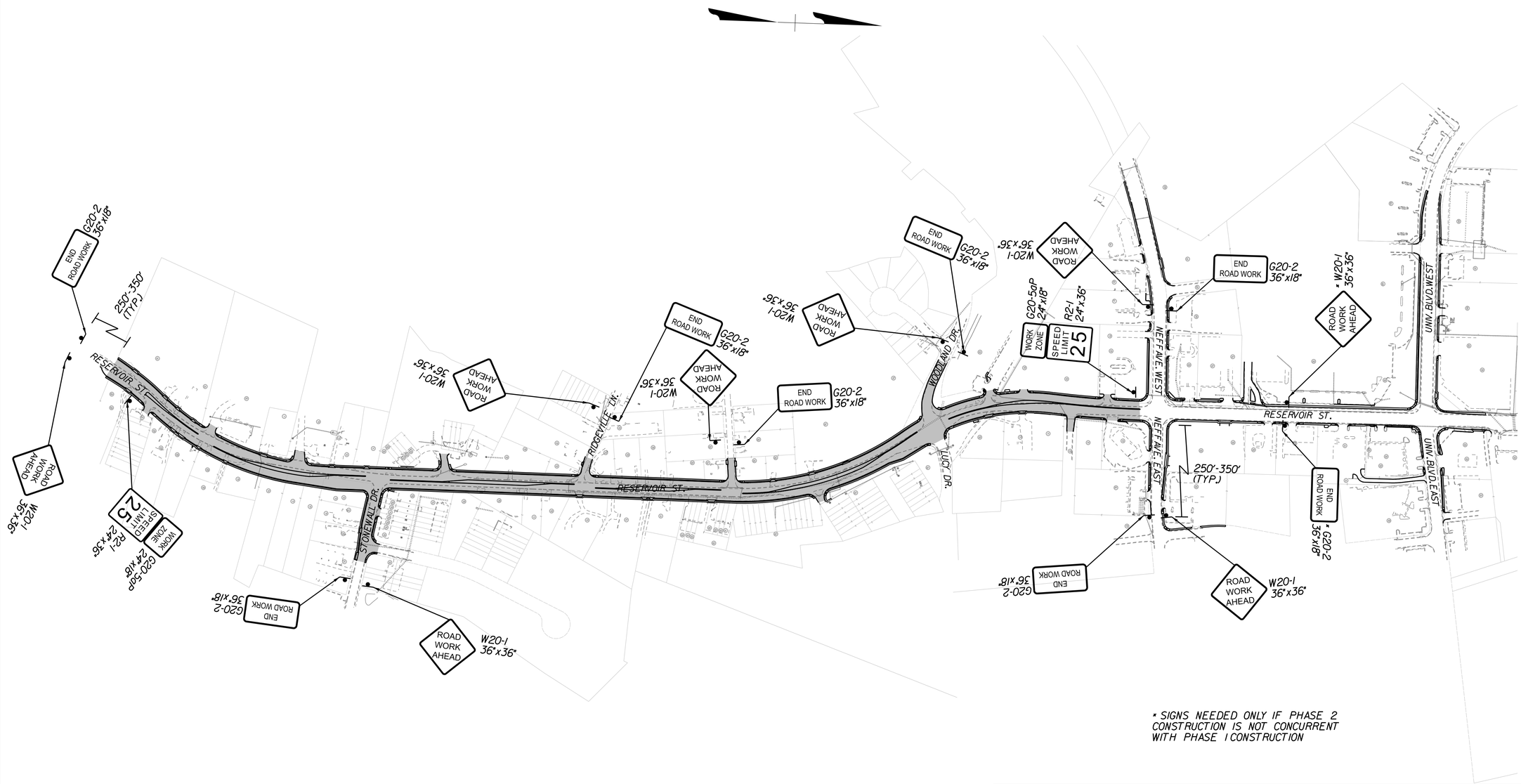
RESERVOIR STREET

STAGE 1 SITEWIDE CONSTRUCTION SIGNAGE

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 1K(2)

Maintance Of Traffic & Sequence Of Construction
General Construction Signing - Sitewide
Stage 2A & 2B



* SIGNS NEEDED ONLY IF PHASE 2 CONSTRUCTION IS NOT CONCURRENT WITH PHASE 1 CONSTRUCTION

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = 200'

DRAWN BY DATE

CHECKED BY DATE

DESIGN BY DATE

TAX MAP

RESERVOIR STREET

STAGE 2A/2B SITEWIDE CONSTRUCTION SIGNAGE

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 1K(3)

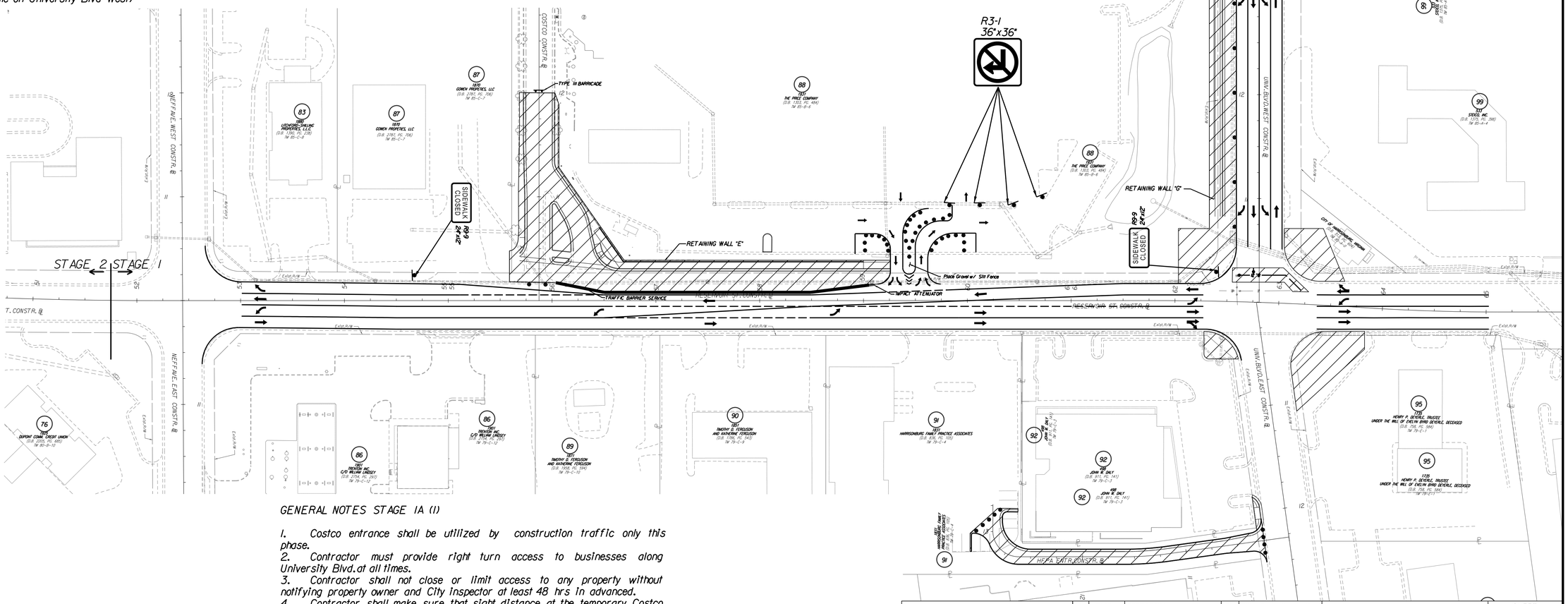
Maintenance of Traffic & Sequence of Construction
Stage 1A(1)

LEGEND

- PERMANENT CONSTRUCTION THIS STAGE
- PERMANENT CONSTRUCTION PREVIOUS STAGE
- TRAFFIC BARRIER SERVICE.CONCRETE
- IMPACT ATTENUATOR SERVICE.TYPE I
- GROUP 2 CHANNELIZING DEVICES
- WORK ZONE SIGN
- INDICATES TRAFFIC LANES

SEQUENCE OF CONSTRUCTION NARRATIVE STAGE 1A (1)

1. Construct Costco temporary entrance and HFPA entrance.
2. Begin construction of University Boulevard signal
3. Close Costco entrance on Reservoir Street,place temporary concrete barrier service along mainline STA 56+00 to 59+15.
4. Excavate for Retaining Wall E,remove existing cantilever wall; construct Wall E,support straps,and backfill. Wait 14 days minimum.
5. Perform rough grading and place shoring for Retaining Wall G during settlement time for Wall E.
6. Construct water main relocation ("bypass") on Reservoir Street at University Blvd Intersection, providing a connection for the eventual continuance of the remaining Univ Blvd West water main relocation. (NOTE: This water main installation will enable no more than one lane closure at a time on University Blvd West)



GENERAL NOTES STAGE 1A (1)

1. Costco entrance shall be utilized by construction traffic only this phase.
2. Contractor must provide right turn access to businesses along University Blvd.at all times.
3. Contractor shall not close or limit access to any property without notifying property owner and City Inspector at least 48 hrs in advanced.
4. Contractor shall make sure that sight distance at the temporary Costco entrance is not impacted by construction equipment or temporary traffic control measures.

SCALE
0 50' 100'

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = 50'	
DRAWN BY	DATE
JSS	
CHECKED BY	DATE
CMY	
DESIGN BY	DATE
JSS/GG	
TAX MAP	

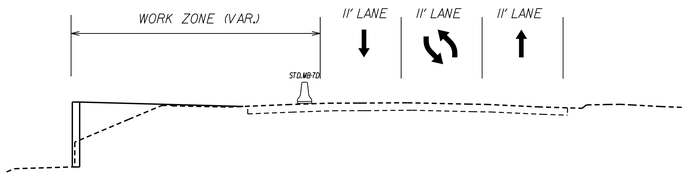
RESERVOIR STREET

STAGE 1A(1) SOC PLAN

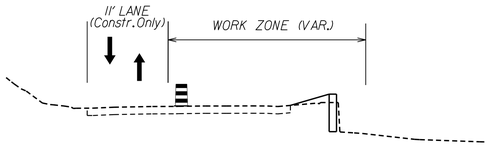
PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET
1L(1)

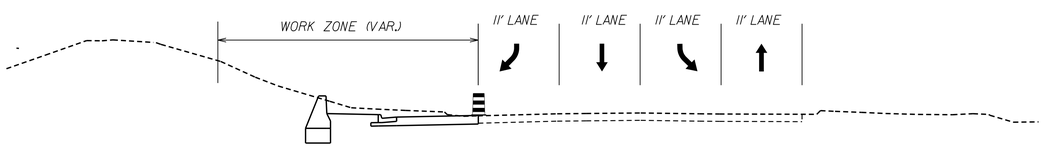
Maintenance of Traffic & Sequence of Construction
Stage 1A(1) (cont.)



RESERVOIR STREET
STA.57+00
N.T.S



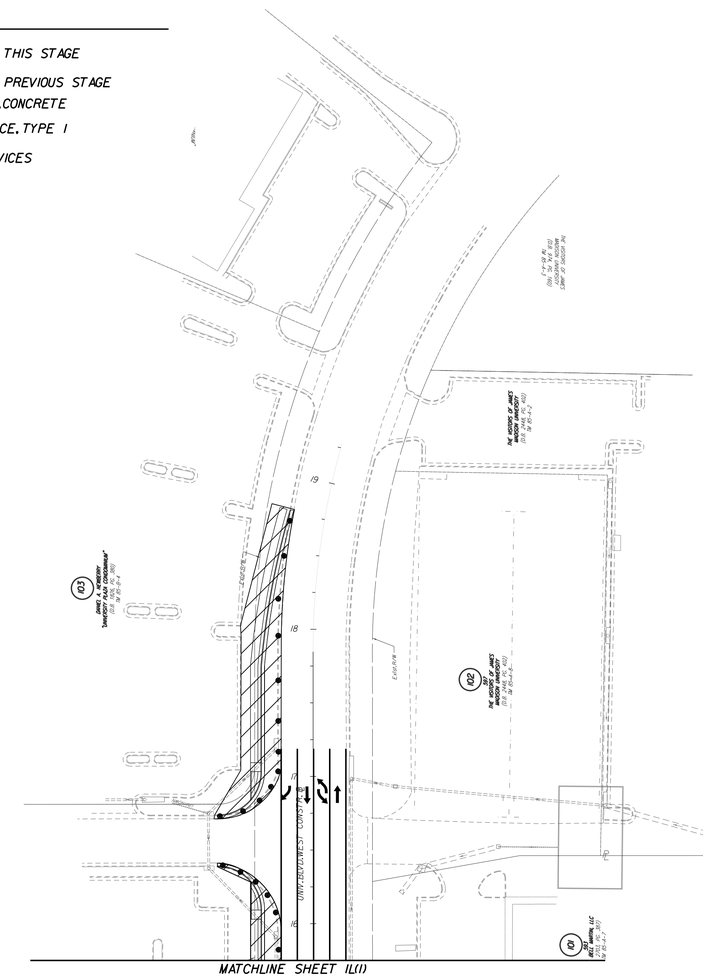
EXISTING COSTCO ENTRANCE
N.T.S



UNIVERSITY BLVD WEST
STA.12+00
N.T.S

LEGEND

- PERMANENT CONSTRUCTION THIS STAGE
- PERMANENT CONSTRUCTION PREVIOUS STAGE
- TRAFFIC BARRIER SERVICE,CONCRETE
- IMPACT ATTENUATOR SERVICE,TYPE I
- GROUP 2 CHANNELIZING DEVICES
- WORK ZONE SIGN
- INDICATES TRAFFIC LANES



SCALE
0 50' 100'

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = 50'

DRAWN BY	DATE
JSS	
CHECKED BY	DATE
CMY	
DESIGN BY	DATE
JSS/GG	

TAX MAP

RESERVOIR STREET

STAGE 1A(1) SOC PLAN

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET
1L(2)

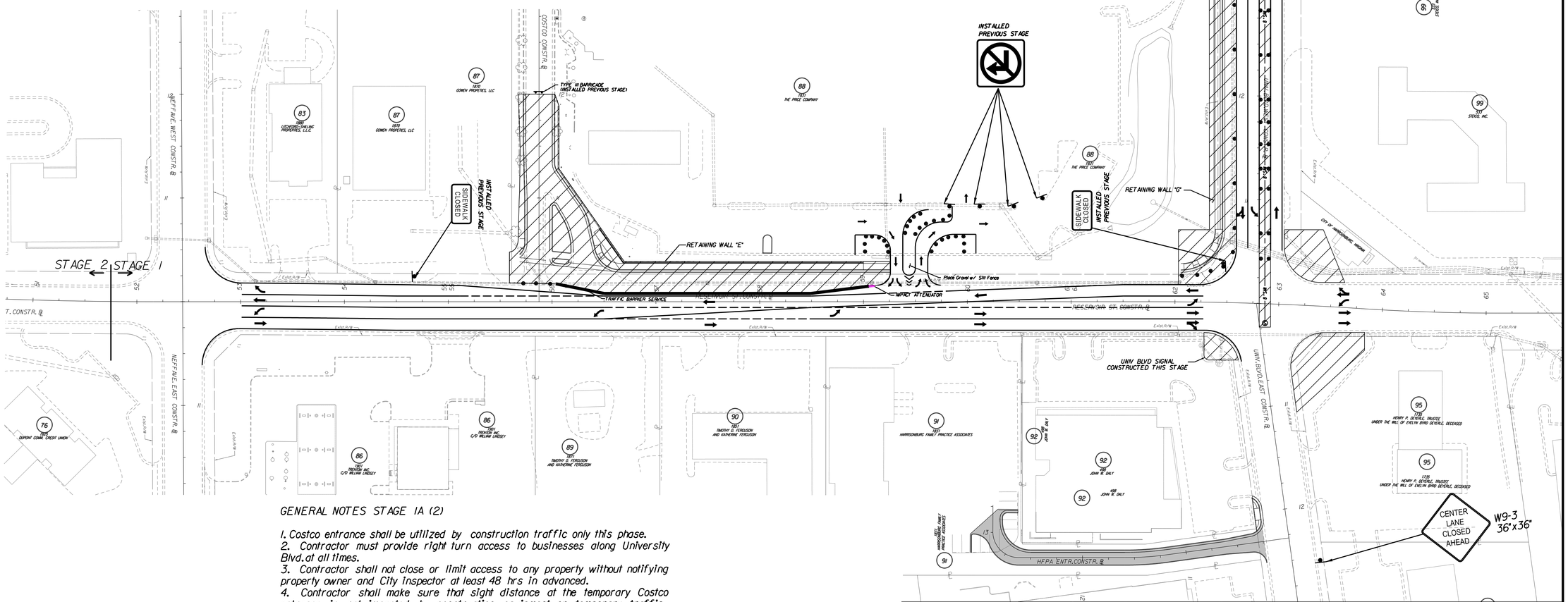
Maintenance of Traffic & Sequence of Construction
Stage 1A(2)

SEQUENCE OF CONSTRUCTION NARRATIVE STAGE 1A (2)

1. Continue construction of University Boulevard signal
2. Continue construction of Retaining Wall E
3. Close lane and construct sewer main relocation on University Blvd.
4. Construct widening along the southern side of University Blvd. West, including new main connections at stations 16+50 and 17+09.
5. Abandon existing sewer main along University Blvd West to permit completion of Retaining Wall "G". Remove sewer pipe as necessary to construct wall.
6. Construct curb and gutter, sidewalk, and roadway widening along southern side of University Blvd West.

LEGEND

- PERMANENT CONSTRUCTION THIS STAGE
- PERMANENT CONSTRUCTION PREVIOUS STAGE
- TRAFFIC BARRIER SERVICE, CONCRETE
- IMPACT ATTENUATOR SERVICE, TYPE I
- GROUP 2 CHANNELIZING DEVICES
- WORK ZONE SIGN
- INDICATES TRAFFIC LANES



GENERAL NOTES STAGE 1A (2)

1. Costco entrance shall be utilized by construction traffic only this phase.
2. Contractor must provide right turn access to businesses along University Blvd. at all times.
3. Contractor shall not close or limit access to any property without notifying property owner and City Inspector at least 48 hrs in advanced.
4. Contractor shall make sure that sight distance at the temporary Costco entrance is not impacted by construction equipment or temporary traffic control measures.
4 Tie-In of sanitary sewer main at the intersection of Reservoir St. shall be a night time operation.

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = 50'	
DRAWN BY	DATE
JSS	
CHECKED BY	DATE
CMY	
DESIGN BY	DATE
JSS/GG	
TAX MAP	

RESERVOIR STREET

STAGE 1A(2) SOC PLAN

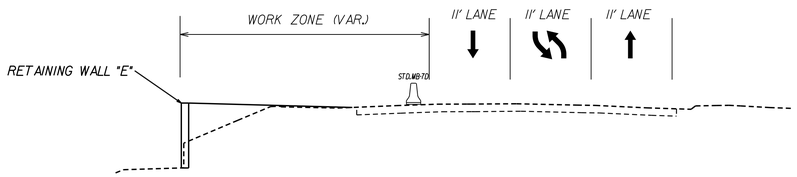
PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 1L(3)

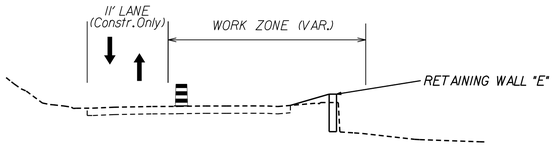
Maintenance of Traffic & Sequence of Construction
Stage 1A(2) (cont.)

LEGEND

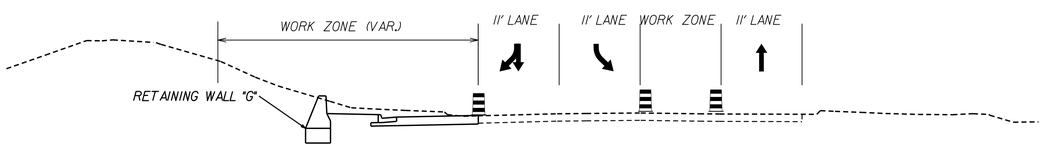
- PERMANENT CONSTRUCTION THIS STAGE
- PERMANENT CONSTRUCTION PREVIOUS STAGE
- TRAFFIC BARRIER SERVICE,CONCRETE
- IMPACT ATTENUATOR SERVICE,TYPE I
- GROUP 2 CHANNELIZING DEVICES
- WORK ZONE SIGN
- INDICATES TRAFFIC LANES



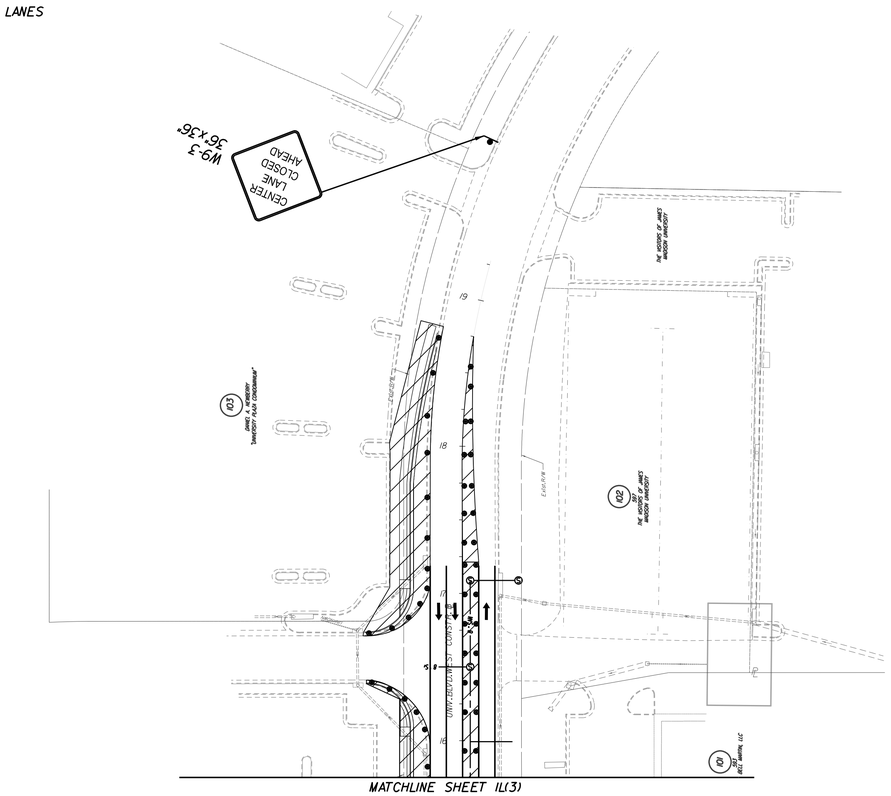
RESERVOIR STREET
STA.57+00
N.T.S



EXISTING COSTCO ENTRANCE
N.T.S



UNIVERSITY BLVD WEST
STA.12+00
N.T.S



SCALE
0 50' 100'

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = 50'

DRAWN BY	DATE
JSS	
CHECKED BY	DATE
CMY	
DESIGN BY	DATE
JSS/GG	

TAX MAP

RESERVOIR STREET

STAGE 1A(2) SOC PLAN

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET
1L(4)

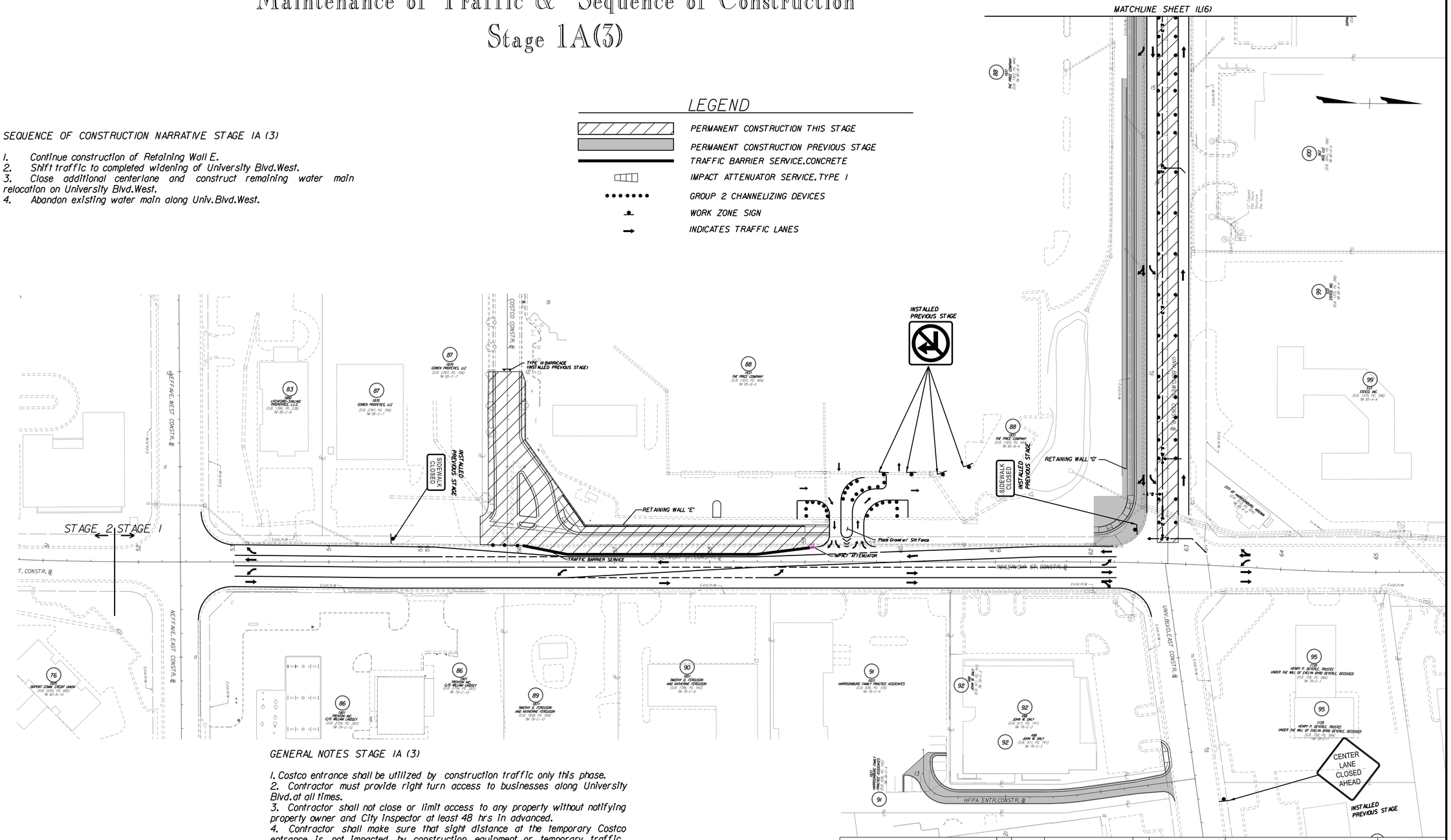
Maintenance of Traffic & Sequence of Construction
Stage 1A(3)

SEQUENCE OF CONSTRUCTION NARRATIVE STAGE 1A (3)

1. Continue construction of Retaining Wall E.
2. Shift traffic to completed widening of University Blvd.West.
3. Close additional centerlane and construct remaining water main relocation on University Blvd.West.
4. Abandon existing water main along Univ.Blvd.West.

LEGEND

- PERMANENT CONSTRUCTION THIS STAGE
- PERMANENT CONSTRUCTION PREVIOUS STAGE
- TRAFFIC BARRIER SERVICE,CONCRETE
- IMPACT ATTENUATOR SERVICE,TYPE I
- GROUP 2 CHANNELIZING DEVICES
- WORK ZONE SIGN
- INDICATES TRAFFIC LANES



GENERAL NOTES STAGE 1A (3)

1. Costco entrance shall be utilized by construction traffic only this phase.
2. Contractor must provide right turn access to businesses along University Blvd.at all times.
3. Contractor shall not close or limit access to any property without notifying property owner and City Inspector at least 48 hrs in advanced.
4. Contractor shall make sure that sight distance at the temporary Costco entrance is not impacted by construction equipment or temporary traffic control measures.

SCALE 0 50' 100'

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = 50'

DRAWN BY	DATE
JSS	
CHECKED BY	DATE
CMY	
DESIGN BY	DATE
JSS/GG	

TAX MAP

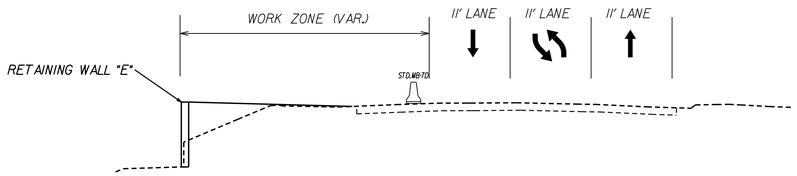
RESERVOIR STREET

STAGE 1A(3) SOC PLAN

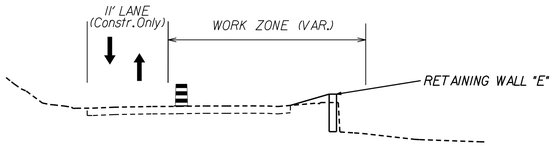
PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 1L(5)

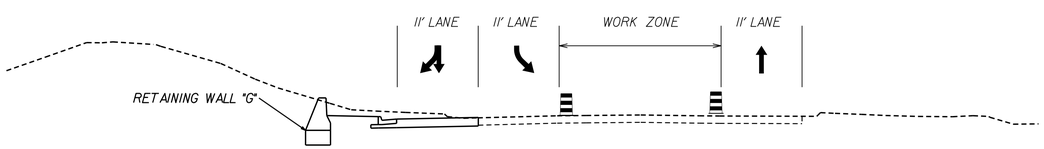
Maintenance of Traffic & Sequence of Construction
Stage 1A(3) (cont.)



RESERVOIR STREET
STA.57+00
N.T.S



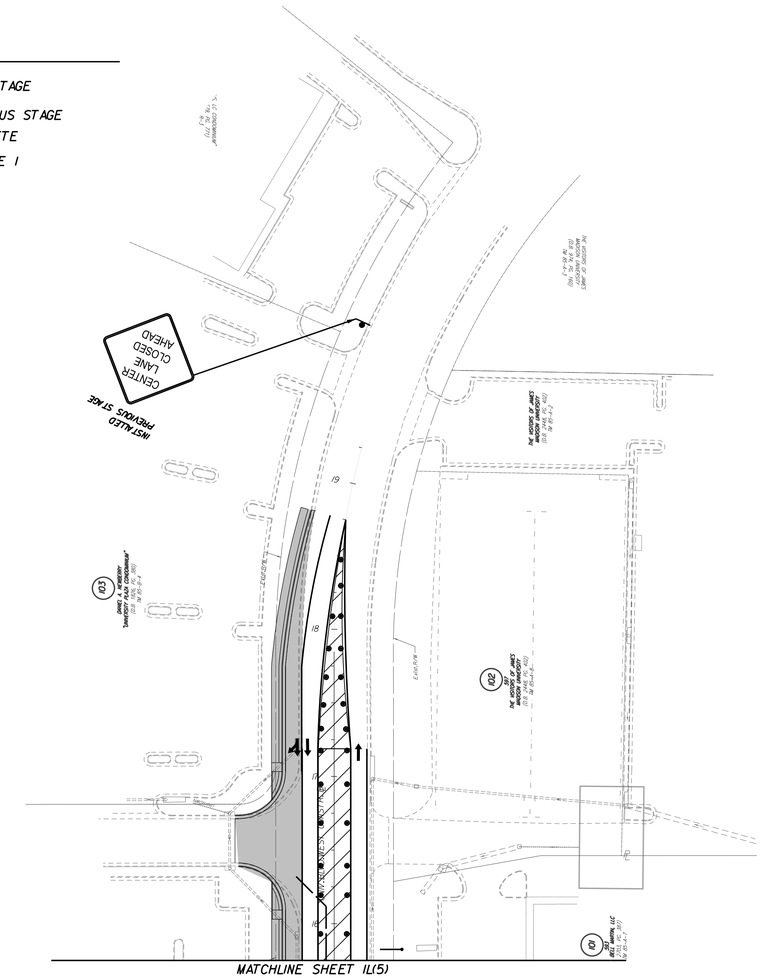
EXISTING COSTCO ENTRANCE
N.T.S



UNIVERSITY BLVD WEST
STA.12+00
N.T.S

LEGEND

- PERMANENT CONSTRUCTION THIS STAGE
- PERMANENT CONSTRUCTION PREVIOUS STAGE
- TRAFFIC BARRIER SERVICE,CONCRETE
- IMPACT ATTENUATOR SERVICE, TYPE I
- GROUP 2 CHANNELIZING DEVICES
- WORK ZONE SIGN
- INDICATES TRAFFIC LANES



SCALE
0 50' 100'

McCORMICK TAYLOR	REV	DATE	DESCRIPTION	BY	SCALE: 1" = 50'		RESERVOIR STREET	SHEET
					DRAWN BY	DATE		
					JSS		STAGE 1A(3) SOC PLAN	1L(6)
					CHECKED BY	DATE		
					CMY		PUBLIC WORKS DEPARTMENT	
					DESIGN BY	DATE	CITY OF HARRISONBURG	
					JSS/GG		320 E MOSBY ROAD	
					TAX MAP		HARRISONBURG, VIRGINIA	

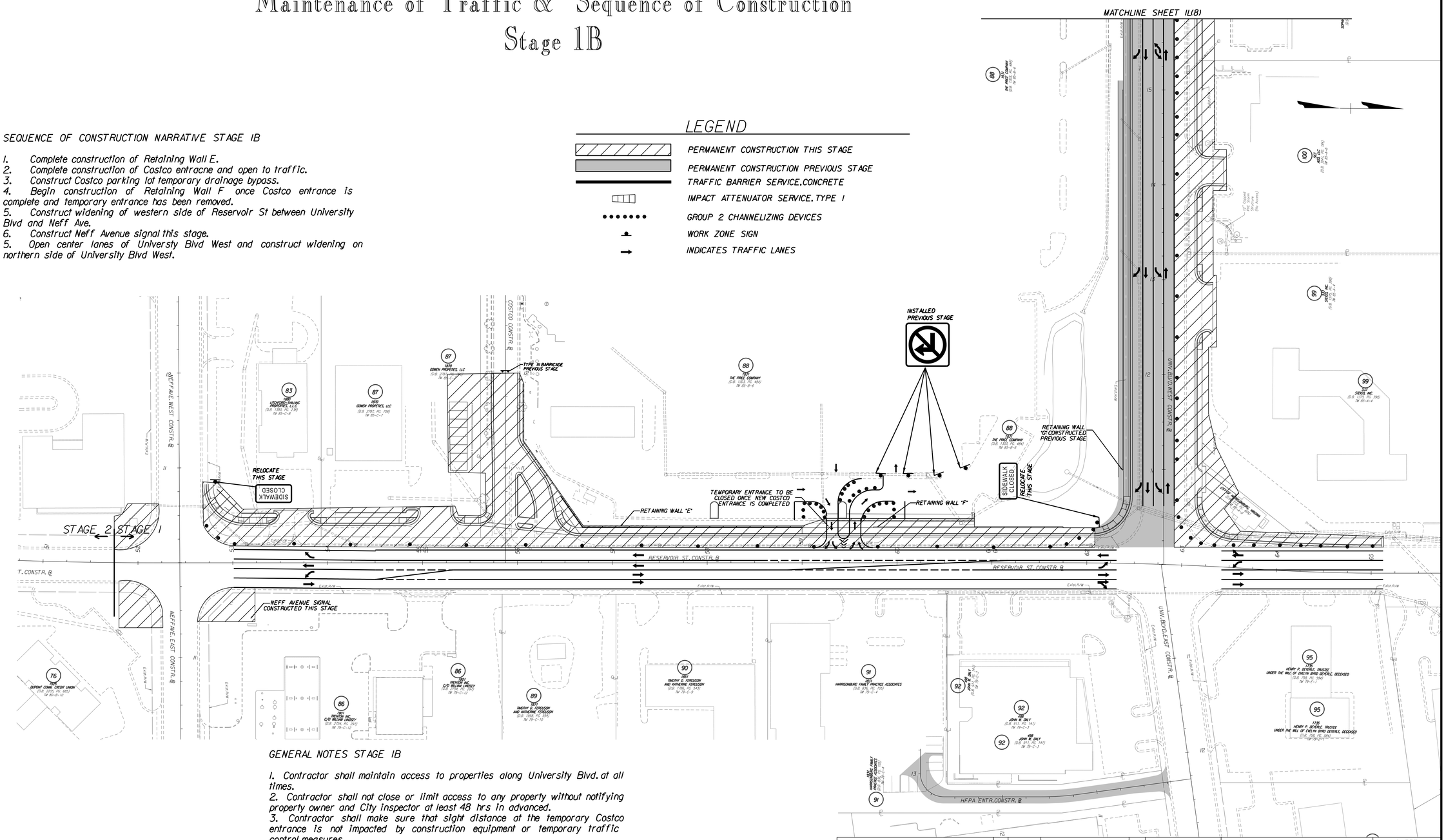
Maintenance of Traffic & Sequence of Construction
Stage 1B

SEQUENCE OF CONSTRUCTION NARRATIVE STAGE IB

1. Complete construction of Retaining Wall E.
2. Complete construction of Costco entracne and open to traffic.
3. Construct Costco parking lot temporary drainage bypass.
4. Begin construction of Retaining Wall F once Costco entrance is complete and temporary entrance has been removed.
5. Construct widening of western side of Reservoir St between University Blvd and Neff Ave.
6. Construct Neff Avenue signal this stage.
5. Open center lanes of University Blvd West and construct widening on northern side of University Blvd West.

LEGEND

- PERMANENT CONSTRUCTION THIS STAGE
- PERMANENT CONSTRUCTION PREVIOUS STAGE
- TRAFFIC BARRIER SERVICE.CONCRETE
- IMPACT ATTENUATOR SERVICE.TYPE I
- GROUP 2 CHANNELIZING DEVICES
- WORK ZONE SIGN
- INDICATES TRAFFIC LANES



GENERAL NOTES STAGE IB

1. Contractor shall maintain access to properties along University Blvd. at all times.
2. Contractor shall not close or limit access to any property without notifying property owner and City Inspector at least 48 hrs in advanced.
3. Contractor shall make sure that sight distance at the temporary Costco entrance is not impacted by construction equipment or temporary traffic control measures.

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = 50'

DRAWN BY	DATE
JSS	
CHECKED BY	DATE
CMY	
DESIGN BY	DATE
JSS/GG	

TAX MAP

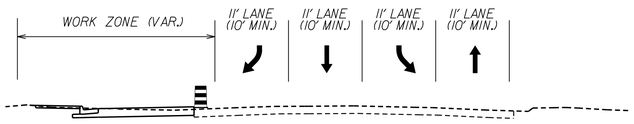
RESERVOIR STREET

STAGE 1B SOC PLAN

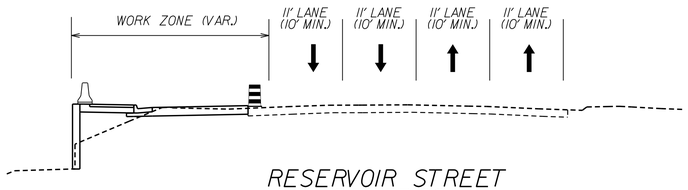
PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 1L(7)

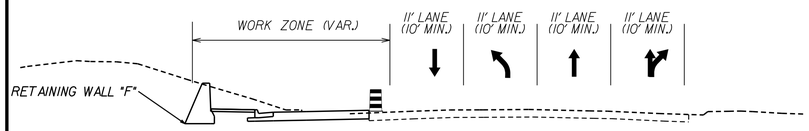
Maintenance of Traffic & Sequence of Construction
Stage 1B (cont.)



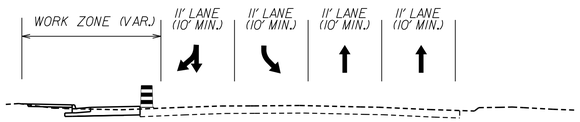
RESERVOIR STREET
STA.54+00
N.T.S



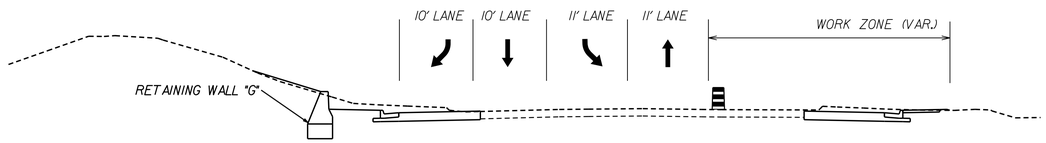
RESERVOIR STREET
STA.57+00
N.T.S



RESERVOIR STREET
STA.62+00
N.T.S



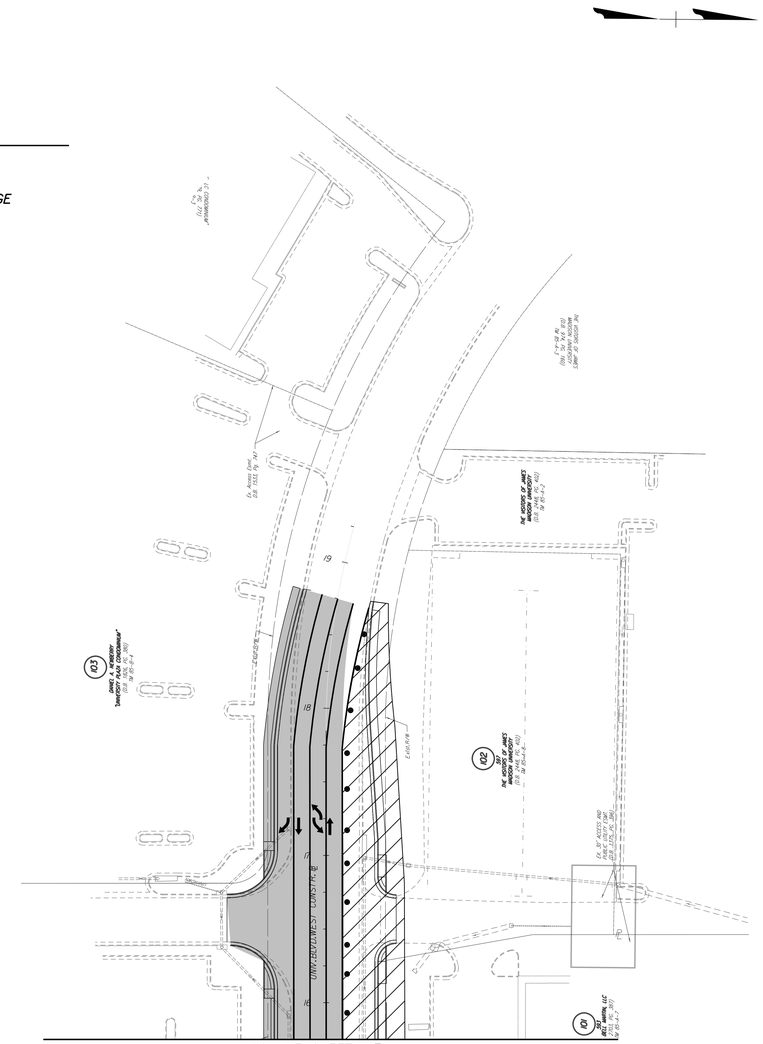
RESERVOIR STREET
STA.64+00
N.T.S



UNIVERSITY BLVD WEST
STA.12+00
N.T.S

LEGEND

- PERMANENT CONSTRUCTION THIS STAGE
- PERMANENT CONSTRUCTION PREVIOUS STAGE
- TRAFFIC BARRIER SERVICE,CONCRETE
- IMPACT ATTENUATOR SERVICE, TYPE I
- GROUP 2 CHANNELIZING DEVICES
- WORK ZONE SIGN
- INDICATES TRAFFIC LANES



SCALE
0 50' 100'

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = 50'

DRAWN BY	DATE
JSS	
CHECKED BY	DATE
CMY	
DESIGN BY	DATE
JSS/GG	

TAX MAP

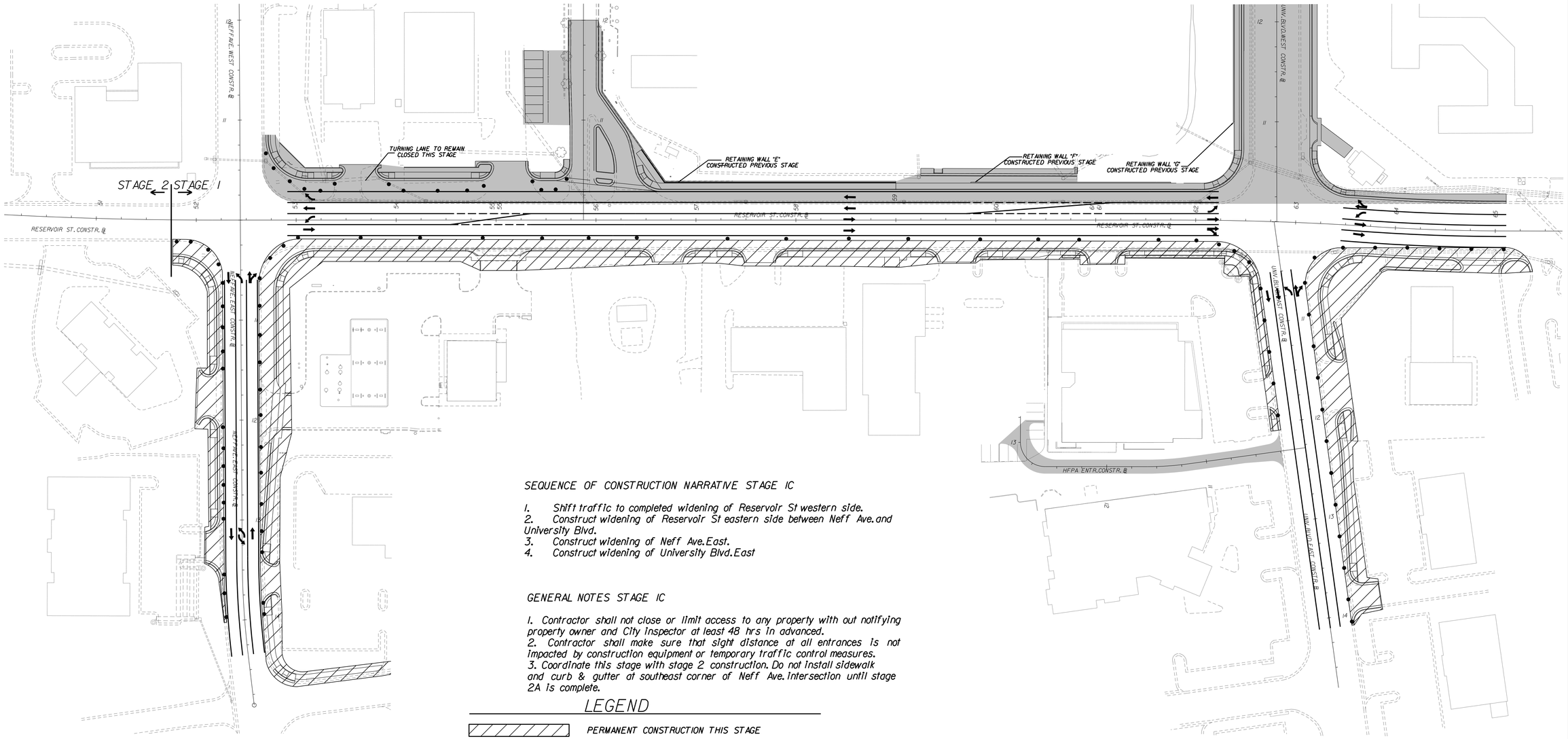
RESERVOIR STREET

STAGE 1B SOC PLAN

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET
1L(8)

Maintenance of Traffic & Sequence of Construction
Stage 1C



SEQUENCE OF CONSTRUCTION NARRATIVE STAGE IC

1. Shift traffic to completed widening of Reservoir St western side.
2. Construct widening of Reservoir St eastern side between Neff Ave. and University Blvd.
3. Construct widening of Neff Ave. East.
4. Construct widening of University Blvd. East

GENERAL NOTES STAGE IC

1. Contractor shall not close or limit access to any property with out notifying property owner and City inspector at least 48 hrs in advanced.
2. Contractor shall make sure that sight distance at all entrances is not impacted by construction equipment or temporary traffic control measures.
3. Coordinate this stage with stage 2 construction. Do not install sidewalk and curb & gutter at southeast corner of Neff Ave. intersection until stage 2A is complete.

LEGEND

- PERMANENT CONSTRUCTION THIS STAGE
- PERMANENT CONSTRUCTION PREVIOUS STAGE
- TRAFFIC BARRIER SERVICE. CONCRETE
- IMPACT ATTENUATOR SERVICE. TYPE I
- GROUP 2 CHANNELIZING DEVICES
- WORK ZONE SIGN
- INDICATES TRAFFIC LANES

SCALE 0 50' 100'

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = 50'

DRAWN BY	DATE
JSS	
CHECKED BY	DATE
CMY	
DESIGN BY	DATE
JSS/GG	
TAX MAP	

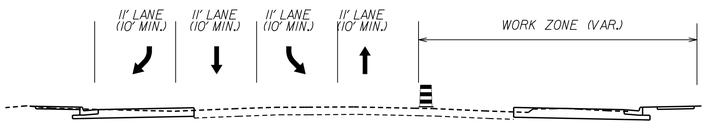
RESERVOIR STREET

STAGE 1C SOC PLAN

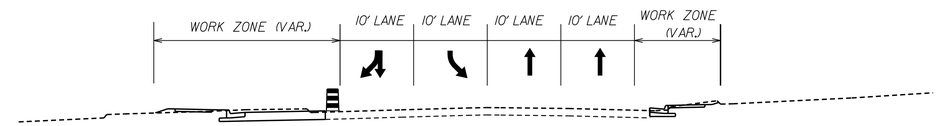
PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 1L(9)

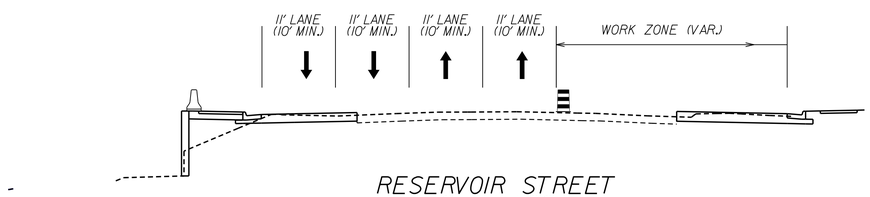
Maintenance of Traffic & Sequence of Construction
Stage 1C (cont.)



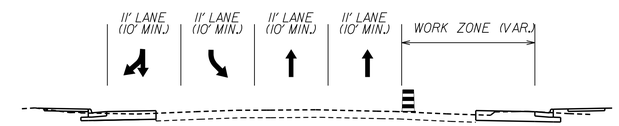
RESERVOIR STREET
STA.54+00
N.T.S



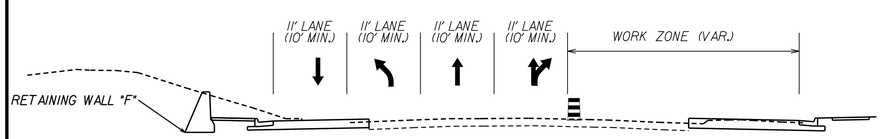
UNIVERSITY BLVD EAST
STA.11+00
N.T.S



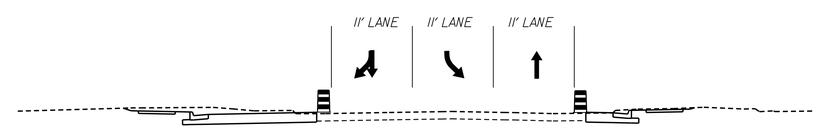
RESERVOIR STREET
STA.57+00
N.T.S



RESERVOIR STREET
STA.64+00
N.T.S



RESERVOIR STREET
STA.62+00
N.T.S



NEFF AVE EAST
STA.11+00
N.T.S

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: N.T.S
DRAWN BY JSS DATE
CHECKED BY CMY DATE
DESIGN BY JSS/GG DATE
TAX MAP

RESERVOIR STREET
STAGE 1C SOC PLAN
PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET
1L(10)

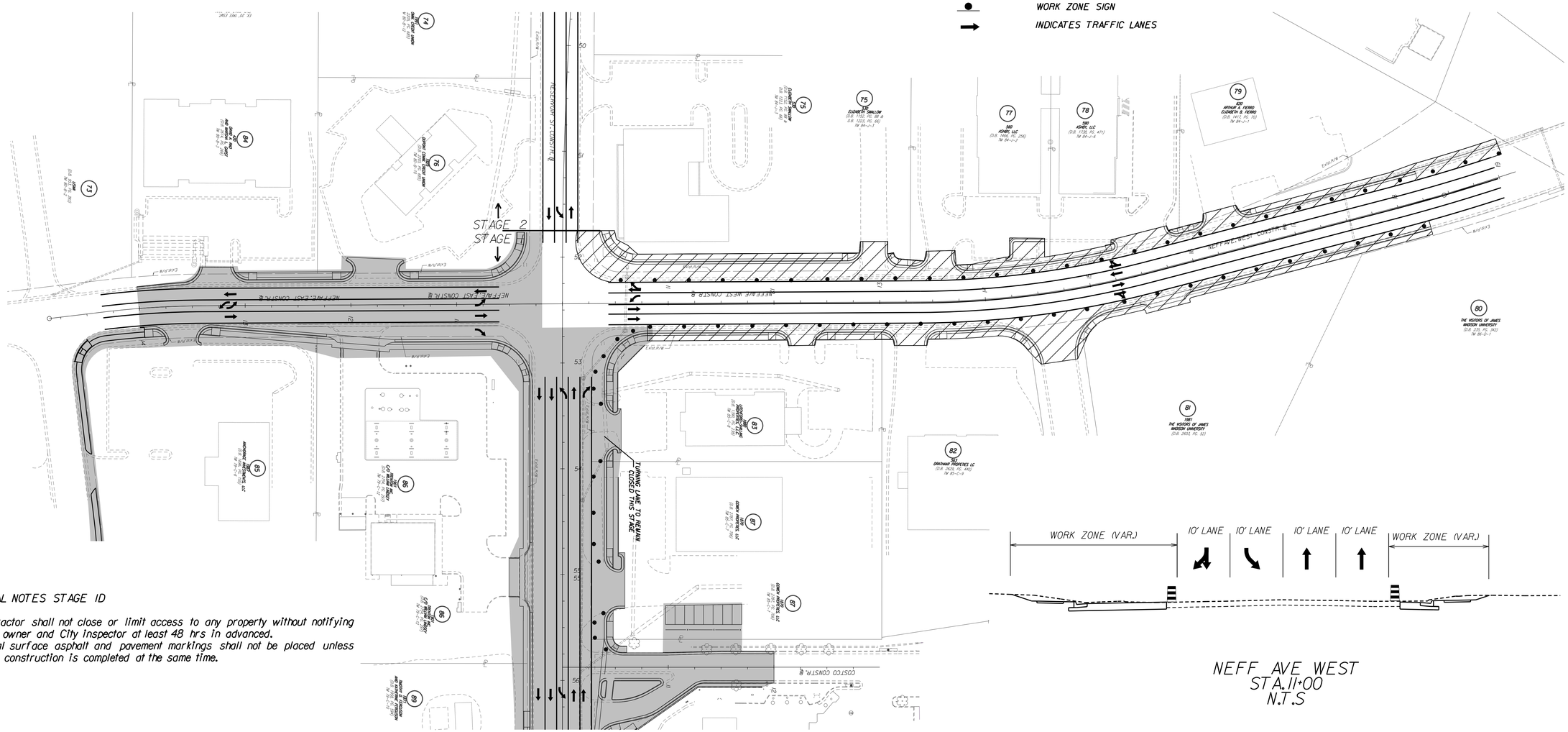
Maintenance of Traffic & Sequence of Construction
Stage 1D

SEQUENCE OF CONSTRUCTION NARRATIVE STAGE ID

1. Construct northern side of Neff Avenue.West.
2. Construct southern side of Neff Avenue.West.
3. Place final surface asphalt and pavement markings across Neff Ave., University Blvd., and Reservoir St.

LEGEND

- PERMANENT CONSTRUCTION THIS STAGE
- PERMANENT CONSTRUCTION PREVIOUS STAGE
- TRAFFIC BARRIER SERVICE.CONCRETE
- IMPACT ATTENUATOR SERVICE.TYPE I
- GROUP 2 CHANNELIZING DEVICES
- WORK ZONE SIGN
- INDICATES TRAFFIC LANES



GENERAL NOTES STAGE ID

1. Contractor shall not close or limit access to any property without notifying property owner and City Inspector at least 48 hrs in advanced.
2. Final surface asphalt and pavement markings shall not be placed unless Stage 2 construction is completed at the same time.

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = 50'	
DRAWN BY	DATE
JSS	
CHECKED BY	DATE
CMY	
DESIGN BY	DATE
JSS/GG	
TAX MAP	

RESERVOIR STREET

STAGE 1D SOC PLAN

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET
1L (11)

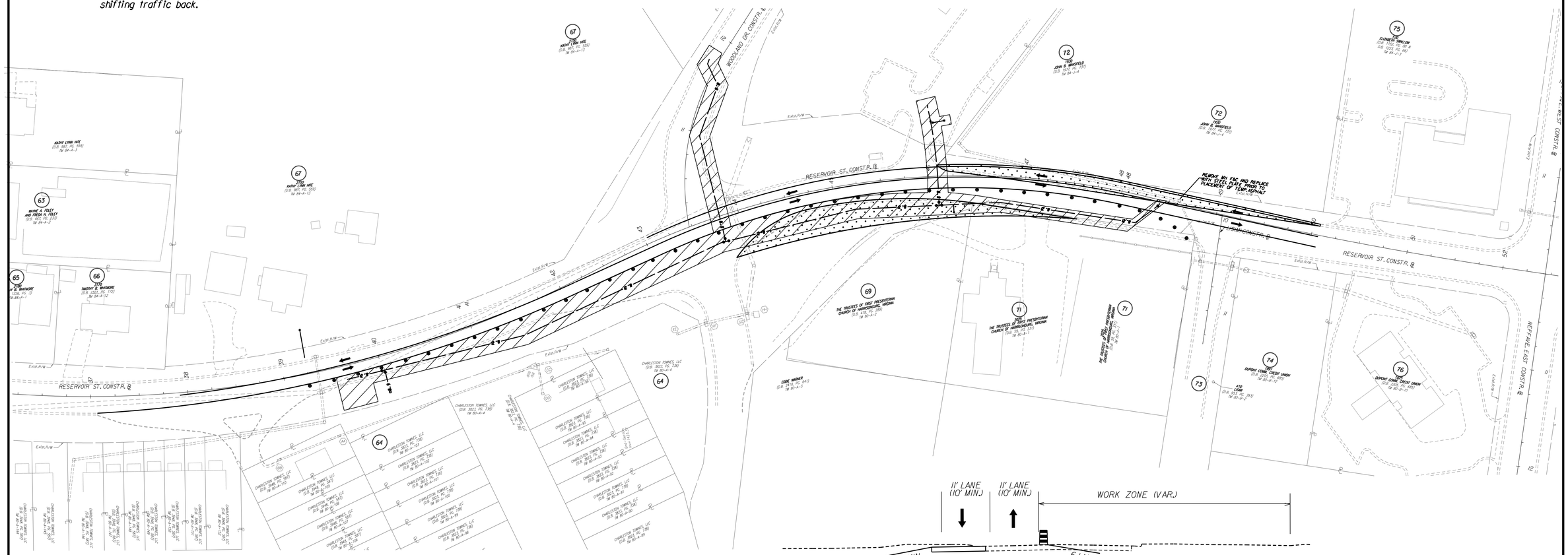
Maintenance of Traffic & Sequence of Construction
Stage 2A(1)

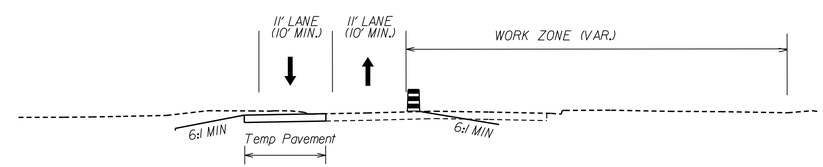
SEQUENCE OF CONSTRUCTION NARRATIVE STAGE 2A (1)

1. Place temporary asphalt on the Western side of Reservoir Street.
2. Shift traffic to Western side of Reservoir Street and onto the newly constructed temporary parvement.
3. Construct new water main from approximate station 39+60 to 48+50.
4. Place temporary pavement on eastern side of Reservoir Street before shifting traffic back.

GENERAL NOTES STAGE 2A(1)

1. A minimum of two eleven foot lanes shall be maintained on Reservoir Street while constructing the water main.
2. Contractor shall utilize a flagging operation and one lane of access to Woodland Drive and Lisimi at all times.
3. Contractor shall maintain access to all private properties during this stage . Contractor shall give property owner and City inspector 72 hours notice if access is to be restricted to any private property.





RESERVOIR STREET
N.T.S

LEGEND

- PERMANENT CONSTRUCTION THIS STAGE
- PERMANENT CONSTRUCTION PREVIOUS STAGE
- TRAFFIC BARRIER SERVICE.CONCRETE
- TEMPORARY ASPHALT
- GROUP 2 CHANNELIZING DEVICES
- WORK ZONE SIGN
- INDICATES TRAFFIC LANES

SCALE
0 50' 100'

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE:	1" = 50'
DRAWN BY	DATE
JSS	
CHECKED BY	DATE
CMY	
DESIGN BY	DATE
JSS/GG	
TAX MAP	

RESERVOIR STREET

STAGE 2A(1) SOC PLAN

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET
1M(1)

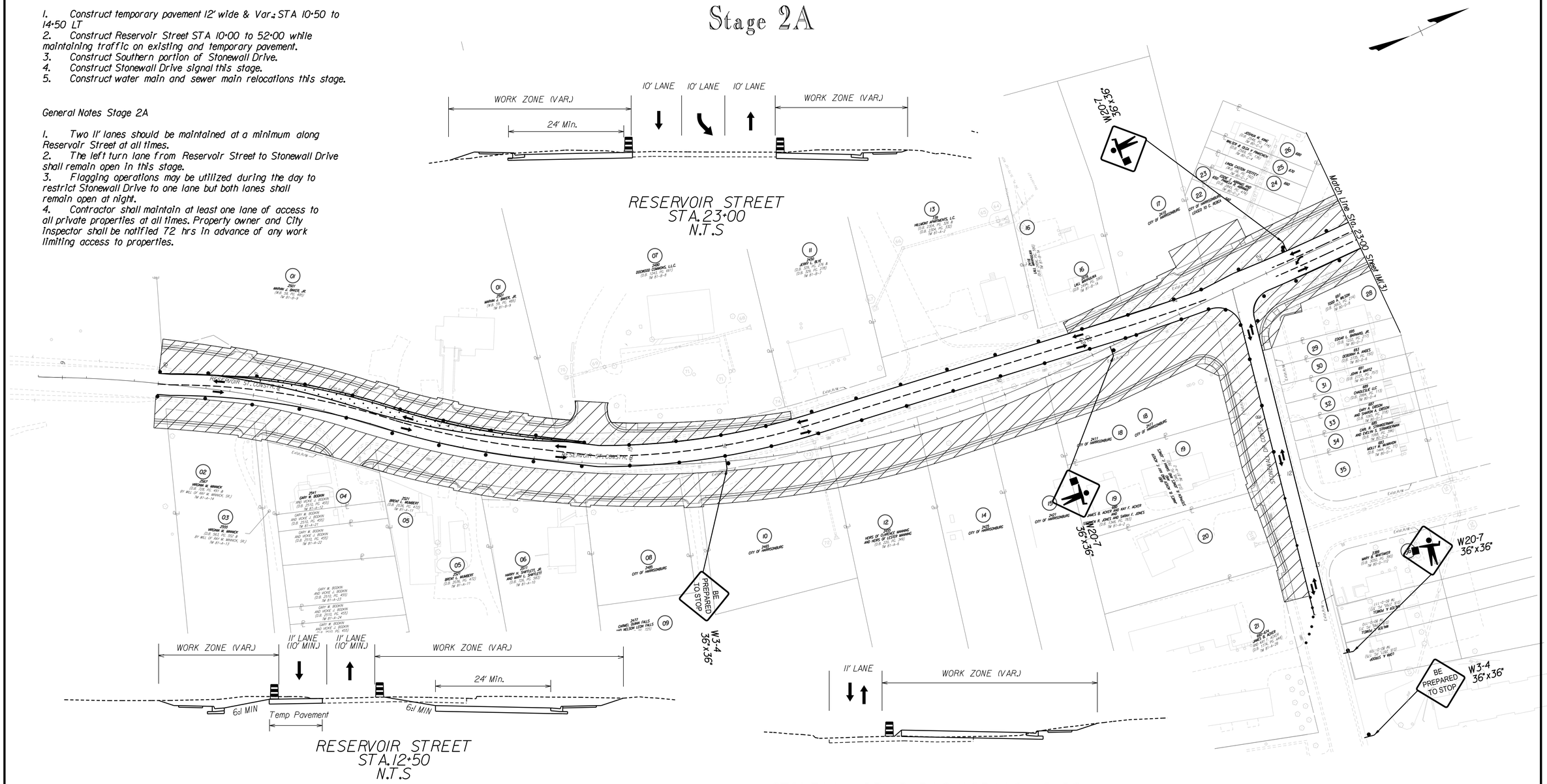
Maintenance of Traffic & Sequence of Construction
Stage 2A

Sequence of Construction Narrative Stage 2A

1. Construct temporary pavement 12' wide & Var.; STA 10+50 to 14+50 LT
2. Construct Reservoir Street STA 10+00 to 52+00 while maintaining traffic on existing and temporary pavement.
3. Construct Southern portion of Stonewall Drive.
4. Construct Stonewall Drive signal this stage.
5. Construct water main and sewer main relocations this stage.

General Notes Stage 2A

1. Two 11' lanes should be maintained at a minimum along Reservoir Street at all times.
2. The left turn lane from Reservoir Street to Stonewall Drive shall remain open in this stage.
3. Flagging operations may be utilized during the day to restrict Stonewall Drive to one lane but both lanes shall remain open at night.
4. Contractor shall maintain at least one lane of access to all private properties at all times. Property owner and City Inspector shall be notified 72 hrs in advance of any work limiting access to properties.



LEGEND

- PERMANENT CONSTRUCTION THIS STAGE
- PERMANENT CONSTRUCTION PREVIOUS STAGE
- TRAFFIC BARRIER SERVICE,CONCRETE
- TEMPORARY ASPHALT
- GROUP 2 CHANNELIZING DEVICES
- WORK ZONE SIGN
- INDICATES TRAFFIC LANES

SCALE
0 50' 100'

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = 50'

DRAWN BY	DATE
JSS	
CHECKED BY	DATE
CMY	
DESIGN BY	DATE
JSS/GG	
TAX MAP	

RESERVOIR STREET

STAGE 2A SOC PLAN

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET
1M(2)

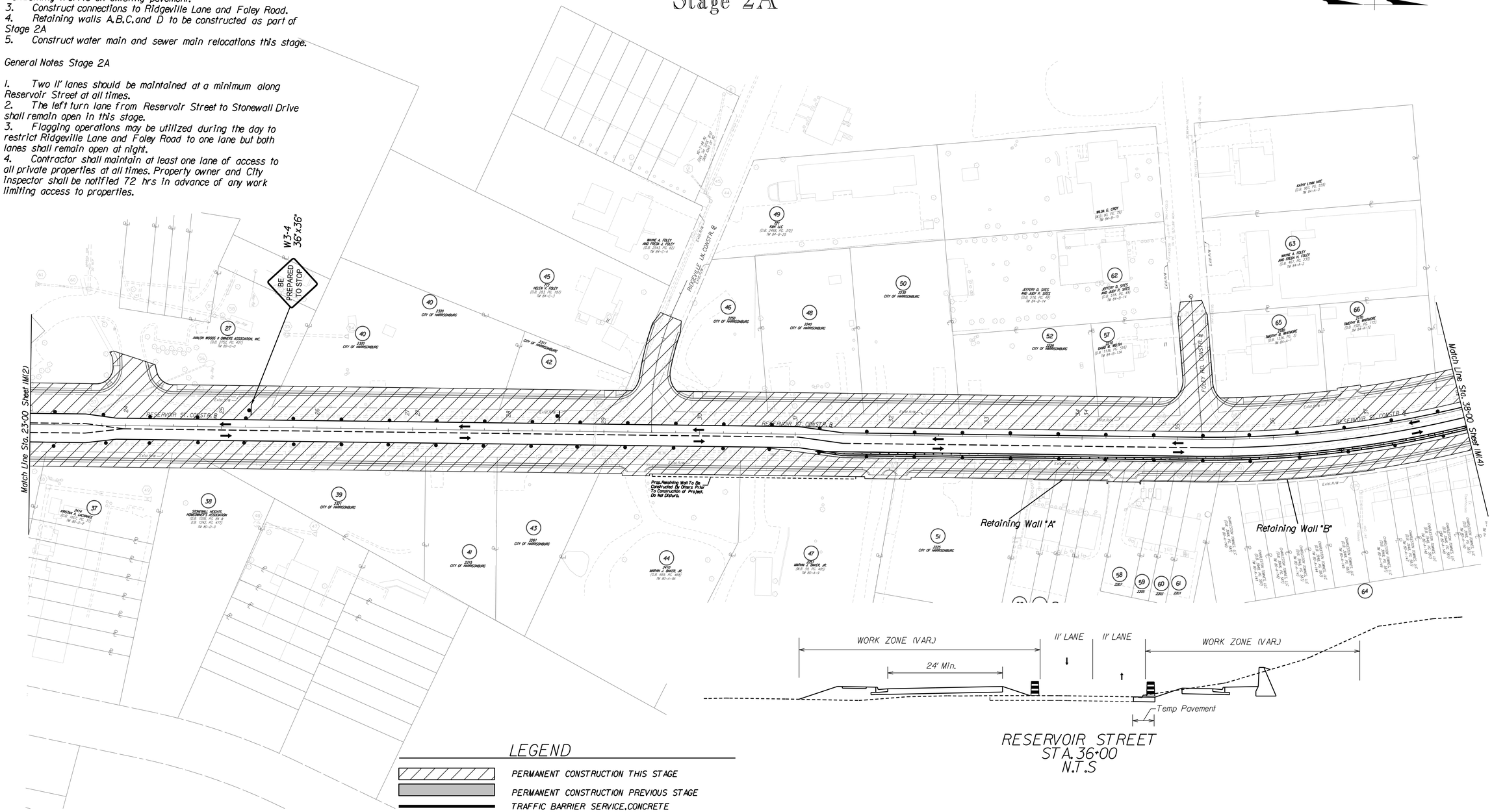
Maintenance of Traffic & Sequence of Construction
Stage 2A

Sequence of Construction Narrative Stage 2A

1. Temporary pavement to be constructed 4' wide; STA 31+25 to 40+25 RT.
2. Construct Reservoir Street STA 10+00 to 52+00 while maintaining traffic on existing pavement.
3. Construct connections to Ridgeville Lane and Foley Road.
4. Retaining walls A,B,C,and D to be constructed as part of Stage 2A
5. Construct water main and sewer main relocations this stage.

General Notes Stage 2A

1. Two 11' lanes should be maintained at a minimum along Reservoir Street at all times.
2. The left turn lane from Reservoir Street to Stonewall Drive shall remain open in this stage.
3. Flagging operations may be utilized during the day to restrict Ridgeville Lane and Foley Road to one lane but both lanes shall remain open at night.
4. Contractor shall maintain at least one lane of access to all private properties at all times. Property owner and City inspector shall be notified 72 hrs in advance of any work limiting access to properties.



LEGEND

- PERMANENT CONSTRUCTION THIS STAGE
- PERMANENT CONSTRUCTION PREVIOUS STAGE
- TRAFFIC BARRIER SERVICE,CONCRETE
- TEMPORARY ASPHALT
- GROUP 2 CHANNELIZING DEVICES
- WORK ZONE SIGN
- INDICATES TRAFFIC LANES

SCALE
0 50' 100'

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

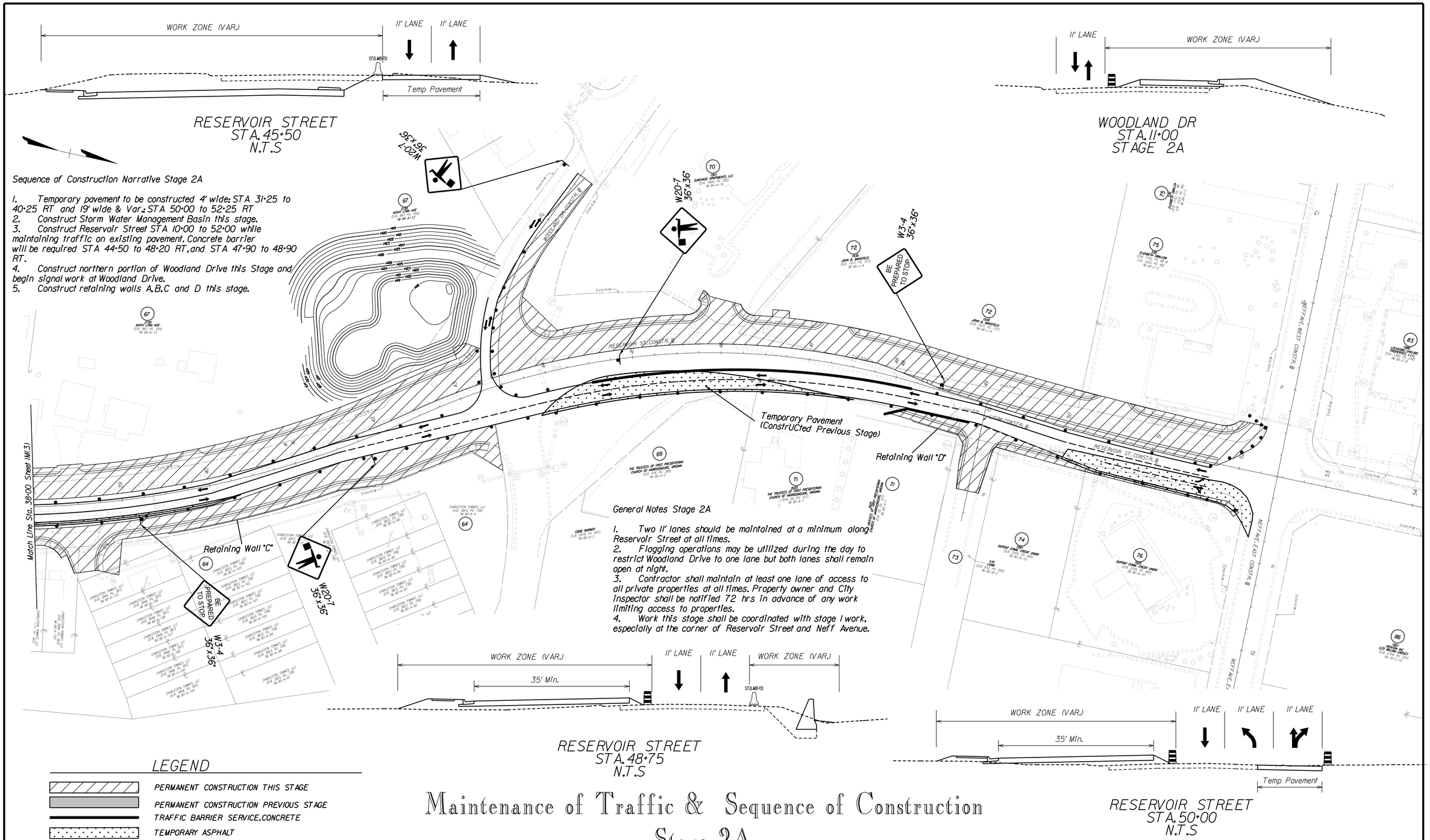
SCALE: 1" = 50'	
DRAWN BY	DATE
JSS	
CHECKED BY	DATE
CMY	
DESIGN BY	DATE
JSS/GG	
TAX MAP	

RESERVOIR STREET

STAGE 2A SOC PLAN

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET
1M(3)



Sequence of Construction Narrative Stage 2A

1. Temporary pavement to be constructed 4' wide; STA 31+25 to 40+25 RT and 19' wide & Var.; STA 50+00 to 52+25 RT
2. Construct Storm Water Management Basin this stage.
3. Construct Reservoir Street STA 10+00 to 52+00 while maintaining traffic on existing pavement. Concrete barrier will be required STA 44+50 to 48+20 RT, and STA 47+90 to 48+90 RT.
4. Construct northern portion of Woodland Drive this Stage and begin signal work at Woodland Drive.
5. Construct retaining walls A,B,C and D this stage.

General Notes Stage 2A

1. Two 11' lanes should be maintained at a minimum along Reservoir Street at all times.
2. Flagging operations may be utilized during the day to restrict Woodland Drive to one lane but both lanes shall remain open at night.
3. Contractor shall maintain at least one lane of access to all private properties at all times. Property owner and City inspector shall be notified 72 hrs in advance of any work limiting access to properties.
4. Work this stage shall be coordinated with stage 1 work, especially at the corner of Reservoir Street and Neff Avenue.

Maintenance of Traffic & Sequence of Construction

Stage 2A

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE:	1" = 50'
DRAWN BY	DATE
JSS	
CHECKED BY	DATE
CMY	
DESIGN BY	DATE
JSS/GG	
TAX MAP	

RESERVOIR STREET

STAGE 2A SOC PLAN

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET

1M(4)

Maintenance of Traffic & Sequence of Construction
Stage 2B

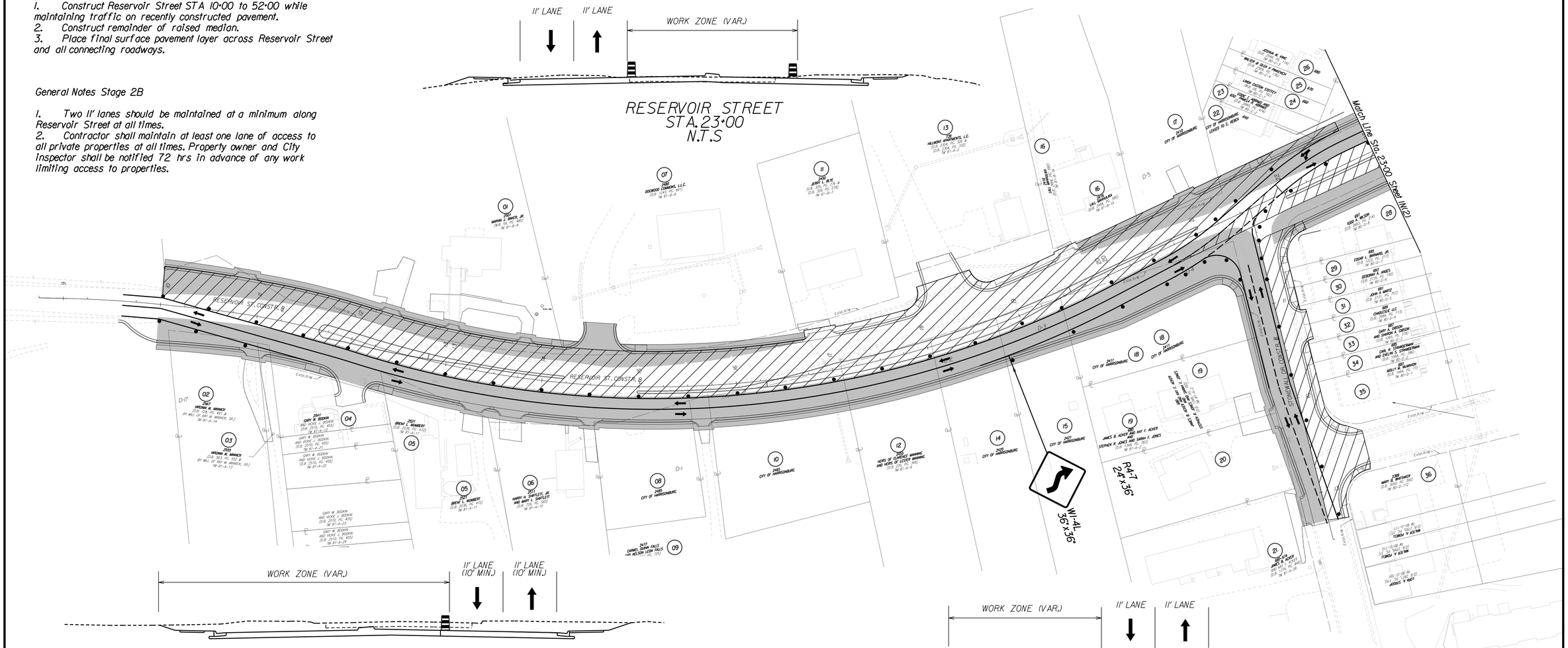
Sequence of Construction Narrative Stage 2B

1. Construct Reservoir Street STA 10+00 to 52+00 while maintaining traffic on recently constructed pavement.
2. Construct remainder of raised median.
3. Place final surface pavement layer across Reservoir Street and all connecting roadways.

General Notes Stage 2B

1. Two 11' lanes should be maintained at a minimum along Reservoir Street at all times.
2. Contractor shall maintain at least one lane of access to all private properties at all times. Property owner and City inspector shall be notified 72 hrs in advance of any work limiting access to properties.

RESERVOIR STREET
STA.23+00
N.T.S



RESERVOIR STREET
STA.12+50
N.T.S

STONEWALL DR
STA.11+00
N.T.S

LEGEND

- PERMANENT CONSTRUCTION THIS STAGE
- PERMANENT CONSTRUCTION PREVIOUS STAGE
- TRAFFIC BARRIER SERVICE,CONCRETE
- IMPACT ATTENUATOR SERVICE,TYPE I
- GROUP 2 CHANNELIZING DEVICES
- WORK ZONE SIGN
- INDICATES TRAFFIC LANES

SCALE
0 50' 100'

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = 50'	
DRAWN BY	DATE
JSS	
CHECKED BY	DATE
CMY	
DESIGN BY	DATE
JSS/GG	
TAX MAP	

RESERVOIR STREET

STAGE 2B SOC PLAN

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET
1N(1)

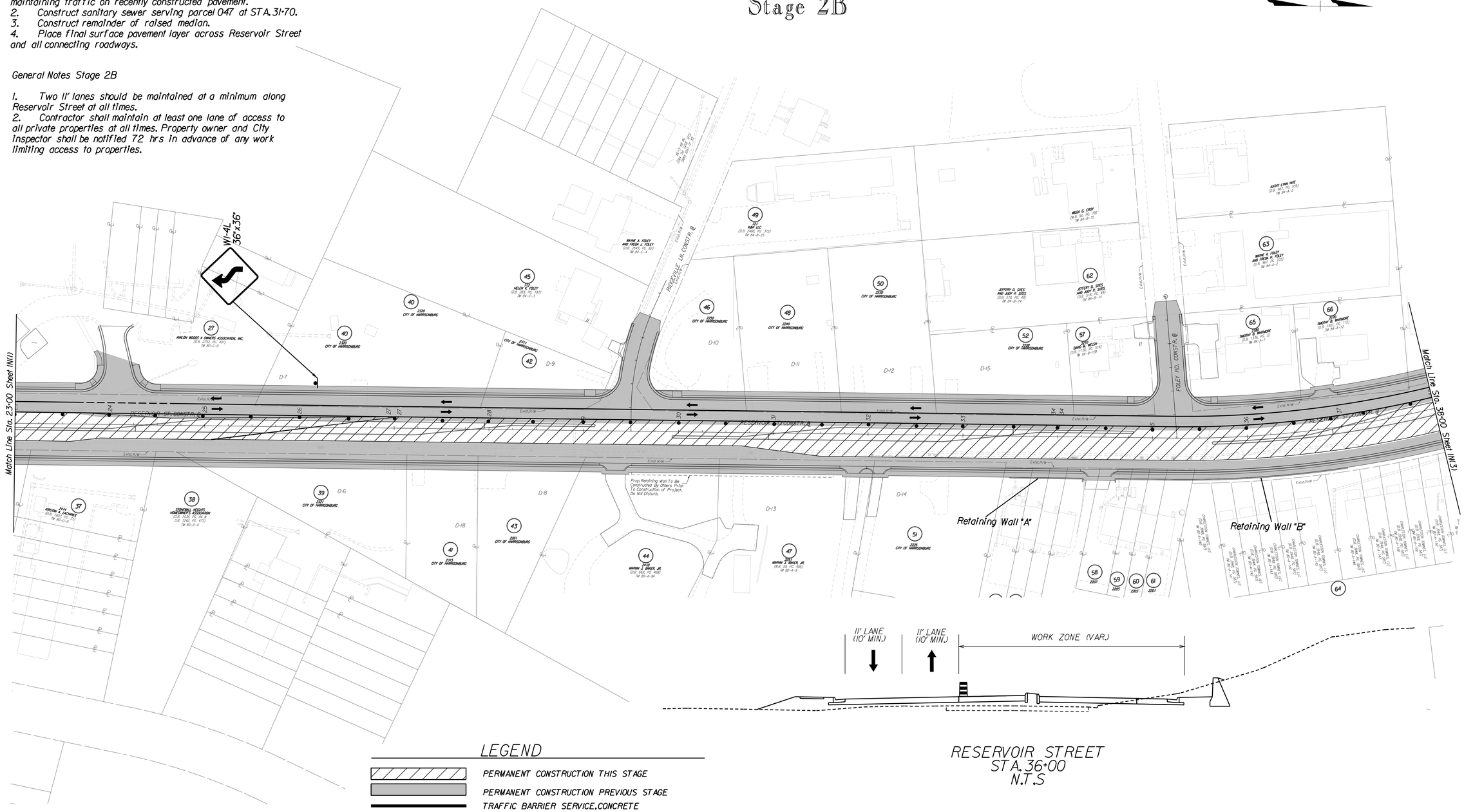
Maintenance of Traffic & Sequence of Construction
Stage 2B

Sequence of Construction Narrative Stage 2B

1. Construct Reservoir Street STA 10+00 to 52+00 while maintaining traffic on recently constructed pavement.
2. Construct sanitary sewer serving parcel 047 at STA. 31+70.
3. Construct remainder of raised median.
4. Place final surface pavement layer across Reservoir Street and all connecting roadways.

General Notes Stage 2B

1. Two 11' lanes should be maintained at a minimum along Reservoir Street at all times.
2. Contractor shall maintain at least one lane of access to all private properties at all times. Property owner and City inspector shall be notified 72 hrs in advance of any work limiting access to properties.



RESERVOIR STREET
STA. 36+00
N.T.S

LEGEND

- PERMANENT CONSTRUCTION THIS STAGE
- PERMANENT CONSTRUCTION PREVIOUS STAGE
- TRAFFIC BARRIER SERVICE, CONCRETE
- IMPACT ATTENUATOR SERVICE, TYPE 1
- GROUP 2 CHANNELIZING DEVICES
- WORK ZONE SIGN
- INDICATES TRAFFIC LANES

SCALE
0 50' 100'

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = 50'	
DRAWN BY	DATE
JSS	
CHECKED BY	DATE
CMY	
DESIGN BY	DATE
JSS/GG	
TAX MAP	

RESERVOIR STREET

STAGE 2B SOC PLAN

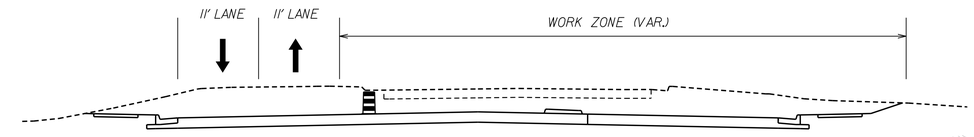
PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET
1N(2)

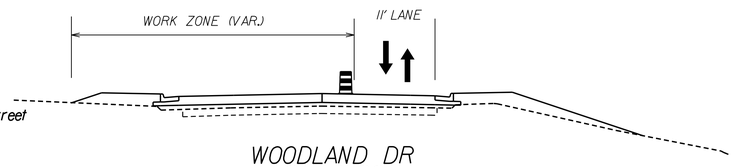
Sequence of Construction Narrative Stage 2B

1. Construct Reservoir Street STA 10+00 to 52+00 while maintaining traffic on recently constructed pavement.

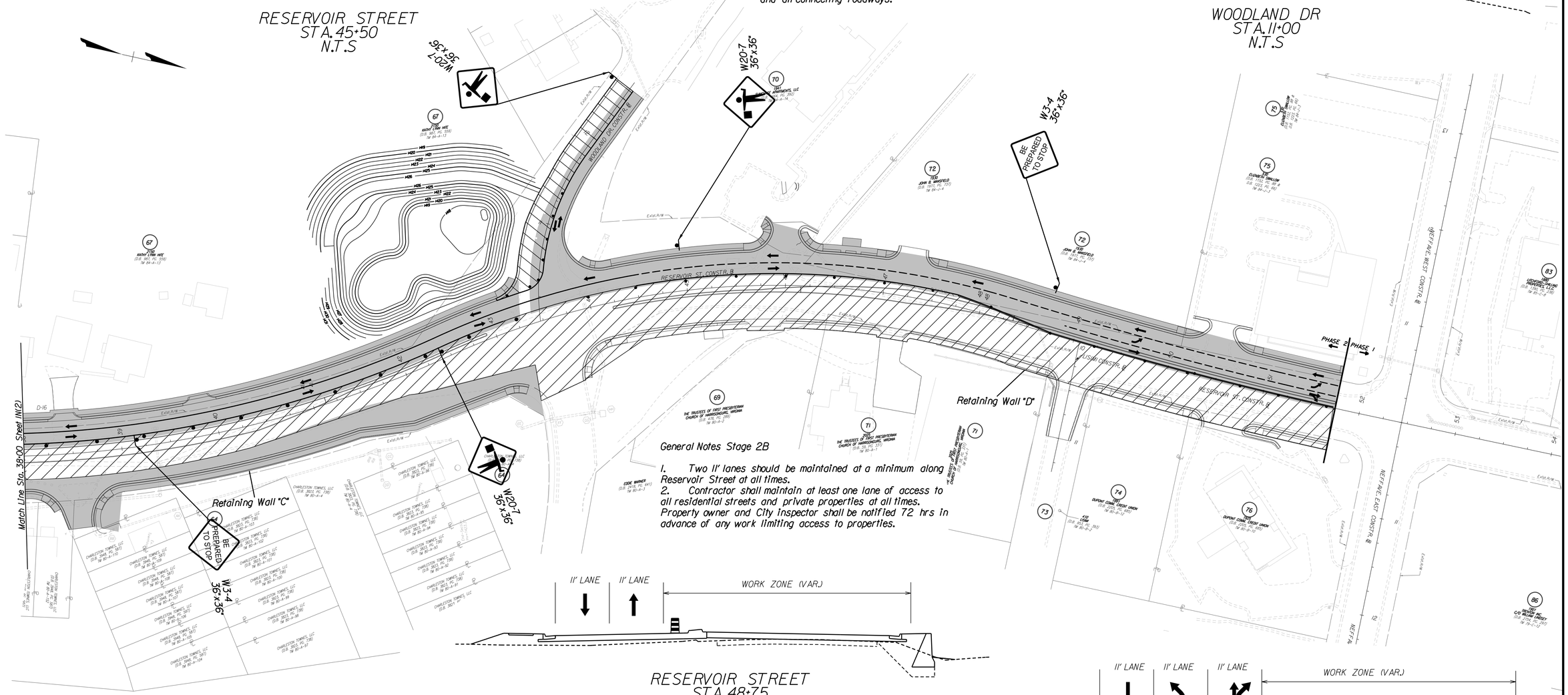
3. Construct remainder of raised median.
4. Place final surface pavement layer across Reservoir Street and all connecting roadways.



RESERVOIR STREET
STA.45+50
N.T.S



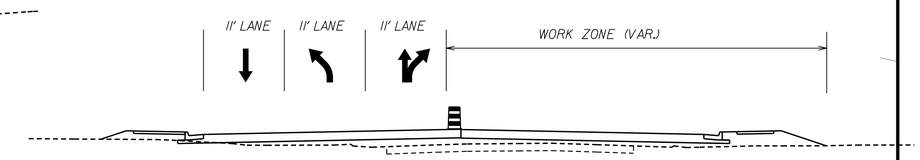
WOODLAND DR
STA.11+00
N.T.S



General Notes Stage 2B

1. Two 11' lanes should be maintained at a minimum along Reservoir Street at all times.
2. Contractor shall maintain at least one lane of access to all residential streets and private properties at all times. Property owner and City Inspector shall be notified 72 hrs in advance of any work limiting access to properties.

RESERVOIR STREET
STA.48+75
N.T.S



RESERVOIR STREET
STA.50+00
N.T.S

Maintenance of Traffic & Sequence of Construction
Stage 2B

LEGEND

- PERMANENT CONSTRUCTION THIS STAGE
- PERMANENT CONSTRUCTION PREVIOUS STAGE
- TRAFFIC BARRIER SERVICE.CONCRETE
- IMPACT ATTENUATOR SERVICE.TYPE I
- GROUP 2 CHANNELIZING DEVICES
- WORK ZONE SIGN
- INDICATES TRAFFIC LANES

SCALE
0 50' 100'

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = 50'
DRAWN BY JSS DATE
CHECKED BY CMY DATE
DESIGN BY JSS/GG DATE
TAX MAP

RESERVOIR STREET
STAGE 2B SOC PLAN
PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET
1N(3)

GENERAL NOTES

1. Work in this project shall conform to the latest editions of the Virginia Department of Transportations (VDOT) Road and Bridge Specifications, the VDOT Road and Bridge Standards, the Virginia Erosion and Sediment Control Handbook, the Virginia Erosion and Sediment Control Regulations and the City of Harrisonburg Design and Construction Standards Manual. In the event of conflict between any of these standards, specifications or plans, the most stringent shall govern. All utilities to be dedicated to the City of Harrisonburg Municipal Water and/or Sanitary Sewer System shall be constructed and tested to conform to Commonwealth of Virginia/Department of Health Waterworks Regulations and/or Department of Environmental Quality Sewerage Collection and Treatment Regulations and the City of Harrisonburg Design and Construction Standards Manual.

2. All drain inlets shall be protected from siltation. Ineffective protection devices shall be immediately replaced and the inlet cleaned. Flushing is not an acceptable method of cleaning.

3. When the crushed stone construction entrance has been covered with soil or has been pushed into the soil by construction traffic, it shall be replaced with a depth of stone equal to that of original application.

4. The location of existing utilities as shown is approximate only. The contractor is responsible for locating all public or private utilities that lie in or adjacent to the construction site. The contractor shall be responsible for repairing, at his expense, all existing utilities damaged during construction. Forty-eight (48) hours prior to any excavation call Miss Utility 1(800) 552-7001.

5. All underground facilities located within the City's rights-of-way shall be installed prior to the placement of any part of the pavement structure.

6. Installation of concrete storm pipe shall comply with VDOT Standard Drawing PB-1.

7. All materials used for fill or backfill shall be free of wood, roots, rocks, boulders or any other non-compactable soil type material. Unsatisfactory materials also include man-made fills and refuse debris derived from any source. Satisfactory material for use as fill for public streets include material classified in ASTM D-2487 as GW, GP, GM, GC, SW, SP, SM, SC, ML, and CL groups. The moisture content shall be controlled within plus or minus 2 percentage points of optimum to facilitate compaction. Generally, unsatisfactory materials include materials classified in ASTM D-2487 as PT, CH, MH, OL, OH, and any soil too wet to facilitate compaction. CH and MH soils may be used subject to approval of the Engineer. Soils shall have a minimum dry density of 9210/cubic foot per ASTM D-698 and shall have a plasticity index less than 12.

8. Materials used to construct embankments for any purpose, backfill around drainage structures or in utility trenches, or any other depression requiring fill or backfill shall be compacted to 95% of maximum density as determined by the standard Proctor test as set out in ASTM standard D-698. The contractor shall, prior to any operations involving filling or backfilling, submit the result of the Proctor test together with a certification that the soil tested in representative of the materials to be used on the project. Tests shall be conducted by a certified materials testing laboratory and the certifications made by a licensed professional Engineer representing the laboratory.

9. Embankment fill and trench backfill shall be placed in lifts at a maximum uncompacted depth of 8-inches and 6-inches, respectively. Density tests shall be conducted at the following minimum frequencies:
(a) Embankment for roads, streets, dams, etc.: One test per lift per 10,000 square feet of lift. (b) Backfill around structures and in trenches: One test per lift per 500 lineal feet of trench.
Compaction tests for street pavement structure shall be made in cut and fill areas at the following minimum frequencies: (a) Sub-Grade: One test per lane per 500 lineal feet. (b) Stone Base: One test per lane per 6" compacted lift per 500 lineal feet. (c) Hot Asphaltic Concrete: One test per lane per lift per 500 lineal feet.

10. All excavations, including trenches, shall be kept dry to protect their integrity.

11. Test results shall be submitted to the Engineer. Failure to conduct density tests shall be cause for non-acceptance of the facility. Tests shall be conducted at the sole cost of the Contractor.

12. Standard UD-4 underdrain shall be installed where indicated on plans or further where determined necessary in the field by the City Inspectors.

13. Pavement design in based upon City minimum pavement sections as outlined in the DCSM.

14. City Inspectors have full authority to reject fill or backfill materials, require undercutting or sub grade stabilization, require provisions for sub drainage, or require other measures which affect the integrity of road and utility construction. Failure to comply with Inspectors' directives shall be cause for nonacceptance of the facility.

15. Traffic control on public streets shall be in conformance with the Manual of Uniform Traffic Control Devices and as further directed by City Inspectors.

16. Any discrepancies found between the drawings and specifications and site conditions or any inconsistencies or ambiguities in drawings or specifications shall be immediately reported to the Engineer, in writing, who shall promptly address such inconsistencies or ambiguities. Work done by the contractor after his discovery of such discrepancies, inconsistencies or ambiguities shall be done at the contractor's risk.

17. A preconstruction conference shall be held prior to the start of construction. The contractor shall arrange the meeting with the Public Works Department and/or Engineer.

18. Install City standard street centerline monuments where required for new streets. Monumemnts will be provided by City; contract unit price shall included installation of monument and any materials associated with installation. Contractor shall coordinate with City surveyor and City Inspection on placement of monuments.

19. Topsoil and seed all disturbed areas not otherwise covered.

20. Temporary construction easements shown are being provided by private property owners in total cooperation with the City. Such easements are for access and temporary occupation only as necessary to complete the work. Unless an owner specifically agrees, contactor shall not use these areas for long term storage of materials, equipment or vehicles (including employee vehicles) and shall endeavor to limit impact on these areas to a minimum. Contractor shall cooperate with property owners to address their concerns over use of, or access to, their property. All damage to public and private properties caused by the contactor's operations or negligence, beyond that defined by the work itself, shall be repaired to the City's satisfaction at no additional cost to the owner.

21. Miscellaneous items of work shown on the drawings for which there is no specified unit price are considered to be incidental and the costs for such items shall be included in the price bid for other items.

22. Provide rodding and concrete thrust blocking of waterline appurtenances in accordance with City standards. Provide waterline taps as necessary for pressure testing and bacteriological sampling. All waterline testing and documentation is the contractor's responsibility. City Inspector shall collect samples.

23. Grass channels, whether detailed or a result of slope ties, shall be overseeded, protected, maintained and reseeded as necessary to establish erosion-resistant grass cover.

24. Pipe lengths shown are from center-to-center of structures.

25. New water pipe shall be ductile iron class 52.

26. "To be removed" (TBR) and "remove" indicates contractor's work unless noted to be by others.

27. Driveway replacements shall match existing driveways, whether gravel, concrete or paved. Minimum thickness for gravel drives shall be 6 inches of compacted 21A Stone. Minimum paved driveway section shall be 6 inches compacted 21A stone with 2 inches SM-9.5AL asphaltic concrete.

28. Limits and grades of all driveway replacements shall be confirmed in field with the City Engineer.

29. Precast units adjacent to cast-in-place concrete items, such as sidewalks, ditches, gutters and flumes, shall be connected to the adjacent unit by means of No.4 smooth steel dowels spaced on approximately 12 - inch centers throughout the contact length and extend at least into both the precast unit and the cast-in place item. Refer to VDOT 2007 Road and Bridge Spec's, sect. 302.03, page 293, paragraph (B) 1E

30. Contractor to coordinate with HEC (Todd McCroy @ 434-536) prior to installing concrete sidewalk so HEC can install conduit in sidewalk for future street lighting.

31. Existing drainage facilities being utilized as part of the drainage system shall be cleaned as directed by the Engineer. The cost incidental to this shall be included in the contract price for other items.

32. The material listed below will be paid for on a tonnage basis on this project. The theoretical tonnage shown on these plans is based on the weight shown hereon. The weight will vary in accordance with the specific gravity of the aggregates and the asphaltic content of the mix actually used to secure the design depth. The weight of the asphalt concrete is based on 95% of theoretical maximum density.

33. The City purchased several properties during the right-of-way phase of this project that may be used as construction staging areas. These parcels are labeled on the respective plan sheets. Contractor shall keep staging areas appropriately organized and secure.

34. Two geotechnical reports were developed for this project, and are available to the contractor to use for information only. A summary of the reports are as follows:
a. S&ME Report, July 2012. Includes general project information and boring log data.
b. F&R Report, December 2013. Includes more detailed information for retaining walls (specifically Retaining Wall "E") and general subgrade work.
c. F&R Addendum #1, January 2014. Includes detailed information about pavement design based on updated traffic volumes.

GRADING

G-1 The grade line denotes top of finished pavement unless shown otherwise on typical sections or plans.

G-3 Earthwork quantities on this project are based on anticipated settlement and may require adjusting during construction. Payment will be made only for quantities actually moved.

G-4 The cost of removal of all existing concrete items located in the area to be graded, including, but not limited to the following, shall be included in the price bid for regular excavation: Curb and Gutter, Concrete Pipe, Sidewalk, Foundations

G-6 If any off-site borrow materials are used as structural fill, these materials should be of low plasticity (plasticity index less than 25), free of organics and debris, and have a maximum particle size of 3 inches. In addition, the off-site borrow should have a standard Proctor maximum dry density (VTM-1) of at least 100 pounds per cubic foot.

G-7 Material from regular excavation which is suitable for stabilization with hydraulic cement (lime) shall be placed in the top portion of the subgrade.

PAVEMENT

P-2 The pavement materials on this project will be paid for on a tonnage basis. The weight will vary in accordance with the specific gravity of the aggregates and the asphaltic content of the mix actually used to secure the design depth. The weight of the asphalt concrete is based on 95% of the theoretical maximum density.

INCIDENTALS

I-7 Where Standard slope roundoffs would damage trees, bushes or other desirable vegetation, they shall be omitted when so ordered by the Engineer.

I-9 When no centerline alignment is shown for a proposed entrance, the entrance shall be constructed in the same location as the existing entrance.

I-10 St'd. RM-1 Right of Way monuments shall be set by the Contractor.

I-18 All pavement markings and traffic flow arrows shown on the roadway construction plans are schematic only. The actual location and application of pavement markings shall be in accordance with Section 704 of the applicable VDOT Road and Bridge Specifications, MUTCD, sequence of construction/traffic control plans, pavement marking plan sheets 12(3) thru 12(11C) and as directed by the Engineer.

I-20 The Official Electronic PDF Version of the plans will override the paper copies or prints of specific layers.

Portions of this plan assembly have been CADD generated. To assist in the preparation of the bid and construction of the project, Microstation format (.dgn) files will be made available to the prime contractor during bids and after award of the contract.

I-21 All electronic plan assemblies will include the construction plans in two formats: PDF files and MicroStation format (.dgn) files. Only the PDF files will be considered as part of the official plan assembly.

The MicroStation format (.dgn) files are furnished only as information for the contractor. These plans are developed in layers (levels) to aid in readability. However, the construction items may or may not be in the proper layering scheme as described in the VDOT CADD Manual. The MicroStation files will only match the scanned files if all required levels are turned on. A Microstation Software license is required to be able to read these files.

DRAINAGE

D-1 The horizontal location of all drainage structures shown on these plans is approximate only, with the exception of structures showing specific stations, special design bridges and storm sewer systems.

D-2 The horizontal location and invert elevations shown for proposed culverts and storm sewer outfall pipes are based on existing survey data and required design criteria. If during construction, it is found that the horizontal location or invert elevations shown on the plans differ significantly from the horizontal location or elevations of the stream or swale in which the culvert or storm sewer outfall pipe is to be placed, the Engineer shall confer with, and get approval from, the applicable District Drainage Engineer before installing the culvert or storm sewer outfall pipe.

D-3 The "H" dimensions shown on plans for drop inlets and junction boxes and the "L.F." dimensions shown for manholes are for estimating purposes and are based on the proposed invert elevations shown for the structure and the anticipated top (rim) elevation based on existing or proposed finished grade. The actual "H" or "L.F." dimensions are to be determined by the contractor from field conditions.

D-6 Pipes shall conform to any of the allowable types shown on sheet number 2, within the applicable height of cover limitations.
For strength, sheet thickness, or class designation: available sizes: height of cover limitations: and other restrictions for a particular pipe type or height of cover, see the VDOT Road and Bridge Standard PC-1. Structural plate pipe may be substituted for corrugated pipe of the same size, provided the substitution complies with the applicable sections of the VDOT Road and Bridge Standards PC-1.

D-8 Where open joint pipe is to be used, no joint shall be opened a distance exceeding 25% of the spigot length. Sealing of the pipe joint shall be in accordance with Section 302 of the applicable VDOT Road and Bridge Specifications.

D-12 All existing drainage facilities labeled "To Be Abandoned" shall be left in place, backfilled and plugged in accordance with the VDOT Road and Bridge Standard PP-1. Basis of Payment will be C.Y. of Flowable Backfill.

D-13 Existing drainage facilities being utilized as a part of the drainage system, and designated on the plans "To Be Cleaned Out" shall be cleaned as directed by the Engineer. The cost incidental to this shall be included in the contract price for other items.

D-16 When CG-6 is specified on a radius (such as at a street intersection), the Engineer may approve a decrease in the cross slope of the gutter to facilitate proper drainage.

EROSION AND SEDIMENT CONTROL (ESC)

E-1 If the removal of Brush Silt Barrier is specified by the plans or required by the Engineer, the cost of removal and disposal of brush shall be in accordance with Section 109 of the applicable VDOT Road and Bridge Specifications.

E-2 Rock for Check Dams, Inlet Protection, Erosion Control Stone and Riprap shall be in accordance with Section 203 and Section 414 of the applicable VDOT Road and Bridge Specifications.

E-3 The following symbols are used to depict Erosion Control items in the plan assembly:

- EC-2 / EC-3A / EC-3B / EC-3C — Denotes Protective Covering, St'd. EC-2
- EC-3A — Denotes Soil Stabilization Mat. St'd. EC-3 Type A, B or C
- TFB — Denotes Temporary Filter Barrier, St'd EC-5
- TSF — Denotes Temporary Silt Fence, St'd EC-5
- TDC — Denotes Temporary Diversion Channel, St'd EC-12
- DD — Denotes Temporary Diversion Dike, St'd EC-9
- TC-I — Denotes Turbidity Curtain, Type - Impervious
- TC-P — Denotes Turbidity Curtain, Type - Pervious
- RCD-1 — Denotes Rock Check Dam, Type I: St'd EC-4
- RCD-2 — Denotes Rock Check Dam, Type II: St'd EC-4
- IP-A — Denotes Inlet Protection, Type A: St'd EC-6
- IP-B — Denotes Inlet Protection, Type B: St'd EC-6

Note: Contractor to monitor erosion control outfalls and address issues that may arise during construction, especially after storm events.

STORMWATER MANAGEMENT

S-1 CLEARING AND GRUBBING OF SWM BASIN SITE - The area where the dam is to be constructed and the area upstream of the dam, to an elevation equal to the crest of the dam (maximum ponded water elevation), shall be cleared and grubbed in accordance with Section 301 of the applicable VDOT Road and Bridge Specifications.

S-2 SWM BASIN DAM CONSTRUCTION - The dam for detention basins (no permanent pool) shall conform to the details contained in the plans and shall be constructed in accordance with Section 303 of the applicable VDOT Road and Bridge Specifications. The native material on which the dam will set shall meet the specifications for AASHTO Type A-4 or finer material. Where the native material does not meet this requirement, the area beneath the dam is to be excavated a minimum of 4' and backfilled with a material meeting the AASHTO Type A-4 or finer classification unless otherwise specified in the plans. The material used for the embankment of the dam shall be AASHTO Type A-4 or finer or otherwise specified in the plans. Dams with foundation and embankment material not meeting the above requirements or dams greater than 15' in height, or dams for retention basins (permanent pool) shall incorporate a membrane-lined trench, a homogenous embankment with seepage controls, a zoned embankment or other such approved designs as specified in the plans.

S-3 SWM BASIN OUTLET PIPE - The pipe culvert under or through the dam for detention basins (no permanent pool) shall be reinforced concrete pipe with rubber gaskets in accordance with Section 232 and 212 of the applicable VDOT Road and Bridge Specifications. A concrete cradle shall extend the full length of the pipe culvert in accordance with the Standard Drawings. The connection between the pipe culvert and the SWM-1 Drainage Structure (or other control structure) shall be made watertight as approved by the Engineer and the cost shall be included in the price bid for pipe.

S-4 The SWM-1 Drainage Structure (or other control structure) shall have 4" high numbers and 1" wide stripes painted at 1' intervals as shown on the Standard Drawings or detail sheets. The numbers and stripes are to be installed at the time of the initial installation of the SWM-1 Drainage Structure (or other control structure). Paint and application shall be in accordance with Section 231 and 411 of the applicable VDOT Road and Bridge Specifications and the cost is to be included in the price bid for the applicable structure.

S-5 All SWM Basins designated for use as temporary sediment basins shall be constructed during the initial phase of earth moving activities or as specified by the plans or directed by the Engineer. During project construction, the SWM-1 Drainage Structure (or other control structure) shall be modified in accordance with the Standard Drawings or plan details in order to provide a temporary sediment basin with both a "wet" storage volume (permanent pool) and a "dry" storage volume. Sediment accumulated in the basin shall be removed when the volume of the "wet" storage (permanent pool) has been reduced by 50%. Sediment shall be disposed of in accordance with Section 106.04 of the applicable VDOT Road and Bridge Specifications. When project construction is complete to a stage where no additional sediment from the project is expected to enter the basin, as determined by the Engineer, the basin shall be cleaned out and restored to the original design elevations, the area stabilized and all temporary modifications to the SWM-1 Drainage Structure (or other control structure) removed.

PRIVATE AND COMMERCIAL ENTRANCES

TYPE I
Crusher Run Aggr.

6" Crusher Run
Aggr. 25 or 26

TYPE II
Concrete

Concrete Entrance Pavement
7" HES
4" Aggr. Base Mat'l. Ty. I
No. 21A or 21B

TYPE III
Asphalt

Asphalt Conc. Type
SM-9.5AL or SM-9.5D @ 220 Lbs. per S.Y.
6" Aggr. Base Mat'l. Ty. I
No. 21A or 21B

NOT TO SCALE

TYPE IV
Asphalt Commercial

Asphalt Conc. Type
SM-9.5AL or SM-9.5D @ 165 Lbs. per S.Y.
4" Asphalt Conc. Base Course
BM-25.0
6" Aggr. Base Mat'l. Ty. I
No. 21A or 21B

The type of entrance (I, II, III, IV) to be constructed will be determined by the existing condition at the time of construction.

ALLOWABLE TYPE OF STORM SEWER PIPE (UNLESS OTHERWISE SHOWN ON PLANS)
(SEE ROAD AND BRIDGE STANDARD PC-1 FOR HEIGHT OF COVER LIMITATIONS FOR EACH TYPE)

LOCATION	CONCRETE	CORRUGATED STEEL ALUMINUM COATED TYPE 2 FULLY CONCRETE LINED	ALUMINUM COATED TYPE 2 STEEL SPIRAL RIB	POLYMER COATED 10D/0D CORRUGATED STEEL SPIRAL RIB	POLYMER COATED 10D/0D CORRUGATED STEEL DOUBLE WALL (SMOOTH INTERIOR)	ALUMINUM SPIRAL RIB	POLYVINYLCHLORIDE (PVC) RIBBED PIPE (SMOOTH INTERIOR)	POLYETHYLENE (PE) CORRUGATED TYPE S	POLYPROPYLENE (PP) TYPE D OR S
All Except As Noted	X								X

ALLOWABLE TYPE OF PIPE CULVERT (UNLESS OTHERWISE SHOWN ON PLANS)
(SEE ROAD AND BRIDGE STANDARD PC-1 FOR HEIGHT OF COVER LIMITATIONS FOR EACH TYPE)

LOCATION	CONCRETE	ALUMINUM COATED TYPE 2 CORRUGATED STEEL	POLYMER COATED 10D/0D CORRUGATED STEEL	UNCOATED GALVANIZED CORRUGATED STEEL	GALVANIZED STEEL STRUCTURAL PLATE	GALVANIZED STEEL STRUCTURAL PLATE WITH CONCRETE INVERT	CORRUGATED ALUMINUM ALLOY	CORRUGATED ALUMINUM ALLOY STRUCTURAL PLATE	POLYVINYLCHLORIDE (PVC) RIBBED PIPE (SMOOTH INTERIOR)	POLYETHYLENE (PE) CORRUGATED TYPE C	POLYETHYLENE (PE) CORRUGATED TYPE S	POLYPROPYLENE (PP) TYPE D OR S
All Except As Noted	X											X

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = NTS
DRAWN BY | DATE
CMY
CHECKED BY | DATE
RJD
DESIGN BY | DATE
CMY
TAX MAP

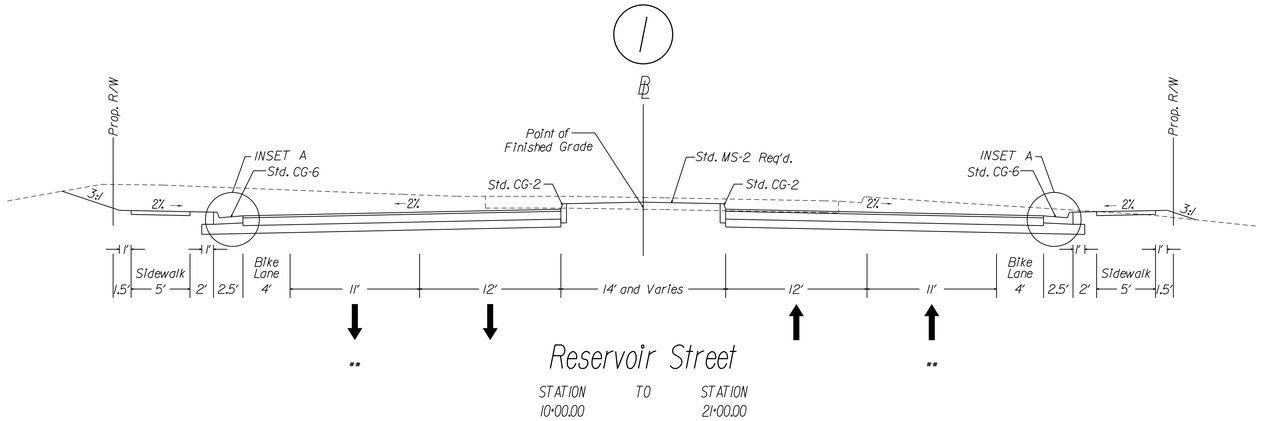
RESERVIOR STREET

GENERAL NOTES

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E. MOSBY ROAD
HARRISONBURG, VIRGINIA

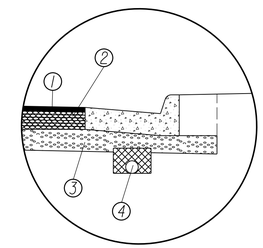
SHEET 2

TYPICAL SECTIONS

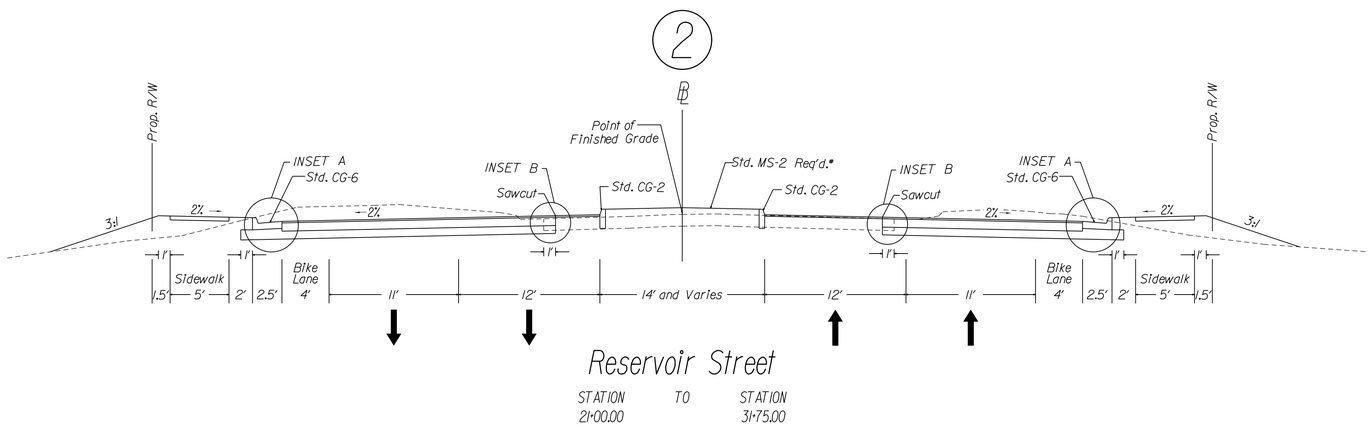


**NOTE: OUTSIDE SB & NB RESERVOIR STREET LANE TAPER. SEE SIGNING & PAVEMENT MARKING SHEETS FOR DETAILS

INSET A

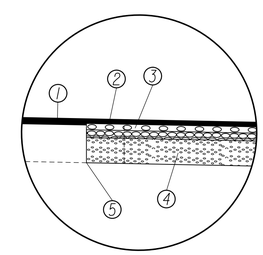


1. ASPHALT CONCRETE SURFACE COURSE TYPE SM-12.5D @ 220 LBS. PER SQ.YD.
2. 8" ASPHALT CONCRETE BASE COURSE TYPE BM-25.0A
3. 8" AGGREGATE BASE MATERIAL TYPE I NO. 21B
4. STANDARD UD-4 REQ'D. (SEE SHEET 2B(3))

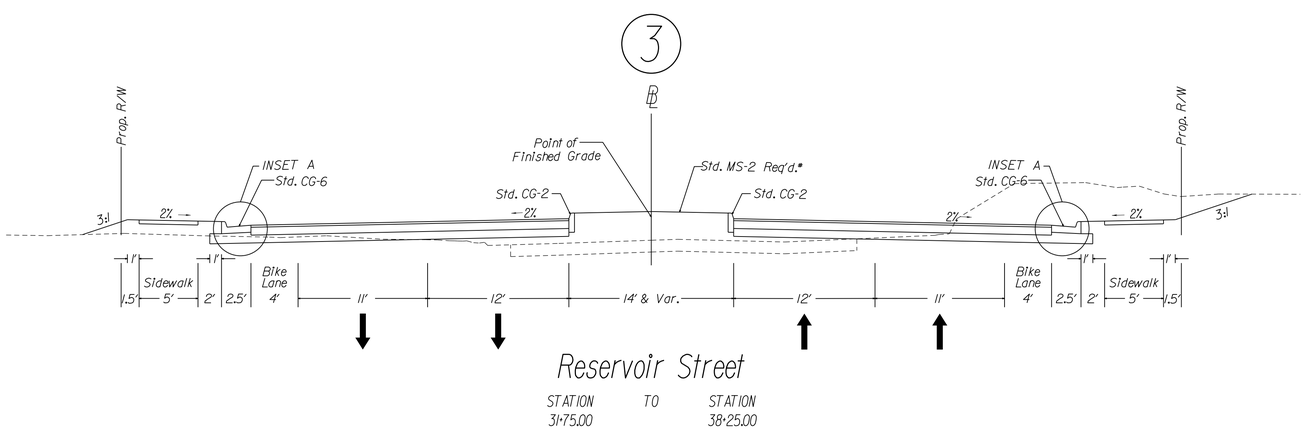


*NOTE: SEE SHEET 2A(2) FOR TURN LANE & MEDIAN TREATMENTS

INSET B



1. MILL EXISTING PAVEMENT 2" AND OVERLAY ASPHALT CONCRETE SURFACE COURSE TYPE SM-12.5D @ 220 LBS. PER SQ.YD.
2. ASPHALT CONCRETE SURFACE COURSE TYPE SM-12.5D @ 220 LBS. PER SQ.YD.
3. 8" ASPHALT CONCRETE BASE COURSE TYPE BM-25.0A
4. 8" AGGREGATE BASE MATERIAL TYPE I NO. 21B
5. SAWCUT LINE



REV	DATE	DESCRIPTION	BY

McCORMICK TAYLOR

SCALE: 1" = NTS

DRAWN BY: CMY — DATE

CHECKED BY: RJD — DATE

DESIGN BY: CMY — DATE

TAX MAP

RESERVOIR STREET

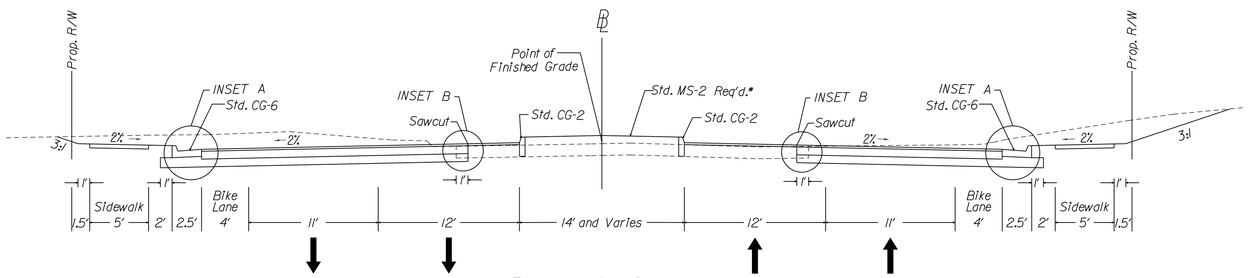
TYPICAL SECTIONS

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 2A

TYPICAL SECTIONS

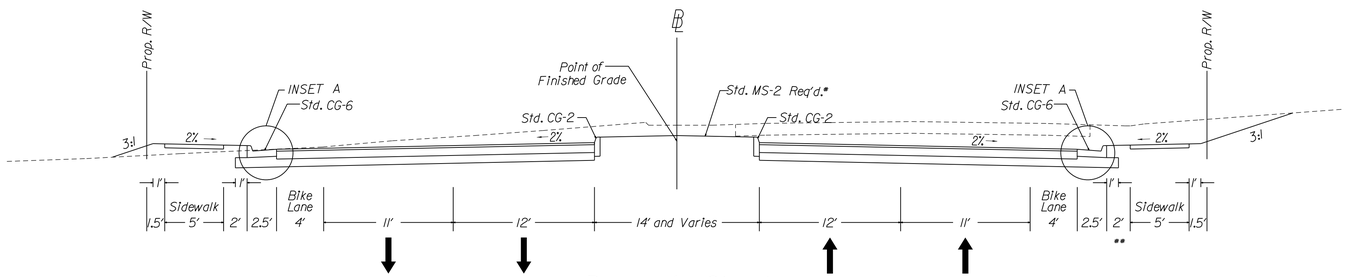
4



Reservoir Street

STATION 38+25.00 TO STATION 41+00.00

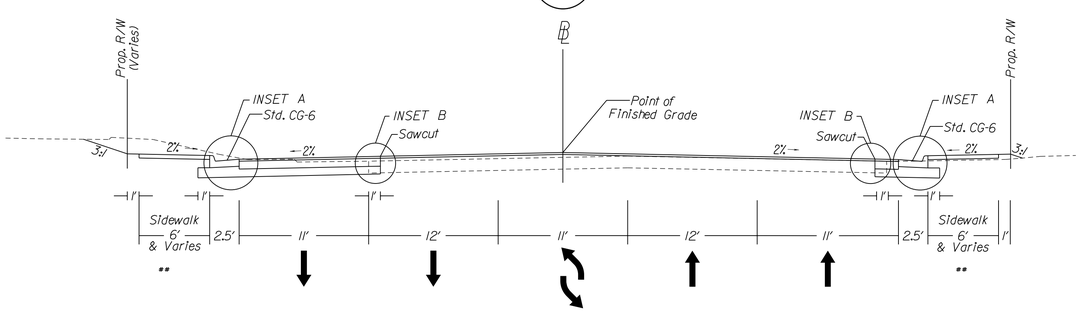
5



Reservoir Street

STATION 41+00.00 TO STATION 48+25.00

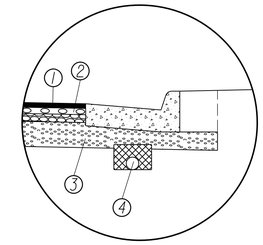
6



Reservoir Street

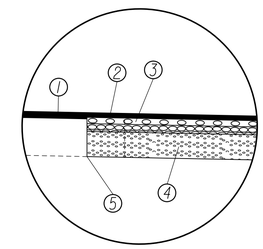
STATION 48+25.00 TO STATION 65+37.25

INSET A



1. ASPHALT CONCRETE SURFACE COURSE TYPE SM-12.5D @ 220 LBS. PER SQ. YD.
2. 8" ASPHALT CONCRETE BASE COURSE TYPE BM-25.0A
3. 8" AGGREGATE BASE MATERIAL TYPE I NO. 21B
4. STANDARD UD-4 REQ'D. (SEE SHEET 2B(3))

INSET B



1. MILL EXISTING PAVEMENT 2" AND OVERLAY ASPHALT CONCRETE SURFACE COURSE TYPE SM-12.5D @ 220 LBS. PER SQ. YD.
2. ASPHALT CONCRETE SURFACE COURSE TYPE SM-12.5D @ 220 LBS. PER SQ. YD.
3. 8" ASPHALT CONCRETE BASE COURSE TYPE BM-25.0A
4. 8" AGGREGATE BASE MATERIAL TYPE I NO. 21B
5. SAWCUT LINE

**NOTE: SEE ROADWAY PLAN FOR BUFFER STRIP WIDTHS

*NOTE: SEE SHEET 2A(2) FOR TURN LANE & MEDIAN TREATMENTS

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = NTS
DRAWN BY CMY DATE
CHECKED BY RJD DATE
DESIGN BY CMY DATE
TAX MAP

RESERVOIR STREET

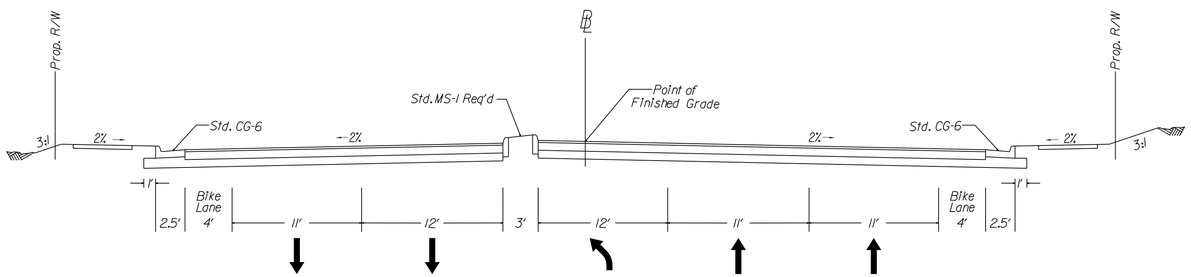
TYPICAL SECTIONS

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 2A(1)

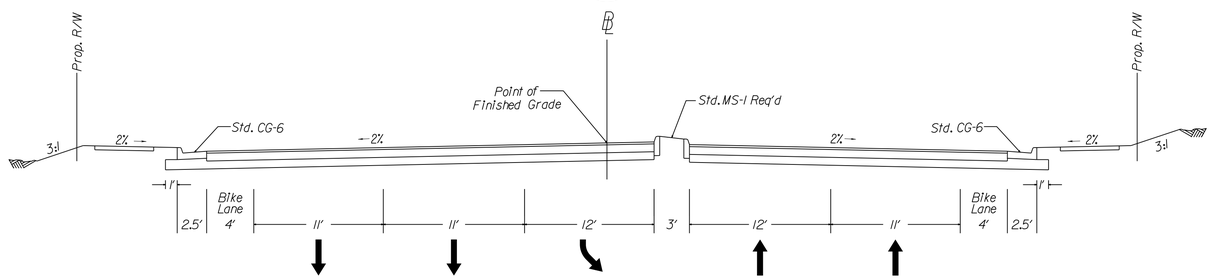
TYPICAL SECTIONS

7



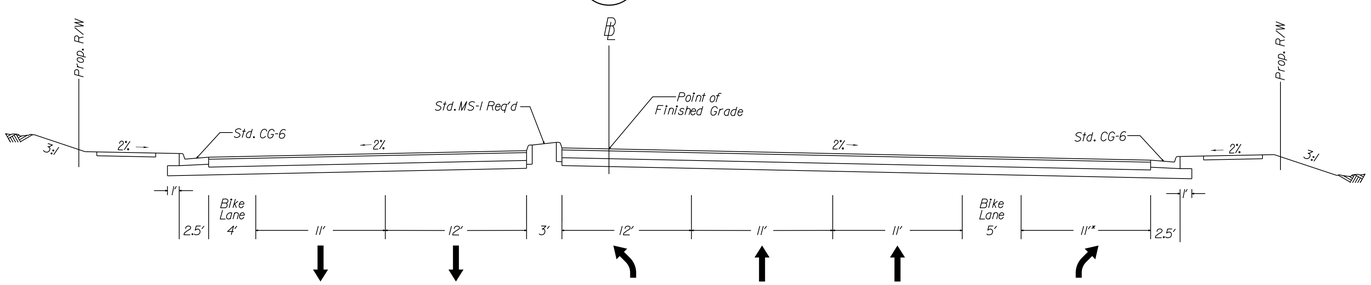
Reservoir Street Left Turning Lanes (NB)

8



Reservoir Street Left Turning Lanes (SB)

9



Reservoir Street Turning Lanes (NB)

TURNING LANE TAPERS: RESERVOIR STREET		
	STATION	OFFSET
BEGIN	11+73	7ft. R
END	13+23	4ft. L
BEGIN	16+03	4ft. R
END	17+03	7ft. L
BEGIN	18+89	7ft. R
END	19+89	4ft. L
BEGIN	24+00	4ft. R
END	25+00	7ft. L
BEGIN	24+22	4ft. R
END	28+22	7ft. L
BEGIN	26+12	7ft. R
END	28+12	4ft. L
BEGIN	30+68	4ft. R
END	31+68	7ft. L
BEGIN	31+80	7ft. R
END	33+80	4ft. L
BEGIN	36+63	4ft. R
END	38+63	7ft. L
BEGIN	32+80	7ft. R
END	33+80	4ft. L
BEGIN	36+63	4ft. R
END	37+63	7ft. L
BEGIN	40+40	4ft. R
END	41+40	7ft. L
BEGIN	45+75	7ft. R
END	47+25	4ft. L
BEGIN	47+25	7ft. R
END	48+75	4ft. L

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = NTS
DRAWN BY CMY DATE
CHECKED BY RJD DATE
DESIGN BY CMY DATE
TAX MAP

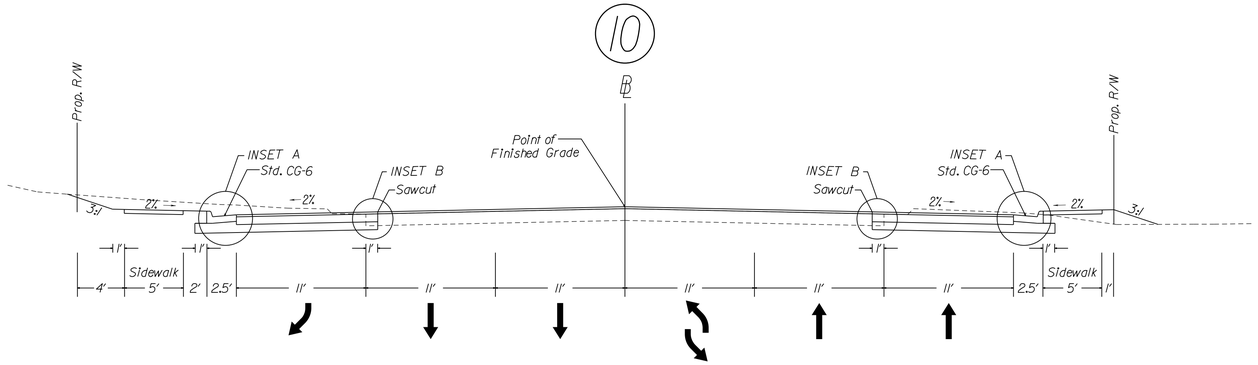
RESERVOIR STREET

TYPICAL SECTIONS

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

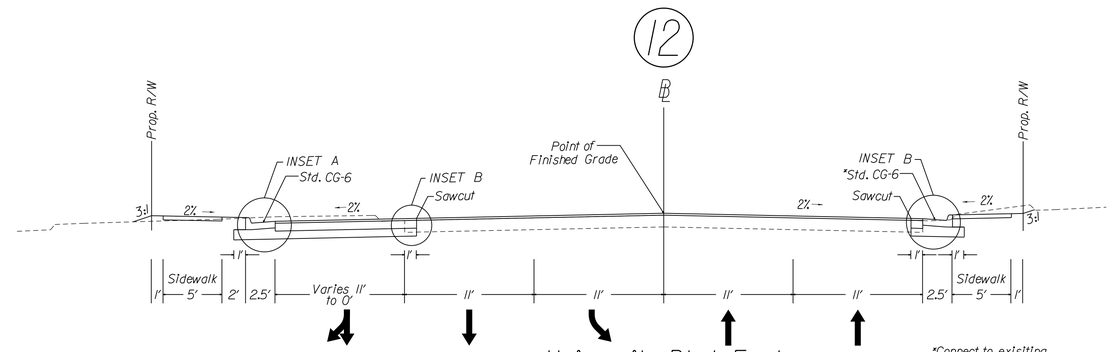
SHEET 2A(2)

TYPICAL SECTIONS



University Blvd. West

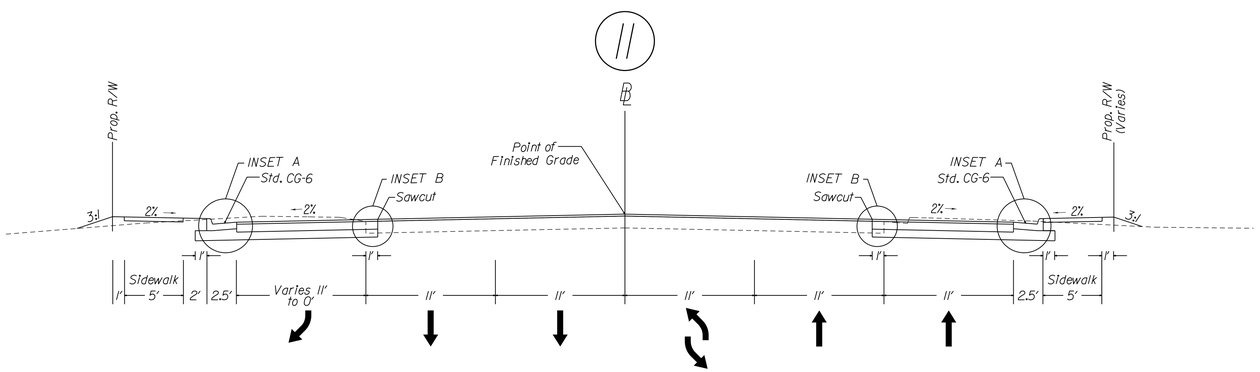
STATION 10+27.10 TO STATION 16+85.39



*Connect to exisiting curb STA 12+52.18

University Blvd. East

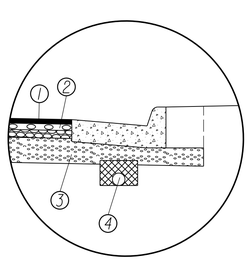
STATION 10+29.10 TO STATION 14+10.37



University Blvd. West

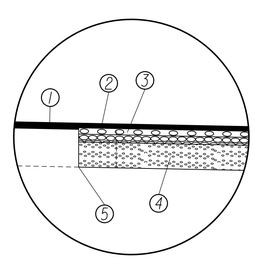
STATION 16+85.39 TO STATION 18+79.89

INSET A



1. ASPHALT CONCRETE SURFACE COURSE TYPE SM-12.5D @ 220 LBS. PER SQ.YD.
2. 8" ASPHALT CONCRETE BASE COURSE TYPE BM-25.0A
3. 8" AGGREGATE BASE MATERIAL TYPE I NO. 21B
4. STANDARD UD-4 REQ'D. (SEE SHEET 2B(3))

INSET B



1. MILL EXISTING PAVEMENT 2" AND OVERLAY ASPHALT CONCRETE SURFACE COURSE TYPE SM-12.5D @ 220 LBS. PER SQ.YD.
2. ASPHALT CONCRETE SURFACE COURSE TYPE SM-12.5D @ 220 LBS. PER SQ.YD.
3. 8" ASPHALT CONCRETE BASE COURSE TYPE BM-25.0A
4. 8" AGGREGATE BASE MATERIAL TYPE I NO. 21B
5. SAWCUT LINE

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = NTS

DRAWN BY	DATE
CMY	
CHECKED BY	DATE
RJD	
DESIGN BY	DATE
CMY	

TAX MAP

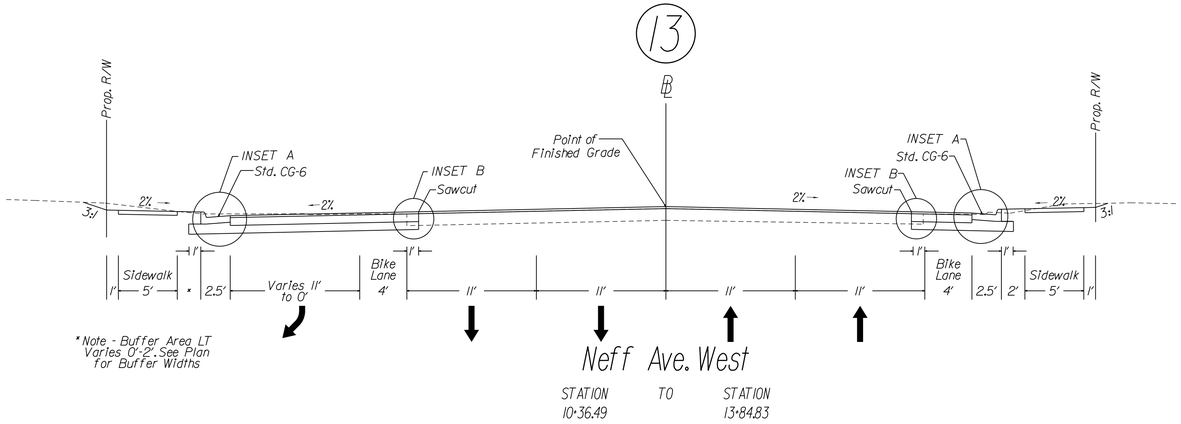
RESERVOIR STREET

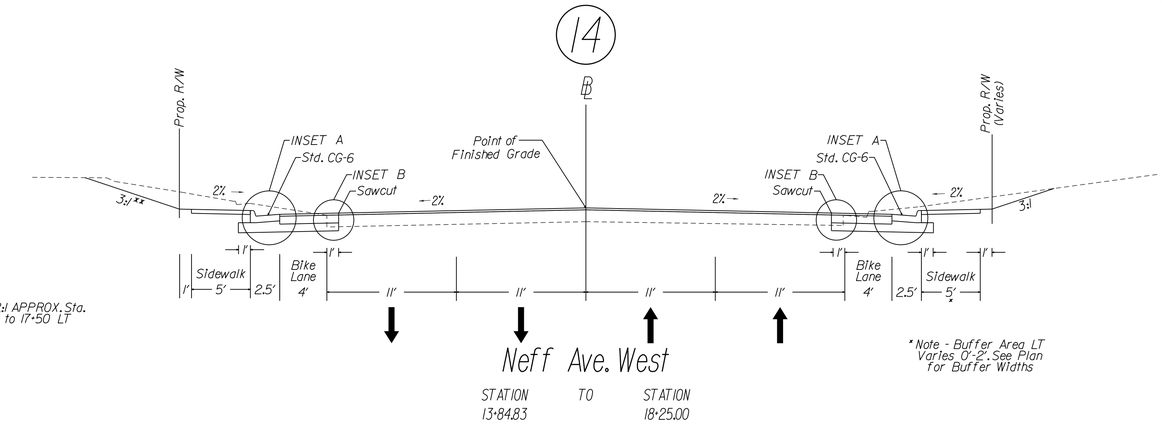
TYPICAL SECTIONS

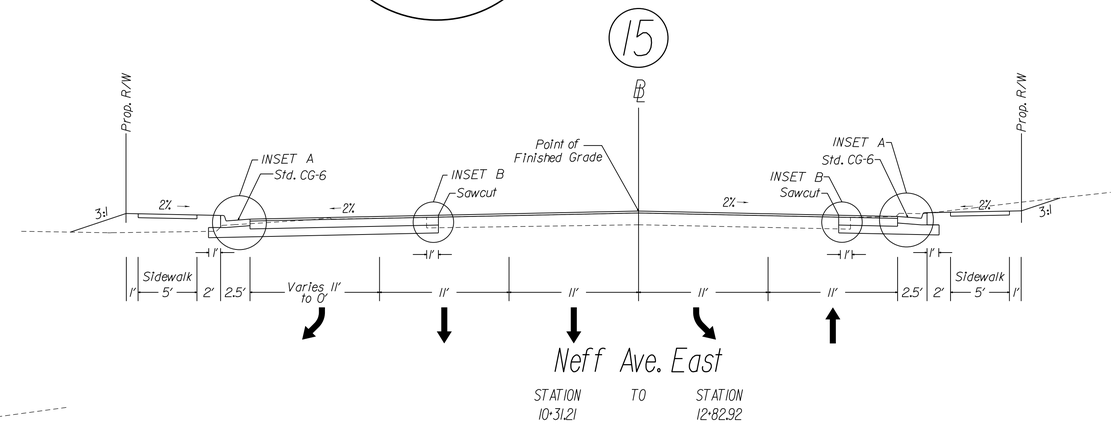
PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 2A(3)

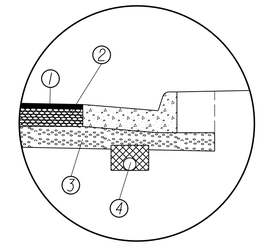
TYPICAL SECTIONS





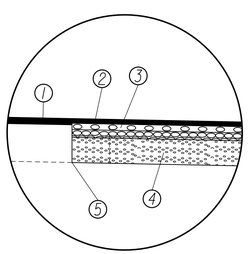


INSET A



1. ASPHALT CONCRETE SURFACE COURSE TYPE SM-12.5D @ 220 LBS. PER SQ. YD.
2. 8" ASPHALT CONCRETE BASE COURSE TYPE BM-25.0A
3. 8" AGGREGATE BASE MATERIAL TYPE I NO. 21B
4. STANDARD UD-4 REQ'D. (SEE SHEET 2B(3))

INSET B



1. MILL EXISTING PAVEMENT 2" AND OVERLAY ASPHALT CONCRETE SURFACE COURSE TYPE SM-12.5D @ 220 LBS. PER SQ. YD.
2. ASPHALT CONCRETE SURFACE COURSE TYPE SM-12.5D @ 220 LBS. PER SQ. YD.
3. 8" ASPHALT CONCRETE BASE COURSE TYPE BM-25.0A
4. 8" AGGREGATE BASE MATERIAL TYPE I NO. 21B
5. SAWCUT LINE

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = NTS

DRAWN BY	DATE
CMY	
CHECKED BY	DATE
RJD	
DESIGN BY	DATE
CMY	
TAX MAP	

RESERVOIR STREET

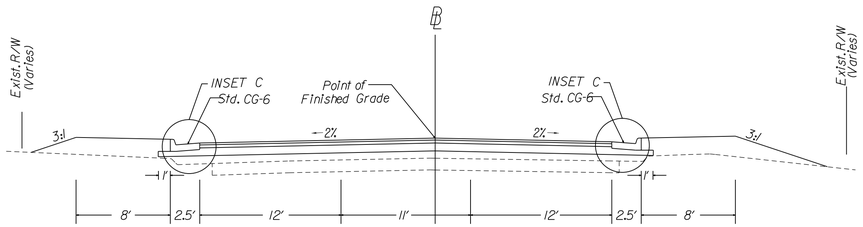
TYPICAL SECTIONS

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 2A(4)

TYPICAL SECTIONS

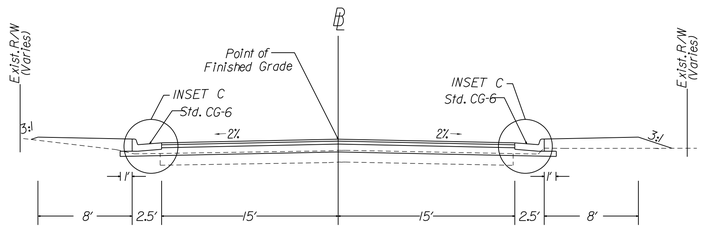
16



Woodland Rd.

STATION 10+35.06 TO STATION 11+44.16

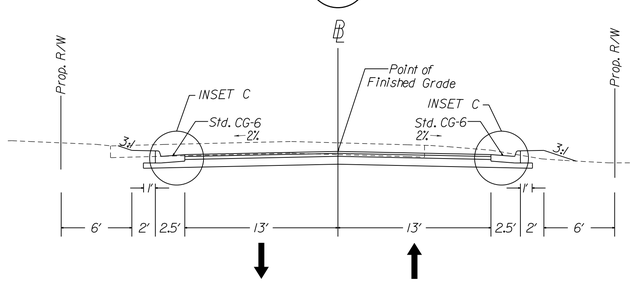
17



Woodland Rd.

STATION 11+44.16 TO STATION 12+50.00

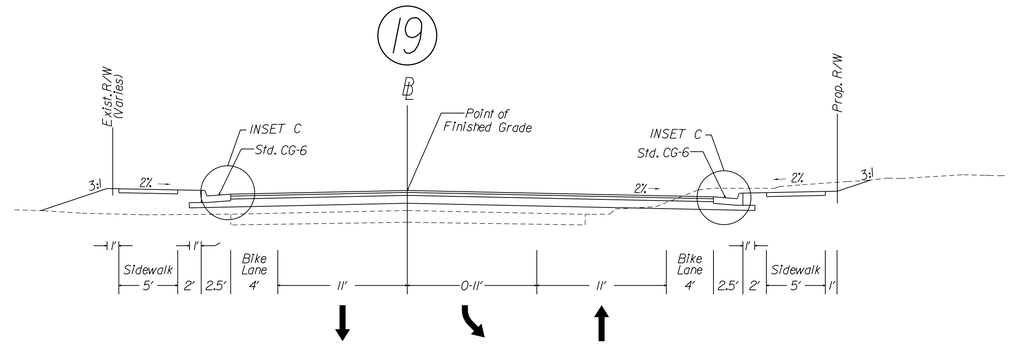
18



Ridgeville Lane

STATION 10+34.01 TO STATION 11+23.56

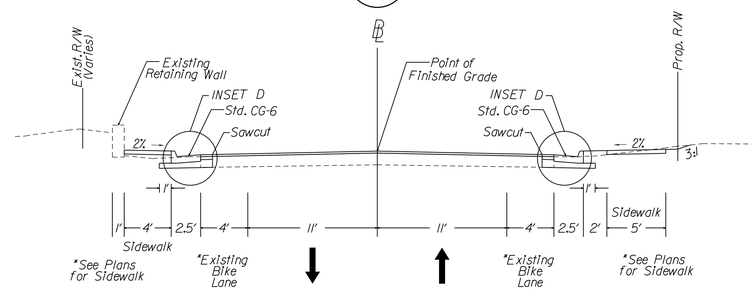
19



Stonewall Drive

STATION 10+39.37 TO STATION 12+98.98

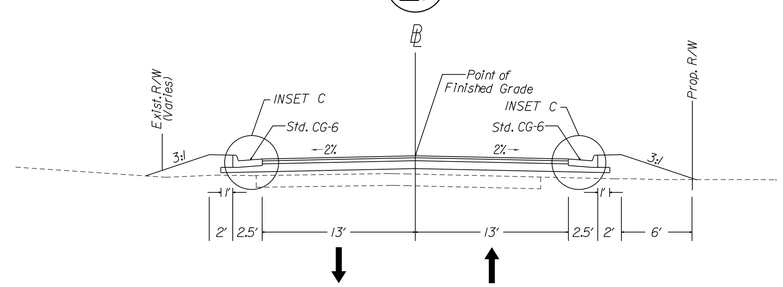
20



Stonewall Drive

STATION 12+98.98 TO STATION 13+31.33

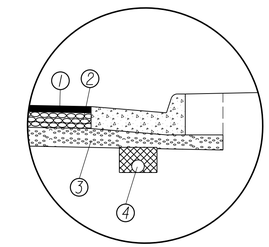
21



Foley Rd.

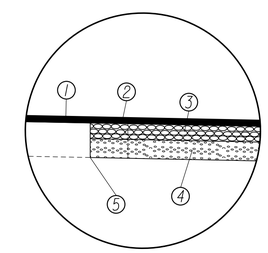
STATION 10+34.15 TO STATION 11+45.00

INSET C



1. ASPHALT CONCRETE SURFACE COURSE TYPE SM-12.5D @ 220 LBS. PER SQ.YD.
2. 3" ASPHALT CONCRETE BASE COURSE TYPE BM-25.0A
3. 8" AGGREGATE BASE MATERIAL TYPE I NO. 21B (For Subbase)
4. STANDARD UD-4 REQ'D. (SEE SHEET 2B(3))

INSET D



1. MILL EXISTING PAVEMENT 2" AND OVERLAY ASPHALT CONCRETE SURFACE COURSE TYPE SM-12.5D @ 220 LBS. PER SQ.YD.
2. ASPHALT CONCRETE SURFACE COURSE TYPE SM-12.5D @ 220 LBS. PER SQ.YD.
3. 3" ASPHALT CONCRETE BASE COURSE TYPE BM-25.0A
4. 8" AGGREGATE BASE MATERIAL TYPE I NO. 21B (For Subbase)
5. SAWCUT LINE

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = NTS	
DRAWN BY	DATE
CMY	
CHECKED BY	DATE
RJD	
DESIGN BY	DATE
CMY	
TAX MAP	

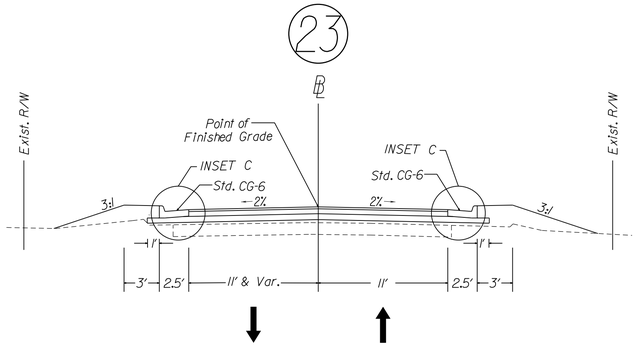
RESERVOIR STREET

TYPICAL SECTIONS

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

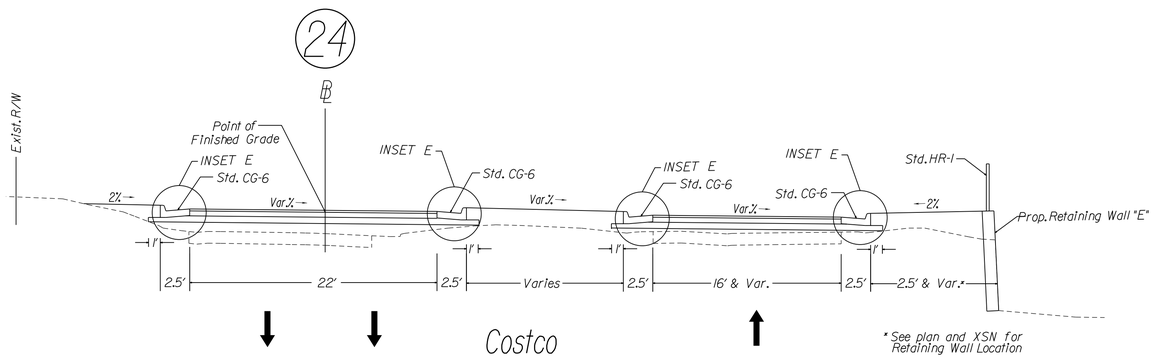
SHEET 2A(5)

TYPICAL SECTIONS



Lisimi

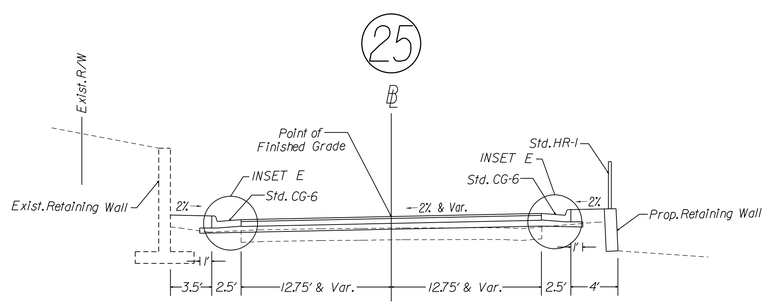
STATION 10+34.09 TO STATION 11+00.00



Costco

STATION 10+36.56 TO STATION 11+05.56

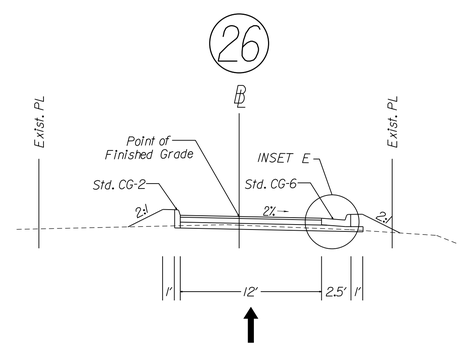
* See plan and XSN for Retaining Wall Location



* See plan and XSN for Retaining Wall Location

Costco

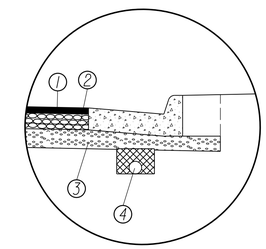
STATION 11+05.56 TO STATION 12+00.00



HFPA Entrance

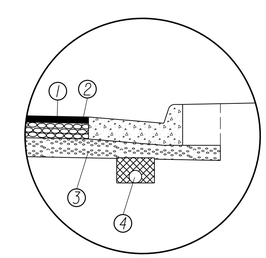
STATION 10+94.24 TO STATION 13+17.80

INSET C



1. ASPHALT CONCRETE SURFACE COURSE TYPE SM-12.5D @ 220 LBS. PER SQ. YD.
2. 3" ASPHALT CONCRETE BASE COURSE TYPE BM-25.0A
3. 8" AGGREGATE BASE MATERIAL TYPE I NO. 21B (For Subbase)
4. STANDARD UD-4 REQ'D. (SEE SHEET 2B(3))

INSET E



1. ASPHALT CONCRETE SURFACE COURSE TYPE SM-9.5AL @ 165 LBS. PER SQ. YD.
2. 4" ASPHALT CONCRETE BASE COURSE TYPE BM-25.0A
3. 6" AGGREGATE BASE MATERIAL TYPE I NO. 21B (For Subbase)
4. STANDARD UD-4 REQ'D. (SEE SHEET 2B(3))

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = NTS

DRAWN BY	DATE
CMY	
CHECKED BY	DATE
RJD	
DESIGN BY	DATE
CMY	

TAX MAP

RESERVOIR STREET

TYPICAL SECTIONS

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 2A(6)

PROPOSED STORM SEWER DESCRIPTIONS

PLAN SHEET 3

3-1
1 Std DI-3B Req'd
H= 6.1' L= 8'
Inv.= 1520.58'
Drop Inlet Silt Trap,Type B Req'd

3-2
1 Std DI-3B Req'd
H= 6.9' L= 12'
Inv.= 1515.03'
Drop Inlet Silt Trap,Type B Req'd

3-3
1 Std DI-3BB Req'd
H= 9.6' L= 12'
Inv.= 1529.35'
Drop Inlet Silt Trap,Type B Req'd
16" -15' Storm Sewer Pipe Req'd (Stub)
Plug upstream end for future use.
Inv.(In)=1529.61 Inv(Out)=1529.45

3-4
1 Std DI-1 Req'd
H= 6.0' Inv = 1518.20
Std ST-1 Req'd
Drop Inlet Silt Trap,Type A Req'd

3-1 — 3-2
91' - 15" Storm Sewer Pipe Req'd
Cover = 4.4'
Inv.(In) = 1520.58' Inv.(Out) = 1515.13'

3-2 — 4-1
174' - 15" Radial Storm Sewer Pipe Req'd
Cover = 4.1'
(962' radius with open joints - using 8' pipe joint lengths with full bevel).Joints are to be opened a maximum of 25% of the spigot or tongue length
Inv.(In) = 1515.03' Inv.(Out) = 1502.68'

3-3 — 3-1
132' - 15" Storm Sewer Pipe Req'd
Cover = 2.3'
Inv.(In) = 1529.35' Inv.(Out) = 1522.75'

3-5
1 Std DI-1 Req'd
H= 6.0' Inv = 1511.00
Std ST-1 Req'd
Drop Inlet Silt Trap,Type A Req'd

3-4 — 3-5
68' - 15" Storm Sewer Pipe Req'd
Cover = 4'
Inv.(In) = 1518.20' Inv.(Out) = 1511.10'

3-5 — 4-7
109' - 15" Storm Sewer Pipe Req'd
Cover = 4'
Inv.(In) = 1511.00' Inv.(Out) = 1503.91'

PLAN SHEET 4

4-1
1 Std DI-3B Req'd
H= 7.5' L= 6'
Inv.= 1502.58'

4-2
1 Std DI-3B Req'd
H= 5.0' L= 6'
Inv.= 1505.14'
Drop Inlet Silt Trap,Type B Req'd

4-3
1 Std DI-3B Req'd
H= 7.0' L= 12'
Inv.= 1493.21'
Drop Inlet Silt Trap,Type B Req'd

4-4
1 Std DI-3B Req'd
H= 4.0' L= 12'
Inv.= 1495.35'
Drop Inlet Silt Trap,Type B Req'd

4-5
1 Std DI-3B Req'd
H= 6.2' L= 12'
Inv.= 1488.98'
Drop Inlet Silt Trap,Type B Req'd

4-6
1 Std DI-3B Req'd
H= 4.0' L= 12'
Inv.= 1485.48'
Drop Inlet Silt Trap,Type B Req'd

4-7
6.4' Std MH 1 or 2 Req'd
Inv = 1503.81'
1 St'd MH-1 Frame and Cover Req'd

4-1 — 4-3
263' - 18" Storm Sewer Pipe Req'd
Cover = 5.2'
(962' radius with open joints - using 8' pipe joint lengths with full bevel).Joints are to be opened a maximum of 25% of the spigot or tongue length
Inv.(In) = 1502.58' Inv.(Out) = 1493.31'

4-2 — 4-1
73' - 15" Storm Sewer Pipe Req'd
Cover = 2.7'
Inv.(In) = 1505.14' Inv.(Out) = 1502.68'

4-3 — 4-5
106' - 18" Storm Sewer Pipe Req'd
Cover = 5.2'
Inv.(In) = 1493.21' Inv.(Out) = 1489.08'

4-4 — 4-6
207" - 15" Storm Sewer Pipe Req'd
Cover = 3'
Inv.(In) = 1495.35' Inv.(Out) = 1485.58'

4-5 — 5-1
283' - 18" Radial Storm Sewer Pipe Req'd
Cover = 5.1'
Inv.(In) = 1488.98' Inv.(Out) = 1474.38'
(962' radius with open joints - using 8' pipe joint lengths with full bevel).Joints are to be opened a maximum of 25% of the spigot or tongue length

4-6 — 5-2
167" - 15" Storm Sewer Pipe Req'd
Cover = 3'
Inv.(In) = 1485.48' Inv.(Out) = 1477.30'

4-7 — Ex.70
40' - 15" Storm Sewer Pipe Req'd
Cover = 1.0'
Inv.(In) = 1503.81' Inv.(Out) = 1503.33'

PLAN SHEET 5

5-1
1 Std DI-3B Req'd
H= 7.4' L= 12'
Inv.= 1474.28'
Drop Inlet Silt Trap,Type B Req'd

5-2
1 Std DI-3B Req'd
H= 4.6' L= 12'
Inv.= 1477.20'
Drop Inlet Silt Trap,Type B Req'd

5-3
1 Std DI-3B Req'd
H= 6.9' L= 12'
Inv.= 1464.41'
Drop Inlet Silt Trap,Type B Req'd

5-4
1 Std DI-3B Req'd
H= 6.2' L= 12'
Inv.= 1465.07'
Drop Inlet Silt Trap,Type B Req'd

5-5
1 Std DI-3B Req'd
H= 8.3' L= 12'
Inv.= 1442.23'
Drop Inlet Silt Trap,Type B Req'd

5-6
1 Std DI-3B Req'd
H= 4.0' L= 12'
Inv.= 1446.55'
Drop Inlet Silt Trap,Type B Req'd

5-7
1 Std DI-3C Req'd
H= 7.2' L= 6' Inv.= 1461.82'
Remove Exist.Inlet and Extend
Exist.30" RCP 3'
Drop Inlet Silt Trap,Type B Req'd

5-1 — 5-3
283' - 18" Storm Sewer Pipe Req'd
Cover = 3.2'
Inv.(In) = 1474.28' Inv.(Out) = 1466.33'

5-2 — 5-1
87' - 15" Storm Sewer Pipe Req'd
Cover = 2.8'
Inv.(In) = 1477.20' Inv.(Out) = 1474.38'

5-3 — 5-5
337' - 18" Storm Sewer Pipe Req'd
Cover = 5.1'
Inv.(In) = 1464.41' Inv.(Out) = 1442.33'

5-4 — 5-3
73' - 15" Storm Sewer Pipe Req'd
Cover = 4.4'
Inv.(In) = 1465.07' Inv.(Out) = 1464.51'

5-5 — 6-1
196' - 18" Storm Sewer Pipe Req'd
Cover = 6.7'
Inv.(In) = 1442.23' Inv.(Out) = 1433.47'

5-6 — 5-5
73' - 15" Storm Sewer Pipe Req'd
Cover = 2.2'
Inv.(In) = 1446.55' Inv.(Out) = 1442.33'

PLAN SHEET 6

6-1
1 Std DI-3B Req'd
H= 8.8' L= 12'
Inv.= 1433.37'
Drop Inlet Silt Trap,Type B Req'd

6-2
1 Std DI-3B Req'd
H= 5.4' L= 12'
Inv.= 1437.00'
Drop Inlet Silt Trap,Type B Req'd

6-3
1 Std DI-3B Req'd
H= 7.4' L= 12'
Inv.= 1429.34'
Drop Inlet Silt Trap,Type B Req'd

6-4
1 Std DI-3B Req'd
H= 4.2' L= 12'
Inv.= 1432.57'
Drop Inlet Silt Trap,Type B Req'd

6-5
3.4' Std MH-1 or 2 Req'd
Inv.= 1438.25'
1 Std MH-1 Frame and Cover Req'd

6-6
1 Std DI-1 Req'd
H= 3.3'
Inv.= 1438.41'
Drop Inlet Silt Trap,Type A Req'd

6-7
2 Std DI-1 Req'd
H= 4.8' Inv.= 1438.20'
Cast In Place with no center wall.
Drop Inlet Silt Trap,Type A Req'd

6-8
Adjust Exist MH (-0.35')

6-9
Adjust Exist MH (-0.24')

6-10
9.5' Std MH-1 or 2 Req'd
Inv.= 1423.60'
1 Std MH-1 Frame and Cover Req'd
Remove Exist.JB

6-11
Adjust Exist MH (-0.24')

6-12
1 St'd DI-1 Req'd
H=7.6'.Inv.= 1425.60
Drop Inlet Silt Trap,Type A Req'd

6-13
4.5' Std MH-1 or 2 Req'd
Inv.= 1433.49'
Connect Exist.12" and Match Invert
1 Std MH-1 Frame and Cover Req'd

6-1 — 6-3
247' - 24" Storm Sewer Pipe Req'd
Cover = 5'
Inv.(In) = 1433.37' Inv.(Out) = 1429.44'

6-2 — 6-9
13' - 24" Storm Sewer Pipe Req'd
Cover = 4'
Inv.(In) = 1437.00' Inv.(Out) = 1435.98'

6-3 — 7-2
296' - 24" Storm Sewer Pipe Req'd
Cover = 4'
Inv.(In) = 1429.34' Inv.(Out) = 1424.25'

6-4 — 6-3
73' - 15" Storm Sewer Pipe Req'd
Cover = 2.3'
Inv.(In) = 1432.57' Inv.(Out) = 1431.84'

6-5 — 6-8
48' - 24" Storm Sewer Pipe Req'd
Cover = 2'
Inv.(In) = 1438.25' Inv.(Out) = 1437.09'

6-6 — 6-5
16' - 24" Storm Sewer Pipe Req'd
Cover = 2'
Inv.(In) = 1438.41' Inv.(Out) = 1438.33'

6-7 — 6-2
9' - 24" Storm Sewer Pipe Req'd
Cover = 3'
Inv.(In) = 1438.20' Inv.(Out) = 1437.00'

6-12 — 6-10
23' - 24" Storm Sewer Pipe Req'd
Cover = 6'
Inv.(In) = 1425.60' Inv.(Out) = 1423.70'

6-13 — 6-12
24' - 15" Storm Sewer Pipe Req'd
Cover=6'
Inv.(In)=1433.49' Inv.(Out)=1430.20'

PLAN SHEET 7

7-1
1 Std DI-3B Req'd
H= 4.0' L= 12'
Inv.= 1427.63'
Drop Inlet Silt Trap,Type B Req'd

7-2
1 Std DI-3B Req'd
H= 7.1' L= 12'
Inv.= 1424.15'
Drop Inlet Silt Trap,Type B Req'd

7-3
1 Std DI-3B Req'd
H= 5.7' L= 12'
Inv.= 1422.17'
Drop Inlet Silt Trap,Type B Req'd

7-4
1 Std DI-3B Req'd
H= 4.0' L= 12'
Inv.= 1423.91'
Drop Inlet Silt Trap,Type B Req'd

7-5
NOT USED

7-6
NOT USED

7-7
NOT USED

7-8
NOT USED

7-9
1 Std DI-1 Req'd
H= 5.5'
Inv.= 1422.47'
Drop Inlet Silt Trap,Type A Req'd

7-10
9.4' Std MH-1 or 2 Req'd
Inv.= 1421.84' (Match Exist.42" Inv.)
1 Std MH-1 Frame and Cover Req'd
49' 15" Storm Sewer Pipe Req'd
Cover =1'
Inv.(In)=1433.10 (Connect to Exist.Inlet)
Inv.(Out)=1421.94

7-11
1 Std DI-3B Req'd
H= 4.2' L= 12'
Inv.= 1425.28'
Drop Inlet Silt Trap,Type B Req'd

7-12
1 Std DI-3B Req'd
H= 4.1' L= 12'
Inv.= 1425.44'
Drop Inlet Silt Trap,Type B Req'd

7-13
Adjust Exist MH (+1.16')

7-14
Adjust Exist MH (+1.80')

7-15
Adjust Exist MH (+1.92')

7-16
Adjust Exist MH (+2.48')

7-1 — 7-2
77' - 15" Storm Sewer Pipe Req'd
Cover = 2.2'
Inv.(In) = 1427.63' Inv.(Out) = 1424.25'

7-2 — 7-3
330' - 30" Radial Storm Sewer Pipe Req'd
Cover = 3'
Inv.(In) = 1424.15' Inv.(Out) = 1422.27'
(1183' radius with open joints - using 8' pipe joint lengths with full bevel).Joints are to be opened a maximum of 25% of the spigot or tongue length

7-3 — 8-12
323' - 30" Radial Storm Sewer Pipe Req'd
Cover = 3'
Inv.(In) = 1422.17' Inv.(Out) = 1420.00'
(1007' radius with open joints - using 8' pipe joint lengths with full bevel).Joints are to be opened a maximum of 25% of the spigot or tongue length

7-4 — 7-3
73' - 15" Storm Sewer Pipe Req'd
Cover = 2.2'
Inv.(In) = 1423.91' Inv.(Out) = 1422.27'

7-9 — 7-16
39' - 15" Storm Sewer Pipe Req'd
Cover = 4.2'
Inv.(In) = 1422.47' Inv.(Out) = 1420.50'

7-11 — 7-9
26' - 15" Storm Sewer Pipe Req'd
Cover = 2'
Inv.(In) = 1425.28' Inv.(Out) = 1424.08'

7-12 — 7-11
32' - 15" Storm Sewer Pipe Req'd
Cover = 2'
Inv.(In) = 1425.44' Inv.(Out) = 1425.28'

PLAN SHEET 8

8-1
1 Std DI-3C Req'd
H= 4.7' L= 12'
Inv.= 1421.58'
Drop Inlet Silt Trap,Type B Req'd

8-2
1 Std DI-3C Req'd
H= 4.1' L= 12'
Inv.= 1421.99'
Drop Inlet Silt Trap,Type B Req'd

8-3
1 Std DI-3B Req'd
H= 7.8' L= 12'
Inv.= 1425.14'
Drop Inlet Silt Trap,Type B Req'd

8-4
1 Std DI-3B Req'd
H= 6.6' L= 12'
Inv.= 1426.34'
Drop Inlet Silt Trap,Type B Req'd

8-5
1 Std DI-3B Req'd
H= 6.1' L= 12'
Inv.= 1435.23'
Drop Inlet Silt Trap,Type B Req'd

8-6
1 Std DI-3B Req'd
H= 4.7' L= 12'
Inv.= 1436.85'
Drop Inlet Silt Trap,Type B Req'd

8-7
1 Std 30" ES-1 or 2 Req'd
Inv = 1419.00'
90 TN EC-1,Class 1 Req'd

8-8
10.45' St'd.SWM-1 (4x4) Req'd
Bottom Elev.= 1412.80'
3" Diameter Water Quality Orifice Req'd.Inv.= 1417.50'
See Sheet 19(3) for Details
165 TON EC-1,Class 1 Req'd for Spillway

8-9
1 Std 36" ES-1 Req'd
Inv.=1413.00'

8-10
1 Std DI-3C Req'd
H= 6.5' L= 12'
Inv.= 1419.57'
Drop Inlet Silt Trap,Type B Req'd

8-11
1 Std DI-3C Req'd
H= 4.1' L= 12'
Inv.= 1421.78'
Drop Inlet Silt Trap,Type B Req'd

8-12
1 Std DI-3C Req'd
H= 6.3' L= 12'
Inv.= 1419.90'
Drop Inlet Silt Trap,Type B Req'd

8-13
1 Std DI-3C Req'd
H= 4.1' L= 12'
Inv.= 1422.14'
Drop Inlet Silt Trap,Type B Req'd

8-14
1-Std JB-1,Type A Req'd
H = 12.2',W = 4'
Inv.= 1413.83' (Match Exist.)
St'd ST-1,SL-1 Req'd
1 Std MH-1 Frame and Cover Req'd

8-15
1 Std 60" ES-1 Req'd
Inv = 1413.00'
165 TN EC-1,Class 1 Req'd

8-16
1-Std JB-1,Type A Req'd
H = 16.2',W=4'
Inv.= 1414.18' (Match Exist.)
St'd ST-1,SL-1 Req'd
1 Std MH-1 Frame and Cover Req'd

8-17
1 Std DI-3B Req'd
H=7.2' L=12'
Inv.=1437.88'
Drop Inlet Silt Trap,Type B Req'd

Note: St'd ST-1 Req'd for All Structures with Depths of 4'-0" or greater.

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: N.T.S	
DRAWN BY	DATE
JJK	
CHECKED BY	DATE
MAY	
DESIGN BY	DATE
JJK	
TAX MAP	

RESERVOIR STREET

PROPOSED STORM SEWER

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 2B

PROPOSED STORM SEWER DESCRIPTIONS

8-1 / 8-10
44' - 24" Storm Sewer Pipe Req'd
Cover = 2'
Inv.(In) = 1421.58' Inv.(Out) = 1419.67'

8-2 / 8-11
55' - 15" Storm Sewer Pipe Req'd
Cover = 2.3'
Inv.(In) = 1421.99' Inv.(Out) = 1421.88'

8-3 / 8-1
234' - 18" Storm Sewer Pipe Req'd
Cover = 2.7'
Inv.(In) = 1425.14' Inv.(Out) = 1421.68'

8-4 / 8-3
73' - 15" Storm Sewer Pipe Req'd
Cover = 4.6'
Inv.(In) = 1426.34' Inv.(Out) = 1425.24'

8-5 / 8-3
192' - 18" Radial Storm Sewer Pipe Req'd
Cover = 4.5'
Inv.(In) = 1435.23' Inv.(Out) = 1425.24'
(838' radius with open joints - using 8' pipe joint lengths with full bevel).Joints are to be opened a maximum of 25% of the spigot or tongue length

8-6 / 8-5
75' - 15" Storm Sewer Pipe Req'd
Cover = 3.2'
Inv.(In) = 1436.85' Inv.(Out) = 1435.33'

8-8 / 8-9
134' - 36" Storm Sewer Pipe Req'd
Cover = 2'
Inv.(In) = 1416.00' Inv.(Out) = 1413.00'

8-10 / 8-7
34' - 30" Storm Sewer Pipe Req'd
Cover = 3.4'
Inv.(In) = 1419.57' Inv.(Out) = 1419.00'

8-11 / 8-10
81' - 15" Storm Sewer Pipe Req'd
Cover = 2.3'
Inv.(In) = 1421.78' Inv.(Out) = 1421.00'

8-12 / 8-10
46' - 30" Storm Sewer Pipe Req'd
Cover = 3.4'
Inv.(In) = 1419.90' Inv.(Out) = 1419.67'

8-13 / 8-11
46' - 15" Storm Sewer Pipe Req'd
Cover = 2.3'
Inv.(In) = 1422.14' Inv.(Out) = 1421.88'

8-14 / 8-15
46' - 60" Storm Sewer Pipe Req'd
Cover = 3.5'
Inv.(In) = 1413.83' Inv.(Out) = 1413.00'

8-17 / 8-5
125'-18" Storm Sewer Pipe Req'd
Cover=4.8'
Inv.(In)=1437.88' Inv.(Out)=1435.33'

PLAN SHEET 9

9-1
1 Std DI-3B Req'd
H= 7.4' L= 12'
Inv.= 1439.76'
Drop Inlet SIlt Trap,Type B Req'd

9-2
1 Std DI-2B Req'd
H= 6.9' L= 12'
Inv.= 1440.26'
Drop Inlet SIlt Trap,Type B Req'd

9-3
NOT USED

9-4
NOT USED

9-5
6.7' Std MH-1 or 2 Req'd
Inv.= 1441.11'
1 Std MH-1 Frame and Cover Req'd

9-6
1 Std DI-2B Req'd
H= 3.9' L= 12'
Inv.= 1443.36'
Drop Inlet SIlt Trap,Type B Req'd

9-7
1 Std DI-3B Req'd
H= 4.1' L= 12'
Inv.= 1443.15'
Drop Inlet SIlt Trap,Type B Req'd

9-8
1 Std DI-3B Req'd
H= 9.6' L= 12'
Inv.= 1441.40'
Drop Inlet SIlt Trap,Type B Req'd

9-9
1 Std DI-3C Req'd
H= 5.9' L= 6'
Inv.= 1446.13'
Drop Inlet SIlt Trap,Type B Req'd

9-10
1 Std DI-3C Req'd
H= 6.4' L= 6'
Inv.= 1445.79'
Drop Inlet SIlt Trap,Type B Req'd

9-11
1 Std DI-3B Req'd
H= 6.9' L= 12'
Inv.= 1445.45'
Drop Inlet SIlt Trap,Type B Req'd
Connect Exist.Pipe,Remove Exist.Inlet

9-12
NOT USED

9-13
NOT USED

9-14
5.7' Std MH-1 or 2 Req'd
Inv.= 1441.30'
1 Std MH-1 Frame and Cover Req'd

9-15
Special Design Retaining Wall Req'd
See Detail
Pipe Inv.= 1443.00'

9-1 / 8-17
91'-18" Storm Sewer Pipe Req'd
Cover=5.6'
Inv.(In)=1439.76 Inv.(Out)=1437.98'

9-2 / 9-1
73' - 15" Storm Sewer Pipe Req'd
Cover = 5.1'
Inv.(In) = 1440.26' Inv.(Out) = 1439.86'

9-5 / 9-2
48' - 15" Storm Sewer Pipe Req'd
Cover = 3.4'
Inv.(In) = 1441.11' Inv.(Out) = 1440.36'

9-6 / 9-7
29' - 15" Storm Sewer Pipe Req'd
Cover = 2.2'
Inv.(In) = 1443.36' Inv.(Out) = 1443.25'

9-9 / 9-10
69' - 15" Storm Sewer Pipe Req'd
Cover = 4.1'
Inv.(In) = 1446.13' Inv.(Out) = 1445.89'

9-10 / 9-11
66' - 15" Storm Sewer Pipe Req'd
Cover = 4.7'
Inv.(In) = 1445.79' Inv.(Out) = 1445.55'

9-11 / 10-1
142' - 18" Storm Sewer Pipe Req'd
Cover = 4.9'
Inv.(In) = 1445.45' Inv.(Out) = 1444.84'

9-7 / 9-14
18' - 15" Storm Sewer Pipe Req'd
Cover = 1.4'
Inv.(In) = 1443.15' Inv.(Out) = 1441.40'

9-14 / 9-5
33' - 15" Storm Sewer Pipe Req'd
Cover = 3.1'
Inv.(In) = 1441.30' Inv.(Out) = 1441.21'

9-15 / 9-5
12' - 23"x14" Storm Sewer Pipe Req'd
Cover = 2.3'
Inv.(In) = 1443.00' Inv.(Out) = 1441.21'

PLAN SHEET 9B

9B-1
1 Std DI-3B Req'd
H= 5.6' L= 12'
Inv.= 1435.68'
Extend Exist.15" RCP 2'
Drop Inlet SIlt Trap,Type B Req'd

9B-2
1 Std DI-3B Req'd
H= 5.8' L= 12'
Inv.= 1436.65'
Extend Exist.15" RCP 2'
Drop Inlet SIlt Trap,Type B Req'd

9B-3
7.5' Std MH-1 or 2 Req'd
Inv.= 1430.83'
1 Std MH-1 Frame and Cover Req'd

9B-1 / 9B-3
44' - 15" Storm Sewer Pipe Req'd
Cover = 4'
Inv.(In) = 1435.68' Inv.(Out) = 1430.83'

PLAN SHEET 10

10-1
1 Std DI-3B Req'd
H= 6.2' L= 12'
Inv.= 1444.74'
Drop Inlet SIlt Trap,Type B Req'd

10-2
1 Std DI-3B Req'd
H= 6.4' L= 12'
Inv.= 1443.23'
Drop Inlet SIlt Trap,Type B Req'd

10-3
1 Std DI-3B Req'd
H= 5.9' L= 12'
Inv.= 1444.20'
Drop Inlet SIlt Trap,Type B Req'd

10-4
1 Std DI-2B Req'd
H= 7.3' L= 12'
Inv.= 1439.57'
Drop Inlet SIlt Trap,Type B Req'd

10-5
1 Std DI-2B Req'd
H= 4.7' L= 12'
Inv.= 1431.94'
Drop Inlet SIlt Trap,Type B Req'd

10-6
1 Std DI-3B Req'd
H= 4.0' L= 12'
Inv.= 1432.69'
Drop Inlet SIlt Trap,Type B Req'd

10-7
NOT USED

10-8
1 Std DI-3B Req'd
H= 4.7' L= 12'
Inv.= 1421.97'
Drop Inlet SIlt Trap,Type B Req'd

10-9
1 Std DI-3B Req'd
H= 4.0' L= 12'
Inv.= 1423.33' (Match Exist.)
Drop Inlet SIlt Trap,Type B Req'd
Connect Exist.Pipe,Remove Exist.Inlet

10-10
NOT USED

10-11
1 Std DI-2B Req'd
H= 3.0' (Below MIn.), L= 12'
Inv.= 1428.30' (Match Exist.)
Drop Inlet SIlt Trap,Type B Req'd

10-12
1 Std JB-1,Type C Req'd
H= 3',W=2'
Inv.= 1428.18' (Match Exist.)
Connect Exist.Pipes
1 St'd MH-1 Frame and Cover Req'd

10-1 / 10-2
81' - 24" Storm Sewer Pipe Req'd
Cover = 3.6'
Inv.(In) = 1444.74' Inv.(Out) = 1443.33'

10-2 / 10-4
119' - 24" Storm Sewer Pipe Req'd
Cover = 4.1'
Inv.(In) = 1443.23' Inv.(Out) = 1439.67'

10-3 / 10-2
74' - 15" Storm Sewer Pipe Req'd
Cover = 4.1'
Inv.(In) = 1444.20' Inv.(Out) = 1443.33'

10-4 / 10-5
201' - 24" Storm Sewer Pipe Req'd
Cover = 2.2'
Inv.(In) = 1439.57' Inv.(Out) = 1432.04'

10-5 / 10-8
184' - 24" Storm Sewer Pipe Req'd
Cover = 2.2'
Inv.(In) = 1431.95' Inv.(Out) = 1422.07'

10-6 / 10-5
60' - 15" Storm Sewer Pipe Req'd
Cover = 2.2'
Inv.(In) = 1432.70' Inv.(Out) = 1432.39'

10-8 / 11-1
134' - 24" Storm Sewer Pipe Req'd
Cover = 2.2'
Inv.(In) = 1421.97' Inv.(Out) = 1416.72'

Ex.14A / 10-2
21' - 18" Storm Sewer Pipe Req'd
Cover = 4'
Inv.(In) = 1443.54' Inv.(Out) = 1443.33'

10-11 / 10-12
5' - 15" Storm Sewer Pipe Req'd
Cover = 1'
Inv.(In) = 1428.30' Inv.(Out) = 1428.18'

PLAN SHEET 11

11-1
1 Std DI-3B Req'd
H= 4.8' L= 12'
Inv.= 1416.62'
Drop Inlet SIlt Trap,Type B Req'd

11-2
5.0' Std MH-1 or 2 Req'd
Inv.= 1416.31'
1 Std MH-1 Frame and Cover Req'd

11-3
1 Std DI-3C Req'd
H= 2.5'(Below MIn.) L= 6'
Inv.= 1415.85'
Drop Inlet SIlt Trap,Type B Req'd

11-4
2.7' Std MH-1 or 2 Req'd
Inv.= 1415.51'
Connect to Exist.Pipe
1 Std MH-1 Frame and Cover Req'd

11-5
1 Std DI-3C Req'd
H= 2.6' (Below MIn.) L= 6'
Inv.= 1415.81'
Drop Inlet SIlt Trap,Type B Req'd

11-6
1 Std DI-3C Req'd
H= 4.1' L= 6'
Inv.= 1413.62'
Drop Inlet SIlt Trap,Type B Req'd

11-7
3.9' Std MH-1 or 2 Req'd
Inv.= 1413.25'
1 Std MH-1 Frame and Cover Req'd

11-8
1 Std DI-3C Req'd
H= 4.0' L=6'
Inv.= 1416.36'
Extend Exist 15" RCP 2'
Drop Inlet SIlt Trap,Type B Req'd

11-9
1 Std DI-3A Req'd
H= 4.2'
Inv.= 1411.84'
Drop Inlet SIlt Trap,Type B Req'd

11-10
NOT USED

11-11
NOT USED

11-12
4.1' Std MH-1 or 2 Req'd
Inv.= 1413.71'
1 Std MH-1 Frame and Cover Req'd
Connect Exist.Pipe,Remove Exist.Inlet

11-13
3.4' Std MH-1 or 2 Req'd
Inv.= 1414.95'
1 Std MH-1 Frame and Cover Req'd
Connect Exist.Pipe,Remove Exist.Inlet

11-14
1 Std DI-3B Req'd
H= 3.8' (Below MIn.) L= 12'
Inv.= 1417.84'
Drop Inlet SIlt Trap,Type B Req'd
Connect Exist.Pipe,Remove Exist.Inlet

11-15
Adjust Exist MH (-0.60')

11-1 / 11-2
12' - 24" Storm Sewer Pipe Req'd
Cover = 2.2'
Inv.(In) = 1416.62' Inv.(Out) = 1416.41'

11-2 / 11-13
64' - 24" Storm Sewer Pipe Req'd
Cover = 1.4'
Inv.(In) = 1416.31' Inv.(Out) = 1415.05'

11-3 / 11-4
8' - 15" Storm Sewer Pipe Req'd
Cover = 1.3'
Inv.(In) = 1415.85' Inv.(Out) = 1415.51'

11-5 / 11-4
60' - 15" Storm Sewer Pipe Req'd
Cover = 1.3'
Inv.(In) = 1415.81' Inv.(Out) = 1415.51'

11-6 / 11-7
6' - 15" Storm Sewer Pipe Req'd
Cover = 2'
Inv.(In) = 1413.62' Inv.(Out) = 1413.25'

11-9 / 11-15
18' - 15" Storm Sewer Pipe Req'd
Cover = 2'
Inv.(In) = 1411.84' Inv.(Out) = 1411.74'

PLAN SHEET 11B

11B-1
1 Std DI-3B Req'd
H= 2.8' (Below MIn.) L= 12'
Inv.= 1418.00'
Drop Inlet SIlt Trap,Type B Req'd

11B-2
3.2' Std MH-1 or 2 Req'd
Inv.= 1417.45'
Connect Exist.Pipe,Remove Exist.Inlet
1 Std MH-1 Frame and Cover Req'd

11B-3
1 Std DI-3B Req'd
H= 4.7' L= 12'
Inv.= 1416.57'
Connect Exist.Pipe
Drop Inlet SIlt Trap,Type B Req'd

11B-4
4.4' Std MH-1 or 2 Req'd
Inv.= 1416.69'
Connect Exist.Pipe,Remove Exist.Inlet
1 Std MH-1 Frame and Cover Req'd

11B-5
5.9' Std MH-1 or 2 Req'd
Inv.= 1422.65'
Connect Exist.Pipe,Remove Exist.Inlet
1 Std MH-1 Frame and Cover Req'd

11B-6
1 Std DI-3B Req'd
H= 5.2' L= 12'
Inv.= 1424.02'
Connect Exist.Pipe
Drop Inlet SIlt Trap,Type B Req'd

11B-7
1 Std DI-3B Req'd
H= 5.0' L= 12'
Inv.= 1432.96'
Drop Inlet SIlt Trap,Type B Req'd

11B-8
5.7' Std MH-1 or 2 Req'd
Inv.= 1432.00'
1 Std MH-1 Frame and Cover Req'd

11B-9
5.6' Std MH-1 or 2 Req'd
Inv.= 1419.91'
Connect Exist.Pipe,Remove Exist.Inlet
1 Std MH-1 Frame and Cover Req'd

11B-10
1 Std DI-3B Req'd
H= 5.2' L= 12'
Inv.= 1420.50'
Drop Inlet SIlt Trap,Type B Req'd

11B-11
6.2' Std MH-1 or 2 Req'd
Inv.= 1425.50'
Connect Exist.Pipe,Remove Exist.Inlet
1 Std MH-1 Frame and Cover Req'd

11B-12
1 Std DI-3B Req'd
H= 5.9' L= 12'
Inv.= 1426.00'
Drop Inlet SIlt Trap,Type B Req'd

11B-13
1 Std DI-3B Req'd
H= 4.0' L= 12'
Inv.= 1434.18'
Drop Inlet SIlt Trap,Type B Req'd

11B-14
6.9' Std MH-1 or 2 Req'd
Inv.= 1429.61'
Connect Exist.Pipe,Remove Exist.Inlet
1 Std MH-1 Frame and Cover Req'd

11B-15
3' Std MH-1 or 2 Req'd
Inv.= 1417.75'
1 Std MH-1 Frame and Cover Req'd

11B-1 / 11B-15
5' - 15" Storm Sewer Pipe Req'd
Cover = 1.0'
Inv.(In) = 1418.00' Inv.(Out) = 1417.85'

11B-15 / 11B-2
11' - 15" Storm Sewer Pipe Req'd
Cover = 1.0'
Inv.(In) = 1417.75' Inv.(Out) = 1417.55'

11B-4 / 11B-3
9' - 24" Storm Sewer Pipe Req'd
Cover = 3.1'
Inv.(In) = 1416.69' Inv.(Out) = 1416.57'

11B-6 / 11B-5
16' - 15" Storm Sewer Pipe Req'd
Cover = 3.9'
Inv.(In) = 1424.02' Inv.(Out) = 1422.75'

11B-7 / 11B-8
10' - 15" Storm Sewer Pipe Req'd
Cover = 3.7'
Inv.(In) = 1432.96' Inv.(Out) = 1432.10'

11B-8 / 11B-14
28' - 15" Storm Sewer Pipe Req'd
Cover = 4.4'
Inv.(In) = 1432.00' Inv.(Out) = 1429.71'

11B-10 / 11B-9
10' - 15" Storm Sewer Pipe Req'd
Cover = 3.4'
Inv.(In) = 1420.50' Inv.(Out) = 1420.01'

11B-12 / 11B-11
10' - 15" Storm Sewer Pipe Req'd
Cover = 4.1'
Inv.(In) = 1426.00' Inv.(Out) = 1425.60'

11B-13 / Ex.77
50' - 15" Storm Sewer Pipe Req'd
Cover = 2.2'
Inv.(In) = 1434.18' Inv.(Out) = 1429.56'

Note: St'd ST-1 Req'd for All Structures with Depths of 4'-0" or greater.

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE:	N.T.S
DRAWN BY	DATE
JJK	
CHECKED BY	DATE
MAY	
DESIGN BY	DATE
JJK	
TAX MAP	

RESERVOIR STREET

PROPOSED STORM

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 2B1

PROPOSED STORM SEWER SUMMARY

STRUCTURE NO.	STRUCTURE NO.	DESIGN HEIGHT OF COVER	STORM SEWER PIPE						CONCRETE PIPE	ELLIPTICAL CONCRETE PIPE	HEIGHT OF STR	DROP INLETS								DI-1	Adjust MH-1 Top	MANHOLE MH 1 OR 2	STR. STEEL JB-1	SWM-1	FRAME & COVER MH 1	End Section			Class A3 Concrete	EROSION CONTROL STONE EC-1	REMARKS
			PIPE DIAMETER						PIPE DIAMETER	PIPE DIA		DI-2B	DI-3A	DI-3B		DI-3C	DI-3C	DI-3BB								ES-1 or 2					
												LENGTH																				
												12'	2.5'	6'	8'	12'	6'	12'	12'							30"	36"	60"				
		FT.	15"	18"	24"	30"	36"	60"	15"	23"X14"	FT.	EA	EA	EA	EA	EA	EA	EA	EA	EA	L.F.	L.F.	LB	LF	EA	EA	EA	EA	CY	TON	
	3-1		-	-	-	-	-	-	-	-	6.1				1																
	3-2		-	-	-	-	-	-	-	-	6.9					1															
	3-3		-	-	-	-	-	-	-	-	9.6								1												
	3-4		-	-	-	-	-	-	-	-	6									1											
3-1	3-2	4	91	-	-	-	-	-	-	-																					
3-2	4-1	4	174	-	-	-	-	-	-	-																					
3-3	3-1	2	132	-	-	-	-	-	-	-																					
	3-5		-	-	-	-	-	-	-	-	6									1											
3-4	3-5	4	68	-	-	-	-	-	-	-																					
3-5	4-7	4	109	-	-	-	-	-	-	-																					
			-	-	-	-	-	-	-	-																					
	4-1		-	-	-	-	-	-	-	-	7.5			1																	
	4-2		-	-	-	-	-	-	-	-	5			1																	
	4-3		-	-	-	-	-	-	-	-	7					1															
	4-4		-	-	-	-	-	-	-	-	4					1															
	4-5		-	-	-	-	-	-	-	-	6.2					1															
	4-6		-	-	-	-	-	-	-	-	4					1															
	4-7		-	-	-	-	-	-	-	-												6.4			1						
4-1	4-3	5	-	263	-	-	-	-	-	-																					
4-2	4-1	3	73	-	-	-	-	-	-	-																					
4-3	4-5	5	-	106	-	-	-	-	-	-																					
4-4	4-6	3	207		-	-	-	-	-	-																					
4-5	5-1	5	-	283	-	-	-	-	-	-																					
4-6	5-2	3	167		-	-	-	-	-	-																					
4-7	Ex.70	1	40	-		-	-	-	-	-																					
			-	-	-	-	-	-	-	-																					
	5-1		-	-	-	-	-	-	-	-	7.4					1															
	5-2		-	-	-	-	-	-	-	-	4.6					1															
	5-3		-	-	-	-	-	-	-	-	6.9					1															
	5-4		-	-	-	-	-	-	-	-	6.2					1															
	5-5		-	-	-	-	-	-	-	-	8.3					1															
	5-6		-	-	-	-	-	-	-	-	4					1															
	5-7		-	-	-	-	-	-	-	-	7.2						1														
5-1	5-3	3		283	-	-	-	-	-	-																					
5-2	5-1	3	87	-	-	-	-	-	-	-																					
5-3	5-5	5		337	-	-	-	-	-	-																					
5-4	5-3	4	73	-	-	-	-	-	-	-																					
5-5	6-1	7	-	196	-	-	-	-	-	-																					
5-6	5-5	2	73	-	-	-	-	-	-	-																					
			-	-	-	-	-	-	-	-																					
	6-1		-	-	-	-	-	-	-	-	8.8					1															
	6-2		-	-	-	-	-	-	-	-	5.4					1															
	6-3		-	-	-	-	-	-	-	-	7.4					1															
	6-4		-	-	-	-	-	-	-	-	4.2					1															
	6-5		-	-	-	-	-	-	-	-												3.4			1						
	6-6		-	-	-	-	-	-	-	-	3.3									1											
	6-7										4.8									2											Cast in place with no center wall
	6-8																				0.35										
	6-9																				0.24										
	6-10																					9.5			1						
	6-11																				0.24										
	6-12										7.6									1											
	6-13																					4.5			1						
6-1	6-3	5			247																										
6-2	6-9	4			13																										
6-3	7-2	4			296																										
6-4	6-3	2	73																												
6-5	6-8	2			48																										
6-6	6-5	2			16																										
6-7	6-2	3			9																										
6-12	6-10	6			23																										
6-13	6-12	6	24																												
	7-1										4					1															
	7-2										7.1					1															
	7-3										5.7					1															
	7-4										4					1															
	7-9										5.5									1											
	7-10	1	49																			9.4			1						
	7-11										4.2					1															
	7-12										4.1					1															
	7-13																				1.16										
	7-14																				1.8										
	7-15																				1.92										
	7-16																				2.48										

STRUCTURE NO.	STRUCTURE NO.	DESIGN HEIGHT OF COVER	STORM SEWER PIPE						CONCRETE PIPE	ELLIPTICAL CONCRETE PIPE	HEIGHT OF STR	DROP INLETS								DI-1	Adjust MH-1 Top	MANHOLE MH 1 OR 2	STR. STEEL JB-1	SWM-1	FRAME & COVER MH 1	End Section			Class A3 Concrete	EROSION CONTROL STONE EC-1	REMARKS
			PIPE DIAMETER						PIPE DIAMETER	PIPE DIA		DI-2B	DI-3A	DI-3B		DI-3C	DI-3C	DI-3BB								ES-1 or 2					
												LENGTH																				
												12'	2.5'	6'	8'	12'	6'	12'	12'							30"	36"	60"				
		FT.	15"	18"	24"	30"	36"	60"	15"	23"X14"	FT.	EA	EA	EA	EA	EA	EA	EA	EA	EA	L.F.	L.F.	LB	LF	EA	EA	EA	EA	CY	TON	
7-1	7-2	2	77																												
7-2	7-3	3				330																									
7-3	8-12	3				323																									
7-4	7-3	2	73																												
7-9	7-16	4	39																												
7-11	7-9	2	26																												
7-12	7-11	2	32																												
	8-1										4.7						1														
	8-2										4.1						1														
	8-3										7.8					1															
	8-4										6.6					1															
	8-5										6.1					1															
	8-6										4.7					1															
	8-7																								1					90	
	8-8										6.5												8								
	8-9																									1					
	8-10										6.5						1														
	8-11										4.1						1														
	8-12										6.3						1														
	8-13										4.1						1														
	8-14										12.2												2064		1				10.5		SL-1 Req'd
	8-15																											1		165	
	8-16										16.2												2064		1				11.9		SL-1 Req'd
	8-17										7.2																				
8-1	8-10	2			44																										
8-2	8-11	2	55																												
8-3	8-1	3		234																											
8-4	8-3	5	73																												
8-5	8-3	5		192																											
8-6	8-5	3	75																												
8-8	8-9	2					134																						42		Concrete Cradle Req'd
8-10	8-7	3				34																									
8-11	8-10	2	81																												
8-12	8-10	3				46																									
8-13	8-11	2	46																												
8-14	8-15	4						46																							
8-17	8-5	5		125																											
	9-1										7.4					1															
	9-2										6.9	1																			
	9-5																					6.7			1						
	9-6										3.9	1																			
	9-7										4.1					1															
	9-8										9.6					1															
	9-9										5.9						1														
	9-10										6.4						1														
	9-11										6.9					1															
	9-14																					5.7			1						
	9-15																														Special Design Ret. Wall (See Detail)
9-1	8-17	6		91																											
9-2	9-1	5	73																												
9-5	9-2	3	48																												
9-6	9-7	2	29																												
9-9	9-10	4	69																												
9-10	9-11	5	67																												
9-11	10-1	5		142																											
9-7	9-14	1	18																												
9-14	9-5	3	33																												
9-15	9-5	2								12																					

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = NTS
DRAWN BY DATE
CHECKED BY DATE
DESIGN BY DATE
TAX MAP

RESERVOIR STREET

DRAINAGE SUMMARY

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E. MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 2B(2)

PROPOSED DRAINAGE & UNDERDRAIN SUMMARY

STRUCTURE NO.	STRUCTURE NO.	DESIGN HEIGHT OF COVER	STORM SEWER PIPE						CONCRETE PIPE	ELLIPTICAL CONCRETE PIPE	HEIGHT OF STR	DROP INLETS								DI-1	Adjust MH-1 Top	MANHOLE MH 1 OR 2	STR. STEEL JB-1	SWM-1	FRAME & COVER MH 1	End Section			Class A3 Concrete	EROSION CONTROL STONE EC-1	REMARKS
			PIPE DIAMETER						PIPE DIAMETER	PIPE DIA		DI-2B	DI-3A	DI-3B		DI-3C	DI-3C	DI-3BB								ES-1 or 2					
												LENGTH																				
												12'	2.5'	6'	8'	12'	6'	12'	12'							30"	36"	60"				
		FT.	15"	18"	24"	30"	36"	60"	15"	23"X14"	FT.	EA	EA	EA	EA	EA	EA	EA	EA	EA	L.F.	L.F.	LB	LF	EA	EA	EA	EA	CY	TON	
	9B-1	4							2		5.6					1																
	9B-2	4							2		5.8					1																
	9B-3																					7.5			1							
9B-1	9B-3	4	44																													
	10-1										6.2					1																
	10-2										6.5					1																
	10-3										5.9					1																
	10-4										7.3	1																				
	10-5										4.7	1																				
	10-6										4					1																
	10-8										4.7					1																
	10-9										4					1																
	10-11										3	1																				
	10-12										3												1294		1				4.9			
10-1	10-2	4			81																											
10-2	10-4	4			119																											
10-3	10-2	4	74																													
10-4	10-5	2			201																											
10-5	10-8	2			184																											
10-6	10-5	2	60																													
10-8	11-1	2			134																											
Ex.14A	10-2	4		21																												
10-11	10-12	1	5																													
	11-1										4.8					1																
	11-2										5											5			1							
	11-3										2.5						1															
	11-4																					2.7			1							
	11-5										2.6						1															
	11-6										4.1						1															
	11-7																					3.9			1							
	11-8	2							2		4						1															
	11-9										4.2		1																			
	11-12																					4.1			1							
	11-13																					3.4			1							
	11-14										3.8					1																
	11-15																					0.6										(Adjust Down)
11-1	11-2	2			12																											
11-2	11-13	1			64																											
11-3	11-4	1	8																													
11-5	11-4	1	60																													
11-6	11-7	2	6																													
11-9	11-15	2	18																													
	11B-1										2.8					1																
	11B-2																					3.2			1							
	11B-3										4.7					1																
	11B-4																					4.4			1							
	11B-5																					5.9			1							
	11B-6										5.2					1																
	11B-7										5					1																
	11B-8																					5.7			1							
	11B-9																					5.6			1							
	11B-10										5.2					1																
	11B-11																					6.2			1							
	11B-12										5.9					1																
	11B-13										4					1																
	11B-14																					6.9			1							
	11B-15																					3			1							
11B-1	11B-15	1	5																													
11B-15	11B-2	1	11																													
11B-4	11B-3	3			9																											
11B-6	11B-5	4	16																													
11B-7	11B-8	4	10																													
11B-8	11B-14	4	28																													
11B-10	11B-9	3	10																													
11B-12	11B-11	4	10																													
11B-13	Ex.77	2	50																													
PROJECT TOTALS			2769	2273	1500	733	134	46	6	12	462	5	1	2	1	46	7	6	1	7	8.19	113.7	5422	8	24	1	1	1	69.3	255	

Street	Begin Station	End Station	Travelway R/L	UD-4 Feet	CD-1 Feet	CD-2 Feet	Outlet Pipe	Remarks
RESERVOIR	10+00	11+52	R	148				Tie to Structure 3-1
	10+00	12+03	L	211				Tie to Structure 3-2
	11+54	13+92	R	243				Tie to Structure 4-2
	12+05	13+92	L	181				Tie to Structure 4-1
	13+94	16+86	R	304				Tie to Structure 4-4
	13+94	16+62	L	259				Tie to Structure 4-3
	15+07	15+42	R		48			
	15+08	15+41	L/R		47			
	16+89	18+88	R	207				Tie to Structure 4-6
	16+65	17+76	L	108				Tie to Structure 4-5
	18+90	20+54	R	167				Tie to Structure 5-2
	17+78	20+67	L	284				Tie to Structure 5-1
	20+56	12+61	R	260				End Station on Stonewall Dr./ Tie to Structure 5-7
	20+69	23+51	L	284				Tie to Structure 5-3
	22+00	23+51	R	152				Tie to Structure 5-4
	23+53	26+89	R	336				Tie to Structure 5-6
	23+53	26+89	L	337				Tie to Structure 5-5
	26+92	28+80	R	189				Tie to Structure 6-2
	26+92	28+88	L	197				Tie to Structure 6-1
	28+82	31+37	R	256				Tie to Structure 6-4
	28+90	11+11	L	109				End Station on Ridgeville / Tie to Structure 6-1
	11+09	31+37	L	229				Begin Station on Ridgeville / Tie to Structure 6-3
	31+39	34+12	R	272				Tie to Structure 7-1
	31+39	34+35	L	295				Tie to Structure 7-2
	34+14	37+74	R	369				Tie to Structure 7-4
	34+47	34+68	L	23				Tie to Structure 7-2
	35+63	37+77	L	208				Tie to Structure 7-3
	37+77	41+20	R	354				Tie to Structure 8-13
	37+80	41+19	L	329				Tie to Structure 8-12
	41+22	41+66	R	47				Tie to Structure 8-11
	41+22	41+69	L	47				Tie to Structure 8-10
	41+76	42+27	R	55				Tie to Structure 8-11
	41+78		L/R			81		Tie to Structures 8-10 & 8-11
	41+80	42+28	L	48				Tie to Structure 8-10
	42+31	44+90	R	57				Tie to Structure 8-2
	42+30	44+59	L	239				Tie to Structure 8-1
	44+52	44+94	L		58			Tie to Structure 8-3
	44+52	44+82	R		41			Tie to Structure 8-4
	44+62	46+46	L	193				Tie to Structure 8-3
	44+62	46+46	R	177				Tie to Structure 8-4
	46+48	47+67	L	125				Tie to Structure 8-5
	47+70	48+59	L	93				Tie to Structure 8-17
	46+49	48+59	R	192				Tie to Structure 8-6
	48+60	51+52	R	295				Tie to Structure 9-2
	51+60	13+05	R	306			20	End Station on Neff Ave. East / Connect to Outlet Pipe
	48+60	12+87	R	379				End Station on Neff Ave. West
	12+90	55+44	R	309				Begin Station on Neff Ave. East / Connect to Outlet Pipe
	53+49	55+46	R	198				Tie to Structure 10-3
	10+86	53+19	L	77				Start Station on Neff Ave. West / Tie to Structure 9-11
	53+23	54+63	L	141				Tie to Structure 10-1
	54+66	55+46	L	83				Tie to Structure 10-2
	55+50	58+69	R	321				Tie to Structure 10-6
	56+68	58+71	L	206				Tie to Structure 10-5
	58+72	60+42	R	170				Tie to Structure 10-9
	58+74	60+57	L	187				Tie to Structure 10-8
	60+46	61+90	R	145				Tie to Structure 11-14
	60+61	61+94	L	134				Tie to Structure 11-1
	61+96	62+44	R	50				Tie to Structure 11-8
	61+98	11+14	L	115				End Station on Unv. Blvd. West / Tie to Structure 11-3
	63+73	65+08	R	103				
	11+14	65+21	L	279				Begin Station on Unv. Blvd. West / Tie to Structure
Neff. Ave. West	10+88	17+42	R	312				Tie to Structure 9-10
	14+02	17+41	R	341				Tie to Structure 9B-2
	10+88	12+70	L	182				Tie to Structure 9-9
	13+85	17+44	L	355				Tie to Structure 9B-1
Costco	10+32	12+73	R	270				Tie to Structure 10-4
Unv.Blvd. East	10+33	11+42	R	114				Tie to Structure 11-8
	10+47	11+44	L	124				Tie to Structure 11-6
Unv.Blvd. West	11+25	13+33	R	209				Tie to Structure 11-5
	11+25	13+15	L	190				Tie to Structure 11-3
	13+19	14+54	L	135				Tie to Structure 11B-1
	13+38	15+35	R	198				Tie to Structure 11B-4
	14+58	15+97	L	140				Tie to Structure 11B-10
	15+40	17+33	R	194				Tie to Structure 11B-5
	16+02	17+19	L	118				Tie to Structure 11B-12
	17+22	18+77	L	161				Tie to Structure 11B-13
	17+37	18+25	R	134				Tie to Structure 11B-7
	Project Totals			**14259**	**194**	**81**	**20**	

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = NTS
DRAWN BY DATE
CHECKED BY DATE
DESIGN BY DATE
TAX MAP

RESERVOIR STREET

UNDERDRAIN SUMMARY

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 2B(3)

PAVEMENT SUMMARY

			SURFACE		BASE COURSE				SUBBASE				RESURFACING		ENTRANCES						
PLAN SHEET NO.	LOCATION	STATION TO STATION	AREA	ASPH. CONC. TYPE SM-12.5D (220LBS /S.Y.)	AREA	ASPH. CONC. BASE COURSE BM-25.0A (8" DEPTH)		ASPH. CONC. BASE COURSE BM-25.0A (3" DEPTH)	AREA	AGGR. BASE MAT'L TYPE 1 21B (8" DEPTH)		AGGR. BASE MAT'L TYPE 1 21B (VARIES DEPTH)	AREA	OVERLAY ASPH. CONC. TYPE SM-12.5D (220LBS /S.Y.)	AREA	AGGR. BASE MAT'L TYPE 1 21B (6" DEPTH)	AGGR. BASE MAT'L TYPE 1 21B (4" DEPTH)		ASPH. CONC. BASE COURSE BM-25.0A (4" DEPTH)	ASPH. CONC. TYPE SM-9.5AL (220LBS /S.Y.)	CONCRETE ENTR. 7"
			S.Y.	TON	S.Y.	TON		TON	S.Y.	TON	TON	TON	S.Y.	TON	S.Y.	TON	TON	TON	TON	TON	S.Y.
3	RESERVOIR STREET	10+00 TO 13+00	2171	239	2171	955	-	-	2171	1016	-	100	-	-	-	-	-	-	-	-	-
	TYPE IV ENTR. CG-9D	10+86 RT	-	-	-	-	-	-	-	-	-	-	-	-	150	53	-	-	33	17	-
	TYPE III ENTR. CG-11	11+88 RT	-	-	-	-	-	-	-	-	-	-	-	-	104	37	-	-	-	11	-
	TYPE III ENTR. CG-9D	12+31 LT	-	-	-	-	-	-	-	-	-	-	-	-	138	48	-	-	-	15	-
	TYPE III ENTR. CG-9D	13+05 LT	-	-	-	-	-	-	-	-	-	-	-	-	71	25	-	-	-	8	-
4	RESERVOIR STREET	13+00 TO 20+00	4835	532	4835	2127	-	-	4835	2262	-	279	-	-	-	-	-	-	-	-	-
	TYPE III ENTR. CG-9D	13+05 LT	-	-	-	-	-	-	-	-	-	-	-	-	130	46	-	-	-	14	-
	TYPE III ENTR. CG-11	13+36 RT	-	-	-	-	-	-	-	-	-	-	-	-	42	15	-	-	-	5	-
	TYPE II ENTR. CG-9D	13+67 RT	-	-	-	-	-	-	-	-	-	-	-	-	50	-	18	-	-	-	50
	TYPE III ENTR. CG-9D	14+47.50 RT	-	-	-	-	-	-	-	-	-	-	-	-	44	15	-	-	-	5	-
	TYPE IV ENTR. CG-11	14+59 LT	-	-	-	-	-	-	-	-	-	-	-	-	103	36	-	-	23	11	-
	TYPE III ENTR. CG-9D	15+58.50 RT	-	-	-	-	-	-	-	-	-	-	-	-	15	5	-	-	-	2	-
	TYPE III ENTR. CG-9D	16+98 LT	-	-	-	-	-	-	-	-	-	-	-	-	26	9	-	-	-	3	-
	TYPE IV ENTR. CG-11	18+37 LT	-	-	-	-	-	-	-	-	-	-	108	12	139	49	-	-	31	15	-
	TYPE III ENTR. CG-9D	19+67 LT	-	-	-	-	-	-	-	-	-	-	-	-	5	2	-	-	-	1	-
5	RESERVOIR STREET	20+00 TO 27+00	3521	399	3521	1599	-	231	3521	1699	-	272	1403	154	-	-	-	-	-	-	-
	STONEWALL DRIVE	10+39.97 TO 13+50	739	81	739	-	-	122	739	346	-	75	523	58	-	-	-	-	-	-	-
	TYPE III ENTR. CG-9D	21+06 LT	-	-	-	-	-	-	-	-	-	-	-	-	43	15	-	-	-	5	-
	TYPE III ENTR. CG-9B	12+15 RT	-	-	-	-	-	-	-	-	-	-	-	-	107	38	-	-	-	12	-
	TYPE II ENTR. CG-11	11+30 LT	-	-	-	-	-	-	-	-	-	-	-	-	55	19	-	-	12	6	-
	TYPE IV ENTR. CG-11	12+66 LT	-	-	-	-	-	-	-	-	-	-	203	22	-	-	-	-	-	-	-
	TYPE III ENTR. CG-9B	13+14 RT	-	-	-	-	-	-	-	-	-	-	-	-	68	24	-	-	-	7	-
	TYPE IV ENTR. CG-11	24+09 LT	-	-	-	-	-	-	-	-	-	-	-	-	226	79	-	-	50	25	-

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = NTS
DRAWN BY DATE
CHECKED BY DATE
DESIGN BY DATE
TAX MAP

RESERVOIR STREET

PAVEMENT SUMMARY

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET
2D(1)

PAVEMENT SUMMARY

			SURFACE		BASE COURSE				SUBBASE				RESURFACING		ENTRANCES						
PLAN SHEET NO.	LOCATION	STATION TO STATION	AREA	ASPH. CONC. TYPE SM-12.5D (220LBS /S.Y.)	AREA	ASPH. CONC. BASE COURSE BM-25.0A (8" DEPTH)		ASPH. CONC. BASE COURSE BM-25.0A (3" DEPTH)	AREA	AGGR. BASE MAT'L TYPE 1 21B (8" DEPTH)		AGGR. BASE MAT'L TYPE 1 21B (VARIES DEPTH)	AREA	OVERLAY ASPH. CONC. TYPE SM-12.5D (220LBS /S.Y.)	AREA	AGGR. BASE MAT'L TYPE 1 21B (6" DEPTH)	AGGR. BASE MAT'L TYPE 1 21B (4" DEPTH)		ASPH. CONC. BASE COURSE BM-25.0A (4" DEPTH)	ASPH. CONC. TYPE SM-12.5D (220LBS /S.Y.)	CONCRETE ENTR. 7"
			S.Y.	TON	S.Y.	TON		TON	S.Y.	TON	TON	TON	S.Y.	TON	S.Y.	TON	TON	TON	TON	TON	
6	RESERVOIR STREET	27+00 TO 34+00	3663	403	3663	1612	-	177	3663	1714	-	100	1074	118	-	-	-	-	-	-	-
	RIDGEVILLE DRIVE	10+34.01 TO 11+23.56	297	33	297	-	-	49	297	139	-	21	-	-	-	-	-	-	-	-	-
	TYPE III ENTR. CG-9D	10+79 LT	-	-	-	-	-	-	-	-	-	-	-	-	14	5	-	-	-	2	-
	TYPE II, III ENTR. CG-9D	29+22 RT	-	-	-	-	-	-	-	-	-	-	-	-	518	121	40	-	76	38	173
	TYPE II ENTR. CG-9D	31+89 RT	-	-	-	-	-	-	-	-	-	-	-	-	69	-	16	-	-	-	69
	TYPE III ENTR. CG-9D	32+18 RT	-	-	-	-	-	-	-	-	-	-	-	-	49	17	-	-	-	5	-
7	RESERVOIR STREET	34+00 TO 41+00	3990	439	3990	1755	-	108	3990	1867	-	267	655	72	-	-	-	-	-	-	-
	FOLEY ROAD	10+34.15 TO 11+45.00	355	39	355	-	-	59	355	166	-	44	-	-	-	-	-	-	-	-	-
	TYPE III ENTR. CG-9D	34+50 RT	-	-	-	-	-	-	-	-	-	-	-	-	27	13	-	-	-	4	-
	TYPE III ENTR. CG-9B	11+16 LT	-	-	-	-	-	-	-	-	-	-	-	-	28	10	-	-	-	3	-
	TYPE III ENTR. CG-9B	11+08 RT	-	-	-	-	-	-	-	-	-	-	-	-	147	52	-	-	-	16	-
	TYPE III ENTR. CG-9D	36+80 LT	-	-	-	-	-	-	-	-	-	-	-	-	145	51	-	-	-	16	-
	TYPE III ENTR. CG-9D	38+44 LT	-	-	-	-	-	-	-	-	-	-	-	-	81	28	-	-	-	9	-
	TYPE IV ENTR. CG-11	38+53 RT	-	-	-	-	-	-	-	-	-	-	146	16	-	-	-	-	-	-	-
8	RESERVOIR STREET	41+00 TO 48+00	5276	580	5276	2321	-	-	5276	2469	-	218	-	-	-	-	-	-	-	-	-
	WOODLAND DRIVE	10+35 TO 12+62	787	87	787	-	-	130	787	368	-	66	123	14	-	-	-	-	-	-	-
	TYPE IV ENTR. CG-11	45+90 LT	-	-	-	-	-	-	-	-	-	-	-	-	126	44	-	-	28	14	-
	TYPE IV ENTR. CG-11	47+23 LT	-	-	-	-	-	-	-	-	-	-	-	-	55	19	-	-	12	6	-
	TYPE III ENTR. CG-9D	47+16 RT	-	-	-	-	-	-	-	-	-	-	-	-	288	101	-	-	-	32	-
9	RESERVOIR STREET	48+00 TO 55+00	2260	249	2260	994	-	473	2260	1058	-	178	2864	315	-	-	-	-	-	-	-
	NEFF AVE. WEST	10+36.81 TO 12+35	532	59	532	234	-	-	532	249	-	56	933	103	-	-	-	-	-	-	-
	NEFF AVE. EAST	10+31.21 TO 11+75	387	42	387	170	-	-	387	181	-	36	582	64	-	-	-	-	-	-	-
	LISIMI	10+34.09 TO 11+00	56	6	56	-	-	9	56	26	-	20	-	-	-	-	-	-	-	-	-

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = NTS
DRAWN BY DATE
CHECKED BY DATE
DESIGN BY DATE
TAX MAP

RESERVOIR STREET

PAVEMENT SUMMARY

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 2D(2)

PAVEMENT SUMMARY

			SURFACE		BASE COURSE				SUBBASE				RESURFACING		ENTRANCES						
PLAN SHEET NO.	LOCATION	STATION TO STATION	AREA	ASPH. CONC. TYPE SM-12.5D (220LBS /S.Y.)	AREA	ASPH. CONC. BASE COURSE BM-25.0A (8" DEPTH)		ASPH. CONC. BASE COURSE BM-25.0A (3" DEPTH)	AREA	AGGR. BASE MAT'L TYPE 1 21B (8" DEPTH)		AGGR. BASE MAT'L TYPE 1 21B (VARIES DEPTH)	AREA	OVERLAY ASPH. CONC. TYPE SM-12.5D (220LBS /S.Y.)	AREA	AGGR. BASE MAT'L TYPE 1 21B (6" DEPTH)	AGGR. BASE MAT'L TYPE 1 21B (4" DEPTH)		ASPH. CONC. BASE COURSE BM-25.0A (4" DEPTH)	ASPH. CONC. TYPE SM-9.5AL (220LBS /S.Y.)	CONCRETE ENTR. 7"
			S.Y.	TON	S.Y.	TON		TON	S.Y.	TON	TON	TON	S.Y.	TON	S.Y.	TON	TON	TON	TON	TON	
9	TYPE IV ENTR. CG-11	50+43 LT	-	-	-	-	-	-	-	-	-	-	40	4	60	21	-	-	13	7	-
	TYPE IV ENTR. CG-11	50+70 RT	-	-	-	-	-	-	-	-	-	-	71	8	-	-	-	-	-	-	-
	TYPE IV ENTR. CG-11	11+75 RT	-	-	-	-	-	-	-	-	-	-	-	-	52	18	-	-	11	6	-
	TYPE IV ENTR. CG-11	12+25 RT	-	-	-	-	-	-	-	-	-	-	-	-	43	15	-	-	9	5	-
	TYPE IV ENTR. CG-11	53+65 LT	-	-	-	-	-	-	-	-	-	-	-	-	64	22	-	-	14	7	-
	TYPE IV ENTR. CG-11	55+06.10 RT	-	-	-	-	-	-	-	-	-	-	-	-	18	6	-	-	4	2	-
	TYPE IV ENTR. CG-11	55+15+50 LT	-	-	-	-	-	-	-	-	-	-	-	-	14	5	-	-	3	2	-
9B	NEFF AVE. WEST	12+35 TO 18+25	611	67	611	269	-	-	611	286	-	154	3126	344	-	-	-	-	-	-	-
	TYPE IV ENTR. CG-11	12+94 LT	-	-	-	-	-	-	-	-	-	-	-	-	63	22	-	-	14	7	-
	TYPE IV ENTR. CG-11	13+30 RT	-	-	-	-	-	-	-	-	-	-	-	-	55	19	-	-	12	6	-
	TYPE IV ENTR. CG-11	13+59 LT	-	-	-	-	-	-	-	-	-	-	-	-	55	19	-	-	12	6	-
	TYPE IV ENTR. CG-11	14+61 RT	-	-	-	-	-	-	-	-	-	-	-	-	249	87	-	-	55	27	-
	TYPE IV ENTR. CG-11	15+66 LT	-	-	-	-	-	-	-	-	-	-	-	-	67	24	-	-	15	7	-
	TYPE IV ENTR. CG-11	16+37 LT	-	-	-	-	-	-	-	-	-	-	-	-	54	19	-	-	12	6	-
9C	NEFF AVE. EAST	11+75 TO 14+01	242	27	242	106	-	-	242	113	-	52	857	94	-	-	-	-	-	-	-
	TYPE IV ENTR. CG-11	11+75 RT	-	-	-	-	-	-	-	-	-	-	-	-	56	20	-	-	12	6	-
	TYPE IV ENTR. CG-11	13+25 RT	-	-	-	-	-	-	-	-	-	-	-	-	61	21	-	-	13	7	-
	TYPE IV ENTR. CG-11	13+59.50 LT	-	-	-	-	-	-	-	-	-	-	-	-	64	22	-	-	14	7	-
10	RESERVOIR STREET	55+00 TO 61+00	1168	128	1168	514	-	457	1168	546	-	175	2769	305	-	-	-	-	-	-	-
	TYPE IV ENTR. CG-11	55+06.10 RT	-	-	-	-	-	-	-	-	-	-	-	-	24	8	-	-	5	3	-
	TYPE IV ENTR. CG-11	55+15.50 LT	-	-	-	-	-	-	-	-	-	-	-	-	70	25	-	-	15	8	-
	COSTCO	10+36.56 TO 12+00	-	-	-	-	-	-	-	-	-	70	-	-	650	228	-	-	143	72	-
	TYPE IV ENTR. CG-11	56+73 RT	-	-	-	-	-	-	-	-	-	-	-	-	50	18	-	-	11	6	-

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = NTS
DRAWN BY | DATE
CHECKED BY | DATE
DESIGN BY | DATE
TAX MAP

RESERVOIR STREET

PAVEMENT SUMMARY

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 2D(3)

PAVEMENT SUMMARY

			SURFACE		BASE COURSE				SUBBASE				RESURFACING		ENTRANCES						
PLAN SHEET NO.	LOCATION	STATION TO STATION	AREA	ASPH. CONC. TYPE SM-12.5D (220LBS /S.Y.)	AREA	ASPH. CONC. BASE COURSE BM-25.0A (8" DEPTH)		ASPH. CONC. BASE COURSE BM-25.0A (3" DEPTH)	AREA	AGGR. BASE MAT'L TYPE 1 21B (8" DEPTH)		AGGR. BASE MAT'L TYPE 1 21B (VARIES DEPTH)	AREA	OVERLAY ASPH. CONC. TYPE SM-12.5D (220LBS /S.Y.)	AREA	AGGR. BASE MAT'L TYPE 1 21B (6" DEPTH)	AGGR. BASE MAT'L TYPE 1 21B (4" DEPTH)		ASPH. CONC. BASE COURSE BM-25.0A (4" DEPTH)	ASPH. CONC. TYPE SM-9.5AL (220LBS /S.Y.)	
			S.Y.	TON	S.Y.	TON		TON	S.Y.	TON	TON	TON	S.Y.	TON	S.Y.	TON	TON	TON	TON	TON	
10	TYPE IV ENTR. CG-11	57+65 RT	-	-	-	-	-	-	-	-	-	-	-	-	50	18	-	-	11	6	-
	TYPE IV ENTR. CG-11	59+61 RT	-	-	-	-	-	-	-	-	-	-	-	-	60	21	-	-	13	7	-
	TYPE IV ENTR. CG-11	61+07 RT	-	-	-	-	-	-	-	-	-	-	-	-	15	5	-	-	3	2	-
11	RESERVOIR STREET	61+00 TO 65+37.25	530	58	530	233	-	-	530	248	-	87	2189	241	-	-	-	-	-	-	-
	UNIV. BLVD. WEST	10+27.10 TO 12+25	588	65	588	258	-	-	588	275	-	56	949	104	-	-	-	-	-	-	-
	UNIV. BLVD. EAST	10+29.10 TO 11+50	197	22	197	86	-	-	197	92	-	44	615	68	-	-	-	-	-	-	-
	TYPE IV ENTR. CG-11	61+07 RT	-	-	-	-	-	-	-	-	-	-	-	-	31	11	-	-	7	3	-
	TYPE IV ENTR. CG-9D	10+97 RT	-	-	-	-	-	-	-	-	-	-	-	-	54	19	-	-	12	6	-
	TYPE IV ENTR. CG-11	64+81 RT	-	-	-	-	-	-	-	-	-	-	-	-	43	15	-	-	9	5	-
11B	UNIV. BLVD. WEST	12+25 TO 18+79.89	1500	165	1500	660	-	-	1500	702	-	188	3295	362	-	-	-	-	-	-	-
	TYPE IV ENTR. CG-11	12+71 RT	-	-	-	-	-	-	-	-	-	-	-	-	109	38	-	-	24	12	-
	TYPE IV ENTR. CG-11	14+14 RT	-	-	-	-	-	-	-	-	-	-	-	-	99	35	-	-	22	11	-
	TYPE IV ENTR. CG-11	16+57 RT	-	-	-	-	-	-	-	-	-	-	36	4	-	-	-	-	-	-	-
11C	UNIV. BLVD. EAST	11+50 TO 14+10.37	243	27	243	107	-	-	243	113	-	122	1224	135	-	-	-	-	-	-	-
	TYPE IV ENTR. CG-11	11+71 LT	-	-	-	-	-	-	-	-	-	-	-	-	123	43	-	-	27	14	-
	HFPA ENTR.	10+24 TO 13+18	-	-	-	-	-	-	-	-	-	-	-	-	457	160	-	-	101	50	-
	TYPE IV ENTR. CG-11	13+82 LT	-	-	-	-	-	-	-	-	-	-	-	-	84	29	-	-	18	9	-

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = NTS
DRAWN BY DATE
CHECKED BY DATE
DESIGN BY DATE
TAX MAP

RESERVOIR STREET

PAVEMENT SUMMARY

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 2D(4)

DEMOLITION SUMMARY

DEMOLITION / CLEARING OF PARCEL / CLOSING WELL / UNDERGROUND STORAGE TANK REMOVAL SUMMARY											
SHEET NUMBER	PARCEL NUMBER	DEMOLITION NUMBER	PROPERTY OWNER	STATION RT. OR LT.	DESCRIPTION	INCLUDED IN CONTRACT					NOT IN CONTRACT
						DEMOLITION OF BUILDINGS	CLEARING OF PARCEL	CLOSING WELL	UNDERGROUND STORAGE TANK REMOVAL		ITEMS TO BE REMOVED BY OTHERS
									TYPE A	TYPE B	
5	27	D-18	AVALON WOODS II OWNERS ASSOCIATION, INC.	LT. 23+45	FOUNDATION						
5	27	D-900	AVALON WOODS II OWNERS ASSOCIATION, INC.	LT. 23+90	SIGN						
6	53	D-500	TRAVIS F. MARSHALL	RT. 33+60	UNDERGROUND STORAGE TANK						
7	58,89	D-501	JAMES W. MARSHALL, EMANUEL ENTERPRISES LLC	RT. 34+73	UNDERGROUND STORAGE TANK						
8		D-904	CITY OF HARRISONBURG	RT. 41+78	SIGN						
8		D-905	CITY OF HARRISONBURG	LT. 43+12	SIGN						
8		D-19	CITY OF HARRISONBURG	IT. 45+50	BUS SHELTER						
8		D-901	CITY OF HARRISONBURG	IT. 46+10	LIGHT						
9	76	D-902	DUPONT COMM. CREDIT UNION	RT. 50+45	LIGHT						
9	76	D-903	DUPONT COMM. CREDIT UNION	RT. 50+98	LIGHT						
9	75	D-20	ELIZABETH SWALLOW	LT. 52+00	SIGN						
9	83	D-21	LITCHFORD - SCHILLING	LT. 53+05	SIGN						
9	87	D-22	GOWEN PROPERTIES	LT. 54+90	SIGN						
10	88	D-910	THE PRICE COMPANY	LT. 56+10	Light						
10	90	D-23	TIMOTHY D. FERGUSON & KATHERINE FERGUSON	RT. 57+40	SIGN						
11	95	D-906	HENRY P. DEYERLE, TRUSTEE	LT. 10+71	SIGN						
11	95	D-906	HENRY P. DEYERLE, TRUSTEE	LT. 11+38	LIGHT						
11C	95	D-905	HENRY P. DEYERLE, TRUSTEE	LT. 12+02	LIGHT						

* Unit price for demo of lights to include removing light fixture, foundation, relocating light behind propsed right of way and all materials associated with relocating light.

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = NTS
DRAWN BY | DATE
CHECKED BY | DATE
DESIGN BY | DATE
TAX MAP

RESERVOIR STREET

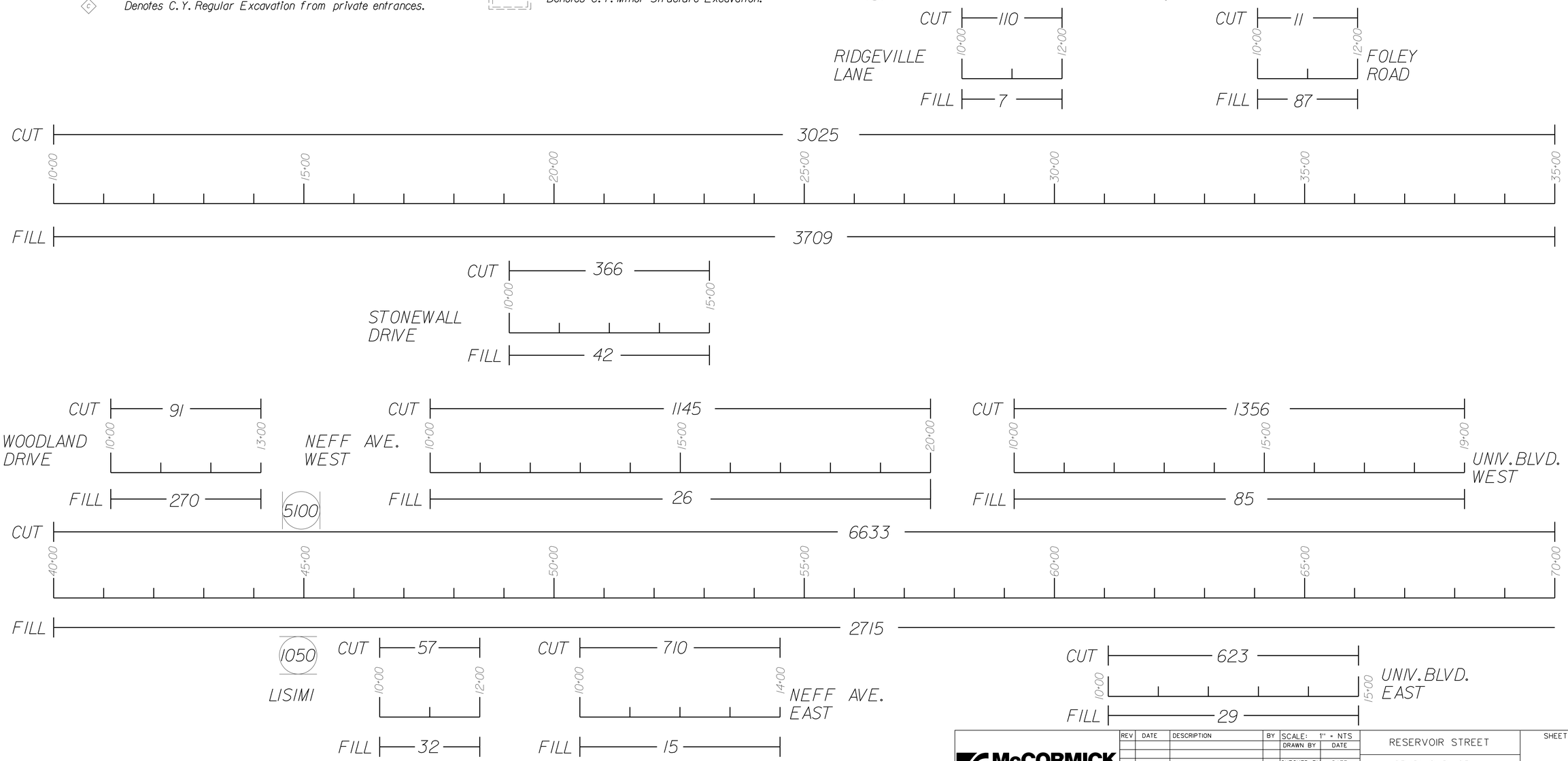
DEMOLITION SUMMARY

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET
2D(5)

GRADING DIAGRAM

- ⊢130⊣ Fill — Denotes fill quantity from computer listings and/or manual cross-sections.
- ⊢130⊣ Cut — Denotes cut quantity from computer listings and/or manual cross-sections. Quantity adjusted for demolition of pavement.
- Denotes C.Y. root mat material in cut areas which is included in Regular Excavation quantities.
- Denotes C.Y. root mat material removed from fill sections and backfilled with (specify material) (Backfill with Regular Excavation and/or Borrow Excavation)
- Denotes C.Y. Regular Excavation from private entrances.
- Denotes C.Y. fill for private entrances.
- Denotes C.Y. unsuitable material above subgrade which is included in Regular Excavation.
- Denotes C.Y. of excavation of unsuitable mat'l. below subgrade and backfilled with (specify material)
- Denotes C.Y. Regular Excavation from drainage ditches.
- Denotes C.Y. Minor Structure Excavation.
- Denotes C.Y. existing pavement to be removed as "Demolition of Pavement" from fill sections and backfilled with (specify mat'l.)
- Denotes C.Y. existing pavement to be removed as Demolition of Pavement in cut sections within construction limits and is not included in the Regular Excavation quantities.
- Denotes C.Y. Haul. (Haul Material shown will be C.Y. of mat'l. not compacted.)
- Denotes C.Y. fill for S.W.M. (Stormwater Management Basin)
- Denotes C.Y. cut from S.W.M. (Stormwater Management Basin)
- Denotes Borrow Material (Min. CBR, specify)
- Denotes Surplus Material.
- Denotes C.Y. fill for drainage ditches.



McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = NTS
DRAWN BY DATE
CHECKED BY DATE
DESIGN BY DATE
TAX MAP

RESERVOIR STREET

GRADING DIAGRAM

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 2D(6)

GRADING DIAGRAM SUMMARY

Location	Roadway Cut (1) (8)	Root Mat in Cut Sections	Root Mat in Fill Sections	Cut - Ditches (9)	Fill - Ditches (9)	Unsuitable Material: Below Subgrade	Unsuitable Material: Above Subgrade	Roadway Fill (10) (8)	Entrances: Cut	Entrances: Fill	Total Regular Excavation (6)	Total Fill	Demolition of Pavement (2)	Minor Structure Excavation (2)	Stormwater Management Basins (5) (2): Cut	Stormwater Management Basins (5) (2): Fill	Borrow (Embankment) (6)
	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.
RESERVOIR	9658					400		6424	944	148					5100	1050	
STONEWALL	366							42									
RIDGEVILLE	110							7									
FOLEY	11							87									
WOODLAND	91							270									
LISIMI	57							32									
NEFF E.	710							15									
NEFF W.	1145							26									
UNIV.E	623							29									
UNIV.W.	1356							85									
FORMULAS	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
TOTALS	(3) 14127	(4)	(3) (7)	(3)	(7)	(11) 400	(4)	(7) 7017	(3) 944	(7) 148	15017	7165			5100	(7) 1050	

FORMULAS

Roadway Cut (C) = Unadjusted Cut from Computer Listings or Manual Cross-Sections minus (-) Demolition of Pavement.

Roadway Fill (J) = Fill Required plus (+) Material for Backfill of Demolition of Pavement Areas in Fill (for heights of fill < 3 feet below subgrade)

Total Reg. Excav. (M) = C + E + F + H + K

Total Fill (N) = J + E + G + H + L + R

Borrow (S) = [N - ([C + F + K + P + Q - D - I] x Compaction Factor)] ÷ Compaction Factor for Borrow Site

(Embankment) (S) = N - (C + F + K + P + Q - D - I) (Embankment = Total Fill - Usable Cut) Estimated Material to be obtained off-site.

(1) Cut quantity shown does not include the material removed as Demolition of Pavement.

(2) Quantity shown for use in Grading Diagram only. See other Summaries for pay item(s).

(3) Included in Totat Regular Excavation

(4) Included in Roadway Cut quantity.

(5) Quantities for Temporary Sediment Basins and Temporary Sediment Traps are included with the Stormwater Management Basin quantities.

(6) Denotes pay item.

(7) Included in total fill quantity.

(8) This quantity comes from the computer listings and/or manual cross-sections and may be adjusted for other quantities.

(9) Volumes obtained for Cut Ditches and Fill Ditches not included in computer listings.

(10) Includes settlement of in-place soil.

(11) Included in the line item for Undercut Excavation (85006)

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = NTS
DRAWN BY DATE
CHECKED BY DATE
DESIGN BY DATE
TAX MAP

RESERVOIR STREET

GRADING DIAGRAM SUMMARY

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 2D(7)

INCIDENTAL SUMMARY

SHEET NO.	CURB STD. CG-2 ⓧ	COMB. CURB AND GUTTER STD. CG-6 ⓧ	ENTRANCE GUTER STD. CG-9B ⓧ	ENTRANCE GUTER STD. CG-9D ⓧ	ENTRANCE GUTER STD. CG-13 ⓧ	HYD. CEMENT CONCRETE SIDEWALK 4 IN. ⓧ	HYD. CEMENT CONCRETE SIDEWALK 7 IN. ⓧ STD.	CG-12 DETECTABLE WARNING SURFACE ⓧ	FLEXIBLE PAVEMENT PLANING ⓧ	DEMOLITION OF PAVEMENT ⓧ	AGGR. BASE MATL. TYPE I, 21B (UNDER SIDEWALK)	MAILBOX POST	RW MONUMENTS RW-2	NS FE-CL (SPLIT RAIL FENCE)	SAW CUT ASPHALT PVMT. 6"	HANDRAIL HR-1 TYPE II	NS STREET CENTER-LINE MONUMENTS	MEDIAN STRIP STD. MS-2	MEDIAN STRIP STD. MS-1A	RW-2	RW-3
	L.F.	L.F.	S.Y.	S.Y.		S.Y.	S.Y.	S.Y.	S.Y.	S.Y.	TON	L.F.	EA.	L.F.	L.F.	EA.	EA.	L.F.	S.Y.	CY	CY
3	232	543	-	70	-	280	49	6	0	1147	128	4	17	-	-	-	2	108	11	-	-
4	647	1400	-	147	-	671	101	10	108	2630	293	9	41	-	-	-	1	326	110	12	-
5	599	1942	45	18	-	866	210	16	2129	1728	439	6	28	-	1531	-	1	368	115	-	-
6	706	1410	-	71	-	716	45	7	1074	1389	314	4	41	-	475	50	2	258	102	18	-
7	821	1455	32	93	-	703	73	10	801	2523	318	6	20	-	273	516	2	409	74	180	-
8	394	1688	-	56	-	556	229	14	123	4168	299	3	5	-	73	80	3	197	135	32	-
9	225	1897	-	-	10	759	245	40	4490	894	398	7	11	-	1805	88	3	36	120		34
9B	-	1129	-	35	-	465	127	25	3126	272	228	6	15	-	1204	-	3	-	-	-	-
9C	-	379	-	-	33	253	77	12	857	98	126	3	3	230	450	-	1	-	-	-	-
10	142	1652	-	-	-	494	174	21	2769	287	235	7	4	72	1200	243	-	-	6	46.3	-
11	81	1290	-	21	-	454	164	16	3753	301	229	3	14	-	1403	200	3	-	36	67.1	-
11B	100	1275	-	-	-	518	121	21	3331	336	250	3	4	-	1387	-	1	-	-	87.6	-
11C	321	575	-	-	-	70	56	9	1224	249	47	3	3	-	531	275	1	-	-	-	-
TOTAL	4268	16635	77	511	43	6805	1671	207	23785	16022	3304	64	206	302	10332	1452	23	1702	709	444	34

INCIDENTAL SUMMARY CONT'D.

	MAINTENANCE OF TRAFFIC									PORTABLE CHANGEABLE MESSAGE SIGN	TRAFFIC BARRIER SERVICE
	CONST. PVMT MARKING TYPE D 4 IN.	CONST. PVMT MARKING TYPE F 4 IN.	FLAGGER SERVICE	CONST. SIGNS	TYPE III BARRICADE 8'	CRUSHER RUN AGGREGATE NO. 25 OR 26	ALLAYING DUST	ELECTRONIC ARROW	GROUP 2 CHANNELIZING DEVICE		
	L.F.	L.F.	HOUR	S.F.	E.A.	TON	HOUR	HOUR	DAY	HOUR	E.A.
TOTAL	9125	27375	640	293	6	1000	1200	5000	127600	17520	475

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = NTS
DRAWN BY DATE
CHECKED BY DATE
DESIGN BY DATE
TAX MAP

RESERVOIR STREET

INCIDENTAL SUMMARY

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

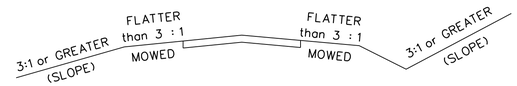
SHEET 2D(8)

ROADSIDE DEVELOPMENT

CORE MIX

MIX	LBS./ ACRES	DESCRIPTION
1	77	38.3% HOMERUN PERENIAL RYEGRASS
2	39	19.4% CREEPING RED FESCUE
3	30	14.7% KENTUCKY BLUEGRASS
4	30	14.7% CARDINAL CREEPING RED FESCUE
5	19	9.7% NAVIGATOR CREEPING RED FESCUE
5	6	3.2% ANNUAL RYE SEED - VNS
TEMPORARY		
3/1 - 5/16 and	50	50% CERTIFIED TALL FESCUE
8/16 - 3/1	50	50% BARLEY, WINTER RYE OR WINTER WHEAT
5/16 - 8/16	50	50% FOXTAIL MILLET
	50	50% CERTIFIED TALL FESCUE

SECTION OF SEED LOCATIONS



ROADSIDE DEVELOPMENT SUMMARY						
PROJECT NUMBERS	TOPSOIL 2" CLASS A | B	REGULAR SEED	OVER SEEDING	LIME	FERT. 15-30-15	TEMPORARY SEEDING
	ACRES	LBS.	LBS.	TONS	TONS	LBS.
U000-115, R30	2.5	800	800	8	0.6	400

NOTES:

APPROXIMATELY 2.5 ACRES WILL BE DISTURBED ON THIS PROJECT AND WILL REQUIRE THE ESTABLISHMENT OF GRASSES AND/OR LEGUMES.

☆ NOTES FOR FIELD USE ONLY

OVERSEEDING RATES SHALL BE 100 PERCENT OF THE SEED MIXTURE SUPPLIED WITHOUT FERTILIZER.

THE ENGINEER WILL REQUIRE THE CONTRACTOR TO PERFORM SUPPLEMENTAL SEEDING WHEN LESS THAN 75 PERCENT UNIFORM STAND OF THE PERMANENT GRASS SPECIFIED IN THE MIXTURES IS OBTAINED. (ANNUAL SPECIES SUCH AS, RYE AND MILLET ARE TEMPORARY VARIETIES AND REQUIRE SUPPLEMENTAL SEEDING.)

NOTES APPLY TO SCHEDULE

LEGUME SEED MIXES (BIRDSFOOT TREFOIL, CROWNVETCH, AND SERICEA LESPEDEZA) AND WEEPING LOVEGRASS SHALL NOT BE USED ON SHOULDERS AND OTHER LOCATIONS FLATTER THAN 3:1 SLOPE.

LEGUME SEED SHALL BE INOCULATED WITH THE APPROPRIATE STRAIN AND RATE OF BACTERIA. FOR HYDROSEEDING, USE FIVE TIMES THE DRY SEEDING RATE OF INOCULATE.

A TEMPORARY MIX OR EROSION CONTROL MULCH, AS DIRECTED BY THE ENGINEER, IS TO BE USED ONLY ON AREAS THAT ARE TO BE REGRADED OR LATER DISTURBED, IF LEFT DORMANT FOR MORE THAN 15 DAYS.

EROSION CONTROL MULCH, AS DIRECTED BY THE ENGINEER, IS TO BE USED ON AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN 15 DAYS BETWEEN DECEMBER 1 AND FEBRUARY 28.

EROSION CONTROL MULCH, AS LISTED ON THE VDOT APPROVED PRODUCTS LIST, SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMENDATIONS.

EROSION CONTROL MULCH SHALL PROVIDE 100 PERCENT COVERAGE OF ALL DENUDED AREAS .

SPRING & SUMMER AND FALL & WINTER DEFINED FOR THE PURPOSE OF DETERMINING WHETHER HULLED OR UNHULLED BERMUDAGRASS AND SERICEA LESPEDEZA SEED IS REQUIRED:

SPRING & SUMMER 4/1 - 9/15 - USE HULLED SEED
FALL & WINTER 9/15 - 4/1 - USE UNHULLED SEED

TYPE I MULCH (STRAW) TO BE USED ON NEWLY SEEDED AREAS ADJACENT TO ALL WATERWAYS, WETLANDS, SWAMPS, OR ANY AREA IN WHICH DRAINAGE FLOWS TOWARD AREAS UNDER THE JURISDICTION OF THE ENVIRONMENTAL REGULATORY AGENCIES.

TYPE I MULCH SHALL BE APPLIED TO PROVIDE A MINIMUM 90 PERCENT COVERAGE.

TYPE I MULCH SHALL BE TACKED WITH FIBER MULCH AT THE RATE OF 750 LBS. PER ACRE AND/OR MULCH TACKIFIER.

TYPE II MULCH (FIBER MULCH) MAY BE SUBSTITUTED FOR TYPE I MULCH AT THE RECOMMENDATION OF THE DISTRICT ROADSIDE MANAGER.

TYPE II MULCH SHALL BE APPLIED AT A RATE OF 1500 LBS. (NET DRY WEIGHT) PER ACRE TO PROVIDE A MINIMUM OF 90 PERCENT COVERAGE, AND SHALL BE APPLIED IN A SEPARATE APPLICATION.

ALL TOPSOIL IS TO BE FREE OF HARD LUMPS, CLODS, ROCKS AND FOREIGN DEBRIS AND IS TO BE HAND RAKED TO TIE INTO EXISTING LAWNS.

ALL SEED MUST BE IN CONFORMANCE WITH VDOT SEED SPECIFICATIONS FOR GRASSES & LEGUMES AND BE PROVIDED AT THE PROJECT SITE IN BAGS NOT OPENED AND LABELED FOR USE ON VDOT PROJECTS WITH A GREEN TAG CERTIFYING INSPECTION BY THE VIRGINIA CROP IMPROVEMENT ASSOCIATION.

McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = NTS
DRAWN BY DATE
CHECKED BY DATE
DESIGN BY DATE
TAX MAP

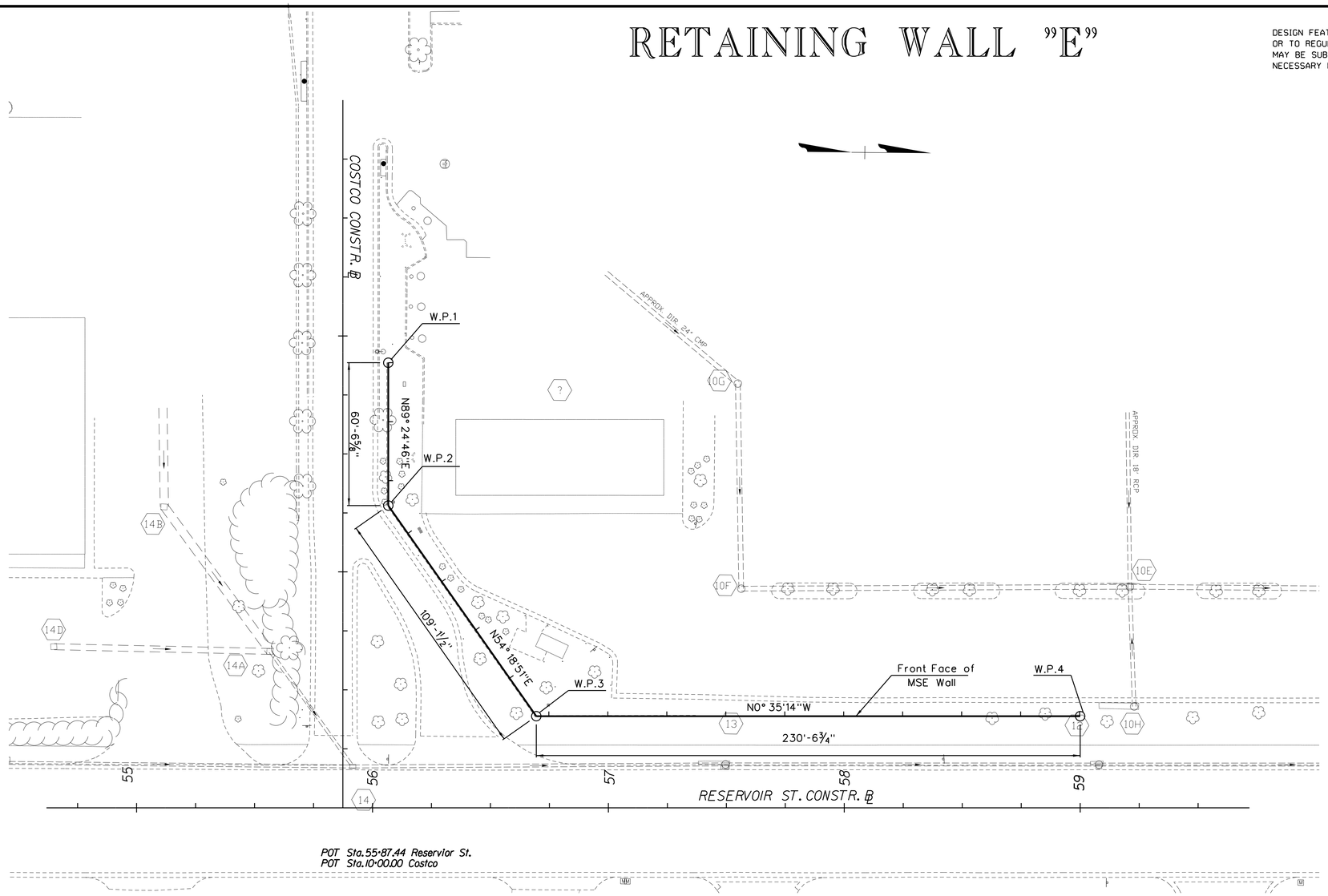
RESERVOIR STREET
ROADSIDE DEVELOPMENT
PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET
2D(9)

RETAINING WALL "E"

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	710	VDOT* U000-115-R30 UPC* 101219	2E(1)



LEGEND

W.P. - Working Point

STAKE - OUT PLAN

NOT TO SCALE

STAKE-OUT PLAN WORK POINTS						
NUMBER	WALL STATION	ROADWAY STATION	ROADWAY OFFSET	ROAD ALIGNMENT	Y (NORTHING)	X (EASTING)
1	10+00.00	11+88.67	19.25	COSTCO	6838781.77	11380903.68
2	10+60.55	11+28.12	19.25	COSCTO	6838782.39	11380964.23
3	11+69.68	56+69.44	38.83	RESERVOIR	6838846.05	11381052.86
4	14+00.24	59+00.00	38.83	RESERVOIR	6839076.60	11381050.50

* - THREE PLACE COORDINATES ARE FOR COMPUTATIONAL PURPOSES ONLY AND DO NOT IMPLY A PRECISION BEYOND TWO DECIMAL PLACES.
** - STATIONS & OFFSETS ARE IN FEET UNLESS NOTED OTHERWISE.

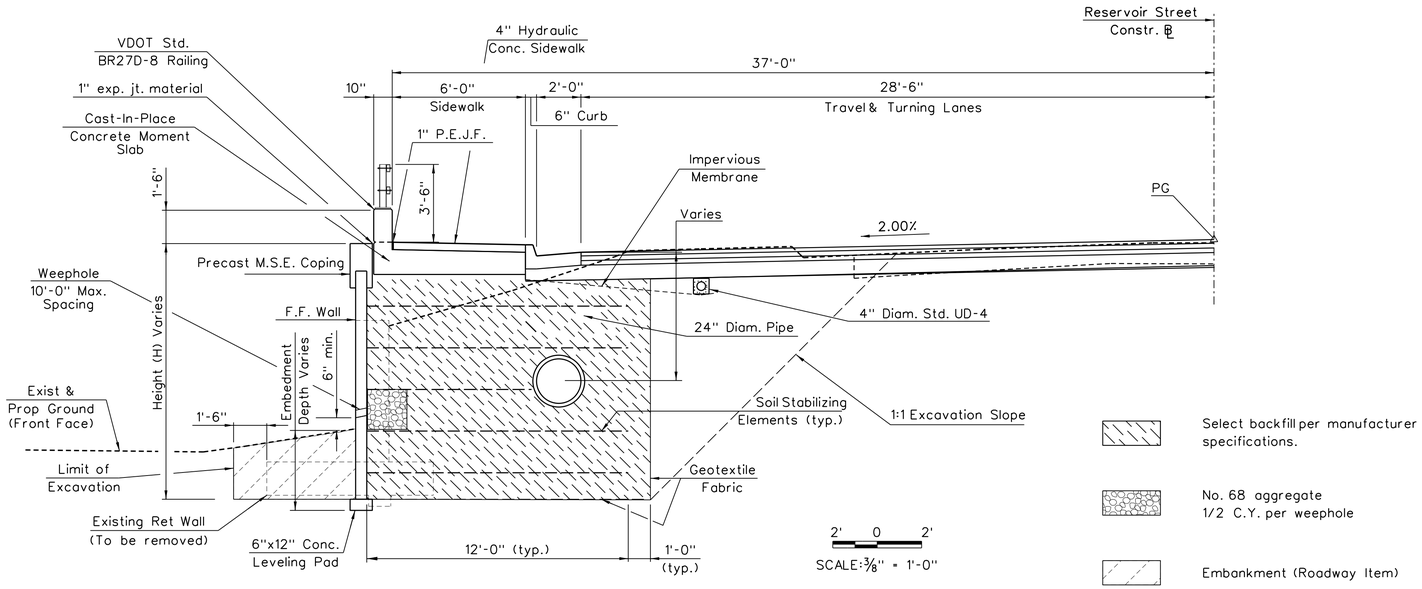
APPROXIMATE QUANTITIES - MECHANICALLY STABILIZED RETAINING WALL E		
ITEM	UNIT	TOTAL
MSE WALL PANELS	SF	3554
CLASS A3 CONCRETE (LEVELING PAD)	CY	8
CLASS A4 CONCRETE (MOMENT SLAB & BARRIER)	CY	116
MOMENT SLAB REINFORCING	LB	14866
BR27D-8 RAILING	LF	271
HR-1 TYPE II RAILING	LF	130
GEOTEXTILE	SY	950
SELECT GRANULAR MATERIAL	TON	2581
BOND BREAKER	?	?
NO. 68 AGGREGATE	CY	20
EXCAVATION	CY	1613
STRAPS		
COPING		

RETAINING WALL "E" GENERAL NOTES

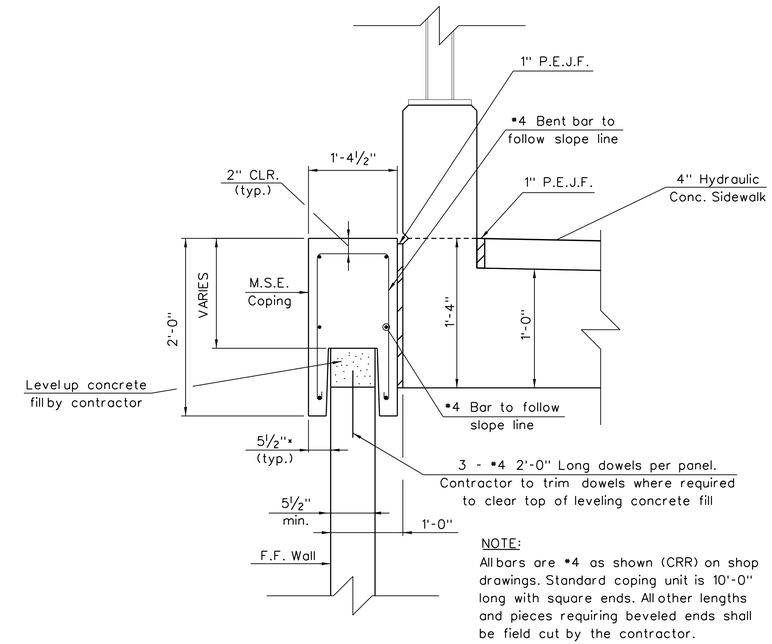
- Design loads: Live load surcharge of 2.0'
  Earth surcharge to account for 3" of future asphalt overlay.
- Specifications (Refer to latest versions):
  Construction: Virginia Department of Transportation, Road and Bridge Specifications, 2007 with current revisions.
  Design: AASHTO LRFD Bridge Design Specifications. 6th Edition, 2013 & VDOT Modifications.
  Standards: Virginia Department of Transportation Road and Bridge Standards, 2008.
- These plans are incomplete unless accompanied by the Supplemental Specifications and Special Provisions included in the contract documents.
- The minimum design life of MSE wall shall be 75 years.
- Construct barriers and moment slabs using VDOT Class A4 cement concrete. Construct leveling pads using VDOT Class A3 cement concrete. Chamfer exposed edges ¾ in. by ¾ in. Rake finishe all horizontal construction joints.
- All reinforcing steel shall be deformed and shall conform to ASTM A615. Grade 60 except for reinforcing steel noted as CRR (corrosion resistant reinforcement) which shall conform to the applicable specifications noted in the special provision.
- Corrosion resistant reinforcing steel shall be used in the precast facing panels.
- Corrosion resistant reinforcing (CRR) steels shall conform to one or more of the three types (low carbon/chromium, stainless clad or solid stainless) listed in the special provision. The minimum yield strength shall be: 100 Ksi for low carbon/chromium steel and 60 Ksi for stainless clad steel or solid stainless steel.
- Material in the retaining wall select backfill/reinforcement zone shall be specified and compacted per the manufacturer's specifications and VDOT Road and Bridge Specifications.
- Verify all dimensions and geometry in the field as necessary for proper fit of the proposed construction. Coordinate with inspector.
- A higher strength of concrete may be substituted for a lower strength of concrete at no additional cost to the City.
- Galvanize all soil stabilizing elements, and hardware in accordance with the manufacturer's specification and VDOT Road and Bridge Specifications.
- Minimum precast panel design thickness is 5.5 inches. Vertical joints shall be placed in the wall at intervals not to exceed 90 feet.
- An impervious membrane shall be placed below the pavement and just above the first row of reinforcement to intercept any flows containing deicing chemicals.
- The membrane shall be sloped to drain away from the facing to an intercepting longitudinal drain outletted beyond the reinforced zone. The cost of the impervious membrane shall be included in the price bid for other items.
  A geotextile shall be used as a separator between the mechanically stabilized earth mass and the subbase.
- Barrier and moment slab shall not be placed until 14 days after wall completion.
- The contractor shall use a Category A retaining wall system manufacturer listed on the approved retaining wall systems list published by VDOT. The wall system shall be capable of meeting all requirements for the project documents, including but not limited to geotechnical/subsurface conditions, settlement limits, utility coordination, including storm drainage, panel design, and railing installation.
- The contractor shall notify the geotechnical engineer if excavation reveals disturbed, unsuitable, or unstable foundation material. If unsuitable or unstable soils are encountered in the proposed foundation zone, undercut excavation will be required. Remove unsuitable or unstable foundation material below the bottom of the wall based on the geotechnical engineer's recommendation. After removing unsuitable or unstable foundation material below the bottom of the wall, compact the foundation area according to the VDOT specifications.
- The selected wall supplier will submit a detailed design including calculations and shop drawings for approval. A complete reinforcing steel schedule shall be included in the shop drawings. This submittal shall be sealed by a professional engineer registered in the Commonwealth of Virginia.
- All panel types and other related elements shall be detailed on shop drawings.
- Contractor is responsible for obtaining data and verifying bearing pressure of existing soil. Results shall be provided to Engineer and Inspector prior to foundation construction.
- Bond breaker shall be used between the proposed sidewalk and moment slab. The price for this item shall be included in the price bid for other items.

SCALE	PROJECT	SHEET NO.
0 25' 50'	UPC* 101219	2E(1)

TYPICAL SECTIONS - RETAINING WALL "E"



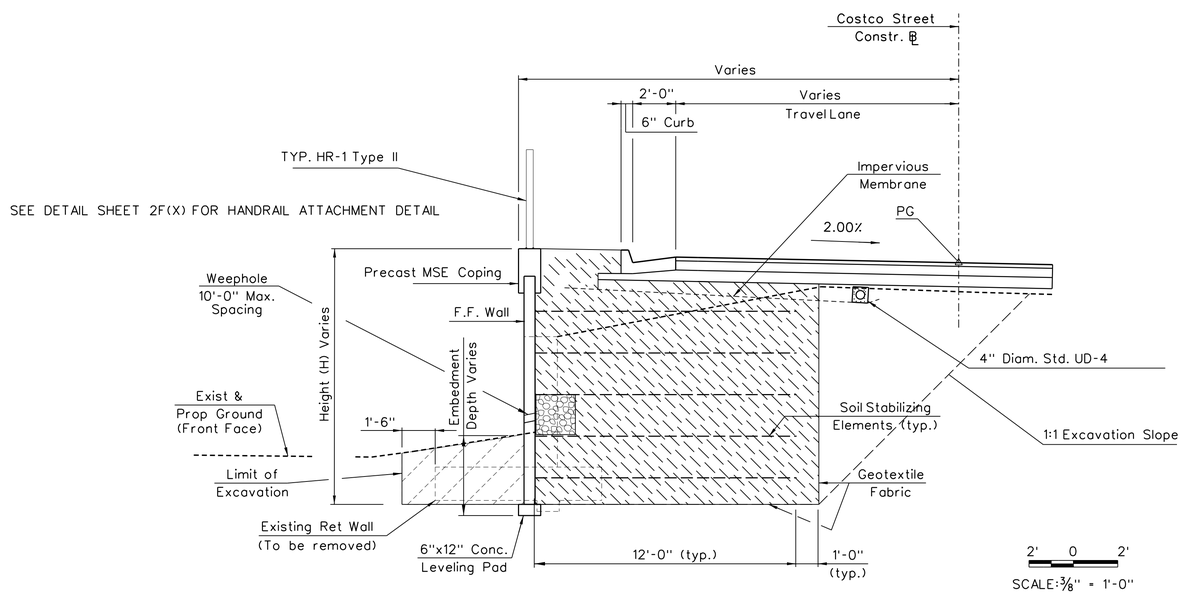
TYPICAL MSE WALL SECTION WITH SIDEWALK & BARRIER - RESERVOIR STREET



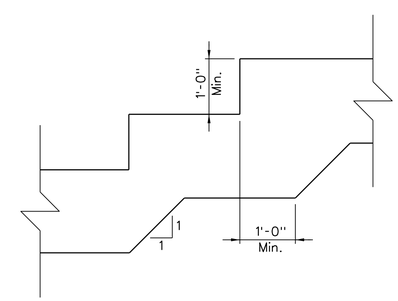
NOTE:
All bars are #4 as shown (CRR) on shop drawings. Standard coping unit is 10'-0" long with square ends. All other lengths and pieces requiring beveled ends shall be field cut by the contractor.

PRECAST COPING DETAIL

NOT TO SCALE
* - 5½" IF PRECAST PANEL DESIGN THICKNESS IS 5½"



TYPICAL MSE WALL SECTION WITH HANDRAIL - COSTCO ENTRANCE



TYP. LEVELING PAD STEP DETAIL

NOT TO SCALE

REV	DATE	DESCRIPTION	BY

McCORMICK TAYLOR

SCALE: 1" = NTS
DRAWN BY | DATE
CHECKED BY | DATE
DESIGN BY | DATE
TAX MAP

RESERVOIR STREET
WALL "E" TYPICALS

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

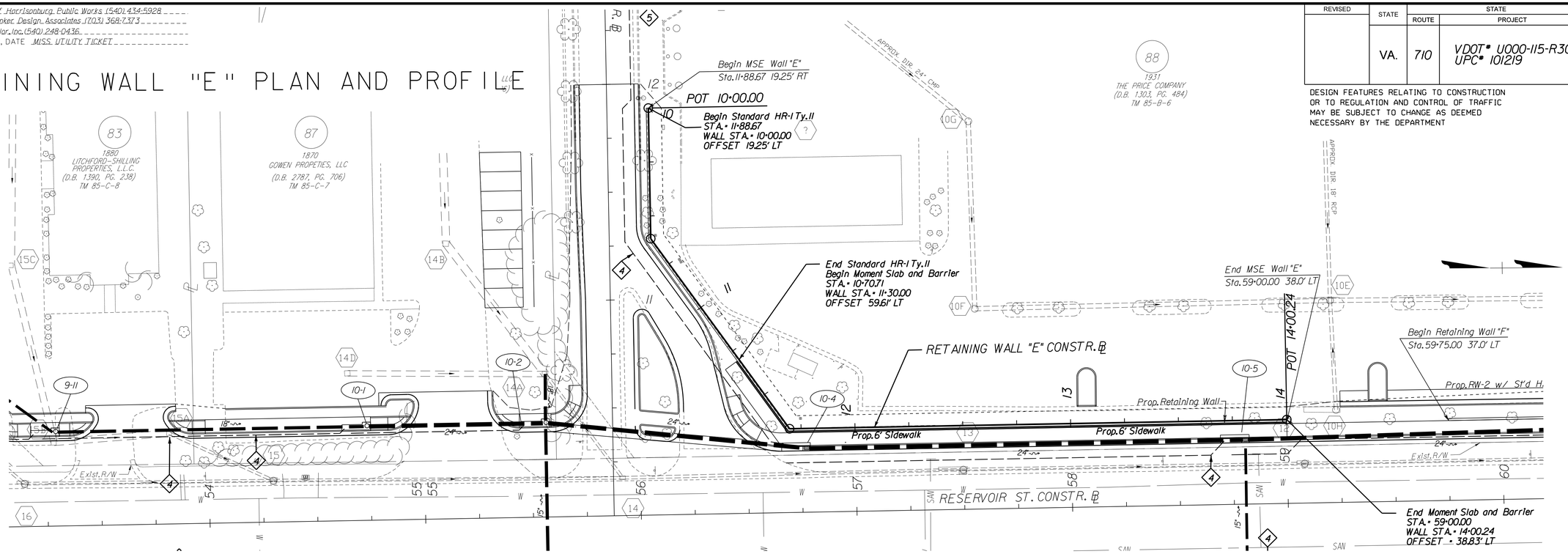
SHEET
2E(2)

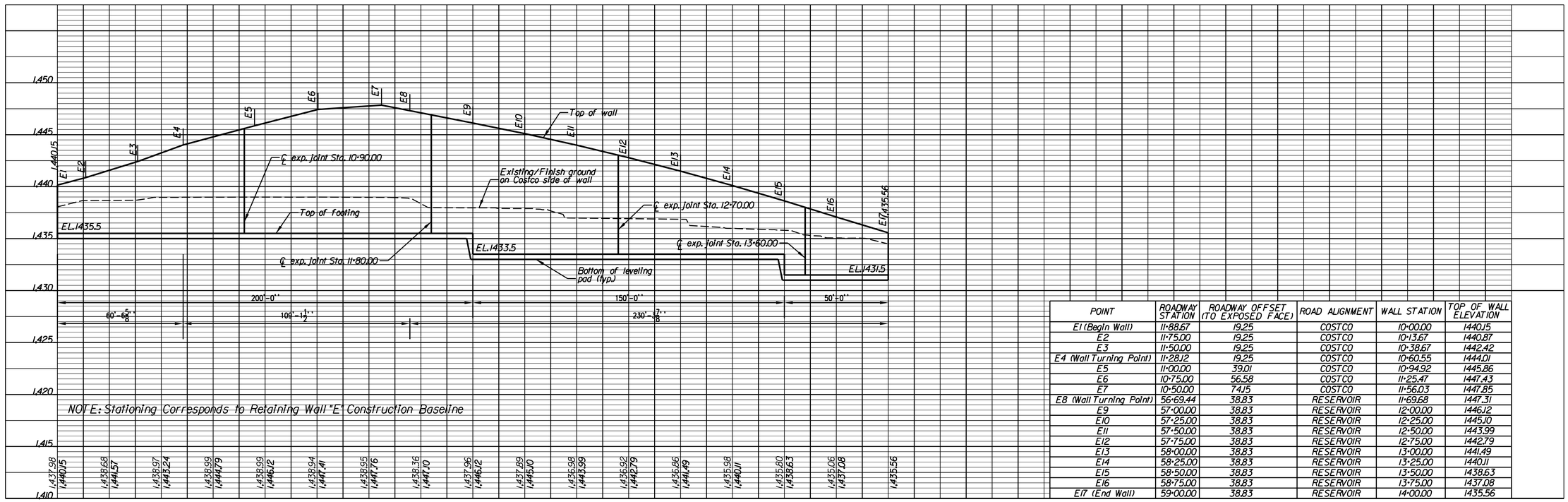
PROJECT MANAGER City of Harrisonburg, Public Works (540) 434-5928
SURVEYED BY, DATE Bloker Design Associates (703) 368-7373
DESIGN BY McCormick Taylor, Inc. (540) 248-0436
SUBSURFACE UTILITY BY, DATE MISS UTILITY TICKET

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	710	VDOT# U000-115-R30 UPC# 101219	2E(3)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

RETAINING WALL "E" PLAN AND PROFILE





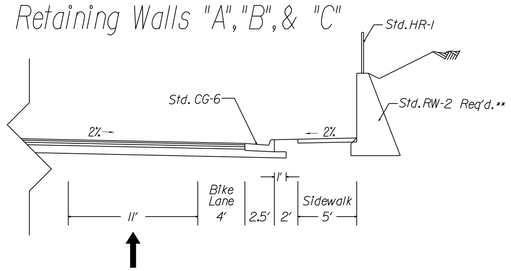
POINT	ROADWAY STATION	ROADWAY OFFSET (TO EXPOSED FACE)	ROAD ALIGNMENT	WALL STATION	TOP OF WALL ELEVATION
E1 (Begin Wall)	11+88.67	19.25	COSTCO	10+00.00	1440.15
E2	11+75.00	19.25	COSTCO	10+13.67	1440.87
E3	11+50.00	19.25	COSTCO	10+38.67	1442.42
E4 (Wall Turning Point)	11+28.12	19.25	COSTCO	10+60.55	1444.01
E5	11+00.00	39.01	COSTCO	10+94.92	1445.86
E6	10+75.00	56.58	COSTCO	11+25.47	1447.43
E7	10+50.00	74.15	COSTCO	11+56.03	1447.85
E8 (Wall Turning Point)	56+69.44	38.83	RESERVOIR	11+69.68	1447.31
E9	57+00.00	38.83	RESERVOIR	12+00.00	1446.12
E10	57+25.00	38.83	RESERVOIR	12+25.00	1445.10
E11	57+50.00	38.83	RESERVOIR	12+50.00	1443.99
E12	57+75.00	38.83	RESERVOIR	12+75.00	1442.79
E13	58+00.00	38.83	RESERVOIR	13+00.00	1441.49
E14	58+25.00	38.83	RESERVOIR	13+25.00	1440.11
E15	58+50.00	38.83	RESERVOIR	13+50.00	1438.63
E16	58+75.00	38.83	RESERVOIR	13+75.00	1437.08
E17 (End Wall)	59+00.00	38.83	RESERVOIR	14+00.00	1435.56

SCALE 0 25' 50'

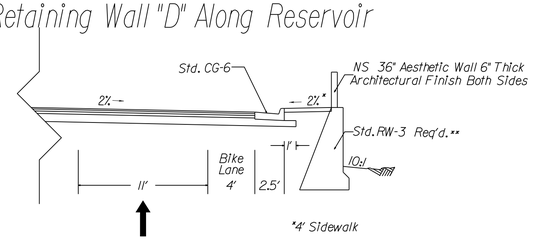
PROJECT	SHEET NO.
UPC# 101219	2E(3)

RETAINING WALL DETAILS

Retaining Walls "A","B",& "C"

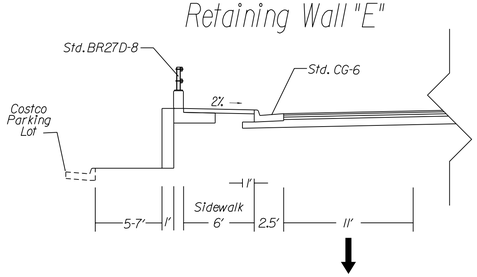


Retaining Wall "D" Along Reservoir



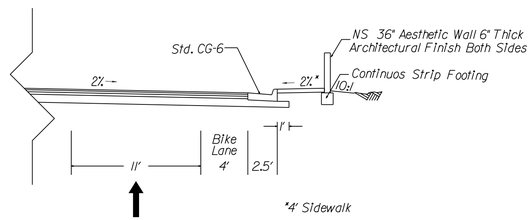
** Walls To Have Architectural Finish See Special Provisions

Retaining Wall "E"

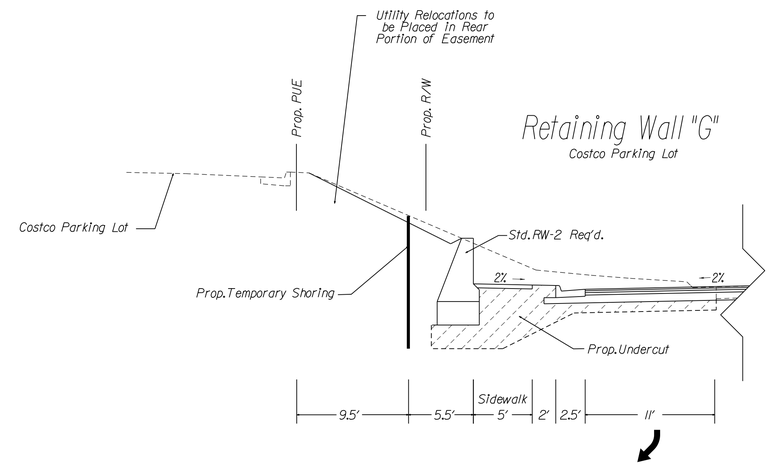


NOTE: See sheets 2C(1) thru 2C(4) for Retaining Wall "E" Details

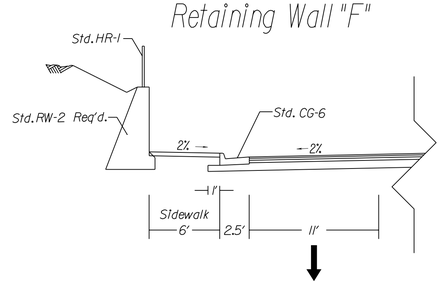
Retaining Wall "D" Along Reservoir



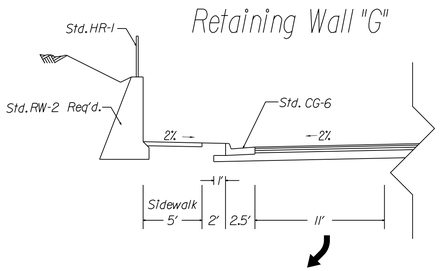
Retaining Wall "G"
Costco Parking Lot



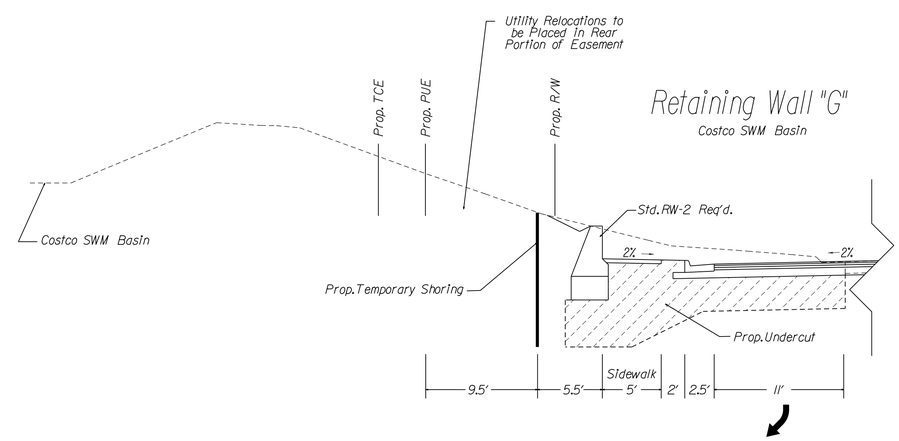
Retaining Wall "F"



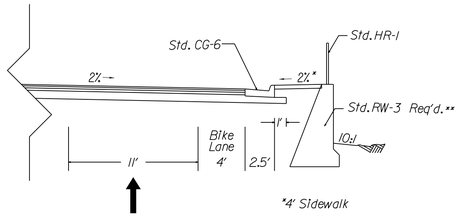
Retaining Wall "G"



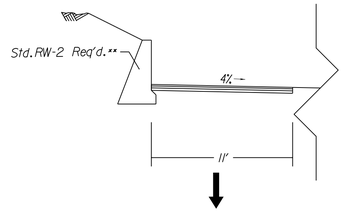
Retaining Wall "G"
Costco SWM Basin



Retaining Wall "D" Along Lisimi



Retaining Wall "H"



REV	DATE	DESCRIPTION	BY

McCORMICK TAYLOR

SCALE: 1" = NTS
DRAWN BY | DATE
CHECKED BY | DATE
DESIGN BY | DATE
TAX MAP

RESERVOIR STREET

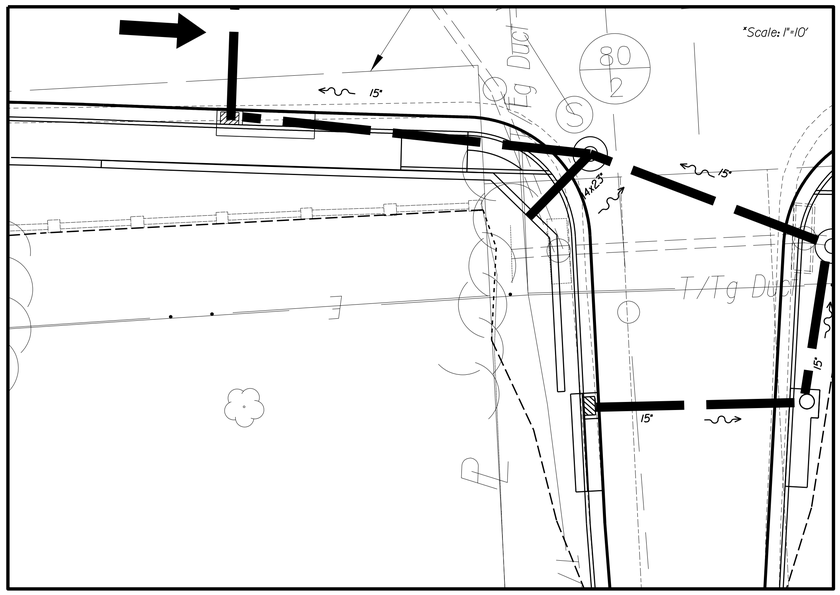
RETAINING WALL DETAILS

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

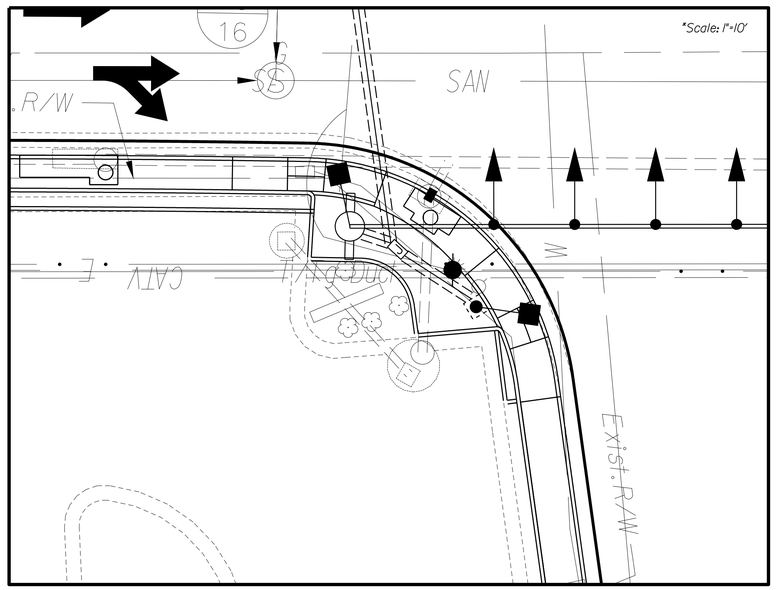
SHEET 2F(1)

DETAILS

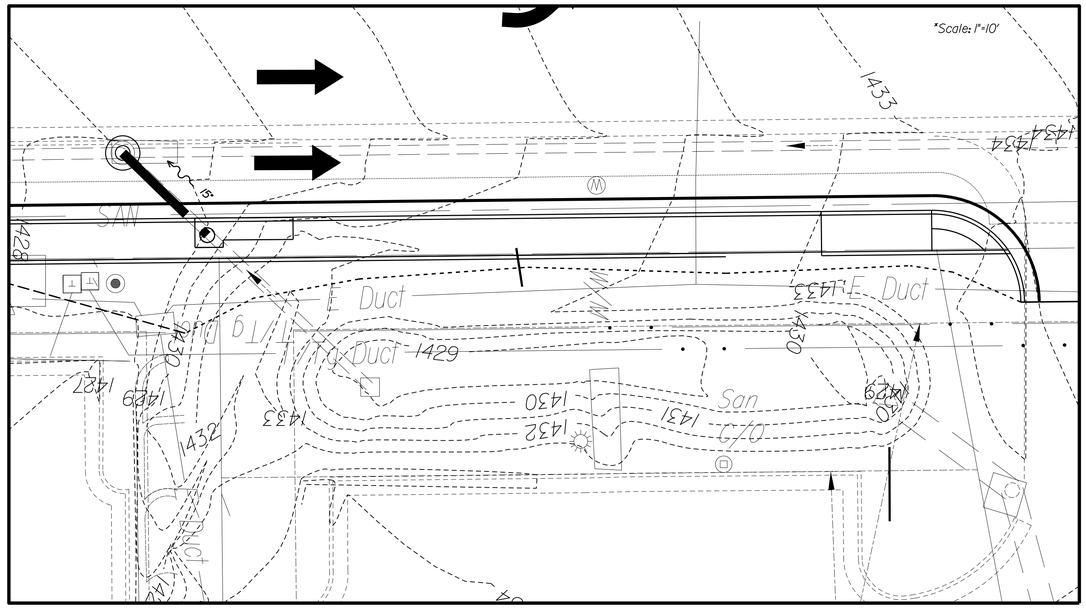
Parcel 71 Retaining Wall "D"



Parcel 92 Parking Lot and Corner



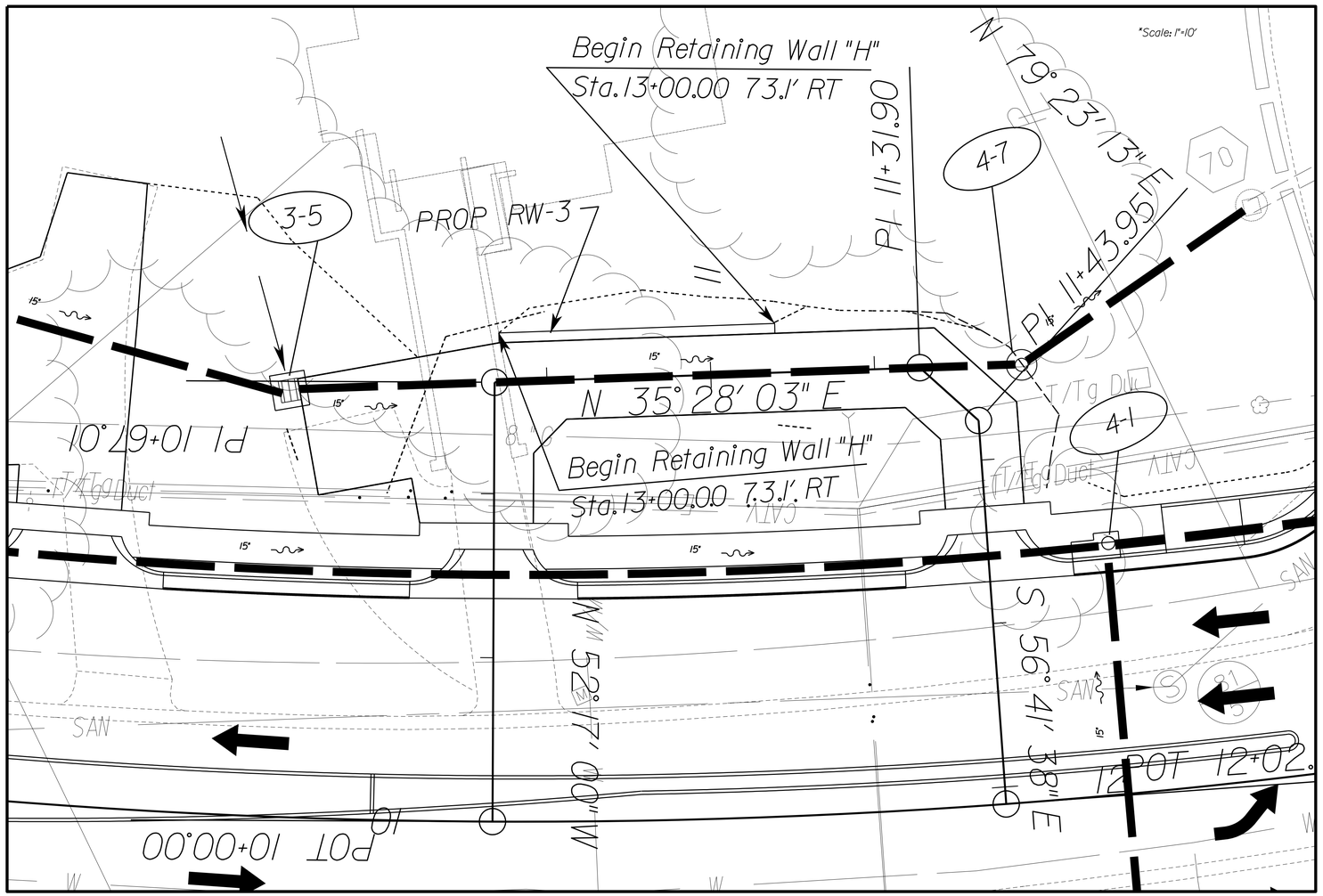
Parcel 100 Sidewalk at Existing Private BMP



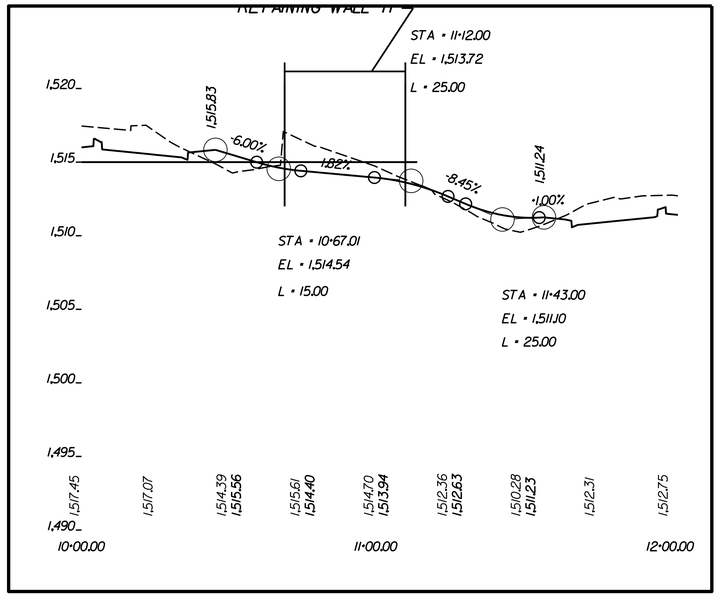
	REV	DATE	DESCRIPTION	BY	SCALE: 1" = NTS		RESERVOIR STREET	SHEET
McCORMICK TAYLOR					DRAWN BY	DATE		
					CHECKED BY	DATE	DETAILS	2F(2)
					DESIGN BY	DATE	PUBLIC WORKS DEPARTMENT CITY OF HARRISONBURG 320 E MOSBY ROAD HARRISONBURG, VIRGINIA	
					TAX MAP			

DETAILS PARCEL 01

Parcel 01 Driveway Construction Plan



Parcel 01 Driveway Construction Profile



McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = NTS
DRAWN BY DATE
CHECKED BY DATE
DESIGN BY DATE
TAX MAP

RESERVOIR STREET

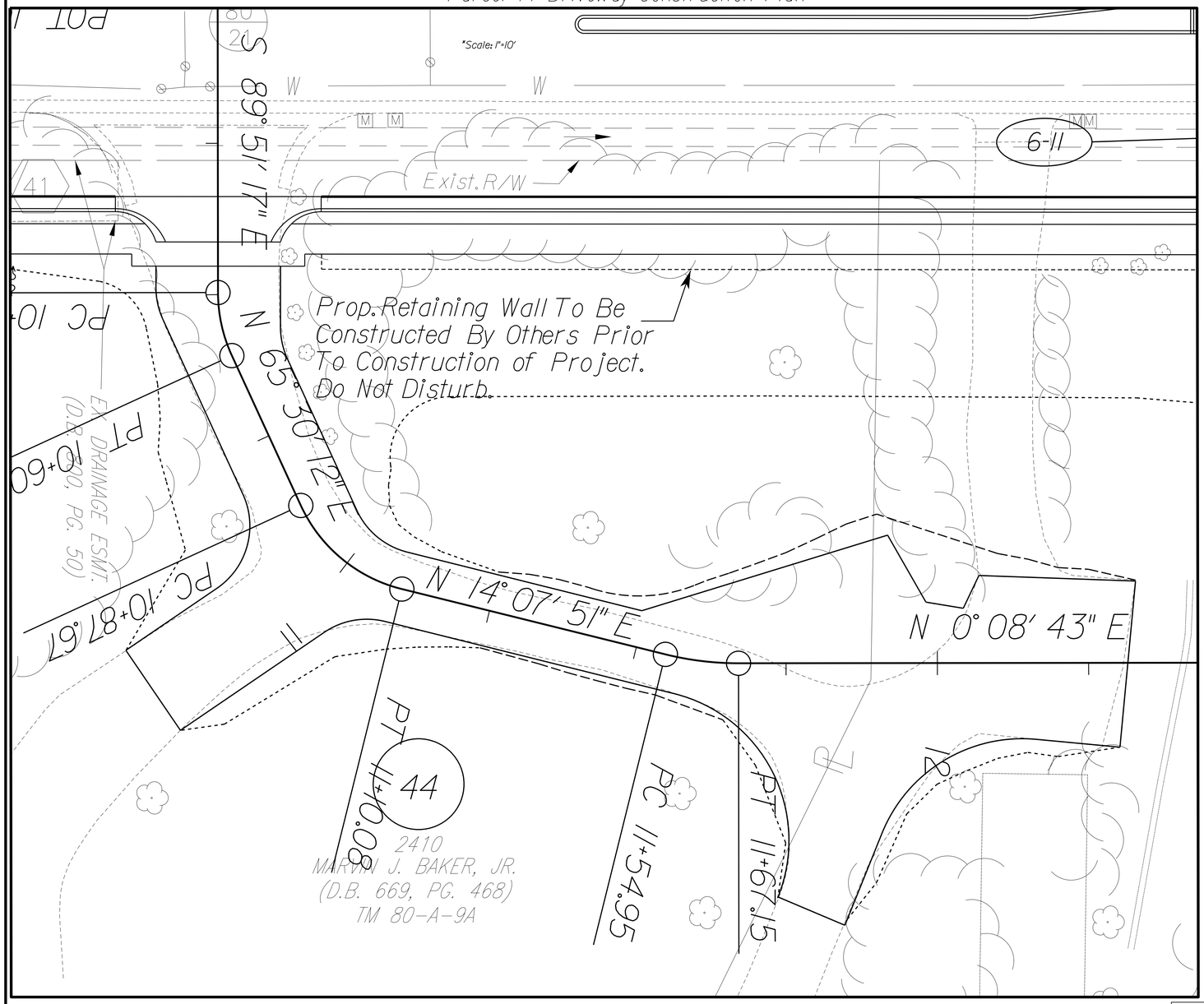
DETAILS PARCEL 01

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

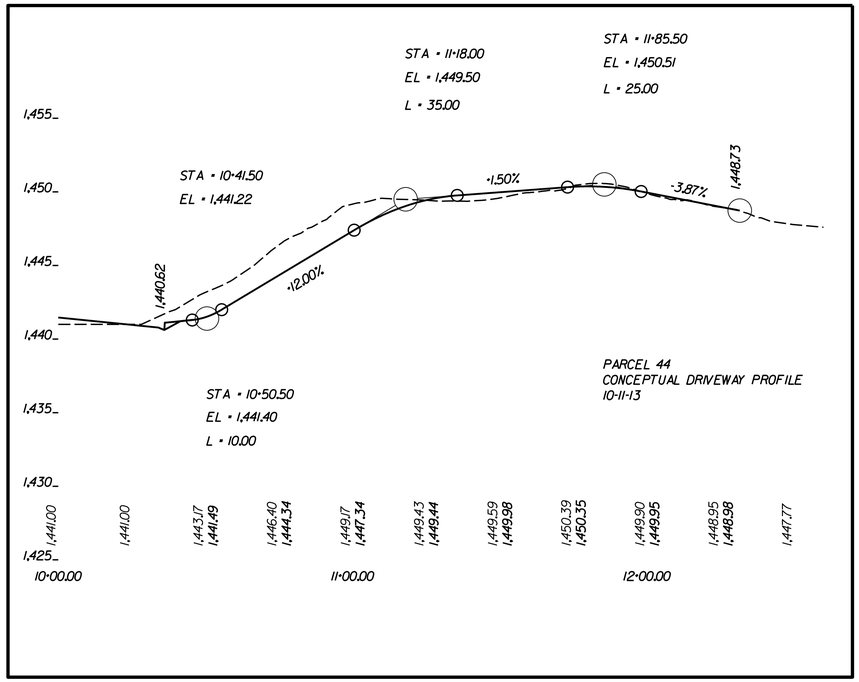
SHEET 2F(3)

DETAILS PARCEL 44

Parcel 44 Driveway Construction Plan



Parcel 44 Driveway Construction Profile



McCORMICK TAYLOR

REV	DATE	DESCRIPTION	BY

SCALE: 1" = NTS
DRAWN BY DATE
CHECKED BY DATE
DESIGN BY DATE
TAX MAP

RESERVOIR STREET

DETAILS PARCEL 44

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 E MOSBY ROAD
HARRISONBURG, VIRGINIA

SHEET 2F(4)