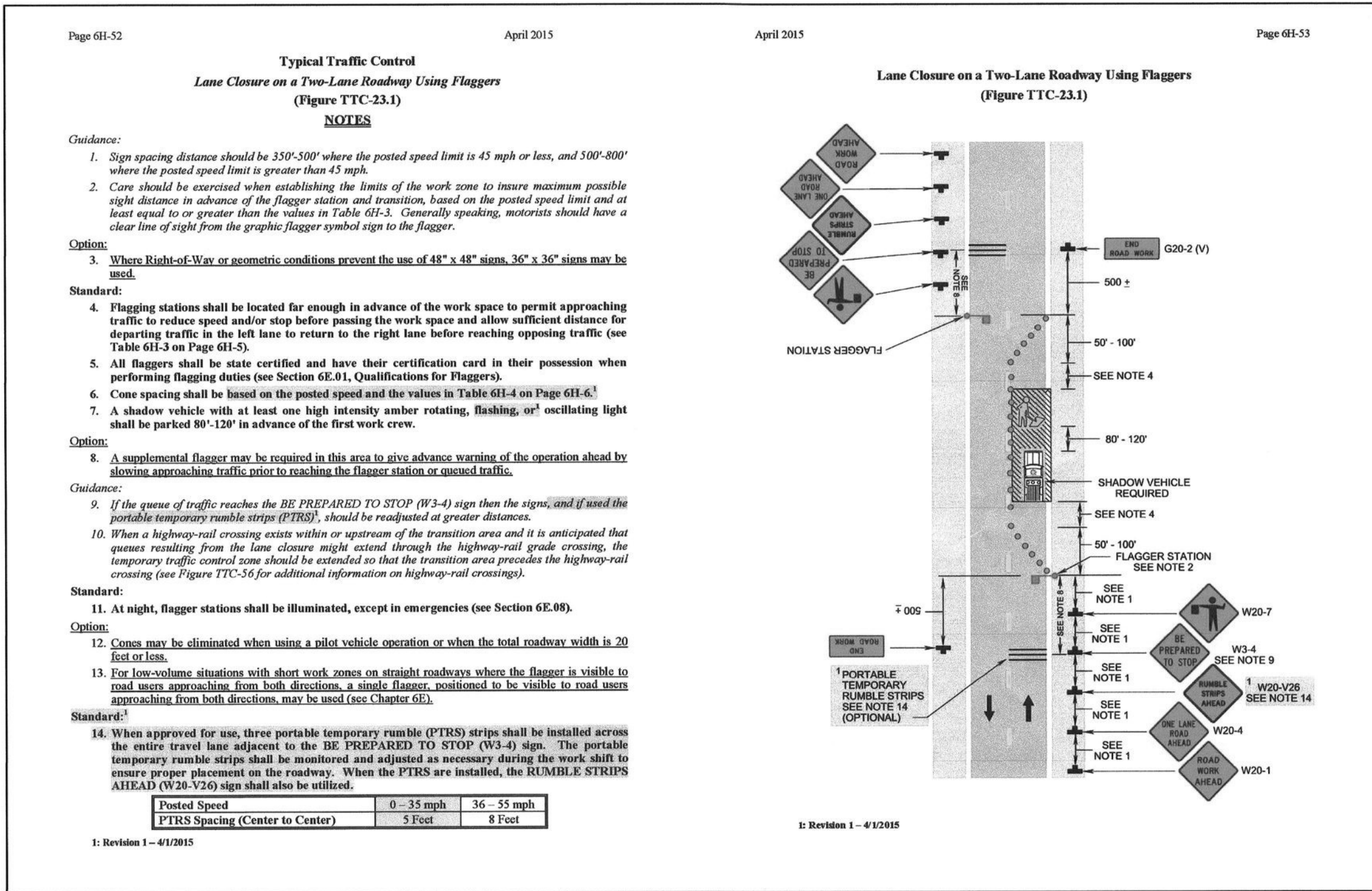
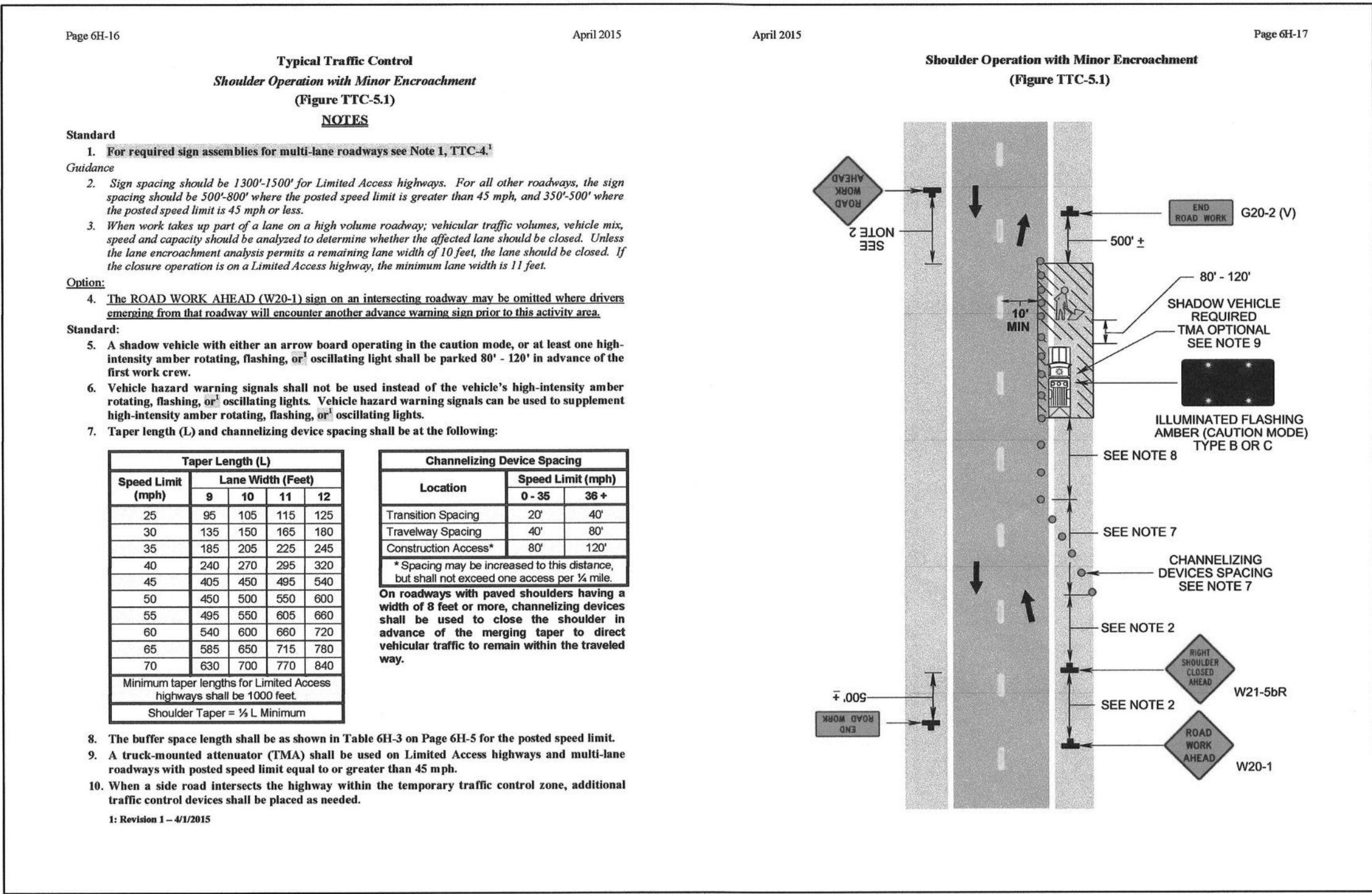


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**TYPICAL APPLICATIONS OF TEMPORARY TRAFFIC CONTROL
AS GIVEN IN THE VIRGINIA WORK AREA PROTECTION MANUAL**

MAINTENANCE OF TRAFFIC NOTES

1. DURING CONSTRUCTION, CONTRACTOR SHALL LIMIT DISRUPTION TO RESIDENTIAL ACCESS DRIVEWAYS, COORDINATE CONSTRUCTION ACTIVITIES THAT MAY AFFECT DRIVEWAYS WITH THE PROPERTY OWNER, AND PROVIDE OWNER WITH ACCESS BY END OF WORK DAY OR SOONER AS POSSIBLE.
2. ALL STANDARDS AND GUIDELINES OF THE VIRGINIA WORK AREA PROTECTION MANUAL (VWAPM) SHALL APPLY TO ANY TRAFFIC CONTROL MEASURES INCLUDING, BUT NOT LIMITED TO, ALL DEVICES, METHODS, AND DIMENSIONS.
3. CONTRACTOR SHALL PROVIDE WARNING SIGNS, AND APPROVED PORTABLE SIGN STANDS AND INSURE AN UNRESTRICTED VIEW OF ADVANCE WARNING SIGN MESSAGES FOR SAFETY OF TRAFFIC AND IN ACCORDANCE WITH THE VWAPM.
4. ALL WORK WITHIN THE RIGHT-OF-WAY SHALL BE APPROPRIATELY SIGNED REGARDLESS OF WHETHER A LANE OR SHOULDER CLOSURE IS NEEDED.
5. DURING LANE CLOSURES, CONTRACTOR SHALL USE AT LEAST 2 FLAGMEN AT ALL TIMES AND IN ACCORDANCE WITH THE VWAPM.
6. CONES MAY BE USED IN AREAS WHERE PERSONNEL WILL BE PRESENT TO INSURE THEIR PROPER ALIGNMENT; GROUP II DRUMS SHALL BE REQUIRED WHEN THE WORK ZONE IS UNMANNED. ALL CONES SHALL BE A MINIMUM OF 36" IN HEIGHT AND PLACED IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE VWAPM.
7. ALL TRAFFIC CONTROL EQUIPMENT AND OBJECTS SHALL MEET NCHRP 350 CRASH TESTING CRITERIA.
8. THESE NOTES ARE PROVIDED AS GUIDELINES ONLY. THE CONTRACTOR SHALL PREPARE A SPECIFIC TRAFFIC CONTROL PLAN THAT MATCHES HIS PLANNED OPERATIONS AND PROJECT SEQUENCING.

COMMUNICATION NOTES

1. THE CONTRACTOR SHALL ADVISE THE CITY OF ROANOKE TRANSPORTATION DEPARTMENT OF PLANNED LANE CLOSURES A MINIMUM OF 72 HOURS IN ADVANCE OF PLANNED LANE CLOSURE.
2. THE CONTRACTOR SHOULD IMMEDIATELY NOTIFY 911 FOR ANY EMERGENCY.
3. IF AN EMERGENCY IS TRAFFIC RELATED, THE CITY OF ROANOKE TRANSPORTATION DEPARTMENT, OR HIS DESIGNEE SHOULD BE NOTIFIED IMMEDIATELY AFTER CALLING 911.

TABLE: PRESSURE AND METER TYPE FOR SERVICE

TAX MAP NUMBER	PROPERTY ADDRESS	APPROX. METER PRESSURE (psd)	METER TYPE
5480401	4210 Griffin Road, S.W.	112	S
5470201	4247 Griffin Road, S.W.	103	S
5470202	4237 Griffin Road, S.W.	86	S
5470203	4263 Griffin Road, S.W.	83	S
5470204	4305 Griffin Road, S.W.	78	S
5470205	4313 Griffin Road, S.W.	75	S
5470206	4323 Griffin Road, S.W.	73	S
5470504	0 Griffin Road, S.W.	88	D
5470505	0 Griffin Road, S.W.	88	D
5470415	0 Griffin Road, S.W.	78	S
5470414	4320 Griffin Road, S.W.	68	S
5470413	0 Griffin Road, S.W.	66	S
5470412	4334 Griffin Road, S.W.	63	S
5470411	0 Griffin Road, S.W.	59	S
5470410	4350 Griffin Road, S.W.	52	D
5470409	0 Griffin Road, S.W.	52	D
5470408	4372 Griffin Road, S.W.	49	S
5470401	4320 Bristol Road, S.W.	63	S
5470402	4322 Bristol Road, S.W.	50	S
5470404	4351 Bristol Road, S.W.	34	S
5470405	4367 Bristol Road, S.W.	31	S
5470406	0 Bristol Road, S.W.	28	D
5470407	0 Bristol Road, S.W.	28	D
5470506	4318 Bristol Road, S.W.	74	S
5470526	0 Bristol Road, S.W.	60	S
5470525	4332 Bristol Road, S.W.	54	S
5470524	0 Bristol Road, S.W.	41	D
5470523	0 Bristol Road, S.W.	41	D
5470522	0 Bristol Road, S.W.	30	S
5470521	4364 Bristol Road, S.W.	28	D
5470520	4372 Bristol Road, S.W.	28	D
5470507	0 Joplin Road, S.W.	65	S
5470508	4233 Joplin Road, S.W.	65	S
5470509	4243 Joplin Road, S.W.	65	S
5470510	4251 Joplin Road, S.W.	66	S
5470511	4259 Joplin Road, S.W.	61	D
5470512	4267 Joplin Road, S.W.	61	D
5470513	4297 Joplin Road, S.W.	72	S
5470601	4228 Joplin Road, S.W.	68	S
5470602	4244 Joplin Road, S.W.	68	S
5470603	4252 Joplin Road, S.W.	65	S
5470604	4260 Joplin Road, S.W.	65	S
5470605	4268 Joplin Road, S.W.	70	S
5470712	4404 Van Winkle Road, S.W.	47	S
5470711	4384 Van Winkle Road, S.W.	41	S
5470710	4374 Van Winkle Road, S.W.	36	S
5470709	4366 Van Winkle Road, S.W.	36	S
5470708	4356 Van Winkle Road, S.W.	38	S
5470707	4350 Van Winkle Road, S.W.	40	S
5470705	4336 Van Winkle Road, S.W.	45	S
5470703	4306 Van Winkle Road, S.W.	69	S
5470702	0 Van Winkle Road, S.W.	76	S
5470701	0 Van Winkle Road, S.W.	81	S
5470519	0 Van Winkle Road, S.W.	37	D
5470518	0 Van Winkle Road, S.W.	37	D
5470517	0 Van Winkle Road, S.W.	41	S
5470516	4339 Van Winkle Road, S.W.	48	S
5470515	0 Van Winkle Road, S.W.	53	S
5470514	4305 Van Winkle Road, S.W.	71	S
5480340	4215 Roy Drive, S.W.	74	S
5480339	0 Roy Drive, S.W.	72	S
5480338	4233 Roy Drive, S.W.	65	S
5480337	0 Roy Drive, S.W.	62	S
5480121	0 Griffin Road, S.W.	72	S
5480122	4220 Roy Drive, S.W.	70	S
5480107	0 Roy Drive, S.W.	60	S
5480106	4236 Roy Drive, S.W.	55	S

ABOVE PRESSURES ARE STATIC BASED ON HGL AT ELEVATION 1410
S - DENOTES SINGLE METER SETTER, D - DENOTES DOUBLE METER SETTER

#	STRUCTURE	RIM	GRATE	INV.OUT	INV.IN
D-1	DMH	1144.38'			
D-2	Curb Inlet	1148.70'			
D-2a	Curb Inlet	1148.62'			
D-2b	Drop Inlet		1148.71'		
D-2c	Drop Inlet		1147.30'		
D-3	15" RCP			1189.17' (15" RCP)	1192.26' (15" RCP)
D-4	15" CMP			1207.11' (15" CMP)	1208.79' (15" CMP)
D-5	12" RCP			1218.00' (12" RCP)	1222.99' (12" RCP)
D-6	15" STL			1220.08' (15" STL)	1223.73' (15" STL)
D-7	12" RCP			1240.40' (12" RCP)	1242.06' (12" RCP)
D-8	12" RCP			1243.27' (12" RCP)	1244.61' (12" RCP)
D-9	12" RCP			1257.90' (12" RCP)	1258.44' (12" RCP)
D-10	12" CMP			1259.46' (12" CMP)	1260.30' (12" CMP)
D-11	12" RCP			1283.00' (12" RCP)	1283.32' (12" RCP)
D-12	18" RCP			1281.40' (18" RCP)	1282.78' (18" RCP)
D-13	18" RCP			1242.60' (18" RCP)	1245.58' (18" RCP)
D-14	18" RCP			1289.48' (18" RCP)	1291.26' (18" RCP)
D-15	12" RCP			1246.62' (12" RCP)	1248.68' (12" RCP)
D-16	15" RCP			1241.92' (15" RCP)	1243.32' (15" RCP)
D-17	24" CMP			1235.95' (24" CMP)	1237.92' (24" CMP)
D-18	15" CMP			1233.94' (15" CMP)	1235.31' (15" CMP)
D-19	36" RCP			1220.07' (36" RCP)	1221.77' (36" RCP)
D-20	15" CMP			1241.40' (15" CMP)	1243.22' (15" CMP)
D-21	12" CMP			1248.78' (12" CMP)	1252.21' (12" CMP)
D-22	Drop Inlet		1212.16'		
D-23	15" RCP				1221.33' (15" RCP)
D-24	15" RCP			1232.25' (15" RCP)	unknown
D-25	15" CMP			1236.38' (15" CMP)	1236.96' (15" CMP)
D-26	15" CPP			1241.79' (15" CPP)	1243.17' (15" CPP)

SITE AND ZONING TABULATIONS

CURRENT ZONING: ALL LOTS ARE R-7 EXCEPT FOR TAX MAP #5480401.
#5480401 IS RA(c): RESIDENTIAL-AGRICULTURAL ORD. #30467
PROPOSED USE: SAME RESIDENTIAL USE WITH WATERLINE BETTERMENT.
SITE ACREAGE: LOT SIZE VARIES.
PROPOSED NUMBER OF LOTS: NO CHANGE IN NUMBER OF LOTS.

GENERAL NOTES

1. THE PROPERTIES SHOWN ON THESE PLANS ARE LOCATED AT ROANOKE CITY TAX ASSESSMENT MAP NUMBERS AS LISTED IN CHART AT LEFT.
2. OWNER/DEVELOPER: WESTERN VIRGINIA WATER AUTHORITY
(ATTN: WILL BULLOSS, P.E.)
601 SOUTH JEFFERSON STREET, SUITE 300
ROANOKE, VA 24011 (540) 283-2939
3. NO PORTION OF THIS PROJECT IS LOCATED WITHIN THE LIMITS OF A 100 YEAR FLOOD BOUNDARY AS DESIGNATED BY FEMA. THIS OPINION IS BASED ON AN INSPECTION OF THE FLOOD INSURANCE RATE MAP #51161C0252G, DATED SEPTEMBER 28, 2007.
4. THE PROPERTY LINES AND RIGHT OF WAY SHOWN ARE THE RESULT OF REPRODUCING RECORDED SUBDIVISION PLATS FOR THE LOTS INVOLVED AND JUSTIFYING THESE WITH PROPERTY CORNERS AS LOCATED BY FIELD SURVEY PERFORMED BY LUMSDEN ASSOCIATES, P.C. IN 2019.
5. TOPOGRAPHIC DATA IS BASED ON A FIELD SURVEY PERFORMED BY LUMSDEN ASSOCIATES, P.C. IN 2019 AND SUPPLEMENTED BY ROANOKE CITY GIS MAPPING. THE LOCATION OF THE NEAR SIDE CURBS, OR EDGE OF PAVEMENT, AND PROFILE ELEVATIONS ARE TAKEN DIRECTLY FROM THE FIELD SURVEY.
6. A TITLE REPORT WAS NOT FURNISHED FOR THESE PROPERTIES.
7. THE PROPERTIES SHOWN ON THESE PLANS ARE CURRENTLY SERVED BY WESTERN VIRGINIA WATER AUTHORITY FOR WATER SUPPLY.
8. THE PROPERTIES SHOWN ON THESE PLANS ARE ACCESED BY PUBLIC ROADS.
9. AN APPROVED SET OF PLANS SHALL BE KEPT ON SITE AT ALL TIMES.

Lumsden Associates, P.C.
ENGINEERS | SURVEYORS | PLANNERS

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ROANOKE, VIRGINIA 24018

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COMMONWEALTH OF VIRGINIA
ANDREW P. LUMSDEN
Lic. No. 052218
12/18/19
PROFESSIONAL ENGINEER

NOTES & DETAILS

**GRIFFIN / VAN WINKLE
WATERLINE REPLACEMENTS**
PREPARED FOR
WESTERN VIRGINIA WATER AUTHORITY
SITUATED IN
THE CITY OF ROANOKE, VIRGINIA

REVISIONS	NO.	DATE	DESCRIPTION
	1		
	2		
	3		
	4		
	5		

DATE: December 18, 2019
SCALE: NONE
COMMISSION NO: 19-034
SHEET 2 OF 12