UTILITY NOTES:

1. G.C. SHALL COORDINATE THE EXACT SANITARY SEWER, WATER, AND STORM SEWER BUILDING TIE–IN LOCATIONS WITH THE ARCHITECTURAL PLANS.
2. ALL UTILITY SERVICE LATERALS OR LINES, INCLUDING ELECTRIC, SHALL BE INSTALLED UNDERGROUND PER SECTION 36.2–610. WATER & SEWER CONNNECTIONS SHALL CONFORM TO WVWA UTILITY STANDARDS AND INTERNATIONAL BUILDING CODE.
3. THE G.C. SHALL COORDINATE TEMPORARY POWER FOR THE PROPOSED BUILDING AS REQ'D.
4. G.C. SHALL PROVIDE ALL REQUIRED COORDINATION, MATERIALS, AND INSTALLATION TIMING BETWEEN AEP, ROANOKE GAS, AND OTHER PROVIDERS.

GENERAL W.V.W.A. NOTES:

1. ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THE LATEST WVWA DESIGN AND CONSTRUCTION STANDARDS.
2. THE CONTRACTOR OR DEVELOPER IS REQUIRED TO NOTIFY THE WESTERN VIRGINIA WATER AUTHORITY IN WRITING AT LEAST THREE (3) DAYS PRIOR TO ANY CONSTRUCTION. PLEASE CONTACT MARK SINK AT (540) 537–3460.
3. ALL WORK SHALL BE SUBJECT TO INSPECTION BY THE WESTERN VIRGINIA WATER AUTHORITY.
4. FIELD CORRECTIONS SHALL BE APPROVED BY THE WESTERN VIRGINIA WATER AUTHORITY PRIOR TO THE START OF CONSTRUCTION.
5. THE CONTRACTOR SHALL MAINTAIN A MINIMUM OF 18" CLEARANCE VERTICALLY AND 2' MINIMUM HORIZONTALLY FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE AT ALL WATER, SANITARY SEWER CROSSINGS OF ANY OTHER UTILITIES. WHERE THIS CANNOT BE ACHIEVED ADDITIONAL MEASURES IN ACCORDANCE WITH WVWA STANDARDS SHALL BE ENFORCED.
6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE ALL EXISTING UTILITIES LOCATED AND POTHOLED TO VERIFY LOCATIONS. THIS PLAN REVIEW DOES NOT REMOVE THE CONTRACTOR'S RESPONSIBILITY TO RELOCATE ANY EXISTING CONFLICTS FOUND DURING CONSTRUCTION.
7. REFER TO PLAN SET AND WVWA DETAILS FOR SPECIFIC CONSTRUCTION STANDARDS.
8. ALL PAVEMENT IN THE PUBLIC RIGHT OF WAY SHALL BE RESTORED BASED ON THE CITY OF ROANOKE RIGHT OF WAY EXCAVATION AND RESTORATION STANDARDS.

W.V.W.A. WATER NOTES:

1. ALL WATER CONNECTIONS TO EXISTING LINES SHALL BE COORDINATED WITH AND PERFORMED BY THE WESTERN VIRGINIA WATER AUTHORITY. G.C. SHALL PROVIDE ALL MATERIALS REQUIRED FOR THE PROPOSED WATERLINE INCLUDING THE TAPPING SLEEVE AND VALVE. WVWA TO PERFORM THE ACTUAL TAP ON THE EXISTING WATERLINE.
2. ALL WATER AND SANITARY SEWER FACILITIES ARE TO BE INSTALLED ACCORDING TO THE WESTERN VIRGINIA WATER AUTHORITY DESIGN AND CONSTRUCTION STANDARDS.
3. .G.C. SHALL PROVIDE 5 DAYS NOTICE TO THE WVWA FOR ANY ANTICIPATED WATER OUTAGE TO ALLOW THE WVWA TIME TO SCHEDULE AND NOTIFY AFFECTED CUSTOMERS. (540) 537–3460
4. CONTRACTOR TO FURNISH AND INSTALL TAPPING SLEEVE AND VALVE, TAP TO BE MADE BY WVWA. CONTRACTOR SHALL BE RESPONSIBLE FOR EXCAVATION AND SHORING PER OSHA REGULATIONS.

W.V.W.A. SANITARY SEWER NOTES:

1. ALL SANITARY SEWER CONNECTIONS TO EXISTING LINES SHALL BE COORDINATED WITH AND PERFORMED BY THE WESTERN VIRGINIA WATER AUTHORITY.
2. ALL WATER AND SANITARY SEWER FACILITIES ARE TO BE INSTALLED ACCORDING TO THE WESTERN VIRGINIA WATER AUTHORITY DESIGN AND CONSTRUCTION STANDARDS.
3. SANITARY SEWER TAP TO EXISTING MANHOLE TO BE MADE BY CONTRACTOR AND COORDINATED WITH W.V.W.A. MANHOLE CONNECTION MUST BE CORED WITH A FLEXIBLE BOOT INSTALLED.

FIRE NOTES

1. G.C. SHALL PROVIDE A 3200 SERIES OR ABOVE KNOX BOX AT THE MAIN ENTRY DOOR PER THE FIRE MARSHALL'S OFFICE, CONTACT THE FIRE MARSHALL'S OFFICE AT 540–853–2795 FOR ORDERING INFORMATION. SEE ARCHITECTURAL PLANS FOR ADDITIONAL DETAILS ON SPECIFIC MOUNTING LOCATIONS, ETC.
2. THE PROPOSED BUILDING SHALL HAVE SPRINKLER SERVICE. G.C. SHALL BE RESPONSIBLE FOR PROVIDING A P.I.V., FIRE DEPARTMENT CONNECTION, KNOX BOXES, AND IN–GROUND WATER VAULT FOR THE DOMESTIC WATER METER, AND DOUBLE DETECTOR CHECK FOR THE FIRE SERVICE.
3. A FIRE HYDRANT SHALL BE LOCATED WITHIN 250' OF THE MOST REMOTE PART OF BUILDING. BUILDING HAS MIXED OCCUPANCY USE GROUPS TO INCLUDE B AND S–1 WITH TYPE II–B CONSTRUCTION.
4. S USE GROUPS LESS THAN 20,000 SF SHALL PROVIDE 2,500 GPM OF FLOW FROM THE FIRE HYDRANTS THAT SERVE THE SITE.
5. EACH FIRE DEPARTMENT CONNECTION (FDC) IS REQUIRED TO HAVE A KNOX BOX LOCKING CAP INSTALLED WITH SINGLE 5" STORZ COUPLING AND A 30° ELBOW. PLEASE CALL THE NUMBER LISTED ABOVE IN NOTE #1, OR VISIT WWW.KNOXBOX.COM FOR ORDERING INFORMATION.
6. A KNOX GATE SWITCH SHALL BE PROVIDED FOR DROP BEAM SECURITY GATE "A" IN THE SALES DISPLAY LOT.

SANITARY SEWER SCHEDULE:

BLDG.	Ⓧ	30 LF OF 4" PVC SDR–35 AT 2.08% (INV. AT BLDG. 1081.50)
Ⓧ		S.S. C.O. PRIVATE (TRAFFIC–BEARING LID) TOP=1084.90 INV.=1080.88
Ⓧ	①	21 LF OF 4" PVC SDR–35 AT 4.57%
BLDG.	Ⓙ	14 LF OF 4" PVC SDR–35 AT 11.28% (INV. AT BLDG. 1081.50)
Ⓙ		OIL/WATER SEPARATOR TOP=1084.90 INV.=1079.92
Ⓙ	①	5 LF OF 4" PVC SDR–35 AT 0.00%
①		S.S. C.O. PRIVATE (TRAFFIC–BEARING LID) TOP=1084.90 INV.=1079.92
①	Ⓚ	32 LF OF 4" PVC SDR–35 AT 5.0%
BLDG.	Ⓚ	22 LF OF 4" PVC SDR–35 AT 2.08% (INV. AT BLDG 1081.50)
Ⓚ		S.S. C.O. PRIVATE (TRAFFIC–BEARING LID) TOP=1085.25 INV.=1081.05
Ⓚ	Ⓖ	19 LF OF 4" PVC SDR–35 AT 2.08%
Ⓖ		S.S. C.O. PRIVATE (TRAFFIC–BEARING LID) TOP=1084.88 INV.=1080.85 (FROM H) INV.=1078.32 (FROM I)
Ⓖ	Ⓕ	35 LF OF 4" PVC SDR–35 AT 2.08%
Ⓕ		S.S. C.O. PRIVATE (TRAFFIC–BEARING LID) TOP=1084.70 INV.=1077.60
Ⓕ	Ⓔ	100 LF OF 4" PVC SDR–35 AT 1.25%
Ⓔ		S.S. C.O. PRIVATE (TRAFFIC–BEARING LID) TOP=1086.04 INV.=1076.35
Ⓔ	Ⓓ	58 LF OF 4" PVC SDR–35 AT 1.25%
Ⓓ		S.S. C.O. PRIVATE (TRAFFIC–BEARING LID) TOP=1084.43 INV.=1075.75
Ⓓ	Ⓒ	96 LF OF 4" PVC SDR–35 AT 1.25%
Ⓒ		S.S. C.O. PRIVATE (TRAFFIC–BEARING LID) TOP=1085.65 INV.=1074.55
Ⓒ	Ⓑ	90 LF OF 4" PVC SDR–35 AT 1.25%
Ⓑ		S.S. CLEANOUT (TRAFFIC–BEARING LID) TOP=1083.30 INV.=1073.43
Ⓑ	Ⓐ	89 LF OF 4" PVC SDR–35 AT 2.25%
Ⓐ		S.S. MANHOLE (PUBLIC) TOP=1081.94 INV. IN=1071.43 INV. OUT=1071.33
Ⓐ	EX. C	151 LF OF 6" PVC SDR–35 AT 1.49% INV. OUT:1069.08

NOTES:
1. G.C. TO CONFIRM & COORDINATE THE BUILDING TIE–IN LOCATION AND ELEVATION WITH M.E.P. AND ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION OF LATERAL.
2. G.C. TO CONFIRM THE TIE–IN LOCATION AND ELEVATION TO THE EXISTING MANHOLE PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
3. G.C. SHALL CORE DRILL THE EXISTING MANHOLE AND PROVIDE A FLEXIBLE BOOT CONNECTION FOR THE PROPOSED CONNECTION.

STORM STRUCTURE SCHEDULE:

- ⚠1 VDOT ST'D DI–3C CURB INLET (10' THROAT) TOP:1086.28 INV:1082.00
- ⚠2 129 LF OF 15" TYPE S HDPE PIPE AT 2.0%
- ⚠3 VDOT ST'D DI–3C CURB INLET (8' THROAT) TOP:1084.06 INV. IN:1081.20 (#13) INV. IN:1079.42 (#2) INV. IN:1077.89 (#12) INV OUT:1077.79
- ⚠4 214 LF OF 18" TYPE S HDPE PIPE AT 1.00%
- ⚠5 VDOT ST'D DI–3B CURB INLET (6' THROAT) TOP:1082.38 INV. IN:1075.65 INV. OUT:1074.65
- ⚠6 135 LF OF 18" TYPE S HDPE PIPE AT 1.81% INV OUT:1072.20
- ⚠7 750 LF TOTAL OF 84" ALLUMINIZED TYPE II (14 GAUGE) CMP PIPE FOR SWM FACILITY (3) RUNS OF 250 LF W/WEIR WALL & ORIFICE (SEE DETAIL ON SHEET C14.0 FOR SPECIFIC ELEVATIONS)
- ⚠8 110 LF OF 6" SCH. 40 PIPE AT 2.1% W/ 3 TRAFFIC BEARING CLEANOUTS INV. IN:1082.85 INV. OUT:1081.20
- ⚠9 VDOT ST'D DI–1 GRATE INLET TOP:1084.55 INV. IN:1081.20 INV. OUT:1081.10
- ⚠10 66 LF OF 15" TYPE S HDPE PIPE AT 1.48%
- ⚠11 VDOT ST'D DI–1 GRATE INLET TOP:1084.50 INV. IN:1080.12 INV. OUT:1080.02
- ⚠12 155 LF OF 15" TYPE S HDPE PIPE AT 1.37%
- ⚠13 87 LF OF 6" SCH. 40 PIPE AT 1.88% W/1 TRAFFIC BEARING CLEANOUT INV. IN:1082.85 INV. OUT:1081.20
- ⚠14 VDOT ST'D MH–2 MH BASE W/ OPEN TOP & TRASH RACK TOP:1083.98 INV.:1079.00
- ⚠15 87 LF OF 30" TYPE S HDPE PIPE AT 1.00%
- ⚠16 VDOT ST'D DI–7 GRATE INLET (TYPE 1 GRATE) TOP:1087.58 INV. IN:1078.13 INV. OUT:1078.03
- ⚠17 134 LF OF 30" TYPE S HDPE PIPE AT 2.00%
- ⚠18 VDOT ST'D DI–7 GRATE INLET (TYPE 1 GRATE) TOP:1083.00 INV. IN:1075.36 INV. OUT:1075.26
- ⚠19 152 LF OF 30" TYPE S HDPE PIPE AT 1.00% INV. OUT:1073.75
- ⚠20 VDOT ST'D MH–2 MH TOP:1078.15 INV. IN:1068.85 INV. OUT:1068.73
- ⚠21 23 LF OF 30" CLASS III RCP PIPE AT 10.96%
- ⚠22 VDOT ST'D MH–2 MH TOP:1071.63 INV. IN:1066.21 (#21) INV. IN:1066.31 (#26B) INV. OUT:1066.11
- ⚠23 11 LF OF 30" CLASS III RCP PIPE AT 1.00%
- ⚠24 VDOT ST'D DI–1 GRATE INLET TOP:1069.50 INV. IN:1066.00 INV. OUT:1065.89
- ⚠25 VDOT ST'D DI–5 GRATE INLET TYPE III GRATE TOP:1082.50 INV.:1076.90
- ⚠26 230 LF OF 15" CLASS III RCP PIPE AT 2.12%
- ⚠26A VDOT ST'D MH–2 MH TOP:1076.05 INV. IN:1072.04 INV. OUT:1071.94
- ⚠26B 229 LF OF 15" CLASS III RCP PIPE AT 2.46%
- ⚠27 VDOT ST'D DI–7A GRATE INLET TYPE III GRATE TOP:1089.81 INV.:1085.31
- ⚠28 292 LF OF 15" CLASS III RCP PIPE AT 3.46%
- ⚠28A VDOT ST'D DI–3B CURB INLET (8' THROAT) TOP:1080.48 INV. IN:1075.22 INV. OUT:1075.12
- ⚠29 VDOT ST'D DI–2B CURB INLET (6' THROAT) TOP:1080.47 INV.:1076.37
- ⚠30 7 LF OF 15" CMP PIPE AT 8.29% INV OUT:1075.79
- ⚠31 VDOT ST'D DI–3B CURB INLET (10' THROAT) TOP:1079.06 INV.:1074.85
- ⚠32 29 LF OF 15" CMP PIPE AT 2.83% INV OUT:1074.03

NOTES:
1. VDOT STD IS–1 INLET SHAPING SHALL BE PROVIDED IN ALL PROPOSED STRUCTURES
2. NON–SHRINK GROUT SHALL BE USED FOR ALL STORM SEWER PIPE CONNECTIONS.
3. STORM SEWER LOCATED IN PUBLIC RIGHT OF WAY OF PETERS CREEK ROAD, IS REQUIRED TO HAVE WATER TIGHT, GASKETED JOINTS.

NOTE: *SEE IRRIGATION PLANS FOR IRRIGATION METER

NOTE: CONTRACTOR TO COORDINATE GAS LINE INSTALLATION WITH UTILITY PROVIDER.

NOTE: SEE PLUMBING DRAWINGS FOR EXACT UTILITY CONNECTION LOCATIONS AT THE BUILDING. LOCATIONS SHOWN ON THIS PLAN ARE FOR GENERAL COORDINATION PURPOSES ONLY AND SHOULD BE VERIFIED PRIOR TO INSTALLATION.

NOTE: CONTRACTOR TO PROVIDE TAMPER SWITCHES IN THE VAULT AND THE POST INDICATING SPRINKLER CONTROL VALVE

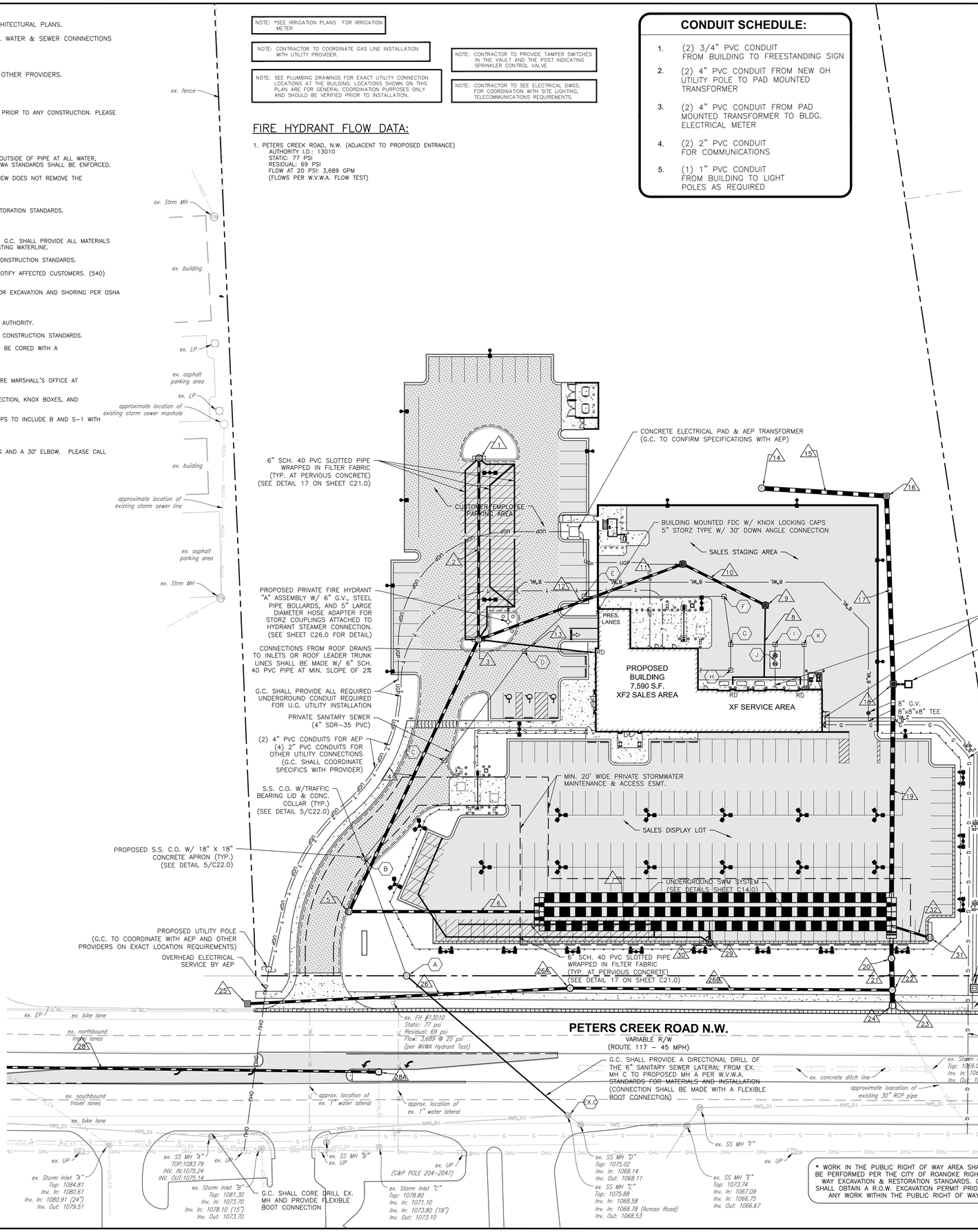
NOTE: CONTRACTOR TO SEE ELECTRICAL DWGS. FOR COORDINATION WITH SITE LIGHTING, TELECOMMUNICATIONS REQUIREMENTS.

FIRE HYDRANT FLOW DATA:

1. PETERS CREEK ROAD, N.W. (ADJACENT TO PROPOSED ENTRANCE)
   AUTHORITY I.D.: 13010
   STATIC: 77 PSI
   RESIDUAL: 69 PSI
   FLOW AT 20 PSI: 3,689 GPM
   (FLOWS PER W.V.W.A. FLOW TEST)

CONDUIT SCHEDULE:

1. (2) 3/4" PVC CONDUIT FROM BUILDING TO FREESTANDING SIGN
2. (2) 4" PVC CONDUIT FROM NEW OH UTILITY POLE TO PAD MOUNTED TRANSFORMER
3. (2) 4" PVC CONDUIT FROM PAD MOUNTED TRANSFORMER TO BLDG. ELECTRICAL METER
4. (2) 2" PVC CONDUIT FOR COMMUNICATIONS
5. (1) 1" PVC CONDUIT FROM BUILDING TO LIGHT POLES AS REQUIRED



SCALE: 1" = 30'

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REVISIONS

REV#	DATE	DESCRIPTION	BY
1	5/5/19	CLIENT REV.	BTC
2	6/10/19	LOCALITY REV.	BTC
3	7/19/19	PLAN REVISION	BTC

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2839 PETERS CREEK ROAD
ROANOKE, VA 24019

PROJECT NO.	04180107.00
DATE	21 MARCH 2019
SHEET TITLE	UTILITY PLAN
SHEET NO.	C5.0