05148comp-04-nd01.plt

SITE AND ZONING TABULATION

PROPERTY TAX # : 067.13-02-02.00-0000, 067.13-02-02.01-0000
SITE ZONING: R1
PROPOSED USE: SINGLE FAMILY RESIDENCE
MINIMUM LOT REQUIREMENTS:
1. ALL LOTS SERVED BY PRIVATE WELL AND SEWAGE DISPOSAL SYSTEM:
   A. AREA: 0.75 ACRE (32,670 SQUARE FEET)
   B. FRONTAGE: 90 FEET ON A PUBLICLY OWNED AND MAINTAINED STREET
2. LOTS SERVED BY EITHER PUBLIC SEWER OR WATER:
   A. AREA: 20,000 SQUARE FEET
   B. FRONTAGE: 75 FEET ON A PUBLICLY OWNED AND MAINTAINED ROAD
3. ALL LOTS SERVED BY EITHER PUBLIC SEWER OR WATER:
   A. AREA: 7,200 SQUARE FEET
   B. FRONTAGE: 60 FEET ON A PUBLICLY OWNED AND MAINTAINED STREET

SETBACK REQUIREMENTS:
FRONT: PRINCIPAL STRUCTURE = 30 FT.
ACCESSORY STRUCTURE = BEHIND FRONT BUILDING LINE
SIDE: PRINCIPAL STRUCTURE = 10 FT.
ACCESSORY STRUCTURE = 10 FT. BEHIND THE FRONT BUILDING LINE, OR 3 FT. BEHIND REAR BUILDING LINE
REAR: PRINCIPAL STRUCTURE = 25 FT.
ACCESSORY STRUCTURE = 3 FT.
MAXIMUM LOT COVERAGE PERCENTAGE: 50 PERCENT OF THE TOTAL LOT AREA
MAXIMUM BUILDING COVERAGE PERCENTAGE: 30 PERCENT OF THE TOTAL AREA FOR ALL BUILDINGS AND 7 PERCENT FOR ACCESSORY BUILDINGS
BUILDING HEIGHT MAXIMUM: PRINCIPAL STRUCTURE = 45 FT.
ACCESSORY STRUCTURE = 15 FT., OR 25 FT. PROVIDED THEY COMPLY WITH THE SETBACK REQUIREMENTS FOR PRINCIPAL STRUCTURES
PARKING FORMULA: 2 SPACES PER DWELLING UNIT

GENERAL NOTES

1. DEVELOPER: DAVID C. WALTON
   4733 WALTON LANE
   ROANOKE, VA, 24018
   CONTACT: DAVID C. WALTON, PHONE : (540)-989-8662
2. THIS PROPERTY IS LOCATED IN A SPECIAL FLOOD HAZARD AREA AS DESIGNATED BY FEMA. THIS OPINION IS BASED ON AN INSPECTION OF THE FLOOD INSURANCE RATE MAP. SEE COMMUNITY PANEL # 01436, MAP # 51161C0143G, DATED SEPTEMBER 28, 2007.
3. BOUNDARY SURVEY WAS PERFORMED BY LUMSDEN ASSOCIATES IN 2008.
4. SOURCE OF TOPOGRAPHY IS FIELD SURVEY BY LUMSDEN ASSOCIATES IN 2008.
5. NO TITLE REPORT WAS FURNISHED FOR THIS PROPERTY.
6. DUE TO THE FLOODPLAIN BEING LOCATED ON THIS SITE, THE DEVELOPMENT MUST BE IN ACCORDANCE WITH SECTION 30-74 FLOODPLAIN OVERLAY DISTRICT, OF THE ROANOKE COUNTY ZONING ORDINANCE.

CONSTRUCTION NOTES

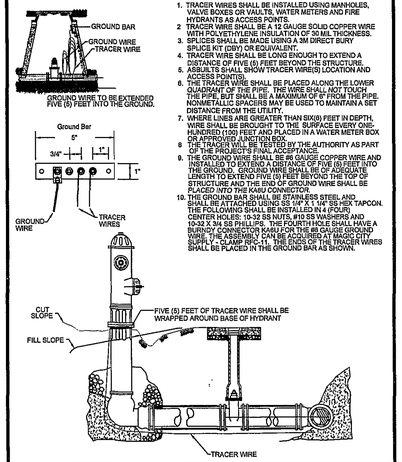
1. ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT COUNTY OF ROANOKE, THE WESTERN VIRGINIA WATER AUTHORITY (WVWA) AND VDOT STANDARDS AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE OWNER AND THE ENGINEER OF ANY CHANGES OR CONDITIONS ATTACHED TO PERMITS OBTAINED FROM ANY AUTHORITY ISSUING PERMITS.
3. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY EXISTING CONDITIONS PRIOR TO STARTING CONSTRUCTION.
4. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO STARTING CONSTRUCTION.
5. THE CONTRACTOR AND/OR OWNER SHALL PROVIDE A STORAGE CONTAINER FOR TEMPORARY STORAGE AND DISPOSAL OF LAND CLEARANCE DEBRIS AND BUILDING MATERIALS. ON-SITE BURIAL OF MATERIAL SHALL NOT BE PERMITTED.
6. NO CONSTRUCTION/FIELD REVISIONS ARE ALLOWED WITHOUT THE APPROVAL OF THE CONSULTING ENGINEER, ROANOKE COUNTY, AND WVWA.
7. ANY NEW ALIGNMENTS, CHANGES IN GRADES, ALTERNATE PIPE SIZES, MANHOLES, OR ESC MEASURES WILL REQUIRE A NEW SET OF PLANS STAMPED BY THE CONSULTING ENGINEER. COUNTY ENGINEER WILL REVIEW PLANS FOR ANY REVISIONS.
8. ALL NECESSARY UTILITY LATERALS CONDUITS (I.E. WATER, SEWER, STORM, GAS AND TELEPHONE) SHALL BE CONSTRUCTED PRIOR TO THE PLACEMENT OF BASE MATERIAL.
9. THE ENTIRE CONSTRUCTION AREA INCLUDING DITCHES AND/OR PAVEMENT IS TO BE BACKFILLED AND SEEDED AT THE EARLIEST POSSIBLE TIME AFTER FINAL GRADING.

GRADING NOTES

1. AREAS TO BE GRADED SHALL BE CLEARED OF ALL VEGETATION, STRUCTURES, AND OTHER PHYSICAL FEATURES IN PREPARATION OF GRADING.
2. TOPSOIL SHALL BE REMOVED FROM THE CLEARED AREA AND STOCKPILED FOR FUTURE USE.
3. FILL MATERIAL SHALL BE FREE FROM ORGANIC MATTER AND ROCKS LARGER THAN 6 INCHES IN DIAMETER.
4. FILL MATERIAL SHALL BE PLACED AND COMPACTED IN EIGHT (8) INCH LOOSE LIFTS AND COMPACTED TO AT LEAST NINETY-FIVE (95) PERCENT OF THE MATERIAL'S MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698, STANDARD PROCTOR. MAINTAIN MOISTURE CONTENT OF FILL MATERIAL WITHIN THREE (3) PERCENT OF OPTIMUM TO ATTAIN REQUIRED COMPACTION DENSITY.
5. NO SUBSURFACE SOILS INFORMATION HAS BEEN FURNISHED TO THE DESIGNING ENGINEER (LUMSDEN ASSOCIATES, P.C.). A QUALIFIED GEOTECHNICAL ENGINEER, LICENSED IN THE STATE OF VIRGINIA, SHOULD BE CONSULTED CONCERNING SOIL STABILITY, SLOPE STABILIZATION, SOIL COMPACTION, TESTING, AND OTHER SOIL CHARACTERISTICS. LUMSDEN ASSOCIATES ASSUMES NO RESPONSIBILITY OR LIABILITY RELATING TO FAILURES RESULTING FROM THE SAME.

WESTERN VIRGINIA WATER AUTHORITY GENERAL NOTES

1. ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THE CONSTRUCTION STANDARDS AND SPECIFICATIONS OF THE WESTERN VIRGINIA WATER AUTHORITY (WVWA).
2. A PRE-CONSTRUCTION CONFERENCE SHALL BE SCHEDULED WITH ROANOKE COUNTY ENGINEERING DIVISION, AND THE WESTERN VIRGINIA WATER AUTHORITY, TO BE HELD AT LEAST ONE (1) DAY PRIOR TO ANY CONSTRUCTION.
3. ALL WORK SHALL BE SUBJECTED TO INSPECTION BY THE WESTERN VIRGINIA WATER AUTHORITY AND ROANOKE COUNTY INSPECTORS.
4. THE DEVELOPER OR CONTRACTOR SHALL SUPPLY THE COUNTY, AND THE WESTERN VIRGINIA WATER AUTHORITY WITH CORRECT AS-BUILT PLANS BEFORE TENTATIVE ACCEPTANCE.
5. FIELD CORRECTIONS SHALL BE APPROVED BY THE ROANOKE COUNTY ENGINEERING DIVISION AND THE WESTERN VIRGINIA WATER AUTHORITY PRIOR TO SUCH CONSTRUCTION.



1. TRACER WIRES SHALL BE INSTALLED USING MANHOLES, VALVE BOXES OR VAULTS, WATER METERS AND FIRE HYDRANTS AS ACCESS POINTS.
2. TRACER WIRE SHALL BE A 12 GAUGE SOLID COPPER WIRE WITH POLYETHYLENE INSULATION OF 30 MIL THICKNESS.
3. SPLICES SHALL BE MADE USING A 3M DIRECT BURY SPLICE KIT (DBY) OR EQUIVALENT.
4. TRACER WIRE SHALL BE LONG ENOUGH TO EXTEND A DISTANCE OF FIVE (5) FEET BEYOND THE STRUCTURE.
5. ASBUILTS SHALL SHOW TRACER WIRE(S) LOCATION AND ACCESS POINT(S).
6. THE TRACER WIRE SHALL BE PLACED ALONG THE LOWER QUADRANT OF THE PIPE. THE WIRE SHALL NOT TOUCH THE PIPE, BUT SHALL BE A MAXIMUM OF 9" FROM THE PIPE. NONMETALLIC SPACERS MAY BE USED TO MAINTAIN A SET DISTANCE FROM THE UTILITY.
7. WHERE LINES ARE GREATER THAN SIX(6) FEET IN DEPTH, WIRE SHALL BE BROUGHT TO THE SURFACE EVERY ONE-HUNDRED (100) FEET AND PLACED IN A WATER METER BOX OR APPROVED JUNCTION BOX.
8. THE TRACER WILL BE TESTED BY THE AUTHORITY AS PART OF THE PROJECT'S FINAL ACCEPTANCE.
9. THE GROUND WIRE SHALL BE A 12 GAUGE COPPER WIRE AND SHALL BE EXTEND A DISTANCE OF FIVE (5) FEET INTO THE GROUND. GROUND WIRE SHALL BE OF ADEQUATE LENGTH TO EXTEND FIVE (5) FEET BEYOND THE TOP OF STRUCTURE AND THE END OF GROUND WIRE SHALL BE PLACED INTO THE KAAD CONNECTOR.
10. THE GROUND BAR SHALL BE STAINLESS STEEL AND SHALL BE ATTACHED USING SS 1/4" X 1 1/4" SS HEX TAPCON. THE FOLLOWING SHALL BE INSTALLED IN A (FOUR) CENTER HOLES: 10-32 SS NUTS, #10 SS WASHERS AND 10-32 X 3/4 SS PHILLIPS. THE FOURTH HOLE SHALL HAVE A BURNDY CONNECTOR KA6U FOR THE #6 GAUGE GROUND WIRE. THE ASSEMBLY CAN BE ACQUIRED AT MACO CITY SUPPLY, LLC SLAMP DP-11. THE ENDS OF THE TRACER WIRES SHALL BE PLACED IN THE GROUND BAR AS SHOWN.

WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS

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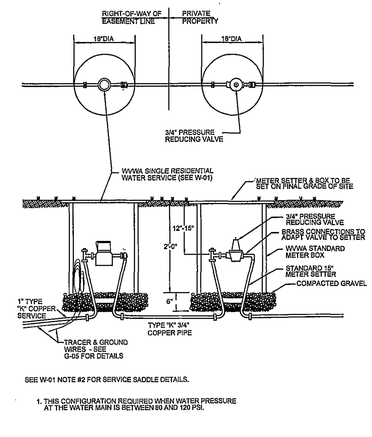
TRACER WIRE FOR NONMETALLIC PRESSURE PIPE — G-05



SEE W-01 NOTE #2 FOR SERVICE SADDLE DETAILS.

1. THIS CONFIGURATION REQUIRED WHEN WATER PRESSURE AT THE WATER MAIN IS BETWEEN 60 AND 120 PSI.

WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS

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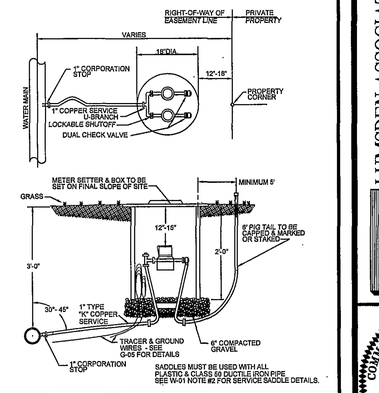
TYPE "B" SINGLE RESIDENTIAL WATER SERVICE (LINE PRESSURE UNDER 60 TO 120 PSI) — W-02

1. SETTER TO BE A.Y. McDONALD #02-215 WODD33 , FORD VBH472-15W-1133 OR APPROVED EQUAL.
2. METER BOX MUST BE CARSON/MID-STATES PLASTICS, INC PLASTIC BOX WITH FORD A32-T (ELECTRONIC READ LID) OR A. Y. McDONALD MODEL 74M32C-TC CAST IRON BASE & COVER OR APPROVED EQUAL.
3. CORPORATION STOP MUST BE FORD F1000-4-6 OR APPROVED EQUAL.



SADDLES MUST BE USED WITH ALL PLASTIC & CLASS 50 DUCTILE IRON PIPE. SEE W-01 NOTE #2 FOR SERVICE SADDLE DETAILS.

WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS

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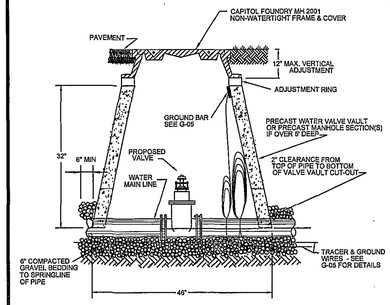
DOUBLE RESIDENTIAL WATER SERVICE — W-04



WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS

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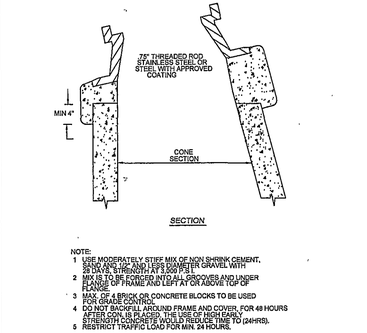
WATER LINE VALVE INSTALLATION — W-08



NOTE:
1 USE MODERATELY STIFF MIX OF NON SHRINK CEMENT, SAND & 1/2" (MAX) DIAMETER GRAVEL WITH 28 DAYS STRENGTH AT 3,000 PSI
2 MIX IS TO BE PLACED IN ALL GROOVES AND UNDER FLANGE OF FRAME AND LEFT AT OR ABOVE TOP OF FLANGE
3 MAX. OF 4 BRICK OR CONCRETE BLOCKS TO BE USED FOR GRADE CONTROL
4 DO NOT BACKFILL AROUND FRAME AND COVER, FOR 48 HOURS AFTER CONCRETE IS PLACED. THE USE OF HIGH EARLY STRENGTH CONCRETE (4,000 PSI) FROM MIX TIME TO (24HRS).
5 RESTRICT TRAFFIC LOAD FOR MIN. 24 HOURS.

WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS

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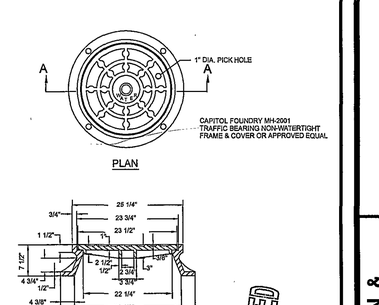
INSTALLATION DETAIL FOR ALL FRAMES AND COVERS — W-16



APPROVED

WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS

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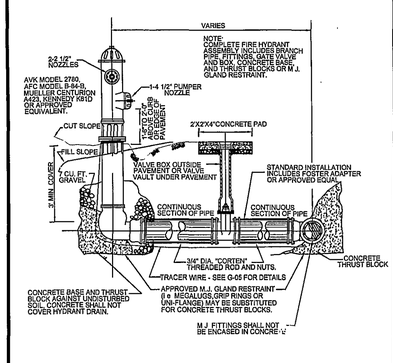
MANHOLE FRAME AND COVER — W-17

NOTES:
1. PUBLIC HYDRANTS SHALL BE PAINTED SILVER WITH AN OIL-BASED PAINT AND PRIVATE HYDRANTS SHALL BE PAINTED WHITE WITH AN OIL-BASED PAINT.
2. FIRE HYDRANT SHALL BE INSTALLED 2' MIN. AND 4' MAX. FROM BACK OF CURB OR 6' MIN. AND 12' MAX. WHEN CURB IS NOT PRESENT. FIRE HYDRANTS TO BE INSTALLED WITHIN RIGHT-OF-WAY OR EASEMENT LINE.
3. AREA AROUND HYDRANT AT A RADIUS OF 3' SHALL BE LEVEL AND UNOBSTRUCTED.
4. WATERPROOF BAGS SHALL BE PLACED OVER ALL NEWLY INSTALLED PIPE HYDRANTS.
5. HIGH PRESSURE (OVER 120 PSI) REQUIRES THE USE ALL 3 RESTRAINTS.



WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS

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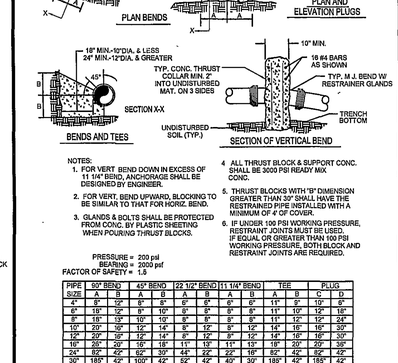
FIRE HYDRANT ASSEMBLY — W-18



NOTES:
1. FOR VERT. BEND DOWN IN EXCESS OF 11 1/4° BEND, ANCHORAGE SHALL BE DESIGNED BY ENGINEER.
2. FOR VERT. BEND UPWARD, BLOCKING TO BE SIMILAR TO THAT FOR HORIZ. BEND.
3. GLANDS & BOLTS SHALL BE PROTECTED FROM CONC. BY PLASTIC SHEETING WHEN POURING THRUST BLOCKS.
4. ALL THRUST BLOCK & SUPPORT CONC. SHALL BE 3000 PSI READY MIX CONC.
5. THRUST BLOCKS WITH "B" DIMENSION GREATER THAN 30" SHALL HAVE THE RESTRAINED PIPE INSTALLED WITH A MINIMUM OF 4' OF COVER.
6. IF UNDER 100 PSI WORKING PRESSURE, RESTRAINT JOINTS MUST BE USED. IF EQUAL OR GREATER THAN 100 PSI WORKING PRESSURE, BOTH BLOCK AND RESTRAINT JOINTS ARE REQUIRED.

PRESSURE = 200 psi
BEARING = 2000 psf
FACTOR OF SAFETY = 1.5

PIPE SIZE	90° BEND A	90° BEND B	45° BEND A	45° BEND B	22 1/2° BEND A	22 1/2° BEND B	11 1/4° BEND A	11 1/4° BEND B	TEE A	TEE B	PLUG C	PLUG D
4"	8"	12"	8"	8"	6"	6"	6"	6"	11"	9"	10"	6"
6"	18"	12"	8"	10"	6"	8"	6"	8"	11"	10"	12"	18"
8"	18"	12"	10"	10"	8"	8"	8"	8"	11"	12"	12"	24"
10"	20"	16"	12"	14"	8"	12"	8"	12"	14"	16"	16"	30"
12"	22"	16"	12"	14"	8"	12"	8"	12"	14"	16"	16"	30"
16"	25"	20"	16"	18"	11"	12"	11"	13"	18"	20"	20"	36"
24"	82"	42"	62"	30"	44"	22"	22"	16"	82"	42"	82"	42"
30"	185"	42"	107"	42"	52"	42"	40"	30"	185"	42"	183"	42"

WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS

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THRUST BLOCK CONSTRUCTION — W-19

FACTOR OF SAFETY = 1.5

PIPE SIZE	PIPE MAT'L	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND	VALVE /PLUG	TEE BRANCH	REDUCER (NOTE 2)	VERT. 45°	VERT. 22 1/2°	VERT. 11 1/4°
6"	D.I.	28'	12'	6'	3'	38'	34'	20'	23'	11'	5'
8"	D.I.	37'	16'	7'	4'	51'	47'	21'	30'	15'	7'
10"	D.I.	45'	19'	9'	4'	61'	57'	20'	37'	18'	9'
12"	D.I.	53'	22'	11'	5'	73'	69'	38'	43'	21'	10'
6"	PVC	30'	12'	6'	3'	55'	38'	29'	35'	17'	8'
8"	PVC	40'	16'	8'	4'	74'	58'	31'	46'	22'	11'
10"	PVC	47'	20'	9'	5'	89'	82'	30'	58'	27'	13'
12"	PVC	56'	23'	11'	6'	108'	88'	58'	66'	32'	16'

1. ALL JOINTS SHALL BE RESTRAINED ON BOTH SIDES OF THE FITTING FOR THE LENGTH SHOWN UNLESS OTHERWISE INDICATED.
2. REDUCER IS ONE SIZE SMALLER THAN PIPE LISTED. RESTRAINED LENGTH IS UPSTREAM ON THE LARGE SIDE OF THE REDUCER.
3 IF UNDER 100 PSI WORKING PRESSURE, RESTRAINT JOINT(S) ARE TO BE USED. IF EQUAL TO OR OVER 100 PSI WORKING PRESSURE, BOTH THRUST BLOCK AND RESTRAINT JOINTS SHALL BE USED

WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS

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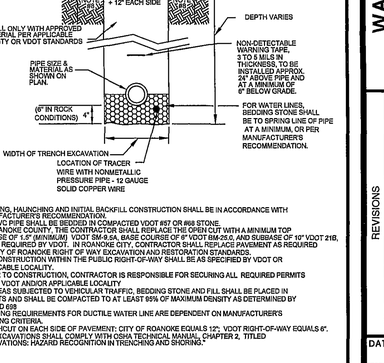
THRUST RESTRAINT OF PIPE JOINTS DESIGN LENGTHS — W-20



NOTES
1 BEDDING, HAUNCHING AND INITIAL BACKFILL CONSTRUCTION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION.
2. ALL PVC PIPE SHALL BE BEDDED IN COMPACTED VDOT #57 OR #68 STONE.
3 IN ROANOKE COUNTY, THE CONTRACTOR SHALL REPLACE THE OPEN CUT WITH A MINIMUM TOP COURSE OF 1.5" (MINIMUM) VDOT SM-9.5A, BASE COURSE OF 6" VDOT 208.03.C AND SUBBASE OF 10" VDOT 21B, OR AS REQUIRED BY VDOT. IN ROANOKE CITY, CONTRACTOR SHALL REPLACE PAVEMENT AS REQUIRED BY CITY OF ROANOKE RIGHT OF WAY EXCAVATION AND RESTORATION STANDARDS.
4. ALL CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE AS SPECIFIED BY VDOT OR APPLICABLE LOCALITY.
5. PRIOR TO CONSTRUCTION, CONTRACTOR IS RESPONSIBLE FOR SECURING ALL REQUIRED PERMITS FROM VDOT AND/OR APPLICABLE LOCALITY
6. IN AREAS SUBJECTED TO VEHICULAR TRAFFIC, BEDDING STONE AND FILL SHALL BE PLACED IN 6" LIFTS AND SHALL BE COMPACTED TO AT LEAST 95% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D 698
7. BEDDING REQUIREMENTS FOR DUCTILE WATER LINE ARE DEPENDENT ON MANUFACTURER'S BEDDING CRITERIA.
8 BENCHCUT ON EACH SIDE OF PAVEMENT; CITY OF ROANOKE EQUALS 12"; VDOT RIGHT-OF-WAY EQUALS 6".
9 ALL EXCAVATIONS SHALL COMPLY WITH OSHA TECHNICAL MANUAL, CHAPTER 2, TITLED "EXCAVATIONS: HAZARD RECOGNITION IN TRENCHING AND SHORING."

WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS

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BEDDING AND BACKFILL UNDER PAVEMENT AND RIGHT-OF-WAY — W-25

LUMSDEN ASSOCIATES, P.C.
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P.O. BOX 20669
ROANOKE, VIRGINIA 24018
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E-MAIL: MAIL@LUMSDENPC.COM

COMMONWEALTH OF VIRGINIA
THOMAS C. DALE
Lic. No. 033002
10/23/08
PROFESSIONAL ENGINEER

NOTES & DETAILS

WALTON ACRES SUBDIVISION & WATERLINE EXTENSION

PREPARED FOR
DAVID C. WALTON
WINDSOR HILLS MAGISTERIAL DISTRICT
ROANOKE COUNTY, VIRGINIA

NO.	DATE	REVISIONS DESCRIPTION
1		
2		
3		
4		
5		

DATE: October 23, 2008
SCALE: NOT TO SCALE
COMMISSION NO: 2008-148
SHEET 4 OF 7

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