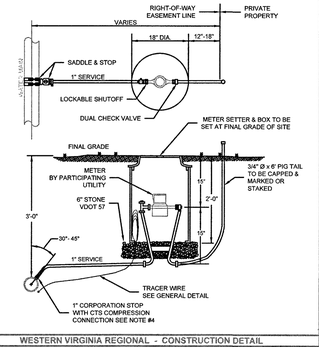
1. SETTER TO BE A.Y. McDONALD 720-215WD0033, FORD VBHH72-15W-11-33 OR APPROVED EQUAL
2. SADDLES MUST BE USED WITH ALL PLASTIC & DUCTILE IRON PIPE. SERVICE SADDLES SHALL BE USED IN ACCORDANCE WITH WATER DISTRIBUTION PIPING SPECIFICATION. SERVICE SADDLES FOR PLASTIC PIPE SHALL BE: POWERSEAL 3417, OR 3412AS, ROMAC 202S, OR 306, OR FORD METER FS202 OR FS303. FOR DUCTILE IRON PIPE USE THE ABOVE OR POWERSEAL 3413, ROMAC 202 OR FORD METER F202.
3. METER BOX SHALL BE CARSON/MID-STATES PLASTICS, INC. PLASTIC BOX WITH FORD "A" DOMESTIC SERIES FRAME WITH A NICOR DOMESTIC 12.25 CX LID WITH SENSUS RECESS AND WVWA LOGO OR APPROVED EQUAL. METER BOX SHALL NOT BE PLACED IN AREAS SUBJECT TO VEHICULAR TRAFFIC. IF TRAFFIC BEARING BOX IS REQUIRED, DESIGN ENGINEER SHALL CONSULT WITH PARTICIPATING UTILITY TO DETERMINE SITE SPECIFIC REQUIREMENTS.
4. CORPORATION STOP SHALL BE FORD FB1000-4-G-NL, MUELLER B-25008 OR APPROVED EQUAL
5. SERVICE SHALL BE "K" TYPE COPPER OR P.E. 4710 ,CTS O.D., MINIMUM CELL CLASS 445474E AND 445474D.
6. WHENEVER SIDEWALK EXISTS OR IS PROPOSED, MODIFY METER LOCATION AS DIRECTED.



WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

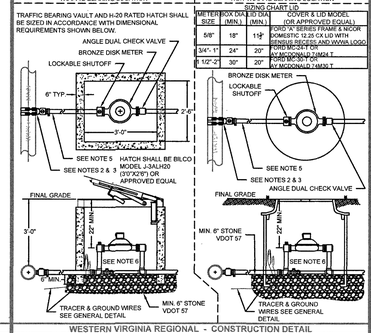
SINGLE RESIDENTIAL WATER SERVICE - (NEW DEVELOPMENT) (LINE PRESSURE UNDER 120 PSI) — W-1 — 05/07/17

1. ALL METERS ARE TO BE PROVIDED AND INSTALLED BY PARTICIPATING UTILITY AT OWNER/DEVELOPER'S EXPENSE. METER BOX, SERVICE, AND SETTER TO BE FURNISHED AND INSTALLED BY OWNER/DEVELOPER IN ACCORDANCE WITH THE MINIMUM REQUIREMENTS SHOWN BELOW.
2. SADDLES MUST BE USED WITH ALL PLASTIC & DUCTILE IRON PIPE. SERVICE SADDLES SHALL BE USED IN ACCORDANCE WITH WATER DISTRIBUTION PIPING SPECIFICATION. SERVICE SADDLES FOR PLASTIC PIPE SHALL BE: POWERSEAL 3417, OR 3412AS, ROMAC 202S, OR 306, OR FORD METER FS202 OR FS303. FOR DUCTILE IRON PIPE USE THE ABOVE OR POWERSEAL 3413, ROMAC 202 OR FORD METER F202.
3. CORPORATION STOP SHALL BE FORD FB1000-4-G-NL, MUELLER B-25008 OR APPROVED EQUAL
4. METER BOXES LOCATED IN AREAS SUBJECT TO VEHICULAR TRAFFIC SHALL BE CONCRETE WITH H-20 RATED TRAFFIC BEARING HATCH. ALL OTHER METER BOXES SHALL BE CARSON/MID-STATES PLASTICS, INC. PLASTIC BOX, ACIS CORRUGATED HDPE BOX, OR APPROVED EQUAL. MINIMUM METER BOX & LID DIAMETERS SHALL BE IN ACCORDANCE WITH SIZING CHART BELOW.
5. SERVICE SHALL BE "K" TYPE COPPER OR P.E. 4710 ,CTS O.D., MINIMUM CELL CLASS 445474E AND 445474D.
6. COPPER METER SETTER TO BE FORD, A.Y. MCDONALD OR APPROVED EQUAL WITH ANGLE DUAL CHECK VALVE AND BYPASS HAVING LOCKABLE SHUTOFF VALVE.
7. SERVICES REQUIRING METERS LARGER THAN 2-INCH SHALL BE REVIEWED BY THE PARTICIPATING UTILITY ON A CASE BY CASE BASIS.

TRAFFIC BEARING LOCATION	NON TRAFFIC BEARING LOCATION
SIZING CHART LID	
METER SIZE (MIN.)	BOX DIA (MIN.)
5/8"	18"
3/4"- 1"	24"
1-1/2"-2"	30"

COVER & LID MODEL (OR APPROVED EQUAL)
FORD "A" SERIES FRAME & NICOR DOMESTIC 12.25 CX LID WITH SENSUS RECESS AND WVWA LOGO
A.Y. MCDONALD 74M24 T
A.Y. MCDONALD 74M30 T

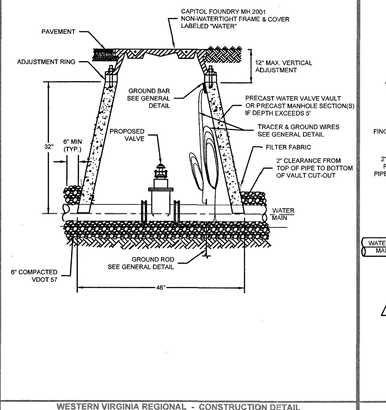
TRAFFIC BEARING VAULT AND H-20 RATED HATCH SHALL BE SIZED IN ACCORDANCE WITH DIMENSIONAL REQUIREMENTS SHOWN BELOW.



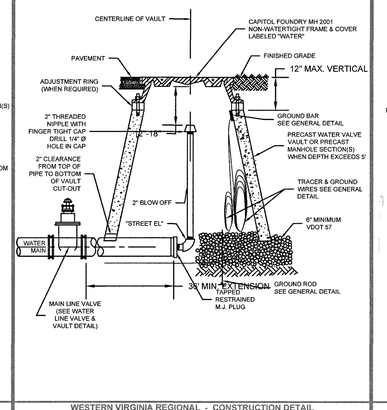
WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

COMMERCIAL WATER SERVICE METER SIZES 5/8" - 2" — W-5 — 05/07/17

1. FILTER FABRIC TO BE INSTALLED BETWEEN BOTTOM OF PIPE AND STONE BEDDING. FABRIC TO EXTEND VERTICALLY A MINIMUM OF 6" FROM BOTTOM OF VAULT (FULL CIRCUMFERENCE).



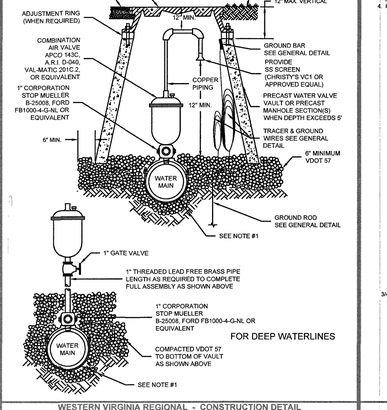
1. THE 2" PIPING AND "STREET EL" SHALL BE LEAD FREE BRASS OR DUCTILE IRON.
2. PIPE JOINTS SHALL BE RESTRAINED BEFORE GATE VALVE IN ACCORDANCE WITH DISTANCE SHOWN IN THE "MINIMUM THRUST RESTRAINT OF PIPE JOINTS DESIGN LENGTHS" DETAIL FOR VALVE / PLUG. PIPE JOINTS BETWEEN GATE VALVE AND BLOWOFF SHALL ALSO BE RESTRAINED.



WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

WATER LINE VALVE & VAULT — W-9 — 01/01/14

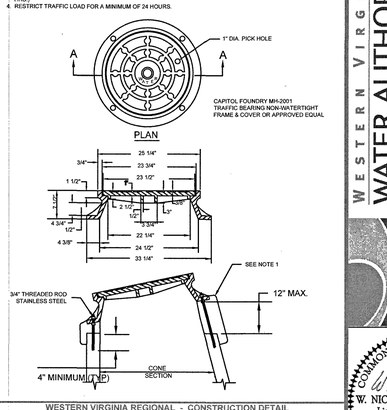
1. SEE RESIDENTIAL WATER SERVICE DETAIL FOR SADDLE REQUIREMENTS.
2. LARGER COMBINATION VALVE MAY BE REQUIRED DEPENDING ON APPLICATION.



WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

COMBINATION AIR VALVE ASSEMBLY — W-13 — 02/10/15

1. USE MODERATELY STIFF MIX OF NON SHRINK GROUT, SAND, AND 1/2" AND LESS DIAMETER GRAVEL WITH 28 DAYS. STRENGTH AT MINIMUM 2,500 P.S.I.
2. MIX IS TO BE FORCED INTO ALL GROOVES AND UNDER FLANGE OF FRAME AND LEFT AT OR ABOVE TOP OF FLANGE.
3. DO NOT BACKFILL AROUND FRAME AND COVER, FOR 48 HOURS AFTER CONCRETE IS PLACED. THE USE OF HIGH EARLY STRENGTH CEMENT WOULD REDUCE TIME TO 24 HRS.)
4. RESTRICT TRAFFIC LOAD FOR A MINIMUM OF 24 HOURS.

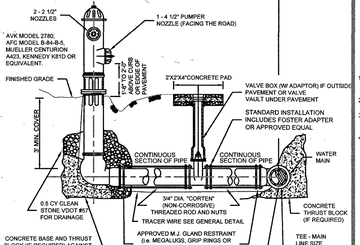


WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

VAULT FRAME AND COVER — W-16 — 01/01/14

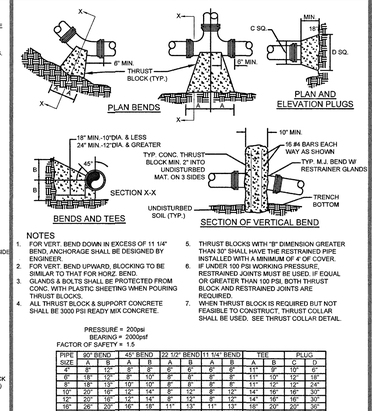
1. ALL WATER FACILITIES SHALL BE INSTALLED ACCORDING TO THE WESTERN VIRGINIA WATER AUTHORITY (WVWA) DESIGN AND CONSTRUCTION STANDARDS (LATEST REVISION).
2. ALL DRIVEWAYS, CULVERTS & MAILBOXES MUST BE RESTORED TO EXISTING CONDITIONS AFTER CONSTRUCTION IS COMPLETED. ANY CHANGES TOREGEN EXISTING CONDITIONS MUST BE APPROVED BY WVWA.
3. ALL CONNECTIONS TO EXISTING WATER MAINS SHALL BE COORDINATED WITH THE WVWA.
4. A MINIMUM COVER OF 3 FEET IS REQUIRED OVER PROPOSED LINES, EXCEPT WHERE SHOWN.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND UNCOVERING VALVE VAULTS AFTER PAVING AND ADJUSTMENT TO FINAL GRADE IF NECESSARY.
6. ALL EXISTING UTILITIES MAY NOT BE SHOWN IN THE EXACT LOCATION. THE CONTRACTOR SHALL COMPLY WITH THE STATE WATER WORKS REGULATIONS WHERE LINES CROSS.
7. ALL EXCAVATION, BACKFILL AND PAVEMENT REPLACEMENT IN THE VDOT RIGHT OF WAY SHALL BE REPLACED IN ACCORDANCE WITH THE LUP–SP & LUP–OC PROVISIONS.
8. ALL TRENCHES IN EXISTING RIGHT OF WAYS SHALL BE COMPACTED ACCORDING TO VDOT STANDARDS.
9. ALL WATER MAINS SHALL BE C900 PVC IN ACCORDANCE WITH AWWA EXCEPT THROUGH BORED SECTIONS, WHICH MAY BE DR–11 HDPE.
10. ALL PAVEMENT CUTS SHALL BE SAW CUT AND EDGES TACK COATED PRIOR TO PAVING.
11. THE CONTRACTOR SHALL FLUSH AND DISINFECT IN ACCORDANCE WITH AWWA SPECIFICATION C651, LATEST REVISION.

1. PUBLIC HYDRANTS SHALL BE PAINTED SILVER WITH AN OIL-BASED PAINT. PRIVATE HYDRANTS SHALL ALSO BE PAINTED SILVER WITH AN OIL-BASED PAINT UNLESS OTHERWISE SPECIFIED BY THE JURISDICTIONAL FIRE MARSHALL.
2. FIRE HYDRANT SHALL BE INSTALLED 18" MIN. AND 4' MAX. FROM BACK OF CURB OR 6' MIN. AND 12' MAX. FROM EDGE OF PAVEMENT WHEN CURB IS NOT PRESENT. FIRE HYDRANT TO BE INSTALLED WITHIN RIGHT-OF-WAY OR EASEMENT LINE.
3. AREA AROUND HYDRANT AT A RADIUS OF 4' TO BE LEVEL AND UNOBSTRUCTED.
4. WATERPROOF BAGS OR DOT OF SEALANT SHALL BE PLACED OVER ALL NEWLY INSTALLED FIRE HYDRANTS.
5. HYDRANT ASSEMBLIES SHALL BE RODDED AND RESTRAINED WITH APPROVED M.J. GLAND RESTRAINTS. HIGH PRESSURE (OVER 150 PSI) ALSO REQUIRES CONCRETE THRUST BLOCKS AS SHOWN BELOW.
6. IF DURING CONSTRUCTION THE SEASONAL WATER LEVEL IS NOTED TO BE ABOVE THE DRAIN OUTLETS OF THE PROPOSED HYDRANT, THE PARTICIPATING UTILITY WILL BE NOTIFIED IMMEDIATELY SO THAT THE HYDRANT CAN BE RELOCATED TO A SUITABLE LOCATION. OMITTED, OR THE DRAIN HOLE PLUGGED.
7. TWO WRAPS OF TRACER WIRE SHALL BE WRAPPED AROUND BASE OF HYDRANT.
8. APPROVED MODELS - AVK MODEL 2780, AFC MODEL B-84-B-S, MUELLER CENTURION A423, KENNEDY K81D OR EQUIVALENT.
9. WHERE HYDRANT LATERAL(S) IS APPROVED BY THE PARTICIPATING UTILITY TO BE LONGER IN LENGTH, MARK THE CONTINUOUS SECTION OF PIPE ON EACH SIDE OF THE GATE VALVE UNREADIBLE. RESTRAINED PIPE JOINTS SHALL BE INSTALLED BETWEEN THE TEE AND GATE VALVE IN LIEU OF RODDING. HOWEVER, X-RODDED CONTINUOUS SECTION OF PIPE SHALL ALWAYS BE INSTALLED BETWEEN THE GATE VALVE AND HYDRANT.



WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

FIRE HYDRANT ASSEMBLY — W-17 — 02/10/15



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 HORZ. BEND.
3. GLANDS & BOLTS SHALL BE PROTECTED FROM CONC. WITH PLASTIC SHEETING WHEN POURING THRUST BLOCKS.
4. ALL THRUST BLOCK & SUPPORT CONCRETE SHALL BE 3000 PSI READY MIX CONCRETE.
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, RESTRAINED JOINTS MUST BE USED. IF EQUAL OR GREATER THAN 100 PSI, BOTH THRUST BLOCK AND RESTRAINED JOINTS ARE REQUIRED.
7. WHEN THRUST BLOCK IS REQUIRED BUT NOT FEASIBLE TO CONSTRUCT, THRUST COLLAR SHALL BE USED. SEE THRUST COLLAR DETAIL.

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

PIPE SIZE	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND	TEE			PLUG	
	A	B	A	B	A	B	C	D	
4"	8"	12"	8"	6"	6"	6"	6"	11"	10"
6"	16"	12"	8"	6"	6"	6"	6"	11"	10"
8"	18"	13"	10"	10"	8"	8"	8"	11"	10"
10"	20"	16"	12"	14"	8"	8"	8"	14"	14"
12"	20"	16"	12"	14"	8"	10"	8"	15"	14"
16"	20"	20"	16"	18"	11"	13"	11"	18"	20"
24"	82"	42"	60"	30"	44"	22"	22"	16"	85"
30"	183"	42"	100"	42"	52"	42"	40"	30"	189"

WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

THRUST BLOCK REQUIREMENTS — W-18 — 01/01/14

1. ALL JOINTS SHALL BE RESTRAINED ON BOTH SIDES OF THE FITTING AND DOCUMENTED BY THE INSPECTOR FOR THE LENGTH SHOWN UNLESS OTHERWISE INDICATED.
2. RESTRAINED LENGTH SHOWN REFERS TO ANY DESIGNED OR POTENTIAL LINE STOP, INCLUDING ALL GATE VALVES.
3. RESTRAINED LENGTH SHOWN REFERS TO THE BRANCH LINE ONLY. THE CONTINUOUS PIPE LENGTH OF THE MAIN RUN SHALL BE A MINIMUM OF 10' ON EACH SIDE OF THE TEE.
4. RESTRAINED LENGTH SHOWN IS BASED ON REDUCING PIPE DIAMETER TO ONE SIZE SMALLER THAN PIPE LISTED (ANY OTHER DIAMETER REDUCTION WILL REQUIRE ADDITIONAL CALCULATIONS BEFORE INSTALLATION). RESTRAINED LENGTH SHOWN IS UPSTREAM ON THE LARGE SIDE OF THE REDUCER.
5. 12" AND SMALLER DIAMETER: IF UNDER 150 PSI WORKING PRESSURE, RESTRAINED JOINT(S) ARE TO BE USED. IF EQUAL TO OR OVER 150 PSI WORKING PRESSURE, BOTH THRUST BLOCK(S) AND RESTRAINED JOINT(S) SHALL BE USED.

   LARGER THAN 12" DIAMETER: IF UNDER 300 PSI WORKING PRESSURE, RESTRAINED JOINT(S) ARE TO BE USED. IF EQUAL TO OR OVER 100 PSI WORKING PRESSURE, BOTH THRUST BLOCK(S) AND RESTRAINED JOINT(S) SHALL BE USED (UNLESS OTHERWISE APPROVED BY THE PARTICIPATING UTILITY).
6. FOR RESTRAINED JOINT PIPING REQUIREMENTS AT FITTING R.J. PVC AND R.J. DIP MAY BE USED INTERCHANGEABLY WITH APPROVAL FROM PARTICIPATING UTILITY. CONTRACTOR MUST PLAN ACCORDINGLY FOR THE DIFFERENCE IN PVC AND DIP BELL AND SPIGOT DIMENSIONS.

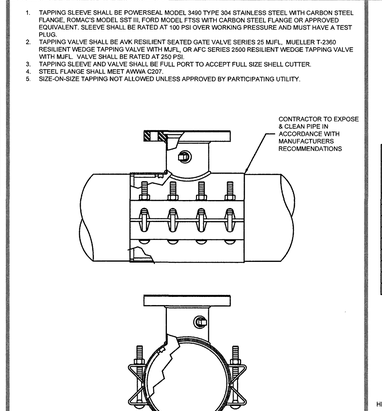
PIPE SIZE	PIPE MAT'L	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND	VALVE / PLUG	TEE BRANCH OUTLET	TEE RUN REDUCER OUTLET 4)	45° VERT.	22 1/2° VERT.	11 1/4° VERT.
4"	D.I.	28'	21'	6'	3'	50'	26'	26'	21'	10'	5'
6"	D.I.	36'	21'	8'	4'	65'	41'	27'	27'	13'	7'
10"	D.I.	43'	21'	9'	5'	77'	53'	26'	32'	16'	8'
12"	D.I.	51'	21'	10'	5'	91'	67'	27'	38'	18'	9'
6"	PVC	29'	21'	6'	3'	78'	25'	40'	32'	16'	8'
8"	PVC	37'	21'	8'	4'	102'	49'	43'	42'	21'	10'
10"	PVC	44'	21'	9'	5'	122'	68'	41'	51'	25'	12'
12"	PVC	51'	21'	11'	6'	143'	89'	42'	60'	29'	15'

FACTOR OF SAFETY = 1.5

WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

MINIMUM THRUST RESTRAINT OF PIPE JOINTS DESIGN LENGTHS — W-19 — 02/10/15

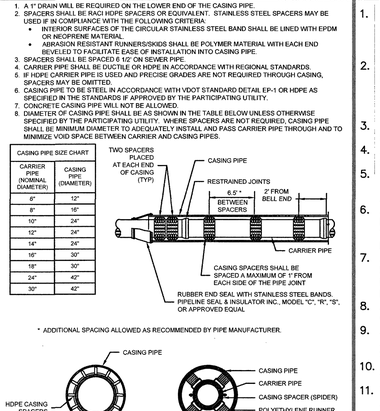
1. TAPPING SLEEVE SHALL BE POWERSEAL MODEL 3490 TYPE 304 STAINLESS STEEL WITH CARBON STEEL FLANGE, ROMAC'S MODEL SST III, FORD MODEL FTSS WITH CARBON STEEL FLANGE OR APPROVED EQUIVALENT. SLEEVE SHALL BE RATED AT 100 PSI OVER WORKING PRESSURE AND MUST HAVE A TEST PLUG.
2. TAPPING VALVE SHALL BE AVK RESILIENT SEATED GATE VALVE SERIES 25 MJFL, MUELLER T-2360 RESILIENT WEDGE TAPPING VALVE WITH MJFL, OR AFC SERIES 2500 RESILIENT WEDGE TAPPING VALVE WITH MJFL. VALVE SHALL BE RATED AT 250 PSI.
3. TAPPING SLEEVE AND VALVE SHALL BE FULL PORT TO ACCEPT FULL SIZE SHELL CUTTER.
4. STEEL FLANGE SHALL MEET AWWA C207.
5. SIZE-ON-SIZE TAPPING NOT ALLOWED UNLESS APPROVED BY PARTICIPATING UTILITY.



WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

TAPPING SLEEVE AND VALVE — W-21 — 01/01/14

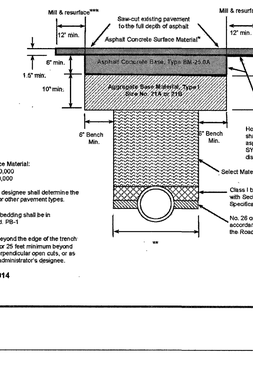
CASING PIPE SIZE CHART	
CARRIER PIPE (NOMINAL DIAMETER)	CASING PIPE (DIAMETER)
6"	12"
8"	16"
10"	24"
12"	24"
14"	24"
16"	30"
18"	30"
24"	42"
30"	42"



WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

PIPE SUPPORT IN CASING PIPE — G-6 — 06/05/15

Asphalt Pavement Restoration Detail for Open Cut Utility Installations



NOTES:

* Asphalt Concrete Surface Material:
SM-9.5A for ADT < 10,000
SM-9.5D for ADT > 10,000

The district administrator's designee shall determine the restoration requirements for other pavement types.

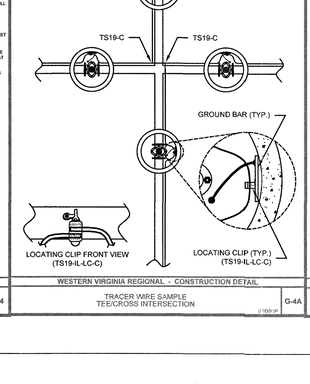
** Trench width and pipe bedding shall be in accordance with VDOT Std. PB-1

*** 12 inches minimum beyond the edge of the trench on longitudinal open cuts, or 25 feet minimum beyond the trench centerline on perpendicular open cuts, or as determined by the district administrator's designee.

Date: August 27, 2014

Not to Scale

1. TRACER WIRES SHALL BE INSTALLED USING MANHOLES, TRACER WIRE ACCESS BOXES, VALVE BOXES OR VAULTS, WATER METERS AND/OR HYDRANTS AS ACCESS POINTS.
2. FOR WATER AND SEWER INSTALLED BY OPEN TRENCHING, HORIZONTAL DIRECTIONAL DRILLING OR PIPE BURSTING, TRACER WIRE SHALL BE NEPTCO TRACE-SAFE WATER BLOCKING TRACER WIRE OR APPROVED EQUAL.
3. FOR SEWER INSTALLED BY PIPE BURSTING, TRACER WIRE SHALL BE NEPTCO TRACE-SAFE WATER BLOCKING CONNECTORS OR APPROVED EQUAL. SPLICES SHALL BE MADE IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. CONTRACTOR WILL BE RESPONSIBLE FOR ENSURING CONTINUITY AT ALL SPLICE LOCATIONS.
4. WHERE TRACER WIRE IS INSTALLED WITH STEEL CASING PIPE, AND IS DIRECTIONALLY DRILLED (RODDED/AUGER AND JACKED) TO DUCTILE IRON PIPE ON EACH END, TRACER WIRE SHALL BE INSTALLED ALONG FULL LENGTH OF HDPE PIPE WITH AVK ACCESS POINT INSTALLED AT EACH END(DUCTILE IRON TRANSITION - TRACER WIRE SHALL BE CONNECTED TO THE ACCESS POINT IN ACCORDANCE WITH THIS DETAIL. ANY TRANSITION FROM DUCTILE IRON MAIN TO NON-DUCTILE IRON MAIN SHALL HAVE A TRACER WIRE ACCESS POINT.
5. AS-BUILTS SHALL SHOW TRACER WIRE(S) LOCATION AND ACCESS POINT(S). ALONG WITH BUTT OFFSET DIMENSIONS.
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 6" FROM THE PIPE. NON-METALLIC SPACERS MAY BE USED TO MAINTAIN A SET DISTANCE FROM THE PIPE.
7. WIRE SHALL BE BROUGHT TO THE SURFACE EVERY FIVE HUNDRED (500) FEET AND PLACED IN A WATER METER BOX OR A DRAINAGE & WATER SOLUTIONS, INC. (DWS) OR APPROVED EQUAL ALL CAST IRON TRACER WIRE ACCESS BOX.
8. THE TRACER WILL BE TESTED BY THE PARTICIPATING UTILITY AS PART OF THE PROJECT'S FINAL ACCEPTANCE. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING ANY BREAKS IN THE WIRE.
9. THE GROUND WIRE SHALL BE #6 AWG COPPER WIRE AND SHALL BE OF ADEQUATE LENGTH TO EXTEND A MINIMUM OF (5) FIVE FEET BEYOND THE TOP OF THE STRUCTURE. THE END OF THE GROUND WIRED SHALL CONNECT TO THE GROUND BAR OR LID WITH A BRASS BOLT, NUT AND LOCK WASHER (SEE GROUND BAR DETAIL).
10. A GROUND ROD SHALL BE INSTALLED AT EACH LOCATION WHERE GROUND WIRE SURFACES AND CONNECTS TO GROUND BAR. GROUND ROD SHALL BE COPPER COATED WITH A MINIMUM DIAMETER OF 5/8" AND SHALL BE BURIED A MINIMUM OF FOUR (4) FEET INTO THE GROUND
11. THE GROUND BAR SHALL BE STAINLESS STEEL AND SHALL BE ATTACHED USING SIX (6) X 3/8" SS HEX TAPCON. THE FOLLOWING GROUND BAR MANUFACTURERS ARE APPROVED: DWS MODEL GB-1 OR APPROVED EQUAL. ALL GROUND BARS WITH FOUR (4) HOLE SHALL HAVE A BURNDY KA6U MECHANICAL TERMINAL LUG FOR THE #6 AWG GROUND WIRE. THE ASSEMBLY CAN BE ACQUIRED AT BCS INDUSTRIAL SUPPLY, INC. (540-353-9903) - CLAMP RFC-11. THE ENDS OF THE TRACER WIRES SHALL BE PLACED IN THE GROUND BAR AS SHOWN BELOW
12. IF USING TRACER WIRE ACCESS BOX AS ACCESS POINT, GROUND BAR WILL NOT BE REQUIRED. WIRES SHALL BE CONNECTED AS SHOWN IN THE TRACER WIRE ACCESS BOX DETAIL. THE TRACER WIRE SHALL BE PLACED ALONG THE LOWER QUADRANT OF THE PIPE.
13. TWO WRAPS OF TRACER WIRE SHALL BE WRAPPED SNUGGLY AROUND BASE OF HYDRANT. WIRE SHALL NOT BE LEFT IN A MANNER THAT WOULD INTERFERE WITH MOWING AROUND HYDRANT
14. WHEN USING ALL DUCTILE MAIN, TRACER WIRE FOR SERVICES SHALL BE 12 AWG COPPER TRACER WIRE. TRACER WIRE SHALL HAVE BARE WIRE CONTACT TO DUCTILE MAIN


BLUE = TRACE SAFE TRACER WIRE
BLACK = GROUND WIRE & GROUND BAR
TS19-HLL-LC = TRACE SAFE LOCATING CLIP AT GROUND BAR
TS19-C = SERVICE LATERAL TRACE SAFE CONNECTOR
GROUND WIRE = #6 AWG COPPER WIRE
NOTE: LEAVE FIVE FEET (5') OF EXCESS TRACER WIRE COILED UP IN VAULT
TS19-