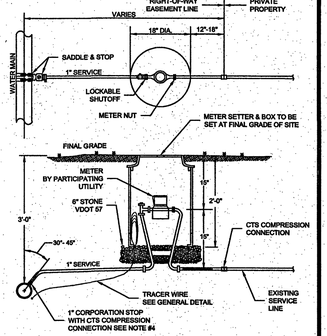
12184comp-07-nd03.plt

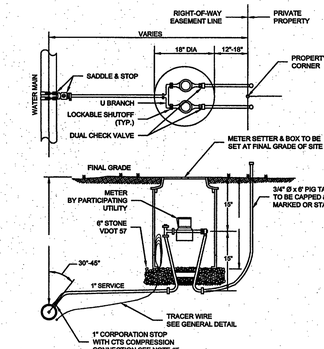
1. SETTER TO BE A.Y. McDONALD 20-215WXDD33, FORD VB72-15W-11-33 OR APPROVED EQUAL.
2. SADDLES MUST BE USED WITH ALL PLASTIC & DUCTILE IRON PIPE. SERVICE SADDLES SHALL BE USED IN ACCORDANCE WITH WATER DISTRIBUTION PIPING SPECIFICATION. SERVICE SADDLES FOR PLASTIC PIPE SHALL BE: POWERSEAL 3417, OR 3412AS, 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 FS202.
3. METER BOX SHALL BE CARSON/MID-STATES PLASTICS, INC. PLASTIC BOX WITH FORD A32-T (ELECTRONIC READ LID), ADS CORRUGATED HDPE BOX WITH FORD A32-T (ELECTRONIC READ LID), OR A. Y. McDONALD MODEL 74M32AT CAST IRON BASE & COVER 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 F1000-4-G OR APPROVED EQUAL.
5. SERVICE SHALL BE "K" TYPE COPPER, OR COPPER TUBE SIZE POLYETHYLENE (PE) 4710, SDOR-9 (200 psi).
6. WHENEVER SIDEWALK EXISTS OR IS PROPOSED, MODIFY METER LOCATION AS DIRECTED.



WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

SINGLE RESIDENTIAL WATER SERVICE (REPLACEMENT OF EXISTING SERVICE) — 01/01/14 — W-2

1. SETTER TO BE A.Y. McDONALD 20-215 WDD033, FORD VBH72-15W-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 FS202.
3. METER BOX SHALL BE CARSON/MID-STATES PLASTICS, INC. PLASTIC BOX WITH FORD A32-T (ELECTRONIC READ LID), ADS CORRUGATED HDPE BOX WITH FORD A32-T (ELECTRONIC READ LID), OR A. Y. McDONALD MODEL 74M32AT CAST IRON BASE & COVER OR APPROVED EQUAL. USE OF TRAFFIC BEARING BOX SHALL BE APPROVED BY THE AUTHORITY. 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. WHENEVER SIDEWALK EXISTS OR IS PROPOSED, MODIFY METER LOCATION AS DIRECTED.
5. CORPORATION STOP SHALL BE FORD F1000-4-G OR APPROVED EQUAL.
6. SERVICE SHALL BE "K" TYPE COPPER, OR COPPER TUBE SIZE POLYETHYLENE (PE) 4710, SDOR-9 (200 psi).



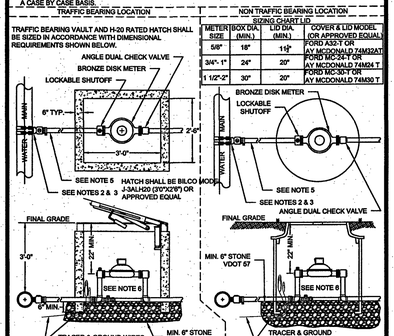
WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

DOUBLE RESIDENTIAL WATER SERVICE (LINE PRESSURE UNDER120 PSI) — 01/01/14 — W-4

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 FS202.
3. CORPORATION STOP SHALL BE FORD F1000-4-G, MUELLER H-15000 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, ADS 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 445474C AND 445474D.
6. A 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		
METER SIZE	BOX DIA (MIN.)	LID DIA (MIN.)	COVER & LID MODEL (OR APPROVED EQUAL)
5/8"	18"	11½"	FORD A32-T OR AY MCDONALD 74M32AT
3/4"- 1"	24"	20"	FORD MC-32-T OR AY MCDONALD 74M24 T
1 1/2"-2"	30"	20"	FORD MC-30-T OR AY MCDONALD 74M30 T

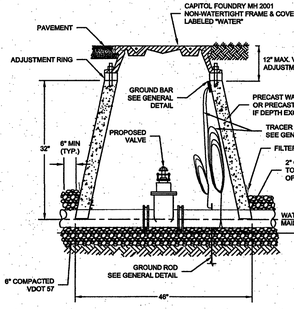
TRAFFIC BEARING VAULT AND H-20 RATED HATCH SHALL BE SIZED IN ACCORDANCE WITH DIMENSIONAL REQUIREMENTS SHOWN BELOW.



WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

COMMERCIAL WATER SERVICE METER SIZES 5/8" - 2" — 01/01/14 — W-5

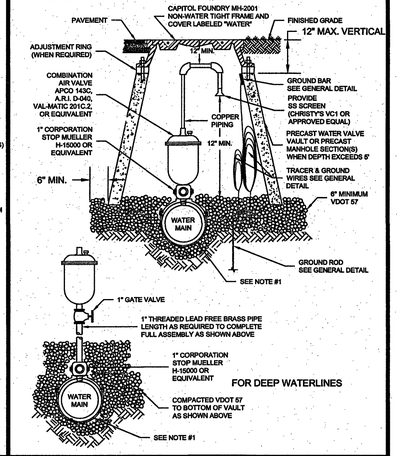
1. FILTER FABRIC TO BE INSTALLED BETWEEN BOTTOM OF PIPE AND STONE BEDDING. FABRIC TO EXTEND VERTICALLY A MINIMUM OF 9" FROM BOTTOM OF VAULT (FULL CIRCUMFERENCE).



WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

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

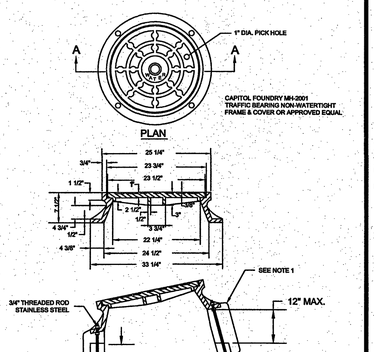
1. SEE RESIDENTIAL WATER SERVICE DETAIL FOR SADDLE REQUIREMENTS.
2. LARGER COMBINATION VALVE MAY BE REQUIRED DEPENDING ON APPLICATION.



WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

COMBINATION AIR VALVE ASSEMBLY — 01/01/14 — W-13

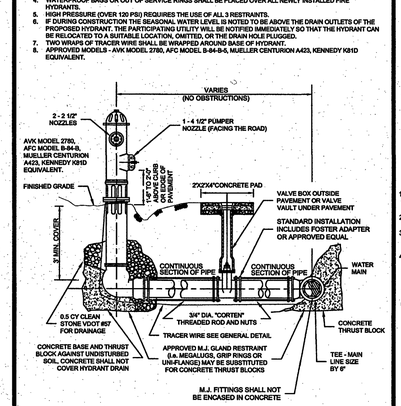
1. USE MODERATELY STIFF MIX OF NON SHRINK GROUT, SAND, AND 1/2" AND LESS DIAMETER GRAVEL WITH 28 DAYS, STRENGTH AT MINIMUM 3,000 P.S.I.
2. MIX IS TO BE FORCED INTO ALL GROOVES AND UNDER FLANGE OF FRAME AND LEFT AT OR ABOVE TOP OF FLANGE.
3. DO NOT BACKFILL AROUND FRAME AND COVER, FOR 48 HOURS AFTER CONCRETE 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

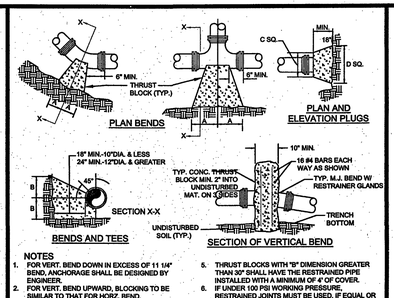
VAULT FRAME AND COVER — 01/01/14 — W-16

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 2' 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 OUT OF SERVICE RINGS SHALL BE PLACED OVER ALL NEWLY INSTALLED FIRE HYDRANTS.
5. HIGH PRESSURE (OVER 120 PSI) REQUIRES THE USE OF ALL 3 RESTRAINTS.
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-6, MUELLER CENTURION A423, KENNEDY K81D EQUIVALENT.



WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

FIRE HYDRANT ASSEMBLY — 01/01/14 — W-17



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. 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 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	TEE C	PLUG D
4"	8"	12"	6"	8"	6"	6"	6"	6"	6"	11"	10"	12"
6"	18"	12"	8"	10"	8"	8"	8"	8"	11"	10"	12"	18"
8"	18"	13"	10"	10"	8"	8"	8"	8"	11"	10"	12"	24"
10"	20"	18"	10"	14"	8"	12"	8"	12"	14"	18"	18"	30"
12"	20"	18"	10"	14"	8"	12"	8"	12"	14"	18"	18"	30"
16"	26"	20"	16"	16"	11"	13"	11"	13"	18"	20"	20"	36"
24"	82"	42"	60"	30"	44"	22"	22"	16"	82"	42"	82"	42"
30"	180"	42"	100"	42"	52"	42"	40"	30"	180"	42"	180"	42"

WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

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

FACTOR OF SAFETY = 1.5

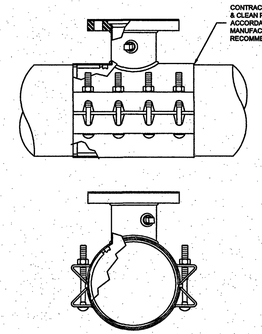
PIPE SIZE	PIPE MAT'L	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND	VALVE /PLUG	TEE BRANCH	REDUCER (NOTE 2)	VERT. 45°	VERT. 22 1/2°	VERT. 11 1/4°
6"	D.I.	28'	21'	6'	3'	38'	34'	20'	23'	11'	5'
8"	D.I.	37'	21'	7'	4'	51'	47'	21'	30'	15'	7'
10"	D.I.	45'	21'	9'	4'	61'	57'	20'	37'	18'	9'
12"	D.I.	53'	22'	11'	5'	73'	69'	38'	43'	21'	10'
6"	PVC	30'	21'	6'	3'	56'	38'	29'	35'	17'	8'
8"	PVC	40'	21'	8'	4'	74'	56'	31'	46'	22'	11'
10"	PVC	47'	21'	9'	5'	89'	82'	30'	56'	27'	13'
12"	PVC	56'	23'	11'	6'	106'	88'	56'	66'	32'	16'

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. 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, RESTRAINED JOINT(S) ARE TO BE USED. IF EQUAL TO OR OVER 100 PSI WORKING PRESSURE, BOTH THRUST BLOCK AND RESTRAINED JOINTS SHALL BE USED.
4. FOR RESTRAINED JOINT PIPING REQUIREMENTS AT FITTING R.J. PVC AND R.J. DIP MAY BE USED INTERCHANGEABLY.

WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

MINIMUM THRUST RESTRAINT OF PIPE JOINTS DESIGN LENGTHS — 01/01/14 — W-19

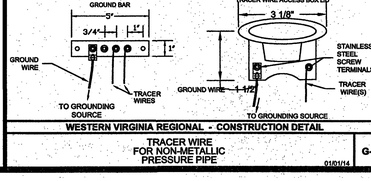
1. TAPPING SLEEVE SHALL BE POWERSEAL MODEL 3490 TYPE 304 STAINLESS STEEL WITH CARBON STEEL FLANGE, ROMAC'S MODEL SST III, FORD MODEL FTSS WITH CARBON STEEL FLANGE OR APPROVED EQUIVALENT. SLEEVE SHALL BE RATED AT 100 PSI OVER WORKING PRESSURE AND MUST HAVE A TEST PLUG.
2. TAPPING VALVE SHALL BE AVK RESILIENT 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 200 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 — 01/01/14 — W-21

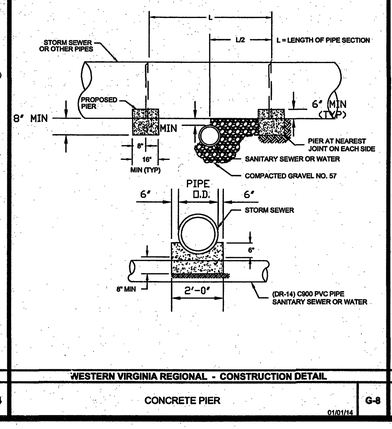
1. TRACER WIRES SHALL BE INSTALLED USING MANHOLES, TRACER WIRE ACCESS BOXES, VALVE BOXES OR VAULTS, WATER METERS AND FIRE HYDRANTS AS ACCESS POINTS.
2. FOR WATER AND SEWER INSTALLED BY OPEN TRENCHING, HORIZONTAL DIRECTIONAL DRILLING, OR PIPE BURSTING, TRACER WIRE SHALL BE NEPTCO TRACE-SAFE WATER BLOCKING TRACER WIRE OR APPROVED EQUAL. TRACER WIRE SHALL BE A 19 AWG SOLID COPPER CONDUCTOR WITH POLYETHYLENE INSULATION SURROUNDED BY A CORE MATERIAL COMPRISED OF HIGH-TENACITY, WOVEN POLYESTER WITH WATER BLOCKING YARNS ENCAPSULATED IN AN ABRASION RESISTANT (GREEN OR BLUE) 30 MIL HDPE JACKET. TRACER WIRE SHALL HAVE A MINIMUM TENSILE STRENGTH OF 1,800 LBS. AND SHALL NOT CONDUCT AN ELECTRICAL CURRENT IF STRUCK BY LIGHTENING. SPLICES SHALL ONLY BE MADE WITH GEL FILLED CONNECTORS DESIGNED FOR WIRE WITH A WOVEN POLYESTER FIBER CORE SUCH AS NEPTCO TRACE-SAFE WATER BLOCKING CONNECTORS OR APPROVED EQUAL. SPLICES SHALL BE MADE IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
3. SPLICES AT THE ENDS OF TRACER WIRE, INTERMITTENT OF ACCESS POINTS, SHALL BE MADE USING NEPTCO TS-19-8, WATER BLOCKING BUTT SPLICE CONNECTORS OR APPROVED EQUAL.
4. AT ALL ACCESS POINTS, TRACER WIRE SHALL BE LOOPED USING NEPTCO TS-12-18-8, WATER BLOCKING BUTT SPLICE CONNECTORS OF THE TRACER WIRE, WITH 30 MIL HDPE JACKET SHALL BE CONNECTED IN THE 12 AWG CONDUCTORS OF THE BUTT SPLICE CONNECTOR, EXTENDED UP INTO THE ACCESS POINT STR ,CTURE, AND ATTACHED TO THE GROUND BAR (SEE NOTE #10) OR LID TERMINALS PER NOTE #13. AT ALL ACCESS POINTS, EACH DIRECTION OF WIRE SHALL HAVE AN INDEPENDENT TRACER WIRE FEED EXTENDED TO GROUND BAR OR LID TERMINALS TO ALLOW FOR DIRECTIONALLY INDUCING CURRENT DURING LOCATING. THE 12 AWG COPPER TRACER WIRE SHALL BE OF ADEQUATE LENGTH TO EXTEND FIVE (5) FEET ABOVE THE TOP OF STRUCTURE.
5. WHERE HDPE PIPE IS INSTALLED WITHOUT STEEL CASING PIPE, SUCH AS A DIRECTIONALLY DRILLED CROSSINGS, AND CONNECTED TO DUCTILE IRON PIPE ON EACH END, TRACER WIRE SHALL BE INSTALLED ALONG FULL LENGTH OF HDPE PIPE WITH AN ACCESS POINT INSTALLED AT EACH HDPE/DUCTILE IRON TRANSITION. TRACER WIRE SHALL BE CONNECTED TO THE ACCESS POINT IN ACCORDANCE WITH THIS DETAIL.
6. AS-BUILTS SHALL SHOW TRACER WIRE(S) LOCATION AND ACCESS POINT(S).
7. 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 UTILITY.
8. WHERE LINES ARE GREATER THAN SIX (6) FEET IN DEPTH, 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. (OR APPROVED EQUAL) ALL CAST IRON TRACER WIRE ACCESS BOX.
9. THE TRACER WILL BE TESTED BY THE PARTICIPATING UTILITY AS PART OF THE PROJECTS FINAL ACCEPTANCE.
10. THE TRACER WIRE SHALL BE #8 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 TERMINAL USING A BURNDY KAIU MECHANICAL TERMINAL LUG.
11. A GROUND ROD SHALL BE INSTALLED AT EACH LOCATION WHERE GROUND WIRE SURFACES AND CONNECTS TO GROUND BAR OR LID TERMINAL. 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.
12. THE GROUND BAR SHALL BE STAINLESS STEEL, AND SHALL BE ATTACHED USING SS 2" X 1/2" 6S HEX TAPCON. THE FOLLOWING SHALL BE INSTALLED IN (4) FOUR CENTER HOLES: 1/4-3/256 NUTS, #10 SS WASHERS AND 10-32 X 5/8 PHILLIPS. THE FOURTH HOLE SHALL HAVE A BURNDY KAIU MECHANICAL TERMINAL LUG FOR THE #8 AWG GROUND WIRE. THE ASSEMBLY CAN BE ACQUIRED AT RCS INDUSTRIAL SUPPLY, INC. (540-563-0663) - CLAMP RPC-11. THE ENDS OF THE TRACER WIRES SHALL BE PLACED IN THE GROUND BAR AS SHOWN BELOW.
13. IF USING TRACER WIRE ACCESS BOX AS ACCESS POINT, GROUND BAR WILL NOT BE REQUIRED. THE REMOVABLE LID ON THE ACCESS BOX SHALL CONTAIN TWO SCREW TERMINALS. THE 12 AWG COPPER TRACER WIRE SHALL BE BROUGHT UP IN ACCESS BOX AND CONNECTED TO ONE OF THE SCREW TERMINALS. IF MORE THAN ONE TRACER WIRE IS NECESSARY TO ACCOUNT FOR TOTAL NUMBER OF PIPE DIRECTIONS AT ACCESS BOX, MULTIPLE TRACER WIRES SHALL BE CONNECTED TO THAT SAME SCREW TERMINAL. THE #8 AWG COPPER GROUND WIRE SHALL BE CONNECTED FROM THE GROUND ROD TO THE REMAINING SCREW TERMINAL WITH THE USE OF A BURNDY KAIU MECHANICAL TERMINAL LUG. WIRES SHALL BE CONNECTED AS SHOWN BELOW. TRACER WIRE AND GROUND WIRE SHALL BOTH BE OF ADEQUATE LENGTH TO EXTEND FIVE (5) FEET ABOVE THE TOP OF ACCESS BOX.
14. TWO WRAPS OF TRACER WIRE SHALL BE WRAPPED SNUGGLY AROUND BASE OF HYDRANT. WIRE SHALL NOT BE LEFT IN A WAY THAT WOULD INTERFERE WITH MOWING AROUND HYDRANT.



WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

TRACER WIRE FOR NON-METALLIC PRESSURE PIPE — 01/01/14 — G-4

1. PIER REQUIRED WHEN STORM DRAIN OR OTHER PIPES CROSSES OVER THE OTHER UTILITY WITH A VERTICAL CLEARANCE OF LESS THAN 18".
2. PIER TO BE BUILT ON UNDISTURBED EARTH.
3. CONCRETE TO BE READY MIX, CLASS A3.



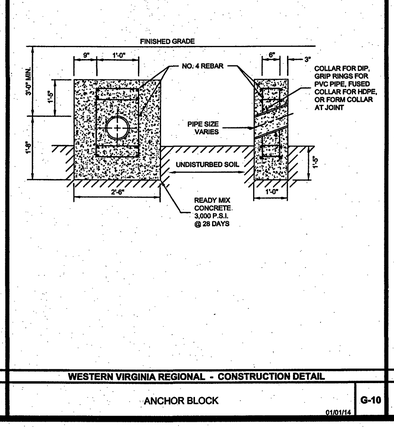
WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

CONCRETE PIER — 01/01/14 — G-8

1. IN ADDITION TO ANCHOR BLOCKS, RESTRAINED JOINT PIPE WILL BE REQUIRED FOR ALL SLOPES EXCEEDING 20%.
2. MINIMUM SPACING REQUIREMENTS SHALL BE AS FOLLOW:

SLOPES 20% TO 35% – NO MORE THAN 36 FT ON CENTER
* SLOPES 35% TO 50% – NO MORE THAN 24 FT ON CENTER
* SLOPES 50% TO 80% – NO MORE THAN 16 FT ON CENTER

* ONLY ALLOWED WITH WRITTEN APPROVAL OF PARTICIPATING UTILITY



WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

ANCHOR BLOCK — 01/01/14 — G-10

1. BEDDING, HAUNCHING AND INITIAL BACKFILL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THIS DETAIL AND MANUFACTURER'S RECOMMENDATION.
2. ALL PVC PIPE SHALL BE BEDDED IN COMPACTED VDOT #57 OR #58 STONE, OR CRUSHER RUN.
3. IN AREAS SUBJECTED TO VEHICULAR TRAFFIC, BEDDING STONE AND FILL SHALL BE PLACED IN 6" LIFTS FROM BOTTOM OF TRENCH TO 1' ABOVE THE PIPE AND THE REMAINING SHALL BE PLACED IN 10" LIFTS AND SHALL BE COMPACTED TO AT LEAST 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D 698.
4. BEDDING REQUIREMENTS FOR DUCTILE IRON WATER LINE ARE DEPENDENT ON MANUFACTURER'S BEDDING CRITERIA.
5. ALL EXCAVATIONS SHALL COMPLY WITH OSHA TECHNICAL MANUAL, CHAPTER 2, TITLED "EXCAVATIONS: HAZARD RECOGNITION IN TRENCHING AND SHORING."
6. THE TRACER WIRE SHALL BE PLACED ALONG THE LOWER QUADRANT OF THE PIPE. THE WIRE SHALL NOT TOUCH THE PIPE