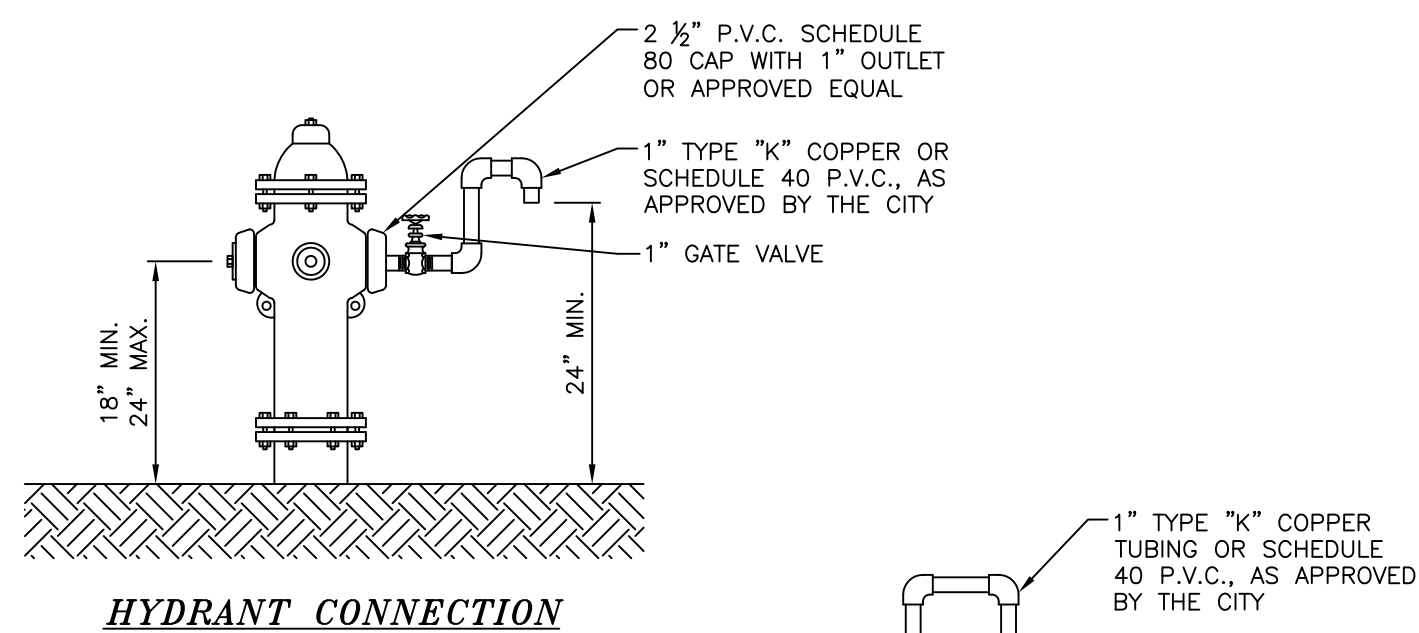


FOR JACK AND BORE INSTALLATION OF SERVICES UNDER EXISTING PAVEMENT AND SERVICES UNDER PROPOSED PAVEMENT USE MIN. 3" DIAMETER PVC SCH. 80. END OF CASING TO BE SEALED WITH PORTLAND CEMENT GROUT OR EQUAL.

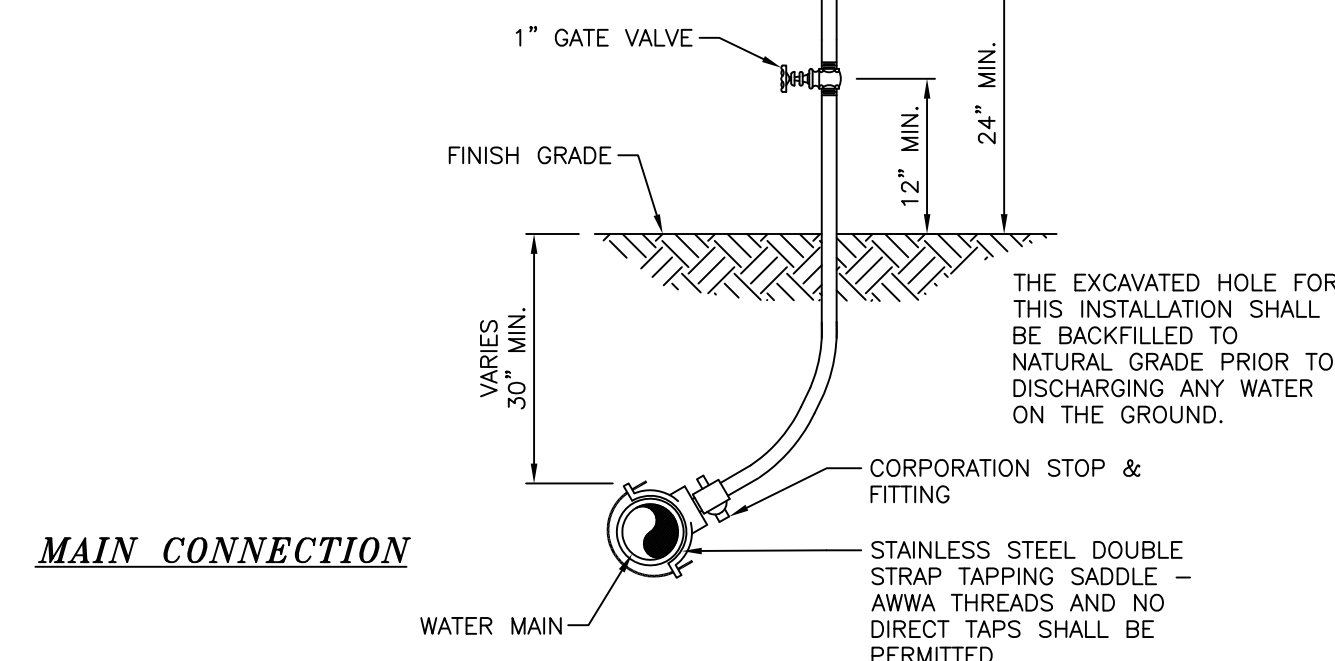
NOTES:

- SUCCESSIVE TAPS INTO THE WATER MAIN SHALL BE SPACED A MINIMUM OF 18" APART. TAPS SPACED BETWEEN 18" TO 48" SHALL BE OFFSET TO EACH SIDE OF THE MAIN.
- METER BOX SHALL BE SET TO CONFORM TO FINISHED GRADE ADJACENT TO PROPERTY LINE. METER SHALL NOT BE PLACED IN SIDEWALK OR DRIVEWAY AREAS. SERVICE LINES SHALL NOT BE PLACED UNDER DRIVEWAYS.
- ALL 5/8" & 1" METERS REQUIRE A LOCKABLE ANGLE CURB VALVE (ANGLE BALL VALVE: 3/4" VALVE FOR 5/8" METER, 1" VALVE FOR 1" METER AND 1 1/2" VALVE FOR 1 1/2" METER), YOKE AND INTEGRAL CHECK VALVE.
- A DUAL CHECK VALVE OR OTHER BACKFLOW PREVENTION DEVICE REQUIRED ON ALL SERVICES BEHIND METER.
- DIMENSION "A" = 7" (5/8" METER)
= 8" (1" METER)
= 8" (1 1/2" METER)
= 12" (2" METER)
- MAXIMUM SERVICE LENGTH IS 100' TO METER.
- BEDDING (MIN. 4") AND COVER (MIN. 4") OVER SERVICE LINE OR CASING SHALL CONSIST OF FINE GRANULAR MATERIAL. UNSUITABLE IN-SITU MATERIALS SUCH AS MUCK, DEBRIS AND LARGER ROCKS SHALL BE REMOVED WITH 3/4" MAXIMUM SIZE.
- USE MIN. 3" DIAMETER PVC SCH. 80 CASING FOR ALL LONG SERVICES UNDER EXISTING OR PROPOSED ROADWAY. END OF CASING TO EXTEND MIN. 3 FEET FROM EDGE OF PAVEMENT AND IS TO BE SEALED WITH CEMENT.

TYPICAL SERVICE CONNECTION FOR 5/8", 1", 1 1/2", OR 2" METER



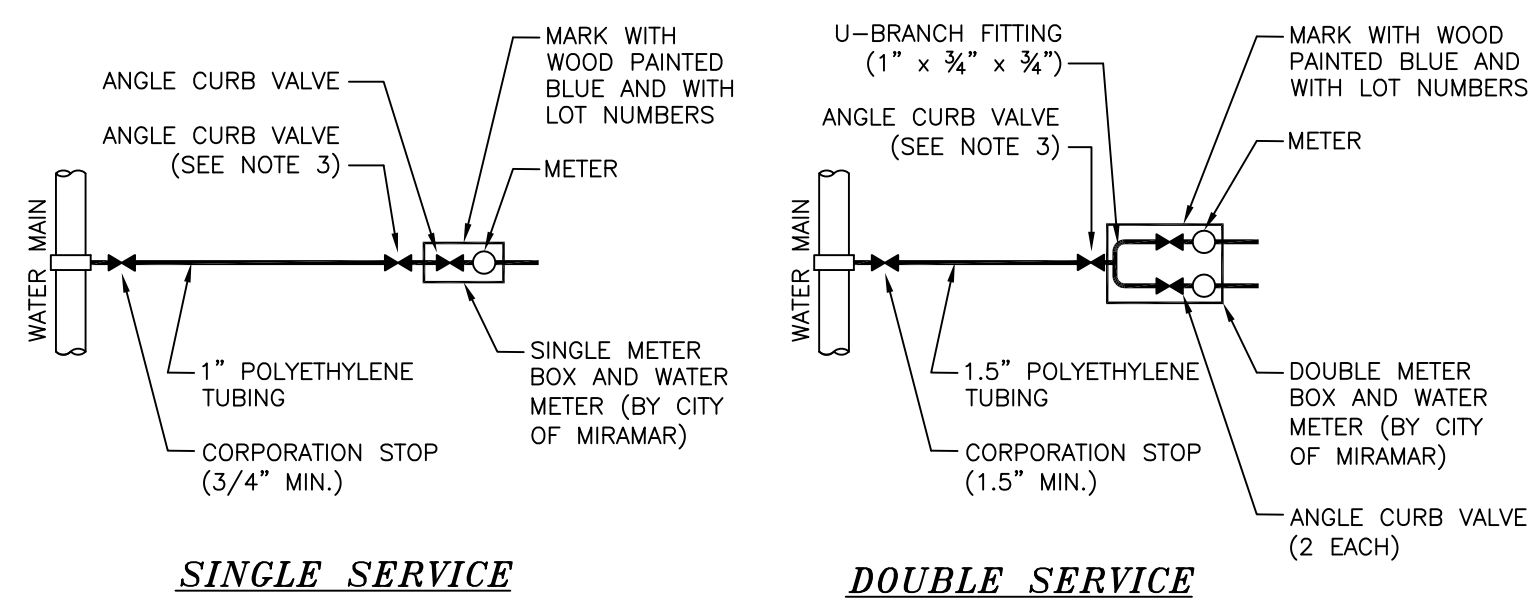
HYDRANT CONNECTION



MAIN CONNECTION

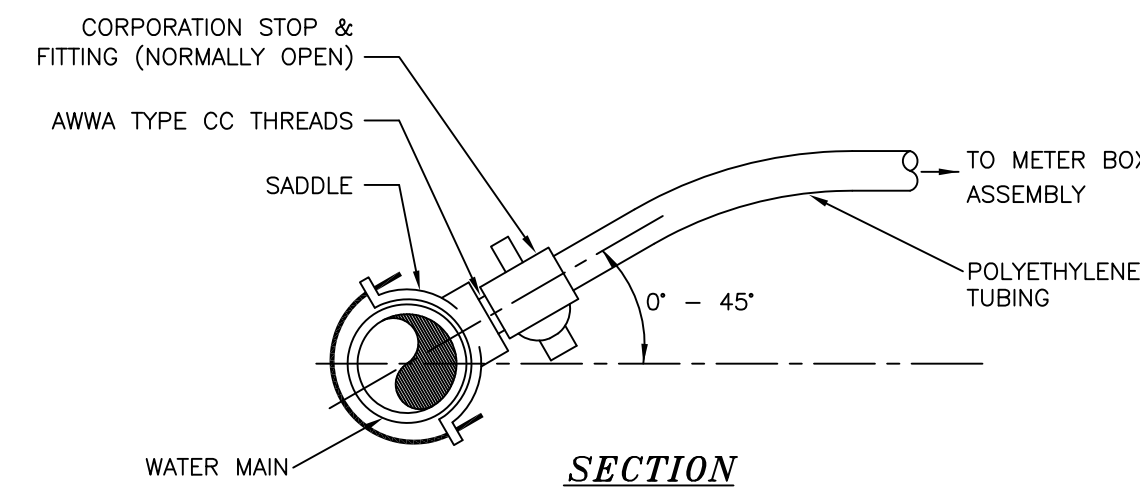
- NOTES:**
- SAMPLING POINTS SHALL BE LOCATED AND LATER REMOVED AS REQUIRED BY CITY OF MIRAMAR.
 - CORPORATION STOP SHALL BE REMOVED AND SADDLE PLUGGED WITH A BRASS FITTING.
 - SAMPLING POINTS MAY BE PLACED AT THE ENDS OF WATER SERVICES BEFORE THE METERS AND ON BLOW OFFS FOR TERMINAL WATER MAINS, WHERE SERVICES AND BLOW OFFS ARE REQUIRED BY THE PLANS.
 - WHERE COPPER TUBING IS USED A CORPORATION STOP SHALL BE INSTALLED WITH A LENGTH OF COPPER TUBING EXTENDING ABOVE THE GROUND. THE TUBING SHALL BE INSTALLED WITH A 180° BEND AND A VALVE.
 - UPON COMPLETION OF SAMPLING, REMOVE COPPER TUBING AND INSTALL SCREW-IN BRASS PLUG AT CORPORATION STOP.

SAMPLING POINT DETAIL



SINGLE SERVICE

DOUBLE SERVICE

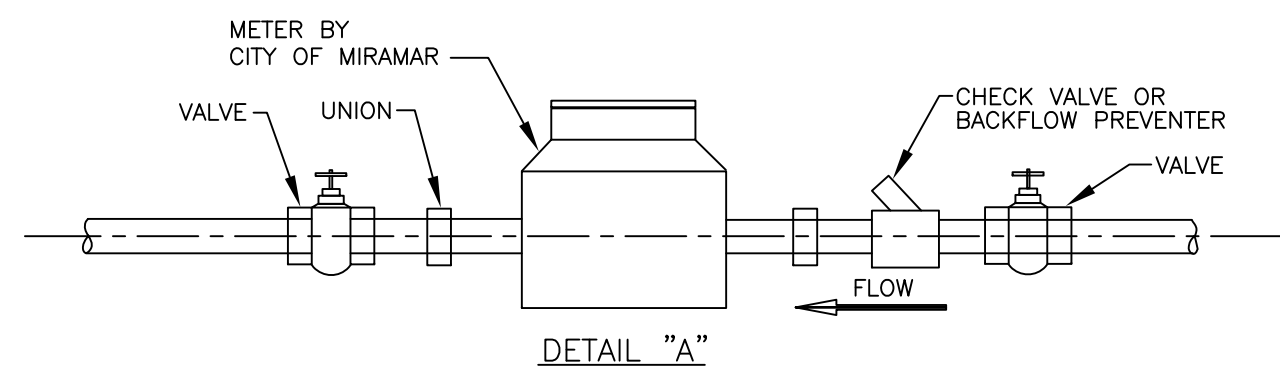


SECTION

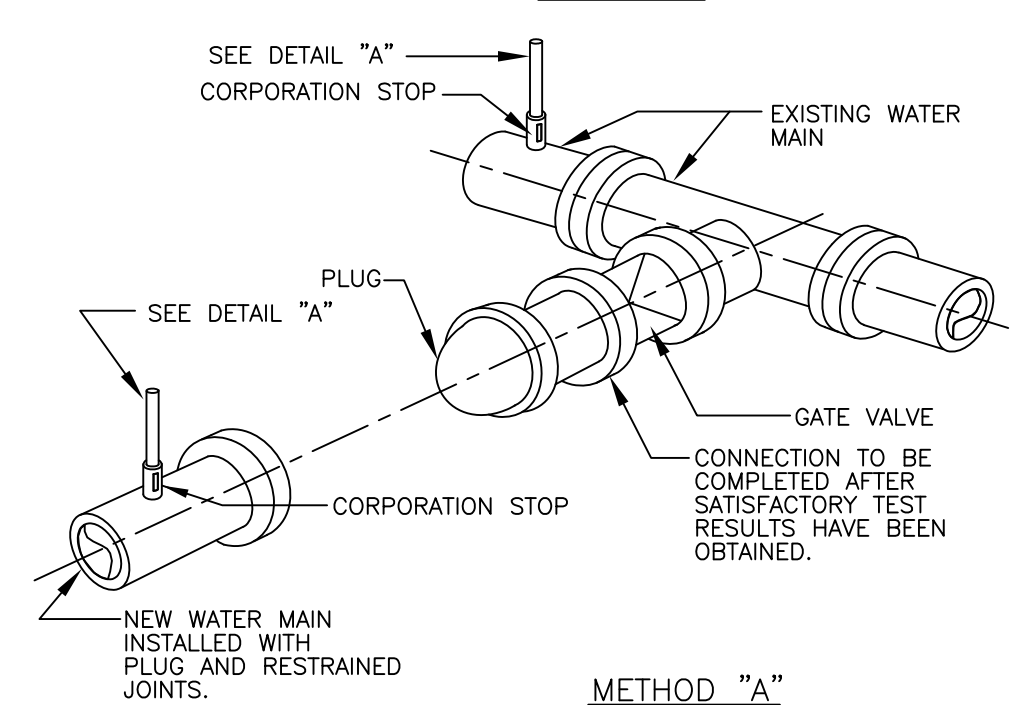
NOTES:

- ALL FITTINGS SHALL BE BRASS WITH COMPRESSION/PACK JOINT TYPE CONNECTIONS.
- NO SERVICE LINE SHALL TERMINATE UNDER A DRIVEWAY.
- EACH SERVICE SHALL TERMINATE AT AN ANGLE CURB VALVE, FORD METER BOX KV43-341W-NL; 1.5"x1" FOR DOUBLE SERVICE AND 1"x1" FOR SINGLE SERVICE OR APPROVED EQUAL.
- INSTALL MIN. 3" DIA. PVC SCH. 80 CASING FOR ALL LONG SERVICES UNDER EXISTING OR PROPOSED ROADWAY. END OF CASING TO EXTEND MINIMUM 3 FEET FROM EDGE OF PAVEMENT AND IS TO BE SEALED WITH PORTLAND CEMENT GROUT, OR APPROVED EQUAL.
- METER BOX SHALL BE PURCHASED BY CONTRACTOR (SEE METER NOTES).

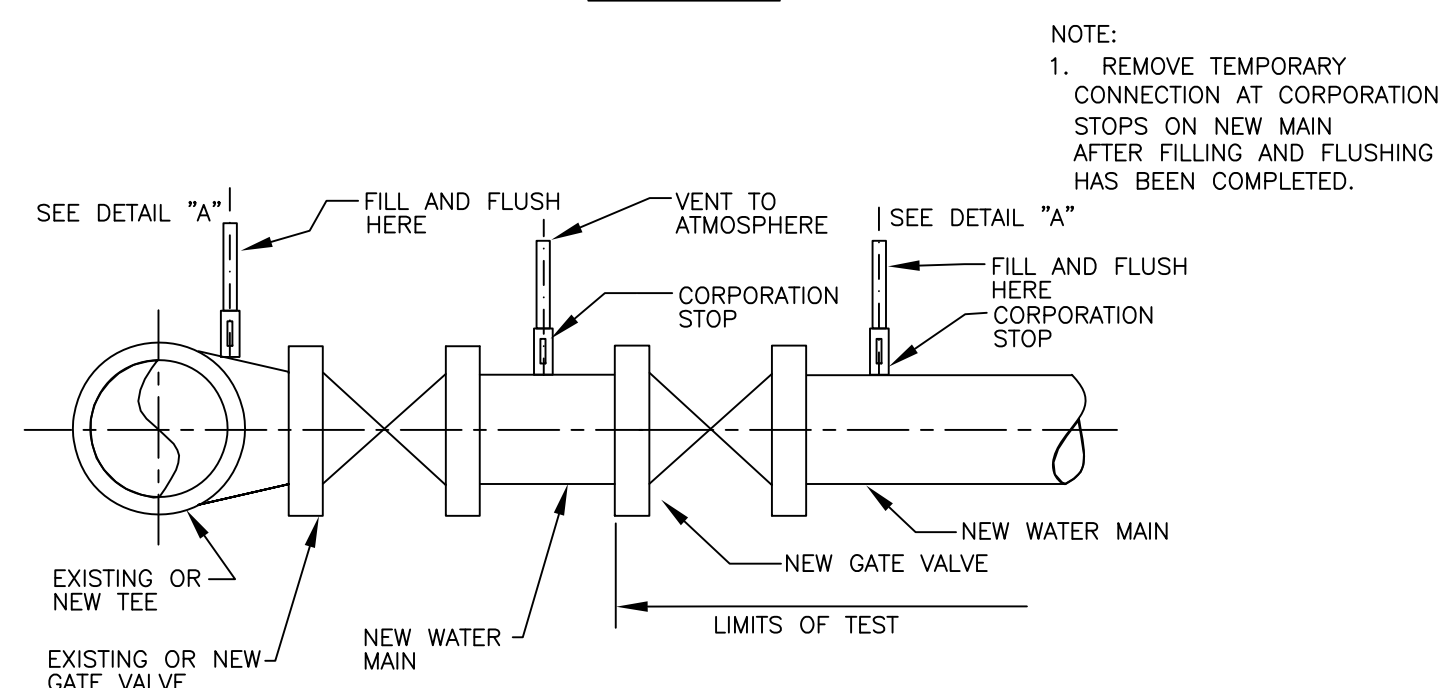
WATER SERVICE CONNECTION DETAILS



DETAIL "A"

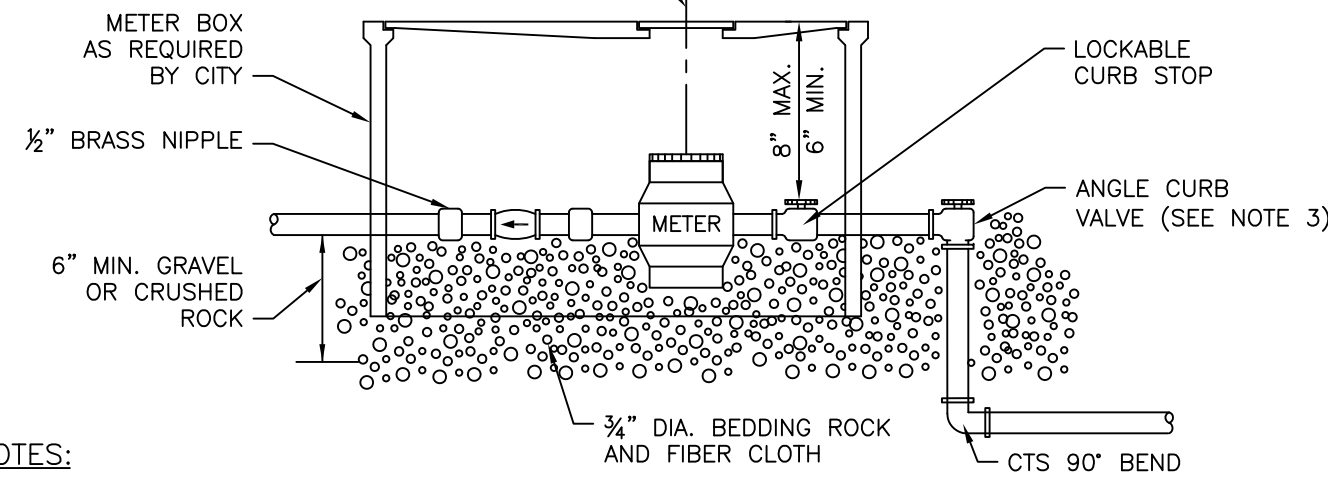
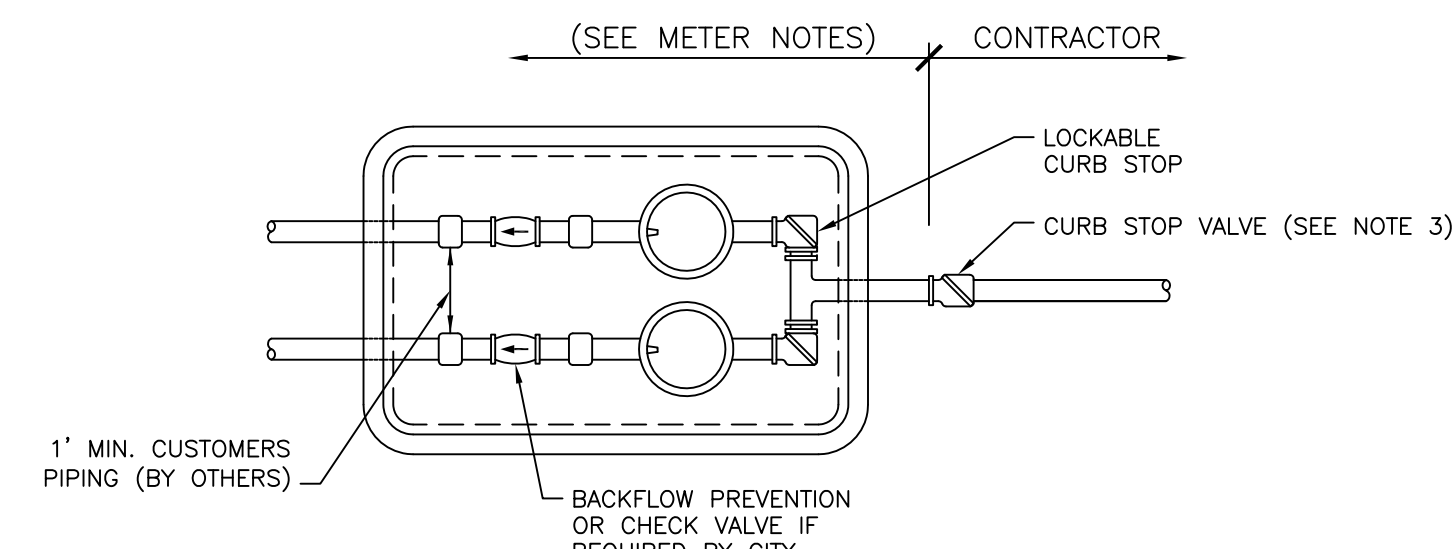


METHOD "A"



METHOD "B"

FILL AND FLUSHING CONNECTION DETAIL



NOTES:

- METER OVER 2" SHALL BE GIVEN SPECIAL DESIGN CONSIDERATION.
- METERS SHALL BE PURCHASED AND INSTALLED BY THE CONTRACTOR (SEE METER NOTES).
- EACH SERVICE SHALL TERMINATE AT AN ANGLE CURB VALVE, FORD METER BOX KV43-341W-NL; 1.5"x1" FOR DOUBLE SERVICE AND 1"x1" FOR SINGLE SERVICE OR APPROVED EQUAL. CURB STOP SHALL NOT BE INSTALLED BELOW 12" FROM FINISHED GRADE.
- METER BOXES TO BE SET IN GRASS AREAS.
- METER BOX SHALL BE PURCHASED BY CONTRACTOR (SEE METER NOTES).

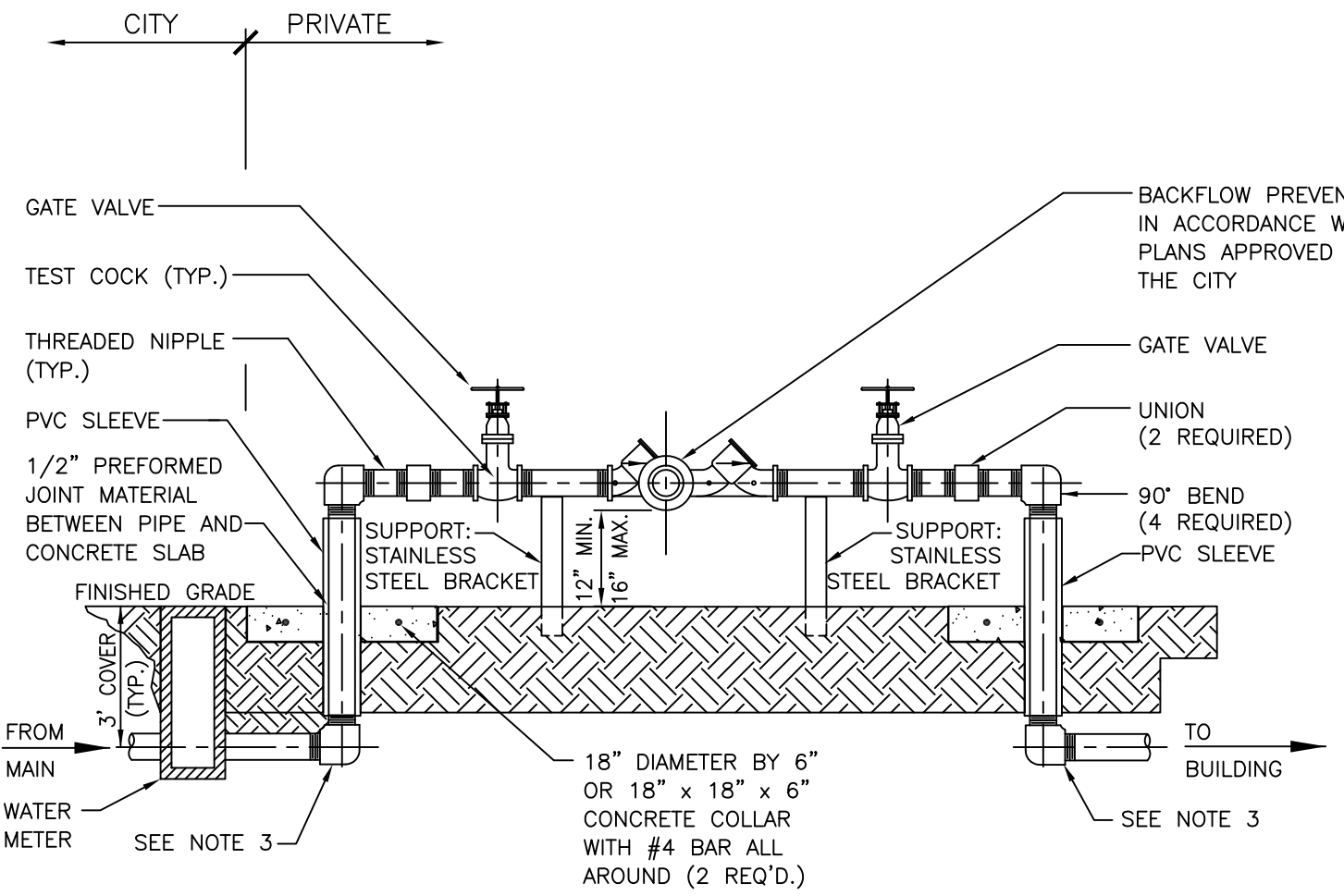
METER BOX DETAIL U.S. FOUNDRY NO. 7630

METER NOTES: Contractor/Developer shall be responsible for ordering and purchasing water meter, boxes and other related appurtenances for a complete water meter assembly from City's approved vendor: HD Supply Waterworks
Attn: James Watts
Phone: 954-772-7343

Meters shall be "Sensus" model and must be shipped to*:
City of Miramar Utilities Department
Attn: Harry Morgan
13900 Pembroke RD. Miramar, FL. 33027

*Note: Please reference name of development on the shipping order.

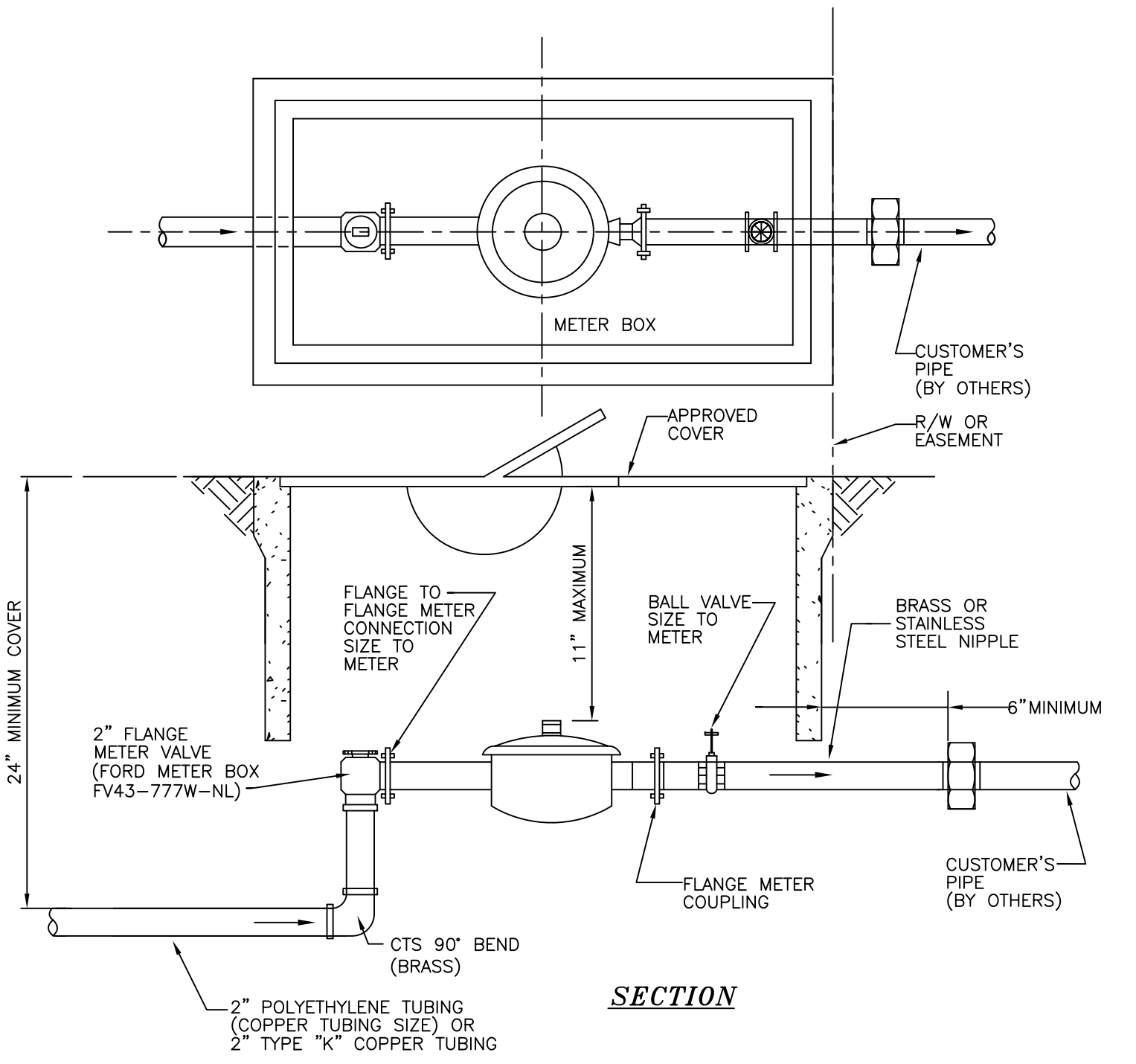
When contractor/developer is ready to install the meter(s), they must setup water meter accounts at City's Utility Billing at which point the already assembled water meter system will be released by the Utility Department at no charge to the contractor for installation.



NOTES:

- ALL PIPE AND FITTINGS 2" AND SMALLER SHALL BE THREADED BRASS. ALL 3" PIPE TO BE GALVANIZED STEEL.
- ALL PIPE FITTINGS 4" AND LARGER SHALL BE CEMENT-LINED DUCTILE IRON WITH FLANGED FITTINGS FOR ABOVEGROUND USE. MECHANICAL JOINT FITTINGS SHALL BE USED UNDERGROUND WITH RESTRAINED JOINTS AND THRUST COLLARS.
- APPROVED RESTRAINED ALL JOINTS ON UNDERGROUND DUCTILE IRON PIPING 4" AND LARGER.
- ALL ABOVEGROUND DUCTILE PIPING, FITTINGS AND VALVES SHALL BE PAINTED RUST-OLEUM BLUE OR APPROVED EQUAL.
- PROVIDE STAINLESS STEEL SUPPORT BRACKET AND PVC SLEEVE AS SHOWN ON DETAIL.

REDUCED PRESSURE BACKFLOW PREVENTER

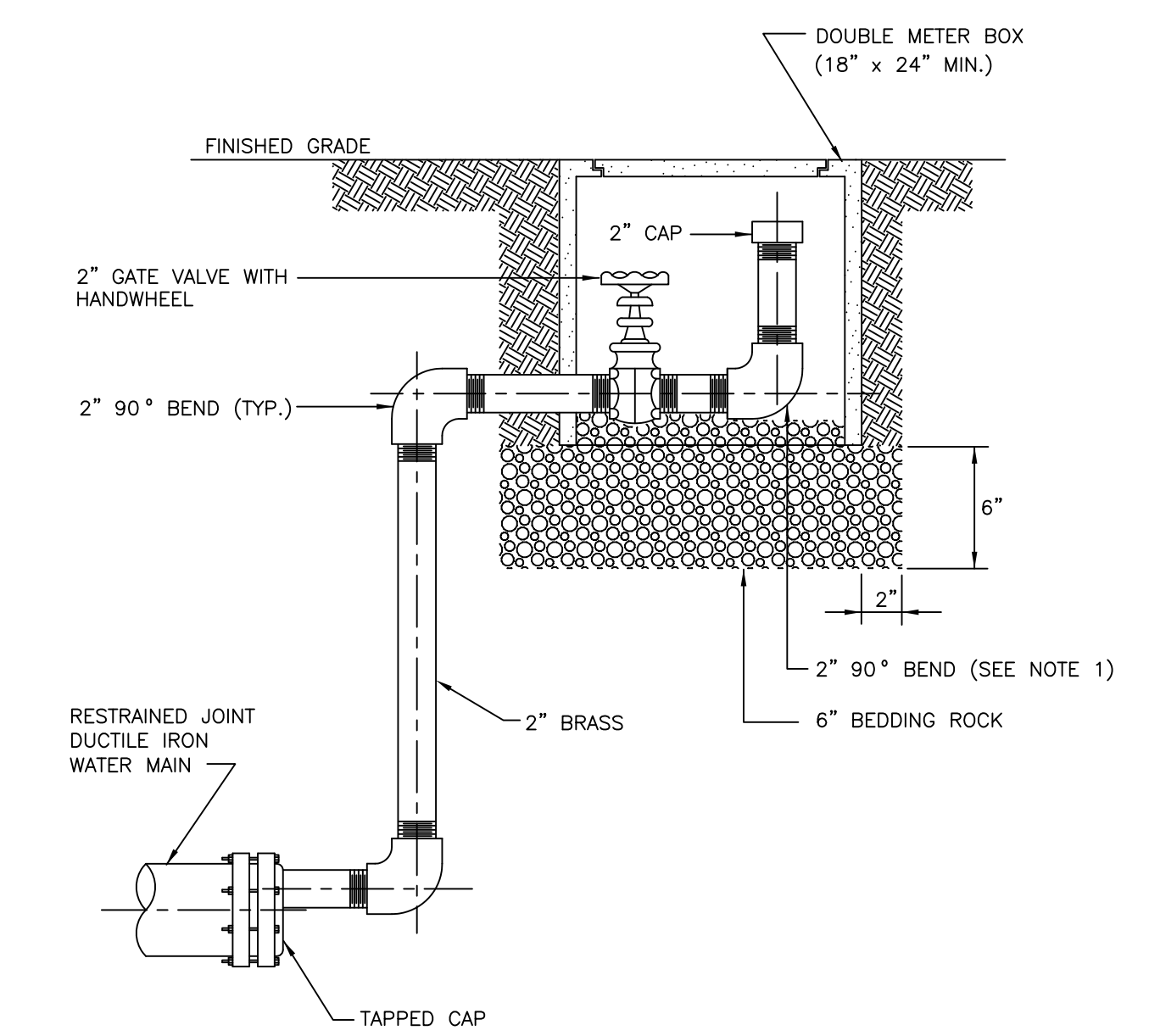


SECTION

NOTES:

- ALL STRUCTURES IN R/W TO BE TRAFFIC BEARING TYPE.
- R/W OR EASEMENT LINE IS THE CUSTOMERS SIDE OF METER BOX.
- CITY OF MIRAMAR RESPONSIBILITY ENDS AT THE CUSTOMERS SIDE OF BALL VALVE.
- CURVE IN SERVICE LINE SHALL BE AS CLOSE TO METER BOX AS PRACTICAL AND MINIMUM RADIUS SHALL BE 21" FOR 2" TUBING.
- METERS SHALL BE PURCHASED AND INSTALLED BY THE CONTRACTOR (SEE METER NOTES).
- ALL BACKFLOW PREVENTION DEVICES PER LOCAL BUILDING CODE AND SUPPLIED BY CUSTOMER.
- METER BOXES ARE TO BE DOWELED INTO SIDEWALK OR ROCK BASE USING A MINIMUM OF SIX 1/4" DIAMETER THREADED RODS EXTENDING 6" BEYOND THE METER BOX EXTERIOR.

METER INSTALLATION FOR 1.5", OR 2" METERS



NOTES:

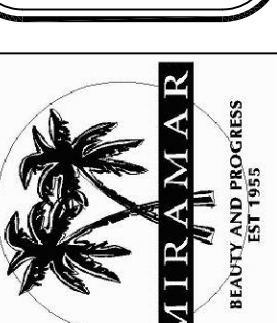
- ALL 2" PIPE AND FITTINGS SHALL BE DUCTILE IRON PIPE THREADED (NPT) JOINTS. BEND SHALL BE ROTATED APPROXIMATELY 20° FROM VERTICAL.

BLOW OFF VALVE DETAIL

| REVISIONS | | BY | DATE |
|-----------|---------------------------|----|----------|
| 1 | GENERAL | | 07/09/14 |
| 2 | METER REVISIONS AND NOTES | | 8/6/15 |

UTILITIES

CITY OF MIRAMAR DEPARTMENT OF CONSTRUCTION & FACILITIES MANAGEMENT ENGINEERING STANDARDS



SCALE: N.T.S.

SHEET NO. 3 OF 11