

# CITY OF BREVARD WATER CONSTRUCTION DETAILS

|   |                           |
|---|---------------------------|
| PROJECT REFERENCE NO.<br><b>R-5799</b>                                  | SHEET NO.<br><b>UC-3A</b> |
| DESIGNED BY: <b>MRD</b>   |                           |
| DRAWN BY: <b>SRW</b>  |                           |
| CHECKED BY: <b>JDN</b>  |                           |
| APPROVED BY: <b>JDN</b>   |                           |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION                             |                           |
| UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 1250-4151   |                           |
| 7/13/2023 11:41:58 PM EDT UTILITY CONSTRUCTION PLANS ONLY               |                           |
| <b>DOCUMENT NOT CONSIDERED FINAL UNTIL ALL SIGNATURES ARE COMPLETED</b> |                           |

## UTILITY CONSTRUCTION

**STANDARD EXCAVATION**  
BACKFILL MATERIAL COMPACTED IN 6" LIFTS  
24" MAX 12" MIN  
12" MAX 6" MIN  
UNDISTURBED EARTH

**OVERCUT EXCAVATION**  
BACKFILL MATERIAL COMPACTED IN 6" LIFTS  
24" MAX 12" MIN  
12" MAX 6" MIN  
UNDISTURBED EARTH  
NOTE: BELL HOLES NOT SHOWN.

**STANDARD EXCAVATION IN WET CONDITIONS**  
BACKFILL MATERIAL COMPACTED IN 6" LIFTS  
24" MAX 12" MIN  
12" MAX 6" MIN  
SPRING LINE OF PIPE  
WASHED STONE EMBEDMENT  
UNDISTURBED EARTH

**UNDERCUT EXCAVATION IN UNSTABLE SOILS TYPES**  
BACKFILL MATERIAL COMPACTED IN 6" LIFTS  
24" MAX 12" MIN  
12" MAX 6" MIN  
SPRING LINE OF PIPE  
WASHED STONE EMBEDMENT  
ADDITIONAL WASHED STONE FOR UNDERCUT EXCAVATION ONLY AS DIRECTED BY ENGINEER  
UNDISTURBED EARTH

**PIPE MATERIAL:**  
DIP/CL-350 (4" DIAMETER AND GREATER)  
PVC/SDR-13.5 (LESS THAN 4" DIAMETER)

**NOTES:**  
1.) CONSTRUCTION OF TRENCHES SHALL BE IN ACCORDANCE WITH THE LATEST OSHA REGULATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE REGULATIONS.  
2.) NO BOULDERS OR STONES IN EXCESS OF 4" IN SIZE SHALL BE USED AS PART OF THE INITIAL BACKFILL.  
3.) PIPE BEDDING MATERIAL SHALL BE # 57 WASHED STONE.  
4.) INSTALL 12 GAUGE INSULATED TRACER WIRE FOR ALL NON-FERROUS PIPES.  
5.) MINIMUM COVER ON TOP OF PIPE IS 3 FEET.

**Brevard North Carolina**  
**TYPICAL TRENCH DETAIL**  
NOT TO SCALE

| REVISIONS |             | STANDARD DETAIL |
|-----------|-------------|-----------------|
| DATE      | DESCRIPTION |                 |
| 12/01/10  | ISSUED      | W-1.0           |

**2" AND LARGER GATE VALVE INSTALLATION**  
NOT TO SCALE

WORD "WATER" CAST IN TOP  
FINISHED GRADE  
24" X 24" X 6" CONCRETE PAD  
24" X 24" X 6" BLOCKING  
CAST IRON ROADWAY VALVE BOX (RUSSELL FOUNDRY P-107) OR SLIP TYPE ON BOTH LIDS MARKED "WATER"  
REFER TO SPECIAL PROVISIONS.  
WATER MAIN  
14 GAUGE TYPE THIN SOLID COPPER TRACER WIRE BROUGHT UP INTO ALL VALVE BOXES TO WITHIN 12" OF FINISHED GRADE  
4" MIN. COVER  
PIPE RESTRAINTS MEGA LUGS (TYP.) WITH BLOCKING UNDER VALVE PER CITY OF BREVARD DETAIL W-4.0. REFER TO SPECIAL PROVISIONS.  
MUELLER M.J. GATE VALVE REFER TO SPECIAL PROVISIONS.

**NOTES:**  
1.) THE CONTRACTOR IS REQUIRED TO INSTALL 24"X24"X6" CONCRETE PADS AROUND ALL VALVE BOXES. PRECAST CONCRETE COLLARS ARE NOT ACCEPTED.  
2.) ALL VALVES MUST OPEN COUNTER CLOCKWISE AND CLOSE CLOCKWISE.

**Brevard North Carolina**  
**TYPICAL TRENCH DETAIL**  
NOT TO SCALE

| REVISIONS |             | STANDARD DETAIL |
|-----------|-------------|-----------------|
| DATE      | DESCRIPTION |                 |
| 12/01/10  | ISSUED      | W-2.0           |

**TWO VALVES AT A TEE**

**TYPICAL VALVE PLACEMENT ON FIRE HYDRANT WHEN COMING OFF A TEE**

**THREE AND FOUR VALVES AT AN INTERSECTION**

**NOTES:**  
1. WHEN THERE IS ONLY ONE SUPPLY AND THREE DEAD END LEGS, PLACE VALVES ON DEAD END LEGS.  
2. WHEN THERE ARE THREE SUPPLY LEGS AND ONE DEAD END LEG, PLACE VALVES ON SUPPLY LEGS.  
3. WHEN THERE ARE TWO SUPPLY LEGS AND TWO DEAD END LEGS, PLACE VALVES ON ALL FOUR LEGS.  
4. CITY MAY REQUIRE VALVE PLACEMENT BASED ON CURRENT OR FUTURE NEEDS.  
5. WHEN ONE LEG AT AN INTERSECTION IS A HYDRANT LEG, VALVE MUST BE PLACED ON A HYDRANT LEG.  
6. A "SUPPLY LEG" IS ANY LEG CONNECTED TO THE TREATED WATER SOURCE BY PIPING EQUAL AND OR GREATER THAN ITS SIZE AND SEPARATE FROM THE TEE OR CROSS BEING CONSIDERED.

**Brevard North Carolina**  
**TYPICAL VALVING CONFIGURATION**  
NOT TO SCALE

| REVISIONS |             | STANDARD DETAIL |
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**TAPPING SLEEVE AND VALVE ASSEMBLY**  
NOT TO SCALE

STAINLESS STEEL TAPPING SLEEVE MUELLER T-3045S REFER TO SPECIAL PROVISIONS.  
VALVE (MUELLER T-2360-16) REFER TO SPECIAL PROVISIONS.  
WATER LINE  
WATER LINE MAIN  
VALVE (MUELLER T-2360-16) REFER TO SPECIAL PROVISIONS.  
STAINLESS STEEL TAPPING SLEEVE MUELLER T-3045S REFER TO SPECIAL PROVISIONS.

**NOTES:**  
1.) TAPPING SLEEVE WILL BE STAINLESS STEEL. MUELLER T-3045S. REFER TO SPECIAL PROVISIONS.  
2.) APPROVED RESILIENT SEAT TAPPING VALVE.  
3.) SOLID CONCRETE OR BRICK BLOCKING WILL BE USED AS FOOTING FOR DUCTILE IRON PIPE.  
4.) CONCRETE WILL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINTS FITTINGS.  
5.) SEE APPROPRIATE STANDARD DETAIL FOR THRUST BLOCK DIMENSIONS.  
6.) ALL FITTINGS AND APPURTENANCES SHALL BE RESTRAINED.

**Brevard North Carolina**  
**TAPPING SLEEVE AND VALVE ASSEMBLY**  
NOT TO SCALE

| REVISIONS |             | STANDARD DETAIL |
|-----------|-------------|-----------------|
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