

# Bolivar Water Supply Corporation



## DESIGN STANDARD AND SPECIFICATIONS MANUAL

original

## BOLIVAR WATER SUPPLY CORPORATION Regular Board Meeting Minutes

April 10, 2014

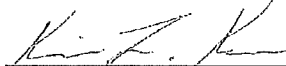
PRESIDENT, Kevin Kemplin called meeting to order. All other Directors were present except Tommy, Bob and John. Also attending, Managers, James Parkman & Polly Kruger and Foreman, Ronnie Pyron.

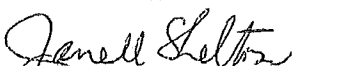
- **Minutes:** Secretary Freida Ashcraft, read the minutes of the March 13, 2014, Annual Board Meeting. A motion was made by Mary and 2<sup>nd</sup> by Janell to accept the minutes as read.  
*Motion Carried Unanimously*
- **Edward Jones:** Allen Chick with Edward Jones gave a report on Bolivar's portfolio.
- **Report on System:** James gave an update on various parts of the system. Report on Terrace Acres WSC merger. He also reported on another small system called BVK Water system that is interested in BWSC taking it over. A motion was made by D. L. and 2<sup>nd</sup> by Freida to get further information on this matter.  
*Both Motions Carried Unanimously*
- **Resolution Adoption:** After review of the Uniform Plumbing Code book, required by TCEQ and the Design Standard and Specifications Manual a motion was made by Janell and 2<sup>nd</sup> by Mary to accept both items.  
*Motion Carried Unanimously*
- **Financial Statement:** After review of the financial statement a motion was made by Mary and 2<sup>nd</sup> by Janell to accept the expenditures as presented.  
*Motion Carried Unanimously*
- **Adjournment:** A motion to adjourn was made by Janell and 2<sup>nd</sup> by D. L.

**Meeting Adjourned.**

**[Minutes approved by Directors present]**

**APRIL 10, 2014**

  
Kevin Kemplin, President

  
Janell Shelton, Vice President

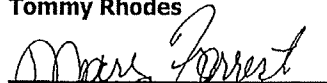
  
Freida Ashcraft, Sec/Treas

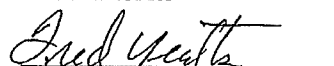
  
D. L. Bowles

**ABSENT**  
Tommy Rhodes

**ABSENT**  
John Kubicek

**ABSENT**  
Bob Montgomery

  
Mary Forrest

  
Fred Yeatts

# WATER SYSTEM SPECIFICATIONS

## 1.1 General:

The design and construction of the water distribution system to serve the development shall be in accordance with good engineering principles, with these Standards of Design, the Standard Specifications for Construction and the Standard Details and with the requirements of the Texas Commission on Environmental Quality (TCEQ). All off-site water mains shall be sized and located to conform to projected demands in accordance with the latest Water Master Plan and the computer model with regard to the impact of each development on the existing and proposed water distribution system. No construction shall commence prior to the approval of the complete construction plans and specifications by Bolivar WSC.

All facilities shall be of sufficient size to provide adequate capacity for ultimate development. The pipelines shall be sized to meet the maximum instant domestic requirements. The design criteria for water demand shall be submitted to Bolivar WSC with the plans and specifications. Bolivar WSC reserves the right to require larger pipelines than required for the proposed development in order to provide capacities for areas outside the development. The developer will be responsible to construct water lines adjacent to their property in accordance with the latest Water Master Plan, across the frontage of the tract, or as required by Bolivar WSC. All facilities that are to be public shall be constructed with domestically manufactured materials.

The minimum pipeline size to serve residential areas shall be six (6) inches in diameter, and the minimum pipeline size serving commercial, business, industrial, etc. shall be six inches (6"). In general, all lines shall be looped with no dead-ends. Dead-end lines will be considered on a case by case basis and shall be furnished with an approved flush valve arrangement.

## 1.2 Connections to Existing Distribution System:

Preliminary discussions concerning take-off points in the distribution system should be conducted with Bolivar Water Supply Corporation prior to finalizing the preliminary designs of the distribution system, which will serve the development. Connections to BWSC's existing system will be allowed only at locations where Bolivar WSC has determined that sufficient quantity and pressures are available to meet the projected requirements of the development. In general, the connections to the existing distribution system shall be made in such a manner to keep "shut-downs" to a minimum. Preference will be given to a tapping sleeve and valve connections.

In a proposed development where BWSC water is not adjacent to the property but is accessible, the developer shall provide, at his expense, an off-site water main of sufficient size to serve his development or as shown on BWSC's Water Master Plan,

which ever is larger. The proposed development will normally require a loop into the existing water distribution system in order to provide adequate water pressure. The loop will be at the developer's expense. In general, BWSC will not approve a development, which cannot be served by extensions to Bolivar WSC distribution system.

### 1.3 Location of Facilities:

A. Pipelines: Water pipelines shall be located in the parkways between the back of the curb and the street right-of-way. The location shall be two feet (2') from the back of curb on the north side of east-west streets and on the west side of north-south streets. The location of all water mains and valves are to be shown on the subdivision plans subject to the approval of Bolivar WSC.

B. Gate Valves: Gate valves shall be located outside the paved streets and shall be two feet (2') from back of curb of the intersecting street. In general, gate valves shall be located at street intersections. Unless otherwise approved by BWSC, valves shall be located in the northwest quadrant of the street intersection. All valve boxes shall be encased in a concrete pad that shall be twelve inches by twelve inches by six inches (12" x 12" x 6") and reinforced with No. 3 steel bars.

### 1.4 Water Service Connections:

A water service pipeline shall be laid to each lot with fittings and a meter box in accordance with the Standard Specifications for Construction and the Standard Details. All service pipelines, which supply water to each single-family lot, shall be constructed of SDR-9 (Polytube) having a minimum size of Three-fourths inch (3/4").

All water services under pavement shall be encased in a minimum 2" diameter steel encasement pipe or approved equivalent, with no coupling being installed under the roadway. The ends of the encasement pipe shall be sealed with silicone

All residential services shall be tapped to the PVC water main using double strap brass saddle. Tapping tees are required for all services larger than 4-inch.

A. Installation of Meter Boxes: Installation of model FYM241-233-T-G-NL Ford Meter Box Company, Inc., meter boxes for single family, multi-family, condominium and townhouse developments may be installed only at approved locations. Each single family residence shall have individual meter taps and boxes. Condominiums, townhouses, or multi-family developments may use alternate installations, approved on case-by-case basis. Service pipeline size for commercial and industrial developments shall be designed by the developer in accordance with the BWSC's adopted Uniform Plumbing Code.

## 1.5 Materials and Installation:

A. Pipe: Water pipelines shall be PVC pipe conforming to the Standard Specifications for Construction. In general, the water pipelines shall be AWWA Standard C-900 with cast-iron outside dimensions, and installed with a minimum of four feet (4') of cover from proposed final grade, unless otherwise approved by Bolivar WSC.

B. All water mains under pavement shall be encased as follows:

- a. 8-inch through 10-inch - encase in steel or approved equal. (ie: C-900)
- b. 12-inch and larger - encase in steel pipe, size and thickness ( 1/4" min.) to be approved by Bolivar's Engineer.

C. All pipes not under pavement shall be installed in embedment material as shown on the Standard Details.

D. Gate Valves: All gate valves shall conform to AWWA C-509 standards manufactured by Mueller, Clow, or an approved manufacturer with resilient seat only and shall conform to and shall be installed according to the Design Standard.

G. Water Service Connections: Service pipeline shall be in accordance with the designs shown on the Standard Drawings. The materials shall be Mueller, Ford, AVK or approved equal and shall be installed in accordance with the Standard Specifications for Construction. All connections shall be compression type or approved equal.

H. Bends: Mega-lugs or approved equal shall be installed at a horizontal change in the directions of 45° or greater and at all vertical change in direction that require a bend. The restraints shall be placed at the bend and at the next pipe joint in the direction from the bend.

I. All irrigation meters shall have a testable double check backflow preventer

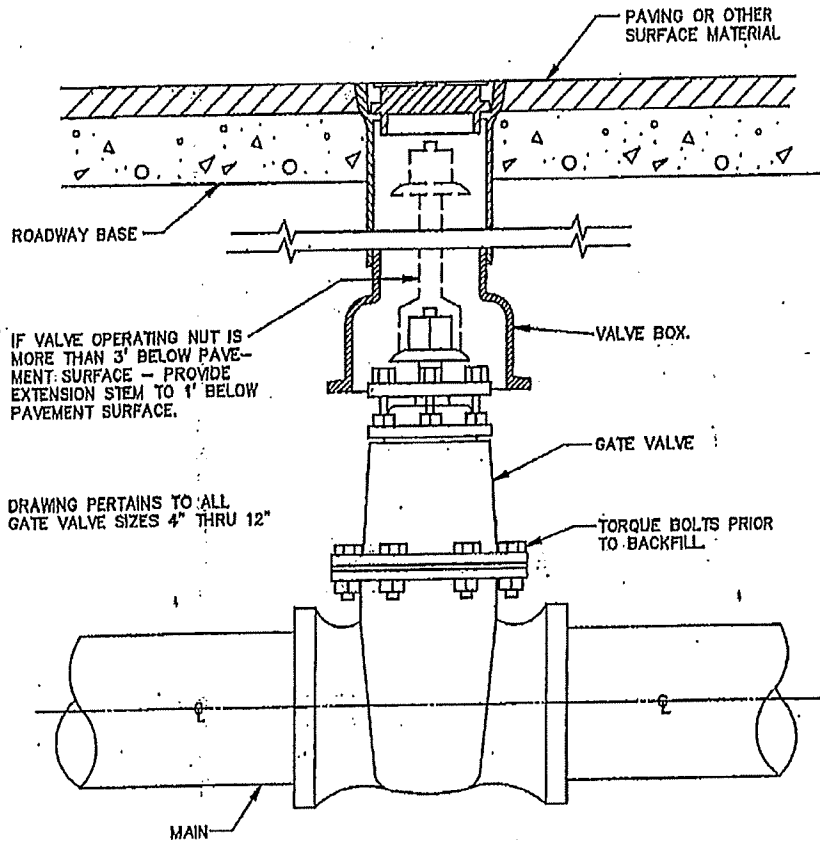
J. All iron fittings shall be covered and secured with plastic wrap prior to backfill being placed.

K. No imported materials.

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**NOTE:**

IN UNPAVED AREAS, INSTALL 2' x 2' x 6" CONCRETE VALVE PAD FLUSH WITH THE TOP OF VALVE BOX. REINFORCE WITH #3 BARS ON 6" CENTERS BOTH WAYS.



IF VALVE OPERATING NUT IS MORE THAN 3" BELOW PAVEMENT SURFACE - PROVIDE EXTENSION STEM TO 1" BELOW PAVEMENT SURFACE.

DRAWING PERTAINS TO ALL GATE VALVE SIZES 4" THRU 12"

TORQUE BOLTS PRIOR TO BACKFILL

**GATE VALVE BOX AND EXTENSION STEM**

N.T.S.

Gate Valve 4" To 12" Box & Extension Stem	 <b>Bolivar Water Supply</b>	Revision Date	Scale
		Date Dec, 2012	Sheet No. WAT--01

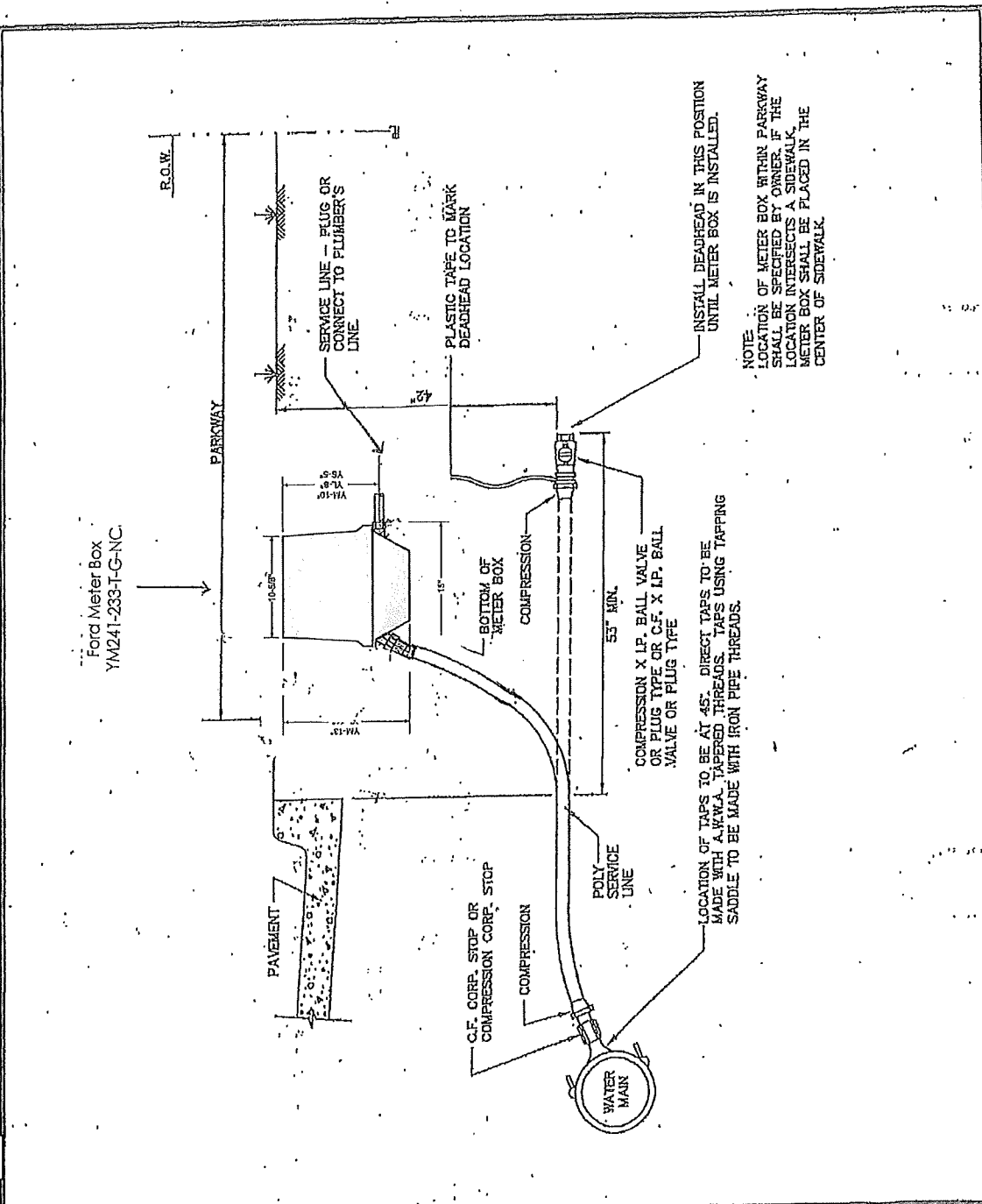
PLOT SCALE: 1:1

PLOT STYLE: 11x17.ctb

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NOTE:  
 LOCATION OF METER BOX WITHIN PARKWAY SHALL BE SPECIFIED BY OWNER. IF THE LOCATION INTERSECTS A SIDEWALK, METER BOX SHALL BE PLACED IN THE CENTER OF SIDEWALK.

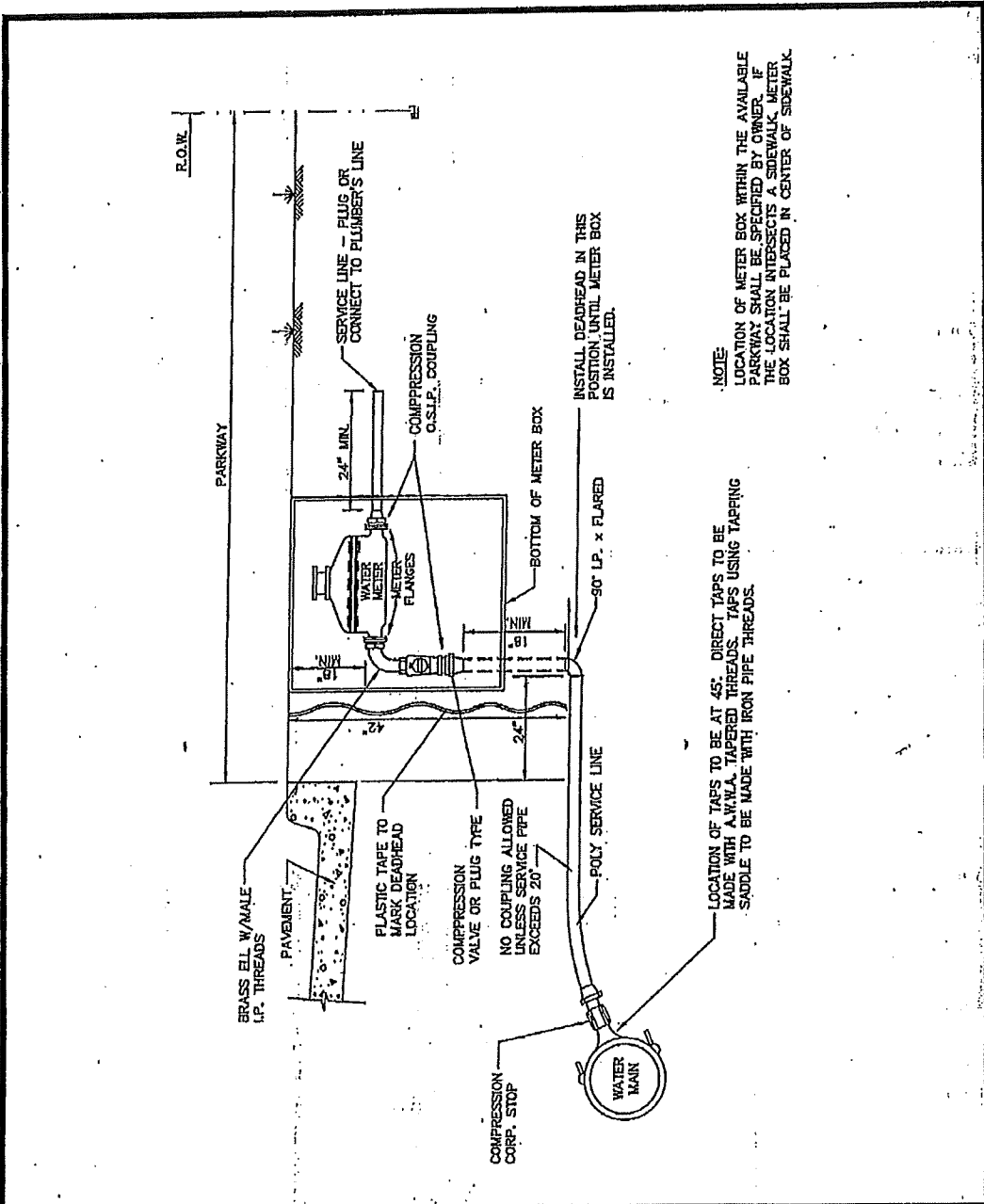
LOCATION OF TAPS TO BE AT 45°. DIRECT TAPS TO BE MADE WITH A.R.W.A. TAPERED THREADS. TAPS USING TAPPING SADDLE TO BE MADE WITH IRON PIPE THREADS.

Water Service Installation	 Bolivar Water Supply	Revision Date	Scale None
3/4" Or 1" Line		Date Dec, 2012	Sheet No. WAT-13

PLOT SCALE: 1:1

PLOT STYLE: 11x17.ctb

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**NOTE:**  
 LOCATION OF METER BOX WITHIN THE AVAILABLE PARKWAY SHALL BE SPECIFIED BY OWNER. IF THE LOCATION INTERSECTS A SIDEWALK, METER BOX SHALL BE PLACED IN CENTER OF SIDEWALK.

LOCATION OF TAPS TO BE AT 45° DIRECT TAPS TO BE MADE WITH A.W.W.A. TAPERED THREADS. TAPS USING TAPPING SADDLE TO BE MADE WITH IRON PIPE THREADS.

INSTALL DEADHEAD IN THIS POSITION UNTIL METER BOX IS INSTALLED.

Water Service Installation	 <b>Bolivar Water Supply</b>	Revision Date	Scale None
1-1/2" Or 2" Line		Date Dec, 2012	Sheet No. WAT-14

PLOT SCALE: 1:1

PLOT STYLE: 11x17.ctb

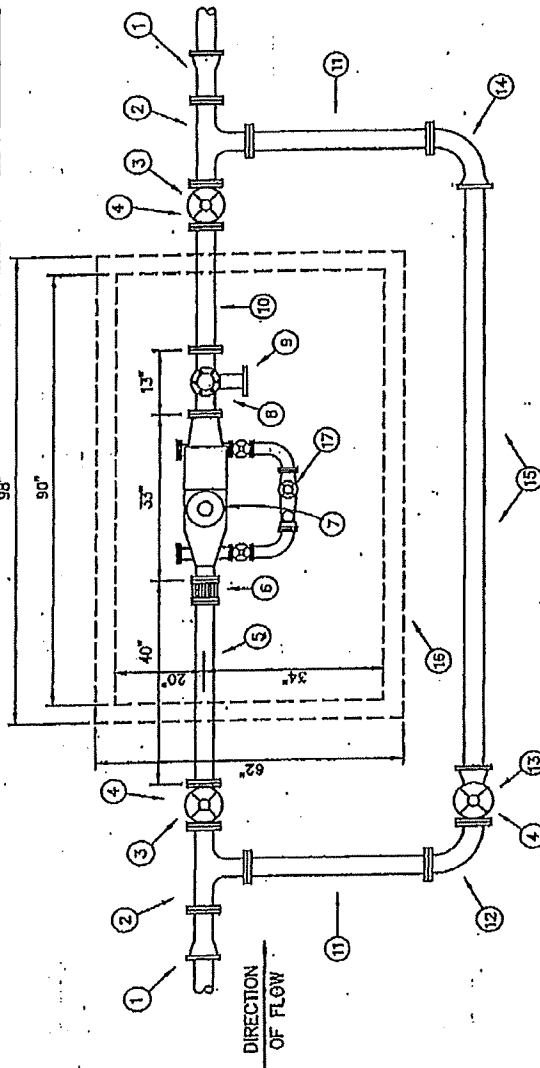



Date: 12/12/12 -- DSMITH

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MATERIALS LIST	
PART NO.	DESCRIPTION
1	4" X 24" D.I. NIPPLE F. X F.
2	4" X 36" D.I. NIPPLE F. X F.
3	4" D.I. 90° BEND. F. X F.
4	4" GATE VALVE F. X M.J.
5	4" D.I. 90° BEND. M.J. X F.
6	4" D.I. PIPE, CLASS 52, APPROX. 10'
7	PRECAST METER VAULT
8	VAULT FLOOR (NOT SHOWN)
9	ACCESS HATCH (NOT SHOWN)
10	BY-PASS METER

MATERIALS LIST	
PART NO.	DESCRIPTION
1	4" X 12" D.I. NIPPLE M.J. X F.
2	4" X 4" D.I. TEE F. X F.
3	4" GATE VALVE F. X F.
4	VALVE STACK RISER COVER & LID
5	4" X 40" D.I. NIPPLE F. X SLEEVE
6	4" FLANGED COUPLING ADAPTER
7	4" METER AS SPECIFIED (TYPE F.M. SHOWN)
8	4" X 4" D.I. TEE F. X F. (TEST POINT)
9	4" BLIND FLG.



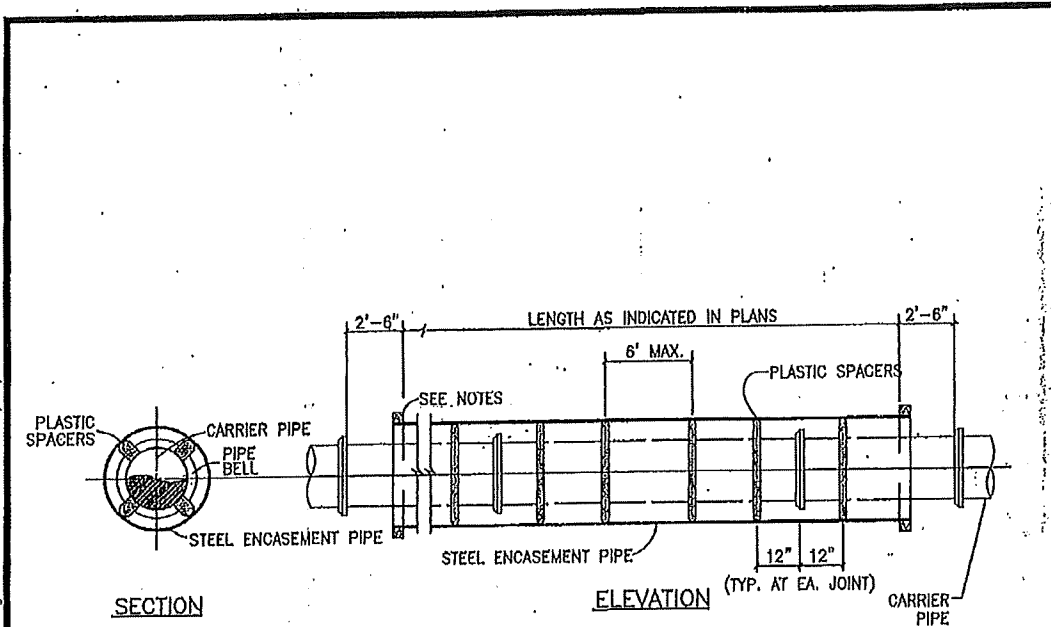
4" Combination Water Service With 4" Meter	 <b>Bolivar Water Supply</b>	Revision Date	Scale
		Date Dec, 2012	None Sheet No. WAT-15

PLOT SCALE: 1:1

PLOT STYLE: 11x17.ctb

Date: 12/12/12 - DSMITH

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**NOTES:**

- 1) PREFABRICATED PLASTIC SPACERS MUST BE APPROVED BY THE OWNER.
- 2) CONTRACTOR SHALL PROVIDE SUPPORT UNDER CARRIER PIPE TO HAVE MIN. 1" CLEARANCE BETWEEN PIPE BELL AND ENCASEMENT PIPE.
- 3) ENDS OF ENCASEMENT PIPE SHALL BE PLUGGED WITH BRICK AND MORTAR FOR ROADWAY AND RAILROAD CROSSINGS. PLUGS SHALL BE CONSTRUCTED WITH A WEEP-HOLE.
- 4) STEEL ENCASEMENT PIPES SHALL BE WELDED.
- 5) EXTERIOR OF ENCASEMENT PIPE SHALL BE COATED WITH AN ASPHALT VARNISH.
- 6) MINIMUM YIELD STRENGTH OF THE ENCASEMENT PIPE SHALL BE 35,000 P.S.I.
- 7) CARRIER PIPE JOINTS SHALL BE RESTRAINED.

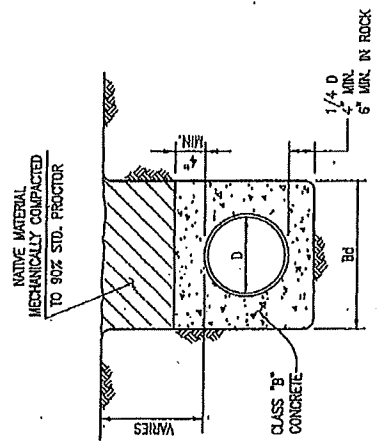
**ENCASED BORE RAILROAD OR ROADWAY**

NO SCALE

Encasement Pipe	 <b>Bolivar Water Supply</b>	Revision Date	Scale
Water Line By Bore		Date	Sheet No.
		Dec, 2012	WAT-17

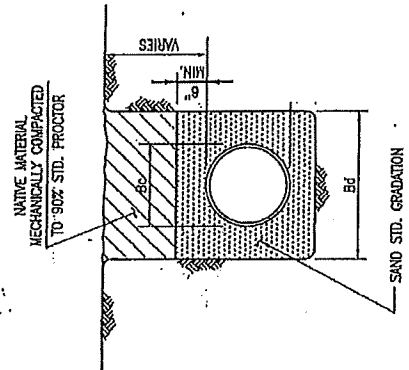
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**CLASS "G"**

- N.T.S.
1. Bc = OUTSIDE DIAMETER OF PIPE
  2. Bd = TRENCH WIDTH
  3. D = INSIDE DIAMETER OF PIPE



**WATER LINE EMBEDMENT**

- N.T.S.
1. Bc = OUTSIDE DIAMETER OF PIPE
  2. Bd = TRENCH WIDTH
  3. D = INSIDE DIAMETER OF PIPE

Embedment	 <b>Bolivar Water Supply</b>	Revision Date	Scale
Water Line Embed. & Class "G"		Date	None
		Dec, 2012	Sheet No. EMB -01

PLOT SCALE: 1:1      PLOT STYLE: 11x17.ctb