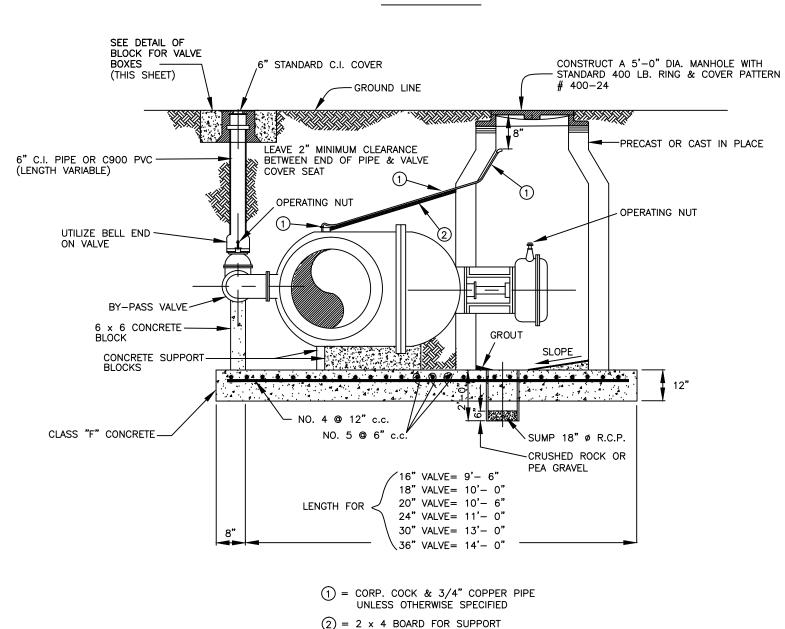
- 1. Valves shall have flanged ends. Flanged ends shall conform to ASA B16.1, Class 125 lb.
- 2. Rollers, tracks and scrappers for horizontal valves shall conform to AWWA
- Specification C500 with the following exception: Babbitt tracks will not be acceptable.
- 3. All valves 14" and larger shall be designed for horizontal pipe line unless otherwise called for
- All other valves are to be vertical.
- 4. For cast in place or precast manholes, see sanitary sewer manholes for materials.

## **PLAN**



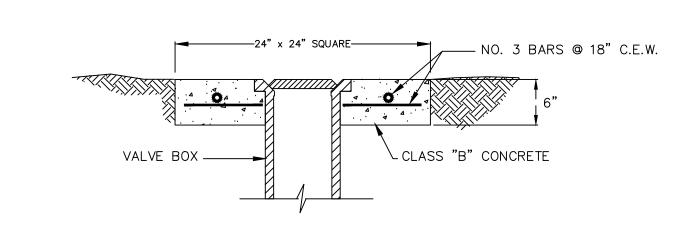
**SECTION A-A** 

HORIZONTAL VALVE INSTALLATION

### 5' MAX. \* 3' MAX. ON 44' STREET BASS & HAYES, VULCAN OR (OR APPROVED EQUAL) \_\_STRAIGHT OR BELL BOTTOM THIS NIPPLE MIN. 1 FT. D.I. PIPE OR P.V.C. C-900 POURED CONCRETE CLASS "B" (DO NOT COVER MECHANICAL JOINTS OR WEEP HOLE.) — 6" D.I. OR P.V.C. PIPE CLASS "B" CONCRETE RESILIENT SEATED GATE VALVE THRUST BLOCK <u>4" THRU 12"</u> 1. ALL FITTINGS ARE MECHANICAL JOINTS, EXCEPT VALVE TO TEES OR

- WYES MAY BE FLANGE TO FLANGE.
- 2. PLACEMENT OF FIRE HYDRANTS IN SIDEWALK IS PROHIBITED.
- 3. PEA GRAVEL TO BE PLACED AROUND WEEP HOLE.
- 4. HYDROLOCK IS NOT REQUIRED.

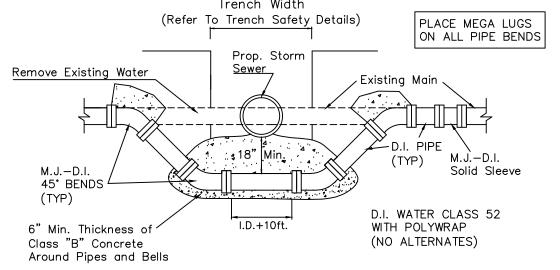
## FIRE HYDRANT ASSEMBLY



# **DETAIL OF BLOCK** FOR VALVE BOXES

NOT IN PAVEMENT





# WATER MAIN LOWERING

INITIAL BACKFILL OF COMPACTED STONE

ACCEPTED MATERIALS MANUFACTURERS (SEE NOTE 9)

**GATE VALVES** 

M & H CLOW

RESILIENT SEATED GATE VALVE

<u>4" THRU 12"</u> MUELLER CLOW

KENNEDY

TAPPING SLEEVES

M & H

AVK

CLOW MUELLER

AFC **TYLER** 

TAPPING VALVES

M & H CLOW MUELLER

AFC AVK

ADJUSTABLE VALVE BOX WITH LID

**TYLER** BASS & HAYES EAST JORDAN IRON WORKS

VALVE BOX WITH LID

FOR USE WITH C-900 P.V.C. VALVE STACK EAST JORDAN IRON WORKS

**TYLER** BASS & HAYES

STAINLESS STEEL WATERMAIN REPAIR CLAMP WITH OR WITHOUT SERVICE OUTLET

MUELLER FORD

APPROVED PIPE

UP TO 12" C- 900 P.V.C.

CLASS 200, DR 14 DUCTILE IRON: CLASS 50 & 51 WITH MECHANICAL JOINT ACCESSORIES CEMENT LINED.

COMBINATION AIR VALVES

STANDARD, SINGLE- BODY DOUBLE ORIFICE 1" THRU 6": APCO OR APPROVED EQUAL

GATE VALVES FOR COMBINATION AIR VALVES

<u>1" THRU 2"</u>

SELECT MATERIAL

COMPACTED TO A

DENSITY OF 95%

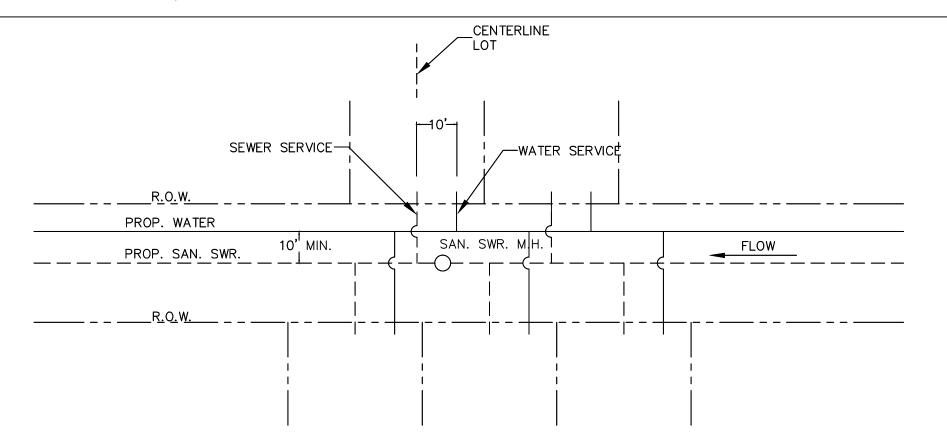
SEE SPECIAL NOTES #1

NIBCO # T- 131; # T- 133, OR APPROVED EQUAL

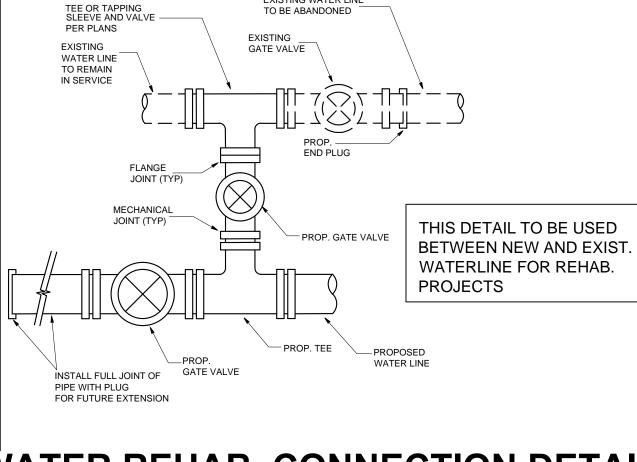
ALL MATERIALS AND WORKMANSHIP TO CONFORM TO THE REQUIREMENTS SET FORTH IN THE LATEST EDITION OF THE CITY OF RICHARDSON'S MANUAL FOR GENERAL PROCEDURES FOR THE DESIGN OF WATER AND SEWER LINES AND WATER DEPARTMENT STANDARDS.

#### SPECIAL NOTES:

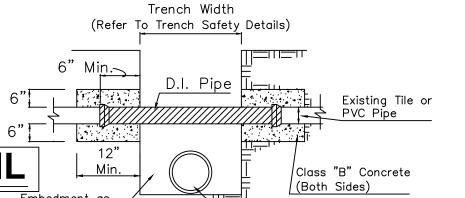
- 1. WATER MAINS SHALL HAVE THE FOLLOWING MINIMUM COVER BELOW STREET GRADES; 6", 3.5', 8", 4.0', 12", 5.0': LARGER, AS SHOWN ON PLANS.
- 2. ALL RESIDENTIAL WATER SERVICES SHALL BE 1" MINIMUM.
- 3. PLASTIC TAPE FOR SERVICES TO BE ATTACHED TO THE ENDS OF ALL SERVICE LINES AND EXTEND ABOVE GROUND LEVEL. THE TAPE SHALL MEET THE FOLLOWING SPECIFICATIONS: a. "ALLEN MARKING TAPE" OR EQUAL.
- b. ROLL MARKED CONTINUOUSLY, "CAUTION SEWER LINE", OR "CAUTION WATER LINE".
- c. SIX (6) INCHES IN WIDTH.
- b. GREEN TAPE FOR SEWER SERVICES, BLUE TAPE FOR WATER SERVICE.
- 4. LOCATE WATER SERVICES 10 FT. UPSTREAM OF SANITARY SEWER SERVICES.
- 5. ALL STUBOUTS SHALL BE ONE FULL JOINT OF PIPE.
- 6. REMOVE BLEEDER AND PLUG WITH BRASS PLUG.
- 7. CONTRACTOR SHALL MEET TNRCC STANDARDS FOR SEPARATION OF WATER AND SEWER CONDUITS.
- 8. CONTRACTOR SHALL SUPPLY ALL EQUIPMENT, LABOR, MATERIALS, AND ANY OTHER APPURTENANCES NECESSARY TO TEST WATER AND SEWER LINES TO CITY STANDARDS.
- 9. APPROVED MATERIALS LIST IS AVAILABLE FROM THE UTILITY SYSTEMS MANAGER ENGINEER AT THE CITY OF RICHARDSON SERVICE CENTER 1260 COLUMBIA DRIVE. RICHARDSON, TEXAS. TELEPHONE 972-744-4411.



# TYPICAL LOT SERVICE DETAIL



WATER REHAB. CONNECTION DETAIL



MAIN REALIGNMENT DETAIL

REMOVED

OLD MAIN CUT

- AND PLUG

**UTILITY SUPPORT DETAIL** 

Shown on Plans

**NO ADDITIONS OR CHANGES** TO STANDARD DETAIL SHEETS UNLESS APPROVED BY CITY OF RICHARDSON

Revisions:

City of Richardson

Richardson, Texas 75080

972 744-4280

972 744-5804

411 W. Arapaho Road

Suite 204

voice:

Drawn By:

Checked By:

fax:

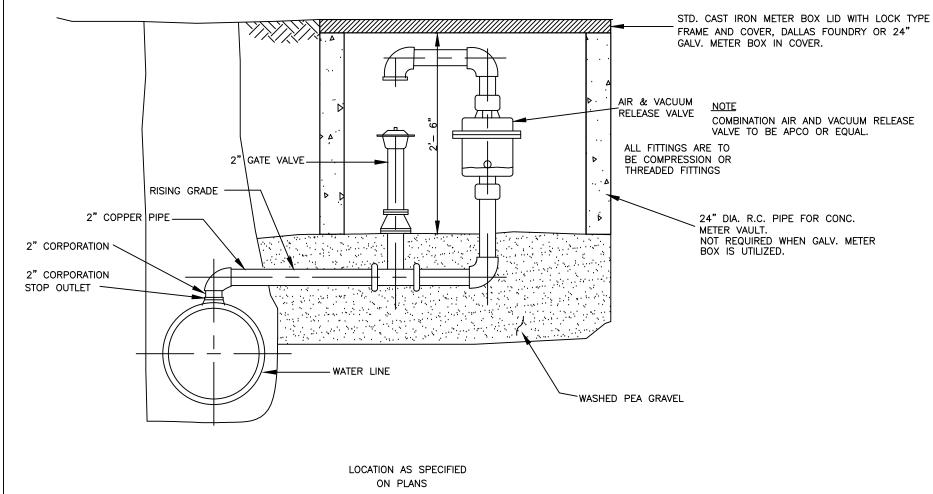
24"x36" Scale: 11"x17" Scale: Vertical Scale:

Project Number: Issue Date: 01 SEP 09

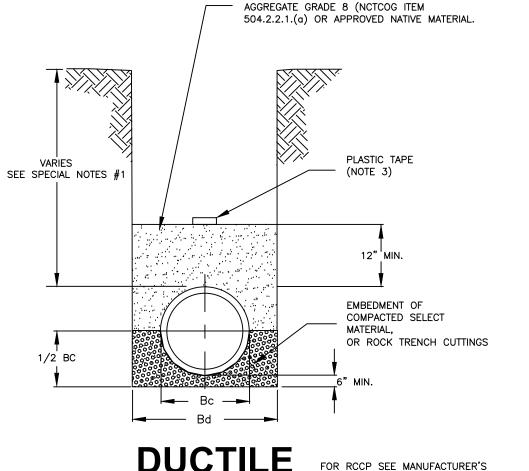
Sheet Title: **WATER** 

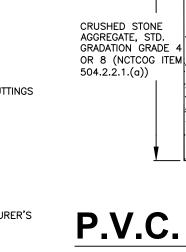
Sheet No.:

**C-1** 



**AIR RELEASE VALVE** 





P.V.C. C-900 (CLASS 200)

**EMBEDMENT FOR WATER CONDUITS** 

LAYING SCHEDULE FOR EMBEDMENT DETAIL.