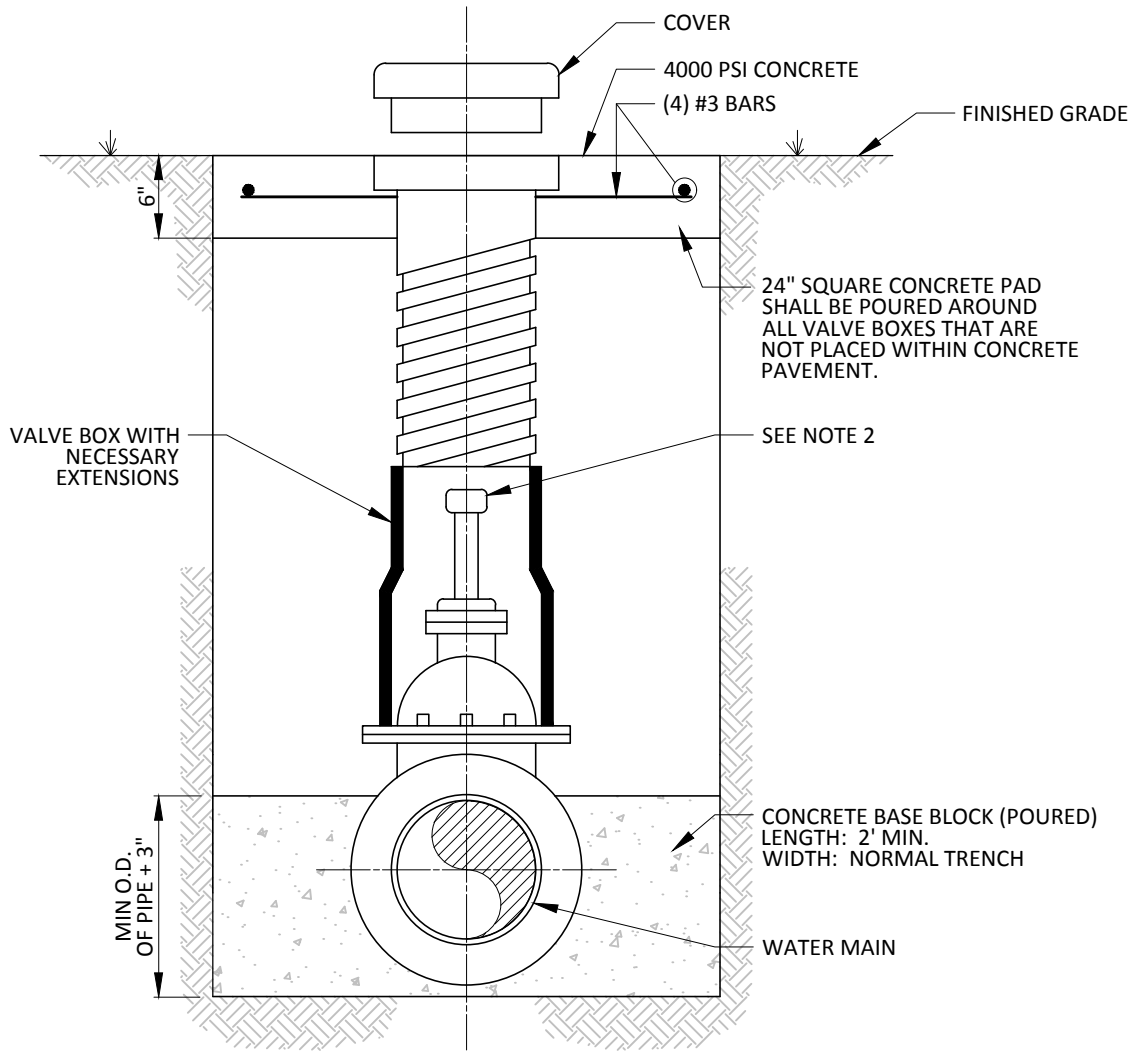


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TYPICAL VALVE SETTING AND BOX

NOTES:

1. RESILIENT SEAT VALVES 4" THRU 12" IN SIZE SHALL BE IN ACCORDANCE WITH AWWA STANDARD C-509.
2. A PERMANENTLY ATTACHED VALVE EXTENSION STEM SHALL BE REQUIRED FOR ANY VALVE WHOSE OPERATING NUT IS LOCATED IN EXCESS OF 4' BELOW THE TOP OF VALVE BOX. THIS EXTENSION SHALL BE OF SUFFICIENT LENGTH TO ENSURE THAT ITS TOP IS WITHIN 4' OF VALVE BOX LID.
3. DUCTILE IRON OR C-900 PVC PIPE SHALL BE USED FOR VALVE STACKS WITH ADJUSTABLE VALVE BOXES.
4. CUT A "V" SHAPED SYMBOL ON THE NEAREST CURB FACE WITH THE POINT OF THE "V" SYMBOL POINTING TOWARDS THE VALVE LOCATION.

GENERAL DESIGN STANDARDS WATER DETAILS

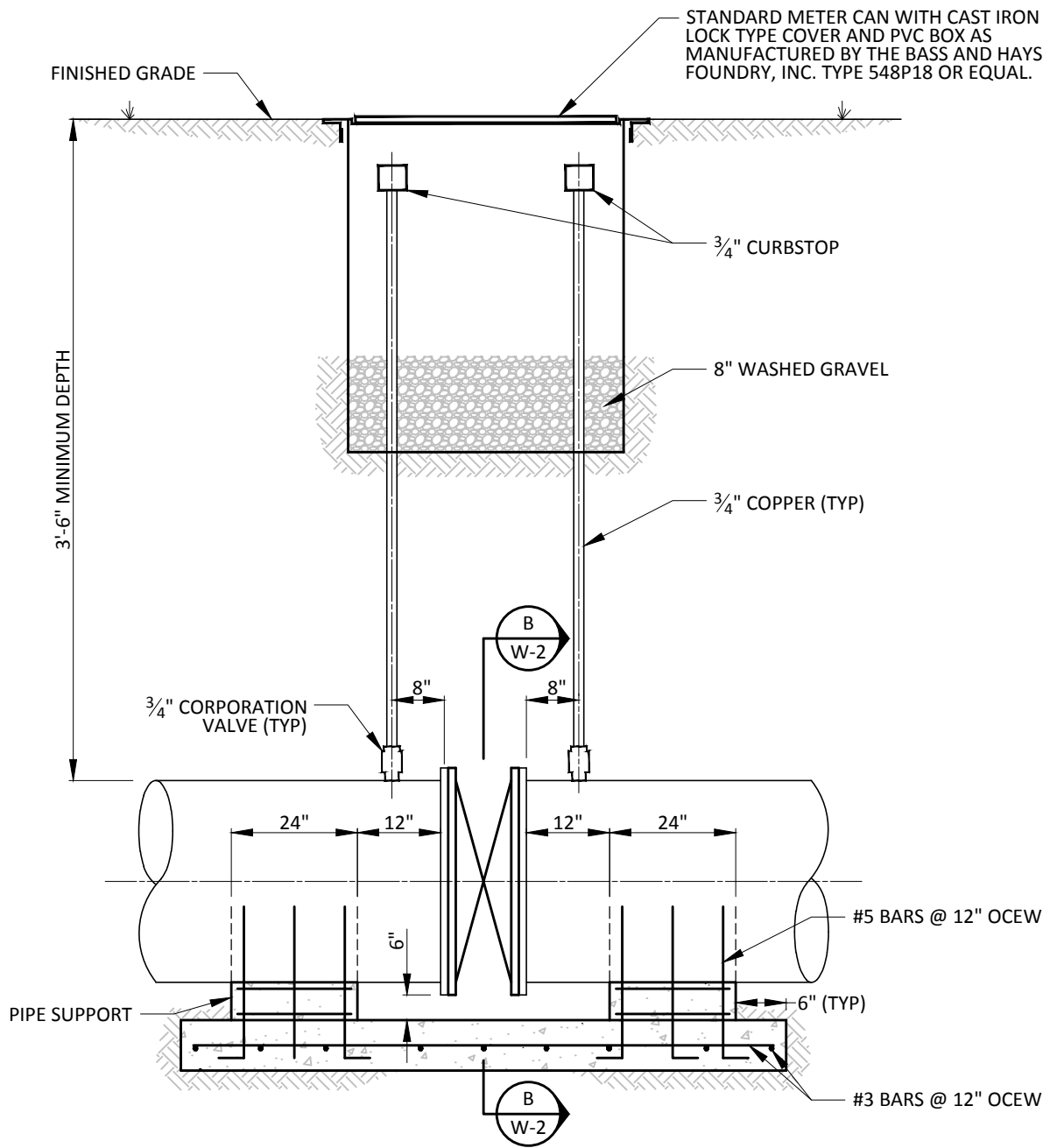
SCALE: NTS DATE: 01/2004
SHEET 1 OF 1

TYPICAL GATE VALVE INSTALLATION

W-1

ENGINEERING
DEPARTMENT





SECTION A-A

NOTE:

METER CAN SHALL REMAIN WITHIN THE RIGHT OF WAY BUT SHALL ALSO REMAIN BEHIND THE CURB AND NOT WITHIN THE PAVING AREAS.

GENERAL DESIGN STANDARDS
WATER DETAILS

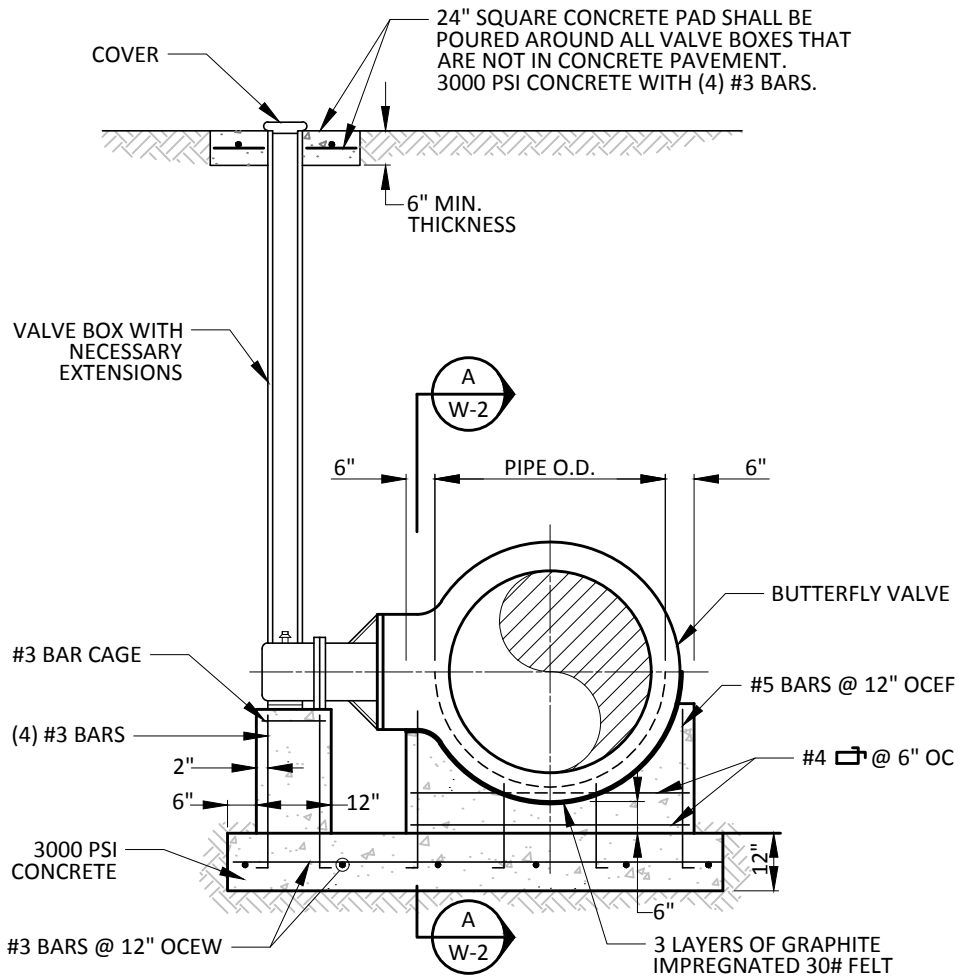
SCALE: NTS DATE: 01/2016
SHEET 1 OF 2

TYPICAL BUTTERFLY VALVE DETAILS

W-2

ENGINEERING
DEPARTMENT





NOTE:

A PERMANENTLY ATTACHED VALVE EXTENSION STEM SHALL BE REQUIRED FOR ANY VALVE WHERE THE OPERATOR NUT IS LOCATED IN EXCESS OF 48" BELOW FINISHED GRADE. THIS EXTENSION SHALL BE SUFFICIENT LENGTH TO ENSURE THAT THE OPERATOR NUT IS WITHIN 48" OF THE FINISHED GRADE.

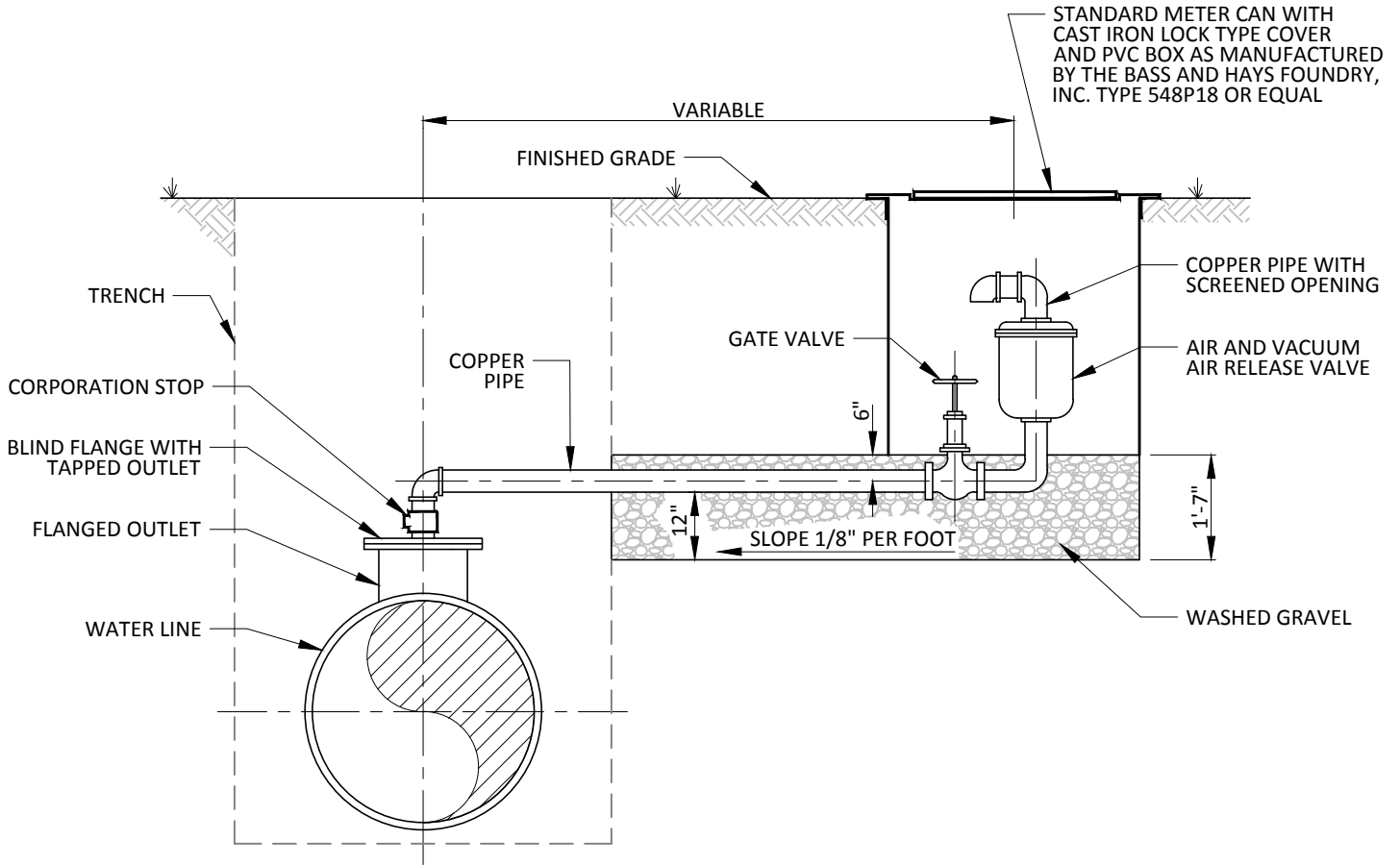
GENERAL DESIGN STANDARDS
WATER DETAILS

SCALE: NTS DATE: 01/2004
SHEET 2 OF 2



TYPICAL BUTTERFLY VALVE
INSTALLATION

W-2
ENGINEERING
DEPARTMENT



I.D. OF MAIN	AIR VALVE	BRASS GATE VALVE	VENT PIPE
12"-16"	1"	1"	1"
20"-26"	2"	2"	2"

NOTES:

1. PIPING AND FITTINGS FOR AIR AND VACUUM-AIR RELEASE VALVES SHALL BE 2" DIA. TYPE "K" SOFT COPPER WITH FLARED CONNECTIONS OR THREADED BRASS PIPE AND FITTINGS.
2. USE COMBINATION AIR AND VACUUM-AIR RELEASE VALVE APCO OR CLA-VAL OR APPROVED EQUAL.

**GENERAL DESIGN STANDARDS
WATER DETAILS**

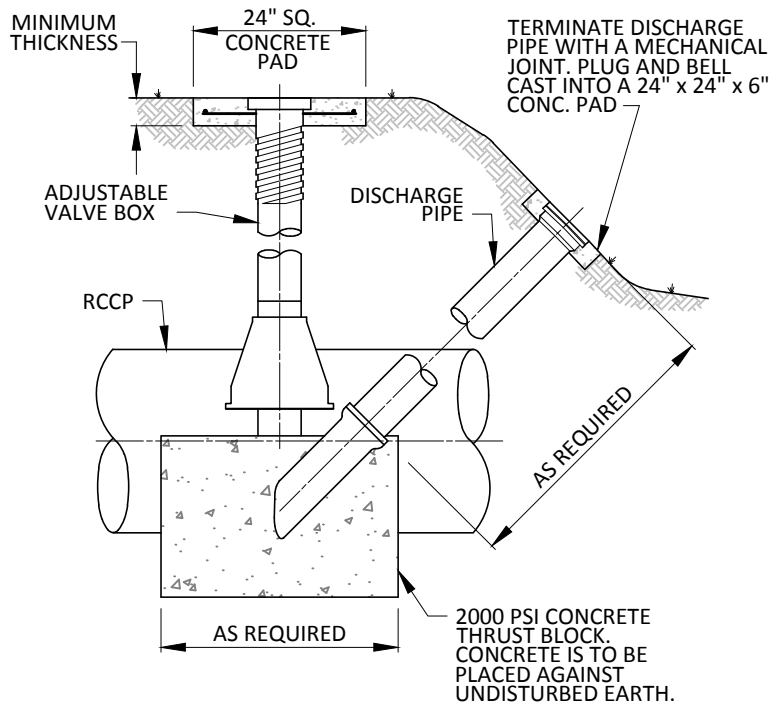
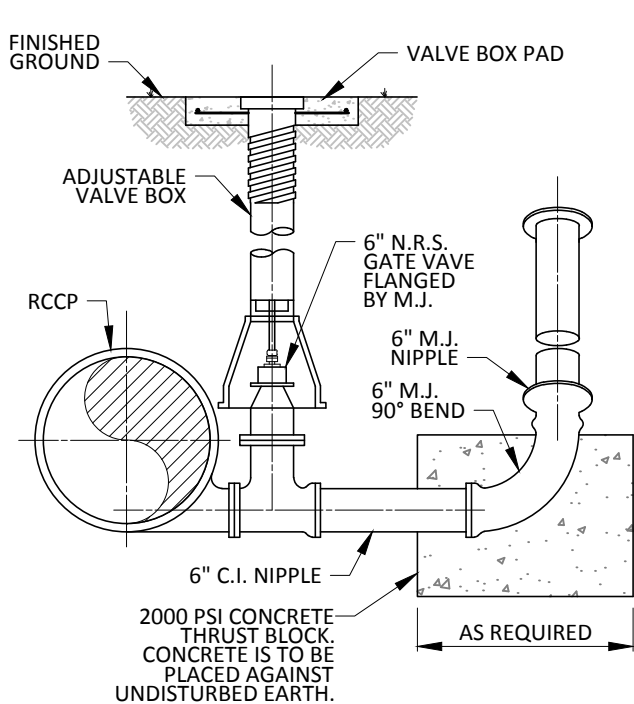
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SHEET 1 OF 1

**AIR AND VACUUM RELEASE
VALVE ASSEMBLY**

W-3

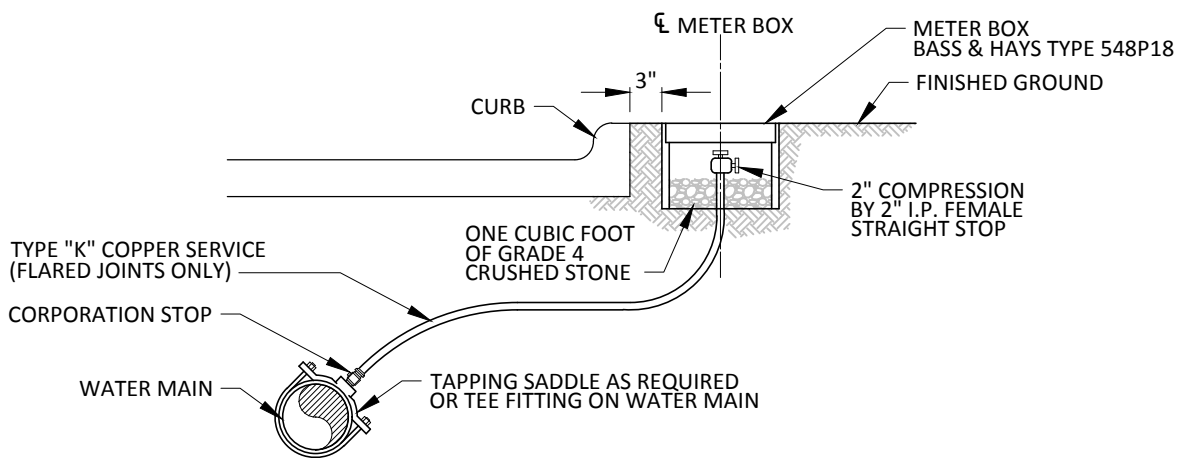
ENGINEERING
DEPARTMENT





NOTE:
 A PERMANENTLY ATTACHED VALVE EXTENSION STEM SHALL BE REQUIRED FOR ANY VALVE WHERE THE OPERATOR NUT IS LOCATED IN EXCESS OF 48 INCHES BELOW FINISH GRADE. THIS EXTENSION SHALL BE OF SUFFICIENT LENGTH TO INSURE THAT THE OPERATOR NUT IS WITHIN 48 INCHES OF THE FINISH GRADE.

BLOW OFF VALVE DETAILS FOR RCCP WATER PIPE



BLOW OFF ASSEMBLY FOR SMALLER WATER PIPE

GENERAL DESIGN STANDARDS WATER DETAILS

SCALE: NTS DATE: 01/2004
 SHEET 1 OF 1

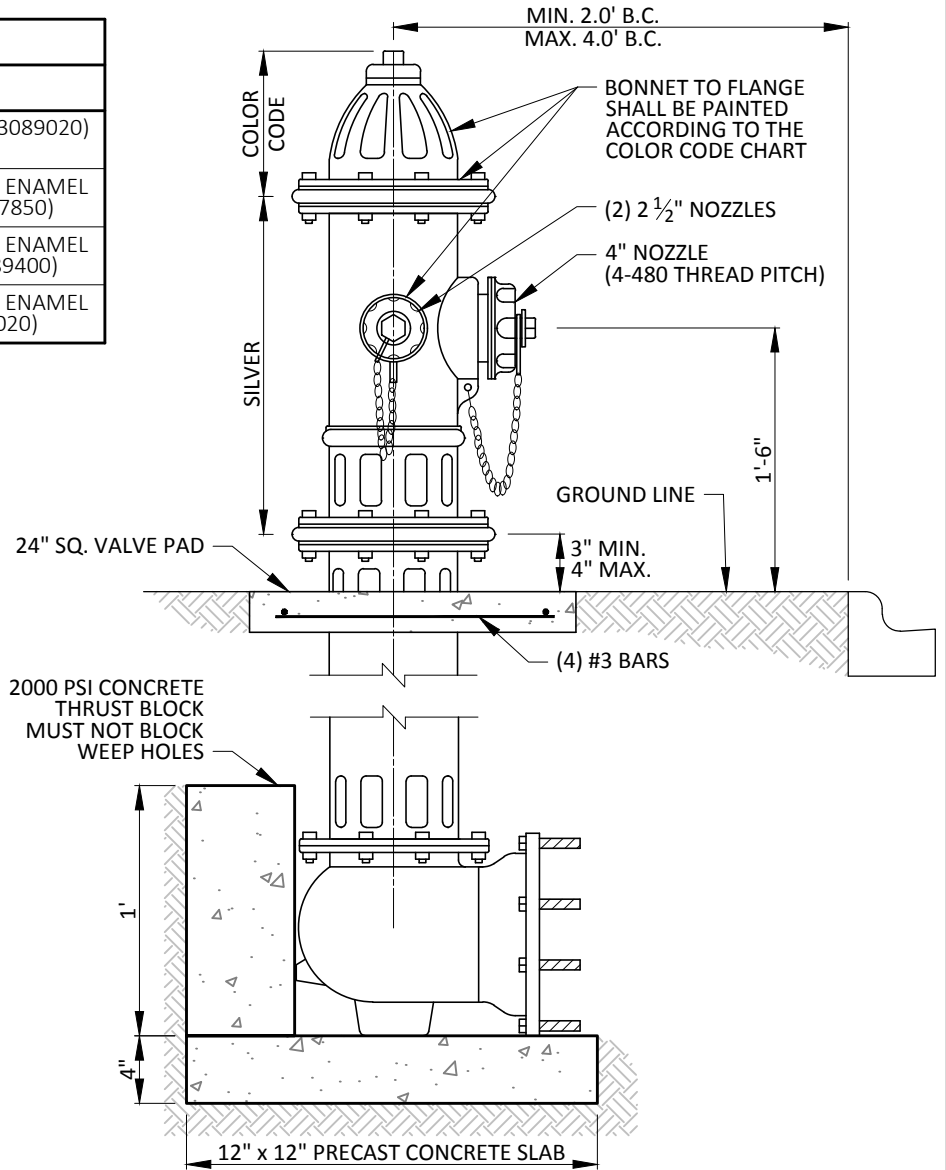


BLOW OFF VALVE DETAILS

W-4

ENGINEERING
 DEPARTMENT

COLOR CODE CHART	
ITEM	COLOR
6" MAINS	ICI "DEVOE" ALUMINUM (No. 43089020)
8" MAINS	ICI "DEVOE" ALKYD INDUSTRIAL ENAMEL "IMPERIAL BLUE" (No. 43087850)
12" AND OVER MAINS	ICI "DEVOE" ALKYD INDUSTRIAL ENAMEL "SAFETY YELLOW" (No. 43089400)
BASE & NOZZLE CAPS	ICI "DEVOE" ALKYD INDUSTRIAL ENAMEL "ALUMINUM" (No. 43089020)



NOTES:

1. ALL ANCHOR FITTINGS ARE TO BE CONCRETE THRUST BLOCKED. ALL DUCTILE AND/OR CAST IRON FITTINGS (SEE PIPE AND FITTINGS SPECIFICATIONS) ARE TO BE WRAPPED WITH POLYWRAP. SEE GENERAL SPECIFICATIONS FOR DETAILS.
2. ALL HYDRANTS SHALL BE EQUIPPED WITH A BREAKAWAY FLANGE AND SHALL BE APPROVED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
3. INSTALL APPROXIMATELY 2 CUBIC FEET OF WASHED GRAVEL AROUND BASE OF FIRE HYDRANT FOR DRAIN FILL.
4. OPERATING NUT SHALL BE 1 1/4".
5. APPROVED MODELS: CLOW (MEDALLION), MUELLER (CENTURION), AND WATEROUS (PACER).

TYPICAL FIRE HYDRANT INSTALLATION

NOTE:
 CITY OF CARROLLTON FIRE MARSHALL SHALL ASSIGN A WATER DEPARTMENT REFERENCE NUMBER FOR EACH NEW FIRE HYDRANT. THE SUBMITTING ENGINEER SHALL PLACE THIS REFERENCE NUMBER ON THE "FINAL APPROVAL" DRAWINGS BEFORE CONSTRUCTION CAN BEGIN. ON DRAWING SUBMITTALS WHERE EXISTING FIRE HYDRANTS ARE SHOWN ON EXISTING SUBDIVISIONS FOR STREETS, WATER MAIN, SEWER REHABILITATION OR STREET RELOCATIONS, A WATER DEPARTMENT REFERENCE NUMBER SHALL BE OBTAINED FROM THE CITY OF CARROLLTON ENGINEERING DEPARTMENT. CONTRACTORS ARE RESPONSIBLE FOR RELOCATING FIRE HYDRANT TAGS ON EXISTING HYDRANTS THAT ARE MOVED OR REPLACED.

**GENERAL DESIGN STANDARDS
 WATER DETAILS**

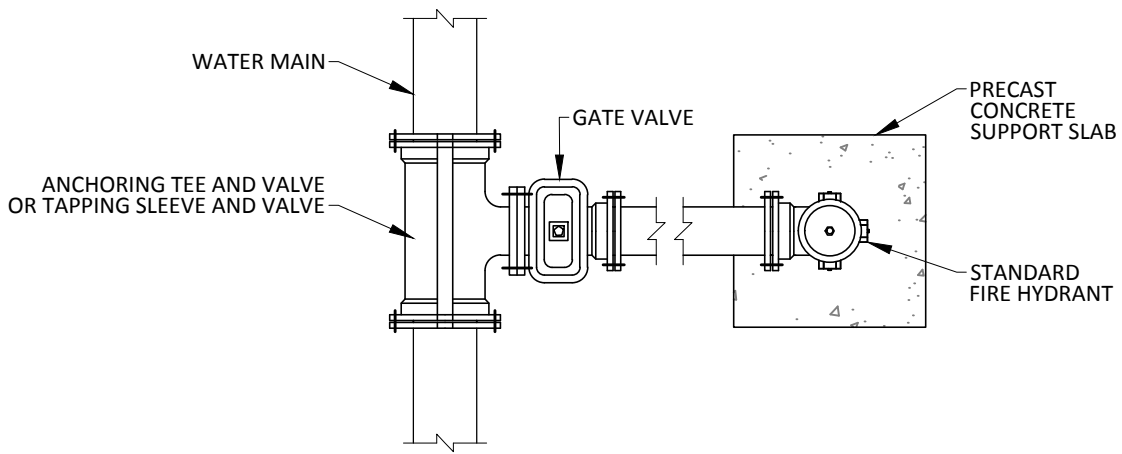
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 SHEET 1 OF 4

**TYPICAL FIRE HYDRANT
 INSTALLATION DETAIL**

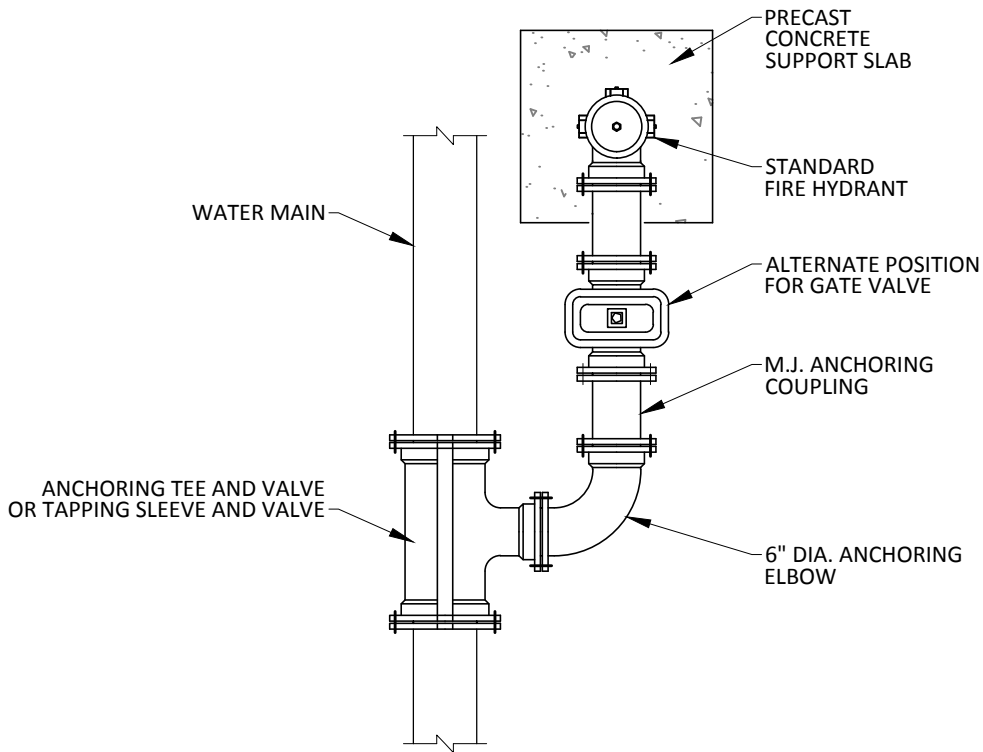


W-5
 ENGINEERING
 DEPARTMENT

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STANDARD INSTALLATION



ALTERNATE INSTALLATION

NOTE:

MEGALUGS SHALL BE USED AT ALL TEES AND BENDS.

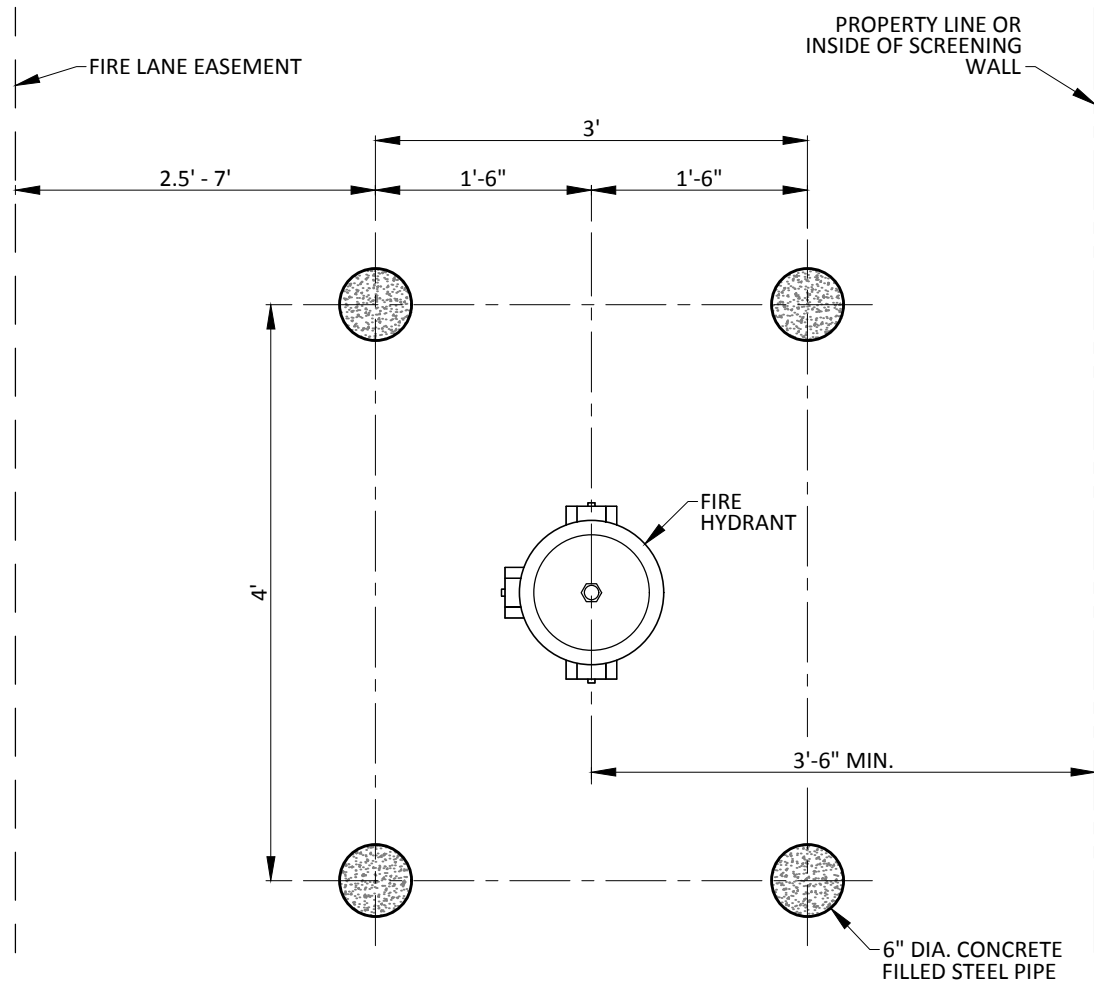
**GENERAL DESIGN STANDARDS
WATER DETAILS**

SCALE: NTS DATE: 01/2004
SHEET 2 OF 4



TYPICAL FIRE HYDRANT INSTALLATION

W-5
ENGINEERING
DEPARTMENT



NOTES:

1. GUARD POST TO BE 6" DIA. CONCRETE FILLED STEEL PIPE. 6' LENGTH (3' ABOVE PAVING, 3' BELOW PAVING) CASED IN 16" DIA. PIER AT A DEPTH OF 1'. BELOW BOTTOM OF PIPE USE (2) #6 x 12" THRU PIPE INTO CONCRETE PIER. PIPES TO BE PAINTED SAME AS FIRE HYDRANT - ALUMINUM.
2. THIS DESIGN FOR USE ONLY WHERE CURBS CANNOT BE CONSTRUCTED.

**GENERAL DESIGN STANDARDS
WATER DETAILS**

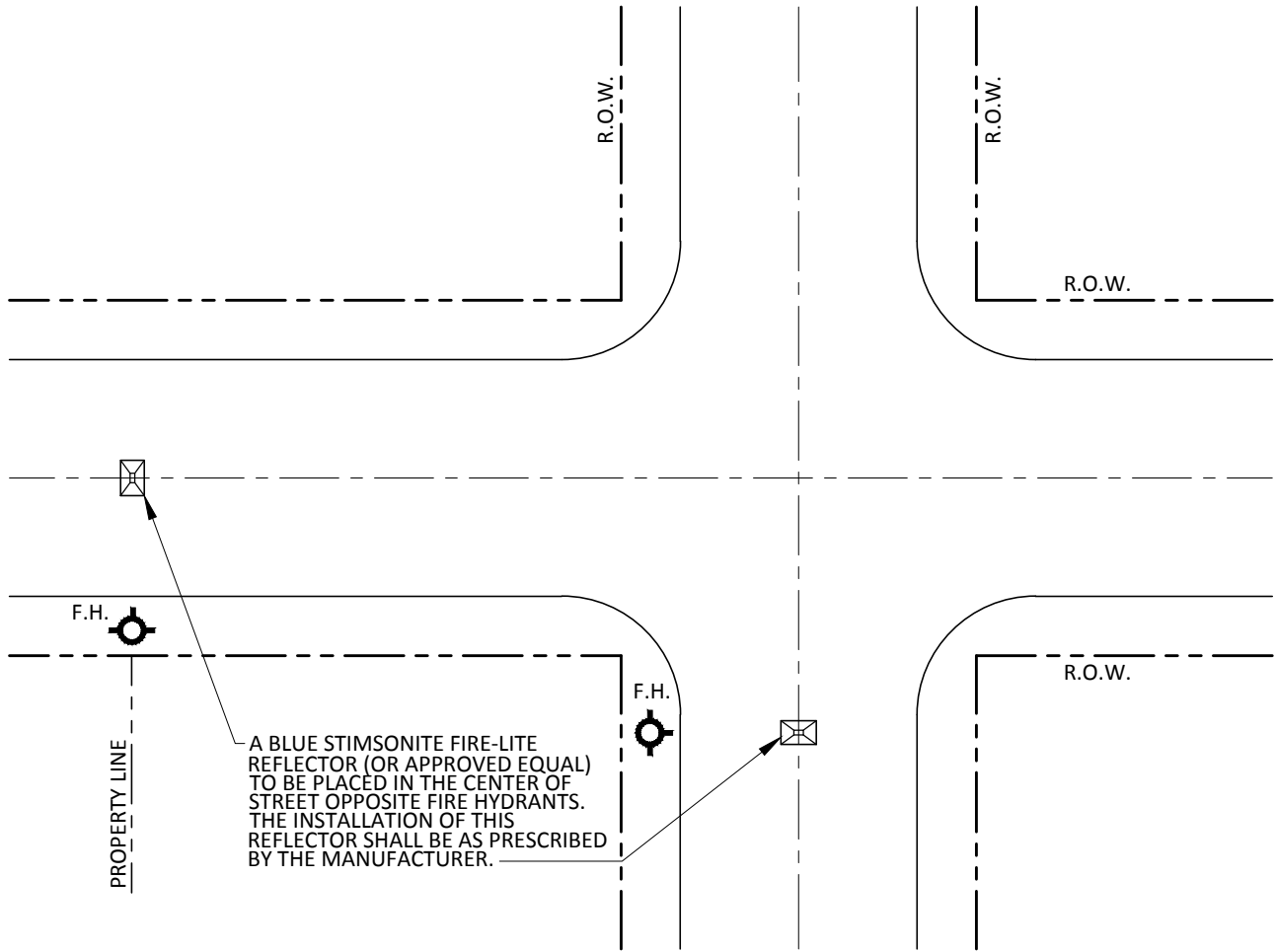
SCALE: NTS DATE: 01/2004
SHEET 3 OF 4



**FIRE HYDRANT GUARD POST
INSTALLATION**

W-5
ENGINEERING
DEPARTMENT

FILENAME: W-5_3-4.DWG



NOTES:

1. WHERE FIRE HYDRANT IS TO BE LOCATED BETWEEN STREET INTERSECTIONS FIRE HYDRANT SHALL BE PLACED AT A PROPERTY INTERSECTION (EXTENDED).
2. DO NOT PLACE FIRE HYDRANT WITHIN CURB RADIUS RETURN.

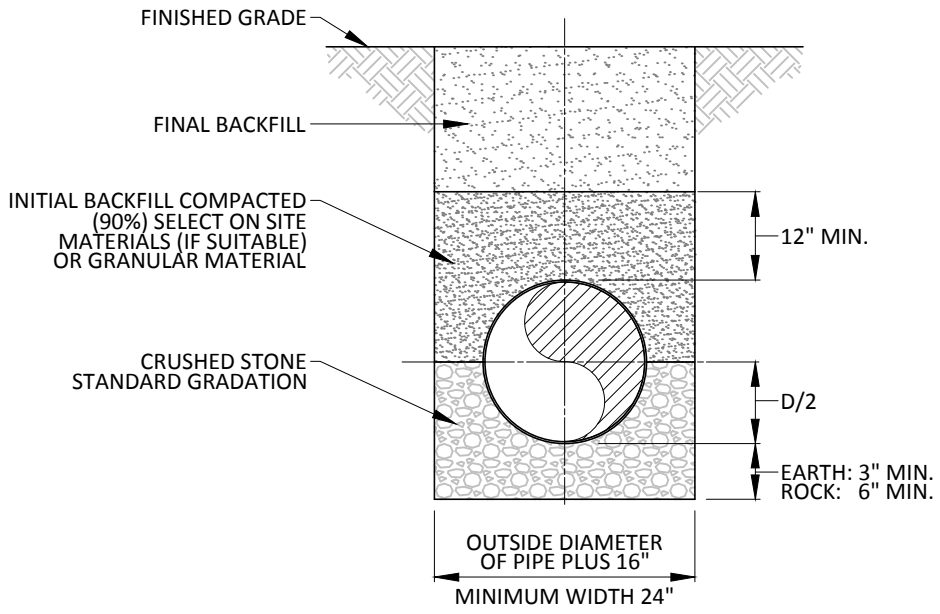
**GENERAL DESIGN STANDARDS
WATER DETAILS**

SCALE: NTS DATE: 01/2004
SHEET 4 OF 4



**FIRE HYDRANT REFLECTOR
INSTALLATION**

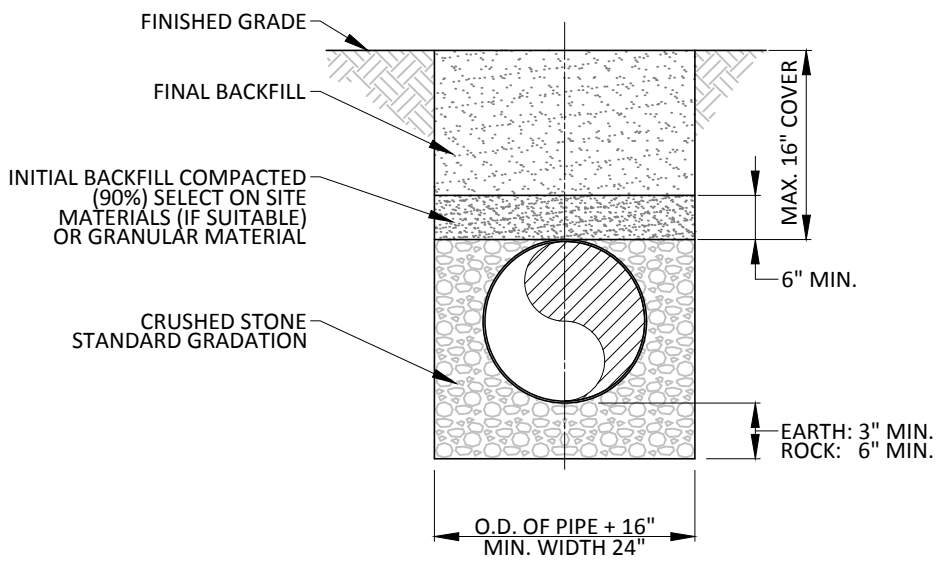
W-5
ENGINEERING
DEPARTMENT



CLASS "B" EMBEDMENT NOTES:

FOR USE IN EARTH OR ROCK EXCAVATION TO 8' DEPTH USING 18" DIAMETER OR LARGER AWWA STANDARD C900, CLASS 200 (DR 14) PVC PIPE OR CLASS 51 DUCTILE IRON PIPE.

CLASS "B" EMBEDMENT



CLASS "C" EMBEDMENT NOTES:

FOR USE IN EARTH OVER 8' DEPTH UP TO A MAXIMUM OF 16' DEPTH OR IN ROCK EXCAVATION USING 16" DIAMETER OR SMALLER AWWA STANDARD C900, CLASS 200 (DR 14) PVC PIPE OR CLASS 51 DUCTILE IRON PIPE.

CLASS "C" EMBEDMENT

STANDARD CRUSHED STONE EMBEDMENT GRADATION	
RETAINED ON SIEVE	PERCENT BY WEIGHT
RETAINED ON 1 1/2" SIEVE	0%
RETAINED ON 1" SIEVE	0 TO 5%
RETAINED ON 1/2" SIEVE	40 TO 75%
RETAINED ON #4 SIEVE	90 TO 100%
RETAINED ON #8 SIEVE	95 TO 100%

- NOTES:**
- FOR THE DEFINITION OF THE BACKFILL MATERIAL TERMS SEE N.C.T.C.O.G. SPECIFICATIONS ITEM 504.4.
 - FINAL BACKFILL SHALL CONSIST OF AND BE PLACED IN ACCORDANCE WITH THE N.C.T.C.O.G. SPECIFICATIONS ITEM 504.6.

**GENERAL DESIGN STANDARDS
WATER DETAILS**

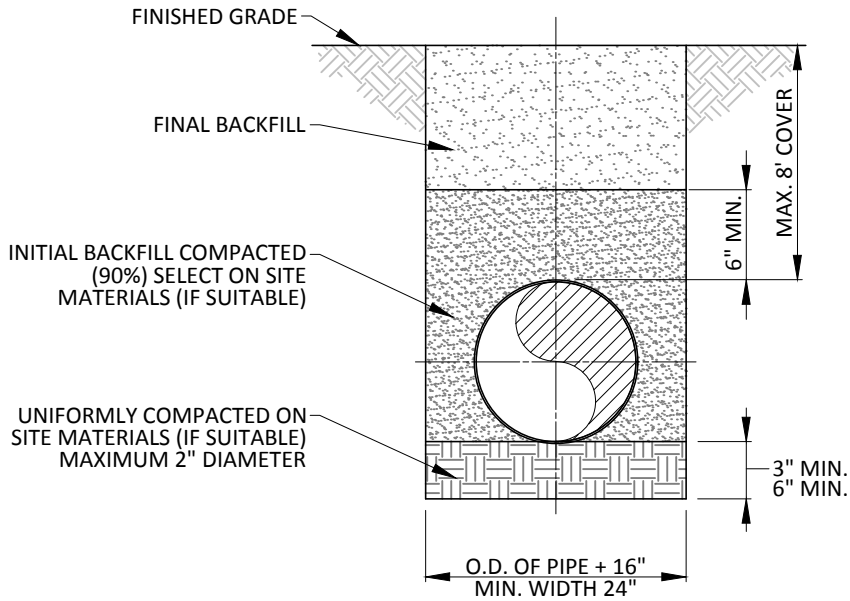
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SHEET 1 OF 3



**WATER MAIN PIPE EMBEDMENT
AND BACKFILL DETAILS
CLASS "B" & "C"**

W-6
ENGINEERING
DEPARTMENT

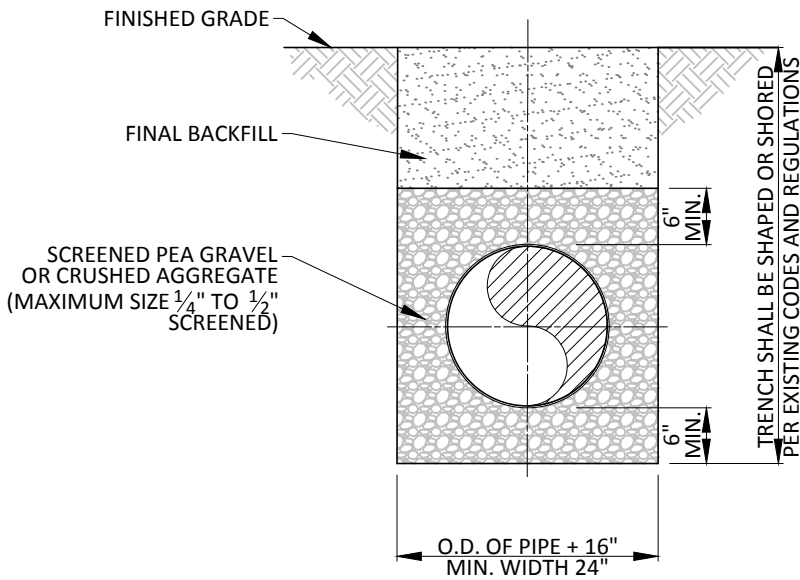
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CLASS "D+" EMBEDMENT NOTES:

FOR USE IN EARTH ONLY UP TO A MAXIMUM OF 8' DEPTH (NO ROCK) USING 16" DIAMETER AND SMALLER CLASS 51 DUCTILE IRON PIPE.

CLASS "D+" EMBEDMENT



R.C.C.P. TYPE PIPE EMBEDMENT

NOTES:

1. FOR THE DEFINITION OF THE BACKFILL MATERIAL TERMS SEE N.C.T.C.O.G. SPECIFICATIONS ITEM 504.4.
2. FINAL BACKFILL SHALL CONSIST OF AND BE PLACED IN ACCORDANCE WITH THE N.C.T.C.O.G. SPECIFICATIONS ITEM 504.6.

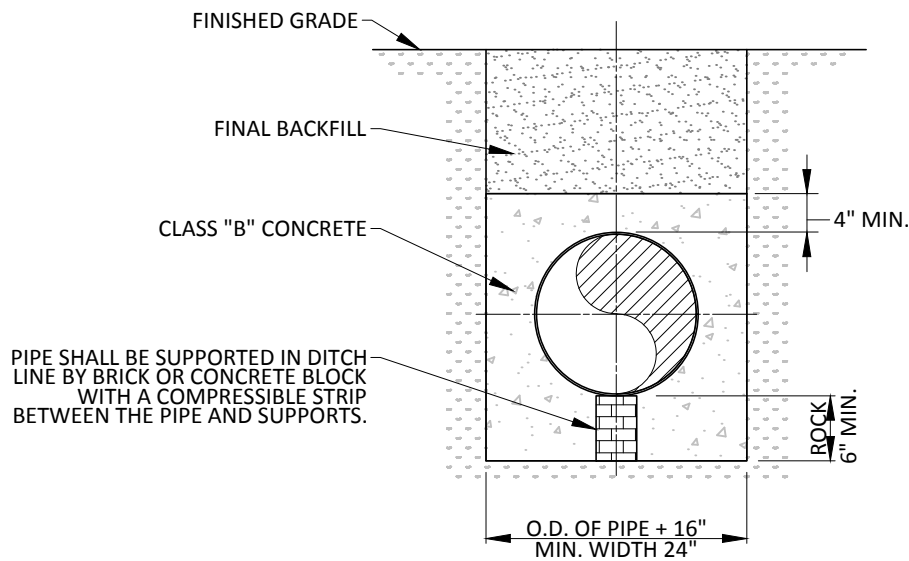
**GENERAL DESIGN STANDARDS
WATER DETAILS**

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SHEET 2 OF 3

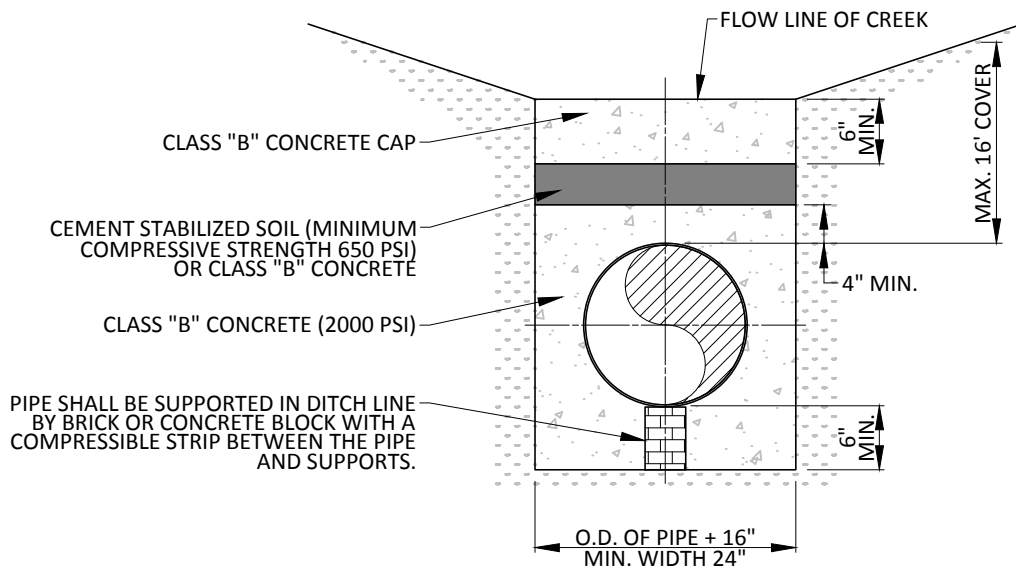


WATER MAIN PIPE EMBEDMENT
AND BACKFILL DETAILS
CLASS "D+" & R.C.C.P. TYPE PIPE

W-6
ENGINEERING
DEPARTMENT



CLASS "G" EMBEDMENT



CLASS "G-1" EMBEDMENT NOTES:
FOR USE IN ROCK DITCHES WHEN CROSSING A CREEK BED.

CLASS "G-1" EMBEDMENT

NOTES:

1. FOR THE DEFINITION OF THE BACKFILL MATERIAL TERMS SEE N.C.T.C.O.G. SPECIFICATIONS ITEM 504.4.
2. FINAL BACKFILL SHALL CONSIST OF AND BE PLACED IN ACCORDANCE WITH THE N.C.T.C.O.G. SPECIFICATIONS ITEM 504.6.

**GENERAL DESIGN STANDARDS
WATER DETAILS**

SCALE: NTS DATE: 01/2004
SHEET 3 OF 3

**WATER MAIN PIPE EMBEDMENT
AND BACKFILL DETAILS
CLASS "G" & "G-1"**

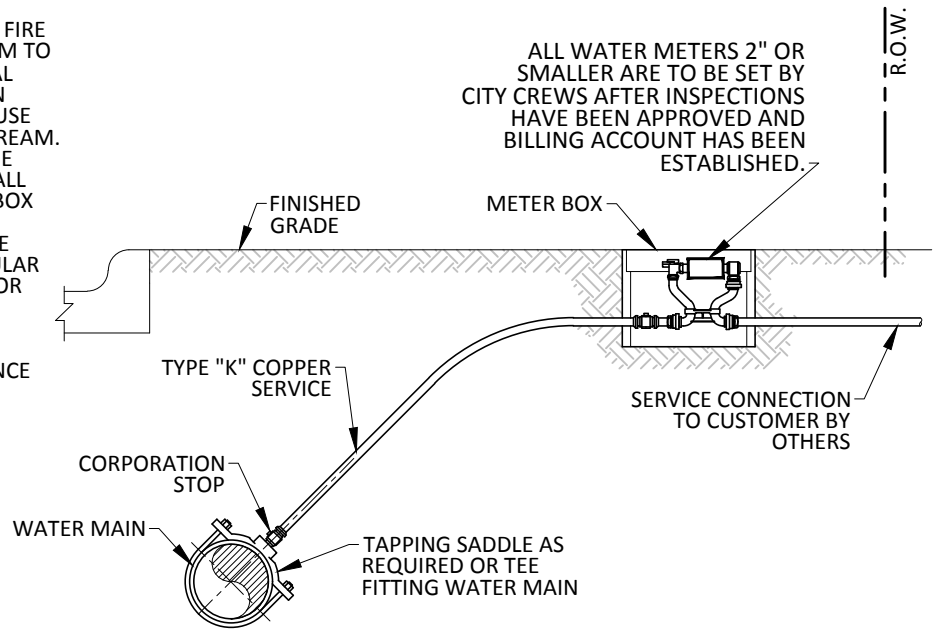
W-6

ENGINEERING
DEPARTMENT

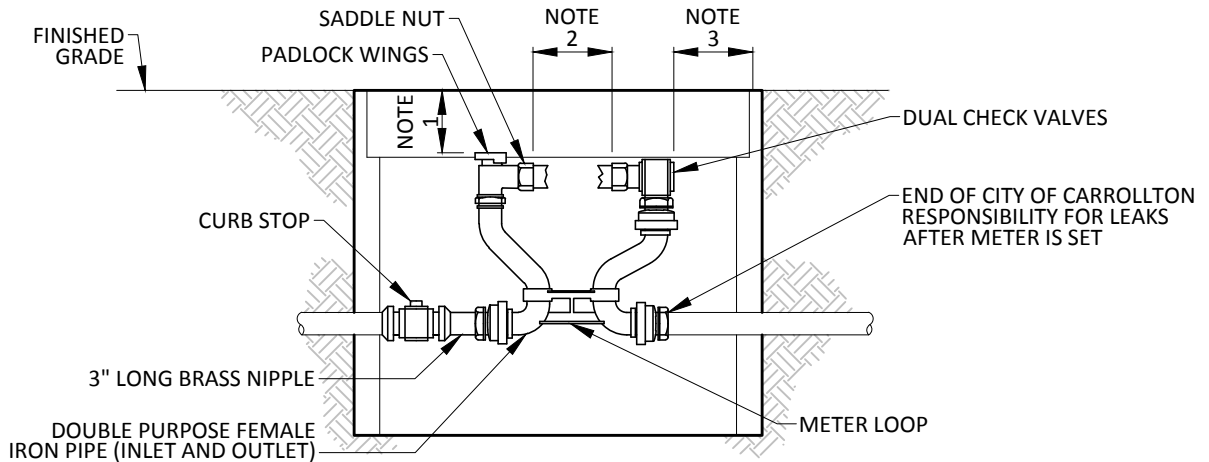


INSTALLATION NOTES:

1. WATER SERVICES SHALL NOT BE CONNECTED TO FIRE HYDRANT LINES. ALL MATERIALS SHALL CONFORM TO THE STANDARD SPECIFICATIONS AND/OR SPECIAL PROVISIONS. WATER METER SHALL BE PLACED IN CENTER OF LOT WITH THE SANITARY SEWER HOUSE CONNECTION TO BE LOCATED 10 FEET DOWNSTREAM. ALL TAPS SHALL BE MADE AT A 45° ANGLE TO THE CENTERLINE OF THE PIPE. THE CONTRACTOR SHALL SET THE METER BOX IN ALL CASES. THE METER BOX SHALL BE SET WITHIN THE RIGHT-OF-WAY OR A DEDICATED UTILITY EASEMENT. IN ALL CASES THE METER BOX SHALL BE PROTECTED FROM VEHICULAR TRAFFIC. SEE WATER IMPROVEMENT SECTION FOR METER ASSEMBLY APPROVED MATERIAL LIST.
2. ANY WATER SERVICE INSTALLED UNDER STREET PAVEMENT SHALL HAVE MINIMUM 24" CLEARANCE UNDER THE PAVEMENT.



TYPICAL SERVICE CONNECTION



METER BOX DETAIL

NOTES:

1. FINAL CLEARANCE BETWEEN METER BOX LID OPENING TO SERVICE LOOP PADLOCK WINGS IS 6" MIN., 9" MAX.
2. TEMPORARY WATER LOOP JUMPER SIZES: 1" LOOP JUMPER (MIN. 10 3/4", MAX. 11").
3. METER LOOPS SHALL BE CENTERED IN METER BOXES.
4. METER BOX SHALL BE P548P-18D AS MANUFACTURED BY EAST JORDAN IRON WORKS.
5. METER BOX SHALL BE LOCATED OUT OF ALL FLATWORK, SIDEWALKS AND APPROACHES. EXCEPTION: WHERE APPROVED BY THE BUILDING OFFICIAL, A WATER METER SERVICE MAY BE LOCATED IN A TRAFFIC RATED AREA USING A TRAFFIC RATED METER BOX WITH 62 SERIES DUCTILE IRON LID & RINGS.
6. 90° BENDS OR ANGLE STOPS MAY NOT BE INSTALLED IN SERVICES.
7. ALL SERVICES SHALL BE A CONTINUOUS PIECE OF COPPER UNLESS APPROVED BY PUBLIC WORKS.

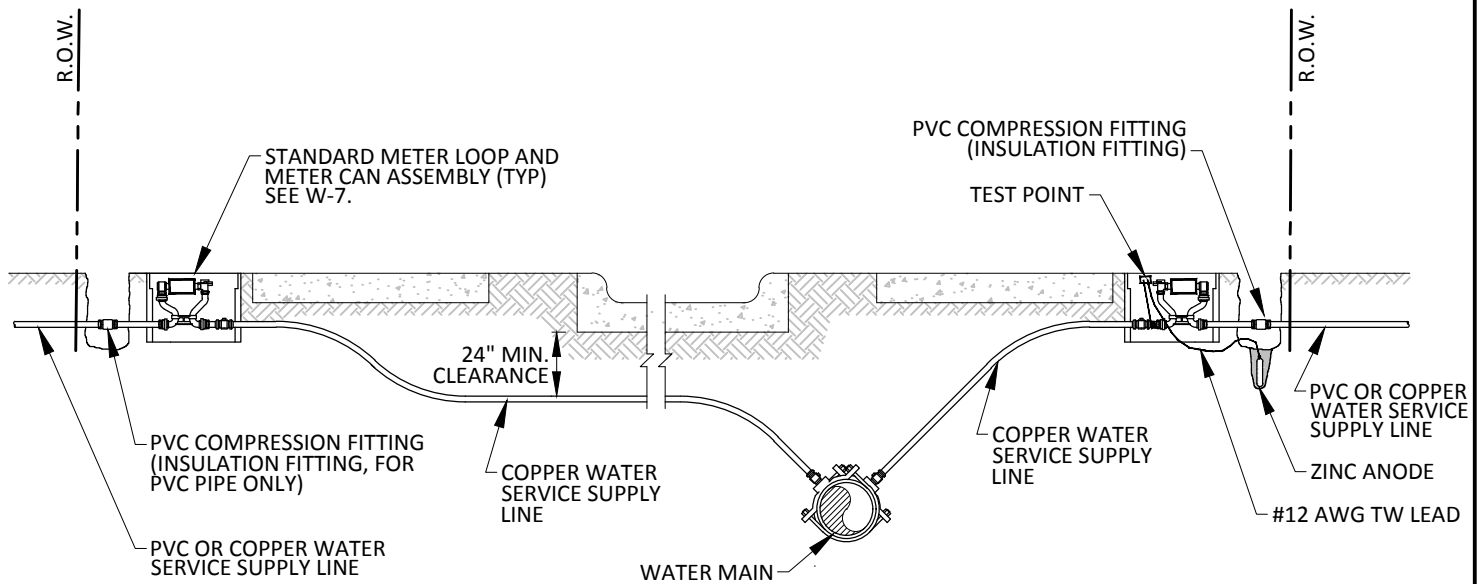
**GENERAL DESIGN STANDARDS
WATER DETAILS**

SCALE: NTS DATE: 01/2007
SHEET 1 OF 1

**COPPER SERVICE CONNECTION
WITH METER BOX DETAILS**



W-7
ENGINEERING
DEPARTMENT



INSTALLATION NOTES:

THE CONNECTION TO THE 3" LONG BRASS PIPE NIPPLE SHALL BE MADE IN THE FOLLOWING MANNER:

1. USE A MINIMUM OF 4 WRAPS OF THE #12 AWG TW LEAD WIRE (PREPARED FOR SOLDERING).
2. CONNECTION IS TO BE REINFORCED BY THE USE OF A SCREW TYPE HOSE CLAMP WITH A STAINLESS STEEL BAND.
3. AFTER THE APPLICATION OF FLUXING COMPOUND, THE CLAMP ASSEMBLY IS TO BE COMPLETELY COVERED WITH A FLAME MELTED COAT OF SOLDER.
4. WHEN THE SOLDER HAS COOLED, THE ENTIRE CLAMP/LEAD ASSEMBLY (CONNECTION) SHALL BE COATED WITH A LAYER OF "ROYSTON ROSKOTE MASTIC R28 RUBBERIZED" MASTIC OR APPROVED EQUAL.

PVC WATER SUPPLY LINE

1. THE CONNECTION OF THE TEST WIRES AT THE TEST POINT SHALL BE BY THE USE OF A 8X10-8 SCREW TYPE ELECTRICAL CONNECTOR FOR 8-10 STRAND WIRE AS MANUFACTURED BY THE ILSCO COMPANY OR EQUAL.

COPPER WATER SUPPLY LINE

1. A PVC COMPRESSION COUPLING FITTING AS MANUFACTURED BY THE FLO CONTROL, INC., COMPANY (FITTING SERIES 210) OR EQUAL CONNECTOR SHALL BE USED AS AN INSULATING FITTING. A MINIMUM GAP OF 1/4" SHALL BE LEFT BETWEEN THE ENDS OF THE COPPER WATER SERVICE SUPPLY PIPE (WITHIN THE COMPRESSION FITTING). THE CONNECTION OF THE TEST WIRES AT THE TEST POINT SHALL BE MADE BY THE USE OF A 8X10-8 SCREW TYPE ELECTRICAL CONNECTOR FOR SIZE 8 TO 10 STRANDED WIRE. THE ELECTRICAL CONNECTOR SHALL BE AS MANUFACTURED BY THE ILSCO COMPANY, OR EQUAL.

DESIGN NOTE:

ALL NEW WATER MAIN SYSTEMS COMPOSED OF DUCTILE IRON PIPES MUST BE ACCOMPANIED BY A CATHODIC PROTECTION DESIGN PERFORMED BY A TEXAS REGISTERED PROFESSIONAL ENGINEER. (THE USE OF DUCTILE IRON PIPE MUST BE APPROVED BY THE CITY.)

**GENERAL DESIGN STANDARDS
WATER DETAILS**

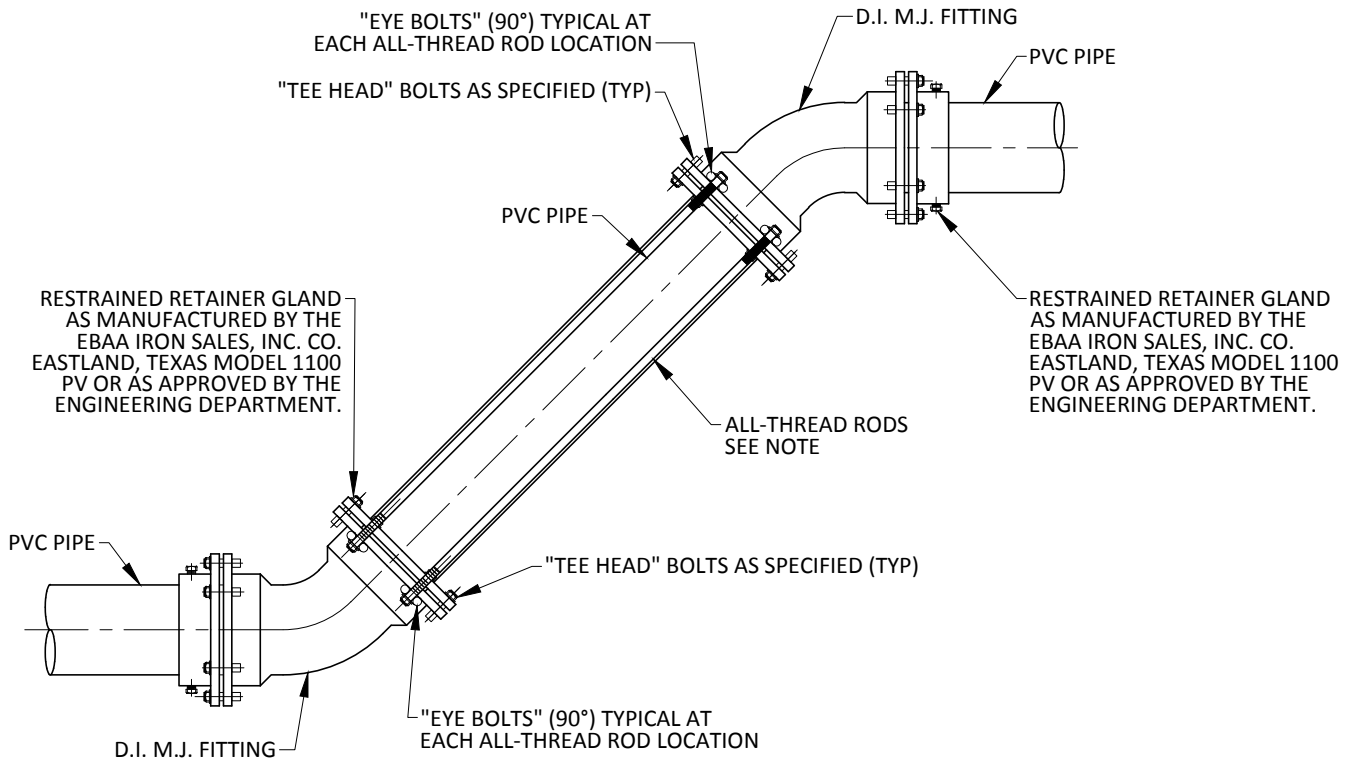
SCALE: NTS DATE: 01/2004
SHEET 1 OF 1



CATHODIC PROTECTION DETAILS

W-8

ENGINEERING
DEPARTMENT



**STANDARD THRUST HARNESS DETAIL
HORIZONTAL AND/OR VERTICAL OFFSETS**

NOTE:

SEE GENERAL DESIGN STANDARDS SECTION 4, PAGE 4-1 FOR REQUIRED METALLURGICAL SPECIFICATIONS FOR ALL BOLTS, NUTS, WASHERS, AND ALL-THREAD RODS. ALSO SEE PAGE 4-1 FOR REQUIRED COATINGS AND COVERINGS FOR FITTINGS.

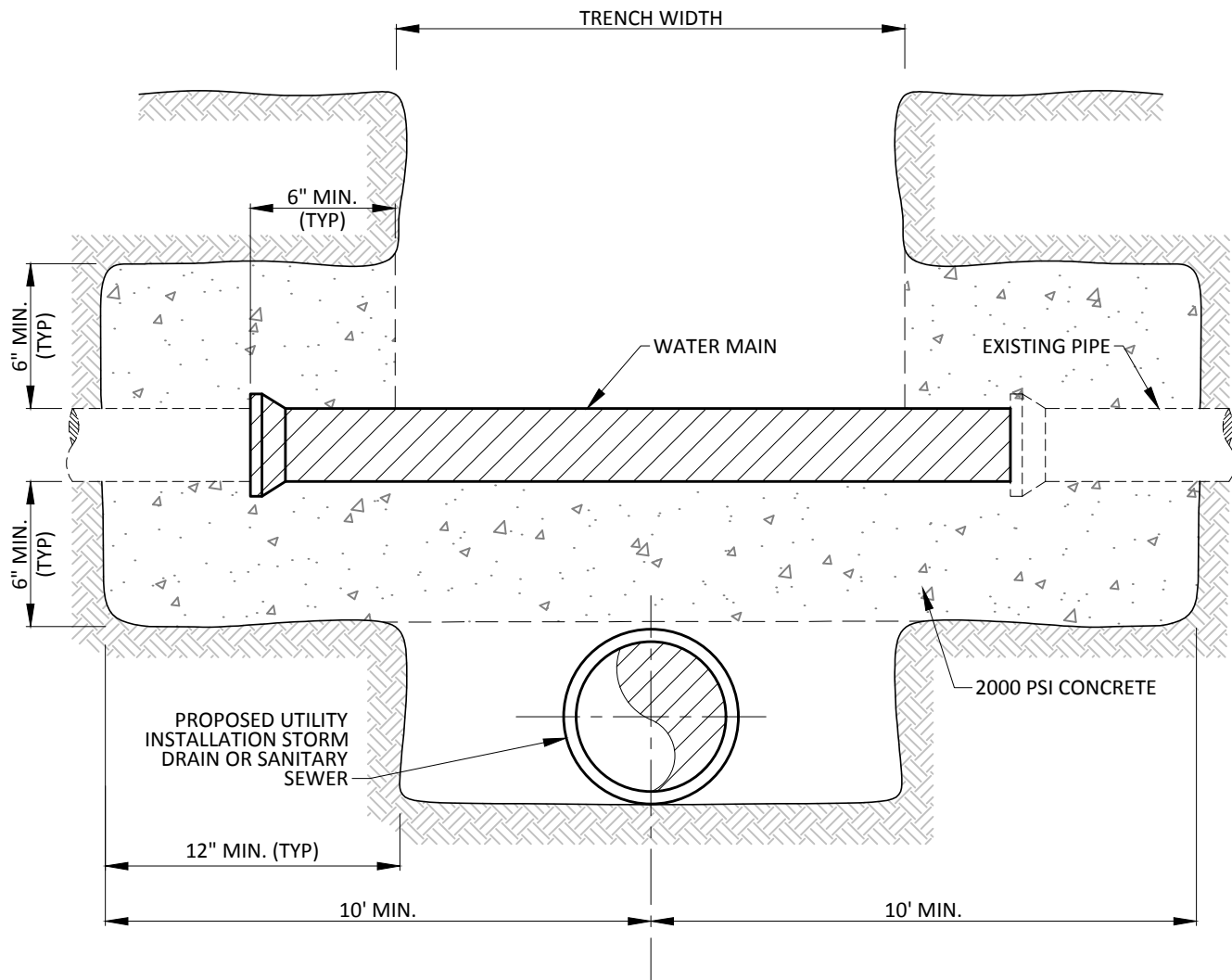
**GENERAL DESIGN STANDARDS
WATER DETAILS**

SCALE: NTS DATE: 01/2004
SHEET 1 OF 1



**OFFSET AND/OR LOWERING OF WATER
MAIN THRUST HARNESS DETAIL**

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ENGINEERING
DEPARTMENT



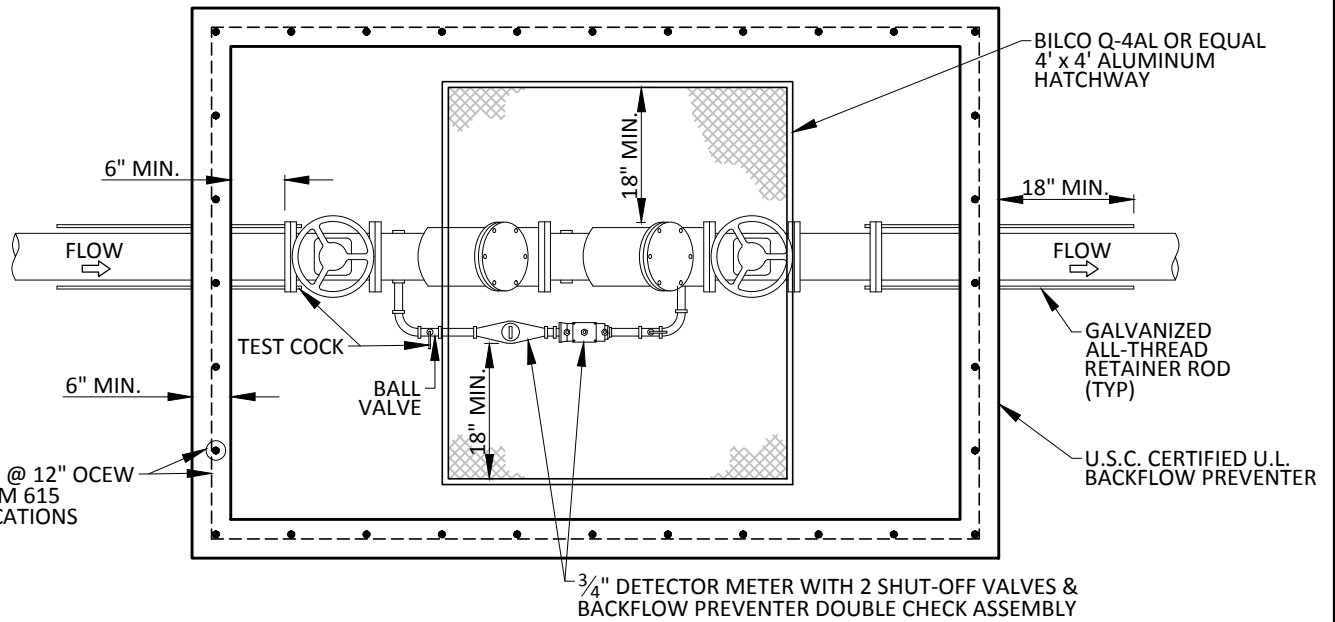
**GENERAL DESIGN STANDARDS
WATER DETAILS**

SCALE: NTS DATE: 01/2006
SHEET 1 OF 1



CROSSING UTILITY PIPE SUPPORT

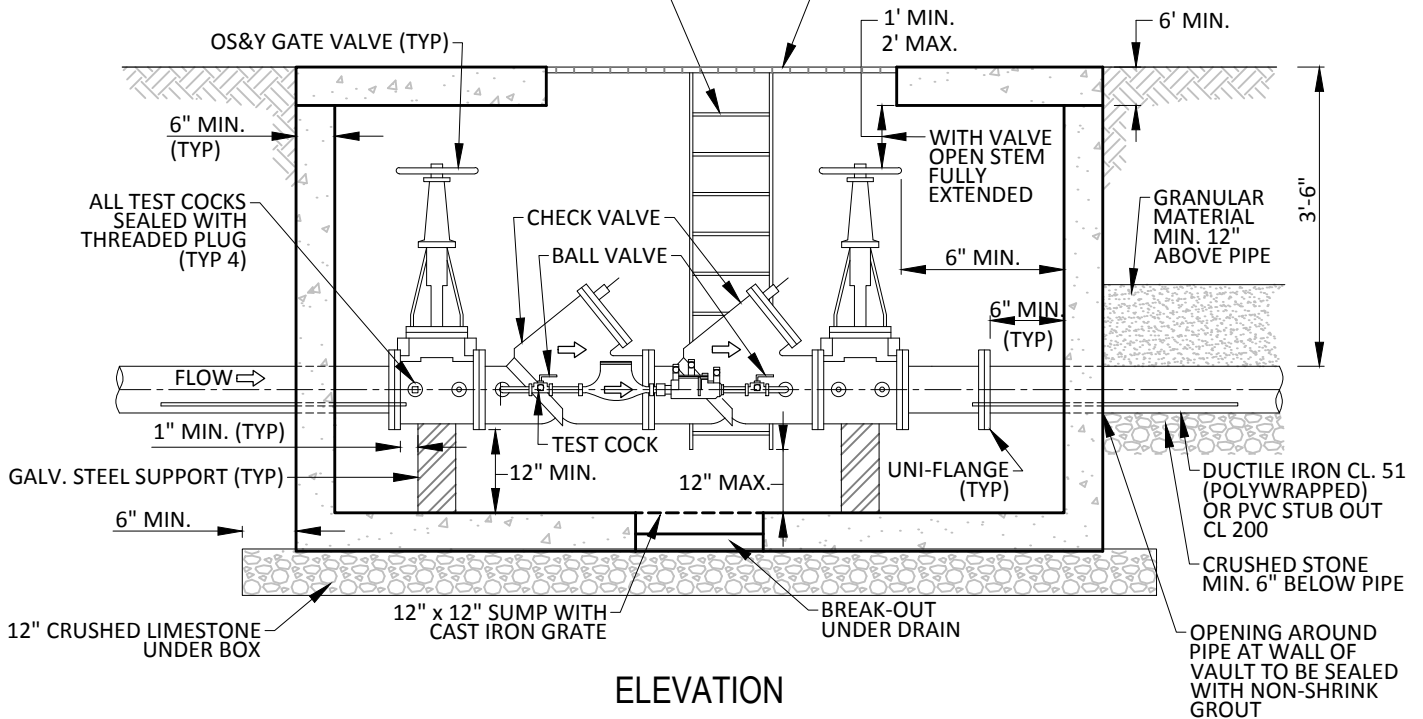
W-10
ENGINEERING
DEPARTMENT



PLAN VIEW

ACCESS LADDER SHALL BE CONSTRUCTED OF 1/2" x 2 1/2" BAR SIDE RAILS WITH 1" DIA. STEEL RUNGS @ 12" OC. ALL MEMBERS SHALL BE WELDED WITH LADDER TO BE HOT DIPPED GALV. AFTER FABRICATION. BOLT LADDER TO VAULT WALL AND INSERT ANCHORS.

MIN. 4' x 4" OPENING WITH 1/4" THICK ALUMINUM (NON-SKID) PLATE DOOR WHOSE FRAME IS RIGIDLY AFFIXED TO THE CONCRETE DECK. A HANDLE WITH A LOCKABLE DEVICE IS REQUIRED (BILDO DOORS OR EQUAL)



ELEVATION

NOTE:

FOR METER VAULT INSTALLATION NOTES, SEE W-11, SHEET 2 OF 4.

GENERAL DESIGN STANDARDS
WATER DETAILS

SCALE: NTS DATE: 01/2014
SHEET 1 OF 4

METER VAULT INSTALLATION

W-11
ENGINEERING
DEPARTMENT



NOTES:

1. ALL FITTINGS WITHIN THE CITY R.O.W. AND/OR THE UTILITY EASEMENTS SHALL BE RESTRAINED WITH ANCHOR RODS (SEE WATER MAINS) OR RESTRAINING GLANDS (EBAA IRON SALES, INC. SERIES 1100 PV OR EQUAL) AT METER VAULT INSTALLATIONS WHERE PVC PIPE IS USED.
2. ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF CARROLLTON GENERAL DESIGN STANDARDS.
3. IF THE METER VAULT INSTALLATION EXCEEDS THE EASEMENT LIMITS AS INDICATED AND SHOWN ON THE CONTRACTOR'S DRAWING, ADDITIONAL EASEMENT DEDICATION WILL BE REQUIRED BEFORE METER VAULT INSTALLATION SHALL BE ACCEPTED BY THE CITY OF CARROLLTON.
4. METER VAULT SHALL CLEAR ALL EXISTING UTILITIES BY A MINIMUM OF 12".
5. THE INSTALLATION OF THE METER VAULT SHALL BE WITHIN THE R.O.W. OR WITHIN A DEDICATED UTILITY EASEMENT AS FILED AND APPROVED BY THE CITY OF CARROLLTON ENGINEERING DEPARTMENT.
6. ALL BACK FLOW ASSEMBLIES SHALL BE INSTALLED BY LICENSED PLUMBERS, IRRIGATORS, OR FIRE SPRINKLER TECHNICIANS WHO MEET THE REQUIREMENTS OF THE CITY'S CURRENT PLUMBING CODE. (ALL ASSEMBLIES MUST BE TESTED AFTER INSTALLATION BY AN APPROVED CITY REGISTERED TESTER. TEST REPORTS SHALL BE SUBMITTED TO THE WATER QUALITY/PRODUCTION OFFICE WITHIN 15 DAYS OF THE TEST).
7. PER ORDINANCE #2336 55-20 MULTIPLE CONNECTIONS: ANY PREMISES REQUIRING MULTIPLE SERVICE CONNECTIONS FOR ADEQUACY OF SUPPLY AND/OR FIRE PROTECTION WILL BE REQUIRED TO INSTALL A BACKFLOW ASSEMBLY ON EACH OF THE ADDITIONAL SERVICE LINES TO THE PREMISES. THE TYPE OF ASSEMBLY WILL BE DETERMINED BY THE DEGREE OF HAZARD THAT OCCURS IN THE EVENT OF AN INTERCONNECT BETWEEN ANY OF THE BUILDINGS ON THE PREMISES.
8. VALVES ON METER SHALL BE SECURED/LOCKED IN THE OPEN POSITION AT ALL TIMES.
9. FIRE DEPARTMENT CONNECTION SHALL BE INSTALLED PER IFC, NFPA, AND CITY STANDARDS.

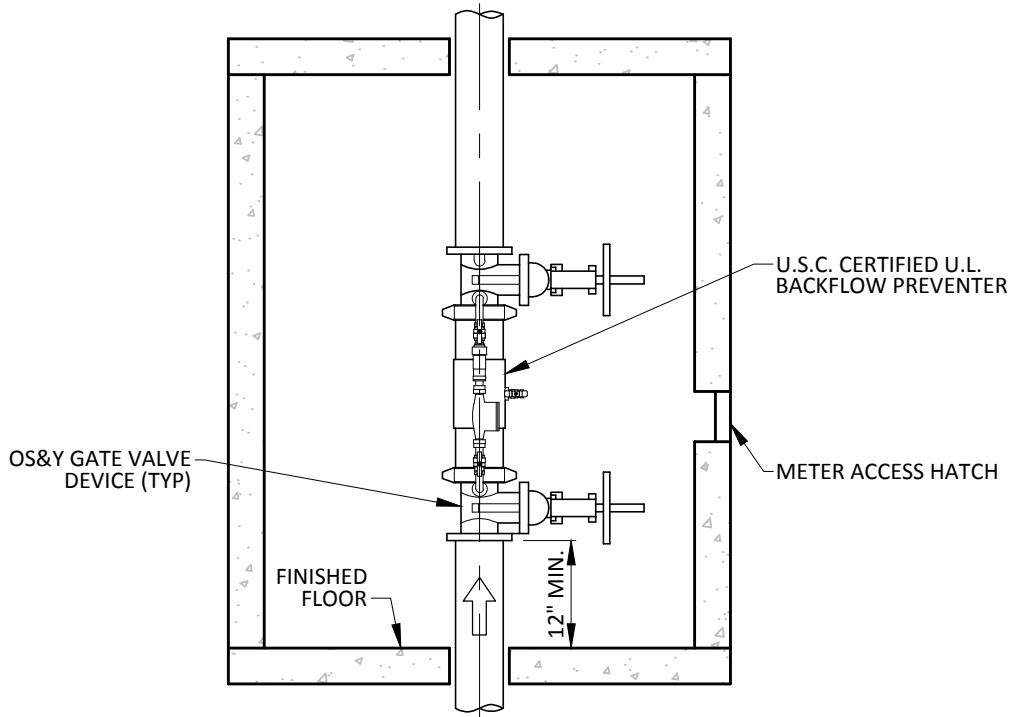
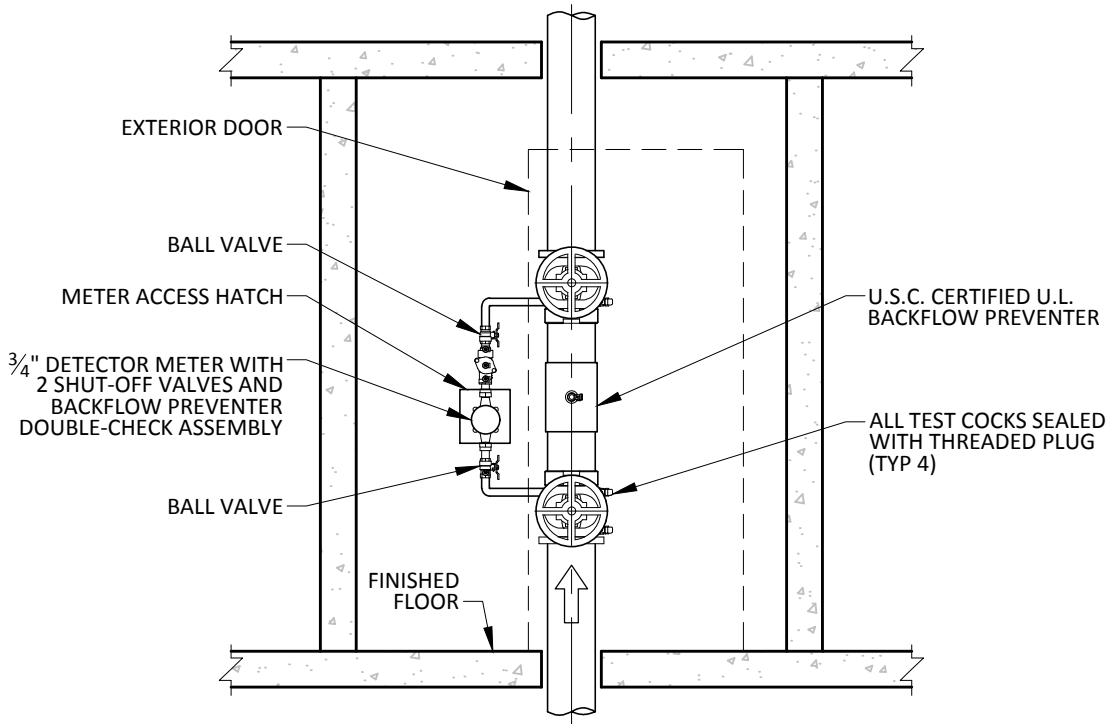
**GENERAL DESIGN STANDARDS
WATER DETAILS**

SCALE: NTS DATE: 01/2014
SHEET 2 OF 4



METER VAULT INSTALLATION NOTES

W-11
ENGINEERING
DEPARTMENT



NOTE:
FOR METER VAULT INSTALLATION NOTES, SEE W-11, SHEET 4 OF 4.

**GENERAL DESIGN STANDARDS
SEWER DETAILS**

SCALE: NTS DATE: 01/2014
SHEET 3 OF 4

**METER VAULT INSTALLATION
VERTICAL CLOSET**

W-11
ENGINEERING
DEPARTMENT



NOTES:

1. FIRE SPRINKLER RISER ROOM (FSRR) SHALL BE AT LEAST 8' x 8' IF DOUBLE DETECTOR CHECK VALVE (DDCV) ASSEMBLY IS INSIDE ROOM AND SHALL BE EVEN LARGER IF A FIRE PUMP IS ALSO INSIDE.
2. NO PART OF THE DDCV ASSEMBLY MAY IMPEDE ACCESS THROUGH REQUIRED DOOR TO FSSR.
3. DDCV SHALL BE INSTALLED PER INTERNATIONAL FIRE, BUILDING, AND PLUMBING CODES AND SHALL BE LISTED FOR VERTICAL USE. ALL ASSEMBLIES SHALL BE INSTALLED IN COMPLIANCE WITH STATE STANDARDS, PLUMBING CODES, AND CITY OF CARROLLTON ORDINANCE, CHAPTER 56.
4. DIGITAL READERS SHALL BE PLACED ON THE OUTSIDE OF RISER ROOMS AT A HEIGHT OF 4.5' TO 5.5' ABOVE THE GROUND. EXPERIENCED CONTRACTORS ARE: ACTION FIRE PROS (BRETT SMITH 214-519-3905); TEXAS SPRINKLERS (903-905-0516); AND FIRE POWER SYSTEMS (TOM GOODWIN OR STEVE COLE 972-647-8172).
5. $\frac{3}{4}$ " BYPASS METER SHALL BE WITHIN 12" OF EXTERIOR WALL AND ALIGNED WITH REQUIRED ACCESS HATCH.
6. HATCH SHALL BE BETWEEN 3' AND 5' ABOVE GRADE AND EASILY ACCESSIBLE AT ALL TIMES.
7. HATCH SHALL HAVE A CLASP FOR UTILITY CUSTOMER SERVICE (UCS) TO INSTALL THEIR PADLOCK ON IT. PRIOR TO INSTALLATION, VENDOR MUST PURCHASE LOCK FROM UTILITY CUSTOMER SERVICE. UCS WILL PROVIDE A KEY TO THE VENDOR AND RETAIN A KEY FOR CITY PURPOSES.
8. METER NUMBER STAMPED ON BLACK COVER OF METER SHALL BE GIVEN TO UTILITY BILLING AND PUBLIC WORKS.
9. VALVES ON METER SHALL BE SECURED/LOCKED IN THE OPEN POSITION AT ALL TIMES.
10. FIRE DEPARTMENT CONNECTION SHALL BE INSTALLED PER IFC, NFPA, AND CITY STANDARDS.

**GENERAL DESIGN STANDARDS
SEWER DETAILS**

SCALE: NTS DATE: 01/2014
SHEET 4 OF 4



**METER VAULT INSTALLATION
VERTICAL CLOSET NOTES**

W-11
ENGINEERING
DEPARTMENT