

### 100 Series: General Notes & Materials

<u>Detail</u>	<u>Title</u>
100-1	GENERAL NOTES
100-2	GENERAL NOTES (CONTINUED) BACKFLOW PREVENTION GENERAL NOTES & APPROVAL PROCESS NOTES
100-3	WATER (POTABLE) SYSTEM MATERIAL SPECIFICATION
100-4	SEWER SYSTEM MATERIAL SPECIFICATION
100-5	RECLAIMED WATER SYSTEM MATERIAL SPECIFICATION

### 300 Series: Water - Potable

<u>Detail</u>	<u>Title</u>
300-1	AIR GAP
310-1	0.5in-2in REDUCED PRESSURE PRINCIPLE ASSEMBLY
310-2	3in-10in REDUCED PRESSURE PRINCIPLE ASSEMBLY RPS EXCEPT F-L
310-3	0.5in-2in PRESSURE VACUUM BREAKER ASSEMBLY
320-1	1in-10in DOUBLE CHECK VALVE DETECTOR ASSEMBLY
330	REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY
335	HOT TAP & JUMPER METER CONNECTION
342	POTABLE WATER SERVICE CONNECTION (1in-2in)
345-1	POTABLE WATER METER VAULT (3in-8in)
345-2	ABOVE GROUND POTABLE WATER METER (3in-8in)
346-1	PRESSURE REDUCING VALVE (PRV) VAULT
346-2	ABOVE GROUND PRESSURE REDUCING ASSEMBLY
350-1	PIPE TRENCH DETAIL
350-2	PIPE TRENCH DETAIL FOR SERVICES
351-1	POTABLE AIR RELEASE VALVE
352-1	CASING JACK-AND-BORE DETAIL
352-2	CASING SPACER DETAIL
360-1	DRY BARREL FIRE HYDRANT INSTALLATION
360-2	WET BARREL FIRE HYDRANT INSTALLATION
370-1	VERTICAL RE-ALIGNMENT OF WATER MAIN
370-2	VERTICAL DEFLECTION OF WATER MAINS 6in-12in DIAMETER
375-1	ABOVE GROUND INTERCONNECT LAYOUT
390-1	POTABLE CURB STOP (BLOW OFF) WITH FLUSHING PIPE

### 400 Series: Sanitary Sewer

<u>Detail</u>	<u>Title</u>
400-1	DEEP CUT SEWER CONNECTION (SEWER LATERAL)
410-1	WASTEWATER AIR RELEASE VALVE (ARV) ABOVE GROUND - OFFSET FROM MAIN
410-2	WASTEWATER AIR RELEASE VALVE (ARV) ABOVE GROUND - ABOVE MAIN
410-3	WASTEWATER AIR RELEASE VALVE (ARV) LIFT STATION DISCHARGE
410-4	WASTEWATER AIR RELEASE VALVE (ARV) MANHOLE INSTALLATION - ABOVE MAIN
420	TEMPORARY MANHOLE PLUG
426-1	INSIDE DROP FORCE MAIN CONNECTION
426-2	INSIDE DROP GRAVITY SEWER CONNECTION
440	SEWER SERVICE CONNECTION
450-1	TYPICAL GRAVITY-SOLIDS INTERCEPTOR
450-2	TYPICAL HYDRO-MECHANICAL GREASE INTERCEPTOR (HGI)

### 600 Series: Water - Reclaimed

<u>Detail</u>	<u>Title</u>
600-1	RECLAIMED WATER ID TAG AND DECAL
610-1	RECLAIMED WATER SERVICE CONNECTION
630-1	RECLAIMED WATER CURB STOP (BLOW OFF) WITH FLUSHING PIPE

07/24/25 - 03:36pm

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DATE: <b>July '25</b>		5656 W Talavi Blvd Glendale, AZ 85306	<b>DETAIL SHEET INDEX</b>	DETAIL NO. <b>000</b>
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**GENERAL NOTES:**

1. Any changes from approved plans must be submitted to EPCOR for written approval prior to installation.
2. Contractor shall keep a clean, current set of contract drawings as a record of the location of all work completed as part of the project. Revisions, additions, and deletions shall be annotated on the record set of drawings in Red. Contractor shall ensure that survey-grade GPS equipment is used to record northing, easting, and elevation data for certain buried appurtenances. For water mains, appurtenances to be located include valves, crosses, tees, bends, reducers, and other fittings as required by the construction inspector. For sewer mains, appurtenances include the rim and invert elevations of manholes, clean-outs and other features as required. GPS coordinates will utilize the North American Datum (NAD) 1983, State Plane Arizona Central Zone in Maricopa and Santa Cruz counties, and State Plane Arizona West Zone in Mohave County. All units will be in US feet. Prior to completion of the work, provide the red-lined drawings to the Engineer of record for preparation of the project Record Drawings. Final completion will not be made until the Engineer of Record receives satisfactory red-lined drawings.
3. Contractor shall notify EPCOR Construction Inspections Department 48 hours in advance of any construction. When appointments for inspection are arranged at least 48 hours in advance, the inspection/test will be conducted as scheduled, otherwise the request will be scheduled based on availability.
4. Contractor shall be responsible for obtaining required permits and inspections from appropriate governmental agencies for all work in public rights-of-way (Maricopa County Department of Transportation, City Engineering Department, etc.). Inspections by EPCOR do not relieve contractor of responsibility to obtain required inspections from other interested governmental agencies (Building Safety, Fire District, etc.).
5. All work and testing shall be in accordance with Maricopa Association of Governments (MAG) Standard Specifications and Details unless otherwise stated on plans.
6. All potable waterlines and fittings shall have NSF-PW seal. All materials and products used in the potable water system shall conform to NSF Standards 60 and 61 in accordance with AAC R18-4-213. All materials shall be lead-free as defined in AAC R18-4-101 and R18-4-107.
7. Pipe Separation:
  - a. Separation between water and sewer lines will be a minimum of 6 feet horizontal distance from outside edge to outside edge of pipe. Two feet vertical separation is required between water lines, storm drains, and dry utilities.
  - b. Vertical and Horizontal separation of pipes and pipe crossings of varying degrees of water quality shall be in accordance with State & local government requirements.
8. Dip Section: All dip sections shall be constructed of restrained ductile iron pipe (DIP) per EPCOR's STD. DET. 370-1. All dip sections shall be joint restrained DIP with polyethylene wrap for the entire length per MAG SEC. 610.6. Joint restrained lengths will follow MAG STD. DET. 303-1 and 303-2. Anchor blocks/thrust blocks must be installed for vertical bends per MAG STD. DET. 381. Air/Vacuum release valves are required at all highpoints and at vertical realignments of the water line.
9. Concrete Encasement: All water and sewer encasements shall follow MAG STD. DET. 404-1. When a water line must be constructed under a sewer or reclaimed water line, the water line must be a minimum of 2' below the sewer or reclaimed water line and extra protection is required. Protection for the sewer main should be constructed with mechanical joint or restrained joint ductile iron pipe for a distance of ten feet on both sides of the water main. A full length of DIP will be centered over/under the water main. When DIP is not used, extra protection is required, per MAG 610.5.5. Refer to MAG STD. DET. 404-1 regarding force mains. All encasements require rebar and class "C" concrete.
10. Gate valves shall be resilient seated in accordance with EPCOR's "Water Material Specifications" and MAG SEC. 630.3.
11. Valve supports shall be in accordance with MAG STD. DET. 301.
12. Valve boxes shall be in accordance with MAG STD. DET. 391-1, type C. Note: Valve box lids used in City of Surprise shall be Bingham & Taylor, Model # CUL5LHVTSK4WCL35
13. Water Valve Debris Caps: Debris caps are required when water valves are constructed within 2 feet of the edge of gutter, in areas that are unpaved, and areas prone to flooding. Valves should be set 2-tenths above finish grade in all unpaved areas. Concrete collar with carsonite marker is required on all valve locations outside of right-of-way.
14. Concrete thrust blocks shall be in accordance with MAG STD. DET. 380. Thrust blocks are NOT allowed in Right-of-ways (ROWs). Restrained joints per MAG STD. DET. 303-1 & 2 shall be used in ROWs in place of concrete thrust blocks. 90-degree fittings are NOT allowed in ROW's, but may be used in other areas as approved by EPCOR.
15. Field lock gaskets are not allowed.
16. Water services 2 inches and smaller shall be in accordance with EPCOR STD. DET. 342.
17. Fire hydrants located on "Dead End" water mains shall have a blow-off, in accordance with EPCOR STD. DET. 390-1, installed at the end of the water main.
18. Hydrant coating: "Safety Yellow". Complete hydrant preparation prior to inspection for painting. Inspection is also required after painting for contractor to receive final acceptance.
19. Pumper nozzle shall be oriented to provide best accessibility for fire truck. All hydrant ports must be lubricated with a food-grade lubricant, or NSF 60 product.
20. Fire hydrants shall be in accordance with EPCOR STD. DET. 360-1 or 360-2 as indicated on the Plan.

100-1 & 2.DWG  
07/24/25 - 03:39pm

DATE:  
July '25



5656 W Talavi Blvd  
Glendale, AZ 85306

GENERAL NOTES

DETAIL NO.  
100-1

**GENERAL NOTES (CONTINUED)**

- 21. Reclaimed waterlines shall be installed in accordance with MAG SEC. 601, 610 and 616. Testing shall be in accordance with MAG SEC. 610 and 611 including disinfection/chlorination. Final flushing and bacteriological testing as specified in MAG SEC 611.15 shall not be required.
- 22. Any shutdown to EPCOR's system requires a minimum of 48 hours notice to EPCOR's Inspector. Shutdowns will only be allowed on Tuesdays, Wednesdays and Thursdays. Time restrictions may also apply.
- 23. Concealed Pick-hole Manhole Covers: Concealed Pick-hole manhole covers are required when the edge of the manhole covers are constructed within 2 feet of the edge of gutter, in areas that are unpaved, and areas prone to flooding. Manholes should be set 2-tenths above finish grade in all unpaved areas. Concrete collar with carsonite marker is required on all manhole locations outside of right-of-way. Concealed Pick-hole manhole covers are required for all manholes in Mohave County.
- 24. Water Pressure Testing: All water lines will be tested per MAG SEC. 610.15. Modifications to these specifications include; the testing to be at a minimum of 200 psi, higher test pressures may be required in certain circumstances, and loss/leakage calculations will be based upon a maximum of 1500-feet, starting with the smallest diameter pipe.
- 25. The Contractor is required to uniform slope test all sewer lines by video and vacuum test all manholes in accordance with A.A.C. R18-9-E301. Deflection testing shall be performed per MAG SEC. 615.11. Testing documentation and flash drives shall be submitted to EPCOR Development Services Project Manager for approval prior to acceptance. All required repairs are the responsibility of the contractor and must be coordinated with EPCOR inspectors.
- 26. Sewer Testing: All sewer mains and laterals shall be pressure tested and video tested. All sewer mains shall also be mandrill tested. The maximum allowable sag is 0.5 inches.
- 27. When using plugs to test sewer mains/manholes contractor must use mechanical plugs per EPCOR STD. DET. 420. No air plugs allowed.
- 28. In Mohave County, solid sleeves are not allowed as a remedy to a failed pressure test on a new line.

**BACKFLOW PREVENTION GENERAL NOTES:**

- 1. Backflow Prevention Devices: All landscape and commercial water services require backflow prevention devices, meeting the requirements of EPCOR. Backflow devices shall be in place prior to meters being set. Testing of the backflow devices may be completed after the installation of the meter.
- 2. Contact Utility Cross-Connection Specialist (Backflow Prevention) at (623) 445-2411 for approved assembly list, inspections and testing.


- 3. Use only a University Of Southern California Foundation For Cross-Connection Control and Hydraulic Research (USC) APPROVED assembly.
- 4. Backflow prevention assemblies shall have a certificate of approval issued by USC-FCCCHR, or other approved third-party certifying entity unrelated to the product manufacturer or vendor, in accordance with AAC R18-4-215. All assemblies shall be installed in accordance with EPCOR standard details. No assembly shall be placed in service unless it has been tested and is functioning as designed. A certified test must be submitted to EPCOR Cross Connection Specialist (Backflow Prevention) for approval. Approval of water facilities will not be granted prior to backflow prevention approval.
- 5. Locate assembly within 24 inches of water meter unless otherwise directed by Utility's Cross-Connection Specialist.
- 6. All Pressure Vacuum Breaker Assemblies shall be installed a minimum of 12 inches above all downstream piping and outlets.
- 7. Use lead free solder only.
- 8. CLEARANCES:
  - a. Wall or structure: Minimum 36"
  - b. Above finish grade: Minimum 12" – Maximum 24"
- 9. Fire Lines: provide usage-tamper switches & wiring to alarm system where required by fire department. Note: Fire Lines longer than 75' require backflow assembly at property line or EPCOR approved location. Such Fire Lines must have backflow prevention assemblies with a metered bypass.

**APPROVAL PROCESS FOR BACKFLOW PREVENTION ASSEMBLIES:**

- 1. All new backflow prevention assemblies (BPAs) shall be tested and functioning as designed prior to Approval in accordance with AAC R18-4-215.
- 2. Developer/Contractor/Customer shall forward passing test report with required BPA information to EPCOR Cross Connection Specialist, marked pending approval.
- 3. EPCOR Cross Connection Specialist (Backflow Prevention) will notify Developer Services that an approved backflow prevention assembly test has been received, and this project is ready for an approval inspection.
- 4. A Construction Inspector then schedules an Approval Inspection with the Developer/Contractor/Customer.
- 5. EPCOR Construction Inspector confirms presence of BPA, and confirms proper installation guidelines have been followed.
- 6. Backflow Prevention approval process complete.
- 7. Approval may be granted provided all other required Operation Inspection items have no deficiencies.

07/24/25 - 03:39pm

100-1 & 2.DWG

DATE: July '25		5656 W Talavi Blvd Glendale, AZ 85306	<b>GENERAL NOTES (CONTINUED) BACKFLOW PREVENTION GENERAL NOTES &amp; APPROVAL PROCESS NOTES</b>	DETAIL NO. 100-2
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**WATER SYSTEM MATERIAL SPECIFICATION**

**DISTRIBUTION PIPING**

- C900 Polyvinyl Chloride (PVC): In accordance with American Water Works Association (AWWA) Standard C900 for pipe diameters thru 12": DR=14, elastomeric-gasket bell-end.
- Ductile Iron Pipe, mortar-lined (DIP) shall be used for pipe diameters greater than 12".
- Ductile Iron Pipe, mortar-lined (DIP): In accordance AWWA Standards C150 & C151 Mortar lining shall be in accordance with AWWA C104. All Ductile Iron Pipe shall be polyethylene wrapped for the entire length in accordance with MAG SEC. 610.6. 6" through 14" diameter must be Pressure Class 350 minimum: 16" through 24" must be Pressure Class 250 Minimum, 30" and larger must be Pressure Class 150 minimum.
- In Paradise Valley and Chaparral (Fountain Hills) Districts, Ductile Iron Pipe only. PVC is not permitted.
- Concrete Pressure Pipe, Steel Cylinder Type: In accordance with AWWA Standard C303 and MAG SEC. 758 for pipe diameters greater than 24". Manufacturer's technical data sheets shall be submitted to EPCOR for review and approval. Service taps are not permitted on concrete pressure pipe.

**DISTRIBUTION FITTING**

- Push-on or mechanical joint in accordance with AWWA C111 and MAG SEC. 750.4. Joint restraints, where required, shall be Mechanical Restrained Joint with product approved by EPCOR or flanged joint for lengths in accordance with MAG STD. DET. 303-2. Field lock gaskets are not allowed.

**WATER LINE VALVE**

- Mueller, Clow, Kennedy, or M&H resilient wedge seated Gate Valve in accordance with MAG SEC. 630.3 with valve box and cover in accordance with MAG STD. DET. 391-1 Type "C" minimum lid weight of 16lbs. Valves installed outside the pavement or in the flow line of a roadway shall have a debris cap installed per MAG STD. DET. 392. Butterfly valves are not allowed without EPCOR Approval.

**CONTROL VALVES (MOHAVE COUNTY ONLY)**

- The external tubing needs to be stainless steel, not copper. CLA-VAL is the only acceptable manufacturer.

**TAPPING SLEEVE & VALVE**

- Stainless Steel - Approved manufacturers are Cascade, JCM, and Smith-Blair.
- Paradise Valley District may require a bypass on valves on 12" or larger pipe. Contact EPCOR for approval on a case-by-case basis.

**WATER SERVICE**

- For taps, pipe and fittings for water services through 2", the size shall be in accordance with EPCOR's STD. DET. 342. Requests must be submitted for review and approval. Minimum water service line size diameter shall be 1".
- Tubac District requires meter setters on all projects 1" and smaller.
- 2" meter setters are required for critical service developments in Paradise Valley and Anthem Districts.
- Approved Saddles, all Iron Pipe Thread Tap and bronze strap: For PVC, Jones J-995, Jones J-996, Mueller H-13000 Series; For Ductile Iron Pipe, Ford 202B, Jones J-979, Mueller BR2B Series, Mueller BR2S Series.
- All brass fittings must be manufactured by Ford, Mueller, or James Jones. All angle meter stops must include locking wings.
- All corp stops and angle valves must be ball style. All fittings must be "pac-joint" type.
- All brass must be lead free.

**FIRE HYDRANTS**

- All hydrants will be Wet Barrel (unless Dry Barrel hydrants are required by local jurisdiction) and be manufactured by Clow or Jones. Break-off check valve shall be Clow.
- All hydrants shall be equipped with national standard hose threads.

**TRACER WIRE**

- See EPCOR's STD. DET. 350-1. Tracer wire must be used for all water lines.

**DIP SECTIONS**

- All dip sections shall be constructed of restrained ductile iron pipe (DIP) per EPCOR's STD. DET. 370-1. All dip sections shall be joint restrained DIP with polyethylene wrap for the entire length per MAG SEC. 610.6. Joint restrained lengths will follow MAG STD. DET. 303-1 and 303-2. Anchor blocks/thrust blocks must be installed for vertical bends per MAG STD. DET. 381.

**MARKING TAPE**

- See EPCOR's STD. DET. 350-1. Marking tape must be used for all water lines and services.

**MARKING POSTS**

- Carsonite marking posts are required for all water valves located outside of ROW and outside of paved areas, installed with concrete collar.

**ALL OTHER ITEMS**

- In accordance with MAG Specifications.
- Where MAG standards are specified, those standards are applicable.

100-3 & 4 & 5.DWG 07/24/25 - 03:39pm

DATE:  
July '25



5656 W Talavi Blvd  
Glendale, AZ 85306

WATER (POTABLE) SYSTEM  
MATERIAL SPECIFICATION

DETAIL NO.  
100-3

**SEWER SYSTEM MATERIAL SPECIFICATION**

**COLLECTION MAINS**

- SDR35 PVC sewer pipe in accordance with MAG Specifications, ASTM D-3034, ASTM F-679, SDR-26 required at 12' of depth and greater.

**SEWER SERVICE**

- SDR35 PVC sewer pipe in accordance with MAG Specifications.

**MANHOLES**

- Precast Concrete in accordance with MAG Specifications, except that no steps shall be installed in any manholes. Each manhole shall be treated with "Insecta" insect treatment as soon as that manhole is raised to grade, after lining is complete and prior to final acceptance. All sewer manholes shall be lined, including the base, with one of the following products, as applied by a certified applicator:

- ... NeoPoxy NPR-5300 Series epoxy
- ... Raven 405/A10
- ... Sauereisen 210
- ... Sewer Shield 100

**MANHOLE COVER**

- Cast Iron in accordance with MAG Specifications. All manholes shall have a 30" frame and cover, Neenah R-1743. Lid to be stamped "Sanitary Sewer" in accordance with MAG Detail 424. No agency identification shall be added. See EPCOR's STD. DET. 100-2 for information on water tight manhole covers.

**ALL OTHER ITEMS**

- In accordance with MAG Specifications.

**FORCE MAINS**

- HDPE preferred IPS minimum DR11 or PVC pressure pipe in accordance with AWWA C900 or C905.

**SEWER SYSTEM MATERIAL SPECIFICATION (CONTINUED)**

**MARKING POSTS**

- Carsonite marking posts are required for all sewer mains outside of ROW and outside of paved areas, and are required for force mains greater than 16 inches in diameter.

**TRACER WIRE**

- See EPCOR's STD. DET. 350-1. Tracer wire must be used for all sewer force mains.

**MARKING TAPE**

- See EPCOR's STD. DET. 350-1. Marking tape must be used for all sewer lines and services.

**ALL OTHER ITEMS**

- In accordance with MAG Specifications.
- Where MAG standards are specified, those standards are applicable regardless of project location.

100-3 & 4 & 5.DWG 07/24/25 - 03:39pm

DATE:  
July '25



5656 W Talavi Blvd  
Glendale, AZ 85306

SEWER SYSTEM MATERIAL SPECIFICATION

DETAIL NO.  
100-4

**RECLAIMED WATER SYSTEM MATERIAL SPECIFICATION**

**DISTRIBUTION PIPING**

- C900 Polyvinyl Chloride (PVC): In accordance with American Water Works Association (AWWA) Standard C900 for pipe diameters up to 12"; DR=14, elastomeric-gasket bell-end.
- In Mohave County, all PVC must be DR14 only. DR18 is not permitted.
- C905 Polyvinyl Chloride (PVC): In accordance AWWA Standard C905 for pipe diameters greater 12"; DR=14, elastomeric-gasket bell end.
- Ductile Iron Pipe (DIP): In accordance with AWWA Standards C150 & C151. Mortar lining shall be in accordance with AWWA C104. All Ductile Iron Pipe shall be polyethylene wrapped for the entire length in accordance with MAG SEC. 610.6. 6" through 14" diameter must be Pressure Class 350 minimum; 16" through 24" must be Pressure Class 250 minimum, 30" and larger must be Pressure Class 150 minimum.
- All pipe shall be appropriately identified through integral coloring and wording of the pipe, stenciling of the pipe, or pipe sleeving (pipe socks) in accordance with MAG SEC. 616. Marking tape shall be installed in accordance with EPCOR's STD. DET. 350-1.

**FITTINGS**

- Push-on or mechanical joint in accordance with MAG SEC. 750. Joint restraints, where required, shall be Mechanical Restraint Joint with product approved by the Utility for lengths in accordance with MAG STD. DET. 303-2.

**VALVES**

- Mueller, Clow, Kennedy, or M&H resilient wedge seated Gate Valve in accordance with MAG SEC. 630.3 with valve box and cover in accordance with MAG Detail 391-1 Type "C" minimum lid weight of 16lbs.
- Valve riser pipes shall be painted purple (Seymour Safety Purple) inside and out. Debris caps with identification tag shall be installed in accordance with MAG STD. DET. 392, MAG SEC. 616, and EPCOR's STD. DET. 600-1.

**SERVICES**

- Taps, pipe and fittings for water services 1-1/2" and 2" size shall be in accordance with EPCOR's STD. DET. 610-1. Larger sizes to be submitted for approval. No services smaller than 1-1/2" will be approved by EPCOR.

**RECLAIMED WATER SYSTEM MATERIAL SPECIFICATION (CONT'D)**

**DIP SECTIONS**

- All dip sections shall be constructed of restrained ductile iron pipe (DIP) per EPCOR's STD. DET. 370-1. All dip sections shall be joint restrained DIP with polyethylene wrap for the entire length per MAG SEC. 610.6. Joint restrained lengths will follow MAG STD. DET. 303-1 and 303-2 and appropriately identified in accordance with MAG SEC. 616. Anchor blocks/thrust blocks must be installed for vertical bends per MAG STD. DET. 381.

**MARKING TAPE**

- Wording per MAG SEC. 616 to be used on all reclaimed water mains. The marking tape shall be printed "Caution: Reclaimed Water Line" on Purple Tape for reclaimed water lines.

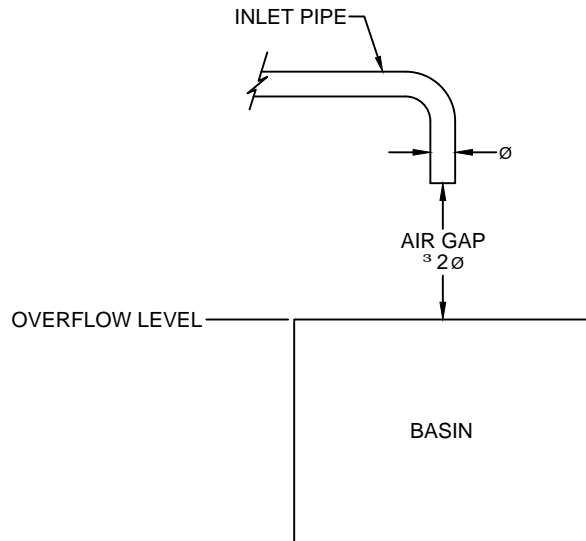
**ALL OTHER ITEMS**

- In accordance with MAG Specifications.
- Where MAG standards are specified, those standards are applicable regardless of project location.

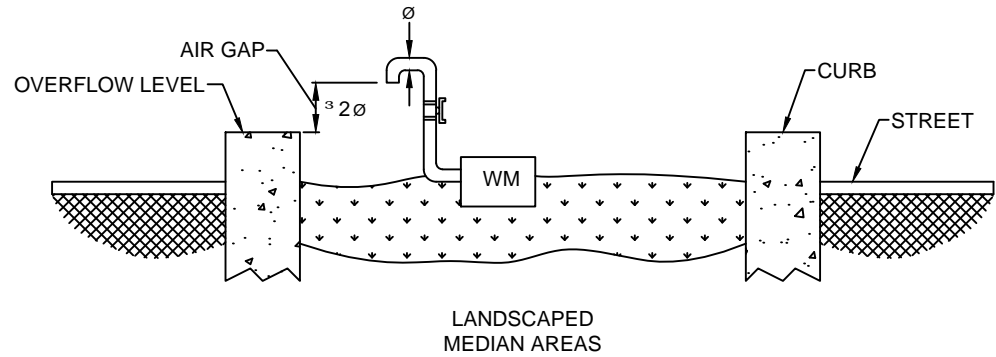
100-3 & 4 & 5.DWG 07/24/25 - 03:38pm

DATE: July '25		5656 W Talavi Blvd Glendale, AZ 85306	RECLAIMED WATER SYSTEM MATERIAL SPECIFICATION	DETAIL NO. 100-5
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### TYPICAL BASIN STYLE AIR GAP



### TYPICAL FLOOD IRRIGATION STYLE AIR GAP



#### NOTES:

1. AN AIR GAP IS A PHYSICAL SEPARATION BETWEEN THE END OF A POSSIBLE WATER SUPPLY PIPE AND THE OVERFLOW LEVEL OF AN OPEN OR NON-PRESSURIZED BASIN.
2. AIR GAP DISTANCE TO BE MEASURED FROM BOTTOM OF PIPE TO OVERFLOW LEVEL
3. AIR GAP DISTANCE TO ALWAYS BE AT LEAST TWICE THE INLET PIPE DIAMETER, AND IN NO CASES LESS THAN 1".
4. CONTACT EPCOR CROSS CONNECTION SPECIALIST (BACKFLOW PREVENTION) @ 623-587-5202 FOR APPROVED ASSEMBLY LIST, INSPECTIONS AND TESTING.
5. SEE EPCOR'S STD. DET. 100-2 FOR MORE INFORMATION.

300-1.DWG 07/24/25 - 03:38pm

DATE:

July '25

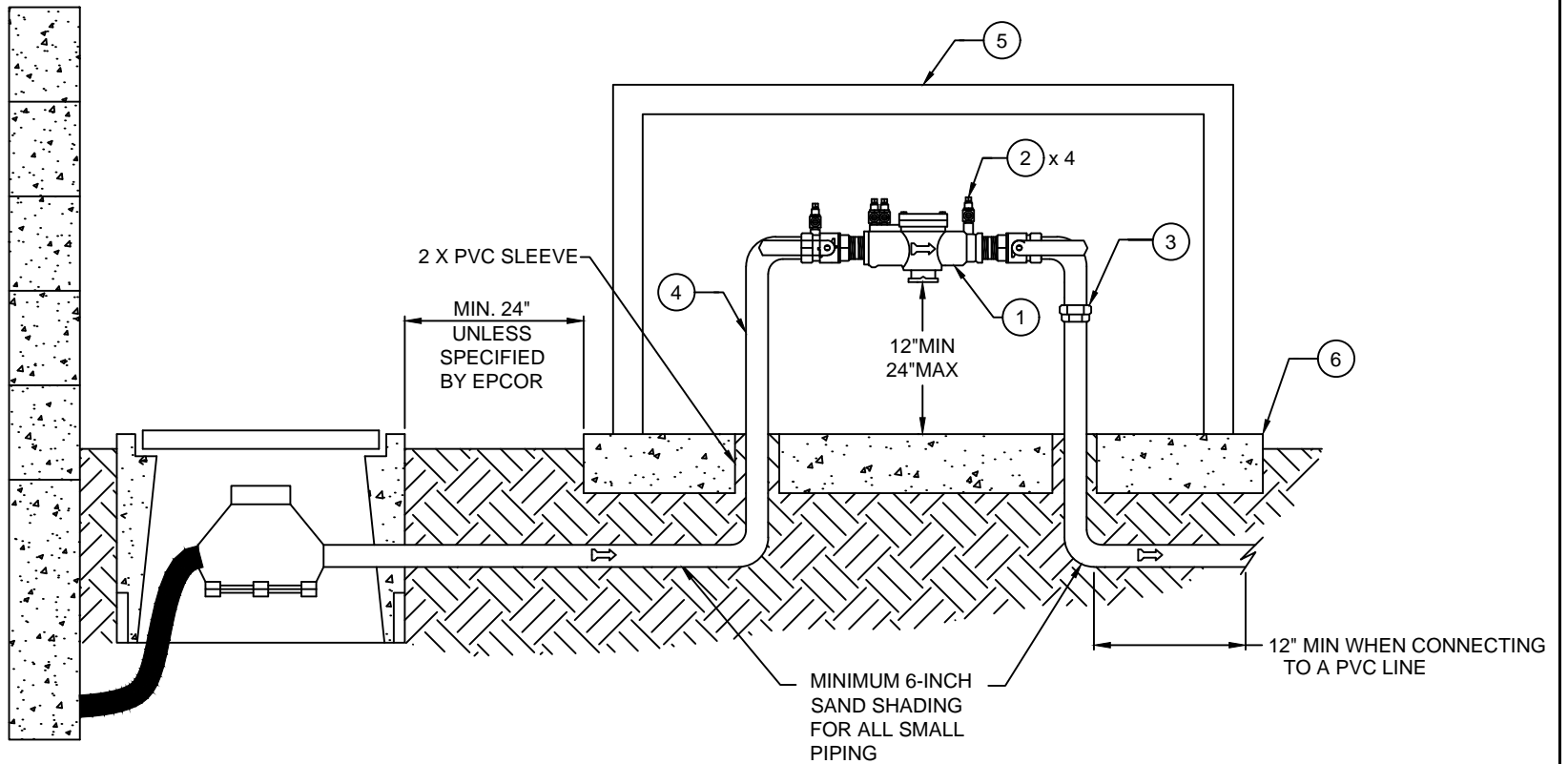


5656 W Talavi Blvd  
Glendale, AZ 85306

AIR GAP

DETAIL NO.

300-1



**NOTES:**

1. SEE EPCOR'S STD. DET. 100-2 FOR BACKFLOW PREVENTION GENERAL NOTES.
2. TO CONNECT TO GALVANIZED LINES, USE A BRASS FITTING. FOR PVC LINES USE A COPPER FEMALE ADAPTER X PVC MALE ADAPTER FITTING (OR A SCH 80 PVC NIPPLE).

**MATERIAL LIST:**

- ①. USC APPROVED ASSEMBLY, (SUBMIT TO EPCOR FOR APPROVAL).
- ②. TEST COCKS WITH BRASS PLUGS (4).
- ③. 3 PC BRASS UNION 12" MAX FROM ASSEMBLY
- ④. ALL COPPER FITTINGS, TYPE 'K' COPPER TUBING
- ⑤. VANDALISM AND/OR FREEZE PROTECTION ENCLOSURE (OPTIONAL)
- ⑥. 4" CONCRETE SLAB W/PVC SLEEVES FOR ENCLOSURE (OPTIONAL)

310-1.DWG 07/24/25 - 03:38pm

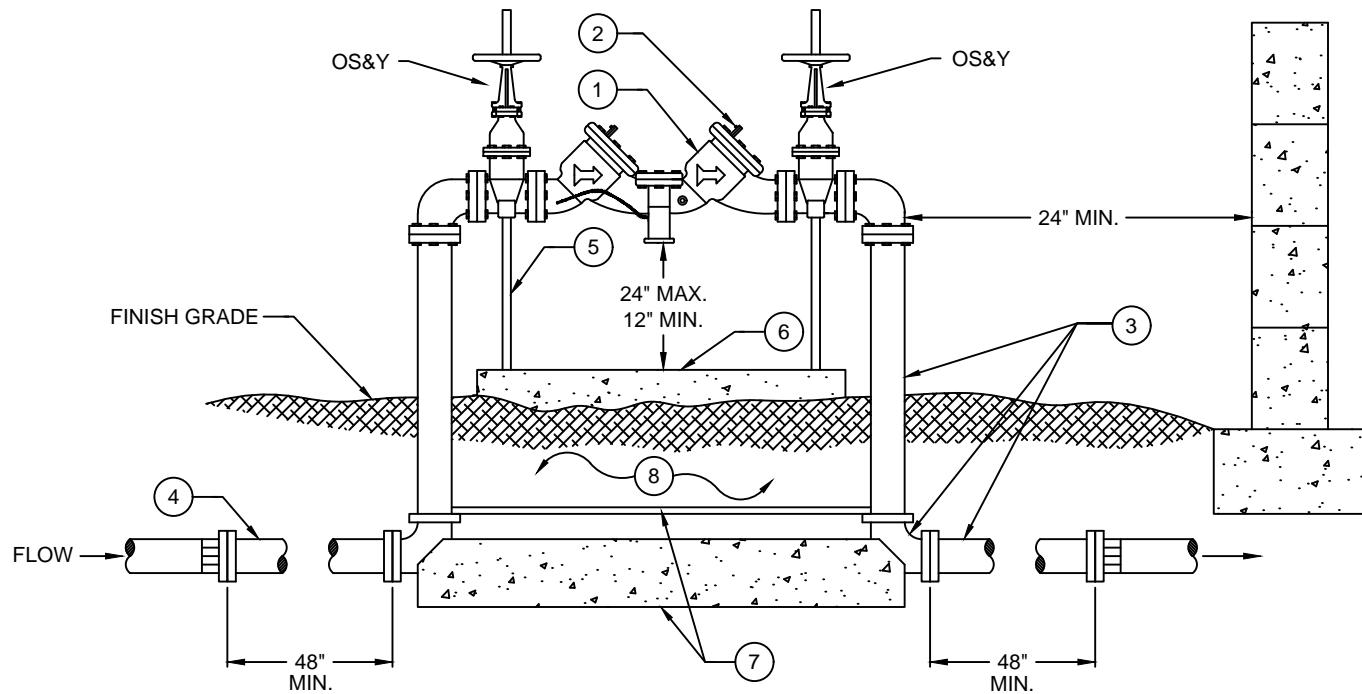
DATE:  
July '25



5656 W Talavi Blvd  
Glendale, AZ 85306

0.5IN-2IN REDUCED PRESSURE  
PRINCIPLE ASSEMBLY

DETAIL NO.  
310-1



**NOTES:**

1. SEE EPCOR'S STD. DET. 100-2 FOR BACKFLOW PREVENTION GENERAL NOTES.
2. BACKFILL UNDER ASSEMBLY SHALL BE 95% COMPACTION
3. FOR FIRE LINE USAGE-TAMPER SWITCHES & WIRING MAY BE NEEDED BY FIRE DEPARTMENT OR DISTRICT.
4. FOR FIRE LINES, A REDUCED PRESSURE DETECTOR ASSEMBLY WITH METER IS REQUIRED. METER SHALL HAVE AN AMR REGISTER.
5. ALL PIPE FROM THE WATER MAIN TO THE DCDA MUST BE RESTRAINED JOINT D.I.P.

**MATERIAL LIST:**

- ① USC APPROVED ASSEMBLY, (SUBMIT TO EPCOR FOR APPROVAL).
- ② TEST COCKS WITH BRASS PLUGS (4).
- ③ USE FLANGED DUCTILE IRON FOR ABOVE GROUND PIPE & FITTINGS. RESTRAINED JOINTS SHALL BE USED BELOW GROUND.
- ④ MEGALUG M.J. FITTING-FOR AC PIPE USE FCA
- ⑤ ADJUSTABLE PIPE SUPPORTS (2)
- ⑥ CONCRETE SLAB MINIMUM 6" THICK X 24" WIDE
- ⑦ CONCRETE THRUST BLOCK-12" WIDE X 12" THICK MINIMUM TO UNDISTURBED EARTH. USE 2-3/4" ZINC COATED, THREADED RODS, BOLTED TO FLANGES, BOTH SIDES TYPICAL; (4 TOTAL).  
OR A 3'X3'X1/4" STEEL ANGLE, AS SHOWN IN EPCOR STD. DET. 345-2
- ⑧ JOINT RESTRAINTS PER M.A.G. STD. DET. 303-1 AND 303-2

310-2.DWG 07/24/25 - 03:38pm

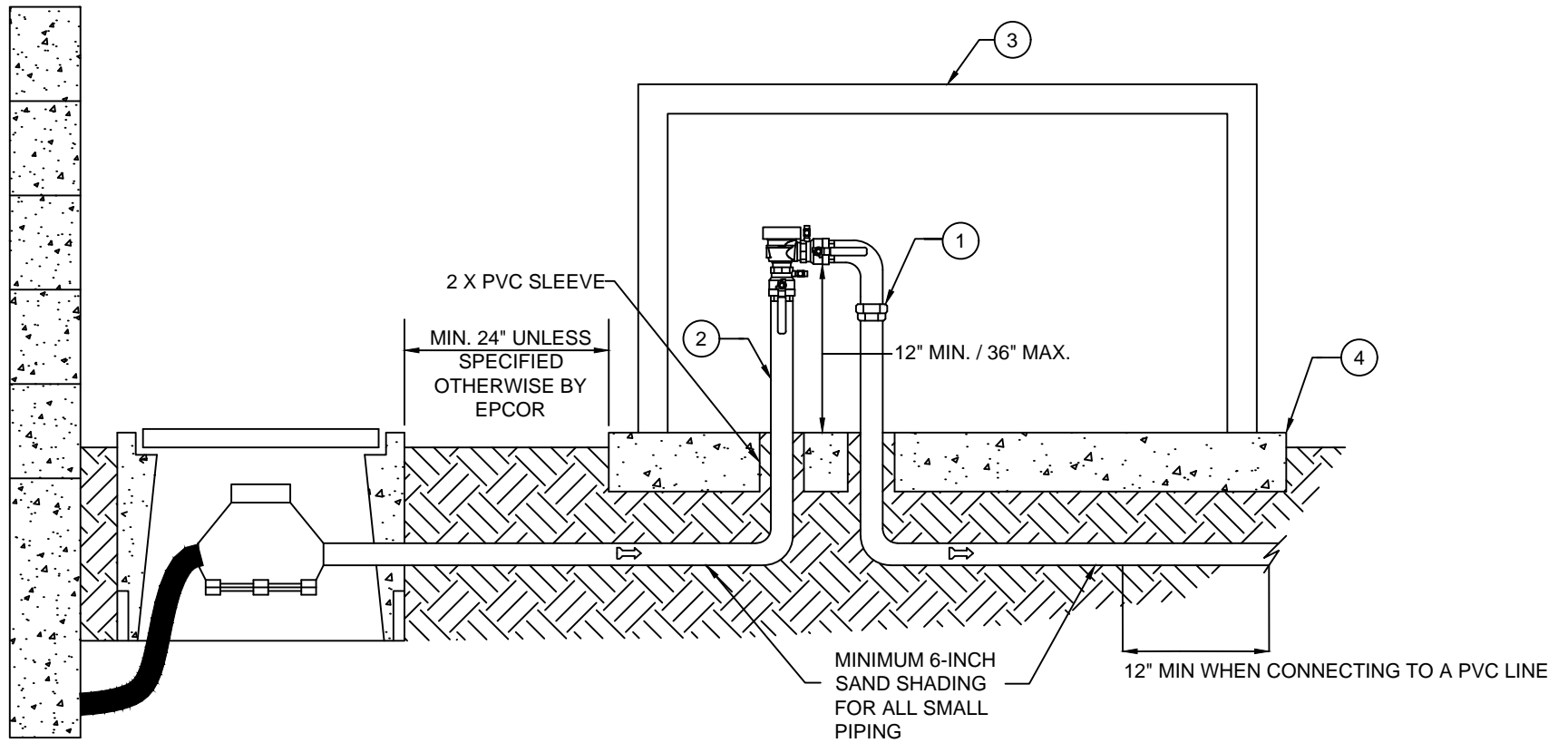
DATE:  
July '25



5656 W Talavi Blvd  
Glendale, AZ 85306

3in-10in REDUCED PRESSURE  
PRINCIPLE ASSEMBLY RPS EXCEPT F-L

DETAIL NO.  
310-2



**NOTES:**

1. SEE EPCOR'S STD. DET. 100-2 FOR BACKFLOW PREVENTION GENERAL NOTES.
2. TO CONNECT TO GALVANIZED LINES, USE A BRASS FITTING. FOR PVC LINES USE A COPPER FEMALE ADAPTER X PVC MALE ADAPTER FITTING (OR A SCH 80 PVC NIPPLE).
3. USC APPROVED ASSEMBLY, (SUBMIT TO EPCOR FOR APPROVAL).
4. TEST COCKS WITH BRASS PLUGS (4).

**MATERIAL LIST:**

- ①. 3 PC BRASS UNION 12" MAX FROM ASSEMBLY
- ②. ALL COPPER FITTINGS, TYPE 'K' COPPER TUBING
- ③. VANDALISM AND/OR FREEZE PROTECTION ENCLOSURE (OPTIONAL)
- ④. 4" CONCRETE SLAB W/PVC SLEEVES FOR ENCLOSURE (OPTIONAL)

310-3.DWG 07/24/25 - 03:38pm

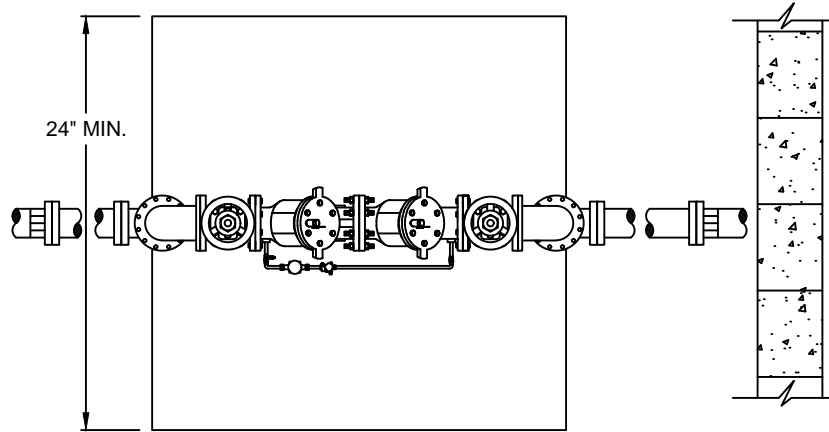
DATE:  
July '25



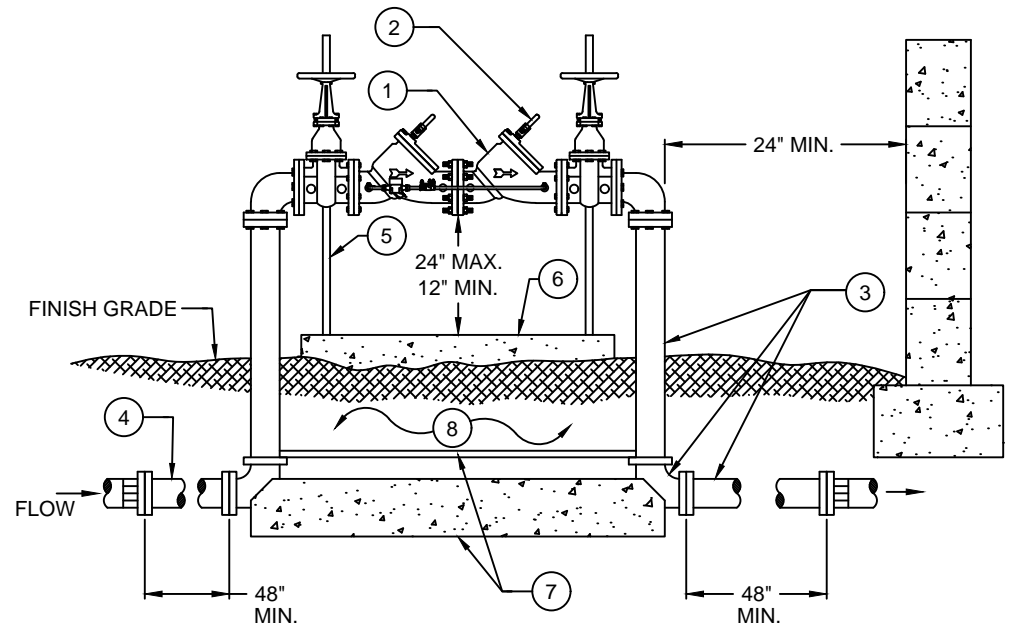
5656 W Talavi Blvd  
Glendale, AZ 85306

0.5in-2in PRESSURE VACUUM  
BREAKER ASSEMBLY

DETAIL NO.  
310-3



PLAN VIEW



SECTION VIEW

MATERIAL LIST:

- ① U.S.C. (ALSO UL/FM FOR FIRELINES) APPROVED ASSEMBLY, (SUBMIT TO EPCOR FOR APPROVAL).
- ② TEST COCKS WITH BRASS PLUGS (4).
- ③ FLANGED DUCTILE IRON PIPE & FITTINGS ABOVE GROUND MEGALUG RECOMMENDED BELOW GROUND.
- ④ MEGALUG M.J. FITTING-FOR AC PIPE USE F.C.A.
- ⑤ ADJUSTABLE PIPE SUPPORTS (2)
- ⑥ CONCRETE SLAB MINIMUM 6" THICK x 24" WIDE
- ⑦ CONCRETE THRUST BLOCK-12" WIDE x 12" THICK MINIMUM TO UNDISTURBED EARTH. USE 2-3/4" ZINC COATED, THREADED RODS, BOLTED TO FLANGES, BOTH SIDES TYPICAL; (4 TOTAL).  
OR A 3"x3"x1/4" STEEL ANGLE, AS SHOWN IN EPCOR STD. DET. 345-2
- ⑧ JOINT RESTRAINTS PER M.A.G. STD. DET. 303-1 & 303-2.

NOTES:

1. SEE EPCOR'S STD. DET. 100-2 FOR BACKFLOW PREVENTION GENERAL NOTES.
2. FOR FIRE LINES, A DOUBLE CHECK DETECTOR ASSEMBLY WITH METER IS REQUIRED. METER SHALL HAVE AN AMR REGISTER.
3. ALL PIPE FROM THE WATER MAIN TO THE DCDA MUST BE RESTRAINED JOINT D.I.P.

320-1.DWG 07/24/25 - 03:38pm

DATE:  
July '25

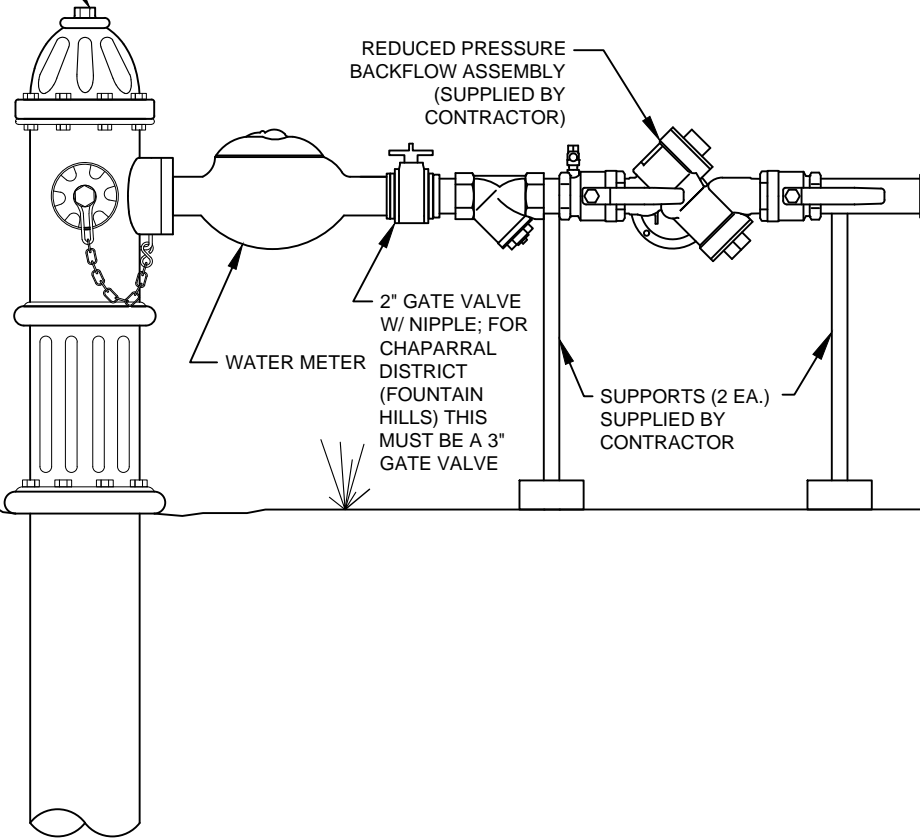


5656 W Talavi Blvd  
Glendale, AZ 85306

1in-10in DOUBLE CHECK VALVE  
DETECTOR ASSEMBLY

DETAIL NO.  
320-1

POTABLE WATER  
SYSTEM FIRE  
HYDRANT



REDUCED PRESSURE  
BACKFLOW ASSEMBLY  
(SUPPLIED BY  
CONTRACTOR)

WATER METER

2" GATE VALVE  
W/ NIPPLE; FOR  
CHAPARRAL  
DISTRICT  
(FOUNTAIN  
HILLS) THIS  
MUST BE A 3"  
GATE VALVE

SUPPORTS (2 EA.)  
SUPPLIED BY  
CONTRACTOR

NOTES:

1. PROPER BACKFLOW PROTECTION REQUIRED BY EPCOR.
2. USER MUST INSTALL A REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY ON EACH HYDRANT METER BEFORE USING WATER.
3. BACKFLOW ASSEMBLY MUST BE TESTED BY A RECOGNIZED, CERTIFIED BACKFLOW ASSEMBLY TESTER BEFORE USING AND ALSO EACH TIME METER IS MOVED.
4. USER MUST REMOVE BACKFLOW ASSEMBLY WHEN HYDRANT METER IS REMOVED OR RELOCATED.
5. USER IS LIABLE FOR ANY DAMAGE TO HYDRANT METER AND FITTINGS.
6. USER MUST USE GATE VALVE TO CONTROL FLOW OF WATER.

330.DWG 07/24/25 - 03:38pm

DATE:

July '25

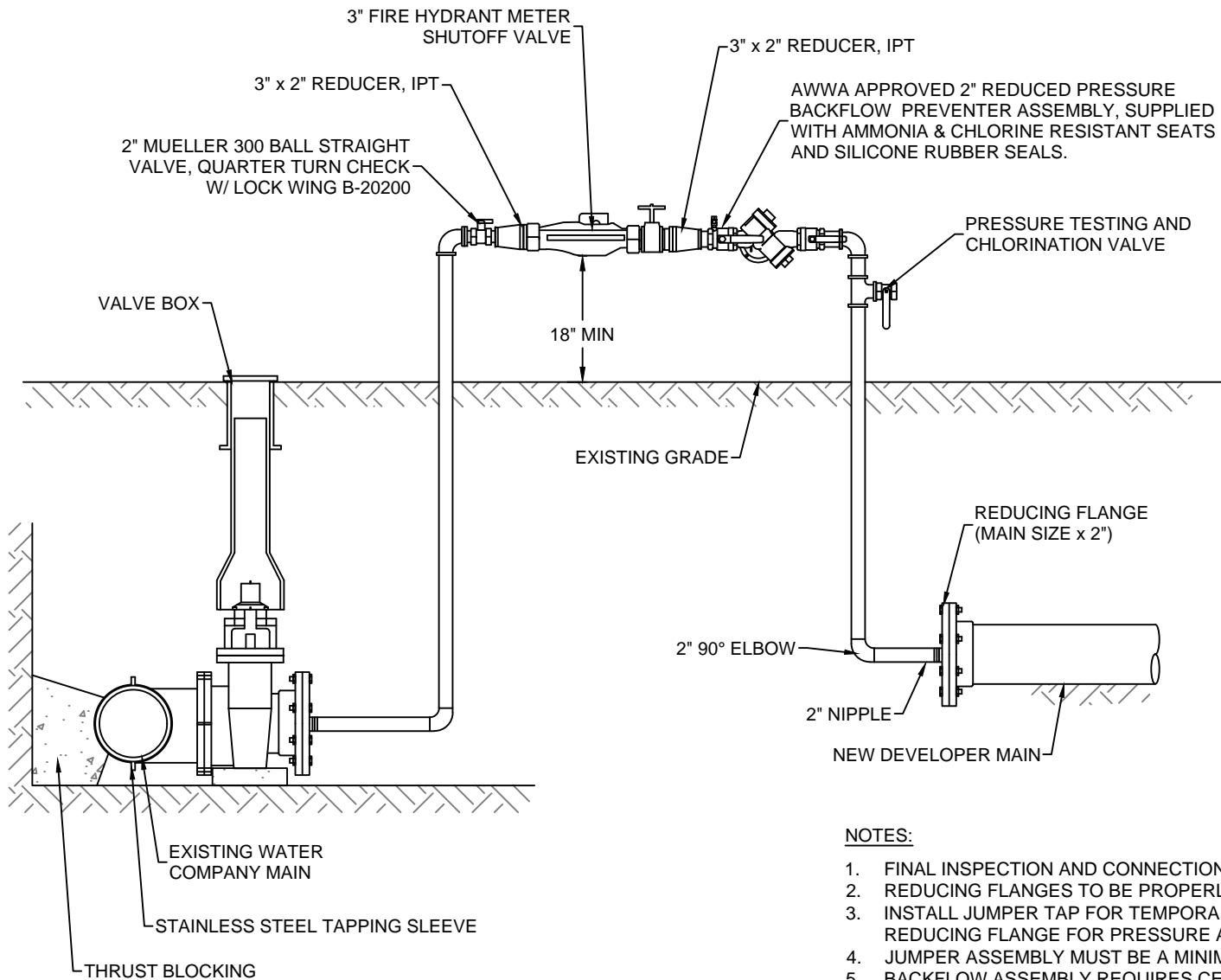


5656 W Talavi Blvd  
Glendale, AZ 85306

REDUCED PRESSURE PRINCIPLE  
BACKFLOW PREVENTION ASSEMBLY FOR  
TEMPORARY USE ON HYDRANT METERS

DETAIL NO.

330



**NOTES:**

1. FINAL INSPECTION AND CONNECTION TO BE WITNESSED BY EPCOR
2. REDUCING FLANGES TO BE PROPERLY RESTRAINED.
3. INSTALL JUMPER TAP FOR TEMPORARY METER DOWNSTREAM OF THE REDUCING FLANGE FOR PRESSURE AND BACTEE TESTING.
4. JUMPER ASSEMBLY MUST BE A MINIMUM OF 18" ABOVE FINISHED GRADE.
5. BACKFLOW ASSEMBLY REQUIRES CERTIFICATION.
6. ASSEMBLY NOT TO BE REMOVED, AND SPOOL PIECE INSTALLED FOR FINAL CONNECTION UNTIL ALL TESTING, BACTERIAL CLEARANCE AND FINAL INSPECTIONS HAVE BEEN OBTAINED.
7. ALL NEW PIPING SHALL BE PROPERLY RESTRAINED.

335.DWG 07/24/25 - 03:38pm

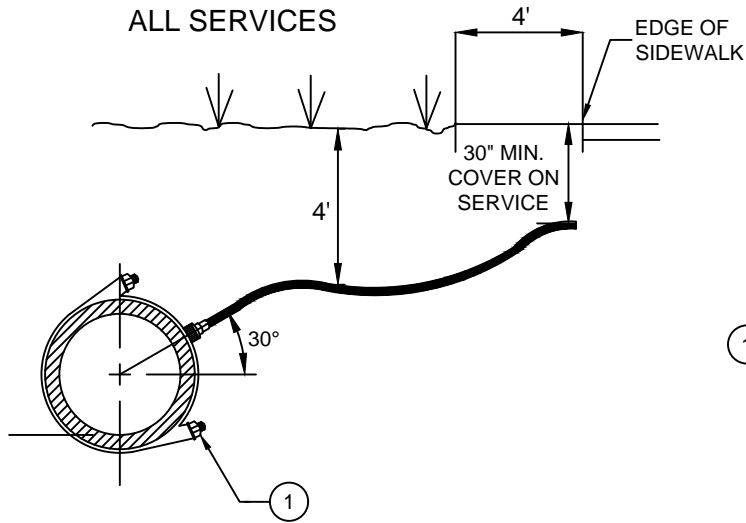
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July '25



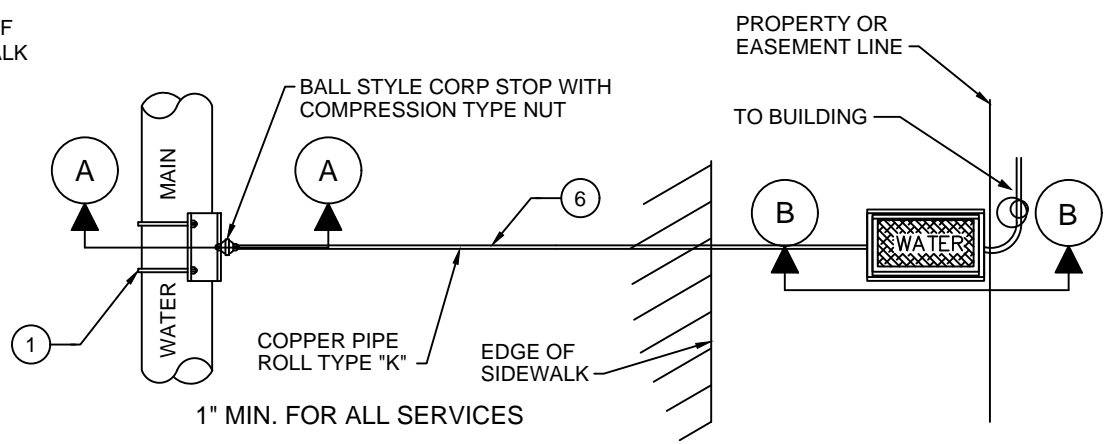
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Glendale, AZ 85306

**HOT TAP & JUMPER  
METER CONNECTION**

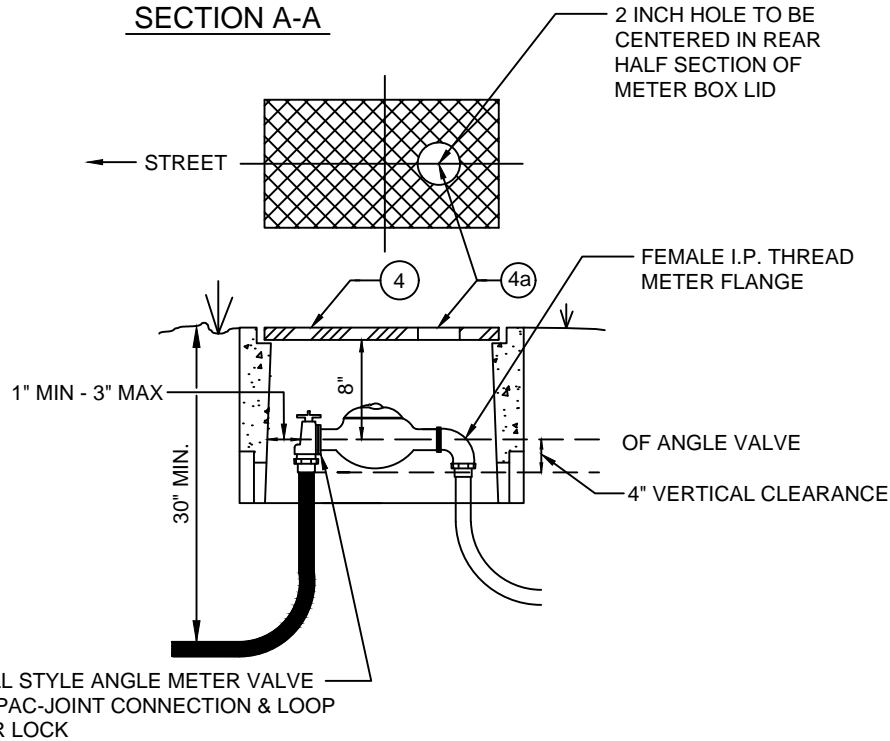
DETAIL NO.  
335



SECTION A-A



PLAN VIEW



SECTION B-B

**NOTES:**

1. SEE EPCOR'S WATER SYSTEM MATERIAL SPECIFICATIONS FOR APPROVED SADDLES.
2. METERS WILL ONLY BE SET BY EPCOR UPON PAYMENT OF FEES AND ACCEPTANCE OF FACILITY.
3. MINIMUM #4 BOX ON 1-1/2 INCH OR LARGER - #2 BOX FOR ALL SERVICES UP TO 1 INCH.
4. CONCRETE METER BOX PER M.A.G. STD. DET. 320 BOX NO. 2 OR 4 W/ STEEL LID TO BE SET PERPENDICULAR TO BACK OF WALK OR CURB. BOX TO MATCH SLOPE OF FINISH GRADE AND SET 1" ABOVE FINISH GRADE OR BACK OF WALK OR CURB. (4a) 2 INCH DIAMETER OPENING
5. NO BOXES IN DRIVEWAYS OR SIDEWALKS.
6. 6 INCH SAND SHADING AND BEDDING ON SERVICE.
7. CAL WESTERN INC TYPE CAL102 BLUE POLY SLEEVE REQUIRED IN MOHAVE COUNTY ONLY. TRACER WIRE REQUIRED ON TOP OF SLEEVE.
8. MOHAVE COUNTY REQUIRES A COMPRESSION PINCH NUT AT THE PAC-JOINT PRIOR TO THE SADDLE.
9. AAC R14-2-405.B.3 STATES, "WHERE SERVICE IS BEING PROVIDED FOR THE FIRST TIME, THE CUSTOMER SHALL PROVIDE AND MAINTAIN A PRIVATE CUTOFF VALVE WITHIN 18 INCHES OF THE METER ON THE CUSTOMER'S SIDE OF THE METER."

342.DWG 07/24/25 - 03:38pm

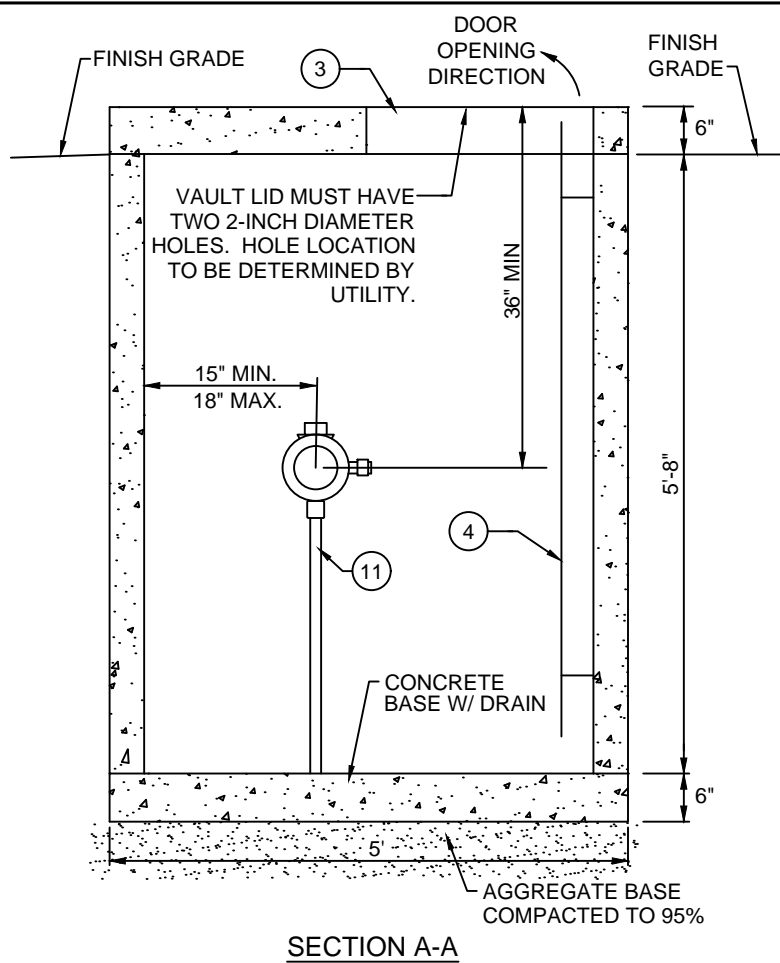
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July '25



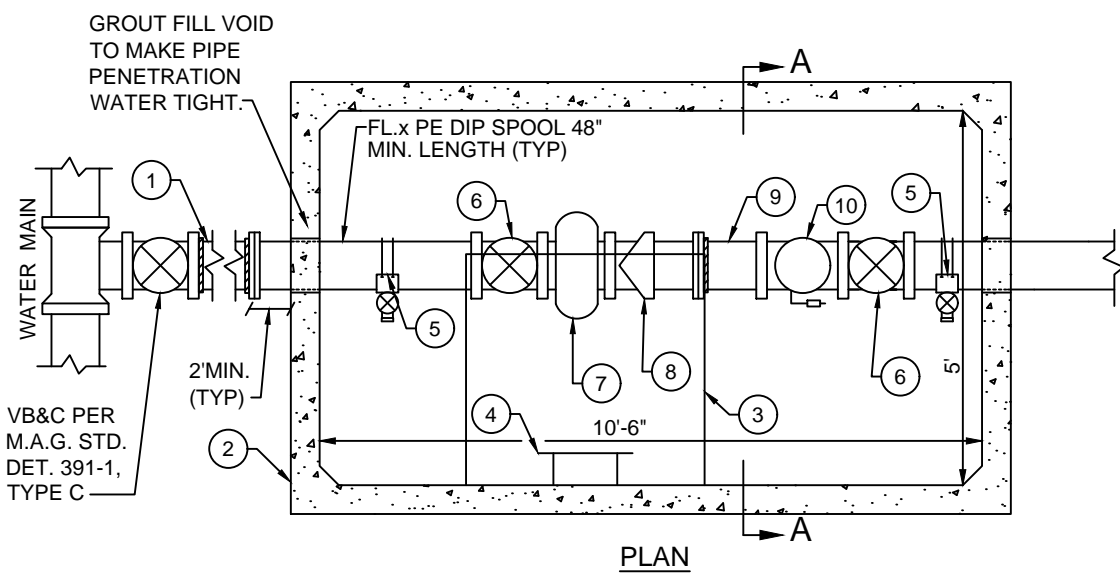
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Glendale, AZ 85306

**POTABLE WATER SERVICE  
CONNECTION (1in-2in) WITH  
CORRESPONDING METER**

DETAIL NO.  
342



SECTION A-A



PLAN

**MATERIALS LIST:**

- ① ALL PIPING TO BE JOINT RESTRAINED, MIN. PRESSURE CLASS 150, DIP. JOINT RESTRAINTS TO BE FLANGED OR MEGALUG.
- ② PRE-CAST VAULT, OLD CASTLE 5106-WA OR EPCOR APPROVED EQUAL.
- ③ 6' x 4' ALUMINUM ACCESS DOOR WITH SPRING ASSIST RATED FOR H-20 LOADING. HALLIDAY PRODUCTS H2R7248 OR EPCOR APPROVED EQUAL. VAULT DOOR SYSTEM WILL HAVE 2" DIAMETER HOLE TO ALLOW FOR ANTENNAE. THE HOLE SHOULD BE IN A LOCATION THAT ALLOWS EASE OF INSTALLATION, ALLOW VAULT DOORS TO OPEN FULLY, AND HAVE ENOUGH CABLE TO NOT BIND.

- ④ ALUMINUM BOLT ON LADDER WITH SAFETY EXTENSION, HALLIDAY PRODUCTS LIB AND LIE OR EPCOR APPROVED EQUAL.
- ⑤ 2" DOUBLE STRAP BRONZE SADDLES PER EPCOR'S STD. DET. 342-2 AND A 2" LOCKABLE BALL VALVE.
- ⑥ MUELLER OR CLOW RESILIENT SEATED FLANGED NRS GATE VALVE WITH HAND WHEEL IN ACCORDANCE WITH M.A.G. SECTION 630.3.
- ⑦ STRAINER REQUIRED WITH INSTALLATION OF METER.
- ⑧ ALL METERS THAT ARE 3 INCHES OR LARGER MUST BE COMPOUND METERS. EPCOR WILL PROVIDE ALL COMPOUND METERS. CONTRACTOR WILL NEED TO COORDINATE PICK-UP AND INSTALLATION WITH EPCOR STAFF
- ⑨ FLANGED X FCA DIP SPOOL, MINIMUM 3 PIPE DIAMETERS LENGTH.
- ⑩ EPCOR APPROVED CHECK VALVE.
- ⑪ ADJUSTABLE PIPE SUPPORTS (2)

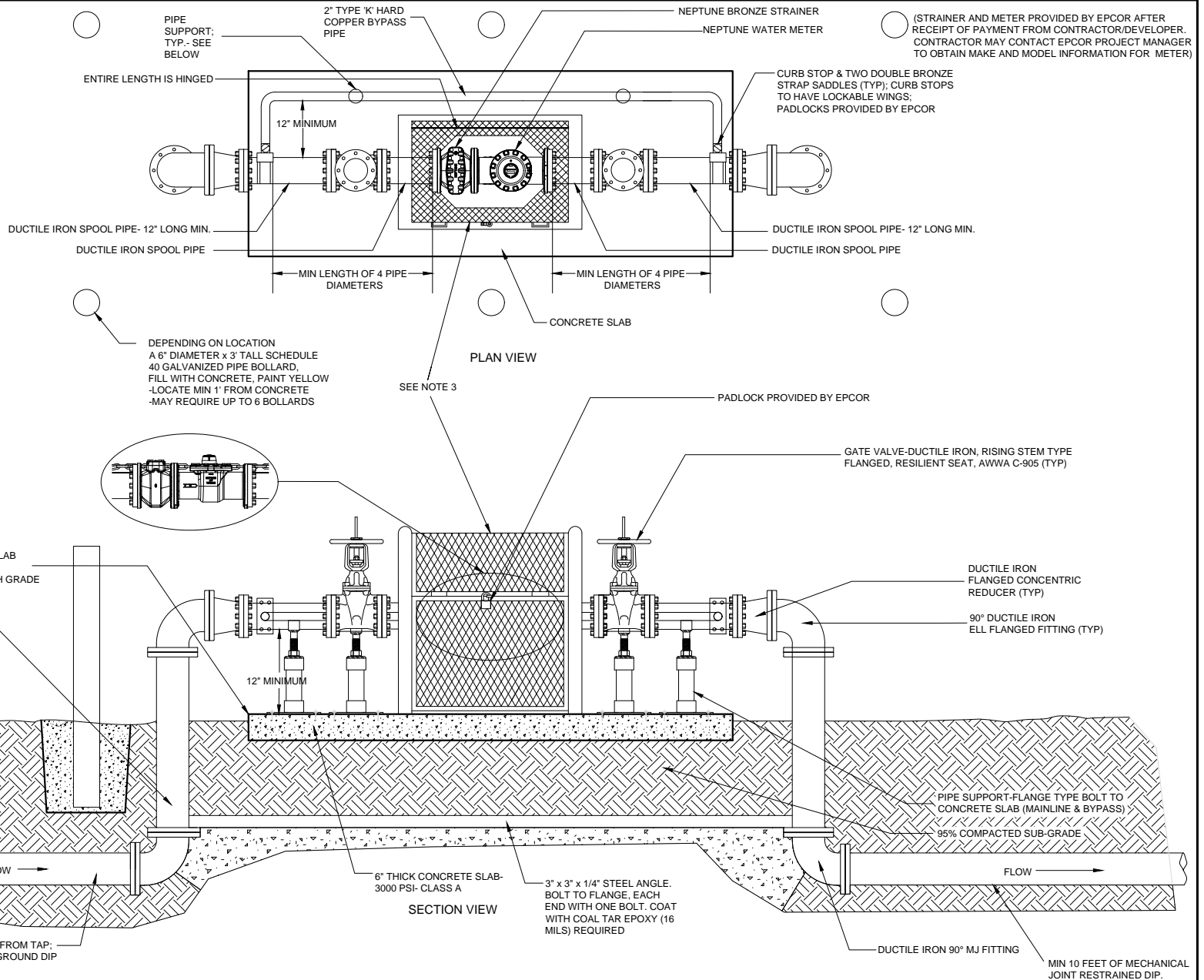
**NOTE:**  
LARGER METER VAULTS REQUIRE SPECIAL DESIGN AND EPCOR APPROVAL.

07/24/25 - 03:38pm 345-1.DWG

DATE: July '25		5656 W Talavi Blvd Glendale, AZ 85306	<b>POTABLE WATER METER VAULT</b> (3in-8in)	DETAIL NO. 345-1
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**NOTES:**

1. AN EPCOR APPROVED BACKFLOW PREVENTION ASSEMBLY IS REQUIRED DOWNSTREAM OF THE METER.
2. ALL ABOVE GROUND PIPING/VALVES SHALL BE PAINTED DESERT SAND TO MATCH COLOR OF CAGE ENCLOSURE.
3. METER & STRAINER TO BE PROTECTED WITH A LOCKABLE HINGED CLAMSHELL ENCLOSURE; TOP PORTION IS HINGED AND HAS HANDLES TO ALLOW TOP PORTION TO BE LIFTED OPEN TO ALLOW FULL ACCESS TO METER AND STRAINER; WHEN OPENED, TOP PORTION SHALL STAY IN OPEN POSITION WITHOUT ASSISTANCE; METAL ENCLOSURE SHALL BE CAPABLE OF WITHSTANDING A MINIMUM OF 200 POUNDS PER SQUARE FOOT WITHOUT ANY PERMANENT DEFLECTION OR DISTORTION; POWDERCOATED WITH EPCOR APPROVED COLOR, DESERT SAND; MAKE & MODEL OF ENCLOSURE SHALL BE APPROVED BY EPCOR PRIOR TO INSTALLATION; ENCLOSURE SHALL BE BOLTED TO CONCRETE SLAB; SIDE OF ENCLOSURE ABOVE PIPE SHALL BE ENCLOSED AND BELOW PIPE MAY BE OPEN
4. SIZE ON SIZE BYPASS DEPENDING ON DEMAND.



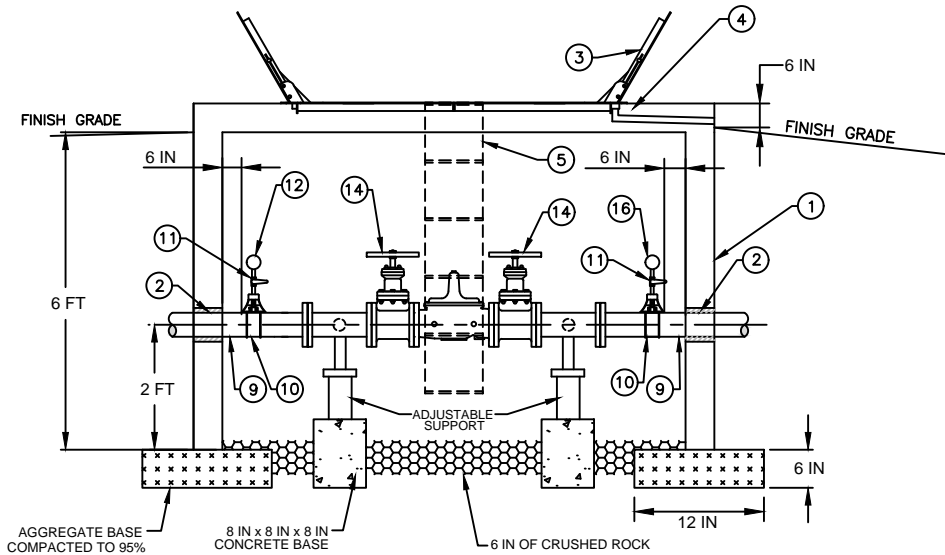
(STRAINER AND METER PROVIDED BY EPCOR AFTER RECEIPT OF PAYMENT FROM CONTRACTOR/DEVELOPER. CONTRACTOR MAY CONTACT EPCOR PROJECT MANAGER TO OBTAIN MAKE AND MODEL INFORMATION FOR METER)

SEE NOTE 3

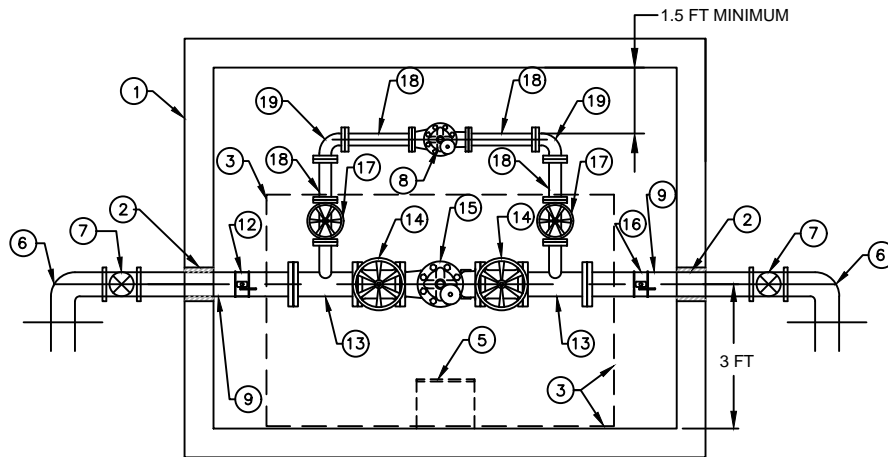
\* METER ASSEMBLIES 8" AND LARGER ARE TO BE DESIGNED BY DEVELOPER'S ENGINEER AND APPROVED BY EPCOR

07/24/25 - 03:38pm 345-2.DWG

DATE: July '25		5656 W Talavi Blvd Glendale, AZ 85306	<b>ABOVE GROUND POTABLE WATER METER (3in-8in)</b>	DETAIL NO. 345-2
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TYPICAL WATER UTILITY VAULT (SIDE VIEW)  
SCALE: NONE



TYPICAL WATER UTILITY VAULT (PLAN VIEW)  
SCALE: NONE

### KEYED NOTES:

- ① PRECAST CONCRETE WATER UTILITY VAULT, PER MAG STD DET 321 & 345-1, 6" MIN DEPTH OF CRUSHED ROCK FLOOR, 8" X 8" X 8" CONCRETE BASES FOR PIPE SUPPORTS ON COMPACTED NATIVE SOIL.
  - ② INSTALL ELASTONERIC GASKET AROUND PIPE. GROUT ALL PROTRUSIONS.
  - ③ 6'X4' ALUMINUM ACCESS DOOR WITH SPRING ASSIST RATED FOR H-20 LOADING. HALLIDAY PRODUCTS H2R7248 OR EPCOR APPROVED EQUAL.
  - ④ 1.5" THREADED DRAIN INCLUDED WITH ACCESS HATCH TO PREVENT RAINFALL FROM ACCUMULATING INSIDE VAULT. CONTRACTOR TO PROVIDE PVC PIPE TO DRAIN WATER AWAY FROM ACCESS HATCH CHANNEL.
  - ⑤ ALUMINUM BOLT ON LADDER WITH SAFETY EXTENSION. HALLIDAY PRODUCTS L1B AND L1E OR EPCOR APPROVED EQUAL.
  - ⑥ 90 DEGREE BEND, FLG X MJ WITH THRUST BLOCKS.
  - ⑦ GATE VALVE, MJ X FLG WITH BOX & COVER.
  - ⑧ \*\*PRV FLxFL (4" CLAY-VAL 90-01 PRV, WITH THE FOLLOWING OPTIONS: A, B, C, D, S, Y, & VALVE POSITION INDICATOR-X101)
  - ⑨ DIP SPOOL FLxFL
  - ⑩ FORD SERVICE SADDLE OR APPROVED EQUAL.
  - ⑪ 1" BALL VALVE 2-1" BRASS NIPPLES. 1-1"-1/4" BUSHING ALL FITTINGS TO BE THREADED.
  - ⑫ PRESSURE GAUGE (LIQUID FILLED), 150 PSI RANGE
  - ⑬ TEE FLxFL (8"x6"x4") WITH PIPE SUPPORT ON 8"x8"x8" CONCRETE BASE ON COMPACTED SOIL.
  - ⑭ GATE VALVE FLxFL (NON-RISING STEM)
  - ⑮ \*\*PRV, FLxFL (6" CLA-VAL 90-01 PRV, WITH THE FOLLOWING OPTIONS: A, B, C, D, S, Y & VALVE POSITION INDICATOR-X101)
  - ⑯ PRESSURE GAUGE (LIQUID FILLED) 200 PSI RANGE.
  - ⑰ GATE VALVE FLxFL (NON-RISING STEM)
  - ⑱ DIP SPOOL FLxFL
  - ⑲ 90° BEND FLxFL
- \* THE SIZES OF THE TEES, SPOOLS, VALVES, BENDS ETC. ARE CONTINGENT UPON PRV SIZING.
- \*\* IN CHAPARRAL BERMAD CONTROL VALVES WITH HIGH SENSITIVITY PILOTS ARE TO BE USED IN PLACE OF CLA-VAL.

346-1.DWG 07/24/25 - 03:39pm

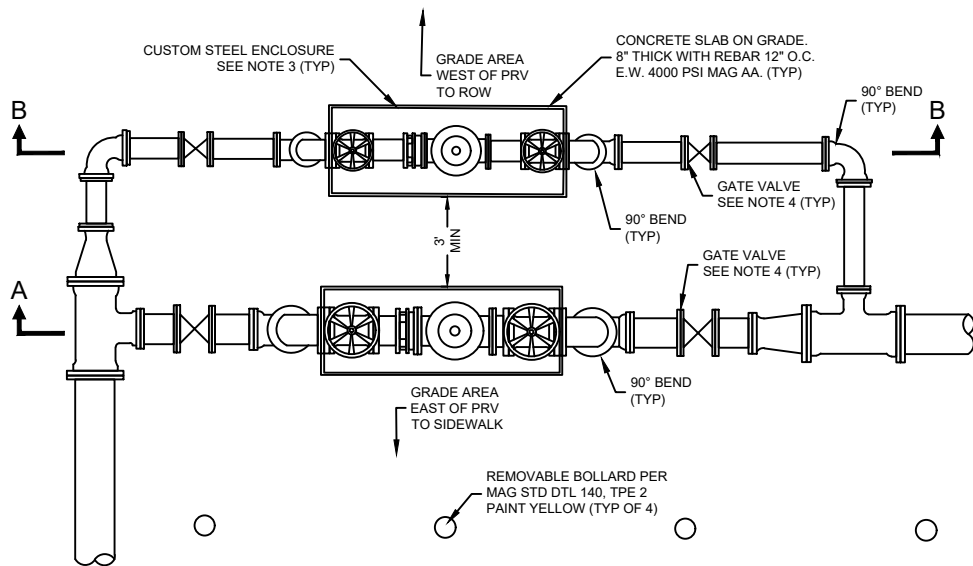
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July '25



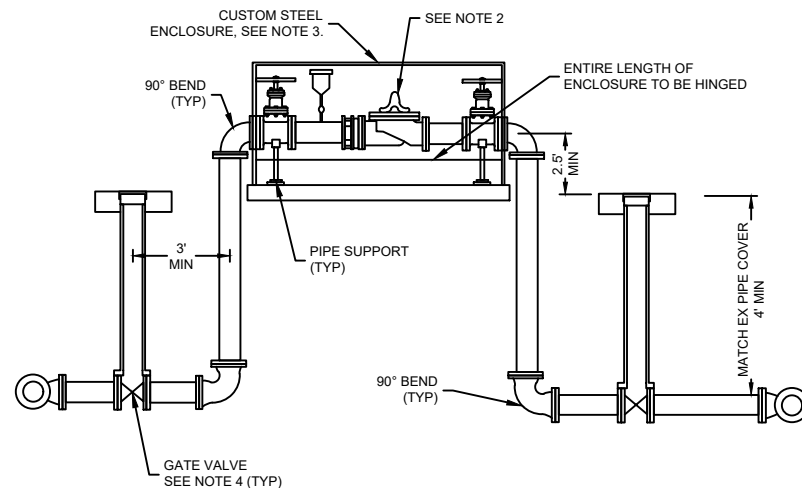
5656 W Talavi Blvd  
Glendale, AZ 85306

PRESSURE REDUCING  
VALVE (PRV) VAULT

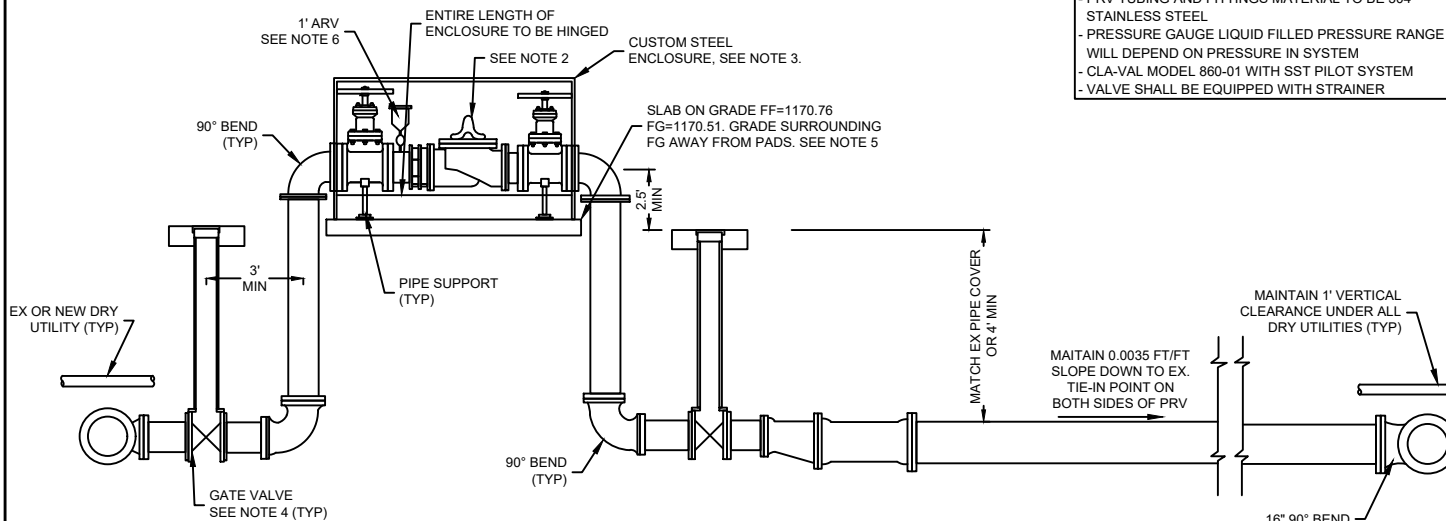
DETAIL NO.  
346-1



PRV PLAN VIEW



PRV PROFILE VIEW B-B



PRV PROFILE VIEW A-A

**OTHER REQUIREMENTS:**

- 1-INCH ARV LOCATED ON BOTH SIDES (SPOOL BAM #9)
- A DISMANTLING JOINT ON EITHER SIDE OF PRV
- PRV TUBING AND FITTINGS MATERIAL TO BE 304 STAINLESS STEEL
- PRESSURE GAUGE LIQUID FILLED PRESSURE RANGE WILL DEPEND ON PRESSURE IN SYSTEM
- CLA-VAL MODEL 860-01 WITH SST PILOT SYSTEM
- VALVE SHALL BE EQUIPPED WITH STRAINER

**GENERAL NOTES:**

1. RESTRAIN ALL NEW UNDERGROUND PIPING, ABOVE GROUND PIPING WILL BE FLANGED.
2. ALL PRESSURE REDUCING VALVES SHALL BE CLAVAL MODEL S0-01 BPSY KCX CL150FL WITH PILOT ISOLATION VALVES, PRESSURE OPEN SPEED CONTROL, Y-STRAINER EPOXY COATED, DUCTILE IRON BODY, STAINLESS STEEL, FULL SST PILOT SYSTEM, XP2F METERING PACKAGE WITH X117D.
3. PRV TO BE PROTECTED WITH LOCKABLE HINGED CLAMHELL ENCLOSURE; TOP PORTION SHALL BE HINGED AND HAVE HANDLES TO ALLOW IT TO BE LIFTED OPEN TO ALLOW FULL ACCESS TO PRV; WHEN OPENED, TOP PORTION SHALL STAY IN OPEN POSITION WITHOUT ASSISTANCE; METAL ENCLOSURE SHALL BE CAPABLE OF WITHSTANDING A MINIMUM OF 200 POUNDS PER SQUARE FOOT WITHOUT ANY PERMANENT DEFLECTION OR DISTORTION; POWDERCOAT ENTIRE ENCLOSURE WITH EPCOR APPROVED DESERT SAND; MAKE, MODEL, AND CONFIGURATION OF ENCLOSURE SHALL BE APPROVED BY EPCOR PRIOR TO INSTALLATION; ENCLOSURE SHALL BE BOLTED TO CONCRETE SLAB; SIDE OF ENCLOSURE ABOVE PIPE SHALL BE ENCLOSED AND BELOW PIPE MAY BE OPEN, COORDINATE WITH EPCOR OPERATIONS STAFF TO MATCH THEIR PREFERRED ENCLOSURE CONFIGURATION BASED ON EXISTING CLAMHELLS IN THEIR SYSTEM.
4. INSTALL VALVE BOX AND COVER PER MAG STD. DET. 391-1 TYPE C. ADJUST FRAME AND COVER PER MAG STD. DET. 270, SIZE AS NOTED.
5. OVEREXCAVATE 5' UNDER AND ADJACENT TO NEW PADS AND BACKFILL WITH COMPACTED ABC
6. ARV SHALL BE MODEL 1.200A T1, D1 R318-NBR-S2 BY APCO OR APPROVED EQUAL.
7. ALL MATERIALS IN CONTACT WITH POTABLE WATER SHALL BE NSF 60 & 61 CERTIFIED.

07/24/25 - 03:52pm 346-2.DWG

DATE:  
July '25



5656 W Talavi Blvd  
Glendale, AZ 85306

**ABOVE GROUND PRESSURE  
REDUCING ASSEMBLY**

DETAIL NO.  
346-2

**BACKFILL**

- IN NON-SAW CUT AREAS TO BE NATIVE MATERIAL SCREENED AT 4" OR LESS
- IN SAW CUT AREAS TO BE ONE SACK ABC SLURRY OR AS SPECIFIED BY R.O.W. AGENCY.

TRACER WIRE #12 GAUGE COPPER WIRE. WIRE NUTS NEED TO BE DRY SPLICE WATER-PROOF GEL PACKS.

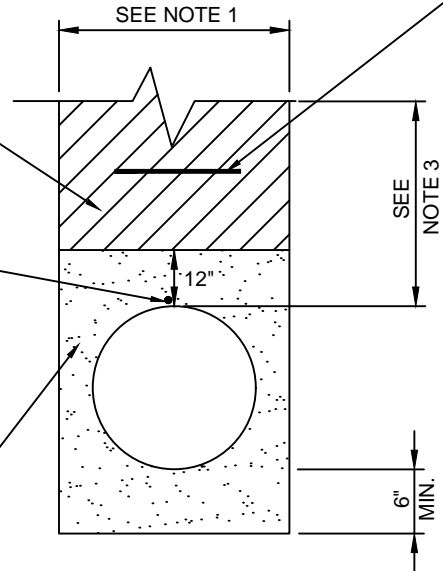
**PIPE ZONE**

FROM MIN. 6" BELOW BOTTOM OF PIPE TO MIN. 12" ABOVE TOP OF PIPE BACKFILL WITH THE FOLLOWING PER NOTE 4:

- A. WATER LINES
  - MARICOPA & SANTA CRUZ COUNTIES = ABC
  - MOHAVE COUNTY = SAND PER M.A.G. 701.3
- B. RECLAIMED WATER LINES
  - MARICOPA & SANTA CRUZ COUNTIES = ABC
  - MOHAVE COUNTY = SAND PER M.A.G. 701.3
- C. SEWER FORCE MAIN
  - MARICOPA & SANTA CRUZ COUNTIES = ABC
  - MOHAVE COUNTY = SAND PER M.A.G. 701.3
- D. GRAVITY SEWER LINES
  - PINAL COUNTY = ABC
  - ALL OTHER SERVICE AREAS = 3/8" CRUSHED WASHED ROCK (NO REJECTS)

**WATER AND SEWER SERVICES  
(ALL UTILITY SERVICE AREAS)**

MINIMUM 6" SAND BEDDING AND 6" SAND SHADING. BACKFILL AS PER DETAIL.



**PIPE MARKING TAPE**

MARKING TAPE SHALL BE LOCATED 18 INCHES BELOW GROUND SURFACE.

WORDING PER M.A.G. SEC. 616 TO BE USED FOR ALL WATER, & RECLAIMED WATER LINES AND SERVICES. THE MARKING TAPE SHALL BE PRINTED ON STANDARD COLORED NON-DETECTABLE TAPE. LETTERING SHALL BE BLACK, 1-1/2" HEIGHT MINIMUM.

RECLAIMED WATER LINES SHALL USE PURPLE TAPE & SHALL READ "CAUTION: RECLAIMED WATER LINE" POTABLE WATER LINES SHALL USE BLUE TAPE & SHALL READ "CAUTION: POTABLE WATER LINE"

RAW & NON-POTABLE WATER LINES SHALL USE YELLOW TAPE & SHALL READ "RAW WATER MAINS" AND/OR "NON-POTABLE WATER MAINS".

SEWER AND SERVICE LINES SHALL USE GREEN TAPE & SHALL READ "CAUTION: SEWER LINE".

**NOTES:**

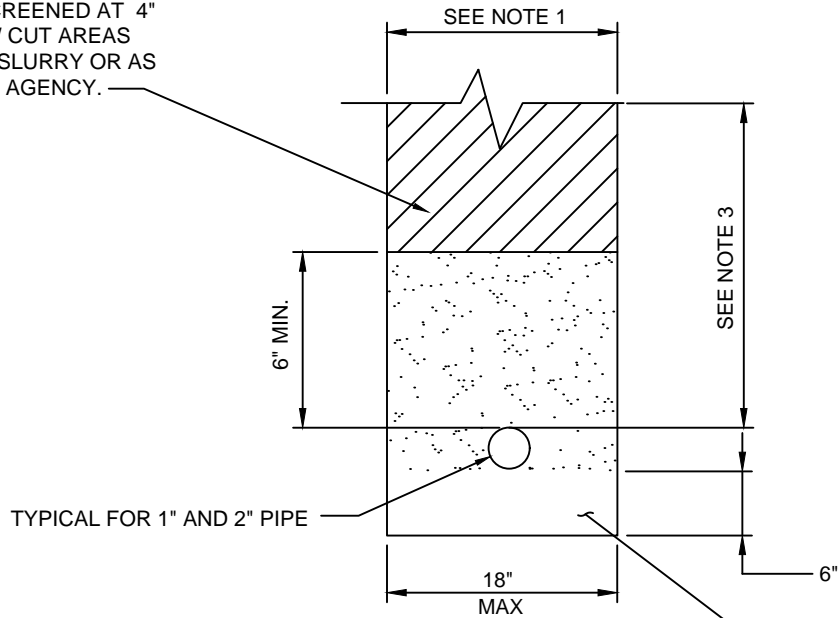
1. TRENCH WILL BE IN ACCORDANCE WITH M.A.G. SECTION 601.
2. 1/2 SACK ABC SLURRY (CLSM) TO BE IN ACCORDANCE WITH M.A.G. SECTION 728.
3. DEPTH OF BURY TO BE MIN. 48"
4. 3/8" CRUSHED WASHED ROCK TO BE IN ACCORDANCE WITH M.A.G. SECTION 716-2. AND TABLE 716-2. SAND TO BE IN ACCORDANCE WITH M.A.G. SECTION 701.3. ABC TO BE IN ACCORDANCE WITH M.A.G. SECTION 702.2 AND TABLE 702-1.
5. TRACER WIRE IS TO BE BROUGHT UP TO GRADE AT EACH FIRE HYDRANT TO GROUND / VALVE BOX.

350-1.DWG 07/24/25 - 03:39pm

DATE: <b>July '25</b>		5656 W Talavi Blvd Glendale, AZ 85306	<b>PIPE TRENCH DETAIL</b>	DETAIL NO. <b>350-1</b>
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**BACKFILL**

IN NON-SAW CUT AREAS TO BE NATIVE MATERIAL SCREENED AT 4" OR LESS AND IN SAW CUT AREAS TO BE 1/2 SACK ABC SLURRY OR AS SPECIFIED BY R.O.W. AGENCY.



**BEDDING**

**WATER AND SEWER SERVICES**

MINIMUM 6" SAND BEDDING AND 6" SAND SHADING. BACKFILL AS PER ABOVE.

**NOTES:**

1. TRENCH WILL BE IN ACCORDANCE WITH M.A.G. SECTION 601.
2. ONE-HALF SACK ABC SLURRY (CLSM) TO BE IN ACCORDANCE WITH M.A.G. SECTION 728.
3. DEPTH OF BURY TO BE MIN. 48" IN STREETS.
4. SAND TO BE IN ACCORDANCE WITH M.A.G. SECTION 701.3.

07/24/25 - 03:39pm  
350-2.DWG

DATE:

July '25

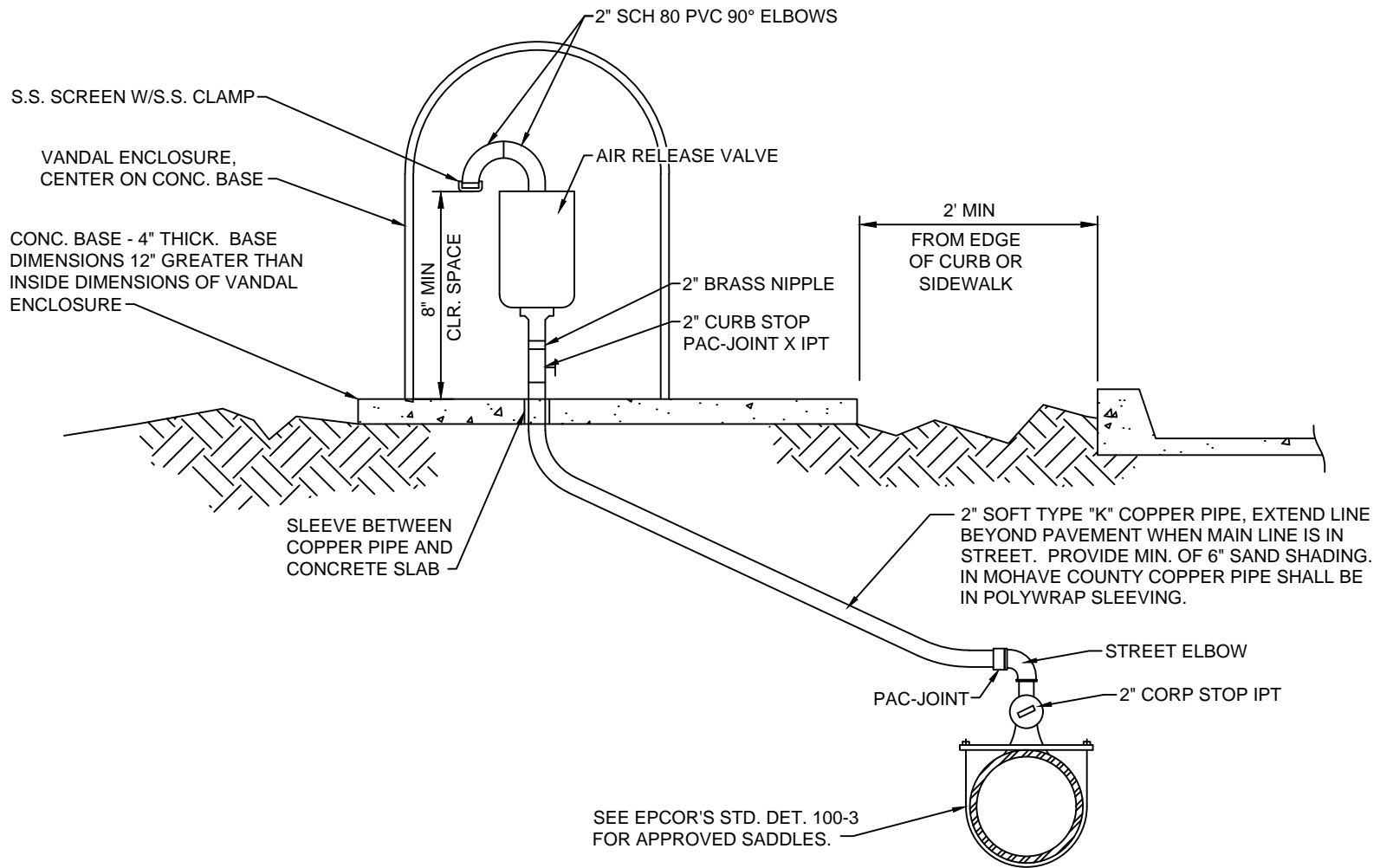


5656 W Talavi Blvd  
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PIPE TRENCH DETAIL  
FOR SERVICES

DETAIL NO.

350-2

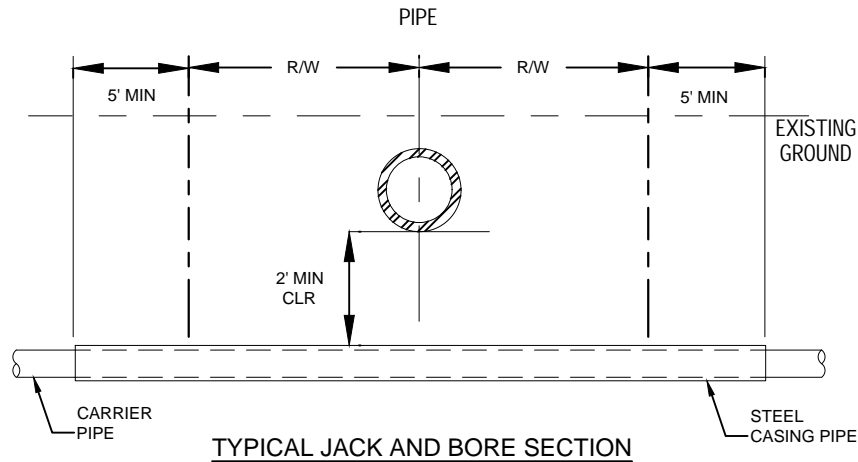


**NOTES:**

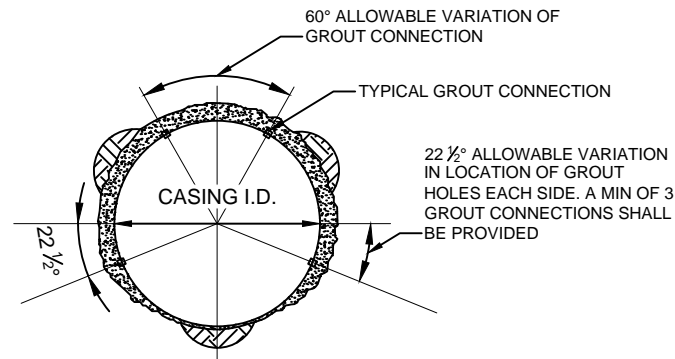
1. VANDAL ENCLOSURE TO BE "QEM 1 GUARDSHACK" OR EPCOR APPROVED EQUAL.
2. COPPER LINE FROM MAIN TO AIR RELEASE VALVE TO BE INSTALLED WITH POSITIVE SLOPE TO PREVENT BLOCKAGE.
3. PROVIDE PER EPCOR'S WATER SPECIFICATIONS APPROVED MATERIALS LIST.
4. MAG STD. DET. 140-1 PROTECTION BOLLARDS IN TRAFFIC AREAS.
5. ALL ABOVE GROUND AIR RELEASE VALVES MUST BE PRE-APPROVED BY EPCOR. UNDERGROUND AIR RELEASE VALVES PER EPCOR'S STD. DET. 351-3.

07/24/25 - 03:39pm 351-1.DWG

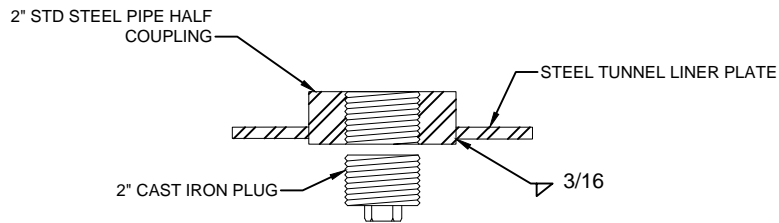
DATE: July '25		5656 W Talavi Blvd Glendale, AZ 85306	<b>POTABLE AIR RELEASE VALVE</b>	DETAIL NO. 351-1
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**TYPICAL JACK AND BORE SECTION**



**CASING PIPE GROUTING DETAIL**



**TYPICAL GROUT CONNECTION DETAIL**

**NOTES:**

1. ALL WORK ON JACK AND BORE SHALL CONFORM TO MAG STANDARD SPECIFICATIONS SECTION 602 UNLESS OTHERWISE NOTED.
2. CASING SHALL EXTEND A MINIMUM OF FIVE FEET BEYOND THE RIGHT-OF-WAY.
3. FOR CASING PIPE 36 INCHES OR LARGER, GROUT CONNECTIONS SHALL BE INSTALLED. GROUT CONNECTIONS SHALL BE PROVIDED AT A MAXIMUM SPACING OF 10 FEET.
4. CARRIER PIPE SHALL BE PLACED IN ACCORDANCE WITH MAG STANDARD SPECIFICATIONS. JOINT RESTRAINTS SHALL BE INSTALLED FOR THE SECTION OF CARRIER PIPE INSIDE THE CASING PIPE.
5. THE REQUIREMENTS FOR THE TYPE OF SOIL AND LEVEL OF COMPACTION OF THE PIPE EMBEDMENT MUST BE FOLLOWED UP TO THE ENDS OF THE PIPE CASING.
6. IF THERE IS WATER IN THE PIPE AT THE TIME OF INSTALLATION, SEEPAGE OF WATER IS POSSIBLE AND RUNNING GROUNDS CONDITIONS MAY BE ANTICIPATED. WHERE THESE CONDITIONS EXIST, THE CUTTING HEAD SHALL BE SHIELDED TO AVOID LOSS OF SUPPORT FOR THE PIPE.
7. DURING ANY DIRECTIONAL BORING OPERATIONS, PRECAUTIONS SHALL BE TAKEN TO ENSURE STORM WATER RUNOFF WILL NOT FLOW INTO THE JACKING PITS.
8. TRENCHLESS CONSTRUCTION DRIVING AND RECEIVING PITS FOR CONSTRUCTIONAL SAFETY SHALL BE IN ACCORDANCE WITH OSHA REQUIREMENTS.
9. CONTRACTOR TO NOTIFY INSPECTOR 48 HOURS IN ADVANCE PRIOR TO BORING.
10. CASING PIPE SHALL BE WELDED STEEL ASTM A-252 GRADE B.
11. CARRIER PIPE SHALL BE DUCTILE IRON WITH MEGA-LUG JOINT RESTRAINTS, SERIES 1100.
12. FOR RAILROAD CROSSINGS, REFER TO RAILROAD OWNER REQUIREMENTS.

Carrier Pipe Diameter (inches)	Water		Sewer	
	Minimum Casing Pipe Diameter (inches)	Minimum Casing Pipe Wall Thickness (inch)	Minimum Casing Pipe Diameter (inches)	Minimum Casing Pipe Wall Thickness (inch)
4	24	3/8	30	3/8
6	24	3/8	30	3/8
8	30	3/8	36	3/8
10	30	3/8	36	3/8
12	36	3/8	42	1/2
14	36	3/8	42	1/2
15	36	3/8	42	1/2
16	36	3/8	42	1/2
18	42	1/2	48	1/2
20	42	1/2	48	1/2
21	42	1/2	48	1/2
24	48	1/2	54	5/8
27	48	1/2	54	5/8
30	60	5/8	66	3/4
36	60	5/8	66	3/4
42	72	3/4	78	3/4
48	80	1	86	1

352-1.DWG 07/24/25 - 03:39pm

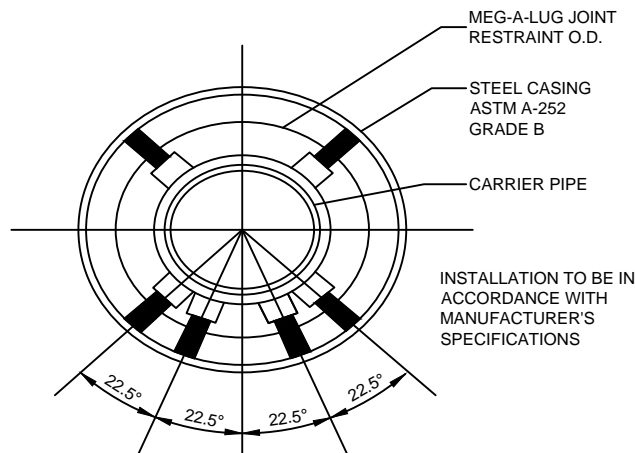
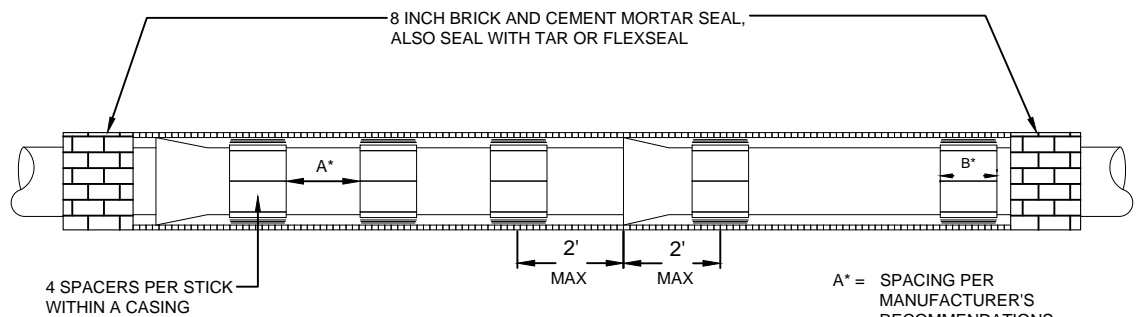
DATE:  
July '25



5656 W Talavi Blvd  
Glendale, AZ 85306

CASING JACK-AND-BORE DETAIL

DETAIL NO.  
352-1



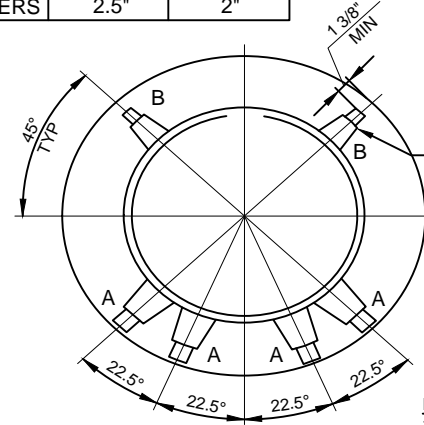
A\* = SPACING PER MANUFACTURER'S RECOMMENDATIONS (4' MAXIMUM)

B\* = 8" MINIMUM ON 36" AND SMALLER DIAMETER CARRIER PIPE  
12" MINIMUM FOR GREATER THAN 36" DIAMETER CARRIER PIPE.

INSTALLATION TO BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS

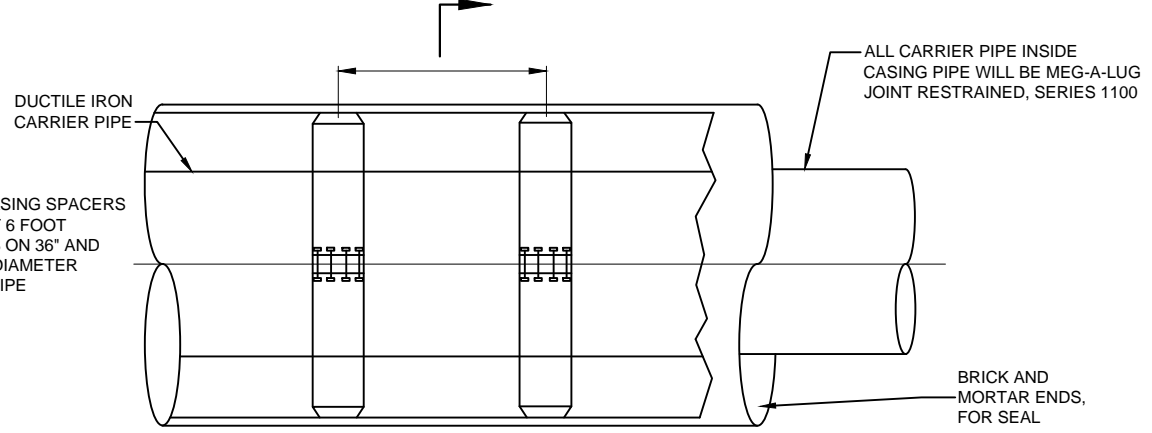
CASING PIPE DETAIL

	A	B
RISER	5"	4"
RUNNERS	2.5"	2"



SECTION

- NOTES:
1. NO FILL IN ANNULAR SPACE
  2. A CASING SPACER MUST BE PLACED WITHIN 2 FEET OF EACH END OF THE CASING PIPE
  3. CASING SPACERS SHALL BE APS (SSI) OR CASCADE TYPE (CCS)



PLAN

CASING SPACER DETAIL

352-2.DWG 07/24/25 - 03:39pm

DATE:  
July '25

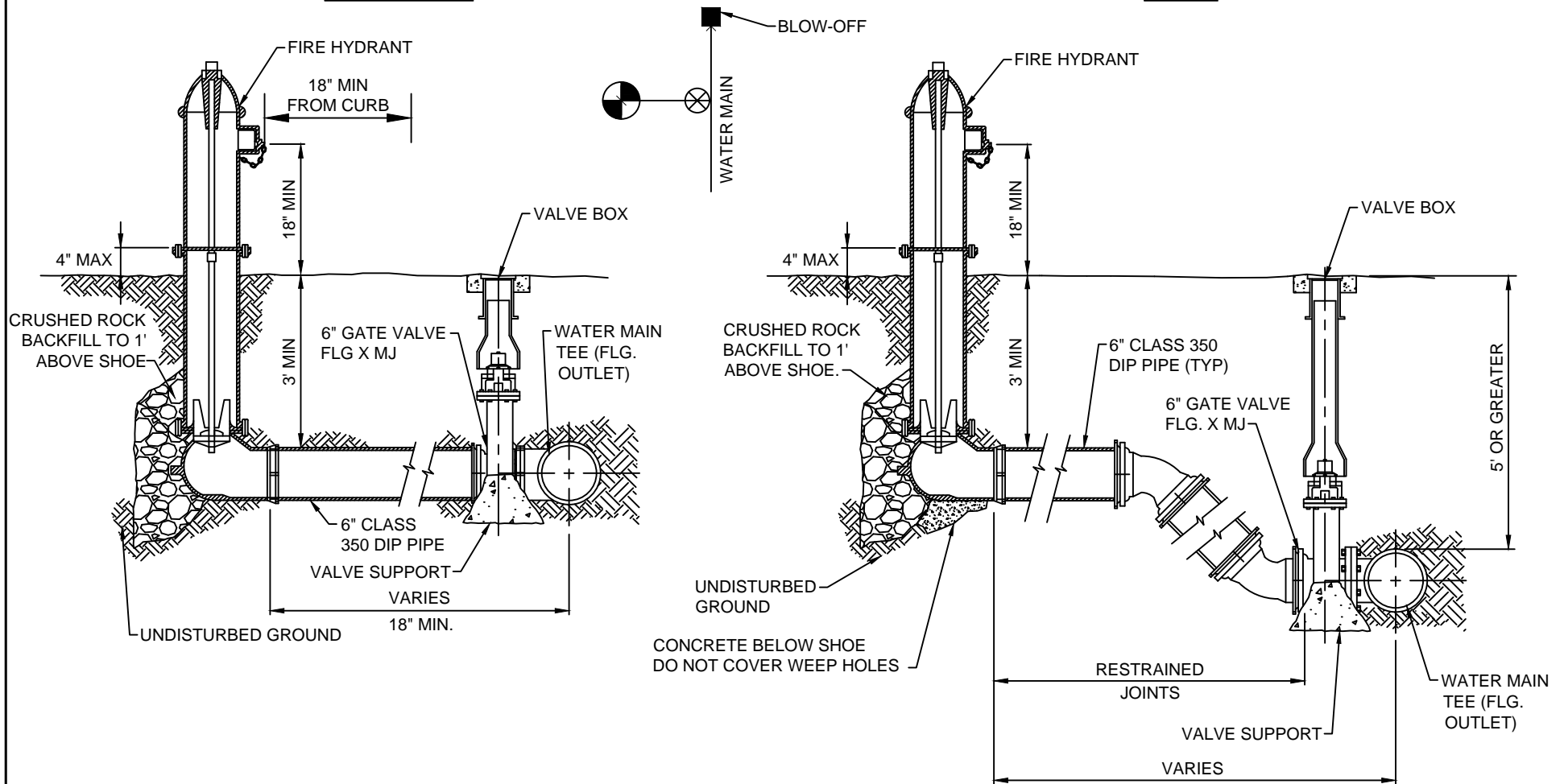


5656 W Talavi Blvd  
Glendale, AZ 85306

DETAIL NO.  
352-2

**STANDARD**

**DEEP**

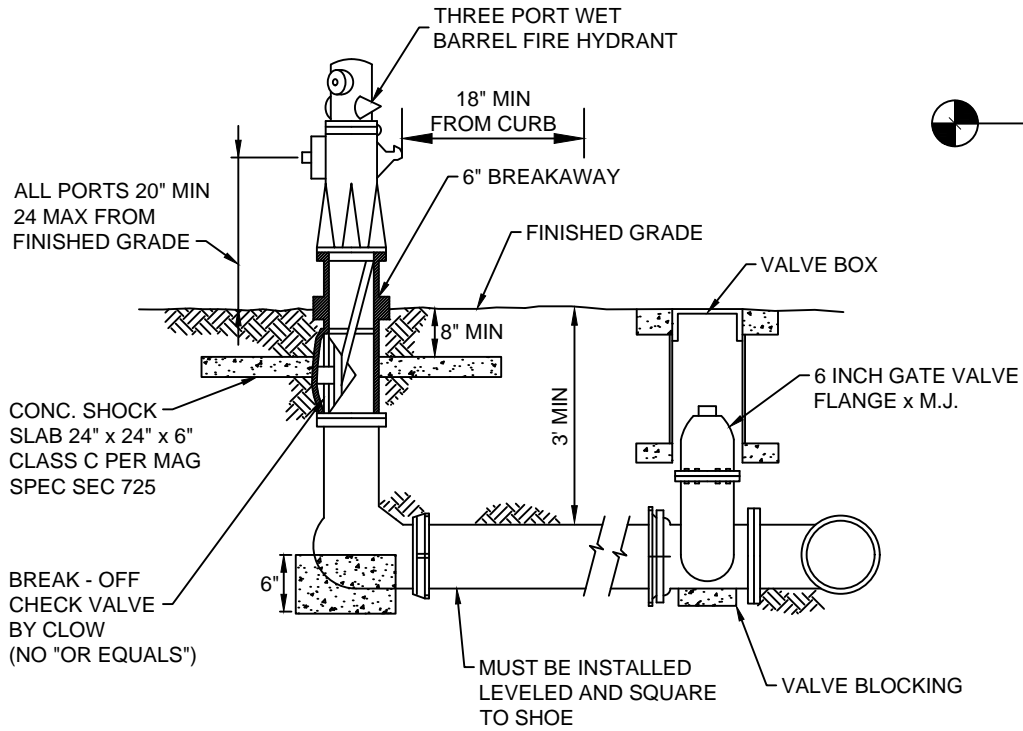


**NOTES:**

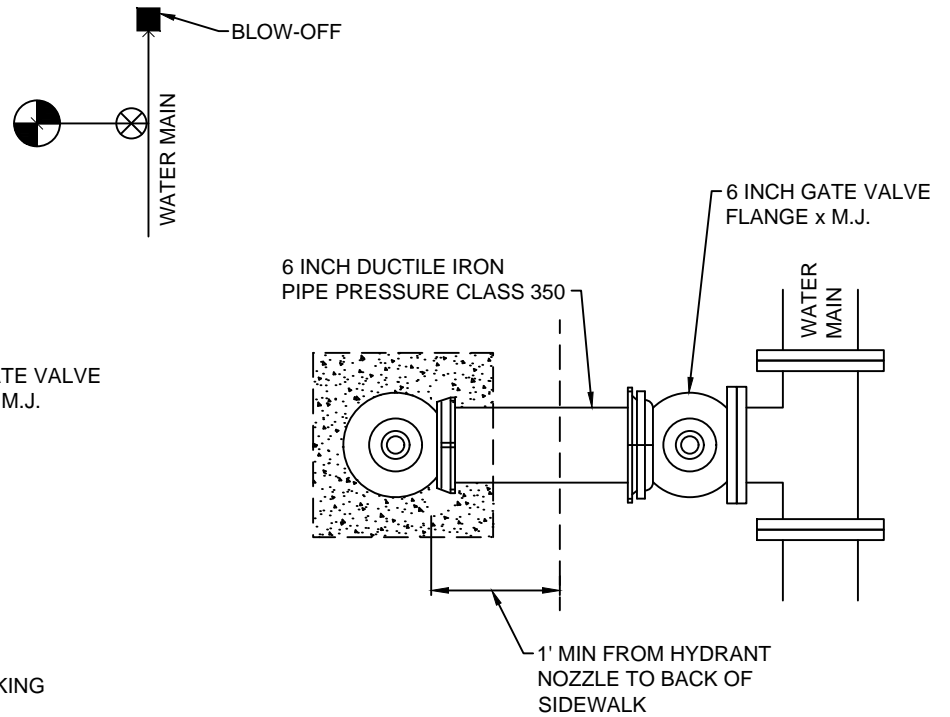
1. SEE EPCOR STD. DET. 100-1 FOR FIRE HYDRANT GENERAL NOTES.
2. ALL JOINT RESTRAINTS PER M.A.G. STD. DET. 303- 1 & 2 AND M.A.G. SECT. 750.3.
3. VALVE BOX PER M.A.G. STD. DET. 391-1-C.
4. ALL VALVE OPERATING NUTS SHALL BE A MAX OF 36 INCHES BELOW GROUND SURFACE.
5. DRY BARREL HYDRANTS SHALL BE MUELLER "CENTURION", CLOW "MEDALLION", OR KENNEDY "K81D", WITH NATIONAL STANDARD HOSE THREADS. NO APPROVED EQUALS WILL BE ACCEPTED.
6. PROVIDED A MINIMUM 3 FOOT DIAMETER CLEARANCE AROUND HYDRANT.

07/24/25 - 03:39pm 360-1.DWG

DATE: July '25		5656 W Talavi Blvd Glendale, AZ 85306	<b>DRY BARREL FIRE HYDRANT INSTALLATION</b>	DETAIL NO. 360-1
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**SECTION**



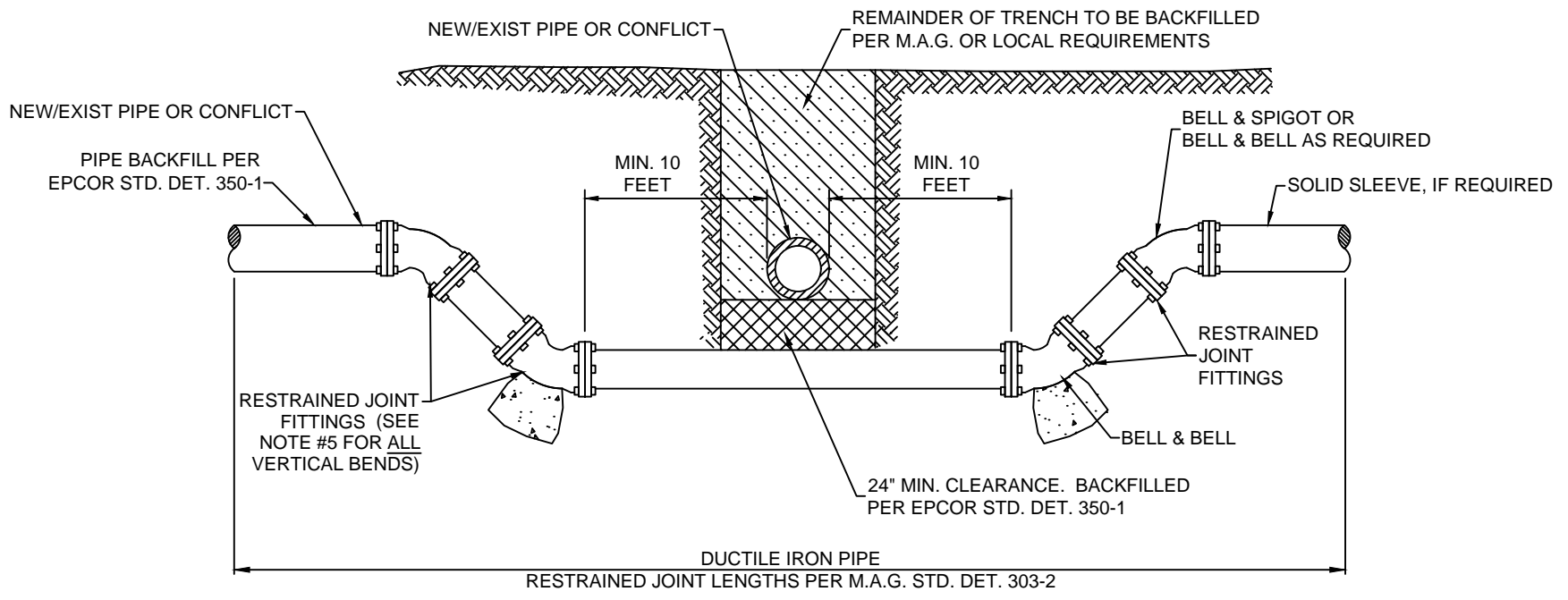
**PLAN VIEW**

**NOTES:**

1. SEE EPCOR STD. DET. 100-1 FOR FIRE HYDRANT GENERAL NOTES.
2. ALL JOINT RESTRAINTS PER M.A.G. STD. DET. 303- 1 & 2 AND M.A.G. SECT. 750.3.
3. ALL JOINTS SHALL BE RESTRAINED, INCLUDING MAIN AT TEE ENDS.
4. APPROVED HYDRANTS INCLUDE: CLOW\* AND JONES  
(\*CLOW HYDRANTS SHALL BE MODEL 860 WITH 2 1/2" FEMALE NPT ON TOP OF HYDRANT TO ALLOW FOR PRESSURE MONITORING).
5. THE 6 INCH GATE VALVE SHALL BE FLANGED BY MECHANICAL JOINT.
6. PROVIDE A MINIMUM 3 FOOT DIAMETER CLEARANCE AROUND HYDRANT.
7. THE HYDRANT SHALL HAVE 2 - 2 1/2" PORTS, AND 1 - 4 1/2" PORT.
8. ALL HYDRANTS SHALL HAVE NATIONAL STANDARD HOSE THREADS.
9. VALVE BOX PER M.A.G. STD. DET. 391-1-C.

360-2.DWG 07/24/25 - 03:39pm

DATE:	<b>July '25</b>		5656 W Talavi Blvd Glendale, AZ 85306	<b>WET BARREL FIRE HYDRANT INSTALLATION</b>	DETAIL NO. <b>360-2</b>
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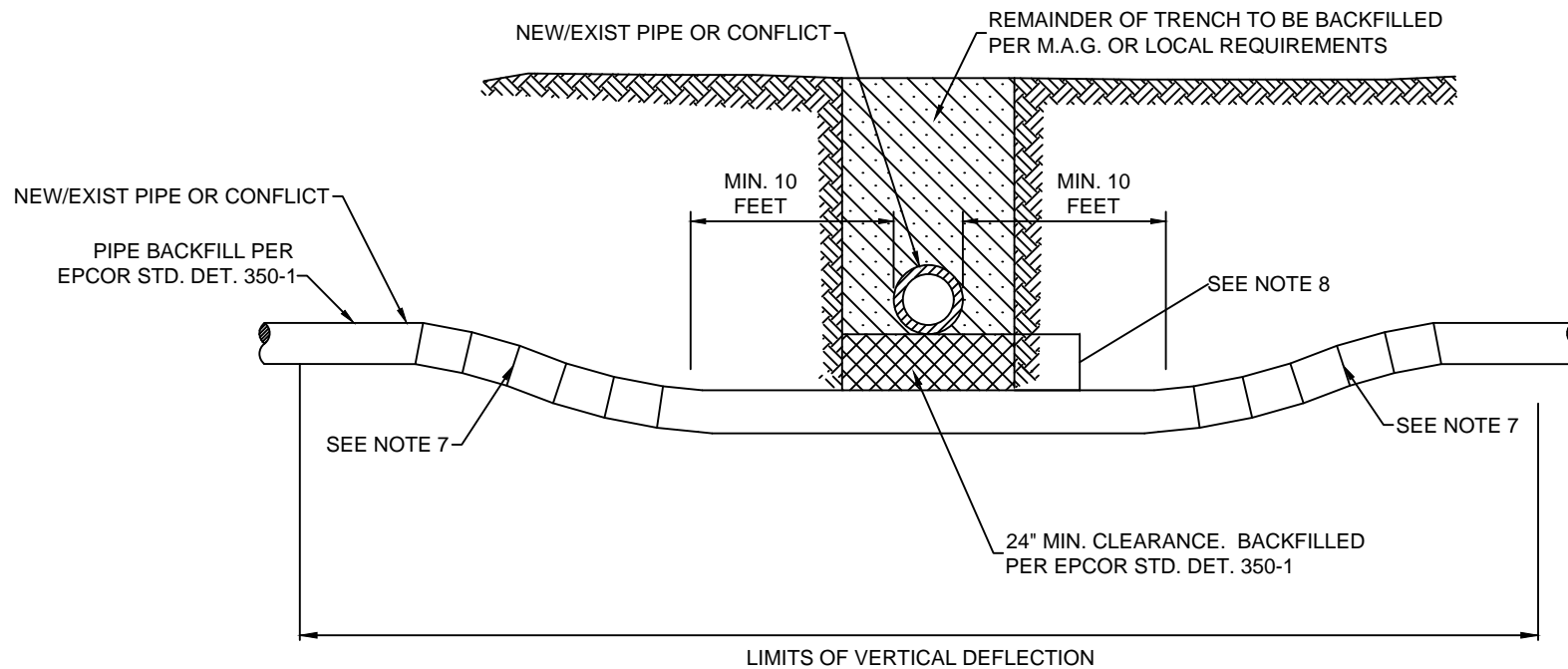


**NOTES:**

1. ALL JOINT RESTRAINTS ARE TO BE MEG-A-LUG, SIGMA, EEBA OR STAR, NO FIELD LOCKS OR UNIFLANGE, FOR LENGTHS IN ACCORDANCE w/ M.A.G. STD. DET. 303-2
2. PIPE IS TO BE DUCTILE IRON, MINIMUM PRESSURE CLASS 150.
3. ALL DUCTILE IRON PIPE SHALL BE POLYETHYLENE WRAPPED FOR THE ENTIRE LENGTH IN ACCORDANCE WITH M.A.G. SECT. 610.6
4. BEGIN/END RESTRAINED JOINT STATIONING TO BE SHOWN ON THE APPROVED CONSTRUCTION DRAWINGS. ALL BENDS & FITTINGS SHALL HAVE STATIONING AND ELEVATION SHOWN ON THE APPROVED CONSTRUCTION DRAWINGS. THE BOTTOM ELEVATION OF THE CONFLICT AND THE TOP ELEVATION OF THE DUCTILE IRON PIPE AT THE CENTERLINE OF THE CONFLICT SHALL BE SHOWN ON THE APPROVED CONSTRUCTION DRAWINGS.
5. INSTALL ANCHOR BLOCKS/THRUST BLOCKS AT ALL VERTICAL BENDS PER M.A.G. STD. DET. 381.
6. AIR RELEASE VALVES ARE REQUIRED ON THE HIGH POINT OF VERTICAL REALIGNMENT.

370-1.DWG 07/24/25 - 03:39pm

DATE:	<b>July '25</b>		5656 W Talavi Blvd Glendale, AZ 85306	<b>VERTICAL RE-ALIGNMENT OF WATER MAIN</b>	DETAIL NO. <b>370-1</b>
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**NOTES:**

1. ALL JOINT RESTRAINTS IF REQUIRED ARE TO BE MEG-A-LUG, SIGMA, EEBA OR STAR, NO FIELD LOCKS OR UNIFLANGE, FOR LENGTHS IN ACCORDANCE w/ M.A.G. STD. DET. 303-2
2. DUCTILE IRON PIPE SHALL BE MINIMUM PRESSURE CLASS 150.
3. ALL DUCTILE IRON PIPE SHALL BE POLYETHYLENE WRAPPED FOR THE ENTIRE LENGTH IN ACCORDANCE WITH M.A.G. SECT. 610.6
4. BEGIN/END DEFLECTION JOINT STATIONING TO BE SHOWN ON THE APPROVED CONSTRUCTION DRAWINGS. ALL BENDS & FITTINGS SHALL HAVE STATIONING AND ELEVATION SHOWN ON THE APPROVED CONSTRUCTION DRAWINGS. THE BOTTOM ELEVATION OF THE CONFLICT AND THE TOP ELEVATION OF THE PIPE AT THE CENTERLINE OF THE CONFLICT SHALL BE SHOWN ON THE APPROVED CONSTRUCTION DRAWINGS.
5. SEE NOTE 7
6. AIR RELEASE VALVES ARE REQUIRED ON THE HIGH POINT OF VERTICAL REALIGNMENT.
7. ANGLE OF DEFLECTION SHALL MEET THE PIPE MANUFACTURER'S RECOMMENDATIONS. IN NO CASE SHALL THE ANGLE OF DEFLECTION FOR PUSH ON OR M.J DIP JOINTS EXCEED 5°; 1° FOR C-900 PVC PIPE PUSH ON JOINTS. CONGITUDINAL OR BARREL BENDING OF PIPE IS NOT ALLOWED.
8. FOR DEPTHS GREATER THAN 4 FT USE EPCOR DET. 370-1 TO ACHIEVE THE VERTICAL REALIGNMENT

370-2.DWG 07/24/25 - 03:39pm

DATE:  
July '25



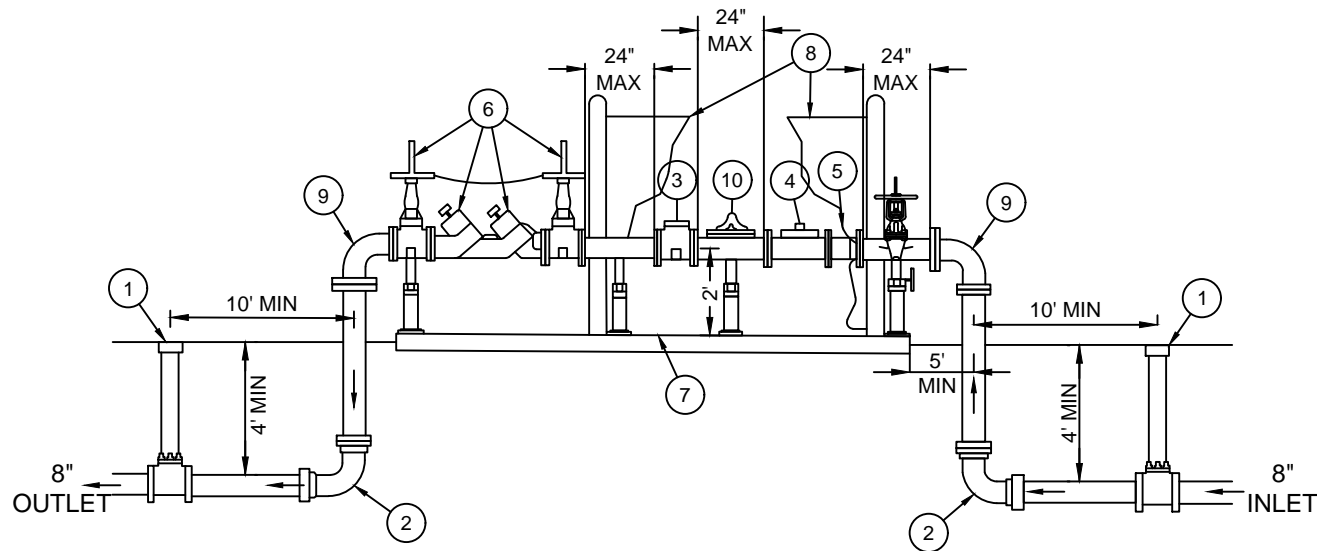
5656 W Talavi Blvd  
Glendale, AZ 85306

**VERTICAL DEFLECTION  
OF WATER MAINS  
6" TO 12" DIAMETER**

DETAIL NO.  
370-2

## INTERCONNECT NOTES

1. 8" GATE VALVE AND BOX, MJ X FLG (NON-RISING STEM)
2. 8" 90° DUCTILE IRON BEND, MJ WITH MEG-A-LUG RESTRAINT
3. 8" CLA-VAL DIFFERENTIAL PRESSURE SUSTAINING VALVE
4. 8" NEPTUNE METER AFTER APPLICATION AND PAYMENT OF FEES
5. 8" STRAINER, SAME MANUFACTURER AS METER, NSF CERTIFIED
6. REDUCED PRESSURE PRINCIPLE ASSEMBLY PER EPCOR STD. DET. 310-2
7. 8" THICK CONCRETE BASE WITH #4 REBAR AT 12" ON CENTER EACH WAY CONCRETE PAD ON COMPACTED NATIVE SOIL
8. LOCKING CAGE TO COVER THE PRESSURE REDUCING VALVE, METER AND STRAINER. CAGE TO BE 'DESERT SAND' COLOR. SUBMIT SHOP DRAWING AND SPECIFICATIONS TO EPCOR FOR APPROVAL
9. 8" 90° DUCTILE IRON BEND, FLANGED.
10. 2" TAPPING SADDLE WITH BRASS NIPPLE



## GENERAL NOTES

1. ALL ABOVE GROUND PIPING AND VALVES SHALL BE PAINTED 'DESERT SAND' TO MATCH COLOR OF CAGE ENCLOSURE
2. PROTECTIVE BOLLARDS SHALL BE INSTALLED TO PROTECT THE ASSEMBLY FROM TRAFFIC

375.DWG 07/24/25 - 03:39pm

DATE:

July '25

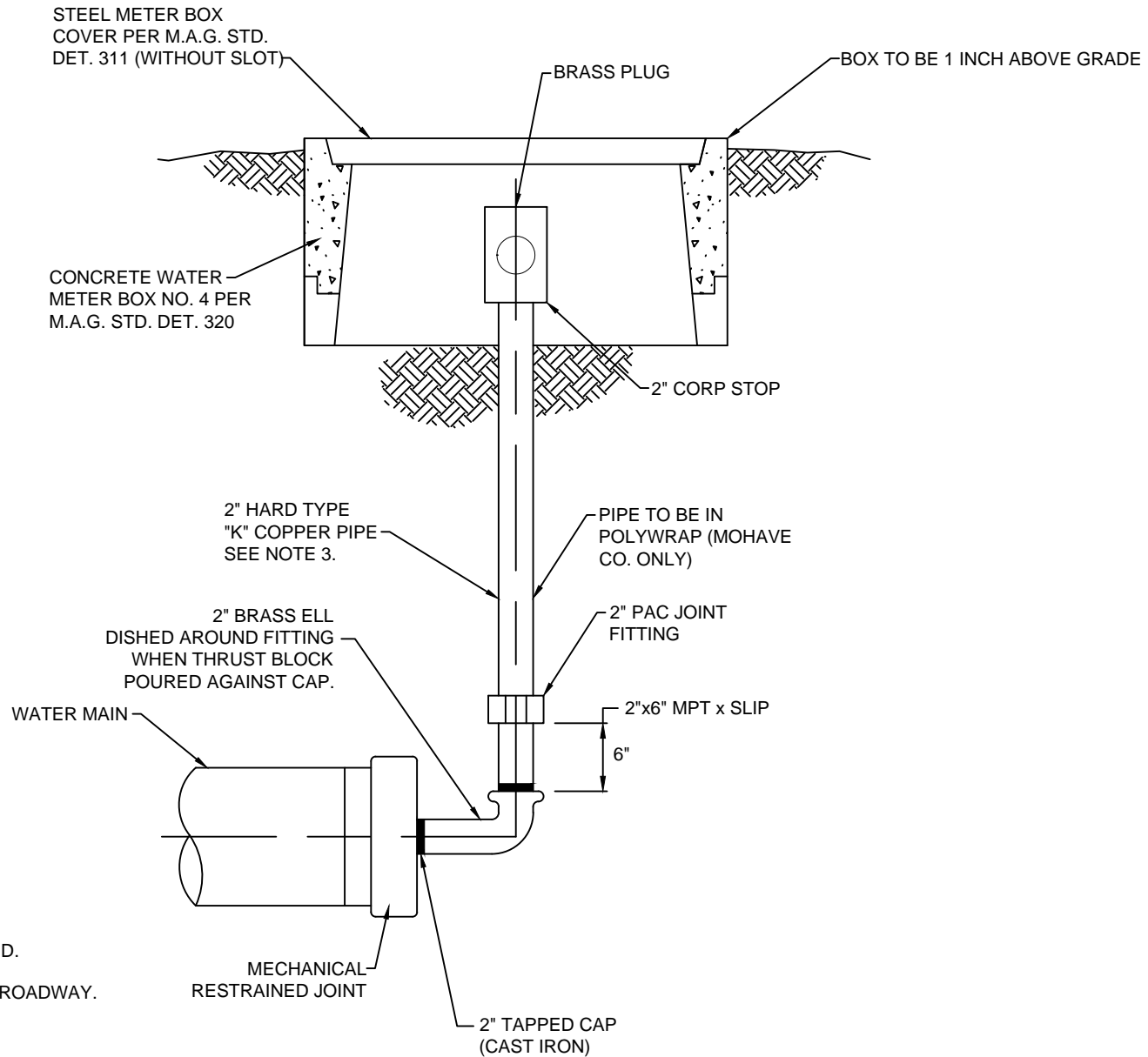


5656 W Talavi Blvd  
Glendale, AZ 85306

ABOVE GROUND INTERCONNECT LAYOUT

DETAIL NO.

375-1

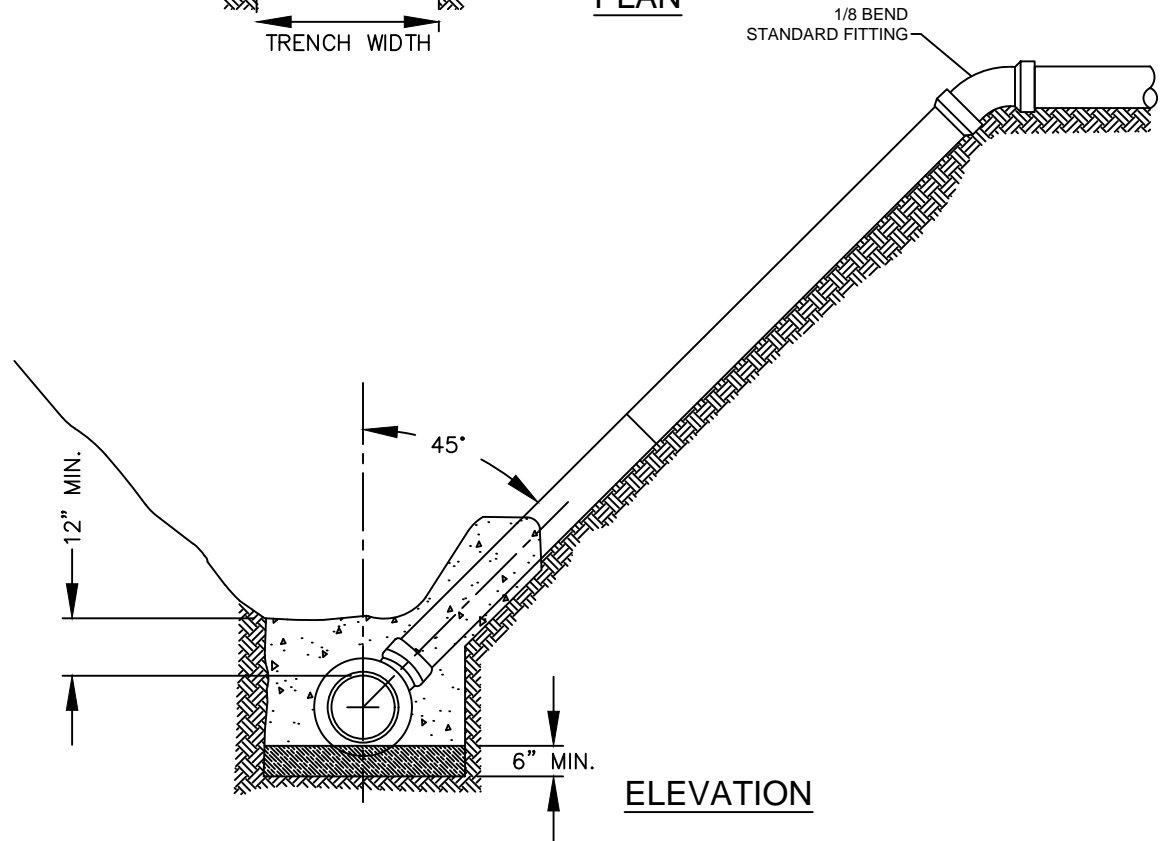
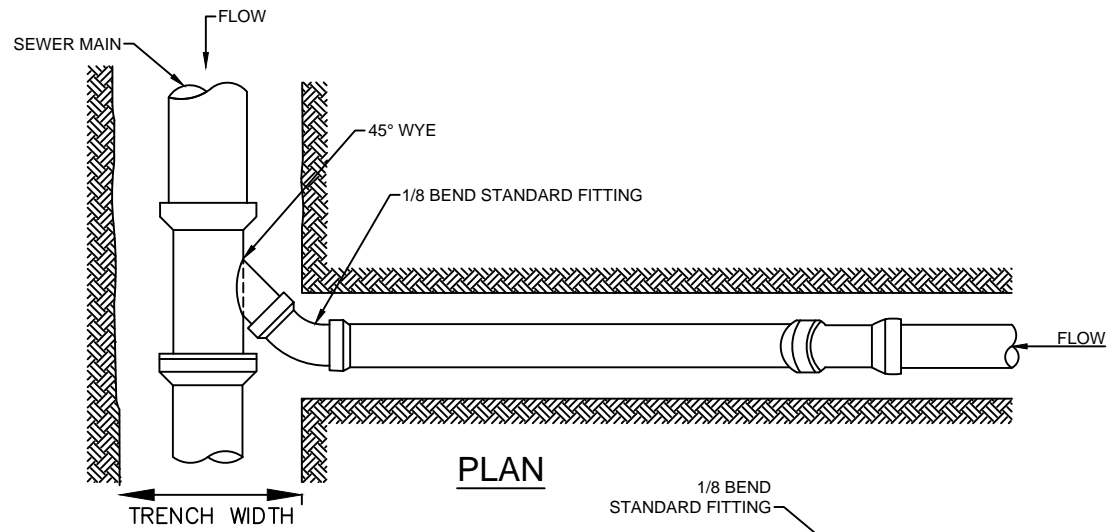


**NOTES:**

1. NO SOLDERED JOINTS
2. CARSONITE MARKER REQUIRED.
3. SOFT COPPER TO BE USED IN ROADWAY.

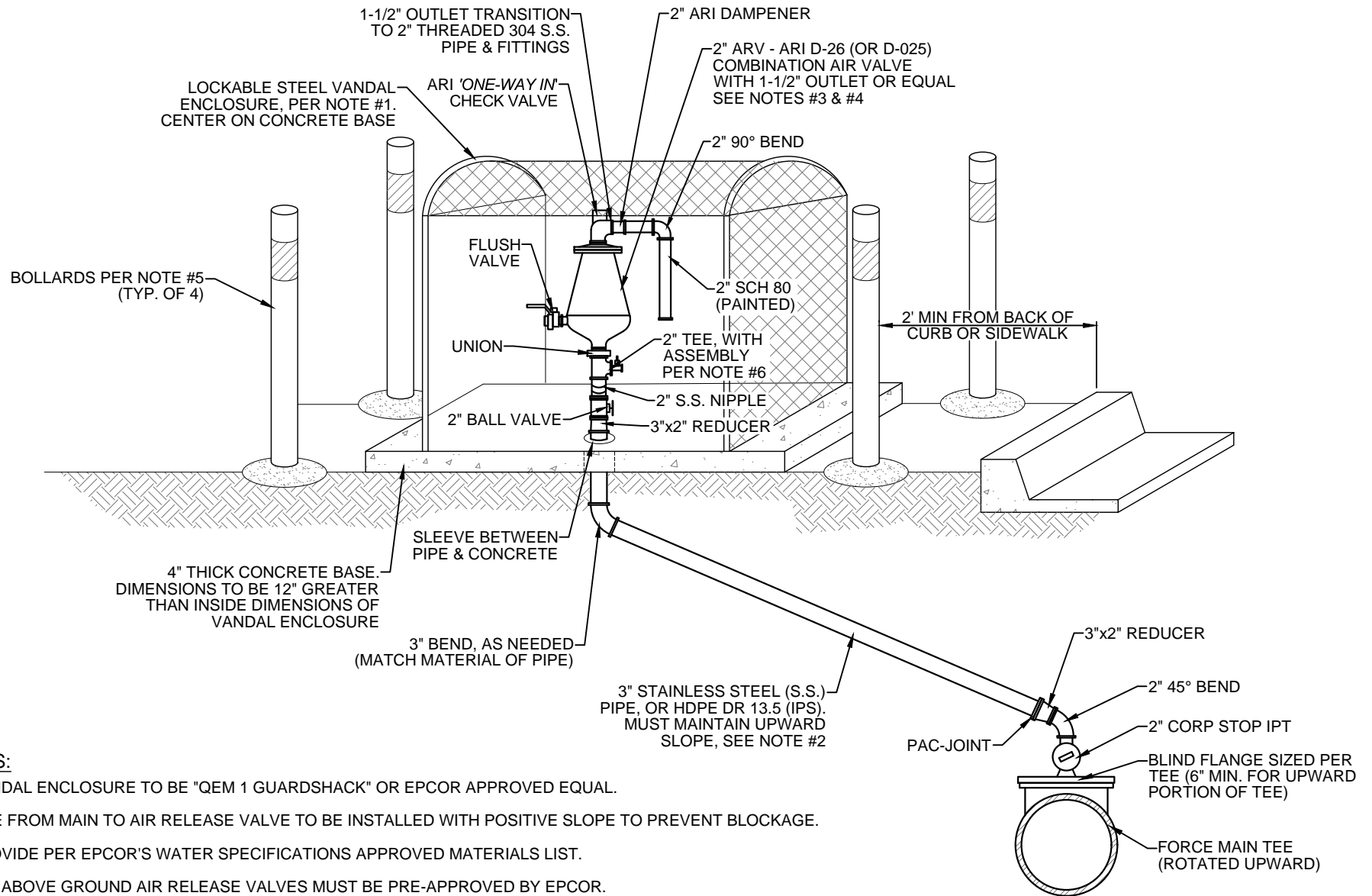
390-1.DWG 07/24/25 - 03:39pm

DATE: July '25		5656 W Talavi Blvd Glendale, AZ 85306	<b>POTABLE CURB STOP (BLOW OFF) WITH FLUSHING PIPE</b>	DETAIL NO. 390-1
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400-1.DWG 07/24/25 - 03:39pm

DATE: July '25		5656 W Talavi Blvd Glendale, AZ 85306	DEEP CUT SEWER CONNECTION (SEWER LATERAL)	DETAIL NO. 400-1
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**NOTES:**

1. VANDAL ENCLOSURE TO BE "QEM 1 GUARDSHACK" OR EPCOR APPROVED EQUAL.
2. LINE FROM MAIN TO AIR RELEASE VALVE TO BE INSTALLED WITH POSITIVE SLOPE TO PREVENT BLOCKAGE.
3. PROVIDE PER EPCOR'S WATER SPECIFICATIONS APPROVED MATERIALS LIST.
4. ALL ABOVE GROUND AIR RELEASE VALVES MUST BE PRE-APPROVED BY EPCOR.
5. MAG STD. DET. 140-1 PROTECTION BOLLARDS IN TRAFFIC AREAS.
6. 2" TEE AND STAINLESS STEEL 1/4" BALL VALVE WITH AN ASHCROFT S.S. GLYCERINE 0-160 PRESSURE GAUGE AND STAINLESS STEEL DIAPHRAGM SEAL.

410-1\_OFFSET.DWG 07/24/25 - 03:39pm

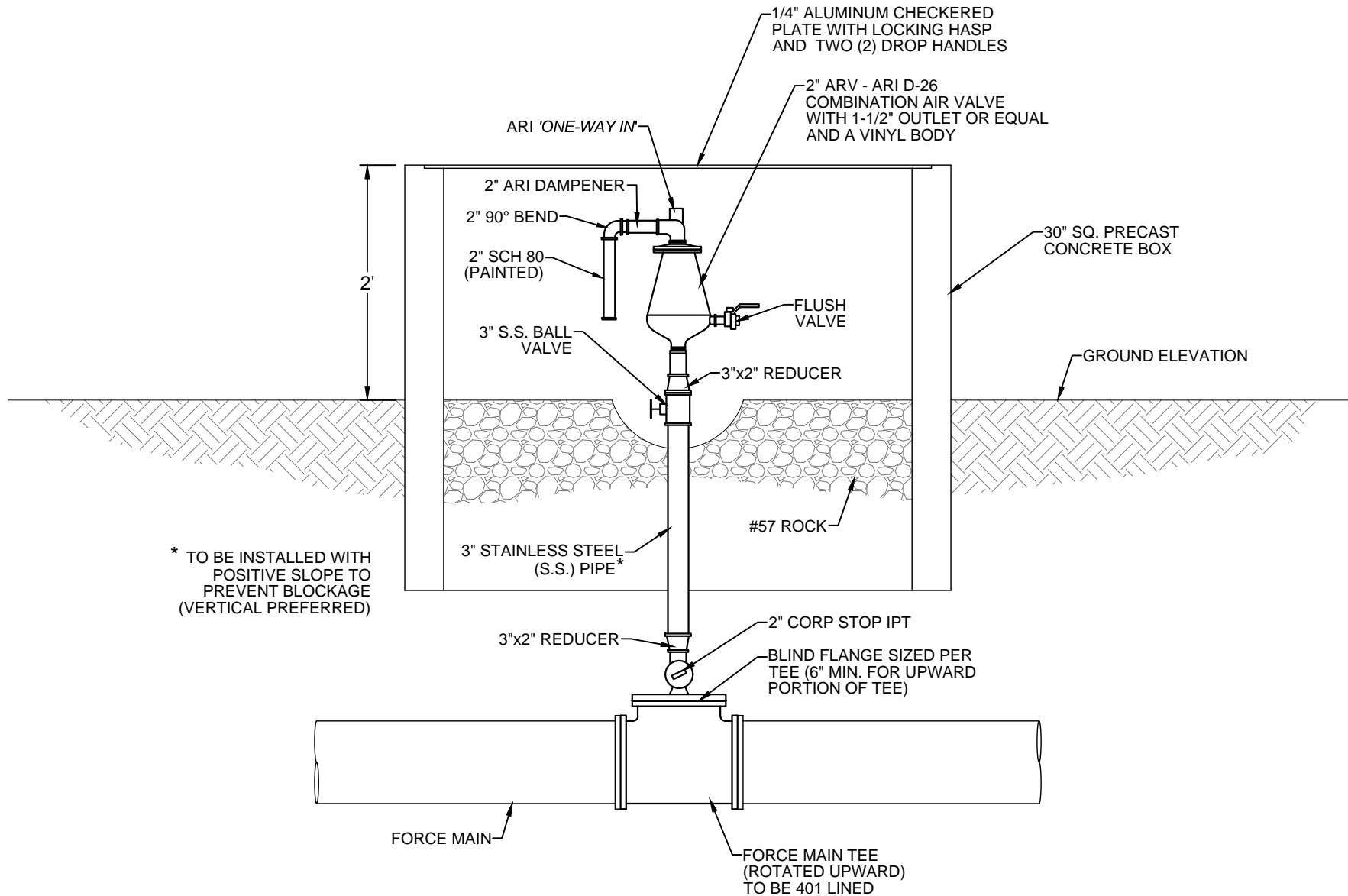
DATE:  
July '25



5656 W Talavi Blvd  
Glendale, AZ 85306

**WASTEWATER AIR RELEASE VALVE  
(ARV) ABOVE GROUND - OFFSET FROM  
MAIN**

DETAIL NO.  
410-1



\* TO BE INSTALLED WITH POSITIVE SLOPE TO PREVENT BLOCKAGE (VERTICAL PREFERRED)

07/24/25 - 03:39pm

410-2\_ABOVE.DWG

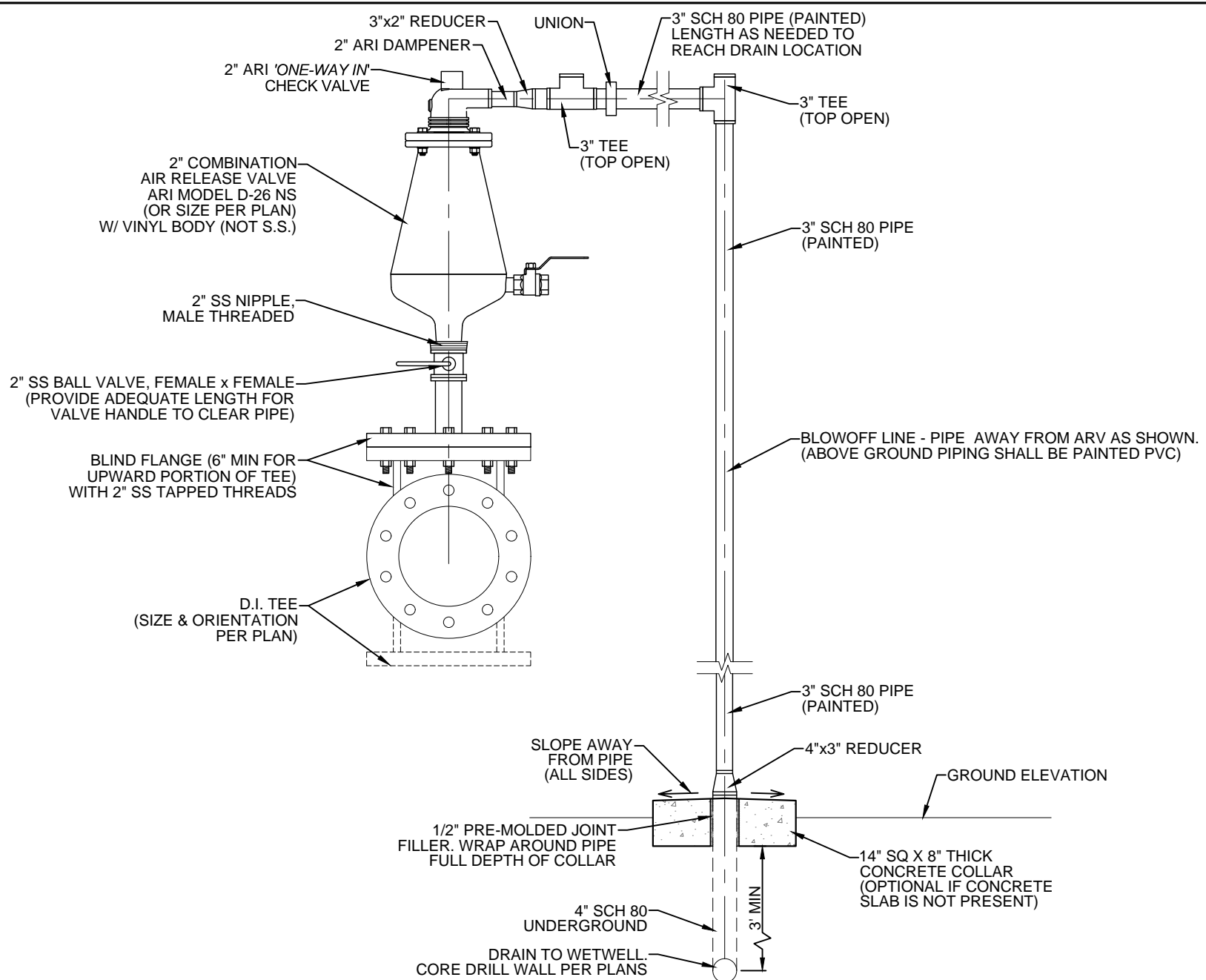
DATE:  
July '25



5656 W Talavi Blvd  
Glendale, AZ 85306

WASTEWATER AIR RELEASE VALVE  
(ARV) ABOVE GROUND - ABOVE MAIN

DETAIL NO.  
410-2



07/24/25 - 03:39pm

410-3\_LS.DWG

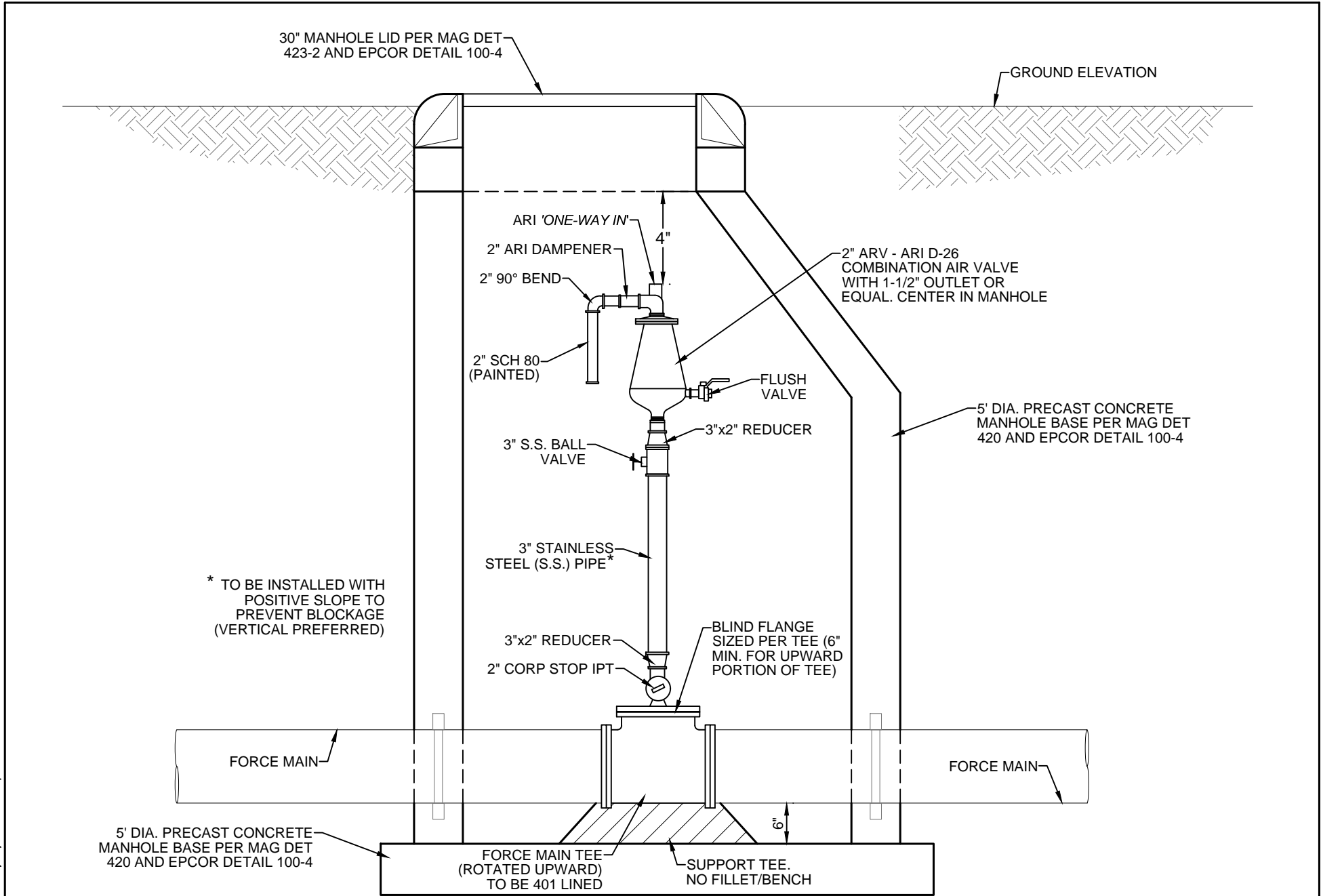
DATE:  
July '25



5656 W Talavi Blvd  
Glendale, AZ 85306

**WASTEWATER AIR RELEASE VALVE  
(ARV) LIFT STATION DISCHARGE**

DETAIL NO.  
410-3



30" MANHOLE LID PER MAG DET 423-2 AND EPCOR DETAIL 100-4

GROUND ELEVATION

ARI 'ONE-WAY IN'  
2" ARI DAMPENER  
2" 90° BEND  
2" SCH 80 (PAINTED)

2" ARV - ARI D-26 COMBINATION AIR VALVE WITH 1-1/2" OUTLET OR EQUAL. CENTER IN MANHOLE

3" S.S. BALL VALVE

FLUSH VALVE

5' DIA. PRECAST CONCRETE MANHOLE BASE PER MAG DET 420 AND EPCOR DETAIL 100-4

3" STAINLESS STEEL (S.S.) PIPE\*

\* TO BE INSTALLED WITH POSITIVE SLOPE TO PREVENT BLOCKAGE (VERTICAL PREFERRED)

3"x2" REDUCER  
2" CORP STOP IPT

BLIND FLANGE SIZED PER TEE (6" MIN. FOR UPWARD PORTION OF TEE)

FORCE MAIN

FORCE MAIN

5' DIA. PRECAST CONCRETE MANHOLE BASE PER MAG DET 420 AND EPCOR DETAIL 100-4

FORCE MAIN TEE (ROTATED UPWARD) TO BE 401 LINED

SUPPORT TEE. NO FILLET/BENCH

6"

410-4\_MH.DWG 07/24/25 - 03:40pm

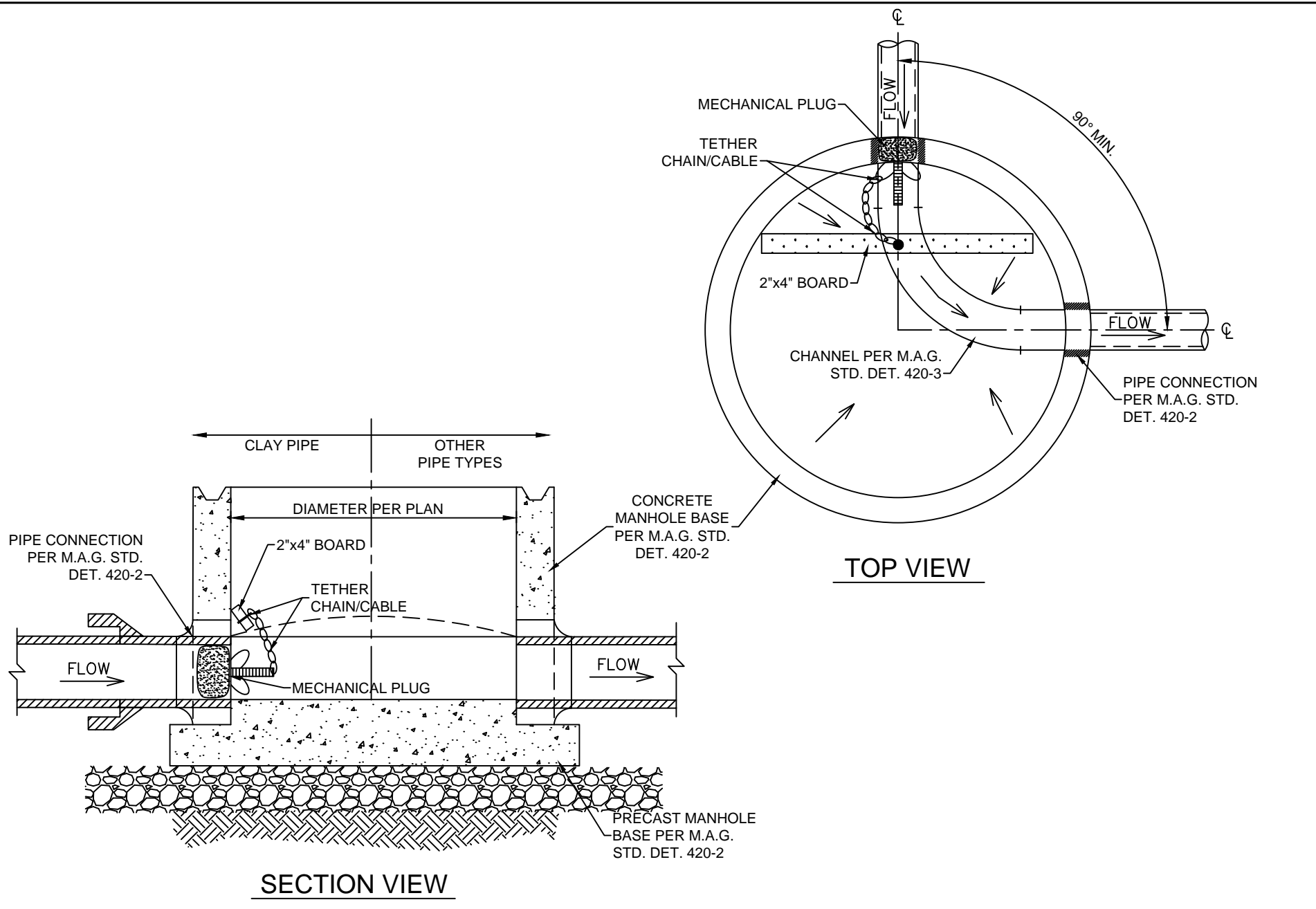
DATE:  
July '25



5656 W Talavi Blvd  
Glendale, AZ 85306

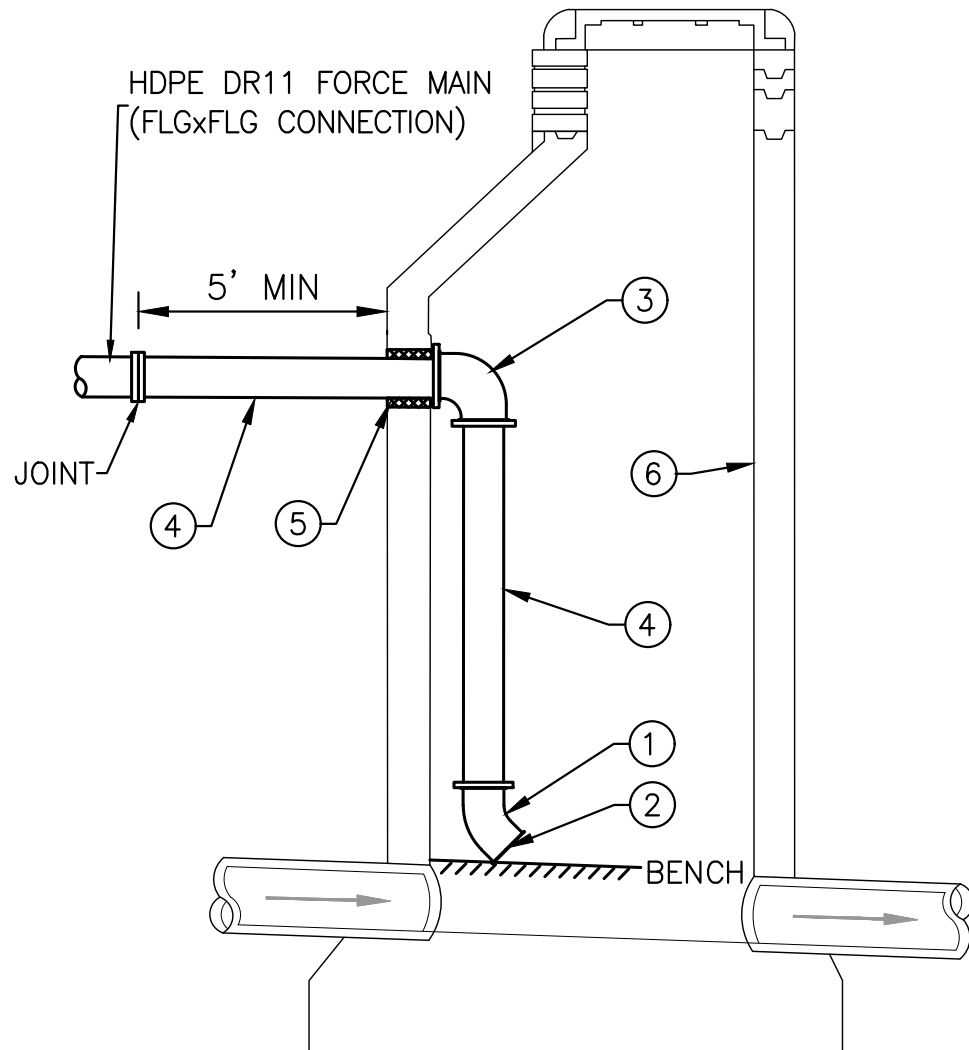
WASTEWATER AIR RELEASE VALVE (ARV)  
MANHOLE INSTALLATION - ABOVE MAIN

DETAIL NO.  
410-4



420.DWG 07/24/25 - 03:40pm

DATE: July '25		5656 W Talavi Blvd Glendale, AZ 85306	TEMPORARY MANHOLE PLUG	DETAIL NO. 420
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NOTES:

1. 45 DEGREE HDPE DR11 ELBOW RESTRAINED TO DIRECT FLOW DOWN STREAM. REST ON BENCH.
2. FORCE MAIN SHALL TRANSITION INTO A GRAVITY LINE WITHIN A MANHOLE IN A MANNER THAT MINIMIZES AGITATION OF SEWAGE. THE CROWN OF THE FORCE MAIN AND OUTLET GRAVITY LINE SHALL MATCH WHERE POSSIBLE, WITH BENCH GROUTING INSTALLED TO DIRECT FLOW INTO THE OUTLET WITH A MINIMAL CHANGE IN THE GRAVITY FLOW ANGLE.
3. 90 DEGREE HDPE DR11 BEND RESTRAINED TO DIRECT FLOW DOWN STREAM.
4. HDPE PIPE PER EPCOR APPROVED MATERIALS LIST (DR11). ALL HDPE PIPE TO BE IPS.
5. CORE AND SEAL PER MANHOLE MANUFACTURER SPECIFICATIONS.
6. COAT INSIDE SURFACES WITH APPROVED LINER MATERIAL PER EPCOR STD DET 100-4.

NOTE:  
DISCHARGE OUTLET SHALL NOT BE LOCATED  
BELOW CROWN OF DOWNSTREAM PIPE

07/24/25 - 03:40pm  
426-1.DWG

DATE:

July '25

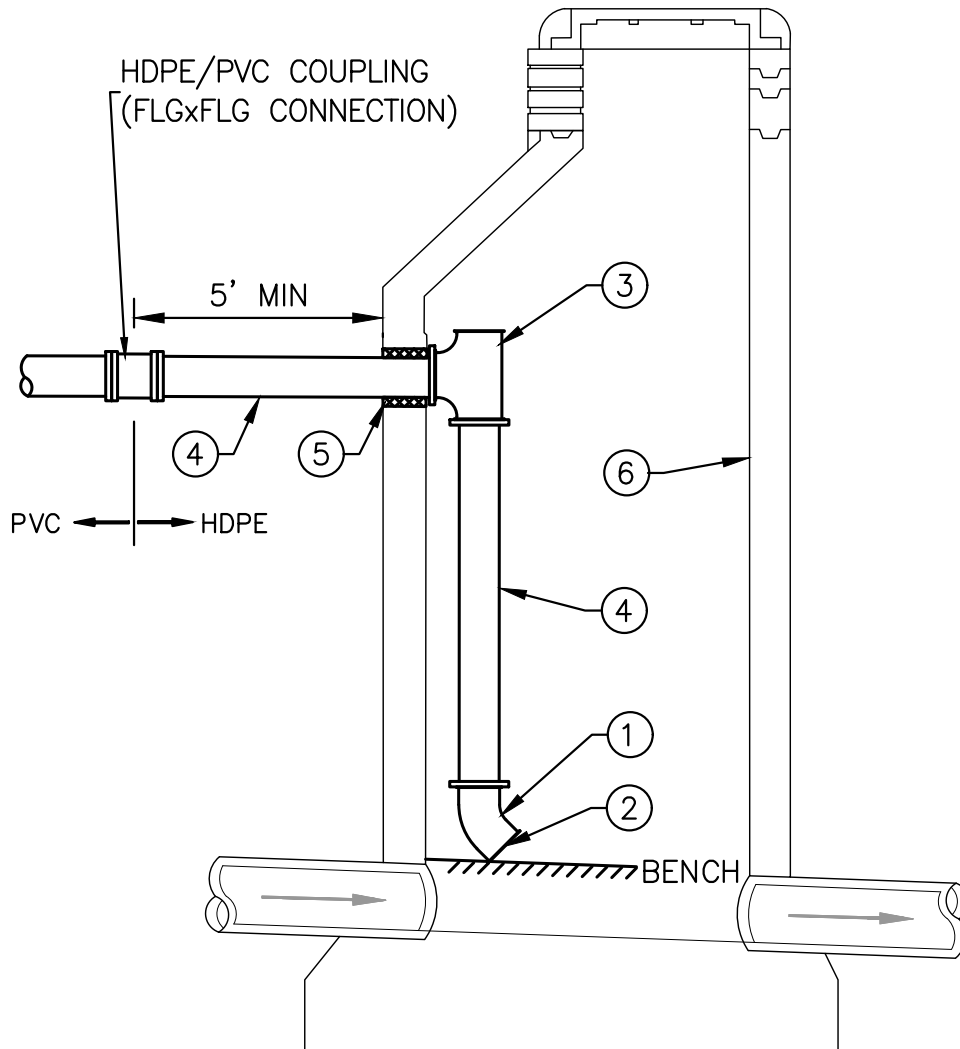


5656 W Talavi Blvd  
Glendale, AZ 85306

INSIDE DROP FORCE MAIN CONNECTION

DETAIL NO.

426-1



NOTES:

1. 45 DEGREE ELBOW HDPE DR 11 RESTRAINED TO DIRECT FLOW DOWN STREAM. REST ON BENCH.
2. GRAVITY SEWER SHALL TRANSITION INTO A GRAVITY LINE WITHIN A MANHOLE IN A MANNER THAT MINIMIZES AGITATION OF SEWAGE. THE CROWN OF THE FORCE MAIN AND OUTLET GRAVITY LINE SHALL MATCH WHERE POSSIBLE, WITH BENCH GROUTING INSTALLED TO DIRECT FLOW INTO THE OUTLET WITH A MINIMAL CHANGE IN THE GRAVITY FLOW ANGLE.
3. HDPE TEE, NO CAP ON TOP.
4. HDPE PIPE PER EPCOR APPROVED MATERIALS LIST (DR11). ALL HDPE PIPE TO BE IPS.
5. CORE AND SEAL PER MANHOLE MANUFACTURER SPECIFICATIONS.
6. COAT INSIDE SURFACES WITH APPROVED LINER MATERIAL PER EPCOR STD DET 100-4.

NOTE:  
DISCHARGE OUTLET SHALL NOT BE LOCATED BELOW CROWN OF DOWNSTREAM PIPE

426-2.DWG 07/24/25 - 03:40pm

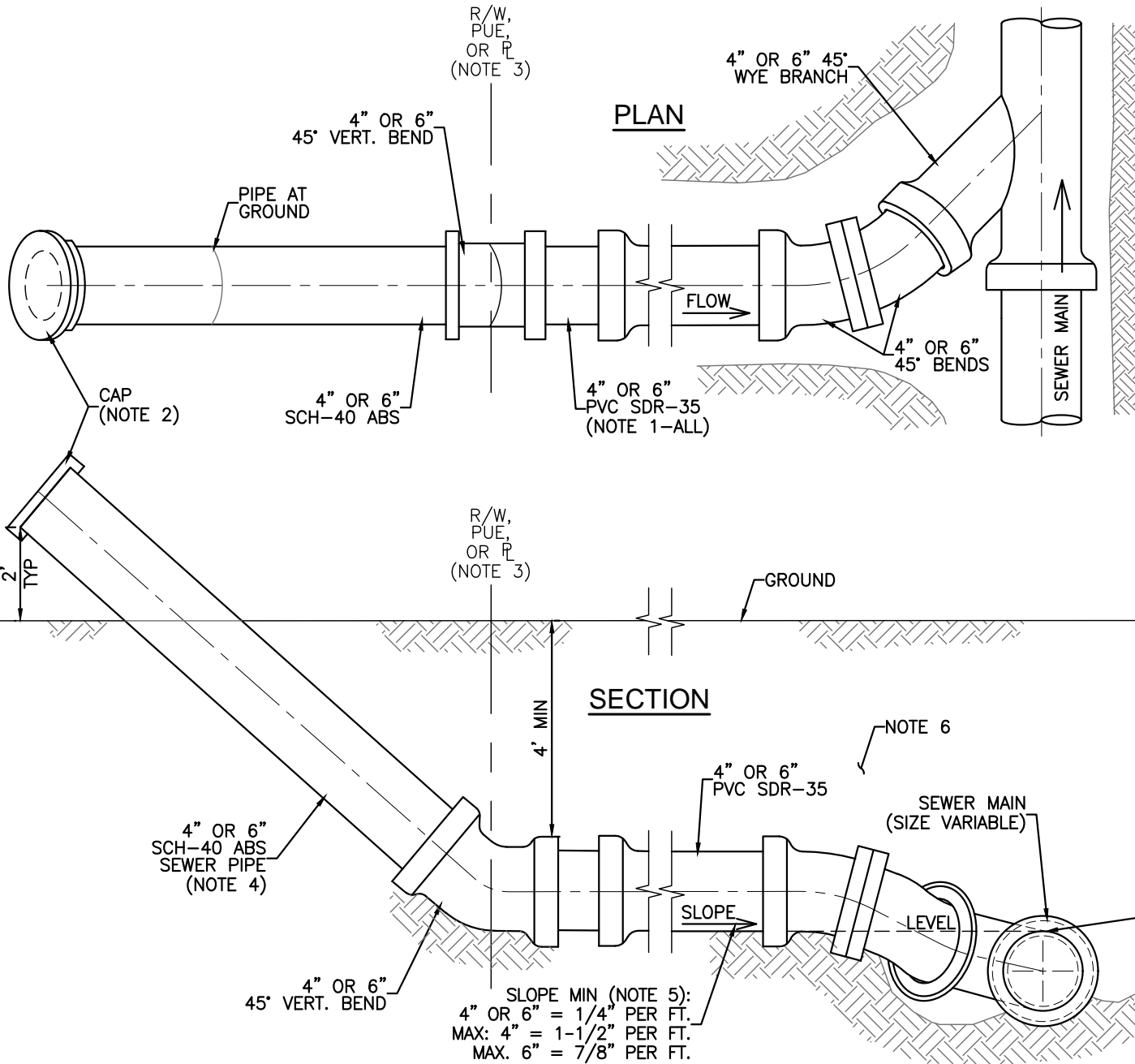
DATE:  
July '25



5656 W Talavi Blvd  
Glendale, AZ 85306

INSIDE DROP GRAVITY SEWER CONNECTION

DETAIL NO.  
426-2



**NOTES:**

1. SIZE OF SERVICE SHALL BE AS DESIGNATED ON PLANS.
2. END OF SERVICE TO BE CAPPED AND MARKED.
3. EPCOR'S RESPONSIBILITY SHALL BE LIMITED TO SEWER COLLECTION SYSTEMS AND THEIR APPURTENANCES WITHIN A DEDICATED UTILITY EASEMENT, ROW OR PUE. SEWER SYSTEM COMPONENTS OUTSIDE OF THESE ESTABLISHED LIMITS SHALL BE THE RESPONSIBILITY OF THE PROJECT OWNER AND NOT EPCOR.
4. SEWER LATERALS SHALL HAVE A CONTINUOUS MINIMUM 4-FT COVER THROUGHOUT THE HORIZONTAL ALIGNMENT OF THE 4-IN OR 6-IN SEWER LATERAL TO THE PUE/PROPERTY LINE AT THE SLOPES INDICATED. A 45-DEGREE BEND SHALL BE INSTALLED BY THE CONTRACTOR AT THE PUE/PROPERTY LINE. THE VERTICAL PORTION OF THE LATERAL REQUIRED TO PROVIDE A CONNECTION TO THE HOME OR BUILDING SHALL CONNECT TO THE 45-DEGREE BEND AT THE PUE/PROPERTY LINE. THE HOME OR BUILDING CONNECTION WORK SHALL BE SOLELY THE RESPONSIBILITY OF THE DEVELOPER OR HOMEOWNER, NOT EPCOR. THE PIPE MATERIAL REQUIRED FOR THE SEWER SERVICE FROM THE MAINLINE SEWER TO THE PUE OR PROPERTY LINE SHALL BE 4-IN OR 6-IN SDR-35 OR AS NOTED ON THE PLANS. THE VERTICAL PORTION OF THE SEWER SERVICE FROM THE 45-DEGREE BEND TO THE CAP SHALL BE SCH-40 ABS (BLACK), TO BE PROVIDED AND INSTALLED BY THE CONTRACTOR AS PART OF THE SEWER SERVICE INSTALLATION.
5. IF DEPTH REQUIRES, MINIMUM SLOPE CAN BE REDUCED TO 1/8" PER FOOT, PROVIDED STUB IS STAKED TO GRADE.
6. BACKFILL SHALL BE PER EPCOR STD. DETAIL 350-1

SLOPE MIN (NOTE 5):  
 4" OR 6" = 1/4" PER FT.  
 MAX: 4" = 1-1/2" PER FT.  
 MAX: 6" = 7/8" PER FT.

440.DWG 07/24/25 - 03:40pm

DATE:  
July '25



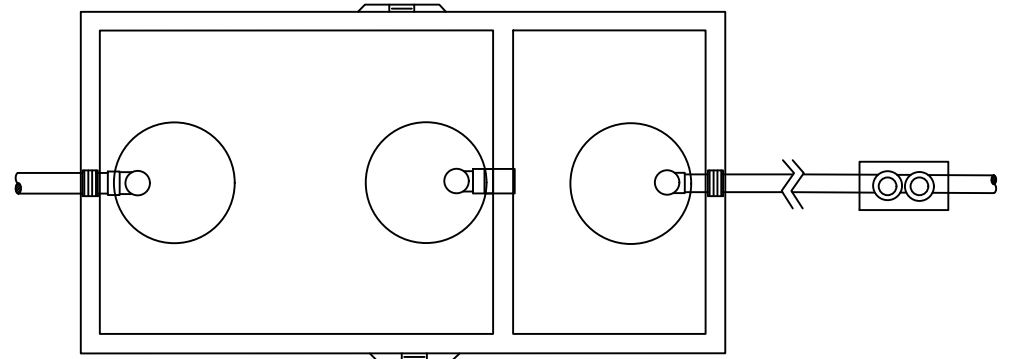
5656 W Talavi Blvd  
Glendale, AZ 85306

**SEWER SERVICE CONNECTION**

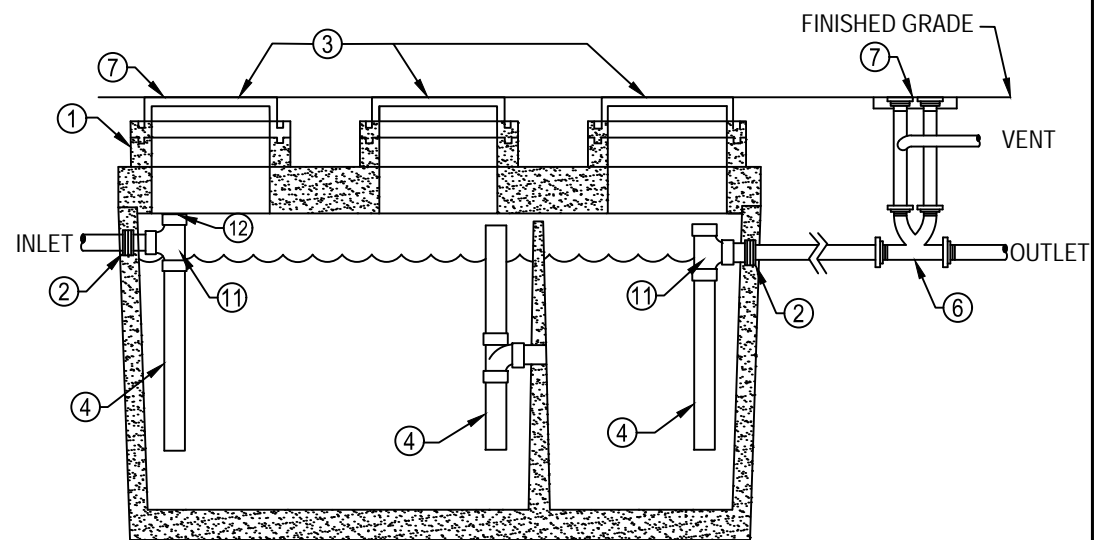
DETAIL NO.  
440

**NOTES:**

- ① ALL GRADIENT RISERS, INCLUDING THE MANHOLE FRAME WILL HAVE THE INTERIOR SEALED WITH NON-SHRINK GROUT
- ② PIPE CONNECTIONS SHALL BE FLEXIBLE CONNECTIONS AND COMPLY WITH ASTM C923 OR ASTM C1644 FOR PRECAST INTERCEPTORS; OR SECTION 7 OF C923 OR ASTM C1644 FOR MATERIALS OTHER THAN PRECAST CONCRETE.
- ③ MANHOLE, FRAME, COVER, AND COLLAR MUST BE WATERTIGHT (GASKETED), ANCHORED, DOES NOT SLIDE, AND SUPPORTS ANTICIPATED LOADS. REFERENCE M.A.G. DETAILS 422 AND 424-1.
- ④ OUTLET AND BAFFLE PLUMBING: MUST BE OPEN TOPPED, 12" DISTANCE FROM INTERNAL FLOOR TO END OF PIPE AND EXTEND 5" ABOVE THE LIQUID LEVEL. INTERNAL PIPING SHALL BE 4" DIAMETER.
- ⑤ CONSTRUCTION & SPECIFICATIONS TO MOST CURRENT REVISIONS OF ASTM C1613/ ASTM F2649/IAPMO/ANSI Z1001
- ⑥ 2-WAY CLEANOUT ON THE OUTLET LINE. VENT INTERCEPTOR TO ROOF.
- ⑦ WATER TEST AND REPAIR: INSPECTED BY EPCOR PRETREATMENT COORDINATOR PER ASTM C1613; IAPMO Z1001 OR NPCA BEST PRACTICES GUIDELINES.
- ⑧ ACCESS: MINIMUM 2" ON LARGER SIZES EACH PLUMBING FITTING (INLET, BAFFLE AND OUTLET) SHALL HAVE THE REQUIRED AND STIPULATED ACCESS OPENING, RISERS AND COVERS.
- ⑨ SUITABLE SUB-BASE BEDDING WITH GRANULAR MATERIAL SHALL BE PREPARED TO HANDLE ANTICIPATED LOADS.
- ⑩ CONTACT EPCOR PRETREATMENT AT [PRETREATMENT@EPCOR.COM](mailto:PRETREATMENT@EPCOR.COM) FOR INSPECTION/TESTING.
- ⑪ INLET AND OUTLET PLUMBING MUST HAVE TEE'S.
- ⑫ INLET TEE MUST HAVE A CAP



**TOP VIEW**  
(COVERS & RINGS REMOVED)



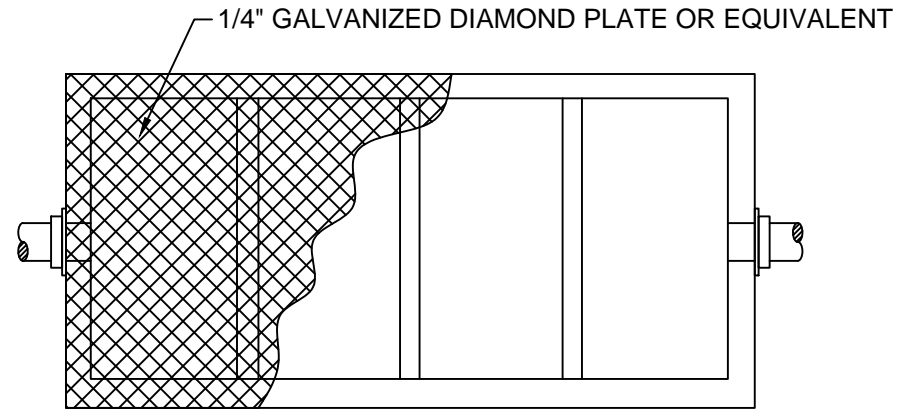
**SIDE SECTION VIEW**

450-1.DWG 07/24/25 - 03:40pm

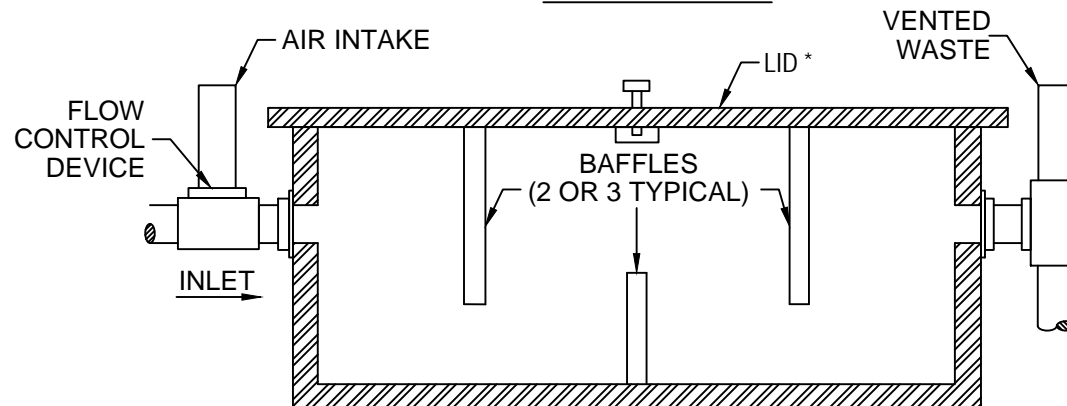
DATE: <b>July '25</b>		5656 W Talavi Blvd Glendale, AZ 85306	<b>TYPICAL GRAVITY-SOLIDS INTERCEPTOR</b>	DETAIL NO. <b>450-1</b>
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**NOTES:**

1. PERFORMANCE STANDARDS: MUST BE CERTIFIED PER (PDI) G-101 / ASME A112.14.3 / CSA B481 OR MOST CURRENT REVISIONS .
2. A FLOW CONTROL DEVICE MUST BE INSTALLED TO MANUFACTURES' SPECIFICATION ON THE INLET PIPE PRIOR TO ENTERING THE HYDROMECHANICAL GREASE INTERCEPTOR (HGI). FLOW CONTROL MUST BE ACCESSIBLE FOR MAINTENANCE.
3. HGI MAY BE INSTALLED ABOVE GROUND OR BELOW FLOOR GRADE.
4. HGI MUST BE EASILY ACCESSIBLE FOR INSPECTION AND MAINTENANCE.
5. FILL WITH CLEAN WATER PRIOR TO START UP.
6. HGI MUST BE INSPECTED PRIOR TO BACKFILL BY EPCOR PRETREATMENT COORDINATOR.
7. USE AND SIZE TO BE APPROVED BY EPCOR PRETREATMENT- INSPECTED BY PRETREATMENT COORDINATOR.
9. PROPER AIR CONTROL IS CRITICAL TO THE OPERATION OF AN HGI. AIR INTAKE ON THE INLET AND VENTED WASTE ON THE OUTLET.
10. CONTACT EPCOR PRETREATMENT AT [PRETREATMENT@EPCOR.COM](mailto:PRETREATMENT@EPCOR.COM) FOR SHOP DRAWING SUBMITTAL AND INSPECTION/TESTING.



**PLAN VIEW**



**SECTION**

\* LID MUST BE CAPABLE OF SUPPORTING ANTICIPATED LOADS

450-2.DWG 07/24/25 - 03:40pm

DATE:  
July '25



5656 W Talavi Blvd  
Glendale, AZ 85306

TYPICAL HYDRO-MECHANICAL  
GREASE INTERCEPTOR (HGI)

DETAIL NO.  
450-2

RECLAIMED WATER  
DO NOT DRINK  
NO TOMAR

VALVE TAG:

3"x8"x $\frac{3}{16}$ " PURPLE POLYETHYLENE PLASTIC WITH MINIMUM  $\frac{1}{2}$ " HIGH WHITE LETTERING IN ACCORDANCE WITH M.A.G. SECTION 616. TAG TO BE ATTACHED WITH STAINLESS STEEL WIRE.

IDENTIFICATION DECAL:

5"x16"x $\frac{3}{16}$ " PURPLE POLYETHYLENE PLASTIC WITH MINIMUM 1" HIGH WHITE LETTERING IN ACCORDANCE WITH M.A.G. SECTION 616. DECAL TO BE ATTACHED WITH AN EPOXY ADHESIVE.

600-1.DWG 07/24/25 - 03:40pm

DATE:

July '25

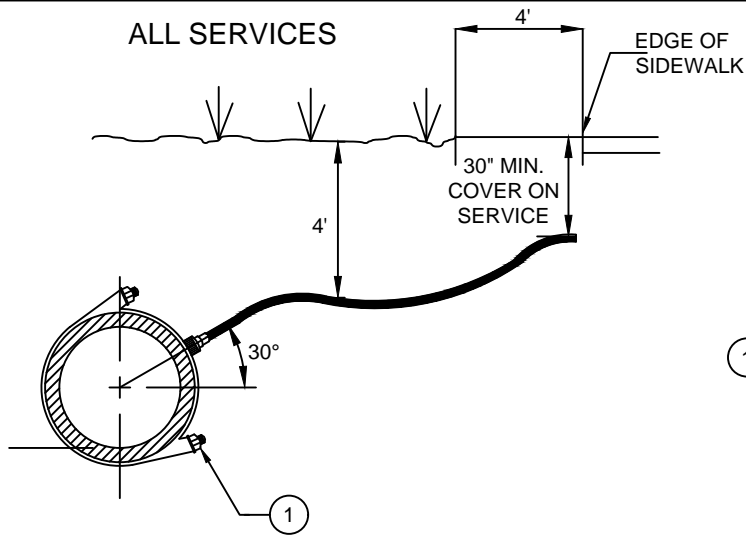


5656 W Talavi Blvd  
Glendale, AZ 85306

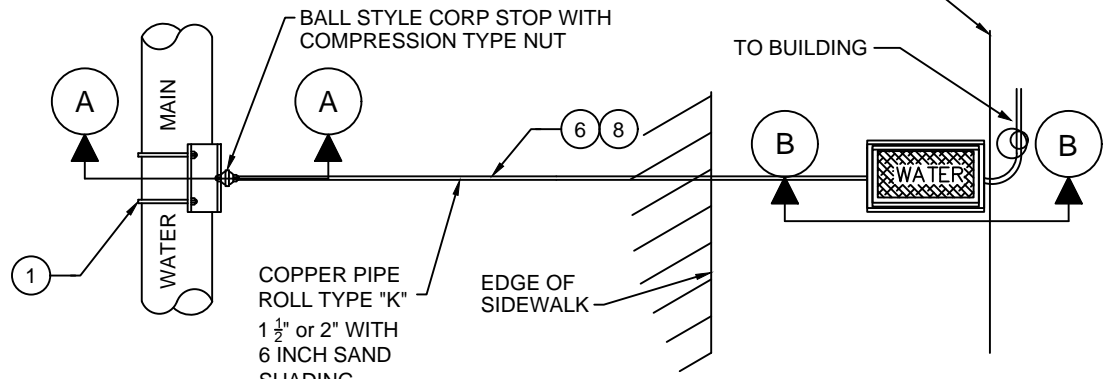
RECLAIMED WATER ID TAG  
AND DECAL

DETAIL NO.

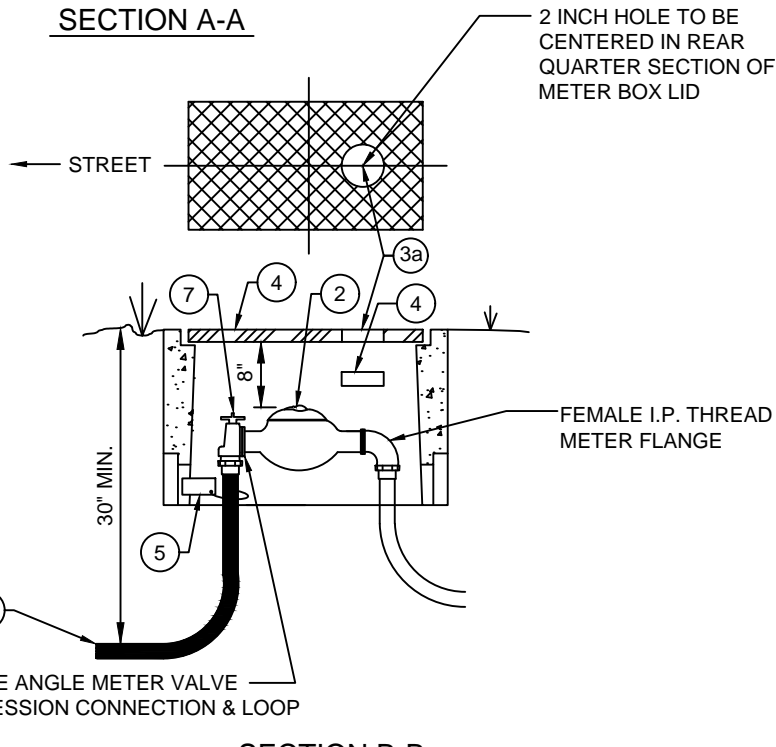
600-1



SECTION A-A



PLAN VIEW



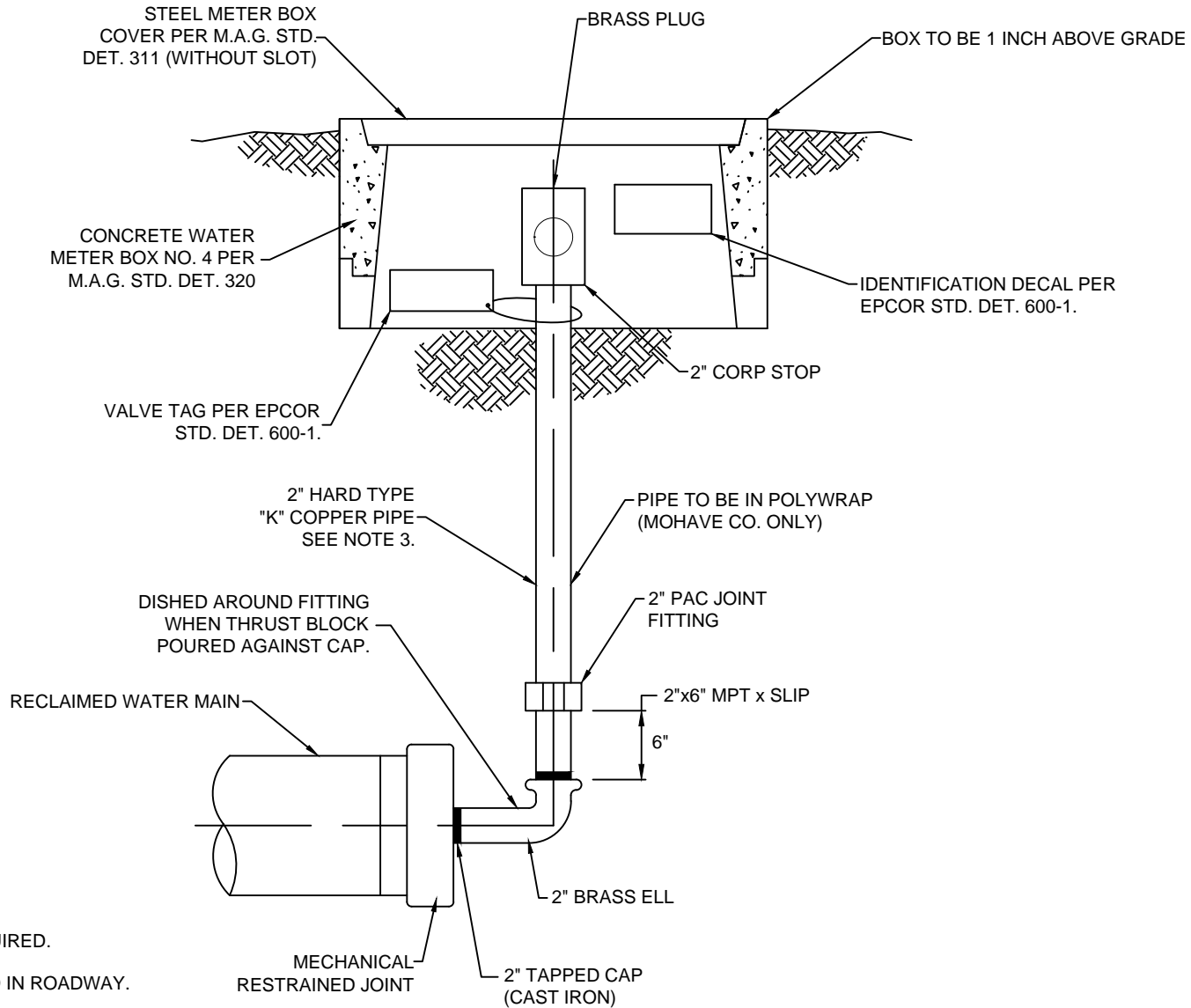
SECTION B-B

**NOTES:**

1. SEE EPCOR STD. DET. 100-3 FOR APPROVED SADDLES.
2. METER TO BE SET BY EPCOR UPON PAYMENT OF FEES.
3. CONCRETE METER BOX PER M.A.G. STD. DET. 320 BOX NO. 2 OR 4 W/ STEEL LID W/ 2 INCH DIAM. OPENING TO BE SET PERPENDICULAR TO BACK OF WALK OR CURB. BOX TO MATCH SLOPE OF FINISH GRADE AND SET 1" ABOVE FINISH GRADE OR BACK OF WALK OR CURB. 3a) 2 INCH DIAMETER OPENING.
4. IDENTIFICATION DECAL PER EPCOR STD. DET. 600-1.
5. VALVE TAG PER EPCOR STD. DET. 600-1.
6. RECLAIMED LINE COPPER PIPE TO BE WRAPPED WITH PURPLE POLYETHYLENE TAPE.
7. ANGLE BALL METER VALVE TEE HEAD TO BE STAMPED "RECLAIMED WATER".
8. CAL WESTERN INC TYPE CAL102 PURPLE POLY SLEEVE REQUIRED IN MOHAVE COUNTY ONLY. TRACER WIRE REQUIRED ON TOP OF SLEEVE.

610-1.DWG 07/24/25 - 03:40pm

DATE:	<b>July '25</b>		5656 W Talavi Blvd Glendale, AZ 85306	<b>RECLAIMED WATER SERVICE CONNECTION</b>	DETAIL NO. <b>610-1</b>
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**NOTES:**

1. NO SOLDERED JOINTS
2. CARSONITE MARKER REQUIRED.
3. SOFT COPPER TO BE USED IN ROADWAY.

630-1.DWG 07/24/25 - 03:40pm

DATE: <b>July '25</b>		5656 W Talavi Blvd Glendale, AZ 85306	<b>RECLAIMED WATER CURB STOP          (BLOW OFF) WITH FLUSHING PIPE</b>	DETAIL NO. <b>630-1</b>
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