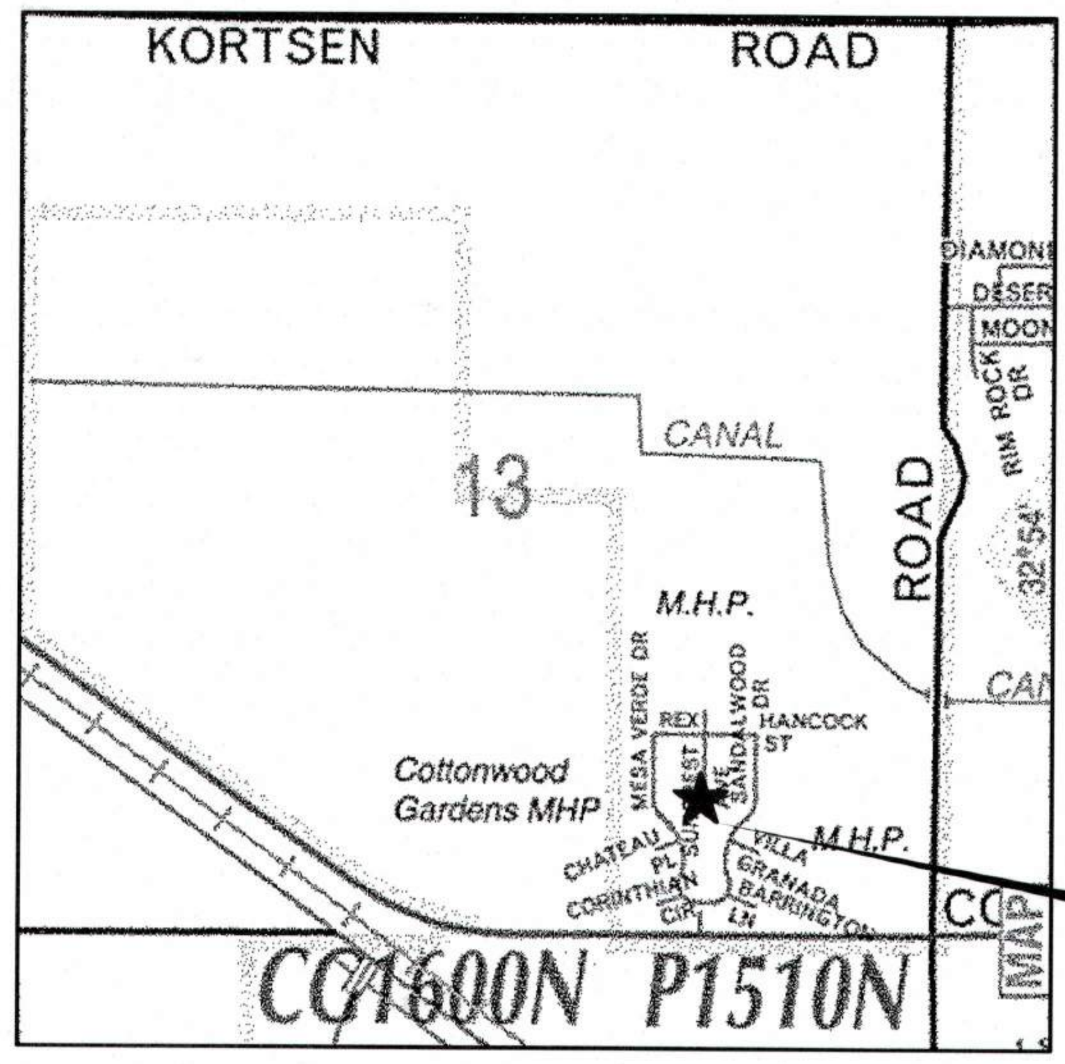
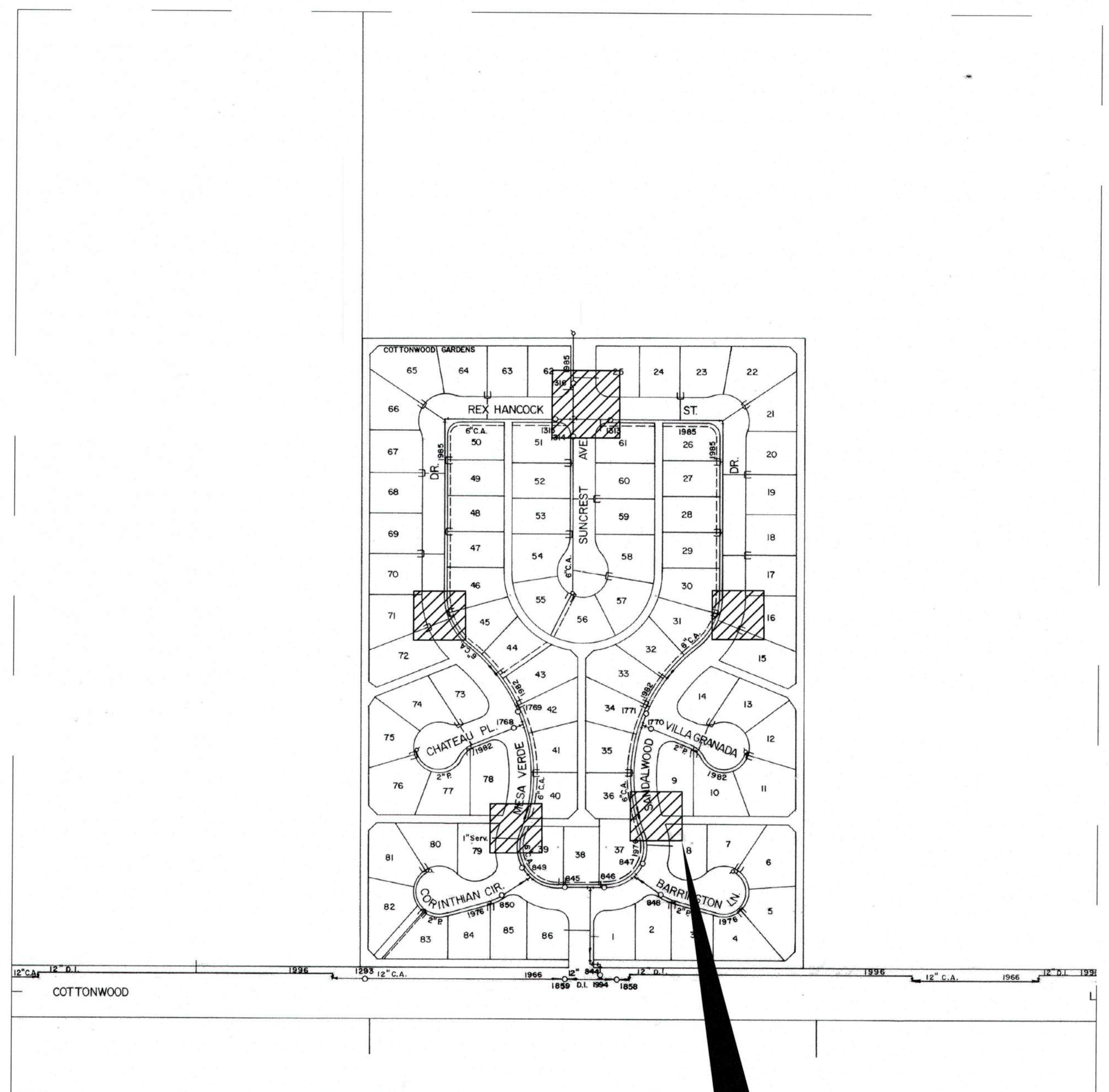
CONSTRUCT (5) FIRE HYDRANTS IN THE PINAL VALLEY WATER SYSTEM
SE 1/4 SEC. 13, T. 06 S., R. 05 E. OF THE G. & S. R. B. & M.



VICINITY MAP
N.T.S.

GENERAL NOTES:

1. ALL WORK AND MATERIALS SHALL CONFORM TO CURRENT COUNTY HEALTH DEPARTMENT STANDARDS AND REVISIONS, ARIZONA WATER COMPANY STANDARD SPECIFICATIONS AND DETAILS, AND ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY ENGINEERING BULLETIN NO. 10.
2. PERMITS REQUIRED WILL BE SECURED FROM THE APPROPRIATE AGENCY, I.E. COUNTY PERMIT IN COUNTY RIGHT-OF-WAY.
3. PRIOR TO CONSTRUCTION, THE APPROPRIATE AGENCY(IES) WILL BE NOTIFIED AS REQUIRED BY THE PERMIT(S).
4. ALL BACKFILL, COMPACTION, AND TESTING SHALL BE PER CURRENT COUNTY, CITY, STATE, ADOT, AND ARIZONA WATER COMPANY STANDARDS AND SPECIFICATIONS.
5. ALL WATER LINES 8" AND LESS ARE TO HAVE A MINIMUM COVER OF 36 INCHES & ALL WATER LINES 12" AND GREATER ARE TO HAVE 48" OF MINIMUM COVER OVER THE TOP OF PIPE TO FINISHED GRADE, UNLESS OTHERWISE SPECIFIED ON THE CONSTRUCTION DRAWINGS.
6. ALL FRAMES, COVERS, VALVE BOXES, ETC. SHALL BE ADJUSTED TO FINISHED GRADE PRIOR TO PLACING OF ASPHALTIC CONCRETE SURFACE COURSE BY THE CONTRACTOR. (WHERE APPLICABLE)
7. ALL WATER LINES SHALL BE PRESSURE AND LEAKAGE TESTED IN ACCORDANCE WITH AWWA C-600 OR MAG STD. 611.2.
8. ALL WATER LINES ARE TO BE DISINFECTED PER ADEQ ENGINEERING BULLETIN NO.8 OR AWWA C651-05 OR MAG 611.3.
9. AIR RELEASE VALVES ARE REQUIRED AT WATER SYSTEM HIGH POINTS PER ARIZONA WATER COMPANY STANDARD DETAILS.
10. WATER/SEWER SEPARATION SHALL BE PER CURRENT ARIZONA WATER COMPANY STANDARDS AND ADEQ AAC R18-5-502-C.
11. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO UNCOVER ALL EXISTING WATER LINES BEING CONNECTED TO, AND TO VERIFY THE LOCATION, DEPTH AND SIZE OF PIPE BEFORE ANY CONSTRUCTION BEGINS.
12. ANY CONSTRUCTION PERFORMED WITHOUT THE KNOWLEDGE OF THE INSPECTOR OR HIS REPRESENTATIVE IS LIABLE FOR REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
13. IN ACCORDANCE WITH AAC R18-4-213, ALL MATERIALS ADDED AFTER JANUARY 1, 1993 WHICH MAY COME IN CONTACT WITH DRINKING WATER, SHALL CONFORM TO NATIONAL SANITATION FOUNDATION STANDARDS 60 AND 61.
14. ALL WATER SERVICES SHALL BE SET A MINIMUM OF 2 FEET ON THE CUSTOMERS PROPERTY AND NOT WITHIN RIGHT-OF-WAY.
15. UNLESS OTHERWISE SPECIFIED ON THE CONSTRUCTION DRAWINGS, ALL WATER MAINS ARE TO BE INSTALLED 5 FEET FROM THE PROPERTY LINE INSIDE THE RIGHT-OF-WAY OR EASEMENT.
16. WATER VALVES SHALL BE SPACED NOT MORE THAN 500 FEET IN COMMERCIAL DISTRICTS AND NOT MORE THAN 800 FEET IN OTHER DISTRICTS. VARIATIONS MAY BE REQUIRED FOR TRANSMISSION MAINS OR SPECIAL APPLICATIONS. SUFFICIENT VALVING IS REQUIRED WHERE WATER LINES CROSS STREAMS, RAILROADS AND MAJOR HIGHWAYS.
17. MAXIMUM JOINT DEFLECTION FOR 6" MECHANICAL JOINT DUCTILE IRON PIPE IS 7°-7' OR 27" FOR 18 FOOT LENGTH PIPE, FOR A MAXIMUM CURVE OF 145 FEET.
18. MAXIMUM JOINT DEFLECTION FOR 6", 8", & 12" PUSH-ON JOINT DUCTILE IRON PIPE IS 5° OR 19" FOR 18 FOOT LENGTH PIPE, FOR A MAXIMUM CURVE OF 205 FEET.
19. MAXIMUM JOINT DEFLECTION FOR 8" & 12" MECHANICAL JOINT DUCTILE IRON PIPE IS 5°-21' OR 20" FOR 18 FOOT LENGTH PIPE, FOR A MAXIMUM CURVE OF 195 FEET.
20. ALL PIPE, FITTINGS, VALVES, FIRE HYDRANTS, AND OTHER APPURTENANCES MUST CONFORM TO AWWA, ASTM, AND NSF STANDARDS. (EB 10, CHAP. 7, SECTION B)
21. BACKFLOW PREVENTION MUST BE IN ACCORDANCE WITH R-18-4-115.
22. CONSTRUCTION MATERIALS USED IN WATER SYSTEM MUST BE LEAD FREE AS PER AAC R18-4-504 AND R18-1-101 (43).



SHEET INDEX

SHT. No.	DWG. No.	DESCRIPTION	PREPARED BY
1	PV-0341	COVER SHEET	AWC
2	PV-0341	CONSTRUCTION PLAN	AWC
3	PV-0341	AWC NOTES	AWC
4	PV-0341	AWC DETAILS	AWC
5	PV-0341	CITY OF CASA GRANDE NOTES	AWC

⬡	QUANTITIES LIST	QUANTITY
1	INSTALL FIRE HYDRANT ASSEMBLY PER AWC STD. DTL. E-9-6-1	5
2	INSTALL 6" D.I.P. W/ POLYWRAP & RELATED FITTINGS	53 LF
3	TIE INTO EX. 6" C.A. WATER MAIN W/ 6" TRANSITION COUPLING	10

CONSTRUCTION NOTES:

1. CONNECT M.J. FITTINGS TO M.J. FITTINGS USING FOSTER ADAPTERS.
2. ALL MATERIALS & PIPE REMOVED, MUST BE DISPOSED BY THE CONTRACTOR.
3. ASPHALT REPLACEMENT & TRENCH BACKFILL PER MAG 200-1 ON SHT.4 IF NECESSARY
4. ALL NEW RESTRAINED PIPE MUST BE U.S. PIPE TR FLEX, AMERICAN FLEX RING OR M.J. DUCTILE IRON PIPE WITH MEGALUG SERIES 1100, STAR GRIP SERIES 3000 OR TUF GRIP SERIES 1000 JOINT RESTRAINTS.
5. USE MEGALUG SERIES 1100, STAR GRIP SERIES 3000 OR TUF GRIP SERIES 1000 JOINT RESTRAINTS AT ALL M.J. FITTING CONNECTIONS.
6. INTERRUPTION OF WATER SERVICE FOR TIE-INS CANNOT EXCEED 4 HOURS IN DURATION FROM TIME OF SHUTDOWN TO COMPLETION OF FLUSHING.
7. COMPANY DOES NOT GUARANTEE EXISTING VALVES WILL PROVIDE A DRY SHUTDOWN.
8. ANY ADDITIONAL FITTINGS REQUIRED FOR TIE-INS BUT NOT SHOWN ON PLANS FOR PROPER ALIGNMENT SHALL BE CONSIDERED INCIDENTAL AND INCLUDED IN THE PIPE PRICE.
9. PROTECT ALL UTILITY CROSSINGS IN PLACE UNLESS OTHERWISE NOTED ON PLANS.
10. TRAFFIC CONTROL PER RIGHT-OF-WAY PERMIT REQUIREMENTS.
11. CONTRACTOR MUST USE NO. 1 METER BOXES WHEN INSTALLING A NEW SERVICE CONNECTION AT THE SAME LOCATION OF AN EX. SERVICE.
12. CONTRACTOR MUST MAINTAIN MIN. 3-FEET HORIZONTAL SEPARATION FROM OUTSIDE OF WATER MAIN TRENCH TO EX. POWER POLES AND PROVIDE BRACING FOR EX. POWER POLES IF NECESSARY DURING CONSTRUCTION.
13. CONTRACTOR MUST PLUG ENDS OF ABANDONED IN PLACE WATER MAINS WITH CLASS 'C' CONCRETE MIN. 24-INCHES INTO PIPE.
14. PASSING COMPACTION TEST RESULTS ARE REQUIRED PRIOR TO PAVEMENT REPLACEMENT.
15. CONTRACTOR MUST PAY THE COST OF ALL WATER PROVIDED BY AWCo. TO THE CONTRACTOR FOR CONSTRUCTION AND TESTING OF THE WATER MAINS.
16. CONTRACTOR MUST PROVIDE AND INSTALL NEW CUSTOMER SHUTOFF VALVE AT EACH SERVICE WITH PRIOR CUSTOMER PERMISSION.
17. CONTRACTOR MUST COORDINATE MATERIAL, LOCATION, AND TIMING, OF SERVICE TIE-OVERS WITH CUSTOMER.
18. PROTECT WATER LINE TO BE ABANDONED IN PLACE UNTIL FINAL TIE-INS ARE COMPLETED.
19. CONTRACTOR HAS THE OPTION TO BORE THE ROAD WHILE MAINTAINING MINIMUM DEPTH FOR SERVICE REPLACEMENT.
20. CONTRACTOR MUST MAINTAIN ALL PAVEMENT CUTS IN A SMOOTH AND SAFE MANNER WITH FLUSH MOUNTED PLATES OR TEMPORARY ASPHALT UNTIL CONTRACTOR COMPLETES PERMANENT PAVEMENT REPLACEMENT.
21. CONTRACTOR MUST MATCH PAVEMENT THICKNESS PER MAG STD. DTL. 200-1 IF THE EXISTING PAVEMENT IS NOT THICKER THAN 3" INCHES, A 3" MINIMUM SHALL BE PUT BACK WITH EITHER R-19 3/4" HOT MIX OR R-12.5 1/2" HOT MIX. EDGES WILL BE TACK COATED PRIOR TO THE MIX BEING PLACED. AFTER PATCH IS COMPLETE A CRACK SEAL SHALL BE PLACED AROUND THE SAW CUT LINES AND PATCH.
22. CONTRACTOR MUST CONFORM TO MAG STD. DTL. 200-2 SECTION 336 (F-G) IN PINAL COUNTY R/W
23. REPLACE EXISTING LANDSCAPING IN KIND AFTER CONSTRUCTION IS COMPLETE

WATER MAIN MATERIALS ABBREVIATION REFERENCE:

CA - CEMENT ASBESTOS
PVC - POLYVINYL CHLORIDE
CLC - CEMENT LINED AND COATED STEEL
CU - COPPER
STL - STEEL
CI - CAST IRON
DI - DUCTILE IRON
HDPE - HIGH DENSITY POLYETHYLENE
GS - GALVANIZED STEEL

OWNER/ENGINEER/DEVELOPER

ARIZONA WATER COMPANY
POST OFFICE BOX 29006
PHOENIX, AZ 85038-9006
VOICE: (602) 240-6860
FAX: (602) 294-2169
CONTACT: AMY WALTHERESON

BASIS OF BEARING

IS THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SECTION 13 SHOWN HEREON AS S89°53'04"W

BENCHMARK

NGS CONTROL POINT E422
BEING A 3.5" BRASS DISK STAMPED "E 422 1980"
ELEVATION = 1419.96' NAVD88 DATUM. NGS DATA.

REFERENCE DOCUMENTS

(R1) PLAT OF COTTONWOOD GARDENS AS RECORDED IN BOOK 19 OF MAPS, PAGE 22.

200' 100' 0' 200' 400'

CITY OF CASA GRANDE PLAN APPROVAL RECOMMENDED

CIVIL ENGINEER: ____________________

DATE: __________ EXPIRATION DATE: __________

THE CITY APPROVES THESE PLANS IN CONCEPT ONLY.
THE CITY ACCEPTS NO RESPONSIBILITY FOR ERRORS OR OMISSIONS.

CITY OF CASA GRANDE PLAN APPROVAL

CITY ENGINEER: ____________________

DATE: __________ EXPIRATION DATE: __________

THE CITY APPROVES THESE PLANS IN CONCEPT ONLY.
THE CITY ACCEPTS NO RESPONSIBILITY FOR ERRORS OR OMISSIONS.

"AS-BUILT CERTIFICATION"

ACCEPTED BY:

CITY ENGINEERING INSPECTOR: ____________________ DATE: __________

CITY ENGINEER: ____________________ DATE: __________

FOR BIDDING PURPOSES ONLY
Feb 12, 2026
Engineering Department
Arizona Water Company

REVISIONS:

The installation shown is to be installed in accordance with the Arizona Water Company standard specifications on file with the Arizona Department of Environmental Quality

W.A. No.:
P.E. No.: 2594
SYSTEM: PINAL VALLEY (CG)
LEGAL DESC.: SE 1/4 SEC. 13, T. 06 S., R. 05 E.
TAX DIST.: 0428 & 0458
SB No.:
DATE: 01/12/2026
SCALE: AS SHOWN
DRAWN BY: TDS
REVIEWED BY:
CHECKED BY:

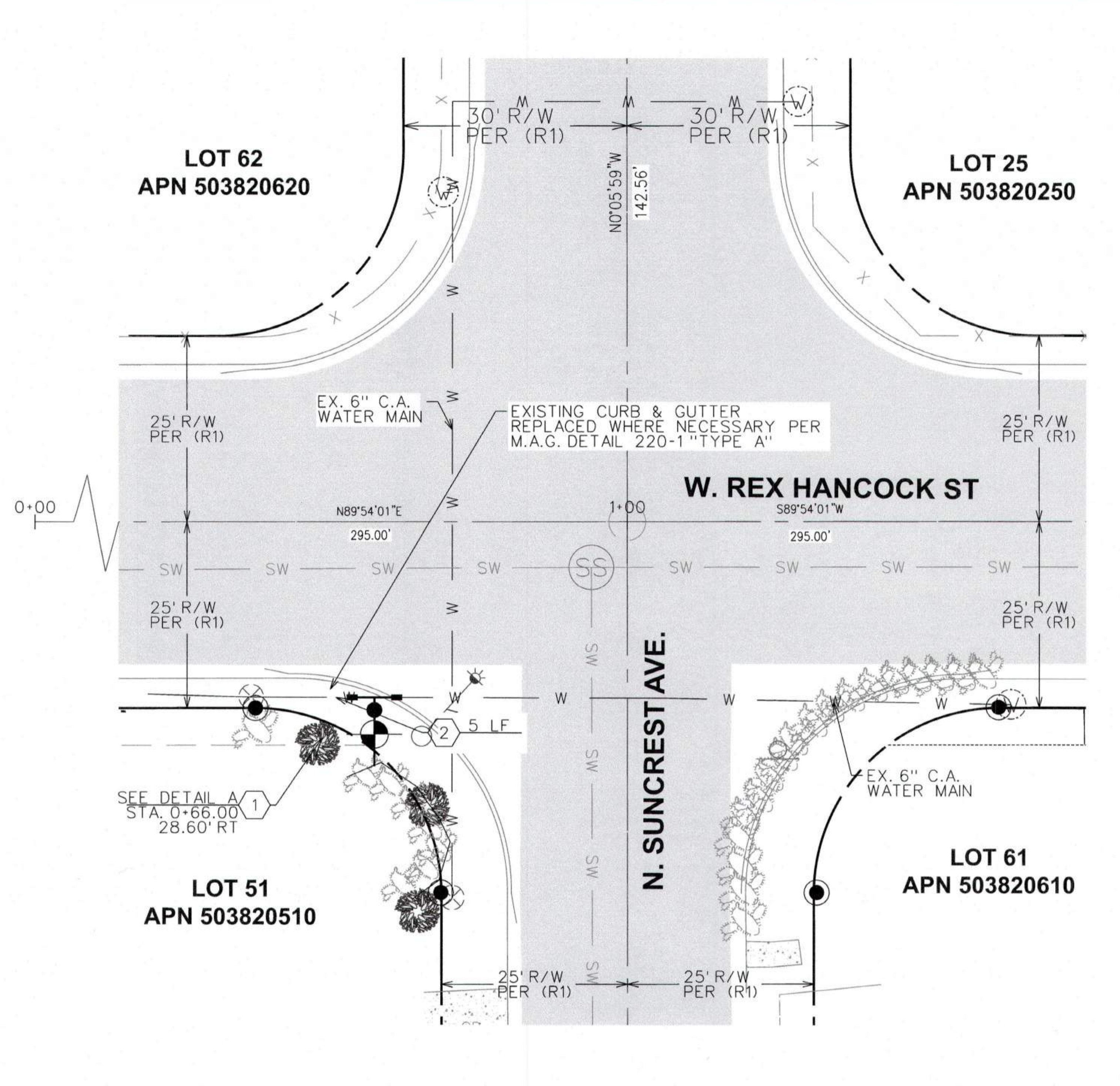
ARIZONA WATER COMPANY
3805 N. BLACK CANYON HWY. POST OFFICE BOX 29006
PHOENIX, ARIZONA 85038-9006
(602) 240-6860

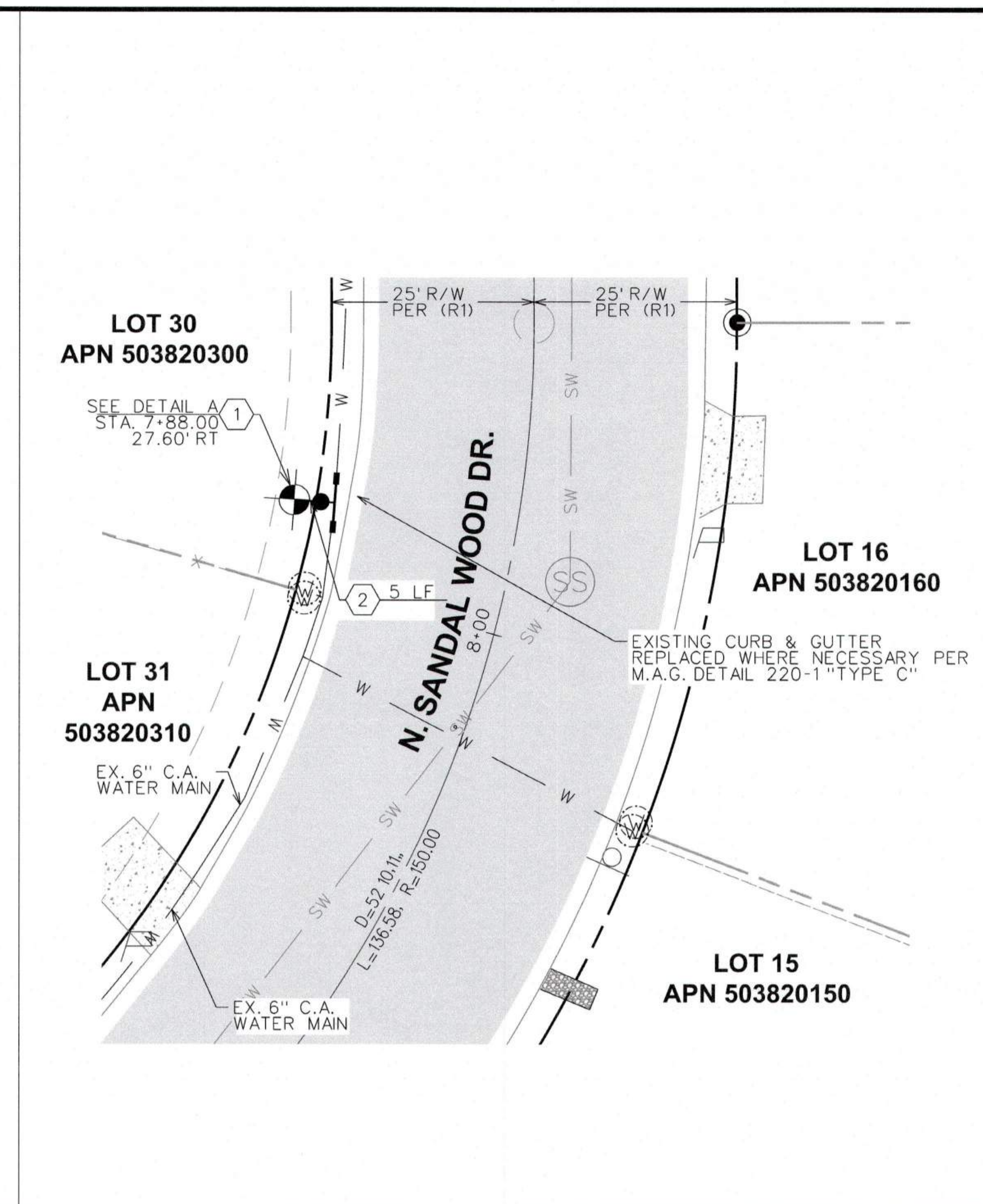
PROJECT DESC.: CONSTRUCT (5) FIRE HYDRANTS IN THE PINAL VALLEY WATER SYSTEM
PROJECT SHEET DESC.: COVER SHEET

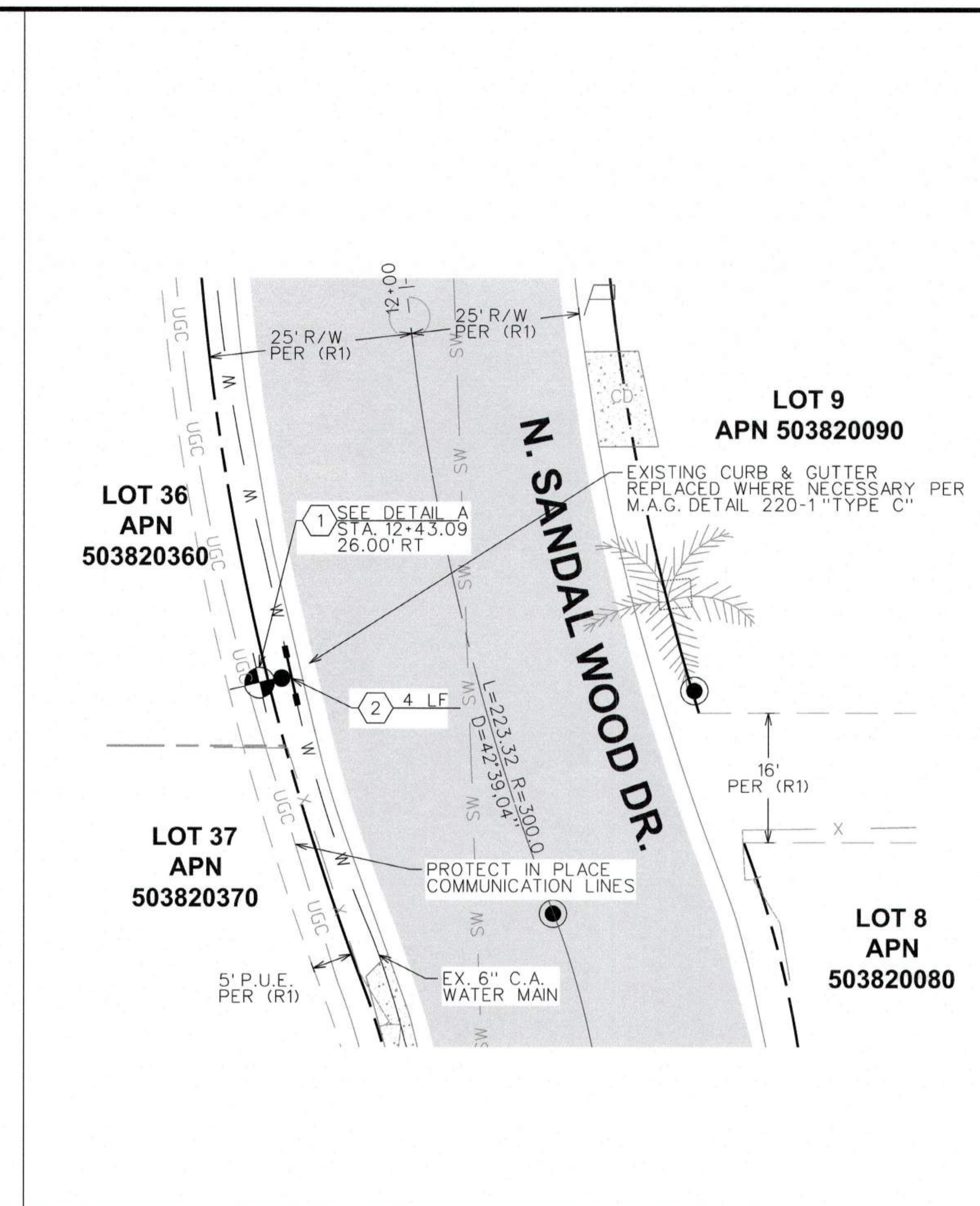
Registered Professional Engineer
CERTIFICATE NO. 70873
AMY WALTHERESON
ARIZONA, U.S.A.
Expires 3-31-2026

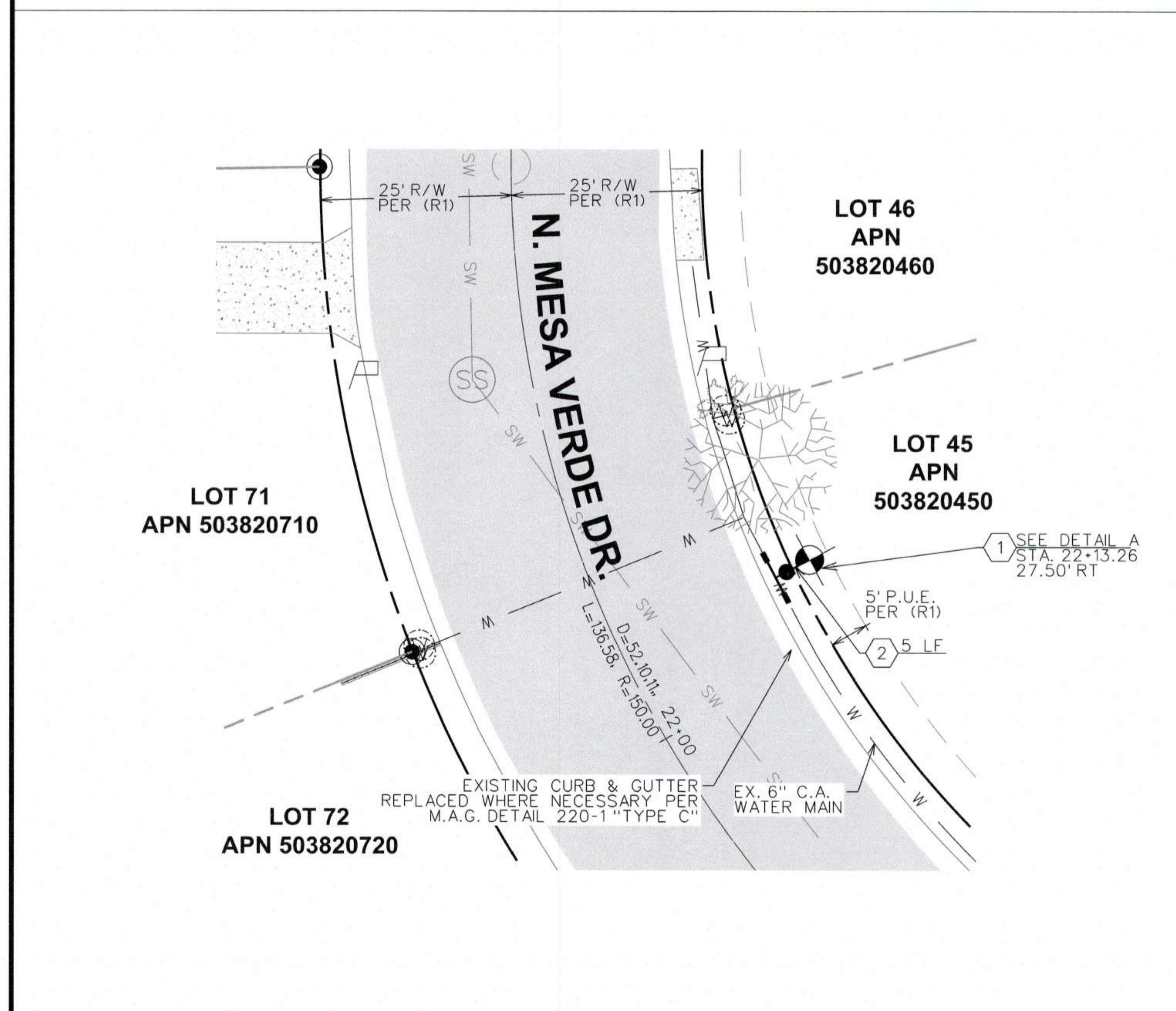
DWG. No.: PV-0341

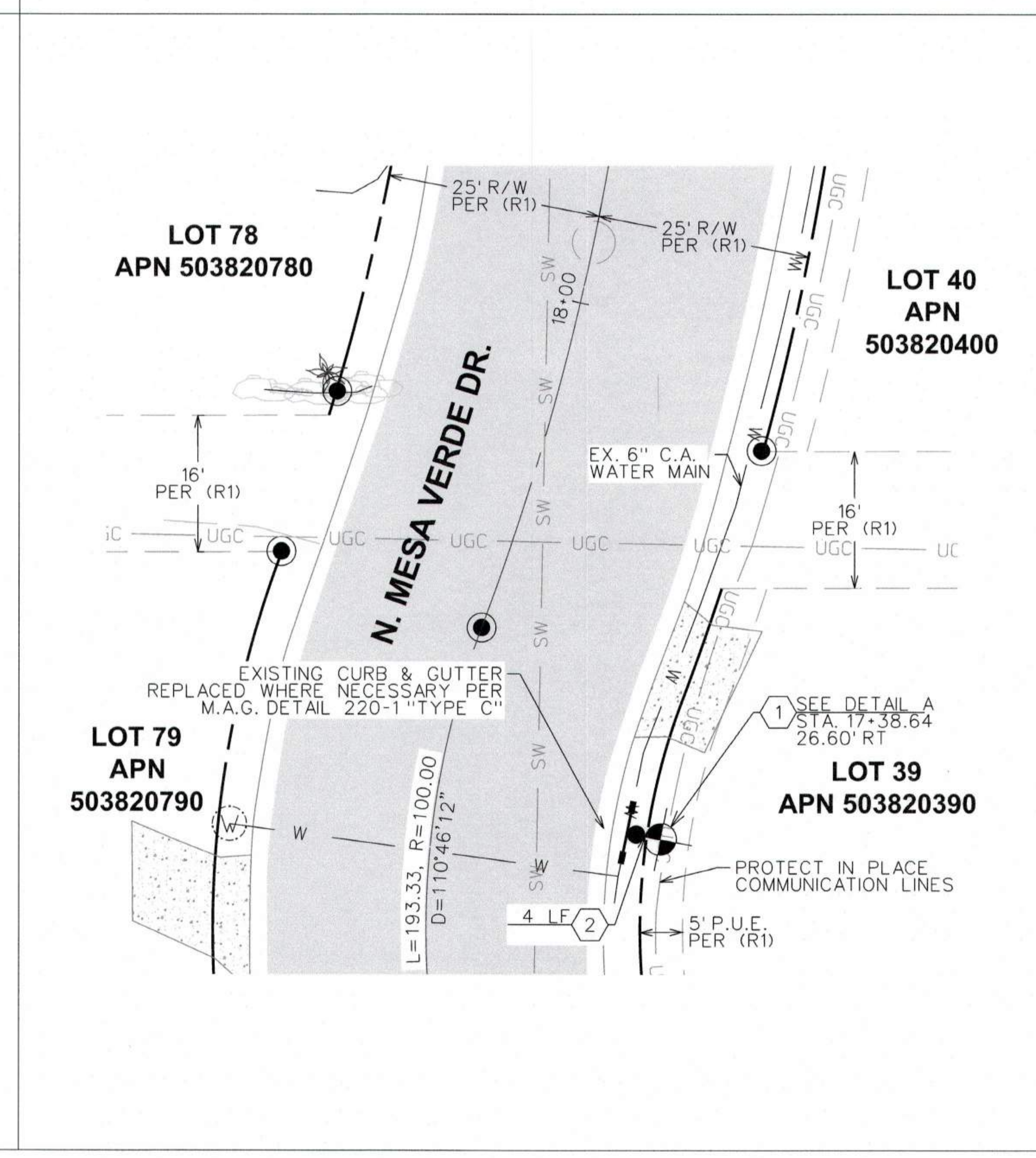
⬡	WATER CONSTRUCTION
1	INSTALL FIRE HYDRANT ASSEMBLY PER AWC STD. DTL. E-9-6-1
2	INSTALL 6" D.I.P. W/ POLYWRAP & RELATED FITTINGS
3	TIE INTO EX. 6" C.A. WATER MAIN W/ 6" TRANSITION COUPLING







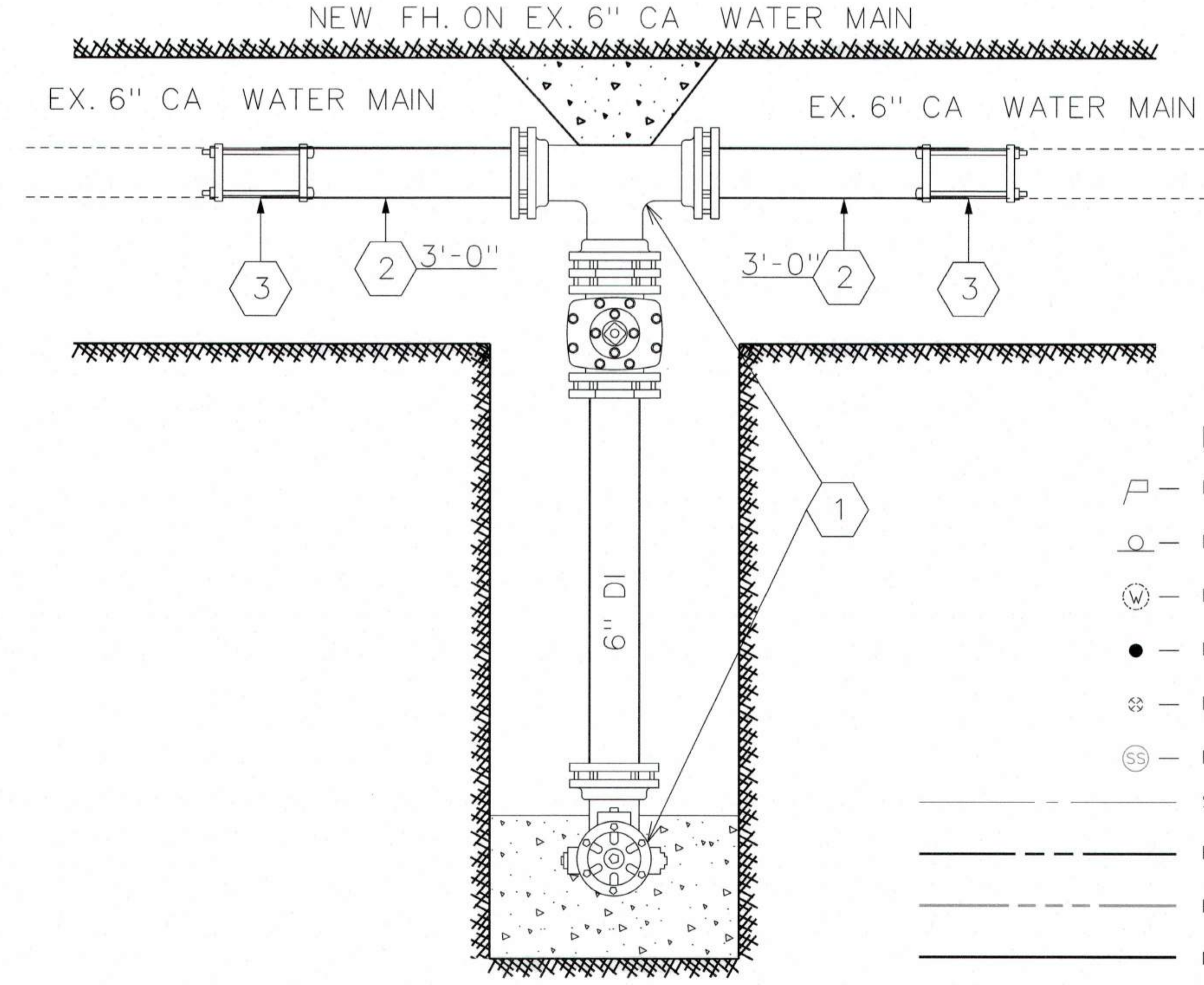


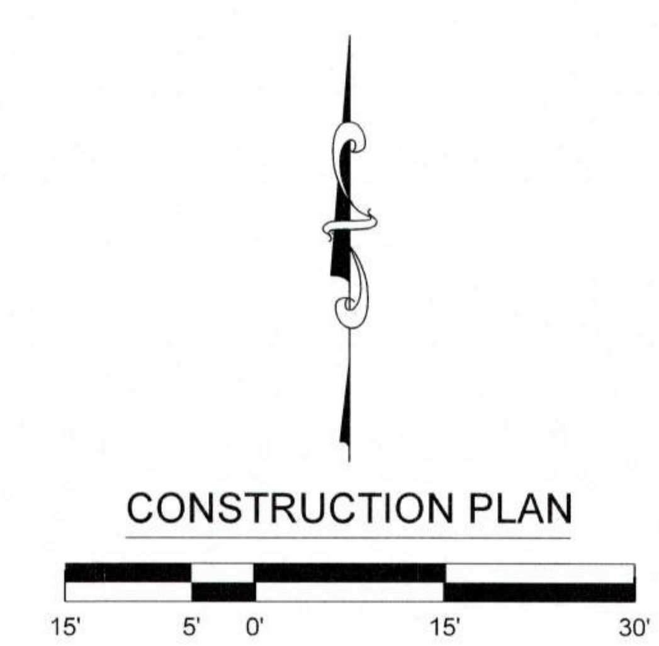


DETAIL "A":

NTS

NEW FH. ON EX. 6" CA WATER MAIN





LEGEND

- EX. MAIL BOX
- EX. SIGN
- EX. WATER METER BOX
- NEW WATER VALVE
- EX. WATER VALVE
- EX. SEWER MANHOLE
- STREET CENTERLINE/MONUMENT LINE
- RIGHT-OF-WAY LINE
- PROPERTY LINE
- NEW WATER LINE
- EX. WATER LINE
- EX. SEWER LINE
- EX. UNDERGOUND CABLE
- EX. FENCE
- EX. EASEMENT
- EX. ASPHALT

EXISTING UTILITY VERIFICATION:

THE CONTRACTOR MUST POTHOLE TO VERIFY DEPTH AND LOCATION OF ALL EXISTING UNDERGROUND UTILITIES AND STRUCTURES THAT ARE ADJACENT TO AND CROSSING THE WORK AREA BEFORE ANY CONSTRUCTION BEGINS.

THE CONTRACTOR MUST ALSO POTHOLE ALL EXISTING WATER LINES BEING CONNECTED TO, AND VERIFY THE LOCATION, DEPTH AND SIZE OF PIPE BEFORE ANY CONSTRUCTION BEGINS.

FOR BIDDING PURPOSES ONLY
Feb 12, 2026
Engineering Department Arizona Water Company

REVISIONS:

The installation shown is to be installed in accordance with the Arizona Water Company standard specifications on file with the Arizona Department of Environmental Quality

W.A. No.: | P.E. No.: 2594
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ARIZONA WATER COMPANY
3805 N BLACK CANYON HWY. POST OFFICE BOX 29006
PHOENIX, ARIZONA 85038-9006
(602) 240-6860

PROJECT DESC.: CONSTRUCT (5) FIRE HYDRANTS IN THE PINAL VALLEY WATER SYSTEM
PROJECT SHEET DESC.: CONSTRUCTION PLAN

Registered Professional Engineer
CERTIFICATE NO. 70873
AMY WALTHERESON
ARIZONA, U.S.A.
Expires 3-31-2026

DWG. No.: PV-0341
SHEET 2 OF 5

E-8-1
CONSTRUCTION SPECIFICATIONS
FOR THE INSTALLATION OF WATER DISTRIBUTION SYSTEMS
DUCTILE IRON

DEFINITIONS

A. Company. The words "Company" or "Arizona Water Company" mean Arizona Water Company, and where applicable, any division of Arizona Water Company, whose principal place of business is located at 3805 North Black Canyon Highway, Phoenix, Arizona 85015-5351 (Post Office Box 29006, Phoenix, Arizona 85038-9006).

B. Company's Authorized Representative. The words "Company's Authorized Representative" mean any officer of the Company, and any of the Company's Engineers, any Division Manager or Superintendent of the Company and/or such other person(s) designated in writing as the "Company's Authorized Representative" by the President or any Vice President of the Company.

C. Contractor. The word "Contractor" means either an individual or other entity employed to do the work as shown on the Construction Drawings and as specified herein.

D. Construction Drawings. The words "Construction Drawings" mean plans prepared by or on behalf of Arizona Water Company.

E. Contract. The word "Contract" means the written document titled "Proposal/Contract" when such document has been signed by an officer or other authorized representative of both the Contractor and the Company.

(1.) GENERAL

All work is to be completed in a safe, workmanlike manner and in accordance with these Construction Specifications; any deviation therefrom must be approved in writing by the Company.

Installations must conform with the requirements of all governmental regulating agencies and the cost of conforming to such regulations must be included in the unit bid prices. Examples of such regulations, without attempting to be inclusive, are:

a. Special compaction and paving for street crossing.
b. Shoring when required because of the trench depth.
c. Closing a trench in those areas where no open trench is allowed overnight.
d. Barricading and traffic control as required.

(2.) LOCATION MARKING

Alignment stakes as required in the opinion of the Company shall be furnished by the Company to the Contractor and shall be set by the Company at agreed upon intervals and offsets. Under normal circumstances these will reference the pipeline location five feet (5') into the right-of-way measured from property pins. Grade stakes will be provided only when the Construction Drawings show a pipeline depth other than covered in these Specifications. It is the responsibility of the Contractor to preserve all survey work.

(3.) TRENCH EXCAVATION

The trench location is to be determined by the Construction Drawings.

FOR 8-INCH OR SMALLER PIPE: The depth of the trench prior to pipe laying shall be such that the finished pipeline shall have between thirty-six inches (36") and forty-two inches (42") of cover unless otherwise specified on the Construction Drawings.

FOR 12-INCH AND LARGER PIPE: The depth of the trench prior to pipe laying shall be such that the finished pipeline shall have between forty-eight inches (48") and sixty inches (60") of cover unless otherwise specified on the Construction Drawings.

The width of the trench at and below the level at the top of the pipe shall be a minimum of twelve inches (12") plus the outside diameter of the pipe barrel and a maximum of twenty-four inches (24") plus the outside diameter of the pipe barrel.

The bottom of the trench shall be accurately graded to provide a uniform bearing for each length of pipe for the full length of the pipe. If the native material on the trench bottom can be reasonably dug by hand, bell holes shall be dug for the joints so that the joints in no way support the pipe. When native materials such as rock are encountered during trenching that will not provide a uniform support for the pipe, the trench will be over-excavated an additional six inches (6") and suitable bedding material will be placed in the trench.

Bedding material will be placed by hand in four-inch (4") lifts and compacted to ensure uniform compaction and to eliminate any voids under the pipe. When the space between the pipe and trench bottom varies, this must be backfilled and compacted in four-inch (4") lifts to the mid-section of the pipe.

Whenever the trench is over-excavated for whatever reason, the trench bottom will be brought up to the correct depth at the Contractor's expense using either method (a) or (b) as follows:

a. A.B.C. material shall be used and compacted to a uniform density of not less than 95% of the maximum density as determined by M.A.G.

b. Native material 100% of which will pass through a one and one-half inch (1-1/2") screen and at least 20% of which will pass through a number-8 screen shall be used and compacted to a uniform density of not less than 85% of the maximum density as determined by AASHTO T-99 method A and T-191.

(4.) MATERIALS TO BE PROVIDED BY CONTRACTOR

Unless otherwise specified on the Construction Drawings or in the Contract, the Contractor will supply all of the necessary materials which will become a permanent and integral part of the water distribution system, including concrete blocking, anchors, backfill material, paving material and supplies used during the prosecution of the work. All materials provided by the Contractor to construct the water distribution system must be NSF Standard 61 approved. All potable water pipes and fittings shall have NSF-PW seal. Construction materials used in the water system shall be lead free as defined at AAC R28-4-504 and R18-1-101. The Contractor will provide the following materials:

a. FIRE HYDRANTS: Mueller Super Centurion 250 Fire Hydrant, meets ANSI/AWWA C502 Standard, Model No. A-423, 5-1/4" main valve opening, three way, 6" Mechanical Joint Shoe, 1-1/2" pentagon operating nut, color - yellow, drain open, open direction - left, 4' or 4'-6" bury depending on application. For pumper and hose nozzle information see below.

(1) One - 4" Pumper Nozzle, NST and Two - 2-1/2" Hose Nozzles, NST. (These locations only: Ajo, Casa Grande, Coolidge and San Manuel.)

(2) One - 4-1/2" Pumper Nozzle, NST and Two - 2-1/2" Hose Nozzles, NST. (These locations only: Apache Junction, Arizona City, Lakeside, Oracle, Overgaard, Pinewood, Rimrock, Sedona, Sierra Vista, White Tank and Winkelman.)

(3) One - 4-1/2" Pumper Nozzle, NST and Two - 2-1/2" Hose Nozzles, NPT (Bisbee only.)

(4) One - 3" Pumper Nozzle GA 6-350 (6 threads per inch, 3.50 pitch diameter) and Two - 2-1/2" Hose Nozzles, NPT (Miami only.)

(5) One - 3-1/2" Pumper Nozzle GA 6-411 (6 threads per inch, 4.11 pitch diameter) and Two - 2-1/2" Hose Nozzle, NST (Superior only.)

b. FITTINGS: Manufactured by Tyler or Union. Crosses, Elbows, Tees, Cap, Reducer, Adapter, Plug, Blind Flange and Tapped Flange; Ductile Iron, Class 350, SSB, Cast Iron Cement Lined.

(1) Foster Adaptors for MJ, made by Infact Corporation: Available in size 4" to 16". Part No. 4" = 4FA-BC, 6" = 6FA-BC, 8" = 8FA-BC, 10" = 10FA-BC, 12" = 12FA-BC, 16" = 16FA-BC.

c. DETECTOR CHECK VALVE: Mueller/ Hersey EDC III, iron body, including 5/8" x 3/4" Trim Kit. Trim Kit Part No.: 4" = 282080, 6" = 282082, 8" = 282085, 10" = 282496.

d. GATE VALVES: Mueller Resilient Wedge Gate Valves, meets AWWA C509 specification, 250 psig, Non-rising stem, Part No. A-2360 sizes 4" through 12" ; Part No. A-2361 sizes 14" through 36", low zinc stems, epoxy coated inside and outside to meet the NSF 61 rating. The bonnet and stuffing box shall have 304 stainless steel bolts/nuts.

e. TRACER WIRE and WARNING TAPE:

(1) TRACER WIRE: Shall be direct bury AWG #14 solid copper wire, Color: Blue.

(2) WARNING TAPE: Reef Industries, Standard Terra Tape in 3" widths. Color: Blue and imprinted 'Arizona Water Company'.

f. AIR RELEASE VALVE: Crispin Model AR10 with 1" NPT inlet and 1/2" NPT outlet, cast iron body and top flange; with a 5/64" orifice with stainless steel valve sealing faces and BUNA-N rubber.

g. PRESSURE RELIEF VALVE: Watts 174A, Model M, 2" inlet, 2" outlet, Bronze Body, 30lb. to 150lb. pressure range.

h. MEGALUG: Mechanical Joint restraint made of ductile iron conforming to ASTM 536-80, 250 psi made by EBAA Iron, Inc., series 1100 or equal.

i. METER BOXES:

(1) Concrete Box with a steel regular lid, Number 1: Tucson specification.

(2) Concrete Box with a steel regular lid, Number 2, 3, and 4: Phoenix specification.

j. PIPE, COPPER: Type K soft copper in 60 or 100-foot coils, per ASTM B88.

k. PIPE, DUCTILE IRON: Ductile Iron Pipe, Cement Lined, Push-on, conform to current ANSI/AWWA Specification A21.51/C151, Pressure Class 350 (sizes 4" through 12"), Pressure Class 250 (sizes 14" through 20"), or Pressure Class 200 for 24" through 36" pipe. Vendors:
(1) Pacific States Cast Iron Pipe Company
(2) Griffin Pipe
(3) United States Pipe and Foundry Company
(4) American Ductile Iron Pipe
(5) Clow Pipe (McWane, Inc.)

l. PIPE, PLASTIC: Plastic pipe, C-900 PVC per ANSI/AWWA C900, Class 150, sizes 6" through 12". NSF61 approved. Furnished in laying lengths of 20'. The barrel shall conform to the outside dimensions of steel pipe (IPS) or cast iron (CI) pipe equivalent and the wall thickness of dimension-ratio (DR) 18.

m. POLYETHYLENE ENCASEMENT (Polywrap): For all pipeline and related fittings installed, EXCEPT for the Coolidge Division. Minimum 8 Mil. and installed per AWWA C105/A21.5-93 and ASTM A-674-89. Manufactured by the Pacific States Cast Iron Pipe Company. The wrapping tape shall be minimum 10 mil. vinyl tape. No duct tape shall be used.

n. COUPLING: Mueller, straight three part union, tested to meet ANSI/AWWA C800, H15403, conductive compression.

Mueller, H15428, straight coupling, conductive compression by male iron pipe, tested to meet ANSI/AWWA C800 specification. Size: 2".

Mueller, H15451, straight coupling, conductive compression by female iron pipe, tested to meet ANSI/AWWA C800 specification. Size: 2".

Viking Johnson brand, sold by Mueller: MaxiFit Straight (2"-24"), MaxiFitXtra Straight (4"-8") or MaxiStep Transition, tested to meet AWWA/ANSI C.219-91 specifications - certified to ISO 9001:1994 / Smith - Blair Quantum.

o. STOP, ANGLE METER, BALL: Mueller, valve, B24258, conductive compression by meter swivel nut, tested to meet ANSI/AWWA C800, size 5/8 " x 3/4" x 3/4" for a 3/4" service or size 1" for a 1" service.

Mueller, valve, B24265, female pipe thread by meter swivel nut, tested to meet ANSI/AWWA C800, size 5/8" x 3/4 " x 3/4 " for a 3/4" service or size 1" for a 1" service.

p. STOP, CORP: Mueller, ball valve, B25008, taper thread by conductive compression, tested to meet ANSI/AWWA C800 specification, sizes: 3/4", 1" and 2".

Mueller, ball valve, B25028, iron pipe thread by conductive compression, tested to meet ANSI/AWWA C800 specification. Sizes 3/4", 1", and 2".

Mueller, 300 Ball Curb Valve, B-25122, taper thread by conductive compression, tested to meet ANSI/AWWA C800 specifications, size: 2". (2" service)

q. STOP, CURB: Oriseal valve, H10291, iron pipe thread by iron pipe thread, quarter turn check, brass, tested to 300 psi working pressure, tested to meet ANSI/AWWA C800 specification, size: 2".

Mueller, B20283, Mueller 300 ball curb valve, female iron pipe by female iron pipe, quarter turn check, tested to meet ANSI/AWWA C800 specification. Size: 2". (Blow-off E-9-8-1).

r. TAPPING SADDLE: Smith Blair, Cast Bronze ASTM-B584 85-5-5-5, double strap, iron pipe threads, Models 321 and 323. Washers are silicon bronze, ASTM-B36. Gaskets are grade 60 Buna N, or Mueller bronze double strap service saddle, BR 2 B series, cast bronze, ASTM-B585, 85-5-5-5, or H16084, 200 psig, meets ANSI/AWWA C800.

s. TAPPING SLEEVE: Mueller H304 Stainless Steel Tapping Sleeve, JCM 432 18 8 Type 304 Stainless Steel Tapping Sleeve, Romac "SST" Type 304 Stainless Steel Tapping Sleeve or CASCADE-style CST-EX stainless steel pressure-rated tapping sleeve.

t. TAPPING VALVE: Mueller Resilient Wedge tapping valve, Catalog Number T-2360-16, Class 125, sizes 4" through 12"; T-2361-16, Class 125, sizes 14" to 36" all with Type 304 stainless steel fasteners; bypass valves are required on 18" - 36" valves flange by mechanical joint per ANSI/AWWA C111, iron wedge, non-rising stem. Epoxy coated interior/exterior per ANSI/AWWA C550 for NSF 61 compliance. 250 PSI range for valves 4" to 12". 150 PSI range for valves 14" to 36".

u. U-BRANCH: Mueller, H15364, 1" male iron pipe by 3/4" male iron pipe, tested to meet ANSI/AWWA C800 specification. Size: 1" x 3/4" x 13-1/2", straight line.

v. VALVE BOXES: Valve Box with Cover, adjustable, Tyler 562-A or equal, made of cast iron.

w. VAULTS: Utility Vault Company, Chandler, AZ.

(1) 4484-WA concrete vault with a 3660 aluminum double torsion door with a recessed padlock hasp, two - 18" x 24" center knockouts.

(2) 575-WA concrete vault with a 4874 aluminum double torsion door with a recessed padlock hasp, two - 18" x 24" center knock outs and adjustable frame.

(3) 612-5X-WA concrete vault with a 4874 aluminum double torsion door with a recessed padlock hasp, two - 18" x 24" center knockouts.

x. VALVE, METER: Mueller, B24265-1, Mueller 300 ball angle meter valve, female iron pipe by meter nut, quarter turn check, lock wing, tested to meet ANSI/AWWA C800 specification. Size: 1".

Mueller, B25170, Mueller 300 ball straight valve, conductive compression by female iron pipe, quarter turn check, lock wing, tested to meet ANSI/AWWA C800 specification. Size: 1".

y. YOKES, METER: Relocator type copper meter yoke with horizontal inlet and outlet and meter thread ends, B24118, with lock wing Mueller 300 angle ball valve, full port, sizes: 1" x 12", 5/8" x 3/4" x 7", 5/8 x 3/4" x 9".

Mueller, 2" copper meter yoke with horizontal inlet and outlet and female iron pipe threads, B2423-99000, with lock wing Mueller 300 ball angle meter valves on inlet and outlet risers. Raised 1" by-pass with lock wing Mueller 300 ball valve.

The Contractor also will be required to provide the following materials, the cost of which will be included in its unit bid price:

All material and concrete for thrust blocks, other anchors, reinforcing steel; all gravel, crushed stone, A.B.C., earth, sand, or screened material which may be required; all material for bracing and shoring trenches and for construction of forms; all barricades and traffic control equipment; all material for paving replacement and any water used for compaction of backfill.

(5.) INSTALLATION OF MATERIALS

All materials are to be installed in accordance with manufacturers recommendations unless otherwise directed by these Specifications.

All pipe, fittings and valves shall be laid true to the lines, grades and locations established by the Specifications and the Construction Drawings.

The ends and inside of the pipe shall be thoroughly cleaned and inspected for damage. No damaged materials shall be installed in the water distribution system. Whenever the work ceases for any reason, all open pipeline ends shall be tightly plugged by the Contractor. Plugs shall be watertight and approved by the company.

Concrete thrust blocks of the sizes required by the plans and specifications are to be provided at all valves, changes in direction or size, or at any other point where an unbalanced thrust due to water pressure would exist. Thrust blocks are to be formed to prevent any concrete from spilling over or into a joint.

Trench curves as shown on the Construction Drawings may be made without fittings when using push on joint pipe up to twelve inches (12") in diameter, if the deflection of the pipe does not exceed five degrees (5°) or nineteen inches (19") per eighteen-foot (18') length of pipe. The minimum radius of such curves will be two hundred five feet (205').

Prior to construction, the appropriate agency(ies) will be notified as required by the permit(s).

It shall be the Contractor's responsibility to uncover all existing water lines being connected to, and to verify the location, depth and size of pipe before any construction begins.

Any construction performed without the knowledge of the duly authorized representative is liable for removal and replacement at the Contractor's expense.

All fire hydrants, frames, covers and valve boxes, etc. shall be adjusted to finished grade prior to the placing of the asphalt concrete surface course by the Contractor (where applicable).

Air release valves shall be installed at water system high points per Standard Detail E-9-8-2/E-9-8-3.

All water services shall be set a minimum of two feet (2') on the customer's property, preferably within the P.U.E. and not within right-of-way.

Unless otherwise specified on the construction drawings, all water mains shall be installed five feet (5') from the property line inside the right-of-way or easement.

Water valves shall be spaced not more than five hundred feet (500') in commercial districts and not more than eight hundred feet (800') in other districts. Variations may be required for transmission mains or special applications.

Installation of water line casing shall be per Standard Specification E-9-24-1.

Tracer Wire and Warning Tape are to be installed on all mains, tees, crosses, ells and fire hydrant laterals. They will not be installed on service lines. The tracer wire will be installed on the water main 45 degrees from the vertical centerline of the pipe and shall be taped to the fittings directly and on the main every 10 feet using a minimum 10 mil vinyl tape. The tracer wire shall be placed between the valve riser and box with a minimum of 12" of wire inside. The warning tape shall be installed a minimum of two feet below the surface, being measured from final grade, directly over the center of the pipe. Any splices in the tracer wire shall be joined using waterproof connectors. Any splices in the warning tape shall be joined using minimum 10 mil vinyl tape. The tracer wire shall be tested for continuity after backfill and compaction, but before paving. Any detected damages to the wire shall be repaired before paving will be allowed.

(6.) BACKFILL OF WATER MAIN TRENCHES

Backfill of any excavation shall conform to the requirements of any of the governmental agencies having jurisdiction over the location. If no governmental agency having such jurisdiction specifies backfill or compaction requirements, and no special requirements are shown on the Construction Drawings, the procedure set forth in this section will apply for water line trenches.

The bedding material above the pipe and backfill material shall be compacted to a minimum of 95% compaction as determind by M.A.G. specifications. If water settling is used for compaction, it is the responsibility of the Contractor to prevent the pipe from floating.

The bedding material shall be either native material, 100% of which will pass through a one and one-half inch (1-1/2") screen and at least 20% of which will pass through a number-8 screen, or imported material which conforms to M.A.G. specifications for A.B.C. or type-B select materials. Bedding material shall be used below and around the pipe and a minimum of twelve inches (12") above the pipe. Shade and bedding material to be mechanically compacted prior to remainder of trench back-fill.

The remainder of the trench shall be backfilled with native or imported material which shall be of sound earthen material free from broken concrete, wood, broken pavement, or other unsuitable substances. Except as otherwise specified, backfill may be material containing no pieces larger than six inches (6") in greatest dimension.

Where settlement occurs, additional backfill material shall be placed and compacted and the trench shall be brought to final grade.

(7.) HYDROSTATIC TESTING OF COMPLETED PIPELINES

Hydrostatic testing of water pipelines will be completed before the new system is connected into the existing water system so that all testing can be done against all new materials.

The completed section of water pipeline to be tested shall be slowly filled with water with care being taken to expel all air from the pipe. If necessary, the pipe will be tapped at high points to vent air.

The Contractor shall provide all equipment and labor necessary to accomplish this testing and the price shall be included in the unit prices. The Contractor shall notify the Company in advance of the testing so that the Company can schedule a duly authorized representative to be at the site during testing. The Contractor, at its own expense, shall make any necessary repairs to the system being tested in order to cause the section being tested to meet the test limits set below. The Contractor may request authorization of the Company to connect the new pipelines to the existing system prior to completion of pressure testing when, in the Company's sole opinion and judgment, conditions warrant such connection.

The Contractor shall assume all responsibility to complete pressure testing to Company's specifications after such connection, including, but not limited to, isolation of the new pipelines from the existing system, if necessary.

Connections prior to completion of pressure testing shall not be made unless prior Company authorization has been obtained, and any extra expenses resulting from such connections shall be the sole responsibility of the Contractor.

Leakage tests will be for a period of two hours at 200 + or - 5 psi at the point of lowest elevation; leakage may not exceed 0.1 gallons per hour per one thousand feet (1,000') of pipe per inch of diameter. If dry utilities are not installed, a second pressure test is required.

(8.) DISINFECTION AND FLUSHING OF COMPLETED WATER PIPELINES

Disinfection and flushing will conform to recommendations of Arizona State Department of Health Services Engineering Bulletin Number 8, latest edition, or any future Arizona Department of Environmental Quality bulletins. Contractor to follow all conditions of any discharge permit.

(9.) NO OTHER UTILITIES ALLOWED IN OR NEAR WATER PIPELINE TRENCHES

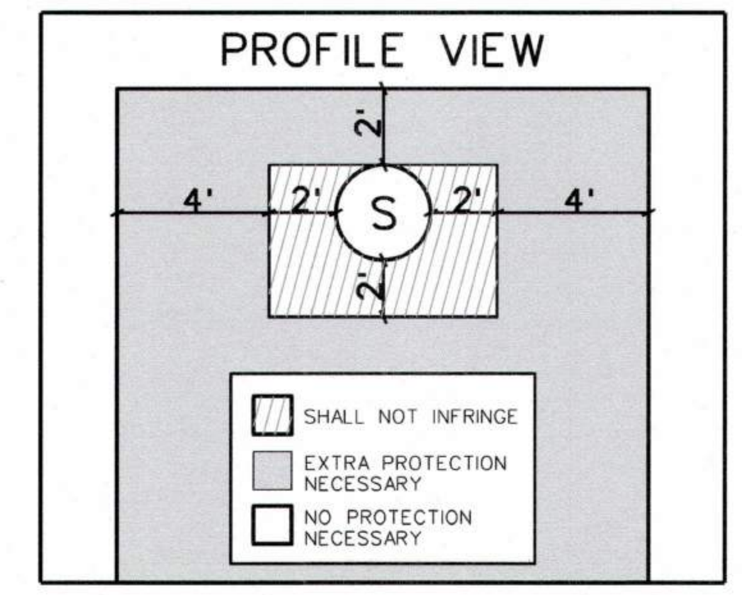
No other utility installations will be permitted in the water pipeline trench or within five feet (5') of the Company's water pipeline when running parallel to the water pipelines.

(10.) PROTECTION OF WATER MAINS NEAR SEWERS

In order to protect water mains from contamination by sewers, the installation of the water mains must conform to the following requirements:

a. Horizontal - When water lines and sewers are laid parallel with each other, the horizontal distance between them shall not be less than six feet (6'). Each line shall be laid on undisturbed or bedded material in a separate trench. Where conditions prevent the minimum horizontal separation set forth above, extra protection will be required. Extra protection shall consist of constructing the sewer main with mechanical joint ductile iron pipe or with slip-joint ductile iron pipe if joint restraint is provided, or encasing both water and sewer main in concrete. See AWC Standard Detail E-9-30-1 and E-9-30-2.

The Construction Drawings shall indicate the installation requirements. The drawings showing these exceptions shall have been approved by the appropriate state and/or county health department. Refer to the diagram below for clarification.



Under no circumstances will the horizontal separation between sewer mains and water mains be less than two feet (2'). All distances are to be measured from the outside of the sewer main to the outside of the water main.

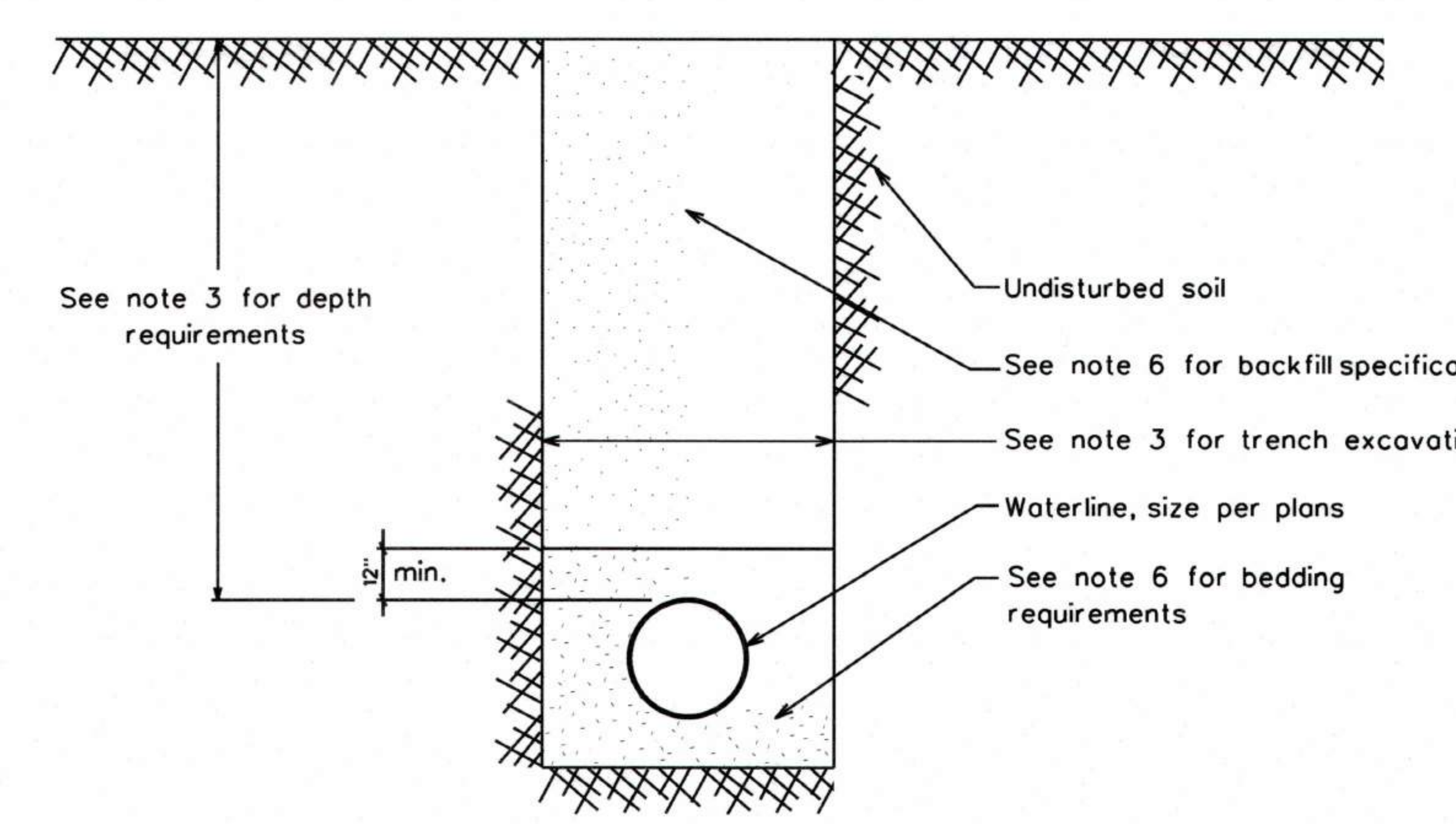
b. Vertical - When a water main is parallel with or crosses a sewer main within two feet (2') above the sewer or greater than two feet (2') below the sewer, extra protection will be required. Extra protection shall consist of constructing the sewer main with mechanical joint ductile iron pipe or with slip-joint ductile iron pipe if joint restraint is provided, or encasing both water and sewer main in concrete. See AWC Standard Detail E-9-30-1 and E-9-30-2.

The Construction Drawings shall indicate the installation requirements. The drawings showing these exceptions shall have been approved by the appropriate state and/or county health department.

Under no circumstances will the vertical separation of a sewer main installed above a water main be less than two feet (2'). All distances are to be measured from the outside of the sewer main to the outside of the water main. Refer to the diagram above for clarification.

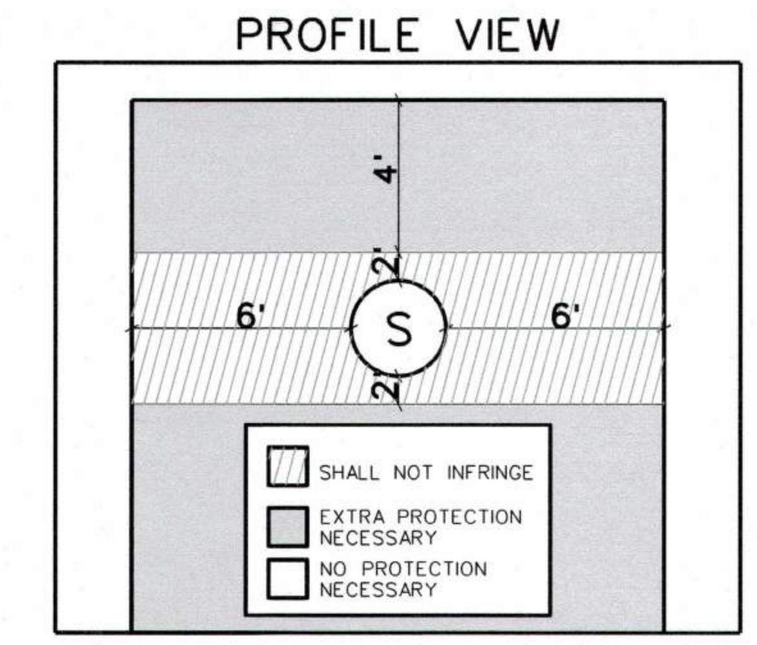
c. When unusual conditions such as, but not limited to, highway or bridge crossings prevent the water and sewer main separations required from being met, the appropriate state and/or county health department will review and may approve requests for authorization to use alternate construction techniques, materials and joints on a case-by-case basis.

d. No water pipe shall pass through or come into contact with any part of a sewer manhole. The minimum horizontal separation between water mains and manholes shall be six feet (6'), measured from the center of the manhole.



TYPICAL TRENCH DETAIL
Per MAG Specifications 601, 601.4.2, 601.4.6

e. The minimum separation between force mains or pressure sewers and water mains shall be two feet (2') vertically and six feet (6') horizontally under all conditions. Where a sewer force main crosses above, or less than six feet (6') below, a water line, the sewer main shall be encased in at least six inches (6") of concrete for ten feet (10') on either side of the water main. Refer to the diagram below for clarification.



f. Sewer mains (gravity, pressure, force) shall be kept a minimum of fifty feet (50') from drinking water wells, unless the following conditions are met:

1. Water main pipe, pressure tested in place to 50 psi without excessive leakage, may be used for gravity sewers at distances greater than twenty feet (20') from drinking water wells.

2. Water main pipe, pressure tested in place to 150 psi without excessive leakage, may be used for pressure sewers and force mains at distances greater than twenty feet (20') from drinking water wells.

g. No septic tank/disposal field system shall be constructed within one hundred feet (100') of a drinking water well.

h. All distances are measured perpendicularly from the outside of the sewer main to the outside of the water main. These separation requirements do not apply to building, plumbing or individual house service connections.

i. Use Mechanical Joint ductile iron pipe with Megalug thrust restraints a minimum of ten (10') feet on each side of a sewer or storm drain crossing.

(11.) COMPACTION

When crossing existing water mains a minimum of 95% compaction is required to the bottom of existing mains.

Arizona Water Company requires that no slurry be permitted to contact existing cement/asbestos or ductile iron pipes, unless authorized by the company. Slurry may be poured in the bottom of the sewer trench stopping three inches (3") below the existing water main. The backfill used around the main should be AB in sufficient depth to prevent slurry from contacting existing main.

(12.) WATER MAIN MATERIAL SPECIFICATIONS

Ductile iron pipe (Push-on type) minimum class 350, cement lined and conform to AWWA C151.

All main line valves shall conform to AWWA C500 with a minimum working pressure of 200 psi.

All cast iron fittings to be cement lined in accordance with AWWA C104 and shall conform to AWWA C110 with a minimum working pressure of 250 psi. Except for the Coolidge System - See Note 4L.

Maximum joint deflection for 6" mechanical joint ductile iron pipe is seven degrees, seven minutes (7°,7') or twenty-seven inches (27") per eighteen-foot (18') length pipe, for a maximum curve of one hundred forty-five feet (145').

Maximum joint deflection for 8" and 12" mechanical joint ductile iron pipe is five degrees, twenty-one minutes (5°,21') or twenty inches (20") per eighteen-foot (18') length pipe, for a maximum curve of one hundred ninety-five feet (195').

Maximum joint deflection for 6", 8" and 12" push-on joint ductile iron pipe is five degrees (5°) or nineteen inches (19") per eighteen-foot (18') length pipe for a maximum curve of two hundred five feet (205').

FOR BIDDING PURPOSES ONLY
Feb 12, 2026
Engineering Department
Arizona Water Company

REVISIONS:

The installation shown is to be installed in accordance with the Arizona Water Company standard specifications on file with the Arizona Department of Environmental Quality

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA 811
Call 811 or click Arizona811.com

W.A. No.:	P.E. No.: 2594
SYSTEM: PINAL VALLEY (CG)	
LEGAL DESC.: SE 1/4 SEC. 13, T. 06 S., R. 05 E.	
TAX DIST.: 0428 & 0458	SIB No.:
DATE: 01/12/2026	SCALE: AS SHOWN
DRAWN BY: TDS	REVIEWED BY: BWP / CHECKED BY: MC

ARIZONA WATER COMPANY
3805 N. BLACK CANYON HWY. POST OFFICE BOX 29006
PHOENIX, ARIZONA 85038-9006
(602) 240-6860

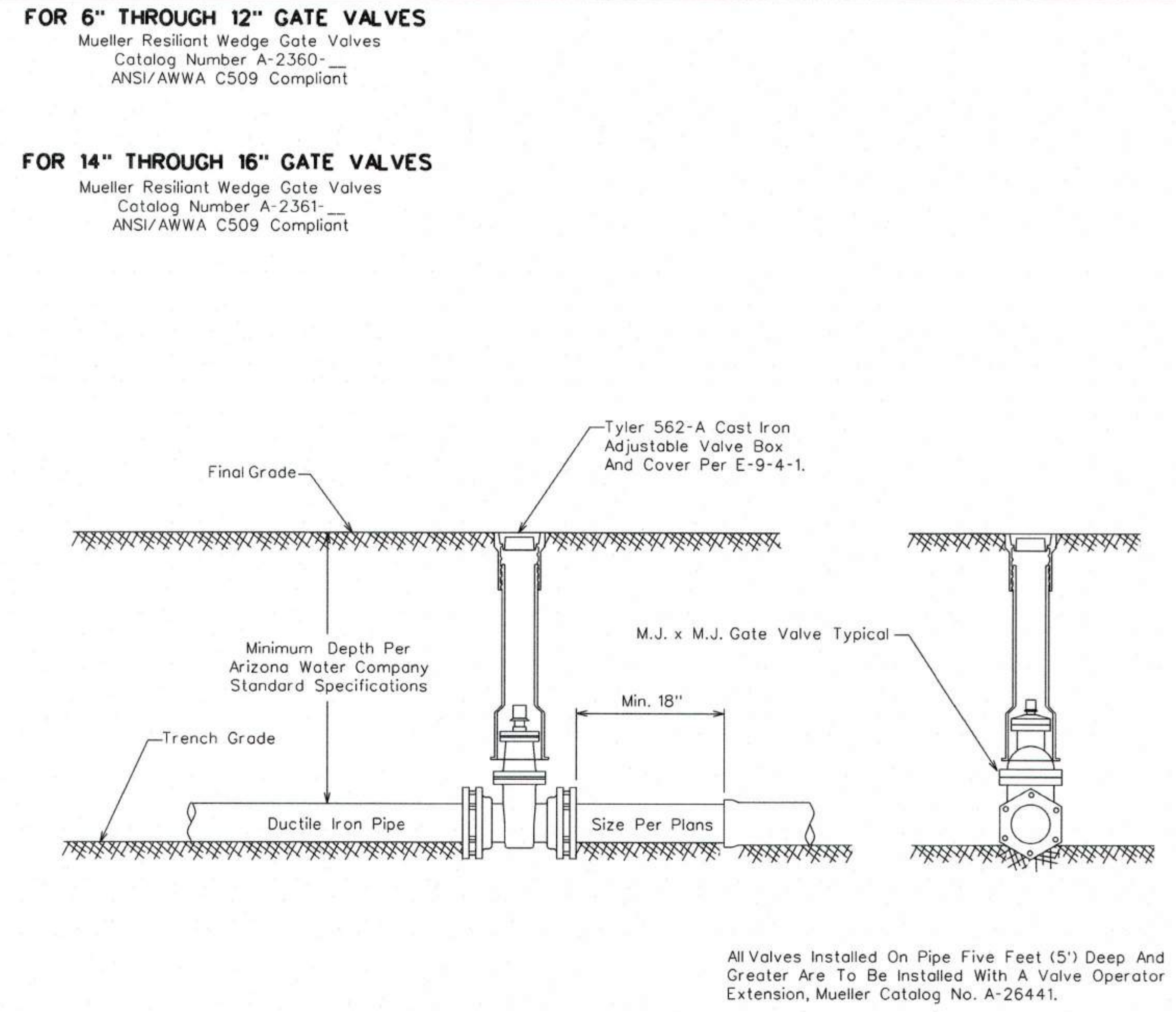
PROJECT DESC.: CONSTRUCT (5) FIRE HYDRANTS IN THE PINAL VALLEY WATER SYSTEM

PROJECT SHEET DESC.: AWC NOTES

Registered Professional Engineer (Civil)
Certificate No. 70873
AMY WALTHERESON
Date Signed 1/21/26
ARIZONA, U.S.A.
Expires 3-31-2026

DWG. No.: PV-0341

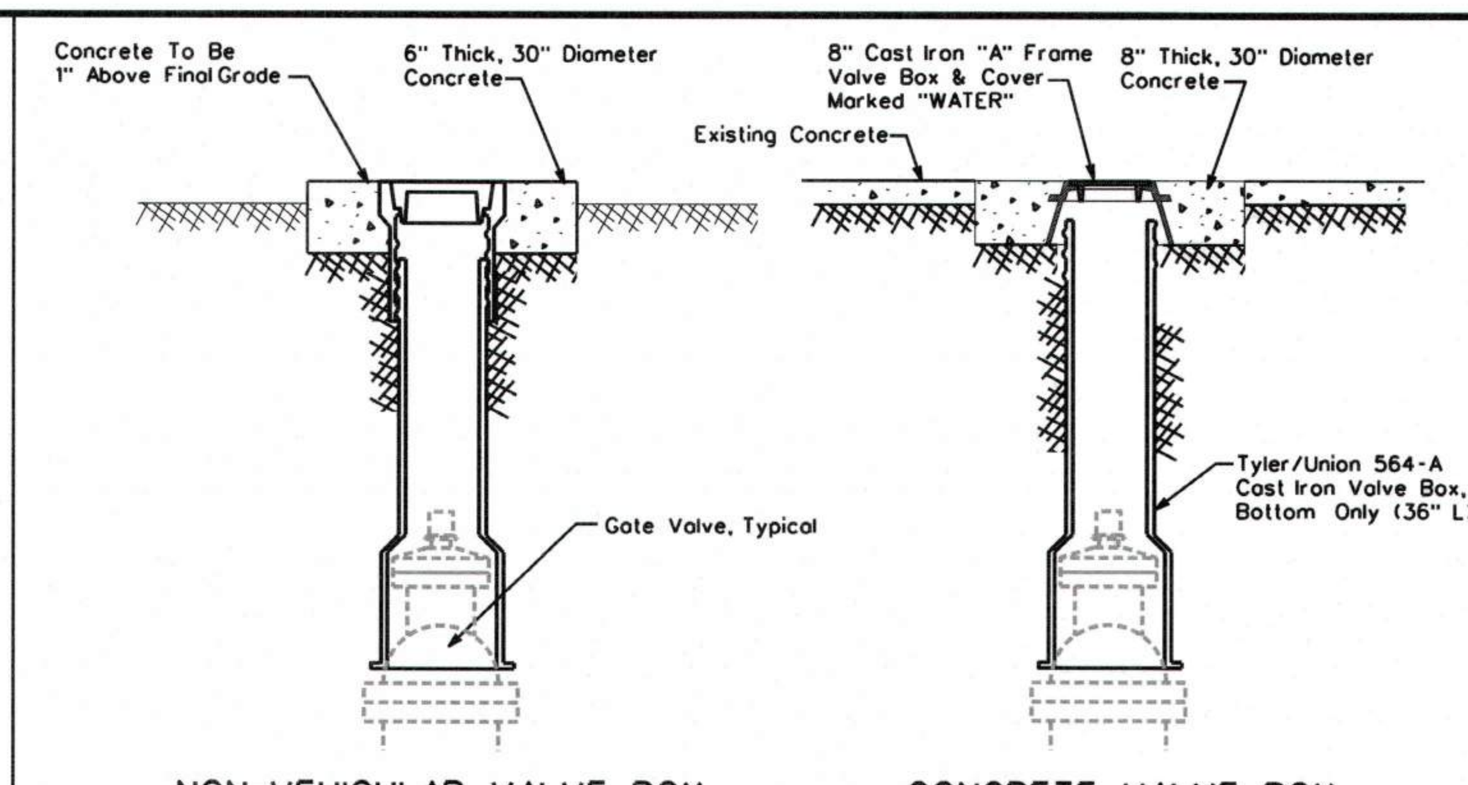
SHEET 3 OF 5



ARIZONA WATER COMPANY

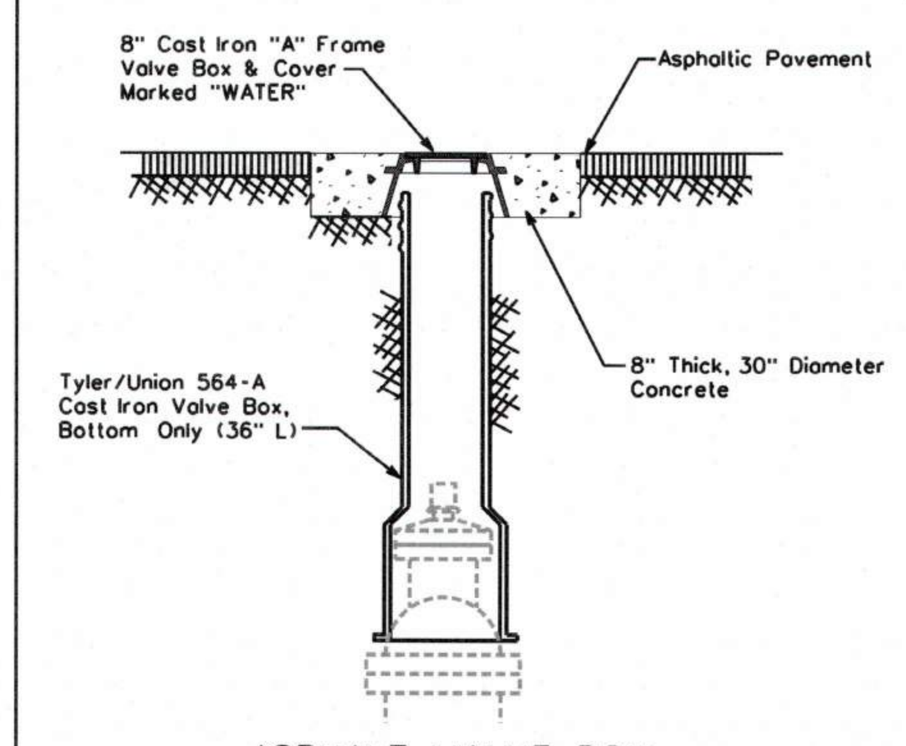
STANDARD SPECIFICATION
FOR THE INSTALLATION OF
TYPICAL VERTICAL GATE VALVES

DRAWN BY:	APPROVED BY:	DATE:		
CB	MW	03.20.1986	△ 08.23.2006	E-9-2-1



NON-VEHICULAR VALVE BOX

CONCRETE VALVE BOX
For Areas Subject To Vehicular Traffic



ASPHALT VALVE BOX
For Areas Subject To Vehicular Traffic

NOTE:

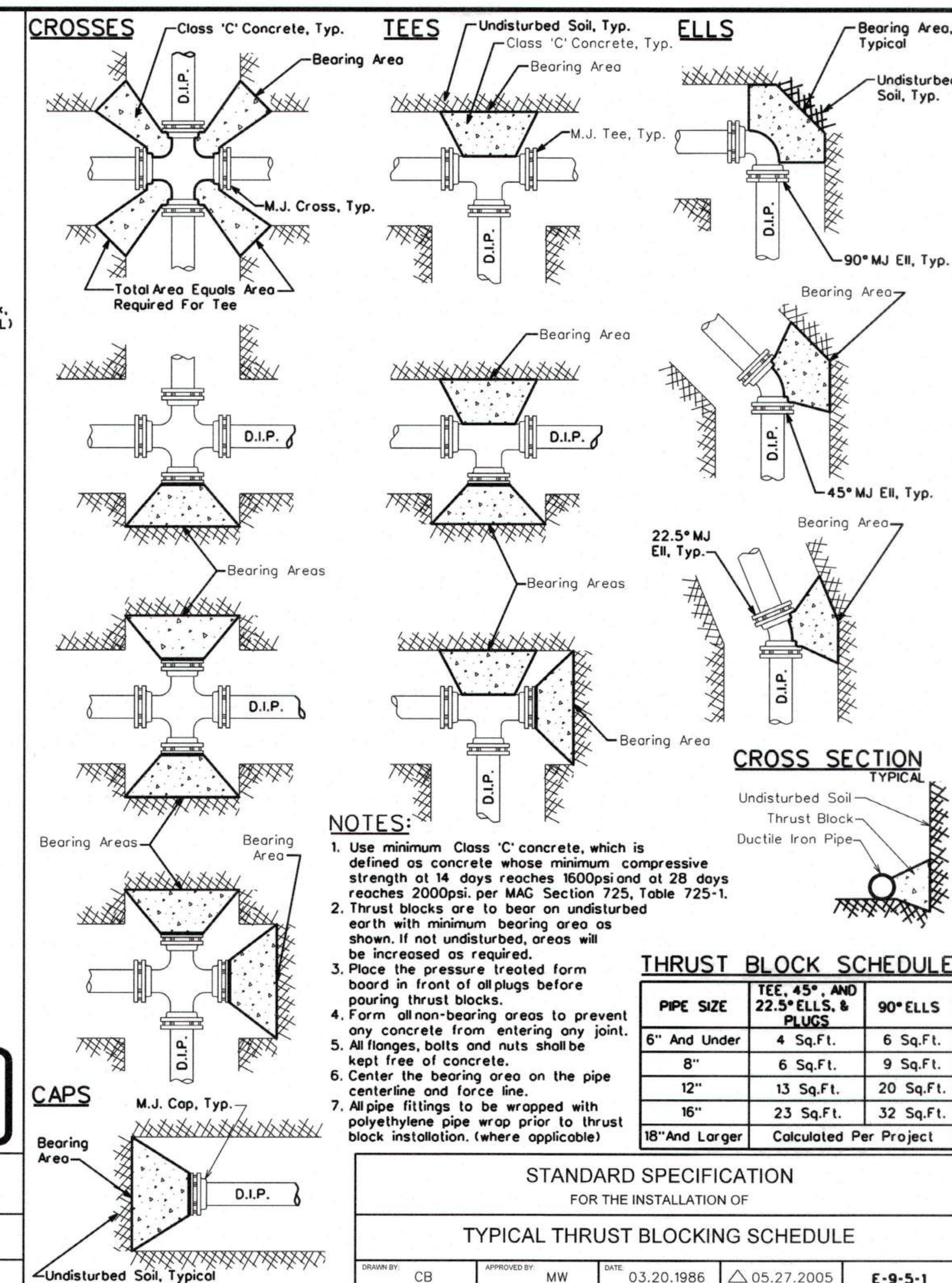
1. The Valve Box Shall Be Adjusted To Finished Grade Prior To Placing Of Asphalt And/Or Concrete.
2. For Non-Traffic Areas Use Tyler/Union 562-A, Two-Piece, 6855 Series Or Equivalent Adjustable Cast Iron Valve Box And Cover. Valves 4" To 12"

   For Traffic Areas, Use Tyler/Union 564-A Bottom Section Only With An 8" Cast Iron "A" Frame With Cover. Valves 4" To 12"
3. All Valves Installed Five Feet (5') Deep And Greater Are To Be Installed With A Valve Operator Extension, Mueller Catalog No. A-26441 And Shall Have A Debris Cap
4. Use Minimum Class 'C' Concrete which is defined as concrete whose minimum compressive strength at 14 days reaches 1600psi and at 28 days reaches 2000psi. per MAG Section 725, Table 725-1.

ARIZONA WATER COMPANY

STANDARD SPECIFICATION
FOR THE INSTALLATION OF
TYPICAL VALVE SUBJECT TO NON-VEHICULAR AND VEHICULAR TRAFFIC

DRAWN BY:	APPROVED BY:	DATE:		
CB	MW	03.20.1986	△ 8.24.2006	E-9-4-1



CROSS SECTION
TYPICAL

NOTES:

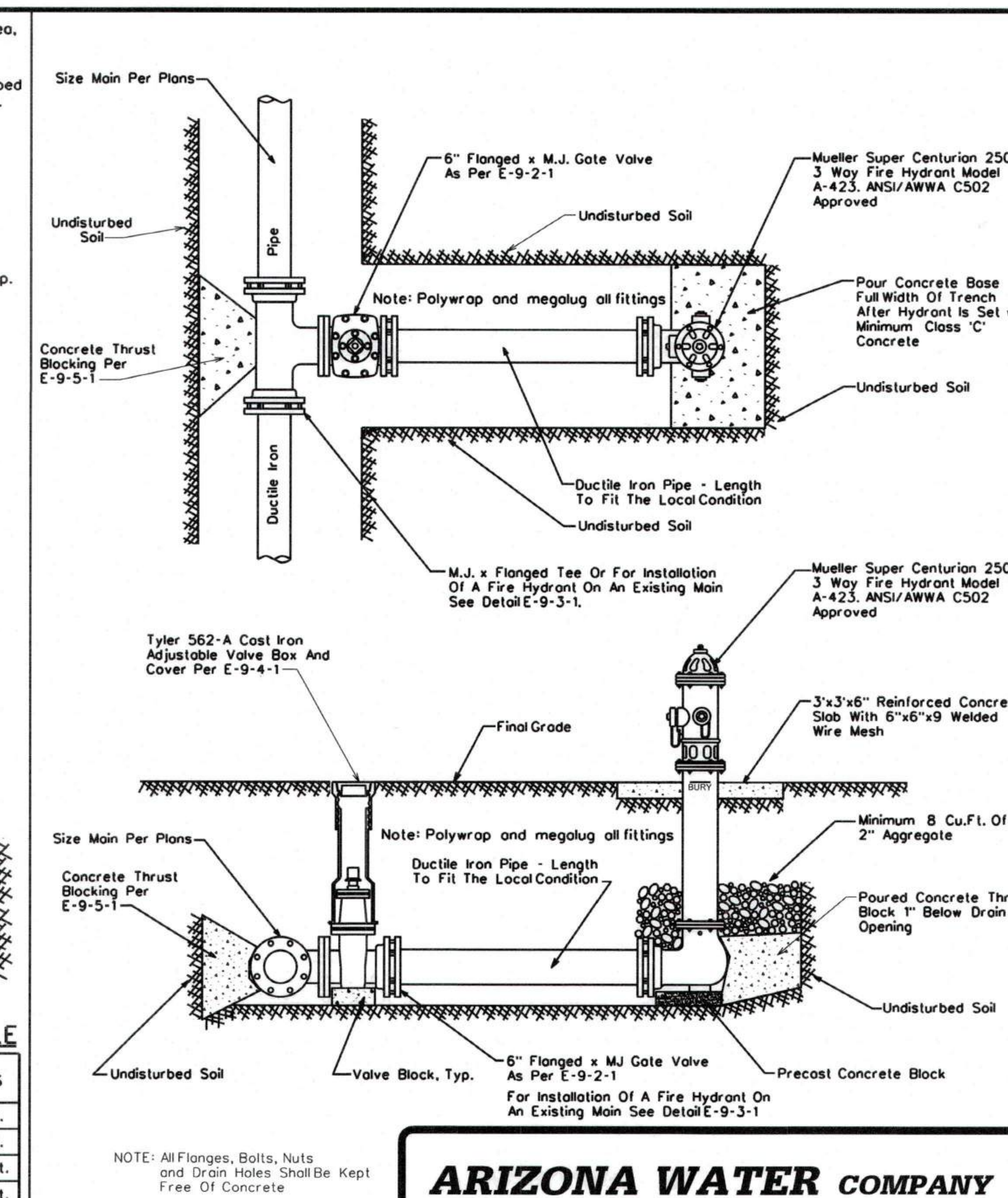
1. Use minimum Class 'C' concrete, which is defined as concrete whose minimum compressive strength at 14 days reaches 1600psi and at 28 days reaches 2000psi. per MAG Section 725, Table 725-1.
2. Thrust blocks are to bear on undisturbed earth with minimum bearing area as shown. If not undisturbed, areas will be increased as required.
3. Place the pressure treated form board in front of all plugs before pouring thrust blocks.
4. Form all non-bearing areas to prevent any concrete from entering any joint.
5. All flanges, bolts and nuts shall be kept free of concrete.
6. Center the bearing area on the pipe centerline and force line.
7. All pipe fittings to be wrapped with polyethylene pipe wrap prior to thrust block installation. (where applicable)

THRUST BLOCK SCHEDULE

PIPE SIZE	TEE, 45°, AND 22.5° ELLS, & PLUGS	90° ELLS
6" And Under	4 Sq.Ft.	6 Sq.Ft.
8"	6 Sq.Ft.	9 Sq.Ft.
12"	13 Sq.Ft.	20 Sq.Ft.
16"	23 Sq.Ft.	32 Sq.Ft.
18" And Larger	Calculated Per Project	

STANDARD SPECIFICATION
FOR THE INSTALLATION OF
TYPICAL THRUST BLOCKING SCHEDULE

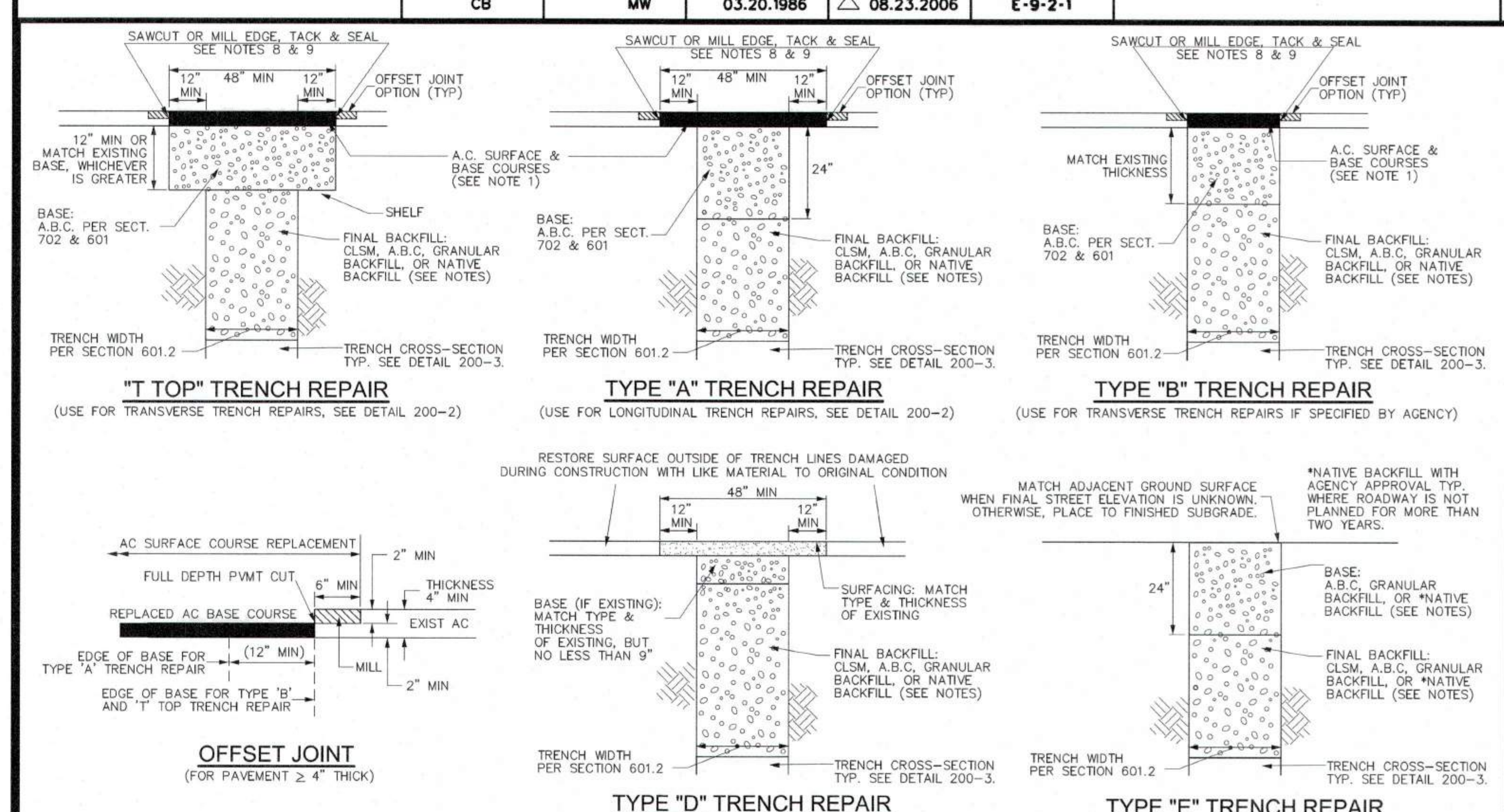
DRAWN BY:	APPROVED BY:	DATE:		
CB	MW	03.20.1986	△ 05.27.2005	E-9-5-1



ARIZONA WATER COMPANY

STANDARD SPECIFICATION
FOR THE INSTALLATION OF
TYPICAL PERPENDICULAR FIRE HYDRANT

DRAWN BY:	APPROVED BY:	DATE:		
CB	MW	1-28-91	△ 08.24.2006	E-9-6-1



"T TOP" TRENCH REPAIR
(USE FOR TRANSVERSE TRENCH REPAIRS, SEE DETAIL 200-2)

TYPE "A" TRENCH REPAIR
(USE FOR LONGITUDINAL TRENCH REPAIRS, SEE DETAIL 200-2)

TYPE "B" TRENCH REPAIR
(USE FOR TRANSVERSE TRENCH REPAIRS IF SPECIFIED BY AGENCY)

OFFSET JOINT
(FOR PAVEMENT ≥ 4" THICK)

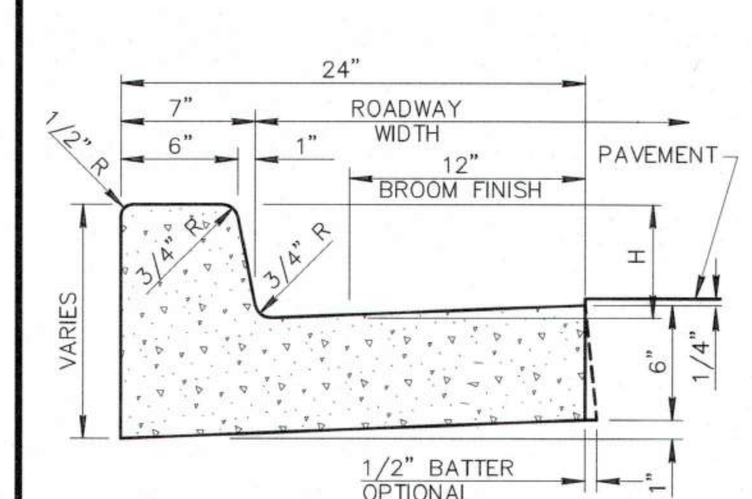
TYPE "D" TRENCH REPAIR
(TRENCH NOT UNDER CONCRETE OR ASPHALT PAVEMENT)

TYPE "E" TRENCH REPAIR
(TRENCH IN FUTURE ROADWAY PRISM OR ALLEY)

NOTES:

1. PAVEMENT MATCHING, BASE COURSES AND SURFACE REPLACEMENT SHALL BE IN ACCORDANCE WITH SECTION 336 UNLESS OTHERWISE SPECIFIED IN CONTRACT DOCUMENTS.
2. TRENCH EXCAVATION, BACKFILLING AND COMPACTION SHALL BE IN ACCORDANCE WITH SECTION 601. NATIVE BACKFILL SHALL ONLY BE USED WITH AGENCY APPROVAL.
3. CLSM SHALL BE 1/2-SACK OR 1-SACK PER SECTIONS 604 AND 728.
4. MATERIAL FOR FINAL BACKFILL AND BASE (IF APPLICABLE) SHALL BE AS NOTED HEREIN UNLESS OTHERWISE SPECIFIED IN CONTRACT DOCUMENTS.
5. FINAL BACKFILL SHALL BE CLSM FOR TRENCH DEPTHS GREATER THAN 4 FEET UNLESS A SAFE (OHSA COMPLIANT) WORKING SPACE AT LEAST 30" WIDE IS PROVIDED TO CONDUCT COMPACTION TESTING.
6. PROVIDE MINIMUM 12" WIDE SHELF AS SHOWN IN "T-TOP" TRENCH REPAIR AT ENDS OF TYPE "A" TRENCH REPAIR EXCEPT WHERE EDGE ABUTS EXISTING CONCRETE.
7. USE "T-TOP" PAVEMENT REPLACEMENT WHERE A TRENCH IS NOT PARALLEL TO A STREET OR GOES THROUGH AN INTERSECTION.
8. THE JOINT LOCATION OR JOINT CONFIGURATION MAY VARY FROM THAT SHOWN TO ELIMINATE REMNANTS, TO ELIMINATE FULL DEPTH SAWCUT JOINTS FROM BEING LOCATED WITHIN A WHEEL PATH AS REQUIRED BY SECTION 336, OR WHEN AN OFFSET JOINT IS CONSTRUCTED. SEE DETAIL 200-2 FOR REMNANT PAVEMENT REMOVAL REQUIREMENTS.
9. SAWCUT OR MILL EDGE AND APPLY TACK COAT. FOR PERMANENT PAVEMENT, APPLY 2-1/2" WIDE SECTION 337.2.1 COMPLIANT JOINT SEALANT AS REQUIRED BY AGENCY - SEE DETAIL ON 200-2.
10. EXPOSED COPPER OR POLYETHYLENE WATER PIPE UP TO 2" IN DIAMETER IN TRENCHES TO BE BACKFILLED WITH CLSM SHALL BE WRAPPED WITH MINIMUM 3/4" THICK PREFORMED PIPE-COVERING FOAM INSULATION BEFORE PLACING CLSM.

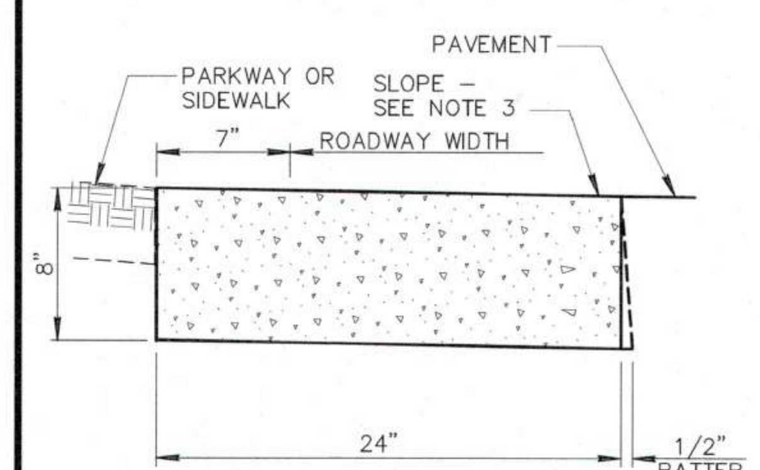
DETAIL NO.			REVISED	DETAIL NO.
200-1	MARICOPA ASSOCIATION of GOVERNMENTS — STANDARD DETAIL ENGLISH	TRENCH BACKFILL AND SURFACE REPLACEMENT	01-01-2023	200-1



VERTICAL CURB AND GUTTER
(TYPE A)

NOTES: (TYPE A)

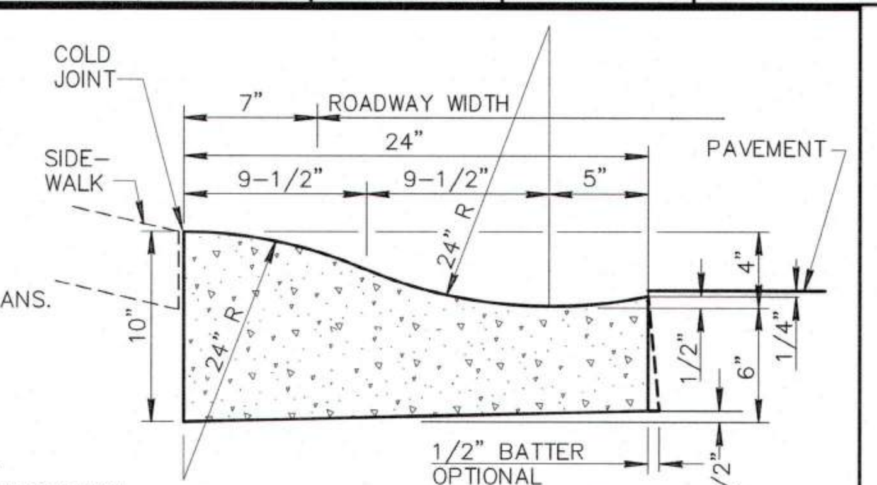
1. ALL EXPOSED SURFACES TO BE TROWEL FINISHED EXCEPT AS SHOWN. SEE SECT. 340.
2. H=6" OR AS SPECIFIED ON PLANS.
3. CONTRACTION JOINT SPACING 10' MAXIMUM.
4. EXPANSION JOINTS AS PER SECT. 340.
5. CLASS 'B' CONCRETE PER 725.
6. WHEN THE ADJACENT PAVEMENT SECTION SLOPES AWAY FROM THE GUTTER, THE SLOPE OF THE GUTTER PAN SHALL MATCH PAVEMENT CROSS SLOPE.



RIBBON CURB
(TYPE B)

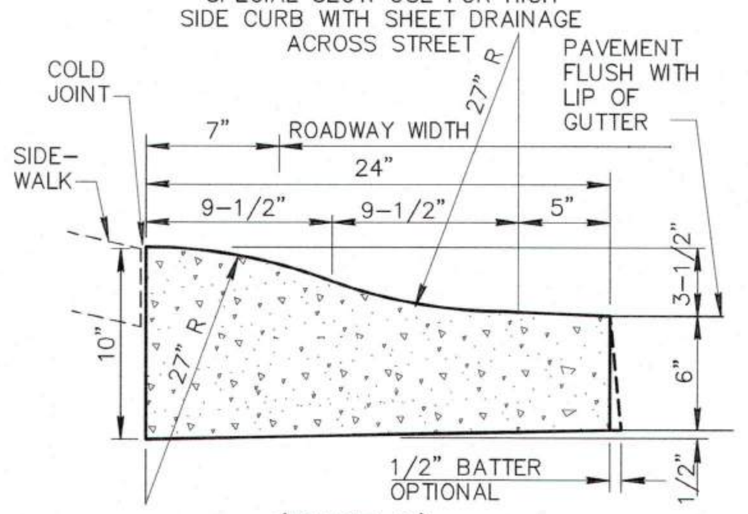
NOTES: (TYPE B)

1. CONSTRUCT CURB AND INSTALL 1/2" MASTIC EXPANSION JOINTS, A.S.T.M. D-1751. SECT. 340.
2. BROOM FINISH ALL SURFACES.
3. RIBBON CURB MAY SLOPE TOWARDS PAVEMENT OR PARKWAY AS INDICATED ON PLANS.
4. CONTRACTION JOINT SPACING 10' MAXIMUM.
5. CONCRETE SHALL BE CLASS 'B' PER SECT. 725 AND INSTALLED PER SECT. 505.



ROLL CURB AND GUTTER
(TYPE C)

SPECIAL SECT. USE FOR HIGH SIDE CURB WITH SHEET DRAINAGE ACROSS STREET



(TYPE D)

NOTES: (C & D)

1. ALL WORK AND MATERIALS SHALL CONFORM TO SECT. 340, 505 AND 725. BROOM FINISH TO EXPOSED SURFACE.
2. CONTRACTION JOINT SPACING 10' MAXIMUM.
3. EXPANSION JOINTS AS PER SECT. 340.
4. CLASS 'B' CONCRETE PER 725.

DETAIL NO.			REVISED	DETAIL NO.
220-1	MARICOPA ASSOCIATION of GOVERNMENTS — STANDARD DETAIL ENGLISH	CURB AND GUTTER TYPES A, B, C AND D	01-01-2021	220-1

REVISIONS:

The installation shown is to be installed in accordance with the Arizona Water Company standard specifications on file with the Arizona Department of Environmental Quality

Contact Arizona 811 at least two full working days before you begin excavation. ARIZONA811. Call 811 or click Arizona811.com

W.A. No.:
P.E. No.: 2594
SYSTEM: PINAL VALLEY (CG)
LEGAL DESC.: SE 1/4 SEC. 13, T. 06 S., R. 05 E.
TAX DIST.: 0428 & 0458
SIB No.:
DATE: 01/12/2026
SCALE: AS SHOWN
DRAWN BY: TDS
REVIEWED BY: BLP
CHECKED BY: MC

ARIZONA WATER COMPANY
3805 N. BLACK CANYON HWY. POST OFFICE BOX 29006
PHOENIX, ARIZONA 85038-9006
(602) 240-6860

PROJECT DESC.: CONSTRUCT (5) FIRE HYDRANTS IN THE PINAL VALLEY WATER SYSTEM

PROJECT SHEET DESC.: AWC DETAILS

Registered Professional Engineer (Civil) Certificate No. 70873 AMY WALTHERESON, ARIZONA, U.S.A. Expires 3-31-2026

FOR BIDDING PURPOSES ONLY
Feb 12, 2026
Engineering Department Arizona Water Company

DWG. No.: PV-0341

SHEET 4 OF 5

CITY OF CASA GRANDE STANDARD PLAN NOTES

GENERAL NOTES: CONSTRUCTION INSPECTION AND TESTING

1. All public Improvement Construction within the public right-of-way and onsite shall be conducted in accordance with, and conform to, the latest edition of the uniform standard specifications for Public Works Construction and Uniform Standard Details for Public Works Construction, Both as published by the Maricopa Association of Governments (M.A.G.).

2. Inspection of work per M.A.G. 105.10: The Engineer shall be permitted to inspect all materials, and each part or detail of the work at any time for the purpose of expediting and facilitating the progress of work. He shall be furnished with such information and assistance by the contractor, as is required to make a complete and detailed inspection. The City Engineer requires that the actual test result data sheet accompany all compaction test results submitted to the city's inspector. Pass/Fail statements are not acceptable without the attached data sheet. Failure to submit the test result data sheets will result in an incomplete submittal and the test will be rejected.

3. In the event of conflict between M.A.G. standard specifications and standard details and these plans, these plans shall prevail.

4. The office of the City Engineer shall be notified at least forty-eight (48) hours prior to the commencement of any work within the city right-of-way. TELEPHONE: 520-421-8625.

5. Contractor is to notify all public utilities at least two (2) working days prior to construction, for field locations of their respective facilities, by contacting the following: BLUE STAKE NUMBER: 1-800-782-5348.

6. Contractor shall coordinate and make arrangements for relocation of any utilities conflicting with the proposed construction of these plans, with the appropriate utility.

7. Removal and replacement of all trees, shrubs, vegetation, miscellaneous structures, debris, rubble and other deleterious materials within the limits of construction shall be at the contractor's expense.

8. All concrete sidewalks, driveways, aprons, cross-pans, valley gutter, curbs and gutters landscaping and irrigation that may be damaged during the course of constructions shall be removed and replaced by the contractor at the contractor's expense.

WATER MAIN NOTES

1. All proposed public and/or private utilities shall be installed on the opposite side of right-of-way from the proposed water mains whenever possible.

2. WATER DISTRIBUTION DESIGN REPORT:

BY: ARIZONA WATER COMPANY

DATED: 01/21/2026

JOB NUMBER: • PE 2594

3. All materials that come into contact with drinking water shall meet NSF standard 60 and 61.

4. All water mains less than twelve (12") inches in diameter are to be installed at a minimum top of pipe depth of thirty six (36") inches below finished grade. Water mains twelve (12") inches in diameter, or larger, shall be installed at a minimum top of pipe depth of forty eight (48") inches below finished grade.

PAVING NOTES

1. All grading, excavation, paving, trenching, pipe bedding and backfill shall comply with the recommendations set forth in the SOILS (Geotechnical) report for this project and the referenced required specifications and details. SOILS report and pavement design were prepared:

BY: N/A

JOB NO. ____________

DATED: ____________

2. The contractor shall verify the locations, elevations and horizontal controls of all existing utilities at point of tie-in prior to commencing any new construction. Should any location, elevation or control differ from that shown on these plans, the contractor shall contact the owner's agent.

3. The contractor shall give 72 hours notice to the City Engineer prior to any construction activity within the right-of-way.

4. The City Engineer must approve all plan revisions in writing prior to construction of any changes to approved plans.

5. Upon commencement of work, traffic control devices shall be posted and maintained by the contractor until such time as work is completed.

6. Remove and relocation of all mailboxes, fences, signs, gates, posts-pipes, etc., within the right-of-way and construction limits shall be directed by the City Engineer.

7. 25 MPH speed limit signs shall be located at all entrances into the development. 35 MPH signs for collectors shall be located per the plans.

8. Concrete Collars, on all utility and survey monument frame adjustments, are to be installed flush with the proposed or existing pavement.

9. Paint for pavement marking and striping shall be thermal traffic paint applied in a single coat at a rate of 100 to 110 sq. feet per gallon with traffic beads included.

10. Street cuts on asphalt pavement: Cut existing pavement at one (1') from the utility trench cut, per M.A.G. detail 200 type (T) top; Tack edges. (Using A19mm per. MAG Sect.710 Asphaltic concrete hot mix.) Asphalt concrete shall be tested for compaction, to 95%. The contractor, at his expense, will have a private lab core sample and run a Marshall for compaction test, for acceptance on all street cuts. All replacement pavements shall match existing, unless authorized in writing by the City Engineer.

11. All construction & test methods shall be in conformance with the city of Casa Grande and Maricopa Association of Governments (M.A.G.) uniform standards specifications and details for public works construction, latest edition. .

12. Asphaltic concrete shall conform to M.A.G. USSD section 710 mix specifications. The minimum pavement section for Arterials and Major Collectors shall be a 2" (12.5 mm) AC surface course with a 3" (19 mm) AC base course with a minimum 10" aggregate base course. Minimum 6" aggregate base course for collectors. Alternate pavement sections based on a geotechnical report may be considered, but must contain at least the 2" + 3"AC pavement noted above in the top section of the pavement structure and an equivalent load capacity.

PAVING NOTES CONTINUED...

13. Surface Course Asphalt for all expressways and arterial streets must be rubberized asphalt concrete conforming to ADOT specifications. Placement dates for rubberized AC are March 15th to May 31st and September 1st to November 15th. No placement of rubberized AC will be allowed outside these dates unless Contractor has City of Casa Grande approval and that the rubberized AC can be placed per ADOT specifications.

14. All concrete shall comply with M.A.G. Section 725, Class-A 3000-PSI compressive strength at 28 days, unless otherwise specified. Contractor shall supply mix design to the City Engineer for approval prior to placement. Contractor shall supply a copy of each batch ticket to the City Engineer or his representative.

15. A copy of the City approved plans must be kept on-site at all times, during the course of construction.

16. All newly constructed pavements shall receive an application of sealant (fog-seal), approved in advance by the City Engineer and prior to acceptance into a warranty period. Hydrant reflectors shall be installed after the application of the sealant.

17. In the event of any dispute between these plans and M.A.G. standard specifications, these approved plans shall prevail.

18. The contractor/owner is responsible for final adjustment of all manholes, valves, clean-outs, water meter boxes, j-boxes, etc., and restoration of construction site to M.A.G. standards, including Right of Way Grading. None of the above shall be located in the sidewalk or curb areas.

19. Engineer's testing of A/C mix prior to placement is required and results are to be delivered to the City Engineer or his representative prior to paving.

20. Rolling patterns required by the geo-technical testing firm shall also be supplied to the Engineers representative.

21. Core testing of newly constructed asphalt concrete surfaces may be required at the discretion of the City Engineer. Core tests are mandatory, along with supporting Marshall test results, for all existing roadways where street cuts are necessary.

22. Protection of valley gutters, cross-pans and aprons during paving operations shall be the responsibility of the contractor and all damaged concrete shall be replaced prior to acceptance.

23. Tack seal shall be required between lifts, all vertical concrete surfaces prior to placement of asphalt. This requirement also applies to vertical asphaltic concrete surfaces and at all joints of new lifts.

24. The surveyor shall perform installation and straddling of monuments. Once stamped, datum shall be part of the as-built plans.

25. Street sign bases, poles and signs shall be installed prior to the final walk-through and acceptance into any warranty period. Only channel sign posts shall be permitted.

PAVING NOTES CONTINUED...

26. All Warning, Regulatory and Street Name Signs must be manufactured of "ASTM D-4956-04 -Proposed Type IX Sheeting" (3M 4090 series or equivalent), that will be attached to the standard sign aluminum plates. Sign imaging shall be in compliance with the reflective sheeting manufacturers matched component system. Sign imaging shall consist of an acrylic based electronic cut able film (3M 1170 Series or equivalent) or silk-screened (depending on the quality of signage) with standard highway colors. In addition, if called out on plans, to create a graffiti-protective coating, a premium protective overlay film, 3M 1160 or equivalent, shall be used which is designed to comply with the underlying reflective sheeting match component system.

27. Right-of-way grading shall be completed prior to the final walk-through and shall be held one (1") inch below back of walk. (B.O.W.)

28. Paving As-Builts: Paving as-built plans shall be prepared by the design engineer and shall certify that this project was constructed in substantial conformance with the approved plans prior to request for final inspection, certificate of occupancy or release of assurance.

29. Freshly paved finished roadway shall be 1/4" above the lip of the concrete gutter.

30. Sub grade preparation for all sidewalks, curb & gutter shall be scarified and loosened to a depth of 6", and shall be constructed to achieve a uniform moisture by the addition of water, moisture shall be maintained 2.0 percent above optimum moisture prior to placement of concrete, and compacted to 95 percent of maximum density. All materials outside the moisture limit shall be considered subject to removal.

31. Any Pavement adjacent to existing ROW must match the existing pavement design, unless authorized, in writing, by the City Engineer.

REVISIONS:

The installation shown is to be installed in accordance with the Arizona Water Company standard specifications on file with the Arizona Department of Environmental Quality

W.A. No.: | P.E. No.: 2594

SYSTEM: PINAL VALLEY (CG)

LEGAL DESC: SE 1/4 SEC. 13, T. 06 S., R. 05 E.

TAX DIST: 0428 & 0458 | SB No.:

DATE: 01/12/2026 | SCALE: AS SHOWN

DRAWN BY: TDS | REVIEWED BY: BWP | CHECKED BY: MC

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