

PRIVATE SEWER NOTES

1.

ALL DESIGN STANDARDS, MATERIALS AND WORKMANSHIP FOR PRIVATE SANITARY SEWERS SHALL BE IN ACCORDANCE WITH THE PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT (PCRWDR) ENGINEERING DESIGN STANDARDS 2022 AND THE STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION 2022. SAID DOCUMENT IS AVAILABLE THROUGH THE PCRWDR WEBSITE (www.pima.gov/wmw/eng/des_std.htm).
2.

THE CONTRACTOR SHALL CALL ARIZONA 811 AT 811 A MINIMUM OF TWO (2) BUSINESS DAYS PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL KEEP ALL ARIZONA 811 REQUESTS UP-TO-DATE AND COMPLY WITH APPLICABLE ARIZONA REVISED STATUTES (A.R.S.), TITLE 40, CHAPTER 1, ARTICLE 6.3, SECTION 40-360.22 PERTAINING TO ARIZONA 811. ERRORS IN ARIZONA 811 SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.
3.

THE CONTRACTOR SHALL VERIFY LOCATION AND ELEVATIONS OF ALL EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION. CALL ARIZONA 811 AT 811 A MINIMUM OF TWO (2) BUSINESS DAYS PRIOR TO EXCAVATING.
4.

THE CONTRACTOR SHALL FIELD VERIFY EXISTING SEWER ELEVATIONS AND ALIGNMENTS PRIOR TO CONSTRUCTION AND IMPLEMENTATION; VERIFICATION MAY REQUIRE POT-HOLING.
5.

NO PRIVATE BACKWATER VALVES ARE REQUIRED FOR THIS PROJECT.
6.

BUILDING CONNECTION SEWERS (BCSS) SHALL BE STUBBED OUT TO 5' OUTSIDE THE BUILDING ENVELOPE OR AS OTHERWISE SHOWN ON PLANS.
7.

ALL PVC PIPE SHALL BE J.M. PIPE RING-TITE PVC GRAVITY SEWER PIPE AND FITTINGS, SDR 35, OR EQUIVALENT.
8.

THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED BY GOVERNMENTAL AGENCIES.
9.

THE CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE AGENCY TO ENSURE THAT AN INSPECTOR FROM THEIR BUILDING CODES DEPARTMENT IS PRESENT OVER THE COURSE OF CONSTRUCTION TO INSPECT AND APPROVE THE INSTALLATION OF THE PRIVATE SEWER.
10.

AN APPROVED COPY OF THIS PLAN SHALL BE KEPT ON LOCATION AT THE JOBSITE AT ALL TIME DURING CONSTRUCTION.
11.

IF UNANTICIPATED CONDITIONS ARE ENCOUNTERED DURING THE COURSE OF CONSTRUCTION AND ARE BEYOND THE SCOPE OF THE DESIGN, THE ENGINEER SHALL SUBMIT THE NECESSARY REVISED OR SUPPLEMENTAL IMPROVEMENT PLANS FOR REVIEW AND APPROVAL BY CITY OF TUCSON BUILDING CODES.
12.

UPON COMMENCEMENT OF WORK, TRAFFIC CONTROL DEVICES SHALL BE POSTED AND MAINTAINED BY THE CONTRACTOR UNTIL SUCH TIME AS THE WORK IS COMPLETED. ALL WARNING SIGNS, BARRICADES, ETC. SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES ADOPTED BY THE STATE OF ARIZONA PURSUANT TO A.R.S. 28-650.
13.

ANY ACTIVITY THAT MIGHT AFFECT THE SANITARY SEWER SYSTEM (MATERIALS ENTERING THE SYSTEM, CONVEYANCE AND TREATMENT) REQUIRES APPROVAL AND/OR PERMIT BY PCRWDR PRIOR TO THAT ACTIVITY.
14.

IMMEDIATELY REPORT ANY RELEASE OF SEWAGE AND/OR ANY DAMAGE TO OR THE DROPPING OF DEBRIS INTO THE PUBLIC SANITARY SEWAGE CONVEYANCE SYSTEM TO EITHER PCRWDR FIELD ENGINEERING (520) 740-2651 OR PCRWDR CONVEYANCE DIVISION (520) 443-6500. ON WEEKENDS, HOLIDAYS, OR BETWEEN 5:00 P.M. AND 7:00 A.M., CALL PCRWDR CENTRAL CONTROL ROOM (520) 443-6048 AND REQUEST A PCRWDR REPRESENTATIVE TO BE DISPATCHED TO THE SITE. CONTRACTOR SHALL TAKE IMMEDIATE ACTION TO CONTAIN THE SANITARY SEWAGE OVERFLOW (SSO) FROM THE SEWER SYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS TO REPAIR THE SYSTEM, FOR ALL EXPENSES TO MITIGATE THE RELEASE AND TO DISINFECT THE RELEASE AREAS AND FOR ANY REGULATORY PENALTIES LEVIED ON PCRWDR BECAUSE THE SSO ENTERED A NATURAL DRAINAGE WAY OR STORM WATER DRAINAGE SYSTEM. THE CONTRACTOR SHALL REPAIR ALL DAMAGE AS DIRECTED AND APPROVED BY PCRWDR.
15.

THE INSPECTION OF THE CONTRACTOR'S WORK BY THE ENGINEER OF RECORD AND/OR AN AGENCY STAFF SHALL IN NO WAY RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, CONSTRUCTION PLANS AND/OR SPECIFICATIONS. IF THE ENGINEER OF RECORD OR AGENCY STAFF FAIL TO POINT OUT A DEFECT, DEFICIENCY, OR ERROR IN THE WORK FROM LACK OF DISCOVERY OR FOR ANY OTHER REASON, IT SHALL IN NO WAY PREVENT LATER REJECTION OR RELIEVE THE CONTRACTOR OF PERFORMING CORRECTIONS TO THE UNSATISFACTORY WORK WHEN DISCOVERED. THE CONTRACTOR SHALL NOT FILE A CLAIM FOR LOSSES SUFFERED DUE TO ANY NECESSARY REMOVALS OR REPAIRS RESULTING FROM THE UNSATISFACTORY WORK.
16.

THE CONTRACTOR SHALL COMPLY WITH APPLICABLE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS AT ALL TIMES AND PCRWDR MANHOLE ENTRY GUIDELINES.
17.

ALL ROUGH GRADING, INCLUDING FILL, SHALL BE COMPLETED PRIOR TO THE INSTALLATION OF SANITARY SEWERS TO A MINIMUM OF 4 FEET OVER THE TOP OF THE SEWER PIPE AND COMPACTION AS INDICATED ON THE PLANS.
18.

BEDDING, SHADING, AND TRENCH BACKFILL COMPACTION SHALL BE IN ACCORDANCE WITH DETAILS RWRD 104 AND RWRD 105, OR AS SHOWN ON THE PLANS. SHOULD GROUNDWATER OR UNANTICIPATED SOIL CONDITIONS BE ENCOUNTERED, THE BEDDING SHALL BE MODIFIED BY THE ENGINEER OF RECORD AND/OR SOILS ENGINEER.
19.

SANITARY SEWER CONSTRUCTION SHALL START AT THE LOWEST DOWNSTREAM POINT AND PROGRESS UPSTREAM, REGARDLESS OF THE STATIONING SHOWN ON THE PLANS. IF NOT, THE CONTRACTOR SHALL PROVIDE AN OUT OF SEQUENCE LETTER FOR REVIEW AND APPROVAL BY THE ENGINEER OF RECORD.
20.

THE HORIZONTAL AND VERTICAL SEPARATION BETWEEN PUBLIC WATER MAINS AND PRIVATE SEWER MAINS SHALL COMPLY WITH A.A.C. R18-5-502 AND DETAIL RWRD 108.
21.

ACCORDING TO THE REVISED BLUE STAKE LAW (ARS 40-360.21 THROUGH 40-360.32), THIS PROJECT IS SUBJECT TO THE NEW SERVICE LATERAL DESIGN AND CONSTRUCTION REQUIREMENTS PER SUBSECTION 5.3.5 OF THE PCRWDR ENGINEERING DESIGN STANDARDS 2016 AND DETAILS RWRD 401 AND RWRD 404.
22.

NEW PRIVATE SEWER FACILITIES MUST BE TESTED, INSPECTED, AND AUTHORIZED FOR DISCHARGE BY PCDEQ/ADEO PRIOR TO DISCHARGING INTO THE EXISTING PUBLIC SANITARY SEWER.

PRIVATE SEWER NOTES - CONTINUED

23.

ONLY PLANS ACCEPTED BY PCDEQ/ADEO SHALL BE USED FOR THE INSTALLATION OF SANITARY SEWER FACILITIES. PLANS ACCEPTED BY PCDEQ REQUIRING REVISION SHALL BE RESUBMITTED FOR RE-REVIEW AND RE-ACCEPTANCE BY PCDEQ/ADEO PRIOR TO START OF THE REVISED WORK.
24.

CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PUBLIC/EXISTING SANITARY SEWER MANHOLE STRUCTURES AT ALL TIMES.
25.

ALL LANDSCAPING LOCATED WITHIN TEN (10) FEET HORIZONTALLY OF THE PRIVATE SANITARY SEWER AND MANHOLES SHALL BE IN ACCORDANCE WITH THE PLANTING GUIDELINES CONTAINED WITHIN PCRWDR ENGINEERING DESIGN STANDARDS 2016 MANUAL, SECTION 7.7.
26.

ALL STORM WATER POLLUTION PREVENTION PLAN (SWPPP) MEASURES SHALL BE INSTALLED SO AS TO PREVENT ALL STORM WATER, CONSTRUCTION WATER, FUELS, CHEMICALS, OR LIQUIDS TO BE DIRECTED INTO OR ONTO ANY SANITARY SEWER FACILITIES. PROTECTION OF SANITARY SEWER FACILITIES SHALL BE A PART OF THE APPROVED CONSTRUCTION SWPPP AND BEST MANAGEMENT PRACTICES. PROTECTION DEVICES SHALL BE INSTALLED AND MAINTAINED AROUND ALL POTENTIALLY AFFECTED SANITARY SEWER FACILITIES WITHIN THE PROJECT LIMITS. ADDITIONAL MEASURES SHALL INCLUDE BUT NOT BE LIMITED TO THE USE OF RAIN STOPPERS AND MANHOLE COVERS AS DEEMED NECESSARY THE ENGINEER OF RECORD.
27.

ALL PROJECT ACTIVITIES MUST BE KEPT WITHIN THE PROJECT AREAS. CAUTION MUST BE NOTED CONCERNING HUMAN BURIALS. ARCHAEOLOGICAL CLEARANCE RECOMMENDATIONS DO NOT EXEMPT THE DEVELOPMENT FROM COMPLIANCE WITH STATE BURIAL PROTECTION LAWS. IN THE EVENT THAT HUMAN REMAINS, INCLUDING HUMAN SKELETAL REMAINS, CREMATIONS, AND/OR CEREMONIAL OBJECTS AND FUNERARY OBJECTS ARE FOUND DURING EXCAVATION OR CONSTRUCTION, GROUND DISTURBING ACTIVITIES MUST CEASE IN THE IMMEDIATE VICINITY OF THE DISCOVERY. STATE LAWS ARS 41-865 AND ARS 41-844 REQUIRE THAT THE ARIZONA STATE MUSEUM BE NOTIFIED OF THE DISCOVERY AT (520) 621-4795 SO THAT CULTURAL GROUPS WHO CLAIM CULTURAL OR RELIGIOUS AFFINITY TO THEM CAN MAKE APPROPRIATE ARRANGEMENTS FOR THE REPATRIATION AND REBURIAL OF THE REMAINS. THE HUMAN REMAINS WILL BE REMOVED FROM THE SITE BY A PROFESSIONAL ARCHAEOLOGIST PENDING CONSULTATION AND REVIEW BY THE ARIZONA STATE MUSEUM AND THE CONCERNED CULTURAL GROUPS.
28.

SURVEY LAYOUT AND SURVEY CONTROL SHALL BE PERFORMED BY, OR UNDER THE DIRECT SUPERVISION OF, A REGISTERED LAND SURVEYOR (RLS) REGISTERED IN THE STATE OF ARIZONA.
29.

WHERE CONNECTIONS TO EXISTING MANHOLES ARE TO BE MADE, THE CONTRACTOR SHALL CONSTRUCT NEW INVERTS IN THE EXISTING BASE TO SMOOTHLY DIRECT THE FLOW IN THE PROPER DIRECTION.
30.

DUCTILE IRON PIPE (DIP) 6-INCHES AND GREATER IN DIAMETER, FITTINGS AND METAL COUPLINGS SHALL HAVE AN APPROVED INTERIOR LINING. ALL DIP SHALL BE INSTALLED WITH AN APPROVED EXTERIOR POLYETHYLENE WRAPPING.
31.

THE WORDS "PRIVATE SANITARY SEWER" SHALL BE IMPRINTED ON COVERS OF ALL MANHOLES WHICH ARE TO BE PART OF THE PRIVATE SANITARY SEWER CONVEYANCE SYSTEM.
32.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO ADJUST OR RECONSTRUCT ALL SANITARY SEWER MANHOLES TO FINISHED GRADE. ALL FRAMES AND COVER ADJUSTMENTS ARE TO BE IN ACCORDANCE WITH PCRWDR STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION 2016 MANUAL, DETAILS RWRD 211, 212, 304 OR RWRD 305 (AS APPLICABLE) AND DETAIL RWRD 306. WHILE ADJUSTING THE MANHOLE TO FINISHED GRADE IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT FRAMES AND COVERS ARE CLEANED OF ANY AND ALL ATTACHED MATERIALS (ASPHALT, CONCRETE, ETC.) AND THAT ANY VENT HOLES ARE OPEN AND CLEAR OF OBSTRUCTIONS. IF THE FRAME AND COVER ARE DAMAGED OR CANNOT BE COMPLETELY CLEANED A NEW FRAME AND COVER ARE TO BE PUT INTO PLACE. COSTS ASSOCIATED WITH THESE ACTIONS ARE THE RESPONSIBILITY OF THE CONTRACTOR. REFER TO PCRWDR STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION 2016 MANUAL, DETAILS RWRD 213 218 FOR FRAME AND COVER REQUIREMENTS.

PCDEQ/ADEO CERTIFICATE OF COMPLETION NOTES

33.

SEWER CONSTRUCTION SHALL NOT COMMENCE UNTIL PCDEQ/ADEO HAS ISSUED A CONSTRUCTION AUTHORIZATION (CA) FOR THIS PROJECT.
34.

THE PROJECT WILL BE CONSTRUCTED AND INSPECTED UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL ENGINEER, REGISTERED IN THE STATE OF ARIZONA.
35.

THE CONTRACTOR SHALL PROVIDE THE ENGINEER OF WORK WITH A MATERIALS LIST AND THE FOLLOWING TEST RESULTS AS REQUIRED BY TITLE 18, CHAPTER 9 OF THE ARIZONA ADMINISTRATIVE CODE:

A.

EXFILTRATION OR LOW PRESSURE AIR TESTING FOR PIPE LEAKAGE.

B.

DEFLECTION TESTING/MANDREL TESTING FOR PIPE SHAPE.

C.

MIRROR, LAMP LIGHTING, OR REMOTE CAMERA TESTING FOR UNIFORM SLOPE.

D.

COMPACTION TESTS FOR TRENCH BACKFILL.

E.

MANHOLE TESTING
36.

THE CONTRACTOR SHALL NOTIFY THE LICENSED LAND SURVEYOR TWO WORKING DAYS IN ADVANCE OF CONSTRUCTION AND SHALL FACILITATE THE SURVEYOR'S EFFORTS TO FIELD VERIFY THE AS-BUILT LOCATIONS OF THE PRIVATE SEWER MAINS AND APPURTENANCES. THE SEWER TRENCH SHALL NOT BE BACKFILLED UNTIL THE SURVEYOR HAS FIELD VERIFIED THE AS-BUILT LOCATIONS FOR THAT PORTION OF SEWER IMPROVEMENT.
37.

THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF WORK FIVE (5) WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL FACILITATE THE INSPECTION OF THE FINAL INSTALLATION BY OTHERS.
38.

AFTER CONSTRUCTION AND FINAL INSPECTION, A PROFESSIONAL ENGINEER OR LICENSED LAND SURVEYOR, REGISTERED IN THE STATE OF ARIZONA, WILL PREPARE AS-BUILT PLANS. THE PROFESSIONAL ENGINEER WILL ALSO COMPLETE AN ENGINEER'S CERTIFICATE OF COMPLETION AND SUBMIT THAT INFORMATION TO PCDEQ/ADEO FOR APPROVAL ALONG WITH ALL CONSTRUCTION TESTING AS REQUIRED IN ACCORDANCE WITH ARIZONA ADMINISTRATIVE CODE R18-9-E301 (INCLUDING MANHOLE TESTING, SEWER LINE LEAKAGE TESTING, DEFLECTION TESTING, AND UNIFORM SLOPE TESTING) IN ORDER TO RECEIVE DISCHARGE AUTHORIZATION (DA).

SEWER GENERAL NOTES

1.

ALL NEW SEWER MANHOLES SHALL BE 4' DIAMETER PER STANDARD DETAIL RWRD 205 UNLESS OTHERWISE NOTED.
2.

ALL SANITARY SEWERS WILL BE DESIGNED TO PROVIDE FOR GRAVITY FLOW.
- PRIVATE SEWER TESTING NOTES

1.

SEWERS.

A.

PERFORM A DEFLECTION TEST OF THE TOTAL LENGTH OF ALL SEWER LINES MADE OF FLEXIBLE MATERIALS TO ENSURE THAT THE INSTALLATION MEETS OR EXCEEDS THE MANUFACTURER'S RECOMMENDATIONS AND RECORD THE RESULTS.

B.

TEST EACH SEGMENT OF THE SEWER LINE FOR LEAKAGE USING THE APPLICABLE METHOD BELOW AND RECORD THE RESULTS:

i.

"STANDARD TEST METHOD FOR INSTALLATION OF ACCEPTANCE OF PLASTIC GRAVITY SEWER LINES USING LOW-PRESSURE AIR" PUBLISHED BY THE AMERICAN SOCIETY FOR TESTING AND MATERIALS, (F 1417-92) REAPPROVED 1998;

ii.

"STANDARD PRACTICE FOR TESTING CONCRETE PIPE SEWER LINES BY LOW-PRESSURE AIR TEST METHOD" PUBLISHED BY THE AMERICAN SOCIETY FOR TESTING AND MATERIALS, (C 924-89), REAPPROVED 1997;

iii.

"STANDARD TEST METHOD FOR LOW-PRESSURE AIR TEST OF VITRIFIED CLAY PIPE LINES" PUBLISHED BY THE AMERICAN SOCIETY FOR TESTING AND MATERIALS, (C 828-98), APPROVED MARCH 10, 1998; OR

iv.

THE MATERIAL LISTED IN SUBSECTION 1B(i), 1B(ii), AND 1B(iii) ABOVE IS INCORPORATED BY REFERENCE AND DOES NOT INCLUDE ANY LATER AMENDMENT OR EDITIONS OF THE INCORPORATED MATTER. COPIES OF THE INCORPORATED MATERIAL ARE AVAILABLE FOR INSPECTION AT THE DEPARTMENT OF ENVIRONMENTAL QUALITY AND THE OFFICE OF THE SECRETARY OF STATE, OR MAY BE OBTAINED FROM THE AMERICAN SOCIETY FOR TESTING AND MATERIALS, 100 BARR HARBOR DRIVE, CONSHOHOCKEN, PA 19428-2959.

C.

TEST THE TOTAL LENGTH OF THE SEWER LINE FOR UNIFORM SLOPE BY LAMP LIGHTING, REMOTE CAMERA OR SIMILAR METHOD APPROVED BY THE DEPARTMENT, AND RECORD THE RESULTS.

2.

MANHOLES.

A.

THE APPLICANT SHALL TEST MANHOLES USING ONE OF THE FOLLOWING TEST PROTOCOLS:

i.

WATER TIGHTNESS TESTING BY FILLING THE MANHOLE WITH WATER. THE APPLICANT SHALL ENSURE THAT THE DROP IN WATER LEVEL DOES NOT EXCEED 0.001% OF TOTAL MANHOLE VOLUME IN ONE HOUR.

ii.

AIR PRESSURE TESTING USING THE "STANDARD TEST METHOD FOR CONCRETE SEWER MANHOLES BY NEGATIVE AIR PRESSURE (VACUUM) TEST," PUBLISHED BY THE AMERICAN SOCIETY FOR TESTING AND MATERIALS, (C-1244-93), APPROVED AUGUST 15, 1993. THIS MATERIAL IS INCORPORATED BY REFERENCE, DOES NOT INCLUDE ANY LATER AMENDMENTS OR EDITIONS OF THE INCORPORATED MATTER, AND IS ON FILE WITH THE OFFICE OF THE SECRETARY OF STATE. THE MATERIAL MAY BE VIEWED AT THE DEPARTMENT OF ENVIRONMENTAL QUALITY, WATER QUALITY DIVISION, OR OBTAINED FROM THE AMERICAN SOCIETY FOR TESTING AND MATERIALS, 100 BARR HARBOR DRIVE, CONSHOHOCKEN, PA 19428-2959.

B.

THE APPLICANT SHALL PERFORM MANHOLE TESTING UNDER SECTION 2A ABOVE AFTER INSTALLATION OF THE MANHOLE CONE TO VERIFY WATER TIGHTNESS OF THE MANHOLE FROM THE TOP OF THE CONE DOWN.

i.

UPON SATISFACTORY TEST RESULTS, THE APPLICANT SHALL INSTALL THE MANHOLE RING AND ANY SPACERS, COMPLETE THE JOINTS, AND SEAL THE MANHOLE TO A WATERTIGHT CONDITION.

ii.

IF THE MANHOLE CONE, SPACERS, AND RING CAN BE INSTALLED TO FINAL GRADE WITHOUT DISTURBANCE OR ADJUSTMENT BY LATER CONSTRUCTION, THE APPLICANT MAY PERFORM THE TESTING FROM THE TOP OF THE MANHOLE RING ON DOWN.

PRIVATE WATER AND BACKFLOW ASSEMBLY NOTES

1.

ALL PLUMBING ASSOCIATED WITH WATER SERVICE LINES SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF THE INTERNATIONAL PLUMBING CODE.

2.

ALL BEDDING, SHADING, AND BACKFILL SHALL BE PER TUCSON WATER DETAIL SD 115 AT A MINIMUM. NO WATER SETTLING SHALL BE PERMITTED.

3.

CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND PAYING FOR BACKFLOW INSTALLATION PERMIT(S) FROM TUCSON WATER.

4.

CONTRACTOR SHALL CONTACT TUCSON WATER'S BACKFLOW PREVENTION SECTION AT (520) 791-2650 FOR INSPECTION.

5.

THE BACKFLOW ASSEMBLY SHALL BE TESTED AFTER INSTALLATION BY A TUCSON WATER APPROVED CERTIFIED INSPECTOR PRIOR TO INSPECTION BY TUCSON WATER.

6.

REDUCED PRESSURE ASSEMBLY SHALL BE WATTS FAE909HWOT OR EQUIVALENT, APPROVED BY TUCSON WATER. CALL BACKFLOW PREVENTION SECTION AT (520) 791-2650 FOR APPROVED MODELS LIST.

7.

REDUCED PRESSURE ASSEMBLY SHALL BE INSTALLED, TESTED, AND INSPECTED PER CITY OF TUCSON ORDINANCE NO. 7380 ADOPTED MAY 21, 1990 OR AS REVISED THERETO.

8.

BACKFLOW PREVENTER SHALL BE ENCLOSED IN "STRONG BOX" SBBC-XXCR OR EQUIVALENT. SIZE TO FIT BACKFLOW PREVENTER ASSEMBLY. PAINT TO MATCH SCREEN WALLS AND MOUNT ON 4-INCH THICK CONCRETE PAD. CONTRACTOR TO PROVIDE LOCK AND 2 KEYS TO OWNER.

9.

BLUE REFLECTIVE RAISED PAVEMENT MARKERS (RPM's) SHALL BE INSTALLED AT EACH FIRE HYDRANT LOCATION.

FIRELINE NOTES

1.

ALL MATERIALS, INSTALLATION, AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH NFPA 24 AND ALL STATE AND LOCAL CODES.

2.

A COPY OF THE APPROVED PLANS SHALL BE ON THE WORKSITE AT ALL TIMES DURING CONSTRUCTION.

3.

ALL WORK TO BE PERFORMED BY A LICENSED CONTRACTOR.

4.

TESTING:

AFTER FLUSHING SYSTEM, TEST FIRE MAIN HYDROSTATICALLY IN ACCORDANCE WITH NFPA REQUIREMENTS, AT NOT LESS THAN 200 PSI (OR 50 PSI ABOVE STREET PRESSURE, WHICHEVER IS GREATER) FOR A PERIOD OF NOT LESS THAN TWO HOURS. CHECK SYSTEM FOR LEAKAGE AT JOINTS.

REPAIR OR REPLACE PIPING PRODUCTS AS REQUIRED TO ELIMINATE LEAKAGE ACCORDING TO NFPA STANDARDS AND RETEST AS SPECIFIED TO DEMONSTRATE COMPLIANCE.

FLUSHING AND TESTING SHALL BE WITNESSED AND APPROVED BY THE CLIENT'S REPRESENTATIVE, TUCSON FIRE DEPARTMENT, AND GOVERNING AGENCY.

5.

DEPTH OF COVER TO BE 36" MINIMUM.

6.

RESTRAINTS TO BE EBAA IRON "MEGALUG" RESTRAINT SYSTEM.

7.

ALL PIPE TO BE C-900 PVC.

8.

PERMITTING FOR FIRE SERVICE UNDERGROUND IS A SEPARATE, DEFERRED SUBMITTAL THROUGH THE FIRE DEPARTMENT AND IS THE RESPONSIBILITY OF THE CONTRACTOR. BRING 3 COPIES OF THIS PLAN SET TO TUCSON FIRE DEPARTMENT HEADQUARTERS, 300 SOUTH FIRE CENTRAL. PERMIT APPLICATIONS ARE ALSO AVAILABLE AT THAT LOCATION.

STORM DRAIN NOTES

1.

SUBSTITUTION OF ANY MATERIALS FOR CONSTRUCTION OF STORM DRAIN WILL NOT BE ALLOWED UNLESS FIRST APPROVED BY THE ENGINEER OF WORK.

2.

STORM DRAINS ARE TO BE CONSTRUCTED IN COMPLIANCE WITH PIMA ASSOCIATION OF GOVERNMENTS (PAG) STANDARD SPECIFICATIONS AND STANDARD DETAILS FOR PUBLIC IMPROVEMENTS, 2015 EDITIONS. THESE MAY BE MODIFIED AND/OR SUPPLEMENTED BY THE REQUIREMENTS OF THESE PLANS.

3.

SRP STORM DRAIN SHALL BE CONTECH ULTRA-FLO ALUMINIZED STEEL PIPE 3/4" X 3/4" X 7-1/2" CORRUGATIONS OR EQUIVALENT. 18-INCH TO 24-INCH PIPE SHALL BE 12 GAGE THICKNESS AND 36-INCH PIPE SHALL BE 10 GAGE THICKNESS. PIPE AND BEDDING SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND STANDARD DETAIL NO. 108.

4.

HDPE STORM DRAIN SHALL BE ADS N-12 WT OR EQUIVALENT HIGH DENSITY CORRUGATED POLYETHYLENE PIPE (HDPE). PIPE AND BEDDING SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND STANDARD DETAIL NO. 108.

ADVANCED DRAINAGE SYSTEMS, INC.

ATTN: PHILLIP MCDONELL

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