

**GENERAL SANITARY SEWER NOTES**

- ALL DESIGN STANDARDS, MATERIALS AND WORKMANSHIP FOR PUBLIC SANITARY SEWERS SHALL BE IN ACCORDANCE WITH THE PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT (PCRWRD) ENGINEERING DESIGN STANDARDS 2016 AND THE STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION 2016 EXCEPT AS MODIFIED HEREBY. SAID DOCUMENT IS AVAILABLE THROUGH THE PCRWRD WEBSITE ([www.pima.gov/wrm/eng/des\\_std.htm](http://www.pima.gov/wrm/eng/des_std.htm)).
- THE WORDS "TOWN OF MARANA SANITARY SEWER" SHALL BE IMPRINTED ONLY ON ALL COVERS OF MANHOLES WHICH ARE TO BE PART OF THE MARANA WATER SANITARY SEWER CONVEYANCE SYSTEM. ALL DETAILS REFERENCED HEREIN SHALL BE MODIFIED AS NECESSARY PER THE ATTACHED DETAIL FOR THE MANHOLE FRAME AND COVER REQUIREMENTS. SEE DETAIL 1 THIS SHEET.
- THE CONTRACTOR SHALL CALL ARIZONA 811 A MINIMUM OF TWO (2) BUSINESS DAYS PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL KEEP ALL "BLUE STAKE" 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 "BLUE STAKE". ERRORS IN BLUE "STAKE SHALL" BE IMMEDIATELY REPORTED TO THE ENGINEER.
- HOUSE OR BUSINESS CONNECTION SEWERS (HCS OR BCS) ARE NOT PART OF THE PUBLIC SANITARY SEWER CONVEYANCE SYSTEM. PRIVATE CONNECTION SEWERS CONSTRUCTED PRIOR TO JANUARY 2006 ARE NOT REQUIRED TO BE BLUE STAKED. ANY HCS/BCS ENCOUNTERED DURING CONSTRUCTION SHALL BE PROTECTED, REPAIRED, OR REROUTED, AS THE SITUATION DICTATES PER PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT (PCRWRD) STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION 2016 MANUAL, DETAIL RWRD 400 AT NO EXPENSE TO THE PROPERTY OWNER OR MARANA WATER.
- ACCORDING TO THE REVISED BLUE STAKE LAWS (A.R.S 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 PCRWRD ENGINEERING DESIGN STANDARDS 2016 AND S.D. RWRD-401 AND RWRD-404.
- THE CONTRACTOR SHALL FIELD VERIFY EXISTING SEWER ELEVATION AND ALIGNMENTS PRIOR TO CONSTRUCTION AND IMPLEMENTATION. VERIFICATION MAY REQUIRE POT-HOLING.
- ANY ACTIVITY THAT MIGHT AFFECT THE SANITARY SEWER SYSTEM (MATERIALS ENTERING THE SYSTEM, CONVEYANCE AND TREATMENT) REQUIRES APPROVAL AND/OR PERMIT BY MARANA WATER PRIOR TO ANY ACTIVITY.
- SEWER CONSTRUCTION SHALL NOT COMMENCE UNTIL (A) PIMA COUNTY DEPARTMENT OF ENVIRONMENTAL QUALITY (PDEQ) HAS ISSUED A CERTIFICATE OF CONSTRUCTION AUTHORIZATION FOR THIS PROJECT, (B) THE CONTRACTOR HAS OBTAINED A PUBLIC SEWER CONSTRUCTION PERMIT FROM THE TOWN OF MARANA AND (C) A PRE-CONSTRUCTION MEETING WITH THE ASSIGNED MARANA WATER CONSTRUCTION INSPECTOR IS SCHEDULED AT LEAST THREE (3) FULL WORKING DAYS PRIOR TO THE START OF SEWER CONSTRUCTION. FLOW MANAGEMENT PLANS SHALL BE SUBMITTED TO MARANA WATER THIRTY (30) DAYS PRIOR TO THE IMPLEMENTATION OF FLOW MANAGEMENT.
- THE CONTRACTOR SHALL MAKE FULL PAYMENT OF THE PERMIT FEES AND OBTAIN A SEWER CONSTRUCTION PERMIT FROM THE TOWN OF MARANA A MINIMUM OF THREE (3) FULL BUSINESS DAYS PRIOR TO COMMENCING ANY SEWER CONSTRUCTION ACTIVITIES. THREE (3) SETS OF THE CONSTRUCTION PLANS, SPECIFICATIONS AND SPECIAL PROVISIONS (IF APPLICABLE) SHALL BE SUBMITTED WITH THE SANITARY SEWER CONSTRUCTION PERMIT APPLICATION. MARANA WATER REQUIRES A MINIMUM OF 3 BUSINESS DAYS NOTIFICATION. NO WORK SHALL BE PERFORMED IN ANY CASE WITHOUT A TOWN OF MARANA SEWER CONSTRUCTION PERMIT.
- IMMEDIATELY REPORT ANY RELEASE OF SEWAGE, AND/OR ANY DAMAGE TO OR THE DROPPING OF DEBRIS INTO THE PUBLIC SANITARY SEWAGE CONVEYANCE SYSTEM TO MARANA WATER. 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 MARANA WATER BECAUSE THE SSO ENTERED A NATURAL DRAINAGE WAY OR STORM WATER DRAINAGE SYSTEM. THE CONTRACTOR SHALL REPAIR ALL DAMAGE AS DIRECTED AND APPROVED BY MARANA WATER AT NO COST TO MARANA WATER.
- THE INSPECTION OF THE CONTRACTOR'S WORK BY AN AGENCY AND/OR MARANA WATER 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 MARANA WATER 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.

**GENERAL SANITARY SEWER NOTES CONT.**

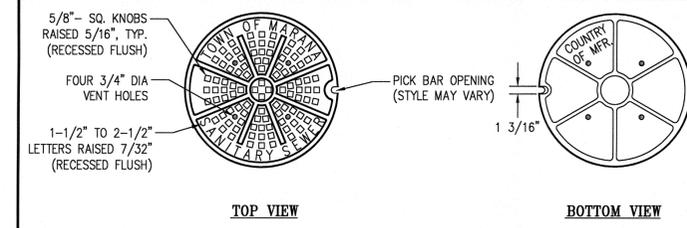
- THE CONTRACTOR SHALL COMPLY WITH APPLICABLE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS AT ALL TIMES.
- ALL SITE GRADING INCLUDING FILL AND COMPACTION SHALL BE COMPLETED PRIOR TO THE INSTALLATION OF SANITARY SEWERS TO A MINIMUM OF 4 FEET OVER THE TOP OF THE SEWER PIPE, OR AS INDICATED ON THE PLANS, OR AS OTHERWISE DIRECTED BY MARANA WATER.
- BEDDING, SHADING, AND TRENCH BACKFILL COMPACTION SHALL BE IN ACCORDANCE WITH DETAIL RWRD-104 OR AS SHOWN ON THE PLANS. SHOULD GROUND WATER OR UNANTICIPATED SOIL CONDITIONS BE ENCOUNTERED, THE BEDDING SHALL BE MODIFIED BY THE ENGINEER OF RECORD AND APPROVED BY MARANA WATER.
- 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 APPROVAL BY MARANA WATER.
- THE HORIZONTAL AND VERTICAL SEPARATION BETWEEN PUBLIC WATER MAIN AND PUBLIC SEWER LINE SHALL COMPLY WITH A.A.C. R18-5-502 AND DETAIL RWRD-108.
- NEW PUBLIC SEWER FACILITIES MUST BE TESTED, INSPECTED AND ACCEPTED FOR DISCHARGE BY MARANA WATER AND PDEQ PRIOR TO DISCHARGING INTO THE EXISTING PUBLIC SANITARY SEWER.
- AS-BUILT SEWER PLANS ARE REQUIRED FOR FINAL ACCEPTANCE OF SEWER CONSTRUCTION BY MARANA WATER AND SHALL CONFORM TO SUBSECTION 1.4.7 OF THE PCRWRD STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION 2016. THE PROJECT SURVEYOR SHALL SUBMIT THREE RED LINE COPIES AT THE ORIGINAL DESIGN SIZE AND SCALE AND AN ELECTRONIC VERSION TO MARANA WATER.
- ONLY PLANS ACCEPTED BY MARANA WATER SHALL BE USED FOR THE INSTALLATION OF SANITARY SEWER FACILITIES. PLANS ACCEPTED BY MARANA WATER REQUIRING REVISION SHALL BE RESUBMITTED FOR REVIEW AND RE-ACCEPTANCE BY MARANA WATER PRIOR TO START OF THE REVISED WORK.
- SEWER CONSTRUCTION WILL NOT BE ACCEPTED BY MARANA WATER IF IT INCLUDES ADDITIONAL WORK NOT PROVIDED IN THE APPROVED SET OF PLANS. SEE SUBSECTION 1.4.5 OF THE PCRWRD STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION 2016 REGARDING THE APPROVAL OF FIELD CHANGES.
- CONTRACTOR SHALL MAINTAIN ACCESS TO ALL SANITARY SEWER MANHOLE STRUCTURES AT ALL TIMES.
- ALL LANDSCAPING LOCATED WITHIN TEN (10) FEET HORIZONTALLY OF THE PUBLIC SANITARY SEWER AND MANHOLES AND/OR WITHIN THE PUBLIC SEWER EASEMENTS SHOWN HEREON SHALL BE IN ACCORDANCE WITH THE PLANTING GUIDELINES CONTAINED WITHIN PCRWRD ENGINEERING DESIGN STANDARDS 2016 MANUAL SECTION 7.7.
- ALL STORM WATER POLLUTION PREVENTION PLAN (SWPPP) MEASURES SHALL BE INSTALLED SO AS TO PREVENT ALL STORM WATER, CONSTRUCTION WATER, FUELS, CHEMICALS, OR LIQUIDS FROM BEING 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 ARE NOT BE LIMITED TO THE USE OF RAIN STOPPERS AND MANHOLE COVERS AS DEEMED NECESSARY BY MARANA WATER.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE NO SOIL, SEDIMENT, DEBRIS, TRASH OR OTHER NUISANCE MATERIALS ARE ALLOWED TO ENTER THE NEW OR EXISTING SEWER SYSTEM DURING CONSTRUCTION AS THE RESULT OF A RAINFALL EVENT, VANDALISM, FLOODING, IRRIGATION BACKWATER, IRRIGATION BREAKOUT, OR OTHER IRRIGATION ACTIVITIES, ETC. IN THE EVENT NUISANCE MATERIALS DO INFILTRATE THE SEWER SYSTEM IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMOVE THEM AT NO ADDITIONAL COST TO THE TOWN OF MARANA.
- ALL PROJECT ACTIVITIES MUST BE KEPT WITHIN THE PROJECT AREAS. A 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 A.R.S. 41-865 AND A.R.S. 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.

**GENERAL SANITARY SEWER NOTES CONT.**

- SURVEY CUT SHEETS SHALL BE DEVELOPED IN ACCORDANCE WITH SUBSECTION 3.2.3(A)(i) OF THE PCRWRD STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION 2016. CERTIFIED CUT SHEETS SHALL BE SUBMITTED TO MARANA WATER CONSTRUCTION INSPECTOR PRIOR TO COMMENCEMENT OF SEWER CONSTRUCTION. THE CUT SHEETS ARE FOR THE PROJECT FILE AND COMMENCEMENT OF SEWER CONSTRUCTION WILL NOT BE DELAYED DUE TO REVIEW OF THE DELIVERABLE. ANY ERRORS OR OMISSIONS RESULTING IN IMPROPER SEWER CONSTRUCTION SHALL NOT BE THE RESPONSIBILITY OF MARANA WATER. REFER TO SUBSECTION 3.2.3(A)(ii) FOR ALIGNMENT VERIFICATION REQUIREMENTS INCLUDING THE SPACING REQUIREMENTS FOR GRADE STAKES.
- 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. PRIOR TO THE START OF SURVEY ACTIVITIES THE INDIVIDUAL OR COMPANY RESPONSIBLE FOR SURVEY LAYOUT AND CONTROL SHALL CONTACT MARANA WATER TO ARRANGE A MEETING TO REVIEW SURVEY CONTROL (HORIZONTAL AND VERTICAL) TO BE UTILIZED ON THE PROJECT.
- OMISSIONS OR CONFLICTS BETWEEN VARIOUS ELEMENTS OF THE DRAWINGS, NOTES AND DETAILS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER A MINIMUM OF 48 HOURS BEFORE THAT PORTION OF THE PROJECT IN QUESTION IS TO BE CONSTRUCTED. IF THE ENGINEER IS NOT NOTIFIED ACCORDINGLY, ANY DISCREPANCIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND/OR SURVEYOR.
- 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 ON UNIFORM TRAFFIC CONTROL DEVICES ADOPTED BY THE STATE OF ARIZONA PURSUANT TO A.R.S. 28-650.
- A RIGHT-OF-WAY USE PERMIT IS REQUIRED FOR CONSTRUCTION IN PUBLIC RIGHT-OF-WAY.
- CALL MARANA WATER AT (520) 382-2570 REGARDING ALL QUESTIONS INVOLVING THE PREPARATION OF FLOW MANAGEMENT PLANS. PCRWRD STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION 2016 MANUAL SECTION 2.2.1 APPLIES TO ANY PROJECT THAT REQUIRES TRENCHING WITHIN SIX (6) FEET HORIZONTALLY AND / OR TWO (2) FEET VERTICALLY OF AN EXISTING PUBLIC SEWER LINE. PRECEDING ANY WORK THAT MAY AFFECT A LIVE SEWER, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO: (A) IDENTIFY AND INCLUDE ALL FLOW MANAGEMENT COSTS IN THE CONSTRUCTION BID AND (B) PROVIDE A FLOW MANAGEMENT PLAN THIRTY (30) DAYS PRIOR TO THE IMPLEMENTATION OF FLOW MANAGEMENT. REFER TO PCRWRD STANDARD SPECIFICATIONS AND DETAIL FOR CONSTRUCTION 2016 MANUAL.
- IF THIS PROJECT REQUIRES A FLOW MANAGEMENT PLAN AS DETERMINED BY PCRWRD STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION 2016 MANUAL SECTION 2.2.1 OR MARANA WATER, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO (A) IDENTIFY AND INCLUDE ALL FLOW MANAGEMENT COSTS IN THE SEWER CONSTRUCTION BID SUBMITTED WITH THE PUBLIC SEWER PERMIT APPLICATION, AND (B) PROVIDE A FLOW MANAGEMENT PLAN AT LEAST THIRTY (30) DAYS PRIOR TO IMPLEMENTING FLOW MANAGEMENT. MARANA WATER WILL REVIEW THE FMP WITHIN 10 BUSINESS DAYS TO ACCOMMODATE REVIEW AND REVISION CYCLES. REFER TO SECTION 2 OF THE PCRWRD STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION 2016. FOR ANY QUESTIONS REGARDING FLOW MANAGEMENT, PLEASE CONTACT MARANA WATER (520) 382-2570.
- THE CONTRACTOR SHALL FURNISH, OPERATE AND MAINTAIN ALL EQUIPMENT AND LABOR NECESSARY TO PROVIDE CONTINUOUS 24 HR/DAY SANITARY SEWER SERVICE TO ALL PARTIES TRIBUTARY TO A LIVE SANITARY SEWER TO WHICH A CONNECTION IS TO BE MADE. MARANA WATER SHALL BE NOTIFIED AT (520-382-2570) A MINIMUM OF TWO (2) BUSINESS DAYS PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITIES THAT COULD EITHER ADVERSELY IMPACT THE FLOW WITHIN A LIVE SANITARY SEWER SYSTEM, OR INVOLVE CONNECTION TO ANY PUBLIC SANITARY SEWER. THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 2 OF THE PCRWRD STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION 2016.
- WHERE CONNECTIONS TO EXISTING MANHOLES ARE TO BE MADE THE CONTRACTOR SHALL CONSTRUCT NEW INVERTS IN EXISTING BASE TO SMOOTHLY DIRECT THE FLOW IN THE PROPER DIRECTION.
- THE USE OF DUCTILE IRON PIPE SHALL BE AVOIDED WHENEVER POSSIBLE. WHEN THE USE OF DUCTILE IRON PIPE CANNOT BE AVOIDED DUE TO SITE CONSTRAINTS, THE PIPE RUN WHICH THE DUCTILE IRON PIPE IS IN SHALL INCLUDE A CIPP LINER FROM MANHOLE TO MANHOLE. THIS REQUIREMENT WILL BE ADDRESSED ON A CASE-BY-CASE BASIS. IF A CIPP LINER IS NOT REQUIRED ANOTHER APPROVED INTERIOR LINING WILL BE REQUIRED.
- DUCTILE IRON PIPE 6 INCHES AND GREATER IN DIAMETER, FITTINGS AND METAL COUPLINGS SHALL HAVE AN APPROVED INTERIOR LINING. ALL DUCTILE IRON PIPE SHALL BE INSTALLED WITH AN APPROVED EXTERIOR POLYETHYLENE WRAPPING.

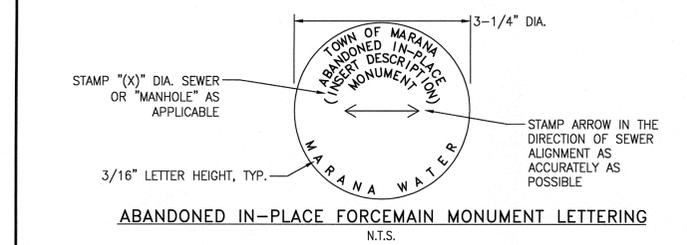
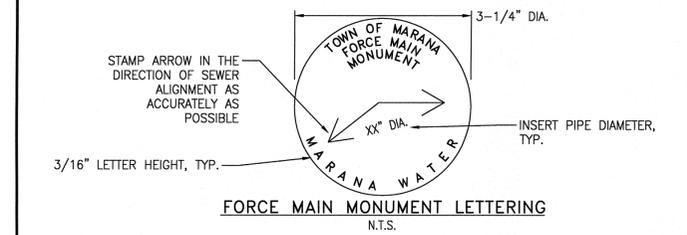
**GENERAL SANITARY SEWER NOTES CONT.**

- MANHOLE SURFACES SHALL BE CAULKED, SEALED AND COATED PER PCRWRD ENGINEERING DESIGN STANDARDS 2016, SUBSECTION 5.2.16, AND PCRWRD STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION 2016, SUBSECTION 3.3.3(viii).
- 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 PCRWRD STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION 2016 DETAILS RWRD 211, 212, 304 OR 305 (AS APPLICABLE). 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 MARANA WATER STANDARDS AND PCRWRD STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION 2016 DETAILS RWRD 213-218 FOR FRAME AND COVER REQUIREMENTS.
- WHEN A PUBLIC SEWER IS DESIGNED AT OR NEAR MINIMUM ALLOWABLE PIPE SLOPES SPECIAL CARE SHALL BE TAKEN TO ASSURE DESIGN SLOPE IS MAINTAINED. SEWERS FOUND TO BE CONSTRUCTED AT INSUFFICIENT SLOPES WILL NOT BE ACCEPTED BY MARANA WATER AND/OR PDEQ. CORRECTIVE ACTION, INCLUDING RE-CONSTRUCTION OF THE SEWER(S) AT THE SOLE EXPENSE OF THE PROJECT OWNER/CONTRACTOR SHALL BE REQUIRED.
- EXISTING PRESSURE SEWERS AND ABANDONED GRAVITY SEWER MAIN LOCATIONS WILL BE IDENTIFIED AND MARKED PER PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT (PCRWRD) STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION 2016 MANUAL, DETAIL RWRD 503, AS MODIFIED HEREIN. THE WORDS "TOWN OF MARANA" SHALL APPEAR ON ANY MARKER ASSOCIATED WITH MARANA WATER INFRASTRUCTURE. AT NO TIME SHALL THE WORDS PIMA COUNTY APPEAR ON MARANA WATER INFRASTRUCTURE. SEE DETAIL 2 THIS SHEET.
- ALL HOUSE CONNECTION SEWER STUB-OUTS SHALL HAVE A MINIMUM SLOPE OF 1% AND A MINIMUM COVER OF 4 FEET IN THE AREA BETWEEN THE MAIN LINE SEWER & PROPERTY LINE. IF COVER IS LESS THEN 4 FEET, THE HCS STUB-OUT SHALL BE DUCTILE IRON. ALL HCS STUB-OUTS SHALL BE MARKED AT PROPERTY LINE WITH #9 WIRE ANCHORED WITH A BRICK.
- HCS LOCATIONS SHALL BE STAMPED WITH AN "HCS" INTO THE TOP OF OR FACE OF CONCRETE STREET CURBS.
- HCS'S WILL BE LOCATED BY THE ENGINEER AS STATIONED ON THE PLANS. BACKWATER VALVES TO BE INSTALLED IN ALL HCS'S WHEN THE FINISH FLOOR ELEVATION IS ONE FOOT OR LESS ABOVE THE NEAREST UPSTREAM MANHOLE. THERE SHALL BE A TABLE OF LOTS REQUIRING BACKWATER VALVES ON THE APPROVED PLANS.
- CCTV INSPECTION SHALL BE REQUIRED FOR ALL NEW SEWER MAIN CONSTRUCTION IN ACCORDANCE WITH SECTION 3.2.3(D) OF THE PCRWRD STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION 2016 WITH THE EXCEPTION THAT THE CONTRACTOR SHALL PERFORM ALL CCTV INSPECTION OF THE NEW SEWER MAINS. THE TOWN DOES NOT PROVIDE CCTV INSPECTION SERVICE. ALL COSTS ASSOCIATED WITH THE CCTV INSPECTION SHALL BE INCIDENTAL TO THE COST OF INSTALLING THE NEW SEWER MAIN AND BORNE BY THE CONTRACTOR OR OWNER.
- GIS DATA FOR NEW SEWER INFRASTRUCTURE SHALL BE REQUIRED PRIOR TO FINAL ACCEPTANCE. SEE "GIS INTEGRATION OF SEWER PIPELINE INSPECTION DATA" AT: [HTTP://WWW.MARANA.AZ.GOV/WATER-PLAN-REQUIREMENTS/?RQ=GIS](http://www.maranaaz.gov/water-plan-requirements/?rq=GIS)
- THE CONTRACTOR SHALL HYDROSEED OR RE-VEGETATE ALL AREAS DISTURBED BY CONSTRUCTION OF THESE IMPROVEMENTS THAT ARE NOT COVERED BY STRUCTURES, PAVEMENT, SLOPE/BANK PROTECTION OR OTHER PERMANENT STABILIZATION METHODS AS SPECIFIED BY THE OWNER. CONTRACTOR TO USE NATIVE SEED MIX AS APPROVED BY OWNER.



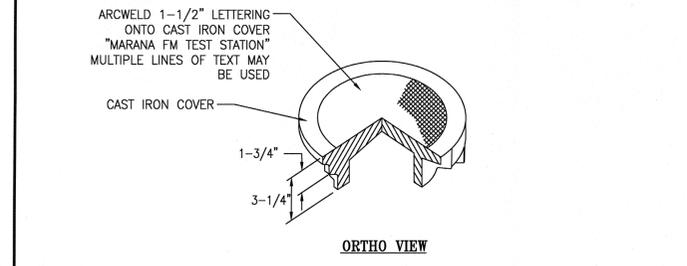
**NOTES:**  
 1. THIS DETAIL SUPERCEDES S.D. RWRD 213 REGARDING MANHOLE COVER REQUIREMENTS ONLY. THE FRAME REQUIREMENTS REMAIN UNCHANGED.  
 2. COVER STYLE MAY VARY SLIGHTLY WITH APPROVAL BY THE FIELD ENGINEER.

**DETAIL 1 24" MANHOLE COVER** N.T.S.



**NOTE:**  
 1. THIS DETAIL SUPERCEDES S.D. RWRD 503 REGARDING FORCE MAIN ABANDONMENT MONUMENT REQUIREMENTS ONLY. THE CONCRETE, REINFORCING BAR, AND TRACER WIRE REQUIREMENTS REMAIN UNCHANGED.

**DETAIL 2 FORCE MAIN MONUMENTS** N.T.S.



**NOTE:**  
 1. THIS COVER DETAIL SUPERCEDES S.D. RWRD 501 REGARDING FORCE MAIN TEST STATION COVER REQUIREMENTS ONLY. THE BOX, COLLAR, AND TRACER WIRE REQUIREMENTS REMAIN UNCHANGED.

**DETAIL 3 FORCEMAIN TEST STATION** N.T.S.

	<b>NOTICE TO DESIGN ENGINEER</b>	
	THE GENERAL NOTES AND STANDARD DETAILS AS SHOWN ON THIS DRAWING ARE FOR REFERENCE ONLY. IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO VERIFY THE APPLICABILITY OF EACH STANDARD NOTE AND DETAIL FOR THE PROJECT. ALL MODIFICATIONS TO THE INFORMATION SHOWN ON THIS DETAIL SHEET SHALL HAVE PRIOR APPROVAL FROM TOWN OF MARANA WATER AND ITS ENGINEERS.	
	<b>GENERAL NOTES AND STANDARD DETAILS</b>	
	[Signature] MARANA WATER DIRECTOR TOWN OF MARANA ENGINEER	6-26-18 DATE 6-21-19 DATE
JUNE 2018		SHEET OF