



MEMORANDUM

Date: February 3, 2022

To: The Honorable Chair and Members
Pima County Board of Supervisors

From: Jan Leshner 
Acting County Administrator

Re: **Regional Wastewater Reclamation Department Engineering Standards Update**

A request was made at the January 18, 2022 Board of Supervisors meeting to continue the adoption of the 2022 Regional Wastewater Reclamation Department (RWRD) Standards update to provide additional time to review the changes. RWRD staff is available to meet with Board offices to review the proposed changes.

RWRD routinely collects details on issues encountered in daily use of these standards. Based on the information gathered, parts of the standards may require clarification or changes. Typically, RWRD processes updates on a 5-year cycle. The frequency of updates could be sooner if a significant change is needed. The current version of the standards is dated 2017.

The attached outline provides a summary of the current revisions, most of which are minor in nature. Meetings and discussions were held with the two primary RWRD stakeholders, the Southern Arizona Home Builders Association (SAHBA) and Metropolitan Pima Alliance (MPA). Both entities have submitted letters of support for these changes.

The full changes, including redlined updates, are available on the RWRD design standards, specification and details web page.

You are welcome to contact Jackson Jenkins, RWRD Director, to discuss the proposed changes.

Attachment

c: Carmine DeBonis, Jr., Deputy County Administrator for Public Works
Francisco García, MD, MPH, Deputy County Administrator & Chief Medical Officer,
Health and Community Services
Yves Khawam, PhD, Assistant County Administrator for Public Works
Jackson Jenkins, Director, Regional Wastewater Reclamation

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January 19, 2022

TO: Carmine DeBonis, Deputy County Administrator for Public Works

FROM: Jackson Jenkins, Director 

SUBJECT: 2022 RWRD Engineering Design Standards

On the January 18 Board of Supervisors Meeting Agenda item no. 23, *Proposed Revisions to RWRD Engineering Design Standards 2022 and RWRD Standard Specifications and Details for Construction 2022* was continued until the second BOS meeting in February. Supervisor Heinz requested the extension so that he and his staff have sufficient time to review it.

In order to help facilitate his review and/or the review by any other BOS member, I am including a “cheat-sheet” of the areas with changes. RWRD typically gathers and collects issues and concerns encountered in our daily use and implementation of these standards with the development community. It is not unusual to find that some parts of the standards require additional clarification or changes based on real experiences by our stakeholders.

Typically, the Department will request approval for such updates by the BOS on an approximate 5-year review cycle basis. The current version of standards is dated 2017. The frequency for updates could be sooner than 5 years if there was a significant or major change needed. However, most all of our requested changes are deemed to be minor in nature. Meetings and discussions were held with our two primary stakeholders, Southern AZ Home Builders Association (SAHBA) and Metropolitan Pima Alliance (MPA) both entities have submitted letters of support for these changes.

Based on Supervisor Heinz’s request for additional review time as well as a related question from District 5, I recommend you share this with each respective BOS member as they prepare for next month’s consideration of this item

If anyone has technical related questions pertaining to our standards, feel free to have them contact Francisco Galindo, Sanitary Engineering Manager at (520)724-6733. For all other questions, please contact Eric Wieduwilt, Deputy Director for Technical Services & Engineering at (520)724-9841 or myself (520)724-6549.

Attachment

c: Yves Khawam, PhD, Assistant County Administrator for Public Works
Eric Wieduwilt, PE., Deputy Director for TS&E
Francisco Galindo, Sanitary Engineering Manager for TS&E

2022 Changes to the RWRD Engineering Design Standards and Standard Specifications and Details for Construction Manual

The RWRD Design Standards and Standard Specifications and Details for Construction contain two main sections. A summary of the changes made to each section are highlighted below:

A. Summary reference of the 2022 Revisions to the RWRD ENGINEERING DESIGN STANDARDS

1 - Introduction

- 1.2 Service Area Map updated.
- 1.3 Definitions revised. Added definitions.

2 – Regulations, Policies, and Procedures

- 2.1 Added "delegated authority".
- 2.3 Variances - Added less than 3 feet of cover as a condition.
Changed reviewers. Removed reference to Special Approval.
- 2.4 Changed reviewer.
- 2.5 Removed reference to Engineering Directive.
- 2.7 Revised statements for Special Facilities.
- 2.9 Removed section pertaining to private sewers.

3 - Private Sewers

- 3.4 Removed Design Standards Use for private sewers.
- 3.5 Added pre-treatment statement.
- 3.6 Changed private force statement.

4 - Utility Coordination

- 4.1 Modified procedures and plan document submittals.
- 4.2 Added to requirements for submitted plans. Deleted landscaping plan section.
Additional conditions for setbacks from poles. Added statements relating to sewer modification plans.

5 - Gravity Sewers

- 5.1 Changed cover requirements. Separation from utilities and drainage facilities expanded.
Scour protection requirements expanded.
- 5.2 Added conditions to manhole placement. Table 5.4 - Minimum MH diameters - 4 foot diameter permitted for 12 and 15 inch pipes under certain conditions. Future connections into MH's and drop MH connections. Corrosion protection. Cleanouts added for phased projects.
- 5.3 Removed internal drop manhole connection section. Removed public sewer easement for private cleanout on housed connection sewer. Removed property owner responsibility statement.
- 5.4 Changed graphical plan requirements to "recommendations".

6 - Wastewater Pumping Systems

- 6.4 Added truck access requirements. Inserted Homeland Security Statement.
- 6.6 Added antenna mast, odor control, grit manhole, and wet well aeration clarifications.
Changed pump cycles.

7 - Easements

Added access slope and widths criteria. Added recording data and Grant of Easement requirements. Added Landscaping Certification Statement.

Appendix B

Changed "siphon" to "depressed sewer".

2022 Changes to the RWRD Engineering Design Standards and Standard Specifications and Details for Construction Manual

B. Summary reference of the 2022 Revisions to the RWRD CONSTRUCTION SPECIFICATIONS AND DETAILS

1 - General Provisions for Public Sewer Construction

- 1.1 None
- 1.2 Revised definitions. Added definitions.
- 1.3 Clarified Director's approval.
- 1.4.1 Deleted Code reference
- 1.4.5 Changed "As-Built" to "Record Drawings".
- 1.4.7 Changed "As-Built" to "Record Drawings". Added to requirements.

2 - Wastewater Flow Management

- 2.1 Introduction wording revised.
- 2.2 Planning for Flow Management - small and large line clarifications.
- 2.3 Approval process revised.
- 2.4 Flow method procedures revised.
- 2.6 Deleted minimum pump vacuum. Added containment requirements and testing requirements. Revised connections to existing sewer lines. Manhole adjustments deleted.
- 2.7 Grammatical revisions.

3 - Standard Specifications

- 3.1.2 Changed resistivity statement - removed "or smaller".
- 3.2.2 Ductile Iron Pipe to be interior lined with Cured-In-Place Pipe (CIP). Added CIP to pipe materials list.
- 3.3 Polymer constructed manholes required for new manholes requiring corrosion protection. Existing manhole corrosion protection for force main connection to manhole.
- 3.4 Casing pipe specifications expanded.

4- Standard Details (List of the revised Details)

- 1 GENERAL NOTES
- 100 CASING FOR SEWER LINES
- 101 PILE-SUPPORTED SEWER LINES
- 104 TYPICAL TRENCH FOR GRAVITY SEWER LINES
- 107 DEFLECTION TESTING MANDREL
- 109 TURNIN RADII FOR SEWER EASEMENTS
- 110 RIGHT ANGLE TURN AROUND FOR SEWER EASEMENTS
- 111 SEWER EASEMENT FOR TYPICAL SECTION
- 112 SEWER EASEMENTS IN ENVIRONMENTALLY SENSITIVE AREAS
- 113 SCOUR PROTECTION FOR SEWER LINES
- 205 4' DIAMETER MANHOLE CONFIGURATIONS
- 206 5' DIAMTER MANHOLE CONFIGURATIONS
- 207 SHALLOW MANHOLES
- 209 REINFORCED MANHOLE JOINTS
- 210 MANHOLE STEPS CONFIGURATION
- 211 CONCRETE COLLAR FOR PAVED AREAS
- 212 CONCRETE COLLAR FOR UNPAVED AREAS
- 213 24" FRAME AND COVER

2022 Changes to the RWRD Engineering Design Standards and Standard Specifications and Details for Construction Manual

214	24" WATERTIGHT FRAME AND COVER
215	24" BOLTED WATERTIGHT FRAME AND COVER
216	30" FRAME AND COVER
217	30" WATERTIGHT FRAME AND COVER
218	30" BOLTED WATERTIGHT FRAME AND COVER
223	MANHOLE VENT ASSEMBLY
224	MODIFIED MANHOLE VENT ASSEMBLY
226	CONCRETE WEIR FOR DIVERSION MANHOLES
228	REDWOOD ISOLATION GATE
231	INTERNAL DROP MANHOLE CONNECTION
304	GRADE ADJUSTMENT FOR EXISTING BRICK MANHOLE
305	GRADE ADJUSTMENT FOR EXISTING PRECAST MANHOLE
306	FLOW CHANNEL COVER
401	HCS CONNECTION TO SEWER LINE
402	HCS CONNECTIONS TO MANHOLES
403	DETAIL CONVERTED TO DETAIL RWRD-231
500	TYPICAL TRENCH FOR FORCE MAINS
501	FORCE MAIN TEST STATION
503	FORCE MAIN ABANDONMENT AND REPLACEMENT MARKERS
504	EQUIPMENT SUPPORT AND SHADE STRUCTURE