



WASTEWATER RECLAMATION
201 NORTH STONE AVENUE
TUCSON, ARIZONA 85701-1207

JACKSON JENKINS
DIRECTOR

PH: (520) 724-6500
FAX: (520) 724-9635

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Pima County Stakeholders

RE: Guidance for the Use of Ductile Iron Pipe in Public Sanitary Sewers

Dear Pima County Stakeholder:

This Guidance encourages the design engineer to use good engineering judgement as called for in the Arizona Administrative Code in order to avoid the use of ductile iron pipe in the design of public sanitary sewers. This Guidance does not supersede the water and sewer main separation requirement as required by the Arizona Administrative Code.

Reference Standards

Arizona Administrative Code R18-9 and R-18-5, September 30, 2016

- a. AAC R18—9-E301(C)(7)
- b. AAC R18-5-502.C.3

Section 5 of the 2016 Pima County RWRD Engineering Design Standards

Background

Pima County Regional Wastewater Reclamation Department (RWRD) allows various materials for sanitary sewer pipe. Among those materials are: Polyvinyl chloride (PVC), vitrified clay pipe (VCP), fiberglass reinforced pipe (FRP), high density polyethylene (HDPE), reinforced concrete pipe (RCP), and ductile iron pipe (DIP).

There are approximately 3,500 miles of sewer pipe in the RWRD wastewater collection system, and ductile iron pipe accounts for approximately 77 miles or 2.3%. Recent testing failures of the interior coatings on ductile iron pipe, and long-term erosion and detachment of the interior coatings are causing concern by the Department. RWRD is working closely with the pipe supplier and coating manufacturer to resolve the problem.

In the interim, we are asking the design engineers to refrain from calling out ductile iron pipe when there may be good engineering design alternatives that could be used. A recent example is re-evaluating the design layout to ensure velocities do not exceed ten (10) feet per second which would require the use of ductile iron pipe. Other examples are to adjust the finished grade to maintain a four (4) foot minimum cover, and design the waterlines closer to finish grade to attain two (2) foot separation between the water and sewer mains.

The Pima County Regional Wastewater Reclamation Department appreciates your cooperation of this matter and welcome suggestions and alternatives during the public sewer design process.

If you should have any questions regarding the above information, please feel free to contact this office.

Sincerely,

Jackson Jenkins, Director
Pima County Regional Wastewater Reclamation Department