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Eng.

**PIMA COUNTY
WASTEWATER MANAGEMENT DEPARTMENT
DIRECTIVE**

Directive: ENG2006-13

Effective Date: December 31, 2006

SUBJECT: MANHOLE INVERT SLOPES

STATEMENT OF PURPOSE

This Directive modifies the requirements for invert elevation drops between the inlet pipes and outlet pipe(s) within a standard manhole.

GENERAL PROVISIONS

The following table identifies the required minimum invert elevation drops within a manhole:

Horizontal Sewer Deflection Angle	Required Invert Drop within Manhole
0 to 9 degrees	Drop shall be the average slope between inlet and outlet pipe slopes
10 to 45 degrees	Drop shall be 0.10 feet between inlet and outlet pipes
46 to 90 degrees	Drop shall be 0.20 feet between inlet and outlet pipes

All channels within the manhole shall be shaped and formed to provide a smooth transition of flow between inlet pipe(s) and outlet pipe(s).

AUTHORITY

Federal Regulations, Arizona State Regulations, Pima County Ordinances and other enabling legislation, which affect the collection, conveyance, treatment, and control of sanitary sewage.

PROCEDURE

Sewer design and construction shall comply with the drop requirements. Any variance must be approved in writing by the Manager of Sanitary Engineering, through the Variance Procedure ENG2005-04.

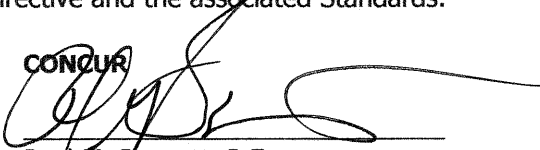
PROCEDURAL RESPONSIBILITY

The Manager of Sanitary Engineering for Pima County Wastewater Management, and/or designated representative(s), are responsible for the enforcement of this directive and the associated Standards.

RECOMMEND

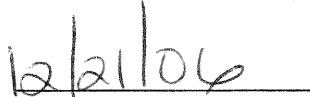

Eric Wieduwilt, P.E.
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CONCUR


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APPROVED


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Date