

# PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT TECHNICAL POLICY

POLICY NO.: Technical Policy, TECH-008

EFFECTIVE DATE: June 8, 2006

POLICY NAME: Minimum standards for security barriers at detention/retention basins

PURPOSE: To clarify sections 3.6.2 and 4.3.1 of the Stormwater Detention/Retention Manual regarding the need for and design of security barriers at detention/retention basins.

## BACKGROUND:

The Stormwater Detention/Retention Manual establishes when security barriers are needed and provides some specifications regarding construction when required. However, there is not a minimum construction standard that is applicable for all methods of construction. When identifying security barrier needs, consideration must be given to safety issues related to vehicular and pedestrian traffic.

## POLICY:

Generally, detention/retention basins that are designed in accordance with the Manual with mild side slopes preclude the need for security barriers around them. However, security barriers are required for the purpose of minimizing the potential for an accidental fall by a pedestrian and/or to meet traffic safety requirements along roadways. Barriers are needed in the following cases:

- 1) When basin slopes are steeper than 4:1 slope and the flow depth is more than 2 feet. The top of slope is considered to be within 1 to 3 feet from the top edge of the basin.
- 2) At any retaining walls on any inlet or outlet structure headwalls and/or wingwalls. The prescribed security barrier shall be barricade railing that meets guardrail standards under International Building Codes for the purpose of minimizing the potential for and accidental fall. The railing shall meet Standard Detail 105 Barricade Railing from the City of Tucson/Pima County Standard Details for Public Improvements Manual, 2003 Edition. If the retaining wall and structure are along streets and within the right-of-way, then vehicular guard post railing may also be required to meet traffic safety standards.
- 3) At any public or private drainage basin when building ingress/egress points, sidewalks, parking, or other restrictive structures are within 5 feet of the top of slope of the basin. In this case, the security barrier shall be constructed only on the side where the ingress/egress point or structures exist to minimize the possibility of an accidental fall.
- 4) At any location determined to need security barriers during review of the development plan or grading/improvement plans.

When required, security barriers shall be constructed using the following methods, and detail sections shall be shown on the development plan or grading/improvement plan, whichever applies:

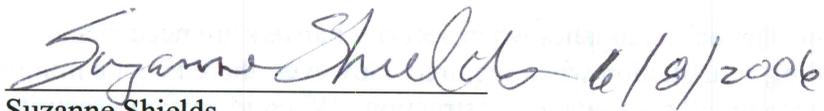
- 1) Vegetation: Shall be at least 42" high, width shall be equal to or greater than height, and with sufficient density width from sidewalks, streets and buildings to minimize the possibility of an

accidental fall. When used, plant materials shall be consistent with the Pima County Landscaping Ordinance and must be in place and established prior to the time the occupancy permit is requested. When proposed, this requirement shall be noted on the plans.

Vegetative barriers shall not restrict hydraulic capacity.

- 2) Railing: Shall be a least 42" and shall be designed in accordance with Standard Detail 105 Barricade Railing. Railings shall not restrict hydraulic capacity.
- 3) Wood, masonry, chain-link fence or other metal fence: Shall be a least 42" high, shall provide a minimum level of security equivalent to that provide by Standard Detail 105 Barricade Railing and shall not restrict the hydraulic capacity of structures

APPROVED BY:

 6/8/2006

Suzanne Shields

Director

Date

Original Policy Approved:

Date(s) Revised: