

# Review and Update of Technical Standards for Storm Drainage Infrastructure

April 1, 2014

Report to TTI Committee

# Agenda

- Infrastructure Design Manual background
- Standards Review background
- Standards Review Cycle 2013
  - Chronology
  - Summary of Input
  - Summary of Revisions
  - Summary of Comments
- Key issues
  - Detention Required
  - Change in Impervious Cover
  - Single Family Residential Requirements
  - Fee in lieu of Detention
  - Porous Pavement
- Next Steps

# Infrastructure Design Manual

## Background

Purpose--to establish the basic criteria to guide engineers in designing infrastructure improvements and modifications such that the design may be approved by the Department, and that upon completion, the Department may accept the work for operation and maintenance of the public infrastructure system(s).

## Applicability

# Standards Review

—a policy and process for periodic update

- Steps/Milestones-- FY13
  - Posting/Opening of Review July 15, 2012
  - Input received Sept. 29, 2012
  - Input analyzed
  - Issues considered
  - Proposed revisions posted for comment April 11, 2013
  - Consideration of comments
  - Final documents prepared for promulgation March 3, 2014
- Participation Summary
  - Initial Input 40 parties 609 issues
  - Comment on Draft 41 parties 57 comments

# Summary of Revisions

- New Chapter 9 includes:
  - Updated values for runoff coefficients for determining the amount of runoff from a drainage area.
  - Updated values for inlet capacities to reflect results of more recent research and studies
  - Added requirements for design submittals to delineate the paths and flow of stormwater during extreme events.
  - Revised stormwater detention requirements for all properties with development/redevelopment
  - Decreased applicability of Single Family Residential (SFR) exemption from detention requirement
- New Chapter 13 includes:
  - Revised standards regarding use of porous pavement for Single Family Residential

# Key Issue—Detention Required

- Current
  - Mitigate effect of New Development, Redevelopment and In-Fill Development on an existing drainage system
  - based on increased impervious cover
- Revised
  - Mitigate effect of New Development, Redevelopment and In-Fill Development on an existing drainage system
  - based on increased impervious cover and on existing impervious areas that are redeveloped

# Key Issue— Change in Impervious Cover

- Current
  - Detention volume (required) is calculated on the basis of the amount of area of increased impervious cover
- Revised
  - Detention volume (required) is calculated on the basis of the changes to the impervious cover associated with the project development and existing conditions at the site.

# Key Issue—Single Family Residential Requirements

- Current
  - For SFR Lots less than 15,000 sf
  - Exempt from detention for proposed impervious cover up to 75%
  - 0.20 ac-ft/acre detention required for impervious cover over 75%
- Revised
  - For SFR Lots less than 15,000 sf
  - Exempt from detention for proposed impervious cover up to 65%
  - 0.20 ac-ft/acre detention for impervious cover above 65%



# Key Issue—Fee in lieu of Detention

- **Current**
  - May be considered if COH has available regional detention in watershed, or
  - ..if payment was made to HCFCD for in-place regional detention in watershed (for new facilities draining directly to HCFCD channel)
- **Revised**
  - **(no change)**

# Key Issue—Porous Pavement

- Current
  - Standards included for porous pavement
  - not permitted for residential driveways
- Revised
  - Design criteria unchanged
  - Allows for porous pavement to be approved as pervious for SFR applications within limits

# Next Steps

- Updated volumes for IDM and Standard Specifications to be published.
- Proposed revisions to become effective for projects submitted after implementation date for design, by contract for specifications.
- Next Review: Drainage (Chapter 9) for 2017-2018

# Review and Update of Technical Standards for Storm Drainage Infrastructure

April 1, 2014

Report to TTI Committee