

# City of Houston

## Transportation, Technology & Infrastructure Committee

2016 Infrastructure Design Manual Review

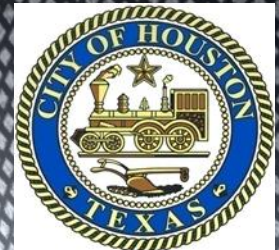
Chapter 7 – Water Line Design Requirements

Chapter 8 – Wastewater Collection System Design Requirements

Chapter 11 – Geotechnical and Environmental Requirements

Chapter 14 – Facility Design Requirements

May 31, 2016





# FY16 Review Activities

STEPS/MILESTONES	
Posting/Opening of Review	July 20, 2015 – September 30, 2015
Input received	October 1, 2015 – November 15, 2015
Input Analyzed & Revisions Proposed	November 16, 2015 – March 1, 2016
Proposed Revisions Posted for Comment	March 1, 2016 – March 30, 2016
Consideration of Comments	April 1, 2016 – May 30, 2016
TTI Presentation	May 30, 2016
Final Changes Promulgated	July 1, 2016

PARTICIPATION		
Initial Comments	11 Respondents	108 Items for Review
Proposed Revision Comments	11 Respondents	55 Items for Review
ACEC and HCA are ex-officio members of sub-committee		

# Chapter 7 -Water Line Design Requirements

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## Water Line Design Primary Change

- “Appendix A” added to Chapter 7
- Large diameter water line design
- Surface Water Transmission Lines
- Different requirements from smaller diameter distribution waterlines



# Chapter 7 -Water Line Design Requirements

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## Water Line Design Primary Change

- New “Tape Coating on Steel Pipe” Specification: Consolidation of several specifications
- New regulations for several pipe material specifications [Steel and Pre-stressed Concrete Cylinder Pipe (PCCP)]



# Chapter 8 – Wastewater Collection System

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## Wastewater Primary Change

Precast Manhole materials: Allowance for other than concrete (polymer concrete)

New Standard Specification 2088-Precast Polymer Concrete Manhole: created to reflect above



# Existing Wastewater Specifications & Details

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## Primary Changes

Existing Standard Specifications (Wastewater Collection System):

- Revised/ updated to reflect changes
  - Regulatory requirements
  - Technical advancements
- Goal: Improve system efficiency  
Ease of operation & maintenance



# New Wastewater Specifications & Details

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New Standard Specifications/associated details:

- 2088-Precast Polymer Concrete Manhole
- 2091-Non-Metallic Frames, Grates, Rings & Covers (allows composite manhole covers)
- 2551-Sanitary Sewer Renewal by Spin Cast Pipe Lining
- 2556-Cured-In-Place Pipe



# Wastewater **New** Guide Specifications

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## New Guide Specifications in conjunction with revised Guide Drawings:

- Division 13:
  - 13550- Prestressed Concrete Camera Pole
  - 13560- Perpetual Power Unit (PPU) WiMax Radio and Camera
- Division 16:
  - 16171- Low Voltage Electric Motor
  - 16172- Low Voltage Variable Frequency Drives
  - 16290- Surge Protection Devices
  - 16662- Motor Management Relay
  - 16663- Motor Protection Relay
  - 16910- Manual Transfer Switch





# Wastewater **New** Guide Specifications...continued

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New Guide Specifications created (facilitate trial of new pipe materials):

- 2510- Polypropylene Corrugated Wall Pipe
- 2511- Steel Reinforced Polyethylene Pipe



# Chapter 11 – Geotechnical and Environmental Requirements

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## Environmental Primary Changes

- Include coordinates of all environmental borings
- Coordinates will be plotted in GIS System for use on future City projects
- Provides for use of on-line data available from TCEQ Houston District Office



# Chapter 11 – Geotechnical and Environmental Requirements

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## Geotechnical Primary Changes

- Enhanced requirements for soil borings associated with drainage channels and trenchless crossings
- Added minimum depth of soil boring to 15 feet for utility lines



# Chapter 14 – Facility Design Requirements

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## Facility Design Primary Change:

### Updated references

- Engineering Design Manual for Submersible Lift Stations
  - Revised and renamed as ‘Engineering Design Guidelines for Submersible Lift Stations’
- Engineering Design Guidelines Drawings for Submersible Lift Stations
  - Civil, Mechanical and Structural Drawings & Details
  - Electrical & Instrumentation Drawings & Details



# Chapters 3, 5, & 16

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## **Minor modifications (off-cycle) made**

### **Chapter 3:**

Changes made to information required on plan & profile sheets

### **Chapter 5:**

Added minimum easement width requirement - Sanitary Sewer Tunnels of Diameter 24-inch & greater

### **Chapter 16:**

Requirements for Wireless Communication Devices Located within the Public Street Right-of-Way



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Questions?

