

SUGAR LAND  
LOW IMPACT DEVELOPMENT  
HOW DO WE MAKE IT WORK?

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# Sugar Land L.I.D.

- Environmental policy discussions
  - Water quality a major concern
  - Started in early 2000's
  - City's conversion to surface water
  - Limited direction
  - Draft documents created / no formal direction
  - LEED project consideration and discussion
  - Created more questions than answers
  - Left open ended
  - Where do we go from here?

# Sugar Land L.I.D.

- 2011 – Engineering started looking into LID standards – cautious approach
- 2012 – hired consultant to assist in the development of LID guidelines
- 2012 – Created staff based taskforce for QA/QC review and concurrence
- 2013 – Reviewed with Development Committee
- 2013 – Adopted by the City

# Sugar Land L.I.D.

- City adopted LID as part of our Design Standards
  - ▣ Chapter 10 – Low Impact Development & Green Infrastructure Design Criteria for Storm Water Management
  - ▣ Updates managed by City Engineer
  - ▣ Makes the criteria easier to update
  - ▣ Used as supplement to existing standards
  - ▣ Identified for site development and roadways

# How Do We Make it Work?

- Through the adoption of LID standards
- Allows the design consultants more latitude
- Does allow for reduced detention over regular criteria
  - ▣ Reduced impervious cover
  - ▣ More natural areas
  - ▣ Identifies runoff management functions and the effects

# How Do We Make It Work?

- Identification of acceptable LID practices
  - ▣ Defines and describes LID improvements that satisfy water quality and detention requirements
- Pre-Project Meeting Requirements
  - ▣ Approved documentation process
- LID Design Criteria
  - ▣ Soil amendments
  - ▣ Vegetation considerations
  - ▣ Rainwater harvesting
  - ▣ Permeable pavement

# How Do We Make It Work?

- Identified specific project types
  - ▣ Roadways
  - ▣ Commercial Developments
  - ▣ Can expand as comfort level and knowledge of staff grows
- Maintenance
  - ▣ Clearly identifying who is responsible
  - ▣ Best practices
  - ▣ Declaration (Appendix B)

# How Do We Make It Work?

## □ Construction

- Training – Contractors, Inspectors and Vendors
- Communication
  - Clear understanding of the design intent and unique details
- Erosion and sediment control
  - SWPPP during construction
- Tree protection
- Construction sequencing



# LID Development Activity

- Developing more interest
- Being utilized in City Parks
- Education of community ongoing
- Few development projects have used LID
- City continues to consider LID on future projects where it makes sense