TXDOT DRAINAGE:  
A COLLABORATIVE APPROACH TO  
MOBILITY IMPROVEMENTS

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SAN MARCOS, TX

• Mobility 35 Project
• Project Goals:  
  • Widen frontage roads  
  • Elevate frontage road bridges  
  • Reverse Ramps
WATERSHEDS

- Spans 2 major river crossings
  - San Marcos River
  - Willow Springs Creek
- Located near the confluence of the Blanco and San Marcos Rivers

TXDOT DESIGN CRITERIA

- 30% Design
- 8 Outfalls
- 4 Water Quality Ponds
- 10-year storm sewer design
The confluence of the Blanco and San Marcos Rivers has seen repeated historical flooding.

MEMORIAL DAY 2015

• The largest recorded event to date occurred Memorial Day 2015
• Overflow area studied with increasing detail since 2014
EXISTING INUNDATION

Evaluate impacts with a 1D/2D Infoworks Integrated Catchment Modeling (ICM) model
  • Blanco River
  • San Marcos River
  • Willow Springs Creek
  • Overflow areas (including IH 35 between the two rivers)
  • IH 35 roadway drainage systems

ROADWAY IMPACTS

Mitigation options investigated in various configurations:
  • Upsized existing culverts
  • Additional culverts
  • Maximized ditch capacity
  • Extended bridge
  • Altered frontage road profiles
  • Offsite pond

MITIGATION ANALYSIS
PROPOSED MITIGATION

- Upsize existing culvert along IH 35
- Optimize ditches along IH 35
- Lower profile of the frontage road back to existing

DRAINAGE

CITY BETTERMENT

- Design Improvements
  - Increase storm sewer capacity to the 25-year
  - Accept local flows into the TxDOT system
- Supplement Additional Cost
CITY BETTERMENT

SUNSET ACRES

• Residential Area 60" CMP Trunk
• Resides within TxDOT ROW

SUNSET ACRES BETTERMENT

Ongoing Drainage Improvements
• Detention of Overflow from Willow Springs Creek Trib 2
• Update residential storm sewer design
### QUANTITIES

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>UNIT</th>
<th>QUANTITY 60% DESIGN</th>
<th>QUANTITY WITH BETTERMENT</th>
<th>TOTAL AMOUNT 60% DESIGN</th>
<th>TOTAL AMOUNT WITH BETTERMENT</th>
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**TOTAL TXDOT:** $7,980,000

**TOTAL CoSM:** $5,175,200

**TOTAL:** $13,155,200

### QUESTIONS

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