Town and Country West Mobility and Drainage Project
Preliminary Engineering Report Presentation

TECHNICAL REVIEW COMMITTEE
WBS No. N-T17000-0017-3
May 15, 2014
Town & Country TRC

- PROJECT LOCATION
Town & Country TRC

- PROJECT LIMITS/ADJACENT DEVELOPMENT
### Utilities

<table>
<thead>
<tr>
<th>Utility</th>
<th>Existing</th>
<th>Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Line</td>
<td>12” Cast Iron</td>
<td>REPLACE ALL WATERLINES</td>
</tr>
<tr>
<td>Sanitary Sewer</td>
<td>10” &amp; 12” Gravity Unreinforced Conc. Pipes</td>
<td>REPLACE/UPGRADE ALL SEWERS</td>
</tr>
<tr>
<td>ATT</td>
<td>PVC Conduits</td>
<td>TBD in Design</td>
</tr>
<tr>
<td>CenterPoint Energy</td>
<td>Underground Gas &amp; Electric</td>
<td>TBD in Design</td>
</tr>
<tr>
<td>MCI</td>
<td>Fiber</td>
<td>TBD in Design</td>
</tr>
</tbody>
</table>
KEY OBJECTIVES

• Improve Drainage Deficiencies
• Improve Roadway Alignment
• Improve Mobility & Safety
- Buffalo Bayou Watershed
- Western Half Drains to IH 10
- Eastern Half Drains to Attingham Drive System
- 24” to 36” RCP’s
- Street Flooding
- Does not meet City’s 2 & 100-year Criteria

Flood Event 6/6/2010
Ponding depths in the range of 3 to 10 inches
EXISTING 100 YR SHEET FLOW PONDING
DRAINAGE BENEFITS

- Meet City criteria for the project area
- Provides additional benefits to the surrounding areas.
- The Attingham drainage system will receive relief for the 100 year in terms of ponding depth and duration.
- Sub-Surface Detention = 8(+) AC-FT
Town & Country TRC

- PROPOSED 100 YR SHEET FLOW PONDING – OPTION II
OPTION III – BENEFITS TO SURROUNDING AREA
- **RECOMMENDED DRAINAGE IMPROVEMENTS (OPTION III)**

  - Approximately 5,115 LF of Reinforced Concrete Boxes
    (Sizes vary from 6’x9’ to up to 10’x10’ RCB’s)
  
  - New Outfall to Existing IH-10: (7’x5’ RCB)
  
  - Sub-Surface Detention = 8(+) AC-FT
KEY OBJECTIVES

• Improve Drainage Deficiencies
• Improve Mobility & Safety
• Improve Roadway Alignment
Mobility & Safety Improvements

- Extend Town & Country Way
- Roundabout
Town & Country Way Extension

- Improves Traffic Circulation
- Reduces Cut Through Traffic

- Fixed Route Transit
Town & Country Way Extension

- Serves as a Relief/Alternate Route (Safety)
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MOBILITY IMPROVEMENTS – Town & Country Way Extension
Town & Country TRC

MOBILITY IMPROVEMENTS – Town & Country Way Extension
ROADWAY IMPROVEMENTS - TOWN AND COUNTRY WAY EXTENSION
• Reduce Conflicts (32-intersection vs. 8-Roundabout)
• Safety
• Control Speeds
• Efficient Traffic flow
• Reduces Congestion
• Reduces Delays
• Less Pollution
• Traffic Calming
Better suited for the Extension
Town & Country TRC

Counter Clockwise Circulation
Circulatory Roadway
Splitter Island
Accessible Pedestrian Crossing
Sidewalk

NOT TO SCALE
ROADWAY IMPROVEMENTS – ROUNDBOUTS
(SIGNING & STRIPING)
- ROUNDABOUTS – AUTOTURN

WB-50 AutoTurn Run
ROUNDABOUTS – Levels of Service

- Opening Year (2015)
  - Roundabout LOS = A

- Projected (2030)
  - Roundabout LOS = A
KEY OBJECTIVES

- Improve Drainage Deficiencies
- Improve Mobility & Safety
- Improve Roadway Alignment
- Concrete Roadway (7.5” Concrete)
- 4-Lane Undivided
- Built early 1970’s
- 4’ Sidewalks (Discontinuous)
- Pavement Condition Rating (50 to 67)*
  * 35-59=Low
  59-64.9=Medium-Low
  64.9-72=Medium

Town and Country Way - Typical Section
- Concrete Roadway (7.5” Concrete)
- 4-Lane Divided
- Built early 1970's
- 4’ Sidewalks (Discontinuous)
- Pavement Condition Rating (50 to 67)
  * 35-59=Low
  * 59-64.9=Medium-Low
  * 64.9-72=Medium

Town & Country Boulevard - Typical Section
Town & Country TRC

- ALIGNMENT SHIFT

75ft Alignment Shift
Town & Country Way
- ROW – 60 FT
- Local Street
- No Posted Speed Limit

Town & Country Blvd.
- ROW – 100 FT
- Local Street
- 75ft Alignment Shift
- No Posted Speed Limit

EXISTING ALIGNMENT
ALTERNATIVE I

- Alignment Shift
- Cross Section Transition
ALTERNATIVE II - RECOMMENDED

- Alignment Shift
- Cross Section Transition
- Roundabout

Town & Country TRC
ALTERNATIVE II - RECOMMENDED

- Alignment Shift
- Cross Section Transition
- Roundabout

TOWN & COUNTRY BLVD
FROM STA. 6+04 TO TOWN & COUNTRY WAY

Town & Country Way
Town & Country TRC

- RIGHT-OF-WAY ACQUISITION

<table>
<thead>
<tr>
<th>PARCEL</th>
<th>AREA (SqFt)</th>
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<tbody>
<tr>
<td>Parcel A</td>
<td>18,005</td>
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<tr>
<td>Parcel B</td>
<td>10,811</td>
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<tr>
<td>Parcel C</td>
<td>13,637</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>42,453</strong></td>
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CONCEPTUAL TRAFFIC CONTROL PLAN

- Phased Construction
BUDGET/ SCHEDULE
Roadway Alternative II w/Drainage OPTION III

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>TOTAL</th>
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<tbody>
<tr>
<td>ROADWAY</td>
<td>$942,000</td>
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<tr>
<td>WATER LINE ITEMS</td>
<td>$304,000</td>
</tr>
<tr>
<td>SANITARY SEWER ITEMS</td>
<td>$205,000</td>
</tr>
<tr>
<td>DRAINAGE ITEMS (8+ ac/ft detention)</td>
<td>$4,866,000</td>
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<tr>
<td>GENERAL ITEMS (20% Contingency/Mobilization/Misc.)</td>
<td>$908,000</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$7,225,000</td>
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* 100% TIRZ Funded
KEY OBJECTIVES SATISFIED

• Improve Drainage Deficiencies

• Improve Mobility & Safety

• Improve Roadway Alignment