

# Westpark Tollway

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CEE 491 – Group Project 2

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# Overview

- Project Description & Cost
- Project Use and Social Benefits
- Economic Benefits
- Awards and Innovations
- Technical Issues
- Social and Policy Issues

# General Information

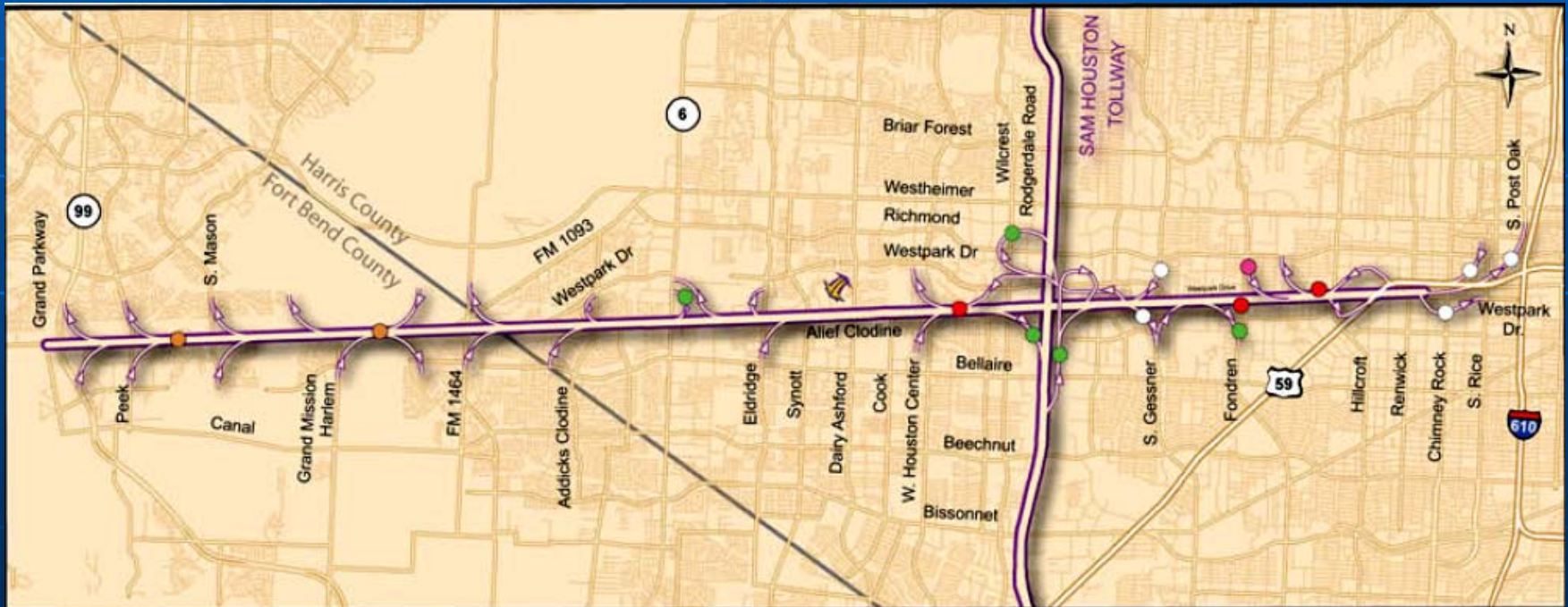
- Texas
- 2002 -2005
- Harris County Toll Road Authority
  - Westpark Tollway
  - Maintains & Operates Tollway
- Fort Bends County Toll Road Authority
  - Fort Bend Westpark Tollway
- Funded
  - Existing Toll Road Funds
  - Bond Sales

# Westpark Specifications

- 20 miles
  - Westpark Tollway – 14 miles
  - Fort Bend Westpark Tollway – 6 miles
- Approximately 46 Million Users
- Electronic Tollway
  - EZ Tag, TollTag, & TxTag

# Westpark Map

## Grand Parkway to I-610



# Cost

- 260 Million Dollars
- Tollway Cost
  - Axle Amount
  - Sections
- 2 Axle Total Cost
  - West Bound - \$5.40
  - East Bound - \$6.40

# East Bound: I-10 to Grand Parkway

		2 Axles	3 Axles	4 Axles	5 Axles	6 Axles
<b>Peek Road Mainlane (Fort Bend)</b>	pass through	\$0.60	\$1.00	\$1.50	\$2.60	\$3.25
<b>Harlem / Grand Mission Mainlane (Fort Bend)</b>	pass through	\$0.60	\$1.00	\$1.50	\$2.60	\$3.25
<b>Wilcrest East Mainlane</b>	pass through	\$1.25	\$3.00	\$4.00	\$5.00	\$6.25
Beltway 8 (to southbound Sam Houston)	exit	\$0.50	\$1.25	\$1.75	\$2.00	\$2.50
Gessner Road East	exit	\$0.35	\$1.00	\$1.50	\$2.10	\$2.45
Fondren Road	exit	\$0.50	\$1.00	\$1.50	\$2.00	\$2.50
<b>Fondren East Mainlane</b>	pass through	\$1.25	\$3.00	\$4.00	\$5.00	\$6.25
Fondren Eastbound	on ramp	\$0.65	\$1.00	\$1.50	\$2.60	\$3.25
South Post Oak Blvd	exit	\$0.35	\$1.00	\$1.50	\$2.10	\$2.45
Westpark Drive East	exit	\$0.35	\$1.00	\$1.50	\$2.10	\$2.45

# Project Use and Social Benefits

- Used as a limited-access toll road; restricted to vehicles having a transponder unit attached
- Uptown Houston is the second largest business district in Houston and hosts nearly 200,000 office workers and shoppers each day
- Rapidly growing west and southwest Houston communities receive direct and exclusive access to the central part of the city, including Uptown Houston



# Economic Benefits

- Total revenues:
  - \$292,193,930 (2004 fiscal year)
  - \$336,552,690 (2005 fiscal year)
  - \$373,271,267 (2006 fiscal year)
  - \$437,860,519 (2007 fiscal year)
  - \$487,129,967 (2008 fiscal year)
- Portions of the revenues collected are used to pay back the bond that financed the construction of the tollways within Harris County and maintenance
- Major county industries (i.e. manufacturing, shipping, and tourism) benefit from the tollway



# Awards and Innovations

- 2005 – International Bridge, Tunnel and Turnpike Association President's Award for Technology
  - First all-electronic toll road
  - Toll plazas are equipped with TAG readers, violation lights, and cameras
  - Transponder units (EZ TAGs) adhere to the inside of the windshield
    - Electronically deducts tolls
    - Pre-paid and rechargeable
  - Provides a safer toll road
  - Allows for non-stop, highway speed travel



# Awards and Innovations

- 2007 – Texas Outstanding Civil Engineering Achievement Award
  - Electronic toll system
  - Limited width of the right-of-way
    - Constructed many types of retaining walls
      - Mechanically stabilized with geo piers
      - Depressed retaining walls with compression struts
      - Drilled shafts, sheet piles, tie-backs
  - Over 300 utility conflicts
    - Installed conduits between drill shafts and through bridges
    - Pave over existing utilities

# Technical Issues

- Two Large Cracks
  - 300 feet and 100 feet long
  - Possibly caused by soil erosion from problems with the detention basin
  - Repair Cost ~ \$2 million
- Drainage Problem
  - Cause is unknown
  - Roadway is constantly wet
  - Depressed section
  - Water table rise, groundwater leakage, nearby lake

# Technical Issues

- Drainage Problem
  - Wetness has caused accidents
  - Section has to be redone, leading to closure
  - Repair cost ~\$3.1 million



# Social and Policy Issues

- Repairs and Reconstruction
  - No authorization without explanation
  - Close two sections of tollway for 45 days
- Toll Increase
  - 2007 – Suggestion to double the toll during peak hours to “decongest” was cancelled
  - But \$0.25 increase implemented for all toll roads in Houston
- EZ TAGs
  - Out-of-state travelers
  - Lack on information
  - Situation has improved

**Thank You!**