

**IH 35E Managed Lanes Project  
SB 1420 Committee**

November 22, 2011, 1:30 p.m.  
Denton County Transportation Authority  
Board Room  
1660 S. Stemmons, Suite 250  
Lewisville, TX, 75067

**AGENDA**

1. Welcome and Introductions
2. Staff presentation regarding (*Handout 2.1*):
  - a. Further update Scenarios 1-4, 5, 7 and 8
  - b. Financial Analysis of Scenarios 6A, 6B, and 6C
  - c. Build out options for added public funds (\$1.2B) – Scenario 6A+
  - d. Schedule
3. Presentation by the North Texas Tollway Authority committee representative regarding waiver of the North Texas Tollway's Authority's option to develop, finance, construct, and operate the IH 35E Managed Lanes Project (*Handout 3.1*)
4. Public Input
5. Proposed Memorandum of Understanding for the SB 1420 Committee for the development of the IH 35E Managed Lanes Project
6. Discussion of issues to be addressed by the committee and staff
7. Adjourn - **ACTION ITEM**

## 2. Staff Presentation – Update Scenarios 1-4

### Summary Scenario 1-4

- A summary of the public funds requirement for each scenario is listed below:

Scenarios *	Concession			Availability Payment			
	Total construction costs (nominal \$)	Additional public funds required (nominal \$)*	Total public grant funds required (nominal \$)	Additional upfront public grant funds (nominal \$ - in excess of \$592 m)**	First year availability payment	Shortfall Analysis # of years net revenue is less than annual AP ***	Nominal operational shortfall
Scenario 1: Full length, one managed lane	\$4,424 m	\$2,474 m	\$3,066 m	\$1,819 m	\$213 m	16 years	\$1,445 m
Scenario 2: Full length, two managed lanes	\$4,461 m	\$2,295 m	\$2,887 m	\$1,862 m	\$213 m	12 years	\$1,172 m
- Scenario 2 without RTR loan	\$4,461 m	\$2,544 m	\$3,136 m	\$2,272 m	\$197 m	11 years	\$954 m
Scenario 3: Reduced length, one managed lane	\$2,523 m	\$1,005 m	\$1,597 m	\$0 m	\$183 m	28 years	\$2,795 m
Scenario 4: Reduced length, two managed lanes	\$2,563 m	\$904 m	\$1,496 m	\$0 m	\$188 m	24 years	\$2,223 m
- Scenario 4 without RTR loan	\$2,563 m	\$1,151 m	\$1,743 m	\$497 m	\$169 m	21 years	\$1,635 m

\* Does not include \$592 million of RTR Funds

\*\* In scenarios where RTR loan was assumed, \$1,000 m loan was repaid in full in year 1 of operations, funded through a combination of debt and equity from the developer.

\*\*\* For scenarios 1 through 4, due to size of public funds requirement under availability payment and concession, as well as stakeholder concerns over project scope, a municipal revenue line was not forecast. Only the aggressive concession revenue line is available to compare against the availability payment stream.

Handout 2.1

## 2. Staff Presentation–Update on Scenarios 6A-6C

### Scenario 6A

#### Managed Lanes

Provide two reversible Managed Lanes between IH 635 and Loop 288 (minor improvements up to US 77)

#### General Purpose and Frontage Roads

Re-use existing pavement where possible, no additional capacity

#### Lake Lewisville

- Connect frontage roads across Lake Lewisville using tolled bridges
- Build all new southbound frontage roads, general purpose lanes and managed lanes across Lake Lewisville

#### SH 121/IH 35E Interchange

Construct the missing direct connector ramps to the North

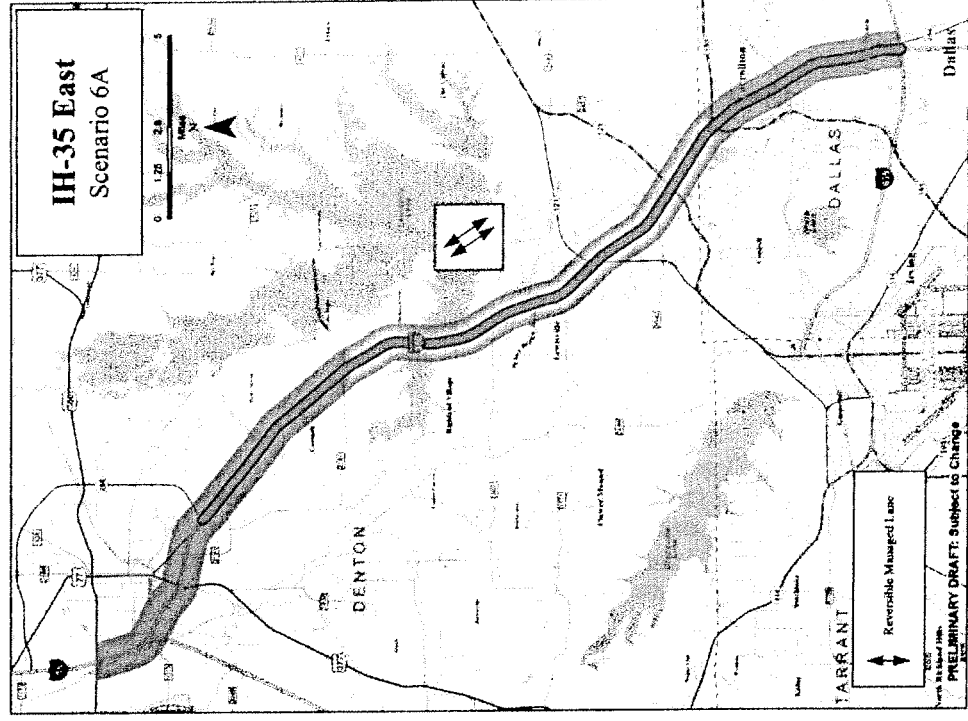
#### Collector Distributor System at PGBT and SH 121

Construct full collector-distributor (CD) system between PGBT and SH121 (toll CD's)

#### Right-of-Way Acquisition

Minimized ROW acquisition where possible

PRELIMINARY: SUBJECT TO CHANGE



Handout 2.1

## 2. Staff Presentation–Update on Scenarios 6A-6C

### Scenario 6B

#### Differences from Scenario A

##### Collector Distributor System at PGBT and SH 121

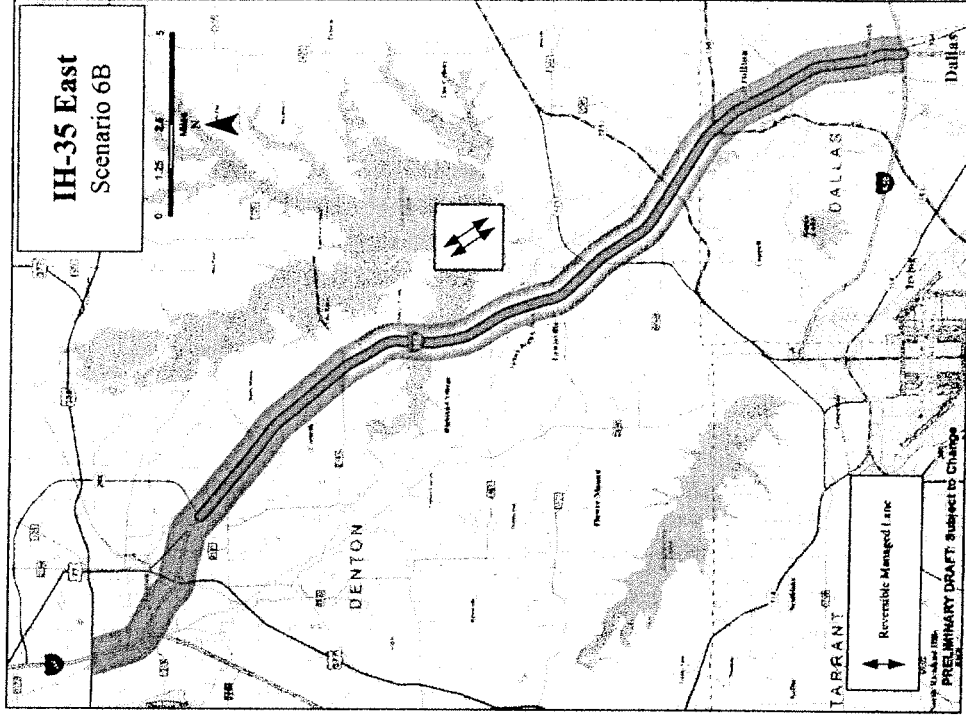
Removes collector-distributor (CD) system between PGBT and SH121 (toll CD's)

##### Corinth Parkway

Removes interchange conversion at Corinth Parkway

##### Lake Lewisville

Reduces width of bridge at Lake Lewisville (eliminate sidewalk, reduced shoulders and width for bike lane along frontage road)



PRELIMINARY: SUBJECT TO CHANGE

Handout 2.1

## 2. Staff Presentation–Update on Scenarios 6A-6C

### Scenario 6C

#### Differences from Scenario A:

##### Managed Lanes

Extend limits from US 77 to US 380

Provide one Managed Lane in each direction between IH 635 and US 380

Provide no barrier separation between managed lanes and GP lanes

##### General Purpose Lanes

Limited shoulder width and potentially reduced lane widths to fit onto existing bridges

##### Corinth Parkway

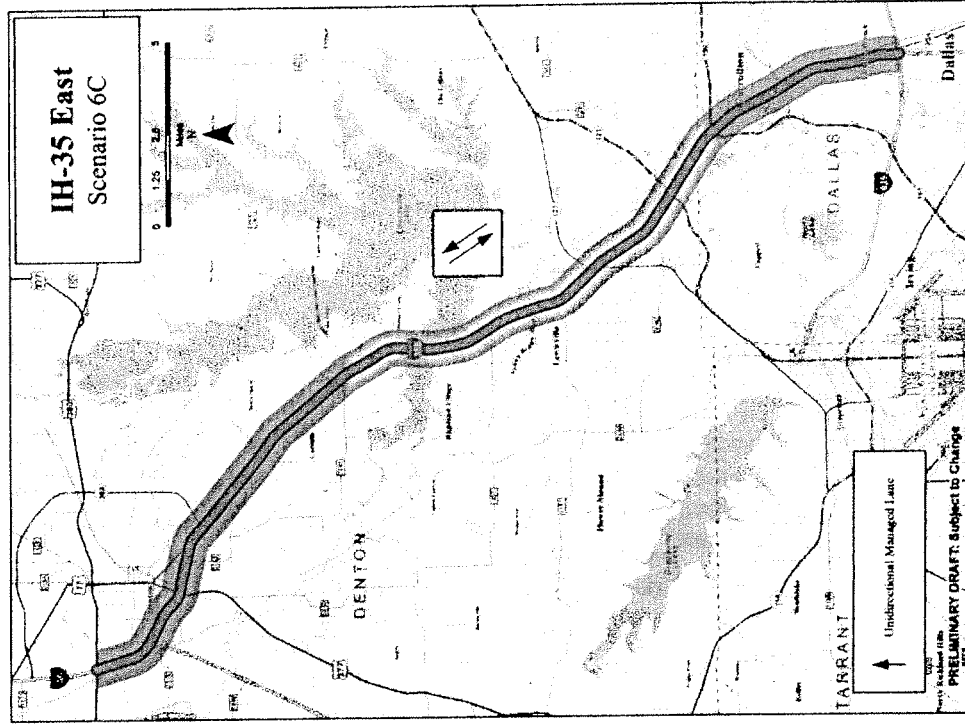
Removes interchange conversion at Corinth Parkway

##### Lake Lewisville

Reduces width of bridge at Lake Lewisville (eliminate sidewalk, reduced shoulders and width for bike lane along frontage road)

##### Does not include:

- Belt Line Road
- Dickerson Parkway



PRELIMINARY: SUBJECT TO CHANGE

Handout 2.1

## 2. Staff Presentation – Financial Analysis 6A-6C

	6A	6B	6C	Ultimate*
Length (miles)	23.2	23.2	28.2	28.2
Limits	IH 635 - Loop 288	IH 635 - Loop 288	IH 635 - US 380	IH 635 - US 380
Capital Costs (nominal \$ millions)	\$2,011	\$1,325	\$1,161	\$4,773
Design-Build Costs	\$1,375	\$918	\$854	\$3,345
ROW	\$636	\$407	\$307	\$1,428
<b>Total Public Funds Requirement (Includes \$592 RTR Funds)</b>				
Concession (nominal \$ millions)	\$812	\$394	\$0	\$2,987
Availability Payment (nominal \$ millions)	\$592 upfront \$198 year 1	\$592 upfront \$132 year 1	\$592 upfront \$125 year 1	Not analyzed
Nominal Operational Shortfall	\$868-\$4,109	\$375-\$2,000	\$108-\$747	
Municipal Finance (nominal \$ millions)	\$1,897	\$1,264	\$924	Not analyzed

\* Cost estimate and financial analysis for the ultimate configuration were performed in 2010. Traffic and revenue analysis for the ultimate configuration was prepared based on the 2030 NCTCOG model and therefore some information is not comparable to more recent scenarios. Handout 2.1

## 2. Staff Presentation – Build Out Options for Scenario 6A+

Option	Cost Range (2011 \$ millions)
Construct additional Auxiliary Lanes between Corinth Parkway and Loop 288	\$7 – \$9
Construct additional General Purpose Lanes between IH-635 and Corporate Drive	\$130 – \$180
Extend Managed Lanes from Loop 288 to US 380	\$52 – \$60
Construct remainder of proposed Lewisville Lake Bridge and pavement approaches	\$165 – \$180
Reconstruct existing general purpose and frontage road pavement	\$220 – \$250

# 3. NTTA Presentation

## Overview of Assumptions

### Project Assumptions

- \$3.2 Billion fully funded in September 2011
- \$592 Million of TxDOT Reimbursement paid 2012 to 2015 per construction schedule
- Segment openings dates of:
  - Middle Segment [FM 2181 south to PGBT (SH 190)] – 2018
  - North Segment [US 380 south to FM 2181] – 2019
  - South Segment [PGBT (SH 190) south to IH-635] – 2021

### Financial Structure Assumptions

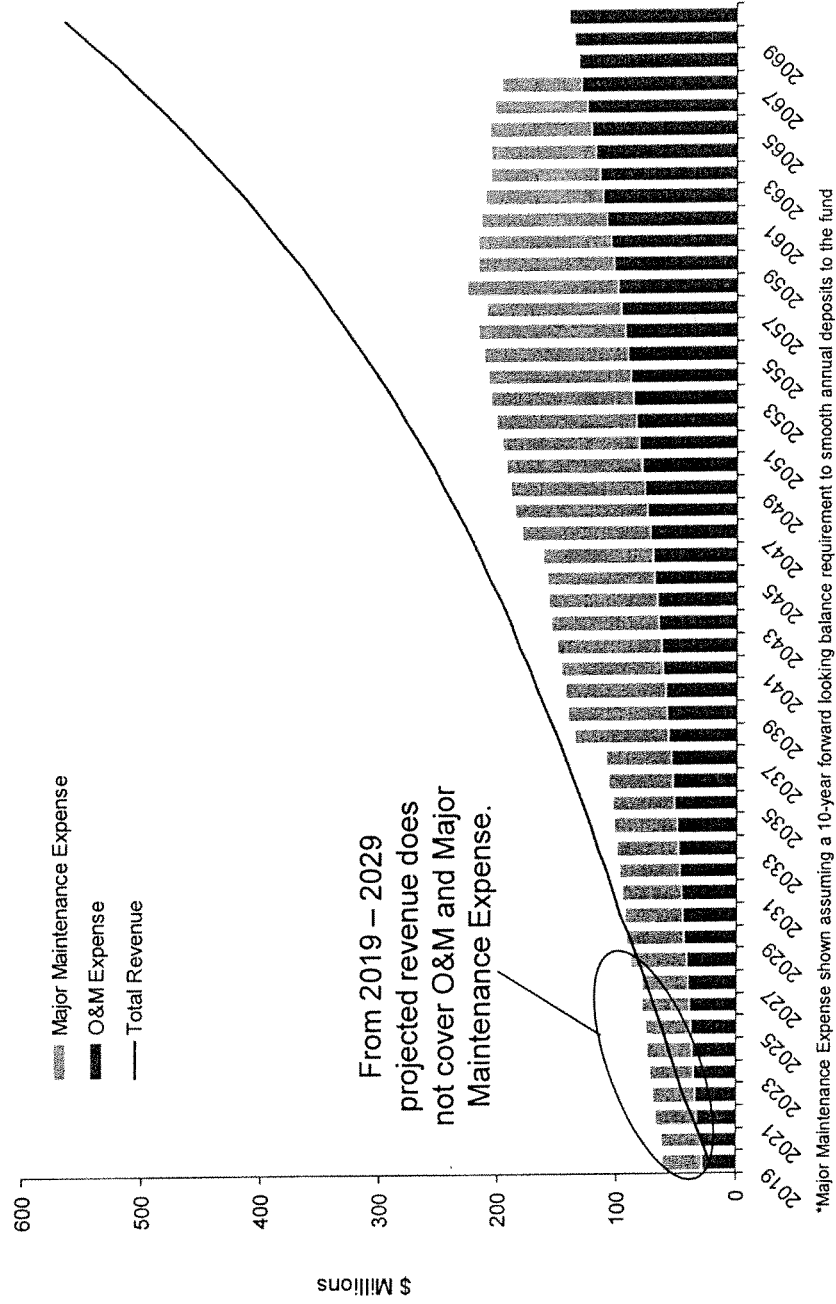
- Credit ratings in the “BBB” category
- Senior lien Current Interest Bonds only
- Capital Appreciation Bonds not available due to rating level
- Capitalized interest through 2019
- Bonds structured to a minimum debt service coverage of 1.50x

### Input Assumptions

- Level 2 T&R Study provided by Wilbur Smith Associates utilizing baseline configuration toll schedule
- O&M estimates provided by NTTA consultants assuming maintenance of entire corridor (ROW to ROW)
- Major Maintenance estimates provided by NTTA consultants assuming maintenance of entire corridor (ROW to ROW)
- Assumes maintenance levels consistent with other TxDOT roads.

**Financial Analysis was conducted on the full corridor based on the T&R, O&M and Major Maintenance estimates provided.**

# 3. NTTA Presentation Revenue and Cost Projections



\*Major Maintenance Expense shown assuming a 10-year forward looking balance requirement to smooth annual deposits to the fund

Revenue and Cost Source: I35E Input Model\_r2\_2011-08-03.xlsx  
 Figures are preliminary estimates and subject to change based on market conditions and further diligence by NTTA. Rates as of August 8, 2011.

# 3. NTTA Presentation Revenue and Cost Projections

FY (Ended 8/31)	Total Revenue	O&M Expense	Major Maintenance Expense	Excess Net Cash Flow
2019	\$21,211,463	\$28,591,077	\$32,119,599	(\$39,499,207)
2020	27,745,238	29,932,778	32,435,358	(34,622,898)
2021	35,908,406	32,909,855	33,925,498	(30,926,947)
2022	43,647,486	34,434,883	35,566,967	(26,354,365)
2023	50,000,550	35,777,340	36,709,063	(22,485,852)
2024	55,778,615	37,002,347	37,086,382	(18,260,124)
2025	61,781,131	38,079,801	37,088,768	(13,387,437)
2026	68,052,928	39,239,927	38,296,922	(10,483,922)
2027	74,414,756	40,485,800	39,020,529	(5,091,574)
2028	81,209,425	41,776,791	46,311,817	(6,879,283)
2029	88,516,721	43,118,023	48,774,750	(3,376,052)
2030	96,188,837	44,503,723	49,047,225	2,637,889
2031	102,873,846	45,793,287	49,866,468	7,214,091
2032	108,964,579	47,103,099	50,623,573	11,237,907
2033	115,281,110	48,466,864	51,701,063	15,113,183
2034	121,923,824	49,886,821	52,149,673	19,887,430
2035	128,948,672	51,364,969	52,491,256	25,092,447
2036	135,882,339	52,867,145	54,164,790	28,850,404
2037	142,880,270	54,409,269	55,534,511	32,936,490
2038	150,144,409	56,007,586	78,980,914	15,155,908
2039	157,784,968	57,665,331	84,326,696	15,792,941
2040	165,746,162	59,381,910	84,527,672	21,896,580
2041	173,480,567	61,118,219	86,649,251	25,713,096
2042	181,135,825	62,891,616	88,120,387	30,123,812
2043	189,158,446	64,725,440	90,309,740	34,123,266
2044	197,443,472	66,359,884	91,147,085	39,936,503
2045	205,983,142	68,025,110	91,627,937	46,330,095
2046	214,848,064	70,015,413	92,978,037	51,854,615
2047	224,060,743	72,074,069	107,715,287	44,271,387
2048	233,702,750	74,199,711	112,187,077	47,315,963
2049	243,653,094	76,391,481	113,067,927	54,193,686
2050	253,885,275	78,643,031	115,169,772	60,072,473
2051	264,480,097	80,965,170	115,999,046	67,515,882
2052	275,487,463	83,357,434	118,073,053	74,056,976
2053	286,978,674	85,827,959	119,939,408	81,211,307
2054	298,809,002	88,368,646	120,623,947	89,816,409
2055	311,051,447	90,991,166	121,300,945	98,759,336
2056	323,783,411	93,684,304	123,794,835	106,304,273
2057	336,982,461	96,453,658	113,703,785	126,825,018
2058	350,615,932	99,302,727	127,356,402	123,956,802
<b>Total</b>	<b>\$6,600,425,702</b>	<b>\$2,382,193,657</b>	<b>3,096,006,570.53</b>	<b>\$1,186,768,508</b>

Negative cash flow of \$211M during the first 11 years of operations

Positive cash flow generates enough to repay the \$211M from first 11 years

\*Major Maintenance Expense shown assuming a 10-year forward looking balance requirement to smooth annual deposits to the fund

Revenue and Cost Source: I35E Input Model\_r2\_2011-08-03.xlsx  
 Figures are preliminary estimates and subject to change based on market conditions and further diligence by NTTA. Rates as of August 8, 2011.

# 3. NTTA Presentation

## I-35E Managed Lanes Project

### Debt Capacity and Preliminary Financial Feasibility Analysis

#### Project Feasibility – Base Case

2020 Toll Revenue	\$	24,783,100
2020 Other Revenue	\$	2,962,138
<b>2020 Gross Revenue</b>	<b>\$</b>	<b>27,745,238</b>

Debt Service Coverage	1.50x
Maximum 2020 Debt Service	\$ 18,496,825
All-In Total Interest Cost	6.17%

<b>Debt Capacity (Net Proceeds)</b>	<b>\$</b>	<b>307,702,708</b>
Underwriter's Discount	\$	(1,544,675)
Costs of Issuance	\$	(2,926,805)
Capitalized Interest	\$	(147,962,400)
<b>Construction Fund Proceeds</b>	<b>\$</b>	<b>155,268,828</b>
Construction Cost	\$	(2,619,160,633)
<b>Funding Excess / (Gap)</b>	<b>\$</b>	<b>(2,463,891,805)</b>

% Feasibility 5.93%

- NTTA has requested that RBC Capital Markets ("RBCCM") provide a debt capacity and preliminary financial feasibility analysis of the I-35E Managed Lanes Project
- NTTA has provided RBCCM with projected revenues, operating costs, maintenance costs and construction costs
  - Annual O&M and major maintenance costs exceed revenues for the first 11 years of operations
- To finance a road that has higher costs than revenue, the following must be assumed:
  - Gross revenue pledge for bonds
  - To the extent project revenues are not available, O&M and major maintenance costs are paid and guaranteed by State, County, or other governmental entities
- Financial assumptions include
  - Capitalized interest: through 2019
  - Ratings: Low investment grade (Baa3 / BBB- levels)
  - Minimum gross debt service coverage ratio: 1.50x
  - All-In Total Interest Cost: 6.17% (current market rates)

Revenue and Cost Source: I35E Input Model\_r2\_2011-08-03.xlsx  
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# 3. NTTA Presentation

## Staff Recommendation

- Staff recommends the Board of Directors waive its first option right to develop, finance, construct and operate the IH 35E managed lanes project