Prepared for

The Honorable Larry Phillips
Chair, Select Committee
on Transportation Funding
Texas House of Representatives

Dr. David Ellis
Dr. Tim Lomax
Texas Transportation Institute
The Texas A&M University System
College Station, Texas
October 26, 2010
Our Charge

- Assess the effect of congestion on consumer commodities
- Assess congestion costs to households under six different scenarios
  - Current funding trend
  - Recapture Diversions
  - Recapture Diversions and Debt Service
  - Spend $2B on maintenance and $4B on construction
  - Use T.E.R.P. funds to service debt
  - Use oil severance tax to service Prop. 14 bond debt
Percent Annual Increase: 1970 to 2009

- Population: 0.5%
- Registered Vehicles: 2.5%
- Vehicle Miles Traveled: 3.5%
- State-Maintained Lane Miles: 0.0%
Why it Matters

- Traffic congestion affects –
  - Cost of consumer goods
  - Jobs
  - Economic growth
  - Tax revenues
  - Quality of life
Estimating How It Affects People

- Looked at “cost” on a household level
- Number of households based on State Data Center projections
- Plotted two variables
  - Cost of programs, projects and policies to address congestion
  - Cost of extra travel time and extra fuel from not addressing congestion

Note: Did not include congestion costs to business.
Annual Cost per Household

2010 to 2035

Congestion Cost

Implementation Cost

Current Trend

$0 $100 $200 $300 $400 $500 $600 $700 $800

$0 $1,000 $2,000 $3,000 $4,000 $5,000 $6,000
Annual Cost per Household – 2010 to 2035

- Use Oil and Gas Severance Tax to Service Debt

Chart showing the annual cost per household from 2010 to 2035 with varying costs and implementations.
Annual Cost per Household

2010 to 2035

Use TERP Funds to Service Debt
Annual Cost per Household
2010 to 2035

Recapture Diversions

Implementation Cost

Congestion Cost
### Annual Cost per Household

**2010 to 2035**

<table>
<thead>
<tr>
<th>Year</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$0</td>
</tr>
<tr>
<td>2010</td>
<td>$200</td>
</tr>
<tr>
<td>2015</td>
<td>$300</td>
</tr>
<tr>
<td>2020</td>
<td>$400</td>
</tr>
<tr>
<td>2025</td>
<td>$500</td>
</tr>
<tr>
<td>2030</td>
<td>$600</td>
</tr>
<tr>
<td>2035</td>
<td>$700</td>
</tr>
<tr>
<td>2040</td>
<td>$800</td>
</tr>
</tbody>
</table>

#### Diagram:

- **Y-axis:** Implementation Cost
  - $0 to $800
- **X-axis:** Congestion Cost
  - $0 to $6,000
- **Legend:**
  - **Recapture Diversions and Debt**

The diagram shows a decrease in implementation cost with increasing congestion cost, highlighting the relationship between these two variables.
Annual Cost per Household

2010 to 2035

$800

$4 Billion Annual Construction Letting

IMPLEMENTATION COST

CONGESTION COST

$0 $1,000 $2,000 $3,000 $4,000 $5,000 $6,000

$0 $100 $200 $300 $400 $500 $600 $700 $800
Annual Cost per Household

2010 to 2035

Increased Investment leads to Decreased Congestion Cost

$350 Cost

$3,390 Savings
Annual Costs per Household
2010 to 2035

- Congestion
- Implementation

$4 Billion Annual Letting
Recapture Diversions and Debt
Recapture Diversions
Use TERP Funds to Service Debt
Use Oil and Gas Severance Tax to Service Debt
Current Funding Trend
What Do We Know?

1. Transportation funding has not kept pace with demand – has not for many years
2. Mobility will get worse
   - How much depends on how much effort to address the problem
3. Many types of mobility solutions; consider pursuing all of them
4. Consequences of not addressing the congestion issues