

Briefing for Transportation Finance Panel

- Corridor Economic Impact Analysis
- Status Report

TFP Webinar
September 29, 2015



**CDM
Smith**[®]



Tom Maziarz, CTDOT
Glen Weisbrod, EDRG

Economic Analyses

of Let's Go CT Transportation Investments

Where we are in the process:

- ready to deliver new type of information to assist decision makers
- to assess value of investments relative to cost

Economic assessment: of transportation investments

- new measures to gauge the worth of investments
- beyond standard transportation measures like accident & congestion reduction

Today's presentation: first part of economic analysis

- corridor-level analysis
- **3 highway corridors**
 - with the largest & boldest improvements
 - important conduits of commerce
 - among our most congested.

Summary of initial findings: good return on investment

- Demonstrate that transportation investments will spur growth in jobs, business, & income.
- Economic benefits will far exceed the cost of building the projects

Economic Analyses

of Let's Go CT Transportation Investments

Presentation of Initial Analyses to Transportation Finance Panel

September 29, 2015

1. Introduction: Tom Maziarz, CTDOT

- Overview plus schedule for remaining analyses
- Explanation of 3 corridors to be presented today
- Purpose & approach to conducting the economic analyses

2. Methods & Results: Glen Weisbrod, Economic Development Research Group

- **Methods**
- **Results**
 - **I-95 West** corridor
 - **I-95 East** corridor
 - **I-84 West** corridor

Economic Analyses

Scope of analysis & Timeline for completion

Highway analyses:

- **Major corridor ‘packages’:** **TODAY**
 - Present major corridors as full packages first
 - Major projects & key segments being analyzed individually
- **Individual projects:** ***end of October***

Transit analyses:

- **Metro North mainline:** New Haven to NY: ***end of October***
 - ***Special & more detailed analyses*** using NEC data
 - Assess impacts of more frequent and faster service
 - **2+2 track configuration**: 2 tracks for local & 2 tracks for express service.
- **Other individual projects:** Waterbury Branch, Hartford Line, SLE: ***end of Oct.***

Three Major Highway Corridors

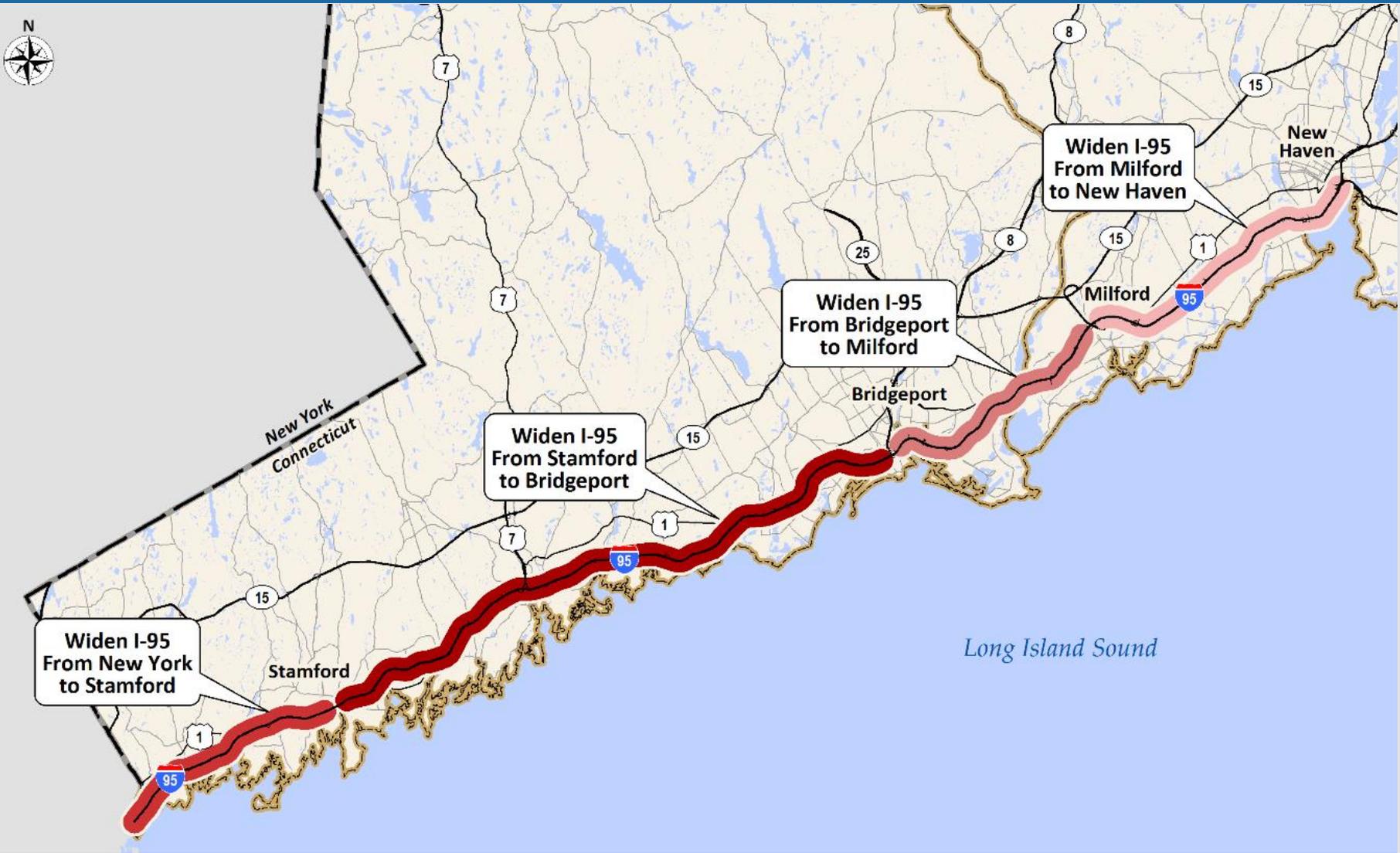


Three Major Highway Corridors

current conditions

	I-95 West	I-95 East	I-84 West
Length (Miles)	50	60	37
Daily Traffic	135,000	84,000	80,000
% Trucks	13.6%	10.5%	12.7%
Daily VMT <i>Vehicle <u>Miles</u> Traveled</i>	6,500,000 miles	3,700,000 miles	3,100,000 miles
Annual VHT <i>Vehicle <u>Hours</u> Traveled</i>	45.1M hours	24.0M hours	29.2M hours
Annual Delay <i>Hours of congestion</i>	5.3M hours	2.1M hours	2.6M hours

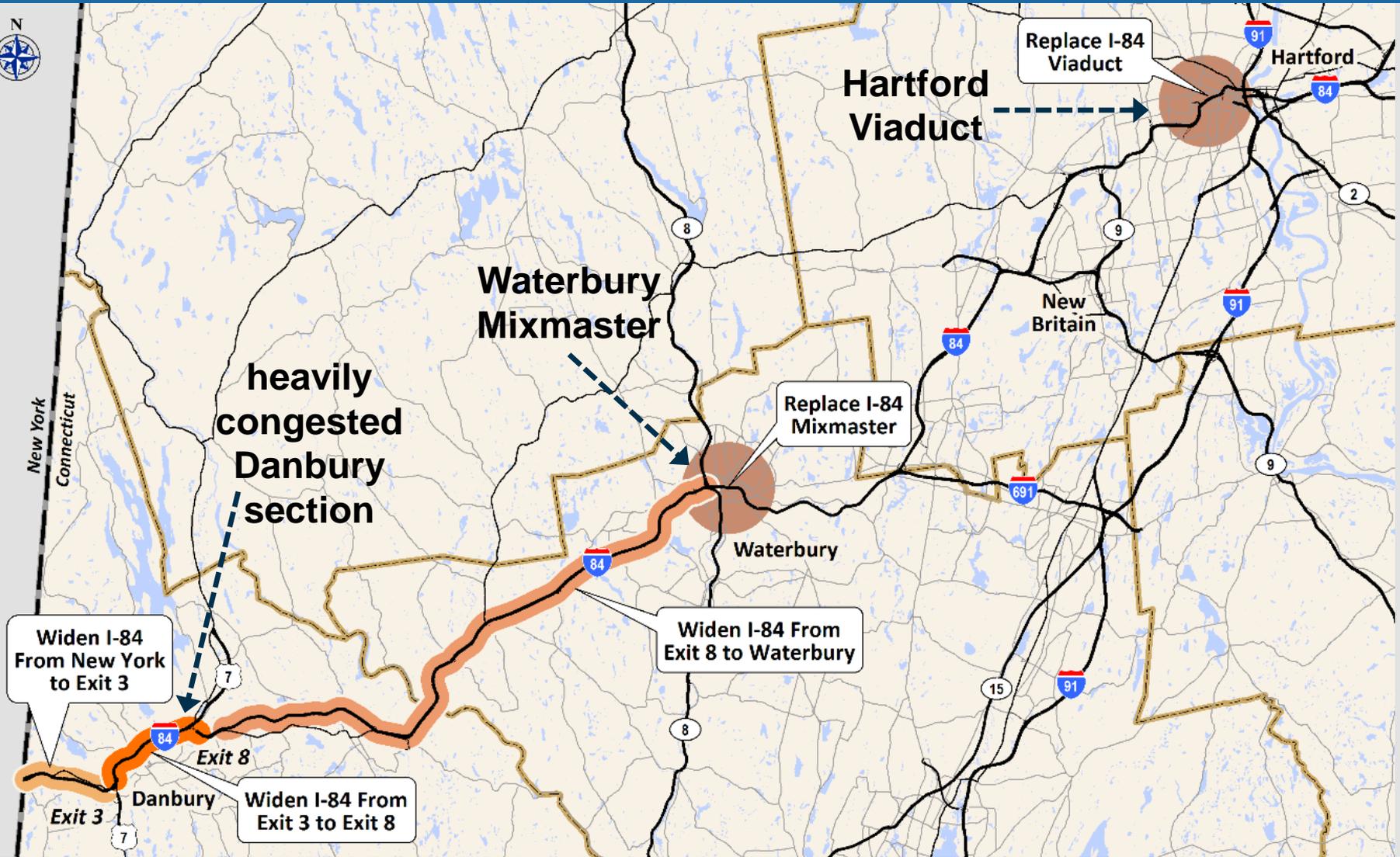
I-95 West: NY to New Haven Highway Corridor Package



I-95 East: Branford to R.I. Highway Corridor Package



I-84 West Corridor plus Mixmaster & Viaduct



Why we conducted economic analysis

Traditionally, transportation plans were based on standard measures of **safety**, **congestion**, & **mobility**. For this strategic plan, we need to go beyond standard measures.

Purpose of economic analysis:

Assess project's ability to **support other strategic goals** of CT (especially economic growth)

- Assess **“economic value”** of safety, congestion, & mobility improvements
- Assess a project's potential to **facilitate or spur economic growth**

Glen will explain multiple methods used to get more & better insights into value of projects

Methods & Results

Glen Weisbrod

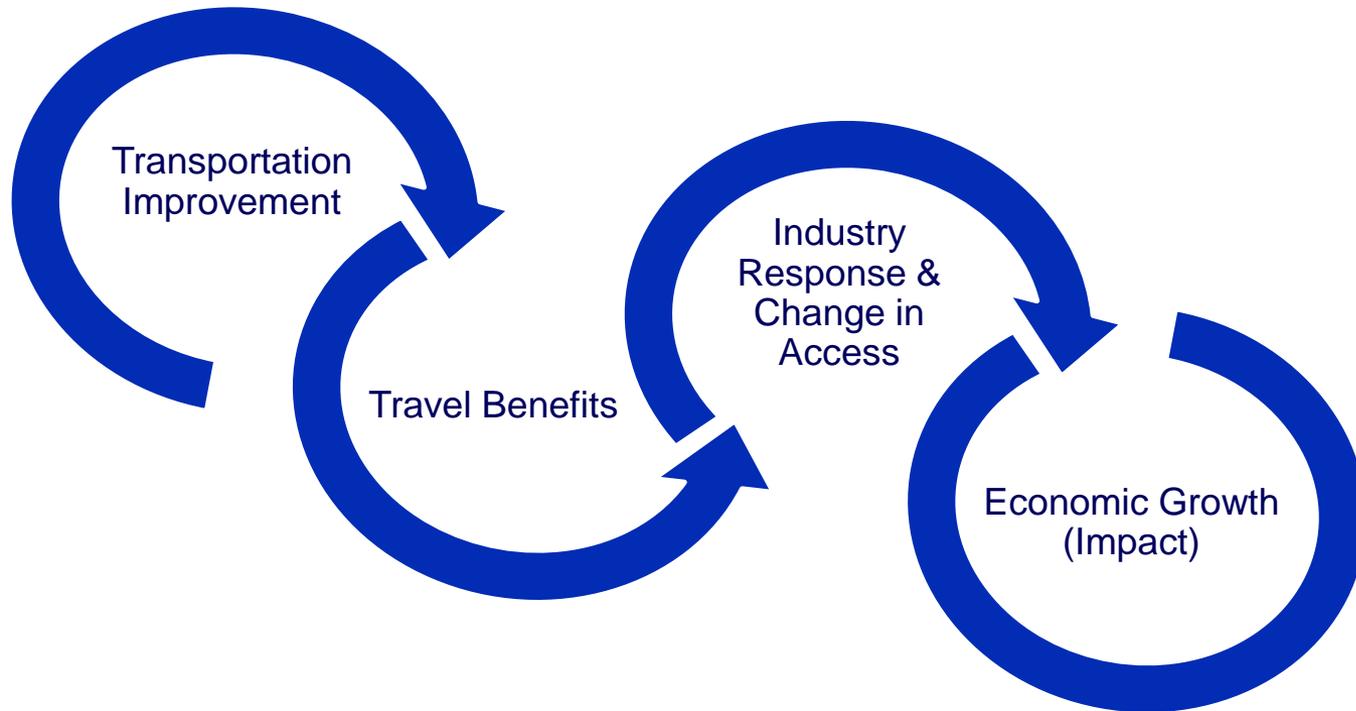
President , Economic Development Research Group

- **37 years experience** on economic assessments of energy, transportation, & economic development programs
- Advised **over 20 state DOT's**
- Former Chair of **Transportation Research Board's (TRB)** 'Committee on Transportation & Economic Development'
- Coauthored:
 - **TRB guide:** Assessing Social-Economic Impacts of Transportation
 - **FHWA guide:** Measuring Economic Impacts of Highways
 - **APTA's guide:** Economic Impacts of Public Transportation

Economic Impact Analysis



Evaluation of changes in economy due to monetary transactions.

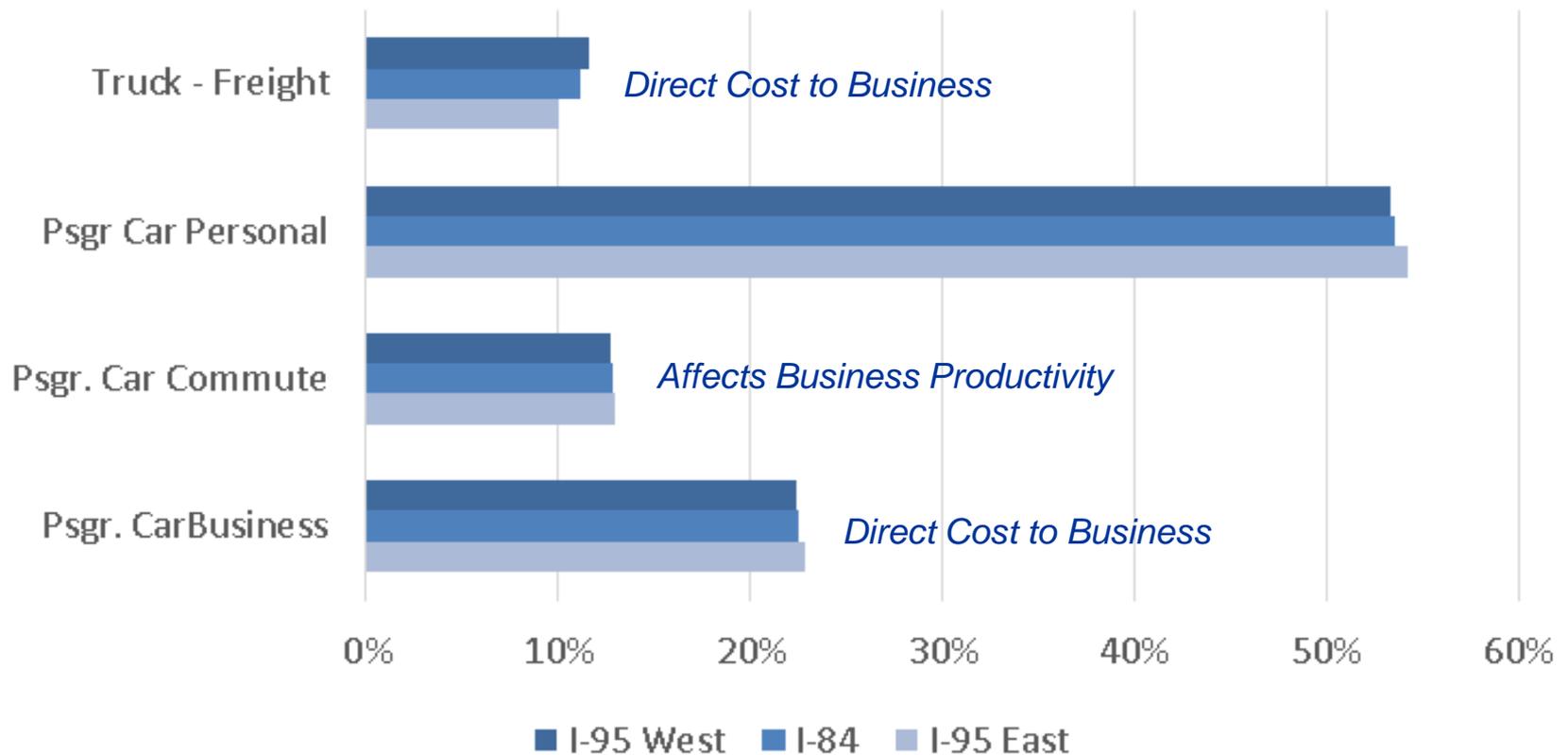


Factors Affecting Economic Impacts & Benefits

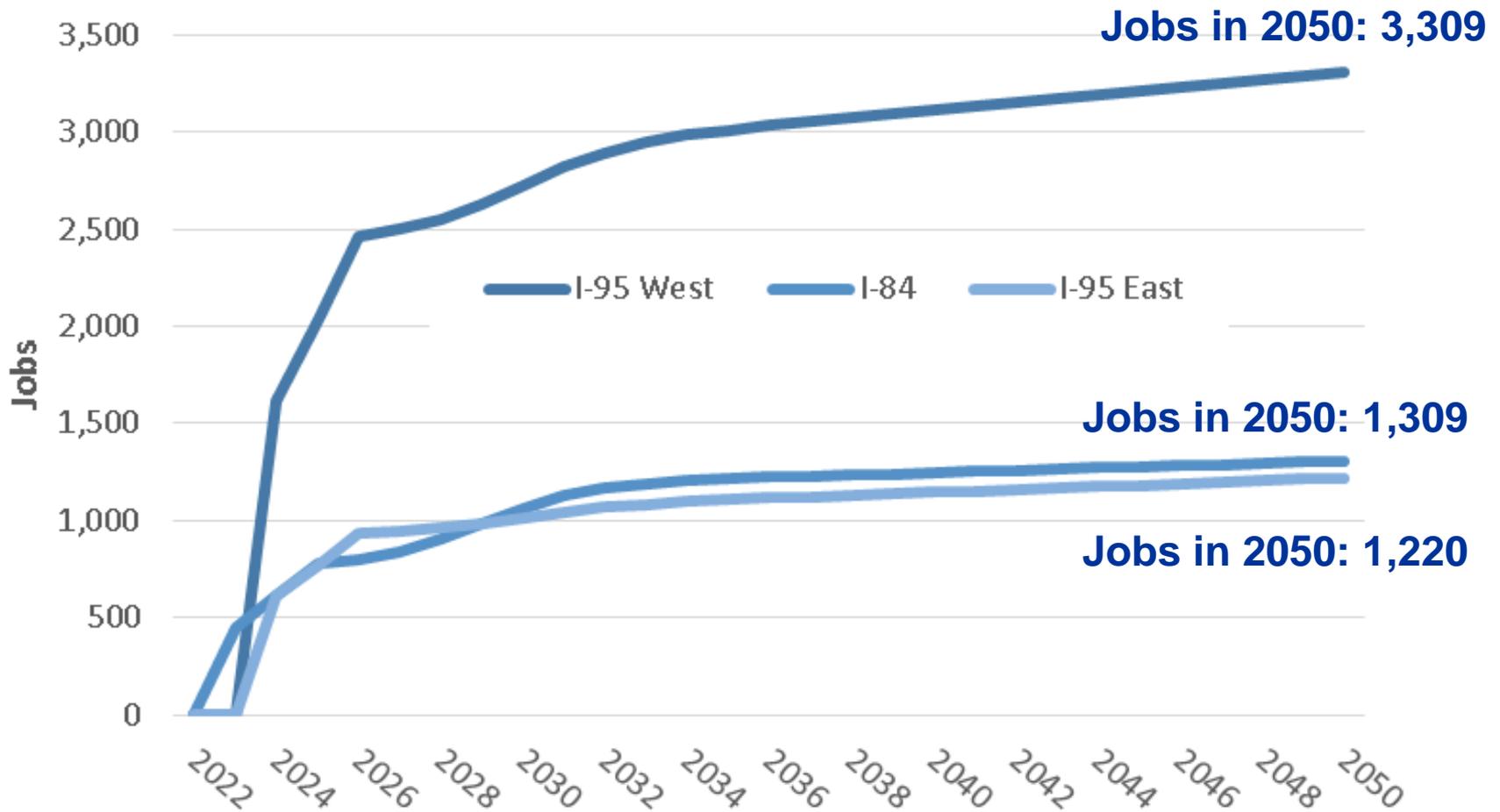
Benefit Categories	Travel Factors
Economic Impact Factors	
Vehicle Operating Costs	VMT, Mix of Vehicle Types, Congestion
Time & Reliability (<i>Business</i>)	VHT, Trip Purpose, Congestion
Logistics Productivity	Truck Fleet Mix, Commodity Mix, Congestion
Market Access	Effective Size of Labor and Delivery markets
Other Societal Benefits	
Personal Time (<i>Not Business</i>)	VHT, Trip Purpose, Congestion
Safety	VMT, Speed, Road Class/Design
Environment	Fleet Mix, VMT, Congestion

Trip Characteristics & Economic Impact

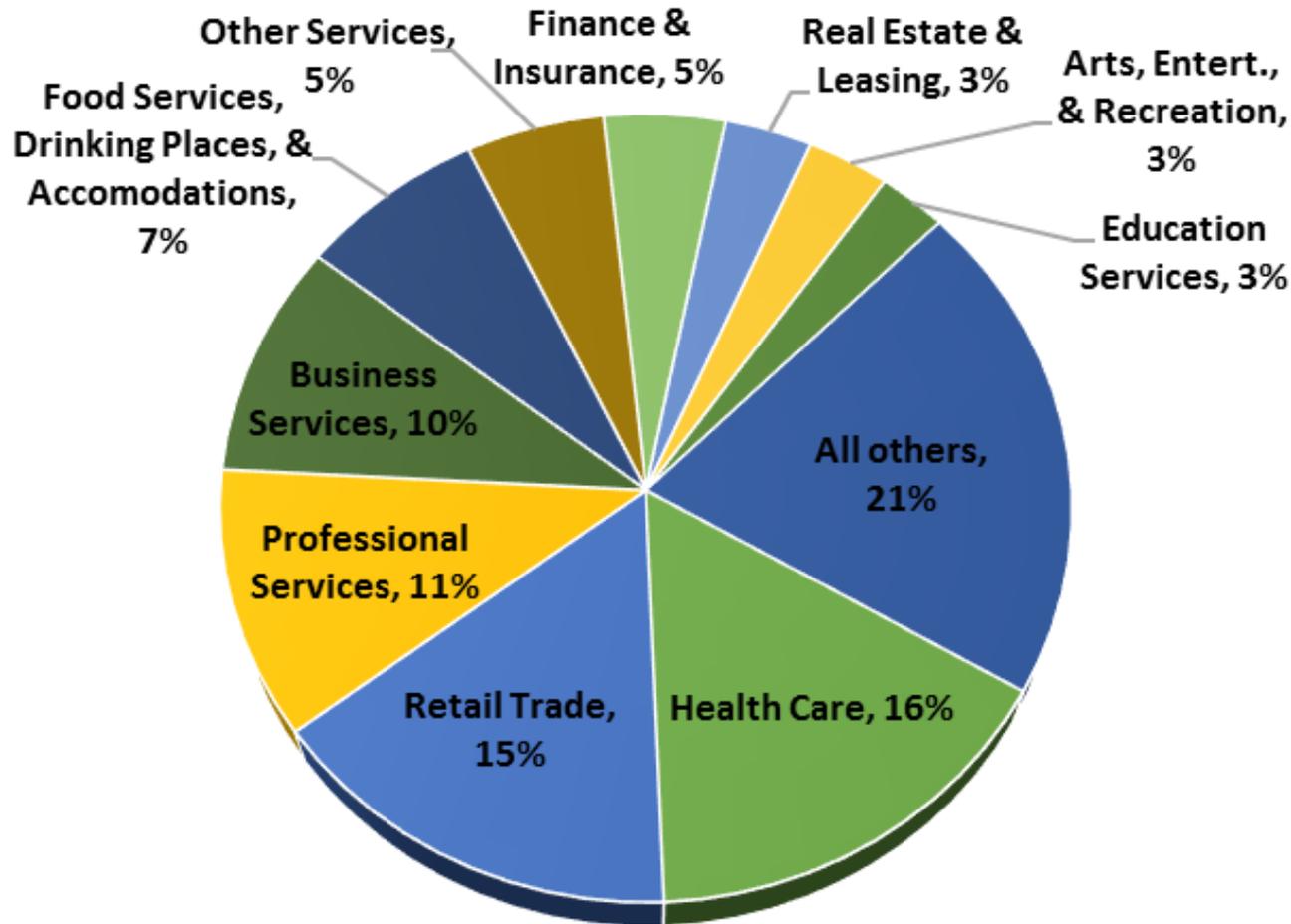
% of Trips by Mode / Purpose



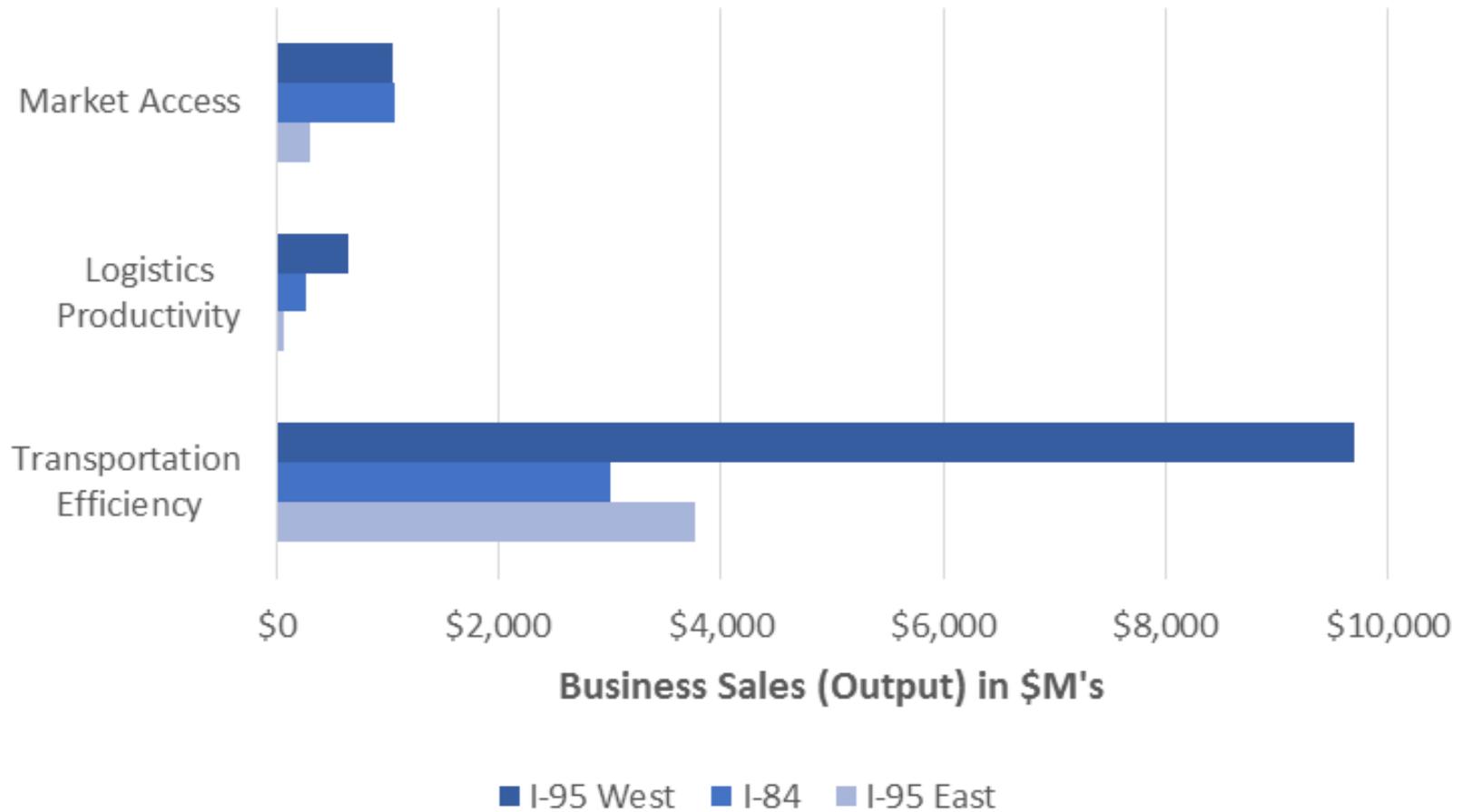
EIA Results: Sustained, Long-term Jobs



Job Impacts Industry Profile: Travel Efficiency (I-95 West, I-84, & I-95 East – All Corridors)



Selected Economic Impacts



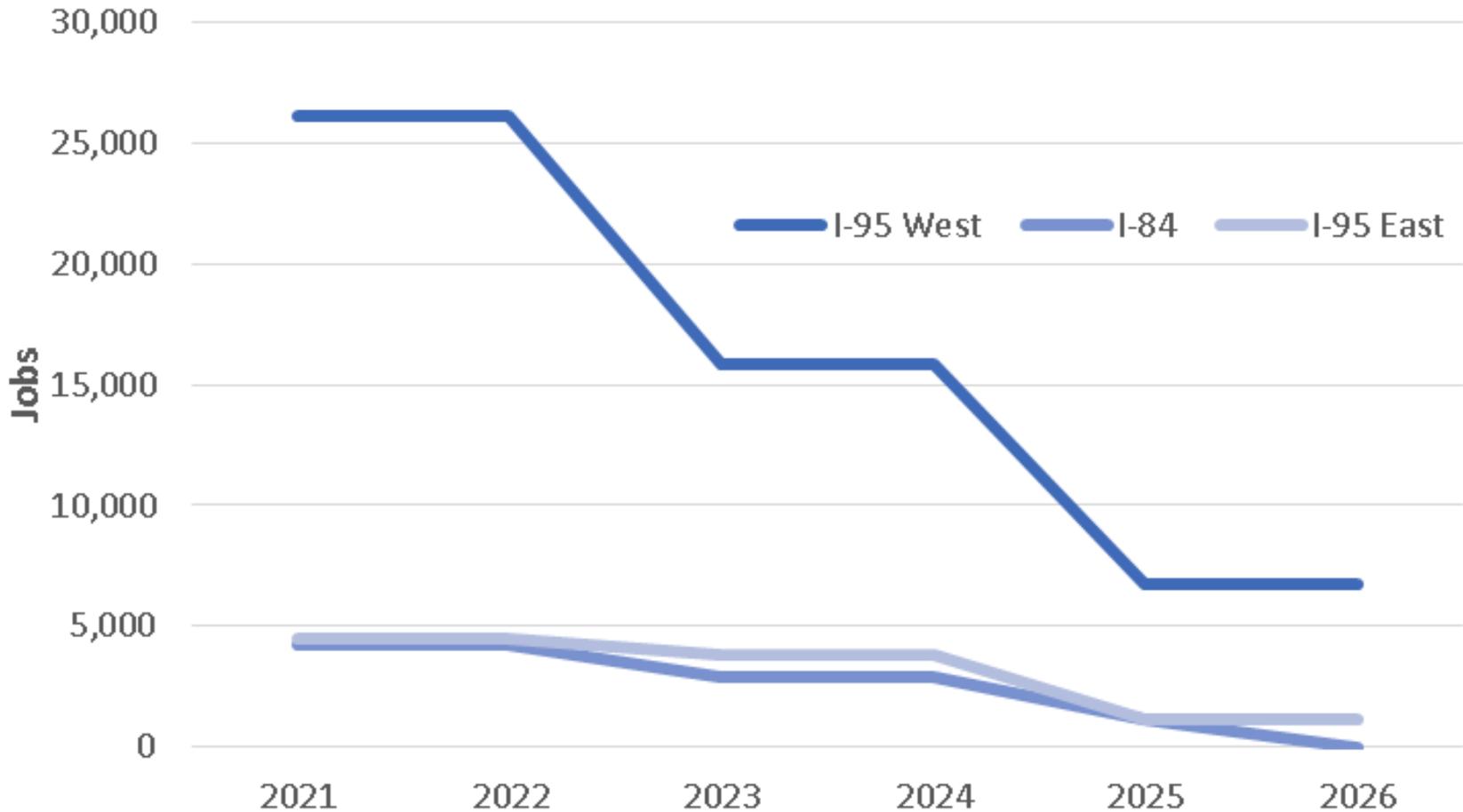
EIA Results

Sustained, Long-term Travel Efficiency & Market Access

Added Business Sales (output)	I-95 West	I-84 West*	I-95 East
Total Long-Term Impact <i>(total of 27 year-cash output stream)</i>	\$11.4 billion	\$4.4 billion	\$4.2 billion

* Not including Mixmaster & Viaduct

EIA Results - Construction Jobs by Year



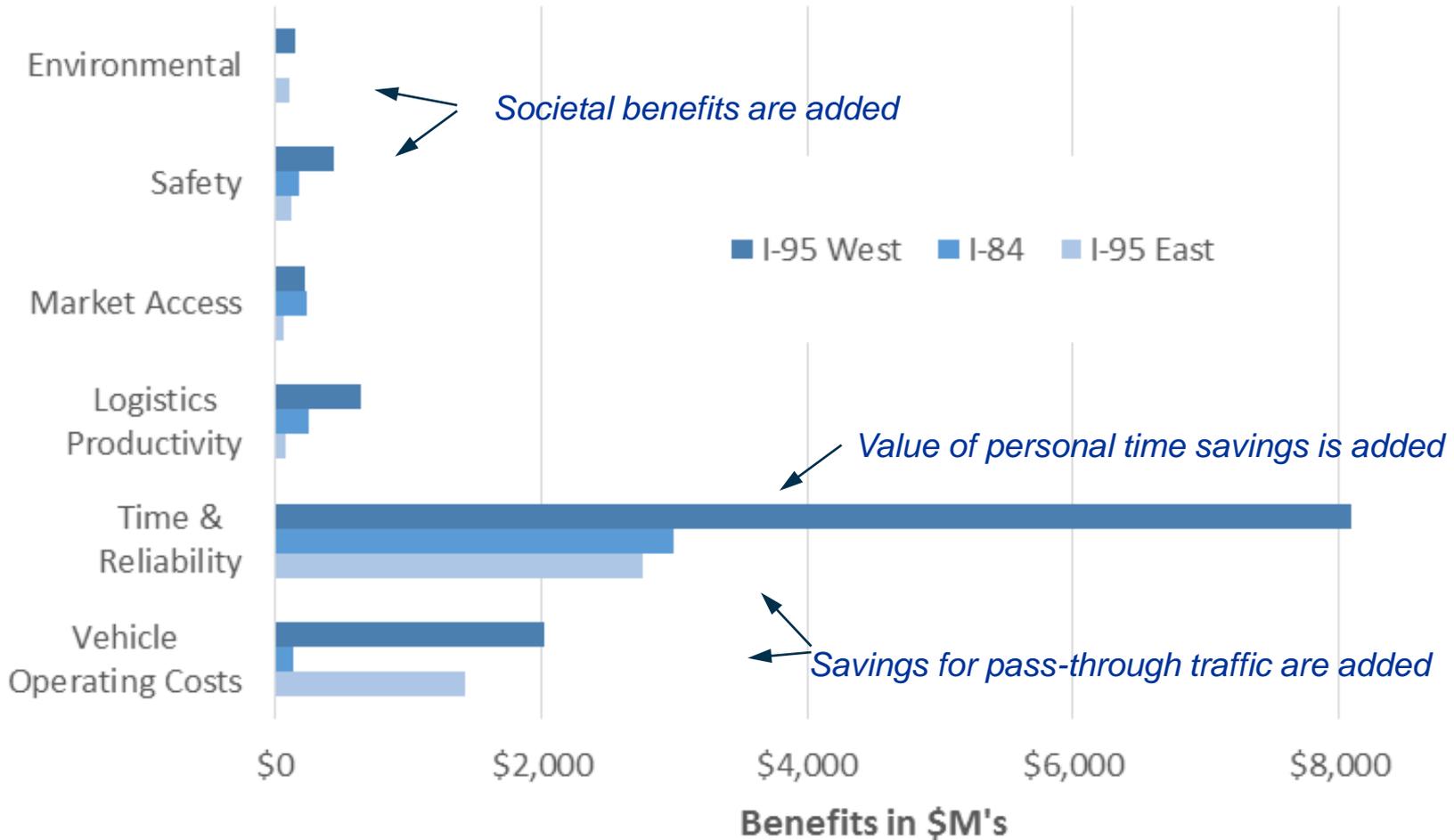
EIA Results - Construction Impacts

Added Business Sales (output)	I-95 West	I-84 West*	I-95 East
Construction Period Impact (2021-2026)	\$13.9 billion	\$2.2 billion	\$2.7 billion

* Not including Mixmaster & Viaduct

Total Societal Benefits

Stream of future benefits is discounted to present value



BCA Results

Comparative Long-term Costs & Benefits

Present Value	I-95 West	I-84 *	I-95 East
Project Benefits (\$ billions)	\$11.6	\$3.8	\$4.5
Project Costs (\$ billions)**	\$7.0	\$1.1	\$1.3
Benefit/Cost Ratio	1.65	3.30	3.42

* Not Including Mixmaster and Viaduct

** Project costs are discounted at a rate of 3% to year(s) of expenditure

Summary

- The three packages of projects address severe congestion along key economic corridors
- Completion of these projects will enable Connecticut to add roughly 5,800 jobs (that would otherwise not occur)
- The impacts will be spread widely across the State's economy
- All three projects have Benefit/Cost ratios well over 1.0, meaning that there is a positive Return on Investment
- The next step is to conduct more analysis of individual highways and transit investments

Summary

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- Completion of these projects will enable Connecticut to add roughly 5,800 jobs (that would otherwise not occur)
- The impacts will be spread widely across the State's economy
- All three projects have Benefit/Cost ratios well over 1.0, meaning that there is a positive Return on Investment
- Represent critical interventions to support the state's economic future
 - they allow CT to remain competitive as a business location site
 - without these projects, the high costs of congestion would drive away a portion of the state's business growth.
 - there would be over 5,000 fewer long term, permanent jobs in CT
- Next step: conduct more analysis of individual highways & transit investments