



Chittenden County I-89 2050 Study

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# Agenda

Project Overview

Corridor Bundle Overview

Approved I-89 Corridor Implementation Plan Next Steps



# Project Overview



### Chittenden County I-89 2050 Study

There is significant uncertainty about where people will live and how they will travel in the future due to the COVID-19 pandemic, technology, demographics, and other dynamics. We recognize that the I-89 Vision, Goals, Objectives and implementation actions that will follow will need to be reassessed periodically to ensure that they address the evolving situation.

#### **Vision Statement**

The 2050 Vision for the I-89 Corridor through Chittenden County is an interstate system (mainline and interchanges) that is safe, resilient, and provides for reliable and efficient movement of people and goods in support of state, regional, and municipal plans and goals.

### Chittenden County I-89 2050 Study

#### Goals

- **Safety:** Enhance safety along the I-89 Study Corridor and areas surrounding adjacent interchanges for all users.
- **Livable, Sustainable and Healthy Communities:** Promote compact, smart growth that supports livable, affordable, vibrant, and healthy communities.
- Mobility & Efficiency: Improve the efficiency and reliability of the I-89 Corridor and Adjacent Interchanges for all users.
- Environmental Stewardship & Resilience: Establish a resilient I-89 Corridor that minimizes environmental impacts associated with the transportation system.
- **Economic Access & Vitality:** Improve economic access and vitality in Chittenden County.
- **System Preservation:** Preserve and improve the condition and performance of the I-89 Corridor.

## Chittenden County I-89 2050 Study Project Overview

Our schedule for successfully moving from project kick-off through stakeholder engagement and technical evaluations to develop a comprehensive, forward-looking plan for the I-89 corridor.



Workshop

Committee

Committe



# Corridor "Bundle"



Overview

## **Developing & Evaluating I-89 Corridor "Bundles"**

1. Corridor Assessment

Identify potential recommendations based on stakeholder input and technical evaluation





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1. Corridor Assessment Identify potential recommendations based on stakeholder input and technical evaluation



#### 2. Bundle Evaluation

Assemble and evaluate "bundles" of multimodal improvements



Five Bundles Identified & Advanced into Implementation Plan 1.2050 Base 2.TDM 3.TDM + Exit 14 DDI 4.TDM + Exit 14 DDI + Exit 12B 5.TDM + Exit 14 DDI + Exit 13 SPDI

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#### Five Bundles Identified & Advanced into Implementation Plan 1.2050 Base 2.TDM 3.TDM + Exit 14 DDI 4.TDM + Exit 14 DDI + Exit 12B 5.TDM + Exit 14 DDI + Exit 13 SPDI

#### 3. Implementation Plan

Develop Implementation Plan with monitoring & project triggers for major capital improvements

Implementation Plan & Final Report



#### Bundle 1 (2050 Base)

- TIP and MTP projects included
- MTP assumed 90% of household growth in existing centers, significant bike/ped, transit investments, increased participation in TDM programs, and electrification of 90% of light vehicle fleet





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#### Bundle 2 (Transportation Demand Management)

- 2050 Base + Additional TDM, Walk, Bike, Transit & Telecommute Measures
- TDM Focus Group identified package of TDM measures
  - Could reduce VMT by up to  ${\sim}20\%$





Selected the low Vehicle Miles Traveled

(VMT) Scenario

- Bundle 1 (2050 Base)
  - TIP and MTP projects included
  - MTP assumed 90% of household growth in existing centers, significant bike/ped, transit, and TDM investment

#### Bundle 2 (Transportation Demand Management)

- 2050 Base + Additional TDM & Telecommute Measures
- TDM Focus Group identified package of TDM measures
  - Up to ~20% reduction in VMT

#### Bundle 3 (Exit 14 Diverging Diamond Interchange)

- Bundle 2 + Exit 14 DDI

#### Exit 14 DDI



- Bundle 1 (2050 Base)
  - TIP and MTP projects included
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#### Bundle 2 (Transportation Demand Management)

- 2050 Base + Additional TDM & Telecommute Measures
- TDM Focus Group identified package of TDM measures
  - Up to ~20% reduction in VMT
- Bundle 3 (Exit 14 Diverging Diamond Interchange)
  Bundle 2 + Exit 14 DDI
- Bundle 4 (Exit 14 DDI + Exit 12B)
  - Bundle 3 + Exit 12B

#### Exit 12B



- Bundle 1 (2050 Base)
  - TIP and MTP projects included
  - MTP assumed 90% of household growth in existing centers, significant bike/ped, transit, and TDM investment

#### Bundle 2 (Transportation Demand Management)

- 2050 Base + Additional TDM & Telecommute Measures
- TDM Focus Group identified package of TDM measures
  - Up to ~20% reduction in VMT
- Bundle 3 (Exit 14 Diverging Diamond Interchange)
  Bundle 2 + Exit 14 DDI
- Bundle 4 (Exit 14 DDI + Exit 12B)
  - Bundle 3 + Exit 12B
- Bundle 5 (Exit 14 DDI + Exit 13 Single Point Diamond Interchange)
  - Bundle 3 + Exit 13 SPDI

### Exit 13 SPDI



#### Comparing Bundles: 2050 PM Peak Hour Volume/Capacity Ratio



### **Bundle Evaluation Observations**

- 1. VMT estimated to increase **28%** from 2020 to 2050 No Build (4.2M > 5.4M)
- 2. TDM, Bike/Ped, and Transit Elements of MTP reduce 2050 VMT by 4%
- 3. Bundle 2 reduces VMT 20% compared to 2050 Base (brings regional VMT down to 2020 levels)
- 4. Bundle 3 VMT ranges by approximately 20% depending on level of TDM reductions achieved

	2050 No Build	2050 Base	Bundle 2	Bundle 3a	Bundle 3b
Metric	TIP Only	MTP (except I-89 placeholders)	TDM + Telework	Bundle 2 + Exit 14 DDI	Exit 14 DDI
Model Wide					
VMT	5,397,421	5,197,692	4,189,124	4,197,730	5,154,464
Fuel Consumption / GHG Emissions	42,167	40,607	32,728	32,795	40,269
Exit 14 Volume					
Total Trips through Exit 14 interchange (vpd)	55,092	51,823	42,258	38,998	47,181
I-89 & I-189 Mainline					
Miles of I-89 with $v/c > 0.9$ PM Peak Hour	1.34	1.34	0	0	1.34
Segment	Exit 14-15	Exit 14-15			Exit 14-15
Miles of I-189 with v/c > 0.9 PM Peak Hour	0.28	0.28	0	0	0.28
Segment	E of Shelburne Rd	E of Shelburne Rd			E of Shelburne Rd
Change in Volume on Arterial Corridors (vpd)					
Williston Road (east of Dorset St)	29,326	25,826	22,334	21,688	24,571
Change vs. 2050 Base			-14%	-16%	-5%
Dorset Street (south of Williston Road)	24,760	20,715	16,978	16,215	19,042
Change vs. 2050 Base			-18%	-22%	-8%
Winooski Main Street Bridge over Winooski River	44,380	38,338	32,288	33,745	38,535
Change vs. 2050 Base			-16%	-12%	1%
Lime Kiln Road	12,374	12,523	10,067	10,268	12,576
Change vs. 2050 Base			-20%	-18%	0%

### **Bundle Evaluation Observations**

- 1. Both Exit 12B and the Exit 13 SPDI reduce volumes through Exit 14 (18% and 27%, respectively) compared with the 2050 Base
- 2. Both Exit 12B and the Exit 13 SPDI reduce volumes along Williston Road and Dorset Street compared with the 2050 Base

	2050 No Build	2050 Base	Bundle 2	Bundle 4a	Bundle 4b	Bundle 5a	Bundle 5b
Metric	TIP Only	MTP (except I-89 placeholders)	TDM + Telework	Bundle 2 + Exit 14 DDI + Exit 12B	Exit 14 DDI + Exit 12B	Bundle 2 + Exit 14 DDI + Exit 13 SPDI	Exit 14 DDI + Exit 13 SPDI
Model Wide							
VMT	5,397,421	5,197,692	4,189,124	4,203,166	5,169,913	4,187,948	5,158,763
Fuel Consumption / GHG Emissions	42,167	40,607	32,728	32,837	40,390	32 718	40,303
Exit 14 Volume							
Total Trips through Exit 14 interchange (vpd)	55,092	51,823	42,258	35,331	42,619	31,252	38,069
I-89 & I-189 Mainline							
Miles of I-89 with $v/c > 0.9$ PM Peak Hour	1.34	1.34	0	0	1.34	0	1.34
Segment	Exit 14-15	Exit 14-15			Exit 14-15		Exit 14-15
Miles of I-189 with $v/c > 0.9$ PM Peak Hour	0.28	0.28	0	0	0.28	0	0
Segment	E of Shelburne Rd	E of Shelburne Rd			E of Shelburne Rd		
Change in Volume on Arterial Corridors (vpd)						2	
Williston Road (east of Dorset St)	29,326	25,826	22,334	17,752	20,445	19,491	22,624
Change vs. 2050 Base			-14%	-31%	-21%	-25%	-12%
Dorset Street (south of Williston Road)	24,760	20,715	16,978	14,634	17,286	12,213	14,301
Change vs. 2050 Base			-18%	-29%	-17%	-41%	-31%
Winooski Main Street Bridge over Winooski River	44,380	38,338	32,288	33,057	37,985	32,681	37,716
Change vs. 2050 Base			-16%	-14%	-1%	-15%	-2%
Lime Kiln Road	12,374	12,523	10,067	9,603	11,778	9,801	12,034
Change vs. 2050 Base			-20%	-23%	-6%	-22%	-4%

# I-89 Implementation Plan



# **Approved Motion**

*The I-89 Advisory Committee (May 18th) unanimously approved the Corridor Implementation Plan to Guide Investments along I-89 in Chittenden County through 2050.* 



### **Approved Implementation Plan**

				Implementing	Implementing	
	Recommendation	Description	Cost Estimate	Agency	Partners	Next Steps
SHOR	T-TERM (1-5 YEARS)					
S.1	Form an I-89 Corridor Monitoring Committee to meet regularly to monitor the Implementation Plan	The I-89 Corridor Monitoring Committee will meet regularly (possibly annually) with VTrans and the CCRPC to review the status of the Implementation Plan including updated metrics, considerations, TDM implementation, etc.	N/A	CCRPC	N/A	Schedule first committee meeting in late Spring/early Summer 2023.
S.2	Develop a Plan and initiate implementation of the Transportation Demand Management (TDM) Measures	Develop a plan to advance identified TDM measures to maximize VMT reduction. These measures could include: Increase telework share by 50%; 90% of households in Existing Developed Areas; Double walking & biking trips; Triple transit service; Increase employer-sponsored TDM participation; Reduce supply of residential parking and increase cost of paid parking; Implement a mileage-based fee. Work with partners to begin implementation of measures identified in the TDM Plan.	\$250,000	CCRPC	CATMA, Municipalities, GMT, Local Motion, and Other Partners	Program TDM Plan in the FY24 UPWP (starting July 1, 2023). Develop the plan and work with partners to start implementing the TDM measures.
S.3	Conduct Exit 14 Supplemental Scoping Study	Conduct Supplemental Scoping Study to identify a preferred alternative for Exit 14 that enhances overall safety and operations for all users.	\$100,000	CCRPC/VTrans	City of South Burlington	Program Supplemental Scoping Study in FY24 UPWP (starting July 1, 2023).

#### MEDIUM TERM (6-15 YEARS)

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LONG TERM (15+ YEARS)







- TAC Meeting | Today
- Final Report | Summer 2022

