Ohio Transportation Engineering Conference

Rebuilding a Better I-84 in Hartford, Connecticut

October 26, 2016
Project Overview
Where is the I-84 Hartford Project?
Where is the I-84 Hartford Project?
I-84 Highway Crosses Rail Twice
Project Background

- Rail line built in 1830s
- Proposed East-West Expressway in 1940s
- I-84 constructed in 1960s
  - Designed to avoid rail
  - Built prior to NEPA
  - Planned to carry 55,000 vehicles per day by 1975
“The impact of the I-84 freeway upon the physical environments into which it was introduced has been both dramatic and overwhelming.”

- CTDOT & FHWA, 1970
Why is it Needed?

- Bridge structural deficiencies
- Operational and safety deficiencies
- Mobility deficiencies
Goals and Objectives

- Reduce footprint of interstate
- Repair physical and visual divide
- Create aesthetically pleasing spaces
- Increase opportunities for development and open space
- Support City’s urban design goals and multi-modal interconnectivity
Project Schedule

I-84 Hartford Project

2013
2015
2017
2019
2021
2023
2027

Needs & Deficiencies
- Data Collection
- Analysis & Reporting

Environmental Phase
- Alternatives Development
- NEPA Documentation / Record of Decision

Final Design

Completed

Dates are approximate and will be updated as the project progresses.
Alternatives Overview
Mainline Alternatives

- Alternative 1: No Build
- Alternative 2 (Elevated Highway)
- Alternative 3 (Lowered Highway)
- Alternative 4 (Tunneled Highway)
Alternative 4: Tunneled Highway
Preliminary Traffic Analyses

- Perform I-84 mainline analysis
- Analyze city streets and intersections
Mainline Traffic Goals

- Remove left-hand on- and off-ramps
- Enhance lane continuity – 3 lanes
- Reduce number of ramps and improve spacing
Various Ramp Options

10 WESTERN OPTIONS

Trumbull & High Street Interchanges Closed

15 EASTERN OPTIONS
City Street Design Goals (Complete Streets)

- Add redundancy to network
- Reduce detrimental impact of ramps
  - Spread out
  - Keep to one side of street
- Minimize intersection size
- Signals with full pedestrian phasing
Screened over 150 Alternatives

- Some lowered highway options perform well
  - Relocated railroad creates interchange opportunities
  - New roadways create redundancy in network
  - Better opportunities to connect neighborhoods
Existing Conditions

Legend

- Good Traffic Operations
- Fair Traffic Operations
- Poor Traffic Operations
- Total Number of Lanes

Mainline Operations

- Free-Flow Speed
- Moderate Congestion
- Significant Congestion
Lowered Highway

Legend

- Green Circle: Free-Flow Speed
- Orange Circle: Moderate Congestion
- Red Circle: Significant Congestion

- #: Good Traffic Operations
- ★: Fair Traffic Operations
- #: Poor Traffic Operations
- Total Number of Lanes
- New Structure
- New Pavement

Mainline Operations
Improved Local Road Connections

Subject to change based upon ongoing analysis and design.
Meeting Design Goals

New connections to add redundancy
Meeting Design Goals

Reduce detrimental impact of ramps

Ramps occupy one side of street

Spread Out
More Than Just a Highway Project

- Improved local road connections
- On-street bicycle lanes
- Pedestrian-friendly streets
- Multi-use trail / linear park
- CT *rail* Hartford Line, rail station, and CT *fastrak*
- Creating opportunities for development
Transit Modifications

- Relocated Railroad and New Train Station
- Busway Crosses Below I-84
East Coast Greenway
Overlay within I-84 Corridor

“A continuous, traffic-free route, serving users of all abilities and ages....”
East Coast Greenway

Experience on the Path
On-Street Bicycle Network
Mobility: Complete Streets

- Streets designed and operated to enable safe and comfortable access for all users
  - Pedestrians and cyclists
  - Provide for parking and transit
  - Accommodate all ages and abilities
Complete Streets

- Far-side bus stops
- Buffered Bike Lanes on high volume roadways
Complete Streets

- Bike Lanes
- Parking

On-Street Bike Lanes
On-Street Parking

Capitol Avenue
Flower Street
Urban Design Goals

- Strengthen character / function of districts on both sides of highway
- Reconnect neighborhoods across the highway
- Integrate highway access points into urban fabric
- Promote TOD around Union Station
- Implement Complete Streets
Asylum / Broad / Bushnell Park

Existing Conditions
Asylum / Broad / Bushnell Park

Potential Development

- Multi-Use Greenway
- New rail annex
- New I-84 off/on ramps
- Parklet on cap west of Broad
- New I-84 off/on ramps
- New boulevard along Bushnell Park
- Rail viaduct removed
- Potential development
I-84 between Park and Sigourney

Enhanced Improvements
### Potential Land Areas for Transit, TOD, Parking, Public Space

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<tr>
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<tr>
<td>POTENTIAL DEVELOPMENTS</td>
<td>18 AC</td>
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All pink

Pink

Dash pink

Yellow
I-84 between Broad and Asylum

Existing view on Asylum Street

- I-84 elevated
- Auto-oriented zone discourages walking/biking
- Unattractive pedestrian environment
- No dedicated bike lanes
I-84 between Broad and Asylum

Potential View on Asylum Street

- Wide sidewalks and landscape
- TOD along street with active ground floor uses
- Traffic calming with removal of I-84 on/off ramps to Asylum
- Dedicated bike lanes both directions
Laurel Street Looking South

Existing

- View of elevated I-84 viaduct
- Limited sidewalk space/no bike lanes
Laurel Street Looking South

Potential

- Screening wall to hide lowered highway
- Multi-use greenway on expanded deck
- Dedicated Laurel Street bike lanes
View from Flower Street towards I-84

Existing Conditions
View from Flower Street towards I-84

Lowered Highway Alternative
View from Flower Street towards I-84

With elevated greenway and barrier wall
View from Flower Street towards I-84
*With Greenway, Barrier Wall, Landscape, and Ramp*

- Aetna
- Ramp to greenway
- Elevated greenway, screening wall, and landscape
Public Outreach Methods

- Public meetings & advisory committee
- Open planning studios
- Stakeholder meetings and presentations
- ‘Pop ups’
- Public schools & churches
- Churches
- Newsletters
- Social Media
Website i84hartford.com

- View the alternatives via 3-Dimensional Model
- Interactive Alternatives Webpage
- Provide feedback, ask questions
Thank You!