

I-84 Congestion Relief Forum



Can
*congestion
pricing*
help manage
congestion on a
rebuilt I-84
& help finance it?

**CDM
Smith**[®]

CT Congestion Relief Study

<http://www.ct-congestion-relief.com>



DOT conducting studies of CT's 2 most congested corridors:

- I-95 corridor from NY to New Haven
- I-84 in Hartford Metropolitan Area

Both studies:

- Funded with special federal grants
 - Value Pricing Pilot Program
- Will focus on providing **travel options** to help achieve congestion relief
- Will evaluate **electronic tolling & pricing**
 - As 'one' component of a broader strategy to reduce congestion

CT Congestion Relief Forums



Purpose: to learn what congestion relief & congestion pricing methods have worked in other states

Invited panelists from other states

- have experience with successful practices in other states

Opportunity: learn from others

- Hear about methods used elsewhere & lessons learned by other communities
- Ask questions about what might work in Connecticut

CT Congestion Relief Forums: Format

Three-hour forums tailored to each study area

- I-95 forum (NY- New Haven corridor)
- I-84 forum (Hartford area)

Agenda

Overview: problem & study

Panel 1: out-of-state professionals & community leaders

Panel 2: local panelists

- bring local perspectives to the discussion

Open session: questions from the audience

What is electronic tolling?

vastly different from the old manned toll booths used in the past



Tolling in CT circa 1980

Toll booths created traffic problems

- Congestion
- Accidents
- Air quality problems

New Electronic Methods do not create traffic problems



Electronic sensors mounted overhead on special gantries

- EZ Pass readers
- Cameras for video tolling
 - for drivers without EZ Pass



- no booths
- no stopping
- no need to slow down
 - no traffic delays
 - no safety problems

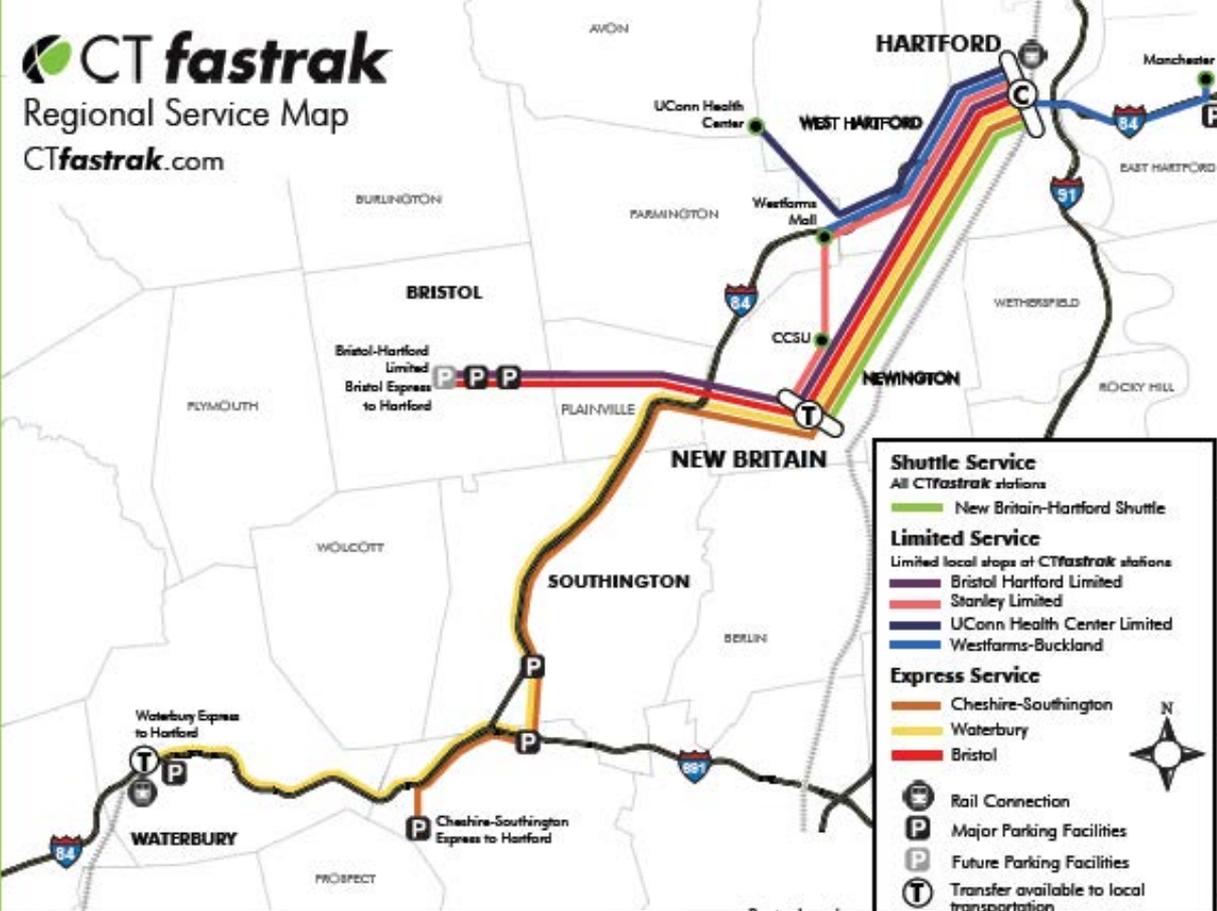
Congestion Pricing is a congestion relief method that works by managing demand during peak traffic periods

Congestion pricing uses **higher toll rates** during peak periods to encourage drivers to:

- shift to ***less congested times***
- shift to ***less congested routes***
- shift to ***transit***
- shift to ***other lanes***
 - key factor for ***express toll lanes***



Congestion pricing can provide ***sustainable relief*** by managing peak use even as demand grows demand

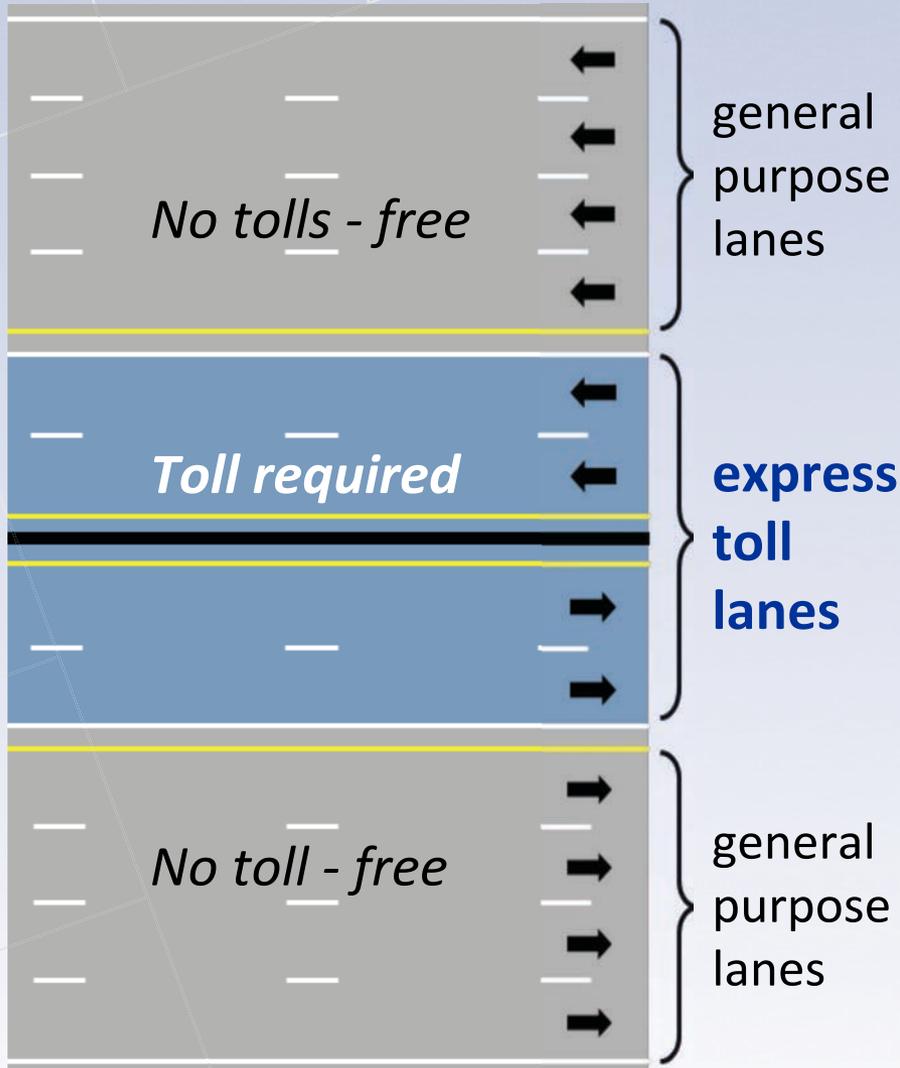


Shift to transit
 Transit options will
 be improved
 with opening of
CTfastrak in 2015



Shift to other lanes:

'Express Toll' or 'Managed' Lanes: *form of congestion pricing*



Most popular tolling method for new projects

Gives drivers a **choice**

- pay a toll & bypass congestion
- most drivers value having a choice
 - across all income levels

Congestion relief

- **proven & effective** tool for congestion management

Existing and Planned Managed Lanes



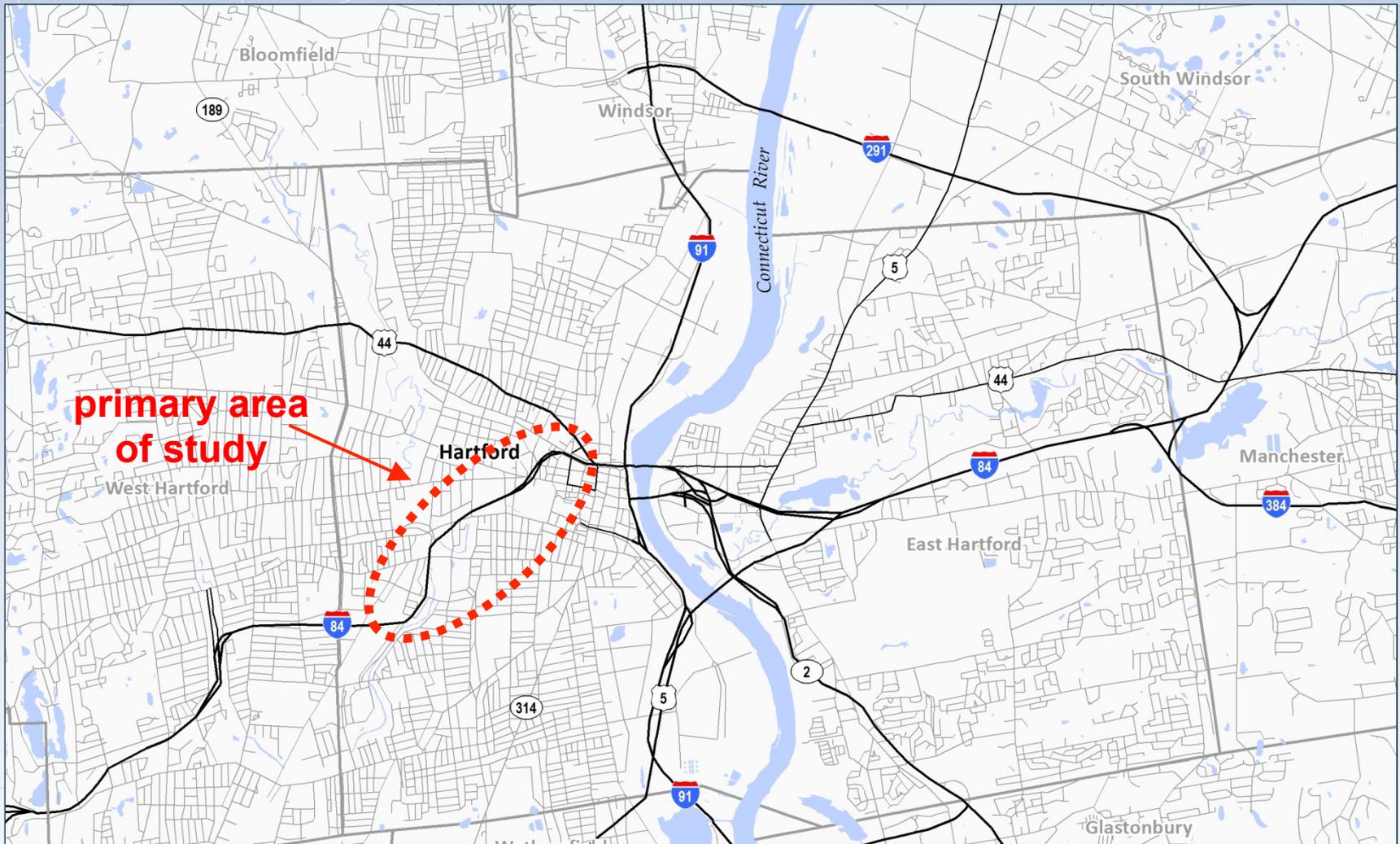
Miami: successful & effective express lane project (*Debora Rivera & Mayor Gilbert*)



Overview of I-84

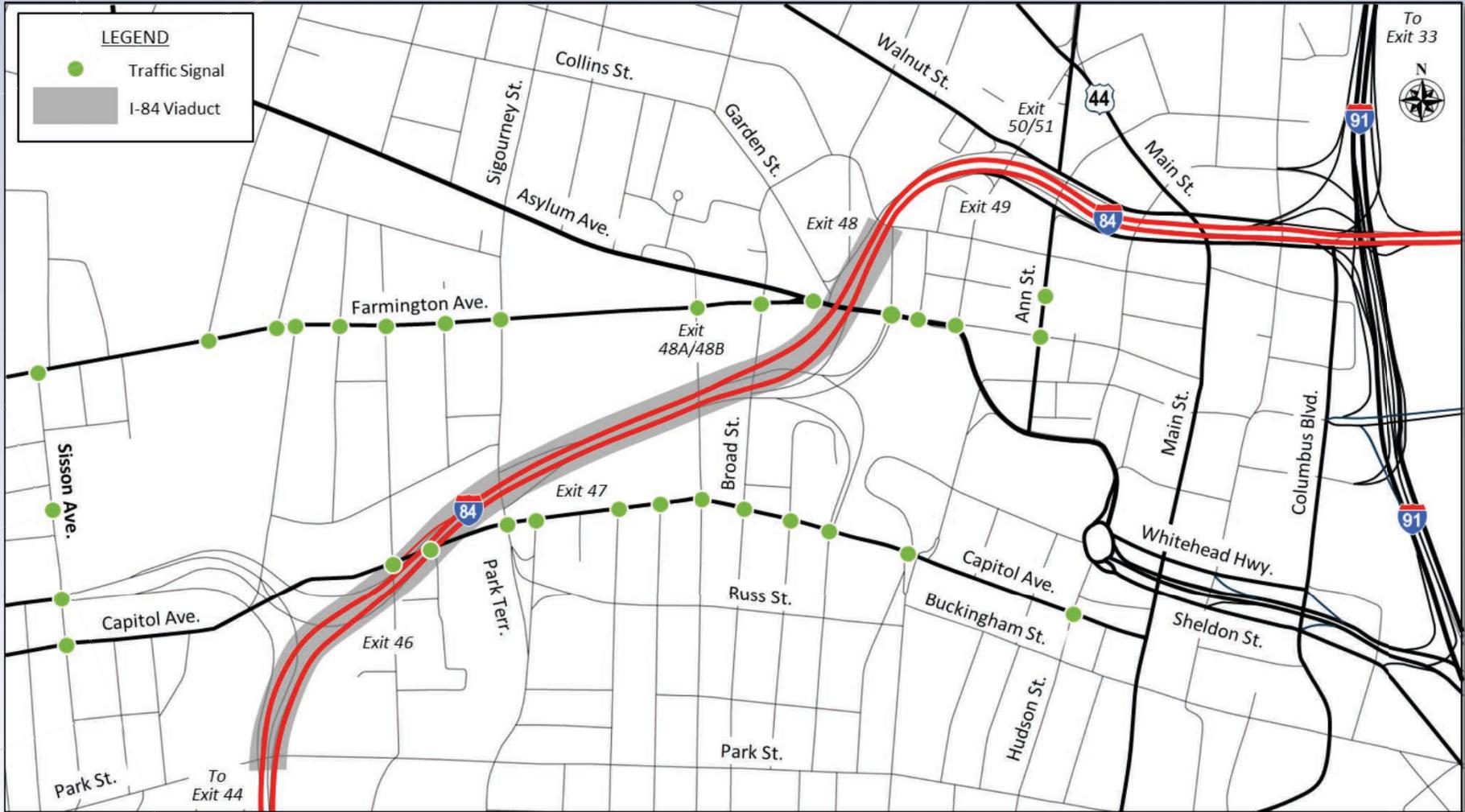
- problems
 - aging I-84 viaduct (very costly to replace)
 - congestion & safety
- **opportunity:** replacement can reshape Hartford

I-84 is part of regional network



I-84 Viaduct:

$\frac{3}{4}$ -mile long, 50 years old, heavily congested



Hartford's Aging Viaduct

- built in 1965 it is 50 years old
- expensive to maintain & repair

Impacts of 1960's design on city were extensive & adverse



- consumed large amount of land
- divided neighborhoods, business districts, parks
- it affected quality of life & economic development



Connecticut's *busiest* freeway

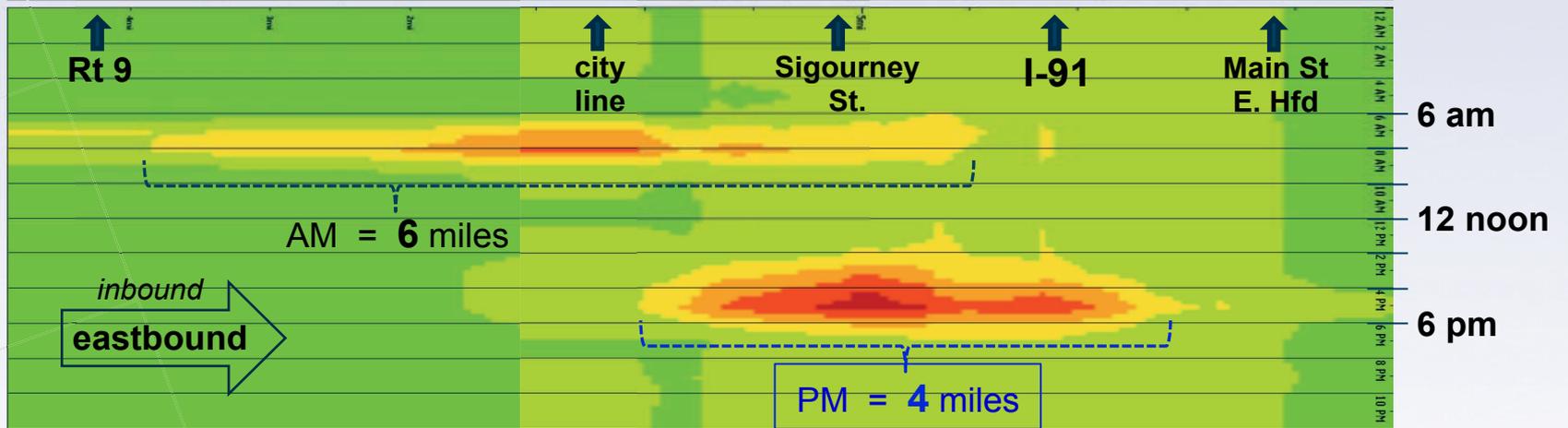
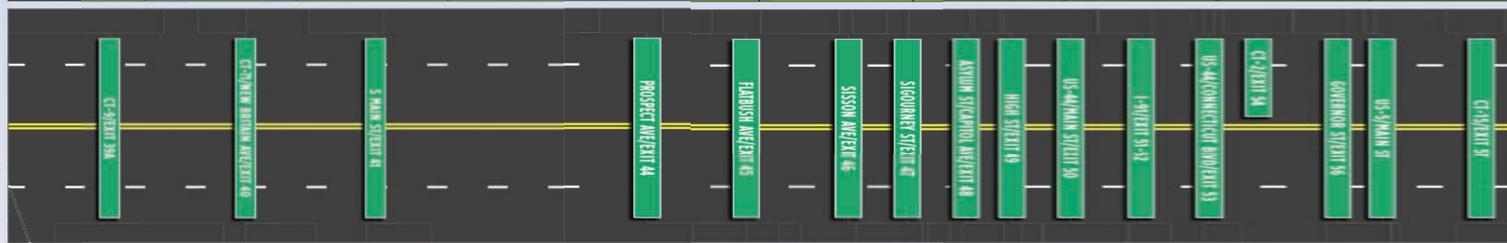
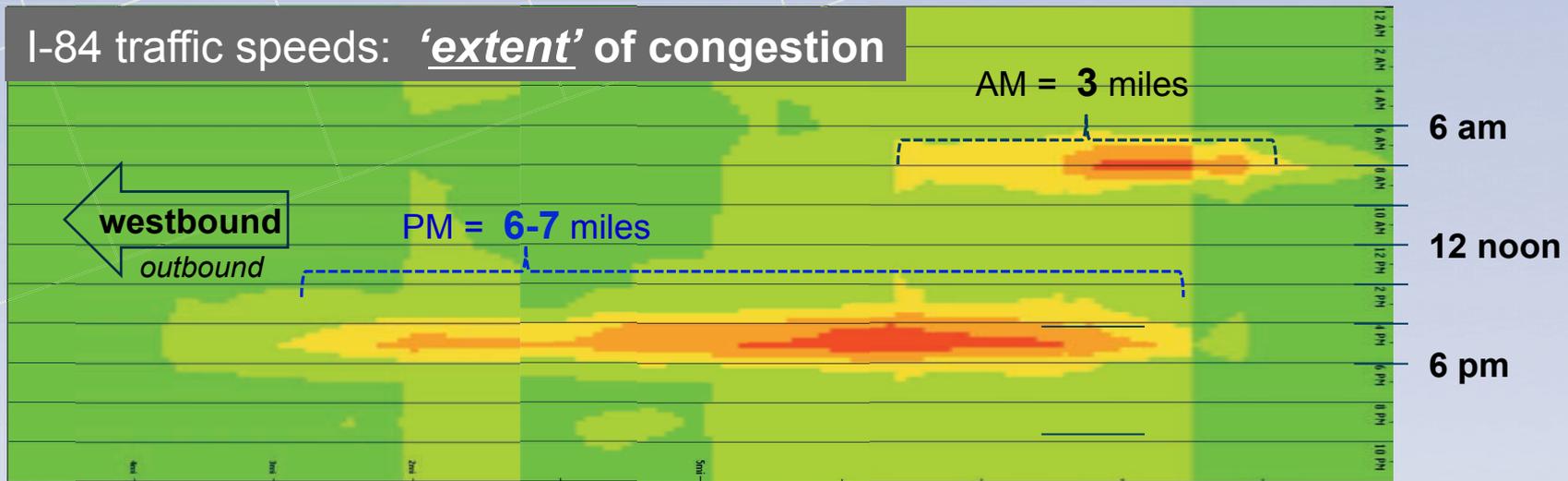
175,000 = daily traffic volume (higher than I-95)

6-7 mile traffic jams

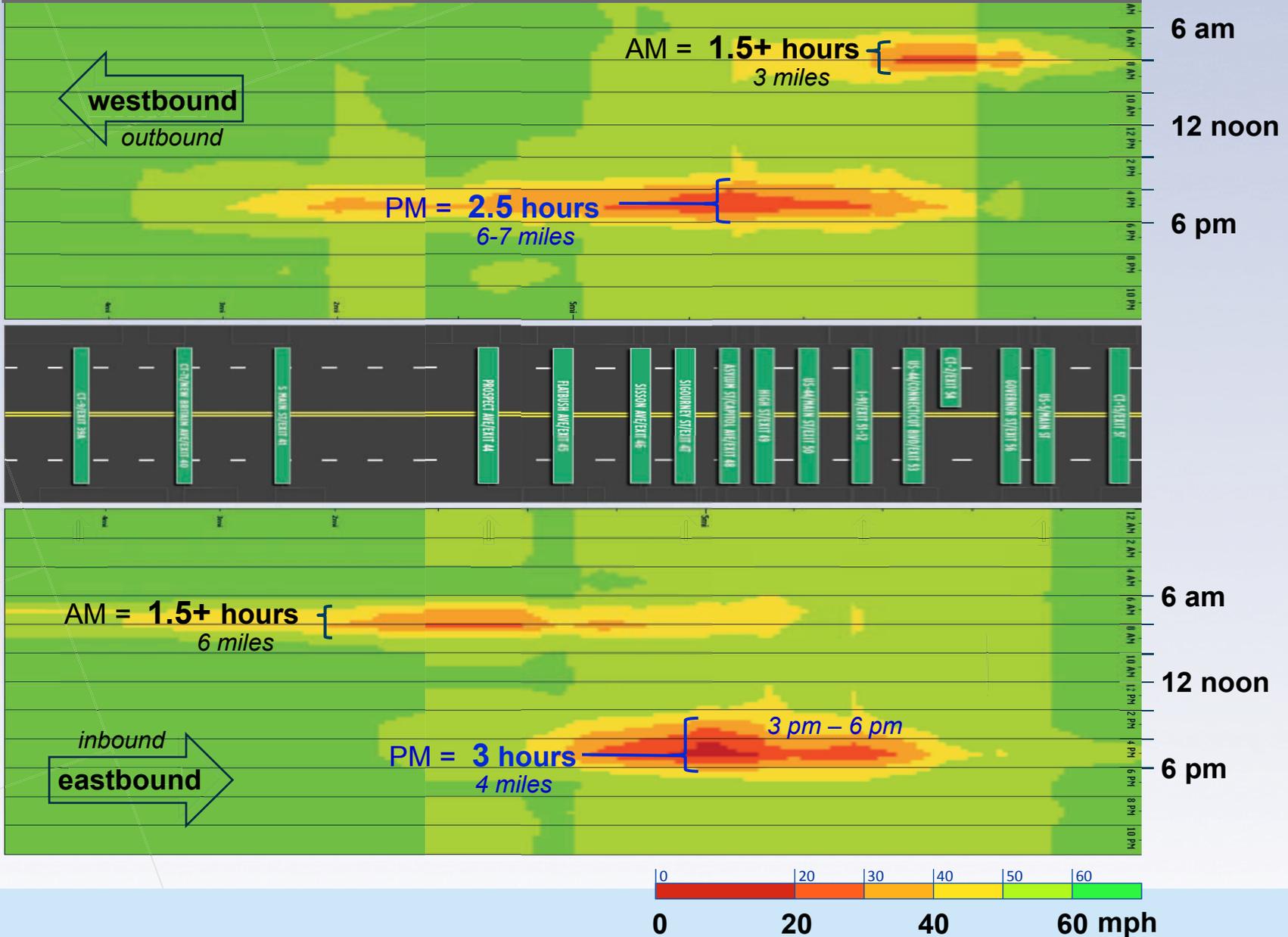
- Most congested of Hartford freeways (*nearly 50% of region's congestion*)
- Less congestion than I-95, but still a problem



I-84 traffic speeds: 'extent' of congestion



I-84 Traffic Speeds: duration of congestion





Opportunity to correct mistakes of 1960s

DOT determined that replacement is needed.

Study suggests less intrusive design options

- Below or at-grade design
- Smaller footprint of highway
- Being evaluated as part of alternatives analysis & environmental study



Challenge:

How to reduce footprint & not make congestion worse

- Project goal: **undo damage** from 1965 design & **shrink footprint**

Can we reduce congestion without widening?

- Better design & operational improvements will help

Can congestion pricing help 'manage' congestion?

- Yes, worked in other states
- **Sustainable capacity**
Pricing protects investment by managing growth of peak traffic



Challenge:

How to pay for replacement: *\$3-5 Billion*

Difficult in current fiscal environment

- Federal funding uncertain, but shrinking
- Gas tax is ***not sustainable*** as cars become more fuel efficient

Can congestion pricing help finance part of project?

Can congestion pricing help finance part of project?

I-84 Viaduct Project must prepare a financial plan

Financial plan - a critical task for advancing any viaduct replacement project

- FHWA requires mega-projects to demonstrate financial feasibility
- Projects cannot proceed without this
 - Financial Plan will evaluate traditional state & federal funding
 - but also include findings from pricing study
 - Pricing study will supplement the financial plan analysis
 - test viability of tolling & pricing option

Scope of Pricing Study:

Study allows full evaluation of pricing & tolling methods

- new electronic technologies & new pricing methods
- Combining *pricing* with *design* options to minimize local impacts

Wide range of options will be explored:

- tolling all lanes on *I-84*
- tolling only *express toll lanes*
- toll rates & *pricing discount options*
- highway *design options* such as *collector-distributor roads*
 - C-D roads separate local traffic from through traffic
 - Local traffic not subject to tolls
 - Improves highway operations by removing merging/weaving/short trips
- conversion of existing HOV lanes to *HOT lanes*



Can congestion pricing be used on existing I-84 and I-91 HOV Lanes?



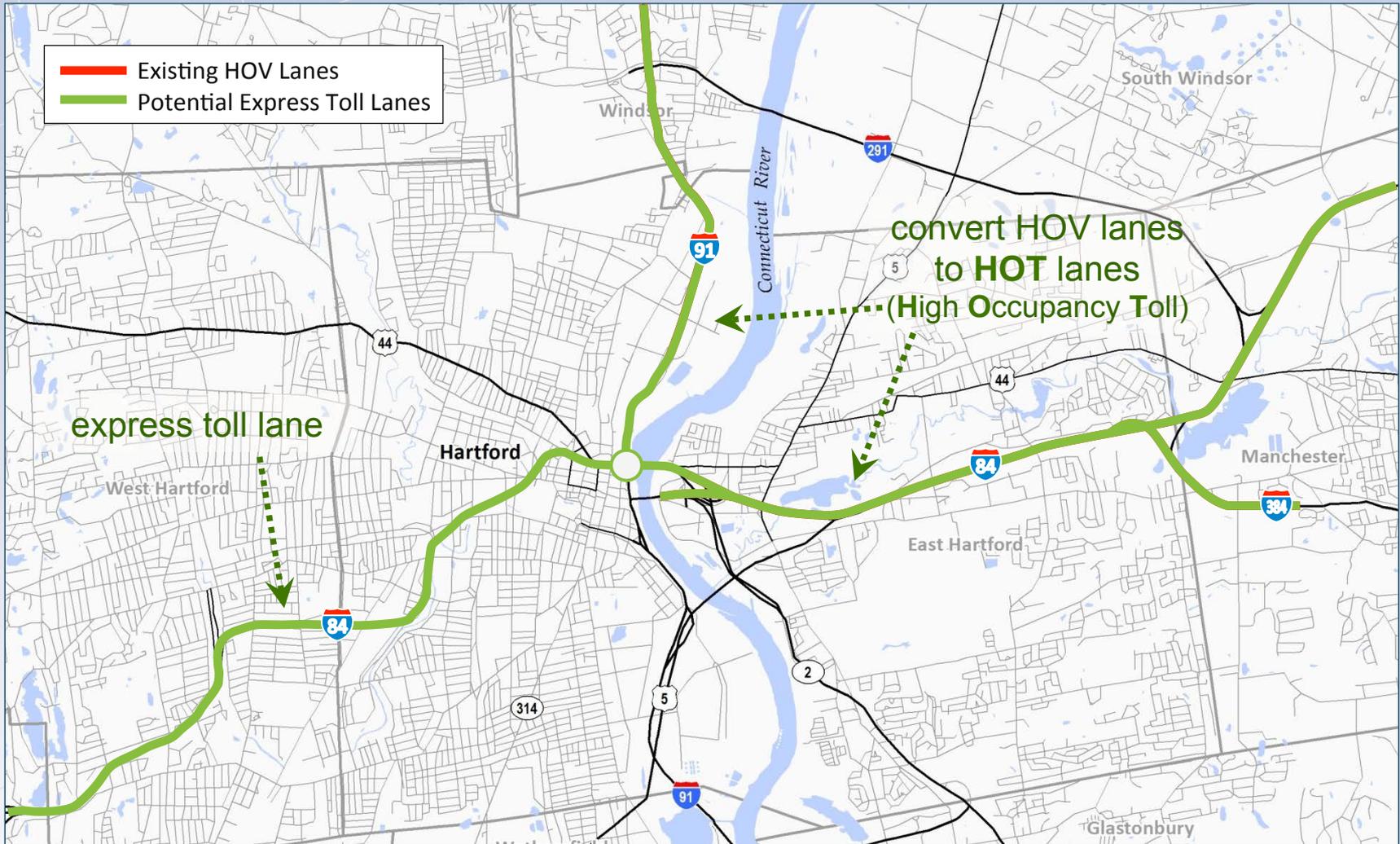


I-84 & I-91 HOV lanes

- Configured perfectly for “easy” conversion
 - physically separated from general purpose lanes
 - separate access/egress points
 - all traffic passes through common location (*single tolling location*)
- Excess capacity in HOV lanes
 - about 600 to 700 vehicles during peak hour

Goal of conversion:
reduce congestion

Regional network of HOT lanes to be explored



Concluding remarks

- Congestion pricing provides **'sustainable' relief** by managing peak use even as demand grows demand
- Pricing study will be closely coordinated with I-84 viaduct project
- It will assess whether pricing can help manage congestion in Hartford area
 - **I-84 viaduct replacement**
 - **Conversion of two existing HOV lanes**
- Will be completed in early 2015