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# Fast and Furious – Rebuilding and Widening the I-90 West Corridor

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February 23, 2016

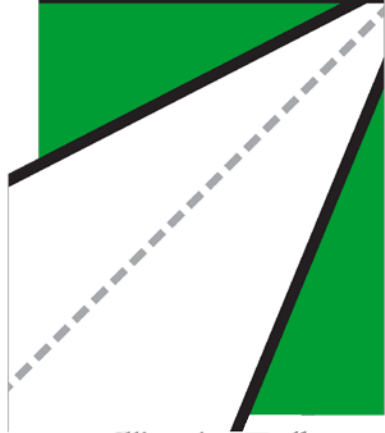
# Agenda

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- **Project overview**
- **New initiatives**
- **Construction schedule**



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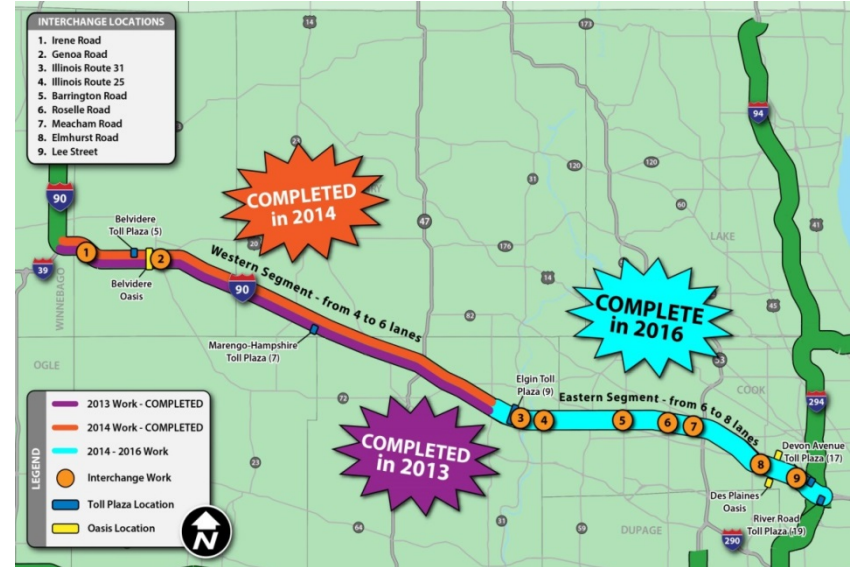
## **Project Overview**

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# Jane Addams Memorial Tollway (I-90)

*Rebuilding and widening I-90 as a 21st century, state-of-the-art corridor linking Rockford to O'Hare International Airport*

- 62 miles of roadway improvements
- \$2.5 billion budget includes funds to integrate transit in the corridor today, as well as future transit options



# Why Reconstruct?



# Emergency Repairs



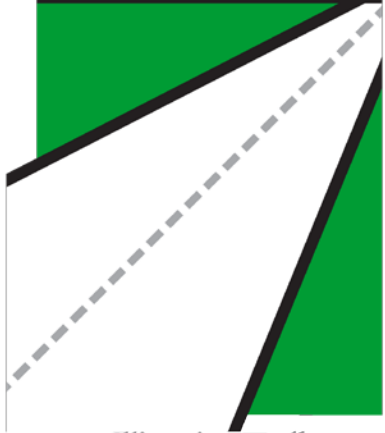
# Established I-90 Corridor Planning Council

- Board approves Move Illinois Program August 2011
- Report to address opportunities and improve I-90 corridor
- Developed guiding principles

## Guiding Principles

1. Improve the performance of the Interstate 90 corridor to support the economic vitality across northern Illinois, thereby enhancing passenger, commuter, and freight mobility for the corridor.
2. Require cooperative planning among agencies and municipalities to guide future investments along Interstate 90 in a transparent and accountable manner.
3. Taken together, the Tollway, IDOT, CTA, Pace and Metra move more than one million people a day. Collectively, we need to plan for current and future levels of congestion by improving the overall throughput of the corridor by enhancing accessibility and providing transportation choices. Future transportation plans must take into account the broader impacts and benefits within the corridor.
4. Minimize the environmental impacts of transportation infrastructure and operations and promote sustainable practices.
5. Support financially viable solutions that protect the Interstate 90 corridor and allow flexibility for future growth.
6. Maximize the use and extend the lifecycle of the collective infrastructure assets along the Interstate 90 corridor.

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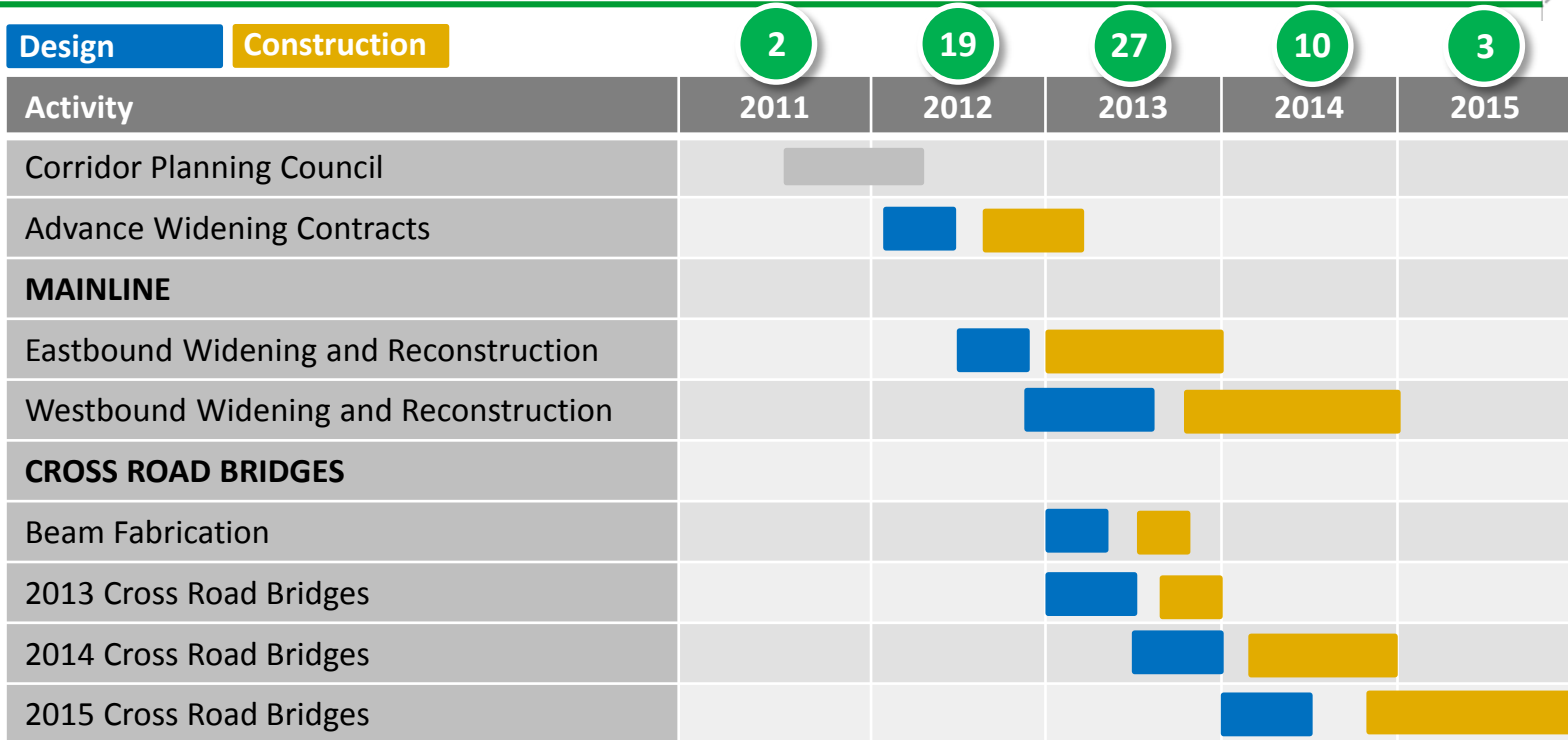
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**Design Process**

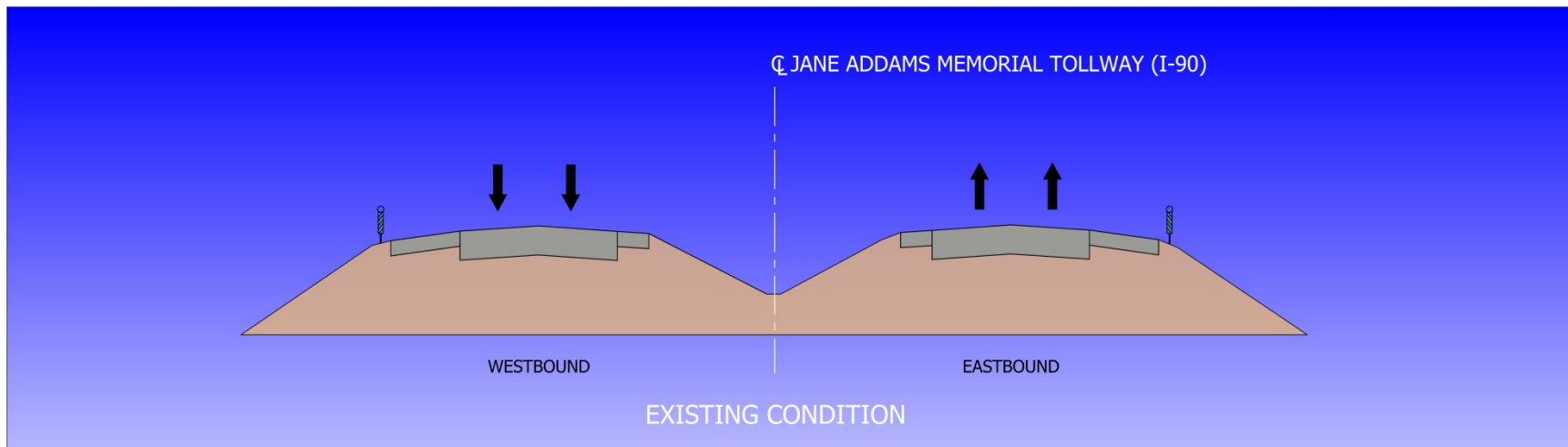
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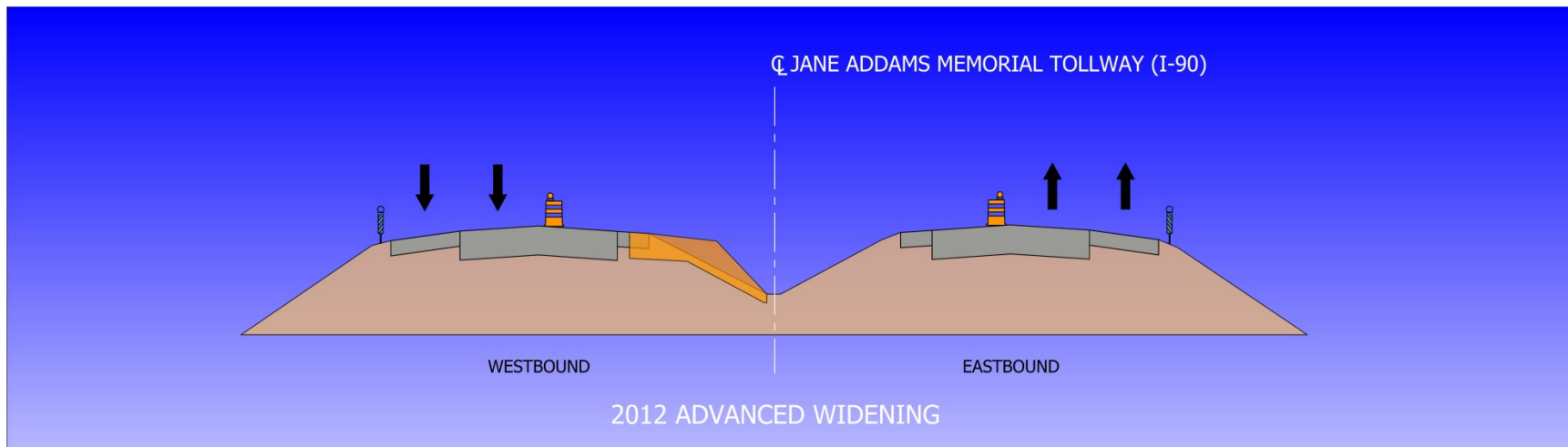
# I-90 Western Segment Schedule



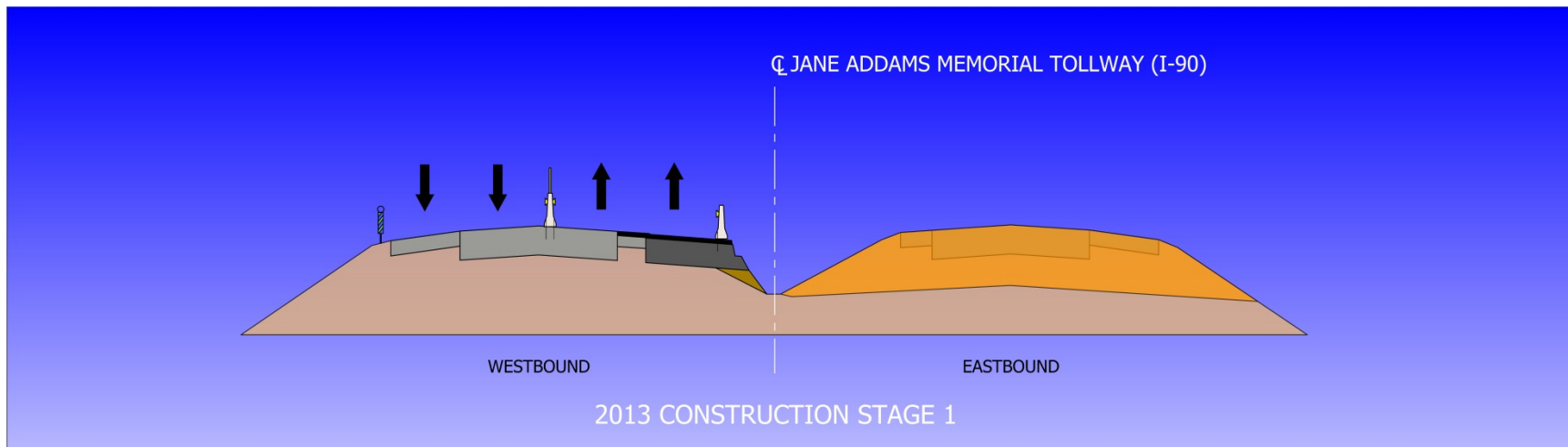
# I-90 Typical Sections



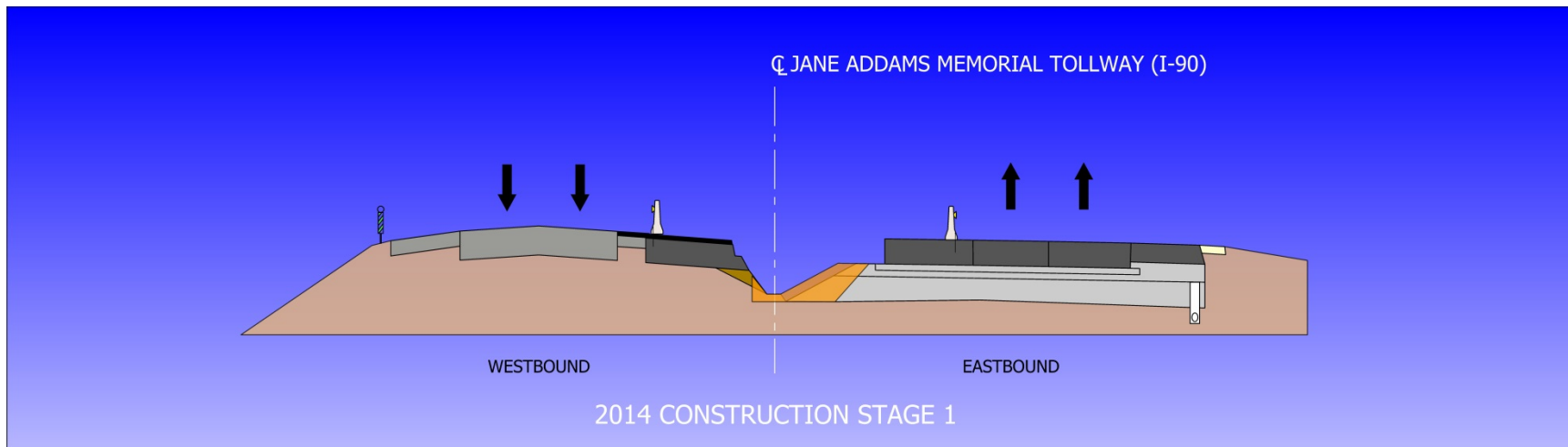
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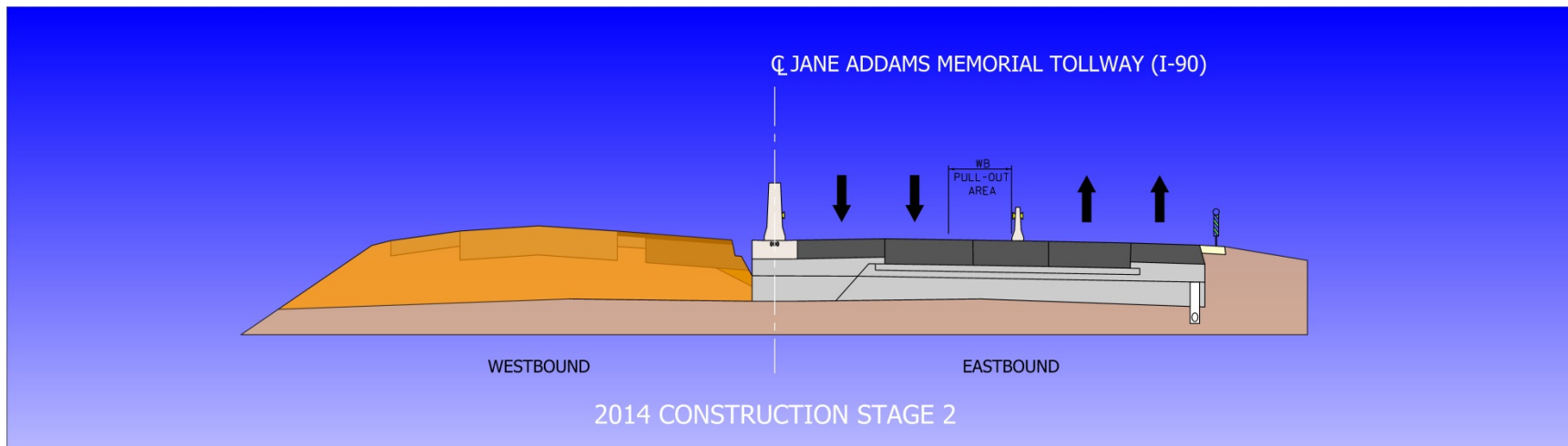
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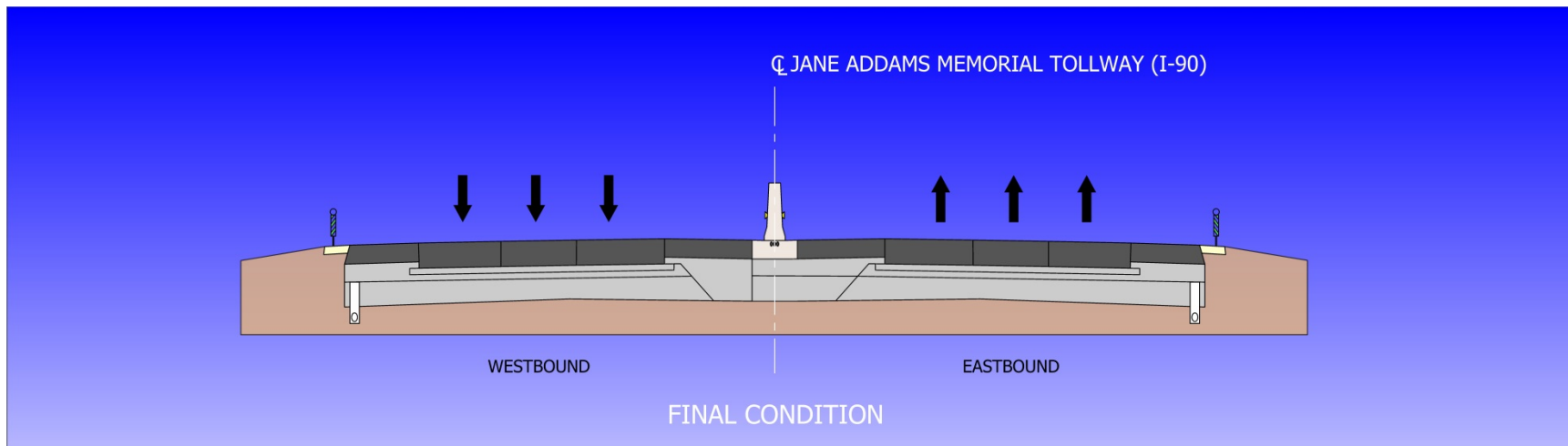
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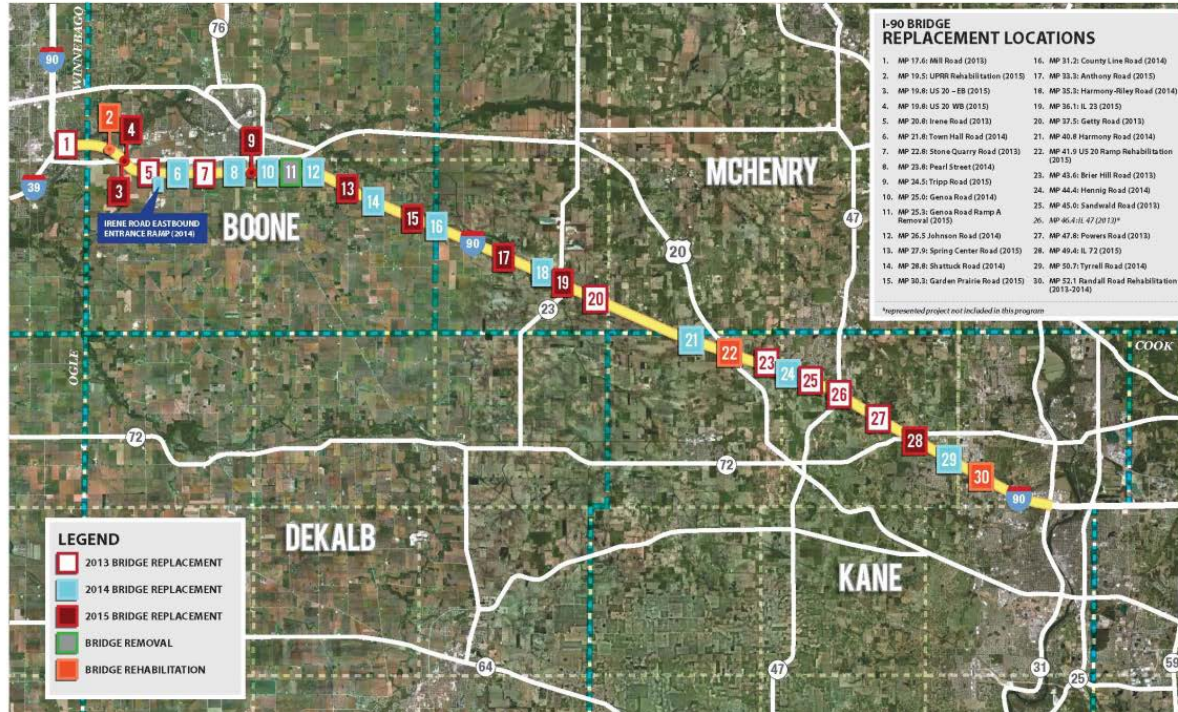
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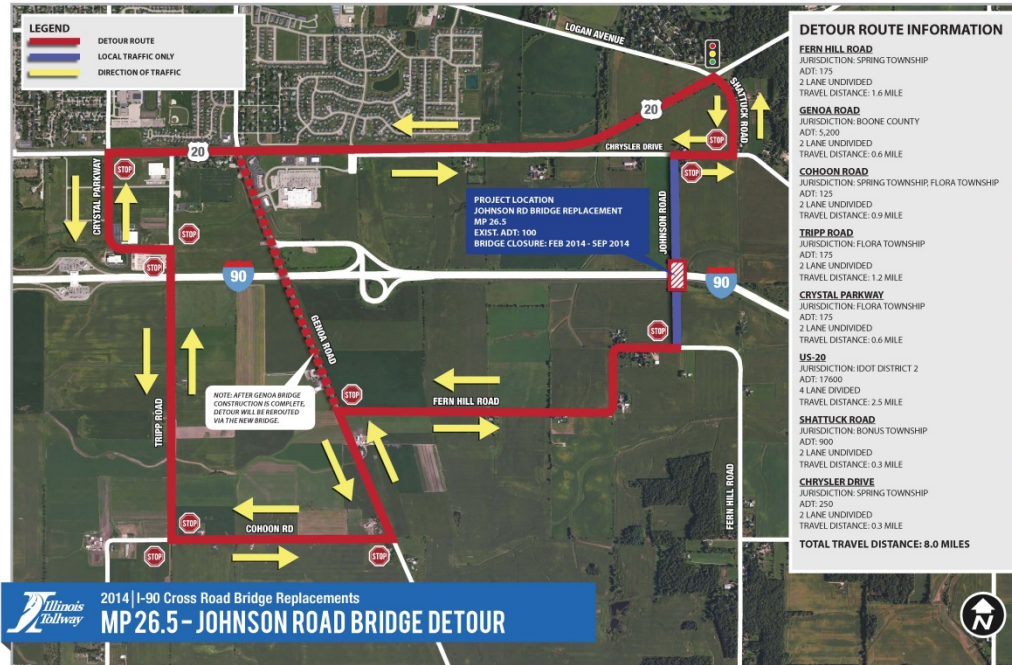


# Local Crossroad Bridges





# Local Detour Routes

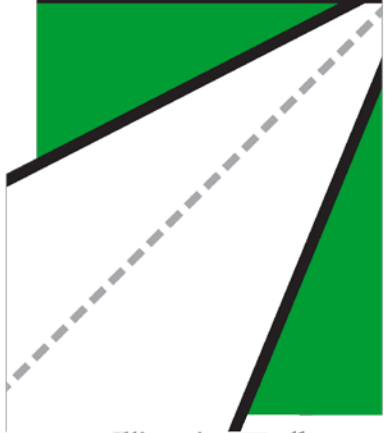


DRAFT - Subject to change. As of October 29, 2013

# Providing New Access



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**New Initiatives**

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# LED Lighting



# Stainless Steel Rebar



# Two-Lift PCC Pavement



# Shallow Depth PCC Girders



# Intermediate Power Distribution and Communications Buildings

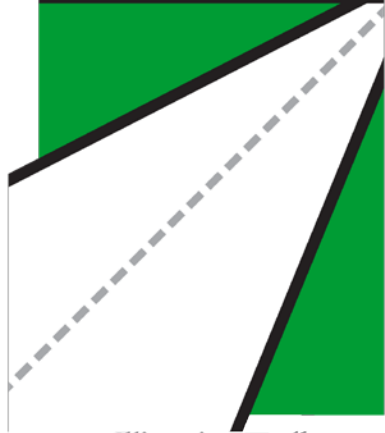




# Crash Investigation Sites



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## **Construction Schedule**

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# Construction Began in Spring 2013

- Staging complications
- Early delays



# Removals



# Unusual Precipitation in 2013

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- **Chicago-O'Hare precipitation totals (March 1 to June 30)**
  - Observed precipitation = 21.87 inches
  - Normal expected precipitation = 13.01 inches
  - Departure from normal = 8.86 inches
  
- **Rockford precipitation totals (March 1 to June 30)**
  - Observed precipitation = 21.09 inches
  - Normal expected precipitation = 14.34 inches
  - Departure from normal = 6.75 inches

# Excessive Rains Present Challenges



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# Multiple Days of Measureable Precipitation

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## Chicago-O'Hare rainfall events

- **26 of 40 days between May 20 and June 28 had measurable precipitation**
- **March 1 to June 30**
  - Days > 0.01 inch = 54 (16 in June)
  - Days > 0.10 inch = 31 (10 in June)
  - Days > 0.50 inch = 16 (6 in June)
  - Days > 1.00 inch = 5 (1 in June)

## Rockford rainfall events

- **25 of 40 days between May 21 and June 29 had measureable precipitation**
  - **March 1 to June 30**
    - Days > 0.01 inch = 51 (17 in June)
    - Days > 0.10 inch = 37 (12 in June)
    - Days > 0.50 inch = 12 (5 in June)
    - Days > 1.00 inch = 4 (1 in June)
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# Implement Schedule Recovery



# Soil Modification Required

- **531 tons of lime**
- **7,882 tons of fly ash**
- **Minimal undercuts**



# Earthwork/Subgrade

- 1,062,801 cubic yards of earth excavation



# The Whole Process...



# Lessons Learned

- **Eastbound roadway completion late October 2013**
- **Lessons learned**
  - Incident management
  - Tight bidding schedule
  - Maintenance of traffic complications
  - Micro-surfacing



# Median Construction 2013/2014

- **Median work included**
  - Excavation and subgrade
  - Closed drainage system
  - Barrier base
  - Lighting conduit
  - Barrier wall
  - Eastbound shoulders



# Polar Vortex 2013/2014

- **Below normal temps from November to April**
- **Above normal snowfall (45.9 inches)**
- **Third coldest winter in history**
- **Third snowiest winter in history**



# Construction Continues in 2014

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- **Starting from behind**
  - Delays ranging from 16 – 118 working days
  - Contractor agreement/buy-in
  - Delay mitigation approaches
    - Premium time overtime
    - Double shifts
    - Resequencing/restaging
    - Lump-sum acceleration proposals



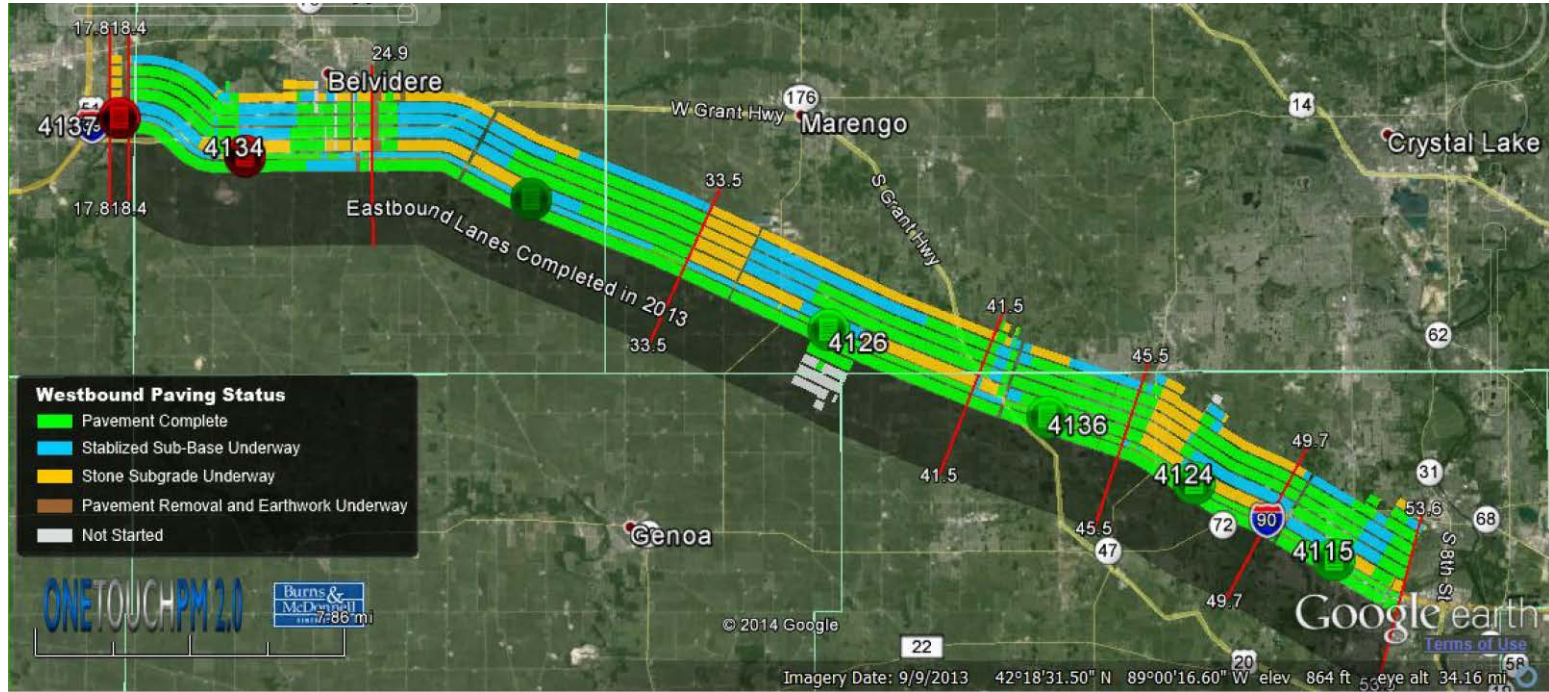
# Overcoming Obstacles



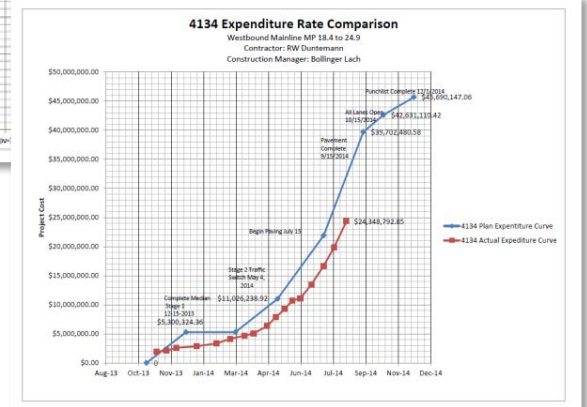
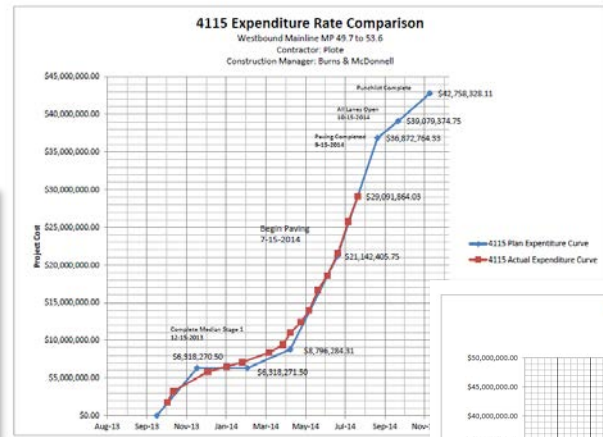
# Getting Everyone Back on Track



# Tracking Progress and Issues



# Tracking Expenditures



# The Push to Finish



# Resequencing to Accomplish the Goal



# The Finish Line: Mainline Completion

- **October 28, 2014**



# I-90 Western Segment Summary

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*Delivered on schedule and within budget*

- **Overall mainline reconstruction timeline 11 months**
- **40 total construction contracts**
  - 16 mainline contracts
  - 24 additional contracts
- **Over 50 professional design and construction management firms**
- **Significant scope of work**
  - 2,802,965 cubic yards of earthwork
  - 855,107 tons of asphalt
  - 647,579 cubic yards of concrete
- **Excellent example of cooperation between owner, engineering and construction professionals and local agencies**



# 37 Miles Complete



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**Thank You**

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