

15th International Managed Lanes Conference, Miami, FL



Edens Expressway Bus on Shoulder Study
Chicago, IL

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CH2M

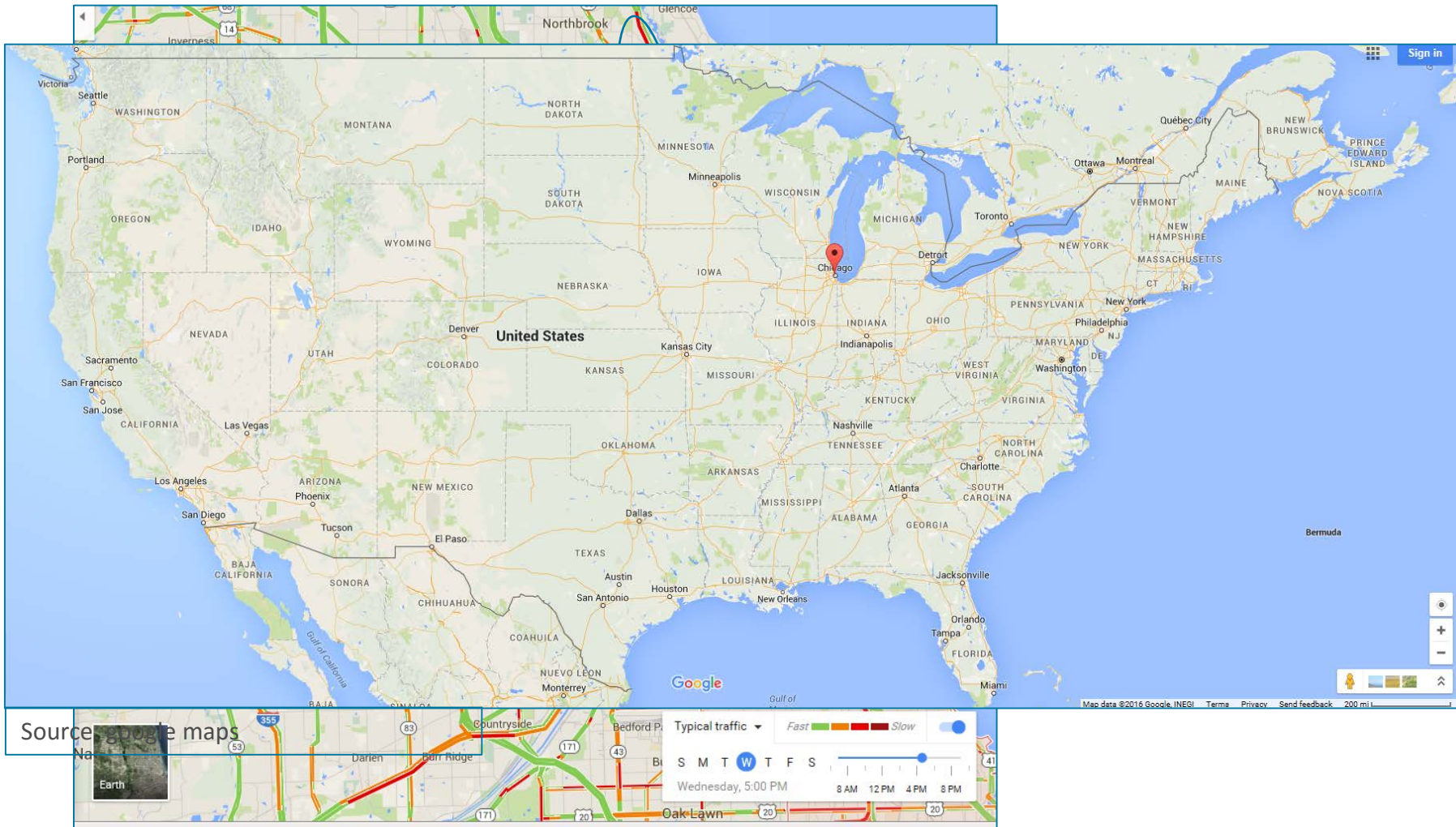


Edens Expressway Bus on Shoulders Presentation Overview

- Location and context of the study area
- History of Bus on Shoulders in Illinois
- Edens Expressway (Interstate 94) Study

Project Location

Typical Traffic Conditions

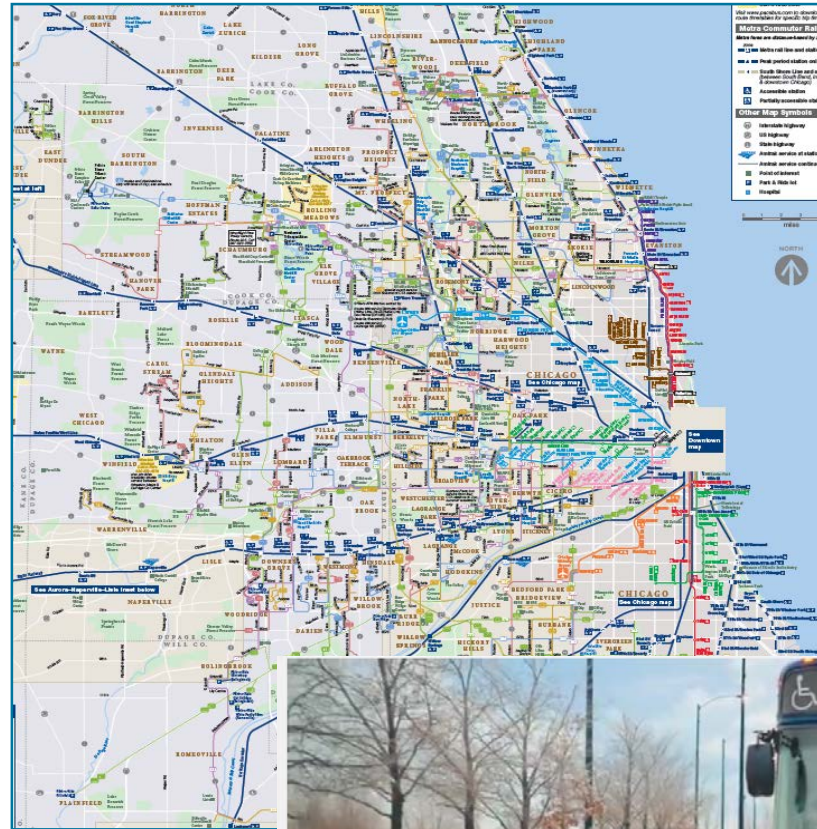


Chicagoland Transit services

- Regional Transit Authority (RTA)
 - Chicago Transit Authority (CTA)
 - Metra Rail
 - Pace Bus – Suburban service



Source: Illinois DOT



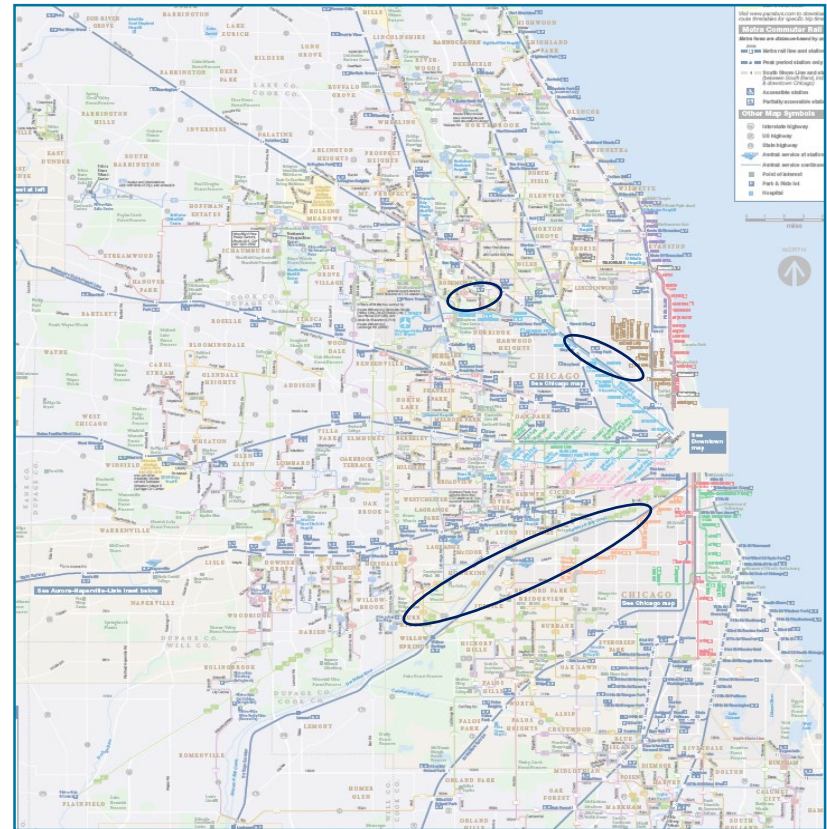
Source: Regional
Transit Authority



Source: Regional Transit Authority

Managed Lanes in Chicagoland

- Bus on Shoulders (BOS) on I-55
- Shoulder riding allowed on I-190
- Reversible Express Lanes on I-90/I-94
- No HOV/HOT/ETL lanes
- Ongoing managed lane studies



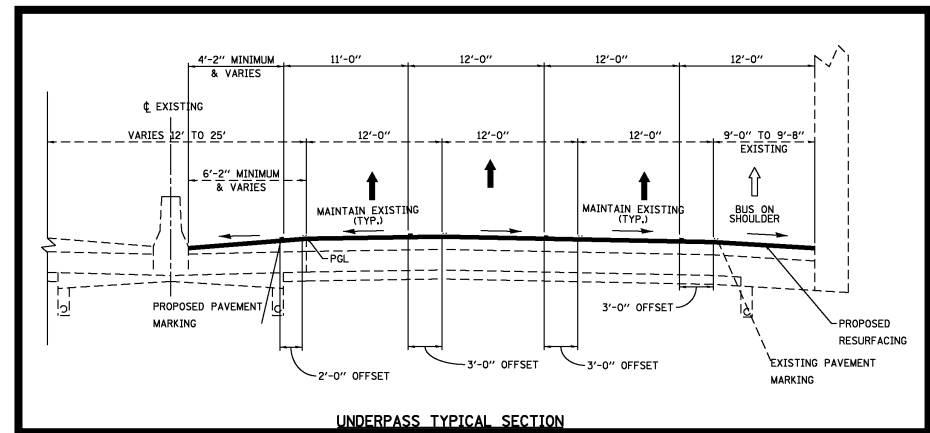
Source: RTA

Bus on Shoulders

- Bus on Shoulder (BOS) current operations on Interstate 55



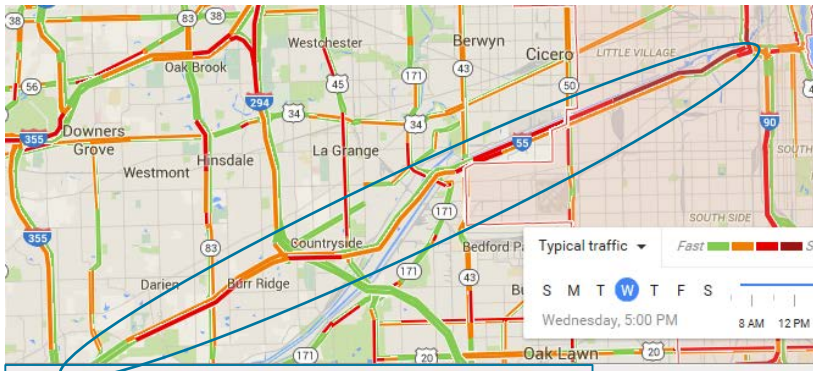
- Preliminary Engineering and Environmental Study Edens Expressway



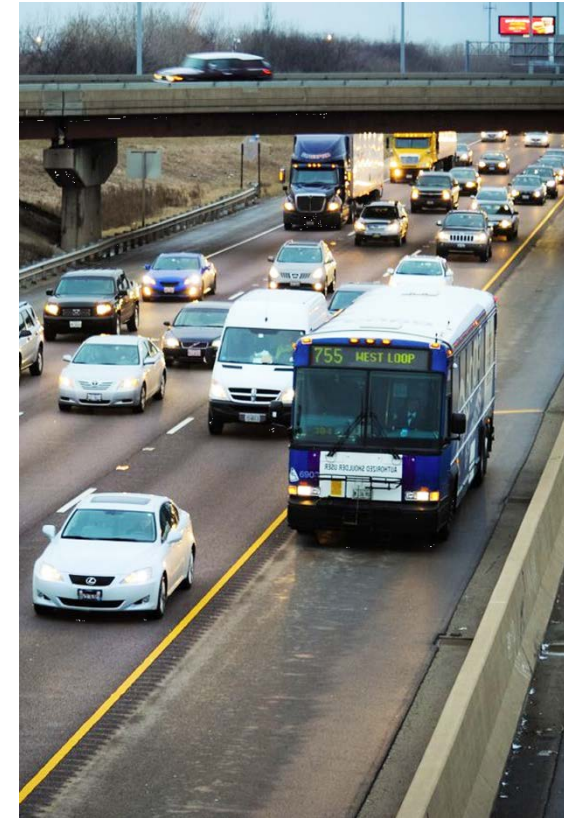
History of Bus on Shoulders Interstate 55 Corridor

Bus on Shoulder (BOS) on Interstate 55

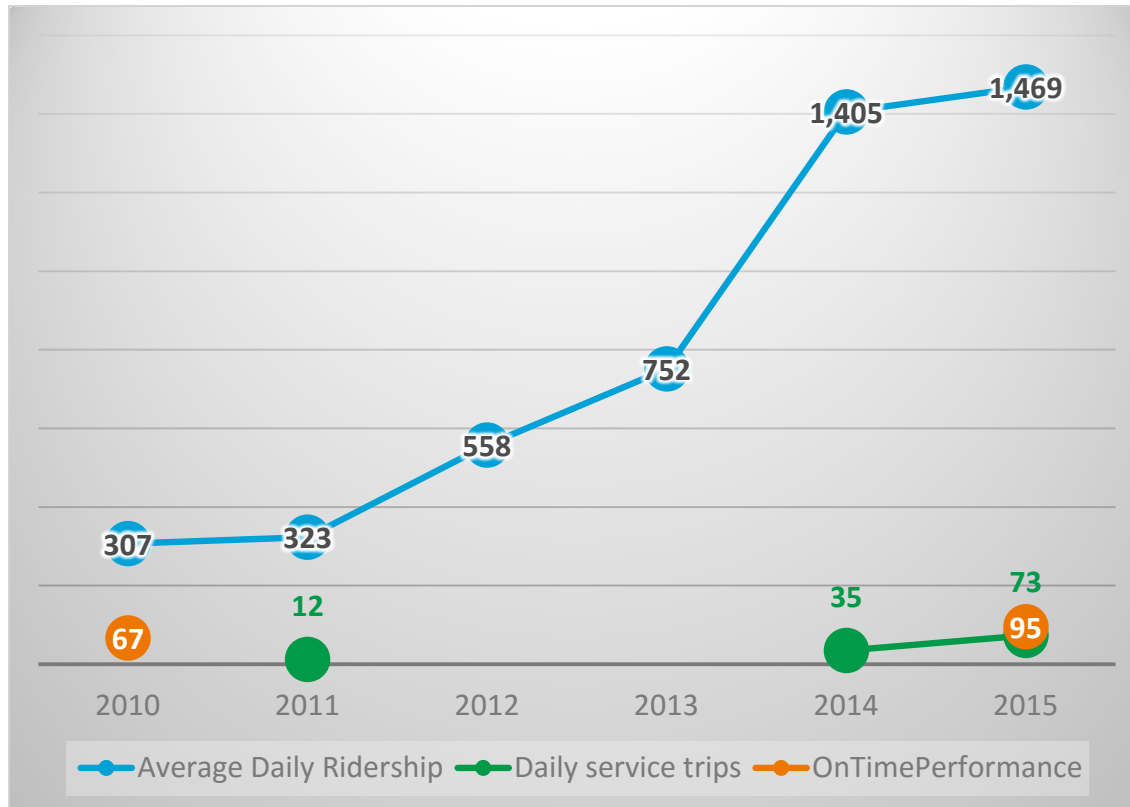
- Only pace buses are allowed
- Left side shoulder operations
- 18 miles implemented in 2011
- 4 additional miles of operation in 2014



Source: google maps



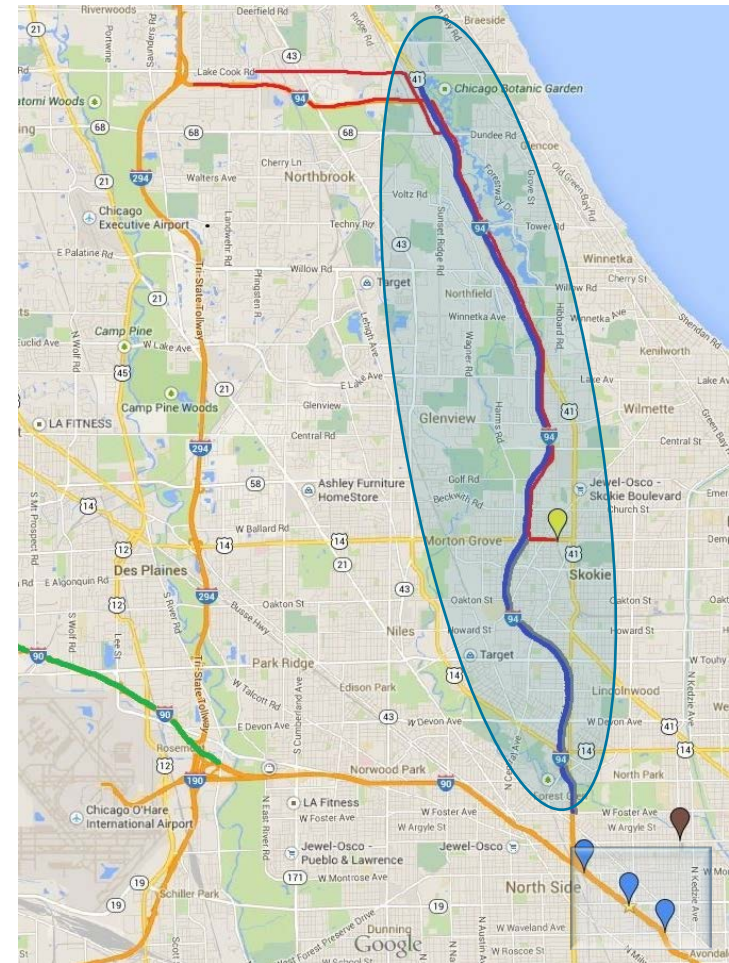
History of Bus on Shoulders Interstate 55 Corridor (cont'd)



Source: Google earth

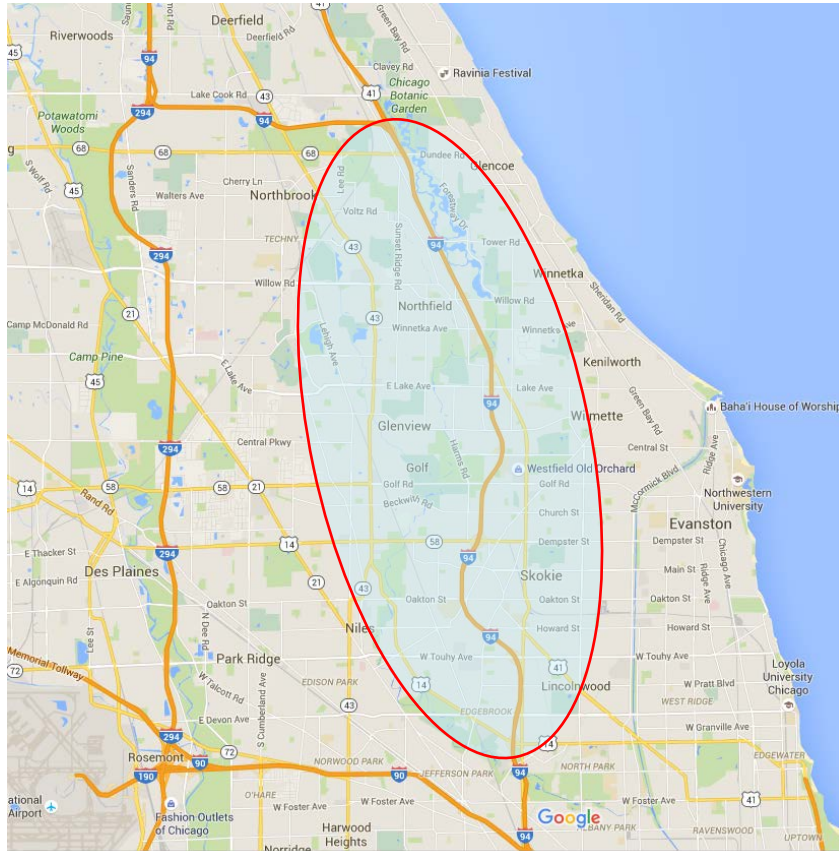
Edens Expressway Bus on Shoulder Study

- 14 miles of study on Interstate 94
 - Foster Avenue to Lake Cook Road
- Six-lane cross-section with ADTs up to 160,000
- Significant daily traffic congestions
- Buses operate currently on this corridor



Source: google maps

Bus on Shoulder Study Transit Choices



Source: google maps



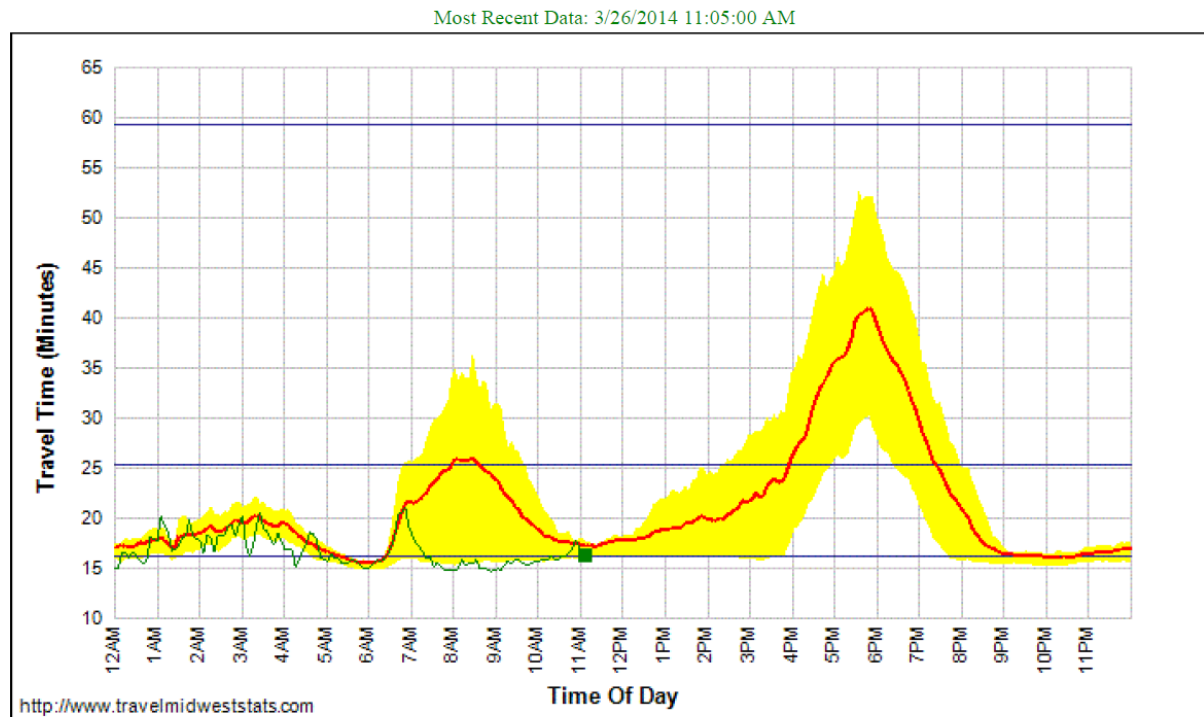
Source: Chicago Regional Transit Authority

Transit Map – Rail & Bus

Bus on Shoulder Study

Project Purpose

- Improve Reliability
 - Unreliable travel times
 - On-time performance (63%)



[More Detail](#) | [Custom Query](#)

Existing Conditions

Physical Constraints – Roadway Engineering



Bridges

- Guardrails
- Shoulder widths
- Vertical clearance



Shoulder condition and widths

- Left side
- Right side

Source: google maps

Existing Constraints

Traffic Operations, Enforcement



Traffic Operations:

- Weaving operations at interchanges
- Limited sight distance at interchanges
- Ramp metering compliance
- Existing “five percent” crash locations
- System Interchanges



Enforcement:

Only right side shoulder is effectively useable

Edens Expressway Design Criteria

- BOS Lane Width
 - Over the bridges
 - Under the bridges
- Superelevation
- Vertical Clearance
- Operating Speeds
- Rumble Strip

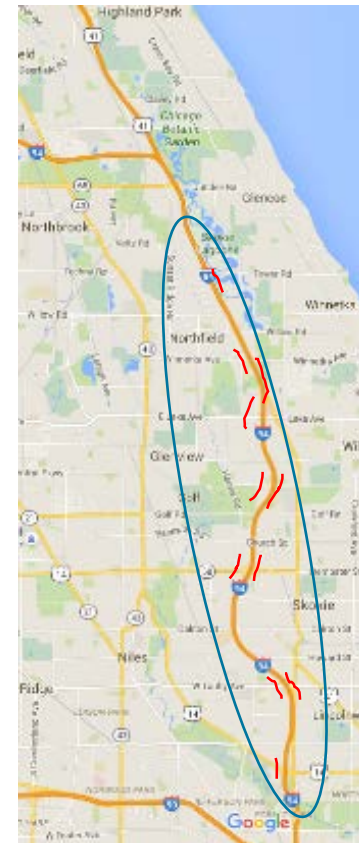
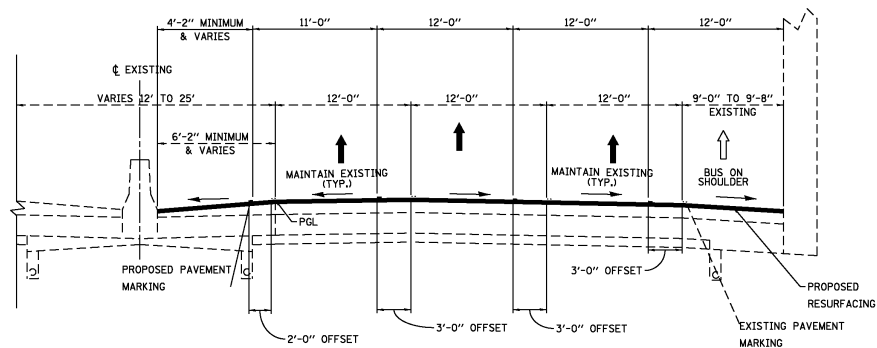
Field Trip – Test Drive



- Field Observations
- Stakeholders
 - Pace, the local suburban transit bus service
 - Illinois State Police
 - FHWA
 - IDOT Central office, District's Bureau of Traffic, Bureau of Maintenance

Proposed Improvements

- Proposed Bus operations on right side shoulder
 - Resurfacing all the outside shoulders
 - Relocate rumble strips
 - Resurface and relocate mainline travel lanes at some locations



Source: google maps

— Gap Sections

Study Summary

- Preliminary Engineering & Environmental study
- Approved to be a demonstration project
- 10-mile section proposed
- Cost Estimate \$10.7M
- CMAQ grant approval

Thank You

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