Eisenhower expressway

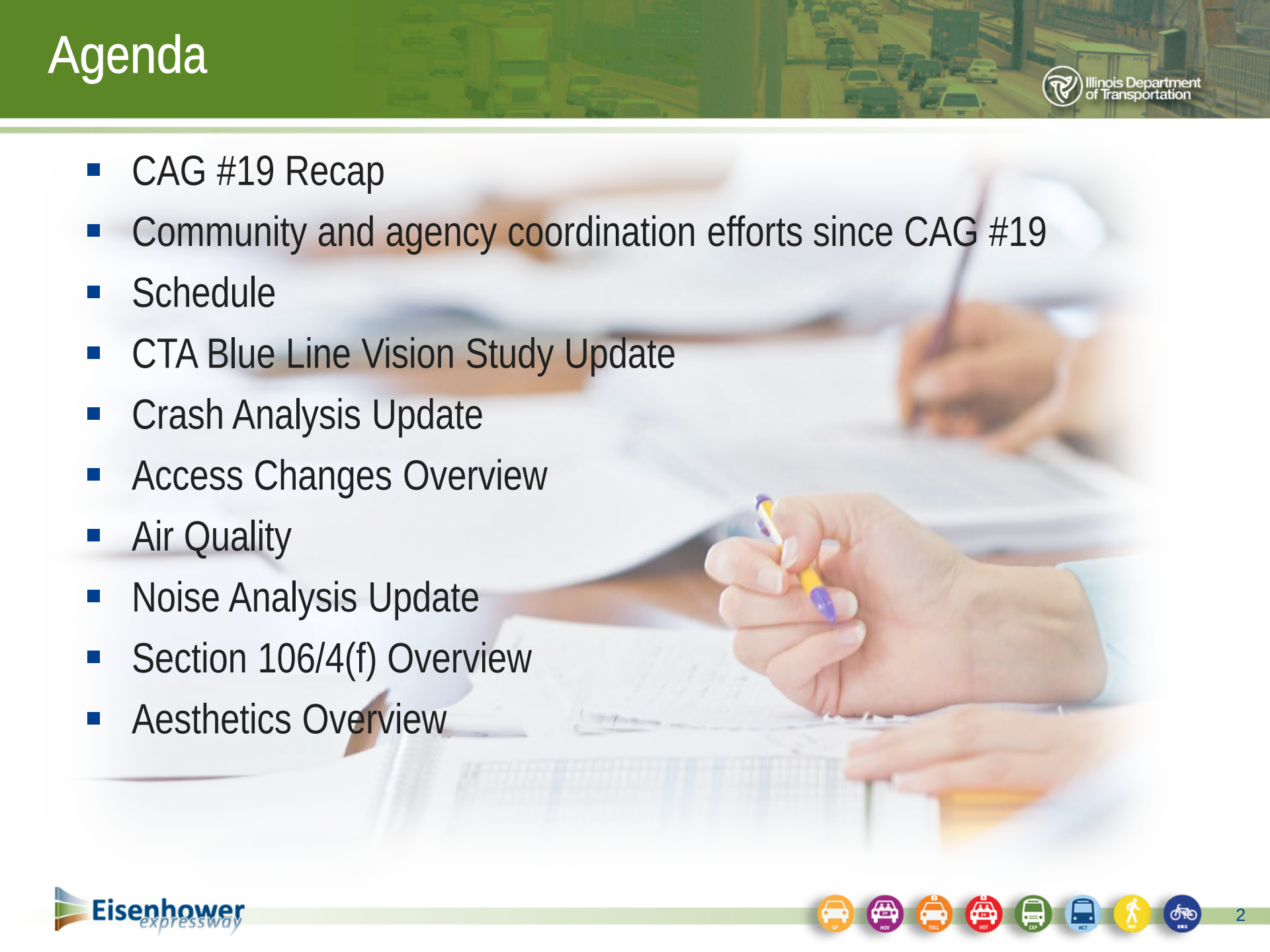
Illinois Department of Transportation

Corridor Advisory Group Meeting #20

August 27, 2015

Agenda

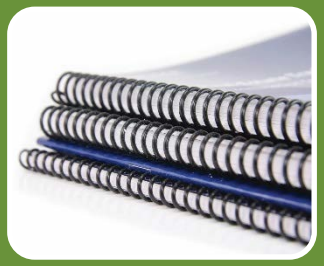
- CAG #19 Recap
- Community and agency coordination efforts since CAG #19
- Schedule
- CTA Blue Line Vision Study Update
- Crash Analysis Update
- Access Changes Overview
- Air Quality
- Noise Analysis Update
- Section 106/4(f) Overview
- Aesthetics Overview



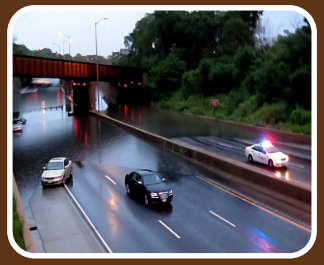
CAG #19 Recap

Round 3 Evaluation to date

- HOT 3+ provides the greatest person throughput and accessibility improvement
- HOV 2 + is the second best



Draft Environmental Impact Statement



Existing Drainage Review

- Flooding
- Trunk Sewer Grade Line
- Existing Drainage Plan
- 1 on 1 Village Meetings

Community and Agency Coordination Efforts

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- Oak Park and Maywood Town Hall Meetings
- Park Districts
- 1 on 1 Meetings
- Working Group Meetings
- Cook County
- CTA/CSX
- Water Reclamation District
- CDOT

Community and Agency Coordination Efforts

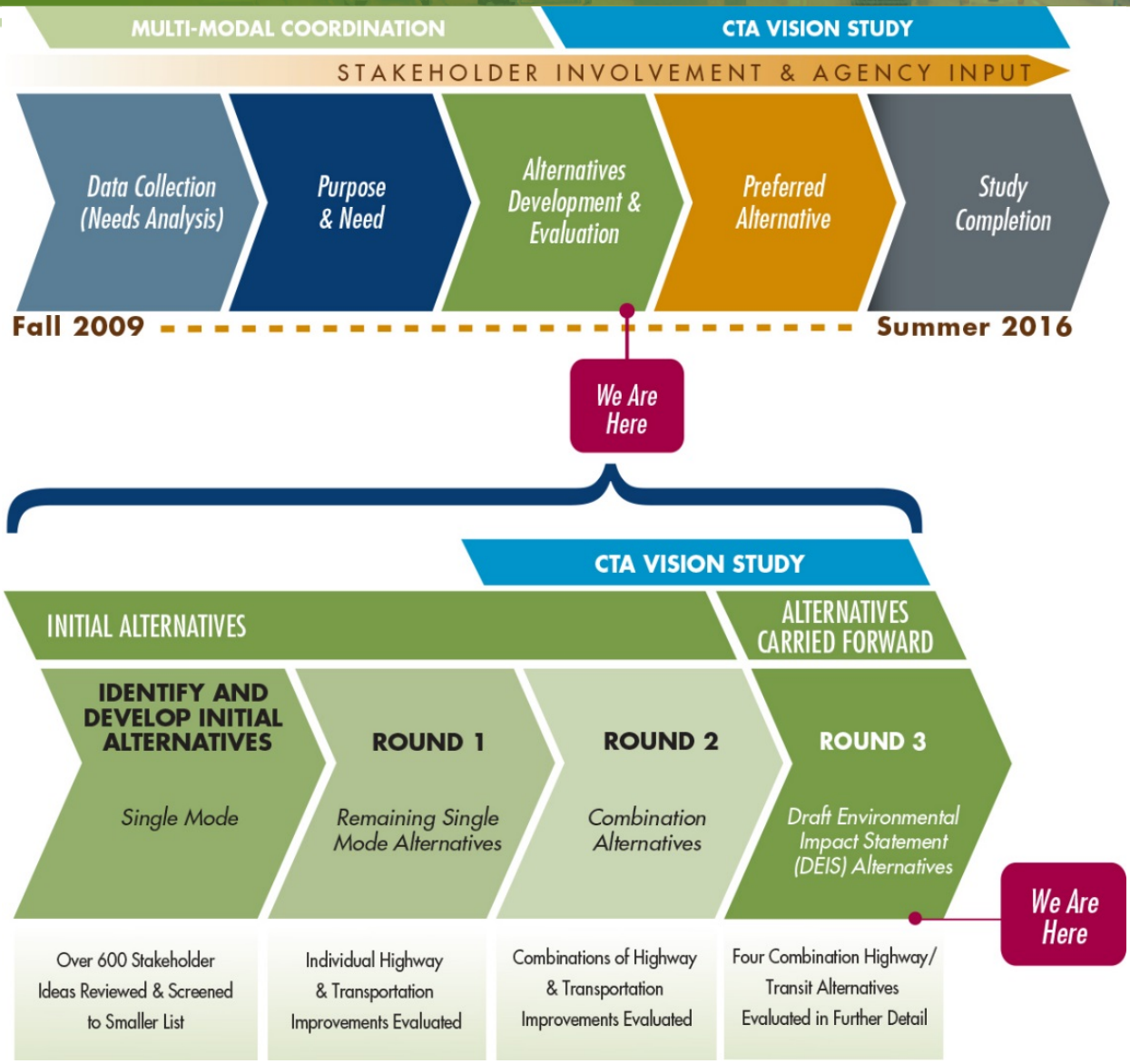
Oak Park

- Established Working Group and Study Sessions

Other communities and agencies

- One-on-one meetings (ongoing)

Schedule


MULTI-MODAL COORDINATION
CTA VISION STUDY
STAKEHOLDER INVOLVEMENT & AGENCY INPUT
Data Collection (Needs Analysis)
Purpose & Need
Alternatives Development & Evaluation
Preferred Alternative
Study Completion
Fall 2009
Summer 2016
We Are Here
CTA VISION STUDY
INITIAL ALTERNATIVES
ALTERNATIVES CARRIED FORWARD
IDENTIFY AND DEVELOP INITIAL ALTERNATIVES
Single Mode
ROUND 1
Remaining Single Mode Alternatives
ROUND 2
Combination Alternatives
ROUND 3
Draft Environmental Impact Statement (DEIS) Alternatives
We Are Here
Over 600 Stakeholder Ideas Reviewed & Screened to Smaller List
Individual Highway & Transportation Improvements Evaluated
Combinations of Highway & Transportation Improvements Evaluated
Four Combination Highway/ Transit Alternatives Evaluated in Further Detail

CTA Blue Line Forest Park Branch Feasibility/Vision Study Review and Status Update

August 27, 2015

Carole Morey, Chief Planning Officer

Summary of Existing Conditions Assessment

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Minimal upgrades have been completed as needed

- Special Trackwork: crossovers & switches recently upgraded (except Lathrop)
- Signals: recently upgraded

Remaining elements beyond useful life and severely worn

- Track: contaminated ballast, deteriorated ties, poor drainage, worn rail
- Stations: over 50 years old, only 4 of 12 are accessible, narrow platforms
- Structures: approaching end of useful life
- Traction Power: substation, cabling, third rail, etc require upgrading
- Communications System: warrants technical improvements
- Maintenance Shop: approaching end of useful life; inadequate track configuration and capacity

Maintain Existing Entrance Locations

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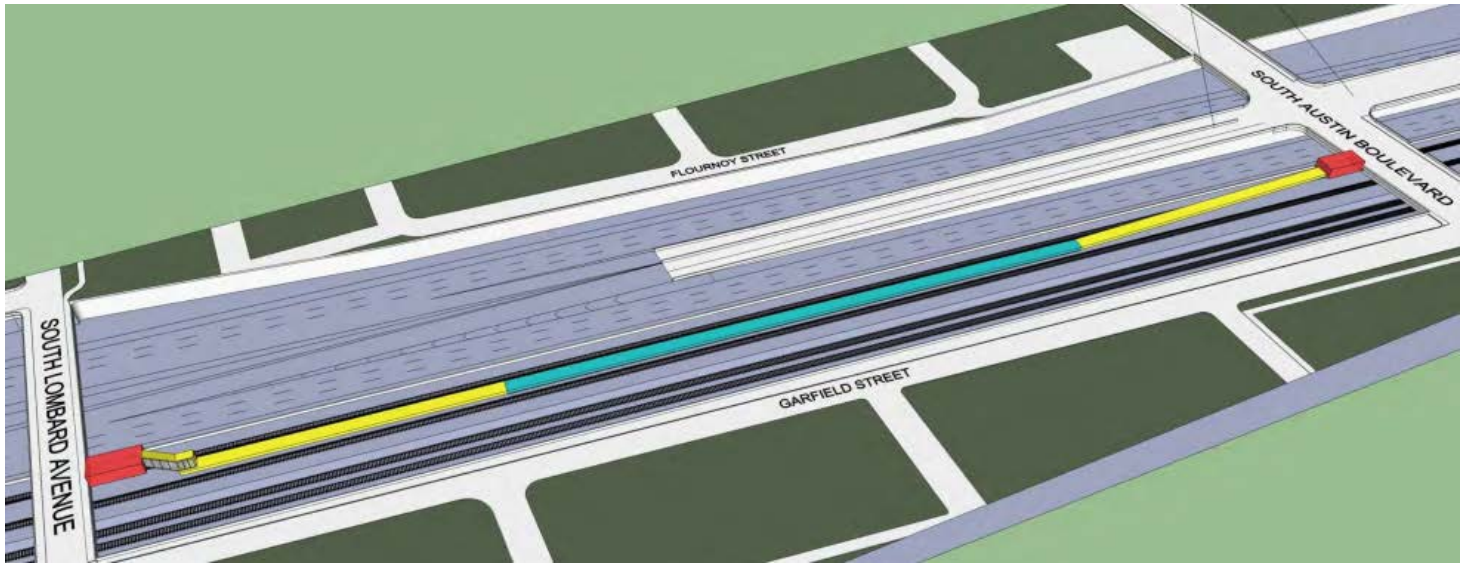
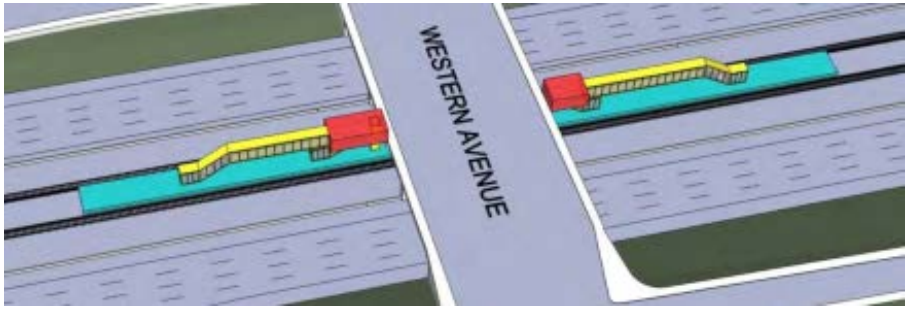
- **Retain double and triple entry station entrances**
  Harlem, Oak Park, Austin, Illinois Medical District, Racine, UIC-Halsted



- **Dual headhouses possible for single entry stations with bus connections**
  Cicero, Pulaski, Western



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Redesign Forest Park terminal, yard and shop

- Improve site circulation
  - Bus circulation and transfers
  - Bike and pedestrian access to the terminal
  - Highway and traffic flow around the terminal
- Meet increased rail yard and shop needs
  - Inadequate fleet storage
  - Inadequate shop size
  - Improve yard configuration

Maintain Existing Service

- **Long-term**
  - Bring service speeds up to state-of-good-repair
  - No 3rd track or express service
    - Already serves as west side express due to current station spacing
- Remove stations closed in 1970s

- **Short-term (immediate)**
  - CTA continues to perform interim slow zone maintenance work on branch, which began in spring 2014
    - 5 nights/week, occasional weekends
    - From Clinton to Forest Park, but focusing on west end of branch

Intermodal Coordination

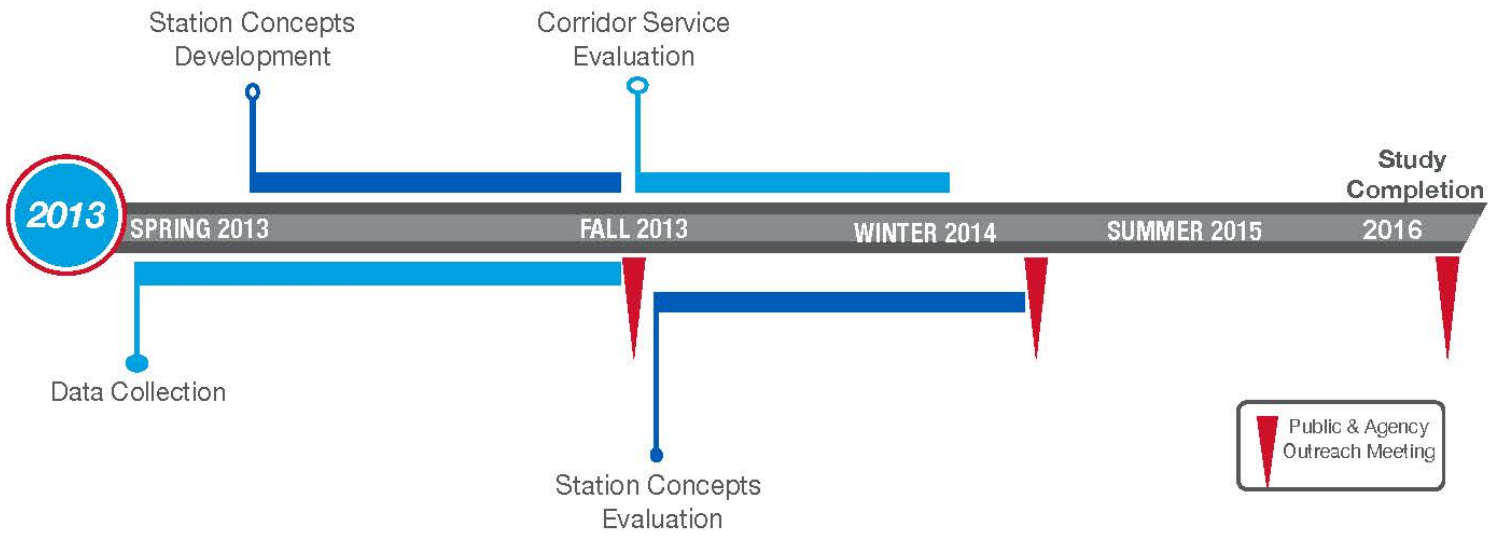
- Continue to work with IDOT on corridor improvements
  - Coordinate on overhead bridges to improve stations and access from street
  - Project may be segmented into stations and track
  - Potential for coordinating long term cost savings for both projects
  - Provide transit alternative during highway construction
- Continue to coordinate with municipal stakeholders

Summary of Overall Recommendations

- Complete reconstruction/modernization for the Forest Park branch
  - Maintain existing entrance locations
  - Improve customer experience
  - Improve infrastructure
  - Improve terminal site
- Maintain existing service
- Work with IDOT and stakeholders on corridor improvements

Next Steps

- Present results to public in coordination with IDOT I-290 Public Hearing
- Continue to evaluate funding options and project phasing



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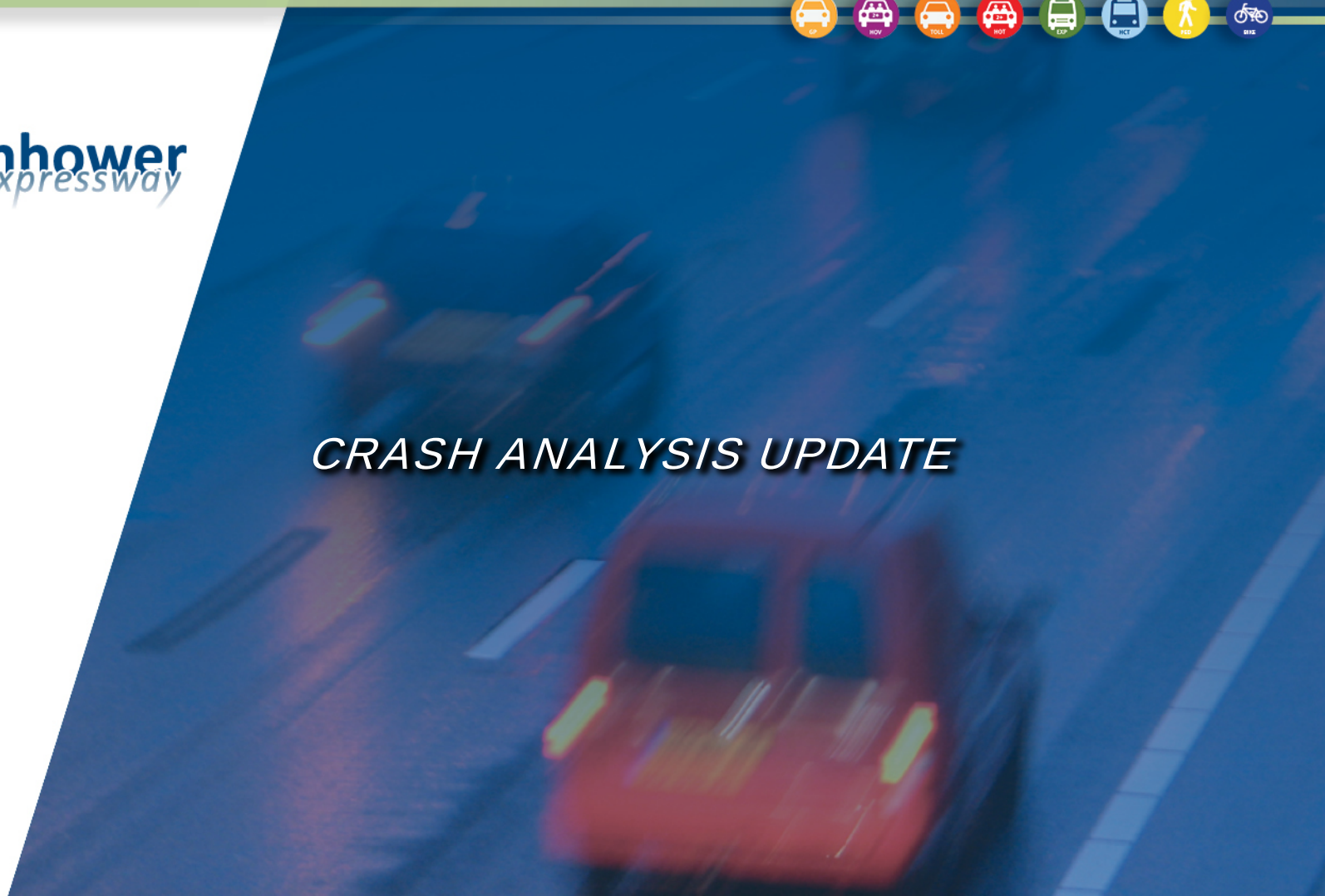
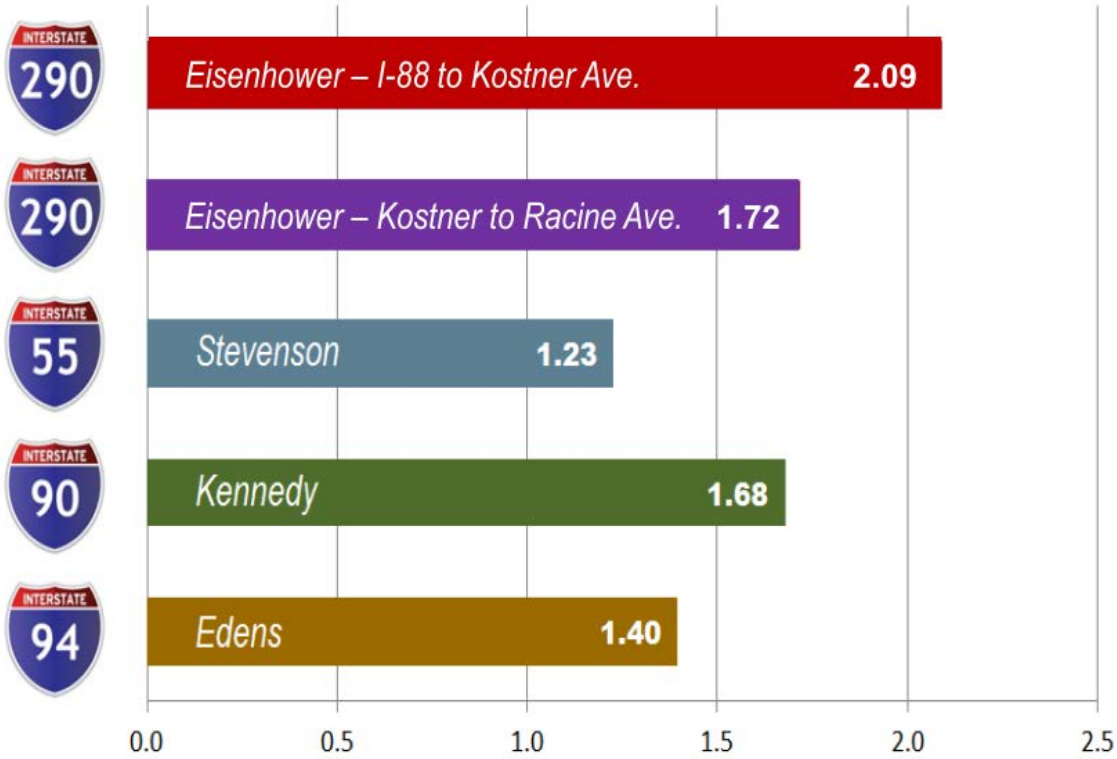
CRASH ANALYSIS UPDATE



Local Freeway Crash Rate Comparison

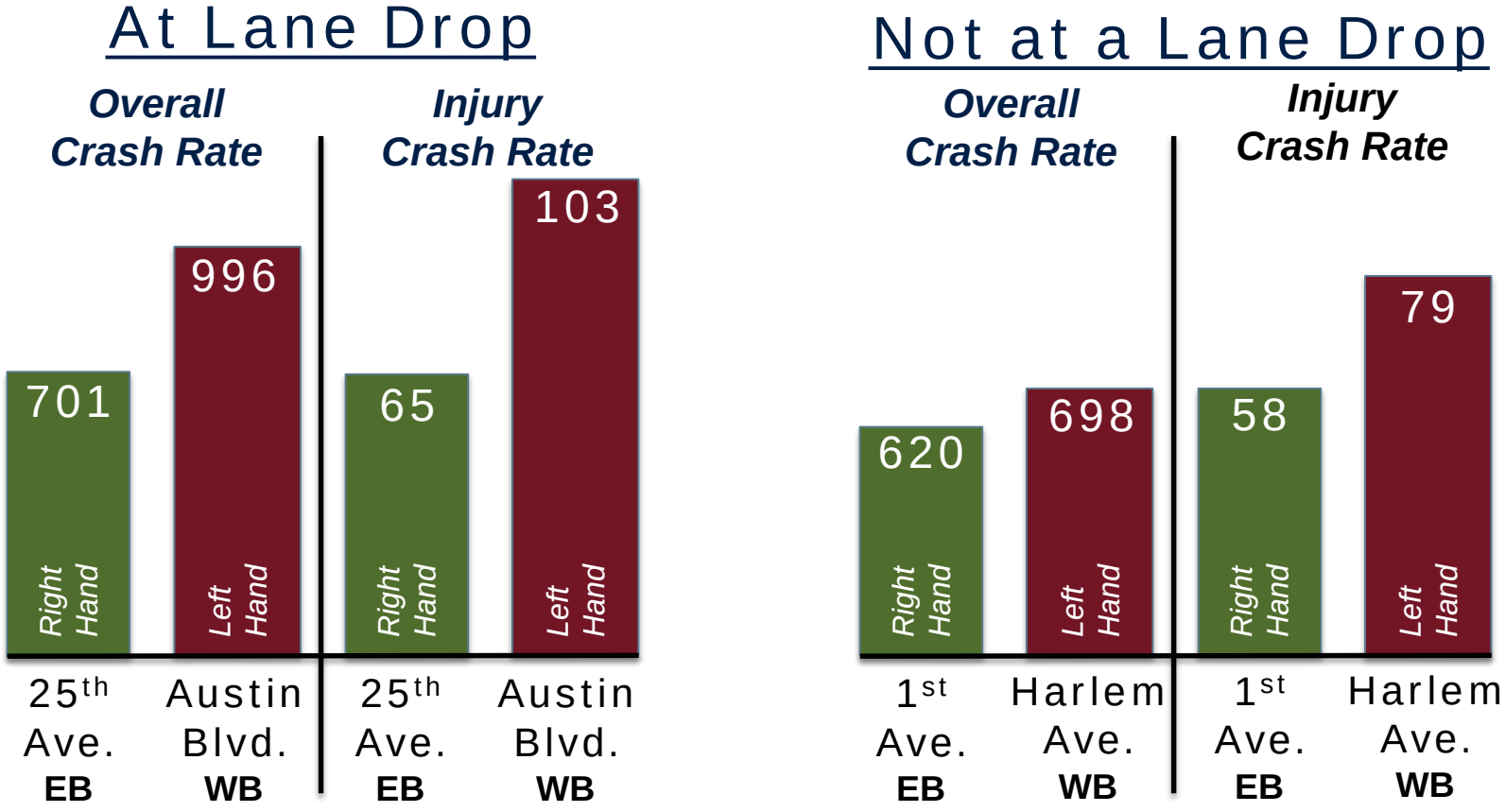
- With 2011-2013 crash study update, Eisenhower crash rate remains higher than comparable expressways
- West section has 22% higher crash rate than east section



Crash data 2006-2008, 2011-2013 - Crash rates given in crashes per million vehicle miles

Right vs. Left-hand Ramps

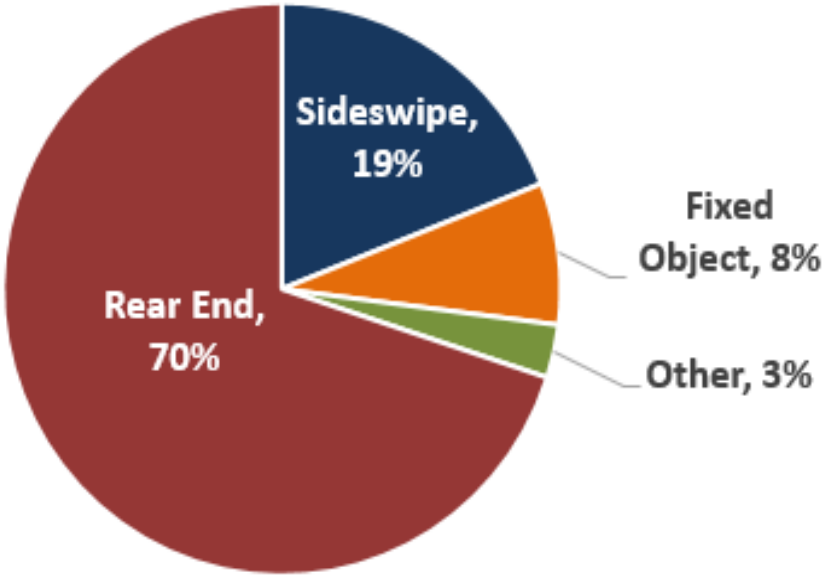
I-290 Crash Rates
2006 – 2008 & 2011 – 2013
(6 Year Totals)



Crash Types and Time of Day

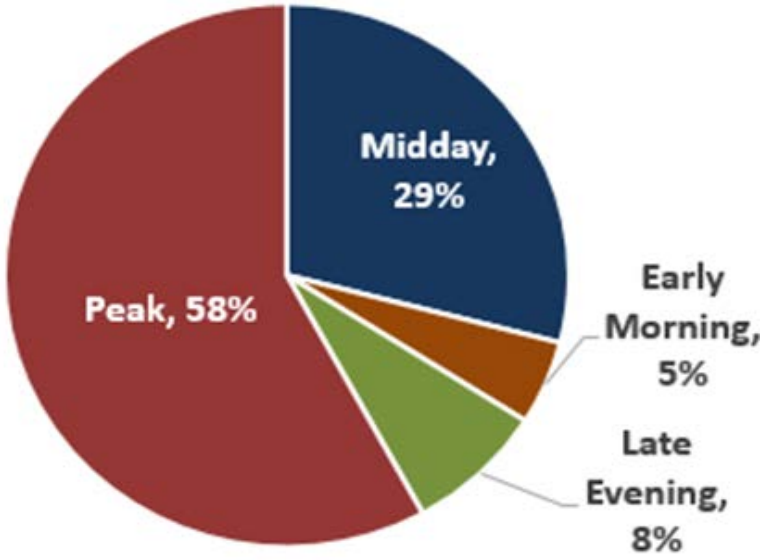
I-290 mainline

Type of Crash 2011-2013



I-290 mainline

Rear End Crash time of day 2011-2013



- 70% are rear end
- 58% occur during congested periods
- Most severe crashes occur overnight (higher speeds)

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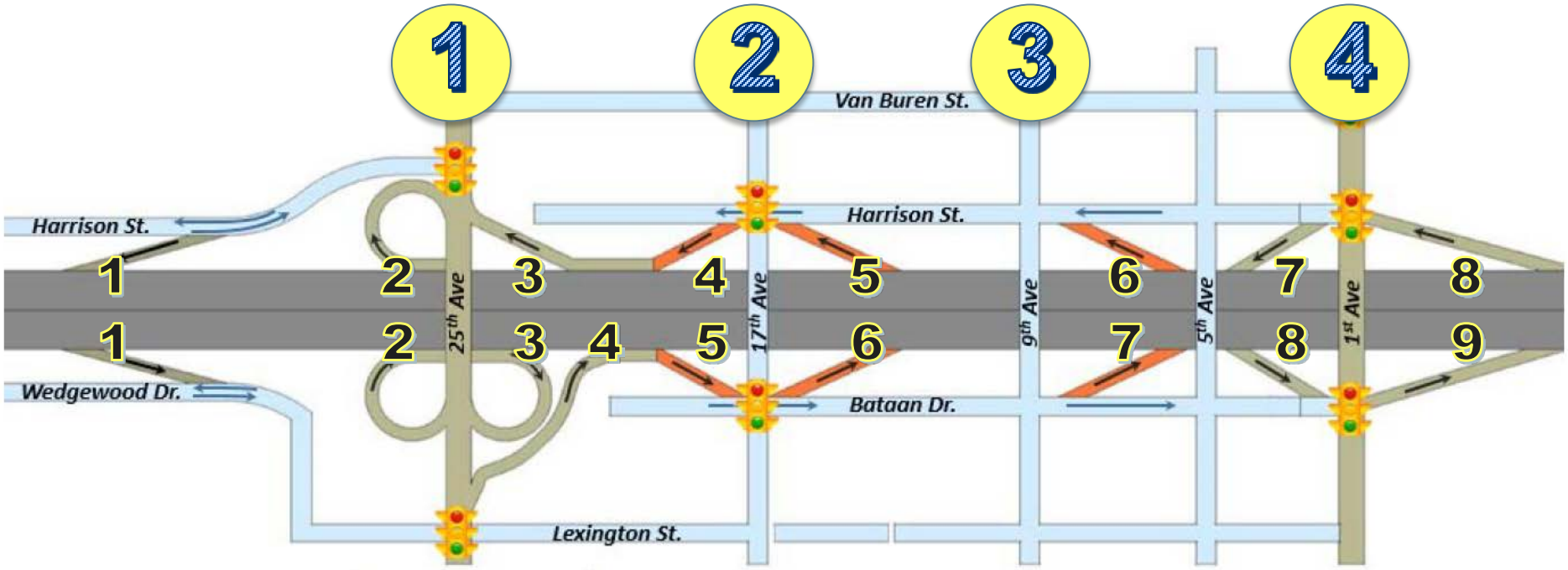
Eisenhower expressway

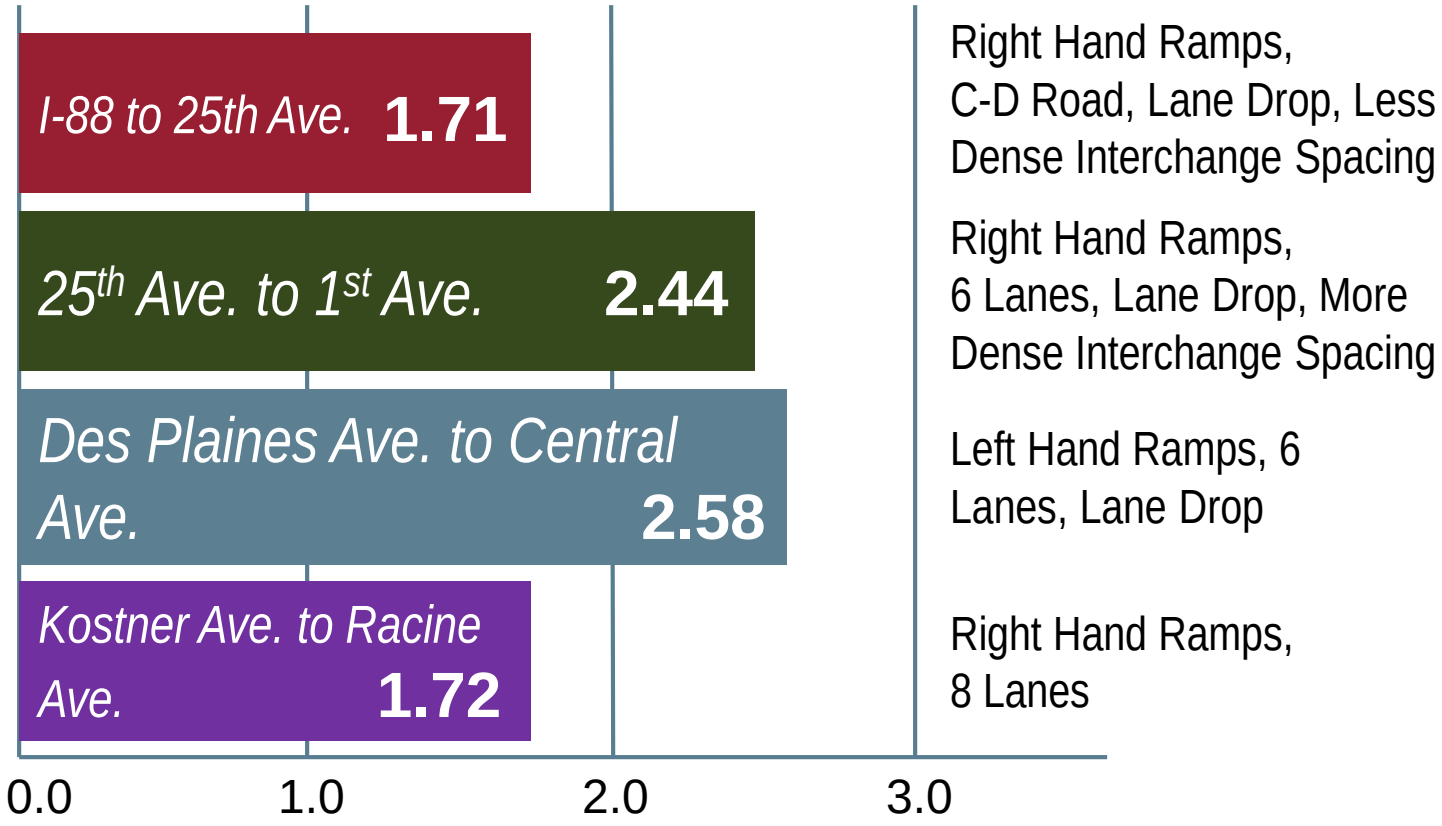
ACCESS CHANGES OVERVIEW

Existing Conditions – 25th Ave to First Ave



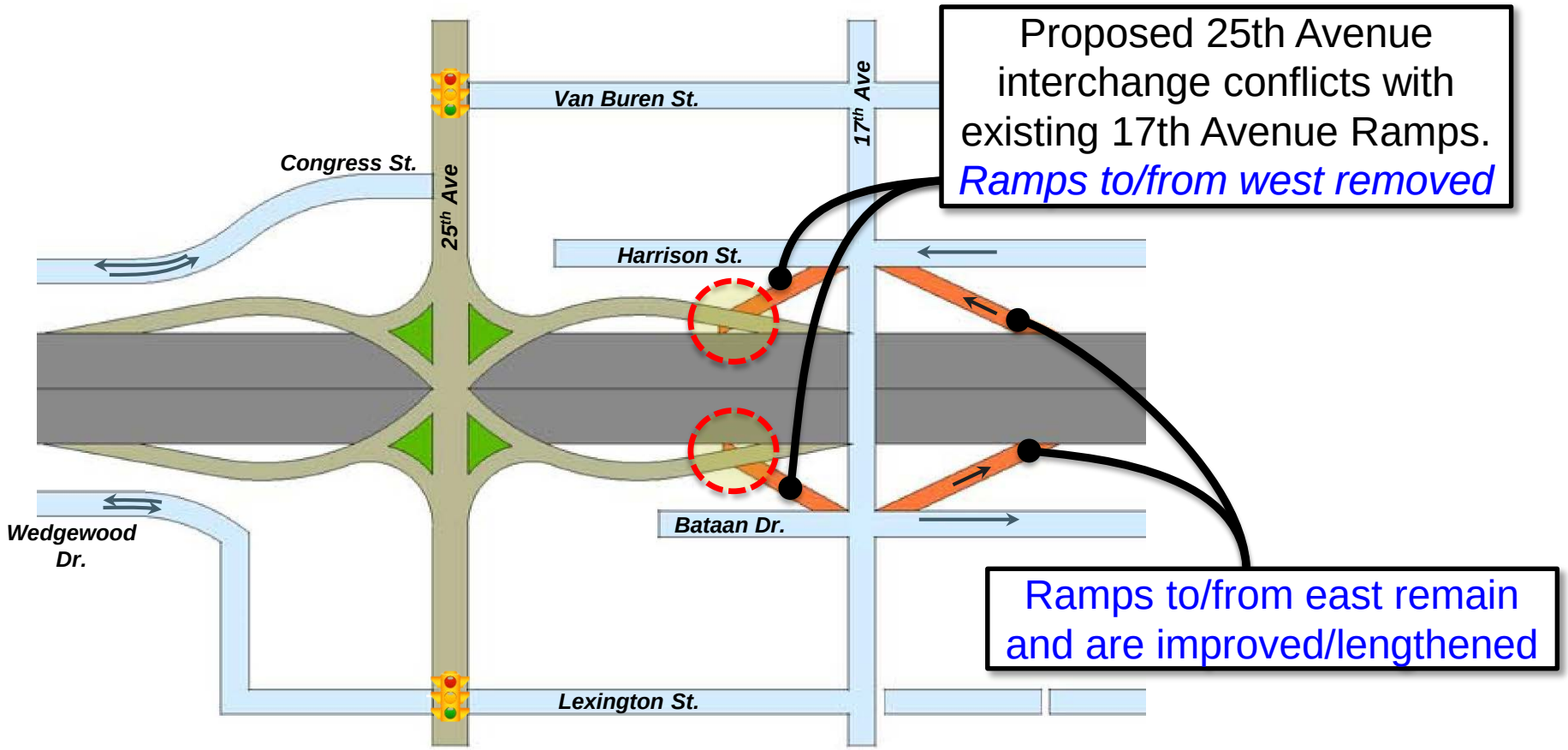
- 4 *interchanges in 1.5 miles*
  - *Current policy recommends 1 mile spacing*
- 8 *to* 9 *ramps each direction*
- *Inadequate ramp lengths*
- *Sharp/abrupt ramp entrance/exit angles*
- *Inadequate weaving space*
- *Elevated crash rates*

Existing Conditions – 25th Ave to First Ave

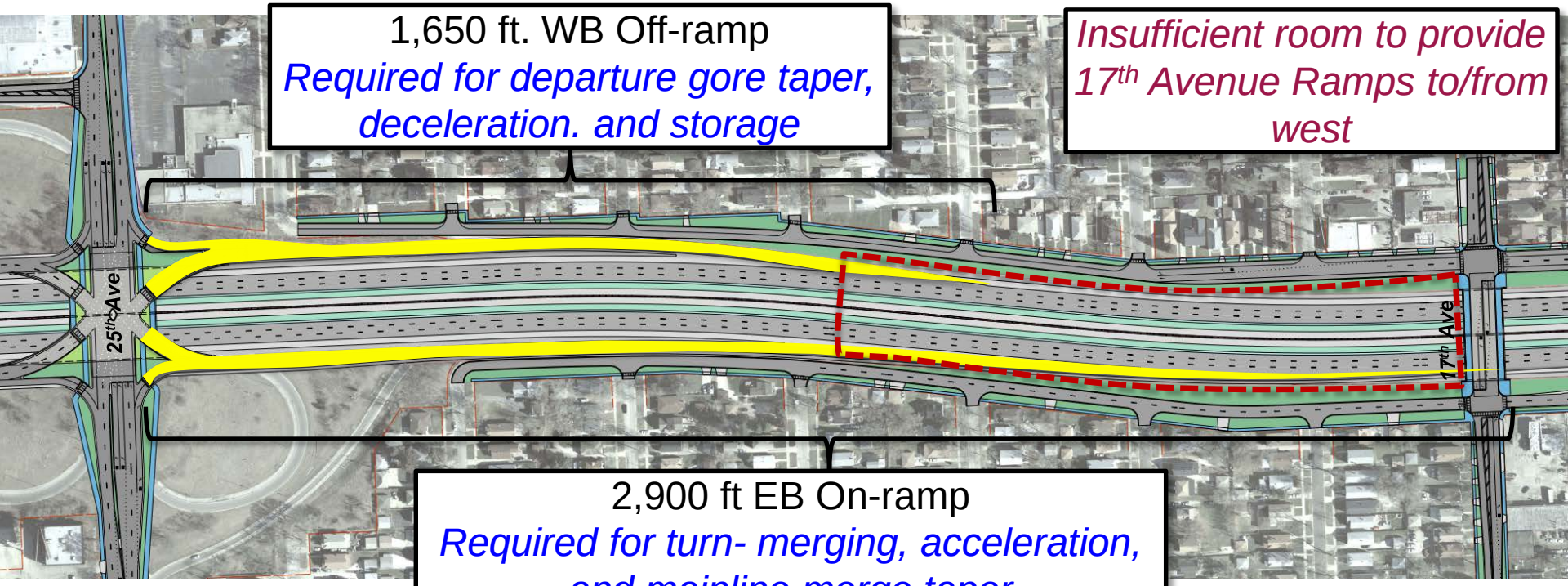


2006-2008, 2011-2013 Data - Crash rates given in crashes per million vehicle miles

25th Avenue & 17th Avenue Ramp Conflicts

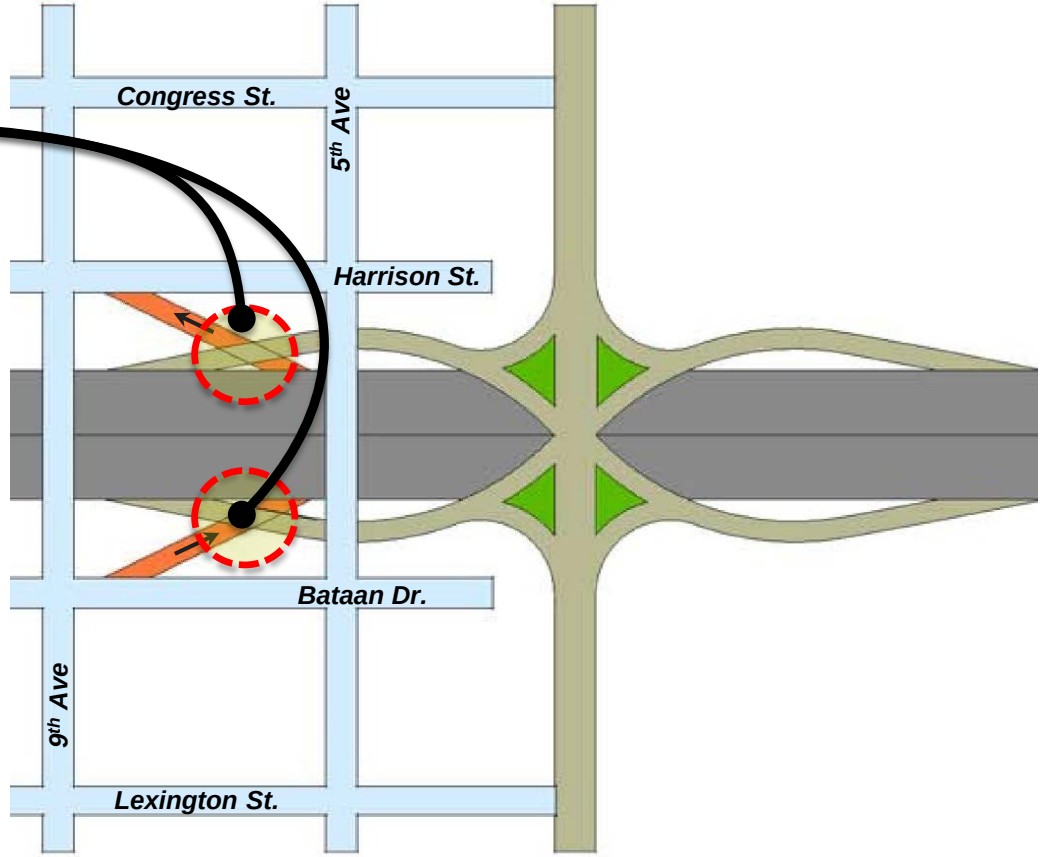


25th Avenue Ramp Design



1st Avenue & 9th Avenue Ramp Conflicts

Proposed 1st Avenue interchange conflicts with existing 9th Avenue Ramps.
Ramps to/from east removed



1st Avenue Ramp Design

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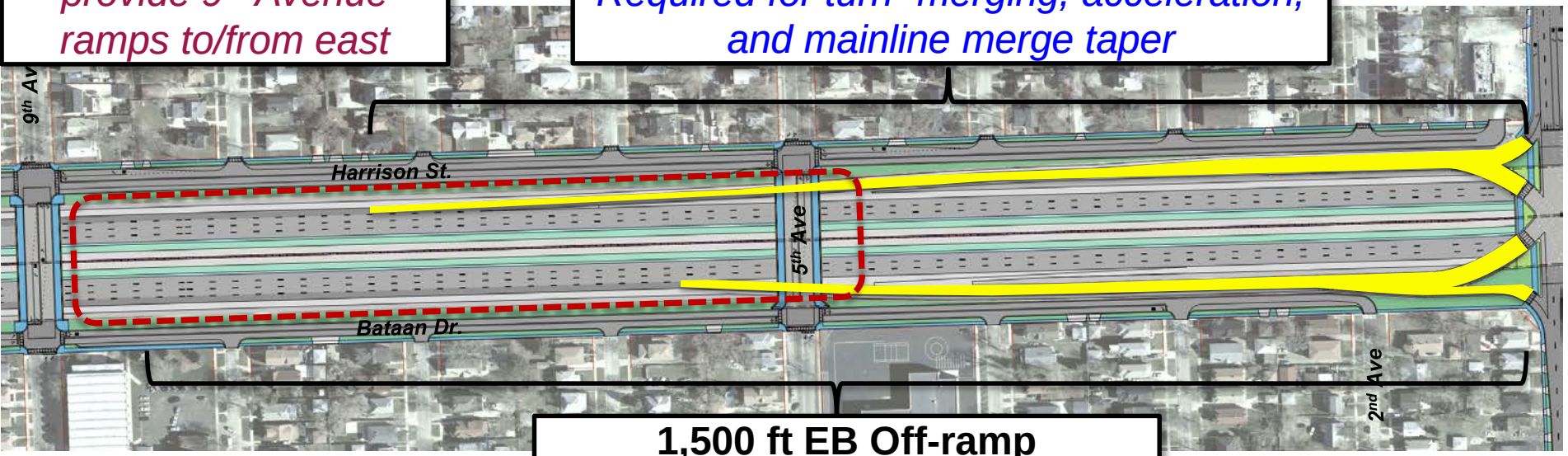
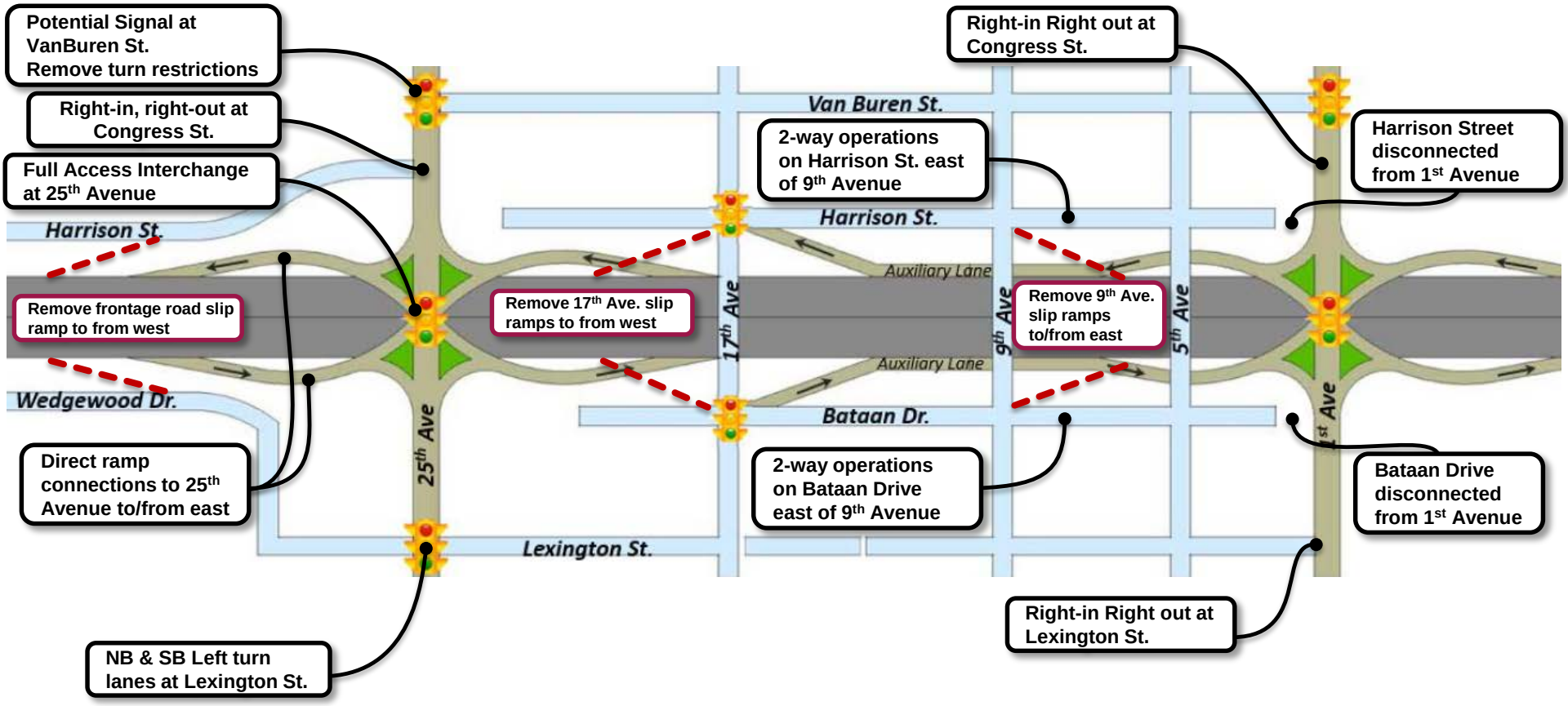
Insufficient room to provide 9th Avenue ramps to/from east

1,900 ft WB On-ramp
Required for turn- merging, acceleration, and mainline merge taper

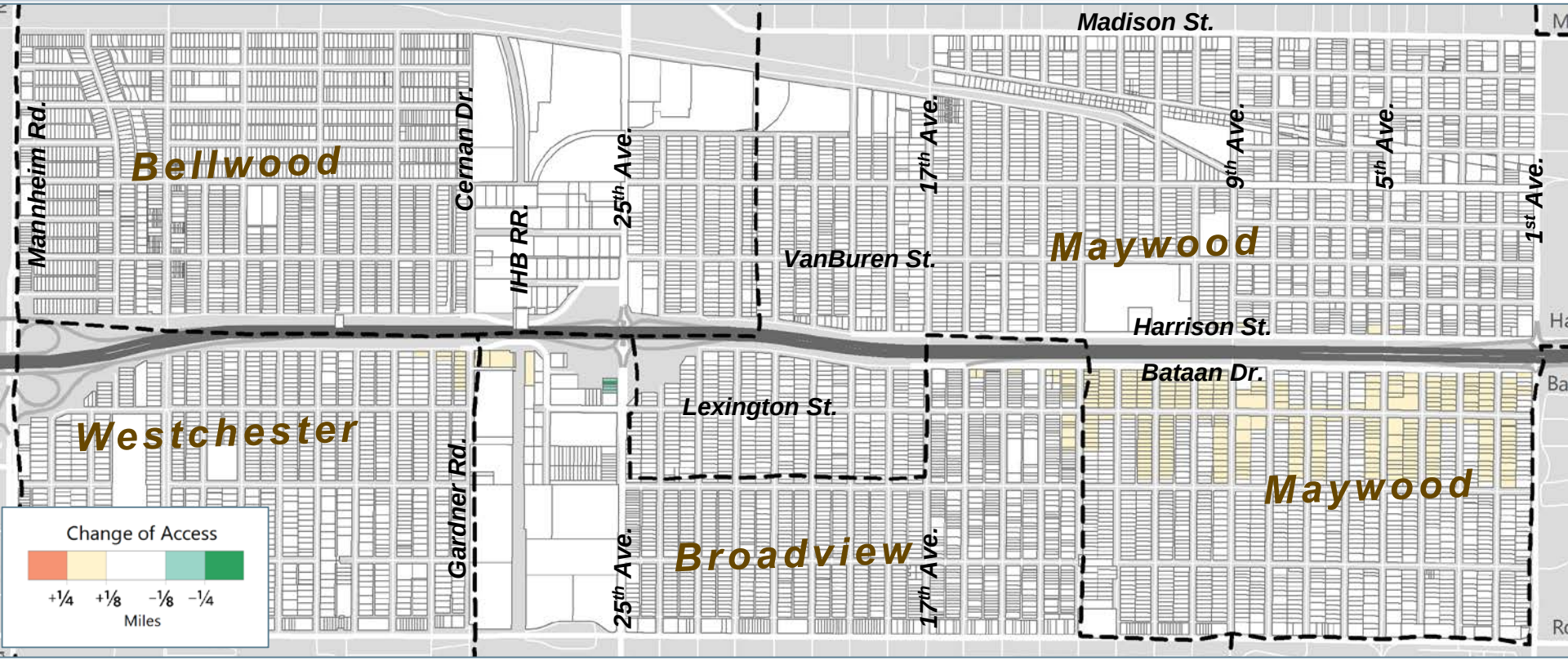


1,500 ft EB Off-ramp
Required for departure gore taper, deceleration. and storage

Summary of Proposed Access Modifications

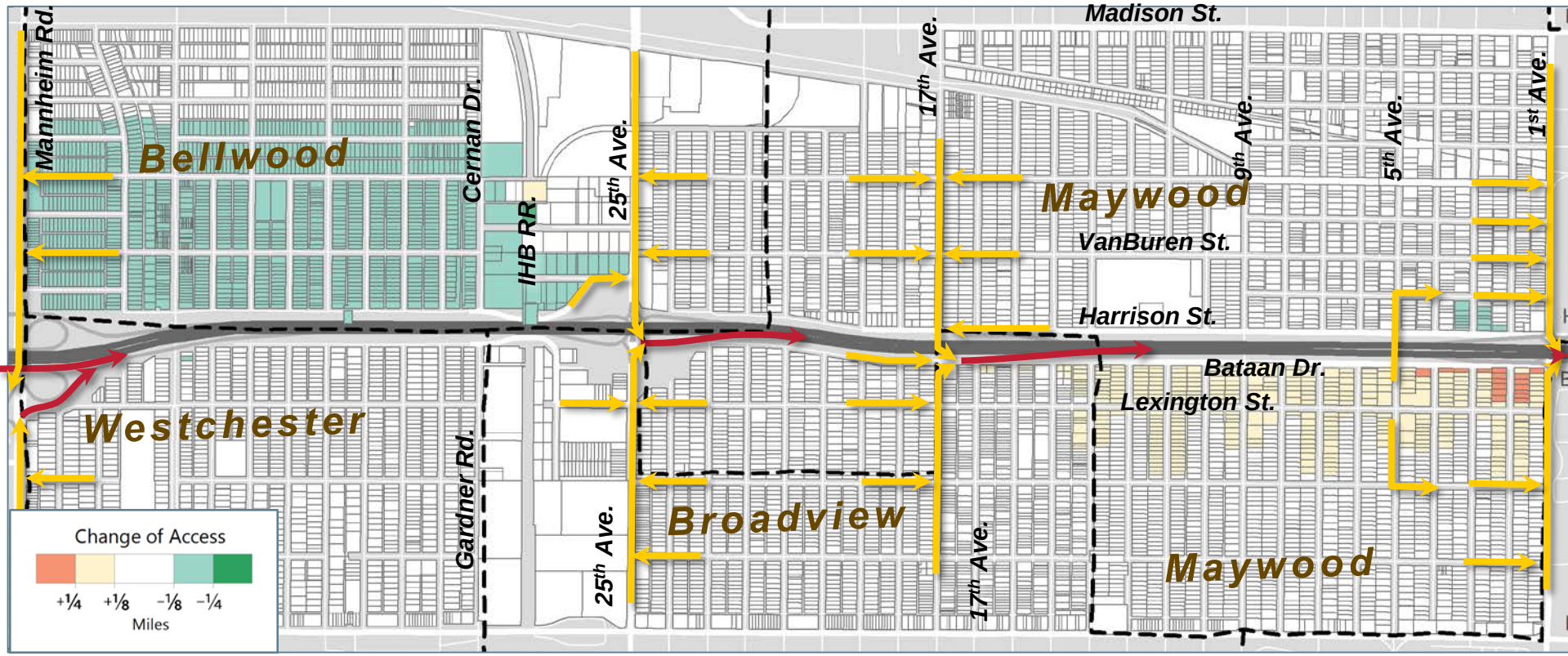


Average Distance Changes – GIS Analysis



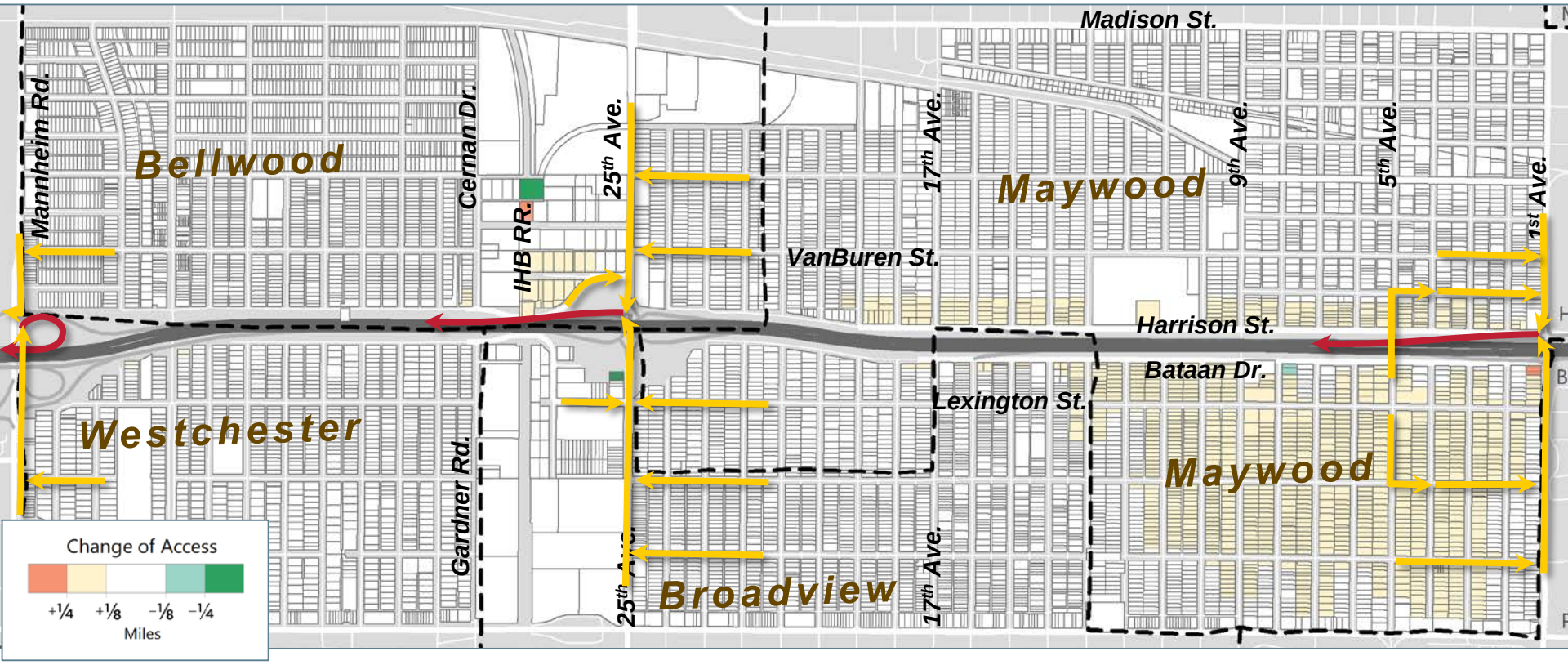
- *Compares shortest travel distance between No-Build and Build.*
- *Change in travel distance calculated to/from I-290 to/from each property (7,400 individual parcels evaluated)*
- *Average distance changes for all directions: Less than 1/10th mile (+79 ft.)*

To Eastbound I-290



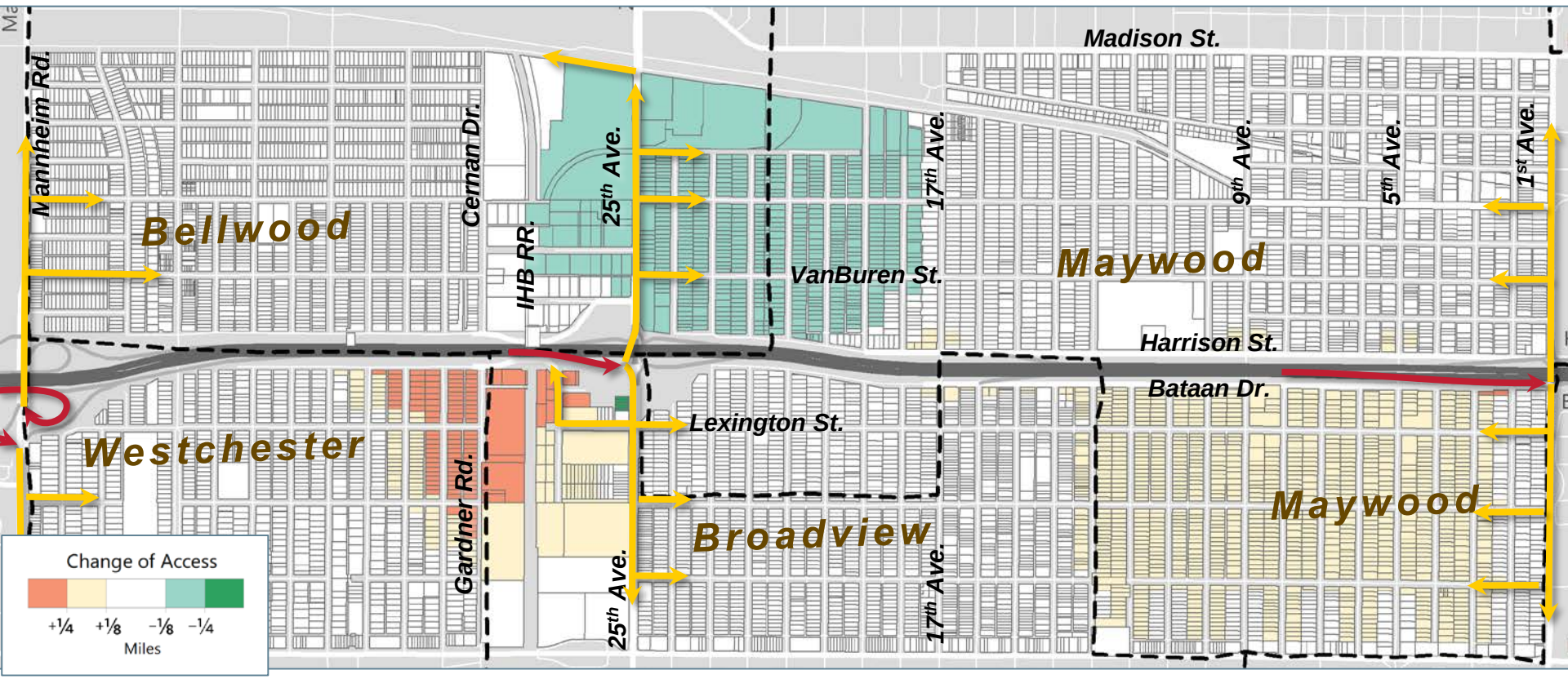
- Distance changes
  - Average: -60ft
  - Maximum increase: 2,100 ft. (0.40mi)
  - Maximum decrease: 1,900 ft. (0.36mi)

To Westbound I-290



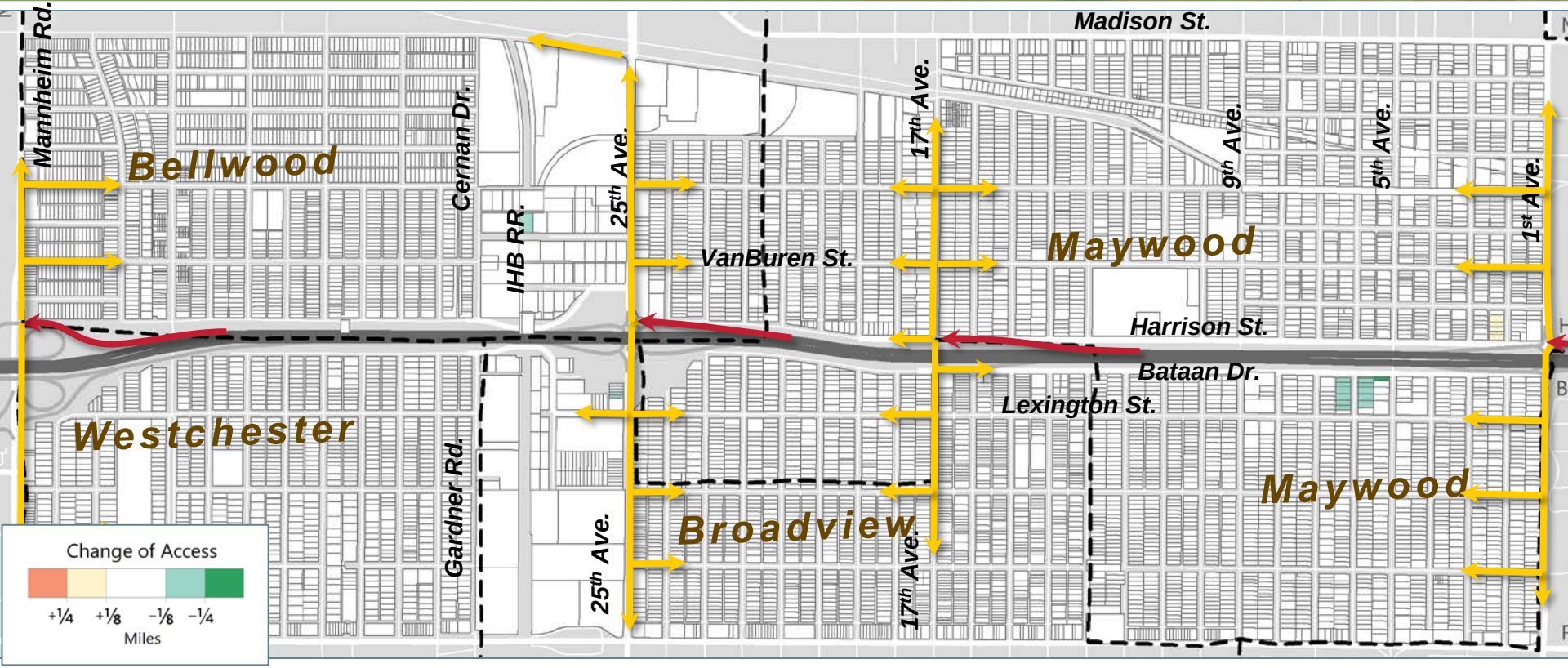
- Distance changes
  - Average: +130ft
  - Maximum increase: 1,900 ft. (0.36mi)
  - Maximum decrease: 1,700 ft. (0.32mi)

Eastbound I-290 to Individual Properties



- Distance changes
  - Average: +50ft
  - Maximum increase: 3,200 ft. (0.60mi)
  - Maximum decrease: 2,300 ft. (0.44mi)

Westbound I-290 to Individual Properties



- Distance changes
  - Average: +184ft
  - Maximum increase: 1,300 ft. (0.25mi)
  - Maximum decrease: 1,400 ft. (0.27mi)

25th Avenue Proposed Access

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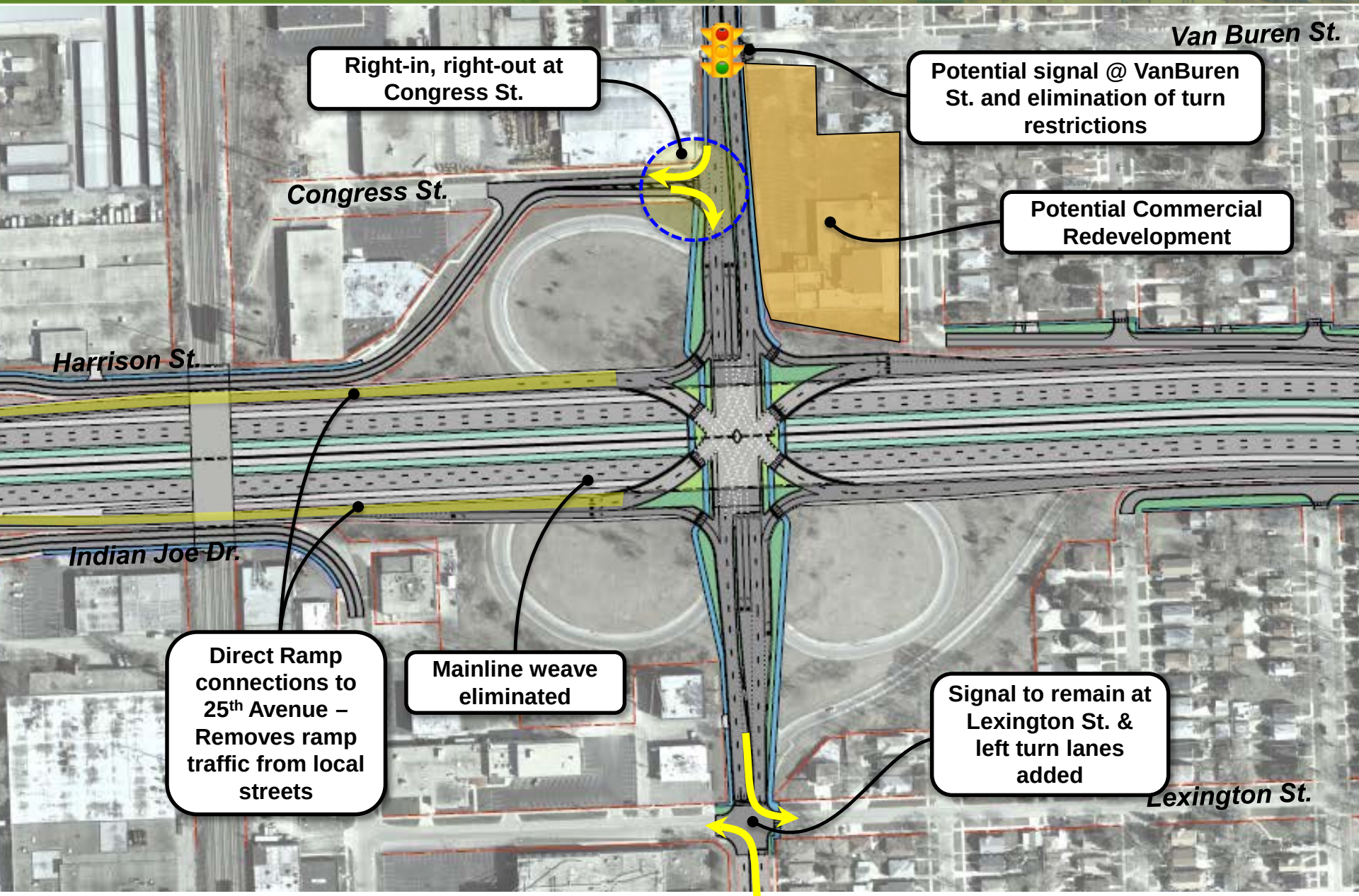
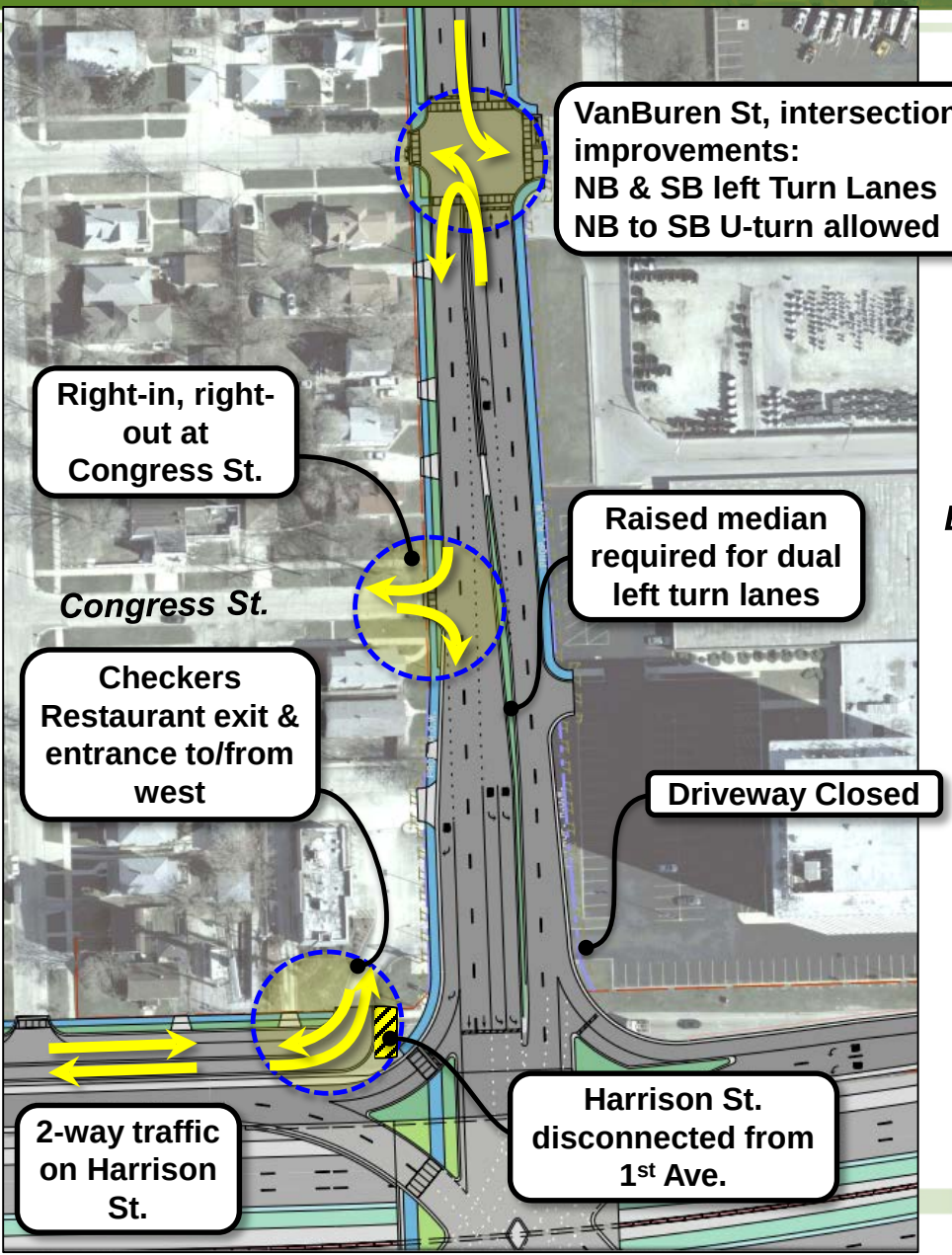
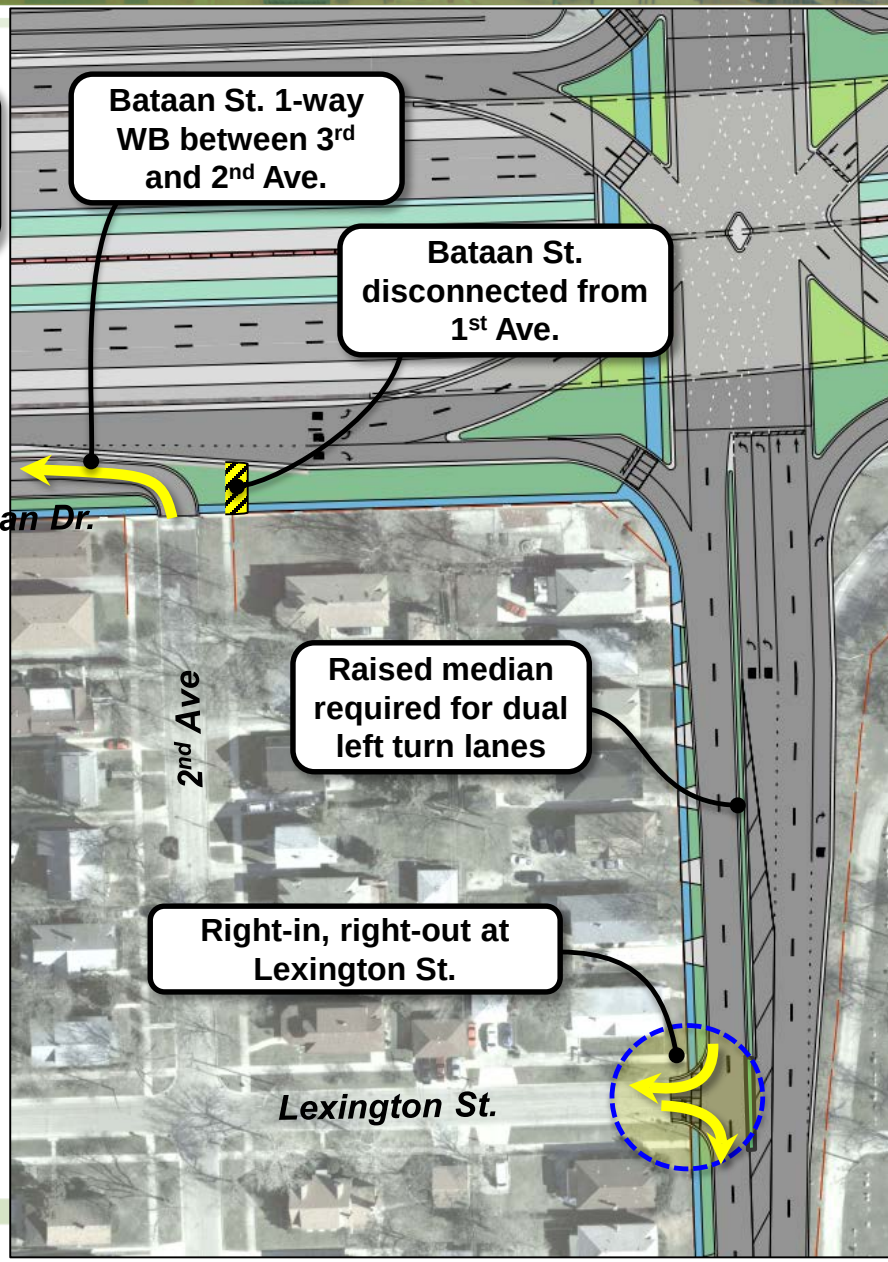


1st Avenue Proposed Conditions – Access Changes

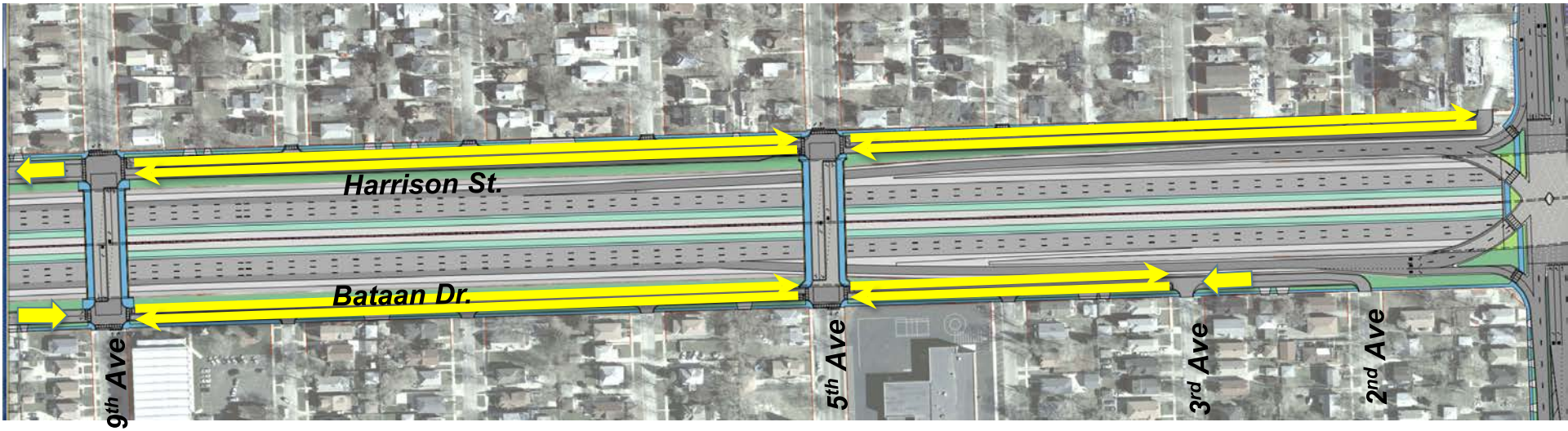
Illinois Department of Transportation





Two-Way Frontage Roads

- Frontage roads converted to 2-way operations between 9th and 3rd/2nd Avenues



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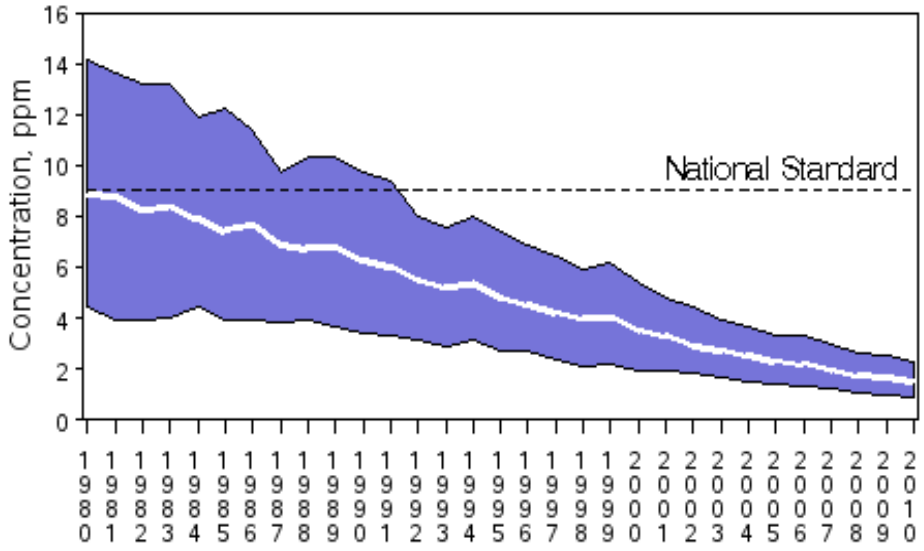
AIR QUALITY

Air Quality Has Been Improving

- USEPA National Ambient Air Quality Standards for 6 pollutants (carbon monoxide, nitrogen dioxide, ozone, particulate matter, sulfur dioxide & lead)
- Significant progress in reducing mobile source emissions (cleaner vehicles, cleaner fuels, inspection & maintenance)

CO Air Quality, 1980 - 2010

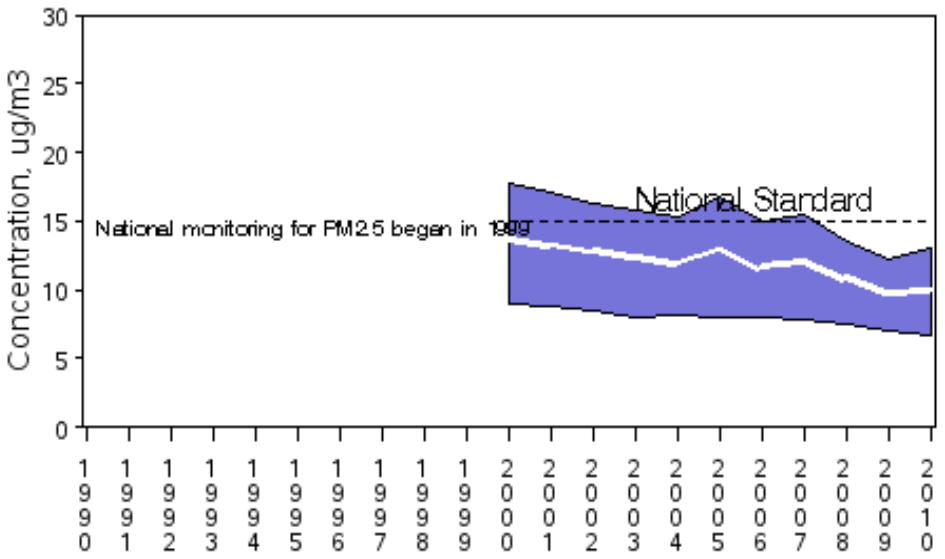
(Based on Annual 2nd Maximum 8-hour Average)
National Trend based on 104 Sites



1980 to 2010 : 82% decrease in National Average

PM2.5 Air Quality, 2000 - 2010

(Based on Seasonally-Weighted Annual Average)
National Trend based on 646 Sites



2000 to 2010 : 27% decrease in National Average

Region-Wide Transportation Air Quality in Conformance

Illinois Department of Transportation

Cook County

- non-attainment area for ozone
- maintenance area for small particulate matter

CMAP Long Range Plan & Program

- region-wide transportation air quality conformity analysis
- region in conformance & under allowable air pollutant budgets
- I-290 Expressway improvements included

Round 3 Alternatives Air Quality Analysis

Illinois Department of Transportation

- Regional air quality sensitivity analysis (2040 tons per day)

Pollutant	No Build	GP	HOV 2+	HOT 3+	HOT 3+ TOLL
Carbon Monoxide	64.78	+0.7%	-0.5%	-0.3%	-0.4%
Nitrogen Dioxide	7.58	+0.2%	-0.1%	-0.1%	-0.6%
Hydrocarbon	3.47	+0.1%	0.0%	-0.1%	0.0%
Particulate Matter (PM10)	4.95	-0.1%	0.0%	-0.3%	-0.4%
Particulate Matter (PM2.5)	0.89	+0.1%	-0.1%	-0.3%	-0.5%

- *No substantial change between Round 3 Build alternatives & No Build alternative because small VMT change (0.5% or less)*

Carbon Monoxide Intersection Sensitivity Analysis

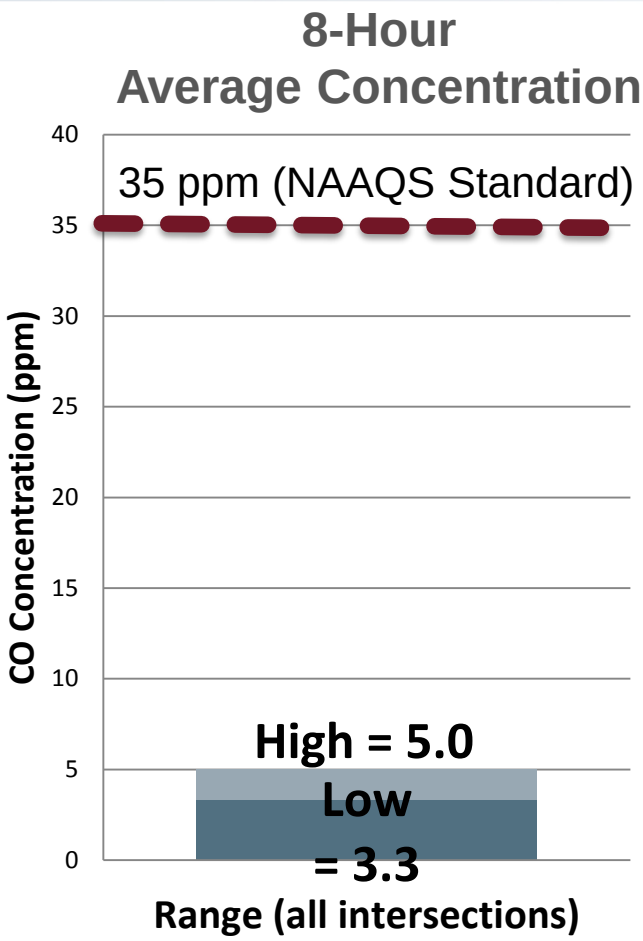
- CO concentration measured in parts per million (ppm)
  - 70 ppm – some health concern
  - 150 - 200 ppm – serious heath concern
- Pass/Fail standard for transportation projects:
  - Established to protect vulnerable populations (children, elderly, etc.)
  - 35 ppm - 1 hour average
  - 9 ppm - 8 hour average

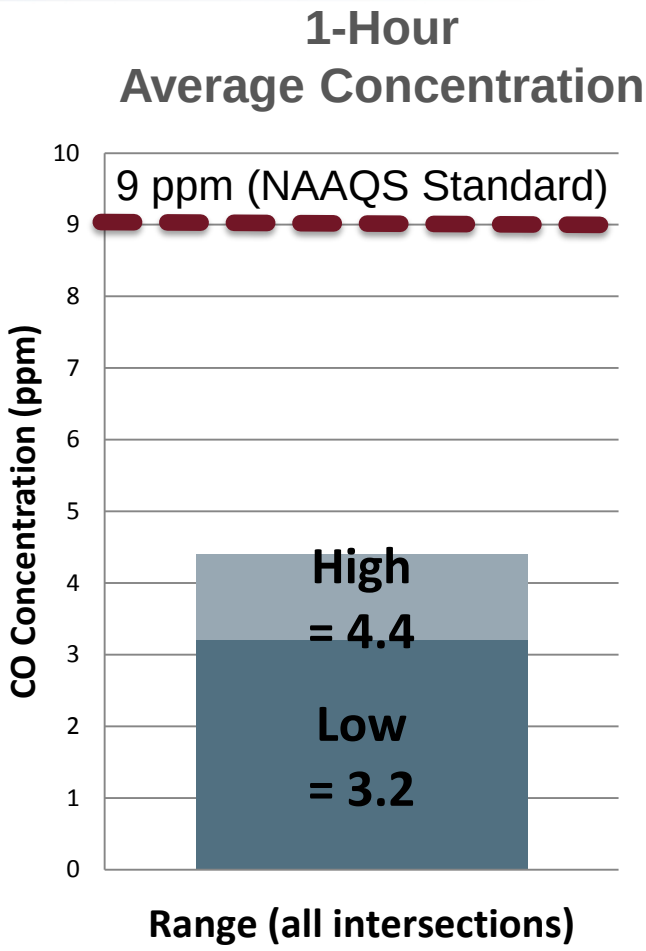
Carbon Monoxide Intersection Sensitivity Analysis

- COSIM threshold for analysis
  - 62,500 ADT or greater design year approach volume
  - All intersections well below traffic threshold: (highest approach volume)

Interchange @ I-290	ADT Approach Volume
25th Avenue	14,000
1st Avenue	15,000
Harlem Avenue	20,000
Austin Boulevard	10,000
Central Avenue	14,000
Laramie Avenue	8,000
Cicero Avenue	13,000

Carbon Monoxide Intersection Sensitivity Analysis





- CO Intersection sensitivity analysis shows that all intersections well below CO standards

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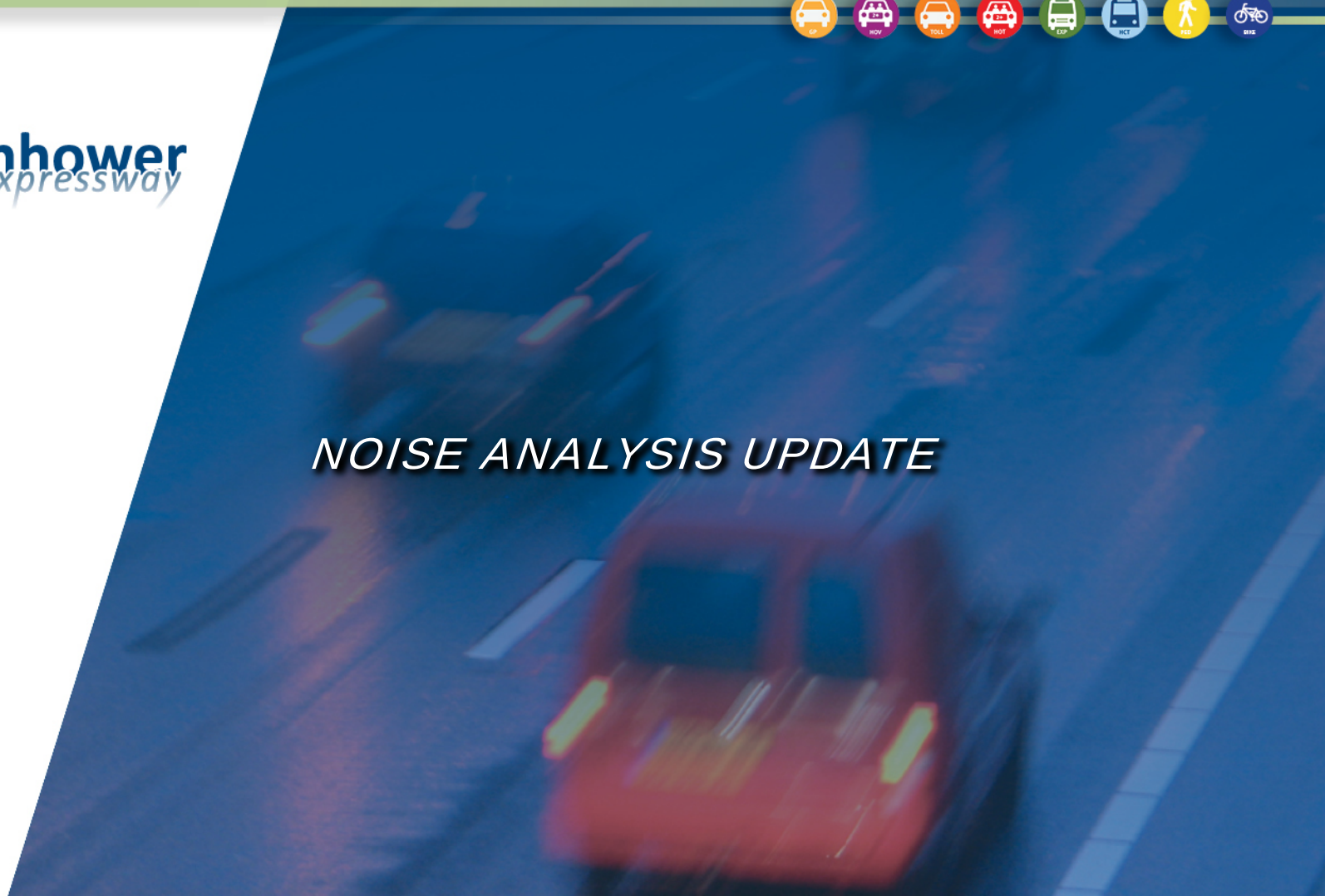
NOISE ANALYSIS UPDATE



Traffic Noise

- Traffic noise is predicted by FHWA Traffic Noise Model, validated with field measurements
- Noise receptors studied for sensitive land uses

Noise Abatement Criteria (NAC)

- Category A: Serene lands - rarely applies. (Tomb of the Unknown Solider)
- Category B: Residential
- Category C: Hospitals, schools, places of worship, parks
- Category D*: Hospitals, libraries, places of worship, institutions, schools
- Category E: Hotels, offices, restaurants
- Category F: Agricultural, industrial, retail, utilities
- Category G: Undeveloped lands

*Interior noise, to be studied only after exterior is studied, or if noise abatement is not feasible and reasonable

INTERIOR vs EXTERIOR NOISE

- IDOT and FHWA stipulate that outdoor areas of frequent human use be given primary consideration
- Interior noise for private residences not studied, as that analysis focuses on noise levels interfering with outdoor conversations

"Only consider the interior levels at these land uses after fully completing an analysis of any outdoor activity areas or determining that exterior abatement measures are not feasible or reasonable."

-- FHWA's *Highway Traffic Noise: Analysis and Abatement Guidance*

Common Noise Levels

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72 dB(A)
NAC
*Category **E***

67 dB(A)
NAC
*Category **B** & **C***

dB(A)	Examples
90	Food blender @ 3 feet, freight train at 100 feet
80	
70	
60	Dishwasher in next room, large business office
50	
40	Library. 45dB(A) – quiet urban nighttime
30	
20	
10	
3	Threshold of human hearing

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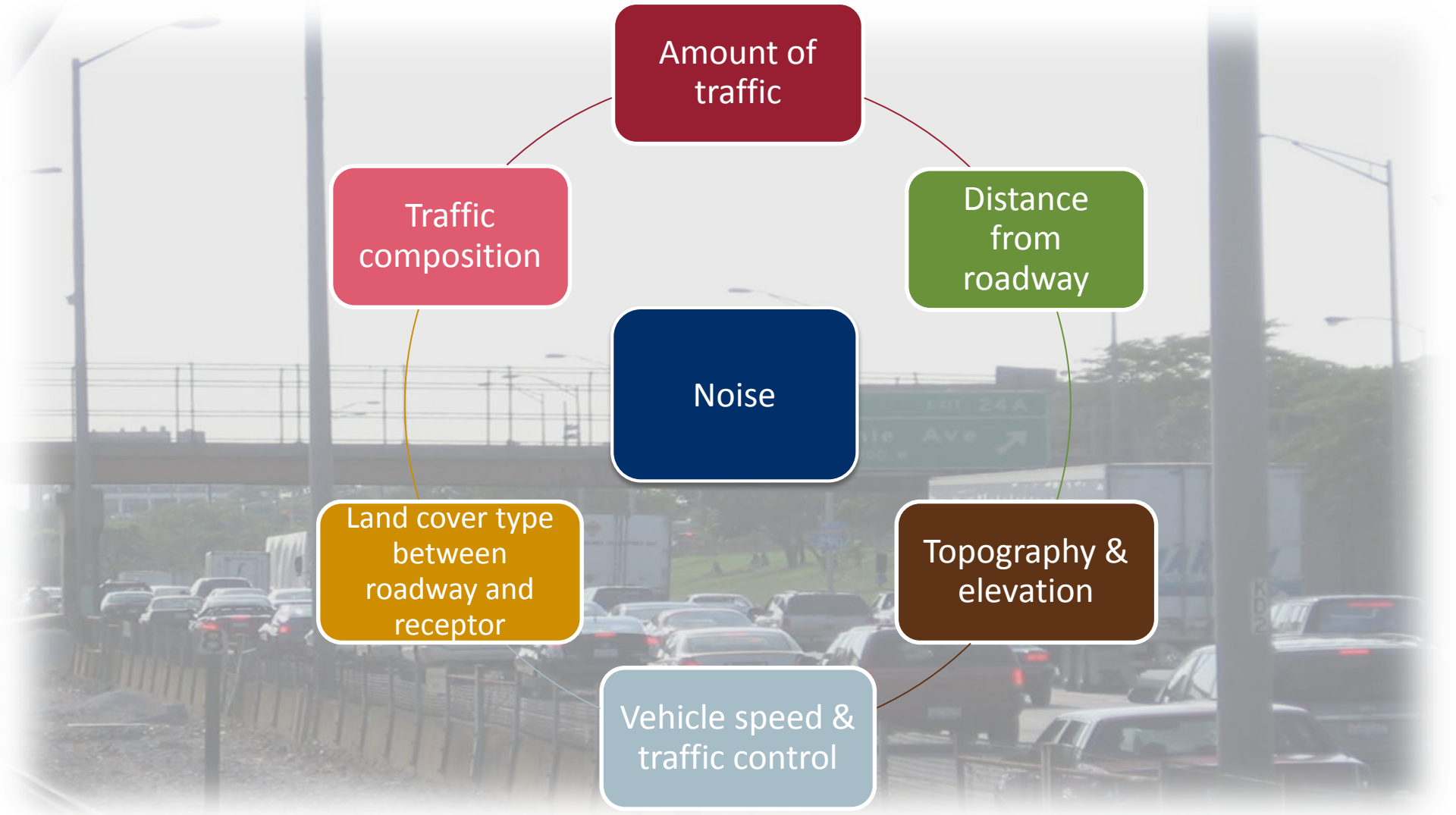
What Can Affect Traffic Noise Levels?



Existing v. No Build Noise Levels

Municipality	Studied I-290 Noise Receptors*	Receptors with Existing Levels Higher than NAC	Receptors with 2040 No Build Levels Higher than NAC
Hillside	14	6 (43%)	7 (50%)
Westchester	6	0 (0%)	0 (0%)
Bellwood	14	9 (64%)	9 (64%)
Broadview	3	2 (67%)	2 (67%)
Maywood	26	21 (81%)	22 (85%)
Forest Park	16	15 (94%)	15 (94%)
Oak Park	48	35 (73%)	36 (75%)
Chicago	161	132 (82%)	136 (84%)

Noise – Next Analysis Steps

- Noise Abatement Analysis – CAG #21
  - Traffic Noise Impacts
  - Reasonable and feasible wall locations
    - Wall heights and locations
    - Is a wall constructible?
    - Is a wall feasible (5 dB(A) reduction)?
    - Is a wall reasonable (8 dB(A) reduction and benefit/cost)?
  - Viewpoints Solicitation

Viewpoints Solicitation

- Response goal of 1/3 of benefited receptors per proposed barrier
  - *If 50% of votes for a barrier are in favor, the proposed abatement measure will be likely to be implemented*
- First row receptors
  - Two votes
- Rental properties
  - One vote for tenant, one vote for owner (per unit)

Noise Wall Outreach and Viewpoints Survey

- **Noise wall information meetings**
  - 3 locations – October
  - Renderings
  - Benefitted residents invited, general public welcome
- **Viewpoints survey**
  - Benefitted receptors only

Viewpoints Example Letter and Form

FILE COPY

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Division of Highways/Region One / District One
201 West Center Court/Schaumburg, Illinois 60196-1096

Project and Environmental Studies
I-55 at Weber Road
Weber Road from 135th Street/Romeo Road to 119th Street/Rodeo Drive
Will County

November 8, 2013

Re: Viewpoint Solicitation – First Notice
Noise Barrier Implementation

«fullname»
«Address1»
«Address2» «zip»

Dear Property Owner or Resident:

The Illinois Department of Transportation (Department) in cooperation with Will County Department of Highways (County) are currently engaged in preliminary engineering and environmental studies (Phase I) for Weber Road from 135th Street/Romeo Road to 119th Street/Rodeo Drive including the Weber Road interchange at I-55. The proposed improvements include reconstruction of the existing diamond interchange of I-55 at Weber Road to a diverging diamond interchange and widening of Weber Road from four lanes to six lanes. The I-55 at Weber Road improvements are included in the Department's FY 2014-2019 Proposed Multi-Modal Transportation Improvement Program contingent upon the sale of approximately 200 acres of unused property currently owned by the Illinois Department of Corrections as stipulated in Public Act 95-0019, and contingent upon local financial participation for improvements to adjacent highway facilities under local jurisdiction.

As part of the Phase I Study, traffic noise was evaluated for the proposed roadway improvements. The traffic noise analysis indicated that noise levels in your area warrant the consideration of noise abatement. Based on the noise abatement analysis, a noise wall approximately 10 feet high is warranted along the west side of Weber Road from approximately 300 feet north of Rodeo Drive to just north of Countryside Drive. See the enclosed figure for the location of the proposed noise wall. The proposed wall in your area is labeled as "B1B".

The Department is requesting your viewpoint regarding your desire for the noise wall proposed near your location. This letter has been provided to all property owners and tenants who would "benefit" from a noise barrier.

Viewpoint Form

I-55 at Weber Road
Weber Road from 135th Street/Romeo Road to 119th Street/Rodeo Drive
Will County
Wall – B1B

Please provide your response by December 9, 2013.

I am in favor of a noise barrier:

__ Yes

__ No

Name: _____

Signature: _____

Owner: _____ OR Tenant: _____

Address: _____

_____

Date: _____

Comments:

_____

_____

_____

_____

Noise – Next Steps

- Noise Abatement Analysis – CAG #21
  - Traffic Noise Impacts
  - Reasonable and feasible wall locations
- Noise Forums for Viewpoints Solicitations
- Viewpoints Solicitation Surveys

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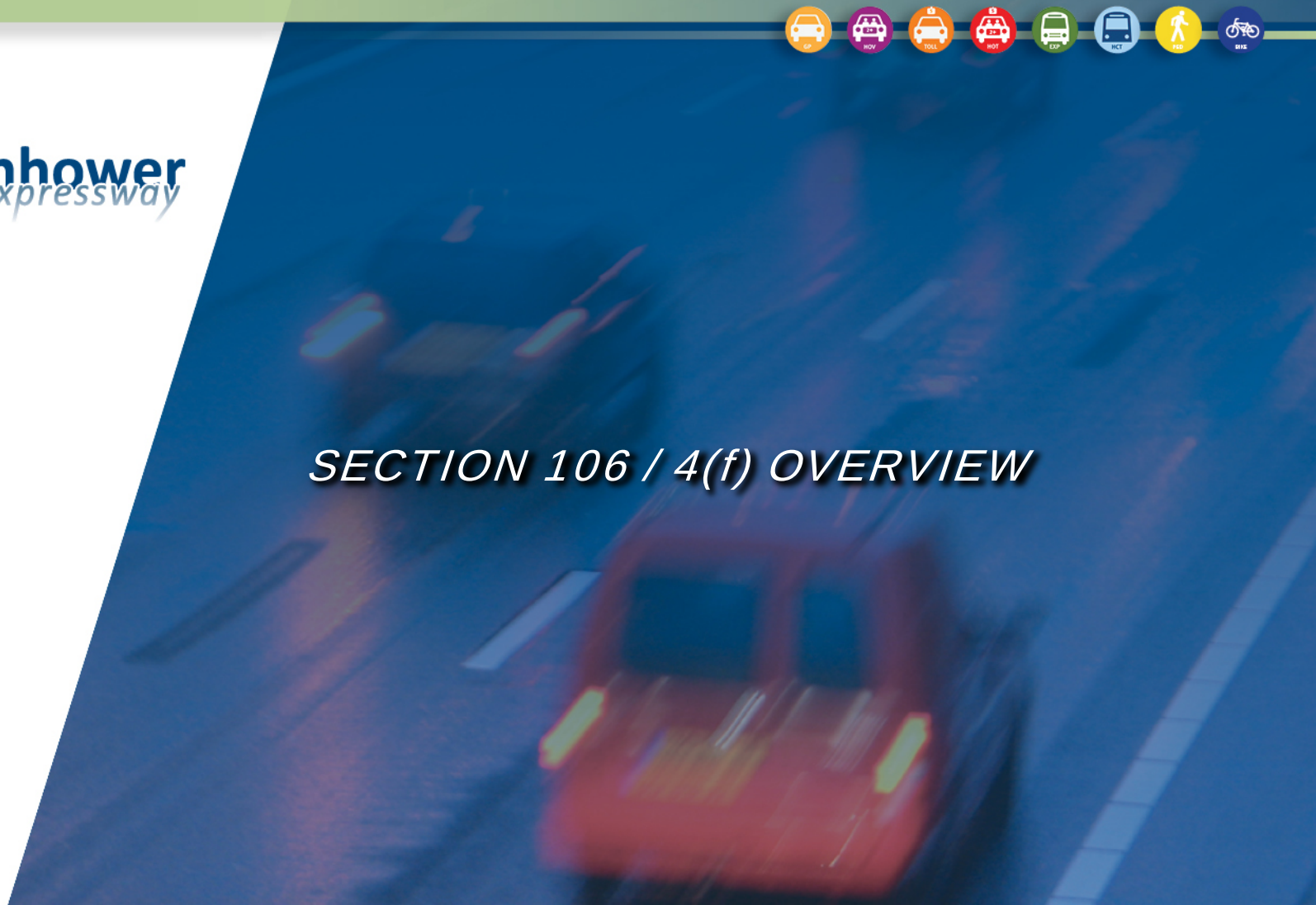
Eisenhower expressway

SECTION 106 / 4(f) OVERVIEW



Section 106 Overview

- Step 1 – Identify historic properties
  - Data collection
  - First coordination point with Agency/Consulting Parties
- Step 2 – Address and resolve adverse affects
  - Direct or indirect impacts
  - Adverse effects – modify project
  - Unresolved issues – additional consultation
  - Second coordination point with Agency/Consulting Parties

Section 106 Historic Properties Identification in Area of Potential Effects

- Area of Potential Effects (APE): area within which a project may affect historic properties; project study area
- Historic properties: those listed in or eligible for listing in National Register of Historic Places (NRHP) for historic and/or architectural significance and retaining integrity
- Coordination with FHWA, SHPO, IDOT, and consulting parties to identify historic properties

Oak Park Conservatory – NRHP-Listed

Section 4(f) Applicability Criteria

For Park and Recreation Areas:

- Publicly owned
- Open to public
- Major purpose – park or recreational use
- Significant use for recreation

Park and Recreation Areas adjacent to I-290:

- Forest Park: Veterans Park, Dog Park, and the Community Garden
- Oak Park: Rehm Park, Barrie Park, and Wenonah Park
- Chicago: Columbus Park, Park No. 422, and Horan Park

Section 4(f) Considerations

FHWA may NOT approve the use of a publicly owned park, recreation area, or wildlife/waterfowl refuge, or a publicly or privately owned historic site, unless:

- *There is no feasible and prudent alternative to such use, and*
- *The project includes all possible planning to minimize harm.*

OR…

- *The use is determined to have only a de minimis impact on the Section 4(f) resource.*

49 USC 303 as amended

Section 4(f) Applicability Criteria

For Significant Historic Properties:

- Historic properties
  - On or eligible for the National Register
- Archaeological sites
  - NR eligible and important for preservation in place rather than for data recovery
- Historic districts
  - Individual historic, contributing or integral element
- Local historic property
  - As determined significant by FHWA

23 CFR 771.135(e)

Section 4(f) Use

- When land is permanently incorporated into a transportation facility
- Temporary occupancy that is adverse in terms of the 4(f) purpose
- Constructive Use:
  - *Proximity impacts*
  - *No actual incorporation of land*
  - *Defined by impact where…the activities, features, or attributes that qualify the property as a Section 4(f) resource are…substantially impaired.*

23 CFR 771.135 (p)(2)

Section 106/4(f): Where Are We Now?

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Park and Recreation Areas adjacent to I-290:

- Forest Park: Veterans Park, Dog Park, and the Community Garden
- Oak Park: Rehm Park, Barrie Park, and Wenonah Park
- Chicago: Columbus Park, Park No. 422, and Horan Park

- TE at Columbus Park (for bike path extension)
- No permanent ROW acquisition required
- Noise analysis at parks
- Existing vs. future

Environmental Justice

Identified needs affecting all income groups

Alternatives Considered

- All alternatives multimodal
- Access changes – minimal impact
- CTA Vision Study
- Access across the corridor
- Wider sidewalks
- Access to transit
- Carpool options

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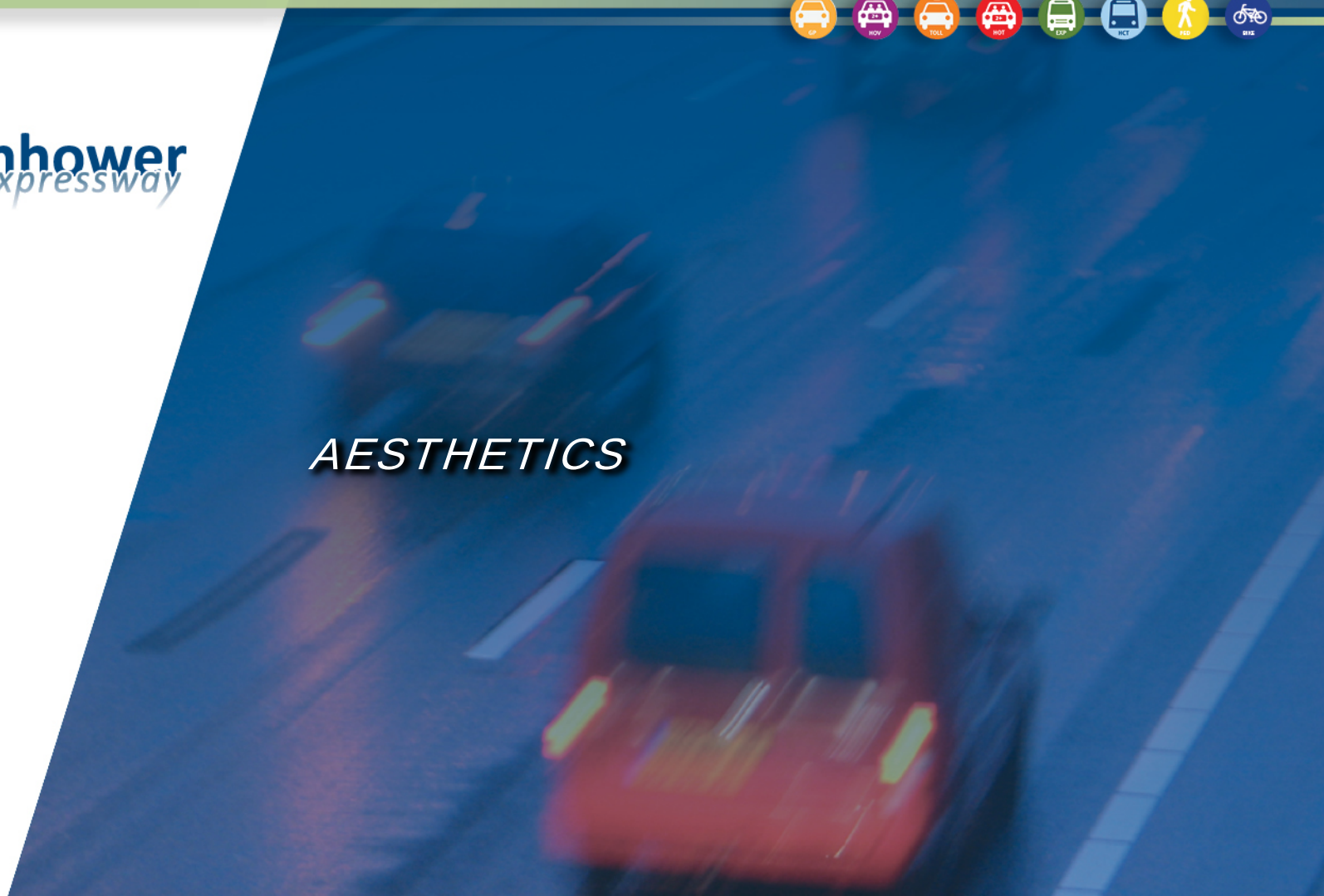
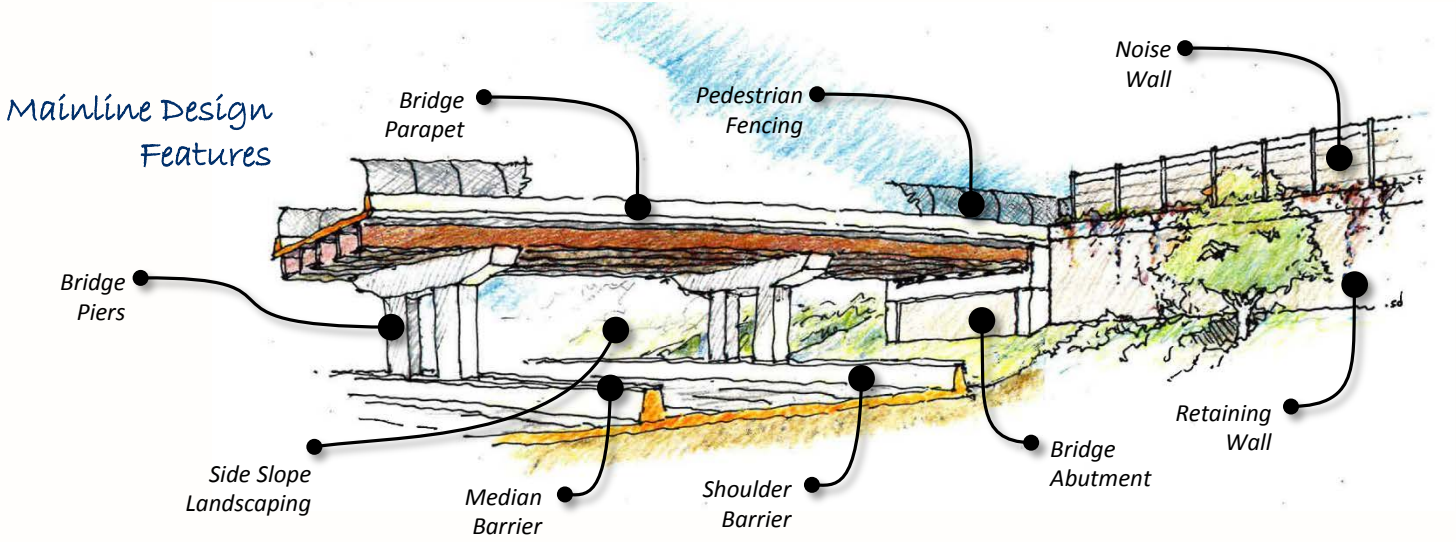
Eisenhower expressway

AESTHETICS



Mainline Aesthetic Overview



Crossroad Aesthetic Features

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Perspectives: expressway traveler and local community

- Parapet/formliner/fencing
- Pedestrian fencing/railing
- Sidewalks/trails
- Traffic signals
- Lighting
- Non-standard features
  - street furniture, bike racks, gateway
- Noise wall
- Funding

Create unified theme across corridor and cross streets

Illinois Department of Transportation

Eisenhower expressway

NEXT STEPS

Next Steps

- Community/Agency Meetings
- CAG #21 – September 2015
  - Round 3 Wrap Up
  - Noise Walls
  - Aesthetics
  - ITS Concepts
- Noise Wall Forums – October
- CAG #22
- DEIS – November 2015 (tentative)
- Public Hearing – December 2015 (tentative)