

Barrington Road

Mundhank Road to IL 62

Community Advisory Group Meeting #2

December 7, 2016

Meeting Agenda

Welcome / Introductions

1

Study Status

2

CAG Meeting #1 Review

3

Problem Statement

4

Evaluation of Problem Statement

5

Proposed Improvements

6

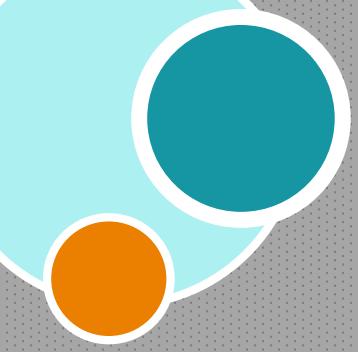
Next Steps

7

AGENDA

- ☕ 5 Minute Break

-
-



Welcome / Introductions

Project Team

Illinois Department of Transportation

Kimberly Murphy, P.E.
Consultant Studies Unit Head

Lori Brown, P.E.
Project Manager

Scott Czaplicki, P.E.
Project Manager

Ken Yang, P.E.
Project Engineer



**Illinois Department
of Transportation**

Burns & McDonnell Engineering

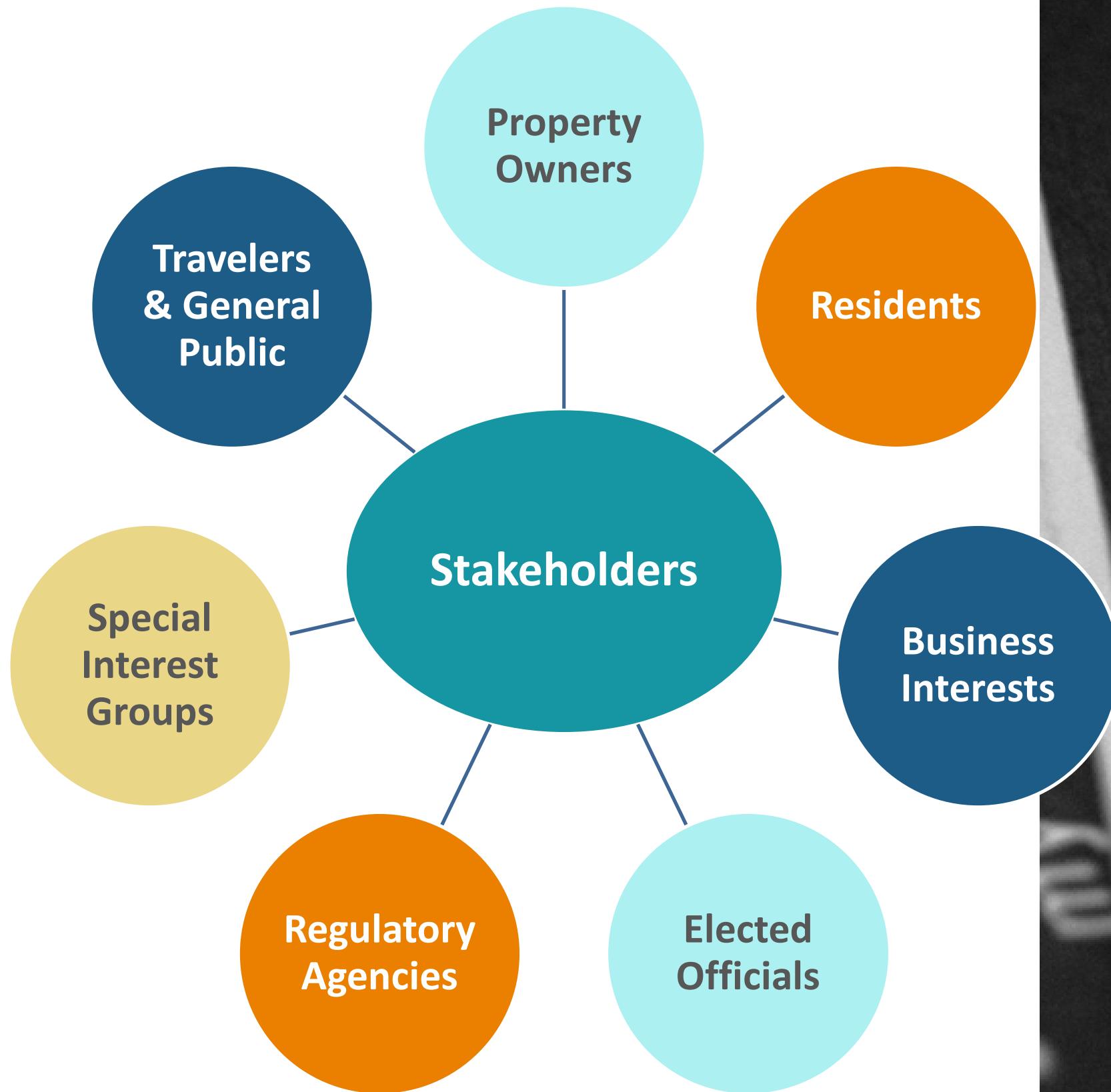
Mike Mack, P.E.
Project Manager

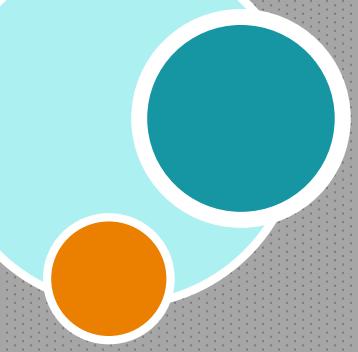
Jennifer Morales, P.E.
Project Engineer/
Public Involvement

Jenny Allen
Design Engineer

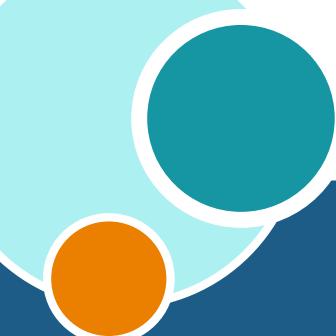
BURNS & MCDONNELLSM

CAG Members





Study Status



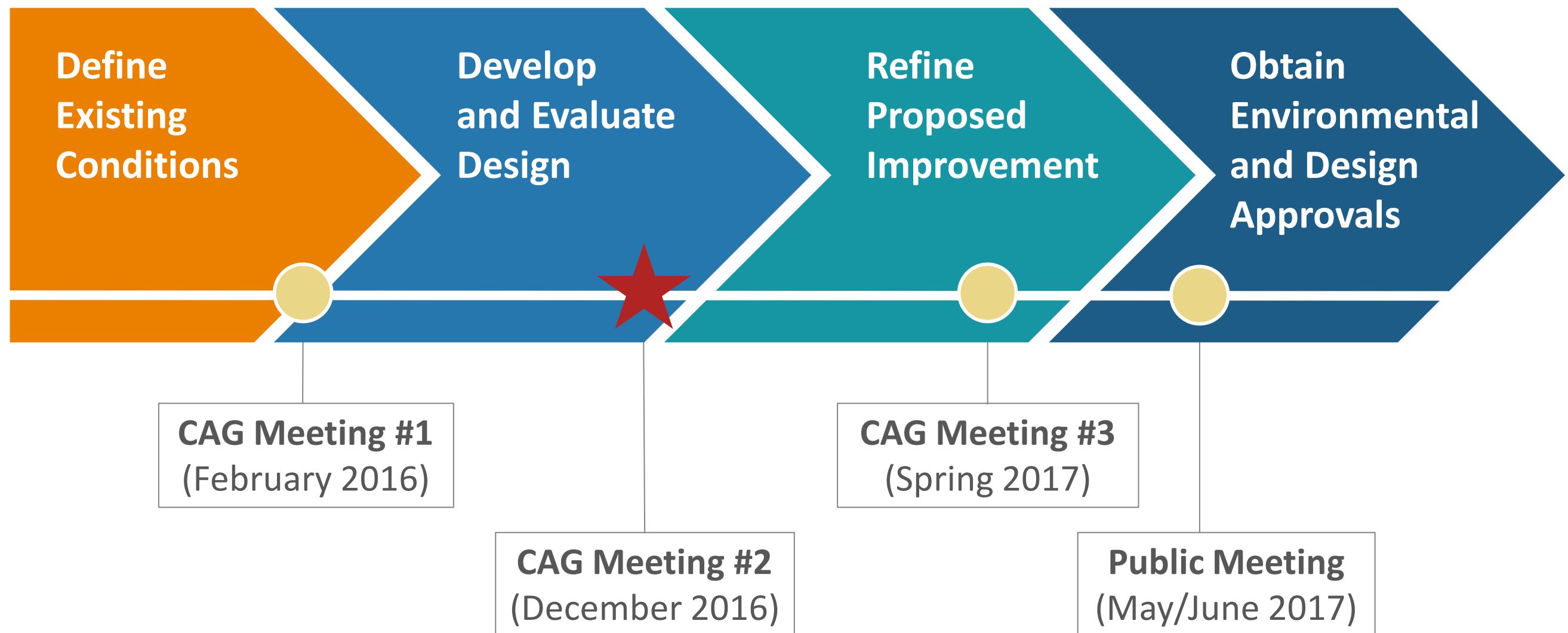
IDOT Project Process



 *We are here*

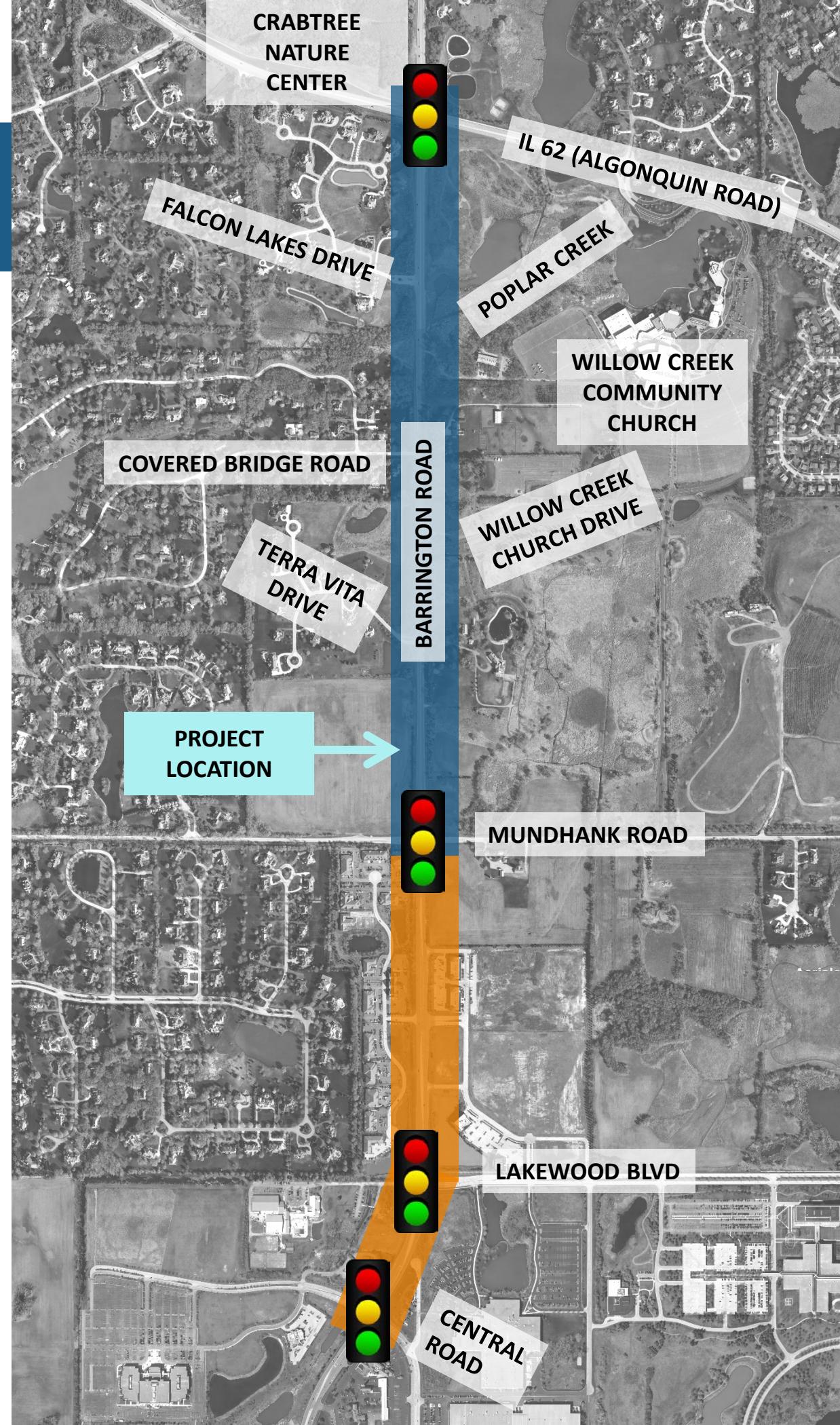
**This improvement is included in the Department's FY 2017-2022 Proposed Highway Improvement Program. Our current engineering efforts are targeted to enable a contract letting in the middle years of our current multi-year program contingent upon plan readiness, land acquisition, and funding availability through our future annual legislative appropriations.*

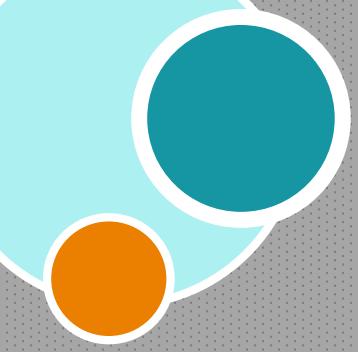
Phase I Study Process



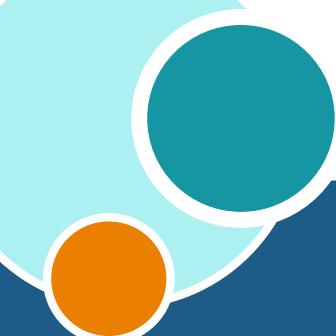
Project Location

- ✓ Barrington Road, Mundhank Road to IL 62
- ✓ Strategic Regional Arterial (SRA) Routes
 - SRA Routes support regional expressway system and are designed to move traffic
- ✓ 1.3 mile study corridor
- ✓ Average Daily Traffic
 - Barrington: 20,000 vehicles per day
 - IL 62: 23,000 vehicles per day
 - Mundhank: 2,000 vehicles per day
- ✓ 2 lane roadway (1 lane in each direction)
- ✓ Residential, institutional, commercial, agricultural land use
- ✓ Crabtree Nature Center
- ✓ Poplar Creek
- ✓ Extension of bike path south to Central Road





CAG Meeting #1 Review

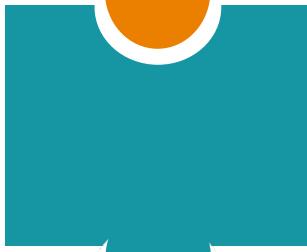


CAG Meeting Summary



Purpose of Study

Understand project and purpose of study



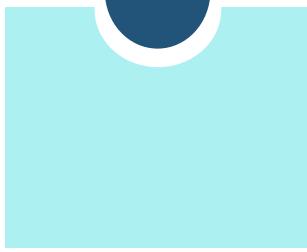
IDOT Planning Process and Public Involvement

CSS/CAG: Where do you fit in?



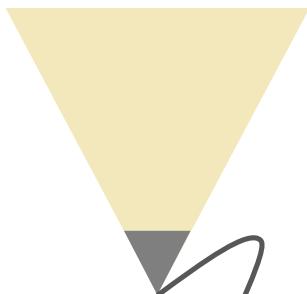
Existing Conditions

Understand preliminary studies and data



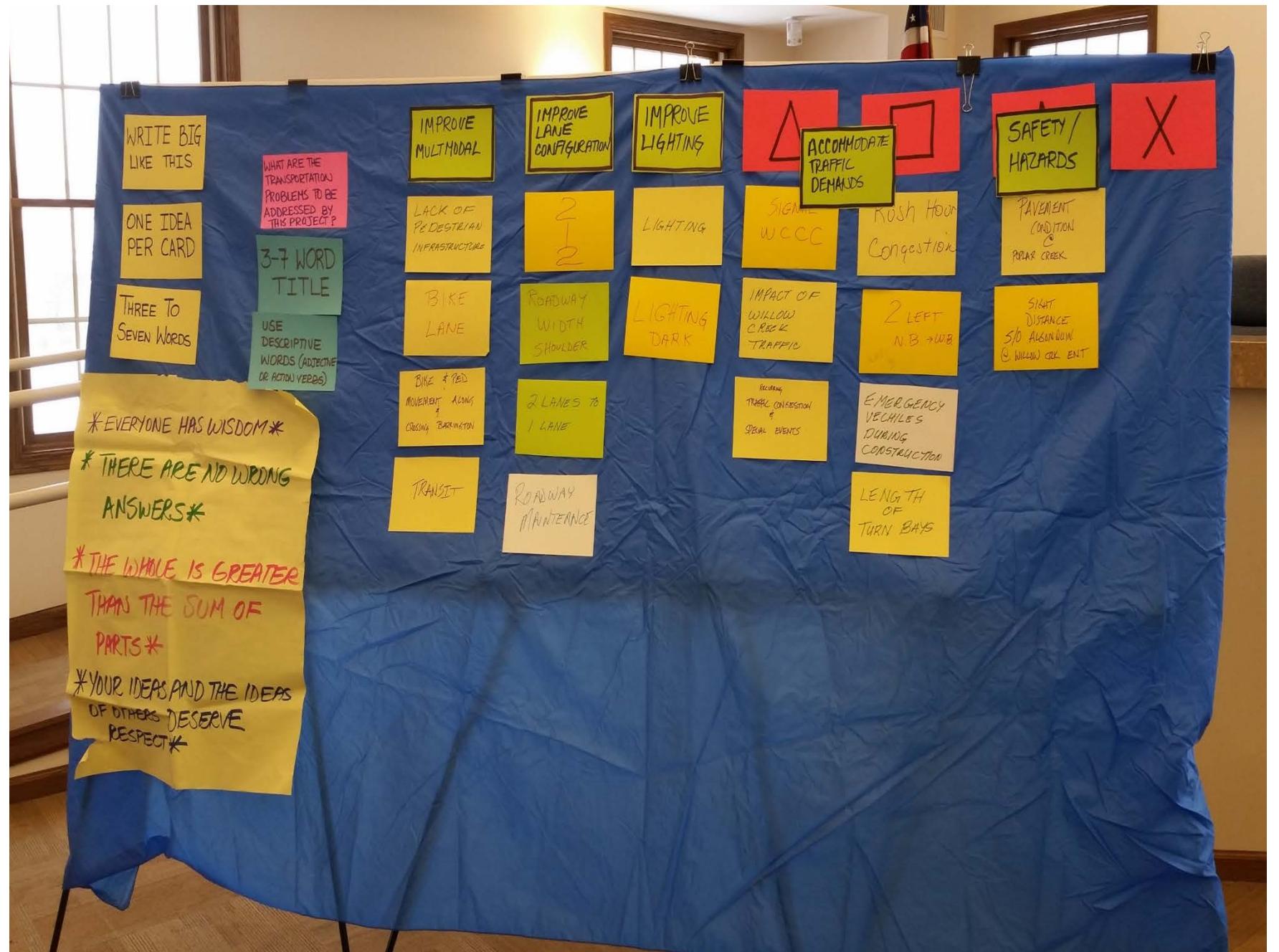
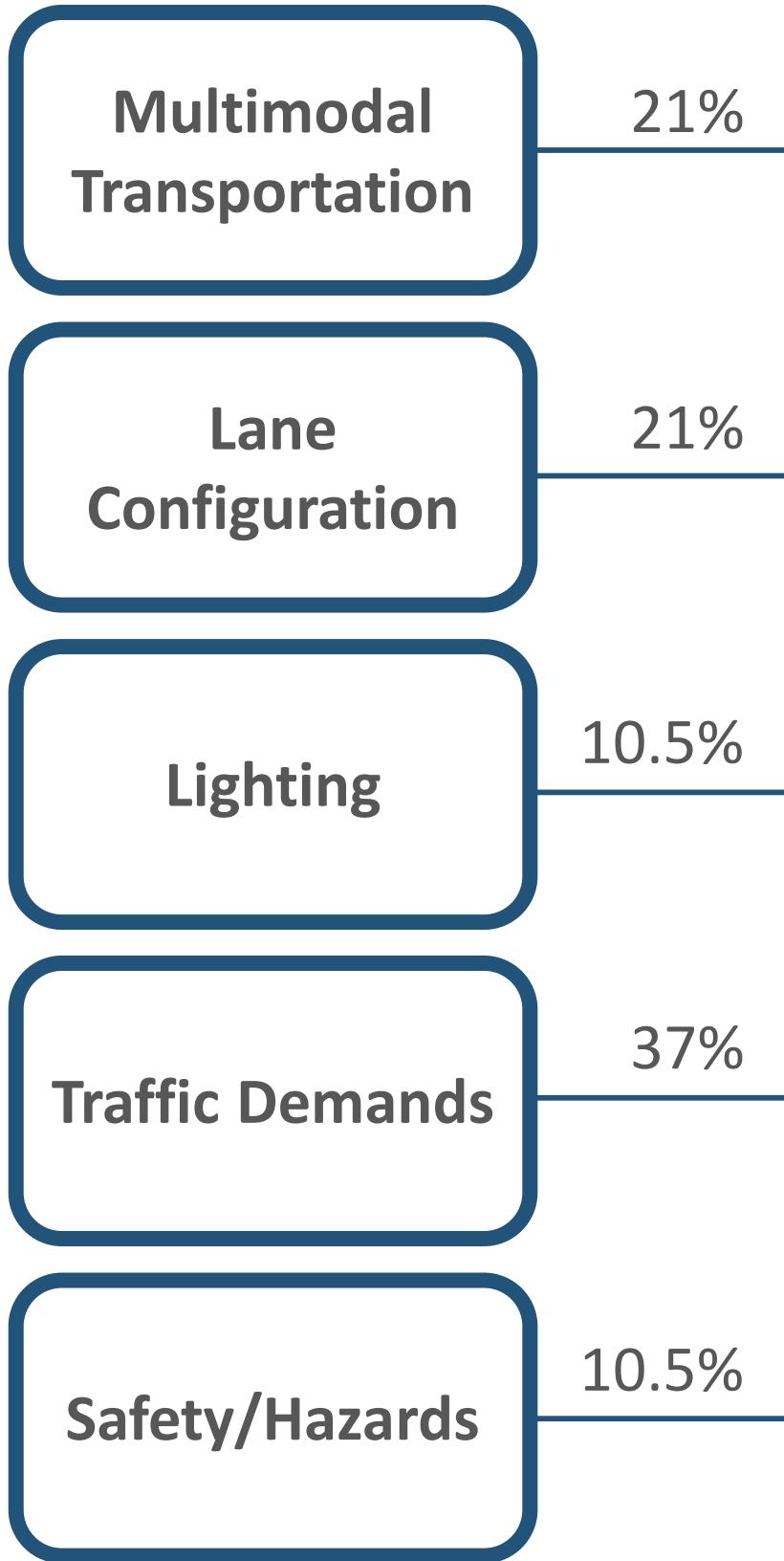
Transportation Issues and Concerns

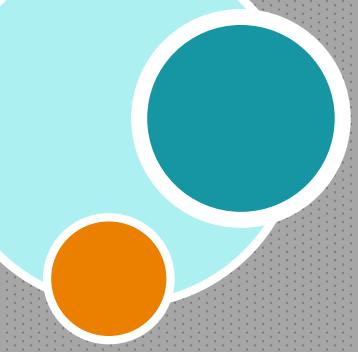
Identify issues and concerns for corridor



PROBLEM STATEMENT

CAG Meeting Workshop Highlights





Problem Statement

Problem Statement

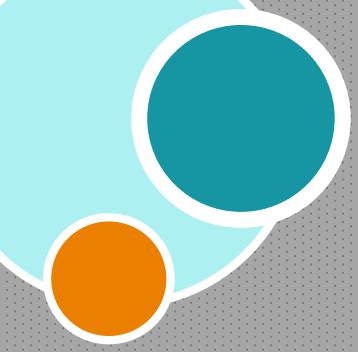
The transportation problems on Barrington Road to be solved by this project are:

- ✓ Improve multimodal transportation
- ✓ Improve lane configuration
- ✓ Improve lighting
- ✓ Accommodate traffic demands
- ✓ Improve safety



Questions?





Evaluation of Problem Statement

Evaluation of Problem Statement

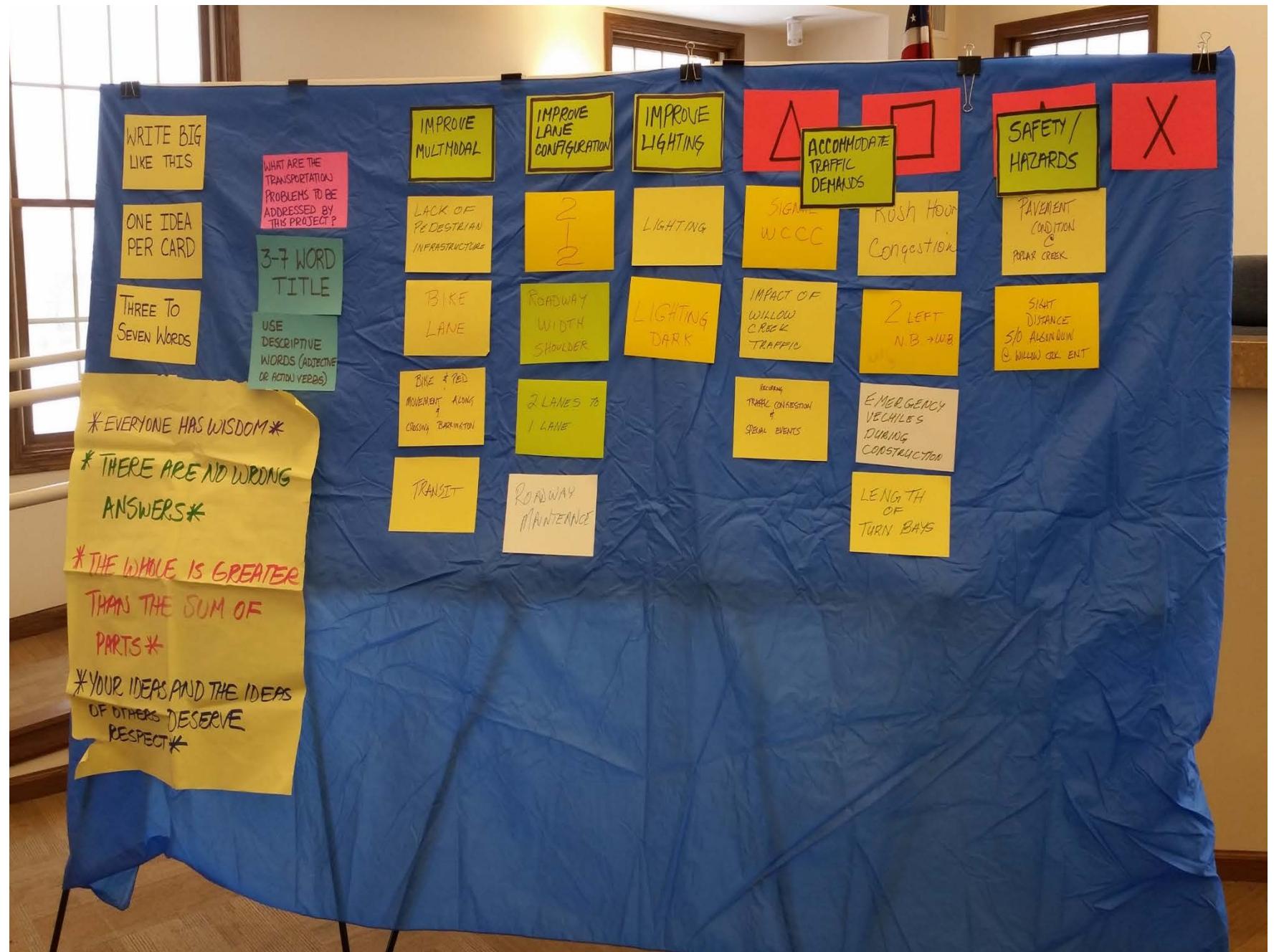
Improve
Multimodal
Transportation

Improve Lane
Configuration

Improve
Lighting

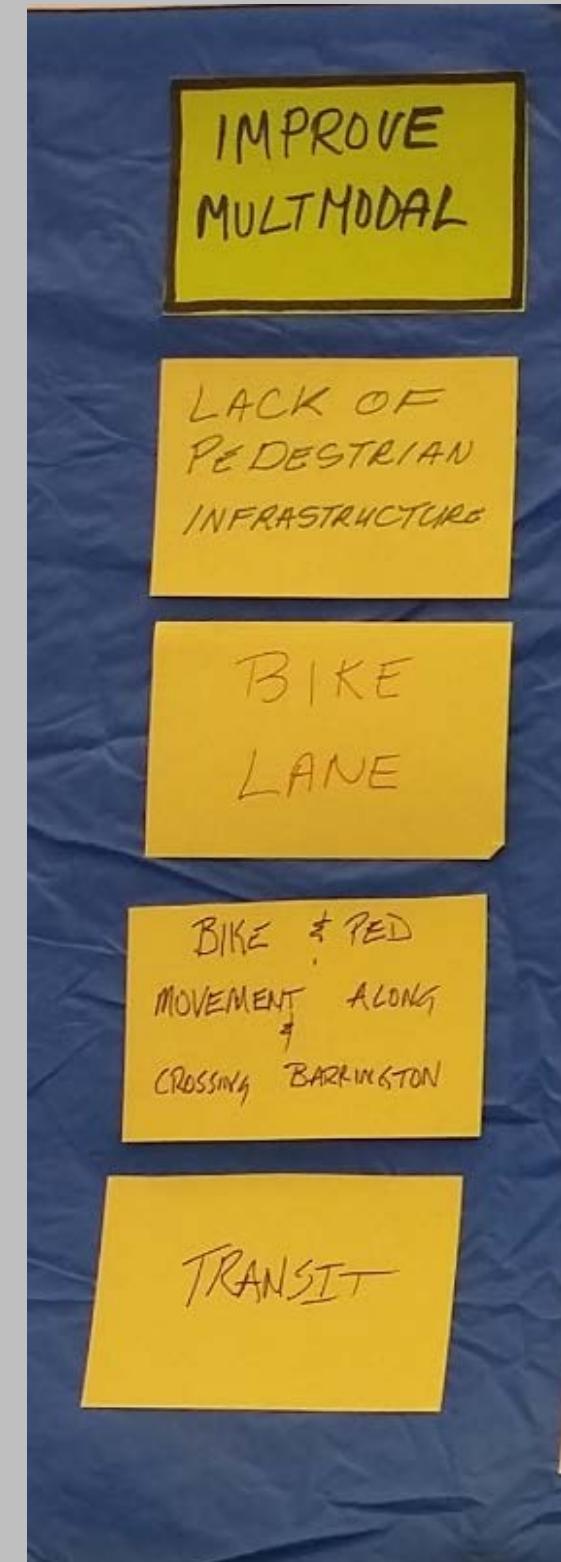
Accommodate
Traffic Demands

Improve Safety

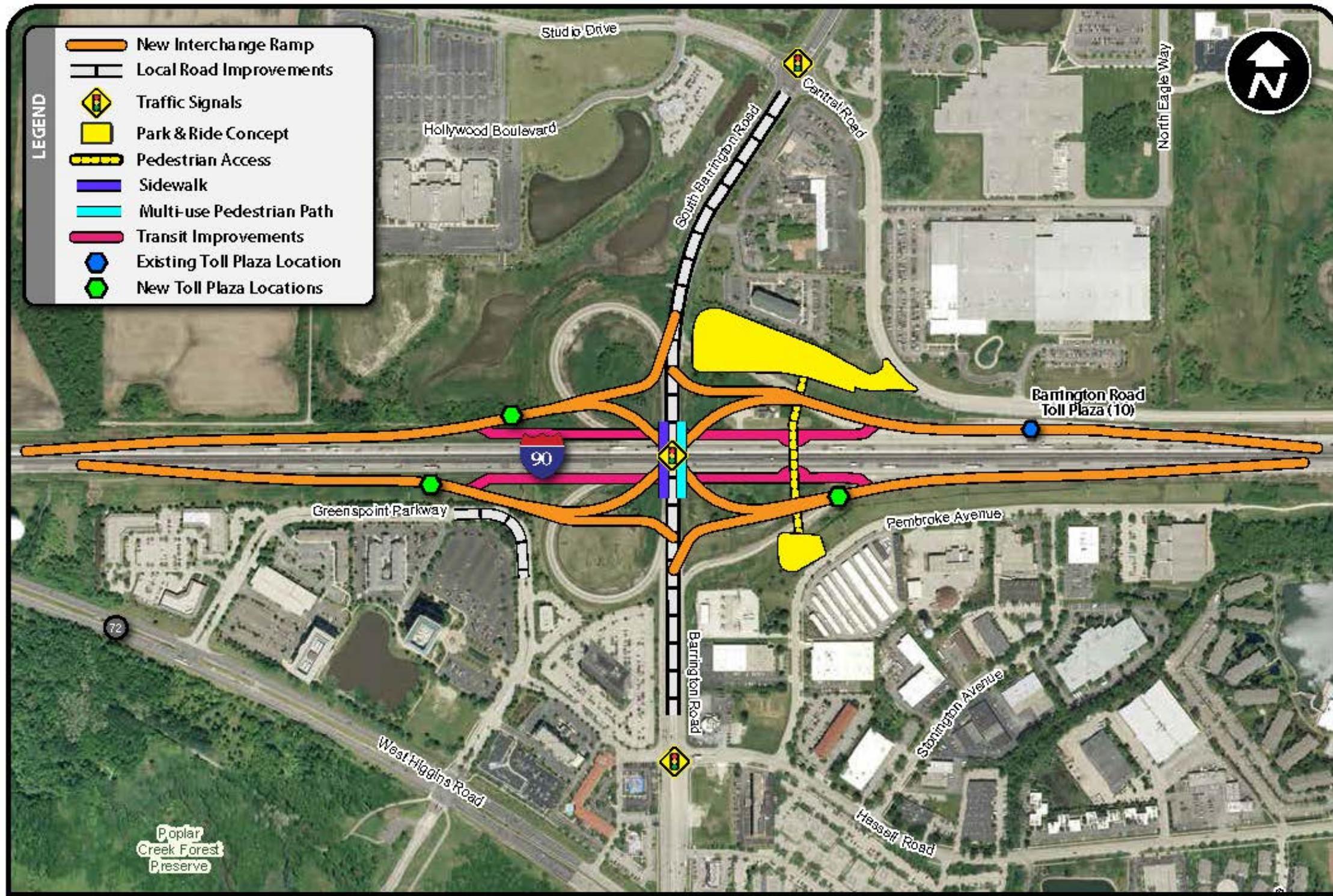


Improve Multimodal Transportation

- Lack of pedestrian infrastructure
- Bike lane
- Bike & pedestrian movements along and crossing Barrington
- Transit



Proposed I-90 Interchange

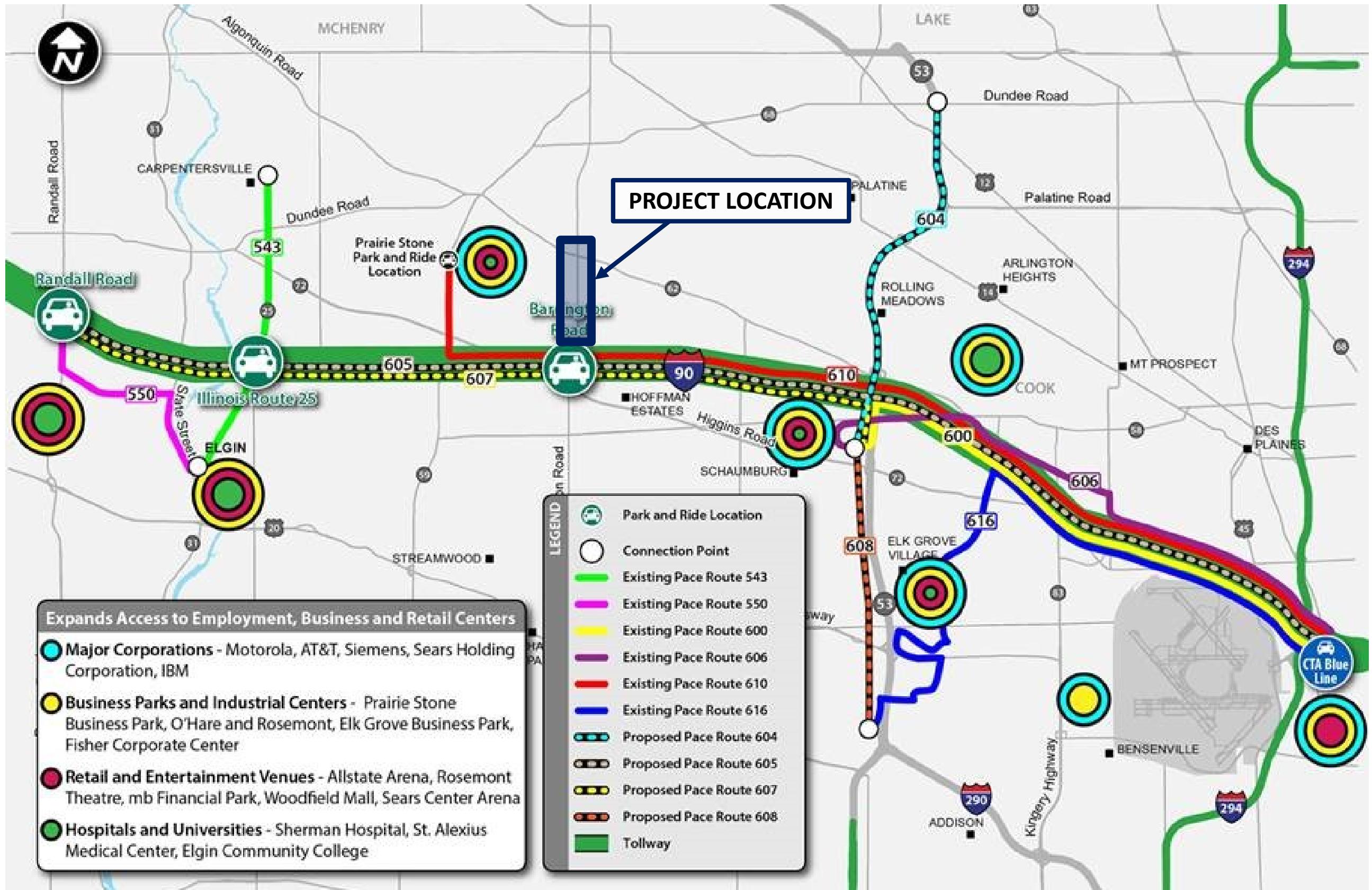


JANE ADDAMS MEMORIAL TOLLWAY
Barrington Road Interchange Project

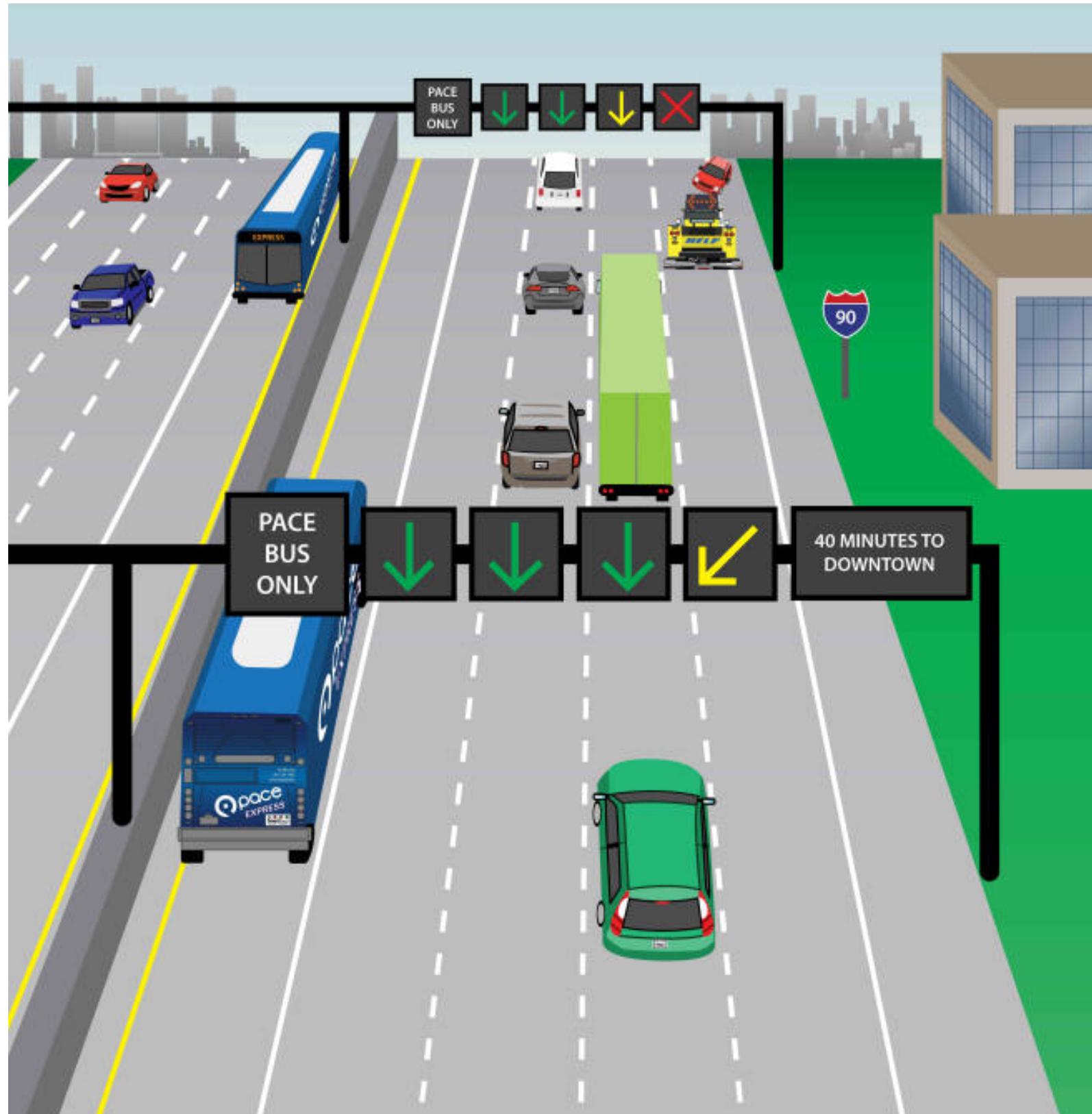


Updated: 03/07/16

PACE Bus Map

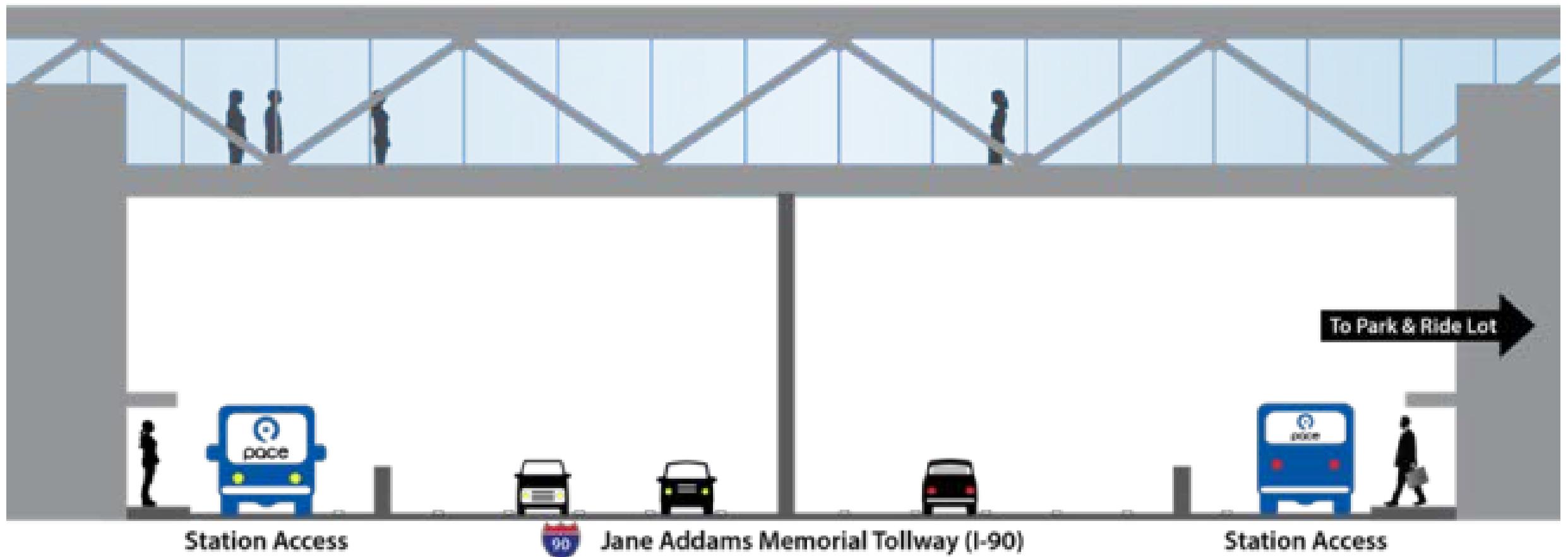


PACE Bus Rapid Transit



PACE Bus Rapid Transit

ENCLOSED PEDESTRIAN BRIDGE



Improve Multimodal Transportation

Concerns

- Lack of pedestrian infrastructure
- Bike lane
- Bike & pedestrian movements along and crossing Barrington
- Transit

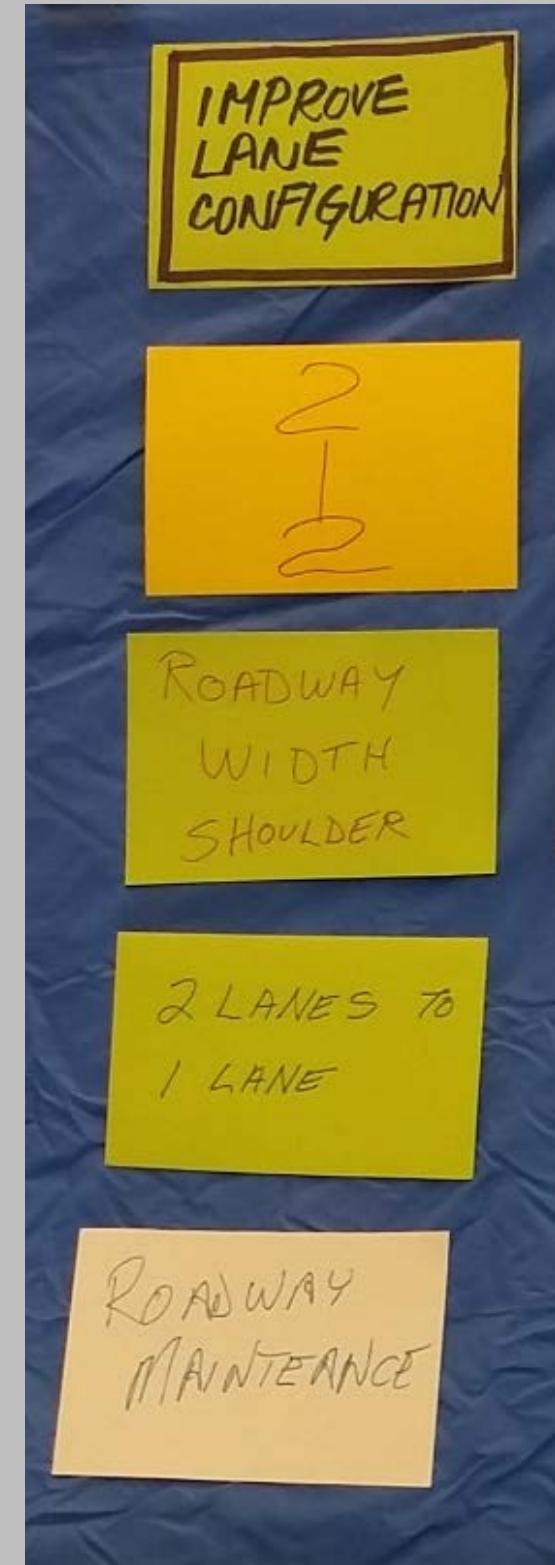
Response

- ✓ Addition of shared use path from IL 62 to Central Road
- ✓ Provides bicycle and pedestrian connection to future systems, including the BRT and Regional Trail Network



Improve Lane Configuration

- 2-1-2 (in reference to the number of lanes on Barrington Road)
- Roadway width / shoulder
- 2 lanes to 1 lane
- Roadway maintenance



Level of Service



LOS A =
FREE FLOW



LOS B =
FREE FLOW



LOS C =
NEAR FREE FLOW



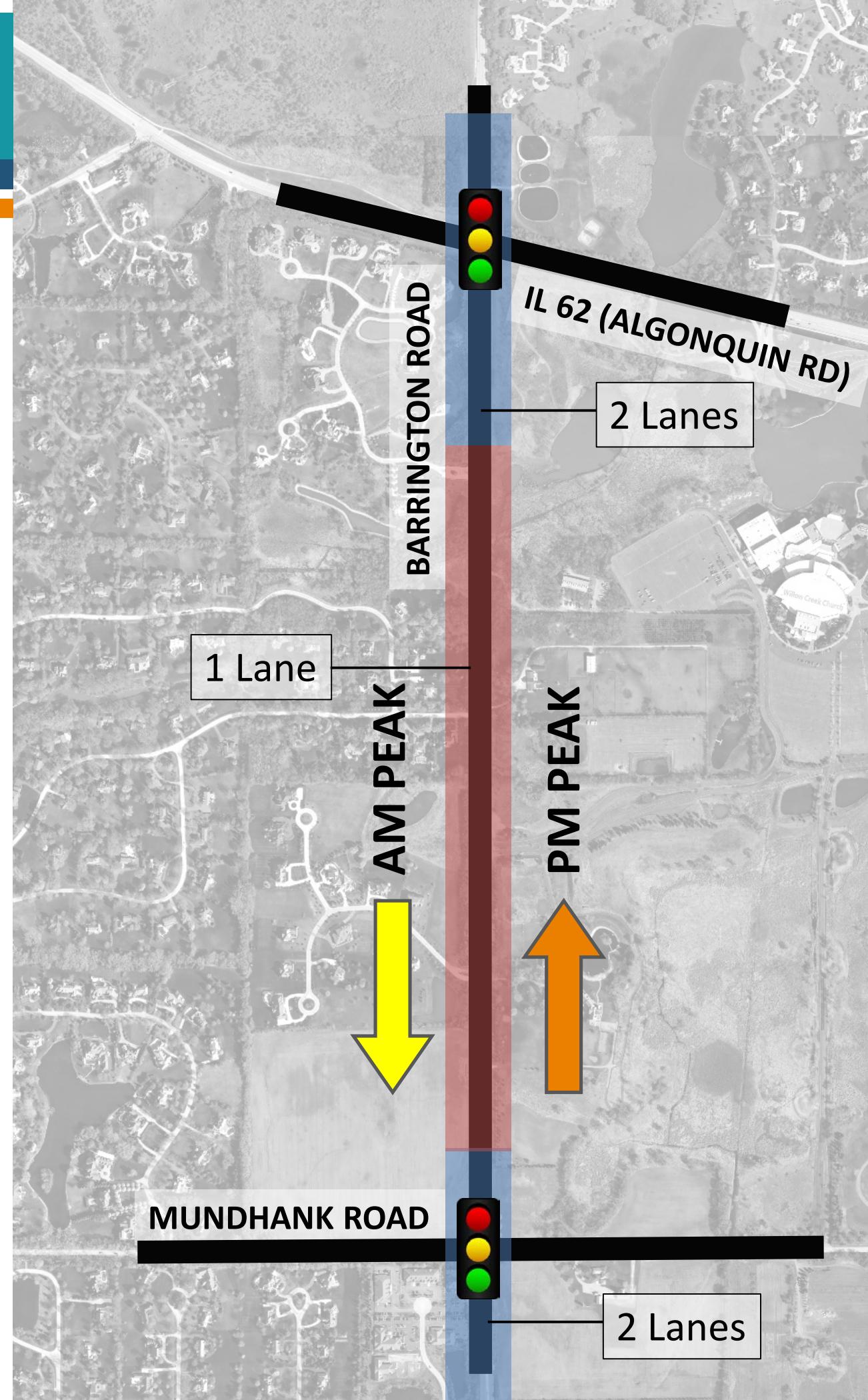
LOS D =
TRAFFIC FLOW
BREAKS DOWN



LOS E =
CONGESTION

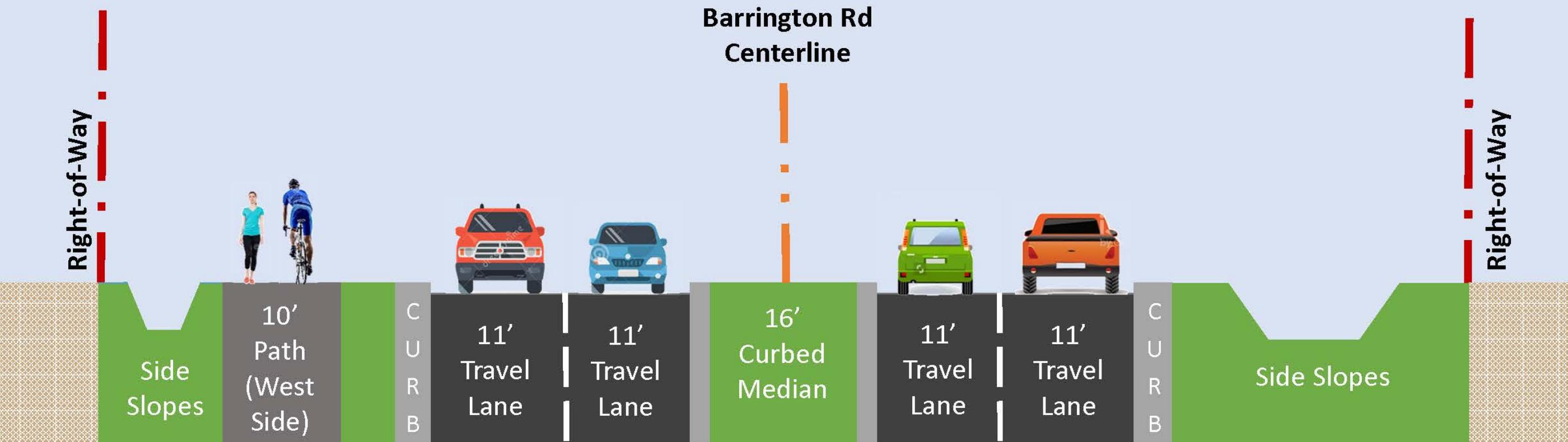


LOS F =
GRIDLOCK



Proposed Typical Section

Proposed



Improve Lane Configuration

Concerns

- 2-1-2 (in reference to the number of lanes on Barrington Road)
- Roadway width / shoulder
- 2 lanes to 1 lane
- Roadway maintenance

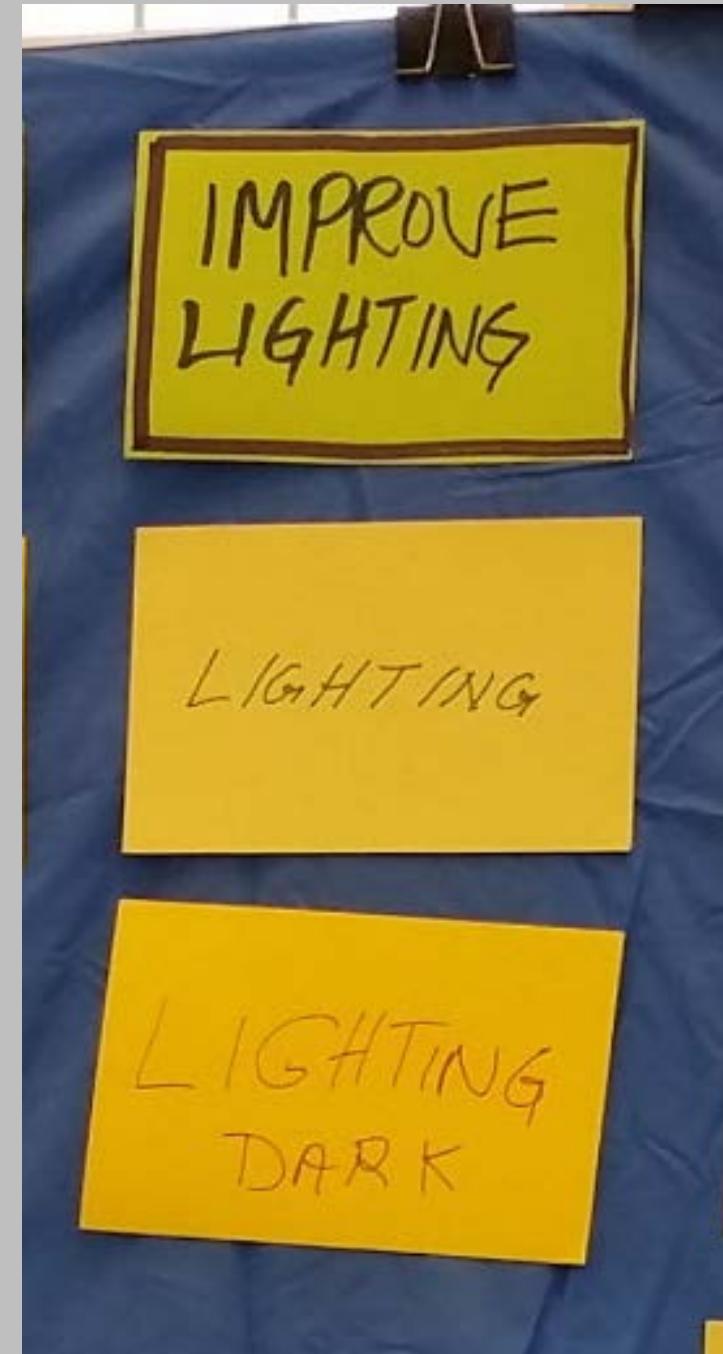
Response

- ✓ Adding a through lane will reduce congestion and provide a cohesive typical section
- ✓ New pavement will reduce maintenance concerns and improve longevity
- ✓ Curb and gutter will prevent vehicles from damaging soft earth/shoulders



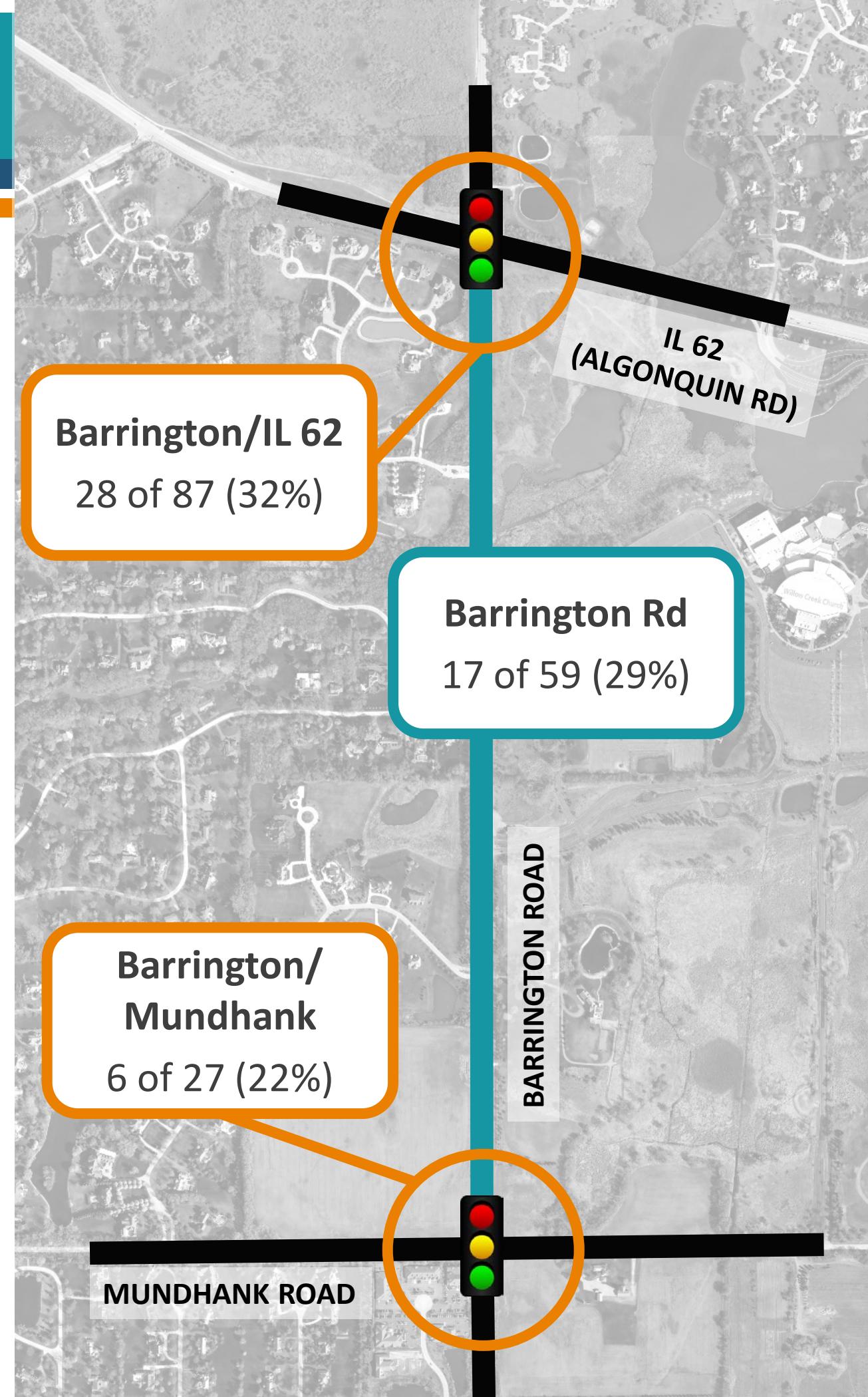
Improve Lighting

- Lighting
- Lighting/Dark



Roadway Lighting

- ✓ I-90/Barrington Interchange project includes roadway lighting to Central Road
- ✓ IDOT Guideline: 50% of crashes need to occur at night in order for roadway lighting to be considered
- ✓ Less than 35% of crashes along Barrington Road occur at night
- ✓ Crash analysis does not indicate a trend related to lack of lighting
- ✓ Mixed community reactions regarding lighting
- ✓ Cost would be 100% local participation



Improve Lighting

Concerns

- Lighting
- Lighting/Dark

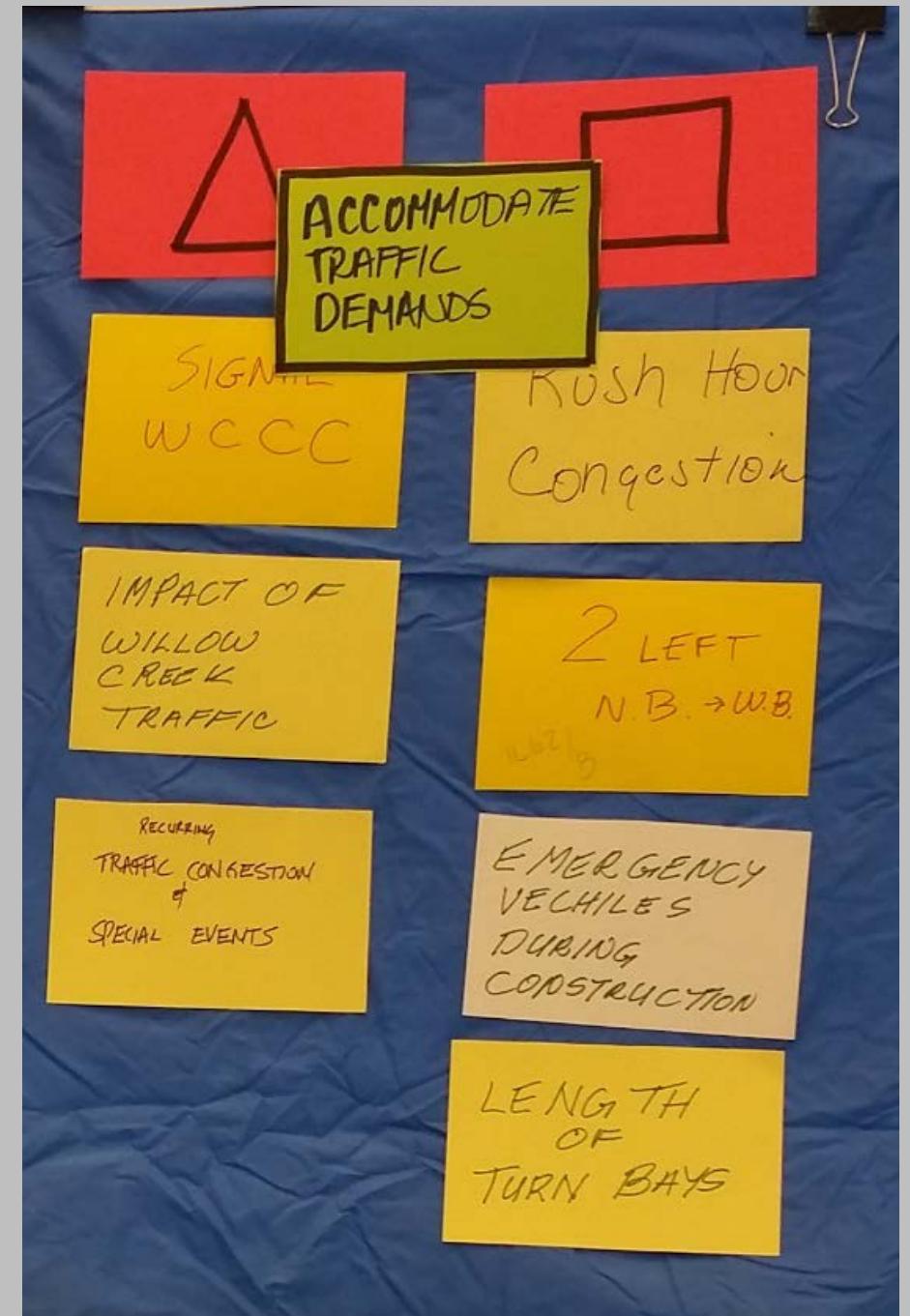
Response

- ✓ Poor lighting is not considered a trend impacting crash statistics for the project corridor
- ✓ Lighting is not justified based on implementation guidelines
- ✓ Lighting cost is 100% local participation



Accommodate Traffic Demands

- Signal at Willow Creek Church
- Impact of Willow Creek traffic
- Recurring traffic congestion & special events
- Rush hour congestion
- Two left northbound to westbound turn lanes at Barrington and IL 62
- Emergency vehicles during construction
- Length of turn bays



Signal at Willow Creek



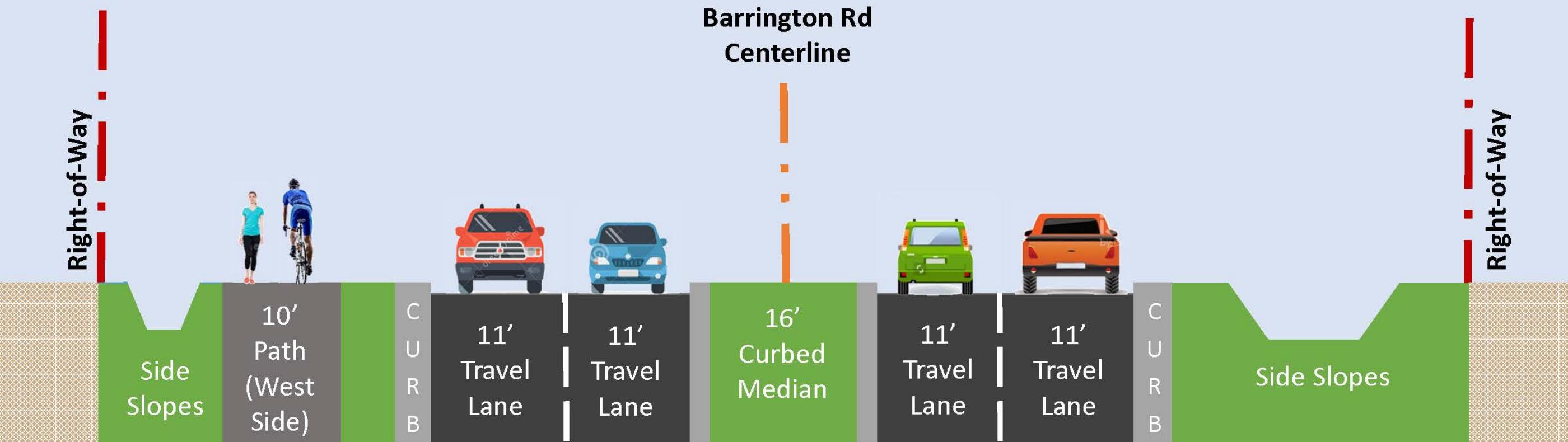
Barrington Rd and Willow Creek Drive

- Traffic counts performed in 2014, that included weekends
- Vehicle code indicates warrants must be met in order to install traffic signal
- Does not meet signal warrants for an SRA route
- Considered a Private Benefit (PB) Improvement



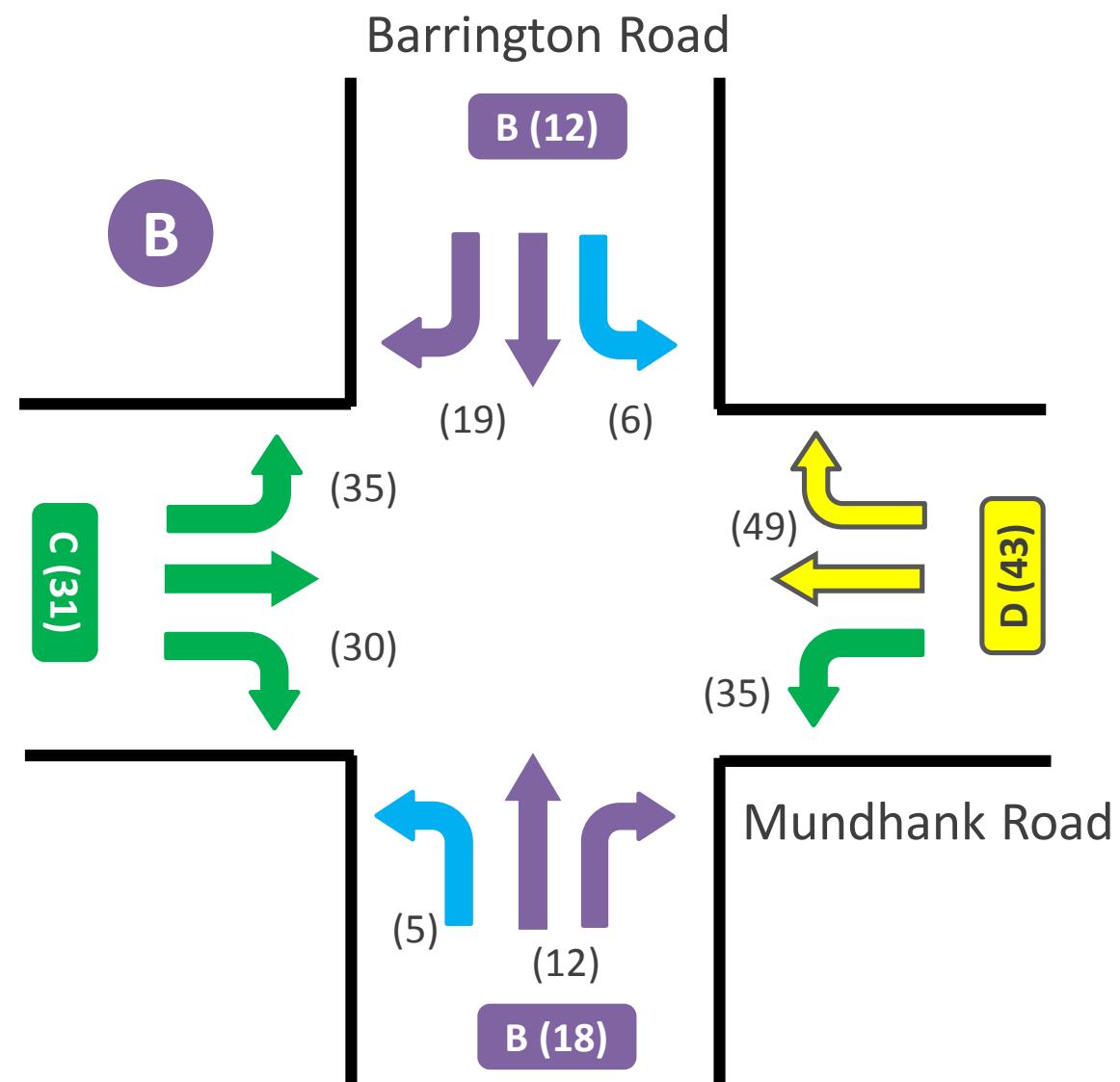
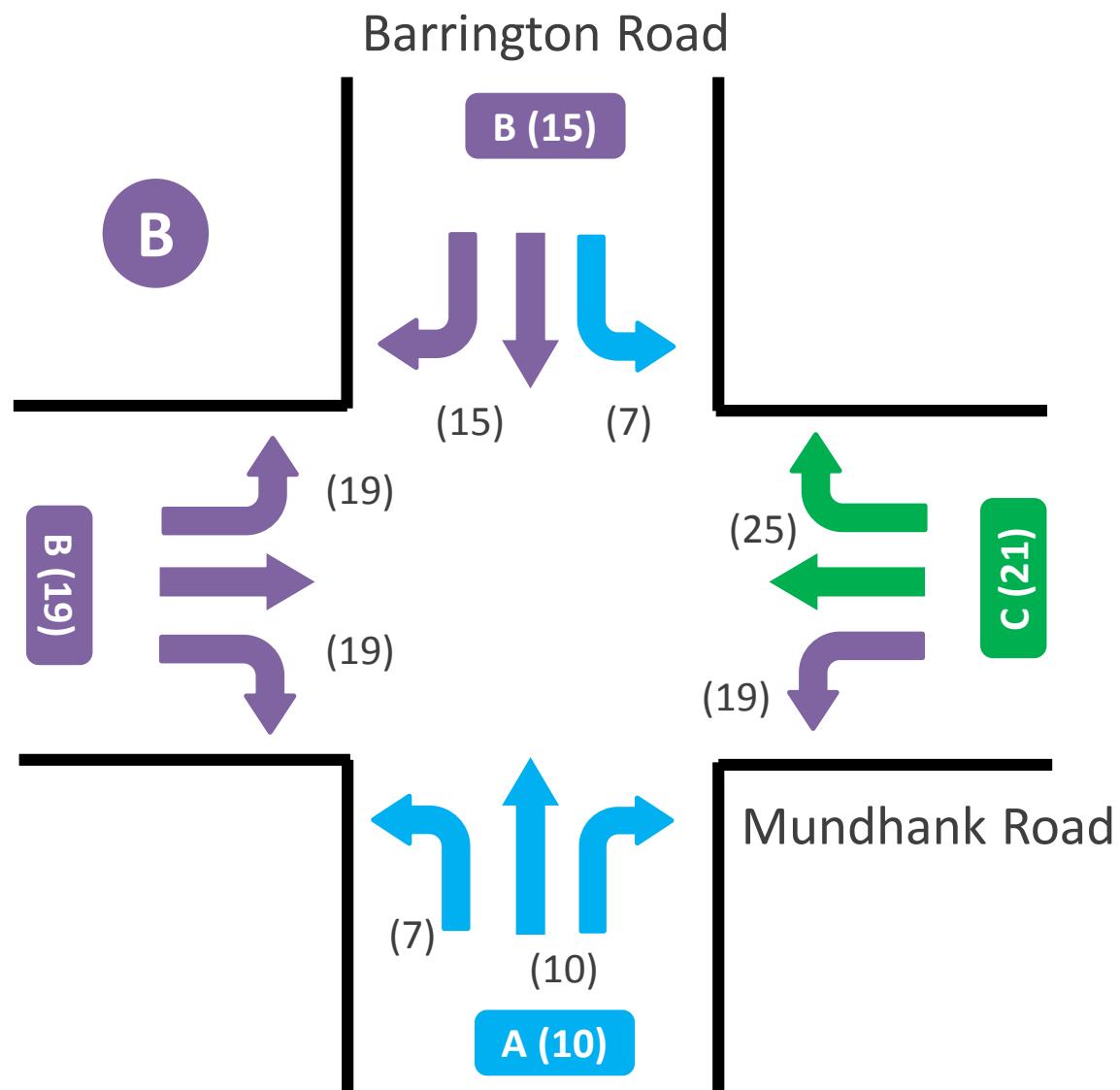
Proposed Typical Section

Proposed



Traffic Data – Mundhank Rd

Existing Conditions & Existing Traffic



AM Peak Hour Traffic (2015)

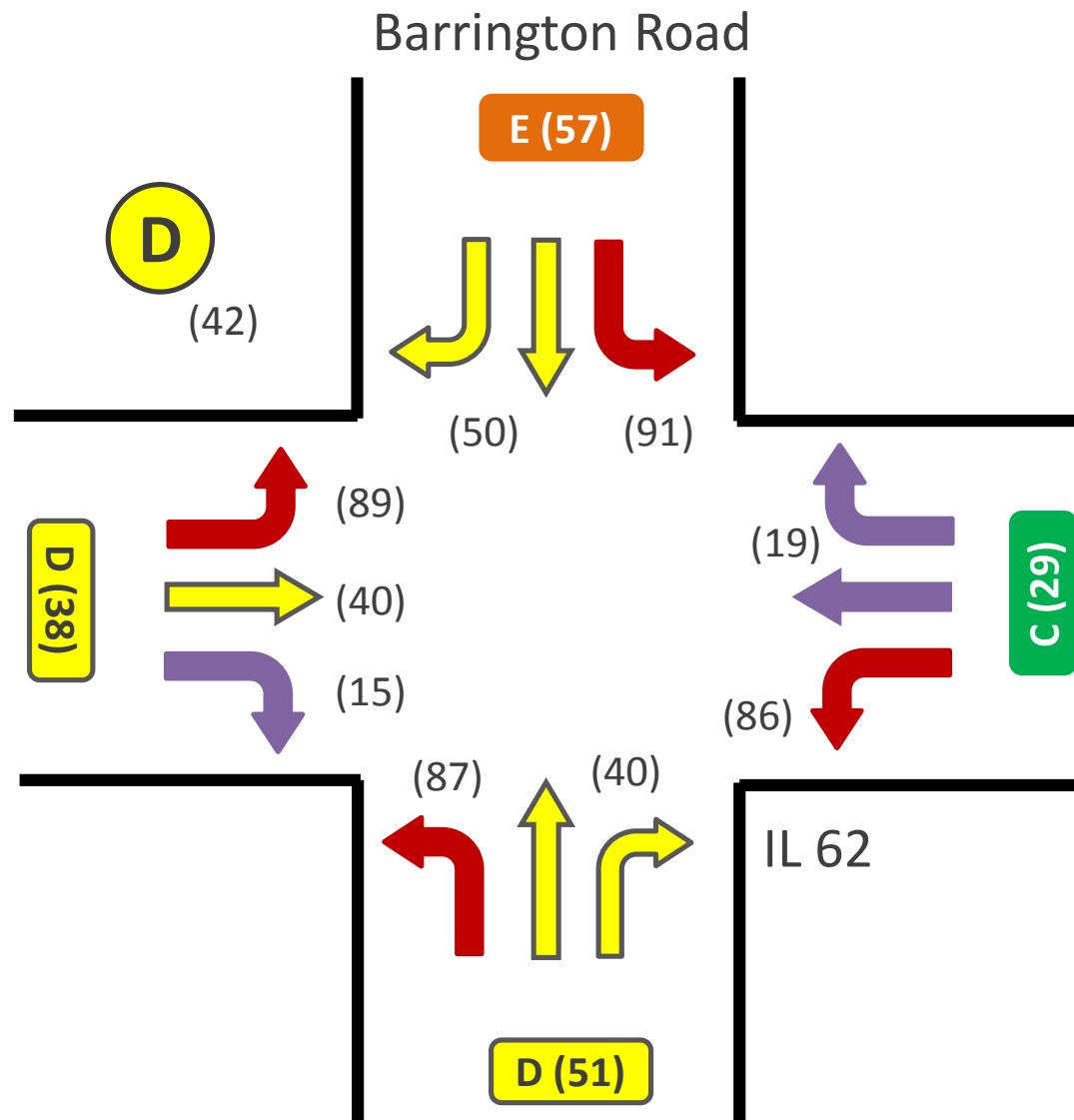
PM Peak Hour Traffic (2015)

(xx) Seconds of delay

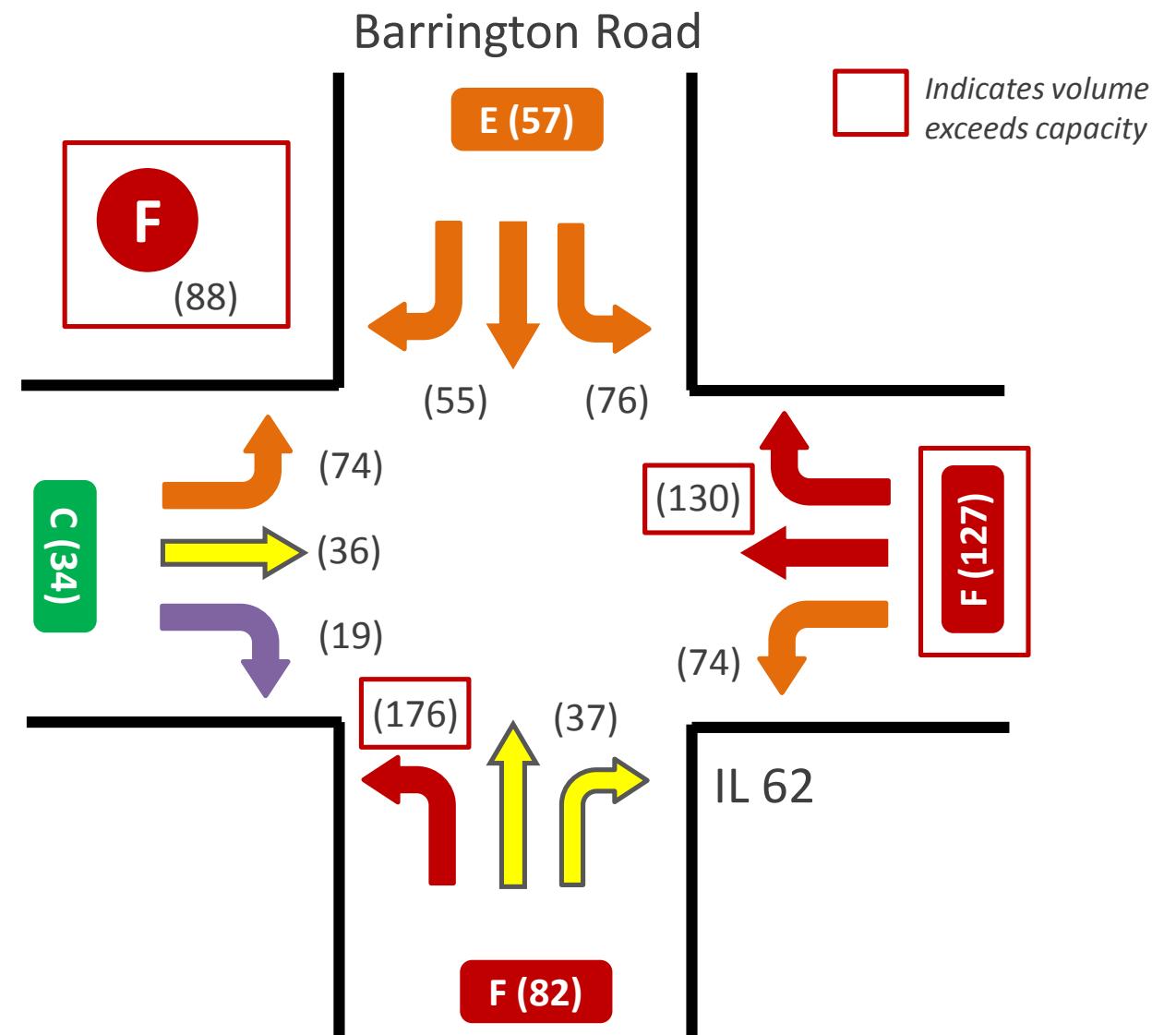


Traffic Data – IL 62 (Algonquin Rd)

Existing Conditions & Existing Traffic



AM Peak Hour Traffic (2015)

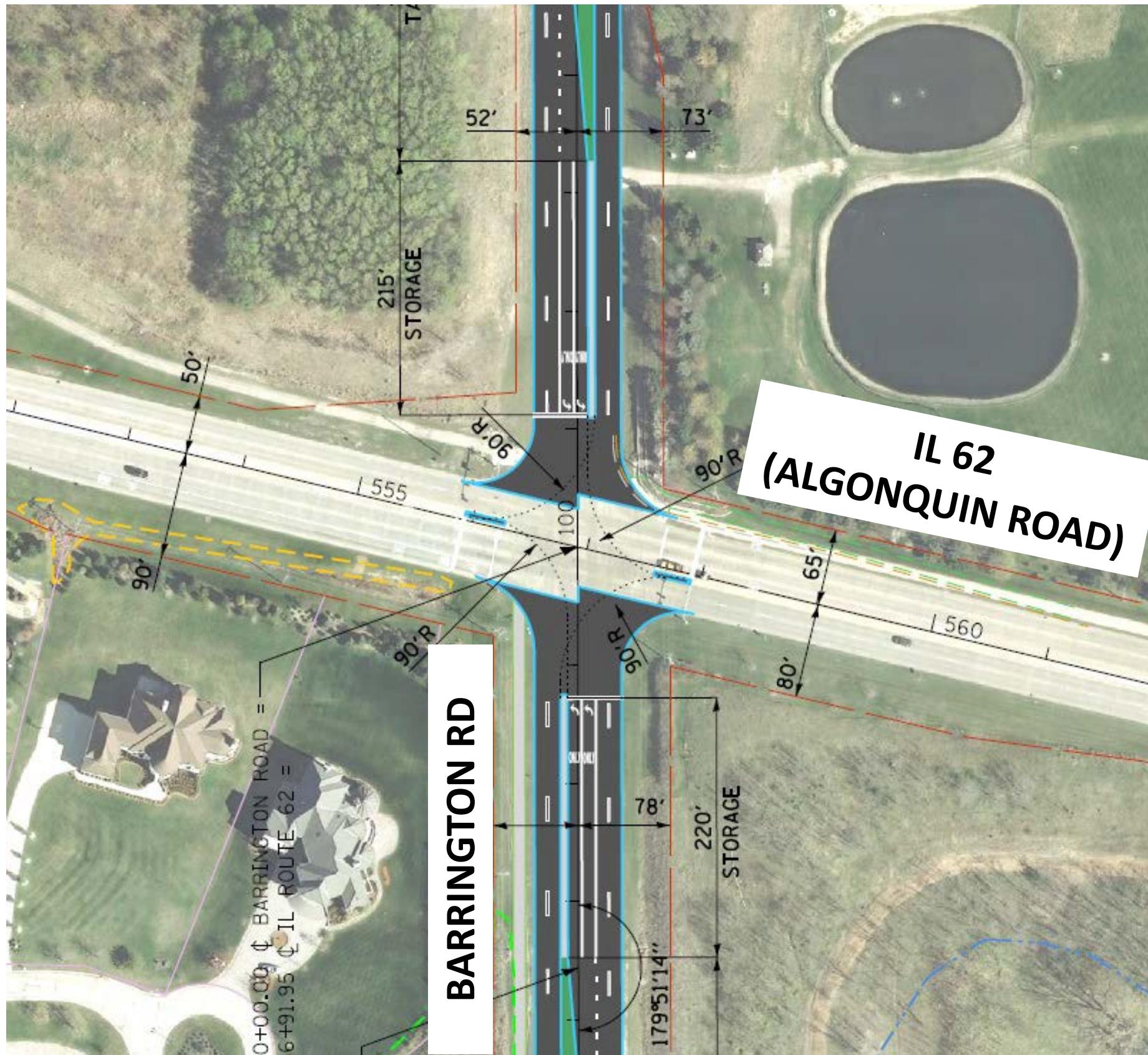


PM Peak Hour Traffic (2015)

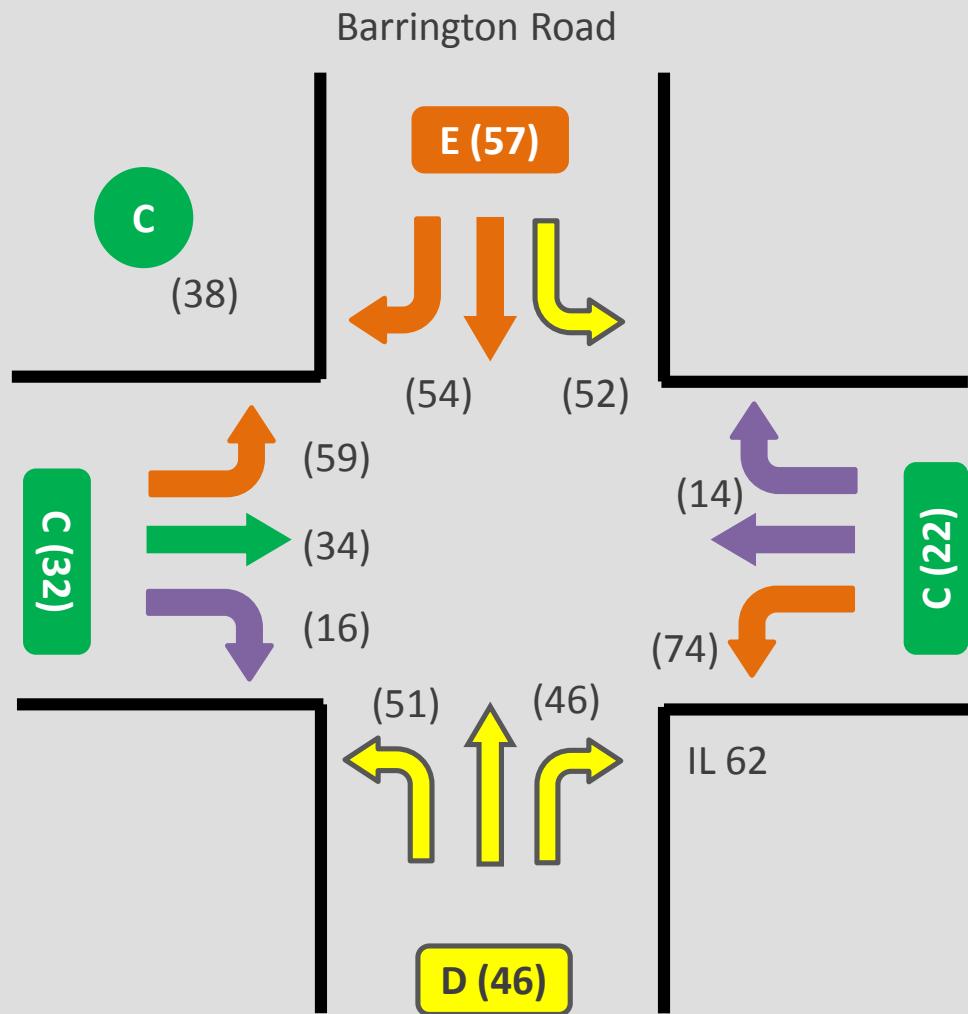
(xx) Seconds of delay



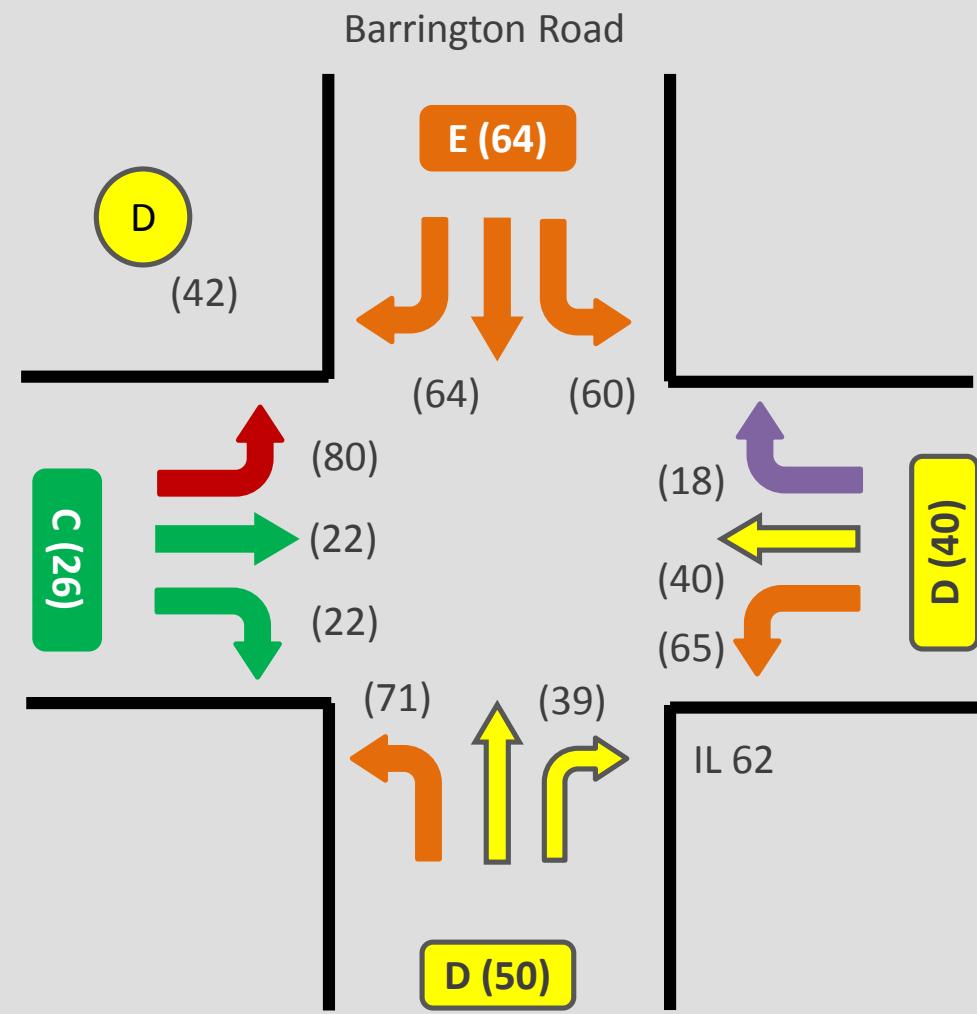
Proposed Barrington-IL 62 Intersection



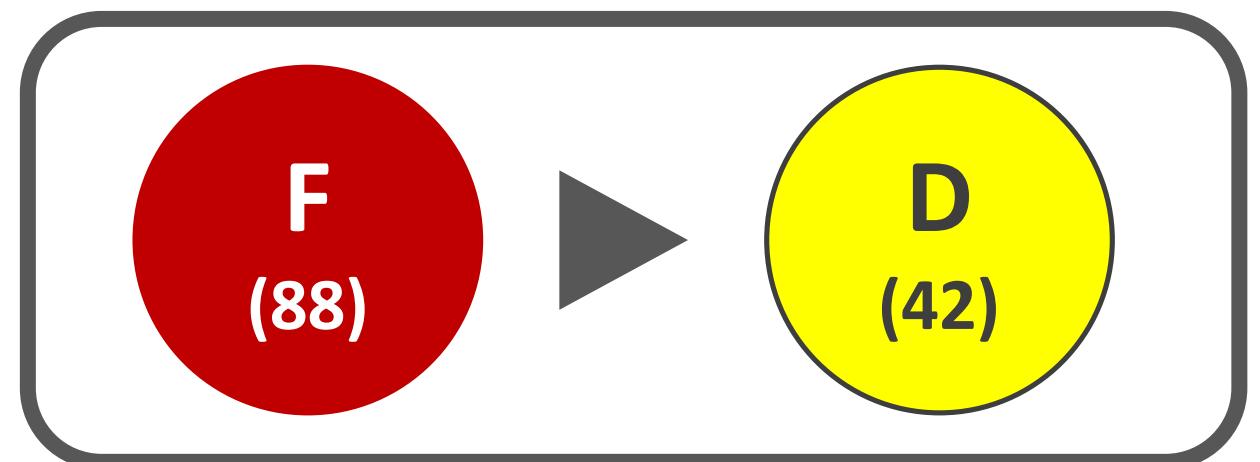
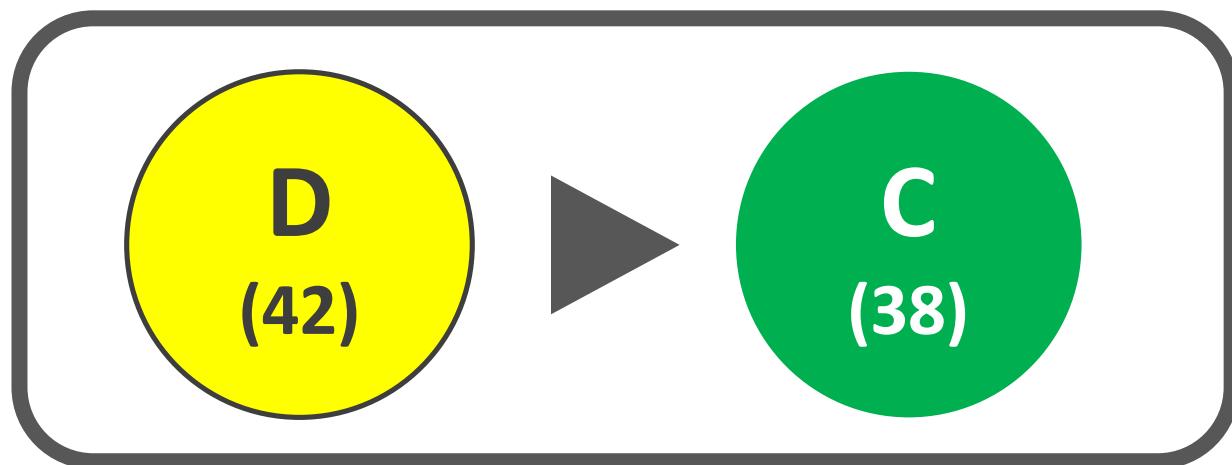
Proposed Barrington-IL 62 Intersection



AM Peak Hour Traffic (2015)

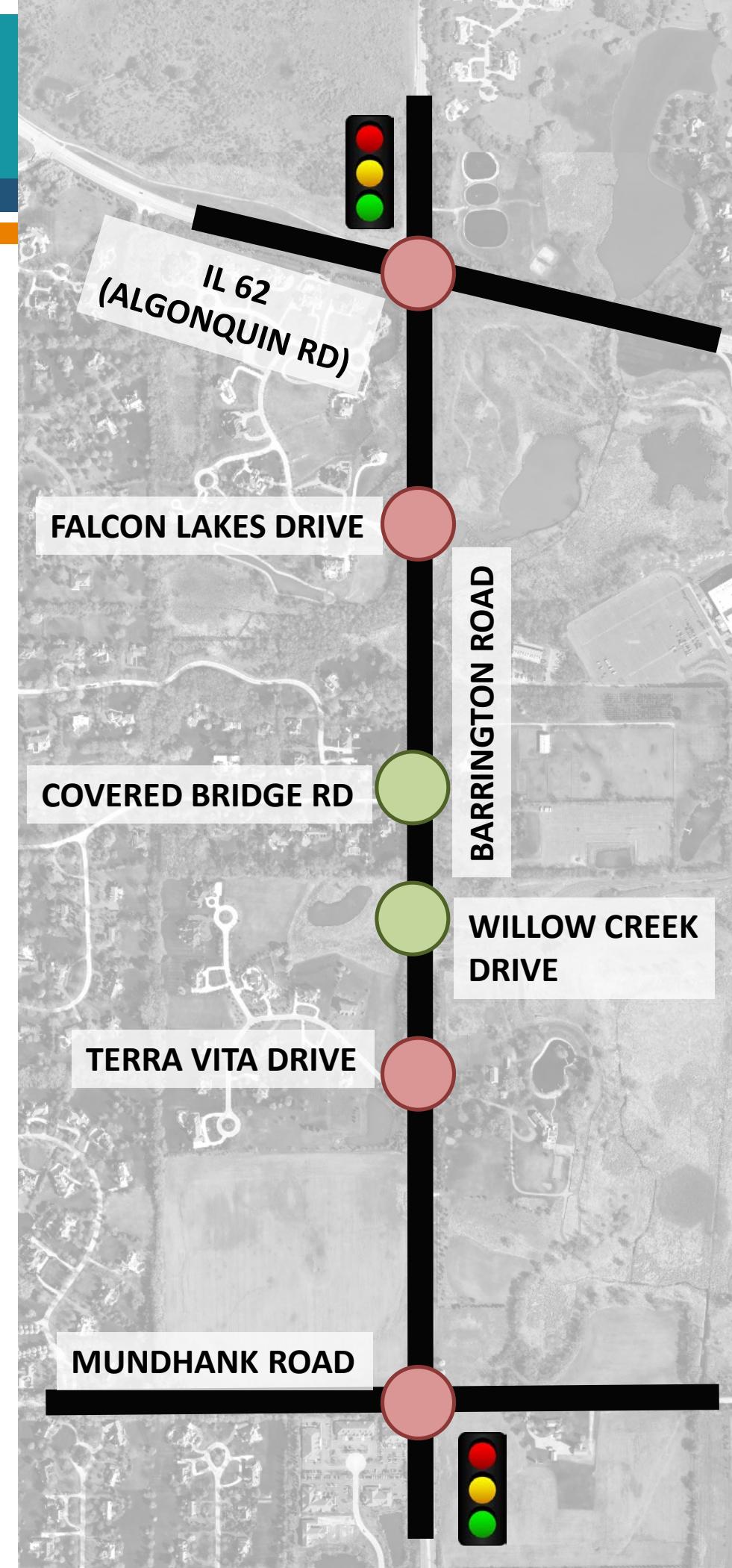


PM Peak Hour Traffic (2015)



Length of Turn Bays

Intersection	Direction/ Movement	Existing Conditions			Rural or Suburban SRA Criteria					
		Taper Length (ft)	Storage Length (ft)	Deceleration Length (ft)	Taper Length (ft)	Meet	Storage Length (ft)	Meet	Deceleration Length (ft)	Meet
Barrington Road										
Mundhank Road	NB LT Lane	170	210	380	220	NO	150	YES	435	NO
	SB LT Lane	210	230	440	220	NO	150	YES	435	YES
Terra Vita Dr	NB LT Lane	230	200	430	180	YES	115	YES	435	NO
	SB RT Lane	170	140	310	180	NO	115	YES	435	NO
Willow Creek Church	NB RT Lane	250	190	440	180	YES	115	YES	435	YES
	SB Left Turn	260	200	460	180	YES	115	YES	435	YES
Covered Bridge Road	NB LT Lane	240	200	440	180	YES	115	YES	435	YES
Falcon Lakes Drive	NB LT Lane	225	200	425	180	YES	115	YES	435	NO
	SB RT Lane	255	150	405	180	YES	115	YES	435	NO
IL Route 62	NB LT Lane	200	370	570	220	NO	150	YES	435	YES
	SB LT Lane	220	120	340	220	YES	150	NO	435	NO



Accommodate Traffic Demands

Concerns

- ✓ Signal at Willow Creek Church
- ✓ Impact of Willow Creek traffic
- ✓ Recurring traffic congestion & special events
- ✓ Rush hour congestion
- ✓ Two left northbound to westbound turn lanes at Barrington and IL 62
- ✓ Emergency vehicles
- ✓ Length of turn bays

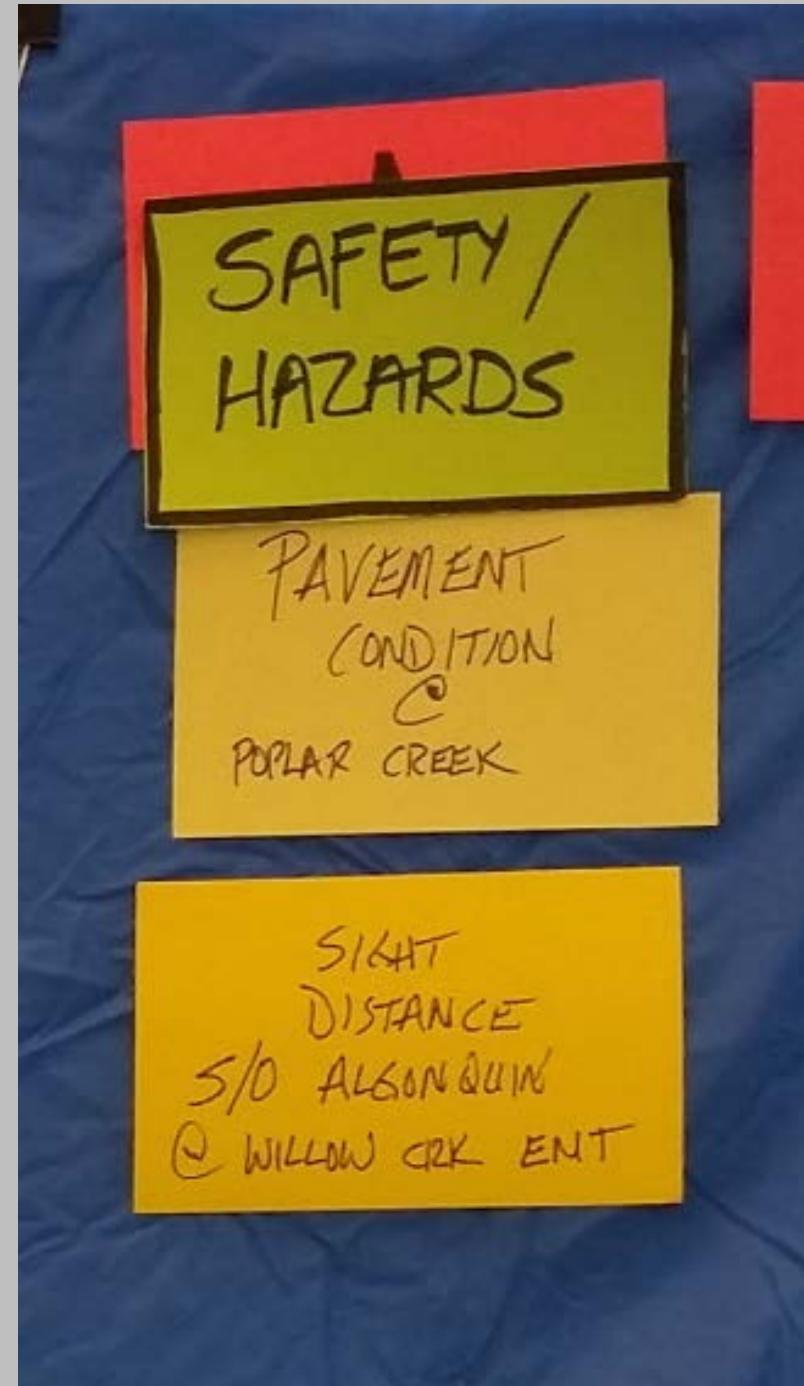
Response

- ✓ Widen Barrington Road to 2 lanes in each direction
- ✓ Dual left turn lanes NB on Barrington Road to WB on IL 62
- ✓ Lengthen turn lane bays for queuing vehicles
- ✓ Improved Level of Service (LOS)

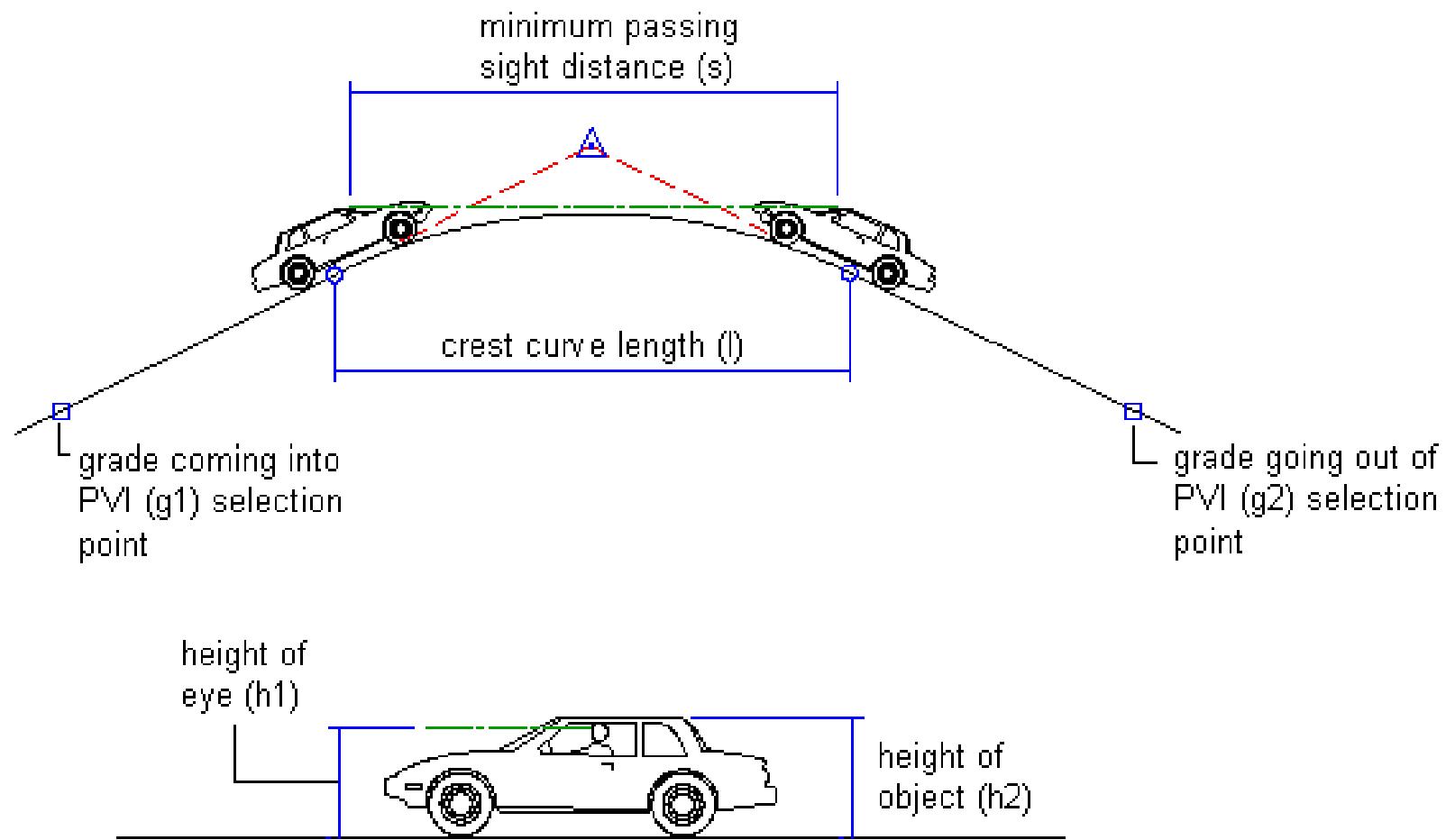


Improve Safety

- Pavement condition at Poplar Creek
- Sight distance south of IL 62 at Willow Creek Entrance



Sight Distance South of IL 62



Improve Safety

Concerns

- ✓ Pavement condition at Poplar Creek
- ✓ Sight distance south of IL 62 at Willow Creek Entrance

Response

- ✓ Full pavement reconstruction
- ✓ Modified vertical profile to address sight distance deficiencies



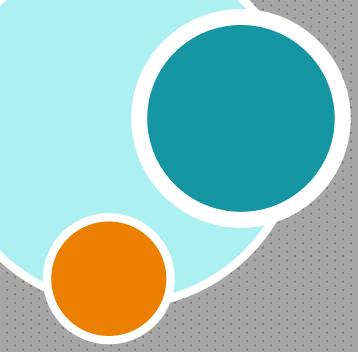
Evaluation of Problem Statement

General Understanding of **AGREEMENT**



Questions?

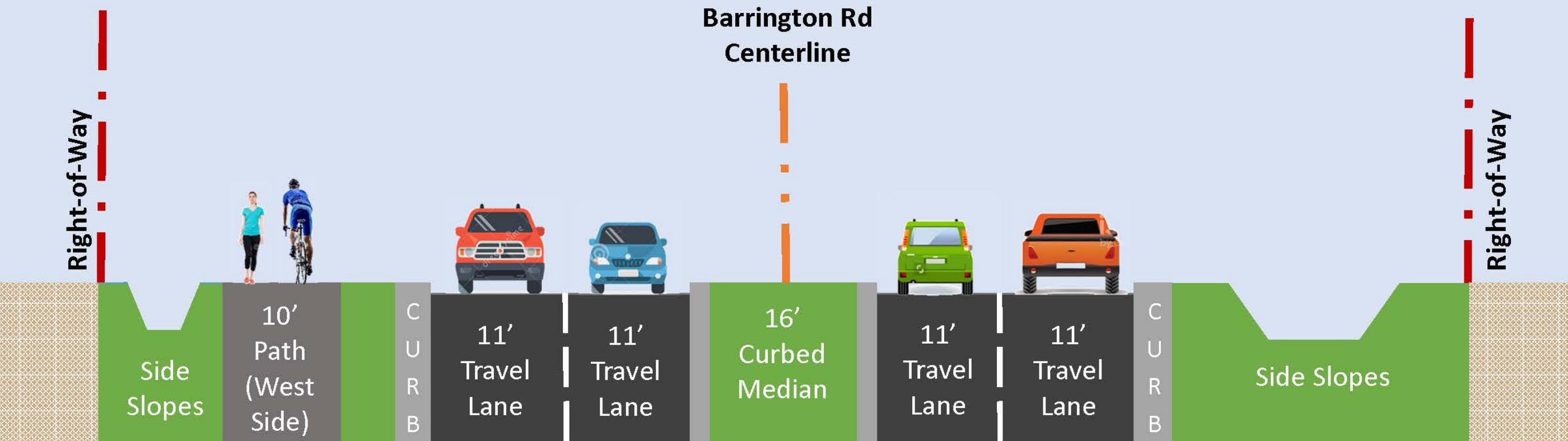




Proposed Improvements

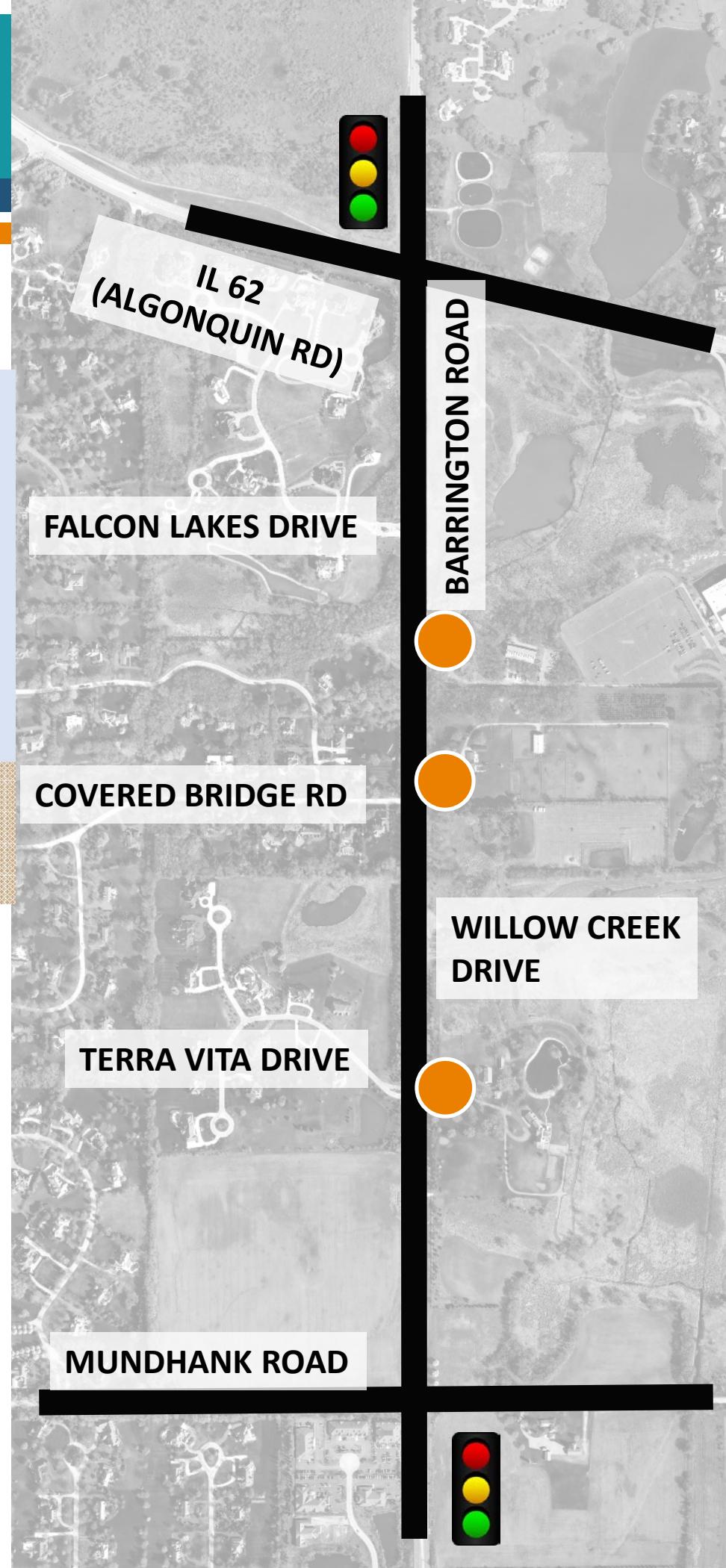
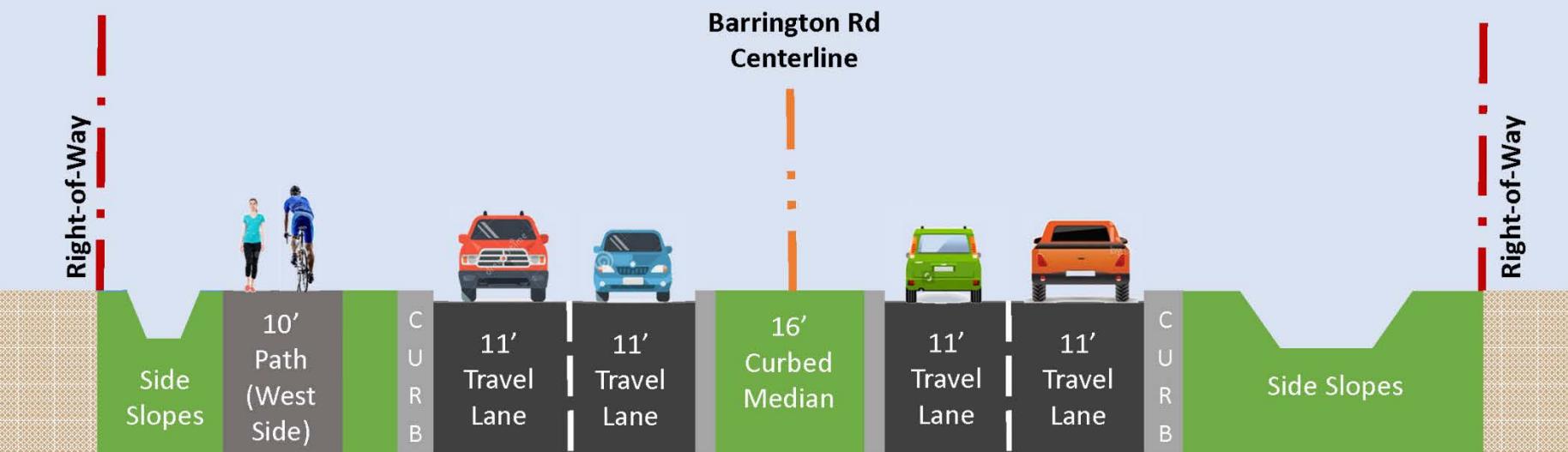
Proposed Typical Section

Proposed



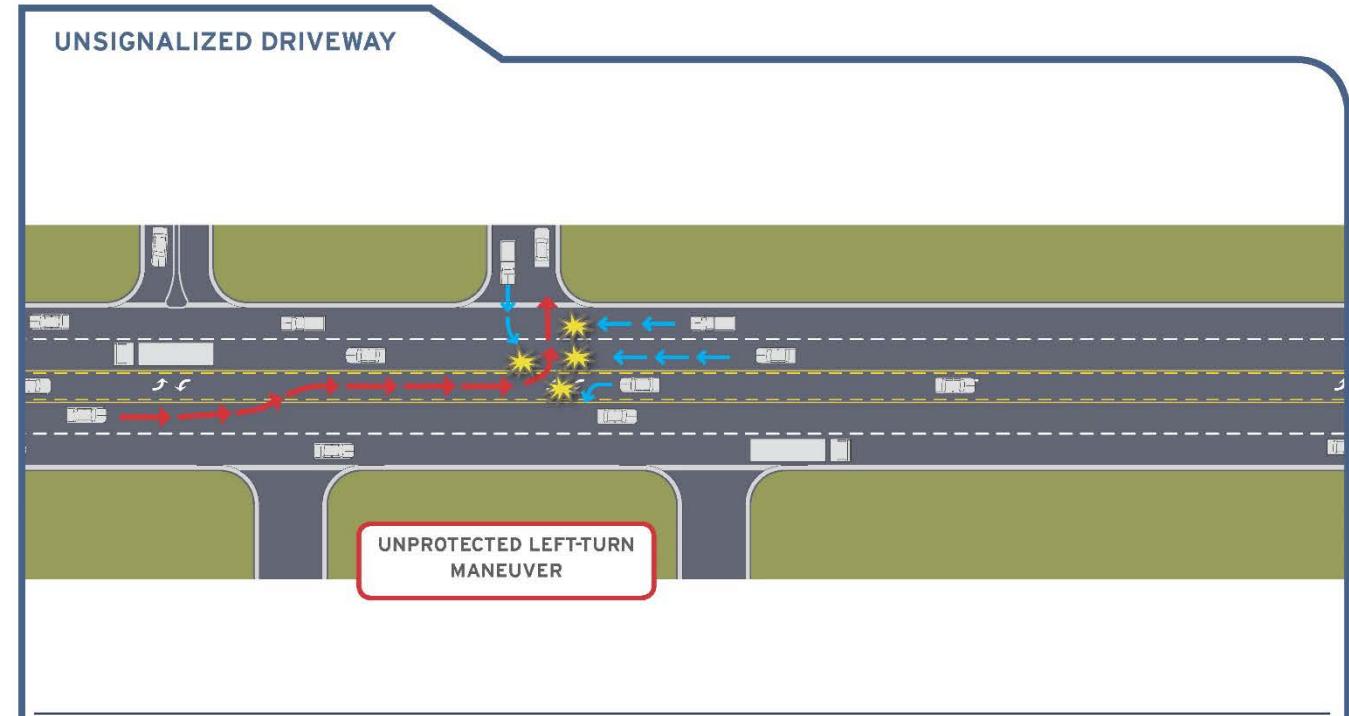
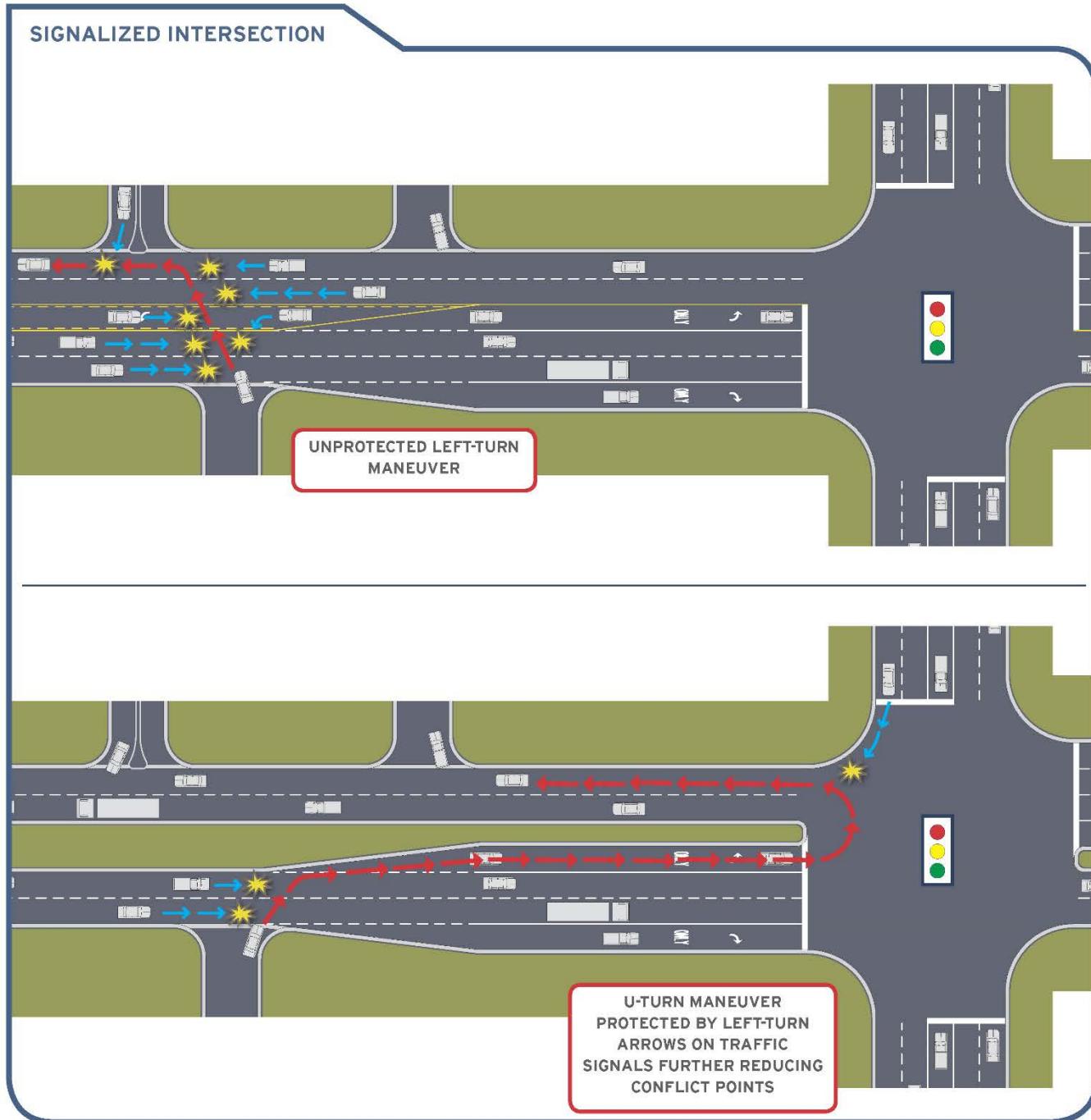
Driveway Access

Proposed



Driveway Access

SAFETY BENEFITS OF U-TURNS UNPROTECTED VS. PROTECTED LEFT-TURN MANEUVER



Path Impacts South of Mundhank



VS

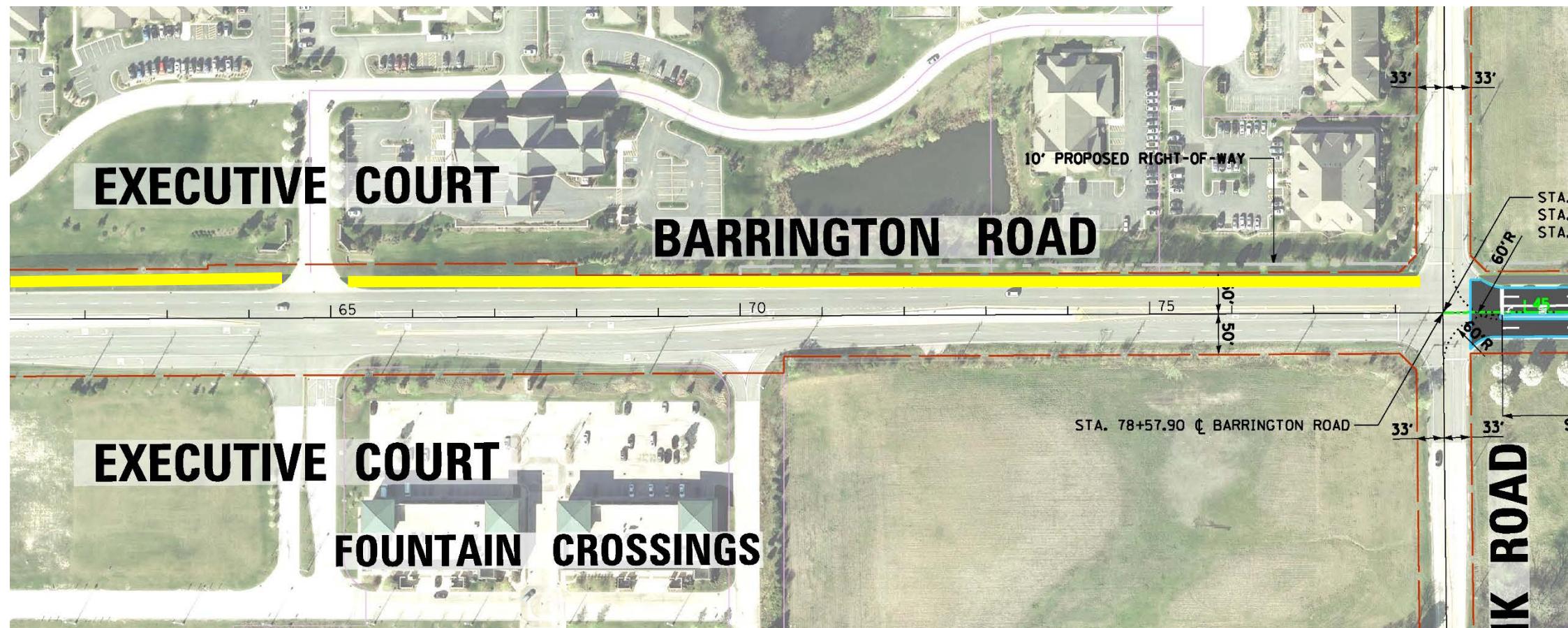
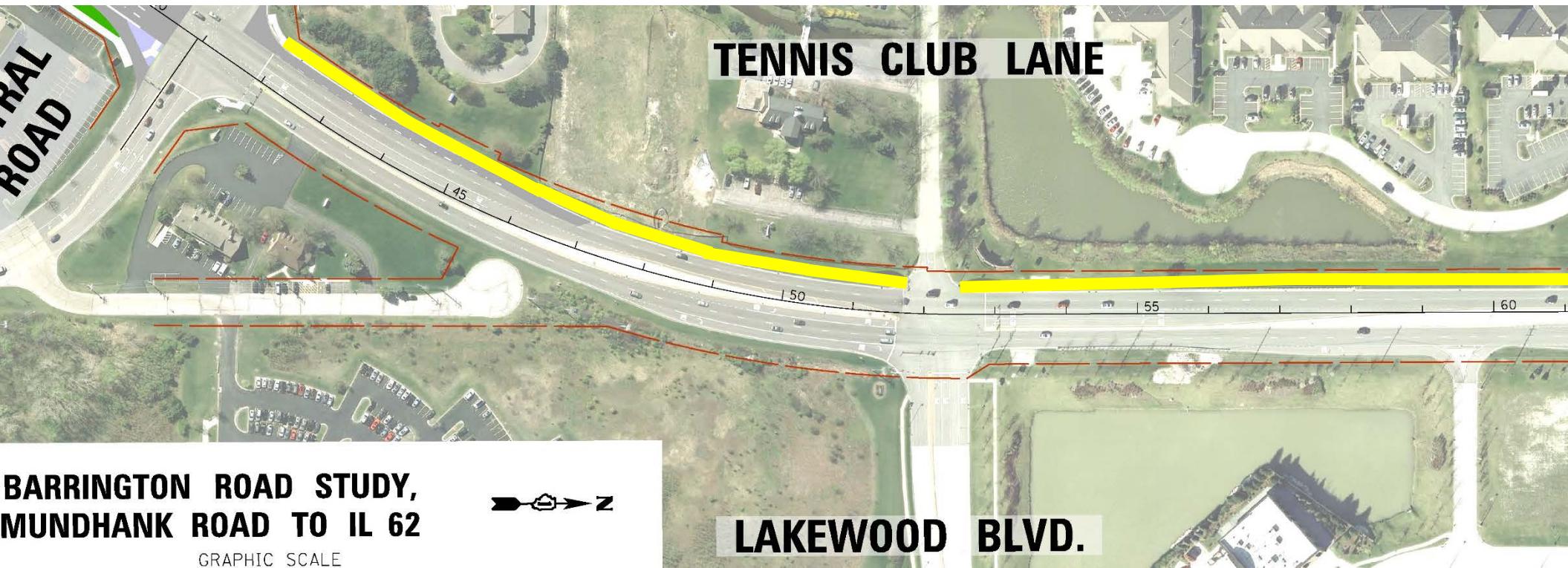
East Side

- 0.75 acres of Proposed ROW required
- 4 driveways and 1 cross street impacted
- Extension of box culvert north of Lakewood
- Modifications to the cul-de-sac north of Central Road

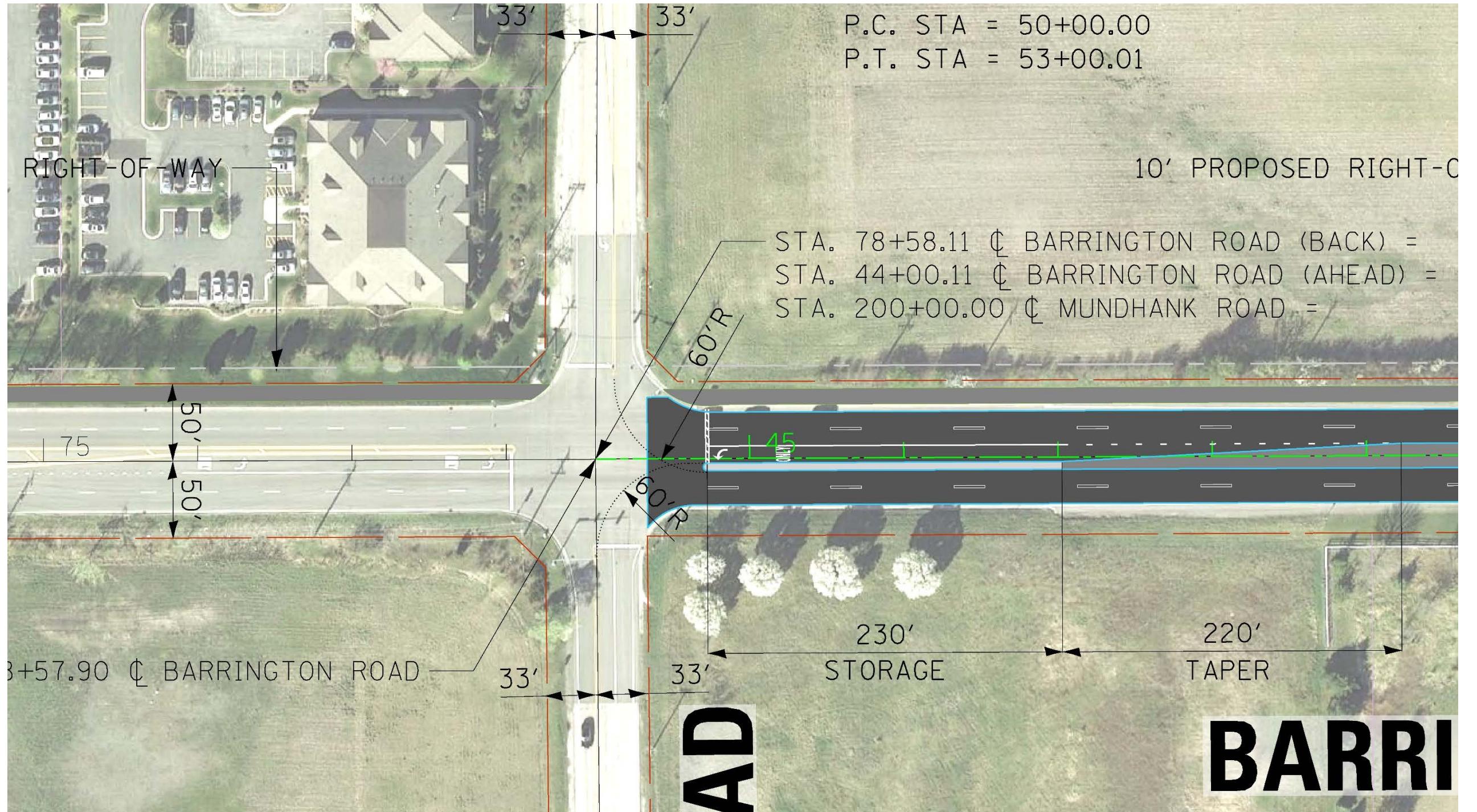
West Side

- 0.20 acres of Proposed ROW required
- 1 driveway and 1 cross street impacted

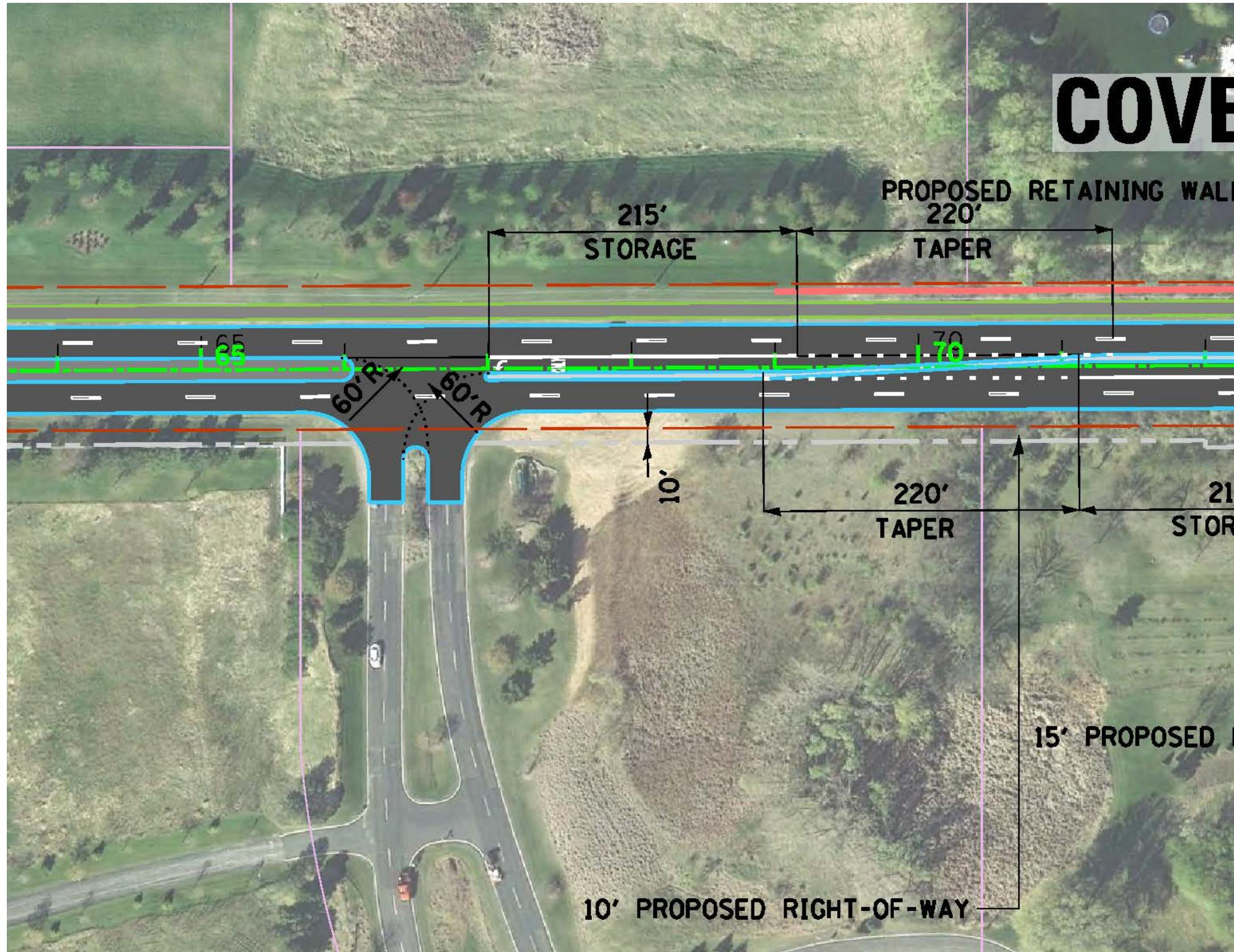
Barrington Rd South of Mundhank



Barrington Rd & Mundhank Rd

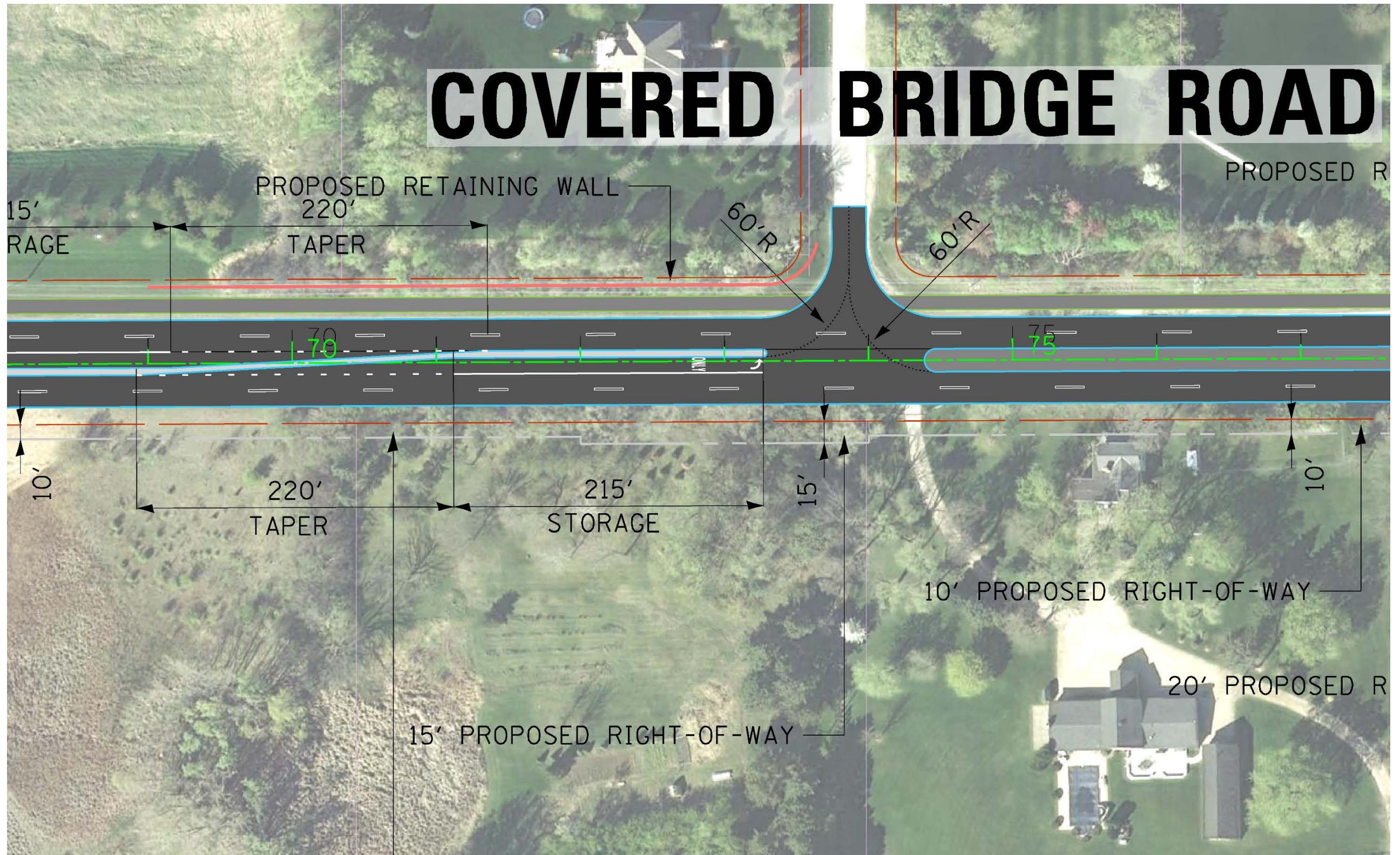


Barrington Rd & Willow Creek Entrance



Barrington Rd & Covered Bridge Rd

COVERED BRIDGE ROAD



Barrington Rd & Falcon Lakes Drive

FALCON LAKES DRIVE

L = 300.00'	L = 30
E = 1.00'	E = 1.0
e = ----	e = --
T.R. = ----	T.R. =
S.E. RUN = ----	S.E. RU
P.C. STA = 87+00.15	P.C. ST
P.T. STA = 90+00.15	P.T. ST

STA. 96+4

10' PROPOSED RIGHT-OF-WAY

60'R

60'R

50'

50'

220'

TAPER

215'

STORAGE

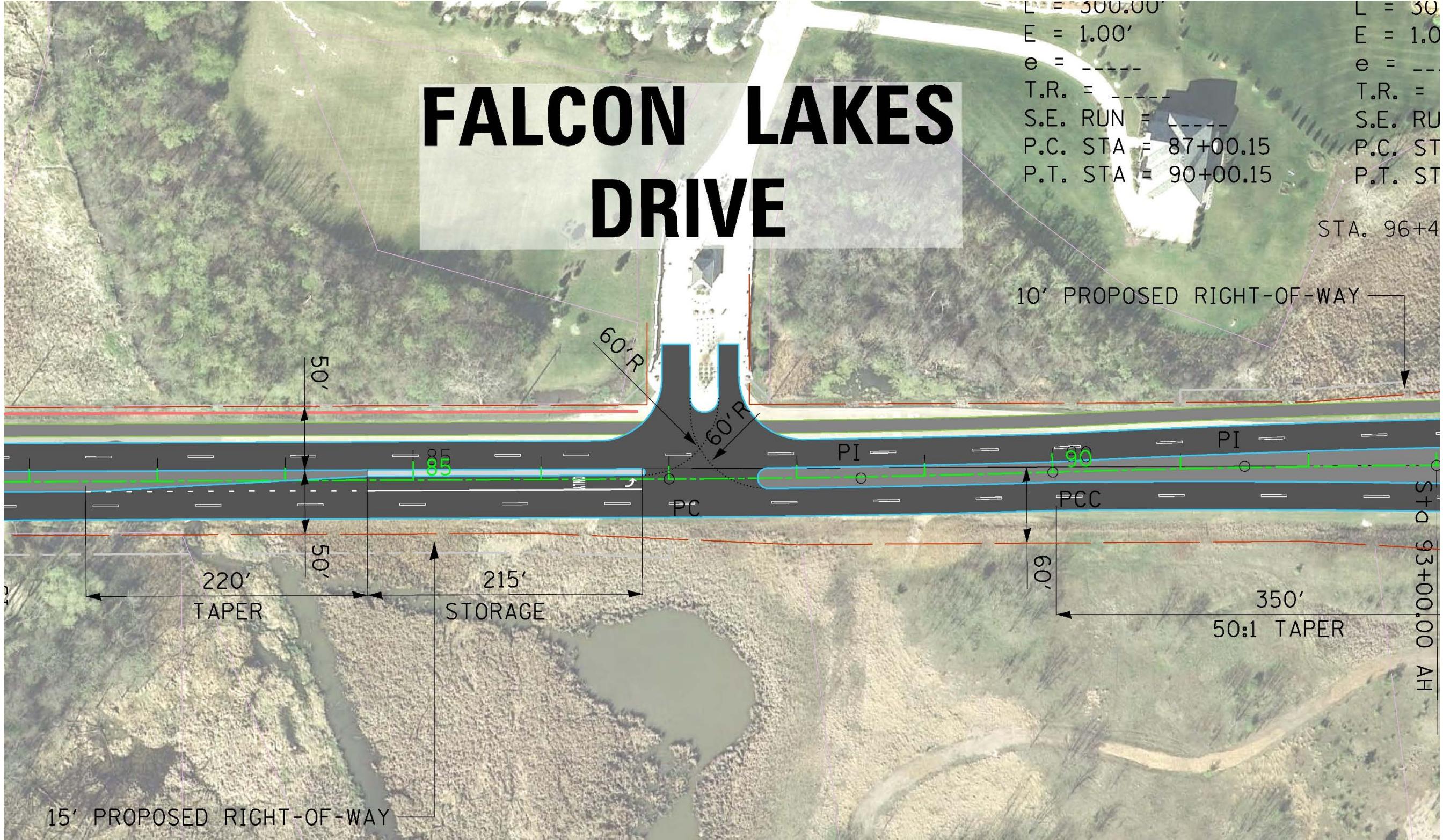
60'

350'

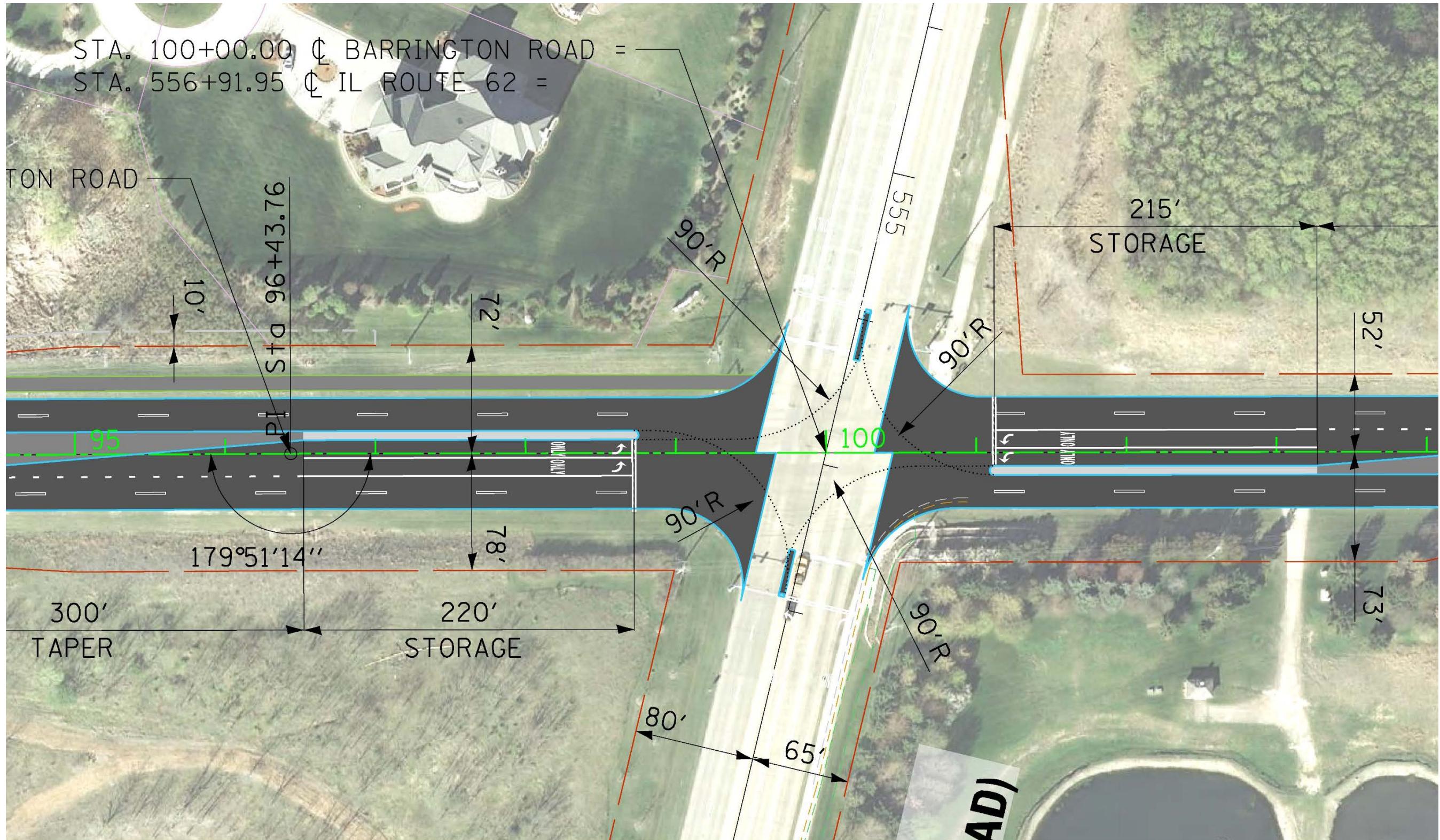
50:1 TAPER

15' PROPOSED RIGHT-OF-WAY

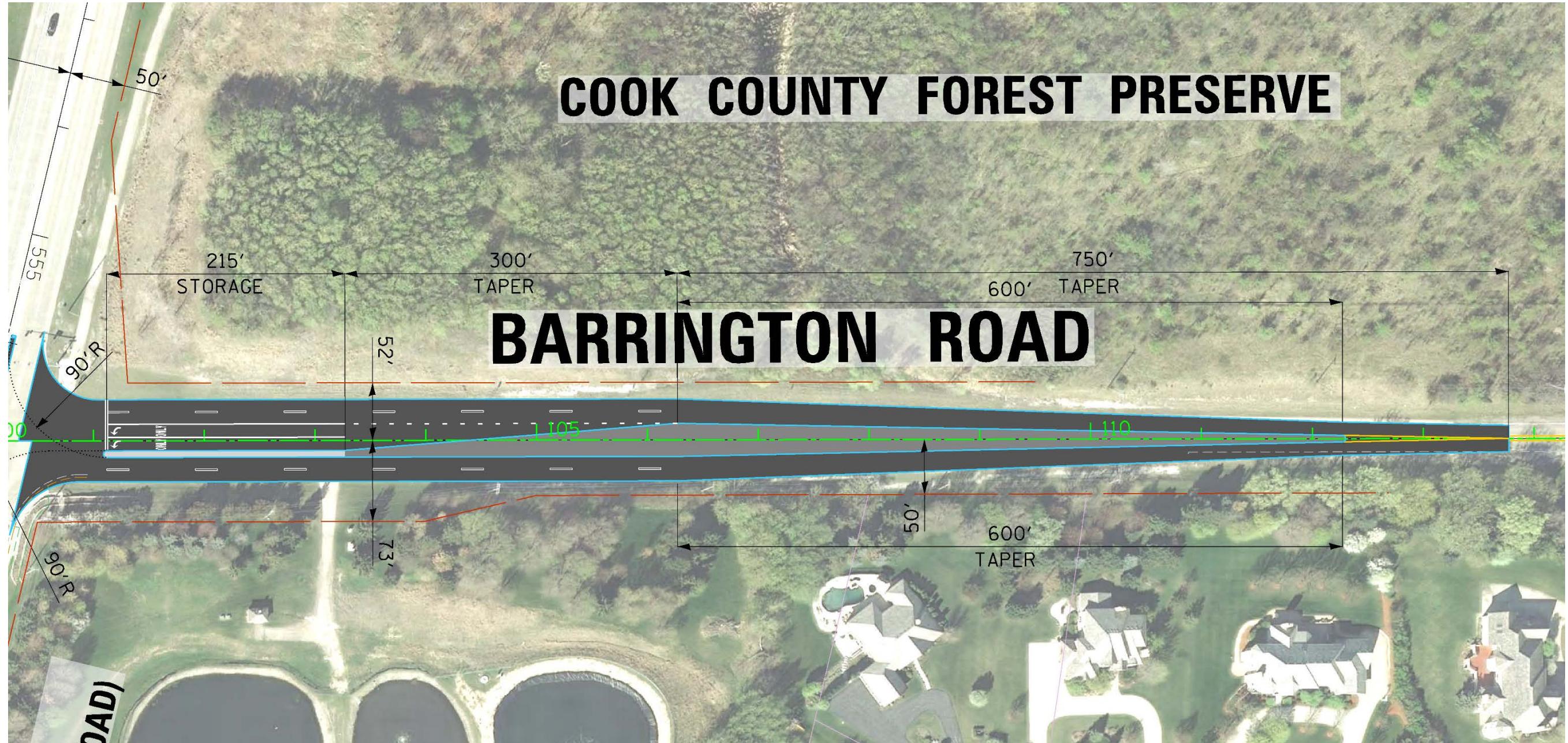
STA 93+00.00 AH



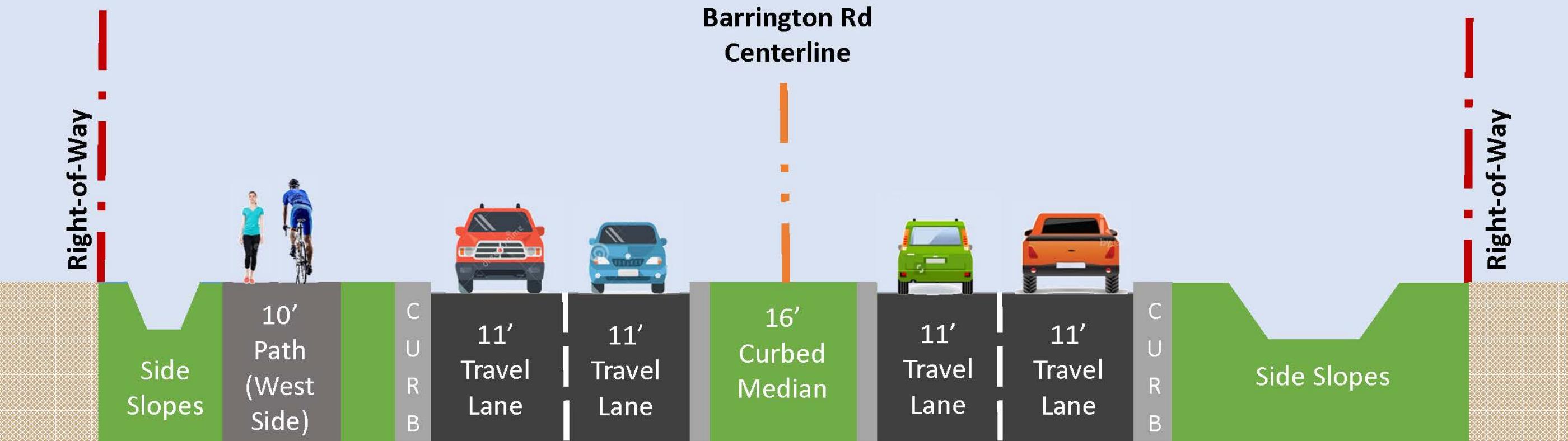
Barrington Rd & IL 62 (Algonquin Rd)



Barrington Road North of IL 62



Reducing Proposed Right-of-Way

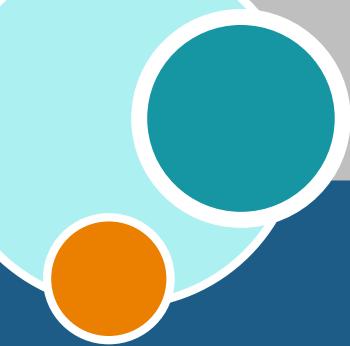


- ✓ Two 11' vs 12' Travel Lanes
- ✓ 16' vs 22' Curbed Median
- ✓ 3:1 Side Slopes (on average)
- ✓ Shifted roadway centerline 8-ft to east
- ✓ Retaining walls



Break Out Discussion

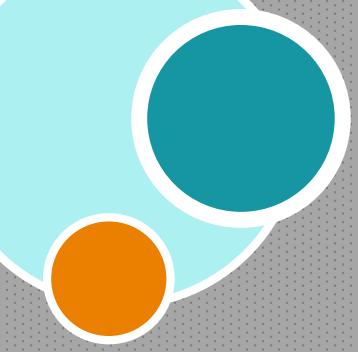




Draft Proposed Improvement

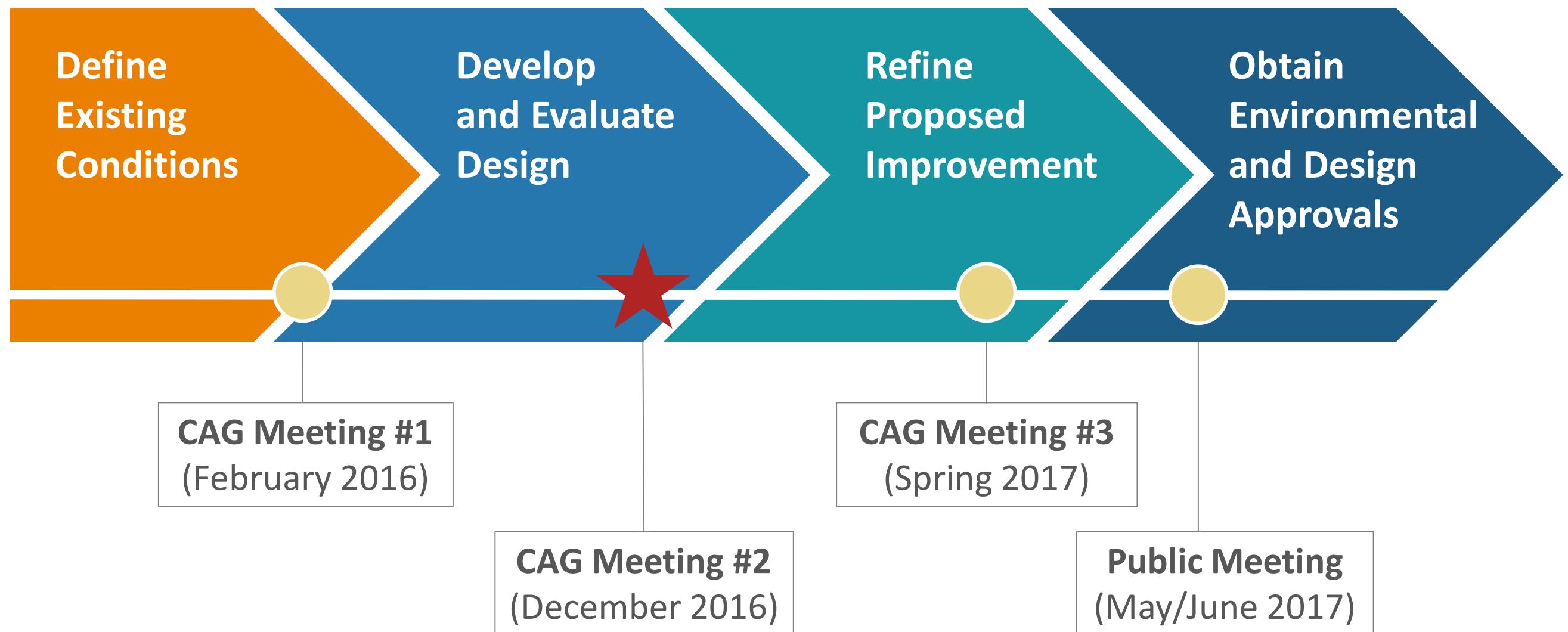
General Understanding of
AGREEMENT





Next Steps

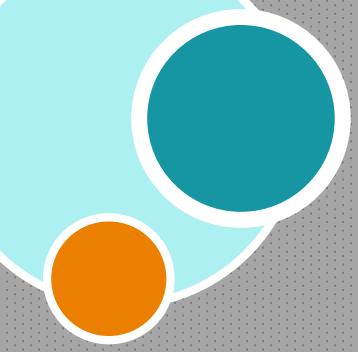
Next Steps



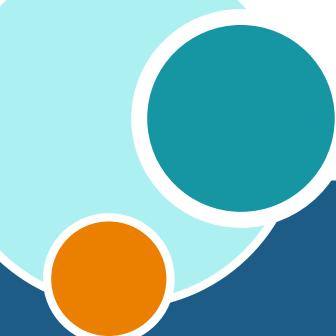
Next Steps

- ✓ Refine Proposed Improvement
 - Noise Analysis
 - Drainage Analysis
- ✓ CAG Meeting #3
(Spring 2017)
- ✓ Complete Project Report
and Environmental
Documentation
- ✓ Public Meeting
(May/June 2017)





Thank You



Questions?



Contact Information

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Project Manager

Illinois Department of Transportation

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Schaumburg, IL 60194

(847) 705-4107

barringtonroad@burnsmcd.com

<http://www.idot.illinois.gov/projects/barrington-rd-at-il-62>