



DEERFIELD
Road

MILWAUKEE AVENUE TO
SAUNDERS/RIVERWOODS ROAD

>Welcome!

DEERFIELD ROAD PHASE I

ENGINEERING AND ENVIRONMENTAL STUDY



DEERFIELD
Road

MILWAUKEE AVENUE TO
SAUNDERS/RIVERWOODS ROAD

PROJECT OVERVIEW



PROJECT LOCATION

OVERALL PROJECT DEVELOPMENT PROCESS

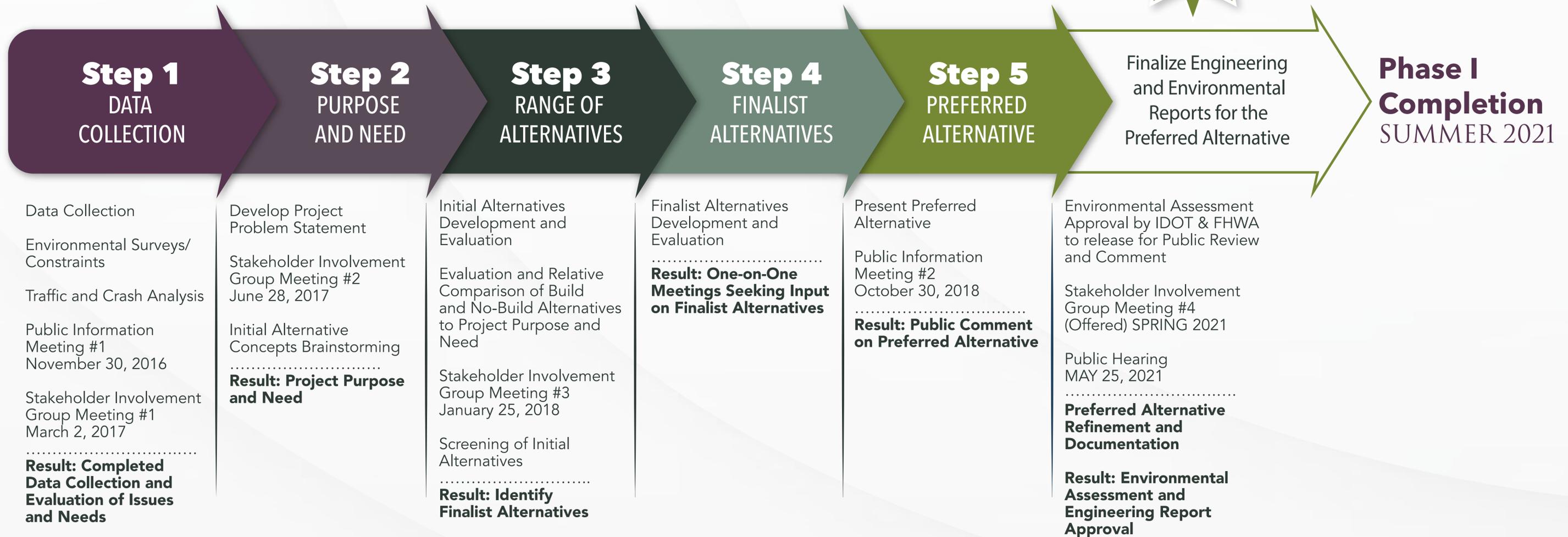
**We Are
Here**

PHASE I
Preliminary Engineering and Environmental Study
(Planned for 36 months)
Initiated 2016 (Targeted August 2021 Completion)

PHASE II
Contract Plan Preparation and Land Acquisition
(Anticipated 24 months)
Targeted August 2023 Completion

PHASE III
Construction
(Anticipated 24 months)
Targeted Fall 2023 Construction Start

PHASE I STUDY PROCESS AND TIMELINE



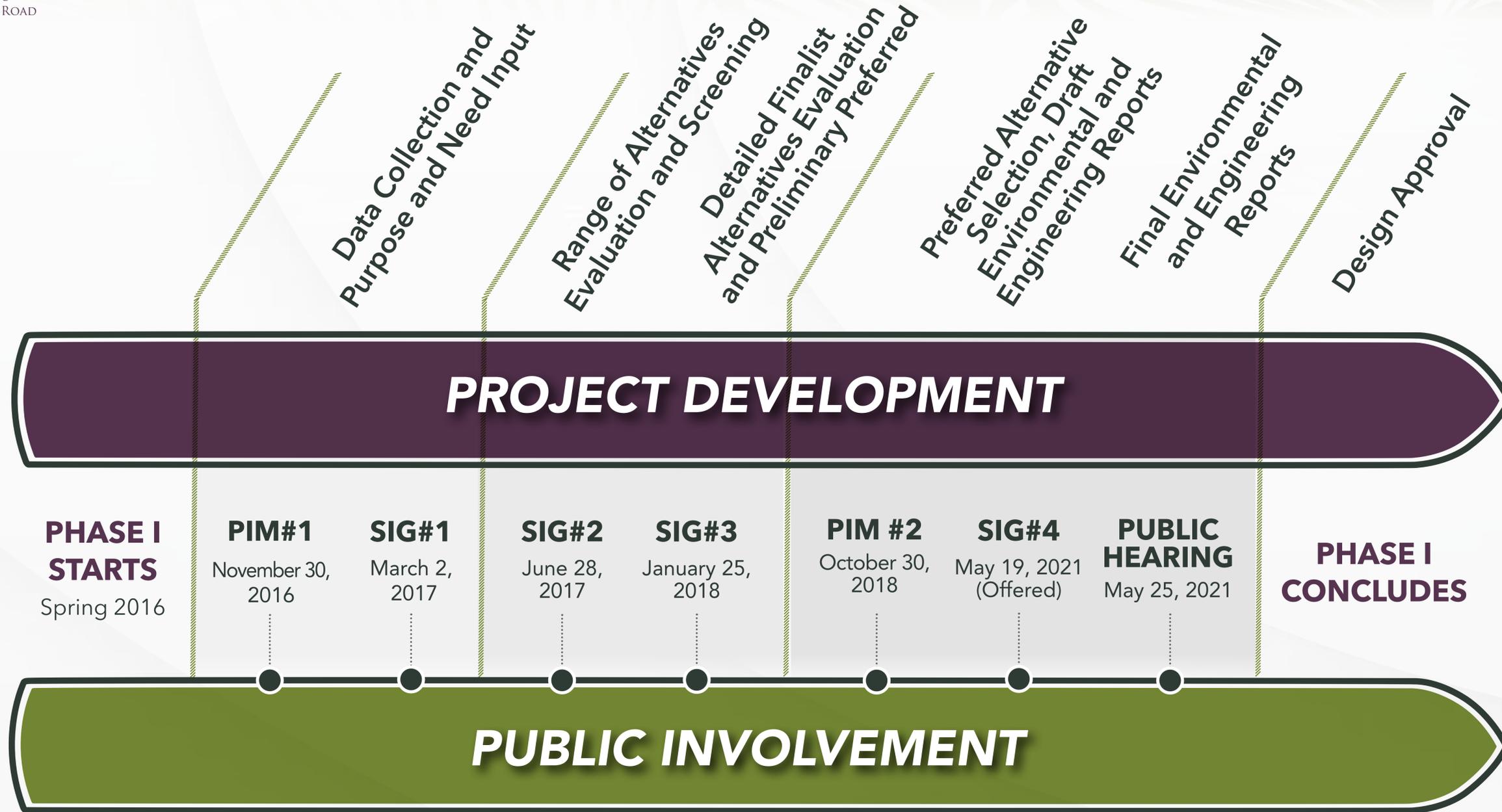
COMMUNITY & PUBLIC INVOLVEMENT



DEERFIELD
Road

MILWAUKEE AVENUE TO
SAUNDERS/RIVERWOODS ROAD

PUBLIC INVOLVEMENT & PROJECT DEVELOPMENT



- Public Information Meeting (PIM)
- Stakeholder Involvement Group (SIG)



ENVIRONMENTAL ASSESSMENT

The Deerfield Road Phase I Study follows the Federal National Environmental Policy Act (NEPA) for project development and is processed as an Environmental Assessment (EA). Following this process will allow the study team to balance the need for safe and efficient transportation improvements with any impacts to the human and natural environment. The study team has considered a variety of factors that may have an impact on the environment and has submitted the final finding to the Federal Highway Administration (FHWA) and to the public for review. The Chapters of the EA include: Purpose and Need; Alternatives; Environmental Setting, Impacts, and Mitigation; Comments and Coordination; and Next Steps.

SOME OF THE ENVIRONMENTAL ASPECTS INCLUDED IN THE STUDY:

Socio-economic
Cultural Resources
Natural Resources
Air Quality
Noise

Surface Waters
Wetlands
Floodplain
Special Waste
Indirect/Cummulative Impacts



The EA is available for public review now through June 14, 2021.

AVOID, MINIMIZE, AND MITIGATE IMPACTS

Purpose:

- ✓ To provide an improved transportation system to address capacity, safety, mobility, and operational deficiencies along Deerfield Road and improve non-motorized accommodations from Milwaukee Avenue (US 45/ IL 21) to Saunders/Riverwoods Road in Lake County, Illinois.

Need:

- ✓ The needs for the project include capacity, safety, mobility, non-motorized and transit connections, and Operational Deficiencies.

The **Purpose and Need** is a formal document and is the first chapter of the Environmental Assessment, which is utilized as the basis for evaluating Alternatives. The Purpose and Need was reviewed by the Stakeholder Involvement Group and approved by the Federal Highway Administration in Fall 2017.

The Purpose and Need can be found on the project website at DeerfieldRoadCorridor.com.



ENVIRONMENTAL ASSESSMENT - NEXT STEPS



DEERFIELD
Road

ENVIRONMENTAL ASSESSMENT

DEERFIELD ROAD (FAU 1257)
IL 21/US 45 to SAUNDERS/RIVERWOODS ROAD
LAKE COUNTY, ILLINOIS



MARCH 2021



The EA review and comment period will be a minimum of 30 days. The project team will then address comments and make any necessary changes to the proposed improvement and EA. To document the changes following the EA review, comment period and the public hearing, an Errata to the EA document will be prepared. Specifically, the EA Errata will:

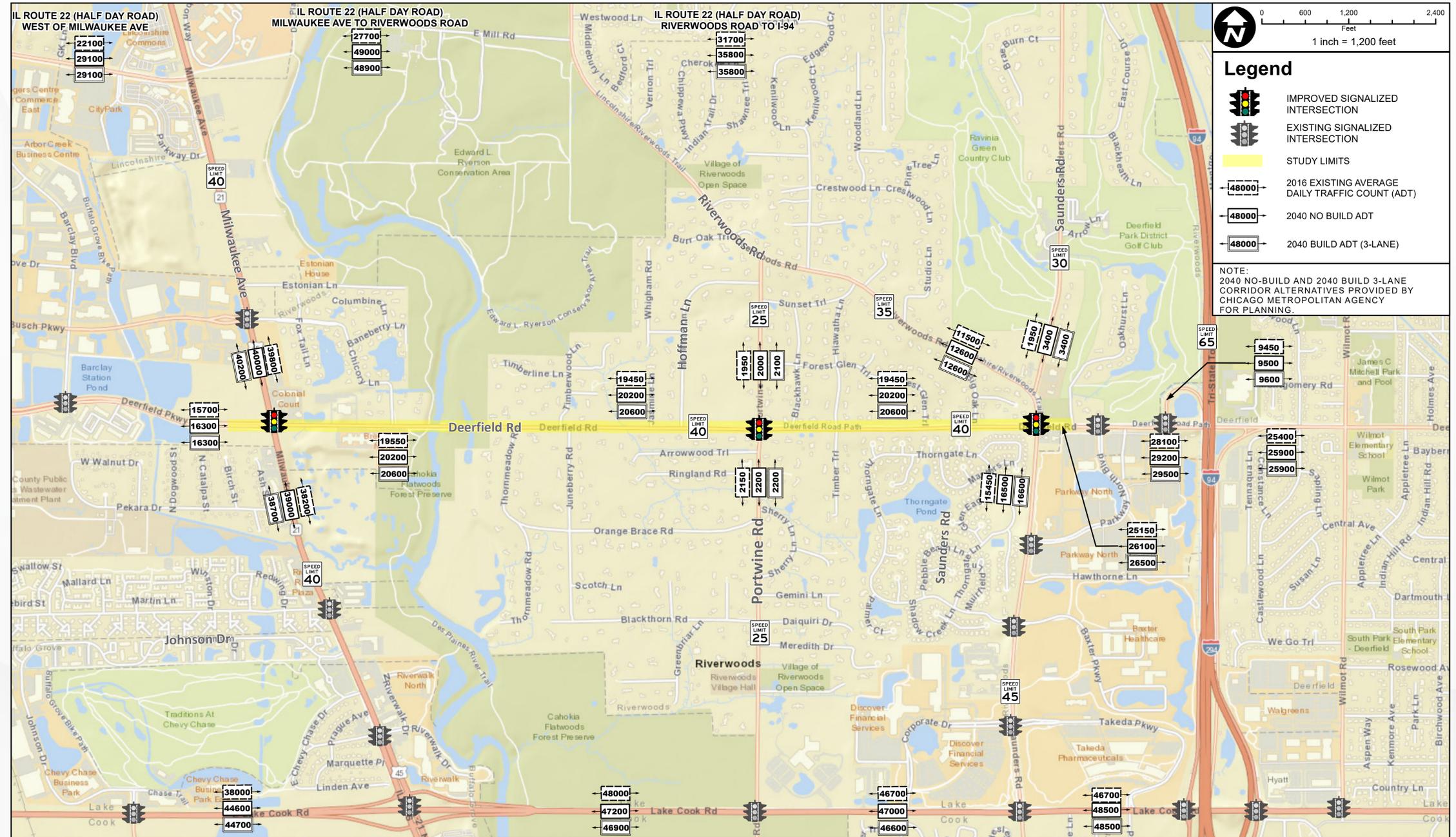
- Reflect changes to the proposed improvement or mitigation measures resulting from comments received on the EA or at the public hearing, and the effect of the changes
- Include any necessary findings, agreements, or determinations for compliance with wetland requirements, historic/cultural regulations, and public lands/resources (Section 4(f)) regulations
- Incorporate pertinent comments received on the EA and the responses to those comments;
- Include public hearing summary.

After the public comment period concludes, LCDOT and IDOT may recommend to the FHWA that a Finding of No Significant Impact (FONSI) be issued for the project. The FHWA will review the EA, comments submitted on the EA, and other supporting documentation, as appropriate. If the FHWA agrees with the LCDOT and IDOT's recommendations, it will issue a separate written FONSI incorporating by reference the EA and any other appropriate environmental documents. If the FHWA determines the project will have a significant impact on the environment, then an Environmental Impact Statement will be required.

ENVIRONMENTAL ASSESSMENT REVIEW PERIOD: MAY 10 - JUNE 14, 2021

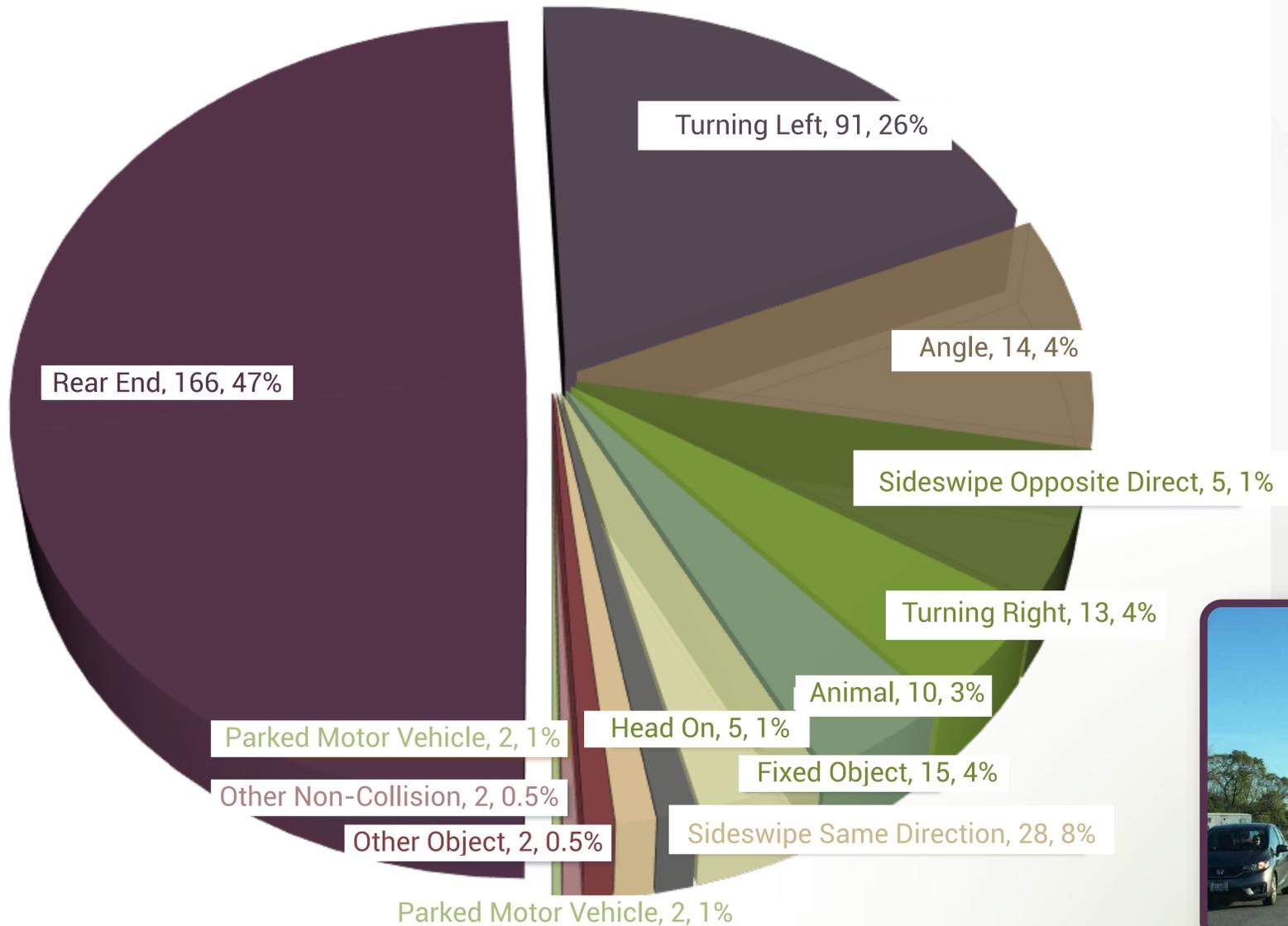
AVERAGE DAILY TRAFFIC DATA

There is minimal projected growth along Deerfield Road from existing 2016 traffic (19,450) to 2040 No-Build (20,200) to 2040 Build (20,600).



Project Study Area Crash Type Summary 353 Total Crashes (2014-2018)

353 crashes in five year period
(2014 - 2018) resulting in **100** injuries.



47% (166) of crashes within the study area are rear end crash type

Rear end crashes within the study area can be attributed to congestion, excessive queueing from intersections, absence of the turning lanes, lack of adequate gaps for main line and side road left turns, lane drops, and drivers not being aware of access points.





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PUBLIC INVOLVEMENT

CONTEXT SENSITIVE SOLUTIONS (CSS)



The Deerfield Road Study uses principles of the Context Sensitive Solutions process, known as CSS.

CSS is a collaborative approach that seeks to involve all stakeholders in the study process to develop alternatives that fit into its surroundings, using a flexible and creative approach to design.

CSS promotes frequent communication, addresses all modes of transportation, and strives to preserve scenic, aesthetic, historic and environmental resources while maintaining safety and mobility.

Project Study Team

- Lake County Division of Transportation (LCDOT)
LEAD AGENCY
- The Illinois Department of Transportation Bureau of Local Roads (IDOT)
- Federal Highway Administration (FHWA)

** Final project decisions will be made by LCDOT. Because the project is seeking Federal funding, IDOT and FHWA have approval authority.*

Stakeholders

- Elected Officials
- Business Community
- Local Agencies
- Interest Groups
- Transportation Providers
- County Technical Staff
- General Public

STAKEHOLDER INVOLVEMENT GROUP (SIG)

Who:

- ✓ SIG members consist of a diverse cross section of stakeholders affected by the study, including government agencies, residents, business owners, and others who utilize Deerfield Road.

Purpose:

- ✓ Provide Input to the project study group throughout the project development process at key milestone points.

Responsibilities:

- ✓ Commit to attend meetings (*approximately 4*)
- ✓ Communicate with your constituents, agencies, or neighbors about the project.

SIG #1

March 2, 2017



PURPOSE:

- Data Collection
- Environmental Surveys/ Constraints
- Traffic and Crash Analysis

SIG #2

June 28, 2017



PURPOSE:

- Develop Project Problem Statement
- Initial Alternative Concepts Brainstorming

SIG #3

January 25, 2018



PURPOSE:

- Initial Alternatives Development and Evaluation
- Evaluation and Relative Comparison of Build and No-Build Alternatives to Project Purpose and Need
- Screening of Initial Alternatives

SIG #4

May 19, 2021 (*offered*)



PURPOSE:

- Environmental Assessment Overview
- Public Hearing Preview



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PUBLIC INVOLVEMENT - AS OF TODAY





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MILWAUKEE AVENUE TO
SAUNDERS/RIVERWOODS ROAD

RANGE OF ALTERNATIVES

DEERFIELD ROAD CORRIDOR (SECTION A & SECTION B) & TERMINI INTERSECTIONS

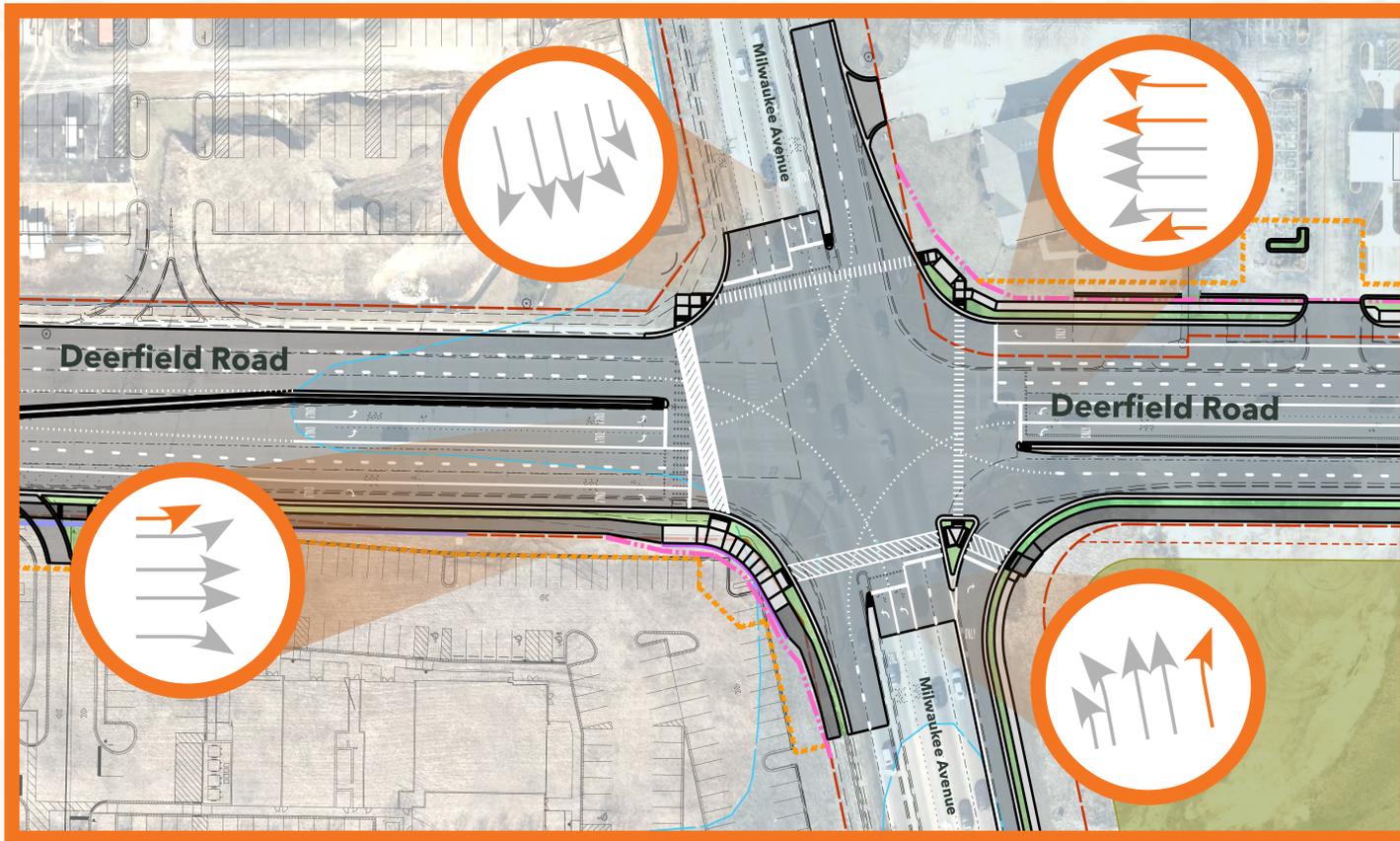


Due to different adjacent land use and transportation needs, the Deerfield Road corridor was broken up into two sections for alternatives development and evaluation, **Section A** consisting of improvements related to the Milwaukee Avenue intersection and **Section B** from the Milwaukee Avenue intersection improvement to Saunders/Riverwoods Road.

SECTION A ALTERNATIVES DEVELOPMENT

11 ALTERNATIVES

were evaluated at the Milwaukee Avenue intersection in addition to a No-Build Alternative



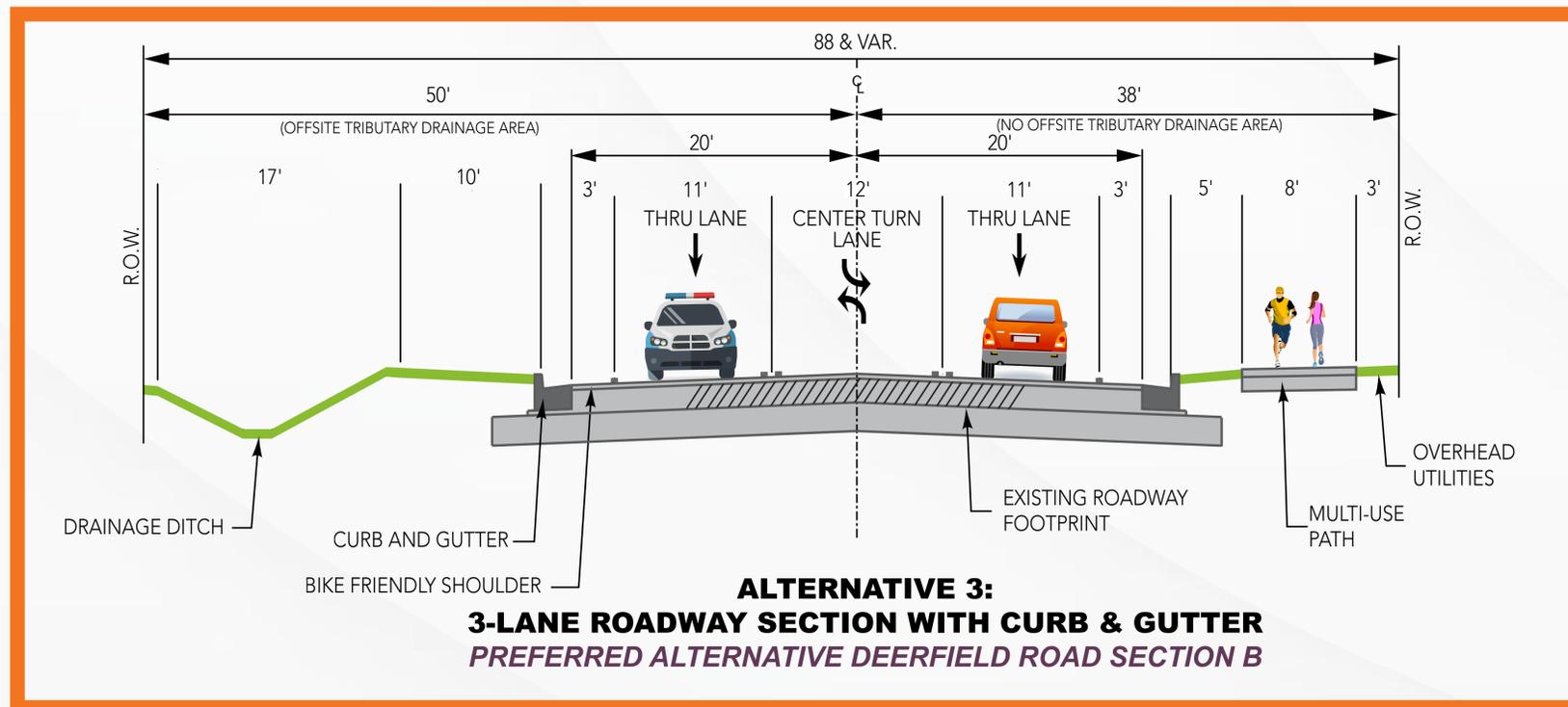
The alternatives evaluation and preferred alternative selection was shown at Public Meeting #2. Refer to Public Meeting #2 materials for more detailed information.



ALTERNATIVE A1D - selected as the preferred intersection alternative

- Westbound right turn lane
- Northbound right turn lane
- 3rd westbound thru on Deerfield
- Dual eastbound and westbound left turn lanes on Deerfield Road

5 ALTERNATIVES WERE EVALUATED IN ADDITION TO A NO-BUILD ALTERNATIVE



The alternatives evaluation and preferred alternative selection was shown at Public Meeting #2. Refer to Public Meeting #2 materials for more detailed information.

ALT
01

ALT
02

ALT
03

ALT
04

ALT
05

ALTERNATIVE 3
3-Lane With Curb
and Gutter

- selected as the preferred alternative
- Reconstructed 3-lane roadway with center turn lane
- Curb and gutter
- Multi-use path
- New drainage system

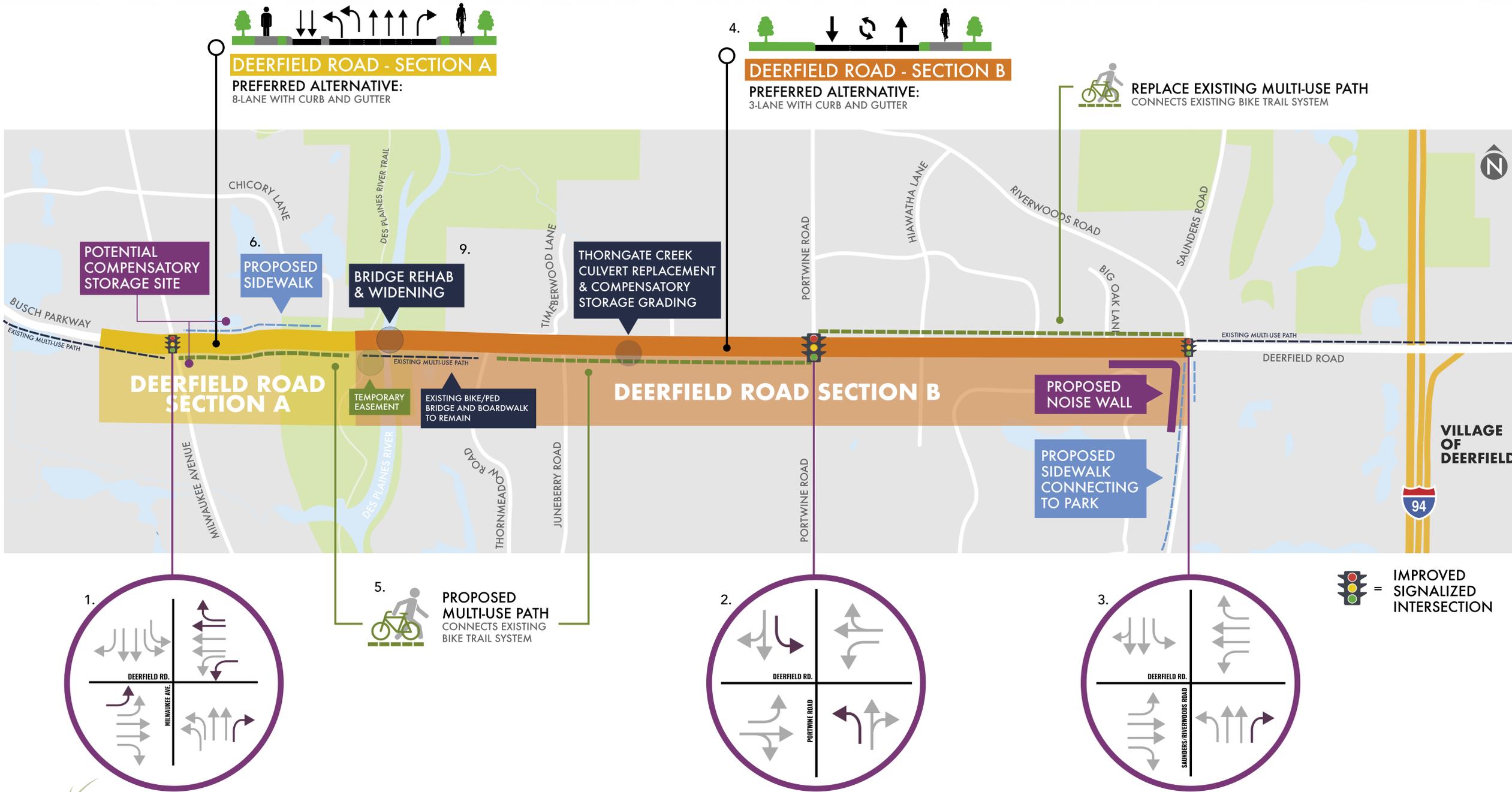


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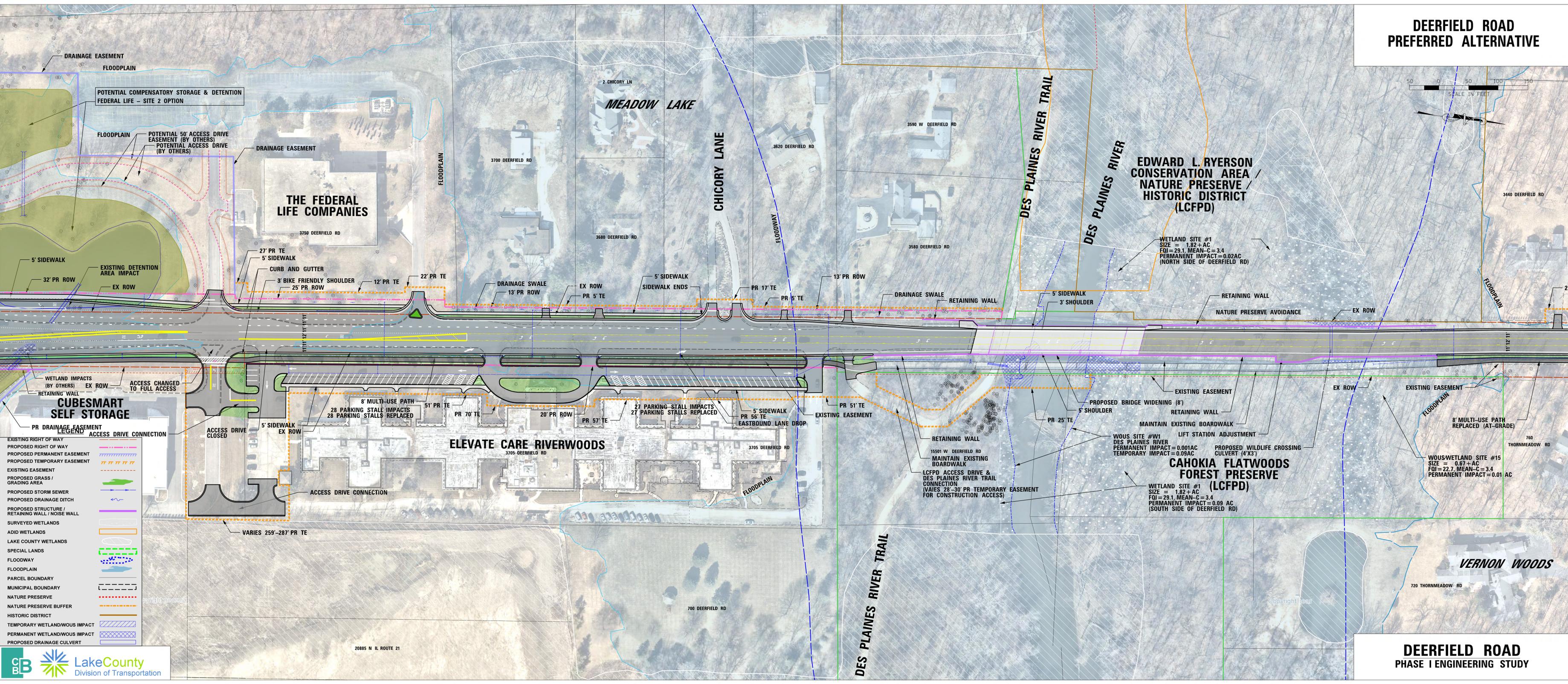
PREFERRED ALTERNATIVE

PREFERRED ALTERNATIVE SUMMARY



1. Intersection improvement at Milwaukee Avenue, including two thru lanes, dual left turn lanes, and an exclusive right turn lane on the northbound, southbound, and eastbound approaches and three thru lanes, dual left turn lanes, and an exclusive right turn lane on the westbound approach.
2. Intersection improvement at Portwine Road, including an exclusive left turn lane on the northbound and southbound approaches.
3. Intersection improvement at Saunders/ Riverwoods Road, including a right turn lane on the northbound approach.
4. The typical roadway section from Milwaukee Avenue to Saunders/ Riverwoods Road includes two 11 feet wide travel lanes in each direction separated by a 12 feet wide two-way left turn lane and 3 feet wide bike friendly shoulders bounded by barrier curb and gutter.
5. A separate 8-foot wide multi-use path along the south side of the roadway from Milwaukee to Portwine Road and along the north side of the roadway from Portwine Road to Saunders/ Riverwoods Road. The multi-use path will be a part of the regional Lake County Trail network.
6. A 5-foot wide sidewalk along the north side of Deerfield Road from Milwaukee Avenue to Chicory Lane, west side of Portwine Road from Deerfield Road south to Arrowwood Trail, and west side of Saunders Road from Deerfield Road to Thorngate HOA Park.
7. A new closed drainage system.
8. A new pavement structure.
9. Widening and re-decking of the Deerfield Road bridge structure over the Des Plaines River.

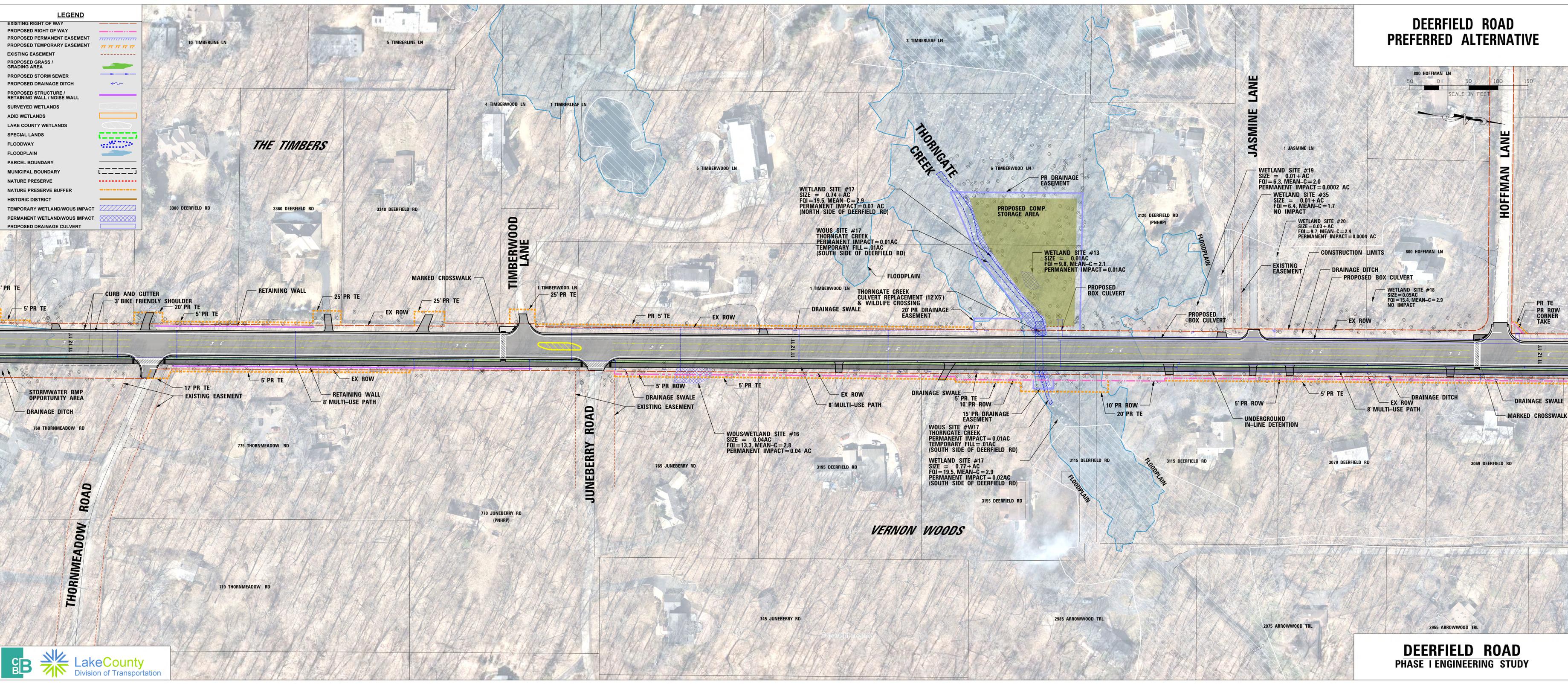
**DEERFIELD ROAD
PREFERRED ALTERNATIVE**



DEERFIELD ROAD PREFERRED ALTERNATIVE



LEGEND	
EXISTING RIGHT OF WAY	
PROPOSED RIGHT OF WAY	
PROPOSED PERMANENT EASEMENT	
PROPOSED TEMPORARY EASEMENT	
EXISTING EASEMENT	
PROPOSED GRASS / GRADING AREA	
PROPOSED STORM SEWER	
PROPOSED DRAINAGE DITCH	
PROPOSED STRUCTURE / RETAINING WALL / NOISE WALL	
SURVEYED WETLANDS	
ADID WETLANDS	
LAKE COUNTY WETLANDS	
SPECIAL LANDS	
FLOODWAY	
FLOODPLAIN	
PARCEL BOUNDARY	
MUNICIPAL BOUNDARY	
NATURE PRESERVE	
NATURE PRESERVE BUFFER	
HISTORIC DISTRICT	
TEMPORARY WETLAND/IOUS IMPACT	
PERMANENT WETLAND/IOUS IMPACT	
PROPOSED DRAINAGE CULVERT	



**DEERFIELD ROAD
PREFERRED ALTERNATIVE**



LEGEND

- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- PROPOSED PERMANENT EASEMENT
- PROPOSED TEMPORARY EASEMENT
- EXISTING EASEMENT
- PROPOSED GRASS / GRADING AREA
- PROPOSED STORM SEWER
- PROPOSED DRAINAGE DITCH
- PROPOSED STRUCTURE / RETAINING WALL / NOISE WALL
- SURVEYED WETLANDS
- ADID WETLANDS
- LAKE COUNTY WETLANDS
- SPECIAL LANDS
- FLOODWAY
- FLOODPLAIN
- PARCEL BOUNDARY
- MUNICIPAL BOUNDARY
- NATURE PRESERVE
- NATURE PRESERVE BUFFER
- HISTORIC DISTRICT
- TEMPORARY WETLAND/OWS IMPACT
- PERMANENT WETLAND/OWS IMPACT
- PROPOSED DRAINAGE CULVERT

**HERRMANN WILDFLOWER
FARM ADDITION
NATURE PRESERVE BUFFER
TO THE
EDWARD L. RYERSON
NATURE PRESERVE
(PRIVATE PROPERTY)**



DEERFIELD ROAD
PREFERRED ALTERNATIVE



LEGEND

- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- PROPOSED PERMANENT EASEMENT
- PROPOSED TEMPORARY EASEMENT
- EXISTING EASEMENT
- PROPOSED GRASS / GRADING AREA
- PROPOSED STORM SEWER
- PROPOSED DRAINAGE DITCH
- PROPOSED STRUCTURE / RETAINING WALL / NOISE WALL
- SURVEYED WETLANDS
- ADD WETLANDS
- LAKE COUNTY WETLANDS
- SPECIAL LANDS
- FLOODWAY
- FLOODPLAIN
- PARCEL BOUNDARY
- MUNICIPAL BOUNDARY
- NATURE PRESERVE
- NATURE PRESERVE BUFFER
- HISTORIC DISTRICT
- TEMPORARY WETLAND/IMPACT
- PERMANENT WETLAND/IMPACT
- PROPOSED DRAINAGE CULVERT



WETLAND SITE #36
SIZE = 0.10 AC
FOI = 18.3, MEAN-C = 2.9
NO IMPACT

WETLAND SITE #37
SIZE = 0.14 AC (EXTENDS OFFSITE)
FOI = 14.7, MEAN-C = 2.8
NO IMPACT

RIVERWOODS WOODLANDS PRESERVE

WETLAND SITE #30
SIZE = 0.14 AC (RAIN GARDEN)
FOI = 18.6, MEAN-C = 3.8
NO IMPACT

DEERFIELD ROAD

CONGRESSIONAL LANE

THORNGATE

THORNGATE LANE

MASTERS LANE

GLEN EAGLES LANE

DEERFIELD ROAD
PHASE I ENGINEERING STUDY

PREFERRED ALTERNATIVE EVALUATION TABLE

 **The Preferred Alternative is: Combination of Section A Alternative A1D and Section B Alternative 3**

Benefits include:

- PM westbound travel time is anticipated to decrease 80% (36 minutes to 7 minutes)
- Overall delay at Milwaukee Avenue intersection is anticipated to decrease 70%
- Turning movement deficiencies addressed at Portwine Road and Saunders/Riverwoods Road intersections
- Mobility is anticipated to improve from 0 to 30 acceptable PM gaps
- Injury crashes are expected to decrease by 50%
- Operation deficiencies addressed with pavement reconstruction
- Non-motorized connections made between Milwaukee Ave. and Saunders/Riverwoods Road

The Preferred Alternative meets the Purpose and Need of the project.

Other Notable Information

- No Permanent Forest Preserve/Nature Preserve or building Impacts
- Least impactful out of all alternatives considered

EVALUATION CRITERIA	UNIT OF MEASURE	NO-BUILD 2040		PREFERRED ALTERNATIVE	
TRANSPORTATION PERFORMANCE (SYNCHRO MODELING)					
Deerfield Road Average Daily Traffic (ADT)		20,200		20,600	
Intersection Level of Service (LOS) and Average Delay ¹		AM	PM	AM	PM
Deerfield Road at Milwaukee Avenue Intersection	LOS (sec/veh)	E (66.7)	F (221.6)	D (44.0)	E (72.1)
Deerfield Road at Portwine Road Intersection	LOS (sec/veh)	C (25.7)	D (37.1)	C (24.8)	D (44.8)
Deerfield Road at Saunders/Riverwoods Road	LOS (sec/veh)	C (29.9)	D (37.5)	C (27.2)	C (25.1)
Total Travel Time		AM	PM	AM	PM
Deerfield Road Eastbound (Milwaukee Avenue to Saunders/Riverwoods Road)	Minutes	6.5	6.8	6.6	6.2
Deerfield Road Westbound (Saunders/Riverwoods Road to Milwaukee Avenue)	Minutes	6.6	35.6	4.7	6.7
MOBILITY (SYNCHRO MODELING)					
Roadway Section Average Vehicular Gap Acceptance		AM	PM	AM	PM
Gaps Per Hour at Stop Controlled Intersections/Driveways (Reference Location Timberwood Ln/Juneberry Rd)	# gaps (> 8 seconds) per hour	52	0	53	31
NON-MOTORIZED ACCOMMODATIONS					
Non-Motorized Accommodations	scale	-		+++++	
SAFETY (ILLINOIS HIGHWAY SAFETY DESIGN MANUAL)					
Average Predicted Crashes - Deerfield Road (Milwaukee Avenue to Saunders/Riverwoods Road)	% increase injury crashes/year	4.8%		-51.4%	
ENVIRONMENTAL RESOURCES					
Added Net Pavement/Impervious Area	acres	-		5.72	
Floodplain Impact	acres	-		3.54	
Floodway Impact	acres	-		0.83	
Wetlands Impact	acres	-		0.65	
High Quality Wetlands Impact	acres	-		0.19	
Tree Impacts	each	-		1,020	
Natural Area Impacts	acres	-		0.008	
Nature Preserve Impacts	acres	-		0.0	
Permanent Forest Preserve District Impact	acres	-		0.0	
Temporary Forest Preserve District Impacts	acres	-		0.3	
SOCIO-ECONOMIC IMPACTS					
Residential/Commercial Structure Impacts	scale	-		0	
Temporary Easements	each	-		4.51	
Permanent Easements	acres	-		6.77	
Proposed ROW	acres	-		3.03	
Parcels Impacted	each	-		74	
COST					
Phase I Engineering Estimate of Construction Cost	dollars	-		\$32,600,000	

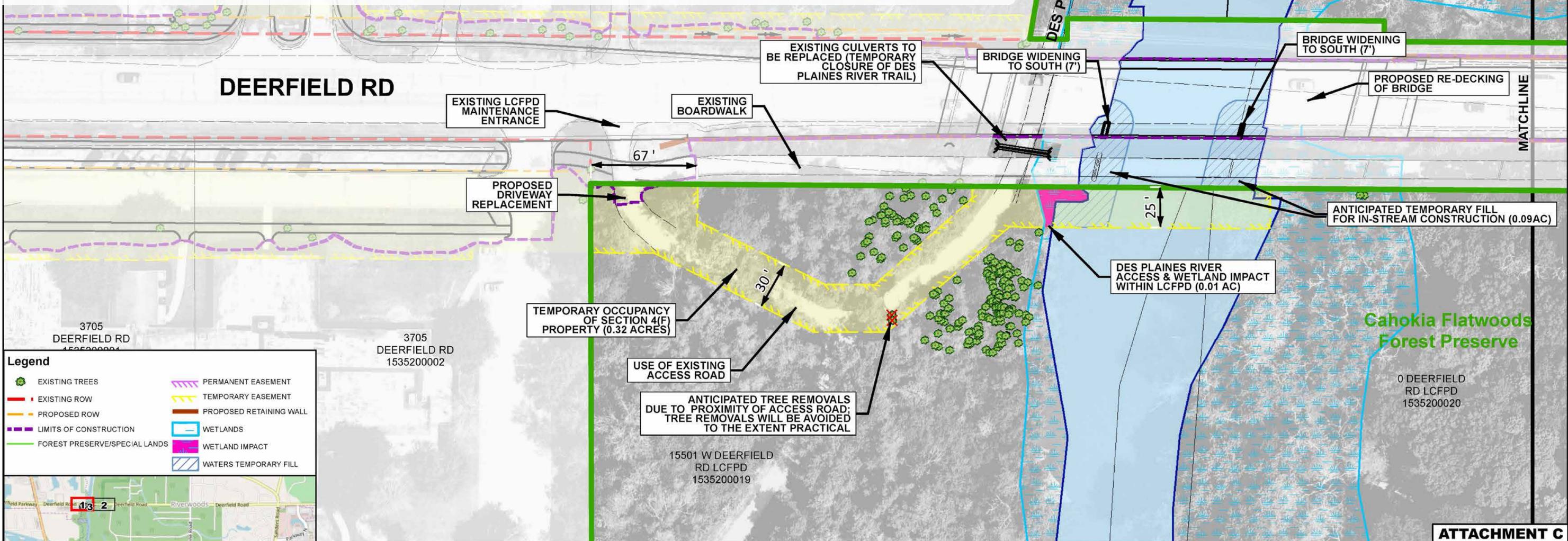
SECTION 4(F)

ANTICIPATED TREE REMOVALS		
ID #	Species	DBH*
466a	Siberian Elm	13
467a	Siberian Elm	11

* DIAMETER AT BREAST HEIGHT

Section 4(f) of the U.S. Department of Transportation (USDOT) Act of 1966 protects historic sites and publicly owned parks, recreational areas, and wildlife and waterfowl refuges.

There is a proposed temporary use (0.32 acres) of the Cahokia Flatwoods Forest Preserve to utilize an existing access road to widen the existing Deerfield Road bridge.



ANTICIPATED NUMBER OF TREE REMOVALS ¹

Village of Riverwoods Classification ²	Within Existing Right-of-Way	Within Proposed Right-of-Way	Within Proposed Temporary Easement	Within Proposed Permanent Easement	Total Removal by Species	Quantity with DBH ≤ 12-inches	Percent of Grand Total Removed (by Species)
Desirable Tree Species ²	183	92	72	23	370	215	36.3%
Other Tree Species	274	121	115	138	648	276	63.7%
Total	457	213	187	161	1,018	491	100%

¹ Includes trees with a DBH of 6-inches or greater not located on LCFPD property. Anticipated tree removals were based on tree location within existing or proposed right-of-way and proposed easement areas.

² Includes a list of “desirable protected trees” and “highly desirable protected trees” based on Section 9-6-5 of the Village of Riverwoods *Tree and Woodland Protection Ordinance*.

The tree impacts shown above assume all trees within the existing right-of-way, proposed right-of-way, and proposed easements are impacted. The final tree impacts will be determined during the next phase of engineering (Design Engineering). Trees will be replanted to the extent possible within the roadway right-of-way and permanent easements.

DESIRABLE TREE SPECIES

- American sycamore
- Bur oak
- Hophornbeam/Ironwood
- Swamp white oak
- Basswood
- Common hackberry
- Pin oak
- White oak
- Black walnut
- Hawthorn
- Red oak
- White pine
- Shagbark hickory
- Yellowbud hickory



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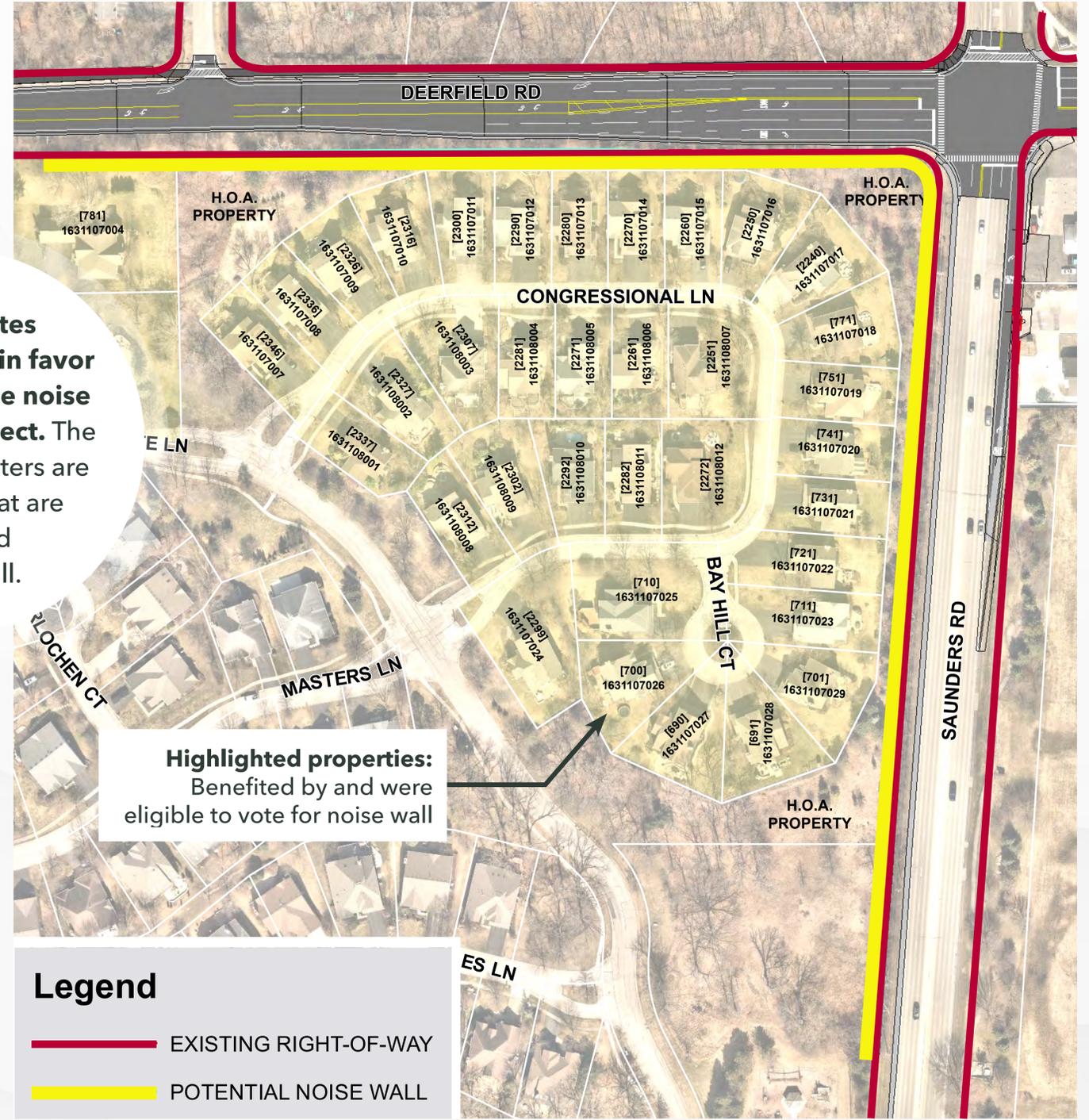
NOISE ANALYSIS & POTENTIAL NOISE WALL



15'

APPROXIMATELY 15 FEET

88% of votes received were in favor of including the noise wall in the project. The only eligible voters are properties that are benefited by the wall.



Legend

- EXISTING RIGHT-OF-WAY
- POTENTIAL NOISE WALL

there are
**THREE TYPES OF
LAND ACQUISITION**

FEE SIMPLE ACQUISITION - or the acquisition of all rights and interest of real property (i.e. right-of-way)

PERMANENT EASEMENT - where underlying ownership is retained by the property owner, but access is permanently allowed during and after construction for maintenance of facilities such as drainage structures.

TEMPORARY EASEMENTS - where underlying ownership is retained by the property owner, but access is temporarily allowed only during construction for items such as grading work, driveway construction, and other minor improvements



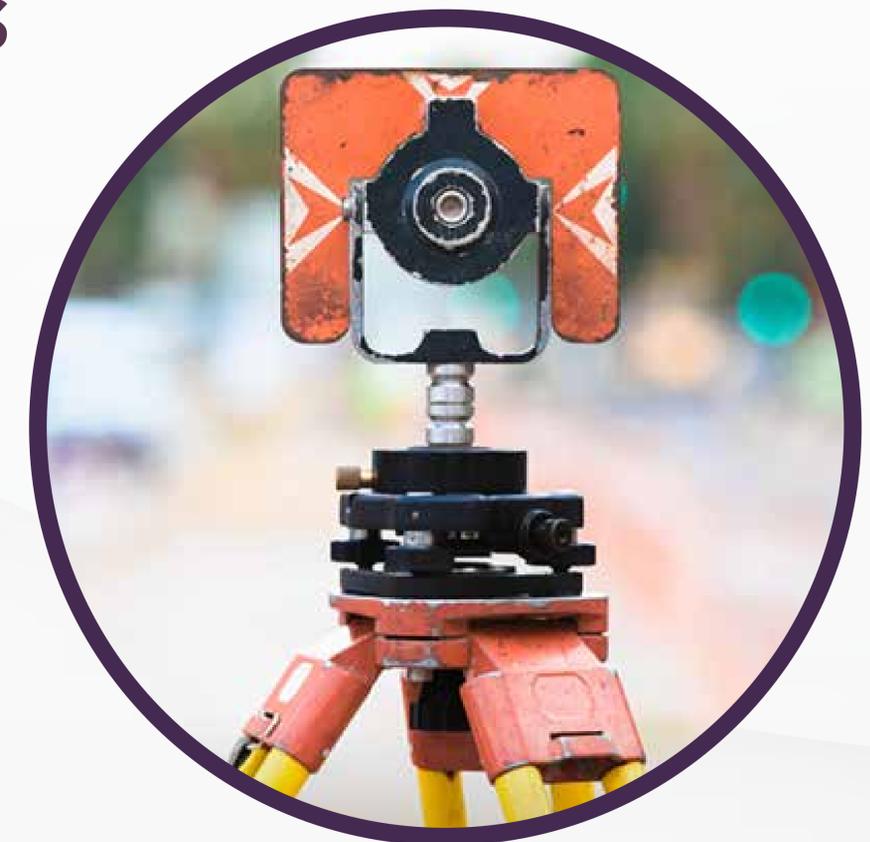
LAND ACQUISITION

Construction of the proposed action will require the acquisition of approximately **3.03 acres of right-of-way, 6.77 acres of permanent easement** and **4.51 acres of temporary construction easements** affecting 74 parcels.

LAND ACQUISITION PROCESS

The land acquisition process involves the following steps:

1. The ownership of the property is confirmed;
2. A plat of survey drawing is prepared to show the dimensions and amount of property that is being acquired;
3. An appraisal and independent review appraisal are made to determine the fair market value of the property to be acquired;
4. Negotiations begin with an offer to acquire the necessary property at the appraised value;
5. If a settlement cannot be reached, the matter is referred to the courts for acquisition under the law of eminent domain, in which property owners are compensated fair market value for the acquired property.



THANK YOU!

LEAVE A COMMENT!

Comments can be made at **DeerfieldRoadCorridor.com** or be sent to Matt Huffman:

Matt Huffman
Consultant Project Manager
9575 W Higgins Road
Suite 600
Rosemont, IL 60018

We encourage comments throughout the course of the study, however, comments received **by June 14, 2021**, will be specifically added to the public hearing record.



due to COVID-19
**VIRTUAL PUBLIC
ENGAGEMENT TOOLS
WILL BE UTILIZED**

- **All Public Hearing information** will be posted on the project website
- **Comments** will be accepted through the project website
- The Virtual Live Public Hearing presentation and comments will be recorded by a **court reporter.**