

Milwaukee County Pedestrian & Bicycle Crossing Assessment

ITE Traffic Engineering Workshop

April 16, 2026



Project Background

- After the pandemic increase in concerns about pedestrian/trail crossings
- Create a plan with purpose of prioritizing needs
- 40+ locations were selected for initial review

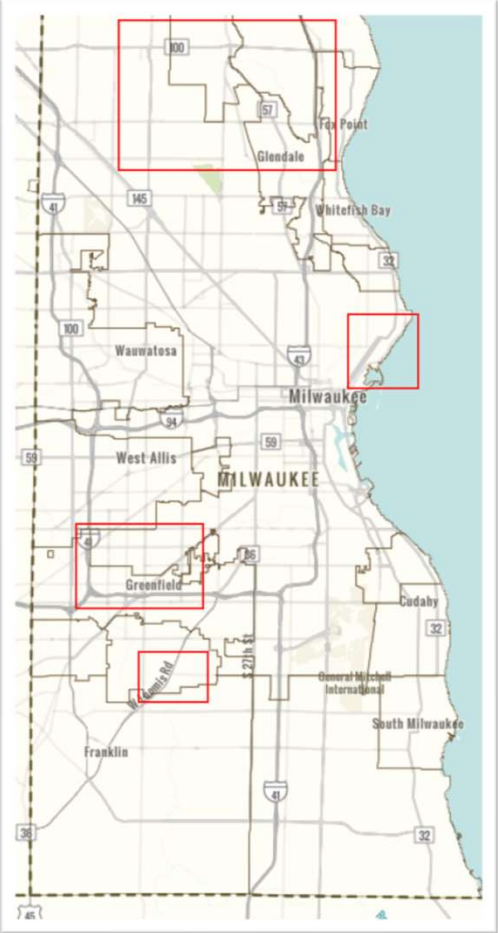


Project Background

- Narrow down locations
- Matrix
- 20 locations remained
- Applied for a Transportation Alternative Program planning funds to evaluate further

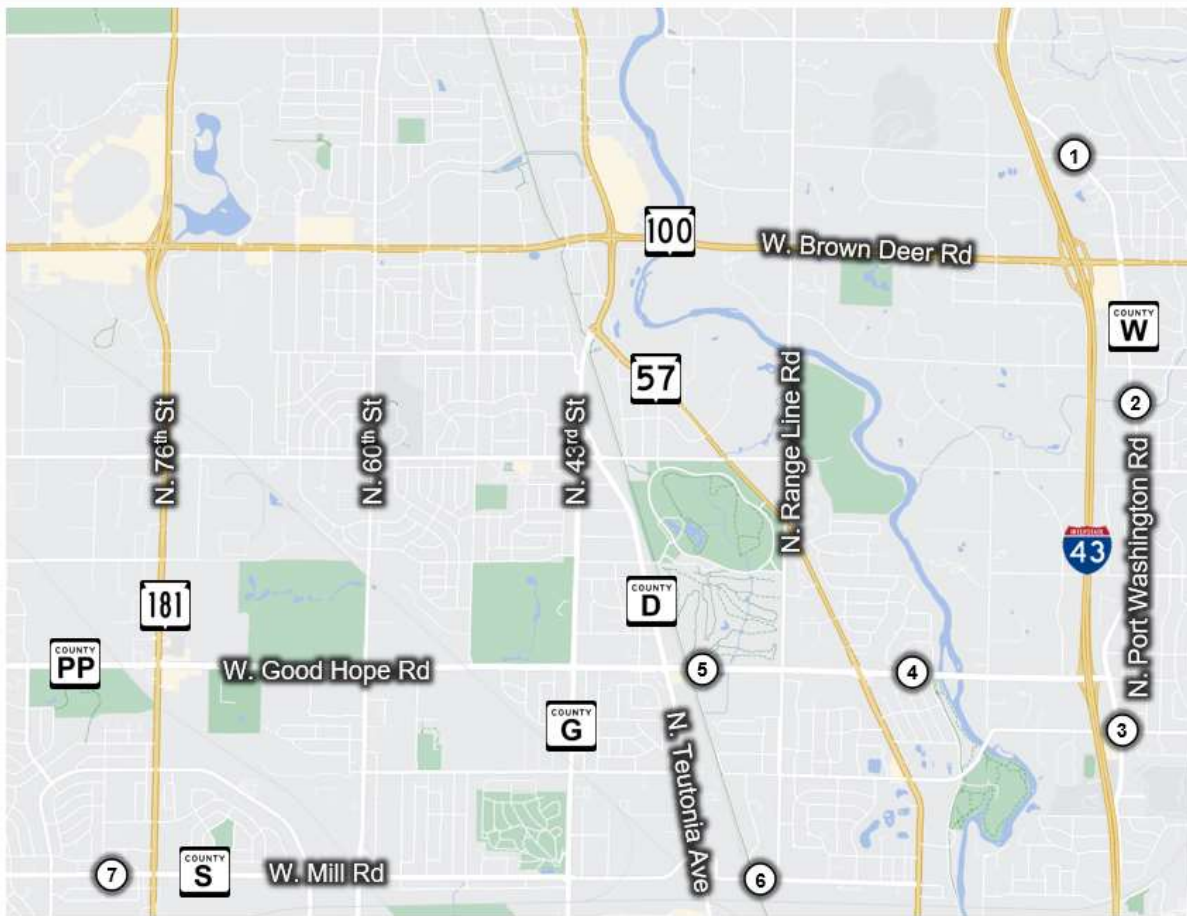
SAFETY ELEMENTS							EXISTING ELEMENTS				
High Crash History	Fatality	Bus Stop	School Crossing	Park Crossing	Trail Crossing	Flashers	Curb Ramp	Sidewalk	Bicycle Lane/ Multi-use Path	Pavement Marking	Advanced Signing
				X			X	X	X	X	X
X	X			X	X		X	X	X	X	X
		X		X	X		X	X		X	X
		X		X	X		X	X	X	X	X
		X		X	X		X	X		X	X
		X	X	X			X	X		X	X
		X	X	X			X	X		X	X
		X		X			X	X		X	X

Study Areas



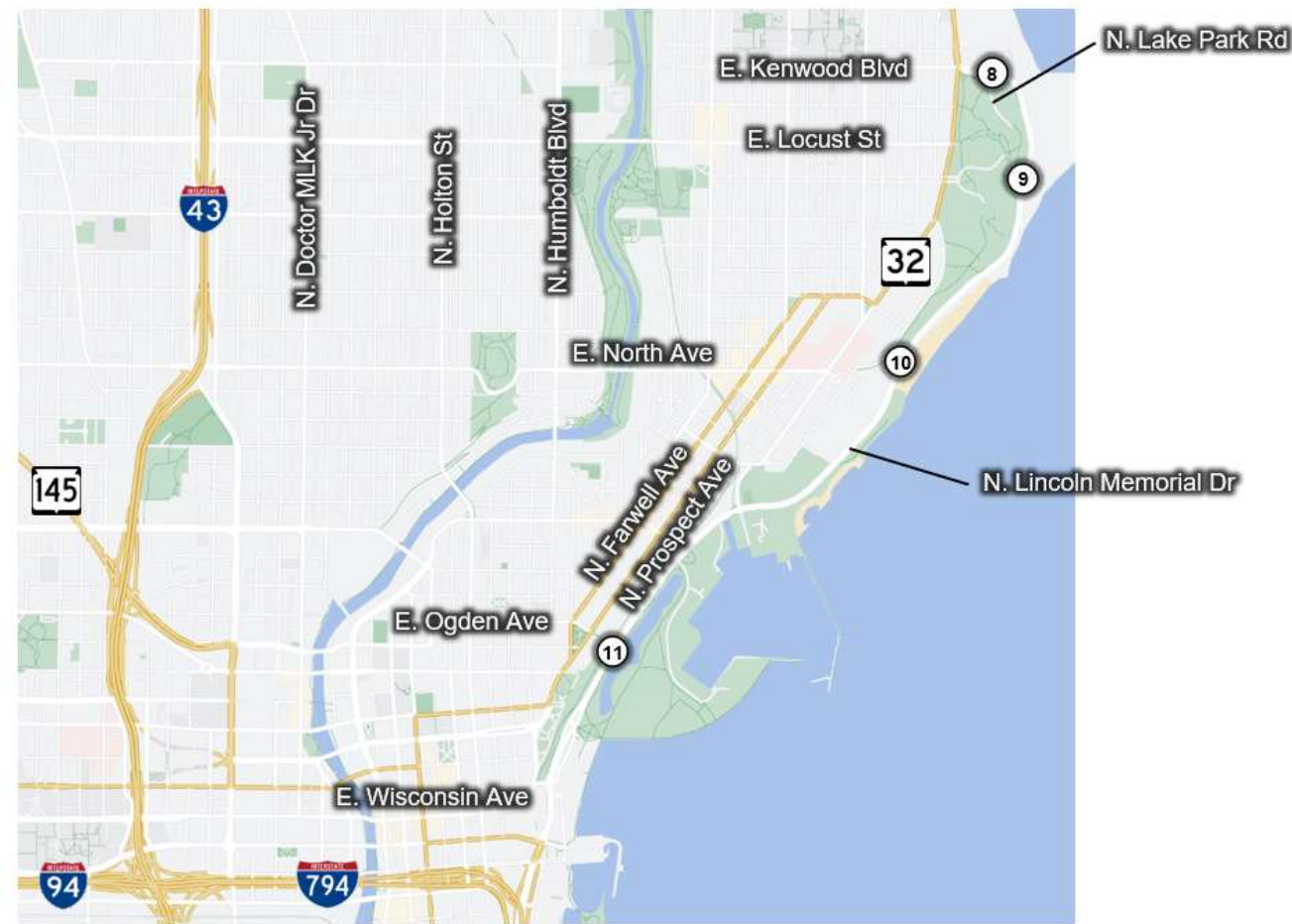
Study Locations

North



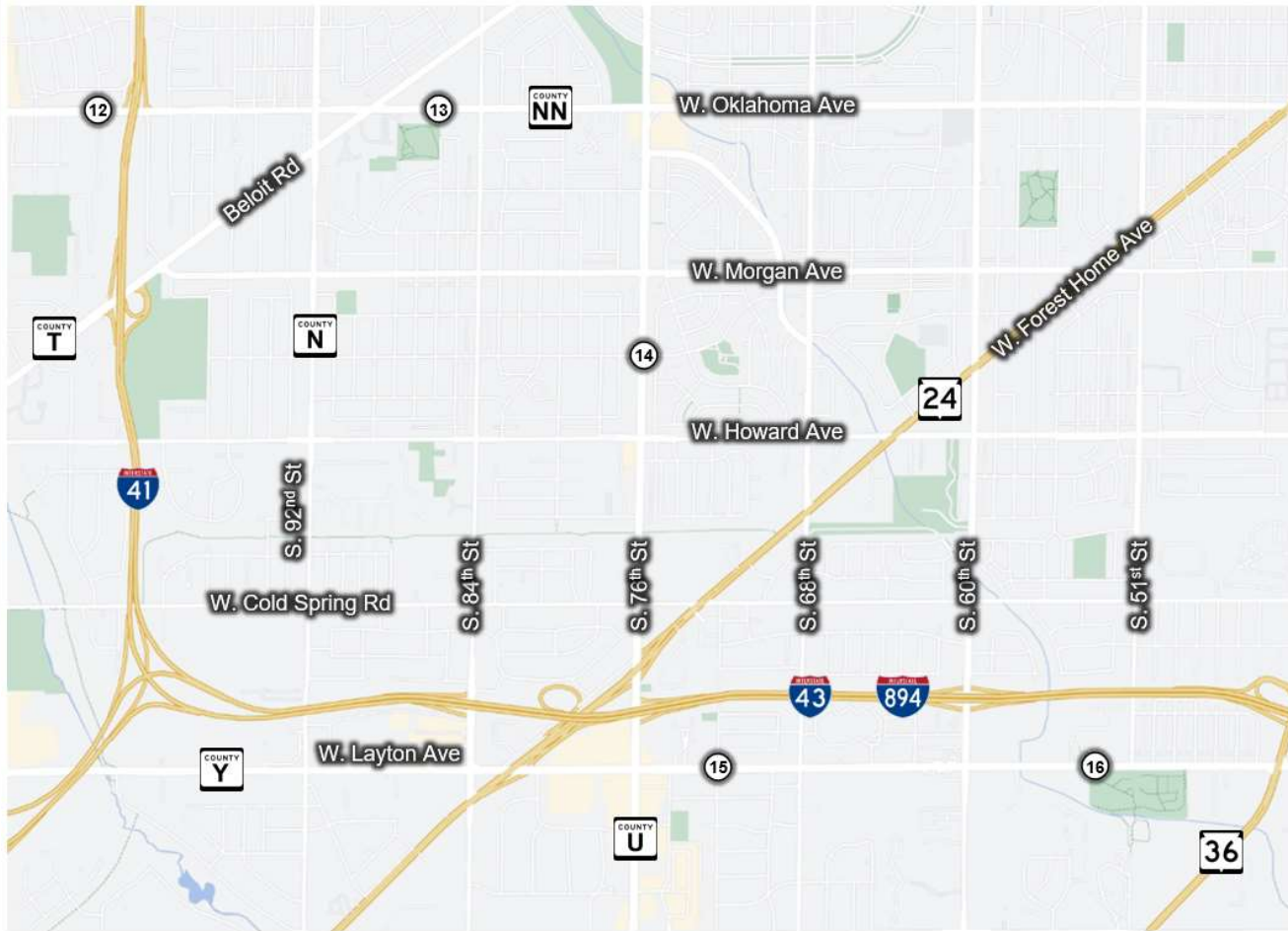
Study Locations

Lakefront



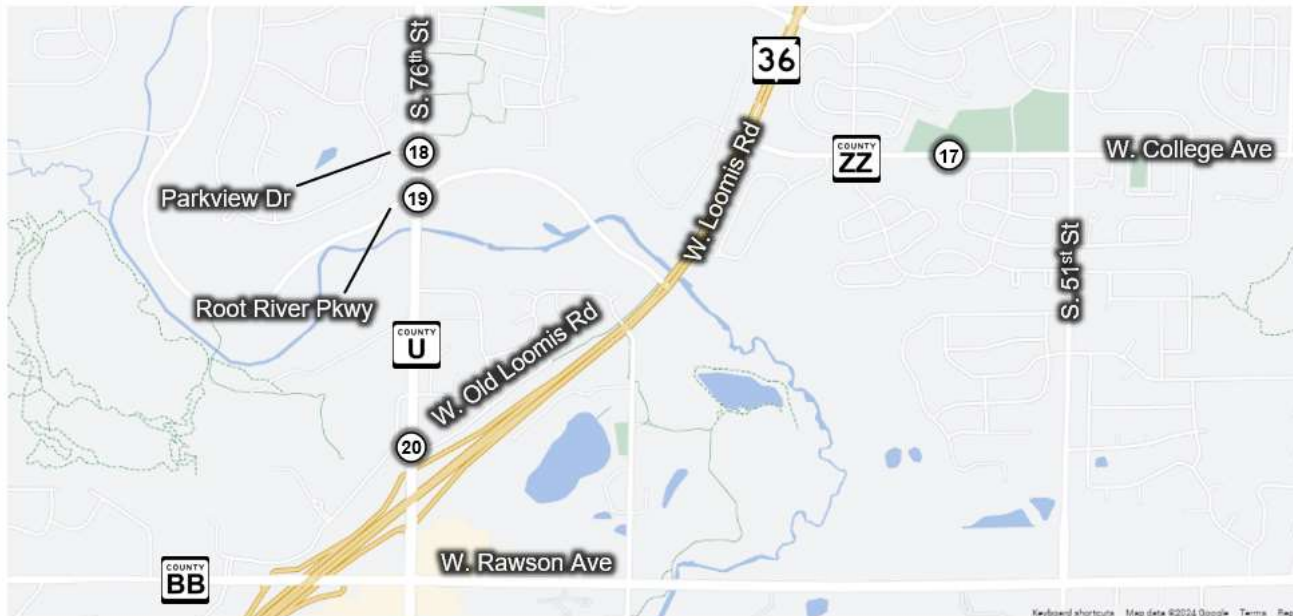
Study Locations

Near South Side



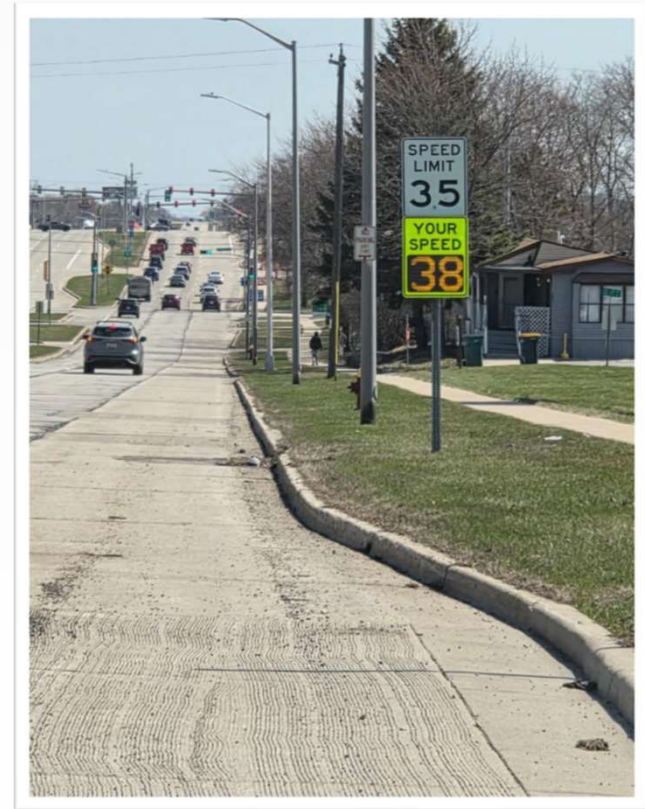
Study Locations

Far South Side



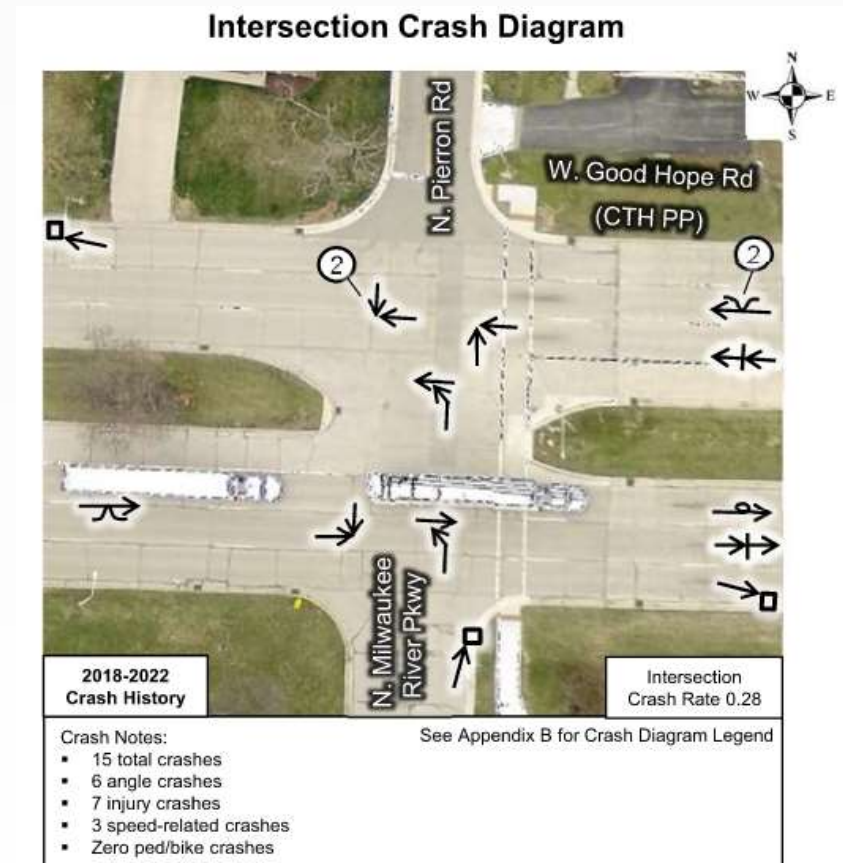
Count and Speed Data

- Scope & Timeline
 - Trails
 - Friday/Saturday
 - Schools
 - Arrival/Dismissal
 - Transit
 - Weekday AM/PM
 - Community Pool



Crash Analysis

- Scope
- Crash Diagrams



Traffic Analysis

- Highway Capacity Software (7th Edition)

Pedestrian Level of Service				
Approach	Eastbound	Westbound	Northbound	Southbound
Flow (ped/hr)	0	2	0	0
Two-Stage Crossing		No		
Pedestrian Platooning		No		
Conflicting Vehicular Flow (veh/h)		1301		
Average Delay (s)		45.8		
Prob. of Non-Delayed Crossing, P_{nd}		0.059		
Proportion of Dissatisfied Peds, P_D		0.597		
Level of Service (LOS)		F		

ADA Compliance Review

- Field Verification
- Photo Inventory



ADA Compliance Review

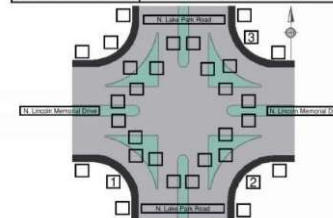
- WisDOT ADA Compliance Checklist



Curb Ramp Compliance Design Report

Include copy of this report in project records.

Project ID 2967-20-01	Project Name Milwaukee County Pedestrian & Bicycle Crossing Assessment	Region Southeast
Highway/Road N. Lincoln Memorial Drive	Intersecting Highway/Road N. Lake Park Road	Curb Ramp SDD Date in Plans 07/23
Date April 18, 2024	Inspected By Josh Fleming	Email josh.fleming@rasmith.com
		Phone (920)843-5742



Legend:

- Non-compliance item presenting minor pedestrian accessibility concerns.
- Non-compliance item presenting moderate pedestrian accessibility concerns.
- Non-compliance item presenting major pedestrian accessibility concerns.

Curb Ramp Location(s)	Ramp Location 1	Ramp Location 2	Ramp Location 3
Curb Ramp ID (STA or other identifier)			
Location Type	Intersection	Intersection	Intersection
Curb Ramp Type	Type 1 (Diagonal)	Type 1 (Diagonal)	Type 4 (Dir.)

Curb Ramp Attributes	Ramp Location 1	Ramp Location 2	Ramp Location 3
Ramp Opening Width (48" minimum)	147 "	312 "	108 "
Ramp Running Slope (8.33% maximum)	4.9 %	5.8 %	6.3 %
Ramp Cross Slope (2% maximum)	2.8 %	3.5 %	0.3 %
LT. Flare Slope (10% max., 6:1 max. for graded)	15.1 %	13.2 %	22.0 %
RT. Flare Slope (10% max., 6:1 max. for graded)	15.3 %	11.2 %	16.6 %
Rollover (11% maximum)	15.1 %	15.6 %	12.8 %
4'x4' Clear Space at Ramp Bottom?	✓ Yes No NA	Yes ✓ No NA	Yes ✓ No NA

Sight Distance Review

- Sight Distance Measurements
 - Stopping Sight Distance
 - Pedestrian Crossing Sight Distance

Pedestrian Crossing Sight Distance



-Minimum PSD Not Met-



-Minimum PSD Not Met-

Conceptual Improvements

- Low-Cost



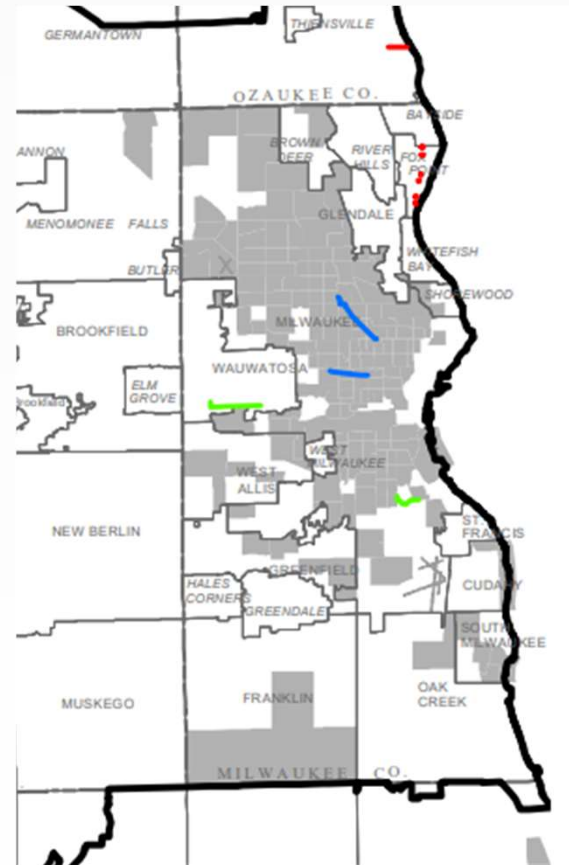
Cost Estimates

- High-Level Cost Breakdown

20. S. 76th Street & Old Loomis Road Intersection		
Low -Cost Alternative:	Work Description	Estimated Price
	Flashing Beacons & Signage:	\$ 15,500.00
	Pavement Markings:	\$ 750.00
	Contingency/Mobilization/Traffic Control:	\$ 5,000.00
	Total Estimate=	\$ 21,250.00
High -Cost Alternative:	Work Description	Estimated Price
	Flashing Beacons & Signage:	\$ 23,000.00
	Pavement Markings:	\$ 2,250.00
	Curb Ramps & Pavement Work:	\$ 70,750.00
	Contingency/Mobilization/Traffic Control:	\$ 29,000.00
	Subtotal=	\$ 125,000.00
	Real Estate Acquisition	\$ 27,000.00
	Total Estimate=	\$ 152,000.00

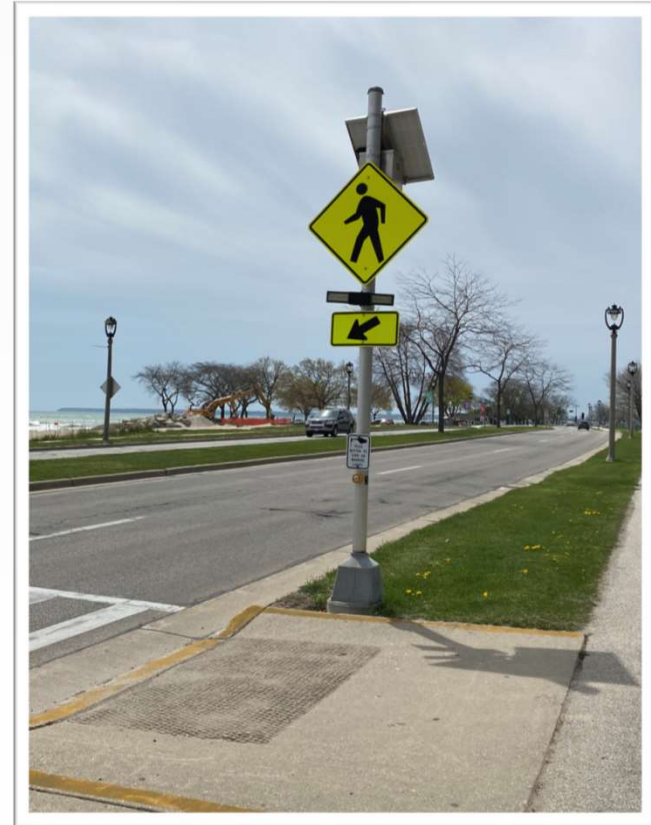
Poverty Status

- US Census Data
- Location



Prioritization

- Needs Criteria
 - Operations (LOS)
 - High-Volume Locations
 - Safety (Ped/Bike Crashes)
 - Crossing Distance
 - Speed
 - Sight Distance
 - Poverty Status
 - Lighting



Prioritization

- Scoring Matrix
 - Actual Value
 - Need Score

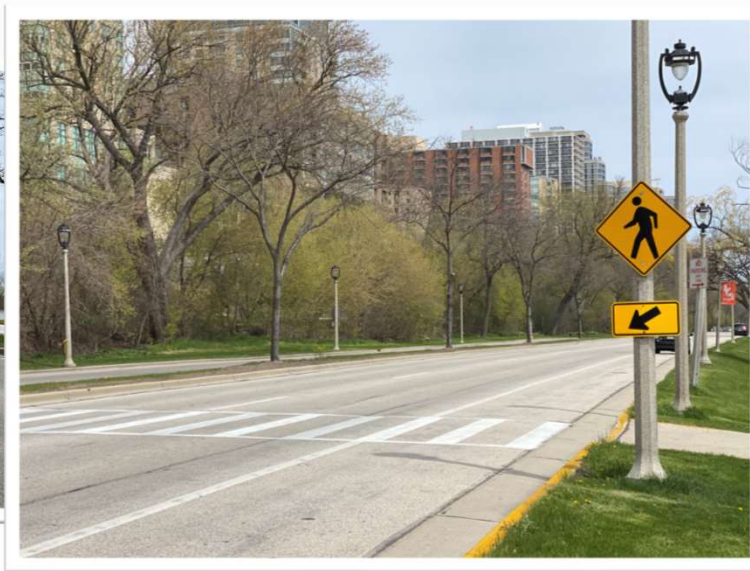
Location #	Description	Criteria (Ranking #)	Existing PLOS* (#1)	Ped / Bike Volumes* (#2)	Ped / Bike Crashes* (#3)	Existing Pedestrian Crossing Distance* (#4)	Speed Concern* (#5)	Sight Distance Met (#6)	Poverty Status (#7)	Street Lighting Present? (#8)
1	Port/Fairy Chasm	Value	E-F	11-100	1	51'-80'	21-30	SSD Only	0-10%	1 Light Pole
		Need Score (1-3)	3	2	2	2	2	2	1	2

Prioritization

■ Final Results - Top 10

- 1) W. Oklahoma Avenue & S. 103rd Street
- 2) W. Mill Road & Oak Leaf Trail
- 3) N. 80th Street & W. Mill Road
- 4) N. Lincoln Memorial Drive & Ravine Road
- 5) S. 76th Street & W. Wilbur Avenue/W. Wedgewood Drive
- 6) S. 72nd Street & W. Layton Avenue
- 7) N. Port Washington Road & W. Fairy Chasm Road
- 8) N. Lincoln Memorial Drive & N. Lake Park Road
- 9) S. 76th Street & W. Root River Parkway
- 10) 8600 block of W. Oklahoma Avenue

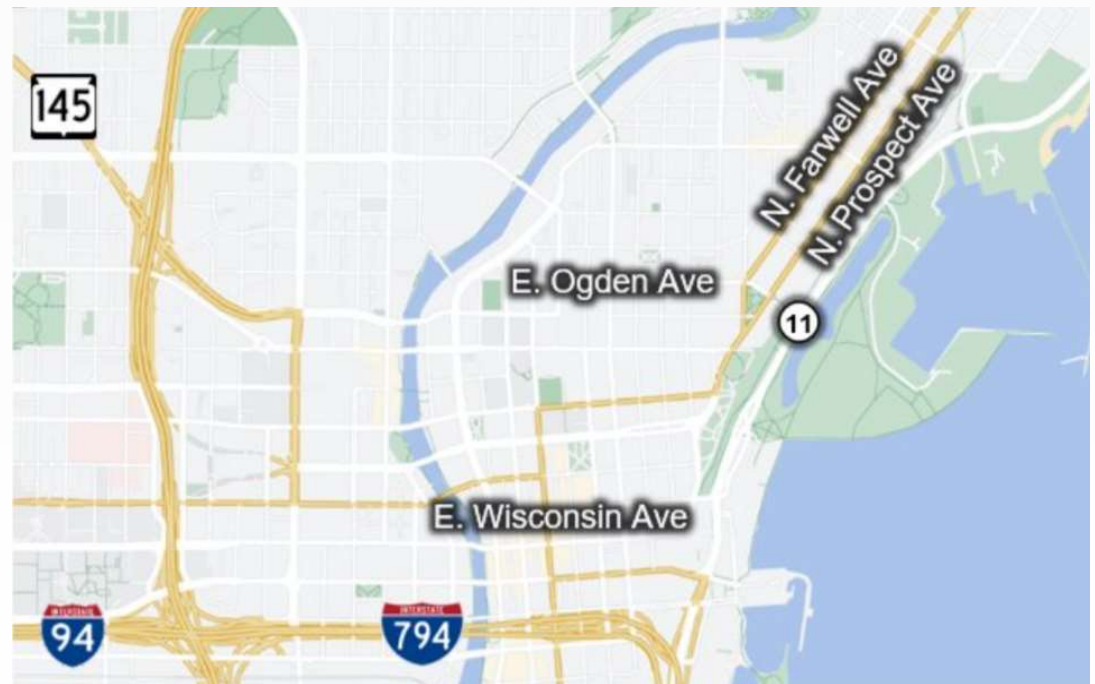
Example Study Location:



N. Lincoln Memorial Drive &
E. Ogden Avenue Stairwell

Study Location

- Connects Prospect Avenue/Lake Bluff Area to Lakefront
- Nearest public crossings > 1500' to north or south



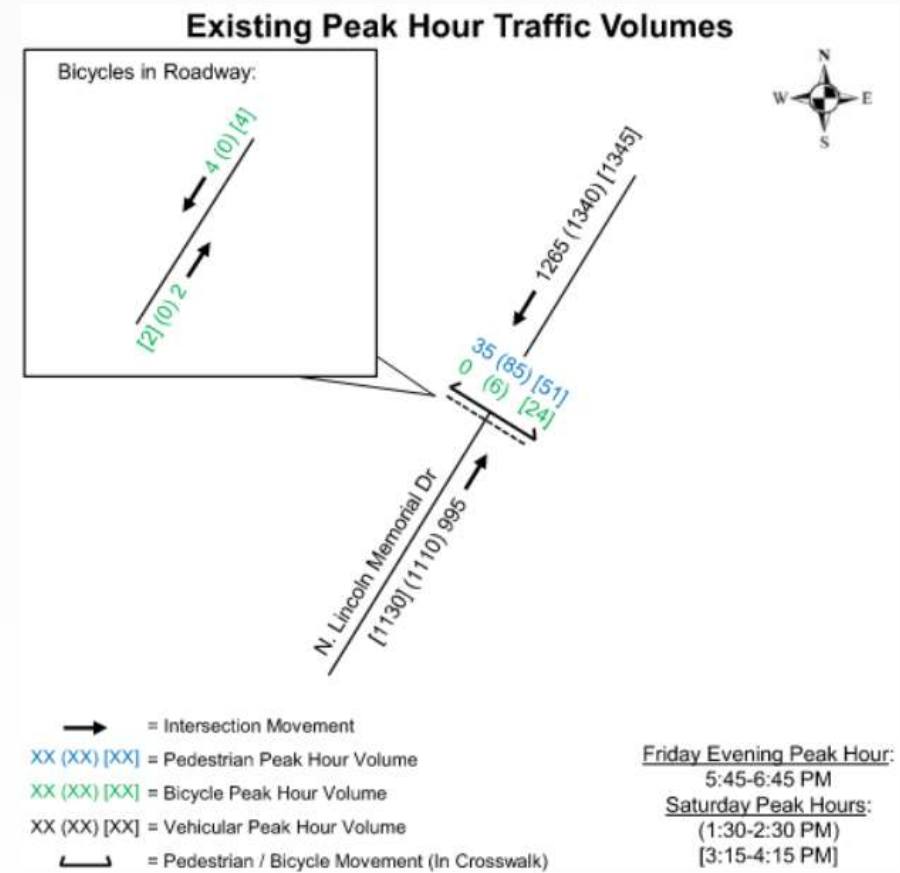
Existing Conditions

- Ladder crosswalk marking with static signing
- Median pedestrian refuge
- On-street parking
- Oak Leaf Trail runs parallel and near to traveled way



Existing Conditions

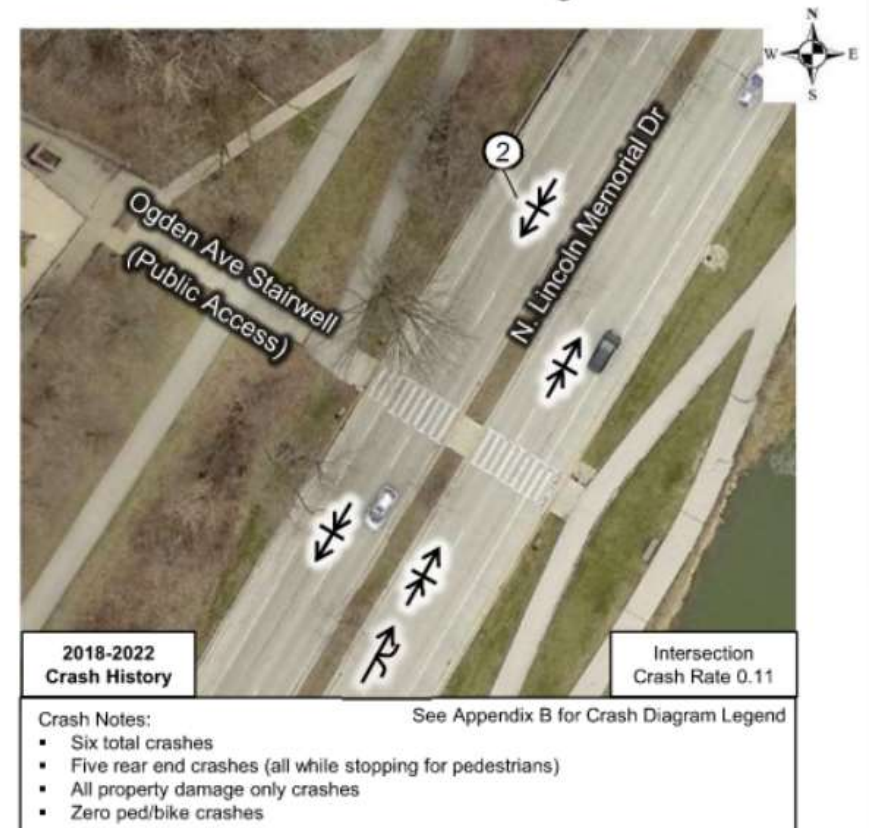
- Peak Hour Volumes
 - Heavy weekend and commuter motor vehicle traffic
 - Significant pedestrian demand



Existing Conditions

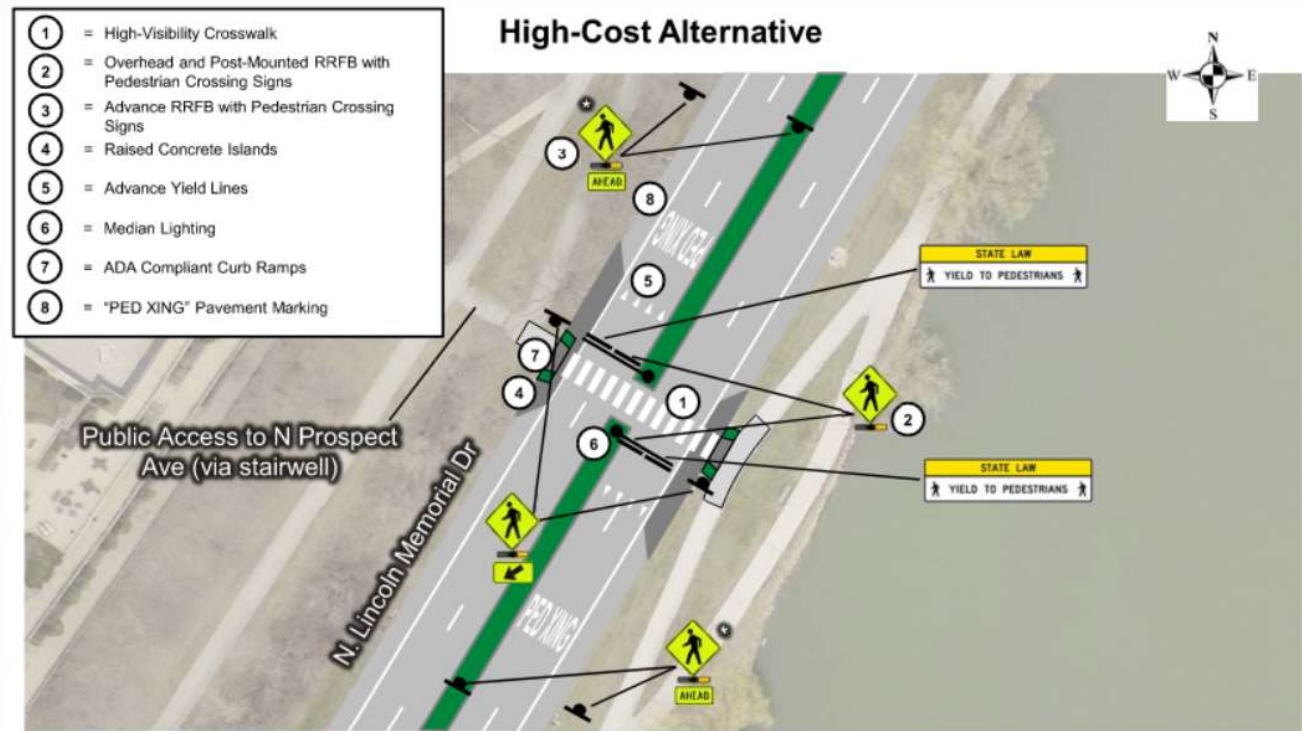
- Crash History
 - No direct ped or bike crashes
 - Rear-ends from sudden stopping

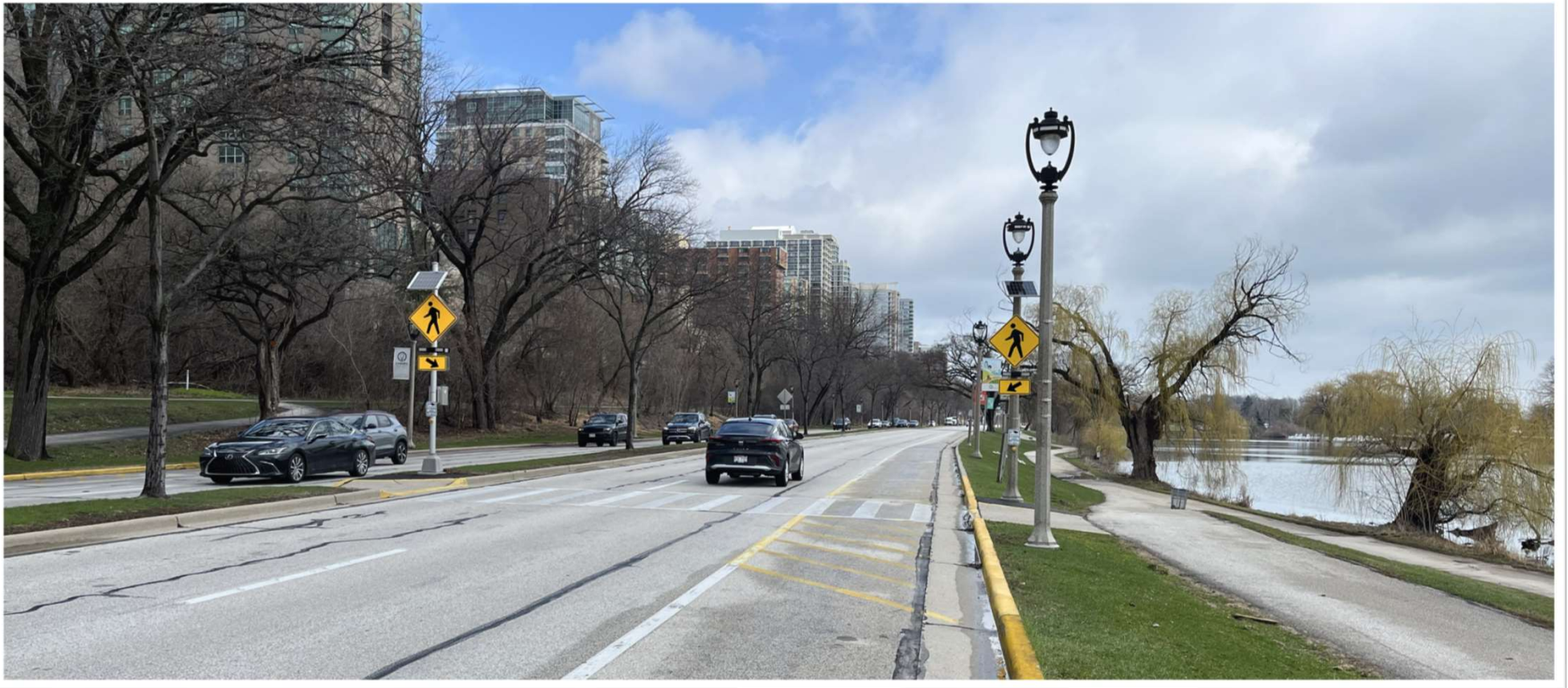
Intersection Crash Diagram



High-Cost Recommendations

- Primary Improvements:
 - Advance & Yield Line RRFB
 - Overhead Signs
 - Curb Extensions
 - Lighting





Future Projects / Next Steps

- Transportation Alternatives Program (TAP)
 - 3 projects covering 9 crossings
- Surface Transportation Program (STP)
 - 1 project covering 2 crossings
- Safe Streets for All (SS4A)
 - Grant will be upgrading 1 crossing
- Highway Safety Improvement Program (HSIP)
 - Attempted to get HSIP funding for 1 crossing, didn't meet cost/benefit ratio
 - 1 other intersection with crossing we are considering for future HSIP application

Questions?

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Thank you!