MOVE NWI

Congestion Management Process

MOVE NWI

PREPARED BY
Northwestern Indiana Regional Planning Commission

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Table of Contents

List of Tables and Figures

TABLES

List of Tables and Figures

FIGURES

MOVE NWI

Federal Requirements

As a Metropolitan Planning Organization (MPO) administering transportation planning and programming activities for a region with over 200,000 people, the Northwestern Indiana Planning Commission (NIRPC) is a Transportation Management Area (TMA) and thus subject to additional federal requirements, chief among them a Congestion Management Process (CMP).[1] Essentially, the CMP is a framework for how the region seeks to manage congestion in a performance-based, multimodal way. At a minimum, the CMP must include the following components:

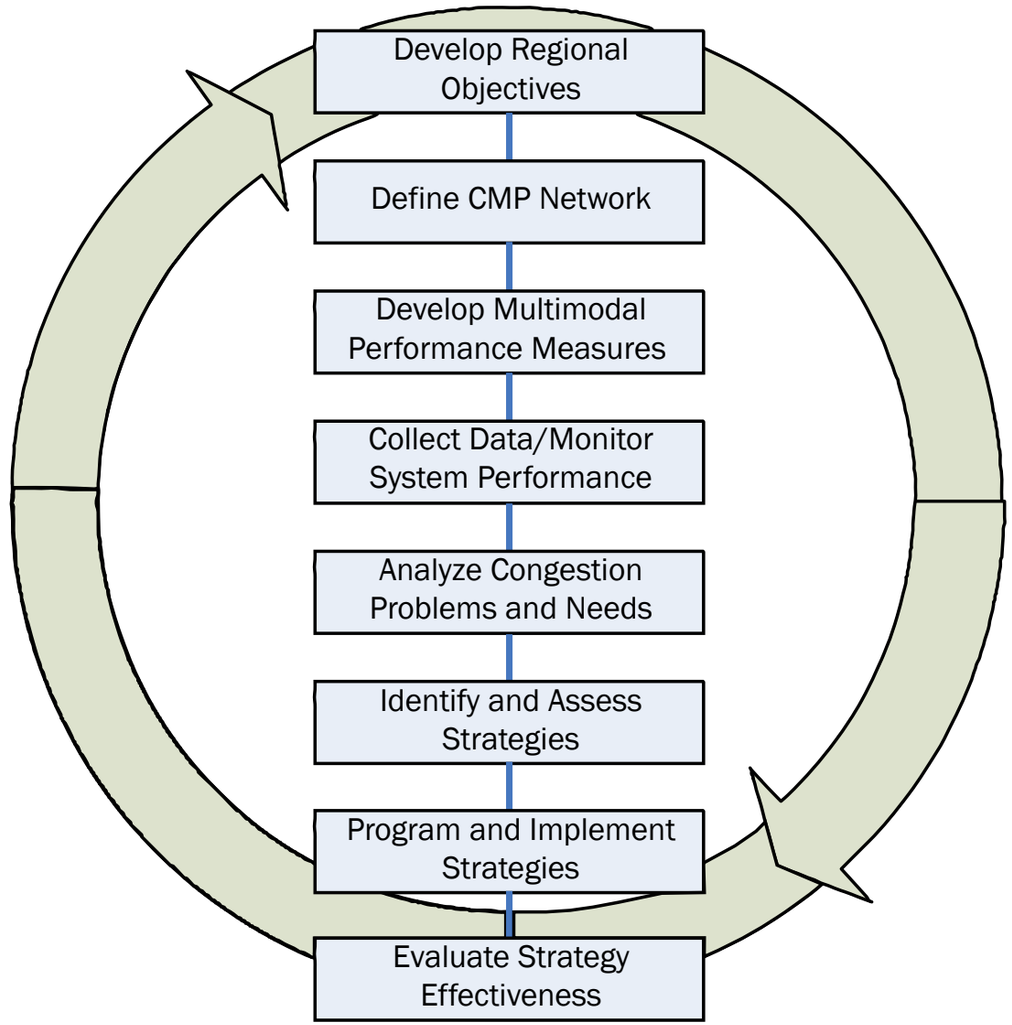
- Methods to monitor and evaluate the performance of the multimodal transportation system
- Identification of the underlying causes of recurring and non-recurring congestion
- Identification and evaluation of alternative strategies
- Information on the implementation of actions, and evaluation of the effectiveness of implemented actions
- Definition of congestion management objectives
- Identification of performance measures to assess the extent of congestion and support the evaluation of the effectiveness of congestion reduction and mobility enhancement strategies for the movement of people and goods
- Establishment of a coordinated program for data collection and system performance monitoring to define the extent and duration of congestion, to contribute in determining the causes of congestion, and evaluate the efficiency and effectiveness of implemented actions
- Identification and evaluation of the anticipated performance and expected benefits of appropriate congestion management strategies that will contribute to the more effective use and improved safety of existing and future transportation systems based on the established performance measures (examples of categories of strategies include demand management measures such as growth management and congestion pricing, traffic operational improvements, public transportation improvements, Intelligent Transportation System technologies as related to the regional ITS architecture, and additional system capacity where necessary)
- Identification of an implementation schedule, implementation responsibilities, and possible funding sources for each strategy (or combination of strategies) proposed for implementation
- Implementation of a process for periodic assessment of the effectiveness of implemented strategies, in terms of the area's established performance measures, that will be provided to decision makers and the public to provide guidance on selection of effective strategies for future implementation
- Since the NIRPC planning area of Lake, Porter, and LaPorte Counties also includes a U.S. Environmental Protection Agency (USEPA) designated non-attainment area for Ozone, NIRPC must administer a CMP that meets the following additional federal requirements:
- For any federally funded project that would add significant capacity, demonstration that the project either primarily addresses a safety concern or relieves a bottleneck, or in the absence of either, a demonstration that the project adheres to the CMP
- For any federally funded project that would add significant capacity, identification of travel demand reduction and operational management strategies determined by the CMP that would be appropriate for the project itself and the corridor of the project and a demonstration that these strategies alone could not manage congestion as well as the project. There must be a commitment to implement any reasonable strategies identified.

In addition to the minimum federal requirements, the Federal Highway Administration (FHWA) highly recommends that a CMP follow an 8-step process that meets the above requirements in a logical manner as shown in Figure 1.[2]

By following the 8-step process as shown in Figure 1, a TMA like NIRPC will be able to meet the CMP Federal Requirements. *MOVE NWI* generally follows the 8 steps, but adds a little more detail as shown below:

1. Develop Congestion Objectives in the Northwestern Indiana Region
2. Define the MOVE Network
3. Develop multimodal performance measures
4. Identify and describe the data sources that will be used to measure the performance measures
5. Analyze the existing conditions of congestion in the Northwestern Indiana Region using the performance measures, noting problems and needs
6. Identify and assess strategies
7. Evaluate projects to address the strategies
8. Periodically evaluate project and strategy effectiveness of the projects and strategies vetted through *MOVE NWI*

Figure 1: FHWA-recommended Steps that a CMP Follow



MOVE NWI

Background of NIRPC Congestion Management Processes (CMPs)

MOVE NWI is not the first CMP that NIRPC has administered. Federal requirements for what was then called the Congestion Management System date back to the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991. USDOT codified the Congestion Management System requirements in 1996.[3] Therefore, NIRPC complied with its first Congestion Management System included as part of the Vision 2020 plan adopted by the NIRPC Full Commission in February 1999. This first Congestion Management System was predominately highway focused, and even then relied only on peak Volume to Capacity (V/C) Ratio as the performance measure for the highway mode. This Congestion Management System also considered transit, using load factor as the only reliable performance measure of congestion. FHWA and the Federal Transit Administration (FTA) commended NIRPC for its Congestion Management System in the 1999 Federal Planning Certification Review. This was largely due to the newly updated Travel Demand Model which supplied then state-of-the art data on traffic volumes used to calculate V/C Ratio and allowed NIRPC to analyze spatial locations of congestion.

However, NIRPC's 1999 Congestion Management System eventually became outdated. In 2005, the Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users (SAFETEA-LU) changed the name of the Congestion Management System to the CMP and added additional requirements.[4] FHWA and FTA issued NIRPC a corrective action in their 2009 Federal Planning Certification Review requiring NIRPC to update its CMP as part of its *2040 Comprehensive Regional Plan* adopted in June 2011, with substantial progress required to be shown by October 2010. NIRPC responded with a much more comprehensive CMP than the former Congestion Management System, adopted in June 2011 as part of the *2040 Comprehensive Regional Plan*. The 2011 CMP thoroughly satisfied the new federal requirements, exhaustively detailing travel demand management and operational management strategies on a corridor-by-corridor basis, and it did so by actively involving participation from a congestion management subcommittee comprised of INDOT, several Local Public Agencies, and transit operators. As a result of NIRPC's effort in adopting the new CMP, FHWA and FTA lifted the corrective action.

While much more comprehensive than any congestion management framework put forth previously by NIRPC, the 2011 CMP still faces some shortcomings that warrant adopting a new CMP. First, there have been a lot of technological advances, particularly in data gathering and analysis, since 2011. Whereas the 2011 CMP still relies heavily on the travel demand model for data even on existing conditions of congestion, NIRPC now has access to "big data" sources such as the National Performance Measure Research Data Set (NPMRDS) and Google Maps API, shedding light on a much more accurate and robust existing condition profile of congestion Second, while the 2011 CMP is prescriptive in terms of how to demonstrate CMP approval for a proposed project, the 2011 CMP is not sufficiently tied to the planning and programming processes that are the heartbeat of what NIRPC does as an agency. The result is that while in theory and according to the CMP document itself there is a robust way of identifying congestion and screening projects, in practice a project progresses through many of the early selection and planning stages before it is found to require CMP adherence, by which point there is little appetite for the CMP being the difference in whether the project can continue to be advanced or not. For these reasons, *MOVE NWI* makes use of more sophisticated congestion data and helps transportation owner/operators know how to use the CMP to self-screen and prepare their projects before they even apply for federal funding. The result is a CMP that is more advanced and user-friendly than the 2011 CMP.

Connection to *NWI 2050* Strategies

As mentioned in the previous section, one of the reasons why NIRPC and its stakeholders deem *MOVE NWI* necessary to replace the 2011 CMP is to be clearer and more compatible with the broader planning process goals and objectives. Since *NWI 2050* is the Northwestern Indiana Region's Metropolitan Transportation Plan (MTP) and contains numerous strategies related to congestion, *MOVE NWI* establishes clear linkages to the strategies so as to directly address *NWI 2050*. Table 1 lists the strategies from *NWI 2050* that pertain to congestion organized by broader initiative and whether they are travel demand management (TDM) strategies, operational management (OM) strategies, land use (LU) strategies, or capacity-adding (CAP) strategies.

Each of the strategies in Table 1 pertain to addressing congestion in some way, either as a TDM strategy, a LU strategy, an OM strategy, or a CAP strategy. The 32 *NWI 2050* TDM strategies seek to reduce congestion by disincentivizing Single Occupancy Vehicle (SOV) travel – either encouraging would-be drivers to avoid SOV travel altogether or shortening the distances of SOV trips. That is, the TDM strategies tackle congestion before a transportation system user has even decided how and where to travel, and as a result these strategies actually reduce the number of SOV trips. The 18 *NWI 2050* LU strategies also seek to reduce congestion before a transportation system user has even decided how and where to travel by enabling the user to access more destinations in closer proximity, reducing the length of trips. The 13

Table 1: *NWI 2050* Strategies Pertaining to Congestion, organized by broader initiative (in bold)

#	**Plan for Smart Land Uses and Quality of Place:**	TDM	LU	OM	CAP
1	Promote future development to occur where utilities and infrastructures – including transit – exist by establishing growth management strategies to ensure that population and employment growth occurs in a sustainable and responsible manner.		X		
2	Incorporate policies and strategies in transportation funding to support main centers, revitalization, areas and emphasize infill.		X		
3	Work with local entities to develop local ordinances that require new trails and connections in new developments where feasible.		X		
4	Encourage municipalities to update land use regulations to include pedestrian connectivity between land uses.		X		
5	Routinely conduct Planning Commission workshops on the Sensible Tools Handbook to continually reinforce best practices in land use planning.		X		

	Plan for E-Commerce Landscape:	TDM	LU	OM	CAP
6	Create plans and programs to address the impact of the growth of e-commerce in NWI on travel behavior, logistic systems and land use planning in partnership with regional and local agencies.		X		
	Plan for Regional Transit:				
7	Local entities that have passengers rail stations should establish a TOD[5] zoning and policies to support growth around the South Shore and Westlake corridor stations areas.		X		
8	Prioritize transit expansions to job centers.	X			
9	Improve regional connectivity by assisting in the identification of key coordinated stops where transit operators can rendezvous to switch passengers from one service to another.	X			
10	Prioritize transit to include priority destinations of senior and veteran centers, vocational rehabilitation centers, retail, recreation, health-related locations, and other places transit riders prioritize as destinations.	X			
11	Improve the efficiency of the existing transit network by using density thresholds to assist in determining if to provide demand response or fixed route services. Fixed route services have priority in dense urban environments and demand response services have a priority in less dense areas.	X			
12	Identify corridors for fixed route transit service and Bus Rapid Transit. Metrics such as population density, congestion, and concentrations of employment may be used in developing priority corridors.	X			
13	Attract transit users by improving the customer experience by developing a regional transit website to assist potential riders with finding transit information such as schedules, fares, and real-time bus tracking with General Transit Specification Feed data.	X			

		TDM	LU	OM	CAP
14	Increase the use of transit and the customer experience by prioritize expansions that decrease wait times so that transit users will not have to wait long for a scheduled ride.	X			
15	Increase the span of transit service longer into the evening and all weekend.	X			
16	Attract more transit users by making General Transit Specification Feed data public to invite app developers to instantly communicate transit information, in accessible and bilingual formats, to riders to better plan travel.	X			
17	Encourage use of transit by utilizing travel-assistants to help familiarize and inform riders with available transportation services.	X			
18	Establish region-wide bike share at major activity centers and transit stations.	X			
19	Improve accessibility to shared mobility by advocating for transportation network companies to offer accessible vehicles in NWI.	X			
20	Increase the use of transit and customer experience with technological improvements that can allow for increased coordination between transit operators, so that all operators have real-time locations of all transit vehicles in the region.	X			
21	Improve the quality of service by coordinating with transit operators to establish universal fare systems and transfer policies between transit operators to make it easier to transfer from one system to another.	X			
22	Track technological advancements including, Artificial Intelligence assisted ride scheduling, autonomous and connected vehicles, and signal preemption for use in transit.	X			
23	Identify priority corridors for transit signal preemption implementation.			X	

	Plan for Complete Streets and Active Transportation:	TDM	LU	OM	CAP
24	Improve pedestrian and bicycle accessibility to high density population areas, employment and retail centers, transit stations, parks, and schools.	X			
25	Establish a process to link shorter and local trails to the regional trail network through local planning efforts.	X			
26	Prioritize non-motorized facilities that maximize connectivity across counties and municipal boundaries, and Main Centers.	X			
27	Collaborate with entities and local land owners on high priority new trail corridors opportunities.	X			
28	Promote placemaking themes and create a unique identity along trail corridors and at significant bus and rail transit stops to attract a wide range of users by using public art and provide amenities.	X			
29	Make pedestrian and biking areas safe and more desirable for users by providing amenities like lighting benches, drinking fountains, restrooms, etc.	X			
30	Prioritize bicycle and pedestrian safety and comfort by reviewing and adjusting traffic speeds.			X	
	Plan for Continually Improved Investment Prioritization:				
31	NIRPC to continue pursuing regional corridor studies within the region to identify regional improvements and help prioritize future funds.				X
32	Prioritize funding for transit- oriented development.		X		
33	Prioritize transit investments that better connect the environmental justice populations to job centers, medical facilities, recreations centers, shopping districts, and educational institutions.	X			
34	Identify and prioritize high-crash areas that could be improved quickly with cost effective solutions.			X	

		TDM	LU	OM	CAP
35	Improve the regional transportation network by pursuing funding opportunities to address bottlenecks in key regional corridors.				X
	Plan for Main Centers and Transit-Oriented Development:				
36	Provide incentives for downtown investment to increase density of population and employment.		X		
37	Promote adaptive reuse of existing buildings in downtown and main centers area for shared office space and infill to accommodate entrepreneurs, startups, and remote workers.		X		
38	Coordinate between local governments and funding agencies to prioritize investment in existing centers will further improve development opportunities and facilitate mixed-use in existing centers.		X		
39	Improve the efficiency of transit and curb the costly growth of sprawl, by increasing the overall density of urban areas.		X		
40	Provide technical assistance for TOD planning.		X		
	Plan for Asset Vulnerability from Climate Change:				
41	Improve resiliency and reduce congestion by sharing data and plans with local Emergency Planning Committees to help them with decision-making and improving evacuation plans.			X	
	Plan for Transformative Investments:				
42	Implement the I-65 and U.S. 30 safety and retrofit project into a livable urban regional center. Funding is needed to correct the current deficiencies as recommended in the plan.		X		
43	Support the Transit Development District (TDD) of the regional South Shore Corridor TOD areas to develop context-appropriate strategies for creating a network of transit-oriented places and sites that integrate different functions and activities within easy access of transit.		X		

		TDM	LU	OM	CAP
44	Reduce congestion by developing a regional railroad crossing improvement plan with a focus on highway-rail grade separations.				X
45	Compile and map roadway crash data to prioritize high crash corridors in the Highway Safety Improvement Program funding grants.			X	
46	Continue working with local university partners on collecting and analyzing data.			X	
47	Share data on traffic volumes and other transportation attributes that NIRPC collects throughout the region.			X	
48	Educate local law enforcement on the importance of location accuracy and consistency in recording crash data.			X	
49	Improve transportation network reliability by compiling, analyzing and mapping reliability data for roadways in order to prioritize funding.			X	
50	Reduce congestion increase transit efficiency by compiling, analyzing and mapping roadway bottleneck data for in order to prioritize funding.				X
51	Increase transparency and awareness of the transportation network performance by publishing a Performance-based Planning dashboard.			X	
52	Gauge progress on installation of bicycle sharing systems, and encourage increased participation through training.	X			
53	Improve safety, efficiency, and regional interoperability of the transportation system by developing, maintaining and communicating the Intelligent Transportation Systems Regional Architecture.			X	
54	Inventory and digitize in GIS sidewalk and bicycle lanes noting gaps infrastructure, and pedestrian and bicyclist comfort.	X			

	Plan for an Engaged Public and Share Best-practices:	TDM	LU	OM	CAP
55	Work with local governments and INDOT to implement and pass Complete Streets policy.	X			
56	Improve emergency response times and reduce congestion by convening a regional stakeholder group to plan signal pre-emption and signal coordination projects.			X	
57	Promote e-bicycle and scooters legislation at the local level.	X			
58	Provide assistance to local governments on sustainable growth and coordination where future planned growth over-laps between communities.		X		
	Plan for More Council of Government Activities:				
59	Pursue legislative means to preserve and acquire abandoned railroad corridors by local entities.	X			
60	Improve connectivity for all users by bringing communities to work together on projects affecting shared corridors.	X			
	Plan for Smart Land Uses and Quality of Place:				
61	Establish policies to increase affordable and accessible housing near job centers and transit stations/stops.		X		
62	Continue to support transit and complete streets to ensure that all residents have access to schools, grocery stores, community centers, medical facilities, reliable transportation and job opportunities.	X			
63	Continue to offer workshops on the Sensible Tools Handbook to provide guidance to local government on best practices of sustainable growth and vibrant communities and to under-stand how land use choices affect local revenues.		X		

	Plan for Cleaner Air and Energy:	TDM	LU	OM	CAP
64	Continue Air Quality Public Education “It all adds up to cleaner air” including emphasis on modal shift.	X			
	Plan for Economic Development:				
65	Work with intermodal facilities and freight carriers to identify locations with high levels of freight movement and to plan strategies for alleviating freight-related congestion.			X	
66	Develop a plan for multi-modal hubs to improve connectivity which will allow for more efficient, reliable, and environmentally friendly movement of people throughout the region.	X			
67	Demonstrate the positive impact of transit and other transportation choices on economic development, workforce participation, public health, and personal/household income.	X			

NWI 2050 OM strategies seek to reduce congestion by improving the operational environment of the vehicle after a transportation system user has decided his or her travel choice and is already en-route and do not directly reduce the number of SOV trips, but rather ensure that those trips experience less congestion. Finally, the 4 *NWI 2050* CAP strategies follow the traditional approach to attempting to mitigate congestion by adding more capacity to the transportation system, theoretically allowing more SOV throughput.

Even though as Table 1 shows there are 67 strategies from *NWI 2050* that if implemented would seek to reduce congestion, it is important to acknowledge that there are also some strategies from *NWI 2050* that would likely increase congestion, emphasizing the point that reducing congestion is not necessarily a desirable goal from all perspectives. Table 2 lists the *NWI 2050* strategies that would likely increase congestion.

Table 2: *NWI 2050* Strategies that Would Likely Increase Congestion, Organized by Broader Initiative (in bold)

#	**Plan for Transformative Investments:**
1	Support marketing programs and opportunities to enhance the Indiana Dunes and Lake Michigan Beaches.
	Plan for a Regional Data and Analysis Framework:
2	Support goal 2.2 of the Ignite the Region Plan in mapping current and future commercial land types to support new business startup.
	Plan for an Engaged Public and Share Best-practices:
3	Share information, research, analysis on immigration as it relates to how this may help to keep the region's population growing and combat the aging of the region, and bring in new capital to the economy.
4	Promote tourism and improve impression of the transportation system by working with stakeholders and tourism centers on securing local match and/or private funding for gateway enhancement projects (streetscape improvements, non-motorized enhancements, pavement programs, etc.) to those locations.

5	Demonstrate the importance of immigration (domestic or foreign) to the workforce, to mitigate an aging population, and to ultimately support population and economic growth of NWI.
	Plan for more Council of Government Activities:
6	Encourage legislators and transportation agencies to explore standardizations in the roadway environment to best accommodate Connected and Automated Vehicles (CAVs).
	Plan for Economic Development:
7	Support immigration (domestic or foreign) that leads to more innovation and creativity, a workforce with higher education levels, better fit of skills with jobs, and economic growth.
8	Work with schools and workforce development agencies to build a workforce with future skills that are needed for the modern economy by offering professional degrees and job training programs.
9	Support regional efforts to maintain NWI's economic and business competitiveness and raise the profile of the region for a good place to do business and to find the most qualified and dedicated employees.

8 out of the 9 *NWI 2050* strategies in Table 2 would likely increase congestion due to promoting a growing population and economy. Strategy number 6 in Table 2 would likely increase congestion because as Connected and Automated Vehicles (CAVs) become deployed, they will have to comingle in the traffic stream with non-CAV vehicles, reducing their early congestion-reducing potential.

Northwestern Indiana Regional Planning Commission's (NIRPC's) Role in *MOVE NWI*

As the federally designated MPO for Northwestern Indiana, NIRPC is required to play the lead role in administering *MOVE NWI*. NIRPC administers *MOVE NWI* is to ensure that the Northwestern Indiana traveling public has realistic expectations that the region is addressing traffic congestion, not simply for the sake of meeting federal requirements. In order to offer the traveling public confidence that region leadership is adequately managing traffic congestion, NIRPC is committed to following roles in administering *MOVE NWI* as shown in Table 3.

Table 3: NIRPC's Roles in Administering *MOVE NWI*

#	Role:
1	Develop *MOVE NWI*
2	Collect data on congestion and in support of *MOVE NWI* performance measures
3	Periodically calculate *MOVE NWI* performance measures based on collected data
4	Vet *MOVE NWI* through NIRPC Surface Transportation Committee, Technical Planning Committee, and Freight and Congestion Task Force
5	Solicit public involvement on *MOVE NWI* through targeted surveys of public opinion and a public comment period advertised through NIRPC's various outreach channels
6	Educate and inform other stakeholders on *MOVE NWI* and their responsibilities pertaining to it (see Tables 4-9)
7	Include proposed project checklist in future Notice of Funding Availability (NOFA) solicitations and educate applicants on how the checklist works
8	Receive and preliminarily evaluate proposed project checklists from applicants and follow up with them on any lingering questions or clarifications
9	Present preliminarily evaluated project checklists to the Surface Transportation Committee for its review
10	Present Surface Transportation Committee-approved project checklists to the Technical Planning Committee for its review
11	Present Technical Planning Committee-approved project checklists as part of programming amendments that require NIRPC Commission approval to the Executive Board or Full Commission for its final approval
12	Periodically update *MOVE NWI*, replacing with a new CMP if necessary

United States Department of Transportation's (USDOT's) Role in *MOVE NWI*

Since USDOT issues and administers the federal requirements necessitating *MOVE NWI*, USDOT has the lead regulatory role in overseeing *MOVE NWI*. Every four years, the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) conduct a federal planning certification review of NIRPC's entire planning process including how NIRPC administers *MOVE NWI*. NIRPC is committed to its roles enumerated in Table 3 above, and in turn expects USDOT to commit to the following roles in Table 4 below.

Table 4: USDOT's Roles in *MOVE NWI*

#	Role:
1	Develop and maintain rulemakings about the requirements of a CMP
2	Offer resources to NIRPC about accurately understanding and interpreting the CMP requirements
3	Review draft *MOVE NWI* and issue comments to NIRPC
4	Review final NIRPC-approved *MOVE NWI* and certify that it meets the requirements
5	Conduct Federal Planning Certification Reviews every 4 years and review *MOVE NWI*, recertifying that it meets federal requirements, or if no longer found to, issue a Corrective Action for NIRPC to remedy the deficiencies.

Indiana Department of Transportation's (INDOT's) Role in *MOVE NWI*

INDOT is a strategically critical partner with NIRPC when it comes to fulfilling the federal requirements of *MOVE NWI*. INDOT not only joins in on and comments to USDOT during the federal planning certification review, but is itself a major owner/operator of the transportation system in Northwestern Indiana. To that end, any objectives, strategies, and actions in *MOVE NWI* will factor into how INDOT conducts business. In order to ensure that INDOT is able to incorporate the objectives, strategies, and actions in *MOVE NWI* in the most efficient and effective manner, INDOT will commit to the following roles in Table 5.

Table 5: INDOT's Roles in *MOVE NWI*

#	Role:
1	Consult with NIRPC during *MOVE NWI* development
2	Make congestion-related data available to NIRPC to the extent licensing permits
3	Administer funding to NIRPC, Local Public Agencies (LPAs), and other transportation operators to enable congestion-related research and planning activities, including the Local Technical Assistance Program
4	Review final NIRPC-approved *MOVE NWI* and assist USDOT in certifying that it meets the requirements
5	Incorporate *MOVE NWI* strategies into project planning and development processes
6	Complete a *MOVE NWI* project checklist for each project selected to be completed
7	Participate on NIRPC Surface Transportation Committee (STC) to periodically evaluate *MOVE NWI* and determine if any modifications or updates are needed

Local Public Agencies' (LPAs') Role in *MOVE NWI*

Local Public Agencies (LPAs), otherwise known as city, town, and county governments, are the core of Northwestern Indiana. The places they represent are the places where Northwestern Indiana's residents, workers, and visitors gather and conduct life every day. As such, LPAs own and operate transportation facilities that are crucial to ensuring that the life and economy of Northwestern Indiana continues in a thriving and sustainable way. Effectively managing congestion in accordance with *MOVE NWI* is essential in order to ensure the region's residents, workers, and visitors continue to enjoy the opportunities Northwestern Indiana offers without worrying that congestion will disrupt access to those opportunities. Table 6 lists the roles NIRPC expects LPAs to play in stewarding *MOVE NWI*.

Table 6: LPAs' Roles in *MOVE NWI*

#	Role:
1	Consult with NIRPC during *MOVE NWI* development
2	Make congestion-related data available to NIRPC to the extent licensing permits
3	Incorporate *MOVE NWI* strategies into project planning and development processes
4	Complete a *MOVE NWI* project checklist for each project application in any future Notice of Funding Availability (NOFA) solicitation
5	Participate on NIRPC Surface Transportation Committee (STC) to periodically evaluate *MOVE NWI* and determine if any modifications or updates are needed

Indiana Toll Road's Role in *MOVE NWI*

The Indiana Toll Road Concession Company (Indiana Toll Road) is a private sector operator of the Indiana Toll Road, a 156-mile east-west tolled Interstate Highway across northern Indiana, 62 miles of which traverses Northwestern Indiana. As the operator of this major transportation facility, Indiana Toll Road is an essential stakeholder in *MOVE NWI* with the ability to greatly contribute to its effectiveness in managing congestion. In order to ensure that Indiana Toll Road most efficiently and effectively contributes to *MOVE NWI*, NIRPC proposes that it abide by the following roles in Table 7.

Table 7: Indiana Toll Road's Roles in *MOVE NWI*

#	Role:
1	Consult with NIRPC during *MOVE NWI* development
2	Make congestion-related data available to NIRPC to the extent licensing permits
3	Incorporate *MOVE NWI* strategies into project planning and development processes
4	Complete a *MOVE NWI* project checklist for each project selected to be completed
5	Participate on NIRPC Surface Transportation Committee (STC) to periodically evaluate *MOVE NWI* and determine if any modifications or updates are needed

United Bridge Partners' Role in *MOVE NWI*

United Bridge Partners is the company that operates and is providing funding for the soon-to-be-completed Cline Avenue Bridge project, the $150 million project to replace the Cline Avenue Bridge over the Indiana Harbor Canal in East Chicago. Once completed and open-to-traffic, the bridge will the final missing link in a regionally significant expressway traversing Hammond, Whiting, East Chicago, and Gary. The bridge itself will be tolled at a variable rate depending on vehicle class (trucks paying more than cars). Since United Bridge Partners will be the operator of this major transportation facility, it is crucial that it abide by the following roles in *MOVE NWI* enumerated in Table 8.

Table 8: United Bridge Partners' Roles in *MOVE NWI*

#	Role:
1	Consult with NIRPC during *MOVE NWI* development
2	Make congestion-related data available to NIRPC to the extent licensing permits
3	Incorporate *MOVE NWI* strategies into project planning and development processes
4	Complete a *MOVE NWI* project checklist for each project selected to be completed
5	Participate on NIRPC Surface Transportation Committee (STC) to periodically evaluate *MOVE NWI* and determine if any modifications or updates are needed

Members of the Public's Role in *MOVE NWI*

At the end of the day, it is how the lives of members will be affected based on *MOVE NWI* that will determine its effectiveness. As such, members of the public are the most important stakeholders. *MOVE NWI* strives to ensure that even if members of the public will continue to experience congestion, they will at least know that region leaders have factored in questions like how much congestion is acceptable and what strategies are being pursued into decisions about future transportation and growth investments. The public has a tremendous ability to decrease the burdens of congestion by taking actions such as those in Table 9 below.

Table 9: Members of the Public's Roles in *MOVE NWI*

#	Role:
1	Travel safely on all modes of transportation, obeying traffic laws
2	Enable location-based services on cell phones and other personal devices to the extent privacy comfort and laws permit
3	Responsibly use and monitor traveler information sources such as overhead signs, radio/news channels, and apps such as Google Maps and Waze
4	Stay tuned to all transportation-related agencies and organizations such as NIRPC, INDOT, transit operators, etc. for the latest information
5	Provide feedback on transportation and congestion-related matters to NIRPC and local officials through survey responses, attending public meetings including virtually, and directly reaching out to officials
6	Provide feedback to NIRPC on the draft *MOVE NWI*
7	Provide feedback to NIRPC on *MOVE NWI* after it is adopted in order for NIRPC to improve upon *MOVE NWI* through future periodic modifications, amendments, or updates

Congestion: What is it and What can be Done About it?

Congestion is a term that many people are familiar with, but few can pinpoint precisely how to define. To state the obvious, there are many contexts where the term congestion has meaning (transportation and bodily health, just to name a couple), and it is important to note that in the context of *MOVE NWI*, it is the transportation context being described.

According to the Federal Highway Administration's Office of Operations, "congestion usually relates to an excess of vehicles on a portion of roadway at a particular time resulting in speeds that are slower—sometimes much slower—than normal or 'free flow' speeds. Congestion often means stopped or stop-and-go traffic."[6] But even after defining congestion, there are a few issues that need to be clarified.

First, people often automatically assume that congestion in the transportation context refers to traffic congestion—that is congestion experienced by cars, trucks, buses, and on-road vehicles. It is true that, especially in Northwestern Indiana, this is the vast majority of congestion experienced, but it is also important to consider that congestion in the transportation context may also refer to congestion on the transit system (overcrowded buses and trains as well as these transit vehicles not arriving on-time) and even the non-motorized system (sidewalk and other pedestrian/bicyclist facility bottlenecks and delays). The federal requirements for *MOVE NWI* require that it examine congestion from a multimodal perspective, meaning that it considers objectives and strategies for managing congestion not just for traffic, but also other modes like transit and non-motorized means. Therefore, *MOVE NWI* examines data and includes objectives and strategies for managing congestion across these different modes.

Second, congestion can be diagnosed in two fundamentally different types: recurring congestion and non-recurring congestion. *Recurring congestion* refers to congestion that can reasonably be expected to occur on an ongoing basis following predictable patterns. There are only two forms of recurring congestion: work commute peak congestion and bottleneck congestion. *Work commute peak congestion* is the twice-a-day congestion that occurs in the morning (roughly 6 AM – 9AM) and afternoon (roughly 3 PM – 6 PM) peaks because of the surge in volume during these times. *Bottleneck congestion* is the congestion that occurs because of bottlenecks on the road or highway network, resulting in congestion at relatively lower traffic volume levels than would cause congestion to appear at nearby portions of the network. Usually such bottlenecks are caused by geometric elements of the network (i.e. interchange designs), but bottlenecks can also be caused by high-demand clusters of development around the network, causing queuing of vehicles on the network servicing this demand (i.e. large intermodal facilities and ports). *Non-recurring congestion*, by contrast, is congestion that unpredictably occurs at any time or location on the network. Crashes, work zones, weather, and special events are all common causes of non-recurring congestion. *MOVE NWI* includes objectives and strategies to address both recurring and non-recurring congestion.

Third, congestion is often characterized as a cause of a perceived burden on society, but it is important to recognize that congestion can also be characterized as a symptom of a thriving society, since it implies that a lot of people and goods are accessing their destinations. *MOVE NWI* does not make a value judgment about which of these characterizations are correct, but it acknowledges that the overarching goal is not to completely eliminate congestion, but rather to strategize about how to effectively manage it.

While acknowledging these common misconceptions and oversimplifications about congestion, congestion for the purposes of *MOVE NWI* can be defined as *a worse than reasonably expected performance in movement for people and goods reaching their destinations*. Such a definition implies that there is a *reasonable* level of congestion that travelers in Northwestern Indiana should be expected to tolerate. Also, such a definition avoids automatically implying that it is only the highway mode that contributes to and experiences congestion. Finally, such a definition signifies

that it is both passenger and freight movement that experiences congestion and for which a congestion management process must address.

After defining *congestion*, it is necessary to define and describe the *management* piece. Defining management may seem obvious and for the purposes of *MOVE NWI* is simply, *coordinating stakeholders to plan for better navigating through a systemic issue (in this case congestion) and martialing resources to the implementation of such a plan*. Planners certainly have a role as one of the key stakeholders in better managing congestion. Afterall, a better quality of life for residents, workers, and visitors in Northwestern Indiana as well as a thriving economy all depend on effective congestion management.

Finally, *MOVE NWI* is a Congestion Management *Process*, so it is important to define how *MOVE NWI* is a *process* that strives to manage congestion. It should be noted that when the federal requirements for Transportation Management Areas (TMAs, metropolitan areas with a population of 200,000 or more) first introduced congestion management, the requirements named a Congestion Management *System*, not a Congestion Management *Process*, which only appeared in 2005 in SAFETEA-LU, the then-federal transportation authorization bill. The intent in changing the nomenclature from *system* to *process* was so that the CMP would not be considered a standalone document but rather a framework integrated into the broader metropolitan transportation planning process.[7] *MOVE NWI* fully aims to integrate congestion management into NIRPC's core planning processes with continual opportunities for evaluation and improvement and as such is a *process*.

Planners have been striving to effectively manage congestion for decades, and the fact that congestion continues to burden quality of life and (as viewed from some angles) to restrict economic growth is testament to a disappointing track record. Clearly, either planners have been pursuing the wrong mix of strategies, stakeholders (including planners) have not contributed to implementing those strategies, or some combination of both. *MOVE NWI* is not an investigative document to determine which is true, but it does acknowledge that past congestion management processes have not fully realized their potential. The hope is that *MOVE NWI* will simplify and streamline stakeholders' and the public's roles and expectations in the process in order to be more effective at actually managing congestion.

How does *MOVE NWI* Work?

MOVE NWI seeks to manage congestion holistically in the Northwestern Indiana Region by following the (slightly modified) FHWA-prescribed 8-step process, as mentioned earlier:

1. Develop Congestion Objectives in the Northwestern Indiana Region
2. Define the *MOVE NWI* Network
3. Develop multimodal performance measures
4. Identify and describe the data sources that will be used to measure the performance measures
5. Analyze the existing conditions of congestion in the Northwestern Indiana Region using the performance measures, noting problems and needs
6. Identify and assess strategies
7. Evaluate projects to address the strategies
8. Periodically evaluate project and strategy effectiveness of the projects and strategies vetted through *MOVE NWI*

The following 8 sections of *MOVE NWI* go into more detail about how each of these steps work in the broader context of preparing *MOVE NWI* to be an effective process for managing congestion.

Congestion Objectives in the Northwestern Indiana Region

Objectives are SMART (specific, measurable, achievable, realistic, and time-bound) statements of aspiration. Thus, congestion objectives in the Northwestern Indiana Region are grounded aspirational statements that regional stakeholders want to achieve in terms of managing congestion and which lend themselves to periodic measurement of progress. There are two categories of congestion objectives in *MOVE NWI*: objectives from *NWI 2050* that relate to congestion and additional stakeholder-added objectives.

First, objectives in *MOVE NWI* link the vision and critical paths from *NWI 2050* into SMART statements that *MOVE NWI* aspires to. Thus, the objectives start with the 16 critical paths (formed by 4 vision areas and 4 plan focus areas) undergirding *NWI 2050*. Then, since each of the 16 critical paths are associated with performance-based planning (PbP) measures as part of the Action Plan section in *NWI 2050*, *MOVE NWI* selects the performance measures and targets that are most relevant to congestion management. Table 10 below lists the congestion objectives derived from *NWI 2050*, categorized by critical path (note that some critical paths are not associated with any congestion objectives).

Second, additional congestion objectives not expressly derived from *NWI 2050* are added because they more narrowly pertain to conditions on the *MOVE NWI* network (explained in the next section) and/or lend themselves to available and ongoing data collected. Table 11 lists the additional *MOVE NWI* congestion objectives organized by *MOVE NWI* network typology (explained in the next section).

Table 10: Congestion Objectives Derived From *NWI 2050* Organized by Critical Path

#	**Update land development policies and strategies to emphasize accessibility between people and opportunities**	**Performance Measure(s)** ***Italicized indicates federally required***	**Existing Conditions**	**Data Source(s) and Year(s)**
1	Prevent trip times from increasing from their existing levels by 2030	All purpose average trip time	By Car: 18.9 min By Transit: 45.1 min	NIRPC Household Travel Survey (2018)
2	Prevent work purpose trip times from increasing from their existing levels by 2030	Work purpose average trip time	By Car: 25.6 min By Transit: 92.9 min Overall: 27.6 min	NIRPC Household Travel Survey (2018), 2014-2018 ACS
3	Prevent retail/service trip times from increasing from their existing levels by 2030	Retail/Service purpose average trip time	By Car: 15.3 min By Transit: 65.2 min	NIRPC Household Travel Survey (2018)
4	Prevent school purpose trip times from increasing from their existing levels by 2030	School purpose average trip time	By Car: 15.2 min By Transit (including school bus): 27.8 min	NIRPC Household Travel Survey (2018)
5	Prevent medical care purpose average trip times from increasing from their existing levels by 2030	Medical care purpose average trip time	By Car: 21.5 min By Transit: 57.2 min	NIRPC Household Travel Survey (2018)
6	Prevent other purpose (not covered by objectives 2-5 above) average trip times from increasing from their existing levels by 2030	Other purpose average trip time	By Car: 19.5 min By Transit: 70.5 min	NIRPC Household Travel Survey (2018)
	Connect fragmented natural areas and integrate links between people and green spaces to increase resiliency and health outcomes			
	No congestion objectives			
	Complete roadway, bicycle, sidewalk, and transit networks across municipal and county lines to enhance safe and efficient access to opportunities for all			
7	Increase the percentage of population within ¼-mile network distance to a trail or bicycle facility from their existing levels by 2030	Percent of population within ¼-mile network distance to a trail or bicycle facility	13.7%	2013-2017 ACS, Local Public Agencies and INDOT (2018)

		Performance Measure(s) *Italicized indicates federally required*	Existing Conditions	Data Source(s) and Year(s)
8	Increase the percentage of population within ¼-mile network distance to a trail or bicycle facility crossing municipal/county jurisdictions from their existing levels by 2030	Percent of population within ¼-mile network distance to a trail or bicycle facility crossing municipal/county jurisdictions	7.9%	2013-2017 ACS, Local Public Agencies and INDOT (2018)
9	Increase the number of people living within fixed-route transit service areas from their existing levels by 2030	Number of people within fixed-route transit service areas (¼ mile for bus, ½ mile for commuter bus and commuter rail)	79,659	2013-2017 ACS, fixed-route transit operators (2018)
10	Record as few or fewer road-related fatalities than in the annual USDOT-required safety targets that NIRPC adopts every year through 2030	*Number of road-related fatalities*	90 annually	2015-2019 ARIES crash database
11	Record as few or fewer road-related fatalities per 100 million vehicle miles traveled than in the annual USDOT-required safety targets that NIRPC adopts every year through 2030	*Rate of road-related fatalities per 100 million vehicle miles traveled*	0.83	2015-2019 ARIES crash database
12	Record as few or fewer road-related serious injuries than in the annual USDOT-required safety targets that NIRPC adopts every year through 2030	*Number of road-related serious injuries*	443 annually	2014-2018 ARIES crash database
13	Record as few or fewer road-related serious injuries per 100 million vehicle miles traveled than in the annual USDOT-required safety targets that NIRPC adopts every year through 2030	*Rate of serious injuries per 100 million vehicle miles traveled*	3.910	2014-2018 ARIES crash database
14	Record as few or fewer non-motorized serious injuries and fatalities than in the annual USDOT-required safety targets that NIRPC adopts every year through 2030	*Number of non-motorized serious injuries and fatalities*	62 annually	2014-2018 ARIES crash database

		Performance Measure(s) ***Italicized indicates federally required***	Existing Conditions	Data Source(s) and Year(s)
15	Increase the percent of non-single occupancy vehicle travel in the Chicago, IL-IN urbanized area by as much or more than in the USDOT-required performance targets that NIRPC adopts every 4 years through 2030	*Percent of non-single occupancy vehicle travel in the Chicago, IL-IN urbanized area*	31.2%	2014-2018 ACS
16	Prevent any increase in the number of transit-related fatalities and rate per total vehicle revenue miles by (transit) mode through the 2030	*Total number of reportable transit-related fatalities and rate per total vehicle revenue miles by (transit) mode*	Bus (including demand response): 0 Rail: 0	Transit operators (2018)
17	Prevent any increase in the number of transit-related injuries and rate per total vehicle revenue miles by (transit) mode through the 2030	*Total number of reportable transit-related injuries and rate per total vehicle revenue miles by (transit) mode*	Bus (including demand response): 0 Rail: 0	Transit operators (2018)
	Commit to removing barriers and obstacles to guarantee equal and accessible opportunities			
	No congestion objectives			
	Maximize growth in existing centers to enhance civic and economic life and to protect natural areas and farmland			
18	Increase the population in “Main Centers” (as defined by NIRPC’s Creating Livable Communities program) from their existing levels by 2030	Population in “Main Centers”	71,456	2013-2017 ACS
19	Increase the employment in “Main Centers” (as defined by NIRPC’s Creating Livable Communities program) from their existing levels by 2030	Employment in “Main Centers”	51,073	Longitudinal Employer-Household Dynamics (LEHD, 2018)
20	Increase the average Walk Score in “Main Centers” (as defined by NIRPC’s Creating Livable Communities program) from their existing levels by 2030	Average Walk Score in “Main Centers”	48.1	Walk Score (walkscore.com, 2019)

	Clean and protect the air, land, water, and natural habitats to sustain and enhance the environment's safety and health for all	Performance Measure(s) *Italicized indicates federally required*	Existing Conditions	Data Source(s) and Year(s)
21	Increase Volatile Organic Compound (VOC) emission reductions from Congestion Mitigation Air Quality (CMAQ)-funded projects from their existing levels by as much or more than in the USDOT-required performance targets that NIRPC adopts every 4 years through 2030	*Volatile Organic Compounds (VOC) reduction from Congestion Mitigation Air Quality (CMAQ)-funded projects (kg/day)*	10,327.75	INDOT (2018)
22	Increase Oxides of Nitrogen (NOx) emission reductions from Congestion Mitigation Air Quality (CMAQ)-funded projects from their existing levels by as much or more than in the USDOT-required performance targets that NIRPC adopts every 4 years through 2030	*Oxides of Nitrogen (NOx) reduction from Congestion Mitigation Air Quality (CMAQ)-funded projects (kg/day)*	56,040.23	INDOT (2018)
23	Increase Carbon Monoxide (CO) emissions reductions from Congestion Mitigation Air Quality (CMAQ)-funded projects from their existing levels by as much or more than in the USDOT-required performance targets that NIRPC adopts every 4 years through 2030	*Carbon Monoxide (CO) reduction from Congestion Mitigation Air Quality (CMAQ)-funded projects (kg/day)*	512.49	INDOT (2018)
24	Increase Particulate Matter less than 10 microns in diameter (PM10) emissions reductions from Congestion Mitigation Air Quality (CMAQ)-funded projects from their existing levels by as much or more than in the USDOT-required performance targets that NIRPC adopts every 4 years through 2030	*Particulate Matter less than 10 microns in diameter (PM10) reduction from Congestion Mitigation Air Quality (CMAQ)-funded projects (kg/day)*	0.00	INDOT (2018)
	Improve roadway, bicycle, sidewalk, and transit networks to revitalize existing urban and rural centers and enhance equity			
25	Increase the percentage of the Environmental Justice (EJ) area population within ¼-mile of a trail or multi-use path from their existing levels by 2030	Percent of Environmental Justice (EJ) area population within ¼-mile of a trail or multi-use path	9.8%	2013-2017 ACS, Local Public Agencies and INDOT (2018)

		Performance Measure(s) ***Italicized indicates federally required***	Existing Conditions	Data Source(s) and Year(s)
26	Increase the population in Environmental Justice (EJ) areas within fixed-route transit service areas from their existing levels by 2030	Population in Environmental Justice (EJ) areas within fixed-route transit service areas	49,658	2013-2017 ACS, fixed-route transit operators (2018)
	Focus educational and workforce development initiatives on expanding skills that the modern economy requires			
	No congestion objectives			
	Collaborate regionally to welcome a diversity of people and talent to achieve mixed and balanced growth			
	No congestion objectives			
	Build region-wide coalitions to advance environmental sustainability for the benefit of future generations			
	No congestion objectives			
	Prioritize transformative investments to elevate the position of the region and to attract a diversity of residents and high-quality economic opportunities			
27	Increase the number of jobs within fixed-route transit service areas from their existing levels by 2030	Jobs within fixed-route transit service areas	86,922	Longitudinal Employer-Household Dynamics (LEHD, 2018), fixed-route transit operators (2018)
	Foster better communications, cooperation and coordination to bring people together across the lines that divide us			
	No congestion objectives			

	Promote initiatives and policies to ensure healthy living, sustainability, quality of life, and prosperity	Performance Measure(s) *Italicized indicates federally required*	Existing Conditions	Data Source(s) and Year(s)
	No congestion objectives			
	Endorse innovative energy and environmental strategies to achieve a balance that protects diverse and unique ecological treasures while fostering a sustainable economy			
	No congestion objectives			
	Adopt technological innovation that enhances the safe and fluid movement of people and goods to enable a flourishing economy			
28	Increase the number of trips made by Shared Mobility services from their existing levels by 2030	Number of trips made by Shared Mobility services	Pending updated Household Travel Survey data	NIRPC Household Travel Survey (2018)
29	Increase the number of alternatively fueled/powered vehicles registered from their existing levels by 2030	Number of alternatively fueled/powered vehicles registered	Data currently unavailable, however, identified as a strategy to build capacity for creating a regional data and analysis framework	INDOT/Indiana Bureau of Motor Vehicles (TBD)
30	Increase the number of Connected or Automated Vehicles (CAVs) registered plus fleet size of CAVs licensed to operate in NW Indiana from their existing levels by 2030	Number of Connected or Automated Vehicles (CAVs) registered plus fleet size of CAVs licensed to operate in NW Indiana	Data currently unavailable, however, identified as a strategy to build capacity for creating a regional data and analysis framework.	INDOT/Indiana Bureau of Motor Vehicles (TBD)
31	Increase the percent of person miles traveled on the Interstate that are reliable from their existing levels by as much or more than in the USDOT-required performance targets that NIRPC adopts every 4 years through 2030	*Percent of person miles traveled on the Interstate that are reliable*	83.0%	NPMRDS (2017)

		Performance Measure(s) ***Italicized indicates federally required***	Existing Conditions	Data Source(s) and Year(s)
32	Increase the percent of person miles traveled on the non-Interstate National Highway System (NHS) that are reliable from their existing levels by as much or more than in the USDOT-required performance targets that NIRPC adopts every 4 years through 2030	*Percent of person miles traveled on the non-Interstate NHS that are reliable*	95.0%	NPMRDS (2017)
33	Decrease the Truck Travel Time Reliability Index (TTTRI) from its existing level by as much or more than in the USDOT-required performance targets that NIRPC adopts every 4 years through 2030	*Truck Travel Time Reliability Index (TTTRI)*	1.54	NPMRDS (2017)
34	Record as few or fewer peak hours of excessive delay per capita (on the National Highway System) in the Chicago, IL-IN Urbanized Area than in the USDOT-required performance targets that NIRPC adopts every 4 years through 2030	*Peak hours of excessive delay per capita in the Chicago, IL-IN Urbanized Area*	14.4	NPMRDS (2017), INDOT/IDOT for posted speed limits (2018)
	Embrace a dynamic, diversified and sustainable economy that attracts and retains talent, enhances quality of life, and increases personal and household income			
	No congestion objectives			

Table 11: Additional *MOVE NWI* Congestion Objectives Organized by *MOVE NWI* Network Typology

#	Overall *MOVE NWI* Network	Performance Measure(s)	Existing Conditions	Data Source(s) and Year(s)
35	Increase the percent of non-single occupancy vehicle travel in the Northwestern Indiana Region from their existing levels by 2030	Percent non-single occupancy vehicle (% non-SOV) travel	16.0%	2014-2018 ACS
36	Prevent vehicle hours traveled (VHT) from increasing from their existing levels by 2030	Daily vehicle hours traveled (VHT) on the *MOVE NWI* network	785,264	NIRPC Travel Demand Model (2020)
37	Reduce road-related crashes per 100 million vehicle miles traveled (VMT) from their existing levels by 2030	Road-related crashes per 100 million vehicle miles traveled (VMT)	245.48	2015-2019 ARIES crash database
	Major Road Corridors on the *MOVE NWI* Network			
38	Prevent the corridor-average annual peak hours of excessive delay per traveler from increasing from its existing level by 2030	Corridor-average annual peak hours of excessive delay per traveler	4.48[8]	NPMRDS (2019)
39	Prevent the corridor-average typical weekday travel time index (TTI) from increasing from its existing level by 2030	Corridor-average typical weekday travel time index (TTI)	1.17[8]	NPMRDS (2019)
40	Prevent any increase in the corridor-total daily vehicle miles traveled from its existing level by 2030	Corridor-total daily vehicle miles traveled (VMT)	12,004,957	HPMS (2018)
41	Prevent any increase in the corridor-total daily vehicle hours traveled from its existing level by 2030	Corridor-total daily vehicle hours traveled (VHT)	249,165[8]	HPMS (2018), NPMRDS (2019)
	Minor Road Corridors on the *MOVE NWI* Network			
42	Prevent any increase in the corridor-average typical weekday Google Maps API-derived travel time index (TTI) from its existing level by 2030	Corridor-average typical weekday Google Maps API-derived travel time index (TTI)	1.13	Google Maps Directions API (2020)
43	Prevent any increase in the corridor-total daily vehicle miles traveled from its existing level by 2030	Corridor-total daily vehicle miles traveled (VMT)	2,700,335[9]	HPMS (2018)
44	Prevent any increase in the corridor-total daily vehicle hours traveled from its existing level by 2030	Corridor-total daily vehicle hours traveled (VHT)	85,143	HPMS (2018), Google Maps Directions API (2020)

	***MOVE NWI* Transit Network**	**Performance Measure(s)**	**Existing Conditions**	**Data Source(s) and Year(s)**
45	Increase the network-total annual unlinked trips (UPT) from their existing levels by 2030	Network-total annual unlinked trips (UPT)	4,645,095	NTD (2018)
46	Increase the transit network-average unlinked trips per vehicle revenue hour from its existing level by 2030	Network-average unlinked trips per vehicle revenue hour	13.7	NTD (2018)

The combination of Tables 10 and 11 collectively form the congestion objectives in *MOVE NWI*. Note that the objectives are not assigned to any individual stakeholder or champion. Rather, every transportation-related agency collectively works to advance these 46 congestion objectives in the Northwestern Indiana Region. Each of these objectives is also matched with a performance measure that NIRPC staff will take the lead in monitoring over time, noting the existing condition of the performance measure in the rightmost column. The rightmost columns of Tables 10 and 11 contain the source(s) and year(s) used to calculate the existing conditions of the performance measures. For more information about the sources, consult *NWI 2050*, specifically the Action Plan: Progress to Measure section.[11]

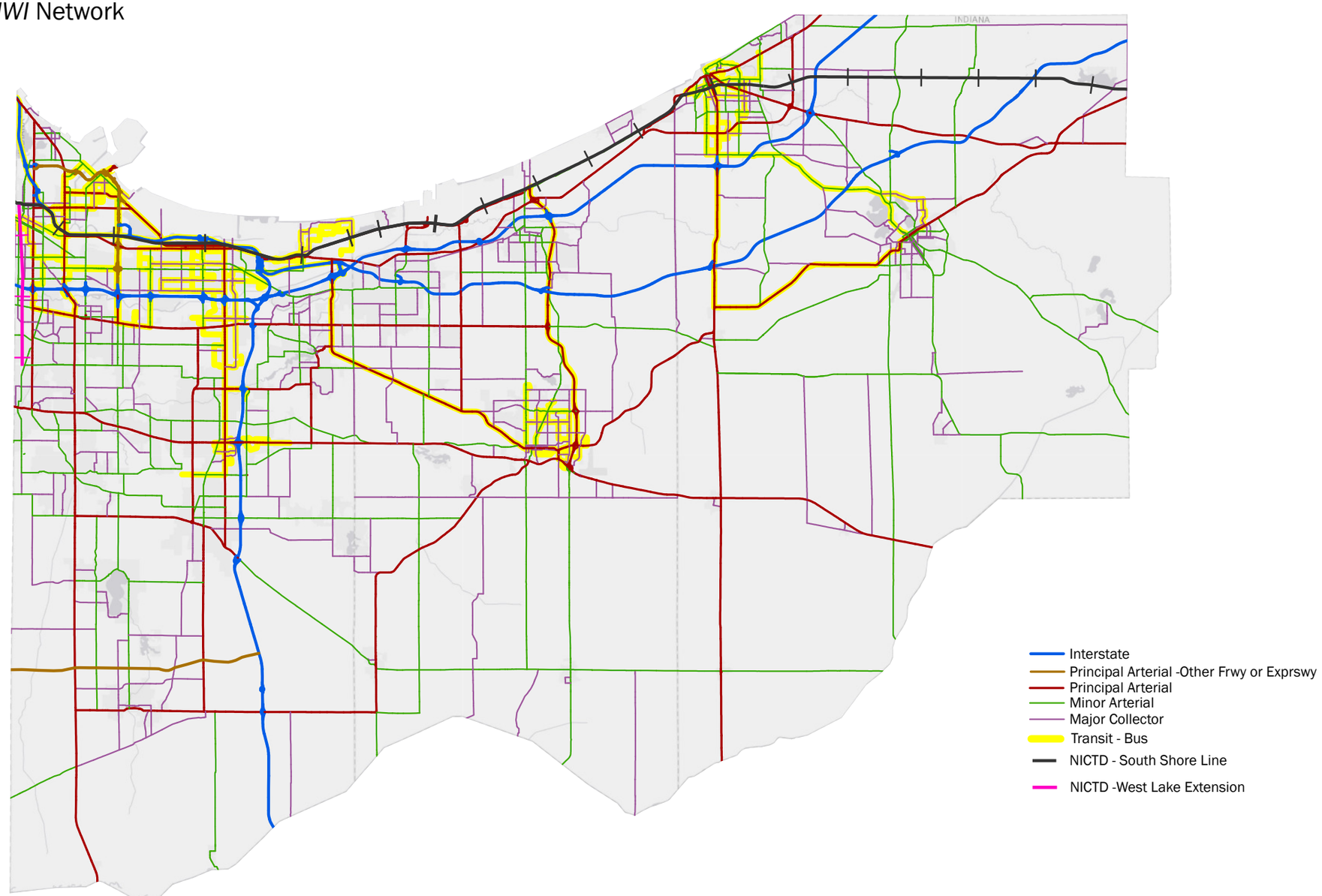
MOVE NWI Network

One of the federal requirements of a CMP is to define the transportation network on which the CMP applies. This means that for portions of the Northwestern Indiana network that are not defined as being part of the *MOVE NWI* network, *MOVE NWI* does not apply to these portions. Here it is important to define "network" because it is one of those terms that transportation professionals too often casually use without considering that many outside the profession may not understand. Like congestion, network is word that has other contexts outside of transportation, so it is important to note that in the context of *MOVE NWI*, only the transportation context applies. Network is defined as the system of transportation facilities—highways, roads, rail lines, bus routes, nonmotorized trails/paths—that collectively form the transportation system on which people and freight travel every day. However, the *MOVE NWI* network is defined as a subset of the network. The reasons why the *MOVE NWI* network is only a subset of the entire network are many, but the principle ones are as follows. First, it would be unrealistic to expect enough quality data for every portion of the network, and since *MOVE NWI* is fundamentally a data-driven process to manage congestion, it follows that the *MOVE NWI* network should only be comprised of transportation facilities for which transportation professionals can collect quality data. Second, there are many portions of the network that either do not experience congestion because of their localized nature (i.e. a rural local road) or experience constant congestion for the same reason (i.e. an entrance road to a port) such that a holistic process to manage congestion like *MOVE NWI* would not be singularly effective at managing congestion anyway.

For these reasons, the *MOVE NWI* network is comprised of all roads and highways functionally classified as Major Collectors or higher, all fixed-route transit lines, and all at-grade railroad crossings.[10] The *MOVE NWI* network does not include exclusively highway-based freight facilities because these vehicles by-and-large use highways open to all traffic. The *MOVE NWI* network excludes nonmotorized facilities because either these facilities are not subject to congestion as commonly considered, or "congestion" on these facilities is not always considered problematic (i.e. slowing to take in sights, pacing appropriate to one's health, etc.). Moreover, the *MOVE NWI* network does not include roads and highways functionally classified as minor collectors or local roads because these facilities are sufficiently localized so not to register as significant congestion for the entire Northwestern Indiana Region. Finally, the *MOVE NWI* network excludes demand response-only transit services because these services utilize roads and highways already subject to the *MOVE NWI* network. Figure 2 below shows the map of the *MOVE NWI* network.

It therefore follows that any project proposed to be programmed into a future NIRPC Transportation Improvement Program (TIP) that is *not* on the *MOVE NWI* network does not have to be screened for *MOVE NWI* adherence. However, any project proposed to be programmed that is on the *MOVE NWI* network *may* have to be screened for adherence depending on the project's characteristics as explained later in the Evaluating Projects and Proposed Project worksheet sections.

Figure 2: Map of *MOVE NWI* Network



Performance Measures

NWI 2050 is a pioneering metropolitan transportation plan for the Northwestern Indiana Region in large part because of how it emphasizes performance measures. As explained in *NWI 2050*, there are of course federally required performance measures, some of which directly pertain to congestion, that NIRPC must address and periodically set and update targets for.[12] But there are also performance measures that NIRPC optionally has chosen to monitor and, to the extent data and other resources permit, set targets for. This general principle also applies to *MOVE NWI*. *MOVE NWI* includes performance measures that are federally required but it also includes performance measures that are not federally required but still specifically tied to the congestion objectives as explained earlier.

The *MOVE NWI* performance measures can be found in the third columns of Tables 10 and 11 in the Congestion Objectives in the Northwestern Indiana Region section earlier in the document. Note that the performance measures are organized by congestion objective. This means that *MOVE NWI* does not contain any performance measures not clearly tied to a congestion objective; this would result in wasted time and resources measuring something that would not be used and evaluated for assessing congestion. Moreover, performance measures are carefully chosen to ensure that they can be monitored by reliable, quality data sources at regular intervals. If the data sources required for a performance measure are unreliable or unpredictable, that would not result in a useful performance measure because it would make it difficult to assess the measure in an ongoing manner. There will of course inevitably be changes to the methodologies used in collecting or synthesizing particular data sources that may make comparing some performance measures across long periods of time problematic, but this is an unavoidable caveat that will just have to be managed.

Data Sources

Clearly, in order to calculate the *MOVE NWI* performance measures, quality data from quality sources are needed. NIRPC is fortunate to have access to a number of high-quality data sources that are not necessarily available to members of the public, and therefore we have an obligation to not violate any data licensing agreements that we are privy to while still managing to objectively present the data in a way that is meaningful for our stakeholders and the general public. All the data sources used in *MOVE NWI* are found in the rightmost columns in Tables 10 and 11, but further description is provided here for eight sources of data in particular. The first three sources described are motor vehicle mode travel time data, the next source is safety data, the following three sources described are multimodal including transit performance data, and the final source described is arguably not data but rather a forecasting tool.

First, the National Performance Measure Research Data Set (NPMRDS) is a probe-based travel time data set that passively collects travel time data at 5-minute intervals for both passenger cars and commercial trucks on the National Highway System. NIRPC only has access to the NPMRDS because it is a federal public transportation agency (in this case a Metropolitan Planning Organization, but State Departments of Transportation and other RITIS-approved agencies are allowed access). Several of the USDOT-required transportation performance measures require using the NPMRDS, so this is considered a reliable and peer-benchmarked data source. The NPMRDS receives its data via in-vehicle probes such as GPS units and cellular phone location data.[13] While NPMRDS is unquestionably one of the most reliable travel time data sources, its main drawback is that its network coverage is limited to only the National Highway System, which consists of Interstate Highways and Arterials that serve a national, or at least larger than just a regionwide, purpose. This means that the vast majority of facilities on the *MOVE NWI* network are not covered by the NPMRDS. Moreover, the NPMRDS does not cover the transit nor any other alternative mode.

Second, the Google Maps API effectively taps into the enormity of Google's passively collected "big data" and delivers travel time estimates for any given day of the year and time of day for any specified road corridor. Specifically, NIRPC uses the Google Maps Directions API and feeds in "directions" for the corridor of interest with a given future day and time of day, and the API returns both a congested and free-flow travel time for that corridor based on a machine learning algorithm applied to recently observed travel time data for a comparable day-of-week and time-of-day on that corridor. In theory, any member of the public has access to a broad resolution view of this data by inputting directions between two points on Google Maps for some future day and time, and the algorithm will return a time range for how long a person should reasonably expect that trip to take. However, NIRPC has paid for a Google API key, which lets it access the backend of that query, returning a more precise decimal number for the travel time instead of a range. This is a great way to tap into probe-based travel time data on all of the *MOVE NWI* road corridors, but it does not work for alternative modes.[14]

Third, NIRPC still possesses and occasionally deploys handheld GPS units that utilize the "floating car" method to manually collect GPS traces of driving a route that are then later processed and converted into travel times. While this method is the most labor intensive and cost ineffective, it has supplied a lot of historic baseline data for NIRPC to draw on and can be effective for occasionally ground-truthing the probe-based travel time data sources. Additionally, this method can be used on transit routes in addition to road corridors, so as NIRPC looks to incorporate transit travel-time data into *MOVE NWI*, this will likely be the initial method of choice while big data sources are evaluated.

Fourth, the Automated Reporting Information Exchange System (ARIES) portal contains law enforcement-supplied crash reports for every reportable crash in which a motor vehicle is at least one of the users involved in the crash. INDOT uses the ARIES crash data to set USDOT-required safety performance measure targets, so there is broad consistency in using this data source for crashes throughout the State of Indiana. The ARIES crash data contains several attributes about crashes including for example the severity (fatal, injury, or property damage only), number of persons killed, number of persons injured, number of vehicles involved, and perhaps most importantly a precise location of the crash that NIRPC staff is able to geocode. Any user who wants access to the ARIES portal with respect to Indiana crash data has to submit an online form requesting use of the data and be approved; NIRPC has already been approved and is a frequent user of the ARIES crash data.

Fifth, the U.S. Census Bureau's American Community Survey (ACS) offers a glimpse of travel time and journey-to-work data for the region. Specifically, Table S0801 contains several relevant variables such as percentage of workers who use each major mode and mean travel time to work. The Census Bureau is a highly reputable source used by virtually all planning peers, but of course its main drawback is that it lacks specificity for any particular corridor or transit route. Still, it is an invaluable data source to record and track over time because of how widely used it is in the field and how consistently it is updated every year. It is also the required data source for one of the key USDOT-required performance measures, the percent of non-Single Occupancy Vehicle (non-SOV) travel in the Chicago, IL-IN Urbanized Area.

Sixth, the National Transit Database (NTD) highlights passenger miles and unlinked trips for the fixed-route transit operators in the region. These metrics are extremely useful in gathering broad-based information about ridership and trip length (as well as financial information which is not as useful in the context of *MOVE NWI*), but unfortunately data from the NTD cannot be distilled down to information about individual transit routes since the reporting is aggregated to an agency-wide level. That said, in the case of highest ridership transit operator in the region, the Northern Indiana Commuter Transportation District's (NICTD's) South Shore Line, there is currently only one route, so it is possible to obtain ridership and trip length data from this route.

Seventh, NIRPC will begin to work with fixed-route transit operators to collect (at least a random sample of) on-time performance (OTP) data for transit routes/operators using GPS traces. Technically this is a subset of the "floating car" method as

mentioned earlier but applied specifically to the fixed-route transit network. To the extent *MOVE NWI* relies upon this method, care will be taken to ensure that it is a random sample (i.e. NIRPC staff will obtain general consent with the operators to collect the data but will not notify the operators of the specific times and routes of the data collection and will blend in as normal riders). The goal will be to eventually explore big data collection methods on the fixed-route network to replace this method, but this is a method that can be immediately deployed.

Eighth, NIRPC will continue to use its travel demand model to screen for possible congestion impacts from future transportation facilities and to guide NIRPC staff to areas of the network that warrant monitoring with more precise and accurate data sources. Since all of the other sources can only measure the present conditions and can at-best make educated guesses about the future impacts of projects, the travel demand model is still the best tool available to predict future congestion impacts of major transportation projects. The most pertinent attributes that the travel demand model will be used for are vehicle hours traveled (VHT), Volume-to-Capacity Ratio (V/C Ratio), and percent below free-flow speed.

Above all, *MOVE NWI* does not rely on a single source of data, nor does it rank which source of data ought to be deemed most reliable, but it draws on all available sources of data as described above that are most applicable to any given assessment of existing conditions or project being evaluated. It should also be noted that all sources of data have some degree of inaccuracy and relying on them to predict future outcomes should always warrant caution.

Existing Conditions

MOVE NWI organizes the existing conditions of the *MOVE NWI* network by network typology: overall conditions, road conditions, and transit conditions. The overall conditions describe the broad state of congestion in the Northwestern Indiana Region regardless of mode, the road conditions describe the state of congestion by particular road corridor on the *MOVE NWI* network, and the transit conditions describe the state of congestion particularly as it pertains to transit.

First, some overall metrics describe the state of congestion in the Northwestern Indiana Region. Table 12 lists the overall existing conditions of congestion in the Northwestern Indiana Region. While some of these appear in Tables 10 and 11 above in the Existing Conditions column, the overall measures of existing condition in Table 12 below are those that specifically apply to the *MOVE NWI* network.

Note that the first of the overall measures of the existing conditions, percent non-SOV travel, is represented as only for Lake, Porter, and LaPorte Counties, not the entire Chicago, IL-IN Urbanized Area as reported in *NWI 2050*, where the figure is 31.2% (2014-2018 ACS). It makes sense that since the three Northwestern Indiana Counties are at the periphery of the Chicago Area that the percent non-SOV travel would be lower because of lower population and employment densities as well as fewer convenient alternative modal options. So in the context of the USDOT-required percent non-SOV travel performance measure, a more accurate interpretation of the existing conditions would be that the Northwestern Indiana Region's 16.0% non-SOV travel supports the Chicago, IL-IN Urbanized Area's 31.2% non-SOV travel. The region's 27.6 minutes mean travel time to work is below the Chicago, IL-IN Urbanized Area's 32.0 minutes and above the national mean travel time to work of 26.6 minutes. Since the NIRPC Travel Demand Model is unique to the Northwestern Indiana Region, there is no easy comparison of daily vehicle hours of travel (VHT) to other regions, but the power of this metric will be in tracking it over time and in determining the effects certain proposed projects have on it. The last two crash-related mea-

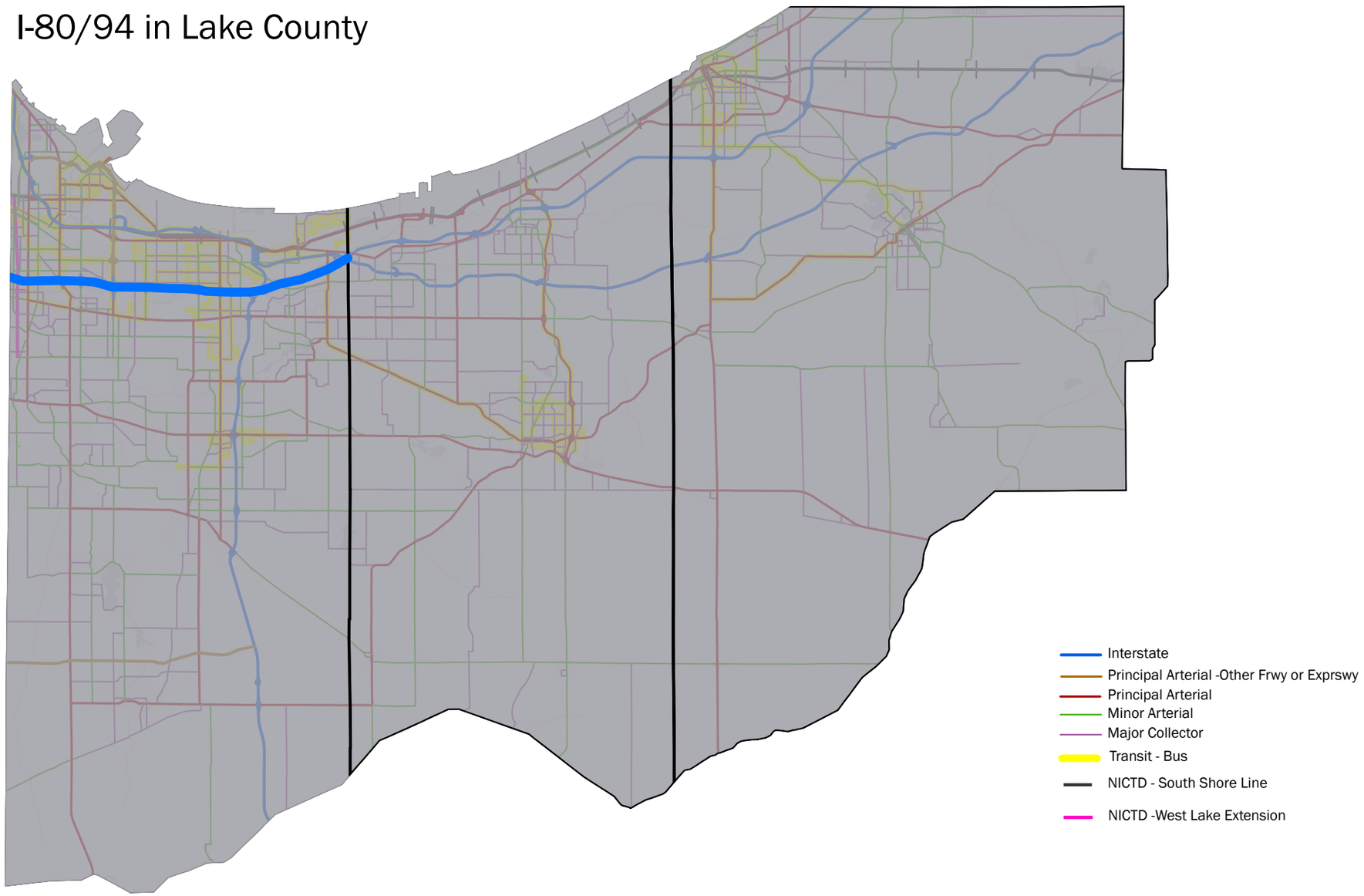
Table 12: Overall Measures of Existing Conditions of Congestion in the Northwestern Indiana Region

Measure of Existing Condition	Value of the Measure	Data Source(s) and Year(s) of the Measure
Percent non-Single Occupancy Vehicle (% non-SOV) Travel	16.0%	2014-2018 American Community Survey
Mean Travel Time to Work (min)	27.6	2014-2018 American Community Survey
Daily Vehicle Hours of Travel (VHT) on the *MOVE NWI* Network	785,264	NIRPC Travel Demand Model, 2020
Road-related Crashes per 100 Million Vehicle Miles Traveled (VMT)	245.48	ARIES 2015-2019 Crashes, Highway Performance Monitoring System 2018
Road-related Fatal Crashes per 100 Million Vehicle Miles Traveled (VMT)	0.83	ARIES 2015-2019 Crashes, Highway Performance Monitoring System 2018

sures are proxies for how much non-recurrent congestion the overall region faces. Other causes, such as inclement weather and work zones, are not included as measures because the region either has no control over them (such as for the former) or deems them positive despite the impacts on congestion (such as the latter).

Second, the road network measures of existing conditions of congestion in the Northwestern Indiana Region are divided into major road corridors and minor road corridors. The major road corridors are Interstate Highways and those major road corridors of which NIRPC submitted information and planning priorities to INDOT as part of the Statewide Corridor Planning Study in September 2018. NIRPC's Surface Transportation Committee (STC), which included INDOT representation, vetted and provided feedback on these corridors. The reason these road corridors are grouped together in this existing conditions section is because NIRPC has thoroughly profiled the conditions and priorities for these corridors and because the vast majority of them are on the National Highway System, covered by the National Performance Measure Research Data Set (NPMRDS). Thus, the existing conditions for these 17 major road corridors are profiled in far greater detail than the other road corridors in the *MOVE NWI* network. The following several pages of *MOVE NWI* show maps of these 17 major road corridors side-by-side with their existing conditions as vetted by the STC and supplemented by further analysis.

Figure 3: Map of I-80/94 from IL-IN Stateline to Lake-Porter County Line



I-80/94 from IL-IN State Line to Lake-Porter County Line

Congestion Notes

- 6.44 Peak Hours of Excessive Delay per Traveler in 2019
- Travel Time Index of 1.40 in 2019
- Daily Vehicle Miles Traveled (VMT) of 2,577,714 in 2018
- Daily Vehicle Hours Traveled (VHT) of 54,815 in 2019
- Most congested (especially recurring congestion) Interstate Highway corridor in NW Indiana
- Most fiber optically connected corridor in NW Indiana with both travel time and dynamic messaging signs deployed

Multimodal Notes

- Major freight corridor linking multiple interchanges servicing intermodal ports as well as Illinois freight facilities to the rest of the Interstate Highway network means that it experiences very high truck volumes
- Most heavily used carpool/vanpool corridor because it serves as the main link between all of NW Indiana and the Chicago area job market, and Pace Vanpool operates a program in NW Indiana

Land Use and Development Notes

- Heavily commercial and industrial immediately along the corridor to service busy interchanges
- Some residential adjacent and in close proximity to the corridor, particularly in Hammond and Gary (the former has gotten INDOT to install sound barrier walls)
- A lot of convenience stores and truck stops along the major interchanges

Safety Notes

- Crash Rate of 182.77 crashes per 100 million vehicle miles traveled (VMT)
- Fatality Rate of 0.66 fatalities per 100 million VMT

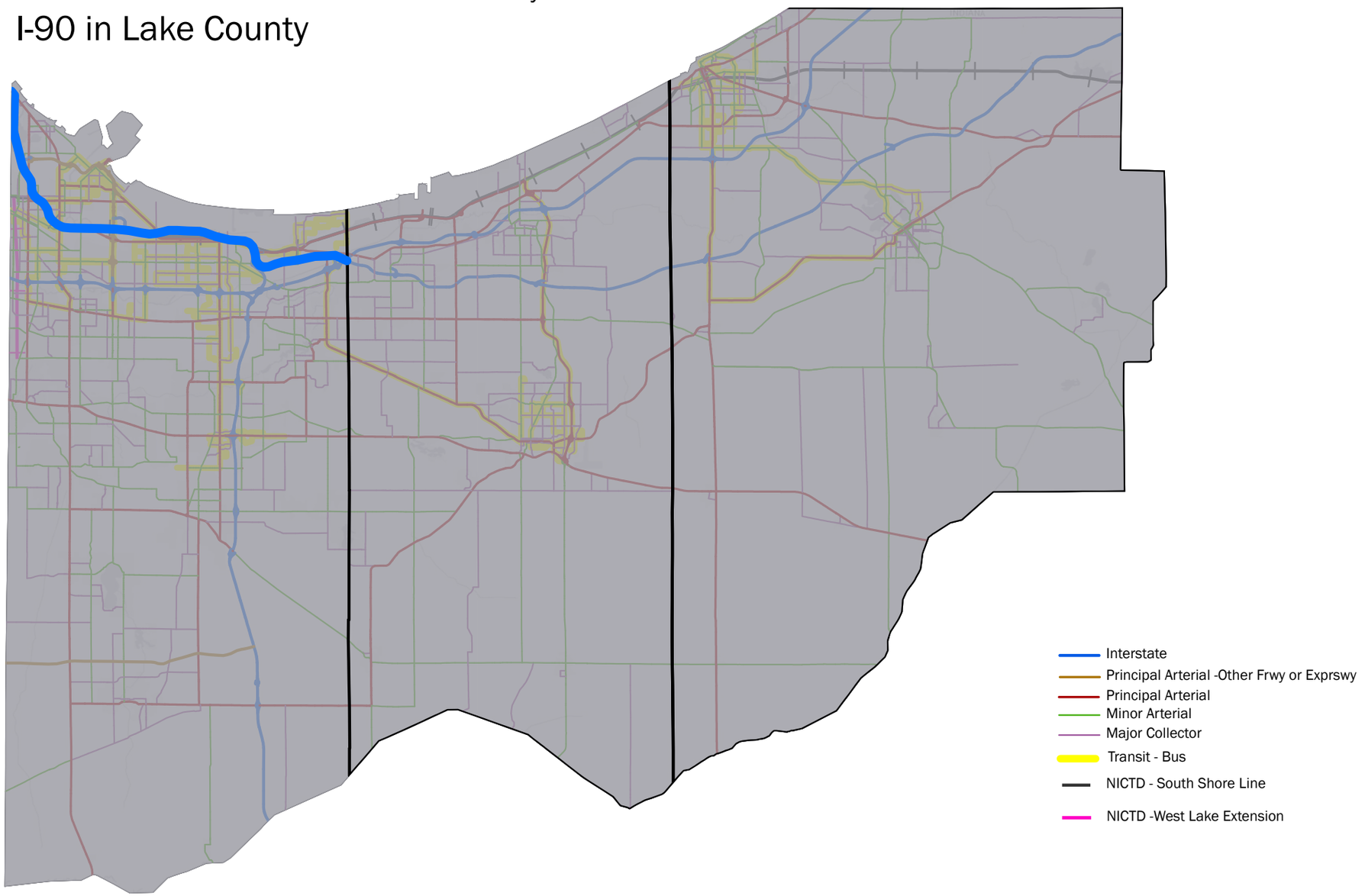
Transit Notes

- No fixed route transit utilizes the corridor, though Royal Excursion and Express Air Coach airport shuttle services utilize portions of the corridor

Other Issues/Priorities to Note About the Corridor

- Transportation Systems Management and Operations (TSMO) RFP issued in March 2020 to address potential TSMO strategies along the corridor such as part-time shoulder use, ramp metering, potentially even managed lanes
- Corridor is prone to some seasonal spikes in traffic volume and increased travel times in the summer due to recreation trips (Eastbound on Friday afternoons, Westbound on Sunday afternoons)

Figure 4: Map of I-90 from IL-IN Stateline to Lake-Porter County Line



I-90 from IL-IN State Line to Lake-Porter County Line

Congestion Notes

- 4.88 Peak Hours of Excessive Delay per Traveler in 2019
- Travel Time Index of 1.18 in 2019
- Daily Vehicle Miles Traveled (VMT) of 553,268 in 2018
- Daily Vehicle Hours Traveled (VHT) of 23,544 in 2019
- Tolled, so limits the traffic volume on the corridor
- Tollbooths are prone to peak period queuing, especially for non-transponder users

Multimodal Notes

- Major freight corridor linking multiple interchanges servicing intermodal ports as well as Illinois freight facilities to the rest of the Interstate Highway network means it should have high truck volumes, but these are reduced because of high toll charges
- Heavily used carpool/vanpool corridor because it serves as a main link between all of NW Indiana and the Chicago area job market, and Pace Vanpool operates a program in NW Indiana; carpooling/vanpooling is a way to reduce the financial burden of tolls
- Best Interstate access to the Gary/Chicago International Airport

Land Use and Development Notes

- Heavily industrial land uses along most of the corridor, especially in the Hammond/Whiting area and in the western and central portions of Gary
- Some residential adjacent the corridor, particularly in portions of Hammond and East Chicago as well as the eastern portion of Gary
- Direct access to downtown Gary at Exit 10
- Calumet Ave (Exit 5) and Lake Station (Exit 21) are the most commercial/retail areas

Safety Notes

- Crash Rate of 369.01 crashes per 100 million vehicle miles traveled (VMT)
- Fatality Rate of 1.78 fatalities per 100 million VMT

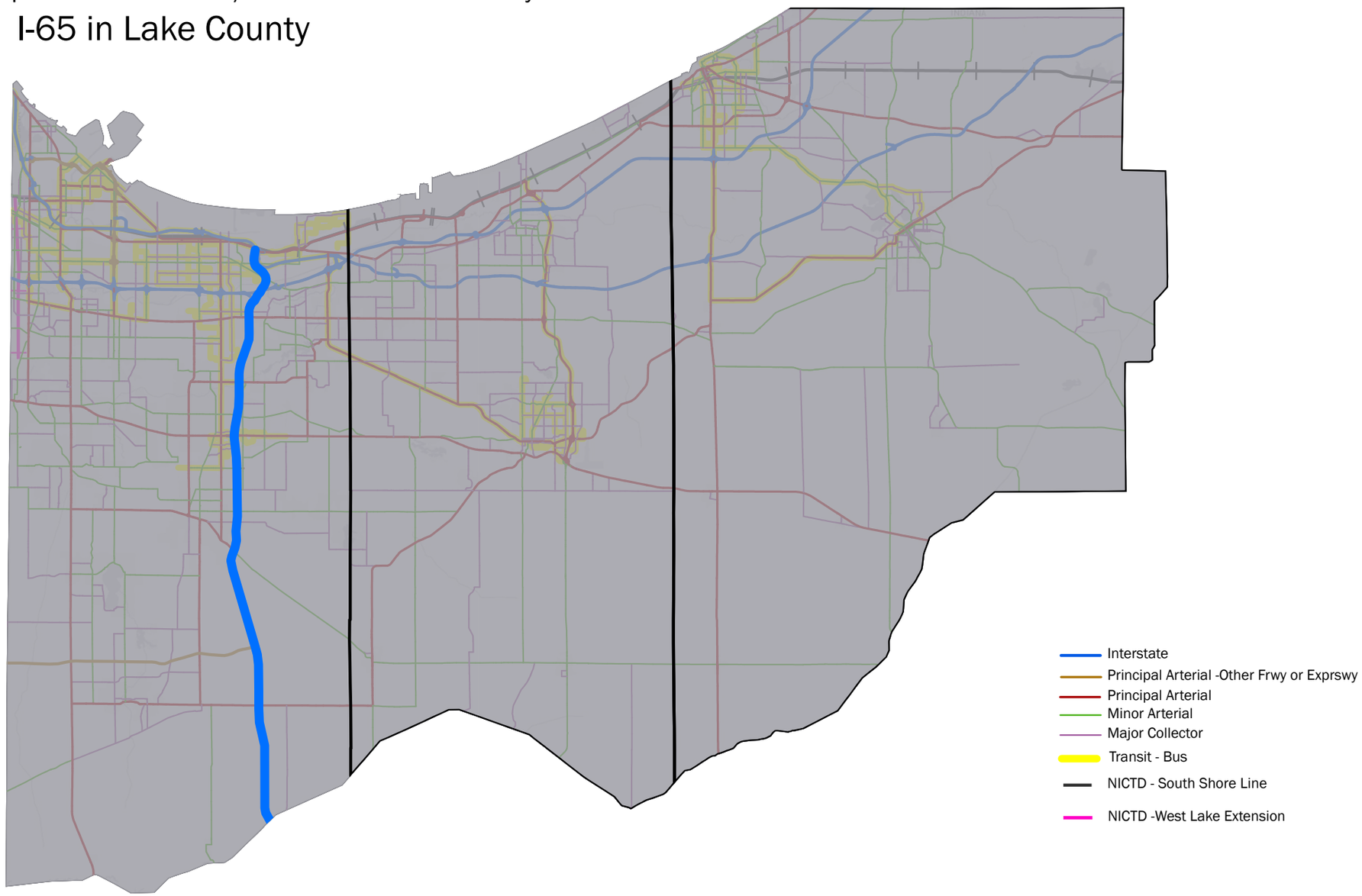
Transit Notes

- The ChicagoDash (City of Valparaiso commuter bus service to and from Chicago) utilizes the corridor for its 5 morning and 5 afternoon peak period runs

Other Issues/Priorities to Note About the Corridor

- Relatively high toll charges raise an equity issue, which is particularly apparent in the proportionately higher non-NW Indiana motorists who use the corridor as well as the seasonal effects of higher volumes during the summer weekends
- Primary alternative corridor to the Borman Expressway (I-80/94) means this corridor experiences significantly higher volumes when incidents occur on the Borman Expressway
- Broadway (Exit 10) is the only non-tolled interchange access to the Indiana Toll Road

Figure 5: Map of I-65 from US-12/20 to Lake-Newton County Line



I-65 from US 12/20 to Lake-Newton County Line

Congestion Notes

- 1.18 Peak Hours of Excessive Delay per Traveler in 2019
- Travel Time Index of 1.05 in 2019
- Daily Vehicle Miles Traveled (VMT) of 1,600,929 in 2018
- Daily Vehicle Hours Traveled (VHT) of 28,627 in 2019
- Primary corridor connecting some of the fastest growing areas of Lake County to the Chicago Area, so experiences peak period congestion, especially between I -80/94 and US 30
- Added Travel Lanes project from US 30 south to SR 2 near Lowell (MM 253 to MM 240) completed in 2019; remains to be seen how much relief to congestion the project resulted in

Multimodal Notes

- Major freight corridor linking the Chicago area with Indianapolis and points south
- SB weigh station at MM 242
- Exit 240 (SR 2 near Lowell) experiences some of the highest proportions of truck traffic on any interchanges in the NW Indiana Region because of the abundance of truck stops and truck-friendly retail in the area

Land Use and Development Notes

- Primarily industrial near the far northern portion of the corridor in Gary
- Primarily residential in the southern portion of Gary, northern portions of Hobart and Merrillville, and Crown Point
- Primarily commercial and retail through most of Hobart and Merrillville and parts of Crown Point
- Primarily rural and agricultural south of Crown Point

Safety Notes

- Crash Rate of 156.13 crashes per 100 million vehicle miles traveled (VMT)
- Fatality Rate of 0.62 fatalities per 100 million VMT

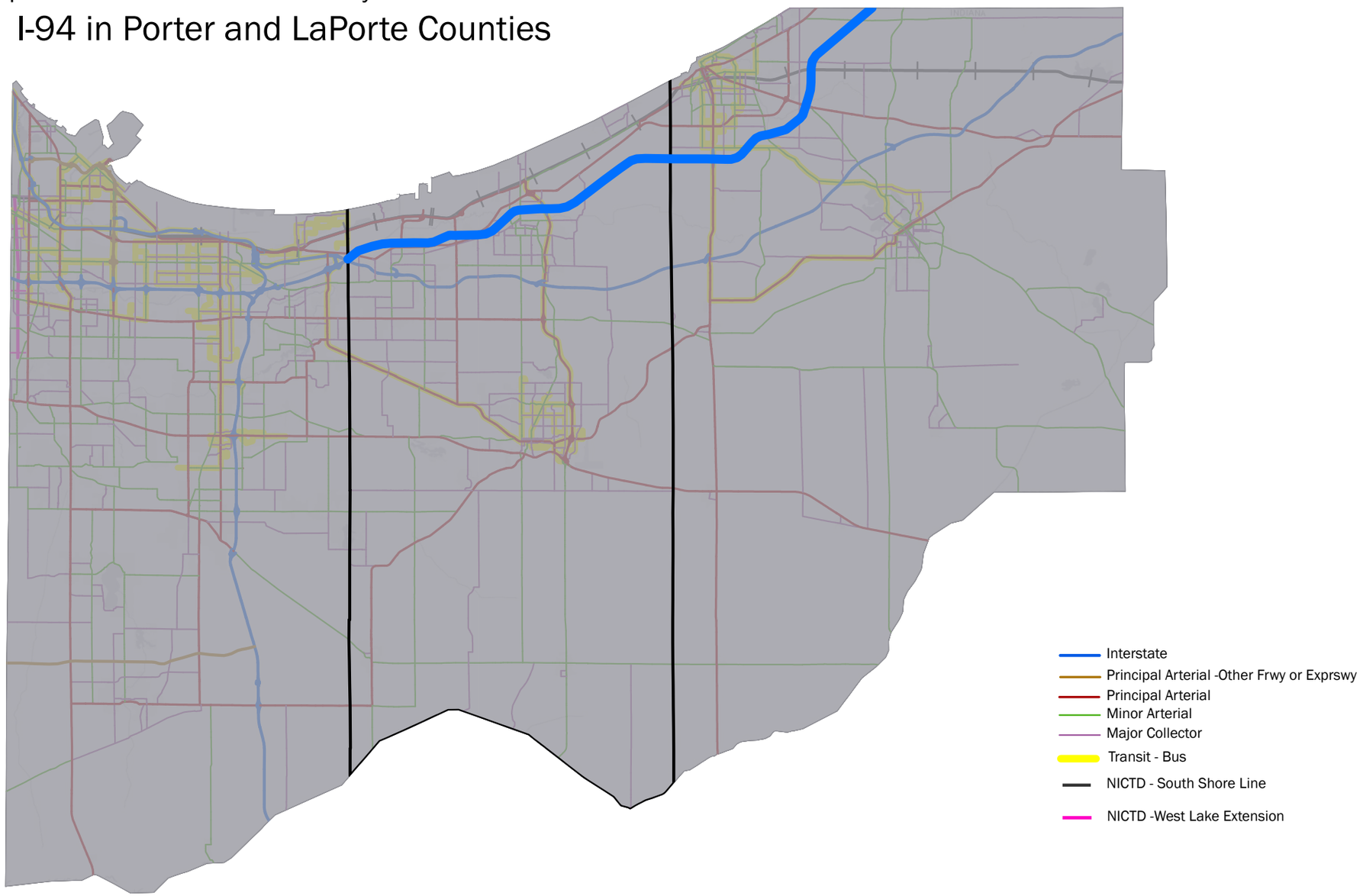
Transit Notes

- No fixed route transit utilizes the corridor, though the Express Air Coach airport shuttle service utilize portions of the corridor

Other Issues/Priorities to Note About the Corridor

- Continual momentum toward eventually widening the corridor to 3 travel lanes in each direction, not just as far south as SR 2, but eventually statewide because the corridor serves as a primary statewide travel corridor
- Expenses (especially replacing/expanding various bridges and overpasses along the corridor) have been the primary hindrance to expanding the corridor to 3 lanes in each direction
- Plans for the Illiana Corridor, that would connect at about MM 243, stalled in 2018, but they could be resurrected

Figure 6: Map of I-94 from Lake-Porter County Line to IN-MI State LIne



I-94 from Lake-Porter County Line to IN-MI State Line

Congestion Notes

- 0.58 Peak Hours of Excessive Delay per Traveler in 2019
- Travel Time Index of 1.04 in 2019
- Daily Vehicle Miles Traveled (VMT) of 1,712,224 in 2018
- Daily Vehicle Hours Traveled (VHT) of 25,859 in 2019
- Prone to seasonal congestion on summer weekends (Friday afternoon eastbound and Sunday afternoon westbound)
- Occasionally experiences peak period congestion due to being the primary corridor between the Michigan City Urbanized Area and the Chicago area

Multimodal Notes

- Major freight corridor linking the Chicago area with Michigan and Canada
- Weigh Station at MM 29 in both EB and WB directions; previously was a Weigh-in-Motion pilot project along the corridor that expired in 2018
- Exit 40 is a major freight interchange linking I-94 with the South Bend area via US 20

Land Use and Development Notes

- Primarily residential in the western Porter County portion of the corridor
- Primarily rural and agricultural in the eastern Porter County and entire LaPorte County portions of the corridor
- Direct access to the large commercial Ameriplex development in Portage

Safety Notes

- Crash Rate of 103.05 crashes per 100 million vehicle miles traveled (VMT)
- Fatality Rate of 0.26 fatalities per 100 million VMT

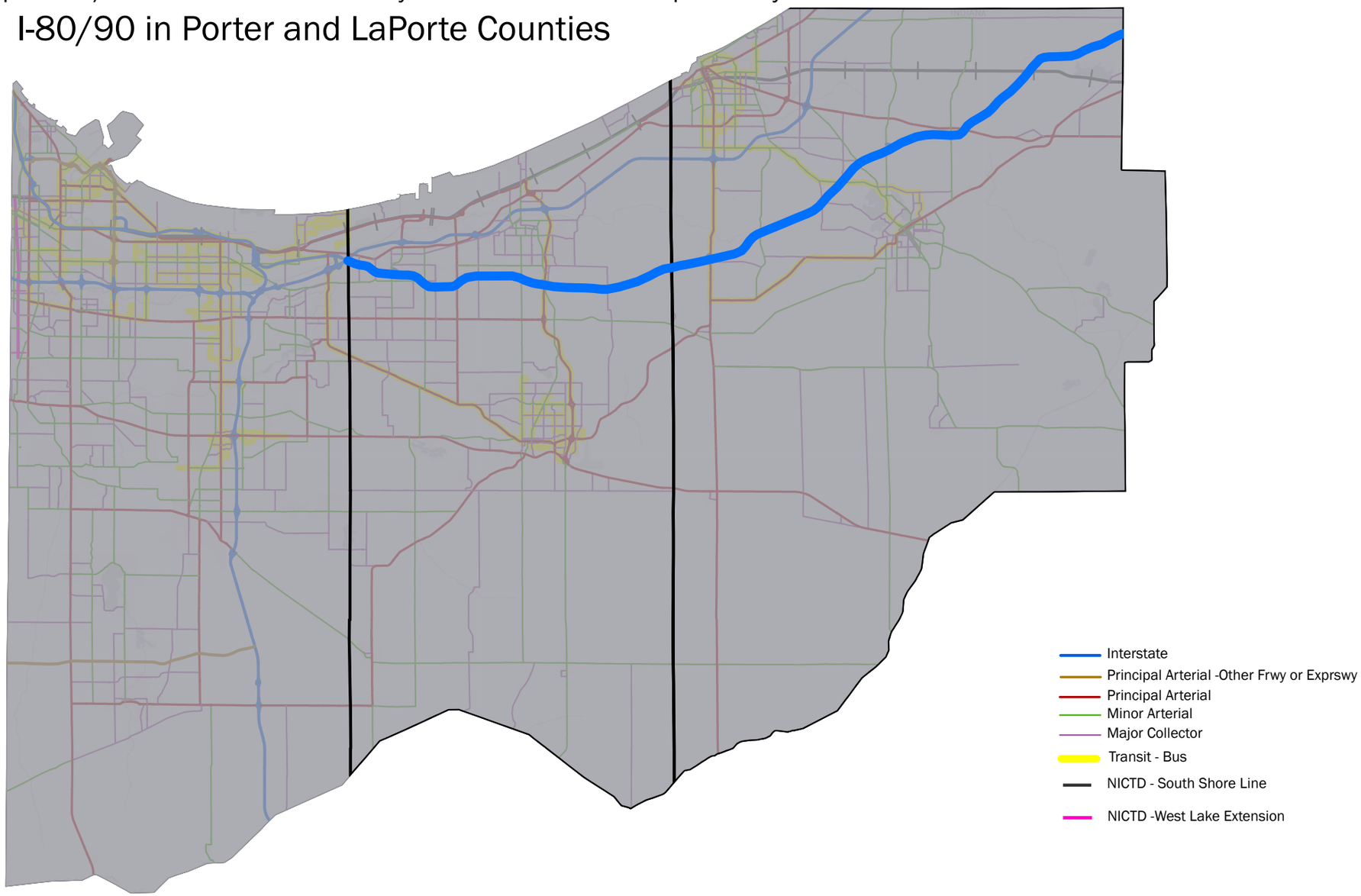
Transit Notes

- No fixed route transit utilizes the corridor, though Royal Excursion airport shuttle service utilize portions of the corridor

Other Issues/Priorities to Note About the Corridor

- Corridor is prone to some seasonal spikes in traffic volume and increased travel times in the summer due to recreation trips (Eastbound on Friday afternoons, Westbound on Sunday afternoons)
- Fiber optically connected from the Illinois state line to the Michigan state line

Figure 7: Map of I-80/90 from Lake-Porter County Line to LaPorte-St. Joseph County Line



I-80/90 from Lake-Porter County Line to LaPorte-St. Joseph County Line

Congestion Notes

- 1.00 Peak Hours of Excessive Delay per Traveler in 2019
- Travel Time Index of 1.02 in 2019
- Daily Vehicle Miles Traveled (VMT) of 1,013,928 in 2018
- Daily Vehicle Hours Traveled (VHT) of 23,512 in 2019
- Tolled, so limits the traffic volume on the corridor
- Tollbooths are prone to peak period queuing, especially for non-transponder users

Multimodal Notes

- Heavily traveled freight corridor because it serves as the primary route between the Chicago area and the East Coast
- Truck volumes, while proportionately high for the Interstate Highway System in general, are somewhat lower than they would be without US 20 serving as a major free alternative, albeit with slightly slower speeds, between Michigan City and South Bend

Land Use and Development Notes

- Overall the corridor is mostly rural and agricultural, traversing roughly halfway between Michigan City and La Porte
- Primarily residential in the far western portion of the corridor in Portage
- Direct access to rapidly growing mixed-use Coffee Creek development in Chesterton

Safety Notes

- Crash Rate of 221.83 crashes per 100 million vehicle miles traveled (VMT)
- Fatality Rate of 0.76 fatalities per 100 million VMT

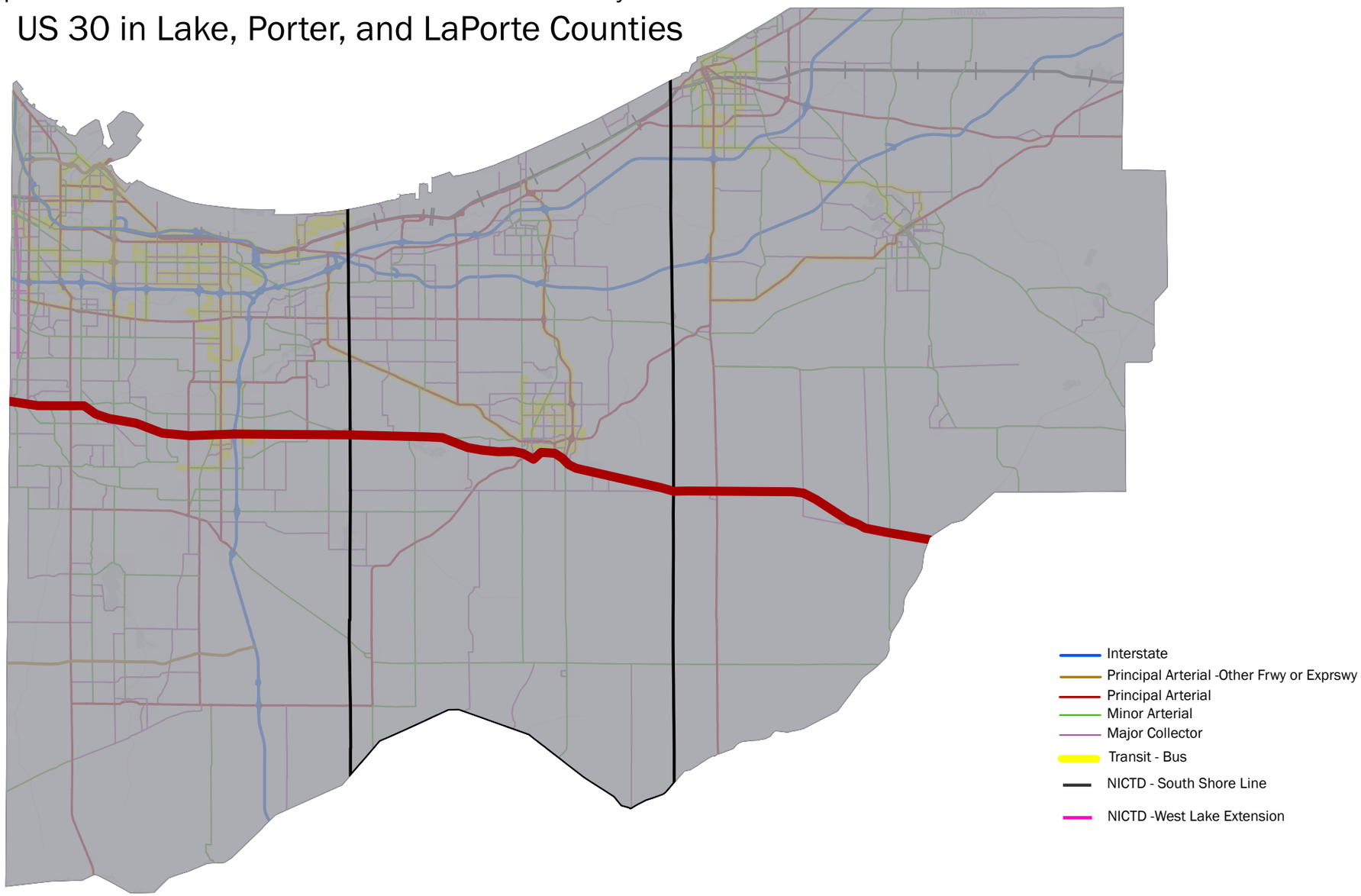
Transit Notes

- No fixed route transit utilizes the corridor, though Royal Excursion airport shuttle service utilize portions of the corridor

Other Issues/Priorities to Note About the Corridor

- Relatively high toll charges raise an equity issue, which is particularly apparent in the proportionately higher non-NW Indiana motorists who use the corridor
- Entire corridor is fiber optically connected

Figure 8: Map of US 30 from IL-IN State Line to LaPorte-Starke County Line



US 30 from IL-IN State Line to LaPorte-Starke County Line

Congestion Notes

- 21.32 Peak Hours of Excessive Delay per Traveler in 2019
- Travel Time Index of 1.17 in 2019
- Daily Vehicle Miles Traveled (VMT) of 1,179,073 in 2018
- Daily Vehicle Hours Traveled (VHT) of 36,014 in 2019
- Experiences recurring peak period congestion near the Illinois-Indiana State Line
- Experiences recurring congestion (both peak and off-peak) near the I-65 Interchange and South Lake Mall due to heavy retail

Multimodal Notes

- Experiences significant freight movement in order to restock many of the major retail centers
- Very little accommodation for non-highway users, with GPTC circulator service in the Merrillville-Hobart corridor the only exception, and even this is limited

Land Use and Development Notes

- In Lake County and in the Valparaiso corridor in Porter County, mismatch between people and jobs with a lot more jobs than people because it is predominately commercial and retail with little-to-no residential land uses
- In unincorporated Porter County as well as LaPorte County, mostly rural/agricultural
- Industrial on the east side of Valparaiso, east of the SR 49 interchange near the Porter County Airport

Safety Notes

- Crash Rate of 390.76 crashes per 100 million vehicle miles traveled (VMT)
- Fatality Rate of 0.93 fatalities per 100 million VMT
- Lack of non-motorized accommodations for safe maneuvering along and across the corridor poses a huge safety concern and led to NIRPC funding the US 30 Safety Study in 2016-2017 with flexed Highway Safety Improvement Program (HSIP) funding, covering the portion of the corridor from Merrillville Rd to Clay St

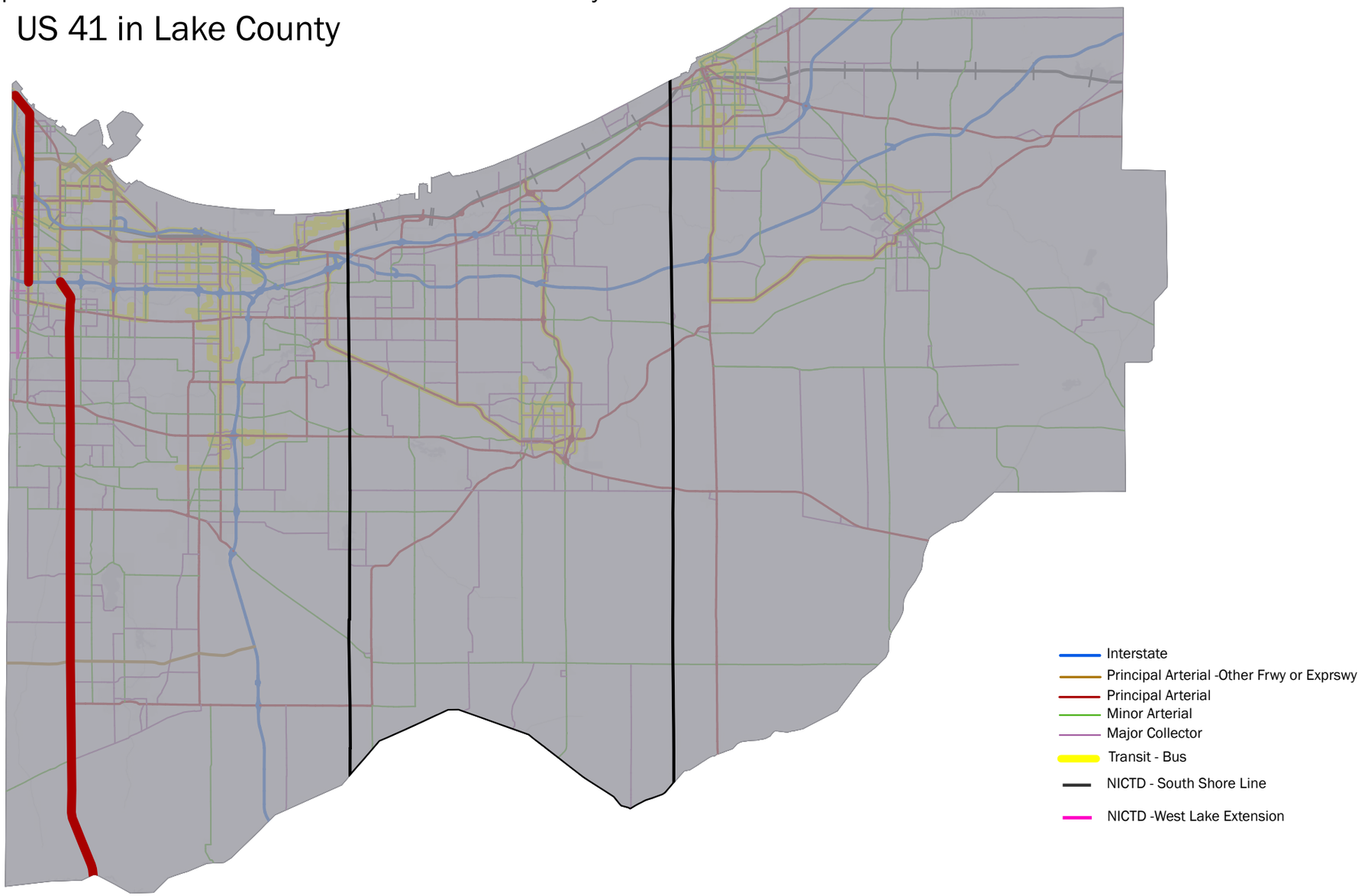
Transit Notes

- GPTC operates a circulator service in the Merrillville-Hobart corridor, primarily serving to complement the Broadway Metro Express (BMX) service on the Broadway corridor

Other Issues/Priorities to Note About the Corridor

- Connexus Indiana and the Blue Ribbon Panel have advanced plans to gradually convert the corridor east of SR 49 all the way to the Ohio State Line as a limited access facility, emphasizing the demand for safer and more efficient freight movement

Figure 9: Map of US 41 from IL-IN State Line to Lake-Newton County Line



US 41 from IL-IN State Line to Lake-Newton County Line

Congestion Notes

- 14.91 Peak Hours of Excessive Delay per Traveler in 2019
- Travel Time Index of 1.21 in 2019
- Daily Vehicle Miles Traveled (VMT) of 728,096 in 2018
- Daily Vehicle Hours Traveled (VHT) of 19,740 in 2019 (portion south of I-80/94)
- Significant peak period congestion on weekdays as well as retail congestion on weekends
- Signals already coordinated, but opportunity to examine signal timing for turning movements onto/off-of corridor
- Used as a major North-South corridor in Lake County due to substandard alternatives

Multimodal Notes

- The corridor intersects the Erie-Lackawanna Trail at both at-grade and grade separated intersections, but a project is being funded to grade separate the at-grade intersection
- The corridor is a critical park-and-ride link for the Hammond and East Chicago station users of the South Shore Line
- The corridor abuts Wicker Memorial Park in the Town of Highland, so there is an opportunity to make the corridor more accommodating to nonmotorized park users

Land Use and Development Notes

- The corridor is heavily reliant on retail and exposed to the risk of the decline in retail due to e-commerce
- Sprawl is a major concern along the corridor, especially south of US 30 in the St. John, Cedar Lake, and Lowell areas as more and more residential subdivisions feed into the corridor, and a major continuous left-turn lane project is being constructed to alleviate this

Safety Notes

- Crash Rate of 670.55 crashes per 100 million vehicle miles traveled (VMT)
- Fatality Rate of 1.96 fatalities per 100 million VMT
- Access control issues create safety concerns for turners onto and off of the corridor
- Width and straightness of corridor create speeding concerns, especially during off-peak times

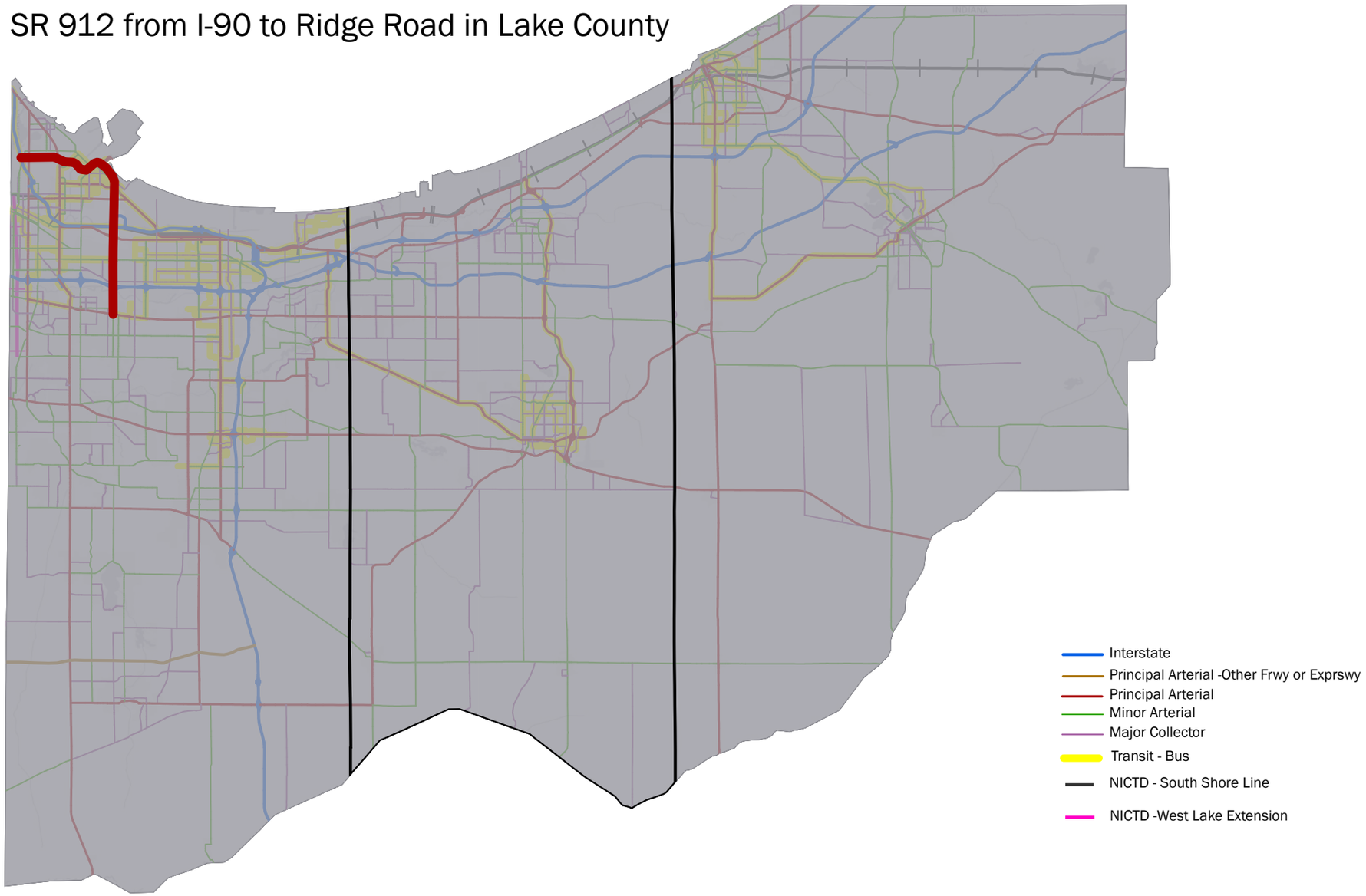
Transit Notes

- This section of US 41 is currently being utilized with hourly service by East Chicago Transit, and Gary Public Transit Corporation
- Demand response transit providers such as South Lake County Community Services and North Township Dial-a-Ride use this corridor on an as-needed basis

Other Issues/Priorities to Note About the Corridor

- Considered the high-end retail corridor for all of Northwestern Indiana
- Town of Schererville has commissioned a plan that has received federal funding to improve the parallel Kennedy Ave corridor to alleviate traffic on this corridor and better access the retail facilities from the back sides

Figure 10: Map of SR 912 from I-90 to Ridge Rd



SR 912 from I-90 to Ridge Rd

Congestion Notes

- 0.90 Peak Hours of Excessive Delay per Traveler in 2019
- Travel Time Index of 1.17 in 2019
- Daily Vehicle Miles Traveled (VMT) of 332,458 in 2018
- Daily Vehicle Hours Traveled (VHT) of 4,949 in 2019
- Heavy truck traffic on the corridor 8,300 AADTT (13% of AADT)
- Downstream bottlenecks on I-80/94 cascade onto corridor

Multimodal Notes

- Critical link to Indiana Harbor and Buffington Harbor multimodal port facilities
- Recreational/tourism traffic bound for Ameristar and Majestic Star Casinos
- High employment at large industrial facilities generates substantial and shift-oriented commuting traffic
- Critical link to airport traffic at Gary/Chicago International Airport

Land Use and Development Notes

- The Marquette Action Plan calls for increased lakefront access that this corridor would be critical to serving
- City of Gary is actively working on projects to improve both Airport Rd and Buffington Harbor Dr access to the corridor

Safety Notes

- Crash Rate of 278.22 crashes per 100 million vehicle miles traveled (VMT)
- Fatality Rate of 0.49 fatalities per 100 million VMT
- Heavy ramp traffic to and from Interstate Highways creates merging safety issues

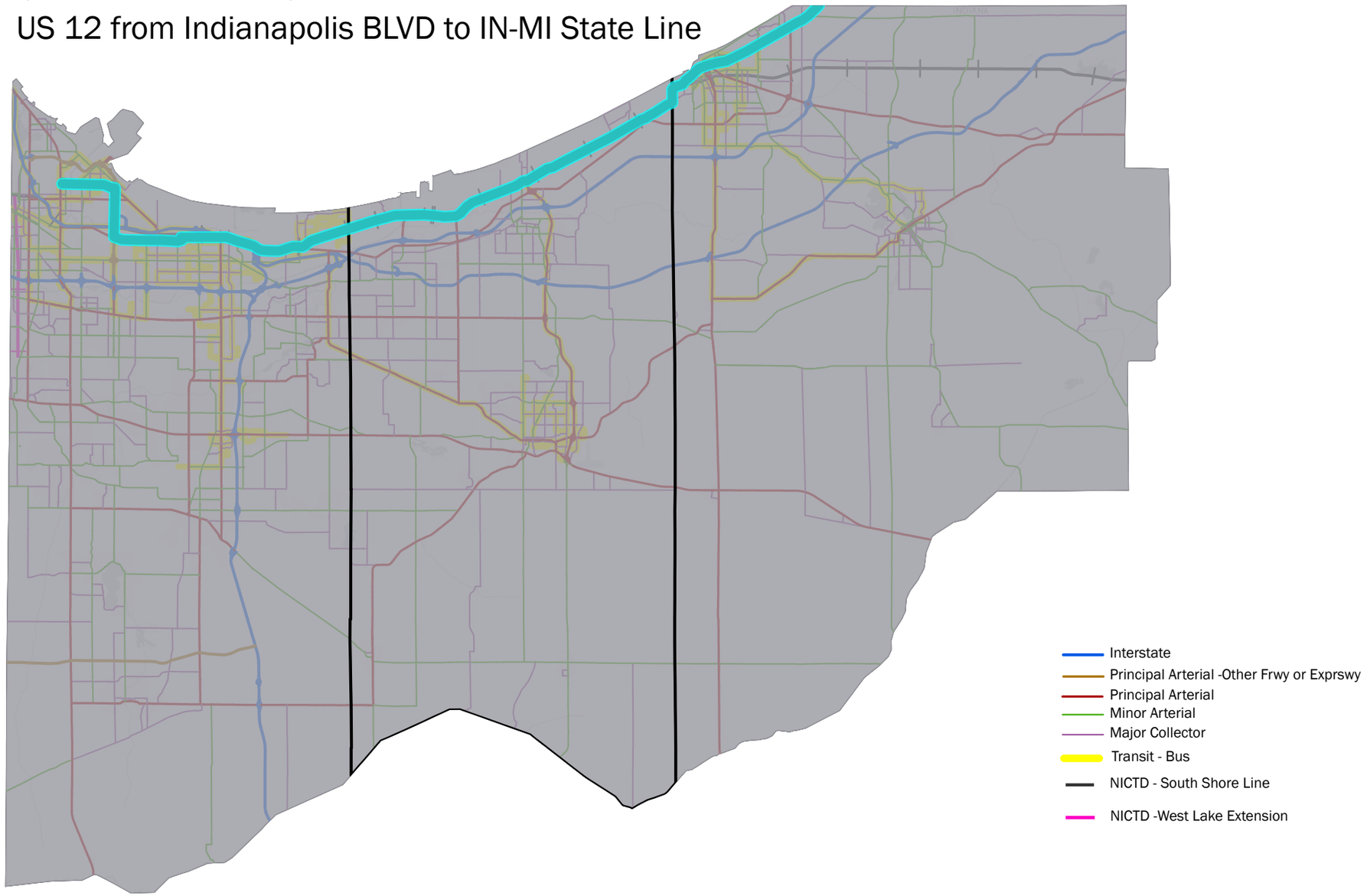
Transit Notes

- This section of Indiana 912 is currently being utilized with hourly service by East Chicago Transit, and Gary Public Transit Corporation
- Demand response transit providers such as South Lake County Community Services and North Township Dial-a-Ride use this corridor on an as-needed basis

Other Issues/Priorities to Note About the Corridor

- Opportunity to improve the identity of the corridor since it is between East Chicago and Gary, without a strong identity toward either one

Figure 11: Map of US 12 from Indianapolis Blvd to IN-MI State Line



US 12 from Indianapolis Blvd to IN-MI State Line

Congestion Notes

- Daily Vehicle Miles Traveled (VMT) of 391,037 in 2018
- A lot of industrial commuter traffic that peaks when shifts start/let out on this corridor
- Occasional summertime congestion on the corridor due to vacationers

Multimodal Notes

- Freight usage is substantial along the corridor since it accesses many industrial facilities
- The planned (and in some segments built) Marquette Greenway parallels this corridor and would feed nonmotorized traffic onto it
- The corridor traverses the downtowns of East Chicago, Gary, and Michigan City, creating opportunities to better brand, install wayfinding, and otherwise accommodate pedestrians along the corridor
- The corridor accesses the Port of Indiana Burns Harbor and the Portage and Michigan City harbors

Land Use and Development Notes

- A variety of land uses frame this corridor: the Indiana Dunes; industrial land uses in the Gary and Burns Harbor areas; commercial in the downtown Gary and Michigan City areas; and residential land uses in parts of Gary, Ogden Dunes, Pines, and Michigan City
- The Marquette Action Plan calls for more shoreline areas near this corridor to be accessible to the public

Safety Notes

- Crash Rate of 514.82 crashes per 100 million vehicle miles traveled (VMT)
- Fatality Rate of 2.66 fatalities per 100 million VMT
- There are four at-grade rail crossings along the corridor—two in Gary and two near Michigan City—creating a safety concern
- Nighttime and low visibility conditions can present safety issues for the corridor in the Indiana Dunes National Lakeshore portion because of a forest canopy and lack of lighting

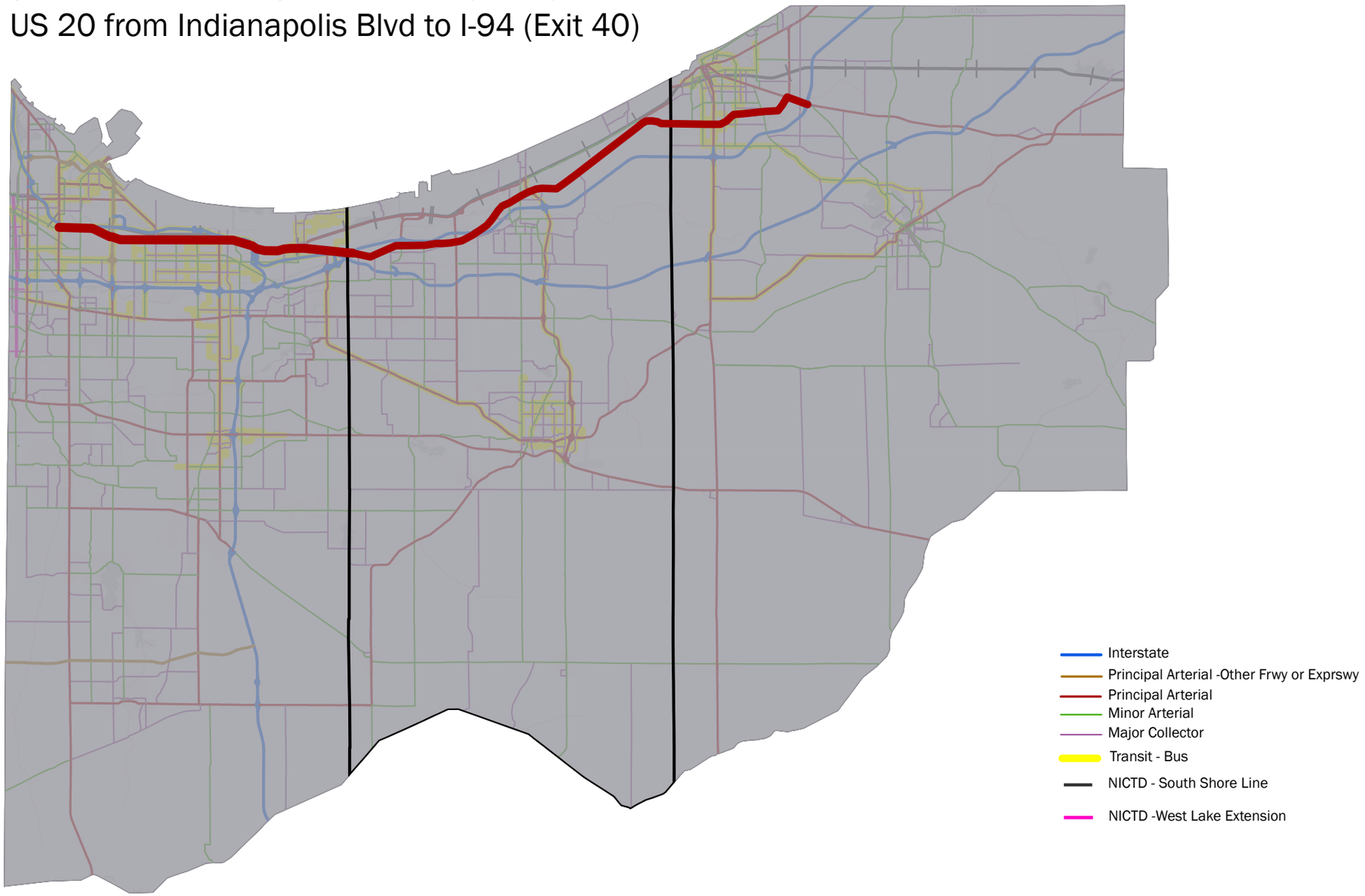
Transit Notes

- East Chicago Transit, Gary Public Transit Corporation, and Michigan City Transit operate fixed-route services along portions of the corridor
- North Township Dial-a-Ride, Porter County Aging and Community Services, and Opportunity Enterprises operate demand response transit along the corridor as needed
- Past studies have looked at the feasibility of operating an Indiana Dunes National Lakeshore shuttle along the corridor

Other Issues/Priorities to Note About the Corridor

- NIRPC organized a task force in 2011-2012 to study relocating the Arcelor Mittal Truck Entrance to alleviate left-turning queues sometimes onto the US 12 through lanes, but alternatives at the time proved prohibitively costly and included utility holdouts
- The South Shore Line Double Tracking project would relocate portions of this corridor in Gary to be cosigned with US 20 for a longer length
- This is arguably the most scenic route in Northwestern Indiana

Figure 12: Map of US 20 from Indianapolis Blvd to I-94 (Exit 40)



US 20 from Indianapolis Blvd to I-94 (Exit 40)

Congestion Notes

- Daily Vehicle Miles Traveled (VMT) of 443,327 in 2018
- Peak hour congestion is pronounced near the East Chicago South Shore Line Station due to commuter traffic
- A lot of industrial commuter traffic that peaks when shifts start/let out on this corridor
- Occasional summertime congestion on the corridor due to vacationers

Multimodal Notes

- Freight usage is substantial along the corridor since it accesses many industrial facilities
- The planned (and in some segments built) Marquette Greenway parallels this corridor and would feed nonmotorized traffic onto it
- The corridor traverses downtown Gary and Burns Harbor, creating opportunities to better brand, install wayfinding, and otherwise accommodate pedestrians along the corridor

Land Use and Development Notes

- Land use varies from Industrial in the western portion of this corridor to residential and commercial near the downtowns of Gary and Burns Harbor, to commercial through Portage and Michigan City, to protected land through the Indiana Dunes National Lakeshore
- Many residential neighborhoods and subdivisions have collectors that feed onto this corridor

Safety Notes

- Crash Rate of 480.86 crashes per 100 million vehicle miles traveled (VMT)
- Fatality Rate of 3.81 fatalities per 100 million VMT
- There are significant safety concerns due to heavy truck usage, distracted driving and hard-to-see road signs for turning
- Speeding is a major concern along this corridor because of its width and usage as a shortcut of I-80/94

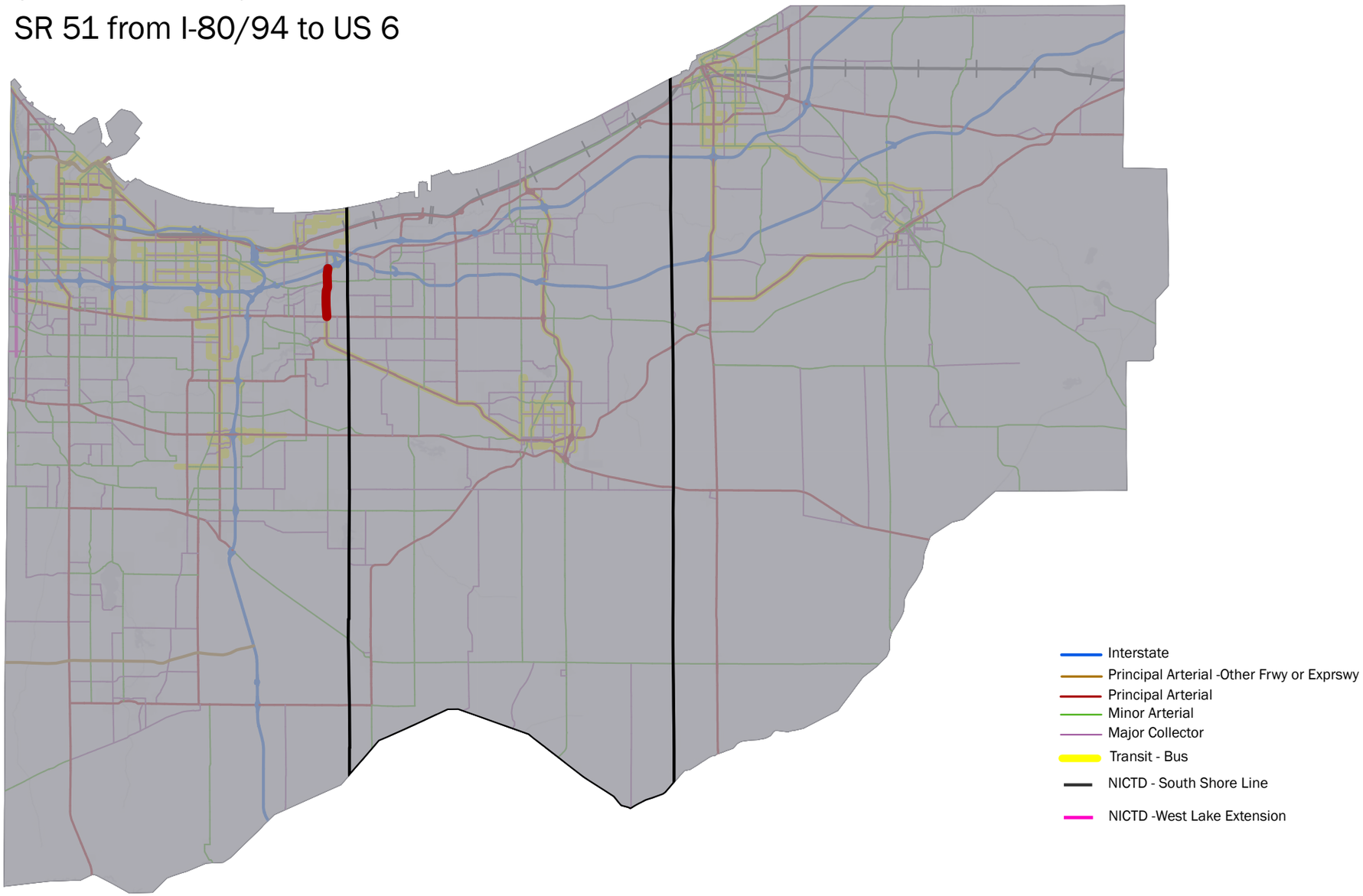
Transit Notes

- Gary Public Transportation Corporation and Michigan City Transit operate fixed-route transit along portions of the corridor
- North Township Dial-a-Ride, Porter County Aging and Community Services, and Opportunity Enterprises operate demand response transit along the corridor as needed

Other Issues/Priorities to Note About the Corridor

- Designated as the Extra Heavy Duty Highway through Northwestern Indiana
- Acts as one of the major alternatives to I-80/94, and carries significantly increased traffic (and truck traffic) when I-80/94 experiences incidents

Figure 13: Map of SR 51 from I-80/94 to US 6



SR 51 from I-80/94 to US 6

Congestion Notes

- 1.09 Peak Hours of Excessive Delay per Traveler in 2019
- Travel Time Index of 1.29 in 2019
- Daily Vehicle Miles Traveled (VMT) of 51,641 in 2018
- Daily Vehicle Hours Traveled (VHT) of 1,504 in 2019
- Truck stop corridor results in slow weaving movements to/from ramps
- Lack of direct interchange with I-90 requires ramp movements onto/off-of I-80/94
- Operational improvements and access control could alleviate issues with truck weaving

Multimodal Notes

- Critical freight link between Interstate Highway System and truck service stations
- Critical access between Interstate Highway System and residential communities in Lake Station and the Miller and Aetna Neighborhoods of Gary
- Critical link for recreational traffic accessing Indiana Dunes National Lakeshore
- Critical nonmotorized link between built portions of Marquette Greenway and Fairview Ave Bicycle and Pedestrian Trail

Land Use and Development Notes

- Gateway opportunity between Gary and Lake Station to introduce more identity on the corridor
- Truck Stop hub along the eastern side of the corridor with mostly Calumet Prairie Nature Preserve along the western side of the corridor

Safety Notes

- Crash Rate of 939.58 crashes per 100 million vehicle miles traveled (VMT)
- Fatality Rate of 2.12 fatalities per 100 million VMT
- High density of weaving movements is a safety issue
- Barrier for nonmotorized traffic due to perceived safety concerns

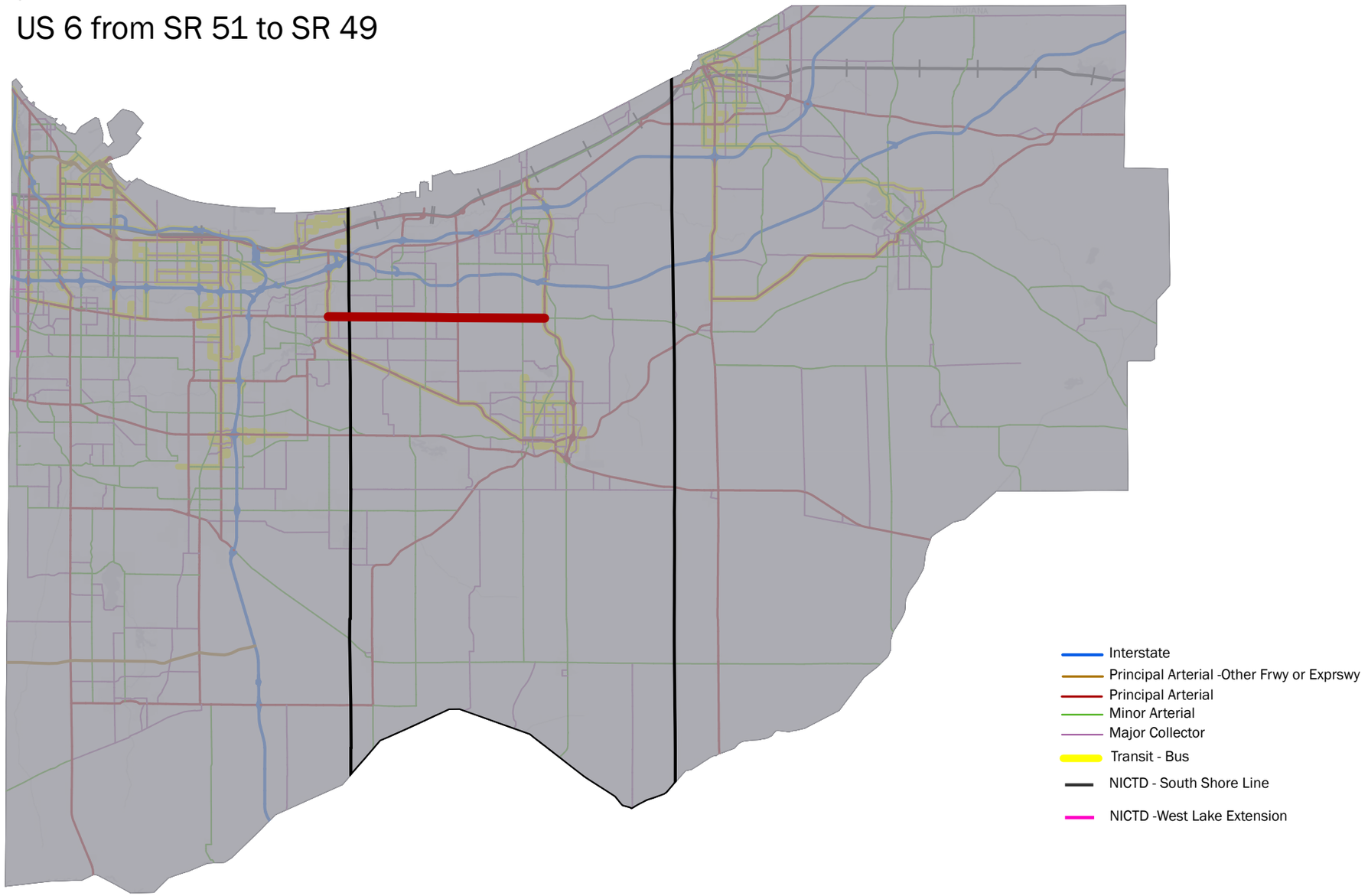
Transit Notes

- This section of SR 51 is currently being utilized by Valparaiso's Chicago Dash commuter service
- Depending on what fixed-route transit plan the City of Hobart decides to implement, this could be an important transit corridor between Hobart and Gary via Gary Public Transportation Corporation (GPTC) service

Other Issues/Priorities to Note About the Corridor

- Receives a lot of out-of-town traffic from truckers and through-travelers stopping at the service stations along the corridor
- Flooding is a concern where the corridor crosses Deep River

Figure 14: Map of US 6 from SR 51 to SR 49



US 6 from SR 51 to SR 49

Congestion Notes

- 6.08 Peak Hours of Excessive Delay per Traveler in 2019
- Travel Time Index of 1.29 in 2019
- Daily Vehicle Miles Traveled (VMT) of 175,738 in 2018
- Daily Vehicle Hours Traveled (VHT) of 6,017 in 2019
- Capacity-constrained corridor with inadequate shoulders and safety features
- Clusters of traffic signals span the western portion of the corridor and also near SR 49, so there is an opportunity to implement signal coordination

Multimodal Notes

- There is a Grade separated intersection along the corridor with the Prairie Duneland Trail, yet there is still a demand for trail users to access the retail facilities along the corridor
- Portage High School abuts the corridor, so there is demand to better accommodate school-bound traffic and pedestriansCritical link for recreational traffic accessing Indiana Dunes National Lakeshore
- One of Porter County's largest parks, Sunset Hill Farm County Park, lies across the corridor from a growing residential area, so there is a demand for better pedestrian access

Land Use and Development Notes

- This is a critical medical corridor linking Porter County's largest hospital (Porter Regional Hospital) with Porter County's largest city (Portage), and a new outpatient medical campus recently opened adjacent to Porter Regional Hospital
- This corridor is primarily a commercial and retail corridor, with some nearby low density residential between Portage and Valparaiso and between Valparaiso and Westville, so it is vulnerable to big-box retail continuing to decline

Safety Notes

- Crash Rate of 786.85 crashes per 100 million vehicle miles traveled (VMT)
- Fatality Rate of 1.25 fatalities per 100 million VMT
- Inadequate capacity and shoulder width creates safety hazard
- Access control could be improved along portions of the corridor with significant retail
- Speeding ambulances and hospital-bound vehicles on a 2-lane major highway can cause safety concerns
- Some visibility problems due to grade on a moraine terrain

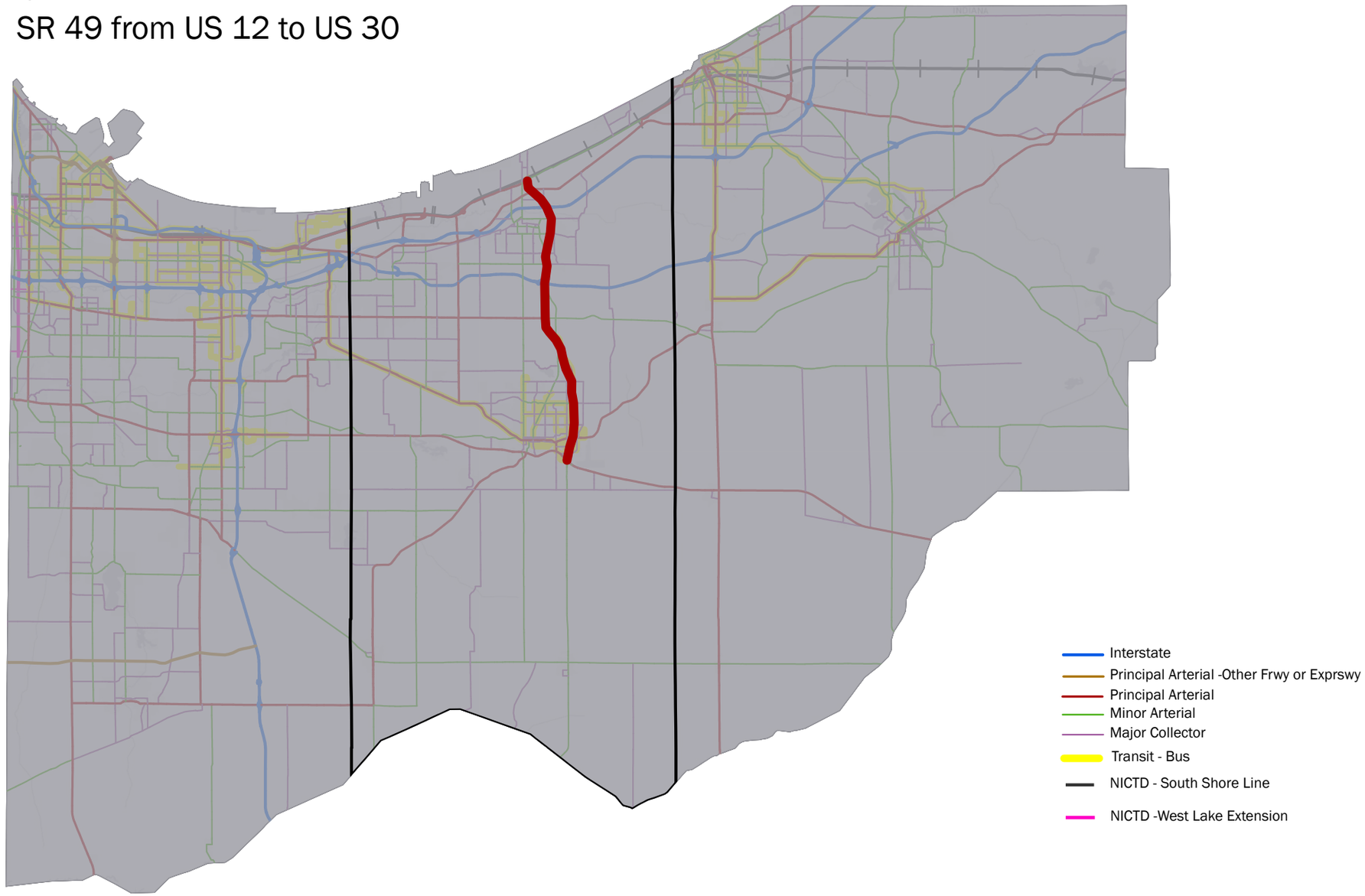
Transit Notes

- Demand response transit providers such as Opportunity Enterprises and Porter County Aging and Community Services use this corridor on an as-needed basis
- The City of Valparaiso has actively explored adding fixed-route service on the V-Line to Porter Regional Hospital

Other Issues/Priorities to Note About the Corridor

- This is an important freight corridor, linking Northwestern Indiana communities to regional and nationally significant corridors. Namely, I-94, SR 51, SR 130, SR 49, US 421, and US 35. There is limited north/south mobility in Northwestern Indiana
- Limited traffic light interference should be prioritized to facilitate efficient travel between key corridors
- Flooding is a concern where the corridor crosses Deep River

Figure 15: Map of SR 49 from US 12 to US 30



SR 49 from US 12 to US 30

Congestion Notes

- 2.35 Peak Hours of Excessive Delay per Traveler in 2019
- Travel Time Index of 1.29 in 2019
- Daily Vehicle Miles Traveled (VMT) of 385,648 in 2018
- Daily Vehicle Hours Traveled (VHT) of 8,558 in 2019
- Bottleneck effect because of lack of N-S connectivity elsewhere in Porter County
- Need operational improvements/access control, new Willowcreek Rd extension to address the congestion issues

Multimodal Notes

- Corridor serves commuter auto traffic, some transit bus traffic, truck traffic carrying freight between Major Interstates and Ports to residential markets, and emergency vehicle traffic to and from Porter Regional Hospital
- The corridor is adjacent to a planned Dunes Kankakee Trail connecting Indiana Dunes State Park to the Kankakee River that could bring a higher demand for bicyclists near and alongside this corridor

Land Use and Development Notes

- This is a fast-growing residential and retail corridor
- City of Valparaiso launched a SR-49 Corridor Study to protect the corridor from the effects of sprawl as evidenced by encroaching development, and identified eliminating at-grade intersections at 500 N and 600 N as priorities
- This is a major medical corridor with a hospital and several medical facilities
- Industrial land uses are prevalent near the intersection of US 30 and Division Rd

Safety Notes

- Crash Rate of 208.47 crashes per 100 million vehicle miles traveled (VMT)
- Fatality Rate of 0.99 fatalities per 100 million VMT
- Elimination or improvement of at-grade intersections would reduce accidents, particularly at 500 N and 600 N, as these intersections lie in a 55 mile per hour speed zone
- Corridor experiences significant speeding issue and has been target of numerous enforcement campaignsSpeeding ambulances and hospital-bound vehicles on a 2-lane major highway can cause safety concerns

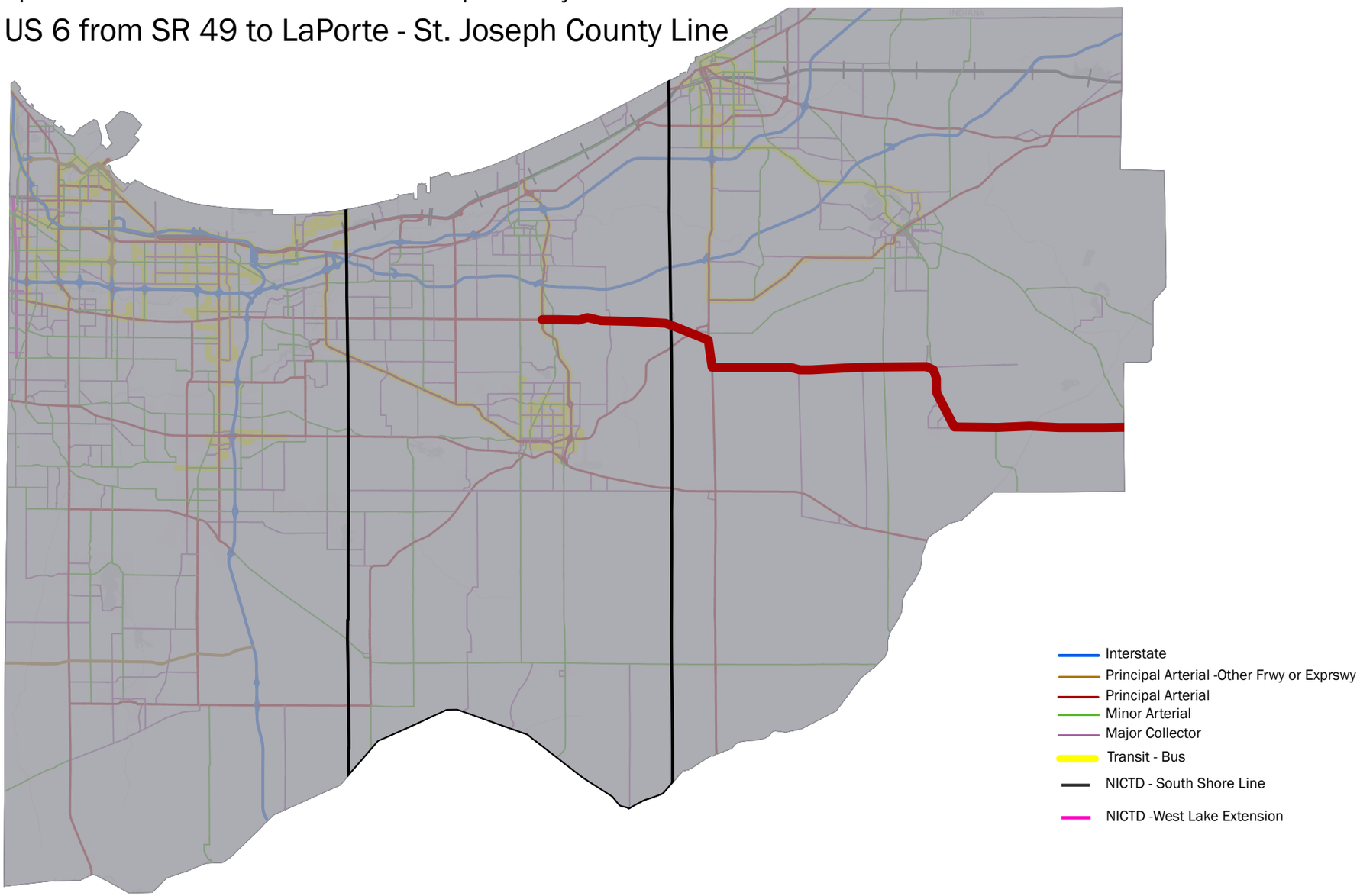
Transit Notes

- Currently, the Valparaiso V-Line utilizes the Chesterton to Valparaiso segment of 49 as a connector from Valparaiso to the Dune Park South Shore Station
- Valparaiso is actively seeking to expand transit availability in this corridor to allow access from Valparaiso to Porter Hospital
- In the future, as development continues along 49, increased transit access should be prioritized to bring more people to the Dune Park South Shore Station like the South Shore Connect does on a limited basis
- Demand response transit providers such as Opportunity Enterprises and Porter County Aging and Community Services use this corridor on an as-needed basis

Other Issues/Priorities to Note About the Corridor

- This is an important freight corridor, linking Valparaiso and Chesterton to regional and nationally significant corridors. Namely, I-90, I-80/94, US 30, and US 6. There is limited north/south mobility in Northwestern Indiana
- Limited traffic light interference should be prioritized to facilitate efficient travel between key corridors

Figure 16: Map of US 6 from SR 49 to LaPorte-St. Joseph County Line



US 6 from SR 49 to LaPorte-St. Joseph County Line

Congestion Notes

- 0.56 Peak Hours of Excessive Delay per Traveler in 2019
- Travel Time Index of 1.09 in 2019
- Daily Vehicle Miles Traveled (VMT) of 148,091 in 2018
- Daily Vehicle Hours Traveled (VHT) of 2,422 in 2019
- Capacity-constrained corridor with inadequate shoulders and safety features

Multimodal Notes

- Moderately heavy freight corridor servicing a nearby UPS facility in Westville
- Serves close to the Kingsbury Industrial Park in LaPorte County

Land Use and Development Notes

- This is primarily a low-density rural/agricultural corridor
- This is a critical medical corridor linking Porter County's largest hospital (Porter Regional Hospital) with eastern Porter County and Westville

Safety Notes

- Crash Rate of 308.42 crashes per 100 million vehicle miles traveled (VMT)
- Fatality Rate of 2.96 fatalities per 100 million VMT
- Inadequate capacity and shoulder width creates safety hazard
- Speeding ambulances and hospital-bound vehicles on a 2-lane major highway can cause safety concerns
- Some visibility problems due to grade on a moraine terrain

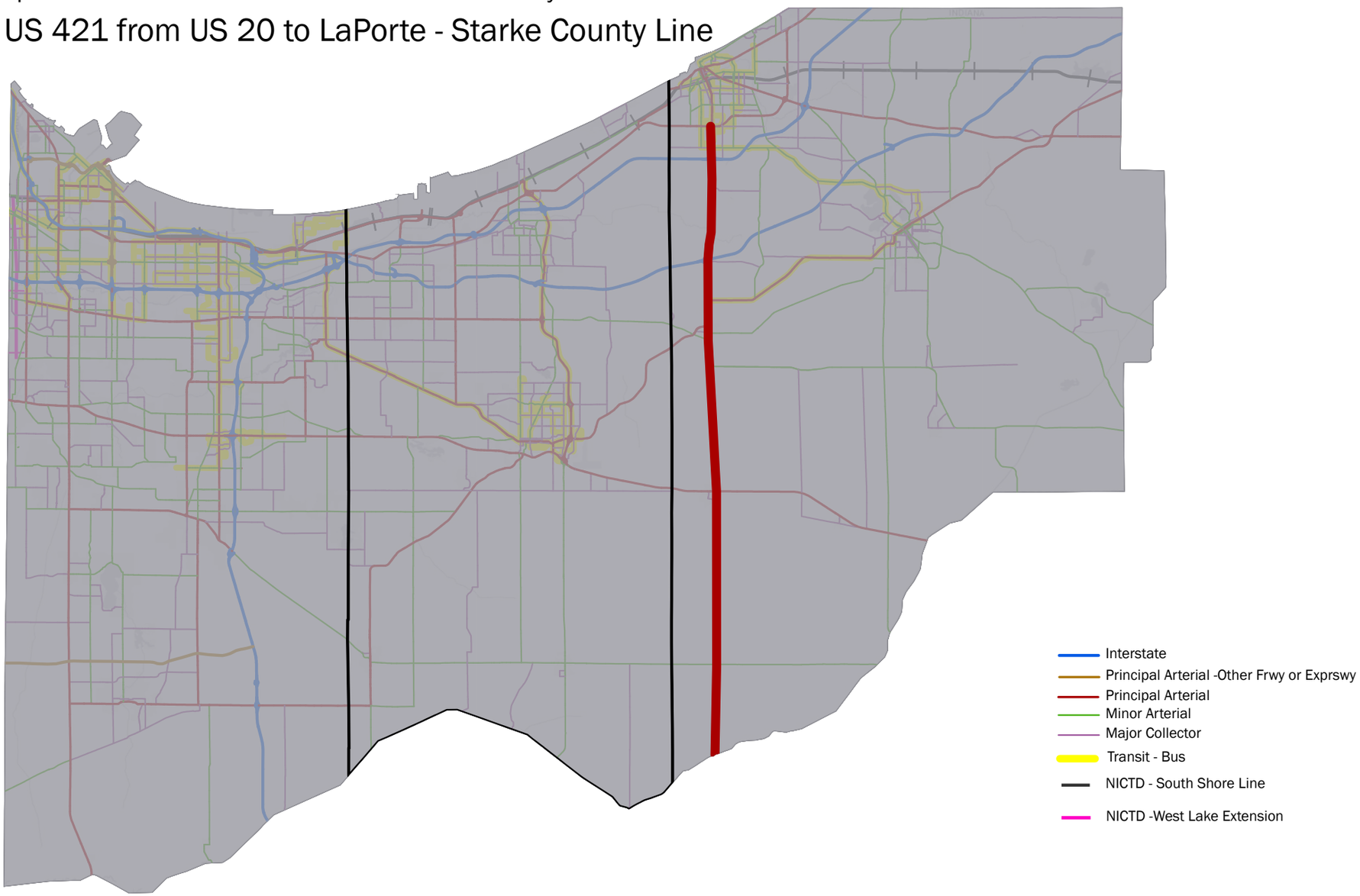
Transit Notes

- Demand response transit providers such as Opportunity Enterprises and Porter County Aging and Community Services use this corridor on an as-needed basis

Other Issues/Priorities to Note About the Corridor

- This is a corridor ripe to watch as Porter County grows, potentially creating sprawl absent smart land use planning
- The expansion of Kingsbury Industrial Park in LaPorte County could be a gamechanger for this corridor if the project gains momentum

Figure 17: Map of US 421 from US 20 to LaPorte-Starke County Line



US 421 from US 20 to LaPorte-Starke County Line

Congestion Notes

- 3.68 Peak Hours of Excessive Delay per Traveler in 2019
- Travel Time Index of 1.17 in 2019
- Daily Vehicle Miles Traveled (VMT) of 245,267 in 2018
- Daily Vehicle Hours Traveled (VHT) of 3,970 in 2019
- Much more heavily trafficked north of I-94 as the main gateway from I-94 into Michigan City

Multimodal Notes

- The corridor abuts the Purdue Northwest Westville Campus and separates housing from campus, creating the need to better accommodate nonmotorized users
- The corridor serves the Michigan City Campground, creating a demand for RVs and recreational travel along the corridor

Land Use and Development Notes

- Primarily a rural, agricultural corridor connecting some of the best prime agricultural land in LaPorte County to other transportation facilities
- Serves the downtowns of the Towns of Westville, Wanatah, and La Crosse, creating an opportunity to better brand the corridor through each of these communities and improve wayfinding

Safety Notes

- Crash Rate of 387.54 crashes per 100 million vehicle miles traveled (VMT)
- Fatality Rate of 1.74 fatalities per 100 million VMT
- The at-grade crossing at Norfolk Southern Railroad just south of Wanatah creates a safety improvement opportunity
- Significant tractor usage along the corridor due to its agricultural character creates some safety issues due to passing
- Straightness of the corridor creates speeding concerns

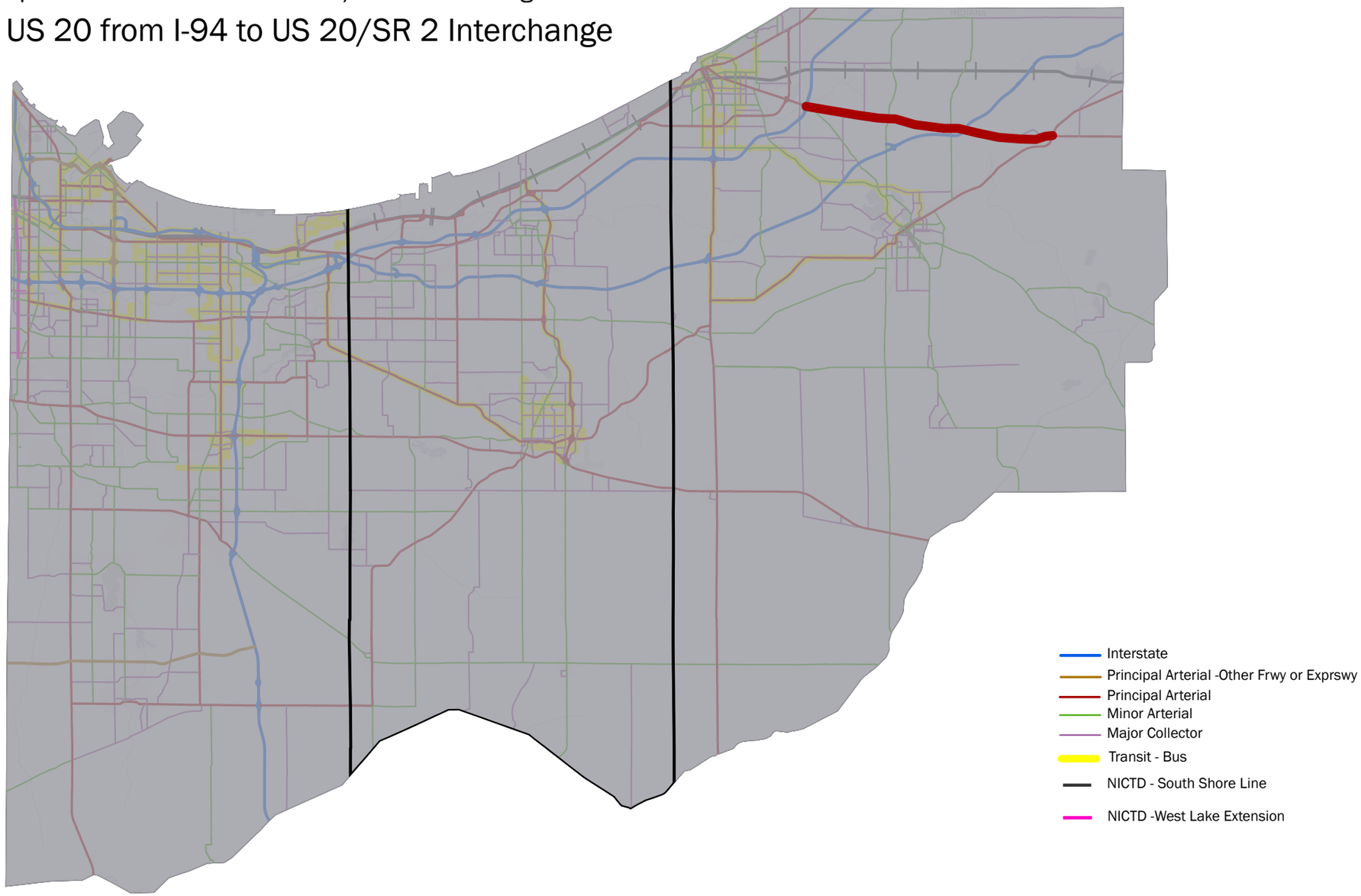
Transit Notes

- US 421 is utilized by the Transit Triangle in half hour increments

Other Issues/Priorities to Note About the Corridor

- Significant tractor usage along the corridor due to its agricultural character
- Used as a long-distance travel alternative to I-65 due to its direct connection between Northwestern Indiana and the Lafayette area

Figure 18: Map of US 20 from I-94 to US 20/SR 2 Interchange



US 20 from I-94 (Exit 40) to US 20/SR 2 Interchange

Congestion Notes

- 0.54 Peak Hours of Excessive Delay per Traveler in 2019
- Travel Time Index of 1.09 in 2019
- Daily Vehicle Miles Traveled (VMT) of 248,469 in 2018
- Daily Vehicle Hours Traveled (VHT) of 5,712 in 2019
- Project currently under construction would address the poor ramp configuration onto and off of I-94 that results in bottleneck delays at these ramps

Multimodal Notes

- Freight usage is substantial along the corridor since it is a primary alternative to the Indiana Toll Rd
- The planned Chessie Trail would cross the corridor near SR 39
- The corridor skirts downtown Rolling Prairie (unincorporated), creating a demand to better accommodate nonmotorized users

Land Use and Development Notes

- Land use is largely light residential and agricultural throughout the corridor, with the exception of a small retail area just east of I-94 and downtown Rolling Prairie
- Planned industrial land uses along Fail Rd would create a larger demand for trucks along this corridor

Safety Notes

- Crash Rate of 241.57 crashes per 100 million vehicle miles traveled (VMT)
- Fatality Rate of 3.75 fatalities per 100 million VMT
- There are significant safety concerns due to heavy truck usage, distracted driving, and hard-to-see road signs for turning
- Speeding is a major concern along this corridor since it is the primary route between Michigan City and South Bend, and the primary alternate route for the Indiana Toll Road creating the perceived need to save time

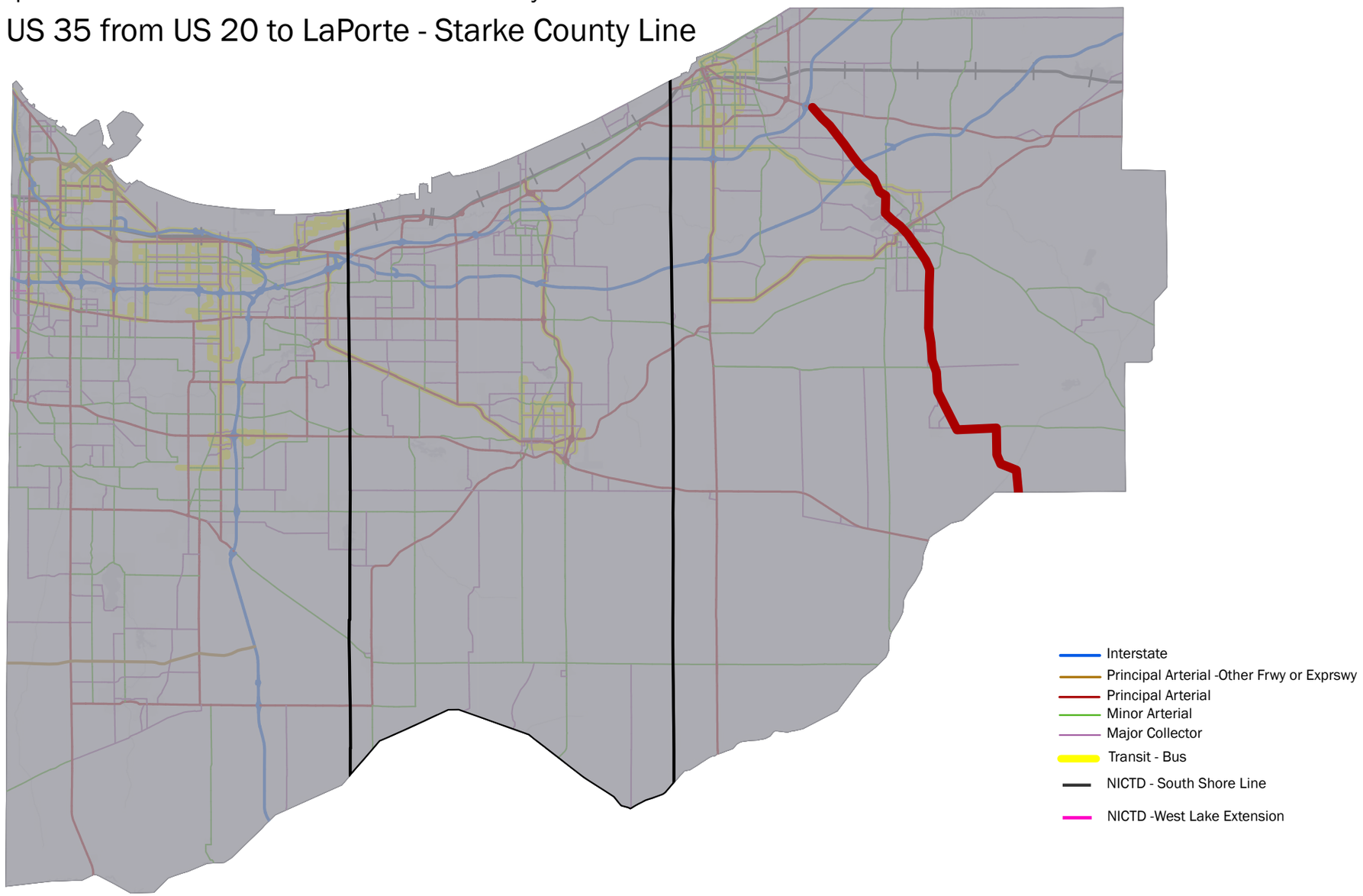
Transit Notes

- Lacks transit service, so there is an opportunity to add service

Other Issues/Priorities to Note About the Corridor

- Designated as the Extra Heavy Duty Highway through Northwest Indiana
- This corridor could be sensitive to toll rates and trucking policies on the Indiana Toll Road, and with minor adjustments could dramatically increase or decrease traffic on this corridor

Figure 19: Map of US 35 from US 20 to LaPorte-Starke County Line



US 35 from US 20 to LaPorte-Starke County Line

Congestion Notes

- 1.72 Peak Hours of Excessive Delay per Traveler in 2019
- Travel Time Index of 1.13 in 2019
- Daily Vehicle Miles Traveled (VMT) of 218,049 in 2018
- Daily Vehicle Hours Traveled (VHT) of 3,922 in 2019
- This is the main arterial between LaPorte County's two largest cities: Michigan City and La Porte
- This corridor also carries traffic from SR 39 and Johnson Rd, both heavily traveled corridors in LaPorte County, in some segments

Multimodal Notes

- This corridor is along the ongoing LaPorte County Economic Development Corridor project is looking at how traffic can bypass downtown La Porte and specifically how traffic from the expanding Kingsbury Industrial Park can access the Interstate Highway System
- Through downtown La Porte, this corridor is more local traffic in nature and carries significant amounts of nonmotorized traffic
- This corridor is parallel to the nearby partially funded and planned Chessie Trail that will link New Buffalo, Michigan to La Porte and LaPorte County

Land Use and Development Notes

- This corridor is primarily rural except for the portion through City of La Porte, but there will be a challenge to ensure that sprawl does not spillover onto the corridor, especially on the fringes of Michigan City and La Porte
- There are several industrial facilities accessed from the corridor including the areas around Severs Rd and Kingsbury Industrial Park
- There will be increased traffic from the NewPorte Landing development being built

Safety Notes

- Crash Rate of 315.90 crashes per 100 million vehicle miles traveled (VMT)
- Fatality Rate of 0.50 fatalities per 100 million VMT
- Heavier than expected truck traffic along the corridor in downtown La Porte due to there not being convenient alternatives results in a safety issue

Transit Notes

- The Triangle Service uses portions of this corridor between La Porte and Michigan City
- US 35 is used as needed by demand response provider TransPorte within the City of Laporte

Other Issues/Priorities to Note About the Corridor

- The segment through La Porte goes through the Downtown La Porte Historic District, and there is a historic aesthetic character throughout the corridor through La Porte
- The corridor is the main access arterial for the INDOT LaPorte District

Next, there are 42 minor road corridors for which NIRPC staff has collected travel time data via the Google Maps API and "floating car" methods. Table 13 shows the free-flow travel time, peak-period travel time, and travel-time index calculated by both the Google Maps API and "floating car" methods. Note that some of these minor road corridors overlap with some of the major road corridors. In these cases, the major road corridor portions of these corridors are considered the primary best source of ongoing data collection, but NIRPC staff will continue to monitor the minor road corridor portions on an ongoing basis, consistent with the format of the data table below.

It is clear from Table 13 above that overall the Google Maps API method produces more consistent and reliable results for travel times than the "floating car" method. This is primarily attributed to two reasons. First, in performing the "floating car" method runs, NIRPC staff had the time and resource limitations of only being able to drive the corridor once per period (AM, PM, and Off-peak), whereas the Google Maps API harnesses "big data" patterns forged from several thousands if not millions of vehicles driving these corridors every day. Second, it appears that the primary area where the "floating car" method is weakest is in the free flow travel time column, significantly varying from the Google Maps API free flow travel time in many cases.

Table 13: Minor Road Corridor Measures of Existing Conditions of Congestion (Typical Weekday)

Corridor	From	To	Google Peak Travel Time (min)	Google Free Flow Travel Time (min)	Google Travel Time Index (TTI)	"Floating Car" Peak Travel Time (min)	"Floating Car" Free Flow Travel Time (min)	"Floating Car" Travel Time Index (TTI)	Vehicle Miles Traveled (VMT)	Estimated Vehicle Hours Traveled (VHT)
101st Ave	IL-IN State Line	White Oak Ave	4.40	4.30	1.02	5.92	3.83	1.54	14,186	541
109th Ave	Calumet Ave	US 41	4.07	3.50	1.16	4.30	3.30	1.30	20,680	647
109th Ave	SR 53	County Line Rd	12.08	10.47	1.15	12.12	9.70	1.25	82,658	2,546
45th St/45th Ave	IL-IN State Line	SR 53	32.68	28.02	1.17	29.15	23.50	1.24	100,646	4,969
77th Ave	Calumet Ave	Cline Ave	9.93	8.38	1.18	11.80	7.85	1.50	19,445	848
93rd Ave	Sheffield Ave	Mississippi St	26.20	23.37	1.12	24.35	22.13	1.10	81,287	3,042
Broad St	Ridge Rd	Division Rd	9.13	7.48	1.22	11.13	6.05	1.84	25,917	1,175
Calumet Ave	I-80/94	US 30	17.42	14.13	1.23	21.58	10.30	2.10	153,972	7,250
Chicago St	Sheffield Ave	US 41	2.57	2.47	1.04	2.17	1.43	1.51	3,149	261

Corridor	From	To	Google Peak Travel Time (min)	Google Free Flow Travel Time (min)	Google Travel Time Index (TTI)	"Floating Car" Peak Travel Time (min)	"Floating Car" Free Flow Travel Time (min)	"Floating Car" Travel Time Index (TTI)	Vehicle Miles Traveled (VMT)	Estimated Vehicle Hours Traveled (VHT)
Cline Ave	I-80/94	45th Ave	6.12	4.42	1.38	3.62	3.41	1.06	29,438	1,459
Colfax Ave	Ridge Rd	73rd Ave	10.73	9.32	1.15	12.25	8.18	1.50	33,695	1,076
Dickey St	129th St	Mich-igan Ave	3.20	2.63	1.22	10.83	2.22	4.89	20,266	836
Gostlin St/145th St	IL-IN State Line	Railroad Ave	9.90	9.07	1.09	9.25	8.07	1.15	15,626	957
Grand Blvd/Miller Ave/Lake St	Hemlock Ave	US 12	4.30	4.05	1.06	4.65	4.65	1.00	8,852	461
Hwy Ave	Ridge Rd	Cline Ave	6.32	5.73	1.10	6.83	5.92	1.15	3,262	173
Kleinman Rd/Wiggs St	Ridge Rd	Main St	6.50	5.58	1.16	6.53	5.08	1.29	8,878	436
Merrillville Rd	US 30	Summit St	8.37	7.45	1.12	7.72	7.47	1.03	29,472	1,157
Michigan St	Hohman Ave	US 20	7.43	6.48	1.15	7.10	5.48	1.29	17,317	896
Mississippi St	61st Ave	101st Ave	10.92	9.97	1.10	12.33	9.75	1.26	75,636	2,578
Columbia/Sheffield Ave/Hart St	Calumet Ave	101st Ave	17.98	15.30	1.18	18.55	15.52	1.20	63,228	2,426
Southeastern Ave	Columbia Ave	175th St	3.53	3.30	1.07	5.93	3.00	1.98	8,278	351
Joliet St/73rd Ave/Joliet Rd	US 30	US 30	31.48	28.75	1.10	30.70	29.30	1.05	77,458	2,782
SR 55	Ridge Rd	US 231	21.48	18.85	1.14	18.50	15.43	1.20	141,191	5,163
Summer St	Columbia Ave	165th St	4.53	4.22	1.08	5.48	3.63	1.51	12,398	493
US 231	I-65	SR 2	10.07	9.53	1.06	11.20	9.33	1.20	66,502	1,311
Cline Ave	Division Rd	93rd Ave	10.63	8.60	1.24	11.08	8.57	1.29	31,775	1,239
Ridge Rd	IL-IN State Line	US 41	9.95	8.87	1.12	6.90	6.07	1.14	57,623	3,132
SR 53	73rd Ave	US 231	14.82	12.47	1.19	15.68	10.53	1.49	97,337	3,709

Corridor	From	To	Google Peak Travel Time (min)	Google Free Flow Travel Time (min)	Google Travel Time Index (TTI)	"Floating Car" Peak Travel Time (min)	"Floating Car" Free Flow Travel Time (min)	"Floating Car" Travel Time Index (TTI)	Vehicle Miles Traveled (VMT)	Estimated Vehicle Hours Traveled (VHT)
SR 8	US 231	SR 49	11.05	10.42	1.06	11.17	9.17	1.22	35,460	696
SR 49	US 12	SR 8	31.95	29.20	1.09	29.50	26.80	1.10	476,806	10,302
SR 149	US 12	SR 130	14.83	12.75	1.16	14.58	12.27	1.19	80,212	2,086
SR 130	37th Ave	250 W	14.40	12.80	1.13	13.93	11.43	1.22	80,518	2,155
Smoke Rd	SR 2	Division Rd	2.53	2.40	1.06	3.40	2.08	1.63	6,752	187
Division Rd	County Line Rd	SR 49	18.18	16.83	1.08	19.00	17.12	1.11	17,795	515
Calumet Ave/ Morgan Blvd	SR 49	Lincoln-way	16.85	14.70	1.15	17.77	13.03	1.36	49,815	1,697
450 W/475 W/500 W	US 20	100 S	27.20	24.47	1.11	25.90	23.25	1.11	N/A	N/A
Crisman Rd/Willow-creek Rd	US 20	700 N	12.02	10.67	1.13	12.22	10.18	1.20	N/A	N/A
Fail Rd	US 20	SR 2	4.98	4.77	1.05	4.68	4.63	1.01	8,847	215
SR 2	SR 49	Fail Rd	38.65	35.58	1.09	36.75	32.62	1.13	253,442	6,687
SR 39	SR 2	400 S	4.45	4.38	1.02	4.58	4.47	1.03	13,329	268
US 20	SR 212	SR 2	16.12	14.87	1.08	21.78	14.57	1.50	263,036	5,385
US 35	US 20	SR 2	12.57	11.23	1.12	11.58	10.95	1.06	114,150	3,036

This is likely due in large part to the same reason just mentioned that NIRPC staff were not able to drive the corridors enough times to generate a stable free flow time during the off-peak period, and any particular run free of obstacles is susceptible to a human driver being able to drive faster than would likely result from an average of many runs. Therefore, the Google Travel Time Index (TTI) column is the most reputable measure of the existing condition of congestion for these minor road corridors. By this measure, it is clear that the TTI of these minor road corridors is similar to the TTI of the major road corridors as shown earlier. This means that in the Northwestern Indiana Region, there is no major difference in travel time reliability (which is closely related to congestion, but is a more precisely a measure in the consistency in travel times between the peak and free-flow conditions) experienced on major road corridors and minor road corridors. However, traffic volumes are clearly higher on the major road corridors as evidenced by the Vehicle Miles Traveled (VMT) data, so motorists in the Northwestern Indiana Region experience more congestion overall on the major road corridors than on the minor road corridors. This is also clear from the Vehicle Hours Traveled (VHT) data.

Third, the transit measures of existing conditions of congestion in the Northwestern Indiana Region currently only describe passenger miles, unlinked trips, and passenger miles per unlinked trip because of ongoing and reliable data limitations. These measures all come from the annually updated National Transit Database (NTD) as described in the Data Sources section. NIRPC will be committed to helping the transit operators track their on-time performance (OTP) data with consent from each fixed-route operator and through agreed upon means, but there is not enough OTP data so far to include in this section. Moreover, it is important to again note that only transit operators of the fixed-route transit network are subject to *MOVE NWI* and so only existing conditions of these 5 operators (Northern Indiana Commuter Transportation District, East Chicago Transit, Gary Public Transportation Corporation, Valparaiso Transit, Michigan City Transit- who also reports for the Transit Triangle Service). Table 14 below lists the measures of existing conditions of congestion for the transit network.

Table 14: Transit Measures of Existing Conditions of Congestion (only fixed-route portions noted)

Transit Operator	Service (mode)	Annual Passenger Miles Traveled (PMT)	Annual Unlinked Trips (UPT)	Passenger Miles per Unlinked Trip	Unlinked Trips per Vehicle Revenue Hour
Northern Indiana Commuter Transportation District (NICTD)	South Shore Line (commuter rail)	110,846,664	3,400,197	32.6	27.4
East Chicago Transit (ECT)	Bus		116,255		12.5
Gary Public Transportation Corporation (GPTC)	Bus	985,028	785,219	1.3	11.7
Valparaiso Transit	V-Line (bus)		108,732		7.2
Valparaiso Transit	ChicagoDash (commuter bus)		63,592		23.8
Michigan City Transit (MCT)	Bus		164,692		12.1
Michigan City Transit (MCT)	Transit Triangle (commuter bus)		6,408		1.2

From Table 14 above, unfortunately only two transit operators report annual passenger miles traveled (NICTD and GPTC), but it is still possible to compare the transit operators by the sheer number of annual unlinked trips and by unlinked trips per vehicle revenue hour. In both of these metrics, a higher value indicates better performance in terms of shifting travelers from driving to an alternative mode. In the case of annual unlinked trips, a higher number simply indicates the transit operator serving more passengers or serving the same passengers multiple times because they find the service convenient or necessary. In the case of unlinked trips per vehicle revenue hour, a higher number indicates a more efficient service in terms of moving passengers with fewer vehicles and therefore drivers, thus being more cost-effective. It is clear in comparing the services across this metric that the commuter services (the South Shore Line and ChicagoDash) fare better, perhaps because they have a singular clear mission: getting riders from Northwestern Indiana to Chicago, largely to their jobs. The bus services on the other hand do not have as singular of a mission, but rather they serve both transit-dependent (those lacking the means to drive or choose an alternative mode) and choice riders (those who could drive but choose to take transit because they find it most convenient) alike for a variety of destinations. In the future, NIRPC staff will work with transit operators to collect data on the on-time performance of their fixed-route services, so this will become another valuable metric in determining how "congested" a rider may perceive the service and, in the case of a would-be choice rider, how likely those services may be to shift trips from driving to taking transit.

Strategies

Table 1 in the earlier Connection to *NWI 2050* Strategies section mentioned all of the strategies from *NWI 2050* that relate to congestion management and organized those strategies into 4 categories: travel demand management (TDM), land use (LU), operational management (OM), and capacity (CAP). (For a description of the strategy categories, consult the paragraph immediately following Table 1). The *NWI 2050* strategies in Table 1 apply as strategies in *MOVE NWI*, but their phrasing mostly suggests that NIRPC is the lead agency for implementing them. Tables 15 through 18 below, organized by the 4 categories, rephrase the *NWI 2050* Strategies to be more concise and applicable to what NIRPC's stakeholders, partner agencies, and project sponsors can do to help better manage congestion. TDM and LU strategies are Tier 1 strategies in that they are the highest priority strategies in *MOVE NWI* because they directly decrease the number and/or distance of SOV trips. OM strategies are Tier 2 strategies because while they do not directly decrease the number and/or distance of trips, they more efficiently utilize existing capacity and are significantly more cost-effective than CAP strategies. CAP strategies are Tier 3 strategies in that while they do offer some help in managing congestion, at least in the short term, they are the most expensive and generally least effective in the long term.

Table 15: *MOVE NWI* Travel Demand Management (TDM) Strategies – Tier 1

#	Strategy	Description	Strategy Number(s) Derived from Table 1
1	Increased transit	Strategically expand transit or make transit more accessible and attractive to existing or would-be riders	8-22, 33, 62, 66-67
2	Increased non-motorized use	Make non-motorized, active transportation such as bicycling, walking, or e-scooter use safer and more accessible and attractive to existing or would-be users	24-29, 52, 54-55, 57, 59
3	Alternative/flexible work hours	Work with employers to encourage and incentivize having employees work in staggered shifts and/or have the option of working at more non-traditional, off-peak times	New
4	Telecommuting	Work with employers to allow employees to work from an alternative location, including at home, at least on certain days	New
5	Ridesharing	Encourage and remove barriers for ridesharing companies/programs to operate	19
6	Carpooling/School-pooling	Work with employers to incentivize carpooling or with school districts to incentivize school-pooling	New
7	Vanpooling	Promote Pace vanpool program and other possible upstart vanpool programs that allow employees working at close-by work locations to arrange shared van rides to and from work	New
8	High-Occupancy Vehicle (HOV) lanes	Implement lanes on major road corridors that are restricted to vehicles with more than 1 occupant	New
9	Congestion pricing	Levy a fee on certain congested roadway segments or dense geographical areas that may vary by congestion condition or time-of-day	New

Table 16: *MOVE NWI* Land Use (LU) Strategies – Tier 1

#	Strategy	Description	Strategy Number(s) Derived from Table 1
10	Growth management and infill development	Enact plans and policies to promote growth in areas that already have existing infrastructure and adequate density	1
11	Non-motorized connectivity between neighborhoods, developments, and/or activity centers	Enact plans and policies that promote non-motorized connectivity between neighborhoods and activity centers and require new developments to make non-motorized connections	3-4
12	Sensible Tools Handbook implementation	Implement NIRPC's Sensible Tools Handbook, applying specific context-appropriate measures	5, 63
13	E-commerce accommodation	Enact plans and policies to accommodate the growth of e-commerce in a safe way that mitigates its increase in congestion	6
14	Transit-oriented development (TOD)	Enact plans and policies that facilitate TOD and maximize its impacts	7, 40, 43
15	Adaptive reuse	Enact plans and policies that adaptively reuse or repurpose existing vacant or underutilized buildings	37
16	Affordable housing near transit or multimodal hubs	Enact plans and policies that incentivize affordable housing (below otherwise market rate or with some waived qualifications) near transit or multimodal hubs	61

Table 17: *MOVE NWI* Operational Management (OM) Strategies – Tier 2

#	Strategy	Description	Strategy Number(s) Derived from Table 1
20	Signal preemption/priority	Allow certain classes of vehicles (such as emergency vehicles, transit vehicles, etc.) to receive priority when they arrive at or are approaching traffic signals	23, 56
21	Signal coordination	Better coordinate a series of adjacent traffic signals along a corridor(s) so as to optimize traffic flow	56
22	Reduced or variable speed limits	Reduce speed limits in areas with high non-motorized activity or allow variable speed limits in order to optimize traffic flow	30
23	Crash reduction focus at specific sites	Employ a crash-reduction focus on the project(s) by incorporating specific, non-capacity adding targeted interventions based on crash data and in a way that effectiveness can be measured over time after implementation	34, 45, 48
24	Increased operational data sharing	Commit to *increasing* the amount of operational data (i.e. crash locations, traffic volumes, travel times, etc.) shared with NIRPC, first responders, university partners, and/or other external entities	41, 46, 47, 49, 51
25	Intelligent Transportation Systems (ITS)	Incorporate ITS elements into the project(s) not already mentioned in other OM strategies such as dynamic messaging signs, travel time signs/notifications, etc.	53
26	Freight/intermodal coordination	Coordinate with freight-specific stakeholders to incorporate non-capacity adding freight congestion reduction elements into the project(s)	65
27	Tolling	Levy a toll on a corridor in order to more efficiently transfer the costs of its operation and maintenance to the users and shift some traffic to other nearby corridors	New
28	HOT/managed lanes	Implement lanes on major road corridors that are restricted to vehicles with more than 1 occupant *or* are willing to pay a posted price that can vary, or lanes that are restricted in some way so as to optimally manage traffic flow	New
29	Reversible lanes	Implement lanes on major road corridors that can be directionally reversed at certain times of day on a fixed schedule or variable schedule when conditions warrant	New
30	Part-time shoulder use	Allow through-motor vehicle traffic on shoulders of major road corridors during certain times of day or during certain conditions of congestion	New
31	Ramp metering	Implement signals or other traffic control devices at merging interchanges to optimize the times/intervals of allowing merging traffic to proceed	New

Table 18: *MOVE NWI* Capacity-Adding (CAP) Strategies – Tier 3

#	Strategy	Description	Strategy Number(s) Derived from Table 1
32	Regional Corridors Study (RCS) implementation	Implement the NIRPC Regional Corridors Study (RCS) to advance the work on one of the 22 corridors in the RCS	31
33	Bottleneck relief	Relieve bottlenecks by changing geometric configurations or apply interventions in such a way as to add a minor level of capacity	35, 50
34	Railroad-highway grade separations	Construct railroad-highway grade separations at currently at-grade crossings	44

In assigning points in determining *MOVE NWI* adherence as explained in the following section, the following number of points will be awarded for each strategy selected: For Tier 1 strategies, 5 points will be awarded for each strategy selected for inclusion in the scope of the project and 3 points will be awarded for each strategy considered for inclusion in the scope of the project with sufficient explanation. For Tier 2 strategies, 3 points will be awarded for each strategy selected for inclusion in the scope of the project and 1 point will be awarded for each strategy considered for inclusion in the scope of the project with sufficient explanation. For Tier 3 strategies, 1 point will be awarded for each strategy selected for inclusion in the scope of the project. For strategies in any Tiers 1-3, one-half point will be awarded for each strategy the project sponsor engages in as an agency within the Northwestern Indiana Region but outside of the scope of the project itself (and excluding strategies engaged in merely through direct NIRPC activities such as membership on a NIRPC committee) with sufficient explanation.

Evaluating Projects

For *MOVE NWI* to be effective in holding project sponsors accountable to advancing the congestion management objectives and strategies articulated in *MOVE NWI*, there needs to be a process for screening projects for adherence with the CMP. It should first be noted that there are a lot of projects that are already planned in *NWI 2050* or programmed into the 2020-2024 Transportation Improvement Program (TIP), so to remove such projects retroactively would be unfair to the project sponsors' expectations and the transparent process that has already played out. More importantly, these projects have already been found to conform to NIRPC's preexisting Congestion Management Process adopted in 2011. That said, *MOVE NWI* distinguishes projects that already have been incorporated in the 2020-2024 TIP (which are categorically exempt from additional adherence to *MOVE NWI*) versus projects that are in the fiscally constrained *NWI 2050* but *not yet* in the 2020-2024 TIP. Before projects in the latter category can be programmed into either the current or any subsequent TIP, those projects must demonstrate adherence to *MOVE NWI* in the same way that any new project seeking inclusion into *NWI 2050* (or any subsequent Metropolitan Transportation Plan) or the 2020-2024 TIP (or any subsequent TIP) would be required to as described in the following paragraphs.

For a project to demonstrate adherence to *MOVE NWI*, there is a shared responsibility between the project sponsor and NIRPC staff. The process of demonstrating adherence begins with the Notice of Funding Availability (NOFA). Project sponsors have the responsibility for determining which program in the NOFA their proposed project falls into. *MOVE NWI* only applies to some projects in the Roadway Improvement, New Roadway, and Quality of Place programs of the NOFA. Thus, projects that fall into any of the other programs are categorically exempted from having to demonstrate *MOVE NWI* adherence. The Proposed Project worksheet to Determine *MOVE NWI* adherence in a later section will help guide project sponsors to further investigate whether their proposed project(s) *may* need to demonstrate *MOVE NWI* adherence. Even within these programs that *may* require *MOVE NWI* adherence, there are certain project types that are also categorically exempted from *MOVE NWI* adherence. The only project types that are required to demonstrate *MOVE NWI* adherence are: (1) Surface transport infrastructure to facilitate port "linkages", (2) New bridge / roadway / tunnel construction in the New Roadways program, (3) Intersection Congestion Improvements in the Roadway Improvement program, and (4) Roadway Expansion in the Quality of Place program. Even for those project types that are required to demonstrate *MOVE NWI* adherence, projects that are not on the *MOVE NWI* Network are categorically exempted from demonstrating *MOVE NWI* adherence. The following Tables 19 through 21 are descriptions from the Proposed Project worksheet to Determine *MOVE NWI* adherence and break down the steps of demonstrating *MOVE NWI* adherence by project type and responsible party for completing each step. Note that even though INDOT (as well as the Indiana Toll Road, United Bridge Partners, and other major transportation agencies) does not have to submit project applications through the NIRPC NOFA process, it still must organize all of its projects proposed for inclusion in the Metropolitan Transportation Plan or TIP into the 4 project types mentioned above and follow the steps in Tables 19 through 21 below, assuming the role of "Project sponsor" as the responsible party.

Table 19: Steps to Demonstrate *MOVE NWI* Adherence for New Roadways Program

Step #	Responsible Party	Directions
1	Project sponsor (or INDOT)	Indicate the road name(s) and termini proposed to be included in the scope of the project. If all of the road segments mentioned have a Functional Classification (FC) of Minor Collector according to this NIRPC webpage, then stop here – project adheres to *MOVE NWI*
2	Project sponsor (or INDOT)	Indicate the length of the project (in miles, rounded to the nearest hundredth), broken out into each road segment if there are multiple road segments
3	Project sponsor (or INDOT)	Indicate the road segment(s) and lengths proposed for added through travel lanes and how many through travel lanes will be added to each road segment mentioned
4	Project sponsor (or INDOT)	Indicate any road segment(s) and lengths proposed for new continuous turn lanes or other types of auxiliary lanes
5	Project sponsor (or INDOT)	Indicate any road segment(s) and lengths with any capacity-adding features other than added travel lanes or continuous turn lanes/auxiliary lanes such as highway-rail grade separations, new bridges/tunnels, etc.
6	Project sponsor (or INDOT)	Indicate the number or best documented estimate of the typical daily *increase* in commercial truck movements (into and out of combined) expected to result from the project in its open to traffic year or a specified horizon year in the future from the baseline (no-build) conditions
7	Project sponsor (or INDOT)	Describe why the project needs to add capacity
8	Project sponsor (or INDOT)	Select all the *MOVE NWI* Strategies 1-34 that are proposed to be directly included into the scope of the project (explain how for each selected strategy)
9	Project sponsor (or INDOT)	Select all the *MOVE NWI* Strategies 1-34 that are not currently, but could consider being, included into the scope of the project (explain how for each selected strategy)
10	Project sponsor (or INDOT)	Select all the *MOVE NWI* Strategies 1-34 that the project sponsor (or INDOT) engages in specifically in the Northwestern Indiana Region beyond simply participating through NIRPC (explain how for each selected strategy)
11	NIRPC staff	Run the NIRPC Travel Demand Model with 2 scenarios: (1) the baseline no-build and (2) the parameters specified in Steps 1-6. If the results show an overall decrease in vehicle hours traveled (VHT) from scenario (1) to scenario (2) of 5% or more either on the project segments directly or collectively on all model segments within 2 miles of the project area, then stop here - project adheres to *MOVE NWI*
12	NIRPC staff	If the project did not pass from Step 11, score the strategies the project sponsor selected in Steps 8-10 according to the point values explained the *MOVE NWI* Strategies section. If the project scores 10 points or more from Step 8 alone, then stop here – project adheres to *MOVE NWI*.
13	NIRPC staff	If after completing Step 12 the project scores 10 points or more, but has to rely on points awarded from Steps 9-10, then request project sponsor to resubmit a NOFA application with enough strategies selected in Step 9 in the revised scope of the project so that the strategies actually included in the scope of the project total 10 points or more. If this is successful, stop here – resubmitted project adheres to *MOVE NWI*.

14	NIRPC staff	If Step 13 is unsuccessful because project only scores 10 points or more by claiming points from Step 10 or project sponsor is unwilling to re-submit a rescoped project, request the project sponsor to agree to submit to NIRPC any documentation supporting the evidence for the strategies claimed in Step 10. If this is successful, stop here – project adheres to *MOVE NWI*.
15	NIRPC staff	If the project still has not adhered to *MOVE NWI* after Step 14 or if 10 or more points cannot be tallied from Steps 8-10, then project does not adhere to *MOVE NWI*.

Table 20: Steps to Demonstrate *MOVE NWI* Adherence for Roadway Improvements Program

Step #	Responsible Party	Directions
1	Project sponsor (or INDOT)	Indicate the road name(s) and termini proposed to be included in the scope of the project. If all of the road segments mentioned have a Functional Classification (FC) of Minor Collector according to this NIRPC webpage, then stop here – project adheres to *MOVE NWI*
2	Project sponsor (or INDOT)	Indicate the length of the project (in miles, rounded to the nearest hundredth), broken out into each road segment if there are multiple road segments
3	Project sponsor (or INDOT)	Indicate the road segment(s) and lengths proposed for added turn lanes (including intersection bypass lanes) – this applies both for roundabouts and conventional intersections. If no single segment length of added turn lane or intersection bypass lane exceeds 0.25 miles, then stop here – project adheres to *MOVE NWI*
4	Project sponsor (or INDOT)	Describe why the project needs to add capacity
5	Project sponsor (or INDOT)	Select all the *MOVE NWI* Strategies 1-34 that are proposed to be directly included into the scope of the project (explain how for each selected strategy)
6	Project sponsor (or INDOT)	Select all the *MOVE NWI* Strategies 1-34 that are not currently, but could consider being, included into the scope of the project (explain how for each selected strategy)
7	Project sponsor (or INDOT)	Select all the *MOVE NWI* Strategies 1-34 that the project sponsor (or INDOT) engages in specifically in the Northwestern Indiana Region beyond simply participating through NIRPC (explain how for each selected strategy)
8	NIRPC staff	Run the NIRPC Travel Demand Model with 2 scenarios: (1) the baseline no-build and (2) the parameters specified in Steps 1-3. If the results show an overall decrease in vehicle hours traveled (VHT) from scenario (1) to scenario (2) of 1% or more either on the project segments directly or collectively on all model segments within 2 miles of the project area, then stop here - project adheres to *MOVE NWI*
9	NIRPC staff	If the project did not pass from Step 8, score the strategies the project sponsor selected in Steps 5-7 according to the point values explained the *MOVE NWI* Strategies section. If the project scores 10 points or more from Step 5 alone, then stop here – project adheres to *MOVE NWI*.
10	NIRPC staff	If after completing Step 9 the project scores 10 points or more, but has to rely on points awarded from Steps 6-7, then request project sponsor to resubmit a NOFA application with enough strategies selected in Step 6 in the revised scope of the project so that the strategies actually included in the scope of the project total 10 points or more. If this is successful, stop here – resubmitted project adheres to *MOVE NWI*.

11	NIRPC staff	If Step 10 is unsuccessful because project only scores 10 points or more by claiming points from Step 7 or project sponsor is unwilling to re-submit a rescoped project, request the project sponsor to agree to submit to NIRPC any documentation supporting the evidence for the strategies claimed in Step 7. If this is successful, stop here – project adheres to *MOVE NWI*.
12	NIRPC staff	If the project still has not adhered to *MOVE NWI* after Step 11 or if 10 or more points cannot be tallied from Steps 5-7, then project does not adhere to *MOVE NWI*.

Table 21: Steps to Demonstrate *MOVE NWI* Adherence for Quality of Place Program

Step #	Responsible Party	Directions
1	Project sponsor (or INDOT)	Indicate the road name(s) and termini proposed to be included in the scope of the project. If all of the road segments mentioned have a Functional Classification (FC) of Minor Collector according to this NIRPC webpage, then stop here – project adheres to *MOVE NWI*
2	Project sponsor (or INDOT)	Indicate the length of the project (in miles, rounded to the nearest hundredth), broken out into each road segment if there are multiple road segments
3	Project sponsor (or INDOT)	Indicate the road segment(s) and lengths proposed for added through travel lanes and how many through travel lanes will be added to each road segment mentioned
4	Project sponsor (or INDOT)	Indicate the road segment(s) and lengths proposed for continuous turn lanes or other auxiliary lanes (including intersection bypass lanes) – this applies both for roundabouts and conventional intersections. If there are no new added travel lanes and no single segment length of continuous turn lanes or other auxiliary lanes exceeds 0.25 miles, then stop here – project adheres to *MOVE NWI*
5	Project sponsor (or INDOT)	Describe why the project needs to add capacity
6	Project sponsor (or INDOT)	Select all the *MOVE NWI* Strategies 1-34 that are proposed to be directly included into the scope of the project (explain how for each selected strategy)
7	Project sponsor (or INDOT)	Select all the *MOVE NWI* Strategies 1-34 that are not currently, but could consider being, included into the scope of the project (explain how for each selected strategy)
8	Project sponsor (or INDOT)	Select all the *MOVE NWI* Strategies 1-34 that the project sponsor (or INDOT) engages in specifically in the Northwestern Indiana Region beyond simply participating through NIRPC (explain how for each selected strategy)
9	NIRPC staff	Run the NIRPC Travel Demand Model with 2 scenarios: (1) the baseline no-build and (2) the parameters specified in Steps 1-3. If the results show an overall decrease in vehicle hours traveled (VHT) from scenario (1) to scenario (2) of 5% or more either on the project segments directly or collectively on all model segments within 2 miles of the project area, then stop here - project adheres to *MOVE NWI*
10	NIRPC staff	If the project did not pass from Step 9, score the strategies the project sponsor selected in Steps 6-8 according to the point values explained the *MOVE NWI* Strategies section. If the project scores 10 points or more from Step 6 alone, then stop here – project adheres to *MOVE NWI*.

11	NIRPC staff	If after completing Step 10 the project scores 10 points or more, but has to rely on points awarded from Steps 7-8, then request project sponsor to resubmit a NOFA application with enough strategies selected in Step 7 in the revised scope of the project so that the strategies actually included in the scope of the project total 10 points or more. If this is successful, stop here – resubmitted project adheres to *MOVE NWI*.
12	NIRPC staff	If Step 11 is unsuccessful because project only scores 10 points or more by claiming points from Step 8 or project sponsor is unwilling to resubmit a rescoped project, request the project sponsor to agree to submit to NIRPC any documentation supporting the evidence for the strategies claimed in Step 8. If this is successful, stop here – project adheres to *MOVE NWI*.
13	NIRPC staff	If the project still has not adhered to *MOVE NWI* after Step 12 or if 10 or more points cannot be tallied from Steps 6-8, then project does not adhere to *MOVE NWI*.

MOVE NWI Administration

MOVE NWI is a living document that requires ongoing administration. NIRPC staff will be in charge of the day-to-day administration of *MOVE NWI*, overseen by the Surface Transportation Committee, Technical Planning Committee, and any other topical committees as requested. NIRPC will plan to update *MOVE NWI* beginning in 2030 as the performance measure data used in evaluating the objectives become available and *MOVE NWI* can be evaluated as a whole unless any intervening MTP calls for objectives, performance measures, or strategies that are substantially different enough to warrant a new CMP to replace *MOVE NWI* before 2030.

Proposed Project Worksheet to Determine *MOVE NWI* Adherence

A worksheet will help applicants in the NOFA process determine whether *MOVE NWI* adherence will be required for their project(s) to be considered for selection and inclusion into the programming process. The worksheet itself will reside as a Microsoft Excel worksheet alongside the rest of the NOFA application. Project sponsors will be alerted that they will only have to fill out the worksheet if their project falls into one of the 3 programs that may require *MOVE NWI* adherence: New Roadways, Roadway Improvements, or Quality of Place. Depending on which of the 3 programs the project being considered falls into, project sponsors will be directed to the appropriate section of the worksheet to complete. The initial questions in each section will probe project sponsors about whether the project falls into one of the project types requiring *MOVE NWI* adherence: in the New Roadways program, surface transport infrastructure to facilitate port "linkages" or new bridge / roadway / tunnel construction; in the Roadway Improvements program, intersection congestion improvements; and in the Quality of Place program, roadway expansion. If it is clear that the project being applied for does not fall into one of these 4 project types, the project sponsor will be instructed that completing the rest of the worksheet is unnecessary because the project adheres to *MOVE NWI*.

Once the project sponsor completes the first part of the worksheet and finds the project will possibly need to demonstrate *MOVE NWI* adherence, the project sponsor will be instructed to provide the information as shown in Tables 19, 20, or 21, whichever applies.

Figure 20: Screenshot of the Proposed Project Worksheet to Determine *MOVE NWI* Adherence

Proposed Project Worksheet to Determine MOVE NWI Adherence

ONLY Complete this worksheet if project application is in Roadway Improvements, New Roadway, or Quality of Place program

General Section (Complete for Roadway Improvements, New Roadway, or Quality of Place program)

Step #					
1	Project Sponsor:				
2	Name of road segment(s) in scope (separate out segments on different roads with (1), (2), etc.):				
3	Name of termini corresponding to road segments specified in Step 2 (separate out sets of termini on different roads with (1), (2), etc.):				
4	Functional Classification of road segment(s) specified in Steps 2-3 (find Functional Classifications here; in the case of a New Roadway, the proposed Functional Classification of the New Roadway(s)):				
5	If ALL Functional Classifications from Step 4 are Minor Collector or Local Only, then STOP here - project adheres to MOVE NWI				
6	Length of road segment(s) specified in Steps 2-3 (miles rounded to nearest hundredth):				
7	Describe why the project needs to add capacity (if indicated as yes in the NOFA application; if no, explain why not and then STOP here - project adheres to MOVE NWI)				
8	Select all of the MOVE NWI strategies that are already scoped into the project or that you would reasonably consider being scoped into the project:	MOVE NWI Strategy:	Already Scoped Into Project	Would Consider Being Scoped Into Project	Explanation (if checked)
		Increased transit	☐	☐	
		Increased non-motorized use	☐	☐	
		Alternative/flexible work hours	☐	☐	
		Telecommuting	☐	☐	
		Ridesharing	☐	☐	
		Carpooling/School-pooling	☐	☐	
		Vanpooling	☐	☐	
		High-Occupancy Vehicle (HOV) lanes	☐	☐	
		Congestion pricing	☐	☐	
		Growth management and infill development	☐	☐	
		Non-motorized connectivity between neighborhoods, developments, and/or activity centers	☐	☐	
		Sensible Tools Handbook implementation	☐	☐	
		E-commerce accommodation	☐	☐	
		Transit-oriented development (TOD)	☐	☐	
		Adaptive reuse	☐	☐	
		Affordable housing near transit or multimodal hubs	☐	☐	
		Remove/reduce parking minimums	☐	☐	
		Mixed-use development	☐	☐	
		Agricultural land conservation/preservation	☐	☐	
		Signal preemption/priority	☐	☐	
		Signal coordination	☐	☐	
		Reduced or variable speed limits	☐	☐	
		Crash reduction focus at specific sites	☐	☐	
		Increased operational data sharing	☐	☐	
		Intelligent Transportation Systems (ITS)	☐	☐	
		Freight/intermodal coordination	☐	☐	
		Tolling	☐	☐	
		HOT/managed lanes	☐	☐	
		Reversible lanes	☐	☐	
		Part-time shoulder use	☐	☐	
		Ramp metering	☐	☐	
		Regional Corridors Study (RCS) implementation	☐	☐	
		Bottleneck relief	☐	☐	
		Railroad-highway grade separations	☐	☐	

9	Select all of the MOVE NWI strategies that you as the project sponsor as an agency engage with in Northwestern Indiana (outside of the specific project and outside of merely NIRPC involvement):	MOVE NWI Strategy:	Engage with in Northwestern Indiana as an Agency	Explanation (if checked)
		Increased transit	☐	
		Increased non-motorized use	☐	
		Alternative/flexible work hours	☐	
		Telecommuting	☐	
		Ridesharing	☐	
		Carpooling/School-pooling	☐	
		Vanpooling	☐	
		High-Occupancy Vehicle (HOV) lanes	☐	
		Congestion pricing	☐	
		Growth management and infill development	☐	
		Non-motorized connectivity between neighborhoods, developments, and/or activity centers	☐	
		Sensible Tools Handbook implementation	☐	
		E-commerce accommodation	☐	
		Transit-oriented development (TOD)	☐	
		Adaptive reuse	☐	
		Affordable housing near transit or multimodal hubs	☐	
		Remove/reduce parking minimums	☐	
		Mixed-use development	☐	
		Agricultural land conservation/preservation	☐	
		Signal preemption/priority	☐	
		Signal coordination	☐	
		Reduced or variable speed limits	☐	
		Crash reduction focus at specific sites	☐	
		Increased operational data sharing	☐	
		Intelligent Transportation Systems (ITS)	☐	
		Freight/intermodal coordination	☐	
		Tolling	☐	
		HOT/managed lanes	☐	
		Reversible lanes	☐	
		Part-time shoulder use	☐	
		Ramp metering	☐	
		Regional Corridors Study (RCS) implementation	☐	
		Bottleneck relief	☐	
		Railroad-highway grade separations	☐	

MOVE NWI

Roadway Improvement Section (ONLY complete if project is in Roadway Improvements program)

Step #					
1	Does the project involve work on, or any approach directly into, an intersection(s)? (If no, STOP here - project adheres to MOVE NWI)	☐ Yes ☐ No			
2	Does the intersection work involve any added turn lanes, added through lanes, or added intersection bypass lanes (If no, STOP here - project adheres to MOVE NWI)	☐ Yes ☐ No			
3	List all segments with added turn lanes, added through lanes, and added intersection bypass lanes being added and their lengths (in miles, rounded to the nearest hundredth)				

New Roadways Section (ONLY complete if project is in New Roadways program)

Step #					
1	List how many new through lanes will be added to each new road segment in the General Section Steps 2-3				
2	List segments that will have continuous turn lanes or other type of auxiliary lanes and their lengths (in miles, rounded to the nearest hundredth)				
3	List segments that will contain any other capacity-adding features such as highway-rail grade separations, new bridges/tunnels, etc. and their lengths (in miles, rounded to the nearest hundredth)				
4	Indicate the number or best documented estimate of the typical daily increase in commercial truck movements (or the commercial truck percentage) expected to result from the project in its open to traffic year or a specified horizon year in the future from the baseline (no-build) conditions				

Quality of Place Section (ONLY complete if project is in Quality of Place program)

Step #					
1	Does the project involve expanding any roadway, defined here as the addition of any travel lanes, continuous turn lanes, or other auxiliary lanes? (If no, STOP here - project adheres to MOVE NWI)	☐ Yes ☐ No			
2	List all segments with added travel lanes, added continous turn lanes, and added auxiliary lanes and their lengths (in miles, rounded to the nearest hundredth)				

Endnotes

1. 23 CFR § 450.322
2. U.S. Department of Transportation Federal Highway Administration, "Congestion Management Process: A Guidebook," April 2011, Accessed at https://www.fhwa.dot.gov/planning/congestion_management_process/cmp_guidebook/cmpguidebk.pdf.
3. 61 FR 67166, December 19, 1996
4. USDOT, FHWA Office of Operations, "An Interim Guidebook on the Congestion Management Process in Metropolitan Transportation Planning," Accessed at https://ops.fhwa.dot.gov/publications/cmpguidebook/02intro.htm.
5. Transit Oriented Development (TOD) is defined in *MOVE NWI* as "a mix of commercial, residential, office and entertainment centered around or located near a transit station" according to the Federal Transit Administration at https://www.transit.dot.gov/TOD.
6. USDOT, FHWA Office of Operations, "Traffic Congestion and Reliability: Trends and Advanced Strategies for Congestion Mitigation," Accessed at https://ops.fhwa.dot.gov/congestion_report/chapter2.htm.
7. USDOT, FHWA Office of Operations, "Management & Operations in the Metropolitan Transportation Plan: A Guidebook for Creating an Objectives-Driven, Performance-Based Approach," November 2007, Accessed at https://ops.fhwa.dot.gov/publications/moguidebook/chap_1.htm#1_5.
8. Excludes US 12 (from Indianapolis Blvd to IN-MI State Line) and US 20 (from Indianapolis Blvd to I-94/Exit 40) these 2 corridors are not included in NPMRDS data and using Google Maps API to perform query during COVID-19 pandemic might skew results.
9. Excludes 450 W/475 W/500 W (from US 20 to 100 S) and Crisman Rd/Willow-creek Rd (US 20 to 700 N) because data on these corridors are not available from the Highway Performance Monitoring System (HPMS).
10. *NWI 2050* Accessed at https://www.nirpc.org/wp-content/uploads/2020/02/NWI-2050-FINAL-PLAN.pdf.
11. For a map of Functional Classification in NWI, see https://nirpcgis.carto.com/viz/647f47b8-ddfd-11e4-aa76-0e018d66dc29/public_map.
12. For a great explanation of the federally required performance measures, including the ones pertaining to congestion (PM3), consult https://www.fhwa.dot.gov/tpm/.
13. Note that not all GPS unit manufacturers and cellular providers are contracted to provide their locations for NPMRDS data. For more information about NPMRDS consult https://npmrds.ritis.org/analytics/.
14. Many thanks to Xinbo Mi of Evansville Metropolitan Planning Organization (EMPO) for alerting Indiana Metropolitan Planning Organizations including NIRPC to the ability to use the Google Maps Directions API for harnessing "big data" in an easy-to-use, cost-effective way.