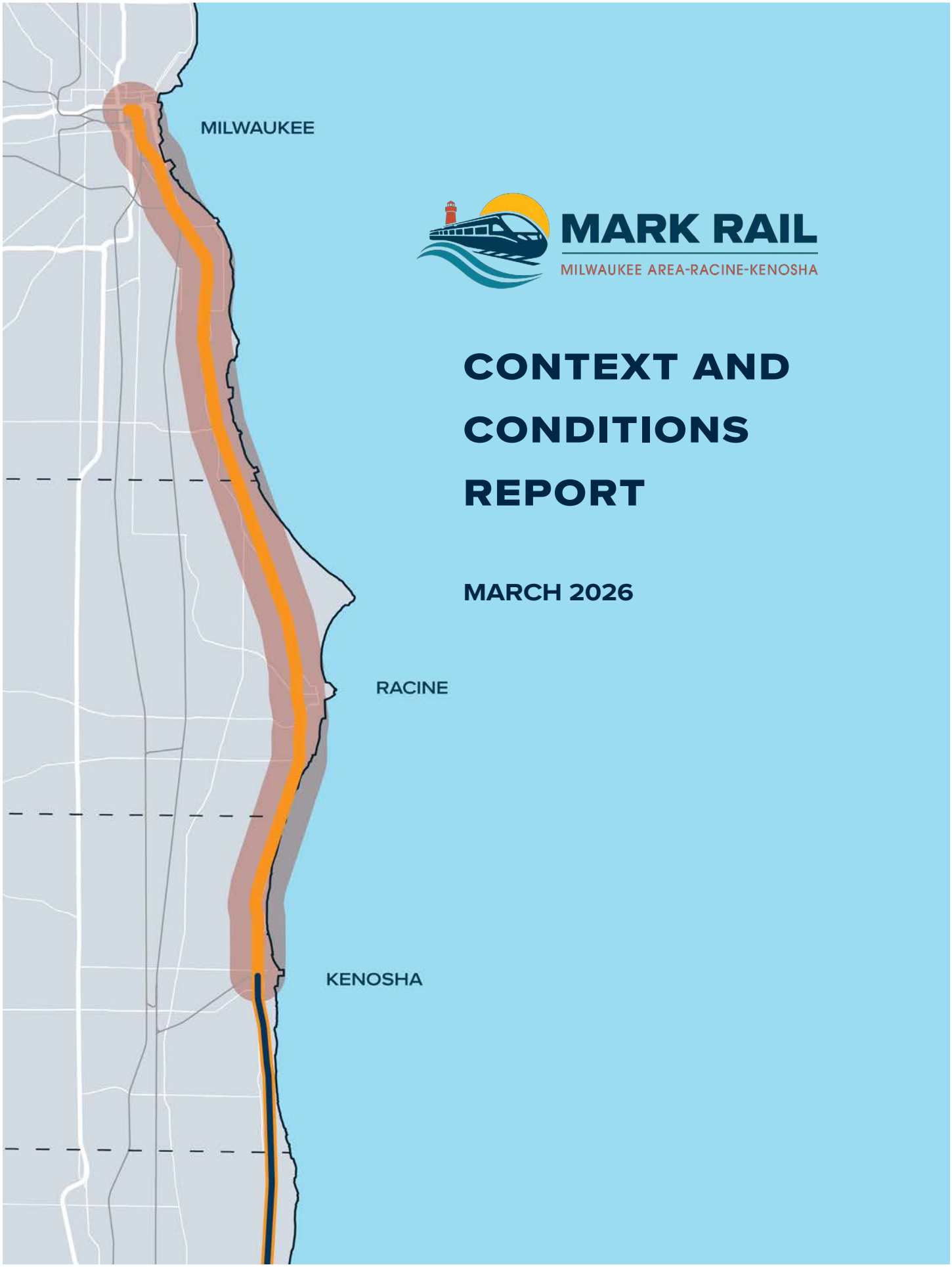

MARK RAIL
MILWAUKEE AREA-RACINE-KENOSHA

CONTEXT AND CONDITIONS REPORT

MARCH 2026

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STUDY BACKGROUND

The City of Racine has a clear interest in the restoration of passenger rail service in the railroad corridor at the western edge of downtown Racine that connects to Milwaukee, Kenosha, and from Kenosha to the Metra commuter rail system and Chicago. As part of the Consolidated Appropriations Act of 2022, Congress provided $5 million to the City of Racine for the "Kenosha-Racine-Milwaukee (KRM) Regional Rail Corridor." This appropriation is being coordinated through the Federal Transit Administration (FTA) in order to advance planning and engineering studies for a restored passenger rail line that in previous studies became known as the 'KRM' project.

Study Partners and Steering Committee

The City of Racine is acting as the overall project manager and administrator of the Congressional funds. Racine contracted with the Southeastern Wisconsin Regional Planning Commission (SEWRPC) to provide additional staff and asked the City of Milwaukee and City of Kenosha to join an informal project Steering Committee. The Wisconsin Department of Transportation (WisDOT) and SEWRPC were also represented on this project Steering Committee, which began meeting in the winter of 2024 and was replaced by a new passenger rail commission in December 2025.

Initial Study Scope and Consultants

In 2023, the City of Racine worked with SEWRPC staff to develop a scope of work to study options for bringing passenger rail back to the corridor from Milwaukee to Kenosha. A solicitation for consultant services was issued and a consultant team was under contract in the spring of 2024. One of the scope tasks was to prepare a detailed analysis of the existing conditions in the corridor from Milwaukee to Racine and Kenosha. SEWRPC took the lead on this task to produce this Context and Conditions Report 2025.

Project Branding

One of the first decisions the project Steering Committee took was to consider options for project branding prepared by the consultant team. This included various options for naming the study and also a project logo based on the selected name. At least three previous efforts in the corridor used the phrase: Kenosha-Racine-Milwaukee, or KRM, to brand studies for commuter rail and commuter bus concepts. The steering committee selected Milwaukee Area-Racine-Kenosha Rail Study, or MARK Rail Study, for this current effort. This reflects the three big cities the line hopes to connect, but also the potential for other stations in the Milwaukee area, including a stop near Milwaukee Mitchell International Airport. A logo with the MARK Rail branding was developed along with a project color and typography guidelines.

STUDY AREA AND STUDY CORRIDOR

At the broad scale the space between the metropolitan areas of Milwaukee and Chicago can be conceived as a north-south corridor—the Milwaukee to Chicago corridor—and it is frequently referred to as such, including in this report. But to be more precise and specific, the MARK Rail Study is defined by two primary geographies (see map at right):

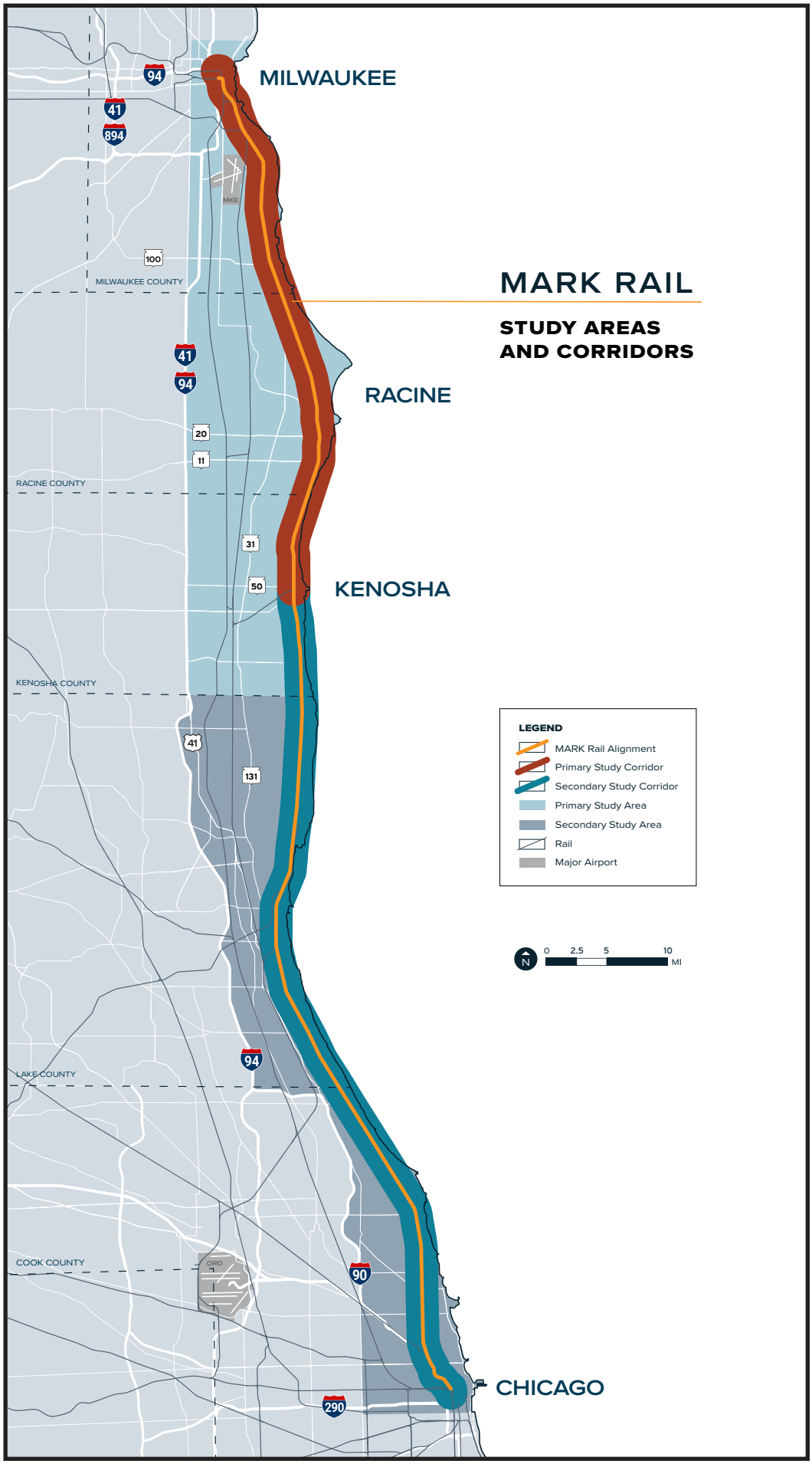
1. A **primary study area** from Interstate 94 east to the Lake Michigan shore and from downtown Milwaukee to the Wisconsin-Illinois state line
2. A **primary study corridor** south from the Milwaukee Intermodal Station (MIS) on Canadian Pacific Kansas City (CPKC) mainline connecting to the Union Pacific (UP) National Avenue Industrial Lead and then the UP Kenosha Subdivision to the Kenosha Metra station.

Combined, these track segments are referred to in this report as the MARK Rail alignment.

The primary study area and corridor reflect the need to develop a service within Wisconsin; with secondary reference to Metra's Union Pacific North (UPN) Line corridor south of Kenosha and areas in Illinois, which are shown on the map graphic as secondary study area and secondary study corridor. The reason to include these as secondary areas is because the MARK Rail service is being planned to continue on to Chicago.

The primary study corridor is specifically defined by a one-mile buffer off both sides of the MARK Rail track alignment. At the north end, the buffer extends out one mile from MIS and, at the south end, one mile from the Kenosha Metra station. Setting this exact boundary for the study corridor allows for consistent analysis and comparison of a variety of data sets.

The larger primary study area includes the area between Interstate 94 and Lake Michigan. This broader frame is used to explore the regional context that contains the MARK Rail corridor, especially in Racine and Kenosha // Counties, where the interstate sets a conceptual and functional divide between more rural and exurban areas to the west and the suburban and urban areas to the east, with real world implications for implementation of the project. Some references are also made to additional geographies south of the state line to communities served by Metra's UPN Line which operates on the UP Kenosha Subdivision into Chicago's downtown.


MILWAUKEE
RACINE
KENOSHA
CHICAGO
MILWAUKEE COUNTY
RACINE COUNTY
KENOSHA COUNTY
LAKE COUNTY
COOK COUNTY
MKE
ORD
94
41
894
100
20
11
31
50
131
90
290
MARK RAIL
STUDY AREAS AND CORRIDORS
LEGEND
MARK Rail Alignment
Primary Study Corridor
Secondary Study Corridor
Primary Study Area
Secondary Study Area
Rail
Major Airport
N
0 2.5 5 10
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REPORT PURPOSE AND APPROACH

The feasibility of restoring the lakeshore rail line connecting three of Wisconsin's largest and oldest cities has been studied before. What can get lost in the format of federal grant applications and environmental impact statements is that the Milwaukee-Racine-Kenosha corridor is a real place, with a long history integral to the State of Wisconsin, the Upper Midwest, and the United States. A key part of that story is the corridor's history of railroading: two railroad giants competed for riders in this corridor for more than a hundred years, then, suddenly, passenger rail was allowed to decline and the service through Racine stopped.

Place-Based Analysis

This report describes part of this history with a focus on transportation infrastructure and industry, along with a demographic sketch and economic snap shot. The best mapping resources are applied to show the pattern of land use, the transportation system, and the rail infrastructure. Photographs taken for this report by SEWRPC staff in the period from 2023 to 2025 show the actual conditions on the ground. A picture of the study corridor emerges. This **place-based approach** shows that the communities along the MARK Rail alignment have much in common, but also variations in landscape features and historical and current development patterns. There are numerous opportunities for reinvestment, economic rebound, and community revitalization.

The Case for MARK Rail

This existing conditions analysis begins to make the case, the argument, for MARK Rail. It shows that passenger rail was central to the physical layout of communities between Milwaukee and Chicago and that passenger rail was (and still is along the UPN) also central to the social and economic life. A separate Business Case is under preparation by the MARK Rail consulting team that will build on this context and conditions foundation to explore and account for the economic benefits that investment in this rail service would bring to the communities served and the rest of the State of Wisconsin.

This report is also a ready resource for elected officials, staff, consultants, and the public interested in MARK Rail. It shows the lay of the land, lists the major businesses and institutions, and the existing transportation system. It provides the necessary context for decision makers at the state and federal levels on the basic logic behind restoration of passenger rail in the corridor.

Chapter 2
Context

INTRODUCTION

HISTORICAL OVERVIEW OF PASSENGER RAIL IN THE CORRIDOR

DEMOGRAPHIC AND ECONOMIC CONTEXT

Population and Employment

Connectivity for Economic and Social Development

ORGANIZATIONAL AND PLANNING POLICY CONTEXT

INTRODUCTION

The MARK Rail Study corridor is a key part of the Great Lakes megalopolis connecting the two metropolitan areas of Milwaukee and Chicago with a nearly continuous band of urbanization along the western shore of Lake Michigan. The Cities of Racine and Kenosha remain distinct urban areas between the two major metros stretching along the lakeshore, and more recently out to the interstate highway. The aerial photograph montage (assembled from closeup Google Earth images) at left provides a view of the urbanization pattern. The more developed, urban parts of the corridor reflect more light from roofs, roads, and parking lots, while fields, woods, and semi-rural exurban areas show darker. Rural and conservation areas separate Kenosha from the massive conurbation starting at the state line that is Chicagoland.

While development of harbors and Great Lakes shipping played a major role in the founding and growth of Milwaukee, Racine, and Kenosha, it was the introduction of railroads in the 1850s that provided the necessary transport and bulk materials movement that transformed the western and southern coast of Lake Michigan into one of the world's great industrial powerhouses in the late 19th century to mid 20th century. Between Milwaukee's Machine Shop of the World centered on the Menomonee Valley and the steel works of south Chicago, Hammond, and Gary, hundreds of factories in the cities along the track just west of the lakeshore processed raw material from the vast interior of the Middle West into finished goods.

Enormous wealth was created, world wars were won, and a middle class was established based on 'good paying union jobs.' But this industrialization also left scars at factory sites with toxic contaminants in the ground and communities and populations that have struggled to recover from a long period of deindustrialization that started in the 1970s. Understanding the basic progress of urban development in the corridor, from a variety of data sets, provides context for planning a restored rail service.

This Context chapter traces the successive eras of transportation infrastructure and provides examples of how communities were shaped by key businesses that grew up along the track and at stations. The railroad era gradually declined as private ownership of cars grew from the 1920s on. Major vehicle, engine, and automobile parts manufacturers in the corridor played a role in this transition, but it was federal investments in new superhighways that turned decline of the private railroad business model into sudden collapse.

Decisions regarding the road and rail transport systems made during this period of transition put downtown Racine and Kenosha at a disadvantage. The megaregion aerial photograph reveals the straight line of I-94 and just how far away it is from the historical port and railroad cities of Racine and Kenosha. Goods movement along the interstate directs growth in logistics and warehousing to greenfield sites instead of within urban areas.

Given this legacy, the MARK Rail Study explores these existing conditions—how we got here and current challenges—and identifies opportunities to better connect these urban areas to a fast-paced economy that values above all connections and flow of goods, people, and information. Regional and rapid rail service has proven economic and social benefits, which is evident along Metra's UPN Line in Illinois. Kenosha is at the north end of the UPN service with seven weekday roundtrip trains to Chicago's Loop. The potential to connect the rest of the existing rail corridor north of Kenosha to the regional economic engine is clear. The exploration begins with a brief review of the history of railroad service in the Milwaukee to Chicago corridor.

HISTORICAL OVERVIEW OF PASSENGER RAIL IN THE CORRIDOR

It is difficult in 2026 to comprehend the role that passenger railroads played in daily life in the Milwaukee to Chicago corridor in the 19th and 20th centuries. Two private freight and passenger railroads with vast networks centered on Milwaukee and Chicago competed for customers in the corridor along with two regional railroads that served the metro areas and cities in between, meaning that four railroads offered express and local service from the heart of the two downtowns:

- Chicago & North Western (C&NW)
- Milwaukee Road (CMST&P)
- North Shore Line (officially CNS&M)
- The Milwaukee Electric Railway and Light Company (TMER&L)

The four railroads provided exceptional choice and access, as well as speed. The C&NW with its steam-powered '400' service (400 minutes Chicago to St. Paul) competed with the Milwaukee Road's 'Hiawatha' for fastest travel times, reaching speeds up to 100 mph. Those big trains roared down the corridor with limited stops, while the North Shore Line was an electric interurban railroad providing access to dozens of formal and informal flag stops along its exclusive track. In addition, the TMER&L operated heavy interurban trains on its 'M-R-K' route, as well as street-running trains that interfaced with smaller and lighter streetcars in Milwaukee, Racine, and Kenosha.

For many years, these private companies operated without public funds or direct public investment (except for land for railroad right of way and franchises to operate on city streets), including over a hundred years for the two big railroads and 70 years for the North Shore Line. But the need to reinvest and upgrade track to meet customer demand for speed, decent stations, and comfortable coach cars meant the margins were always slim, and bankruptcy always a threat, especially during economic downturns. By contrast, freight haulage does not require stations, fast track, or other amenities that passengers require.

The mass production and sale of private automobiles beginning in the 1920s started to cut into private railroad and streetcar profits. During World War II, rail service provided important resiliency to the transportation system during periods of shortages and rationing. But after the war, pent-up demand (including the years of the Great Depression) led to a surge in growth in housing in new suburbs accessed via new interstate highways. The massive federal investment in public roadways, especially interstate highways, struck at the core of the intercity rail model and local streetcar and interurban systems. A necessarily brief sketch is provided in this chapter of a long and complex history of railroading in the MARK Rail Study area and corridor.

A Hybrid Service Model: Local and Express

A review of historical records provides evidence of how for-profit railroads organized service between Milwaukee and Chicago. This short review of that history focuses on primary source materials from the Chicago & North Western Railway (C&NW) given that the MARK Rail alignment is primarily along the former C&NW track adjacent to the lakeshore from Kenosha to Milwaukee. Service along this line from Chicago up to Kenosha, Metra's current UPN Line, has in fact been in continuous service since the first tracks were laid down in 1854. A look at the electric interurban North Shore Line is also provided to put the overall service in the corridor into context.

Both the C&NW and North Shore Line ran local trains with numerous stops and express trains that emphasized a fast connection between the big cities. The built-in flexibility of this hybrid service model allowed for variation in the timetable and recognized the broader travel market, which included trains serving the Milwaukee metro area only; trains that proceeded on to Racine, Kenosha, and Chicago; and local service focused on trips to the Loop from the North Shore suburbs.

Maps and timetables show where stations were located, the frequency of trains, and where the various runs started and terminated. It must be noted that the history of operations stretches over many decades (roughly 1860-1971) and that timetables or maps offer a snapshot in time. These companies tried out new lines, constructed new track in their right of way, built bridges, created bypasses, and explored varying stops and stations in a competition for customers. The timetables changed frequently and in response to larger societal forces, including economic downturns and wars. Private investment was necessarily dynamic and waxed and waned in response to customer demand. Equipment and coaches were upgraded to retain customers, with things like heated cars, comfortable seats and interiors, and dining services all important to the overall business.

Chicago & North Western

The C&NW initiated service in the Chicago to MIlwaukee corridor in 1847. Passenger trains to Milwaukee ran along the Lake Michigan lakeshore until 1971, and continue to carry passengers to this day on the Metra Union Pacific North Line to Kenosha.

Station sites in Wisconsin included:

- MIlwaukee
- St. Francis
- Cudahy
- South Milwaukee
- Oak Creek
- Racine
- Racine Junction
- Kenosha

C&NW System Map (above) dated 3-93 shows the Kenosha Subdivision as a Primary Route Double Track with lakeshore cities labeled and indicated with a dot. However, by 1993 passenger service was not provided north of Kenosha. (Purchased from C&NW Historical Society and scanned by SEWRPC.)

A three-car commuter train (left), with the NorthwWestern logo across the nose of the EMD F7 locomotive, heads into Racine station in 1966. The bi-level coaches are similar to the ones used by Metra today on the UPN. Note that the C&NW had atypical left-hand running where the trains operated on the left track in direction of travel in double track segments. This meant that the eastern track was southbound to Chicago and station buildings were located to the east.

The lakeshore line north out of Chicago (initiated in 1854 and fully under the C&NW company name by 1883) built a critical customer base of north shore suburban commuters. These trains on the north shore segment made stops every few miles, even with heavy steam locomotives. Trains continuing north picked up speed in the open country up to Kenosha and Racine. Distance between stops shortened again to serve the customer base in the Milwaukee area making trips into the city, including stops at 'County Line,' South Milwaukee, and Cudahy. The 1892 timetable (image at right) even had stops within the City of Milwaukee at Bay View and National Avenue, reflecting dependency on railroads prior to construction of good, surfaced roads and streetcar lines.

This local, or commuter, service in the Chicago to Milwaukee corridor was likely the C&NW's most important local service from a revenue point of view. The rest of the C&NW system stretched north to Lake Superior and west to the Great Plains providing service to cities and towns spaced out along the track. In many cases the small towns were founded on the rail service, and depended on the company for travel, mail delivery, and freight. But the highest ridership was likely on trains serving the Milwaukee and Chicago metros.

As is the case with Metra's UPN schedule today, the local Milwaukee Division timetable had a number of weekday trains to and from Chicago that terminated in Waukegan, with those trains making all the station stops north of Evanston. The timetable also shows express service at the top of each hour all the way from Milwaukee with stops in Racine, Kenosha, Waukegan, Lake Forest, Highland Park, and Evanston. In the 1923 timetable (far right image), that trip took 2 hours and 10 minutes. This review of C&NW timetables shows that schedule planning changed over time, presumably in response to customer demand, new technologies, and competition with other railroads in the corridor. The C&NW ran local, limited, and express service between Milwaukee and Chicago for many decades. Stations and stops were eliminated as customers shifted to other services or modes.

STATIONS.	Mls from Chicago	No. 1 Ex. Sun.	No. 3 Except Sund'y	No. 119 Sund'y only.	No. 5 Except Sund'y	No. 7 Daily	No. 9 Daily	No. 11 Daily	No. 13 Daily
Leave									
Chicago	0	7.00AM	8.30AM	8.30AM	11.30AM	3.00PM	5.00PM	7.30PM	10.30PM
Clybourn Jc	3	7.10"	.....	8 40"	.....	.....	.....	.....	.....
Evanston	12	7.30"	8.55"	9.04"	11 55AM	.....	.....	.....	10.58"
Winnetka	17	7.40"	.....	9.15"	.....	.....	.....	.....	.....
Lakeside	18	7.42"	.....	f 9.17"	.....	.....	.....	.....	.....
Glencoe	19	7.45"	.....	9.22"	.....	.....	.....	.....	.....
Ravinia	21	f7.49"	.....	f 9.26"	.....	.....	.....	.....	.....
Highland Park	23	7.54"	9.12"	9.29"	12.12PM	.....	.....	.....	11.17"
Ft. Sheridan	24	7.57"	.....	f 9.32"	.....	.....	.....	.....	.....
Lake Forest	28	8.03"	9.20"	9.38"	12.22"	.....	.....	.....	11.27"
Lake Bluff	30	8.07"	.....	f 9.42"	.....	.....	.....	.....	.....
Waukegan	36	8.19"	9.33"	9.55"	12.37"	4.02"	6.08"	8.35"	11.42PM
Benton	40	8.27"	.....	f10.00"	.....	.....	.....	.....	.....
Spring Bluff	45	8 38"	.....	f10.09"	.....	.....	.....	.....	.....
Kenosha	51	8.55"	9.57"	10 22"	1.02"	4 25"	6.31"	9.00"	12.09AM
Racine Jc	60	9.10"	10.15"	10.38"	1.18"	4.40"	6.45"	.....	12.25"
Racine	62	9.15"	10.19"	10.43"	1.22"	4.45"	6.49"	9.19"	12.30"
County Line	70	9.28"	.....	10.56"	.....	.....	.....	.....	.....
So. Milwaukee	75	9.34"	.....	11.04"	.....	.....	.....	.....	.....
St. Francis	80	9.43"	.....	11.13"	.....	.....	.....	.....	.....
Bay View	82	9.47"	s10.51"	11.18"	.....	.....	s7.19"	.....	1.08"
National Ave.	84	9.50"	10.55"	11.23"	1.55"	5.25"	7.25"	9.55"	1 13"
Milwaukee .Ar	85	9.55"	11.00AM	11.30AM	2.00PM	*5.30"	7.30"	10.00PM	1.20AM
Waukesha	102	10.27AM	12.08PM	.....	.....	†6.02"	8.10"	.....	.....
Madison	167	12.25PM	2.20PM	.....	.....	†8 20PM	10 00PM	.....	.....
Arrive									

* Daily.
† Daily, except Sunday.
f Stop on signal or to leave passengers.
s Stop only to leave passengers.

C&NW 1892 Passenger Timetable

The No. 1 train departed Chicago at 7:00 AM, making all local stops, and arrived in Milwaukee almost 3 hours later at 9:55 AM. The No. 3 train was an express, making the same trip in 2 hours 30 minutes. A trip from Bay View to downtown Milwaukee was also possible in a matter of 8-12 minutes. (C&NW 1892, PDF download from streamlinermemories.info)

MILWAUKEE DIVISION

SOUTHBOUND

Effective Sunday, June 15, 1913

CHICAGO AND NORTH WESTERN LINE

CHICAGO & NORTH WESTERN RY.

MILWAUKEE DIVISION

Suburban Service

CHICAGO

RAVENSWOOD EVANSTON

WILMETTE KENILWORTH

WINNETKA

HIGHLAND PARK

FORT SHERIDAN

LAKE FOREST

WAUKEGAN KENOSHA

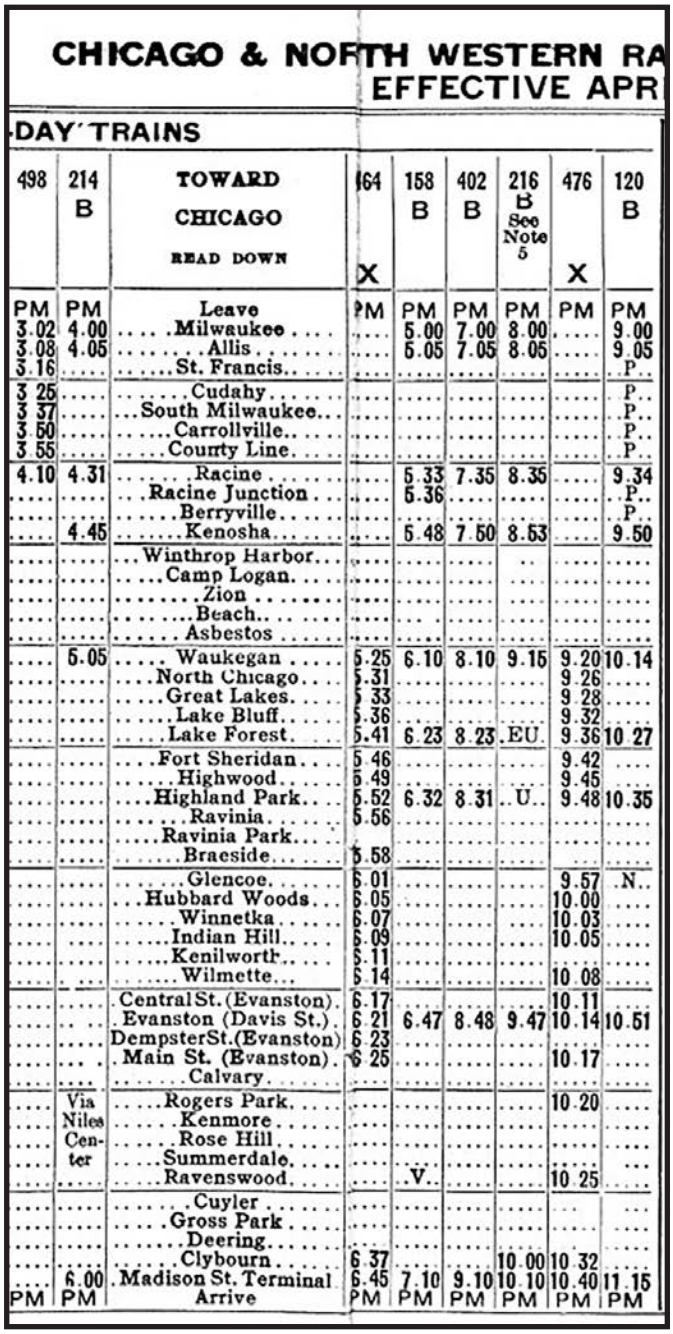
RACINE MILWAUKEE

and Intermediate Stations

HIRAM R. McCULLOUGH, Vice President — W. D. CANTILLON, General Manager

A. C. JOHNSON, Passenger Traffic Manager — C. A. CAIRNS, Gen'l Pass'r and Tkt. Agt.

Form 93 A578-13 (XXM) Subject to change



CHICAGO & NORTH WESTERN RA

EFFECTIVE APR

DAY TRAINS

498	214 B	TOWARD CHICAGO READ DOWN	164 X	158 B	402 B	216 B See Note 5	476 X	120 B
PM	PM	Leave	PM	PM	PM	PM	PM	PM
3.02	4.00	Milwaukee		5.00	7.00	8.00		9.00
3.08	4.05	Allis		5.05	7.05	8.05		9.05
3.16		St. Francis						P
3.25		Cudahy						P
3.37		South Milwaukee						P
3.50		Carrollville						P
3.55		County Line						P
4.10	4.31	Racine		5.33	7.35	8.35		9.34
		Racine Junction		5.36				P
		Berryville						P
	4.45	Kenosha		5.48	7.50	8.53		9.50
		Winthrop Harbor						
		Camp Logan						
		Zion						
		Beach						
		Asbestos						
	5.05	Waukegan	5.25	6.10	8.10	9.15	9.20	10.14
		North Chicago	5.31				9.26	
		Great Lakes	5.33				9.28	
		Lake Bluff	5.36				9.32	
		Lake Forest	5.41	6.23	8.23	EU	9.36	10.27
		Fort Sheridan	5.46				9.42	
		Highwood	5.49				9.45	
		Highland Park	5.52	6.32	8.31	U	9.48	10.35
		Ravinia	5.56					
		Ravinia Park						
		Braeside	5.58					
		Glencoe	6.01				9.57	N
		Hubbard Woods	6.05				10.00	
		Winnetka	6.07				10.03	
		Indian Hill	6.09				10.05	
		Kenilworth	5.11					
		Wilmette	5.14				10.08	
		Central St. (Evanston)	6.17				10.11	
		Evanston (Davis St.)	6.21	6.47	8.48	9.47	10.14	10.51
		DempsterSt.(Evanston)	6.23					
		Main St. (Evanston)	6.25				10.17	
		Calvary						
	Via	Rogers Park					10.20	
	Niles	Kenmore						
	Cen-	Rose Hill						
	ter	Summerdale						
		Ravenswood		V			10.25	
		Cuyler						
		Gross Park						
		Deering						
		Clybourn	6.37			10.00	10.32	
	6.00	Madison St. Terminal	6.45	7.10	9.10	10.10	10.40	11.15
PM	PM	Arrive	PM	PM	PM	PM	PM	PM

The 1913 cover (above left) for the C&NW's Milwaukee Division timetable. These were long, foldout schedules for specific train routes that customers would pick up at stations. The 1923 timetable (above right) shows the train schedule during the C&NW's heyday. Trains typically departed on the hour from Chicago or Milwaukee. Note that the 3:02 PM local train from Milwaukee made all stops, but terminated in Racine. Passengers continuing on to Chicago had 21 minutes to transfer at Racine to an express that left Milwaukee at 4:00 PM and departed Racine at 4:31, arriving in Chicago at 6:00 PM. (C&NW, 1913 and 1923, download from EdgewaterHistory.org)

While the local service was important, it was competition with its rival, the Milwaukee Road, for the run from Chicago to St. Paul, that made for the C&NW's most famous express train: The Twin Cities 400. The name advertised the promise to make that trip in less than 400 minutes (by one account 399 miles in 380 minutes, or an average speed of a mile a minute or 60 miles per hour). These were some of the fastest trains to run on the continent (to this day), exceeding 117 mph in some stretches. Note that to accomplish these speeds track had to be maintained to a much higher standard than for freight, and special constructs like 'superelevated track' were required for fast curves (these tracks were later removed from the Kenosha Subdivision after the end of passenger service). This type of express service required two tracks to allow the faster trains to pass the slower local trains. And, of course, in addition to technological enhancements, these '400' trains had very limited stops: only Evanston and Racine in the Milwaukee segment. Given its interior geographic position, the Milwaukee Road did not provide as many local stops out in the countryside, compared to the C&NW that ran through the neighborhoods and downtowns of all the communities stretched along the coast. This was a

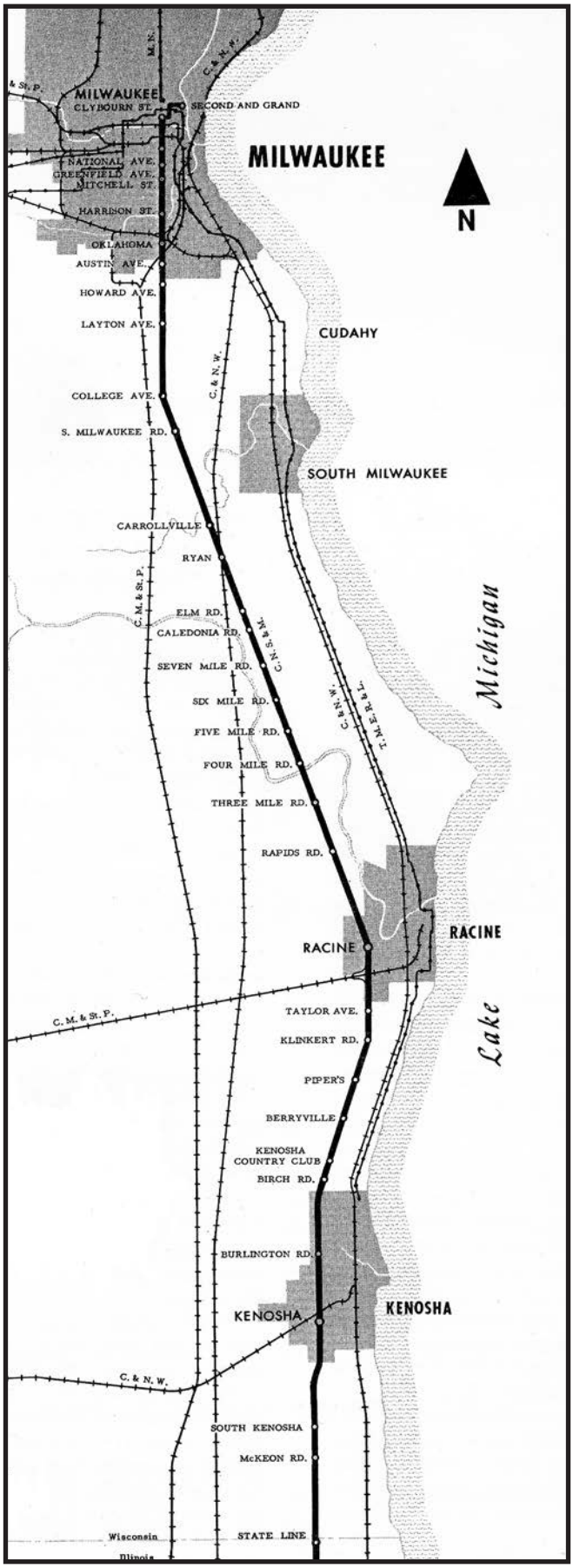
built-in advantage for the Milwaukee Road's fast train, the "Hiawatha," and played a role in the more recent history of passenger rail in the corridor.

The role of the interurbans was also significant, these being heavier trains than streetcars but with electric traction. The vast TMER&L system extended out from Milwaukee across southeastern Wisconsin to all the region's cities, towns, rural crossroads, and resorts (Canfield, 1972). Its M-R-K Line reached all the way to Kenosha, with track adjacent to the C&NW, although the City of Kenosha fought to keep the interurbans off city streets. This M-R-K Line started as a local service, which during part of its 50-year history included a transfer to bus service between South Junction in southern Milwaukee County and Caledonia Junction, then back onto the train. The company worked to build a rapid transit line during the Great Depression, primarily along the C&NW right of way, including new grade-separated crossings under or over the other railroad tracks. The rapid transit service had limited stops, but competition with the North Shore Line and the C&NW was difficult and ultimately the M-R-K Line was the first service of the four railroads to stop at the end of 1947. During the first half of the 20th century, it was the North Shore Line that became the backbone of local movement in the Milwaukee to Chicago corridor.

North Shore Line

Applying electric motors to public transport began in the 1880s. According to the *The North Shore Line* history by David Sadowski (2023), after a fare increase by the C&NW in 1893: "A group of North Shore financial backers decided the time was right to create a new railroad that would give the C&NW real competition, offering lower fares and more frequent service using electric streetcars that did not produce clouds of black smoke" (Sadowski p. 7). Service began between Waukegan and Lake Bluff in 1895, and after financial panics, bankruptcies, and different corporate reorganizations, the Chicago & Milwaukee Electric Railroad was able to extend its service to downtown Milwaukee in 1908. Under ownership of electric and transit magnate Samuel Insull, the Chicago North Shore & Milwaukee Railroad, branded as the North Shore Line (NSL), obtained access to elevated track into Chicago's Loop in 1919.

Unlike the two big steam-powered railroads in the corridor, the North Shore Line electric interurban offered easier access by providing dozens of stations, and even stops where customers could flag down a train at a road crossing. It also ran an express with its streamlined 'Electroliner' train, rivaling the 100 mph speeds of the steam locomotives. But it was the local service, allowing short trips, for instance out to rural country clubs, or trips between the dozens of North Shore cities, that generated, by some estimates, four out of five trips in the corridor. A look at the service in 1916 (map right) shows seven mapped stops between Kenosha and Racine alone. The NSL was the daily choice for working and middle-class customers because it connected more places and was cheaper than a



Map graphic scanned from *Interurban to Milwaukee* (1974) shows the four railroads operating passenger lines between Milwaukee, Racine, and Kenosha. The heavy black line is the route of the North Shore Line.

Map graphic at left and North Shore Line timetable at right were scanned by SEWRPC from *Interurban to Milwaukee* (Central Electric Railfans' Association, 1974). The map (drawn for the bulletin) shows the numerous designated stations along the North Shore Line (labeled as C.N.S.&M.). The M-R-K interurban operated by TMER&L runs parallel to the C&NW track from Milwaukee to the north side of Kenosha.

A North Shore Electroliner is shown at Racine station in the photo below. The station was located west of Washington Park at West Boulevard and Washington Avenue, with a connection to a local streetcar line to downtown Racine.

The timetable from 1922 (at right) lists only some of the stops shown on the map, including Birch Road, Five Mile Road, College Avenue, and National Avenue in Milwaukee. The timetable columns list Limited, Local, and Express trains. The schedule has robust service for North Shore suburbs and more limited, hourly service into Wisconsin.

NORTHBO

Miles from Chicago	TRAIN Nos.	407	121	513	123	515	409	125	517	17	519	411	127
		Lim. Daily	Local Daily ★	Exp. Daily ★	Local Daily ★	Exp. Daily ★	B Lim. Daily	Local Daily	Exp. Daily	Local Daily ★	Exp. Daily ★	Lim. Daily	Local Daily ★
	CHICAGO	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM
0.0	63rd & DORCHESTER	7 33					8 33					9 33	
0.3	UNIVERSITY	7 34					8 34					9 34	
0.7	COTTAGE GROVE	7 35					8 35					9 35	
1.2	SOUTH PARK	7 36					8 36					9 36	
3.8	43rd STREET	7 47					8 47					9 47	
7.6	ROOSEVELT ROAD	7 55		8 16		8 46	8 56		9 16		9 46	9 56	
	LA SALLE & VAN BUREN												
8.5	ADAMS & WABASH	8 00		8 20		8 50	9 00		9 20		9 50	10 00	
8.8	RANDOLPH & WABASH	8 01		8 21		8 51	9 01		9 21		9 51	10 01	
9.8	GRAND AVE	8 05		8 25		8 55	9 05		9 25		9 55	10 05	
15.7	WILSON AVE	8 21		8 41		9 11	9 21		9 41		10 11	10 21	
21.7	CHURCH ST. (Evanston)	8 39	8 45	8 59	9 15	9 29	9 39	9 45	9 59	10 15	10 29	10 39	10 46
22.8	CENTRAL ST. (Evanston)	8 43	8 50	9 03	9 20	9 33	9 43	9 50	10 03	10 20	10 33	10 43	10 50
23.5	LINDEN AVE	8 44	8 51	9 04	9 21	9 34	9 44	9 51	10 04	10 21	10 34	10 44	10 51
24.5	WILMETTE	8 48	8 56	9 09	9 26	9 39	9 48	9 56	10 09	10 26	10 39	10 48	10 56
25.4	KENILWORTH	8 51	9 00	9 12	9 30	9 42	9 51	10 00	10 12	10 30	10 42	10 51	11 00
26.0	INDIAN HILL		9 01	9 14	9 31	9 44		10 01	10 14	10 31	10 44		11 01
26.9	WINNETKA	8 54	9 05	9 16	9 35	9 46	9 54	10 05	10 16	10 35	10 46	10 54	11 05
28.0	HUBBARD WOODS	8 55	9 07	9 17	9 37	9 47	9 55	10 07	10 17	10 37	10 47	10 55	11 07
29.4	GLENCOE	8 59	9 12	9 21	9 42	9 51	9 59	10 12	10 21	10 42	10 51	10 59	11 12
30.8	BRAESIDE		9 15		9 45			10 15		10 45			11 15
31.1	RAVINIA PARK		9 17		9 47			10 17		10 47			11 17
31.8	RAVINIA		9 19	9 24	9 49	9 54		10 19	10 24	10 49	10 54		11 19
33.6	HIGHLAND PARK	9 06	9 23	9 29	9 53	9 59	10 06	10 23	10 29	10 53	10 59	11 06	11 23
34.9	HIGHWOOD	9 08	9 26	9 31	9 56	10 01	10 08	10 26	10 31	10 56	11 01	11 08	11 26
35.7	FT. SHERIDAN	9 10	9 30	9 33	10 00	10 03	10 10	10 30	10 33	11 00	11 03	11 10	11 30
37.3	SACRED HEART		9 32		10 02			10 32		11 02			11 32
38.6	LAKE FOREST	9 15	9 40	9 38	10 10	10 08	10 15	10 40	10 38	11 10	11 08	11 15	11 40
40.7	LAKE BLUFF	9 19	9 45	9 42	10 15	10 12	10 19	10 45	10 42	11 15	11 12	11 19	11 45
42.8	NAVAL STA. (Gt. Lakes)	9 23	9 53	9 47	10 23	10 17	10 23	10 53	10 47	11 23	11 17	11 23	11 53
43.1	NO. CHICAGO JCT	9 25	9 56	9 49	10 26	10 19	10 25	10 56	10 49	11 26	11 19	11 25	11 56
43.1	NO. CHICAGO JCT	9 25	9 57	9 49	10 27	10 19	10 25	10 57	10 49	11 40	11 19	11 25	11 57
43.5	NO. CHICAGO (18th St.)			9 52		10 22			10 52		11 22		
44.8	NO. CHICAGO (10th St.)			9 55		10 25			10 55		11 25		
46.1	WAUKEGAN (East Line)			10 00		10 30			11 00		11 30		
	Ar WAUKEGAN (El Park Line)												
	Lv WAUKEGAN (El Park Line)												
46.2	EDISON CT. (Waukegan)	9 30	10 05		10 35		10 30	11 05		11 45		11 30	12 05
50.3	BEACH (Pine View)									11 57			
52.4	ZION	9 38					10 38			12 02		11 39	
54.3	WINTHROP HARBOR									12 05			
55.3	STATE LINE									12 09			
57.3	McKEOWN ROAD									12 11			
61.2	KENOSHA	9 48					10 48			12 18		11 48	
65.0	BIRCH ROAD									12 26			
67.5	PIPERS									12 32			
71.1	RACINE	10 00					11 00			12 37		12 00	
76.9	FIVE MILE ROAD									12 51			
82.7	CARROLLVILLE									1 00			
86.5	COLLEGE AVE									1 08			
89.8	HOWARD AVE									1 15			
91.2	HARRISON ST. (Mil.City Lim)	10 24					11 24			1 20		12 24	
93.0	NATIONAL AVE	10 31					11 31			1 29		12 31	
93.8	6th and SYCAMORE	10 35					11 35			1 33		12 35	
	MILWAUKEE	AM	AM	AM	AM	AM	AM	AM	AM	PM	AM	PM	PM

ticket on the Milwaukee Road or C&NW.

The combined network created by the four railroads made it possible to get off the intercity service and onto a local streetcar. In downtown Milwaukee those transfers were relatively direct: the NSL's Sixth Street Terminal was a block away from the Milwaukee Road Everett Street Depot, which was also just across the street from TMER&L's streetcar and interurban terminal. This system of intercity railroads, interurbans, and streetcars made it possible to arrive in Milwaukee on a train from New York or Los Angeles via Chicago and immediately transfer to an interurban out to Waukesha or a streetcar to Shorewood. However, after World War II, that system was overthrown and diminished in favor of a newly dominant system of internal combustion, rubber-tired vehicles operating on concrete and asphalt roads and highways paid for through vehicle, gasoline, and income taxes and massive, unprecedented investment from the federal government to create the National System of Interstate and Defense Highways.

Collapse and Demolition

One of the better accounts of the sudden collapse of the private passenger rail business model brought by public investments in the interstate highway system is given in *Master Planners Fifty Years of Regional Planning in Southeastern Wisconsin: 1960-2010* under a section heading "1963: Ripping Up Tracks" (Hayes, 2010, p. 88-91). The journalistic narrative and quotations of those involved explains how the NSL, C&NW, and Milwaukee Road service and stations were all scuttled in a matter of months. The NSL was the first of the three operators to go bankrupt. Its business was moving people and its profit margin highly sensitive to a drop in ticket sales. When infrastructural change came with the completion of I-94 to Milwaukee, the decline was abrupt and the culprit clear; according to the account from the NSL's President, Harold Mason:

> "The North Shore Line has been a victim of the automobile and the expressway," Mason said. "Thorough investigation . . . has supported the North Shore Line's position that it cannot operate at a profit in competition with the expressway system and two modern railroads which parallel its right-of-way between Chicago and Milwaukee." (Hayes, 2010, p. 89).

Sadowski's history explains how the announced closure of the NSL led Chicago Mayor Richard Daley to send a telegram to other Chicago area mayors asking them to gather in his office in February 1961 "to discuss the projected abandonment of the North Shore Line Railroad and the possibility of initiating a mass transportation authority for the metropolitan area" (2023, p. 125). But the public sector was not prepared to save the service and on January 21, 1963, the NSL ran its last trip to Milwaukee and put its right of way up for sale. Immediately after the announced demise of NSL, the Milwaukee Road and C&NW, both running 14 roundtrips each day, said they could "easily absorb the four million passengers a year that had been riding the North Shore" (*Master Planners*, p. 89).

Wisconsin officials debated buying the NSL right of way, but the State Highway Commission determined it could only buy it for a highway; the Wisconsin Legislature would need to act to create a new agency to buy the property to use for mass transit, and it did not. To this day, no regional transit agency exists in the Milwaukee metro or southeastern Wisconsin. (The issue of the NSL right way comes up again in freeway planning, as described on page 18.) In Illinois, though Mayor Daley called for action in 1961, Sadowski points out: "it took until 1974 to create the six-county Regional Transportation Authority that helped save Chicago's commuter rail network" (p. 125). The NSL fell first, but additional collapse and change soon followed with the C&NW next to reduce its passenger service and seek to dispose of its right of way and facilities. In December 1962, executives from the C&NW told Milwaukee County and City officials that they needed to buy their right of way and lakefront depot, or they would sell to somebody else. "The elegant red brick depot with its Romanesque Tower had been a stunning, comforting sight anchoring the east end of Wisconsin Avenue since 1889" (Hayes, 2010, p. 89).

A poignant description of the final demise is given in *Master Planners* (Hayes, 2010, p. 90-91):

> To complete the Milwaukee passenger rail revolution, the County Expressway Commission in the summer of 1963 offered the Milwaukee Road, the only other railroad offering passenger service in Milwaukee, $2,250,000 to abandon its 1886 fortress-like depot at W. Michigan Street between Third and Fourth Streets and build a new depot on W. St. Paul Avenue. Razing of the old depot would make way for the eastward extension of IH 794 toward Lake Michigan. The Milwaukee Road's red brick and sandstone edifice in its day had been as noble in appearance as the North Western Railway's depot on the lakefront, although it had lost its imposing clock tower years earlier. Now suddenly, both depots were doomed.

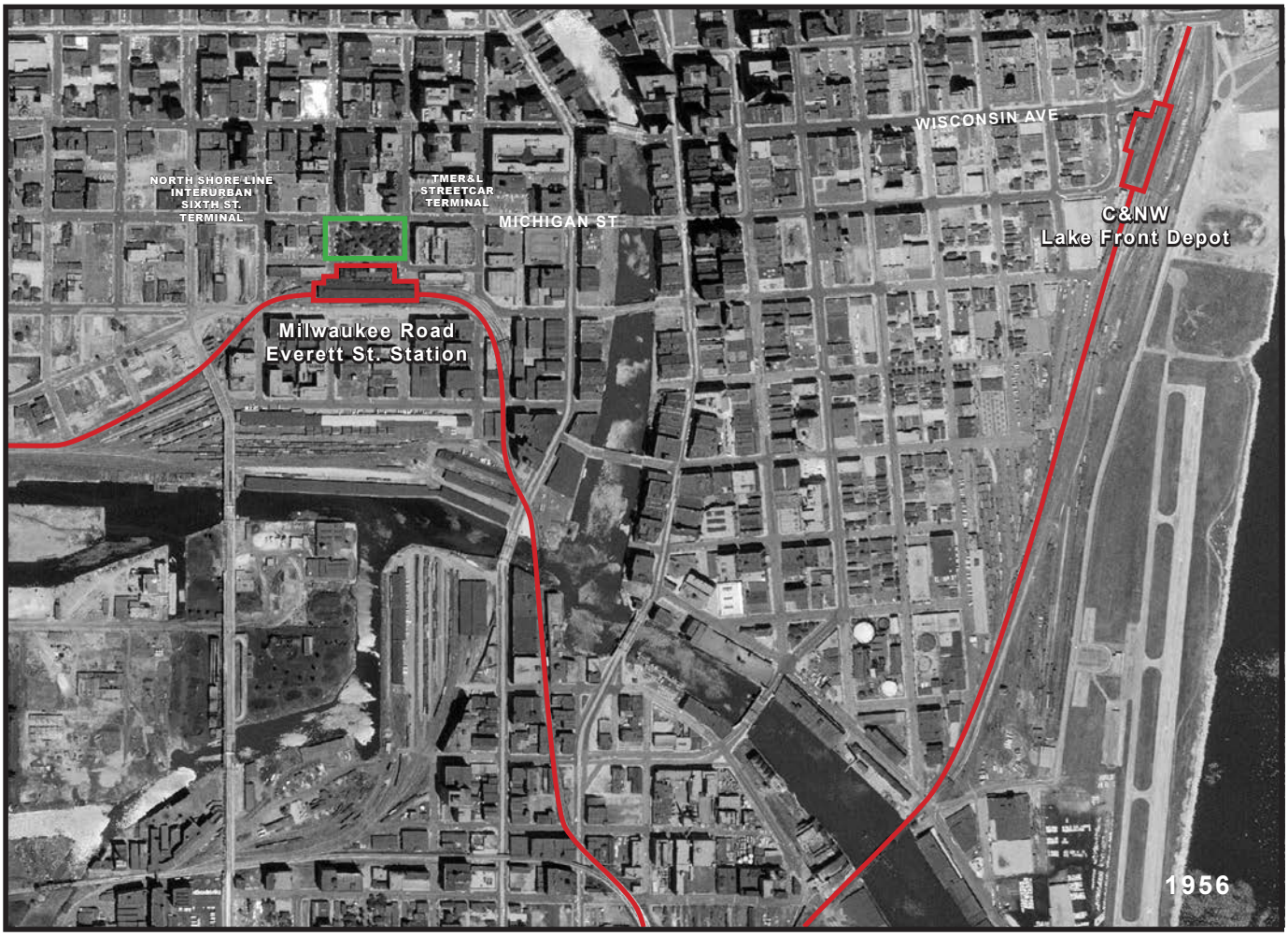
C&NW's Lakefront Depot photographed in 1965, after service was abandoned and the property sold to Milwaukee County. Photo credit: Ray Szopieray (courtesy of Karl Bandow and OnMilwaukee.com)

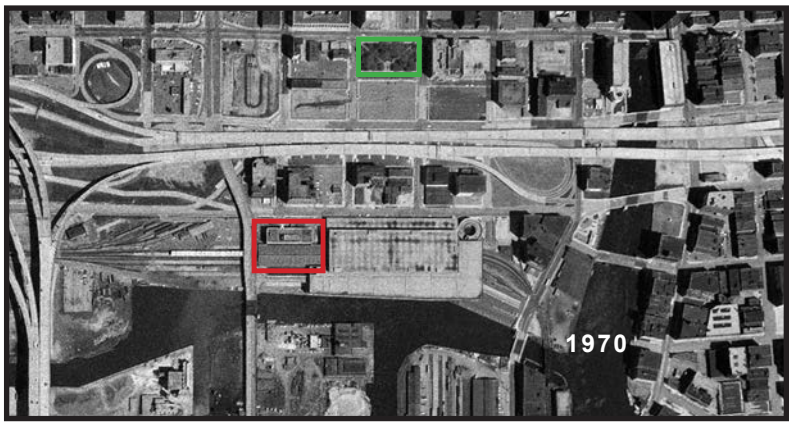
That October, the North Western Railway asked the Milwaukee Road if it would share the new passenger station. An agreement was reached, and thus, two magnificent 19th century railroad palaces were replaced with a small, mundane 1960s box, distinguished only by an arched steel tower that was intended to be viewed from downtown at the south end of Fourth Street. The view was quickly obscured by the construction of an elevated freeway (IH 794) a block north. It was just as well, because the steel arches soon rusted. After 1970, management of the depot was assumed by Amtrak . . . .

In 1964, Milwaukee County bought the North Western Railway lakefront property for $7 million. The grand old lakefront depot, increasingly inhabited by pigeons and badly vandalized, stood until 1968 when it was razed. The event was met with a sad silence. Many Milwaukeeans lamented its loss, but the grassroots effort to preserve the city's architectural treasures had not yet found its voice. When it did, early local preservationists adopted the North Western depot as their symbol of irretrievable loss. With money and will, it could have been saved.

Amtrak and the End of the C&NW Passenger Service

As the Class I railroads lost passengers to other modes in the mid 20th century, the railroad companies petitioned the federal government to release them from obligations





A series of three aerial photos trace the changes to the transportation system in downtown Milwaukee in the 1960s, from a mutltimodal system of passenger rail stations to an interstate freeway.

Above, 1956 aerial photo: downtown Milwaukee has two intercity train depots, an interurban terminal, and a streetcar terminal.

Middle, 1967 aerial: the old Milwaukee Road depot is demolished and a replacement station (opened in 1965) is pushed south of the cleared freeway right of way.

Bottom, 1970 aerial: construction of Interstate 794 nears completion.

Aerial photos download from Milwaukee County GIS (dates labeled) and assembled into a enhanced resolution montage and graphic by SEWRPC.

to provide passenger service. It should be understood that these private companies were established with land grants, millions of acres of land, and other incentives from the United States government with the provision that they provide passenger rail and freight service. But, with competition for passengers from other modes, including airlines and interstates, it became clear that, in most markets, moving freight was profitable while moving people was not.

The railroads lobbied Congress to release them from obligations to provide passenger service, resulting in the Rail Passenger Service Act of 1970. This legislation allowed the Class I railroads to hand the operation of passenger service over to a quasi-public corporation dubbed 'Amtrak.' Crucially for the MARK Rail corridor, the Act allowed Amtrak to consolidate routes onto a very small number of selected intercity corridors. One of the companies that sought to discontinue passenger service was the C&NW, which in 1970 still operated three trains per day between Chicago and Milwaukee on its track along the Lake Michigan shore, passing through Kenosha and Racine, and joining the Milwaukee Road track to the new Union Station south of I-794, its own depot already gone.

Planners were given only eight months to redesign the nation's passenger rail system that had been operating for more than 100 years. The emphasis was on planning for a nationwide network, rather than regional service needs. In November 1970, the U.S. Department of Transportation (USDOT) submitted to Congress and the Interstate Commerce Commission a preliminary report and recommendations for a bare bones national passenger rail system. Major end points of routes were identified, but not specific route alignments. Chicago and Seattle were designated end points, emphasizing long distance travel across the continent rather than regional connections. Between these end points, the Chicago to Twin Cities segment was identified for alignment analysis. Alternatives were evaluated via Milwaukee, from Rockford to Madison, or via East Dubuque.

The recommendation rejected the alternative route via Madison, given the higher population on the Milwaukee route and because there was no longer any service from Madison to St. Paul. Because of the legacy track locations and ownership, a route alignment including both Milwaukee and Madison was not considered. Note that this criterion that cut Madison out of Amtrak was the same one that cut service to Racine and Kenosha, because by that time, since 1963, the C&NW train to St. Paul had been abandoned.

The Milwaukee Road, officially the Chicago, Milwaukee, St. Paul & Pacific Railway, had existing service between Chicago and Seattle and was better positioned for the route to Seattle, having extended track to the Pacific Northwest early in its history. With comparatively limited track, the C&NW had to rely on its Union Pacific partner

> "The Chicago-Milwaukee route via the CNW line was not chosen because the Milwaukee Road is faster. No present service exists on that line to Minneapolis/St. Paul and heavy commuter train interference exists between Chicago and Milwaukee. Also this route segment serves essentially the same population as the Milwaukee Road line."
>
> – Annual Report of National Railroad Passenger Corporation, National Railroad Passenger Corporation, October 1971.

to get to the west coast. This continental scale, flyover approach to Amtrak route planning put the lakeshore track in southeastern Wisconsin at a distinct disadvantage and did not account for regional trips. The USDOT report also points to the presence of "heavy commuter train interference" along the C&NW Kenosha Subdivision track as another reason to recommend the Milwaukee Road alignment, even though it meant bypassing two regional population centers and historically railroad towns. These decisions made in 1970 and 1971 set the 'Empire Builder' long-distance route that Amtrak still runs today. It operates one train in each direction per day between Chicago and Seattle.

While the national route planning led to the selection of the Milwaukee Road alignment rather than the C&NW, the initial planning also retained three additional trains per day operating between Milwaukee and Chicago, with stops in Sturtevant and Glenview, for a total of four trains. Retention of these additional trains led to subsequent investments at the state level and the current service levels.

Hiawatha Service

Given the selection of the Milwaukee Road alignment by Amtrak in 1970, the status of passenger service on the former C&NW track has been tangential and in the background compared to the fits and starts of Amtrak's history in the corridor. What is pertinent is the way in which the restructuring of private passenger rail service into a quasi-public corporation controlled by Congress turned passenger rail into a political football subject to ideological arguments about the proper role of government and the constant demand that Amtrak, somehow, become profitable, even though the whole point of Amtrak was to relieve the private businesses from an unprofitable service. However, a brief discussion of Amtrak service is helpful to understand the broader struggle for passenger rail in the corridor.

In November of 1988, at the beginning of Mayor John Norquist's first term, the City of Milwaukee began to advocate for additional trains to Chicago. A rider survey states that: "It is the City of Milwaukee's belief that expanded and improved Amtrak service can be used as a tool in economic development efforts for the Milwaukee

area, since additional trains and improved train schedules may make it easier for Milwaukee's businesses to seek markets and to conduct other transactions in Chicago" (City of Milwaukee, 1989, p. 1).

The number of Amtrak trains that started and terminated in Milwaukee and Chicago fluctuated between two and five daily roundtrips in the period from 1971 to 1989, mainly subject to the funding available from Congress. A variety of schedules, equipment, and train branding names were tried out, in rough coordination with the long-distance trains that served Milwaukee to Seattle and some Midwest cities including St. Louis and Duluth. These scheduling experiments, in the end, confirmed that the majority of customer demand was in the two big cities only 90 miles apart. Improving that core service, branded successfully as the Hiawatha (after the Milwaukee Road service), has been the focus for the last 36 years.

Following major federal budget cuts, Amtrak reduced Milwaukee-Chicago service to two daily roundtrips in 1981. Amtrak increased service to three daily roundtrips in 1984. In 1989, WisDOT and IDOT sponsored a two-year demonstration project to increase Hiawatha frequencies from three daily roundtrips to five daily roundtrips. The project proved successful, and the two states have contracted with Amtrak to operate the Hiawatha service since then. If the States of Wisconsin and Illinois had not begun contracting with Amtrak in 1989 to increase Hiawatha frequencies, the Hiawatha likely would still be providing a reduced level of service today.

In 1991, state funding was secured to increase the Hiawatha service to seven roundtrips daily. Wisconsin has made the investment because there is general agreement with the City of Milwaukee's statement in 1988 that trains between Milwaukee and Chicago are an economic boon to both cities; the service is a frequent choice for business trips on weekdays and shopping or events on the weekend. This increased state funding pays for more trains staffed by Amtrak and critical upgrades to track owned by the private railroad.

During the last decades of the century, the two legacy railroads succumbed to bankruptcies and mergers. The Milwaukee Road, at one time Milwaukee's largest employer, filed for bankruptcy in 1977 and was sold to the Soo Line Railroad in 1985. The Soo Line was acquired and merged with the Canadian Pacific Railway in 1990. In late 2021, the Canadian Pacific merged with the Kansas City Southern and now uses CPKC as its abbreviation. References in this report to the historical alignment of the Milwaukee Road are the same as those properties now owned by and referred to as the CP or CPKC. The historical names are used as appropriate to the eras being discussed. What was left of the Chicago & North Western was acquired by the Union Pacific Corporation in 1995. Its properties are referred to as UP in this report.

Interstate Skips Racine

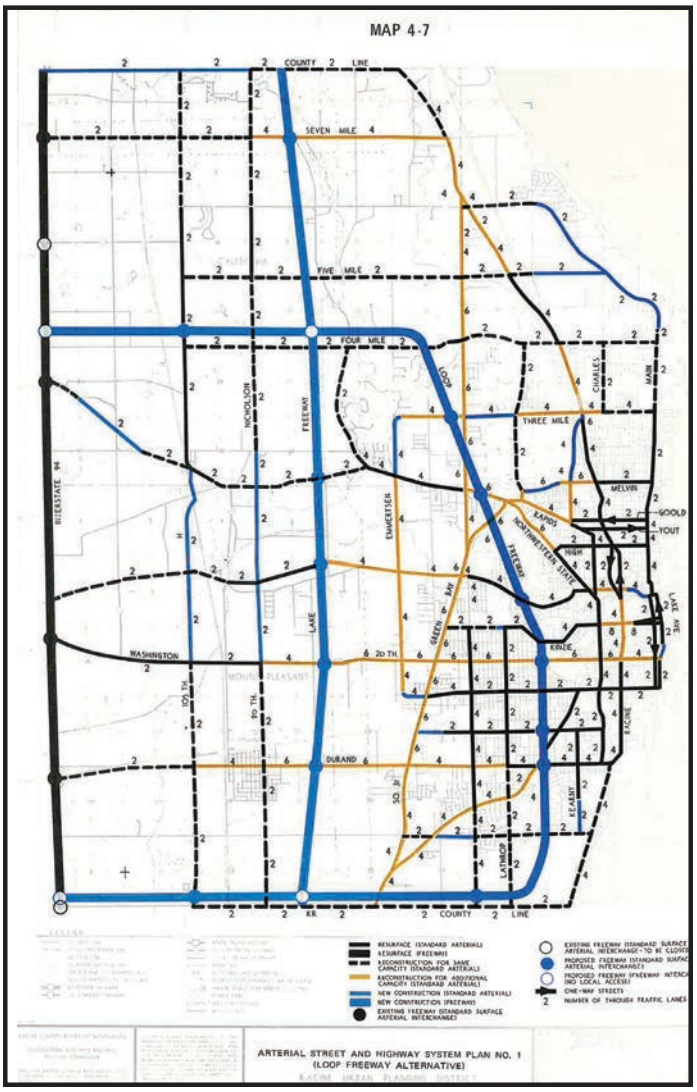
During the same period when passenger rail service was collapsing in the study corridor, decisions were made to align the new interstate in a way that left the Cities of Racine and Kenosha without direct access to the new regional transportation network, specifically I-94. In part, the decision to put Amtrak on the Milwaukee Road track and the decision to align I-94 away from the lakeshore were based on the same geography: the west coast of Lake Michigan is not a straight line between Milwaukee and Chicago. Downtown Racine is about 8 seconds longitude to the east of downtown Milwaukee (see longitude map); meaning an alignment from the south has to bend east to Racine and back west to Milwaukee. (Note the C&NW and North Shore Line depots were both located west of downtown Racine.) This geography does not add much track distance when comparing the CPKC/Amtrak alignment to the UPN because both converge on Chicago, and the UPN has a more direct route into the Loop. But an interstate highway has a much wider right of way than a railroad and, in general, interstate planning sought to avoid alignments through urban areas and towns. The I-94 alignment, which is well west of the coast and its historical urbanization, meant fewer impacts and less expensive acquisition of primarily agricultural and rural lands.

Planning documents show that regional and local highway planning from the 1960s into the 1970s considered how to connect downtown Racine to the interstate system. These reports include:

- SEWRPC Planning Report No. 7 Volume Three, *Recommended Regional Land Use And Transportation Plans 1990*, November, 1966
- SEWRPC Planning Report Number 14, *A Comprehensive Plan For The Racine Urban Planning District Volume Two*, 1972
- SEWRPC, *A Jurisdictional Highway System Plan For Racine County*, 1975

A proposed "Lake Freeway" was part of the regional highway plan connecting from I-794 in Cudahy to the interstate south of the state line. This Lake Freeway would have been aligned halfway between I-94 and the lake, and included a secondary 'Racine Loop Freeway.'

Below: map graphic from a 1972 planning report (SEWRPC, 1972) shows a Loop Freeway Alternative (thick blue line), which proposed to use part of the abandoned NSL right of way to bring a freeway closer to downtown Racine.



Years earlier, at the end of the North Shore Line in 1963, (Hayes, 2010, p. 89) consideration was given to using the old NSL right of way for a truck highway or reserve it for future mass transit. But no action at the state level was taken and by the mid-1960s the City of Racine had ownership of the former NSL right of way. And yet, the Common Council voted in August 1970 to not retain it for a future highway alignment. When a subsequent intergovernmental Citizen Advisory Committee (SEWRPC, 1972) recommended in favor of this freeway loop, including using the old interurban right of way, the Common Council voted again, on September 17, 1974, in opposition to the loop freeway alignment, holding out hope that some other option would be identified. The discussion in the 1970s does not show consideration of using the NSL right of way for a mass transit line. All the emphasis was on expanding roads and limited-access highways.

The result of decisions made during this period of transition is that Racine and Kenosha are not as well connected to their own region, and the other cities along the west coast of Lake Michigan, as they were earlier in their history. In fact, the cessation of passenger ship service along the coast was another broken link; for the first decades of their history there were regular trips between the harbors from Milwaukee to Chicago. It is very unlikely that a new interstate highway would be considered now to better connect Racine and Kenosha. However, the former C&NW railroad right of way along the lakeshore still exists: it is currently known as the UP Kenosha Subdivision. That track is at the western edge of downtown Racine and downtown Kenosha, with an existing Metra station on the UPN Line to Chicago. The track also passes through Oak Creek, South Milwaukee, Cudahy, St. Francis, and the southside of Milwaukee. Three old C&NW depots still exist, in Racine, South Milwaukee, and Cudahy. The UP has two rail corridors between Milwaukee and Chicago and the UP Milwaukee Subdivison carries the majority of its freight traffic. Only a few freight customers are served on the lakeshore subdivision: delivery of coal to the Oak Creek power plant generates the most tonnage for UP and that power plant is planned for conversion to natural gas.

Looking first at this infrastructure history provides the necessary background to understand the physical realities of the transportation system and how these systems shaped the rest of the social, economic, and policy context found in the MARK Rail corridor as it is today.

DEMOGRAPHIC AND ECONOMIC CONTEXT

The MARK Rail Study primary study corridor is aligned (orange line on graphic at right) through the following communities in Wisconsin, from north to south.

Milwaukee County

- City of Milwaukee
- City of St. Francis
- City of Cudahy
- City of South Milwaukee
- City of Oak Creek

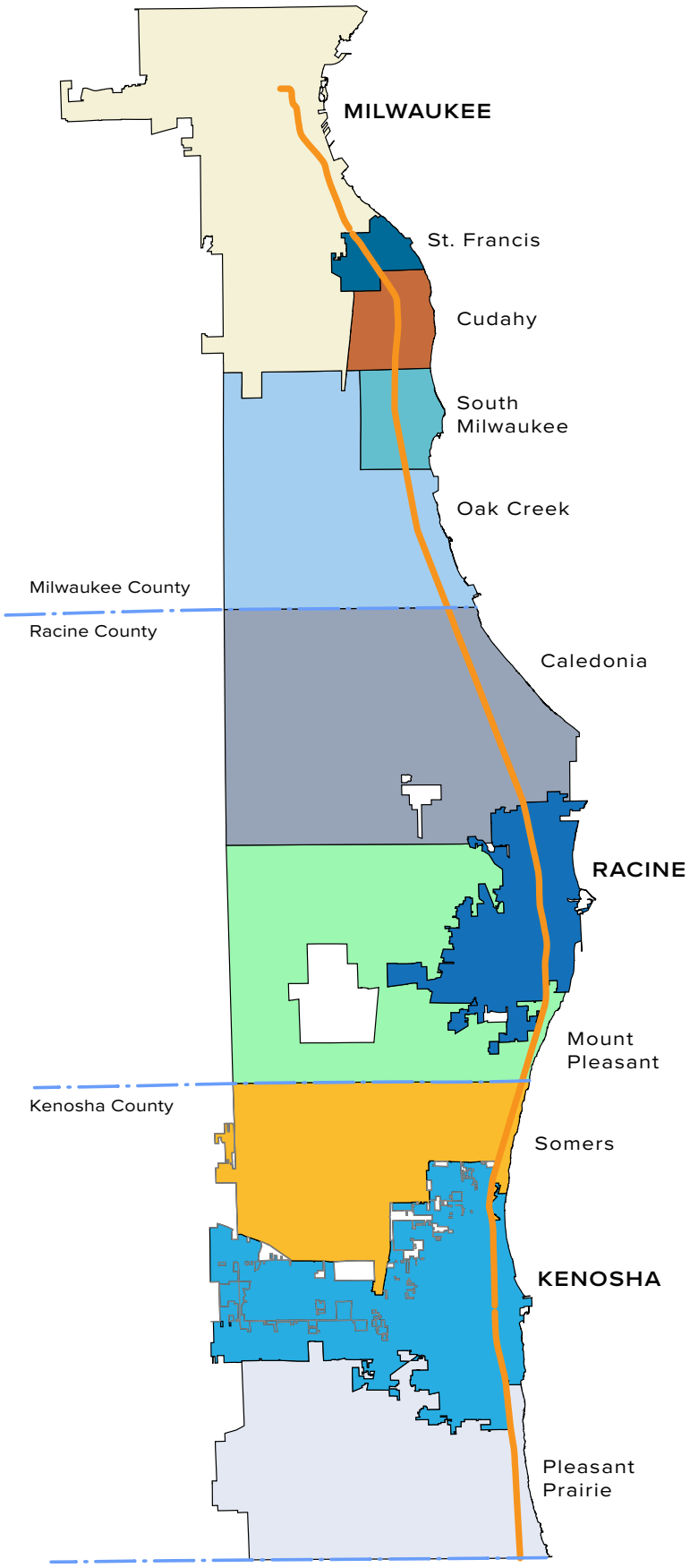
Racine County

- Village of Caledonia
- City of Racine
- Village of Mount Pleasant

Kenosha County

- Village of Somers
- City of Kenosha
- Village of Pleasant Prairie

The U.S. Office of Budget and Management has defined two Combined Statistical Areas (CSAs) and three Metropolitan Statistical Areas (MSAs) within the study area. These areas are defined based on population densities and employment trip percentages, which help to understand how a metropolitan area functions. The City of Racine is part of the Racine-Mount Pleasant MSA within the larger Milwaukee-Racine-Waukesha CSA (population of about 2 million). The City of Kenosha is within the Kenosha MSA but is actually part of the massive Chicago-Naperville CSA (population of about 10 million). These designations reveal that people living in Kenosha make more work trips to employment in Chicagoland than to Milwaukee. Racine is geographically, economically, and functionally between the two bigger employment areas, but closer to the Milwaukee metro. These basic demographic and geographic aspects of the study area have very real implications for MARK Rail planning: Racine is not a suburb of Milwaukee, nor is it part of the Milwaukee metro area in the way that Waukegan is part of the Chicago metro area. Located between the two larger metros, Racine is proximate but not as well connected as it might be.



Population and Employment

Three primary factors shape population dynamics in communities along the MARK Rail line:

1. societal population trends
2. local employment trends
3. available land and annexation policies

Demographic data from the decennial U.S. Census show population and household growth, and some decline, over the 70 years from 1950 to 2020. Looking at each 10-year census, a pattern emerges of growth in the period from 1950 to 1970 within Milwaukee County communities. The City of Milwaukee's population peaked in 1960 with a decline by 1970, which is consistent with the national demographic trend of rising birth rates following World War II that peaked in the early 1960s, then declined.

In the Milwaukee metro area, growing families seeking more bedrooms and bigger yards moved to suburban communities outside Milwaukee, thus the sudden drop in population between 1960 and 1970. Immediately south of Milwaukee, St. Francis, Cudahy, and South Milwaukee continued to grow to their peak populations recorded in the 1970 Census. A child born in these communities in 1950 was 20 years old by 1970, and many of those young adults moved out of their parents' houses in places like Cudahy to other regions or suburbs further west or south where land was available for new housing.

In parallel with basic population dynamics, the other major factor in the corridor affecting population growth or decline is the availability of jobs. Communities along the old C&NW were strongly associated with businesses served by the railroad; and in a number of cases those businesses anchored the downtown or main street (see inset). Growth in manufacturing jobs contributed to population rise in the corridor into the 1970s. These were, and to a certain extent still are, factory towns not commuter suburbs. However, a change in global economic factors in the 1970s, the aging of factory physical plant, and movement of capital 'offshore' led to a loss of manufacturing jobs, and in some areas, population.

Note that one municipality in Milwaukee County in the MARK Rail corridor continues to gain population, which reveals a crucial third factor in population trends: land to grow. In 1960, Oak Creek had less than 10,000 residents, but was over 36,000 residents in 2020. Oak Creek is more of a traditional suburb, although it had industrial plants as well along the Lake Michigan shore and proximate to the C&NW track. Over the period up to 2020, Oak Creek was able to continue to grow within its city limits, having annexed large areas of undeveloped land all the way to the county line. However, that land supply is being built out. Like other cities in the corridor, Oak Creek is planning and implementing major land reuse projects on former industrial properties, near the UP track, that will add to its population before the next census in 2030.

Population for Cities in the Primary Study Corridor: 1950 to 2020

City	1950	1960	1970	1980	1990	2000	2010	2020
Milwaukee	637,392	**741,324**	717,372	636,295	628,088	596,974	594,833	577,222
St. Francis		10,065	**10,460**	10,095	9,245	8,662	9,363	9,161
Cudahy	12,182	17,975	**22,078**	19,547	18,659	18,429	18,267	18,204
South Milwaukee	12,855	20,307	**23,297**	21,069	20,958	21,256	21,156	20,795
Oak Creek		9,372	13,928	16,932	19,516	28,456	34,451	**36,497**
Racine	71,193	89,144	**95,162**	85,725	84,298	81,855	78,860	77,816
Kenosha	54,368	67,899	78,805	77,685	80,352	90,352	99,218	**99,986**

Source: US Census and SEWRPC

The Cudahy Packing Company moved out of Milwaukee to a new location along the C&NW tracks in 1893 and lobbied for a station. The small, existing settlement was renamed 'Cudahy' and grew up around the meat packing plant that developed a well known bacon brand. The meat processing complex, now under the Smithfield brand, is just south of Layton Avenue and the old North Western depot.

For decades, South Milwaukee was known as the home of Bucyrus-Erie, a manufacturer of huge excavator machines. The rise and fall of employment at the main factory seems to have affected the overall population within the city limits, which dropped from 23,297 in 1970 to 20,795 in 2020. This drop of 2,500 in population is small in comparison to Milwaukee or Racine, but nonetheless a 10.7% decline for a small town. Caterpillar Corporation acquired Bucyrus in 2010 and still operates an industrial plant on the northern part of the old property. The City of South Milwaukee recently approved a mixed-use reuse and infill project on the former Bucyrus headquaters site, which fronts on Milwaukee Avenue immediately north of the old C&NW station.

The same factor shows a striking difference between Racine and Kenosha. For most of its history, Kenosha was smaller than Racine, but between 1990 and 2000 Kenosha grew larger. Racine is land locked, surrounded by Mount Pleasant, and unable to annex any additional land. Meanwhile, Kenosha continues to annex land all the way to I-94, and even beyond it to the west. These existing jurisdictional lines reinforce the high value of MARK Rail to Racine. The City of Racine cannot extend its future development out to the interstate and thereby grow its population, but it can infill and redevelop along an existing, underutilized railroad corridor.

Looking at census data on households, a similar trend is apparent. In 1950, the City of Racine had twice as many households than the remainder of Racine County. And the city still had more households than the whole rest of the county up to the 1990 Census. Construction of new subdivisions in Mount Pleasant and exurban and rural parts of the county means that county households continue to grow, while Racine is stagnant.

Trends in Racine were similar to Milwaukee: robust growth from 71,193 residents in 1950 to a peak of 95,162 in the 1970 Census. Major employers in the downtown had a lot to do with this growth in population, attracting residents with work in skilled trades as well as factory line work. Two businesses tell much of the story.

Households in Cities and Remainder of County: 1950 to 2020

Year	City of Milwaukee	Remainder of Milwaukee County	City of Racine	Remainder of Racine County	City of Kenosha	Remainder of Kenosha County
1950	185,734	63,498	21,165	10,234	19,102	5,856
1960	230,987	83,888	27,064	13,672	20,593	8,952
1970	236,981	101,624	29,851	19,945	24,245	11,223
1980	241,818	121,835	31,744	27,674	27,964	15,100
1990	240,540	132,508	31,767	31,969	29,919	17,110
2000	232,188	145,541	31,449	39,370	34,411	21,646
2010	230,221	153,370	30,530	45,121	37,376	25,274
2020	235,410	158,191	31,133	47,826	39,282	27,560

Source: US Census and SEWRPC

Western Publishing was headquartered within a few hundred feet of Racine's C&NW station, between Liberty Street and Mound Street. The complex of buildings housed some of the largest printing presses and binding machines in the country and between 1907 and 2001 produced a vast trove of materials that were foundational to American popular culture, including a series of books for children, comic books, maps, puzzles, cookbooks, and all sorts of other published works stamped with the "Western Publishing" label. Proximity to the station with express trains to Chicago and from there to the rest of the country must have been convenient for business trips to editorial offices in New York and Los Angeles. Company employees—from press operators and lithographers, to artists and writers—also had direct access to the rail line for commute trips.

images on this page courtesy of Racine Heritage Museum. Western Publishing above circa 1950s. J.I. Case warehouse (1947) on the southside of the Root River, and an undated aerial photo showing the Case factories on both sides of the river oxbow.

Most important in terms of the number of employees in the City of Racine and the downtown station area was the growth of the J.I. Case Company. Jerome Case invented a new grain threshing machine and opened a business to manufacture farm equipment in Racine in 1843. The threshing machine factory and a plow works grew to fill both banks of the bend in the Root River from State Street to Water Street. BizTimes Milwaukee reported in a 2018 article ("Reinventing Racine," September 3) that: "At its peak, J.I Case Co. employed more than 5,500 people, serving as the city's largest employer for 120 years." Mergers and growth into a global giant (now part of FIAT) with new manufacturing plants in countries with lower labor costs led to layoffs in Racine. The demolition of the old manufacturing plant in the downtown has left 27 acres vacant along the river and Water Street. Additional undeveloped land at the east end of State Street surrounds the former corporate headquarters where more office space was planned but never developed. The loss of two foundational businesses that brought thousands of employees to live in the city and work in the downtown helps to explain the loss of population.

The rapid growth and sudden decline in factory jobs in the corridor also was a factor in the changing racial demographics in the corridor, specifically in Milwaukee and Racine. A series of articles in the *Milwaukee Journal Sentinel* published in December 2004 (originally titled "Hit by a global bus") provides a detailed account of the changing fortunes of Black industrial workers in Milwaukee. The research shows that Blacks moved to Milwaukee relatively late in the second 'great migration' during and following World War II in comparison to other Midwest cities. This population of mostly unskilled labor filled jobs in manufacturing into the 1970s, with great increases in family income compared to agricultural work in the South. However, when the manufacturing businesses very suddenly shifted work to right-to-work states in the South and to Mexico, or went out of business altogether, the African-American population was plunged into a decades-long economic depression. The article states that between 1967 and 2001 "Milwaukee lost nearly 83,000 manufacturing jobs, a 69% decline." Similar job losses happened in Racine.

The census data show that the Black/African-American population in Milwaukee and Racine grew as a percentage of the population from 1980 to 2020, while the number of white residents declined. In Racine, Black and Hispanic populations continue to grow, together almost 43% compared to 53% white in the 2020 Census. Unemployment, poverty, and lower educational attainment present ongoing challenges, one with roots in fundamental shifts in the global economy that brought impacts to local residents and businesses. As the Journal Sentinel research shows, these issues are concentrated in neighborhoods along railroad corridors where the factories were located.

MARK Rail seeks to reinvest and revitalize the Union Pacific lakeshore corridor by connecting its residents and the land in the corridor to opportunities in the greater megalopolis: opportunities for residents to commute to employment near new rail stations and opportunities to attract new investment to large sites abandoned by industry in the 1970s and 1980s.

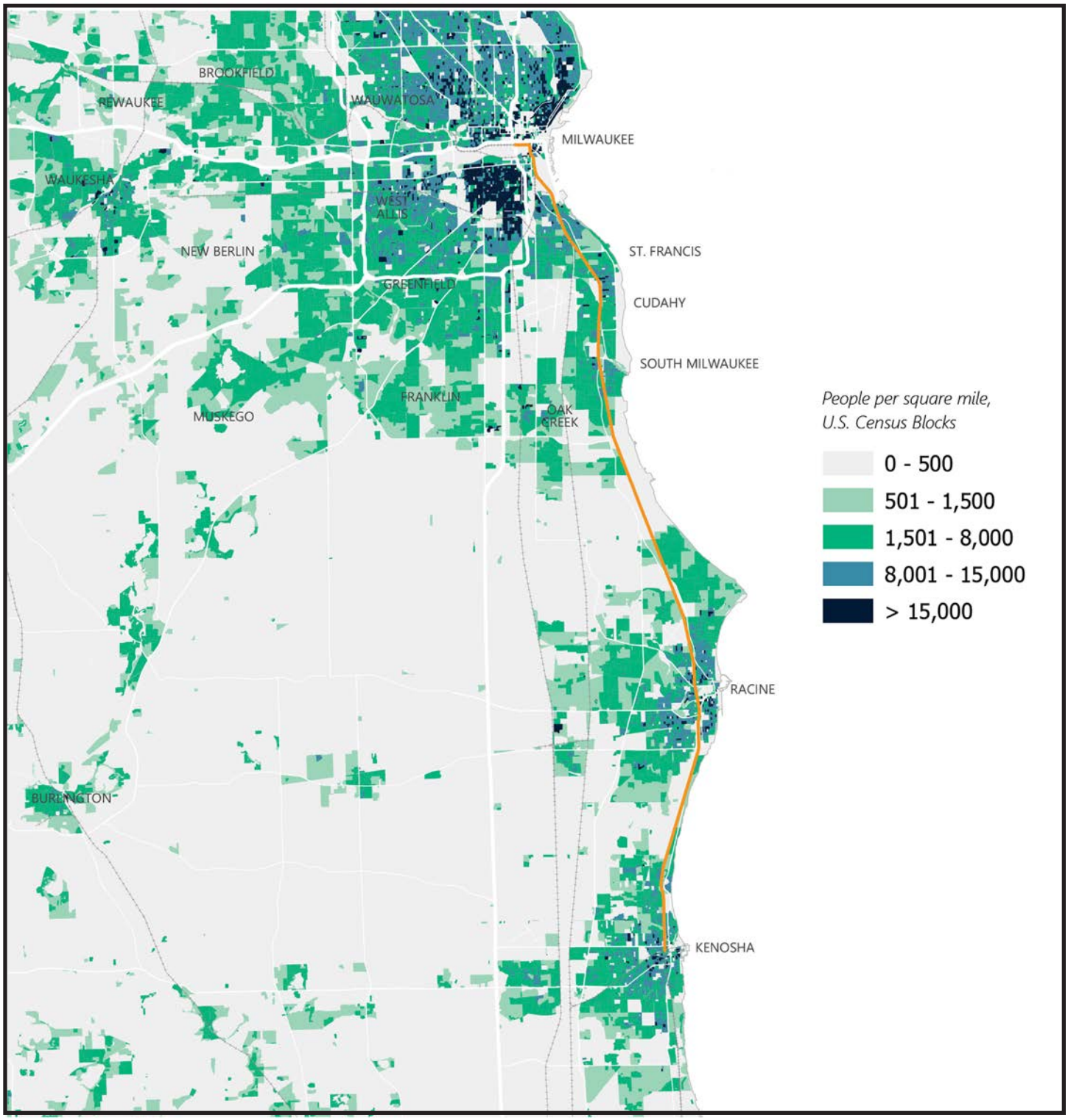
However, even with these decades-long trends, analysis of population and job densities (see map graphics on next page) shows a clear pattern of more people living along the MARK Rail corridor than other parts of Racine or Kenosha Counties. **The two county seats remain the fourth and fifth largest cities in the State.** The population is generally denser in the downtown and adjacent older neighborhoods where lots are smaller and more two-unit houses and apartments were built. The lake is a major attraction for the highest-density, multiple-unit, residential structures, where the most recent construction is bringing new life to both downtowns.

Racial Characteristics and Change: 1980 to 2010

City	Race	1980 Population #	Percent of Total	1990 Population #	Percent of Total	2000 Population #	Percent of Total	2010 Population #	Percent of Total
Milwaukee	White (non-Hispanic)	453,576	71.3	381,714	60.8	270,989	45.4	220,219	37.0
	Black/African American (non-Hispanic)	145,832	22.9	189,408	30.1	220,432	36.9	233,325	39.2
	Hispanic - Any Race	26,111	4.1	39,409	6.3	71,646	12.0	103,007	17.3
	Other Race	10,693	1.7	17,557	2.8	33,907	5.7	38,282	6.5
Racine	White (non-Hispanic)	67,056	78.2	61,408	72.9	51,962	63.5	42,189	53.5
	Black/African American (non-Hispanic)	12,480	14.6	15,270	18.1	16,349	20.0	17,341	22.0
	Hispanic - Any Race	5,501	6.4	6,853	8.1	11,422	13.9	16,309	20.7
	Other Race	688	0.8	767	0.9	2,122	2.6	3,021	3.8
Kenosha	White (non-Hispanic)	71,083	91.5	69,798	86.8	71,686	79.3	68,967	69.5
	Black/African American (non-Hispanic)	2,777	3.6	5,037	6.3	6,810	7.5	9,540	9.6
	Hispanic - Any Race	3,110	4.0	4,732	5.9	9,003	10.0	16,130	16.3
	Other Race	715	0.9	785	1.0	2,853	3.2	4,581	4.6

Source: US Census and SEWRPC

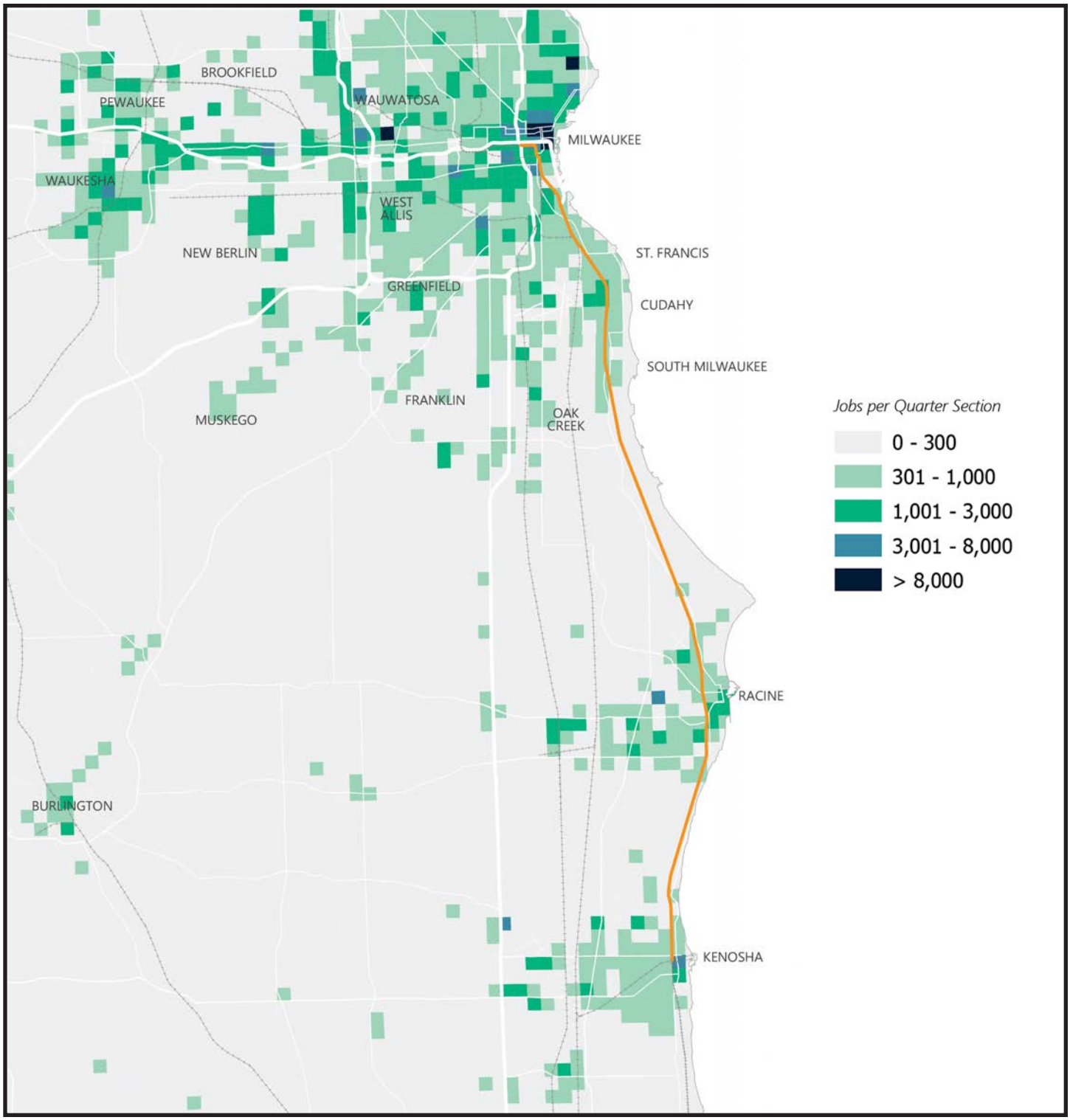
Population Density, 2020



Residential density is mapped as people per square mile (ppsm) at the census block level, which is the highest resolution available. At the regional scale, the highest population densities follow the Lake Michigan coast, and are specifically in the downtown and adjacent areas of Milwaukee, Racine, and Kenosha. The three cities have the largest number of census blocks with more than 15,000 people (shown in black) and also the 8,000 to 15,000 range.

There are no census blocks with more that 8,000 people per square mile in the interstate corridor in Racine County or the rural areas east of Burlington. While residential growth in Kenosha at the interstate and Highway 50 has a handful of blocks over 8,000 ppsqm, overall residential densities in the county west of the interstate remain low, indicating large lot, scattered subdivisions. In Milwaukee County, density spikes are present along the MARK Rail corridor, including new density in Bay View, in downtown Milwaukee, and the east side. The MARK Rail corridor alignment is highly correlated with this pattern of density because these communities grew up along the lakeshore and the old C&NW railroad service.

Jobs Density, 2020



Job density is mapped as jobs per quarter section, which is a quarter of a square mile section, or 160 acres. The highest job density is in downtown Milwaukee (shown in black), which is the central business district / office core. The tallest buildings in Wisconsin concentrate more than 8,000 jobs per quarter section in this area.

Downtown Racine's job density is in the 1,000 to 3,000 jobs range, including the City and County and other government services buildings, but also stretching south to the SC Johnson campus. The historical jobs density in downtown Racine would have been in the highest range during the period of maximum employment at JI Case and Western Publishing.

Downtown Kenosha has one quarter section in the 3,000 to 8,000 jobs range.

Growth in warehousing and logistics at I-94 interchanges in Racine and Kenosha Counties is evident, mostly in a lower range of 300 to 1000 jobs per quarter section. These are sprawling one-story buildings that enclose warehouse space and the resulting job density is relatively low. The goods, docks, and tractor trailers take up much more space than the employees. The value of quick access to the interstate system is the reason these logistics hubs exist. The new computer server plants will also have low job densities.

MARK Rail Primary Study Corridor Population

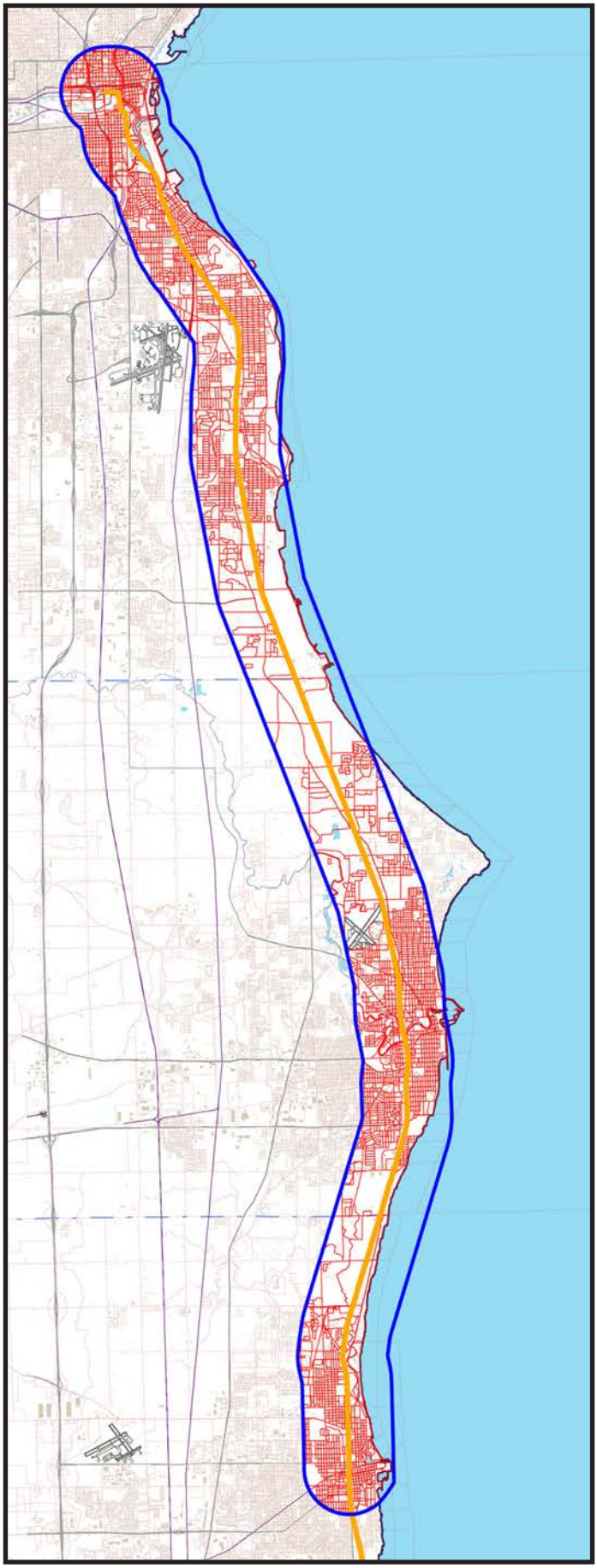
The one-mile buffer that defines the MARK Rail primary study corridor (adjacent graphic, blue line) was intersected with U.S. Census blocks (red lines), resulting in a refined slice of the available demographic data. Census blocks are defined by actual city blocks and other physical features in the landscape; they are denser in areas with smaller blocks and larger in rural areas.

This analysis using the 2020 Census data counted 239,452 persons, meaning that **approximately 240,000 people live within one mile of the MARK Rail alignment.**

This population of nearly a quarter million people shows the relatively consistent density of population along the lakefront from downtown Milwaukee to downtown Kenosha. These residents represent a primary market for restored rail service in the corridor. However, convenient access to MARK Rail depends on the number and spacing of stations, potential routes to stations, and mode of access. For walk or bicycle access to stations, a trip of less than one mile is reasonable, and populations within a mile of a station will have good access. Customers driving to stations may also live outside the one-mile buffer; but, at some distance, the driver of a vehicle may decide to simply drive the whole way to their destination instead of using the rail service. This is especially the case if the potential MARK Rail customer has to drive in the opposite direction to a station from where they are going.

The one-mile buffer itself captures the densest portions of Milwaukee, Racine, and Kenosha: their downtowns. And for the Cities of St. Francis, Cudahy, and South Milwaukee, almost all areas of those municipalities lie within a mile of the track, precisely because those communities grew up along the C&NW tracks, with freight service to factories and passenger service.

Census Blocks and the Primary Study Corridor



Connectivity for Economic and Social Development

The process of deindustrialization has impacted the MARK Rail corridor for decades now. There are signs of a rebound to different industries and businesses, and some return to the downtowns, including new housing, event venues, and office space along the corridor. Significant employers with a long history in the corridor remain, including meat packing in Cudahy, agricultural equipment and household cleaning goods in Racine, and financial and professional services and banking in downtown Milwaukee. And yet, the trend to globalization, mergers, automation, and computerization continues to challenge and disrupt the local economy.

Downtown Racine and downtown Kenosha were both manufacturing centers, with big sites in their downtowns devoted to automobile and farm equipment plants. When the production stopped it challenged the cities to redefine the function and position of their downtown areas. Both cities have taken action to acquire and remediate significant former industrial sites, including the Case site in Racine and a large former Chrysler automobile factory site three-quarters of a mile west of the Metra station now cleared, cleaned, and re-imagined as the Kenosha Innovation Neighborhood or KIN.

Initiatives from the State of Wisconsin since the 1980s to retain and attract new manufacturing have had mixed results, most recently in regard to a planned major computer screen manufacturing plant in southern Racine County. That effort did not result in thousands of manufacturing jobs as originally discussed, and the recent decision to instead host a major computer data center campus has unknown benefits in terms of jobs. That effort spearheaded at the County level is not bringing jobs back to the city, but instead developing Class A agricultural land. Similar business parks are being developed on undeveloped land near the interstate, rather than filling in sites in the city.

These recent economic development efforts, with significant subsidies from the State of Wisconsin, are indicative of the general trend to seek growth in high tech and data management, which is not a traditional forte in the MARK Rail corridor. In addition, policy efforts at the state and county levels have focused on attracting established global corporations to greenfield sites rather than startups or entrepreneurs on smaller infill sites. Research from the Federal Reserve (2023) notes that while less than 5% of all jobs are with new businesses: "Startups alone are responsible for more than 15 percent of aggregate job creation. . . ." As a result, startups are often referred to as "the engine of economic growth."

However, even with a legacy of well-known, brand-name businesses started in the state, Wisconsin is lagging in venture capital investment. Writing for *InBusiness* in January 2025, Tom Still notes that:

> No matter how the numbers are crunched, Wisconsin still lags almost all its Midwest neighbors when it comes to the broad category of early-stage investing. That is generally defined as angel and venture capital, which is money invested in young companies in their "startup" or emerging growth stages. Such companies are typically in technology sectors such as life sciences, information, and advanced manufacturing. . . . (Still, 2024).

In a report by *U.S. News & World Report* (2025) that compared venture capital to the gross domestic product of the 50 states, Wisconsin ranked 46th.

Startups and incubators need less expensive locations, cheap rent, and the type of unplanned meetups that are a hallmark of urban living: an unexpected elevator pitch or coffee shop meet are important parts of getting a business idea into early implementation. The MARK Rail corridor is ideal for these types of interactions; it has plenty of older commercial space in walkable neighborhoods and MARK Rail can provide quick access to capital and expertise in Chicago and Milwaukee when the pitch leads to a next-level meeting, or when investors want to get a look at the startup's offices, labs, or workshop. Seeing this opportunity, the City of Kenosha opened a new incubator on its KIN site in 2024. A promotional brochure (innovatekin.org, no date) points out its locational advantage: "KIN is just a three-minute drive or a 12-minute walk from the northernmost stop on the Chicago Metra Rail, linking you directly to the economic powerhouses of Chicago and Milwaukee." However, to be clear, a train ride to Milwaukee depends on establishing MARK Rail service.

The noticeable growth area in Racine and Kenosha Counties is logistics—the movement of goods—which employ large numbers of warehouse workers and drivers. Unfortunately, logistics is based on tractor-trailer movement of goods along the interstate, which was purposely located away from the historical centers of Racine and Kenosha. The fundamental shift from rail to interstate, and local manufacturing to global supply, continues to play out. Interstate 94 is packed with freight movement by truck, while the UP Kenosha Subdivision track is underutilized: a second UP track between the lakeshore track and the interstate makes the track along the UP Kenosha Subdivision redundant for freight. The opportunity to use this existing right of way for moving people is clear; the need to better connect to the regional economies with a fast and efficient mode of transport is obvious. While MARK Rail cannot directly serve new logistic businesses along the interstate, economic benefits could be realized in bringing new housing, retail, and entertainment development to downtown areas. These new developments can market walkable neighborhoods and rail connections to the two cities as an amenity even for those who cannot use it for their work commute.

Major Employers in the MARK Study corridor

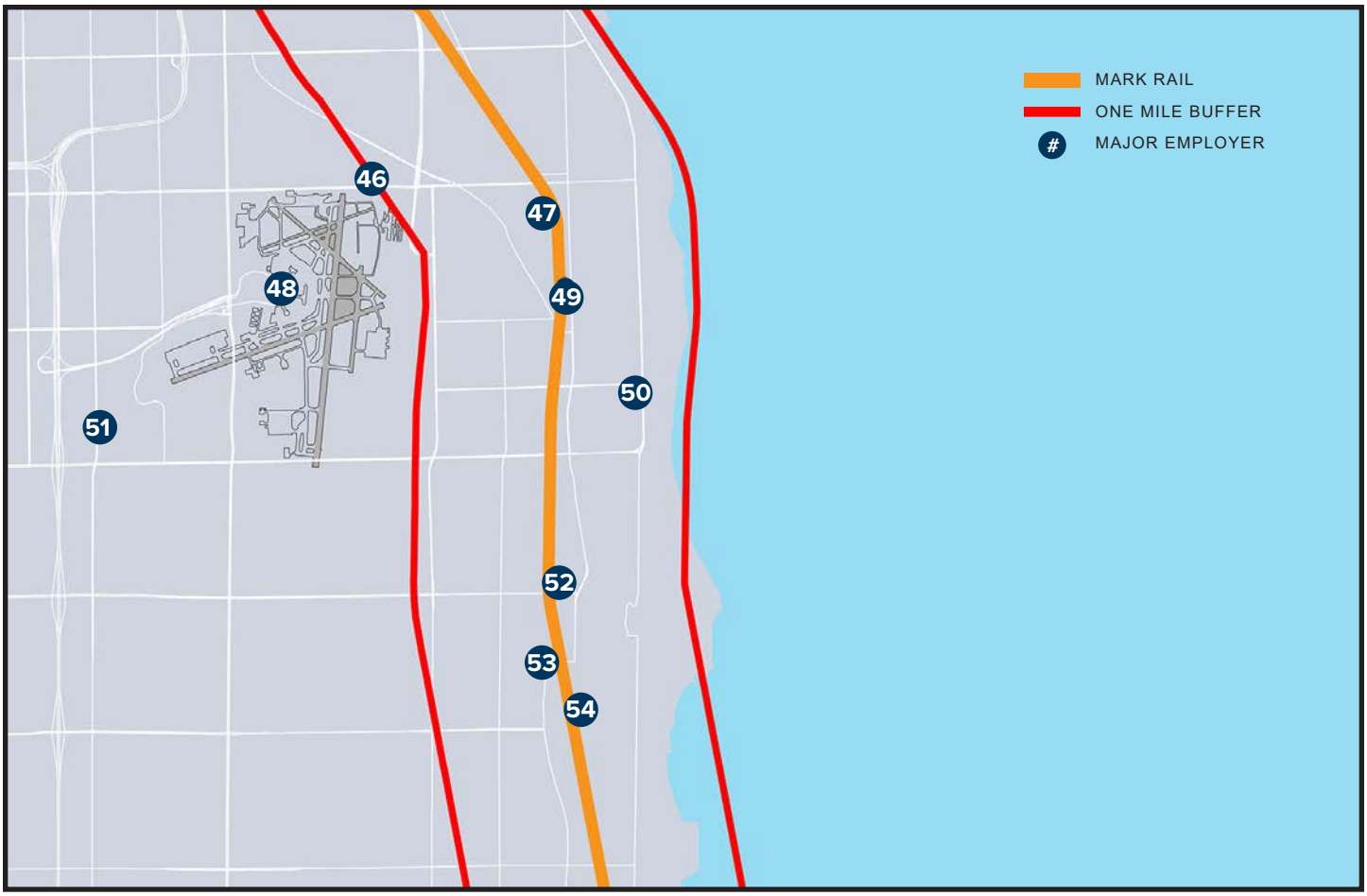
The MARK Rail Study team compiled a list of employers within and adjacent to the primary study corridor, defined as a one-mile buffer off the MARK Rail alignment (shown as a red line on map below). Employers with more than 250 employees are mapped with numbered dots and listed. Of the 77 businesses mapped, 72 are within or just beyond one mile of the MARK Rail alignment. This is consistent with the overall land use pattern, and the historical concentration of activity along the lakeshore and in the downtowns of the three largest cities in the corridor. Major employers are also located along the tracks in Cudahy and South Milwaukee.

More than half of the corridor's major employers are located in downtown Milwaukee, the Menomonee Valley, and Milwaukee's Harbor District. Wisconsin Avenue is the heart of the downtown, with large numbers of jobs stretching from Marquette University east to the office core near the lake, which is anchored by the Northwestern Mutual campus and a number of major accounting, legal, and investment firms in the U.S. Bank Center. (Note that addresses with multiple listings are combined to a single reference numeral on the map.) Hotel, convention, and sports venues in downtown Milwaukee also employ large numbers of people who would benefit from access to MARK Rail.

Employers with more than 250 jobs, Milwaukee

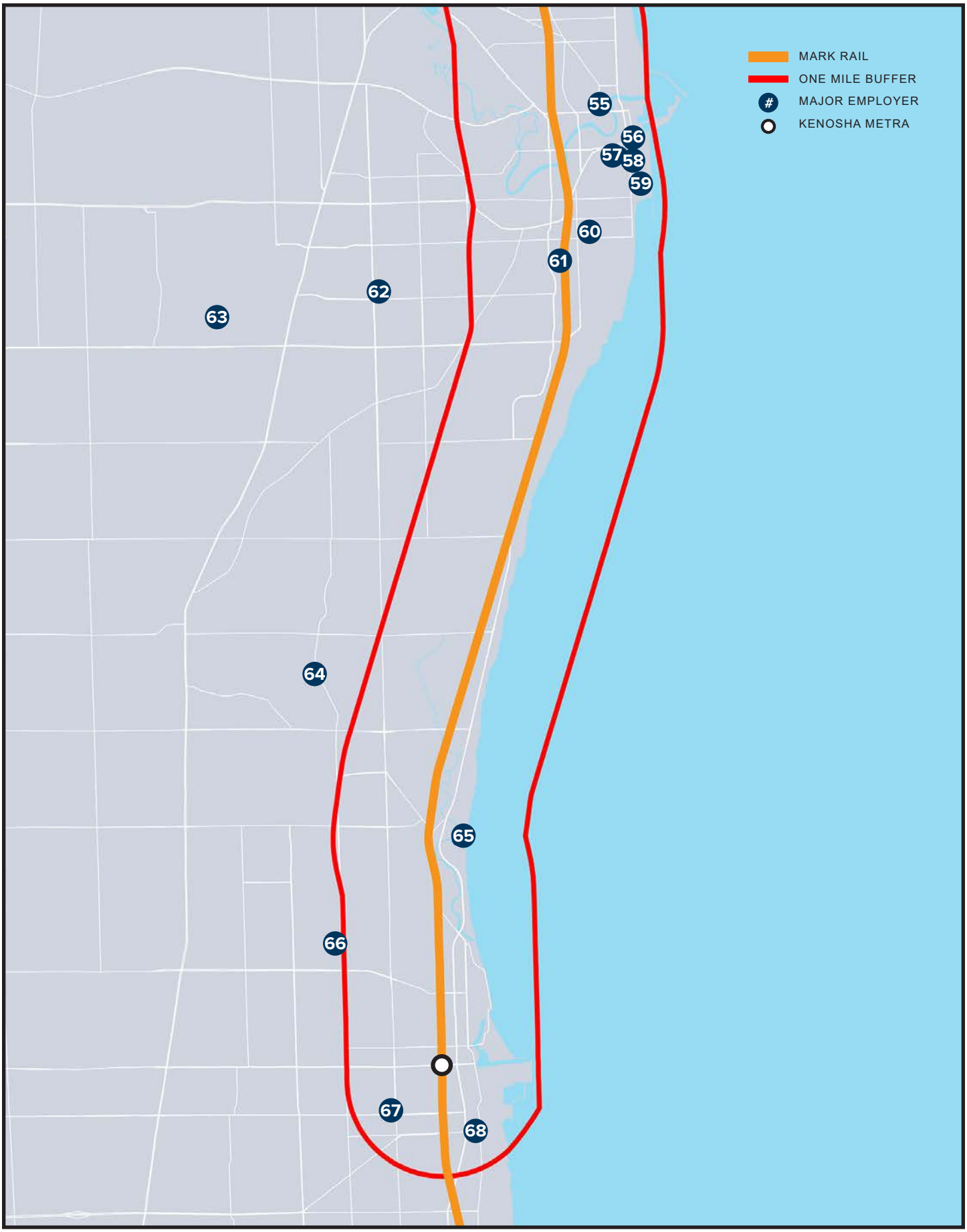
Map #	EMPLOYER	ADDRESS
1	MILWAUKEE COUNTY TRANSIT SYSTEM	1942 N 17th St
2	MILWAUKEE BUCKS	1543 N 2nd St
3	MANPOWERGROUP INC	100 W Manpower Pl
4	FISERV FORUM	1111 N Vel R. Phillips Ave
5	MILWAUKEE SCHOOL OF ENGINEERING	1025 N Broadway
6	REINHART BOERNER VAN DEUREN SC	1000 N Water St
7	MILWAUKEE SECURE DETENTION	1015 N 10th St
8	MILWAUKEE AREA TECHNICAL COLLEGE	700 W State St
9	AURORA SINAI MEDICAL CENTER	945 N 12th St
10	MILWAUKEE COUNTY	821 W State St
11	MGIC INVESTMENT CORP	270 E Kilbourn Ave
11	MORTGAGE GUARANTY INSURANCE CORP	270 E. Kilbourn Ave
12	CITY MILWAUKEE DEPARTMENTS	841 N Broadway
13	SOCIETY BEHAVIORAL MEDICINE	555 E Wells St
13	DELOITTE	555 E Wells St
14	CITY OF MILWAUKEE	200 E Wells St
15	ACCENTURE	790 N Milwaukee St
15	MICHAEL BEST & FRIEDRICH LLP	790 N Water St
15	BMO HARRIS BANK	790 N Water St
16	WISCONSIN CLUB	900 W Wisconsin Ave
17	MARQUETTE UNIVERSITY	1145 W Wisconsin Ave
18	WISCONSIN CENTER DISTRICT	400 W Wisconsin Ave
19	HILTON MILWAUKEE CITY CENTER	509 W Wisconsin Ave
20	NORTHWESTERN MUTUAL	100 E Wisconsin Ave
21	PFISTER HOTEL	424 E Wisconsin Ave
22	QUARLES & BRADY LLP	411 E Wisconsin Ave
23	NORTHWESTERN MUTUAL LIFE INSURANCE	720 E Wisconsin Ave
24	BAKER TILLY VIRCHOW KRAUSE LLP	777 E Wisconsin Ave
24	FOLEY & LARDNER LLP	777 E Wisconsin Ave
24	U.S. BANK BRANCH	777 E Wisconsin Ave
24	BAIRD INVESTMENT MANAGEMENT	777 E Wisconsin Ave
25	ROUNDY'S SUPERMARKETS INC	875 E Wisconsin Ave
26	GODFREY & KAHN SC	833 E Michigan St
27	US BANCORP FUND SERVICE LLC	615 E Michigan St
28	FISERV INC	600 N Vel R Phillips Ave
29	WEC ENERGY GROUP INC	231 W Michigan St
30	USPS	345 W St Paul Ave
31	TWIN DISC INC	222 E Erie St
31	GARDNER DENVER INC	222 E Erie St
32	REXNORD FALK RENEW	3001 W Canal St
33	POTAWATOMI HOTEL & CASINO	1721 W Canal St
34	MILSCO MANUFACTURING	1301 W Canal St
35	MILWAUKEE WORLD FESTIVAL INC	639 E Summerfest Pl
36	ZURN WATER SOLUTIONS CORP	511 W Freshwater Way
37	PERFORMANCE CLEAN LLC	700 W Virginia St
38	AURORA HEALTH CARE ADMINISTRATION	750 W Virginia St
39	MILLER COMPRESSING CO	1640 W Bruce St
40	UNITED COMMUNITY CENTER INC	1028 S 9th St
41	ROCKWELL AUTOMATION INC	1201 S 2nd St
42	LA CAUSA INC	136 W Greenfield Ave
43	KOMATSU MINING CORP	401 E Greenfield Ave
44	LABOR SOLUTIONS	1670 S 11th St
45	WROUGHT WASHER MANUFACTURING	2100 S Bay St

Employers with more than 250 jobs, Milwaukee, Cudahy, and South Milwaukee



46	IBCC INDUSTRIES INC	4630 S Brust Ave	St Francis
47	SMITHFIELD FOODS	1 Sweet Applewood Ln	Cudahy
48	MITCHELL INTERNATIONAL AIRPORT	5300 S Howell Ave	Milwaukee
49	ATI FORGED PRODUCTS	5481 S Packard Ave	Cudahy
50	AURORA ST LUKE'S SOUTH SHORE	5900 S Lake Dr	Cudahy
51	MILWAUKEE METROPOLITAN SEWER	6060 S 13th St	Milwaukee
52	CATERPILLAR GLOBAL MINING	1118 Rawson Ave	South Milwaukee
53	EDUCATORS CREDIT UNION	1201 Marquette Ave	South Milwaukee
54	EATON COOPER POWER SYSTEMS INC	2800 9th Ave	South Milwaukee
55	CASE IH	700 State St	Racine
56	UNITED STATES POSTAL SERVICE	603 Main St	Racine
57	RACINE COUNTY COURTHOUSE	730 Wisconsin Ave	Racine
58	VETERANS OF FOREIGN WARS	820 Main St	Racine
59	GATEWAY TECHNICAL COLLEGE	1001 Main St	Racine
60	SC JOHNSON & SON INC	1525 Howe St	Racine
61	MODINE MANUFACTURING CO	1500 De Koven Ave	Racine
62	TWIN DISC INC	4600 21st St	Racine
63	CASE IH	2701 Oakes Rd	Sturtevant
64	UNIVERSITY OF WI-PARKSIDE	900 Wood Rd	Kenosha
65	CARTHAGE COLLEGE	2001 Alford Park Dr	Kenosha
66	GATEWAY TECHNICAL COLLEGE	3520 30th Ave	Kenosha
67	JOCKEY INTERNATIONAL INC	2300 60th St	Kenosha
68	FROEDTERT KENOSHA HOSPITAL	6308 8th Ave	Kenosha

Employers with more than 250 jobs, Racine and Kenosha



Many of the major brand name businesses in southeastern Wisconsin are found in the MARK Rail corridor, including SC Johnson in Racine and Jockey International in Kenosha. The ability for regional business leaders to travel by train in the corridor, to gather for meetings and civic events, is a benefit that MARK Rail can provide. In addition to the increased mobility and efficiency of the rail line, the service would help to define the corridor as a place to do business. In the previous long era of passenger rail, the Chicago & NorthWestern line and its Lakefront Depot at the foot of Wisconsin Avenue made travel by the C&NW the easy choice if your business meeting was with a major financial or legal firm in Milwaukee.

MARK Rail would connect the three county seats, and government services at county government offices, courts, and jails are also located within the corridor. All three big city halls and related department offices are also in the corridor. These government offices employ large numbers of people and receive visitors every day to conduct business and seek services. The utility of MARK Rail to provide access to government offices for the public and to facilitate efficient travel to meetings between government agency staff is clear.

Higher Education in the MARK Corridor

The MARK Rail corridor is an employment center and also a center of higher education. Downtown Milwaukee hosts four post-secondary schools, three of them on the list of employers with more than 250 employees and within a mile of MARK Rail. Also, the University of Wisconsin-Milwaukee campus is under four miles from the Milwaukee Intermodal Station. Racine and Kenosha both have technical colleges in their downtowns, and Carthage College has a lakefront campus on the northside of Kenosha immediately east of the MARK Rail track. UW-Parkside is nearby but west of the corridor. A number of colleges and universities can be found along the UPN Line, including three schools in Chicago's Loop and most notably Northwestern University in Evanston.

MARK Rail service has the potential to link these institutions together in a way that the existing Hiawatha service on the old Milwaukee Road track cannot. Schools close to MARK Rail include:

- Marquette University
- Milwaukee Area Technical College
- Milwaukee School of Engineering
- Milwaukee Institute of Art and Design
- Gateway Technical College - Racine
- Carthage College in Kenosha
- Gateway Technical College - Kenosha
- Northwestern University in Evanston

The proposed service could benefit students traveling between home and school and faculty moving between schools for lectures, research, or consultations.

Megaregion Economy and the Case for MARK Rail

The economic condition of the MARK Rail corridor and its communities is one of remarkable contrasts: great wealth and enormous production, but also persistent and deep poverty in some locations and some populations. The municipal partners directing the MARK Rail Study are convinced that the reintroduction of passenger rail on the segment of existing track between downtown Kenosha, through Racine, and on to Milwaukee will be of benefit to the overall regional economy and the areas and residents of the corridor that have struggled to adapt to the loss of manufacturing employment.

Coordinated investment in this passenger rail project along with additional placemaking investments in public works, parks, schools, and streetscapes can bring change to MARK Rail station areas. That there is productivity and wealth in the megaregion is clear from a look at the big picture economy, both in southeastern Wisconsin and Chicagoland.

Data and rankings sourced from Federal Reserve Banks (2023) confirm that the Chicagoland metropolitan statistical area (MSA) is the third largest in the United States, with a gross domestic product (GDP) in 2023 of $894 billion. The GDP includes production and services of all types. (Some rankings put the San Francisco area in third place, but the Fed MSA ranking has Chicago third.) Chicago is also in the top ten ranking for all urban areas on the planet. The Milwaukee MSA ranks 39th in the nation with a GDP of $130 billion. The two metro areas, while statistically separate and distinct, interact in important, real ways, which any drive down I-94 flanked by freight movement on trucks across the four lanes will show. Given how the regional economy functions, it is a legitimate exercise to combine the GDP numbers for Chicagoland, the Milwaukee metro, and Racine and Kenosha Counties for a rough estimate of the MARK Rail corridor totaling $1.026 trillion.

This corridor between Milwaukee and Chicago is an economic giant, and yet the transportation system struggles with inefficiencies, and is not comparable to the type of passenger rail, transit lines, stations, or station area development found in other metro areas at the top of the global GDP rankings, for example Tokyo or Paris. Wisconsin in particular is underinvesting in regional transit, and travel within southeastern Wisconsin is heavily reliant on a single mode: private automobiles. And consider that the Milwaukee-Chicago megalopolis does not have local fossil fuel resources. Chicagoland has refineries, but there are none in southeastern Wisconsin, so that money spent on gasoline and diesel to move cars and trucks is mostly transferred out of Wisconsin and the region to places with oil fields. Greenhouse gas emissions and issues of ozone nonattainment create stress in the regional economy and other externalities that will be increasingly difficult to mitigate. Moving people on rail is far more efficient in energy consumption and time, which Metra's UPN Line shows.

Gross Domestic Product Ranking: MARK Rail and USA

Rank	Metropolitan Statistical Area (MSA)	Gross Domestic Product	Year And Reference	Notes
1	New York Newark, Jersey City	$2,298 Billion ($2.298 Trillion)	2023 Commerce	
2	Los Angeles, Long Beach, Anaheim	$1,295 Billion ($1.295 Trillion)	2023 Commerce	
3	Chicago, Naperville, Elgin	$894 Billion (0.894 Trillion	2023 Commerce	Kenosha is part of Chicagoland CSA, but is in its own MSA
4	San Francisco, Oakland, Berkeley	$778 Billion	2023 Commerce	
39	Milwaukee, Waukesha, West Allis	$130 Billion	2023 Commerce	Racine is part of Milwaukee CSA, but in Racine-Mount Pleasant MSA
NA	Racine County	$1.1 Billion	2023 St Louis Fed	$1.1 billion
NA	Kenosha County	$0.99 Billion	2023 St Louis Fed	$1.1 billion + $0.99 billion = $2.09 Billion, both counties
MARK Rail Corridor	Milwaukee MSA and Chicago MSA, Racine County, Kenosha County	$1,026 Billion ($1.026 Trillion)		$894 Billion +$130 Billion + $2.09 Billion = $1.026 Trillion

Sources: Federal Reserve Bank of St. Louis, Gross Domestic Product (2023 data), GDP by county and metropolitan area; US Department of Commerce, Bureau of Economic Analysis (2023 data)

Northwestern Mutual's continued investments in downtown Milwaukee include two new towers, the second being an older structure, shown under reconstruction in May 2025.

SC Johnson's headquarter's campus east of Racine's Uptown area, with a tower and other buildings designed by Frank Lloyd Wright

A significant part of the corridor's wealth is along the UPN Line in the North Shore suburbs of Chicagoland. The residential and commercial properties in places like Lake Forest or Winnetka enjoy much higher property values at least partially due to the convenience of movement along the commuter rail track. Those values, first built up during the decades of the C&NW service, are so high that most of the residents of Chicagoland cannot afford to live along the UPN, even in historically middle-income, higher-density places like Highland Park or Evanston. These properties, as part of the regional economy, contribute important tax revenue to local, regional, and state coffers. Proximity to the lake creates a large part of the value, but it is the added value of access along the passenger rail line and the walkable downtowns centered on their train station, that makes the UPN corridor one of the nation's premier addresses. Without similar service along the UP track in Wisconsin property values lag.

Addressing Economic Distress

The positive aspects of such economic power are self-evident, but just up the line from the very exclusive suburb of Lake Bluff, the communities of North Chicago and Waukegan are challenged by older housing stock, former factory sites, and higher poverty levels. Given the distance from the Loop, these two cities were not developed as residential suburbs of Chicago, but rather as industrial towns. Like Racine and Kenosha, they are in the middle zone between the two big cities in terms of travel time. Passenger rail service is not a guarantee of economic revival, but having a station is a potent community and economic asset that can be a key part of overall economic development strategies.

As with the Census data on population characteristics by race, the statistics by jurisdiction show a concentration of families living below the official poverty line in the three big cities. Milwaukee at 18.6% and Racine at 13.4% stand out as high poverty levels relative to the other communities in the MARK Rail corridor. The middle tier along the MARK Rail corridor includes St. Francis, Cudahy, South Milwaukee, and Kenosha, all in the 9.5% to 10.9% range. This is consistent with the analysis that poverty is concentrated in railroad corridors that have experienced a rapid decline in manufacturing. The neighborhoods closest to the industrial areas were constructed as lower-cost workforce housing (smaller houses or flats) and this housing is amongst the oldest in the region, specifically near downtown Racine and Kenosha. It was built in the early history of settlement as foundational businesses grew. Today, people with the lowest incomes tend to live in the lowest-cost, oldest housing.

Higher-income residents of the corridor tend to live in newer housing, or areas that were first developed as residential suburbs, with Oak Creek as an example. There are few families below the poverty level in Oak Creek, or Mount Pleasant, because low-income residents generally cannot afford to live in large houses on large lots, and new construction is typically out of reach. These dynamics are unlikely to change. But good public policy recognizes the problem of concentrated poverty and seeks to address the causes.

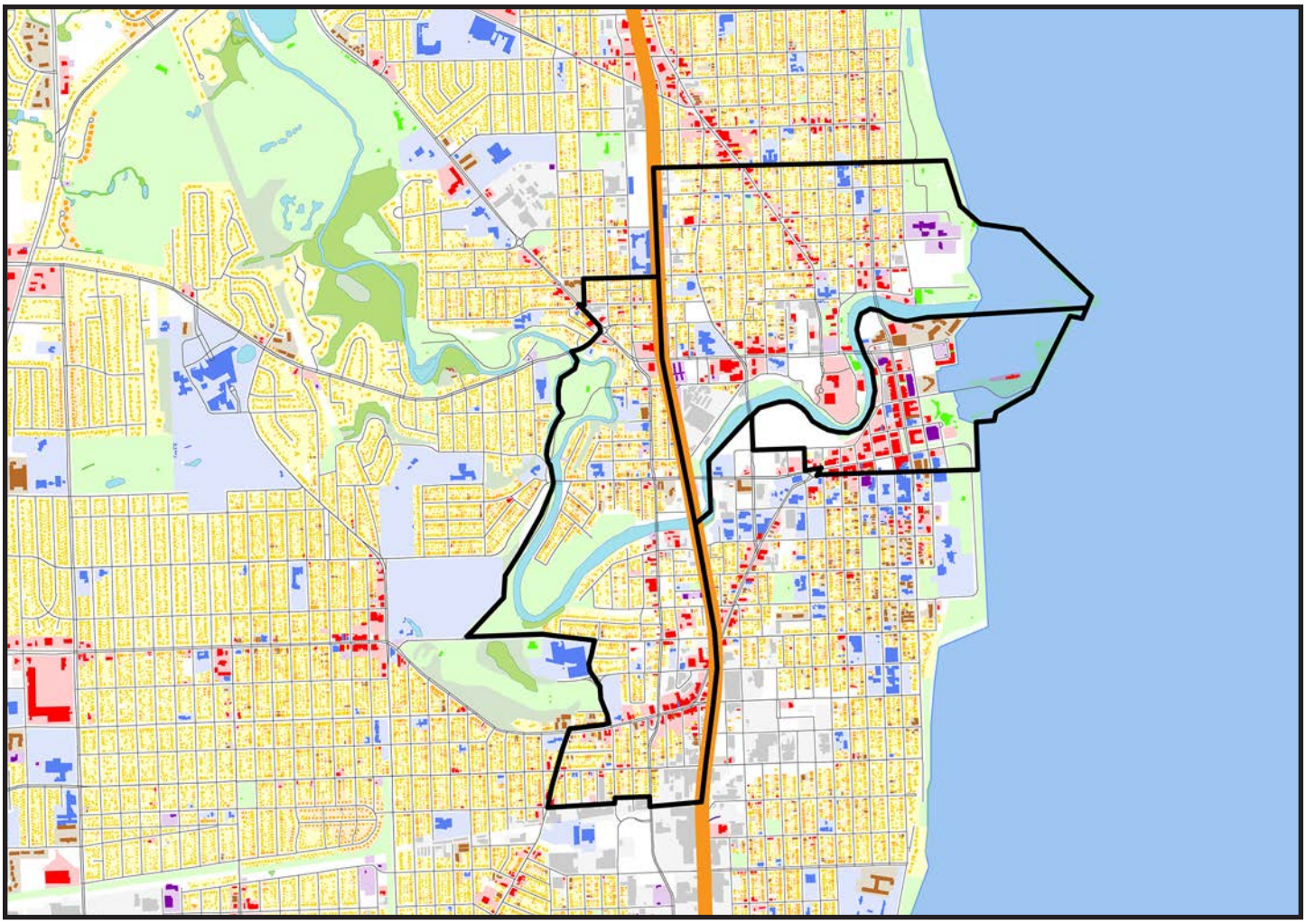
The federal government provides various grants and programs for local economic development. But the majority of federal assistance toward real estate development and

Income and Poverty in the MARK Rail Communities: 2023

Jurisdiction	Median Household Income	Families in Poverty, Percent	Occupied Housing Units Without Access to Personal Vehicle, Percent
City of Milwaukee	$51,888	18.6	16.4
City of St. Francis	$58,490	9.5	15.4
City of Cudahy	66,717	10.3	7.8
City of South Milwaukee	70,146	9.6	6.1
City of Oak Creek	93,120	2.4	3.1
Milwaukee County	62,118	12.9	12.5
Village of Caledonia	91,053	2.5	3.5
City of Racine	55,705	13.4	8.9
Village of Mount Pleasant	90,189	4.2	5.5
Racine County	75,331	7.2	5.7
Village of Somers	78,068	4.6	4.5
City of Kenosha	68,532	10.9	6.0
Village of Pleasant Prairie	103,903	5.9	4.5
Kenosha County	79,412	7.7	4.9

Source: US Census, 2023 ACS 5-year estimates and SEWRPC.

Opportunity Zones in the City of Racine



Source: City of Racine

business investment in distressed communities is made available through two methods: low-income housing tax credits and opportunity zones. (A program called New Market Tax Credits is a smaller program.) The federal Low-Income Housing Tax Credit (LIHTC) program is the only significant federal money for new housing construction (besides the home mortgage interest deduction), and use of these credits brings restrictions on resident income that can reinforce concentrations of poverty. Direct federal investment in new public housing ended in the early 1980s, and there are very few public housing units in the MARK Rail corridor.

The second major program is the Opportunity Zones program created in the 2017 Tax Cuts and Jobs Act. A letter to the President (The White House Opportunity and Revitalization Council, 2019) from an appointed council of top federal officials outlined the Opportunity Zone incentive:

> The increasingly globalized economy has meant prosperity for many, yet millions of Americans have been overlooked, devoid of the same benefits or the potential for upward mobility that comes from widespread investment. Fifty-two million Americans live in economically distressed communities, including the thirty-five million who reside in Opportunity Zones. A lack of investment has contributed to this economic distress, and a lack of access to economic opportunity can lead to negative outcomes in the vital measures that matter to all communities, including high unemployment rates, stagnant wages, low graduation rates, unsafe neighborhoods, and shorter life expectancy. To help these communities, Opportunity Zones were introduced in the Tax Cuts and Jobs Act, which President Donald J. Trump signed into law in December of 2017. . . . The Opportunity Zones tax incentive is designed to spur economic development and job creation in these very communities through preferential tax treatment for those investing certain eligible capital gains into Opportunity Zones.

An article posted on the Kiplinger website (Kiplinger, 2023) estimates there was over $100 billion in new Opportunity Zone investments between 2017 and 2022, claiming: “High-net-worth investors. . . . are clearly aware of the extraordinary benefits offered by the existing federal OZ

incentive, namely, the opportunity to defer capital gains taxes indefinitely, or eliminate them entirely, by holding a qualified OZ investment for 10 years."

The Cities of Racine and Kenosha have three designated Opportunity Zones each. The three in Racine (see map previous page) are all proximate to the UP track—in the downtown, immediately north of downtown, and in the Uptown area—the railroad corridor being a census block boundary. An investment fund was created to encourage investments in Racine. In Kenosha, one of the three zones is immediately south and east of the Metra station. The City of Milwaukee includes zones in the Menomonee Valley and Harbor District that are close to the MARK Rail alignment and the Milwaukee Intermodal Station.

These two federal investment incentives are based on the same structure: a tax credit from the IRS to high-income investors to defer or write off taxes due to the federal government. They help to direct private investment to affordable housing projects that otherwise would not get built. There is a need in the MARK Rail corridor for these types of private investments, but public investment in new transportation infrastructure also helps to create an improved environment that will attract and grow interest from the private sector.

In that regard, reintroducing passenger rail service in the MARK Rail corridor has been studied for decades, including previous KRM studies (described below). The passenger rail project presents an opportunity for a direct investment of federal and state funds into long-term infrastructure that has the potential to bring long-lasting benefits in mobility, efficiency, and property values. The construction of MARK Rail would be a major public works project employing hundreds of workers, with that infusion of wages into the local economies multiplied by sales at local businesses. MARK Rail is the type of project that is typically deemed eligible for grants from the U.S. Department of Transportation (USDOT). Note that grant programs from the Federal Railroad Administraion (FRA) and Federal Transit Administration (FTA) list the presence of designated Opportunity Zones in a project corridor as a criteria in favor of federal funding.

These federal grant programs require non-federal matching funds for capital costs and operations. Finding a method for funding passenger rail and transit in Wisconsin remains a difficult and politically contentious issue; however, identifying non-federal sources of funding is a primary task toward project implementation and, as such, is addressed in other MARK Rail Study reports. Concluding this brief on the historical trends and current social conditions and challenges, it should be noted that there is an opportunity cost of not acting. Racine and Kenosha are the fourth and fifth largest cities in Wisconsin. Both offer numerous sites for infill development and resident populations that need employment and training. The MARK Rail Study is exploring reintroducing passenger rail on a historical passenger rail line, an existing piece of underutilized transportation infrastructure. Given the imperative of connectivity, access, and resiliency for economic and social development in the MARK Rail communities, making use of this infrastructure is an obvious opportunity waiting to be realized.

ORGANIZATIONAL AND PLANNING POLICY CONTEXT

Previous studies of the KRM project concluded that implementation of commuter rail in the study corridor is feasible. Capital and operating costs were shown to be relatively low, when compared to light rail and other passenger rail projects across the nation. Planning recommendations were made and acted on in previous KRM planning efforts to address these obstacles, but, in the end, applications for federal funding were withdrawn.

This project history shows that the primary impediment to implementation is the policy and organizational context in the State of Wisconsin and the Milwaukee region. These obstacles include:

1. Lack of a regional transit agency in the Milwaukee metro
2. Restrictions on local taxing authority and rates
3. An urban/rural divide in Racine and Kenosha Counties, frequently conceived as east or west of I-94.
4. Limited local budget resources, especially for the Milwaukee County Transit System
5. Partisan divide in Wisconsin on state's role in passenger rail development.
6. Scant public staff experience with commuter rail or light rail in the region

Each of these obstacles is shaping the MARK Rail Study process. The project Steering Committee, staff, and consultants considered options to find a path forward within this context during 2024-2025.

The MARK Rail Study exists within a larger context of public policy, at the federal level, state, and regional levels. This policy context is of primary importance, particularly because the physical feasibility of restoring passenger rail to Racine and Kenosha is proven by past history and current railroad operations in the study corridor. However, this report will provide only a pertinent outline of the general policy context at each level.

Federal Policy

The USDOT regulates and manages passenger rail programs under the FRA and FTA. The FRA regulates the operation of intercity passenger rail in coordination with private operators, transit agencies, and Amtrak. Its new program for assisting development of passenger rail is the Corridor Identification Program, or Corridor ID or CID for short. The FRA overview explains that: "The Corridor Identification and Development (Corridor ID) Program is a comprehensive intercity passenger rail planning and development program that will help guide intercity passenger rail development throughout the country and create a pipeline of intercity passenger rail projects ready for implementation" (FRA website, accessed July 2025). Legislative authority is under The Infrastructure Investment and Jobs Act (IIJA), Public Law 117-58. Additional, detailed information on the CID program and process is provided in other MARK Rail Study reports.

All previous KRM studies defined the project to restore service from Kenosha to Milwaukee as a commuter rail service, and therefore, was within the purview of the FTA. The main federal grant program for high-capacity transit project development is the FTA New Starts Program. Commuter rail falls under the New Starts program, but it is not clearly defined what commuter rail means and how it might be different from intercity rail. As explored at the beginning of this chapter, the Chicago to Milwaukee corridor has a long and complicated history of railroading, including the existing UPN Line operated by Metra, which is a commuter rail line but also connects between cities. The MARK Rail corridor may be described as a hybrid between commuter and intercity.

Key differences between commuter and intercity rail include:

- Commuter rail lines typically have many station stops
- Commuter rail stations can be spaced relatively close to each other
- Commuter rail service is organized around daily work trips to a central business district, with more trains in the morning and evening commuter periods
- Intercity trains can be as few as one roundtrip per day, by Amtrak
- Intercity service can connect between cities very far apart from each other
- Intercity trips can be long and beyond a typical daily commute

In the MARK Study Area, Amtrak's Hiawatha service is usually understood as intercity service offering a 90-minute ride between downtown Milwaukee and downtown Chicago. However, some customers use the Hiawatha service for daily or routine work trips. The UPN is understood to be a commuter service, and yet some of the trips, for example to Waukegan or Kenosha can be almost two hours, which is beyond a typical work commute. The MARK Rail Study considered pursuing federal grant funds under the FRA and FTA programs. The MARK Rail Steering Committee decided in 2024-2025 to pursue entry into FRA's Corridor ID program and design service around an intercity passenger rail concept.

State Policy

The historical overview in the first part of this chapter mentions policies and actions that the State of Wisconsin took to support passenger rail service after the end of private railroad service, particularly in regard to Amtrak's Hiawatha service. Political and state budget support waxes and wanes; this brief report will look at the basic organizational and policy context at WisDOT.

Within WisDOT's Division of Transportation Investment Management, the Bureau of Transit, Local Roads, Railroads and Harbors has sections related to transit and to railroads. The transit section helps local communities receive and manage federal and state grants that support transit services, including federal Section 5307 grants from the FTA and funding through the state Urban Mass Transit Operating Assistance program. WisDOT does not have a history of leading or implementing high-capacity transit planning for light rail, heavy rail, commuter rail, or bus rapid transit. But, WisDOT does actively plan and fund projects related to intercity passenger rail, partnering with Minnesota and Illinois and the FRA on state subsidized Amtrak service. In this regard, Wisconsin meets federal requirements by adopting a State Rail Plan, the current one being the 2050 plan, dated July 2023 (WisDOT, 2023).

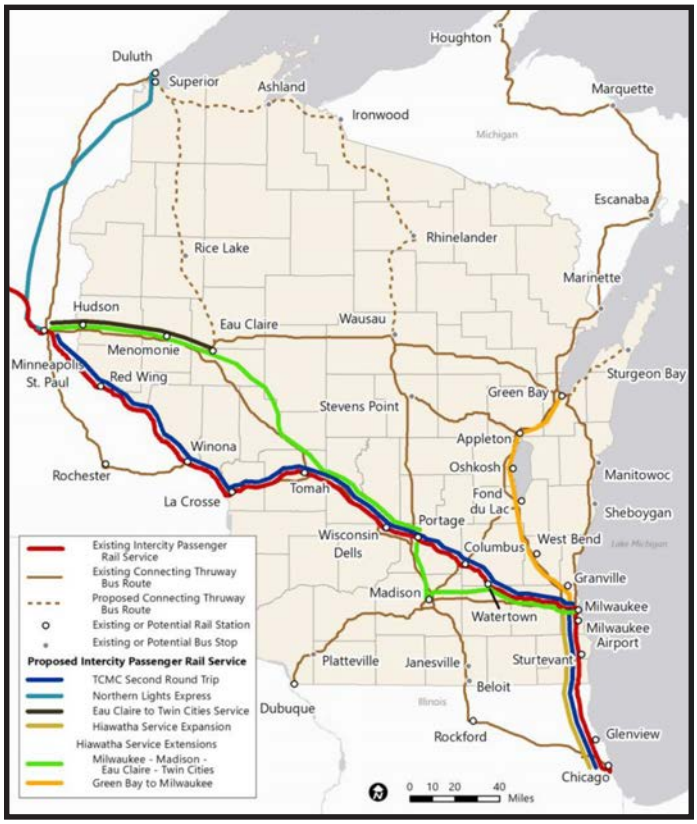
Chapter 3 of the State Rail Plan sets state policy for "Proposed Passenger Rail Improvements and Investments." The State Rail Plan discusses WisDOT projects to improve the Hiawatha service and facilities between Milwaukee and Chicago, but it did not originally identify the MARK Rail primary study corridor (i.e., the UP Kenosha Subdivision through Racine) as a potential intercity passenger rail line. However, as of January 2026, WisDOT was in the process of amending the State Rail Plan to include the MARK Rail corridor as a Long-Range Intercity Passenger and Commuter Rail Project.

Two subsections in the original plan that pertain to the MARK Rail Study Area are copied below:

> 3.2.5. Chicago Area Commuter Rail Improvements - Improvements to Metra's UP North Line
> The Metra UP North line ends at the Kenosha station. Planned improvements will improve the operating capacity and reliability of the line between Ogilvie Transportation Center and Kenosha by installing additional crossovers and track improvements. A new outlying coach yard will allow for more efficient equipment servicing and accommodate service expansion.
>
> 3.2.6. Southeastern Wisconsin Commuter Rail
> SEWRPC's Vision 2050 Long-Range Transportation Plan includes major expansion of all types of transit service. If implemented, commuter rail service would increase from the current level of 10 hours a day (Metra only service) to 190 hours daily, mostly from four new commuter rail lines. Two of the commuter rail lines would start from downtown Milwaukee, with two spokes from one of those main lines. The fiscally constrained portion of Vision 2050 acknowledges that implementing commuter rail recommendations cannot be achieved without additional revenue sources. State-enabling legislation may be necessary to create a special-purpose transit authority able to raise revenues. Therefore, commuter rail is not in the fiscally constrained portion of Vision 2050. Expanded commuter rail service remains in Vision 2050 to implement should fiscal conditions improve.

These references to Metra and SEWRPC's plan for commuter rail are consistent with WisDOT's informal policy to not conduct planning for local high-capacity transit projects. This is a key element of the policy context for MARK Rail.

WisDOT is managing four Corridor ID grants from the FRA. One of the four is seeking to increase service on the Hiawatha corridor from the current seven roundtrips per day to ten roundtrips.

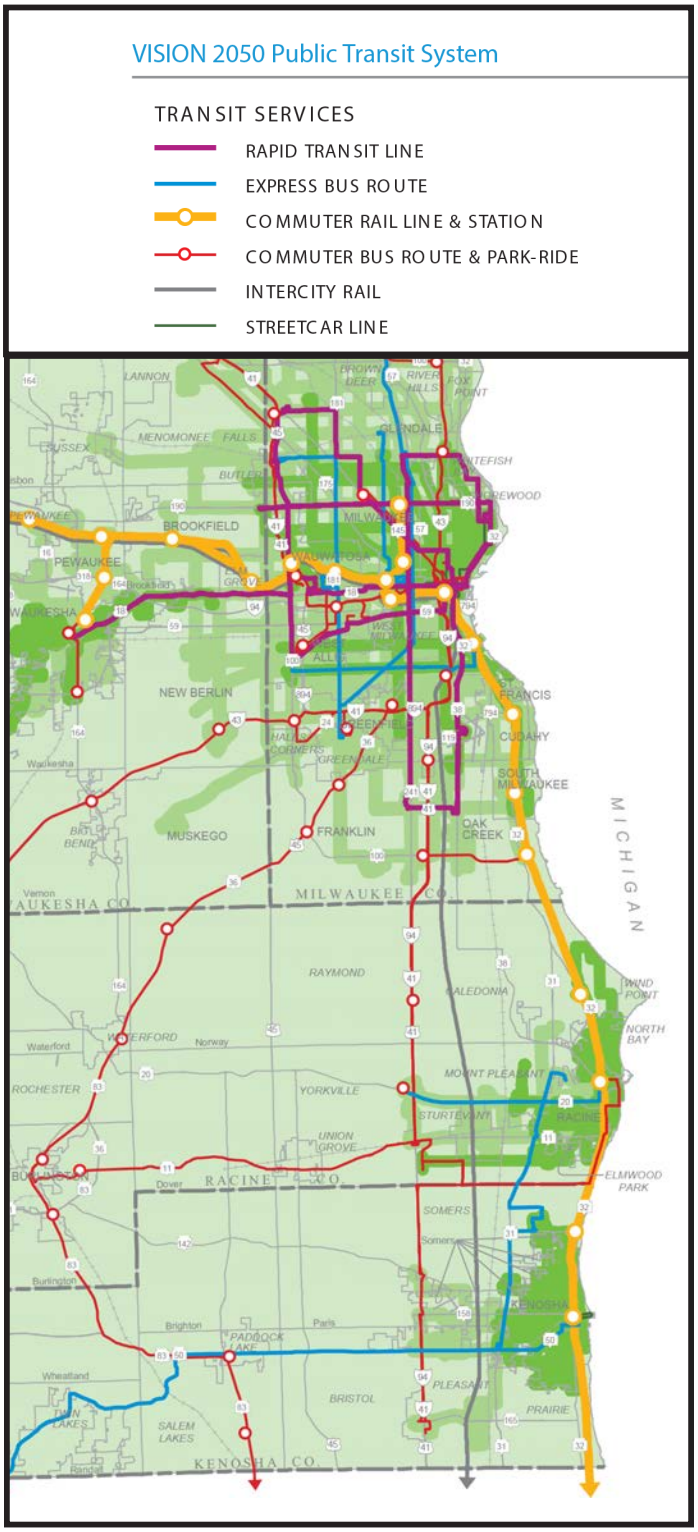


Graphic from the WisDOT State Rail Plan, dated July 2023, labeled in the plan as "Figure 3.1: Wisconsin 2050 Potential Intercity Passenger Rail System."

Regional and Local Policy

As the text from the State Rail Plan describes, VISION 2050 (2025) shows the MARK Rail corridor as a commuter rail line. This has been long-standing recommendation in the regional plan. The MARK Rail Study continues efforts to find a path to implement passenger rail service in this corridor. None of the other commuter rail lines to the west of downtown Milwaukee have been studied to date.

Local policies in support of passenger rail from Milwaukee to Kenosha have shifted over the decades. The difficulties in funding MCTS bus service within Milwaukee County creates issues regarding new commuter rail. In 2024, the Cities of Milwaukee, Racine, and Kenosha all passed resolutions of support for the MARK Rail Study effort. The Kenosha County Board of Supervisors also passed a resolution in 2024 supporting study of passenger rail in the corridor.



The plan graphic from VISION 2050 shows a commuter rail line and stations (yellow) along the MARK Rail alignment from Milwaukee to Kenosha as part of a regional commuter rail system. The station locations are consistent with past KRM plans; now being reexamined under the MARK Rail Study.

In Illinois, planning at the regional level is conducted by the Chicago Metropolitan Agency for Planning (CMAP). In December of 2023, CMAP published its "Plan of Action for Regional Transit." This plan describes a looming fiscal crisis for transit funding for bus and rail service provided by the CTA and Metra. It also recommends new concepts for Metra service to build ridership in a new regional rail model that has more frequent, all-day trains and additional stops in the inner ring suburbs and Chicago. From page 48 of this new plan:

> Changing travel patterns have led to a growing mismatch between Metra's service and the region's travel needs. . . . This trend is most directly attributable to Metra's traditional customer base — downtown office workers — commuting less frequently. . . .
>
> However, not all types of transit trips have been equally impacted. While Metra's traditional downtown commuter ridership has declined significantly, other types of trips — those on weekends, off-peak hours, reverse commute trips, and that do not go to or from downtown Chicago — have not declined nearly as much. The result is that travel on Metra today is more spread throughout the day, less peak-focused, and less downtown-oriented. Due to remote work habits, weekday travel is also skewed towards the middle of the week with lower ridership on Mondays and Fridays.
>
> Metra's most recent strategic plan calls for transitioning its system to a regional rail service model that emphasizes frequent all-day service to more places.

It remains to be seen how new service planning might affect service to Kenosha. MARK Rail partners are coordinating with Metra as planning continues for both MARK Rail and Metra.

Past Kenosha-Racine-Milwaukee (KRM) Planning

In 1998, an initial KRM commuter rail feasibility study was prepared by SEWRPC at the request of local governments in the corridor. Contining this work in the 2000s, SEWRPC commissioned a series of consultant and staff reports analyzing commuter and bus options for the KRM corridor. These feasibility studies look at technical and organizational aspects of the project. They cover alignment options, station locations, operations and management, and organizational options for managing and funding the project.

In order to implement KRM, the State Legislature created the Southeastern Regional Transit Authority (SERTA) in July 2009, which then managed the production of a 2009 Draft Environmental Impact Statement and 2010 FTA New Starts Application. SERTA was the local project manager and also had taxing authority to secure the needed local fund match to any federal grant funding.

However, in June 2011, the State Legislature and Governor repealed the State law creating SERTA, requiring SERTA to dissolve by September 28, 2011. The application from SERTA to the FTA New Starts programs was withdrawn. The KRM project remained essentially inactive until the current MARK Rail effort.

Past KRM reports are listed below, all of them are available online at: www.sewrpc.org/KRMOnline.

1997-1998
"Commuter Rail Feasibility Study," prepared for SEWRPC by TYLin
"Feasibility Study of Commuter Railway Passenger Train Service in the Kenosha-Racine-Milwaukee Corridor," prepared by SEWRPC, June, Report 239

2001-2002
"Wise Ride: Kenosha-Racine-Milwaukee Corridor Transit Study," series of Technical Reports No. 1 -10 and Methodology Memorandum No. 1-9, prepared for SEWRPC by Parsons Transportation Group and Associated Consultants

"Kenosha-Racine-Milwaukee Corridor Transit Study Summary Report and Recommended Plan" SEWRPC, August, Report 276
This study compares commuter bus, commuter rail, and hybrid options; comparisons of the bus vs. rail option should be noted for service concept, station locations, needed shuttle bus service, and travel time issues.

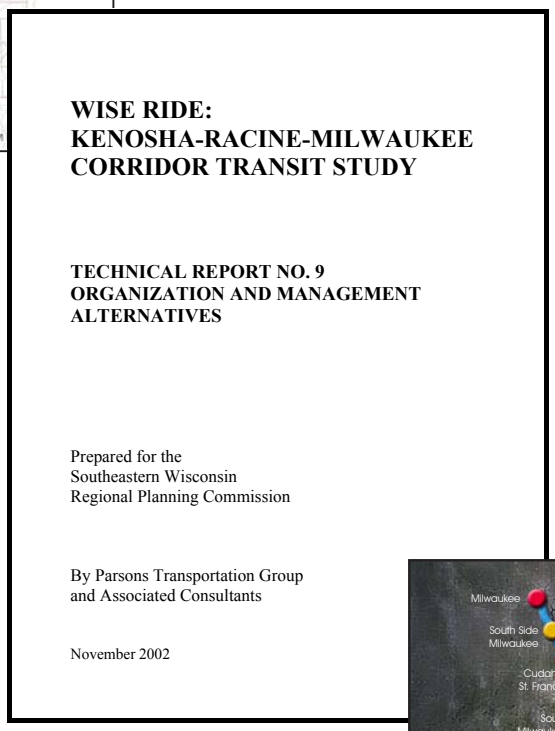
2006-2007
"Kenosha-Racine-Milwaukee Commuter Rail Extension, Environmental Impact Statement & Project Development Phase," prepared for SEWRPC by Earth Tech, Inc./HNTB, series of reports starting with Definition of Alternatives, capital improvements, transit-oriented development plans. Most of these reports were updated and incorporated into the 2009 Draft Environmental Impact Statement and 2010 New Starts Application.

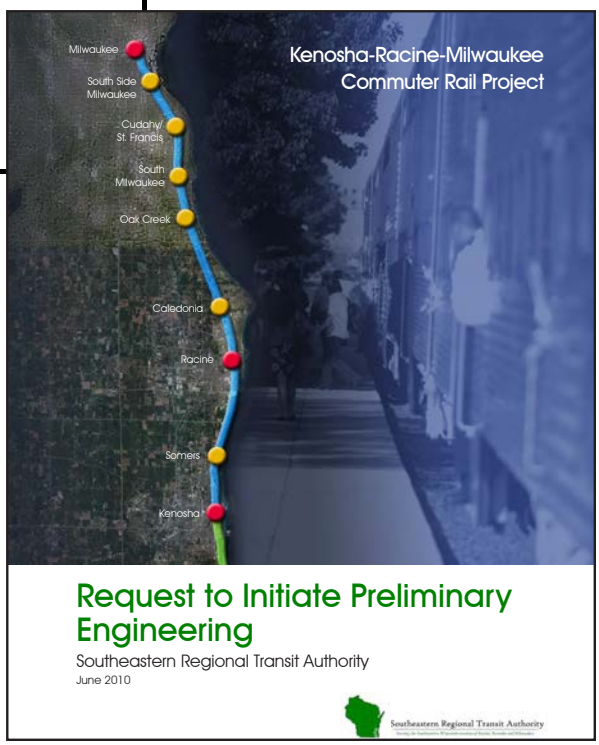
2009-2010
"Kenosha-Racine-Milwaukee Alternatives Analysis/ Draft Environmental Impact Statement, Kenosha, Racine, Milwaukee Counties, Wisconsin," submitted by SEWRPC, July 2009

"Kenosha-Racine-Milwaukee Commuter Rail Project, Request to Initiate Preliminary Engineering," submitted by SERTA (New Starts Application to the Federal Transit Administration), June 2010

2022
"Request To Enter Project Development" Proposal For: U.S. Department Of Transportation, Federal Transit Administration (FTA) Capital Investment Grant Program, submitted by Wisconsin Department Of Transportation (in partnership with Wisconsin Transit & Real Estate Group)

Documents from SERTA can be accessed online from a project archive, including many of the same documents as listed above and all meeting agendas, minutes, materials, and presentations for both the SERTA Board (2009-2011) and the previous temporary RTA (2006-2009). The archive is available at: www.sewrpc.org/SERTA





A small sample of cover images from past KRM studies, 1998 to 2010.


S.C. JOHNSON & SON
STOP

Chapter 3
Land Use

INTRODUCTION

ELEMENTS FOUND IN MARK RAIL COMMUNITIES

MILWAUKEE COUNTY LAND USE

Milwaukee Downtown and Harbor District
Milwaukee Bay View and St. Francis
Cudahy
South Milwaukee and Oak Creek
Oak Creek

RACINE COUNTY LAND USE

Caledonia and Racine North
Racine Central and Downtown
Racine South and Mount Pleasant

KENOSHA COUNTY LAND USE

Kenosha North and Somers
Kenosha Central and Downtown
Kenosha South and Pleasant Prairie

MAJOR INFILL SITES AND PLANNED PROJECTS CHICAGO'S NORTH SHORE RAIL COMMUNITIES

Land Use Map Legend

Land Use On Buildings

- SINGLE-UNIT RESIDENTIAL
- TWO-UNIT RESIDENTIAL
- MULTI-UNIT RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL
- CIVIC AND INSTITUTIONAL
- PARK AND RECREATIONAL
- TRANSPORT AND UTILITIES

Land Use On Parcels

- AGRICULTURE/UNDEVELOPED
- SURFACE WATERS
- WOODS
- WETLANDS
- EXISTING STATION
- FORMER STATION

Land uses are from SEWRPC's 2020 regional land use inventory. Colors are shown on building footprints at 100% and at 30% opacity on parcels. A dot symbol is included on maps for former station locations because the C&NW stations influenced the local land use pattern. Photographs are from SEWRPC, taken between September 2023 and August 2025. City plan document images are from City planning sources.

INTRODUCTION

The existing land use pattern in the MARK Rail primary study corridor is exceptionaly well matched to passenger rail service. The MARK Rail communities along the line grew up along the Chicago & NorthWestern tracks and in relation to service that ran for more than 100 years. The basic urban design framework of these places—the street grid and block pattern, position of key industries and walkable shopping streets—were laid out to provide access to the depot and major employers. Design professionals would say, these places "have good bones." The older cores of Racine and Kenosha were built many decades before the mass ownership of private automobiles, and, while driving is now ubiquitous for most trips, the potential for neighborhood-scale living remains.

This inherent urbanity of MARK Rail communities stands in contrast to many regional transit projects across the nation that extend new light rail or commuter rail lines out into automobile-oriented suburban environments, many times along alignments that are not well suited for transit because the horizontal scale is sprawled beyond reasonable walks, land uses are segrated in an unconnected street network, and the rail alignment has to follow highways or the edges of subdivisions. As explored in this chapter, the MARK Rail communities have a more suitable layout: the track is not at the edge of town, it runs through the center. The communities themselves are not, for the most part, traditional suburbs; they were developed as stand alone cities and towns created to provide a place for manufacturing and a place for that workforce to live: in short, they were factory towns.

This chapter will start by exploring common physical characteristics of MARK Rail communities and their suitability for rail service, and then provide an analysis of the land use pattern at the county-scale for the primary study area, and at the corridor and neighborhood scales that also considers urban design elements related to walkability. A look at railroad-oriented development in North Shore commuter rail suburbs along the UPN Line concludes the analysis.

General land use planning goals that MARK Rail can support include:

1. Support existing urban centers
2. Direct public and private investments to the rail corridor, rather than areas that do not have public works infrastructure to support growth
3. Recycle and reuse land, particularly abandoned factory sites
4. Encourage infill and redevelopment in station areas by providing greater access to the region
5. Reinforce walkable Main Street storefront areas by bringing rail customers and new residents to the area.

The analysis compares the existing land use and urban design features of communities in the primary study corridor to these goals.

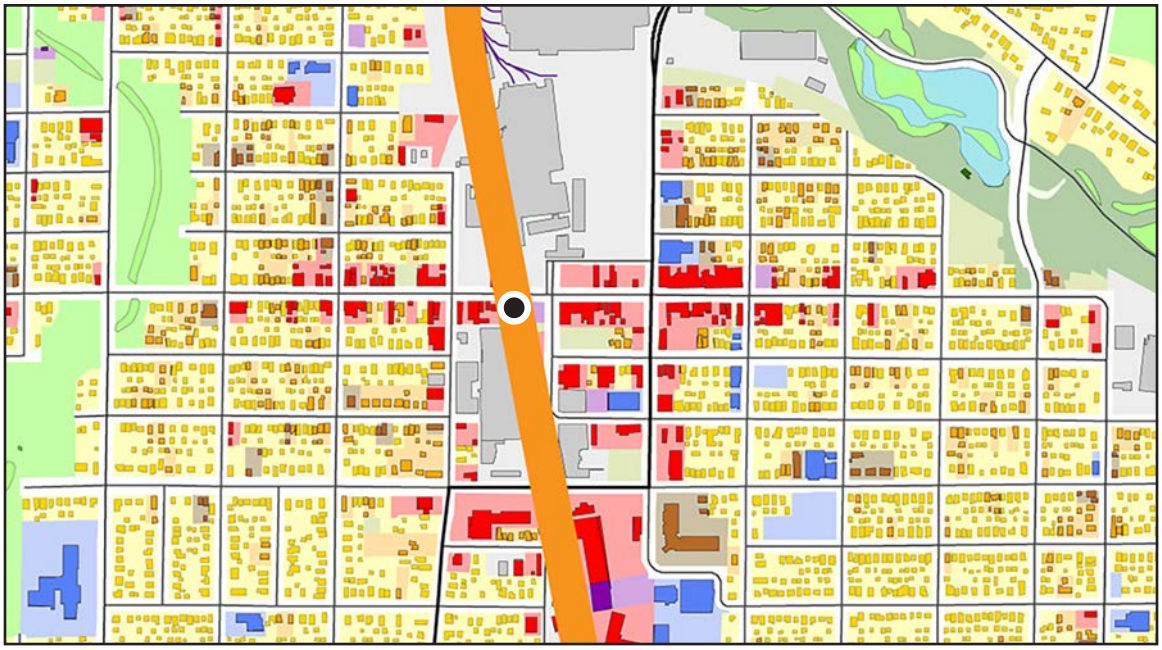
ELEMENTS FOUND IN MARK RAIL COMMUNITIES

The series of municipalities along the corridor exhibit a number of common elements in their basic layout that make them suited to passenger rail service. Not every city along the line has all of the elements, but all have some, including:

- A grid of streets in a highly connected network
- Sidewalks on both sides of streets
- Short blocks that allow for efficient movement in all cardinal directions
- A town center organized, historically, around a major employer, a passenger rail depot, and a walkable Main Street with storefronts set up on a sidewalk
- Small and relatively narrow residential lots that allow for efficient frontage and a neighborly scale
- Alleys or short driveways
- A mix of one- and two-unit detached housing types and some small apartment buildings on mixed blocks
- Small shops, taverns, restaurants, and churches at the street corners and sometimes interior to residential blocks
- Vacant development sites of varying sizes
- New multiple-unit apartments, mixed-use buildings, and factory loft conversions

Storefront Main Street 1.5 blocks from the former C&NW depot, South Milwaukee

Mixed-use block in South Milwaukee with office building (end of block in distance), small lot housing, and institutional uses



Street and land use pattern in South Milwaukee shows 'Main Street' commercial (red) intersecting MARK Rail alignment. Short, walkable blocks have a mix of uses and residential types, all within walking distance of the old depot (black dot).

One- and two-unit detached houses, one block from historic C&NW depot in Cudahy

Alley in small lot residential block in South Milwaukee

MARK Rail communities offer:

- Available vacant sites
- Factory conversions, reuse
- New infill
- Brownfield redevelopment
- New density

Racine
Former Horlick Malt factory reuse for residential and commercial uses as the Belle City Square development

Downtown Racine
Aerial photograph (2020) showing vacant former industrial properties along the Root River, north and south of Water Street. The City of Racine owns the majority of these properties and is seeking redevelopment proposals.

Milwaukee, Bay View
Higher-density infill in a traditional neighborhood setting with new open space

Racine
Brownfield redevelopment on downtown lakefront to new luxury residential

Kenosha
Kenosha Innovation Neighborhood: new technical academy, new start up space, brownfield site clean up and reuse, open space

MILWAUKEE COUNTY LAND USE

The part of Milwaukee County within the MARK Rail study area encompasses the highest intensity land uses within the State of Wisconsin in downtown Milwaukee. It includes the historic first settlement areas of the city: Kilbourntown to west of the Milwaukee River and Juneautown to the east. Walker's Point is south of the Milwaukee River, the Menomonee Valley extending west, and Port Milwaukee along the lakefront.

Neighborhoods to the south of the Valley are a dense mix of housing, retail commercial, and local institutional uses. The intensity of land use lessens moving further south in the county, as more areas are exclusively single-unit residential, and commercial uses are segregated to major arterial roadways and shopping centers, with South 27th Street being the most noticeable and longest commercial corridor. Mitchell International Airport is a large feature in the southern part of the county. A large industrial area is located south of the airport in Oak Creek, intersected by Rawson Avenue.

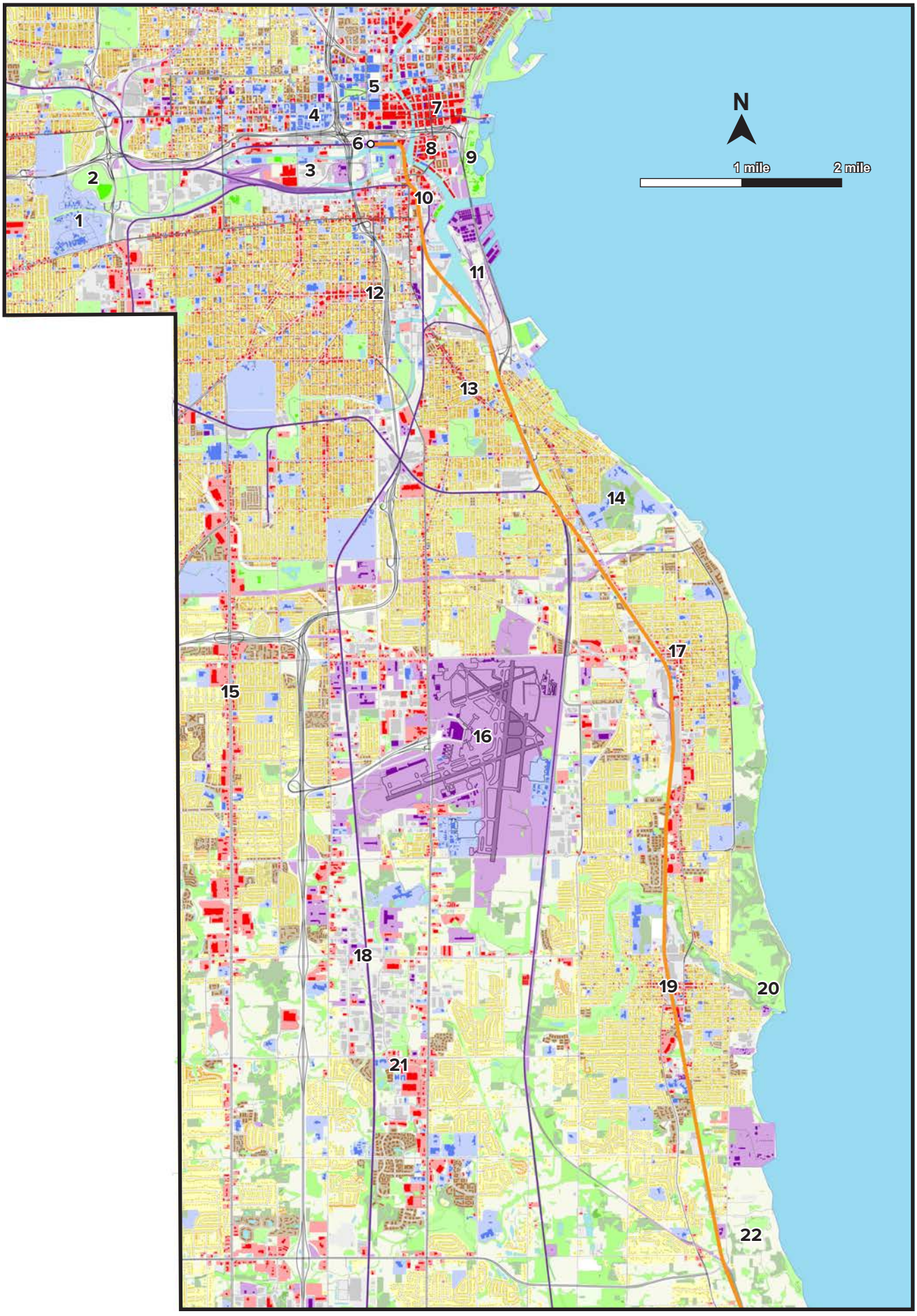
Parkways along the Kinnickinnic River, Root River, and Oak Creek create a pattern of open spaces connecting local and regional parks. Wetland and woodlands in public and private ownership are also a prominent feature in the southern part of the county. Lakefront parks are a major land use feature. Sparse agricultural uses and a diminishing amount of undeveloped open land are found near to the county line, where urbanization of the Milwaukee metropolitan area reaches its southern extent. However, given this reduction in available land, recent developments at the urban edges include some relatively dense mixed-use and multiple-unit apartment complexes, including the new Drexel Town Square and Lakeshore Commons projects.

Land uses nearest to the MARK Rail alignment are an older pattern shaped by the C&NW service in a series of connected communities with higher intensity nodes near the historical depot locations. Land uses to the west are shaped by the automobile and, to some extent, the interstate freeway corridor and its interchange access points.

A closer look at the areas surrounding the MARK Rail alignment in Milwaukee County is provided on the following pages.

Key Places and Destinations in the MARK Rail Study Area

1. Veterans Administration
2. American Family Field
3. Menomonee Valley
4. Marquette University
5. Fiserv Forum and Wisconsin Center
6. Milwaukee Intermodal Station
7. Downtown Milwaukee business district
8. Historic Third Ward
9. Summerfest / Henry Maier Festival Park
10. Walker's Point / Harbor District
11. Port Milwaukee
12. Historic Mitchell Street
13. Kinnickinnic Avenue, Bay View
14. Saint Francis de Sales Seminary
15. South 27th Street Corridor
16. Milwaukee Mitchell International Airport
17. Layton Avenue at Packard Avenue, Cudahy
18. Rawson Avenue industrial area, MATC
19. Milwaukee Avenue, South Milwaukee
20. Grant Park
21. Drexel Town Square, Oak Creek
22. Lakeshore Commons, Oak Creek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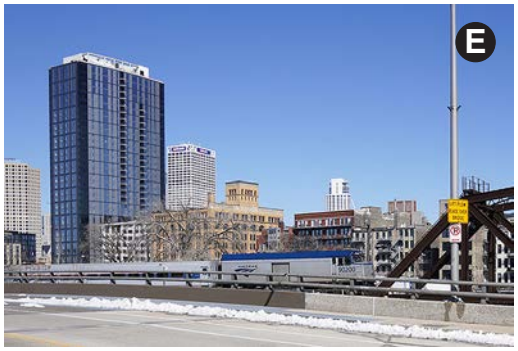
Milwaukee Downtown and Harbor District

General Land Use Pattern

Downtown Milwaukee is divided into Kilbourntown west of the Milwaukee River and Juneautown between the river and lake. Land use west of the river is dominated by civic uses, including the Courthouse, arenas, and a convention center. The Marquette Interchange is itself a major land use, extending east as I-794. The central business district is east of the river centered on Wisconsin Avenue. The Historic Third Ward, with a mix of uses, is located south of the freeway. The City-owned Summerfest grounds are along the lakefront. Utility uses include the Jones Island Water Reclamation Facility. The Harbor District and Port Milwaukee are a mix of commercial, industrial, and open lands. Warehouse and factory conversions to residential and retail uses continue from the Third Ward to the Fifth Ward.



Hiawatha train leaving MIS, office towers in the distance and high-rise residential in Third Ward

Commercial Corridors and Nodes

Commercial office buildings are next to privately-owned parking garages, some taking whole blocks, which are also colored as a commercial use. The downtown lacks a defined, main shopping street with consistent storefronts. Shops and restaurants in the Third Ward are at the ground level of converted warehouses. A market hall, stores, and office space occupy former department stores on Wisconsin Avenue. National Avenue and Historic Mitchell Street are major commercial streets with consistent storefronts.

New loft residential and CPKC elevated track over 2nd Street at Florida Street

Residential Types

Apartment structures, with rental and condominium units, in downtown Milwaukee are the tallest and most dense residential uses in the MARK Rail study area. The buildings are primarily north of the office core, but new high-rise buildings in the Third Ward and on the lakefront are increasing the number of downtown residents. There is a dearth of residential uses or office space within the immediate area of the Intermodal Station.

Looking south to Allen-Bradley Clock Tower from National Avenue

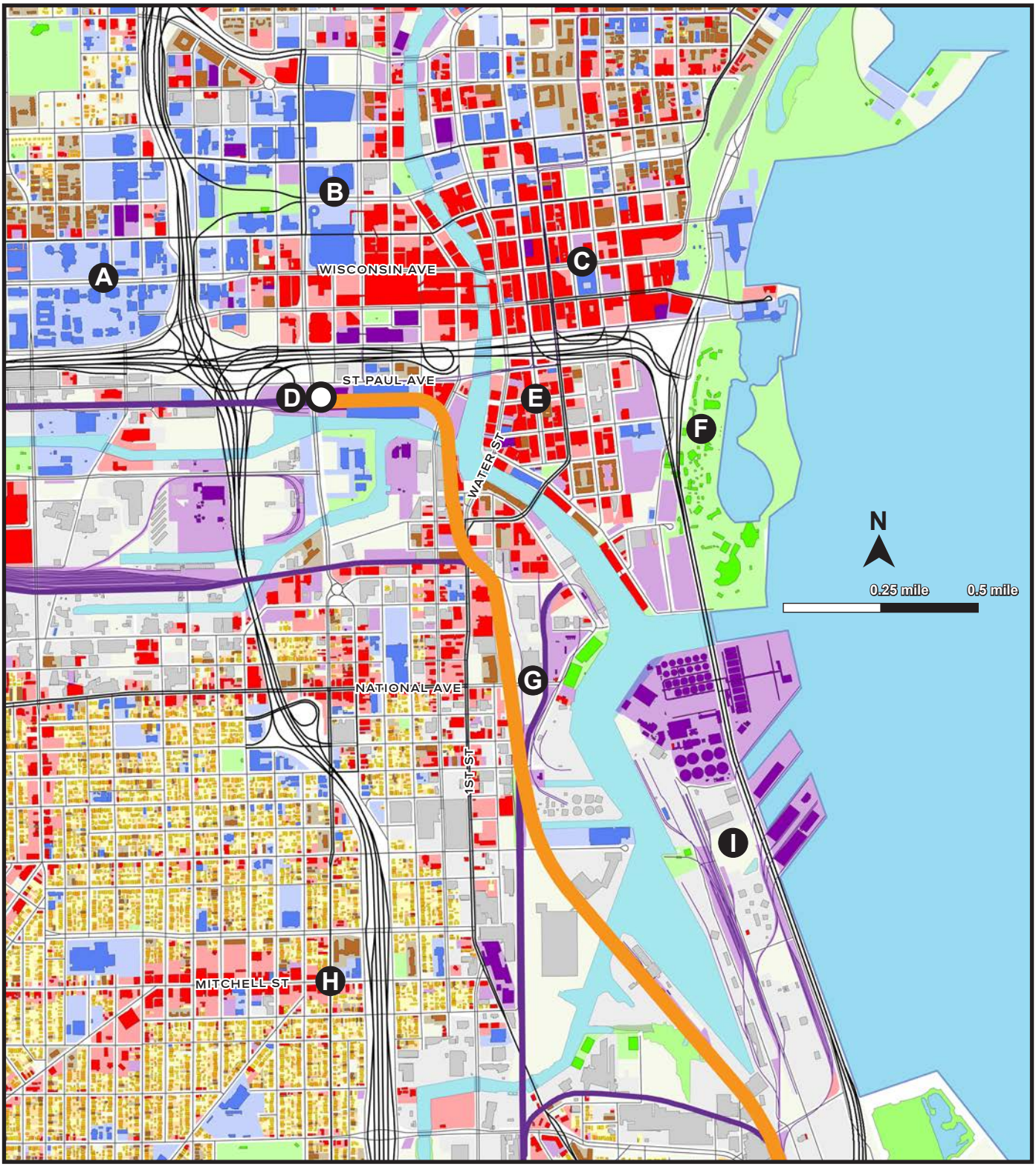
Urban Design Features

Rivers, canals, and freeways are the key features shaping downtown Milwaukee districts. An extensive riverwalk with art installations has been a major addition in recent decades. Blocks in Juneautown are smaller than west of the river where successive redevelopment projects have created a series of superblocks. The civic campus anchored by the Courthouse is organized around a large parking garage with a rooftop park. The downtown is walkable, but industrial areas in the Harbor District are a difficult environment for pedestrians and bicyclists.

Mining equipment displayed at Komatsu

TOD Potential

The presence of an Amtrak station, with 90-minute service to Chicago's Loop and up to seven trains per day, has not produced station area development over the last half century. The station location is a half mile from the Third Ward and development is constrained by a canal to the south, post office immediately east, and freeway interchange to the northwest. The C&NW's former Lakefront Depot at the foot of Wisconsin Avenue helped to shape the office core by providing direct walk access, but the current station location is a mile from the tallest office towers, which are located to maximize lakefront views at the east edge of downtown.



Places near MARK Rail

A Marquette University

B Kilbourn Town: Baird Center, Fiserv Forum

C Wisconsin Avenue office core: Northwestern Mutual, US Bank Center

D Milwaukee Intermodal Station

E Third Ward

F Summerfest / Henry Maier Festival Park

G Harbor District: National Avenue, Rockwell Automation, Komatsu

H Historic Mitchell Street

I Port Milwaukee

Milwaukee Bay View and St. Francis

General Land Use Pattern

Bay View's location south of the gritty Port Milwaukee reinforces the area as a separate community, with rail, river, and roadway barriers marking its boundaries. Residential blocks to the east of I-794 are oriented to the lakefront, with larger houses than the worker cottages found in the areas flanking Kinnickinnic Avenue. A large automobile parts plant, adjacent to UP track, is the largest industrial use interior to the neighborhood. High school and seminary properties, large institutional uses, provide the namesake for St. Francis. The remnants of former railroad property leading to a former power plant can still be seen in a utility corridor that cuts across St. Francis.

Commercial Corridors and Nodes

Kinnickinnic Avenue is the key commercial corridor, cutting diagonally across the northern part of the area, then paralleling the MARK Rail track south through St. Francis. The intersection of Lincoln Avenue with Kinnickinnic is a busy node, supported by new mixed-use infill with storefronts. Small retail nodes, for example on Russell Street east of the track, bring neighborhood icons into the residential areas.

Residential Density

In Bay View, nearly all residential blocks are a mix of single-unit and two-unit houses, typically in an over-under configuration. The density of houses is greater in the northern part of Bay View, due to a higher mix of duplexes and small apartment buildings and smaller lots with minimal setbacks. The blocks present a tight configuration that contributes to the close knit feel of the community. At 25 stories, the Bay View Terrace condominium near the lake is the only high rise. Over the last 20 years Bay View has attracted new residents to newly constructed podium-style apartment buildings. The Bay View neighborhood plan (City of Milwaukee, adopted 2023) indicates a net addition of 585 units since 2002.

Urban Design Features

Kinnickinnic Avenue is one of the longest stretches of small commercial buildings with consistent, occupied storefronts in Milwaukee. It was a streetcar route and its position maximizes walk access. The Kinnickinnic diagonal lends variety to the shape of intersecting blocks. The grid, though irregular, creates a highly connected network of paths. A series of small parks jog to either side of the MARK Rail track and I-794, while the large South Shore Park provides views and access to the lake. Corner and mid-block bars in St. Francis are one of the neighborly aspects of the urban pattern.

TOD Potential

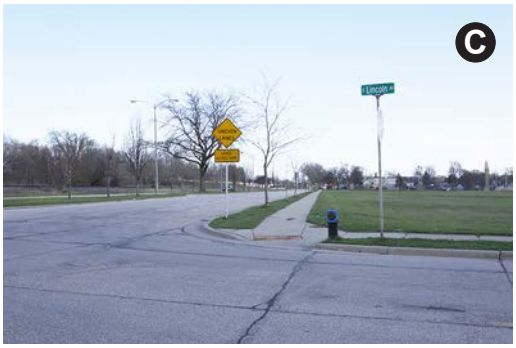
The former Army Reserve site, across Bay Street from a potential MARK Rail station site, is roughly six acres and ready for infill development. The City plan for Bay View highlights this vacant site and recommends other potential redevelopment along major commercial corridors. The existing residential density and grid of streets create a very walkable environment that supports transit ridership.

Mix of old and new development along Kinnickinnic Avenue

Recent mixed-use infill on Kinnickinnic Avenue at Conway Street

Small lot one- and two-unit residential in Bay View

Army Reserve site at Lincoln Avenue and Bay Street



Places near MARK Rail

A Port Milwaukee

B Kinnickinnic Avenue and Lincoln Avenue

C Former Army Reserve infill site

D South Shore Park

E Humbold Park and Oklahoma Avenue

F St. Thomas More High School and Saint Francis de Sales Seminary

G Howard Avenue

Cudahy

General Land Use Pattern

All of the City of Cudahy is captured on the map. Mitchell Airport is to the west; parks along the Lake Michigan shore to the east. MARK Rail runs through the center of Cudahy flanked by industrial and commercial uses. Residential neighborhoods are mixed density in the north half, and more segregated to single-unit houses on most blocks to the south. A mixed-use area is clustered around Layton and Packard Avenues: the heart of downtown Cudahy.

Major Commercial Corridors

Large strip centers and highway commercial uses are located along Layton Avenue between I-794 and the MARK Rail track, with a quick shift to more walkable storefront blocks to the east of the tracks and the intersection with Packard Avenue. This heart of the community was served by the C&NW depot and is a mix of older storefront buildings and new apartments, some with ground floor shops. This walkable scale commercial continues south along Packard for five blocks. The southern segment of Packard Avenue has commercial uses in strip center formats and smaller, stand-alone businesses along the four lane street.

Industrial Areas

Smithfield meat processing is located south of Layton Avenue and west of the MARK Rail track. Spurs off the UP track lead to a railroad car service facility. ATI Forged Products stretches for a half mile along the west side of Packard Avenue.

Residential Types

The majority of housing is small lot, single unit. The older part of Cudahy within walking distance of the meat packing plant has a denser mix of one- and two-unit houses and small apartment buildings. The application of zoning led to more exclusively single-unit blocks in the post-war areas to the south of Grange Avenue. Apartment complexes are clustered at College Avenue and a few other locations. Senior apartments continue to be developed to meet demand.

Urban Design Features

The main urban design scheme is the regular grid of streets, creating numerous residential blocks. These provide walk access and a highly connected space, but commercial corridors are automobile oriented. Attention to the streetscape is evident in the downtown area, softening the overall industrial and strip center environment.

TOD Potential

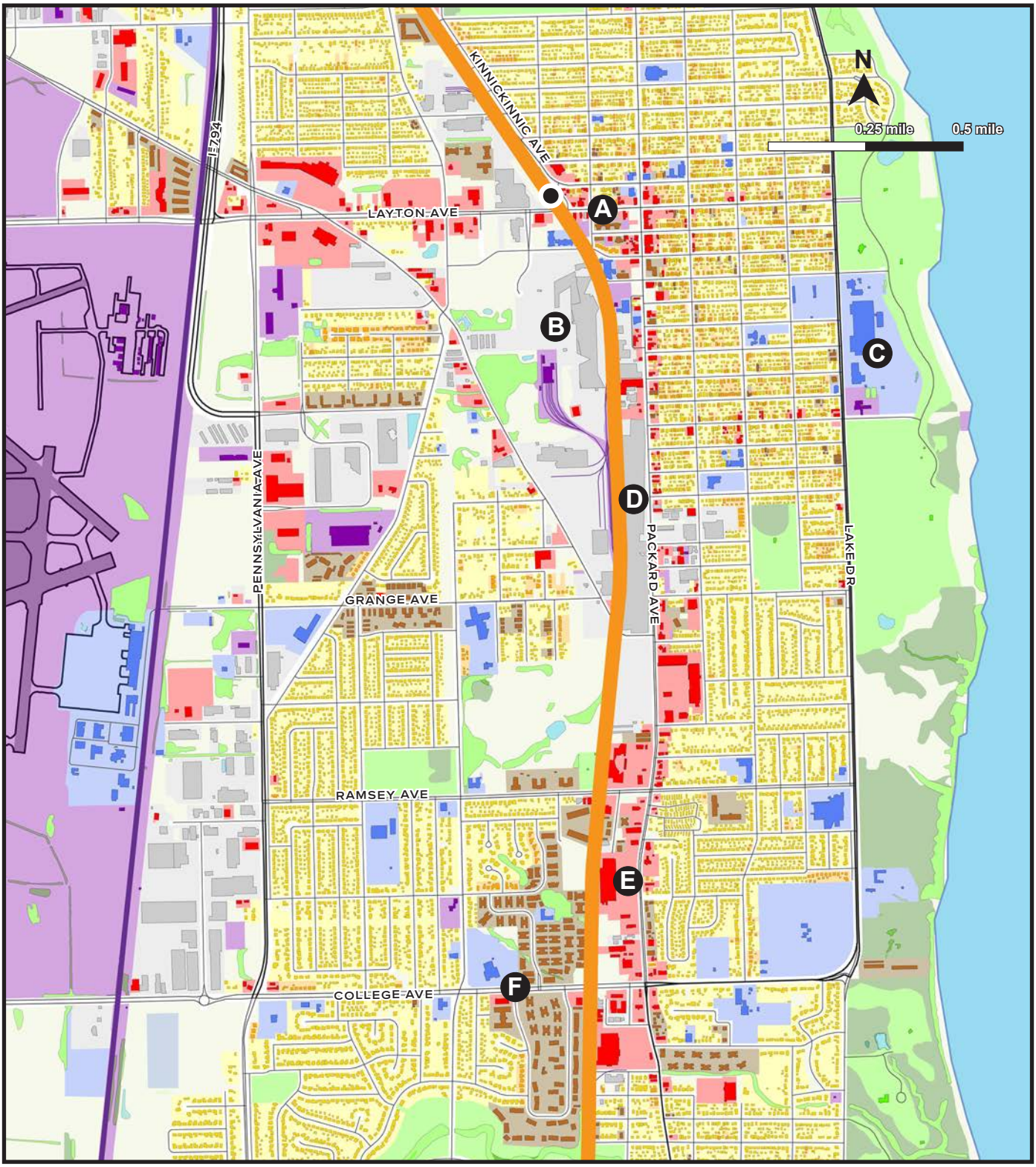
The Layton and Packard corner area is relatively dense and walkable. New mixed-use infill near the historic depot area reinforces the transit orientation. The apartment and condominium complexes near the track at College Avenue present a potential second area for future TOD. Redevelopment of the six-acre, former Kmart site could be focused on a high-density mix of uses, that might include a MARK Rail station.

Layton Avenue looking east from MARK Rail track

New construction, corner of Layton Avenue and Packard Avenue

Smithfield Culinary plant, south of Layton Avenue

Former Kmart site, located immediately east of track



Places near MARK Rail

- **A** Cudahy City Center: Layton Avenue and Packard Avenue
- **B** Smithfield Culinary plant
- **C** Cudahy High School
- **D** ATI Forged Products plant
- **E** Former Kmart site and Packard Avenue commercial strip
- **F** College Avenue apartments and condos

South Milwaukee and Oak Creek

General Land Use Pattern

South Milwaukee's land use pattern is similar to Cudahy: the railroad corridor attracted a major industrial use, the C&NW depot was located across the street from that factory, the street with the depot and the major factory became the Main Street lined by storefronts, and the intersection of the east-west main street and a north-south highway is the heart of the downtown. To the north of the downtown, the Oak Creek Parkway meanders to the lake at Grant Park. Single-unit residential blocks are to the north and south, while the central, older part of the city is a mix of residential types.

Major Commercial Corridors

Milwaukee Avenue is the key walkable commercial area, with storefronts lining the street to the east and west of the old depot. To the east of the tracks, 10th Avenue is also lined by storefronts and civic uses (fire station and library). Strip center retail buildings are located south of Marquette Avenue on both sides of the tracks, where an underpass allows traffic to avoid the railroad crossing. Further south, the Grant Park Plaza shopping center is located west of the tracks where Drexel Boulevard meets Chicago Avenue. This suburban-style shopping center serves large residential areas on surrounding blocks.

Industrial Areas

An area of factory buildings is immediately west of the old depot, now used for a variety of businesses. To the north of Milwaukee Avenue, the former Bucyrus Erie headquarters, shown on the map as industrial, is approved for a transition to a mix of residential and retail uses. Further north, Catepillar Global Mining and other companies continue manufacturing uses.

Residential Uses

Residential unit types are mixed four blocks to the north of Milwaukee Avenue and three blocks to the south. There are few apartment buildings; blocks are lined with one- and two-unit houses that concentrated workers within an easy walk of the major employer. Residential blocks south of Marquette Avenue to Forest Hill Avenue (city limit) are mostly single unit, but there are some townhouse style apartment complexes and Milwaukee style four-flat buildings east of the tracks.

Urban Design Features

Most blocks in the older part of South Milwaukee are urban in layout: blocks are short, under 470 feet x 270 feet; some are almost square. Most blocks have sidewalks on both sides and an alley, which allows for a tighter frontage uninterrupted by driveways. Streetscape features in the depot area include pedestrian-level lighting, on-street parking, and bicycle lanes. The recently constructed Bucyrus Commons outdoor space includes a stage and gathering area, creating a unique feature in the downtown depot area. The transition away from the grid to suburban street patterns is noticeable south of Drexel Boulevard.

TOD Potential

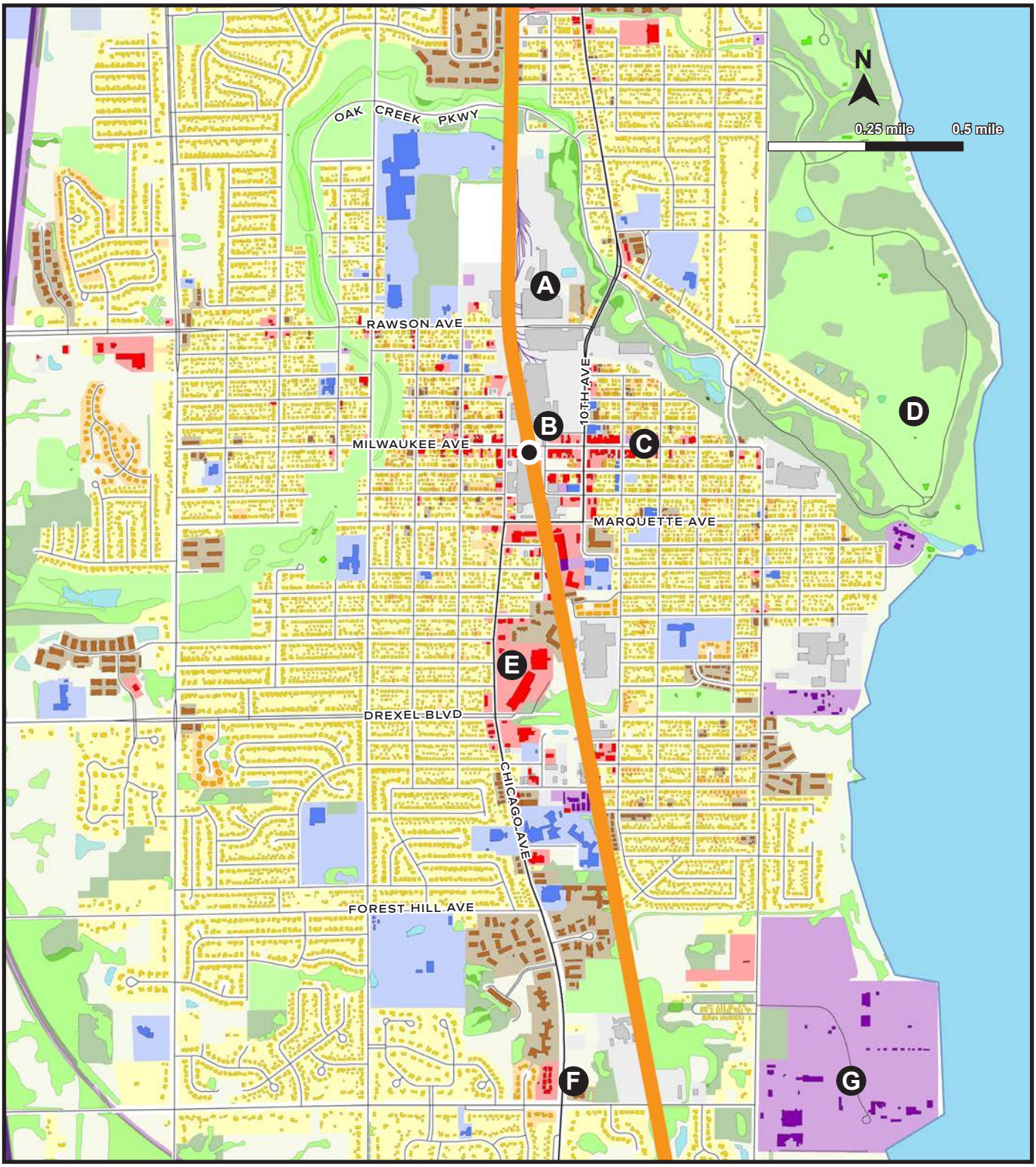
The grid of streets provides a good structure for TOD, and a station would support storefront businesses. But existing single-unit housing may slow densification on residential blocks. Redevelopment of aging industrial and strip center sites is possible.

Former Bucyrus headquarters, north side of Milwaukee Avenue

Bucyrus Commons directly east of old depot

Milwaukee Avenue storefronts east of 10th Avenue

Narrow lots create housing density in the walkable heart of South Milwaukee (Michigan at 8th)



Places near MARK Rail

A Caterpillar Global Mining plant

B Bucyrus plant, redevelopment site, former C&NW depot

C Milwaukee Avenue and 10th Avenue storefronts

D Grant Park

E Grant Park Plaza shopping center

F Market Place Village shops

G MMSD South Shore Water Reclamation Facility

Oak Creek

General Land Use Pattern

The southern part of the City of Oak Creek is exurban, with large lot subdivisions and country estates adjacent to woodlot and wetland conservation areas. However, a number of factories were located on the lake bluff and a related hamlet area with a handful of businesses and worker cottages remain near the site of the former C&NW station at Depot Road. MARK Rail runs close to Lake Michigan in an area undergoing substantial transformation from brownfield industrial sites to lake bluff parklands and new higher density housing development.

Commercial Corridors and Nodes

There are no commercial corridors in this part of the City of Oak Creek. The Marketplace Shopping Village is located at the intersection of Puetz Road and Chicago Avenue. A handful of businesses, including a gas station, are located at Chicago Avenue and Ryan Road near the former M-R-K interurban corridor, a likely rural stop, and just west of the MARK Rail track and potential station sites identified in previous KRM studies. The former interurban corridor is now an electric power transmission line right of way with a recreation trail.

Industrial Areas

MMSD's South Shore Water Reclamation Facility is located on the lakeshore to the north and the We Energies Oak Creek Power Plant on the lakeshore to the south. Both are colored in purple as utilities. The City of Oak Creek water treatment facilty is adjacent to the MARK Rail tracks.

Residential Types

Residential uses are almost exclusively single-unit houses, outside of the new Lakeshore Commons. (Note, the Lakeshore Commons structures were under construction at the time of this report and not yet digitized for mapping.) Lot size and configuration varies depending on the era of the subdivision. Older lots, fronting on rural roads, are deep, while newer subdivisions vary in terms of lot depth and width. Lakeshore Commons is under development, offering much higher densities than other residential in the area. Townhouse, single-unit detached, and multiple-story multiple-unit apartments and condominiums are attracting new residents with over 700 units total.

Urban Design Features

The general area is not urban, but the Lakeshore Commons development has urban design elements including sidewalks, street lamps, paths, and common areas.

TOD Potential

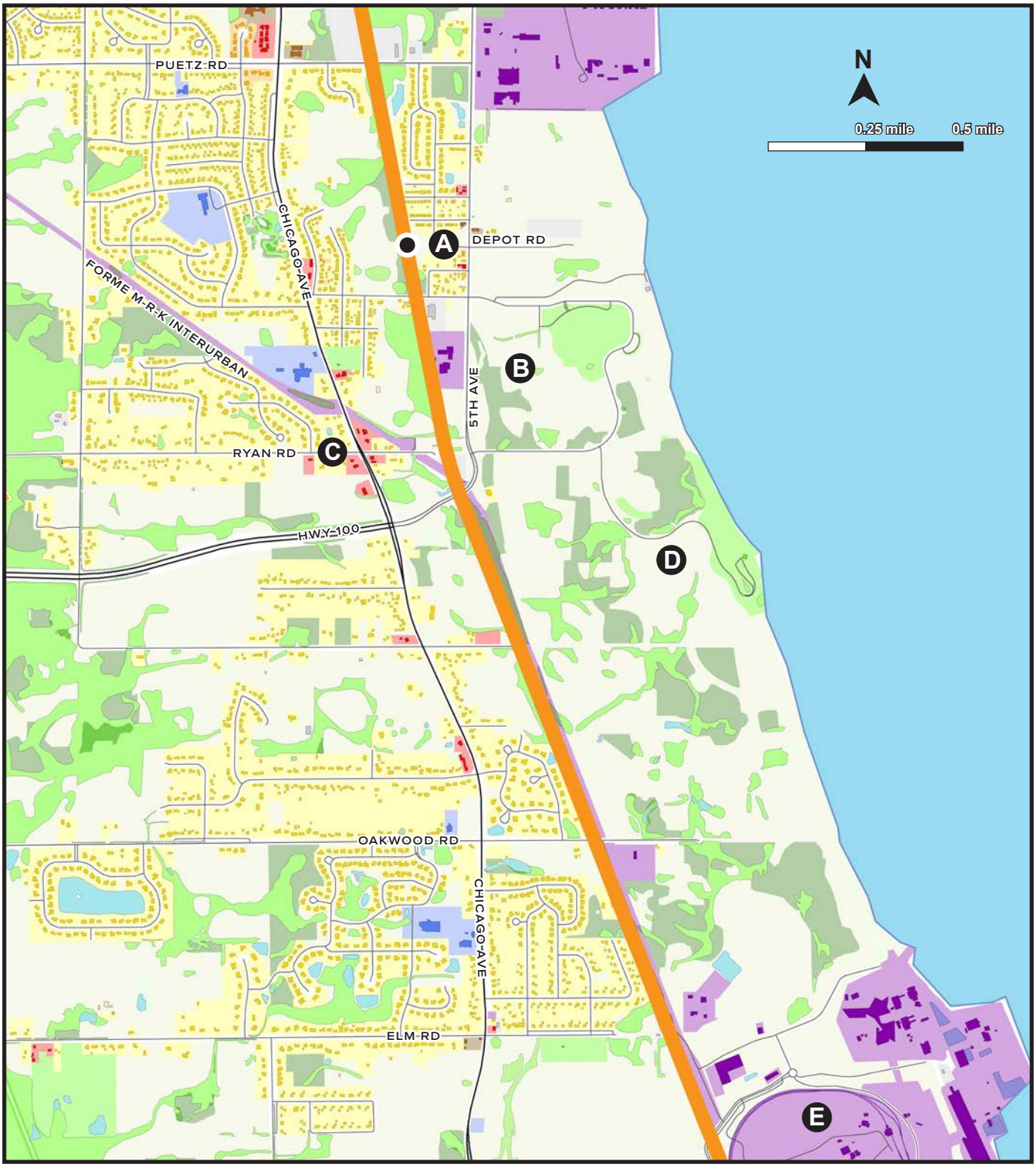
The MARK Rail track lies within 500 feet of the Lakeshore Commons property, which is immediately across Fifth Avenue from the tracks. The approved development plan locates four large apartment builidings at the intersection of Fifth Avenue and Lake Vista Boulevard. Additional brownfield redevelopment is planned for the property between Lakeshore Commons and MMSD's facility on the lakeshore, which would create additional residential density and potential MARK Rail riders.

Small worker cottages one block north of old depot at 6th Avenue in old Oak Creek

Townhouses at Lakeshore Commons, from Fifth Avenue

Large apartment buildings at Lakeshore Commons

MARK Rail track at Fifth Avenue, potential station site



Places near MARK Rail

A Depot Road, former C&NW station and hamlet

B Lakeshore Commons (new development not shown

C Ryan Road at Chicago Avenue, node and junction

D Bender Park

E We Energies Oak Creek Power Plant

RACINE COUNTY LAND USE, EAST OF I-94

Racine County is just under 28 miles across, at its widest extent from Wind Point to its western boundary (off the map). Interstate 94 is almost nine miles west of downtown Racine, meaning less than a third (28 percent) of the width of the county lies to the east of the freeway. The land use in this eastern part of the county is more urban in character than west of the freeway. However, much of the land in even this eastern part of the county is agricultural, conservation areas, or low density rural estates. The most intense land use is found along the lakeshore and within the MARK Rail corridor.

The northern part of the county remains rural as the Milwaukee metropolitan urbanization has yet to fill in lands all the way to the county line in Oak Creek. The Town of Caledonia incorporated into a village comprising essentially all of the land east of the freeway south to Two Mile Road and the limits of Wind Point and the City of Racine. The parts of Caledonia adjacent to Racine are typically low-density residential subdivisions with single-unit houses on generous lots. The band of still rural and exurban development from the freeway arching to Lake Michigan south of the Oak Creek Power Plant contains working agricultural uses and exurban lots with residential uses lined up along town section roadways with open areas behind. Franksville is a hamlet within the village with a cluster of commercial uses where the CPKC track crosses Highway K, and may have some relation to service along the old Milwaukee Road railroad.

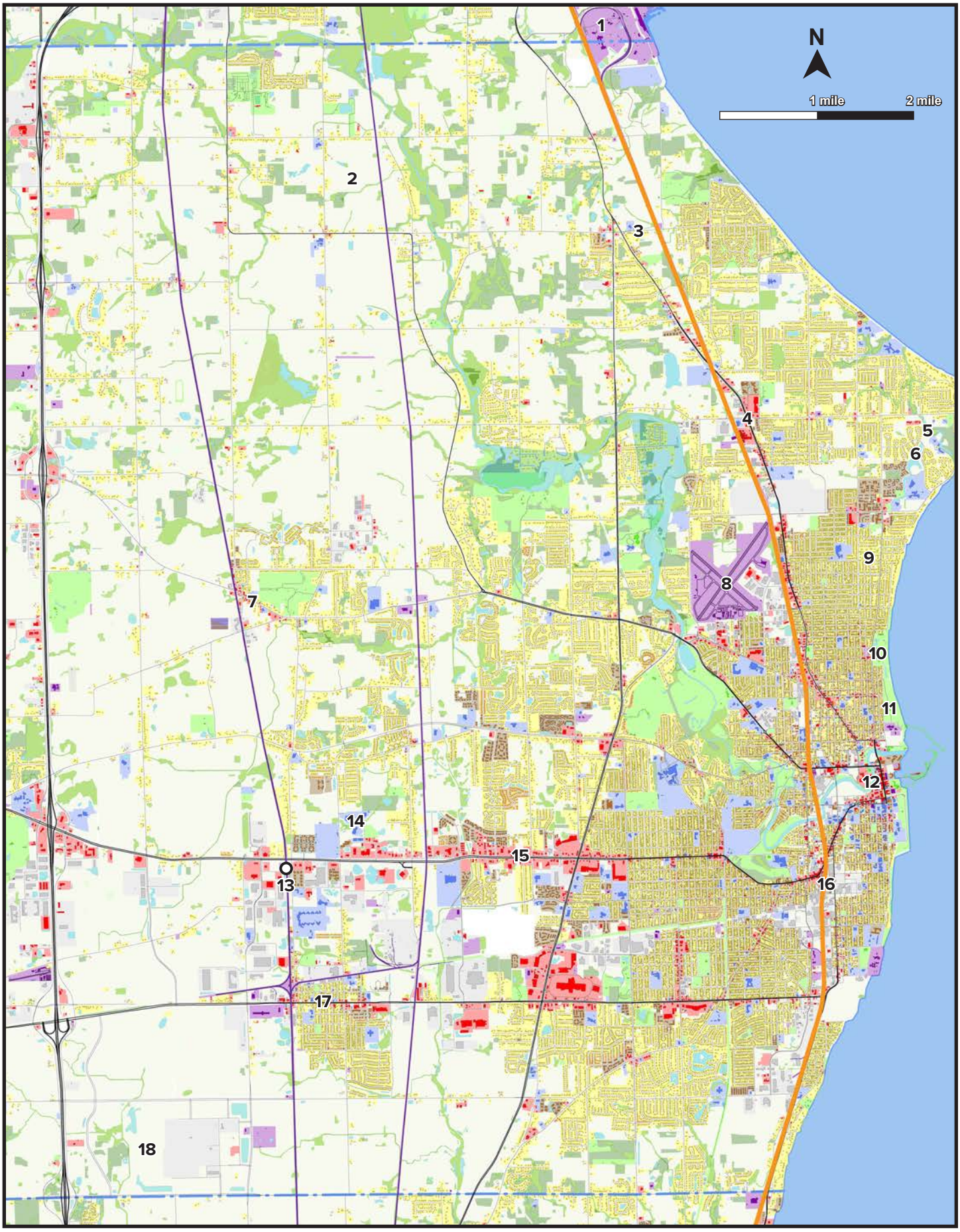
Further south, a cluster of small commercial and low intensity industrial uses are near to where the old Sturtevant Station was located at Durand Avenue and the CPKC tracks. Highway commercial uses along Durand Avenue, Highway 20, and Highway 31 create a rectangular pattern at the county scale. Commercial uses along Highway 20 extend from its freeway interchange to Washington Avenue and into downtown Racine. Before the interstate was constructed, Highway 32 (which runs parallel to the MARK Rail track) was the major north-south route and as such has commercial uses along Douglas Avenue in Racine north into low-intensity suburban areas with nodes at major crossing roads including Four Mile Road and Six Mile Road.

Greenways and parks protecting the Root River are a prominent feature at the county scale. In the southwest corner of the county, large sites are being prepared for development of a business park for manufacture of computer screens and a large data center. A number of similar logistics and light manufacturing business parks are being developed where direct access to the freeway is available.

Neighborhoods in the City of Racine stand out because of the large number of parcels and tightly spaced one- and two-unit houses and a mix of uses including institutional and civic. The area of most intense land use is located within and next to the MARK Rail corridor.

Key Places and Destinations in the MARK Rail Study Area

1. We Energies Oak Creek Power Plant
2. Caledonia
3. Six Mile Road
4. Four Mile Road at Douglas Avenue
5. Wingspread Conference Center
6. Wind Point
7. Franksville
8. Batten International Airport
9. North Bay
10. Racine Zoo
11. Racine North Beach
12. Downtown Racine
13. Sturtevant Amtrak Station
14. Mount Pleasant
15. Highway 20
16. Racine Uptown
17. Durand Avenue, Sturtevant
18. Planned Foxconn and Microsoft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Caledonia and Racine North

General Land Use Pattern

A private airport and two quarries to the east and west of MARK Rail are prominent land use features in this area where the City of Racine and Village of Caledonia meet. Large lot single-unit residential is the main land use between Four Mile Road and Three Mile Road. A group of apartment complexes and some retail uses are located at the east end of Three Mile Road, next to a private school in the Village of Wind Point. The lot pattern in the City of Racine is noticeably denser, but the area between Douglas Avenue and the lake is almost entirely exclusive to single-unit houses. The neighborhood is served by commercial uses along Douglas Avenue.

MARK Rail bridge over Four Mile Road

Industrial Areas

Two quarries north of Three Mile Road are a heavy industrial use. A light industrial park is located east of Batten Airport at South Street.

Commercial Corridors and Nodes

Douglas Avenue is the main commercial corridor. In Racine, the commercial frontage is nominally walkable, on relatively shallow lots. The retail uses spread out to shopping center forms at the intersection of Douglas Avenue and Four Mile Road.

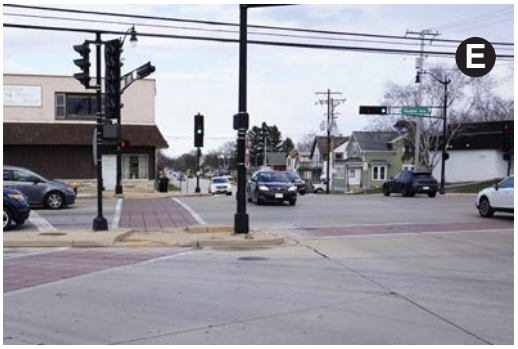
Light industrial uses on South Street in Racine

Residential Types

The majority of houses in Racine and Caledonia are single unit, with a few two-unit houses east of Douglas Avenue on 10th Avenue. A small number of multiple-unit structures are found along Douglas Avenue, including garden apartments between the tracks and Douglas Avenue south of Three Mile Road. Many blocks in Racine are lined with similar, repeated single-story ranch houses. But, closer to the lake, houses tend to have a second story and larger lots.

Urban Design Features

The short residential blocks in Racine create a well connected network of streets. In fact, some of the blocks are only 200 feet in depth, meaning very urban lots of roughly 100 foot depth. Garages are to the rear, but without alleys. The large lots in the very small Village of North Bay contrast. Douglas Avenue has a disorganized highway commercial aesthetic and few features to soften the look of telephone poles and franchise businesses. Fast moving traffic reduces the appeal for walkers.

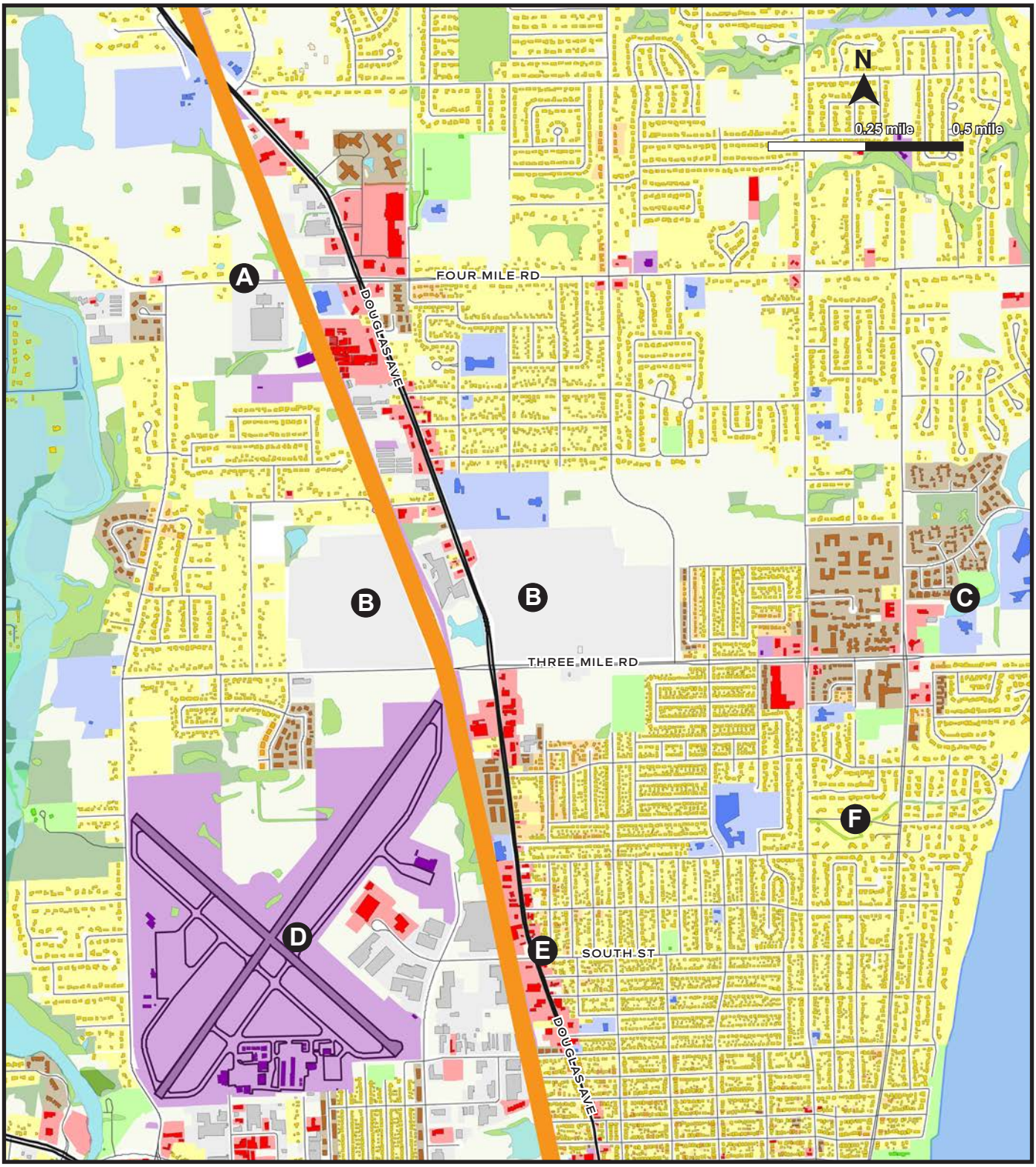


Douglas Ave at South Street

TOD Potential

All blocks in Racine have sidewalks on both sides, so the neighborhood is walkable. While there is limited potential for new TOD, the sheer number of houses in the area could provide a customer base for a local rail line. Previous KRM studies identified Four Mile Road as a potential station location, with a concept plan for a village center east of the track.

Single-unit houses in north Racine near the lake



Places near MARK Rail

A Four Mile Road

B Rock quarries

C Wind Point apartments and Prairie School

D Batten International Airport

E Douglas Avenue commerical at South Street

F Village of North Bay

Racine Central and Downtown

General Land Use Pattern

The center of Racine presents a complex mix of land uses, arranged in relation to the lakeshore and twisting Root River. Northwestern Avenue and Washington Avenue are major arterials aligned to the north and south of the river. State Street, Main Street, and 6th Street form a rectangle closed by the MARK Rail track (or Memorial Drive) on the west side. Civic uses, including City Hall and County buildings, are located along 6th and 7th Streets and the lakefront. Former industrial areas along the river are now vacant. Significant greenspaces include the Racine Zoo and North Beach on the lakefront and parks along the Root River. Residential neighborhoods are located to the north and south of the downtown area, while residential uses in the Main Street and 6th Street area are limited, but with some recent additions close to the lakefront.

Industrial Areas

The SC Johnson campus, to the east of Uptown and the MARK Rail track, is the most prominent industrial use left remaining in this central part of Racine. A number of other sites, mostly adjacent to the track, also retain industrial uses. The former Western Publishing buildings on Mound Street next to the former depot are now a mix of spaces for lease, self storage, and a preparatory school.

Commercial Corridors and Nodes

The commercial diagonal of Douglas Avenue cuts across the neighborhood north of the river and, in a similar fashion, commercial along Washington Avenue extends from the Uptown commercial node north into the dowtown area. A significant node of commercial uses is found along Douglas Avenue from High Street north to Goold Street. Main Street shapes the downtown commercial area, with storefronts extending west in an 'L' shape along 6th and 7th Streets.

Residential Types

The predominate residential types in the neighborhoods outside the core downtown area are one- and two-unit houses, with some houses divided into additional apartment units. The number of structures designed as apartment buildings is small; conversions of multi-story brick factory buildings are growing. Newer condominum and apartment buildings continue to meet demand for views and access at the lakeshore.

Urban Design Features

The overall layout of blocks is quirky given the diagonal thoroughfares that contain much of the commercial frontage. The urban fabric in places like Uptown, with brick massing, storefronts, and second story space provides interest, but storefront and second level space is underutilized. Quality streetscaping lines State Street from the transit center east to Main Street, where streetscape features complement impressive building facades. A riverfront trail and planned extensions will become a major feature in the Water Street infill area.

TOD Potential

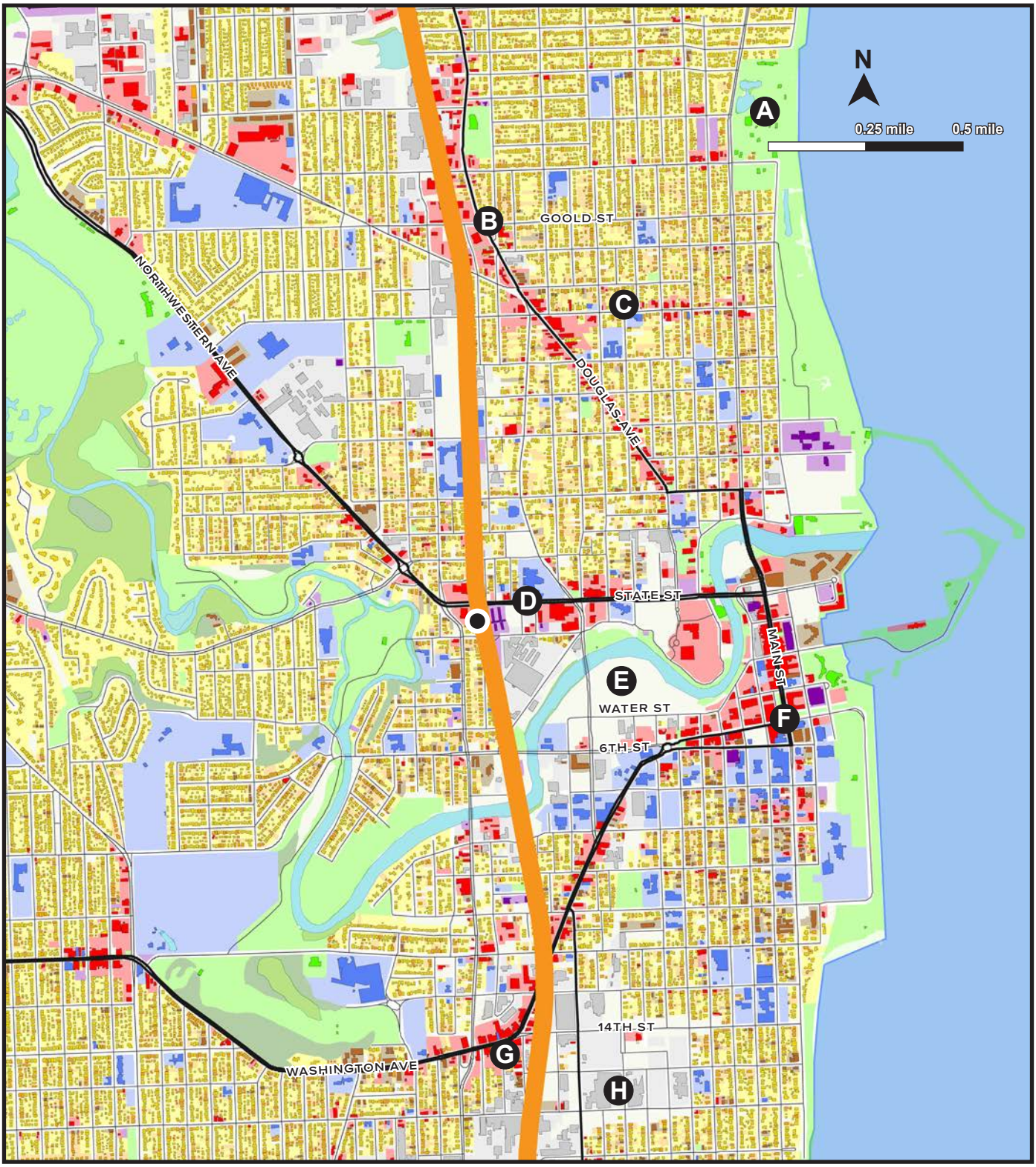
Over 27 acres of City-owned vacant land in proximity to MARK Rail has high potential for transit oriented infill. Identifying future land uses to replace the old manufacturing focus and make downtown Racine a destination is a key planning challenge.

Vacant City-owned property along the south bank of the Root River

A new hotel at Main Street and 5th Street

Uptown's street wall provides an urban feel, but many storefronts and upper floors are vacant

SC Johnson factory and warehouse buildings



Places near MARK Rail

A Racine Zoo

B Douglas Avenue commercial at Goold Street

C North side neighborhoods

D Racine Transit Center and State Street

E Water Street properties

F Main Street and 6th Street

G Uptown

H SC Johnson headquarters

Racine South and Mount Pleasant

General Land Use Pattern

The south side of Racine continues a pattern of heavy and light industrial uses along the UP railroad corridor flanked by residential neighborhoods. The neighborhood to the east of MARK Rail and Racine Street to the lake is a mix of residential uses and institutional and civic uses, including schools, a community center, and Roosevelt Park. A farm and construction equipment testing facility on a former factory site is a major land use east of the intersection of Durand Avenue and Sheridan Road on the lakefront. Residential areas in Mount Pleasant are noticably less dense than blocks in Racine. Working agriculture continues on fields south of Chicory Road.

Industrial Areas

Industrial uses, including Modine Manfacturing, are located to both sides of the MARK Rail track north of Durand Avenue. Industrial uses continue to the west of the track along Memorial Drive.

Commercial Corridors and Nodes

North of Durand Avenue and a block east of MARK Rail, small neighborhood commercial uses, such as mini markets and eateries, are located at corners along Racine Street and Mead Street. The diagonal Taylor Avenue has a retail node, including a strip center and multiple story apartment building with ground level shops. The major commercial area in south Racine is along Lathrop Avenue where a wide variety of sales, service, and restaurant businesses are located along a three-quarter mile strip. At Lathrop Avenue and Durand Avenue the commercial transitions to small shopping malls with outlot businesses. Commercial uses continue to the east along Durand Avenue.

Residential Types

Residential blocks within the City of Racine are a mix of one- and two-unit houses, transitioning to more exclusive one unit blocks farther from the historic center. There are few apartment buildings. The houses are two stories in vernacular forms, one-story ranch and Cape Cod style; some blocks exhibit a Craftsman style with more architectural detail. The suburban layout in Mount Pleasant, to the southwest of Racine, is exclusively single-unit houses on large lots.

Urban Design Features

Blocks within Racine are set on a grid of streets, many served by alleys. Blocks near Taylor Avenue break the regular pattern, including an oval-shaped subdivision close to the track and Durand Avenue. Taylor Avenue and Lathrop Avenue exhibit a first stage reaction to the automobile, with introduction of parking between the curb and commercial structures, then a second stage with early shopping mall types at Durand Avenue. The former North Shore Line interurban right of way converted to a recreational trail is now a major feature.

TOD Potential

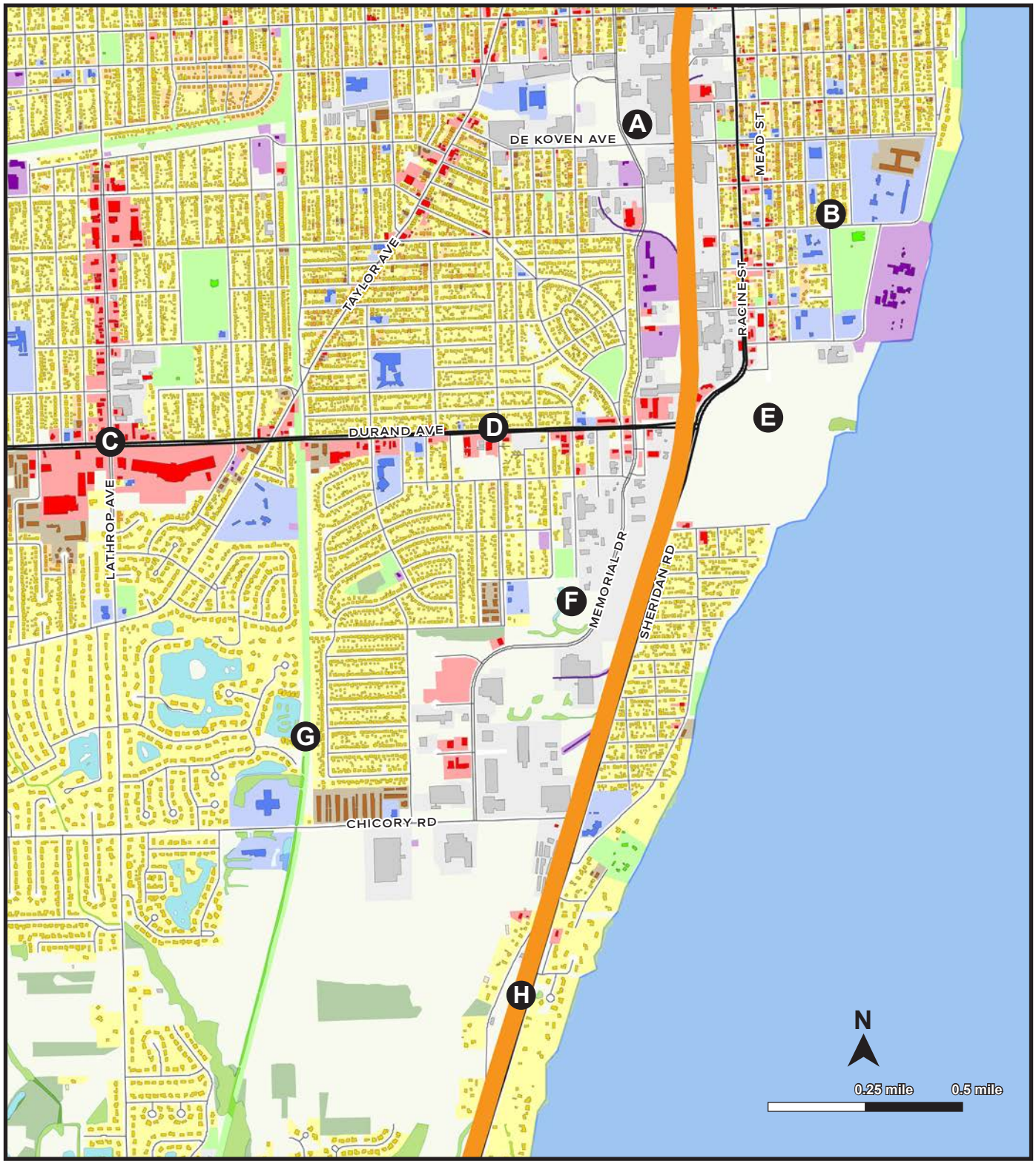
A former factory site on the lakefront is a brownfield with a new use as a test track, but given its location and lake views it will remain a site with potential for infill. If at some future date the properties in agricultural use south of Chicory Road are planned for development, a high-density, walk-oriented community could be planned around a future rail station.

Industrial plant and headquarters, De Koven Avenue

One- and two-units houses, Towerview neighborhood

Agricultural equipment test facility on lakefront

Highway 32 south of Durand Avenue



Places near MARK Rail

A Modine Manufacturing Company

B School Section-Towerview neighborhood

C Lathrop Avenue and Elmwood Plaza Shopping Center

D Durand Avenue

E CNH equipment test facility

F Memorial Drive industrial area

G Racine County Trail (former interurban)

H Sheridan Road/Highway 32 corridor

KENOSHA COUNTY LAND USE, EAST OF I-94

It is approximately seven miles from Lake Michigan in downtown Kenosha to I-94, while the county extends west from the lakefront 25 miles at its widest point, meaning less than a third (28 percent) of the width of the county lies to the east of the freeway. As in Racine County, the northern part of the county east of I-94 remains primarily rural/exurban and agricultural to the lakeshore. However, the southern half of the county shows the influence of Chicagoland, with industrial and residential uses filling in much of the land to the state line. The role of transportation infrastructure, both highways and railways, on the overall land use pattern is evident.

Starting at the lakefront, the older part of the urbanized area was developed at the Kenosha harbor and in proximity to the C&NW track. The downtown is a concentration of commercial and civic uses, with less industrial use than in the past and growing residential. The lake itself is an enticing amenity that encourages high-density housing.

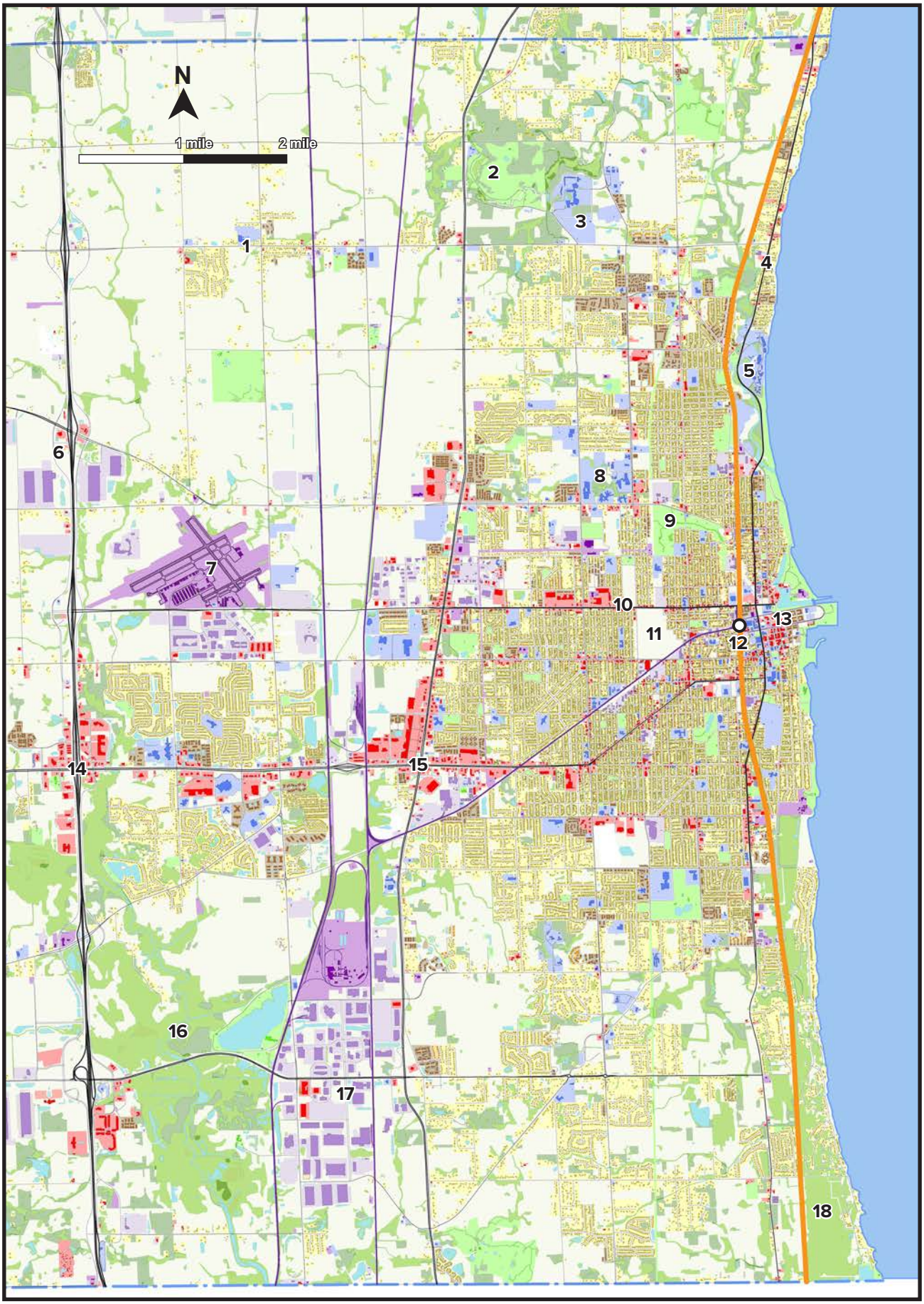
Highway 32 along the lakeshore and Highway 31 are major north to south transportation corridors that serve as local and subregional commercial corridors. However, after construction of I-94 in the 1960s, the role of east-west highways became more prominent. Highway 50 is clearly the major commercial corridor in the county and given that this four-lane highway connects east to Lake Michigan and west to Lake Geneva its interchange with I-94 is a growing commercial conglomeration catering to motorists with gas stations, motels, big box stores, fast food, and car dealerships. Where Highway 50 intersects with Highway 31, a large “big box” regional shopping area has formed.

A trend to construct very large warehouse distribution centers at I-94 interchanges is most evident at Highway 142/Burlington Road where the famous Mars Cheese Castle store is a roadside attraction. Huge warehouse enclosures serve major distribution companies. While this type of new development has shifted to the interstate corridor, these uses are specialized to maximize the efficient movement of freight in a global supply chain. The majority of community investments and institutional land uses—including colleges, schools, and churches—remain toward the lake, in the older neighborhoods and near the MARK Rail corridor.

Railroad corridors continue to shape land use as well: the UP Milwaukee Subdivision and the CPKC tracks frame a major industrial, logistics, and warehousing area bisected by Highway 165 at the southern end of the county. Very low density, residential-only subdivisions are filling in the areas in Pleasant Prairie to the state line. Significant environmental assets and conservation areas remain in the southern part of the county.

Key Places and Destinations in the MARK Rail Study Area

1. Village of Somers
2. Petrifing Springs Park
3. University of Wisconsin-Parkside
4. Highway 32 / Sheridan Road, Somers
5. Carthage College
6. Mars Cheese Castle, Uline, Amazon
7. Kenosha Regional Airport
8. Gateway Technical College-Kenosha
9. Washington Park
10. 52nd Street (Highway 158)
11. Kenosha Innovation Neighborhood
12. Kenosha Metra Station
13. Downtown Kenosha
14. Highway 50 / I-94 interchange
15. Highway 50 and Highway 31 commercial
16. Jerome Creek Nature Preserve
17. 80th Avenue industrial park
18. Chiwaukee Prairie State Natural Area


N
1 mile
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Kenosha North and Somers

General Land Use Pattern

The urbanized area of north Kenosha meets the still rural and undeveloped parts of the Town of Somers. Two big institutional uses are the UW-Parkside campus northwest of the city and Carthage College on the lakefront. Multiple-unit apartment complexes lie in a band from Birch Street west to 14th Place. Small blocks of exclusively single-unit houses are found between the County Bike Trail (former North Shore Line interurban right of way) and MARK Rail track.

Commercial Corridors and Nodes

There are no commercial corridors in the mapped area, but there are some nodes with neighborhood serving retail along 22nd Avenue and a grouping of restaurants and a medical clinic at 35th Street and Sheridan Road. The Glenwood Crossing shopping center is at the corner of Wood Road and 18th Street.

Industrial Areas

There are a handful of industrial uses near the MARK Rail track at 35th Street.

Residential Types

The older post war residential areas in the City of Kenosha are primarily single-unit houses, many in the single-story ranch or story-and-a-half Cape Cod styles.

Urban Design Features

Blocks adjacent to and west of the MARK Rail corridor are small (some less than 300 by 300 feet), on a grid, and with sidewalks. Most blocks do not have full alleys; instead, driveways are between houses connecting to a garage in the rear of the lot. In some cases, the side streets include a mid-block apron to a garage. The short blocks and grid make the area highly connected for walkers. There are very few two-unit houses, small apartment buildings, or townhouses in the area. Mutiple-unit structures are segregated into apartment complexes, or streets lined with two-story garden apartment buildings, specifically along Birch Street and 15th Avenue, where these units back up to the tracks. A recently constructed apartment building sits immediately east of the tracks and Sheridan Road, bringing up-to-date senior apartment design to the area.

TOD Potential

The proximity of Carthage College to the MARK Rail track is an opportunity given the college exhibits parking issues with off-campus lots and a shuttle. The sheer number of houses in the area offers potential riders, but the density is low. Recent apartment construction shows some potential for infill. There is no evidence of tear downs of older, small houses for new houses.

Birch Street apartments

Carthage College from Alford South Park

Ranch houses on 16th Avenue across from Petretti Park

Restaurant on Sheridan Road north of 35th Street

Places near MARK Rail

A UW-Parkside

B Town of Somers

C Birch Street

D Carthage College

E Petretti Park

F County Bike Trail

G Carthage College off-campus parking lot

H 35th Street commercial node

Kenosha Central and Downtown

General Land Use Pattern

The land use pattern is shaped by arterial roadways converging on the historic port area; it is more straightforward than in Racine. For example, 52nd Street is aligned directly west from the harbor all the way to I-94. Railroad alignments influence the land use pattern, particularly the diagonal UP track from the southwest, which Roosevelt Road (Hwy 50) mirrors. This track is lined by industrial uses and the convergence of the two rail corridors creates an area of multiple tracks that is used by Metra to store trains overnight. East of the Metra station and Sheridan Road, a group of four to five blocks in each direction, slightly askew from due north, create the commercial core. Within the streetcar loop from the station to the lake, a major transition from manufacturing to residential was accomplished. Civic and institutional uses, including County and City buildings, a high school, and a hospital line Sheridan Road.

Senior assisted living units on Sheridan Road at 35th Street

Commercial Corridors and Nodes

Commercial buildings are dispersed along the four-lane 52nd Street (Hwy 158), including a large number of taverns and restaurants; parking is off street. A more walkable node exists where Roosevelt Road intersects with 63rd Street and 22nd Avenue, and 60th Street also hosts a number of restaurants across from the former automobile plant that is now the Kenosha Innovation Neighborhood (KIN). In general, this central area of Kenosha has commercial uses interspersed with houses on many blocks providing neighborhood serving businesses and gathering spots.

Innovation center under construction at KIN

Residential Types

The majority of residential blocks are a mix of one- and two-unit houses, with only a few apartment buildings. However, it should be noted that older commercial buildings frequently have apartments on the second floor. In keeping with industry trends, more recent housing construction in the city has been in attached rowhouse and multiple-story apartment types. These types of units are present in downtown Kenosha on redeveloped sites next to the Metra station and out toward the lake. The senior living apartment buildings developed at 35th Street and Sheridan Road are perhaps the largest residential massing in the city.

Apartments under construction, major project in downtown

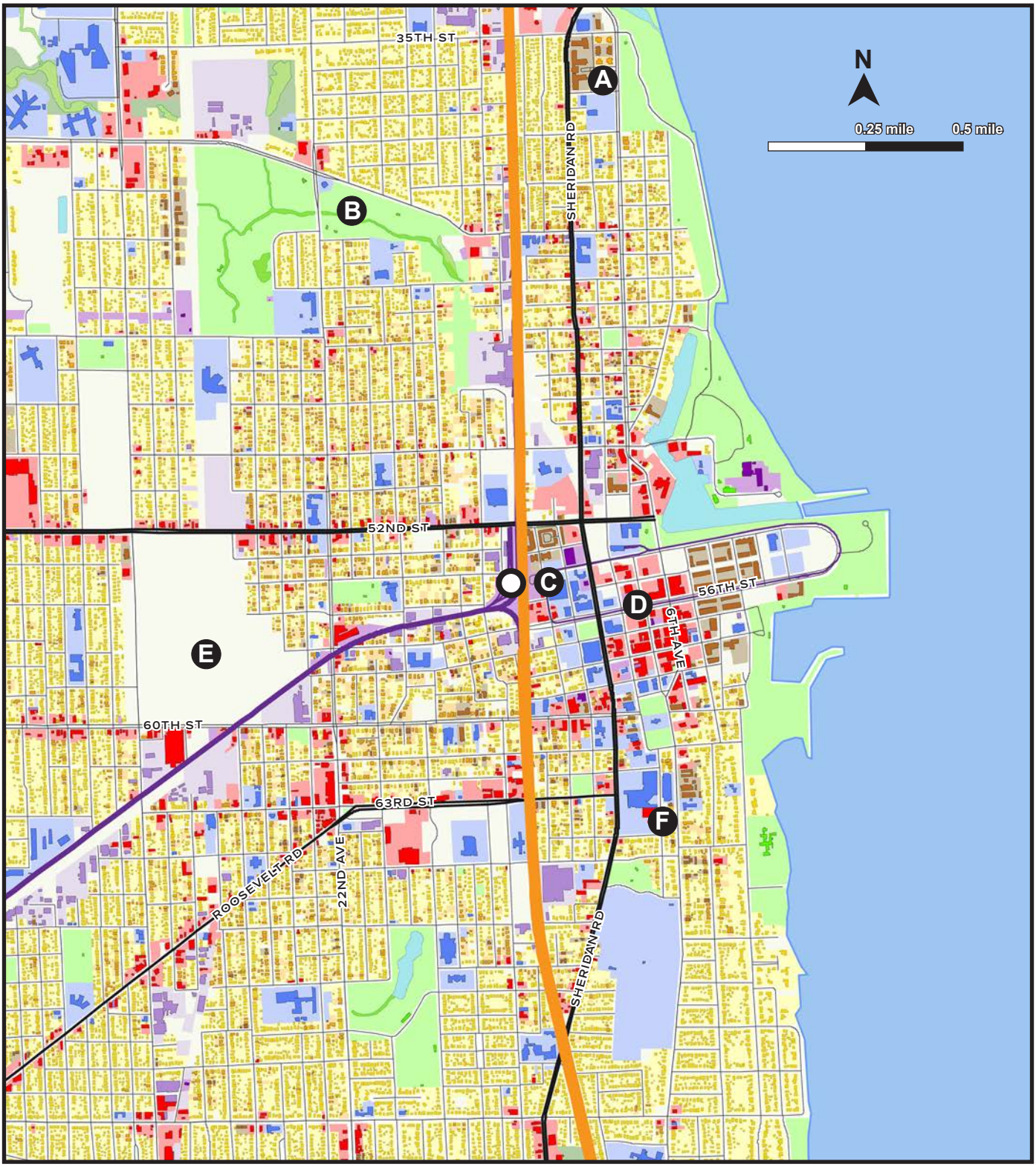
Urban Design Features

A boulevard treatment along 56th Street with a 35-foot wide median is the major urban design feature in the downtown. The streetcar runs in the middle of the median on a grass surface between two rows of trees, extending from the Metra station out to the lakefront. Intersecting the boulevard, 6th Avenue has a full streetscape treatment with decorative pedestrian level lamps and wide sidewalks that encourages outdoor cafe seating. The KIN master plan will also bring a new level of urban design amenities, including a central green space and path system.

Streetscape along 6th Avenue

TOD Potential

Kenosha has Metra service to Chicago and recent investments, most prominently a planned eight-block, $450 million mixed-use development that shows momentum is building for major infill and redevelopment.



Places near MARK Rail

A Saint Catherine Commons senior housing

B Washington Park and neighborhood

C Kenosha Metra station

D Downtown Kenosha

E Kenosha Innovation Neighborhood

F Froedtert Kenosha Clinic

Kenosha South and Pleasant Prairie

General Land Use Pattern

The land use pattern exhibits some of the aspects of a Chicagoland commuter rail station area, in particular the commercial node at 75th Street and Sheridan near the MARK Rail track. The lots between Sherdian Road and the tracks provide space for neighborhood serving retail and service businesses, along with a minor league baseball stadium.

Commercial Corridors and Nodes

Sheridan Road has a stretch of business from 75th Street south to 83rd Street, with some walkable areas but mostly oriented to drive-up and drive-thru customers. Commercial nodes are also found at the intersections of 22nd Avenue and 75th and 80th Streets.

Residential Types

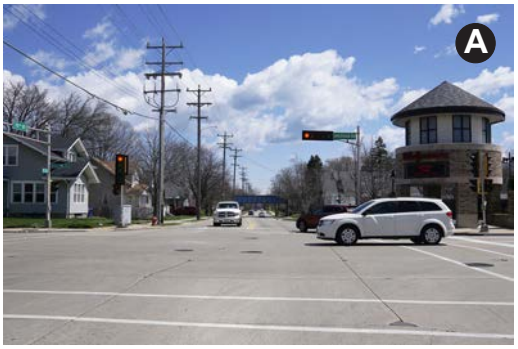
Residential types in this area are primarily single-unit houses. Some blocks have larger houses than the typical single-story ranch style, particularly near Sheridan Road and east toward the lake. A number of these houses have a full two stories and architectural details in Craftsman and other styles. A small number of garden apartment and senior housing complexes are located in the area.

Urban Design Features

The regular grid of streets provides good walkability and all blocks have sidewalks and tree planting on both sides. A mix of neighborhood scale retail, schools, churches, and parks encourages walking.

TOD Potential

Sheridan Road commercial buildings are dated and might provide opportunities for new mixed-use residential redevelopment.

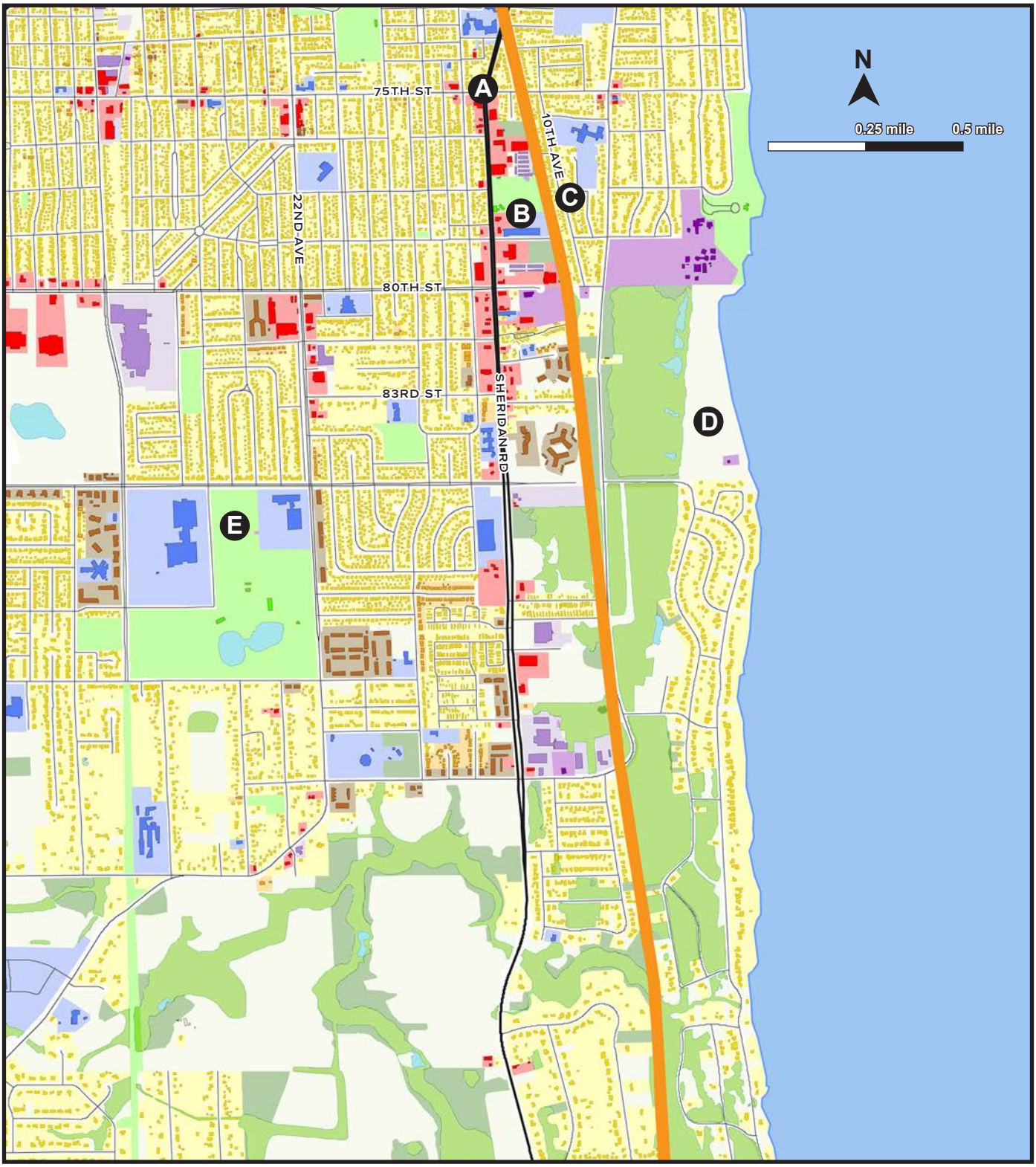


Neighborhood commercial node at 75th Street and Sheridan Road

Sheridan Road shopping near 75th Street

Kenosha Kingfish minor league baseball stadium

Housing just east of the tracks along 10th Avenue



Places near MARK Rail

A 75th and Sheridan commercial node

B Kenosha Kingfish baseball stadium

C Southport neighborhood

D Kenosha Sand Dunes

E Anderson Park and Tremper High School

MAJOR INFILL SITES AND PLANNED PROJECTS

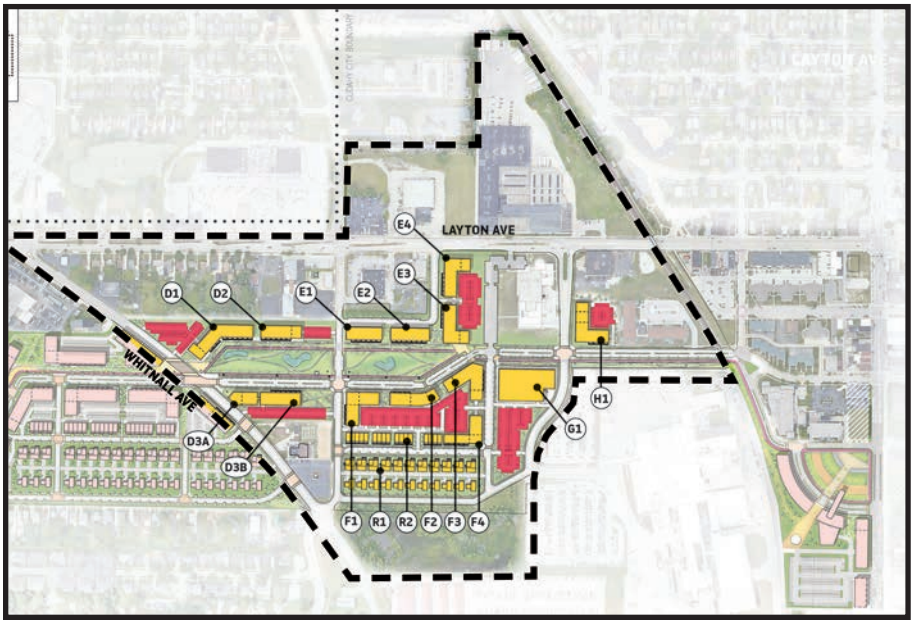
The MARK Rail corridor and its potential station areas have numerous sites that are available for infill development. The largest sites are former factory sites in and near downtown Racine and downtown Kenosha. There are also aging commercial properties proximate to the track that have redevelopment potential. All of the communities along the MARK Rail show progress in catalyzing new development that will enhance local tax revenue and bring new vitality, new residents, and new businesses.

A short list of six properties under project development and planning (all subject to change) are provided here as examples of the growing interest and investments in the corridor. These include:

1. Army Reserve site, Bayview, Milwaukee
2. City Center sites, Cudahy
3. Bucyrus-Erie site, South Milwaukee
4. Lakeshore Commons, Oak Creek
5. Water Street, Racine
6. Downtown redevelopment project, Kenosha

Army Reserve site, Bay View

The City of Milwaukee's Bay View Neighborhood Plan (adopted in 2024) says about this vacant site at Lincoln Avenue across Bay Street from the MARK Rail track, that the "vacant, City-owned lot . . . represents the greatest opportunity for new housing" in the built out neighborhood south of downtown and Port Milwaukee. The plan includes a rendering (left) with a mix of multiple-unit housing types, with the tallest structures closest to Bay Street and a potential Bay View MARK Rail station.

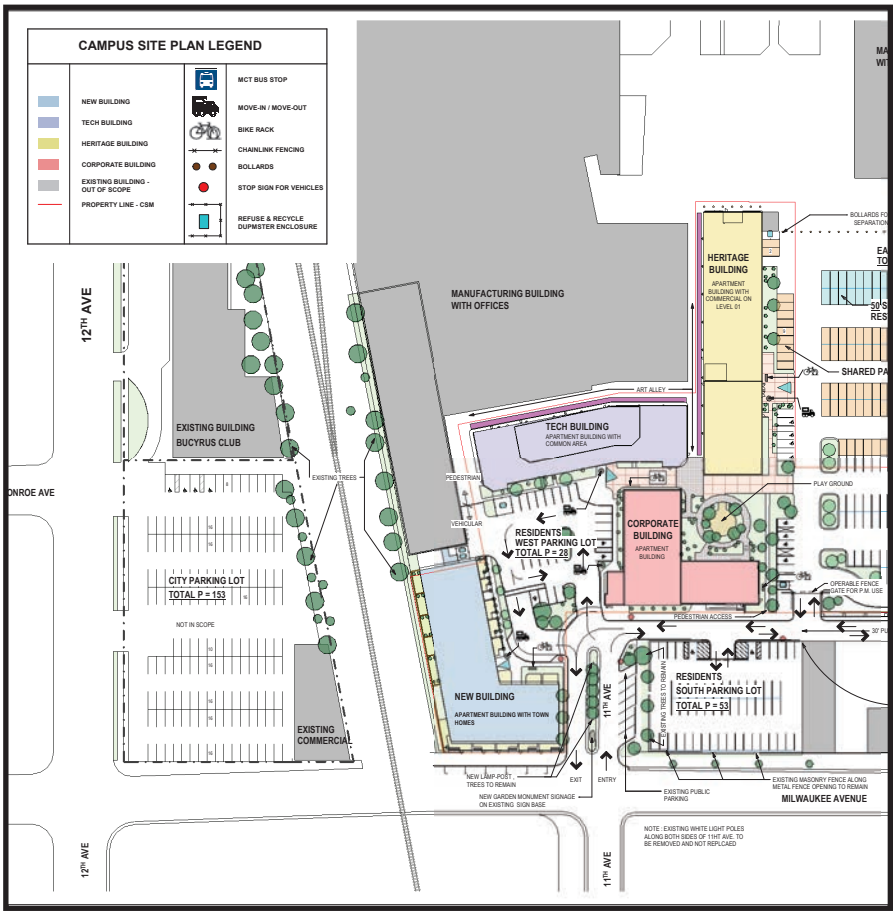


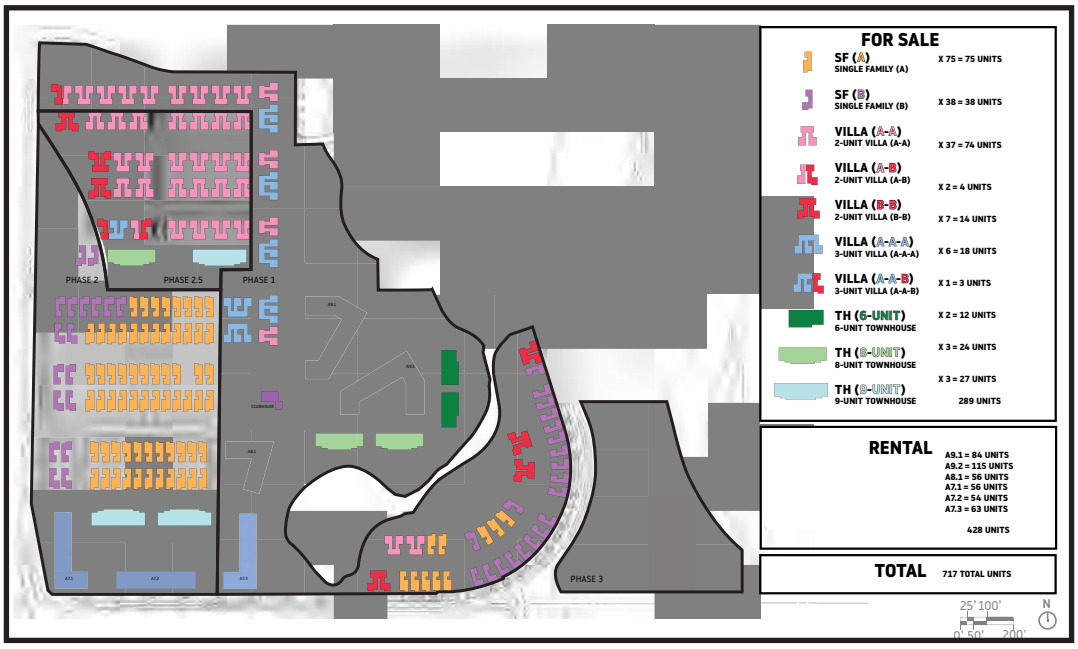
Gateway and City Center Plan, Cudahy

The City of Cudahy has a vision for its city center in the area of a potential MARK Rail station at Layton Avenue. The plan envisions new infill development, park amenities, and new civic infrastructure.

Bucyrus-Erie site, South Milwaukee

The City of South Milwaukee approved a zoning change and TIF for a redevelopment project on a part of the former factory and headquarters property. Milwaukee County is also providing financial support to the project to revitalize a site across Milwaukee Avenue from the former C&NW depot.





Lakeshore Commons, Oak Creek

The City of Oak Creek approved the Lakeshore Commons plan in 2023 on a former heavy industry site on a bluff overlooking Lake Michigan, which is across Fifth Avenue from the MARK Rail track at Ryan Road. The adopted site plan shows a variety of housing types including attached- and detached-single unit villas and townhouses. Large multiple-unit apartment buildings are planned for the southwest corner closest to MARK Rail. The total count for rental and owner occupied units is 717 units.

Water Street, Racine

The City of Racine sees the MARK Rail project as a key catalyst to attract infill development to the former J.I. Case factory sites in downtown Racine. The City's Water Street Redevelopment Framework Plan (2020) shows in detail how the 27 acres of vacant property between Water Street and the Root River can be divided into urban blocks and explores different mixed use programs at increasing intensity.

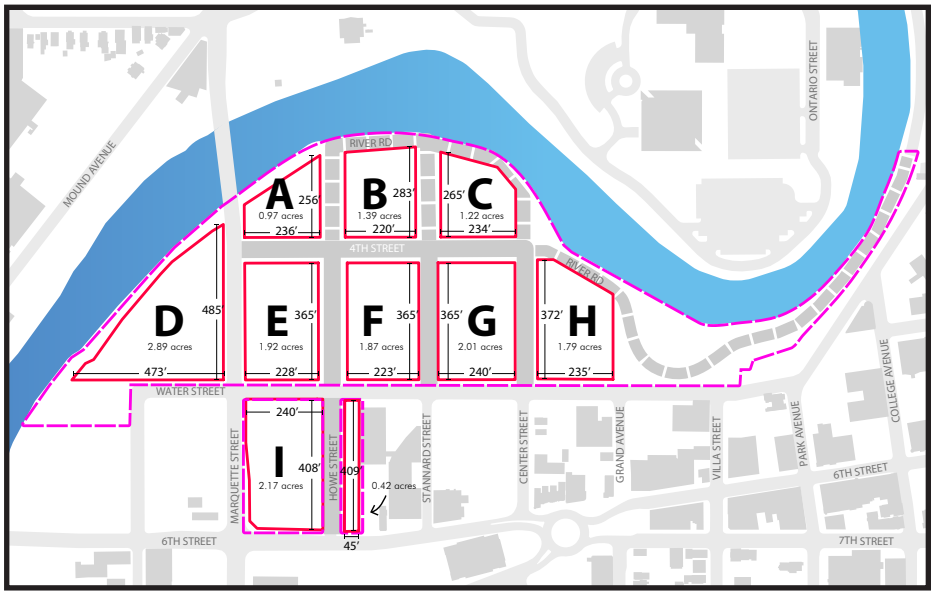


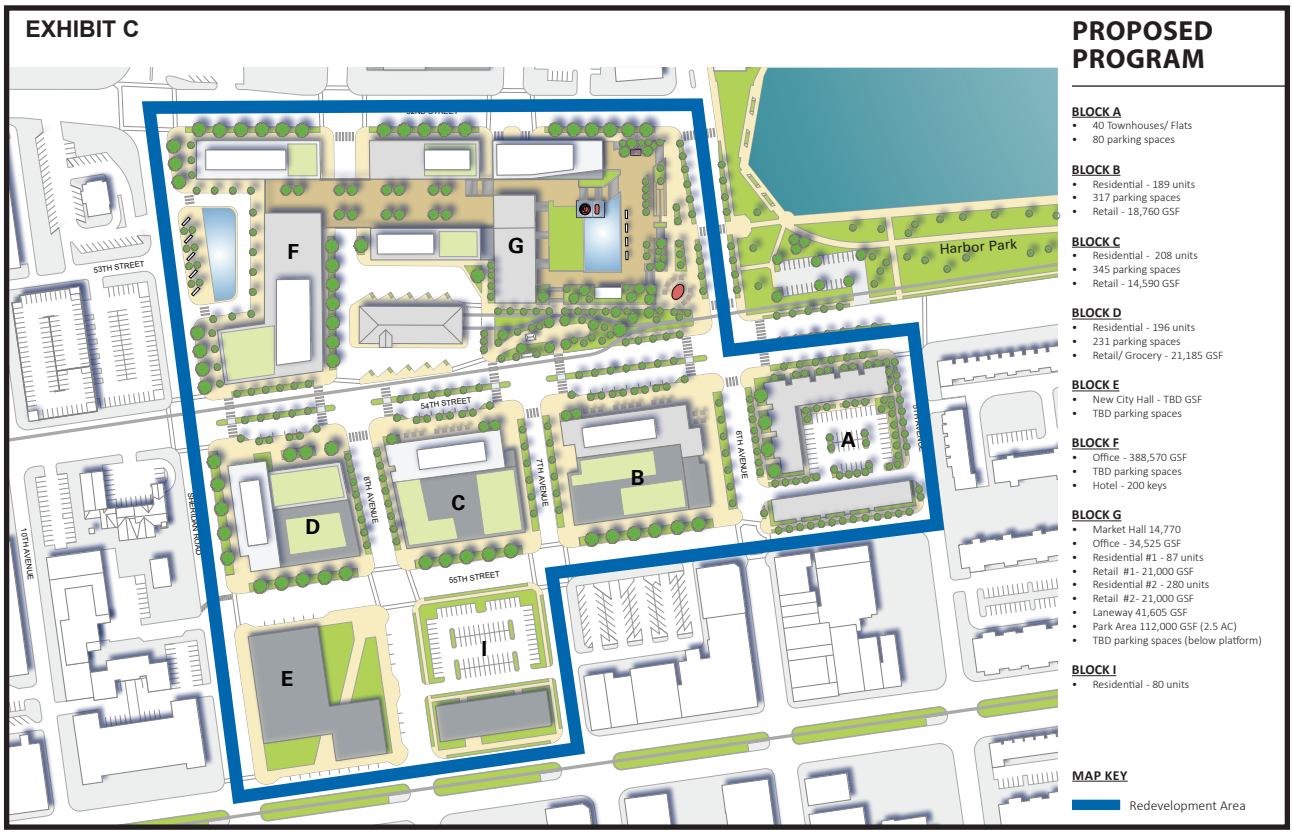
Figure 10. Development Illustration One: Mixed Building Types, Covered Parking for Water Street area in Racine, Wisconsin

A Townhouse – 2 to 3 stories, parking attached 2 car garage, some surface parking
B Townhouse – 2 story, parking detached 2 car garage
C Apartment/Condo – 3 to 4 stories, surface and covered parking
D Apartment/Condo – 3 to 5 stories, 1-2 story parking podiums, terrace
E Apartment/Commercial – 4 to 5 stories, 2 story parking ramp (3 levels of parking)
F Apartment/Condo, street retail (restaurant/entertainment), 3 to 4 stories, 1 story parking podium, terrace
G Apartment/Condominium & street level commercial (restaurant/entertainment) – 4 to 5 stories, 2 story parking podium with terrace

As shown in the block and street guidelines (Table 1 and Table 2) townhomes and apartment/condos are allowed on all blocks within the planned infrastructure.

Downtown Kenosha

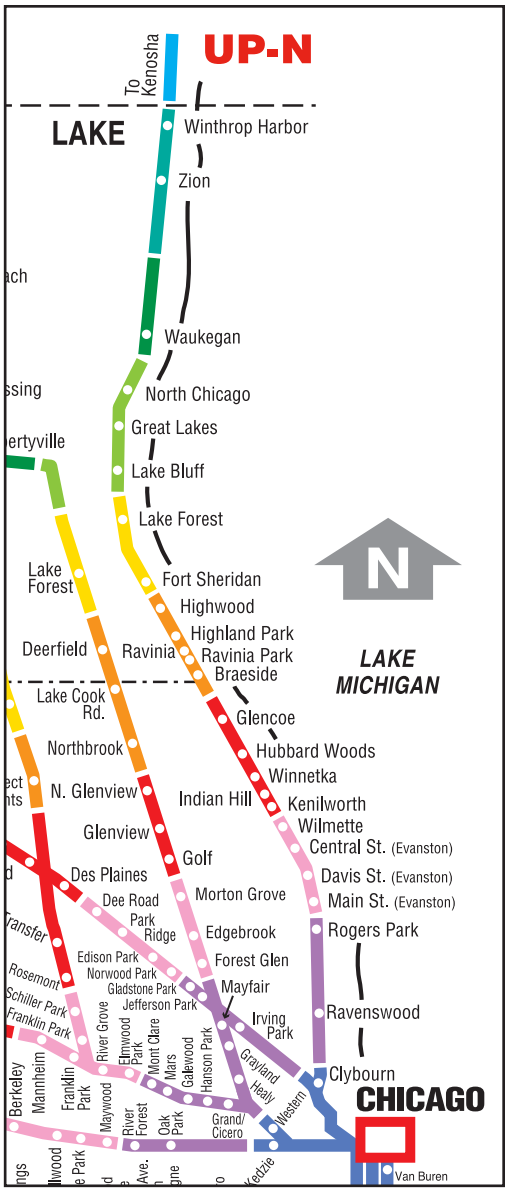
Momentum grows in downtown Kenosha with the approval of an eight-block redevelopment master plan with a projected investment of $450 million. The City is supporting the private investments with $90 million in TIF. The new residential, office, and retail space is an easy walk from the Metra station. MARK Rail would support the investment with new service to Milwaukee and additional trains to Chicago. The first apartment building wa under construction in 2025. (Images from City of Kenosha)



CHICAGO'S NORTH SHORE RAIL COMMUNITIES

Some of the best examples of commuter-rail oriented development can be found just south of the primary MARK Rail Study corridor along the Union Pacific North Line in Illinois. The historic C&NW service helped to build Chicago's North Shore suburbs and their mixed-use town centers. Those interested in the potential for renewed rail service to shape land use and reinvestment in the MARK Rail corridor in Wisconsin can look to the south and consider the common elements that make for a North Shore community. Stations concentrate people, both on foot and in vehicles, which creates a daily customer base for local businesses. (Metra schedule and system map from Metra. Community aerial images from Google Maps.)

Kenosha to Chicago	300	302	304	306	308	310
	a.m.	a.m.	a.m.	a.m.	a.m.	a.m.
Kenosha		4:43		6:08		6:38
Winthrop Harbor		4:51		6:16		6:46
Zion		4:55		6:20		6:50
Waukegan	4:05	5:05	6:05	6:30		7:00
North Chicago	4:08	5:08	6:08	6:33		7:03
Great Lakes	4:12	5:12	6:12	6:37		7:07
Lake Bluff	4:16	5:16	6:16	6:41		7:11
Lake Forest	4:19	5:19	6:19	6:44		7:14
Fort Sheridan	4:23	5:23	6:23	6:49		7:19
Highwood	4:26	5:26	6:26	6:51		7:21
Highland Park	4:29	5:29	6:29	6:54	6:59	7:24
Ravinia	4:32	5:32	6:32	---	7:02	---
***Ravinia Park	---	---	---	---	---	---
Braeside	4:35	5:35	6:35	---	7:05	---
Glencoe	4:37	5:37	6:37	6:59	7:07	7:29
Hubbard Woods	4:40	5:40	6:40	---	7:10	---
Winnetka	4:43	5:43	6:43	7:03	7:13	7:33
Indian Hill	4:45	5:45	6:45	---	7:15	---
Kenilworth	4:47	5:47	6:47	---	7:17	---
Wilmette	4:49	5:49	6:49	7:07	7:19	7:37
Central St.	4:52	5:52	6:52	---	7:22	---
Evanston (Davis St.)	4:55	5:55	6:55	7:11	7:25	7:41
Main St.	4:57	5:57	6:57	---	7:27	---
Rogers Park	5:00	6:00	7:00	7:15	7:30	7:45
Ravenswood	5:05	6:05	7:05	7:20	7:35	7:50
Clybourn	5:12	6:12	7:12	7:27	7:42	7:57
Chicago OTC	5:23	6:23	7:23	7:38	7:53	8:08



Lake Forest

One of the most recognized names along the North Shore, Lake Forest is a classic commuter rail suburb. An all-stop train from Lake Forest to the Loop is scheduled as a 1 hour and 4 minute trip. A classic town square lawn is perpendicular to the station and surrounded by two-story commercial buildings filled with boutique shops catering to a professional class clientele. The population is just under 20,000 on 17 square miles, but growing slowly as apartments are built in the station area. The UP-North Metra station provides a focus and walkable center for daily lives organized around the Metra train schedule. Station parking is parallel to the tracks.

Highland Park

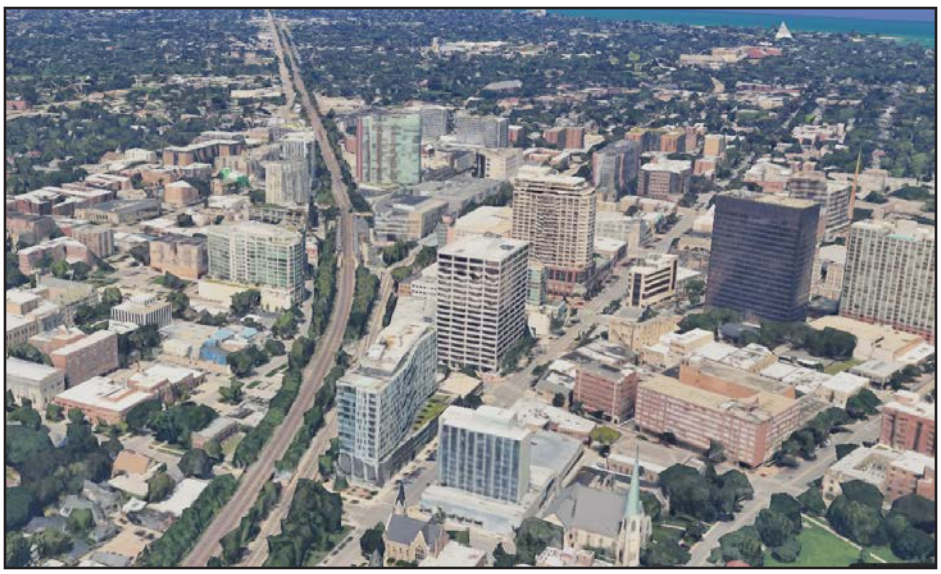
The downtown area of Highland Park extends out from the Metra station with blocks oriented to the track. Perhaps the largest of the North Shore line's commercial centers, the station area has multiple streets lined with shops that are mixed with professional office buildings and apartments. The city of 30,000 actually has four Metra stations on the UPN Line, including Ravinia Park, which brings crowds to the summer-long music festival grounds.

Glencoe

With a population of less than 9,000, the commercial town center in Glencoe is modest in size, and yet half a dozen blocks are lined with shops and eateries.

Evanston

Long considered a reserved college town, Evanston has surged in growth in UPN station areas, including at the Davis Station where the Metra line meets the CTA Purple Line. Office and residential high rises shape a growing urban center.



Chapter 4
Transportation

INTRODUCTION

The review of transport infrastructure and services in this chapter combines a place-based review of corridors and discussion of specific modes. The focus of the analysis is on the movement of people across the MARK Rail corridor, with only minimal comment on freight movement on roadways and no analysis of freight movement on rails. The review is also focused on the Wisconsin segment of the Milwaukee to Chicago corridor; conditions and performance of the system is markedly dissimilar in the two main metropolitan areas, with important implications for MARK Rail.

Transportation Case for MARK Rail

A general view of the regional transportation system in the Milwaukee to Kenosha portion of the corridor is that the system provides a high level of mobility to residents of the area—if they are able to own and operate an automobile. A more technical analysis is provided in the follow pages, including data and analysis maps at the county level of traffic counts, traffic volume, and traffic congestion.

The Need for Multimodal Choice

While the roadway system works, it also has built-in factors that suggest a need for a more multimodal approach. These factors can be outlined as: inefficiencies, inequities, impacts, and constraints. As discussed in Chapter 2, the move away from passenger rail to an interstate-oriented system left downtown Racine and Kenosha at a disadvantage. Both for commute and business trips, the additional drive time to get to the interstate has reinforced disinvestment in the core urban areas and this trip time inefficiency is felt everyday, especially for those who commute to work in the Milwaukee metro.

Crucially the existing transport system dominated by public roads and private vehicles creates real inequities in terms of mobility and access, including for those who are:

- **Too young or too old to drive.** Demographic projections made by SEWRPC calculated that Milwaukee County had 19,950 residents over 85 years of age in 2025, which will double to an estimated 40,663 residents in 2050. Applications of robotics may make it possible for an aging population to continue to use private automobiles, but, for the time being, the oldest among us will find it increasingly difficult to get around the region.
- **Cannot afford to drive.** Clearly the current transport system (based on massive public investments) favors those that can afford the high cost of owning, insuring, and fueling an automobile and limits the mobility of those who cannot.
- **Are not able to drive.** A segment of the population is not physically able to operate an automobile; many due to injuries resulting from car crashes.
- **Do not want to drive.** Some people do not want to drive, because the hectic traffic and speeds make driving uncomfortable and stressful.

Combined, these non-drivers are a substantial portion of the citizenry. Provision of alternatives in the form of public transit and mobility services seek to address these inequities.

In regard to impacts, the overuse of automobiles produces a number of harms to the environment and to the social and urban fabric. Electric vehicles still create impacts to air quality and water quality due to particulates generated by brakes and tires and from the application of salt to roadways. Heavier battery-powered vehicles are presumed to cause more road damage.

And consider the impacts of parked cars. Parking is inexpensive in downtown Milwaukee, when compared to downtown Chicago, and the high cost of parking in the Loop is one of the major factors that generate ticket sales for Amtrak's Hiawatha. But there is an opportunity cost to devoting so much land in downtown Milwaukee to parking. Increasing the availability of rail transport into downtown Milwaukee could reduce demand for parking and allow for more concentrated real estate development with benefits to the tax base. And this in turn will lead to more people walking in the downtown, making the streets and storefront businesses more vital. Access by regional rail creates a different pedestrian pattern than a majority of commuters simply walking from their office to a parking garage.

There are constraints to adding lanes to the regional highway system. It is unlikely that additional lanes will be added to the current eight lanes on I-94 to the state line, because at some point more lanes become too difficult to negotiate. And yet the amount of traffic, trucks and cars, is likely to continue to increase. Utilizing the UP railroad corridor to carry passengers would provide an alternative mode choice and add capacity to the transport network on an underutilized piece of infrastructure and right of way.

Multimodal Assets in the Corridor

Existing elements in the transport system that favor restoration of rail service in the MARK Rail corridor include:

- Existing service on Metra's UPN Line
- A grid of local streets
- Robust local bus transit service
- A fine grained sidewalk network in urban segments
- Growing bicycle infrastructure

These existing assets can support future passenger service by providing the necessary local connections to and from stations. Perhaps most important is the commitment to multimodalism that local governments show with on-going investments in transit service and improvements to pedestrian and bicycle facilities. A review of the transit services in the three counties is provided along with a review of intercity services that connect across the corridor.

This review of the existing transport system reveals the

many assets the region and corridor already has; however, a key piece is missing: regional high-capacity transit and rail connections between downtown Milwaukee and the key cities in the region. Reconnecting Kenosha and Racine to Milwaukee by rail is a primary step to building a multimodal region.

Multimodalism in MARK Rail communities (clockwise from top): in Milwaukee, bus rapid transit and streetcar stations inside a new lakefront high-rise, electric scooter and BRT station on Wisconsin Avenue; in Kenosha, KAT bus transit hub in downtown during a bus pulse including transfers to the streetcar, (Metra station in distance), and bicyclists on 6th Avenue.

Major Facilities and Intercity Services

The transportation system that connects Milwaukee to Chicago is one of the most heavily used in the Midwest and the nation. It moves goods and people between two major metropolitan areas that are spaced far enough apart to be distinct and yet, in terms of economic activity, function as part of a whole. At the broad scale, the major transport infrastructure, facilities, and services include:

- Interstate 94/41, Interstate 90
- Highway 32 in Wisconsin and Highway 41 in Illinois
- Milwaukee Mitchell International Airport
- Chicago O'Hare Airport International Airport
- Amtrak service
- Metra service
- Milwaukee Intermodal Station
- Chicago OTC and Union Station
- Intercity and airport coach bus service
- CPKC and UP freight railroads

These major facilities carry the majority of trips between Milwaukee and Chicago, and the two major airports and three passenger rail hub stations are destinations in themselves for passengers making trips outside the region. It is important to note that the historical urban cores of Racine and Kenosha are some distance from most of these major facilities and services.

Interstate 94

As discussed in Chapter 2, the construction of I-94 in the 1960s brought fundamental changes to the transport network and passenger services between Milwaukee and Chicago. Originally constructed as a limited access, divided four-lane highway in its Wisconsin segment, it was expanded to a six-lane and now an eight-lane highway. The alignment is relatively straight from downtown Milwaukee into Illinois. South of Lake County, I-94 connects to I-290 to the western side of Chicagoland and I-90 into Chicago and its downtown.

It is a safe assumption that I-94 carries the majority of passenger trips made in private vehicles between Milwaukee and Chicago. Traffic volumes and counts are provided later in this chapter for each of the three counties in Wisconsin. Google maps calculates the distance along I-94 to points in the two downtowns at 91.6 miles; trip times can vary from 90 minutes in off peak hours to two hours or more if traffic is backed up, typically an issue south of the junction of I-94 and I-90 into Chicago.

Interstate 94 also carries vast amounts of freight in trucks and tractor-trailer rigs. These trucks dominate the highway during the day and night and frequently create a cordon of trucks occupying three of the four lanes on the stretch south of Milwaukee. The economic importance of the highway cannot be overstated: I-94 provides vital movements of goods between businesses, between ports and multimodal rail to truck hubs, and to stores and customers. The State of Wisconsin has spent billions of dollars, in partnership with the USDOT, constructing and maintaining the Interstate 94 facility, and yet Racine is not in the alignment and the nature of the roadway, with high speeds and truck traffic, can make it a difficult drive.

Alternative routes include Highway 32 in Wisconsin, (discussed in the next section) and Highway 41 in Illinois. These are two- and four-lane highways with intersections and stops that make for longer trips times than the interstate.

Intercity Bus Service, Milwaukee to Chicago

Two intercity bus operators, FlixBus (Greyhound) and Coach USA (Wisconsin Coach Lines), currently operate routes between Milwaukee and Chicago. In addition, Amtrak, Badger Bus, Indian Trails, Jefferson Lines, and Lamers Bus Lines operate intercity bus routes in Wisconsin that serve MIS in downtown Milwaukee and Milwaukee Mitchell airport.

FlixBus provides intercity bus service between MIS in downtown Milwaukee and the Greyhound bus terminal in downtown Chicago. As of 2025, FlixBus provides seven southbound trips and eight northbound trips each day. Some of the trips are non-stop, and some make an intermediate stop at either Mitchell airport or at the Cumberland CTA Blue Line station in Chicago, which provides access to O'Hare airport. FlixBus buses are scheduled to make the 92-mile trip between Milwaukee and Chicago in about 110-165 minutes.

Operating on I-94, FlixBus does not directly serve downtown Racine or downtown Kenosha or other lakeshore communities along the MARK Rail corridor.

The Coach USA Airport Express bus, described in the Airports and Access section, does not serve downtown Chicago. The Coach USA bus to Racine and Kenosha is discussed in the Highway 32 section below.

Airports and Access

The two major airports with passenger service in the corridor are Milwaukee Mitchell International Airport (MKE) and Chicago O'Hare International Airport (ORD). While there are numerous flights every day between these two airports (and also Chicago Midway Airport), they do not function to serve trips between the two cities. They are instead ports for trips outside the area. Mitchell provides connecting flights into O'Hare which is a major national and international hub.

A Milwaukee Intermodal Station

B Milwaukee Mitchell airport (MKE)

C Interstate 94

D Amtrak route/ CPKC

E Metra UPN Line

F O'Hare airport (ORD)

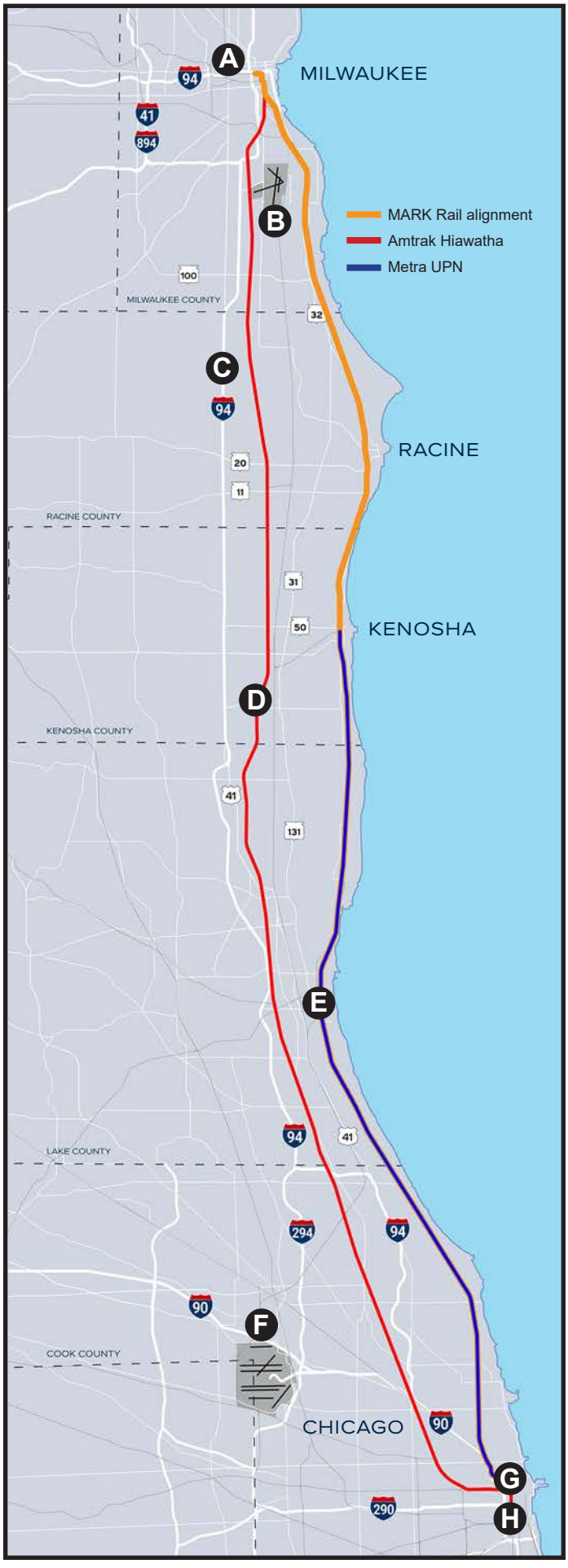
G Ogilive Transportation Center (OTC)

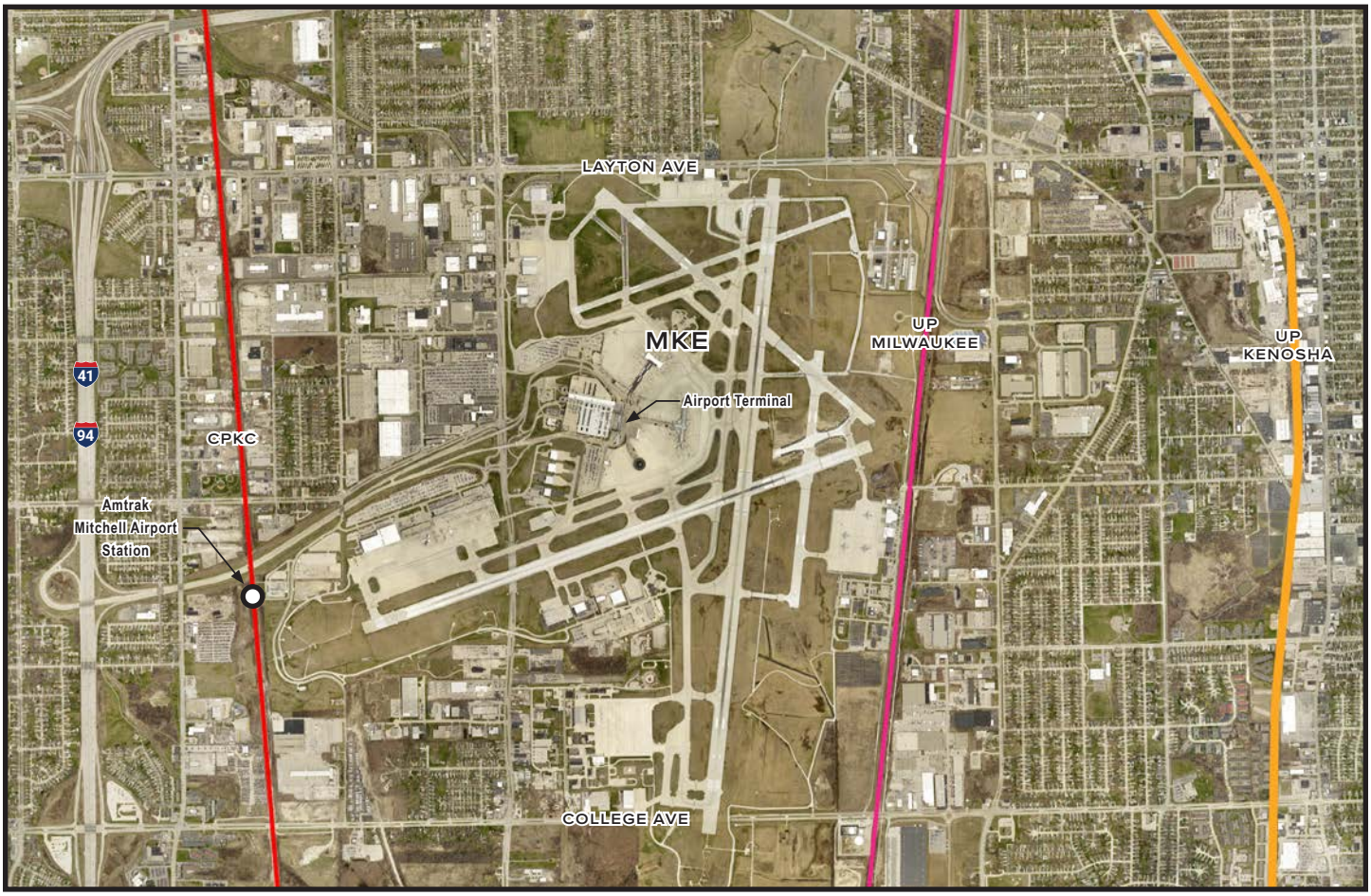
H Chicago Union Station (Amtrak)

Measured along the connecting interstate highways, the two airports are only 72 miles apart. On nearly all connecting flights between MKE and ORD, more time is spent on the tarmac, waiting for a landing slot, gate assignment, and taxiing than flight time in the air. The system works, but it is inefficient in terms of passenger time and energy expenditure. In regard to Racine and Kenosha, using MKE can mean a drive north to fly south to ORD and then a transfer to a connecting flight.

Mitchell is owned and operated by Milwaukee County. As of 2025, the airport is served by commercial airlines providing daily direct flights to 32 domestic and four international destinations. In 2024, an average of 85 domestic and less than one international flight departed from Mitchell each day. The majority of passengers access the airport via private vehicles or taxi services. Additional airport access options include:

- Amtrak via a shuttle to terminal
- Intercity bus service
- Commuter bus
- MCTS Green Line bus





Runways at Milwaukee Mitchell International Airport extend from Layton Avenue on the north to College Avenue on the south as seen in the aerial photography from 2020. Interstate 94 is at the left and the connecting grade-separated access roads lead to the terminal. The red line at left is the CPKC track with the Milwaukee Airport Rail Station indicated. That station is served by Amtrak with a parking lot at the western limit of the airport property. The middle line (fuchsia) is the UP Milwaukee Subdivision, which is UP's main freight route between Chicago and Milwaukee. The MARK Rail alignment (orange) follows UP's Kenosha Subdivision. Even if MARK trains used the Milwaukee Subdivision the access to the airport terminal is still blocked by runways. Layton Avenue is a slightly shorter route than College Avenue from a potential MARK Rail station in Cudahy.

O'Hare is owned and operated by the City of Chicago. As of 2025, the airport is served by commercial airlines providing daily direct flights to 181 domestic and 67 international destinations. In 2024, an average of 880 domestic and 114 international flights departed O'Hare each day. Connecting airport access options include:

- Intercity coach bus service
- Metra commuter rail on the North Central Service line
- Chicago Transit Authority Blue Line
- Pace local transit service

The two airports are connected and served by Coach USA's Airport Express route between Brookfield, Wisconsin, MIS in downtown Milwaukee, and O'Hare. The route includes intermediate stops at Mitchell, a location near the I-94 interchange with Highway 20 in Sturtevant, and the interchange of I-94 with Highway 50 in Kenosha.

Airport Express buses do not directly serve downtown Racine, downtown Kenosha, or other lakeshore communities along the MARK Rail corridor. As of 2025, the Airport Express route provides 12 southbound trips and 12 northbound trips each day. Airport Express buses are scheduled to make the 80-mile trip between MIS and O'Hare in about 105-125 minutes.

Freight Movement and Trucking

As discussed in Chapter 2, the Milwaukee to Chicago corridor is a major economic engine for the nation and the amount of freight moving between the two metropolises is a major issue for the transport network. A critical difference between the modes of freight transport is readily apparent when considering the impacts of movement by railroad or by truck and semi-tractor trailer.

The movement of goods by the Class 1 freight railroads in the corridor and resulting capacity issues and conflicts with passenger rail are a critical consideration for the MARK Rail Study. These are addressed in other MARK Rail technical reports on service development planning. But while the CPKC C&M Subdivision has limited capacity for more passenger trains, UP has two railroad corridors in the study area: the UP Milwaukee Subdivision carries most of the company's freight, while freight movement is sparse on UP's lakeshore Kenosha Subdivision. In general, the movement of rail freight is less noticeable to the working of the transport system and daily life of residents, except when trains block traffic at at-grade railroad crossings. No further analysis of railroad freight is provided in this chapter; see Chapter 5 Rail Infrastructure for further information.

Trucking in the Study Corridor

The level of truck traffic on the region's interstate highways is both a measure of economic activity and also an uncomfortable reality for those driving on I-94 between Milwaukee and Chicago. Current observations indicate that trucks, of all kinds and sizes, and tractor-trailer rigs dominate the three outside lanes of the four-lane highway. The interior lane next to the barrier is usually available for passenger vehicles. However, that lane is also the high speed passing lane. While traffic congestion is relatively low, this is primarily because the highway was recently widened from six to eight lanes. The sheer volume of truck traffic can make for difficult and stressful driving conditions.

One of the benefits of Amtrak's Hiawatha service is that the stress of driving in the midst of trucks is eliminated. Because the MARK Rail Study is focused on movement of people, no further review of truck freight movement is provided in this report.

A Google Maps Street View screen capture shows typical conditions on I-94 south of Milwaukee. The Google vehicle with camera is flanked by tractor trailer rigs on both sides, with another vehicle and truck ahead.

Amtrak: Hiawatha, Borealis, Empire Builder

Intercity Passenger Rail Service

Amtrak currently operates three intercity passenger rail routes within the MARK Rail study area:

- Hiawatha, between Milwaukee and Chicago
- Borealis, between St. Paul and Chicago
- Empire Builder, between Seattle and Chicago

Combined, the Hiawatha and Borealis routes make seven daily roundtrips between MIS and Chicago Union Station. The long-distance Empire Builder route makes one roundtrip per day, but Amtrak does not allow passengers to board these trains for trips between Milwaukee and Chicago. All three routes operate along CPKC's C&M Subdivision, which also carries freight trains and Metra trains south of a major rail junction called Rondout on the Milwaukee District North line.

The States of Wisconsin and Illinois have jointly contracted with Amtrak to provide the Hiawatha service between Milwaukee and Chicago since 1989. As of 2025, the Hiawatha provides six southbound trips Monday through Saturday and five southbound trips on Sunday. The service offers six northbound trips Monday through Thursday, seven northbound trips on Friday (including a late-night trip), and five northbound trips on Sunday.

Intermediate station stops are at Milwaukee Mitchell International Airport; Sturtevant, Wisconsin; and Glenview, Illinois. Amtrak does not directly serve Racine or Kenosha. The Sturtevant station, located immediately south of Highway 20, is roughly 6.5 miles west of downtown Racine and 2.5 miles from I-94. Hiawatha trains make the 86-mile trip between Milwaukee and Chicago in scheduled trip times between 89 and 102 minutes.

The States of Minnesota, Wisconsin, and Illinois have jointly contracted with Amtrak to provide the Borealis service between St. Paul, Milwaukee, and Chicago since 2024. The Borealis operates as an extension of one northbound and one southbound Hiawatha train each day, continuing from Milwaukee on to La Crosse and St. Paul on the same route as the Empire Builder.

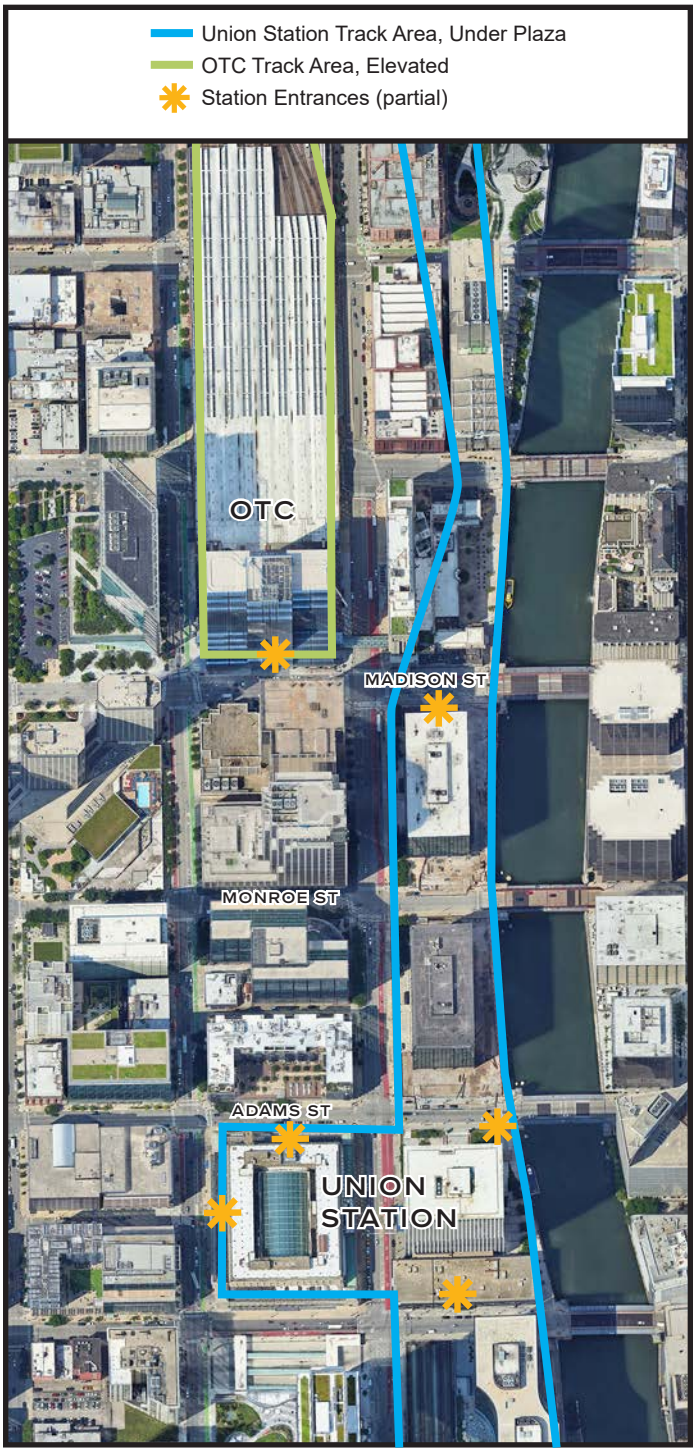
Capacity and Planning Issues

For more than two decades, WisDOT has been working with IDOT, CPKC, Metra, and Amtrak on planning for additional Hiawatha service, with a short-term goal of increasing frequencies from seven trains per day to ten. As noted in the Wisconsin Rail Plan 2050, WisDOT also envisions an additional Borealis roundtrip and new routes serving Madison, Eau Claire, and Green Bay. This planned service is envisioned as extensions of the Hiawatha service, and it could add additional demand for CPKC and Metra track capacity between Milwaukee and Chicago.

Amtrak Hiawatha and Borealis Schedule, 2025

Milwaukee to Chicago	330	332	334	336	338	1340 Borealis	342	
	Mon-Fri	Daily	Daily	Daily	Daily	Daily	Daily	
Milwaukee Intermodal Station	6:15 am	8:05	11:00	1:05 pm	3:00pm	5:36pm	7:35pm	
Milwaukee Mitchell Airport	6:26	8:15	11:10	1:15	3:10	5:54	7:45	
Sturtevant, WI	6:43	8:28	11:23	1:28	3:23	6:07	7:58	
Glenview, IL	7:25	9:06	12:01	2:06	4:01	6:48	8:36	
Chicago Union Station	7:57	9:34	12:29	2:34	4:29	7:20	9:04	
Chicago to Milwaukee	**329**	**331**	**1333 Borealis**	**335**	**337**	**339**	**341**	**343**
	Mon-Fri	Daily	Daily	Daily	Daily	Daily	Daily	Fri
Chicago Union Station	6:10am	8:25am	11:10am	1:05pm	3:15pm	5:08pm	8:05pm	11:25pm
Glenview, IL	6:32	8:47	11:34	1:27	3:37	5:32	8:27	11:47
Sturtevant, WI	7:10	9:25	12:12	2:05	4:15	6:14	9:05	12:25am
Milwaukee Mitchell Airport	7:24	9:39	12:27	2:19	4:29	6:28	9:19	12:39
MIlwaukee Intermodal Station	7:39	9:54	12:42	2:34	4:44	6:45	9:34	12:54

However, these efforts have been stymied by difficulties in identifying feasible and acceptable infrastructure improvement projects in the Milwaukee-Chicago corridor in northeast Illinois to address track capacity constraints. Efforts to find a solution will continue as part of a WisDOT sponsored project under the FRA's Corridor ID program. While this project progresses, WisDOT and CPKC are jointly working on implementing the Muskego Yard Bypass project in Milwaukee, which WisDOT states will allow an eighth Hiawatha roundtrip to be added (see Chapter 5).



Since the demise of C&NW passenger service, WisDOT's investments have been made on the CPKC C&M track, while no investments have been made on the UP Kenosha Subdivision. However, the MARK Rail Study reveals the potential of using the underutilized track along the coast. The opportunity is based on the fact that CPKC has only one corridor between Milwaukee and Chicago, which the railroad uses to carry freight and passenger service. But, UP owns two corridors: the Kenosha Subdivision and the Milwaukee Subdivision. The middle track, the Milwaukee Subdivision, has been UP's primary freight corridor since the days of the C&NW. The available railroad right of way and track capacity is on the Kenosha Subdivision, which typically carries only one coal train per day north of Kenosha. The capacity may provide part of the solution to adding more passenger trains to Chicago, and might also provide options for extending service to Green Bay and Madison. And that track, the MARK Rail alignment, also goes through downtown Kenosha and downtown Racine, and other cities in southern Milwaukee County.

Ogilvie Transportation Center and Chicago Union Station

Ogilvie Transportation Center (OTC) is the rebranding of the former Chicago and Northwestern terminal where elevated tracks terminate in a stub-end station building that was constructed on the site of the former C&NW headhouse between 1984 and 1987. An office tower was added, rising above the station fronting on Madison Street.

The track and platforms at OTC are elevated above surface streets, while track at Union Station slides into the Loop along the Chicago River and below Riverside Plaza that is at the level of adjacent surface street. The platforms under Riverside Plaza extend all the way north to the Madison Street entrance to Union Station so that the two stations are nearly connected. The entrance to OTC on Madison Street is less than a block from the Madison Street entrance to Union Station. Plans by Amtrak, IDOT, and CDOT for renovation and reconfiguration of Union Station include additional platforms on through track. A vision has been developed to join the OTC and Union Station into a combined high speed rail station. The existing configuration allows for relatively easy transfers between trains arriving at OTC and Amtrak and Metra lines at Union Station.

Union Pacific North Line

Metra System

Metra operates 11 lines all of which fan out west of Lake Michigan and converge on Chicago's city center and four terminal stations: Millennium Station, LaSalle Street Station, Union Station, and the Ogilvie Transportation Center (OTC). OTC serves the three Union Pacific lines that were formerly Chicago and Northwestern lines. Metra owns the Metra Electric Lines, but the other lines operate on track owned by private railroads. Metra's 2024 Annual Ridership Statistics report states that the system provided 35.1 million trips in 2024.

UPN Service

The UPN operates along the west coast of Lake Michigan due north from Chicago to its north terminus in Kenosha, which is at mile post 51.5 measured from OTC. In total, Metra runs 70 trains per day on the UPN; many of these terminate in Waukegan with only some continuing to the Kenosha station.

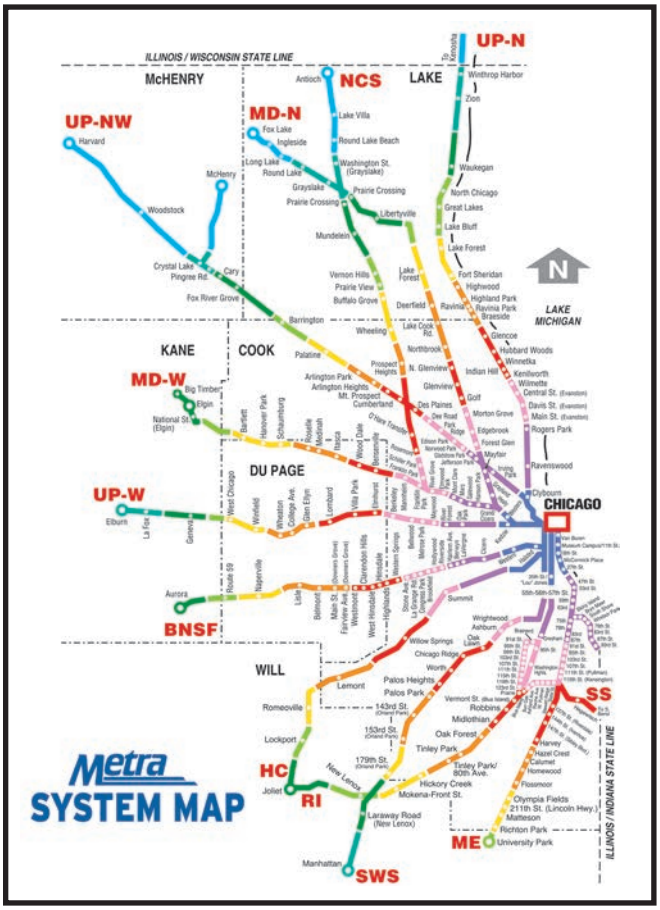
Metra's 2024 annual report (2024) estimated that the UPN line carried 4,831,000 passenger trips in 2024, which was the third highest ridership of the 11 lines, behind the BNSF (west to Aurora) and the UPNW (northwest to Harvard). The UPN route serves 25 intermediate stations including Waukegan, Lake Forest, Highland Park, and Evanston. Service is planned with some trains making all stops, and some operating in a 'skip stop' pattern making 18 out of the 25 station stops. There are no true express trains because the level of demand from customers along the route makes it logical to stop and pick up passengers.

As of 2025, the UPN service at Kenosha provides 10 southbound trips and nine northbound trips to and from Chicago on weekdays. The UPN service provides five southbound and seven northbound trips on Saturdays, and three southbound and three northbound trips on Sundays and holidays. Metra UPN trains make the 52-mile trip between Kenosha and Chicago in a scheduled 91-102 minutes.

Metra customers at Waukegan ready to board a Saturday UPN train to Chicago, July 2024

Metra UPN Schedule, Kenosha Service, 2025

Kenosha to Chicago										
Kenosha	4:43 am	6:08 am	6:38 am	7:08 am	7:38 am	8:08 am	12:08 pm	4:08 pm	6:08 pm	7:08 pm
Intermediate Stops	25	18	18	18	18	18	25	25	25	25
Chicago OTC	6:25 am	7:40 am	8:10 am	8:40 am	9:10 am	9:40 am	1:50 pm	5:50 pm	7:50 pm	8:50
Trip time	1:42	1:32	1:32	1:32	1:32	1:32	1:42	1:42	1:42	1:42
Chicago to Kenosha										
Chicago OTC	5:32 am	10:02 am	2:02 pm	4:02 pm	4:32 pm	5:02 pm	5:32 pm	6:02 pm	10:32 pm	
Intermediate Stops	25	25	25	18	18	18	18	18	25	
Kenosha	7:15 am	11:45 am	3:45 pm	5:33 pm	6:03 pm	6:33 pm	7:03 pm	7:33 pm	12:15 am	
Trip time	1:43	1:43	1:43	1:31	1:31	1:31	1:31	1:31	1:43	


ILLINOIS / WISCONSIN STATE LINE
McHENRY
KANE
COOK
DU PAGE
WILL
LAKE
LAKE MICHIGAN
ILLINOIS / INDIANA STATE LINE
UP-N
NCS
MD-N
UP-NW
MD-W
UP-W
BNSF
HC
RI
SS
ME
SWS
CHICAGO
Metra
SYSTEM MAP


UP-N
To Kenosha
AKE
Winthrop Harbor
Zion
Waukegan
North Chicago
Great Lakes
Lake Bluff
Lake Forest
Fort Sheridan
Highwood
Highland Park
Ravinia
Ravinia Park
Braeside
Glencoe
Hubbard Woods
Winnetka
Indian Hill
Kenilwood
Wilmette
Central St. (Evanston)
Davis St. (Evanston)
Main St. (Evanston)
Rogers Park
Ravenswood
Clybourn
CHICAGO
Van Buren
Museum Campus/11th St.
Cook Rd.
Glenview
Golf
Des Plaines
Dee Road Park
Ridge
Morton Grove
Edgebrook
Forest Glen
Mayfair
Irving Park
Edison Park
Norwood Park
Gladstone Park
Jefferson Park
River Grove
Elmwood Park
Mont Clare
Mars
Galewood
Hanson Park
Grayland
Healy
Western
Maywood
River Forest
Oak Park
Grand/ Cicero
Kedzie
LAKE MICHIGAN
N

Highway 32

General Description

State Highway 32 is an old roadway: it is the first route west of the coast of Lake Michigan, and as such is part of the Lake Michigan Circle Tour. It is an old path and a storied highway, both central to the cities it passes through and on the periphery between them where it takes on a hinterland character of lakefront motels and roadside taverns. In Racine, Highway 32 is Main Street; in Kenosha, it is Sheridan Road only two blocks east of the Metra station; it is Chicago Avenue in Oak Creek and South Milwaukee; and it turns into Kinnickinnic Avenue in Milwaukee. Highway 32 twists around the old Chicago and Northwestern track, sometimes to the west then crossing to the east. The highway and the track were the two critical paths used by residents of southeastern Wisconsin before other routes and highways were developed further inland from the lake. It remains an important place and corridor in the MARK Rail corridor.

State Highway 32 is an arterial highway that generally provides the shortest, most direct roadway connection between downtown Milwaukee, downtown Racine, and downtown Kenosha. The highway consists of two to four lanes, depending on location. Posted speed limits along the highway range from 25 mph in urban areas to 45 mph in more suburban areas. As illustrated in the table below, while Highway 32 provides a shorter distance route between Milwaukee and Racine than I-94, it takes more time because of slower average speeds and many signalized intersections.

Traffic Volumes and Planned Expansion

Traffic volumes along Highway 32 are listed on the three countywide roadway maps included later in this chapter. Volumes vary of course in different segments in relation to land uses and connections to major arterials. However, some of the higher volume segments are found in low density exurban areas where Highway 32 is used to connect to an east-west route that leads to I-94.

Two lane segments along the highway typically feel heavily trafficked, with car after car and few breaks to allow turning movements in peak commuter times. Given this situation, SEWRPC's VISION 2050 plan recommends expansion of Highway 32 to a consistent four-lane highway. However, adding lanes in the semi-rural segments could result in major impacts and functional changes that would alter the rural estate aesthetic along the road. MARK Rail, if implemented, can take some of the pressure off Highway 32 and perhaps help to preserve the existing character of the roadway.

Regional Commuter Bus, Coach USA

Coach USA/Wisconsin Coach Lines operates the Kenosha-Racine-Milwaukee commuter service between Milwaukee and Kenosha. This bus route is sponsored by the City of Racine. In addition to serving MIS in downtown Milwaukee, the Racine Transit Center, and the Kenosha Transit Center, the route includes 18 additional intermediate stops, including Milwaukee Mitchell International Airport and the Kenosha Metra station.

Estimated Auto Travel Times Along State Highway 32, 2025

Estimated travel in minutes	Distance in Miles	Travel Time in Minutes	Average Speed MPH
Downtown Milwaukee to			
Cudahy	6.5	14-24	16-28
South Milwaukee	11.4	24-35	20-29
Oak Creek	14.0	28-40	21-30
Racine	25.1	45-65	23-33
Kenosha	35.6	50-70	24-33
Racine to			
Cudahy	17.4	30-45	23-35
Kenosha	10.9	20-28	23-33
Estimated auto distances and travel times from Google Maps.			

As of 2025, the service provides seven southbound trips and seven northbound trips each weekday; six trips on Saturdays, and four trips on Sundays and holidays. Coach USA makes the 40-mile trip between MIS and the Kenosha Transit Center in roughly 90 minutes.

The Coach USA bus route (purple line on the map graphic) operates primarily on Highway 32 (black line) in Racine and Kenosha Counties. It leaves Highway 32 in downtown Racine, using MLK Drive and Marquette Street into the Racine Transit Center, rejoining Highway 32 south of the downtown. In Milwaukee County, the coach bus uses Ryan Road and Howell Avenue to directly serve Mitchell Airport, and then uses I-794 and the Hoan Bridge to directly serve the downtown office core along Wisconsin Avenue. Previous KRM studies (1998) noted that a commuter bus operating on the Hoan Bridge had a trip time advantage over a commuter rail station at MIS, where a shuttle was proposed to make the connection to the office core. MARK Rail would provide shorter trip times to Racine and Kenosha compared to the relatively slow bus operating on Highway 32.

A Coach USA bus meeting local KAT buses during a 'pulse' at the Kenosha Transit Center

Roadway Network and Traffic

The majority of trips made within Milwaukee County are made in automobiles, buses, and trucks operating on a vast network of roadways, including interstate highways, state and county highways, and local streets. Looking at just the portion of the county within the MARK Rail study area the shape of the roadway network is straightforward: it is a grid of arterial streets aligned to the cardinal directions. The major arterials are spaced one mile apart, for example College Avenue is one mile north of Rawson Avenue, which is one mile north of Drexel Avenue. There are a few streets that cut across the grid, for example Kinnickinnic Avenue, and other segments of Highway 32.

Traffic Volume Analysis

Most prominent in the network is Interstate 94 (also I-41), which is a limited access freeway with grade-separated interchanges and segments. It follows a mostly north-south alignment, but with some significant curves, specifically a jog to the east north of Layton Avenue (and a junction with I-894), and a smaller jog to the west before entering the downtown and the Marquette Interchange. Interstate 94 carries large volumes of traffic, in the range of 188,000 vehicles per day south of Layton Avenue according to WisDOT's continuous counts (WisDOT website). These counts along I-94 are five to ten times the volumes of state highways and arterials in the study area.

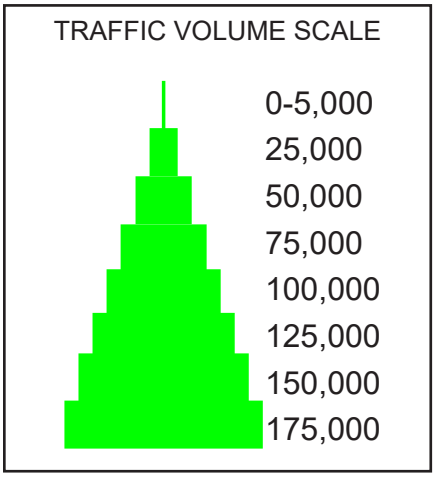
Other roadways carrying the largest volumes include I-794, Howell Road, and Layton Avenue. In general, the segments leading to I-94 carry high volumes. Land use intensity plays some role, but areas with a finer grid also have more roads to carry traffic, for instance Kinnickinnic Avenue in Bay View carries just 9,500 vehicles per day even though the neighborhood is dense and urban. Contrast this to the area where Highway 32 and Ryan Road meet: the land use is low density exurban but the volume on Highway 32 is 13,700 south of Ryan Road, falling to 8,000 to the north. This shows that a big part of the traffic coming out of Racine County is heading to the interstate. Continuing further north on Highway 32 means encountering numerous signalized intersections and slower traffic. A number of the east-west arterials in this part of the county are four lanes.

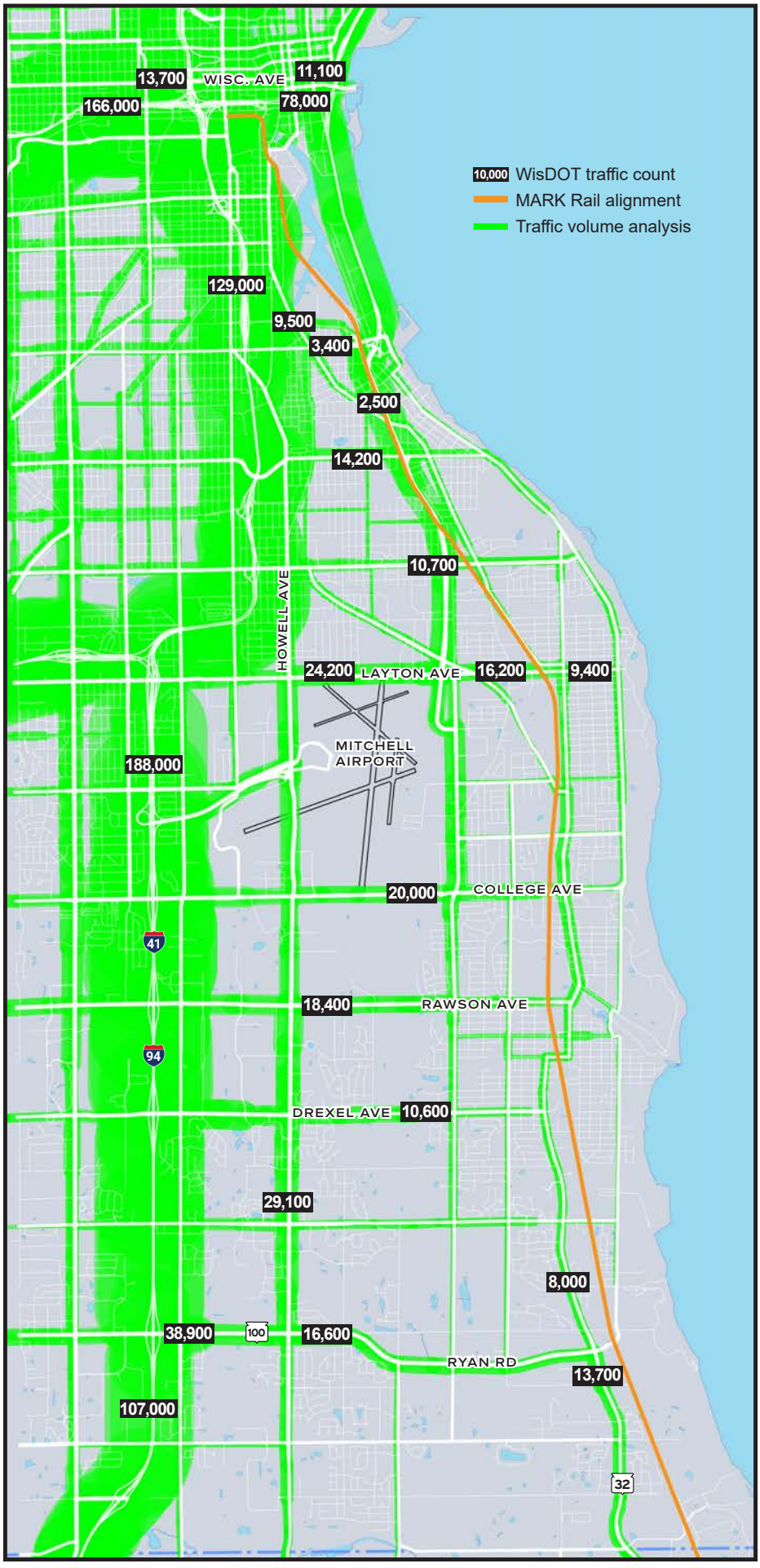
Traffic Congestion Analysis

Transportation planning conducted by SEWRPC (2024 Review and Update of VISION 2050) includes analysis of traffic congestion on major arterial streets and highways, including the interstate system. An image of the analysis, at right, shows all of the MARK Rail study area within Milwaukee County, as well as areas to the north and west of the study area. Traffic congestion is determined by comparing weekday traffic relative to a roadway's designed capacity. The estimated level of peak hour traffic congestion is categorized as none, moderate, severe, or extreme, with each level characterized by the travel speeds and operating conditions, as well as the level of service.

Within the MARK Rail study area, a segment of I-94 south of downtown Milwaukee is shown as having extreme congestion during peak hours, with longer segments to the north and south showing severe congestion. Segments of I-794 in Cudahy and St. Francis also show severe congestion, and it may be that this route option, parallel and east of I-94, keeps I-94 from a longer segment of extreme congestion as seen on other parts of the interstate system in the Milwaukee commute area. It is also notable that Highway 32 near the southern county line has moderate congestion. Recent investments in the interstate system have likely ameliorated congestion coming from the south. It is unlikely that I-94 will be widened any further. MARK Rail can provide an alternative for commuters and other trips into downtown Milwaukee, including for large events that create non-typical congestion.

Traffic volume analysis graphic created from SEWRPC map graphic on vehicle volumes on arterial streets and highways, from 2022 data and traffic counts from WisDOT website.





Milwaukee County Transit

Milwaukee County provides an extensive and robust bus service that provides access to downtown Milwaukee and MIS, where transfers can be made to Amtrak rail and regional bus services. MCTS's 2024 Annual Report (2024) provides data which shows the size of the system:

- 46 bus routes with 3,737 bus stops; 635 with shelters
- 363 buses, 14 battery electric
- More than 17 million total miles served
- More than 1.3 million hours of service
-

MCTS is the largest transit system in Wisconsin and its routes extend to the northern and western county limits, outside of the MARK Rail primary study corridor. The map and route analysis here provides a glimpse at the existing bus routes in downtown Milwaukee near MIS and routes in the eastern and southern sections of the county in relation to the MARK Rail alignment. This overview provides some indication of how MARK Rail stations might interact with MCTS routes.

MCTS Bus Routes Serving MIS

The most important interface between MCTS bus routes and MARK Rail will be at the downtown Milwaukee station, currently the MIS on St. Paul Avenue. One of the two entrances from St. Paul Avenue is lined up with 5th Street. MCTS has a layover stop under the freeway on 5th Street (photo below). Routes in the area that serve MIS include:

- Route 57 stops in front of MIS on St. Paul Avenue
- Route 12 stops a half block north of MIS on 5th Street
- Route 31 stops a half block north of MIS on 5th Street
- Route 34 stops at 5th Street and Clybourn Street
- BlueLine stops at 5th Street and Clybourn Street
- Route 19 stops at 6th Street and Clybourn Street
- Route 80 stops at 6th Street and Clybourn Street
- Route 81 stops at 6th Street and Clybourn Street

In addition to regular routes, MCTS's CONNECT 1 Bus Rapid Transit line operates on Wisconsin Avenue with a stop on 5th Street that is 1500 feet north of the entrance to MIS. CONNECT 1 goes east to the office core and lakefront and west to Wauwatosa.

MCTS bus routes near the MARK Rail alignment and serving the airport

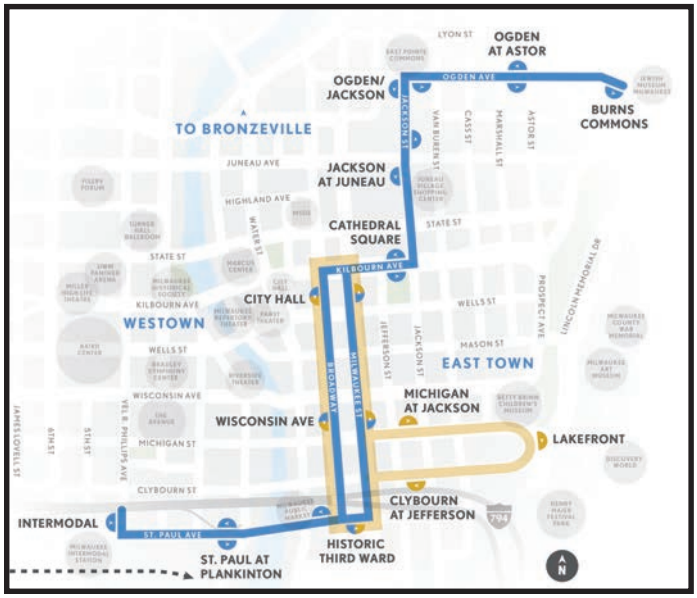
Route 15 on Kinnickinnic Avenue roughly parallels the MARK Rail alignment from downtown Milwaukee to South Milwaukee. Two MCTS routes serve the Mitchell Airport terminal: Route G on 1st Street to Howell Avenue and Route 80 on Sixth Street, Layton Avenue, and Howell Avenue into the airport terminal. Both routes cross Layton Avenue where Route 55 operates east to Cudahy. Route 55 on Layton Avenue could potentially connect to a MARK Rail station in Cudahy, but the route does not directly serve the airport. Two routes operate on major arterials in the Bay View neighborhood, Route 53 on Lincoln Avenue and Route 51 on Oklahoma Avenue.

The Hop Streetcar

The City of Milwaukee owns The Hop streetcar, which operates two lines (M and L) in downtown Milwaukee, into the Third Ward, and west to MIS. (See The Hop map below.) The service is free to riders and typically runs three cars total.

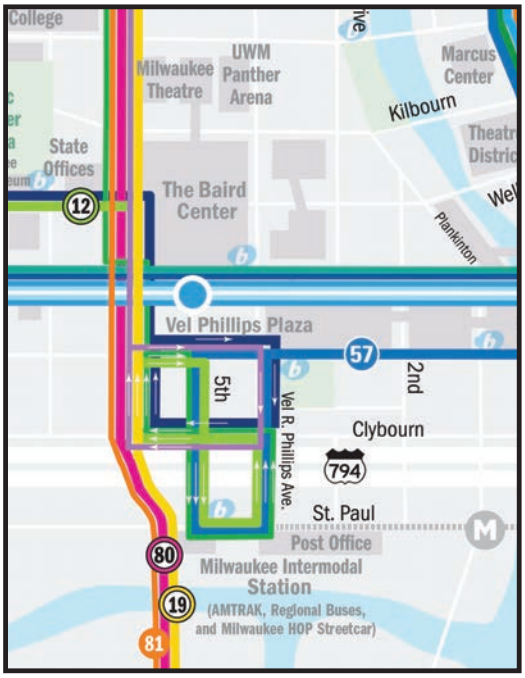
The Hop operates Monday through Friday from 5 a.m. to midnight, Saturday from 7 a.m. to midnight, and Sunday from 7 a.m. to 10 p.m. Streetcars arrive every 15-20 minutes. The interface with MIS provides a useful transfer to Amtrak and coach bus services. A connection from MIS to the eastern office core requires a second transfer to the L-line that loops to the eastern end of Michigan Avenue.

MCTS Route 31 bus heads south on 5th Street toward MIS, with a Route 12 bus at the stop under I-794.



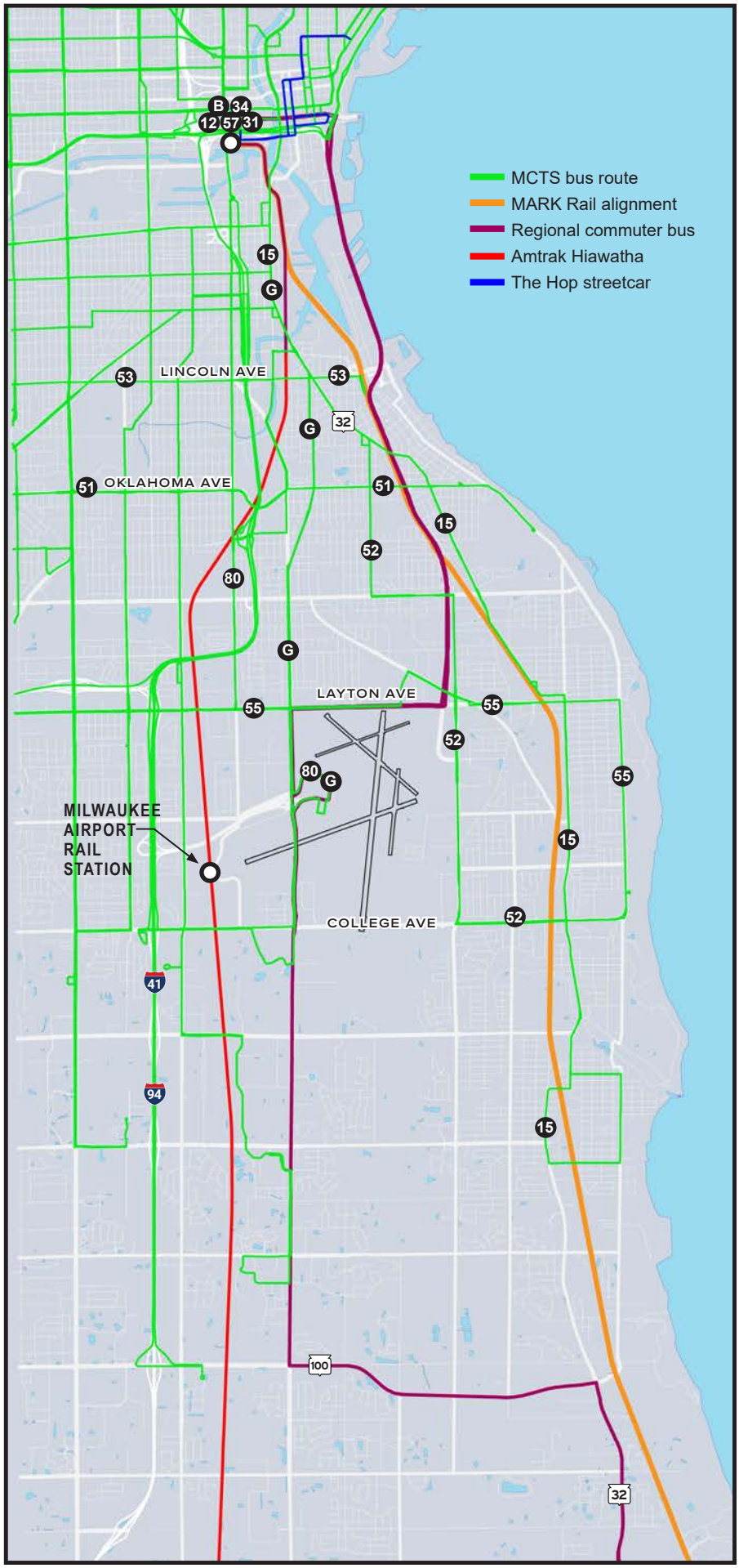
Paratransit

MCTS provides ADA-compliant Transit Plus paratransit service for individuals with disabilities that prevent them from using MCTS' fixed-route local transit service. Transit Plus paratransit service is operated by Transdev. Transit Plus provides door-to-door service within Milwaukee County and requires a reservation at least a day in advance.



Detail, above, from MCTS system map for downtown Milwaukee and bus routes serving the area near MIS

MCTS Route 15 bus at the southern end of its route in South Milwaukee on Chicago Avenue near Drexel Boulevard



Roadway Network and Traffic

Even though I-94 does not serve the City of Racine directly, the presence of the interstate channels traffic across the eastern part of the county onto those roadways that intersect with I-94. This is most apparent on the east-west roadways, but some of the traffic on north-south Highways 38, 31, and 32 is also continuing on to the interstate.

I-94 Interchanges and Connecting Highways

The central role of I-94 in the eastern part of Racine County is perhaps most evident in that the interchanges between state and county highways with I-94 provide a method for navigating and reading the landscape: exit signage along I-94 indicates position in the county and these interchanges are becoming places themselves. The six interchanges with I-94 are at:

- Seven Mile Road
- Highway G
- Highway K
- Highway 20
- Highway 11
- Highway 195 (shared with Kenosha County)

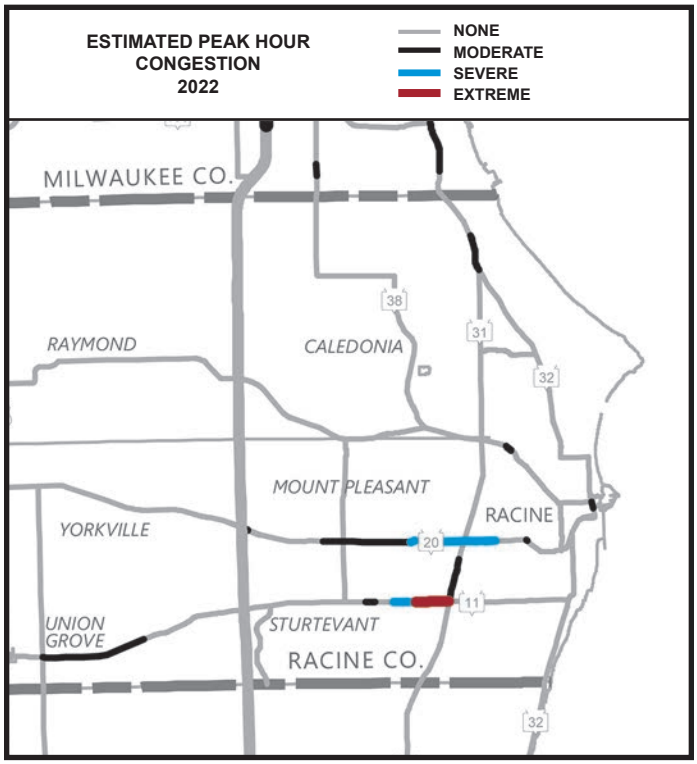
Traffic Volume Analysis

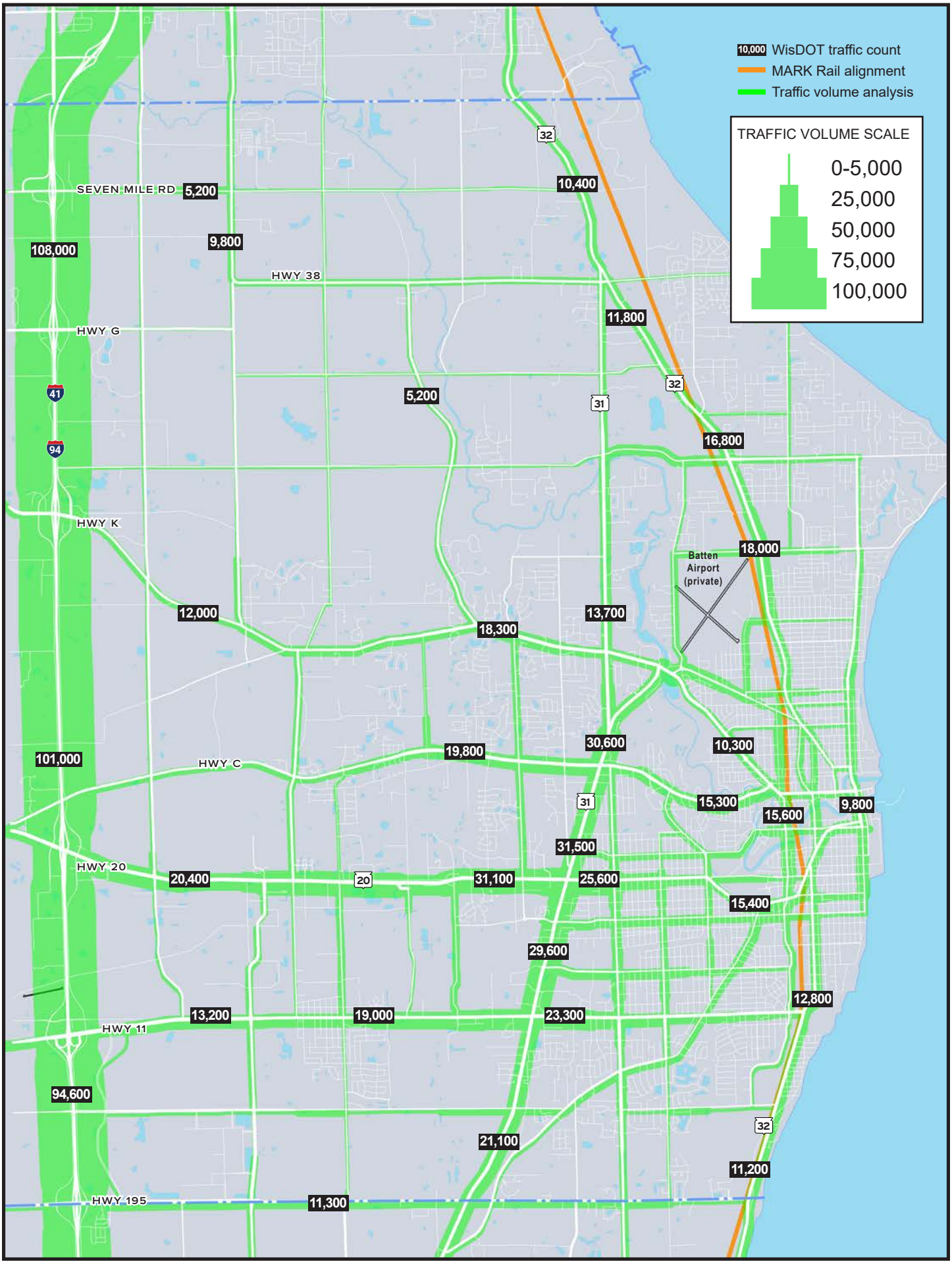
The roadway network connected to the interstate offers a series of options for getting to the City of Racine. Starting with Highway K if traveling from Milwaukee, this two-lane road offers somewhat lower speeds and lower volumes compared to Highway 20 or Highway 11; its diagonal segments cut across the county in the direction of the City. Highway 20 is wider, four lanes from I-94 to east of Highway 31 with posted speeds of 35 mph, and it is a straight line east from the interstate to the diagonal Highway 31, but its path to the downtown sags to the south before proceeding north as Washington Street. Volumes are highest on Highway 20 and Highway 31 where many trips are made to commercial uses and other trips that cross between Mount Pleasant, Sturtevant, and the City of Racine. The area where Highway 20 meets Highway 31 has the highest volumes east of the interstate, from 25,000 to 31,000 vehicles per day. Further details on trip times between I-94 and downtown Racine are provided in the next section.

Traffic volumes on I-94 are highest at the north end of Racine County, with 108,000 car per day near Seven Mile Road, dropping to 101,000 near Highway 20 and 94,600 at Highway 11 near the county line. This shows the general pattern of traffic going north from Racine County to Milwaukee and also a consistent use of I-94 for the interstate trips to Illinois and points south. The older north-south route through the county along Highway 32 carries much lower volumes of traffic: from 9,800 vehicles on Main Street in downtown Racine to a high of 18,000 vehicles in north Racine. This pattern shows the crucial shift for the overall traffic movement to the arterial highways that connect to I-94. Even though the destination may be to the north, and even though the interstate is miles west of the of north-south routes such as Highway 32, it still saves time to drive west to the interstate.

Traffic Congestion Analysis

The use of Highway 20 and Highway 11 to access the interstate is shown on the SEWRPC congestion analysis map graphic, where Highway 20 experiences moderate to severe congestion to the west and east of Highway 31. Likewise, Highway 11 experiences extreme congestion for the segment at Highway 31. This congestion is likely due to the overall number of vehicles on the two roads going to and from I-94, added to vehicles making local trips to the large shopping centers and other commercial uses at these intersections. This pattern is also indicative of the major retail businesses moving out of the traditional downtown area to suburban shopping center locations.




10,000 WisDOT traffic count
MARK Rail alignment
Traffic volume analysis
TRAFFIC VOLUME SCALE
0-5,000
25,000
50,000
75,000
100,000
SEVEN MILE RD
HWY 38
HWY G
HWY K
HWY C
HWY 20
HWY 11
HWY 195
Batten Airport (private)
5,200
10,400
108,000
9,800
11,800
5,200
16,800
18,000
12,000
13,700
18,300
101,000
19,800
30,600
10,300
15,300
15,600
9,800
31,500
20,400
31,100
25,600
15,400
29,600
13,200
19,000
23,300
12,800
94,600
21,100
11,200
11,300

Downtown Racine's Difficult Connection to Interstate 94

The City of Racine is the fifth largest city in Wisconsin and the most populous city in the state without direct access to the interstate system. As explained in Chapter 2, this loss of access to the primary transport facility hampers economic development in the city. Any intercity trip to Racine, for business meetings or other purposes, confronts the traveler with the need to exit the freeway onto roadways at non-freeway speeds with more intersections and stops. The off ramp from I-94 at Highway 20 to the corner of Sixth Street and Main Street is roughly 9.5 miles. The situation has been a concern for the City of Racine since the interstate was planned and constructed.

In 2018, the Eastern Racine County Transportation Task Force was established with a goal of developing transportation recommendations to accommodate likely changes in transportation patterns spurred by the then-announced Foxconn development southwest of the City of Racine in the Village of Mount Pleasant. These recommendations incorporated prior analyses conducted in 2016 and 2017 by SEWRPC at the City of Racine's request that produced preliminary recommendations for improving highway access between the city and I-94 along routes that lead to I-94 interchanges.

The task force identified several impediments along the east-west routes, including:

- Inadequate roadway capacity
- Speed limits less than 40 mph
- Significant direct land access
- Half-mile traffic signal spacing

The task force then identified and recommended various interventions that could be implemented to improve east-west travel, including:

- roadway capacity expansion
- land access management changes
- traffic signal coordination
- speed limit changes

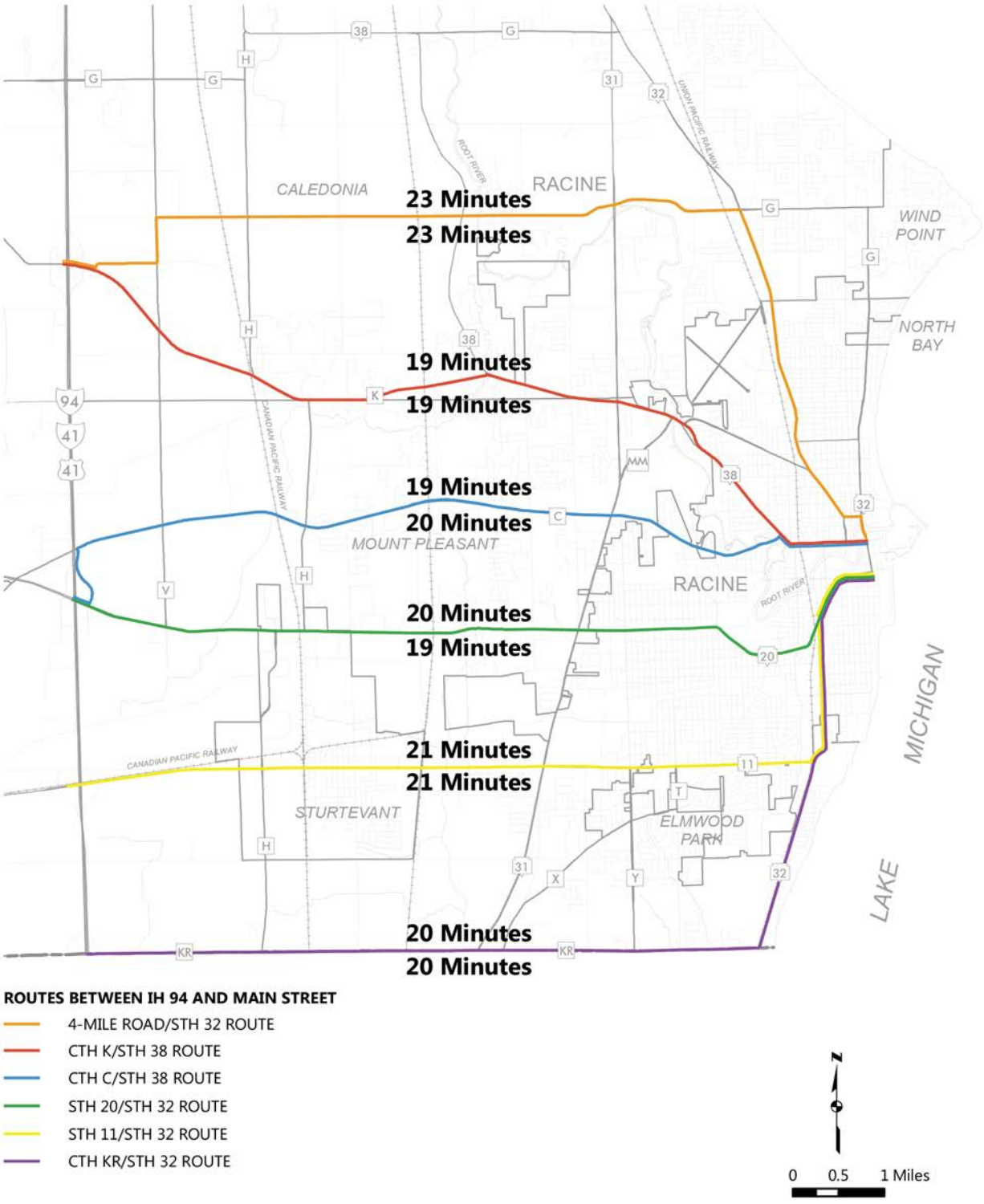
However, the analysis showed that these recommended interventions would reduce auto travel times between downtown Racine and I-94 by only one to three minutes and would not significantly reduce overall auto travel times between downtown Racine and Milwaukee or Chicago.

The fact that I-94 was aligned so far west of downtown Racine and the fact that Racine is located further east than other cities along the coast shows the value of restoring passenger rail service. Most of the major destinations are in the cities along the coast not out by the interstate.

Evanston, Illinois's location on the lakeshore presents a similar problem given its distance from the interstate, and heavy traffic on surface streets. However, Evanston has the Metra UPN service and the CTA Purple Line, providing a more convenient way to travel in the north-south direction.

A map graphic from the task force report (2018, Map 1) shows that no matter which of the five routes is taken from I-94 to downtown Racine, the result is basically the same: a trip of 19 to 21 minutes, with the least direct route on Highway G an outlier at 23 minutes.

Eastbound and Westbound Travel Times Along Routes Between the City of Racine and IH 94 During the Morning Peak Period



Source: Eastern Racine County Sub-area Multi-modal Transportation Plan, Eastern Racine County Transportation Task Force, August 2018

Racine County Transit

Options for travel within Racine County are limited for those would do not have access to a private vehicle. Walking, biking, or using taxi or software-based mobility services, such as Uber or Lyft, are options. The main alternative to driving is the bus system operated by the City of Racine and branded as RYDE Racine.

RYDE Racine

RYDE Racine operates 9 routes with nearly 700 stops. In 2024, the transit system provided 1,053,361 rides (RYDE website). The route network provides broad coverage within the City of Racine, and also connects to Mount Pleasant and the urbanized part of the Village of Caledonia; both communities provide funding for their service. The Route 20 and Route 27 buses operate along Highway 20 west to the interstate. The Route 5 and Route 1 buses operate along Douglas Avenue north to a shopping center at Four Mile Road in Caledonia. A number of routes cross into Mount Pleasant.

Most RYDE bus routes utilize the Racine Transit Center, which is adjacent to the historic C&NW train depot on State Street and offers the potential for convenient transfers from RYDE buses to MARK Rail.

The RYDE network interfaces with intercity service offered by Amtrak and Coach USA. The level of service provided by RYDE Racine shows the strong commitment to transit and places MARK Rail service within an existing transit network for last mile connections.

Paratransit

RYDE Racine provides dial-a-ride paratransit (DART) service for seniors and individuals with mobility challenges. The paratransit vans are wheelchair-accessible providing door-to-door service to qualified individuals within three-quarters of a mile of a RYDE Racine fixed route.

Amtrak

Amtrak is accessible at the Sturtevant Station immediately south of Highway 20. RYDE Racine bus Route 20 serves the Amtrak station connecting to the Racine Transit Center near downtown. The Route 27 bus also operates on Highway 20 to the Amtrak station.

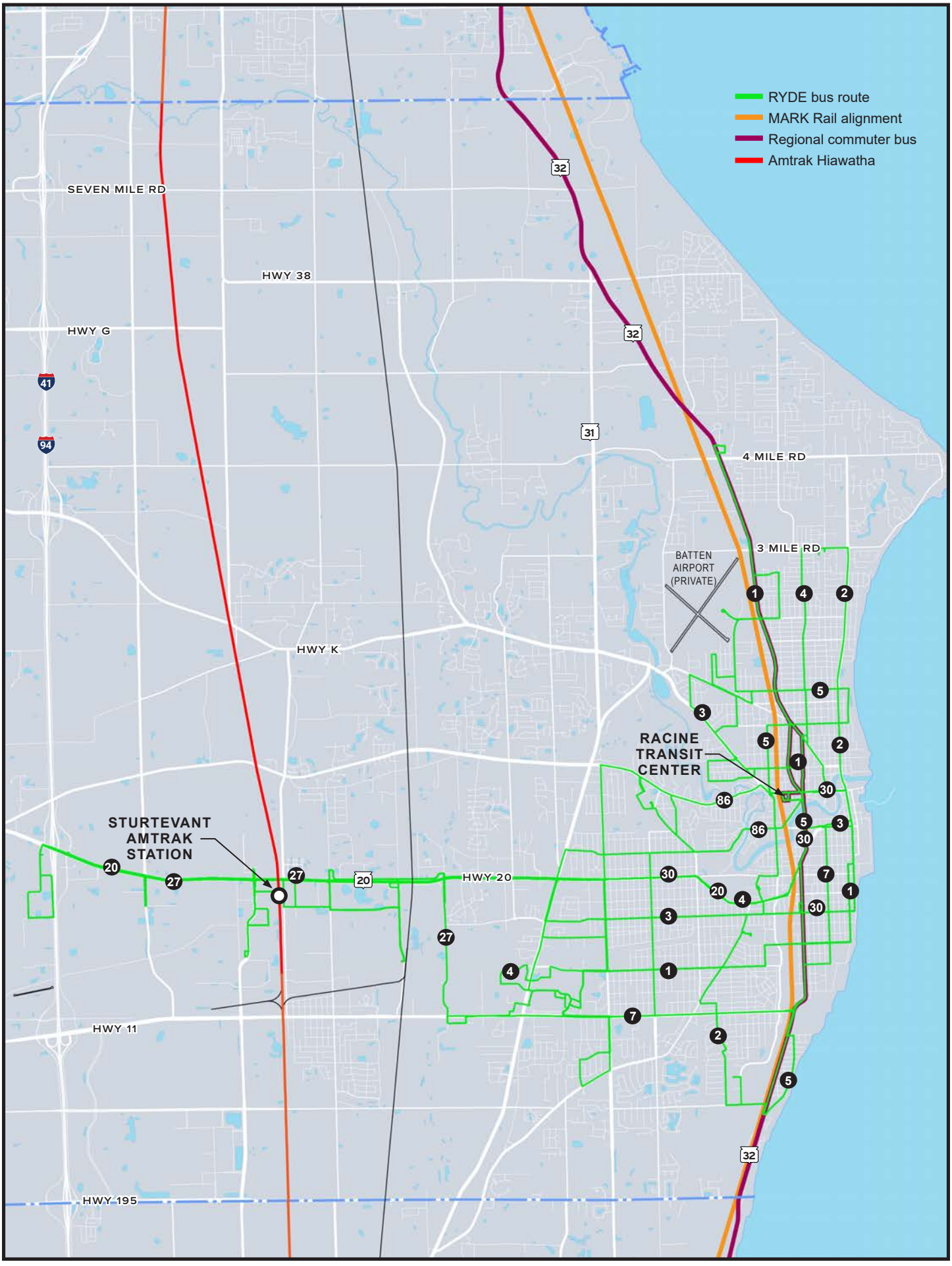
Regional Bus

Coach USA's commuter bus between Milwaukee and Kenosha operates on Douglas Avenue and Marquette Street in Racine with a number of designated stops. It also uses the Racine Transit Center, where an interface with MARK Rail is possible unless the rail service makes coach bus redundant in the corridor.

A RYDE bus on Main Street

Boarding at the Racine Transit Center

RYDE bus at S.C. Johnson headquarters, above, and Racine Transit Center below


RYDE bus route
MARK Rail alignment
Regional commuter bus
Amtrak Hiawatha
SEVEN MILE RD
HWY 38
HWY G
HWY K
HWY 11
HWY 195
HWY 20
4 MILE RD
3 MILE RD
BATTEN AIRPORT (PRIVATE)
RACINE TRANSIT CENTER
STURTEVANT AMTRAK STATION
41
94
32
31
20
27
1
2
3
4
5
7
30
86

KENOSHA COUNTY TRANSPORTATION

Roadway Network and Traffic

The basic shape of the roadway network in Kenosha County east of I-94 is similar to that in Racine County, but with some differences in layout and municipal implications.

I-94 Interchanges and Connecting Highways

There are seven interchanges with I-94 in Kenosha County at:

- Highway 195 / 1st Street (shared with Racine County)
- Highway E / Somers Road
- Highway 142 / Highway S / Burlington Road
- Highway 158
- Highway 50
- Highway C
- Highway 165 / Lakeview Parkway

The three interchanges that connect to highways that lead most directly to downtown Kenosha (Highway S, Highway 158, Highway 50) are spaced close together and are relatively straight.

Importantly, the City of Kenosha has been able to annex land out to the interstate, generating tax base, while the downtown is also closer to the interstate than Racine's because of the alignment of the Lake Michigan coastline. And yet, trips to Kenosha are still confronted by the same basic situation: the interstate system does not directly serve trips to downtown Kenosha. It is 6.5 miles from the Highway 158 interchange to the corner of 52nd Street and Sheridan Road in the downtown.

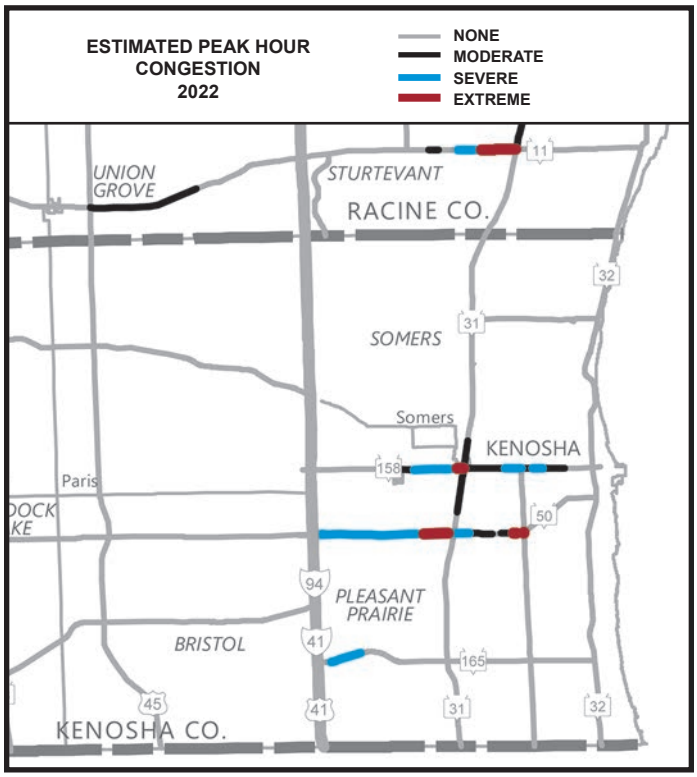
Traffic Volume Analysis

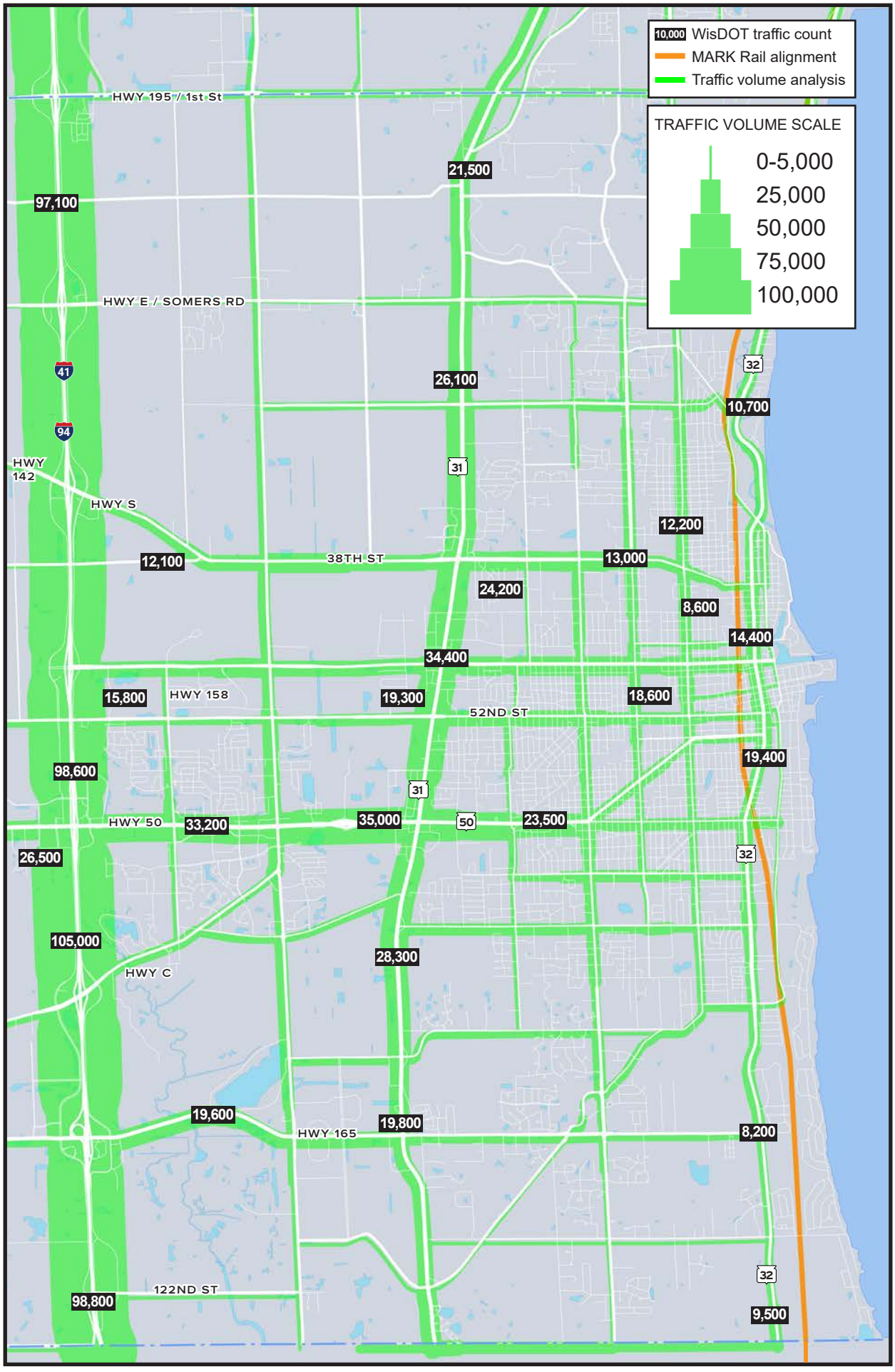
Traffic volumes along I-94 are consistent, but unlike Racine County that has higher counts in the north indicating trips to Milwaukee, the Kenosha County counts are a bit lower at the north end of I-94 and a bit higher toward the state line. This indicates more trips south to Chicagoland. The highest count is in the middle near the Highway 50 interchange. Highway 50 is a major State highway that not only connects east to downtown Kenosha but also west to the Lake Geneva area, which generates significant trips from Chicagoland. The Highway 50 interchange has become a significant commercial node generating some trips itself.

State Highway 31 runs north-south between the coast and the freeway north into Racine County and this position means it carries a high volume of traffic in the 20,000 to 35,000 vehicles per day range. The grid of streets in the City of Kenosha distributes trips, but with some relatively high counts on individual routes near the downtown such as over 18,000 vehicles per day on 52nd Street and nearly 20,000 on Sheridan Road.

Traffic Congestion Analysis

Peak hour congestion in Kenosha County follows the same pattern as in Racine County. The congested roadways carry traffic in the east-west direction from downtown Kenosha and its neighborhoods along the main direct routes to I-94. Highway 159, which is 52nd Street into the downtown, experiences congestion, with the peak at the intersection with Highway 31. Along Highway 50 moderate to severe congestion extends all the way to the interstate.




10,000 WisDOT traffic count
MARK Rail alignment
Traffic volume analysis
TRAFFIC VOLUME SCALE
0-5,000
25,000
50,000
75,000
100,000
HWY 195 / 1st St
HWY E / SOMERS RD
HWY 142
HWY S
38TH ST
HWY 158
52ND ST
HWY 50
HWY C
HWY 165
122ND ST
97,100
21,500
26,100
10,700
12,200
12,100
13,000
24,200
8,600
14,400
34,400
15,800
19,300
18,600
19,400
98,600
33,200
35,000
23,500
26,500
105,000
28,300
19,600
19,800
8,200
98,800
9,500
41
94
31
50
32

Kenosha County Transit

Existing transit service in the City of Kenosha, including a fixed route bus system, a streetcar loop, paratransit, and shuttles is ready to interface with expanded rail service on MARK Rail.

Kenosha Area Transit

The City of Kenosha owns and operates the Kenosha Area Transit (KAT) bus system, which provided 1,346,997 unlinked trip rides in 2024. The system maintains a fleet of buses operating on seven bus routes. The route network extends across the city, from the downtown out to the I-94 interchanges where a number of major businesses are located. The Route 35 bus, running on Highway 31 and Highway 165, provides transit access to a large concentration of light industrial, commercial, and logistic businesses in the Village of Pleasant Prairie.

Five of the KAT routes converge on downtown Kenosha to a transit center at 54th Street and 8th Avenue. This transit center has ten bus bays, shelters, and benches. It allows for transfers between routes, the streetcar loop, and is within walking distance to the Kenosha Metra station.

Paratransit

KAT provides Care-A-Van paratransit service for certified riders. Care-A-Van provides door-to-door service and requires a reservation at least a day in advance.

Kenosha Streetcar

The City owns and operates a streetcar loop from the Metra station east to the lakefront. The streetcars are historic trolleys running on rails in the street and powered by an overhead trolley wire. The City purchased cars that had operated on a number of older systems and restored them for service. Hours are limited to weekends during the winter, and typically from 10:30 am to 6:15 pm on weekdays during the rest of the year. They are an attraction, but also part of the overall transit system.

Carthage College Shuttle

The lakefront college attracts hundreds of commuter students who drive to the campus. The college operates shuttle buses on four routes on campus and to two off-campus parking lots.

Regional Bus Routes

Coach USA's commuter bus between Milwaukee and Kenosha operates on Sheridan Road in Kenosha. It makes a stop at the Kenosha Metra station and the downtown transit center.

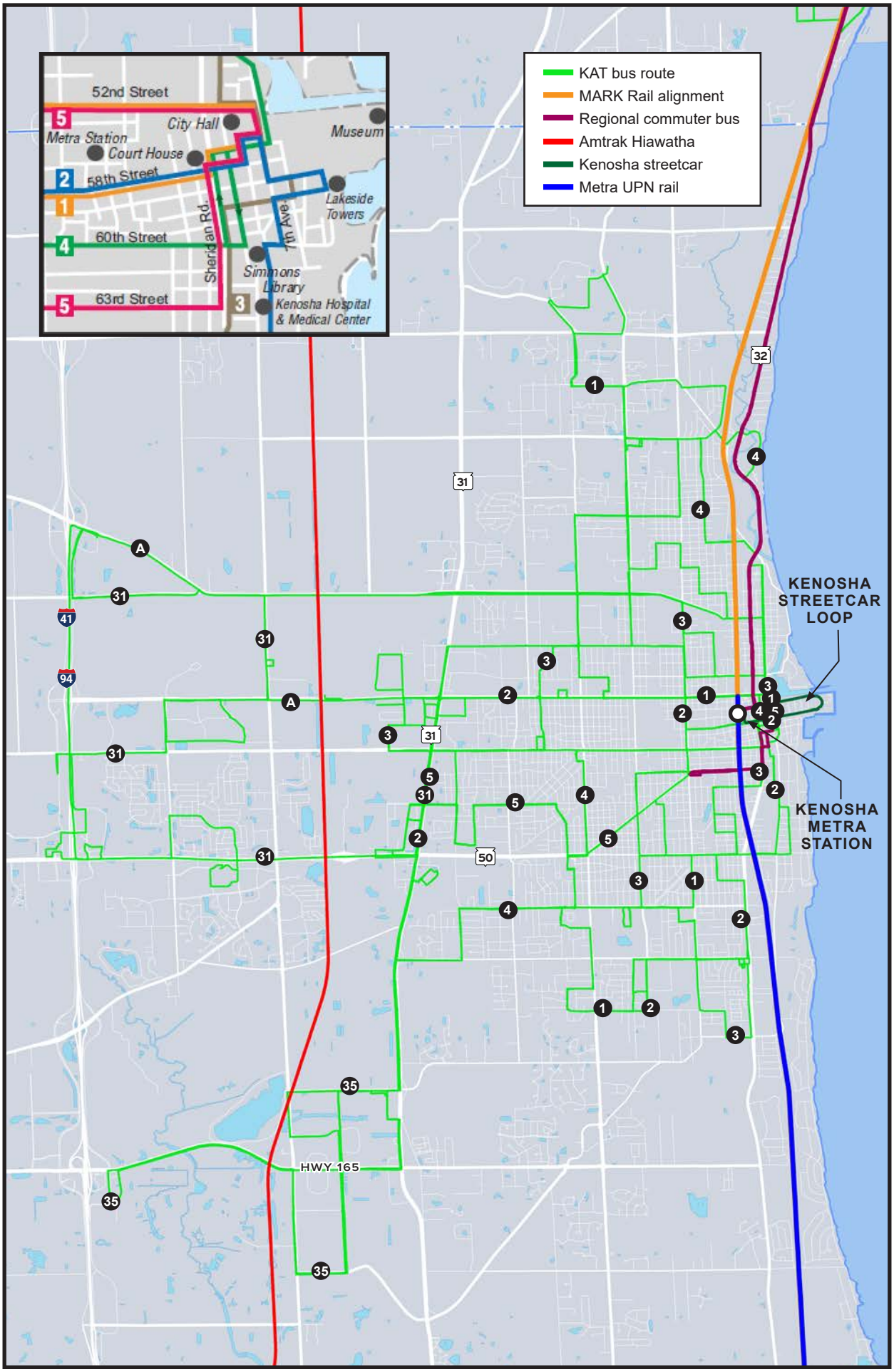
Kenosha Metra Station, Union Pacific North Line

A passenger rail station has been located on 13th Avenue since 1855. The location is well served by bus transit and the streetcar loop that runs on 11th Avenue directly east of the station and its parking lot.

Transit rider makes a transfer to the Route 3 bus

Six KAT buses fill the bays during a pulse at the downtown transit center

Above, a streetcar heads south on 11th Avenue near the Metra station
Below, a Carthage College shuttle at a remote lot adjacent to MARK track


KAT bus route
MARK Rail alignment
Regional commuter bus
Amtrak Hiawatha
Kenosha streetcar
Metra UPN rail
52nd Street
City Hall
Metra Station
Court House
Museum
58th Street
Lakeside Towers
Sheridan Rd.
7th Ave.
60th Street
Simmons Library
63rd Street
Kenosha Hospital & Medical Center
KENOSHA STREETCAR LOOP
KENOSHA METRA STATION
HWY 165

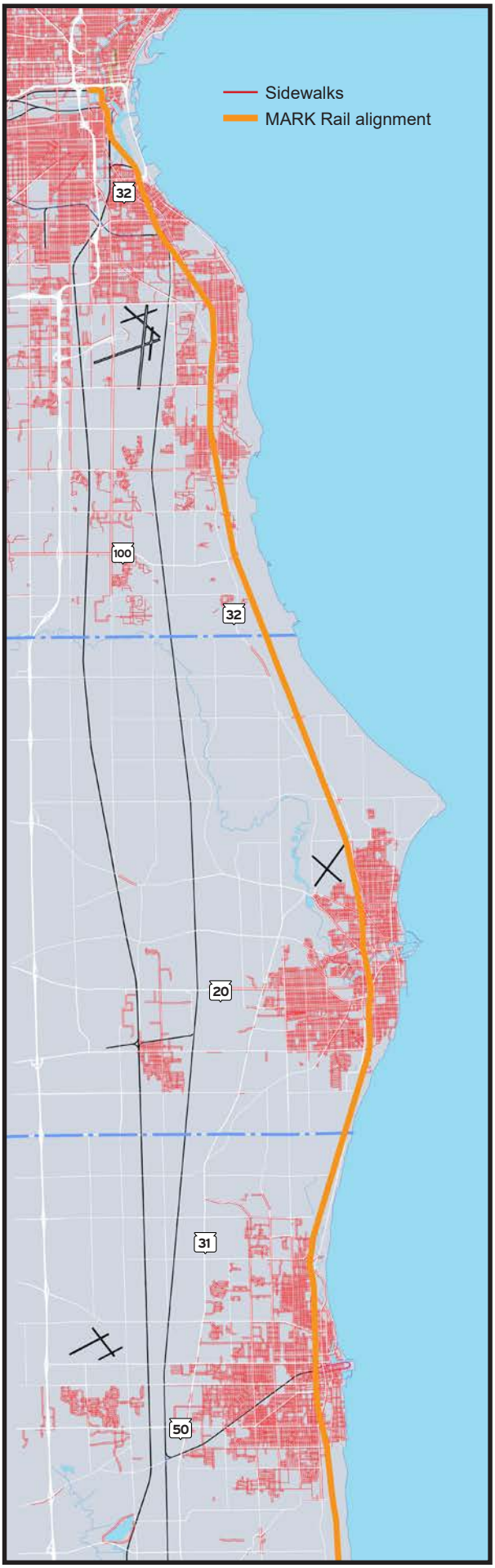
ADDITIONAL MODES

Pedestrian Facilities

The MARK Rail corridor connects three of Wisconsin's largest and oldest cities. All three were founded decades before the introduction of motorized vehicles; their historic downtown areas were built at a pedestrian scale by necessity. Getting around meant walking. When growth came with the introduction of steam railroads and then electric streetcars and interurbans, the primary travel mode remained walking. Neighborhoods grew up next to factories, people walked to work. In places like Cudahy and South Milwaukee, this also meant walking past the local stores next to the depot that sustained the community. While the amount of walking steadily declined so that most trips are now made in automobiles, the infrastructure for walking still exists.

As shown on a map inventory of sidewalks (SEWRPC 2022), nearly all arterial and local streets within Milwaukee, Racine, and Kenosha have sidewalks on both sides of the street. This urban pattern stands in contrast to the suburban and rural areas between the three cities that are devoid of sidewalks.

As with land use, MARK Rail communities were built around the C&NW stations and a network of sidewalks was built to connect to those stations. Across the nation, many other high-capacity transit corridors in planning and development with federal funds extend out to areas that do not have sidewalks. Sidewalks are basic infrastructure for a multimodal transport system: transit riders start and end trips as pedestrians. Passenger rail will increase the number of people walking on sidewalks and past storefront businesses in the station areas.



Main Street in downtown Racine presents an excellent pedestrian environment including wide sidewalks, direct access to storefronts from the sidewalk, pedestrian level lighting, and other decorative streetscape elements.

Bicycle Facilities

Bicycling is a crucial part of a multimodal transport system, and it is a convenient and inexpensive way to access a train station. A network of bicycle lanes exists in the MARK Rail study corridor that afford movement within and between neighborhoods and downtown areas. In addition, a number of multiuse recreational trails provide for longer distance subregional trips (SEWRPC, 2024).

Milwaukee County

The City of Milwaukee is rapidly constructing enhanced bicycle facilities, primarily in the form of buffered and protected bike lanes. This is in accord with a "vision zero" policy and efforts to combat reckless driving on city streets. On some streets, bike lanes are being relocated next to the curb, so that parked cars and concrete barriers protect bicyclists from moving traffic. The City is also continuing to expand its network of marked bike lanes. Both of these types of on-street facilities provide access to the Milwaukee Intermodal Station and destinations in downtown. Off-street bike trails also lead to the station, including the State-owned Hank Aaron Trail in the Menomonee Valley.

Milwaukee County's Oak Leaf recreational trail system includes rails-to-trails segments, including a trail along the old C&NW route north from downtown Milwaukee, and other trails that follow natural features along the lakefront and the Oak Creek parkway. Further south to the county line, the old North Shore Line and M-R-K interurbans cut diagonal paths across the landscape; those old rights of way now combine utility lines and recreation trails.

Racine and Kenosha Counties

In the more rural and exurban areas of Racine and Kenosha Counties, bike facilities are sparse, but wide, paved shoulders along highways offer a route for experienced riders. The former M-R-K interurban line is now a County Bike Trail immediately east of the MARK Rail alignment in north Racine (image below), while the former NSL interurban right of way extends from the City of Kenosha across the county line to Washington Park in Racine. Local streets within the two cities, some with marked bike lanes, offer comfortable bike riding, and a way to access MARK Rail.

New Mobility

A series of innovations that utilize advanced battery technologies, handheld computing in smart phones, and mobility applications for quick rental or ride sharing are starting to change mobility at the city scale. These technologies disrupt old modes, including bus transit and taxis, but also show promise for integrating modes into a network. Train stations are ready hubs for accessing these new services.

Micromobility

Micromobility generally refers to a range of small, lightweight, publicly available vehicles that travel at speeds below 15 miles per hour. Micromobility can take a variety of forms, including manual and electric bicycles, electric scooters, and other similar devices. Micromobility typically serves short trips within urban areas, including "first and last mile" trips connecting to longer distance public transportation modes, including high capacity transit (light rail and bus rapid transit) and passenger rail lines. It should be noted that private ownership of micromobility vehicles is also gaining traction, many of them small enough to bring onto a train for use at both ends of a trip.

Public micromobility services within the MARK Rail primary study area currently are offered in the City of Milwaukee. As of 2025, Bublr Bikes operates a docked manual and electric bike share system in Milwaukee and adjoining communities. These bikes can be checked out for use via a smart phone application and are to be returned to a station for docking, with over 100 station locations in the Milwaukee area.

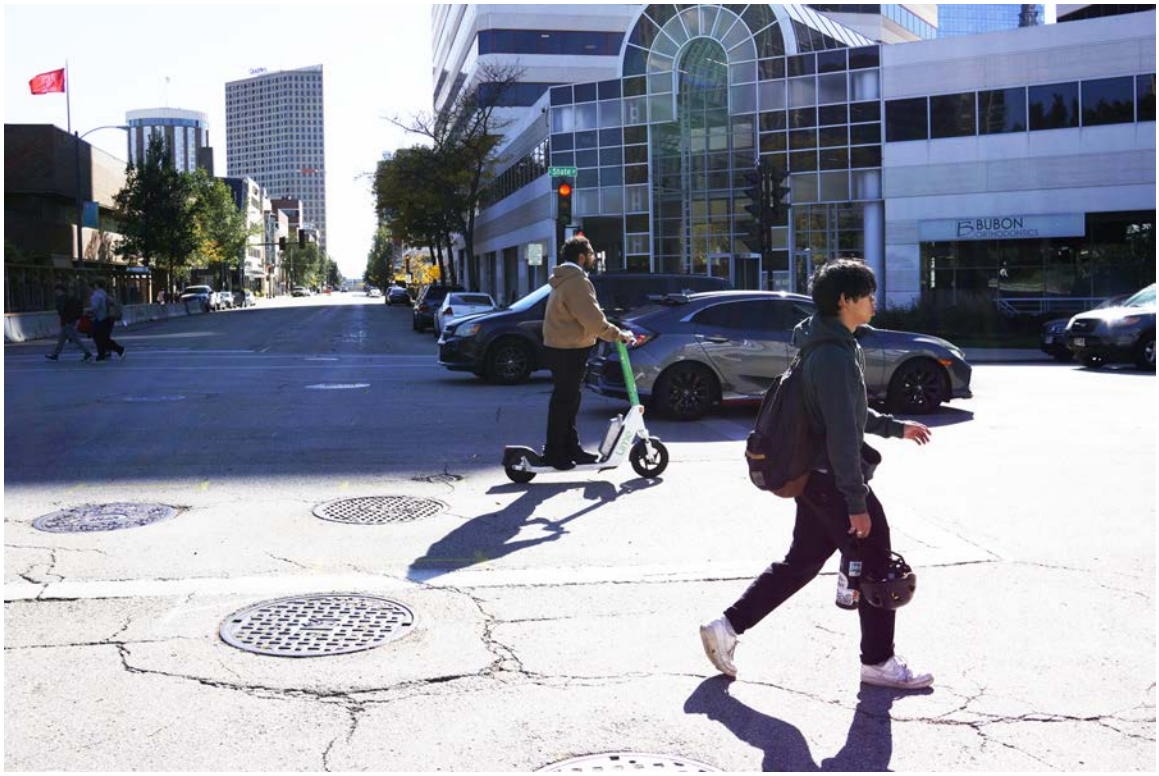
Electric scooters have with small diameter wheels and a skateboard type platform for standing operation, with a handlebar for steering. Some now include a small seat for sitting. Lime (an Uber affiliate) operates these without stations or 'dockless,' meaning they can be found and checked out in any location around the city. Company crews gather the scooters and return them to high activity locations and swap drained batteries for charged ones. Bike share and scooters are available at MIS and could be important to connect the station to places of employment in downtown Milwaukee.

As of 2025, Kenosha County is partnering with Tandem Mobility to pursue development of a docked manual and electric bike share system.

Ride Share

Perhaps the most disruptive of the new transport technologies is the rideshare model, which is based on a smart phone application that makes it possible to hire a gig driver for individual trips in the driver's private vehicle. The two largest companies operating in the MARK Rail corridor are Uber and Lyft. The Uber application can also be used to activate a Lime scooter. These companies have cut into ridership for public transit systems and have put many taxi companies out of business. This type of rideshare may take the place of low-volume shuttles from MARK Rail stations.

Three images from downtown Milwaukee in 2025 show how electric scooters and the local bikeshare system provide new forms of micromobility. Both stand up scooters and a docked bike station are available outside the Amtrak station (opposite page). The Hop streetcar on Vel R. Phillips Avenue at St. Paul Avenue is a short walk to MIS, providing rides into the downtown. Scooters are popular on the Milwaukee School of Engineering campus on the northern side of downtown.



Chapter 5
Railroad Infrastructure

INTRODUCTION

GENERAL CONDITIONS, MARK RAIL STUDY CORRIDOR

SPECIFIC CONDITIONS, PRIMARY STUDY CORRIDOR

CPKC C&M Subdivision

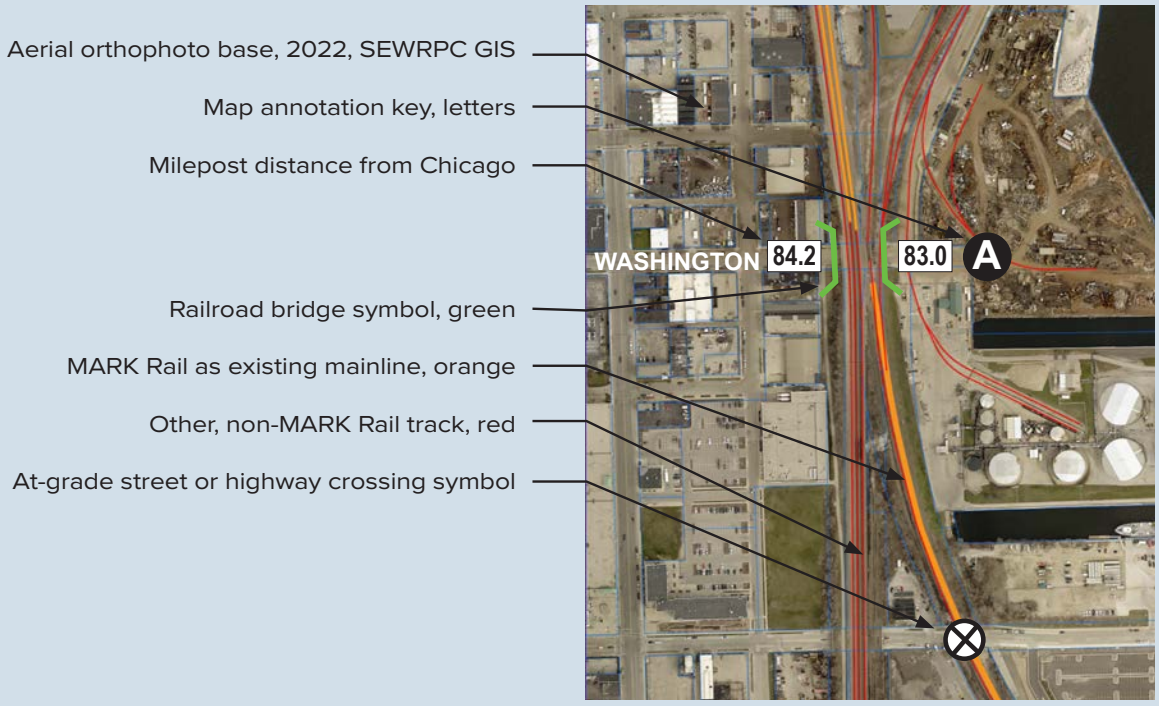
UP National Industrial Lead

UP Kenosha Subdivision

WISDOT MUSKEGO YARD BYPASS PROJECT

GLOSSARY OF RAILROAD TERMS

Specific Conditions Map Legend



The Specific Conditions analysis is organized around a series of map graphics that combine a digitized representation of railroad tracks and a high-resolution aerial orthophoto taken in 2022 (extracted from SEWRPC GIS). The MARK Rail alignment is shown as an orange line that follows existing mainline, with all other tracks as thin red lines. Railroad bridges and at-grade roadway crossings are indicated with map symbols. Milepost labels are added for reference to track segments; all milepost labels are in the approximate position in relation to features on the aerial photo (mostly street crossings), accuracy is not guaranteed.

INTRODUCTION

The MARK Rail Study explores restoration of passenger rail service along existing railroad right of way from Milwaukee south to Kenosha. A critical part of project planning is an evaluation of the existing condition of the railroad infrastructure from the Milwaukee Intermodal Station (MIS) south to the Kenosha Metra station. This evaluation has been conducted a number of times in previous studies of the Kenosha-Racine-Milwaukee (KRM) commuter rail project, beginning with a detailed description of railroad infrastructure in a 1997 consultant analysis and a subsequent SEWRPC report in 1998 (SEWRPC, 1997-1998). This chapter summarizes the existing conditions in 2025, using past descriptions for comparison to current conditions.

A historical perspective helps to understand some of the infrastructure that used to be installed in the corridor that allowed the C&NW to operate some of the fastest passenger trains in the United States at that time. However, along much of the UP Kenosha Subdivision the track condition has deteriorated since the C&NW discontinued passenger service in 1971. The UP now operates only a small number of freight trains at slow speeds on the Kenosha Subdivision. In contrast, the CPKC track between Milwaukee and Chicago, including a short segment that would be shared with MARK Rail, allows passenger train speeds up to 79 mph for Amtrak service.

Railroad Terms

The description of railroad infrastructure in this chapter uses a number of railroad terms. As a reference, brief descriptions of these terms are provided in a glossary at the end of the chapter. A list of the terms in the glossary is provided here:

- Alignment
- Bridges
- Curves: degrees, superelevation, tangent track
- Crossing
- Dispatching
- Grade
- Interlocking
- Junction
- Meet
- Milepost (MP)
- Railroad right of way
- Signals and control: Centralized traffic control (CTC) and Positive Train Control (PTC)
- Subdivision
- Switch
- Track class and operating speed
- Track structure
- Timetable and track chart
- Track types by purpose: main, single track, double track, crossover, siding, spur, turnout

MARK Rail Track Segments

The MARK Rail study identifies and references, by milepost (MP), four segments of trackage from Milwaukee to Chicago:

- Segment 1: CPKC C&M Subdivision, MP 85.4 at MIS to MP 84.2 at Washington Street (also UP MP 83.0)
- Segment 2: UP National Avenue Industrial Lead, MP 83.0 at Washington Street to MP 79.9 at St. Francis (control station)
- Segment 3: UP Kenosha Subdivision, MP 79.9 at St. Francis control point to MP 51.6 Kenosha Metra station
- Segment 4: Kenosha Subdivision, MP 51.6 at Kenosha Metra station to MP 0.0 at Ogilvie Transportation Center in Chicago

Segment 1 from MIS to the proposed junction at Washington Street is 1.2 miles. Segment 2 from Washington Street to the junction in St. Francis is 3.1 miles. Segment 3 from St. Francis to the Kenosha Metra station is 28.3 miles. The MARK Rail primary study corridor is the combined segments 1, 2, and 3, a total distance of 32.6 miles.

Segment 4 is the length of Metra's UPN Line service from Kenosha Metra to Ogilvie Transportation Center (OTC), a distance of 51.6 miles. This segment is the secondary study corridor for MARK Rail. The railroad infrastructure in Segment 4 is maintained to standards that allow Metra passenger service and is not described in this chapter.

Historical Perspective

For most of its existence the MARK Rail route was operated by C&NW as its passenger line between Chicago and Milwaukee. The intense competition for passenger traffic in the corridor led C&NW to improve its track for fast passenger trains. Beginning in 1935, selected trains branded as the "400" routes operated at 100 mph. This route consisted of a double-track main over its entire length from Milwaukee to Chicago.

In 1952, the Interstate Commerce Commission ordered C&NW to the install an Automatic Train Stop (ATS) system along this line to allow safe operation of these very fast trains. ATS was a safety system that applied train brakes if the engineer did not periodically respond to certain signals. During the 1950s, the maximum speed limit for passenger trains along this line was 100 mph on tangent track and 85 mph on superelevated curves.

Beginning in the late 1950s, the C&NW changed its facilities and operations to focus on freight customers. The slower operating speeds of freight trains permits use of less sophisticated track and signal systems and lower levels of maintenance. Given this shift, C&NW began to discontinue its intercity passenger trains, many of which operated in the Milwaukee-Chicago corridor.

By the mid 1960s, the maximum passenger train operating speed between Milwaukee and Chicago was reduced to 79 mph. In 1966, the C&NW moved its remaining passenger trains from its Milwaukee Lakefront Depot to the new Union passenger station on St. Paul Avenue shared with the Milwaukee Road. A connecting track was constructed at Washington Street allowing C&NW passenger trains to access the new depot. On May 1, 1971, Amtrak assumed responsibility for all intercity passenger train operations and the remaining C&NW passenger trains operating through Racine and Kenosha were discontinued.

As a result of changing freight traffic patterns during the late 1970s and early 1980s, the C&NW shifted most of its freight operations between Milwaukee and Chicago to the Milwaukee Subdivision, relegating the Kenosha Subdivision to a secondary freight line. Consequently, freight operating speeds dropped again to 30 mph north of Kenosha Metra station, and in some locations per slow orders to just 10 mph.

With the status of the line downgraded, the C&NW also began removing the signal systems along the line. In 1983, the interlocking signal system for the drawbridge over the Kinnickinnic River was dismantled. In December 1985, the interlocking tower and its operator at St. Francis were replaced with remote control operation by the dispatcher in Chicago. In 1987, both the Automatic Block Signal system (ABS) and the ATS between the north side of Kenosha and St. Francis were removed.

Following the removal of signal systems, the mainline was reduced from two tracks to one and superelevation of curves reduced to accommodate freight-only operation. Maximum speeds were again reduced and grade-crossing signal circuits were modified for slower freight operations.

GENERAL CONDITIONS, MARK RAIL CORRIDOR

Track Condition

Maximum operating speed along any section of railroad track depends on four principal factors: alignment, special trackwork, operational considerations, and physical condition. Maximum operational speed limits are determined primarily by the horizontal curvature of the alignment and, to a lesser extent, by changes in grade. Maximum operating speed limits over special trackwork, such as turnouts, crossings, and crossovers, are determined by the curvature of the turnouts and by the angle of the crossings.

The track along Segment 1—the CPKC C&M Subdivision—is in good condition and currently meets Class 4 safety standards allowing speeds up to 79 mph. This track condition is maintained with various investments by WisDOT and federal grants primarily related to Amtrak's Hiawatha service. However, speeds are limited on the curves directly east of MIS and at Florida Street.

Track Class and Operating Speed
The FRA has prescribed minimum requirements for the safe operation of freight and passenger trains based on track conditions and a classification into maximum operating speeds for different track segments. There are six classes that apply to specific track conditions with specified speed limits for each class. These six FRA classes provide a basis for an initial evaluation of the condition of railroad trackage and for estimation of the costs of improvements needed to meet desired operating speeds.

A railroad may lower the operating speed limit for specific sections of track below the maximum allowable, for example, trains may need to operate at a slower speed through a curve or a track switch.

	Maximum Operating Speed (MPH)	
Track Class	Freight Train	Passenger
1	10	15
2	25	30
3	40	60
4	60	80
5	80	90
6	110	110

Segment 2—the UP National Avenue Industrial Lead between Washington Street to St. Francis—is classified as FRA "excepted" track, meaning that it is not required to meet FRA track safety standards but is restricted in type of operations. Accordingly, all train operations on the National Avenue Industrial Lead are limited to a maximum speed of 10 mph.

Track along MARK Rail Segment 3—the UP Kenosha Subdivision track between St. Francis and Kenosha Metra station—has a maximum speed of 25 mph, and therefore is Class 2 track.

Current Railroad Operations

Segment 1 is as follows. Freight and passenger trains operate on the CPKC C&M Subdivision into the MIS. Currently, long freight trains operate through MIS adjacent to passenger platforms. The Muskego Yard Bypass Project developed by WisDOT (see end of chapter) plans to route most CPKC freight trains into the Muskego Yard and thereby remove them from MIS.

South of the sharply curved track into MIS, CPKC main track in Segment 1 is maintained to allow 40 mph operation from the Menomonee River drawbridge through the curves

at Florida Street to the proposed junction at Washington Street. The connection from the CPKC track to the UP track would be dispatched by CPKC.

Segment 2 is used by a single, daily UP yard assignment to serve industries in Port Milwaukee, Cudahy, and South Milwaukee. South of Washington Street to St. Francis the former main track segment is uncontrolled freight trackage, known as the National Avenue Industrial Lead. This single-track section, where train movements are controlled verbally by the UP yardmaster at Butler, Wisconsin, is non-signaled territory with hand-thrown switches, and a current maximum speed of 10 mph. This section has a signaled crossing of a CPKC industrial lead that is the primary rail access to Port Milwaukee.

A large swing bridge over the Kinnickinnic River will require extensive repairs or replacement to operate MARK Rail. The bridge must remain operable for marine traffic by federal statute, 33 CFR §117.1093 (c)(2) that provides detailed regulations from the U.S. Coast Guard regarding drawbridges on the navigable parts of the Kinnickinnic, Milwaukee, and Menomonee rivers. These bridges must be opened within a two hour notice, from April through November. More frequent use of the Kinnickinnic River Bridge for MARK Rail may require a bridge operator to comply with maritime regulations. At St. Francis, the National Avenue Industrial Lead and UP Milwaukee Subdivision intersect with the end point of the UP Kenosha Subdivision. The UP Milwaukee Subdivision is the primary UP freight route north from Chicago and long freight trains operate through this junction. Reconfiguration of this track in the 1990s resulted in only a single track north to downtown Milwaukee (see details following), which could result in conflicts between the movement of freight and MARK Rail trains.

The majority of the MARK Rail primary study corridor is on the UP Kenosha Subdivision in Segment 3 between St. Francis and Kenosha. UP operates this part of the Kenosha Subdivision as a non-signalized, single-track main dispatched from a control center in Omaha, Nebraska. Trains are dispatched through verbal movement authorities, which replaced signals removed after the end of passenger service. A small stretch of main track in Oak Creek is dispatched using signals, this area having multiple tracks to deliver coal trains to the We Energies Oak Creek Power Plant. These coal trains are the highest frequency freight operation on the UP part of the MARK Rail route. An announced transition by We Energies to a gas-fired plant in 2026 will further reduce freight customers on the Kenosha Subdivision in Wisconsin.

The balance of freight traffic on the UP Kenosha Subdivision and National Avenue Industrial Lead is local freight service originating from Butler, which serves a small group of freight customers between Milwaukee and Kenosha. Additional local freight service works northward from Waukegan, Illinois, on an as-needed basis.

On Segment 4, UP operates commuter service on behalf of Metra as the UPN Line, from Kenosha Metra station to Ogilvie Transportation Center in downtown Chicago. The OTC incorporates much of the old C&NW terminal with multiple tracks and platforms elevated over downtown streets. In a contractual partnership with Metra, UP maintains the mainline in this segment to FRA Class 4, with maximum speed up to 70 mph. The main track segment is fully signaled and has Positive Train Control (PTC) as required by federal regulation for passenger service.

Alignment

The vertical and horizontal alignment of the railroad along the MARK Rail route is generally well suited for fast passenger train operation. The alignment parallels the Lake Michigan shoreline on relatively flat topography for its entire length. The few grade changes that exist are generally caused by ravines that stretch inland perpendicular to the lakeshore. Accordingly, most of the route is basically on the natural grade of the surrounding topography, with the railbed built to smooth variations. There are three sections where the railbed is raised on an earth fill (or embankment) significantly above the grade of local streets: between the Menomonee Drawbridge and Washington Street in Milwaukee, between Mound Street and 9th Street (across the Root River bridge) in Racine, and south of 35th Street to the Kenosha Metra station.

Grades are expressed in percentages, such that a 1% railroad grade corresponds to a vertical change of one foot per 100 feet. From MIS, the southbound grade ascends on a fill section an average of 0.7% to Washington Street, then descends from this fill section down to the Kinnickinnic River bridge. The grade gradually climbs from the river at about 0.7% grade for four miles to Cudahy. Milepost 77.8 in the City of Cudahy marks the highest elevation along the route, 717 feet above mean sea level.

The grade from Cudahy to South Milwaukee is again less than 1% (0.75%) and is almost flat with only a 0.23% change from South Milwaukee to a crest at MP 70.3 near the county line. The grade from this point to the river in Racine (MP 61.5) is only 0.2%.

Between Racine and Kenosha the grades are minor, with a 0.6% grade ascending from the Pike River bridge to the fill section and elevated overpasses starting at 36th Street in Kenosha.

With respect to horizontal alignment, there are 36 horizontal curves along the entire route. Between Kenosha and Washington Street there are 31 horizontal curves. All but six curves on this segment are two degrees (2°) or less; higher degrees indicate sharper curves. The sharpest curves along the route are on the CPKC portion of the route, on the approach and entrance to MIS.

In short, the corridor is mostly straight and flat and basically unchanged since the days of 100 mph service on the

C&NW. It will not require major changes to the railbed to re-institute fast passenger rail service as proposed by the MARK Rail Study.

Railroad Right of Way

Along nearly all of the corridor from Kenosha to Milwaukee there is ample railroad right of way, with most parcels 100 feet in width, particularly in the segments between St. Francis and into the City of Racine. There are also segments that exceed 100 feet in width, including in the City of Cudahy, adjacent to the Oak Creek Power Plant, and in the City of Kenosha. A number of the railroad bridges exhibit slots for four tracks; many with only one track currently on the bridge. Therefore there is excess right of way given the very reduced use of the Kenosha Subdivision for freight and plenty of spatial capacity for constructing new track for MARK Rail.

There is only one segment where railroad right of way is constrained: the segment where the State of Wisconsin acquired railroad land to construct the I-794/Lake Parkway between Bay View and St. Francis. Measurements using SEWRPC GIS indicate that the UP parcels were narrowed to 20-32 feet: only wide enough for a single track.

There are no existing vertical or horizontal clearance obstructions along the route that would prohibit the use of conventional commuter train equipment over this route. In fact, bi-level gallery coaches of the type used by Metra were operated over this entire route on a regular basis by the C&NW.

Street, Highway, and River Crossings

The MARK Rail alignment has a total of 45 at-grade crossings of public street and highway rights of way. (See the end of this chapter for a list of crossings.) All of the public road crossings have safety features in the form of flashing lights and gates; six of these also have additional overhead flashing lights. The UP track crosses five private roadways, drives, or trails. Two of these are in the port area north of Lincoln Avenue and before the Kinnickinnic Bridge and both have access controlled by fencing and gates. There is a private drive crossing multiple tracks internal to the ATI/Ladish property in Cudahy, which has lights and gates. The final two private crossings are on We Energies properties at the Oak Creek Power Plant; one is a pedestrian trail with a fenced gateway and the other is on the main entrance service road, that is controlled with flashing lights and gates. In general, electrical circuits for activating the automatic grade-crossing signals are timed for freight operations.

There are 25 grade-separated crossings of public roads and of these 24 are railroad overpasses of the public road; only the access road from Bay Street to Port Milwaukee and I-794 crosses over the UP track, nominally labeled as E. Lincoln Avenue. A review of the 1998 KRM plan reveals that since that time significant investments were made to grade separate the crossings at Six Mile Road and Four Mile Road. Also, the at-grade crossing at Seven Mile Road was eliminated and additional improvements were made to lights and gates at a few crossings.

The primary study corridor has four river crossing bridges at the Menomonee, Kinnickinnic, Root, and Pike Rivers. There are also four pedestrian-only passageways under the tracks: one north of Pittsburgh Avenue (at Seeboth Street) in Milwaukee, a trail passage next to the creek at Oak Creek Parkway, a narrow pedestrian passage at 38th Street in Kenosha, and the entrance to the Kenosha Metra station, which is a passage under the elevated tracks.

SPECIFIC CONDITIONS, PRIMARY STUDY CORRIDOR

Descriptions of key railroad infrastructure and annotated maps with an aerial photo base (2020) are provided in this chapter section for the majority of the MARK Rail corridor from Milwaukee to Kenosha. The maps include GIS linework showing the existing mainline as the MARK Rail alignment in orange and sidings and spurs in red. The maps show where railroad crossings and bridges are located, and have parcel lines that indicate the extent of private, railroad property.

CPKC C&M Subdivision: CP Milepost 85.4 to 84.2

Downtown and Harbor District

Track Segments and Operations

The aerial photograph at right shows the full extent of CPKC track that is proposed for use by MARK Rail, from Milwaukee Intermodal Station (MIS) to the proposed junction with UP track at Washington Street, a distance of only 1.2 miles on CPKC track. This route into MIS is also, currently and historically, the primary main double track route for trains passing through Milwaukee. As such, it carries freight traffic with long trains passing through the station adjacent to station platforms and Amtrak passenger trains. The Milwaukee downtown US Post Office and MIS train shed are built over the tracks.

Track Class and Signals

- Class 4, maximum speed 79 mph
- CTC signals and PTC overlay

The C&M Subdivision is FRA Class 4 track with a maximum speed of 79 mph and is equipped with Centralized Traffic Control (CTC) and a Positive Train Control (PTC) overlay. Track is fully compliant with requirements for use by Amtrak passenger trains. Dispatch and station platform assignment for passenger trains is by the CPKC train dispatcher. Crossovers between the two main tracks are located within the depot area and south of the Menomonee bridge.

Crossings and Bridges

- One at-grade crossing
- One movable river bridge
- Four street bridges and one pedestrian underpass

The one at-grade crossing is at Plankinton Avenue, immediately east of the US Post Office and it is an impediment to movement of vehicles and pedestrians when long freight trains are present. The movable swing bridge over the Menomonee River allows ships to access canals in the Menomonee Valley, though this type of ship traffic is much reduced in recent years. Bridges over city streets are at Pittsburgh Avenue, First Street, Florida Street, and National Avenue.

The track is on an embankment through this part of Milwaukee and the four street bridges connect this above-grade railbed over the streets. Other streets are simply vacated, or disconnected by the fill section. A pedestrian underpass at Seeboth Street allows passage from Second Street to First Street and Water Street to the Third Ward.

Railroad Right of Way and Curves

The right of way varies from 60 to 140 feet in width. The sharpest curves along the whole MARK Rail route are in the area shown: a compound curve of 14°00’ and 12°30’ at the east end of the passenger station and a reverse curve of 10°00’ and 9°30’ on the bridges over First Street and Florida Street. Trains must slow down to negotiate these curves.

Issues and Considerations

To address safety and capacity issues, WisDOT, the owner of MIS, has secured grants to make significant upgrades to the CPKC Muskego Yard in the Menomonee Valley that will allow CPKC to preclude routing freight trains through the station. This project, known as the Muskego Yard Bypass, will use the railroad right of way north of Florida Street and construct new main track in the yard (see Muskego Yard at end of this chapter).

A Milwaukee Intermodal Station

B The Hop streetcar station

C US Post Office

D Menomonee River Drawbridge

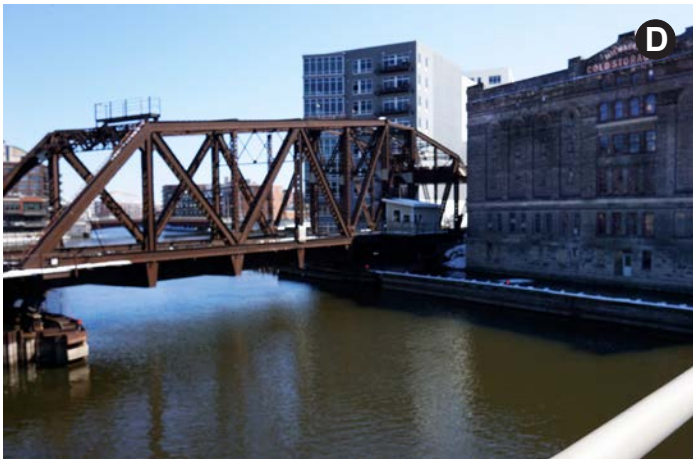
E Third Ward

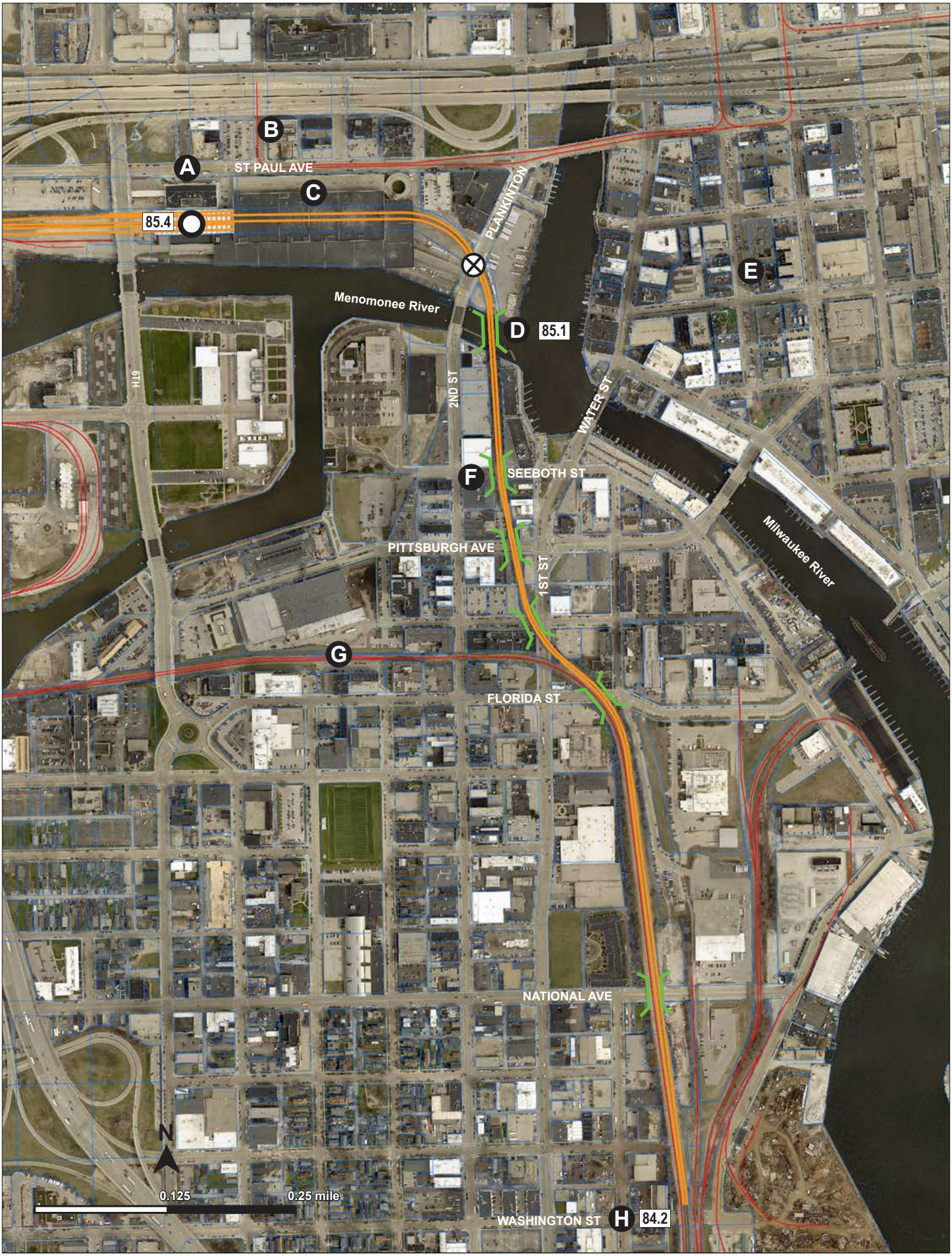
F Pedestrian underpass

G CPKC Muskego Yard track

H Washington Street

The Menomonee River drawbridge from 2nd Street. The bridge swings west toward 2nd Street from a pivot point at its south end.




A
B
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ST PAUL AVE
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WATER ST
SEEBOTH ST
PITTSBURGH AVE
1ST ST
Milwaukee River
FLORIDA ST
NATIONAL AVE
WASHINGTON ST
61H
N
0.125
0.25 mile

Milwaukee Intermodal Station

Exterior of MIS from St. Paul Avenue and 5th Street

Amtrak customers queue up around the interior of MIS (above) and at the single entrance to the trainshed (below).

The Milwaukee passenger depot on W. St. Paul Avenue is used by Amtrak to serve intercity passenger train customers on the Empire Builder, Hiawatha, and Borealis routes. It was opened in 1965 as the Milwaukee Union Station, owned at that time by the Milwaukee Road. The previous Milwaukee Road Everett Street depot was roughly 800 feet further north. The relocation was part of the implementation of freeway construction into the downtown, which also severed the C&NW's path to its Lakefront Depot at the foot of Wisconsin Avenue.

Soon after the new Union Station opened a connection was made to C&NW track so that both railroads could use the station. This arrangement existed for a short period from 1965 to 1971, when Amtrak took over passenger rail service from private companies. The Milwaukee Road merged with Canadian Pacific and the property that the track, platforms, and trainshed are situated on is now owned by CPKC. CPKC manages dispatch to the five tracks inside the trainshed that encloses the platform space.

Milwaukee's downtown US Post Office was built over the tracks during the same freeway construction period in the 1960s, utilizing an air rights agreement with the railroad. A private real estate company owns the parcels to the north and south of the CPKC property and the building structure, which it leases to the USPS. Parts of the platforms extend to the east of the trainshed and under the post office.

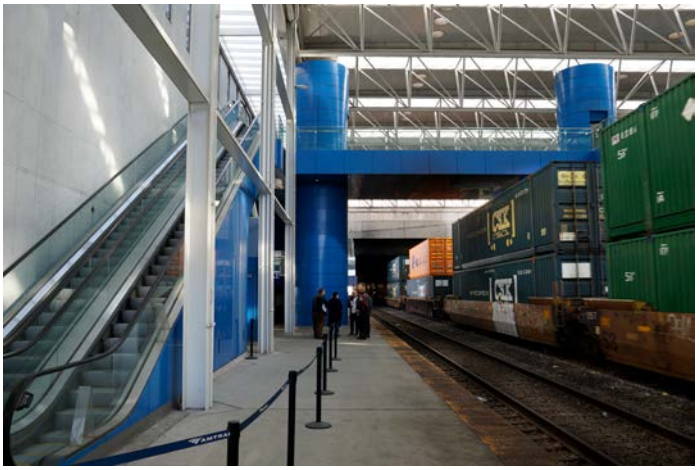
The station building, and its parcel fronting on St. Paul Avenue, are currently owned by WisDOT. WisDOT contracts with Milwaukee Intermodal Partners LLC, a private firm, to manage the property. Amtrak leases space for passenger ticketing and a waiting area.

There are five tracks within the depot trainshed. A single customer entrance from the depot into the trainshed provides access to a concrete platform that is 1,172 feet long and served by Track 1. An island platform, 1,303 feet long, is flanked by Tracks 2 and 3 and a second island platform, 1,303 feet long, is served by Tracks 4 and 5.

The station building was renovated and expanded in 2007 and renamed the Milwaukee Intermodal Station. The “intermodal” refers to possible transfers to regional and national coach bus service available at the station. MCTS buses and The Hop streetcar are also nearby. The expansion created a larger waiting area for Amtrak and bus passengers. The station also has an Amtrak ticketing counter and a small retail space.

In 2016, WisDOT renovated the trainshed to meet federal ADA access requirements, including installation of wheelchair lifts and escalators to a new mezzanine over the three platforms. The former tunnel access to the platforms is not ADA compliant and is closed to the public. There are two escalators (one up, one down) to the mezzanine from the first platform and a single escalator to each of the two island platforms. This means the escalators to the island platforms are running either up or down. Amtrak personnel can change the direction of the escalators if necessary; however, this is problematic for all-day service as envisioned by the MARK Rail Study. It is likely that additional escalators will be needed along with other customer circulation and capacity improvements.

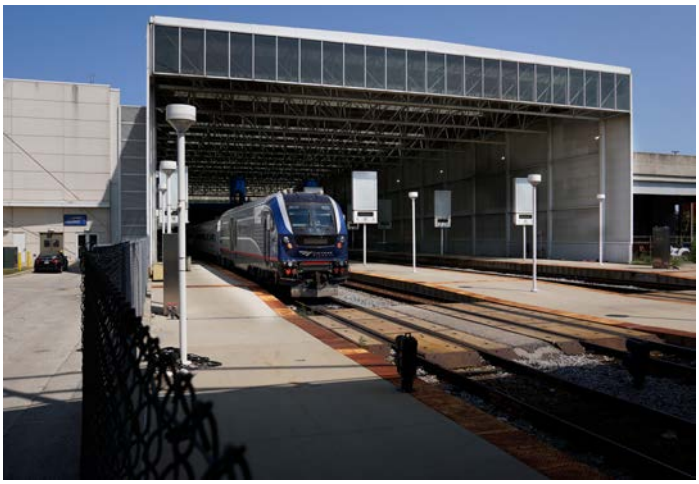
A WisDOT-owned parking lot is to the west of the depot, operated by a private contractor. Additional private parking lots are located along St. Paul Avenue.



Two-way escalators from the platform to the mezzanine inside the MIS trainshed. A CPKC freight train is passing through the station.

A Borealis train serves customers from the first island. The single escalator is set to take arriving customers up to the mezzanine level.

A Hiawatha locomotive is on Track 1 inside the trainshed at MIS.



Customers arriving on the daily Empire Builder train climb the stairs to the mezzanine, while departing customers board.

CPKC C&M Subdivision, UP National Avenue Industrial Lead: UP Milepost 83.0 to 81.8

Port Milwaukee and Harbor District

Track Segments and Operations

The National Avenue Industrial Lead is a component of the UP Milwaukee Subdivision that provides UP freight access to Port Milwaukee. Port facilities are located south of the river bridge and on Jones Island, which UP can serve via a connection to track owned by Port Milwaukee. A connection between the UP track and the CPKC C&M Subdivision mainline was constructed in 1966 at Washington Street to provide C&NW passenger trains access to the new Milwaukee Union Station (now MIS); Amtrak discontinued passenger service on the C&NW Kenosha Subdivision 1971. The track junction at Washington Street was removed in 1995. Restoration of service will require reconstruction of this connection to allow service into MIS and repair or replacement of the Kinnickinnic River drawbridge.

The CPKC route between Washington Street and MIS is part of the primary freight route from Chicago to Milwaukee and also carries Amtrak service. UP freight service on the Milwaukee Subdivision, and into the port, and south on the Kenosha Subdivision, is provided by a single daily local freight assignment from Butler, Wisconsin, serving local industries.

Track Class and Signals

CPKC track

- Class 4, maximum speed 79 mph
- CTC and PTC signals

UP track

- FRA excepted track, maximum speed 10 mph
- No signals

Crossings and Bridges

- One at-grade crossing
- One railroad bridge at Washington Street
- One movable drawbridge over the river
- One railroad crossing

The UP track crosses over Washington Avenue on a railroad bridge at MP 83.1. The UP track is elevated on fill at Washington Street then descends to an at-grade crossing of Greenfield Avenue. The UP right of way is flanked by property owned by Komatsu Corporation which has a pedestrian bridge connecting over the track. The UP bridge over the Kinnickinnic River is at MP 82.5. A CPKC spur, providing access to the port, crosses the UP industrial line at MP 81.8. An automatic interlocking controls movements at this track crossing.

Right of Way and Curves

The UP right of way in this segment is 100 feet wide. The curve from tangent track across the river bridge to the former junction at Washington Street has a relatively wide radius. Previous KRM plans considered other alignments to avoid the existing river bridge, but the analysis indicated the resulting curved track would be sharper and therefore reduce speeds.

A Washington Street, former junction

B Port Milwaukee

C Kinnickinnic River Drawbridge

D Komatsu Corporation

E St Mary's Cement, maritime customer

F CPKC spur crossing of UP

Issues and Considerations

The Kinnickinnic River Bridge requires significant rehabilitation or replacement. Port customers and property owners with their own docks on the river, including a cement terminal, receive supplies by ship and the bridge must allow access for marine traffic. Small craft also use the river south of the bridge.

The clearance height for a fixed bridge is not known at this time. The at-grade crossing of Greenfield Avenue is 1400 feet north of the river bridge. The CPKC right of way has a bridge over Greenfield Avenue 250 feet to the west of the UP crossing.

The Komatsu facility is a recent development not present during previous KRM studies. A short segment of track that also includes a spur into the Komatsu facility was reconstructed south of Greenfield Avenue.

A northbound Amtrak Empire Builder train just north of the CPKC Kinnickinnic River bridge heading to MIS, March 30, 2024


WASHINGTON
84.2
83.0
A
1ST ST
GREENFIELD AVE
B
D
C
D
82.5
Kinnickinnic River
B
1ST ST
KINNICKINNIC AVE
E
82.0
83.4
N
BAY ST
0.125
0.25 mile
F
81.8

Washington Street trackage and UP Kinnickinnic Bridge

Aerial photograph (2020) at left shows the trackage on the Washington Street bridge where a junction was previously located (red box shows approximate location) to connect the two railroads.

Three tracks are shown on CPKC property. The track farthest west leads to Muskego Yard; the other two are main track leading into MIS and points west to St. Paul, Minnesota. The condition of CPKC main track is noticeably better given its maintenance as Class 4, 79 mph service. The UP tracks are used intermittently for local freight service only. The path of the former merge junction is somewhat discernible.

Photographs taken in March and October 2025 show the position and shape of the Kinnickinnic River Bridge. The single-span movable bridge was built in 1903 and is used infrequently. It is anticipated that the bridge will require extensive repairs or replacement to operate MARK Rail. A laker freighter owned by St. Marys Cement is shown at their terminal up river of the bridge.

The bridge must remain operable for marine traffic by federal statute, 33 CFR §117.1093 (c)(2), which states detailed regulations from the U.S. Coast Guard regarding drawbridges on the navigable parts of the Kinnickinnic, Milwaukee, and Menomonee Rivers. These bridges must be opened within a two hour request from maritime traffic, from April through November. Options for the bridge will be developed as the planning for MARK Rail continues.


5
SLOW &
NO WAKE


ST MARYS CHALLENGER


ST. MARYS

UP National Avenue Industrial Lead: Milepost 81.6 to 80.5

Bay View

Track Segments and Operations

Track from the Port Milwaukee area south through Bay View is part of the National Avenue Industrial Lead. UP freight service is provided via a connection to track owned by the port at National Avenue. CPKC also has access to the port at this location. A single track owned by the port is adjacent to the UP track from roughly Conway Street south to its termination north of Russell Avenue.

As with the rest of the MARK Rail route, this segment in Bay View used to host the C&NW passenger rail service on double-track mainline. Construction of the I-794/Lake Parkway in the mid 1990s significantly impacted railroad infrastructure. The rail right of way (parcels) owned by UP were partially taken by the highway project. Unlike the rest of railroad right of way along the MARK Rail route, this section in Bay View is no longer wide enough for two tracks, which would increase the cost of future double tracking or sidings in this segment.

Track Class and Signals

- FRA excepted track, maximum speed 10 mph
- No signals

Crossings and Bridges

- No at-grade crossings
- Four railroad bridges over city streets
- One street bridge over the railroad (Lincoln Avenue)

The Lake Parkway project constructed four new bridges over city streets in Bay View.

Railroad Right of Way and Curves

The UP right of way narrows to just 20 feet, at its narrowest point east of Bay Street. The four bridges in Bay View are only wide enough for a single track. The track is without significant curves.

Issues and Considerations

This segment of track presents a constraint to future expansion to double track or a siding.

A Access road (E. Lincoln Ave) to port, only roadway over track in corridor

B Lake Express Ferry Terminal

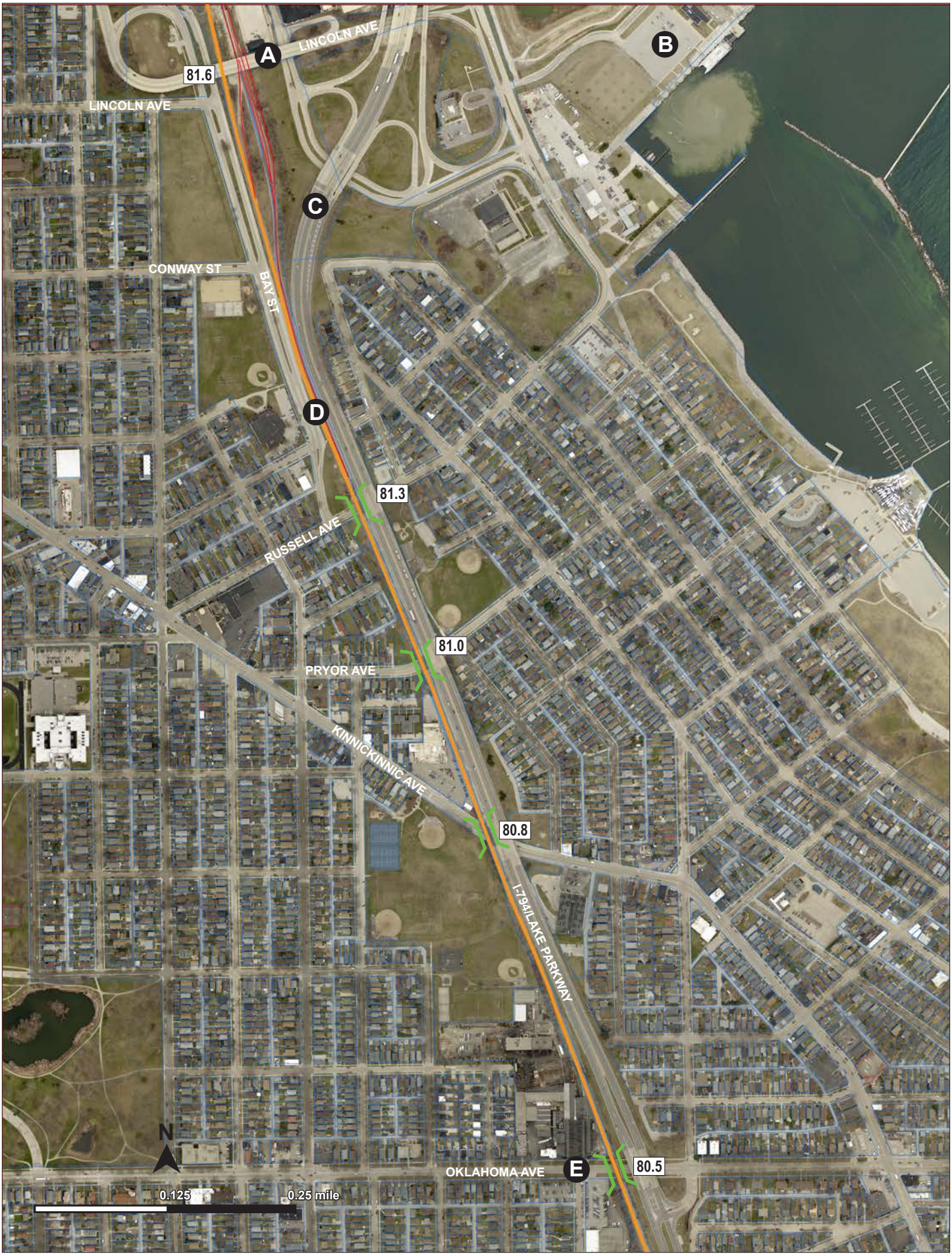
C I-794 / Lake Parkway

D Narrowest UP right of way in corridor, down to 20 feet

E Railroad bridge at Oklahoma Avenue

Looking south from Bay Street in Bay View, the single UP track continues while a Port Milwaukee spur terminates next to the I-794 wall

MCTS Route 51 bus passes under the UP bridge over Oklahoma Ave. This single-track bridge dates to construction of the I-794 project.


A
LINCOLN AVE
81.6
LINCOLN AVE
B
C
CONWAY ST
BAY ST
D
81.3
RUSSELL AVE
81.0
PRYOR AVE
KINNICKINNIC AVE
80.8
I-794/LAKE PARKWAY
N
OKLAHOMA AVE
E
80.5
0.125
0.25 mile

UP National Avenue Industrial Lead, Milwaukee Subdivision, Kenosha Subdivision: Milepost 80.5 to 79.4

St. Francis

Track Segments and Operations

St. Francis is the site of a junction between the UP Kenosha Subdivision, the UP Milwaukee Subdivision, and its National Avenue Industrial Lead. The UP Milwaukee Subdivision is the primary freight line from Chicago to Milwaukee, and on to St. Paul, and is considered the main route through the junction. It curves from a north-south alignment to an east-west alignment at St. Francis. All four lines entering this junction are single track; any train movements through the junction must use a short stretch of common track, roughly 700 feet in length, which is likely to cause conflicts between long freight trains on the Milwaukee Subdivision and MARK Rail trains seeking to use this track from the north or south.

As with the rest of the MARK Rail route, there used to be two tracks in this area during the C&NW's passenger rail period. It was reduced to a single track, apparently during the 1990s, when tracks were removed and realigned to provide right-of-way for construction of the I-794/Lake Parkway. The freeway descends under St. Francis Avenue and also two railroad bridges that carry the track over the freeway lanes, but are hidden by the freeway structure. Even with this bridging, tracks for both subdivisions cross St. Francis Avenue at grade.

Track Class and Signals

National Avenue Industrial Lead
- FRA excepted track, maximum speed 10 mph
- No signals
-

Milwaukee Subdivision
- FRA Class 3, but speed restricted for curved track
-

Kenosha Subdivision
- FRA Class 2, maximum speed 25 mph
- No signals

Crossings and Bridges

- Three at-grade crossings
- Two railroad bridges over I-794 (hidden)

Railroad Right of Way and Curvature

The right of way is a narrow 30 feet south of MP 80.5 and next to I-794, then widens to 50-60 feet near Howard Avenue, and 100 feet south of Howard Avenue. Track curvature and a turnout from the Kenosha Subdivision into the junction may require speed reductions.

Issues and Considerations

A I-794 / Lake Parkway

B UP National Avenue Industrial Lead

C UP Milwaukee Subdivision mainline

D Shared single track segment, 700 feet

E St. Francis control point, MP 79.9

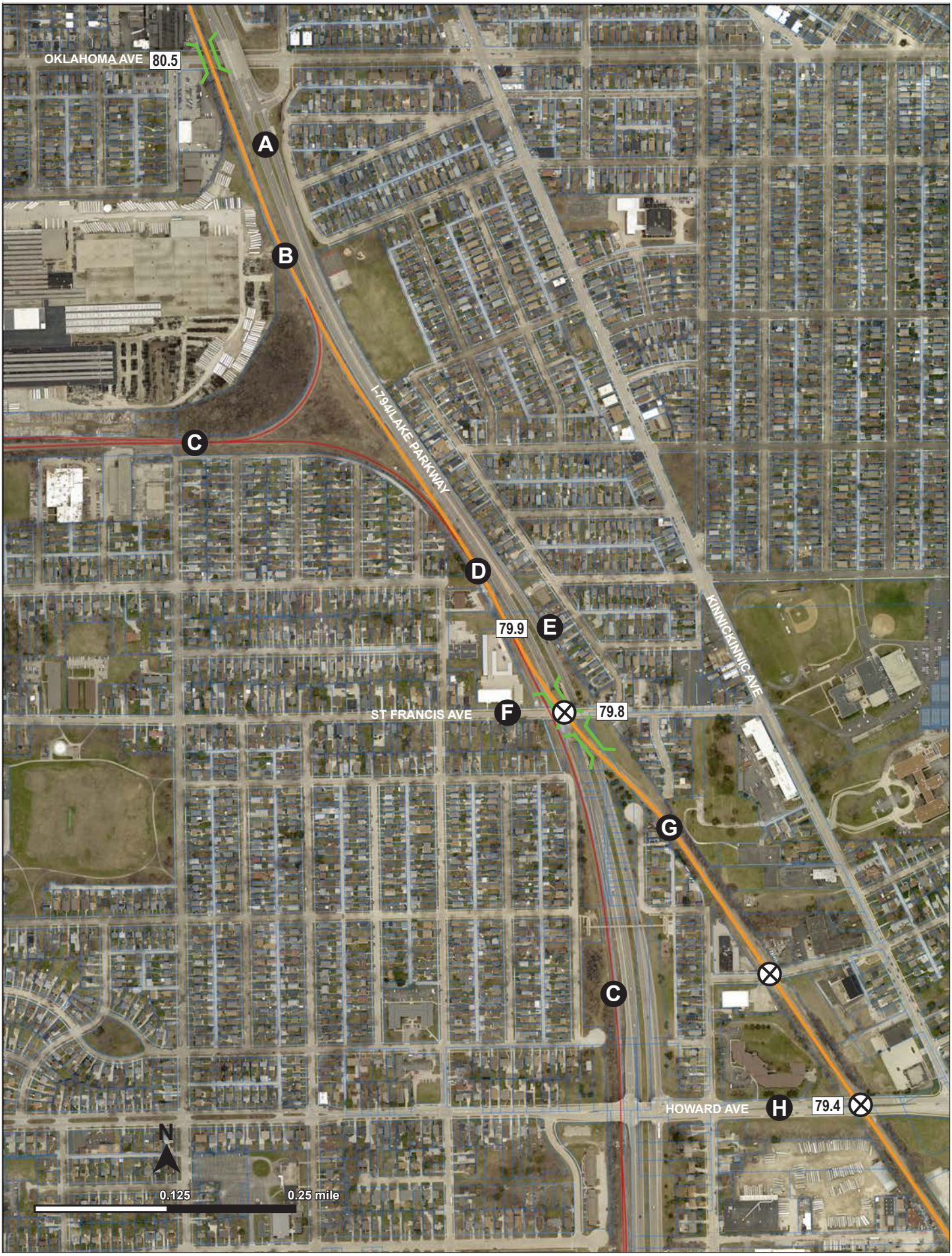
F Freeway underpass, UP bridges and at-grade crossings of St. Francis Avenue

G UP Kenosha Subdivision

H Howard Avenue

The current track configuration requires trains on the Kenosha Subdivision to merge onto the Milwaukee Subdivision for roughly 700 feet, then onto the National Avenue Industrial Lead. Conflicts between MARK Rail trains and freight trains are likely. Long freight trains take time to clear this track, which would mean MARK Rail trains would have to wait. A reconfiguration to a second track to allow MARK Rail to connect directly to the industrial lead may be useful, which could be designed to eliminate turnouts and speed reductions. The interlocking configuration, which controls the use of track to avoid conflicts, may also need reconfiguration.

Looking north to the junction of the UP Kenosha Subdivision (right) at the UP Milwaukee Subdivision (left) from St. Francis Avenue fencing around the I-794 underpass is immediately adjacent to the track.


OKLAHOMA AVE
80.5
A
B
C
I-794/LAKE PARKWAY
D
79.9
E
KINNICKINNIC AVE
ST FRANCIS AVE
F
79.8
G
C
HOWARD AVE
H
79.4
N
0.125
0.25 mile

UP Kenosha Subdivision: Milepost 78.1 to 77.1

Cudahy

Track Segments and Operations

The track through Cudahy includes a segment with multiple tracks, classified as “other than main” track used for storage and spurs to industrial sites. North of Layton Avenue the track appears to be in the center of the right of way, with abandoned and disconnected spurs to the west side of the right of way. Starting just south of MP 78.0 (Barnard Avenue) additional track extends to MP 77.1 near the south end of Whitenall Avenue. A number of spurs serve factories to both sides of the right of way. A WATCO train maintenance facility is connected to the other track west of the mainline.

Track Class and Signals

- FRA Class 2, maximum speed 25 mph
- No signals

Crossings and Bridges

- Three at-grade crossings, including a private road interior to ATI/Ladish property at MP 77.5
- No railroad bridges

Railroad Right of Way and Curves

The right of way is wide: 100 feet at MP 78.1 (Layton Avenue), widening further in the multiple track area, which is 165-300 feet near MP 77.5, then narrowing to 80 feet at the south end. A wide radius curve south of Layton Avenue does not present speed reduction; however, the number of other tracks and spurs may impact speeds in the yard.

Issues and Considerations

Impacts to traffic movement on Layton Avenue may require further consideration. Traffic control signals on Layton Avenue are located at the intersection with Sweet Applewood Lane west of the tracks and Packard Avenue east of the tracks. Traffic and potential left turn movements across Layton Avenue are a consideration for station location and site planning.

A Historic C&NW depot

B Layton Avenue

C Smithfield meat packing plant

D WATCO facility

E ATI Forged Products

F Cudahy multiple track area

The former C&NW Cudahy depot opened for service in 1893. It is a designated Milwaukee County historic landmark and is on the National Register of Historic Places. Demolition was considered in the 1970s, spurring formation of the Cudahy Historical Society, which now owns the building and property. Re-activating the site for a MARK Rail station can be considered, but the current configuration of Kinnickinnic Avenue (the alignment and one-way traffic) could make access difficult.


A
KK AVE
78.1
LAYTON AVE
B
SWEET APPLEWOOD LANE
PACKARD AVE
BARNARD AVE
78.0
C
D
77.5
E
F
WHITNALL AVE
N
0.125
0.25 mile
77.1

UP Kenosha Subdivision: Milepost 76.6 to 75.7

Cudahy and South Milwaukee

Track Segments and Operations

The mainline in southern Cudahy to South Milwaukee is to the west side of the right of way. A 1.2-mile long siding is to the east side of the right of way from MP 76.8 to MP 75.8. Freight trains were observed stored on this siding track.

Track Class and Signals

- FRA Class 2, maximum speed 25 mph
- No signals

Crossings and Bridges

- One at-grade crossing at Ramsey Avenue
- Two railroad bridges

A railroad bridge passes over the four-lane divided CTH ZZ/College Avenue. The bridge appears to be in good condition and may have been constructed as part of a College Avenue reconstruction project. A bridge with stone-arch facade passes over Oak Creek Parkway and the creek; clearance appears to be low.

Railroad Right of Way and Curves

The right of way is a consistent, wide 100 feet. Track is tangent with only a slight curve south of Ramsey Avenue.

Issues and Considerations

Utilization of the siding for freight storage indicates a freight customer in the area. A spur is located at the start of the siding north of MP 75.7. The stone arch bridge over Oak Creek Parkway may need repair.

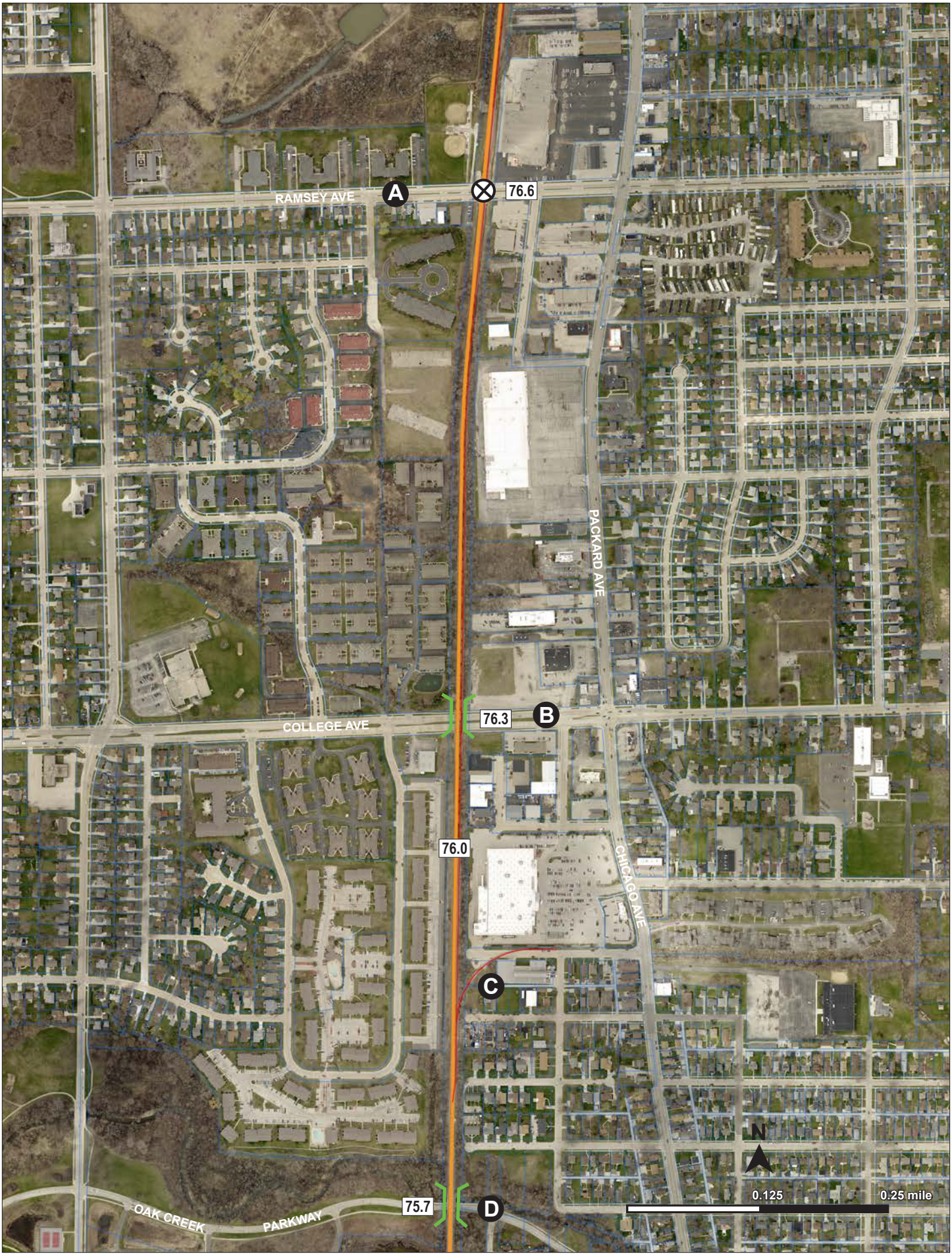
A Ramsey Avenue

B UP bridge over College Avenue

C Siding and spur

D UP stone arch bridge over Oak Creek Parkway

Above, photograph, from April 2024, of the the two-span bridge over College Avenue shows freight cars with cargo stored on a siding track. The highway grade is depressed to pass under the track. Below, September 2025 photograph of stone arch faced bridge over Oak Creek Parkway.


RAMSEY AVE
A
76.6
PACKARD AVE
COLLEGE AVE
76.3
B
76.0
CHICAGO AVE
C
N
0.125
0.25 mile
OAK CREEK
PARKWAY
75.7
D

UP Kenosha Subdivision: Milepost 75.6 to 74.6

South Milwaukee

Track Segments and Operations

In this segment through South Milwaukee the main track is to the west side of the right of way. A single spur starts north of Milwaukee Avenue and extends roughly 3,400 feet past Rawson Avenue to the north. A number of tracks branch off this spur to serve the Caterpillar factory and other industrial plants. The historic C&NW South Milwaukee Depot is located just south of Milwaukee Avenue. It is utilized and maintained by a private owner for a local business.

Track Class and Signals

- FRA Class 2, maximum speed 25 mph
- No signals

Crossings and Bridges

- Two at-grade crossings
- One railroad bridge

The railroad bridge over Highway 32/Marquette Avenue shows space for four tracks in aerial photographs, with the single remaining main track occupying the position west of center. The below-grade highway passage under the bridge is two lanes, with a sidewalk on the north side only. A roadway sign indicates a low 12-foot clearance.

Railroad Right of Way and Curves

The railroad right of way is 100 feet, widening to 125 feet for a short distance south of MP 74.6 then narrowing again. The track is straight except for a slight curve at MP 75.1.

Issues and Considerations

The former C&NW depot location remains a site worth considering for a restored station operation. While the depot is on private property, the City of South Milwaukee owns adjacent parcels, including Bucyrus Commons and parking. A comprehensive planning process for the area between Milwaukee Avenue and Marquette Avenue could consider station site options.

A Caterpillar Global Mining plant, spurs

B Former Bucyrus headquarters, spurs

C Former C&NW depot and Bucyrus Commons

D UP bridge, Highway 32/Marquette Avenue underpass

The UP railroad bridge over Marquette Avenue (above)

The historic C&NW South Milwaukee depot as photographed in September 2023. A local business operates out of the building.


75.6
A
CHICAGO AVE
RAWSON AVE
75.1
B
10TH AVE
MILWAUKEE AVE
74.7
C
MARQUETTE AVE
D
74.6
N
0.125
0.25 mile

UP Kenosha Subdivision: Milepost 73.8 to 70.4

Oak Creek

Track Segments and Operations

The four-mile stretch through the southern part of the City of Oak Creek is mostly single-track to the county line. (Note the scale of the aerial photo is "zoomed out" given the relatively few railroad features.) The only other track in this segment is a spur track starting at MP 72.4 north of American Avenue, continuing to MP 73.3, and terminating short of Puetz Road without connecting back to the main. Aerial photographs show additional spurs, some apparently abandoned, in the area of Depot Road. These spurs may have led to industrial plants along the lake bluff. The name Depot Road and other records indicate there was a C&NW Oak Creek station at MP 72.6.

Track Class and Signals

- FRA Class 2, maximum speed 25 mph
- No signals

Crossings and Bridges

- Seven at-grade crossings
- One railroad bridge

The at-grade crossing at Fitzsimmons Road is partially blocked immediately west of the track, apparently to stop vehicle passage but allow pedestrians to cross the track to a dirt road trail. A similar crossing is at MP 70.4 and Elm Road where a fenced gateway allows pedestrian passage across the track.

The one railroad bridge in this segment is over American Avenue at MP 72.4. The railroad bridge shows two tracks in aerial photographs, with the main track to the west part and a spur to the east.

Railroad Right of Way and Curves

While the bridge over American Avenue shows space for only two tracks, the parcel width is 100 feet, widening to 250 feet north of the bridge and 135 feet south of the bridge. This additional right of way was likely used for the spur tracks and depot in this area. The rest of the segment is 100 feet. There is only a slight curve a near MP 72.0.

A Former Oak Creek station

B UP bridge over American Avenue

C Former M-R-K interuban right of way, now a recreation trail and utility corridor

Issues and Considerations

The American Avenue roadway underpass is very narrow, and—given the hundreds of new housing units on the lake bluff—may present issues for local traffic. Previous KRM studies identified potential station sites at the south end of Fifth Avenue.

American Avenue has a narrow passage, without sidewalks, under the UP bridge.


COLUMBIA AVE
73.8
PUETZ RD
73.3
N
0.25
0.5 mile
72.6
A
DEPOT RD
AMERICAN AVE
72.4
B
C
5TH AVE
CHICAGO AVE
72.0
HWY 100
FITZSIMMONS RD
71.4
OAKWOOD RD
71.0
CHICAGO AVE
ELM RD
70.4

UP Kenosha Subdivision: Milepost 70.3 to MP 66.2

Oak Creek Power Plant and Caledonia

Track Segments and Operations

This section serves a major freight customer for UP, which delivers coal to the We Energies Oak Creek Power Plant. There is a single main track, which is on the western part of the right of way. A long passing siding extends from the Oak Creek Power Plant to just north of Five Mile Road (MP 66.7). For much of this stretch there are actually three tracks, and additional spurs leading into and circling through the power plant. This multiple-track segment is signaled at both ends to control train movements. Some of these tracks are used to store coal trains prior to delivery.

A We Energies Oak Creek Power Plant

B Seven Mile Road

C Six Mile Road, newer UP bridge

D Douglas Avenue/Hwy 32, UP bridge

Track Class and Signals

- FRA Class 2, maximum speed 25 mph
- Signaled track at both ends of multiple-track segment
- Unsignaled single track segments

Crossings and Bridges

- One at-grade crossing
- Two railroad bridges

The lower intensity of development in northern Racine County means fewer roadways for the track to cross. The 1998 KRM report lists Seven Mile Road and Six Mile Road as at-grade crossings. Elimination of these crossings in subsequent years, by closing the crossing at Seven Mile Road and grade separating the track over Six Mile Road, shows that major investments were made to improve the corridor. The Six Mile Road bridge has three tracks on it.

Railroad Right of Way and Curves

The right of way expands to 150 feet west of the power plant property, then is back to a consistent 100 feet south of the power plant. There are no curves in this segment.

Coal freight cars on a siding east of the main track (March 2025) at the eastern terminus of Seven Mile Road. The former at-grade crossing of Seven Mile Road was closed since previous analysis in 1998. The vapor exhaust stack shows the position of the power plant to the east.

The angle of the two-span railroad bridge over Douglas Avenue in Caledonia makes it one of the longer bridges in the MARK Rail corridor north of Kenosha.


70.3
A
DOUGLAS AVE
SEVEN MILE RD
B
68.8
N
0.25
0.5 mile
SIX MILE RD
C
67.7
66.7
FIVE MILE RD
DOUGLAS AVE
66.2
D

UP Kenosha Subdivision: Milepost 66.0 to 62.3

Caledonia and Racine North Side

Track Segments and Operations

The segment of track from Caledonia into the northern part of the City of Racine is single-track, with only a short spur (Ives MP 65) to serve quarries immediately north of Three Mile Road. Along with coal trains, rock trains are one of the key rail customers still served on this part of the Kenosha Subdivision. The single track appears to be in the middle of the railbed and right of way at MP 64.7 then shifts to the eastern part of the right of way near MP 63.0

Track Class and Signals

- FRA Class 2, maximum speed 25 mph
- No signals

Crossings and Bridges

- Eight at-grade crossings
- One railroad bridge

Newspaper reports from 2011 (Patch.com) state that the Village of Caledonia managed a grade-separation project at Four Mile Road to eliminate traffic backups related to coal trains. We Energies is paying for the $8 million project (and presumably the one at Six Mile Road) to address impacts from longer coal trains after the utility made a $2 billion expansion of the power plant in Oak Creek.

The number of at-grade crossings increases dramatically within the City of Racine, specifically south of the airport and an adjacent light industrial area, starting with the crossing at Layard Avenue (MP 63.1).

Railroad Right of Way and Curves

The right of way starts at 90 feet at Three Mile Road (MP 64.7) then narrows and widens in the city, on parcel widths from 90 to 60 feet. The track also moves from a central position in the right of way to the east, likely into the position of the old southbound track when there were three tracks. The primarily tangent track shifts from a diagonal alignment to more directly north-south, with quick curves at Three Mile Road and again at around MP 62.8 north of High Street. These curves will not limit speeds.

Issues and Considerations

The number of street crossings, and the short distance between them, will impact traffic, bicycle, and pedestrian movement in north Racine. Additional measures to ensure safety can be considered in concert with any improvements to the surface of the crossings.

A Four Mile Road

B Quarries, freight service lead

C Three Mile Road

D Goold Road

E High Street, City-owned property, potential MARK Rail service facility

The railroad bridge over Four Mile Road (left) in the Village of Caledonia was funded and constructed in 2011-2012 to eliminate coal trains blocking traffic movement.

At-grade crossing in Racine at Goold Road, looking south


A
65.6
FOUR MILE RD
DOUGLAS AVE
B
C
64.7
THREE MILE RD
63.8
SOUTH ST
LAYARD AVE
63.1
GOOLD ST
63.0
D
HIGH ST
62.6
E
62.3
DOUGLAS AVE
N
0 0.25 0.5 mile

UP Kenosha Subdivision: Milepost 62.3 to 61.4

Racine North Side and Downtown

Track Segments and Operations

The alignment is northwest of and along the western edge of downtown Racine with a single track and no sidings or spurs. The track position to the east of the right of way indicates that it is the remnant of the southbound track from the period of passenger service. Long coal trains pass through the city, but there are no other freight customers or track spurs found in this segment.

Track Class and Signals

- FRA Class 2, maximum speed 25 mph
- No signalization

Crossings and Bridges

- Five at-grade crossings
- Three railroad bridges

The series of at-grade crossings of local streets continues at every block from Albert Street (MP 62.3) to State Street (MP 61.9), for a total of 11 crossings in 1.2 miles from Layard Avenue. The bridges at Mound Avenue and 6th Street sit on the north end of a fill section constructed to lift the track over the Root River. The fill elevation ends north of Mound Street as the topography flattens and the railbed is brought down to grade. The Root River bridge is the largest railroad structure in the MARK Rail primary study corridor. It is a four span, movable bridge dating to the time when the Root River was maintained for commercial shipping. The river is no longer maintained for commercial navigation, so the bridge is not required to be able to open.

Railroad Right of Way and Curves

The right of way varies. It is 60 feet at MP 62.3, then widens in a section with curved track north of State Street. The parcel owned by UP is only 50 feet wide immediately south of State Street, but parcels to the east and west are owned by the City of Racine. The two parcels to the west of UP property, where the historic C&NW depot west platform canopy remains, provide approximately 50 feet of space to the adjacent parcels. The City of Racine Community Development Authority owns a parcel and a building at 1423 State Street. The UP parcel narrows to just 54 feet north of Mound Street, then widens again to 130 feet at Mound Street. The UP parcels is 70 feet wide on the fill between Mound Street and 6th Street. The bridge approach is 130 feet north of the river and 100 feet to the south.

The only curved track in this segment is immediately north of State Street, where the alignment shifts slightly from north-south, to a diagonal that aligns the corridor to the southeast. This slight change means the track is further west of the downtown at State Street than at 6th Street.

Issues and Considerations

The number of street crossings will impact vehicular traffic movement.

There are no quiet zones in Racine listed in the FRA Quiet Zone Locations by City and State report (2022).

The condition of the bridges at Mound Street and 6th Street will require repair or replacement for MARK Rail. See the next page for discussion of the historic C&NW depot and these bridges.

A City-owned property, potential MARK Rail service facility

B State Street

C Racine Transit Center and historic C&NW depot

D 6th Street and Mound Street railroad bridges

E UP Root River bridge

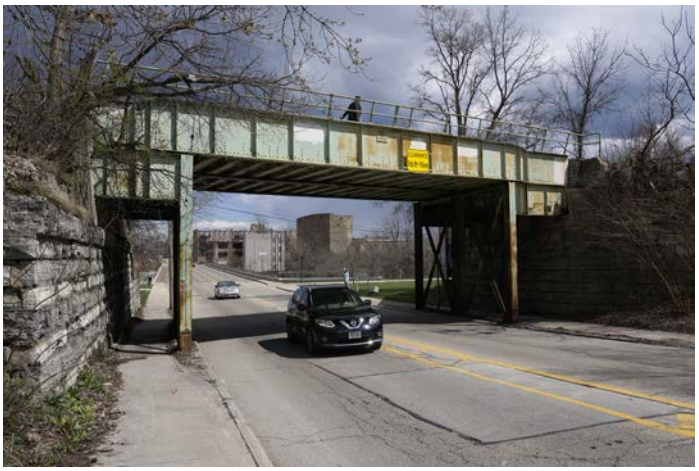

A
ALBERT ST
62.3
DOUGLAS AVE
61.9
B
STATE ST
C
Root River
MARQUETTE ST
MOUND ST
WATER ST
D
61.5
6TH ST
61.4
E
N
0.125
0.25 mile

Historic Racine C&NW Depot and Downtown Bridges

Photographs taken in September 2023 show the Racine C&NW depot under renovation funded by the City of Racine. The work included a new roof, brick tuck pointing, and interior restoration. The former station is designated a historic structure by the City of Racine and in the National Register of Historic Places. Designed by Frost and Granger architects for the C&NW, the depot opened in 1901. It is now owned by the City and integrated into the Racine Transit Center which includes bus bays and shelters adjacent to the depot.

Reuse of the historic depot is one option for a new Racine MARK Rail station. New platforms would need to be constructed and they would need to meet current ADA and clearance requirements.

Photographs from April 2024 show the bridge over the Root River near downtown Racine and bridges over 6th Street and Mound Street.



The condition of the 6th Street and Mound Street bridges will require improvement or replacement for the MARK Rail project. Signage on the 6th Street overpass indicates 16 feet 11 inches of clearance and 13 feet 3 inches under Mound Street.

UP Kenosha Subdivision: Milepost 61.3 to 60.2

Racine Uptown and South Side

Track Segments and Operations

There is a single track on the eastern part of the right of way from the river bridge to MP 60.6, indicating this is the southbound track remaining from the passenger rail era. The bridge over 9th Street has enough space for two tracks, but may be in need of repair. Sidings and spurs start at MP 60.3 and continue south.

There is a station control point (listed as "Racine") at MP 60.3. The current UP timetable lists speed restrictions down to 10 mph in this area due to poor track conditions. Additional tracks begin at MP 60.3 and continue south of De Koven Avenue (see next page).

The remnants of an abandoned Milwaukee Road (originally the Racine & Mississippi Railroad) corridor are evident on the aerial photograph in this location. The C&NW constructed Racine Junction station (see historical timetables in Chapter Two) where its track crossed and connected to the RJ&M. This allowed transfers from the north-south C&NW line to the line going west.

Track Class and Signals

- FRA Class 2, maximum speed 25 mph
- No signals

Crossings and Bridges

- Seven at-grade crossings
- One railroad bridge

The railbed is on fill from the river bridge to a bridge over 9th Street, then brought back down to grade at 11th Street (MP 61.1). There are five at-grade crossings from 11th Street to 14th Street, including a very sharp angled crossing of four-lane Washington Avenue (MP 60.9), which is also Highway 20.

Railroad Right of Way and Curves

The right of way is 100 feet north of 11th Street and varies from 55 to 95 feet between 13th Street and De Koven Avenue. The track has a gentle reverse curvature from the river bridge alignment, bending slightly to the west and into a north-south alignment south of the former junction. These curves do not present speed issues, but as noted above, the turnouts and sidings that start north of De Koven Avenue are speed restricted.

Issues and Considerations

The number of street crossings will impact traffic movement, and the angled crossing at Washington Avenue is a specific consideration.

A Root River Bridge

B Multiple at-grade crossings, including angled crossing of Washington Avenue

C Racine Uptown commercial area

D SC Johnson headquarters

E Former Racine Junction depot and former Milwaukee Road alignment into Racine

F Modine Manufacturing Company

Photo from Junction Avenue shows the proximity of MARK Rail track to SC Johnson's office tower a quarter mile to the east.

A coal train crosses 14th Street less that block from Washington Avenue and Racine's Uptown area.


A
Root River
9TH ST
61.3
11TH ST
61.1
WASHINGTON ST
MEMORIAL DR
B
60.9
C
14TH ST
JUNCTION AVE
D
16TH ST
60.6
E
E
60.3
F
0.125
0.25 mile
DE KOVEN AVE
60.2

UP Kenosha Subdivision: Milepost 60.3 to 59.5

Racine South Side and Mount Pleasant

Track Segments and Operations

There is a single mainline in the segment from MP 60.3 north of De Koven Avenue to Durand Avenue, but the segment is one of the more complicated in terms of sidings and spurs, which are located to the east and west of the main. The spurs serve industrial land uses that flank the rail corridor.

A De Koven Avenue

B Area with multiple tracks

C Durand Avenue Bridge

Track Class and Signals

- FRA Class 2, maximum speed 25 mph
- No signals

Crossings and Bridges

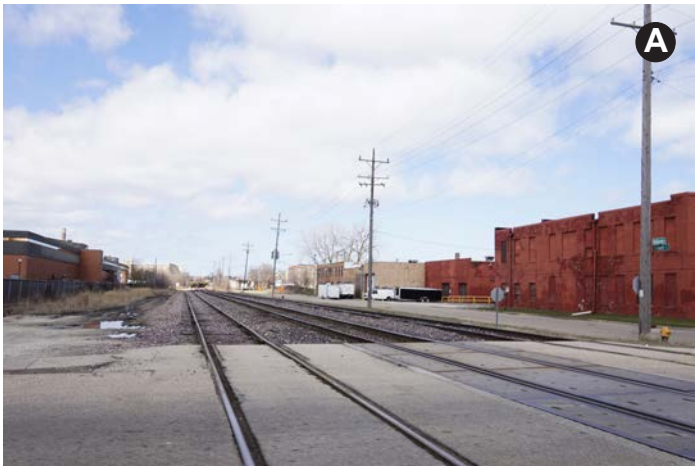
- One at-grade crossing
- One railroad bridge

Railroad Right of Way and Curves

The right of way is approximately 93 feet north of De Koven Avenue where three tracks are present at the crossing. The right of way widens to 200 feet south of De Koven Avenue in an area with multiple tracks. It narrows to 55 feet, but widens again to create space for the curve prior to the Durand Avenue bridge. The bridge itself has a 60-foot-wide deck, currently with two tracks on it and space for another track. South of the Durand Avenue bridge (MP 59.5) the right of way is 85 feet.

Issues and Considerations

The current utilization and condition of sidings and spurs and the number of freight customers to industrial land uses in the area could receive further study.



Three tracks cross De Koven Avenue, including the UP mainline in the middle.

The UP bridge over Durand Avenue presents large concrete abutments and walls just west of the intersection with Highway 32.


60.3
60.2
A
DE KOVEN AVE
RACINE DR
B
MEMORIAL DR
DURAND AVE
C
59.5
HWY 32
N
0.125
0.25 mile

UP Kenosha Subdivision: Milepost 58.4 to 55.1

Mount Pleasant and Somers

Track Segments and Operations

A siding track extends from the multiple track area to the north with individual spurs to two new industrial plants west of the railroad corridor. The industrial use in Racine is an aluminum foundry at the city limit and the spur to the property immediately to the south in Mount Pleasant is to a factory that manufactures railbed and track maintenance equipment. These spurs are to the west of the siding track (three tracks in total), with the siding ending before Chickory Road (MP 58.4). A single track continues to the south.

Track Class and Signals

- FRA Class 2, maximum speed 25 mph
- No signals

Crossings and Bridges

- Five at-grade crossings
- One railroad bridge

The track is positioned immediately west of Highway 32 / Sheridan Road, from Chickory Road to Highway 195 / 1st Street; such that the track crossing is within the intersections of these roadways. Both Chickory Road and 1st Street have overhead warning lights at Highway 32 in addition to flashing lights and gates. The southbound and northbound lanes of Highway 32 have separate left turn lanes at these intersections that provide space to hold vehicles when the railroad gates are down. MARK Rail trains would be shorter than the existing coal trains, meaning the gates would not be down as long, but potentially more frequently.

There is also an at-grade crossing at Hansche Road (MP 58.2) with only flashing lights, but no gate. Hansche Road only connects to the southbound, western side of the divided Highway 32, making it right in / right out only. The road serves about a dozen exurban properties to the south of this crossing and it does not connect back to the highway and is therefore a dead end. South of 1st Street the distance between the track and Highway 32 increases.

A railroad bridge crosses over the Pike River at MP 55.1 just south of 12th Street. The bridge has five spans and two decks and the track is on the eastern deck; the western deck does not appear to have any ties or track.

Railroad Right of Way and Curves

The right of way is 100 feet at Chickory Road, then 80 feet at the county line. The railbed is in the middle of the right of way and the track appears to be in the middle of the railbed until the approach to the Pike River Bridge, where it shifts to the east. Right of way is a consistent 100 feet in Kenosha County to the Pike River bridge. The track is all tangent, without curves or any sidings or turnouts south of MP 58.4.

Issues and Considerations

A review of the intersection design and safety protections where county highways and local roads meet Highway 32 could be conducted in regard to more frequent and faster moving MARK Rail trains.

Condition of the Pike River bridge requires further investigation.

A Spurs to two industrial properties

B At-grade crossing at Hansche Road
(note : map crossing symbol is placed west of roadway so crossing is visible)

C Pike River Bridge

The UP bridge over the Pike River at MP 55.1, south of 12th Street in Kenosha County, requires further investigation. (Aerial photo from Kenosha County GIS)


A
58.4
CHICKORY RD
B
58.2
HANSCHE RD
HWY 32
57.4
HIGHWAY 195 / 1ST ST
56.4
COUNTY A / 7TH ST
Pike River
SHERIDAN RD
N
0.25
0.5 mile
12TH ST
55.3
COUNTY E
55.1
C

UP Kenosha Subdivision: Milepost 54.2 to MP 53.6

Kenosha North Side

Track Segments and Operations

A single track runs through the north side of Kenosha. The alignment is on a low bluff west of the Pike River and Sheridan Road, close to the Lake Michigan shore. It is likely that the southbound track remains in place from the passenger era when there were two tracks. There are no sidings or spurs in this segment.

Track Class and Signals

- FRA Class 2, maximum speed 25 mph
- No signals

Crossings and Bridges

- Two at-grade crossings
- No railroad bridges

The at-grade crossing of 24th Street just west of its intersection with Sheridan Road has only 40 feet between the highway lane and the track.

Railroad Right of Way and Curves

The right of way is 85 feet. The railbed appears to be in the middle of the right of way and the track is on the right side. There is a wide reverse curve that changes the southwest alignment (that parallels the lakeshore and Highway 32 to the north) to a direct north-south alignment into downtown Kenosha. These curves will not impact train speed.

Issues and Considerations

A review of the intersection and highway design at 24th Street and Sheridan Road may be helpful to ensure there is enough roadway space (for example a turn lane) to store vehicles waiting to cross the tracks.

A Birch Road

B Carthage College

C Sheridan Road at 24th Street

D Carthage College off-campus parking with shuttle

Track south of Birch Road is located to the right side of the railbed, indicating it was the southbound track during the passenger service era. Note that the relatively minor curve shown on the map looks more substantial on the ground.


15TH AVE
BIRCH RD
HWY 32
A
54.2
B
SHERIDAN RD
Pike River
24TH ST
53.6
C
14TH AVE
HWY 32
D
N
0.125
0.25 mile

UP Kenosha Subdivision: Mileposts 53.2 to 52.5

Kenosha North Side

Track Segments and Operations

South of 35th Street (MP 52.9) the railbed rises on a fill embankment and stays elevated to the Kenosha Metra station, which is the end of the MARK Rail primary study corridor. The wide right of way, including on bridges, indicates the scale of the former C&NW operation and the former industrial uses in downtown Kenosha. Currently there is only a single main track, but a series of sidings start in this segment at approximately MP 52.8, south of 35th Street.

A 35th Street, at-grade crossing

B Railroad fill embankment, north end

C 38th Street pedestrian underpass

Track Class and Signals

- FRA Class 2, maximum speed 25 mph
- No signals

Crossings and Bridges

- Two at-grade crossings
- Three railroad bridges

The final two at-grade crossings at the south end of the study corridor are at 31st Street and 35th Street. The railroad embankment interrupts the street grid; however, a road runs immediately west of the rail corridor and a pedestrian underpass is provided at 38th Street in the form of a concrete box bridge.

The bridge at 38th Street carries two tracks. The bridges at 40th Street, Washington Street, and 43rd Street have at least three tracks (and some additional abandoned track).

Railroad Right of Way and Curves

The right of way varies from 70 to 130 feet. There are no curves in the track.

Issues and Considerations

No anticipated issues for MARK Rail

A Carthage College parking lot shuttle crosses the track at 35th Street. The hump over the track shows that the railbed is elevated and then rises higher to the south of 35th Street so that the track is above street level and all other crossings to the Metra station are on bridges.


31ST ST
53.2
SHERIDAN RD
HWY 32
Pike River
35TH ST
A
52.9
B
HWY 32
52.8
38TH ST
C
SHERIDAN RD
52.6
WASHINGTON RD
43RD ST
52.5
N
0.125
0.25 mile

UP Kenosha Subdivision: Milepost 52.0 to 51.6

Kenosha Metra Station and Downtown

Track Segments and Operations

The track entering downtown Kenosha and the Metra station are elevated above city streets on an embankment. There are two main tracks at the station with a 300-foot long center platform between them. This track is FRA Class 4 up to MP 51.6.

Metra currently uses a three-track facility adjacent to the Kenosha Metra station for the purpose of storing trains overnight. This facility also performs basic servicing functions, including removal of trash and minor repairs. There is room to store three train consists. The lack of additional space requires Metra to park a fourth train consist on the tracks adjacent to the Metra station. The existing facility does not have adequate room for expansion to accommodate additional train consists for MARK Rail service.

A UP Kenosha Subdivision

B Metra three-track facility for overnight storage and cleaning

C Kenosha Metra Station and parking

D UP Farm Subdivision

E Kenosha Streetcar

Track Class and Signalization

- FRA Class 4, maximum passenger train speed 70 mph
- ABS (Automated Block System) and PTC (Positive Train Control) overlay up to MP 51.6

Crossings and Bridges

- No at-grade crossings
- Two railroad bridges north of the Kenosha Metra station

There are five tracks on the bridge over 50th Street and four into the station at 52nd Street.

Railroad Right of Way and Curves

The right of way is 120 feet at MP 51.9 then widens to 200 feet at the station, where it joins with other parcels owned by UP in the railroad wye connecting to the UP Farm Subdivision.

Issues and Considerations

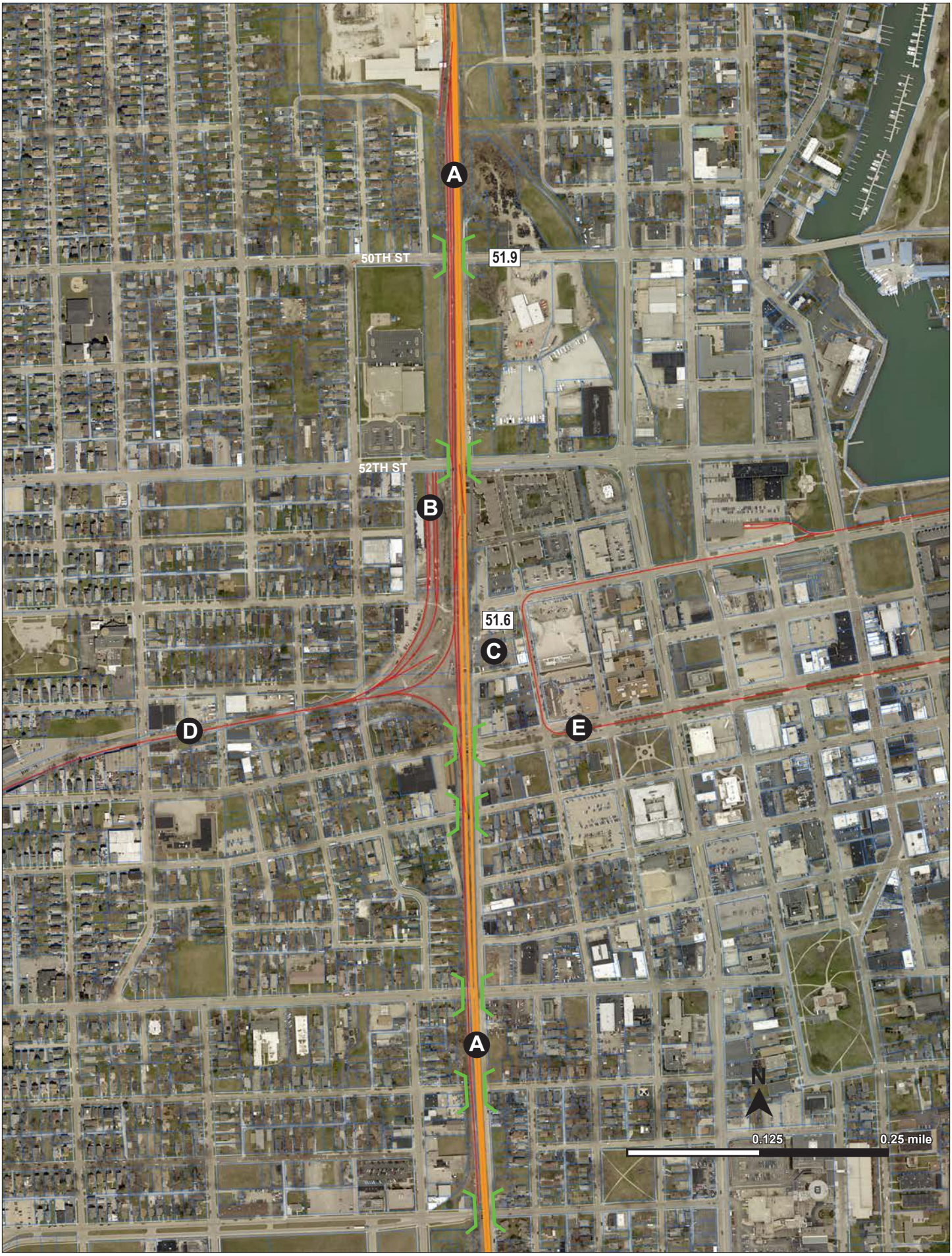
The station is part of the Metra system and is the northern extent of the UP-N line. The existing platform is only 300 feet in length, which is adequate for this terminus station, but there is room for an extension if warranted to serve MARK Rail customers.

The City of Kenosha Redevelopment Authority owns the station building, which it renovated in 2010.

City of Kenosha is investing in a new station lift in 2025.

The front facade of the Kenosha Metra Station showing its 2010 renovation.

Metra signage on the Kenosha elevated platform; four tracks are in the image looking west to the wye.


A
50TH ST
51.9
52TH ST
B
51.6
C
D
E
A
N
0.125
0.25 mile

WISDOT MUSKEGO YARD BYPASS PROJECT

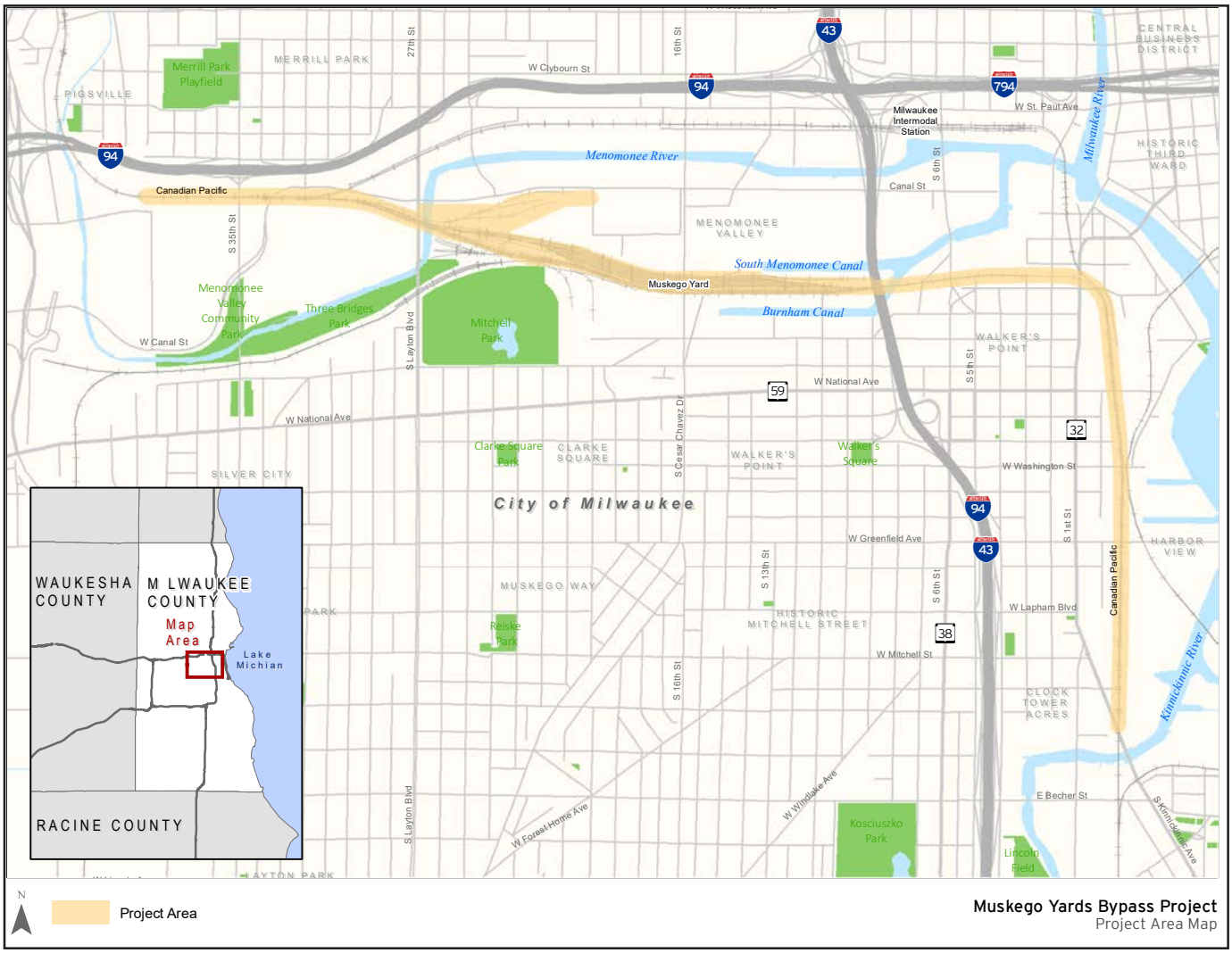
The MARK Rail alignment is in the same rail corridor with WisDOT's Muskego Yard Freight Bypass Project between the proposed junction at Washington Street in Milwaukee at CPKC MP 84.2 and track west to Muskego Yard at Florida Avenue. The Muskego Yard project is mostly funded and in final design. The CPKC tracks at Washington Street, which will be reconstructed for the Muskego Yard Bypass, would be impacted by a new junction with the UP National Avenue Industrial Lead. The rest of the text below is copied from the WisDOT project website, June 2025.

Muskego Yard Freight Rail Bypass Project
Muskego Yard Freight Rail Bypass Project is an improvement project that will update and reconfigure existing rail and yard facilities along the Canadian Pacific Kansas City (CPKC) railroad corridor in Milwaukee.

Purpose/Need
The Muskego Yard Freight Rail Bypass Project is one of the infrastructure projects needed to prepare the corridor for additional round-trips between Milwaukee and Chicago by the Amtrak Hiawatha Service. The Hiawatha is one of the busiest Amtrak routes in the nation and the busiest routes in the Midwest, setting a record in 2019 of more than 880,000 passengers. This service is critical to the economic growth in the region. The Hiawatha also provides connections to seven other Midwest regional state-supported intercity passenger routes.

The project will improve signal, track and structure upgrades resulting in:

- Improved freight and passenger rail operations by increasing yard capacity and the number of dedicated through tracks
- Improved safety by removing the majority of freight traffic through the Milwaukee Intermodal Station (MIS)
- Improved safety and fewer delays for cars, bus, bicycle and pedestrian traffic by routing freight rail traffic to grade separated crossings



Muskego Yards Bypass Project
Project Area Map

- Decreased cost by improving travel times for freight trains
- Facilitates additional passenger rail trains by freeing up rail capacity through MIS

Overview

This project will:

- Create a new double-track mainline through Muskego yard that will become the primary route for freight traffic traveling though Milwaukee
- Install a Centralized Traffic Control (CTC) system to allow signals to automatically change in response to track occupancy and remote control.
- Rehabilitate the 100+ year-old structure across Burnham Canal and the Menomonee Valley River to accommodate higher loading capacity and speed.

Project location

The project is in the Menomonee Valley, south of I-94 and east of I-94/I-43. The project limits begin west of Muskego Yard at milepost (MP) 88.4 at the Grand Avenue railroad control point (CP Grand) on the Watertown Subdivision and end east of Muskego Yard at MP 83.4 at the Kinnickinnic River Bridge railroad control point (CP KK Bridge) on the Chicago & Milwaukee Subdivision.

Right of way needs

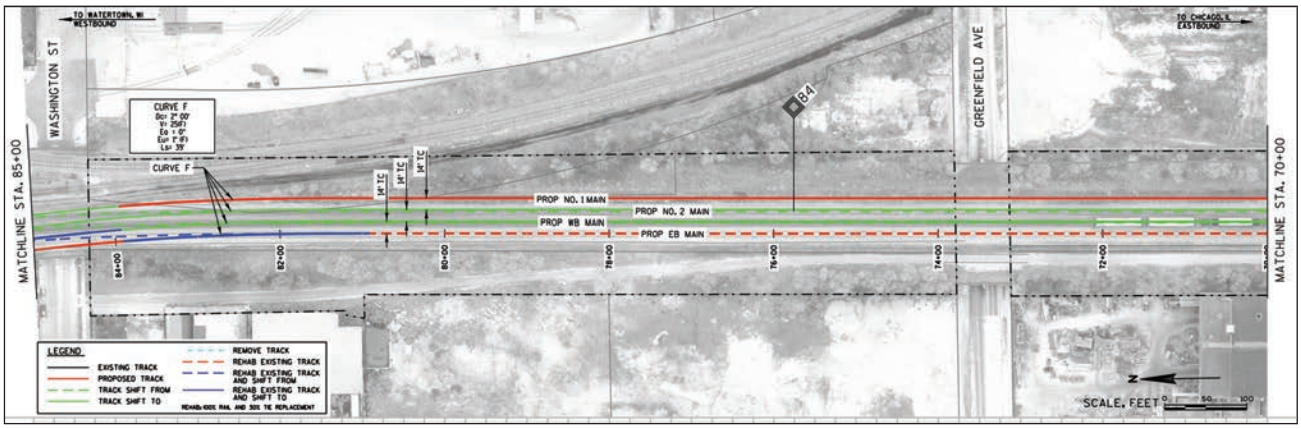
Limited right of way purchases are anticipated for this project along the CPKC property. Property owners will be contacted, if needed.

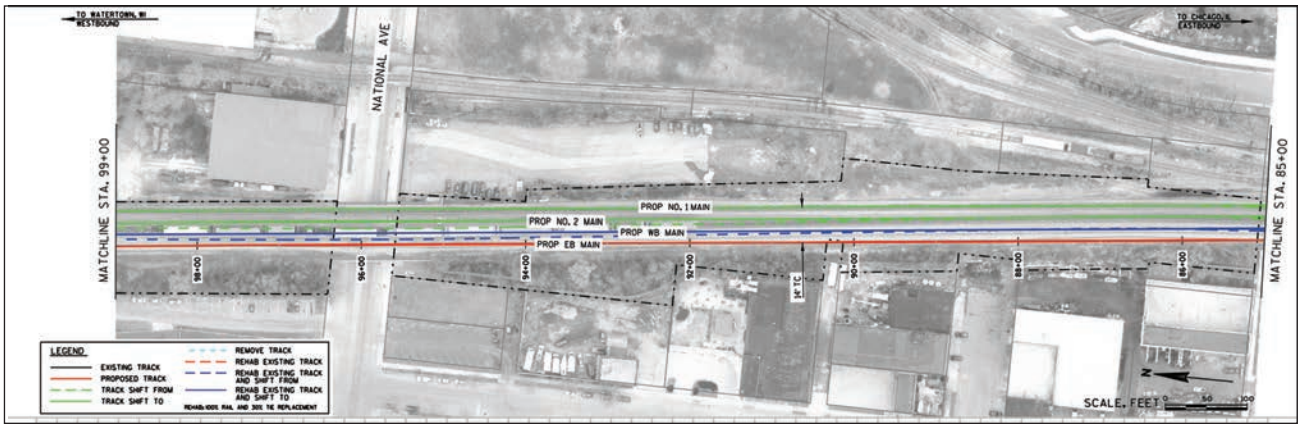
Schedule

- Environmental clearance and preliminary engineering completed June 2023
- Final design - TBD (Expected 2026 - dependent on funding)
- Construction - TBD (Expected 2028 - dependent on funding)
-

The project is currently securing funding for final design and construction.

Images below are from the “Preliminary Plan of Proposed Improvement Canadian Pacific Railway Muskego Yard Bypass” WisDOT, December 2, 2024, showing the proposed improvement in the segment where a connection would be made to the UP track, but this connection is not currently part of the WisDOT project or this drawing.





GLOSSARY OF RAILROAD TERMS

Alignment
The position of the track in space, both in terms of its location in the landscape and the way the track moves through space in three dimensions, referred to as its horizontal and vertical alignment. Changes in horizontal alignment of the track happen at curves, which vary in sharpness expressed as degrees of curvature, while changes in vertical alignment describe the lay of the land, whether it is flat or rising or falling in grade (see Curves and Grade below.)

Bridges
Railroad bridges carry track over roadways, waterways, or changes in elevation (for example a ravine). Railroad bridges are private property owned and maintained by the railroad. Publicly-owned street or highway bridges carry vehicles over railroad tracks. Railroad bridges come in a variety of types, typically described by the number of spans between vertical columns or supports. Railroad bridges can be fixed or movable. Movable bridges move the track structure to allow passage of boats and ships along a navigable waterway; types of movable bridges include swing bridges, lift bridges, and bascule lift bridges.

Curves and tangent track
Trains can operate at higher speeds on straight track (also called tangent track), but typically need to slow down for curves to keep from derailing. Curves are described as degrees and seconds based on the radius of a 360-degree circle. Curves rarely exceed single digits on tracks used for freight, but some curves can be in the 12 to 18 degree range, in a yard or station where trains move slowly. Curves can be superelevated (or banked like on raceway) to allow for faster speed trains to lean into the curve. Typically, superelevation—lifting one rail higher on the outside of a curve—is used only for passenger rail routes because the heavy materials moved by freight trains, like coal or rocks, cannot be tilted without risking derailment.

Crossing
Railroads cross public and private roadways and also other railroad tracks. Railroad crossings are an important part of railroad corridor because it is where the private railroad on private property crosses public space and where conflicts with vehicles and pedestrians occur. Crossings can be at-grade, that is the grade of the surrounding land (the surface), or above or below grade requiring a structure. At-grade crossings can be addressed with safety features including warning lights or signals, warning bells, and gates. There are a number of different types of gates that relate to allowed speeds of trains at the crossing. More robust gates are often required to preclude vehicle drivers from going around gates and risk a collision with a train. Eliminating at-grade crossings is possible by carrying the train over or under the crossing, either putting track or the roadway on a bridge structure. Different types of surfaces can be applied at roadway crossings to provide a surface for vehicle wheels to cross the tracks; these crossings degrade over time due to the weight of vehicles.

Dispatching, train
A train dispatcher provides direction, as needed, regarding signals, switches, and speed to move trains across the railroad's system of tracks. Most dispatching now uses Centralized Traffic Control (see Signals below). Dispatching in principle involves the protection of track users, provided for by the application of protection and the issuance of movement authority.

Grade
The change in elevation of railroad track in relation to topography and the rise or fall of the roadbed. Railroads prefer a flat surface to minimize energy required to climb a slope, or grade, and to reduce the need for braking on a decent. The design of a route may include creation of an earth fill embankment or other structures to reduce the grade or climb. In North America, railroad grades are calculated as the rise in elevation over a run of 100 feet, expressed as a percentage. A 1% grade is equal to 1 foot of vertical change over 100 feet in run.

Interlocking
An interlocking is a complex mechanism that controls signals and switches such that only a prescribed and safe route is allowed through a section of tracks and junctions, and that the sequence of signals and switches is locked (or programmed) so that conflicting movements of trains are not allowed. Older mechanical interlockings were frequently found in towers with a series of levers; the tower allowing the operator to observe and monitor the position of the switches and resulting train movements. Advancements include electronic and digital software interlocking systems operated at control centers, but in some locations, such as drawbridges, older style interlockings may still be in use.

Junction
A place where two or more track routes meet and connect and where trains can move via a turnout from one route or track to another as directed by signals.

Meet
A term in railroad operations planning where trains operating on main track are scheduled to pass each other. When operating on a single track a "meet" implies a conflict for trains traveling in opposing directions such that a scheduled meet requires a siding track to allow one train to pass the other.

Milepost (MP)
Mileposts are measures of linear track distance defined as miles and tenth of a mile reflected in decimals. Mileposts are measured along subdivisions, increasing south to north, for example the UP-Kenosha Subdivision starts at MP 0.0 at the Ogilvie Transportation Center in downtown Chicago and the Kenosha Metra station is at MP 51.6.

A structure built for the TMER&L interurban system next to the track just north of the former C&NW depot in Cudhay

Railroad right of way

Railroads own property and their right of way is defined by parcels connecting as corridors in the landscape. This contrasts with most public right of way that is not on parcels, but rather a space between parcels. Parcels define the railroad right of way and vary primarily in width, which has to be at least wide enough for a single track and a buffer of land to each side.

Signals and control

Signals are the infrastructure and operational methods for safely tracking and dispatching trains moving on mainline and siding tracks. Some track segments are non-signalized, meaning that train movements are controlled through two-way radio communication to the crew in the cab of the locomotive. Signals are also part of a system that monitors where trains are located and how fast they are moving and in what direction. This type of signal system relies on lineside signals—similar to traffic lights—directing the crew in the locomotive to stop or proceed. Advancements in signals are working toward digital signaling to the crew in the cab. The movement of trains through signals and track segments are monitored by dispatch centers where dispatchers can see a model of the whole railroad operation.

Centralized Traffic Control or CTC: A type of signal system that centralizes control over a large part of a railroad system in one location and uses a large map model of the track layout so the control operator can see where each train is and control the signals and switches remotely. CTC provides for movement authority to be granted by the indication of lineside signals to crews.

Positive Train Control or PTC: A regulatory requirement for passenger service, is a signal system overlay designed to regulate and enforce compliance with speed and restrictions through automation so that train collisions are avoided due to operational errors. PTC checks the movement of trains and automatically stops them if the train is exceeding speeds or in non-compliance with signals. The Rail Safety Improvement Act of 2008 (RSIA) mandated the implementation of PTC systems on Class I railroads' mainlines after a series of deadly crashes on commuter rail lines. It is required for passenger service under the authority of federal regulation 49 CFR § 236 (I).

Station

In railroad parlance, a station is a control point in the operational timetable; it can also be the location of a passenger depot, but not necessarily.

Subdivision

A track route and operating segment named and described in a working timetable. The subdivision designation makes it possible to look at a functional portion of a larger railroad system, typically operating between two major destinations or track infrastructure points, for example a subdivision between terminals in Milwaukee or Chicago.

Switch

The mechanism that directs trains from one section of track to another by physically moving the track connection. Switches can be thrown manually, literally picking up the switch and moving the track connection, to direct slow-moving trains to a spur, or through automated control from a dispatching center that moves the track by means of an electric motor. Switches work in concert with signals as the critical control mechanism for moving and directing trains.

Track class and operating speed

The FRA has prescribed minimum requirements for the safe operation of freight and passenger trains based on track conditions and a classification into maximum operating speeds for different track segments. These minimum requirements are set forth in a detailed set of engineering standards that relate to the condition of the trackwork structure, including the age and condition of rails, the age and condition of cross ties, the condition of ballast, the quality of drainage, and the level of vegetation. There are six classes that apply to specific track conditions with specified speed limits for each class. These six FRA classes provide a basis for an initial evaluation of the condition of railroad trackage and for estimation of the costs of improvements needed to meet desired operating speeds in an existing track structure.

A railroad may lower the operating speed limit for specific sections of track below the maximum allowable operating speed due to track geometry, track infrastructure, or other operational considerations. For example, trains may need to operate at a slower speed through a curve, a track switch, or adjacent to a yard.

Track structure

Rail: a fixed length of hot-rolled steel that the wheels of the train rest on and guide the movement of the wheels around curves. Rail can be jointed, with small gaps between sections of rail causing the railroad clickety-clack sound or continuously welded providing a smoother surface.
Ties: Ties sit on the ballast perpendicular to the rail. They can be made of treated wood or concrete.
Ballast: typically crushed stone between the ties and the ground base that supports and transfers the weight of the train and keeps the track from sinking into more malleable ground and provides adequate drainage to the right of way.

Track timetable and track chart

Railroads utilize a timetable for each subdivision that includes a track chart, which is a schematic line drawing, indicated the basic layout of mainline, sidings, and spurs next to a milepost column. The timetable includes operational information including maximum speeds between mileposts and named locations called stations and control points. Freight traffic operates on an as needed basis to serve customers with daily base schedules. This differs from a timetable or schedule for passenger service which is more precise and shows when trains will be at passenger stations along the line.

Track types by purpose or use

Mainline: the track that is the primary through route for train operations.
Single track: meaning there is only one track for operation of the route. There may be additional sidings in a segment of right of way, but for operations purposes there is only a single track for the service. Trains moving in opposing directions can operate on different sections of single track with the train dispatcher stopping or moving trains to allow for trains to pass and avoid conflicts.
Double track: meaning there are two main tracks in the segment allowing for movement of two trains, typically operated to avoid conflicts with trains moving in opposite directions or at different speeds.
Crossover: track work that allows trains to move from one track to another.
Siding: track that is to the side of mainline and joined by a turnout to allow movement of trains off the mainline, typically to allow for trains to pass each other.
Spur: a section of track that connects from the main line to a track that leaves the primary right of way to serve a customer or facility such as a port. On some railroads these tracks have alternate designations such as industrial leads.
Turnout: a set of track components that work together to pass a train from one track to another. The degree of curvature of the turnout track will determine the speed of movement of trains.

Wye

A triangular junction of three track segments.

List of Crossings and Bridges in Mark Rail Primary Study Corridor

MILEPOST	TYPE OF CROSSING	STREET, HIGHWAY, OR STATION NAME	CROSSING PROTECTION	Public At-Grade Crossing Count	Bridges/Overpass Count
85.70	Station	Milwaukee Passenger Depot	—		
85.35	At-Grade	S. Plankinton Avenue	—	1	
85.30	Movable Bridge	Menomonee Drawbridge	—		1
85.10	Underpass	Pedestrian	—		
85.00	Overpass	E. Pittsburgh Avenue	—		2
84.90	Overpass	S. 1st Street (STH 32)	—		3
84.90	Overpass	E. Florida Street	—		4
84.50	Overpass	E. National Avenue	—		5
84.20	Station	Washington Street (C.P.)	—		
83.00	Overpass	E. Washington Street	—		6
83.00	Station	Washington Street (UP)	—		
82.72	At-Grade	E. Greenfield Avenue	Lights, Gates	2	
82.50	Movable Bridge	Kinnickinnic River Bridge	—		7
81.80	At-Grade	Private, end of E. Bay St. port	None, fenced	(private 1)	
81.80	Station	Bay View	—		
81.80	At-Grade	off Bay Street (Private)	Crossbucks only	(private 2)	
81.60	Underpass	E. Lincoln Avenue (ramp)	—		
81.30	Overpass	E. Russell Avenue	—		8
81.00	Overpass	Pryor Avenue	—		9
80.80	Overpass	S. Kinnickinnic Avenue	—		10
80.50	Overpass	E. Oklahoma Avenue (CTH NN)	—		11
80.20	Former Station	St. Francis (old location)	—		
79.90	Station	St. Francis	—		
79.85	At-Grade	E. St. Francis Avenue	Lights, Gates	3	
79.51	At-Grade	E. Crawford Avenue	Lights, Gates	4	
79.36	At-Grade (new street)	E. Howard Avenue	Overhead Lights, Gates	5	
79.20	CLOSED	E. Norwich Avenue	closed, none		
78.90	At-Grade	E. Denton Avenue	Lights, Gates	6	
78.40	At-Grade	E. Van Norman Avenue	Lights, Gates	7	
78.20	Station	Cudahy (Old Depot)	—		
78.10	At-Grade	E. Layton Avenue (CTH Y)	Overhead Lights, Gates	8	
78.00	At-Grade	E. Barnard Avenue	Lights, Gates	9	
77.50	At-Grade	ATI/Ladish (Private)	Lights, Gates??	(private 3)	
77.03	At-Grade	Ladish Avenue	Lights, Gates	10	
76.60	At-Grade	E. Ramsey Avenue	Lights, Gates	11	
76.30	Overpass	E. College Avenue (STH ZZ)	—		12

75.70	**Overpass**	Oak Creek Parkway	—	includes arched bridge over creek and ped/trail underpass 2	13
75.07	**At-Grade**	Rawson Avenue	Overhead Lights, Gates		
74.76	**At-Grade**	Milwaukee Avenue	Overhead Lights, Gates		
74.70	**Former Station**	South Milwaukee (Depot)	—		
74.60	**Overpass**	Marquette Avenue (STH 32)	—		14
73.80	**At-Grade**	Columbia Avenue	Lights, Gates	12	
73.30	**At-Grade**	E. Puetz Road	Lights, Gates	13	
72.60	**Former Station**	Oak Creek (Depot Road)	—		
72.40	**Overpass**	E. American Avenue	—		15
72.00	**At-Grade**	Fifth Avenue	Lights, Gates	14	
71.40	**At-Grade (partially closed, trail)**	E. Fitzsimmons Road	Lights, Gates	15	
71.00	**At-Grade**	E. Oakwood Road	Lights, Gates	16	
70.40	**At-Grade (private, trail)**	E. Elm Road/We Enegies Trail	none, fenced passage	(private 4)	
70.30	**At-Grade**	Oak Creek Power Plant, service road (Private)	Fenced secure entrance, Lights, Gates	(private 5)	
69.30	**Station**	Oak Creek	—		
68.80	**CLOSED**	Seven Mile Road	—		
67.75	**Overpass (new)**	Six Mile Road	—		16
66.70	**At-Grade**	Five Mile Road	Lights, Gates	17	
66.20	**Overpass**	Douglas Avenue (STH 32)	—		17
65.60	**Overpass (new)**	Four Mile Road	—		18
64.70	**At-Grade**	Three Mile Road	Lights, Gates	18	
64.60	**Former Station**	Ives	—		
63.80	**At-Grade**	South Street	Lights, Gates	19	
63.11	**At-Grade**	Layard Avenue	Lights, Gates	20	
63.00	**At-Grade**	Goold Street	Lights, Gates	21	
62.96	**At-Grade**	Yout Street	Lights, Gates	22	
62.93	**At-Grade**	Rapids Drive	Lights, Gates	23	
62.60	**At-Grade**	High Street	Lights, Gates	24	
62.30	**At-Grade**	Albert Street	Lights, Gates	25	
62.15	**At-Grade**	Hamilton Street	Lights, Gates	26	
62.10	**At-Grade**	Prospect Street	Lights, Gates	27	
61.99	**At-Grade**	West Street	Lights, Gates	28	
61.88	**At-Grade**	State Street (STH 38)	Lights, Gates	29	
61.80	**Former Station**	Racine (Old Depot)	—		
61.60	**Overpass**	Mound Avenue	—		19
61.50	**Overpass**	Sixth Street	—		20

61.40	**Bridge**	Root River	—		21
61.30	**Overpass**	9th Street	—		22
61.07	**At-Grade**	11th Street	Lights, Gates	30	
60.97	**At-Grade**	12th Street	Lights, Gates	31	
60.92	**At-Grade**	Washington Ave (STH 20)	Overhead Lights, Gates	32	
60.87	**At-Grade**	13th Street	Lights, Gates	33	
60.76	**At-Grade**	14th Street	Lights, Gates	34	
60.56	**At-Grade**	16th Street	Lights, Gates	35	
60.50	**Station**	Racine (former Racine Junction)	—		
60.22	**At-Grade**	De Koven Avenue	Lights, Gates	36	
59.50	**Overpass**	Durand Avenue (STH 11)	—		23
58.43	**At-Grade**	Chickory Road	Lights, Gates	37	
58.21	**At-Grade**	Hanche Road	Lights only	38	
57.36	**At-Grade**	County Line Road (CTH KR)	Overhead Lights, Gates	39	
56.40	**At-Grade**	Berryville Road (CTH A)	Lights, Gates	40	
55.25	**At-Grade**	12th Street (CTH E)	Lights, Gates	41	
55.05	**Bridge**	Pike River	—		24
54.19	**At-Grade**	Birch Road (CTH EE)	Lights, Gates	42	
53.60	**At-Grade**	24th Street	Lights, Gates	43	
53.20	**At-Grade**	31st Street	Lights, Gates	44	
52.90	**At-Grade**	35th Street	Lights, Gates	45	
	Overpass	38th St. ped underpass			25
52.60	**Overpass**	Washington Road (CTH S)	—		26
52.50	**Overpass**	43rd Street	—		27
51.90	**Overpass**	50th Street	—		28
51.80	**Overpass**	52nd Street (STH 158)	—		29
51.65	**Overpass**	Pedestrian passage in station	—		
51.60	**Station**	Kenosha	—		

NOTE: This list of railroad crossings is based directly on a similar list in the 1998 KRM study. The accuracy of the list was checked against the aerial photographs provided for the corridor, and the count of at-grade crossings is made in the list, which appears to be accurate. However the distance each milepost to the orgin at OTC MP 0 is not confirmed to the tenth or hundredth of a mile indicated. The relative distance between the mileposts seems accurate as indicated by a the aerial photos and prior description of tracks ans spurs in the corridor.

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