

# OZAUKEE COUNTY TRANSIT DEVELOPMENT PLAN: 2019-2023



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Special acknowledgement is due the following individuals who previously served as members of the Committee during the course of the planning program: Kip Kinzel, Mayor of Cedarburg, Tom Mlada, Mayor of Port Washington, and Randy Tetzlaff, Director of Planning and Development, City of Port Washington.

## RESOLUTION NO. 2019-13

### RESOLUTION OF THE SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION AMENDING THE ADOPTED DESIGN YEAR 2050 REGIONAL LAND USE AND TRANSPORTATION PLAN (“VISION 2050”) FOR SOUTHEASTERN WISCONSIN (OZAUKEE COUNTY TRANSIT DEVELOPMENT PLAN: 2019-2023)

WHEREAS, pursuant to Section 66.0309(10) of the Wisconsin Statutes, by Resolution 2016-07, the Southeastern Wisconsin Regional Planning Commission, adopted the design year 2050 regional land use and transportation plan documented in SEWRPC Planning Report No. 55, *VISION 2050: A Regional Land Use and Transportation Plan for Southeastern Wisconsin*, which proposes a substantial improvement and expansion of transit service in Southeastern Wisconsin over the next 30 years; and

WHEREAS, in 2016 Ozaukee County requested that the Southeastern Wisconsin Regional Planning Commission assist the County in preparing a public transit development plan for the County transit system which would identify operating and service improvements and serve as a guide for the continued operation of the transit system during the period 2019-2023, such plan being similar to one completed for the County by the Commission in 2002; and

WHEREAS, under the guidance of the Advisory Committee, all research, outreach, and analyses undertaken for the preparation of the Ozaukee County transit plan have been concluded, including the preparation of SEWRPC Community Assistance Planning Report No. 331, *Ozaukee County Transit Development Plan: 2019-2023*, published in October 2018, which report contains specific recommendations as to the operation and funding of public transit services provided by Ozaukee County, together with descriptive, explanatory, and other matter prepared within the framework of VISION 2050.

WHEREAS, the *Ozaukee County Transit Development Plan: 2019-2023*, was approved by the Ozaukee County Transit Development Plan Advisory Committee at its meeting held on June 5, 2018, and endorsed by the Ozaukee County Board of Supervisors at their meeting held January 2, 2019; and

WHEREAS, Section 66.0309(9) of the Wisconsin Statutes authorizes and empowers the Regional Planning Commission, as the work of making the whole master plan progresses, to amend, extend, or add to the master plan or carry any part or subject matter thereof into greater detail.

NOW, THEREFORE, BE IT HEREBY RESOLVED:

FIRST: That in accordance with 23 CFR 450.336(a), the Southeastern Wisconsin Regional Planning Commission hereby certifies that the regional land use-transportation planning process is addressing the issues of the metropolitan planning area, and is being conducted in accordance with all applicable Federal laws, regulations, and requirements, including:

1. 23 U.S.C. 134, 49 U.S.C. 5303, and this subpart;
2. In nonattainment and maintenance areas, Sections 174 and 176 (c) and (d) of the Clean Air Act, as amended (42 U.S.C. 7504, 7506 (c) and (d)) and 40 CFR part 93;
3. Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d-1) and 49 CFR part 21;
4. 49 U.S.C. 5332, prohibiting discrimination on the basis of race, color, creed, national origin, sex, or age in employment or business opportunity;

RESOLUTION NO. 2019-13

5. Sections 1101(b) of the FAST Act (Pub. L. 114-357) and 49 CFR Part 26 regarding the involvement of disadvantaged business enterprises in USDOT funded projects;
6. 23 CFR part 230, regarding the implementation of an equal employment opportunity program on Federal and Federal-aid highway construction contracts;
7. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 *et seq.*) and 49 CFR Parts 27, 37, and 38;
8. The Older Americans Act, as amended (42 U.S.C. 6101), prohibiting discrimination on the basis of age in programs or activities receiving Federal financial assistance;
9. Section 324 of title 23 U.S.C. regarding the prohibition of discrimination based on gender; and
10. Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and 49 CFR part 27 regarding discrimination against individuals with disabilities.

SECOND: That the year 2050 regional land use and transportation plan, being a part of the master plan for the physical development of the Region and set forth in SEWRPC Planning Report No. 55, *VISION 2050: A Regional Land Use and Transportation Plan for Southeastern Wisconsin*, published in July 2016, and amended on the 20<sup>th</sup> day of June 2018, and the 5<sup>th</sup> day of December 2018, be hereby amended to incorporate the recommendations set forth in SEWRPC Community Assistance Planning Report No. 331, *Ozaukee County Transit Development Plan: 2019-2023*

THIRD: That a true, correct, and exact copy of this resolution and the aforementioned report shall be forthwith distributed to each of the local legislative bodies of the government units within the Region entitled thereto and to such other bodies, agencies, or individuals as the law may require or as the Commission or its Executive Committee or its Executive Director in their discretion shall determine and direct.

The foregoing resolution, upon motion duly made and seconded, was regularly adopted at the meeting of the Southeastern Wisconsin Regional Planning Commission held on the 19<sup>th</sup> day of June 2019, the vote being: Ayes 16; Nays 0.



Charles L. Colman, Chairman

ATTEST:



Kevin J. Muhs, Deputy Secretary

COMMUNITY ASSISTANCE PLANNING REPORT  
NUMBER 331

**OZAUKEE COUNTY TRANSIT  
DEVELOPMENT PLAN: 2019-2023**

Prepared by the  
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U.S. Department of Transportation  
**Federal Highway Administration**  
**Federal Transit Administration**



June 2019



# OZAUKEE COUNTY TRANSIT DEVELOPMENT PLAN

## EXECUTIVE SUMMARY

### INTRODUCTION

At the request of Ozaukee County, the Southeastern Wisconsin Regional Planning Commission (SEWRPC) prepared this short-term plan for public transit services for the County covering the period of 2019 through 2023. The Ozaukee County Transit Development Plan: 2019-2023 is based on a performance review of the existing county transit system, and analyses of the travel habits, patterns, and needs of system users based on travel data and surveys collected in 2012 and 2016. The plan also includes an analysis of potential transit system alternatives, and proposes a set of recommended service changes for the transit system. The study of transit service in Ozaukee County was conducted within the framework of VISION 2050, the long-range regional land use and transportation plan adopted by the Commission in 2016, which proposes a substantial improvement and expansion of transit service in Southeastern Wisconsin over the next 30 years.<sup>1</sup>

Commission staff prepared the plan in a joint effort with the staff of Ozaukee County. The plan was guided by an Advisory Committee including representatives from the County, local municipalities, and interested business groups and non-profit organizations. After careful study and evaluation, the Advisory Committee developed and approved the transit service recommendations for the Ozaukee County Transit System that are included in this plan.

### EXISTING TRANSIT SERVICES AND TRAVEL PATTERNS

#### Ozaukee County Express

The Ozaukee County Express provides weekday-only, peak, traditional and reverse commute service on Route 143. In the traditional commute direction (southbound in the morning and northbound in the evening), the Express provides nine morning trips to downtown Milwaukee and nine afternoon/evening trips to Ozaukee County. In the reverse commute direction, there are four morning trips to Ozaukee County and two return afternoon trips to Milwaukee. Fares are currently \$3.50 each way in cash, or \$2.50 if paying with stored value on an M-card smartcard. Passengers can transfer to or from the Shared-Ride Taxi for \$1.00. Passengers can transfer to a Milwaukee County Transit System (MCTS) route at no additional charge or transfer to the Express from an MCTS route by paying the difference between the two fares, which is typically \$0.50, if using the M-CARD. In 2016, there were 106,500 passenger trips made on the Ozaukee County Express.

#### Ozaukee County Shared-Ride Taxi

The Ozaukee County Shared-Ride Taxi provides countywide mobility for all residents of Ozaukee County. It provides curb-to-curb and door-to-door service for the general public and door-to-door



*Credit: Ozaukee County Transit Services*

**In 2016, there were 106,500 passenger trips made on the Ozaukee County Express.**



*Credit: Ozaukee County Transit Services*

**In 2016, the Ozaukee County Shared-ride Taxi provided 113,600 passenger trips.**

<sup>1</sup> See SEWRPC Planning Report No. 55, VISION 2050: A Regional Land Use and Transportation Plan for Southeastern Wisconsin, July 2016.

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and lobby-to-lobby service for people with disabilities. Service is provided on a shared-ride basis, with riders guaranteed service if they submit a request with 24-hour notice, although same-day requests can be accommodated if there is available capacity. Starting in 2017, the service area was extended to three specific locations in Milwaukee County where the Taxi offers transfers from relatively frequent, all-day MCTS services. This extension provides Ozaukee County employers with improved access to Milwaukee County workforce without reliable access to an automobile. Taxi service is available on weekdays from 5:00 a.m. to 10:00 p.m., Saturdays from 8:30 a.m. to 10:00 p.m., and Sundays from 8:00 a.m. to 6:00 p.m. Fares for a one-way trip depend on the number of zones a passenger travels through on their trip. The adult fare is between \$3.00 and \$6.75, students pay between \$2.75 and \$6.00, and seniors and people with disabilities pay between \$2.50 and \$5.50. In 2016, the Ozaukee Shared-Ride Taxi provided 113,600 passenger trips.

## EVALUATION OF THE OZAUKEE COUNTY TRANSIT SYSTEM

As part of the Ozaukee County Transit Development Plan, the existing County transit services were evaluated by comparing the performance of the Ozaukee County Express and the Ozaukee County Shared-Ride Taxi to a series of standards developed by the Advisory Committee. These standards were developed to evaluate how effectively the existing County transit services fulfilled the three objectives the Advisory Committee identified for the transit system. A number of these standards required comparing the two transit services to peer systems with similar service types, routes, ridership, and budgets that serve areas of a similar density to the Ozaukee County Transit System. A summary of the results is provided below.

SUMMARY OF THE PERFORMANCE EVALUATION
<b>Objective 1: Meeting the Demand and Need for Transit Services</b>
The Express service performs reasonably well in meeting the demand and need for transit services. In Ozaukee County, 83,500 residents, or 97 percent of all Ozaukee County residents live within a seven-mile drive or taxi ride of a park-ride lot served by the Express during the traditional commute. The Shared-Ride Taxi service successfully fulfills this standard, as it provides local transportation to all County residents, connecting residential areas with each other, with major activity centers, and with places of employment.
<b>Objective 2: Operating Safely, Reliably, Conveniently, Comfortably, and Efficiently</b>
The Express meets the service frequency and availability standard for the traditional commute, which requires that service be provided every 30 minutes during weekday peak periods. However, the Express does not meet this standard in the reverse commute direction, which largely serves retail and service jobs near IH 43 in Ozaukee County. The Shared-Ride Taxi's lower performance related to efficiency may be due to its relatively low number of shared trips, when compared to the peer group.
<b>Objective No. 3: Achieving the Other Objectives at the Lowest Possible Cost</b>
This objective recognizes that there are limited public funds available to support public transit, and encourages the efficient use of financial resources when providing public transit. When compared to peers in the Region and across the Nation, the Express has relatively high operating costs, as measured by revenue hour or revenue mile. The recent decline in ridership and the combined high operating costs result in relatively high levels of operating assistance per passenger and a relatively low farebox recovery ratio. The Shared-Ride Taxi successfully fulfills the Cost Effectiveness Performance Standard with the lowest operating expenses per passenger, at \$16.33, when compared to all transit systems in its peer group.

## PUBLIC INVOLVEMENT PROCESS

Following the performance evaluation of the County's existing transit services, a set of potential alternatives for future transit services were developed. In June 2017, the County held the first round of public involvement including two public meetings and one business-focused meeting to gather input on features that should be considered in the development of alternatives. Based on the input received, alternatives were then designed to improve the performance of the Ozaukee County Transit System. In February and March 2018, the County held a second round of outreach to gather feedback on the potential transit service improvement alternatives. This included one business-focused meeting and three public involvement meetings. The Recommended Transit Service Plan was developed in careful consideration of the comments and input received from the Advisory Committee, Ozaukee County businesses, and the public throughout the process.

## RECOMMENDED TRANSIT SERVICE PLAN

The Final Recommended Transit Service Plan for the Ozaukee County Transit System contains elements that should be implemented between 2019 and 2023 depending on the amount of funding the County has available for transit services. The Recommended Transit Service Plan also lists possible transit service alternatives that could be explored further to determine if they warrant implementation, and alternatives that should not be considered for implementation.

### **Recommended Transit Services if Funding is Maintained**

The Plan recommends actions to be taken if Ozaukee County chooses to maintain funding for the transit system at a relatively constant level between 2019 and 2023, and there are no significant changes to State and Federal funding.

#### ***Continue Operating the Ozaukee County Express and Shared-Ride Taxi at Current Levels and Increase Fares at the Rate of Inflation***

If there are no significant changes to County, State, or Federal funding, the Plan recommends the County continue operation of the Ozaukee County Express and the Ozaukee County Shared-ride Taxi in much the same fashion it does now and increase fares to keep pace with inflation. The Express would require fare increases of \$0.25 at the beginning of 2019 and again at the beginning of 2023. The Shared-Ride Taxi service would require one fare increase of \$0.25 in 2020 to keep pace with inflation. If the fare increases are implemented, the County may expect its level of funding in year-of-expenditure dollars for the Express and Shared-Ride Taxi service to be about the same in 2023 as in 2019, although oscillations in ridership in recent years make this difficult to predict. The County should consider including the recommended fare increases for the Express during future contract negotiations for commuter transit services. No significant changes in operation of the Shared-Ride Taxi service are proposed under this funding scenario. However, if the County implements a smartphone app for the Shared-Ride Taxi, riders would be able to make a reservation, pay, and track their ride. Additional time savings may be realized through on-line payments, reducing the time needed for the driver to collect payment.

#### ***Provide On-Demand Service for a Premium Fare***

Feedback received during outreach meetings with Ozaukee County businesses and the public indicated that there was a desire to have guaranteed same-day service that ensured on-time arrivals, particularly for trips to work. To address these requests, this recommendation proposes charging a premium fare of \$10.00 per ride for on-demand services on the Shared-Ride Taxi that would guarantee same-day service within two hours of the trip request. The premium fare is projected to require an annual local share of approximately \$5,900 and generate approximately 6,000 additional passengers trips in 2023.



### **Recommended Transit Services if Funding is Reduced**

If Ozaukee County chooses to reduce funding for transit services, or is unable to increase funding in response to a decrease in State or Federal funding, it is recommended that the County prioritize raising fares to fill the budget gap before considering service reductions. The following changes to the transit system are summarized below.

#### ***Increase Fares at a Rate Greater than Inflation on the Ozaukee County Express***

Although raising fares was not a preferred option expressed during the public involvement process, there are a few other options available to the County if funding is reduced, given that Ozaukee County recently dropped or modified unproductive route segments. Therefore, this recommendation would increase fares by

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\$0.25 in 2019, 2021, and 2023, which would represent an increase at a rate greater than inflation. Increasing fares would be expected to reduce County assistance by approximately \$47,400 between 2019 and 2023. The County may be able to include the recommended fare increases during future contract negotiations for commuter transit services. Raising fares would likely reduce ridership, so each successive fare increase would generate less additional revenue for the County.

### ***Increase Fares at a Rate Greater than Inflation on the Ozaukee County Shared-Ride Taxi***

This recommendation would increase the per trip fare charged to managed care providers, also referred to as the agency fare, while keeping regular fare increases on pace with inflation. Therefore, this recommendation would increase regular Shared-Ride Taxi fares by \$0.25 in 2020 and include an additional increase in the per trip agency fare from \$12.00 to \$16.00 in 2019 to reduce the County’s level of support. These increases would be expected to reduce the required amount of County assistance by approximately \$31,500 between 2019 and 2023.

### **Recommended Transit Services if Funding is Increased**

If Ozaukee County chooses to increase funding for the transit system between 2019 and 2023, the following changes to the transit system are recommended.

### ***Extend Shared-Ride Taxi Service Hours***

This recommendation would extend weekday service hours from 10:00 p.m. to 11:30 p.m. on a trial basis so the County can track changes in ridership and tailor outreach regarding the service expansion to Ozaukee County businesses. It is anticipated that this recommendation would serve 500 additional passengers at a cost to the County of approximately \$3,000 in 2023. The ridership levels may increase if the additional service hours are promoted to local businesses and employees.

### ***Expand Marketing of Transit Options***

This recommendation would increase awareness about transit options in Ozaukee County by expanding the target audience and continuing to find innovative methods to share information about the transit services offered. This could include hiring a mobility manager that could work with businesses to promote current transit services and analyze and evaluate transportation services across county lines. The cost of a mobility manager position varies by County and organization, with salary ranges between \$25,000 and \$60,000. Federal grants could help pay for up to 80 percent of this cost.

### ***Increase Service Frequency and Hours on the Ozaukee County Express***

This recommendation would add a morning run from Grafton Commons at approximately 6:30 a.m. and an afternoon run from downtown Milwaukee at approximately 4:30 p.m., at a cost of approximately \$102,600 in 2023, with Ozaukee County’s portion of the operating cost estimated at \$29,700. The additional frequency would provide existing riders with greater flexibility and thereby would improve the quality of service, in addition to attracting an estimated 6,600 additional riders in 2023.



*Credit: Ozaukee County Transit Services*

### ***Improve Bus Stops Along Port Washington Road***

The bus stop improvements recommended in this plan would help increase accessibility for all individuals using the Ozaukee County Express, including people with disabilities, by providing bus pads and connecting sidewalks at bus stops along Port Washington Road. The initial costs of these improvements is approximately \$177,000, but the plan recommends that preliminary engineering be undertaken to develop more refined cost estimates. Federal grants could help pay for up to 80 percent of the costs.

### **Implement Reduced Transfer Fares at the Three MCTS Bus Stop Connection Points**

Similar to the reduced \$1.00 fare that is currently charged if an individual is using the Shared-Ride Taxi and transferring to or from the Express, the Plan recommends implementing a \$1.00 Shared-Ride Taxi fare for individuals transferring to or from the MCTS routes serving the three transfer points of Cherrywood Lane, Glencoe Place, and the Brown Deer Park & Ride Lot. It is estimated that this recommendation will increase the number of passengers transferring by 700 riders, as compared to transfers under the existing fare structure. In addition, it is estimated that farebox revenue would be reduced and operating expenses would increase for a total cost to the County of approximately \$18,100 in 2023. The Plan also recommends that the County pursue opportunities to reduce the wait times at the three MCTS transfer points, including encouraging individuals traveling to or from work to schedule standing reservations for regularly occurring employment trips.

### **Transit Services Requiring Further Study**

The Plan recommends further study of four alternatives due to their cost, complexity, and the amount of coordination required prior to determining if implementation is appropriate. It is recommended that the County explore each of these alternatives further by contacting potential partner entities, including the Wisconsin Department of Transportation, Washington County, Ozaukee County businesses, and MCTS. The Commission can continue to assist the County if further study is pursued.

### **Study Implementation of Bus-on-Shoulder Operations Along IH 43**

Implementing bus-on-shoulder (BOS) would allow buses to use the shoulder along IH 43 during peak congestion periods to bypass congestion in the general purpose traffic lanes, reducing congestion-related reliability issues and providing a more attractive alternative to the automobile. However, there are several factors that will need to be carefully considered in order to implement BOS in Southeastern Wisconsin such as updating state law to allow buses to use the shoulder, ensuring there are adequate shoulder widths to accommodate buses within the corridor (12 feet is recommended), bus driver training, and public education. Commission staff identified segments along IH 43 where it would be possible to accommodate the necessary shoulder width needed for BOS without major roadway improvements. However, there are segments with structural barriers (e.g., bridge piers or concrete walls) that currently limit BOS. The Commission will coordinate with key stakeholders to further study BOS feasibility in Southeastern Wisconsin. Results of this coordination will be shared with Ozaukee County as they consider if implementation of BOS is appropriate.



*Credit: Minnesota Department of Transportation*

### **Consider Merging the Ozaukee County and Washington County Shared-Ride Taxi Services**

The Plan recommends further study of a merger between the Ozaukee County and Washington County Shared-Ride Taxi services. In the event a merger is reconsidered during the five-year planning horizon, the counties would need to determine how to proceed with a number of items such as staffing levels, the transfer of assets, vehicle storage, maintenance, branding, and fare structure. The benefits of a merger include enhanced mobility between the counties and greater access to both counties' employment opportunities, medical facilities, and other resources. Annual ridership is estimated to increase by between 6,700 and 10,600 passenger trips as a result of a merger. Excluding any one-time startup costs and any potential savings at the contractor level or in county staffing, it is estimated that merging the transit services would increase the combined costs to the counties by approximately \$22,800 to \$36,400 annually.

### **Consider Implementing a New Route to Serve Port Washington Road**

The plan recommends a new MCTS route to serve Ozaukee County employers along Port Washington Road, Concordia University, and the MATC-Mequon Campus. As envisioned, this route would offer weekday and weekend service approximately every 30 to 40 minutes. In 2023, ridership is anticipated to

be approximately 50,300 and operating expenses would be approximately \$868,200. Due to the significant cost of implementing this route, it is not recommended at this time. However, the proposed route may be attractive in the future as MCTS considers a system redesign to focus on higher frequency routes and services in areas that have a mix of residential, commercial, and entertainment uses. Further study will be needed to identify if additional funding could be provided from MATC, Concordia University, businesses, or Ozaukee County to support this new route.

### ***Consider Implementing Flexible Shuttles***

Flexible shuttles would allow route deviations of up to 0.75 miles from a fixed route to provide direct access to businesses. This potential transit service would include two routes – one along Cedarburg Road and the second along Port Washington Road. Both routes would serve key employment destinations, with the Cedarburg Road route serving the Mequon business park and the Port Washington Road route providing service to the Aurora Medical Center. While the ability of a flexible shuttle to deviate from its route makes it well suited to serving scattered destinations in the suburban and rural areas, these deviations can result in additional travel time and unreliable arrival times for passengers. The annual cost for the service is estimated at approximately \$214,000, with \$75,700 needed from local sources. If the County decides to explore flexible shuttles, it is recommended that potential options to provide the service be discussed with businesses that could most benefit from having more direct shuttle access. In addition, the County may consider overseeing a contract with a private transit provider, with financial contributions from businesses that benefit from the transit service.

### **Transit Services Not Recommended for Implementation or Further Study**

Due to input from Ozaukee County businesses and the public and their high cost relative to projected ridership, the following transit service alternatives are not recommended for implementation or further study.

- Providing on-demand services through a partnership with a transportation network company (e.g., Uber or Lyft)
- Extending MCTS service on Route 12 to provide service to Mequon
- Expanding reverse commute services on the Ozaukee County Express
- Reducing service on the Ozaukee County Express by eliminating the lowest performing runs

## **CONCLUSIONS**

This short-range transit service plan for Ozaukee County, as recommended to the County by the Advisory Committee, represents the culmination of the study of the existing transit services in the County, the evaluation of the performance of existing and alternative transit service options relative to a set of objectives and standards that the County transit system should meet, and the consideration of both public and business feedback on the future of transit in Ozaukee County. The recommended plan presents a course of action for the County under three different funding scenarios, and prepares the County to make informed decisions in the face of future uncertainties within the plan's timeframe.

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Credit: Ozaukee County

## 1.1 INTRODUCTION

At the request of Ozaukee County, the Regional Planning Commission prepared this transit system operations analysis and short-range service plan. The last short-range transit development plan prepared by the Commission for the County covered the period from 2002 through 2006.<sup>1</sup> The new plan is needed in order for the transit system to respond to changes in residential, industrial, and commercial development occurring within the County and Southeastern Wisconsin, respond to an increased demand for labor from Milwaukee County by Ozaukee County businesses, and to adjust services to reflect the needs of existing Ozaukee County Transit System users.

This operations analysis and short-range service plan was conducted within the context of the continuing regional transportation planning program. In 2016, the Commission adopted VISION 2050, a regional land use and transportation plan with a design year 2050.<sup>2</sup> That plan includes a public transit element that recommends a significant improvement in and expansion of transit service in the Region over a 35-year period (see Map 1.1). The regional plan also has some specific recommendations that pertain to transit services in Ozaukee County:

- Improve existing commuter bus services between Ozaukee and Milwaukee Counties. The regional plan recommends that the existing service be refined and improved by increasing the frequency of service to every 15 minutes or better during rush hour, and every 60 minutes or better during the midday and nighttime, with service operating from 5 a.m. to midnight, covering all three work shifts. Weekend service is also recommended, as is exploring operating commuter bus service in the shoulder of a freeway where possible during congested periods, allowing buses to bypass congestion. It is also recommended that a park-ride lot be constructed at Highland Road and be served by commuter bus service once it is completed.

<sup>1</sup> See *SEWRPC Community Assistance Planning Report No. 265, Ozaukee County Transit System Development Plan: 2002-2006, October 2002.*

<sup>2</sup> See *SEWRPC Planning Report No. 55, VISION 2050: A Regional Land Use and Transportation System Plan for Southeastern Wisconsin, July 2016.*



- Extend two local bus routes northward from the Milwaukee County border to provide access to jobs and destinations along Port Washington Road between the Columbia St. Mary's Hospital and the county line, and along Cedarburg Road, Mequon Business Park along Donges Bay Road, and into Thiensville.
- Initiate local shuttle service connecting the developed areas of Cedarburg and Grafton to the commuter bus route, and local shuttle service connecting the developed areas of Port Washington and Saukville to the commuter bus route. Both of these routes would be intended to increase access for Milwaukee County residents to jobs in these areas, visitors to the Region to the attractions in these areas, and residents of these areas to the commuter bus route and destinations in Milwaukee County. They would include timed transfers with the commuter bus route at park-ride lots.
- Continued operation of the shared-ride taxi service countywide, with consideration of merging the shared-ride taxi services across the Region into one larger service, providing residents of the County with greater access to destinations across Southeastern Wisconsin.

This operations analysis and short-range service planning study is considered an initial stage of implementation of the adopted regional plan. The transit development plan is short-range in nature, covering the period 2019 through 2023, and is based on a performance review of the existing county transit system, and analyses of the travel habits, patterns, and needs of system users based on travel data and surveys collected in 2012 and 2016. The plan, completed in 2018, proposes a set of recommended service changes for the transit system and forecasts ridership, service levels, and operating and capital expenses that would be expected from implementing the changes.

This operations analysis and service plan is documented in the following chapters of this report:

- Chapter 2, "Existing Transit Services and Travel Patterns," which describes the public transit system in Ozaukee County, the travel patterns of existing ridership, and summarizes the other major transit services presently available in the County
- Chapter 3, "Service Objectives and Standards," which provides a set of transit service objectives, supporting performance standards, and design criteria that were used in evaluating the performance of the existing bus and taxi services; in designing any changes to the existing transit services; and in evaluating service alternatives
- Chapter 4, "Evaluation of Existing Transit Services," which describes how well the existing transit services meet the performance standards, thereby identifying service-related problems, successes, and deficiencies
- Chapter 5, "Transit Service Alternatives," which identifies, describes, and evaluates potential service changes, and provides forecasts of ridership, service levels and costs for each alternative
- Chapter 6, "Recommended Transit Services," which sets forth a description of the transit service improvements that have been considered and recommended by the Ozaukee County Transit Development Plan Advisory Committee and a plan for the implementation of the identified service improvements



# EXISTING TRANSIT SERVICES AND TRAVEL PATTERNS

# 2



Credit: Ozaukee County

## 2.1 INTRODUCTION

This chapter describes the public transit system in Ozaukee County, the travel patterns of existing ridership, and summarizes the other major transit services presently available in the County. The chapter first presents a description of the County transit system, including its history, administrative structure, and the County's progress on implementing the principal recommendations from the previous Transit Development Plan. Following that overview, the chapter provides more detail on both the Ozaukee County Express and Shared-Ride Taxi services, including describing service operations, vehicle fleet, ridership, and costs. A description of the other major public transit service providers in the County follows, including an additional fixed bus route serving Ozaukee County, intercity bus service, and the principal human services transportation providers for seniors and people with disabilities.

## 2.2 OZAUKEE COUNTY TRANSIT SYSTEM

The Ozaukee County Transit System has two major services. The Express service provides peak traditional and reverse commute service using 40-foot, accessible transit buses. It connects park-ride lots in the City of Port Washington, the Village of Saukville, the Town of Grafton, and the Village of Grafton to downtown Milwaukee, and also connects downtown Milwaukee and near north side neighborhoods with retail, medical facilities, and manufacturing facilities in the City of Mequon, Village of Grafton, Village of Saukville, and City of Port Washington. The Shared-Ride Taxi service provides door-to-door, curb-to-curb, and lobby-to-lobby countywide transit service by dispatching sedans, minivans, accessible minivans, and accessible minibuses using an advance reservation system.

### System History

The current Ozaukee County Transit System is an evolution of the system recommended in SEWRPC Community Assistance Planning Report No. 218, *A Transit Service Plan for Ozaukee County: 1996-2000*. Following that report's publication in July 1995, County staff, with the assistance of Commission staff, worked to implement the recommended commuter bus service and series of coordinating shuttles, with the County receiving a Federal Highway Administration Congestion Mitigation and Air Quality (CMAQ) grant to begin operation of the services in August 1996. The Shared-Ride Taxi service began more than a year later,

in January 1998, as a one-year pilot expansion of the County's existing taxi service for seniors and people with disabilities.

During the initial three-year, CMAQ-funded period, traditional and reverse commute bus services were offered between Ozaukee County and Milwaukee County. The spine of the system was a commuter service that connected park-ride lots in Ozaukee County to downtown Milwaukee using IH 43, and the near south and near north sides of the City of Milwaukee to jobs along Port Washington Road and the park-ride lots in Ozaukee County, again predominately using IH 43. The reverse commute service was paired with a series of shuttle services that connected residents of Milwaukee County to jobs in Ozaukee County, including shuttles from park-ride lots in Ozaukee County to job centers in the Cities of Cedarburg and Mequon, and the Villages of Fredonia, Grafton, and Saukville. For a brief period of time, there was also a commuter service from the City of Cedarburg and the Village of Thiensville that traveled down STH 181, STH 100, and IH 43 into the City of Milwaukee.

At the end of the three-year period, significant modifications were made to many of the shuttle services, with reverse commute services and the associated shuttles scaled back to focus on the most productive routes. By 2001, shuttles coordinated with the Express service served only the City of Mequon and the Villages of Grafton and Saukville. These shuttle services remained for a number of years, but were eliminated by the end of 2008 due to low ridership and constraints on County funding, both related to the recession. Following the elimination of the shuttles, reverse commute service on the Express commuter route was significantly scaled back, although it still exists today in a limited form. While the Express service and its associated shuttles were initially envisioned primarily as services to help employers in Ozaukee County attract labor from Milwaukee County, today the majority of the ridership is Ozaukee County residents traveling to jobs in downtown Milwaukee.

Compared to the Express and its associated shuttles, the Shared-Ride Taxi service has remained largely unchanged since its initiation in 1998. Service hours have been gradually extended throughout the life of the service, most recently with the addition of service on Sunday afternoons. Previous to 2012, the City of Port Washington had its own shared-ride taxi service, and therefore the County Shared-Ride Taxi did not serve trips with both the origin and destination within the City. However, Port Washington's service ceased operation on January 1, 2012, and the County's Shared-Ride Taxi has provided service within the City since that date.

### **Progress Implementing the Previous Transit Development Plan**

In addition to the transit development plan mentioned in the previous section, one other transit development plan has been completed for Ozaukee County, SEWRPC Community Assistance Planning Report No. 265, *Ozaukee County Transit System Development Plan: 2002-2006*, published in October 2002. The Advisory Committee guiding the development of this study requested an analysis of the progress implementing the Transit Development Plan from 2002, an important step in understanding the evolution of the Ozaukee County Transit System since its inception. Reviewing the implementation of the previous Plan may also be useful to the Committee as it considers what service and infrastructure alternatives should be studied in this Transit Development Plan.

### **Recommendations Related to the Ozaukee County Express**

The report had three principal recommendations for the County related to the Express:

- Eliminate unproductive segments or trips on the Express Bus Route – A route performance evaluation included in the Transit Development Plan determined that some trips or segments of trips operated as part of Route 143 could be dropped or modified to improve the efficiency of the service. In early 2002, as a result of these recommendations, the County eliminated service to the Northshore Park & Ride Lot near E. Silver Spring Drive and N. Port Washington Road (now the Bayshore Park & Ride Lot) and the Fredonia Park & Ride Lot near STH 57 and CTH H. The County also adjusted the departure times for the weekday afternoon trips leaving downtown Milwaukee, and eliminated a northbound trip which left the near south side of the City of Milwaukee at 9:50 p.m. and a southbound trip which left Grafton at 12:35 a.m.

- Respond to changes in demand on shuttle routes – At the time the previous Transit Development Plan was written, some of the shuttle routes were experiencing low ridership on certain trips, while others did not appear to serve all of the locations where service was requested. The Plan recommended that the County react to increases and decreases in demand by adding or reducing the number of trips on a service, and replacing low performing routes with a timed transfer to the Shared-Ride Taxi service. As demand for the routes fell during the most recent recession, the County eliminated shuttle routes and replaced them with timed transfers to the Shared-Ride Taxi.
- Implement a connecting Express service to UWM – The Plan recommended that the County initiate a new shuttle service or add a stop to the Route 143 to facilitate a transfer to various MCTS routes to allow residents of Ozaukee County to access UWM via transit more easily. The options discussed included adding a stop to Route 143 at the Brown Deer Park & Ride Lot near W. Brown Deer Road and IH 43 (so that passengers could transfer to Route 49U), adding a stop to the traditional commute trips of Route 143 at W. Capitol Drive and N. Port Washington Road (so that passengers could transfer to Route 62), adding a stop to the traditional commute trips of the Route 143 at W. Center Street and N. 8th Street (so that passengers could transfer to Route 22), or adding a special shuttle trip to the Route 143 timed to reach the Brown Deer Park & Ride Lot at the same time as Route 49U. It does not appear that the County implemented any of these alternatives.

The previous Transit Development Plan also made recommendations for the development of two new park-ride lots within Ozaukee County: a new park-ride lot at STH 60 and IH 43, which was constructed as part of the development of Grafton Commons; and a new park-ride lot either in the northeast quadrant of the IH 43 interchange at Mequon Road or adjacent to the Pick 'n' Save at W. Venture Court and N. Port Washington Road. Due to a lack of agreement at the time between the City of Mequon and Ozaukee County on this issue, this option was never pursued further by the implementing agency, the Wisconsin Department of Transportation (WisDOT).

### ***Recommendations Related to the Ozaukee County Shared-Ride Taxi***

The report also had three principal recommendations for the County in regards to its Shared-Ride Taxi service:

- Expand vehicle availability to meet demand during weekday midday periods – The Transit Development Plan noted that, in 2001, the County experienced difficulty meeting the demand for taxi service during the midday on many weekdays, and recommended that the County expand its vehicle fleet from 13 vehicles to 15 vehicles. Demand has since increased, and the County has responded by increasing its current Shared-Ride Taxi fleet to 26 vehicles.
- Increase service hours during the evening hours – In 2001, a number of residents with disabilities were struggling to access employment opportunities where the shift time extended into the evening hours, past the time that the Shared-Ride Taxi service operated. At that time, the Shared-Ride Taxi ended service at 6 p.m. on Mondays through Thursdays. To address this concern, the Transit Development Plan recommended extending service until 9:30 p.m. on Mondays through Thursdays (service was already provided until 9:30 p.m. on Friday evenings). Service has since been extended even further, now operating until 10 p.m. on Mondays through Saturdays.
- Consider absorbing the City of Port Washington taxi service if appropriate – The Transit Development Plan studied merging the City of Port Washington taxi service with the County Shared-Ride Taxi service to improve the efficiency of both services. However, the Plan recommended that the two systems continue to operate separately as long as the City of Port Washington desired to provide a higher level of service (on-demand, rather than advance reservation, operations) to its residents. The Plan did note that the County should be receptive to absorbing the City taxi service in the future, if Port Washington determined that it was unable to continue to provide the service. The County fulfilled this recommendation in January 2012, when it extended the services of the Shared-Ride Taxi to include trips inside the City of Port Washington following the discontinuation of the City's taxi service.

## **Administrative Structure**

Ozaukee County owns the Ozaukee County Transit System, with the Ozaukee County Board of Supervisors Public Works Committee serving as the policy-making entity of the Transit System. The staff of the Ozaukee County Department of Public Works report to the Public Works Committee, conduct the Requests for Proposals for the operations of the Express and Shared-Ride Taxi services, procure the vehicles for the Shared-Ride Taxi system, and work closely with the operators to ensure smooth and efficient operations. Milwaukee Transport Services, Inc., the operator of the Milwaukee County Transit System (MCTS), is the current operator for the Express service between Ozaukee County and Milwaukee County, using vehicles and a fleet maintenance facility owned by Milwaukee County. The park-ride lots utilized by the Express service are owned by the Wisconsin Department of Transportation (WisDOT) or are privately-owned lots, such as at the Walmart in Saukville. Specialized Transportation Services, Inc. operates the vehicles for the Shared-Ride Taxi service, while Ozaukee County owns the vehicles, which are maintained by the adjacent Ozaukee County Highway Department. The Ozaukee County Board of Supervisors has the ultimate responsibility for the review and approval of certain important matters, including the annual budget for the Transit System.

## **Ozaukee County Express**

The Ozaukee County Express provided weekday-only, peak, traditional and reverse commute service during 2017 on Route 143, shown in Map 2.1. The operating characteristics, service levels, ridership, fares, and financial data for the system are summarized below.

### ***Routing and Times of Service***

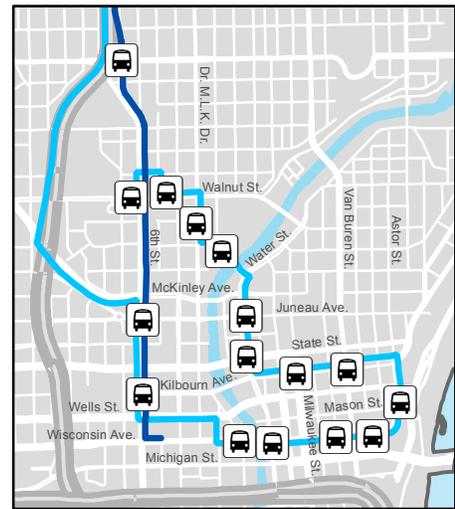
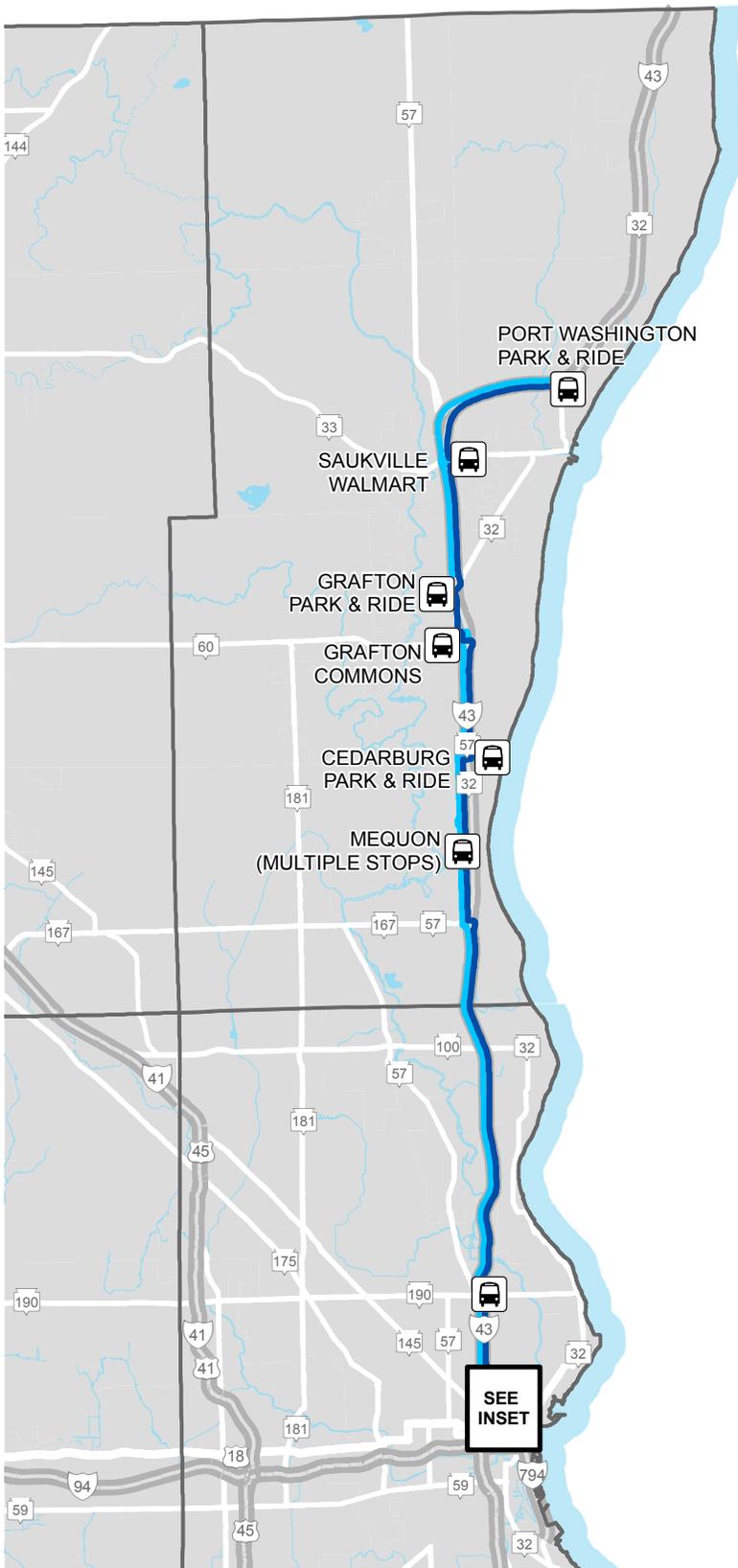
In the traditional commute direction (southbound in the morning and northbound in the afternoon and evening), Route 143 provides service from the following locations in Ozaukee County:

- The Port Washington Park & Ride Lot at IH 43 and STH 32 in the City of Port Washington (served by two trips in the morning and five trips in the afternoon/evening)
- The Walmart parking lot at IH 43 and STH 33 in the Village of Saukville (served by two trips in the morning and five trips in the afternoon/evening)
- The Grafton Park & Ride Lot at IH 43 and CTH V in the Town of Grafton (served by five trips in the morning and five trips in the afternoon/evening)
- Grafton Commons and the surrounding area at IH 43 and STH 60 in the Village of Grafton (served by all nine trips in the morning and all nine trips in the afternoon/evening)
- The Cedarburg Park & Ride Lot at IH 43 and CTH C in the Town of Grafton (served by all nine trips in the morning and all nine trips in the afternoon/evening)
- A number of destinations along N. Port Washington Road between CTH C and STH 167 in the City of Mequon (served by four trips in the morning and six trips in the afternoon/evening)

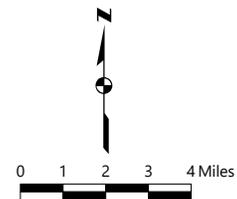
All nine trips connect these locations in Ozaukee County to downtown Milwaukee, where passengers can alight at stops along N. 6th Street, Wisconsin Avenue, and at Schlitz Park. The nine morning trips serve the Cedarburg Park & Ride Lot between 6:15 a.m. and 8:25 a.m., reaching downtown between 6:35 a.m. and 8:57 a.m. The nine afternoon/evening trips leave downtown between 1:57 p.m. and 5:49 p.m., reaching the Cedarburg Park & Ride Lot between 2:26 p.m. and 6:27 p.m.

In the reverse commute direction, Route 143 provides service from downtown and neighborhoods to the north in the City of Milwaukee (between W. Wisconsin Avenue and W. Capitol Drive, along N. 6th Street, N. 7th Street, N. 8th Street, and N. Port Washington Road) to locations in Ozaukee County, including destinations along N. Port Washington Road between STH 167 and CTH C in the City of Mequon, Grafton Commons and the surrounding area in the Village of Grafton, Walmart in the Village of Saukville, and Allen Edmonds in the City of Port Washington. Two morning trips leave N. 6th Street and W. Wisconsin Avenue at 5:24 a.m. and 6:12 a.m., serving Grafton Commons at 6:04 a.m. and 6:52 a.m. Two afternoon trips serve Grafton Commons at 3:25 p.m. and 4:27 p.m., reaching N. 6th Street and W. Highland Avenue at 4:09 p.m. and 5:11 p.m.

**Map 2.1**  
**Ozaukee County Express: Route 143**



- ROUTE 143: REVERSE COMMUTE SERVICE
- ROUTE 143: TRADITIONAL COMMUTE SERVICE
- EXPRESS STOP



Source: Ozaukee County Department of Public Works and SEWRPC

A passenger whose journey starts or ends at a location in Ozaukee County not served by the Express may transfer to or from the Shared-Ride Taxi at a discounted fare for the initial or final segment of their journey. Passengers on the Express can also transfer to an MCTS route at no charge, or transfer from an MCTS route to the Express by paying the difference between the two fares. This transfer policy gives residents of Ozaukee County who cannot drive or do not have access to an automobile access to Milwaukee County, and gives Milwaukee County residents access to jobs and other destinations in all of Ozaukee County during the times that the Express is operating.

### ***Park-Ride Lots***

As discussed previously, the Express route serves three publicly-owned park-ride lots in Ozaukee County, and three private parking lots where passengers of the Express are permitted to park.

- The Port Washington Park & Ride Lot at IH 43 and STH 32 in the City of Port Washington has free parking for approximately 50 vehicles, although more may fit in a -paved overflow area to the east of the main lot. The lot includes a passenger shelter and bicycle lockers, and is owned by WisDOT. On a typical weekday in 2015, 34 vehicles were parked, utilizing 68 percent of the lot's capacity.
- The Grafton Park & Ride Lot at IH 43 and CTH V in the Town of Grafton has free parking for approximately 85 vehicles. The lot includes a passenger shelter and bicycle lockers, and is owned by WisDOT. On a typical weekday in 2015, 22 vehicles were parked, utilizing 26 percent of the lot's capacity.
- The Cedarburg Park & Ride Lot at IH 43 and CTH C in the Town of Grafton has free parking for approximately 65 vehicles. The lot includes a passenger shelter and bicycle lockers, and is owned by WisDOT. On a typical weekday in 2015, 74 vehicles were parked, utilizing 114 percent of the lot's capacity.
- Passengers of the Express can also park in the Walmart parking lot at IH 43 and STH 32 in the Village of Saukville, the Kohl's parking lot at Grafton Commons and the Target parking lot just south of Grafton Commons, both near IH 43 and STH 60 in the Village of Grafton. All three lots include a passenger shelter, and the Walmart lot includes a bicycle locker as well. As these are private lots shared with businesses, no estimate of capacity or utilization is available.

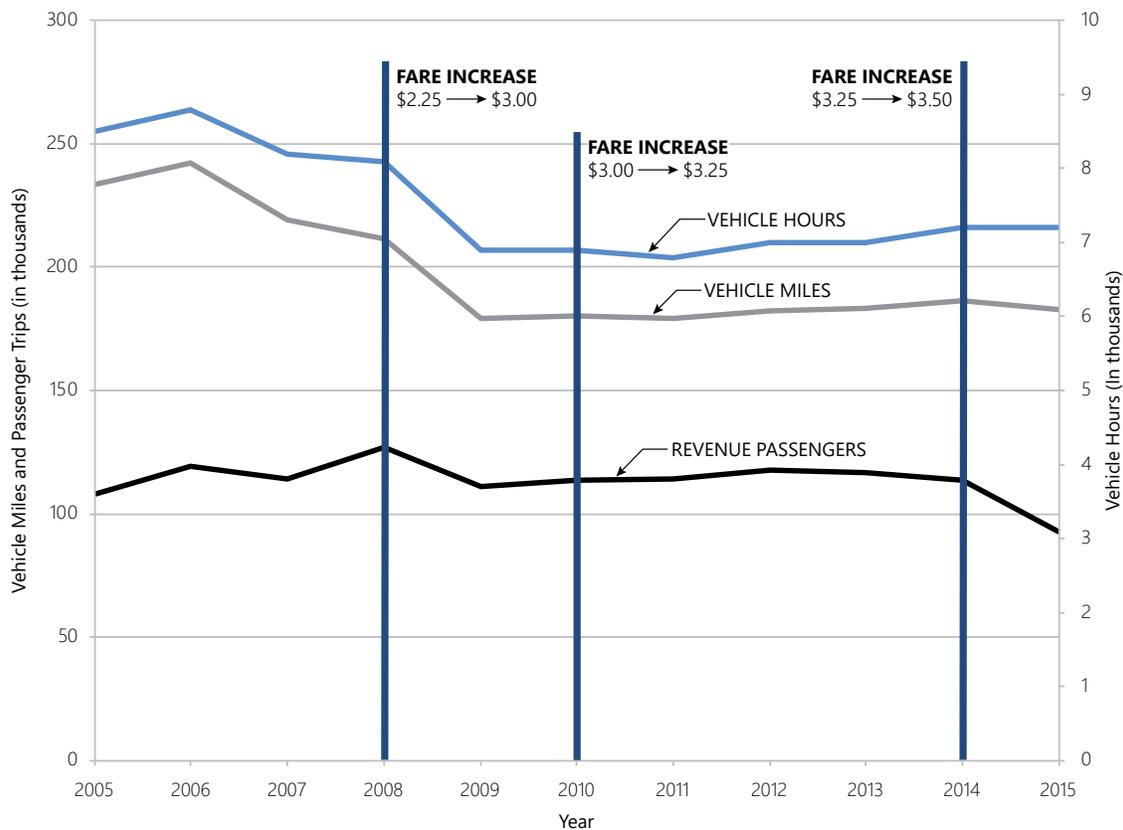
### ***Ridership and Service Levels***

In 2015, the Express carried 92,500 linked passenger trips. This was the first significant decline in ridership after five years of stable ridership between 2009 and 2014 (see Figure 2.1). The 2015 decrease can likely be attributed to the approximately 30 percent decline in gas prices between 2014 and 2015, and may also be related to a change in how ridership was estimated starting in 2015. Excluding 2015, ridership decreased slightly over the past decade, decreasing approximately 5 percent between 2006 and 2014 (from 119,100 to 113,500), while the amount of service offered declined approximately 18 percent during that period (from 8,800 revenue vehicle hours to 7,200 revenue vehicle hours of service). Table 2.1 details the ridership and service provided per year, and the percent changes year-over-year between 2010 and 2015. Table 2.1 also includes two measures of service effectiveness, passengers per vehicle hour and passengers per vehicle mile. In general, the effectiveness of the Express remained relatively unchanged in recent years, until the significant decline in ridership in 2015. The 19 percent decline in measured ridership during that period led to a similar decline in the measures of service effectiveness, although due to a change in passenger counting methodologies between 2014 and 2015, it is difficult to determine how much of that decline truly occurred.

### ***Fares***

The latest fare increase occurred on January 1, 2014, bringing fares for the Express to their current level of \$3.50 each way in cash, or \$2.50 if paying with stored value on an M-Card smartcard. Seniors, people with disabilities, and children pay \$1.60, and additional fare options are available to riders with a 1-, 7-, or 31-day MCTS pass. Historic changes in the one-way cash fare are shown in Figure 2.1.

**Figure 2.1**  
**Ozaukee County Express Service Ridership, Service Levels, and Fare Changes**



Source: National Transit Database, Ozaukee Department of Public Works, and SEWRPC

**Vehicle Fleet and Maintenance Facilities**

Ozaukee County does not own any vehicles or maintenance facilities for the Express Service. As part of their operating contract with the County, Milwaukee Transport Services, Inc. operates a fleet of Milwaukee County-owned 40-foot, 35-seat, handicap-accessible transit buses maintained at a MCTS operating and maintenance facility located at 1900 W. Fiebrantz Avenue in the City of Milwaukee.

**Expenditures and Revenue**

Trends in operating expenses, state and federal assistance, county funding, and farebox revenue for the years 2005 through 2014 are shown in Figure 2.2. Operating expenses increased over that period, although they were relatively stable between 2007 and 2013. Over the decade, operating expenses increased 36 percent, from \$916,800 in 2005 to \$1,249,700 in 2014. At the same time, the amount of vehicle hours of service decreased 15 percent, indicating that a significant portion of the increase in operating expenses is a result of an increase in the cost per vehicle hour of the service. Some of that increase can be seen in Table 2.2, which shows operating expenses, revenues, and assistance for 2010 through 2014 and indicates that operating expenses per vehicle hour of service climbed \$9.12 over those five years, or 5.5 percent. Table 2.2 also shows that the service became slightly less efficient over those five years, with total and County operating assistance per passenger increasing 13.5 percent and 43.8 percent, respectively. The large disparity between the increases in total operating assistance per passenger and the increase in County operating assistance per passenger reflect the decline in Federal and State funding during this five year period, particularly in 2012, when decreases in Statewide funding for transit shifted more of the burden of supporting transit to local governments.

Recent increases in operating expenses have been accompanied by increases in county operational assistance, (by \$165,200 (or 63.8 percent) between 2010 and 2014, from \$258,800 to \$424,000), as farebox revenues, state funding, and federal funding have been relatively flat.

**Table 2.1**  
**Ozaukee County Express Service Ridership and Service Levels**

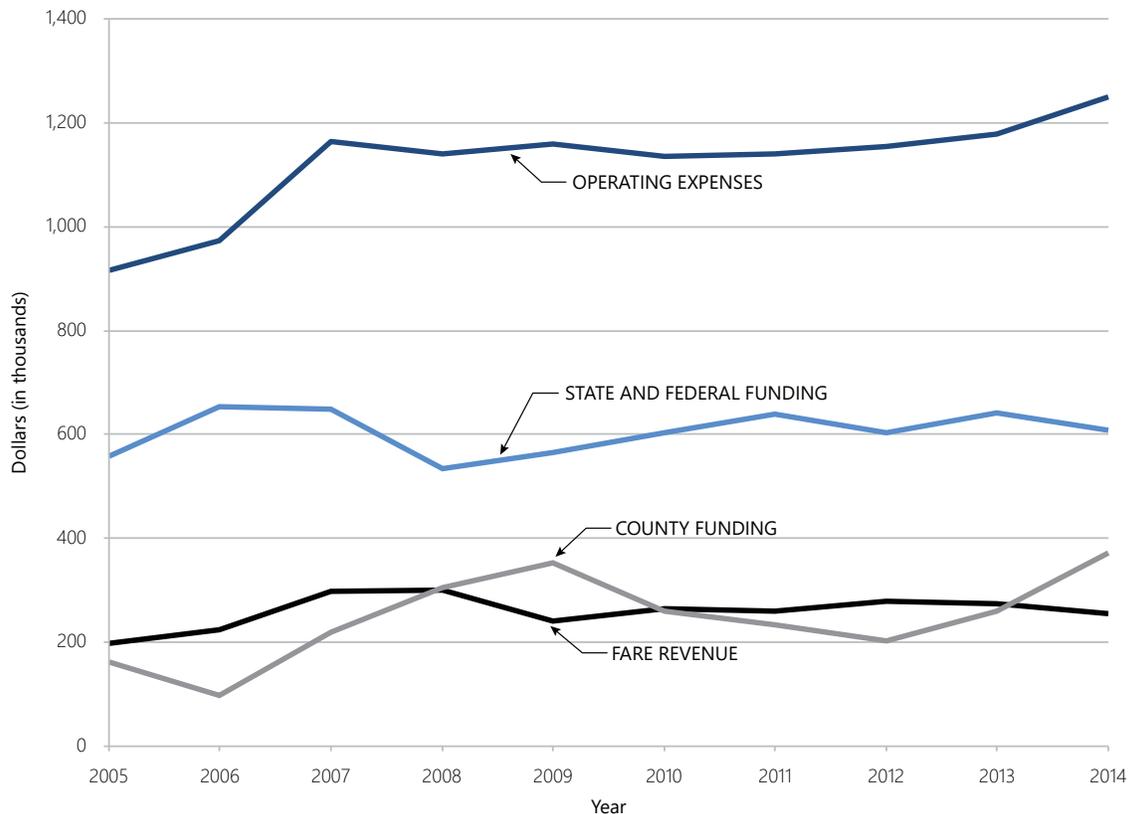
Characteristic	Year					
	2010	2011	2012	2013	2014	2015
Passenger Trips						
Annual Passengers	113,600	113,900	117,500	116,600	113,800	92,500
Average Weekday Passengers	445	447	461	457	446	363
Service Provided						
Annual Revenue Vehicle Miles	180,300	179,100	182,400	183,500	186,500	182,900
Annual Revenue Vehicle Hours	6,900	6,800	7,000	7,000	7,200	7,200
Service Effectiveness						
Passengers per Vehicle Mile	0.63	0.64	0.64	0.64	0.61	0.51
Passengers per Vehicle Hour	16.46	16.75	16.79	16.66	15.81	12.85

Characteristic	Annual Change from Previous Year by Percent					
	2010	2011	2012	2013	2014	2015
Passenger Trips						
Annual Passengers	2.4%	0.3%	3.2%	-0.8%	-2.4%	-18.7%
Average Weekday Passengers	2.4%	0.3%	3.2%	-0.8%	-2.4%	-18.7%
Service Provided						
Annual Revenue Vehicle Miles	0.7%	-0.7%	1.8%	0.6%	1.6%	-1.9%
Annual Revenue Vehicle Hours	0.0%	-1.4%	2.9%	0.0%	2.9%	0.0%
Service Effectiveness						
Passengers per Vehicle Mile	1.7%	0.9%	1.3%	-1.4%	-4.0%	-17.1%
Passengers per Vehicle Hour	2.4%	1.7%	0.2%	-0.8%	-5.1%	-18.7%

Source: National Transit Database, Ozaukee County Department of Public Works, and SEWRPC

**Figure 2.2**  
**Ozaukee County Express Service Operating Expenses, Revenues, and Assistance**



Source: Wisconsin Department of Transportation, Ozaukee County Department of Public Works, and SEWRPC

**Table 2.2**  
**Annual Operating Expenses, Revenues, and Assistance for**  
**the Ozaukee County Express Service: 2010-2014**

Characteristics	Year					Change 2010-2014	
	2010	2011	2012	2013	2014	Number	Percent
Services Provided							
Total Vehicle Miles	180,300	179,100	182,400	183,500	186,500	6,200	3.4
Total Vehicle Hours	6,900	6,800	7,000	7,000	7,200	300	4.3
Revenue Passengers	113,600	113,900	117,500	116,600	113,800	200	0.2
Expenses and Revenues							
Operating Expenses	\$1,134,700	\$1,140,800	\$1,154,200	\$1,177,700	\$1,249,700	\$115,000	10.1
Farebox Revenues	\$265,100	\$260,800	\$278,800	\$274,400	\$253,700	-\$11,400	-4.3
Percent of Expenses							
Recovered through Revenues	23.4	22.9	24.2	23.3	20.3	-3.1	-13.1
Operating Assistance							
Federal	\$155,800	\$165,600	\$167,000	\$159,800	\$151,600	\$48,600	-2.7
State	\$448,200	\$473,400	\$435,900	\$482,400	\$456,700	-\$51,100	1.9
County	\$258,800	\$232,200	\$201,700	\$258,900	\$372,900	\$114,100	44.1
Total	\$862,800	\$871,200	\$804,600	\$901,100	\$981,200	\$162,700	13.7
Per Trip Data							
Operating Expenses	\$9.99	\$10.02	\$9.82	\$10.10	\$10.98	\$0.99	9.9
Farebox Revenue	\$2.33	\$2.29	\$2.37	\$2.35	\$2.23	-\$0.10	-4.5
Total Operating Assistance	\$7.60	\$7.65	\$6.85	\$7.73	\$8.62	\$0.97	13.5
County Operating Assistance	\$2.28	\$2.04	\$1.72	\$2.22	\$3.28	\$1.00	43.8
Operating Expenses Per Mile	\$6.29	\$6.37	\$6.33	\$6.42	\$6.70	\$0.41	6.5
Operating Expenses Per Hour	\$164.45	\$167.76	\$164.89	\$168.24	\$173.57	\$9.12	5.5

Source: Wisconsin Department of Transportation, Ozaukee County Department of Public Works, and SEWRPC

Ozaukee County has had no recent direct expenditure of funds for capital facilities and equipment for the Express service, except for approximately \$80,000 in pavement improvements to the Cedarburg Park & Ride Lot in 2015. The capital costs of the vehicles and other equipment are included in the contract operating expenses paid to Milwaukee Transport Services, Inc.

### **Characteristics of Users**

The Southeastern Wisconsin Regional Planning Commission (SEWRPC) conducted a passenger survey of the Ozaukee County Express in October 2012. The survey entailed distributing a prepaid, pre-addressed, mail-back survey questionnaire to all passengers on each scheduled weekday bus trip operated by the transit system on the survey day. Passengers who preferred to use Spanish were provided with a Spanish translation of the questionnaire. Commission staff received 280 completed survey questionnaires, representing about 74 percent of the 380 passenger trips made on the day of the survey. Table 2.3 provides a summary of the socio-economic characteristics of Ozaukee County Express passengers using the bus service on the survey day. The following observations may be made based upon examination of this information:

- Ozaukee County Express passengers are predominantly between the ages 25 and 64, have a valid driver's license, and from households making \$50,000 per year or more
- Essentially all riders, about 99 percent, used the Express to commute to and from work
- About 74 percent of the riders have two or more vehicles available in their household
- Over 92 percent of the riders use the Express three or more times per week

### **Travel Patterns of Users**

Map 2.2 shows production-attraction flows on the Express based on passenger count information collected on Route 143 in September 2016. A significant majority of riders in the traditional commute direction board the Express at Grafton Commons near IH 43 and STH 60, and the Cedarburg Park & Ride Lot near IH 43 and CTH C. It can also be seen that ridership in the traditional commute direction is the dominant direction

of travel on the Express, a change from the early years of the system. It is unknown at this time if more extensive reverse commute service would result in greater ridership, as the limited reverse-commute service could be suppressing demand by making it difficult for many individuals to coordinate their shift times with the few reverse commute runs on the Express.

### Ozaukee County Shared-Ride Taxi

The Ozaukee County Shared-Ride Taxi provides countywide mobility for all residents of Ozaukee County utilizing a fleet of hybrid sedans, minivans, accessible minivans, and accessible mini-buses.

#### Service Area

The Shared-Ride Taxi service is designed to serve any trip made within Ozaukee County during its operating hours. Starting January 1, 2017, the Shared-Ride Taxi's service area was extended slightly to three specific locations in Milwaukee County where the Taxi offers transfers from frequent, all-day MCTS services. This new service extension allows workers from Milwaukee County better access to jobs in Ozaukee County, and allows Ozaukee County employers improved access to the portion of the Milwaukee County workforce without reliable access to an automobile. Before this extension, only jobs with shift times coordinated with the Express service were accessible, and even then only easily accessible to Milwaukee County residents living in the neighborhoods directly served by the Express. The local MCTS routes now connected to the Shared-Ride Taxi serve a much larger portion of Milwaukee County, and provide relatively frequent all-day service, including on weekends. Map 2.3 displays the location and connecting bus routes of the three transfer points in Milwaukee County.

#### Service Level

The Shared-Ride Taxi provides curb-to curb and door-to-door service for the general public and door-to-door and lobby-to-lobby service for people with disabilities. Service is provided on a shared-ride basis where passengers with different origins and destinations may share a vehicle for a portion of their trips. The taxi is an advance reservation system, with riders guaranteed service if they submit a request by the preceding day. If the request is made the same day, the trip will be accommodated if capacity is available. The hours of operation for the Shared-Ride Taxi service are:

- Monday through Friday, 5:00 a.m. to 10:00 p.m.
- Saturday, 8:30 a.m. to 10:00 p.m.
- Sunday, 8:00 a.m. to 6:00 p.m.

#### Ridership and Service Levels

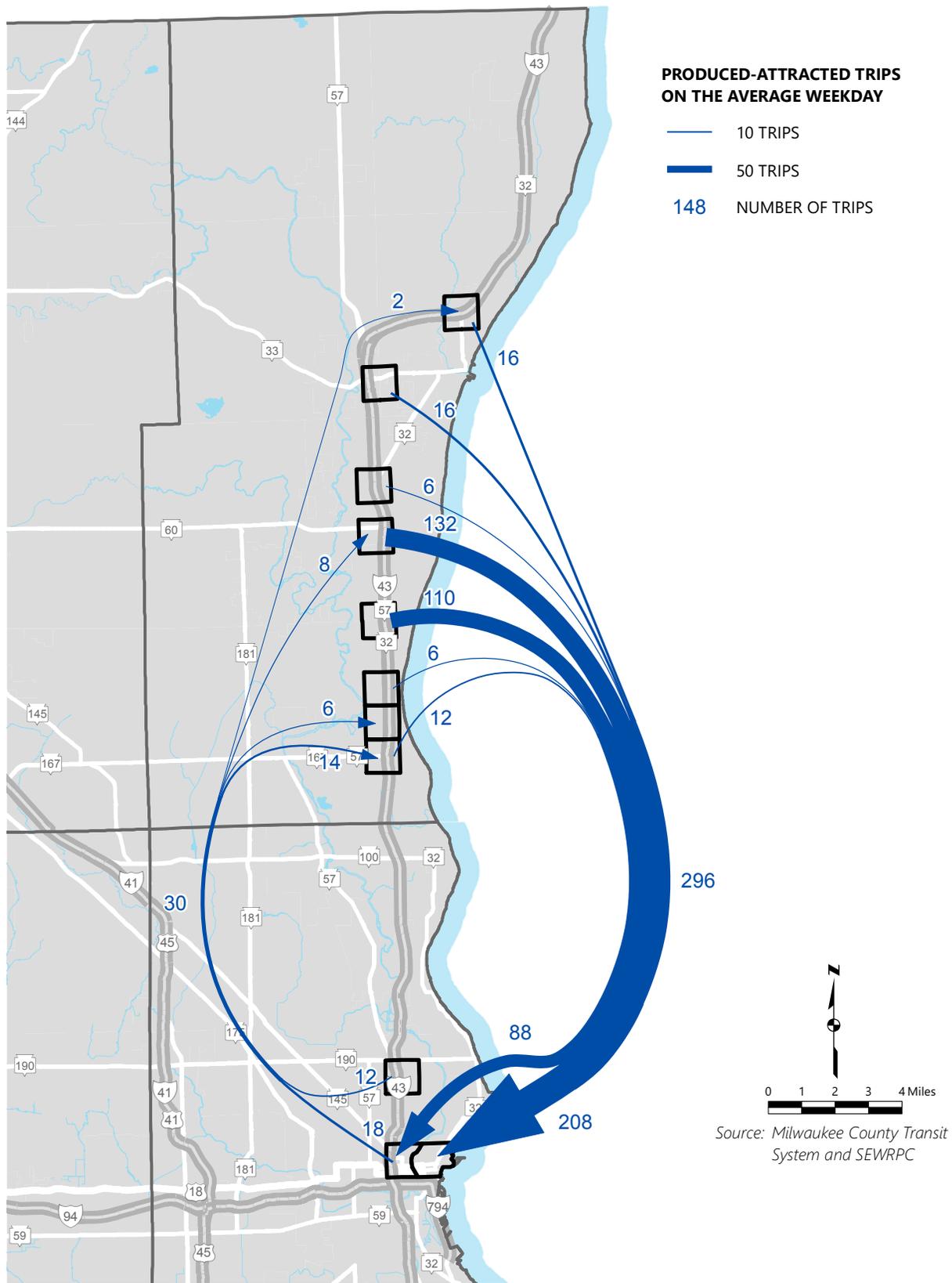
In 2015, the Shared-Ride Taxi provided 108,500 linked passenger trips. Ridership grew steadily for much of the past decade, but significant increases occurred in 2012 and in 2014 (see Figure 2.3). These increases are likely due to the discontinuation of the

**Table 2.3**  
**Socioeconomic Characteristics**  
**of Weekday Transit Riders on**  
**the Ozaukee County Express**  
**Service: October 2012**

Category	Percent of Total Trips
<b>Age</b>	
18 and under	0.8
19 to 24	11.6
25 to 34	14.1
35 to 44	17.0
45 to 54	31.1
55 to 64	24.4
65 and over	1.0
Total	100.0
<b>Sex</b>	
Male	52.4
Female	47.6
Total	100.0
<b>Licensed Driver</b>	
Yes	94.5
No	5.5
Total	100.0
<b>Household Income</b>	
Under \$10,000	3.7
\$10,000-\$19,999	7.2
\$20,000-\$29,999	4.7
\$30,000-\$39,999	4.8
\$40,000-\$49,999	3.9
\$50,000-\$74,999	20.5
\$75,000-\$99,999	22.9
\$100,000-\$199,999	29.1
\$200,000 and over	3.2
Total	100.0
<b>Trip Purpose</b>	
Home-Based Work	99.3
Home-Based Shopping	--
Home-Based Other	0.7
Nonhome Based	--
School	--
Total	100.0
<b>Vehicles Available per Household</b>	
No vehicle	4.6
One vehicle	21.3
Two or more vehicles	74.1
Total	100.0
<b>Frequency of Use</b>	
Less than once a month	1.1
1-3 times a month	2.9
1-2 times a week	3.7
3-5 times a week	87.3
More than 5 times a week	5.1
Total	100.0

Source: SEWRPC

**Map 2.2**  
**Passenger Travel Patterns on the Ozaukee County Express: September 2016**



City of Port Washington's shared-ride taxi service on January 1, 2012, and then the discontinuation of the private taxi operator that took its place in early 2014. Table 2.4 displays the linked passenger trips, revenue vehicle hours of service, and revenue vehicle miles of service provided each year for the past decade. Revenue vehicle hours and revenue vehicle miles of service have increased during the period shown, although less rapidly in recent years, indicating that the Shared-Ride Taxi has become more efficient during that period by serving more passengers per hour and mile of service (as the two taxi services in Port Washington stopped operations).

### ***Fares***

Fares most recently changed on January 1, 2012 when they increased by \$0.25. This increase brought standard adult fares for a one-way trip on the Shared-Ride Taxi to their current level: between \$3.00 and \$6.75, depending on the number of zones a passenger travels through on his or her trip (see Figure 2.4 for a map of the zones). Students pay between \$2.75 and \$6.00, and seniors and people with disabilities pay between \$2.50 and \$5.50. A passenger transferring between the Express and Shared-Ride Taxi services pays \$1.00 to use the Shared-Ride Taxi service. Table 2.5 shows fares for 2017, while Figure 2.3 shows historic changes in the one-way standard adult fare for travel within one fare zone.

### ***Vehicle Fleet and Maintenance Facilities***

The Shared-Ride Taxi service uses publicly owned vehicles provided by Ozaukee County and maintained by the Ozaukee County Highway Department. The County-owned storage and dispatch facility is located at 741 W. Oakland Avenue in Port Washington, and the maintenance facility is in an adjacent building. The vehicles owned by the County for the Shared-Ride Taxi service have an average mileage of 149,861 as of January 2017, and are cataloged in Table 2.6.

### ***Expenditures and Revenue***

Trends in operating expenses, state and federal assistance, county funding, and farebox revenue for the years 2005 through 2014 are shown in Figure 2.5. Operating expenses increased year-over-year in all but two years during that decade. Operating expenses increased 77 percent, from \$1,081,300 in 2005 to \$1,913,600 in 2014. At the same time, the amount of vehicle hours of service increased 49 percent (from 36,800 hours in 2005 to 54,900 hours in 2015), meaning that operating expenses per vehicle hour have roughly kept pace with inflation, which was approximately 22 percent over those 10 years. Because State funding and Federal funding for the Shared-Ride Taxi grew more slowly than expenses, County assistance grew slightly faster than overall operating expenses during the period. However, the amount of County funding required to support the service declined somewhat in the later years of the period due to the increase in fare revenue following the institution of an agency fare of \$8 per trip (later increased to \$10) and the discontinuation of the City of Port Washington's taxi service in 2012, which increased the overall efficiency of the service.

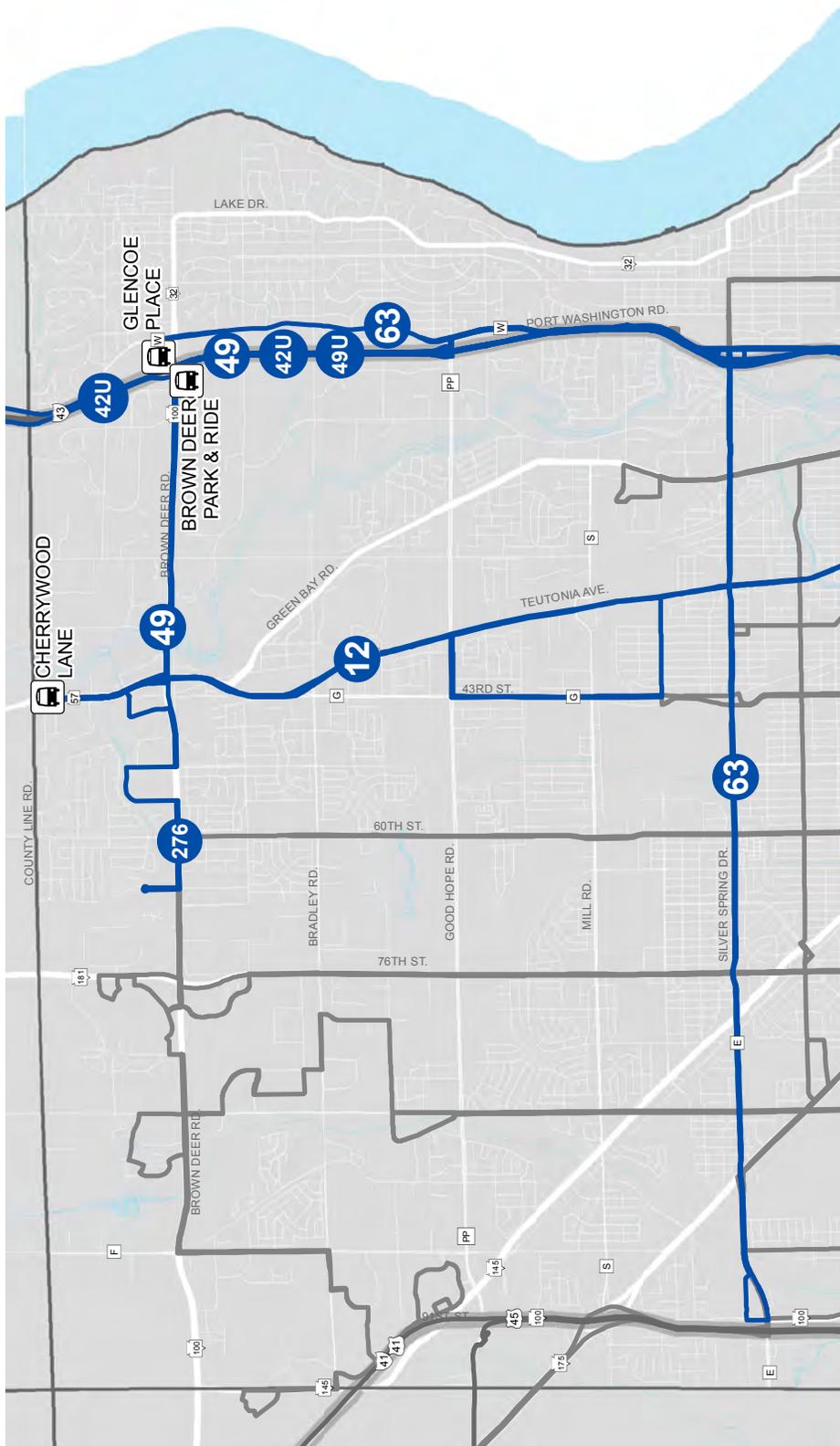
Table 2.7 displays more detailed operating expenditures and revenues for 2010 through 2014. The percent of expenses recovered through farebox revenues during the period displayed in the table increased 94 percent, from 14.4 percent to 27.9 percent. With the increase in the percent of expenses recovered through farebox revenues, as well as an increase in State and Federal assistance, the amount of County assistance per passenger declined 39 percent, from \$5.68 to \$3.48.

Ozaukee County procures the vehicles for the Shared-Ride Taxi, typically requiring an annual capital expenditure to replace vehicles as they age. In addition, the County invested approximately \$2.2 million in a new storage facility and dispatch center in 2012. The vehicles listed in Table 2.6 are owned by Ozaukee County, and are planned to be replaced when they reach 300,000 miles on a schedule set by the Ozaukee County Department of Public Works with the budgetary approval of the Ozaukee County Board. Due to the expenditures on the maintenance facility, slightly fewer vehicles were replaced in between 2010 and 2014. From 2010 to 2014, an average of \$153,200 was spent annually on new vehicle purchases, with \$30,600 of that being County funds. The County intends to replace five to seven vehicles a year in the coming years, and budgeted \$275,000 for vehicle purchases in 2017.

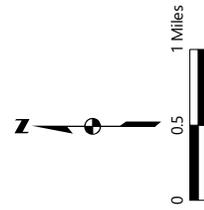
### ***Characteristics of Users***

The Commission conducted a passenger survey of the Ozaukee County Shared-Ride Taxi in October 2012. The survey entailed distributing a prepaid, pre-addressed, mail-back survey questionnaire to all passengers

**Map 2.3**  
**Transfer Points Between MCTS and Ozaukee County Shared-Ride Taxi Services**

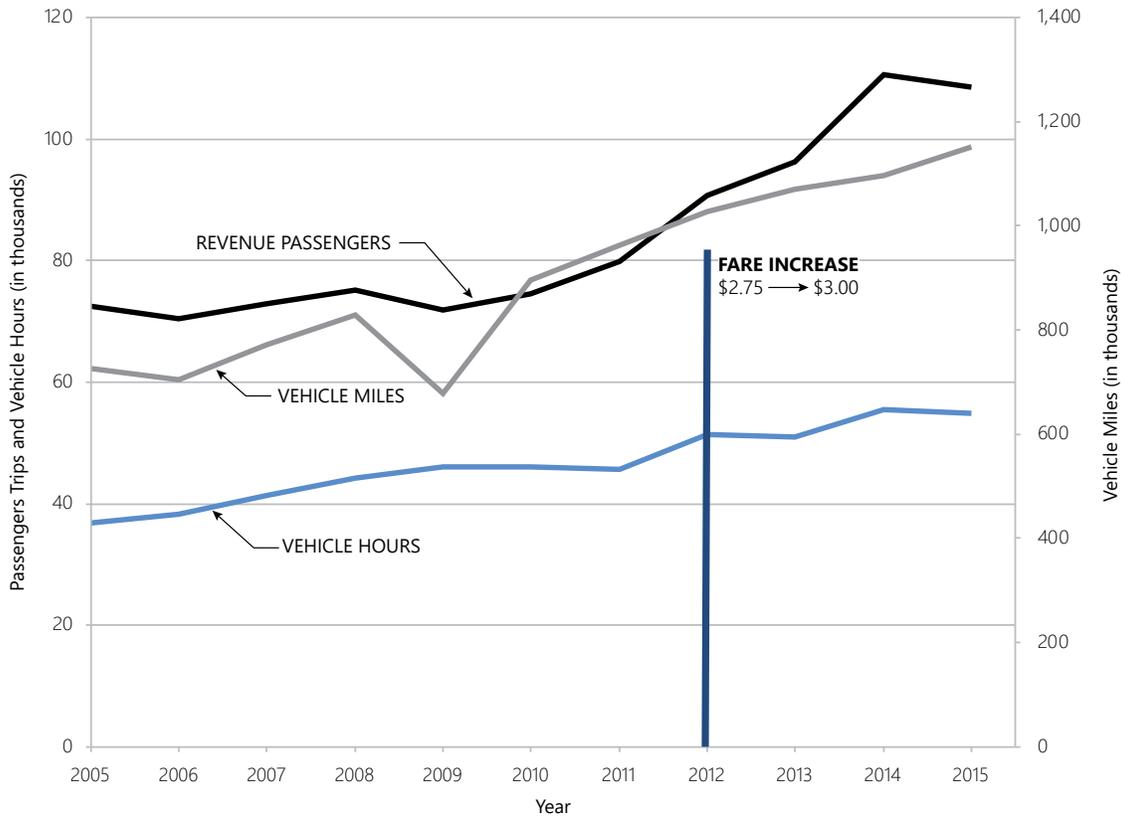


- MCTS ROUTE CONNECTED TO TRANSFER POINT (ROUTES 12, 42U, 49U, 49, 63, AND 276)
- OTHER MCTS ROUTE
-  TRANSFER POINT BETWEEN MCTS AND OZAUKEE COUNTY SHARED-RIDE TAXI SERVICES



Source: Ozaukee County Department of Public Works and SEWRPC

**Figure 2.3**  
**Ozaukee County Shared-Ride Taxi Service Ridership, Service Levels, and Fare Changes**



Source: National Transit Database, Ozaukee Department of Public Works, and SEWRPC

**Table 2.4**  
**Ozaukee County Shared-Ride Taxi Service Ridership and Service Levels**

Characteristic	Year					
	2010	2011	2012	2013	2014	2015
Passenger Trips						
Annual Passengers	74,600	79,900	90,800	96,300	110,600	108,500
Average Weekday Passengers	235	252	286	304	349	342
Service Provided						
Annual Revenue Vehicle Miles	895,000	963,800	1,026,900	1,070,800	1,097,900	1,151,900
Annual Revenue Vehicle Hours	46,100	45,700	51,400	50,900	55,500	54,900
Service Effectiveness						
Passengers per Vehicle Mile	0.08	0.08	0.09	0.09	0.10	0.09
Passengers per Vehicle Hour	1.62	1.75	1.77	1.89	1.99	1.98

Characteristic	Annual Change from Previous Year by Percent					
	2010	2011	2012	2013	2014	2015
Passenger Trips						
Annual Passengers	3.9%	7.1%	13.6%	6.1%	14.8%	-1.9%
Average Weekday Passengers	3.9%	7.1%	13.6%	6.1%	14.8%	-1.9%
Service Provided						
Annual Revenue Vehicle Miles	31.7%	7.7%	6.5%	4.3%	2.5%	4.9%
Annual Revenue Vehicle Hours	0.0%	-0.9%	12.5%	-1.0%	9.0%	-1.1%
Service Effectiveness						
Passengers per Vehicle Mile	-21.1%	-0.5%	6.7%	1.7%	12.0%	-6.5%
Passengers per Vehicle Hour	3.9%	8.0%	1.0%	7.1%	5.3%	-0.8%

Source: National Transit Database, Ozaukee County Department of Public Works, and SEWRPC

using the Taxi system on the survey day. Passengers who preferred to use Spanish were provided with a Spanish translation of the questionnaire. Commission staff received 122 completed surveys, representing about 33 percent of the 367 passenger trips made on the Ozaukee County Shared-Ride Taxi on the day of the survey. Table 2.8 is a summary of the socio-economic characteristics of Ozaukee County Shared-Ride Taxi passengers using the service on the survey day. The following observations may be made based upon examination of this information from the survey:

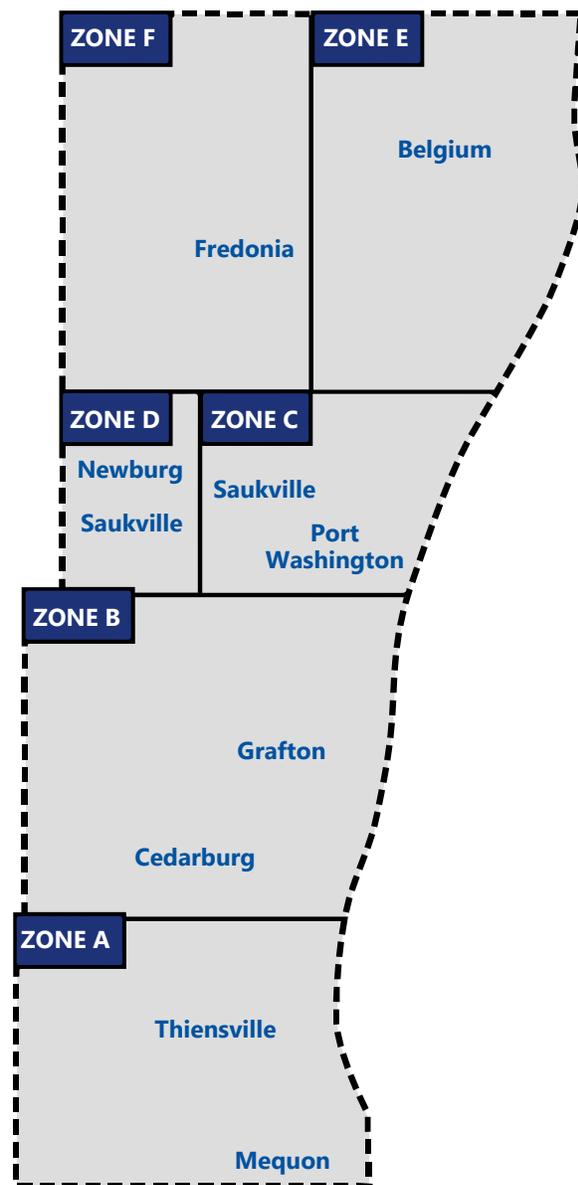
- Most Ozaukee County Shared-Ride Taxi passengers do not have a valid driver's license, and are from households with annual incomes of \$29,999 or less
- Most riders used the Shared-Ride Taxi service to make trips between home and work, followed by trips between home and other purposes, such as medical visits
- About 37 percent of the riders have no vehicle available in their household
- About 60 percent of the weekday riders use the taxi service regularly, that is, three or more times a week.

**Travel Patterns of Users**

Utilizing vehicle logs from September 2016, Map 2.4 shows travel on an average day in September 2016 within and between subareas of Ozaukee County in a produced-attracted format. The production area for trips having one end at "home"—that is, either coming from or going to home—is the area containing the location of the "home". The attraction area is the area containing the "non-home" end of that trip. The production area for trips having neither end at "home" is the area where the trip started and the attraction area is the location of the trip destination.

Examining the map, it can be noted that the distribution of weekday trip productions in the study area largely reflects the concentrations of population and attractions within the County. The more urbanized areas of the County, which have the highest residential density and the most jobs and services, show the highest number of trip productions and trip attractions. In particular, there appears to be a significant amount of travel between the City of Port Washington and most other parts of the County, and the highest density of trips within the City of Port Washington as well. The Village of Grafton is another significant producer of trips,

**Figure 2.4**  
Ozaukee County Shared-Ride  
Taxi Service Fare Zones



Source: Ozaukee County Department of Public Works, and SEWRPC

**Table 2.5**  
Fares for the Ozaukee County Shared-Ride  
Taxi Service: January 2017

Zones Traveled	Fare Type		
	Adult	Seniors and People with Disabilities	Student
1	\$3.00	\$2.50	\$2.75
2	\$4.00	\$3.50	\$3.75
3	\$5.50	\$4.25	\$4.75
4	\$6.75	\$5.50	\$6.00

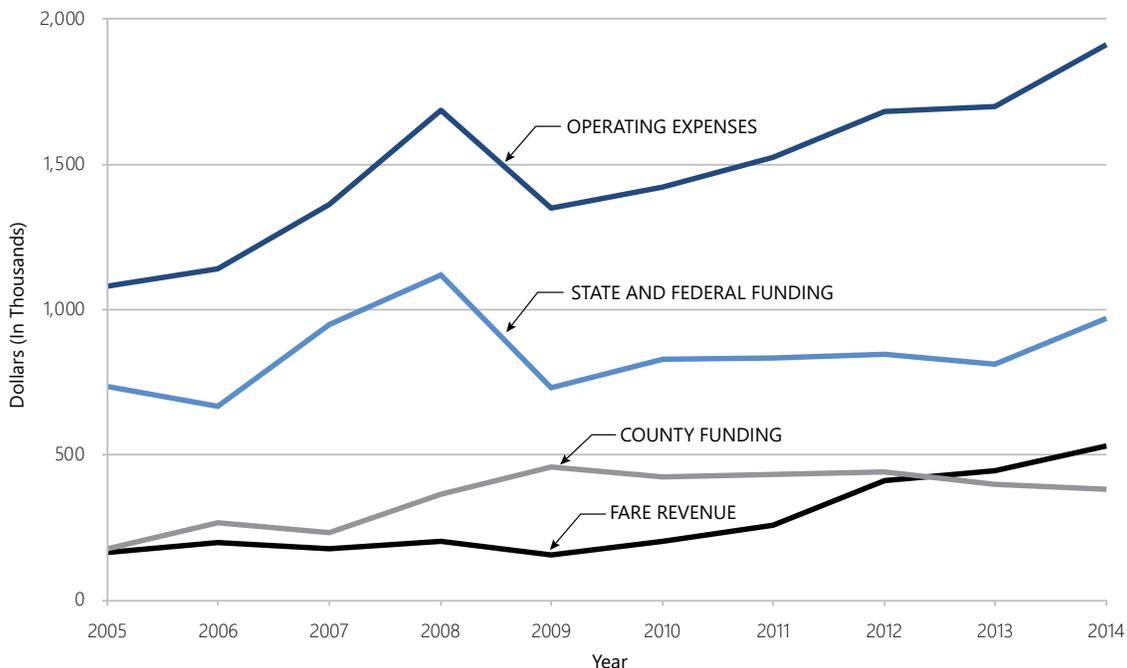
Source: Ozaukee County Department of Public Works, and SEWRPC

**Table 2.6**  
**Vehicle Fleet Used for the Ozaukee County Shared-Ride Taxi Service: January 2017**

Vehicle Type		Year of Manufacture	Capacity		Mileage
Make	Model		Ambulatory	Wheelchair	
Ford	Metrolite	2009	4	2	318,866
Ford	Starcraft	2010	4	2	289,840
Ford	Starcraft	2010	4	2	300,709
Ford	Starcraft	2010	4	2	292,154
Ford	Starcraft	2010	4	2	295,403
Ford	Starcraft	2011	12	2	269,653
Ford	Starcraft	2011	12	2	237,621
Ford	Starcraft	2011	12	2	296,235
Ford	Startrans	2012	6	1	220,712
Ford	Metrolite	2012	8	2	173,269
Ford	Metrolite	2012	8	2	128,112
Dodge	Caravan	2014	6	--	144,368
Dodge	Caravan	2014	6	--	138,654
Dodge	Caravan	2014	6	--	138,110
Dodge	ADA-Cara	2014	4	1	113,926
Dodge	ADA-Cara	2014	4	1	79,039
Ford	Metrolite	2015	4	2	87,888
Ford	Metrolite	2015	4	2	67,151
Ford	Metrolite	2015	4	2	67,020
Toyota	Prius	2015	4	--	65,129
Toyota	Prius	2015	4	--	68,783
Toyota	Prius	2015	4	--	54,925
Toyota	Prius	2016	7	--	19,156
Toyota	Prius	2016	4	--	15,586
Toyota	Prius	2016	4	--	14,075
Dodge	ADA-Cara	2016	4	1	0
Average					149,861

Source: Ozaukee County Department of Public Works, and SEWRPC

**Figure 2.5**  
**Ozaukee County Shared-Ride Taxi Service Operating Expenses, Revenues, and Assistance**



Source: Wisconsin Department of Transportation, Ozaukee County Department of Public Works, and SEWRPC

**Table 2.7**  
**Annual Operating Expenses, Revenues, and Assistance for**  
**the Ozaukee County Shared-Ride Taxi Service: 2010-2014**

Characteristics	Year					Change 2010-2014	
	2010	2011	2012	2013	2014	Number	Percent
Services Provided							
Total Vehicle Miles	895,000	963,800	1,026,900	1,070,800	1,097,900	202,900	22.7
Total Vehicle Hours	46,100	45,700	51,400	50,900	55,500	9,400	20.4
Revenue Passengers	74,600	79,900	90,800	96,300	110,600	36,000	48.3
Expenses and Revenues							
Operating Expenses	\$1,420,600	\$1,522,800	\$1,682,000	\$1,697,500	\$1,913,600	\$493,000	34.7
Farebox Revenues	\$204,400	\$258,400	\$410,900	\$447,200	\$533,900	\$329,500	161.2
Percent of Expenses							
Recovered through Revenues	14.4	17.0	24.4	26.3	27.9	13.5	93.9
Operating Assistance							
Federal	\$132,500	\$89,400	\$89,900	\$87,700	\$103,300	-\$30,300	-22.0
State	\$698,600	\$743,700	\$755,400	\$725,500	\$868,700	\$206,500	24.3
County	\$424,000	\$432,400	\$443,600	\$397,900	\$384,500	-\$74,800	-9.3
Total	\$1,255,100	\$1,265,400	\$1,288,900	\$1,211,100	\$1,356,500	\$140,300	8.1
Per Trip Data							
Operating Expenses	\$19.04	\$19.06	\$18.52	\$17.63	\$17.30	-\$1.74	-9.1
Farebox Revenue	\$2.74	\$3.23	\$4.53	\$4.64	\$4.83	\$2.09	76.2
Total Operating Assistance	\$16.30	\$15.84	\$14.19	\$12.58	\$12.26	-\$4.04	-24.8
County Operating Assistance	\$5.68	\$5.41	\$4.89	\$4.13	\$3.48	-\$2.21	-38.8
Operating Expenses Per Mile	\$1.59	\$1.58	\$1.64	\$1.59	\$1.74	\$0.16	9.8
Operating Expenses Per Hour	\$30.82	\$33.32	\$32.72	\$33.35	\$34.48	\$3.66	11.9

Source: Wisconsin Department of Transportation, Ozaukee County Department of Public Works, and SEWRPC

both internally and to other nearby communities. Interestingly, the City of Mequon tends to attract trips from other communities (and has a fairly high number of trips produced and attracted internally), but does not produce many trips that travel to other communities in the County.

Table 2.9 displays the origin or destination of individuals who transferred to or from the Express or an MCTS route to start or complete their journey. In September 2016, approximately 170 trips were made on the Shared-Ride Taxi that involved a transfer to or from the Express or an MCTS route. The park-ride lot at the Grafton Commons was by far the most used transfer stop, with 139 trips transferring there. This result is unsurprising, given the relatively central location of the Commons, and the fact that it is the only stop served by all Express trips.

59 of the 170 trips were reverse commute, to jobs in the Cities of Mequon and Port Washington, Villages of Fredonia and Saukville, and the Town of Grafton. One individual appears to use the Express and the Shared-Ride Taxi for his daily commute to the Village of Fredonia, while others appear to use the Shared-Ride Taxi to complete their journeys more occasionally; perhaps as a secondary option to get to work should a carpool fall through or their vehicle be unavailable, or to travel to less regular destinations, such as shopping or visiting friends or relatives.

Of the remaining 111 transfer trips, all individuals appear to be using the Shared-Ride Taxi to connect to and from their home to the Express or an MCTS Route, with the most frequent users coming from the City of Port Washington, the Village of Grafton, and the Town of Saukville.

## 2.3 OTHER MAJOR PUBLIC TRANSIT SERVICES

Ozaukee County is the principal provider of public transit service within the County. However, a number of other transit services were also available in 2017 to County residents, including local transit services for the general public and human services transportation for seniors and people with disabilities.

## Route 42U

In addition to operating the Express for Ozaukee County, MCTS operates an additional route in Ozaukee County during that fall and spring semesters, coordinated with the academic calendar of the Milwaukee Area Technical College (MATC), which has a campus on Highland Road in the City of Mequon, and Concordia University, also located on Highland Road in the City of Mequon.

Route 42U connects Milwaukee County and Ozaukee County residents to higher education opportunities in the City of Mequon and Milwaukee County. The route serves between W. Wisconsin Avenue in downtown Milwaukee and the W. Good Hope Road in the City of Glendale, with stops along N. 6th Street, N. 7th Street, N. 8th Street, and N. Port Washington Road; serves the Brown Deer Park & Ride Lot at IH 43 and W. Brown Deer Road; and serves N. Port Washington Road in the City of Mequon, with stops between W. County Line Road and Highland Road. The route connects all of these locations with MATC Downtown, located near N. 6th Street and W. Highland Avenue in the City of Milwaukee; Cardinal Stritch University, located near W. Coventry Court and N. Port Washington Road; MATC North, located near Highland Road and Green Bay Road in the City of Mequon; and Concordia University Wisconsin, located near Highland Road and N. Lake Shore Road in the City of Mequon. Map 2.5 displays the route in detail.

The service is intended to provide access to classes at all four campuses, and therefore service is only provided during the fall and spring semester, and on weekdays only. Service is spread throughout the day, with 14 northbound trips a day between 6:48 a.m. and 10:17 p.m., and 12 southbound trips a day between 7:38 a.m. and 11:17 p.m.

## Intercity Bus Services

Two companies provided intercity bus service through Ozaukee County in 2017, but do not serve any locations within the County.

- Indian Trails, Inc. – Indian Trails operates service connecting the Cities of Green Bay and Milwaukee that travels through Ozaukee County on IH 43
- Jefferson Lines, Inc. – Jefferson operates service connecting the Cities of Green Bay and Milwaukee that travels through Ozaukee County on IH 43

## Human Services Transportation Programs

In addition to the transit services for the general public that were summarized above, many agencies provided transportation services specifically for seniors or people with disabilities for trips that would be difficult to make on existing public transit services. In 2016, the Commission conducted a transportation coordination planning effort, which included a detailed inventory of all the human services transportation providers in

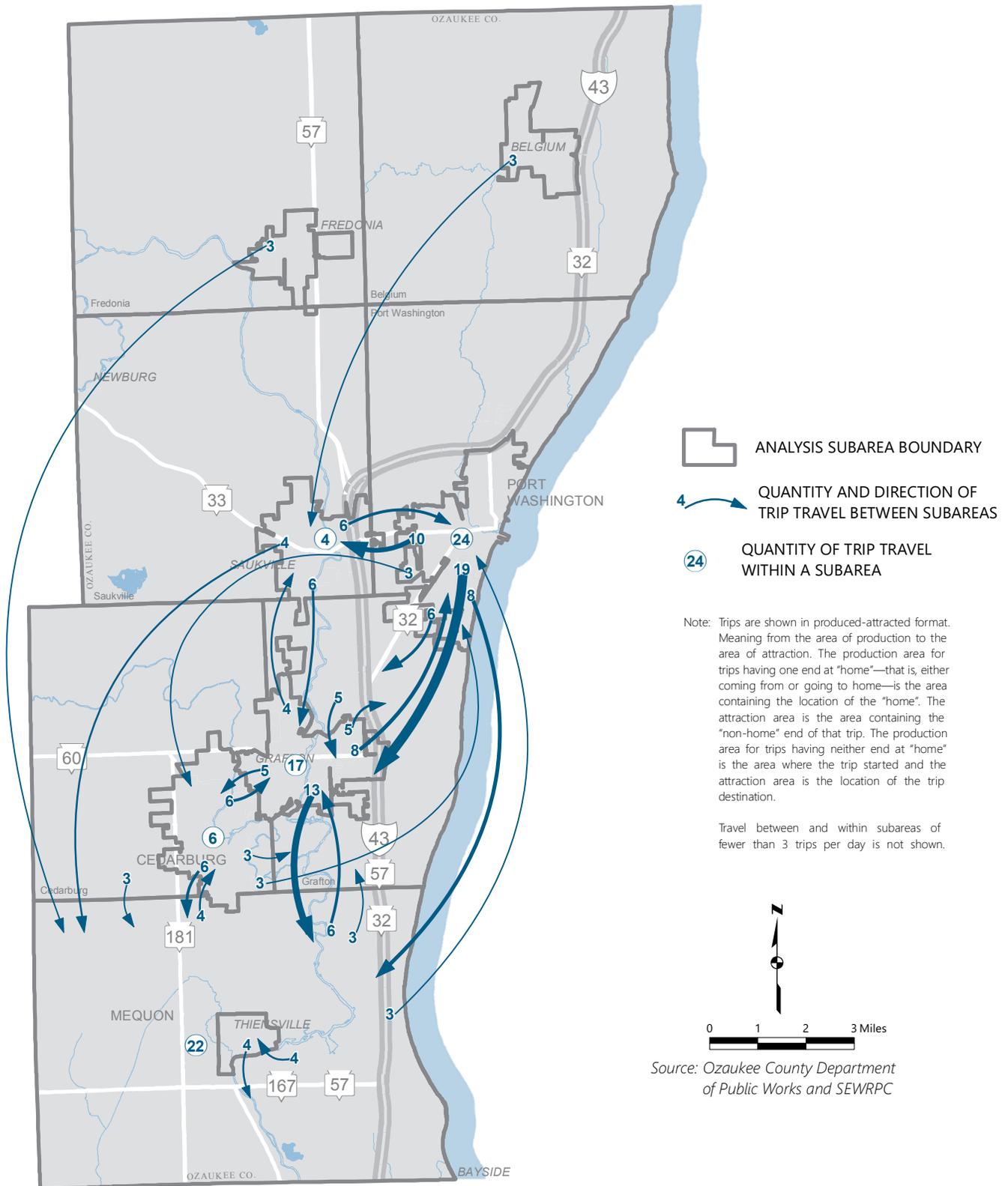
**Table 2.8**  
**Socioeconomic Characteristics**  
**of Weekday Transit Riders on**  
**the Ozaukee County Shared Ride**  
**Taxi Service: October 2012**

Category	Percent of Total Trips
Age	
18 and under	6.4
19 to 24	12.7
25 to 34	22.2
35 to 44	7.9
45 to 54	17.5
55 to 64	11.1
65 and over	22.2
Total	100.0
Sex	
Male	43.1
Female	56.9
Total	100.0
Licensed Driver	
Yes	38.1
No	61.9
Total	100.0
Household Income	
Under \$10,000	28.3
\$10,000-\$19,999	9.4
\$20,000-\$29,999	24.5
\$30,000-\$39,999	11.3
\$40,000-\$49,999	3.8
\$50,000-\$74,999	15.1
\$75,000-\$99,999	3.8
\$100,000-\$199,999	3.8
\$200,000 and over	--
Total	100.0
Trip Purpose	
Home-Based Work	61.3
Home-Based Shopping	4.8
Home-Based Other	14.5
Nonhome Based	8.1
School	11.3
Total	100.0
Vehicles Available per Household	
No vehicle	36.7
One vehicle	41.6
Two or more vehicles	21.7
Total	100.0
Frequency of Use	
Less than once a month	20.6
1-3 times a month	3.2
1-2 times a week	15.9
3-5 times a week	50.8
More than 5 times a week	9.5
Total	100.0

Source: SEWRPC

## Map 2.4

### Travel Patterns on the Ozaukee County Shared-Ride Taxi Service: September 2016



**Table 2.9  
Productions or Attractions of Trips Using the Shared-Ride Taxi  
to Transfer to Another Service: September 2016**

Transfer Point	Area of Production							Total
	City of Cedarburg	City of Mequon	City of Port Washington	Town of Grafton	Town of Saukville	Village of Grafton	Village of Saukville	
Walmart in Saukville	--	--	4	--	--	--	3	7
Grafton Park & Ride Lot	--	--	2	--	--	--	--	2
Grafton Commons	--	--	13	--	15	54	--	82
Cedarburg Park & Ride Lot	9	--	--	--	--	--	1	10
Concordia University	--	--	--	1	--	--	--	1
Highland Road	--	--	--	1	--	--	--	1
W. Venture Court	--	3	2	--	--	--	--	5
W. Mequon Road	--	3	--	--	--	--	--	3
<b>Total</b>	<b>9</b>	<b>6</b>	<b>21</b>	<b>2</b>	<b>15</b>	<b>54</b>	<b>4</b>	<b>111</b>

Transfer Point	Area of Attraction					Total
	City of Mequon	City of Port Washington	Town of Grafton	Village of Fredonia	Village of Saukville	
W. County Line Road & STH 57	--	--	--	--	1	1
MATC – Mequon Campus	1	--	--	--	--	1
Grafton Commons	1	2	16	38	--	57
<b>Total</b>	<b>2</b>	<b>2</b>	<b>16</b>	<b>38</b>	<b>1</b>	<b>59</b>

Source: Ozaukee County Department of Public Works and SEWRPC

Ozaukee County, and identified some of the unmet needs<sup>3</sup> for human services transportation and strategies to address those unmet needs. The main human services transportation programs in the County are listed below, while a comprehensive list can be found in Table 2.10:

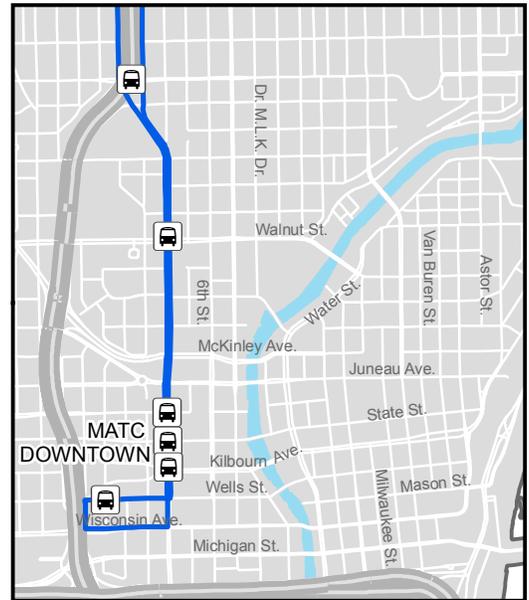
- Cedarburg Senior Center Van Service – The Senior Center provides shared-ride transportation services for City of Cedarburg residents aged 55 and older. The Senior Center owns one vehicle, which is driven by volunteers. Twenty-four hour advance reservation is required, and service is provided curb-to-curb.
- Interfaith Caregivers of Ozaukee County – Interfaith provides transportation services for seniors and adults with disabilities, including out-of-county services to medical appointments in Milwaukee County. Volunteer drivers generally operate their own vehicles, although Interfaith is expanding their service using an accessible Interfaith-owned vehicle. Three-day advance reservation is required, and service is provided door-through-door.

## 2.4 CONCLUSION

This chapter summarized existing public transit services and human services transportation providers in Ozaukee County as of January, 2017. Inventorying and understanding the existing transit services in the County is a necessary first step in determining what service alternatives should be studied as part of the planning process.

<sup>3</sup> See SEWRPC Memorandum Report No. 230, Public Transit – Human Services Transportation Coordination Plan for Ozaukee County: 2016, April 2017.

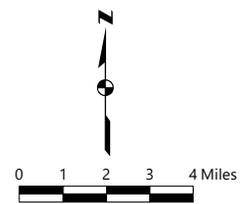
**Map 2.5  
Milwaukee County Transit System: Route 42U**



— MCTS ROUTE 42U



BUS STOP



Source: Ozaukee County Department of Public Works and SEWRPC

**Table 2.10  
Inventory of Human Services Transit Service Providers in Ozaukee County: 2016**

Name of Service Provider	Type of Provider	Type of Service	Service Area	Eligible Users	Days and Hours of Operation	Fare Per Trip	Vehicles Used	Funding Sources in Addition to Fares
Away We Go (414) 559-6779	Private, non-profit	Fixed routes and on-demand rides	Milwaukee and Ozaukee Counties	Seniors and people with disabilities	As required	No charge	7 non-ambulatory accessible vehicles	Federal \$5310
Balance Inc. (262) 268-6811	Private, non-profit	Scheduled for activities and day trips	Ozaukee and Washington Counties	Participants in Balance Inc. programs	As required	No charge	9 accessible vans 8 minivans 4 sedans	Family Care United Way Donations
Bright Star (262) 677-9200	Private, for-profit	Scheduled for activities and medical appointments	Ozaukee, Washington, and Dodge Counties	Seniors and adults with disabilities	Seven days a week, 24 hours a day	\$38.00 per hour up to 3 hours \$25.00 per hour over 3 hours	Volunteers use own vehicles	--
Cedarburg Senior Center (262) 375-7644	Public	Advance reservation, curb-to-curb	15-mile radius around City of Cedarburg	City of Cedarburg residents age 55 years and older	Monday – Friday: 8:00 a.m. – 4:00 p.m.	Distance-based. Within city: \$1.00 Outside of city: \$2.00 to \$5.00	1 6-passenger van	Private Donations City of Cedarburg
Home Instead Senior Care (262) 546-0226	Private, for-profit	Advanced reservation, door-through-door	Ozaukee, Milwaukee, and Washington Counties	Ambulatory individuals	Seven days a week, 24 hours a day	Private pay: \$23 per hour	1 passenger van	--
Interfaith Caregivers of Ozaukee County (262) 376-5362	Private, Non-profit	Advance reservation, door-through-door	Ozaukee County to appointments inside and outside of the County	Seniors and people with disabilities	Monday – Thursday: 9:00 a.m. – 5:00 p.m. Limited service at other times	No charge	Volunteers use own vehicles 2 accessible vans	Federal \$5310 Private Grants Private Donations
Lifestar (262) 338-9798	Private, for-profit	Advance reservation, door-to-door	Ozaukee and Milwaukee Counties and long distance locations	Seniors and people with disabilities	Seven days a week, 24 hours a day	Private pay and Title 19 Medicaid reimbursement	Accessible vans	Title 19 Medical Assistance
Ozaukee Family Services (262) 376-7774	Private, non-profit	Advance reservation, door-through-door	Ozaukee County	Seniors and people with disabilities	Monday – Friday: 9:00 a.m. – 3:00 p.m.	No charge	Volunteers use own vehicles	Private donations
Ozaukee County Veteran Services (262) 284-8326	Public	1 week advanced reservation, door-through-door	Ozaukee County VA Medical Hospital	Military veterans	Monday – Friday: 8:30 a.m. – 5:00 p.m.	\$10 co-pay round trip	Accessible vans and volunteers	--
Pineview (Good Hope Manor) (262) 692-2817	Private, for-profit	Scheduled for activities and day trips	As required	Residents of Pineview facilities	As required	No charge	2 accessible van	--
Port of Hope (Good Hope Manor) (262) 268-0301	Private, for-profit	Scheduled for activities and day trips	As required	Residents of Port of Hope facilities	As required	No charge	1 accessible van	--

Table continued on next page.

**Table 2.10 (continued)**

Name of Service Provider	Type of Provider	Type of Service	Service Area	Eligible Users	Days and Hours of Operation	Fare Per Trip	Vehicles Used	Funding Sources in Addition to Fares
Portal Industries (262) 377-4410	Private, non-profit	Fixed route for curbside or door-to-door	Ozaukee County	Seniors and people with disabilities	Monday – Friday: 7:00 a.m. – 4:45 p.m. Limited service at other times	No charge	4 5-passenger mini-vans 7 15-passenger accessible vans	Federal \$5310 Community Care
Advanced Reservation Transportation	Private, non-profit	Advance reservations, door-to-door	Ozaukee County	Seniors residing in senior housing	By appointment	Varies with program		
Transtar Medical Transport (800) 972-8080	Private, for-profit	Advance reservation, door-to-door for medical activities	Ozaukee and Milwaukee Counties and long distance locations	Seniors and people with disabilities	Weekdays: 5:00 a.m. – 6:00 p.m. Saturdays: 5:00 a.m. – 3:00 p.m.	Title 19 Medicaid reimbursement or private pay \$50.00 base rate and \$2.50 per mile	Accessible vans	Title 19 Medical Assistance

Source: SEWRPC





*Credit: Ozaukee County*

## 3.1 INTRODUCTION

To allow a thorough evaluation of the existing transit services offered by Ozaukee County and any alternative transit services proposed as part of this study, this chapter establishes the objectives for the transit services and identifies the standards that will be used to measure how successful the existing system and any proposed alternatives are at fulfilling those objectives. The objectives and standards provide the basis upon which the performance of existing transit services will be assessed; alternative service plans designed and evaluated; and service improvements recommended. Therefore, the objectives included in this chapter are intended to represent the level of transit service and performance desired by the residents of Ozaukee County. Only if the objectives and standards clearly reflect the transit-related goals of the community will the recommended plan provide the desired level of service within the limits of available financial resources.

Given the need for objectives to reflect the desired level of transit service for Ozaukee County, the task of formulating objectives, principles, and standards must involve interested and knowledgeable public officials and private citizens representing a broad cross-section of interests in the community, as well as individuals familiar with the technical aspects of providing transit service. Accordingly, one of the important functions of the Ozaukee County Transit Development Plan Advisory Committee was to articulate transit service objectives, principles, and supporting standards for the planning effort. By drawing upon the collective knowledge, experience, views, and values of the members of the Advisory Committee, a relevant set of transit service objectives, supporting principles, and standards was defined and is listed in Figure 3.1.

## 3.2 OBJECTIVES

The following objectives adopted by the Advisory Committee envision a transit system that will effectively serve Ozaukee County while minimizing costs:

- a. Serve the travel needs of residents traveling within Ozaukee County, County residents commuting to jobs in Milwaukee County, and County employers seeking workers
- b. Provide efficient, safe, reliable, convenient, and comfortable transit services in Ozaukee County

**Figure 3.1  
Public Transit Service Objectives and Standards**

**OBJECTIVE 1**

**Serve the travel needs of residents traveling within Ozaukee County, County residents commuting to jobs in Milwaukee County, and County employers seeking workers.**

**Associated Public Transit Principle**

Transit services can increase mobility for all segments of the population in urban and rural areas, particularly for people residing in low- to middle-income households, students, seniors, and people with disabilities. Fixed-route public transit services are generally best suited for operating within and between large and medium-sized urban areas, serving the mobility needs of the population and the labor needs of employers. Demand-response public transit services are more cost-effective than fixed-route transit services where demand for transit is low, such as when serving areas with low-density urban development, small urban areas, and rural areas.

**Design and Operating Standards**

<p><b>1. Commuter Bus Service</b> Serve major travel corridors with commuter bus service by connecting major activity centers and concentrations of significant urban development within the County and the Region.</p>	<p><b>2. Shuttle Bus Service</b> Provides local transportation linking commuter services to major employment centers by providing a timed transfer from commuter services and serving the shift times of large employers. If implemented by the County, costs should be partially borne by the employer or employers served.</p>	<p><b>3. Shared-Ride Taxi Service</b> Should provide local transportation to the County's residents, particularly those that can be considered transit-dependent, by connecting residential areas with each other, major activity centers, and areas of employment.</p>
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**Performance Standards and Associated Performance Measures**

<p><b>1. Major Activity Centers</b> Maximize the number of major activity centers and facilities for transit-dependent people served by transit. This is measured by the number of activity centers within one-quarter mile of a local bus or shuttle route, one-half mile of a commuter bus route, or within the service area of a shared-ride taxi service. Major activity centers include the following:<sup>a</sup></p> <ol style="list-style-type: none"> <li>a. Commercial areas</li> <li>b. Educational institutions</li> <li>c. Medical centers</li> <li>d. Employers</li> <li>e. Facilities serving transit-dependent populations</li> </ol>	<p><b>2. Population</b> Maximize the population served by transit. Residents are considered served if they are within the following distances of a fixed-route transit service, or are within the service area of a shared-ride taxi service.</p> <table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th colspan="2" style="text-align: center;">Distance from Bus Stop</th> </tr> <tr> <th style="text-align: left;"><u>Service Type</u></th> <th style="text-align: center;"><u>Walking</u></th> <th style="text-align: center;"><u>Driving</u></th> </tr> </thead> <tbody> <tr> <td>Commuter Bus</td> <td style="text-align: center;">½ Mile</td> <td style="text-align: center;">3 Miles</td> </tr> <tr> <td>Local Shuttle</td> <td style="text-align: center;">¼ Mile</td> <td style="text-align: center;">--</td> </tr> </tbody> </table>		Distance from Bus Stop		<u>Service Type</u>	<u>Walking</u>	<u>Driving</u>	Commuter Bus	½ Mile	3 Miles	Local Shuttle	¼ Mile	--	<p><b>3. Employment</b> Maximize the number of jobs served by transit. This is measured by the total employment at businesses located within one-quarter mile of local bus or shuttle routes, one-half mile of a commuter bus route, or within the service area of a demand-response service.</p>	<p><b>4. Density</b> Maximize the transit-supportive land area accessible by public transit. Land area is considered transit-supportive if it has a density of at least 4 dwelling units per net residential acre, or at least 640 jobs per quarter section. This is measured by the proportion of the County's total transit-supportive land area within one-quarter mile of a local bus or shuttle route, one-half mile of a commuter bus route, or within the service area of a shared-ride taxi service.</p>
	Distance from Bus Stop														
<u>Service Type</u>	<u>Walking</u>	<u>Driving</u>													
Commuter Bus	½ Mile	3 Miles													
Local Shuttle	¼ Mile	--													

<sup>a</sup> In order to be considered a major activity center, the following definitions must apply:

- Commercial areas are concentrations of retail and service establishments that typically include a department store or a discount store along with a supermarket on 15 to 60 acres, totaling 150,000 or more square feet of gross leasable floor space
- Educational institutions are the main campus of traditional four-year institutions of higher education and public technical colleges
- Medical centers are all hospitals and clinics with 10 or more physicians
- Employers are all employers with more than 100 employees, or clusters of adjacent employers with collectively more than 100 employees such as business or industrial parks
- Facilities serving transit-dependent populations are senior centers, senior meal sites, residential facilities for seniors and/or people with disabilities, residential facilities for low-income individuals, and government facilities that provide significant services to members of transit-dependent population groups

Figure 3.1 (continued)

**OBJECTIVE 2**

**Provide efficient, safe, reliable, convenient, and comfortable transit services in Ozaukee County.**

**Associated Public Transit Principle**

The benefits to the entire public of a transit service are directly related to the level of utilization—measured by ridership—of that service. Ridership is influenced by the level of access the public has to services that are reliable and provide for quick, convenient, comfortable, and safe travel. Riders view transit services with these attributes as an effective and attractive alternative to the private automobile.

**Design and Operating Standards**

<p><b>1. Route Design</b> Extend commuter bus routes as needed or pair them with a local shuttle to perform a collection-distribution function at the ends of the route. Routes should have direct alignments with a limited number of turns, and should be arranged to minimize duplication of service and unnecessary transfers.</p>	<p><b>2. Bus Stop and Park/Ride Lot Design</b> Clearly mark bus stops and park-ride lots with easily recognizable signs and locate them so as to minimize the walking or driving distance over an accessible path to and from residential areas and major activity centers, and to facilitate connections with other transit services where appropriate. Place stops every two to three blocks apart on local bus routes and place park-ride lots at least one mile apart on commuter bus routes. Within business parks, shuttle route stop spacing may need to differ from standard local route stop spacing based on the spacing between businesses and the presence or lack of sidewalks and crosswalks.</p>	<p><b>3. Vehicle Age and Condition</b> Rehabilitate or replace vehicles once they reach the end of their normal service life. Federal Transit Administration guidelines (listed below) require a transit vehicle to reach a minimum service life before it is replaced.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="2"><u>Vehicle Type</u></th> <th rowspan="2"><u>Length (feet)</u></th> <th colspan="2"><u>Service Life</u></th> </tr> <tr> <th>Years</th> <th>Mileage</th> </tr> </thead> <tbody> <tr> <td>Heavy-Duty Bus</td> <td>35+</td> <td>12</td> <td>500,000</td> </tr> <tr> <td>Heavy Duty Bus</td> <td>25-30</td> <td>10</td> <td>350,000</td> </tr> <tr> <td>Medium-Duty Bus</td> <td>25-30</td> <td>7</td> <td>200,000</td> </tr> <tr> <td>Light-Duty Bus<sup>b</sup></td> <td>20-30</td> <td>5</td> <td>150,000</td> </tr> <tr> <td>Cars and Vans<sup>b</sup></td> <td>--</td> <td>4</td> <td>100,000</td> </tr> </tbody> </table>	<u>Vehicle Type</u>	<u>Length (feet)</u>	<u>Service Life</u>		Years	Mileage	Heavy-Duty Bus	35+	12	500,000	Heavy Duty Bus	25-30	10	350,000	Medium-Duty Bus	25-30	7	200,000	Light-Duty Bus <sup>b</sup>	20-30	5	150,000	Cars and Vans <sup>b</sup>	--	4	100,000
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Cars and Vans <sup>b</sup>	--	4	100,000																									
<p><b>4. Service Frequency and Availability</b> Operate all fixed-route transit services at least every 30 minutes during the weekday peak period, and operate local fixed-route services at least every 60 minutes during off-peak service hours. Shared-ride taxi services should have a maximum advance reservation requirement of 24 hours, and seek to have less than 3 percent of same day service requests denied.</p>	<p><b>5. Service Travel Speeds</b> Operate transit services such that travel speeds are not less than 10 miles per hour for local fixed-route and shared-ride taxi services, and not less than 25 miles per hour for commuter bus services.</p>	<p><b>6. Passenger Demand</b> Provide adequate service and vehicle capacity to meet existing and anticipated demand. The average passenger load factor, measured as the ratio of passengers to seats, should not exceed 1.00 during any period for shared-ride taxi. Fixed route transit services should not exceed an average passenger load factor of 1.50.</p>																										

**Performance Standards and Associated Performance Measures**

<p><b>1. Ridership and Service Effectiveness</b> Maximize ridership on and the effectiveness of transit services. This is measured using passengers per capita, total passengers per vehicle hour, total passengers per vehicle mile, and passenger miles per vehicle mile which will be compared to similar transit systems. Transit services with service effectiveness measures more than 20 percent below the median of the peer comparison group will be reviewed for potential changes to their routes, runs, service areas, and service periods.</p>	<p><b>2. On-Time Performance</b> Maximize adherence to published schedules for fixed-route transit services and scheduled rider pickup and drop off times for shared-ride taxi services. Regularly monitor performance and make adjustments to any local transit service with less than 90 percent and any commuter bus service with less than 70 percent of trips on time (defined as being between zero minutes early and three minutes late for fixed-route services and 30 minutes early or late for shared-ride taxi services).</p>	<p><b>3. Travel Time</b> Keep travel times on transit services reasonable in comparison to travel time by automobiles for similar trips. This standard is measured using the ratio of transit to automobile distance and the ratio of transit to automobile travel time.</p>
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<sup>b</sup> This vehicle type is currently owned by the Ozaukee County Transit System.

Figure 3.1 (continued)

**OBJECTIVE 3**

**Meet all other objectives at the lowest possible cost. Given limited public funds, this objective seeks to permit elected officials the flexibility to balance the standards associated with Objectives 1 and 2 with the level of public funding required to fully meet those standards.**

**Associated Public Transit Principle**

Given limited public funds, the cost of providing transit at a desired service level should be minimized and revenue gained from the service should be maximized to maintain the financial stability of services.

**Design and Operating Standards**

<p><b>1. Costs</b> Minimize the total operating expenditures and capital investment for transit services to reflect efficient utilization of resources.</p>	<p><b>2. Fare Structure</b> Charge premium fares for premium services, and discounted fares for priority population groups and frequent riders.</p>	<p><b>3. Fare Increases</b> Consider periodic increases in passenger fares to maintain the financial stability of transit services when:</p> <ul style="list-style-type: none"> <li>a. The farebox recovery ratio falls below the level determined to be acceptable by local officials</li> <li>b. Operating expenses per unit of service have increased by more than 10 percent since fares were last raised</li> <li>c. Projected levels of Federal and State operating assistance would require an increase in local operating assistance above the level deemed acceptable by local officials</li> <li>d. A fare increase would be projected to generate more revenue than would be lost due to potential decreases in ridership</li> </ul> <p>It is recommended that fares not be increased faster than the rate of inflation.</p>	<p><b>4. Total Assistance</b> Minimize the sum of capital investment and operating assistance in the transit system from all sources, while meeting other objectives.</p>	<p><b>5. Cost Sharing</b> Charge special fares to, or implement cost-sharing agreements with, agencies, employers, or business improvement districts for additional transit services and trips designed to serve a particular agency, employer, or business district.</p>
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**Performance Standards and Associated Performance Measures**

<p><b>1. Operating Expenses</b> Minimize the operating expenses per total and revenue vehicle mile, the operating expenses per total and revenue vehicle hour, and the operating assistance per passenger. Annual increases in such costs should not exceed the median percentage increases experienced by comparable transit systems.</p>	<p><b>2. Farebox Revenue</b> Maximize the operating revenues generated from passenger fares. This is measured using the percent of operating expenses recovered through passenger fare revenue.</p>	<p><b>3. Cost Effectiveness</b> Review transit services with substandard cost effectiveness for potential changes to their routes, runs, service areas, and service periods. Cost effectiveness is considered substandard when the operating expenses per passenger, or operating expenses per passenger mile are more than 20 percent above, or the farebox recovery ratio is more than 20 percent below, the median for comparable transit systems.</p>
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Source: SEWRPC

- c. Meet all other objectives at the lowest possible cost. Given limited public funds, this objective seeks to permit elected officials the flexibility to balance the standards associated with Objectives 1 and 2 with the level of public funding required to fully meet those standards.

### **3.3 PRINCIPLES AND STANDARDS**

Complementing each of the service objectives is a planning principle and a set of standards, as shown in Figure 3.1. The planning principle supports each objective, and the associated standards describe how a transit service can fulfill the objective. The standards provide a guideline for the County to measure against to determine any areas of a transit service that might need improvement. It is not necessarily realistic to expect the County's transit services to meet all of the standards, as standards related to cost effectiveness or levels of public assistance may come into conflict with design standards regarding service area or level of service. The service design and operating standards are intended to provide guidelines for the design of new and improved services, for the operation of the transit system, and for purchasing capital equipment or constructing facilities. The performance standards provide the basis for evaluating the performance of the existing transit system and proposed alternative services. For each performance standard, one or more performance measures are identified that can be used to quantify the performance of the transit service or system for measurement against the standard.

The service performance standards and the associated performance measures also reflect the recommendations of the 1996 State Transit Advisory Council. Among the charges to the Council was the identification of appropriate transit system performance measures and standards. The Council recommended that five measures be used to assess the performance of Wisconsin transit systems, including: operating ratio, or farebox recovery rate; operating expense per passenger; passengers per capita; passengers per revenue vehicle hour of service; operating expenses per revenue vehicle hour of service. All of these performance measures have been incorporated into the performance standards and measures included in Figure 3.1 or will be used to identify peer transit systems for evaluating the Ozaukee County Transit System. The performance standards in Figure 3.1 can also provide guidance to the transit system in establishing the multi-year service and performance goals that are required for systems receiving State transit operating assistance.

The performance evaluation of the existing transit system utilized in the current study included assessments of transit performance on both a system-wide and an individual service basis. The service standards set forth in this chapter represent a comprehensive list from which specific performance standards and measures, as deemed appropriate, were drawn in conducting the system-wide and service performance evaluations. A more complete description of the evaluation process is presented in Chapter 4.

### **3.4 ADDITIONAL CONSIDERATIONS**

The objectives, principles, and standards set forth in Figure 3.1 are intended to guide the evaluation of the performance of the existing transit system and the design and evaluation of alternative service improvements. In the application of these objectives, principles, and standards, the limitations of public resources must be pragmatically considered in the following ways:

- An overall evaluation of the existing public transit services and the alternative service plans must be made based on costs and revenue. This analysis may show the attainment of one or more standards to be beyond the fiscal capability of the community, and, therefore, the standards cannot be practically met and must be either modified or eliminated.
- A transit system is unlikely to fully meet all the standards, and the extent to which each standard is met, exceeded, or violated must serve as the final measure of the ability of the system to achieve the objective each standard supports.
- Certain intangible factors, including the perceived value of the transit service to the community and its potential acceptance by the concerned elected officials, may influence the preparation and selection of a recommended plan. Given that transit service may be perceived as a valuable service within the community, the community may decide to initiate or retain such services regardless of performance or cost.





*Credit: Ozaukee County*

## 4.1 INTRODUCTION AND SUMMARY

This chapter details the performance evaluation of the existing Ozaukee County Transit Services, as part of preparations to study various alternatives to serve unmet transportation needs and improve or expand existing transit services, if warranted. This evaluation was performed using the standards identified in Chapter 3 of this report to determine if the objectives selected by the Advisory Committee for the Ozaukee County Transit Development Plan are fulfilled by the existing transit system.

The two transit services provided by the County were analyzed, with the applicable standards for each service listed under their objective in the sections of this chapter. A number of standards require comparing the Express service or the Shared-Ride Taxi service to a peer group, which is made up of six transit systems that provide a similar type, level, and quantity of service as each of the Ozaukee County services. The process for selecting the systems that make up the peer groups is described in more detail later in this chapter. The remaining sections in this chapter present the findings of the performance evaluation of the Ozaukee County Express service and the Ozaukee County Shared-Ride Taxi service. Figure 4.1 and the remaining text in this section provide a brief summary of the results of the performance evaluation.

### **Summary of the Performance Evaluation of the Ozaukee County Express**

The Express service performed reasonably well under the performance evaluation summarized in Figure 4.1, with a few specific weaknesses that resulted in poor performance under some standards. The service provides robust coverage of the County, with easy access to the service for the vast majority of residents. It also serves many key destinations within Milwaukee County, focusing on areas where congestion and parking costs increase the likelihood that an individual would choose to take transit rather than drive. However, compared to peers in the Region and across the Nation, the Express has relatively high operating costs, as measured by revenue hour or by revenue mile. Combined with the decline in ridership that occurred in 2015, these high costs result in relatively high levels of operating assistance per passenger and a relatively low farebox recovery ratio. In addition, the on time performance and travel time of the Express are poorer than recommended by the standards, although truly addressing these weaknesses would require coordinating with the Wisconsin Department of Transportation regarding developing a bus-on-shoulder initiative that would allow the Express to avoid congestion when traveling on the Region's freeway system.

**Figure 4.1**  
**Summary of the Results of the Performance Evaluation of the Ozaukee County Transit Services**

Objective	Standard	Express	Shared-Ride Taxi
<u>Objective 1</u> Meeting the demand and need for transit services	Commuter Bus Service	Fulfilled	Not Applicable
	Shared-Ride Taxi Service	Not Applicable	Fulfilled
	Major Activity Centers	Partially Fulfilled	Fulfilled
	Population	Partially Fulfilled	Fulfilled
	Employment	Partially Fulfilled	Fulfilled
<u>Objective 2</u> Operating safely, reliably, conveniently, comfortably, and efficiently	Route Design	Partially Fulfilled	Not Applicable
	Bus Stop and Park-Ride Lot Design	Partially Fulfilled	Not Applicable
	Vehicle Age and Condition	Not Applicable	Fulfilled
	Service Frequency and Availability	Partially Fulfilled	Fulfilled
	Service Travel Speeds	Partially Fulfilled	Fulfilled
	Passenger Demand	Fulfilled	Fulfilled
	Ridership and Service Effectiveness	Partially Fulfilled	Partially Fulfilled
	On-Time Performance	Not Fulfilled	Fulfilled
<u>Objective 3</u> Achieving the other objectives at the lowest possible cost	Travel Time	Partially Fulfilled	Fulfilled
	Fare Structure	Fulfilled	Fulfilled
	Operating Expenses	Partially Fulfilled	Fulfilled
	Cost Effectiveness	Not Fulfilled	Fulfilled

Source: SEWRPC

### Summary of the Performance Evaluation of the Ozaukee County Shared-Ride Taxi

The Shared-Ride Taxi service provides a robust level of service, and performs well compared to peers in the Region and across the Nation. The service is cost effective, with reasonable operating expenses that are growing more slowly than those of peer systems. The most obvious type of improvement to the Shared-Ride Taxi to be studied would be potential modifications to operating procedures that would increase the usefulness of the service for residents (including Milwaukee County residents) to get to work, and therefore address some of the labor shortage that is being reported by businesses in Ozaukee County.

## 4.2 PEER SYSTEMS

As part of the evaluation of the Ozaukee County Transit Services, a number of standards require comparing the performance of the two County transit services to the performance of a peer group of transit systems. In order to make this comparison, six peer transit systems were identified for each County transit service. These peer systems were selected based on their service type and characteristics, annual ridership, urban area population, total vehicle miles operated annually, total annual operating budget, and proximity to Ozaukee County. Peer systems for the County’s Shared-Ride Taxi service were also selected based on the size of their respective service areas and the number of residents within their service areas. The six peer systems identified for each of the County’s transit services were the systems that most closely matched the characteristics of each service according to data gathered from the National Transit Database (NTD) for 2015.

### Ozaukee County Express Peer Group

Table 4.1 lists the service characteristics of the systems selected for the Express peer group, all of which offer services that are generally similar to the Express. Some of the peers are much larger than the Express and some serve larger metropolitan areas as well. Those serving larger metropolitan areas have significantly higher passenger fares. Nearly all of the peer systems provide local fixed route bus service or shuttle service in addition to their commuter bus service. The data contained within Table 4.1 reflect only their commuter bus service.

### Ozaukee County Shared-Ride Taxi Peer Group

The six peer systems selected for the Ozaukee County Shared-Ride Taxi are shown in Table 4.2. These systems have the most similar service characteristics of the systems that had five or more years of data available from the NTD. Due to Ozaukee County’s relatively unusual size, the peers mostly serve larger geographic areas than the Ozaukee County Shared-Ride Taxi, with one operator that serves a collection of

**Table 4.1**  
**Selected 2015 Service Characteristics for the Ozaukee County Express Service and Its Peer Systems**

Transit System	Metropolitan Area	Time Period Served	Days Served	Reverse Commute Service	Adult Cash Fare	Urbanized Area Population	Operating Budget	Revenue Vehicle Miles Operated	Annual Unlinked Passenger Trips
Washington County Commuter Express	Milwaukee	Peak	Weekdays	Not Provided	\$3.75	1,390,000	\$1,110,000	250,000	100,000
Waukesha County Express Bus <sup>a</sup>	Milwaukee	Peak	Weekdays	Provided	\$3.25-\$4.00	1,390,000	\$2,240,000	380,000	160,000
Butler County Regional Transit Authority <sup>a</sup> – Express	Cincinnati	Peak	Weekdays	Provided	\$3.50	1,650,000	\$860,000	300,000	70,000
Cobb Community Transit <sup>a</sup>	Atlanta	All Day	No Sundays	Provided	\$5.00	4,800,000	\$3,100,000	630,000	450,000
Merrimack Valley Regional Transit Authority <sup>a</sup> – Commuter Bus	Boston	Peak	Weekdays	Not Provided	\$6.00	4,340,000	\$420,000	90,000	64,000
Western Contra Costa Transit Authority <sup>a</sup>	San Francisco	All Day	Everyday	Provided	\$5.00	3,470,000	\$1,460,000	360,000	230,000
Ozaukee County Express	Milwaukee	Peak	Weekdays	Provided	\$3.50	1,390,000	\$1,110,000	180,000	90,000

<sup>a</sup> These transit systems provide additional fixed-route transit services in addition to providing commuter bus services. The statistics listed in this table apply only to the commuter bus services provided by these transit systems.

Source: National Transit Database and SEWRPC

**Table 4.2**  
**Selected 2015 Service Characteristics for the Ozaukee County Shared-Ride Taxi Service and Its Peer Systems**

Transit System	Metropolitan Area	Service Type	Weekday Service Hours	Service Days	Adult Cash Fare	Urbanized Area Population	Operating Budget	Revenue Vehicle Miles Operated	Service Area in Square Miles	Population in Service Area	Annual Passenger Trips
Washington County Shared-Ride Taxi	Milwaukee	Advanced Reservation	5:00 a.m. - 11:00 p.m.	7 Days a Week	\$4.25 - \$9.00	1,390,000	\$2,200,000	1,150,000	435	134,000	94,000
Miami County Public Transit	Dayton	Advanced Reservation	5:00 a.m. - 6:00 p.m.	Weekdays and Saturday	\$4.00	720,000	\$1,040,000	360,000	410	105,000	40,000
Greene County Area Transit Service	Dayton	Advanced Reservation	6:00 a.m. - 9:00 p.m.	7 Days a Week	\$3.00 - \$6.00	720,000	\$3,270,000	970,000	425	165,000	181,000
Clermont Transportation Connection	Cincinnati	Advanced Reservation	6:00 a.m. - 6:00 p.m.	Weekdays and Saturday	\$4.75	1,650,000	\$2,160,000	890,000	452	203,000	118,000
Cumberland Area Transit System	Philadelphia	Advanced Reservation	8:00 a.m. - 4:00 p.m.	Weekdays	Free	5,510,000	\$2,370,000	440,000	484	154,000	75,000
Valley Transit District	New Haven, CT	Advanced Reservation	6:00 a.m. - 5:30 p.m.	Weekdays	\$4.50	960,000	\$1,430,000	260,000	58	89,000	73,000
Ozaukee County Shared-Ride Taxi	Milwaukee	Advanced Reservation	5:00 a.m. - 10:00 p.m.	7 Days a Week	\$3.00 - \$6.75	1,390,000	\$1,770,000	1,060,000	235	88,000	110,000

Source: National Transit Database and SEWRPC

communities making up a much smaller geographic area. The people per square mile within each peer’s service area is relatively similar to the County’s Shared-Ride Taxi service, and fares are generally similar to those charged by Ozaukee County, excluding one service that does not charge a fare.

### 4.3 PERFORMANCE EVALUATION OF THE OZAUKEE COUNTY EXPRESS

Evaluating the performance of the Express service requires identifying which standards from Figure 3.1 need to be examined to determine if the service is meeting the public transit service objectives established in Chapter 3 of this report. Those three objectives seek to provide a service that meets the demand and need for transit service between Ozaukee County and Milwaukee County; operates safely, reliably, conveniently, comfortably, and efficiently; and utilizes public resources cost-effectively.

**Figure 4.2**  
**Objective 1 and Associated Standards Applicable to the Evaluation of the Ozaukee County Express**

OBJECTIVE 1													
<b>Serve the travel needs of residents traveling within Ozaukee County, County residents commuting to jobs in Milwaukee County, and County employers seeking workers.</b>													
Applicable Design and Operating Standards													
<p><b>1. Commuter Bus Service</b>            Serve major travel corridors with commuter bus service by connecting major activity centers and concentrations of significant urban development within the County and the Region.</p>													
Applicable Performance Standards and Associated Performance Measures													
<p><b>1. Major Activity Centers</b>            Maximize the number of major activity centers and facilities for transit-dependent people served by transit. This is measured by the number of activity centers within one-quarter mile of a local bus or shuttle route, one-half mile of a commuter bus route, or within the service area of a shared-ride taxi service. Major activity centers include the following:<sup>a</sup></p> <ol style="list-style-type: none"> <li>a. Commercial areas</li> <li>b. Educational institutions</li> <li>c. Medical centers</li> <li>d. Employers</li> <li>e. Facilities serving transit-dependent populations</li> </ol>	<p><b>2. Population</b>            Maximize the population served by transit. Residents are considered served if they are within the following distances of a fixed-route transit service, or are within the service area of a shared-ride taxi service.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="2" style="text-align: left;"><u>Service Type</u></th> <th colspan="2" style="text-align: center;">Distance from Bus Stop</th> </tr> <tr> <th style="text-align: center;"><u>Walking</u></th> <th style="text-align: center;"><u>Driving</u></th> </tr> </thead> <tbody> <tr> <td>Commuter Bus</td> <td style="text-align: center;">½ Mile</td> <td style="text-align: center;">3 Miles</td> </tr> <tr> <td>Local Shuttle</td> <td style="text-align: center;">¼ Mile</td> <td style="text-align: center;">--</td> </tr> </tbody> </table>	<u>Service Type</u>	Distance from Bus Stop		<u>Walking</u>	<u>Driving</u>	Commuter Bus	½ Mile	3 Miles	Local Shuttle	¼ Mile	--	<p><b>3. Employment</b>            Maximize the number of jobs served by transit. This is measured by the total employment at businesses located within one-quarter mile of local bus or shuttle routes, one-half mile of a commuter bus route, or within the service area of a demand-response service.</p>
<u>Service Type</u>	Distance from Bus Stop												
	<u>Walking</u>	<u>Driving</u>											
Commuter Bus	½ Mile	3 Miles											
Local Shuttle	¼ Mile	--											

<sup>a</sup> In order to be considered a major activity center, the following definitions must apply:

- Commercial areas are concentrations of retail and service establishments that typically include a department store or a discount store along with a supermarket on 15 to 60 acres, totaling 150,000 or more square feet of gross leasable floor space
- Educational institutions are the main campus of traditional four-year institutions of higher education and public technical colleges
- Medical centers are all hospitals and clinics with 10 or more physicians
- Employers are all employers with more than 100 employees, or clusters of adjacent employers with collectively more than 100 employees such as business or industrial parks
- Facilities serving transit-dependent populations are senior centers, senior meal sites, residential facilities for seniors and/or people with disabilities, residential facilities for low-income individuals, and government facilities that provide significant services to members of transit-dependent population groups

Source: SEWRPC

### **Objective 1: Meet the Need and Demand for Service**

In order to determine if the Express effectively serves existing travel patterns, meeting the demand and need for transit services between Ozaukee County and Milwaukee County, each applicable standard and associated performance measure(s) were individually evaluated. These individual evaluations were collectively considered to determine how effectively the current service meets the overall objective. Figure 4.2 contains the full text of Objective 1, the applicable design and performance standards, and associated performance measures used to evaluate the Express service’s fulfillment of the objective.

#### **Commuter Bus Service Design and Operating Standard**

The Express service successfully fulfills the Commuter Bus Service Design and Operating Standard, as it serves a major travel corridor and connects major activity centers and concentrations of significant urban development within the Region.

### **Major Activity Centers Performance Standard**

The Major Activity Centers Performance Standard encourages maximizing the number of major activity centers used by transit-dependent people within the service area of the transit service. Determining how many major activity centers are served by the Express requires looking at different types of activity centers in Ozaukee County and Milwaukee County. One set of activity centers must be analyzed to determine how well the Express meets the standard for individuals who live in Ozaukee County and wish to travel to Milwaukee County, while a separate set must be analyzed to determine how well the Express meets the standard for individuals who live in Milwaukee County and wish to work in Ozaukee County.

To analyze access to major activity centers for individuals making a traditional commute trip into Milwaukee County, Map 4.1 displays the location of the residential facilities for transit-dependent populations in Ozaukee County, while Table 4.3 quantifies the number and percentage of these facilities within a three-, five-, and seven-mile drive or taxi ride of a park-ride lot served by the Express. Table 4.3 indicates that almost two-thirds of the residential facilities for transit-dependent populations are within three miles of a park-ride lot, and almost all residential facilities for transit-dependent populations in Ozaukee County are within seven miles of a park-ride lot.

Map 4.2 shows the locations of job resource centers, major employers, major medical centers, major institutions of higher education, and major commercial areas in Milwaukee County, and also outlines the areas within one-half mile of a Express stop and one-quarter mile of a 15-minute ride on a connecting local bus service provided by the Milwaukee County Transit System (MCTS). Table 4.3 displays the quantity and percentage of these major activity centers within the service area of the Express and connecting local bus services. As data shown in Table 2.3 in Chapter 2 of this report demonstrate, the vast majority of trips served by the Express are for work purposes, and Table 4.3 shows that more than one-quarter of the major employers in Milwaukee County are served by the Express and connecting local bus service. New routes or route extensions could increase this coverage. More than half of the main campuses of technical colleges or four-year traditional institutions of higher education are accessible via the Express or a connecting local service, while only 14 percent of Milwaukee County's major medical facilities are accessible from the Express or a connecting local bus route.

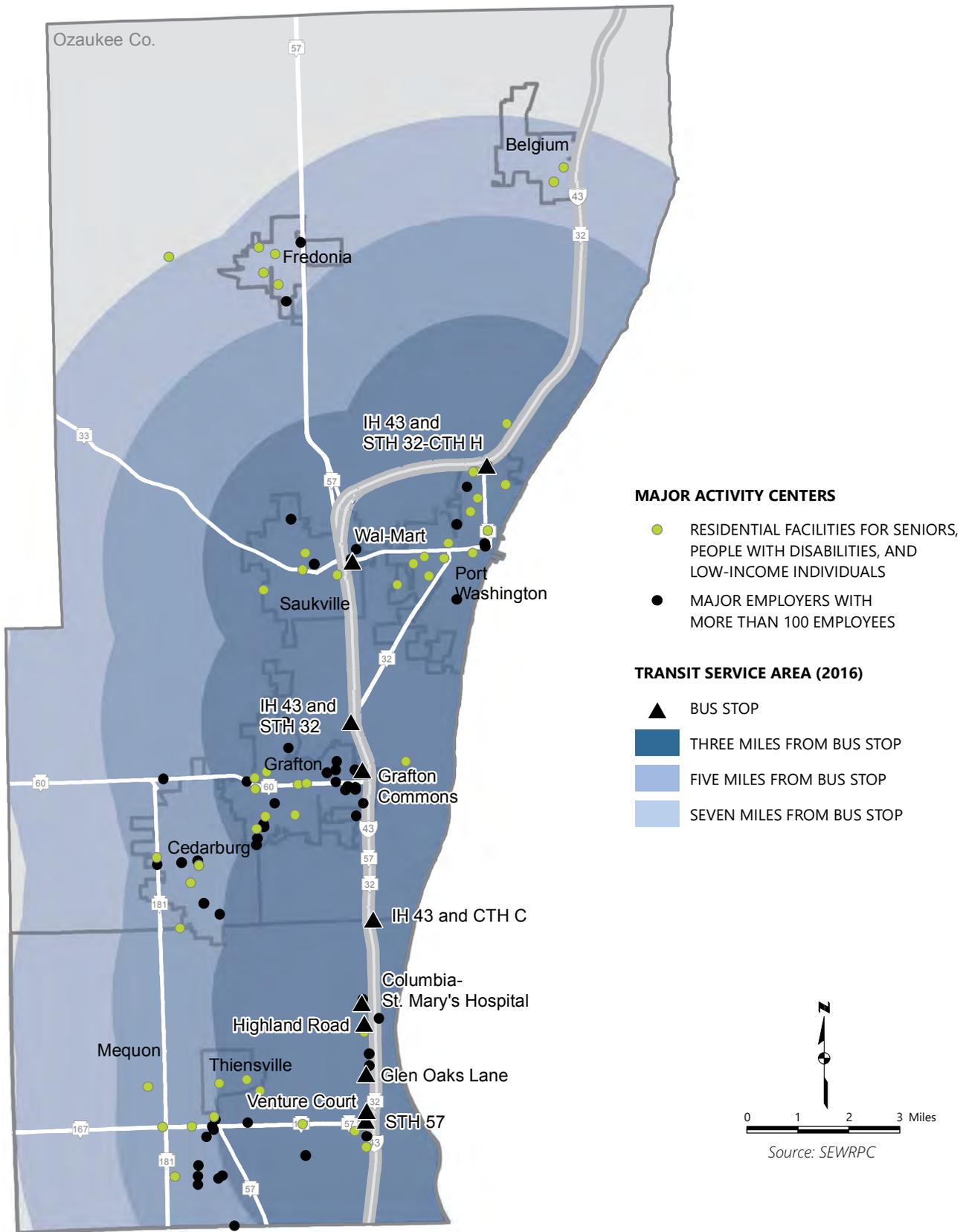
To analyze accessibility to and from major activity centers for individuals making a reverse commute trip to a job in Ozaukee County, Map 4.1 also displays major employers in the County. Major employers are considered accessible if they are within walking distance of an Express stop, or within a 15-minute ride on a connecting Shared-Ride Taxi trip. Using a typical average travel speed for a Shared-Ride Taxi trip, it is assumed that a destination within five miles of an Express stop is accessible via a connecting Shared-Ride Taxi trip of 15 minutes or less. Table 4.3 displays the quantity and percentage of employers within the service area of the Express and a connecting Shared-Ride Taxi trip of 15 minutes or less. Nearly all of the County's major employers are accessible from the Express via a relatively short connecting trip on the Shared-Ride Taxi service.

For the same reason, Map 4.2 includes residential facilities for transit-dependent populations in Milwaukee County, and Table 4.3 quantifies the number of those facilities that are served by the Express. As the Express does not serve any park-ride lots in Milwaukee County, potential travelers from these residential facilities would most likely rely on walking to an Express stop or using a connecting local transit service and transferring to the Express. As with other measures in this section, it is assumed that 15 minutes on a connecting local service is the upper limit for a residential facility to be considered served. More than 11 percent of Milwaukee County's residential facilities for transit-dependent populations are within a 15-minute ride on a connecting local transit service of a bus stop served by the Express.

### **Population Performance Standard**

The Population Performance Standard recommends maximizing the number of residents with access to transit. In the case of the Express, this is measured using the number of people within a three-mile driving access distance to the park-ride lots served (or within one-half mile walking distance of non-park-ride bus stop, whichever is greater). Recognizing that an individual may choose to drive farther than that to reach the park-ride lot, five-mile and seven-mile access distances are also measured. Map 4.3 displays the residential population density by quarter-section in Ozaukee County, with a three-, five-, and seven-mile access distance from each park-ride lot served by the Express overlaid on top. As of the 2010 U.S. Census,

**Map 4.1**  
**Major Activity Centers in Ozaukee County Served by the Ozaukee County Express**



**Table 4.3**  
**Major Activity Centers Served by the Ozaukee County Express**

In Ozaukee County				
Major Activity Center Type	Distance from Bus Stop Served by Express	Number of Activity Centers Served	Percent of All Activity Centers of Type Within County	
			Residential Facilities for Transit-Dependent Populations	3 Miles or Less
	5 Miles or Less	46	86.8	
	7 Miles or Less	52	98.1	
Major Employers	5 Miles or Less	54	96.4	

In Milwaukee County				
Major Activity Center Type	Within Walking Distance of a Bus Stop Served by Express		Within 15 Minutes on a Connecting Local Transit Service	
	Number	Percent	Number	Percent
Major Employers	82	16.0	131	25.5
Job Resource Centers	1	14.3	1	14.3
Major Medical Facilities	1	2.9	5	14.3
Major Institutions of Higher Education	3	33.3	5	55.6
Major Commercial Areas	3	20.0	5	33.3
Residential Facilities for Transit-Dependent Populations	4	0.7	71	11.6

Source: SEWRPC

approximately 43,100 residents (50 percent of all County residents) lived within a three-mile drive or taxi ride of a park-ride lot served by the Express, 67,000 residents (78 percent of all County residents) lived within a five-mile drive or taxi ride of a park-ride lot served by the Express, and 83,500 residents (97 percent of all County residents) lived within a seven-mile drive or taxi ride of a park-ride lot served by the Express.

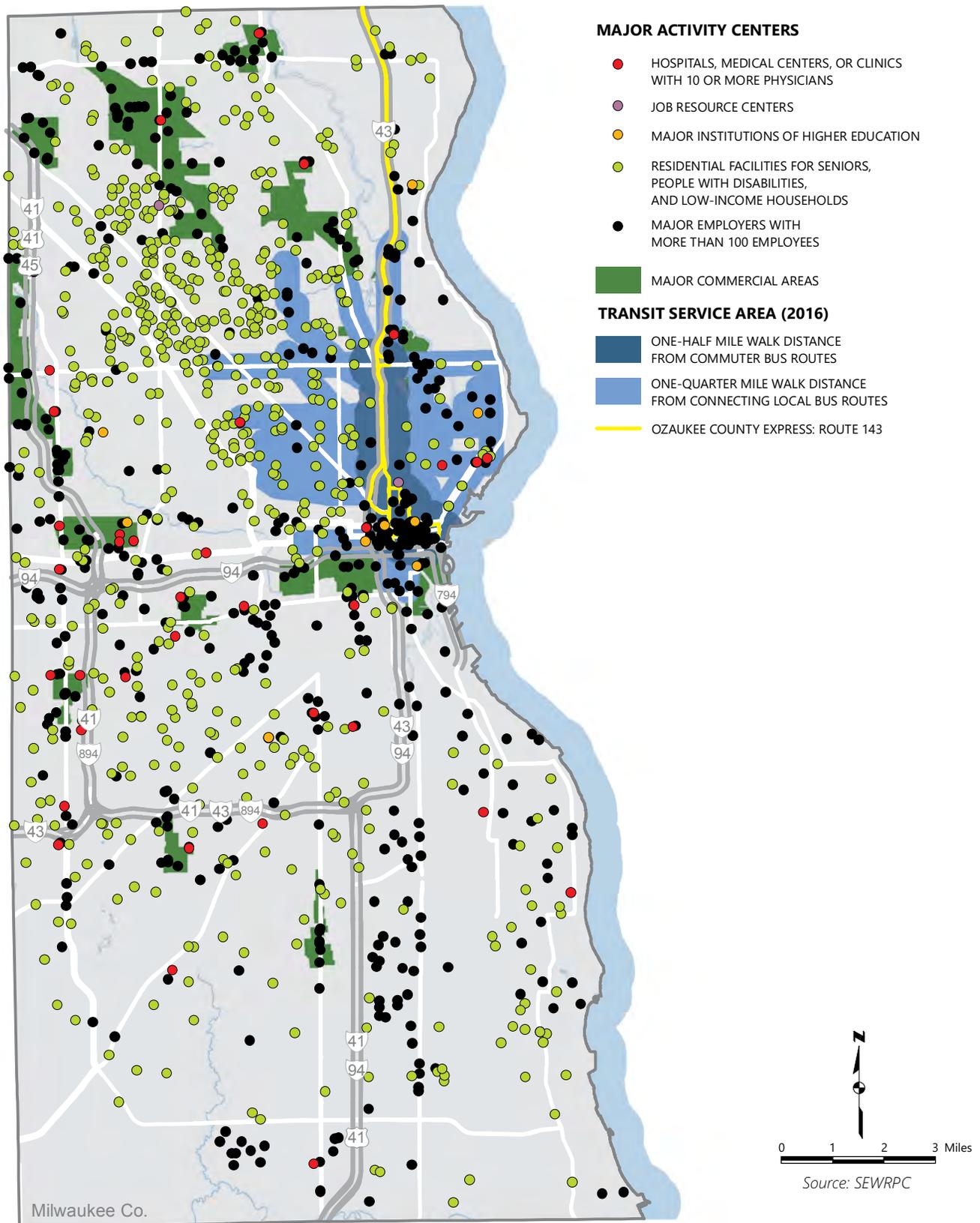
To measure access to transit for individuals commuting to a job in Ozaukee County, Map 4.4 displays the residential population density by quarter-section in Milwaukee County, with a one-half mile walking distance of an Express stop and a one-quarter mile walking distance of a 15-minute ride on a connecting local bus service overlaid on top. As of the 2010 U.S. Census, approximately 72,300 residents (8 percent of all County residents) live within a one-half mile walk of a bus stop served by the Express and 254,500 residents (27 percent of all County residents) live within a one-quarter mile walk of a local route that connects to the Express in 15 minutes or less. Due to the size of census blocks and tracts in some areas of Ozaukee County, quarter section data developed from the 2010 U.S. Census were used to develop the estimates of population served, rather than more recent data from the American Community Survey.

**Employment Performance Standard**

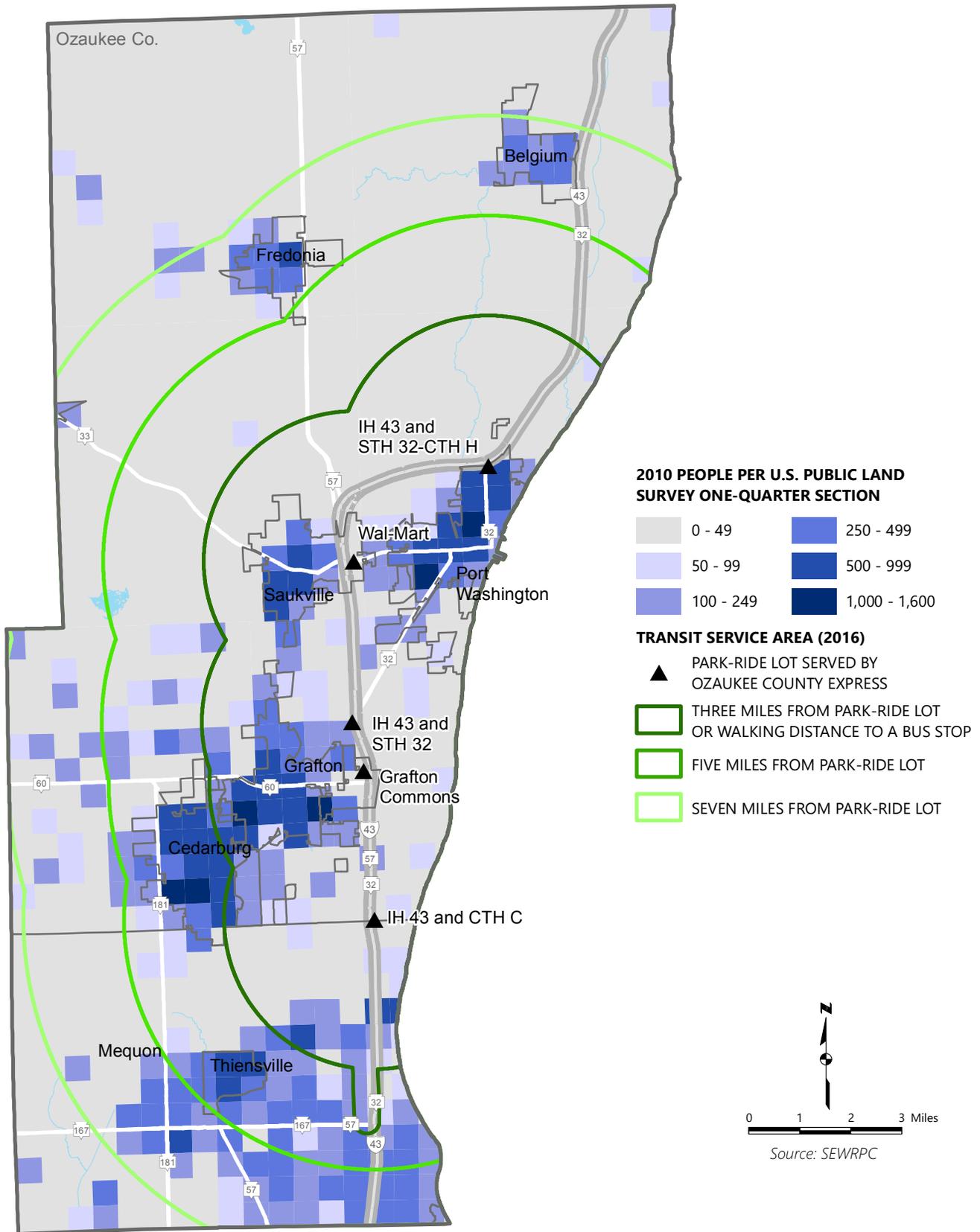
The employment standard recommends maximizing the number of jobs accessible via transit. The total employment within walking distance of an Express stop or a 15-minute ride on a connecting local bus service was measured to partially determine how well the Express fulfills the Employment Performance Standard. Map 4.5 displays the employment density by quarter-section in Milwaukee County, with transit service walk access distances overlaid on top. Many of the highest employment density areas in the region are served by the Express or a connecting local service, with approximately 110,800 jobs (19 percent of all County jobs in 2010) within a one-half mile walk of a bus stop served by the Express and 195,800 jobs (34 percent of all County jobs in 2010) within a one-quarter mile walk of a local route that connects to the Express in 15 minutes or less. This is not intended to indicate that all of those jobs are served, as service hours and frequency on the Express are unlikely to align with every job within walking distance of a bus stop.

To measure access to transit for individuals commuting to a job in Ozaukee County, Map 4.6 displays the employment density by quarter-section in Ozaukee County, with five-mile buffer around each Express stop, representing a 15-minute ride via the Shared-Ride Taxi. Nearly all of the employers in the County are within a 15-minute ride on the Shared-Ride Taxi of an Express stop, with approximately 49,100 jobs (96 percent of all Ozaukee County jobs in 2010) within that area. This is not intended to indicate that all of those jobs are served, as service hours and frequency on the Express are unlikely to align with every job within that buffer.

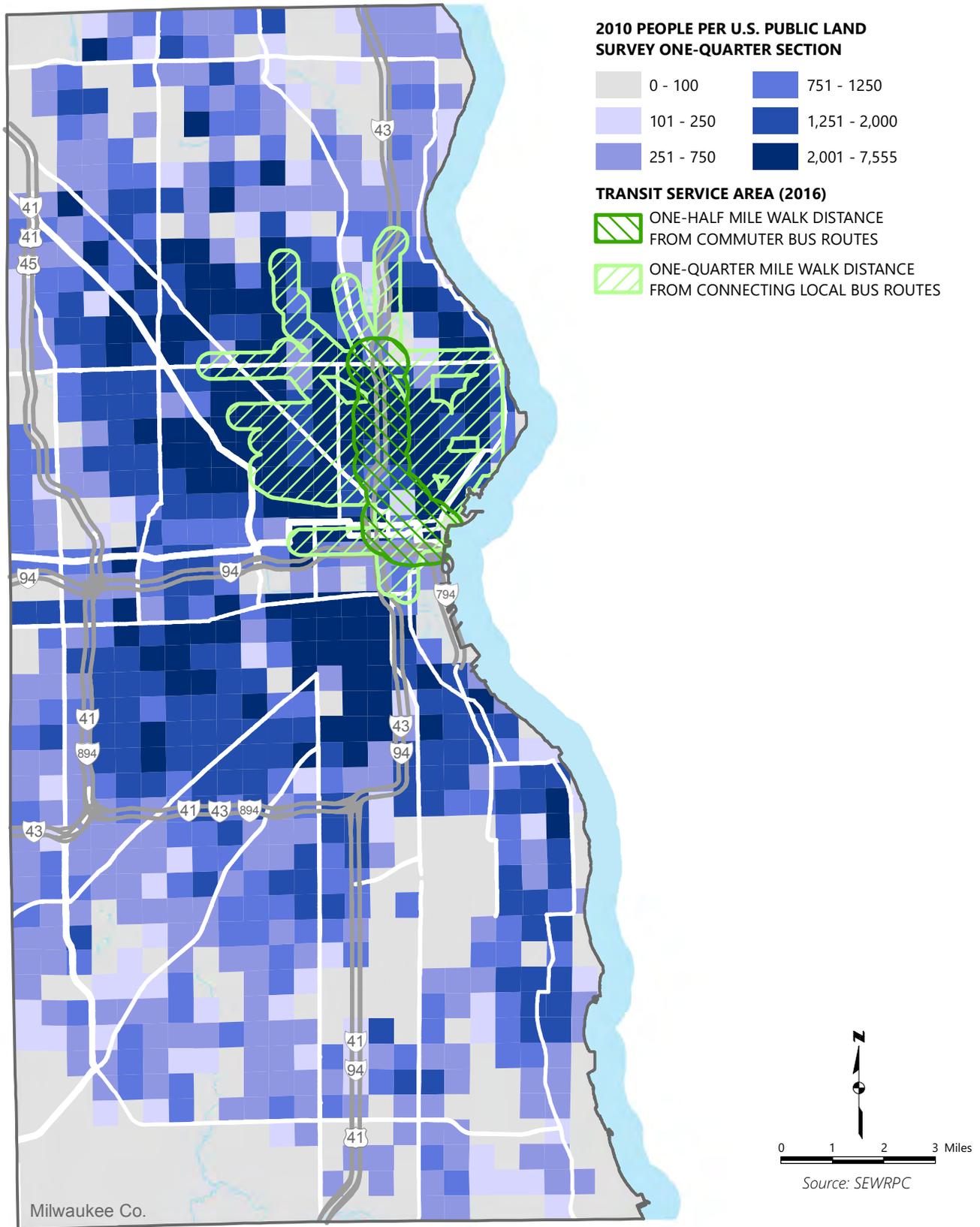
**Map 4.2**  
**Major Activity Centers in Milwaukee County Served by the Ozaukee County Express**



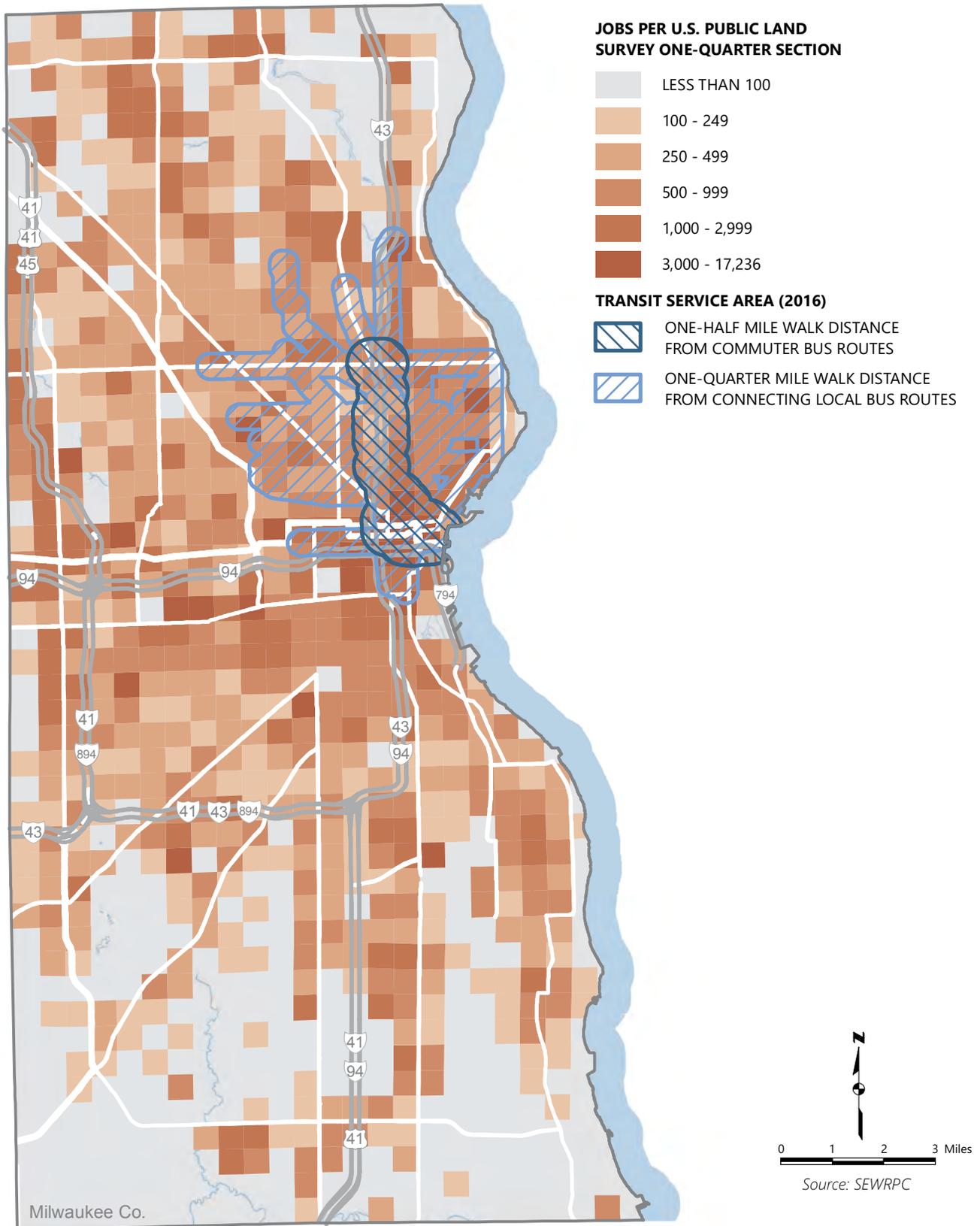
**Map 4.3**  
**Population in Ozaukee County Served by the Ozaukee County Express**



**Map 4.4**  
**Population in Milwaukee County Served by the Ozaukee County Express**

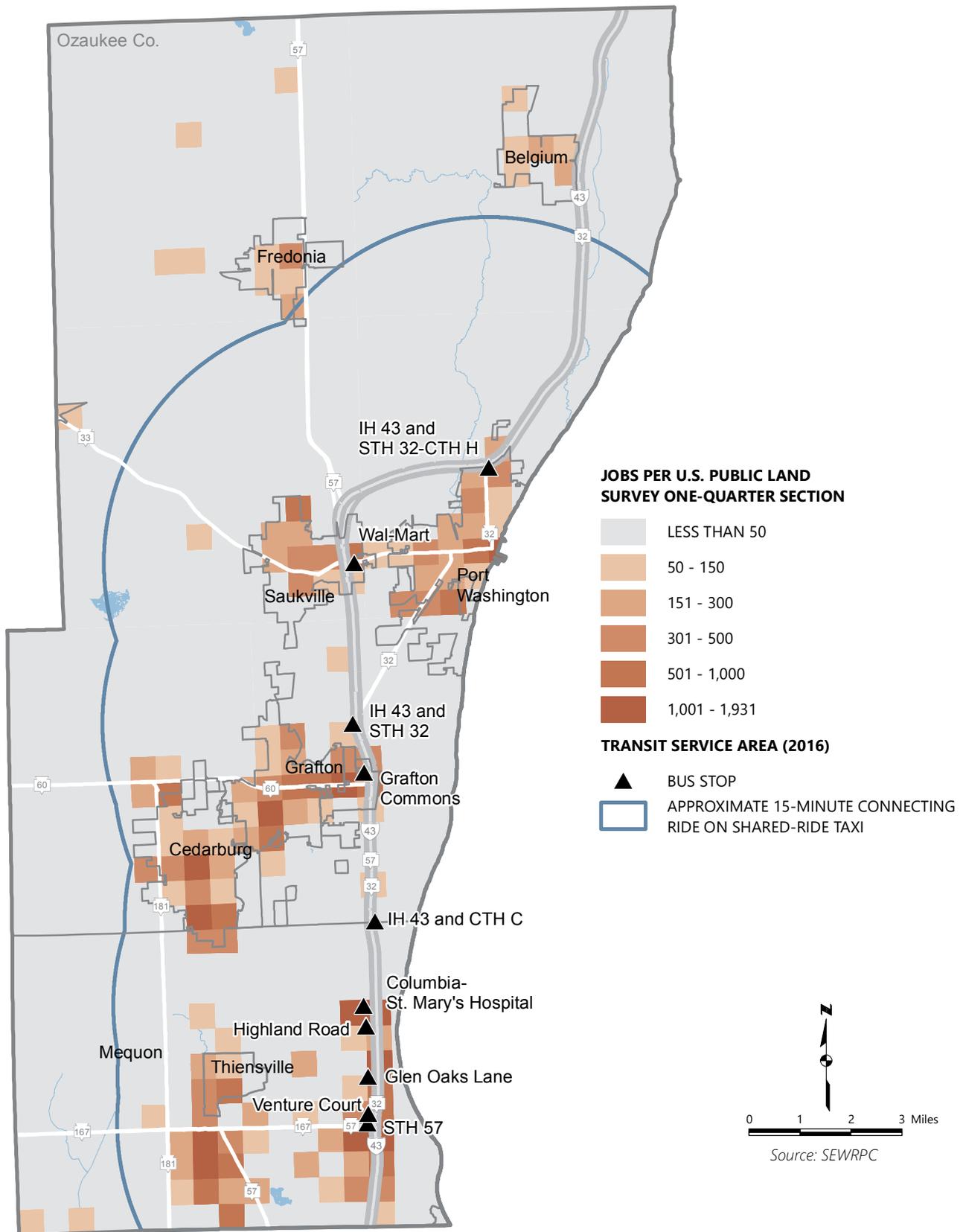


**Map 4.5**  
**Employment in Milwaukee County Served by the Ozaukee County Express**



**Map 4.6**

**Employment in Ozaukee County Served by Shared-Ride Taxi Connecting to the Ozaukee County Express**



**Figure 4.3**  
**Objective 2 and Associated Standards Applicable to the Evaluation of the Ozaukee County Express**

OBJECTIVE 2		
<b>Provide efficient, safe, reliable, convenient, and comfortable transit services in Ozaukee County.</b>		
Applicable Design and Operating Standards		
<p><b>1. Route Design</b>                      Extend commuter bus routes as needed or pair them with a local shuttle to perform a collection-distribution function at the ends of the route. Routes should have direct alignments with a limited number of turns, and should be arranged to minimize duplication of service and unnecessary transfers.</p>	<p><b>2. Bus Stop and Park/Ride Lot Design</b>                      Clearly mark bus stops and park-ride lots with easily recognizable signs and locate them so as to minimize the walking or driving distance over an accessible path to and from residential areas and major activity centers, and to facilitate connections with other transit services where appropriate. Place stops every two to three blocks apart on local bus routes and place park-ride lots at least one mile apart on commuter bus routes. Within business parks, shuttle route stop spacing may need to differ from standard local route stop spacing based on the spacing between businesses and the presence or lack of sidewalks and crosswalks.</p>	
<p><b>4. Service Frequency and Availability</b>                      Operate all fixed-route transit services at least every 30 minutes during the weekday peak period, and operate local fixed-route services at least every 60 minutes during off-peak service hours. Shared-ride taxi services should have a maximum advance reservation requirement of 24 hours, and seek to have less than 3 percent of same day service requests denied.</p>	<p><b>5. Service Travel Speeds</b>                      Operate transit services such that travel speeds are not less than 10 miles per hour for local fixed-route and shared-ride taxi services, and not less than 25 miles per hour for commuter bus services.</p>	<p><b>6. Passenger Demand</b>                      Provide adequate service and vehicle capacity to meet existing and anticipated demand. The average passenger load factor, measured as the ratio of passengers to seats, should not exceed 1.00 during any period for shared-ride taxi. Fixed route transit services should not exceed an average passenger load factor of 1.50.</p>
Applicable Performance Standards and Associated Performance Measures		
<p><b>1. Ridership and Service Effectiveness</b>                      Maximize ridership on and the effectiveness of transit services. This is measured using passengers per capita, total passengers per vehicle hour, total passengers per vehicle mile, and passenger miles per vehicle mile which will be compared to similar transit systems. Transit services with service effectiveness measures more than 20 percent below the median of the peer comparison group will be reviewed for potential changes to their routes, runs, service areas, and service periods.</p>	<p><b>2. On-Time Performance</b>                      Maximize adherence to published schedules for fixed-route transit services and scheduled rider pickup and drop off times for shared-ride taxi services. Regularly monitor performance and make adjustments to any local transit service with less than 90 percent and any commuter bus service with less than 70 percent of trips on time (defined as being between zero minutes early and three minutes late for fixed-route services and 30 minutes early or late for shared-ride taxi services).</p>	<p><b>3. Travel Time</b>                      Keep travel times on transit services reasonable in comparison to travel time by automobiles for similar trips. This standard is measured using the ratio of transit to automobile distance and the ratio of transit to automobile travel time.</p>

Source: SEWRPC

**Objective 2: Operating Safely, Reliably, Conveniently, Comfortably, and Efficiently**

Figure 4.3 contains the applicable standards that were used to determine if the Express is providing a service that is efficient, safe, reliable, convenient, and comfortable.

**Route Design and Operating Standard**

The Express service has a direct alignment with a limited number of turns, and minimizes unnecessary transfers. It does not currently serve a collector-distributor function at the end of its route, although it does along N. Port Washington Road in the City of Mequon. Also, there are no existing local shuttle routes connected to the Express to perform that collector-distributor function for other parts of the County not adjacent to IH 43.

### ***Bus Stop and Park-Ride Lot Design and Operating Standard***

The park-ride lots and bus stops served by the Express are appropriately spaced and located, with accessible driving and walking paths to each, distances of more than one mile between each park-ride, and bus stops placed at least every two blocks on average. In general, the park-ride lots served by the Express are well-located and easy to access via driving, largely due to being accessible via arterials with quick access to IH 43. The two park-ride lots on private property (at the Walmart on STH 33 and at Grafton Commons near STH 60) are not signed, although they include robust amenities and well-designed, accessible paths to the lot and bus shelter. Awareness of these lots and the Express service would be improved by signage directing residents to these lots on adjacent arterials and segments of IH 43. The three publicly-owned park-ride lots (the Port Washington Lot at STH 32, the Grafton Lot at CTH V and STH 32, and the Cedarburg Lot at CTH C) are well-signed—with directional signage on nearby arterials, IH 43 off-ramps, and advisory signage on IH 43 itself—and include robust amenities such as bike lockers and shelters. However, accessible sidewalks to the Port Washington Lot could be improved by providing a more protected path to the shelter from nearby sidewalks. The Grafton Lot and the Cedarburg Lot do not have accessible paths, although there is little development nearby from which a pedestrian could travel.

All of the bus stops served by the Express are properly signed, and most have accessible sidewalks to and from the stop. The stops adjacent to Ascension/Columbia St. Mary's Hospital on N. Port Washington Road in Mequon should be improved with a bus pad and an accessible sidewalk to the hospital. The stops at Highland Road and N. Port Washington Road could be improved with sidewalk access to adjacent businesses, while a bus pad connecting to the nearby sidewalk should be added to the stop at W. Mequon Road and N. Port Washington Road. To implement accessibility improvements to bus stops and park-ride lots, the County could pursue Federal Transit Administration Enhanced Mobility for Seniors and Individuals with Disabilities Program (Section 5310) funding, which would reimburse 80 percent of the cost of construction. Additional information on specific improvements can be found in Chapter 5, Transit Service Alternatives for the Ozaukee County Transit System.

### ***Service Frequency and Availability Design and Operating Standard***

Fulfilling the Service Frequency and Availability Standard requires that service be provided every 30 minutes during weekday peak periods. The Express meets this standard in the peak direction, which serves first shift jobs of all types in and near downtown Milwaukee. The service does not meet this standard in the reverse direction, which serves largely retail and service jobs near IH 43 in Ozaukee County.

### ***Service Travel Speeds Design and Operating Standard***

The Service Travel Speeds Standard requires that commuter bus services achieve average travel speeds of at least 25 miles per hour over the duration of the route. As scheduled, most of the Express runs meet this standard, with the few that do not occurring during the period of highest congestion on IH 43. Without a method of avoiding congestion on IH 43, the service will not meet this standard for every run.

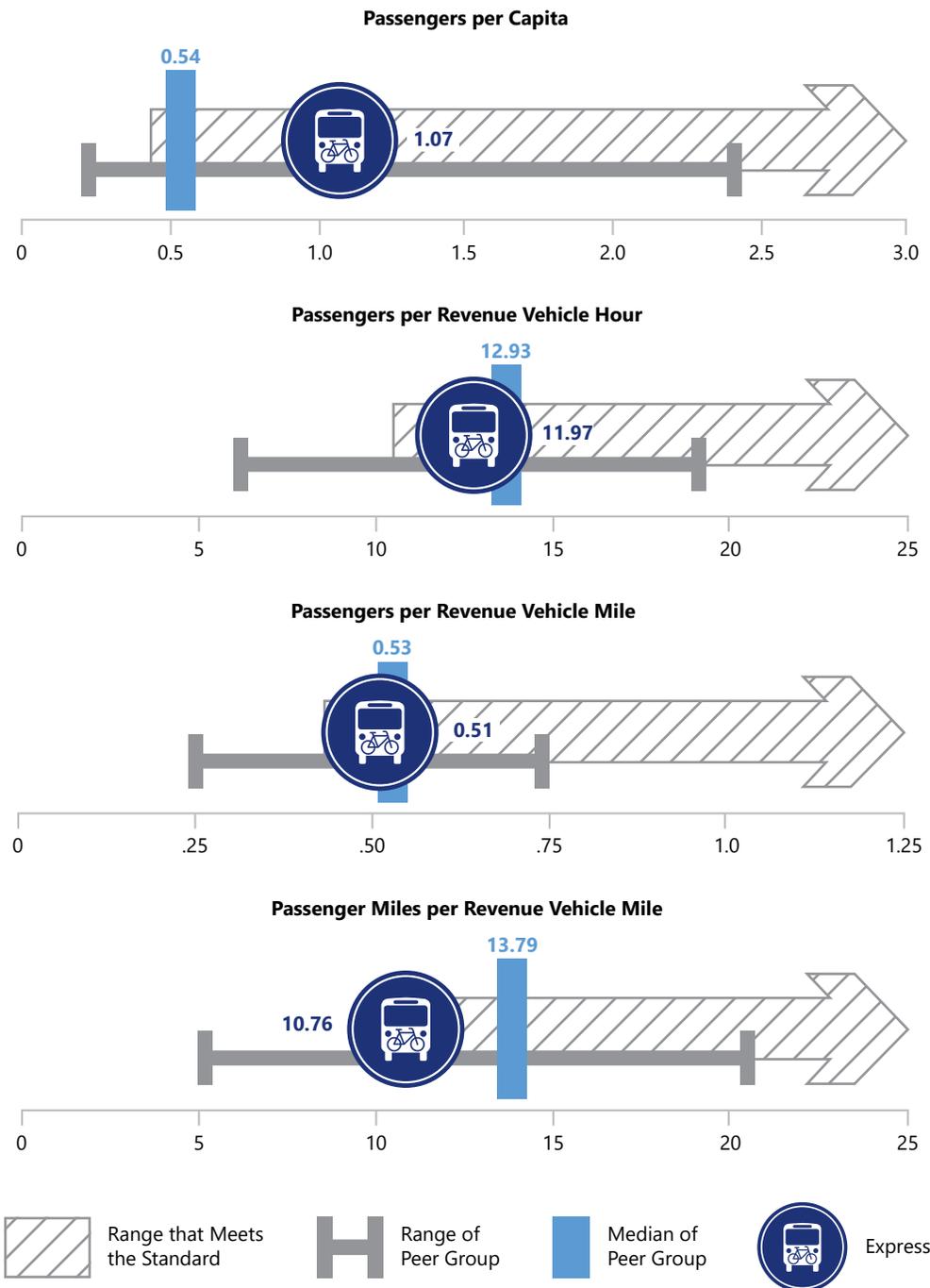
### ***Passenger Demand Design and Operating Standard***

This standard recommends that the average ratio of peak passengers to seats on the Express not exceed 1.50. The vehicles used to operate the Express have 35 seats, so the average peak passenger load on the Express should not exceed 52 passengers. During sample data provided by MCTS for the month of September 2016, the peak leave load on any run was 34 passengers. Based on these data, it is likely that the only runs that exceed 52 passengers are special runs operated each summer during Summerfest, meaning that the annual peak average is well within this standard.

### ***Ridership and Service Effectiveness Performance Standard***

The Ridership and Service Effectiveness Standard uses four performance measures (passengers per capita, passengers per revenue vehicle hour, passengers per revenue vehicle mile, and passenger miles per revenue vehicle mile) to compare the service effectiveness of the Express service to six peer transit systems from around the Nation. If the service effectiveness measures are more than 20 percent below the median of the peer comparison group, this standard encourages modifying routes, runs, service areas, or service periods. Figure 4.4 shows the results of this comparison of the Express to its peers by displaying the range of the peer group's performance, the median of the peer group's performance, the range of performance that meets the standard, and the performance of the Express for each measure. The data for each peer system is presented in Table 4.4.

**Figure 4.4**  
**Ridership and Service Effectiveness Performance Standard: Comparison of**  
**Ozaukee County Express to Peer Group for Associated Performance Measures**



Source: National Transit Database and SEWRPC

**Table 4.4**  
**Ozaukee County Express and Peer Group Data for the Ridership and Service Effectiveness Performance Standard**

Peer System and Metropolitan Area	Performance Measures											
	Passengers per Capita			Passengers per Revenue Vehicle Hour			Passengers per Revenue Vehicle Mile			Passenger Miles per Revenue Vehicle Mile		
	2011	2015	Average Annual Change	2011	2015	Average Annual Change	2011	2015	Average Annual Change	2011	2015	Average Annual Change
Washington County Commuter Express (Milwaukee)	0.96	0.77	-5.33%	13.52	11.47	-3.95%	0.50	0.41	-4.73%	15.22	12.71	-4.29%
Waukesha County Express Bus (Milwaukee)	0.62	0.42	-8.72%	10.40	10.45	0.97%	0.45	0.43	-0.27%	9.53	9.44	0.39%
Butler County Regional Transit Authority – Express <sup>a</sup> (Cincinnati)	0.08	0.20	54.28%	4.05	4.80	12.48%	0.19	0.24	14.74%	4.07	4.87	10.82%
Cobb Community Transit (Atlanta)	0.98	0.32	-9.47%	19.10	19.01	0.30%	0.68	0.72	1.40%	17.76	15.10	-2.36%
Merrimack Valley Regional Transit Authority – Commuter Bus (Boston)	0.16	0.21	7.37%	15.90	12.46	-5.26%	0.97	0.75	-5.29%	27.09	20.64	-5.57%
Western Contra Costa Transit Authority (San Francisco)	2.00	2.44	6.96%	16.50	18.84	4.65%	0.52	0.64	7.45%	12.36	14.86	7.01%
<b>Ozaukee County Express (Milwaukee)</b>	<b>1.32</b>	<b>1.07</b>	<b>-4.66%</b>	<b>16.65</b>	<b>12.93</b>	<b>-5.84%</b>	<b>0.64</b>	<b>0.51</b>	<b>-5.27%</b>	<b>13.03</b>	<b>10.76</b>	<b>-4.64%</b>

<sup>a</sup> The Butler County Regional Transit Authority did not report complete commuter bus information to the National Transit Database in 2011. 2012 information is displayed in this table.

Source: National Transit Database and SEWRPC

Figure 4.4 indicates that the Express is slightly out of the acceptable range for one of the four performance measures. Passengers per capita is largely dependent on how well a system covers its service area, and as Ozaukee County is a relatively long, thin County, with much of its population adjacent to the corridor served by the Express, it is perhaps unsurprising that the Express performs extremely well compared to its peers on this measure.

Likely due to the reasonably high ridership on the Express and the relatively minimal amount of congestion on IH 43 at most times of the day, the Express performs well compared to peers in regards to passengers per revenue vehicle hour of service. The Express also performs well, although not quite as strongly, on the passengers per revenue vehicle mile of service measure, averaging near the median of the peer group (and well within the limit of the standard). Compared to systems in the peer group, the majority of Express passengers are traveling shorter average distances per trip, as the parts of Ozaukee County that generate much of the Express' ridership are relatively close to downtown Milwaukee compared to peers in this metro area, and this metro area is relatively compact compared to the metro areas served by the other peer services.

In contrast to the other three performance measures that are associated with the Ridership and Service Effectiveness Standard, the Express is not quite within 20 percent of the median of the peer group under the passenger miles per revenue vehicle mile of service measure. This performance measure essentially serves as a proxy for the average number of seats filled on a vehicle over the course of its revenue trip, and some of the low performance on this measure is related to the relatively low ridership on Express runs that serve reverse commute trips. In addition, as mentioned previously, a large proportion of the Express ridership comes from the Grafton area, meaning that the vehicles would have a low number of passengers on board for the additional miles of service to and from the Port Washington Area. In general, the Express performs reasonably well on this standard, meeting the standard under three of the four associated measures.

### ***On-Time Performance Standard***

The On-Time Performance Standard states that 70 percent of trips on a fixed-route service should be within zero minutes early and three minutes late. Based on information provided by MCTS from September 2015, the Express is within zero minutes early and three minutes late on 68.3 percent of trips, just slightly below the standard. If certain runs are regularly late, schedule adjustments may improve on-time performance. However, it is likely that a large number of late trips are related to congestion, and therefore a large improvement in on-time performance would likely require reducing the impact of congestion on the Express through dedicated lanes or bus-on-shoulder operations.

### ***Travel Time Performance Standard***

The Travel Time Performance Standard encourages that travel times by transit be kept reasonable in comparison to travel times by automobiles for similar trips. Table 4.5 compares congested in-vehicle automobile travel times to typical in-vehicle Express travel times, and shows that the ratio between transit travel times and automobile travel times generally is reasonable. However, a few trips do exceed a ratio of 2.00, which is generally beyond what many riders are willing to accept when determining whether to use a transit service. Reducing this ratio on those trips that exceed 2.00 would likely require that the Express have a reliable way to avoid congestion during peak periods.

### **Objective 3: Utilizing Public Resources Cost-Effectively**

Objective 3 recognizes that public funds are limited, and must be used efficiently. In order to determine if public funds are being spent well, the following analyses compare the Express to its peer group using a number of performance measures. The applicable standards and performance measures used to measure how efficiently the Express is using public funds are shown in Figure 4.5.

### ***Fare Structure Design and Operating Standard***

The Fare Structure Standard recommends premium fares for premium services and discounts for priority users, such as seniors or people with disabilities. The Express fulfills this standard, with \$3.50 base standard adult fare—higher than that of a typical local bus service in the Region—and a discounted fare of \$1.60 for seniors and people with disabilities. In cooperation with MCTS, frequent Express riders can also purchase discounted 7- and 31-day passes.

### ***Operating Expenses Performance Standard***

By comparing the annual percent increase between 2011 and 2015 in operating expenses per total vehicle mile, operating expenses per revenue vehicle mile, operating expenses per total vehicle hour, operating expenses per revenue vehicle hour, and operating assistance per passenger, the Operating Expenses Performance Standard ensures that the inflationary growth in operating costs is comparable to that of peer systems. In order to fulfill the standard, none of the annual percent increases in the five performance measures should exceed the median percentage increases experienced by the peer group. Figure 4.6 displays a comparison of the annual percent change for each metric for 2011 to 2015 between the range of the peer group's performance, the range of performance that meets the standard, the median of the peer group's performance, and the performance of the Express. Table 4.6 provides the detailed data used to develop Figure 4.6.

The Express performs well on the four measures that compare growth in operating expenses per various measures of amounts of service provided. The average annual percent change in operating expenses per revenue vehicle mile, per revenue vehicle hour, per total vehicle mile, and per total vehicle hour all meet the corresponding standard, with the growth rate of operating expenses per unit of service for the Express less than the median of the peer group for these performance measures. However, the actual unit costs in 2015 (shown in Table 4.6) for these four performance measures are higher than all of the systems in the peer group, which is perhaps a cause for concern.

The Express performed less well in the annual percent change in operating assistance per passenger performance measure, as the decline in ridership between 2014 and 2015 increased the average subsidy amount per passenger significantly. However, even with the recent increase, the amount of operating assistance per passenger is still lower than two of the peer systems, most notably Waukesha County's commuter bus services. Overall, the Express performs reasonably well on this standard, with generally declining operating costs per unit of service between 2011 and 2015.

**Table 4.5**  
**Travel Time Comparison Between the Ozaukee County Express and Automobiles: Minimum and Maximum Typical Travel Times**

Trip Origin	Trip Destination	Traditional Commute Trips						Ratio (transit to automobile)
		Minimum Typical Travel Time (minutes)			Maximum Typical Travel Time (minutes)			
		Express	Automobile <sup>a</sup>	Difference (minutes)	Express	Automobile	Difference (minutes)	
Port Washington Park & Ride	E. Wisconsin Avenue and N. Cass Street	54	31	23	59	37	22	1.74
		39	23	16	52	29	23	1.70
		27	18	9	38	24	14	1.50
		28	20	8	46	26	20	1.40
E. Wisconsin Avenue and N. Cass Street	Port Washington Park & Ride	59	30	29	73	35	38	1.97
		35	23	12	52	27	25	1.52
		27	18	9	39	23	16	1.50
		30	20	10	47	25	22	1.50
<b>Reverse Commute Trips</b>								
Trip Origin	Trip Destination	Reverse Commute Trips						Ratio (transit to automobile)
		Minimum Typical Travel Time (minutes)			Maximum Typical Travel Time (minutes)			
		Express	Automobile <sup>a</sup>	Difference (minutes)	Express	Automobile	Difference (minutes)	
N. 6th Street and W. Highland Avenue	Grafton Commons	28	21	7	38	26	12	1.33
		34	19	15	34	23	13	1.79
		24	16	8	24	21	3	1.50
		20	14	6	20	18	2	1.43
Grafton Commons	N. 6th Street and W. Highland Avenue	44	21	23	44	27	17	2.10
		36	19	17	36	25	11	1.89
		33	16	17	33	22	11	2.06
		24	14	10	25	19	6	1.71
Venture Court	N. 8th Street and W. North Avenue	24	14	10	25	19	6	1.71
		33	16	17	33	22	11	2.06
		36	19	17	36	25	11	1.89
		44	21	23	44	27	17	2.10

<sup>a</sup> Minimum travel times for automobiles were derived from free flow travel occurring during off-peak travel periods.

Source: MCTS and SEWRPC

**Figure 4.5**  
**Objective 3 and Associated Standards Applicable to the Evaluation of the Ozaukee County Express**

OBJECTIVE 3	
<b>Meet all other objectives at the lowest possible cost. Given limited public funds, this objective seeks to permit elected officials the flexibility to balance the standards associated with Objectives 1 and 2 with the level of public funding required to fully meet those standards.</b>	
Applicable Design and Operating Standards	
<b>2. Fare Structure</b> Charge premium fares for premium services, and discounted fares for priority population groups and frequent riders.	
Applicable Performance Standards and Associated Performance Measures	
<b>1. Operating Expenses</b> Minimize the operating expenses per total and revenue vehicle mile, the operating expenses per total and revenue vehicle hour, and the operating assistance per passenger. Annual increases in such costs should not exceed the median percentage increases experienced by comparable transit systems.	<b>3. Cost Effectiveness</b> Review transit services with substandard cost effectiveness for potential changes to their routes, runs, service areas, and service periods. Cost effectiveness is considered substandard when the operating expenses per passenger, or operating expenses per passenger mile are more than 20 percent above, or the farebox recovery ratio is more than 20 percent below, the median for comparable transit systems.

Source: SEWRPC

### **Cost Effectiveness Performance Standard**

The Cost Effectiveness Standard recommends that the operating cost per passenger and operating cost per passenger mile should be no greater than 20 percent above the median of the peer group, and that the farebox recovery ratio should not be more than 20 percent below the median of the peer group. If a transit service is substandard under any of these performance measures, it may indicate that changes to routes, runs, service areas, and service periods need to be considered. Figure 4.7 shows the range of the peer group’s performance, the median of the peer group’s performance, the range of performance that meets the standard, and the performance of the Express for these performance measures. Table 4.7 provides the detailed data used to develop Figure 4.7.

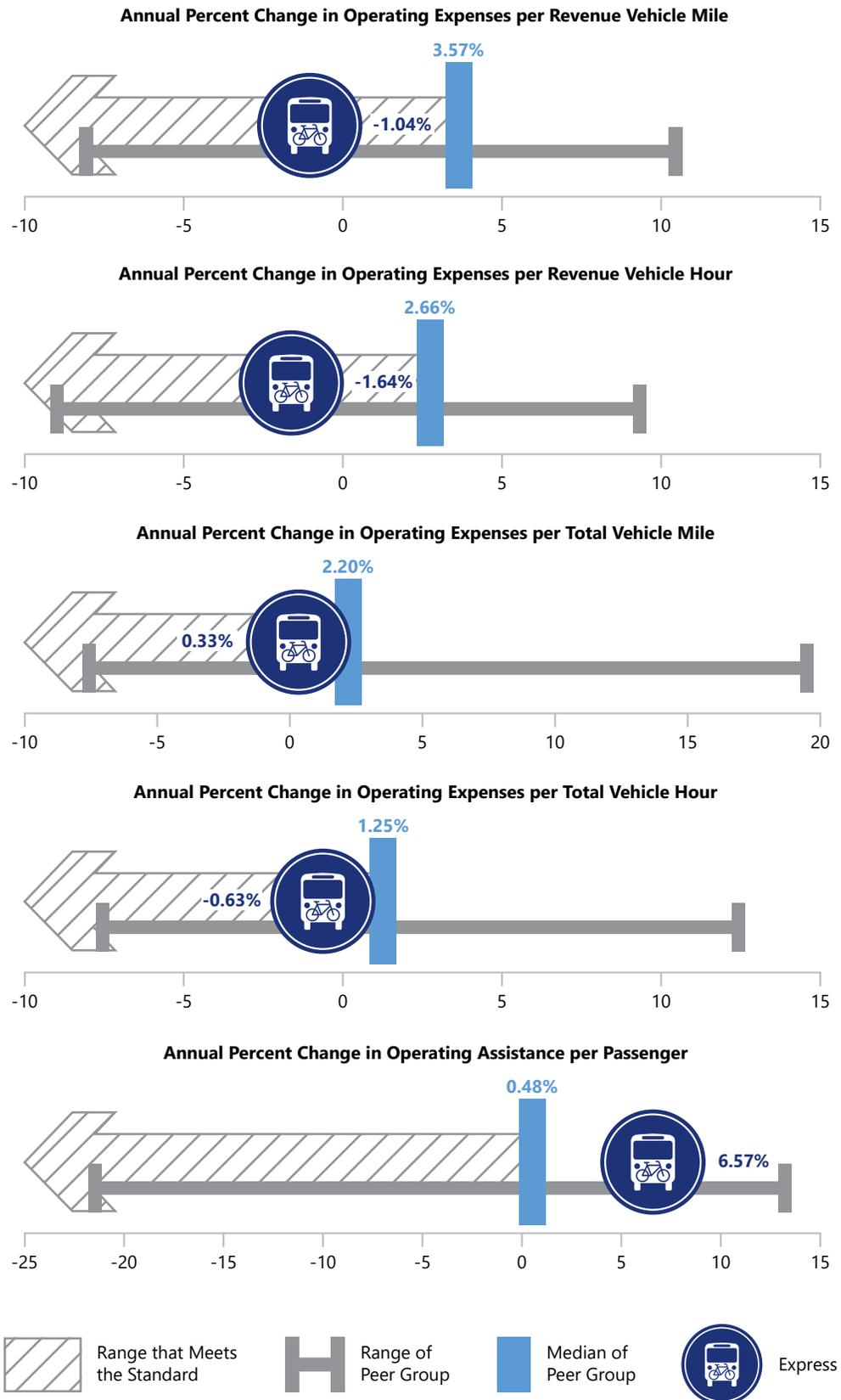
Given the relatively high level of operating expenses per unit of service and decline in ridership in 2015 discussed previously, it is unsurprising that the Express does not perform well under this standard, failing to meet the requirements for all three performance measures. At \$12.01, the operating cost per passenger for the Express is greater than all but the Waukesha County Express Buses. Similarly, operating cost per passenger mile is higher than all but two of the peer systems.

In 2015, the Express had a farebox recovery ratio of 17.67 percent, which is low compared to its regional and most of its national peers. It was already low in 2011 (partially due to the relatively high operating costs per unit of service, and partially due to average fares that are lower than many other commuter bus systems), and declined relatively significantly between 2011 and 2015, due to the decrease in ridership between 2014 and 2015. Overall, the Express does not meet this standard.

## **4.4 PERFORMANCE EVALUATION OF THE OZAUKEE COUNTY SHARED-RIDE TAXI**

In order to evaluate the performance of the County’s Shared-Ride Taxi service, the applicable standards from each of the public transit service objectives established in Chapter 3 of this report need to be identified from those listed in Figure 3.1. Those three objectives seek to provide a service that meets the demand and need for transit service within Ozaukee County; operates safely, reliably, conveniently, comfortably, and efficiently; and utilizes public resources cost-effectively. This evaluation uses the applicable standards to determine how well the Shared-Ride Taxi fulfills each objective.

**Figure 4.6**  
**Operating Expenses Performance Standard: Comparison of Ozaukee County**  
**Express to Peer Group for Associated Performance Measures**



Source: National Transit Database and SEWRPC

**Table 4.6**

**Ozaukee County Express and Peer Group Data for the Operating Expenses Performance Standard**

Peer System and Metropolitan Area	Performance Measures														
	Operating Expenses per Revenue Vehicle Mile			Operating Expenses per Revenue Vehicle Hour			Operating Expenses per Total Vehicle Mile			Operating Expenses per Total Vehicle Hour			Operating Assistance per Passenger		
	2011	2015	Average Annual Change	2011	2015	Average Annual Change	2011	2015	Average Annual Change	2011	2015	Average Annual Change	2011	2015	Average Annual Change
Washington County Commuter Express (Milwaukee)	\$4.89	\$4.45	-2.03%	\$132.00	\$124.14	-1.22%	\$2.55	\$2.31	-1.98%	\$78.75	\$74.55	-1.05%	\$6.88	\$7.48	2.52%
Waukesha County Express Bus (Milwaukee)	\$6.15	\$5.87	-0.90%	\$143.38	\$142.49	0.14%	\$4.55	\$4.10	-2.20%	\$98.58	\$98.14	0.36%	\$10.73	\$10.67	1.10%
Butler County Regional Transit Authority – Express <sup>a</sup> (Cincinnati)	\$2.39	\$2.87	10.01%	\$49.96	\$56.87	7.38%	\$1.93	\$2.77	19.78%	\$39.98	\$50.45	12.68%	\$11.61	\$11.23	-0.80%
Cobb Community Transit (Atlanta)	\$3.30	\$4.93	10.69%	\$92.56	\$130.97	9.47%	\$2.18	\$2.77	6.38%	\$71.50	\$75.71	2.14%	\$3.04	\$4.93	13.55%
Merrimack Valley Regional Transit Authority –Commuter Bus (Boston)	\$8.43	\$4.90	-8.36%	\$138.52	\$81.73	-9.27%	\$3.59	\$2.21	-7.91%	\$87.40	\$54.58	-7.76%	\$4.78	\$0.27	-21.87%
Western Contra Costa Transit Authority (San Francisco)	\$3.21	\$4.04	8.04%	\$102.07	\$118.66	5.18%	\$2.23	\$3.74	19.42%	\$98.95	\$110.41	3.95%	\$2.18	\$2.16	-0.14%
<i>Ozaukee County Express (Milwaukee)</i>	<i>\$6.37</i>	<i>\$6.07</i>	<i>-1.04%</i>	<i>\$166.87</i>	<i>\$155.23</i>	<i>-1.64%</i>	<i>\$4.07</i>	<i>\$4.11</i>	<i>0.33%</i>	<i>\$117.33</i>	<i>\$113.99</i>	<i>-0.63%</i>	<i>\$7.73</i>	<i>\$9.88</i>	<i>6.57%</i>

<sup>a</sup> The Butler County Regional Transit Authority did not report complete commuter bus information to the National Transit Database in 2011. 2012 information is displayed in this table.

Source: National Transit Database and SEWRPC

**Objective 1: Meeting the Need and Demand for Service**

Determining if the Shared-Ride Taxi effectively serves the needs of residents traveling within Ozaukee County requires each applicable standard and associated performance measure(s) to be individually evaluated. These individual evaluations were collectively considered to determine how effectively the current service meets the overall objective. Figure 4.8 contains the full text of Objective 1, the applicable design and performance standards, and the associated performance measures used to evaluate the Shared-Ride Taxi service.

**Shared-Ride Taxi Service Design and Operating Standard**

The Shared-Ride Taxi service successfully fulfills the Shared-Ride Taxi Service Standard, as it provides local transportation to all County residents, connecting residential areas with each other, with major activity centers, and with places of employment.

**Major Activity Centers Performance Standard**

The Major Activity Centers Performance Standard encourages maximizing the number of major activity centers used by transit-dependent populations within the service area of the Shared-Ride Taxi service. The Shared-Ride Taxi service fulfills this standard by serving all major activity centers in Ozaukee County, and providing a connection to and from the Express for individuals who cannot or do not wish to drive to and from a park-ride lot.

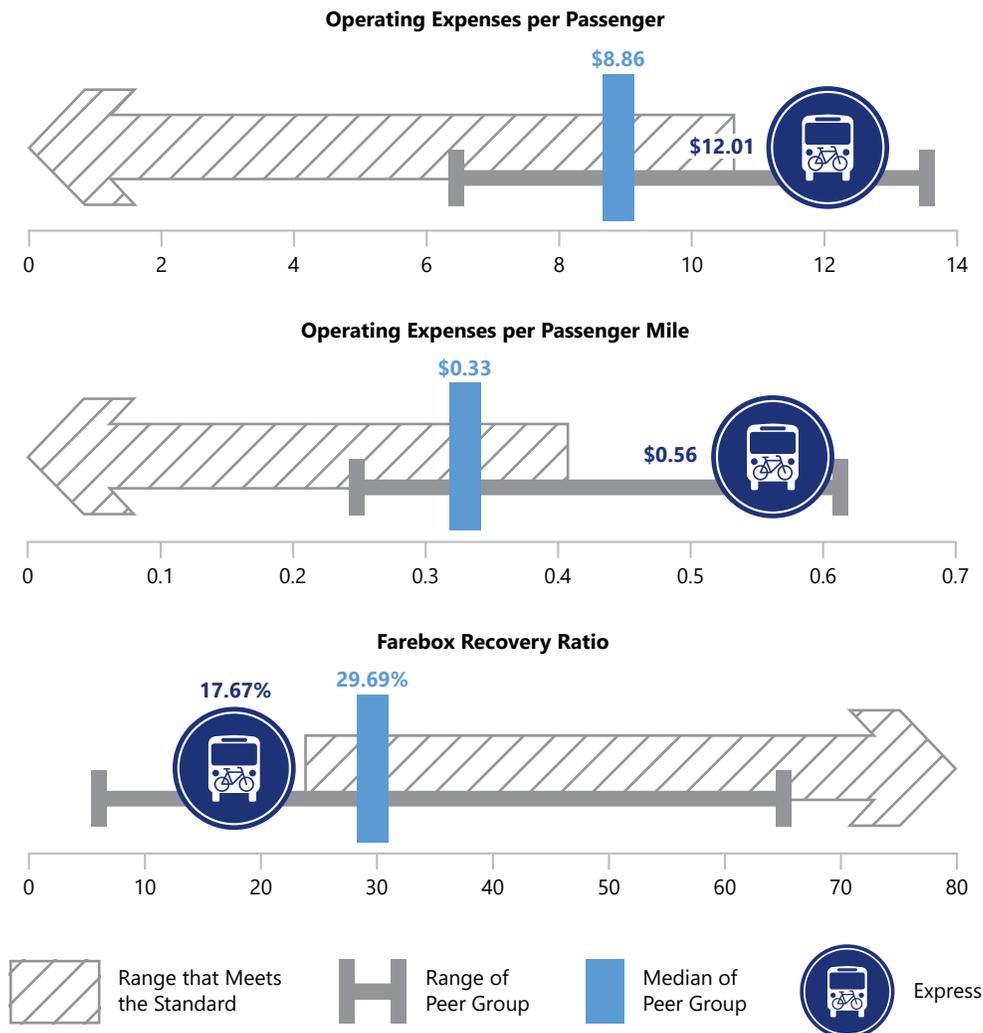
**Population Performance Standard**

The Population Performance Standard recommends maximizing the number of residents with access to transit. The Shared-Ride Taxi fulfills this standard, serving all Ozaukee County residents.

**Employment Performance Standard**

Nearly all jobs within Ozaukee County are served by the Shared-Ride Taxi service, fulfilling this standard. Some jobs may be inaccessible if their start and/or end time is outside of the service hours of the Shared-Ride Taxi. Similar to major activity centers, a number of jobs in Milwaukee County are also served through a transfer from the Shared-Ride Taxi service to the Express service.

**Figure 4.7**  
**Cost Effectiveness Performance Standard: Comparison of Ozaukee County**  
**Express to Peer Group for Associated Performance Measures**



Source: National Transit Database and SEWRPC

**Objective 2: Operating Safely, Reliably, Conveniently, Comfortably, and Efficiently**

Figure 4.9 contains the applicable standards that were used to determine if the Shared-Ride Taxi is providing a service that is efficient, safe, reliable, convenient, and comfortable for users.

**Vehicle Age and Condition Design and Operating Standard**

The Vehicle Age and Condition Standard recommends that vehicles used by the County to provide its Shared-Ride Taxi service be rehabilitated or replaced once they have reached the end of their useful life. The County is currently replacing vehicles on an appropriate schedule once they reach the end of their useful life, meeting this standard.

**Service Frequency and Availability Design and Operating Standard**

The Service Frequency and Availability Standard recommends that Shared-Ride Taxi services should have a maximum advance reservation requirement of 24 hours, and seek to have less than three percent of same day service requests denied. Based on ridership and service denial data from Ozaukee County for the three months within the first quarter of 2017, service denials account for 1.4 percent, 1.1 percent, and 0.9 percent, respectively. Given that approximately 99 percent of rides were provided as requested during this time period, the Shared-Ride Taxi meets this standard.

**Table 4.7**

**Ozaukee County Express and Peer Group Data for the Cost Effectiveness Performance Standard**

Peer System and Metropolitan Area	Performance Measures								
	Operating Expenses per Passenger			Operating Expenses per Passenger Mile			Farebox Recovery Ratio		
	2011	2015	Average Annual Change	2011	2015	Average Annual Change	2011	2015	Average Annual Change
Washington County Commuter Express (Milwaukee)	\$9.76	\$10.82	2.79%	\$0.32	\$0.35	2.32%	29.49%	30.88%	1.57%
Waukesha County Express Bus (Milwaukee)	\$13.78	\$13.63	0.43%	\$0.65	\$0.62	-0.26%	22.15%	21.74%	0.26%
Butler County Regional Transit Authority – Express <sup>a</sup> (Cincinnati)	\$12.32	\$11.85	-0.90%	\$0.59	\$0.59	0.49%	5.78%	5.22%	-1.08%
Cobb Community Transit (Atlanta)	\$4.85	\$6.89	9.35%	\$0.19	\$0.33	17.42%	37.28%	28.49%	-5.80%
Merrimack Valley Regional Transit Authority – Commuter Bus (Boston)	\$8.71	\$6.56	-4.47%	\$0.31	\$0.24	-4.23%	45.10%	45.94%	1.20%
Western Contra Costa Transit Authority (San Francisco)	\$6.19	\$6.30	0.65%	\$0.26	\$0.27	1.98%	64.69%	65.65%	0.51%
<i>Ozaukee County Express (Milwaukee)</i>	<i>\$10.02</i>	<i>\$12.01</i>	<i>4.73%</i>	<i>\$0.49</i>	<i>\$0.56</i>	<i>3.75%</i>	<i>22.86%</i>	<i>17.67%</i>	<i>-5.93%</i>

<sup>a</sup> The Butler County Regional Transit Authority did not report complete commuter bus information to the National Transit Database in 2011. 2012 information is displayed in this table.

Source: National Transit Database and SEWRPC

**Service Travel Speeds Design and Operating Standard**

The Service Travel Speeds Standard requires that shared-ride taxi services average travel speeds of at least 10 miles per hour for the duration of a passenger’s trip. The Shared-Ride Taxi meets this standard in a sample of trips taken from a month of trip logs in May 2017. Speeds in this sample of trips range from 4 to 55 miles per hour, with an average speed of 24 miles per hour.

**Passenger Demand Design and Operating Standard**

The Passenger Demand Standard recommends that the average passenger load factor for shared-ride taxi services not exceed 1.00 at any point during operations. The Shared-Ride Taxi service meets this standard.

**Ridership and Service Effectiveness Performance Standard**

The Ridership and Service Effectiveness Standard uses four performance measures (passengers per capita, passengers per revenue vehicle hour, passengers per revenue vehicle mile, and passenger miles per revenue vehicle mile) to compare the service effectiveness of the Shared-Ride Taxi service to six peer services. If the service effectiveness measures are more than 20 percent below the median of the peer comparison group, this standard encourages modifications to service areas or service periods. Figure 4.10 shows the results of this comparison of the Shared-Ride Taxi to its peers by displaying the range of the peer group’s performance, the median of the peer group’s performance, the range of performance that meets the standard, and the performance of the Shared-Ride Taxi for each measure. The data for each peer system is presented in Table 4.8.

As indicated in Figure 4.10, the Shared-Ride Taxi’s performance is within the range meeting the standard for two of the four performance measures. The passengers per capita measure is 1.23, which is well above the median of the peer group. Considering the high passengers per capita utilization rate, the fact that the County’s Shared-Ride Taxi service performs lower than the median on the three service effectiveness standards is notable. It appears that, compared to peer services, the Shared-Ride Taxi has lower numbers of shared trips, as evidenced by its relatively low passenger miles per revenue vehicle mile. In addition, the

**Figure 4.8**  
**Objective 1 and Associated Standards Applicable to**  
**the Evaluation of the Ozaukee County Shared-Ride Taxi**

OBJECTIVE 1		
<b>Serve the travel needs of residents traveling within Ozaukee County, County residents commuting to jobs in Milwaukee County, and County employers seeking workers.</b>		
Applicable Design and Operating Standards		
<p><b>3. Shared-Ride Taxi Service</b>            Should provide local transportation to the County’s residents, particularly those that can be considered transit-dependent, by connecting residential areas with each other, major activity centers, and areas of employment.</p>		
Applicable Performance Standards and Associated Performance Measures		
<p><b>1. Major Activity Centers</b>            Maximize the number of major activity centers and facilities for transit-dependent people served by transit. This is measured by the number of activity centers within one-quarter mile of a local bus or shuttle route, one-half mile of a commuter bus route, or within the service area of a shared-ride taxi service. Major activity centers include the following:<sup>a</sup></p> <ol style="list-style-type: none"> <li>a. Commercial areas</li> <li>b. Educational institutions</li> <li>c. Medical centers</li> <li>d. Employers</li> <li>e. Facilities serving transit-dependent populations</li> </ol>	<p><b>2. Population</b>            Maximize the population served by transit. Residents are considered served if they are within the service area of a shared-ride taxi service.</p>	<p><b>3. Employment</b>            Maximize the number of jobs served by transit. This is measured by the total employment at businesses located within the service area of a demand-response service.</p>

<sup>a</sup> In order to be considered a major activity center, the following definitions must apply:

- Commercial areas are concentrations of retail and service establishments that typically include a department store or a discount store along with a supermarket on 15 to 60 acres, totaling 150,000 or more square feet of gross leasable floor space
- Educational institutions are the main campus of traditional four-year institutions of higher education and public technical colleges
- Medical centers are all hospitals and clinics with 10 or more physicians
- Employers are all employers with more than 100 employees, or clusters of adjacent employers with collectively more than 100 employees such as business or industrial parks
- Facilities serving transit-dependent populations are senior centers, senior meal sites, residential facilities for seniors and/or people with disabilities, residential facilities for low-income individuals, and government facilities that provide significant services to members of transit-dependent population groups

Source: SEWRPC

better performance of the Shared-Ride Taxi under the passengers per revenue vehicle hour measure relative to its performance under the passengers per revenue vehicle mile measure implies that the Shared-Ride Taxi provides more short, slow trips than many of its peer systems, perhaps reflecting the amount of time spent by the Taxi vehicles in the denser parts of the County.

**On-Time Travel Performance Standard**

The On-Time Performance Standard states that 90 percent of trips should occur 30 minutes before or after their scheduled passenger pick-up or drop-off times for Shared-Ride Taxi services. Data for the Shared-Ride Taxi service from May 2017 were used to develop Table 4.9, which shows that the service is currently meeting the standard for 91.1 percent of the trips analyzed. Therefore, the Shared-Ride Taxi service meets this performance standard.

**Figure 4.9**  
**Objective 2 and Associated Standards Applicable to**  
**the Evaluation of the Ozaukee County Shared-Ride Taxi**

**OBJECTIVE 2**

**Provide efficient, safe, reliable, convenient, and comfortable transit services in Ozaukee County.**

Applicable Design and Operating Standards																		
<p><b>3. Vehicle Age and Condition</b>                      Rehabilitate or replace vehicles once they reach the end of their normal service life. Federal Transit Administration guidelines (listed below) require a transit vehicle to reach a minimum service life before it is replaced.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="text-align: left;">Vehicle Type</th> <th style="text-align: center;">Length</th> <th colspan="2" style="text-align: center;">Service Life</th> </tr> <tr> <th style="text-align: center;">(feet)</th> <th style="text-align: center;">Years</th> <th style="text-align: center;">Mileage</th> </tr> </thead> <tbody> <tr> <td>Light-Duty Bus</td> <td style="text-align: center;">20-30</td> <td style="text-align: center;">5</td> <td style="text-align: center;">150,000</td> </tr> <tr> <td>Cars and Vans</td> <td style="text-align: center;">--</td> <td style="text-align: center;">4</td> <td style="text-align: center;">100,000</td> </tr> </tbody> </table>		Vehicle Type	Length	Service Life		(feet)	Years	Mileage	Light-Duty Bus	20-30	5	150,000	Cars and Vans	--	4	100,000	<p><b>4. Service Frequency and Availability</b>                      Shared-ride taxi services should have a maximum advance reservation requirement of 24 hours, and seek to have less than 3 percent of same day service requests denied.</p>	
Vehicle Type	Length		Service Life															
	(feet)	Years	Mileage															
Light-Duty Bus	20-30	5	150,000															
Cars and Vans	--	4	100,000															
<p><b>5. Service Travel Speeds</b>                      Operate transit services such that average travel speeds are not less than 10 miles per hour for shared-ride taxi services.</p>		<p><b>6. Passenger Demand</b>                      Provide adequate service and vehicle capacity to meet existing and anticipated demand. The average passenger load factor, measured as the ratio of passengers to seats, should not exceed 1.00 during any period for shared-ride taxi services.</p>																

Applicable Performance Standards and Associated Performance Measures		
<p><b>1. Ridership and Service Effectiveness</b>                      Maximize ridership on and the effectiveness of transit services. This is measured using passengers per capita, total passengers per vehicle hour, total passengers per vehicle mile, and passenger miles per vehicle mile which will be compared to similar transit systems. Transit services with service effectiveness measures more than 20 percent below the median of the peer comparison group will be reviewed for potential changes to their routes, runs, service areas, and service periods.</p>	<p><b>2. On-Time Performance</b>                      Maximize adherence to scheduled rider pickup and drop off times. Regularly monitor performance and make adjustments to any local transit service with less than 90 percent of trips on time (defined as being between 15 minutes early and 15 minutes late for shared-ride taxi services).</p>	<p><b>3. Travel Time</b>                      Keep travel times on transit services reasonable in comparison to travel time by automobiles for similar trips. This standard is measured using the ratio of transit to automobile distance and the ratio of transit to automobile travel time.</p>

Source: SEWRPC

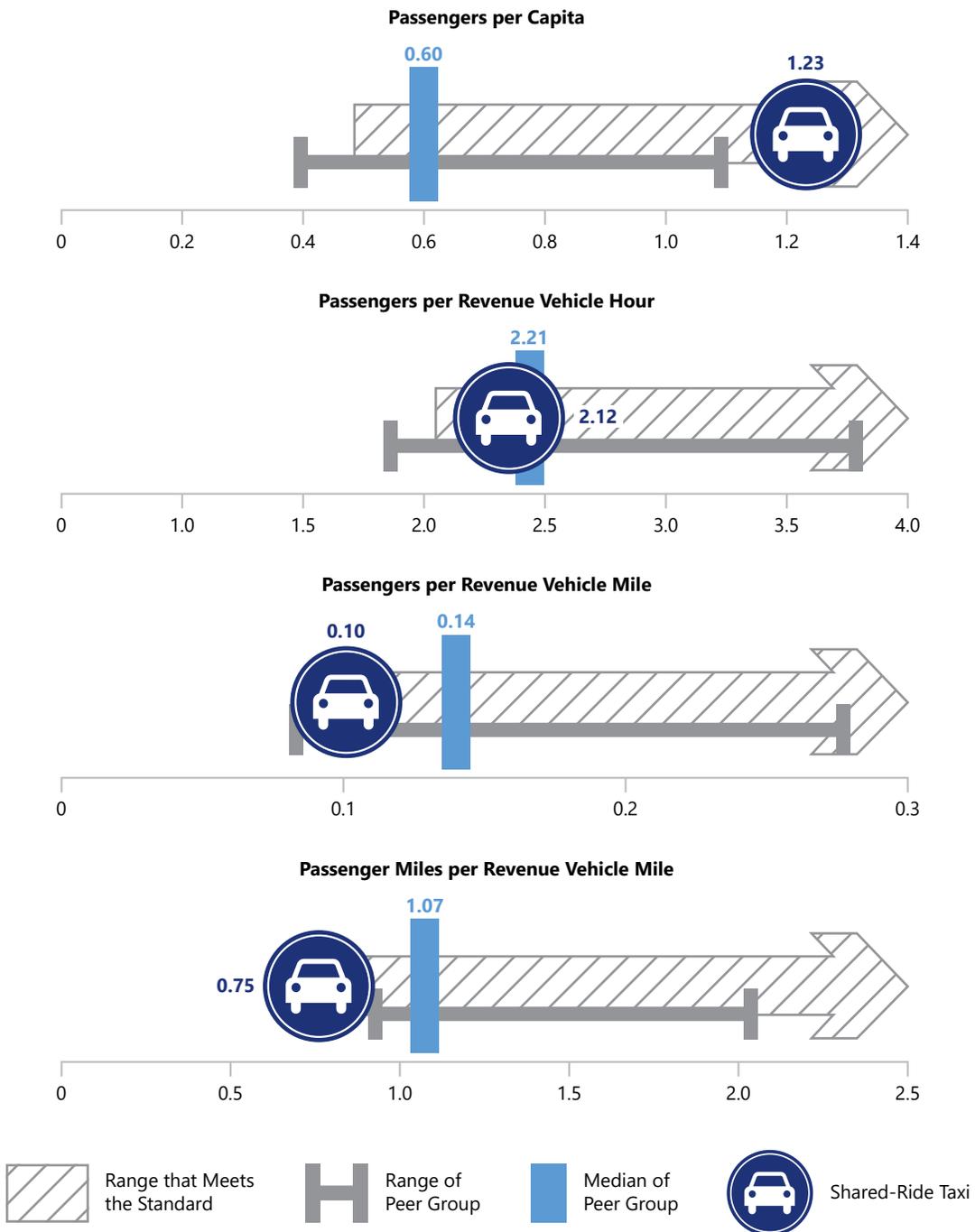
**Travel Time Performance Standard**

The Travel Time Performance Standard encourages that travel times by transit be kept reasonable in comparison to travel times by automobiles for similar trips. Table 4.5 compares travel times between 10 randomly selected origin-destination pairs for users of the Shared-Ride Taxi service to travel times by private automobile for the same journey, and shows that the ratio between transit travel times and automobile travel times does not exceed 1.75 on average. This result indicates an acceptable difference in travel time between private automobile travel and travel using the Shared-Ride Taxi, meeting this standard.

**Objective 3: Utilizing Public Resources Cost-Effectively**

Objective 3 recognizes that public funds are limited, and must be used efficiently. In order to determine if public funds are being well-spent, the following analyses compare the Shared-Ride Taxi service to its peer group using a number of performance measures. The applicable standards and performance measures used to measure how efficiently the Shared-Ride Taxi is using public funds are shown in Figure 4.11.

**Figure 4.10**  
**Ridership and Service Effectiveness Performance Standard: Comparison of**  
**Ozaukee County Shared-Ride Taxi to Peer Group for Associated Performance Measures**



Source: National Transit Database and SEWRPC

**Table 4.8**  
**Ozaukee County Shared-Ride Taxi and Peer Group Data for**  
**the Ridership and Service Effectiveness Performance Standard**

Peer System and Metropolitan Area	Performance Measures											
	Passengers per Capita			Passengers per Revenue Vehicle Hour			Passengers per Revenue Vehicle Mile			Passenger Miles per Revenue Vehicle Mile		
	2011	2015	Average Annual Change	2011	2015	Average Annual Change	2011	2015	Average Annual Change	2011	2015	Average Annual Change
Washington County Shared-Ride Taxi (Milwaukee)	0.74	0.70	-1.28%	1.79	1.70	-1.23%	0.08	0.08	-0.84%	0.96	0.90	-1.69%
Miami County Public Transit (Dayton)	0.42	0.38	-2.73%	2.00	2.02	0.31%	0.10	0.11	0.37%	0.89	0.90	0.61%
Greene County Area Transit Service (Dayton)	0.96	1.10	3.52%	3.73	3.56	-1.21%	0.19	0.19	-0.56%	2.08	2.05	-0.25%
Clermont Transportation Connection (Cincinnati)	0.47	0.41	-4.44%	1.55	1.52	-0.43%	0.09	0.09	2.70%	1.06	1.10	1.27%
Cumberland Area Transit System (Philadelphia)	0.62	0.49	-5.94%	2.86	2.41	-4.16%	0.18	0.17	-2.10%	1.30	1.05	-5.16%
Valley Transit District (New Haven, CT)	0.91	0.82	-2.64%	3.51	3.79	2.11%	0.27	0.28	0.71%	1.67	1.67	0.32%
<i>Ozaukee County Shared-Ride Taxi (Milwaukee)</i>	<i>0.91</i>	<i>1.23</i>	<i>8.10%</i>	<i>1.79</i>	<i>2.12</i>	<i>4.40%</i>	<i>0.10</i>	<i>0.10</i>	<i>1.75%</i>	<i>0.67</i>	<i>0.75</i>	<i>2.79%</i>

Source: National Transit Database and SEWRPC

### **Fare Structure Design and Operating Standard**

The Fare Structure Standard encourages premium fares for premium services, and discounts for priority users, such as seniors or people with disabilities. The Shared-Ride Taxi service fulfills both these recommendations, with a zone-based standard fare that is higher than a typical local bus service and a discounted fare for seniors and people with disabilities.

### **Operating Expenses Performance Standard**

By comparing the annual percent increase between 2011 and 2015 in operating expenses per total vehicle mile, operating expenses per revenue vehicle mile, operating expenses per total vehicle hour, operating expenses per revenue vehicle hour, and operating assistance per passenger, the Operating Expenses Performance Standard ensures that the inflationary growth in operating costs is comparable to that of peer systems. In order to fulfill the standard, none of the annual percent increases in the five performance measures should exceed the median percentage increases experienced by the peer group. Figure 4.12 displays a comparison of the annual percent change for each metric for 2011 through 2015, showing the range of the peer group's performance, the range of performance that meets the standard, the median of the peer group's performance, and the performance of the Shared-Ride Taxi service. Table 4.9 provides the detailed data used to develop Figure 4.12.

The Shared-Ride Taxi meets the standard under all five performance measures that were examined. From 2011 to 2015, the operating expenses and operating assistance for the Shared-Ride Taxi increased slower than the median of the peer group, and for three performance measures, decreased faster than any of the systems in the peer group. For the four measures that study operating expenses per unit of service, the actual unit costs (shown in Table 4.9) of the Shared-Ride Taxi service were lower than all of the peer systems, leading to an extremely successful result for this standard. For the fifth measure, operating assistance per passenger, the Shared-Ride Taxi's unit costs are lower than all but one of the peer systems, and decreased significantly from 2011 to 2015, largely due to the implementation of agency fares and the increased number of shorter, more cost effective trips following the discontinuation of the City of Port Washington's taxi service.

### **Cost Effectiveness Performance Standard**

The Cost Effectiveness Standard recommends that operating cost per passenger and operating cost per passenger mile should be no greater than 20 percent above the median of the peer group, and that the

**Table 4.9**  
**Ozaukee County Shared-Ride Taxi and Peer Group Data for**  
**the Operating Expenses Performance Standard**

Peer System and Metropolitan Area	Performance Measures														
	Operating Expenses per Revenue Vehicle Mile			Operating Expenses per Revenue Vehicle Hour			Operating Expenses per Total Vehicle Mile			Operating Expenses per Total Vehicle Hour			Operating Assistance per Passenger		
	2011	2015	Average Annual Change	2011	2015	Average Annual Change	2011	2015	Average Annual Change	2011	2015	Average Annual Change	2011	2015	Average Annual Change
Washington County Shared-Ride Taxi (Milwaukee)	\$1.83	\$1.91	1.21%	\$38.49	\$39.70	0.81%	\$1.59	\$1.68	1.44%	\$34.13	\$35.04	0.68%	\$18.16	\$19.09	1.31%
Miami County Public Transit (Dayton)	\$2.38	\$2.88	4.93%	\$43.91	\$52.88	4.99%	\$2.18	\$2.36	2.09%	\$36.66	\$41.06	3.20%	\$15.58	\$19.99	6.61%
Greene County Area Transit Service (Dayton)	\$3.30	\$3.37	0.52%	\$64.52	\$64.19	-0.12%	\$2.64	\$2.67	0.27%	\$51.59	\$51.39	-0.09%	\$5.58	\$6.02	2.48%
Clermont Transportation Connection (Cincinnati)	\$2.05	\$2.42	5.76%	\$36.62	\$39.33	2.67%	\$1.68	\$1.95	5.34%	\$30.18	\$32.60	2.85%	\$23.00	\$25.24	3.19%
Cumberland Area Transit System (Philadelphia)	\$5.01	\$5.34	1.69%	\$77.66	\$75.89	-0.43%	\$4.31	\$4.52	1.29%	\$69.24	\$66.71	-0.81%	\$27.20	\$31.54	3.92%
Valley Transit District (New Haven, CT)	\$4.23	\$5.43	6.66%	\$55.03	\$74.62	8.24%	\$3.80	\$4.89	6.73%	\$49.60	\$71.32	9.99%	\$14.96	\$18.68	5.77%
<i>Ozaukee County Shared-Ride Taxi (Milwaukee)</i>	<i>\$1.81</i>	<i>\$1.67</i>	<i>-1.90%</i>	<i>\$34.07</i>	<i>\$34.69</i>	<i>0.65%</i>	<i>\$1.63</i>	<i>\$1.54</i>	<i>-1.25%</i>	<i>\$30.96</i>	<i>\$32.29</i>	<i>1.27%</i>	<i>\$16.18</i>	<i>\$11.76</i>	<i>-7.62%</i>

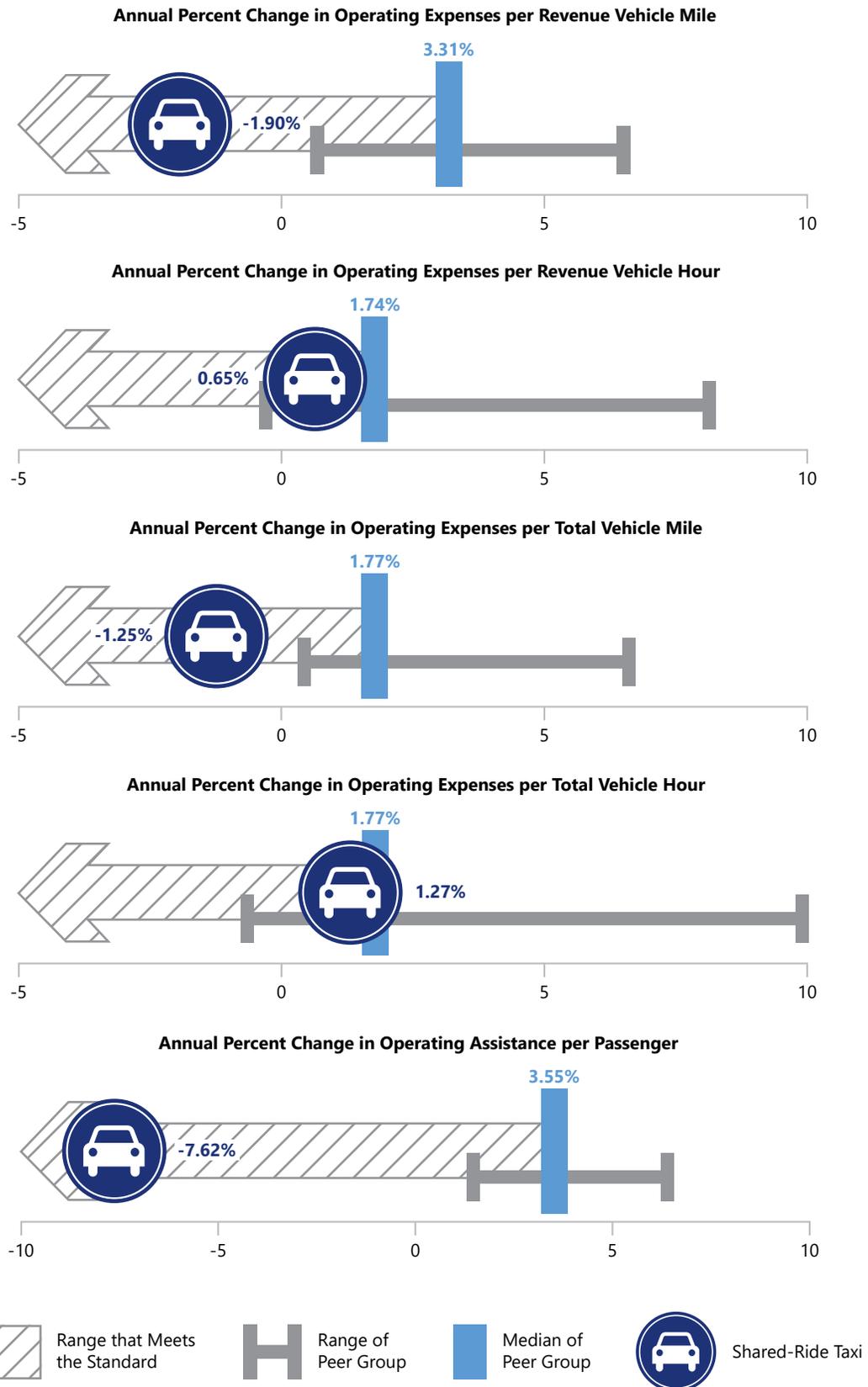
Source: National Transit Database and SEWRPC

**Figure 4.11**  
**Objective 3 and Associated Standards Applicable to**  
**the Evaluation of the Ozaukee County Shared-Ride Taxi**

OBJECTIVE 3	
<p><b>Meet all other objectives at the lowest possible cost. Given limited public funds, this objective seeks to permit elected officials the flexibility to balance the standards associated with Objectives 1 and 2 with the level of public funding required to fully meet those standards.</b></p>	
Design and Operating Standards	
<p><b>2. Fare Structure</b>            Charge premium fares for premium services, and discounted fares for priority population groups and frequent riders.</p>	
Performance Standards and Associated Performance Measures	
<p><b>1. Operating Expenses</b>            Minimize the operating expenses per total and revenue vehicle mile, the operating expenses per total and revenue vehicle hour, and the operating assistance per passenger. Annual increases in such costs should not exceed the median percentage increases experienced by comparable transit systems.</p>	<p><b>3. Cost Effectiveness</b>            Review transit services with substandard cost effectiveness for potential changes to their routes, runs, service areas, and service periods. Cost effectiveness is considered substandard when the operating expenses per passenger, or operating expenses per passenger mile are more than 20 percent above, or the farebox recovery ratio is more than 20 percent below, the median for comparable transit systems.</p>

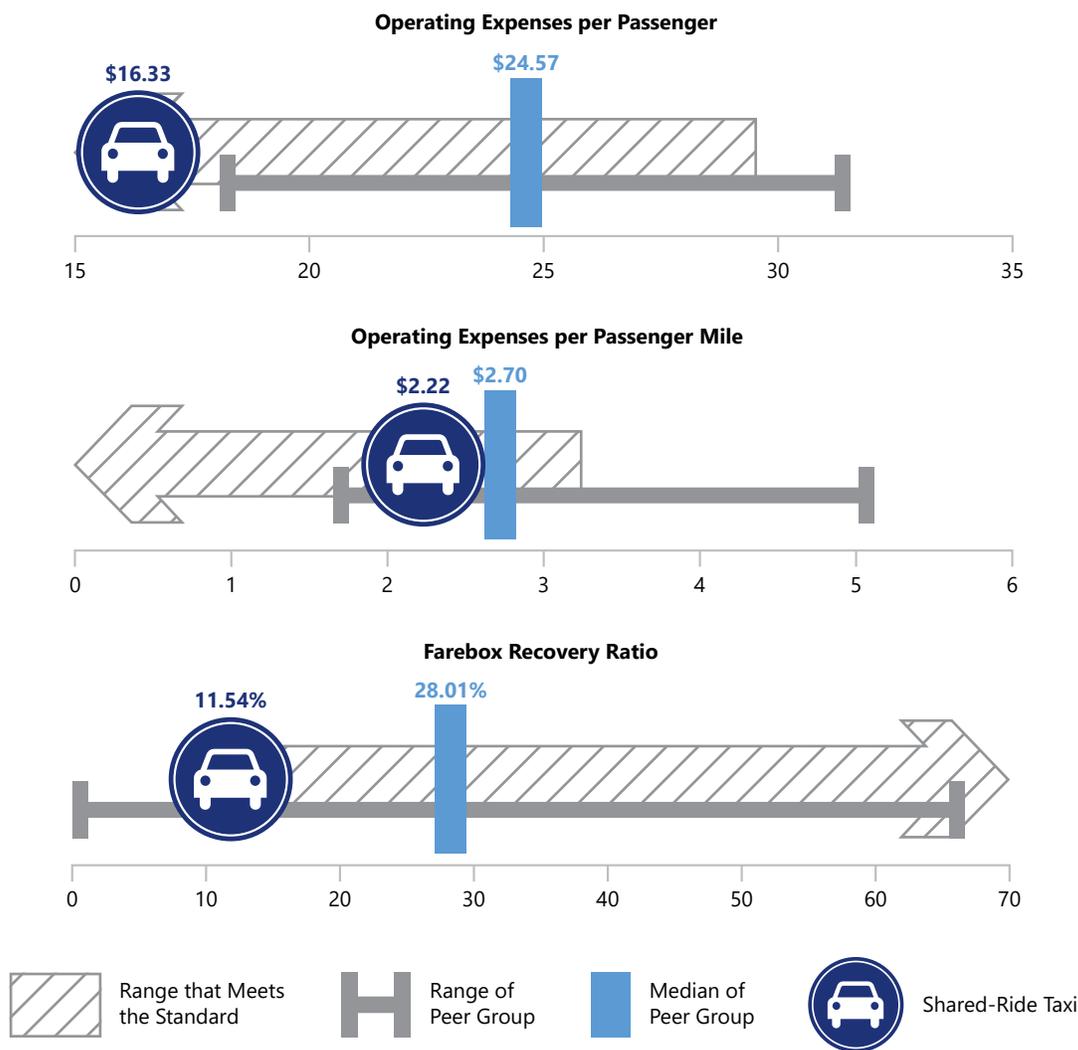
Source: SEWRPC

**Figure 4.12**  
**Operating Expenses Performance Standard: Comparison of Ozaukee County**  
**Shared-Ride Taxi to Peer Group for Associated Performance Measures**



Source: National Transit Database and SEWRPC

**Figure 4.13**  
**Cost Effectiveness Performance Standard: Comparison of Ozaukee County Shared-Ride Taxi to Peer Group for Associated Performance Measures**



Source: National Transit Database and SEWRPC

farebox recovery ratio should be no greater than 20 percent below the median of the peer group. If a transit service is substandard under any of these performance measures, it may indicate that changes to service policies, service areas, and service periods need to be considered. Figure 4.13 shows the range of the peer group’s performance, the median of the peer group’s performance, the range of performance that meets the standard, and the performance of the Shared-Ride Taxi service for these performance measures. Table 4.10 provides the detailed data used to develop Figure 4.13.

The Shared-Ride Taxi fulfills this standard under all three performance measures. At \$16.33, the operating expenses per passenger for the Shared-Ride Taxi are lower than any system in its peer group. Additionally, operating expenses per passenger mile was lower than the median of the peer group, at \$2.22. Notably, all of the systems in the peer group saw increases in these measures of expenses between 2011 and 2015, while the Shared-Ride Taxi experienced a decrease.

The Shared-Ride Taxi’s farebox recovery ratio is higher than all but one peer system and has grown more quickly than any other peer system during this time period. As mentioned previously, this is likely related to the implementation of agency fares during this period, and an increase in shorter, more cost-efficient trips following the discontinuation of the City of Port Washington’s taxi service.

**Table 4.10**  
**Ozaukee County Shared-Ride Taxi and Peer Group Data for**  
**the Cost Effectiveness Performance Standard**

Peer System and Metropolitan Area	Performance Measures								
	Operating Expenses per Passenger			Operating Expenses per Passenger Mile			Farebox Recovery Ratio		
	2011	2015	Average Annual Change	2011	2015	Average Annual Change	2011	2015	Average Annual Change
Washington County Shared-Ride Taxi (Milwaukee)	\$21.48	\$23.29	2.07%	\$1.89	\$2.13	3.10%	15.49%	18.03%	4.01%
Miami County Public Transit (Dayton)	\$21.95	\$26.23	4.59%	\$2.68	\$3.18	4.55%	29.01%	23.81%	-4.18%
Greene County Area Transit Service (Dayton)	\$17.26	\$18.05	1.15%	\$1.59	\$1.64	0.83%	67.67%	66.68%	-0.18%
Clermont Transportation Connection (Cincinnati)	\$23.65	\$25.85	3.09%	\$1.94	\$2.21	4.52%	2.77%	2.36%	5.68%
Cumberland Area Transit System (Philadelphia)	\$27.20	\$31.54	3.92%	\$3.86	\$5.09	7.45%	0.00%	0.00%	0.00%
Valley Transit District (New Haven, CT)	\$15.69	\$19.67	5.87%	\$2.53	\$3.24	6.55%	4.64%	5.04%	2.37%
<i>Ozaukee County Shared-Ride Taxi (Milwaukee)</i>	<i>\$19.01</i>	<i>\$16.33</i>	<i>-3.66%</i>	<i>\$2.70</i>	<i>\$2.22</i>	<i>-4.47%</i>	<i>14.92%</i>	<i>28.01%</i>	<i>19.42%</i>

Source: National Transit Database and SEWRPC

## 4.5 CONCLUSION

This chapter’s evaluation of the Express and Shared-Ride Taxi services provided by Ozaukee County Transit Services indicates potential areas for service changes to help the system better fulfill the objectives and standards laid out in Chapter 3 of this report. Improvements to park-ride lots, more competitive travel times for the Express, and other possible service improvements could increase the transit system’s performance under various standards. Chapter 5 of this report presents potential service improvement alternatives, and analyzes their costs and influence on the performance of the transit system.





*Credit: Flickr User Andrew Caballero-Reynolds*

## **5.1 INTRODUCTION**

This chapter discusses potential service alternatives to the existing Ozaukee County Transit System for Ozaukee County to consider implementing to improve services for County residents traveling within Ozaukee County and to Milwaukee County, and for County employers seeking workers. These alternatives have been designed to improve the performance of the Ozaukee County Transit System based on the evaluation of the transit system’s performance completed in Chapter 4 of this report, and in careful consideration of the comments and ideas received from the Advisory Committee, Ozaukee County businesses, and the public related to this planning effort.

Future expenses, revenues, and ridership of the two existing services provided by the Ozaukee County Transit System were analyzed to provide a “no-change” alternative that will serve as the base scenario against which potential service changes will be compared. Each section includes a description of the alternative, a discussion of advantages or disadvantages of a particular alternative, and a table containing the expected operating expenses, revenues, and ridership for the duration of this short-range Transit Development Plan, and an annual average for the five-year plan timeframe. This chapter is organized into three alternatives categories: employment-related transit services targeting Ozaukee County businesses; fixed-route service alternatives; and Shared-Ride Taxi service alternatives.

## **5.2 EMPLOYMENT-RELATED TRANSIT SERVICES TARGETING OZAUKEE COUNTY BUSINESSES**

The need to connect Ozaukee County businesses with employees in Milwaukee County was a common theme throughout the development of this plan, including in discussions with Ozaukee County businesses, during two public information meetings, and during numerous Advisory Committee meetings. This section of alternatives provides options that the Advisory Committee considered as part of the planning process and documents the potential benefits and estimated costs of various methods to increase the labor pool and improve access to jobs in Ozaukee County.

### **Flexible or Fixed-Route Shuttles**

As described in Chapter 2, the County's commuter bus service was initially paired with a series of shuttle services that connected residents of Milwaukee County to jobs in Ozaukee County, including shuttles from park-ride lots in Ozaukee County to the Cities of Cedarburg and Mequon, and the Villages of Fredonia, Grafton, and Saukville. These shuttle services operated from 1996 through 2008, with a service reduction in 2001 and ultimate cancellation in 2008, due to continued declines in ridership and the economic recession. Based on input received during development of this plan, there is interest again in considering options to bring back some form of shuttle service to help employers in Ozaukee County attract and retain labor from Milwaukee County by a direct connection between areas of higher unemployment and business parks and corridors.

The flexible service envisioned in this alternative would allow for minor deviations in the route to provide direct access to passengers who live or work in the vicinity of the basic route. The potential service would be offered from 5:00 a.m. to 8:00 p.m. on weekdays and would pick-up and drop-off at any location along the route. It is anticipated that this service would be provided with a smaller vehicle than a full-sized bus, similar to the largest vehicles in the existing Shared-Ride Taxi fleet, with capacity to transport 14 passengers, including two passengers in wheelchairs.

As envisioned, passengers requesting a pick-up not along the main route would be required to make trip requests within two hours of the desired pick-up time. The driver would provide trips to any location within 0.75 miles of the route upon passenger request. This distance was selected based on surveys of providers as documented in Transit Cooperative Research Program (TCRP) Report 140, *A Guide for Planning and Operating Flexible Public Transportation Services* and similar service in Western Kenosha County, but could be modified by the County as needed.<sup>4</sup> For example, Rockwell Automation in Mequon falls just outside the 0.75-mile service area, but if the company wanted to participate in the service, Ozaukee County could consider expanding the service area.

The routes, as shown on Map 5.1, have been designed to serve key employers and destinations within Ozaukee County. The Cedarburg Road route would provide up to eight one-way trips per day with four trips in the morning and four trips in the afternoon and would serve destinations such as the Mequon business park, downtown Cedarburg, John Crane Orion, and Charter Steel. The route along Port Washington Road would serve destinations including MATC-Mequon, Ascension/Columbia St. Mary's, Aurora Medical Center, and the Port Washington Industrial Park, providing up to ten one-way trips per day, with five morning trips and five afternoon trips. Additional flexibility is provided in that, once a run is complete, the vehicle would be available for Shared-Ride Taxi rides beyond the designated route and flexible service area until the next run needs to be made.

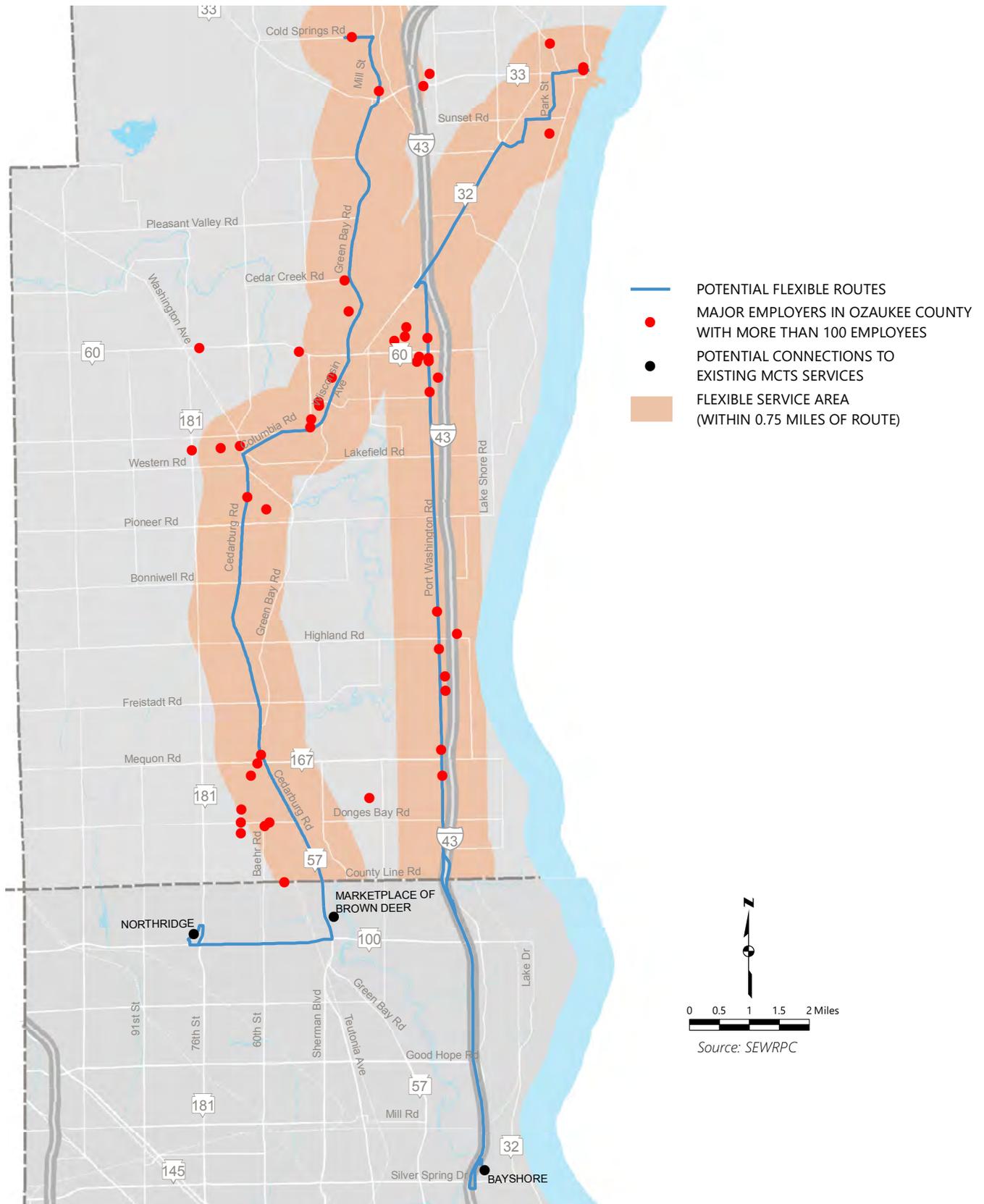
The potential shuttle service would connect with MCTS local bus service at three transfer points located at Bayshore Mall, the Marketplace of Brown Deer (Green Bay Road and Schroeder Drive transfer point), and the former Northridge Mall (Brown Deer Road and Servite Drive). Each of the potential transfer points is currently served by multiple MCTS bus routes.

Chapter 3, Service Objectives and Standards, of this Plan, identifies three objectives to effectively serve Ozaukee County including the following objective, to "serve the travel needs of residents traveling within Ozaukee County, County residents commuting to jobs in Milwaukee County, and County employers seeking workers." Since this potential alternative seeks to connect workforce in Milwaukee County to employees in Ozaukee County, Commission staff analyzed the effectiveness of how well the potential shuttle service performs relative to this objective, including how well the three transfer points serve certain transit-dependent populations, including minority and low-income families within a 15-minute transit ride. Maps 5.2 and 5.3 show the minority and low-income populations within one-quarter mile walk distance from bus routes within a 15-minute transit ride to each potential transfer point. As shown on Map 5.2 and Map 5.3, the Bayshore transfer point would serve approximately 19,311 minority people and approximately 1,665 low-income families. The Northridge transfer point would serve 12,928 minority people and 484 low-income families. The Brown Deer transfer connection would serve 3,437 minority people and 159 low-income families.

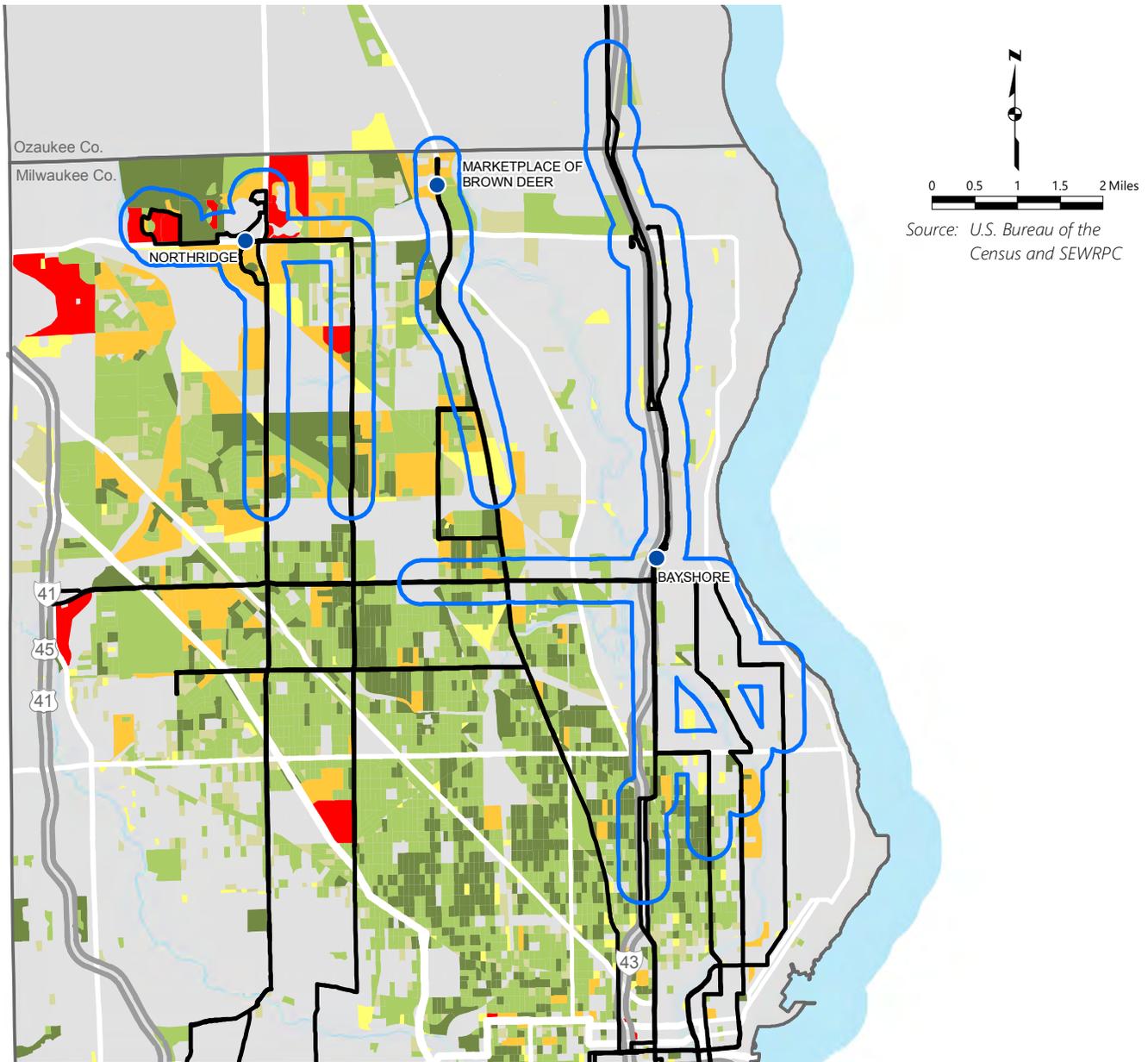
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<sup>4</sup> *TCRP Report 140, A Guide for Planning and Operating Flexible Public Transportation Services, 2010.*

**Map 5.1**  
**Proximity of Employers to the Potential Flexible Route in Ozaukee County**



**Map 5.2**  
**Minority Population Within a 15-Minute Transit Ride from Potential Transit Connections**



**TRANSIT SERVICE AREA (2016)**

ONE-QUARTER MILE WALK DISTANCE FROM BUS ROUTES WITHIN A 15 MINUTE TRANSIT RIDE FROM POTENTIAL TRANSIT CONNECTIONS

POTENTIAL TRANSIT CONNECTION

MINORITY PEOPLE SERVED BY ALL TRANSIT ROUTES: 35,676

MINORITY PEOPLE SERVED BY BAYSHORE ROUTE: 19,311

MINORITY PEOPLE SERVED BY BROWN DEER ROUTE: 3,437

MINORITY PEOPLE SERVED BY NORTHRIDGE ROUTE: 12,928

MCTS LOCAL & EXPRESS SERVICE

**CENSUS BLOCKS WHEREIN THE PERCENTAGE OF MINORITY PEOPLE, INCLUDING HISPANIC PEOPLE, EXCEEDS THE REGIONAL AVERAGE OF 28.9 PERCENT BASED ON THE 2010 U.S. CENSUS**

500 OR MORE MINORITY PEOPLE

200 TO 499 MINORITY PEOPLE

100 TO 199 MINORITY PEOPLE

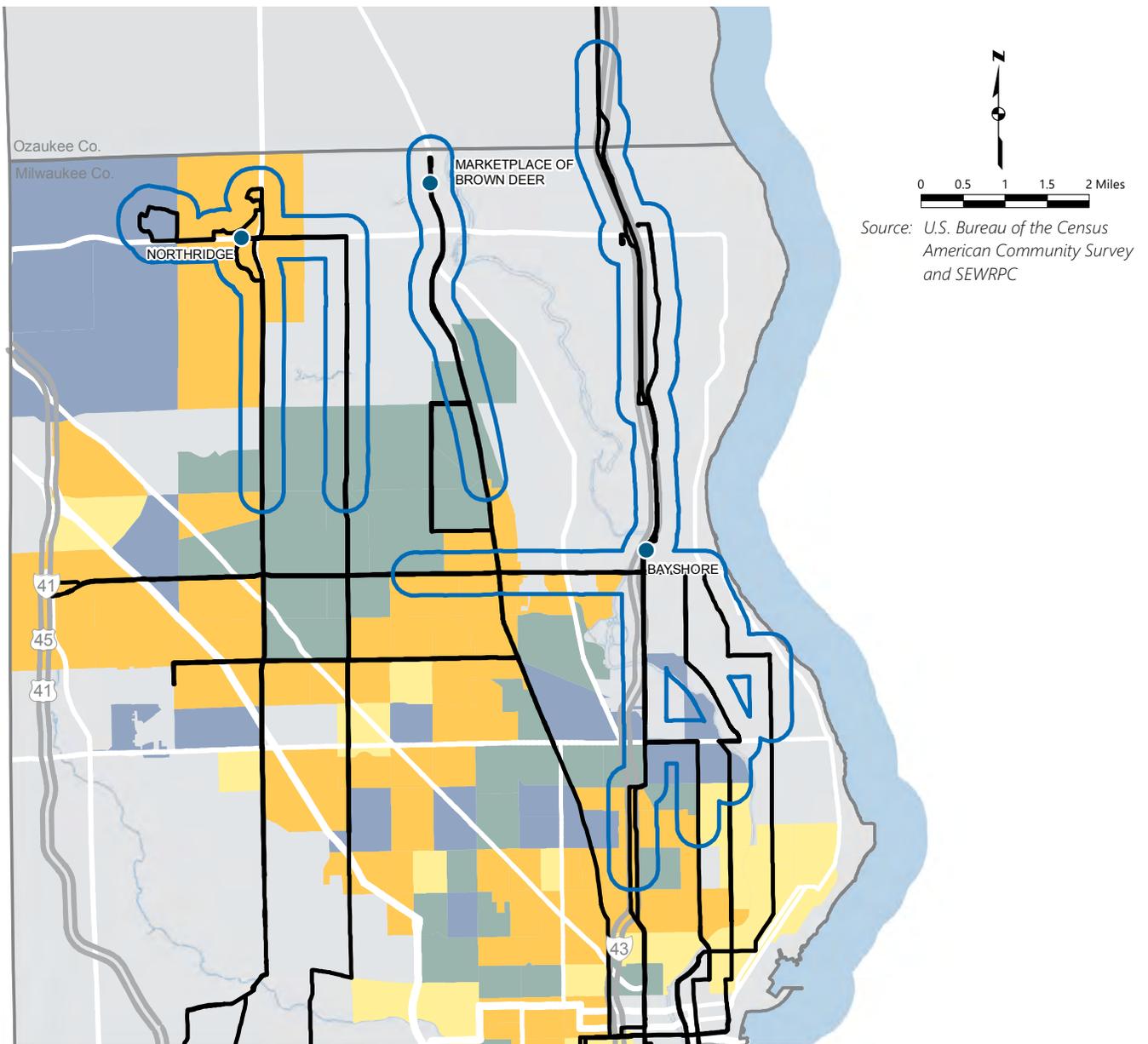
25 TO 99 MINORITY PEOPLE

10 TO 24 MINORITY PEOPLE

1 TO 9 MINORITY PEOPLE

Note: Areas in gray are comprised of census blocks wherein the percentage of minority people, including Hispanic people, is less than or equal to the regional average of 28.9 percent.

**Map 5.3**  
**Low-Income Families Within a 15-Minute Transit Ride from Potential Transit Connections**



Source: U.S. Bureau of the Census  
 American Community Survey  
 and SEWRPC

**TRANSIT SERVICE AREA (2016)**

ONE-QUARTER MILE WALK DISTANCE FROM BUS ROUTES WITHIN A 15-MINUTE TRANSIT RIDE FROM POTENTIAL TRANSIT CONNECTIONS

POTENTIAL TRANSIT CONNECTION

LOW-INCOME FAMILIES SERVED BY ALL TRANSIT ROUTES: 2,308

LOW-INCOME FAMILIES SERVED BY BAYSHORE ROUTE: 1,665

LOW-INCOME FAMILIES SERVED BY BROWN DEER ROUTE: 159

LOW-INCOME FAMILIES SERVED BY NORTHRIDGE ROUTE: 484

MCTS LOCAL & EXPRESS SERVICE

**CENSUS TRACTS WHEREIN THE PERCENTAGE OF FAMILIES IN POVERTY EXCEEDS THE REGIONAL AVERAGE OF 10.3 PERCENT BASED ON THE 2008-2012 U.S. CENSUS AMERICAN COMMUNITY**

FEWER THAN 100 FAMILIES IN POVERTY

100-199 FAMILIES IN POVERTY

200-299 FAMILIES IN POVERTY

300 OR MORE FAMILIES IN POVERTY

Notes: Areas in gray are comprised of census tracts wherein the percentage of families in poverty is less than or equal to the regional average of 10.3 percent.

The information reflected on this map is from the American Community Survey, which is based on sample data from a small percentage of the population. Consequently, the data has a relatively large margin of error that can result in larger census tracts being identified as having concentrations of families in poverty even though there are only small enclaves of such families located within the tract identified.

Table 5.1 provides the annual operating expenses, revenues, and ridership estimates associated with the fixed-flexible routes. Since this service is primarily focused on providing access to employers within Ozaukee County, costs could be shared through a partnership with County employers. The annual cost of the service is estimated to be approximately \$214,000 in 2022, which includes the cost to operate and maintain the vehicles. The capital cost to purchase two mini-buses (at approximately \$110,000), is not included in this total. The fare for the service is assumed to be \$2.00 per ride, for a total of approximately \$20,000 in 2018 and 2022. The farebox revenue could be lower if the County accepts transfers from MCTS. For purposes of this analysis a conservative estimate of 2.6 passenger trips per revenue hour based on the experience of similar services found in the TCRP Report 140, resulting in an estimate of 10,000 passengers per year.

**Table 5.1**  
**Projected Annual Operating Expenses, Revenues, and Ridership for the Fixed-Flexible Route Alternative**

Characteristics	Projected		
	2018	2022	Average
Services Provided			
Revenue Vehicle Miles	78,700	81,500	80,100
Revenue Vehicle Hours	3,800	3,800	3,800
Revenue Passengers			
Total	10,000	10,300	10,150
Passengers per Revenue Vehicle Mile	0.13	0.13	0.13
Passengers per Revenue Vehicle Hour	2.63	2.71	2.67
Expenses and Revenues			
Operating Expenses <sup>a</sup>	\$208,500	\$214,000	\$211,250
Farebox Revenues <sup>a</sup>	\$20,000	\$20,600	\$20,300
Percent of Expenses			
Recovered Through Revenues	9.6	9.6	9.6
Operating Assistance			
Federal <sup>a</sup>	\$33,200	\$34,400	\$33,800
State <sup>a</sup>	\$81,500	\$83,300	\$82,400
County <sup>a</sup>	\$73,800	\$75,700	\$74,800
Total <sup>a</sup>	\$188,500	\$193,400	\$191,000
Per Trip Data			
Operating Expenses <sup>a</sup>	\$20.85	\$20.78	\$20.81
Farebox Revenue <sup>a</sup>	\$2.00	\$2.00	\$2.00
Total Operating Assistance <sup>a</sup>	\$18.85	\$18.78	\$18.81

<sup>a</sup> Expenses and revenues are expressed in estimated year-of-expenditure dollars.

Source: SEWRPC

Flexible service provides the potential of serving less densely developed areas with transit service by allowing a set route to be modified to respond to customer needs. However, this ability to modify the route may cause the service to be less viable for work trips due to the potential variability in trip times, which would impact on-time arrivals. However, if this service is provided in careful coordination with employers, it could be possible to synchronize scheduling to offer more on-time arrivals when shift changes can be anticipated. This synchronization of schedules may necessitate more trips than are included in the cost estimates in Table 5.1.

### On-Demand Services

Interest in analyzing the initiation of on-demand services was expressed at the business-focused meeting, the public involvement meetings, and during discussions with the Advisory Committee. This alternative enhances the existing Shared-Ride Taxi service by providing a demand-response program for employees needing transportation to or from their workplace. The demand responsive system could be operated in two different ways. One option is through a private contract with a demand-responsive transportation network company such as Lyft or Uber. The second option is to operate the services through the County's Shared-Ride Taxi, either using the County's fleet or contracting the services with a private contractor providing their own vehicle fleet. If provided by the County, the on-demand services would need to ensure capacity exists to accommodate all trips equally, not just employment trips. This is based on Federal regulations that limit prioritizing certain trip purposes over other trip purposes. The alternative to expand the Ozaukee County Shared-Ride Taxi to an on-demand service is described in further detail in the Shared-Ride Taxi section later in this chapter.

### Partnership with a Transportation Network Company

Public transportation operators that have recently partnered with private demand responsive transportation providers can serve as examples for Ozaukee County. Two well-known national examples include Centennial, Colorado, and Pinellas County, Florida. Another recent example is Lone Tree, Colorado, which began a pilot with Uber in August 2017, building on an existing free shuttle service.

Centennial, Colorado, is a low-density suburb of Denver with a population over 109,000. It has one light rail transit station, a park-ride lot, and a dial-a-ride service. However, the community experienced difficulty serving commuters' first and last mile needs. To address these needs, in August 2016, the City of Centennial launched the Go Centennial pilot, a public-private partnership designed as an experiment to enhance and increase transit ridership at the light rail station.

During the six-month pilot period, transit users in a 3.75 square mile service area near the light rail station could take a free Lyft Line ride between the light rail station and any point in the service area. An accessible vehicle with a ramp and a trained driver were present in the service area during all hours of operation to provide service for people with limited mobility. Rides could be booked through smartphone applications or by telephone.

Go Centennial provided rides at no cost to travelers to go to or from the light rail station. Each trip was subsidized at market rate, which was on average \$4.70, ranging from \$2.56 to \$16.24 (eliminating an outlier of \$42.16). By comparison, the cost for the Call-n-Ride service to the same light rail station was subsidized at an average cost of \$18.54 per boarding in 2015. The Go Centennial service resulted in a 78 percent reduction in total costs compared to the Call-n-Ride service operated by the Regional Transit District. The final report for this pilot concluded that with a larger service area that fosters higher ridership and better utilization of the accessible vehicle, a partnership like Go Centennial could cut Call-n-Ride costs in half while providing more responsive service to the same number of riders.

The Pinellas Suncoast Transit Authority (PSTA), located in Pinellas County, Florida, began subsidizing rides on Uber (along with United Taxi and Wheelchair Transport) in February 2016. They are the first transit agency in the United States to partner with Uber, through the Direct Connect program. Although Pinellas County is the most densely populated county in Florida and has approximately 960,000 residents, it includes locations that cannot be reached by the existing bus service. PSTA has been challenged with providing first/last mile transit connections and adequate funding for transit. In an attempt to address these challenges, they developed a partnership with Uber and United Taxi.

Direct Connect allows riders to use Uber, United Taxi, or Wheelchair Transport to connect to the PSTA bus system. Passengers need to apply a promo code in the Uber app, then slide to the "PSTA" option to request a ride. The service hours are 6:00 a.m. until 11:00 p.m., seven days a week. In addition, riders who take Direct Connect to a bus stop can show their Uber/United Taxi/Wheelchair Transport receipt to the bus operator and get the bus ride free within an hour of the initial ride. The program expanded in January 2017 to include all of Pinellas County, including eight zones and eight bus stops, and increased the amount paid by PSTA from \$3.00 per ride to \$5.00 per ride if the trip started and ended within the same zone. In April 2018, PSTA eliminated the zones and increased the number of connecting bus stops from eight to 24.

Lone Tree, Colorado, is a Denver suburb with approximately 10,000 residents, which has launched one of the most recent on-demand pilot programs. In August 2017 the City of Lone Tree began a new pilot with Uber called Lone Tree Link On Demand, to provide free door-to-door on-demand rides within the city limits. The service allows anyone requesting a ride through the Uber app with a pick up location and destination within Lone Tree city limits to select the free Link On Demand option.

The Link On Demand pilot program offers service from 7:00 a.m. through 7:00 p.m. Monday through Thursday with extended hours until 10:00 p.m. on Friday. The service is also available Saturdays and Sundays with service from 10:00 a.m. to 10:00 p.m. and 10:00 a.m. and 8:00 p.m., respectively.

The pilot with Uber builds upon the existing public private partnership with three local employers that provided a free shuttle service to connect major employment hubs with healthcare facilities, retail, and mass transportation stations. The service reassigned one of the existing Link shuttle buses to Uber's server. Since its launch, the service has provided over 1,400 rides in Lone Tree. The pilot ended in December 2017.

In light of these initiatives in other communities, the Commission staff discussed the potential for providing subsidized on-demand service with representatives from Lyft. Based on that conversation, it appears that the most rational way to move forward with partnering with Lyft to provide on-demand service would be for the County to work with Lyft and interested employers to provide subsidized rides between specific

origins and destinations. As described by the Lyft representatives, there would be a coupon code provided to employees, which would allow the County and employers to track usage. In addition, specific pick-up and drop-off locations would be designated, or “geo-fenced” so that the coupon code would only work for those trips. This arrangement would ensure that employers and the County are only responsible for the costs associated with employment-related rides. Payment for the subsidized portion of the rides could come from the County, or directly from the employer being served. If the latter, unique coupon codes could be used in the mobile app to get to and from that specific business.

There are both opportunities and challenges associated with partnering with a private transportation network company. If not subsidized by the County or an employer, the cost would be relatively high per trip for the users and require access to a cell phone and credit card. These barriers could be overcome by allowing users to make reservations over the phone and by working with their employers to arrange payment. For example, a planned pilot between Lyft and the Los Angeles County Metropolitan Transportation Authority will allow customers to call a dispatcher phone number, providing equity to individuals who are either unbanked or non-smartphone users.<sup>5</sup>

Commission staff estimated three illustrative rides on Uber and Lyft. Both companies have a similar fare structure that includes a base fare of \$1.25, a per mile cost of \$1.16, a per minute fare of \$0.20, and a service fee of \$1.75. The costs are provided as ranges due to the travel time variability. Three sample trips were estimated using the websites for each company and listed below:

- Grafton Park & Ride Lot to Aurora Medical Center in Grafton would be between \$7 and \$9. (This one-way trip would cost \$3.00 at the Adult fare on the Ozaukee County Shared-Ride Taxi)
- Saukville Walmart to Charter Steel would be between \$7 and \$10. (This one-way trip would cost \$3.00 at the Adult fare on the Ozaukee County Shared-Ride Taxi)
- Cherrywood Lane to the Mequon Business Park would be between \$7 and \$9. (This one-way trip would cost \$3.00 at the Adult fare on the Ozaukee County Shared-Ride Taxi)

As can be seen from this limited sample, serving destinations in Ozaukee County would be more expensive to subsidize in Ozaukee County than those in the pilots studied by Commission staff. This is largely because the longer trip lengths required to reach many destinations in the County. One option would be to have businesses pay the full cost of the service provided to their employees using a coupon code associated with each business. Another option would be for the County to pay for the service and develop a cost share with the participating businesses.

Regardless of the method chosen, the County would need to work with a selected transportation network company to ensure adequate drivers are available during peak times to provide services. If this alternative is to be further pursued and if the County would be subsidizing any of the cost of the trips under this model, further study of other similar efforts across the nation would be needed to predict ridership levels, and therefore costs to the County.

### **Expanded MCTS Service Including Routes 276, 12, and 68 to Serve Key Employment Destinations**

Based on meetings with the public and businesses, and Advisory Committee discussions, three potential extensions of MCTS local routes were considered to serve Ozaukee County employers. These include an extension of MCTS Route 276 to the Mequon Town Center, an extension of MCTS Route 12 to the Mequon Business Park, and a potential Route 68 to Concordia University and MATC-Mequon. More detail on each alternative is provided in the following text, including service areas, potential costs to Ozaukee County, potential ridership, and the potential employment centers and population served by each route.

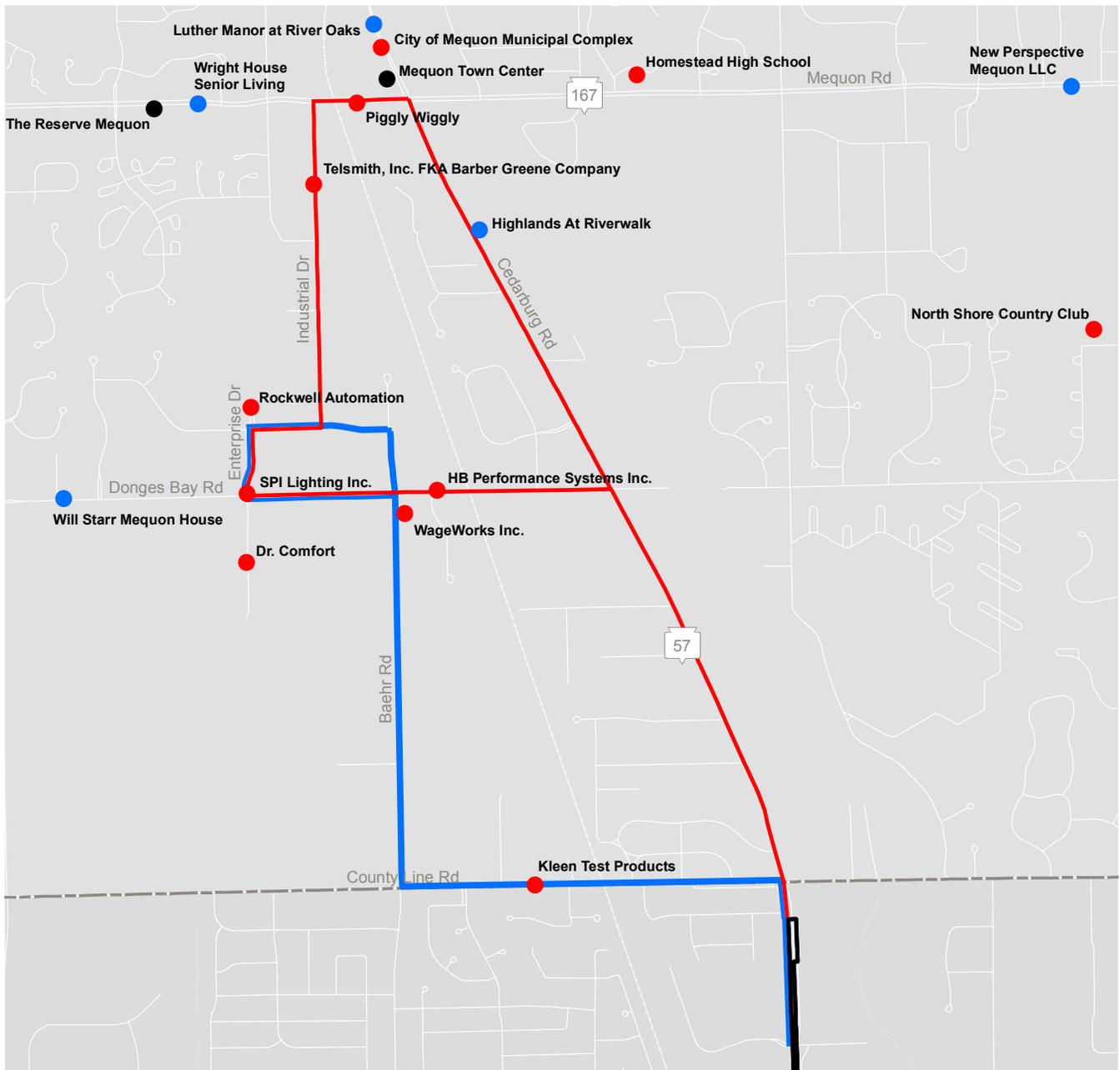
#### **Routes 276 and 12**

The extension of MCTS Route 276, as shown in red on Map 5.4, would extend an existing route from its current terminus at W. Cherrywood Lane and N. Green Bay Road along Cedarburg Road. The route would travel west on Donges Bay Road to Enterprise Drive, then north on Industrial Drive to Mequon Road. From

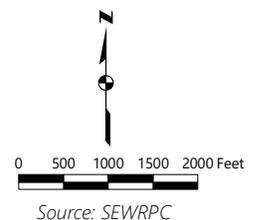
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<sup>5</sup> *Shared Used Mobility Policy Database, Two-Region Mobility on Demand Partnership.*

**Map 5.4**  
**Employment and Residential Facilities near the Possible Extension**  
**of Routes 12 and 276 in the City of Mequon**



- EXISTING MCTS ROUTES (12, 49, 276)
- POSSIBLE EXTENSION OF ROUTE 276
- POSSIBLE EXTENSION OF ROUTE 12
- MAJOR EMPLOYERS WITH MORE THAN 100 EMPLOYEES
- RESIDENTIAL FACILITIES FOR SENIORS, PEOPLE WITH DISABILITIES, AND LOW-INCOME HOUSEHOLDS
- OTHER HIGHER DENSITY RESIDENTIAL FACILITIES



Mequon Road, the route would continue to Cedarburg Road, returning to Cherrywood Lane. This route would serve the business park in Mequon, which includes Rockwell Automation and Telsmith, Inc. In addition, there are residential and retail areas, including Mequon Town Center, which would be served by this potential route. This route, as envisioned, would provide all day service on weekdays from 5:00 a.m. to 7:30 p.m.

Two options for operating the extension of Route 276 are presented for comparison. One option would continue to run the route with one bus, which would add 22 minutes to each trip. As a result, the number of total weekday trips in Milwaukee County would be reduced from 29 per weekday to 15 trips per weekday, reducing frequency to approximately every hour. Table 5.2 displays the operating expenses, revenues, and ridership for the extension of Route 276 with one bus. As indicated in Table 5.2, the route is anticipated to generate approximately 12,600 revenue passengers in 2022. The operating costs for the extended Route 276 with one bus would be \$189,600 in 2022. Ozaukee County would be responsible for approximately \$67,000 in 2022. Although roughly hourly bus service may be appropriate for the density of the areas served by this potential route, Milwaukee County may not be interested in decreasing the frequency of service for their residents.

The second option would run the route with two buses to maintain the current frequency of approximately 30 minutes. This option would utilize two buses and provide approximately 34 round trips daily. As shown in Table 5.3, ridership would increase to approximately 19,500 and operating expenses would double. Ridership is expected to increase due to the additional destinations

**Table 5.2**  
**Projected Annual Operating Expenses, Revenues, and Ridership to Extend MCTS Route 276 with Hourly Service: 2018-2022**

Characteristics	Projected		
	2018	2022	Average
Services Provided			
Revenue Vehicle Miles	11,300	11,300	11,300
Revenue Vehicle Hours	1,800	1,800	1,800
Revenue Passengers			
Total	12,600	12,700	12,700
Passengers per Revenue Vehicle Mile	1.12	1.12	1.12
Passengers per Revenue Vehicle Hour	7.00	7.00	7.00
Expenses and Revenues			
Operating Expenses <sup>a</sup>	\$184,900	\$189,600	\$187,300
Farebox Revenues <sup>a</sup>	\$18,100	\$18,300	\$18,200
Percent of Expenses			
Recovered Through Revenues	9.8	9.7	9.7
Operating Assistance			
Federal <sup>a</sup>	\$42,900	\$44,000	\$43,500
State <sup>a</sup>	\$58,800	\$60,300	\$59,600
County <sup>a</sup>	\$65,100	\$67,000	\$66,100
Total <sup>a</sup>	\$166,800	\$171,300	\$169,100
Per Trip Data			
Operating Expenses <sup>a</sup>	\$14.67	\$14.93	\$14.80
Farebox Revenue <sup>a</sup>	\$1.44	\$1.44	\$1.44
Total Operating Assistance <sup>a</sup>	\$13.24	\$13.49	\$13.36

<sup>a</sup> Expenses and revenues are expressed in estimated year-of-expenditure dollars.

Source: SEWRPC

**Table 5.3**  
**Projected Annual Operating Expenses, Revenues, and Ridership to Extend MCTS Route 276 with Half-Hourly Service: 2018-2022**

Characteristics	Projected		
	2018	2022	Average
Services Provided			
Revenue Vehicle Miles	22,700	22,700	22,700
Revenue Vehicle Hours	3,700	3,700	3,700
Revenue Passengers			
Total	19,400	19,500	19,500
Passengers per Revenue Vehicle Mile	0.85	0.86	0.86
Passengers per Revenue Vehicle Hour	7.00	7.00	7.00
Expenses and Revenues			
Operating Expenses <sup>a</sup>	\$369,750	\$379,100	\$374,400
Farebox Revenues <sup>a</sup>	\$27,900	\$28,100	\$28,000
Percent of Expenses			
Recovered Through Revenues	7.5	7.4	7.5
Operating Assistance			
Federal <sup>a</sup>	\$85,800	\$88,000	\$86,900
State <sup>a</sup>	\$117,600	\$120,500	\$119,100
County <sup>a</sup>	\$138,450	\$139,300	\$138,900
Total <sup>a</sup>	\$341,850	\$347,800	\$344,900
Per Trip Data			
Operating Expenses <sup>a</sup>	\$19.06	\$19.44	\$19.25
Farebox Revenue <sup>a</sup>	\$1.44	\$1.44	\$1.44
Total Operating Assistance <sup>a</sup>	\$17.62	\$17.84	\$17.73

<sup>a</sup> Expenses and revenues are expressed in estimated year-of-expenditure dollars.

Source: SEWRPC

served while maintaining existing service frequencies, expanding the options for employees using the route to reach jobs, particularly jobs within the retail or hospitality industries that have multiple shift changes throughout the day and evening hours. The operating expenses for the second option would be approximately \$379,100 in 2022. As a result, Ozaukee County's share for extending Route 276 with a frequency maintained at 30 minutes would total approximately \$139,300 in 2022.

The extension of MCTS Route 12 to the Mequon business park is shown in blue on Map 5.4. The route would extend from Cherrywood Lane to County Line Road, and then west to Baehr Road. From Baehr Road, the route would make a loop around Executive Drive to Enterprise Drive and back to Donges Bay Road. This route extension would primarily serve businesses in the Mequon Business Park and therefore, the potential route would be limited to the weekday service hours of 6:00 a.m. to 9:00 a.m. and 3:00 p.m. to 6:00 p.m. Table 5.4 shows the anticipated ridership levels at approximately 32,500 and farebox revenues of approximately \$46,800 in 2022. Two additional buses would be needed in order to maintain existing service levels in Milwaukee County of approximately every 25 minutes along the existing length of Route 12. The total operating assistance for extending the service into Ozaukee County would be approximately \$415,100, of which Ozaukee County would be responsible for approximately \$161,100 in 2022.

Map 5.5 illustrates the proximity to jobs for both potential Routes 12 and 276. The routes serve key employment areas, with greater than 1,000 jobs per one-quarter section. Map 5.6 further illustrates the population served, depicting the high number of people residing in and around the Mequon Town Center along the potential route 276.

### Route 68

As depicted on Map 5.7, the potential Route 68 would depart from Bayshore Town Center and travel north along Port Washington Road to Highland Road. On weekdays, Route 68 would proceed to Concordia University, concluding with service to the MATC-Mequon campus. It would offer service approximately every 30 minutes between 6:00 a.m. and 6:00 p.m. and approximately every 40 minutes between 6:00 p.m. and 12:00 a.m. Weekend service on Route 68 would begin at Bayshore Town Center, continue north along Port Washington Road and conclude with service to Concordia University. The potential Route 68 would operate on Saturdays from 6:00 a.m. to 11:00 p.m., with service every 30 minutes. On Sundays, the potential route would operate from 8:00 a.m. to 7:00 p.m. and offer service every 30 minutes. In order to provide headways of approximately 30 minutes, this route would require three buses between 6:00 a.m. and 6:00 p.m. on weekdays and two buses on the weekend. This route could replace Route 42U. Ozaukee County does not currently contribute toward the operating expenses for Route 42U. Ozaukee County's contribution toward Route 42U or the potential Route 68 could be a point of negotiation. If Route 42U continues along its current route, there is an option to extend Route 68 north to serve Ascension/Columbia St. Mary's Hospital, rather than MATC and Concordia.

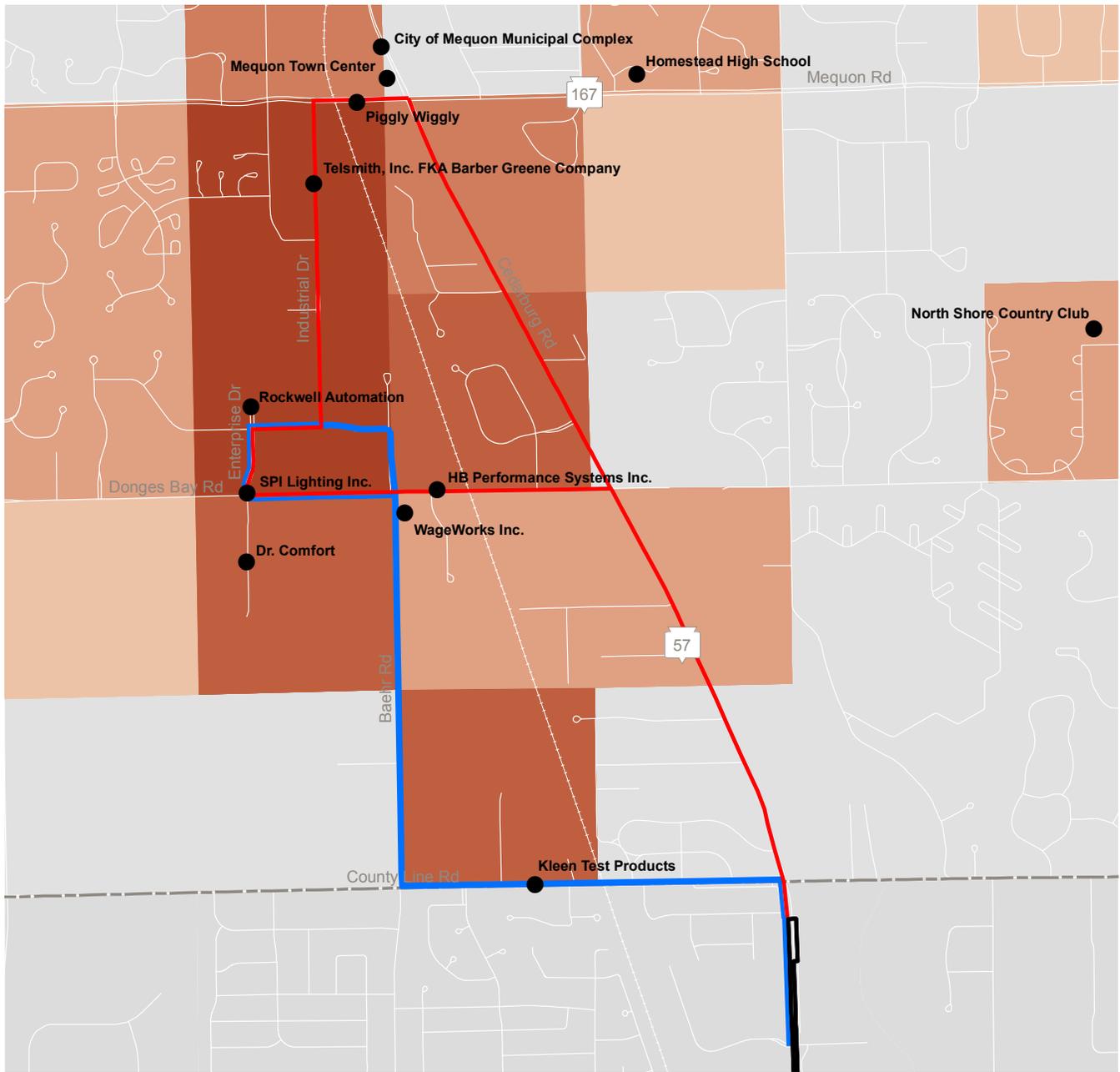
**Table 5.4**  
**Projected Annual Operating Expenses, Revenues, and Ridership to Extend MCTS Route 12: 2018-2022**

Characteristics	Projected		
	2018	2022	Average
Services Provided			
Revenue Vehicle Miles	19,400	19,400	19,400
Revenue Vehicle Hours	3,800	3,800	3,800
Revenue Passengers			
Total	32,300	32,500	32,400
Passengers per Revenue Vehicle Mile	1.66	1.68	1.67
Passengers per Revenue Vehicle Hour	8.50	8.50	8.50
Expenses and Revenues			
Operating Expenses <sup>a</sup>	\$459,000	\$461,900	\$460,500
Farebox Revenues <sup>a</sup>	\$46,500	\$46,800	\$46,700
Percent of Expenses			
Recovered Through Revenues	10.1	10.1	10.1
Operating Assistance			
Federal <sup>a</sup>	\$106,500	\$107,200	\$106,900
State <sup>a</sup>	\$146,000	\$146,800	\$146,400
County <sup>a</sup>	\$160,000	\$161,100	\$160,600
Total <sup>a</sup>	\$412,500	\$415,100	\$413,800
Per Trip Data			
Operating Expenses <sup>a</sup>	\$14.21	\$14.21	\$14.21
Farebox Revenue <sup>a</sup>	\$1.44	\$1.44	\$1.44
Total Operating Assistance <sup>a</sup>	\$12.77	\$12.77	\$12.77

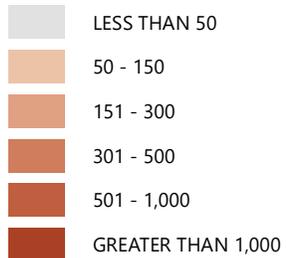
<sup>a</sup> Expenses and revenues are expressed in estimated year-of-expenditure dollars.

Source: SEWRPC

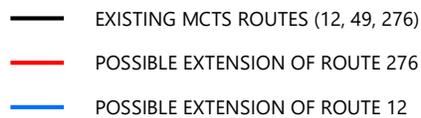
**Map 5.5**  
**Employment Near the Possible Extension of Routes 12 and 276 in the City of Mequon**



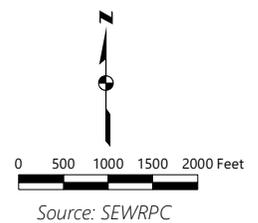
**2010 JOBS PER U.S. PUBLIC LAND SURVEY ONE-QUARTER SECTION**



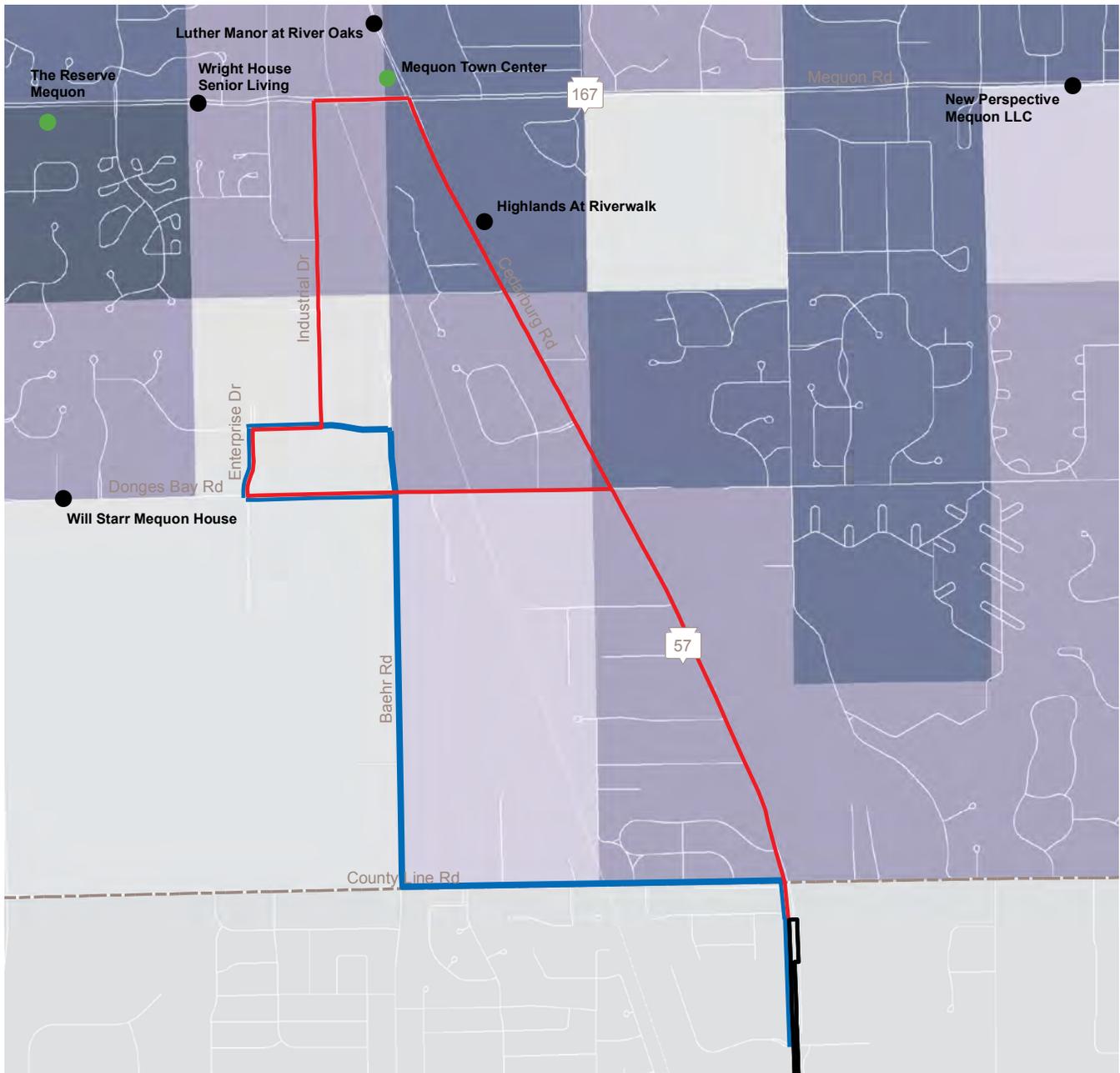
**TRANSIT ROUTES**



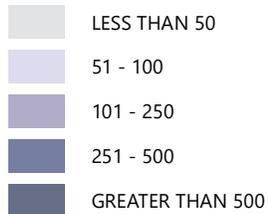
**FACILITIES**



**Map 5.6**  
**Population Near the Possible Extension of Routes 12 and 276 in the City of Mequon**



**2010 POPULATION PER U.S. PUBLIC LAND SURVEY ONE-QUARTER SECTION**



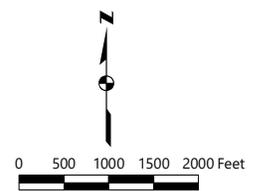
**TRANSIT ROUTES**

- EXISTING MCTS ROUTES (12, 49, 276)
- POSSIBLE EXTENSION OF ROUTE 276
- POSSIBLE EXTENSION OF ROUTE 12

**FACILITIES**

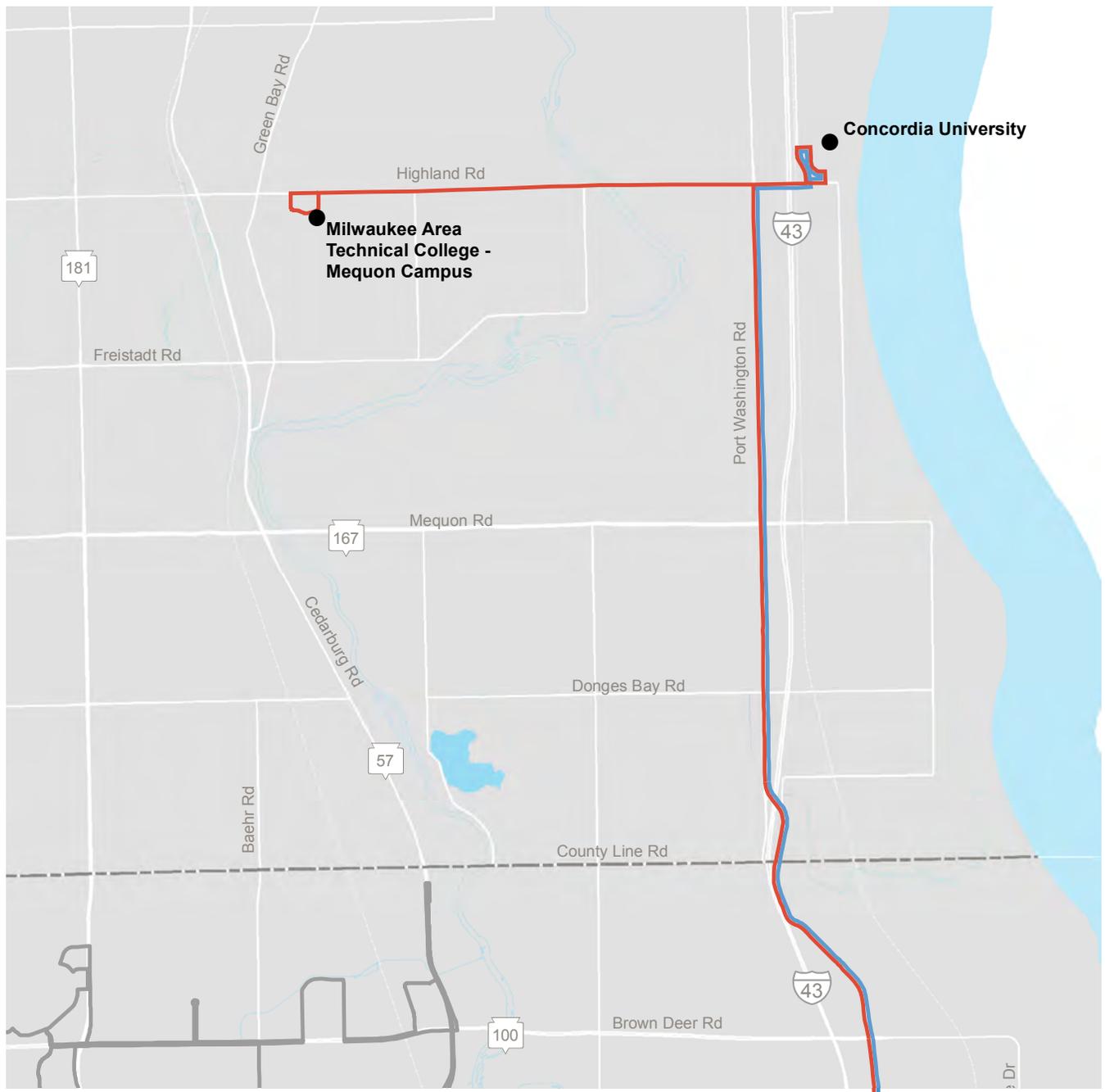
- RESIDENTIAL FACILITIES FOR SENIORS, PEOPLE, WITH DISABILITIES, AND LOW-INCOME HOUSEHOLDS
- OTHER HIGHER DENSITY RESIDENTIAL FACILITIES<sup>a</sup>

<sup>a</sup>The Mequon Town Center and the Reserve Opened After 2010



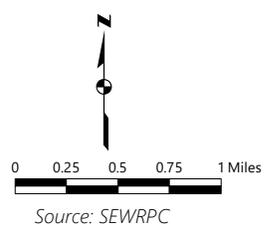
Source: SEWRPC

**Map 5.7**  
**Potential Route 68 in Milwaukee and Ozaukee Counties**



To Bayshore Town Center ▼

- POTENTIAL WEEKDAY ROUTE 68
- POTENTIAL WEEKEND ROUTE 68
- MCTS ROUTE



As shown in Table 5.5, operating expenses for the portion of the potential Route 68 alternative in Ozaukee County are anticipated to be \$868,200 in 2022. It is assumed that Ozaukee County would be responsible for the portion of additional miles within their border, which would be approximately \$318,300 in 2022, with Federal and State funds contributing a total of approximately \$477,500 to the operating costs.

Map 5.8 shows the route and nearby employment density, as well as major employers within a half-mile of Route 68. Map 5.9 shows the population density in proximity to Route 68. It also includes residential facilities for seniors, people with disabilities, and low-income households who may utilize the route. The route would connect areas with high population density in northern Milwaukee County with areas with more than 500 jobs per quarter section, including six major employers in Ozaukee County.

**Table 5.5**  
**Projected Annual Operating Expenses, Revenues, and Ridership for Potential MCTS Route 68: 2018-2022**

Characteristics	Projected		
	2018	2022	Average
Services Provided			
Revenue Vehicle Miles	63,400	63,400	63,400
Revenue Vehicle Hours	5,000	5,000	5,000
Revenue Passengers			
Total	50,000	50,300	50,200
Passengers per Revenue Vehicle Mile	0.79	0.79	0.79
Passengers per Revenue Vehicle Hour	10.0	10.0	10.0
Expenses and Revenues			
Operating Expenses <sup>a</sup>	\$862,800	\$868,200	\$865,500
Farebox Revenues <sup>a</sup>	\$72,000	\$72,400	\$72,200
Percent of Expenses			
Recovered Through Revenues	8.3	8.3	8.3
Operating Assistance			
Federal <sup>a</sup>	\$200,200	\$201,500	\$200,900
State <sup>a</sup>	\$274,300	\$276,000	\$275,200
County <sup>a</sup>	\$316,300	\$318,300	\$317,300
Total <sup>a</sup>	\$790,800	\$795,800	\$793,400
Per Trip Data			
Operating Expenses <sup>a</sup>	\$17.26	\$17.26	\$17.26
Farebox Revenue <sup>a</sup>	\$1.44	\$1.44	\$1.44
Total Operating Assistance <sup>a</sup>	\$15.82	\$15.82	\$15.82

<sup>a</sup> Expenses and revenues are expressed in estimated year-of-expenditure dollars.

Source: SEWRPC

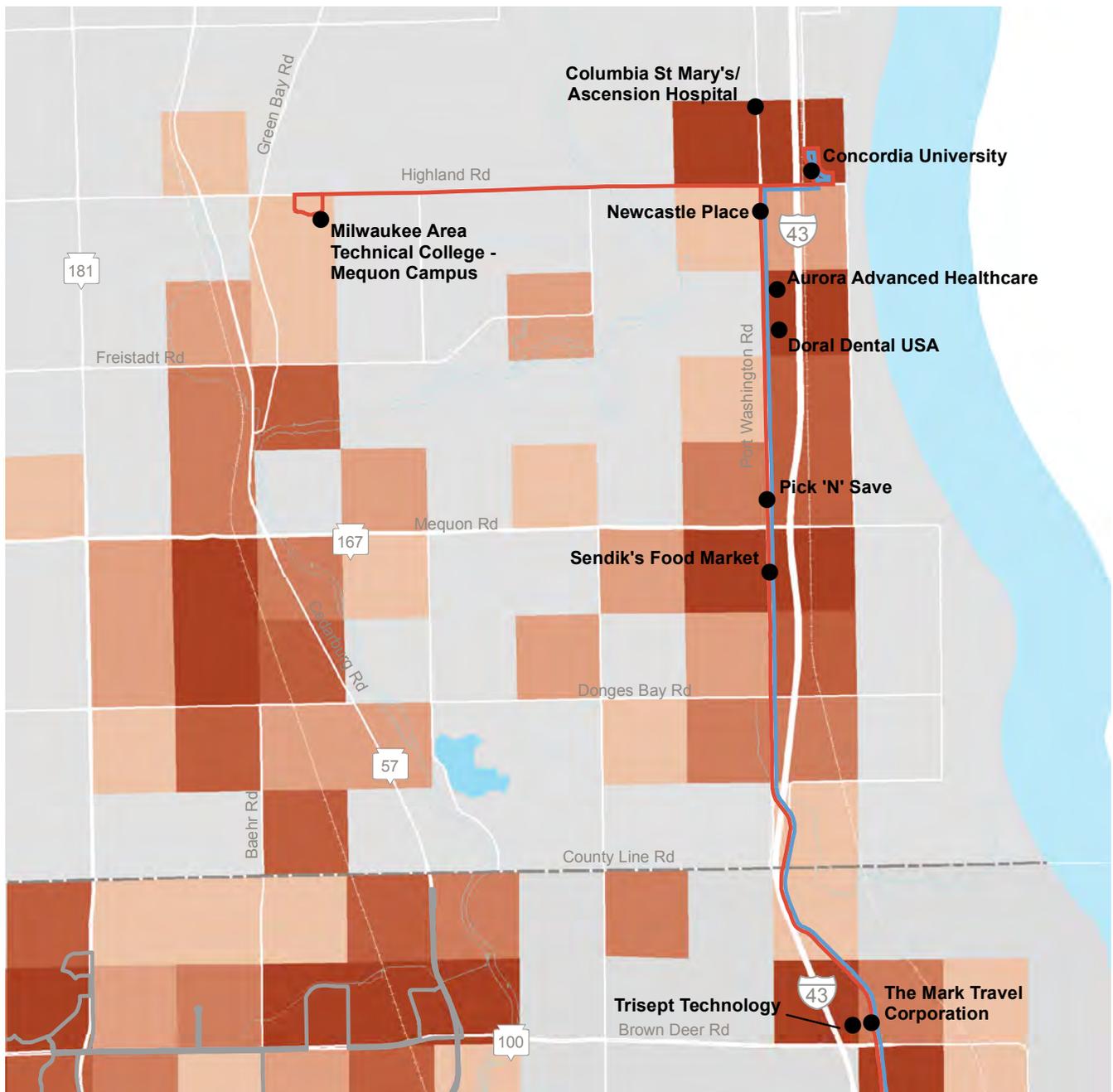
### Expanded Reverse Commute Service from Milwaukee County to Ozaukee County

Based on input received during the public involvement meetings, the business-focused meeting, and discussions with the Advisory Committee, this alternative reviews the possible expansion of reverse commute services from Milwaukee County to Ozaukee County. The County could consider increasing the number of reverse commute runs on the Express to improve service to employers in Ozaukee County. If the County is interested in expanding reverse commute services, it should work with businesses along the route to determine if they have existing or future employees who would benefit from reverse commute service at additional times during the day. If the County discovers that there would be demand for such a service, the following alternative represents an example of a service improvement the County could consider.

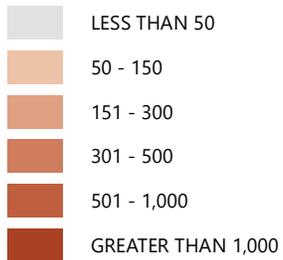
This alternative includes three additional reverse commute trips; one in the morning, one in the early afternoon, and one in the evening. Currently, the Ozaukee County Express begins northbound service in downtown Milwaukee at 5:25 a.m., and arrives in the Port Washington Park & Ride Lot at 6:21 a.m. In order to accommodate early shifts, an earlier run could be added, which would leave downtown Milwaukee before 5:00 a.m. and reach the Port Washington lot in time for the existing 5:46 a.m. traditional commute run. The existing afternoon reverse commute runs occur between 3:00 p.m. and 5:00 p.m. Employees using the reverse commute service may benefit from two additional southbound runs at approximately 2:00 p.m. and 5:00 p.m. to accommodate those who need to leave early or stay late on their shifts.

As shown in Table 5.6, the three additional trips would serve approximately 2,300 riders in 2022 and with operating expenses totaling approximately \$78,000 in 2022. Ozaukee County would be responsible for approximately \$30,000 of this total, in addition to Federal and State funds. Ridership is anticipated to be relatively low at approximately three passengers per revenue vehicle hour, which is a conservative estimate based on current reverse commute ridership. Based on the low ridership, Commission staff does not recommend this alternative at this time. However, ridership could expand with marketing of the service and as employment opportunities grow in Ozaukee County. In addition, if Ozaukee County decides to pursue this

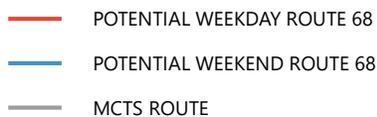
**Map 5.8**  
**Employment Near the Potential Route 68 in Milwaukee and Ozaukee Counties**



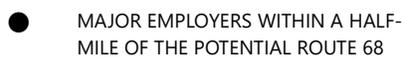
**2010 JOBS PER U.S. PUBLIC LAND SURVEY ONE-QUARTER SECTION**



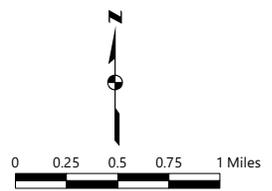
**BUS ROUTES**



**FACILITIES**

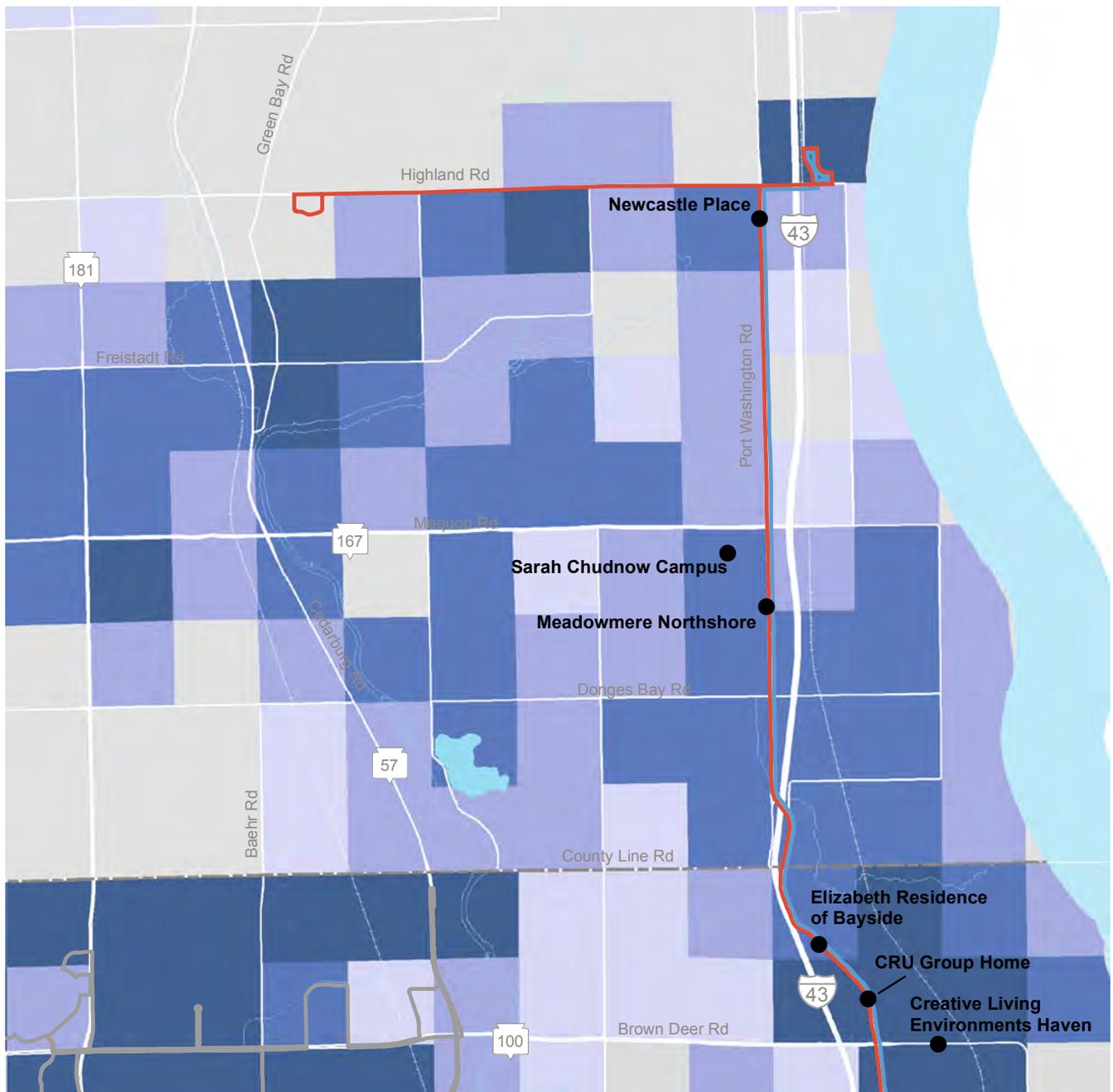


To Bayshore  
Town Center ↓



Source: SEWRPC

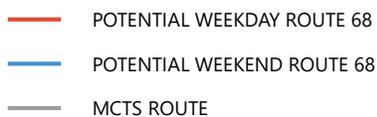
**Map 5.9**  
**Population Near the Potential Route 68 in Milwaukee and Ozaukee Counties**



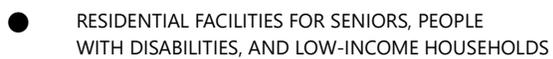
**2010 POPULATION PER U.S. PUBLIC LAND SURVEY ONE-QUARTER SECTION**



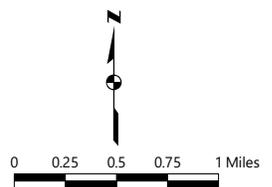
**BUS ROUTES**



**FACILITIES**



To Bayshore  
 Town Center



Source: SEWRPC

alternative, they could collaborate with Ascension/Columbia St. Mary's and local retailers to verify the shift times and commuter needs of their employees to ensure higher ridership before initiating the expanded service.

### Expanded Marketing of Transit Options

As discussed at multiple Advisory Committee meetings and during discussions with businesses and the public, there are opportunities to educate the public about transit options in Ozaukee County, particularly for potential and current employees. This alternative identifies various options to reach the target audience and potential costs for these options.

Ozaukee County currently spends about \$10,000 to \$12,000 annually for advertisements in Ozaukee County newspapers. Development of content and placement of advertisements is done by a consultant, who currently spends

approximately 10 hours annually. If the target audience is expanded to include residents in Milwaukee County, the amount of time and money needed can be expected to increase. In addition, if Spanish-speaking populations are targeted as part of the marketing campaign, the materials should be translated. For example, based upon the Commission's recent experience, the outside costs to translate materials for publication in print and/or on the Commission's website is estimated to be approximately \$3,000 annually.

One option to help inform potential employees about transit options would be to extend advertisements to newspapers that target communities that may be interested in transit services to jobs in Ozaukee County. The Milwaukee Courier has a readership of 160,000, of which 95 percent are African American. The Milwaukee Courier has a weekly circulation of 40,000 locations including businesses, churches, and community centers primarily in Milwaukee. The cost of advertising in the Milwaukee Courier is approximately \$2,400 for a full page advertisement (10" x 18") to \$200 for a partial page advertisement (3.25" x 5"), with an additional \$150 per color for color display advertising. In addition, the weekly newspaper El Conquistador serves the Latino Community and distributes approximately 12,500 newspapers. The cost for a full page black and white advertisement is \$875 and \$126 for a partial page advertisement (3.75" x 4").

In developing potential marketing campaigns, there are a number of nationally recognized examples to consider. The Chicago RTA's Ride On campaign was popular for its clever phrasing such as, "Try the Chicago-style dogs. Skip the Chicago-style traffic." Another example from The Rapid in Grand Rapids, Michigan used the concept of building stronger communities through transit with the There's More to the Ride campaign. In addition, the 2011 publication by EMBARQ, *From Here to There: A Creative Guide to Making Public Transport the Way to Go*, identified eight tactics to successfully market public transportation. These include: brand and identity, internal communication, user education, user information systems, marketing campaigns, public relations and external communications, user feedback systems, and online engagement. They highlight successful marketing campaigns such as RTC Transit in Las Vegas, Nevada that used endorsements to encourage and promote ridership and Los Angeles Metro that had a clear message and brand to promote the Orange Line route. Although these campaigns may not apply directly to Ozaukee County based on their

**Table 5.6**  
**Projected Annual Operating Expenses, Revenues, and Ridership for Expanded Reverse Commute Service on the Ozaukee County Express: 2018-2022**

Characteristics	Projected		
	2018	2022	Average
Services Provided			
Revenue Vehicle Miles	90,700	90,700	90,700
Revenue Vehicle Hours	765	765	765
Revenue Passengers			
Total	2,300	2,300	2,300
Passengers per Revenue Vehicle Mile	0.03	0.03	0.03
Passengers per Revenue Vehicle Hour	3.0	3.0	3.0
Expenses and Revenues			
Operating Expenses <sup>a</sup>	\$76,500	\$78,400	\$77,450
Farebox Revenues <sup>a</sup>	\$5,800	\$5,800	\$5,800
Percent of Expenses			
Recovered Through Revenues	7.6	7.4	7.5
Operating Assistance			
Federal <sup>a</sup>	\$17,800	\$18,200	\$18,000
State <sup>a</sup>	\$24,300	\$24,900	\$24,600
County <sup>a</sup>	\$28,600	\$29,500	\$29,100
Total <sup>a</sup>	\$70,700	\$72,600	\$71,700
Per Trip Data			
Operating Expenses <sup>a</sup>	\$33.26	\$34.09	\$33.67
Farebox Revenue <sup>a</sup>	\$2.52	\$2.52	\$2.52
Total Operating Assistance <sup>a</sup>	\$30.74	\$31.57	\$31.15

<sup>a</sup> Expenses and revenues are expressed in estimated year-of-expenditure dollars.

Source: SEWRPC

size and budget, the selected campaigns offer concepts to consider if the County decides to pursue an expanded transit marketing effort.

There are also opportunities to leverage existing community events or link to other websites that may help increase awareness about transit options. For example, job fairs have been mentioned by Advisory Committee members as one opportunity to continue to share information about transit options with potential employees. In addition, the Rideshare program provided by the State of Wisconsin, which connects commuters together to carpool, could be promoted at the same time. This program could be another option for employees to share rides, including for first and last mile connections. Lastly, MCTS just launched their new app, which could allow for greater marketing of transit services in Ozaukee County, including to both potential employees and employers.

Social media platforms such as Facebook, Twitter, Instagram, Flickr, and YouTube provide opportunities for Ozaukee County Transit to connect with customers and promote services. Some uses of social media that may be relevant for Ozaukee County include sharing service updates, providing information about projects and planning efforts, and interacting with customers informally. Within the region, a number of transit providers have an active social media presence including MCTS, RYDE Racine, and Western Kenosha County Transit. Their content ranges from daily updates provided by MCTS to updates on planning activities or promoting events where transit is available in Western Kenosha County. Maintaining an active social media presence requires staff time. Based on a survey of transit agencies, 86 percent of small urban and rural transit agencies reported a time commitment of up to 40 hours per month.<sup>6</sup> If Ozaukee County uses social media to provide real-time service updates, the staff time required could increase. In addition to staffing issues, the County may want to consider developing social media policies to provide guidance on issues such as account management, acceptable use, content review, security, and user conduct.

As indicated during discussions at the business-focused meeting and at Advisory Committee meetings, employers and their human resource managers may be unaware of existing transit services that could provide access to their business. Staff could be made available from Ozaukee County Transit Services or Ozaukee Economic Development to offer trip planning advice for employers, recruiters, and human resources staff. For example, individual trip planning combined with the recently developed Ozaukee County Shared-Ride Taxi poster and updated website could help businesses identify transit options for their employees based on shift times. In addition, there are tax incentives for employers who support commuter options called Commuter Tax Benefits. These benefits allow employers to use pretax dollars to pay for transit passes, vanpool fares and parking. These benefits are promoted as a way to recruit and retain good employees. Local resources for commuter benefit options are the Wisconsin Department of Transportation, through their commuter options webpage, and MCTS, on their commuter value pass webpage. Nationally, there are resources from the National Center for Transit Research at the University of South Florida and their National Transportation Demand Management and Telework Clearinghouse/Best Workplaces for Commuters Support Center.

Initiating and sustaining a successful marketing and outreach effort would likely require additional staff, which could potentially be accomplished through staffing at Ozaukee Economic Development or with assistance of a mobility manager. The *Public Transit-Human Services Transportation Coordination Plan for Ozaukee County: 2016* identified strategies to address unmet travel needs within Ozaukee County and between Counties. One strategy listed in that plan included providing funding for a mobility manager position, with the individual filling the position responsible for promoting the availability of transportation services, gathering and analyzing data to evaluate the transportation options for seniors, people with disabilities, and low-income residents, coordinating transportation services across county lines, coordinating community engagement in the transportation planning process, and dispersing information on transit services to the public. The cost of a mobility manager position varies by County and organization but the annual salary may be in the range of \$35,000 - \$60,000 based on the duties and background of the incumbent, and federal funds are typically available to reimburse up to 80 percent of the cost of the position.

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<sup>6</sup> *TCRP Synthesis 99, Uses of Social Media in Public Transportation – A Synthesis of Transit Practice, 2012.*

### **5.3 FIXED-ROUTE SERVICE ALTERNATIVES FOR THE OZAUKEE COUNTY EXPRESS**

Based on the evaluation of existing services in Chapter 4, meetings with the public and businesses, and Advisory Committee discussions, the following potential fixed-route service alternatives and improvements were analyzed for the Advisory Committee to consider for inclusion in the recommended transit system development plan. These alternatives include modifications or enhancements to the current Express service and additional fixed-route service that could be provided by Ozaukee County.

#### **No Changes to the Ozaukee County Express**

Given the evaluation of existing Express bus services in Chapter 4, the County could choose to continue the existing service without modification for the time period considered under this plan. The current system is the result of continual refinement by the County, and given the current financial resources available at all levels of government, may be the most appropriate type and level of service to provide unless more resources become available. This alternative also serves as the base against which the remaining fixed-route service alternatives will be compared.

This evaluation assumes that operating expenses per service hour will grow at a rate of 2 percent each year, and that the percentage of operating expenses covered by a combination of Federal and State funds will remain at approximately 55 percent. Fare increases will be necessary at the beginning of 2018 and again at the beginning of 2022 if the County wishes for fares to keep pace with inflation.

As shown in Table 5.7, ridership numbers for the Express are expected to stay constant but may fluctuate if an unexpected spike in gas prices occurs. The increases in ridership in between 2015 and 2018 reflect current trends. If these fare increases are implemented, the County can expect its level of funding in year-of-expenditure dollars to be about the same in 2022 as in 2018, meaning a decrease in funding in constant dollars. The increases in the County's level of assistance from 2015 to 2018 is due to a change in how federal and state funds are distributed between the Express and Shared-Ride Taxi that began in 2016.

#### **Improvements to Bus Stops**

Comments received from the public and the Advisory Committee indicated that improvements to some of the bus stops within Ozaukee County may be desirable to improve the usability of the stops and their accessibility for people with disabilities. As requested by the Advisory Committee, this potential alternative provides cost estimates for bus stop improvements along the Port Washington Road segment of Route 143 and also identifies potential funding sources for the improvements.

Commission staff inventoried each bus stop along Route 143 and identified eight locations that are in need of improvements to increase accessibility for people with disabilities, including bus pads and connecting sidewalks. The bus stop locations and associated improvements are included in Table 5.8. These locations and current amenities are also shown on Map 5.10. The improvements are estimated to cost \$177,000 based on the costs from other projects provided by MCTS. The estimates do not include costs associated with relocating utilities, traffic signals or other impediments. If the Advisory Committee selects this alternative and the County pursues its implementation, it is recommended that preliminary engineering be undertaken to develop more refined cost estimates.

In addition to an inventory of bus stop improvements, the Advisory Committee requested additional information on funding options. The Commission staff identified two sources of funding including FTA Section 5307 and FTA Section 5310. The following discussion outlines the eligible activities and local match requirements for these potential funding sources.

#### **FTA Section 5307**

In 2017 Ozaukee County received \$611,673 in FTA Section 5307/5340 Urbanized Area Formula Funds. Eligible activities that can utilize these funds include planning, engineering, design and evaluation of transit projects and other technical transportation-related studies; capital investments in bus and bus-related activities such as replacement of buses, overhaul of buses, rebuilding of buses, crime prevention and security equipment, and construction of maintenance and passenger facilities; and capital investments in new and

**Table 5.7**  
**Projected Annual Operating Expenses, Revenues, and**  
**Ridership for the Ozaukee County Express Service: 2018-2022**

Characteristics	Actual	Projected		
	2015	2018	2022	Average
<b>Services Provided</b>				
Revenue Vehicle Miles	182,900	182,900	182,900	182,900
Revenue Vehicle Hours	7,200	7,200	7,200	7,200
<b>Revenue Passengers</b>				
Total	92,500	110,000	110,000	110,000
Passengers per Revenue Vehicle Mile	0.51	0.60	0.60	0.60
Passengers per Revenue Vehicle Hour	12.85	15.28	15.28	15.28
<b>Expenses and Revenues</b>				
Operating Expenses <sup>a</sup>	\$1,253,800	\$1,542,700	\$1,592,700	\$1,567,700
Farebox Revenues <sup>a</sup>	\$196,300	\$265,100	\$282,700	\$273,900
<b>Percent of Expenses</b>				
Recovered Through Revenues	15.7	17.2	17.7	17.5
<b>Operating Assistance</b>				
Federal <sup>a</sup>	\$515,000	\$497,000	\$483,000	\$490,000
State <sup>a</sup>	\$441,300	\$397,500	\$407,500	\$402,500
County <sup>a</sup>	\$101,200	\$383,100	\$419,500	\$401,300
Total <sup>a</sup>	\$1,057,500	\$1,277,600	\$1,310,000	\$1,293,800
<b>Per Trip Data</b>				
Operating Expenses <sup>a</sup>	\$13.55	\$14.02	\$14.48	\$14.25
Farebox Revenue <sup>a</sup>	\$2.12	\$2.41	\$2.57	\$2.49
Total Operating Assistance <sup>a</sup>	\$11.43	\$11.61	\$11.91	\$11.76

<sup>a</sup> Expenses and revenues are expressed in estimated year-of-expenditure dollars.

Source: SEWRPC

**Table 5.8**  
**Bus Stop Improvement Locations and Estimated Costs**

Map Number	Location	Improvements	Estimated Cost
1	Columbia St. Mary's Hospital (West side of Port Washington Road)	400' x 8' sidewalk	\$96,000
		6' x 8' bus pad	\$2,000
2	Columbia St. Mary's Hospital (East side of Port Washington Road)	6' x 8' bus pad	\$2,000
3	Port Washington Road/Highland Road (SW)	66' x 8' sidewalk connecting to bus pad and shelter	\$15,840
4	Port Washington Road/Highland Road (SE)	142' x 8' sidewalk connecting to Newcastle Place Senior Housing	\$34,080
		82' x 8' sidewalk connecting to bus pad and shelter	\$19,680
5	Port Washington Road/Glen Oaks Lane (NW)	6' x 8' bus pad to connect to sidewalk	\$2,000
6	Port Washington Road/Glen Oaks Lane (SE)	12' x 6' bus pad to connect to sidewalk	\$2,160
7	Port Washington Road/Mequon Road (NE)	10' x 10' bus pad to connect to sidewalk	\$3,000
Estimated Total			\$176,760

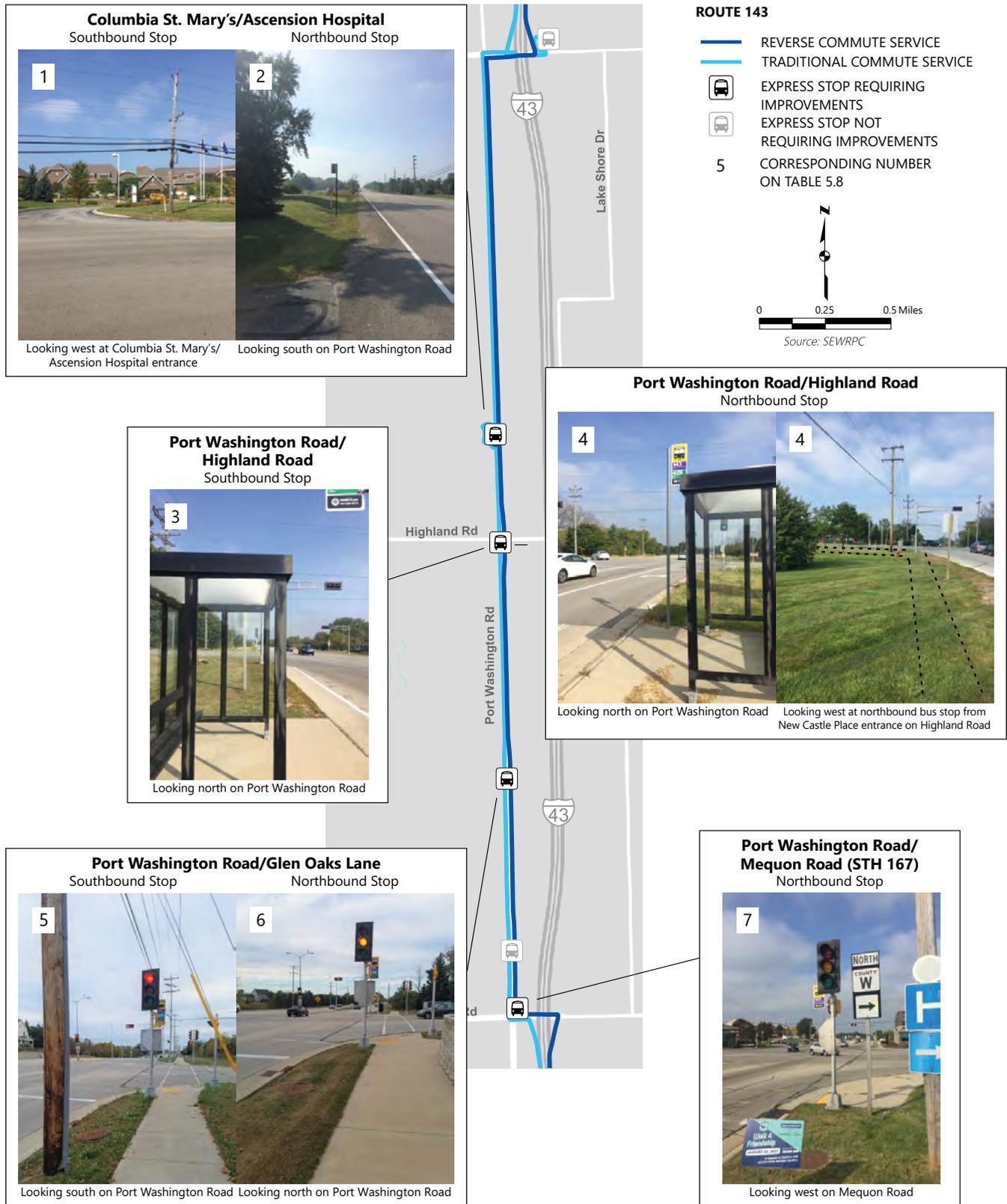
Note: Unit costs provided by the Milwaukee County Transit System were utilized to develop the costs associated with the recommended bus stop improvements to comply with the American with Disabilities Act are as follows:

6' x 8' flat bus pad = \$1,500 - \$2,000 (used \$2,000 in estimate)

Concrete = \$30/square foot

Source: SEWRPC

**Map 5.10**  
**Potential Bus Stop Improvements for the Ozaukee County Express**  
**Along Port Washington Road in the City of Mequon**



existing fixed guideway systems, including rolling stock, overhaul and rebuilding of vehicles, track, signals, communications, and computer hardware and software.<sup>7</sup>

Additional eligible projects include what are called, “associated transit improvements,” by the FTA. The County and other transit operators in the Milwaukee Urbanized Area are collectively required to spend at least 1 percent of their annual share of Section 5307 funds on associated transit improvements, such as bus shelters, landscaping and streetscaping, pedestrian access and walkways, and enhanced access for people with disabilities to public transportation. Pedestrian paths located within 0.5 miles of a transit stop or station and bicycle paths located within three miles of a transit stop or station are eligible capital projects and qualify as associated transit improvements. Projects outside this distance may be eligible if they are within the distance that a person could be expected to safely and conveniently walk or bicycle to the particular stop or station.<sup>8</sup>

For capital expenditures, the Federal share cannot exceed 80 percent of the net project costs, though the Federal share can account for 90 percent of the net project costs for vehicle-related equipment attributable to compliance with the Americans with Disabilities Act and the Clean Air Act. The Federal share may not exceed 50 percent of the net project cost for operating assistance.

### **FTA Section 5310**

The Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities Program seeks to improve mobility by removing barriers to transportation services and expanding upon transportation mobility options. Eligible activities for nontraditional Section 5310 projects include building an accessible path to a bus stop, including curb-cuts, sidewalks, accessible pedestrian signals or other accessible features. Within the Milwaukee Urbanized Area, the Commission manages the competitive application process for the selection of projects that receive 5310 funds, and Ozaukee County would be eligible to apply for those funds. The Federal share of eligible capital costs may not exceed 80 percent, and 50 percent for operating assistance. Section 5310 Program funds are awarded on a biennial cycle, with the open application period typically occurring during the summer months of even-numbered years. The application period for 2019 and 2020 projects is anticipated to open in June 2018.

### **Implement Bus on Shoulder along IH 43**

There are numerous benefits to implementing bus on shoulder (BOS). In addition to reducing congestion-related reliability problems, BOS applications also improve the competitive travel times for buses versus cars; they reduce bus running times; they are relatively low cost and easy to implement; they do not require new rights-of-way; and they are not obtrusive. There are approximately 20 BOS projects in North America, including the Minneapolis-St. Paul Twin Cities area, Miami-Dade, Florida, and Columbus, Ohio. This section presents the feasibility and the potential benefits of implementing BOS along IH 43 and describes the likely next steps for Ozaukee County and its partners, including WisDOT, should there be interest in pursuing this alternative. In particular, there are several factors that will need to be considered in order to safely implement BOS. These include potential changes to state law, existing shoulder widths within the corridor, bus driver training operating protocols, and training.

As envisioned, the BOS alternative would allow buses to use the shoulder along IH 43 during peak congestion periods to bypass congestion in the general purpose traffic lanes, reducing congestion-related reliability issues and providing a more attractive alternative to the automobile. Nationally, BOS projects typically limit bus use of the shoulder to times when traffic on the highway is congested and moving very slowly. In addition, most BOS applications place a limit on the speed a bus can travel while on the shoulder. For example, many of the BOS systems limit shoulder usage to when traffic in the general travel lanes slows to less than 35 miles per hour and restrict BOS speeds to ten to 15 miles per hour faster than general traffic with a maximum speed of no more than 45 miles per hour. In the Twin Cities, shoulder usage is restricted to times when speed slows to 35 miles per hour. When buses use the shoulders in the Twin Cities area, they are allowed to travel 15 miles per hour faster than general traffic, up to a maximum of 35 miles per hour.

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<sup>7</sup> FTA, *Fact Sheet: Urbanized Area Formula Program Grants 49 U.S.C. Chapter 53, Section 5307 & 5340*.

<sup>8</sup> FTA *Circular 9030.1E*, *Urbanized Area Formula Program: Program Guidance and Application Instructions, January 16, 2014*.

With regard to the shoulder width requirements, the minimum shoulder width to implement BOS will be governed by the width of the bus, however most agencies have used ten feet as a minimum operational lane width as buses are typically nine feet wide. It is recommended that should BOS be pursued, the desirable shoulder width should be 12 feet to allow for safe air space around the bus, including bus mirrors, with a minimum acceptable width of ten feet. For example, the BOS facilities in Miami, Florida had a minimum design standard of ten feet but required 12 feet on facilities where there were significant truck volumes. Additionally, continuous, consistent shoulder widths are required to effectively implement BOS as structural impediments would necessitate merging into congested traffic, adding delay and potentially negating the travel time benefit of BOS.

### ***Inventory of Current Operations, Shoulder Widths, and Impediments Along IH 43***

The Commission staff reviewed the historic travel speeds and congestion levels, shoulder widths, and structural impediments within the IH 43 segments utilized by the Ozaukee County Express. The year 2016 travel speed data utilized for this analysis was obtained from Federal Highway's National Performance Management Research Data Set. In addition, WisDOT provided data on shoulder widths along IH 43. BOS best practices and comparisons were informed by Transit Cooperative Research Program (TCRP) Report 151, *A Guide for Implementing Bus on Shoulder Systems*.

#### Travel Speeds/Congestion Levels

As delays caused by congestion impact the reliability of the Ozaukee County Express, BOS and the attendant improvement in reliability has the potential to increase ridership. As noted in the TCRP Report on Bus on Shoulder Systems, transit riders will build buffer time into their travel schedules to account for anticipated congestion. This buffered travel time is used by commuters to help make mode choice decisions. Although it is difficult to isolate ridership changes based on BOS implementation, applications in more congested corridors appear to have increased ridership due to increased reliability.

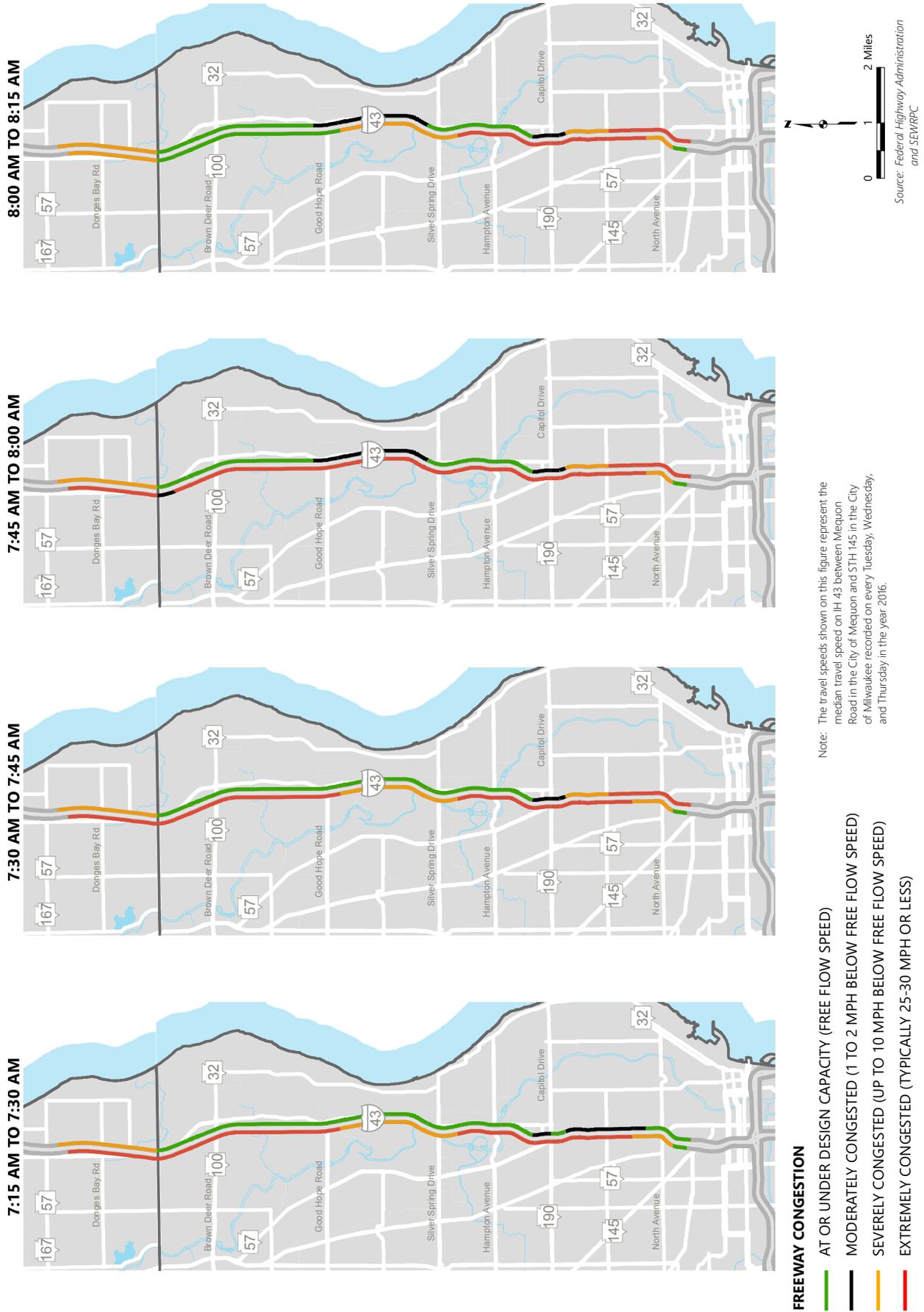
Figures 5.1 and 5.2 show a series of maps to illustrate the congestion levels at 15-minute intervals during the morning and afternoon commutes. As shown in Figure 5.1, the peak morning commute occurs between 7:15 a.m. and 8:15 a.m. when multiple segments of southbound IH 43 are extremely congested, or operating more than ten miles per hour below free flow speed. The series of maps illustrate how the congestion levels increase on IH 43 during the peak commuting period. In the afternoon, Figure 5.2 shows that segments of IH 43 are extremely congested in the northbound direction south of Good Hope Road.

Table 5.9 compares observed travel times along IH 43 to potential time savings if BOS is implemented with speeds of 35, 40, or 45 miles per hour. Shoulder use at 45 miles per hour is shown for comparison purposes. However, a majority of the examples studied in the TCRP Report have shoulder-use speed limits of 35 miles per hour. One exception is Ottawa, Ontario, which allows speeds up to 62 miles per hour (or 100 kilometers per hour). Since bus volumes are very high on their system (up to 100 buses per hour), the higher bus volumes improve safety by minimizing surprises to motorists in the adjacent general purpose lanes.

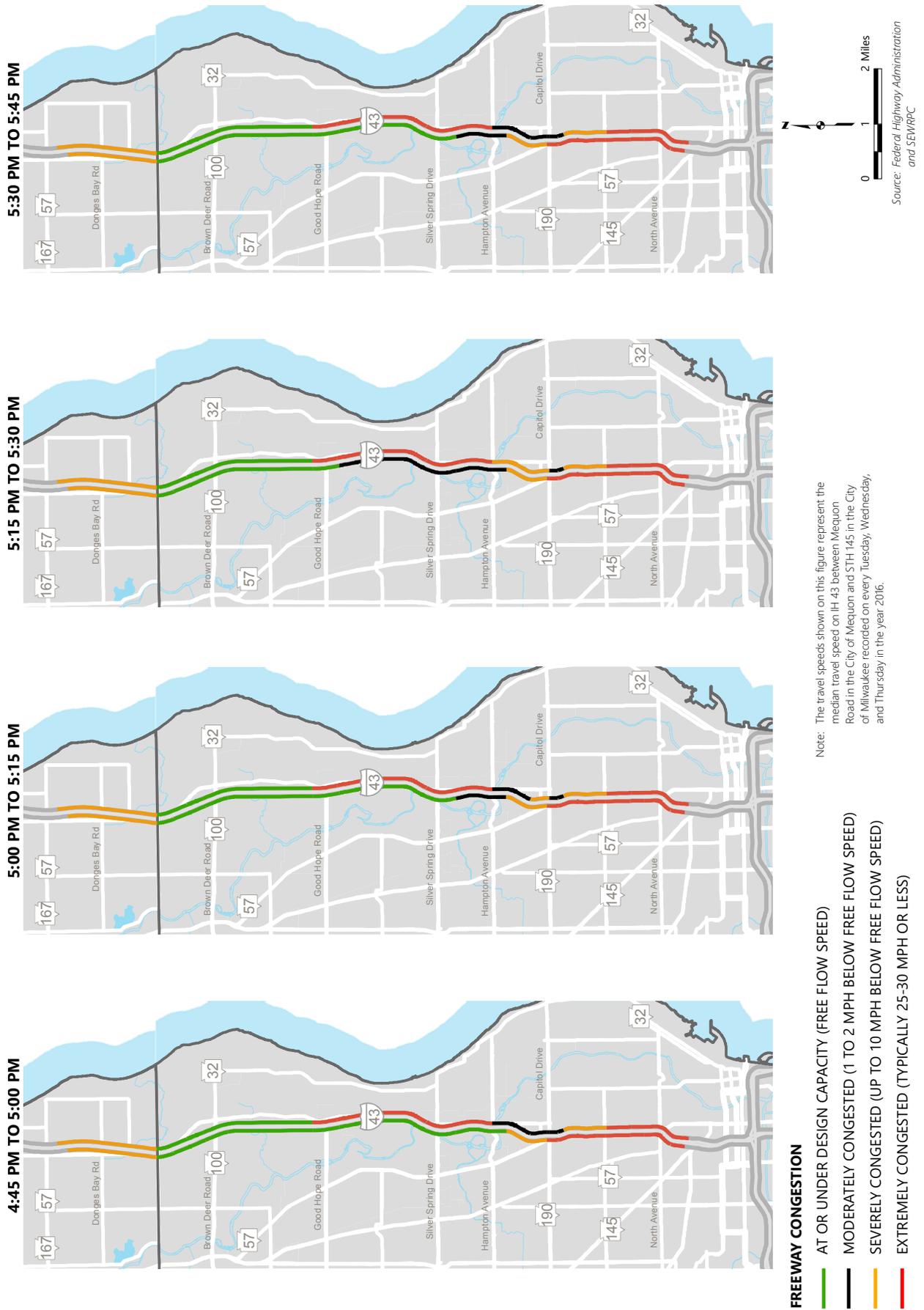
The frequency of recorded speeds for each segment along IH 43 are shown in Figures 5.3 and 5.4. The data shown reflects speeds for every Tuesday, Wednesday, and Thursday in 2016, as reported in the National Performance Management Research Data Set. The color intensity in the horizontal bars show how often the speed occurs. For example, the segment from Silver Spring Drive to Hampton Avenue on Figure 5.3 experiences speeds under 23 miles per hour 50 percent of the time. Figure 5.3 also shows that if BOS were implemented at 40 miles per hour, the bus would operate at speeds greater than the general travel lanes 75 percent of the time, resulting in a more reliable bus trip. Figure 5.4 shows that there would be fewer reliability benefits for IH 43 northbound. For example, the segment from Hampton Avenue to Silver Spring Drive experiences speeds above 34 miles per hour over 50 percent of the time. Therefore, there would be lesser reliability benefits if BOS is implemented along that segment of IH 43 northbound.

The majority of BOS benefits related to potential travel time savings would occur in the southbound direction. The congestion along the corridor results in median travel time delays of approximately 11 minutes as shown in Table 5.9. If BOS is implemented with a 35 miles per hour operating speed, the median travel times for southbound bus trips would be improved by over three minutes. If the BOS is implemented allowing speeds of 45 miles per hour, the median time savings would be increased to six minutes. The southbound travel time peak occurs at 7:30 a.m., with a travel time of approximately 32 minutes from Mequon Road and STH

**Figure 5.1**  
**Congestion Experienced on IH 43 on an Average Weekday: 7:15 a.m. to 8:15 a.m.**



**Figure 5.2**  
**Congestion Experienced on IH 43 on an Average Weekday: 4:45 p.m. to 5:45 p.m.**



**Table 5.9  
Comparison of Potential Bus-On-Shoulder (BOS) Travel Times to Median Observed Travel Times on an Average Weekday Along IH 43 Between Mequon Road and STH 145**

Southbound (11.48 Miles)												
Travel Time (Minutes)	Time Period (AM)											
	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	
Mainline Freeway <sup>a</sup>	11:30	12:00	14:00	20:30	23:00	21:30	19:00	18:00	16:00	14:00	12:00	
Delay <sup>b</sup>	--	--	2:00	8:30	11:00	9:30	7:00	6:00	4:00	2:00	--	
BOS at 45 MPH <sup>c</sup> Time Savings	--	--	--	5:00	7:30	6:00	3:30	2:30	0:30	--	--	
BOS at 40 MPH <sup>c</sup> Time Savings	--	--	--	3:30	6:00	4:30	2:00	1:00	--	--	--	
BOS at 35 MPH <sup>c</sup> Time Savings	--	--	--	1:00	3:30	2:00	--	--	--	--	--	

Northbound (11.72 Miles)															
Travel Time (Minutes)	Time Period (PM)														
	3:00	3:15	3:30	3:45	4:00	4:15	4:30	4:45	5:00	5:15	5:30	5:45	6:00	6:15	6:30
Mainline Freeway <sup>a</sup>	12:00	12:30	13:00	14:00	14:00	15:00	16:00	16:30	17:30	17:30	17:00	15:30	13:30	12:00	12:00
Delay <sup>b</sup>	--	--	0:30	1:30	1:30	2:30	3:30	4:00	5:00	5:00	4:30	3:00	1:00	--	--
BOS at 45 MPH <sup>c</sup> Time Savings	--	--	--	--	--	--	0:30	1:00	2:00	2:00	1:30	--	--	--	--

<sup>a</sup> The mainline freeway travel time is the median travel time observed on an average weekday in the year 2016.

<sup>b</sup> Delay is the difference between the free flow travel time—12:00 minutes traveling southbound and 12:30 minutes traveling northbound—and the observed travel time on the mainline freeway. The free flow travel time is based on the speed limit of each segment.

<sup>c</sup> The travel time for a Bus-On-Shoulder traveling southbound is 15:30 minutes at 45 MPH, 17:00 minutes at 40 MPH, and 19:30 minutes at 35 MPH; and the travel time for a Bus-On-Shoulder traveling northbound is 15:30 minutes at 45 MPH.

Source: Federal Highway Administration and SEWRPC

145. In summary, the travel time benefits if BOS is implemented on IH 43 could range from approximately three minutes to seven minutes, depending on the operating speed.

Table 5.9 also shows median travel time delays of five minutes during northbound travel during the afternoon commute. For northbound trips, the peak travel times are more evenly spread throughout the afternoon. Therefore, the travel time savings are reduced to under one minute, if the buses on the shoulder are allowed to travel at 45 miles per hour. The time savings benefits of BOS at different times of the day that are shown in Table 5.9 are also illustrated in Figure 5.5. The northbound travel time peak is approximately 22 minutes and occurs for a longer period between approximately 4:45 p.m. and 5:30 p.m. As a result, the travel time benefits from BOS will likely be less advantageous during the afternoon commute.

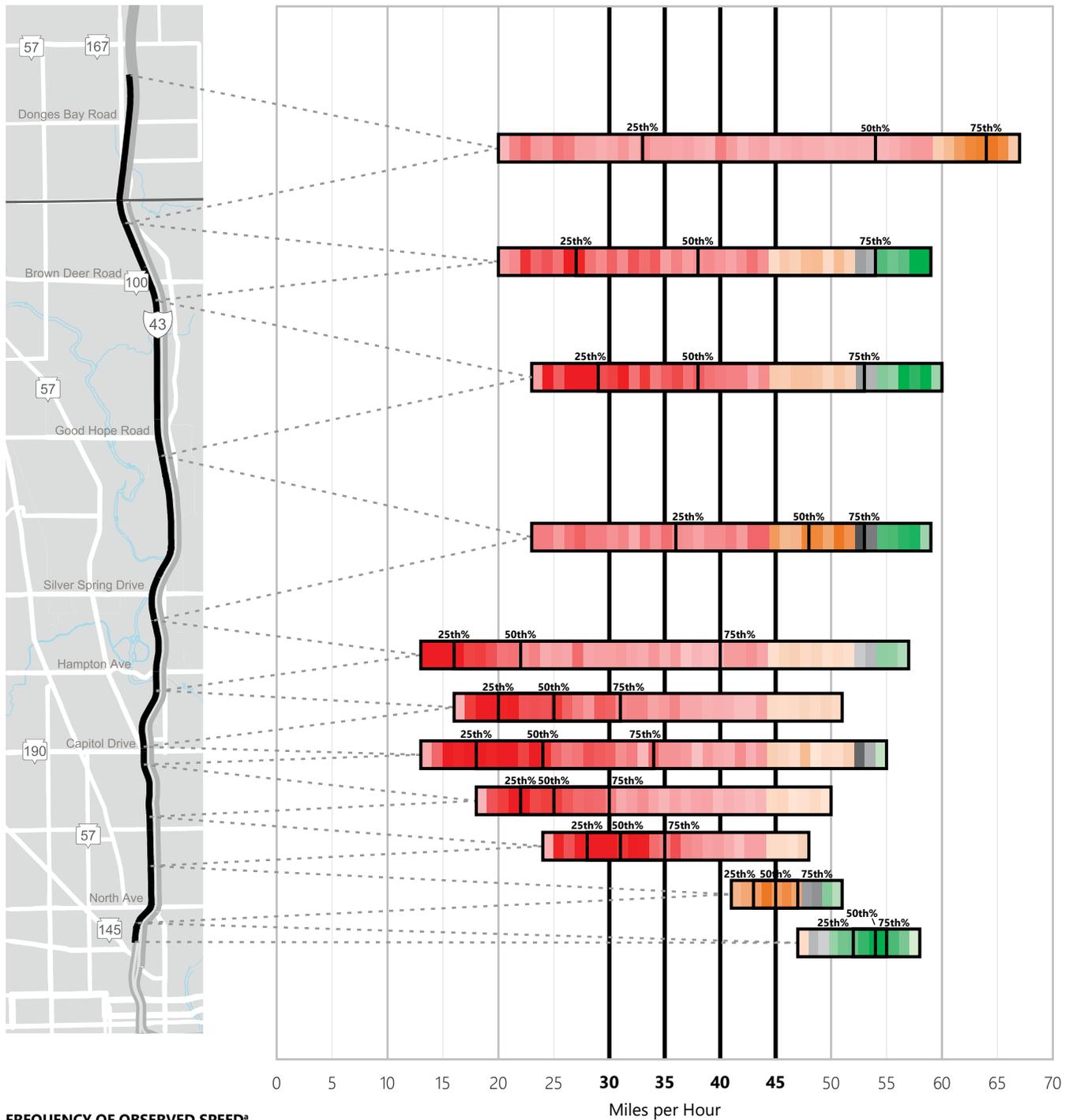
#### Shoulder Widths/Structural Impediments

Map 5.11 shows the shoulder widths and structural barriers along the corridor. For purposes of this analysis, it was assumed that the bus would operate on the right shoulder. This prevents the bus from needing to cross multiple lanes of traffic to exit the freeway, adding potential delay and negating the travel time benefits of BOS. As noted above, the preferred width for BOS is 12 feet, with a minimum acceptable width of ten feet. The majority of impediments shown are bridges, where the bridge piers or concrete walls currently prohibit the use of the shoulder for buses. Map 5.11 also indicates locations on IH 43 into which the general purpose travel lanes could potentially be shifted to provide additional width to the right shoulder. For example, the northbound and southbound segment between County Line Road and Good Hope Road could be restriped to allocate three feet from the left shoulder to a wider right shoulder. Therefore, it may be possible to accommodate the necessary shoulder width in certain areas without major construction. It should be noted that any restriping recommendations would need to be reviewed and potentially implemented by WisDOT, the owner and operator of IH 43, in order for Ozaukee County to implement BOS.

#### **Policy Changes to Implement Bus on Shoulder**

As discussed previously, future discussions about BOS would have to include WisDOT, as well as the Federal Highway Administration to understand any budgetary, legal, and operational concerns. In addition,

**Figure 5.3**  
**Observed Traffic Speed (mph) on an Average Weekday in 2016 Along**  
**Southbound IH 43 from Mequon Road to STH 145: 7:15 a.m. to 8:15 a.m.**



**FREQUENCY OF OBSERVED SPEED<sup>a</sup>**

LESS OFTEN	MORE OFTEN	
		AT OR UNDER DESIGN CAPACITY (FREE FLOW SPEED)
		MODERATELY CONGESTED (1 TO 2 MPH BELOW FREE FLOW SPEED)
		SEVERELY CONGESTED (UP TO 10 MPH BELOW FREE FLOW SPEED)
		EXTREMELY CONGESTED (MORE THAN 10 MPH BELOW FREE FLOW SPEED)

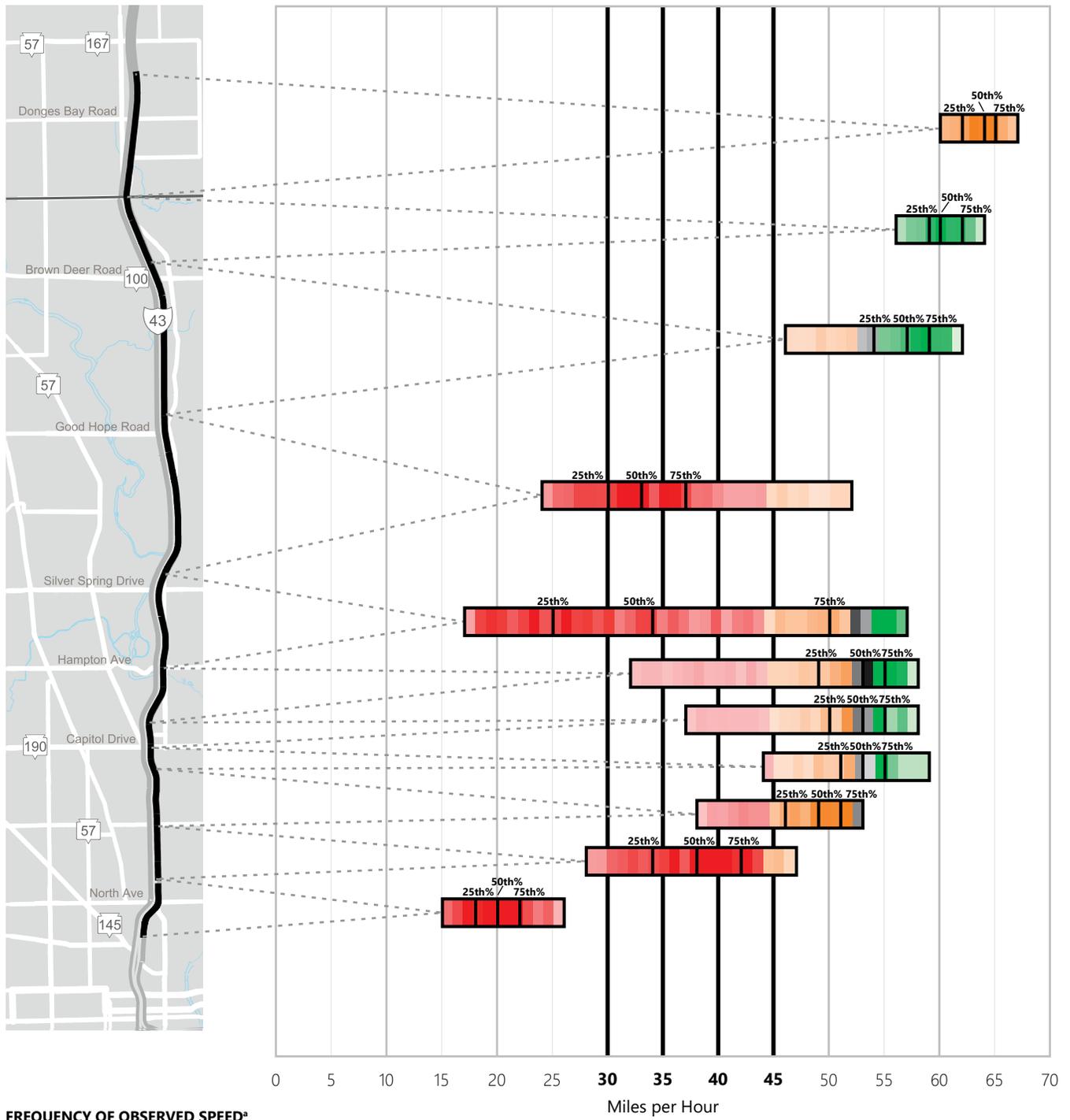
— POTENTIAL TRAVEL SPEEDS OF BOS

Note: The travel times shown in this figure represent the observed travel times on IH 43 between Mequon Road in the City of Mequon and STH 145 in the City of Milwaukee recorded on every Tuesday, Wednesday, and Thursday in the year 2016.

Source: Federal Highway Administration and SEWRPC

<sup>a</sup>The color intensity reflects how often that travel speed occurred within each individual segment.

**Figure 5.4**  
**Observed Traffic Speed (mph) on an Average Weekday in 2016 Along**  
**Northbound IH 43 from STH 145 to Mequon Road: 4:45 p.m. to 5:45 p.m.**



**FREQUENCY OF OBSERVED SPEED\***

LESS OFTEN      MORE OFTEN

- AT OR UNDER DESIGN CAPACITY (FREE FLOW SPEED)
- MODERATELY CONGESTED (1 TO 2 MPH BELOW FREE FLOW SPEED)
- SEVERELY CONGESTED (UP TO 10 MPH BELOW FREE FLOW SPEED)
- EXTREMELY CONGESTED (MORE THAN 10 MPH BELOW FREE FLOW SPEED)

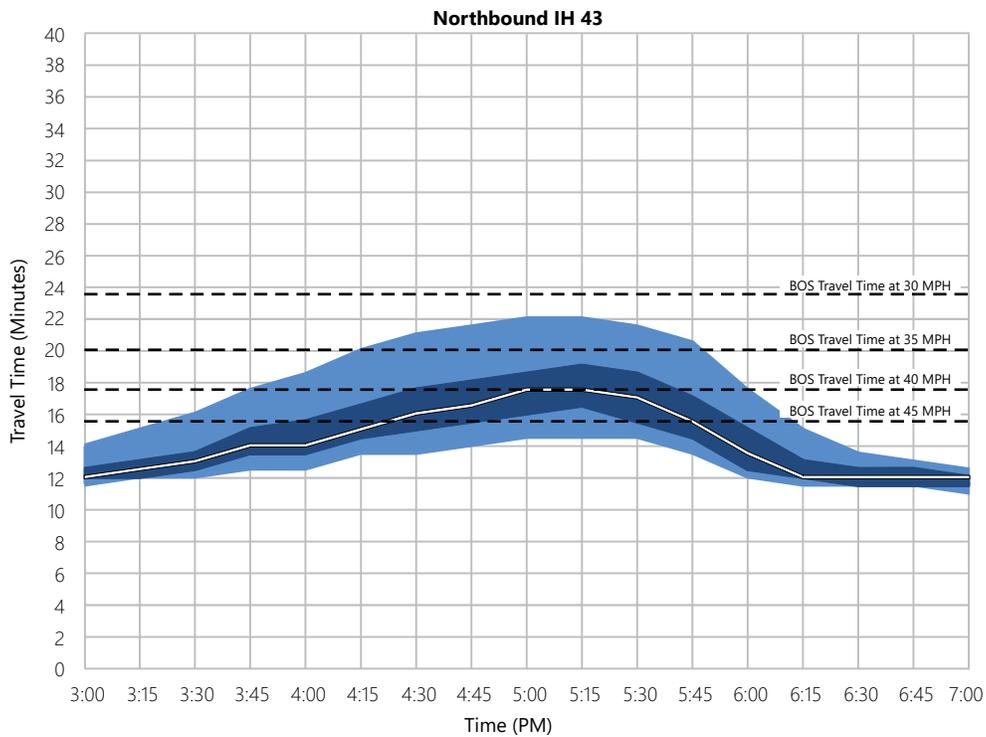
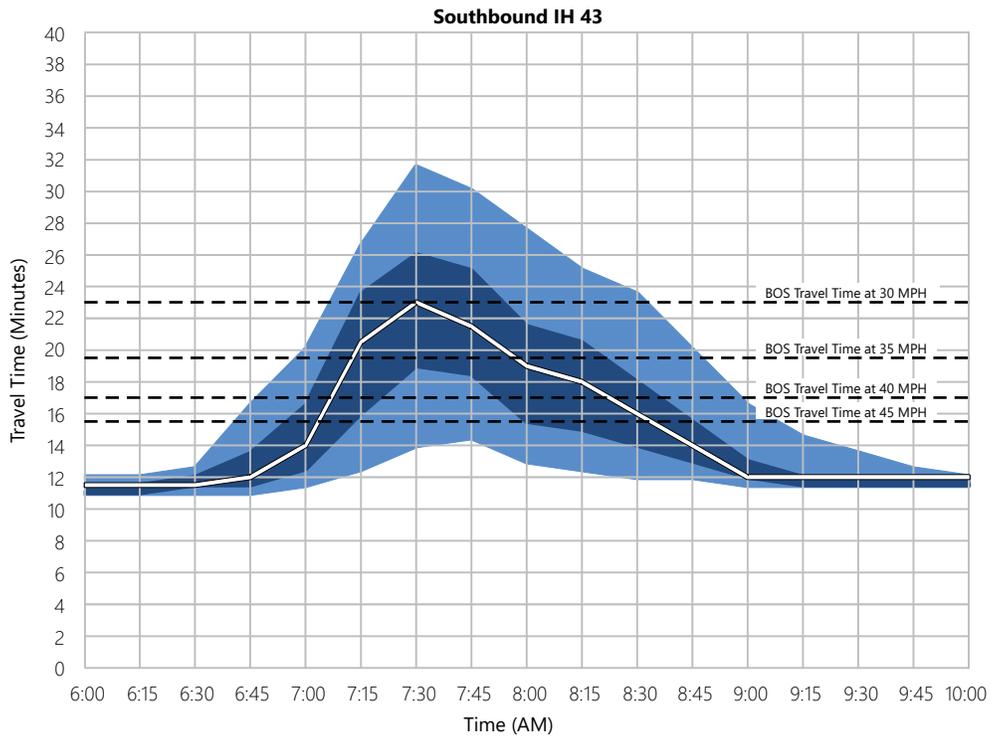
— POTENTIAL TRAVEL SPEEDS OF BOS

Note: The travel times shown in this figure represent the observed travel times on IH 43 between Mequon Road in the City of Mequon and STH 145 in the City of Milwaukee recorded on every Tuesday, Wednesday, and Thursday in the year 2016.

Source: Federal Highway Administration and SEWRPC

\*The color intensity reflects how often that travel speed occurred within each individual segment.

**Figure 5.5**  
**Comparison of Potential Bus-On-Shoulder Travel Times to the Observed Travel**  
**Times on an Average Weekday Along IH 43 Between Mequon Road to STH 145**

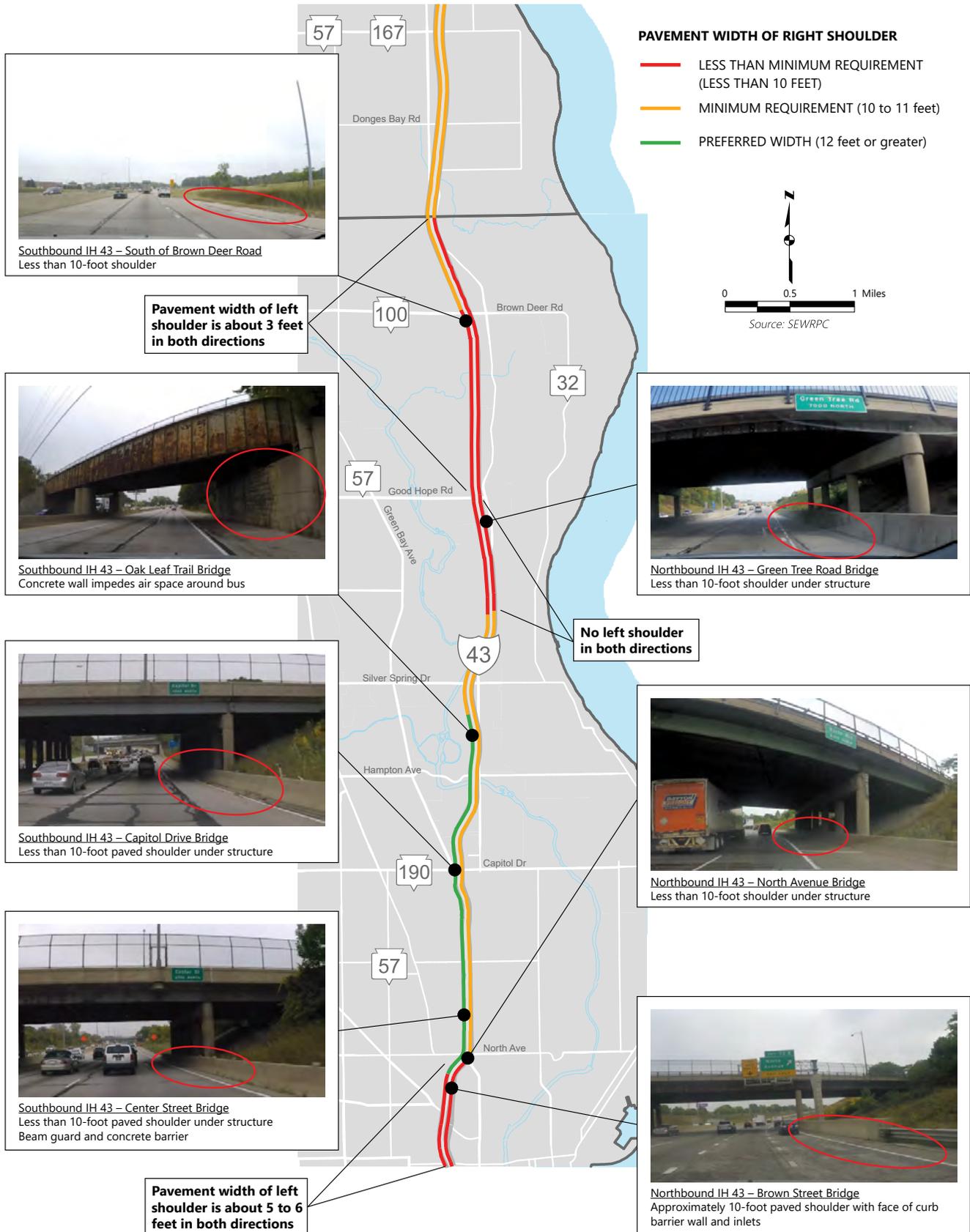


- RANGE OF TRAVEL TIME ON IH 43
- 25TH PERCENTILE TO 75TH PERCENTILE TRAVEL TIME
- MEDIAN TRAVEL TIME

Note: The travel times shown in this figure represent the observed travel times on IH 43 between Mequon Road in the City of Mequon and STH 145 in the City of Milwaukee recorded on every Tuesday, Wednesday, and Thursday in the year 2016.

Source: Federal Highway Administration and SEWRPC

**Map 5.11**  
**Geometric Constraints for Potential Bus-On-Shoulder (BOS) Along IH 43**



MCTS, the contract operator of the Ozaukee County Express, would be an important partner to ensure the BOS design and operation will meet their needs, as well as addressing training for the bus drivers. While developing the BOS alternative, the Commission coordinated with WisDOT to review the preliminary draft. Although based on the initial review no major issues were identified, WisDOT will continue to be engaged in the process and provide input on BOS implementation including, but not limited to, funding and operations.

There are legal considerations that will need to be addressed by the Wisconsin State Legislature. Currently, the Wisconsin Rules of the Road Section 346.08 prohibits the passing on the right using any part of the shoulder. In order to implement bus on shoulder, the Wisconsin State Legislature would have to amend state statute in order to formalize BOS operations.

### **Next Steps to Implement BOS**

If this alternative is selected, final implementation will likely occur beyond the planning horizon of this 5-year plan. However, based on BOS development processes in other states, the Commission recommends coordinating with key stakeholders, including the Federal Highway Administration, WisDOT, and MCTS to review policy, budget, operational protocols, and training as a first step. If the BOS concept is pursued on IH 43 or other highways, the Commission also recommends a marketing and educational campaign to acquaint motorists using the general purpose lanes of the reasons that buses should be given priority and how they will operate. The Commission can provide refined analyses to determine where BOS could be implemented immediately with restriping and work with WisDOT to quantify costs.

### **Increased Service Frequency and Service Hours**

In the event the County decides to increase service on the Ozaukee County Express, the Commission analyzed MCTS ridership data and travel patterns to determine where runs could be added. Based on the high volume of southbound riders boarding at the Grafton Commons stop in the morning, a run could be added from Grafton Commons at 6:30 a.m. In addition, a northbound run could be added in the evening at 4:38 p.m. based on the higher than average ridership around that time.

Table 5.10 shows the expected incremental operating expenses, revenues, and ridership on the Ozaukee County Express for 2018-2022 associated with this alternative. Adding the two runs discussed above is expected to cost approximately \$102,600 in 2022, with Ozaukee County's portion of the operating cost estimated at \$29,700. The estimated number of additional riders is 6,600 in 2022. The additional frequency would provide existing riders with greater flexibility and thereby would improve the quality of service for existing riders, in addition to attracting new riders.

### **Increased Fares at a Rate Greater than Inflation to Reduce the County's Level of Assistance**

Should the County need to reduce its level of assistance to the Express Service, the County would likely need to increase fares at a rate greater than inflation. Raising fares would slightly discourage ridership as the service becomes more expensive to users.

Table 5.11 displays the expected changes in operating expenses, revenues, and ridership under this alternative. Fares would be raised \$0.75 over the course of the plan, with increases in 2018, 2020, and 2022. As a result of increasing fares, the County level of assistance is projected to be approximately \$10,000 less in 2022 when compared to the "no change" alternative. Due to the increase in fares, 2,900 fewer revenue passengers would be estimated to use the service in 2022 than under the "no change" alternative.

### **Reduced Service on the Ozaukee County Express**

As noted in Chapter 2, Existing Transit Services and Travel Patterns, Ozaukee County eliminated parts of Route 143 in 2002 to improve the efficiency of the service based on the recommendations of a route performance evaluation. In addition, the route was further refined within the past few years to optimize the stops served and which runs served each stop. As a result, the current Route 143 operates efficiently, as further described in Chapter 4, Evaluation of the Ozaukee County Transit Services. However, in order to provide Ozaukee County with options should the amount of available funding for the Express be reduced, the Commission has prepared an analysis of potential reductions for consideration.

This alternative would remove a pair of round trips with the least revenue passengers per run based on 2016 and 2017 ridership data from MCTS. The morning round trip that would be eliminated includes

the northbound run that starts at W. Walnut Street and N. 5th Street at 7:34 a.m. and averages approximately one passenger per run. The southbound run that starts at the Grafton Park & Ride Lot at 8:06 a.m. and averages approximately nine passengers per run would also be eliminated. In addition, ridership data from MCTS indicates that the afternoon northbound run from W. Walnut Street and N. 5th Street at 1:41 p.m. averages six passengers per run, and its paired southbound run from the Port Washington Park & Ride Lot at 3:05 p.m. averages approximately three passengers per run. This afternoon round trip would also be eliminated under this alternative.

**Table 5.10**  
**Projected Changes in Annual Operating Expenses, Revenues, and Ridership for Increased Frequency on the Ozaukee County Express: 2018-2022**

Characteristics	Projected		
	2018	2022	Average
Services Provided			
Revenue Vehicle Miles	28,200	28,200	28,200
Revenue Vehicle Hours	1,020	1,020	1,020
Revenue Passengers			
Total	6,600	6,600	6,600
Passengers per Revenue Vehicle Mile	0.23	0.23	0.23
Passengers per Revenue Vehicle Hour	13.00	13.00	13.00
Expenses and Revenues			
Operating Expenses <sup>a</sup>	\$102,000	\$102,600	\$102,300
Farebox Revenues <sup>a</sup>	\$16,500	\$16,500	\$16,500
Percent of Expenses			
Recovered Through Revenues	16.2	16.1	16.1
Operating Assistance			
Federal <sup>a</sup>	\$23,700	\$23,800	\$23,800
State <sup>a</sup>	\$32,400	\$32,600	\$32,500
County <sup>a</sup>	\$29,400	\$29,700	\$29,600
Total <sup>a</sup>	\$85,500	\$86,100	\$85,800
Per Trip Data			
Operating Expenses <sup>a</sup>	\$15.45	\$15.55	\$15.50
Farebox Revenue <sup>a</sup>	\$2.50	\$2.50	\$2.50
Total Operating Assistance <sup>a</sup>	\$12.95	\$13.05	\$13.00

<sup>a</sup> Expenses and revenues are expressed in estimated year-of-expenditure dollars.

Source: SEWRPC

Table 5.12 shows the expected decrease in operating expenses, revenues, and ridership on the Ozaukee County Express for 2018 through 2022 under this alternative. As shown in Table 5.12, the elimination of these runs could reduce operating expenses in 2022 by approximately \$89,900. By eliminating low performing runs, the County can expect its level of County assistance to decrease by approximately \$37,300 in 2022.

Eliminating the two existing runs would result in less schedule flexibility for riders, reducing the morning reverse commute options at Walnut Street and 5th Street to only one run. Similarly, eliminating the northbound run at 1:41 p.m. would reduce flexibility, including options for employees traveling to Ozaukee County for employment or Ozaukee County residents requiring an early return trip from Milwaukee.

## 5.4 SHARED-RIDE TAXI SERVICE ALTERNATIVES FOR THE OZAUKEE COUNTY TRANSIT SYSTEM

The following Shared-Ride Taxi service modifications were analyzed as potential service alternatives and improvements for the Advisory Committee to consider including in the recommended transit system development plan. These alternatives are based on the evaluation of existing services in Chapter 4, as well as input received during the public involvement meetings, the business-focused meeting, and discussions with the Advisory Committee.

### No Changes to the Ozaukee County Shared-Ride Taxi

Under this alternative, the County could choose to continue the existing Shared-Ride Taxi service for the time period considered under this plan. The current service's ridership and revenue hours of service are expected to continue to increase due to employment growth and increases in the senior populations. Costs are also expected to increase based on the historical trend of operating expenses per revenue vehicle hours. This alternative also serves as the base against which other alternatives can be considered.

Table 5.13 shows the expected operating expenses, revenues, and ridership on the Shared-Ride Taxi, assuming that ridership will increase slightly as a result of projected growth in the senior population and employment growth in Ozaukee County. This table assumes that operating expenses will increase 1 percent each year, and that the percentage of operating expenses covered by Federal and State sources will remain

approximately 55 percent. Under this alternative, a fare increase of \$0.25 would be needed in 2020 to keep pace with inflation. If these assumptions prove accurate, the County can expect its level of funding to increase by about \$62,000 between 2015 and 2022.

**Extend Shared-Ride Taxi Service Hours to 4:00 a.m. in the Morning and 12:00 a.m. in the Evening**

A potential unmet need that has been raised during the Advisory Committee meetings, the business meeting, and public involvement meetings is the lack of transportation options for individuals outside of the current Shared-Ride Taxi service hours. This includes both transportation to social activities and employment. To address this concern, this alternative would extend the service hours of the Shared-Ride Taxi until 12:00 a.m. on both weekdays and weekends, and begin service at 4:00 a.m. on weekdays.

**Table 5.11  
Projected Changes in Annual Operating Expenses, Revenues, and Ridership for Increased Fares at a Rate Greater Than Inflation for the Ozaukee County Express: 2018-2022**

Characteristics	Projected		
	2018	2022	Average
Services Provided			
Revenue Vehicle Miles	0	0	0
Revenue Vehicle Hours	0	0	0
Revenue Passengers			
Total	17,500	14,600	16,050
Passengers per Revenue Vehicle Mile	0.10	0.08	0.09
Passengers per Revenue Vehicle Hour	-0.53	-0.93	-0.73
Expenses and Revenues			
Operating Expenses <sup>a</sup>	\$288,900	\$338,900	\$313,900
Farebox Revenues <sup>a</sup>	\$68,800	\$96,100	\$82,450
Percent of Expenses			
Recovered Through Revenues	1.53	2.70	2.12
Operating Assistance			
Federal <sup>a</sup>	-\$18,000	-\$32,000	-\$25,000
State <sup>a</sup>	-\$43,800	-\$33,800	-\$38,800
County <sup>a</sup>	\$281,900	\$308,600	\$295,250
Total <sup>a</sup>	\$220,100	\$242,800	\$231,450
Per Trip Data			
Operating Expenses <sup>a</sup>	\$0.47	\$1.32	\$0.89
Farebox Revenue <sup>a</sup>	\$0.29	\$0.61	\$0.45
Total Operating Assistance <sup>a</sup>	\$0.18	\$0.71	\$0.45

<sup>a</sup> Expenses and revenues are expressed in estimated year-of-expenditure dollars.

Source: SEWRPC

Table 5.14 shows that the additional service, fuel, and maintenance costs would result in an increase in total operating expenses of \$133,600 in 2022. The extended service also results in an additional cost of \$11,900 for the County in 2022, in addition to Federal and State funds. This alternative assumes two vehicles would be required to be available to accommodate the additional service hours.

**On-Demand Transportation Services Provided by the Ozaukee County Shared-Ride Taxi**

Based on discussions with the Advisory Committee and input from the business meetings and public involvement meetings, the Commission staff analyzed an alternative whereby the Ozaukee County Shared-Ride Taxi would operate as an on-demand service. This alternative assumes rides would be provided with two hours' notice of the request.

On-demand services could offer more timely service for employment-based trips, allowing employers or employees to schedule rides that would meet their business hours and needs, including accommodating overtime. At the business-focused meeting and the public involvement meetings, it was further suggested that subscription-based services could potentially offer employers the opportunity to reserve rides on the Ozaukee County Shared-Ride Taxi on a regular basis. This could help ensure that their employees have a ride exactly when they need it and provide Ozaukee County with the ability to plan for the needed service. Employers could identify employees who would subscribe.

Upon review of the public comments received during the meetings in June 2017, the Advisory Committee suggested that the Commission staff contact the Federal Transit Administration (FTA) to determine if Federal law allows subscription-based services to give a priority to work trips. Commission staff discussed this question with FTA staff as directed by the Advisory Committee. In response, FTA staff indicated that subscription based services are allowed, however Ozaukee County would not be able to prioritize trips for employment unless certain criteria are met. Specifically, the Code of Federal Regulations, Title 49, Part 37, Transportation Services for Individuals with Disabilities, Part 37.133, Subscription Service, allows for a subscription service component as a part of an entity's paratransit service. However, this section identifies provisions that

Ozaukee County will need to address, should this option be implemented. This section stipulates that “at any time of day, this component may not absorb more than 50 percent of available capacity on the total system.” Therefore, in order to implement a subscription-based system for employment-based trips, Ozaukee County would be required to track the number of subscription trips to ensure that the required amount of capacity remains for all users of the Shared-Ride Taxi service. FTA indicated that the trips, including non-subscription capacity, would need to be documented in a Paratransit Service Plan. On-demand rides would benefit both employment trips (if they meet FTA’s requirements) and non-employment related trips. Therefore, the Commission has analyzed an alternative that includes on-demand service for all trips on the Shared-Ride Taxi. If this alternative is pursued by the County, Commission staff can offer input on the design and tracking of the program to meet Federal requirements.

**Table 5.12**  
**Projected Decreases in Annual Operating Expenses, Revenues, and Ridership for Reduced Service on the Ozaukee County Express Service: 2018-2022**

Characteristics	Projected		
	2018	2022	Average
Services Provided			
Revenue Vehicle Miles	-25,000	-25,000	-25,000
Revenue Vehicle Hours	-900	-900	-900
Revenue Passengers			
Total	-1,300	-1,300	-1,300
Passengers per Revenue Vehicle Mile	0.05	0.05	0.05
Passengers per Revenue Vehicle Hour	5.00	5.00	5.00
Expenses and Revenues			
Operating Expenses <sup>a</sup>	-\$89,300	-\$89,900	-\$89,600
Farebox Revenues <sup>a</sup>	-\$3,200	-\$3,200	-\$3,200
Percent of Expenses			
Recovered Through Revenues	3.6	3.6	3.6
Operating Assistance			
Federal <sup>a</sup>	-\$20,700	-\$20,900	-\$20,800
State <sup>a</sup>	-\$28,400	-\$28,500	-\$28,500
County <sup>a</sup>	-\$37,000	-\$37,300	-\$37,200
Total <sup>a</sup>	-\$86,100	-\$86,700	-\$86,400
Per Trip Data			
Operating Expenses <sup>a</sup>	\$68.69	\$69.15	\$68.92
Farebox Revenue <sup>a</sup>	\$2.46	\$2.46	\$2.46
Total Operating Assistance <sup>a</sup>	\$66.23	\$66.69	\$66.46

<sup>a</sup> Expenses and revenues are expressed in estimated year-of-expenditure dollars.

Source: SEWRPC

The Pace On Demand service, in suburban Chicago, is an example that may offer insights as to how on-demand services could be implemented in Ozaukee County. The Pace shared-ride taxi initially started as a call and ride service that provided transit options for those that may not be well-served by traditional fixed route bus service. In August 2018, the Pace Call-n-Ride program updated its service to the new Pace On Demand brand name. The update was a result of a new online booking system allowing rides to be reserved both by phone and online. The service continues to provide reservation-based, curb-to-curb, public transportation service for the general public traveling anywhere within one of the 11 designated service zones. In addition, reservations for rides can still be made at least one hour in advance and subscription trips are available to accommodate regular trips without having to call and make a reservation each time. The new online reservation system is likely in response to customers’ desire for web-based services similar to those offered by transportation network companies, such as Lyft and Uber. Prices are \$2.00 one-way when using the Ventra card or \$2.25 if paying with cash. Transfers from fixed-route buses are \$0.30 with the Ventra card. The Pace On Demand service times vary by zone but typically run from 6:00 a.m. to 6:30 p.m. on weekdays, with two of the 11 service zones offering service on weekends.

Implementing this alternative is expected to require that Ozaukee County purchase at least five new vehicles, which would cost approximately \$50,000 each. This amount is not included in Table 5.15, which shows the projected changes in annual operating expenses, revenues, and ridership for the Ozaukee Shared-Ride Taxi if On-Demand Service is implemented. As indicated in Table 5.15, on-demand service is expected to serve approximately 38,500 passengers in 2022 and operating expenses would total approximately \$542,500 in 2022. Ozaukee County would be responsible for approximately \$53,100 of this total, in addition to Federal and State funds. The ridership numbers were projected using the difference in rides per capita between the Port Washington Taxi in 2011 and the Ozaukee County Shared-Ride Taxi in 2012. This analysis sought to reasonably estimate the number of new rides that could be expected from providing on-demand service

**Table 5.13**  
**Projected Annual Operating Expenses, Revenues, and Ridership**  
**for the Ozaukee Shared-Ride Taxi: 2018-2022**

Characteristics	Actual	Projected		
	2015	2018	2022	Average
Services Provided				
Revenue Vehicle Miles	1,151,900	1,242,600	1,313,800	1,278,200
Revenue Vehicle Hours	54,891	59,000	62,400	60,700
Revenue Passengers				
Total	108,500	116,800	123,500	120,200
Passengers per Revenue Vehicle Mile	0.09	0.09	0.09	0.09
Passengers per Revenue Vehicle Hour	1.98	1.98	1.98	1.98
Expenses and Revenues				
Operating Expenses <sup>a</sup>	\$1,772,100	\$1,848,800	\$2,074,500	\$1,961,700
Farebox Revenues <sup>a</sup>	\$496,500	\$550,100	\$612,600	\$581,400
Percent of Expenses				
Recovered Through Revenues	28.0	29.8	29.5	29.6
Operating Assistance				
Federal <sup>a</sup>	\$2,100	\$92,000	\$102,400	\$106,200
State <sup>a</sup>	\$974,800	\$938,500	\$980,800	\$959,700
County <sup>a</sup>	\$298,700	\$268,200	\$360,700	\$314,500
Total <sup>a</sup>	\$1,275,600	\$1,298,700	\$1,491,900	\$1,380,300
Per Trip Data				
Operating Expenses <sup>a</sup>	\$16.33	\$15.83	\$16.80	\$16.31
Farebox Revenue <sup>a</sup>	\$4.58	\$4.71	\$4.96	\$4.84
Total Operating Assistance <sup>a</sup>	\$11.76	\$11.12	\$11.84	\$11.48

<sup>a</sup> Expenses and revenues are expressed in estimated year-of-expenditure dollars.

Source: SEWRPC

County wide. Ridership would be expected to ramp up over a period of time as awareness of the additional mobility option grows. If this service is complemented with a marketing campaign at the outset, ridership would be expected to increase at a faster pace. The County may also consider partnering with Ozaukee County businesses to pay a portion of the operating expenses and vehicle purchases, which would total approximately \$792,500 in 2022.

### **Increase Fares at a Rate Greater Than Inflation on the County Shared-Ride Taxi Service**

If the County needs to reduce its level of assistance to the Shared-Ride Taxi service, the County would likely need to increase fares at a rate greater than inflation. Given that operating expenses for transit services are largely a function of the amount of service provided, and that the amount of service provided by a shared-ride taxi service is largely dependent on the number of rides provided, the County would need to increase fares in order to reduce its expenses.

Raising fares would decrease the amount of operating assistance per revenue passenger, and it would also slightly discourage ridership as the service becomes more expensive to its users. Without savings from changes in operating procedures or lower wages and benefits for taxi operators, raising fares is the County's only option to reduce its level of operating assistance.

Table 5.16 displays the projected changes in operating expenses, revenues, and ridership under this alternative. As discussed under the "no change" alternative, raising fares at the rate of inflation would result in an average fare increase of \$0.25 in 2020. Holding County operating assistance under the 2015 level of \$298,700 would require the County to increase fares \$0.25 in 2018, 2020, and 2022, resulting in an increase of \$0.75 over the plan timeframe.

Due to the increase in fares, 120,400 revenue passengers are estimated to use the service in 2022, which is 3,100 fewer revenue passengers than under the alternative that increases fares at the rate of inflation.

## Merging the Ozaukee County and Washington County Shared-Ride Taxi Services

At the request of the Ozaukee County Board of Supervisors and the Washington County Board of Supervisors, the Commission staff prepared a memorandum for consideration at a Joint Meeting of the Ozaukee County and Washington County Public Works Committees on November 16, 2017. The memorandum included an assessment of the benefits, costs, and impacts of combining the Ozaukee County and Washington County transit systems and serves as the basis for the following discussion. At the joint meeting, the two Committees voted against a motion to continue investigating a regional transit partnership between the Counties. However, in the event a merger of the transit systems is considered during the five-year planning horizon of this plan, the following information may assist Ozaukee County.

**Table 5.14  
Projected Changes in Annual Operating Expenses, Revenues,  
and Ridership for the Ozaukee Shared-Ride Taxi to  
Extend Hours to 4:00 a.m. and 12:00 a.m.: 2018-2022**

Characteristics	Projected		
	2018	2022	Average
Services Provided			
Revenue Vehicle Miles	63,500	64,600	64,100
Revenue Vehicle Hours	4,800	4,900	4,900
Revenue Passengers			
Total	9,600	9,800	9,700
Passengers per Revenue Vehicle Mile	0.15	0.15	0.15
Passengers per Revenue Vehicle Hour	2.00	2.00	2.00
Expenses and Revenues			
Operating Expenses <sup>a</sup>	\$130,800	\$133,600	\$132,200
Farebox Revenues <sup>a</sup>	\$47,200	\$48,200	\$47,700
Percent of Expenses			
Recovered Through Revenues	0.36	0.36	0.36
Operating Assistance			
Federal <sup>a</sup>	\$30,400	\$31,000	\$30,700
State <sup>a</sup>	\$41,500	\$42,500	\$42,000
County <sup>a</sup>	\$11,700	\$11,900	\$11,800
Total <sup>a</sup>	\$83,600	\$85,400	\$84,500
Per Trip Data			
Operating Expenses <sup>a</sup>	\$13.63	\$13.63	\$13.63
Farebox Revenue <sup>a</sup>	\$4.92	\$4.92	\$4.92
Total Operating Assistance <sup>a</sup>	\$8.71	\$8.71	\$8.71

<sup>a</sup> Expenses and revenues are expressed in estimated year-of-expenditure dollars.

Source: SEWRPC

## Benefits of Merging

As noted in SEWRPC Community Assistance Planning Report No. 317, *Washington County Transit System Development Plan*, a merger between the Ozaukee County and Washington County transit systems would provide current and future passengers of the two shared-ride taxi services with greater access and mobility, allowing residents of either county to access both counties' employment opportunities, medical facilities, and other resources. Existing shared-ride taxi users who travel between the two counties would typically experience quicker trips, as transferring in Newburg would no longer be required. A merger would also allow businesses in both counties access to a greater labor pool, potentially assisting with the current labor shortage being experienced by many businesses.

In addition, merging services may result in increased efficiencies for the transit systems, such as the potential for reducing the number of empty shared-ride taxi vehicles traveling to or from the Newburg transfer point. The current contract operator for both counties' shared-ride taxi services has indicated that they may be able to reduce dispatch costs if they were providing one unified service, perhaps saving approximately \$50,000 per year. Although it may not lead to direct cost savings, merging would also reduce the amount of administrative reports currently associated with managing each transit system. Each operator must currently report data annually to and be intensively reviewed once every three years by the Federal Transit Administration (FTA), and work with the Wisconsin Department of Transportation to sign grant agreements, provide quarterly and yearly summary reports, and respond as needed to annual audits. The total amount of reports related to Federal and State requirements would be reduced if the two transit systems were merged. Merging would also allow the two separate shared-ride taxi contracts to be combined, reducing the total amount of reporting related to contract management.

## Costs and Impacts of Merging

It is expected that if a merger between the Ozaukee County and Washington County transit systems is implemented, the greater freedom to move between the two counties would result in an increase in trips across county lines over what is currently experienced by each existing shared-ride taxi service individually.

Commission staff has previously provided an estimate of the increased ridership and estimated costs associated with merging the two taxi services as part of developing SEWRPC Community Assistance Planning Report No. 317, *Washington County Transit System Development Plan*. As part of producing this memorandum, Commission staff refined those estimates, including estimating potential ridership increases using information from the regional travel demand models, the regional household travel survey, and existing taxi trip logs. Producing these more refined estimates resulted in a range of values, with the expectation that future ridership on the merged systems will fall somewhere within this range within the first two to three years after a merger would be implemented.

**Table 5.15**  
**Projected Changes in Annual Operating Expenses, Revenues, and Ridership for the Ozaukee Shared-Ride Taxi with On-Demand Service: 2018-2022**

Characteristics	Projected		
	2018	2022	Average
Services Provided			
Revenue Vehicle Miles	330,800	339,100	334,950
Revenue Vehicle Hours	15,900	19,900	17,900
Revenue Passengers			
Total	30,800	38,500	34,700
Passengers per Revenue Vehicle Mile	0.09	0.09	0.09
Passengers per Revenue Vehicle Hour	1.97	1.97	1.97
Expenses and Revenues			
Operating Expenses <sup>a</sup>	\$433,400	\$542,500	\$487,950
Farebox Revenues <sup>a</sup>	\$152,800	\$191,000	\$171,900
Percent of Expenses			
Recovered Through Revenues	0.35	0.35	0.35
Operating Assistance			
Federal <sup>a</sup>	\$100,600	\$125,900	\$113,300
State <sup>a</sup>	\$137,800	\$172,500	\$155,200
County <sup>a</sup>	\$42,200	\$53,100	\$47,700
Total <sup>a</sup>	\$280,600	\$351,500	\$316,100
Per Trip Data			
Operating Expenses <sup>a</sup>	\$14.07	\$14.09	\$14.08
Farebox Revenue <sup>a</sup>	\$4.96	\$4.96	\$4.96
Total Operating Assistance <sup>a</sup>	\$9.11	\$9.13	\$9.12

<sup>a</sup> Expenses and revenues are expressed in estimated year-of-expenditure dollars.

Source: SEWRPC

Table 5.17 shows the estimated ridership increase, and the estimated operating costs (in 2017\$) associated with these new trips. It is expected that these trips will be more expensive per trip to operate than the current average trip, as the average length of these new trips is likely to be longer than the average length of existing trips. Table 5.17 includes estimates of the total costs associated with the trips, and also includes an estimate of the additional fare revenue generated by the trips and the additional Federal, State, and local funding associated with the trips. Excluding any one-time startup costs and any potential savings at the contractor or in county staffing, it is estimated that merging the transit service would cost the counties a combined additional \$22,800 through \$36,400. It is not expected that the full costs of the merger would occur in the first year, as a ramp-up period can be expected when introducing new transit services. However, depending on the timing of initiation of new services, the transit commission may not be able to rely on the additional State and Federal funding shown in the table below during the first year of operation. Therefore, the counties may be responsible for up to \$81,300 through \$129,700 in the first year of operation, although due to the ramp-up period discussed earlier, these full amounts seem unlikely.

In addition to increased operating costs, it is likely that a significant portion of these new trips will occur during time periods when the two existing taxi fleets are already near capacity, requiring the potential transit commission to acquire additional taxi vehicles. If the distribution of the new trips throughout the day is similar to the distribution of existing trips, up to three additional vehicles may need to be purchased. It is expected that the additional vehicles will cost approximately \$75,000 to \$150,000, depending on the number and size of vehicle required. It is likely that these vehicles will be purchased partially with Federal funds, leaving a local cost of approximately \$15,000 to \$30,000.

There would be additional potential impacts associated with merging the transit systems beyond the expected additional costs associated with providing greater mobility. Many of these items are discussed below under the "Additional Decision Items" section, but some impacts not included in that section would include the need to combine the financial systems for the transit systems and the need to rebid the shared-ride taxi contracts to create a merged service from an operational perspective. Combining the dispatch systems of the existing shared-ride taxi services is expected to cost approximately \$8,000 to \$10,000, according to the vendor of the system both services are currently utilizing. There may be other administrative costs associated

with these efforts that could not be absorbed in the regular work of the staff of the potential transit commission, leading to additional one-time costs.

#### Additional Federal Requirements

If any single organization using FTA funds spent more than \$1,000,000 in FTA funds in the previous year and has more than 50 individual employees doing transit-related work, that organization would need to produce an equal employment opportunity (EEO) plan. It is possible, although not certain, that the contractor operating the merged shared-ride taxi service may meet both of these thresholds, and therefore need to produce an EEO plan to have on file in case it is reviewed by the FTA during the triennial review process. The type of EEO plan required in this instance, called an abbreviated EEO program, is relatively straightforward, but would represent an additional effort that STS, as the current contractor for both taxi services, does not have to currently produce.

**Table 5.16**  
**Projected Change in Annual Operating Expenses, Revenues, and Ridership for the Ozaukee Shared-Ride Taxi if Fares are Increased at a Rate Greater Than Inflation: 2018-2022**

Characteristics	Projected		
	2018	2022	Average
Services Provided			
Revenue Vehicle Miles	106,700	197,100	151,900
Revenue Vehicle Hours	4,809	9,109	6,959
Revenue Passengers			
Total	8,300	11,900	10,100
Passengers per Revenue Vehicle Mile	0.00	0.00	0.00
Passengers per Revenue Vehicle Hour	0.00	0.00	0.00
Expenses and Revenues			
Operating Expenses <sup>a</sup>	\$98,700	\$355,600	\$227,150
Farebox Revenues <sup>a</sup>	\$82,800	\$160,900	\$121,850
Percent of Expenses			
Recovered Through Revenues	2.9	2.9	2.9
Operating Assistance			
Federal <sup>a</sup>	\$106,400	\$121,300	\$113,850
State <sup>a</sup>	-\$52,500	\$74,200	\$10,850
County <sup>a</sup>	-\$38,000	-\$800	-\$19,400
Total <sup>a</sup>	\$15,900	\$194,700	\$105,300
Per Trip Data			
Operating Expenses <sup>a</sup>	-\$0.32	\$1.34	\$0.51
Farebox Revenue <sup>a</sup>	\$0.38	\$0.88	\$0.63
Total Operating Assistance <sup>a</sup>	-\$0.70	\$0.46	-\$0.12

<sup>a</sup> Expenses and revenues are expressed in estimated year-of-expenditure dollars.

Source: SEWRPC

#### Funding a Merged Service

As shown in Table 5.17, it is expected that a merger would result in slightly more Federal and State funds, but not enough additional funds to cover the entire cost of the expanded service. Even if potential cost savings in other areas occur, the counties or the future transit commission would need to determine how to distribute the cost of providing transit services. Commission staff would propose that if a merger is pursued, each county provide the local funding necessary to the transit commission to operate the bus services that serve that respective county. Similarly, Commission staff would also encourage that each county provide the transit commission with the funds needed to cover the costs incurred to provide taxi services for trips entirely within that county. If the counties agree with these relatively straightforward suggestions, the remaining issue would be how to fund the local (non-Federal and non-State) cost of the new trips that would travel between the two counties. Two possible options are discussed in the following paragraphs, but additional options could certainly be explored by the counties or the transit commission.

One possible approach to funding the intercounty trips would be to bill each county for the portion of the trip that takes place in each county on a per-mile or per-hour basis. Fare revenue for these trips could be distributed in the same fashion, based on what portion of the overall trip occurred in each county. This approach would likely be the most equitable, but may require information that is not readily available from the two services' current dispatch software. Therefore, this option may not be technically feasible.

Another possible approach would provide a slightly lower level of equity, but would not require the technical capacity of the first approach. The counties or the transit commission could choose to simply split costs and fare revenue for any trip that crosses the county line in half. The major population centers in each county are roughly the same distance from the county line, and these population centers are likely to produce and attract most of the intercounty trips. This approach is likely to be simpler to implement than the per-mile or per-hour approach discussed above.

### Creating a Transit Commission

Fully merging the two transit systems would require the creation of a transit commission, the only option allowed under current State law for the creation of a multi-county transit systems. There are five other multi-county transit commissions in the State, and their charters and bylaws were studied as part of developing the draft charter text included in the memorandum presented at the joint meeting of the Public Works Committees, which Ozaukee County and Washington County could consider as a starting point if they choose to pursue a transit commission.

To create a transit commission, each county's Board of Supervisors would need to pass identical resolutions. This resolution would likely need to reference a charter similar to that included in the memorandum. Passing this resolution would require that the counties agree upon the number and position of the members of the transit commission's board, among other items. The other multi-county transit commissions in Wisconsin generally have three or four board members from each county on their board, and State Statutes require that a transit commission have at least seven members. Different transit commissions have different policies regarding whether all the board members from each county must be elected officials representing that county (such as County Supervisors) or if some board members should be transit riders or members of the public from each county. Alternatively, the Counties could look to their existing Joint Board of Health structure, with nine members (four from Ozaukee County and five from Washington County), at least four of which are not elected officials or staff of either County.

State Statutes require that initial transit commission members must be appointed for staggered three-year terms, and after that, the term of office of each member of the commission be three years. A commission's members cannot be financially involved in any corporation subject to the commission's jurisdiction. All commission members must be appointed by the County Boards, County Board Chair, or governing board of any municipality that joins a commission.

Following a decision to create a transit commission, the counties would request that SEWRPC pass a resolution indicating SEWRPC's support of designating the transit commission as a recipient for FTA funds. Following SEWRPC passing the needed resolution, the counties would make a request the Wisconsin Department of Transportation that the Governor designate the transit commission. If he agrees, the Governor would notify the FTA of his decision, making the transit commission eligible to receive the Federal funds currently collected by each county. In 2017, Ozaukee County received approximately \$0.70 million and Washington County received approximately \$1.03 million in FTA formula funds for their transit services. If the Governor designates the transit commission as a recipient of FTA funds in place of both counties, the transit commission would receive at least that amount of money in the future.

### Additional Decision Items

In addition to determining the makeup of the potential transit commission, there are a number of decisions that will need to be made by the County Boards or the future transit commission. The following items have been identified by Commission and County staff, although this is likely not an exhaustive list.

#### Transfer of Assets

Currently, each county owns the vehicles needed to provide their respective shared-ride taxi services. In addition, Ozaukee County owns a dispatch and vehicle storage facility. It is likely that all of these assets should be transferred from the counties to the new transit commission, although whether one of the

**Table 5.17**  
**Estimated Additional Annual Operating Expenses, Revenues, and Ridership for a Merged Ozaukee County-Washington County Shared-Ride Taxi Service**

Characteristics	Estimated Amounts		
	Low	High	Average
Services Provided			
Revenue Vehicle Miles	113,900	180,200	147,100
Revenue Vehicle Hours	4,200	6,700	5,500
Revenue Passengers	6,700	10,600	8,700
Expenses and Revenues			
Operating Expenses <sup>a</sup>	\$106,300	\$169,600	\$138,000
Farebox Revenues <sup>a</sup>	\$25,000	\$39,900	\$32,500
Percent of Expenses			
Recovered Through Revenues	23.5	23.5	23.5
Operating Assistance			
Federal <sup>a</sup>	\$31,400	\$49,800	\$40,600
State <sup>a</sup>	\$27,100	\$43,500	\$35,300
County <sup>a</sup>	\$22,800	\$36,400	\$29,600
Total <sup>a</sup>	\$81,300	\$129,700	\$105,500

<sup>a</sup> Expenses and revenues are expressed in estimated year-of-expenditure dollars.

Source: SEWRPC

counties will act as the fiscal agent for the transit commission would need to be determined by the counties or the transit commission.

### Vehicle Storage and Dispatch

Ozaukee County's taxi vehicles are stored in and dispatched from a County-owned facility in Port Washington. Washington County's taxi vehicles are stored at and dispatched from a facility leased by STS in West Bend. If the systems are merged, the counties or the transit commission will need to determine if the vehicles should be stored in different locations, and whether it is reasonable to consolidate dispatch centers. Washington County currently pays a slightly higher rate to STS than Ozaukee County, partially due to the need for STS to lease space for dispatch staff and to store Washington County's vehicles. It may be possible to reduce this cost difference if dispatch or storage can be reasonably consolidated.

### Vehicle Maintenance

Currently, Ozaukee County maintains its shared-ride taxi vehicles at its Highway Department maintenance facility using Highway Department staff, while Washington County's vehicles are maintained at a Johnson Bus facility by their staff. Based on conversations with Ozaukee County staff, it appears that there is not currently capacity for a large number of additional vehicles to be maintained by the Ozaukee County Highway Department, and therefore the counties or the transit commission would need to determine the most efficient way to maintain the consolidated fleet, if a merger is pursued.

### Branding

If the counties decide to merge their transit systems, it is likely that a new name, logo, and brand for the merged service would be appropriate. A new name, brand, and logo could be chosen by the counties, or the decision could be delegated to the transit commission members. Information provided by Ozaukee County staff indicates that the designing a new logo and implementing a new website would cost approximately \$4,000, while replacing the logos and information on the side of each taxi vehicle would cost approximately \$400 per vehicle. The counties or the transit commission would need to decide if it makes sense to pursue a full rebranding immediately, or if, for instance, the vehicles could simply be branded with the new logo and information as part of the ongoing replacement of vehicles that have reached the end of their useful life.

### Fare Structure

Currently, Ozaukee County has a zone-based fare system, while Washington County has a distance-based fare system. In many cases, the differing fare structures result in similar fees being paid by riders in both counties, but there are examples where a zone system and a distance system can result in very different charges for similar length trips. In an extreme example, it is possible for a short trip in Ozaukee County to cover three zones, but be less than five miles in trip length. Under Ozaukee County's fare structure and rates, that trip would cost a senior \$4.25, while under Washington County's fare structure and rates, the same trip would cost a senior \$2.50. Similarly, the longest one zone trip in Ozaukee County is approximately 14 miles, costing a senior \$2.50 under Ozaukee County's fare structure and rates, but \$4.25 under Washington County's fare structure and rates.

In addition to the idiosyncrasies of each fare structure, Washington County's taxi fares for adults are currently higher, on average, than Ozaukee County's taxi fares (as shown in Table 5.18). Washington County adult fares range from \$4.25 to \$9.00, while Ozaukee County adult fares range from \$3.00 to \$6.75. Student fares are also slightly higher in Washington County than Ozaukee County, while fares for seniors and people with disabilities are similar between the two counties.

In 2016, Ozaukee County collected an average of \$0.48 in passenger fare revenue per revenue mile of service, while Washington County collected an average of \$0.33 in passenger fare revenue per revenue mile of service. Some of this difference can be explained by the larger number of short trips that Ozaukee County provides now that the City of Port Washington. In addition, a larger proportion of its passengers of the Ozaukee County Shared-Ride Taxi are adults without a disability, meaning that more riders are paying the full adult fare in Ozaukee County than Washington County.

The counties or the transit commission would need to determine the appropriate fare structure for the merged system. If the counties or the transit commission choose to pursue a distance-based system, it

**Table 5.18**  
**Existing Fares for Passengers on the Ozaukee County Shared-Ride Taxi**  
**Service and the Washington County Shared-Ride Taxi Service**

Taxi System	Zones or Distance Traveled	Fare Category		
		Adult	Senior or Person with Disability	Student
Ozaukee County	Within 1 Zone	\$3.00	\$2.50	\$2.75
	Within 2 Zones	\$4.00	\$3.50	\$3.50
	Within 3 Zones	\$5.50	\$4.25	\$4.25
	Within 4 or More Zones	\$6.75	\$5.50	\$5.50
Washington County	5.0 miles or less	\$4.25	\$2.50	\$3.25
	5.1 to 10.0 miles	\$5.75	\$3.50	\$4.75
	10.1 to 15.0 miles	\$6.00	\$4.25	\$6.00
	15.1 to 20 miles	\$7.00	\$5.00	\$7.00
	20.0 miles or more	\$8.00	\$5.75	\$8.00

Source: SEWRPC

would make sense for additional fare categories to be considered, including a lower fare for trips shorter than 3 miles such as those entirely within the City of Port Washington, and higher fare categories for trips between 20 and 25 miles in length, between 25 and 30 miles in length, and greater than 30 miles in length. If the counties or the transit commission choose to pursue a zone-based system, zones would need to be identified for Washington County, and five, six, and seven zone fare categories would likely need to be identified. The counties or the transit commission would also need to resolve the differences in fares between the two counties for adults under 65 and students.

#### Staffing Levels

If a transit system merger is pursued, either the counties or the transit commission would need to determine the level of staffing required to manage the joint shared-ride taxi systems and the two bus services. In discussions with Ozaukee County and Washington County staff, it became clear that it may be possible to manage the merged system and fulfill all State and Federal requirements with less than 2.0 FTEs, but that it would require more than 1.0 FTE. Staff also indicated that an individual with an accounting or bookkeeping background would be desirable, at least on a part time basis.

#### Service Hours

Currently, service hours differ between the two shared-ride taxi services, as shown in Table 5.19. It is likely that the counties or the transit commission would want to unify the service hours if the services are merged. If this results in hours being expanded in either county, there would be additional new operating costs associated with the merger beyond those described in Table 5.13. If this unification results in hours being cut, it is likely that operational cost savings would occur. The counties or the transit commission would need to weigh the cost increases or decreases against the increase or decrease in mobility for residents resulting from adding or reducing service hours.

#### Operational Policies

There are a number of small differences in operational policies between the two services that would need to be modified by the counties or a transit commission if a merger is pursued. Examples of some of the differences include:

- Ozaukee County allows the first child five and under to ride free, with any additional children five and under being charged the student rate, while Washington County allows any children four and under to ride free
- The counties have differing penalties for repeat “no-show” clients
- The counties have differing policies regarding how much time a client might be expected to wait for a taxi to arrive to pick them up

### Radio systems

At the November 16, 2017, Joint Meeting of the Ozaukee and Washington Counties Public Works Committees, the adequacy of existing radio systems to provide coverage in both Counties was raised, since dispatch updates would be critical to serving residents in both Counties. Therefore, if a merger is considered in the future, the radio capabilities and needs of a potential merged transit system should be further studied.

**Table 5.19**

### **Existing Service Hours on the Ozaukee County Shared-Ride Taxi Service and the Washington County Shared-Ride Taxi Service**

<b>Day of the Week</b>	<b>Taxi System</b>	
	Ozaukee County	Washington County
Mondays – Fridays	5:00 a.m. – 10:00 p.m.	5:00 a.m. – 11:00 p.m.
Saturdays	8:30 a.m. – 10:00 p.m.	5:00 a.m. – 11:00 p.m.
Sundays	8:00 a.m. – 6:00 p.m.	8:00 a.m. – 4:00 p.m.

Source: SEWRPC

### Next Steps

Should both Ozaukee County and Washington County determine to proceed with a merger, the counties would need to determine which of the above items they feel should be decided by the Boards of Supervisors, and which items should be delegated to a transit commission. In addition, it may make sense to identify the appropriate membership of the transit commission, and begin to develop and refine the transit commission’s charter.

Because of the timing of such a changeover, it may make sense to wait to truly integrate the services until the beginning of a calendar year, to ease the transition with State and Federal agencies, and match the county budgetary cycle. It may also be possible to provide a unified service to passengers earlier, while working to financially and legally unify the “behind the scenes” operations of the service. Commission staff are available to assist the counties if they determine to proceed further.

## **5.5 CONCLUSIONS**

The alternatives discussed in this chapter deserve the Advisory Committee’s full consideration, but few would be able to be implemented without additional Ozaukee County funding. Further discussion with Ozaukee County businesses may provide opportunities for public-private partnerships, particularly for the employment-related transit services, including flexible or fixed route shuttles or partnering with a Transportation Network Company, such as Lyft or Uber. As the County considers these alternatives and the recommended transit plan that results from this process, it will need to balance all service objectives outlined in Chapter 3, Public Transit Service Objectives and Standards, while minimizing costs.





Credit: Ozaukee County

## 6.1 INTRODUCTION AND SUMMARY

This chapter describes the recommended transit service plan for the Ozaukee County Transit System, as determined by the Advisory Committee guiding the plan following public input in February and March 2018. The recommended plan contains elements that should be implemented between 2019 and 2023 depending on the amount of funding the County has available for transit services. In 2016, the Commission adopted VISION 2050, a regional land use and transportation system plan with a design year of 2050.<sup>9</sup> This recommended plan encourages the further development of transit service in Ozaukee County within the framework of VISION 2050, which proposes a substantial improvement and expansion of transit service in Southeastern Wisconsin over the next 30 years. This chapter also lists transit service alternatives that could be explored further to determine if they warrant implementation, and alternatives that should not be considered for implementation. Future expenses, revenues, and ridership for the transit system under each funding scenario or element of the funding scenario are included in this chapter.

## 6.2 RECOMMENDED TRANSIT SERVICES IF FUNDING IS MAINTAINED

The following section describes the recommended actions to be taken if Ozaukee County chooses to maintain funding for the transit system at a relatively constant level between 2019 and 2023, and there are no significant changes to State and Federal funding. The following changes to the transit system are recommended:

- A fare increase, at the rate of inflation, of \$0.25 in 2019 and 2023 for the Ozaukee County Express
- A fare increase, at the rate of inflation, of \$0.25 in 2020 for the Ozaukee County Shared-Ride Taxi
- Implement on-demand service for a premium fare on the Ozaukee County Shared-Ride Taxi by providing service within two hours of a request and with a 15-minute departure time

<sup>9</sup> See *SEWRPC Planning Report No. 55, VISION 2050: A Regional Land Use and Transportation Plan for Southeastern Wisconsin, July 2016*.

Other than these changes, this plan recommends that existing Shared-Ride Taxi and County Express services continue to operate the same as they do currently under this funding scenario.

### **Continue Operating the Ozaukee County Express, and Increase Fares at the Rate of Inflation**

This funding scenario assumes no significant changes in County, State, or Federal funding and recommends the County continue its current operation of the Ozaukee County Express. The forecasted service levels, ridership, operating expenses, and operating revenues for the Ozaukee County Express are shown in Table 6.1. Fare increases of \$0.25 are expected to be necessary at the beginning of 2019 and again at the beginning of 2023 if the County wishes fares to keep pace with inflation. If the fare increases are implemented, the County may expect its level of funding in year-of-expenditure dollars to be about the same in 2023 as in 2019, although oscillations in ridership in recent years make this difficult to predict. Assuming the County continues to contract with MCTS for the Express Service and therefore is integrated in the MCTS fare structure, the County would only receive additional funds from cash fares and those fares paid with stored value on the M-Card if the fare increases are implemented. The County could include the recommended fare increases during future contract negotiations for commuter transit services.

### **Continue Operating the Shared-Ride Taxi and Increase Fares at the Rate of Inflation**

If there are no significant changes in County, State, or Federal funding, this plan recommends that Ozaukee County continue to operate the Shared-Ride Taxi in much the same fashion it does now and increase fares by \$0.25 in 2020 to keep pace with inflation. Table 6.2 summarizes the forecasted service levels, ridership, operating expenses, and operating revenues. The current service's ridership and revenue hours of service are expected to continue to increase due to employment growth and increases in the senior population. As this funding scenario assumes no significant changes in funding, it recommends the County continue its current practice of replacing approximately five vehicles a year as they reach their useful life of 300,000 miles.

If the County implements a smartphone app for the Shared-Ride Taxi, riders would be able to make a reservation, pay, and track their ride. If implemented, riders would be able to better anticipate their ride's arrival, potentially reducing the amount of time needed for passenger boarding. Additional time savings may be realized through on-line payments, reducing the time needed for the driver to collect payment.

### **Provide On-Demand Service for a Premium Fare**

During outreach meetings with Ozaukee County businesses and the public regarding the alternatives for this plan, two primary concerns emerged regarding the County's existing Shared-Ride Taxi service. First, there was a desire to have a guarantee of same-day service available for all trip purposes. Second, there was a desire to reduce transfer times between MCTS services and the Shared-Ride Taxi and guarantee on-time arrivals for employment trips.

Providing improved service to address these concerns will require more revenue vehicle hours of service and may reduce the efficiency of the Shared-Ride Taxi. For example, providing guaranteed same-day service may reduce efficiency by decreasing opportunities to schedule shared rides. It will also require more drivers and vehicles to be available during peak hours to guarantee service availability. Guaranteeing on-time arrivals and reduced transfer times requires consideration of the Shared-Ride Taxi's scheduling process, which currently budgets up to 60 minutes to ensure passengers arrive at their destination on time. For example, if a passenger schedules a ride for which they need to arrive at their destination by 10:00 a.m. and the trip takes 15 minutes, the Shared-Ride Taxi could be scheduled to arrive within a 60-minute window between 8:45 a.m. and 9:45 a.m. This characteristic of the Shared-Ride Taxi service is somewhat limiting for a passenger beginning their trip at their home or business. However, if any individual is transferring to the Shared-Ride Taxi from an MCTS bus service, ensuring that the individual transfers successfully may require the individual to arrive at the transfer point up to one hour early. Therefore, reducing transfer times for employment trips by eliminating the 60-minute window would provide a more desirable service, but would reduce efficiency because it would require that rides not be shared unless origins and destinations for multiple passengers are nearly identical. This improvement also would likely require more capacity during peak times to meet demand.

This recommendation proposes charging a premium fare for enhanced Shared-Ride Taxi services to address both concerns raised by the public and businesses. The guaranteed same-day service is proposed

to be provided within two hours of the trip request being received and to be offered with a shorter 15-minute departure window to reduce potential wait time. To ensure an on-time arrival for work-related trips, this recommendation also encourages the County to publicize the option for employers and employees to schedule standing reservations through the Shared-Ride Taxi, which is further discussed in the recommendation to implement reduced transfer fares at the three MCTS bus stop connection points as a transit service to consider if funding is increased.

It is anticipated that the on-demand services for a premium fare will result in the need for additional vehicles to meet the demand for the Ozaukee County Shared-Ride Taxi, particularly during the eight hours of highest ridership, which include weekday mornings from 5:00 a.m. to 10:00 a.m., weekday afternoons from 2:00 p.m. to 5:00 p.m., and weekends from 10:00 a.m. to 2:00 p.m. As discussed above, the on-demand rides will likely not be shared unless origins and destinations for multiple passengers are nearly identical, requiring additional capacity. Therefore, the revenue services hours assumed in the cost calculations provided in Table 6.3, include two vehicles during times of peak capacity on weekdays, resulting in a total of 16 additional revenue service hours, and one vehicle during times of peak capacity on Saturday and Sundays, resulting in eight additional revenue service hours. The capital cost to purchase two additional vehicles, at a cost of approximately \$50,000 each, is not included in this total.

In order to meet all service objectives at the lowest possible cost to the County, this recommendation assumes that a premium fare of \$10.00 per ride be charged for the on-demand services with the expectation that the premium fare be paid by employers for employment trips. This service is anticipated to generate approximately 5,900 revenue passengers in 2023. The on-demand service is anticipated to cost approximately \$144,300 to operate in 2023. Given the premium fare of \$10.00 recommended for the on-demand services, the local share would be approximately \$5,900 in 2023.

If Ozaukee County chooses to reduce funding for transit service, or is unable to increase funding in response to a decrease in State or Federal funding, it is recommended that the County prioritize raising fares to fill the budget gap before considering reducing service. The Ozaukee County Express operates efficiently as a result of recent route optimization improvements, which eliminated underperforming runs. Therefore, there are not additional runs that are obvious candidates for elimination at this time.

### 6.3 RECOMMENDED TRANSIT SERVICES IF FUNDING IS REDUCED

If Ozaukee County chooses to reduce funding for transit service, or is unable to increase funding in response to a decrease in State or Federal funding, it is recommended that the County prioritize raising fares to fill the budget gap before considering reducing service. The Ozaukee County Express operates efficiently as a result of recent route optimization improvements, which eliminated underperforming runs. Therefore, there are not additional runs that are obvious candidates for elimination at this time.

#### Increase Fares at a Rate Greater than Inflation on the Ozaukee County Express

Although raising fares was not a preferred option expressed during the public outreach process, there are few other options available to the County if funding is reduced, given that Ozaukee County recently dropped or modified unproductive segments on the Express Route. Therefore, this recommendation would increase fares by \$0.25 in 2019, 2021, and 2023 for the Ozaukee County Express, which would represent

**Table 6.1**  
**Projected Annual Operating Expenses, Revenues,**  
**and Ridership for the Ozaukee County Express if**  
**Available Funding is Maintained: 2019-2023**

Characteristics	Projected		
	2019	2023	Average
Services Provided			
Revenue Vehicle Miles	182,900	182,900	182,900
Revenue Vehicle Hours	7,200	7,200	7,200
Revenue Passengers			
Total	110,000	110,000	110,000
Passengers per Revenue Vehicle Mile	0.60	0.60	0.60
Passengers per Revenue Vehicle Hour	15.28	15.28	15.28
Expenses and Revenues			
Operating Expenses <sup>a</sup>	\$1,534,400	\$1,573,700	\$1,554,100
Farebox Revenues <sup>a</sup>	\$248,800	\$255,500	\$252,200
Percent of Expenses			
Recovered Through Revenues	16.2	16.2	16.2
Operating Assistance			
Federal <sup>a</sup>	\$474,000	\$486,000	\$480,000
State <sup>a</sup>	\$400,000	\$410,100	\$405,100
County <sup>a</sup>	\$411,600	\$422,100	\$416,900
Total <sup>a</sup>	\$1,285,600	\$1,318,200	\$1,301,900
Per Trip Data			
Operating Expenses <sup>a</sup>	\$13.95	\$14.31	\$14.13
Farebox Revenue <sup>a</sup>	\$2.26	\$2.44	\$2.36
Total Operating Assistance <sup>a</sup>	\$11.69	\$11.98	\$11.84

<sup>a</sup> Expenses and revenues are expressed in estimated year-of-expenditure dollars.

Source: SEWRPC

an increase at a rate greater than inflation. Increasing fares on the Ozaukee County Express would be expected to reduce the required amount of County assistance by approximately \$47,400 between 2019 and 2023, as shown in Table 6.4. Raising fares would likely reduce ridership, so each successive fare increase would generate less additional revenue for the County. Due to the contractual relationship with MCTS for the Ozaukee County Express service, if the fare increases are implemented only by Ozaukee County, the County would only receive additional funds from increases of cash fares and fares paid with stored value on the M-Card, which account for 38 percent of the total fares collected on the Ozaukee County Express. The County could include the recommended fare increases during future contract negotiations for commuter transit services to ensure that they apply more uniformly to all passengers.

**Table 6.2  
Projected Annual Operating Expenses, Revenues, and Ridership for Fare Increases on the Ozaukee County Shared-Ride Taxi if Funding is Maintained: 2019-2023**

Characteristics	Projected		
	2019	2023	Average
Services Provided			
Revenue Vehicle Miles	1,271,300	1,342,600	1,307,000
Revenue Vehicle Hours	60,400	63,700	62,100
Revenue Passengers			
Total	119,500	126,200	122,900
Passengers per Revenue Vehicle Mile	0.09	0.09	0.09
Passengers per Revenue Vehicle Hour	1.98	1.98	1.98
Expenses and Revenues			
Operating Expenses <sup>a</sup>	\$1,920,900	\$2,149,300	\$2,035,100
Farebox Revenues <sup>a</sup>	\$587,900	\$652,500	\$620,200
Percent of Expenses			
Recovered Through Revenues	30.6	30.4	30.5
Operating Assistance			
Federal <sup>a</sup>	\$111,500	\$124,700	\$118,100
State <sup>a</sup>	\$908,900	\$1,017,000	\$963,000
County <sup>a</sup>	\$312,600	\$355,100	\$333,800
Total <sup>a</sup>	\$1,333,000	\$1,496,800	\$1,414,900
Per Trip Data			
Operating Expenses <sup>a</sup>	\$16.07	\$17.03	\$16.55
Farebox Revenue <sup>a</sup>	\$4.92	\$5.17	\$5.05
Total Operating Assistance <sup>a</sup>	\$10.66	\$11.78	\$11.22

<sup>a</sup> Expenses and revenues are expressed in estimated year-of-expenditure dollars.

Source: SEWRPC

### Increase Fares at a Rate Greater than Inflation on the Ozaukee County Shared-Ride Taxi

Similar to the input received regarding increasing fares on the Ozaukee County Express, a number of commenters indicated that they are not in favor of raising regular fares on the Ozaukee County Shared-Ride Taxi. Therefore, an option available to Ozaukee County should they need to reduce their level of support for the Shared-Ride Taxi includes increasing the per trip fare charged to managed care providers, also referred to as the agency fare, while keeping regular fare increases on pace with inflation. In addition to the fare increase of \$0.25 recommended in 2020 to keep pace with inflation, this option would include an additional increase in the per trip agency fare from \$12.00 to \$16.00 in 2019, to reduce the County's level of support. As shown in Table 6.5, increasing the agency fare to \$16.00 in 2019 and a \$0.25 fare increase in 2020 would be expected to reduce the required amount of County assistance by approximately \$31,500 between 2019 and 2023.

## 6.4 RECOMMENDED TRANSIT SERVICES IF FUNDING IS INCREASED

If Ozaukee County chooses to increase funding for the transit system between 2019 and 2023, the following changes to the transit system are recommended:

- Extending Shared-Ride Taxi service hours from 10:00 p.m. to 11:30 p.m. on weekdays
- Expanding marketing of transit options
- Increasing service frequency and service hours on the Ozaukee County Express
- Improving bus stops within Ozaukee County along Port Washington Road
- Implementing reduced transfer fares of \$1.00 at the three MCTS bus stop connection points.

Although the five recommended changes under this funding scenario would require that additional funding be made available for County transit services, the additional funding needed would be relatively modest and within the scale of funding increases provided for transit services in Ozaukee County in the past.

### Extend Shared-Ride Taxi Service Hours

Many of the public and business comments supported extending service hours on the Shared-Ride Taxi to provide both employment-related rides and transportation to social activities in the evening. Given the relatively high cost of providing extended hours for both weekdays and weekends, this recommendation prioritizes extending service hours to 11:30 p.m. on weekdays on a trial basis. By extending service by one and one half hours on weekdays, the county can track any changes in ridership and would be able to tailor outreach regarding the service expansion to Ozaukee County businesses. Table 6.6 provides the estimated operating expenses, revenues, and ridership for this service. This recommendation is anticipated to serve 500 additional revenue passengers at a cost to the County of approximately \$3,000 in 2023. If additional outreach is done to promote the extended service hours, particularly to local businesses, ridership levels may increase.

### Expand Marketing of Transit Options

Strong support was expressed for expanding transit marketing during the business meetings and the public comment period. This recommendation would aim to increase awareness about transit options in Ozaukee County by expanding the target audience and venues and continuing to find innovative ways to share information about the transit services offered.

**Table 6.3**  
**Projected Annual Operating Expenses, Revenues, and Ridership for the Ozaukee Shared-Ride Taxi for On-Demand Service for a Premium Fare: 2019-2023**

Characteristics	Projected		
	2019	2023	Average
Services Provided			
Revenue Vehicle Miles	37,800	38,500	38,200
Revenue Vehicle Hours	4,600	4,700	4,700
Revenue Passengers			
Total	5,800	5,900	5,900
Passengers per Revenue Vehicle Mile	0.15	0.15	0.15
Passengers per Revenue Vehicle Hour	1.25	1.25	1.25
Expenses and Revenues			
Operating Expenses <sup>a</sup>	\$130,500	\$144,300	\$137,400
Farebox Revenues <sup>a</sup>	\$58,000	\$59,000	\$58,500
Percent of Expenses			
Recovered Through Revenues	44.44	40.89	42.67
Operating Assistance			
Federal <sup>a</sup>	\$30,300	\$33,500	\$31,900
State <sup>a</sup>	\$41,500	\$45,900	\$43,700
County <sup>a</sup>	\$700	\$5,900	\$3,300
Total <sup>a</sup>	\$72,500	\$85,300	\$78,900
Per Trip Data			
Operating Expenses <sup>a</sup>	\$22.50	\$24.46	\$23.48
Farebox Revenue <sup>a</sup>	\$10.00	\$10.00	\$10.00
Total Operating Assistance <sup>a</sup>	\$12.50	\$14.46	\$13.48

<sup>a</sup> Expenses and revenues are expressed in estimated year-of-expenditure dollars.

Source: SEWRPC

**Table 6.4**  
**Projected Annual Operating Expenses, Revenues, and Ridership for the Ozaukee Express if Fares are Increased at a Rate Greater than Inflation: 2019-2023**

Characteristics	Projected		
	2019	2023	Average
Services Provided			
Revenue Vehicle Miles	182,900	182,900	182,900
Revenue Vehicle Hours	7,200	7,200	7,200
Revenue Passengers			
Total	108,500	105,600	107,050
Passengers per Revenue Vehicle Mile	0.59	0.58	0.59
Passengers per Revenue Vehicle Hour	15.07	14.67	14.87
Expenses and Revenues			
Operating Expenses <sup>a</sup>	\$1,534,400	\$1,573,700	\$1,554,100
Farebox Revenues <sup>a</sup>	\$198,700	\$263,300	\$231,000
Percent of Expenses			
Recovered Through Revenues	12.95	16.73	14.84
Operating Assistance			
Federal <sup>a</sup>	\$474,000	\$486,000	\$480,000
State <sup>a</sup>	\$400,000	\$410,100	\$405,100
County <sup>a</sup>	\$461,700	\$414,300	\$438,000
Total <sup>a</sup>	\$1,335,700	\$1,310,400	\$1,323,100
Per Trip Data			
Operating Expenses <sup>a</sup>	\$14.14	\$14.90	\$14.52
Farebox Revenue <sup>a</sup>	\$2.57	\$2.89	\$2.73
Total Operating Assistance <sup>a</sup>	\$12.31	\$12.41	\$12.36

<sup>a</sup> Expenses and revenues are expressed in estimated year-of-expenditure dollars.

Source: SEWRPC

This plan recommends hiring a mobility manager that could work with businesses to promote the transit services, analyze and evaluate transportation services across county lines, and share information on transit services. The cost of a mobility manager varies by County, organization, and experience, but could range from \$25,000 to \$60,000. Federal grants could help pay for up to 80 percent of this cost.

### Increase Service Frequency and Hours on the Ozaukee County Express

This recommendation would increase service frequency and hours on the Ozaukee County Express in the event more funding becomes available. This recommendation includes adding a morning southbound run from Grafton Commons at approximately 6:30 a.m. and an afternoon run from downtown Milwaukee at approximately 4:30 p.m. Table 6.7 displays the expected operating expenses, revenues, and ridership for this recommendation.

Adding the two runs is expected to cost approximately \$102,600 in 2023, with Ozaukee County's portion of the operating cost estimated at \$29,700. The additional frequency would provide existing riders with greater flexibility and thereby would improve the quality of service, in addition to attracting an estimated 6,600 additional riders in 2023.

### Improve Bus Stops Along Port Washington Road

The bus stop improvements recommended in this plan would help increase accessibility for all individuals using the Ozaukee County Express, including people with disabilities, by providing bus pads and connecting sidewalks at bus stops along Port Washington Road, as shown in Map 6.1. The estimated cost of these improvements is approximately \$176,800 (as shown in Table 6.8). The costs were based on similar improvements completed by MCTS, but do not include any potential costs associated with relocating utilities, traffic signals, or other impediments. This plan recommends that preliminary engineering be undertaken to develop more refined cost estimates. Federal Transit Administration grants, including FTA Section 5307 and 5310 funds, could help pay for up to 80 percent of the costs.

### Implement Reduced Transfer Fares at the Three MCTS Bus Stop Connection Points

During the public comment period, it was requested that the County extend the existing \$1.00 transfer fare for trips connecting between the Express and Shared-Ride Taxi to Shared-Ride Taxi trips connecting to MCTS services at the three transfer points of Cherrywood Lane, Glencoe Place, and the Brown Deer Park & Ride Lot. In 2017, the three transfer points generated 2,516 Shared-Ride Taxi rides as either destination or origin trips, including 1,897 transfers at the Cherrywood Lane, 374 transfers at Glencoe Place, and 245 transfers at the Brown Deer Park & Ride Lot.

If this recommendation is selected for implementation, the County should identify potential opportunities to reduce the wait times at the three MCTS transfer points. As previously discussed within the recommendation to provide on-demand service for a premium fare, it is recommended that the County encourage employees or employers to schedule standing Shared-Ride Taxi reservations for regularly occurring

**Table 6.5**  
**Projected Annual Operating Expenses, Revenues, and Ridership for the Ozaukee Shared-Ride Taxi if the Agency Fare is Increased from \$12.00 to \$16.00 per Trip and Fares are Increased at the Rate of Inflation: 2019-2023**

Characteristics	Projected		
	2019	2023	Average
Services Provided			
Revenue Vehicle Miles	1,244,700	1,283,300	1,263,900
Revenue Vehicle Hours	59,100	60,900	60,000
Revenue Passengers			
Total	117,200	120,600	118,800
Passengers per Revenue Vehicle Mile	0.09	0.09	0.09
Passengers per Revenue Vehicle Hour	1.98	1.98	1.98
Expenses and Revenues			
Operating Expenses <sup>a</sup>	\$1,879,600	\$2,054,800	\$1,967,200
Farebox Revenues <sup>a</sup>	\$663,300	\$713,900	\$688,600
Percent of Expenses			
Recovered Through Revenues	35.3	34.7	35.0
Operating Assistance			
Federal <sup>a</sup>	\$109,000	\$119,300	\$114,200
State <sup>a</sup>	\$889,400	\$972,300	\$930,900
County <sup>a</sup>	\$217,800	\$249,300	\$233,500
Total <sup>a</sup>	\$1,216,300	\$1,340,900	\$1,278,600
Per Trip Data			
Operating Expenses <sup>a</sup>	\$16.06	\$17.04	\$16.55
Farebox Revenue <sup>a</sup>	\$5.67	\$5.92	\$5.79
Total Operating Assistance <sup>a</sup>	\$10.40	\$11.12	\$10.76

<sup>a</sup> Expenses and revenues are expressed in estimated year-of-expenditure dollars.

Source: SEWRPC

employment trips to guarantee a seamless transfer and an on-time arrival to work. The County will be required to track the number of employment-related subscription trips to ensure that no more than 50 percent of the available capacity of the total system is absorbed by employment-based trips. If this alternative is pursued by the County, Commission staff can offer input on the design and tracking of the program to meet Federal requirements.

As shown in Table 6.9, Commission staff estimates that as more riders learn about the \$1.00 transfer fares from the three MCTS connection points, the number of revenue passengers transferring will increase by 700 riders, as compared to transfers resulting from the existing fare structure in 2023. The number of revenue passengers may increase if standing reservations are promoted among businesses, particularly through a marketing campaign. Based on the current fare structure, the County is currently receiving approximately \$12,200 in farebox revenues from the Shared-Ride Taxi trips generated from the three MCTS bus stop connection points. If the \$1.00 transfer fare is extended, Commission staff estimates that farebox revenue would be reduced to \$3,300 for these trips, a loss of approximately \$8,900. In addition, the operating expenses would increase along with ridership, from \$33,800 under the current fare structure to \$43,000 with the \$1.00 transfer fare. Therefore, the loss of farebox revenue (\$8,900) and the increase in operating expenses (\$9,200) results in a cost to the County of approximately \$18,100 in 2023.

**Table 6.6  
Projected Annual Operating Expenses, Revenues, and Ridership for the Ozaukee Shared-Ride Taxi to Extend Hours to 11:30 p.m. on Weekdays: 2019-2023**

Characteristics	Projected		
	2019	2023	Average
Services Provided			
Revenue Vehicle Miles	18,400	18,700	18,600
Revenue Vehicle Hours	400	400	400
Revenue Passengers			
Total	500	500	500
Passengers per Revenue Vehicle Mile	0.03	0.03	0.03
Passengers per Revenue Vehicle Hour	1.25	1.25	1.25
Expenses and Revenues			
Operating Expenses <sup>a</sup>	\$11,300	\$12,300	\$11,800
Farebox Revenues <sup>a</sup>	\$2,400	\$2,500	\$2,500
Percent of Expenses			
Recovered Through Revenues	21.24	20.33	20.78
Operating Assistance			
Federal <sup>a</sup>	\$2,600	\$2,900	\$2,800
State <sup>a</sup>	\$3,600	\$3,900	\$3,800
County <sup>a</sup>	\$2,700	\$3,000	\$2,900
Total <sup>a</sup>	\$8,900	\$9,800	\$9,400
Per Trip Data			
Operating Expenses <sup>a</sup>	\$22.60	\$24.60	\$23.60
Farebox Revenue <sup>a</sup>	\$4.71	\$4.96	\$4.84
Total Operating Assistance <sup>a</sup>	\$17.80	\$19.60	\$18.70

<sup>a</sup> Expenses and revenues are expressed in estimated year-of-expenditure dollars.

Source: SEWRPC

## 6.5 TRANSIT SERVICES REQUIRING FURTHER STUDY

Implementing the following transit services would be complex, requiring negotiating with several other entities or units of government, or obtaining potentially significant funding from numerous sources, and therefore it is recommended that further study be completed before determining if implementation is appropriate. These transit services include:

- Implementing options for bus-on-shoulder operations along IH 43
- Merging the Ozaukee County and Washington County Shared-Ride Taxi services
- Implementing the new MCTS Route 68 to serve key employment and education destinations
- Implementing flexible shuttles with deviations up to 0.75 miles.

Due to the complicating factors, it is recommended that the County explore each of these alternatives further by contacting potential partner entities, including the Wisconsin Department of Transportation, Washington County, Ozaukee County businesses, and MCTS.

## Study Implementation of Bus-on-Shoulder Along IH 43

Implementing bus-on-shoulder (BOS) would allow buses to use the shoulder along IH 43 during peak congestion periods to bypass congestion in the general purpose traffic lanes, reducing congestion-related reliability issues and providing a more attractive alternative to the automobile. There are numerous benefits to implementing BOS. In addition to reducing congestion-related schedule reliability problems, BOS applications also increase the travel time competitiveness of bus services relative to automobiles; reduce bus running times; are relatively low cost and easy to implement; do not require new rights-of-way; and are not obtrusive. There are approximately 20 BOS projects in North America, including the Minneapolis-St. Paul area, the Chicago area, and in Columbus, Ohio. However, there are several factors that will need to be carefully considered in order to

safely implement BOS in Southeastern Wisconsin. These include potential changes to state law, existing shoulder widths within the corridor, bus driver training, operating protocols, and public education.

Commission staff conducted an inventory of current operations, shoulder widths, and impediments along the IH 43 segments utilized by the Ozaukee County Express, which is documented in Chapter 5 of this report, "Transit Service Alternatives for the Ozaukee County Transit System." This included 2016 travel speed data from the Federal Highway Administration's National Performance Management Research Data Set. In addition, WisDOT provided data on shoulder widths along IH 43. BOS best practices and comparisons were derived from the Transit Cooperative Research Program (TCRP) Report 151, *A Guide for Implementing Bus on Shoulder Systems*. This section summarizes the findings related to time savings benefits, shoulder widths and structural impediments, and next steps to implement BOS.

### Time Savings Benefits

As delays caused by congestion impact the reliability of the Ozaukee County Express, the improvement in reliability expected from implementing BOS has the potential to increase ridership. As noted in the TCRP Report on BOS systems, transit riders will build buffer time into their travel schedules to account for anticipated congestion. This buffered travel time is used by commuters to help make mode choice decisions. Although it is difficult to isolate ridership changes based on BOS implementation, applications in more congested corridors are believed to have increased ridership due to increased reliability of the transit service.

Commission staff conducted an initial feasibility study (in Chapter 5) that quantified potential travel savings benefits if BOS is implemented along the IH 43 corridor. For example, Table 6.10 compares observed travel times along IH 43 to potential time savings if BOS is implemented at speeds of 35, 40, or 45 miles per hour. Shoulder use at 45 miles per hour is shown for comparison purposes given that a majority of BOS nationwide have shoulder-use speed limits of 35 miles per hour.

The majority of BOS travel time improvements occur in the southbound direction. The congestion on IH 43 results in median travel time delays of approximately 11 minutes (shown in Table 6.10). If BOS is implemented

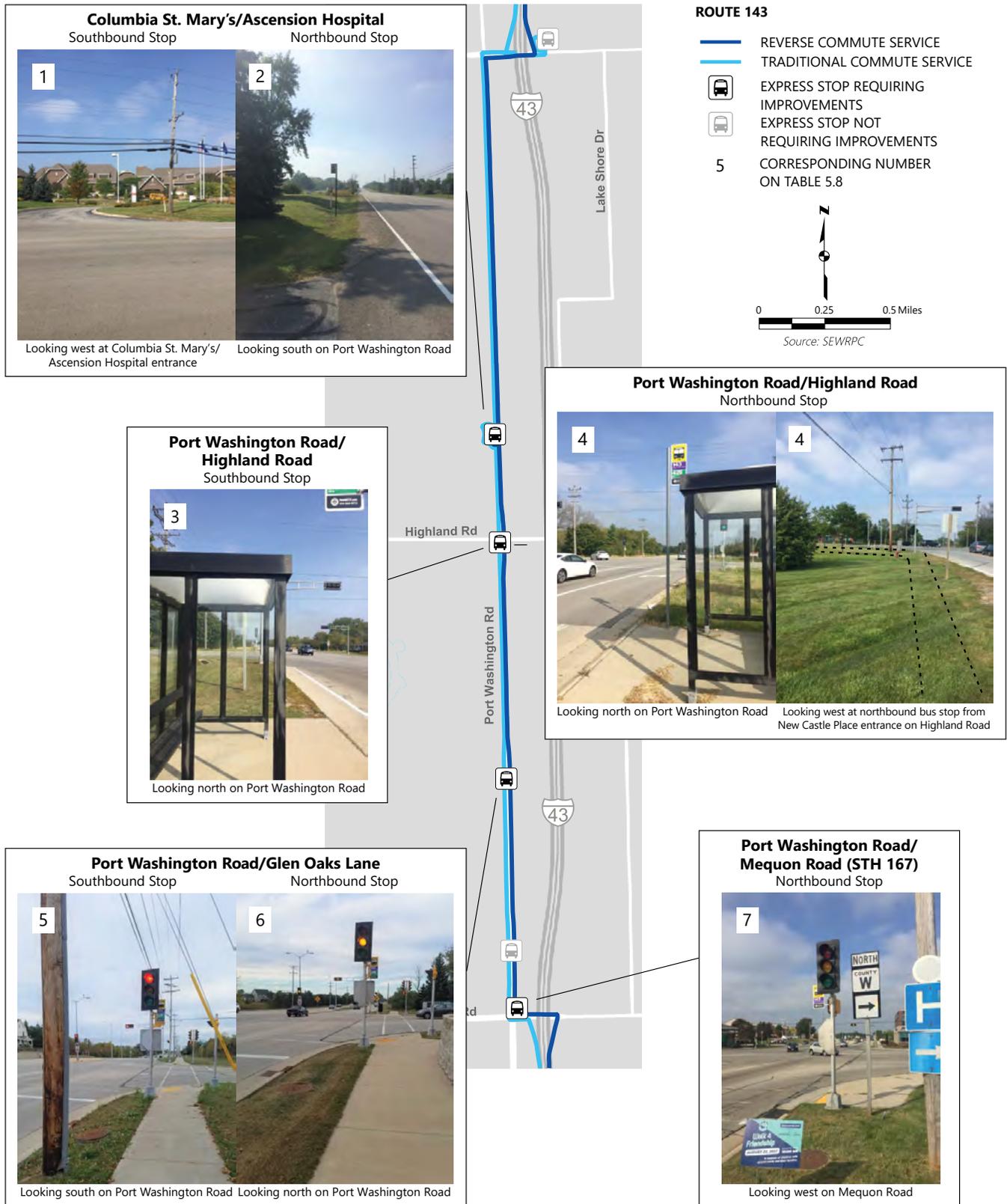
**Table 6.7**  
**Projected Annual Operating Expenses, Revenues, and Ridership for Increased Service Frequency and Hours on the Ozaukee County Express: 2019-2023**

Characteristics	Projected		
	2019	2023	Average
Services Provided			
Revenue Vehicle Miles	28,200	28,200	28,200
Revenue Vehicle Hours	1,020	1,020	1,020
Revenue Passengers			
Total	6,600	6,600	6,600
Passengers per Revenue Vehicle Mile	0.23	0.23	0.23
Passengers per Revenue Vehicle Hour	13.00	13.00	13.00
Expenses and Revenues			
Operating Expenses <sup>a</sup>	\$102,000	\$102,600	\$102,300
Farebox Revenues <sup>a</sup>	\$16,500	\$16,500	\$16,500
Percent of Expenses			
Recovered Through Revenues	16.2	16.1	16.1
Operating Assistance			
Federal <sup>a</sup>	\$23,700	\$23,800	\$23,800
State <sup>a</sup>	\$32,400	\$32,600	\$32,500
County <sup>a</sup>	\$29,400	\$29,700	\$29,600
Total <sup>a</sup>	\$85,500	\$86,100	\$85,800
Per Trip Data			
Operating Expenses <sup>a</sup>	\$15.45	\$15.55	\$15.50
Farebox Revenue <sup>a</sup>	\$2.50	\$2.50	\$2.50
Total Operating Assistance <sup>a</sup>	\$12.95	\$13.05	\$13.00

<sup>a</sup> Expenses and revenues are expressed in estimated year-of-expenditure dollars.

Source: SEWRPC

**Map 6.1**  
**Potential Bus Stop Improvements for the Ozaukee County Express**  
**Along Port Washington Road in the City of Mequon**



**Table 6.8**  
**Bus Stop Improvement Locations and Estimated Costs**

Map Number	Location	Improvements	Estimated Cost
1	Columbia St. Mary's Hospital (West side of Port Washington Road)	400' x 8' sidewalk 6' x 8' bus pad	\$96,000 \$2,000
2	Columbia St. Mary's Hospital (East side of Port Washington Road)	6' x 8' bus pad	\$2,000
3	Port Washington Road/Highland Road (SW)	66' x 8' sidewalk connecting to bus pad and shelter	\$15,840
4	Port Washington Road/Highland Road (SE)	142' x 8' sidewalk connecting to Newcastle Place Senior Housing 82' x 8' sidewalk connecting to bus pad and shelter	\$34,080 \$19,680
5	Port Washington Road/Glen Oaks Lane (NW)	6' x 8' bus pad to connect to sidewalk	\$2,000
6	Port Washington Road/Glen Oaks Lane (SE)	12' x 6' bus pad to connect to sidewalk	\$2,160
7	Port Washington Road/Mequon Road (NE)	10' x 10' bus pad to connect to sidewalk	\$3,000
Estimated Total			\$176,760

Note: Unit costs provided by the Milwaukee County Transit System were utilized to develop the costs associated with the recommended bus stop improvements to comply with the American with Disabilities Act are as follows:

6' x 8' flat bus pad = \$1,500 - \$2,000 (used \$2,000 in estimate)  
Concrete = \$30/square foot

Source: SEWRPC

with a 35 miles per hour operating speed, the median travel times for southbound bus trips would be improved by over three minutes. If the BOS is implemented allowing speeds of 40 miles per hour, the median time savings would be increased to approximately four minutes.

**Shoulder Widths and Structural Impediments**

Shoulder width requirements will be governed by the width of the bus, however, most agencies have used ten feet as a minimum operational lane width as buses are typically nine feet wide. This plan recommends that the desirable shoulder width should be 12 feet to allow adequate vertical clearance for the bus, including bus mirrors. However, MCTS or the Express operator at the time further study is initiated should be consulted to verify their preferred operational widths.

Continuous and consistent shoulder widths are necessary to effectively implement BOS as structural impediments would necessitate merging into congested traffic, adding delay and potentially negating the travel time benefits of BOS. For purposes of this analysis, it was assumed that the bus would operate on the right shoulder. This prevents the bus from needing to cross multiple lanes of traffic to exit the freeway, adding potential delay and negating the travel time benefits of BOS. As noted above, the recommended shoulder width for BOS is 12 feet, but a minimum width of ten feet may be acceptable. Map 6.2 shows the shoulder widths and structural barriers along the corridor. The majority of impediments shown are bridges, where the bridge piers or concrete walls currently prohibit the use of the shoulder for buses. Map 6.2 also indicates locations on IH 43 into which the general purpose travel lanes could potentially be shifted to provide additional width to the right shoulder. For example, the northbound and southbound segment between County Line Road and Good Hope Road could be restriped to allocate three feet from the left shoulder to a wider right shoulder. Therefore, it may be possible to accommodate the necessary shoulder width in certain areas without major construction. It should be noted that any restriping recommendations

**Table 6.9**  
**Comparison of Projected Annual Operating Expenses, Revenues, and Ridership to Implement Reduced Transfer Fares of \$1.00 at the Three MCTS Bus Stop Connections and Current Fares in 2023**

Characteristics	Current Fare	\$1.00 Transfer
Revenue Passengers	2,600	3,300
Expenses and Revenues		
Operating Expenses <sup>a</sup>	\$33,800	\$43,000
Farebox Revenues <sup>a</sup>	\$12,200	\$3,300
Percent of Expenses		
Recovered Through Revenues	36.1	7.7
Per Trip Data		
Farebox Revenue <sup>a</sup>	\$4.71	\$1.00

<sup>a</sup> Expenses and revenues are expressed in estimated year-of-expenditure dollars.

Source: SEWRPC

**Table 6.10**  
**Comparison of Potential Bus-On-Shoulder (BOS) Travel Times to Median Observed Travel Times on an Average Weekday Along IH 43 Between Mequon Road and STH 145**

Southbound (11.48 Miles)												
Travel Time (Minutes)	Time Period (AM)											
	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	
Mainline Freeway <sup>a</sup>	11:30	12:00	14:00	20:30	23:00	21:30	19:00	18:00	16:00	14:00	12:00	
Delay <sup>b</sup>	--	--	2:00	8:30	11:00	9:30	7:00	6:00	4:00	2:00	--	
BOS at 45 MPH <sup>c</sup> Time Savings	--	--	--	5:00	7:30	6:00	3:30	2:30	0:30	--	--	
BOS at 40 MPH <sup>c</sup> Time Savings	--	--	--	3:30	6:00	4:30	2:00	1:00	--	--	--	
BOS at 35 MPH <sup>c</sup> Time Savings	--	--	--	1:00	3:30	2:00	--	--	--	--	--	

Northbound (11.72 Miles)															
Travel Time (Minutes)	Time Period (PM)														
	3:00	3:15	3:30	3:45	4:00	4:15	4:30	4:45	5:00	5:15	5:30	5:45	6:00	6:15	6:30
Mainline Freeway <sup>a</sup>	12:00	12:30	13:00	14:00	14:00	15:00	16:00	16:30	17:30	17:30	17:00	15:30	13:30	12:00	12:00
Delay <sup>b</sup>	--	--	0:30	1:30	1:30	2:30	3:30	4:00	5:00	5:00	4:30	3:00	1:00	--	--
BOS at 45 MPH <sup>c</sup> Time Savings	--	--	--	--	--	--	0:30	1:00	2:00	2:00	1:30	--	--	--	--

<sup>a</sup> The mainline freeway travel time is the median travel time observed on an average weekday in the year 2016.

<sup>b</sup> Delay is the difference between the free flow travel time—12:00 minutes traveling southbound and 12:30 minutes traveling northbound—and the observed travel time on the mainline freeway. The free flow travel time is based on the speed limit of each segment.

<sup>c</sup> The travel time for a Bus-On-Shoulder traveling southbound is 15:30 minutes at 45 MPH, 17:00 minutes at 40 MPH, and 19:30 minutes at 35 MPH; and the travel time for a Bus-On-Shoulder traveling northbound is 15:30 minutes at 45 MPH.

Source: Federal Highway Administration and SEWRPC

would need to be reviewed and potentially implemented by WisDOT, the owner and operator of IH 43, in order for Ozaukee County to implement BOS.

**Next Steps to Implement BOS**

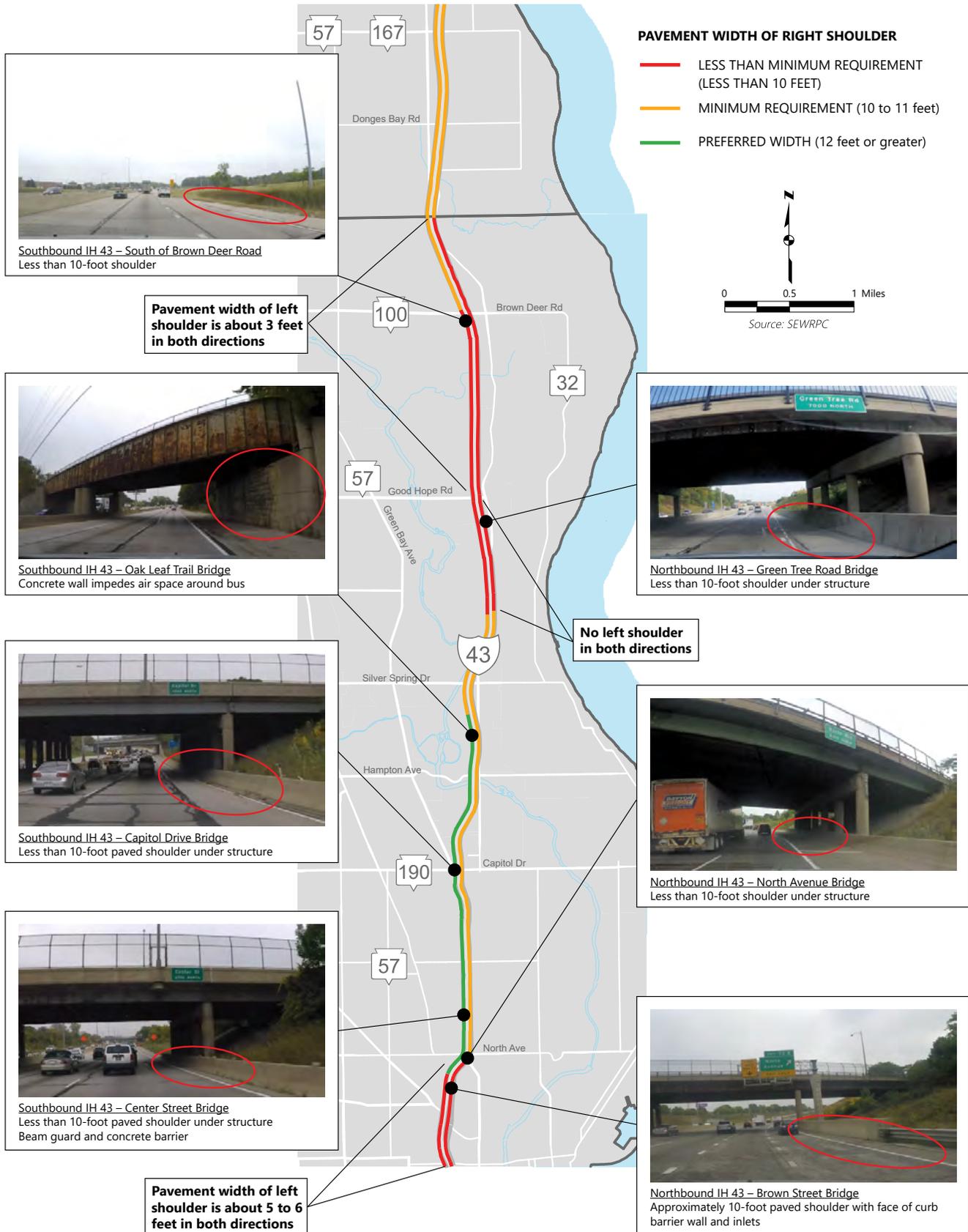
The Commission will continue to study BOS feasibility and implementation in Southeastern Wisconsin to determine current impediments, travel time savings, and where BOS could be implemented immediately with restriping. The Commission will coordinate with key stakeholders, including the Federal Highway Administration, WisDOT, and MCTS to review policy, budget, operation protocols, and training. Further study will be needed to gather best practices related to marketing and education campaigns that acquaint motorists using the general purpose lanes of the reasons that buses should be given priority and how buses and motorists should operate their vehicles. In addition, there are legal considerations that will need to be addressed by the Wisconsin State Legislature. Currently, the Wisconsin Rules of the Road Section 346.08 prohibits passing on the right using any part of the shoulder. In order to implement bus-on-shoulder, the Wisconsin State Legislature would have to amend state statute in order to formalize BOS operations.

**Consider Merging the Ozaukee County and Washington County Shared-Ride Taxi Services**

At the request of the Ozaukee and Washington County Boards of Supervisors, Commission staff prepared a memorandum for consideration at a Joint Meeting of the Ozaukee County and Washington County Public Works Committees on November 16, 2017. The memorandum included an assessment of the benefits, costs, and impacts of combining the Ozaukee County and Washington County transit systems. The two Public Works Committees voted against a motion to continue investigating a regional transit partnership between the Counties at the November 16, 2017 meeting. Since the potential merger of the two systems could be reconsidered during the five-year horizon of this plan, a potential merger is included as an item for further study under this plan. Additionally, support for a transit system merger was expressed during the public comment period, suggesting that interest still exists.

Under current state law, the full merger of the two transit systems would require the creation of a transit commission. As shown in Table 6.11, a merger of the Ozaukee County and Washington County transit systems

**Map 6.2**  
**Geometric Constraints for Potential Bus-On-Shoulder (BOS) Along IH 43**



could result in future annual ridership increases between 6,700 and 10,600 passengers, as riders would have greater access to both counties' employment opportunities, medical facilities, and other resources.

Excluding any one-time startup costs and any potential savings at the contractor level or in county staffing, it is estimated that merging the transit services would increase the combined costs of the counties by \$22,800 to \$36,400 annually. Should both Ozaukee County and Washington County determine to proceed with a merger, the counties would need to determine how to proceed on a number of items including, but not limited to, the transfer of assets, vehicle storage, maintenance, branding, and fare structure. More detail on the Commission staff's analysis can be found in Chapter 5 of this report, "Transit Service Alternatives," or in the memorandum presented at the November 16, 2017 meeting.

**Table 6.11**  
**Estimated Additional Annual Operating Expenses, Revenues, and Ridership for a Merged Ozaukee County-Washington County Shared-Ride Taxi Service**

Characteristics	Estimated Amounts		
	Low	High	Average
Services Provided			
Revenue Vehicle Miles	113,900	180,200	147,100
Revenue Vehicle Hours	4,200	6,700	5,500
Revenue Passengers	6,700	10,600	8,700
Expenses and Revenues			
Operating Expenses <sup>a</sup>	\$106,300	\$169,600	\$138,000
Farebox Revenues <sup>a</sup>	\$25,000	\$39,900	\$32,500
Percent of Expenses			
Recovered Through Revenues	23.5	23.5	23.5
Operating Assistance			
Federal <sup>a</sup>	\$31,400	\$49,800	\$40,600
State <sup>a</sup>	\$27,100	\$43,500	\$35,300
County <sup>a</sup>	\$22,800	\$36,400	\$29,600
Total <sup>a</sup>	\$81,300	\$129,700	\$105,500

<sup>a</sup> Expenses and revenues are expressed in estimated year-of-expenditure dollars.

Source: SEWRPC

### Consider Implementing a New Route to Serve Port Washington Road

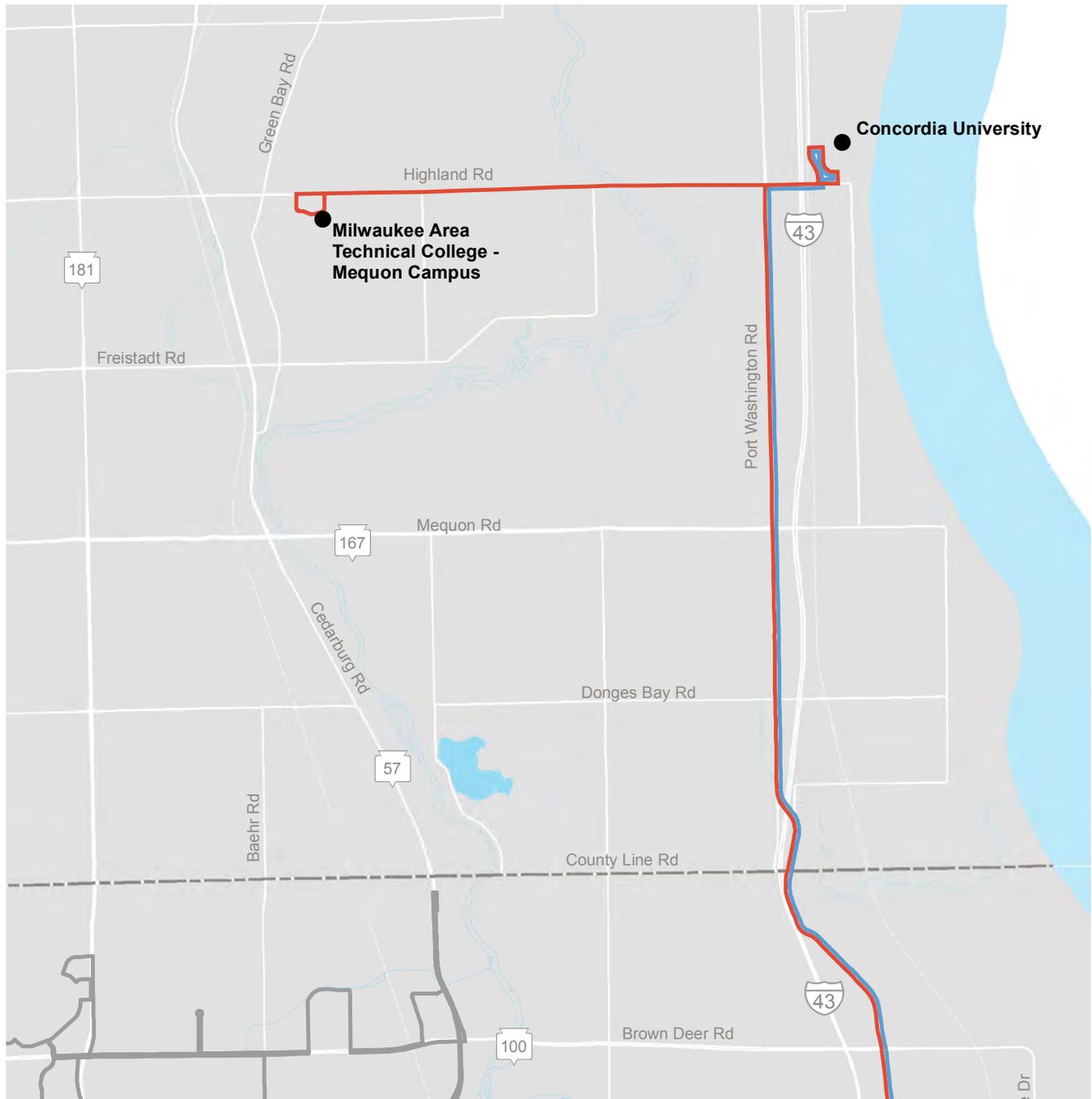
A potential new MCTS route, as shown on Map 6.3, could serve Ozaukee County employers along Port Washington Road as well as Concordia University and the MATC-Mequon campus. As envisioned, this route would offer weekday service approximately every 30 to 40 minutes from 6:00 a.m. to 12:00 a.m. and weekend service every 30 minutes from 6:00 a.m. to 11:00 p.m. on Saturdays, and from 8:00 a.m. to 7:00 p.m. on Sundays. The operating expenses would be approximately \$868,200 in 2023, of which the local share would be \$318,300, as indicated in Table 6.12. Ridership is anticipated to be about 50,300 in 2023. This route could replace Route 42U, which has historically underperformed compared to other MCTS routes. Because of the significant local funds needed to implement this route, it is not recommended at this time. However, the proposed route may be attractive in the future as MCTS considers a system redesign to focus on higher frequency routes and service areas that have a mix of residential, commercial, and entertainment uses. Further study will be needed to identify if additional funding could be provided from MATC, Concordia, businesses, or Ozaukee County to support this potential new route.

### Consider Implementing Flexible Shuttles

Flexible shuttles, as envisioned in the transit service alternatives, would allow route deviations of up to 0.75 miles from a fixed route to provide direct access to businesses. The flexible shuttle alternative considered two routes – one along Cedarburg Road and another along Port Washington Road, as shown in Map 6.4. The route along Cedarburg Road would serve the Mequon business park, downtown Cedarburg, MATC-Mequon, and employers in Grafton and Saukville. The Port Washington Road route would serve destinations including Ascension Columbia St. Mary's, Aurora Medical Center, and the Port Washington Industrial Park. The annual cost for the service was estimated to be approximately \$214,000, with \$75,700 needing to be generated locally, as shown in Table 6.13. The capital cost to purchase two mini-buses (estimated at \$55,000 each), is not included in this total.

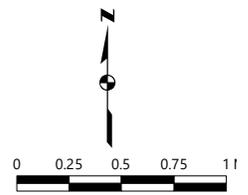
While flexible shuttles can be a reasonable transit service option in less densely populated areas, their ability to modify the routes in response to passenger requests may cause this service to be less viable for work trips as the potential deviations reduce travel time reliability. In general, the public and businesses supported flexible shuttles during the outreach on the transit service alternatives. However, comments from Ozaukee County employers indicated that their start times are not flexible. Therefore, this plan recommends that flexible shuttles be further studied to determine if they would be able to adequately provide the needed on-time service.

**Map 6.3**  
**Potential MCTS Route in Milwaukee and Ozaukee Counties**



**To Bayshore Town Center** ↓

- POTENTIAL WEEKDAY ROUTE 68
- POTENTIAL WEEKEND ROUTE 68
- MCTS ROUTE



Source: SEWRPC

If the County decides to explore shuttle service further, it is recommended that potential options to provide the service be discussed with businesses that could most benefit from having more direct shuttle access. Based on similar privately provided services operating in the Region, it is estimated that the shuttle service could operate with approximately two to five vans. The County could consider the option of overseeing a contract with a private transit provider to identify stop locations, service times, and costs. It is anticipated that the businesses receiving the service would contribute to the cost of the shuttle service.

**6.6 TRANSIT SERVICES NOT RECOMMENDED FOR IMPLEMENTATION OR FURTHER STUDY**

Due to input from businesses and the public, and the high cost relative to projected ridership, the following transit service alternatives are not recommended for implementation or further study:

- Providing on-demand services through a partnership with a transportation network company (Uber/Lyft) is not recommended. This alternative received minimal interest from businesses and the public. Without subsidies from private businesses or the County, the cost of using a private transportation network company for a daily commute would be relatively high given the current fare structures for Lyft and Uber.
- Extending MCTS service on Route 12 to provide service to the Mequon business park and Mequon Town Center is not recommended due to the lack of interest from businesses and the public and the limited service area relative to its cost.
- Expanded reverse commute services on the Ozaukee County Express from Milwaukee County to Ozaukee County is not recommended due to the projected low ridership (2,300 riders in 2022), relative to the added cost of additional service. In addition, this alternative generated relatively little interest from the public and Ozaukee County businesses.
- Reducing service on the Ozaukee County Express by eliminating the lowest performing runs is not recommended. Eliminating the two existing runs discussed in Chapter 5 would result in less schedule flexibility for riders. Further, the current route for the Ozaukee County Express operates efficiently as a result of recent refinements to optimize the stops served by each run.

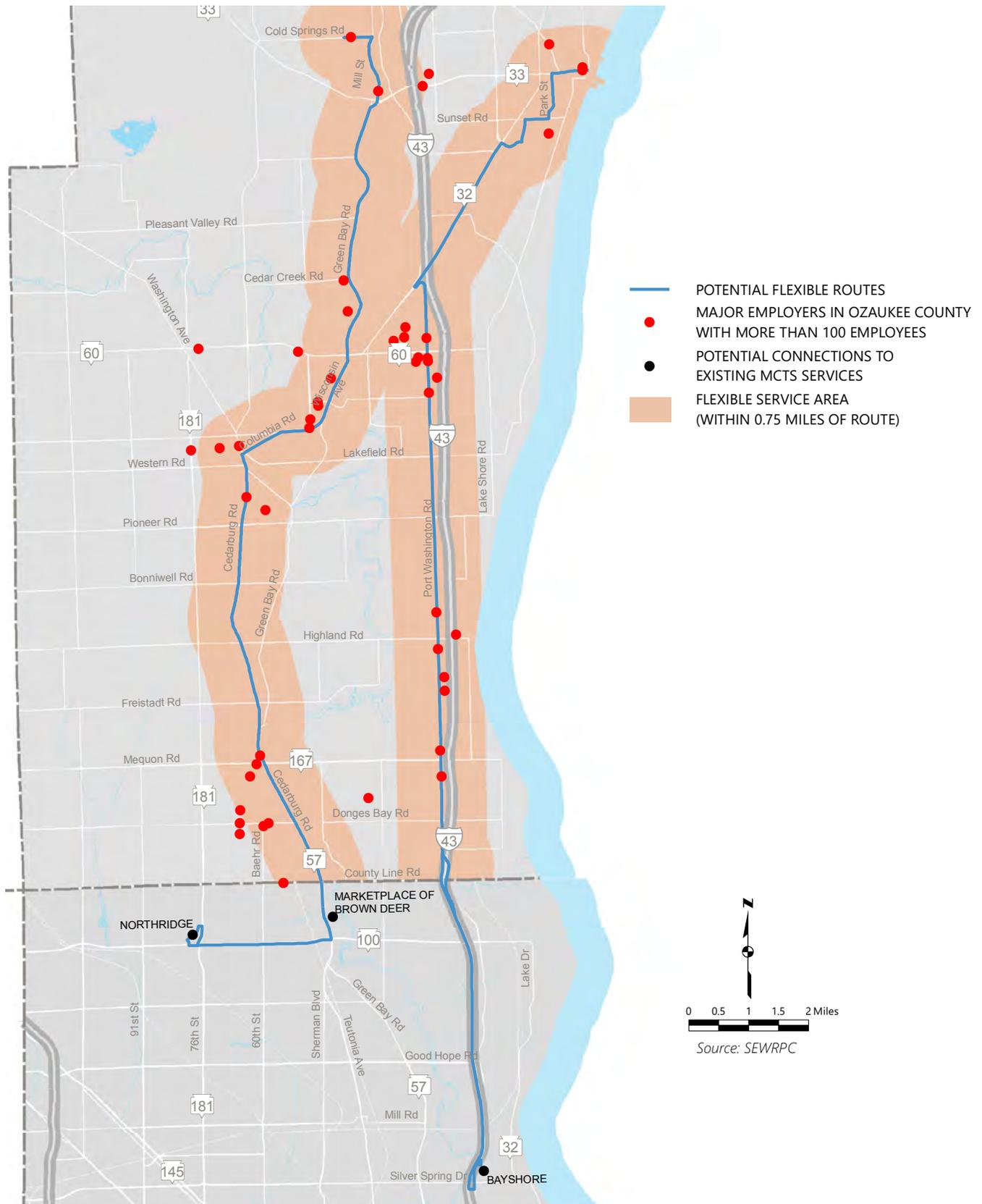
**Table 6.12  
Projected Annual Operating Expenses, Revenues,  
and Ridership to Add a New Route on Port  
Washington Road in Mequon: 2019-2023**

Characteristics	Projected		
	2019	2023	Average
Services Provided			
Revenue Vehicle Miles	63,400	63,400	63,400
Revenue Vehicle Hours	5,000	5,000	5,000
Revenue Passengers			
Total	50,000	50,300	50,200
Passengers per Revenue Vehicle Mile	0.79	0.79	0.79
Passengers per Revenue Vehicle Hour	10.0	10.0	10.0
Expenses and Revenues			
Operating Expenses <sup>a</sup>	\$862,800	\$868,200	\$865,500
Farebox Revenues <sup>a</sup>	\$72,000	\$72,400	\$72,200
Percent of Expenses			
Recovered Through Revenues	8.3	8.3	8.3
Operating Assistance			
Federal <sup>a</sup>	\$200,200	\$201,500	\$200,900
State <sup>a</sup>	\$274,300	\$276,000	\$275,200
County <sup>a</sup>	\$316,300	\$318,300	\$317,300
Total <sup>a</sup>	\$790,800	\$795,800	\$793,400
Per Trip Data			
Operating Expenses <sup>a</sup>	\$17.26	\$17.26	\$17.26
Farebox Revenue <sup>a</sup>	\$1.44	\$1.44	\$1.44
Total Operating Assistance <sup>a</sup>	\$15.82	\$15.82	\$15.82

<sup>a</sup> Expenses and revenues are expressed in estimated year-of-expenditure dollars.

Source: SEWRPC

## Map 6.4 Potential Flexible Route in Ozaukee County and Nearby Major Employers



## 6.7 CONCLUSION

This chapter has presented the transit services recommended for Ozaukee County for the years 2019-2023. The recommendations in this chapter represent the culmination of the study of the existing transit services in the County, the evaluation of the performance of existing and alternative transit service options relative to a set of objectives and standards that the County transit system should meet, and the consideration of both public and business feedback on the future of transit in Ozaukee County. The recommended plan presents a course of action for the County under three different funding scenarios, and prepares the County to make informed decisions in the face of future uncertainties.

**Table 6.13**  
**Projected Annual Operating Expenses, Revenues, and Ridership for Flexible Shuttles: 2019-2023**

Characteristics	Projected		
	2019	2023	Average
Services Provided			
Revenue Vehicle Miles	78,700	81,500	80,100
Revenue Vehicle Hours	3,800	3,800	3,800
Revenue Passengers			
Total	10,000	10,300	10,150
Passengers per Revenue Vehicle Mile	0.13	0.13	0.13
Passengers per Revenue Vehicle Hour	2.63	2.71	2.67
Expenses and Revenues			
Operating Expenses <sup>a</sup>	\$208,500	\$214,000	\$211,250
Farebox Revenues <sup>a</sup>	\$20,000	\$20,600	\$20,300
Percent of Expenses			
Recovered Through Revenues	9.6	9.6	9.6
Operating Assistance			
Federal <sup>a</sup>	\$33,200	\$34,400	\$33,800
State <sup>a</sup>	\$81,500	\$83,300	\$82,400
County <sup>a</sup>	\$73,800	\$75,700	\$74,800
Total <sup>a</sup>	\$188,500	\$193,400	\$191,000
Per Trip Data			
Operating Expenses <sup>a</sup>	\$20.85	\$20.78	\$20.81
Farebox Revenue <sup>a</sup>	\$2.00	\$2.00	\$2.00
Total Operating Assistance <sup>a</sup>	\$18.85	\$18.78	\$18.81

<sup>a</sup> Expenses and revenues are expressed in estimated year-of-expenditure dollars.

Source: SEWRPC

