

1. Agenda

Documents: [TTC_20150121_AG.PDF](#)

2. Complete Packet

Documents: [TTC_20150121_PK.PDF](#)



City of Fitchburg
5520 Lacy Road
Fitchburg, WI 53711-5318
Phone: (608) 270-4200 Fax (608) 270-4275
www.city.fitchburg.wi.us

**AGENDA
TRANSPORTATION AND TRANSIT COMMISSION
WEDNESDAY, JANUARY 21, 2015
6:30 P.M.**

NOTICE IS HEREBY GIVEN that the Transportation and Transit Commission will meet at 6:30 P.M. on Wednesday, January 21, 2015 in the Meeting Room at **Fitchburg City Hall**, 5520 Lacy Road, to consider and act on the following:

(*Note: Full coverage of this meeting is available through FACTv and Streaming Video, accessible on the city web site at <http://www.fitchburgwi.gov/677/Government-Channel>)*

- 1. Call to Order**
- 2. Public Appearances – Non Agenda Items**
- 3. Approval of Minutes:**
 - a. April 10, 2014**
 - b. June 12, 2014**
- 4. Report of the Transportation Project Engineer**
- 5. 6:45 P.M. – Review and Discuss Intra-City of Fitchburg Transit Study**, Presentation by Joe Kapper and Joe Kern of SRF Consulting Group, Inc.
- 6. 7:45 P.M. – Review and Discuss Beltline PEL Study**, Presentation by Robert Knorr – WisDOT and Tom Lynch – Strand Associates
- 7. 8:45 P.M. – General Discussion of 2015 goals and initiatives for TTC**
- 8. Announcements**
 - a. Next TTC meeting scheduled for March 12, 2015
- 9. Adjournment**

Note: It is possible that members of and possibly a quorum of members of other government bodies of the municipality may be in attendance at the above stated meeting to gather information. No action will be taken by any governmental body at the above stated meeting other than the governmental body specifically referred to above in this notice. Please note that, upon reasonable notice, efforts will be made to accommodate the needs of disabled individuals through appropriate aids and services. For additional information or to request this service, contact Fitchburg City Hall, 5520 Lacy Road, Fitchburg WI 53711, (608) 270-4200



City of Fitchburg
5520 Lacy Road
Fitchburg, WI 53711-5318
Phone: (608) 270-4200 Fax (608) 270-4275
www.city.fitchburg.wi.us

**AGENDA
TRANSPORTATION AND TRANSIT COMMISSION
WEDNESDAY, JANUARY 21, 2015
6:30 P.M.**

NOTICE IS HEREBY GIVEN that the Transportation and Transit Commission will meet at 6:30 P.M. on Wednesday, January 21, 2015 in the Meeting Room at **Fitchburg City Hall**, 5520 Lacy Road, to consider and act on the following:

(Note: Full coverage of this meeting is available through FACTv and Streaming Video, accessible on the city web site at <http://www.fitchburgwi.gov/677/Government-Channel>)

- 1. Call to Order**
- 2. Public Appearances – Non Agenda Items**
- 3. Approval of Minutes:**
 - a. April 10, 2014**
 - b. June 12, 2014**
- 4. Report of the Transportation Project Engineer**
- 5. 6:45 P.M. – Review and Discuss Intra-City of Fitchburg Transit Study**, Presentation by Joe Kapper and Joe Kern of SRF Consulting Group, Inc.
- 6. 7:45 P.M. – Review and Discuss Beltline PEL Study**, Presentation by Robert Knorr – WisDOT and Tom Lynch – Strand Associates
- 7. 8:45 P.M. – General Discussion of 2015 goals and initiatives for TTC**
- 8. Announcements**
 - a. Next TTC meeting scheduled for March 12, 2015
- 9. Adjournment**

Note: It is possible that members of and possibly a quorum of members of other government bodies of the municipality may be in attendance at the above stated meeting to gather information. No action will be taken by any governmental body at the above stated meeting other than the governmental body specifically referred to above in this notice. Please note that, upon reasonable notice, efforts will be made to accommodate the needs of disabled individuals through appropriate aids and services. For additional information or to request this service, contact Fitchburg City Hall, 5520 Lacy Road, Fitchburg WI 53711, (608) 270-4200



**DRAFT MINUTES
TRANSPORTATION AND TRANSIT COMMISSION
WEDNESDAY, APRIL 10, 2014**

Transportation and Transit Commission Members Present: Kim Lobdell, Steve Arnold, Rich Tate, Phil Winkel, Tony McGrath, and Troy Klein.

Members Absent: Dick Collins – excused

Others Present: Ahnaray Bizjak – Transportation Project Engineer

1. **Call to Order** – The meeting of the TTC was called to order by the committee chairperson Kim Lobdell at 6:30 p.m.
2. **Public Appearances – Non Agenda Items** – None
3. **Approval of March 19, 2014 Minutes** – Motion by Phil Winkel, second by Rich Tate, to **approve** the March 19, 2014 minutes. Arnold provided two corrections; Item 4, first paragraph, last line, missing the word “racks” after bike. The second correction is Item 8, first paragraph, strike the words “*No action taken*” since the resolution as tabled. *Motion carried with the noted corrections.*
4. **Report of the Transportation Project Engineer** – Ahna Bizjak stated that she did not have a report for the commission. Steve Arnold asked about a date for the Fitchburg Bike Rodeo event. Ahna Bizjak reported that it is scheduled for Saturday, May 10 from 10 am-12 pm and will be held at the Stoner Prairie Elementary School parking lot.
5. **Resolution R-34-14, Approving 2014 Transit Service Modifications**

Motion by Arnold, second by Rich Tate; to take the resolution off the table. *Motion carried.*

Colin Conn provided a report on the Metro Transit public hearing. He commented that there was a good turnout. The main comments about the Fitchburg Route 44/48 modifications included a lack of support to take the bus off of the Gilson loop. Nobody in Madison liked the idea of eliminating service from those streets. Metro is still looking for opportunities to provide service to Swan Creek without eliminating that portion of the route. The new proposal is a new Route 49. He originally looked at using McCoy to Syene but this service configuration didn't offer as much. Instead, Conn is suggesting the use of Hwy 14 south to Lacy Road to E. Cheryl Parkway. In looking at it, speed is the primary factor here (looking to increase the speed of the route). What Conn really likes about Route 49 is that it can be anchored at the higher density residential area at No Oaks/E. Cheryl and then fly down E. Cheryl Parkway. He believes that this route structure is an improvement compared to what was originally proposed in March. The new Route 49 will be interlined with Route 44 to the north from the South Transfer Point (STP), so a transfer will not be necessary at the STP.

Regarding Route 59, the only negative feedback came from one resident in Belmar. There doesn't appear to be anyone else who is opposed to the route modifications. Conn would like to leave the

route the way that it is proposed. The route 59 modifications were being proposed due to low productivity of the route. Conn commented that the additional bus stops on Whitney Way and Allied Drive will increase productivity of the route. Arnold commented that there appears to be feedback to incorporate a bus stop at the Sentinel Pass/Crescent Road intersection. Bizjak commented that she supports the placement of a stop near this intersection because it provides access to the eastern area of Belmar as well as access from the Dunn's Marsh Neighborhood to the north. Any additional bus stops would be considered based on demand by customer requests.

Tony McGrath commented that he was surprised by the lack of knowledge that Colin had on the growth that is occurring in Fitchburg. He wonders if we should be doing a better job of communicating those changes with Metro. Conn responded that a lot of that future growth information is handled with other folks at Metro, but stated that Ahna Bizjak and Steve Arnold do a good job of sharing this information with Metro. McGrath asked at what point should the City be contacting Metro to be in a position to add service to a new neighborhood at its development. Conn commented that we should know by August 2014 to be able to incorporate changes in August 2015. It takes that much time to plan a route change.

Lobdell asked about the cost difference for Route 49 compared to the Route 44/48 service. The preliminary numbers indicate that this new service configuration will cost less than the existing service, but not by much. The cost difference is negligible between the scenarios.

Lobdell asked if the Route 49 scenario was shared at the Metro Transit public hearing. She commented that this scenario was not shared at our public hearing. Conn stated that this new proposal was developed after the public hearing, in response to the negative feedback to eliminate the Gilson loop.

The question was asked whether the Resolution would need to be amended to reflect these changes. Bizjak commented that the second Whereas clause on the Resolution suggests that Route 44/48 would operate on McCoy and Syene Road. TTC could amend the resolution to change the name to Route 49 and identify operation on Highway 14 to Lacy Road to E. Cheryl Parkway instead of Syene Road.

Motion by Arnold, second by Klein, to **amend** the resolution to reflect the route changes and to make technical modifications as needed to ensure the resolution is accurate. Lobdell commented that Route 49 should also be referenced in the first paragraph and in the Now Therefor statement. *Motion carried.*

Motion by Arnold, second by Klein, to recommend **approval** of R-34-14 as amended. *Motion passed 6-0, one member absent.*

6. Announcements –

- a. Next TTC meeting is scheduled for Thursday, May 8, 2014. Bizjak commented that if there are no action items, the May meeting will be canceled.
- b. Phil Winkel commented that this is his last TTC meeting. He has decided to no longer serve on the Board of Public Works and therefor TTC. Lobdell thanked Winkel for his years of service. Motion by Arnold, second by everyone, to express our gratitude to Phil for his dedication to the commission.

7. Adjournment – Meeting adjourned at 7:30 p.m.



5520 Lacy Road
Fitchburg, WI
53711
608-270-4260
www.fitchburg.wi.us

DRAFT
MINUTES
TRANSPORTATION AND TRANSIT COMMISSION
THURSDAY, JUNE 12, 2014
6:30 P.M.

Transportation and Transit Commission Members Present: Kim Lobdell, Tony McGrath, Michael Gernetzke, Troy Klein, Steve Arnold, Rich Tate

Members Absent: Dick Collins

Others Present: Gus VanderWegen, Project Engineer, Ahnaray Bizjak, Interim Director of Public Works

1. **Call to Order** -The meeting of the Transportation and Transit Commission was called to order by Lobdell at 6:30 p.m.
2. **Public Appearances – Non Agenda Items** – April Schultz, Resident at 2644 Fahey Glen – Advocating for increased transit services.
3. **Report of the Project Engineer** – Gus VanderWegen – Recent TEA grant for Spoke & Sprocket Drives
Kim Lobdell – Mayor is starting the process for an intra-city transit study. Council has appropriated funds.
4. **Final Plat Request FP-2028-14**, Phil Sveum, Agent for Hamm Fam Land, LLC, was available to answer questions for the Final Plat of Quarry Vista
 - Motion made by Arnold for approval of the plat request.
 - Seconded by Klein
 - Motion carried (unanimous)
5. **Resolution R-70-14**, Resolution Designating Path Location for a Connection to McKee Road from the Military Ridge Path
 - Introduction of alternatives by Ahnaray Bizjak with 4 exhibits
 - Presentation by William Haus, Attorney for General Beverage, Bob Corbett & Hamid Noushani, Architects for General Beverage, Joel S. Minkoff, Manager for General Beverage to advocate to move the proposed location of the east side of the corridor.
 - John & Deborah Paul, owners of Midwest Decorative Stone spoke in opposition of moving the path to the east side of the corridor.
 - Motion made by Klein to reject resolution to allow more time to study the issue.
 - Seconded by Gernetzke
 - Roll call vote: Yes: Tate, Klein, McGrath, Lobdell & Gernetzke No: Arnold
 - Motion carried 5-1
6. **Announcements**
 - a. Next TTC meeting scheduled for Thursday, July 10, 2014
7. **Adjournment** – Meeting adjourned at 9:55 p.m.

Technical Memorandum #1

Demand Methodology and Estimates

Transit Feasibility Study

City of Fitchburg, Wisconsin



December 11, 2014

SRF No. 8679

Table of Contents

Introduction	2
Summary of Demand Estimation Results	2
Estimation of Current Year Transit Demand	3
1. Minnesota Hybrid Passenger Demand Model	3
Methodology	3
Calculations	4
2. Service Hours and Passengers per Hour Model	4
Methodology	4
Calculations	5
3. TAZ-Level Modal Split	5
Methodology	5
Calculations	6
Conclusion.....	6

H:\Projects\8679\TP\Tech Memo #1\Tech Memo #1_141211_DraftForClientReview.docx

Introduction

Prior to developing transit alternatives for the City of Fitchburg, estimates of demand are important to serve as a guide for the levels of transit service that the community can support, and informing project stakeholders about gaps in the existing scope of transit service. Alternative methods of estimating overall transit demand within Fitchburg were tested to gauge the reasonableness of the results and to identify the best method to advance for further consideration in the study. Following a brief summary of the demand estimation results for 2015, 2020, and 2030 based on alternative methodologies, this technical memorandum details the demand estimation methods and walks through the calculations for each approach (full calculations are shown in Appendix A). These methodologies include:

1. The Minnesota Hybrid Passenger Demand Model, which was developed for the Minnesota Department of Transportation's 2011 *Greater Minnesota Transit Investment Plan*;
2. The Minnesota Service Hours and Passengers Per Hour Model, which was also developed for the MnDOT 2011 Greater Minnesota Transit Investment Plan; and
3. A TAZ-level Modal Split Model, based on the Madison MPO travel demand model

Summary of Demand Estimation Results

Based on the results of all three transit demand estimation methodologies, which closely correspond to and validate each other, the consultant team estimates a current year theoretical demand estimate of 475,000 annual transit trips. Based on forecasted growth rates within the Madison MPO TAZs from the regional travel demand model (1.11 percent per year), the estimate of 2015, 2020, and 2030 annual trip demand is listed below in Table 1.

Table 1. Annual Transit Demand Estimation Results

Year	Annual Trip Demand Estimate
2015	500,000
2020	525,000
2030	590,000

Existing ridership in Fitchburg, estimated at about 385,000 annual trips, includes many daily express bus routes providing direct connections to major employment and education centers in Madison and Verona, and local service in central Fitchburg provided by Madison Metro Route 40. Existing ridership also includes daily boardings in parts of Fitchburg that border the Allied Drive and Dunn's Marsh neighborhoods where transit service is provided by two Madison Metro local routes.

Estimation of Current Year Transit Demand

1. Minnesota Hybrid Passenger Demand Model

Methodology

In terms of demographics and travel behavior, the State of Minnesota has many similarities to the State of Wisconsin. Additionally, historic levels of transit investment in small and mid-sized urban areas from state and federal funding sources have been similar, offering commonalities in their local policy environments. In order to respond to legislative direction, SRF developed for the Minnesota Department of Transportation (MnDOT) its own demand model as part of the *Greater Minnesota Transit Investment Plan* to estimate future rural transit demand across the state. The model used methods previously developed in other states around the country, but was specially tailored to be more responsive to the diversity of transit services and service areas found across Greater Minnesota.

Referred to as the Minnesota Hybrid Passenger Demand Model, this model has two basic components:

1. All Greater Minnesota counties have a base level of public transit need which can be adequately represented by looking at the transit dependent population. The Arkansas Model¹, factored to Minnesota trip utilization, is used as the basis for this component.
2. In counties with a large urban center (population above 50,000), an additional component of transit need is present which accounts for expanded markets for commuters, students, and general travelers. The Mobility Gap Model² is used as a starting point for this component, and is then factored to calibrate to current large urban use patterns.

The Minnesota Hybrid Passenger Demand Model was calibrated using year 2009 transit trip rates. The initial information from the Arkansas Model and Mobility Gap Model were factored to represent the 100th percentile passengers per capita rates found across all Greater Minnesota transit systems in 2009. The Mobility Gap Model trip rate was additionally factored so that the combined results represent the levels of need currently being met in large urban areas, per utilization data from MnDOT (2008) and the results of an on-board user survey.

Figure 1. Minnesota Hybrid Demand Model Inputs

Annual Demand by County	=	Population 65 years or older	X 4.2
	+	Population with disabilities under 65 years	X 15.0
	+	Low-income, non-disabled population under 65 years	X 7.0
	+	Zero-vehicle households in counties with major urban centers and special service conditions counties	X 3 x 365 x P
<i>(P varies by urban center or special service condition county to calibrate to current demand, ranges from 20 to 50%)</i>			

¹ Source: SG And Associates and Governor’s Task Force – Arkansas, Arkansas Model, 1992.

² Source: LSC Transportation Consultants, Montana rural Passenger Needs Study, 2001.

Calculations

As detailed below in Table 2, application of the Minnesota Hybrid Demand Model to 2008-2012 American Community Survey (ACS) statistics for the City of Fitchburg, using a P-Factor value of 0.50, results in a current annual demand estimation of approximately 405,000 trips.

Table 2. MN Hybrid Demand Model Totals – City of Fitchburg

2008-2012 ACS Population Data	Population Totals	MN Hybrid Demand Model Multiplier	Current Trip Demand
Population 65 years or older	4663	4.2	19,585
Population with disabilities under 65	1382	15	20,730
Low-income, non-disabled population under 65 years	1954	7	13,678
Zero-Vehicle HHs	642	547.5 (3*365*P)	351,495
P Factor	0.50	-	-
TOTAL		405,000	

2. Service Hours and Passengers per Hour Model

Methodology

The second demand estimation methodology tested is the Service Hours and Passengers per Hour Model, which was also developed as part of MnDOT's *2011 Minnesota Transit Investment Plan* in order to produce credible future transit service hour estimates by county for Greater Minnesota. This model incorporates multiple peer group categories; large urban, medium urban, small urban, rural-high service levels, and rural-low service levels. The primary inputs for the Minnesota Service Hours and Passengers per Hour Model are 2008 service hours by transit system (level of service), current population estimates by county, and future population projections by county.

To develop the service hours projections, a target rate for service hours per capita for each transit service peer group was applied to the future population of each county based on population. Table 3 lists the target service hours per capita rates for each county analyzed under the Minnesota Service Hours Model estimates.

Table 3. Service Hours per Capita and Passengers per Hour Target Rates by Peer Group

Peer Group	Target Rate	Passengers per Hour Target
Large urban (Duluth, Rochester, St. Cloud)	1.50-1.75	20
Medium urban (Moorhead, Mankato, La Crescent, East Grand Forks)	1.00	15
Small urban	0.75	10
Rural – High service level	0.75	5
Rural – Low service level	0.50	3

Calculations

In order to effectively apply the service hours per capita target rates to the developed and developing areas within the City of Fitchburg, an analysis of household density per acre (2010 Households by Transportation Analysis Zone (TAZ)) was completed. A majority of TAZs north of Lacy Road within the City of Fitchburg fall above the standard transit-supportive threshold of three households per acre. Subsequently, all TAZs north of the Lacy Road corridor (2010 population: 19,459) were coded as transit supportive, and the medium urban target service hours target rate (1.0) was applied to this area of the City of Fitchburg. The TAZs south of the Lacy Road corridor (2010 population: 5,744) exhibit a much lower development density, and the small urban service hours target rate (0.75) was applied to this sub-area of the city. Finally, a passengers per service hour target rate, based on performance standards of peer transit systems, was applied to both geographic groups to arrive at a current trip annual demand estimate of approximately 435,000 trips. Results of this methodology are also detailed below in Table 4.

Table 4. MN Service Hours Model Totals – City of Fitchburg

2010 City of Fitchburg Population (By TAZ)	Population Totals	Service Hours Target	Current Service Hours Needs	Passengers Per Service Hour Targets	Current Annual Trip Demand
Transit Supportive Area (North of Lacy Road)	19,459	1.0 (Medium Urban Peer Group)	19,459	20	389,180
Undeveloped Area (South of Lacy Road)	5,744	0.75 (Small Urban Peer Group)	4,308	10	43,080
TOTALS	25,203	-	23,767	-	435,000

3. TAZ-Level Modal Split

Methodology

The final demand estimation methodology analyzed the household population data and forecasted growth. The existing household population in the City of Fitchburg (9,962

households – 2009-2013 ACS) was multiplied against the average number of daily household trips for the dominant residential land uses in the City of Fitchburg (Madison Metropolitan Area and Dane County 2030 Regional Transportation Plan) and annualized to reach an annual trips figure. Finally, a two percent mode share (City of Madison 2030 Transportation Plan (Dane County outside of Madison); City of Fitchburg 2030 Transportation Plan) was applied to reach an annual trip demand.

Calculations

Based on the previously detailed methodology, the TAZ-level modal split analysis results in a current annual demand of approximately 475,000 trips.

Conclusion

Three alternative methods for estimating current transit demand for Fitchburg were tested to determine the reasonableness of the estimates compared to current transit utilization and to identify a method to advance for the analysis of service options to come later in the study. Based on this analysis, we conclude that all three methods of demand estimation are producing fairly similar results. In order to keep the analysis consistent with local planning approaches, the TAZ Level Mode Split technique should be used to estimate future year transit demand levels.

Appendix A - Fitchburg Demand Methodology and Estimates

Madison MPO TAZ - Modal Split

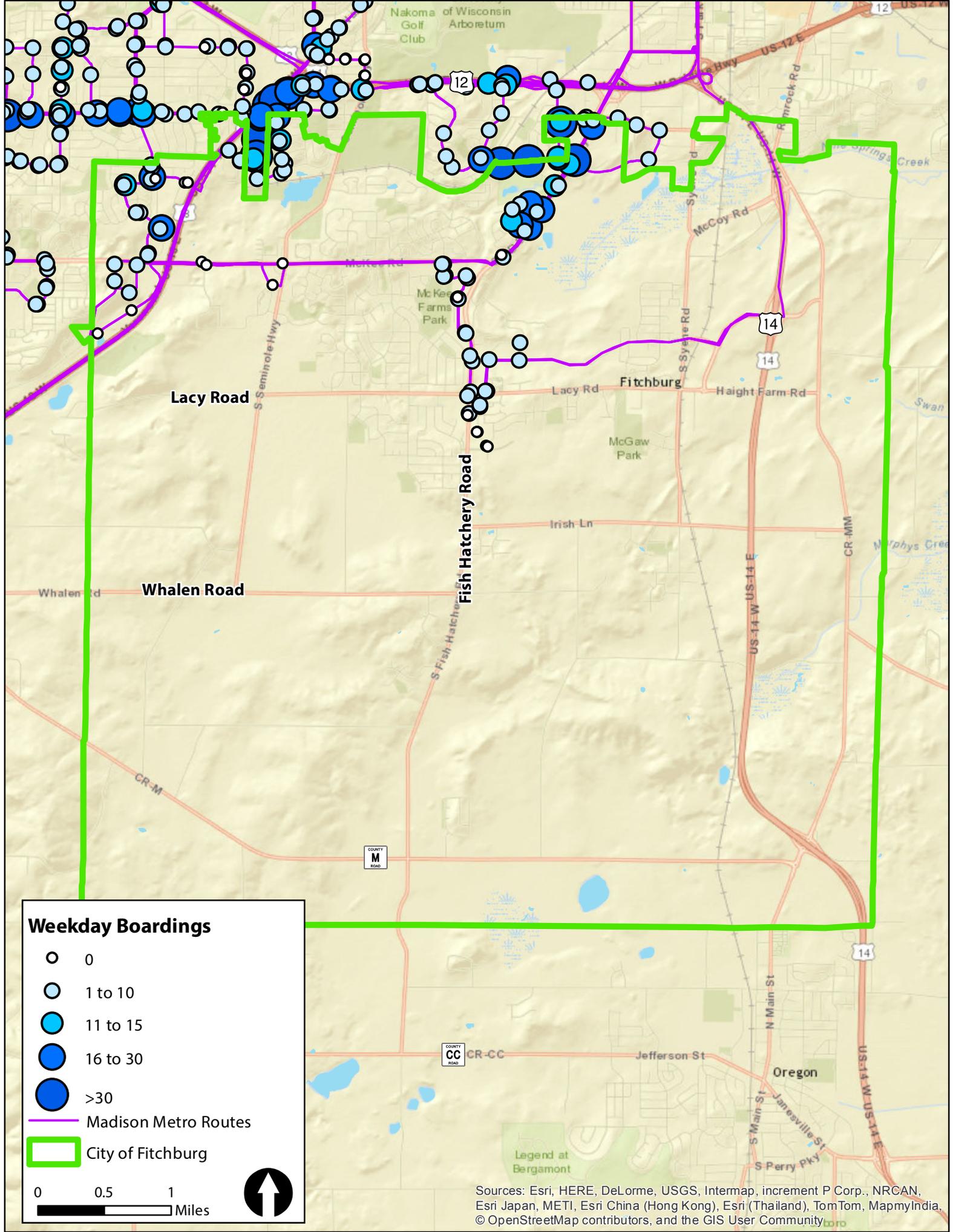
City of Fitchburg	HH Population Total	Annual Trips	Madison MPO Daily Trips	Existing Annual Madison Metro Trips Serving Fitchburg	Mode Share	Current Trip Demand	2015 Trip Demand	2020 Trip Demand	2030 Trip Demand
Current HH (2013 ACS)	9962	23634845	6.5	386204	2.00%	472697	499471	527762	589241

MN Hybrid Demand Model

City of Fitchburg	Population Totals	Multiplier	Current Trip Demand	2015 Trip Demand	2020 Trip Demand	2030 Trip Demand
Population 65 years or older	4663	4.2	19585			
Population with disabilities under 65	1382	15	20730			
Low-income, non-disabled population under 65 years	1954	7	13678			
Zero-Vehicle HHs	642	547.5	351495			
P Factor	0.5					
			405488	414483	437959	488978

Service Hours and Passengers per Hour Model

City of Fitchburg	Population Totals	Service Hours Target	Current Service Hours Needs	Service Hours Per Capita Ranges	Passengers Per Service Hour (Medium Urban)	Passengers Per Service Hour (Small Urban)	Current Trip Demand	2015 Trip Demand	2020 Trip Demand	2030 Trip Demand
Medium Urban Area Population (Transit Supportive)	19459	1.00	19459	Low	10	5	216130	228372	241307	269417
Small Urban Area Population	5744	0.75	4308	Medium	15	7	322041	340282	359556	401441
TOTALS	25203		23767	High	20	10	432260	456744	482614	538835



Weekday Boardings

- 0
- 1 to 10
- 11 to 15
- 16 to 30
- >30

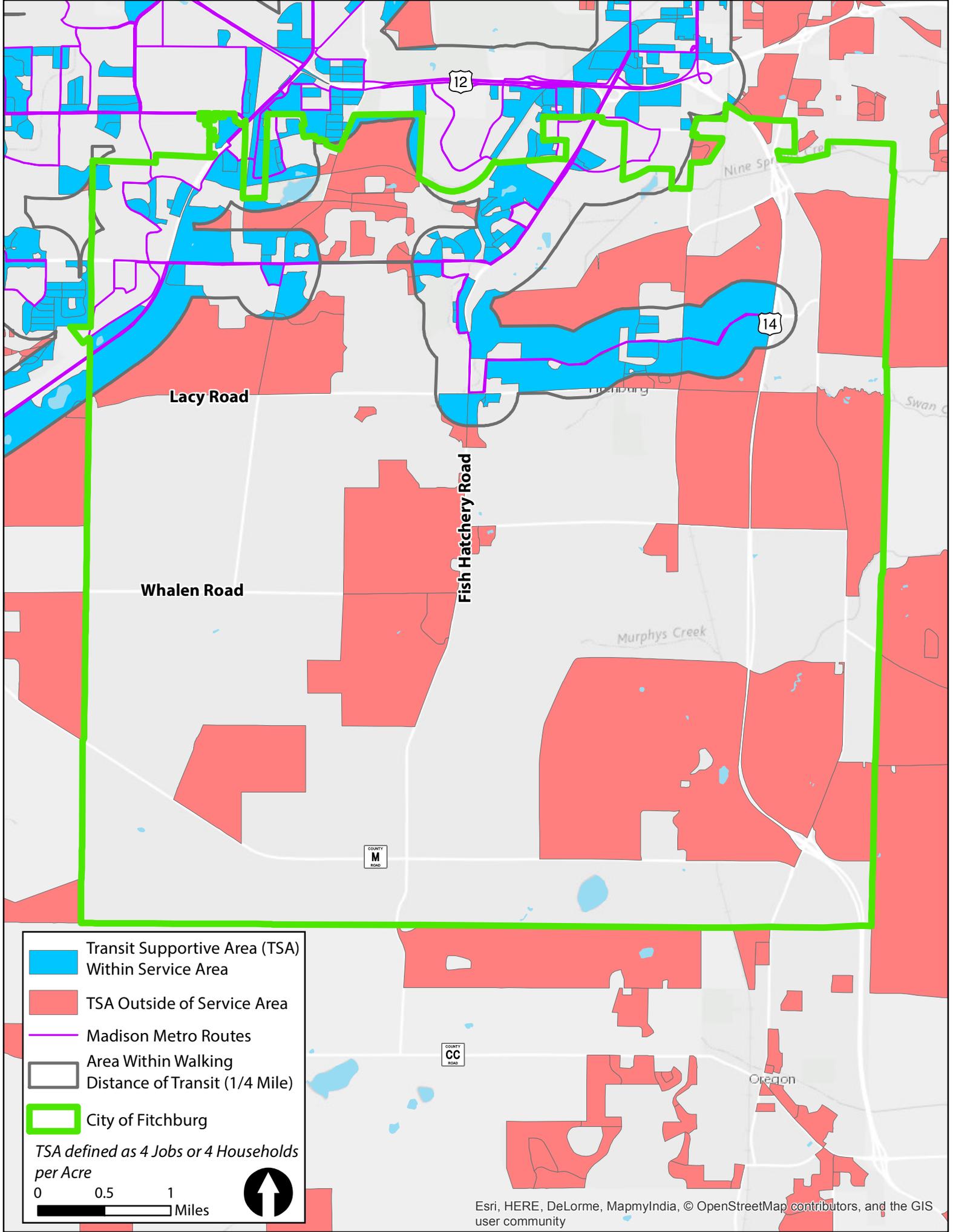
— Madison Metro Routes

▭ City of Fitchburg

0 0.5 1 Miles



Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community



12

14

Lacy Road

Whalen Road

Fish Hatchery Road

Murphys Creek

Oregon

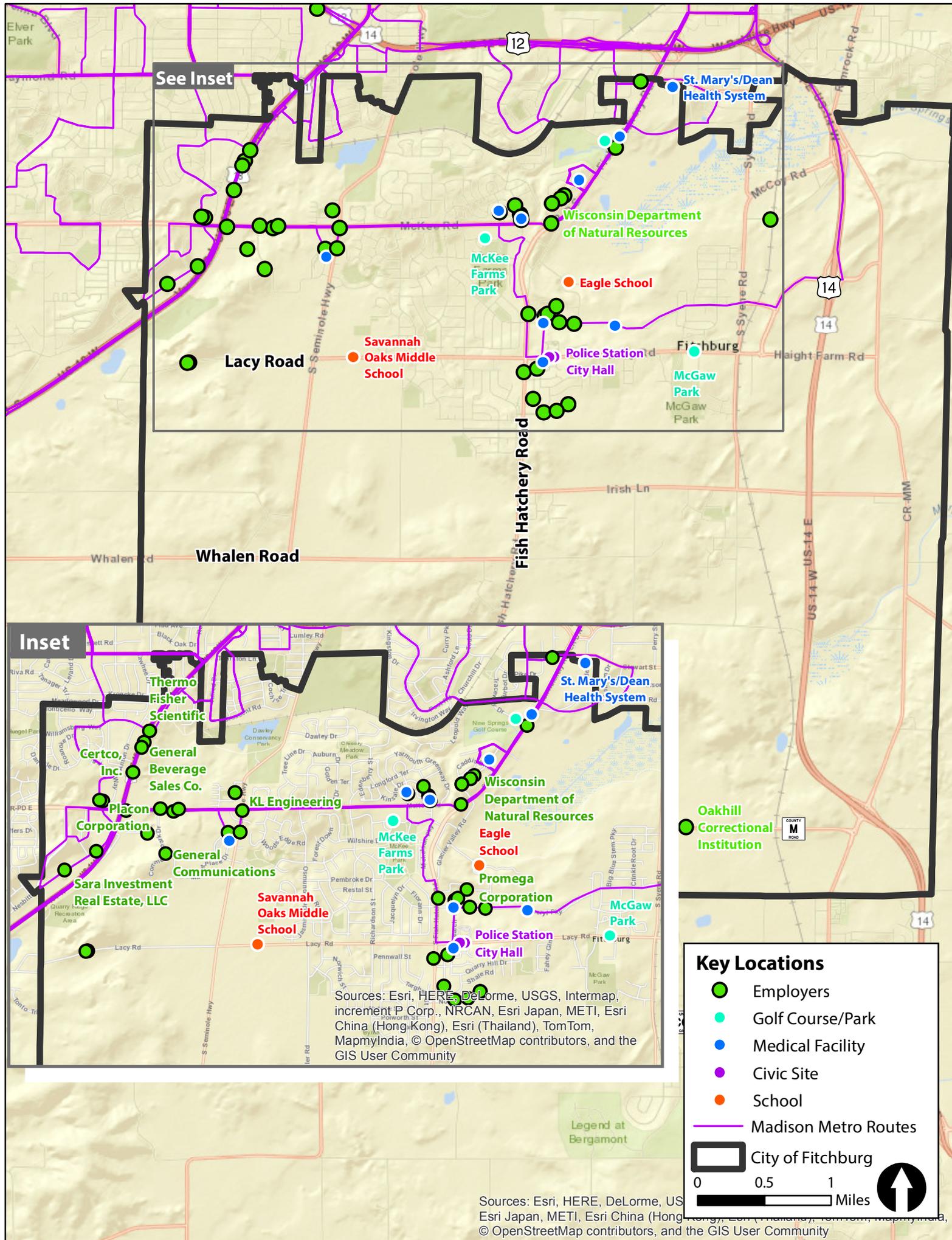
COUNTY M ROAD

COUNTY CC ROAD

- Transit Supportive Area (TSA) Within Service Area
- TSA Outside of Service Area
- Madison Metro Routes
- Area Within Walking Distance of Transit (1/4 Mile)
- City of Fitchburg

TSA defined as 4 Jobs or 4 Households per Acre



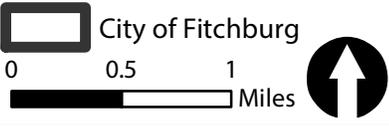


See Inset

Inset

Key Locations

- Employers
- Golf Course/Park
- Medical Facility
- Civic Site
- School
- Madison Metro Routes
- City of Fitchburg



Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong-Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong-Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Fitchburg Transit Feasibility Study

Overview and Comparison of Transit Concepts

DRAFT

City of Fitchburg



January 15, 2015

SRF No. 8679

Fitchburg Transit Mode Definitions

Three different approaches to meeting transit needs in Fitchburg are presented for evaluation. All are considered public transit, meaning that each is fully accessible to people with disabilities, open to the general public, and has a set schedule and fare structure; however, each has different implications in terms of ridership and cost. While each mode could realistically be deployed in Fitchburg, they will be presented in the context of several screening criteria that will allow local officials to identify a preferred strategy and set of near-term outcomes.

Fixed Route Transit

In the Madison Region, fixed route public transit services are operated by the City of Madison (d/b/a Madison Metro Transit), and the City of Monona. Fixed route service is provided on a repetitive, scheduled basis along a specific route with vehicles stopping to pick up and deliver passengers to specific locations; each fixed route trip serves the same origins and destinations. Fitchburg does not operate a municipal transit system on its own, so it would make the most sense to coordinate with an existing regional provider or contract with a private transportation company for transit services. Preliminary cost and ridership estimates are based on the assumption of hourly service operating from 6:00a.m. to 10:00p.m. For the transit feasibility study, two governance and operating models are presented:

Option #1: Intergovernmental Agreement

In this option, the new Fitchburg route will be operated by Madison Metro Transit (Metro) under an intergovernmental agreement with the City of Madison. The service product would be a traditional Metro bus with accompanying ADA complementary paratransit.

Option #2: Contracted Service

In this option, the new Fitchburg route will be operated by a private contractor. The City of Fitchburg will be the contract manager, and the fiscal agent for state and federal funds. ADA complementary paratransit would be provided in a coordinated manner among Metro providers and the selected contractor based on geographic area.

Flexible Bus

A flexible bus – commonly referred to as “flex-route” or “deviated fixed-route” – is a transit mode that operates as a hybrid of a fixed-route bus and a demand response service. There are several scheduled time points strategically placed along a travel corridor, and the vehicle will operate curb-to-curb service within a set geographic area. If the geographic area exists as a $\frac{3}{4}$ mile or greater buffer, it is deemed to be equivalent to ADA complementary paratransit. Rides are dispatched as they are for paratransit service, and still have conventional bus stops

and shelters corresponding to the time points. For preliminary ridership and cost estimates this service is assumed to operate from 6:00a.m to 10:00p.m. and connect Metro’s South and West Transfer Points. Approximately three vehicles would be required to operate hourly headways.

Option #1: Intergovernmental Agreement

In this option, the flexible route would be operated under the scope of one of Metro or Dane County’s existing paratransit service contracts, and the City of Fitchburg would enter an agreement with one of these agencies for purchased transportation.

Option #2: Contracted Service

In this option, the new Fitchburg flexible bus will be operated by a private contractor. The City of Fitchburg will be the contract manager, and the fiscal agent for state and federal funds.

Shared-Ride-Taxi

Shared-ride-taxi or “demand response” service is defined by FTA as any non-fixed route system of transporting individuals that requires advanced scheduling by the customer, including services provided by public entities, nonprofits, and private providers. Service is provided curb-to-curb and there are no formalized schedules. In Wisconsin, these services are provided by taxi companies or rural transportation providers. The vehicles do not operate over a fixed route or on a fixed schedule except, perhaps, on a temporary basis to satisfy a special need. The vehicle may be dispatched to pick up several passengers at different pick-up points before taking them to their respective destinations and may even be interrupted en route to these destinations to pick up other passengers.

Under this option, the City of Fitchburg would contract with a private or nonprofit agency to provide the service. The City of Fitchburg will be the contract manager, and the fiscal agent for state and federal funds.

Private Transportation Technological Platforms

New technological platforms for transportation have become common in many cities, the most notable of which are Uber and Lyft. These are platforms in which private vehicle owners and livery companies provide point-to-point transportation. Passengers request a ride via a smartphone app, which is also used to track vehicles and pay fares. Taxi companies have developed similar platforms where passengers can hail rides using mobile devices, such as Curb (formerly Taxi Magic) and iHAIL. Gradually these services are becoming an integral part of the private transportation network, and for some trip purposes supplement taxi and public transit. For basic services, fares are comparable to metered taxi fares (considerably higher than public transit), and greater for livery vehicle or shared van services. Additionally, there are no regulations for accessibility and the use of these services requires a credit card.

Fares also vary based on a proprietary algorithm that balances supply and demand known as surge pricing.

For the above reasons vehicles that use Uber and Lyft are not considered public transit modes. However, many of its elements can be deployed in a public transit setting. Demand responses modes (flexible bus, shared-ride-taxi, etc.) can be dispatched using smartphones or online using existing software packages. Also, vehicles can be tracked in real-time using automatic vehicle locators. In addition to purchasing software packages, transit agencies have partnered with colleges and universities to develop transit apps as a part of student projects at a considerably reduced cost. It would be recommended to further explore incorporating these customer interfaces into a public transit project.

Service Design Assumptions

Fixed Route Transit Service

Fixed route service can operate with a focus on regional connections or a focus on service within Fitchburg. Regional service will operate as specified in the Transit Development Plan and connect the Metro South and West Transfer Points. Intracity service will concentrate on serving those portions of Fitchburg's urban service area that lack access to public transit, with timed transfers to Madison Metro Transit's all-day fixed routes in Fitchburg (e.g., Route 52 and Route 40). For comparison, service levels will be at an hourly frequency from 6:00a.m. to 10:00p.m. on weekdays.

Fixed route performance characteristics:

- Metro Transit operating cost:
\$95 per revenue hour - \$113 per revenue hour, annualized to roughly \$730,000 to \$830,000.
- Contracted cost per hour: \$80/revenue hour
- Local share of operating expenses is approximately 30 percent
- Minimum fleet requirement of two buses
- Includes ADA complementary paratransit
- Metro Transit service requires 40 ft. heavy duty transit vehicles, contracted service requires large cutaway chassis vehicles
- 10-15 passengers per hour

Flexible Bus Service

Flexible bus service can operate with a focus on regional connections or a focus on service within Fitchburg. Regional service will cover a geographic area similar to that of a regional

fixed route, connecting to Madison Metro Transit Transfer Points. Scheduled time points will be located near the following locations:

- McKee Road and Fitchrona Road (Super Target Area)
- McKee Road at Seminole Highway
- McKee Farms Park Area
- Fitchburg Community Library
- Hatchery Hill Area
- Northern Portion of Fish Hatchery Road

Intracity service will serve similar areas within Fitchburg, but not continue with routing into Madison. All service will include timed transfers to Madison Metro Transit's all-day fixed routes in Fitchburg (ex., Route 52 and Route 40). For comparison, service levels will be at an hourly frequency from 6:00a.m. to 10:00p.m. on weekdays.

Flexible bus performance characteristics:

- Operating cost falls within the range of \$45 to \$95 per revenue hour depending on the contractor. Smaller human service transit providers are on the low end of this scale, whereas Madison Metro's in house paratransit service is on the highest end. Annualized costs are roughly \$550,000 to \$1,140,000.
- Local share of operating expenses is approximately 30 percent
- Offers service that is equivalent to ADA minimums.
- Vehicles are medium duty cutaway chassis buses
- Minimum fleet requirement of three vehicles (due to longer travel times and more indirect routing compared to fixed route service)
- 5-7 passengers per hour

Shared Ride Taxi Service

Shared Ride Taxi service will be limited to the urban service area of Fitchburg, however it is the only transit mode with potential to serve rural portions of the community. Service is assumed to run from 6:00a.m. to 10:00 p.m. and can link with fixed route transit on demand.

- Operating cost is approximately \$35 per revenue hour, annualized to roughly \$420,000

- Local share of operating expenses is approximately 30 percent
- Offers service that is equivalent to ADA minimums.
- Vehicles are medium duty cutaway mini-buses (8 passenger), supplemented by minivans or sedans.
- Minimum fleet requirement of three vehicles (due to geographic coverage)
- 3-5 passengers per hour

Regional Plan Citations

All of the above mentioned transit modes are consistent with strategies and recommendations in the 2013-2017 Transit Development Plan (TDP) for the Madison Urban Area and the 2013 Coordinated Public Transit -Human Services Transportation Plan for Dane County.

TDP Recommendations

Under the category of Transit Planning and Service Development, the TDP recommends to extend service to transit supportive areas that are currently unserved by transit, particularly low income neighborhoods, and also introduce new commuter express service. Additionally, the TDP recommends exploring the feasibility of point-deviation (flexible bus) and other alternative service delivery methods in low density areas or at low use times in a cost effective manner to extend service to new communities. Adding a new peripheral route to that serves Fitchburg and connects the West Transfer Point and South Transfer Point is listed in the TDP as a medium-term transit improvement.

Coordinated Plan Recommendations

The following items are identified as needs in the 2013 Coordinated Public Transit -Human Services Transportation Plan for Dane County, and support the development of the transit modes being considered in this study:

- Expanded/new regional fixed-route bus service to reach new markets
- Regional schedule coordination and coordination of fare collection systems
- Additional accessible and shared-ride-taxi service to offer public transit in smaller communities.

City of Fitchburg – Transit Feasibility Study: Draft Transit Concepts 1/13/15

Transit Mode		Screening Criteria				
		Consistency with Regional Policy	Operating and Capital Cost	Frequency and Estimated Ridership	Administration	Markets Served
<p>Fixed Route Bus</p> <ul style="list-style-type: none"> - Most formal route and fare structure - Signed stops and shelters placed at ¼ mile distance - Minimum of hourly frequency - ADA complimentary paratransit service - Can connect two Madison Metro Transfer Points (regional), or run a shorter route (intracity) connecting to Madison Metro Routes or a single transfer point. 	<p>Option#1: Intergovernmental agreement with City of Madison for Madison Metro Transit service.</p> <p>Option #2: Fixed route bus service that is privately contracted under direct oversight of the City of Fitchburg</p>	<ul style="list-style-type: none"> • Is the transit service project specifically identified the 2013-2017 Transit Development Plan for the Madison Urban Area? Is the service consistent with recommendations for Madison’s “peripheral” areas? • Is the transit service project consistent with strategies in local comprehensive plans, long-range transportation plans, Dane County coordinated transportation plan, etc.? • How will state, federal, and local funding be invested in the service project? 	<ul style="list-style-type: none"> • Local administrative costs • Total operating cost • Total capital cost • Local share of operating cost (exclusive of fare revenue) • Local share of capital cost 	<ul style="list-style-type: none"> • Frequency • Estimated annual ridership in third year of operation (first year ridership assumed to be about 50-60% of this) • Service productivity and cost effectiveness 	<ul style="list-style-type: none"> • Contract structure (vehicle ownership, operating contract, type of agreement) • Grant applications • Applicable state/federal reporting and requirements • Marketing • City of Fitchburg oversight (customer service, contract administration, reporting, financial management) 	<ul style="list-style-type: none"> • How do ridership estimates correspond to target markets, and estimated demand? • Geographic coverage of service
<p>Flexible Bus Service</p> <ul style="list-style-type: none"> - Hybrid of demand response and fixed-route service - Curb-to-curb service in a designated zone - Scheduled time points at key Fitchburg destinations and Metro transfer points. - Can connect two Madison Metro Transfer Points (regional), or run a shorter route (intracity) connecting to Madison Metro Routes or a single transfer point. 	<p>Option #1: Intergovernmental agreement with the City of Madison for Madison Metro Paratransit Service</p> <p>Option #2: Service is privately contracted under direct oversight of the City of Fitchburg</p>					
<p>Shared-Ride-Taxi Service</p> <ul style="list-style-type: none"> - Dial-a-ride zone in Fitchburg that includes residential areas and key community destinations - Differs from specialized services in that it is open to general public - Serves a zone of Fitchburg with transit supportive densities outside of Madison Metro service area. 	<p>Service is privately contracted under direct oversight of the City of Fitchburg</p>					

Concept Evaluation

● = Comparatively high rating ◉ = Moderate rating □ = Comparatively low rating

Consistency with Regional Policy

Measures:

- Specific Inclusion in Transit Development Plan
- Consistent with Policies in the Dane County Coordinated Transit Plan, and Fitchburg Transit Plan.
- Ability to leverage local, state, and federal funding

MODE, OPERATOR, ORIENTATION	RATING	NOTES
Fixed Route, Metro, Regional	●	Service is mentioned in all plans. WisDOT funding Tier A2 or Tier B.
Fixed Route, Metro, Intracity	◉	Service is not a project listed in Madison TDP. WisDOT funding Tier A2 or Tier B.
Fixed Route, Private Contractor, Regional	●	Service is mentioned in all plans. WisDOT funding Tier B.
Fixed Route, Private Contractor, Intracity	◉	Service is not a project listed in Madison TDP. WisDOT funding Tier B.
Flexible Bus, Metro or County, Regional	●	Service is not mentioned in TDP, but is consistent with specific strategies listed in local and county plans. WisDOT funding Tier A2 or Tier B.
Flexible Bus, Metro or County, Intracity	●	Service is not mentioned in TDP, but is consistent with specific strategies listed in local and county plans. WisDOT funding Tier A2 or Tier B.
Flexible Bus, Private Contractor, Regional	●	Service is not mentioned in TDP, but is consistent with specific strategies listed in local and county plans. WisDOT funding Tier B.
Flexible Bus, Private Contractor, Intracity	●	Service is not mentioned in TDP, but is consistent with specific strategies listed in local and county plans. WisDOT funding Tier B.
Shared-Ride-Taxi, Private Contractor, Intracity	●	Service is not mentioned in TDP, but is consistent with specific strategies listed in local and county plans. WisDOT funding Tier B.

Operating and Capital Cost

Measures:

- Total Operating and Capital Cost
- Local Share of Capital Cost

MODE, OPERATOR, ORIENTATION	RATING	NOTES
Fixed Route, Metro, Regional	<input type="checkbox"/>	Highest overall operating cost and capital cost, highest revenue potential
Fixed Route, Metro, Intracity	<input type="checkbox"/>	Similar per hour cost to regional route, but with less revenue potential.
Fixed Route, Private Contractor, Regional	<input checked="" type="checkbox"/>	Cost savings though contracted operations and lower capital costs.
Fixed Route, Private Contractor, Intracity	<input checked="" type="checkbox"/>	Cost savings though contracted operations and lower capital costs.
Flexible Bus, Metro or County, Regional	<input type="checkbox"/>	Potentially high per hour rate depending on operator.
Flexible Bus, Metro or County, Intracity	<input type="checkbox"/>	Potentially high per hour rate depending on operator.
Flexible Bus, Private Contractor, Regional	<input checked="" type="checkbox"/>	Greater mileage increases fleet requirement and overall cost.
Flexible Bus, Private Contractor, Intracity	<input checked="" type="checkbox"/>	Overall capital and operating costs will be similar to
Shared-Ride-Taxi, Private Contractor, Intracity	<input checked="" type="checkbox"/>	Lowest overall costs.

Frequency and Estimated Ridership

Measures:

- Frequency
- Estimated annual ridership in third year of operation
- Service productivity and cost effectiveness

MODE, OPERATOR, ORIENTATION	RATING	NOTES
Fixed Route, Metro, Regional	●	Hourly frequency corresponding to timed transfers and route mileage. Greatest potential for overall ridership.
Fixed Route, Metro, Intracity	◉	Hourly frequency corresponding to connections with Madison Metro Transit routes. Similar productivity to Option #1, but lower ridership due to reduced connectivity.
Fixed Route, Private Contractor, Regional	●	Hourly frequency corresponding to timed transfers and route mileage. Greatest potential for overall ridership (somewhat more capacity constrained due to smaller fleet).
Fixed Route, Private Contractor, Intracity	◉	Hourly frequency with possible greater frequency during peak period. Similar productivity to Option #1, but lower ridership due to reduced connectivity.
Flexible Bus, Metro or County, Regional	□	Hourly frequency corresponding to timed transfers and route mileage. Potentially high contractor rates reduce cost effectiveness
Flexible Bus, Metro or County, Intracity	□	Hourly frequency with possible greater frequency during peak period. Potentially high contractor rates reduce cost effectiveness.
Flexible Bus, Private Contractor, Regional	●	Hourly frequency corresponding to timed transfers and route mileage.
Flexible Bus, Private Contractor, Intracity	●	Hourly frequency with possible greater frequency during peak period.
Shared-Ride-Taxi, Private Contractor, Intracity	□	Greatest cost per rider, lowest overall ridership.

Administration

Measures:

- Contract Structure
- Responsibility for grant management and reporting
- Oversight requirements
- Marketing and customer service requirements

MODE, OPERATOR, ORIENTATION	RATING	NOTES
Fixed Route, Metro, Regional	●	Intergovernmental agreement with the City of Madison to provide fixed route service, delegated authority to Madison Metro Transit for oversight.
Fixed Route, Metro, Intracity	●	Intergovernmental agreement with the City of Madison to provide fixed route service, delegated authority to Madison Metro Transit for oversight.
Fixed Route, Private Contractor, Regional	□	City of Fitchburg manages contract with a private provider and oversees service project, including grant management and reporting. Contractor assumes some customer service and marketing responsibilities.
Fixed Route, Private Contractor, Intracity	□	City of Fitchburg manages contract with a private provider and oversees service project, including grant management and reporting. Contractor assumes some customer service and marketing responsibilities.
Flexible Bus, Metro or County, Regional	⊙	Administration is a shared effort between municipal partner and contractor.
Flexible Bus, Metro or County, Intracity	⊙	Administration is a shared effort between municipal partner and contractor.
Flexible Bus, Private Contractor, Regional	□	City of Fitchburg has most active role in service design and administration.
Flexible Bus, Private Contractor, Intracity	□	City of Fitchburg has most active role in service design and administration.
Shared-Ride-Taxi, Private Contractor, Intracity	⊙	City of Fitchburg has an active role in administration, however the contract design is the most simple to arrange, and peer technical assistance is available.

Markets Served

Measures:

- Potential to meet demand
- How ridership corresponds to market segments
- Geographic coverage
- This measure largely depends on the target market for the service, and the project purpose.

MODE, OPERATOR, ORIENTATION	RATING	NOTES
Fixed Route, Metro, Regional	●	Fixed route transit that serves Madison Metro transfer points covers the broadest geographic area and has the greatest potential for connecting ridership.
Fixed Route, Metro, Intracity	□	Need for multiple transfers, cost, and lack of geographic coverage reduce the desirability of this option.
Fixed Route, Private Contractor, Regional	●	Fixed route transit that serves Madison Metro transfer points covers the broadest geographic area and has the greatest potential for connecting ridership.
Fixed Route, Private Contractor, Intracity	□	Need for multiple transfers, cost, and lack of geographic coverage reduce the desirability of this option.
Flexible Bus, Metro or County, Regional	●	Serves intracity market efficiently, while maximizing connections to Madison Metro routes.
Flexible Bus, Metro or County, Intracity	●	Serves intracity market efficiently, while maximizing connections to Madison Metro routes.
Flexible Bus, Private Contractor, Regional	●	Serves intracity market efficiently, while maximizing connections to Madison Metro routes.
Flexible Bus, Private Contractor, Intracity	●	Good option for serving intracity market that is not covered by Madison Metro fixed route.
Shared-Ride-Taxi, Private Contractor, Intracity	○	Serves a specific market of people who rely on transit.

Summary

MODE, OPERATOR, ORIENTATION	Regional Policy	Cost	Frequency and Ridership	Administration	Markets Served
Fixed Route, Metro, Regional	●	□	●	●	●
Fixed Route, Metro, Intracity	◉	□	◉	●	□
Fixed Route, Private Contractor, Regional	●	◉	●	□	●
Fixed Route, Private Contractor, Intracity	◉	◉	◉	□	□
Flexible Bus, Metro or County, Regional	●	□	□	◉	●
Flexible Bus, Metro or County, Intracity	●	□	□	◉	●
Flexible Bus, Private Contractor, Regional	●	◉	●	□	●
Flexible Bus, Private Contractor, Intracity	●	●	●	□	●
Shared-Ride-Taxi, Private Contractor, Intracity	●	●	□	●	◉

In this preliminary comparison, there are two transportation modes that seem most appropriate when considering the potential ridership and target market for service. For connections to a regional market and the highest ridership potential the fixed route modes that make connections to the West and/or South Transfer Points are the best performing options. However, if the project goal is to fill in geographic gaps within Fitchburg, where those who rely on transit have many mobility challenges the contracted flexible bus options have the greatest balance of cost effectiveness, ridership potential, and administrative requirements. Additionally, a flexible service like this can develop a future market for more robust fixed-route service.