### General Recommendations 2013-2017 Transit Development Plan 12/12/2012

### **Transit Planning and Service Development**

- 1. Adopt the Transit Service Planning Guidelines and Performance Standards in Appendix \_\_\_\_\_ and utilize as a guide for annual service adjustments.
- <u>Continue Metro Transit staff involvement in City of Madison land use planning and development</u> review processes to promote transit-supportive development in areas where transit service is envisioned in the future. Encourage other communities to also involve Metro staff in their plan and review processes.
- 3. <u>MPO staff should work with Capital Area Regional Planning Commission (CARPC) staff to integrate</u> <u>transit service planning considerations into CARPC's Future Urban Development Analysis plans being</u> <u>developed in cooperation with local communities.</u>
- 4. Improve the utility of existing transit service by improving the directness and frequency of routes where appropriate.
- 5. Extend service to peripheral areas that are currently unserved by transit, including new commuter express service to outlying communities.
- 6. Improve transit service performance monitoring by maintaining area-specific ridership information and adding on-time performance as part of the monitoring program. In addition to the monthly route productivity reports, consider publishing more detailed performance reports. These reports would separate time of day (peak, mid day, weekend), segment diametrical routes, and combine paired one-way routes. Update the stop-level ridership information as needed. Track and report on-time performance for fixed-route transit service system-wide and by route, as practical and appropriate.
- 7. Optimize transit schedules to reduce overcrowding and bus clumping while enhancing connections at the transfer points and in other places.
- 8. Develop and improve transfers outside the transfer point system where routes intersect or have common routing.

Coordinate schedules and provide facilities at bus stops as appropriate.

9. Explore the feasibility of point-deviation and other alternative service delivery methods.

### **Transit Facilities Development**

- 10. Add boarding platforms, shelters, benches, and other passenger facilities as appropriate given the usage characteristics at the bus stops.
- 11. Coordinate with the City of Madison Engineering Department, City of Madison Traffic Engineering Division, and other local jurisdictions to implement pedestrian facility improvements and transit supportive roadway changes. These include bus lanes, in-lane bus stops, relocation of near side bus stops to far side, and traffic signal and other operational changes to reduce unnecessary delay for buses.
- 12. Develop a comprehensive bus stop inventory to identify and track facilities such as boarding platforms, benches, shelters, schedule information, and signage, along with information on

pedestrian access and significant nearby land uses. Use the inventory, boarding information, and socioeconomic data to help prioritize facility improvements.

This information would be used to assess the facility needs throughout the system. Existing databases track the location and presence of a shelter. This should be expanded to include the shelter type, presence of a bench, platform surface, sidewalk needs, ridership information, signage information, presence of schedule information, and other variables.

13. Work with the City of Madison, University of Wisconsin-Madison, and others to locate a new intercity bus terminal.

The new bus terminal should be in a location that is easily serviceable by transit without adding new routes or introducing splits and deviations.

- 14. Work towards making all bus stops ADA compliant. Install concrete boarding platforms and work with other City of Madison departments and local jurisdictions to complete the sidewalk network along transit routes, including crosswalk improvements.
- 15. Double-sign, relocate, or close near side bus stops to improve the operating environment and reduce confusion.

Double-signing, or installing stand-along "No Parking" signs in conjunction with the bus stop sign, allows the bus stop sign to be relocated to the boarding platform and may reduce illegal parking. Relocating or closing near side bus stops has several benefits, including reduced conflict with right turning traffic and crossing pedestrians.

- 16. Add static schedule information to unsheltered bus stops with moderate to heavy use.
- 17. Adopt a bus stop consolidation program to remove or relocate excessive bus stops in central Madison, particularly on the Jenifer Street, Johnson / Gorham Streets, and Monroe Street corridors. This project is needed to bring these corridors into compliance with the Transit Planning Guidelines. The stop consolidation program should include substantial public outreach and sufficient data collection and analysis to identify bus stops for removal or relocation.

### **Medium to Long Range Transit Planning**

18. Increase the capacity of the bus garage and/or construct a new facility.

Increasing bus garage capacity is necessary for the expansion of the transit system envisioned by this Transit Development Plan. A planning effort is underway that may recommend expanding the existing facility at 1101 E. Washington Avenue and/or building one or more new facilities. Locations of new facilities should be chosen in south and/or west Madison to reduce deadheading. Pursue short term solutions to facilitate day-to-day operations and expand the fleet to accommodate new service. Develop site analysis criteria to prioritize expansion concepts.

19. Develop concepts for bus rapid transit (BRT) and plan for implementation in the next five to ten years pending the outcome of the Transit Corridor Study (BRT Study).

The Transit Corridor Study, expected to be completed in early 2013, will likely recommend four corridors for bus rapid transit development: University Avenue to West Towne, Park Street to Fitchburg, East Washington Avenue to East Towne, and Sherman Avenue to north Madison.

Potential future extensions (e.g., to the new UW Research Park, Middleton, and east Madison) will also be identified.

20. Expand the capacity of the park-and-ride lot at the North Transfer Point and construct additional formal park-and-ride lots near transfer points and at other locations where opportunities arise. *Planning for new owned or leased park and ride lots and provide new commuter service to existing under-utilized park and ride lots such as Lot 13-02 in east Verona and 13-04 in the American Center. New park and ride lots should be located in areas that can easily be served by existing routes.* 

### **Metro Paratransit Service**

- 21. Continue to coordinate with other specialized transportation services to provide the best service for passengers while eliminating duplicative service.
- 22. Continue training programs and incentives and investigate other innovative ways to encourage migration of passengers from paratransit to fixed-route service.
- 23. <u>Continue to work with Dane County Dept. of Human Services staff and service agencies to spread</u> <u>out client trips, where possible, to address peak period capacity issues and improve service</u> <u>efficiency.</u>
- 24. Diversify the fleet with 30-foot and 60-foot articulated buses pending the outcome of the Bus Size Study.

The Bus Size Study is expected to be completed in 2013. It may recommend diversifying the fixed-route bus fleet with smaller and larger buses to match the demand. This change may reduce Metro's costs by reducing fuel consumption and reducing the number of extra bus trips. Larger buses may reduce the number of standees and pass-ups on busy routes, and smaller buses may improve Metro's image by having fewer empty seats on some peripheral routes.

### **Metro Fleet**

- 25. Reduce emissions by purchasing alternative fueled vehicles and reducing unnecessary idling. Hybrid-diesel buses have been shown to reduce fuel and maintenance costs. Other fuel options, such as compressed natural gas, should be explored.
- 26. Replace the current fare boxes with modern units.

The existing fare boxes have reached or exceeded their life expectancy. New fare boxes may reduce Metro's maintenance costs and increase its fare revenue due to fewer instances of fare boxes being out of order. Replacement fare boxes should include the ability to deploy contactless smart cards that have greater flexibility in storing monetary credit, purchased rides, passes, and transfers. New technology also may allow riders to pay fares with smart phones.

### **Passenger Information and Marketing**

- 27. Improve the System Map and Ride Guide to optimize their legibility and accuracy.
  - Consider innovative mapping strategies like assigning colors, line types, or line weights based on the route classification and identifying a "Frequent Transit Network" consisting of transit corridors with consistent 15-minute or better service throughout the weekday.
- 28. Maintain, support, improve, and expand online transit tracking and trip planning data and services such as Metro Transit Tracker, Google Maps, BusRadar, and Mobile UW.

#### Funding, Fares, and Transportation Demand Management

29. Collaborate and negotiate with transit partners to ensure that the transit system is funded equitably.

Work collaboratively with communities within and around the service area to coordinate Metro Transit's service with other transit systems and/or work to recruit them as a transit partner.

- 30. Maintain a fare structure that is equitable, affordable, and capable of maintaining adequate service levels.
- 31. Continue efforts to maximize public and private funding sources.

Examples include advertising, incorporation of transit facilities as part of new developments or impact fee/special assessment programs for roadway improvements, and private sponsorship of bus shelters or new service to employers.

- 32. Continue efforts to reach regional agreement on a new finance and governance structure, such as a representative regional transit authority, for regional transit service.
- 33. Continue to support and expand the unlimited ride pass programs and Commute Card program and coordinate with other alternative transportation promotion efforts by Metro, the Madison Area Transportation Planning Board (MPO), and other agencies and organizations.

## 2013-2017 Transit Development Plan Potential Future Service Change Concepts (DRAFT)

	Priority 1 - Short Term (1-3 years)				
Routes	Action	Cost *	Goals	Ann Cost **	Ann Hrs
2	Eliminate Sherman via, all trips operate via Fordem.		4	\$0	0
3	Eliminate Division via, all trips operate via Winnebago.		4	\$0	0
5, 20	Eliminate Route 6 Hayes via, all trips operate via MATC.		2, 3, 4, 5,	\$0	0
	Reroute Route 20 via Portage and Hayes.		7, 8, 10		
12	Eliminate routing on Lake Point and Waunona.		2, 8, 10	\$0	0
14, 15	Bypass Sheboygan Avenue via Regent Street (Route 14) and Old Middleton Road (Route 15)		2, 3, 5, 8, 10	\$0	0
27, 29	Eliminate Route 29, extend Route 27 to Dane County		2, 4, 7, 8,	\$0	0
27,25	Regional Airport and North Towne Center P&R.		2, 4, 7, 8, 10	γu	0
14, 15, 25, 27	Establish an express stop pattern on East Washington Avenue from the Capitol Square to Milwaukee Street.		2, 3, 8, 10	\$0	0
11, 15, 56, 57, 71, 72, 74	Establish an express stop pattern on University Avenue from the UW to Segoe.		2, 3, 8, 10	\$0	0
3, 7	Convert Route 7 to Route 3 on weekends.	\$ WD	3, 4, 6	\$213,127	2,160
6	Reduce weekend headways from 60 to 30 minutes.	\$\$ WD	1, 2, 4	\$426,254	4,320
8, 78	Combine Routes 8 and 78 into one route from the Capitol Square to Middleton via Bluff. Extend Middleton service to include Sundays.	\$ Sundays	2, 4, 6, 8, 9	\$106,563	1,080
9, 33	Reduce the number of buses in service from three to two, end service near First Street, eliminate Route 33.	-\$ PK, MD	8	-\$272,329	-2,760
10	Reduce the number of buses in service from three to two, eliminate Johnson/Gorham via.	-\$ MD	8	-\$136,164	-1,380
11	Reroute Route 11 from the WTP to Colony, similar to the peak Route 14 routing west of Rosa. Reroute the peak Route 14 to be identical to the mid-day Route 14.	0.5 \$ PK	2, 4, 10	\$68,082	690
11, 12, 39	Extend Routes 11 and 12 (peak) and Route 39 (off-peak) to Owl Creek.	\$ PK 0.5 \$ MD, EV	6, 9	\$272,329	2,760
16	Reduce weekday headways from 60 to 30 minutes throughout the weekday.	1.5 \$ MD, EV	1, 2, 4, 9	\$408,493	4,140
l, 19, 52	Eliminate Routes 1 and 52, extend Route 19 to McKee via King James.	-0.5 \$ PK, MD, EV	2, 8	-\$204,246	-2,070
28	Reduce headways from 10-15 minutes to 7.5 minutes during the school year from the NTP to UW.	\$\$\$ PK	2, 3, 5, 8, 10	\$408,493	4,140
50	Reduce weekday headways from 60 to 30 minutes throughout the weekday.	0.5 \$ MD, EV	1, 2, 4, 8, 9	\$136,164	1,380

New	Introduce a new circulator route from Sheboygan	\$\$ MD	2, 3, 5, 9	\$272,329	2,760
	Avenue to University/Johnson via University Ave with				
	30-minute headways weekday mid-day only.				
Total				\$1,699,094	17,220

Priority 2 - Medium Term (3-5 years)					
Routes	Action	Cost *	Goals	Ann Cost **	Ann Hrs
5	Eliminate deviation to Fisher Street, operate on Park		2, 3, 8, 10	\$0	0
	from Wingra to STP.				
5, 13	Reroute Route 5 from West Washington to Park and		4, 8, 9, 10	\$0	0
	State, reroute Route 13 to West Washington.				
2,6	Combine Route 2-West with Route 6-East and reduce	\$\$ PK	2, 4, 5, 7,	\$816,986	8,280
	weekday headways from 30 to 15 minutes. Combine	\$\$\$\$ MD	10		
	Route 2-North with Route 6-West.				
4, 5	Reduce evening and weekend headways from 60 to 30	\$\$\$\$ EV, WD	1, 2, 4, 9	\$1,397,164	14,160
	minutes.				
21	Increase peak headways from 15 to 30 minutes and	-\$ PK	1, 8	-\$204,246	-2,070
	weekday headways from 30 to 60 minutes.	-0.5 \$ MD			
10, 38	Eliminate Oakridge via. Reroute from Jenifer and	\$\$ PK	2, 3, 5, 10	\$272,329	2,760
	Broom/Basset to First and East Washington. Extend				
	Route 10 span to include peaks.				
55	Reroute from Beltline and Verona Road to Whitney	\$ PK	1, 5, 7, 8,	\$136,164	1,380
	Way, Fitchrona, and Nesbitt. Reduce Headways from 60		9, 10		
	to 30 minutes.				
51, 56, 57	Eliminate Route 51 and operate Routes 56 and 57 south	\$ MD, EV, WD	4, 6, 9	\$485,455	4,920
	of the WTP as a two-way loop.				
3, 58	Eliminate Route 58 and reduce Route 3 peak headways	-0.5 \$ PK	4, 8	-\$68,082	-690
	from 30 to 15 minutes.				
75	Reduce headways from 90 to 30 minutes.	\$\$\$ PK	1, 2, 7, 10	\$408,493	4,140
80-Lot 76	Extend from Lot 76 to University and Farley.	\$ MD, EV	4, 7, 8	\$272,329	2,760
53	Restore Route 53, a commuter loop route from the UW	\$ PK	2, 4, 7	\$136,164	1,380
	to Mineral Point Road and Odana.				
Total				\$3,652,756	37,020

	Priority 3 - Long Term (New Service as Development and	Funding Allows)			
Routes	Action	Cost *	Goals	Ann Cost **	Ann Hrs
Monona	Provide open-door service on Broadway and Monona		1, 4, 6, 7,	\$0	0
	Drive. Introduce a via that covers Monona Drive from		8		
	Nichols/Pflaum to Buckeye				
Middleton	Eliminate Routes 70 and 78 and operate Routes 71 and	\$\$ MD, EV, WD	2, 4	\$970,911	9,840
	72 off peak.				
Grandview	Restructure Routes 14 and 15 east of the ETP to provide	\$ PK	6, 10	\$136,164	1,380
Commons	service east of I-39/90.				
Nine	Extend Routes 44 and 48 to E Cheryl and Syene.	\$ PK	6, 7, 10	\$136,164	1,380
Springs					
Fitchburg	Introduce a new peripheral route from the WTP to STP	\$\$ PK, MD, EV	6, 7, 9	\$1,030,113	10,440
	via Red Arrow/Allied, King James, McKee, E Cheryl, and	\$ WD			
	Fish Hatchery.				
URP Ph II	Introduce a new peripheral route from the WTP to	\$ - \$\$	2, 6, 7, 10	\$932,430	9,450
	Pleasant View via Odana and Watts.				

Sprecher	Extend Route 36 from High Crossing Blvd to the ETP as a	\$\$ PK	6, 7	\$757,784	7,680
East	two-way route via Crossroads, Lien, Reiner, Sprecher,	\$ MD, EV, WD			
	and Milwaukee Street.				
Sun Prairie	Extend Route 26 to serve West Sun Prairie interlined	\$ MD	2, 4, 6, 7,	\$834,747	8,460
	with a new route serving East Sun Prairie as a two-way	\$\$ EV <i>,</i> WD	9		
	loop replacing the existing shuttle service to/from East				
	Towne.				
Total				\$4,798,312	48,630

New Express Service					
Routes	Action	Cost *	Goals	Ann Cost **	Ann Hrs
Waunakee	Central Madison to Waunakee via University, Allen,	***	6, 10	\$136,164	1,380
West	Century, and CTH Q.				
Waunakee	Central Madison to Waunakee via Packers, and	***	6, 10	\$136,164	1,380
East	Northport.				
Stoughton	Central Madison to Stoughton via John Nolen, Beltline,	***	6, 10	\$136,164	1,380
	USH 51, including a deviation to serve downtown				
McFarland	Extend Routes 11 and 12 south to McFarland.	***	6, 10	\$136,164	1,380
Cottage	Central Madison to Cottage Grove via E Washington,	***	6, 10	\$136,164	1,380
Grove	Milwaukee Street, and Cottage Grove Road or via John				
Sun Prairie	Central Madison to Sun Prairie via East Washington,	***	6, 10	\$136,164	1,380
East	USH 151, O'Keeffe, and Main.				
Sun Prairie	Central Madison to Sun Prairie via E Washington and	***	6, 10	\$136,164	1,380
West	Grand.				
DeForest	Central Madison to DeForest via E Washington, USH 51,	***	6, 10	\$136,164	1,380
	and CTH V.				
Total				\$1,089,315	11,040

#### Grand Total

\$11,239,477 113,910

\* \$ = One bus in service for the time period specified.

PK = Weekday peak periods

MD = Weekday mid-days

EV = Weekday evenings

WD = Weekends

\*\* The annual costs for service improvements were estimated by approximating the number of buses and span of service for peak, mid-day, evening, and weekend time periods. An operating cost of \$98.03 is assumed based on 2010 vehicle operating and maintenance costs and scheduled service hours from the NTD.

\*\*\* The cost for new express service is dependent on the frequency and span of the service that would likely be tailored to the travel market. For this exercise, two buses in service for each route during the peak period is assumed.

### Potential Future Service Change Concepts

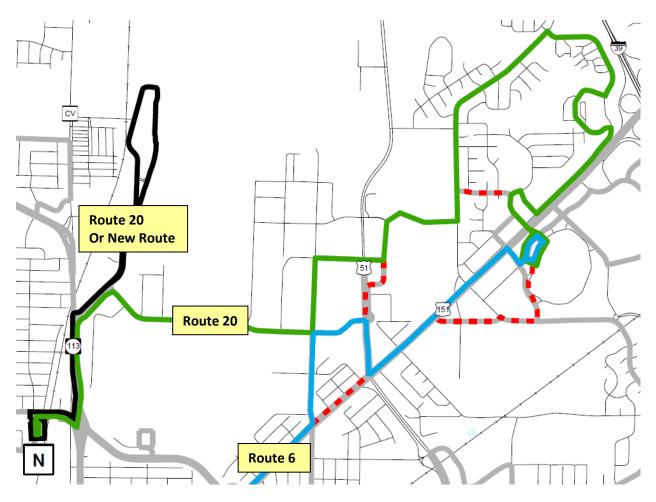
## Routes 2 and 3: Eliminate Sherman via (Route 2) and Division via (Route 3). All trips operate via Fordem and Winnebago, respectively. (4)

Currently, Route 2 splits between Baldwin Street and Sherman / Fordem Avenues and Route 3 splits between Baldwin Street and Division Street / Atwood Avenue. Alternating trips operate "Via Sherman" or "Via Fordem" and "Via Winnebago" or "Via Division." Removing these splits would make the system easier to use and less confusing. The vias have similar levels of ridership; Fordem Avenue and Winnebago Avenue were chosen because they are more direct and provide service to more transit supportive land uses. Because of the limited pedestrian connections between Sherman Avenue and Fordem Avenue, some local service should remain on Sherman Avenue, such as Route 28 or a modified Route 9. Some local service should likely remain on Division Street, such as Routes 10 and 38.



## Routes 6 and 20: Eliminate Route 6 Hayes via, all trips operate via MATC. Reroute Route 20 to Portage and Hayes Roads. (2, 3, 4, 5, 7, 8, 10)

Currently, Route 6 generally follows one of two circuitous pathways between the Capitol Square and East Towne Mall. Removing this split would make the system easier to use and less confusing. Streamlining the routing for Route 6 through the Madison College by rerouting it from Kinsman Boulevard to Anderson Street would reduce travel times as well as further simplify the line. The areas left unserved by this change would be served by a modified Route 20 that would use the new Bartillon Drive connection between USH-51 and Portage Road. This change would require a transfer for riders traveling between Portage / Hayes Roads and central Madison, but would provide additional connections at the North Transfer Point and improve the utilization of Route 20 by providing it a unique market east of the Dane County Airport. This change builds on past simplifications of Route 6 and may be considered an incremental approach to bus rapid transit in the East Washington Avenue corridor.

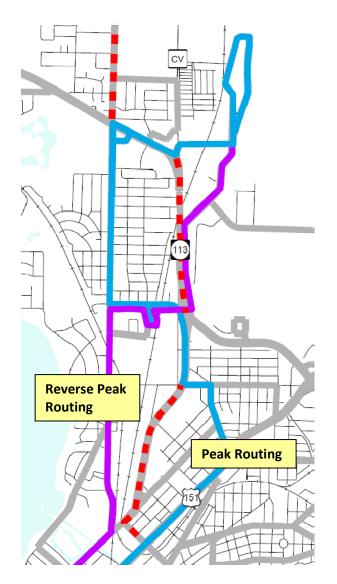


## Route 12: Eliminate routing on Lake Point Drive and Waunona Way. (2, 8, 10)

Currently, Route 12 deviates north of Broadway one to two blocks between the Capitol Square and Dutch Mill Park & Ride. This deviation provides extremely little peak-period-only coverage and adds about four minutes to trips. Removing this deviation would make the system easier to use and less confusing because buses would follow a more logical path and Routes 12 and 16 would serve the same bus stops. This change builds on past simplifications in this area, such as the removal of the deviation south of Broadway for Route 11 in August 2012. Upgrades to pedestrian infrastructure along Broadway in the early 2000's reduced the need for deviations in this area. This change is expected to affect about 27 daily boardings – the heaviest used stop, at 14 daily boardings, is the stop at Bridge Road and Lake Point Drive, one block north of Broadway.

# Routes 27 and 29: Eliminate Route 29, extend Route 27 to Dane County Regional Airport and North Towne Center P&R. (2, 4, 7, 8, 10)

Route 29, with only two round trips per day, has very low utility north of Delaware Boulevard and is duplicative of Route 21, which continues through the North Transfer Point to central Madison. Restructuring Routes 27 and 29 may improve the efficiency of the system while providing direct reverse commute service to Dane County Airport and making the system easier to use and less confusing. Providing a direct route from central Madison to North Sherman Avenue may be considered an incremental approach to bus rapid transit in north Madison.



East Washington Avenue service: Establish an express stop pattern on East Washington Avenue from the Capitol Square to Milwaukee Street. (2, 3, 8, 10)

Routes 14, 15, 25, 27, 29, 37, 56, and 57 provide peak period service on East Washington Avenue. Establishing a pattern of express stops to serve these routes while Route 6 continues to provide service to local stops may improve travel times during peak periods. This change may be considered an incremental approach to bus rapid transit in the East Washington Avenue corridor.

# University Avenue service: Establish an express stop pattern on University Avenue from the Capitol Square to Segoe Road. (2, 3, 8, 10)

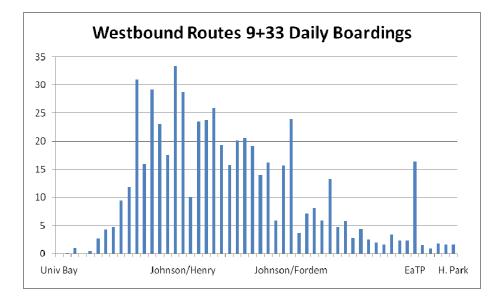
Routes 11, 12, 15, 28, 37, 38, 56, 57, 70, 71, 72, and 74 provide peak period and mid-day service on University Avenue west of Campus Drive. Establishing a pattern of express stops to serve these routes while Route 2 continues to provide service to local stops may improve travel times, particularly during peak periods. This change may be considered an incremental approach to bus rapid transit in the University Avenue corridor.

Route 2: Improve weekday peak and mid-day service to every 15 minutes between the West Transfer Point and Capitol Square.

The west half of Route 2 is very productive throughout the mid-day, peak periods, evenings and weekends. This change would enhance the quality of service in this busy corridor, reduce overcrowding, and allow for several other improvements (see Routes 9, 10, and 33 and Routes 14, 15, west Madison).

# Routes 9, 10, and 33: Reduce the number of buses in the mid-day rotation from six to four, restructure to eliminate service west of UW campus, duplicative service on Johnson / Gorham, and Route 33. (8)

Routes 9 and 33 are an interlined pair during the mid-day with a cycle time of 90 minutes and a threebus rotation. While Route 9 enjoys reasonably high overall productivity of about 45 mid-day weekday boardings per revenue service hour, it's utility drops off substantially east of about Fordem Avenue. Route 33 provides virtually no utility and has the lowest productivity of any route during the mid-day at less than five boardings per revenue service hour.



Route 10 currently operates as a mid-day only two-way loop with alternating trips traveling out via Johnson Street and in via Jenifer Street or out via Jenifer Street and in via Gorham Street. Route 10 was established as a circulator route when the transfer point system was established. At that time, all four transfer points pulsed at :00 and :30, which resulted in Routes 2, 3, 4, and 5 serving Jenifer, Johnson, and Gorham Streets at about the same time with about a 30-minute gap, which was filled by Route 10 during the mid-day. In the early 2000's, the East Transfer Point's pulse was changed to :15 and :45 which separated Route 3 from Route 4 and Route 2 from Route 5; and Route 10 was deleted. However, Route 10 was reinstated after several requests for direct service from between Jenifer Street and the UW campus as well as other places. The mid-day weekday productivity for Route 10 (14 boardings per revenue service hour) is low because the modifications at the East Transfer Point reduced its utility, and it competes for riders with Routes 2, 3, 4, 5, and 9.

This change would improve system efficiency by reducing the number of buses in the mid-day rotation from six to four as well as make the system easier to use and less confusing. Route 9 would operate from the East Transfer Point to UW campus via Johnson and Gorham Streets and Route 10 would operate from Atwood Avenue and Division Street to UW campus via Jenifer Street.

Routes 14 and 15, West Madison: Extend a new peak-only route to Colony Drive and west Madison and reroute the peak-period Route 14 to be similar to the mid-day Route 14. Reroute Routes 14 and 15 from Sheboygan Avenue to Regent Street and Old Middleton Road, respectively. Introduce a new peak-only route from Sheboygan Avenue to UW campus. (2, 3, 5, 10)

These improvements are directly or indirectly related to each other. Restructuring the peak-period Route 14 would make the system easier to use and less confusing because Route 14 would follow the same routing throughout the day west of the Capitol Square.

Ridership on Routes 14 and 15 have grown to the point where overloading has become a concern and extra buses have been deployed on both routes. During peak periods, Routes 14 and 15 are often at or near capacity when they pass Sheboygan Avenue. Removing this deviation is expected to reduce travel times on these routes by several minutes. It is expected that Route 2 service level s would be increased in order to maintain consistent 15-minute service along Sheboygan Avenue off peak (see Route 2). The peak period capacity and service lost on Sheboygan Avenue would be replaced by a frequent peak-only route directly connecting Hill Farms and the UW campus, which would likely replace some overload trips in that corridor.

## Routes 3, 6, and 7: Convert Route 7 to Routes 3 and 6 on weekends and reduce weekend headways on Route 6 from 60 to 30 minutes. (1, 2, 3, 4, 6)

Route 7 is currently operated as a weekend-only route that replaces Route 3 and the Route 6 via Tokay. This is an efficiency measure that removes several deviations and reduces the cycle time from 120 minutes (Route 3) to 90 minutes. This allows relatively high frequency (30 minutes) between the East Transfer Point and West Transfer Point, provides timed transfers at the West Transfer Point, and reduces travel times. However, Route 7 suffers from chronic unreliability, often arriving at the transfer points after the pulse. Route 7 leaves the East Transfer Point three minutes before the pulse, but delays and missed connections continue to affect the quality of service on Route 7 and other routes. Converting Route 7 to Route 3 would add one bus into the weekend service rotation, increase travel times between the East and West Transfer Points, and cause 15-minute or more waits at the West Transfer Point, but it would solve the reliability problems, reduce confusion, and increase service on Monroe Street. This change also removes the service on Tokay Boulevard provided by Route 7. To provide this service, Route 6 weekend frequencies would be reduced from 60 minutes to 30 minutes with the Tokay via in operation. Improving frequencies on Route 6 on weekends would also improve service on the East Washington Avenue corridor which currently has mid-day Saturday productivity of over 40 boardings per hour excluding the Madison CBD, and service on Hayes Road which is every two hours.

## Routes 8 and 78: Combine Routes 8 and 78 into one route from the Capitol Square to Middleton via Bluff. Extend Middleton service to include Sundays. (2, 4, 6, 8, 9)

Routes 8 and 78 are weekend-only routes that replace parts of weekday-only Routes 14 (serving Bluff and Regent Street from the Capitol Square) and 70 (serving Middleton). Combining these two routes into one route from the Capitol Square to Middleton via Bluff Street may provide some operational efficiencies and would provide more direct service between Madison and Middleton that is more similar to regular weekday service. Direct Saturday service between Middleton and the West Transfer Point would be lost, however, since Route 73 does not operate on weekends. Route 78 is currently operated on Saturdays only; adding service to Sundays would further improve travel options in Middleton.

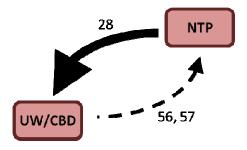
## Routes 11, 12, and 39: Extend Routes 11 and 12 (peak-period) and Route 39 (off-peak) to southeast Madison. (6, 9)

The area in southeast Madison south of the Beltline Highway and east of USH 51 (Marsh Road and Owl Creek) is rapidly developing, and the many residents are low income. Current Metro service is limited to Supplemental School Service. Extending regular fixed-route service to this neighborhood would likely consist of converting Route 39 in the mid-day from a one-way loop to a two-way linear route and extending it south via Marsh Road with, ideally, a cycle time of 90 minutes. During the peak periods, Route 39 would be unchanged and Routes 11 and 12 would be extended to provide direct service to central Madison with transfers available to Route 16 on Broadway to serve trips to Monona Grove High School.

## **Route 16:** Reduce weekday headways from 60 to 30 minutes throughout the weekday. (1, 2, 4, 9) Route 16 was created in the mid 2000's when several peripheral loop routes anchored to the South and East Transfer Points were consolidated, resulting in improved system efficiency and overall utility. Route 16 is considered a core route because it is part of the cross-town network of routes that connect the transfer points. It also has relatively high mid-day weekday productivity of 56 boardings per revenue service hour and provides service to high density, low-income neighborhoods near Rimrock Road, along Broadway, and in other areas, which would benefit from increased service levels. Currently, Route 16 operates "closed-door" along parts of Broadway and Monona Drive through the City of Monona, which provides transit service with its Monona Lift and Monona Express service. The utility and area coverage provided by Route 16 would be improved by providing service along this portion of its route.

# Route 28: Reduce headways from 10-15 minutes to 7.5 minutes during the school year from the North Transfer Point to UW campus. (2, 3, 5, 8, 10)

Route 28 provides frequent, direct peak period service between the north side of the Isthmus and UW campus. The reverse peak flow of buses is handled with Routes 56 and 57. The Route 28/56/57 system has very high peak period productivity and increasing service levels is warranted.



**Route 50:** Reduce weekday headways from 60 to 30 minutes throughout the weekday. (1, 2, 4, 8, 9) Route 50 currently provides 30-minute headways during peak periods and 60-minute headways at other times (weekday mid-days, weekday evenings, and weekends). It is a loop route with alternating directions designed to connect neighborhoods in southwest Madison with retail areas as well as the West Transfer Point. Improving the service levels is supported by the high productivity of the route during weekday mid-days and weekends and would make the route easier to use and understand, particularly considering the alternating direction pattern.

Routes 2 and 6: Combine Route 2-West with Route 6-East and reduce weekday headways from 30 to 15 minutes. Combine Route 2-North with Route 6-West. (2, 4, 5, 7, 10)

Routes 2-West (West Transfer Point to Capitol Square) and 6-East (Capitol Square to East Towne) are highly productive routes serving high concentrations of residential areas, employment centers, and education. Combining them and improving the service on the resulting route from the West Transfer Point to East Towne would be an investment in a high volume transit corridor and support transit oriented development in the Isthmus. Routes 6-West and 2-North would also be combined. This change may be considered an incremental approach to bus rapid transit in the east-west corridor.



**Routes 4 and 5: Reduce evening and weekend headways from 60 to 30 minutes.** (1, 2, 4, 9) Improving evening and weekend service levels on Routes 4 and 5 would strengthen core transit service connecting the transfer points and Madison's central neighborhoods.

## Routes 10 and 38: Eliminate Oakridge via and reroute Route 38 from Jenifer Street and Broom / Basset Streets to First Street and East Washington Avenue. Extend Route 10 span to include peak periods. (2, 3, 5, 10)

Route 38 provides peak-only commuter service to Madison's east side. It also provides direct service from Jenifer Street to the UW campus, bypassing the Capitol Square. Rerouting Route 38 from Jenifer Street to East Washington Avenue would reduce travel times, ease overcrowding, and increase reliability. The Route 10 service span would be increased to include peak periods to replace service lost on the Jenifer Street and Broom / Bassett Street corridors.

# Routes 52 and 55: Reroute Route 55 from the Beltline Highway and Verona Road to Whitney Way, Fitchrona Road, and Nesbitt Road. Reduce Headways from 60 to 30 minutes. Eliminate Route 52 during peak periods. (1, 5, 7, 8, 9, 10)

Combining Routes 52 and 55 would improve connections between Epic Campus, Fitchburg / Southwest Madison, and the West Transfer Point. Increasing the service levels on Route 55 would provide more flexibility to commuters using that route.

## Routes 51, 56, and 57: Eliminate Route 51 and operate Routes 56 and 57 south of the West Transfer Point. (4, 6, 9)

The service area provided by Route 51 is limited by the 30-minute cycle length dictated by pulses at the West Transfer Point. Extending service to the developed areas along McKee Road would require a route structure similar to Routes 56 and 57 south of the West Transfer Point.

### Routes 3, 58: Eliminate Route 58 and reduce Route 3 peak headways from 30 to 15 minutes. (4, 8)

Route 58 is identical to Route 3 east of Whitney Way. It provides very little peak-only coverage south of the West Transfer Point with low productivity – the majority of Route 58's service area is duplicated by Routes 50 and 57. Replacing Route 58 trips on Monroe Street and Odana Road with Route 3 trips would make the system easier to use and less confusing; however, it may cause a capacity problem at the West Transfer Point.

### Route 75: Reduce peak headways from 90 minutes to 30 minutes. (1, 2, 7, 10)

Increasing the service levels on Route 75 would provide more flexibility to commuters using that route.

## Grandview Commons: Restructure Routes 14 and 15 east of the ETP to provide service east of I-39/90. (6, 10)

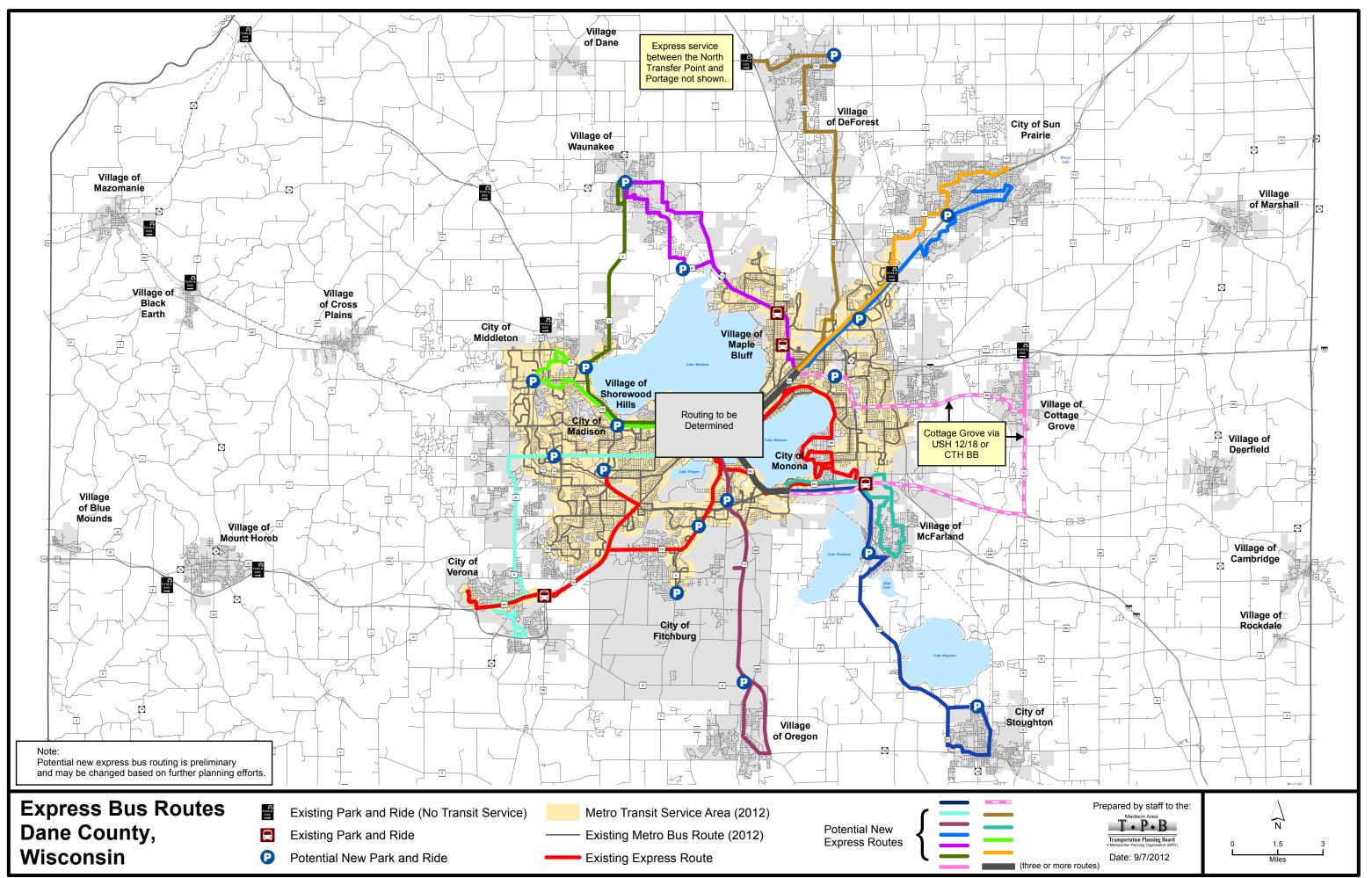
The Grandview Commons development has added a substantial number of new residential dwelling units in a neighborhood designed with New Urbanism techniques. Extending peak-period transit service to this neighborhood would provide commuting alternatives.

## Fitchburg: Create a new route from the South Transfer Point to the West Transfer Point via central Fitchburg, McKee Rd, King James Way, and Red Arrow Trail and delete Route 52. (6, 7, 9)

This new route would connect the majority of Fitchburg with its city center at Lacy Road as well as the West and South Transfer Points. It would cover the area currently served by Route 52, which would be deleted.

## West Madison: Restore a commuter loop route from the UW campus to Mineral Point Road and Odana Road. (2, 4, 7)

Route 53 was a peak-only route that looped around Mineral Point Road, Whitney Way, and Odana Road before serving the UW/VA Hospitals and UW campus. This route would provide a one-seat ride between the UW campus and near west Madison. It would likely be combined with Routes 11 and 12 east of the Capitol Square.



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