

MEETING ANNOUNCEMENT
Madison Area Transportation Planning Board
A Metropolitan Planning Organization (MPO)

August 5, 2020

Virtual Meeting via Zoom

6:30 p.m.

This meeting is being held virtually to help protect our communities from the Coronavirus (COVID-19) pandemic.

1. **Written Comments:** You can send comments on agenda items to mpo@cityofmadison.com.
2. **Public Registration:** You can register your support or opposition to an agenda item at <https://www.cityofmadison.com/MeetingRegistration>. If you wish to speak at the virtual meeting on an agenda item, you must register. When you register, you will be sent an email with the information you will need to join the virtual meeting.
3. **Listen to the Meeting:** You can call-in to the **Madison Area Transportation Planning Board** meeting:
 - Listen to audio via phone:
(877) 853-5257 (Toll Free)
Zoom Meeting ID: 921 7336 9773

If you need an interpreter, materials in alternate formats, or other accommodations to access this meeting, contact the Madison Planning, Community & Econ. Development Dept. at (608) 266-4635 or TTY/TEXTNET (866) 704-2318. *Please do so at least 72 hours prior to the meeting so that proper arrangements can be made.*

Si usted necesita un interprete, materiales en un formato alternativo u otro tipo de acomodaciones para tener acceso a esta reunión, contacte al Departamento de Desarrollo Comunitario de la ciudad al (608) 266-4635 o TTY/TEXTNET (866) 704-2318. *Por favor contáctenos con al menos 72 horas de anticipación a la reunión, con el fin de hacer a tiempo, los arreglos necesarios.*

Yog tias koj xav tau ib tug neeg txhais lus, xav tau cov ntaub ntawv ua lwm hom ntawv, los sis lwm yam kev pab kom koom tau rau lub rooj sib tham no, hu rau Madison Lub Tuam Tsev Xyuas Txog Kev Npaj, Lub Zej Zos thiab Kev Txhim Kho (Madison Planning, Community & Economic Development Dept.) ntawm (608) 266-4635 los sis TTY/TEXTNET (866) 704-2318. *Thov ua qhov no yam tsawg 72 teev ua ntej lub rooj sib tham kom thiab li npaj tau.*

如果您出席会议需要一名口译人员、不同格式的材料，或者其他的方便设施，请与 Madison Planning, Community & Economic Development Dept. 联系，电话是 (608) 266-4635 或 TTY/TEXTNET (866) 704-2318。
请在会议开始前至少 72 小时提出请求，以便我们做出安排。

AGENDA

1. Roll Call
2. Approval of July 1, 2020 Meeting Minutes
3. Communications
4. Public Comment (for items **not** on MPO Agenda)
5. Public Hearing on Amendment to the Regional Transportation Plan 2050 to Add the East-West Bus Rapid Transit (BRT) Project to the Fiscally Constrained Plan

Note: Action by the MPO on the RTP amendment is anticipated following the hearing unless comments are received expressing concerns in which case action could be postponed until the September meeting. Written comments on the amendment are invited until 4:30 p.m. on August 4, the day before the meeting, and should be e-mailed to mpo@cityofmadison.com.

6. Resolution TPB No. 175 Approving Amendment #2 to the Regional Transportation Plan 2050 to Add the East-West BRT Project to the Fiscally Constrained Plan
7. Approval of Letter of Support for East-West BRT Project
8. Resolution TPB No. 176 Approving Amendment #7 to the 2020-2024 Transportation Improvement Program for the Madison Metropolitan Area & Dane County
 - USH 14 (North to South C. Fitchburg Limits), Mill & Overlay (Const. in '2025-'27)
9. Approval to Release Draft 2021-2025 Transportation Improvement Program (TIP) for the Madison Metropolitan Area & Dane County for Public Review and Comment
10. Presentation on Streetlight Data and Uses of It to Support MPO Planning Activities
11. Discussion on MPO Targets for the Federal Safety Performance Measures
12. Status Report on Capital Area RPC Activities
13. Announcements and Schedule of Future Meetings
14. Adjournment

Next MPO Board Meeting:

Wednesday, September 2, 2020 at 6:30 p.m.
Virtual Meeting

**Madison Area Transportation Planning Board (an MPO)
July 1, 2020 Meeting Minutes**

Virtual Meeting hosted via Zoom

Chair Opitz called the meeting to order at 6:38 PM.

1. Roll Call

Members present: Margaret Bergamini, Paul Esser, Grant Foster, Dorothy Krause, Tom Lynch, Jerry Mandli, Ed Minihan (left during item #6), Mark Opitz, Mike Tierney, Samba Baldeh (joined during item #6)

Members absent: Grant Foster, Patrick Heck, Jerry Mandli, Doug Wood

MPO staff present: Bill Schaefer, Colleen Hoesly, Zia Brucaya

Others present in an official capacity:

Yang Tao, City of Madison Traffic Engineering; Diane Paoni, WisDOT; Forbes McIntosh, DCCVA; Steve Steinhoff, CARPC

2. Approval of May 6, 2020 Meeting Minutes

Esser moved, Bergamini seconded, to approve May 6, 2020 meeting minutes. Motion carried with Krause abstaining.

3. Approval of June 3, 2020 Joint MPO-CARPC Meeting Minutes

Bergamini moved, Krause seconded, to approve June 3, 2020 joint MPO-CARPC meeting minutes. Motion carried.

4. Communications

- Letter from WisDOT and FHWA approving the 2019 Work Program amendment related to carryover funding.
- MPO staff comment on sewer service area amendment request by the Village of Cottage Grove for planned employment area north of the interstate. Schaefer explained that staff provide comments on consistency of the amendment with the MPO's regional plan goals and policies in the interest of greater planning integration with CARPC. He said the primary concern with this amendment was the lack of planned street connections to future areas of development.
- Email from Michael Barrett, City of Madison resident, with comments related to #11 on the agenda.

5. Public Comment (for items *not* on MPO Agenda)

None

6. Presentation on City of Madison's Vision Zero Initiative

Yang Tao provided a presentation on the history, goals, and strategies of Vision Zero (VZ). VZ was first implemented in Sweden in the 1990s and has since been adopted in cities around the world. Madison's goal will be to eliminate traffic fatalities and serious injuries by 2030. VZ takes a systems approach that accounts for human failings in transportation infrastructure design, and shifts away from an exclusively engineering perspective to elevate the public health perspective. There are minimum criteria that must be met to become a "Vision Zero City." An interdisciplinary steering team of city agencies and departments, including the Mayor's office, traffic engineering, fleet services, police, Metro, public health and others has been developing the initiative. They also plan to convene a task force that includes additional organization and agency

partners beyond the city. Tao also shared upcoming projects and branding/communication plans that are under development.

Krause asked how speed reduction would be implemented on East Washington Avenue. Tao replied that roadway design plays a role in reducing speed, such as adding continental crosswalks, installing speed radar boards, as well as traffic signal timing to slow speeds. Schaefer noted that there has been an increased call nationwide to eliminate the enforcement component of Vision Zero due racial equity in policing concerns, and asked what Madison’s approach would be. Tao replied that it was a topic of conversation at the (City of Madison) Transportation Commission, and the city will be very mindful and intentional in terms of the role of enforcement, but would focus more on the education and engineering components. Baldeh asked what role technology will play in the initiative. Tao replied that technology could help with speed enforcement and enable better safety analysis. Longer term, there is hope that as AV technology becomes more widespread safety will improve.

7. Resolution TPB No. 174 Approving Amendment #6 to the 2020-2024 Transportation Improvement Program for the Madison Metropolitan Area & Dane County

Schaefer explained that the TIP amendment adds two projects, which were recently approved for Federal Highway Safety Improvement Program (HSIP) funding. The first project is on STH 19 at the USH 151 interchange ramp intersections. It involves the addition of monotube traffic signals (with a signal per lane) and protected left-turn lane phasing, lengthening of the left turn lanes, and widening of the shoulders. Construction is scheduled in 2023. The second project is on CTH MM at the McCoy Road intersection. It involves reconstruction of the intersection with added turn lanes (NB left and through) and moving of the Capital City Trail crossing to the intersection, along with the addition of monotube traffic signals with vehicle detection and pedestrian countdown timers with push buttons. Construction is scheduled for 2021. The TIP amendment will allow design to be started for both projects this year.

Esser moved, Baldeh seconded, to approve Resolution TPB No. 174 amending the 2020-2024 TIP. Motion carried.

8. Approval to Release for Public Review and Comment Proposed Amendment to the Regional Transportation Plan 2050 to Add the Initial Bus Rapid Transit Project to the Fiscally Constrained Plan

Schaefer explained that while the RTP recommends BRT, the BRT system was not included as part of the official, fiscally constrained plan. The initial project hadn’t been identified, and it also wasn’t clear at the time that the city could move forward with an initial BRT project without an additional funding source. Federal transportation planning rules require that regional transportation plans include a financial capacity analysis to demonstrate that the estimated costs of projects in the official, federally recognized plan can be covered using projected revenues based on existing and reasonably likely new funding sources. The RTP did anticipate an amendment to the RTP to add BRT to the official, fiscally constrained plan once the initial project and the funding to build and operate it had been identified. Now that the city has a motor vehicle registration fee to help fund BRT and the project has been included in the City of Madison’s Capital Budget, the RTP is proposed to be amended to add the East-West BRT project to the fiscally constrained plan. Schaefer also noted that he spoke with FTA staff, who advised to make sure that the budget is consistent with what the City has submitted for entering project development. Lynch stated that the Oscar Mayer satellite bus facility would not be included as part of the BRT project at this time. Schaefer explained that public notice and a hearing was required for the amendment. Approval is being sought to send out the notice.

Esser moved, Baldeh seconded, to approve release of the proposed Regional Transportation Plan amendment to add the BRT project for public review and comment. Motion carried.

9. Presentation on 2019 Annual Traffic Safety Report for Dane County

Hoesly shared a presentation on the background of the Dane County Traffic Safety Commission (TSC) and the results of the 2019 Annual Traffic Safety Report for Dane County. The Annual Traffic Safety Report is produced by the TSC and focuses on human-related crash factors. It supports a data-driven approach to planning and decision-making. The presentation included snapshots of 2019 crash trends in Dane County, a breakdown of crash factors by percent of total vs. percent fatal, and insights related to the following crash categories: cars, bicycles & pedestrians, motorcycles, teens & older drivers, distracted drivers, and speeding & aggressive drivers. Lynch inquired if the MPO had access to any race and ethnicity data related to crashes. Hoesly replied that the MPO was not able to access that data from the crash reports, however she noted that she asked UW TOPS Lab staff if that data is available, and learned that TOPS Lab staff was working on trying to extract race and ethnicity data from CODES hospital data linked to traffic crashes to share with Madison and other communities.

10. Approval of MPO and TDM Program Logos/Visual Elements and Mission and Vision Statements and Discussion on Rebranding Roll Out

Brucaya shared a brief presentation on the goals and status of the rebranding project, iterative selection process for the final logos, and key goals and messages for both rebrand rollouts. She then presented two alternate draft mission and vision statements for both the MPO and TDM program, and explained the changes that were made since the last board meeting based upon comments from the board.

Lynch suggested adding “equitable” to the mission statement for the MPO. Schaefer replied that equity was inherently included in sustainability, however he agreed that many people only associate sustainability with the environment and thought it was a good idea to add that. Esser stated he liked Alternative 1 for both the MPO mission and vision statements, with the addition of “equitable.” Esser suggested that the MPO mission should be “Lead the collaborative planning and funding of a sustainable, equitable transportation system for the Greater Madison region,” and the vision statement should be “A sustainable, equitable regional transportation system that connects people, places and opportunities to achieve an exceptional quality of life for all.”

Brucaya then reviewed the refined logos for each rebrand, which were shared at the previous board meeting. There was general consensus to accept the logos as presented. Brucaya then briefly discussed the rollout strategy that Distillery provided, and stated that there would be more in depth discussion about the rollout at a future board meeting. The timing of the rollout was uncertain due to the need for assistance from City IT on a number of items.

Opitz moved, Krause seconded, to approve the MPO and TDM program mission and vision statements as revised. Motion carried. Esser moved, Tierney seconded, to approve the MPO and TDM program logos. Motion carried.

11. Discussion Regarding MATPB Response to Racial Injustice and Continued Racial Inequities Generated in Part by Past Land Use/Transportation Planning and Decision Making

Opitz explained that Schaefer reached out to him to discuss whether the MPO should develop and release a statement about racial injustice following the protests that arose as the result of the death of George Floyd. They both agreed it would be more impactful if MPO staff developed a list of actions that the organization might pursue to help address the racial inequities in the Madison region caused in part by past land use and transportation planning decisions. The MPO could then report on these actions later. Schaefer said staff felt that it was important for the MPO to consider what we can all do – as individuals, staff, and as an organization – to be intentionally anti-racist as we approach our work.

Schaefer reviewed a list of actions that staff compiled, which was included in the board packet. The list was organized under the following categories: organizational development; planning process; outreach &

engagement; and policy & funding actions. Schaefer noted that focus is on actions that go beyond meeting federal Title VI and Environmental Justice requirements, which the MPO already does.

Krause noted that the county is planning to complete a mapping prejudice project. She said that it is also important to pay attention to what is happening in WHEDA Opportunity Zones and transportation's role in gentrification. Esser asked about the intent of the agenda item, whether informational or an action item. Schaefer replied that it is for discussion, but the intention is to incorporate some of the items into next year's work program based on board feedback. Esser said that from an organizational perspective, increasing the representation of persons of color appointed to the MPO board and committees should be the top priority. Lynch stated that the allocation of federal funds and its impacts on people of color needs to continue to be addressed, and should be considered in project scoring criteria. Tierney noted the importance that transportation construction jobs and projects play in terms of ladders of economic opportunity. Opitz stated this would likely be an ongoing conversation, and requested that Schaefer reach out to any board member that wasn't in attendance to gather feedback on this topic.

12. Status Report on Capital Area RPC Activities

Steinhoff stated that despite COVID-19, CARPC was busy processing urban service area amendments over the past few months for Cottage Grove, Fitchburg, and McFarland. Steinhoff also noted that the next CARPC meeting would be the following week, where they would vote on the CARPC logo, and a UW Professor would be giving a presentation on the history of racial discrimination in planning in the Madison region.

13. Announcements and Schedule of Future Meetings

The next meeting will be on August 5.

14. Adjournment

Baldehy moved, Esser seconded, to adjourn the meeting. Motion carried. The meeting was adjourned at 9:07 p.m.

TPB (MPO) Agenda Cover Sheet
August 5, 2020

Item No. 5

Re:

Public Hearing on Amendment to the Regional Transportation Plan 2050 to Add the East-West Bus Rapid Transit (BRT) Project to the Fiscally Constrained Plan

Staff Comments on Item:

After receiving approval from the MPO board at the July meeting and clarifying current estimated costs for the BRT project with Madison/Metro staff, the notice of the hearing and opportunity to comment on the RTP amendment was sent out to our entire contact list and posted on the MPO website. The final memo regarding the amendment is attached.

Staff has not received any comments on the amendment. Written comments may be submitted up through August 4, the day before the MPO Board meeting. Staff will share any comments received at the meeting. The lack of comments isn't that surprising given the technical nature of the RTP amendment and widespread support for the BRT project.

Materials Presented on Item:

1. Memo to Chief Elected Officials regarding the proposed RTP amendment to add the East-West BRT project to the fiscally constrained plan

Staff Recommendation/Rationale:

N/A



Transportation Planning Board
A Metropolitan Planning Organization (MPO)

Memorandum

TO: All Mayors, Village Presidents, and Town Chairs in the MPO Planning Area and Dane County Executive
FROM: William Schaefer, Transportation Planning Manager
DATE: July 6, 2020
RE: Notice of Public Hearing on Proposed Amendment to the Regional Transportation Plan 2050 for the Madison Metropolitan Area to Add East-West Bus Rapid Transit Project to the Fiscally Constrained Plan

This is to notify you of a proposed amendment to MATPB's [Regional Transportation Plan \(RTP\) 2050](#) for the Madison Metropolitan Area. The RTP amendment would add the East-West Bus Rapid Transit (BRT) project to the fiscally constrained plan along with a Satellite Bus Garage project. Specifically, it would add the projects to [Appendix A – Project and Policy Recommendations](#) of the RTP, retitling the table “Arterial Street/Roadway and Major Transit Capital Improvement Projects: 2017-2050” and adding a Transit Capital Projects section listing the BRT project (up to \$147 million total cost, including design, street improvements, and rolling stock) and the Satellite Bus Garage (\$ 22 million cost; \$12 million for RE and PE) as planned projects in the 2020-2035 timeframe.

The RTP recommends implementation of a BRT system and specifically calls for project planning leading to an initial BRT project (see Transit section of [Chapter 5 of the RTP – Needs Analysis and Recommendations](#)). However, the BRT system was not included as part of the official, fiscally constrained plan. Federal transportation planning rules require that regional transportation plans include a financial capacity analysis to demonstrate that the estimated costs of projects in the official, federally recognized plan can be covered using projected revenues based on existing and reasonably likely new funding sources (See [Chapter 6 of the RTP – Financial Capacity Analysis](#)). This is to ensure that regional transportation plans don't just contain a “wish list” of projects. At the time, an initial project from the planned BRT system hadn't been identified and it also wasn't clear that the City of Madison would be able to move forward with an initial project without a new source of funding. The RTP did anticipate an amendment to the RTP to add BRT to the official, fiscally constrained plan once the initial project and the funding to build and operate it had been identified. The amendment is being proposed now.

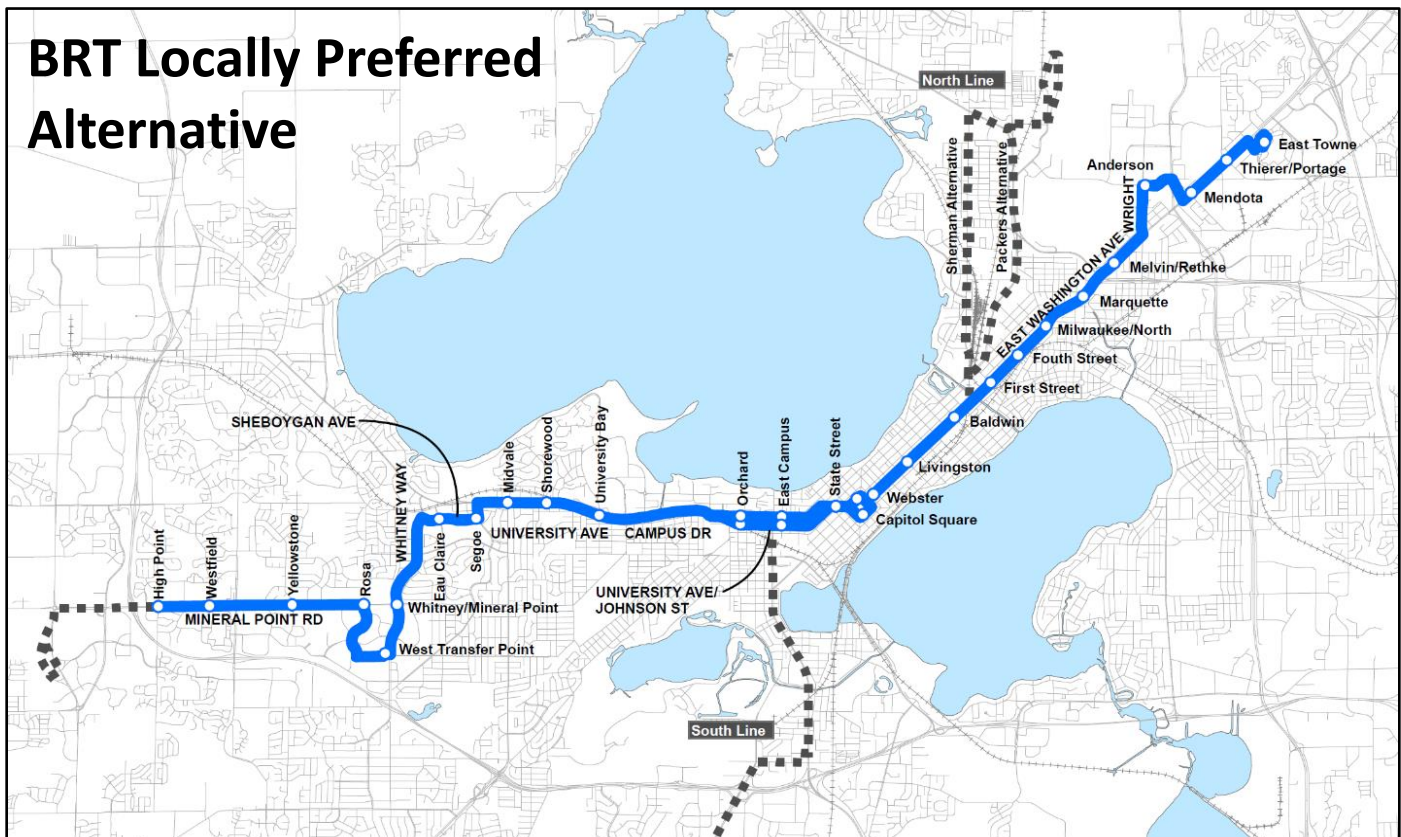
Background

Following MATPB adoption of RTP 2050 in 2017, the City of Madison passed a resolution in early 2018 supporting a BRT inter-agency staff team recommendation to pursue an initial BRT project in the east-west corridor consistent with the 2013 BRT Feasibility Study led by MATPB. Later in 2018, the city hired a consultant to develop the scope and begin preliminary design (“Phase 1 pre-project development”) for the initial project and submit an application to the Federal Transit Administration (FTA) for Small Starts application.

In 2019 the city approved a vehicle registration fee of \$40 per vehicle that went into effect in March 2020. Some of the revenues from the fee will be used to fund the BRT project. The city approved a 2020-2025 Capital Budget, which includes \$128.5 million (including anticipated FTA Small Starts funding) for the planning, design, and construction costs

for the initial east-west BRT project¹. The city received a federal grant for the purchase of property at the former Oscar Mayer plant for a planned satellite bus garage facility, and has budgeted funding in 2020-'22 for the purchase, design, and construction improvements for the new garage.

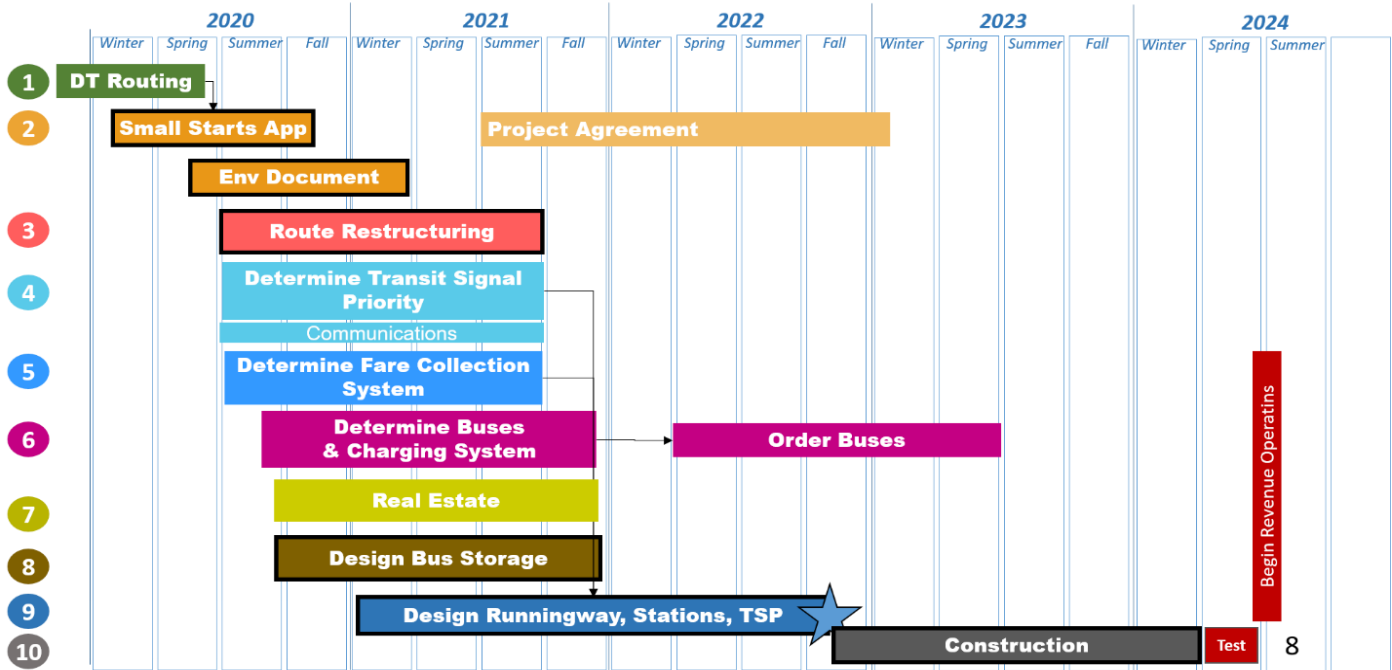
The East-West BRT Planning Study was completed in early 2020, and in April 2020 the city adopted a resolution endorsing the recommended routing and other design details for the initial East-West BRT Project (“Locally Preferred Alternative” or “LPA”) and recommending advancing the project into the next phases of engineering, design, and environmental evaluation. The East-West BRT LPA runs from East Towne Mall to West Towne Mall. It is 15 miles in length, includes 27 stations, and would run every 15 minutes weekdays until 7 p.m. and every 30 minutes from 7 p.m.-12 a.m. weekdays and on weekends. The estimated capital cost (in 2020\$) is approximately \$130 million. The annual net operating and maintenance cost of the BRT line is estimated to be \$2.9 to \$3.7 million. See map below of the LPA and [Madison East-West BRT Planning Study Locally Preferred Alternative Report](#) for more information on the project.



The city sent a letter to FTA in May requesting entry into Project Development in pursuit of an FTA Section 5309 Small Starts Grant for the BRT project. The city expects to complete sufficient documentation to request a project rating from FTA in September. Environmental documentation is scheduled to be completed in winter 2021. If successful in receiving a Small Starts grant, the agreement is expected to be executed in 2022 with service starting in spring 2024 following construction. See graphic below showing BRT schedule and key tasks.

¹ The city is considering transferring BRT bus purchases from the Metro Transit budget to the BRT budget to increase the local match percentage and increase grant application competitiveness.

BRT Schedule and Key Tasks



RTP Amendment to Add East-West BRT and Satellite Bus Facility Projects to Fiscally Constrained Plan

The City of Madison has committed the necessary local funds, which along with its existing federal/state funding for design and the anticipated Small Starts grant, will cover the cost to complete project development and construct the project. The city’s currently adopted 2020-2025 Capital Budget includes \$128.5 million for the project for planning/design and capital costs in 2020-2023. The city’s 2021 Capital Budget update is proposing to merge Metro Transit capital funds to achieve bus replacement goals. The budget will be revised this year to account for an updated capital cost estimate for BRT street improvements.

In terms of revenue, the city will have the new \$40 vehicle registration fee to partially support the BRT capital cost and ongoing O/M costs. The fee is expected to generate around \$8 million per year in new revenue. While some of this revenue will be used to support general Metro operating expenses and at least initially replace property tax revenue that would otherwise go to support Metro, the new revenue source is important. There are also three Tax Increment Financing (TIF) districts located in different segments of the corridor, which is another potential funding source in addition to local property tax revenue.

A restructuring of the local bus route system in conjunction with implementation of the East-West BRT Project is planned to eliminate duplicate service in the BRT corridor and provide connections to BRT. This will result in some offsetting operating cost savings, which is the reason for the range for the estimated net additional operating cost. A route network design study will be initiated this summer to develop the plan for restricting the route system.

Based on the high average daily ridership in the corridor (around 16,000), large number of residents (70,000) and employees (56,000) served, plans for redevelopment in the corridor, past BRT projects funded in the U.S., and other factors, Madison has a very high likelihood of securing a Small Starts funding grant, if not in 2022, then in the near future.

Based on all of this information, the East-West BRT project, along with the Satellite Bus Facility, are proposed to now be added to the fiscally constrained RTP 2050. It should be noted that an East-West BRT project is being amended into the RTP, however some details regarding the exact limits of the project, roadway improvements, and even the routing in certain areas (e.g., planned route through the UW Research) are still subject to change based on the final design work, final cost estimates, and outcome of the Metro route network design study.

July 6, 2020 Memo – Proposed Amendment to RTP 2050

Public Hearing and Anticipated MPO Action

The following is the date of the public hearing on the RTP 2050 amendment, which provides an opportunity to provide oral comments to the board.

Public Hearing

Wednesday, August 5 at 6:30 p.m.

Virtual Meeting hosted via Zoom

[Note: See agenda when posted for information on how to register to speak]

Written comments regarding the RTP 2050 amendment must be submitted by 4:30 p.m. on Tuesday, August 4. Please address written comments to the MATPB office or email them to MATPB staff at mpo@cityofmadison.com.

MATPB anticipates taking action on the RTP 2050 amendment following the public hearing unless the board receives comments expressing concerns prior to or at the hearing in which case action could be delayed.

Cc (via email):

MPO Policy Board and CC List
MPO Technical Committee and CC List
MPO Citizen Advisory Committee
Administrators/Clerks in the MPO Area
Dane Co. Supervisors in MPO Area
Dane Co. PW & Transp. Committee
City of Madison Alders

WisDOT Central and SW Region Staff Contacts
Federal and State Resource Agency Contacts
Ho-Chunk Nation Contacts
Interest Organization Contacts
City of Madison Transp. Policy & Planning Bd. & TC
Local Transp. / Public Works Committees
City of Madison Neighborhood Associations

TPB (MPO) Agenda Cover Sheet

August 5, 2020

Item No. 6

Re:

Resolution TPB No. 175 Approving Amendment #2 to the Regional Transportation Plan 2050 to Add the East-West BRT Project to the Fiscally Constrained Plan

Staff Comments on Item:

As explained at the last meeting, the Regional Transportation Plan (RTP) 2050 recommends implementation of a Bus Rapid Transit (BRT) system and specifically calls for project planning leading to an initial BRT project (See the Public Transit section of [Chapter 5 of the RTP – Needs Analysis and Recommendations](#)). While the RTP recommends BRT, the BRT system was not included as part of the official, fiscally constrained plan. Federal transportation planning rules require that regional transportation plans include a financial capacity analysis to demonstrate that the estimated costs of projects in the official, federally recognized plan can be covered using projected revenues based on existing and reasonably likely new funding sources (See [Chapter 6 of the RTP – Financial Capacity Analysis](#)). At the time, an initial project from the planned BRT system hadn't yet been identified and it also wasn't clear that the City of Madison would be able to move forward with an initial project without a new source of funding.

The RTP did anticipate an amendment to the RTP to add BRT to the official, fiscally constrained plan once the initial project and the funding to build and operate it had been identified. Now that this has been done, the BRT project has been included in the City of Madison's Capital Budget, and the city has been approved to enter into the Project Development phase under FTA's Small Starts program (see attached letter), the RTP is proposed to be amended to add the East-West BRT project and the satellite bus garage project to the fiscally constrained plan. Specifically, the projects will be added to [Appendix A – Project and Policy Recommendations](#) of the RTP. The amendment also modifies the Financial Capacity Analysis to include information on the city's capital budget, which includes the BRT project, and the new revenue (\$8 million annually) from the motor vehicle registration fee, some of which will be used to fund BRT.

Materials Presented on Item:

1. Resolution TPB No. 175
2. Letter from FTA regarding project development initiation for the East-West BRT project

Staff Recommendation/Rationale:

Staff recommends approval

Resolution TPB No. 175

Approving Amendment #2 to the Regional Transportation Plan 2050 for the Madison Metropolitan Area

WHEREAS, the Madison Area Transportation Planning Board (MATPB) is the designated Metropolitan Planning Organization (MPO) for the Madison, Wisconsin Metropolitan Area with responsibilities to perform regional transportation planning and programming, in cooperation with the Wisconsin Department of Transportation and Metro Transit, the major transit operator; and

WHEREAS, one of the primary responsibilities of the MATPB is to prepare and approve a long-range regional transportation plan in accordance with the Fixing America's Surface Transportation (FAST) Act (23 U.S.C. 104, 134) and implementing U.S. Department of Transportation (DOT) regulations (23 C.F.R. 450); and

WHEREAS, the regional transportation plan is a multi-modal transportation systems plan that defines the goals for the region and specifies the policies, projects, and strategies to help achieve these goals, and also ties the goals to performance measures to be used to track the region's progress in meeting plan goals over time; and

WHEREAS, on April 5, 2017 MATPB approved Resolution TPB No. 126 adopting the *Regional Transportation (RTP) 2050 for the Madison Metropolitan Area*, which updated the previous RTP 2035 Update, extending the plan horizon to Year 2050 and revising the growth and travel forecasts; and

WHEREAS, in preparing RTP 2050 MATPB followed federal guidance as set out in the Metropolitan Transportation Planning rule, 23 C.F.R. 450, including consideration of the federal planning factors, identification of performance measures, and preparation of financial, environmental, and environmental justice analyses of the plan and also utilized an extensive public involvement process; and

WHEREAS, the regional transportation plan is intended to guide implementing agencies in development of projects and implementation of other recommendations and supporting actions to guide improvements for all modes of transportation; and

WHEREAS, since adoption of RTP 2050 MATPB has coordinated with WisDOT and Metro Transit to identify federal performance measure targets as these measures have been finalized and worked to implement other performance-based planning and programming requirements, and MATPB has annually prepared a performance measures report indicating progress achieved in reaching the federal measure targets and improving performance on other regional measures selected by MATPB to gauge success in achieving the goals of the regional transportation plan; and

WHEREAS, on December 4, 2019 MATPB approved Resolution TPB No. 160 adopting Amendment #1 to RTP 2050 adding the Beltline (USH 12/14/18/151) dynamic part-time shoulder use project to the plan; and

WHEREAS, RTP 2050 recommends implementation of a Bus Rapid Transit (BRT) system and specifically calls for project planning leading to an initial BRT project, but did not

include BRT as part of the official, fiscally constrained plan because an initial project hadn't yet been identified and it wasn't clear the City of Madison/Metro Transit ("City") would be able to move forward with a project without a new source of local funding; and

WHEREAS, since adoption of RTP 2050 the City has identified an initial BRT project in the east-west corridor running through downtown and the UW – Madison campus between the East Towne and West Towne areas, begun preliminary design, and been granted approval by the Federal Transit Administration (FTA) to enter into the Project Development phase under FTA's Capital Investment Grants Small Starts program for the East-West BRT project; and

WHEREAS, in 2019 the City approved a vehicle registration fee of \$40 per vehicle that went into effect in March 2020, which will generate around \$8 million annually and partially fund the capital and operating costs associated with the BRT project; and

WHEREAS, the City approved a 2020-2025 Capital Budget, which includes the anticipated federal funding and local funding for the planning, design, and construction costs associated with the BRT project and the already awarded federal and local funding for a new Satellite Bus Garage/Maintenance Facility, and intends to update those cost estimates and funding commitments in its 2021-2026 Budget as reflected in the MPO's Draft 2021-2025 Transportation Improvement Program; and

WHEREAS, the City's Small Starts grant application will be very competitive and stands a high likelihood of being awarded due to the high existing ridership in the corridor, large number of residents and employees served, redevelopment projects and plans in the corridor, and the planned commitment of around 50% in matching funds; and

WHEREAS, the estimated net additional operating and maintenance costs (after factoring in restructuring of the local system) of the East-West BRT system of \$2.9-\$3.7 will be able to be covered using some of the increased revenue from the motor vehicle registration fee, local property tax revenue, and possible additional state operating assistance; and

WHEREAS, based on the City's commitment of the necessary local funds, along with existing federal funding for BRT design and the satellite bus facility and the anticipated federal Small Starts grant, the East-West BRT project can now be added to the official, fiscally constrained plan; and

WHEREAS, the MPO's public involvement process for plan amendments has been followed, including a widely distributed public notice that was also made available for public review, including in an accessible format on the MATPB website, and holding a public hearing:

NOW THEREFORE BE IT RESOLVED, MATPB approves Amendment #2 to the *Regional Transportation Plan (RTP) 2050 for the Madison Metropolitan Area* to:

1. Add the following projects to a newly created Programmed and Planned Major Transit Capital Projects Section of Figure A-1 in Appendix A – Project and Policy Recommendations, which is renamed “Arterial Street/Roadway and Major Transit Capital Improvement Projects: 2017-2050”:
 - a. East-West Phase 1 BRT Project, High Point Road/West Towne to East Towne (15 mi.), Construct roadway improvements, stations, and BRT maintenance facility, install BRT systems (TSP, fare collection, monitors, etc.), and purchase BRT buses for Phase 1 BRT system, with a total cost of up to \$147 million, including design. See BRT project map in Attachment A.

- b. Satellite Bus Garage/Maintenance Facility, with total cost of \$22 million plus \$12 million for real estate and design;
2. Modify Chapter 6 of the RTP – Financial Capacity Analysis to:
 - a. Note the new City motor vehicle registration fee as an additional funding source, bringing in \$8 million per year; and
 - b. Revise the projected Metro Transit revenues and expenses in Figures 6-6 and 6-7 to add the capital and net operating costs of the East-West BRT project and Satellite Bus Garage/Maintenance Facility and reference the inclusion of the projects in the City’s capital budget and draft 2021-2025 TIP. See BRT project listing in Attachment B.

BE IT FURTHER RESOLVED that MATPB certifies that the federal metropolitan transportation planning process is addressing major issues facing the metropolitan area and is being conducted in accordance with all applicable federal requirements, including:

1. 23 U.S.C. 134 and 49 U.S.C. 5303, and this subpart;
2. Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d-1) and 49 C.F.R. Part 21;
3. 49 U.S.C. 5332, prohibiting discrimination on the basis of race, color, creed, national origin, sex, or age in employment or business opportunity;
4. Sections 1101(b) of the FAST Act (Pub. L. 114-357) and 49 C.F.R. Part 26 regarding the involvement of disadvantaged business enterprises in U.S. DOT funded projects;
5. 23 C.F.R. Part 230, regarding the implementation of an equal employment opportunity program on Federal and Federal-aid highway construction contracts;
6. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) and 49 C.F.R. Parts 27, 37, and 38;
7. 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;
8. 23 U.S.C. 324 regarding the prohibition of discrimination based on gender; and
9. Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and 49 C.F.R. 27 regarding discrimination against individuals with disabilities.

Date Adopted

Mark Opitz, Chair
Madison Area Transportation Planning Board

ATTACHMENT A



Note: As part of the project development process just getting started, project details may be modified, including: routing in certain areas (e.g., planned route through the UW Research Park); exact limits; roadway improvements; and transit priority treatments.

ATTACHMENT B
East-West BRT Project Listing in Draft 2021-2025 Transportation Improvement Program

Primary Jurisdiction/ Project Sponsor	Project Description	Cost Type	Jan.-Dec. 2021				Jan.-Dec. 2022				Jan.-Dec. 2023				Jan.-Dec. 2024				Jan.-Dec. 2025				Comments	
			Fed	State	Local	Total	Fed	State	Local	Total	Fed	State	Local	Total	Fed	State	Local	Total	Fed	State	Local	Total		
TRANSIT CAPITAL																								
CITY OF MADISON	A. BUS RAPID TRANSIT (BRT) PROJECT																							
	Design and construct a Phase 1 BRT system in the East-West Corridor																							
	Transport 2020 Alternatives Analysis	PL/PE	Cont.	Cont.	Cont.	Cont.																	Carryover project. Grants WI-39-0002 and WI-26-0012.	
	Environmental study (NEPA) and Design	PE			5,500	5,500		4,100	4,100															
	Roadway improvements for BRT	Cap						26,200	26,200													Will seek Section 5309 FTA Small Starts discretionary grant for Phase 1 BRT project.		
	Construction of BRT stations	Cap						23,700	23,700															
	60' articulated electric buses (5307)	Cap					3,671	14,176	17,847	2,012	503	2,515	2,132	533	2,665									Carryover & Future s. 5307 UAFP grants
	60' articulated electric buses (5337)	Cap					1,737	6,331	8,068	869	217	1,086	869	217	1,086									Carryover & Future s. 5337 UAFP grants
	60' articulated electric buses (5339)	Cap					2,880	10,585	13,465	1,460	365	1,825	1,474	369	1,843									Carryover & Future s. 5339 UAFP grants
	BRT systems (TSP, fare collection, monitors, etc.)	Cap						22,200	22,200															
BRT bus maintenance facility	PE/Cap			700	700		7,200	7,200																
	TOTAL				6,200	6,200	8,288	114,492	122,780	4,341	1,085	5,426	4,475	1,119	5,594									
					M		5307/ 5337/ 5339		M		5307/ 5337/ 5339		M		5307/ 5337/ 5339		M					Update following city budget action.		



U.S. Department
Of Transportation
**Federal Transit
Administration**

Headquarters

1200 New Jersey Avenue S.E.
Washington DC 20590

Mr. Thomas Lynch
Director of Transportation
City of Madison Department of Transportation
215 Martin Luther King Jr Blvd, Suite 109
Madison, WI 53701

Re: Project Development Initiation - Madison East-West Bus Rapid Transit

Dear Mr. Lynch:

Thank you for your letter, dated May 15, 2020, requesting entry into the Project Development (PD) phase under the Federal Transit Administration's (FTA) Capital Investment Grants (CIG) Small Starts program for the City of Madison East-West Bus Rapid Transit project (Project). After reviewing your initial letter, FTA requested and received additional information that was submitted on June 2, June 10, June 17, and July 1, 2020. On July 1, 2020, FTA determined that the information provided was sufficient to enter the PD phase.

Please note that the City of Madison undertakes the PD work at its own risk, and that the Project must still progress through further steps in the CIG program to be eligible for consideration to receive CIG funding.

Per the requirements of the Fixing America's Surface Transportation (FAST) Act, the following activities must be completed during PD:

- Select a locally preferred alternative;
- Have the locally preferred alternative adopted into the fiscally constrained long range transportation plan;
- Complete the environmental review process; and
- Complete the activities required to develop sufficient information for evaluation and rating under the CIG criteria.

The FTA encourages you to familiarize yourself with the information found on the CIG program webpage at <https://www.transit.dot.gov/funding/grant-programs/capital-investments/about-program>. There you will find more details and information on the activities mentioned above including answers to frequently asked questions and the information that must be provided to FTA for eventual project evaluation and rating.

The FTA will be in contact to discuss its technical assistance and project oversight plans as the Project moves through PD. The FTA would appreciate periodic updates from the City of Madison on the status of completion of PD activities.

With this entry into PD, the City of Madison has pre-award authority to incur costs for PD activities prior to grant approval and to retain eligibility of those activities for future FTA grant assistance. PD activities include the work necessary to complete the environmental review process and as much engineering and design activities as the City of Madison believes are necessary to support the environmental review process. Upon completion of the environmental review process, FTA extends pre-award authority to project sponsors in PD to incur costs for as much engineering and design as necessary to develop a reasonable cost estimate and financial plan for the project, utility relocation, and real property acquisition and associated relocations. This pre-award authority does not constitute a commitment that future Federal funds will be approved for PD or any other project cost. As with all pre-award authority, relevant Federal requirements must be met prior to incurring costs in order to preserve eligibility of the costs for future FTA grant assistance.

If you have any questions or comments, please contact Jake Sacks at 202-366-2748 or Jacob.Sacks@dot.gov.

Sincerely,

7/21/2020

✕ Felicia L. James

Signed by: FELICIA LANISE JAMES

Felicia L. James
Associate Administrator for Planning
and Environment

cc: Kelley Brookins, Regional Administrator, FTA Region V

TPB (MPO) Agenda Cover Sheet
August 5, 2020

Item No. 7

Re:

Approval of Letter of Support for East-West BRT Project

The City of Madison received approval from the Federal Transit Administration (FTA) to enter into the Project Development phase under FTA's Capital Investment Grants Small Starts program for the East-West BRT project. The City of Madison plans to submit a request to FTA in September for project evaluation. There are advantages to doing this early in the project development process so that any issues with the project affecting the rating can be addressed. As part of the process, Metro is seeking letters of support.

Materials Presented on Item:

1. Draft letter of support

Staff Recommendation/Rationale:

Staff recommends approval of the letter.



Transportation Planning Board
A Metropolitan Planning Organization (MPO)

DRAFT

August 6, 2020

The Honorable Elaine Chao
Secretary
U.S. Department of Transportation
1200 New Jersey Ave SE
Washington, DC 20590

RE: City of Madison, WI East-West Bus Rapid Transit (BRT) Project – FTA Small Starts Program Evaluation

Dear Secretary Chao:

I am pleased to offer the Madison Area Transportation Planning Board's (MATPB) strong support for the City of Madison's request for FTA evaluation of its Small Starts project for the East-West BRT project. MATPB is the designated Metropolitan Planning Organization (MPO) for the Madison Metropolitan Area.

MATPB led the Madison Area BRT Feasibility Study back in 2013, which identified the east-west corridor as the most promising for implementation of BRT. Our Regional Transportation Plan 2050, adopted in 2017, recommends implementation of a BRT system and specifically called for project planning leading to an initial BRT project.

Metro Transit is an award winning transit system and provided 13 million rides a year prior to the COVID-19 pandemic. Transit ridership is heavily concentrated in the east-west corridor the BRT project would serve running through the capacity constrained isthmus and serving the downtown, University of Wisconsin (UW) – Madison campus, two regional shopping malls, and other major employment areas such as the UW Research Park. By the year 2050, Madison anticipates 85,000 new jobs, 100,000 new residents, and nearly 800,000 new road trips to work, school, and recreation. A significant amount of this new development is anticipated in redeveloping areas along the east-west corridor, including the Capitol East Gateway area along E. Washington Ave. and the Madison Yards development adjacent to the new State Office Building. Adding BRT into the Metro Transit system will help provide needed transportation system capacity, improve bus travel times in the corridor and throughout the urban area and simplify the system—helping to serve existing public transit demand and preparing for the expected increase in demand over time.

A well-planned BRT system will make our region stronger and serve the needs of residents, businesses and visitors. As the fastest-growing region in Wisconsin, mobility is critical to successful long-term economic development of the region. A safe and efficient public transit network is critical for our region's growth and our sustainability goals. The first phase of Bus Rapid Transit will provide an important beginning to the creation of a true multimodal transportation system.

We encourage FTA to advance this important regional public transit project. It will improve the quality of life for residents and employees in the region, and will help the University of Wisconsin achieve its growth objectives over time.

Sincerely,

Mark Opitz, Chair
Madison Area Transportation Planning Board, an MPO

TPB (MPO) Agenda Cover Sheet
August 5, 2020

Item No. 8

Re:

Resolution TPB No. 176 Approving Amendment #7 to the 2020-2024 Transportation Improvement Program for the Madison Metropolitan Area & Dane County

The TIP amendment adds a new state highway maintenance project so that design work can begin this year. The project is a mill and overlay project on U.S. Highway (USH) 14 in Fitchburg. Construction is not currently scheduled until 2027, but it is on the advanceable list and could be done as early as 2025.

Materials Presented on Item:

1. Resolution TPB No. 176 (including attachments)

Staff Recommendation/Rationale:

Staff recommends approval.

Resolution TPB No. 176

**Amendment No. 7 to the 2020-2024 Transportation Improvement Program
for the Madison Metropolitan Area & Dane County**

WHEREAS, the Madison Area Transportation Planning Board (MATPB) – An MPO approved the *2020-2024 Transportation Improvement Program for the Madison Metropolitan Area & Dane County* on October 2, 2019; and

WHEREAS, MATPB adopted TPB Resolution No. 161 on December 4, 2019, approving Amendment No. 1, adopted TPB Resolution No. 167 on January 8, 2020, approving Amendment No. 2, adopted TPB Resolution No. 170 on February 5, 2020, approving Amendment No. 3, adopted TPB Resolution No. 171 on March 4, 2020, approving Amendment No. 4, adopted TPB Resolution No. 172 on May 6, 2020, approving TIP Amendment No. 5, and adopted TPB Resolution No. 174 on July 1, 2020, approving TIP Amendment No. 6; and

WHEREAS, Madison Metropolitan Planning Area transportation projects and certain transportation planning activities to be undertaken using Federal funding in 2020–2023 must be included in the effective TIP; and

WHEREAS, an amendment has been requested by WisDOT SW Region to add the federally funded USH 14 (North Fitchburg City Limit to south City Limit) Mill & Overlay project; and

WHEREAS, the TIP amendment will not affect the timing of any other programmed projects in the TIP and the TIP remains financially constrained as shown in the attached revised TIP financial table (Table B-2); and

WHEREAS, MATPB’s public participation procedures for minor TIP amendments such as this have been followed, including listing the projects on the MATPB meeting agenda; and

WHEREAS, the new project is consistent with the *Regional Transportation Plan 2050 for the Madison Metropolitan Area*, the long-range plan for the Madison Metropolitan Area as adopted in April 2017 and amended in December 2019:

NOW, THEREFORE, BE IT RESOLVED that MATPB approves Amendment No. 7 to the *2020-2024 Transportation Improvement Program for the Madison Metropolitan Area & Dane County*, making the following project addition as shown on the attached project listing table:

1. **ADD** the USH 14 (Fitchburg North City Limit to South City Limit) Mill & Overlay project to Page 29 of the Street/Roadway Projects section.

Date Adopted

Mark Opitz, Chair
Madison Area Transportation Planning Board

Table B-2
Summary of Federal Funds Programmed (\$000s) and Those Available in Year of Expenditure Dollars
in the Madison Metropolitan Planning Area

Funding Source		Programmed Expenditures					Estimated Available Funding				
Agency	Program	2020	2021	2022	2023	2024*	2020	2021	2022	2023	2024*
Federal Highway Administration	National Highway Performance Program	65,098	14,487	4,611	17,623	0	65,098	14,487	4,611	17,623	0
	Bridge Replacement and Rehabilitation	0	0	0	0	0	0	0	0	0	0
	Surface Transp. Block Grant Program - Madison Urban Area	171	12,886	181	23,558	1,369	171	12,886	181	23,558	1,369
	Surface Transp. Block Grant Program - State Flexibility	1,103	0	2,570	0	13,842	1,103	0	2,570	0	13,842
	Surface Transp. Block Grant Program - Transp. Alternatives	675	1,364	0	0	0	675	1,364	0	unknown	unknown
	Highway Safety Improvement Program	0	3,894	7,798	2,592	0	0	3,894	7,798	2,592	0
Federal Transit Administration	Section 5307 Urbanized Area Formula Program	6,777	8,008	8,249	8,499	8,759	6,777	8,008	8,249	8,499	8,759
	Sec. 5339 Bus & Bus Facilities	0	939	954	969	984	0	939	954	969	984
	Sec. 5337 State of Good Repair	0	955	970	985	1,000	0	955	970	985	1,000
	Sec. 5310 E/D Enhanced Mobility Program	332	0	0	0	0	365	0	0	0	0
	Sec. 5311 Rural Area Formula Program	1,555	1,075	1,091	1,108	1,126	1,555	1,075	1,091	1,108	1,126
	Sec. 5314 NRP, Sec. 5339 Alt. Analysis Program	0	0	0	0	0	0	0	0	0	0

* Fifth year of funding (2024) is informational only.

** Funding shown in calendar year versus state fiscal year.

Note: All state roadway projects using applicable funding sources (e.g., NHPP, STBG State Flexible, BR) are programmed through 2024. Local BR, STBG (BR), and STBG Rural projects are programmed through 2023. HSIP (other than annual small HES program) projects are programmed through 2023. Local STBG -Transp. Alternatives projects are programmed through 2022. Local STBG-Urban (Madison Urban Area) projects are programmed through 2024. Transit funding is not yet programmed and is based on needs and anticipated future funding levels (See also Table B-4 Metro Transit System Projected Expenses and Revenues). Programmed transit funding for 2020 excludes carryover projects for which the Federal funding is already obligated. Roadway and transit inflation rate @ 1.56% per year applied to expenses, except for the STBG-Urban program. The Interstate 39/90 (S. Beltline to Rock County Line) Reconstruction and Capacity Expansion project is not included in the table since it is primarily located in Rock County and/or outer Dane County. Fiscal constraint for this project is being handled at the state level.

TPB (MPO) Agenda Cover Sheet
August 5, 2020

Item No. 9

Re:

Release of Draft 2021-2025 Transportation Improvement Program (TIP) for the Madison Metropolitan Area & Dane County for Public Review and Comment

Staff Comments on Item:

Staff has received TIP project submittals from WisDOT, Dane County, and local units of government and has compiled them into a complete coordinated listing of projects programmed or planned for implementation over the next five-year period. Staff has reviewed the projects to ensure consistency with the MPO's long-range regional transportation plan. A meeting was held with WisDOT, Dane County, and City of Madison staff to review and work out discrepancies in joint projects or local projects with federal and/or state funds and discuss project scheduling issues.

The complete draft TIP with all appendices we typically include is expected to be ready to release for review and comment shortly after the board meeting. See this [link](#) for a preliminary draft version with all of the project listings. Maps of the major programmed pedestrian/bicycle and roadway projects are attached.

The MPO did not solicit applications this year for STBG Urban projects. That is done every two years in conjunction with WisDOT's local program cycle and the state biennial budget. MPO staff reviewed the status of approved projects with project sponsors and WisDOT staff, and the priority projects table has been updated to reflect current total cost estimates and schedules of the projects. The table is attached.

A public hearing on the TIP will be held at the Board's next meeting on September 5. Action on the TIP is anticipated at the Board's October meeting.

Materials Presented on Item:

1. Maps of major pedestrian/bicycle and roadway projects in the Draft 2021-2025 TIP
2. STBG Urban Priority Projects Table

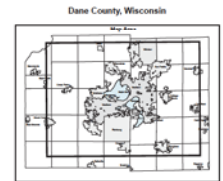
Staff Recommendation/Rationale:

Staff recommends approval to release the draft TIP for public review and comment.

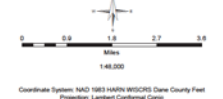
DRAFT
2020 - 2024
Transportation
Improvement
Program
(Major Pedestrian/Bicycle
Projects in the
Madison Metropolitan
Planning Area)

- Year Programmed**
- 2021
 - 2022
 - 2023
 - 2024
 - 2026
- Existing Over/Underpass
 - Existing Bike Path
 - MPO Planning Boundary
- Reconstruction** Programmed Federal Funding
 Reconstruction State and/or Local Funding Only

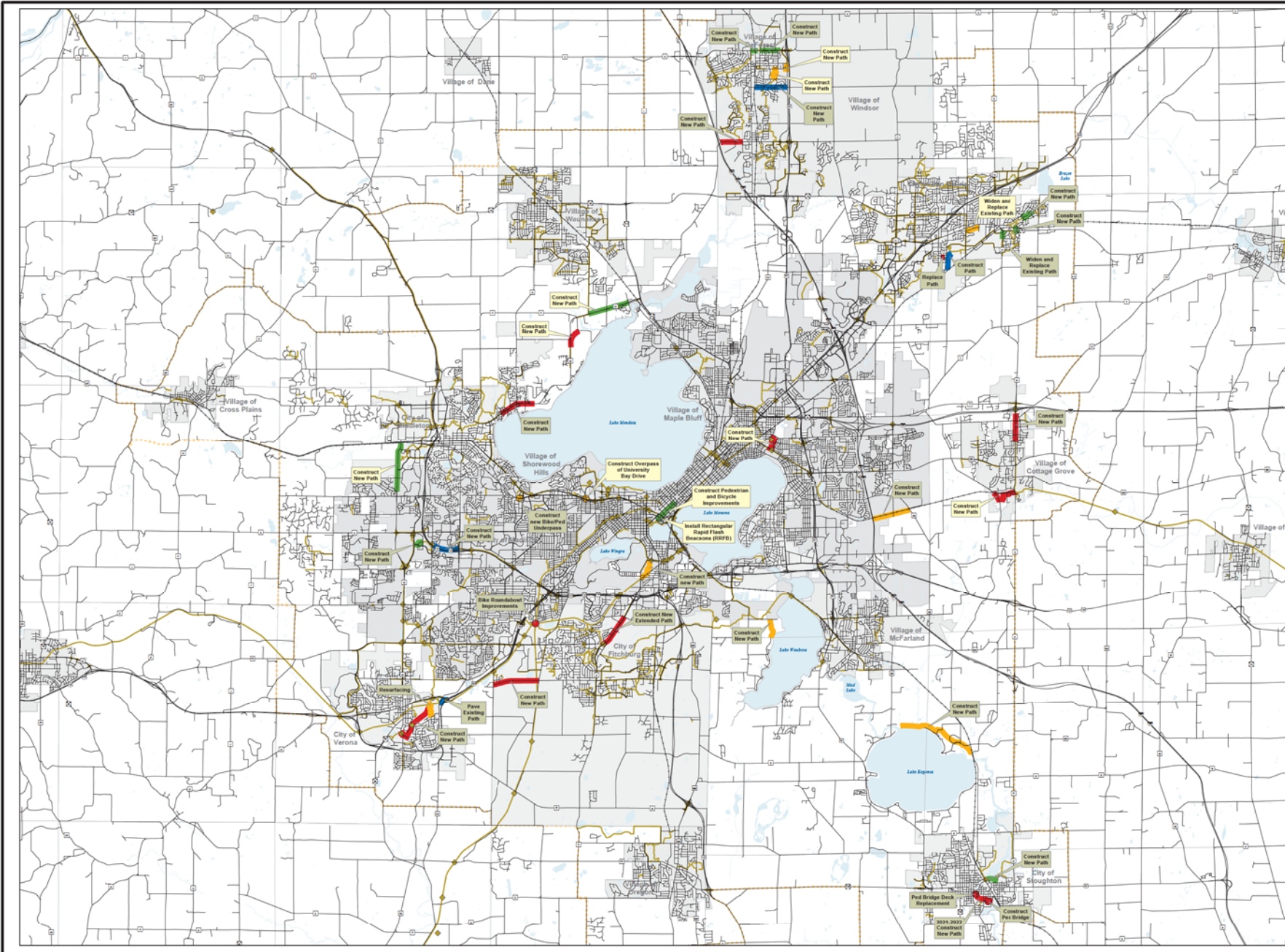
Note: Year of construction shown. See project listings for information on obligation of federal funding.



Prepared by staff for the
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 Transportation Planning Board
 A Metropolitan Planning Organization (MPO)
 Date Revised: 7/28/2019



Coordinate System: NAD 1983 NAD83 WGS84 Dane County Feet
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 Plot: [unreadable]



DRAFT
2021 - 2025
Transportation
Improvement
Program
(Major Roadway Projects
in the Madison Metropolitan
Planning Area)

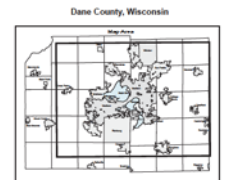
Year Programmed

- █ 2021
- █ 2022
- █ 2023
- █ 2024
- █ 2025

- Study
- MPO Planning Boundary

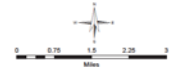
- Reconstruction** Programmed Federal Funding
- Reconstruction** State and/or Local Funding Only
- Reconstruction **Red Text Denotes Planned Major Capacity Expansion Project**

Note: Year of construction shown. See project listings for information on obligation of federal funding.



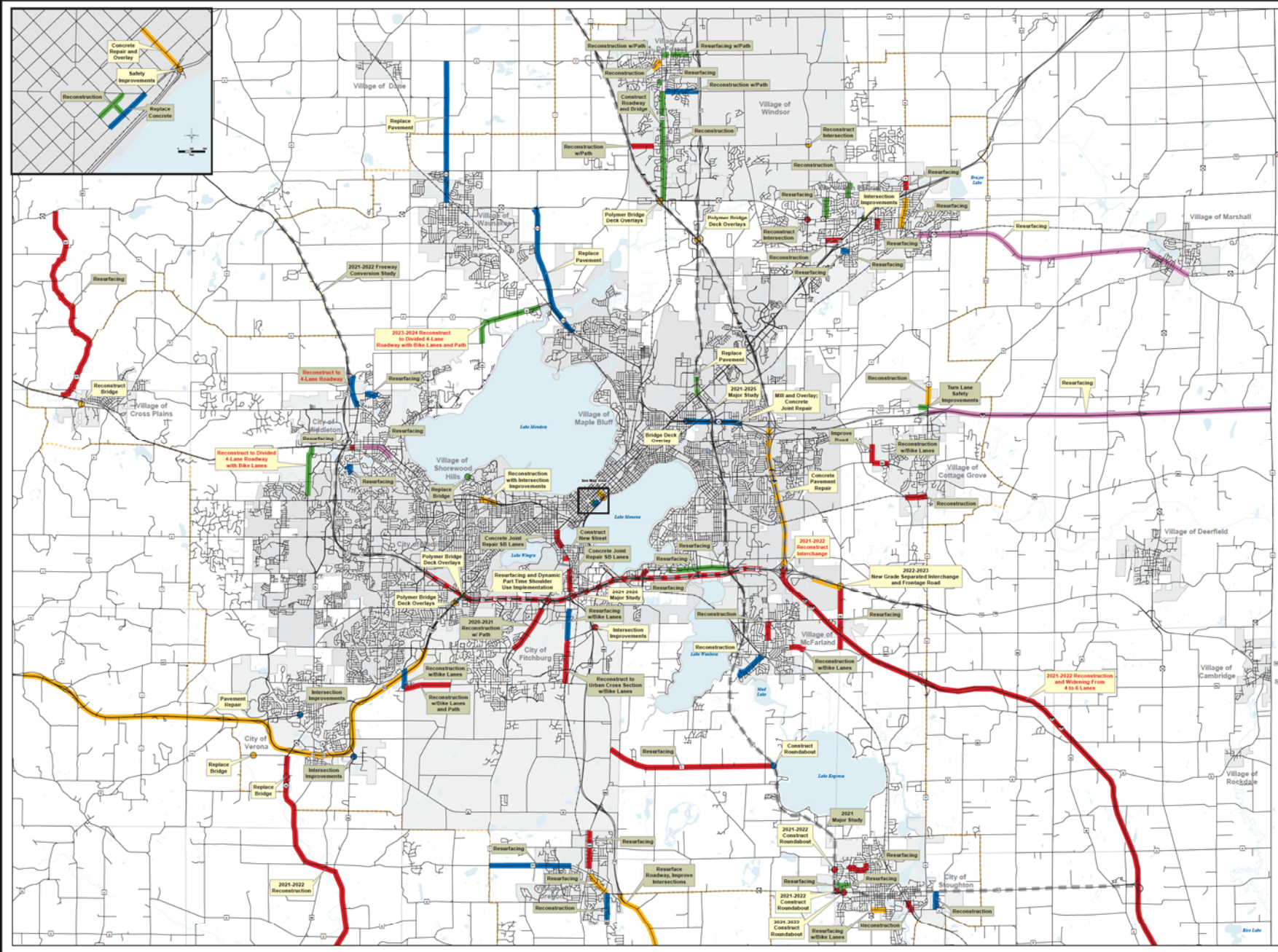
Prepared by staff for:
T · P · B
 Transportation Planning Board
 A Metropolitan Planning Organization (MPO)

Date Revised: 1/29/2023

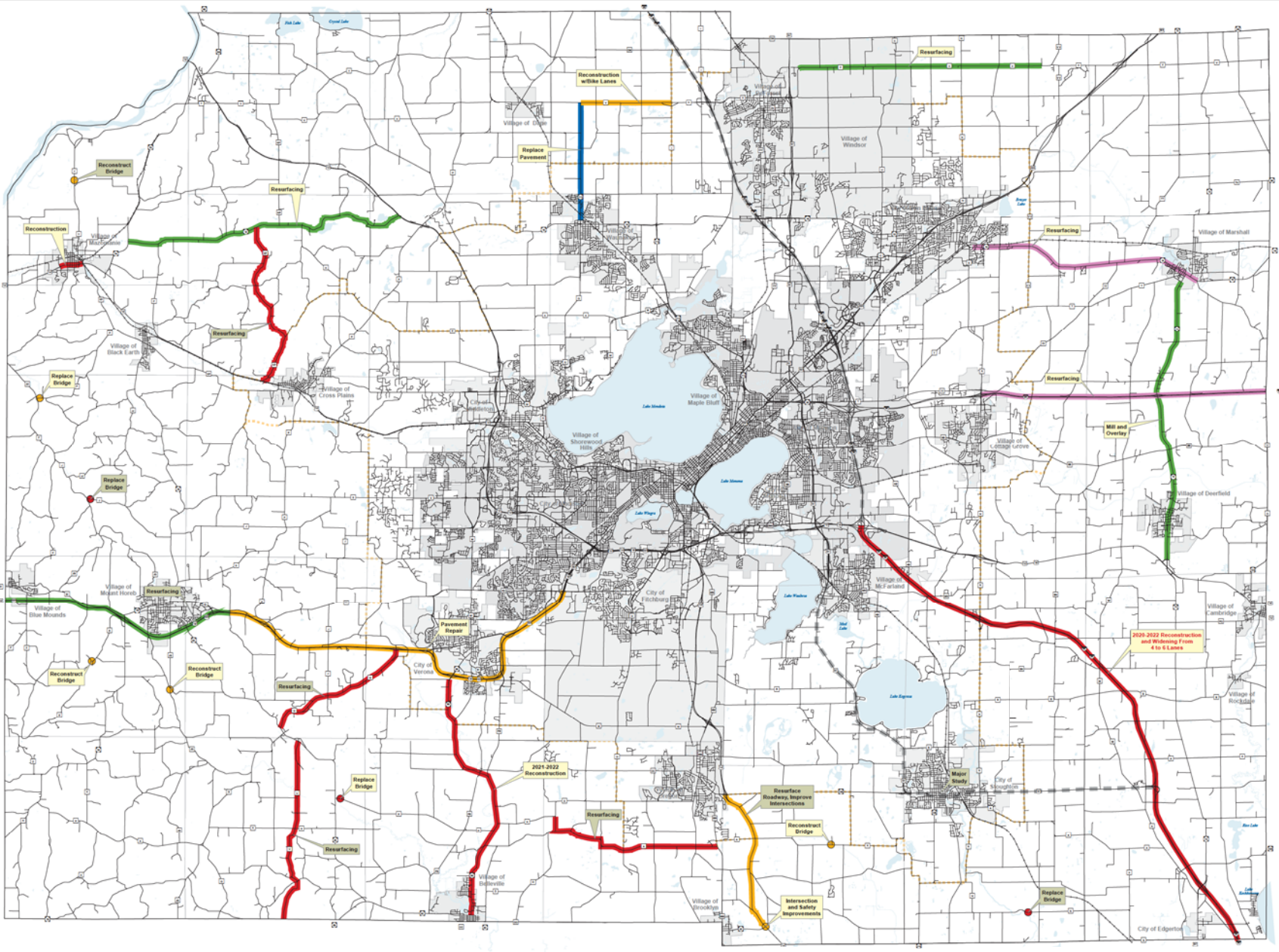


Coordinate System: NAD 1983 HARN WISCONSIN Dane County Feet
 Projection: Lambert Conformal Conic

Source: Esri
 Imagery: 2022 NAIP, DOQQ
 Copyright: 1985, 2022 Esri
 Transportation: 2022, 2023, 2024 Esri
 Conceptual: 2022, 2023, 2024 Esri



DRAFT
2021 - 2025
Transportation
Improvement
Program
(Major Roadway Projects
in the Outer
Dane County Area)



- Year Programmed**
- 2021
 - 2022
 - 2023
 - 2024
 - 2025
- Study
- MPO Planning Boundary

- Reconstruction Programmed Federal Funding
- Reconstruction State and/or Local Funding Only
- Reconstruction Red Text Denotes Planned Major Capacity Expansion Project

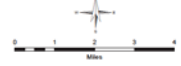
NOTE: Outer area projects shown for informational purposes. MPO approval not required.

NOTE: Year of construction shown. See project listings for information on obligation of federal funding.



Prepared by staff to the
T · P · B
 Transportation Planning Board
 A Metropolitan Planning Organization (MPO)

Date Revised: 10/8/2019



Coordinate System: NAD 1983 HARN WISCONSIN Dane County Feet
 Projection: Lambert Conformal Conic

Source: GIS
 Date: 8/2019
 GIS: 10/8/2019
 GIS: 10/8/2019
 GIS: 10/8/2019

Map Scale: 1 inch = 1 mile
 Date: 10/8/2019
 Author: [Name]

2021 - 2025 Madison Area STBG Urban Program - Approved Priority Projects

Project	Project ID	Score	Const/ Project Calendar Yr. (Yr \$ Obligated if different)	State Fiscal Year	Total Est. Cost ¹ (thousands)	Max. Percent (Fed \$)	Federal Funds Approved (thousands)	Comments
Approved Priority Projects (2021-2025)								
MPO Rideshare Program 2021-2025	5992-08-38,39,51,52	2	2021-2025	2021-2025	\$629	80	\$503	Ongoing support per MPO policy. 3% annual increase.
C. Madison Ped/Bike Safety Education Program 2021-2025	5992-08-45, 46-49	2	2021-2025	2021-2025	\$538	80	\$430	Ongoing support per MPO policy. 3% annual increase.
University Avenue (Shorewood Blvd. to University Bay Drive)	5992-11-30,-31	70 ³	2022 ('21)	2022	\$32,950	60	\$12,710	Funded at 38.6%, \$7,060 short of 60% funding based on current cost estimate.
Pleasant View Rd. (USH 14 to Timber Wolf Trail) Phase 1	5992-11-00,-01	65	2023 ('22)	2023	\$24,900	60	\$11,204	Funded at 45.0%, \$3,736 short of 60% funding based on current cost estimate.
CTH M (Oncken Road to Blue Bill Park Dr. S)	5954-00-00, -01	68	2023	2024	\$22,200	60	\$12,168	Funded at 54.8%, \$1,152 short of 60% funding based on current cost estimate.
Exchange Street (Farwell St. to Sleep Hollow Rd.)	5685-00-04,-05	39	2024	2025	\$2,333	60	\$1,177	Funded at 50.5%, \$1,156 short of 60% funding based on current cost estimate. Selected for funding based on MPO program policy goal to use 10% of funds on "small" projects in interest of equity from geographic standpoint. Schedule could be advanced if funding available in earlier year.
					\$83,550		\$38,192	TOTAL
Candidate Projects For 2026-'27 (Applications from Last Program Cycle)								
John Nolen Drive (Olin Ave. to North Shore Dr.)		66			\$28,770	60		May seek Bridge funding for some of needed bridge work.
Atwood Ave. (Fair Oaks Ave. to Cottage Grove Rd.)		65			\$12,170	60		Final design complete.
Gammon Road (Schroeder Rd to Colony Dr.) - ITS		62			\$450	80		Adaptive traffic signal project.
Mineral Point Rd. (USH 12 to High Point Rd.)		62			\$2,470	60		
Mineral Point Road (Junction Rd. to Glenway St.) - ITS		60			\$765	60		Adaptive traffic signal project.
S. Syene Road (McCoy Rd. to Lacy Rd.)		56			\$7,025	60		
					\$51,650			TOTAL

¹ Includes participating cost only (excludes sanitary sewer and water and construction engineering)

² Funded annually per MPO policy

³ Score from 2018-2022 program cycle rather than 2020-2025 cycle

TPB (MPO) Agenda Cover Sheet
August 5, 2020

Item No. 10

Re:

Presentation on Streetlight Data and Uses of It to Support MPO Planning Activities

Due to limitations in scale, cost, and time, traditional travel data collection methods alone are not sufficient anymore to support effective transportation planning and project design given the changing transportation landscape as evidenced by the impact of COVID-19 on travel. As a result, transportation professionals are increasingly turning to Big Data resources and software to supplement traditional data sources to support planning for the future. As part of the consultant led project to develop a new improved regional travel forecast model, MATPB acquired a subscription to Streetlight InSight, Streetlight Data's on-demand transportation analytics software platform. Streetlight uses data from location based services on cell phones and navigation-GPS devices and sophisticated algorithms to create travel data (trips, travel speeds, O/D information). Because of the great experience we had with the platform, we renewed our subscription for a second year until August 2021.

Streetlight Data's transportation analysis platform offers many unique capabilities:

- Ability to run and interactively visualize unique customized projects in a cloud-based web platform to understand travel patterns, traffic behavior, and demographic information about the composite group of travelers being analyzed;
- As mentioned, use of data derived from both location-based services and navigation-GPS data sources;
- Use of an analytic data processing engine that algorithmically integrates spatial data points from multiple types of devices into trips and activities, and also contextualizes the Big Data with conventional data, including Census data and traffic counters;
- Availability of data on multiple modes of travel in the platform, including motor vehicle, medium and heavy duty trucks, bicycles, and pedestrians with plans to add public transit later this year;
- Availability of estimated average annual travel volume (AADT) counts for almost all roadways in the U.S. by algorithmically combining five data sources; and
- Ability to estimate vehicle miles of travel (VMT) for different areas or roadway networks.

MPO staff have been using the platform to support a variety of MPO and city of Madison planning efforts. A presentation was put together on some of the analyses that have been run for a virtual event Streetlight Data hosted, which is attached. Staff will review this and answer questions at the meeting.

Materials Presented on Item:

1. Powerpoint presentation slides on use cases from virtual Streetlight Data "roadshow" that MPO staff participated in

Staff Recommendation/Rationale:

For discussion purposes only

Using Big Data for Regional Transportation Planning in the Madison Metro Area

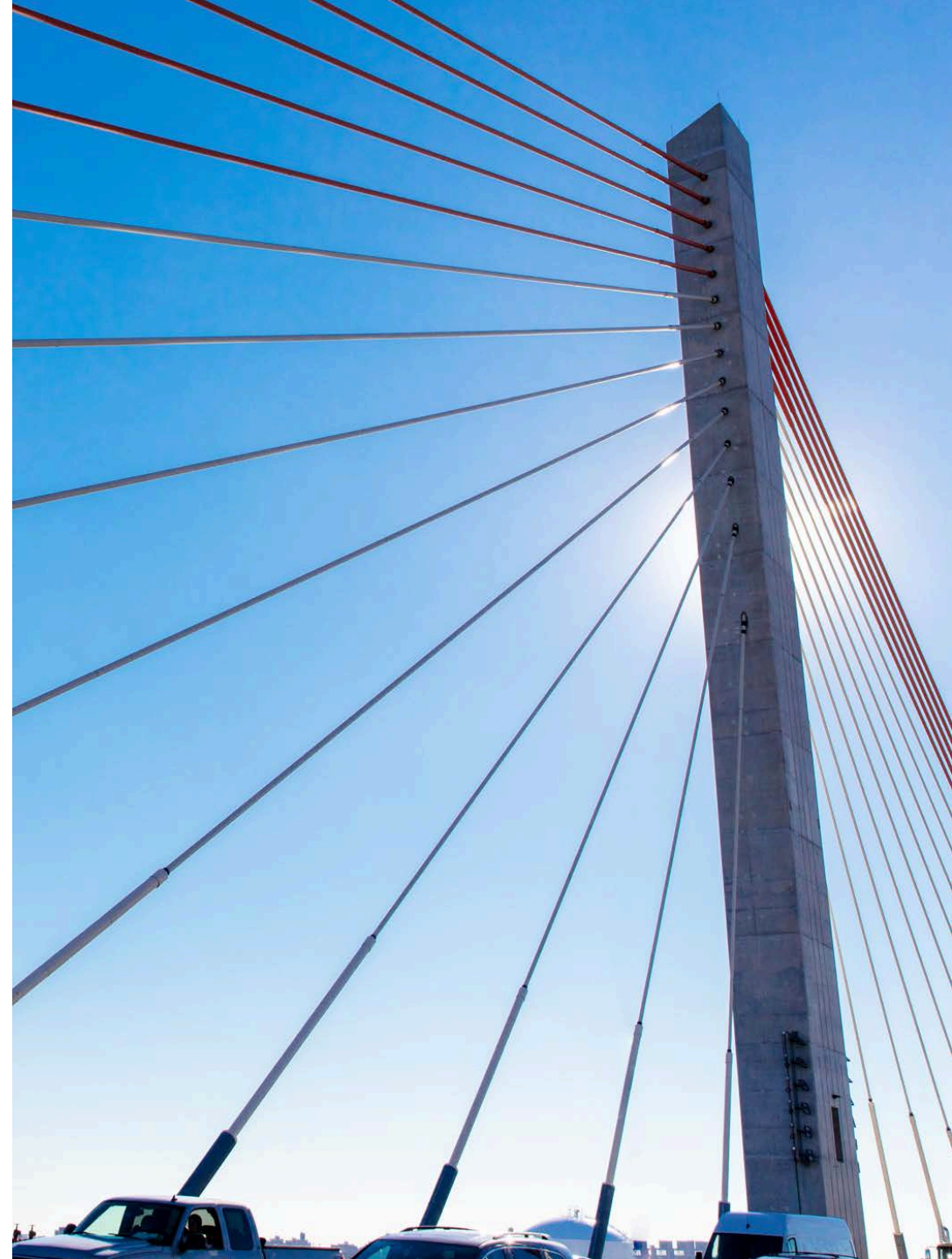
Madison Area Transportation Planning Board (MPO)

mpo@cityofmadison.com



Use Cases

1. Evaluate Accuracy of StreetLight Daily Volume Estimates
2. TDM Validation and Calibration
3. VMT
4. Segment Analysis Tool
5. EJ Priority Area Analysis
6. Bicycle O-D Analysis



Section I

Use Case #1

Compare Daily Traffic Counts with StreetLight Daily Volume Estimates



Compare Daily Traffic Counts with StreetLight Daily Traffic Volume Estimates

- How do StreetLight daily traffic volume estimates compare with actual counts?
 - Continuous Count Comparison
 - WisDOT vs. StreetLight (AADT)
 - City of Madison vs. StreetLight (AWDT)
 - Short-term Count Comparison
 - City of Madison vs. StreetLight (AWDT)



Examples of Big Data Insights

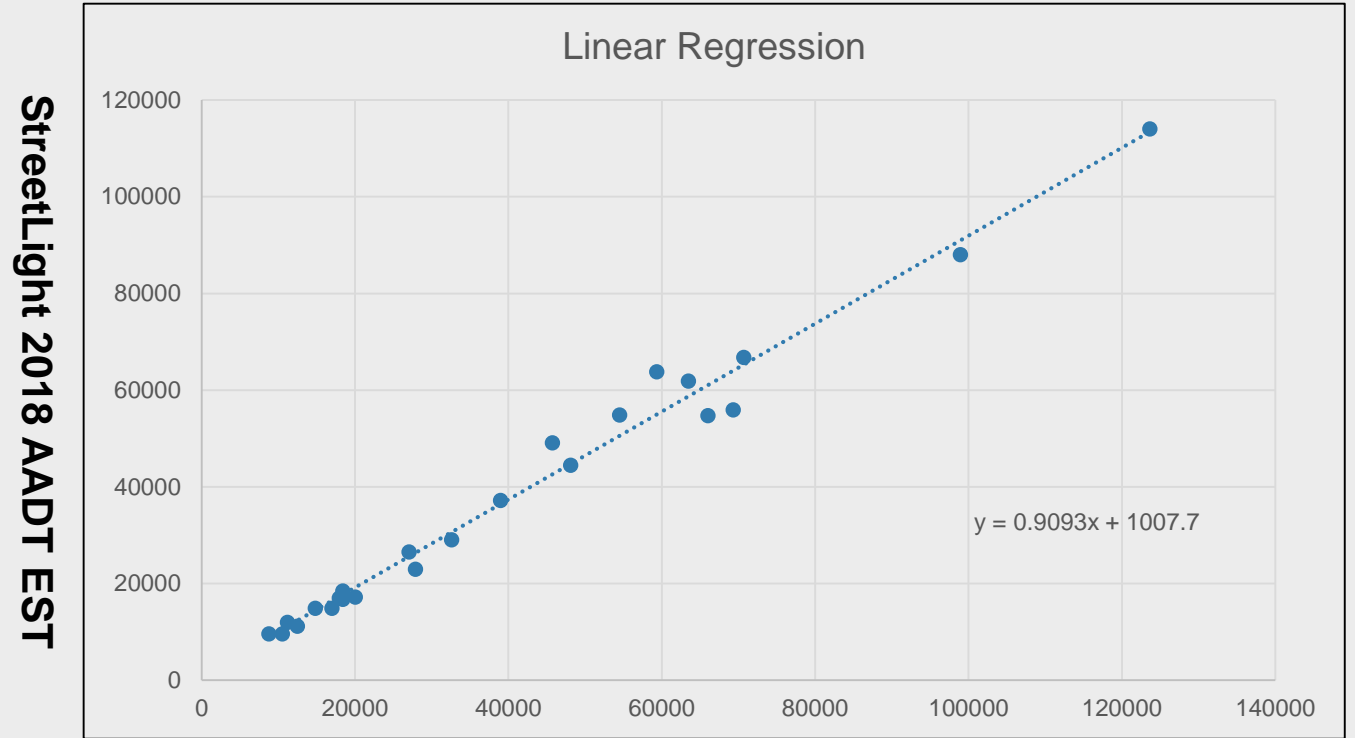
Challenge:

Are StreetLight volume estimates accurate enough to be used for planning purposes?

Streetlight Insights® Solution:

Run a Zone Activity Analysis to generate AADT volume estimates. Verify accuracy of data by comparing StreetLight volume estimates with continuous counts from WisDOT.

2018 WisDOT AADT vs Estimated 2018 AADT



R-Squared = 0.983

Road Size	# of Stations	Target MAPE	MAPE
<15k	6	20%	8%
15-30k	7	20%	9%
30-60k	6	16%	6%
60k+	7	12%	10%



Examples of Big Data Insights

Challenge:

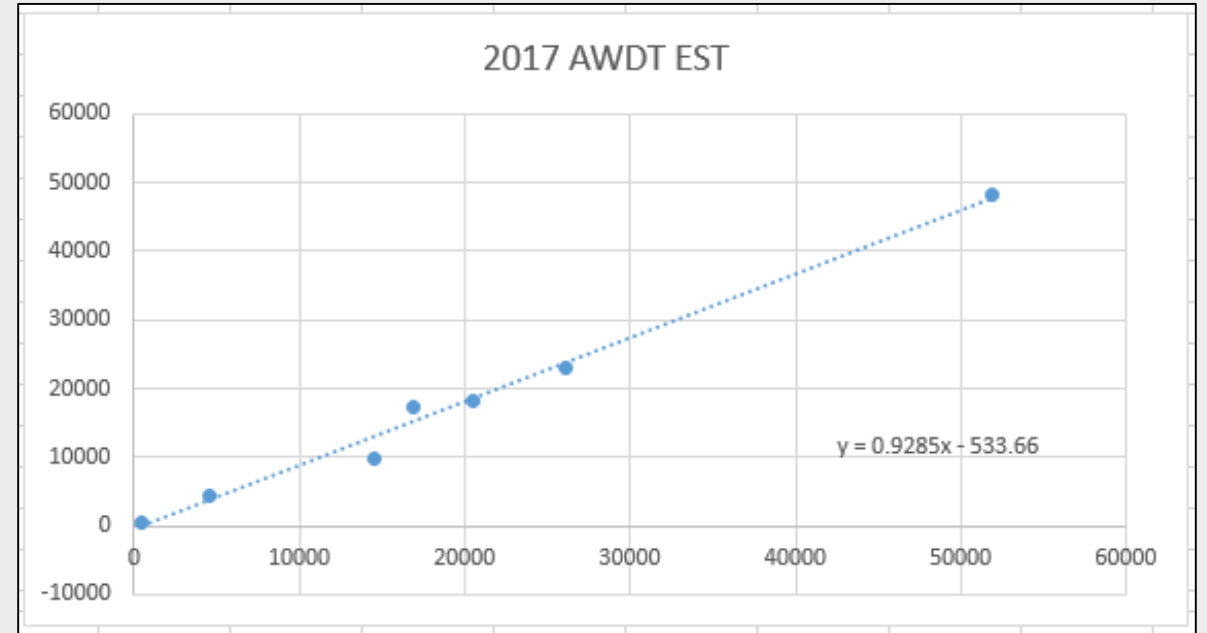
Are StreetLight volume estimates accurate enough to be used for planning purposes?

Streetlight Insights® Solution:

Run a Zone Activity Analysis to generate AWDT Volume Estimates. Verify accuracy of data by comparing StreetLight volume estimates with continuous counts from City of Madison.

2017 City of Madison AWDT vs Estimated 2017 AWDT

StreetLight 2017 AWDT EST



Madison 2017 AWDT

R-Squared = 0.990

Road Size	# of Stations	Target MAPE	MAPE
<15k	3	20%	16%
15-30k	3	20%	8%
30-60k	1	16%	7%
60k+	0	12%	N/A



Examples of Big Data Insights

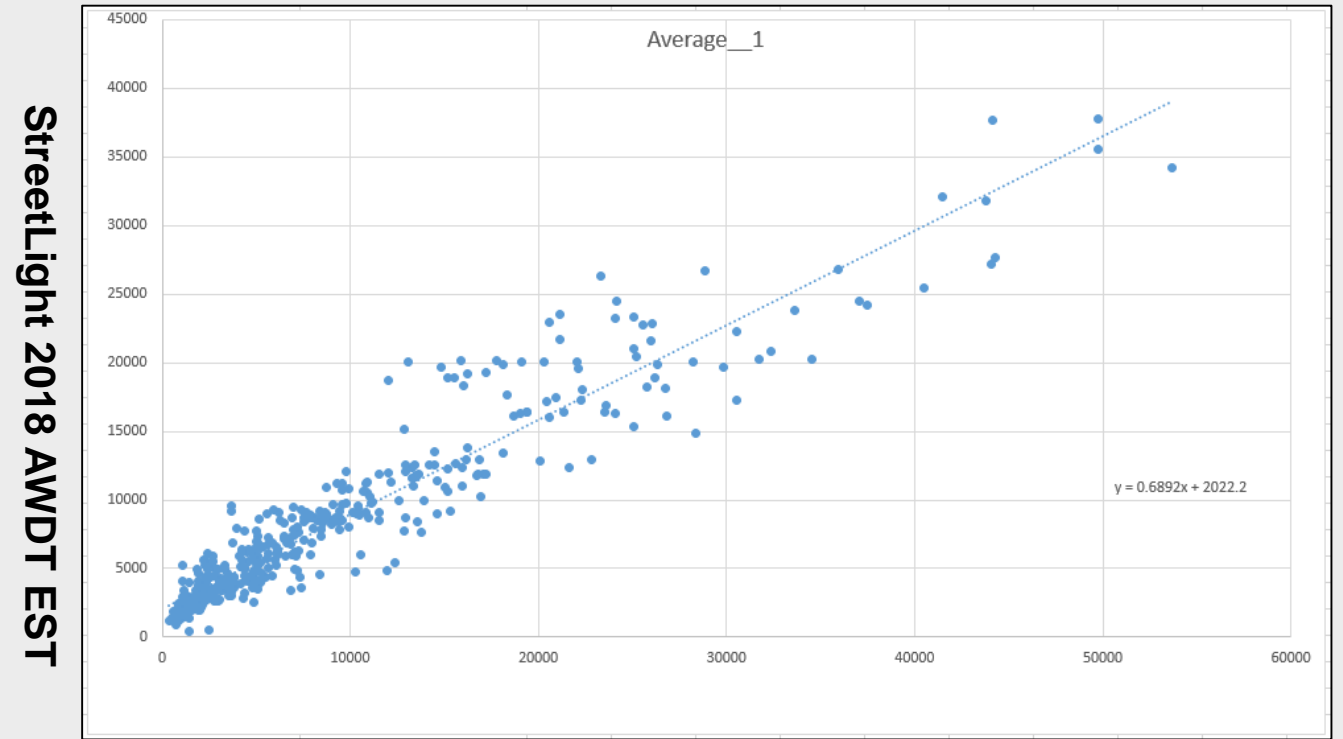
Challenge:

Are StreetLight volume estimates accurate enough to be used for planning purposes?

Streetlight Insights® Solution:

Run a Zone Activity Analysis to generate AWDT Volume Estimates. Verify accuracy of data by comparing StreetLight Volume estimates with short-term Counts from City of Madison.

2018 City of Madison AWDT vs Estimated 2018 AADT



Madison 2018 AWDT

R-Squared = 0.901



Section I

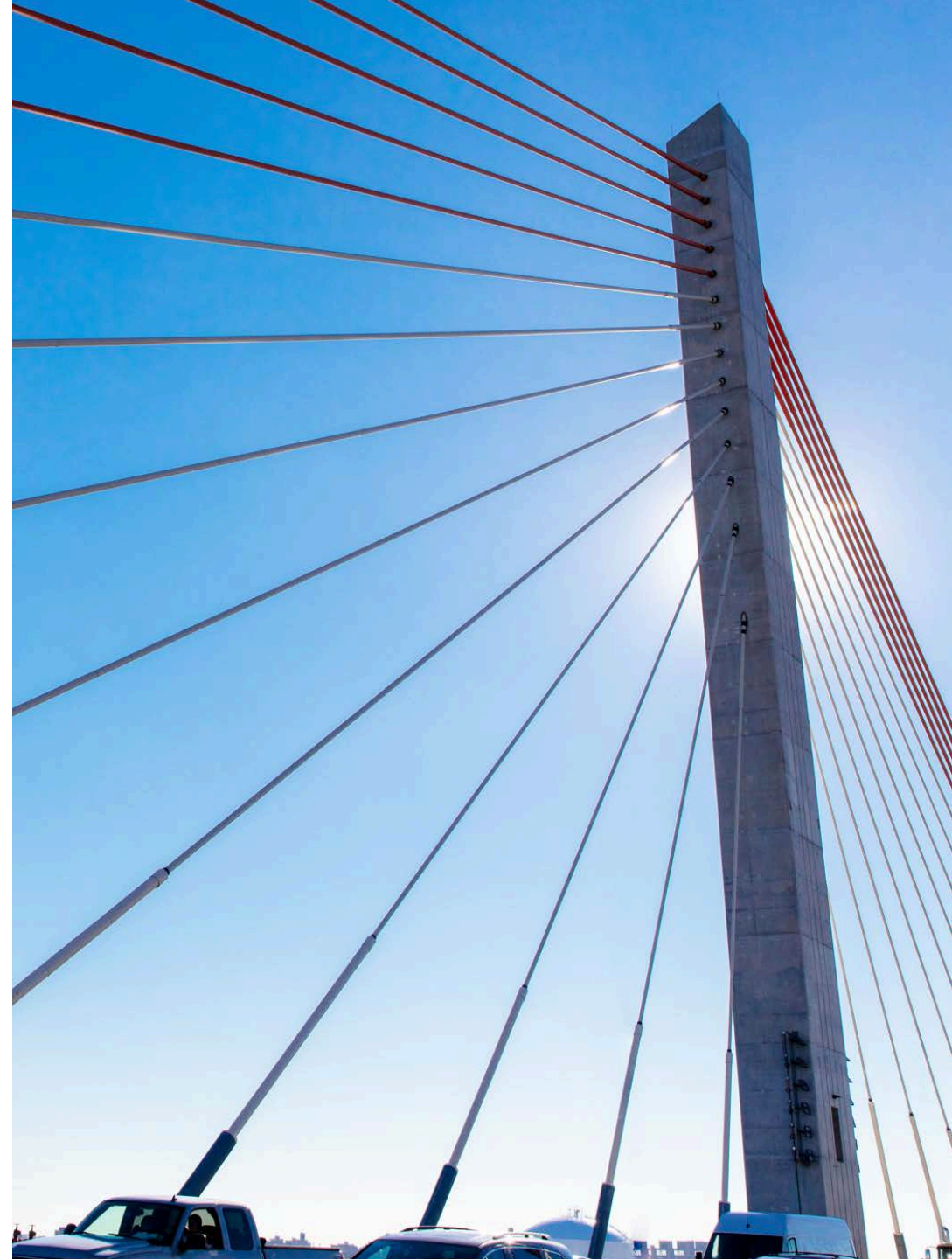
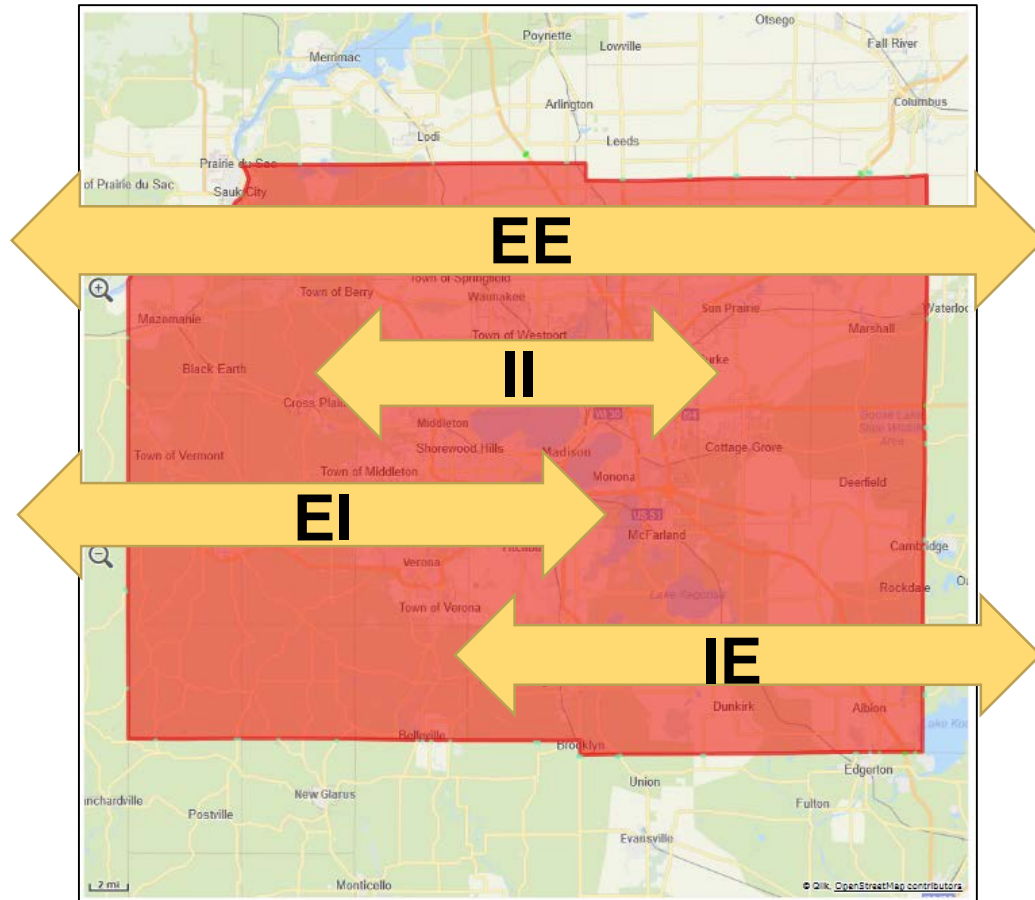
Use Case #2

Travel Demand Model Calibration and Validation



EE-II-EI-IE Analysis

Dane County



Examples of Big Data Insights

Challenge:

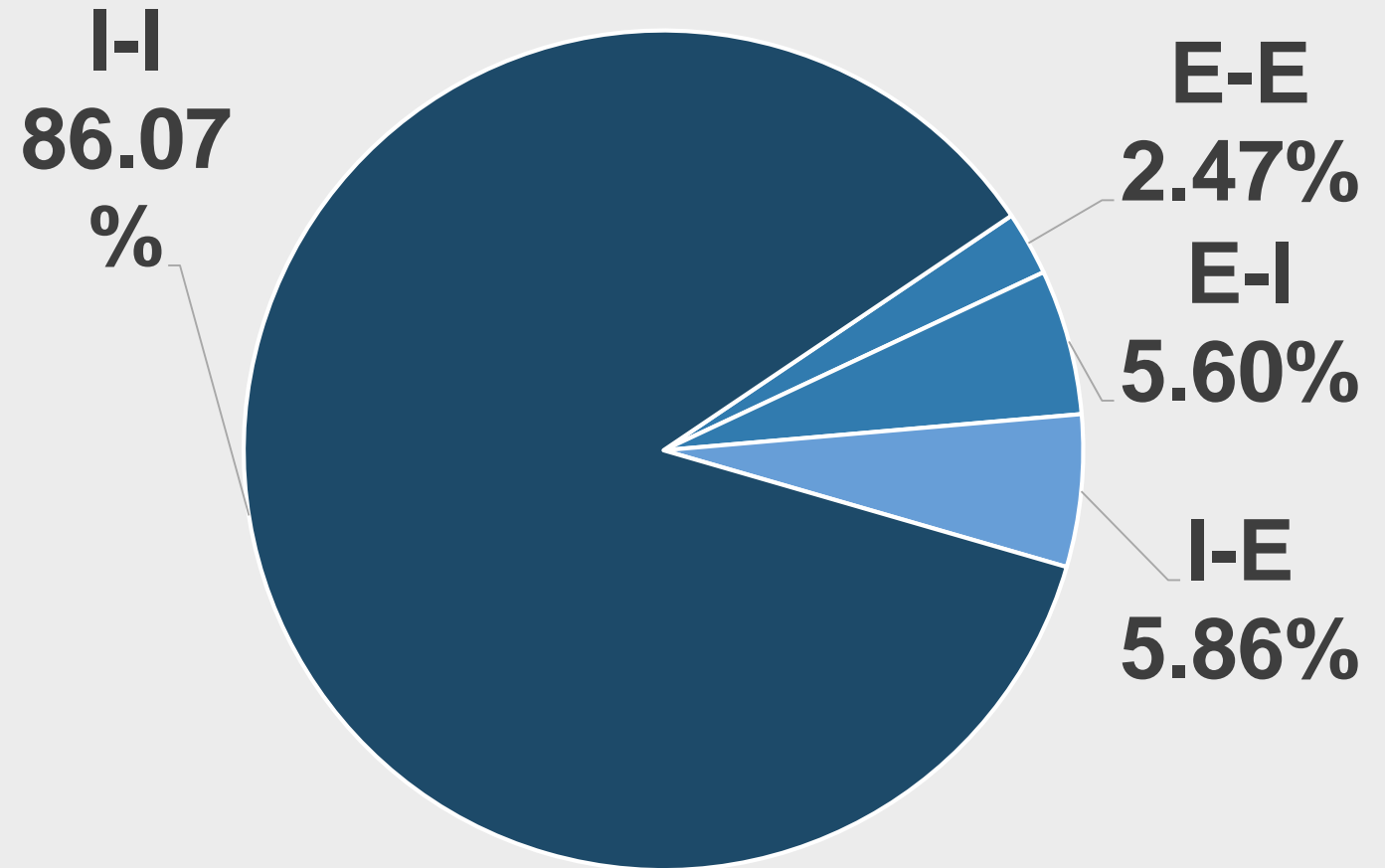
Need a dataset to assist with Travel Demand Model Calibration Purposes.

Streetlight Insights® Solution:

Run a O-D Analysis and Calculate EE, II, EI, and IE trips.

Travel Demand Model Calibration

EE-II-EI-IE Analysis



Examples of Big Data Insights

Challenge:

Need a dataset to assist with Travel Demand Model Validation Purposes.

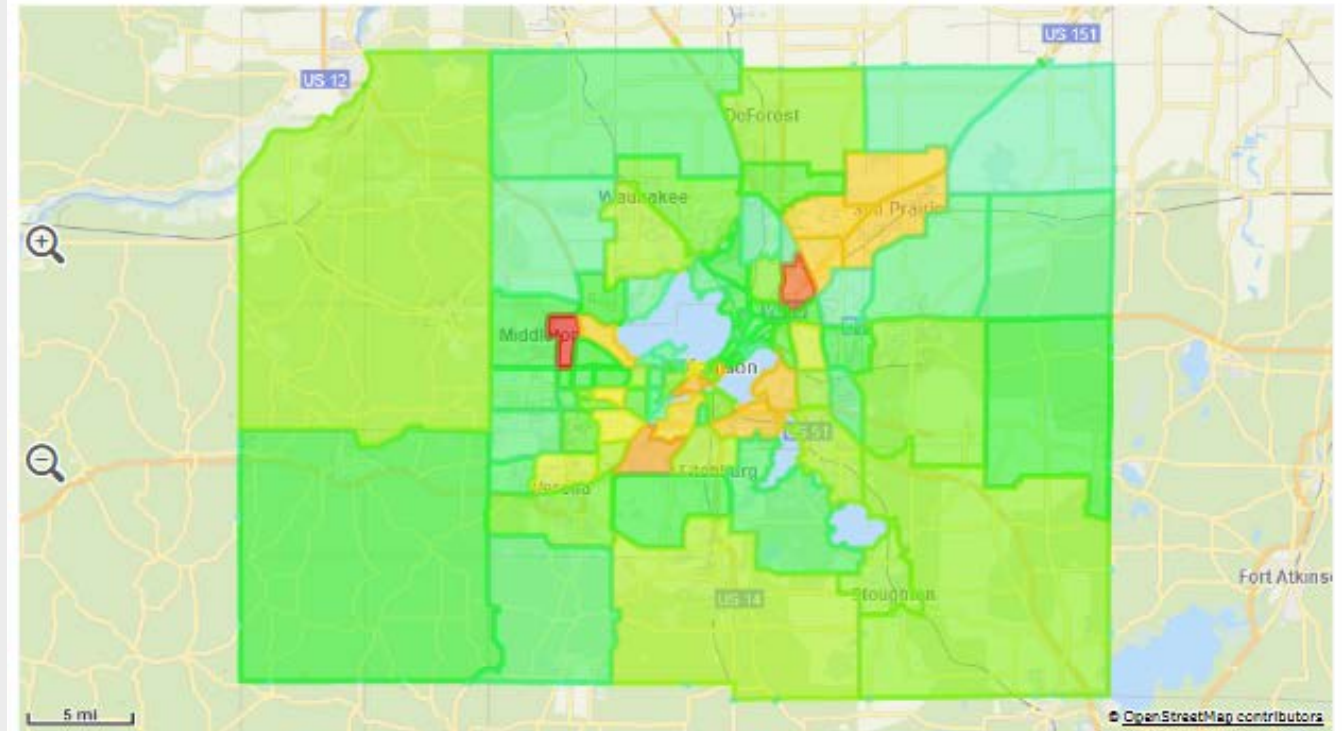
Streetlight Insights® Solution:

Run a O-D Analysis for planning districts in Dane County.

Travel Demand Model Validation

Heatmap of O-D Traffic

Colors indicate the O-D Traffic to each destination Zone during the selected time period.



— Origin Zone

To get more information on how to interpret your analysis traffic Output Type: <https://support.streetlightdata.com/faq/en-us/articles/358829542992>



Section I

Use Case #3

VMT



Examples of Big Data Insights

Challenge:

Need VMT for Dane County Climate Action Plan and for Land Use/Transportation Planning.

Streetlight Insights® Solution:

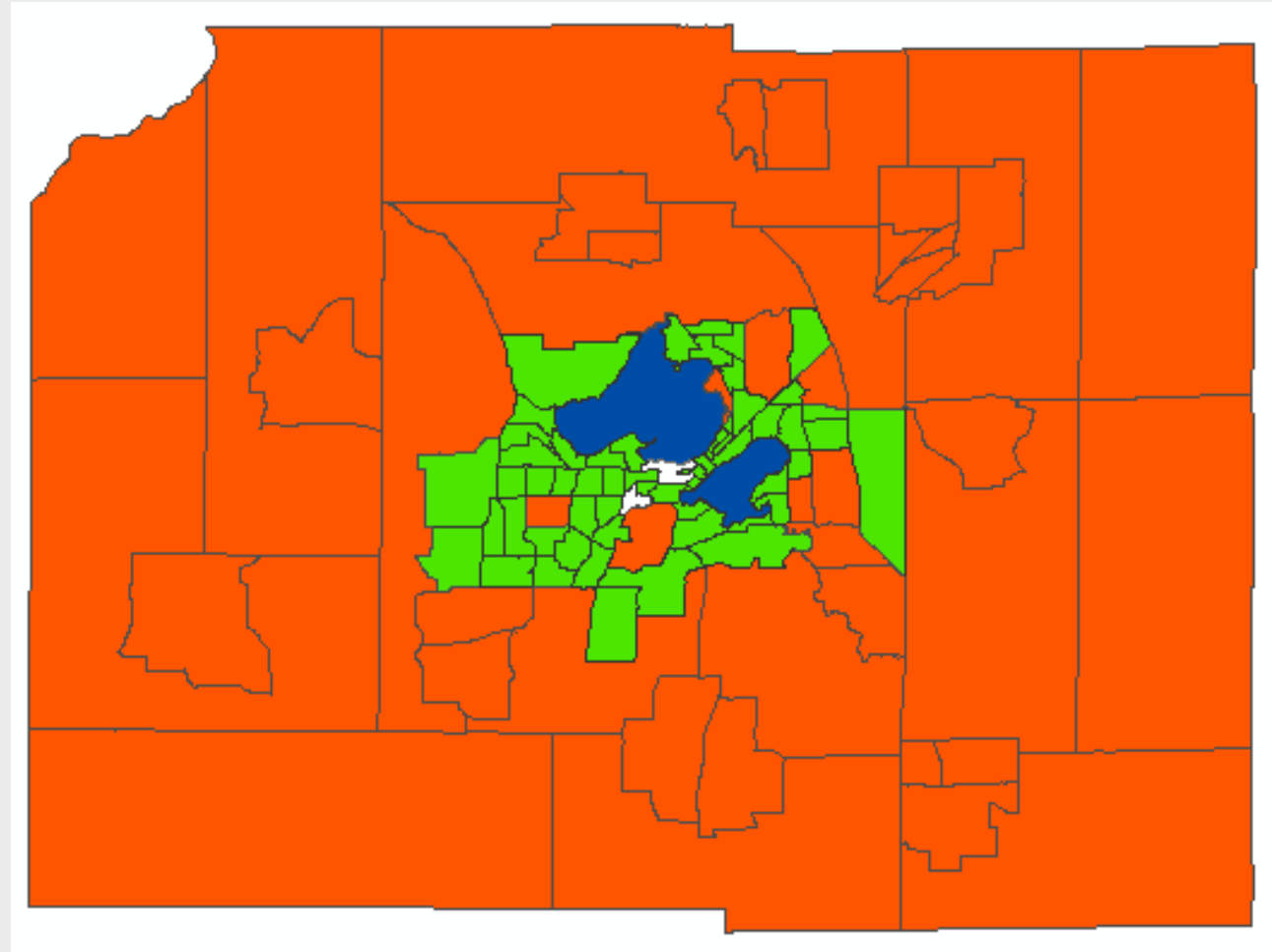
Run a Zone Activity Analysis with Home Metrics at the Census Tract level. Identify areas of Dane County where VMT is higher than average (Red) and lower than average (Green).

Average VMT/HH = 69.68 miles



Land Use and Transportation Planning

VMT/HH by Census Tract



Section I

Use Case #4

Segment Analysis Tool



City of Madison Vision Zero Initiative

- Madison is endorsing a Vision Zero policy to eliminate fatalities and serious injuries that are a result of crashes on streets and paths by 2030
 - Speed limit reduction is a principal component



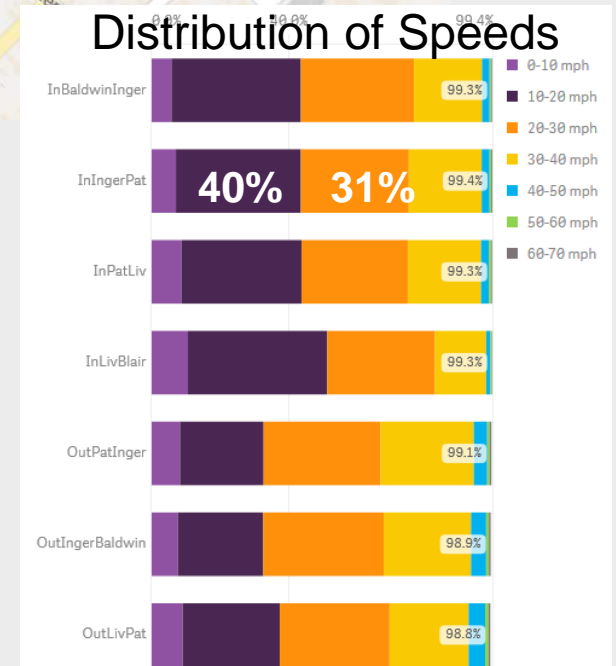
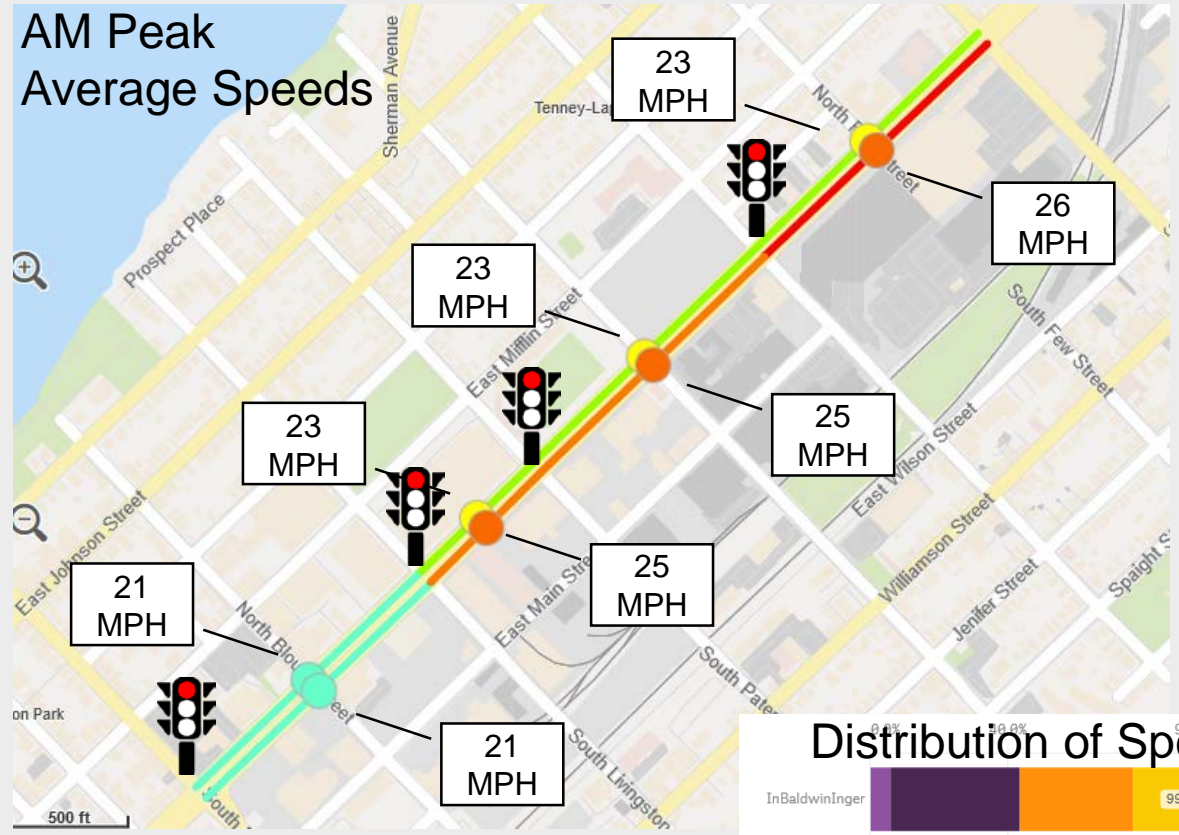
Examples of Big Data Insights

Challenge:

Analyze impacts of reduced speed limit during rush hour

Streetlight Insights® Solution:

Segment Analysis Average Speed and Speed Distribution



Congestion Management Process

- The Congestion Management Process is a systematic approach to managing transportation systems to reduce congestion and maximize safety and mobility
 - Requirements include defining CMP network and developing and monitoring performance measures



Examples of Big Data Insights

Challenge:

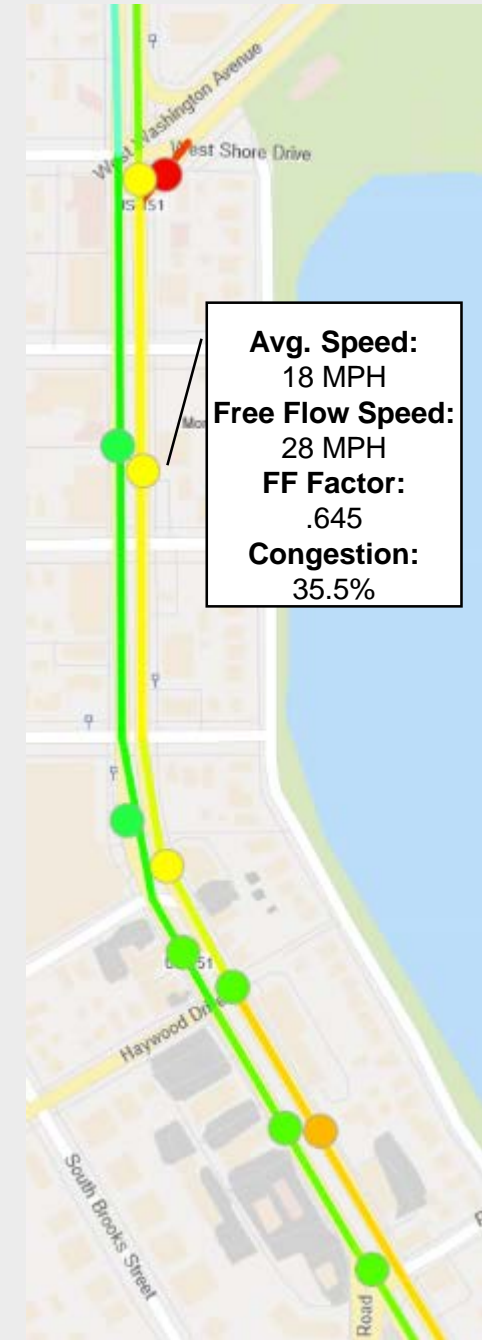
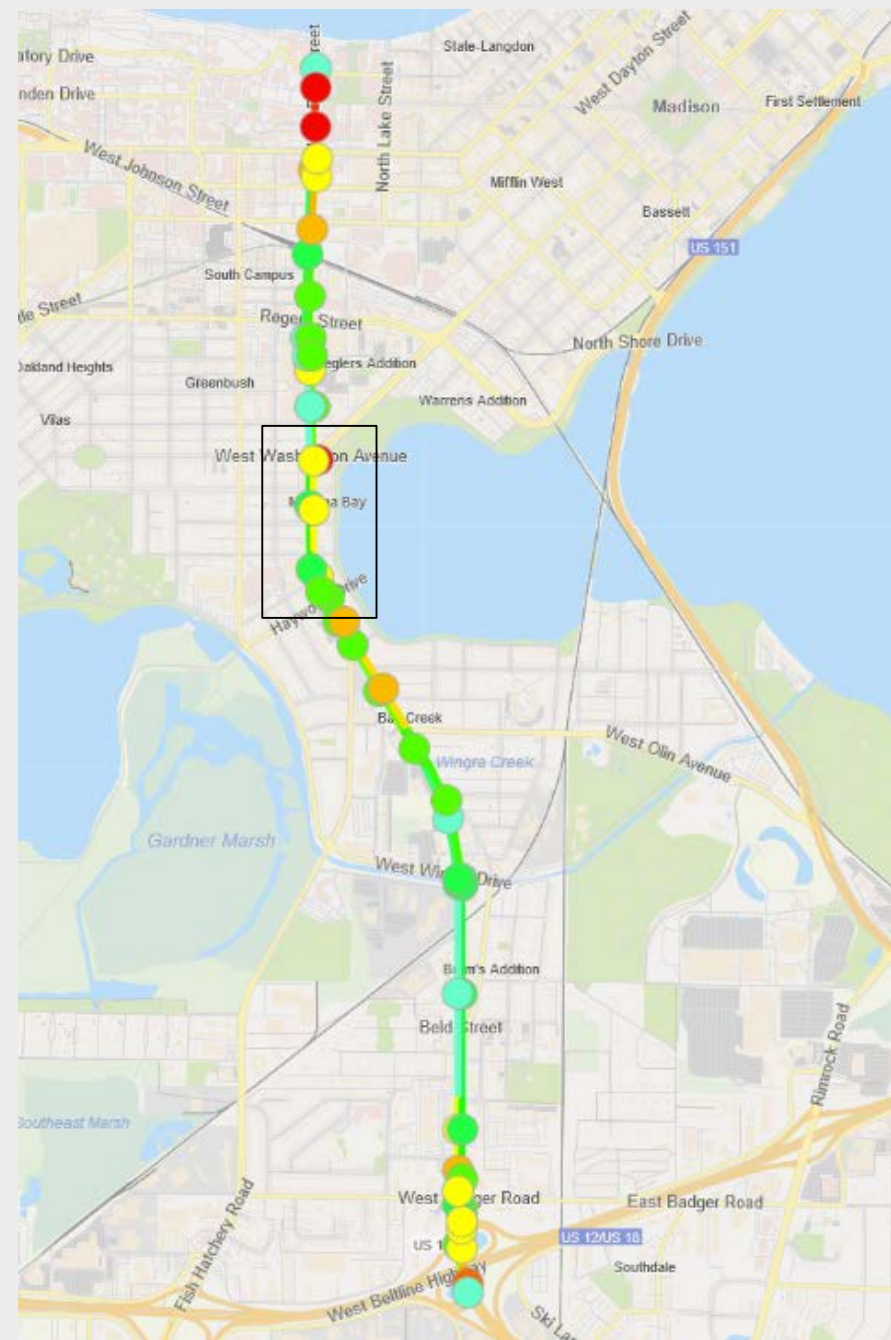
Identify congested roadway corridor segments

Streetlight Insights® Solution

Segment Analysis congestion measure

Free Flow Factor is calculated as the "Average Trip Speed" divided by the "Free Flow Trip Speed". The Free Flow Trip Speed is equal to the Maximum Average Trip Speed that is observed in any one of the 24 hours of the day, averaged over all the days.

Congestion is calculated as 1 minus the Free Flow Factor. If the Free Flow Factor is big, the congestion factor (1 - Free Flow Factor) will be small, indicating less congestion. If the Free Flow Factor is low, the congestion factor (1 - Free Flow Factor) will be high, indicating more congestion.



Section II

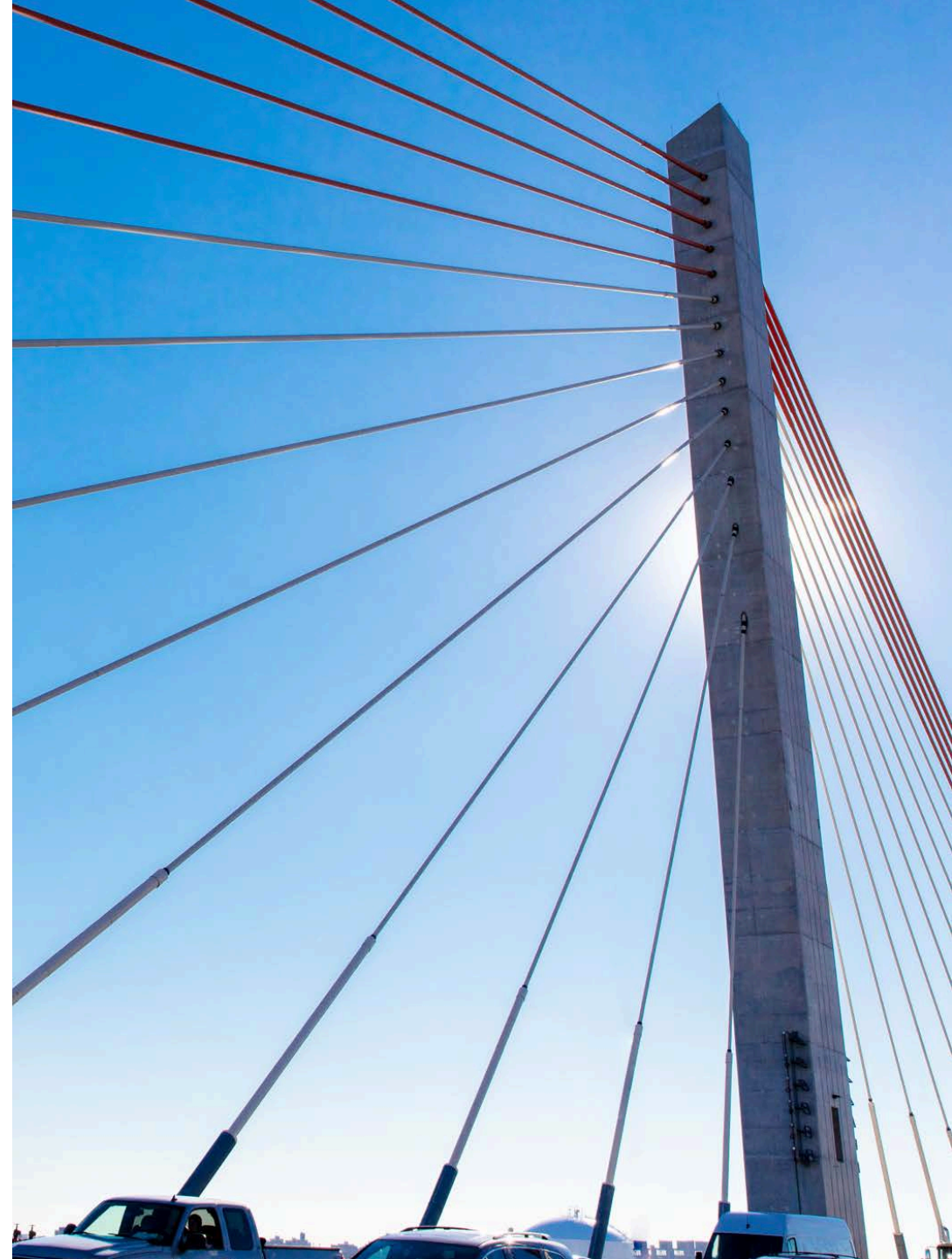
Use Case #5

Environmental Justice Priority Area Analyses



Madison MPO Environmental Justice Priority Area Analyses

- Better understand journey-to-work and other travel by people residing in Environmental Justice (EJ) Priority Areas in order to:
- Identify transportation system improvements that will benefit the residents of these Priority Areas



Examples of Big Data Insights

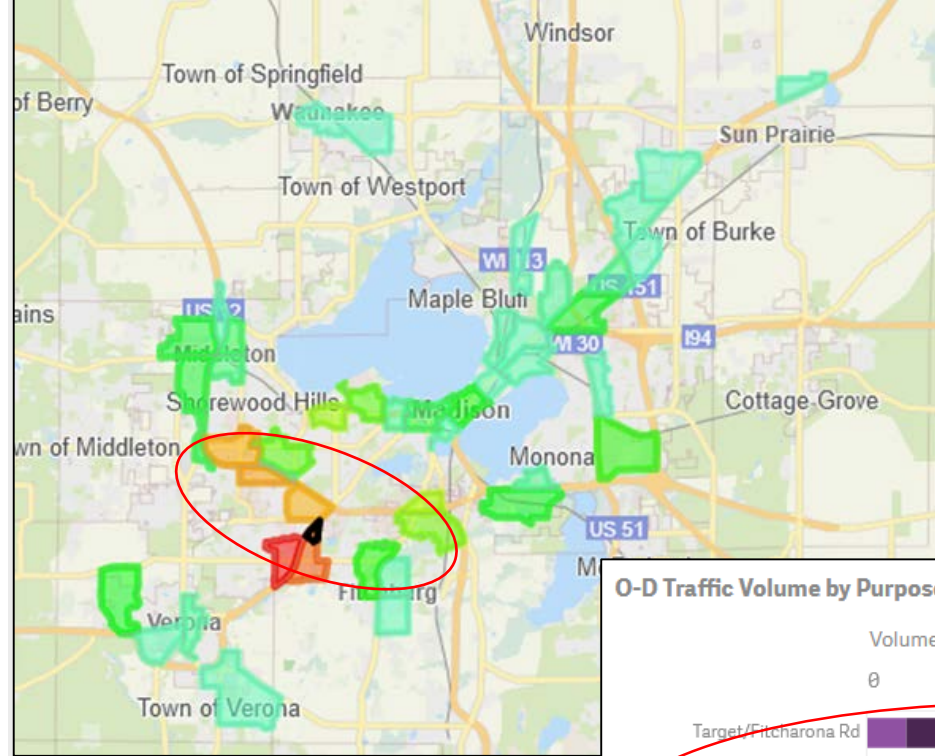
Challenge:

Identify current work locations for residents of EJ Priority Areas

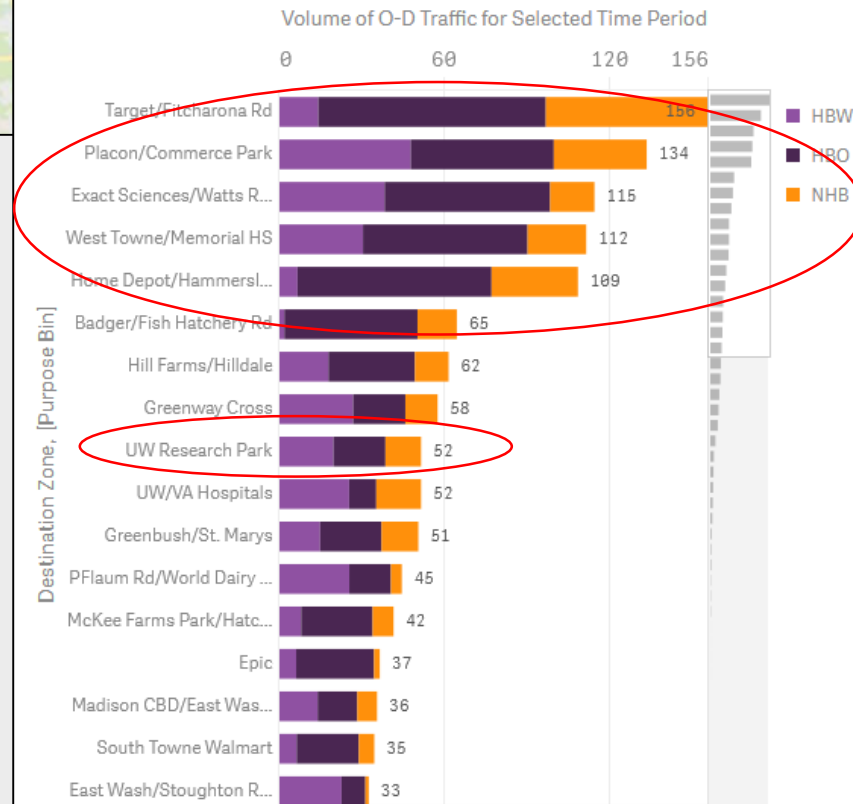
Streetlight Insights® Solution:

O-D Analysis between EJ Priority Areas and Employment Centers

Top Employment Center destinations from EJ areas are generally within the same portion of the metro area – within four miles of each EJ area



O-D Traffic Volume by Purpose



Examples of Big Data Insights

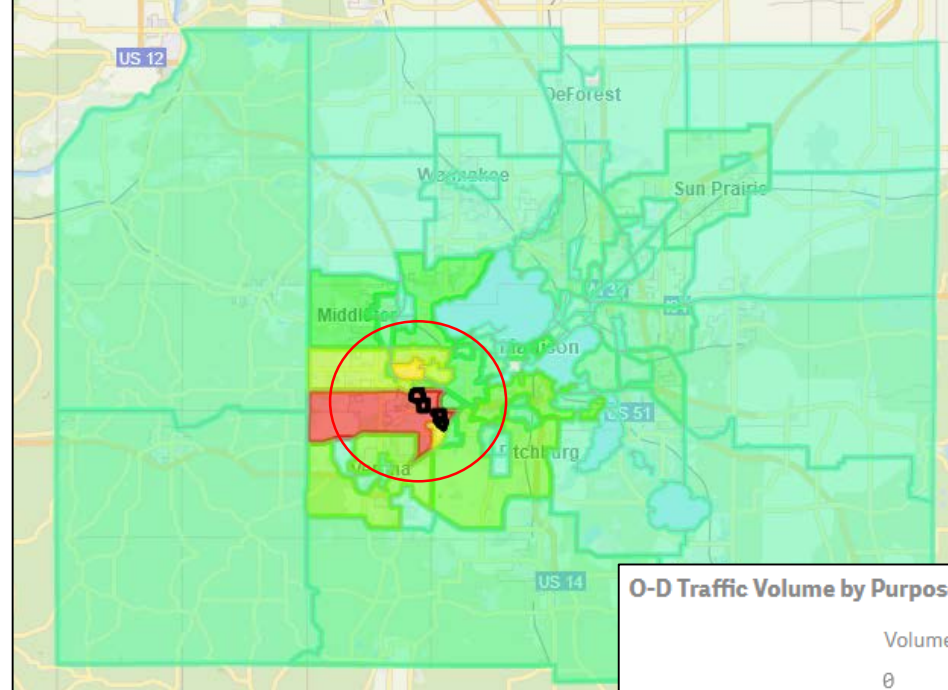
Challenge:

Identify current work locations for residents of EJ Priority Areas

Streetlight Insights® Solution:

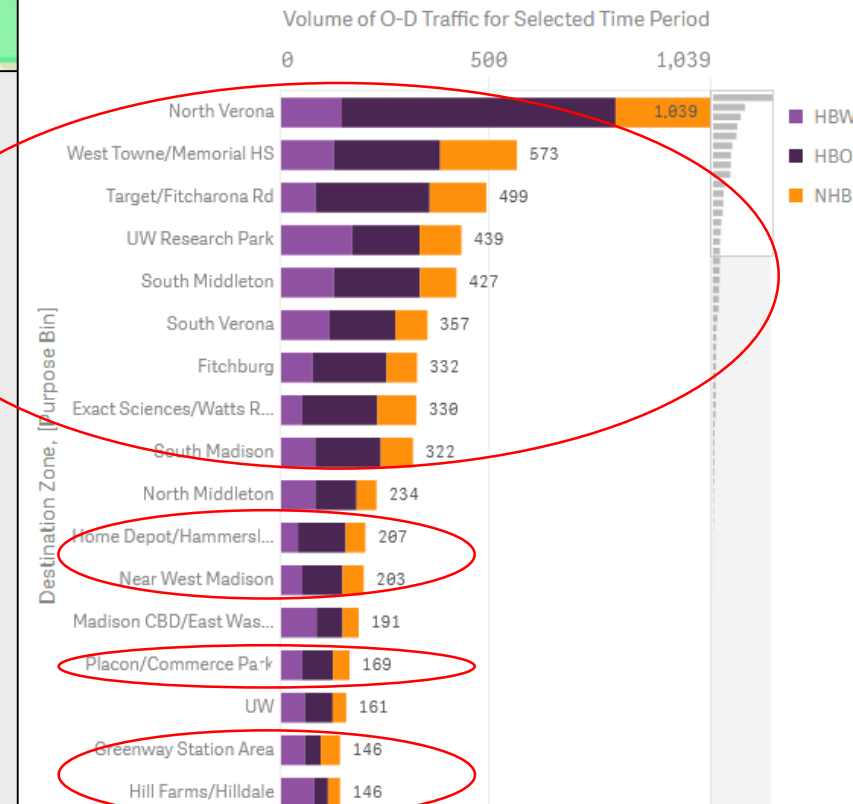
O-D Analysis between Clustered EJ Priority Areas and Employment Centers + Remaining TAZ Super Districts

Top employment destinations from EJ areas are generally within the same portion of the metro area, but are dispersed and not located in Employment Centers



Red Circle shows ~4 mile radius from Clustered EJ Areas

O-D Traffic Volume by Purpose



Examples of Big Data Insights

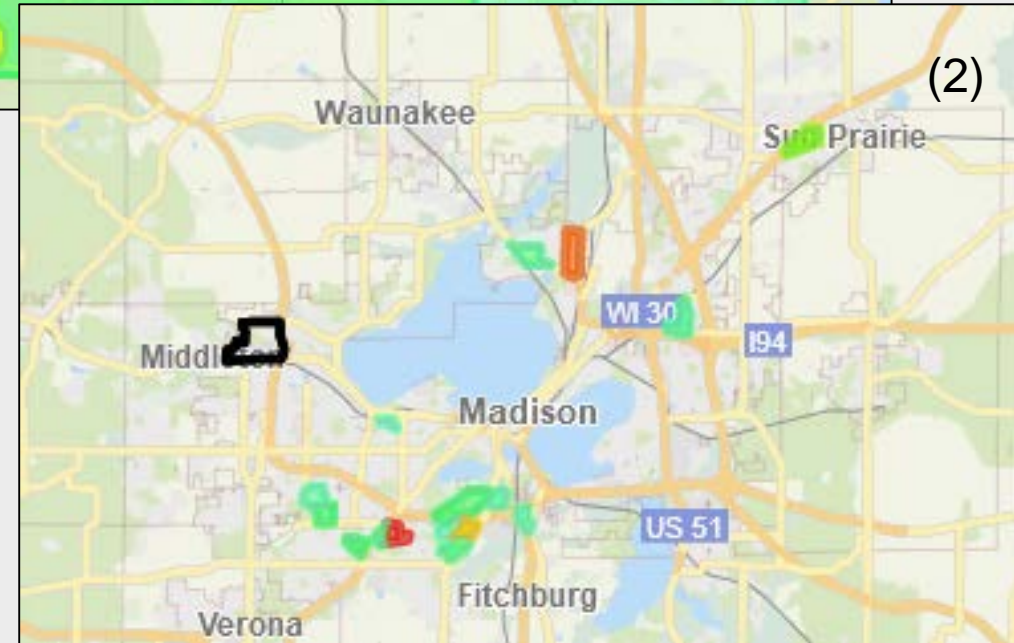
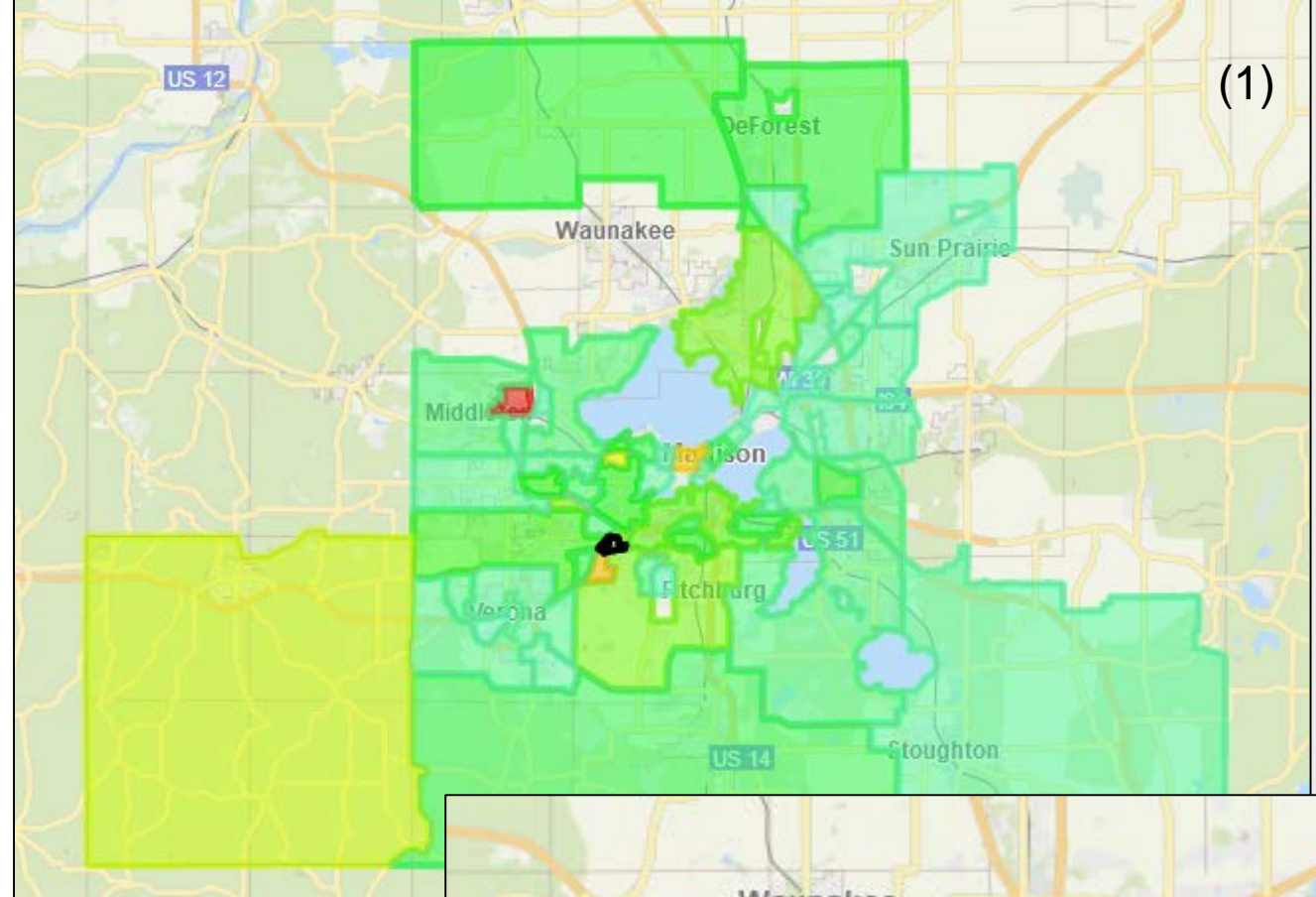
Challenge:

Identify current work locations for residents of EJ Priority Areas for off-peak commutes

Streetlight Insights® Solution:

- 1) O-D Analysis between EJ Priority Areas and Employment Centers + Remaining TAZ Super Districts during off-peak hours (midnight – 6 AM shown)
- 2) Review home (EJ Priority Area) locations for Employment Centers (midnight – 6AM shown)

Off-peak commute patterns often vary considerably from peak-hour commute patterns



Examples of Big Data Insights

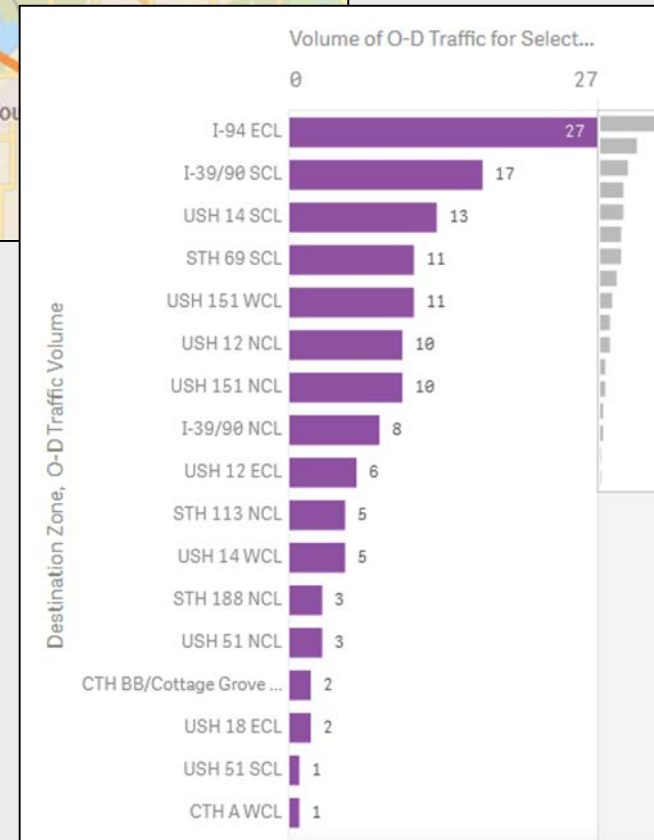
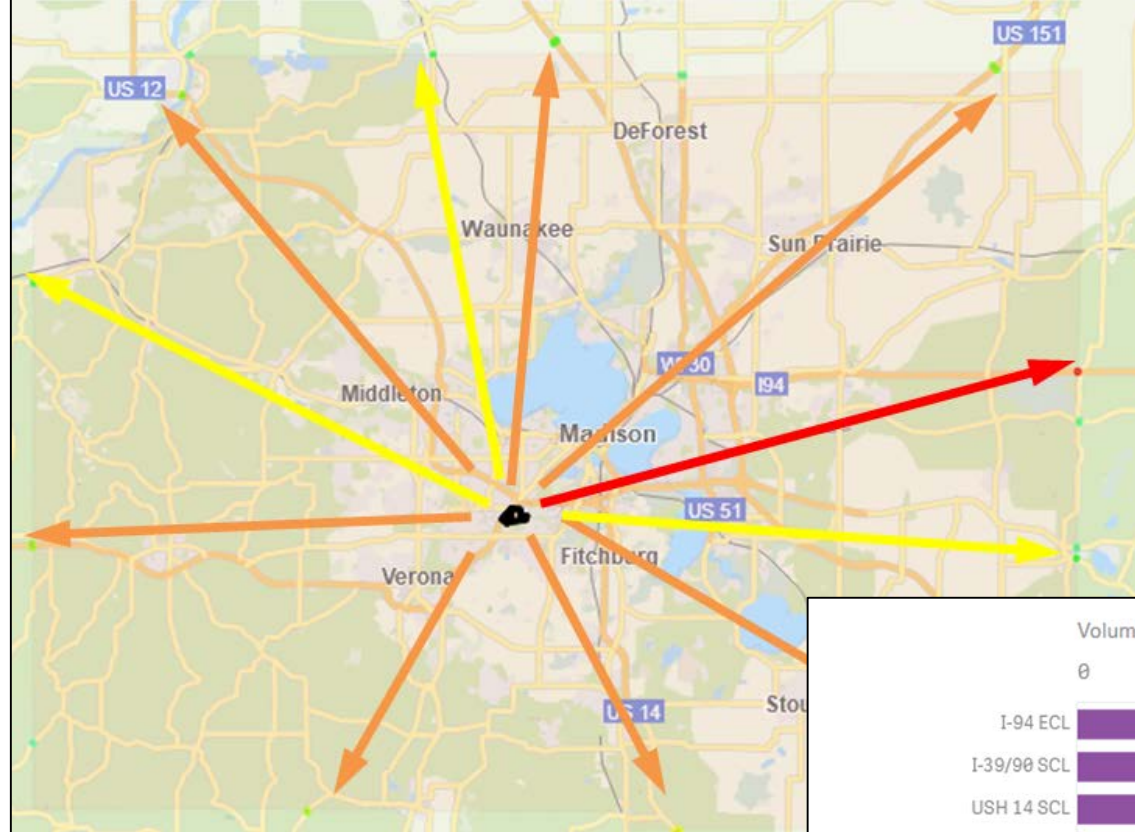
Challenge:

Identify volume of trips, and Dane County “entry points” for residents of EJ Priority Areas

Streetlight Insights® Solution:

O-D Analysis between EJ Priority Areas and bi-directional pass-through zones where roadways cross Dane County lines

Relatively low volumes of trips are made between EJ areas and destinations outside Dane County



Section II

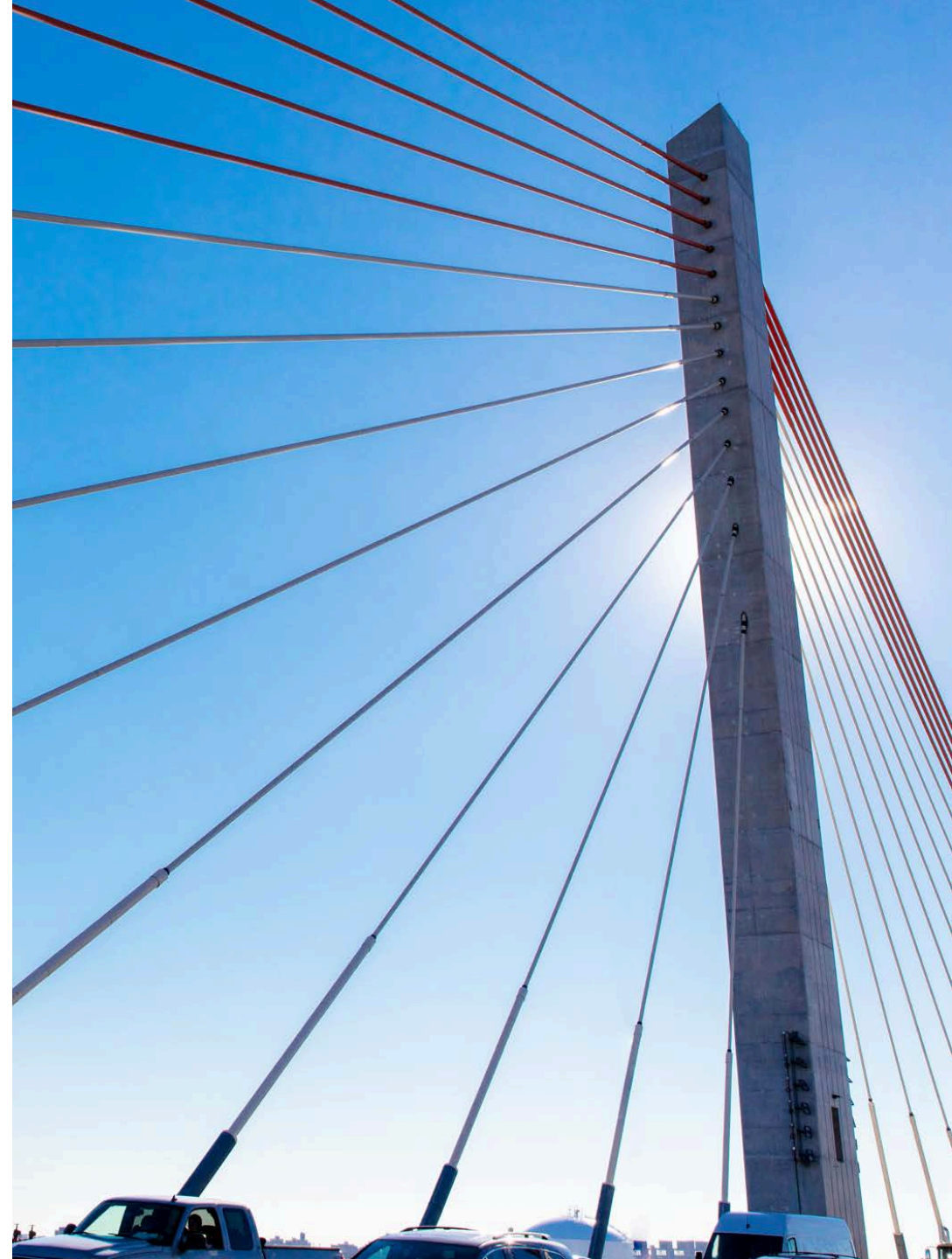
Use Case #6

Bike O-D Analysis



Bike O-D Analysis

- Working to improve understanding of bicycle travel behavior in Dane County, WI.
 - Unable to calibrate StreetLight Index values due to problems with our 2018 bike count data.



Examples of Big Data Insights

Challenge:

Identify key attributes of bike travel in Dane County.

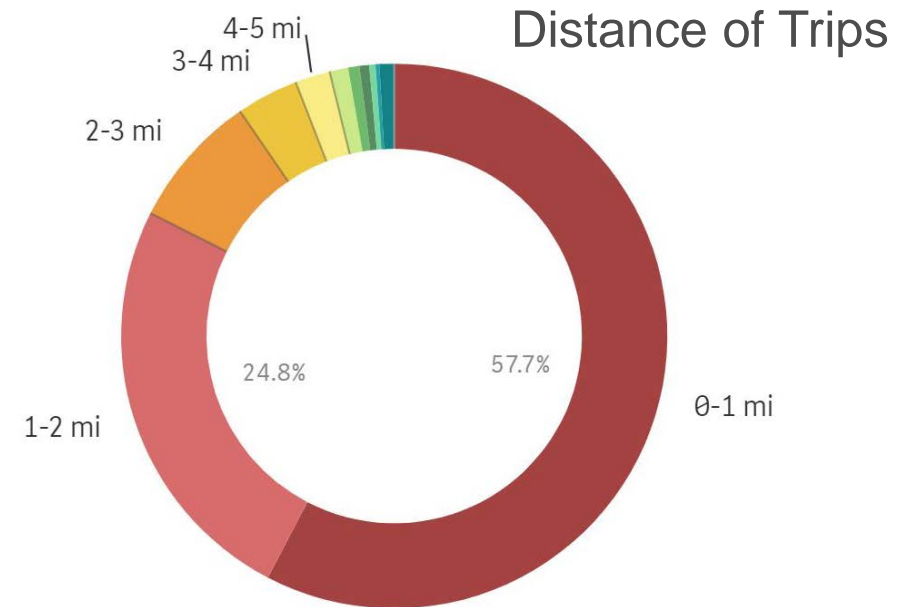
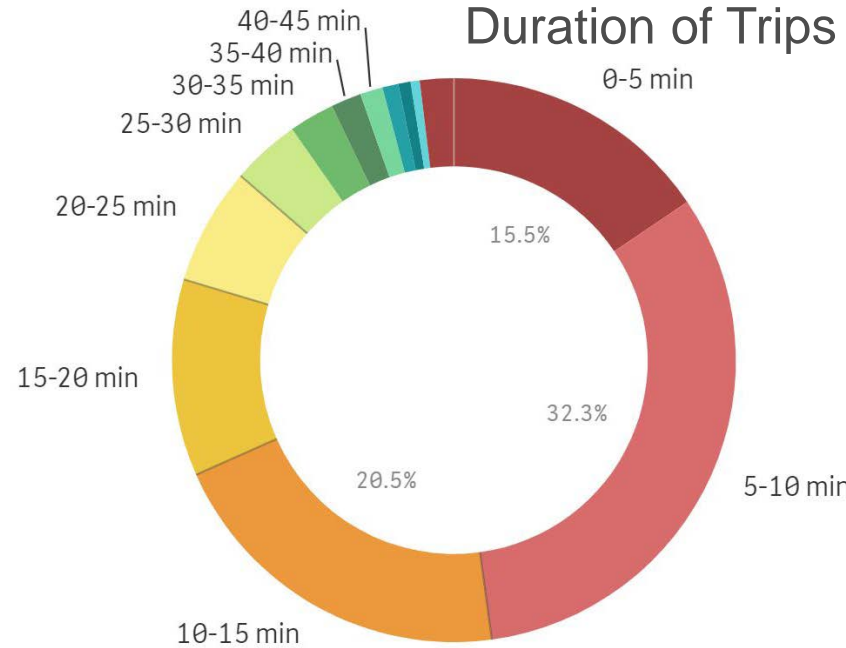
Streetlight Insights® Solution:

Trip distance and duration data show that most bike trips are fairly short.

Median < 1 mi, Average = 2.8 mi.

This is similar to the findings from our 2017 household travel survey. (562 bike trips)

Median 1.2 mi, Average = 1.9 mi.



*2018, Monday-Thursday, all day, including trips beginning and ending in the same zone.

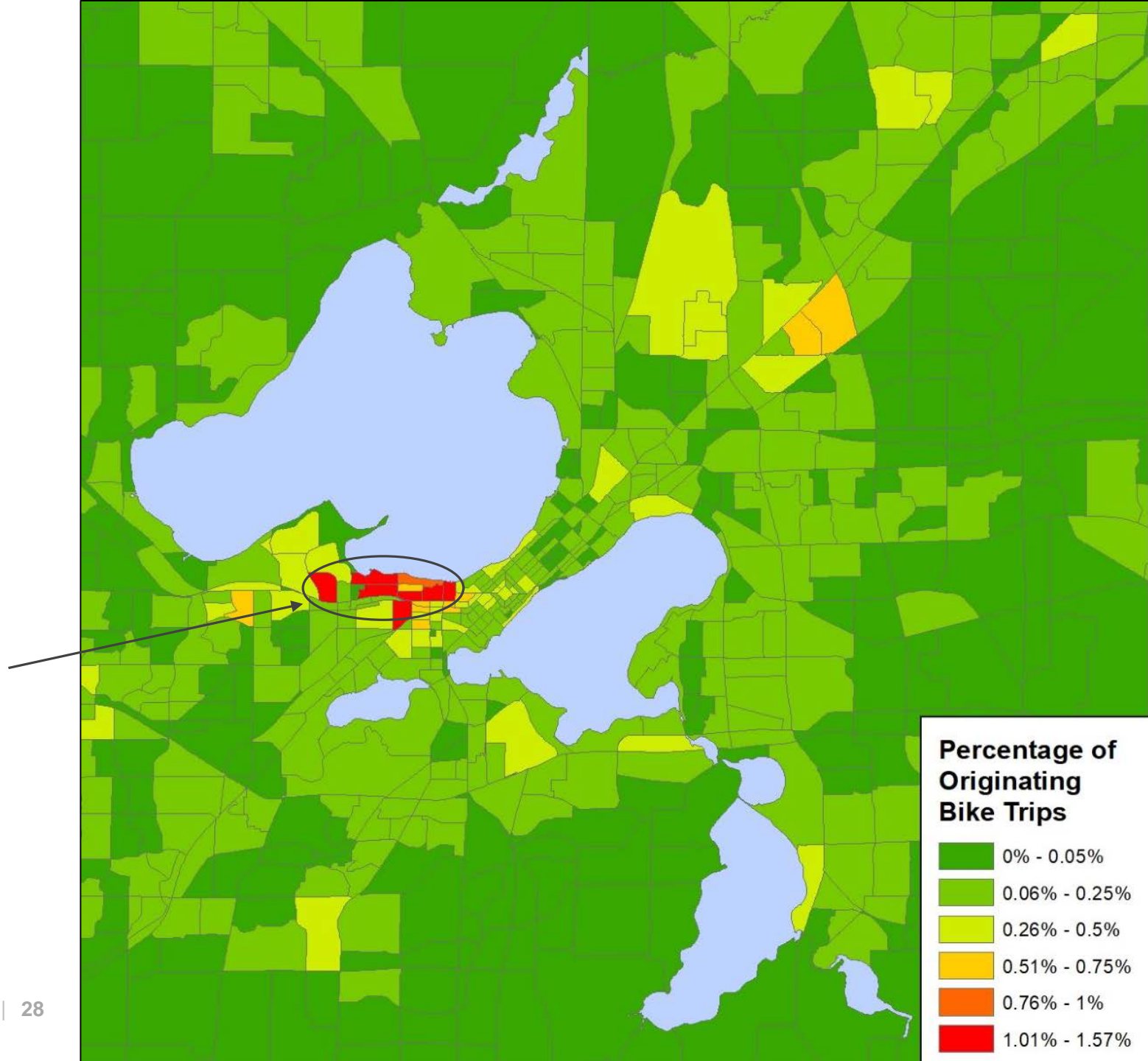
Examples of Big Data Insights

Challenge:

Identify key bike travel nodes.

Streetlight Insights® Solution:

A small cluster of zones in the UW-Madison campus area accounts for nearly 20% of all originating bike trips.



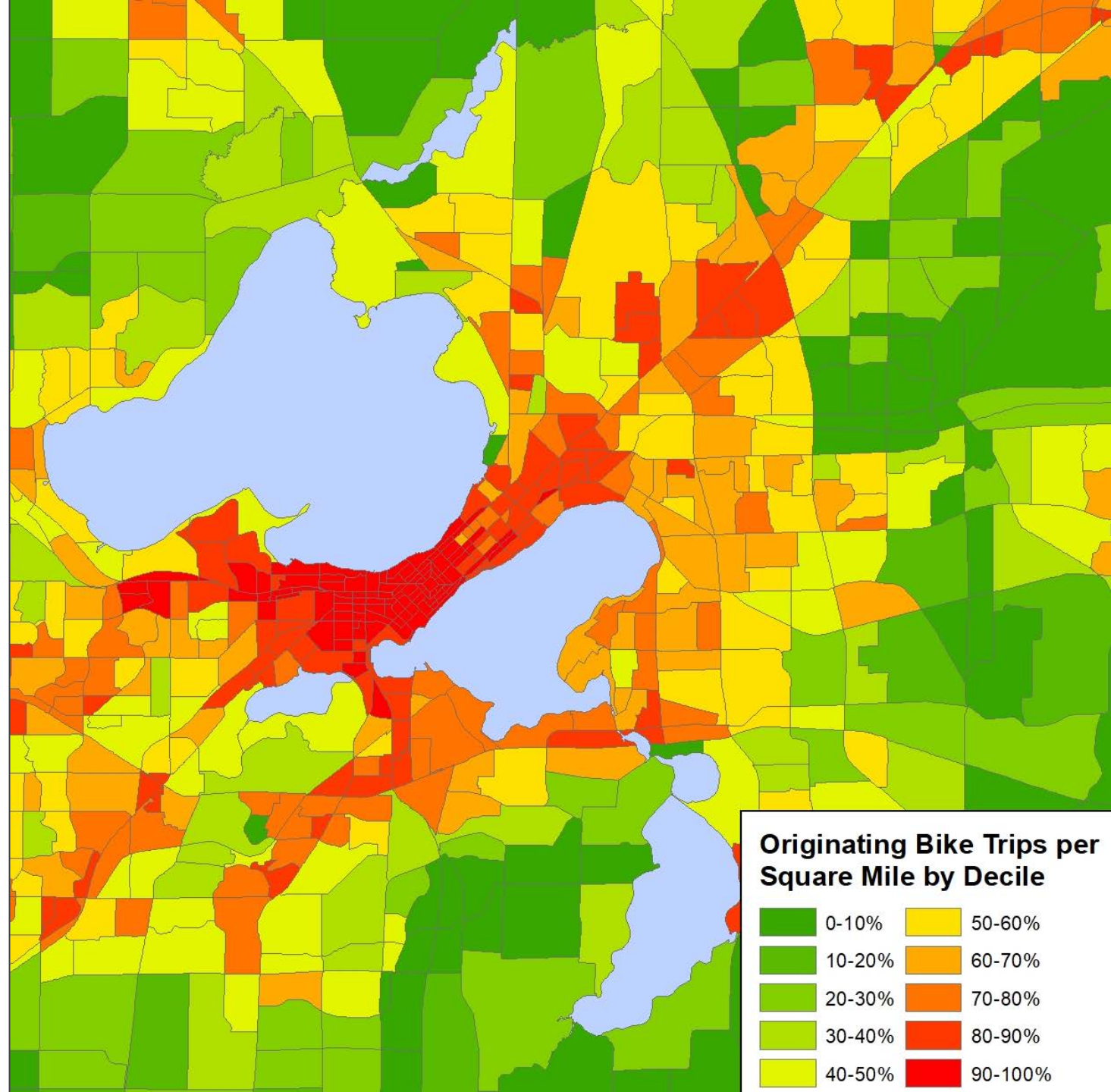
Examples of Big Data Insights

Challenge:

Determine areas of highest bike usage, while accounting for variations in zone size and our current inability to calibrate index values.

Streetlight Insights® Solution:

Normalizing StreetLight Index values by zone area and displaying the results by decile allows us to identify the areas with the highest level of bike usage, despite lacking the ability to calibrate Index values.





STREETLIGHT DATA

Big Data for Mobility

info@streetlightdata.com

TPB (MPO) Agenda Cover Sheet

August 5, 2020

Item No. 11

Re:

Discussion on MPO Targets for the Federal Safety Performance Measures

Staff Comments on Item:

Under the federal transportation performance management framework established by the two most recent federal transportation bills, MAP-21 and the FAST Act, the Federal Highway Administration (FHWA) has finalized six interrelated performance rulemakings to address national goals, including:

- Improving safety;
- Maintaining infrastructure condition;
- Reducing traffic congestion;
- Improving the efficiency of the system and freight movement; and
- Protecting the environment.

The rules establish national performance measures and the methodology for calculating the measures, including data source(s). State departments of transportation (DOTs) and metropolitan planning organizations (MPOs) are required to establish targets for the measures according to a timeline based on when the different rules were finalized and then to track and report on progress toward meeting the targets. New and amended long-range plans and TIPs need to document the strategies and investments planned and programmed to help achieve the targets.

The first federal performance measures to be finalized were those related to safety. The five Highway Safety Improvement Program (HSIP) measures are the number and rate of fatalities and serious injuries and the number of non-motorized fatalities and serious injuries. State DOTs and MPOs must establish annual targets for each of the five HSIP measures. In 2017 WisDOT established the initial state 2018 numerical targets, which represented a 2% reduction in the number and rate of fatalities and a 5% reduction in the number and rate of serious injuries and number of non-motorized fatalities and serious injuries compared to the 2012-2016 average numbers. In 2018 and 2019 WisDOT established targets representing the same percentage reductions. WisDOT is in the process of finalizing the 2021 targets, but it is anticipated that they will use the same percentage reduction targets as in previous years (2% reduction in number and rate of fatalities and 5% reduction for the other safety measures).

MPOs have the option of either agreeing to support the state targets or adopting their own targets. In past years the MPO has elected to support the state performance targets. However, last year language was added to the resolution to say that safety is of utmost importance, the MPO encourages implementing agencies to adopt more aspirational safety goals such as Vision Zero, and the MPO is committed to assisting with these efforts and committed to achieving more aspirational safety goals. That resolution is attached.

During last year's review of the targets, the Board expressed interest in considering establishing unique MPO safety targets this round to better align and support City of Madison and local safety initiatives. It is anticipated that the MPO safety targets for 2021 will be adopted at the October or November Board meeting. Staff is seeking direction from the board in advance of the October/November meeting in order to allow time for staff to determine appropriate MPO specific safety targets should the board wish to go in that direction.

One of the challenges with adopting unique safety targets is having to calculate VMT for the metro area. Currently, we use county VMT estimated by WisDOT. If we adopt our own targets, we must calculate statistics for the metro area, including VMT. With our Streetlight Data subscription we can do that now, but may not have that as an option after next year. Additionally, if MATPB would establish its own safety targets, there would be additional reporting requirements to demonstrate how the MPO was programming projects to achieve these targets. Bascially, we would need to prepare our own report to submit to FHWA similar to what WisDOT does now.

Because MATPB doesn't directly control the programming of HSIP projects nor most other projects, staff believes the primary value for MATPB in the new performance management process is in the reporting and analysis of trends rather than in setting targets. Therefore, staff recommends continuing to simply support the state targets, but using the performance measures report to track performance trends towards the more aspirational long-term goal of zero fatalities.

Materials Presented on Item:

1. Resolution TPB No. 162 adopting the 2020 Federal Highway Safety Improvement Program performance measure targets
2. Safety measures page from the 2018 Performance Measures Report published last year

Staff Recommendation/Rationale:

For discussion purposes only at this time.

Resolution TPB No. 162

Adopting Annual Federal Highway Safety Improvement Program Performance Measure Targets

WHEREAS, the Madison Area Transportation Planning Board (MATPB) is the designated Metropolitan Planning Organization (MPO) responsible, together with the state and Metro Transit, for comprehensive, continuing, and cooperative metropolitan transportation planning and project programming for the Madison, WI Metropolitan Planning Area; and

WHEREAS, federal transportation legislation (MAP-21 and FAST Act) and associated federal rules (Title 23, Section 134 U.S.C.) requires that each MPO undertake a transportation planning process that provides for the establishment and use of a performance-based approach to transportation decision making to support national goals while also establishing performance targets that address the performance measures to use in tracking toward attainment of critical outcomes for the region; and

WHEREAS, the U.S. Department of Transportation (USDOT) established five national performance measures for the Highway Safety Improvement Program (HSIP) within the National Performance Management Measures: Highway Safety Improvement Program; Final (23 CFR 490, Subpart B); and

WHEREAS, the Wisconsin Department of Transportation (WisDOT) has established statewide calendar year 2020 targets for each of the five HSIP performance measures in accordance with 23 CFR 490.209 as part of its HSIP report in August 2019 as follows;

Number of motor vehicle crash fatalities – 564.7 (2% reduction from 2014-'18 average)

Rate of fatalities per 100 million vehicle miles traveled – 0.888 (2% reduction from 2014-'18 average)

Number of serious injuries – 2,907 (5% reduction from 2014-'18 average)

Rate of serious injuries per 100 million vehicle miles traveled – 4.585 (5% reduction from 2014-'18 average)

Number of non-motorized fatalities and serious injuries – 345 (5% reduction from 2014-'18 average); and

WHEREAS, metropolitan planning organizations (MPOs) must also annually establish calendar year targets for each of the five HSIP performance measures by either agreeing to plan and program projects so that they contribute to the accomplishment of WisDOT's HSIP targets or by committing to quantifiable HSIP targets for the Metropolitan Planning Area; and

WHEREAS, the Madison Area Transportation Planning Board (MATPB) intends to continue to track the HSIP performance measures for Dane County and report on these measures annually as part of its Performance Measures report, but has decided to continue to support the state HSIP performance measure targets rather than develop its own targets due to the fact MATPB has authority for programming versus approving only a very small percentage of available federal funding and none of the HSIP funding; and

WHEREAS, MATPB nonetheless views safety for all modes of travel as being of utmost importance and a critical element of its vision for the regional transportation system; and

WHEREAS, MATPB encourages implementing agencies, including WisDOT, Dane County, and local jurisdictions, to adopt more aspirational safety goals such as Vision Zero and to increase their efforts to develop projects, programs, and policies to help achieve more dramatic reductions in fatalities and serious injuries; and

WHEREAS, MATPB is committed to assisting implementing agencies with these efforts in any way it can such as through crash studies, other data analysis, and re-evaluating how projects are prioritized for funding; and

WHEREAS, MATPB remains committed to achieving more aspirational safety goals and using the annual safety measure reporting and target setting process to evaluate the region's progress toward making the regional transportation system safer for all users:


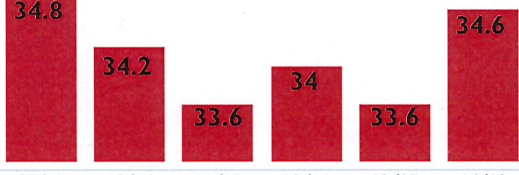


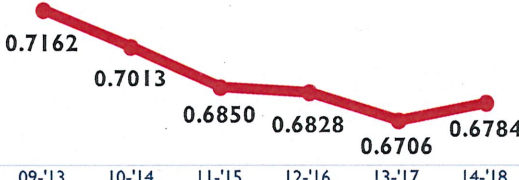


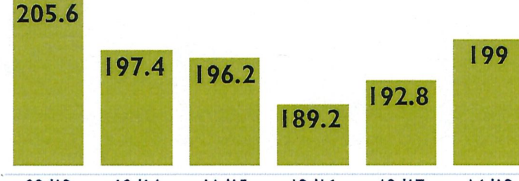





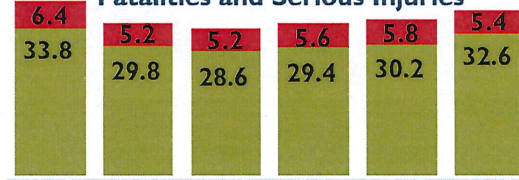

NOW, THEREFORE, BE IT RESOLVED that MATPB agrees to plan and program projects within the Madison Metropolitan Planning Area so that the projects contribute toward the accomplishment of WisDOT's calendar year 2020 HSIP targets for all five of the following performance measures:

- Number of fatalities,
- Rate of fatalities,
- Number of serious injuries,
- Rate of serious injuries, and
- Number of non-motorized fatalities and non-motorized serious injuries.

November 6, 2019
Date Adopted

Mark Opitz
Mark Opitz, Chair
Madison Area Transportation Planning Board

Improve Public Health, Safety, and Security

Performance Measure	Target	Data and Trends	Current Status	Analysis
Motor Vehicle Crash Fatalities* The five-year rolling average of annual total fatalities in Dane County	 DECLINE Reduce by 2%	Dane County Motor Vehicle Fatalities 	 INCREASE Does Not Meet Target	Dane County experienced an average of 34.6 fatalities per year due to a motor vehicle collision for the 5-year period from 2014-2018, an increase of 2.9% from the previous reporting period.
Motor Vehicle Crash Fatality Rate* The five-year rolling average of annual fatalities in Dane County per 100 million vehicle miles traveled (VMT)	 DECLINE Reduce by 2%	Dane County Motor Vehicle Fatality Rate 	 INCREASE Does Not Meet Target	Crash rates help explain the relative safety of the system, allowing for locations with differing amounts of traffic to be compared against other locations. The 2014-2018 5-year fatality rate for Dane County was 0.678, an increase of 1.2% from the previous period.
Motor Vehicle Crash Serious Injuries* The five-year rolling average of annual total serious motor vehicle injuries in Dane County	 DECLINE Reduce by 5%	Dane County Motor Vehicle Serious Injuries 	 INCREASE Does Not Meet Target	Dane County experienced an average of 199 serious injuries as a result of a motor vehicle collision for the 2014-2018 5-year period, an increase of 3.1% over the previous period.
Motor Vehicle Crash Serious Injury Rate* The five-year rolling average of annual serious motor vehicle injuries in Dane County per 100 million vehicle miles traveled (VMT)	 DECLINE Reduce by 5%	Dane County Motor Vehicle Serious Injury Rate 	 INCREASE Does Not Meet Target	The five-year serious injury rate for Dane County was 3.903, an increase of 1.4% from the previous period.
Non-Motorized Vehicle Crash Fatalities and Serious Injuries* The five-year rolling average of annual total bike and pedestrian fatalities and serious injuries.	 DECLINE Reduce by 5%	Dane County Non-Motorized Fatalities and Serious Injuries 	 INCREASE Does Not Meet Target	Non-motorized fatalities and serious injuries decreased in 2018, however the average combined number of non-motorized fatalities and serious injuries for the 2014-2018 period increased 5.3% over the previous period.

Rolling averages smooth out the year-to-year fluctuations in the number of crashes that can occur due to the randomness of crash events that can skew the data in a particular year, allowing for an examination of trends over time. To develop the averages, counts and rates are added for a series of years and averaged for the time period.

*Indicates federal performance measure and MPO adopted targets