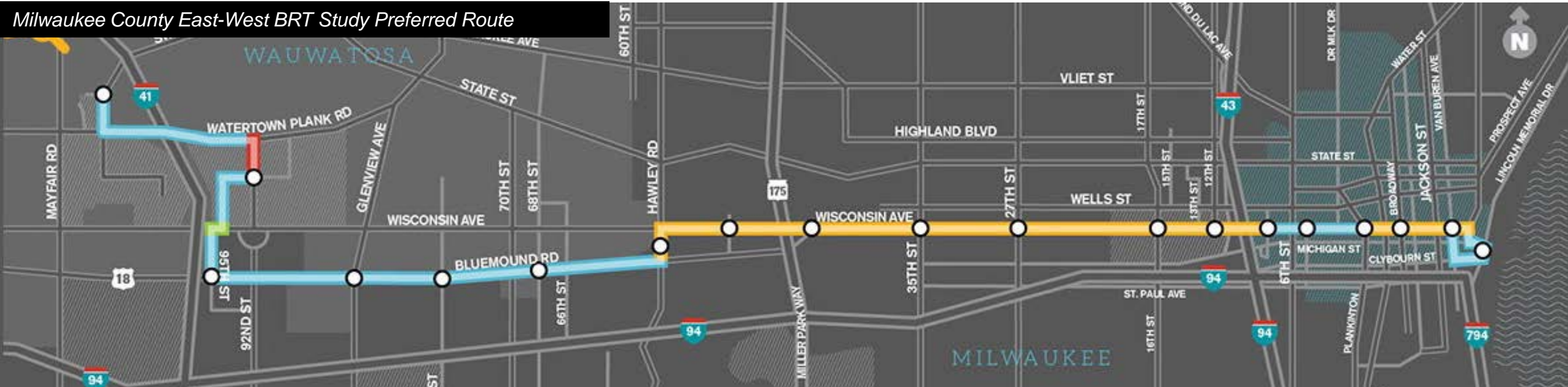


# Planning for Bus Rapid Transit in the Milwaukee Region

*Milwaukee County East-West BRT Study Preferred Route*



*UWM Bus Rapid Transit Course, Fall 2015*



*Cleveland Health Line Bus Rapid Transit*

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# Panelists

- Kevin Muhs, Deputy Director
    - Southeastern Wisconsin Regional Planning Commission
  - Robert Schneider, Associate Professor
    - UW-Milwaukee, Department of Urban Planning
  - Jeff Sponcia, Manager of Planning
    - Milwaukee County Transit System
  - Ashley Booth, Planning & Technical Services Director
    - HNTB Corporation
-

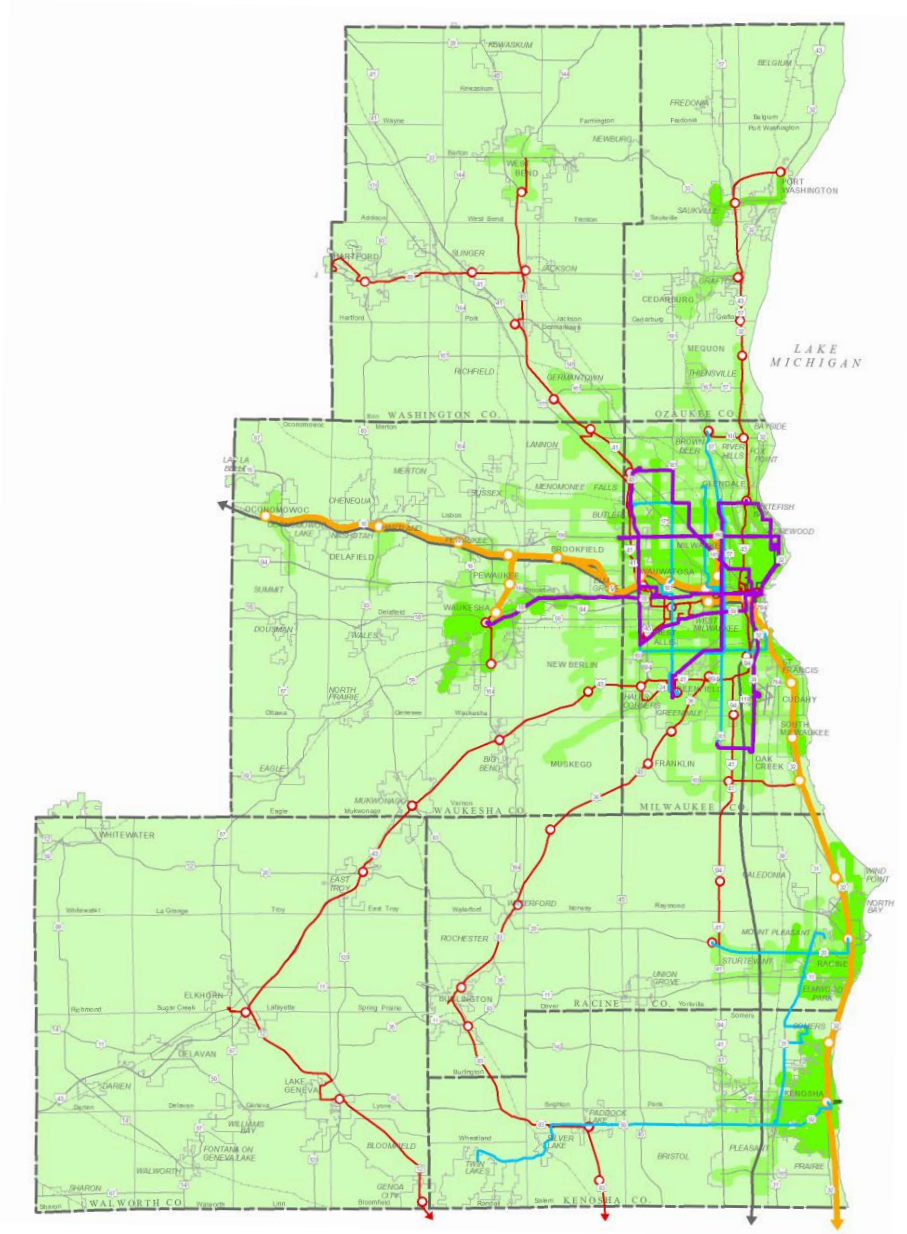


# Introduction to BRT and Transit Planning in Southeastern Wisconsin

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Kevin Muhs

Southeastern Wisconsin Regional Planning Commission



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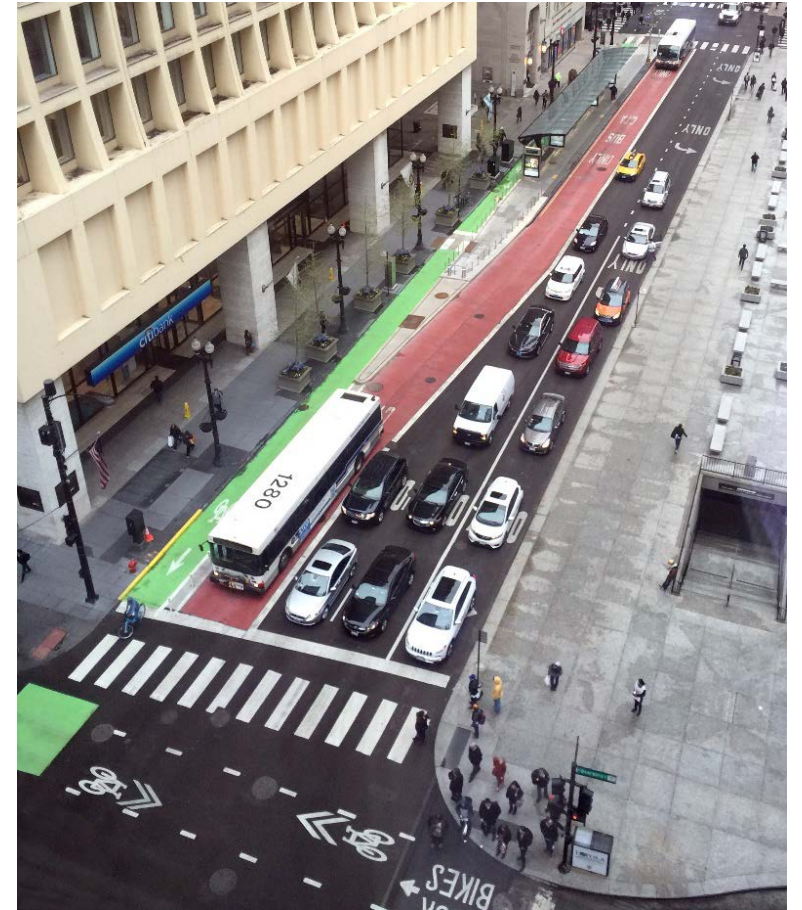
# What is BRT?

High quality, bus-based transit service

- Fast
- Convenient
- Comfortable
- Reliable

With:

- Transit-only lanes
- Traffic signal priority
- High Quality Stations
- Improved Vehicles



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# Transit-Only Lanes

- Painted or otherwise separated from general travel lanes
- Can either be center-running (along the median) or curb-running (in the rightmost lane)





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# Transit Signal Priority

- Extends Green Lights to decrease the chances that a bus will have to stop for a red light
- Uses similar technology as Emergency Vehicle Signal Preemption systems – already installed at many intersections in the Region – at a lower priority than emergency vehicles



# High Quality Stations

- Spaced every ½ to 1 mile





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# High Quality Stations

- Scale and presence can vary by neighborhood





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# Improved Vehicles and Branding

- Signals a different, better service to passengers and the community
- Increased passenger comfort
- Easily identifiable



---

# Where is BRT used?

- Successful in hundreds of cities worldwide; dozens more under construction across U.S.
- Comparable cities with BRT
  - Kansas City, Missouri
  - Cincinnati and Cleveland, Ohio
  - Jacksonville, Florida
  - San Antonio and El Paso, Texas





---

# Why BRT?

- BRT plays a vital role in a **healthy, multimodal** transportation system that connects people to **jobs**, and businesses to their **customers**
  - BRT is **cost-effective, efficient** and has been proven to increase transit use with **improved service** frequencies, travel time and reliability
  - BRT supports and sparks millions of dollars in **economic development**
  - BRT meets a critical need to **mitigate traffic congestion** during the multi-year reconstruction of I-94
-

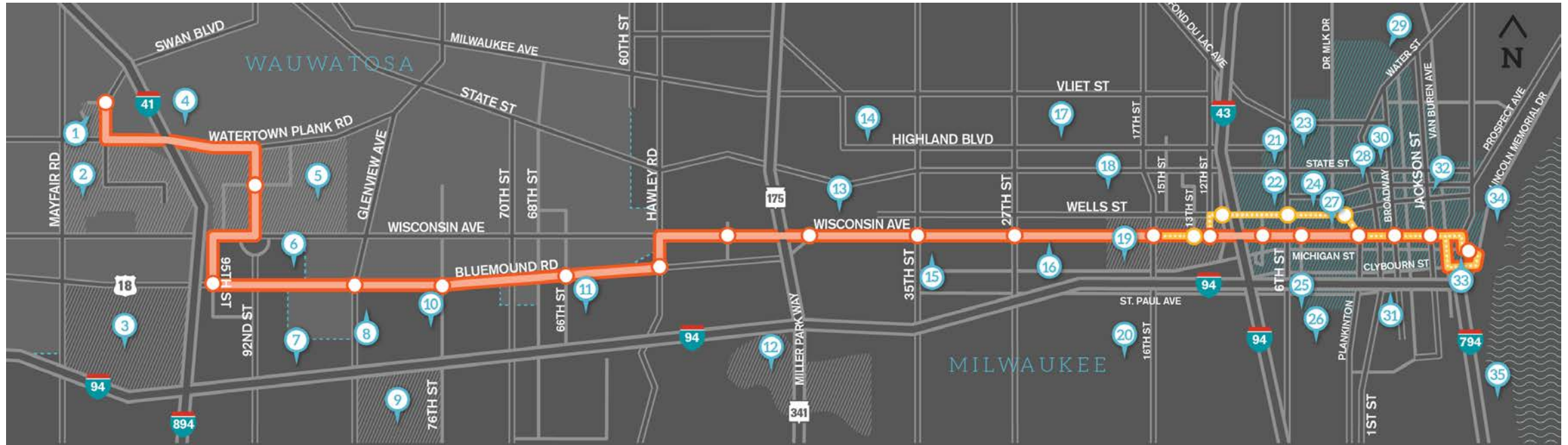
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# The East-West Corridor

- 9-mile regional, modern bus rapid transit service
  - Connects downtown, Near West Side, Marquette University, Wauwatosa and the MRMC
  - Provides improved access to region's most vital, most traveled and most congested corridor
-



# The East-West Corridor



Preferred route and station locations for the East-West BRT designated based on technical analysis and public/stakeholder input during the 2016 feasibility study



Wells Street/Wisconsin Avenue downtown alignment and station locations if conditions arise in which the preferred route is found not to be feasible

1. Watertown Plank Park & Ride Lot
2. Milwaukee County Research Park
3. Milwaukee County Zoo
4. UWM Innovation Campus
5. Milwaukee Regional Medical Center
6. Wisconsin Lutheran College
7. Honey Creek Corporate Center

8. Wisconsin Lutheran High School
9. Wisconsin State Fair Park
10. Pius XI High School
11. MacDowell Montessori School
12. Miller Park
13. Miller Brewing Co.
14. Harley-Davidson Motor Company

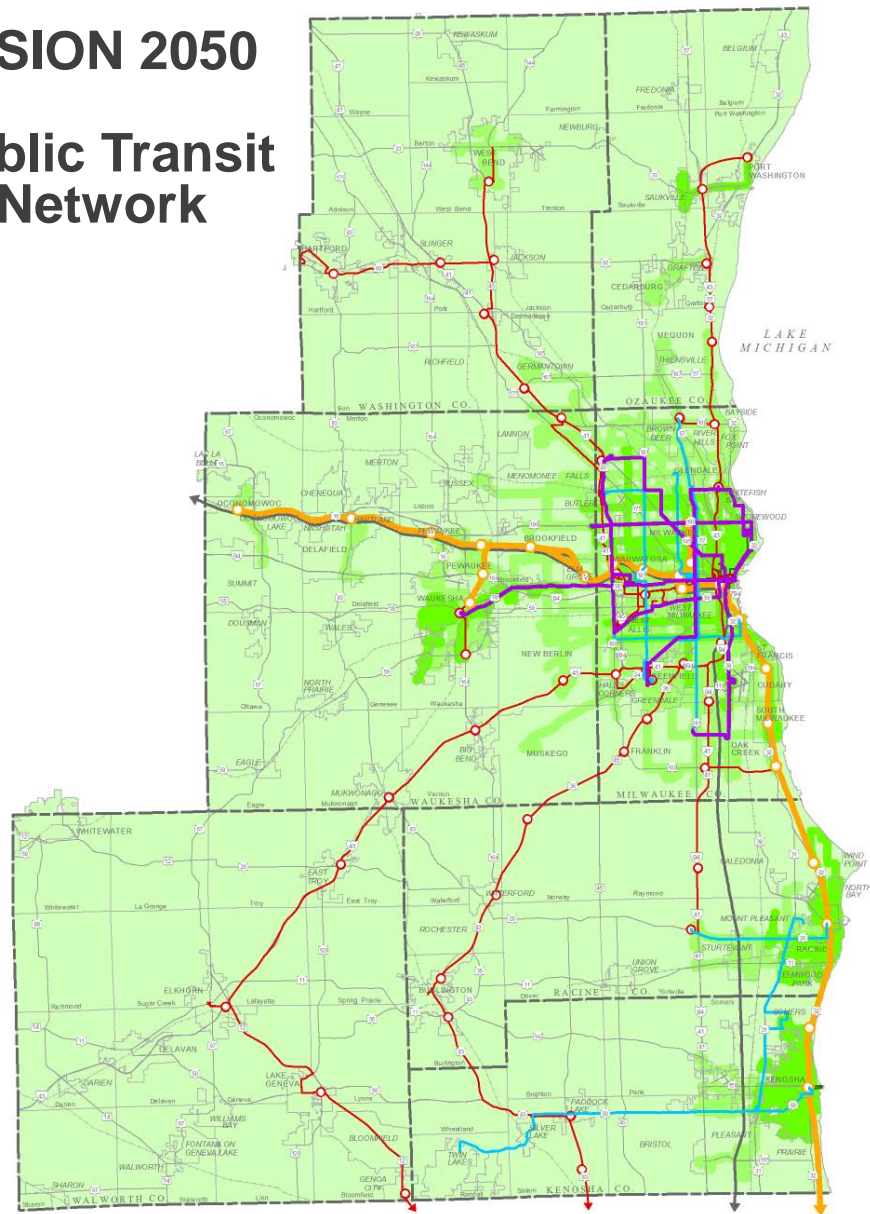
15. Marquette University High School
16. The Rave/Eagles Club
17. Milwaukee High School of the Arts
18. Milwaukee Academy of Science
19. Marquette University
20. Potawatomi Hotel & Casino
21. Milwaukee Area Technical College

22. Milwaukee Public Museum
23. Milwaukee Bucks Arena District
24. Wisconsin Center
25. Milwaukee Intermodal Station
26. Harley-Davidson Museum®
27. The Shops of Grand Avenue
28. Marcus Center for the Performing Arts

29. Downtown Central Business District
30. Milwaukee School of Engineering
31. Milwaukee Public Market
32. Tenor High School
33. The Couture
34. Milwaukee Art Museum
35. Henry W. Maier Festival Park

## VISION 2050

### Public Transit Network



## Regional Connectivity

- Key part of regional transportation plan
- Builds on existing MCTS routes
- Provides opportunities to spur development of and connections to more corridors in region
  - Plan identifies system of 8 rapid transit lines (purple)
  - East-West BRT is “central spine” of the network



# UW-Milwaukee BRT Workshop: A Vision for Bus Rapid Transit in Milwaukee

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Robert Schneider

UW-Milwaukee Department of Urban Planning



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# Fall 2015

- What could a regional BRT system look like?
  - Station design concepts
  - Possible route and station locations
  - Potential benefits
- 21 students
- Co-taught with Associate Professor, Ivy Hu
- <http://uwm.edu/sarup/work/uwmilwaukeebusrapidtransitworkshop2015/>

All Aboard: Bus Rapid Transit in Milwaukee

Technical Report  
BRT Overview  
Route Analysis: East-West Wisconsin Avenue Corridor

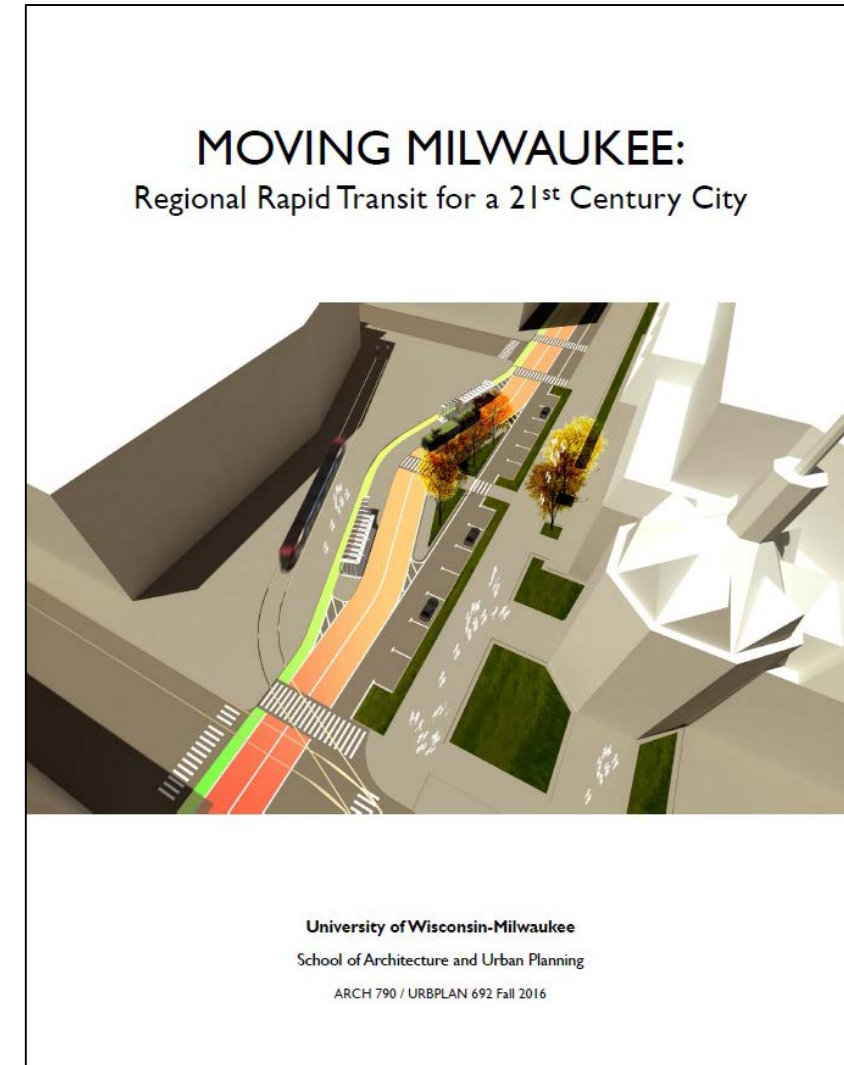
School of Architecture and Urban Planning  
University of Wisconsin – Milwaukee

December 2015



# Fall 2016

- Can we create a more realistic vision?
  - Possible route and station locations
  - Development potential
- What messages should be communicated?
  - Efficiency, safety, equity, competitiveness
- 11 students
- <https://uwm.edu/sarup/work/uwmilwaukeebusrapidtransitworkshop/>



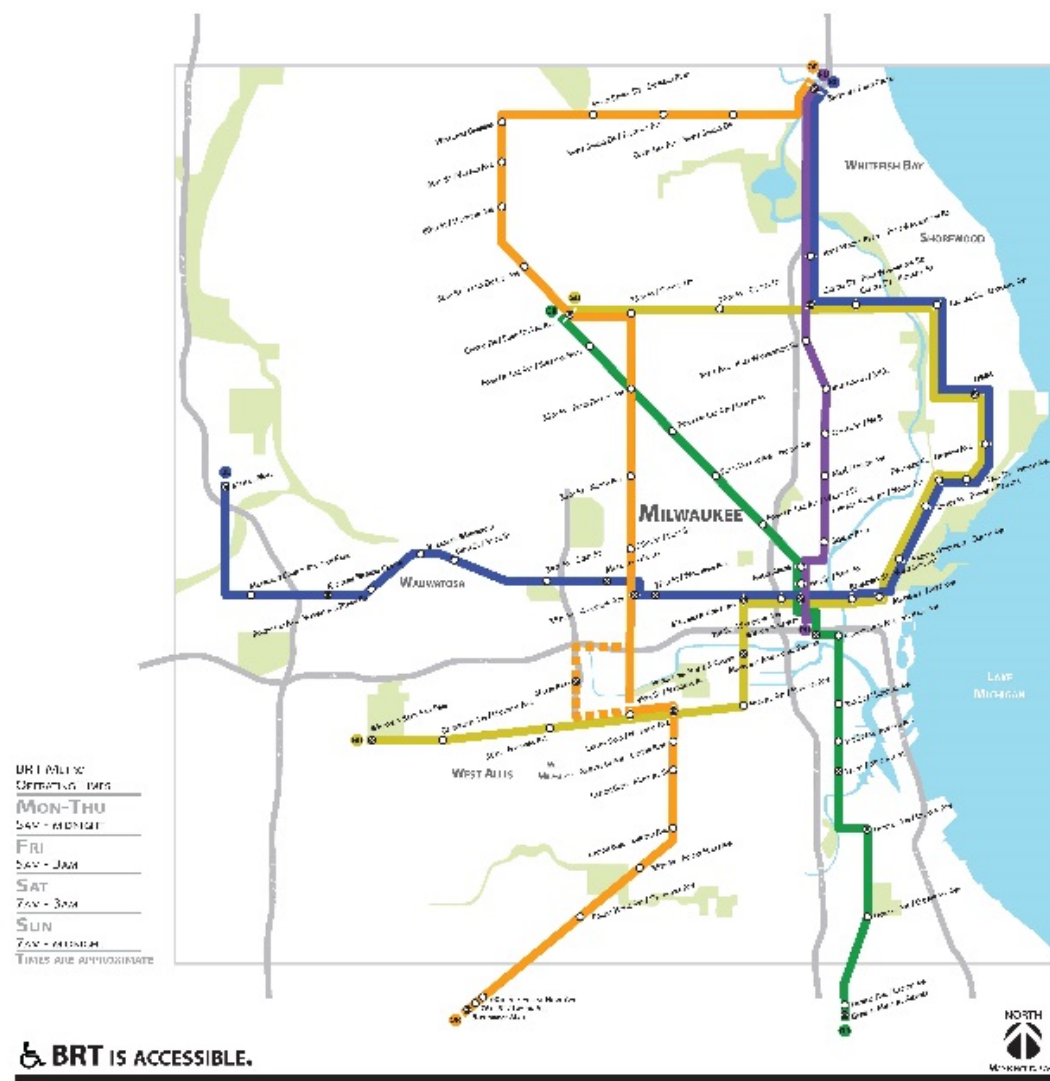


### SYSTEM MAP ALTERNATIVE #1



**LEGEND**

- [illegible]

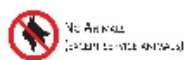


*UWM Bus Rapid Transit  
Course, Fall 2015: System  
Map, Alternative 1*

 **BRT IS ACCESSIBLE.**



No. 5-000000

No Error  
or Deviation

## ACKNOWLEDGMENTS



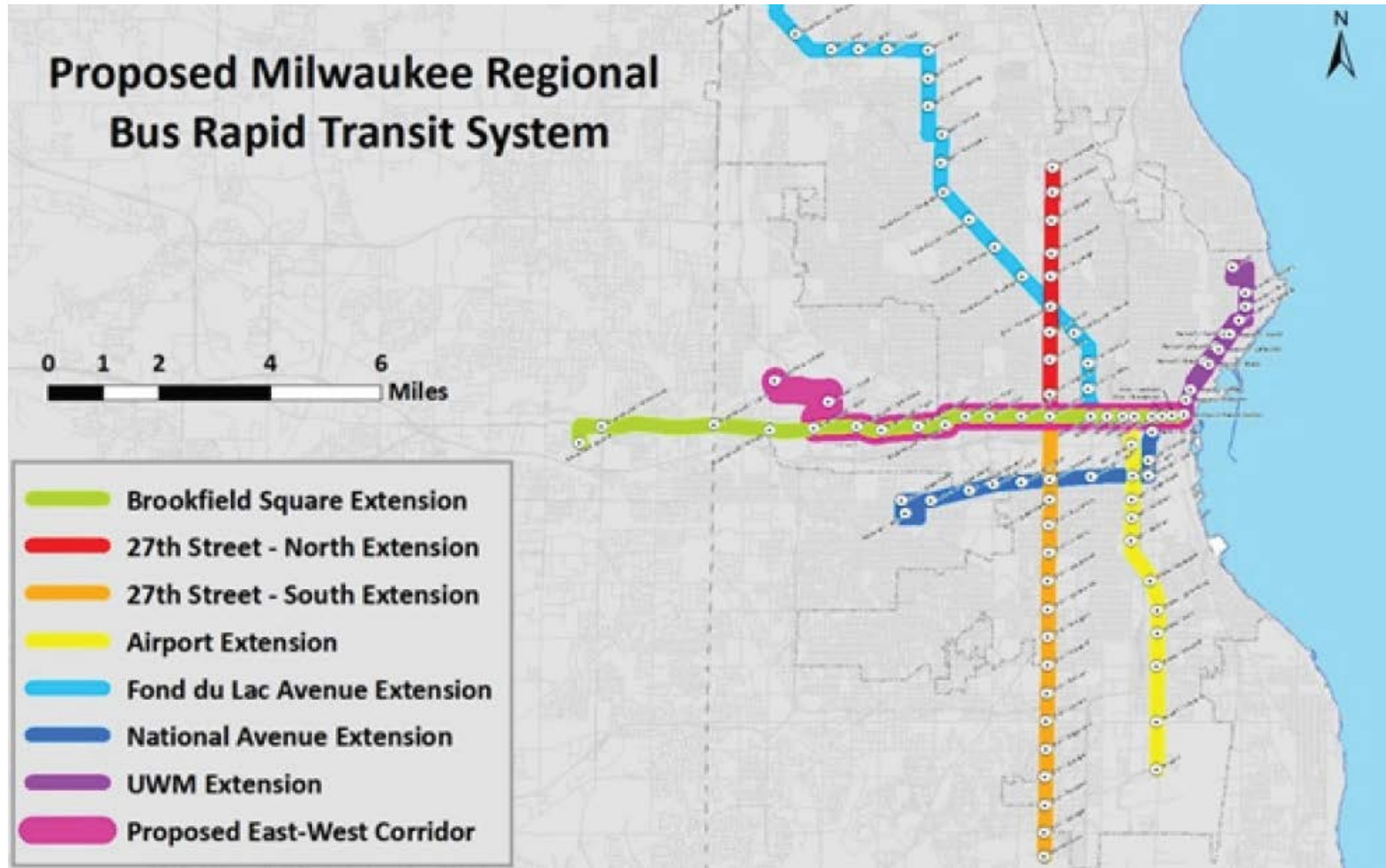
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Excess Income



UWM Bus Rapid Transit Course, Fall 2016: System Map





PRODUCED BY UWM'S BUS RAPID TRANSIT CLASS - FALL 2015



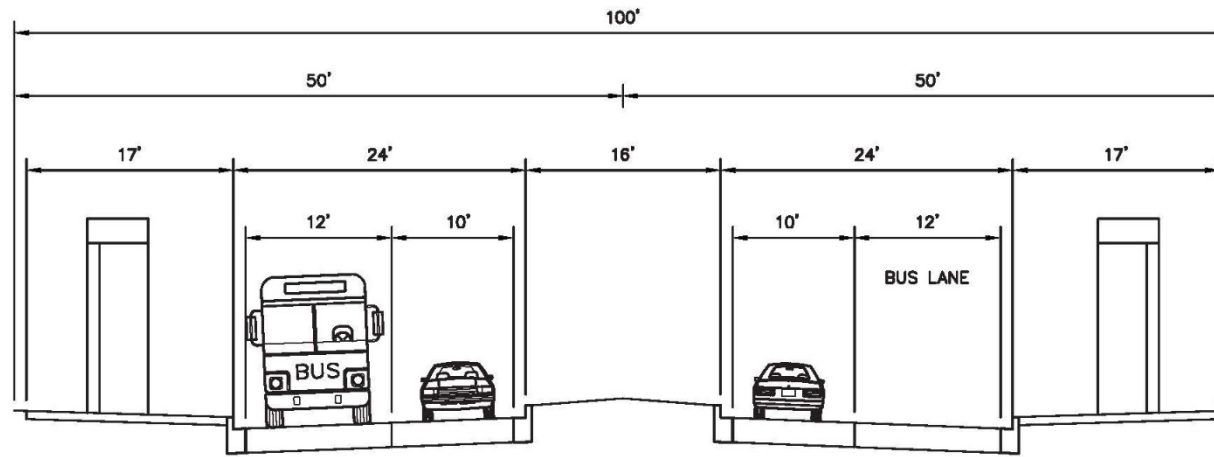


PRODUCED BY UWM'S BUS RAPID TRANSIT CLASS - FALL 2015

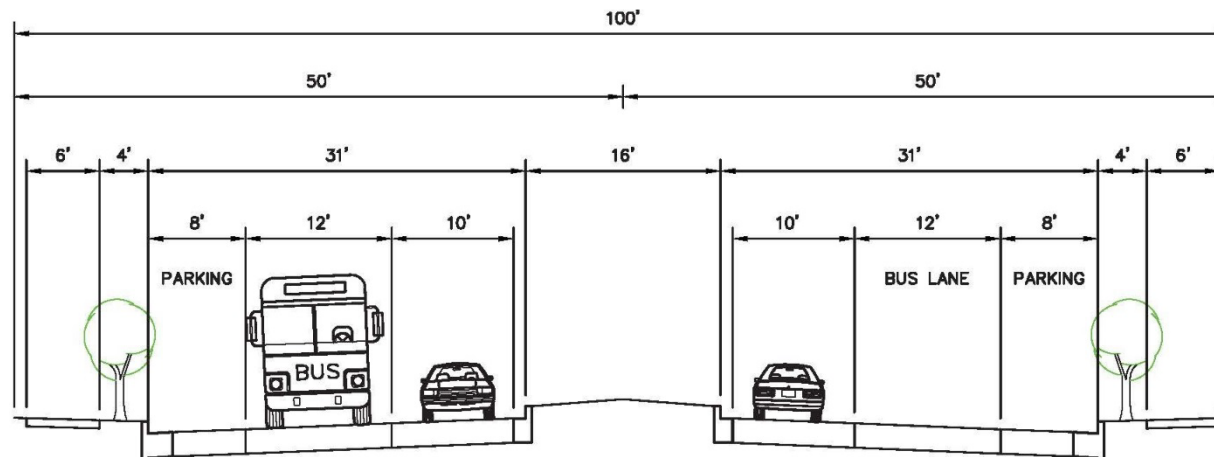




PRODUCED BY UWM'S BUS RAPID TRANSIT CLASS - FALL 2015



CURBSIDE BRT LANES, TWO TRAVEL LANES, AND CURB EXTENSIONS  
WISCONSIN AVENUE – 13TH ST. TO 37TH ST.  
WITH CURBSIDE STATIONS



CURBSIDE BRT LANES, TWO TRAVEL LANES, AND PARKING LANES  
WISCONSIN AVENUE – 13TH ST. TO 37TH ST.  
WITHOUT STATIONS



## New alignment

- Dedicated center bus lanes
- Limit left turns to signalized intersections
  - Add signals at select intersections
- Divert local routes to Wells Street
- Net 0 loss of parking

Wisconsin Avenue—Current Cross Section



Wisconsin Avenue—BRT Cross Section



# Student Findings

- \$4 million/year bus rider time savings
- \$4 million/year crash reduction savings
- \$3 million/year tax revenue (from \$96 million in TOD)
- ?? value of more people having more travel options (reduce car dependence)
- ?? value of making Wisconsin Avenue an attractive *place*
- ?? value of making Milwaukee a more competitive urban region

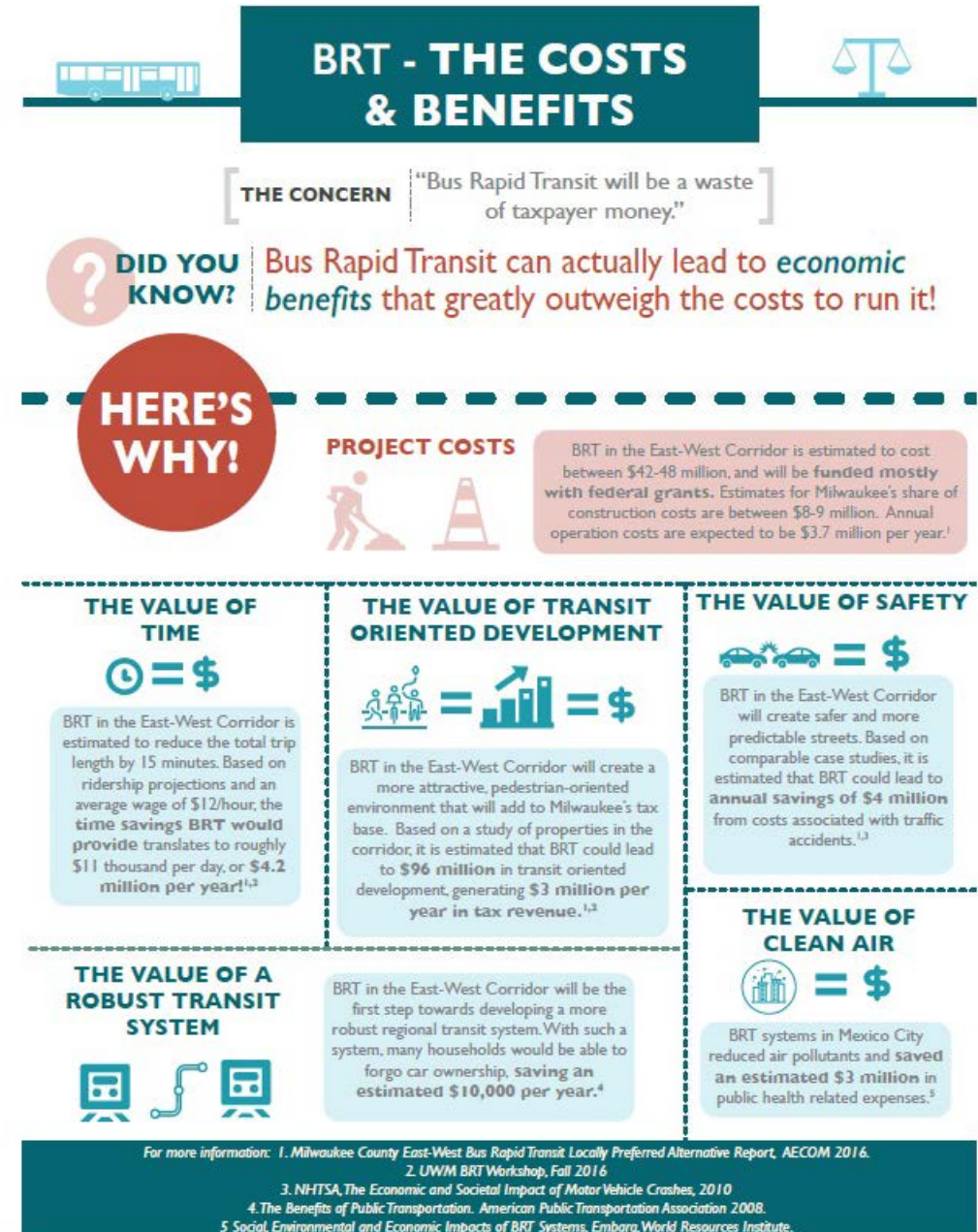
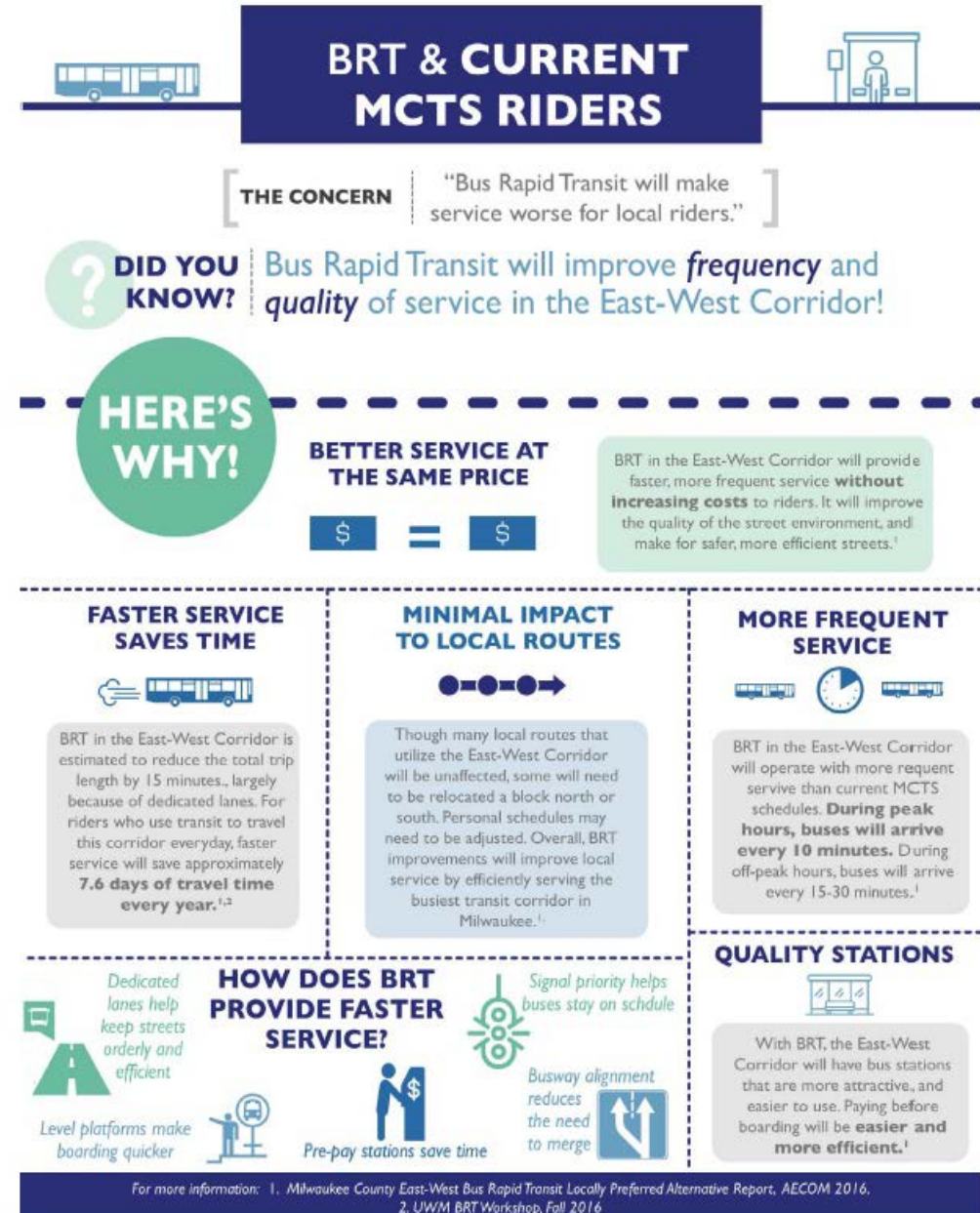


Figure F.03

# Student Findings

- \$4 million/year bus rider time savings
- \$4 million/year crash reduction savings
- \$3 million/year tax revenue (from \$96 million in TOD)
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# Student Findings

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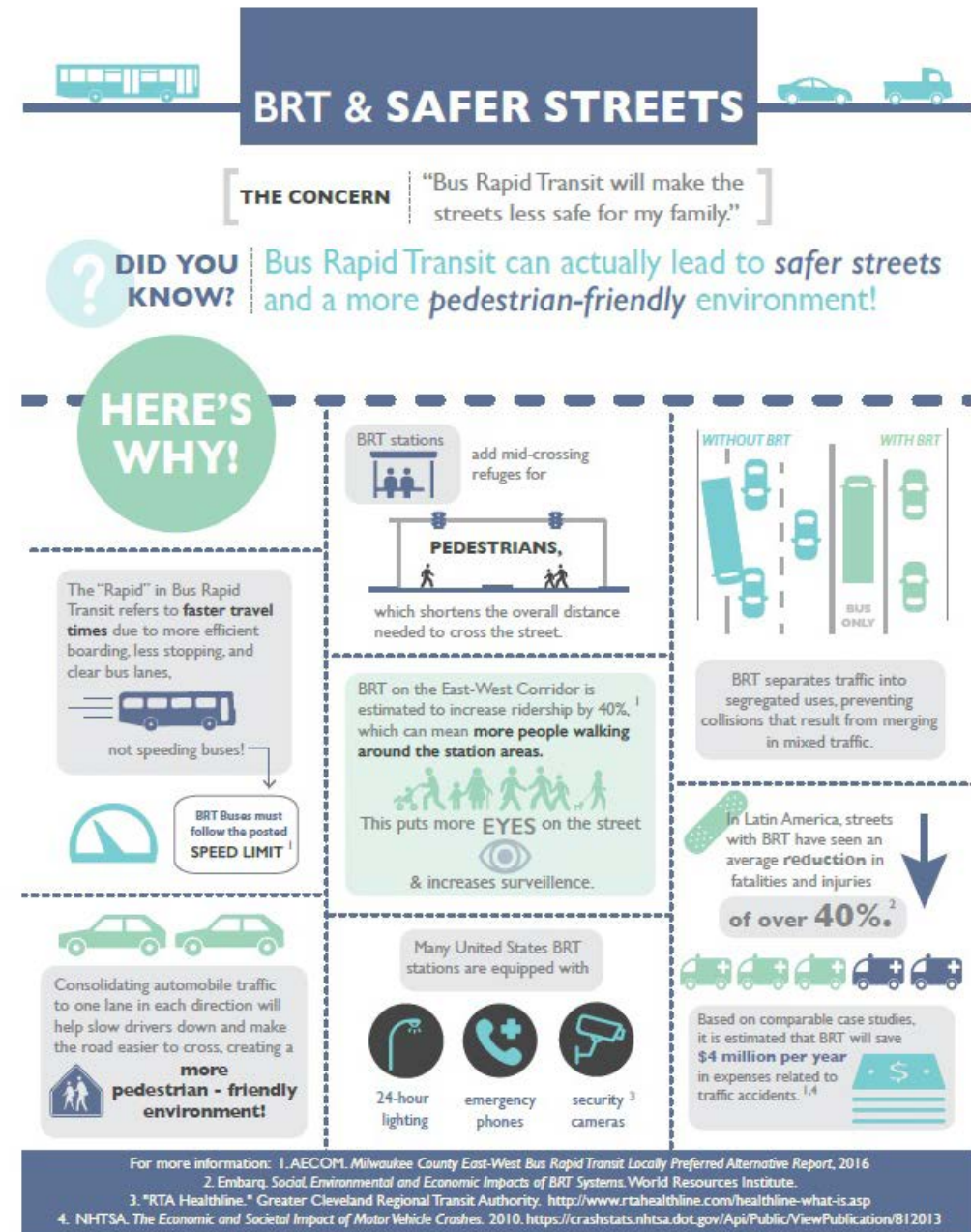
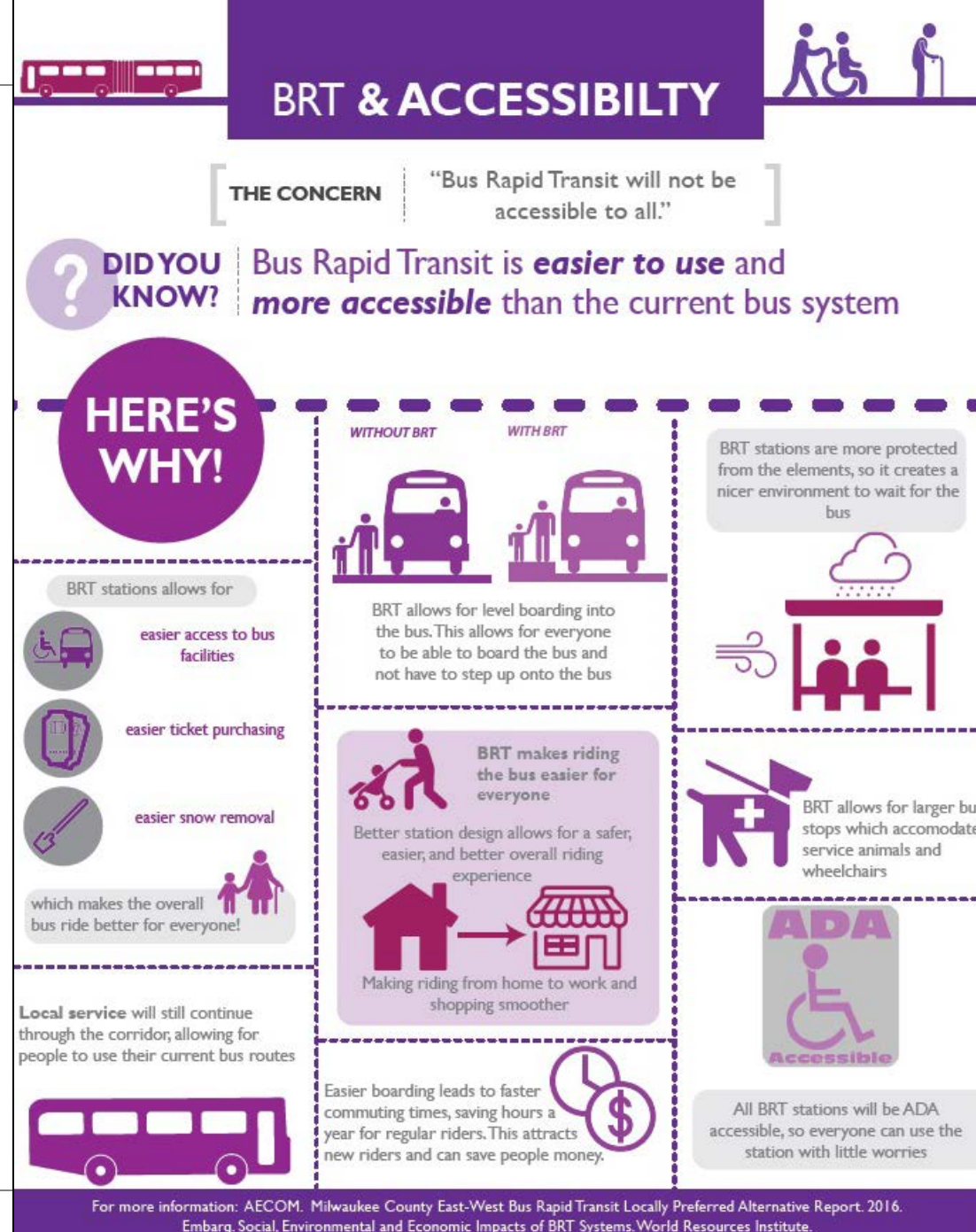


Figure F.07

# Student Findings

- \$4 million/year bus rider time savings
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- \$3 million/year tax revenue (from \$96 million in TOD)
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- ?? value of making Wisconsin Avenue an attractive **place**
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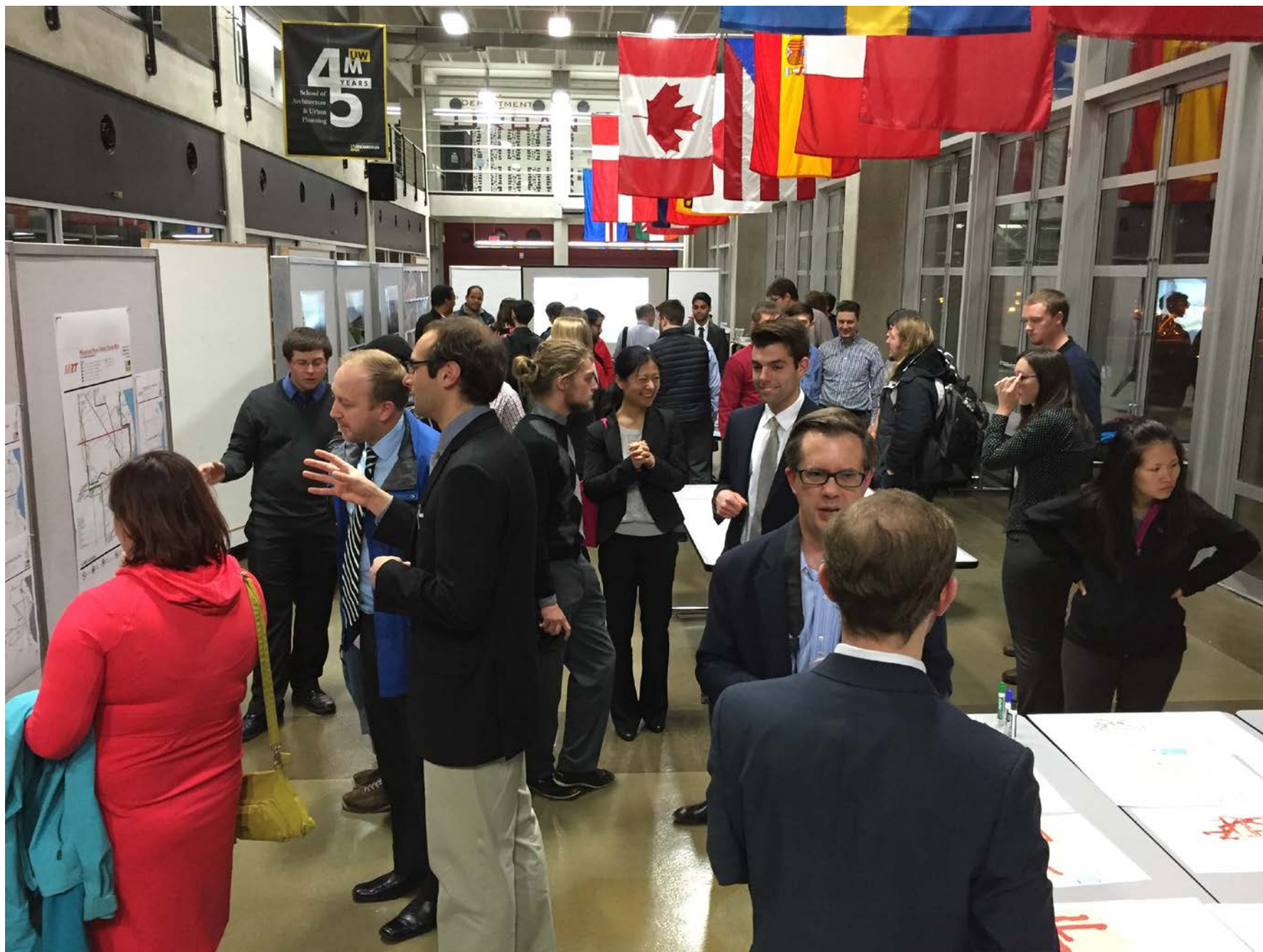






*UWM Bus Rapid Transit Course, Fall 2015: Practitioner Workshop*





*UWM Bus Rapid Transit Course, Fall 2015: Final Workshop*

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# Media Coverage

- **“Study: Bus Rapid Transit to Medical Center has Benefits,”** by Don Behm, Milwaukee Journal-Sentinel, 12/15.
  - **“Major Bus Rapid Transit, Streetcar Station on Wisconsin Avenue among UWM Student Concepts,”** by Sean Ryan, Milwaukee Business Journal, 12/15.
  - **“County Plans for Bus Rapid Transit,”** by Matt Wisla, Urban Milwaukee, 1/16/16.
  - **“West Wisconsin Avenue: Narrow Street, Limited Options,”** by Sean Ryan, Milwaukee Business Journal, 1/1/16.
  - **“Bus Rapid Transit Route may include State St. or Blue Mound Road,”** by Don Behm, Milwaukee Journal-Sentinel, 4/16.
-

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# Media Coverage

- **“Officials to Fast Track Bus Rapid Transit Plan in Funding Quest,”** by Don Behm, Milwaukee Journal-Sentinel, 3/16.
  - **“Bus Rapid Transit Planning Switches into High Gear in Hopes of Securing Grant Money,”** by Sean Ryan, Milwaukee Business Journal, 3/2/16.
  - **“Proposed BRT Line could help Catalyze more than \$60M in Development,”** by Sean Ryan, Milwaukee Business Journal, 12/26/16.
  - **“Report: Bus Rapid Transit would Reduce Car Lanes”,** by Don Behm, Milwaukee Journal-Sentinel, 1/3/17.
-



# East-West BRT Project Overview

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Jeff Sponcia

Milwaukee County Transit System

EAST  
WEST BRT



# MCTS by the Numbers



**60** ROUTES



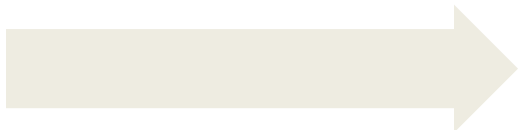
**409** BUSES



**1,045** EMPLOYEES



**844** BUS SHELTERS



**5,500** BUS STOPS





# MCTS Ridership

→ **40+ million rides**

BUS RIDES PER YEAR

→ **130,000+**

RIDES PER AVERAGE WEEKDAY

→ **500,000**

FREEWAY FLYER RIDES PER YEAR

→ **283,000+**

SUMMERFEST RIDES

→ **70,000+**

STATE FAIR RIDES



# MCTS Customers

## Who We Serve

**51% Ages 18-44**

**58% Employed; 10% Students**

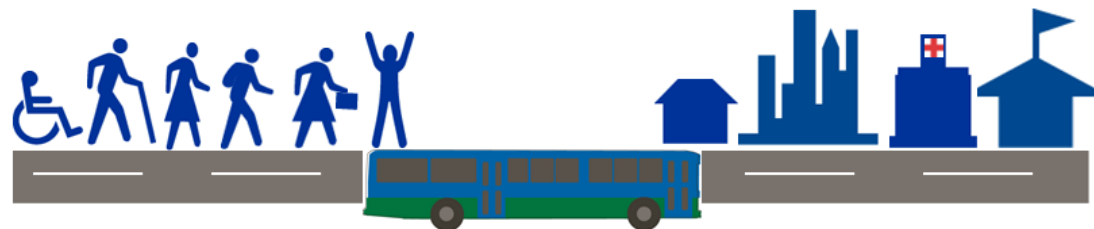
**89% High School Graduates**

**22% College Graduates**

**88% Have Internet Access**

## Why They Ride

- **Work/School**
- **Medical**
- **Recreation**
- **Shopping**



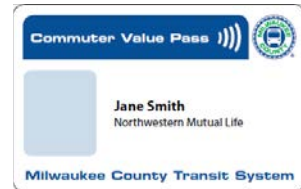


# MCTS Products & Services

**M•CARD**



**Commuter Value Pass**



**U•PASS**



**GO Pass**

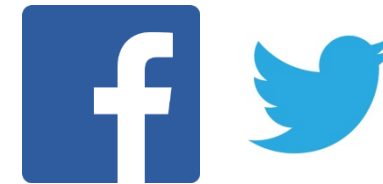


**Buslr Card**



**(MCTS + Bublr)**

- Real-Time Information
- Bus Stop Announcement System
- RideMCTS.com
- Social Media



# What are Some of MCTS Planning's Main Objectives?

1. Improve mobility and access for our riders; speed up the ride
2. Listen to our riders' and bus operators' ideas; incorporate whenever possible; reduce confusion
3. Be responsible with our funding; reduce inefficient or duplicate transit service
4. Partner with local and regional organizations, municipalities and stakeholders

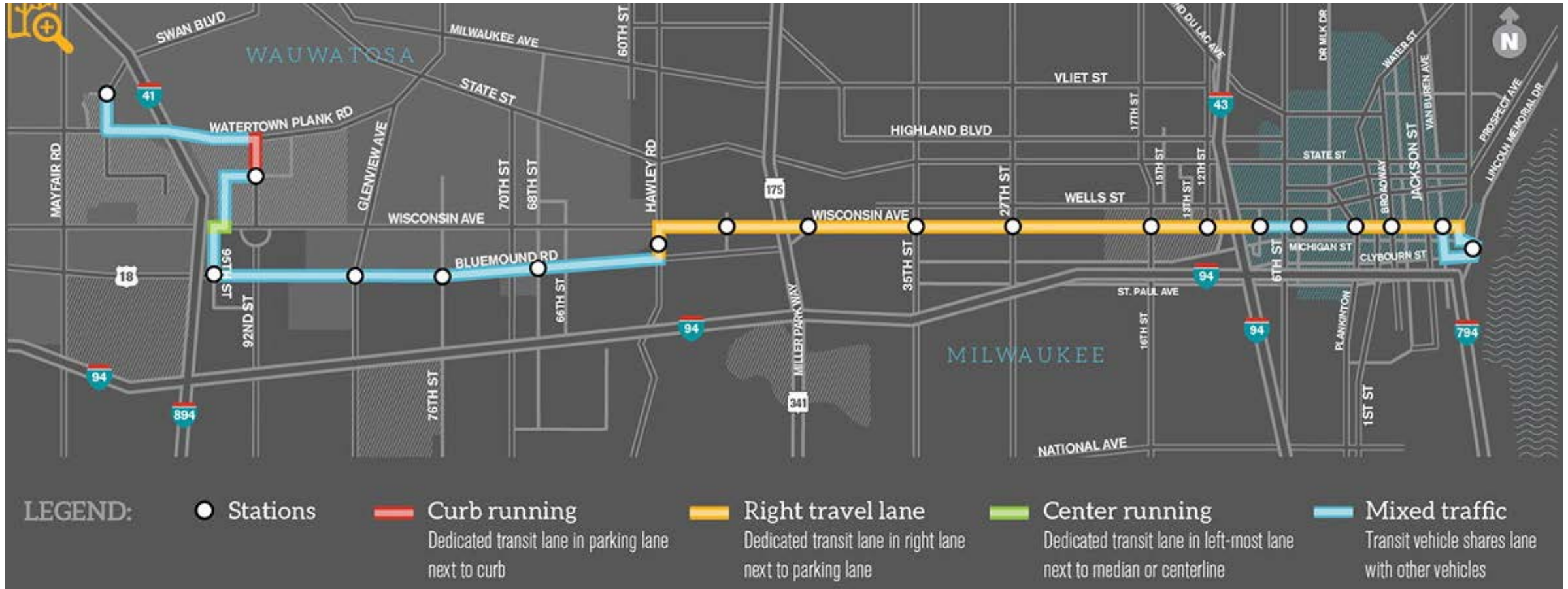




# What are MCTS Planning's Current Projects?

## 1. System Redesign

## 2. East-West BRT



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# Project Features



**Up to 19 stations**  
connect regional  
network of major  
employment centers,  
education facilities  
and recreational  
destinations



**Modern, fuel-  
efficient comfortable,  
vehicles** with features  
for easy boarding and  
interior bike storage



**Shorter travel  
times** because of  
dedicated lanes,  
fewer stops, traffic  
signal priority and  
pre-board ticketing



**Reduces traffic  
congestion**  
by removing an  
estimated 6,700  
cars per day from  
the corridor



**More frequent daily  
service** with buses  
every 10 minutes during  
peak hours and midday,  
and every 20-30 minutes  
in early morning, evening  
and late-night hours

---

# Who Will Use BRT?

The East-West BRT will attract 7,250-9,250 **new** average daily transit riders – a **40% increase** over existing transit ridership in corridor. Within ½-mile station area around preferred route are ...



**9**  
colleges and  
universities



**100+ BUSINESSES**  
with **250 or more**  
**EMPLOYEES**

**47,000**



**RESIDENTS**



**COUNTLESS ATTRACTIONS**  
including the county zoo, Miller Park,  
Bucks' arena, art museum and Summerfest



# Corridor Ridership

## Average Weekday Boardings

■ Gold ■ BRT ■ 30 ■ 30X



By 2035, the BRT project results in:

**17%**

CORRIDOR RIDERSHIP INCREASE  
No Build vs. Build

**9,500**

AVERAGE WEEKDAY BRT BOARDINGS



# Project Phases

## Key 2017 project decisions

- **Lane configuration**
  - Dedicated lane locations
  - Along center lane, median, outside lane or curb side?
- **Station locations**
  - Final station locations
  - Placement in median or road side?
- **Station design**
  - Appropriate size and design of each station

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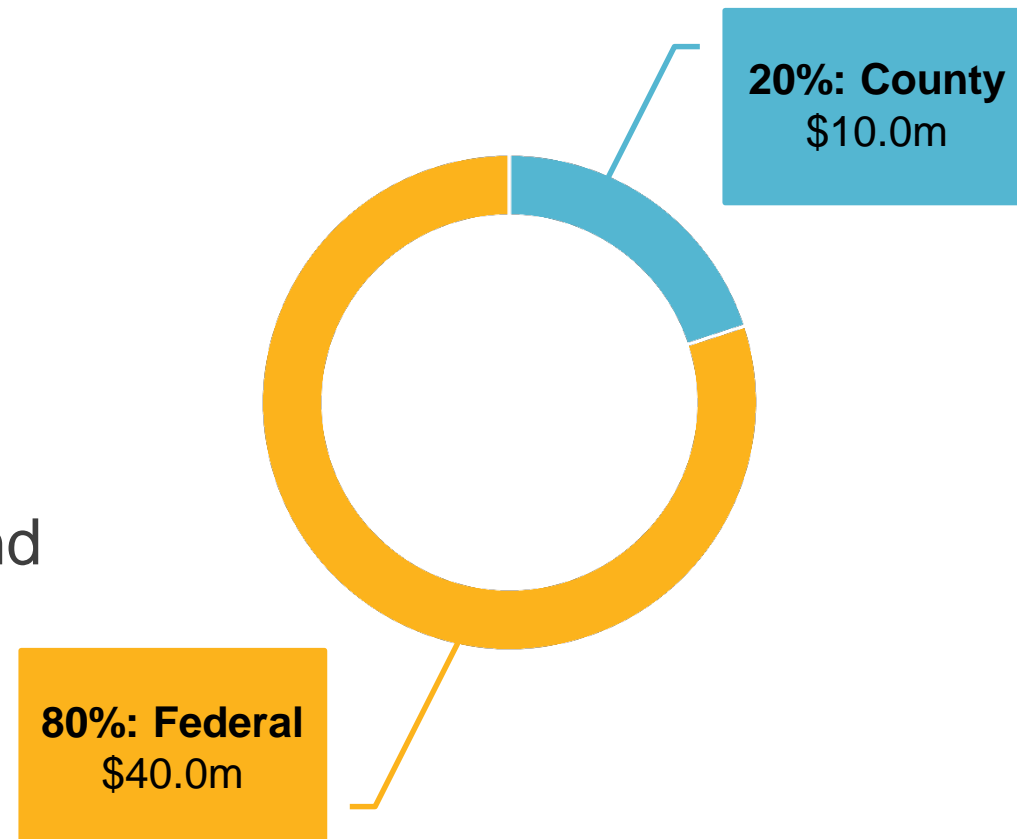
# Environmental Assessment

- Required for all projects to get federal funds
  - Evaluates No Build and Build alternatives
  - Topics include:
    - Traffic
    - Noise
    - Air quality
    - Historic resources
    - Communities and neighborhoods
    - Environmental justice
    - Land use and economics
-



# Costs/Funding

- Capital Cost (\$50 million)
  - Federal Small Starts: up to 80 percent
  - Local match: minimum 20 percent
- Annual Operations Cost
  - New BRT service will only add about 1 percent to MCTS's overall operating and maintenance costs
  - Funded under existing MCTS, which is resourced through fares, state and federal funding



# Outcomes for **Transit Riders**



**Frequent service** every 10 minutes / 5-minute downtown



**Improved travel times** from fewer stops, dedicated lanes and transit signal priority



**Better transit experience** with new buses and enhanced stations

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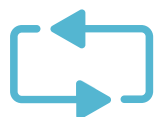
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# Outcomes for **Communities**



Facilitates **economic development**.

Similar systems have seen up to **\$500 million** in investment



**Improved mobility** for those who cannot or choose not to drive  
(23% of station area residents do not have a car)



Promotes **healthy neighborhoods** by encouraging more walking and biking; improved aesthetics, public art and better lighting at stations improves safety and neighborhood character



**Cost-effective** option reduces household transportation costs compared with owning a car (car ownership = \$755/month; monthly MCTS pass = \$72/month)

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# Outcomes for **Businesses**



**Attract and expand** the pool of employees including **Millennials** and **Gen Y**, who prefer car-independent lifestyles



**Less parking** needed from decreased demand. Save up to **\$30,000** per garage space. **Increase land** available for development.



**More foot traffic** to/from stations = **more customers**

---

# Outcomes for the **Region**



**First** investment in a **regional** system. East-West Corridor is **spine** of MCTS system. Future **expansion** may include Fond du Lac Avenue corridor, Waukesha, UWM.



**Enhanced local bus service** and improved mobility for public transportation users



**Leverage** up to **\$34 million** in federal funds **otherwise unavailable** to Milwaukee area



Expand **multimodal connections** through park-and-rides and Bublr bike share

# East-West Corridor BRT Study Outreach Process & Outcome

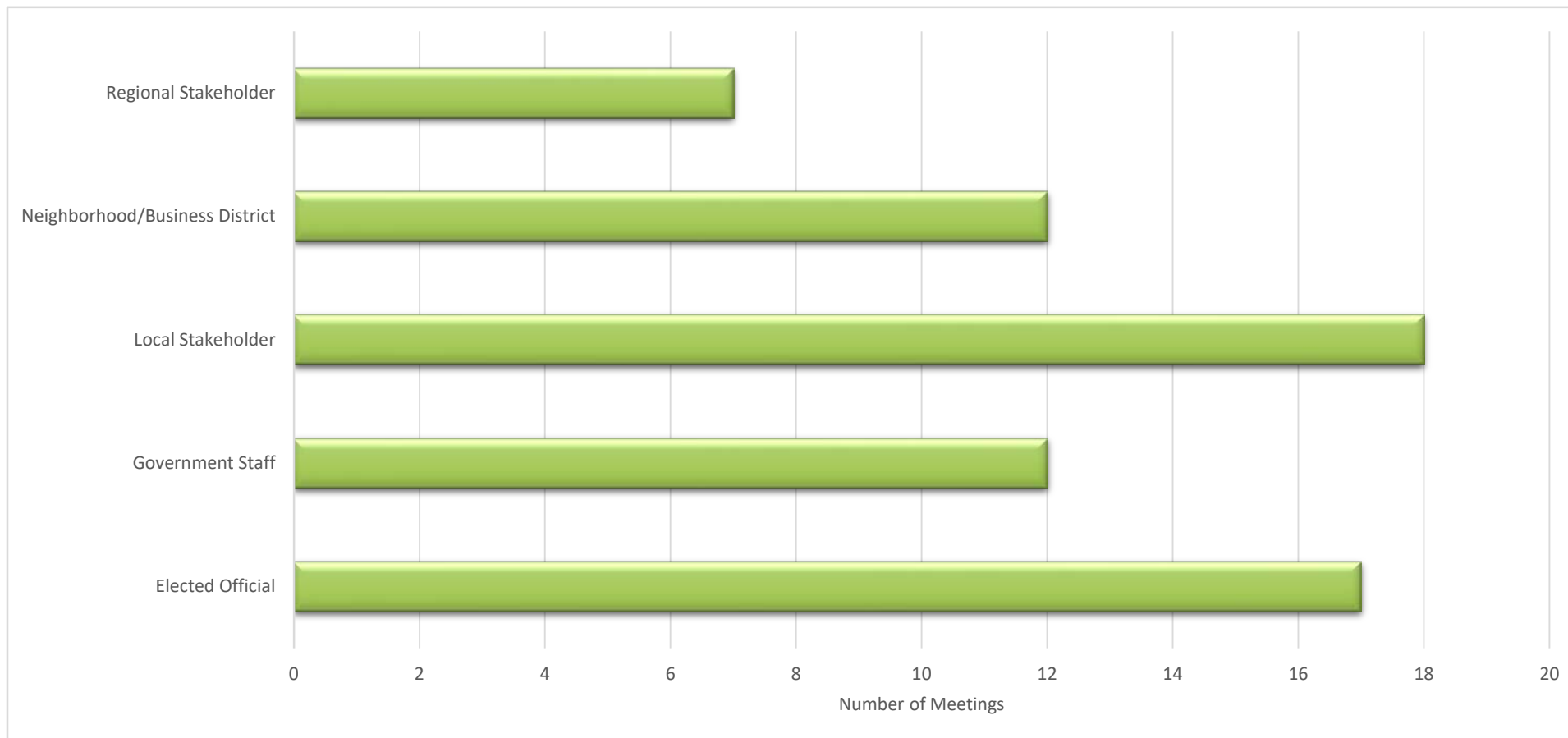
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Ashley Booth  
HNTB Corporation





# Stakeholder Engagement



**Nearly 70 stakeholder meetings** held from Jan. 2017 to June 2017

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# Stakeholder Engagement

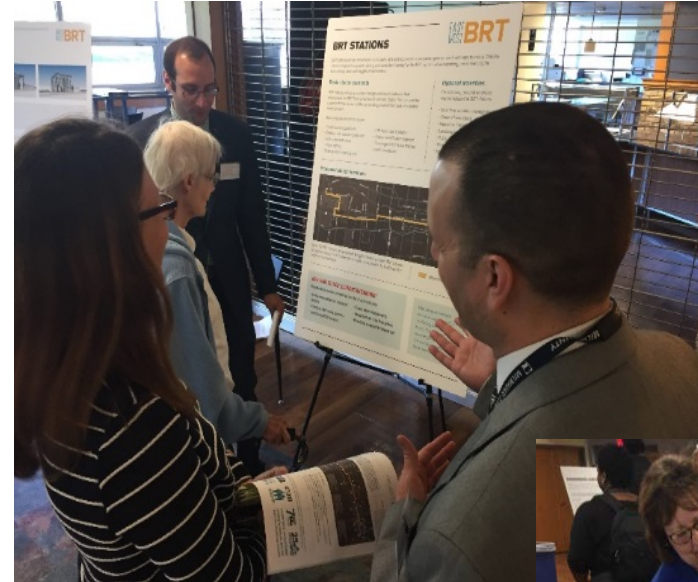
**Reached out to 17 organizations,** representing Minority and Low-Income populations

- 30<sup>th</sup> Street Industrial Corridor
  - African American Chamber of Commerce
  - Avenues West
  - Black Health Coalition
  - Downtown Security Network
  - Hispanic Chamber of Commerce
  - Hmong American Friendship
  - Hmong Wisconsin Chamber of Commerce
  - Independence First
  - Milwaukee Inner-City Congregations Allied for Hope
  - Martin Drive Neighborhood Association
  - Near Westside Partners
  - Milwaukee United Greater Downtown Action Agenda
  - Milwaukee Urban League
  - NAACP-Milwaukee Chapter
  - Neighborhood Leadership Institute
  - Outreach at Avenues West
  - Urban Economic Development Association
-

# Stakeholder Engagement

## Public Meetings – Design Kick-off Meetings

- Decisions:
  - BRT Lane Configurations
  - Station Locations
  - Station Designs
- Meeting Format
  - Open House style at two locations
    - Marquette High – 6/7/2017
    - Zoofari – 6/8/2017
  - Total Attendance: 284 people

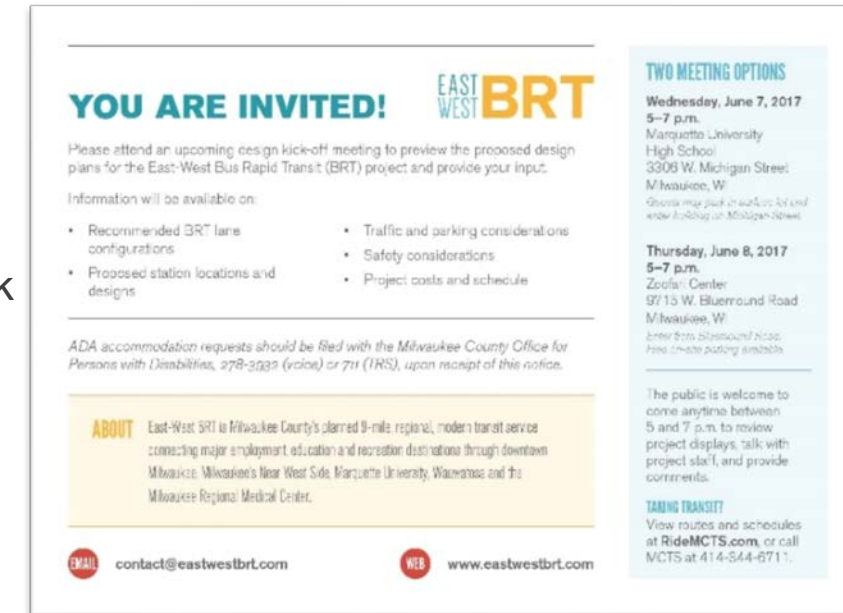


# Stakeholder Engagement



## Public Meeting Notifications

- **Website:** Home page advertising
- **Mailings:** May 18, 2017 - 9,340 postcards mailed to occupants within one block
- **Project contact list:** May 19, 2017 E-Blast to 875 recipients BRT meeting.
- **Third party coordination:**
  - Elected officials in Milwaukee and Wauwatosa,
  - 47 neighborhood associations in Milwaukee and Wauwatosa
  - 212 organizations that represent minority, low-income, disabled and transit dependent populations.
- **Press release:** June 1 & June 6 - MCTS press release
- **MCTS social media accounts:** June 1, 2017 to 14,000 Facebook and 4,000 Twitter followers.
- **MCTS e-blast:** May 19, 2017 to approx. 8,500 recipients

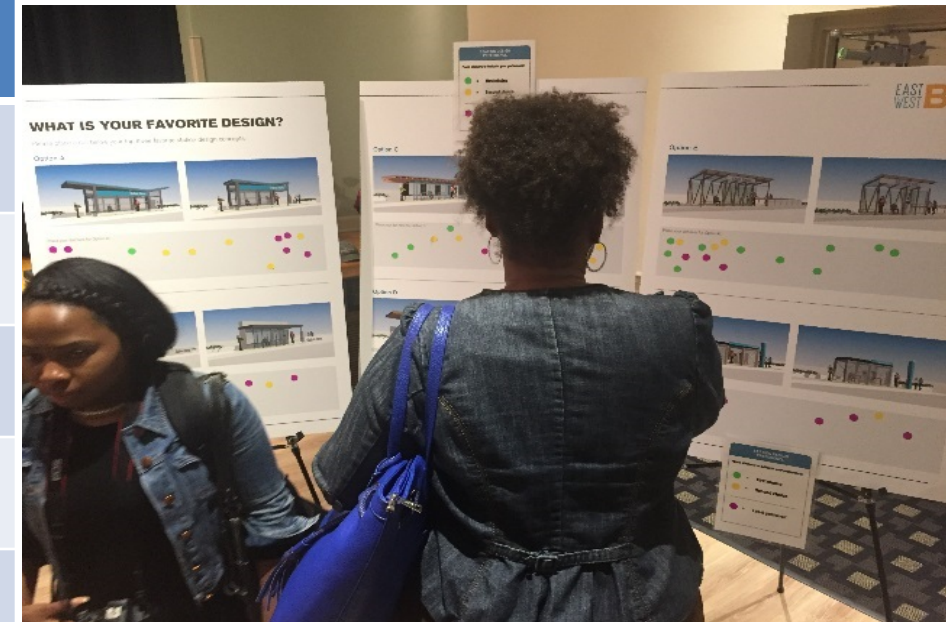




# Stakeholder Engagement

## Public Meeting Comment Summary

Comment Origin	Number of Comments
Marquette University High School	40
Zoofari Center	82
Online comment form	36
Mailed to MCTS	8
Total	166



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# Stakeholder Engagement

## Community Events

Date	Event
6/14/2017	NEWaukee Night Market
7/15/2017	Garfield Days
8/5/2017	Bronzeville Cultural and Arts Festival
8/16/2017	NEWaukee Night Market
9/13/2017	NEWaukee Night Market

### Community Events focused on:

- General Project Overview
- Station Designs

# Stakeholder Engagement

## Outreach Tools

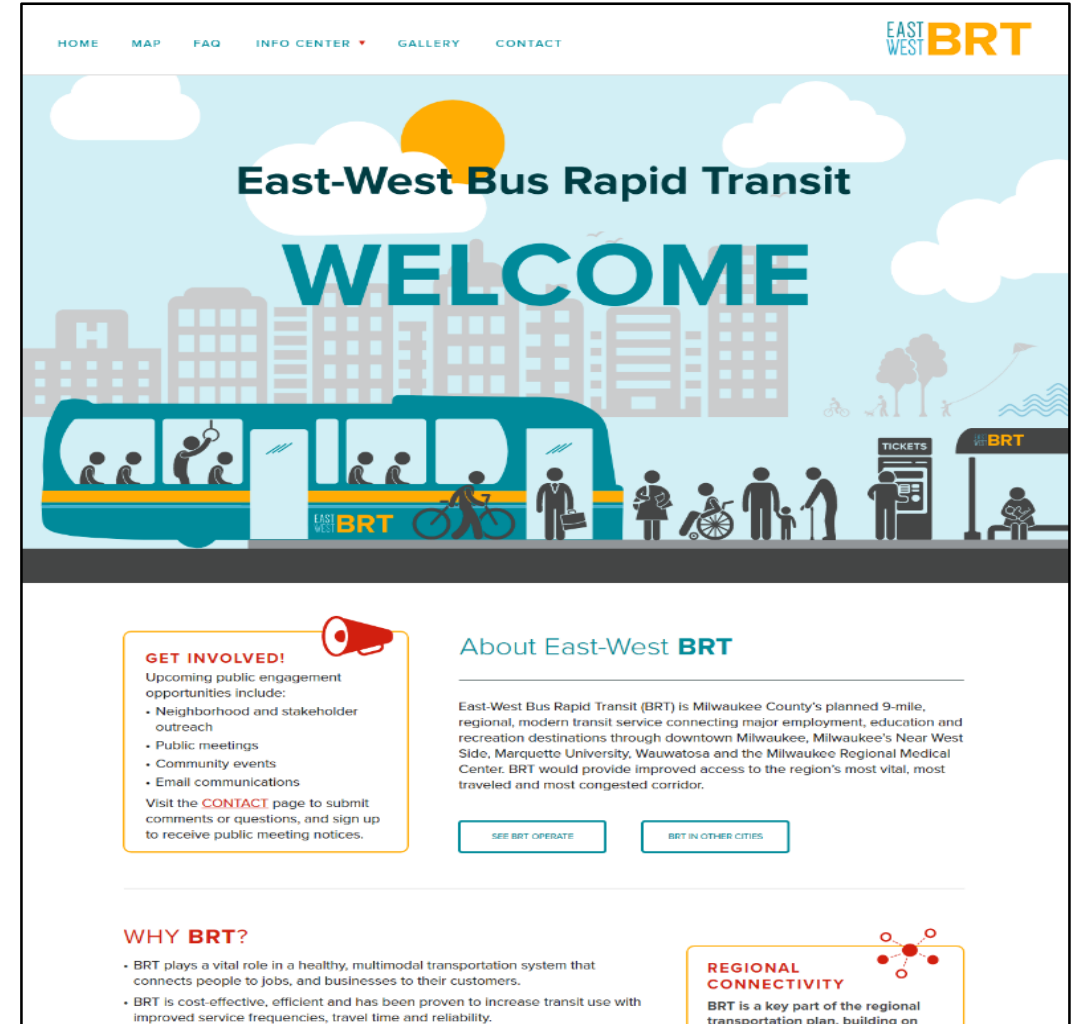
### Animated Video

[https://www.youtube.com/watch?v=QvLi\\_ITY2v4](https://www.youtube.com/watch?v=QvLi_ITY2v4)

### Visualization of BRT at a Signal Priority Location

[https://www.youtube.com/watch?v=oZ1\\_TbWWxNs](https://www.youtube.com/watch?v=oZ1_TbWWxNs)

EAST  
WEST **BRT**



# Stakeholder Engagement

## 2016 Feasibility Study Outreach

- Stakeholder Advisory Group – 3 mtgs.
  - Stakeholder Mtgs. – 24 mtgs.
  - Local Official Outreach – 24 mtgs.
  - Committee & Council Mtgs – Wauwatosa, Milwaukee, Milwaukee County
  - Public Information Mtgs. – 3 mtgs.
  - Website
-



# Outcome

## Result

- **Major enhancements in service and reliability of transit system**
  - **Better access to jobs**
  - **Bus Rapid Transit System – 50% Dedicated Lanes**
  - **Project resulting in over 3,200 new transit riders, for \$10 million in Local**
  - **Step 1 with more to come!**
-

# Questions?

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For more information:

[www.eastwestbrt.com](http://www.eastwestbrt.com)

Or contact:

Dan Basile – MCTS Project Manager  
dbasile@mcts.org

