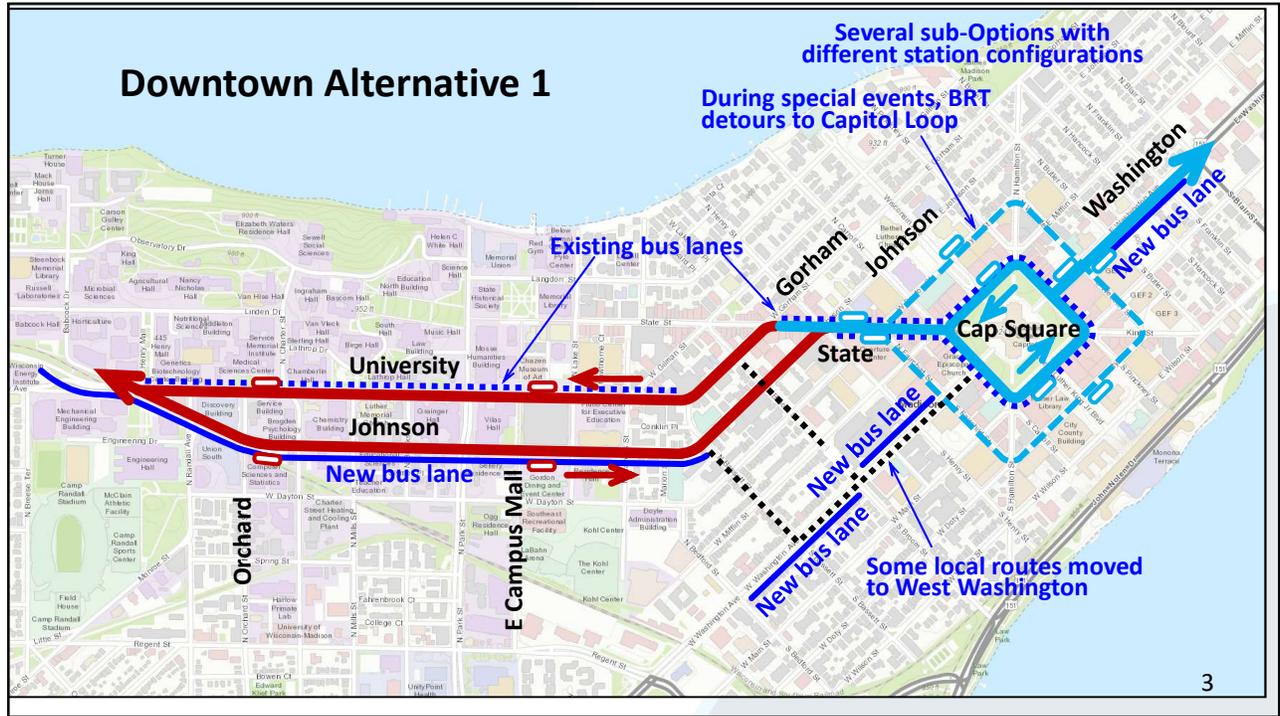


# Madison East-West Bus Rapid Transit (BRT) Planning Study

Transportation Policy and Planning Board – March 30, 2020

MADISON DEPARTMENT





## Next Steps

- **Resolution adopting “Locally Preferred Alternative” (route and stations)**
  - Allows the City to enter “Project Development” (LPA) and apply for a federal Grant
  - Does not lock the city into one alignment, can be changed if warranted as design proceeds
- **Route Network Study**
  - Could influence the LPA and broader bus operations downtown
- **Preliminary Design**
  - Stations, runningway, vehicles, technology
- **Final Design and Construction**
- **Open for service August 2024**

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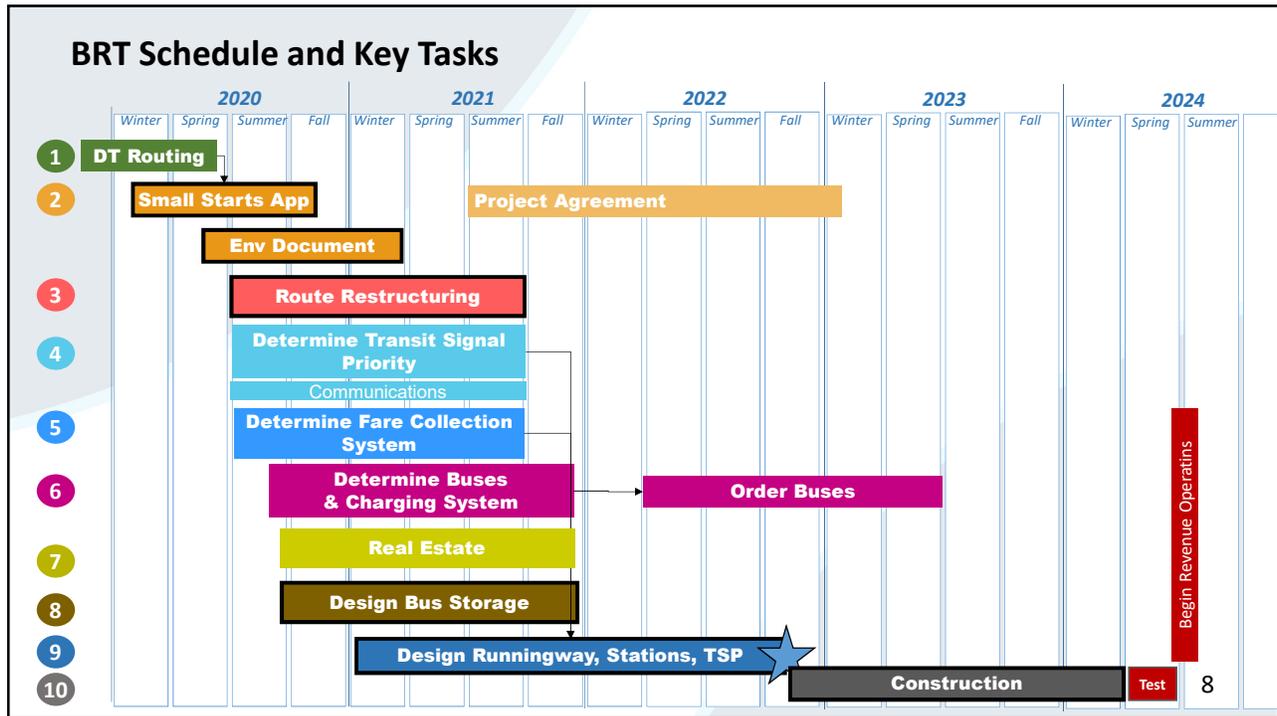
## Adoption Process

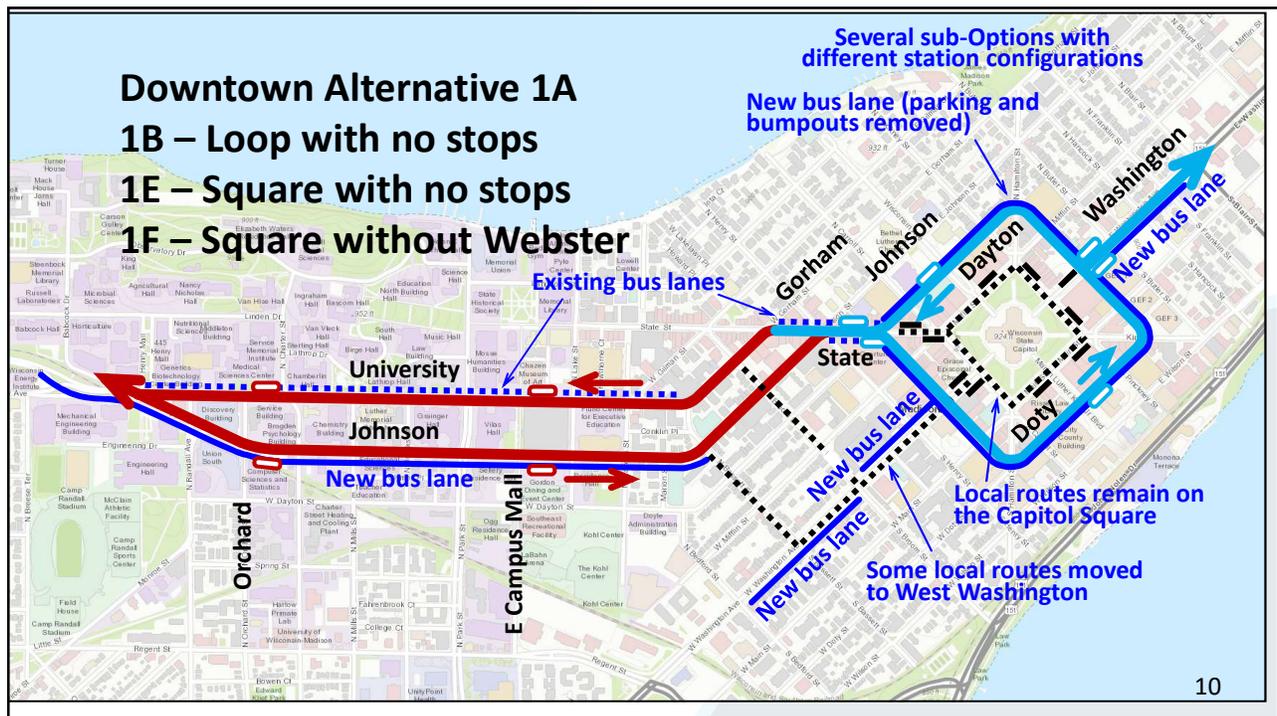
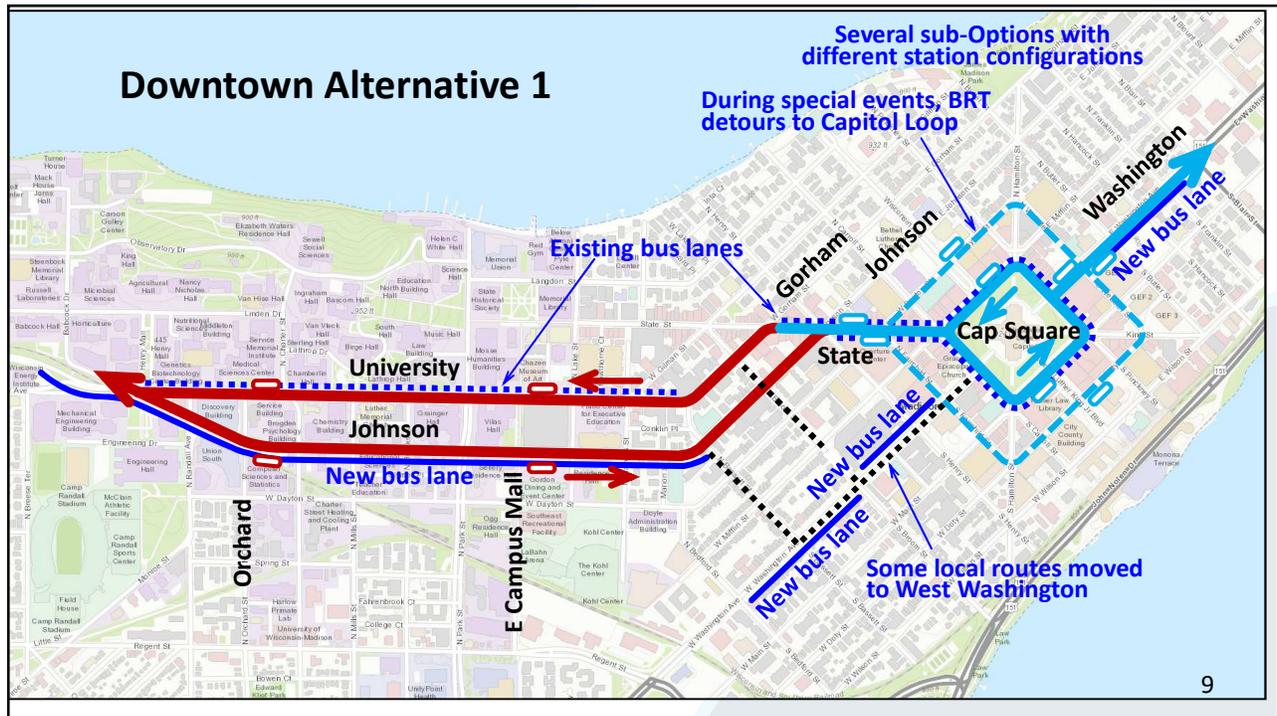
- **TPPB**
  - Recommended Alt 1 downtown and 3 on the west side
- **Common Council**
  - Referred
- **Disability Rights Commission**
  - Recommended for approval
- **Downtown Coordinating Committee**
  - Recommended for approval and staff continue to investigate 1A with route network study
- **TPPB**
  - Today (March 30)
- **Common Council**
  - Tomorrow (March 31)

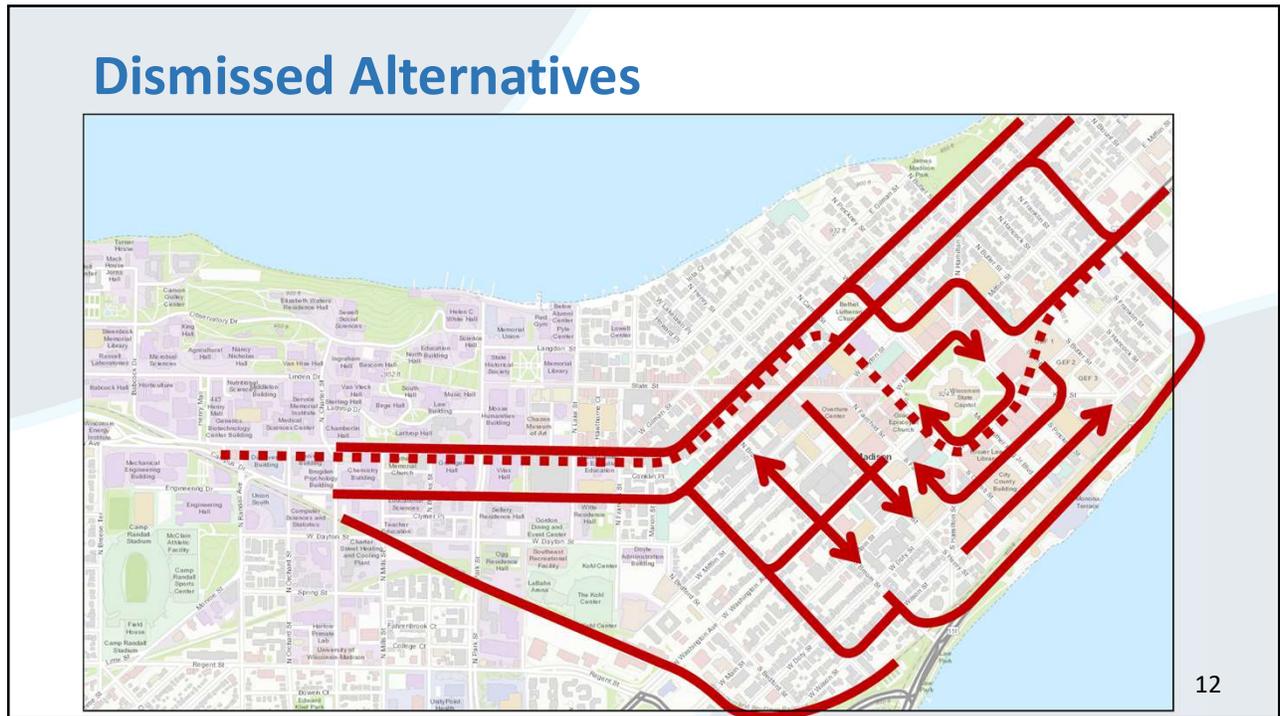
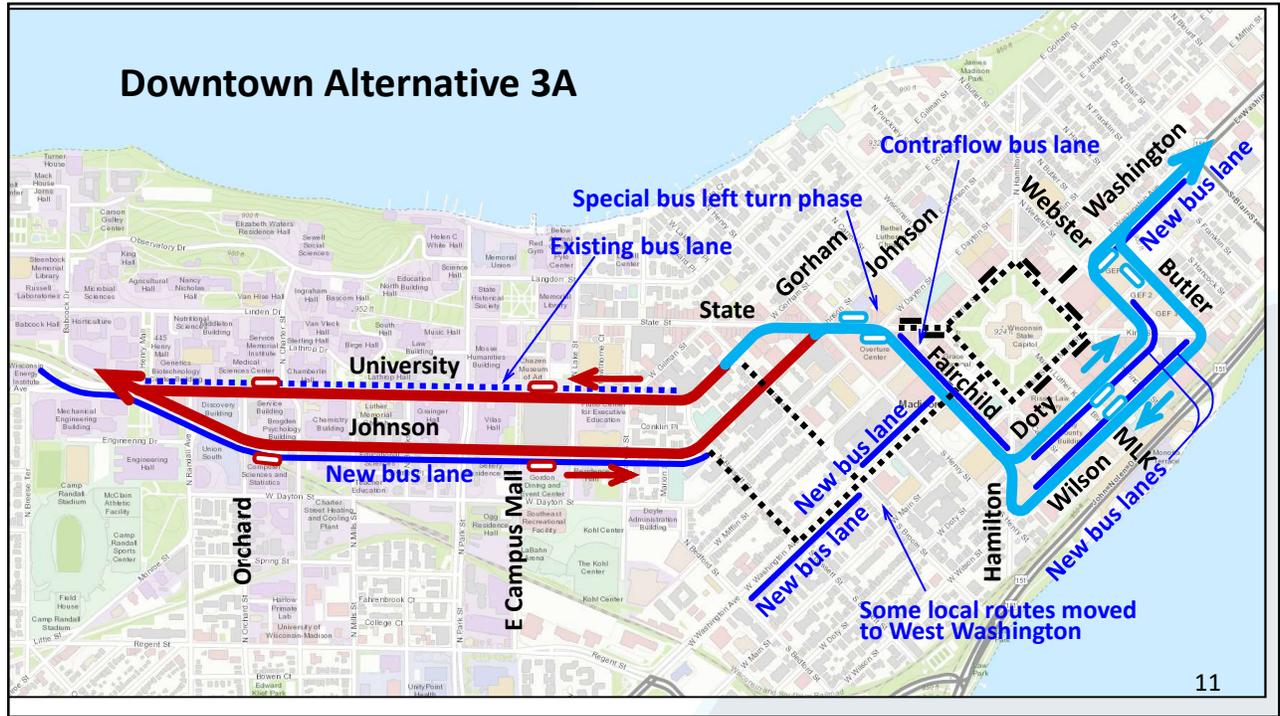
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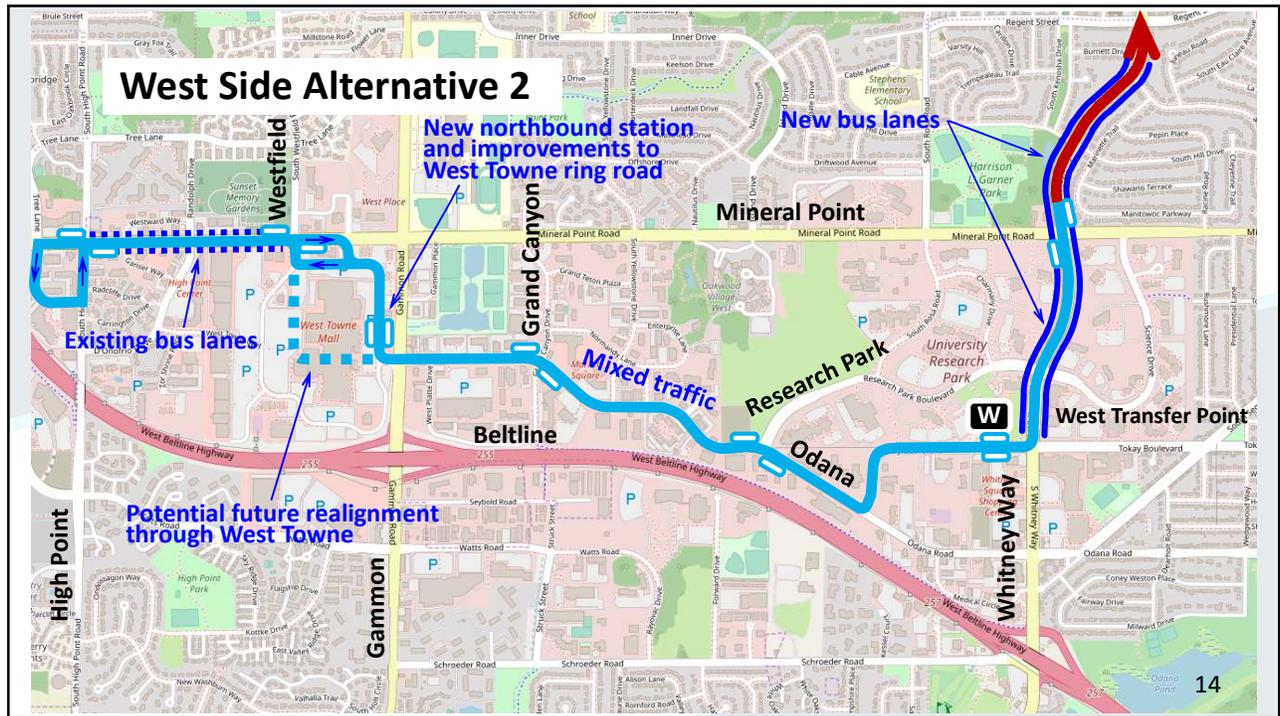
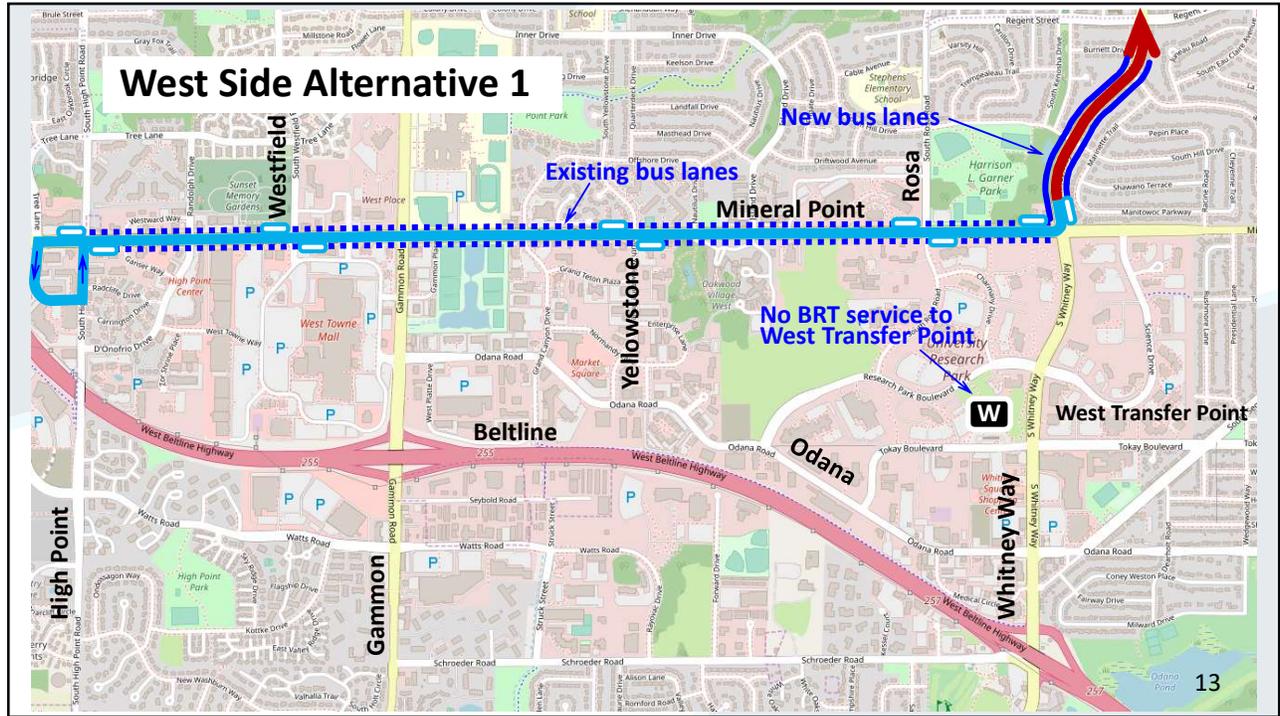
# Madison East-West Bus Rapid Transit (BRT) Planning Study

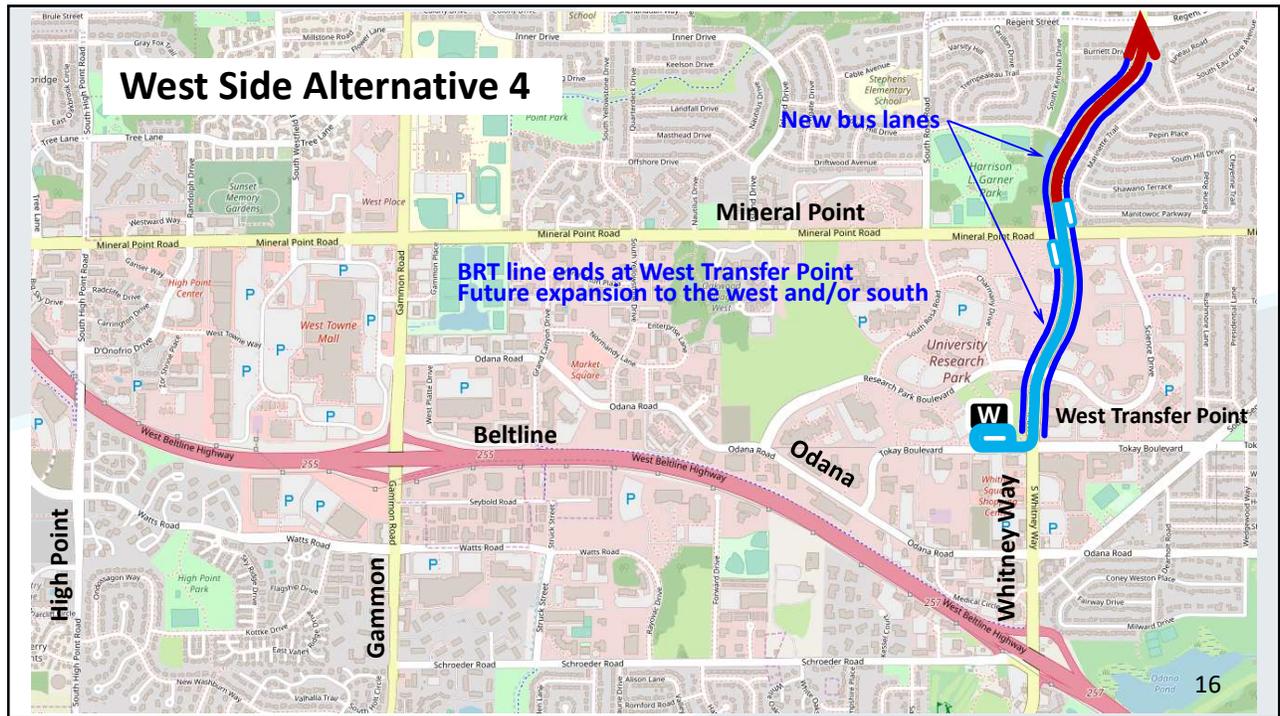
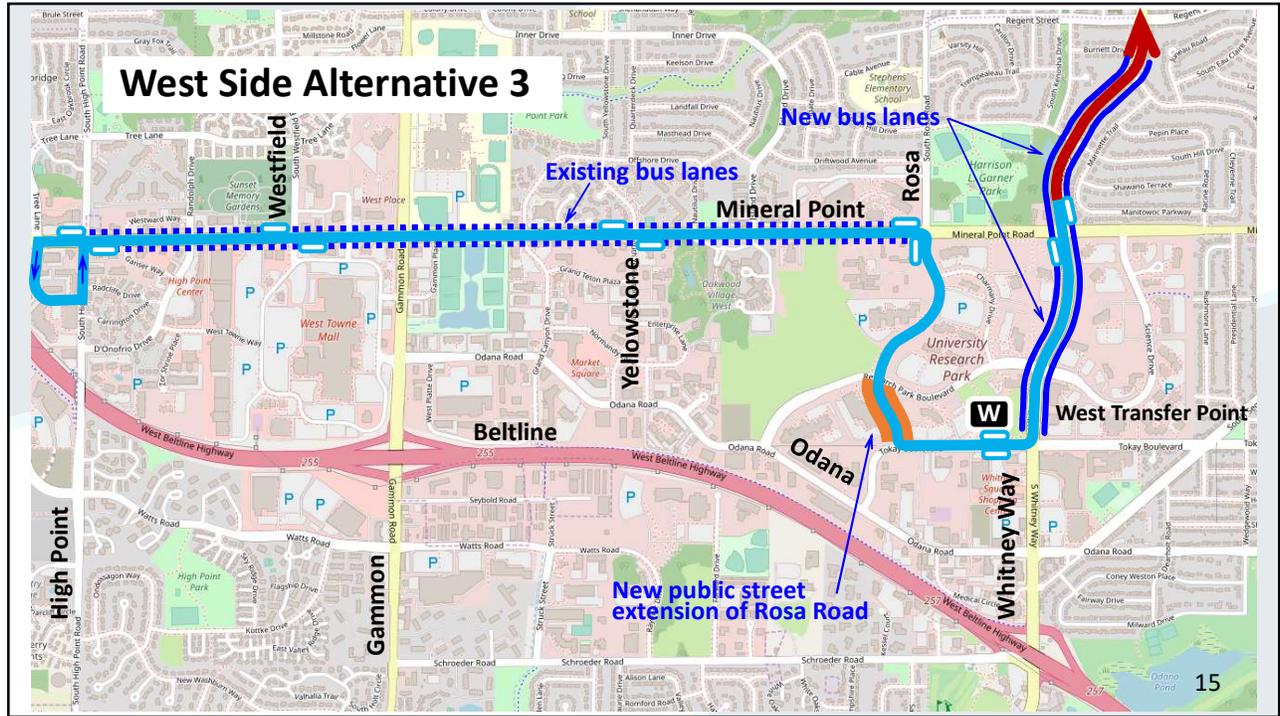
Supplemental Slides



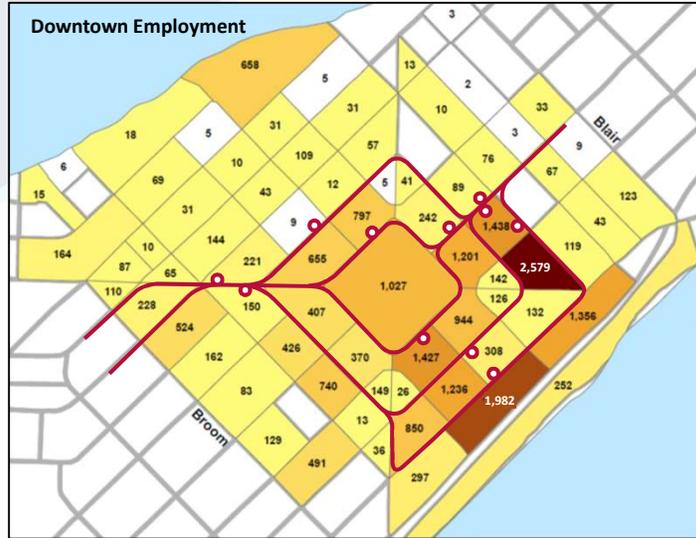






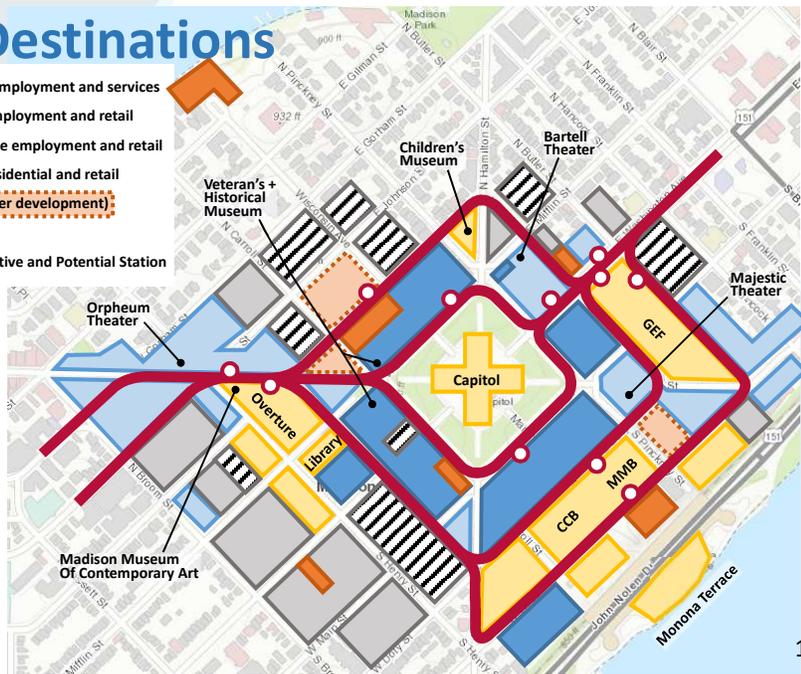


# Employment



# Downtown Destinations

- Municipal employment and services
- High rise employment and retail
- Low/mid rise employment and retail
- High rise residential and retail
- Hotel (under development)
- Other
- BRT Alternative and Potential Station



## Station Spacing (Miles)

Station	Average	Eastbound	Westbound
Orchard Street	0.40	0.41	0.38
East Campus Mall	0.57	0.59	0.54
State Street	0.29	0.29	0.28
Capitol Square	0.22	0.28	0.15
Webster Street	0.49	0.45	0.52
Livingston Street			

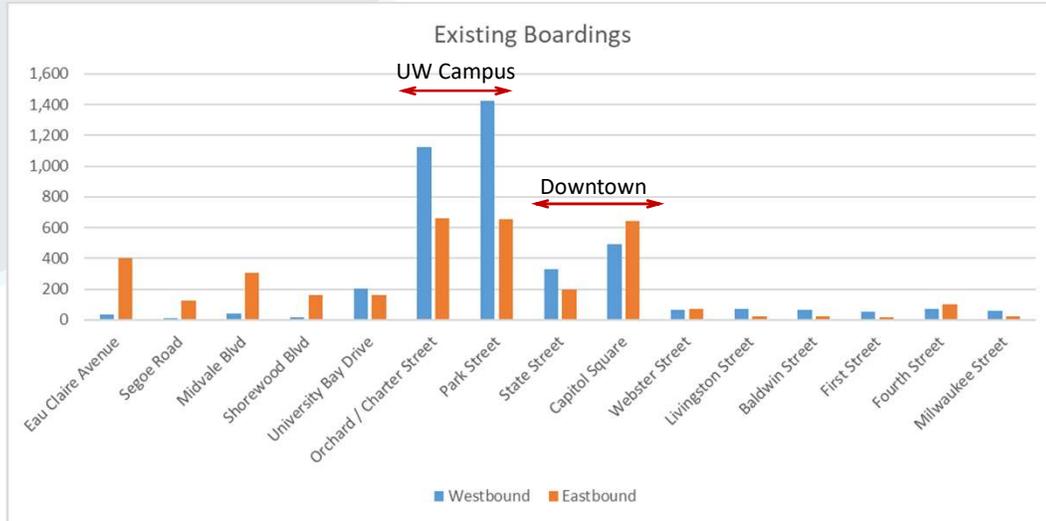
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## Station Spacing

- Capitol Square and Webster stations are too close together per BRT station spacing goals.
- **Capitol Square** was included because it is central to downtown Madison, has the highest number of boardings, and serves transfers.
- **Webster Street** was retained because it serves GEF buildings and First Settlement neighborhoods
- Alternative 1 keeps all stations
- Alternative 1E removes the Capitol Square
- Alternative 1F removes Webster Street

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## Boardings by Stop

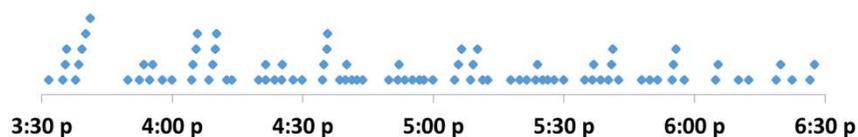


**Downtown Madison is a very large generator of transit trips**

## Capitol Square and State Street Today

- **Moderate bus volumes during the mid day, evening, weekend**
  - A few buses per hour, they generally do not stack up.
- **High bus volumes during peak periods**
  - Over 30 buses per hour. The added volume is commuter routes and regional routes.
  - They often stack up at State Street signals because only one can go through at a time.
  - In the evening, outdoor dining is affected by the noise and fumes.

**2018 Afternoon Trip Distribution WB State at Johnson**



Middle of the day



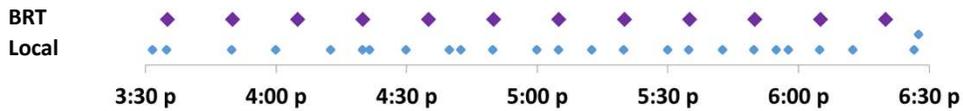
Afternoon peak period



## Capitol Square and State Street With BRT

- **Core city routes and BRT remain**
  - A few buses per hour, they generally do not stack up
  - BRT and potentially some local buses are electric
- **Commuter and regional routes moved to West Washington**
  - The bus volumes overall are much lower and spread throughout the day
- **Some layovers on the square may be moved, changes to improve the streetscape, and potentially close two bus stops**

BRT Afternoon Trip Distribution WB State at Johnson

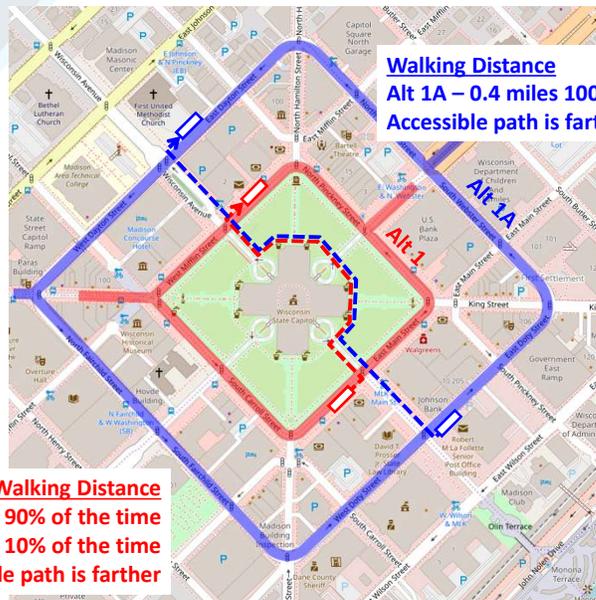


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## Distance Between Stations

Most or all transit stops or stations come in pairs so riders can easily navigate the system.

People will have a hard time finding their return stations for Alternative 1A.



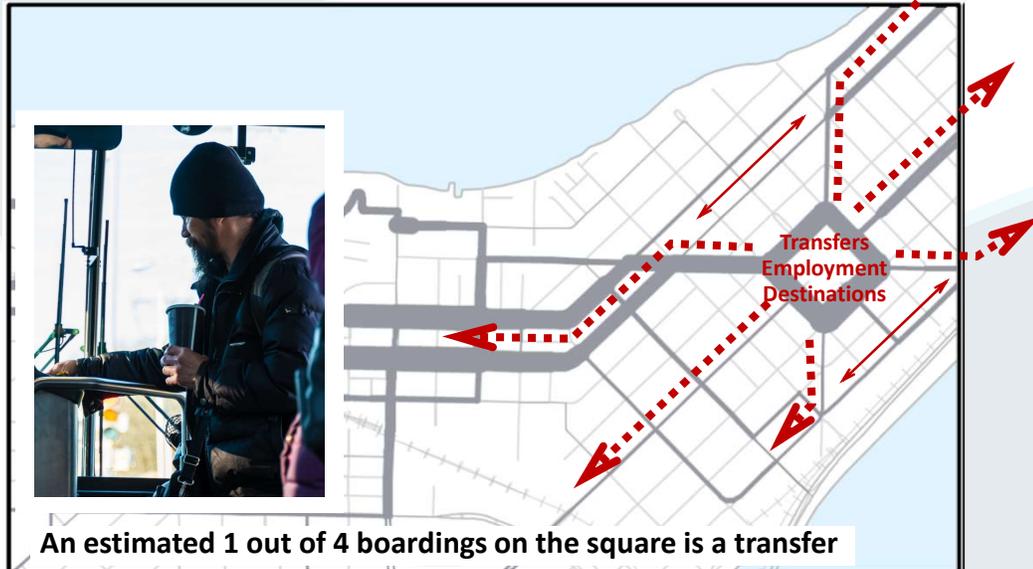
**Walking Distance**  
 Alt 1A – 0.4 miles 100% of the time  
 Accessible path is farther

**Walking Distance**  
 Alt 1 – 0.25 miles 90% of the time  
 0.4 miles 10% of the time  
 Accessible path is farther

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## Transfers

With Alternative 1, people will be able to make transfers to local routes. Some local routes will be able to better utilize Johnson/Gorham and Wilson/Doty.



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## Why the Square makes for good transfers

- **Wide sidewalks and shelters**
  - Helps people who need to wait for a long time. Many bus routes on weekends are hourly.
  - Sidewalks on University Avenue and Johnson Street are narrower and can be full of students.
- **Pedestrian safety**
  - The Capitol Square is well lit and has pedestrian traffic.
- **Bathrooms, food, and coffee**
  - The Capitol Square has businesses that are open to the public.
- **Good for coordinating schedules for transfers**
  - Riders know the bus will not leave before its scheduled time which is published in the Ride Guide. Time points can only be in certain locations.
  - For example, we generally do not want time points in the University/Johnson and Park Street area because buses cannot easily pass each other – we want to keep them moving.

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## Station Areas

- Enough space for high volumes of riders
- Pedestrian friendly
- Well lit and pedestrian activity – important for safety



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## Equity and Accessibility

**City staff interviewed bus riders on the Capitol Square during the day:**

- 55% indicated that walking one block to transfer would be a problem
  - Those with mobility problems expressed greatest concern
- 78% indicated that eliminating stops on the square would be a problem
- 25% indicated that detours were a problem for them



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## Safety

- Of the people interviewed, personal safety was a concern, particularly for women
- Factors that made women feel safe included lighting and the amount of pedestrian traffic



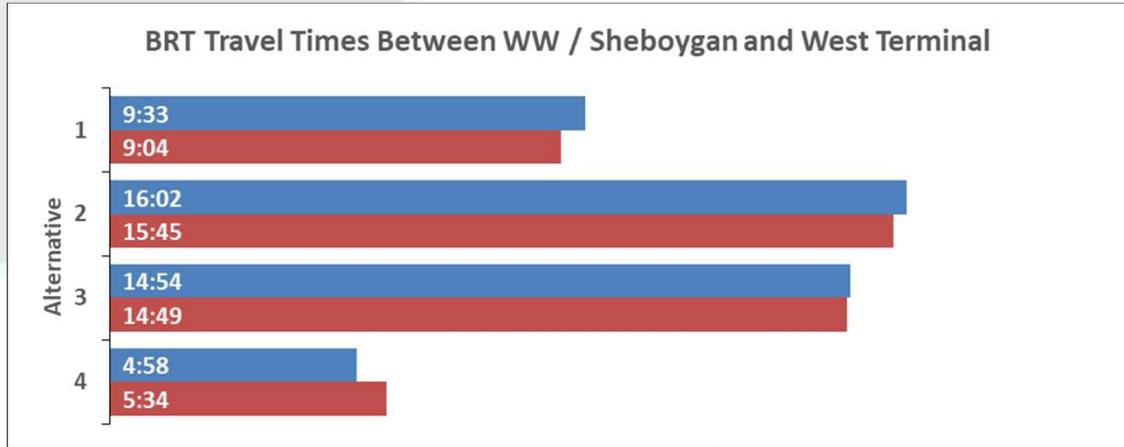
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## Travel Times Downtown



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## Travel Times West Side



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## Parking Impacts

Route	Spaces Removed	Notes
Capitol Square	4	East Washington at Webster
Capitol Loop	85	Outside of capitol loop
Wilson-Fairchild	104	Wilson, Doty, and Inside of Fairchild

Removing metered parking stalls on the Capitol Loop and Wilson Street would have significant revenue impacts to the City with the loss of up to \$200,000 annually.

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## Bike Impacts

Route	Impact
Capitol Square	None – bus volumes are similar or lower, no infrastructure changes
Capitol Loop	Capitol Loop bike lanes are converted to bus, bike, and right turn lanes
Wilson-Fairchild	Fairchild bike lanes would be lost, bikes would operate in mixed vehicle traffic

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## Detour Improvements with BRT

### • Detour signs

- Bigger, better, easier to read
- More staff effort dedicated to putting up, maintaining, taking down
- Temporary BRT signage where BRT will stop

### • Real-time signs

- New real-time signs will have more information and tell riders where to go rather than being blanked out

### • Amenities

- New bus stop planned Eastbound Johnson far side State Street will better accommodate State Street detour
- Full-length concrete terrace at Dayton and Wisconsin
- Possibly shelters or awnings

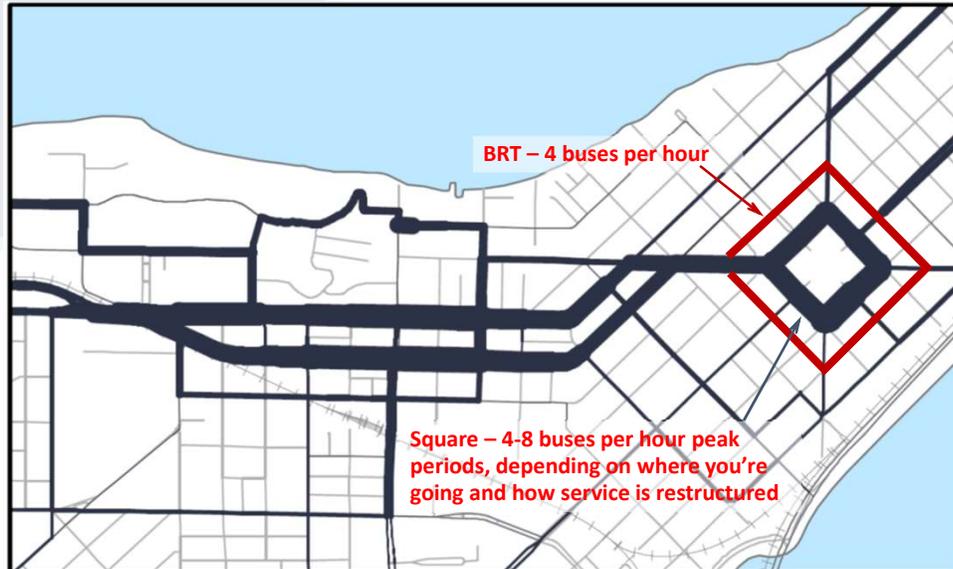
### • Other

- Signal timing improvements to keep buses on time when detoured

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## Frequency

With Alt 1A, the majority of local routes would stay on the square. Rather than having all service in one place, riders would have to choose the square of the loop. Many would choose local service on the square because service levels are higher.



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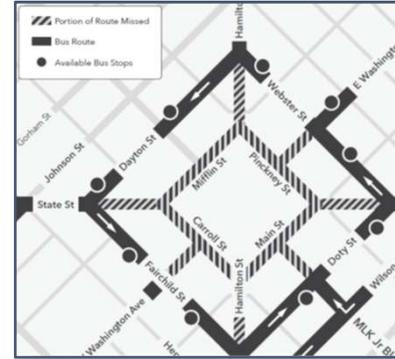
## Pedestrian Impacts

Route	Impact
Capitol Square	None – bus volumes are similar or lower, no infrastructure changes
Capitol Loop	None – no infrastructure changes and no significant changes in vehicle volumes
Wilson-Fairchild	Crossing Fairchild may be more difficult with two-way traffic and loss of bump outs

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## Detours – How we do it today

- **Standardized detours as much as possible**
  - Capitol Loop detour, State Street detour (via Wisconsin)
  - 6-8 major detours are unique
- **Information on the street**
  - Flyers at closed bus stops and on the bus
  - Capitol Loop stops have blue hoods removed revealing generic bus stop signs
- **Online information**
  - Metro web site
  - Text and email alerts
  - Real time data for apps indicate stops closed but not much more
- **Amenities**
  - Main Loop stops have benches but no shelter or real time signs



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## West Side Ridership

Area	2019 Daily Boardings
West Transfer Point *	1,712
West Towne Mall *	80
Odana Road **	83
Mineral Point Road **	216

\* Existing West Transfer Point is served by Alts 2, 3, and 4. Main West Towne Mall stop is served by Alt 2, but for Alts 1 and 3, riders go north to Mineral Point Road

\*\* In the split between Gammon Road and Whitney Way excluding West Transfer Point and West Towne Mall

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