

# City of Madison

DEPARTMENT OF



TRANSPORTATION

## **Addendum 2** **Wilson Street Recommendation**

June 24, 2020

## B.1 Background

On April 5, 2019, Madison Department of Transportation issued an Interim Recommendation for the Wilson Street Corridor. This Interim Recommendation is summarized in the first Addendum to the Wilson Street Corridor Study, dated June 26, 2019. Key components of that interim recommendation included:

- Constructing a raised shared use path on the east side of Broom Street from John Nolen Drive to Wilson Street;
- Constructing a raised cycletrack on the east side of Broom Street from Wilson Street to Doty Street;
- Marking an at-grade cycletrack on the east side of Broom Street from Doty Street to Main Street (a bicycle boulevard);
- Reducing eastbound West Wilson Street from two to one lanes on the 300 block, except for the 200 feet approaching Hamilton Street;
- Maintaining the capability to mark either a two-way separated cycletrack or one-way buffered bike lanes on the 300 block of West Wilson; and,
- Modifications to the Broom St/Wilson St intersection. (Note figures showed elimination of the channelized right turn, but the report narrative also discussed maintaining channelized right turn lane with a tabletop pedestrian crossing to reduce speeds.)

A resolution adopting the Interim Recommendation was introduced at the April 16, 2019 Common Council meeting (and referred to the Transportation Commission and Board of Public Works).

At the Transportation Commission meeting of April 24, 2019, the Commission recommended adoption of the resolution, with some modifications. The resulting resolution narrative stated the following:

*THEREFORE, BE IT RESOLVED, that the City adopt the Interim Recommendations for South Broom Street and the 300 block of West Wilson Street, contingent on a successful pilot in the spring of 2019; and,*

*BE IT FURTHER RESOLVED, that City Engineering prepare plans and specifications in accordance with those recommendations, in order for the reconstruction to occur in the 2019 construction season[sic]; and,*

*BE IT FURTHER RESOLVED, that City Engineering pursue small design modifications that preserve trees or minimize impacts; and, BE IT FINALLY RESOLVED, that the Department of Transportation continue to study the Wilson Street corridor to better accommodate all modes of transportation.*

The resolution adopting the interim recommendation was also acted upon by the Board of Public Works at their May 8, 2019 meeting (approving plans, specifications, and assessments). That resolution was subsequently re-referred to the Transportation Planning and Policy Board (TPPB).

Additional review and guidance provided by the TPPB directed the staff team to develop Wilson Street design alternatives that provided the highest level of bicycle protection throughout the Wilson Street corridor – with an emphasis on a high level of comfort for all ages and abilities bicyclists. The TPPB supported the design recommendations for Broom Street, between John Nolen Drive and Main Street (these are summarized in section B-6).

## B.2 Additional Stakeholder Outreach in 2020

After obtaining guidance from the City's Transportation Policy and Planning Board (TPPB) and Transportation Commission (TC), the Wilson Street staff team felt that additional targeted outreach was necessary - with a specific emphasis on reaching out to residents, businesses and governmental entities located directly on Wilson Street - throughout the entirety of the corridor. The outreach discussed alternatives and treatments that provided higher service levels and safety for cyclists. Special outreach was also made to groups representing persons with disabilities. Stakeholder groups contacted included:

- Members of various condominiums boards located along Wilson Street (including Union Transfer, Marina, Nolen Shore, Doty School and 350 West condominiums)
- Wilson Street restaurants (including Paisan's, Tempest and Osteria Papavero)
- Representatives from Hilton Hotel and Madison Club
- Monona Terrace Community and Convention Center
- Representatives of Dane County Sheriff and Public Safety Facilities
- City-County Building Management and Dane County Dept. of Administration
- State of Wisconsin Dept. of Administration Building Management (representing office buildings at 1 West Wilson and 101 East Wilson)
- Madison Fire Department
- Madison Police Department
- City of Madison Department of Civil Rights staff
- Access to Independence
- Downtown Madison, Inc.

Meetings were also held with representatives from the National Association of City Transportation Officials (NACTO), to ensure that the street design options being recommended are consistent with current best practices recommended by NACTO.

At the beginning of these stakeholder meetings, the staff team stated that there are many, often competing, desired uses for the Wilson Street corridor. At the meetings with various stakeholder groups, the following concerns and requested design improvements were noted as items of particular interest or concern. These are listed below:

### Parking and Related Issues

- Private bus parking for Monona Terrace and Hilton should be accommodated on the south side of Wilson Street
- Delivery and loading area at Marina and other large condos for UPS/FedEx and food delivery as receive high volume of deliveries
- Consideration needed for how delivery drivers get from cycletrack to sidewalk – will need to get dolly up and over curb with heavy loads
- Visibility at Hilton circle drive is an issue for vehicles pulling out onto Wilson Street westbound
- Marina exit from parking garage – consider inclusion of an indicator light or sound for when vehicles are exiting
- Nolen Shore driveway is too steep and should be improved with the reconstruction project
- Streets – For maintenance purposes, there should be parking restrictions year round (on days of garbage pick-up, for any locations with bin pick-up)
- City-County Building (CCB) has delivery needs, so need to consider where deliveries will be accommodated peak hours (when parking may be prohibited)

Aesthetics and Wayfinding

- Move mailboxes/newspaper boxes away from Monona Terrace area
- Generally improve the aesthetics into downtown
- Wider terrace at Nolen Shore desired
- Save as many trees as possible
- Sign for Monona Terrace ramp height/weight restrictions before vehicles turn into facility
- Better wayfinding and signage is needed for drivers, bicyclists and pedestrians, as it is confusing to get to downtown
- Make Wilson Street more attractive, to encourage people to visit this part of downtown
- Pedestrian wayfinding needed (to Wilson St from Capitol Square)

Maintenance

- Preference for sidewalk-level facility where no parking and clear delineators where there is parking allowed
- Desire to install a heated bike path to save on winter maintenance
- Mark bus stop so is seen by plow drivers
- Concerns for floating bus stop snow clearing

Disabled access

- Need a space at CCB for daily unloading for disabled workers – possibly use MLK
- Accessible parking should not empty into street – need to consider both side and rear exiting needs when designating disabled parking
- CCB employees would like improved disabled parking access, as some employees find it very challenging to get from County parking garage to building during winter when it is snowy/icy (would there be a way for them to use Wilson St Garage at same rate?)
- Need to consider needs of vision impaired with different types of facilities, so they know what they are entering – street, bike facility, crosswalk, etc.
- Raised crossing at Broom/Wilson would be better for disabled access if it was raised the entire length, and not just at the right turn lane
- There is an 8-foot minimum boarding area at the floating bus stop located along Broom Street

Biking-Specific Concerns

- Setback of path on Broom St from road is concerning as there is nowhere for bikes/peds to go if there is an incident
- Concern about geometry of path and sections that are narrowed not meeting standards
- Need to slow bikes down at pedestrian crossings especially where disabled cross and at MLK crossing

Other

- Improve crossing of John Nolen Drive from Capital City Path to Broom St, as it is a difficult crossing for anyone walking or biking
- Upgrade railroad tracks on Broom St, as the track crossing is very rough
- Concerns over construction impacts on businesses
- Need to coordinate with other construction projects along corridor
- Fire lanes and aerial apparatus access must be maintained, where required
- Improve Broom Street crossing to Brittingham Park dog park

- Concerns that correct turning radii, for vehicle for turning movements
- Glad to see a designated space for bicyclists to clarify where to expect them, and discouraging bikes using sidewalks
- Consider Wilson Street and Doty Street one-way pair (*see immediately below*)

### B.3 Corridor Goals and Objectives

The corridor goals and objectives are noted in the original report, and include:

- Provide safety for all modes of transportation
- Improve comfortable bike connection to downtown from south, west and east
- Maintain viable, pleasant living area
- Provide pleasing entrance to downtown
- Satisfy parking and loading needs
- Preserve healthy tree canopy and terrace
- Efficient and ordered motor vehicle operations
- Safe and comfortable pedestrian crossings
- Preserve existing infrastructure investments
- Provide corridor vision for Wilson
- Maintain/Improve transit

### B.4 Alternatives

The Alternatives for the Wilson Street corridor remain similar as those reviewed in 2019. They include:

1. On-street bike accommodations from Broom to Blair with existing traffic flow configurations. This was discussed as Alternatives 5 and 6 in the original report. This alternative would require a contra-flow bike lane for the portion of the corridor that runs from Henry to Butler Streets
2. Two-way cycletrack with existing traffic flow configurations. This alternative would construct a cycletrack that runs the full length of the corridor from Broom Street to Blair Street. The cycletrack would run on the south side of the corridor and could be raised (sidewalk level) or at-grade (street level).
3. Two-way cycletrack with revised traffic flow configuration using a one-way pair with Doty Street. This alternative resulted from comments received at a condominium board. It entails relocating eastbound traffic on Wilson Street to Doty Street, one block north. Wilson Street would then carry only westbound traffic from Butler Street to Broom Street.

#### A. On-Street Bike Lanes

Figures B.4-1 and -2 illustrate the concept of on-street accommodations that were described in the original report.

- From Broom to Henry this alternative reduces the number of eastbound general purpose lanes from two to one, and adds buffered striped bicycle lanes in both eastbound and westbound directions.

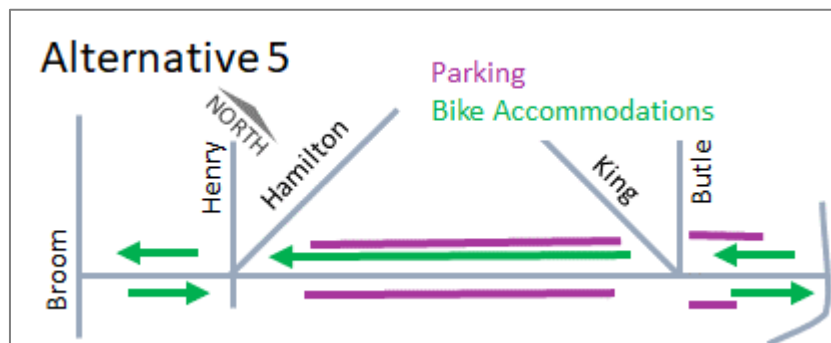
From Henry to Butler this alternative would remove parking and loading on the south side of Wilson Street and adds a buffered contra-flow bike lane on that side. Parking and loading is

maintained on the north side of the street, as are the two one-way general purpose travel lanes westbound. For westbound bicycles, the travel lane adjacent to the parking loading would be labeled as a shared bike/motor vehicle lane. During off-peak times, on the north side of the corridor, parking and loading would be allowed and the striped bicycle lane would travel adjacent to traffic. This is called a “floating bike lane” and exists on Doty St one block to the north. This option reduces general purpose travel lanes from two to one, one-way westbound, during off-peak times.

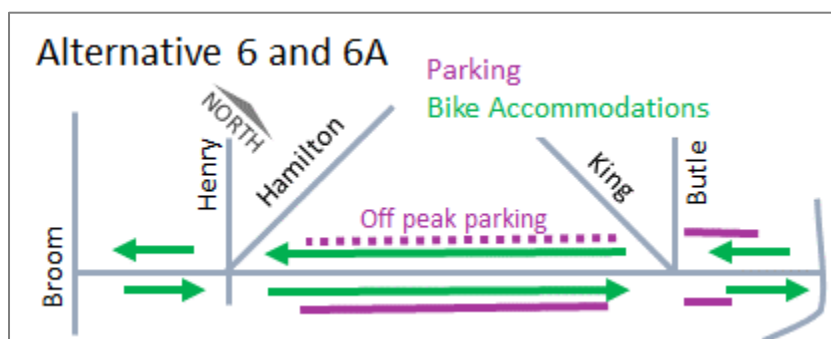
- From Butler to Blair Street, this alternative adds striped bicycle lanes for both eastbound and westbound cyclists. This is accomplished by slightly narrowing the vehicular lanes, as well as narrowing the current three-foot median.

Parking and loading would remain on both sides of Wilson Street. (note that this portion of the alternative is already largely in place).

While this alternative provides some type of bicycle accommodations from Broom Street to Blair Street, it does not provide an “all ages and abilities” facility.



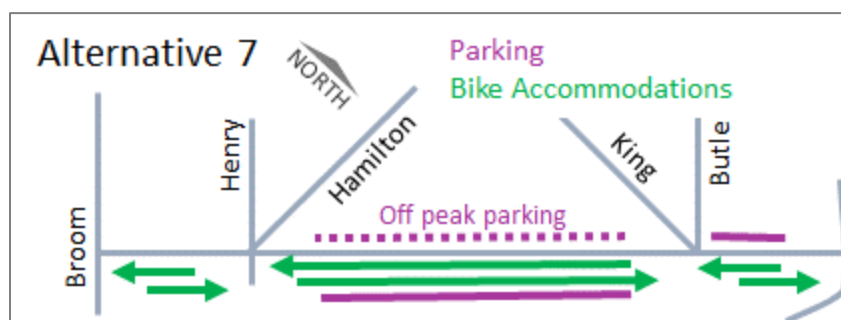
**Figure B.4-1 Alternative 5 Schematic**



**Figure B.4-2 Alternative 6 Schematic**

#### B. Two-way Cycletrack

The two-way cycletrack was discussed as Alternative 7 in the original report. It essentially provides a fully separated two-way bicycle facility on the south side of Wilson Street all the way from Broom Street to Blair Street. This is schematically illustrated in Figure B.4-3.



**Figure B.4-3 Alternative 7 – Two-way Protected Cycletrack**

One consideration of the two-way cycletrack concept is whether the cycletrack is raised (at sidewalk level) or at-grade (street level), both of which affect how the cycletrack is maintained during the winter. These options also impact design of loading zones, parking, pedestrian access and any garbage cart pick up on the street

The City of Madison currently has a few protected bike facilities existing within the street rights-of-way, most notably the contra-flow curb-protected bike lane located along University Avenue through the UW Campus. This protected bike lane has been in place since the 1970's.

More recently, the City has constructed a protected bicycle facility along the Bassett Street right-of-way, with the design varying slightly as the cyclist travels along the street. Figure B.4-4, below, shows a parking-protected bike lane along Bassett Street. Flexible removable bollards are shown to delineate where cars should park, discouraging them from mistakenly parking directly against the curb.



*Figure B.4-4 Bassett Street Parking-Protected Bike Lane – at street level*

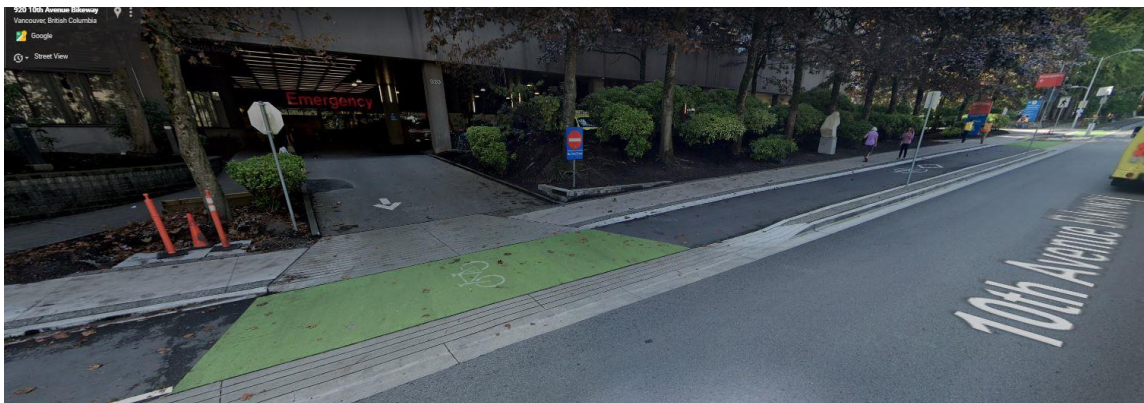


Figure B.4-5, below, shows a slightly different design for a protected bike facility. This design is a one-way cycletrack on Bassett Street, between Gorham and Johnson Streets. This facility is raised rather than at street level and is located directly adjacent to the sidewalk.



*Figure B.4-5 Bassett Street Two-Way Cycle Track Adjacent to Sidewalk*

Figure B.4-6 and B.4-7 and B.4-8, below, show one-way and two-way protected bike lane examples from Vancouver, BC, Canada and Chicago, IL. Note the green pavement markings to alert both cyclists and motorists of a driveway entrance.



*Figure B.4-6 Vancouver, BC - Cycletrack is raised from street level*





*Figure B.4-7 Vancouver, BC – Two-way cycletrack at street level with raised pedestrian crossing*



*Figure B.4-8 Chicago, IL – Cycletrack is at street level with curb separation*

Figure B.4-9 shows a two-way protected cycletrack operating in a busy urban environment in Seattle and B.4-10 shows a two-way protected cycletrack in Brooklyn.



Figure B.4-9 Seattle, WA – Cycletrack is at street level with curbed protection



*Figure B.4-10 Brooklyn, New York City – Parking protected cycletrack at street level with heavy bicycle, pedestrian and parking volumes.*

#### C. Wilson Street and Doty Street One-Way Pair

At a meeting with a condominium board, it was suggested that motor vehicle traffic using the 300 block of Wilson Street and the 200 and 300 blocks of Doty Street should be re-routed, from the current two-way configuration to one-way. Essentially, traffic that is heading into the downtown (primarily from John Nolen Drive and Broom Street) - now using the 300 block of Wilson Street - would be re-routed one block to the north, to use the 300 and 200 blocks of Doty Street. Under this scenario, the 200 block of Doty Street would be converted to one-way traffic (eastbound). The 300 block of W Doty might be able to accommodate both east and westbound traffic. Traffic using the 300 block of Wilson Street would be one-way in the westbound direction only. With this concept, Hamilton Street, which is currently one-way northbound between Wilson and Doty Streets, would be converted to one-way southbound. Figure B.4-11 illustrates the concept.



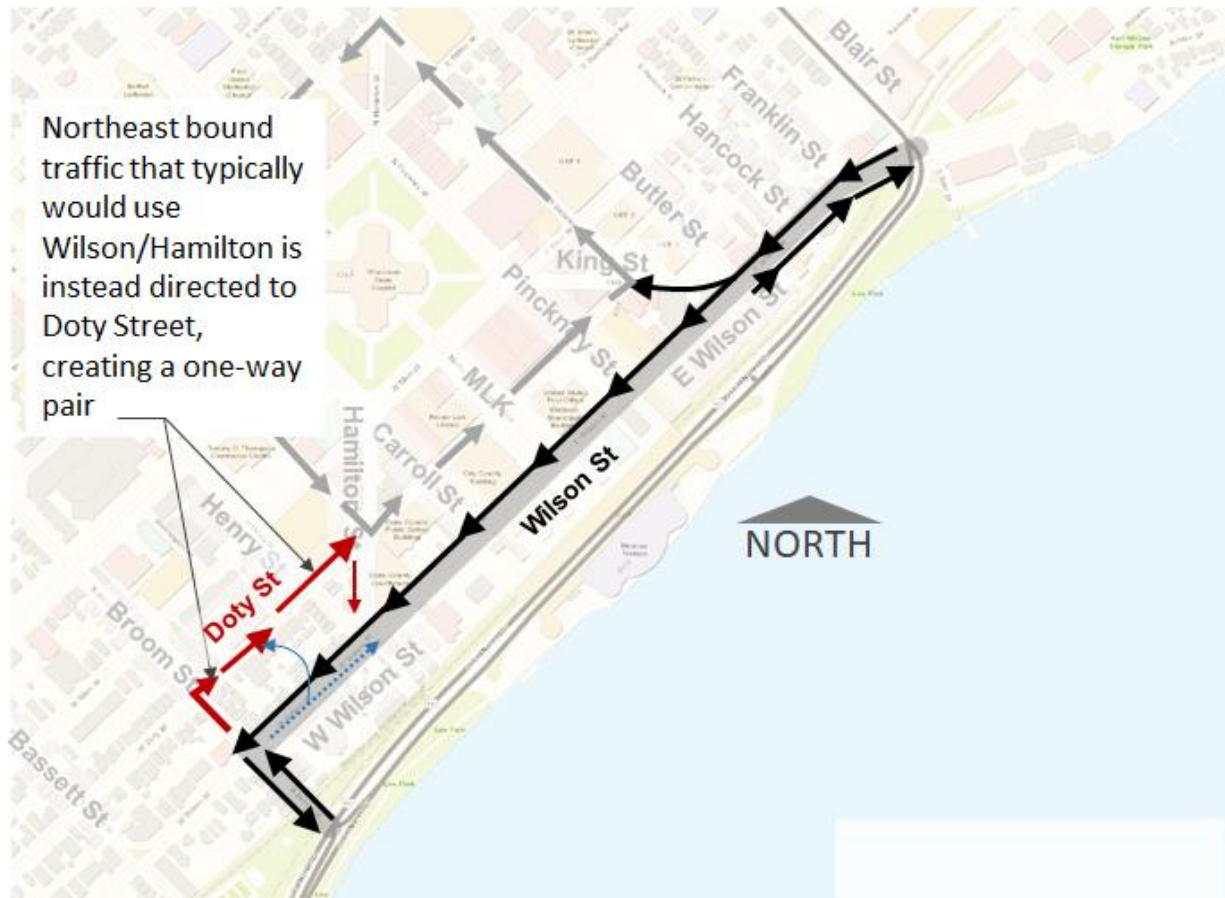


Figure B.4-11 Eastbound traffic is rerouted to W Doty St

This conversion to a one-way pair would alter traffic patterns in the immediate area. The staff team conducted a cursory review of the one-way pair concept. The review included observation regarding the impacts of the concept and traffic modeling. A detailed demand model analysis of the resulting traffic flow changes through the downtown was not conducted.

The alternative would require several geometric and directional changes. Figure B.4-12 illustrates conceptually the needed changes, which would include:

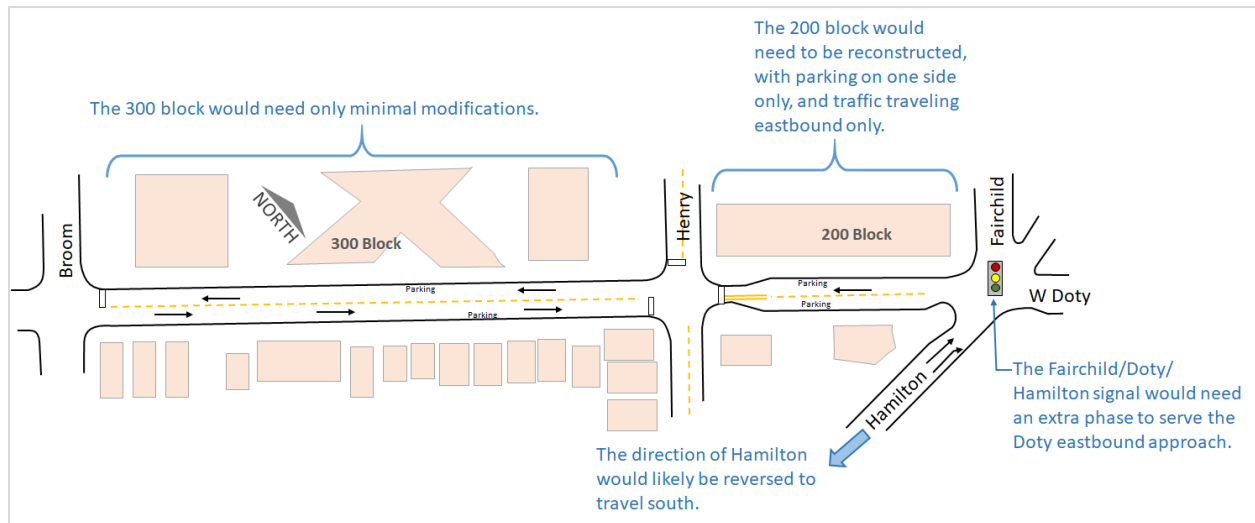


Figure B.4-12 Modifications needed on W Doty St

- Reconstructing the 200 block of West Doty, including the intersection approach with South Fairchild
- Eliminating parking on at least one side of the 200 block of W Doty St.
- Reversing the direction of the 200 block of W Doty to eastbound.
- Adding a signal phase at the Fairchild/Doty/Hamilton intersection (along with added signal heads, etc.)
- Reversing the direction of the 200 block of S Hamilton to southbound.

The 300 block of W Doty would probably only require minimal changes.

Redistributing eastbound traffic volumes from Wilson Street to Doty Street would increase traffic volumes by about 4500 vehicles per day on Doty St. This would result in daily traffic volumes of about 8100 vpd in the 300 block of Doty Street (a 125% increase), and traffic volumes of about 5700 vpd in the 200 block of W Doty Street (a 375% increase). The street geometry, with some reconstruction, can handle these traffic levels. The classification of W Doty St would move from a collector street to a minor arterial.

Traffic volumes along the 200 and 300 blocks of Doty Street would increase significantly, particularly during the morning travel period. Most of the properties along those blocks are residential in nature and residents and landlords would likely object to significant traffic increases through that corridor.

There could be other traffic effects from this reconfiguration which are not represented or modeled. For example, southbound Fairchild vehicles might choose to use Hamilton to access John Nolen Drive.

This Alternative would prompt modifications to the alternatives being considered. These modifications could include:

- Broom Cycletrack – to implement the cycletrack on Broom, both lanes on Broom St. between Wilson and Doty would probably need to be northbound (eliminating the SB lane), so all traffic heading to John Nolen (from the CBD employment areas and parking garages) would need to use Bassett Street or Hamilton St by converting it southbound between Doty St and Wilson St.
- Conflicting Cycletrack Movements - There could be two locations with heavy motor vehicle turn movements across the cycletrack (inbound right turns at Doty, outbound left turns at Wilson).

- Doty Contra-flow Bike Lane - The two lanes of eastbound traffic that would be introduced for at least a portion of the 200 block of Doty, would probably eliminate the westbound contra-flow bike lane.
- Traffic Operations - The added signal phase at Doty and Fairchild intersection for the new eastbound traffic lanes at Doty, the conversion of traffic on Hamilton from northbound to southbound and the added complexity with geometry, make the intersection level of service drop from an existing C (acceptable) with an average delay of 28 seconds, to an F (not acceptable) and an average delay of 181 seconds. This deterioration occurs because to accommodate an additional phase at the intersection, existing phases will see a time reduction to be able to provide timing for the new phase, increasing delays and queues.

### **B.5 Wilson Street Recommendation**

The recommended Wilson Street Alternative from Broom Street to Blair Street is a two-way cycletrack . Reasons supporting this recommendation include the following:

- It provides an “all ages and abilities” bicycle facility from the Capital City Path, one of the state’s busiest paths, to the Capitol Square, one of the state’s most popular destinations. Other alternatives studied do not provide as good of a connection for people of all abilities.
- In 2019, some stakeholders were concerned about the safety for all users with a two-way cycletrack design. However, stakeholders and residents are now more familiar with the operation of a fully separated bicycle facility and how it would work in this corridor and are more supportive.
- Staff discussions with NACTO staff have provided additional guidance and confidence in the design concept being presented.

Two-way cycletrack with revised traffic flow configuration using a one-way pair with Doty Street is not recommended. Reasons for its dismissal include:

- Unacceptable traffic operations at the Fairchild/Doty/Hamilton intersection. The average delay would more than triple.
- Increased infrastructure costs associated with reconstructing the 200 block of Doty.
- While this would decrease traffic volumes on Wilson Street, it would substantially increase traffic volumes on Doty Street, a collector. This traffic increase would likely meet resistance from residents.

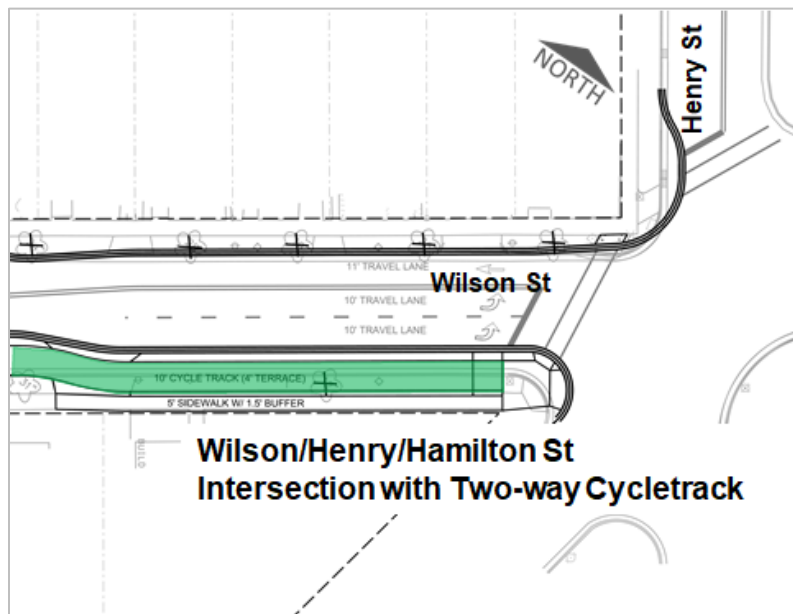
The on-street bike accommodation alternative (bike lanes) is also not recommended because it does provide an “all ages and abilities” facility from the Capital City Trail to the Capitol square. One of the goals of the study was to increase safety for all users, and conventional bike lanes do not provide the level of safety desired.



### A. Description of Recommendation for the 300 Block of Wilson Street

After obtaining guidance from the City's policy advisory committees (TPPB and TC), the staff team proceeded to refine a design for the Wilson Street corridor that included a two-way protected cycletrack along the south side of Wilson Street. This cycletrack would extend from Broom Street to Blair Street.

Several modifications were made to the design of the 300 block of West Wilson, to allow for a cycletrack to be installed. Near the Hamilton Street intersection, the terrace was reduced on the north side of Wilson Street since most of the Ash trees will be removed. Additional terrace narrowing on the south side (requiring one tree removal) provides enough room for a full cycletrack and the two left turn lanes in the eastbound direction, which are needed to maintain operations. Figure B.5-1 illustrates the changes at the intersection. Figure B.5-2 illustrates the changes along the 300 block of the street.



*Figure B.5-1 Wilson Street/Henry/Hamilton St Intersection with Cycletrack*

Some of the refinements, including modifying intersection geometry, were done to allow for the installation of a two-way cycletrack on the south side of the street. The following figures illustrate how the curb faces have been changed to accommodate the cycletrack. Figure B.5-1 shows where the typical section of Wilson Street is expanded at the intersection. Figure B.5-2 illustrates the lane configuration for Wilson Street using a two-way cycletrack.

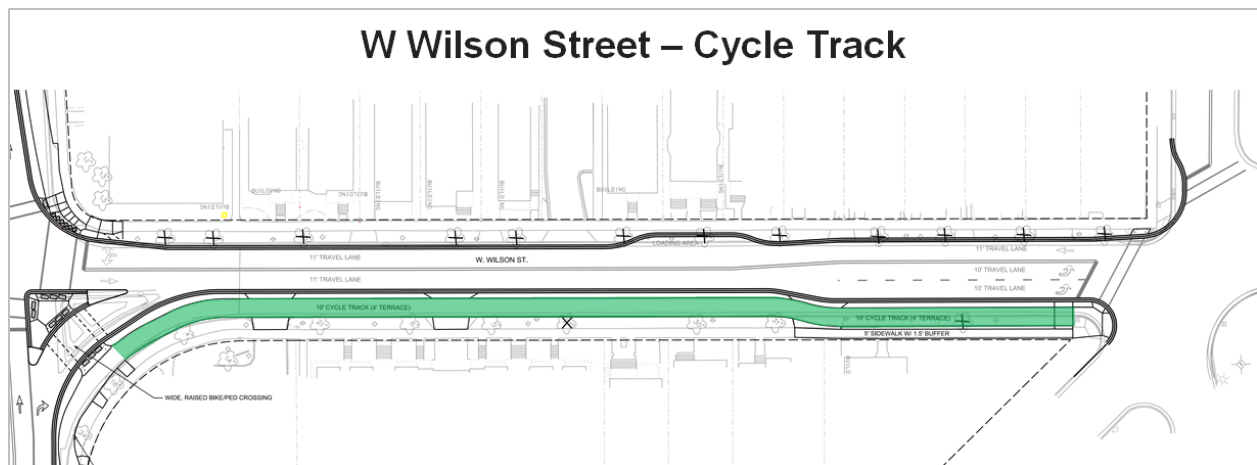


Figure B.5-2 300 Block Wilson Street with Two-way Cycletrack

This section of W Wilson St is recommended to have a raised sidewalk-level cycletrack. Reasons for this include:

- Efficiency for winter maintenance
- Design makes it harder for people driving to mistakenly enter the bicycle facility to park or to enter it driving.
- Safer weekly collection of refuse and recycling carts
- Consistency with the design of the facilities on the adjacent blocks of Broom

The sidewalk level facility will include design elements that make it clear where people should walk and where people should bike. This includes elements such as pavement markings, signage, and noticeable separation between the facilities.

#### B. Description of 400 and 500 Blocks of Wilson Street Options

A two-way protected cycletrack on the south side of Wilson Street could also incorporate similar street improvements to the west of Broom Street. Between Broom Street and Bassett Street, a two-way cycletrack could be accommodated within the street-right-of-way, although there would be a loss of parking, and a reduction to one eastbound travel lane on Wilson Street. Such an alternative would be consistent with the Bassett Street Corridor Plan, which envisions protected bicycle lanes along Bassett eventually connecting with the Wilson Street and Broom St. corridors.

As the Bassett St. corridor study already makes a recommendation for the 400 block of W. Wilson St., the recommendation of this study is to maintain flexibility for the ultimate design of the 400 block of Wilson St. This is achieved with the current proposed design of the Wilson St. and Broom St. intersection (see section B.6. for more specific details. As the recommendations of the Bassett St. corridor study are implemented, the 400 block of W. Wilson St. should be reviewed further to determine if it is appropriate to continue with the recommendations of the Bassett St. corridor plan or if it is appropriate to extend the two-way cycle track from the 300 block of W. Wilson St.

Further to the west along Wilson Street, to the southwest bicycle path, the 500 and 600 blocks of Wilson Street could include a two-way cycletrack, although there would be a loss of parking on one side of the street. Traffic volumes on Wilson Street west of Bassett Street are about 1350 vpd, so having this

section of Wilson function as a Bicycle Boulevard would be consistent with an “all ages and abilities” facility. These blocks are currently included as part of the low-stress bike network.

The on-street parking on the 500 block of W. Wilson St. is heavily used, which effectively results in more narrow feeling of the roadway, helping to maintain slower speeds. Additionally, the street is at an appropriate width (40 ft. from face-of-curb to face-of-curb), which provides for more comfortable spacing between all road users, even during the winter months. However, in order to maintain the lower traffic volumes and speeds, additional traffic calming should be considered for the 500 block in the future.

Constructing a cycletrack through the Bassett/Wilson street intersection would require redesigning the intersection to accommodate both the cycletrack and the eastbound Wilson Street vehicles entering the intersection. The current design of this intersection promotes vehicle traffic on southbound Bassett St. to continue to head east on Wilson St., towards Broom St. The ultimate design of this intersection should maintain this design element in order to help control any traffic volume increases on the 500 block of W. Wilson St.

C. Description of Recommendation for 100 W and 100 to 500 E Blocks of Wilson St (Henry to Blair Street)

In order to fit a 10-foot two-way cycletrack within the street right-of-way, several changes will need to be made to the street. The cycletrack is recommended to continue to be located on the south side of the street, continuing from the 300 block of Wilson Street. There is also a strong desire expressed by businesses and other entities that the south side of Wilson Street continue to be available for parking and, especially, loading. The staff team, in order to accommodate a protected bike facility and loading, recommend that the cycletrack be parking-protected. That is, vehicle do not park and load at the curb, but rather park between the travel lane and parking delineators (similar to the Bassett Street example shown in Figure B.3-1 above. With this design, cyclists are protected from the travel lane by parked or loading vehicles.

Segment B would also accommodate some parking and loading on the north side of the street, however only during non-peak travel periods. During those non-peak travel periods (midday, evening and weekends), parking and loading would occur on both sides of Wilson Street, and there would only be one vehicular travel lane in the westbound direction. Traffic modeling indicates that one travel lane would be sufficient to accommodate vehicular traffic volumes during the off-peak periods, but that two lanes would be necessary for the morning and afternoon peak travel periods (for example, 7:00-9:00 a.m., and 4:00-6:00 p.m. weekdays, although exact times for parking prohibition to be determined after further evaluation).

Although the cycletrack will be 10-feet wide in most locations (measured from the face of curb), some narrowing will occur in select locations. For example, at 1 W Wilson the cycletrack should be narrowed to 9 feet, or even down to 8 ft., in order to accommodate the disabled loading area, to ensure enough buffer space for safe passenger loading/unloading, and to provide bicycle traffic calming. In addition, this area will have a tabletop crossing for pedestrians across the cycletrack. The plan also recommends that final designs consider narrowing the cycletrack to 9 feet in areas with large loading/unloading needs to increase the size of the buffer and provide a larger area for people entering/exiting vehicles and waiting to cross the cycletrack.

The intersection of Wilson St and Martin Luther King Jr Blvd is recommended to be built with a tabletop design to enhance the safety for pedestrians crossing this area. This highlights the presence of pedestrians to both people driving motor vehicles and people riding bicycles.

Figure B.5-3 illustrates the segment of Wilson Street between Henry Street and Butler Street. It illustrates the parking protected cycletrack and the peak hour parking lane. Since much of this portion of Wilson Street was recently reconstructed, the cycletrack is proposed to be at street level, with vertical delineators designating the parking and the cycletrack. This will allow the facility to be built with only small changes to the current street. The final design may consider an off-street cycletrack for the segment nearest Henry St., if it provides for better operations for snow removal and refuse cart collection in the lower density residential area, and/or the ability to preserve existing tree canopy.

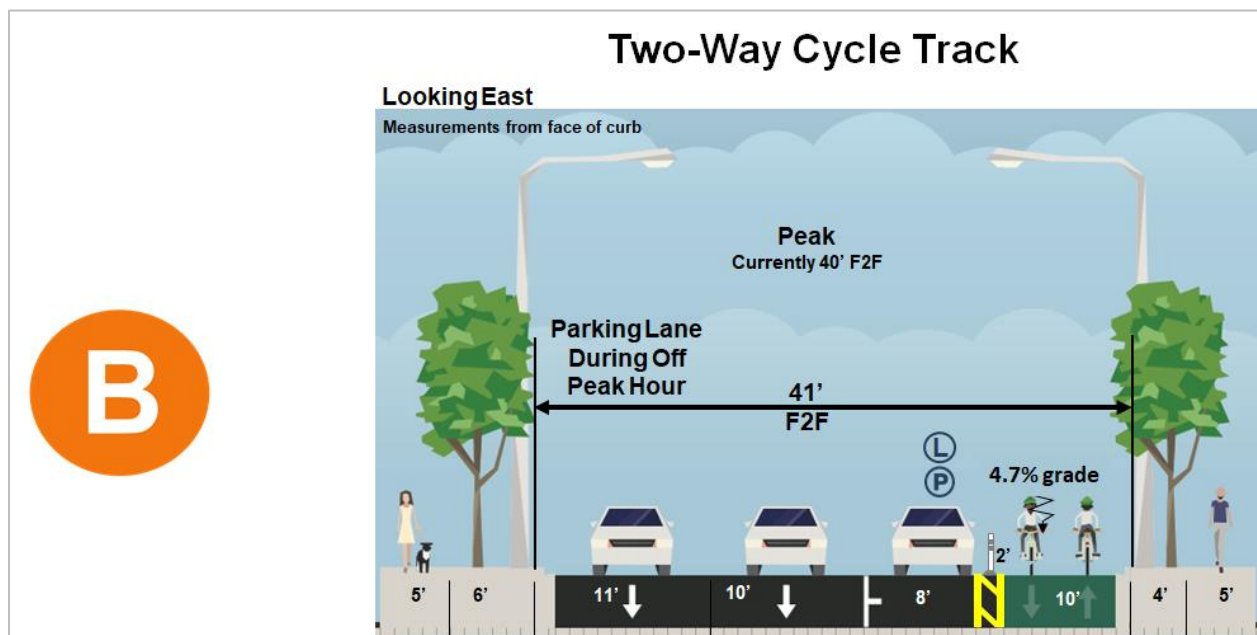


Figure B.5-3 Wilson Street: Henry to Butler Streets

Figure B.5-4 illustrates the segment of Wilson Street between Butler Street and Blair Street. The current configuration of the street has two travel lanes in each direction and parking on both sides of the street. In order to accommodate a cycletrack on the south side of the street – parking would be removed on the south side of the street. Parking utilization is lower on the south side, and it has less frequency of loading. The cycletrack would have a 2-foot buffer between the bike facility and the outside eastbound vehicle travel lane.

Again, since the section from Hancock St to Blair St was recently reconstructed, the cycletrack would be at street level, with delineators separating the cycletrack from the travel lane.

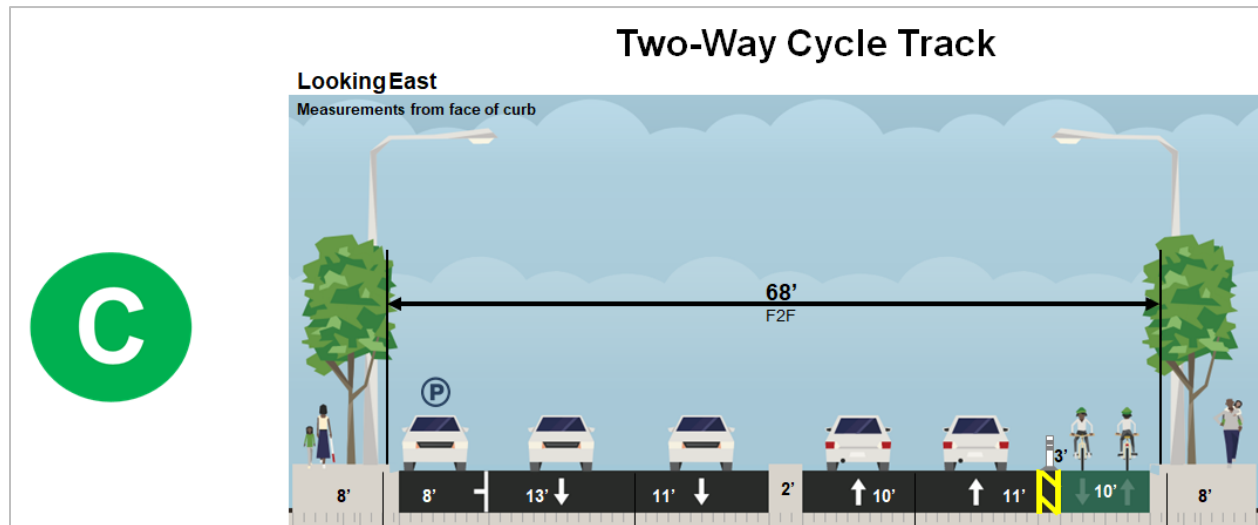
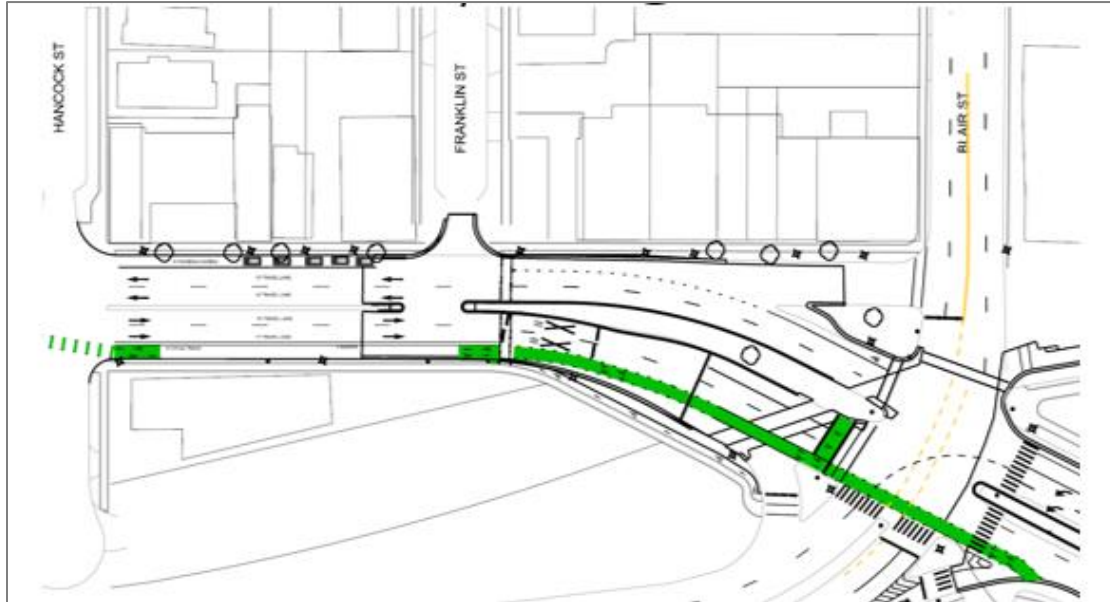


Figure B.5-4 Wilson Street: Butler to Blair Street

Other recommended improvements along the corridor include:

- Moving a portion of the City-County Building disabled loading/unloading area to Martin Luther King Jr Blvd
- Adding signage or other indication at the Marina Condo that would warn pedestrians and bicyclists when cars are exiting the parking garage
- Maintain as much separation as possible from driveways with poor visibility for bicyclists and pedestrians
- Wayfinding for people walking, biking and driving

Figure B.5-5 illustrates how the cycletrack could be accommodated at the Wilson St/Williamson St/Blair St intersection. There are a number of options for how the cycletrack could be accommodated at this intersection to connect with the existing cycletrack along Williamson St. and the Capital City bike path. Design options at this intersection include both on-street and off-street options. The final design of the cycletrack through the intersection will be determined with the approval of the geometrics of the intersection as part of the WisDOT project to reconstruct the intersection (City project number 11135).



*Figure B.5-5 Wilson Street: Hancock to Blair Street (including intersection crossing)*

When completed, the Wilson Street cycletrack would ultimately connect the Southwest Path to the Capital City Path with a protected bicycle facility. Importantly, this continuous protected bicycle corridor will also provide direct bicycle access to all of the employment areas, residential uses and recreational opportunities in and around the Capitol Square – for cyclists of all ages and abilities.

#### **B.6 Refinements to Broom Street**

All the Wilson Street alternatives included a cycletrack on Broom Street from John Nolen Drive to Main Street. Several refinements have been made to this alternative since 2019.



Figure B.6-1 illustrates the refinements made to Broom Street since the issuance of the Interim Recommendation Report. The reduction in one northbound lane north of Wilson Street generally improves accommodations for cyclists and pedestrians by allowing separated facilities for both pedestrians and cyclists.

Figure B.6-2 to 4 show typical sections of Broom Street between John Nolen Drive and Wilson, Wilson and Doty Street, and Doty and Main Street.

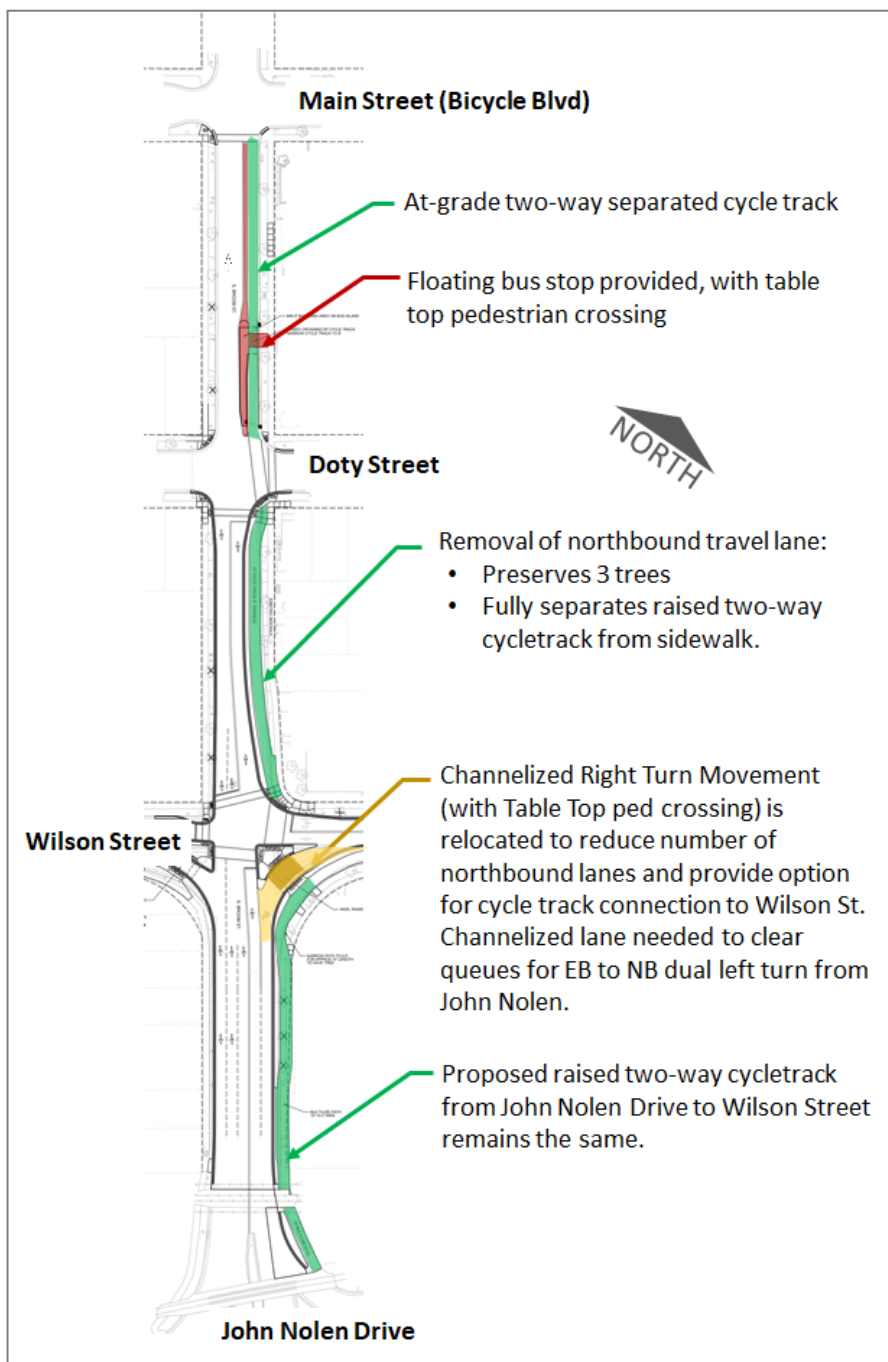


Figure B.6-1 Broom Street Recommendation

Figure B.6-2, below, illustrates the two blocks of Broom Street between Wilson and Main Street. A two-way protected bicycle facility is accommodated along the east side of Broom Street for those two blocks. In addition, a floating bus stop is included (between Doty and Main Streets)

At the Broom Street/Wilson Street intersection, the configuration illustrated in Figure B.6-3, below, accommodates the two-way a cycletrack. After several discussions with NACTO staff, the City staff team decided to maintain the channelized right turn. The channelization separates the north-south bike/ped crossing movement from the very high volume right turn movement, reducing pedestrian conflicts and exposure. Additionally, the truck-turning radius that would be needed for the right turn without the island makes the pedestrian crossing distance longer, and the corresponding pedestrian clearance interval. However, the channelized right turn would be signalized and include a raised crossing to reduce the common complaints of speeding and failure to yield to pedestrians at this intersection. Without the channelized right turn, the raised crossing could not be installed because larger vehicles, especially buses, would have difficulty negotiating the grade change at an awkward angle.

The cycletrack on Broom Street approaching the intersection also narrows to 8.5-feet for a small distance in order to preserve one of the trees that is not being removed.

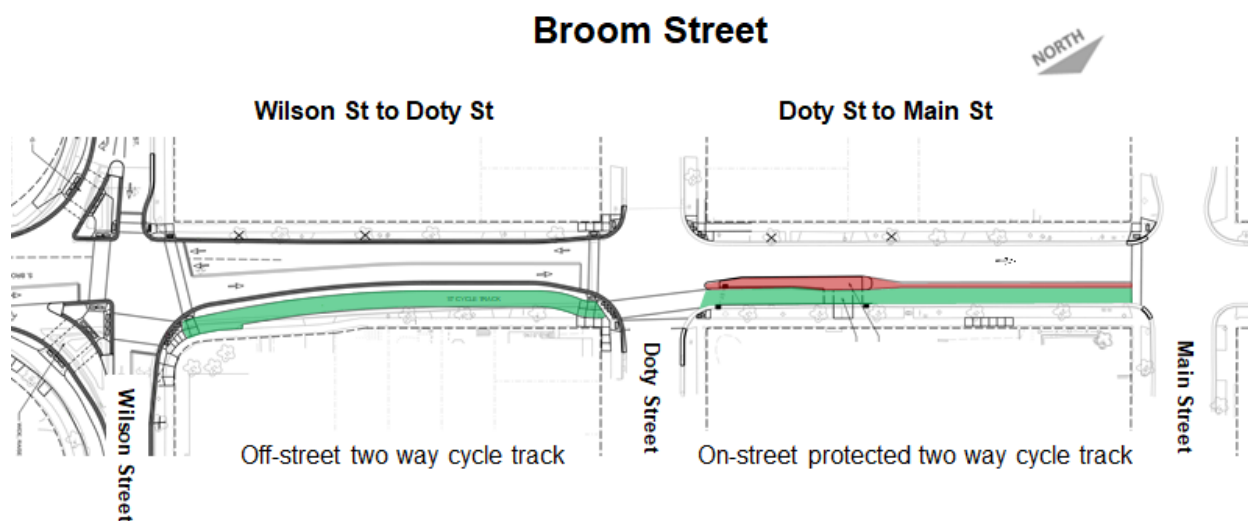


Figure B.6-2 Broom Street Typical Sections

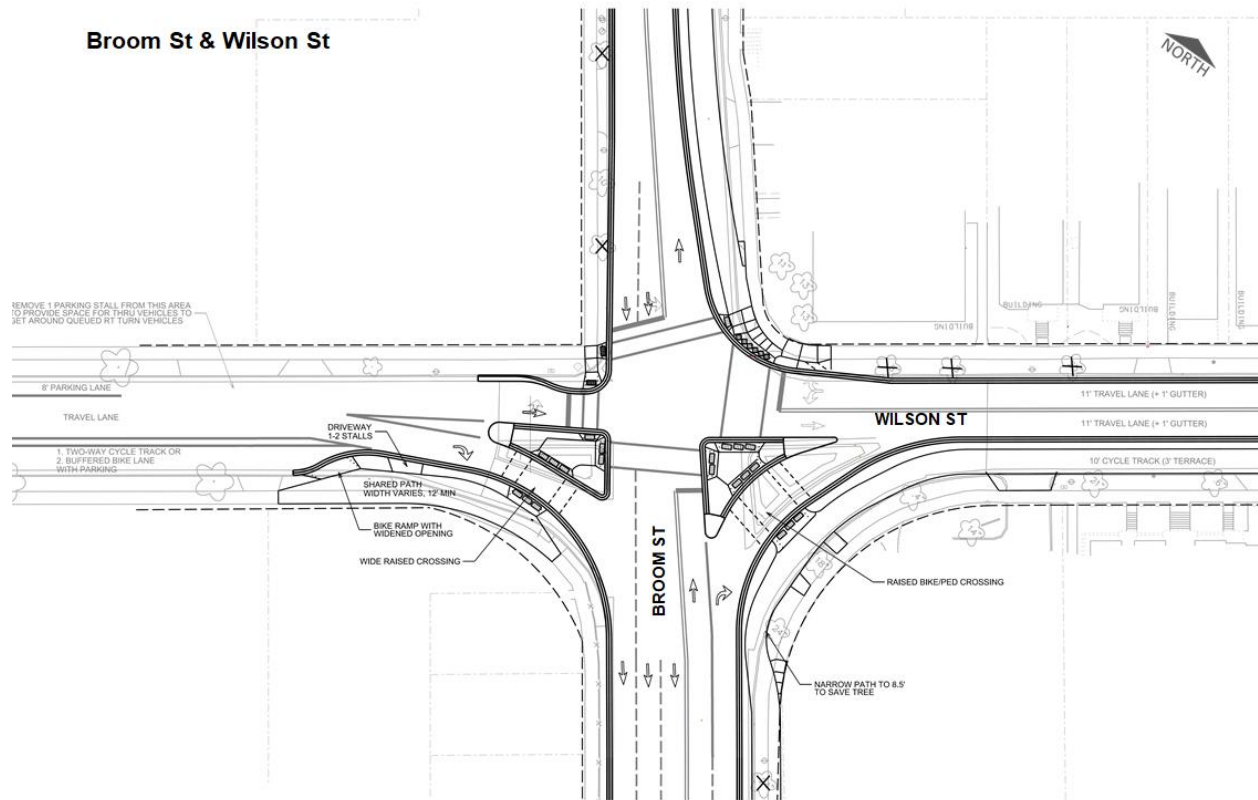


Figure B.6-3 Broom and Wilson Streets Intersection

Figure B.4-4, below shows a street-level view of Broom Street between John Nolen Drive and Wilson Street.

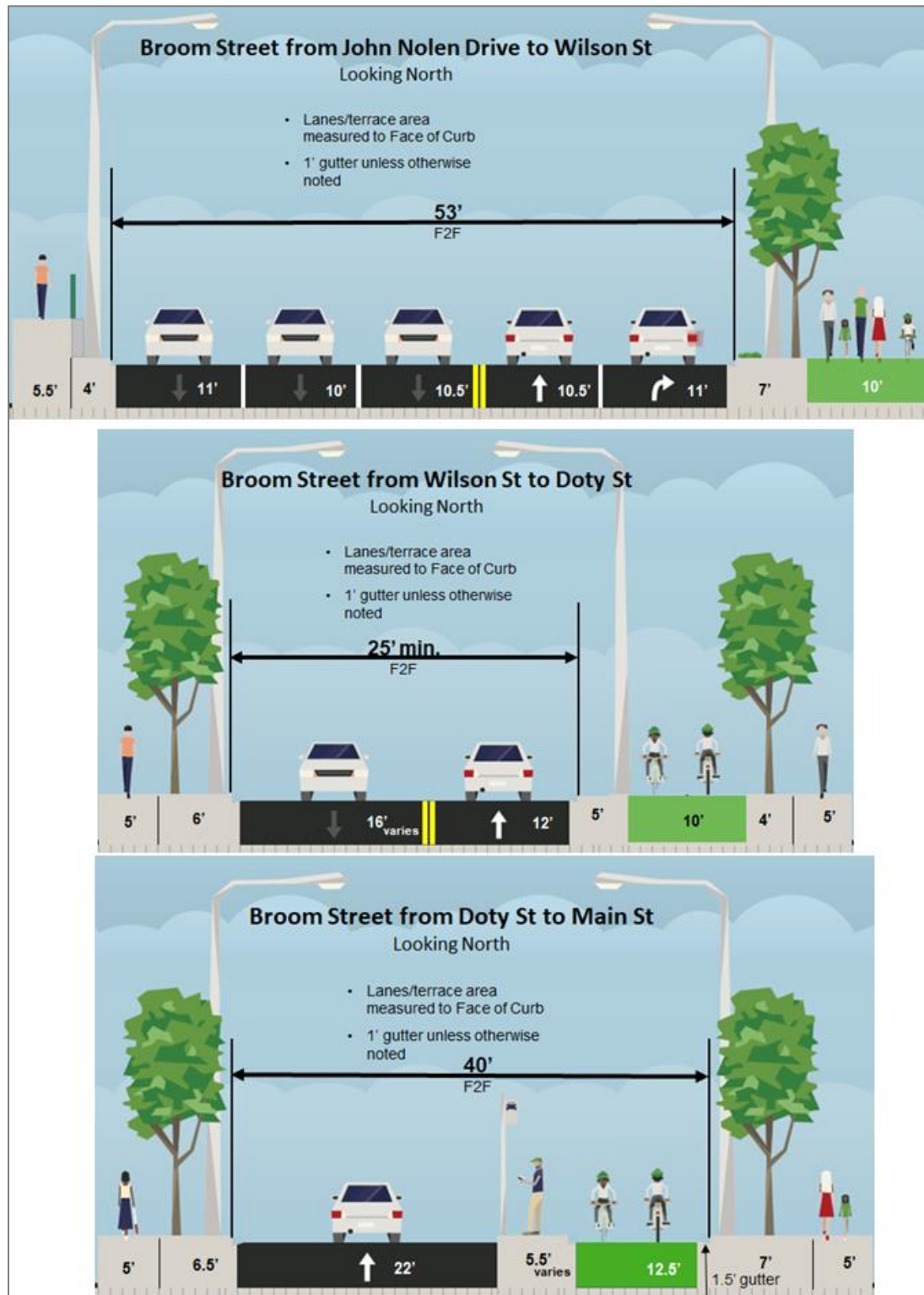


Figure B.6-4 Broom Street (Street View)