



Navy Yard/Capitol Riverfront Safety Assessment

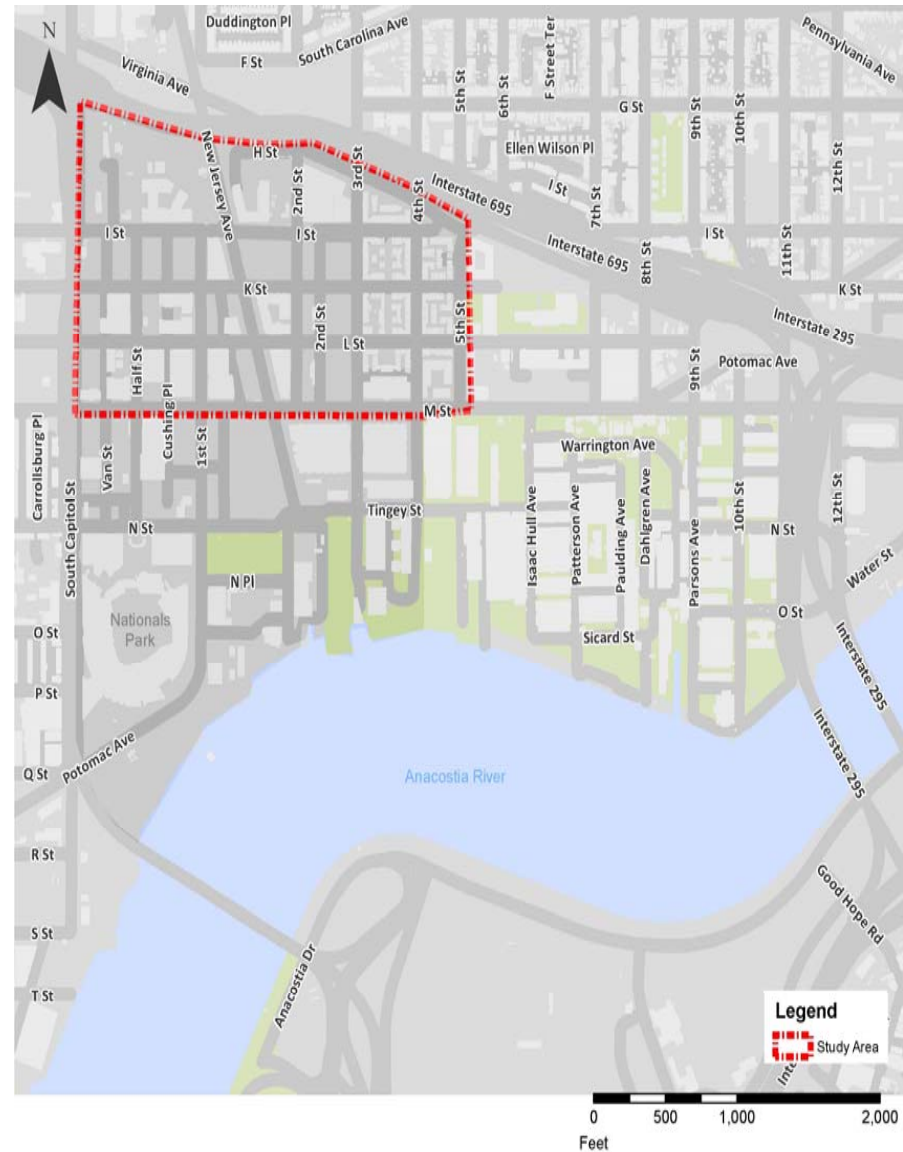
A decorative graphic consisting of three wavy horizontal lines: a thick red line on top, a thin grey line in the middle, and a thin dark blue line at the bottom.

Issues and Opportunities
November 28, 2018

Navy Yard/Capitol Riverfront Study Area and Data

Navy Yard/Capitol Riverfront neighborhood is rapidly changing and developing. Increases in both office/commercial use, as well as residences creates conflicts between roadway users and a greater non-auto mode share.

Assessment will focus on short-term improvements to address existing concerns related to vehicular, bike, and pedestrian safety.





EXISTING CONDITIONS

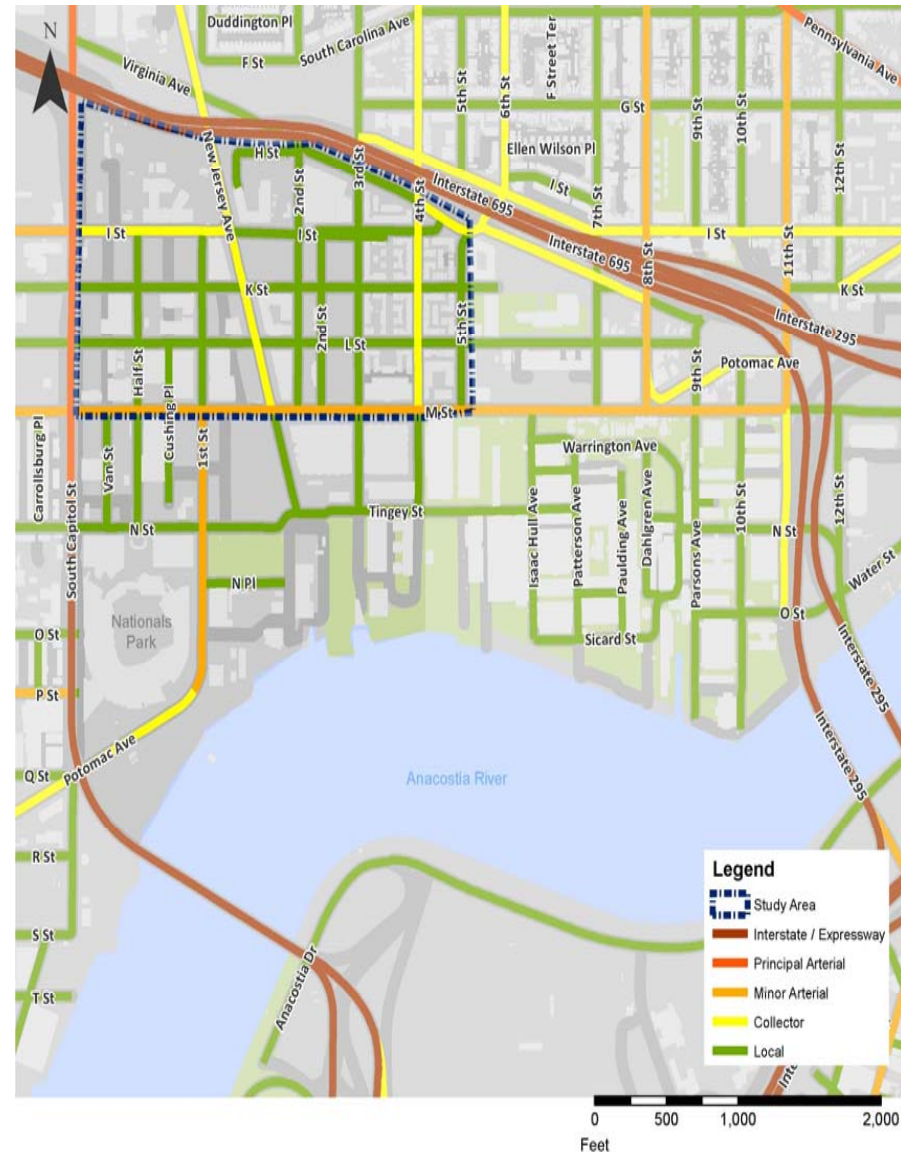


Functional Classification

Functional classification is the process in which streets are categorized into classes according to the service they intend to provide

DC's functional classification system is based on guidelines provided by the Federal Highway Administration.

- **Primary Arterials** serve to connect major activity centers. They are the highest traffic volume corridors and serve the greatest proportion of urban travel demand.
- **Minor Arterials** serve to connect and augment the network of primary arterials and to provide intra-community connectivity.
- **Collector Roadways** serve to gather local traffic and funnel trips to the arterial roadway network.
- **Local Roadways** serve to provide access to the adjacent land use. While they are often designed to discourage through traffic, they are accessible for public use.

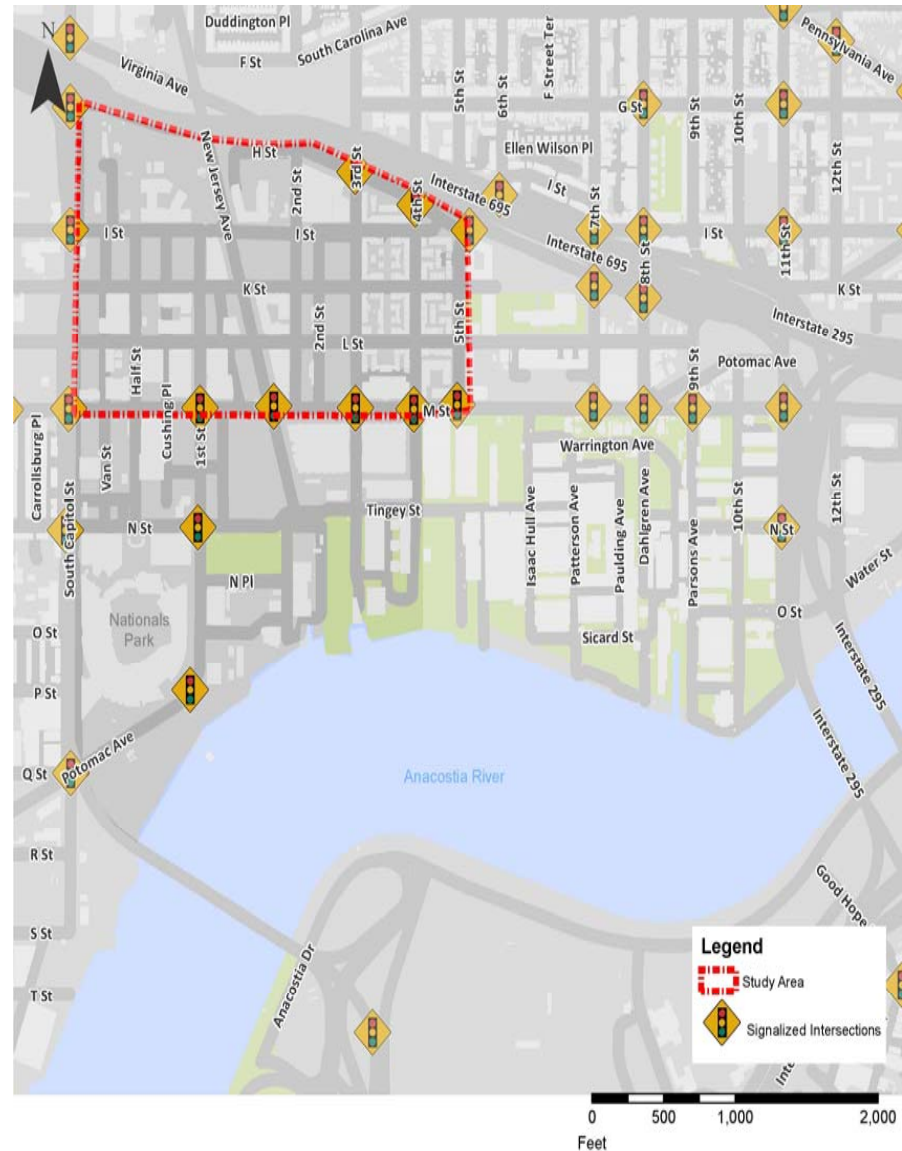


Source: DCGISopendata

Signalized Intersections

Signalized intersections serve as a proxy for intersections with more complexity, volumes, or conflicts, and **locations where care is needed to provide comfortable bicycle and pedestrian crossing movements**

M Street, SE, Virginia Avenue, SE, and 1st Street, SE contain signals in the study area

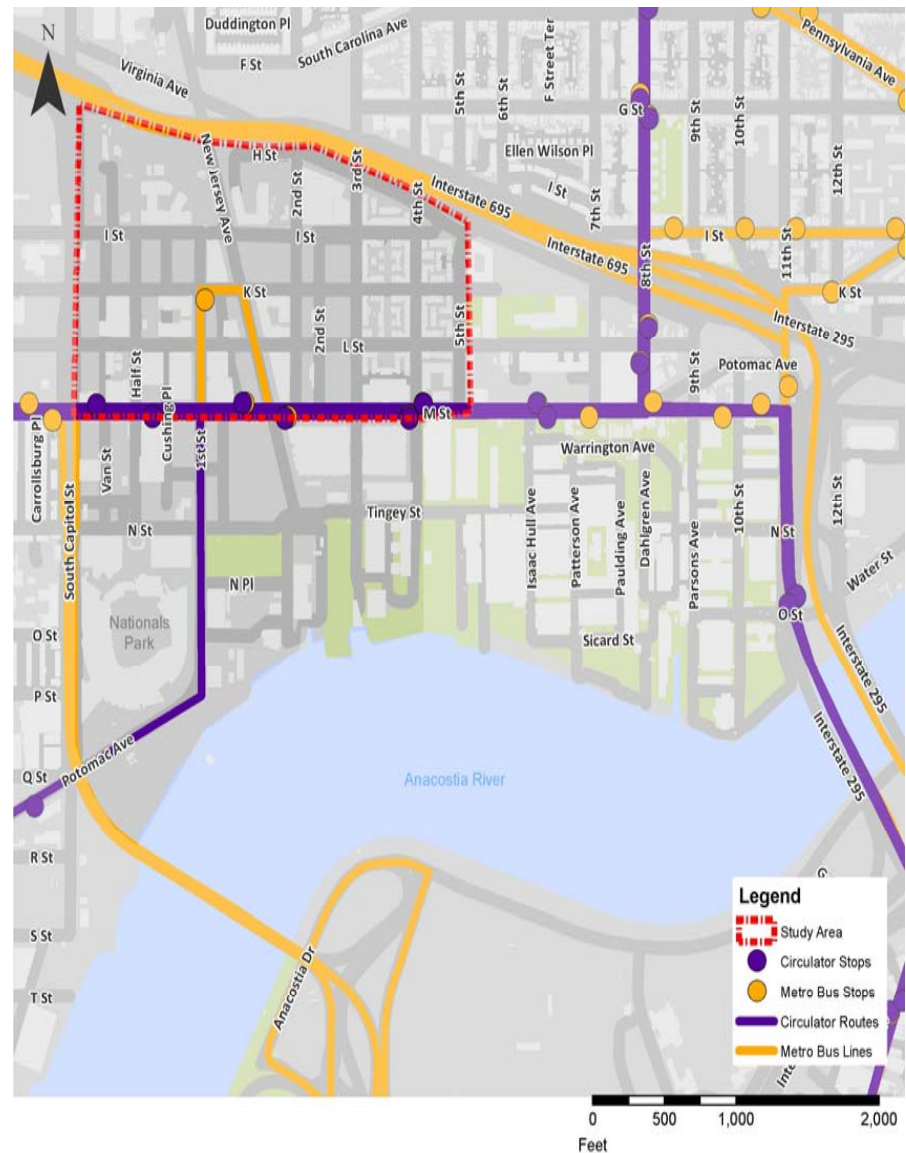


Source: DCGISopendata (October 2018)

Transit Circulation

Bus routes are important to consider as a means of connectivity within the study area to other locations

The study area is serviced by the **DC Circulator** and Metro Bus Lines **A9, P6, V1, and V4**

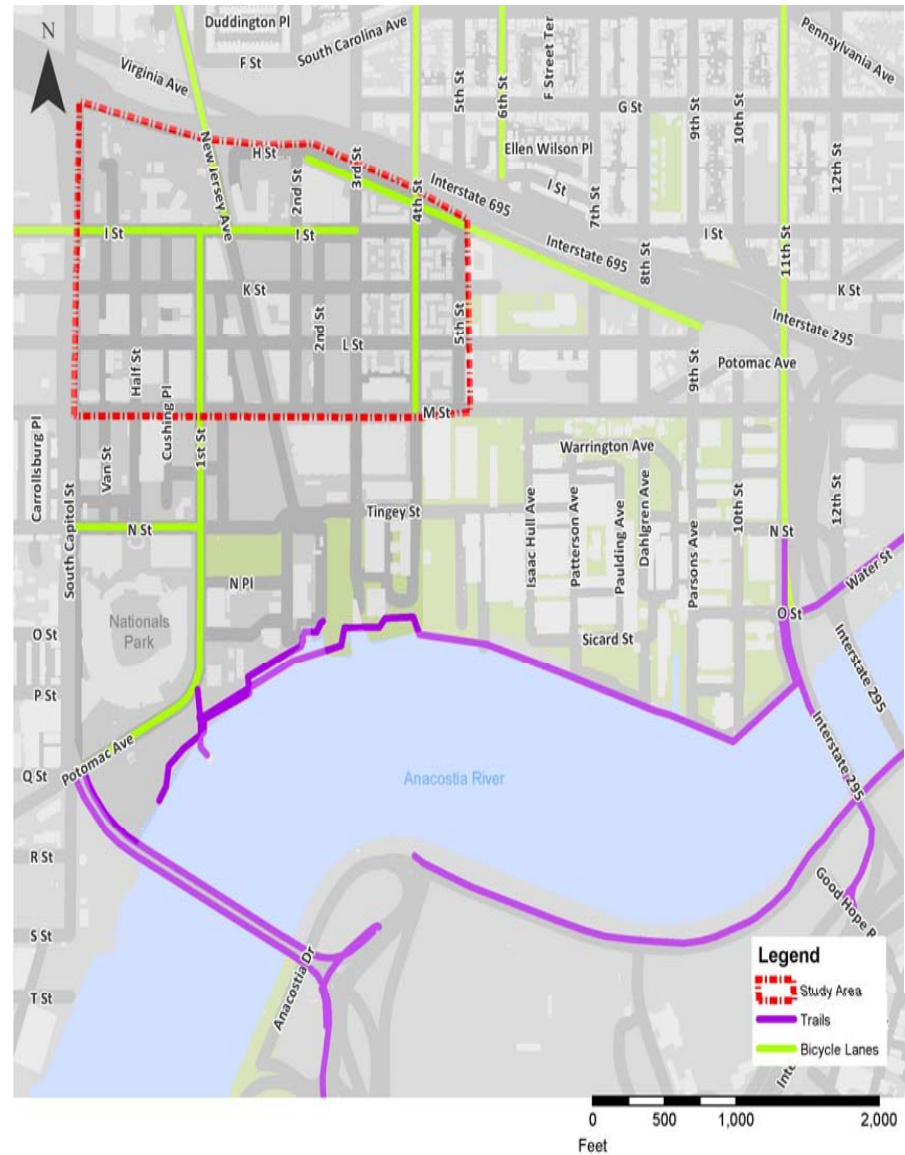


Source: DCGISopendata (June & September 2018)

Bicycle Facilities

Bicycle facilities provide **connectivity** for bicyclists as they travel to their destinations

The study area currently has **limited bicycle facilities** and an **incomplete bicycle facility network**

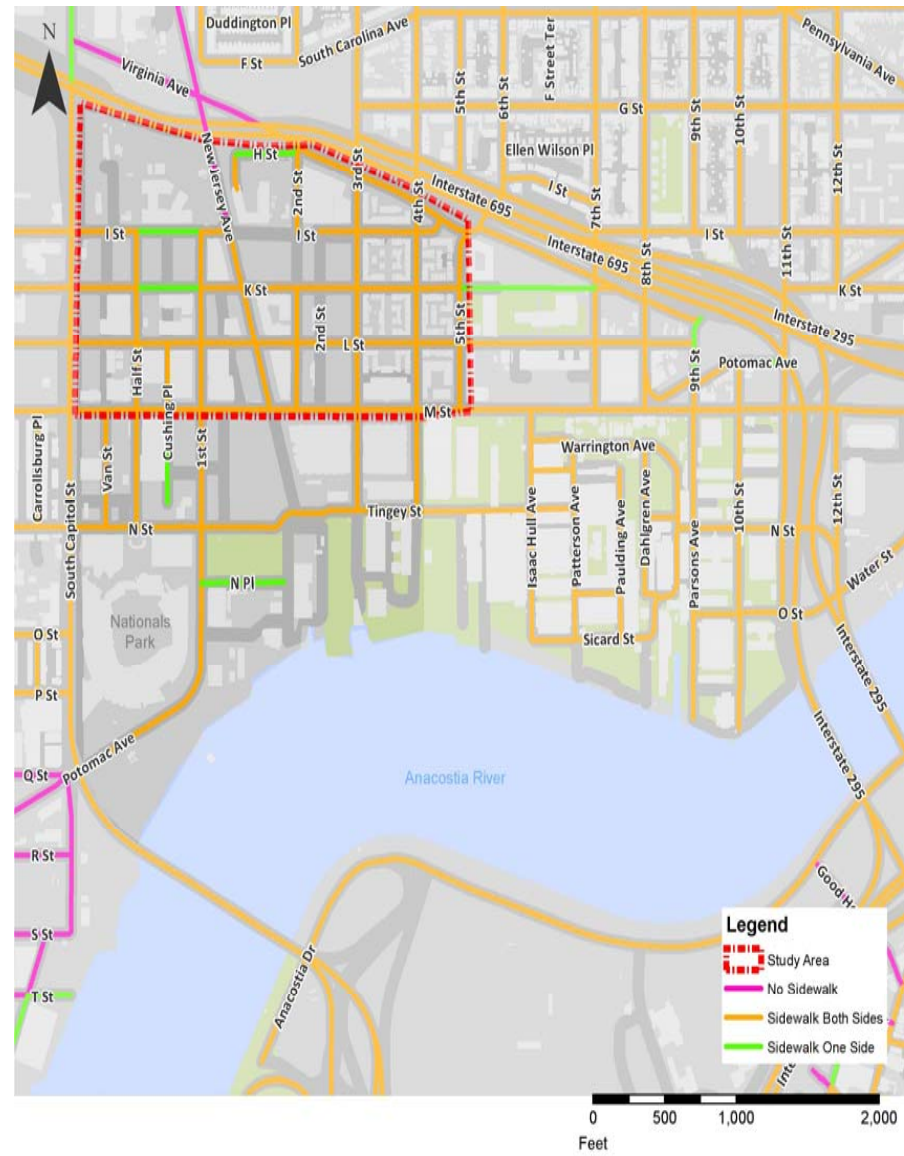


Source: DCGISopendata (October 2018)

Sidewalk Inventory

Sidewalks provide **connectivity** for pedestrians

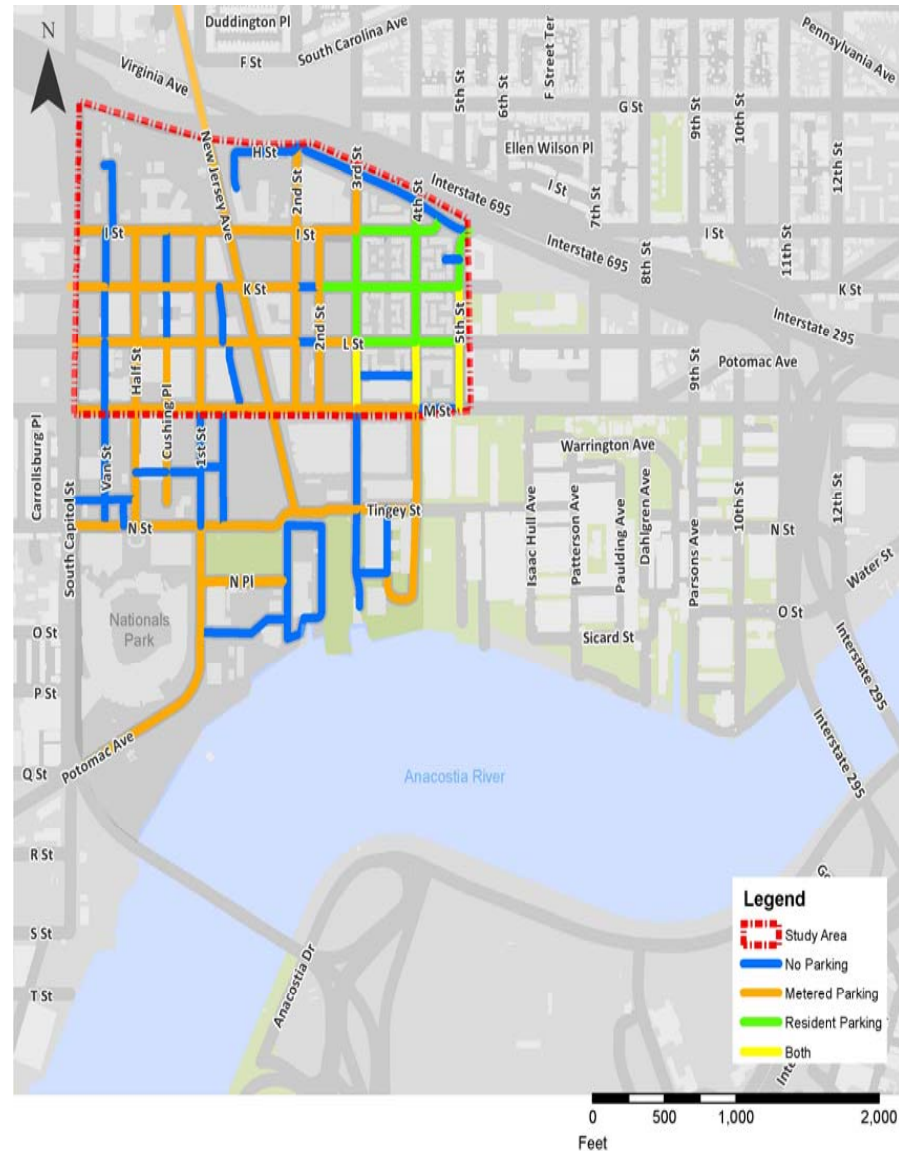
The study area is **generally well served by sidewalks**



Source: DCGISopendata (March 2017)

On Street Parking

On- street parking is important to consider when looking at safety and circulation.



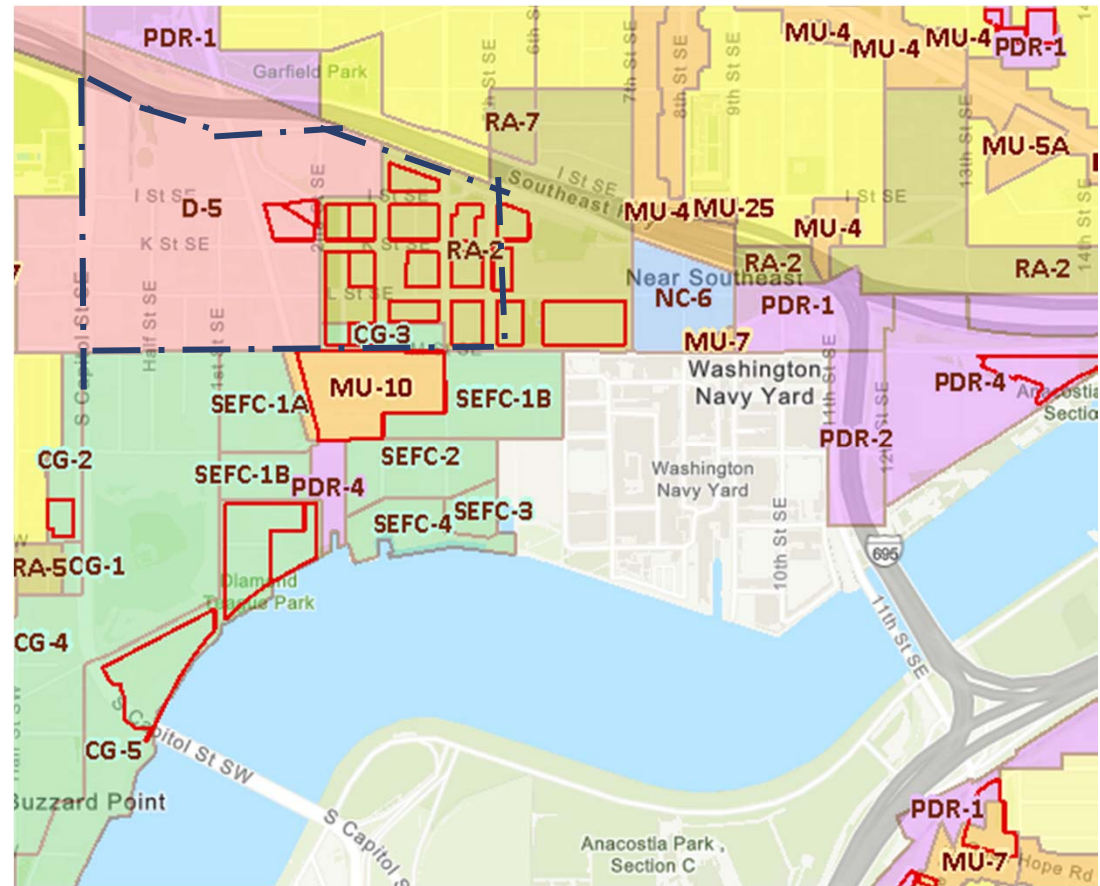
Source: Kittelson (November 2018)

Study Area Zoning

Zoning provides guidance on the type of land uses that are permitted or prohibited in an area

The northern portions of the area are mainly **residential**

The southern portions of the area are mainly **special purpose (medium/high density mixed use)**



- Downtown
- Mixed Use
- Neighborhood Mixed Use
- Production, Distribution, and Repair
- Residential
- Residential
- Special Purpose (medium/high density mixed use)

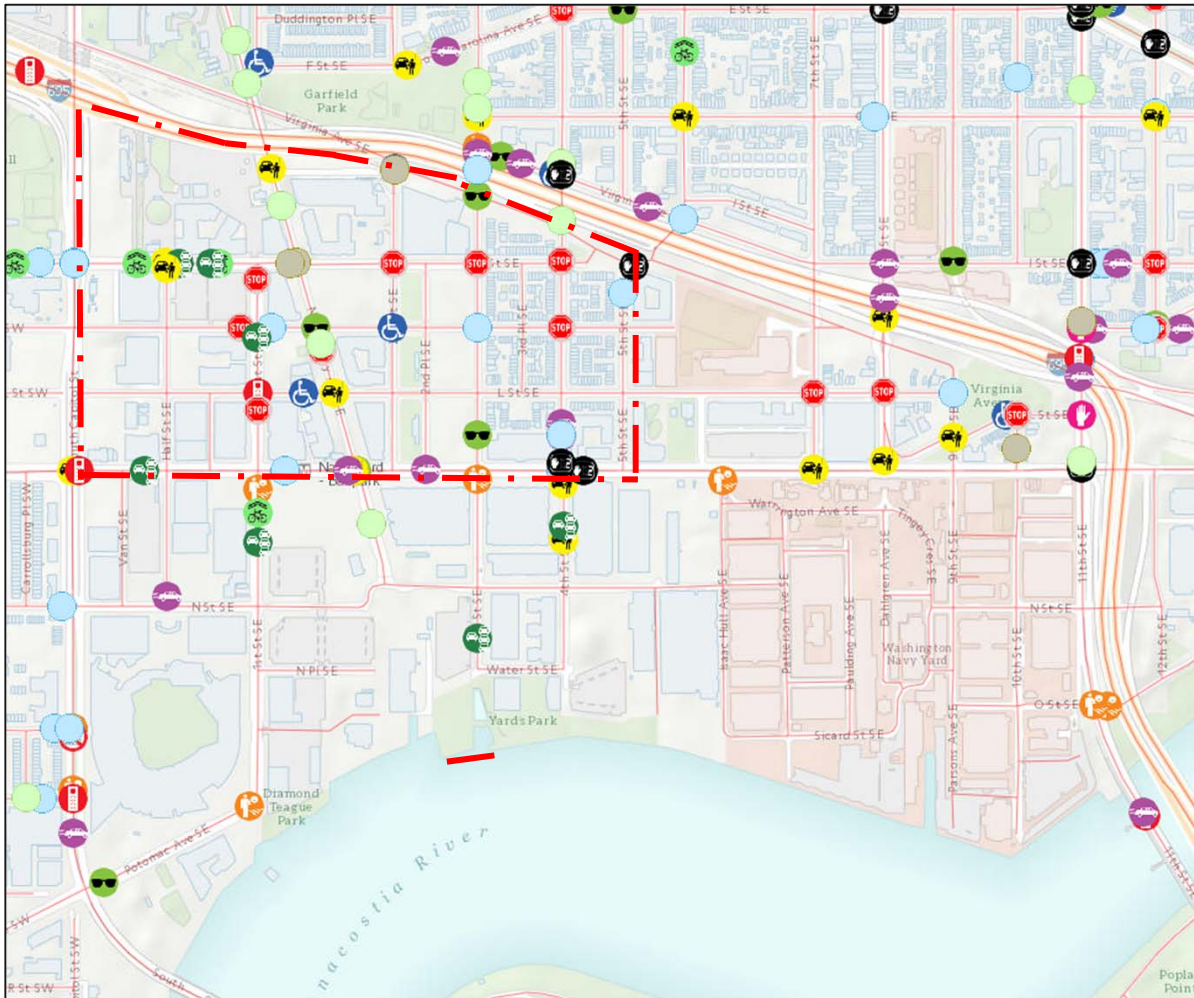
Source: DCOZ Official Zoning Map (November 2018)



SAFETY



Vision Zero



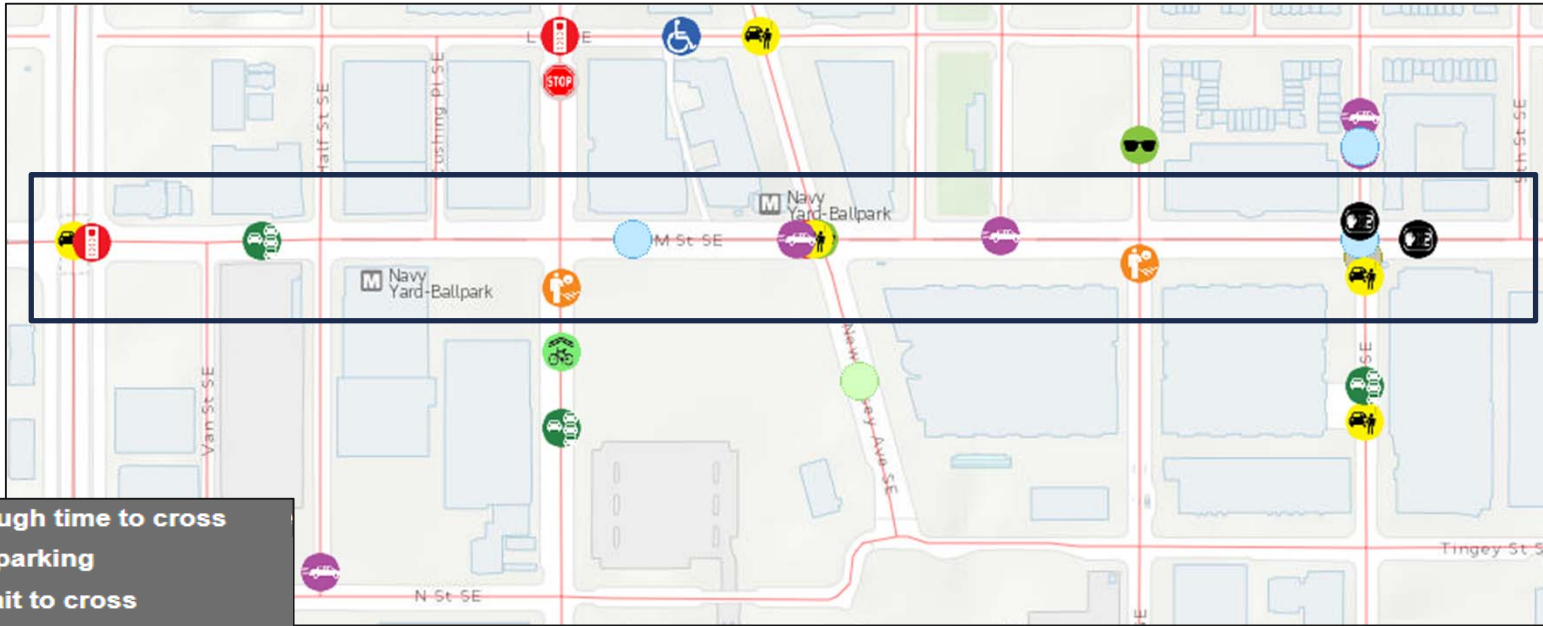
Source: DDOT Vision Zero Safety (November 2018)

Vision Zero is a strategy to eliminate all traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility for all.

The District has adopted Vision Zero and this map shows input from citizens on locations where they noticed hazardous conditions or behavior.

- Not enough time to cross
- Double parking
- Long wait to cross
- Red light running
- Jaywalking
- Poor visibility
- Speeding
- Long distance to cross
- Failure to stop for pedestrians
- Cyclist behavior
- Blocking the bikebox
- Blocking the crosswalk
- Stop sign running
- Accessibility Issue
- Other Biking Issue
- Other Driving Issue
- Other Walking Issue

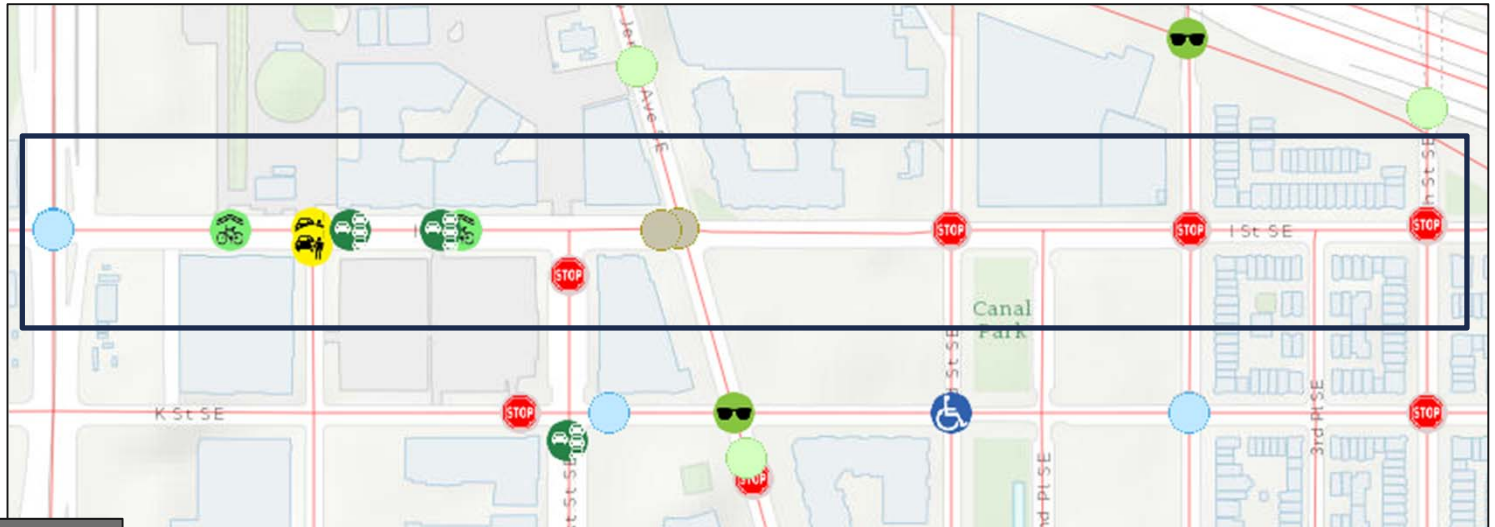
Vision Zero – M Street SE



- Not enough time to cross
- Double parking
- Long wait to cross
- Red light running
- Jaywalking
- Poor visibility
- Speeding
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- Failure to stop for pedestrians
- Cyclist behavior
- Blocking the bikebox
- Blocking the crosswalk
- Stop sign running
- Accessibility Issue
- Other Biking Issue
- Other Driving Issue
- Other Walking Issue

Comments address the issue of **speeding cars, not stopping for pedestrians, and not enough cross time for pedestrians**

Vision Zero – I Street SE



Source: DDOT Vision Zero Safety (November 2018)

Vision Zero – 1st Street SE

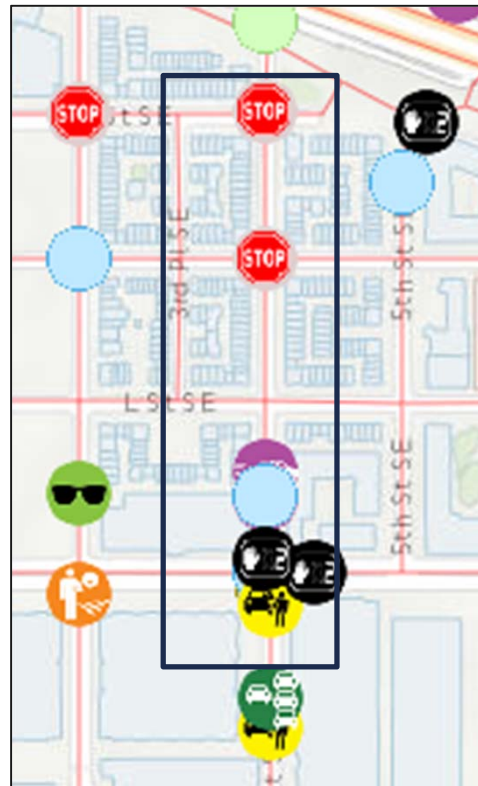
Comments include improving bicycle and pedestrian conditions and stop sign running



- Not enough time to cross
- Double parking
- Long wait to cross
- Red light running
- Jaywalking
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- Speeding
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- Failure to stop for pedestrians
- Cyclist behavior
- Blocking the bikebox
- Blocking the crosswalk
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- Other Walking Issue

Vision Zero – 4th Street SE

Comments address **not enough time to cross** and **stop sign running**



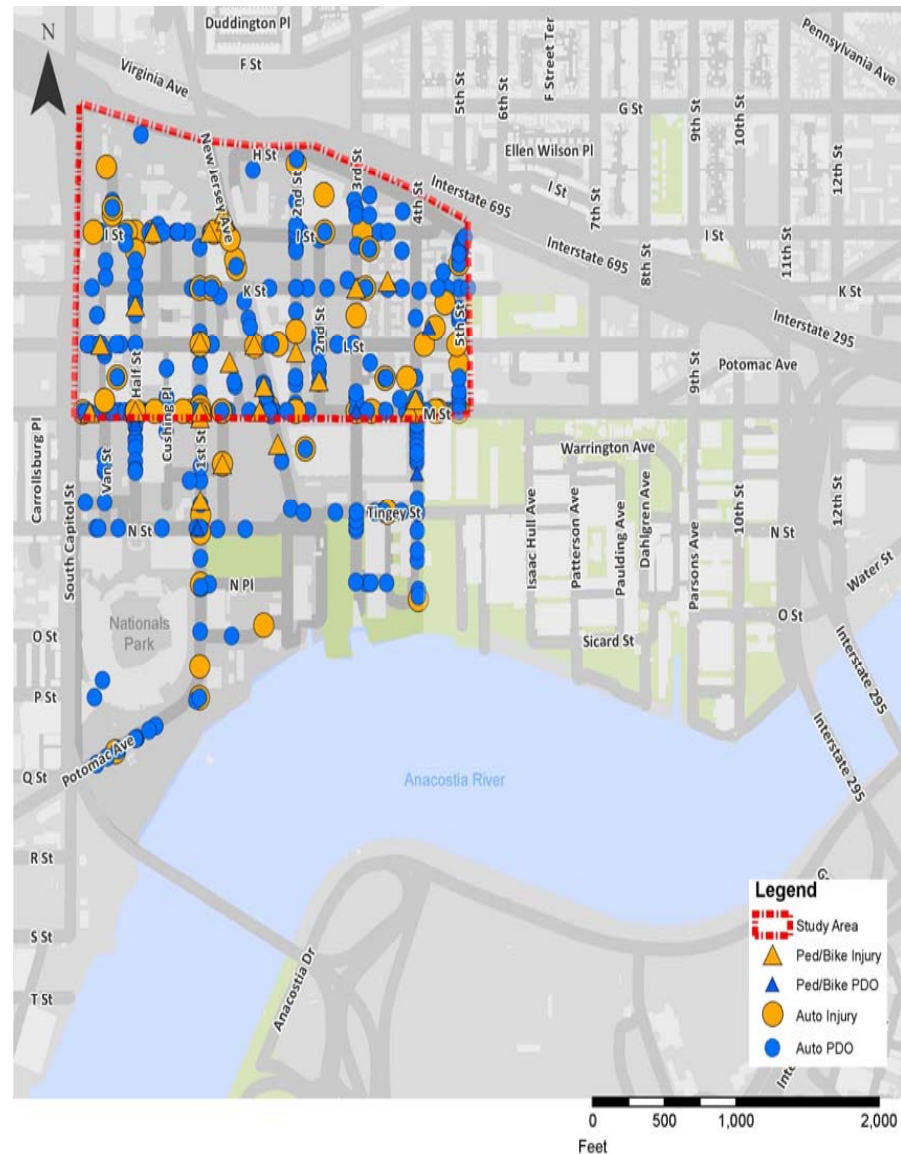
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Crash Data Jan 2014 – Oct 2018

Reviewing the crash data by year shows a sustained increase in crashes since 2014

Mapping the Crash Data helps to identify locations where crashes occurred and to look for patterns to their occurrence

Within the study area, looking at all of the crashes from 2014 to 2018 makes it difficult to identify patterns as the **crashes are fairly well distributed throughout the system**

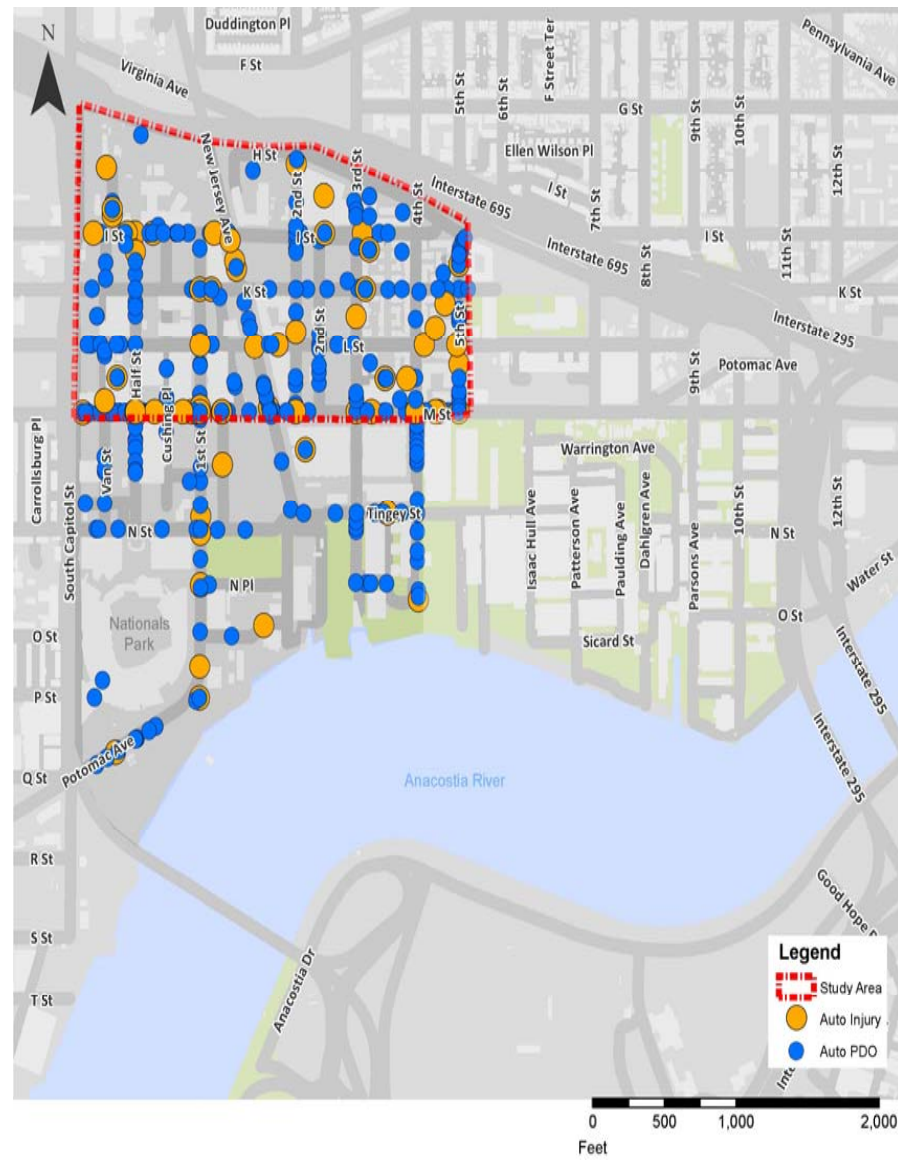


Source: DCGISopendata (November 2018)

Auto Crashes

Jan 2014 - Oct 2018

Crash Data identify locations that crashes occurred to determine patterns for consideration.



Source: DCGISopendata (November 2018)

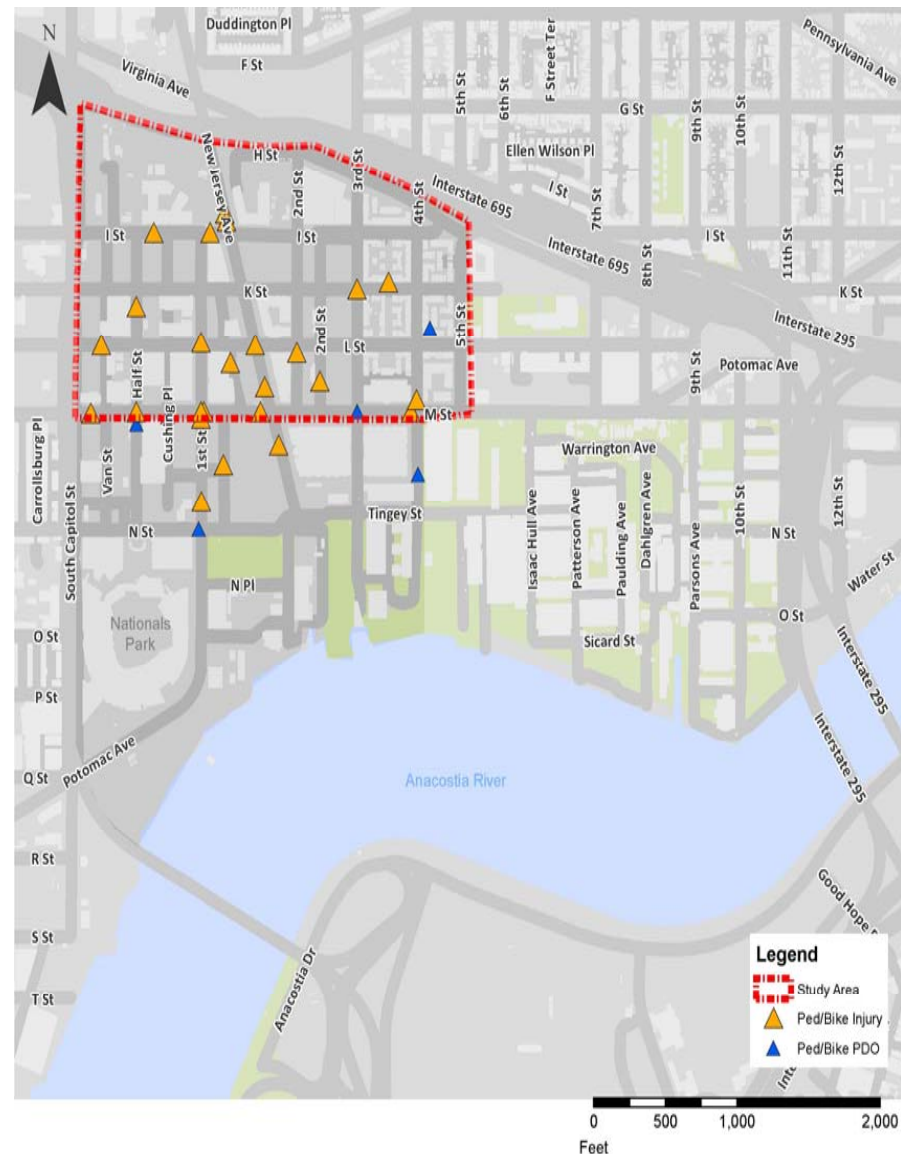
Bicycle and Pedestrian Crashes

Jan 2014 – Oct 2018

Breaking out crashes between bicycles and pedestrians with automobiles helps to identify **locations where safety mitigations might be most beneficial.**

M Street, SE and **1st Street, SE** are the locations with the majority of injury crashes involving pedestrians and/or bicycles

Looking at bicycle and pedestrian crashes by year shows an increase in bicycle and pedestrian crashes in recent years



Source: DCGISopendata (November 2018)

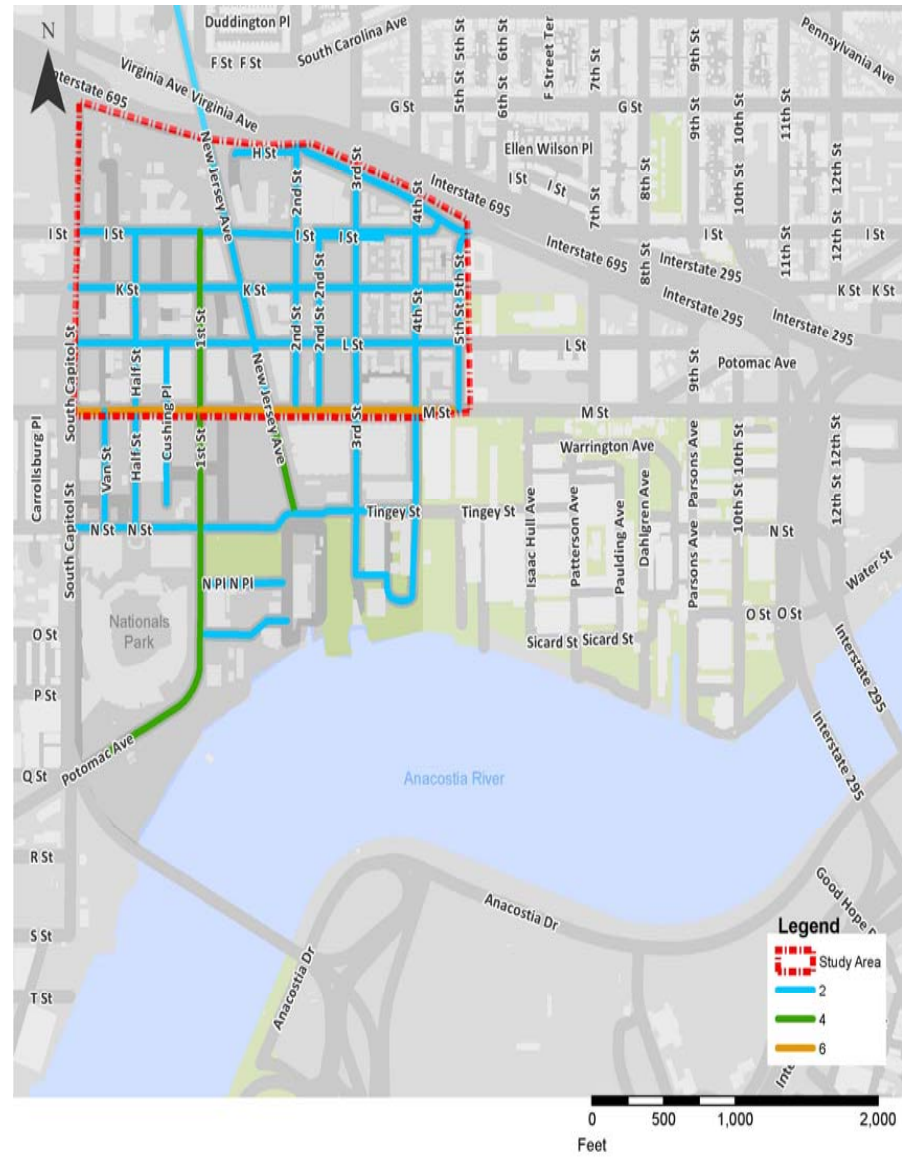


ANALYSIS



Number of Lanes

The **number of lanes** plays a key role in how comfortable a bicyclist feels biking on a particular roadway, impacts vehicle speeds, and affects the safety and comfort of pedestrians crossing.



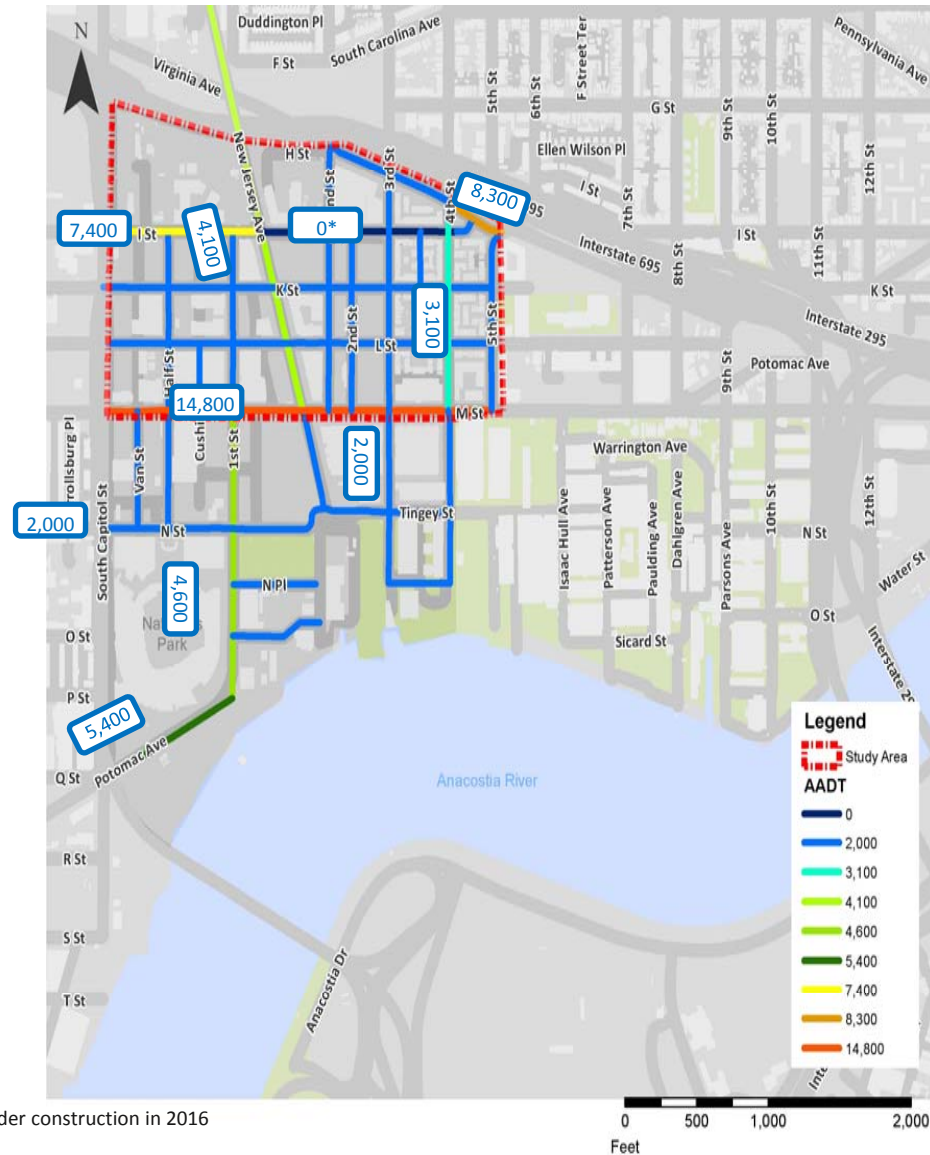
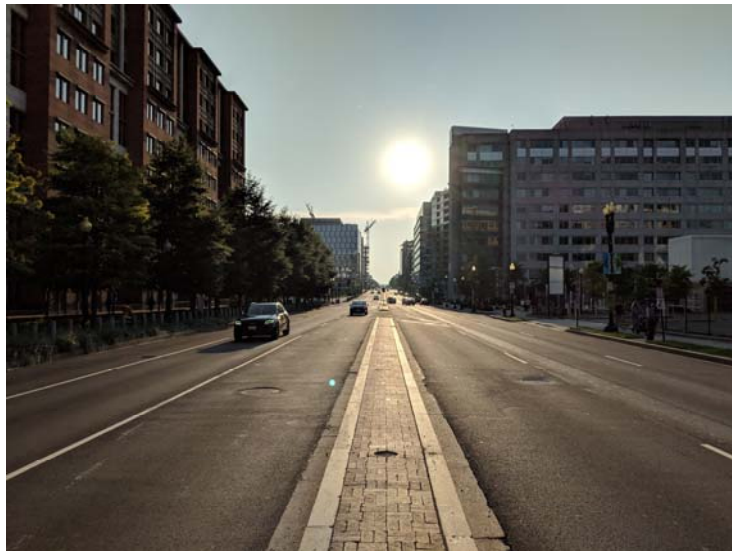
Source: Kittelson (November 2018)

2016 Traffic Volumes Jan 2011–Oct 2018

The **Average Annual Daily Traffic** volume is the total volume of vehicle traffic of a road divided by 365 days.

M Street, SE has the highest AADT volumes in the area at **14,000+**

The majority of roads in the area have **relatively low** traffic volumes for the number of lanes and functional classification



*0: under construction in 2016

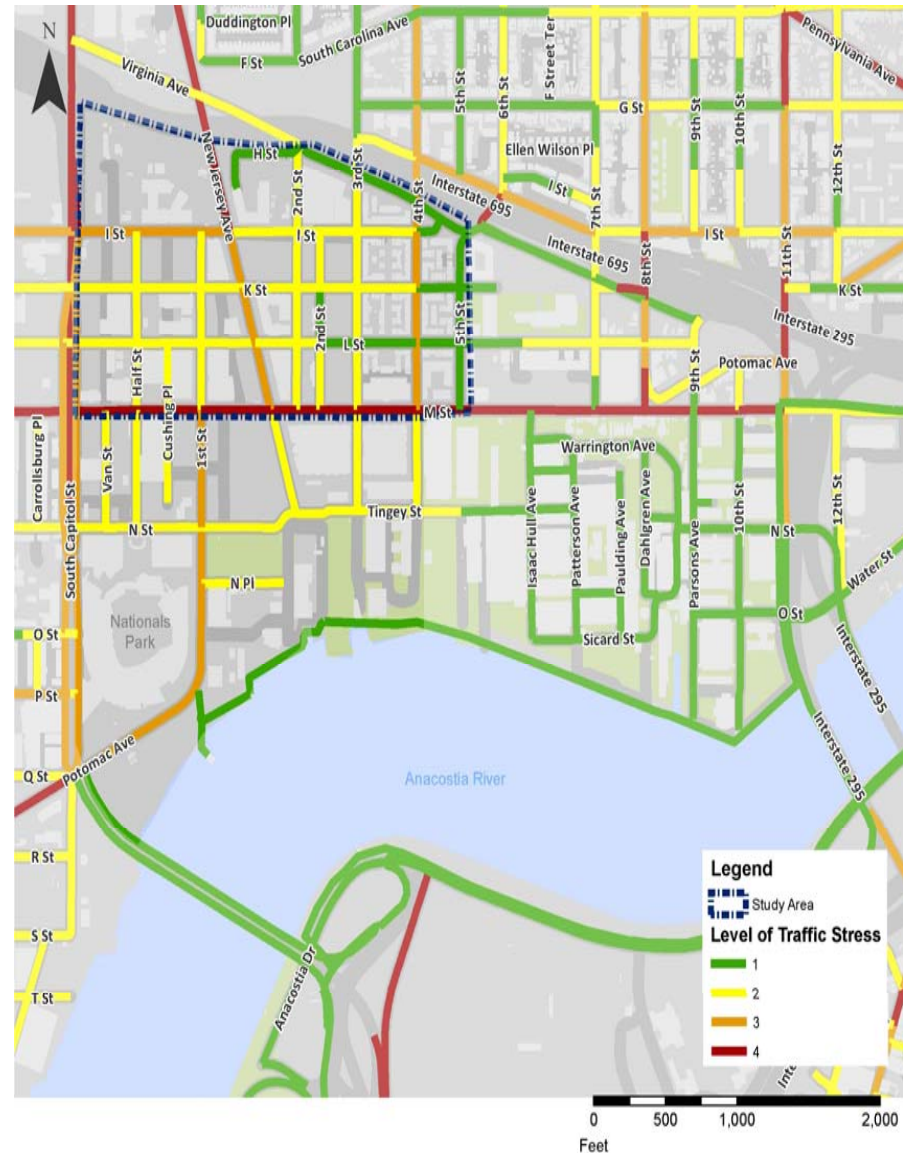
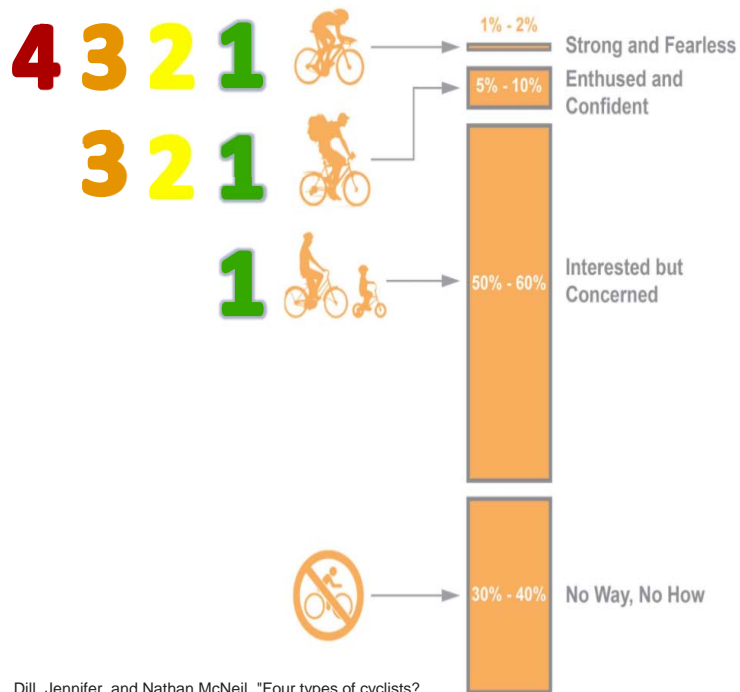
Source: DCGISpendata (October 2018)

Bicycle Levels of Traffic Stress (LTS)

Level of Traffic Stress shows the perceived feelings of stress when riding a bicycle

Areas in the Capitol Riverfront have very little LTS 1

While “Strong and Fearless” cyclists are comfortable riding on almost all streets, “Interested but Concerned” cyclists tend to limit themselves to LTS 1 facilities.



Dill, Jennifer, and Nathan McNeil. "Four types of cyclists? Examination of typology for better understanding of bicycling behavior and potential." *Transportation Research Record: Journal of the Transportation Research Board* 2387 (2013): 129-138.

Next Steps

- Determine safety concerns from residents
- Collect data as necessary to evaluate safety concerns
- Results and recommendations to be presented to community in early 2019

Questions? Comments? Contact:

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