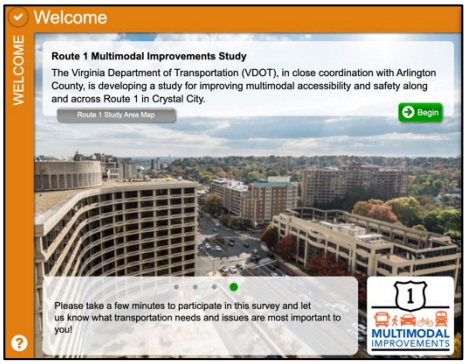
Route 1 Multimodal Improvements Study **MetroQuest Survey Summary**

January 2021

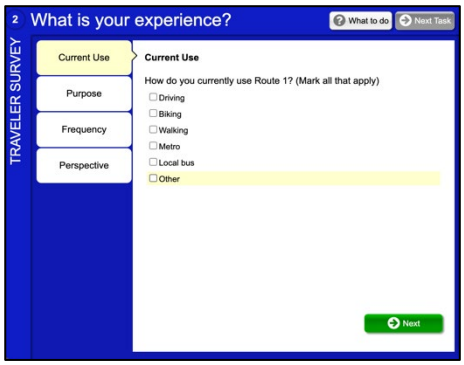
Table of Contents

MetroQuest Survey Overview and Promotion

A Route 1 Multimodal Improvements Study survey was open to the public between October 15 and November 15, 2020. The survey platform was established using MetroQuest, a company that specializes in online public engagement for urban and transpotation projects. The purpose of this MetroQuest survey was to gauge community preferences and priorities to assist VDOT in evaluating potential multimodal improvements for the Route 1 Multimodal Improvements project. The MetroQuest survey for Route 1 was comprised of five survey screens, as shown and described below. Responding to each screen and the corresponding questions was optional, and participants were not required to interact with every question on every screen.

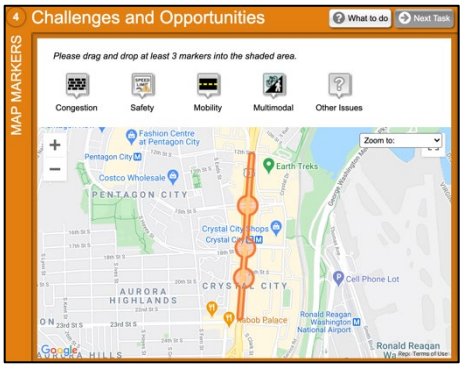


A welcome screen provided an overview of the study and the purpose of the survey.

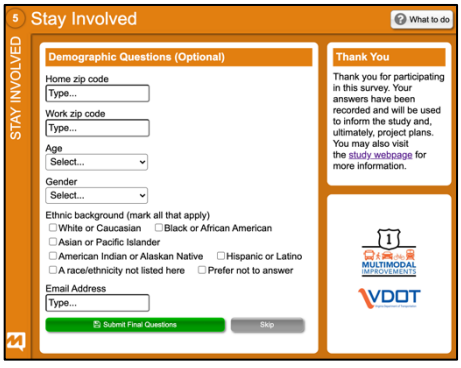


A traveler survey screen asked participants for input on how they travel in the study area, how often, and for what purpose, as well as their perspective on the safety of the study area.

A priority ranking screen asked participants to identify their top five design priorities for the study area; additional comments by respondents were allowed by the survey.



A map marker screen asked participants to identify challenges and opportunities in specific locations within the study area; multiple entries by one respondent were possible.



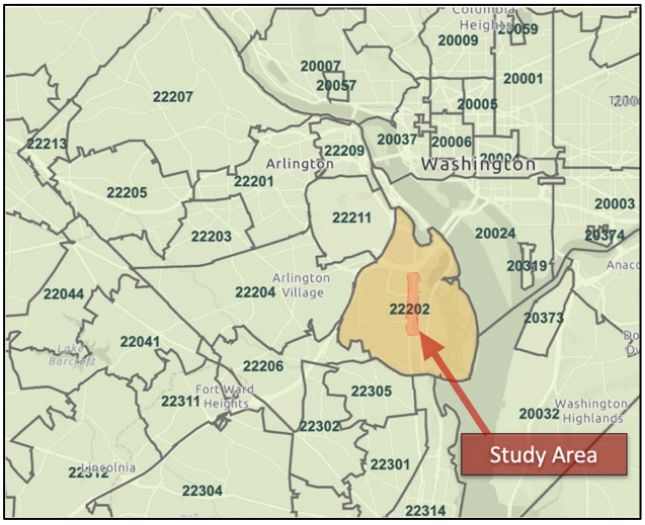
A summary screen asked for participants' demographic data and provided information on project updates.

The survey was promoted via the following platforms:

- VDOT press release – A press release was distributed to local newspapers.
- Study website – A link to the survey was posted on the study website.
- Email campaign – A total of three emails were sent throughout the month the survey was open. By the end of the campaign, the distribution list had 76 people. On average, there was a 53.5% open rate and a 25.7% click rate.
- Paid social media campaign – A paid social media campaign on Facebook and Instagram targeted zip codes within the study area. Three ads achieved a total of 394,119 impressions.

Survey Responses Regarding Participants

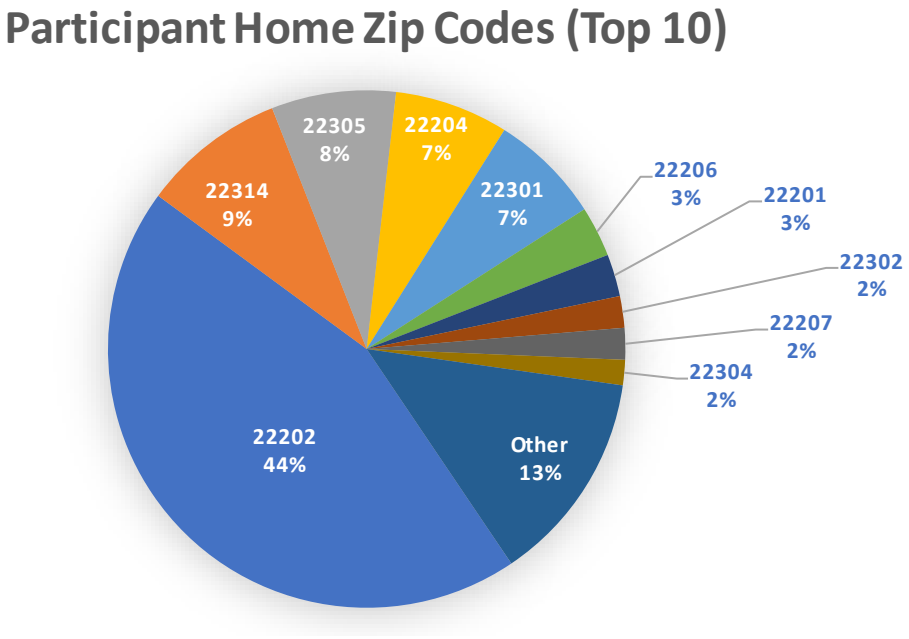
In total, the survey received 1,246 unique submissions. Survey data was filtered to remove duplicative responses and to counter any attempts to slant responses toward the opinions of one or a few respondents. Duplicates were identified by pairing submissions from the same IP address and manually reviewing information within the submission (response date, response time, and answers to various questions). If submissions with the same IP address were observed to be similar, one of the submissions was flagged for removal by adding its "unique VisitID" to a list of survey respondents. After review of the list, 22 duplicate submissions were identified and removed.



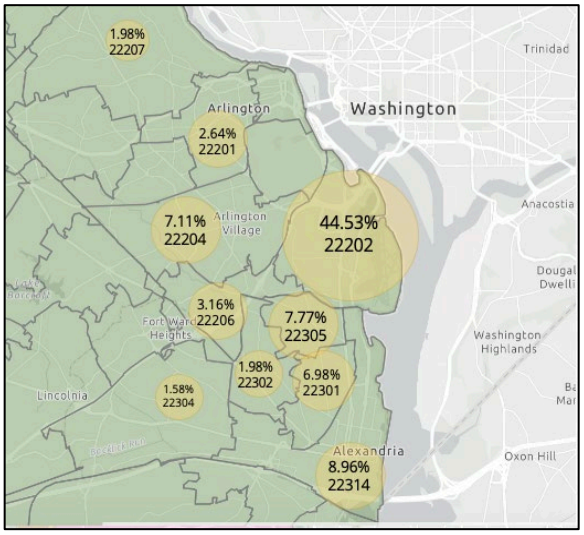
Came to survey from	Visitors	Participants	Conversion Rate
Social Media	1,210	588	48.6%
Email	74	36	48.6%
Direct survey link/other	888	600	57.6%
Total	**2,172**	**1,224**	

Participants by Home Zip Code

Out of 1,224 unique survey participants, 759 provided their home zip codes. These responses included 60 unique zip codes. The charts and table below shows the ten most common responses.

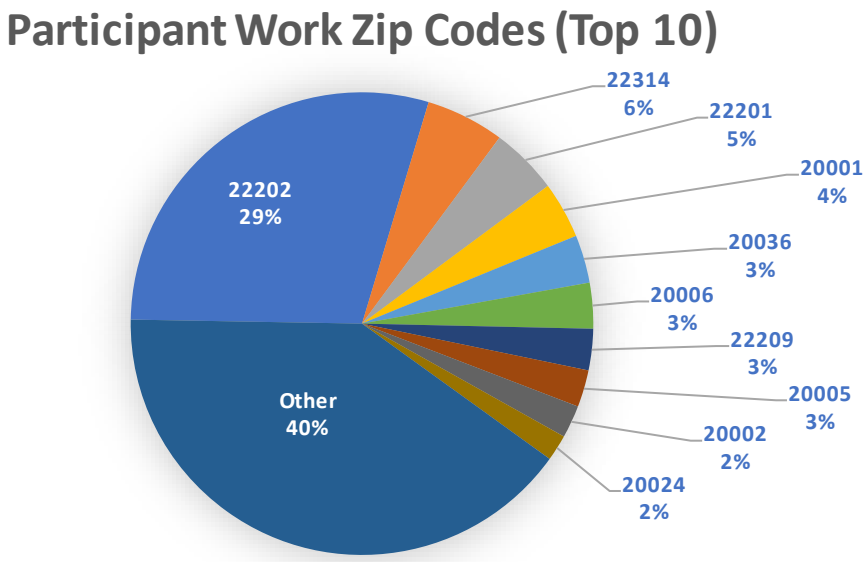


Home Zip Code	Count of Responses	% of Responses
22202	338	44.53%
22314	68	8.96%
22305	59	7.77%
22204	54	7.11%
22301	53	6.98%
22206	24	3.16%
22201	20	2.64%
22302	15	1.98%
22207	15	1.98%
22304	12	1.58%
Other	101	13.31%
Total	759	100%

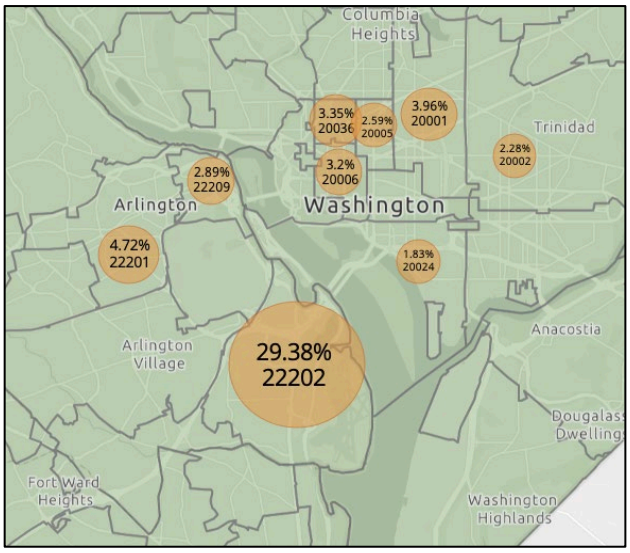


Participants by Work Zip Code

Out of 1,224 unique survey participants, 657 provided their work zip codes. Responses included 136 unique zip codes. The charts and table below shows the ten most common responses.

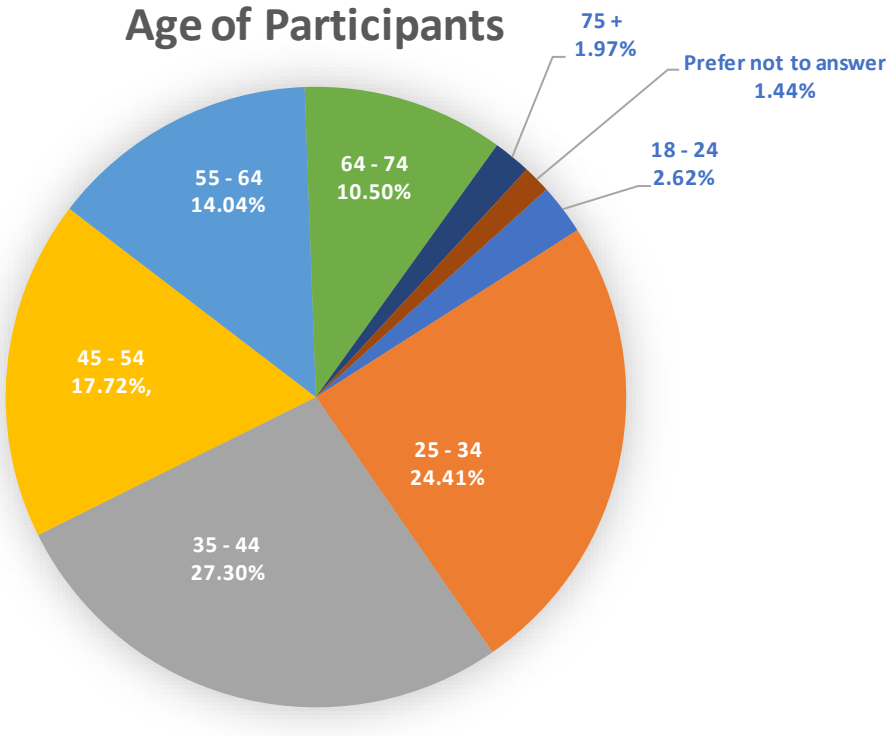


Work Zip Code	Count of Responses	% of Responses
22202	193	29.38%
22314	36	5.48%
22201	31	4.72%
20001	26	3.96%
20036	22	3.35%
20006	21	3.20%
22209	19	2.89%
20005	17	2.59%
20002	15	2.28%
20024	12	1.83%
Other	265	40.33%
Total	657	100%



Participants by Age

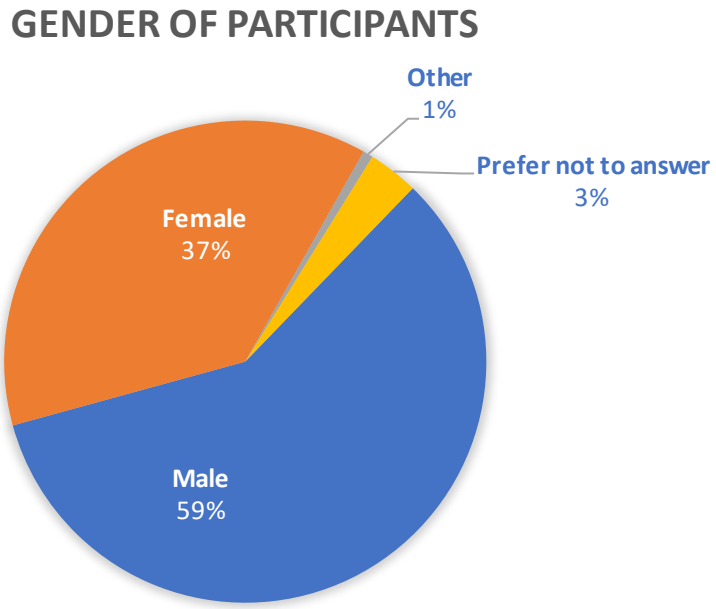
Out of 1,224 unique survey participants, 762 provided input on their age range, as summarized in the chart and table below.



Age Range	Total Count	Percent of Responses
18 - 24	20	2.62%
25 - 34	186	24.41%
35 - 44	208	27.30%
45 - 54	135	17.72%
55 - 64	107	14.04%
64 - 74	80	10.50%
75 +	15	1.97%
Prefer not to answer	11	1.44%
TOTALS	762	100%

Participants by Gender

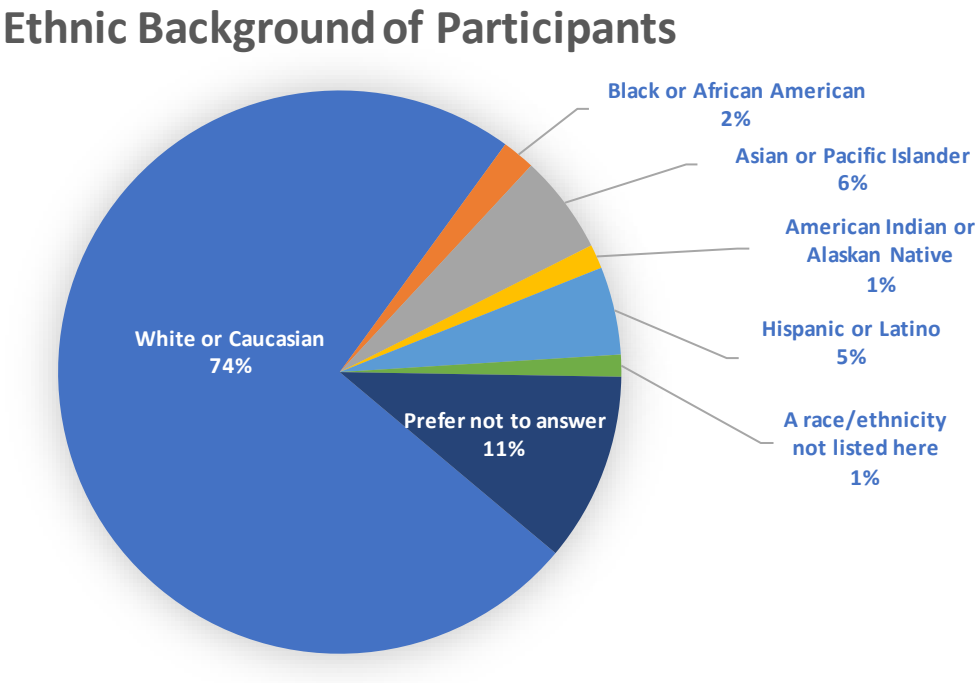
Out of 1,224 unique survey participants, 740 provided gender identification information, as summarized in the chart and table below.



Gender	Total Count	Percent of Responses
Male	433	58.51%
Female	277	37.43%
Other	5	0.68%
Prefer not to answer	25	3.38%
TOTAL	740	100%

Participants by Ethnic Background

Out of 1,224 unique survey participants, 793 left a response to this question about ethic background, as summarized in the chart and table below.



Ethnicity	Total Count	Percent of Responses
White or Caucasian	586	73.90%
Black or African American	15	1.89%
Asian or Pacific Islander	45	5.67%
American Indian or Alaskan Native	11	1.39%
Hispanic or Latino	40	5.04%
A race/ethnicity not listed here	10	1.26%
Prefer not to answer	86	10.84%
TOTALS	793	100%

Survey Responses

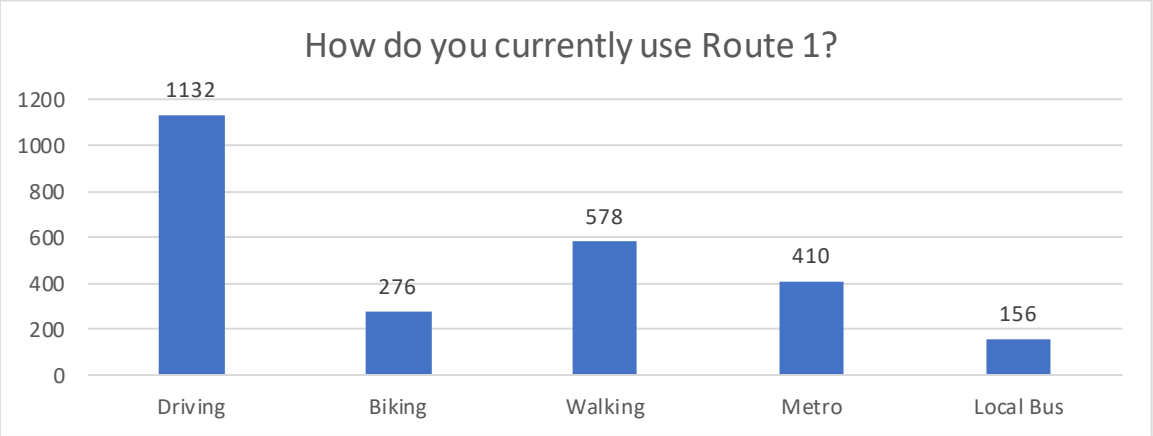
The following pages detail the responses received to the traveler survey, priority ranking, and the map marker screens. Conclusions may be drawn from this data by comparing respondents of multiple questions, for instance, comparing how easy, safe and effective the study area was rated by pedestrians, drivers and cyclists.

Traveler Survey Responses

The traveler survey screen asked participants how they travel the study area, how often and for what purpose, as well as their perspective on the current safety of the study area.

How do you currently use Route 1?

Participants were given a multiple-choice survey. Out of 1,224 unique survey participants, 1,218 left a response to this question, and multiple choices were allowed.



How do you currently use Route 1?	Count
Driving	1,132
Biking	276
Walking	578
Metro	410
Local Bus	156
Total number of choices	2,552

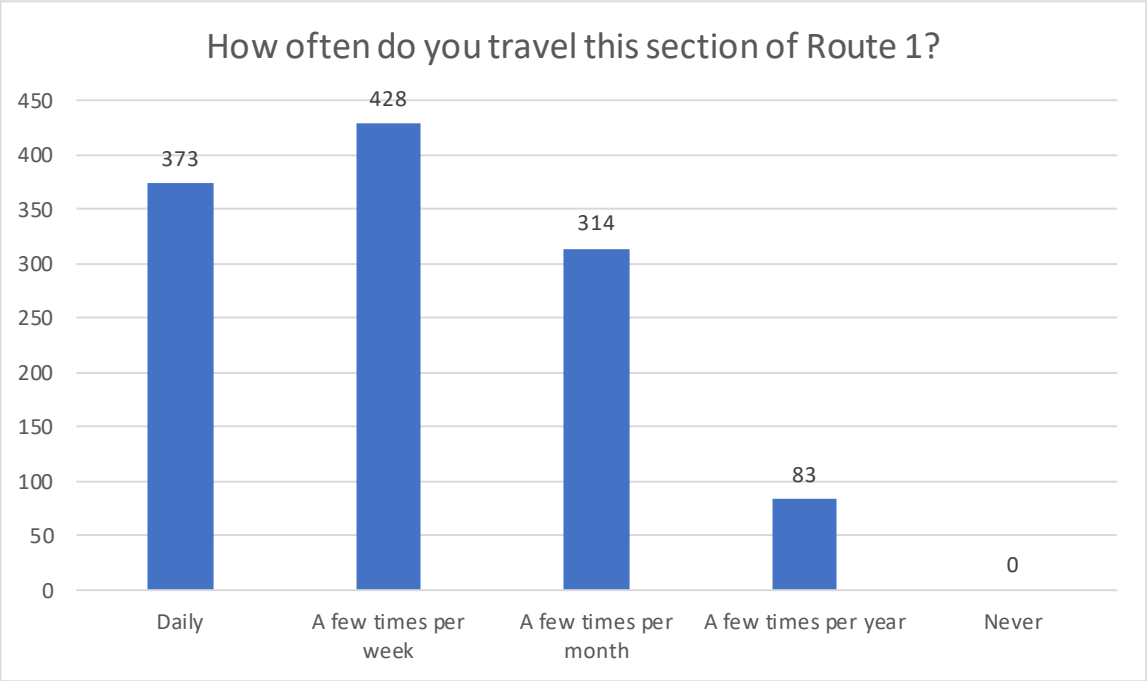
Where do your trips in the corridor take you?

Participants were given a multiple-choice survey. Out of 1,224 unique survey participants, 1,202 left a response to this question, and multiple choices were allowed.

Where do your trips in the corridor take you?	Count
Home	714
School	53
Work	665
Shopping / Errands	1,006
Entertainment	594
Traveling Outside Study Area	581
Other	132
Total number of choices	3,745

How often do you travel this section of Route 1?

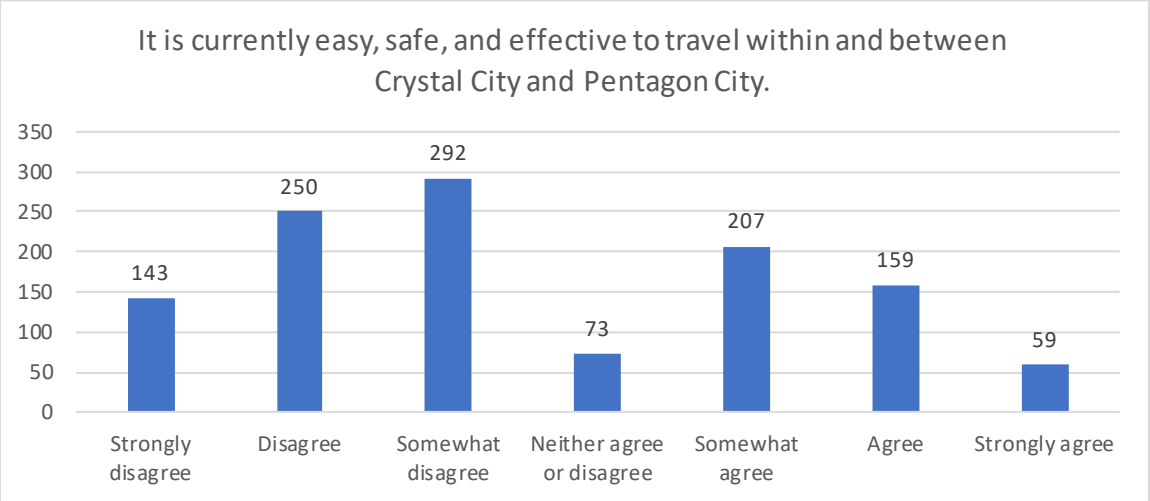
Participants were given a single choice survey. Out of 1,224 unique survey participants, 1,198 left a response to this question.



How often do you travel this section of Route 1	Count
Daily	373
A few times per week	428
A few times per month	314
A few times per year	83
Never	0
Total	1,198

It is currently easy, safe, and effective to travel within and between Crystal City and Pentagon City.

Participants were given a single choice survey. Out of 1,224 unique survey participants, 1,183 left a response to this question.



It is currently easy, safe, and effective to travel within and between Crystal City and Pentagon City.	Count
Strongly disagree	143
Disagree	250
Somewhat disagree	292
Neither agree or disagree	73
Somewhat agree	207
Agree	159
Strongly agree	59
	1,183

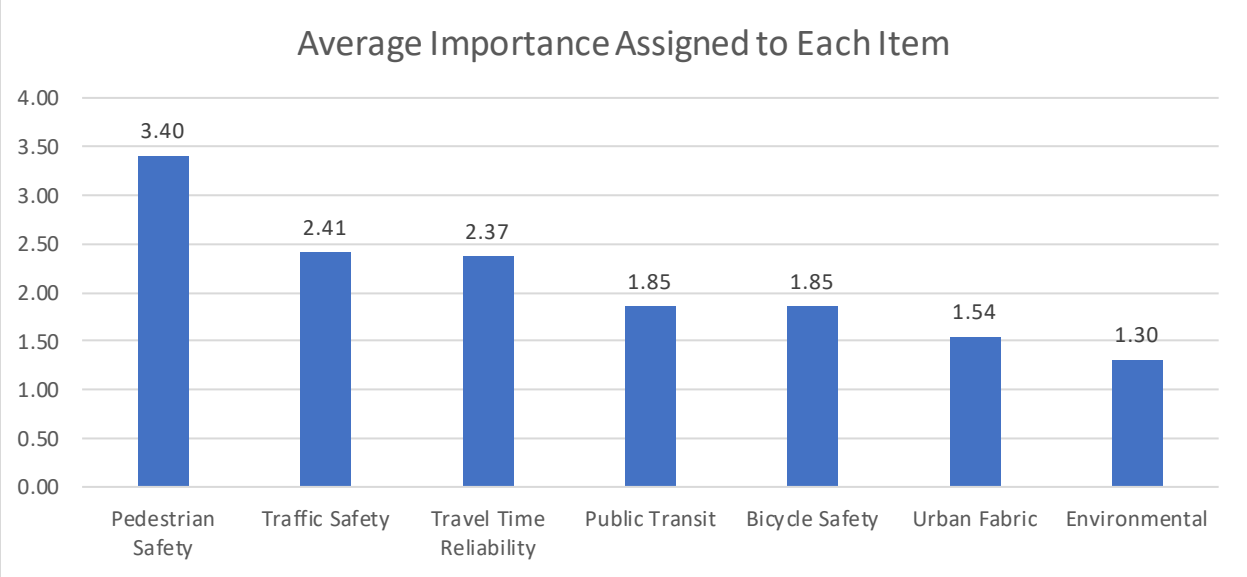
Design Priority Ranking Responses

The design priority survey screen asked participants to identify up to five design priorities for the study area from a list of seven options. Within the five items, participants were then asked to rank their choices in order of priority. This screen also allowed participants to provide open ended comments for each priority area. Out of 1,224 unique survey participants, 757 engaged with the "Design Priority Rankings" screen.

To gauge participant response, the following point values were assigned based on item rankings. The five items selected received between 1 and 5 points, with most prioritized items receiving the most points. Items not selected as top five received 0 points.

Rank of Item	Points Assigned
Top Choice Item	5 Points
Second Choice Item	4 Points
Third Choice Item	3 Points
Fourth Choice Item	2 Points
Fifth Choice Item	1 Point
Not Chosen Item	0 Points

Item	Total Number of Inputs	Average Priority
	How many times was this item picked as a top five choice?	*Total item points/757 participants Higher Values Indicate Greater Priority*
Pedestrian Safety	700	**3.40**
Traffic Safety	554	**2.41**
Travel Time Reliability	508	**2.37**
Public Transit	545	**1.85**
Bicycle Safety	479	**1.85**
Urban Fabric	439	**1.54**
Environmental	444	**1.30**



Key Comments and Themes

Participants could leave comments for each design priority. Below is a summary of common comments and themes by design priority area.

Pedestrian Safety *(51 comments)*

- Strong support to reduce long pedestrian wait and crossing times
- Improve sidewalks and continuous connections
- Narrow lanes to promote slower driving speeds
- Support for pedestrian bridges over Route 1
- Some desire to maintain grade separated intersections

Traffic Safety & Efficiency *(39 comments)*

- Need for more enforcement to address speeding or reduced speed limit along corridor
- Poorly timed traffic signals lead to congestion and near misses (crashes)
- Merge from Route 110 into high speed traffic is safety concern that leads to crashes
- Improve safety at 20th and 23rd Streets for pedestrians; More lights under 15th Street; Remove left turns at 20th Street
- Several comments suggesting that the two Safety & Efficiency should not be presented together, and that the definition is misleading
- Airport traffic does not have a set peak period, but impacts traffic in corridor

Travel Time Reliability *(39 comments)*

- Strong support for improved travel time reliability for public transit in corridor
- Improve traffic signal coordination along the corridor to improve progression of traffic; Caution expressed for adding additional traffic signals in corridor
- Concern that improved vehicular flow would lead to less crossing time for pedestrians

Public Transit (19 comments)

- Strong support to improve Metroway access
- Need for more transit service in corridor (additional stop at Pentagon City)
- Use dedicated public transit lanes to increase reliability of transit
- Suggestion for a small circulator route to help with local traffic

Bicycle Safety (34 comments)

- Desire for dedicated and protected bike lanes for safely crossing Route 1
- Some cyclists avoid the Route 1 area because of unfriendly environment
- Desire for cyclists to obey signs and signals
- Consider other micro mobility transportation options such as scooters in design
- Address both biking along and across Route 1
- Bicycle track along Route 1 for north-south bike connectivity

Urban Fabric (31 comments)

- Existing grade-separated Route 1 is visual barrier that separates Crystal City and neighbors
- Do not shortchange the area urban character for transportation expediency
- Prioritize pedestrian safety to advance this priority
- Desire for a more unified downtown, integrating Crystal City and Pentagon City
- Need for improved streetscape; Support for walkable street scape with building's frontage on street
- Improve ambiance of corridor
- Opposition to changing character of Route 1
    - George Washington Parkway and I-395 will not be able to replace Route 1 as it serves as important north-south highway connection

- Route 1 would not be a good candidate for neighborhood street/boulevard

Environmental (15 comments)

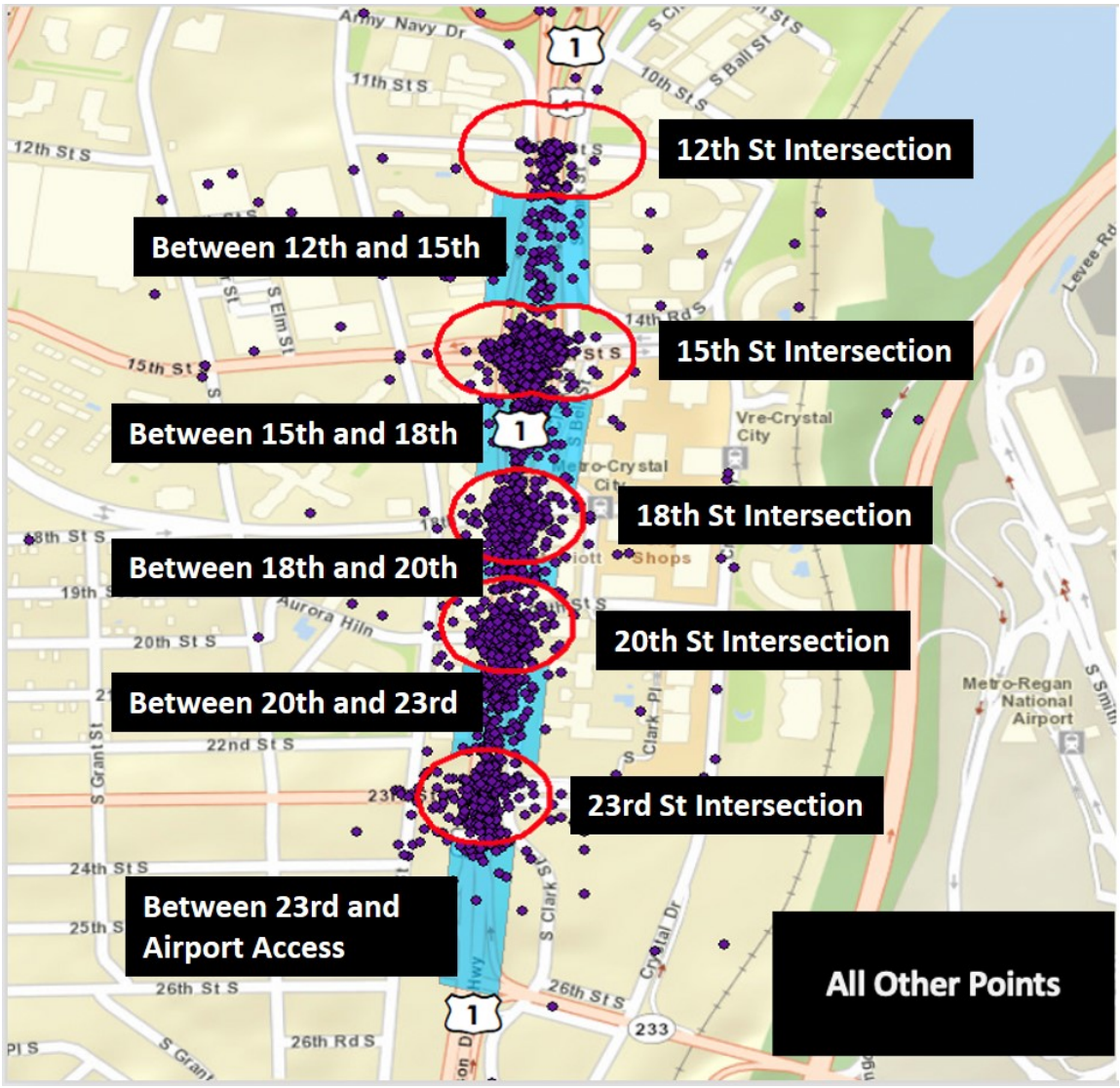
- Reduce carbon emissions
- Not enough green space to preserve land along Route 1 for green environment
- More greenery and clever environmental design to soften the sharp corners and harsh cubic structures on both sides of the corridor
- Implementing this plan would lead to slower traffic with vehicles idling at traffic signals and waiting for pedestrians to cross the street – leading to more environmental degradation
- Environmental design priority is very important to combat pollution (need more trees)

Suggest Another (30 comments)

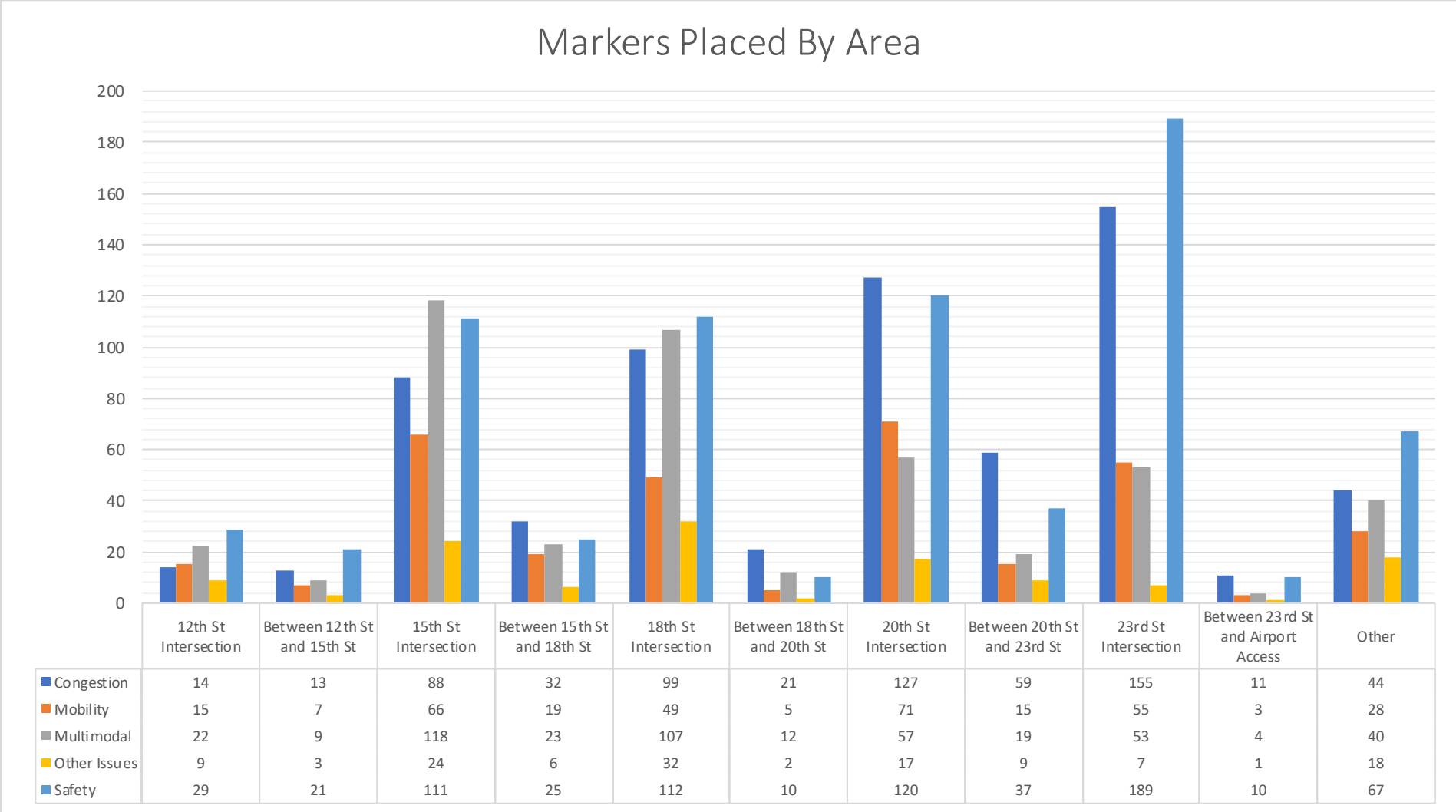
- Priority to address impacts to adjacent streets:
  - Minimize impacts to surrounding residential area
  - Avoid displacing Route 1 traffic to adjacent neighborhoods
  - Discourage diversions
- Make permeability a design priority – the ability to cross Route 1 east/west
- Divert the "pass through" traffic to enhance the community use
- Consider the creation of new usable land area
- Make pedestrian access a priority

Map Marker Responses

A map marker screen asked participants to identify challenges and opportunities in specific locations within the study area. Participants were asked to drag and drop at least three markers from categories including Congestion, Safety, Mobility, Multimodal, and Other. The coordinates of these markers were then sorted to the nearest intersection of block within the study area.

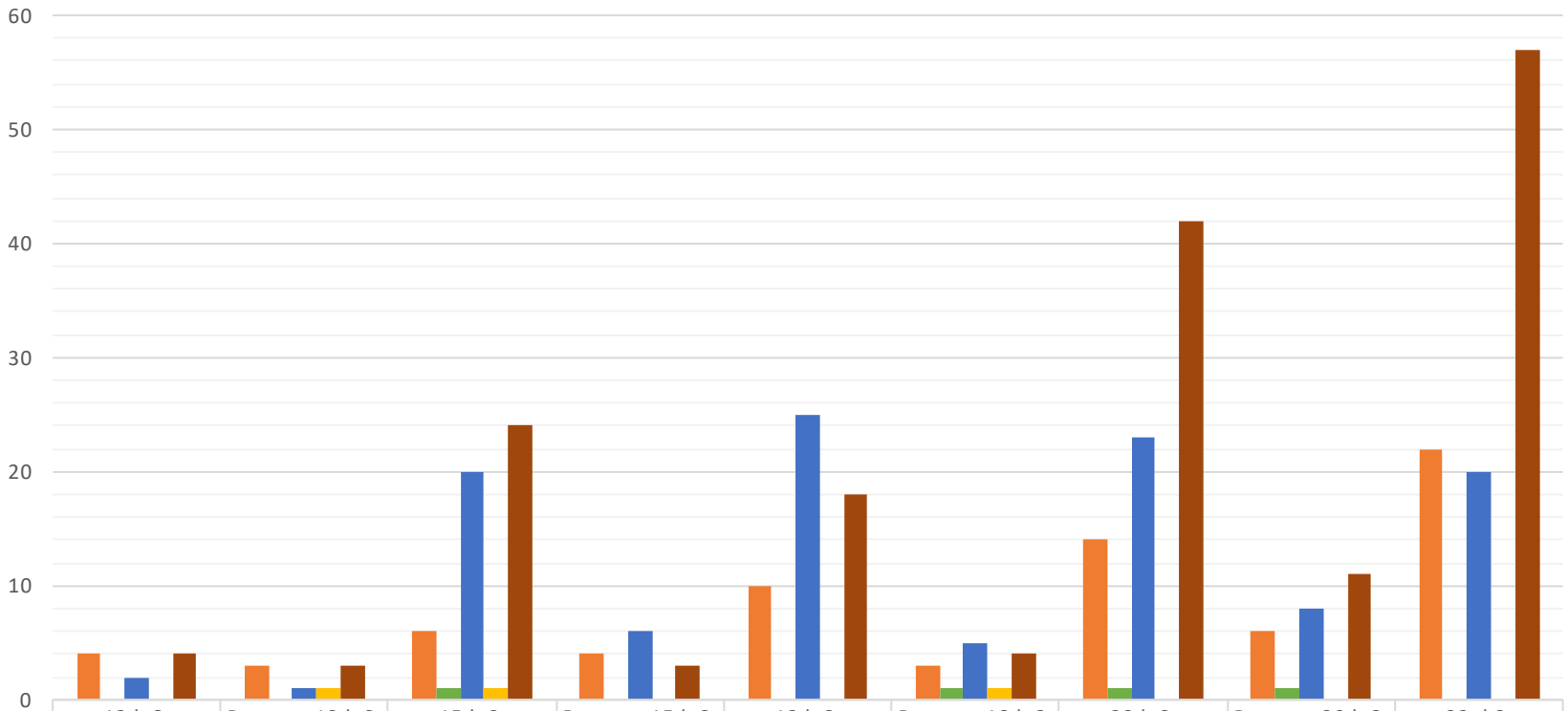


The main map marker screen asked participants to identify challenges and opportunities by dropping "map markers" into specific locations within the study area. The chart below provides an overview of what map markers were dropped where, while the following pages provide additional insight into the individual map marker responses.



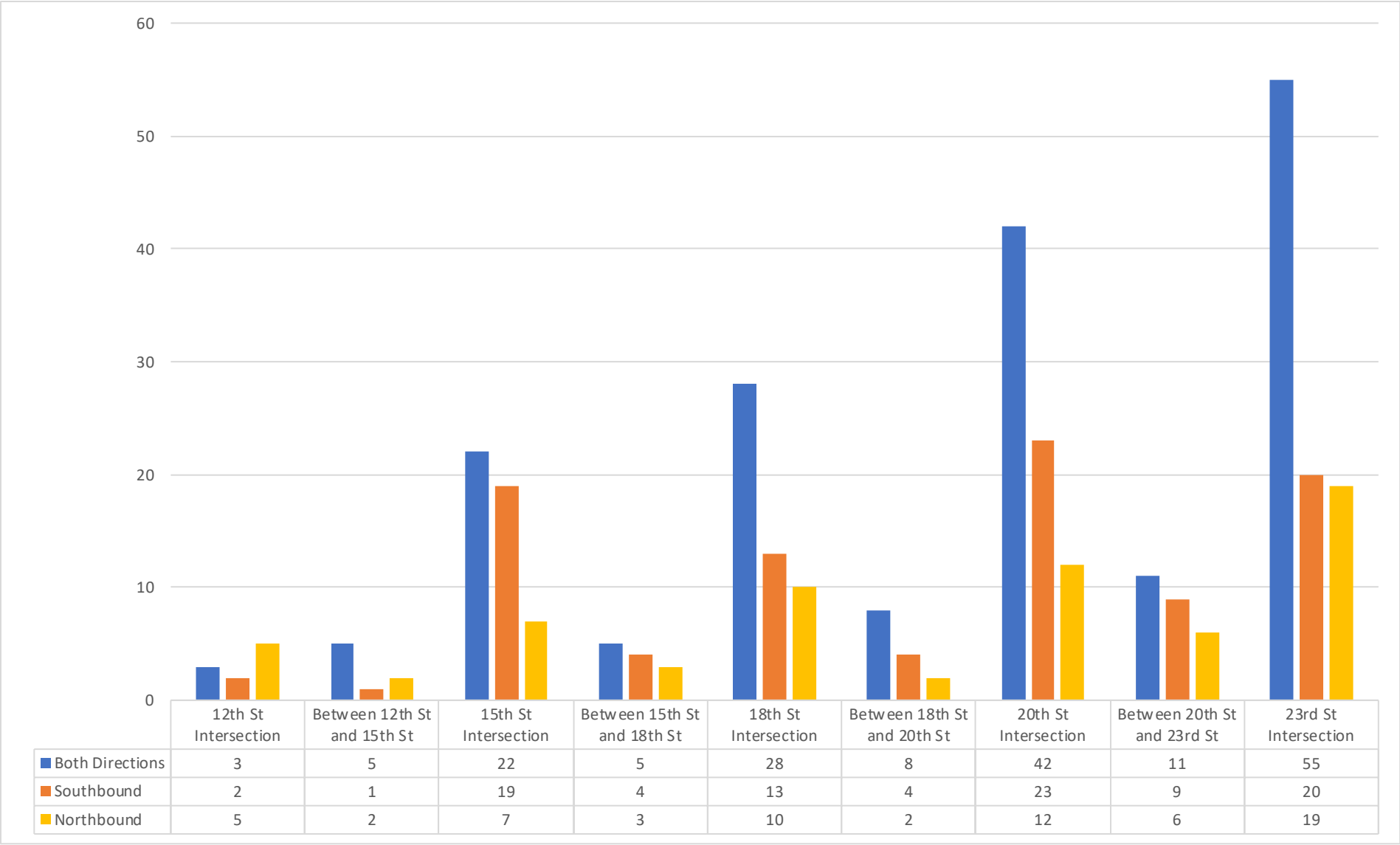
	12th St Intersection	Between 12th St and 15th St	15th St Intersection	Between 15th St and 18th St	18th St Intersection	Between 18th St and 20th St	20th St Intersection	Between 20th St and 23rd St	23rd St Intersection	Between 23rd St and Airport Access	Other
Congestion	14	13	88	32	99	21	127	59	155	11	44
Mobility	15	7	66	19	49	5	71	15	55	3	28
Multimodal	22	9	118	23	107	12	57	19	53	4	40
Other Issues	9	3	24	6	32	2	17	9	7	1	18
Safety	29	21	111	25	112	10	120	37	189	10	67

Congestion: When does it occur most often?



	12th St Intersection	Between 12th St and 15th St	15th St Intersection	Between 15th St and 18th St	18th St Intersection	Between 18th St and 20th St	20th St Intersection	Between 20th St and 23rd St	23rd St Intersection
Weekday Morning	4	3	6	4	10	3	14	6	22
Weekday Midday	0	0	1	0	0	1	1	1	0
Weekday Evening Night	2	1	20	6	25	5	23	8	20
Saturday/Sunday	0	1	1	0	0	1	0	0	0
All The Time	4	3	24	3	18	4	42	11	57

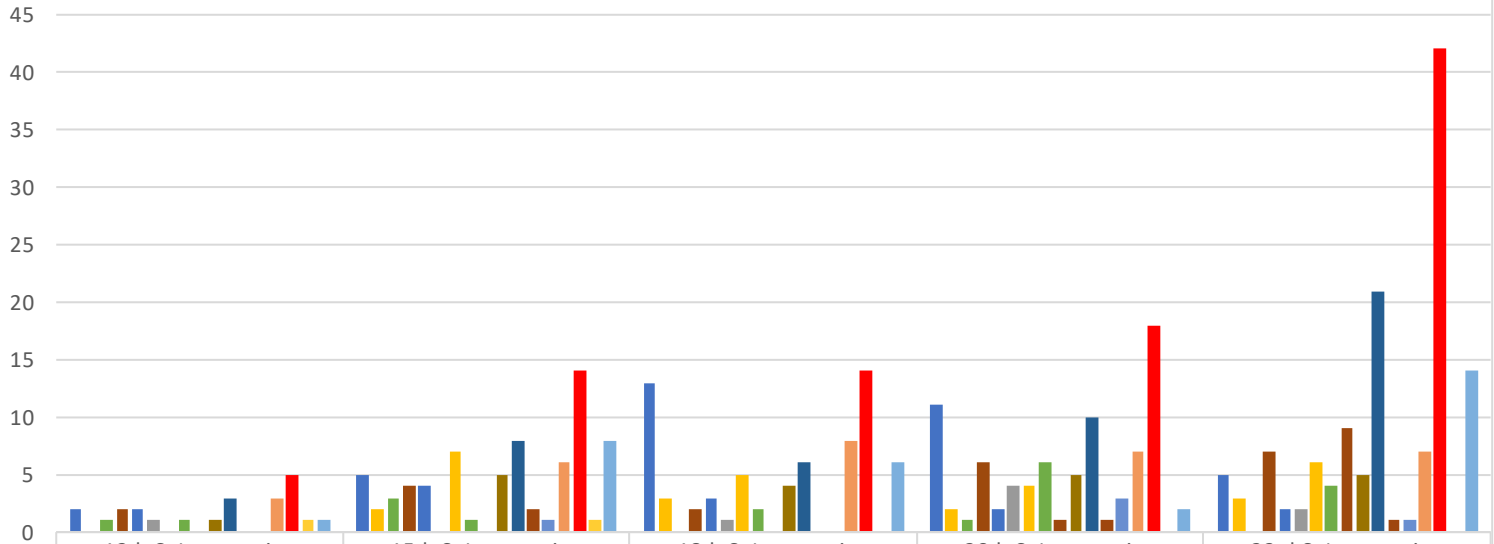
Congestion (cont'd): In which direction?



	12th St Intersection	Between 12th St and 15th St	15th St Intersection	Between 15th St and 18th St	18th St Intersection	Between 18th St and 20th St	20th St Intersection	Between 20th St and 23rd St	23rd St Intersection
Both Directions	3	5	22	5	28	8	42	11	55
Southbound	2	1	19	4	13	4	23	9	20
Northbound	5	2	7	3	10	2	12	6	19

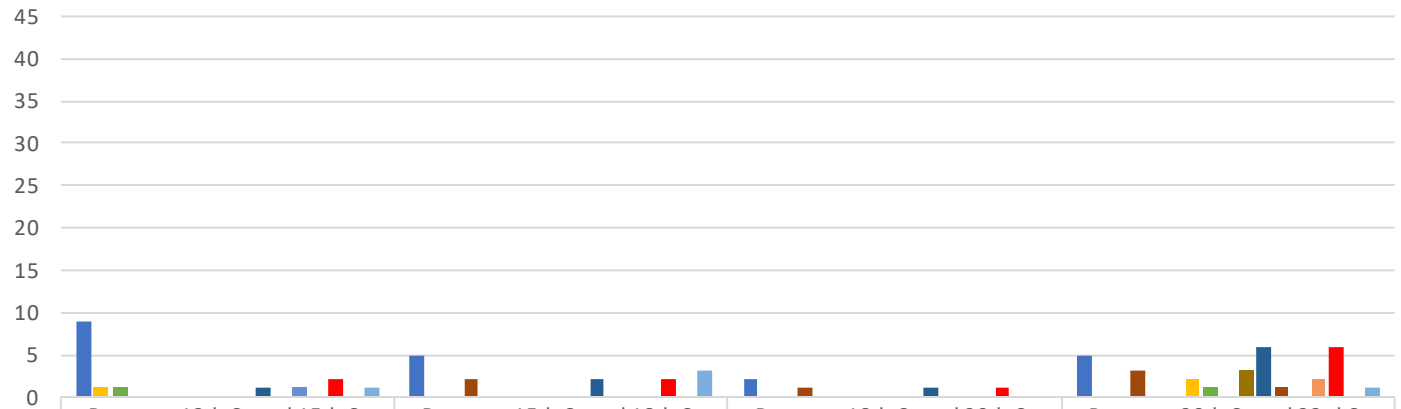
Safety: What is the major safety concern?

At intersections



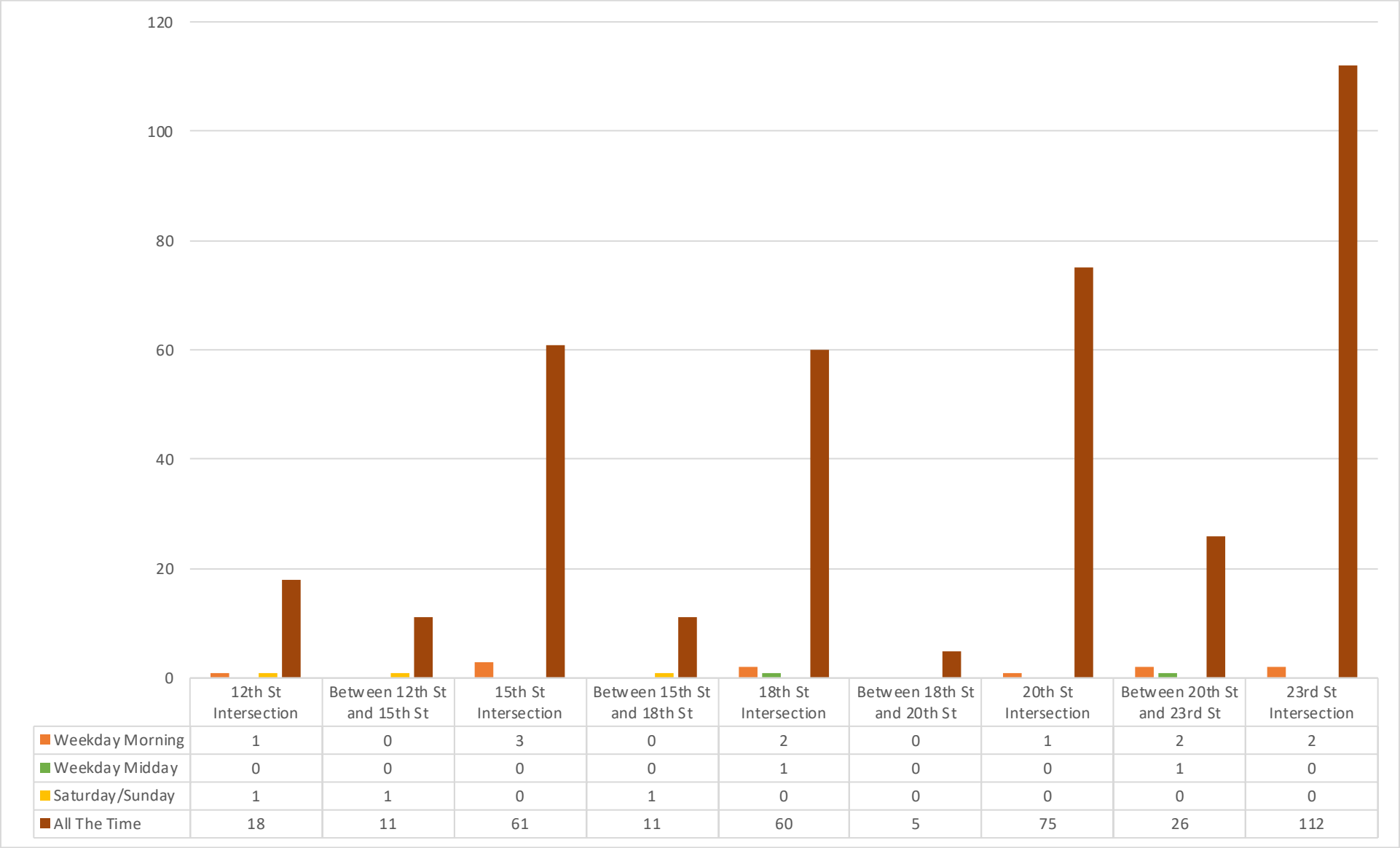
	12th St Intersection	15th St Intersection	18th St Intersection	20th St Intersection	23rd St Intersection
Speeding	2	5	13	11	5
Sudden stops and rearend crashes	0	2	3	2	3
Sideswipes and weaving/merging crashes	1	3	0	1	0
Aggressive or distracted driving	2	4	2	6	7
Lack of wayfinding or guide signs	2	4	3	2	2
Lack of pavement markings	1	0	1	4	2
Pedestrians jaywalking	0	7	5	4	6
Vehicles running red lights	1	1	2	6	4
Poor visibility to make a turn	0	0	0	1	9
Inadequate or missing crosswalk	1	5	4	5	5
Vehicles not yielding to pedestrians	3	8	6	10	21
Vehicles making a right turn on red	0	2	0	1	1
Inadequate or missing sidewalk/curb ramp	0	1	0	3	1
No bike lane or dedicated area for cyclists	3	6	8	7	7
Feels unsafe	5	14	14	18	42
Drainage issues after rain	1	1	0	0	0
Other	1	8	6	2	14

Safety (cont'd): What is the major safety concern?



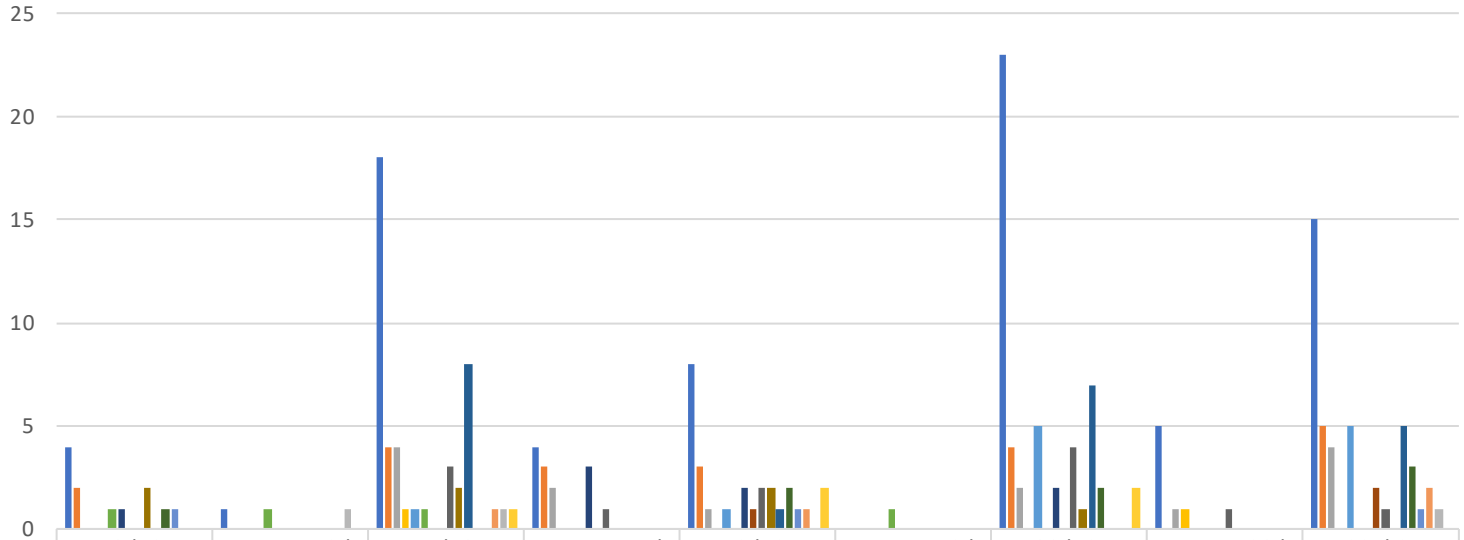
	Between 12th St and 15th St	Between 15th St and 18th St	Between 18th St and 20th St	Between 20th St and 23rd St
Speeding	9	5	2	5
Sudden stops and rearend crashes	1	0	0	0
Sideswipes and weaving/merging crashes	1	0	0	0
Aggressive or distracted driving	0	2	1	3
Lack of wayfinding or guide signs	0	0	0	0
Lack of pavement markings	0	0	0	0
Pedestrians jaywalking	0	0	0	2
Vehicles running red lights	0	0	0	1
Poor visibility to make a turn	0	0	0	0
Inadequate or missing crosswalk	0	0	0	3
Vehicles not yielding to pedestrians	1	2	1	6
Vehicles making a right turn on red	0	0	0	1
Inadequate or missing sidewalk/curb ramp	1	0	0	0
No bike lane or dedicated area for cyclists	0	0	0	2
Feels unsafe	2	2	1	6
Drainage issues after rain	0	0	0	0
Other	1	3	0	1

Safety (cont'd): When is this issue experienced?



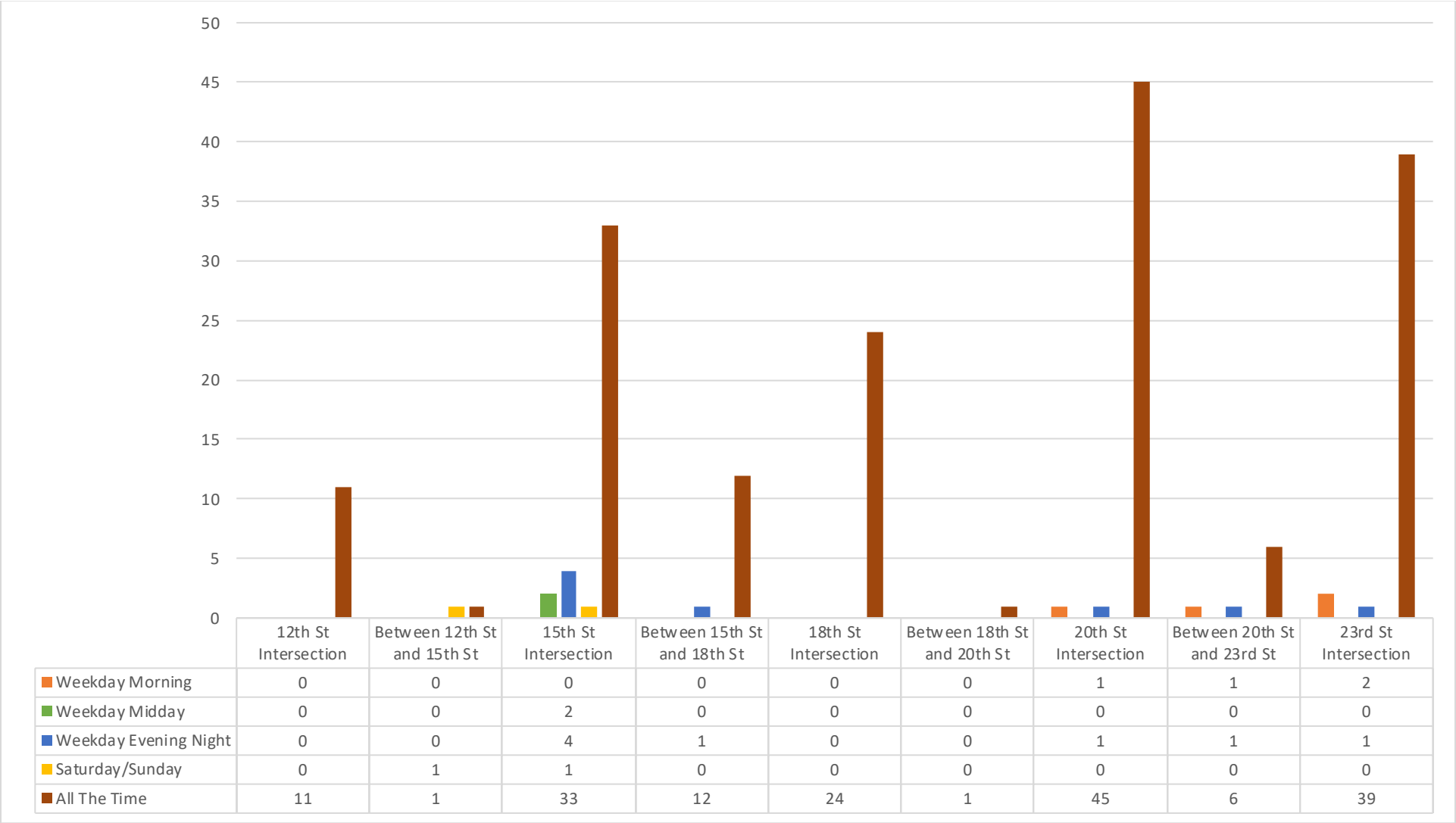
	12th St Intersection	Between 12th St and 15th St	15th St Intersection	Between 15th St and 18th St	18th St Intersection	Between 18th St and 20th St	20th St Intersection	Between 20th St and 23rd St	23rd St Intersection
Weekday Morning	1	0	3	0	2	0	1	2	2
Weekday Midday	0	0	0	0	1	0	0	1	0
Saturday/Sunday	1	1	0	1	0	0	0	0	0
All The Time	18	11	61	11	60	5	75	26	112

Mobility: What is the major mobility issue?



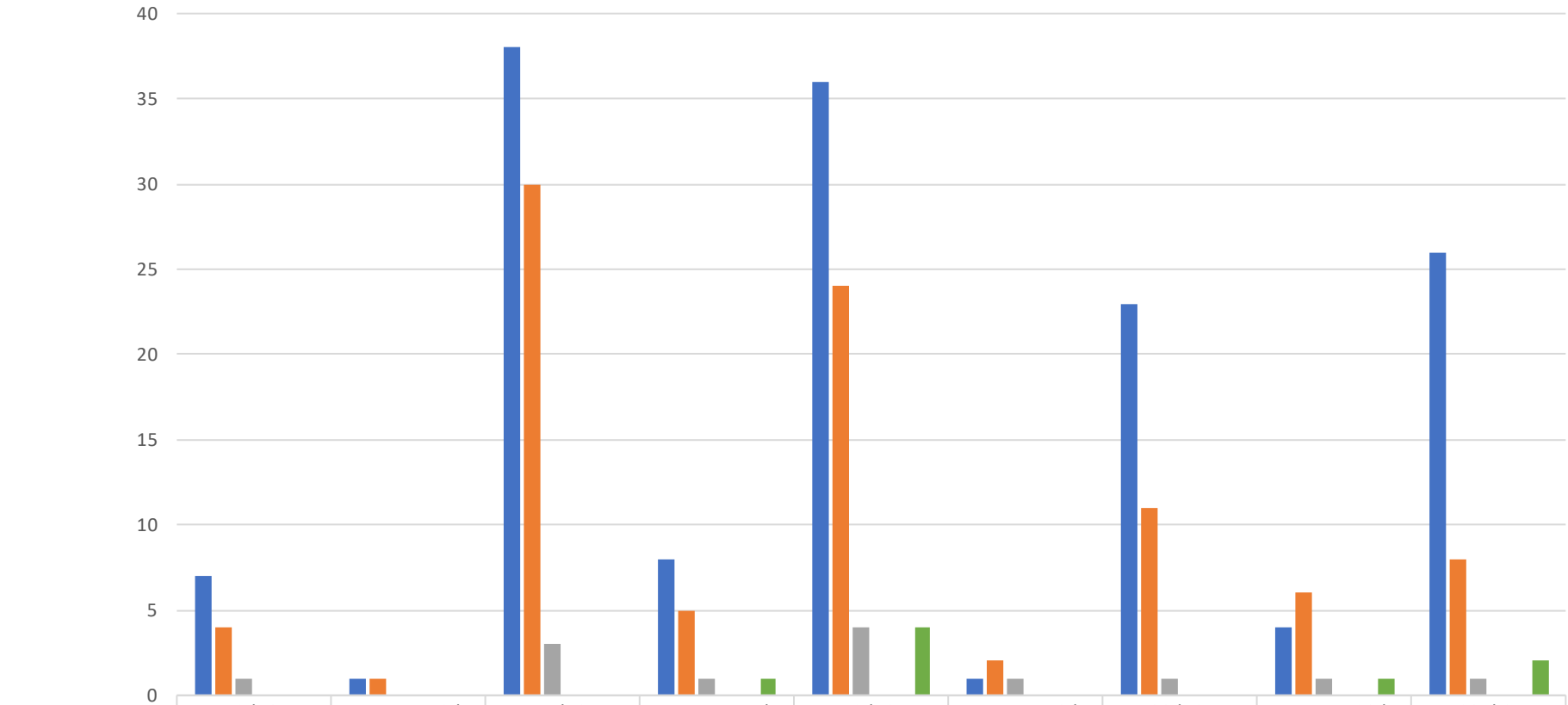
	12th St Intersection	Between 12th St and 15th St	15th St Intersection	Between 15th St and 18th St	18th St Intersection	Between 18th St and 20th St	20th St Intersection	Between 20th St and 23rd St	23rd St Intersection
Difficulty walking within the corridor	4	1	18	4	8	0	23	5	15
Challenges riding a bicycle	2	0	4	3	3	0	4	0	5
Unreliable travel times by car	0	0	4	2	1	0	2	1	4
Unreliable travel time by transit	0	0	1	0	0	0	0	1	0
Difficulty making left turns	0	0	1	0	1	0	5	0	5
Lack of turn lanes	1	1	1	0	0	1	0	0	0
Difficulty accessing businesses	1	0	0	3	2	0	2	0	0
Vehicles blocking entrances or roads	0	0	0	0	1	0	0	0	2
Frequent stops at signals	0	0	3	1	2	0	4	1	1
No bike lane or dedicated area for cyclists	2	0	2	0	2	0	1	0	0
Pedestrian/Cyclist wait too long for signal	0	0	8	0	1	0	7	0	5
Not enough time for pedestrian to cross	1	0	0	0	2	0	2	0	3
Inadequate or missing sidewalkcurb ramp	1	0	0	0	1	0	0	0	1
Poor use of curbspace	0	0	1	0	1	0	0	0	2
Illegal parking	0	1	1	0	0	0	0	0	1
Other	0	0	1	0	2	0	2	0	0

Mobility (cont'd): When does it occur most often?



	12th St Intersection	Between 12th St and 15th St	15th St Intersection	Between 15th St and 18th St	18th St Intersection	Between 18th St and 20th St	20th St Intersection	Between 20th St and 23rd St	23rd St Intersection
Weekday Morning	0	0	0	0	0	0	1	1	2
Weekday Midday	0	0	2	0	0	0	0	0	0
Weekday Evening Night	0	0	4	1	0	0	1	1	1
Saturday/Sunday	0	1	1	0	0	0	0	0	0
All The Time	11	1	33	12	24	1	45	6	39

Multimodal: What mode of travel is most needed?



	12th St Intersection	Between 12th St and 15th St	15th St Intersection	Between 15th St and 18th St	18th St Intersection	Between 18th St and 20th St	20th St Intersection	Between 20th St and 23rd St	23rd St Intersection
Walk	7	1	38	8	36	1	23	4	26
Bike	4	1	30	5	24	2	11	6	8
Bus	1	0	3	1	4	1	1	1	1
Carpool/Vanpool	0	0	0	0	0	0	0	0	0
Park & Ride	0	0	0	0	0	0	0	0	0
Other	0	0	0	1	4	0	0	1	2

Summary

The Route 1 Multimodal Improvements Study survey was open to the public between October 15 and November 15, 2020. From the responses received, this survey met its purpose of gauging initial community preferences and priorities, which will assist the VDOT project team in evaluating potential multimodal improvements in the Route 1 corridor between 12th Street S. and 23rd Street S.