

MEMORANDUM

To: Transportation Commission

From: Joel Pfundt, AICP CTP, Transportation Manager

Victoria Kovacs, AICP, Transportation Planner Brett Schock, PE, AICP, RSP2i, Transpo Group

Date: September 22, 2022

Subject: Lake Street S/Lake Washington Boulevard NE Promenade Analysis and Concept

Development Study

I. RECOMMENDATION:

It is recommended that the Transportation Commission receive an update on the Lake Street S/Lake Washington Boulevard NE Promenade Analysis and Concept Development Study.

Staff and Consultant Transpo Group seek input from the Commission on the candidate crosssection options for the Promenade, potential evaluation criteria, and potential on-street parking management strategies.

II. BACKGROUND DISCUSSION:

A. Introduction

Lake Street South/Lake Washington Boulevard NE is a key multimodal corridor connecting downtown Kirkland south to Bellevue, SR 520, and to the King County Regional Leafline Trails system via the SR-520 Trail. It is also a part of the Lake Washington Loop, a signed 48-mile bicycle route which connects Kirkland, Bellevue, Renton, Seattle, Lake Forest Park, Kenmore, and Bothell. The segment of the corridor between 2nd Avenue South and Lakeview Drive is particularly unique along the Lake Washington Shoreline as it connects downtown Kirkland, Carillon Point, and several City parks in a segment less than a mile, including David E. Brink Park, Marsh Park, Doris Cooper Houghton Beach Park, as well as smaller parks providing waterfront access including the 2nd Avenue South Dock, Street End Park, and Settler's Landing. For this reason, Lake St S/Lake Washington Blvd is a popular scenic walk frequented by people from Kirkland and throughout the region.

Since 2014 there has been expressed public interest and Council discussion of a Promenade along Lake Washington Boulevard. In 2015 the Council adopted the 2035 Transportation Master Plan which recognized the rich walking environment of this corridor and explicitly identified the need for a planning study for a potential lake front Promenade.

Recently, there was renewed community interest in widening the pedestrian space of Lake St S/Lake Washington Blvd NE for social distancing during the height of the COVID19 pandemic as a pilot parking lane closure which could inform a potential permanent Promenade. The Transportation Commission unanimously approved a motion in support of implementing a pilot project in the March 2021 meeting. However, the pilot project was ultimately not pursued given the high cost of a temporary installation, and City Council expressed need for fuller understanding of the baseline safety concerns, bicycle and pedestrian use, and parking utilization of the corridor prior to conducting a pilot project.

To address Council feedback in May, a two-step process was proposed by the City Manager and Staff to further evaluate creating a Promenade pilot along the Lake Washington waterfront, which was approved by Council within the June 2021 budget ordinance. The first step was to perform baseline data collection study to better understand how people are using the corridor. This analysis was presented to Transportation Commission during the September 2021 meeting, and the final report memo completed in December 2021 is included as Attachment B. The second step is to take the results of the analysis and develop design concepts for a new Promenade along the Lake Washington waterfront that addresses the issues and needs in the corridor. Transpo Group was selected as the consultant to complete this study through the City's procurement process. Information developed through the two-step planning process will inform a Council decision in spring of 2023 of how to proceed with the Promenade concept.

B. Study Purpose

Given the unique placemaking, recreational and transportation value of Lake St S/Lake Washington Blvd NE as well as flexibility to adjust existing parking supply given the baseline data collection parking utilization findings, there is opportunity to better allocate existing right-of-way for balanced, multimodal use of the corridor. The purpose of this study is to conduct further analysis to identify constraints and opportunities in the existing roadway design, and to develop and evaluate street design alternatives to improve the comfort of walking, cycling and rolling along Lake Street S/Lake Washington Boulevard to attract more people to Kirkland's signature waterfront.

The extents of this corridor study are from 2nd Avenue South to Lakeview Drive.

C. Requested Transportation Commission Input

This memorandum represents a progress update to the Transportation Commission on the Promenade Analysis and Concept Development study. The update includes information on:

- Existing conditions identified by Transpo Group
- A summary of crash history, safety analysis conducted under the data collection study, and safety-related citizen requests received by the City within the project corridor
- The range of street cross-section options identified by Transpo Group
- Preliminary work to apply cross-sections to various locations within the corridor
- A range of options for addressing reduction in on-street parking

Staff and Transpo Group are seeking the Transportation Commission's feedback on progress to date and any input on preferences or concerns with:

- Identified candidate cross-section options for the Promenade
- Evaluation criteria for cross-sections and alternative corridor layouts for the Promenade

Parking management strategies

Staff and Transpo Group will return to Transportation Commission in December of 2022 with a completed analysis of options. At that time, feedback from the Transportation Commission will be incorporated into the analysis before the evaluation of options is presented to the Kirkland City Council in early 2023.

III. EXISTING CONDITIONS ANALYSIS:

Transpo conducted an in-depth review of the existing conditions in the corridor, including existing data review and field visits. The objective of the existing conditions review was to understand the existing assets and identify opportunities for pedestrians, bikes, vehicles, parking, and infrastructure supporting residences and businesses along the corridor. The existing conditions review also collected information on the existing lighting system, including a nighttime visit to assess lighting conditions after sundown, and a model of lighting levels to compare to standards and ideal conditions, given the desired target user in the corridor.

A. User Mix

Lake Street S/Lake Washington Boulevard NE has a diverse mix of users of all modes. The project corridor has three major public parks with waterfront access, attracting many younger children, their families, pets, strollers, and less confident cyclists. The parks also attract recreational use and exercise in the corridor by a wide range of ages and abilities. Many residences, including multifamily apartment complexes front on Lake Street S/Lake Washington Boulevard NE and residents can easily access downtown Kirkland by foot or bike via the corridor. There are assisted living facilities that front onto the corridor which house individuals with mobility challenges who still use the corridor for exercise and park access. The corridor is part of the Lake Washington Loop, so is frequented by cyclists of a high level of comfort who enjoy elevated cycling speeds compared to the typical multigenerational user mix. In addition to the wide range of active mode users, Lake Street S/Lake Washington Boulevard NE is a significant arterial corridor for Kirkland. Vehicle volumes vary from 5,000 vehicles per day on the north end of the corridor to 15,000 vehicles per day near the intersection with Lakeview Drive.

B. Existing Roadway and Sidewalks

The existing curb to curb pavement on Lake Street S/Lake Washington Boulevard NE is typically 44 feet wide, with some widening at intersections. The typical section throughout the project limits includes two parking lanes, two vehicle lanes (one in each direction) and two marked one-way bike lanes. The existing parking lanes are typically 7 feet wide, the bike lanes are 5 feet wide with no marked buffers, and the vehicle lanes vary between 10.5 and 9.5 feet, with most areas 10 feet in width. There is one signalized intersection within the project limits. The signal at Lake Washington Boulevard and Lakeview Drive defines the southern limit of the project corridor.

Behind the existing curbs, there are sidewalks present on both sides of the roadway. The sidewalks on the west side are typically 10 feet wide between 2nd Ave S and 10th Ave S. Between 10th Ave S and NE 62nd St, west side sidewalks drop to an average of 6 feet in width, except for the recently widened sidewalks at David E Brink Park. South of NE 62nd Street, west side sidewalks widen back out to 10 feet in width to the signal with Lakeview Drive. The existing sidewalk on the east side of the road is 5 feet in width for the entirety of the corridor.

Some of the sidewalk width on both sides of the street is beyond the right of way and includes the entry plazas and frontage improvements of residential and commercial buildings that front on the roadway.

Street trees are present in some locations, some near the curb line and others nearer the right of way line. Street trees are more plentiful, but in less regular configuration, between 2nd Ave S and 5th Ave S, having been installed as development occurred. Between David E Brink Park and 10th Ave S, there are more regularly spaced, mature trees at the curb line. South of 10th Ave S, street trees are present mostly just at Marsh and Houghton Beach Parks.

Some of the existing curbs in the corridor are heavily damaged. Recent redevelopment has damaged some curbs, and long-term maintenance needs have also resulted in some curb deterioration. Sidewalks near street trees whose roots have infiltrated subbase layers are cracked and lifted, presenting mobility challenges, and an uneven walking surface that does not meet ADA guidelines in some areas.

C. Right-of-Way

The right of way in the project corridor varies slightly, but is no less than 60 feet. The variations in the right of way are due to changes in the timing and policies for frontage improvements and right of way dedication as the residences and commercial properties along the corridor have developed. The City's goal for the current study is for all modifications to occur within the existing right of way limits.

D. Existing Land Use and Development

Along Lake Street S and Lake Washington Boulevard NE, the land use is urbanized. There is little undeveloped land on the east or west side of the road. Lake Washington is between 100 and 300 feet to the west of the roadway. Lake access, views, and proximity to Downtown Kirkland make the corridor a highly sought-after residential location. A mix of residence types, with a majority multifamily units, are present on both sides of the street. There are some commercial facilities, including restaurants, offices, and assisted living facilities. Many of the residential buildings have mature landscaping, with well-developed aesthetic treatments including fountains, gardens, terraces and plazas.

E. Residential Support Facilities

Along the corridor, day to day support facilities for residences, including mailboxes and locations for trash pickup, are significant considerations when looking to change the roadway section. Support facilities are more plentiful between 2nd Ave S and 5th Ave S on the north end of the corridor, and between 10th Ave S and Marsh Park. Maintaining access to existing mailboxes at the back of the sidewalk, dumpsters for multifamily units, and single family homes that require placement of and pickup of garbage and recycle cans near the curb will need to be considered in the configuration of a promenade facility. Additionally, the ubiquity of delivery services, especially after the COVID-19 pandemic, for everything from packages to meals to rideshare will mean curb access on both sides of Lake Washington Boulevard will need to be considered.

F. Public Parks

Several public parks are within the study limits. Houghton Beach Park, Marsh Park and David E Brink Park are all heavily used public facilities with waterfront access, including docks for kayaking at Houghton Beach Park, sports facilities, playgrounds and public art installations. Settler's Landing, Street End Park, and the 2nd Ave S Dock are all smaller parks providing waterfront access. The parks are an asset to the community and a significant driver of the active mode usage in the corridor by users of a wide range of ages and comfort levels at all times of the day.

In addition to the public parks, a semi-public walkway exists along the waterfront, through the otherwise private multifamily residential properties within the project corridor. The walkway does get restricted at night, via gates at the private property entrances, but is available during daylight hours as a walking alternative to the sidewalks along the roadway.

G. Crosswalks

There are 10 existing unsignalized marked crossings of Lake Street S/Lake Washington Boulevard NE within the project limits including the crossing at 2nd Ave S, and an additional marked crossing on the north leg of the signalized intersection of Lake Washington Boulevard NE and Lakeview Drive. None of the existing marked crossings are considered midblock as each is marked at either the north or south legal crossing of an intersecting east-west street with the corridor. Three of the crossings, at 7th Ave S, NE 59th St and NE 60th St, are enhanced with rectangular rapid flashing beacons (RRFBs). The crossings at NE 59th St and NE 64th St have overhead pedestrian warning signs in addition to the roadside pedestrian warning signs. All of the crossings in the corridor have pedestrian-carried flags offered for visibility.

H. On-Street Parking

Currently, there is on-street parking allowable on both sides of Lake Street S/Lake Washington Boulevard NE within the project limits, except south of NE 60th St approaching the signal with Lakeview Drive. There are varying time restrictions throughout the corridor, and no parking restrictions indicated by red curb paint or no parking signs near driveways, crosswalks, intersections, and fire hydrants. There is on-street parking available on both sides of most side streets intersecting the corridor.

I. Driveways and Off-Street Parking

Off-street public parking is available in Marsh Park and Houghton Beach Park. The remaining off-street parking in the corridor is private. Some of the commercial buildings have off-street lots that are restricted to business users during the day. One commercial building east of Houghton Beach Park makes their off-street lot available for public parking in the evenings. Off-street parking for residential single and multifamily properties is accessed both by combined driveways leading to parking lots, and head-in driveways in some locations, with multi-stall carports fronting directly onto Lake Street S/Lake Washington Boulevard NE. Several of the driveways on the west side of the corridor have steep approaches to the roadway, which will need to be considered in the design of any changed active mode facilities on the west side of the corridor.

J. Existing Illumination

Street lighting is present on both sides of the corridor; however, preliminary observations indicate that the existing lighting is not uniform along the corridor. A preliminary lighting study

was performed to calculate the existing light levels. Two metrics were measured for this study: average maintained illuminance, which is a measure of how brightly an area is lit, and uniformity ratio, which is a measure of how evenly an area is lit. Calculation areas were delineated separately throughout the corridor for street segments, intersections, mid-block crossings, and sidewalks. Preliminary findings indicate that there are several areas that could be improved for safety and comfort.

Pedestrian-scale lighting is not currently present along the study portion of Lake Street S/Lake Washington Boulevard NE. Active mode facility enhancements along the corridor will present opportunities to improve both street- and pedestrian-level lighting.

The next phase of the project will consider several issues raised by City staff, such as raising light levels to enhance safety and comfort, avoiding over lighting and glare for residents who live along Lake Street S and Lake Washington Boulevard NE, and determining a mix of existing and new equipment that is forward compatible with existing City equipment.

K. Utilities

Electrical power in the corridor is underground, with no power utility poles present on either side of the street. There are existing illumination poles, the analysis and details of which is covered under the "Illumination" section. Stormwater conveyance in the corridor has historically been a concern. The corridor is a fairly flat grade, and due to the fast-changing nature of the development along the lakefront, there have been some stormwater systems that have been "dead ended." The enhancement of the corridor will include being opportunistic about identifying solutions to ponding issues where present and identified by City staff.

IV. SAFETY ANALYSIS

The previous study of the Lake Washington Boulevard NE corridor, included as Attachment B, conducted an analysis of speed in the corridor and a video analytics analysis of near misses at the intersection of Lake Street S and 7th Ave S. The previous study found that speeds in the corridor were aligned with posted limits, and the video analytics analysis of two 13-hour weekday videos during daylight hours found that overall safety ratings and the rate of near-miss crashes were very low. No safety concerns were identified from this analysis. However, the lack of safety concerns identified in the data is not intended to discount the presence of safety risk factors in the corridor. The video study was conducted over two specific days in favorable weather, and at only one intersection along the corridor. In addition, perceived safety risk and associated comfort can vary based on a users' comfort level with cycling, previous experiences, and day to day use of the corridor. This study will consider both data-based safety analysis to guide specific safety improvements, and subjective estimation of the sense of safety the design changes in the corridor would create to inform evaluation and comparison of alternatives.

A. Crash Data Review

Transpo Group was provided with five years of recent crash history in the corridor (2016-2020), between the 2nd Avenue S and Lakeview Drive project limits. In reviewing the crash data, the following crash-related patterns of risk factors in crashes, especially in those involving pedestrians or cyclists, were found:

- Crashes involving pedestrians happened more frequently in the dark, both with streetlights
 on and at dusk prior to streetlights coming on. The pattern of crashes indicates a need for
 improvements to the street lighting, especially at crosswalks.
- Bicycle-related crashes more frequently involved eastbound turns to the cross streets from both northbound and southbound traffic (8 of 12 bike related crashes). There was one (1 of 12) bicycle-related crashes related to driveways.
- Speed of cyclists was cited in 2 crashes as a contributing factor, and
- 3 of 12 bicycle-related crashes were cited as occurring "outside the primary trafficway," indicating possible bike use outside of the bike lanes.

B. Comparison to the Local Road Safety Plan

The City of Kirkland maintains a Local Road Safety Plan (LRSP) that identifies risk factors for crashes citywide. In the LRSP, crashes that involve pedestrians and cyclists are the top two priorities for the City to develop projects that mitigate risk to vulnerable users. The south end of the Lake Washington Boulevard corridor is identified as a Tier II priority location for LRSP-identified projects, with 4 serious injury crashes in the 5-year crash data period (2016-2020). The primary identified physical risk factors (i.e. other than driver behavior) in the LRSP on Lake Washington Boulevard are a posted speed over 30 mph, uncontrolled marked crosswalks at intersections, and the turning movements across these same crossings.

C. Citizen Requests to the City of Kirkland

The City compiled a review of service requests received through Our Kirkland from users of the Lake St S/Lake Washington Boulevard NE corridor since 2018 (post completion of the Lakefront improvements project). Common complaints include overgrown vegetation on sidewalks, trees overhanging the sidewalk or bike lane, tree roots uplifting sidewalks, debris in bike lanes, high speeding traffic or noisy vehicles at night, high traffic volumes in the pm peak, and drivers not yielding to pedestrians at crosswalks. A few location-specific engineering requests include revising signalization and the merge condition at Lakeview Drive, adding lighting and an RRFB to the crosswalk at NE 62nd St, adding an RRFB to the crosswalk at NE 64th St, and adding an RRFB to the crossing at the Aegis Senior Living at 10th Ave S.

D. Safety Priorities

The linear facilities in the project corridor have, historically, been a low risk for active mode users. The data and analysis completed in the 2021 study (see Attachment B), as well as the City's LRSP, demonstrate the relative safety of the linear facilities. The crosswalks and intersections in the project corridor, on the other hand, do present an opportunity to address crash risk factors. The project team will consider improvements to crosswalks, not just at the locations identified through comments to the City, but at all crossings in the corridor, as part of the promenade project. Addressing visibility of cyclists at intersections will help to address left turn and right hook crashes with cyclists. Consolidating bicycle movements to one facility to the west side of the roadway would addresses crash risk between northbound bicyclists and eastbound vehicle turns.

V. CROSS-SECTION OPTIONS

The project team, after analyzing the existing conditions and completing a review of the safety data available, developed a range of feasible sections to create a Promenade in the Lake Washington Boulevard corridor. The intent of the exercise of looking at a wide range of sections is

to identify any opportunities that may exist for facilities beyond the originally envisioned widened pedestrian-focused facility. The project team has not conducted a detailed analysis of the pros and cons of each section, and is in the brainstorming phase of the project where all possibilities are considered. The team has focused on creating an all ages and abilities facility for cyclists, and several of the proposed sections also include widening of the existing pedestrian sidewalks. Removal of on-street parking on one side of the corridor provides opportunity to create a more comfortable facility for cyclists of a wide range of abilities and would result in additional space given to pedestrians on a popular walkway. A compilation of the feasible sections, showing various approaches to developing wider, more comfortable active mode spaces both within the existing curbs, and with modifications of the west curb of the roadway, are shown in Attachment A.

The cross-section options are divided into five categories based on the general configuration of the position of the bike facility, the additional treatments provided for pedestrians, the physical protection of the bike facility, and the position of on-street parking retained in the corridor.

As the project team advances the design to apply the cross-sections to alternative corridor plan layouts, transitions between the Promenade section and the existing roadway configuration at the northern and southern limits of the project will be incorporated. In all configurations, the existing lane assignments and number of lanes at the Lakeview Drive intersection will not change, nor will the configuration of lanes north of 2nd Avenue. The final alternative concepts developed by the project team will presented for feedback from the Transportation Commission in December.

A. Multi-Use Path

The first category of cross-section options would repurpose the existing west side on-street parking lane and both existing on-street bike lanes as a raised multi-use path on the west side. The resulting section would be a very wide promenade dedicated entirely to mixed active mode traffic. The multi-use path would require removal of some existing street trees, to be replaced with new street trees adjacent to the new curb location. The multi-use path would require more significant construction and investment of resources as compared to other options but would meet the overall goal of a new promenade facility.

A lower-cost version of the multiuse path concept would repurpose the existing pavement for the bike lanes and on-street parking into a barrier-separated on-street facility. The barrier between traffic and active modes would be of a material that is less rigid than the curbing for the multi-use path. The repurposed pavement would be available to walking, biking or rolling, but would retain the look and feel of a roadway, which could confuse drivers at driveways and intersecting roadways. A barrier-only conversion for both pedestrian and bicycle traffic could also limit usability by individuals with mobility challenges. A barrier-only conversion would likely only be used as a temporary or demonstration project, or as a phased construction method of designating the promenade while funding for full construction of a raised path is identified.

B. West Side Parking, Protected Bike Lanes

The second category of modifications to the corridor would combine both bike lanes into a single two-way protected bike lane facility. The two existing bike lanes would be moved to the west curb of Lake Washington Boulevard, and on-street parking would be maintained on the west side of the street. The on-street parking would "float" off the west side curb, providing additional physical separation and space between active travel lanes and the two-way protected bike lanes. Because

on-street parking would be next to the protected lanes in category B, a buffer is required to prevent the threat from "dooring," when parked vehicles open a door into a bicycle facility. The protected lanes could be at roadway level or elevated at sidewalk level. In both cases, there could be opportunities to widen the existing west side sidewalk, while still holding the eastern curb line where it is today. One consideration with category B is that the lower amount of potential on-street parking spaces as compared to maintaining parking on the east side due to a higher number of conflicting driveways, mailboxes, and other protected areas on the west side of the corridor.

C. East Side Parking, Protected Bike Lanes

The third category also combines the two bike lanes into a single two-way protected bike lane facility on the west side of the corridor. In category C, the on-street parking is provided on the east side. While a buffer is still necessary between the protected bike lanes and the roadway lanes, the buffer is providing physical barrier and separation between cyclists and vehicle lanes, instead of the dooring threat from parked vehicles. Several variations of roadway-level or sidewalk-level protected lanes, and different buffer configurations were developed, along with sections that minimized disturbance to the existing curbs. Sections with minimal disturbance were developed as "proof of concept" configurations that minimize investment of resources and could represent an early stage of implementing the promenade while funding for a widened, sidewalk-level facility are identified.

D. East Side Parking, Median Separated Protected Bike Lanes

Category D also maintains on-street parking on the east side of the corridor and combines the existing bike lanes into a two-way protected bike lane facility on the west side, but places the bike lanes behind a minimum 5-foot wide median that is intended to be planted with vegetation that could be used to assist in managing stormwater in the corridor. In category D, as in other category options, the protected lanes could be at roadway level, or could be raised to sidewalk level. At sidewalk level, linear cane detectable raised markings would be used to delineate the pedestrian- and bike-dedicated spaces. A differentiation in pavement type and/or pavement markings could also be used to visually distinguish the protected bike lanes from the sidewalk. The sections in category D with sidewalk-elevation protected lanes closely resemble the Category A multi-use path.

E. One-Way Protected Bike Lanes

A fifth category of section keeps the existing one-way bike lanes and repurposes one parking lane for additional buffer space for the cyclists. Section concepts include protected bike lanes at roadway grade, and elevated bike lanes with the curbs moved from their existing positions. Placing the northbound bike lane between the curb and parked vehicles provides additional protection for the northbound cyclists, but the risk of dooring from parked vehicles may increase the need for buffer space with category E sections.

F. Combining Sections

The project team is in the process of combining the sections in each category in plan context to create corridor-length alternatives that would implement the Promenade vision. While implementation of the Category A sections could be a relatively straightforward project within

the corridor; additional benefits for people walking, biking, rolling, in the corridor as well as residents and visitors to the waterfront parks utilizing the on-street parking may be realized through a combination of sections from the other categories.

VI. EVALUATION OF SECTION OPTIONS

The evaluation of section options will need to consider a wide range of differentiating factors, including variations in the land use and urban design context along the corridor, and a desire for a contiguous look, feel and experience for people walking, biking and rolling on the Lake St S/Lake Washington Boulevard NE corridor. Evaluation criteria will first and foremost focus on the safety and comfort of the design user. Secondary criteria that will be evaluated include the amount of reduced on-street parking, existing residential needs, and the relative cost as it relates to the ability to implement the project. There are a number of other potential considerations that could be used to compare alternatives.

Evaluation criteria could include:

- Mitigation of crash risk factors as demonstrated by crash history
- Inclusion of "quick win" project elements to improve corridor in the near term
- Amount of pedestrian space and bike space
- Visibility and safety for bike traffic at driveways
- Accommodation of mailboxes, trash pickup, and driveways
- Transition between promenade section and existing facilities
- Comfort level for low confidence cyclists
- Accommodation of higher speed/more confident Lake Washington Loop bike traffic
- Physical separation between active mode facility and travel lanes
- Physical separation between active mode facility and on-street parking
- Reduction in on-street parking for residential use
- Reduction in on-street parking for public use
- Implementation cost
- Impact to existing street trees
- Opportunity to improve damaged curbs and sidewalks
- Opportunity to address stormwater concerns

The project team is seeking feedback from the Transportation Commission on the evaluation criteria to ensure that we are evaluating section and corridor options and alternatives in a way that matches the public's desires and meets the needs of the City's users and residents.

VII. ON-STREET PARKING MANAGEMENT STRATEGIES

To address the reduction of on-street parking that the promenade concept would require, several parking management strategies were identified that could help to mitigate the impact of the change in parking supply, while maintaining local access to parks, residences, and businesses. For each management strategy, a high-level assessment of advantages and disadvantages is presented for discussion and feedback. In general, it is assumed that the side streets connecting to Lake St S/Lake Washington Boulevard NE have adequate on-street

parking for residents and to absorb the total demand for on-street parking. Tables documenting observed parking compared to the available spaces on and adjacent to the corridor are included in the 2021 parking study, Attachment B.

The parking strategies listed below are presented only for Transportation Commission consideration and feedback. No strategies have been evaluated for recommendation, and a combination of strategies may ultimately be recommended. Note that as part of a separate initiative, the City is evaluating technologies to monitor the use of on-street and off-street public parking Downtown that could be applied to the Lake St S/Lake Washington Blvd NE corridor.

A. Wayfinding Signage

The lowest cost and simplest strategy would be placement of wayfinding signage along Lake Street and Lake Washington Boulevard, directing those looking for parking to the side streets where parking is available similar to recently implemented wayfinding for Downtown.

General advantages of wayfinding signage as a parking management strategy are the low cost, low impact on corridor design, and ease of maintenance. A disadvantage of wayfinding signage could be sign "clutter" and that signage may not be readily visible to those looking for parking in a very localized and specific spot, such as in front of a residence where a delivery or rideshare drop-off is being conducted.

Wayfinding signage can be used as a parking management strategy on its own, or in combination with the other strategies listed below.

B. Time-Restricted Parking

Changing or implementing time-restrictions for the on-street parking along Lake Street and Lake Washington Boulevard would help to manage the availability of spaces by encouraging short term use and greater turn over at the parks and businesses in the corridor. Time-restricted parking does affect the usefulness to residents who typically have longer parking requirements for guests or for their own vehicles, in excess of typical time restrictions. Time-restricted parking requires enforcement, in addition to regularly spaced signage to ensure awareness of the limitations. Enforcement and sign maintenance are a long-term cost to the City of time-restricted parking. Some time-restricted parking is already present in the corridor, on the north end of the limits near 2nd Avenue. A balance of time-restricted parking in areas more likely to generate public parking requirements, such as near parks, with unrestricted parking intended for residents near residential areas, such as between 2nd and 7th Avenues, is a potential parking management strategy to consider.

C. Permit Zones

City does not have a permit parking zone policy to restrict public parking. Generally, restricted parking zones may result in spill over parking problems on adjacent streets, and the City does not have the resources to manage and enforce restricted parking zones.

While permitted parking could be a management technique to help guarantee availability of onstreet parking for residents and/or businesses who apply for permits, there are a number of secondary implications. A permit zone system would require comprehensive application of clear signage on the corridor and may even require signage on side streets. Long-term costs for additional parking enforcement officers of a permit zone, and well as required resources to manage application review, distribution, and monitoring system by the City would be incurred to maintain a permit system.

Moreover, a permit parking system would likely reduce the availability of public parking for park access, trail access, and general business access from on-street parking. Permits may present equity concerns given reduced public availability of spaces or costs associated with obtaining a permit. Turnover among residents and/or redevelopment of residential properties could introduce further complications with a permit parking system. Wait times for permit processing among new residents could lead to parking violations and frustration among residents.

D. Time-Restricted Off-Street Lot

Changing existing parking time restrictions on the off-street lots for the parks and/or investigating the possibility of an additional off-street public lot with time-restricted parking could be options to provide additional public parking. There would be similar ongoing costs for enforcement and maintenance to the corridor-wide time restricted parking option. Obtaining City ownership of an off-street lot would be a significant capital expense and unlikely near-term possibility given the desirability of property near the lakefront. Partnerships for public use of existing private lots, such as the Life Community Church north of 5th Avenue, or for commercial buildings near the south end of the corridor could be more practical opportunities for time-restricted off-street parking.

The existing commercial building lot between 58th and 59th Streets, across from Houghton Beach Park is a private lot that operates as a time-restricted lot. Signage in the lot indicates that the spaces are available on evenings and weekends for public park access but are restricted during daytime business hour use.

E. Combined Time-Restricted and Permit Zones

One context specific parking management strategy would be to combine time restricted and permit zones along the corridor. Time-restrictions would be put in place more on the south half of the corridor, between Marsh Park and Houghton Beach Park, while north of 10th Avenue, permit zones would be in place. The permit zones would allow additional parking in the areas where residences are more of the land use, while the time-restricted zones are matched to the more public uses of the two larger parks.

The disadvantage of this approach, although it does provide for a good context-sensitive match to the on-street parking needs, is that the long-term costs to the City may be the highest of all the approaches. The City would need to maintain enforcement for both time-restricted parking and permit use, as well as maintain a permitting department and internal permit management.

VIII. <u>NEXT STEPS:</u>

Staff and Transpo Group will return to Transportation Commission in December of 2022 with a completed analysis of options. At that time, feedback from the Transportation Commission will be incorporated into the analysis before the evaluation of options is presented to the Kirkland City Council in early 2023.

Attachments:

- A. Cross-Section Promenade Concepts
- B. Multimodal Data Collection Final Study Memo





MEMORANDUM

Date:	December 2, 2021	TG:	21184.00
To:	Joel Pfundt, AICP		
From:	Paul Sharman, PE Patrick Lynch, AICP		
cc:	Iris Cabrera, Sierra Ohlsen		
Subject:	Kirkland Parking Data Collection		

The City of Kirkland is evaluating creation of a pedestrian walkway/promenade along Lake Street S/Lake Washington Boulevard between 2nd Ave S and NE 60th Street. This would require the elimination of existing on-street parking spaces along one side of the roadway. To better understand the impacts of this proposal, the city is seeking to:

- Evaluate the safety benefits and impacts,
- Evaluate vehicle parking impacts, and
- Evaluate changes in how people use the waterfront

To accomplish these goals, parking and multimodal activity data along the Lake Street S/Lake Washington Boulevard corridor were collected. In addition, Streetlight Data was used to understand the travel patterns for those who park within the study area. The study area is shown in Figure 1. The purpose of this memorandum is to summarize the parking, vehicle and multimodal data collected and highlight how potential removal of on-street parking along Lake Washington Blvd may impact travel within the study area.

Study Area Characteristics

The study area is generally bounded by 2nd Avenue South on the north, and NE 60th Street on the south and State Street / NE 68th Avenue to the east. Lake



Figure 1 - Study Area

Street / Lake Washington Boulevard is the primary corridor of interest, a 0.9 mile segment whose speed limit is 30 mph south of approximately 7th Avenue South, and 25 mph to the north. The study area included 8 'side-streets' where parking spillover from Lake Washington Boulevard / Lake Street was likely and three additional off-street parking lots (Marsh Park, Houghton Beach Lot, and 58th Street Lot). The side streets included NE 62nd Street, NE 63rd Street, NE 64th Street, 10th Avenue S, 7th Avenue S, 5th Avenue South, 2nd Avenue S and 2nd Street S. Many of these side streets running perpendicular to Lake Washington Boulevard / Lake Street have steep inclines that may prove difficult to navigate for those with mobility challenges. Based on City of

Kirkland estimates, the study area includes approximately 645 parking spaces, 295 of which are located on Lake Washington Boulevard / Lake Street.

The following sections summarize the traffic data collected.

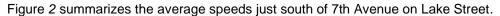
Pneumatic Tube Count Data Collection

72-hour tube data was collected at three locations along Lake Street / Lake Washington Boulevard. The first, at Lake Street south of the 7th Avenue crossing, another at Lake Washington Boulevard south of the Marsh Park crossing, and lastly at Lake Washington Boulevard north of the NE 60th Street crossing. The data was collected continuously from Thursday, July 22nd to the end of the day Sunday, July 25th, 2021. Speed and volume data are summarized in the following sections below.

Speed Observations

The following section summarizes the speed for vehicles travelling along Lake Street / Lake Washington Boulevard at the three study locations. The speeds are broken out into speed bins and averaged across the three days of data collection (Thursday, Friday, Saturday). Raw speed data can be found along with other traffic count data in Appendix B.

Lake Street South of 7th Avenue Crossing



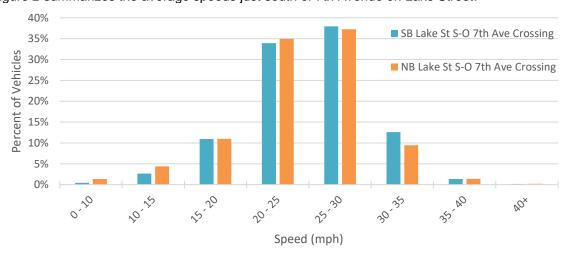


Figure 2. 7th Avenue Distribution of Vehicle Speeds (Avg Thur-Sat)

As shown in Figure 2, most vehicles traveled at speeds between 20-30 miles per hour. The average speed was 24.7 miles per hour, with an 85th percentile speed of 29.6 miles per hour. The speed limit on this section of roadway transitions from 30 miles per hour south of the crossing to 25 miles per hour north of the crossing.

Lake Washington Boulevard South of Marsh Park Crossing

Figure 3 summarizes the average speeds on Lake Washington Boulevard just south of Marsh Park.



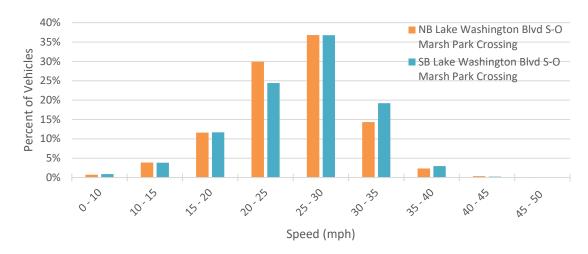


Figure 3. Marsh Park Distribution of Vehicle Speeds (Avg Thur-Sat)

As shown in Figure 4, most vehicles traveled at speeds between 20-30 miles per hour. The average speed was 25.5 miles per hour, with an 85th percentile speed of 30.8 miles per hour. The speed limit on this section of roadway is 30 miles per hour throughout.

Lake Washington Boulevard North of NE 60th Street Crossing

Figure 4 summarizes the three-day average speeds on Lake Washington Boulevard north of NE 60th Street.

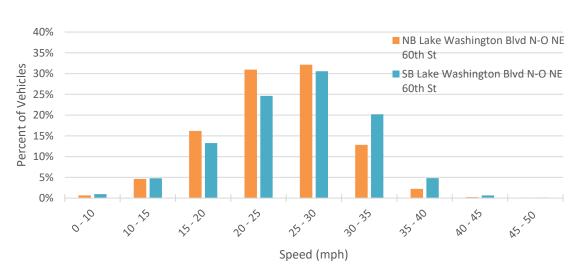


Figure 4. NE 60th Street Distribution of Vehicle Speeds (Avg Thur-Sat)

As shown in Figure 4, most vehicles traveled at speeds between 20-30 miles per hour. The average speed was 25.1 miles per hour, with an 85th percentile speed of 31.1 miles per hour. The speed limit on this section of roadway is 30 miles per hour throughout.

Speed Data Summary

The collected data suggests that the average measured speeds meet the speed limits along all segments of roadway. Speeds gradually increase from north to south, and the 85th percentile speed hovers around 30-31 miles per hour for the studied segments. Table 1 summarizes the average and 85th percentile speeds for each location.

Table 1.	Speed Data Summary			
Location		Average Speed (mph)	85th Percentile Speed (mph)	
Lake St Sou	th of 7th Ave Crossing	24.7	29.6	
Lake Washir	ngton Blvd South of Marsh Park Crossing	25.5	30.8	
Lake Washir	ngton Blvd North of NE 60th St Crossing	25.1	31.1	
Average		25.1	30.5	

Volume Data

This section summarizes the hourly average volume data taken at the three study locations for Thursday, Friday, and Saturday. Directional volumes can be found for all days and locations in Appendix A.

Lake Street South of 7th Avenue Crossing

Figure 5 summarizes the hourly traffic volumes on Lake Street south of 7th Avenue.

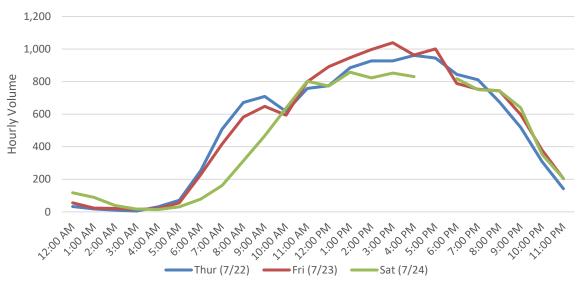


Figure 5. 7th Avenue Hourly Volumes by Day

Hourly traffic volumes trends on Thursday and Friday are generally comparable. Volumes start increasing at 6:00 AM and peak midafternoon (~3:00-4:00 PM) before steadily decreasing as the day goes on. Generally, similar trends are seen on Saturday and Sunday, but weekend volumes tend to at 1:00 PM. Volumes throughout the day on the weekend tend to be lower than during the week. Evening volumes on Saturday and Sunday are comparably to weekday volumes.

Lake Washington Boulevard South of Marsh Park Crossing

Figure 6 summarizes the data collected at this location.



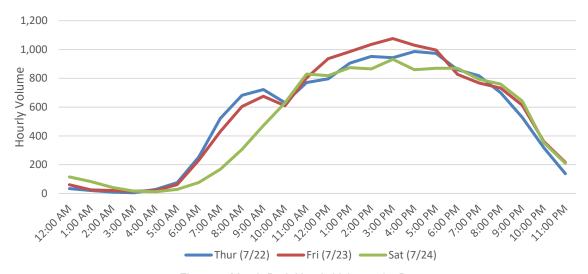


Figure 6. Marsh Park Hourly Volumes by Day

Volumes for Thursday and Friday are comparable for most of the day, excluding the early afternoon when Thursday volumes peaked higher than Friday volumes from 12:00-3:00 PM. The Saturday volumes begin increasing at a much slower rate in the morning but are generally comparable for the rest of the day. The different days follow similar trends throughout the day in terms of when they increase, peak, and decrease.

Lake Washington Boulevard North of NE 60th Street Crossing

Figure 7 summarizes the data collected at this location.

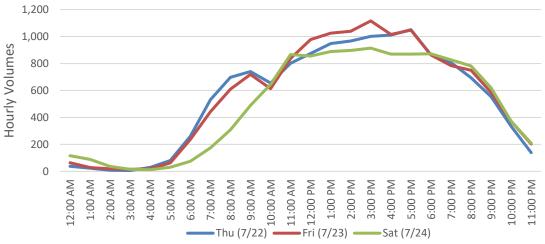


Figure 7. NE 60th Street Hourly Volumes by Day

The data collected at this location is similar to the data near the Marsh Park crossing. Each of the days follow the same trends described for the Marsh Park data. One minor exception is that the Friday data near Marsh Park gradually increases to a peak at 3:00 PM, then gradually decreases throughout the rest of the day. At NE 60th Street, the volumes are relatively similar from 12:00 PM to 5:00 PM, then there is a significant drop at 6:00 PM before gradually decreasing for the rest of the evening.

Volume Data Summary

For most of the Thursday and Friday counts, the peak occurs between 3:00-4:00 PM, whereas the Saturday and Sunday counts typically peak earlier in the day between 1:00-3:00 PM. Before the peak period, the greatest volumes generally occurred on Thursday. During the peak period, the greatest volumes generally occurred on Friday. After the peak period, volumes for Friday and Saturday were typically similar and greater than Thursday volumes. Graphs for each of the individual days at each location showing the northbound, southbound, and total splits are shown in Appendix A. Average daily volumes for each location are summarized below in Table 2.

Table 2. Average	ge Daily Volu	mes						
	Average Weekday Daily Volume			Average	Average Saturday Daily Volume			
Location	Northbound	Southbound	Total	Northbound	Southbound	Total		
Lake St South of 7th Ave Crossing	5,935	6,670	12,405	5,110	5,300	10,410		
Lake Washington Blvd South of Marsh Park Crossing	6,215	6,450	12,665	5,915	5,705	11,620		
Lake Washington Blvd North of NE 60th St Crossing	6,310	6,800	13,110	5,910	5,920	11,830		
Average	6,155	6,640	12,725	5,645	5,640	11,285		



Pedestrian and Bicycle Data Collection

Pedestrian and bicycle counts were collected at three locations along Lake Street and Lake Washington Boulevard. The first, at the Lake Street/7th Avenue South crossing, another at the Lake Washington Boulevard/Marsh Park crossing, and lastly at the Lake Washington Boulevard NE/NE 60th Street crossing. The collection areas are shown on Figure 7. At each crossing, the number of pedestrians and bicyclists who traveled northbound, southbound, eastbound, and westbound were counted. The data was collected continuously on Thursday, July 22nd and Saturday, July 24th, 2021, from 9:00 AM until 9:00 PM. Weather during both days was warm and sunny, with highs of 75 and 82 on Thursday and Saturday, respectively. The count data is summarized in the following sections below.

Lake Street & 7th Avenue South

On Thursday, the number of pedestrians counted varied between 20 and 40 per 15-minute increment while cyclist counts fluctuate between 0 and 20 throughout most of the day. However, pedestrian activity began increasing around 4:30 PM, with pedestrian counts peaking at 6:45 PM when 95 pedestrians were counted within 15 minutes. Bicycle counts did not increase in the evening. On Thursday, 47 percent of pedestrians travelled northbound, while 53 percent of bicyclists travelled southbound. On Saturday, the volume of pedestrian and bicycle counts peaked several times throughout the day. Between 11:30 and 11:45 AM, 88 pedestrians and 31 cyclists were counted while 112 pedestrians and 6 bicyclists were counted between 8:00 and 8:15 PM. Most pedestrians and cyclists travelled northbound at 48 and 51 percent, respectively. The bicycle



Figure 8. Pedestrian and Bicycle Count Locations

and pedestrian counts for Thursday and Saturday are shown on Figure 9 and Figure 10.

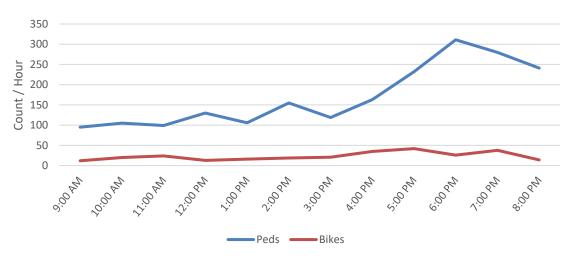


Figure 9. Lake Street & 7th Avenue South Thursday (7/22) Collection Data

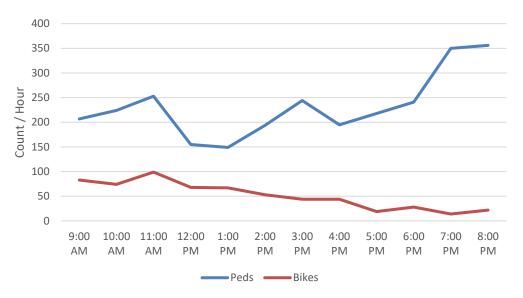


Figure 10. Lake Street & 7th Avenue South Saturday (7/24) Collection Data

Lake Washington Boulevard & Marsh Park

Similar to the counts on 7th Avenue, on Thursday, the pedestrian and bicycle counts remains steady between 20 and 40 pedestrians and 0 and 20 cyclists throughout most of the day until 7:00 PM with 62 pedestrians and 10 cyclists counted. Of the data collected on Thursday, most pedestrians travelled northbound, at 47 percent, and most bicyclists travelled southbound, at 52 percent. On Saturday, there are several peaks throughout the day with volumes ranging from a low of 25 people to the AM peak which counted 61 pedestrians and 26 cyclists at 11:15 AM. The PM peak counted 63 pedestrians and 3 bicyclists and occurred at 8:45 PM. Most pedestrians and cyclists travelled southbound at 46 percent and 50 percent respectively. The data are shown on Figure 11 and Figure 12.

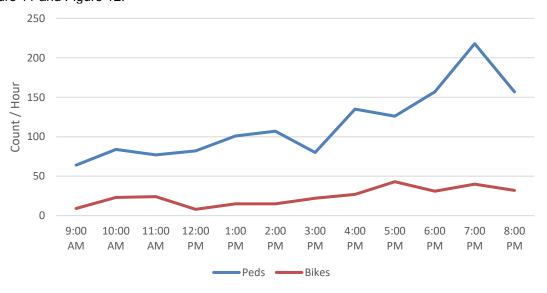


Figure 11. Lake Washington Boulevard & Marsh Park Thursday (7/22) Collection Data

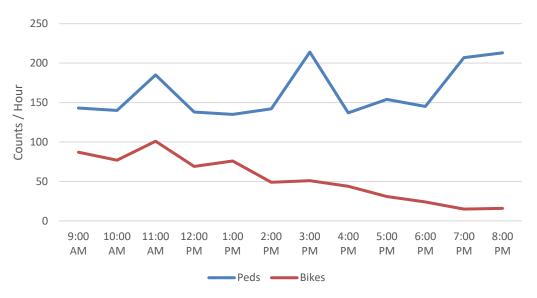


Figure 12. Lake Washington Boulevard & Marsh Park Saturday (7/24) Collection Data

Lake Washington Boulevard NE & NE 60th Street

On Thursday, the data remains steady between 15 and 40 pedestrians and 0 and 15 cyclists until it peaks at 7:15 PM with 61 pedestrians and 8 cyclists counted. Of the data collected on Thursday, the most pedestrians were split traveling northbound and southbound at 44 percent each, and most bicyclists travelled southbound, at 55 percent. On Saturday, there are several peaks throughout the day with volumes ranging from a low of 35 people to the AM peak which counted 71 pedestrians and 27 cyclists at 11:00 AM. The PM peak counted 67 pedestrians and 10 bicyclists and occurred at 8:15 PM. Most pedestrians and cyclists travelled southbound at 42 percent and 51 percent respectively. The data is shown on Figures 12 and 13.



Figure 13. Lake Washington Boulevard NE & NE 60th Street Thursday (7/22) Collection Data

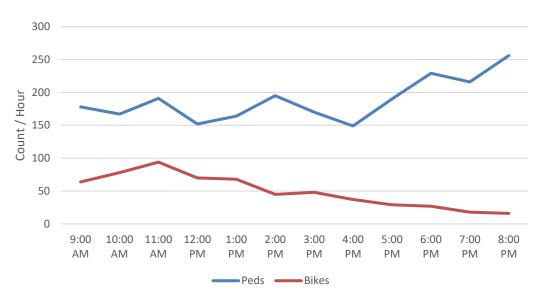


Figure 14. Lake Washington Boulevard NE & NE 60th Street Saturday (7/24) Collection Data

Generally, pedestrian and bicycle volumes tend to be higher on Saturday than on Thursday, with volumes slightly higher at the north end of the study area (at 7th Avenue) than at the other count locations. Bicycle and pedestrian volumes primarily travel north-south along the corridor, with few people crossing the street at the three study locations.

Table 3 summarizes the nonmotorized volumes on Thursday and Saturday at each of the data collection locations. On average, the corridor sees approximately 1,890 nonmotorized users on Thursday and 2,950 users on Saturday.

Table 3. Nonmo	otorized Volui	me Summary					
	Average Weekday Daily Volume			Average Saturday Daily Volume			
Location	Pedestrians	Bicycles	Total	Pedestrians	Bicycles	Total	
Lake St South of 7th Ave Crossing	2036	280	2316	2786	615	3401	
Lake Washington Blvd South of Marsh Park Crossing	1388	289	1677	1953	640	2593	
Lake Washington Blvd North of NE 60th St Crossing	1412	264	1676	2257	594	2851	
Average	1612	278	1890	2332	616	2948	

Comparing the number of multimodal users in Table 3 to the vehicle volumes shown in Table 2 show that a relatively large portion of the roadway users are pedestrian and bicyclists. Assuming an average vehicle occupancy of 1.2, there are approximately 15,270 and 13,540 people traveling along the corridor in cars on Thursday and Saturday, respectively. This would translate to a multimodal mode share of approximately 11 percent on Thursday and 18 percent on the weekend.

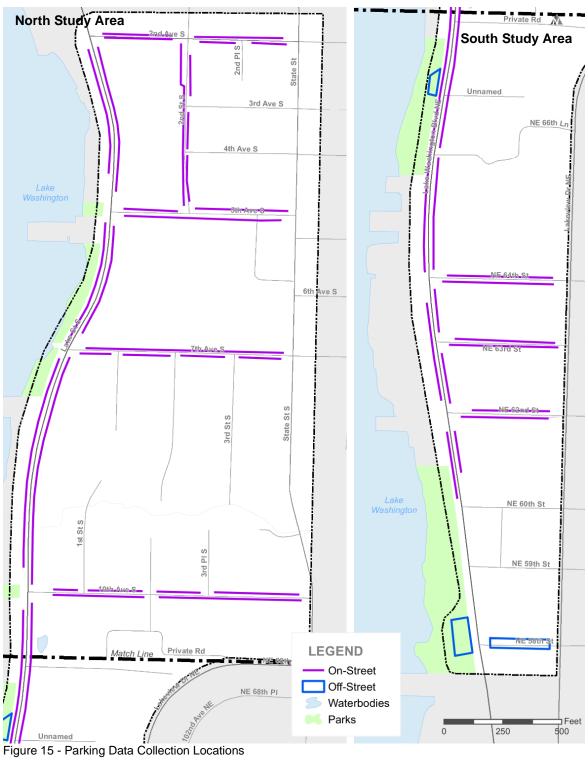


Parking Data Collection

Parking data was collected at both the on-street (Lake Street and Lake Washington Boulevard) and off-street locations within the study area on Thursday and Saturday at regularly spaced three-to four-hour increments. On Thursday, parking counts were conducted at 9AM, 12PM, 4PM and 7PM, while the Saturday counts were conducted at 10AM, 1PM, 4PM and 7PM. The study area is shown in Figure 15. Parking was collected along 45 blocks and three off-street parking lots. The on-street parking supply was provided by City of Kirkland staff and estimated as one parking space per 20 linear feet, totaling approximately 576 parking spaces within the study area. Across the three off-street lots, a total of 69 parking stalls were surveyed.

Hourly total volumes of parked cars across the study area are shown on Figure 16 and Figure 17 for Thursday and Saturday, respectively.





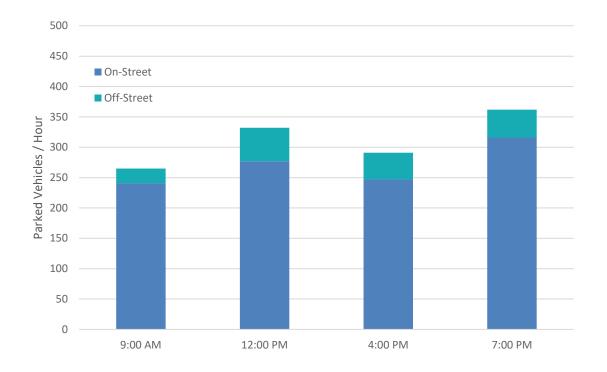


Figure 16 – Thursday (7/22) Parking Occupancy

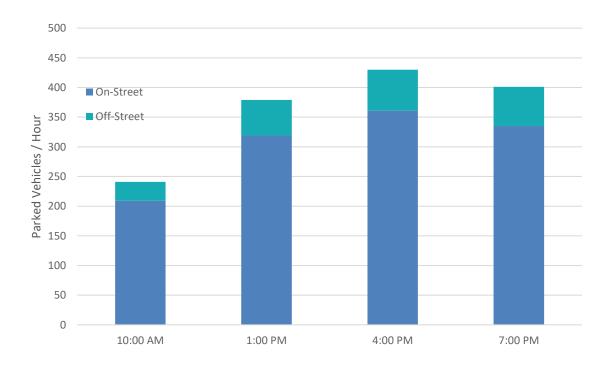


Figure 17 - Saturday (7/24) Parking Occupancy



As shown in Figure 16, the number of parked vehicles fluctuated throughout the day, with peaks at noon and at 7PM. At noon there were 277 on-street and 55 off-street vehicles while at 7:00 PM there were 316 on-street and 46 off-street vehicles. The on-street parking data shows an overall study area occupancy of 42 percent and 56 percent for the midday and evening peaks respectively.

On Saturday (as shown in Figure 17) the number of parked vehicles peaked at 4:00 PM. At this time, there were 361 on-street and 69 off-street vehicles counted – both the largest numbers seen in the duration of this this study. This is representative of an on-street parking occupancy of 60 percent and an off-street occupancy of 100 percent, totaling 67 percent of all spaces.

Table 4 shows the estimated parking occupancy for the total study area during all data collection periods.

Table 4.	Total Study Area Parking Occupancy							
Day	9:00 AM	10:00 AM	12:00 PM	1:00 PM	4:00 PM	7:00 PM		
Thursday	41%	-	52%	-	45%	56%		
Saturday	-	37%	-	59%	67%	62%		

To understand the implications of potential removal of on-street parking along Lake Washington Boulevard / Lake Street, the total on-street parking occupancy along Lake Street / Lake Washington Boulevard is summarized in Table 5.

Table 5.	Lake WA Blvd / Lake St On-Street Parking Occupancy							
Day	9:00 AM	10:00 AM	12:00 PM	1:00 PM	4:00 PM	7:00 PM		
Thursday	33%	-	43%	-	41%	57%		
Saturday	-	28%	-	54%	62%	56%		

Occupancy levels along Lake Washington Boulevard / Lake Street would need to be below 50 percent to avoid parking spillback into the rest of the study area. On-street parking occupancy crosses 50 percent along the corridor during four of the eight periods of data collection, indicating that removal of half the on-street parking supply would likely result in parking spillback onto other neighboring side streets on both weekdays and weekends.

The overall study area occupancy assuming half the on-street parking spaces (approximately 143) were removed from the Lake Washington Boulevard / Lake Street Corridor is summarized in Table 6.



Table 6.	Study Area Occup	oancy Assumin	g Removal of I	nalf on-street s	paces along L	ake WA Blvd
Day	9:00 AM	10:00 AM	12:00 PM	1:00 PM	4:00 PM	7:00 PM
Thursday	53%	-	67%	-	59%	73%
Saturday	-	48%	-	76%	87%	81%

This indicates that there would be adequate supply to accommodate existing parking demand if half the spaces along the Lake Washington Boulevard / Lake Street corridor were removed. However, during the afternoon and evening on Saturdays, parking may be difficult to find when occupancy reaches over 80 percent. While the total demand could be accommodated, there would likely be specific locations where parking demand would exceed supply.

To understand the distribution of parking demand on a block-by-block basis, a map was created for each of the time periods of data collection. All eight maps can be found in Appendix C. These maps highlight both when and where existing parking occupancy is constrained. During the week, the northern section of Lake Street and the southern section of Lake Washington Boulevard generally experience the highest occupancy levels, of which some blocks are fully occupied. The section of on-street parking along Lake Street and Lake Washington Boulevard from 7th Avenue South to NE 62nd Street is at less than 55 percent occupancy for most of the day.

The Saturday counts showed that the northern section of Lake Street and the southern section of Lake Washington Boulevard follow similar trends as the data collected on Thursday. The section between 7th Avenue South and NE 62nd Street, however, showed much higher levels of occupancy on Saturday than Thursday.



Parking Origin Destination

To better understand parking behavior within the study area, the project team sought to understand trip characteristics of those who park within the study area. To accomplish this, data was purchased from Streetlight Data, a company who collects GPS and location-based services (LBS) data from a variety of sources to understand travel behavior. The study area was broken out into 10 'zones' for which origin and destination data was collected. However, because Streetlight Data relies on a small subset of the overall vehicle volumes and some of the zones were small, the zones were aggregated up to three larger zones, as shown in Figure 18. For each of the three zones (northern, central, and southern) average trip length was measured within the Streetlight Data platform. Trip length was used to estimate the number of trips made by Kirkland residents as compared to visitors.

The trip length data for each section was sorted in data ranges of less than one mile, one to two miles, two to five miles, or more than five miles. The percent distribution of trip lengths is shown in Table 7.



Figure 18. Streetlight Data Zone Configuration

Table 7. P	ercentage	of Trips by	Trip Lengtl	h				
	We	ekday Trip L	ength Perce	ntage	Saturday Trip Length Percentage			tage
Location	<1 Mile	1-2 Miles	2-5 Miles	5+ Miles	<1 Mile	1-2 Miles	2-5 Miles	5+ Miles
Northern Zone	23%	11%	25%	41%	16%	16%	19%	49%
Central Zone	14%	13%	31%	42%	21%	12%	21%	46%
Southern Zone	8%	9%	35%	48%	11%	16%	18%	55%
Entire Study Area	a 15%	11%	30%	44%	17%	14%	20%	49%



Northern Zone

The northern zone sees most of its trips originating from less than five miles away during the weekdays (59 percent), whereas the distribution is more evenly split on Saturday at 51 percent of trips being less than five miles in length. On weekdays, nearly a quarter of all trips are less than a mile in length, and a quarter are in the range of two to five miles which indicates that many of the vehicles that park in the northern zone may be local residents. On Saturday, more trips come from more than five miles away, indicating more visitors to the downtown area on Saturdays than during the week.

Central Zone

During the weekdays, most trips originate from less than five miles away (58 percent), but the distribution is more evenly split on Saturday at 54 percent, much like the northern zone. On weekdays, the trip length is weighted to further distances, with only 27 percent of trips originating from less than two miles away. On Saturday, 21 percent of trips are less than one mile, indicating that Kirkland residents may be travelling down to the waterfront and parking.

Southern Zone

Trips to the southern zone on weekdays are mostly split between less than or greater than five miles in length at 52 percent and 48 percent respectively. Breaking down into the smaller bins, however, shows that 82 percent of trips originated from more than two miles away. The Saturday data is more evenly split, however, with 11 percent, 16 percent, and 18 percent for the less than one mile, one to two mile, and two to five mile categories respectively.

Full Study Area

For the weekdays, 57 percent of trips originated from less than five miles away, 15 percent of which were less than a mile in length. 12 percent of trips were in the one to two mile range, and 30 percent were in the two to five mile range. The Saturday data is more evenly split, however, with 17 percent, 15 percent, and 19 percent for the less than one mile, one to two mile, and two to five mile categories respectively.

Safety and Near Miss Video Analysis

To better understand the impacts of increased multimodal activity along the Lake Washington Boulevard / Lake Street corridor, the project team sought to conduct a review of the existing conditions. The project team contacted *Transoft Solutions*, the maker of video analytics software that analyzes both collision and near-miss incidents to establish a safety profile of the site. *Transoft* was willing to do a pilot analysis of one of the video feeds, and the city staff selected the video footage of the Lake Washington Boulevard / 7th Avenue intersection for analysis. The project team uploaded 26 hours of video footage (13 hours on Thursday and 13 hours on Saturday) that was processed through *Transoft's* online video analysis platform.

The software uses machine-learning to analyze near misses, by categorizing all roadway users and calculating when they occupied the same space. The system analyzes both vehicle-vehicle interactions as well as vehicle-multimodal user interactions as long as they are within the video frame. This process is shown for a sample conflict between a pedestrian and vehicle below in Figure 19.





Figure 19 - Sample Conflict in Transoft Video Analytics

Figure 20 provides an overall summary of the safety results generated from the *Transoft* video analytics software.



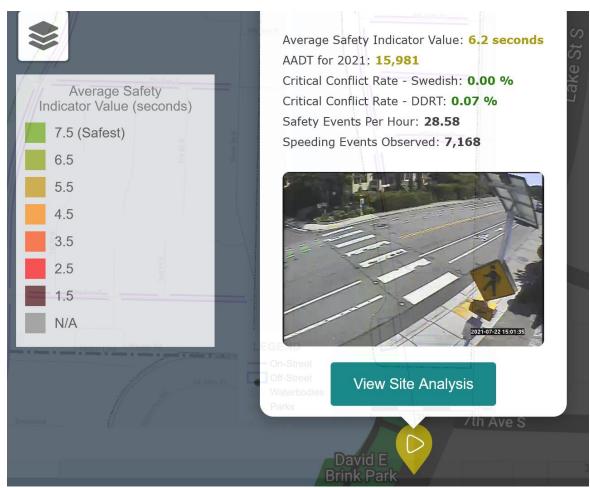


Figure 20 - Safety Analysis Overview of 7th Avenue

Overall safety indicator was categories as relatively safe, as the average safety indicated value was 6.2 (on a 0 to 7.5 scale). This indicates the average time between two roadway users making conflicting movements (i.e., pedestrian in the crosswalk and a vehicle) occupying the same space and a higher value equates to a safer location. The video footage estimated approximately 28 'safety events' per hour, which means that two roadway users occupied the same space within 7.5 seconds of one another. However, the critical conflict rates were well below 1 percent with the nearest miss occurring during a harsh braking event when two vehicles occupied the same space within 0.9 seconds. The nearest-miss conflict between vehicle and pedestrian was 2.3 seconds (shown in Figure 19) and does not score as a critical event within the software analysis.

Both the Swedish and DDRT Critical Conflict Rate calculations are methods of estimating the likelihood of a roadway user getting into a conflict. The DDRT (Desired Design Reaction Time) methodology uses the time between conflict points and design reaction times to measure risk. The Swedish Methodology uses a causal relationship between conflicts and crashes to estimate the likelihood of a collision.

The video analytics software also identified approximately 7,100 speeding events (any vehicle traveling more than 25 MPH). The breakdown of those speeds is summarized in Figure 21.

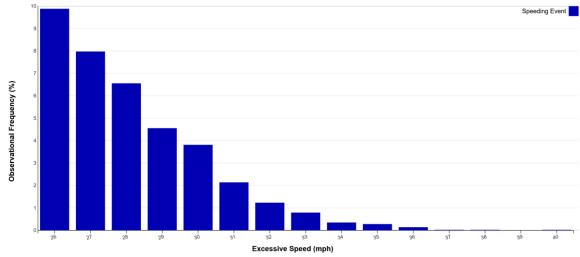


Figure 21 - Speeding Event Summary

The distribution of speeding events captured by the video analytics platform shows that approximately 33 percent of vehicles travel between 26 and 33 MPH, while only approximately 5 percent of vehicles travel more than 30 MPH. While the raw number of speeding events seems high, the distribution shows that there is not a speeding problem (as previously shown in Table 1).

The *Transoft* video analytics platform showed that most near misses were vehicle-vehicle conflicts when a quick breaking event occurred. The platform did not identify any major safety issues at this site.

Summary and Next Steps

The purpose of this memorandum was to summarize the data collected to understand the parking demands within the Lake Washington Boulevard / Lake Street corridor and on the adjacent side streets as well as the level of vehicle and multimodal activity along the corridor. The following summarizes the primary findings of the parking and multimodal data analysis.

- The Lake Washington Boulevard / Lake Street Corridor has high pedestrian and bicycle activity.
 - Nonmotorized activity is highest on Saturdays, but Thursday evenings see times of high activity as well
 - There are multiple periods of time on both Thursdays and Saturdays where 200 to 300 pedestrians use the corridor each hour.
 - o Bicycle volumes peak at approximately 80 per hour on Saturday mornings.
- Traffic speed data shows that there are no major speeding issues along the corridor
- Traffic counts show an average weekday daily traffic of approximately 12,700 vehicles per day, with approximately 11,300 vehicles on Saturday
- Assuming an average vehicle occupancy of 1.2, this would translate to a multimodal mode share of approximately 11 percent on Thursday and 18 percent on the weekend.
- Overall parking demand in the study area was highest on Saturdays, with a peak overall occupancy of approximately 67 percent.
 - While overall supply was able to accommodate demand, the north end of the study area is much busier, with some blocks consistently fully occupied.
- Elimination of parking along one side of the Lake Washington Boulevard / Lake Street corridor would likely cause increased parking spillback into neighboring side streets, but the parking supply within the study area is expected to accommodate the demand.



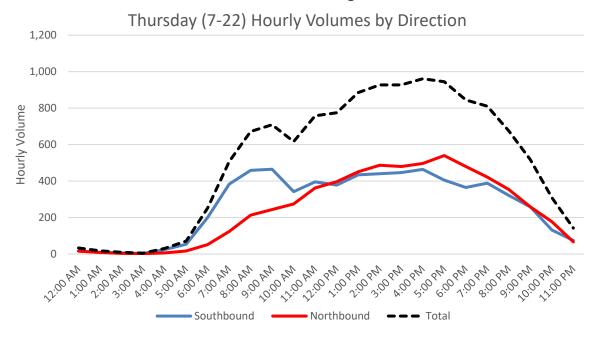
- Both the north and south end of the study area would likely be fully occupied and would require users to park further away from their destination
- The Streetlight Data showed that a sizeable percentage of trips to the waterfront are less than one mile in length, and thus likely taken by Kirkland residents, especially on Thursdays.
 - This is especially true for the Northern Zone, just south of the Kirkland downtown area.
 - Given the high number of short trips, it is likely that if parking within the study area was further constrained, some of these trips may switch to walking or biking.
- The video safety analysis conducted by Transoft Solutions showed no collisions and few reoccurring safety issues. Most near-misses were identified as harsh breaking events and overall site safety was relatively high.

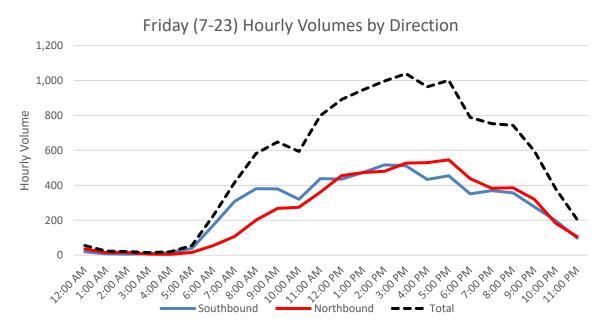
Based on the results of the data analysis presented within this memorandum, Kirkland staff will work to evaluate whether removal of on-street parking along the Lake Washington Boulevard / Lake Street corridor is warranted to install enhanced non-motorized facilities.



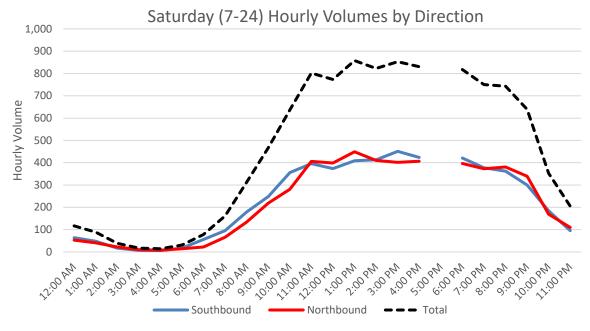
Appendix A - Hourly Vehicle Volume Summaries

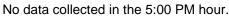
Lake Street South of 7th Avenue Crossing

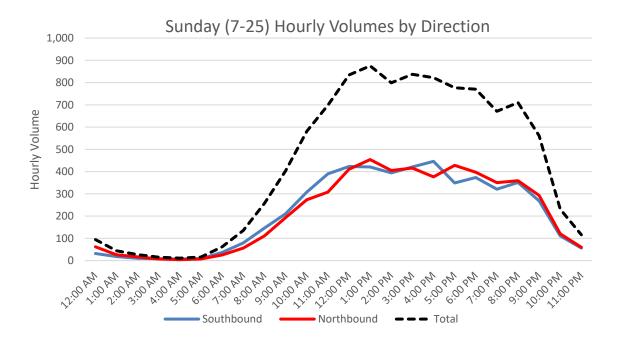






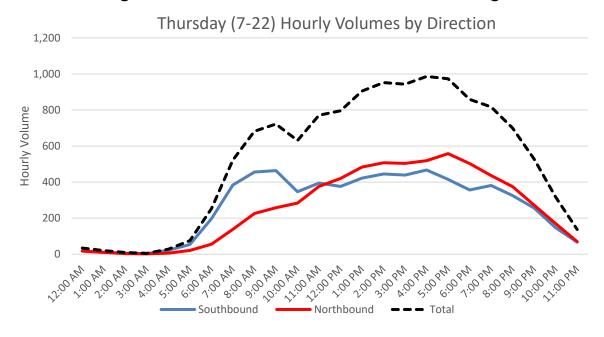


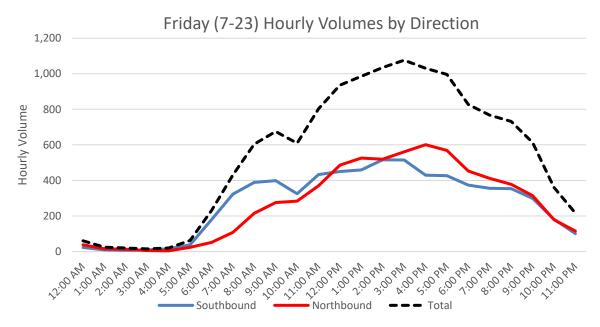




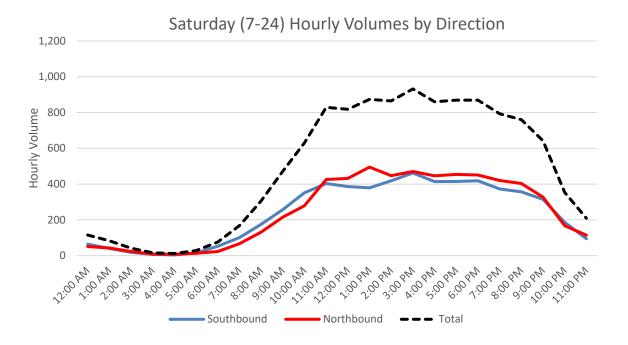


Lake Washington Boulevard South of Marsh Park Crossing

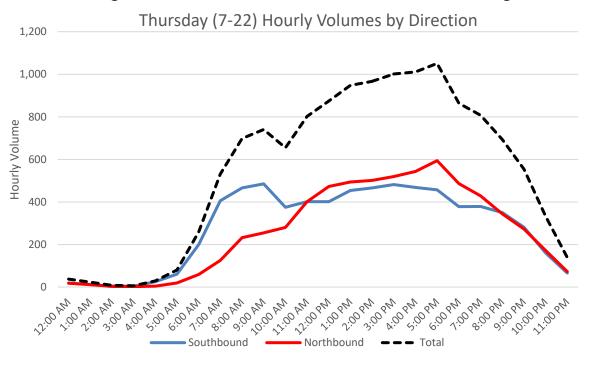




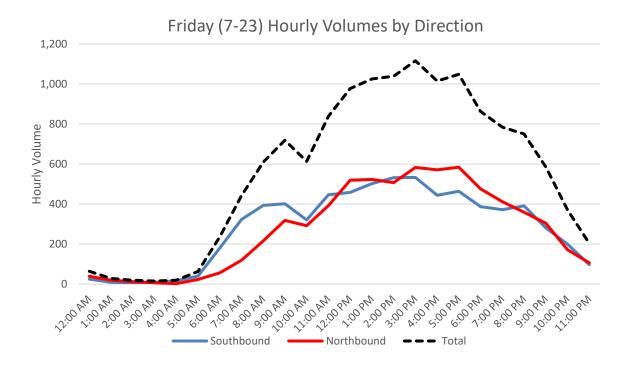


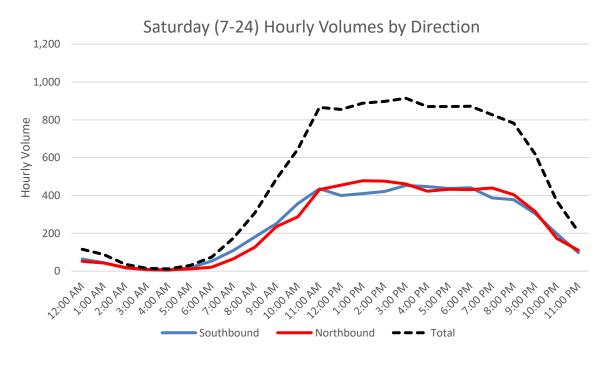


Lake Washington Boulevard North of NE 60th Street Crossing











Appendix B – Raw Traffic Count Data



Vehicle Classification Report Summary



Location: Lake St S-O 7th Ave Crossing

Count Direction: Northbound / Southbound

Date Range: 7/22/2021 to 7/25/2021

Site Code: 01

						FHWA Ve	ehicle Clas	sification						Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
						Study	Total							
Northbound	768	19,374	1,719	4	397	57	0	28	11	17	0	2	15	22,392
Percent	3.4%	86.5%	7.7%	0.0%	1.8%	0.3%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.1%	100%
Southbound	835	20,515	1,618	11	425	59	0	29	5	21	0	0	11	23,529
Percent	3.5%	87.2%	6.9%	0.0%	1.8%	0.3%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	100%
Total	1,603	39,889	3,337	15	822	116	0	57	16	38	0	2	26	45,921
Percent	3.5%	86.9%	7.3%	0.0%	1.8%	0.3%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.1%	100%

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

Date Range: 7/22/2021 to 7/25/2021

Site Code: 01



Thursday, July 22, 2021 Northbound

						FHWA Ve	hicle Clas	sification						Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	16	0	0	0	0	0	0	0	0	0	0	0	16
1:00 AM	0	9	0	0	0	0	0	0	0	0	0	0	0	9
2:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	4
3:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	4	2	0	0	0	0	0	0	0	0	0	0	6
5:00 AM	0	15	2	0	0	0	0	0	0	0	0	0	0	17
6:00 AM	5	36	7	0	4	0	0	0	0	0	0	0	0	52
7:00 AM	2	95	23	1	3	0	0	0	0	0	0	0	0	124
8:00 AM	4	180	17	0	11	0	0	0	0	1	0	0	0	213
9:00 AM	2	200	31	0	11	0	0	0	0	0	0	0	0	244
10:00 AM	4	230	31	0	7	0	0	2	0	0	0	0	1	275
11:00 AM	7	303	37	0	12	2	0	0	1	0	0	0	0	362
12:00 PM	6	343	37	0	11	0	0	0	0	0	0	0	0	397
1:00 PM	7	381	51	0	11	1	0	0	0	0	0	0	0	451
2:00 PM	7	419	47	0	13	0	0	0	0	1	0	0	0	487
3:00 PM	14	405	50	0	11	0	0	0	0	0	0	0	0	480
4:00 PM	12	429	42	0	14	0	0	0	0	0	0	0	0	497
5:00 PM	17	476	35	0	8	2	0	0	1	0	0	0	1	540
6:00 PM	15	428	32	0	3	1	0	1	0	0	0	0	0	480
7:00 PM	20	377	21	0	1	1	0	2	0	0	0	0	0	422
8:00 PM	13	320	19	0	1	0	0	1	0	0	0	0	0	354
9:00 PM	3	245	9	0	1	1	0	0	0	0	0	0	0	259
10:00 PM	2	172	3	0	0	0	0	0	0	0	0	0	0	177
11:00 PM	0	61	6	0	0	0	0	0	0	0	0	0	0	67
Total	140	5,149	503	1	122	8	0	6	2	2	0	0	2	5,935
Percent	2.4%	86.8%	8.5%	0.0%	2.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	

Date Range: 7/22/2021 to 7/25/2021

Site Code: 01



Thursday, July 22, 2021 Southbound

						FHWA Ve	hicle Clas	sification						Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	16	1	0	0	0	0	0	0	0	0	0	0	17
1:00 AM	0	8	1	0	0	0	0	0	0	0	0	0	0	9
2:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	6
3:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
4:00 AM	0	12	8	0	5	0	0	0	0	0	0	0	0	25
5:00 AM	1	40	9	0	4	0	0	0	0	0	0	0	0	54
6:00 AM	8	158	24	0	10	0	0	0	0	0	0	0	0	200
7:00 AM	8	312	50	0	13	0	0	0	0	0	0	0	0	383
8:00 AM	2	384	53	1	18	1	0	0	0	0	0	0	0	459
9:00 AM	6	401	42	0	14	0	0	0	1	1	0	0	0	465
10:00 AM	4	293	32	0	10	2	0	0	0	1	0	0	0	342
11:00 AM	11	331	44	0	8	2	0	0	0	0	0	0	0	396
12:00 PM	8	317	43	0	9	1	0	0	0	0	0	0	0	378
1:00 PM	11	386	26	0	9	1	0	0	1	0	0	0	0	434
2:00 PM	6	380	39	0	12	2	0	1	0	0	0	0	0	440
3:00 PM	4	395	32	0	16	0	0	0	0	0	0	0	0	447
4:00 PM	10	405	33	0	14	0	0	0	0	1	0	0	1	464
5:00 PM	18	354	26	0	7	0	0	0	0	0	0	0	0	405
6:00 PM	10	326	21	0	5	2	0	1	0	0	0	0	0	365
7:00 PM	15	355	16	0	2	1	0	0	0	0	0	0	0	389
8:00 PM	16	279	23	0	0	2	0	0	0	0	0	0	1	321
9:00 PM	1	244	8	0	2	1	0	3	0	0	0	0	0	259
10:00 PM	3	123	4	0	1	0	0	0	1	0	0	0	0	132
11:00 PM	0	71	3	0	1	0	0	0	0	0	0	0	0	75
Total	142	5,597	540	1	160	15	0	5	3	3	0	0	2	6,468
Percent	2.2%	86.5%	8.3%	0.0%	2.5%	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	

Date Range: 7/22/2021 to 7/25/2021

Site Code: 01

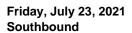


Friday, July 23, 2021 Northbound

						FHWA Ve	hicle Clas	sification						Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	1	32	2	0	0	0	0	0	0	0	0	0	0	35
1:00 AM	0	15	0	0	0	0	0	0	0	0	0	0	0	15
2:00 AM	0	14	1	0	0	0	0	0	0	0	0	0	0	15
3:00 AM	1	5	0	0	0	0	0	0	0	0	0	0	0	6
4:00 AM	0	3	2	0	0	0	0	0	0	0	0	0	0	5
5:00 AM	1	13	2	0	0	0	0	0	0	0	0	0	0	16
6:00 AM	4	39	8	0	3	0	0	0	0	0	0	0	1	55
7:00 AM	6	84	12	0	6	0	0	0	0	0	0	0	0	108
8:00 AM	5	163	22	0	10	1	0	0	0	0	0	0	0	201
9:00 AM	3	199	49	0	15	1	0	0	0	1	0	0	0	268
10:00 AM	6	196	46	1	23	1	0	0	1	0	0	0	0	274
11:00 AM	5	292	36	2	22	1	0	1	0	0	0	0	2	361
12:00 PM	7	384	45	0	12	5	0	0	1	1	0	0	1	456
1:00 PM	11	398	40	0	18	3	0	0	1	0	0	1	1	473
2:00 PM	18	403	37	0	13	5	0	0	0	1	0	1	2	480
3:00 PM	13	457	45	0	8	2	0	0	0	1	0	0	1	527
4:00 PM	14	460	47	0	5	2	0	2	0	0	0	0	0	530
5:00 PM	26	482	33	0	4	0	0	1	0	0	0	0	0	546
6:00 PM	15	405	15	0	3	0	0	0	0	0	0	0	0	438
7:00 PM	9	343	30	0	1	0	0	0	0	0	0	0	0	383
8:00 PM	5	354	23	0	2	2	0	0	0	0	0	0	0	386
9:00 PM	10	279	28	0	3	0	0	0	0	0	0	0	0	320
10:00 PM	1	162	17	0	3	0	0	0	0	0	0	0	0	183
11:00 PM	1	99	5	0	1	0	0	0	0	0	0	0	0	106
Total	162	5,281	545	3	152	23	0	4	3	4	0	2	8	6,187
Percent	2.6%	85.4%	8.8%	0.0%	2.5%	0.4%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.1%	

Date Range: 7/22/2021 to 7/25/2021

Site Code: 01





						FHWA Ve	hicle Clas	sification						Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	19	1	0	0	0	0	0	0	0	0	0	0	20
1:00 AM	0	7	1	0	0	0	0	0	0	0	0	0	0	8
2:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	6
3:00 AM	0	6	2	0	1	0	0	0	0	0	0	0	0	9
4:00 AM	0	13	1	0	1	0	0	0	0	0	0	0	0	15
5:00 AM	1	29	8	0	1	0	0	0	0	0	0	0	0	39
6:00 AM	10	129	25	1	6	1	0	0	0	0	0	0	0	172
7:00 AM	11	242	39	1	13	1	0	1	0	0	0	0	0	308
8:00 AM	4	313	46	1	13	4	0	0	0	0	0	0	0	381
9:00 AM	3	304	53	4	12	3	0	0	0	1	0	0	0	380
10:00 AM	10	257	36	1	12	2	0	0	0	1	0	0	1	320
11:00 AM	8	366	43	0	19	1	0	0	0	0	0	0	1	438
12:00 PM	12	372	39	1	7	2	0	0	0	2	0	0	1	436
1:00 PM	12	414	32	0	11	4	0	1	0	0	0	0	0	474
2:00 PM	13	455	30	1	14	3	0	0	0	0	0	0	1	517
3:00 PM	13	455	34	0	7	1	0	0	0	2	0	0	0	512
4:00 PM	13	384	28	0	8	0	0	0	0	1	0	0	0	434
5:00 PM	12	410	27	0	4	2	0	0	0	0	0	0	0	455
6:00 PM	11	319	16	0	5	0	0	0	0	0	0	0	0	351
7:00 PM	22	325	20	0	2	1	0	0	0	0	0	0	0	370
8:00 PM	5	329	19	0	3	0	0	1	0	0	0	0	0	357
9:00 PM	9	260	6	0	2	0	0	0	0	0	0	0	0	277
10:00 PM	0	183	11	0	2	0	0	0	1	0	0	0	0	197
11:00 PM	0	89	9	0	0	0	0	0	0	0	0	0	0	98
Total	169	5,686	526	10	143	25	0	3	1	7	0	0	4	6,574
Percent	2.6%	86.5%	8.0%	0.2%	2.2%	0.4%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	

Date Range: 7/22/2021 to 7/25/2021

Site Code: 01



Saturday, July 24, 2021 Northbound

						FHWA Ve	hicle Clas	sification						Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	1	51	1	0	0	0	0	0	0	0	0	0	0	53
1:00 AM	0	39	2	0	0	0	0	0	0	0	0	0	0	41
2:00 AM	0	22	0	0	0	0	0	0	0	0	0	0	0	22
3:00 AM	0	9	1	0	0	0	0	0	0	0	0	0	0	10
4:00 AM	0	8	0	0	0	0	0	0	0	0	0	0	0	8
5:00 AM	1	11	2	0	0	0	0	0	0	0	0	0	0	14
6:00 AM	1	16	4	0	1	0	0	0	0	0	0	0	0	22
7:00 AM	6	53	5	0	2	0	0	0	0	0	0	0	0	66
8:00 AM	4	109	20	0	1	0	0	0	0	0	0	0	0	134
9:00 AM	22	165	27	0	4	0	0	0	0	0	0	0	1	219
10:00 AM	25	235	12	0	6	1	0	0	1	1	0	0	0	281
11:00 AM	30	329	34	0	9	3	0	1	0	0	0	0	0	406
12:00 PM	20	347	21	0	9	0	0	0	1	0	0	0	1	399
1:00 PM	22	396	24	0	3	2	0	0	0	1	0	0	1	449
2:00 PM	19	357	27	0	1	2	0	1	1	2	0	0	0	410
3:00 PM	20	349	24	0	5	3	0	0	0	1	0	0	0	402
4:00 PM	11	359	31	0	5	0	0	0	0	1	0	0	0	407
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	16	348	26	0	4	1	0	1	1	0	0	0	0	397
7:00 PM	9	337	23	0	2	2	0	0	0	0	0	0	0	373
8:00 PM	9	349	15	0	4	1	0	2	0	1	0	0	0	381
9:00 PM	7	317	14	0	0	0	0	1	0	0	0	0	0	339
10:00 PM	2	157	8	0	2	0	0	0	0	0	0	0	0	169
11:00 PM	2	103	5	0	0	0	0	0	0	0	0	0	0	110
Total	227	4,466	326	0	58	15	0	6	4	7	0	0	3	5,112
Percent	4.4%	87.4%	6.4%	0.0%	1.1%	0.3%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%	

Date Range: 7/22/2021 to 7/25/2021

Site Code: 01



Saturday, July 24, 2021 Southbound

						FHWA Ve	hicle Clas	sification						Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	1	61	1	0	1	0	0	0	0	0	0	0	0	64
1:00 AM	2	44	1	0	0	0	0	1	0	0	0	0	0	48
2:00 AM	0	17	0	0	0	0	0	0	0	0	0	0	0	17
3:00 AM	0	4	2	0	1	0	0	0	0	0	0	0	0	7
4:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	6
5:00 AM	1	11	5	0	0	0	0	0	0	0	0	0	0	17
6:00 AM	3	46	4	0	3	0	0	0	0	0	0	0	0	56
7:00 AM	15	67	10	0	3	0	0	0	0	0	0	0	0	95
8:00 AM	19	145	11	0	3	1	0	0	0	0	0	0	0	179
9:00 AM	22	199	20	0	3	0	0	1	1	1	0	0	1	248
10:00 AM	27	303	17	0	6	1	0	2	0	0	0	0	0	356
11:00 AM	29	331	17	0	15	2	0	2	0	0	0	0	0	396
12:00 PM	18	317	31	0	6	1	0	1	0	0	0	0	0	374
1:00 PM	24	355	27	0	2	0	0	1	0	0	0	0	0	409
2:00 PM	15	374	22	0	2	0	0	0	0	0	0	0	0	413
3:00 PM	19	389	33	0	5	0	0	4	0	1	0	0	0	451
4:00 PM	19	368	30	0	3	1	0	1	0	0	0	0	2	424
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	9	397	13	0	2	0	0	0	0	0	0	0	0	421
7:00 PM	10	344	17	0	3	2	0	0	0	1	0	0	0	377
8:00 PM	14	330	14	0	2	1	0	0	0	1	0	0	0	362
9:00 PM	5	286	4	0	3	1	0	0	0	1	0	0	0	300
10:00 PM	5	170	8	0	0	1	0	0	0	0	0	0	0	184
11:00 PM	0	93	1	0	1	0	0	0	0	0	0	0	0	95
Total	257	4,656	289	0	64	11	0	13	1	5	0	0	3	5,299
Percent	4.8%	87.9%	5.5%	0.0%	1.2%	0.2%	0.0%	0.2%	0.0%	0.1%	0.0%	0.0%	0.1%	

Date Range: 7/22/2021 to 7/25/2021

Site Code: 01



Sunday, July 25, 2021 Northbound

						FHWA Ve	hicle Clas	sification						Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	1	57	4	0	0	0	0	0	0	0	0	0	0	62
1:00 AM	0	25	1	0	0	0	0	0	0	0	0	0	0	26
2:00 AM	0	17	0	0	0	0	0	0	0	0	0	0	0	17
3:00 AM	0	7	0	0	0	0	0	0	0	0	0	0	0	7
4:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
5:00 AM	1	3	1	0	1	0	0	0	0	1	0	0	0	7
6:00 AM	5	15	4	0	1	0	0	0	0	0	0	0	0	25
7:00 AM	7	47	1	0	0	0	0	1	0	0	0	0	0	56
8:00 AM	14	84	13	0	0	0	0	0	0	0	0	0	0	111
9:00 AM	14	161	13	0	3	1	0	1	0	0	0	0	0	193
10:00 AM	18	221	25	0	6	1	0	1	0	0	0	0	1	273
11:00 AM	23	252	26	0	4	0	0	3	0	0	0	0	0	308
12:00 PM	21	348	36	0	3	2	0	0	0	1	0	0	0	411
1:00 PM	17	393	37	0	6	0	0	0	1	0	0	0	0	454
2:00 PM	17	351	29	0	7	0	0	1	0	0	0	0	0	405
3:00 PM	22	361	24	0	5	1	0	2	1	0	0	0	0	416
4:00 PM	16	329	23	0	5	3	0	0	0	0	0	0	0	376
5:00 PM	15	379	24	0	9	0	0	0	0	1	0	0	0	428
6:00 PM	16	356	20	0	1	1	0	2	0	0	0	0	1	397
7:00 PM	8	319	18	0	3	1	0	0	0	1	0	0	0	350
8:00 PM	13	321	20	0	4	1	0	0	0	0	0	0	0	359
9:00 PM	8	264	15	0	5	0	0	1	0	0	0	0	0	293
10:00 PM	3	106	9	0	2	0	0	0	0	0	0	0	0	120
11:00 PM	0	58	2	0	0	0	0	0	0	0	0	0	0	60
Total	239	4,478	345	0	65	11	0	12	2	4	0	0	2	5,158
Percent	4.6%	86.8%	6.7%	0.0%	1.3%	0.2%	0.0%	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	

Date Range: 7/22/2021 to 7/25/2021

Site Code: 01



Sunday, July 25, 2021 Southbound

						FHWA Ve	hicle Clas	sification						Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	1	30	1	0	0	0	0	0	0	0	0	0	0	32
1:00 AM	0	16	2	0	0	0	0	0	0	0	0	0	0	18
2:00 AM	0	8	1	0	1	0	0	0	0	0	0	0	0	10
3:00 AM	0	7	1	0	0	0	0	0	0	0	0	0	0	8
4:00 AM	0	7	0	0	0	0	0	0	0	0	0	0	0	7
5:00 AM	0	7	1	0	0	0	0	1	0	0	0	0	0	9
6:00 AM	2	32	1	0	2	0	0	0	0	0	0	0	0	37
7:00 AM	4	65	8	0	1	0	0	1	0	0	0	0	0	79
8:00 AM	13	115	13	0	5	0	0	0	0	0	0	0	0	146
9:00 AM	25	164	18	0	1	0	0	0	0	1	0	0	1	210
10:00 AM	40	240	21	0	5	0	0	0	0	1	0	0	1	308
11:00 AM	24	339	21	0	5	0	0	0	0	1	0	0	0	390
12:00 PM	33	361	22	0	3	2	0	1	0	1	0	0	0	423
1:00 PM	22	359	29	0	8	1	0	2	0	0	0	0	0	421
2:00 PM	12	363	14	0	5	0	0	0	0	0	0	0	0	394
3:00 PM	16	381	18	0	5	0	0	1	0	0	0	0	0	421
4:00 PM	22	405	17	0	0	1	0	0	0	1	0	0	0	446
5:00 PM	10	320	14	0	3	2	0	0	0	0	0	0	0	349
6:00 PM	12	342	14	0	4	0	0	1	0	0	0	0	0	373
7:00 PM	13	292	13	0	2	0	0	1	0	0	0	0	0	321
8:00 PM	11	326	10	0	2	2	0	0	0	0	0	0	0	351
9:00 PM	5	243	15	0	4	0	0	0	0	1	0	0	0	268
10:00 PM	2	104	5	0	0	0	0	0	0	0	0	0	0	111
11:00 PM	0	50	4	0	2	0	0	0	0	0	0	0	0	56
Total	267	4,576	263	0	58	8	0	8	0	6	0	0	2	5,188
Percent	5.1%	88.2%	5.1%	0.0%	1.1%	0.2%	0.0%	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	

Date Range: 7/22/2021 to 7/25/2021

Site Code: 01



Total Study Average Northbound

						FHWA Ve	hicle Clas	sification						Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	1	39	2	0	0	0	0	0	0	0	0	0	0	42
1:00 AM	0	22	1	0	0	0	0	0	0	0	0	0	0	23
2:00 AM	0	14	1	0	0	0	0	0	0	0	0	0	0	15
3:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	6
4:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	6
5:00 AM	1	11	2	0	0	0	0	0	0	0	0	0	0	14
6:00 AM	4	27	6	0	2	0	0	0	0	0	0	0	0	39
7:00 AM	5	70	10	0	3	0	0	0	0	0	0	0	0	88
8:00 AM	7	134	18	0	6	0	0	0	0	0	0	0	0	165
9:00 AM	10	181	30	0	8	1	0	0	0	0	0	0	0	230
10:00 AM	13	221	29	0	11	1	0	1	1	0	0	0	1	278
11:00 AM	16	294	33	1	12	2	0	1	0	0	0	0	1	360
12:00 PM	14	356	35	0	9	2	0	0	1	1	0	0	1	419
1:00 PM	14	392	38	0	10	2	0	0	1	0	0	0	1	458
2:00 PM	15	383	35	0	9	2	0	1	0	1	0	0	1	447
3:00 PM	17	393	36	0	7	2	0	1	0	1	0	0	0	457
4:00 PM	13	394	36	0	7	1	0	1	0	0	0	0	0	452
5:00 PM	15	334	23	0	5	1	0	0	0	0	0	0	0	378
6:00 PM	16	384	23	0	3	1	0	1	0	0	0	0	0	428
7:00 PM	12	344	23	0	2	1	0	1	0	0	0	0	0	383
8:00 PM	10	336	19	0	3	1	0	1	0	0	0	0	0	370
9:00 PM	7	276	17	0	2	0	0	1	0	0	0	0	0	303
10:00 PM	2	149	9	0	2	0	0	0	0	0	0	0	0	162
11:00 PM	1	80	5	0	0	0	0	0	0	0	0	0	0	86
Total	193	4,845	432	1	101	17	0	9	3	3	0	0	5	5,609
Percent	3.4%	86.4%	7.7%	0.0%	1.8%	0.3%	0.0%	0.2%	0.1%	0.1%	0.0%	0.0%	0.1%	

Note: Average only condsidered on days with 24-hours of data.

Date Range: 7/22/2021 to 7/25/2021

Site Code: 01



Total Study Average Southbound

						FHWA Ve	hicle Clas	sification						Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	1	32	1	0	0	0	0	0	0	0	0	0	0	34
1:00 AM	1	19	1	0	0	0	0	0	0	0	0	0	0	21
2:00 AM	0	9	1	0	0	0	0	0	0	0	0	0	0	10
3:00 AM	0	5	2	0	1	0	0	0	0	0	0	0	0	8
4:00 AM	0	9	3	0	2	0	0	0	0	0	0	0	0	14
5:00 AM	1	22	6	0	1	0	0	0	0	0	0	0	0	30
6:00 AM	6	91	14	0	5	0	0	0	0	0	0	0	0	116
7:00 AM	10	172	27	0	8	0	0	1	0	0	0	0	0	218
8:00 AM	10	239	31	1	10	2	0	0	0	0	0	0	0	293
9:00 AM	14	267	33	1	8	1	0	0	1	1	0	0	1	327
10:00 AM	20	273	27	0	8	1	0	1	0	1	0	0	1	332
11:00 AM	18	342	31	0	12	1	0	1	0	0	0	0	0	405
12:00 PM	18	342	34	0	6	2	0	1	0	1	0	0	0	404
1:00 PM	17	379	29	0	8	2	0	1	0	0	0	0	0	436
2:00 PM	12	393	26	0	8	1	0	0	0	0	0	0	0	440
3:00 PM	13	405	29	0	8	0	0	1	0	1	0	0	0	457
4:00 PM	16	391	27	0	6	1	0	0	0	1	0	0	1	443
5:00 PM	10	271	17	0	4	1	0	0	0	0	0	0	0	303
6:00 PM	11	346	16	0	4	1	0	1	0	0	0	0	0	379
7:00 PM	15	329	17	0	2	1	0	0	0	0	0	0	0	364
8:00 PM	12	316	17	0	2	1	0	0	0	0	0	0	0	348
9:00 PM	5	258	8	0	3	1	0	1	0	1	0	0	0	277
10:00 PM	3	145	7	0	1	0	0	0	1	0	0	0	0	157
11:00 PM	0	76	4	0	1	0	0	0	0	0	0	0	0	81
Total	213	5,131	408	2	108	16	0	8	2	6	0	0	3	5,897
Percent	3.6%	87.0%	6.9%	0.0%	1.8%	0.3%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.1%	

Note: Average only condsidered on days with 24-hours of data.

Date Range: 7/22/2021 to 7/25/2021

Site Code: 01



3-Day (Tuesday - Thursday) Average Northbound

						FHWA Ve	hicle Clas	sification						Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	16	0	0	0	0	0	0	0	0	0	0	0	16
1:00 AM	0	9	0	0	0	0	0	0	0	0	0	0	0	9
2:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	4
3:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	4	2	0	0	0	0	0	0	0	0	0	0	6
5:00 AM	0	15	2	0	0	0	0	0	0	0	0	0	0	17
6:00 AM	5	36	7	0	4	0	0	0	0	0	0	0	0	52
7:00 AM	2	95	23	1	3	0	0	0	0	0	0	0	0	124
8:00 AM	4	180	17	0	11	0	0	0	0	1	0	0	0	213
9:00 AM	2	200	31	0	11	0	0	0	0	0	0	0	0	244
10:00 AM	4	230	31	0	7	0	0	2	0	0	0	0	1	275
11:00 AM	7	303	37	0	12	2	0	0	1	0	0	0	0	362
12:00 PM	6	343	37	0	11	0	0	0	0	0	0	0	0	397
1:00 PM	7	381	51	0	11	1	0	0	0	0	0	0	0	451
2:00 PM	7	419	47	0	13	0	0	0	0	1	0	0	0	487
3:00 PM	14	405	50	0	11	0	0	0	0	0	0	0	0	480
4:00 PM	12	429	42	0	14	0	0	0	0	0	0	0	0	497
5:00 PM	17	476	35	0	8	2	0	0	1	0	0	0	1	540
6:00 PM	15	428	32	0	3	1	0	1	0	0	0	0	0	480
7:00 PM	20	377	21	0	1	1	0	2	0	0	0	0	0	422
8:00 PM	13	320	19	0	1	0	0	1	0	0	0	0	0	354
9:00 PM	3	245	9	0	1	1	0	0	0	0	0	0	0	259
10:00 PM	2	172	3	0	0	0	0	0	0	0	0	0	0	177
11:00 PM	0	61	6	0	0	0	0	0	0	0	0	0	0	67
Total	140	5,149	503	1	122	8	0	6	2	2	0	0	2	5,935
Percent	2.4%	86.8%	8.5%	0.0%	2.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	

Date Range: 7/22/2021 to 7/25/2021

Site Code: 01



3-Day (Tuesday - Thursday) Average Southbound

						FHWA Ve	hicle Clas	sification						Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	16	1	0	0	0	0	0	0	0	0	0	0	17
1:00 AM	0	8	1	0	0	0	0	0	0	0	0	0	0	9
2:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	6
3:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
4:00 AM	0	12	8	0	5	0	0	0	0	0	0	0	0	25
5:00 AM	1	40	9	0	4	0	0	0	0	0	0	0	0	54
6:00 AM	8	158	24	0	10	0	0	0	0	0	0	0	0	200
7:00 AM	8	312	50	0	13	0	0	0	0	0	0	0	0	383
8:00 AM	2	384	53	1	18	1	0	0	0	0	0	0	0	459
9:00 AM	6	401	42	0	14	0	0	0	1	1	0	0	0	465
10:00 AM	4	293	32	0	10	2	0	0	0	1	0	0	0	342
11:00 AM	11	331	44	0	8	2	0	0	0	0	0	0	0	396
12:00 PM	8	317	43	0	9	1	0	0	0	0	0	0	0	378
1:00 PM	11	386	26	0	9	1	0	0	1	0	0	0	0	434
2:00 PM	6	380	39	0	12	2	0	1	0	0	0	0	0	440
3:00 PM	4	395	32	0	16	0	0	0	0	0	0	0	0	447
4:00 PM	10	405	33	0	14	0	0	0	0	1	0	0	1	464
5:00 PM	18	354	26	0	7	0	0	0	0	0	0	0	0	405
6:00 PM	10	326	21	0	5	2	0	1	0	0	0	0	0	365
7:00 PM	15	355	16	0	2	1	0	0	0	0	0	0	0	389
8:00 PM	16	279	23	0	0	2	0	0	0	0	0	0	1	321
9:00 PM	1	244	8	0	2	1	0	3	0	0	0	0	0	259
10:00 PM	3	123	4	0	1	0	0	0	1	0	0	0	0	132
11:00 PM	0	71	3	0	1	0	0	0	0	0	0	0	0	75
Total	142	5,597	540	1	160	15	0	5	3	3	0	0	2	6,468
Percent	2.2%	86.5%	8.3%	0.0%	2.5%	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	

Vehicle Speed Report Summary



Location: Lake St S-O 7th Ave Crossing

Count Direction: Northbound / Southbound

Date Range: 7/22/2021 to 7/25/2021

Site Code: 01

								Speed	d Range	(mph)								Total
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
								Stud	y Total									
Northbound	295	976	2,453	7,859	8,352	2,107	299	41	5	2	0	0	3	0	0	0	0	22,392
Percent	1.3%	4.4%	11.0%	35.1%	37.3%	9.4%	1.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound	97	610	2,579	7,990	8,952	2,961	307	26	5	1	0	1	0	0	0	0	0	23,529
Percent	0.4%	2.6%	11.0%	34.0%	38.0%	12.6%	1.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total	392	1,586	5,032	15,849	17,304	5,068	606	67	10	3	0	1	3	0	0	0	0	45,921
Percent	0.9%	3.5%	11.0%	34.5%	37.7%	11.0%	1.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Total Study Percentile Spee	d Summa	ıry	Total Study Spee	d Statistics	
Northbound			Northbound		
50th Percentile (Median)	24.8	mph	Mean (Average) Speed	24.4	mph
85th Percentile	29.2	mph	10 mph Pace	20.4 - 30.4	mph
95th Percentile	32.0	mph	Percent in Pace	72.3	%
Southbound			Southbound		
50th Percentile (Median)	25.3	mph	Mean (Average) Speed	25.0	mph
85th Percentile	29.9	mph	10 mph Pace	20.7 - 30.7	mph
95th Percentile	32.4	mph	Percent in Pace	71.9	%

Date Range: 7/22/2021 to 7/25/2021

Site Code: 01

DATA SOLUTIONS

Thursday, July 22, 2021 Northbound

								Spee	d Range	(mph)								Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	0	0	0	2	8	5	1	0	0	0	0	0	0	0	0	0	16
1:00 AM	0	0	0	0	4	3	1	0	1	0	0	0	0	0	0	0	0	9
2:00 AM	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	4
3:00 AM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	0	0	0	1	3	2	0	0	0	0	0	0	0	0	0	0	6
5:00 AM	0	0	0	0	1	8	6	2	0	0	0	0	0	0	0	0	0	17
6:00 AM	0	1	4	2	14	21	8	1	1	0	0	0	0	0	0	0	0	52
7:00 AM	0	0	2	9	57	47	5	4	0	0	0	0	0	0	0	0	0	124
8:00 AM	0	3	3	18	115	71	3	0	0	0	0	0	0	0	0	0	0	213
9:00 AM	2	7	4	49	127	54	1	0	0	0	0	0	0	0	0	0	0	244
10:00 AM	0	6	10	65	142	48	3	1	0	0	0	0	0	0	0	0	0	275
11:00 AM	1	2	10	74	223	51	1	0	0	0	0	0	0	0	0	0	0	362
12:00 PM	0	7	20	87	231	48	4	0	0	0	0	0	0	0	0	0	0	397
1:00 PM	3	7	22	163	227	26	2	1	0	0	0	0	0	0	0	0	0	451
2:00 PM	5	6	13	205	231	26	1	0	0	0	0	0	0	0	0	0	0	487
3:00 PM	2	9	21	200	216	28	1	0	0	0	0	0	3	0	0	0	0	480
4:00 PM	2	13	45	168	217	46	6	0	0	0	0	0	0	0	0	0	0	497
5:00 PM	10	27	49	236	189	27	2	0	0	0	0	0	0	0	0	0	0	540
6:00 PM	18	21	54	220	152	14	1	0	0	0	0	0	0	0	0	0	0	480
7:00 PM	16	35	84	157	119	10	1	0	0	0	0	0	0	0	0	0	0	422
8:00 PM	1	16	60	148	119	8	2	0	0	0	0	0	0	0	0	0	0	354
9:00 PM	4	7	26	81	112	27	2	0	0	0	0	0	0	0	0	0	0	259
10:00 PM	0	0	1	29	83	59	5	0	0	0	0	0	0	0	0	0	0	177
11:00 PM	0	0	1	2	21	34	7	1	1	0	0	0	0	0	0	0	0	67
Total	64	167	429	1,914	2,605	669	70	11	3	0	0	0	3	0	0	0	0	5,935
Percent	1.1%	2.8%	7.2%	32.2%	43.9%	11.3%	1.2%	0.2%	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed	Summary		Speed Stat	istics	
50th Percentile (Median)	25.7	mph	Mean (Average) Speed	25.3	mph
85th Percentile	29.6	mph	10 mph Pace	20.8 - 30.8	mph
95th Percentile	32.0	mph	Percent in Pace	77.1	%

Date Range: 7/22/2021 to 7/25/2021

Site Code: 01



Thursday, July 22, 2021 Southbound

								Spee	d Range	(mph)								Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	0	0	1	7	6	3	0	0	0	0	0	0	0	0	0	0	17
1:00 AM	0	0	0	0	3	4	2	0	0	0	0	0	0	0	0	0	0	9
2:00 AM	0	0	0	2	1	2	1	0	0	0	0	0	0	0	0	0	0	6
3:00 AM	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	3
4:00 AM	0	0	0	0	2	14	9	0	0	0	0	0	0	0	0	0	0	25
5:00 AM	0	0	0	1	14	32	6	1	0	0	0	0	0	0	0	0	0	54
6:00 AM	0	0	3	6	52	117	22	0	0	0	0	0	0	0	0	0	0	200
7:00 AM	1	0	6	22	163	174	16	1	0	0	0	0	0	0	0	0	0	383
8:00 AM	0	1	7	32	248	156	14	1	0	0	0	0	0	0	0	0	0	459
9:00 AM	0	2	7	113	221	118	4	0	0	0	0	0	0	0	0	0	0	465
10:00 AM	2	5	6	61	181	84	3	0	0	0	0	0	0	0	0	0	0	342
11:00 AM	5	13	15	81	227	52	3	0	0	0	0	0	0	0	0	0	0	396
12:00 PM	0	2	23	86	217	49	1	0	0	0	0	0	0	0	0	0	0	378
1:00 PM	3	8	21	159	210	30	3	0	0	0	0	0	0	0	0	0	0	434
2:00 PM	0	6	22	180	195	33	1	3	0	0	0	0	0	0	0	0	0	440
3:00 PM	0	6	21	185	198	36	1	0	0	0	0	0	0	0	0	0	0	447
4:00 PM	1	5	46	233	164	12	3	0	0	0	0	0	0	0	0	0	0	464
5:00 PM	1	13	33	152	171	34	1	0	0	0	0	0	0	0	0	0	0	405
6:00 PM	2	13	52	158	125	12	2	1	0	0	0	0	0	0	0	0	0	365
7:00 PM	3	12	64	164	133	13	0	0	0	0	0	0	0	0	0	0	0	389
8:00 PM	1	6	42	146	115	9	2	0	0	0	0	0	0	0	0	0	0	321
9:00 PM	1	3	26	92	110	23	3	1	0	0	0	0	0	0	0	0	0	259
10:00 PM	0	0	6	24	49	45	7	0	1	0	0	0	0	0	0	0	0	132
11:00 PM	0	0	0	5	34	30	6	0	0	0	0	0	0	0	0	0	0	75
Total	20	95	400	1,903	2,841	1,087	113	8	1	0	0	0	0	0	0	0	0	6,468
Percent	0.3%	1.5%	6.2%	29.4%	43.9%	16.8%	1.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed	Summary		Speed Stat	istics	
50th Percentile (Median)	26.4	mph	Mean (Average) Speed	26.2	mph
85th Percentile	30.6	mph	10 mph Pace	21.7 - 31.7	mph
95th Percentile	33.1	mph	Percent in Pace	75.68	%

Date Range: 7/22/2021 to 7/25/2021

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								Spee	d Range	(mph)								Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	0	0	0	13	15	5	2	0	0	0	0	0	0	0	0	0	35
1:00 AM	0	0	0	1	5	6	3	0	0	0	0	0	0	0	0	0	0	15
2:00 AM	0	0	0	2	5	6	1	1	0	0	0	0	0	0	0	0	0	15
3:00 AM	0	1	0	0	1	3	1	0	0	0	0	0	0	0	0	0	0	6
4:00 AM	0	0	0	1	2	1	0	1	0	0	0	0	0	0	0	0	0	5
5:00 AM	0	0	1	3	5	6	1	0	0	0	0	0	0	0	0	0	0	16
6:00 AM	0	1	3	1	17	24	8	1	0	0	0	0	0	0	0	0	0	55
7:00 AM	0	1	6	9	39	43	10	0	0	0	0	0	0	0	0	0	0	108
8:00 AM	0	5	6	28	105	50	7	0	0	0	0	0	0	0	0	0	0	201
9:00 AM	0	1	8	44	123	70	21	1	0	0	0	0	0	0	0	0	0	268
10:00 AM	1	2	4	30	147	82	7	1	0	0	0	0	0	0	0	0	0	274
11:00 AM	0	5	10	104	189	47	6	0	0	0	0	0	0	0	0	0	0	361
12:00 PM	7	20	24	151	199	54	1	0	0	0	0	0	0	0	0	0	0	456
1:00 PM	15	36	57	178	161	24	2	0	0	0	0	0	0	0	0	0	0	473
2:00 PM	17	39	74	189	148	11	2	0	0	0	0	0	0	0	0	0	0	480
3:00 PM	2	11	42	228	209	32	3	0	0	0	0	0	0	0	0	0	0	527
4:00 PM	8	23	66	169	228	34	2	0	0	0	0	0	0	0	0	0	0	530
5:00 PM	7	21	44	221	226	26	1	0	0	0	0	0	0	0	0	0	0	546
6:00 PM	4	17	78	160	164	15	0	0	0	0	0	0	0	0	0	0	0	438
7:00 PM	6	28	56	156	120	15	1	1	0	0	0	0	0	0	0	0	0	383
8:00 PM	5	18	59	192	98	14	0	0	0	0	0	0	0	0	0	0	0	386
9:00 PM	6	16	51	147	87	13	0	0	0	0	0	0	0	0	0	0	0	320
10:00 PM	1	3	12	42	87	35	2	0	1	0	0	0	0	0	0	0	0	183
11:00 PM	0	0	0	7	50	34	10	4	0	1	0	0	0	0	0	0	0	106
Total	79	248	601	2,063	2,428	660	94	12	1	1	0	0	0	0	0	0	0	6,187
Percent	1.3%	4.0%	9.7%	33.3%	39.2%	10.7%	1.5%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed	Summary		Speed Stat	istics	
50th Percentile (Median)	25.2	mph	Mean (Average) Speed	24.7	mph
85th Percentile	29.5	mph	10 mph Pace	20.2 - 30.2	mph
95th Percentile	32.4	mph	Percent in Pace	72.5	%

Date Range: 7/22/2021 to 7/25/2021

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Friday, July 23, 2021 Southbound

								Spee	d Range	(mph)								Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	0	0	2	7	8	2	0	1	0	0	0	0	0	0	0	0	20
1:00 AM	0	0	0	1	2	3	2	0	0	0	0	0	0	0	0	0	0	8
2:00 AM	0	0	0	0	1	4	1	0	0	0	0	0	0	0	0	0	0	6
3:00 AM	0	0	0	0	1	4	3	0	1	0	0	0	0	0	0	0	0	9
4:00 AM	0	0	0	1	4	8	2	0	0	0	0	0	0	0	0	0	0	15
5:00 AM	0	0	0	2	9	24	4	0	0	0	0	0	0	0	0	0	0	39
6:00 AM	0	2	3	14	55	89	8	1	0	0	0	0	0	0	0	0	0	172
7:00 AM	0	2	8	18	134	133	13	0	0	0	0	0	0	0	0	0	0	308
8:00 AM	0	2	6	48	189	121	14	0	0	1	0	0	0	0	0	0	0	381
9:00 AM	0	0	10	51	187	118	14	0	0	0	0	0	0	0	0	0	0	380
10:00 AM	1	9	6	70	140	87	7	0	0	0	0	0	0	0	0	0	0	320
11:00 AM	1	2	11	74	256	88	6	0	0	0	0	0	0	0	0	0	0	438
12:00 PM	0	3	13	104	264	50	2	0	0	0	0	0	0	0	0	0	0	436
1:00 PM	1	13	25	197	208	30	0	0	0	0	0	0	0	0	0	0	0	474
2:00 PM	3	17	65	211	185	33	3	0	0	0	0	0	0	0	0	0	0	517
3:00 PM	2	5	41	193	226	43	2	0	0	0	0	0	0	0	0	0	0	512
4:00 PM	2	7	42	188	169	24	2	0	0	0	0	0	0	0	0	0	0	434
5:00 PM	3	16	43	176	178	38	1	0	0	0	0	0	0	0	0	0	0	455
6:00 PM	1	15	29	166	128	11	1	0	0	0	0	0	0	0	0	0	0	351
7:00 PM	2	14	68	154	117	15	0	0	0	0	0	0	0	0	0	0	0	370
8:00 PM	1	13	96	148	92	7	0	0	0	0	0	0	0	0	0	0	0	357
9:00 PM	1	8	63	117	86	2	0	0	0	0	0	0	0	0	0	0	0	277
10:00 PM	0	0	16	58	93	25	4	1	0	0	0	0	0	0	0	0	0	197
11:00 PM	0	0	3	11	49	28	5	2	0	0	0	0	0	0	0	0	0	98
Total	18	128	548	2,004	2,780	993	96	4	2	1	0	0	0	0	0	0	0	6,574
Percent	0.3%	1.9%	8.3%	30.5%	42.3%	15.1%	1.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed	Summary		Speed Stat	istics	
50th Percentile (Median)	25.9	mph	Mean (Average) Speed	25.7	mph
85th Percentile	30.3	mph	10 mph Pace	21.5 - 31.5	mph
95th Percentile	32.8	mph	Percent in Pace	74.43	%

Date Range: 7/22/2021 to 7/25/2021

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DATA SOLUTIONS

Saturday, July 24, 2021 Northbound

								Spee	d Range	(mph)								Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	0	1	4	19	20	8	1	0	0	0	0	0	0	0	0	0	53
1:00 AM	0	0	0	1	13	21	6	0	0	0	0	0	0	0	0	0	0	41
2:00 AM	0	0	0	1	8	7	6	0	0	0	0	0	0	0	0	0	0	22
3:00 AM	0	0	0	0	3	4	3	0	0	0	0	0	0	0	0	0	0	10
4:00 AM	0	1	1	0	1	3	2	0	0	0	0	0	0	0	0	0	0	8
5:00 AM	0	0	1	1	6	2	3	1	0	0	0	0	0	0	0	0	0	14
6:00 AM	0	0	2	0	6	11	3	0	0	0	0	0	0	0	0	0	0	22
7:00 AM	0	5	4	14	27	13	2	1	0	0	0	0	0	0	0	0	0	66
8:00 AM	0	2	5	22	65	38	2	0	0	0	0	0	0	0	0	0	0	134
9:00 AM	0	13	19	48	106	31	2	0	0	0	0	0	0	0	0	0	0	219
10:00 AM	3	17	29	78	126	25	3	0	0	0	0	0	0	0	0	0	0	281
11:00 AM	5	16	41	136	185	20	2	1	0	0	0	0	0	0	0	0	0	406
12:00 PM	6	13	41	142	163	33	1	0	0	0	0	0	0	0	0	0	0	399
1:00 PM	6	26	35	186	157	36	3	0	0	0	0	0	0	0	0	0	0	449
2:00 PM	3	15	52	205	112	21	2	0	0	0	0	0	0	0	0	0	0	410
3:00 PM	2	30	71	186	104	9	0	0	0	0	0	0	0	0	0	0	0	402
4:00 PM	11	14	67	191	112	9	3	0	0	0	0	0	0	0	0	0	0	407
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	2	25	47	185	118	19	1	0	0	0	0	0	0	0	0	0	0	397
7:00 PM	6	17	56	168	112	14	0	0	0	0	0	0	0	0	0	0	0	373
8:00 PM	10	30	81	172	82	6	0	0	0	0	0	0	0	0	0	0	0	381
9:00 PM	5	13	62	154	93	11	1	0	0	0	0	0	0	0	0	0	0	339
10:00 PM	0	1	1	29	97	35	4	2	0	0	0	0	0	0	0	0	0	169
11:00 PM	0	0	3	11	39	50	7	0	0	0	0	0	0	0	0	0	0	110
Total	59	238	619	1,934	1,754	438	64	6	0	0	0	0	0	0	0	0	0	5,112
Percent	1.2%	4.7%	12.1%	37.8%	34.3%	8.6%	1.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed	Summary		Speed Stat	istics	
50th Percentile (Median)	24.4	mph	Mean (Average) Speed	24.0	mph
85th Percentile	28.9	mph	10 mph Pace	19.7 - 29.7	mph
95th Percentile	31.7	mph	Percent in Pace	72.1	%

Date Range: 7/22/2021 to 7/25/2021

Site Code: 01

DATA SOLUTIONS

Saturday, July 24, 2021 Southbound

								Spee	d Range	(mph)								Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	0	0	8	28	26	2	0	0	0	0	0	0	0	0	0	0	64
1:00 AM	0	2	0	8	14	14	8	1	0	0	0	1	0	0	0	0	0	48
2:00 AM	0	0	0	1	9	5	0	2	0	0	0	0	0	0	0	0	0	17
3:00 AM	0	0	1	0	0	5	1	0	0	0	0	0	0	0	0	0	0	7
4:00 AM	0	0	1	0	0	4	1	0	0	0	0	0	0	0	0	0	0	6
5:00 AM	0	0	1	2	2	11	1	0	0	0	0	0	0	0	0	0	0	17
6:00 AM	0	0	3	6	24	16	6	1	0	0	0	0	0	0	0	0	0	56
7:00 AM	0	3	10	15	31	28	7	1	0	0	0	0	0	0	0	0	0	95
8:00 AM	1	3	17	26	80	47	4	1	0	0	0	0	0	0	0	0	0	179
9:00 AM	1	6	27	41	123	47	3	0	0	0	0	0	0	0	0	0	0	248
10:00 AM	4	8	45	98	165	31	4	1	0	0	0	0	0	0	0	0	0	356
11:00 AM	1	22	49	106	181	35	2	0	0	0	0	0	0	0	0	0	0	396
12:00 PM	0	7	26	134	167	38	1	0	1	0	0	0	0	0	0	0	0	374
1:00 PM	2	19	42	176	136	31	2	1	0	0	0	0	0	0	0	0	0	409
2:00 PM	2	10	76	190	108	27	0	0	0	0	0	0	0	0	0	0	0	413
3:00 PM	6	20	76	227	114	8	0	0	0	0	0	0	0	0	0	0	0	451
4:00 PM	3	28	62	205	105	20	1	0	0	0	0	0	0	0	0	0	0	424
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	6	56	227	117	13	2	0	0	0	0	0	0	0	0	0	0	421
7:00 PM	2	8	85	194	77	9	2	0	0	0	0	0	0	0	0	0	0	377
8:00 PM	9	29	106	149	65	4	0	0	0	0	0	0	0	0	0	0	0	362
9:00 PM	1	5	45	157	79	13	0	0	0	0	0	0	0	0	0	0	0	300
10:00 PM	0	4	8	51	97	22	2	0	0	0	0	0	0	0	0	0	0	184
11:00 PM	0	0	2	8	34	44	6	1	0	0	0	0	0	0	0	0	0	95
Total	32	180	738	2,029	1,756	498	55	9	1	0	0	1	0	0	0	0	0	5,299
Percent	0.6%	3.4%	13.9%	38.3%	33.1%	9.4%	1.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed	Summary		Speed Stat	istics	
50th Percentile (Median)	24.4	mph	Mean (Average) Speed	24.2	mph
85th Percentile	29.0	mph	10 mph Pace	19.6 - 29.6	mph
95th Percentile	31.8	mph	Percent in Pace	71.69	%

Date Range: 7/22/2021 to 7/25/2021

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Sunday, July 25, 2021 Northbound

								Spee	d Range ((mph)								Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	1	0	0	6	25	15	13	2	0	0	0	0	0	0	0	0	0	62
1:00 AM	0	0	0	2	9	8	7	0	0	0	0	0	0	0	0	0	0	26
2:00 AM	0	0	0	0	5	5	4	2	1	0	0	0	0	0	0	0	0	17
3:00 AM	0	0	0	2	1	2	1	1	0	0	0	0	0	0	0	0	0	7
4:00 AM	0	0	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0	4
5:00 AM	0	0	1	1	3	0	2	0	0	0	0	0	0	0	0	0	0	7
6:00 AM	0	0	2	2	6	9	5	1	0	0	0	0	0	0	0	0	0	25
7:00 AM	0	5	1	8	28	11	1	2	0	0	0	0	0	0	0	0	0	56
8:00 AM	0	8	9	21	51	20	2	0	0	0	0	0	0	0	0	0	0	111
9:00 AM	0	6	16	26	103	39	3	0	0	0	0	0	0	0	0	0	0	193
10:00 AM	1	20	27	61	134	26	4	0	0	0	0	0	0	0	0	0	0	273
11:00 AM	6	14	24	99	128	35	2	0	0	0	0	0	0	0	0	0	0	308
12:00 PM	1	8	41	133	209	17	2	0	0	0	0	0	0	0	0	0	0	411
1:00 PM	10	17	66	197	144	18	2	0	0	0	0	0	0	0	0	0	0	454
2:00 PM	9	36	96	198	59	6	1	0	0	0	0	0	0	0	0	0	0	405
3:00 PM	9	37	93	198	74	5	0	0	0	0	0	0	0	0	0	0	0	416
4:00 PM	20	45	90	133	79	9	0	0	0	0	0	0	0	0	0	0	0	376
5:00 PM	4	32	85	194	101	11	1	0	0	0	0	0	0	0	0	0	0	428
6:00 PM	13	29	80	196	72	7	0	0	0	0	0	0	0	0	0	0	0	397
7:00 PM	6	18	50	171	94	11	0	0	0	0	0	0	0	0	0	0	0	350
8:00 PM	11	37	67	169	65	9	1	0	0	0	0	0	0	0	0	0	0	359
9:00 PM	1	11	51	115	95	16	4	0	0	0	0	0	0	0	0	0	0	293
10:00 PM	1	0	4	15	57	36	4	2	0	1	0	0	0	0	0	0	0	120
11:00 PM	0	0	1	1	21	24	11	2	0	0	0	0	0	0	0	0	0	60
Total	93	323	804	1,948	1,565	340	71	12	1	1	0	0	0	0	0	0	0	5,158
Percent	1.8%	6.3%	15.6%	37.8%	30.3%	6.6%	1.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed	Summary		Speed Stat	istics	
50th Percentile (Median)	23.7	mph	Mean (Average) Speed	23.3	mph
85th Percentile	28.3	mph	10 mph Pace	18.7 - 28.7	mph
95th Percentile	31.5	mph	Percent in Pace	69.5	%

Date Range: 7/22/2021 to 7/25/2021

Site Code: 01



Sunday, July 25, 2021 Southbound

								Spee	d Range	(mph)								Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	0	0	3	10	13	6	0	0	0	0	0	0	0	0	0	0	32
1:00 AM	0	0	1	0	6	8	2	1	0	0	0	0	0	0	0	0	0	18
2:00 AM	0	0	0	2	4	3	1	0	0	0	0	0	0	0	0	0	0	10
3:00 AM	0	0	0	0	2	2	4	0	0	0	0	0	0	0	0	0	0	8
4:00 AM	0	0	0	1	2	3	1	0	0	0	0	0	0	0	0	0	0	7
5:00 AM	0	0	0	1	4	4	0	0	0	0	0	0	0	0	0	0	0	9
6:00 AM	0	1	1	4	17	12	2	0	0	0	0	0	0	0	0	0	0	37
7:00 AM	1	2	3	13	35	21	4	0	0	0	0	0	0	0	0	0	0	79
8:00 AM	0	3	12	30	70	30	1	0	0	0	0	0	0	0	0	0	0	146
9:00 AM	0	12	23	41	108	24	2	0	0	0	0	0	0	0	0	0	0	210
10:00 AM	0	15	35	68	155	32	3	0	0	0	0	0	0	0	0	0	0	308
11:00 AM	1	6	26	144	166	45	2	0	0	0	0	0	0	0	0	0	0	390
12:00 PM	4	14	51	175	150	29	0	0	0	0	0	0	0	0	0	0	0	423
1:00 PM	4	19	74	169	136	18	1	0	0	0	0	0	0	0	0	0	0	421
2:00 PM	1	25	92	208	65	3	0	0	0	0	0	0	0	0	0	0	0	394
3:00 PM	4	24	123	193	67	9	1	0	0	0	0	0	0	0	0	0	0	421
4:00 PM	3	20	93	233	85	11	1	0	0	0	0	0	0	0	0	0	0	446
5:00 PM	1	19	85	147	91	6	0	0	0	0	0	0	0	0	0	0	0	349
6:00 PM	4	16	103	168	75	7	0	0	0	0	0	0	0	0	0	0	0	373
7:00 PM	2	9	62	143	95	8	1	1	0	0	0	0	0	0	0	0	0	321
8:00 PM	2	13	69	187	71	9	0	0	0	0	0	0	0	0	0	0	0	351
9:00 PM	0	6	38	108	94	19	2	1	0	0	0	0	0	0	0	0	0	268
10:00 PM	0	3	2	13	46	40	5	1	1	0	0	0	0	0	0	0	0	111
11:00 PM	0	0	0	3	21	27	4	1	0	0	0	0	0	0	0	0	0	56
Total	27	207	893	2,054	1,575	383	43	5	1	0	0	0	0	0	0	0	0	5,188
Percent	0.5%	4.0%	17.2%	39.6%	30.4%	7.4%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed	Summary		Speed Stat	istics	
50th Percentile (Median)	23.7	mph	Mean (Average) Speed	23.6	mph
85th Percentile	28.3	mph	10 mph Pace	18.8 - 28.8	mph
95th Percentile	31.3	mph	Percent in Pace	71.11	%

Date Range: 7/22/2021 to 7/25/2021

Site Code: 01

DATA SOLUTIONS

Total Study Average

Northbound

								Spee	d Range	(mph)								Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	0	0	3	15	15	8	2	0	0	0	0	0	0	0	0	0	43
1:00 AM	0	0	0	1	8	10	4	0	0	0	0	0	0	0	0	0	0	23
2:00 AM	0	0	0	1	5	5	3	1	0	0	0	0	0	0	0	0	0	15
3:00 AM	0	0	0	1	2	2	2	0	0	0	0	0	0	0	0	0	0	7
4:00 AM	0	0	0	0	2	2	1	0	0	0	0	0	0	0	0	0	0	5
5:00 AM	0	0	1	1	4	4	3	1	0	0	0	0	0	0	0	0	0	14
6:00 AM	0	1	3	1	11	16	6	1	0	0	0	0	0	0	0	0	0	39
7:00 AM	0	3	3	10	38	29	5	2	0	0	0	0	0	0	0	0	0	90
8:00 AM	0	5	6	22	84	45	4	0	0	0	0	0	0	0	0	0	0	166
9:00 AM	1	7	12	42	115	49	7	0	0	0	0	0	0	0	0	0	0	233
10:00 AM	1	11	18	59	137	45	4	1	0	0	0	0	0	0	0	0	0	276
11:00 AM	3	9	21	103	181	38	3	0	0	0	0	0	0	0	0	0	0	358
12:00 PM	4	12	32	128	201	38	2	0	0	0	0	0	0	0	0	0	0	417
1:00 PM	9	22	45	181	172	26	2	0	0	0	0	0	0	0	0	0	0	457
2:00 PM	9	24	59	199	138	16	2	0	0	0	0	0	0	0	0	0	0	447
3:00 PM	4	22	57	203	151	19	1	0	0	0	0	0	1	0	0	0	0	458
4:00 PM	10	24	67	165	159	25	3	0	0	0	0	0	0	0	0	0	0	453
5:00 PM	5	20	45	163	129	16	1	0	0	0	0	0	0	0	0	0	0	379
6:00 PM	9	23	65	190	127	14	1	0	0	0	0	0	0	0	0	0	0	429
7:00 PM	9	25	62	163	111	13	1	0	0	0	0	0	0	0	0	0	0	384
8:00 PM	7	25	67	170	91	9	1	0	0	0	0	0	0	0	0	0	0	370
9:00 PM	4	12	48	124	97	17	2	0	0	0	0	0	0	0	0	0	0	304
10:00 PM	1	1	5	29	81	41	4	1	0	0	0	0	0	0	0	0	0	163
11:00 PM	0	0	1	5	33	36	9	2	0	0	0	0	0	0	0	0	0	86
Total	76	246	617	1,964	2,092	530	79	11	0	0	0	0	1	0	0	0	0	5,616
Percent	1.4%	4.4%	11.0%	35.0%	37.3%	9.4%	1.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Spe	ed Summa	ary	Total Study Spee	d Statistics	
50th Percentile (Median)	24.8	mph	Mean (Average) Speed	24.4	mph
85th Percentile	29.2	mph	10 mph Pace	20.4 - 30.4	mph
95th Percentile	32.0	mph	Percent in Pace	72.3	%

Date Range: 7/22/2021 to 7/25/2021

Site Code: 01

DATA SOLUTIONS

Total Study Average Southbound

								Spee	d Range ((mph)								Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	0	0	4	13	13	3	0	0	0	0	0	0	0	0	0	0	33
1:00 AM	0	1	0	2	6	7	4	1	0	0	0	0	0	0	0	0	0	21
2:00 AM	0	0	0	1	4	4	1	1	0	0	0	0	0	0	0	0	0	11
3:00 AM	0	0	0	0	1	3	2	0	0	0	0	0	0	0	0	0	0	6
4:00 AM	0	0	0	1	2	7	3	0	0	0	0	0	0	0	0	0	0	13
5:00 AM	0	0	0	2	7	18	3	0	0	0	0	0	0	0	0	0	0	30
6:00 AM	0	1	3	8	37	59	10	1	0	0	0	0	0	0	0	0	0	119
7:00 AM	1	2	7	17	91	89	10	1	0	0	0	0	0	0	0	0	0	218
8:00 AM	0	2	11	34	147	89	8	1	0	0	0	0	0	0	0	0	0	292
9:00 AM	0	5	17	62	160	77	6	0	0	0	0	0	0	0	0	0	0	327
10:00 AM	2	9	23	74	160	59	4	0	0	0	0	0	0	0	0	0	0	331
11:00 AM	2	11	25	101	208	55	3	0	0	0	0	0	0	0	0	0	0	405
12:00 PM	1	7	28	125	200	42	1	0	0	0	0	0	0	0	0	0	0	404
1:00 PM	3	15	41	175	173	27	2	0	0	0	0	0	0	0	0	0	0	436
2:00 PM	2	15	64	197	138	24	1	1	0	0	0	0	0	0	0	0	0	442
3:00 PM	3	14	65	200	151	24	1	0	0	0	0	0	0	0	0	0	0	458
4:00 PM	2	15	61	215	131	17	2	0	0	0	0	0	0	0	0	0	0	443
5:00 PM	1	12	40	119	110	20	1	0	0	0	0	0	0	0	0	0	0	303
6:00 PM	2	13	60	180	111	11	1	0	0	0	0	0	0	0	0	0	0	378
7:00 PM	2	11	70	164	106	11	1	0	0	0	0	0	0	0	0	0	0	365
8:00 PM	3	15	78	158	86	7	1	0	0	0	0	0	0	0	0	0	0	348
9:00 PM	1	6	43	119	92	14	1	1	0	0	0	0	0	0	0	0	0	277
10:00 PM	0	2	8	37	71	33	5	1	1	0	0	0	0	0	0	0	0	158
11:00 PM	0	0	1	7	35	32	5	1	0	0	0	0	0	0	0	0	0	81
Total	25	156	645	2,002	2,240	742	79	9	1	0	0	0	0	0	0	0	0	5,899
Percent	0.4%	2.6%	10.9%	33.9%	38.0%	12.6%	1.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Spe	ed Summa	ıry	Total Study Spee	d Statistics	
50th Percentile (Median)	25.3	mph	Mean (Average) Speed	25.0	mph
85th Percentile	29.9	mph	10 mph Pace	20.7 - 30.7	mph
95th Percentile	32.4	mph	Percent in Pace	71.9	%



Location: Lake St S-O 7th Ave Crossing Date Range: 7/22/2021 - 7/28/2021 Site Code: 01

	1	Thursda	ny		Friday		5	Saturda	у		Sunday	1		Monday	у		Tuesda	y	W	/ednesd	lay			
	7	//22/202	21	7/23/2021		7	//24/202	1	7	7/25/202	1	7	7/26/202	21	7	//27/202	1	-	7/28/202	1	Mid-W	/eek A	/erage	
Time	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	16	17	33	35	20	55	53	64	117	62	32	94	-	-	-	-	-	-	-	-	-	16	17	33
1:00 AM	9	9	18	15	8	23	41	48	89	26	18	44	-	-	-	-	-	-	-	-	-	9	9	18
2:00 AM	4	6	10	15	6	21	22	17	39	17	10	27	-	-	-	-	-	-	-	-	-	4	6	10
3:00 AM	2	3	5	6	9	15	10	7	17	7	8	15	-	-	-	-	-	-	-	-	-	2	3	5
4:00 AM	6	25	31	5	15	20	8	6	14	4	7	11	-	-	-	-	-	-	-	-	-	6	25	31
5:00 AM	17	54	71	16	39	55	14	17	31	7	9	16	-	-	-	-	-	-	-	-	-	17	54	71
6:00 AM	52	200	252	55	172	227	22	56	78	25	37	62	-	-	-	-	-	-	-	-	-	52	200	252
7:00 AM	124	383	507	108	308	416	66	95	161	56	79	135	-	-	-	-	-	-	-	-	-	124	383	507
8:00 AM	213	459	672	201	381	582	134	179	313	111	146	257	-	-	-	-	-	-	-	-	-	213	459	672
9:00 AM	244	465	709	268	380	648	219	248	467	193	210	403	-	-	-	-	-	-	-	-	-	244	465	709
10:00 AM	275	342	617	274	320	594	281	356	637	273	308	581	-	-	-	-	-	-	-	-	-	275	342	617
11:00 AM	362	396	758	361	438	799	406	396	802	308	390	698	-	-	-	-	-	-	-	-	-	362	396	758
12:00 PM	397	378	775	456	436	892	399	374	773	411	423	834	-	-	-	-	-	-	-	-	-	397	378	775
1:00 PM	451	434	885	473	474	947	449	409	858	454	421	875	-	-	-	-	-	-	-	-	-	451	434	885
2:00 PM	487	440	927	480	517	997	410	413	823	405	394	799	-	-	-	-	-	-	-	-	-	487	440	927
3:00 PM	480	447	927	527	512	1,039	402	451	853	416	421	837	-	-	-	-	-	-	-	-	_	480	447	927
4:00 PM	497	464	961	530	434	964	407	424	831	376	446	822	-	-	-	-	-	-	-	-	_	497	464	961
5:00 PM	540	405	945	546	455	1,001	0	0	0	428	349	777	-	-	-	-	-	-	-	-	_	540	405	945
6:00 PM	480	365	845	438	351	789	397	421	818	397	373	770	_	-	_	_	-	_	_	_	_	480	365	845
7:00 PM	422	389	811	383	370	753	373	377	750	350	321	671	-	-	-	-	-	-	-	-	-	422	389	811
8:00 PM	354	321	675	386	357	743	381	362	743	359	351	710	-	_	_	-	_	_	_	-	_	354	321	675
9:00 PM	259	259	518	320	277	597	339	300	639	293	268	561	-	-	-	-	-	-	-	-	-	259	259	518
10:00 PM	177	132	309	183	197	380	169	184	353	120	111	231	_	-	_	-	_	_	_	-	_	177	132	309
11:00 PM	67	75	142	106	98	204	110	95	205	60	56	116	-	-	-	-	-	-	-	-	-	67	75	142
Total	5,935	6,468	12,403	6,187	6,574	12,761	5,112	5,299	10,411	5,158	5,188	10,346	-	-	-	-	-	-	-	-	-	5,935	6,468	12,403
Percent	48%	52%	-	48%	52%	-	49%	51%	-	50%	50%	-	-	-	-	-	-	-	-	-	-	48%	52%	-

^{1.} Mid-week average includes data between Tuesday and Thursday.

Vehicle Classification Report Summary



Location: Lake Washington Blvd S-O Marsh Park Crossing

Count Direction: Northbound / Southbound

Date Range: 7/22/2021 to 7/24/2021

Site Code: 02

	FHWA Vehicle Classification														
	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume	
	Study Total														
Northbound	532	15,955	1,654	5	362	83	0	9	9	16	0	1	20	18,646	
Percent	2.9%	85.6%	8.9%	0.0%	1.9%	0.4%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	100%	
Southbound	608	16,004	1,591	16	410	99	0	11	12	10	0	0	9	18,770	
Percent	3.2%	85.3%	8.5%	0.1%	2.2%	0.5%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	100%	
Total	1,140	31,959	3,245	21	772	182	0	20	21	26	0	1	29	37,416	
Percent	3.0%	85.4%	8.7%	0.1%	2.1%	0.5%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%	100%	

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

Date Range: 7/22/2021 to 7/24/2021

Site Code: 02



Thursday, July 22, 2021 Northbound

	FHWA Vehicle Classification													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	16	1	0	0	0	0	0	0	0	0	0	0	17
1:00 AM	0	10	0	0	0	0	0	0	0	0	0	0	0	10
2:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
3:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	6
5:00 AM	0	16	3	0	2	0	0	0	0	0	0	0	0	21
6:00 AM	3	37	11	0	5	0	0	0	0	0	0	0	0	56
7:00 AM	2	103	28	1	4	0	0	0	0	0	0	0	0	138
8:00 AM	4	182	26	0	13	0	0	0	0	1	0	0	0	226
9:00 AM	2	205	34	0	16	1	0	0	0	0	0	0	0	258
10:00 AM	8	228	36	0	10	1	0	0	0	0	0	0	1	284
11:00 AM	5	314	39	0	16	1	0	0	1	0	0	0	0	376
12:00 PM	9	350	44	0	16	1	0	0	0	0	0	0	0	420
1:00 PM	10	402	53	0	17	1	0	0	0	0	0	0	0	483
2:00 PM	8	432	50	0	15	2	0	0	0	0	0	0	0	507
3:00 PM	11	417	62	0	11	1	0	0	0	1	0	0	1	504
4:00 PM	11	440	56	0	9	2	0	0	0	1	0	0	0	519
5:00 PM	18	491	36	0	8	2	0	1	0	1	0	0	1	558
6:00 PM	14	440	39	0	8	1	0	1	0	0	0	0	0	503
7:00 PM	22	381	29	0	2	1	0	0	0	0	0	0	1	436
8:00 PM	11	334	24	0	1	5	0	0	0	0	0	0	0	375
9:00 PM	3	253	14	0	2	0	0	0	0	0	0	0	0	272
10:00 PM	2	160	7	0	1	0	0	0	0	0	0	0	0	170
11:00 PM	1	61	8	0	0	0	0	0	0	0	0	0	0	70
Total	144	5,281	602	1	156	19	0	2	1	4	0	0	4	6,214
Percent	2.3%	85.0%	9.7%	0.0%	2.5%	0.3%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	

Date Range: 7/22/2021 to 7/24/2021

Site Code: 02



Thursday, July 22, 2021 Southbound

		FHWA Vehicle Classification													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume	
12:00 AM	0	16	1	0	0	0	0	0	0	0	0	0	0	17	
1:00 AM	0	9	1	0	0	0	0	0	0	0	0	0	0	10	
2:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	6	
3:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3	
4:00 AM	0	13	4	0	5	0	0	0	0	0	0	0	0	22	
5:00 AM	2	39	11	0	2	0	0	0	0	0	0	0	0	54	
6:00 AM	6	153	24	0	12	2	0	0	0	0	0	0	0	197	
7:00 AM	8	304	58	0	12	2	0	0	0	0	0	0	0	384	
8:00 AM	3	382	49	1	21	0	0	0	0	0	0	0	0	456	
9:00 AM	8	398	39	0	17	0	0	0	1	1	0	0	0	464	
10:00 AM	7	289	36	0	14	1	0	0	0	0	0	0	0	347	
11:00 AM	10	329	42	1	10	1	0	0	1	0	0	0	1	395	
12:00 PM	6	305	53	0	12	0	0	0	0	0	0	0	0	376	
1:00 PM	8	365	34	0	12	1	0	0	1	0	0	0	1	422	
2:00 PM	11	373	44	0	14	2	0	0	1	0	0	0	0	445	
3:00 PM	6	374	37	0	20	1	0	0	1	0	0	0	0	439	
4:00 PM	12	397	45	0	12	1	0	0	0	0	0	0	0	467	
5:00 PM	17	363	25	0	8	2	0	0	0	0	0	0	0	415	
6:00 PM	10	309	28	0	5	4	0	0	0	0	0	0	0	356	
7:00 PM	14	333	27	1	2	3	0	0	0	1	0	0	0	381	
8:00 PM	19	273	28	0	2	1	0	1	0	0	0	0	1	325	
9:00 PM	6	236	10	0	3	1	0	0	0	0	0	0	0	256	
10:00 PM	3	131	11	0	1	0	0	0	1	0	0	0	0	147	
11:00 PM	0	63	3	0	1	0	0	0	0	0	0	0	0	67	
Total	156	5,461	612	3	185	22	0	1	6	2	0	0	3	6,451	
Percent	2.4%	84.7%	9.5%	0.0%	2.9%	0.3%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%		

Date Range: 7/22/2021 to 7/24/2021

Site Code: 02



Friday, July 23, 2021 Northbound

	FHWA Vehicle Classification													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	1	35	2	0	0	0	0	0	0	0	0	0	0	38
1:00 AM	0	14	2	0	0	0	0	0	0	0	0	0	0	16
2:00 AM	0	12	0	0	1	0	0	0	0	0	0	0	0	13
3:00 AM	1	5	0	0	0	0	0	0	0	0	0	0	0	6
4:00 AM	0	2	2	0	0	0	0	0	0	0	0	0	0	4
5:00 AM	1	15	8	0	0	0	0	0	0	0	0	0	0	24
6:00 AM	5	35	9	0	2	0	0	0	1	0	0	0	0	52
7:00 AM	4	82	14	0	7	1	0	0	0	0	0	0	0	108
8:00 AM	6	165	34	0	10	0	0	0	0	0	0	0	0	215
9:00 AM	3	220	38	2	12	0	0	0	1	0	0	0	0	276
10:00 AM	6	231	31	0	14	2	0	0	0	0	0	0	0	284
11:00 AM	8	307	31	0	21	0	0	0	0	1	0	0	2	370
12:00 PM	9	420	40	0	13	2	0	0	0	0	0	0	2	486
1:00 PM	8	453	45	0	12	5	0	1	1	1	0	0	0	526
2:00 PM	19	440	42	1	12	0	0	0	1	0	0	1	3	519
3:00 PM	8	469	70	0	8	2	0	1	1	2	0	0	0	561
4:00 PM	15	502	69	0	6	7	0	0	0	1	0	0	1	601
5:00 PM	29	500	33	0	2	4	0	0	0	0	0	0	1	569
6:00 PM	13	407	23	0	6	3	0	1	0	0	0	0	0	453
7:00 PM	13	363	30	0	2	2	0	0	0	1	0	0	0	411
8:00 PM	3	346	25	0	1	3	0	0	0	0	0	0	0	378
9:00 PM	6	276	28	0	2	2	0	0	0	0	0	0	0	314
10:00 PM	1	157	17	0	4	0	0	0	0	0	0	0	0	179
11:00 PM	1	108	5	0	1	0	0	0	0	0	0	0	0	115
Total	160	5,564	598	3	136	33	0	3	5	6	0	1	9	6,518
Percent	2.5%	85.4%	9.2%	0.0%	2.1%	0.5%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.1%	

Date Range: 7/22/2021 to 7/24/2021

Site Code: 02



Friday, July 23, 2021 Southbound

		FHWA Vehicle Classification													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume	
12:00 AM	0	22	1	0	0	0	0	0	0	0	0	0	0	23	
1:00 AM	0	9	0	0	0	0	0	0	0	0	0	0	0	9	
2:00 AM	0	6	1	0	0	0	0	0	0	0	0	0	0	7	
3:00 AM	0	6	2	0	1	0	0	0	0	0	0	0	0	9	
4:00 AM	0	14	1	0	1	0	0	0	0	0	0	0	0	16	
5:00 AM	1	27	7	0	2	1	0	0	0	0	0	0	0	38	
6:00 AM	10	136	23	1	8	1	0	0	0	0	0	0	0	179	
7:00 AM	16	250	38	1	15	2	0	0	0	0	0	0	1	323	
8:00 AM	13	303	50	2	19	2	0	0	0	0	0	0	0	389	
9:00 AM	7	322	54	3	11	2	0	0	0	0	0	0	0	399	
10:00 AM	16	262	32	1	11	2	0	0	0	0	0	0	1	325	
11:00 AM	7	361	44	0	18	1	0	1	0	0	0	0	1	433	
12:00 PM	16	385	38	1	8	1	0	1	0	0	0	0	0	450	
1:00 PM	14	388	36	2	11	6	0	1	0	1	0	0	0	459	
2:00 PM	8	462	29	1	12	3	0	0	0	1	0	0	0	516	
3:00 PM	8	454	41	1	7	2	0	0	0	2	0	0	0	515	
4:00 PM	14	371	33	0	8	2	0	1	0	0	0	0	0	429	
5:00 PM	11	376	37	0	3	0	0	0	0	0	0	0	0	427	
6:00 PM	10	339	20	0	3	2	0	0	0	0	0	0	0	374	
7:00 PM	19	307	22	0	5	2	0	0	0	1	0	0	0	356	
8:00 PM	9	311	26	0	5	2	0	0	1	0	0	0	0	354	
9:00 PM	7	272	14	0	2	3	0	0	0	1	0	0	0	299	
10:00 PM	0	167	12	0	1	1	0	0	1	0	0	0	0	182	
11:00 PM	1	92	7	0	0	1	0	0	0	0	0	0	0	101	
Total	187	5,642	568	13	151	36	0	4	2	6	0	0	3	6,612	
Percent	2.8%	85.3%	8.6%	0.2%	2.3%	0.5%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%		

Date Range: 7/22/2021 to 7/24/2021

Site Code: 02



Saturday, July 24, 2021 Northbound

	FHWA Vehicle Classification													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	1	49	1	0	0	0	0	0	0	0	0	0	0	51
1:00 AM	0	40	3	0	0	0	0	0	0	0	0	0	0	43
2:00 AM	0	21	1	0	0	1	0	0	0	0	0	0	0	23
3:00 AM	0	9	0	0	0	0	0	0	0	0	0	0	0	9
4:00 AM	0	8	0	0	0	0	0	0	0	0	0	0	0	8
5:00 AM	1	10	1	0	1	0	0	0	0	0	0	0	0	13
6:00 AM	1	17	4	0	1	0	0	0	0	0	0	0	0	23
7:00 AM	6	53	6	0	2	0	0	0	0	0	0	0	0	67
8:00 AM	5	108	16	0	2	0	0	0	0	0	0	0	0	131
9:00 AM	23	148	39	0	4	0	0	0	0	1	0	0	0	215
10:00 AM	25	224	19	0	9	0	0	0	1	1	0	0	0	279
11:00 AM	30	348	36	0	9	1	0	1	1	0	0	0	0	426
12:00 PM	17	378	25	0	8	0	0	1	0	1	0	0	2	432
1:00 PM	22	421	39	1	6	3	0	0	1	1	0	0	1	495
2:00 PM	21	383	35	0	2	4	0	0	0	1	0	0	1	447
3:00 PM	23	403	33	0	4	4	0	1	0	0	0	0	2	470
4:00 PM	11	391	37	0	4	3	0	0	0	0	0	0	0	446
5:00 PM	7	402	38	0	4	3	0	0	0	0	0	0	0	454
6:00 PM	8	398	33	0	5	6	0	0	0	1	0	0	0	451
7:00 PM	7	381	27	0	4	1	0	0	0	0	0	0	0	420
8:00 PM	11	352	33	0	3	2	0	1	0	0	0	0	1	403
9:00 PM	6	304	15	0	0	2	0	0	0	0	0	0	0	327
10:00 PM	1	157	7	0	2	0	0	0	0	0	0	0	0	167
11:00 PM	2	105	6	0	0	1	0	0	0	0	0	0	0	114
Total	228	5,110	454	1	70	31	0	4	3	6	0	0	7	5,914
Percent	3.9%	86.4%	7.7%	0.0%	1.2%	0.5%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%	

Date Range: 7/22/2021 to 7/24/2021

Site Code: 02



Saturday, July 24, 2021 Southbound

						FHWA Ve	hicle Clas	sification						Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	1	57	4	0	1	1	0	0	0	0	0	0	0	64
1:00 AM	0	38	1	0	0	0	0	1	0	0	0	0	0	40
2:00 AM	0	19	0	0	0	0	0	0	0	0	0	0	0	19
3:00 AM	0	5	1	0	1	0	0	0	0	0	0	0	0	7
4:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	4
5:00 AM	1	9	4	0	1	0	0	0	0	0	0	0	0	15
6:00 AM	5	42	4	0	2	0	0	0	0	0	0	0	0	53
7:00 AM	16	73	9	0	2	0	0	0	0	0	0	0	1	101
8:00 AM	16	147	8	0	2	2	0	0	0	0	0	0	0	175
9:00 AM	20	197	36	0	2	1	0	0	0	0	0	0	1	257
10:00 AM	26	294	23	0	7	1	0	0	0	0	0	0	0	351
11:00 AM	28	334	25	0	13	3	0	0	0	0	0	0	0	403
12:00 PM	19	325	30	0	8	3	0	1	0	0	0	0	0	386
1:00 PM	21	315	32	0	5	4	0	0	1	1	0	0	0	379
2:00 PM	21	361	28	0	3	4	0	0	1	0	0	0	0	418
3:00 PM	17	396	39	0	7	3	0	0	0	0	0	0	0	462
4:00 PM	14	357	36	0	3	2	0	1	0	0	0	0	1	414
5:00 PM	23	351	31	0	5	5	0	0	0	0	0	0	0	415
6:00 PM	9	369	31	0	2	6	0	0	1	0	0	0	0	418
7:00 PM	6	327	32	0	2	4	0	2	0	0	0	0	0	373
8:00 PM	9	327	15	0	4	1	0	1	0	0	0	0	0	357
9:00 PM	8	293	8	0	3	1	0	0	1	1	0	0	0	315
10:00 PM	5	171	10	0	0	0	0	0	0	0	0	0	0	186
11:00 PM	0	91	3	0	1	0	0	0	0	0	0	0	0	95
Total	265	4,901	411	0	74	41	0	6	4	2	0	0	3	5,707
Percent	4.6%	85.9%	7.2%	0.0%	1.3%	0.7%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.1%	

Date Range: 7/22/2021 to 7/24/2021

Site Code: 02



Total Study Average Northbound

						FHWA Ve	hicle Clas	sification						Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	1	33	1	0	0	0	0	0	0	0	0	0	0	35
1:00 AM	0	21	2	0	0	0	0	0	0	0	0	0	0	23
2:00 AM	0	12	1	0	0	0	0	0	0	0	0	0	0	13
3:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	5
4:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	6
5:00 AM	1	14	4	0	1	0	0	0	0	0	0	0	0	20
6:00 AM	3	30	8	0	3	0	0	0	0	0	0	0	0	44
7:00 AM	4	79	16	0	4	0	0	0	0	0	0	0	0	103
8:00 AM	5	152	25	0	8	0	0	0	0	0	0	0	0	190
9:00 AM	9	191	37	1	11	0	0	0	0	0	0	0	0	249
10:00 AM	13	228	29	0	11	1	0	0	0	0	0	0	0	282
11:00 AM	14	323	35	0	15	1	0	0	1	0	0	0	1	390
12:00 PM	12	383	36	0	12	1	0	0	0	0	0	0	1	445
1:00 PM	13	425	46	0	12	3	0	0	1	1	0	0	0	501
2:00 PM	16	418	42	0	10	2	0	0	0	0	0	0	1	489
3:00 PM	14	430	55	0	8	2	0	1	0	1	0	0	1	512
4:00 PM	12	444	54	0	6	4	0	0	0	1	0	0	0	521
5:00 PM	18	464	36	0	5	3	0	0	0	0	0	0	1	527
6:00 PM	12	415	32	0	6	3	0	1	0	0	0	0	0	469
7:00 PM	14	375	29	0	3	1	0	0	0	0	0	0	0	422
8:00 PM	8	344	27	0	2	3	0	0	0	0	0	0	0	384
9:00 PM	5	278	19	0	1	1	0	0	0	0	0	0	0	304
10:00 PM	1	158	10	0	2	0	0	0	0	0	0	0	0	171
11:00 PM	1	91	6	0	0	0	0	0	0	0	0	0	0	98
Total	176	5,318	551	1	120	25	0	2	2	3	0	0	5	6,203
Percent	2.8%	85.7%	8.9%	0.0%	1.9%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	

Note: Average only condsidered on days with 24-hours of data.

Date Range: 7/22/2021 to 7/24/2021

Site Code: 02



Total Study Average Southbound

						FHWA Ve	hicle Clas	sification						Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	32	2	0	0	0	0	0	0	0	0	0	0	34
1:00 AM	0	19	1	0	0	0	0	0	0	0	0	0	0	20
2:00 AM	0	10	1	0	0	0	0	0	0	0	0	0	0	11
3:00 AM	0	4	1	0	1	0	0	0	0	0	0	0	0	6
4:00 AM	0	10	2	0	2	0	0	0	0	0	0	0	0	14
5:00 AM	1	25	7	0	2	0	0	0	0	0	0	0	0	35
6:00 AM	7	110	17	0	7	1	0	0	0	0	0	0	0	142
7:00 AM	13	209	35	0	10	1	0	0	0	0	0	0	1	269
8:00 AM	11	277	36	1	14	1	0	0	0	0	0	0	0	340
9:00 AM	12	306	43	1	10	1	0	0	0	0	0	0	0	373
10:00 AM	16	282	30	0	11	1	0	0	0	0	0	0	0	340
11:00 AM	15	341	37	0	14	2	0	0	0	0	0	0	1	410
12:00 PM	14	338	40	0	9	1	0	1	0	0	0	0	0	403
1:00 PM	14	356	34	1	9	4	0	0	1	1	0	0	0	420
2:00 PM	13	399	34	0	10	3	0	0	1	0	0	0	0	460
3:00 PM	10	408	39	0	11	2	0	0	0	1	0	0	0	471
4:00 PM	13	375	38	0	8	2	0	1	0	0	0	0	0	437
5:00 PM	17	363	31	0	5	2	0	0	0	0	0	0	0	418
6:00 PM	10	339	26	0	3	4	0	0	0	0	0	0	0	382
7:00 PM	13	322	27	0	3	3	0	1	0	1	0	0	0	370
8:00 PM	12	304	23	0	4	1	0	1	0	0	0	0	0	345
9:00 PM	7	267	11	0	3	2	0	0	0	1	0	0	0	291
10:00 PM	3	156	11	0	1	0	0	0	1	0	0	0	0	172
11:00 PM	0	82	4	0	1	0	0	0	0	0	0	0	0	87
Total	201	5,334	530	3	138	31	0	4	3	4	0	0	2	6,250
Percent	3.2%	85.3%	8.5%	0.0%	2.2%	0.5%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	

Note: Average only condsidered on days with 24-hours of data.

Date Range: 7/22/2021 to 7/24/2021

Site Code: 02



3-Day (Tuesday - Thursday) Average Northbound

						FHWA Ve	hicle Clas	sification						Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	16	1	0	0	0	0	0	0	0	0	0	0	17
1:00 AM	0	10	0	0	0	0	0	0	0	0	0	0	0	10
2:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
3:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	6
5:00 AM	0	16	3	0	2	0	0	0	0	0	0	0	0	21
6:00 AM	3	37	11	0	5	0	0	0	0	0	0	0	0	56
7:00 AM	2	103	28	1	4	0	0	0	0	0	0	0	0	138
8:00 AM	4	182	26	0	13	0	0	0	0	1	0	0	0	226
9:00 AM	2	205	34	0	16	1	0	0	0	0	0	0	0	258
10:00 AM	8	228	36	0	10	1	0	0	0	0	0	0	1	284
11:00 AM	5	314	39	0	16	1	0	0	1	0	0	0	0	376
12:00 PM	9	350	44	0	16	1	0	0	0	0	0	0	0	420
1:00 PM	10	402	53	0	17	1	0	0	0	0	0	0	0	483
2:00 PM	8	432	50	0	15	2	0	0	0	0	0	0	0	507
3:00 PM	11	417	62	0	11	1	0	0	0	1	0	0	1	504
4:00 PM	11	440	56	0	9	2	0	0	0	1	0	0	0	519
5:00 PM	18	491	36	0	8	2	0	1	0	1	0	0	1	558
6:00 PM	14	440	39	0	8	1	0	1	0	0	0	0	0	503
7:00 PM	22	381	29	0	2	1	0	0	0	0	0	0	1	436
8:00 PM	11	334	24	0	1	5	0	0	0	0	0	0	0	375
9:00 PM	3	253	14	0	2	0	0	0	0	0	0	0	0	272
10:00 PM	2	160	7	0	1	0	0	0	0	0	0	0	0	170
11:00 PM	1	61	8	0	0	0	0	0	0	0	0	0	0	70
Total	144	5,281	602	1	156	19	0	2	1	4	0	0	4	6,214
Percent	2.3%	85.0%	9.7%	0.0%	2.5%	0.3%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	

Date Range: 7/22/2021 to 7/24/2021

Site Code: 02



3-Day (Tuesday - Thursday) Average Southbound

						FHWA Ve	hicle Clas	sification						Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	16	1	0	0	0	0	0	0	0	0	0	0	17
1:00 AM	0	9	1	0	0	0	0	0	0	0	0	0	0	10
2:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	6
3:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
4:00 AM	0	13	4	0	5	0	0	0	0	0	0	0	0	22
5:00 AM	2	39	11	0	2	0	0	0	0	0	0	0	0	54
6:00 AM	6	153	24	0	12	2	0	0	0	0	0	0	0	197
7:00 AM	8	304	58	0	12	2	0	0	0	0	0	0	0	384
8:00 AM	3	382	49	1	21	0	0	0	0	0	0	0	0	456
9:00 AM	8	398	39	0	17	0	0	0	1	1	0	0	0	464
10:00 AM	7	289	36	0	14	1	0	0	0	0	0	0	0	347
11:00 AM	10	329	42	1	10	1	0	0	1	0	0	0	1	395
12:00 PM	6	305	53	0	12	0	0	0	0	0	0	0	0	376
1:00 PM	8	365	34	0	12	1	0	0	1	0	0	0	1	422
2:00 PM	11	373	44	0	14	2	0	0	1	0	0	0	0	445
3:00 PM	6	374	37	0	20	1	0	0	1	0	0	0	0	439
4:00 PM	12	397	45	0	12	1	0	0	0	0	0	0	0	467
5:00 PM	17	363	25	0	8	2	0	0	0	0	0	0	0	415
6:00 PM	10	309	28	0	5	4	0	0	0	0	0	0	0	356
7:00 PM	14	333	27	1	2	3	0	0	0	1	0	0	0	381
8:00 PM	19	273	28	0	2	1	0	1	0	0	0	0	1	325
9:00 PM	6	236	10	0	3	1	0	0	0	0	0	0	0	256
10:00 PM	3	131	11	0	1	0	0	0	1	0	0	0	0	147
11:00 PM	0	63	3	0	1	0	0	0	0	0	0	0	0	67
Total	156	5,461	612	3	185	22	0	1	6	2	0	0	3	6,451
Percent	2.4%	84.7%	9.5%	0.0%	2.9%	0.3%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	

Vehicle Speed Report Summary



Location: Lake Washington Blvd S-O Marsh Park Crossing

Count Direction: Northbound / Southbound

Date Range: 7/22/2021 to 7/24/2021

Site Code: 02

								Speed	d Range ((mph)								Total
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
								Stud	y Total									
Northbound	139	719	2,153	5,572	6,864	2,674	439	70	12	1	3	0	0	0	0	0	0	18,646
Percent	0.7%	3.9%	11.5%	29.9%	36.8%	14.3%	2.4%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound	176	717	2,191	4,583	6,895	3,593	556	50	6	3	0	0	0	0	0	0	0	18,770
Percent	0.9%	3.8%	11.7%	24.4%	36.7%	19.1%	3.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total	315	1,436	4,344	10,155	13,759	6,267	995	120	18	4	3	0	0	0	0	0	0	37,416
Percent	0.8%	3.8%	11.6%	27.1%	36.8%	16.7%	2.7%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Total Study Percentile Spee	ed Summa	ıry	Total Study Spee	d Statistics	
Northbound			Northbound		
50th Percentile (Median)	25.5	mph	Mean (Average) Speed	25.2	mph
85th Percentile	30.4	mph	10 mph Pace	20.9 - 30.9	mph
95th Percentile	33.6	mph	Percent in Pace	67.3	%
Southbound			Southbound		
50th Percentile (Median)	26.4	mph	Mean (Average) Speed	25.7	mph
85th Percentile	31.2	mph	10 mph Pace	22.0 - 32.0	mph
95th Percentile	34.1	mph	Percent in Pace	64.2	%

Date Range: 7/22/2021 to 7/24/2021

Site Code: 02



Thursday, July 22, 2021 Northbound

Speed Range (mph) Total 70 - 75 75 - 80 Time 0 - 10 10 - 15 15 - 20 20 - 25 25 - 30 30 - 35 35 - 40 40 - 45 45 - 50 50 - 55 55 - 60 60 - 65 65 - 70 80 - 85 85 + Volume 12:00 AM 1:00 AM 2:00 AM 3:00 AM 4:00 AM 5:00 AM 6:00 AM 7:00 AM 8:00 AM 9:00 AM 10:00 AM 11:00 AM 12:00 PM 1:00 PM 2:00 PM 3:00 PM 4:00 PM 5:00 PM 6:00 PM 7:00 PM 8:00 PM 9:00 PM 10:00 PM 11:00 PM 6,214 Total 1,557 2,695 1,200 Percent 0.4% 2.0% 6.5% 25.1% 43.4% 19.3% 2.8% 0.4% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%

Daily Percentile Speed	Summary		Speed Stat	istics	
50th Percentile (Median)	27.0	mph	Mean (Average) Speed	26.6	mph
85th Percentile	31.2	mph	10 mph Pace	21.8 - 31.8	mph
95th Percentile	34.1	mph	Percent in Pace	73.2	%

Date Range: 7/22/2021 to 7/24/2021

Site Code: 02



Thursday, July 22, 2021

Southbound Speed Range (mph) Total 70 - 75 Time 0 - 10 10 - 15 15 - 20 20 - 25 25 - 30 30 - 35 35 - 40 40 - 45 45 - 50 50 - 55 55 - 60 60 - 65 65 - 70 75 - 80 80 - 85 85 + Volume 12:00 AM 1:00 AM 2:00 AM 3:00 AM 4:00 AM 5:00 AM 6:00 AM 7:00 AM 8:00 AM 9:00 AM 10:00 AM 11:00 AM 12:00 PM 1:00 PM 2:00 PM 3:00 PM 4:00 PM 5:00 PM 6:00 PM 7:00 PM 8:00 PM 9:00 PM 10:00 PM 11:00 PM 6,451 Total 1,292 2,671 1,672

Daily Percentile Speed	Summary		Speed Stat	istics	
50th Percentile (Median)	27.7	mph	Mean (Average) Speed	27.2	mph
85th Percentile	32.1	mph	10 mph Pace	22.9 - 32.9	mph
95th Percentile	34.4	mph	Percent in Pace	71.65	%

41.4%

25.9%

3.5%

0.3%

0.0%

0.0%

0.0%

0.0%

0.0%

0.0%

0.0%

0.0%

0.0%

20.0%

Percent

0.5%

2.0%

6.3%

Date Range: 7/22/2021 to 7/24/2021

Site Code: 02



Friday, July 23, 2021 Northbound

								Spee	d Range	(mph)								Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	1	0	1	11	14	7	4	0	0	0	0	0	0	0	0	0	38
1:00 AM	0	0	0	2	3	7	3	1	0	0	0	0	0	0	0	0	0	16
2:00 AM	0	0	0	0	5	7	0	0	1	0	0	0	0	0	0	0	0	13
3:00 AM	0	0	1	0	0	2	3	0	0	0	0	0	0	0	0	0	0	6
4:00 AM	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	4
5:00 AM	0	0	1	1	5	12	5	0	0	0	0	0	0	0	0	0	0	24
6:00 AM	1	1	3	4	13	16	14	0	0	0	0	0	0	0	0	0	0	52
7:00 AM	1	1	3	7	30	50	15	1	0	0	0	0	0	0	0	0	0	108
8:00 AM	0	2	3	25	92	78	14	1	0	0	0	0	0	0	0	0	0	215
9:00 AM	2	4	2	38	139	78	11	1	1	0	0	0	0	0	0	0	0	276
10:00 AM	2	6	10	44	136	75	8	3	0	0	0	0	0	0	0	0	0	284
11:00 AM	0	4	6	129	168	56	7	0	0	0	0	0	0	0	0	0	0	370
12:00 PM	6	26	69	137	217	28	3	0	0	0	0	0	0	0	0	0	0	486
1:00 PM	3	42	74	222	155	29	1	0	0	0	0	0	0	0	0	0	0	526
2:00 PM	9	24	120	184	147	32	3	0	0	0	0	0	0	0	0	0	0	519
3:00 PM	5	33	130	196	139	54	4	0	0	0	0	0	0	0	0	0	0	561
4:00 PM	7	52	142	223	138	36	2	0	1	0	0	0	0	0	0	0	0	601
5:00 PM	8	15	105	231	169	32	3	6	0	0	0	0	0	0	0	0	0	569
6:00 PM	2	38	53	170	148	39	3	0	0	0	0	0	0	0	0	0	0	453
7:00 PM	5	12	34	149	173	35	3	0	0	0	0	0	0	0	0	0	0	411
8:00 PM	3	15	69	143	120	27	1	0	0	0	0	0	0	0	0	0	0	378
9:00 PM	3	8	23	101	159	15	5	0	0	0	0	0	0	0	0	0	0	314
10:00 PM	1	1	3	16	88	52	14	3	1	0	0	0	0	0	0	0	0	179
11:00 PM	0	0	1	8	51	34	17	3	1	0	0	0	0	0	0	0	0	115
Total	58	285	852	2,032	2,307	810	146	23	5	0	0	0	0	0	0	0	0	6,518
Percent	0.9%	4.4%	13.1%	31.2%	35.4%	12.4%	2.2%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed	Summary		Speed Stat	istics	
50th Percentile (Median)	25.1	mph	Mean (Average) Speed	24.7	mph
85th Percentile	30.0	mph	10 mph Pace	20.5 - 30.5	mph
95th Percentile	33.2	mph	Percent in Pace	66.8	%

Date Range: 7/22/2021 to 7/24/2021

Site Code: 02



Friday, July 23, 2021 Southbound

								Spee	d Range	(mph)								Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	2	1	2	5	8	4	0	1	0	0	0	0	0	0	0	0	23
1:00 AM	0	1	0	1	2	2	3	0	0	0	0	0	0	0	0	0	0	9
2:00 AM	0	0	0	0	2	3	2	0	0	0	0	0	0	0	0	0	0	7
3:00 AM	0	0	0	0	0	4	4	0	0	1	0	0	0	0	0	0	0	9
4:00 AM	0	0	0	1	3	11	0	1	0	0	0	0	0	0	0	0	0	16
5:00 AM	1	0	0	0	6	21	10	0	0	0	0	0	0	0	0	0	0	38
6:00 AM	0	3	2	7	48	87	30	2	0	0	0	0	0	0	0	0	0	179
7:00 AM	3	2	10	13	101	153	39	2	0	0	0	0	0	0	0	0	0	323
8:00 AM	1	6	8	35	150	160	26	3	0	0	0	0	0	0	0	0	0	389
9:00 AM	2	1	11	32	210	119	23	1	0	0	0	0	0	0	0	0	0	399
10:00 AM	7	6	26	61	145	73	6	1	0	0	0	0	0	0	0	0	0	325
11:00 AM	3	1	19	85	227	93	5	0	0	0	0	0	0	0	0	0	0	433
12:00 PM	0	11	48	125	196	65	5	0	0	0	0	0	0	0	0	0	0	450
1:00 PM	5	20	69	133	185	41	6	0	0	0	0	0	0	0	0	0	0	459
2:00 PM	0	18	77	183	191	42	5	0	0	0	0	0	0	0	0	0	0	516
3:00 PM	3	18	114	187	166	27	0	0	0	0	0	0	0	0	0	0	0	515
4:00 PM	7	32	103	135	116	33	2	0	1	0	0	0	0	0	0	0	0	429
5:00 PM	1	14	60	141	174	33	4	0	0	0	0	0	0	0	0	0	0	427
6:00 PM	4	13	32	126	164	33	1	1	0	0	0	0	0	0	0	0	0	374
7:00 PM	7	11	66	117	112	39	4	0	0	0	0	0	0	0	0	0	0	356
8:00 PM	4	8	88	145	90	16	3	0	0	0	0	0	0	0	0	0	0	354
9:00 PM	2	9	56	107	107	16	2	0	0	0	0	0	0	0	0	0	0	299
10:00 PM	1	1	6	27	95	43	7	2	0	0	0	0	0	0	0	0	0	182
11:00 PM	0	0	1	8	32	44	13	3	0	0	0	0	0	0	0	0	0	101
Total	51	177	797	1,671	2,527	1,166	204	16	2	1	0	0	0	0	0	0	0	6,612
Percent	0.8%	2.7%	12.1%	25.3%	38.2%	17.6%	3.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed	Summary		Speed Stat	istics	
50th Percentile (Median)	26.3	mph	Mean (Average) Speed	25.7	mph
85th Percentile	31.0	mph	10 mph Pace	21.3 - 31.3	mph
95th Percentile	34.1	mph	Percent in Pace	65.91	%

Date Range: 7/22/2021 to 7/24/2021

Site Code: 02



Saturday, July 24, 2021

Northbound

								Spee	d Range	(mph)								Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	0	0	6	17	22	5	1	0	0	0	0	0	0	0	0	0	51
1:00 AM	0	0	0	0	8	18	16	1	0	0	0	0	0	0	0	0	0	43
2:00 AM	2	0	2	0	3	10	2	3	1	0	0	0	0	0	0	0	0	23
3:00 AM	0	0	0	0	4	2	2	1	0	0	0	0	0	0	0	0	0	9
4:00 AM	0	0	1	0	1	2	3	0	0	0	1	0	0	0	0	0	0	8
5:00 AM	0	0	1	0	4	4	2	2	0	0	0	0	0	0	0	0	0	13
6:00 AM	0	0	1	1	4	11	4	2	0	0	0	0	0	0	0	0	0	23
7:00 AM	0	3	4	3	24	25	7	1	0	0	0	0	0	0	0	0	0	67
8:00 AM	0	1	4	7	57	49	12	0	1	0	0	0	0	0	0	0	0	131
9:00 AM	0	12	21	26	94	49	10	1	2	0	0	0	0	0	0	0	0	215
10:00 AM	2	17	24	36	141	50	9	0	0	0	0	0	0	0	0	0	0	279
11:00 AM	4	21	48	147	167	37	2	0	0	0	0	0	0	0	0	0	0	426
12:00 PM	2	14	32	144	184	49	6	1	0	0	0	0	0	0	0	0	0	432
1:00 PM	7	28	106	149	163	37	4	1	0	0	0	0	0	0	0	0	0	495
2:00 PM	0	32	74	197	112	28	4	0	0	0	0	0	0	0	0	0	0	447
3:00 PM	13	36	150	160	94	16	1	0	0	0	0	0	0	0	0	0	0	470
4:00 PM	8	36	102	179	96	23	1	1	0	0	0	0	0	0	0	0	0	446
5:00 PM	4	34	79	214	110	12	0	1	0	0	0	0	0	0	0	0	0	454
6:00 PM	3	35	77	201	104	29	2	0	0	0	0	0	0	0	0	0	0	451
7:00 PM	6	13	52	178	134	34	2	1	0	0	0	0	0	0	0	0	0	420
8:00 PM	3	15	85	177	97	26	0	0	0	0	0	0	0	0	0	0	0	403
9:00 PM	3	4	31	132	131	24	1	1	0	0	0	0	0	0	0	0	0	327
10:00 PM	1	5	0	19	79	52	9	0	1	1	0	0	0	0	0	0	0	167
11:00 PM	1	1	1	7	34	55	13	2	0	0	0	0	0	0	0	0	0	114
Total	59	307	895	1,983	1,862	664	117	20	5	1	1	0	0	0	0	0	0	5,914
Percent	1.0%	5.2%	15.1%	33.5%	31.5%	11.2%	2.0%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed	Summary		Speed Stat	istics	
50th Percentile (Median)	24.3	mph	Mean (Average) Speed	24.2	mph
85th Percentile	29.6	mph	10 mph Pace	19.8 - 29.8	mph
95th Percentile	33.0	mph	Percent in Pace	65.1	%

Date Range: 7/22/2021 to 7/24/2021

Site Code: 02



Saturday, July 24, 2021

Southbound

								Spee	d Range	(mph)								Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	1	1	2	6	18	27	9	0	0	0	0	0	0	0	0	0	0	64
1:00 AM	0	0	1	2	7	16	12	2	0	0	0	0	0	0	0	0	0	40
2:00 AM	0	0	0	0	5	8	4	2	0	0	0	0	0	0	0	0	0	19
3:00 AM	0	0	0	0	2	3	2	0	0	0	0	0	0	0	0	0	0	7
4:00 AM	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	4
5:00 AM	0	1	0	0	3	10	0	1	0	0	0	0	0	0	0	0	0	15
6:00 AM	0	0	3	4	12	22	11	1	0	0	0	0	0	0	0	0	0	53
7:00 AM	2	3	10	8	20	41	16	1	0	0	0	0	0	0	0	0	0	101
8:00 AM	0	3	13	10	66	70	11	2	0	0	0	0	0	0	0	0	0	175
9:00 AM	0	8	18	38	88	90	15	0	0	0	0	0	0	0	0	0	0	257
10:00 AM	4	7	36	43	162	90	6	3	0	0	0	0	0	0	0	0	0	351
11:00 AM	9	26	68	96	160	38	6	0	0	0	0	0	0	0	0	0	0	403
12:00 PM	5	28	59	112	132	43	7	0	0	0	0	0	0	0	0	0	0	386
1:00 PM	6	25	71	118	125	34	0	0	0	0	0	0	0	0	0	0	0	379
2:00 PM	6	49	101	129	107	23	3	0	0	0	0	0	0	0	0	0	0	418
3:00 PM	14	70	134	152	81	11	0	0	0	0	0	0	0	0	0	0	0	462
4:00 PM	8	41	82	124	124	35	0	0	0	0	0	0	0	0	0	0	0	414
5:00 PM	17	70	87	133	79	25	1	0	3	0	0	0	0	0	0	0	0	415
6:00 PM	8	40	106	153	94	15	2	0	0	0	0	0	0	0	0	0	0	418
7:00 PM	5	21	79	149	102	17	0	0	0	0	0	0	0	0	0	0	0	373
8:00 PM	6	11	64	192	73	10	1	0	0	0	0	0	0	0	0	0	0	357
9:00 PM	2	4	50	112	113	33	1	0	0	0	0	0	0	0	0	0	0	315
10:00 PM	0	1	2	33	95	50	4	1	0	0	0	0	0	0	0	0	0	186
11:00 PM	0	1	3	6	28	41	12	3	1	0	0	0	0	0	0	0	0	95
Total	93	410	989	1,620	1,697	755	123	16	4	0	0	0	0	0	0	0	0	5,707
Percent	1.6%	7.2%	17.3%	28.4%	29.7%	13.2%	2.2%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed	Summary		Speed Stat	istics	
50th Percentile (Median)	24.3	mph	Mean (Average) Speed	23.9	mph
85th Percentile	30.1	mph	10 mph Pace	20.6 - 30.6	mph
95th Percentile	33.3	mph	Percent in Pace	58.3	%

Date Range: 7/22/2021 to 7/24/2021

Site Code: 02



Total Study Average

Northbound

								Spee	d Range	(mph)								Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	0	0	2	10	15	5	2	0	0	0	0	0	0	0	0	0	34
1:00 AM	0	0	0	1	5	9	7	1	0	0	0	0	0	0	0	0	0	23
2:00 AM	1	0	1	0	3	6	1	1	1	0	0	0	0	0	0	0	0	14
3:00 AM	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0	0	6
4:00 AM	0	0	0	0	1	3	1	0	0	0	0	0	0	0	0	0	0	5
5:00 AM	0	0	1	1	4	8	4	2	0	0	0	0	0	0	0	0	0	20
6:00 AM	0	1	2	2	11	15	10	1	0	0	0	0	0	0	0	0	0	42
7:00 AM	0	1	3	6	35	46	10	1	0	0	0	0	0	0	0	0	0	102
8:00 AM	0	2	3	16	83	73	13	0	0	0	0	0	0	0	0	0	0	190
9:00 AM	1	6	8	29	120	71	12	1	1	0	0	0	0	0	0	0	0	249
10:00 AM	1	11	13	36	142	68	9	1	0	0	0	0	0	0	0	0	0	281
11:00 AM	1	10	21	104	179	69	7	0	0	0	0	0	0	0	0	0	0	391
12:00 PM	4	15	39	122	206	55	6	1	0	0	0	0	0	0	0	0	0	448
1:00 PM	3	24	71	174	179	45	5	1	0	0	0	0	0	0	0	0	0	502
2:00 PM	5	22	79	185	158	37	5	1	0	0	0	0	0	0	0	0	0	492
3:00 PM	6	28	107	176	153	38	4	0	0	0	0	0	0	0	0	0	0	512
4:00 PM	6	37	103	185	148	40	3	0	1	0	0	0	0	0	0	0	0	523
5:00 PM	4	20	79	213	167	38	3	2	0	0	0	0	0	0	0	0	0	526
6:00 PM	2	27	55	169	157	52	5	1	0	0	0	0	0	0	0	0	0	468
7:00 PM	5	16	46	163	155	35	2	1	0	0	0	0	0	0	0	0	0	423
8:00 PM	3	13	66	149	124	29	1	0	0	0	0	0	0	0	0	0	0	385
9:00 PM	2	4	19	100	137	35	5	1	0	0	1	0	0	0	0	0	0	304
10:00 PM	1	2	2	17	73	61	13	1	1	0	0	0	0	0	0	0	0	171
11:00 PM	0	1	1	7	34	40	13	3	0	0	0	0	0	0	0	0	0	99
Total	45	240	719	1,857	2,286	890	146	22	4	0	1	0	0	0	0	0	0	6,210
Percent	0.7%	3.9%	11.6%	29.9%	36.8%	14.3%	2.4%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Spe	ed Summa	ıry	Total Study Spee	d Statistics	
50th Percentile (Median)	25.5	mph	Mean (Average) Speed	25.2	mph
85th Percentile	30.4	mph	10 mph Pace	20.9 - 30.9	mph
95th Percentile	33.6	mph	Percent in Pace	67.3	%

Date Range: 7/22/2021 to 7/24/2021

Site Code: 02

DATA SOLUTIONS

Total Study Average Southbound

								Spee	d Range ((mph)								Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	1	1	3	11	13	5	0	0	0	0	0	0	0	0	0	0	34
1:00 AM	0	0	0	2	4	7	6	1	0	0	0	0	0	0	0	0	0	20
2:00 AM	0	0	0	0	3	4	2	1	0	0	0	0	0	0	0	0	0	10
3:00 AM	0	0	0	0	1	3	2	0	0	0	0	0	0	0	0	0	0	6
4:00 AM	0	0	0	0	2	9	3	0	0	0	0	0	0	0	0	0	0	14
5:00 AM	0	0	0	0	5	21	7	1	0	0	0	0	0	0	0	0	0	34
6:00 AM	1	1	2	5	30	79	23	2	0	0	0	0	0	0	0	0	0	143
7:00 AM	2	2	8	11	90	125	29	2	0	0	0	0	0	0	0	0	0	269
8:00 AM	0	3	9	20	137	146	23	2	0	0	0	0	0	0	0	0	0	340
9:00 AM	1	4	13	38	158	139	19	1	0	0	0	0	0	0	0	0	0	373
10:00 AM	4	5	23	57	152	92	7	1	0	0	0	0	0	0	0	0	0	341
11:00 AM	4	11	32	81	194	80	8	0	0	0	0	0	0	0	0	0	0	410
12:00 PM	2	15	41	96	183	62	5	0	0	0	0	0	0	0	0	0	0	404
1:00 PM	4	19	60	126	159	49	3	0	0	0	0	0	0	0	0	0	0	420
2:00 PM	3	27	78	141	164	42	5	0	0	0	0	0	0	0	0	0	0	460
3:00 PM	7	32	98	147	146	41	1	0	0	0	0	0	0	0	0	0	0	472
4:00 PM	6	31	75	135	145	44	1	0	0	0	0	0	0	0	0	0	0	437
5:00 PM	7	31	61	121	133	58	6	0	1	0	0	0	0	0	0	0	0	418
6:00 PM	5	20	60	128	140	27	3	0	0	0	0	0	0	0	0	0	0	383
7:00 PM	6	21	62	132	121	27	2	0	0	0	0	0	0	0	0	0	0	371
8:00 PM	3	10	61	157	93	19	2	0	0	0	0	0	0	0	0	0	0	345
9:00 PM	2	5	40	96	115	28	3	0	0	0	0	0	0	0	0	0	0	289
10:00 PM	0	1	4	24	86	48	8	1	0	0	0	0	0	0	0	0	0	172
11:00 PM	0	1	1	6	27	37	12	2	0	0	0	0	0	0	0	0	0	86
Total	57	240	729	1,526	2,299	1,200	185	14	1	0	0	0	0	0	0	0	0	6,251
Percent	0.9%	3.8%	11.7%	24.4%	36.8%	19.2%	3.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Spe	ed Summa	ıry	Total Study Spee	d Statistics	
50th Percentile (Median)	26.4	mph	Mean (Average) Speed	25.7	mph
85th Percentile	31.2	mph	10 mph Pace	22.0 - 32.0	mph
95th Percentile	34.1	mph	Percent in Pace	64.2	%



Location: Lake Washington Blvd S-O Marsh Park Crossing Date Range: 7/22/2021 - 7/28/2021 Site Code: 02

		hursda	ıy		Friday		;	Saturda	у		Sunda	у		Monda	у		Tuesda	у	W	/ednesd	lay			
	7	/22/202	:1	7	/23/202	1	7	/24/202	:1	7	7/25/202	21		7/26/202	21	7	7/27/202	21		7/28/202	21	Mid-V	Veek Av	rerage
Time	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	17	17	34	38	23	61	51	64	115	-	-	-	-	-	-	-	-	-	-	-	-	17	17	34
1:00 AM	10	10	20	16	9	25	43	40	83	-	-	-	-	-	-	-	-	-	-	-	-	10	10	20
2:00 AM	3	6	9	13	7	20	23	19	42	-	-	-	-	-	-	-	-	-	-	-	-	3	6	9
3:00 AM	2	3	5	6	9	15	9	7	16	-	-	-	-	-	-	-	-	-	-	-	-	2	3	5
4:00 AM	6	22	28	4	16	20	8	4	12	-	-	-	-	-	-	-	-	-	-	-	-	6	22	28
5:00 AM	21	54	75	24	38	62	13	15	28	-	-	-	-	-	-	-	-	-	-	-	-	21	54	75
6:00 AM	56	197	253	52	179	231	23	53	76	-	-	-	-	-	-	-	-	-	-	-	-	56	197	253
7:00 AM	138	384	522	108	323	431	67	101	168	-	-	-	-	-	-	-	-	-	-	-	-	138	384	522
8:00 AM	226	456	682	215	389	604	131	175	306	-	-	-	-	-	-	-	-	-	-	-	-	226	456	682
9:00 AM	258	464	722	276	399	675	215	257	472	_	-	-	-	-	-	-	-	-	-	-	-	258	464	722
10:00 AM	284	347	631	284	325	609	279	351	630	_	-	-	-	_	-	-	_	-	-	_	-	284	347	631
11:00 AM	376	395	771	370	433	803	426	403	829	_	-	-	-	_	_	-	_	-	-	_	_	376	395	771
12:00 PM	420	376	796	486	450	936	432	386	818	_	-	-	-	_	-	-	-	-	-	_	-	420	376	796
1:00 PM	483	422	905	526	459	985	495	379	874	_	-	-	_	-	-	_	-	_	-	-	-	483	422	905
2:00 PM	507	445	952	519	516	1,035	447	418	865	_	_	-	_	-	-	_	-	-	_	-	-	507	445	952
3:00 PM	504	439	943	561	515	1,076	470	462	932	_	_	_	_	_	_	_	_	_	_	_	_	504	439	943
4:00 PM	519	467	986	601	429	1,030	446	414	860	-	-	-	-	_	-	-	_	-	-	_	-	519	467	986
5:00 PM	558	415	973	569	427	996	454	415	869	_	_	_	_	_	_	_	_	_	_	_	_	558	415	973
6:00 PM	503	356	859	453	374	827	451	418	869	-	-	-	-	_	_	-	_	-	-	_	-	503	356	859
7:00 PM	436	381	817	411	356	767	420	373	793	-	-	_	-	-	_	_	-	-	-	_	-	436	381	817
8:00 PM	375	325	700	378	354	732	403	357	760	_	_	_	_	_	_	_	_	_	_	_	_	375	325	700
9:00 PM	272	256	528	314	299	613	327	315	642	_	_	_	_	-	_	_	_	_	_	_	_	272	256	528
10:00 PM	170	147	317	179	182	361	167	186	353	_												170	147	317
11:00 PM	70	67	137	115	101	216	114	95	209	-	-	_	_	-	_	_	-	_	-	_	_	70	67	137
Total	6,214	6,451	12,665	6,518	6,612	13,130	5,914	5,707	11,621	-	-	-	-	-	-	-	-	-	-	-	-	6,214	6,451	12,665
Percent	49%	51%	-	50%	50%	-	51%	49%	-	-	-	-	-	-	-	-	-	-	-	-	-	49%	51%	-

^{1.} Mid-week average includes data between Tuesday and Thursday.

Vehicle Classification Report Summary



Location: Lake Washington Blvd N-O NE 60th St

Count Direction: Northbound / Southbound

Date Range: 7/22/2021 to 7/24/2021

Site Code: 03

		FHWA Vehicle Classification												Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
						Study	/ Total							
Northbound	844	10,670	5,857	2	144	896	0	12	43	114	2	4	239	18,827
Percent	4.5%	56.7%	31.1%	0.0%	0.8%	4.8%	0.0%	0.1%	0.2%	0.6%	0.0%	0.0%	1.3%	100%
Southbound	597	16,105	2,071	17	657	61	0	14	9	13	0	0	6	19,550
Percent	3.1%	82.4%	10.6%	0.1%	3.4%	0.3%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	100%
Total	1,441	26,775	7,928	19	801	957	0	26	52	127	2	4	245	38,377
Percent	3.8%	69.8%	20.7%	0.0%	2.1%	2.5%	0.0%	0.1%	0.1%	0.3%	0.0%	0.0%	0.6%	100%

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

Date Range: 7/22/2021 to 7/24/2021

Site Code: 03



Thursday, July 22, 2021 Northbound

						FHWA Ve	hicle Clas	sification						Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	17	1	0	0	0	0	0	0	0	0	0	0	18
1:00 AM	0	11	0	0	1	0	0	0	0	0	0	0	0	12
2:00 AM	0	1	1	0	0	1	0	0	0	0	0	0	0	3
3:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
5:00 AM	0	14	2	0	3	0	0	0	0	0	0	0	0	19
6:00 AM	6	33	13	0	3	1	0	0	0	1	0	0	2	59
7:00 AM	1	83	31	0	4	6	0	0	0	0	0	0	0	125
8:00 AM	2	185	34	0	5	2	0	0	1	3	0	0	0	232
9:00 AM	6	185	49	0	5	9	0	0	0	1	0	0	0	255
10:00 AM	7	195	55	0	5	11	0	1	0	2	0	0	4	280
11:00 AM	15	229	131	0	4	15	0	0	1	1	0	1	4	401
12:00 PM	20	248	177	0	2	19	0	0	1	3	0	0	3	473
1:00 PM	21	276	156	0	5	24	0	0	1	5	0	0	6	494
2:00 PM	29	293	137	0	2	26	0	0	1	2	1	0	10	501
3:00 PM	20	284	170	0	3	27	0	0	1	3	0	0	11	519
4:00 PM	18	317	166	0	3	25	0	1	0	4	0	0	9	543
5:00 PM	40	328	183	0	2	23	0	1	2	6	1	0	8	594
6:00 PM	25	234	182	0	1	32	0	1	0	1	0	0	10	486
7:00 PM	32	210	158	0	2	23	0	1	0	1	0	0	1	428
8:00 PM	13	178	129	0	0	20	0	0	0	2	0	0	2	344
9:00 PM	5	180	67	0	0	16	0	1	0	2	0	0	2	273
10:00 PM	2	138	27	0	1	4	0	0	0	0	0	0	0	172
11:00 PM	2	61	10	0	0	0	0	0	0	0	0	0	0	73
Total	264	3,706	1,879	0	51	284	0	6	8	37	2	1	72	6,310
Percent	4.2%	58.7%	29.8%	0.0%	0.8%	4.5%	0.0%	0.1%	0.1%	0.6%	0.0%	0.0%	1.1%	

Date Range: 7/22/2021 to 7/24/2021

Site Code: 03



Thursday, July 22, 2021 Southbound

						FHWA Ve	hicle Clas	sification						Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	17	2	0	0	0	0	0	0	0	0	0	0	19
1:00 AM	0	10	1	0	0	0	0	0	0	0	0	0	0	11
2:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	5
3:00 AM	0	2	2	0	0	0	0	0	0	0	0	0	0	4
4:00 AM	1	12	7	0	5	0	0	0	0	0	0	0	0	25
5:00 AM	2	42	11	0	6	0	0	0	0	0	0	0	0	61
6:00 AM	7	148	25	0	20	0	0	0	0	0	0	0	0	200
7:00 AM	4	319	54	0	27	1	0	0	0	1	0	0	0	406
8:00 AM	5	377	52	1	29	2	0	0	0	0	0	0	0	466
9:00 AM	10	388	60	0	25	0	0	0	1	1	0	0	0	485
10:00 AM	6	296	54	0	16	2	0	0	0	1	0	0	0	375
11:00 AM	9	328	44	0	15	3	0	1	0	0	0	0	1	401
12:00 PM	6	325	54	0	16	0	0	0	0	0	0	0	0	401
1:00 PM	8	388	38	0	17	3	0	0	0	0	0	0	0	454
2:00 PM	11	374	59	0	20	2	0	0	0	0	0	0	0	466
3:00 PM	7	391	60	0	24	0	0	0	0	0	0	0	0	482
4:00 PM	11	391	45	0	20	1	0	0	0	0	0	0	0	468
5:00 PM	16	395	35	0	11	0	0	0	0	0	0	0	0	457
6:00 PM	7	331	27	0	13	0	0	0	0	0	0	0	0	378
7:00 PM	20	328	22	0	7	2	0	0	0	0	0	0	0	379
8:00 PM	16	283	40	0	4	2	0	3	1	1	0	0	0	350
9:00 PM	5	250	20	0	6	0	0	0	0	0	0	0	0	281
10:00 PM	3	132	23	0	2	0	0	0	1	0	0	0	0	161
11:00 PM	0	58	7	0	1	0	0	0	0	0	0	0	0	66
Total	154	5,590	742	1	284	18	0	4	3	4	0	0	1	6,801
Percent	2.3%	82.2%	10.9%	0.0%	4.2%	0.3%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	

Date Range: 7/22/2021 to 7/24/2021

Site Code: 03



Friday, July 23, 2021 Northbound

						FHWA Ve	hicle Clas	sification						Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	1	36	2	0	0	0	0	0	0	0	0	0	0	39
1:00 AM	0	15	3	0	1	0	0	0	0	0	0	0	0	19
2:00 AM	0	11	0	0	1	0	0	0	0	0	0	0	0	12
3:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	6
4:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
5:00 AM	1	13	8	0	1	0	0	0	0	0	0	0	0	23
6:00 AM	3	37	11	0	4	1	0	0	0	0	0	0	0	56
7:00 AM	3	88	21	0	6	0	0	0	0	1	0	0	0	119
8:00 AM	7	160	38	0	7	2	0	0	0	1	0	0	1	216
9:00 AM	6	237	60	1	3	7	0	0	0	1	0	0	3	318
10:00 AM	7	200	59	0	11	8	0	1	1	2	0	0	3	292
11:00 AM	13	211	137	0	3	18	0	0	0	4	0	0	6	392
12:00 PM	19	265	184	1	3	32	0	0	1	6	0	1	7	519
1:00 PM	27	270	189	0	4	15	0	0	1	4	0	0	13	523
2:00 PM	27	270	156	0	1	38	0	0	3	1	0	0	11	507
3:00 PM	21	316	189	0	2	37	0	0	3	9	0	0	6	583
4:00 PM	17	288	204	0	3	36	0	1	4	3	0	0	15	571
5:00 PM	39	282	220	0	2	25	0	0	3	6	0	0	7	584
6:00 PM	26	248	164	0	1	25	0	1	0	1	0	0	10	476
7:00 PM	23	209	146	0	0	24	0	0	0	4	0	0	6	412
8:00 PM	5	208	103	0	1	35	0	1	3	0	0	1	2	359
9:00 PM	10	202	68	0	2	20	0	0	1	0	0	0	1	304
10:00 PM	1	140	24	0	2	3	0	0	0	0	0	0	1	171
11:00 PM	1	100	3	0	1	0	0	0	1	0	0	0	0	106
Total	257	3,813	1,990	2	59	326	0	4	21	43	0	2	92	6,609
Percent	3.9%	57.7%	30.1%	0.0%	0.9%	4.9%	0.0%	0.1%	0.3%	0.7%	0.0%	0.0%	1.4%	

Date Range: 7/22/2021 to 7/24/2021

Site Code: 03



Friday, July 23, 2021 Southbound

						FHWA Ve	hicle Clas	sification						Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	24	1	0	0	0	0	0	0	0	0	0	0	25
1:00 AM	0	8	1	0	0	0	0	0	0	0	0	0	0	9
2:00 AM	0	5	1	0	1	0	0	0	0	0	0	0	0	7
3:00 AM	0	7	0	0	2	0	0	0	0	0	0	0	0	9
4:00 AM	0	11	3	0	3	0	0	0	0	0	0	0	0	17
5:00 AM	1	29	6	0	4	0	0	0	0	0	0	0	0	40
6:00 AM	11	127	29	1	12	0	0	0	0	0	0	0	0	180
7:00 AM	18	227	51	1	25	1	0	0	0	0	0	0	0	323
8:00 AM	10	287	67	1	26	1	0	0	1	0	0	0	0	393
9:00 AM	9	292	70	6	24	0	0	0	0	0	0	0	0	401
10:00 AM	7	248	42	2	18	2	0	0	0	1	0	0	1	321
11:00 AM	4	364	51	1	25	0	0	0	1	0	0	0	0	446
12:00 PM	10	379	56	0	10	2	0	1	0	0	0	0	0	458
1:00 PM	9	424	48	3	15	2	0	0	0	0	0	0	1	502
2:00 PM	10	455	46	1	14	5	0	0	0	1	0	0	0	532
3:00 PM	8	452	57	0	14	2	0	0	0	0	0	0	0	533
4:00 PM	13	387	31	0	13	0	0	0	0	0	0	0	0	444
5:00 PM	11	394	50	0	4	3	0	0	0	1	0	0	1	464
6:00 PM	9	349	23	0	5	1	0	0	0	0	0	0	0	387
7:00 PM	25	302	35	0	10	0	0	0	0	0	0	0	0	372
8:00 PM	10	341	33	0	7	0	0	0	0	0	0	0	0	391
9:00 PM	8	254	14	0	4	0	0	0	0	1	0	0	0	281
10:00 PM	2	173	17	0	6	0	0	0	1	0	0	0	0	199
11:00 PM	0	81	15	0	1	0	0	0	0	0	0	0	0	97
Total	175	5,620	747	16	243	19	0	1	3	4	0	0	3	6,831
Percent	2.6%	82.3%	10.9%	0.2%	3.6%	0.3%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	

Date Range: 7/22/2021 to 7/24/2021

Site Code: 03



Saturday, July 24, 2021 Northbound

						FHWA Ve	hicle Clas	sification						Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	1	47	3	0	0	1	0	0	0	0	0	0	0	52
1:00 AM	0	36	5	0	2	0	0	0	0	0	0	0	0	43
2:00 AM	0	18	0	0	1	0	0	0	0	0	0	0	0	19
3:00 AM	0	8	0	0	0	0	0	0	0	0	0	0	0	8
4:00 AM	0	7	0	0	0	0	0	0	0	0	0	0	0	7
5:00 AM	1	9	1	0	1	0	0	0	0	0	0	0	0	12
6:00 AM	1	13	7	0	0	0	0	0	0	0	0	0	0	21
7:00 AM	5	47	11	0	0	0	0	0	0	1	0	0	1	65
8:00 AM	2	99	23	0	1	2	0	0	0	0	0	0	0	127
9:00 AM	20	155	43	0	6	10	0	0	0	1	0	0	1	236
10:00 AM	25	174	73	0	1	7	0	0	1	4	0	0	2	287
11:00 AM	42	208	152	0	4	17	0	0	2	1	0	0	5	431
12:00 PM	25	221	169	0	3	25	0	0	3	4	0	0	5	455
1:00 PM	29	243	169	0	3	24	0	0	0	2	0	0	8	478
2:00 PM	33	250	154	0	2	26	0	0	2	3	0	0	6	476
3:00 PM	34	206	178	0	2	29	0	0	0	2	0	1	9	461
4:00 PM	19	224	148	0	1	20	0	0	0	3	0	0	8	423
5:00 PM	24	199	169	0	0	30	0	1	1	4	0	0	5	433
6:00 PM	20	203	179	0	0	20	0	0	2	1	0	0	6	431
7:00 PM	17	199	192	0	2	20	0	1	1	4	0	0	4	440
8:00 PM	11	177	181	0	0	21	0	0	2	2	0	0	10	404
9:00 PM	10	164	103	0	2	29	0	0	0	2	0	0	5	315
10:00 PM	2	144	20	0	3	4	0	0	0	0	0	0	0	173
11:00 PM	2	100	8	0	0	1	0	0	0	0	0	0	0	111
Total	323	3,151	1,988	0	34	286	0	2	14	34	0	1	75	5,908
Percent	5.5%	53.3%	33.6%	0.0%	0.6%	4.8%	0.0%	0.0%	0.2%	0.6%	0.0%	0.0%	1.3%	

Date Range: 7/22/2021 to 7/24/2021

Site Code: 03



Saturday, July 24, 2021 Southbound

						FHWA Ve	hicle Clas	sification						Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	55	8	0	1	0	0	0	0	0	0	0	0	64
1:00 AM	4	35	5	0	1	0	0	0	0	0	0	0	0	45
2:00 AM	0	16	1	0	0	0	0	0	0	0	0	0	0	17
3:00 AM	0	4	2	0	1	0	0	0	0	0	0	0	0	7
4:00 AM	0	2	2	0	1	0	0	0	0	0	0	0	0	5
5:00 AM	2	8	5	0	2	1	0	0	0	0	0	0	0	18
6:00 AM	3	38	6	0	5	1	0	0	0	0	0	0	0	53
7:00 AM	16	76	9	0	7	0	0	1	0	0	0	0	0	109
8:00 AM	17	135	21	0	6	1	0	0	0	1	0	0	0	181
9:00 AM	21	187	31	0	8	1	0	1	0	2	0	0	1	252
10:00 AM	32	275	40	0	8	3	0	0	0	0	0	0	0	358
11:00 AM	33	350	38	0	13	0	0	0	0	1	0	0	0	435
12:00 PM	15	330	43	0	12	0	0	0	0	0	0	0	0	400
1:00 PM	25	331	46	0	5	1	0	1	0	1	0	0	0	410
2:00 PM	14	355	35	0	11	4	0	0	2	0	0	0	0	421
3:00 PM	15	386	40	0	8	1	0	3	0	0	0	0	0	453
4:00 PM	15	376	50	0	5	1	0	0	0	0	0	0	0	447
5:00 PM	10	371	40	0	11	3	0	1	1	0	0	0	0	437
6:00 PM	11	390	35	0	3	1	0	1	0	0	0	0	0	441
7:00 PM	10	333	34	0	8	2	0	0	0	0	0	0	0	387
8:00 PM	13	317	34	0	9	4	0	1	0	0	0	0	0	378
9:00 PM	6	268	26	0	3	0	0	0	0	0	0	0	1	304
10:00 PM	6	171	20	0	1	0	0	0	0	0	0	0	0	198
11:00 PM	0	86	11	0	1	0	0	0	0	0	0	0	0	98
Total	268	4,895	582	0	130	24	0	9	3	5	0	0	2	5,918
Percent	4.5%	82.7%	9.8%	0.0%	2.2%	0.4%	0.0%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	

Date Range: 7/22/2021 to 7/24/2021

Site Code: 03



Total Study Average Northbound

						FHWA Ve	hicle Clas	sification						Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	1	33	2	0	0	0	0	0	0	0	0	0	0	36
1:00 AM	0	21	3	0	1	0	0	0	0	0	0	0	0	25
2:00 AM	0	10	0	0	1	0	0	0	0	0	0	0	0	11
3:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	5
4:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
5:00 AM	1	12	4	0	2	0	0	0	0	0	0	0	0	19
6:00 AM	3	28	10	0	2	1	0	0	0	0	0	0	1	45
7:00 AM	3	73	21	0	3	2	0	0	0	1	0	0	0	103
8:00 AM	4	148	32	0	4	2	0	0	0	1	0	0	0	191
9:00 AM	11	192	51	0	5	9	0	0	0	1	0	0	1	270
10:00 AM	13	190	62	0	6	9	0	1	1	3	0	0	3	288
11:00 AM	23	216	140	0	4	17	0	0	1	2	0	0	5	408
12:00 PM	21	245	177	0	3	25	0	0	2	4	0	0	5	482
1:00 PM	26	263	171	0	4	21	0	0	1	4	0	0	9	499
2:00 PM	30	271	149	0	2	30	0	0	2	2	0	0	9	495
3:00 PM	25	269	179	0	2	31	0	0	1	5	0	0	9	521
4:00 PM	18	276	173	0	2	27	0	1	1	3	0	0	11	512
5:00 PM	34	270	191	0	1	26	0	1	2	5	0	0	7	537
6:00 PM	24	228	175	0	1	26	0	1	1	1	0	0	9	466
7:00 PM	24	206	165	0	1	22	0	1	0	3	0	0	4	426
8:00 PM	10	188	138	0	0	25	0	0	2	1	0	0	5	369
9:00 PM	8	182	79	0	1	22	0	0	0	1	0	0	3	296
10:00 PM	2	141	24	0	2	4	0	0	0	0	0	0	0	173
11:00 PM	2	87	7	0	0	0	0	0	0	0	0	0	0	96
Total	283	3,558	1,953	0	47	299	0	5	14	37	0	0	81	6,277
Percent	4.5%	56.7%	31.1%	0.0%	0.7%	4.8%	0.0%	0.1%	0.2%	0.6%	0.0%	0.0%	1.3%	

Note: Average only condsidered on days with 24-hours of data.

Date Range: 7/22/2021 to 7/24/2021

Site Code: 03



Total Study Average Southbound

						FHWA Ve	hicle Clas	sification						Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	32	4	0	0	0	0	0	0	0	0	0	0	36
1:00 AM	1	18	2	0	0	0	0	0	0	0	0	0	0	21
2:00 AM	0	9	1	0	0	0	0	0	0	0	0	0	0	10
3:00 AM	0	4	1	0	1	0	0	0	0	0	0	0	0	6
4:00 AM	0	8	4	0	3	0	0	0	0	0	0	0	0	15
5:00 AM	2	26	7	0	4	0	0	0	0	0	0	0	0	39
6:00 AM	7	104	20	0	12	0	0	0	0	0	0	0	0	143
7:00 AM	13	207	38	0	20	1	0	0	0	0	0	0	0	279
8:00 AM	11	266	47	1	20	1	0	0	0	0	0	0	0	346
9:00 AM	13	289	54	2	19	0	0	0	0	1	0	0	0	378
10:00 AM	15	273	45	1	14	2	0	0	0	1	0	0	0	351
11:00 AM	15	347	44	0	18	1	0	0	0	0	0	0	0	425
12:00 PM	10	345	51	0	13	1	0	0	0	0	0	0	0	420
1:00 PM	14	381	44	1	12	2	0	0	0	0	0	0	0	454
2:00 PM	12	395	47	0	15	4	0	0	1	0	0	0	0	474
3:00 PM	10	410	52	0	15	1	0	1	0	0	0	0	0	489
4:00 PM	13	385	42	0	13	1	0	0	0	0	0	0	0	454
5:00 PM	12	387	42	0	9	2	0	0	0	0	0	0	0	452
6:00 PM	9	357	28	0	7	1	0	0	0	0	0	0	0	402
7:00 PM	18	321	30	0	8	1	0	0	0	0	0	0	0	378
8:00 PM	13	314	36	0	7	2	0	1	0	0	0	0	0	373
9:00 PM	6	257	20	0	4	0	0	0	0	0	0	0	0	287
10:00 PM	4	159	20	0	3	0	0	0	1	0	0	0	0	187
11:00 PM	0	75	11	0	1	0	0	0	0	0	0	0	0	87
Total	198	5,369	690	5	218	20	0	2	2	2	0	0	0	6,506
Percent	3.0%	82.5%	10.6%	0.1%	3.4%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Note: Average only condsidered on days with 24-hours of data.

Date Range: 7/22/2021 to 7/24/2021

Site Code: 03



3-Day (Tuesday - Thursday) Average Northbound

						FHWA Ve	hicle Clas	sification						Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	17	1	0	0	0	0	0	0	0	0	0	0	18
1:00 AM	0	11	0	0	1	0	0	0	0	0	0	0	0	12
2:00 AM	0	1	1	0	0	1	0	0	0	0	0	0	0	3
3:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
5:00 AM	0	14	2	0	3	0	0	0	0	0	0	0	0	19
6:00 AM	6	33	13	0	3	1	0	0	0	1	0	0	2	59
7:00 AM	1	83	31	0	4	6	0	0	0	0	0	0	0	125
8:00 AM	2	185	34	0	5	2	0	0	1	3	0	0	0	232
9:00 AM	6	185	49	0	5	9	0	0	0	1	0	0	0	255
10:00 AM	7	195	55	0	5	11	0	1	0	2	0	0	4	280
11:00 AM	15	229	131	0	4	15	0	0	1	1	0	1	4	401
12:00 PM	20	248	177	0	2	19	0	0	1	3	0	0	3	473
1:00 PM	21	276	156	0	5	24	0	0	1	5	0	0	6	494
2:00 PM	29	293	137	0	2	26	0	0	1	2	1	0	10	501
3:00 PM	20	284	170	0	3	27	0	0	1	3	0	0	11	519
4:00 PM	18	317	166	0	3	25	0	1	0	4	0	0	9	543
5:00 PM	40	328	183	0	2	23	0	1	2	6	1	0	8	594
6:00 PM	25	234	182	0	1	32	0	1	0	1	0	0	10	486
7:00 PM	32	210	158	0	2	23	0	1	0	1	0	0	1	428
8:00 PM	13	178	129	0	0	20	0	0	0	2	0	0	2	344
9:00 PM	5	180	67	0	0	16	0	1	0	2	0	0	2	273
10:00 PM	2	138	27	0	1	4	0	0	0	0	0	0	0	172
11:00 PM	2	61	10	0	0	0	0	0	0	0	0	0	0	73
Total	264	3,706	1,879	0	51	284	0	6	8	37	2	1	72	6,310
Percent	4.2%	58.7%	29.8%	0.0%	0.8%	4.5%	0.0%	0.1%	0.1%	0.6%	0.0%	0.0%	1.1%	

Date Range: 7/22/2021 to 7/24/2021

Site Code: 03



3-Day (Tuesday - Thursday) Average Southbound

						FHWA Ve	hicle Clas	sification						Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	17	2	0	0	0	0	0	0	0	0	0	0	19
1:00 AM	0	10	1	0	0	0	0	0	0	0	0	0	0	11
2:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	5
3:00 AM	0	2	2	0	0	0	0	0	0	0	0	0	0	4
4:00 AM	1	12	7	0	5	0	0	0	0	0	0	0	0	25
5:00 AM	2	42	11	0	6	0	0	0	0	0	0	0	0	61
6:00 AM	7	148	25	0	20	0	0	0	0	0	0	0	0	200
7:00 AM	4	319	54	0	27	1	0	0	0	1	0	0	0	406
8:00 AM	5	377	52	1	29	2	0	0	0	0	0	0	0	466
9:00 AM	10	388	60	0	25	0	0	0	1	1	0	0	0	485
10:00 AM	6	296	54	0	16	2	0	0	0	1	0	0	0	375
11:00 AM	9	328	44	0	15	3	0	1	0	0	0	0	1	401
12:00 PM	6	325	54	0	16	0	0	0	0	0	0	0	0	401
1:00 PM	8	388	38	0	17	3	0	0	0	0	0	0	0	454
2:00 PM	11	374	59	0	20	2	0	0	0	0	0	0	0	466
3:00 PM	7	391	60	0	24	0	0	0	0	0	0	0	0	482
4:00 PM	11	391	45	0	20	1	0	0	0	0	0	0	0	468
5:00 PM	16	395	35	0	11	0	0	0	0	0	0	0	0	457
6:00 PM	7	331	27	0	13	0	0	0	0	0	0	0	0	378
7:00 PM	20	328	22	0	7	2	0	0	0	0	0	0	0	379
8:00 PM	16	283	40	0	4	2	0	3	1	1	0	0	0	350
9:00 PM	5	250	20	0	6	0	0	0	0	0	0	0	0	281
10:00 PM	3	132	23	0	2	0	0	0	1	0	0	0	0	161
11:00 PM	0	58	7	0	1	0	0	0	0	0	0	0	0	66
Total	154	5,590	742	1	284	18	0	4	3	4	0	0	1	6,801
Percent	2.3%	82.2%	10.9%	0.0%	4.2%	0.3%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	

Vehicle Speed Report Summary



Location: Lake Washington Blvd N-O NE 60th St

Count Direction: Northbound / Southbound

Date Range: 7/22/2021 to 7/24/2021

Site Code: 03

								Speed	d Range ((mph)								Total
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
								Stud	y Total									
Northbound	126	874	3,035	5,824	6,055	2,416	424	53	14	3	0	1	0	2	0	0	0	18,827
Percent	0.7%	4.6%	16.1%	30.9%	32.2%	12.8%	2.3%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound	194	936	2,587	4,808	5,973	3,944	940	135	26	5	0	0	1	0	1	0	0	19,550
Percent	1.0%	4.8%	13.2%	24.6%	30.6%	20.2%	4.8%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total	320	1,810	5,622	10,632	12,028	6,360	1,364	188	40	8	0	1	1	2	1	0	0	38,377
Percent	0.8%	4.7%	14.6%	27.7%	31.3%	16.6%	3.6%	0.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Total Study Percentile Spee	ed Summa	ıry	Total Study Spee	d Statistics	
Northbound			Northbound		
50th Percentile (Median)	24.7	mph	Mean (Average) Speed	24.4	mph
85th Percentile	30.1	mph	10 mph Pace	20.0 - 30.0	mph
95th Percentile	33.2	mph	Percent in Pace	62.8	%
Southbound			Southbound		
50th Percentile (Median)	26.1	mph	Mean (Average) Speed	25.7	mph
85th Percentile	32.0	mph	10 mph Pace	21.9 - 31.9	mph
95th Percentile	35.3	mph	Percent in Pace	57.7	%

Date Range: 7/22/2021 to 7/24/2021

Site Code: 03



Thursday, July 22, 2021 Northbound

Speed Range (mph) Total 70 - 75 Time 0 - 10 10 - 15 15 - 20 20 - 25 25 - 30 30 - 35 35 - 40 40 - 45 45 - 50 50 - 55 55 - 60 60 - 65 65 - 70 75 - 80 80 - 85 85 + Volume 12:00 AM 1:00 AM 2:00 AM 3:00 AM 4:00 AM 5:00 AM 6:00 AM 7:00 AM 8:00 AM 9:00 AM 10:00 AM 11:00 AM 12:00 PM 1:00 PM 2:00 PM 3:00 PM 4:00 PM 5:00 PM 6:00 PM 7:00 PM 8:00 PM 9:00 PM 10:00 PM 11:00 PM 6,310 Total 1,836 2,366 Percent 0.4% 3.2% 11.9% 29.1% 37.5% 15.3% 2.4% 0.2% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%

Daily Percentile Speed	Summary		Speed Stat	istics	
50th Percentile (Median)	25.6	mph	Mean (Average) Speed	25.3	mph
85th Percentile	30.4	mph	10 mph Pace	21.3 - 31.3	mph
95th Percentile	33.3	mph	Percent in Pace	68.6	%

Date Range: 7/22/2021 to 7/24/2021

Site Code: 03

DATA SOLUTIONS

Thursday, July 22, 2021 Southbound

								Spee	d Range ((mph)								Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	0	1	0	5	9	4	0	0	0	0	0	0	0	0	0	0	19
1:00 AM	0	0	0	0	2	7	1	1	0	0	0	0	0	0	0	0	0	11
2:00 AM	0	0	0	2	1	1	1	0	0	0	0	0	0	0	0	0	0	5
3:00 AM	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	4
4:00 AM	0	1	0	1	0	8	10	4	1	0	0	0	0	0	0	0	0	25
5:00 AM	0	0	0	1	4	28	23	4	1	0	0	0	0	0	0	0	0	61
6:00 AM	0	1	3	9	27	107	44	8	1	0	0	0	0	0	0	0	0	200
7:00 AM	0	1	12	27	140	180	44	2	0	0	0	0	0	0	0	0	0	406
8:00 AM	0	7	13	50	125	219	47	5	0	0	0	0	0	0	0	0	0	466
9:00 AM	2	4	9	60	184	186	36	4	0	0	0	0	0	0	0	0	0	485
10:00 AM	0	4	20	44	125	156	24	2	0	0	0	0	0	0	0	0	0	375
11:00 AM	0	18	43	68	173	81	18	0	0	0	0	0	0	0	0	0	0	401
12:00 PM	1	9	37	140	154	57	3	0	0	0	0	0	0	0	0	0	0	401
1:00 PM	7	44	89	125	131	54	4	0	0	0	0	0	0	0	0	0	0	454
2:00 PM	2	9	58	110	186	88	11	2	0	0	0	0	0	0	0	0	0	466
3:00 PM	3	8	37	105	191	122	16	0	0	0	0	0	0	0	0	0	0	482
4:00 PM	0	6	30	134	198	85	15	0	0	0	0	0	0	0	0	0	0	468
5:00 PM	4	24	65	128	164	54	16	1	1	0	0	0	0	0	0	0	0	457
6:00 PM	3	20	48	111	132	58	5	0	1	0	0	0	0	0	0	0	0	378
7:00 PM	9	41	70	102	115	36	5	1	0	0	0	0	0	0	0	0	0	379
8:00 PM	0	13	48	106	143	36	4	0	0	0	0	0	0	0	0	0	0	350
9:00 PM	2	3	15	71	119	58	5	7	1	0	0	0	0	0	0	0	0	281
10:00 PM	0	2	5	10	37	75	27	5	0	0	0	0	0	0	0	0	0	161
11:00 PM	0	1	2	6	16	25	12	3	1	0	0	0	0	0	0	0	0	66
Total	33	216	605	1,410	2,374	1,732	375	49	7	0	0	0	0	0	0	0	0	6,801
Percent	0.5%	3.2%	8.9%	20.7%	34.9%	25.5%	5.5%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed	Summary		Speed Stat	istics	
50th Percentile (Median)	27.6	mph	Mean (Average) Speed	27	mph
85th Percentile	32.5	mph	10 mph Pace	23.0 - 33.0	mph
95th Percentile	35.6	mph	Percent in Pace	63.8	%

Date Range: 7/22/2021 to 7/24/2021

Site Code: 03



Friday, July 23, 2021 Northbound

								Spee	d Range	(mph)								Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	0	0	1	15	12	7	4	0	0	0	0	0	0	0	0	0	39
1:00 AM	0	0	1	0	3	11	4	0	0	0	0	0	0	0	0	0	0	19
2:00 AM	0	0	0	0	3	7	1	0	1	0	0	0	0	0	0	0	0	12
3:00 AM	0	0	0	0	0	5	1	0	0	0	0	0	0	0	0	0	0	6
4:00 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
5:00 AM	0	0	1	0	6	11	5	0	0	0	0	0	0	0	0	0	0	23
6:00 AM	0	0	4	3	11	23	12	3	0	0	0	0	0	0	0	0	0	56
7:00 AM	0	1	4	5	29	55	24	1	0	0	0	0	0	0	0	0	0	119
8:00 AM	1	1	4	11	88	93	17	1	0	0	0	0	0	0	0	0	0	216
9:00 AM	0	0	3	29	160	107	17	1	1	0	0	0	0	0	0	0	0	318
10:00 AM	0	2	13	32	147	84	13	1	0	0	0	0	0	0	0	0	0	292
11:00 AM	1	7	51	122	159	48	3	1	0	0	0	0	0	0	0	0	0	392
12:00 PM	2	9	65	196	211	34	2	0	0	0	0	0	0	0	0	0	0	519
1:00 PM	5	44	141	199	96	38	0	0	0	0	0	0	0	0	0	0	0	523
2:00 PM	1	38	113	208	117	26	2	0	0	0	0	0	0	2	0	0	0	507
3:00 PM	14	83	134	201	109	37	5	0	0	0	0	0	0	0	0	0	0	583
4:00 PM	15	52	171	206	99	24	4	0	0	0	0	0	0	0	0	0	0	571
5:00 PM	5	61	168	184	139	25	1	1	0	0	0	0	0	0	0	0	0	584
6:00 PM	3	17	75	200	139	39	1	0	2	0	0	0	0	0	0	0	0	476
7:00 PM	11	39	65	149	118	26	4	0	0	0	0	0	0	0	0	0	0	412
8:00 PM	1	8	54	155	116	22	3	0	0	0	0	0	0	0	0	0	0	359
9:00 PM	0	0	31	93	136	41	3	0	0	0	0	0	0	0	0	0	0	304
10:00 PM	0	1	10	12	82	55	10	1	0	0	0	0	0	0	0	0	0	171
11:00 PM	0	0	1	2	43	45	12	3	0	0	0	0	0	0	0	0	0	106
Total	59	363	1,109	2,008	2,026	870	151	17	4	0	0	0	0	2	0	0	0	6,609
Percent	0.9%	5.5%	16.8%	30.4%	30.7%	13.2%	2.3%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed	Summary		Speed Stat	istics	
50th Percentile (Median)	24.5	mph	Mean (Average) Speed	24.3	mph
85th Percentile	30.2	mph	10 mph Pace	20.7 - 30.7	mph
95th Percentile	33.2	mph	Percent in Pace	60.7	%

Date Range: 7/22/2021 to 7/24/2021

Site Code: 03



Friday, July 23, 2021 Southbound

								Spee	d Range	(mph)								Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	1	0	2	2	6	8	4	1	1	0	0	0	0	0	0	0	0	25
1:00 AM	0	0	0	0	3	1	2	2	1	0	0	0	0	0	0	0	0	9
2:00 AM	0	0	0	0	2	1	4	0	0	0	0	0	0	0	0	0	0	7
3:00 AM	0	0	0	1	1	4	1	1	0	0	0	0	1	0	0	0	0	9
4:00 AM	0	0	1	0	2	8	6	0	0	0	0	0	0	0	0	0	0	17
5:00 AM	0	0	0	0	3	19	8	10	0	0	0	0	0	0	0	0	0	40
6:00 AM	0	4	3	10	25	84	50	4	0	0	0	0	0	0	0	0	0	180
7:00 AM	0	4	12	24	81	139	57	5	1	0	0	0	0	0	0	0	0	323
8:00 AM	0	3	7	41	142	149	43	7	1	0	0	0	0	0	0	0	0	393
9:00 AM	0	2	18	25	130	180	40	6	0	0	0	0	0	0	0	0	0	401
10:00 AM	1	4	19	43	131	95	26	2	0	0	0	0	0	0	0	0	0	321
11:00 AM	2	17	52	78	205	82	10	0	0	0	0	0	0	0	0	0	0	446
12:00 PM	9	33	62	114	173	55	11	0	0	1	0	0	0	0	0	0	0	458
1:00 PM	1	25	96	152	174	52	2	0	0	0	0	0	0	0	0	0	0	502
2:00 PM	9	60	89	151	165	47	8	0	3	0	0	0	0	0	0	0	0	532
3:00 PM	8	28	102	214	140	34	7	0	0	0	0	0	0	0	0	0	0	533
4:00 PM	10	49	77	126	111	61	7	3	0	0	0	0	0	0	0	0	0	444
5:00 PM	7	47	108	145	116	31	6	1	0	3	0	0	0	0	0	0	0	464
6:00 PM	1	16	49	123	146	49	3	0	0	0	0	0	0	0	0	0	0	387
7:00 PM	12	26	86	110	85	48	4	1	0	0	0	0	0	0	0	0	0	372
8:00 PM	4	43	95	124	87	35	3	0	0	0	0	0	0	0	0	0	0	391
9:00 PM	0	13	19	83	115	49	2	0	0	0	0	0	0	0	0	0	0	281
10:00 PM	0	3	3	25	75	71	19	3	0	0	0	0	0	0	0	0	0	199
11:00 PM	0	1	1	3	13	53	23	1	2	0	0	0	0	0	0	0	0	97
Total	65	378	901	1,594	2,131	1,355	346	47	9	4	0	0	1	0	0	0	0	6,831
Percent	1.0%	5.5%	13.2%	23.3%	31.2%	19.8%	5.1%	0.7%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed	Summary		Speed Stat	istics	
50th Percentile (Median)	26.2	mph	Mean (Average) Speed	25.6	mph
85th Percentile	32.2	mph	10 mph Pace	21.9 - 31.9	mph
95th Percentile	35.5	mph	Percent in Pace	57.15	%

Date Range: 7/22/2021 to 7/24/2021

Site Code: 03

DATA SOLUTIONS

Saturday, July 24, 2021 Northbound

								Spee	d Range	(mph)								Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	1	2	1	21	18	9	0	0	0	0	0	0	0	0	0	0	52
1:00 AM	0	0	0	0	7	19	15	1	1	0	0	0	0	0	0	0	0	43
2:00 AM	0	0	0	0	1	10	5	1	1	1	0	0	0	0	0	0	0	19
3:00 AM	0	0	0	0	2	3	3	0	0	0	0	0	0	0	0	0	0	8
4:00 AM	0	0	0	0	3	0	2	1	1	0	0	0	0	0	0	0	0	7
5:00 AM	0	0	1	0	6	1	3	1	0	0	0	0	0	0	0	0	0	12
6:00 AM	0	1	2	2	3	9	3	1	0	0	0	0	0	0	0	0	0	21
7:00 AM	0	4	6	7	14	26	7	1	0	0	0	0	0	0	0	0	0	65
8:00 AM	0	0	1	4	56	55	11	0	0	0	0	0	0	0	0	0	0	127
9:00 AM	0	7	20	35	102	59	9	3	1	0	0	0	0	0	0	0	0	236
10:00 AM	1	14	49	62	116	37	8	0	0	0	0	0	0	0	0	0	0	287
11:00 AM	0	11	92	171	131	25	1	0	0	0	0	0	0	0	0	0	0	431
12:00 PM	4	21	99	163	138	30	0	0	0	0	0	0	0	0	0	0	0	455
1:00 PM	5	20	105	185	132	30	1	0	0	0	0	0	0	0	0	0	0	478
2:00 PM	0	25	102	225	108	15	1	0	0	0	0	0	0	0	0	0	0	476
3:00 PM	3	58	125	149	111	14	1	0	0	0	0	0	0	0	0	0	0	461
4:00 PM	2	40	96	150	103	27	2	0	2	1	0	0	0	0	0	0	0	423
5:00 PM	4	23	102	205	91	6	1	0	0	1	0	0	0	0	0	0	0	433
6:00 PM	7	23	89	171	114	21	1	4	0	0	0	1	0	0	0	0	0	431
7:00 PM	9	26	117	146	117	23	2	0	0	0	0	0	0	0	0	0	0	440
8:00 PM	3	30	126	149	72	22	2	0	0	0	0	0	0	0	0	0	0	404
9:00 PM	0	7	39	139	108	19	3	0	0	0	0	0	0	0	0	0	0	315
10:00 PM	1	1	2	13	83	58	12	2	1	0	0	0	0	0	0	0	0	173
11:00 PM	0	0	2	3	24	54	21	6	1	0	0	0	0	0	0	0	0	111
Total	39	312	1,177	1,980	1,663	581	123	21	8	3	0	1	0	0	0	0	0	5,908
Percent	0.7%	5.3%	19.9%	33.5%	28.1%	9.8%	2.1%	0.4%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed	Summary		Speed Stat	istics	
50th Percentile (Median)	23.7	mph	Mean (Average) Speed	23.7	mph
85th Percentile	29.4	mph	10 mph Pace	18.6 - 28.6	mph
95th Percentile	32.9	mph	Percent in Pace	62.7	%

Date Range: 7/22/2021 to 7/24/2021

Site Code: 03



Saturday, July 24, 2021 Southbound

								Spee	d Range	(mph)								Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	0	1	4	8	26	19	5	0	0	0	0	0	0	1	0	0	64
1:00 AM	0	0	1	2	3	19	11	7	2	0	0	0	0	0	0	0	0	45
2:00 AM	0	0	0	0	2	4	8	1	2	0	0	0	0	0	0	0	0	17
3:00 AM	0	0	0	0	1	3	3	0	0	0	0	0	0	0	0	0	0	7
4:00 AM	0	0	0	0	0	1	4	0	0	0	0	0	0	0	0	0	0	5
5:00 AM	0	0	2	1	3	5	5	2	0	0	0	0	0	0	0	0	0	18
6:00 AM	0	0	2	3	3	18	20	6	1	0	0	0	0	0	0	0	0	53
7:00 AM	0	3	7	15	16	37	28	3	0	0	0	0	0	0	0	0	0	109
8:00 AM	0	3	12	11	33	92	24	4	2	0	0	0	0	0	0	0	0	181
9:00 AM	1	6	19	40	73	99	12	2	0	0	0	0	0	0	0	0	0	252
10:00 AM	5	11	46	68	141	79	8	0	0	0	0	0	0	0	0	0	0	358
11:00 AM	6	22	84	142	119	56	6	0	0	0	0	0	0	0	0	0	0	435
12:00 PM	6	29	109	121	97	35	2	1	0	0	0	0	0	0	0	0	0	400
1:00 PM	6	19	78	152	115	38	2	0	0	0	0	0	0	0	0	0	0	410
2:00 PM	2	37	87	133	120	38	3	1	0	0	0	0	0	0	0	0	0	421
3:00 PM	7	32	103	184	100	25	2	0	0	0	0	0	0	0	0	0	0	453
4:00 PM	7	41	92	155	111	34	7	0	0	0	0	0	0	0	0	0	0	447
5:00 PM	11	19	108	155	116	24	4	0	0	0	0	0	0	0	0	0	0	437
6:00 PM	10	35	89	179	92	34	2	0	0	0	0	0	0	0	0	0	0	441
7:00 PM	10	29	92	149	80	23	2	2	0	0	0	0	0	0	0	0	0	387
8:00 PM	15	31	88	166	67	9	2	0	0	0	0	0	0	0	0	0	0	378
9:00 PM	8	22	53	94	83	37	7	0	0	0	0	0	0	0	0	0	0	304
10:00 PM	2	2	6	20	63	85	19	1	0	0	0	0	0	0	0	0	0	198
11:00 PM	0	1	2	10	22	36	19	4	3	1	0	0	0	0	0	0	0	98
Total	96	342	1,081	1,804	1,468	857	219	39	10	1	0	0	0	0	1	0	0	5,918
Percent	1.6%	5.8%	18.3%	30.5%	24.8%	14.5%	3.7%	0.7%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed	Summary		Speed Stat	istics	
50th Percentile (Median)	24.2	mph	Mean (Average) Speed	24.2	mph
85th Percentile	30.9	mph	10 mph Pace	19.8 - 29.8	mph
95th Percentile	34.8	mph	Percent in Pace	55.86	%

Date Range: 7/22/2021 to 7/24/2021

Site Code: 03



Total Study Average

Northbound Speed Range (mph) Total Time 0 - 10 10 - 15 15 - 20 20 - 25 25 - 30 30 - 35 35 - 40 40 - 45 45 - 50 50 - 55 55 - 60 60 - 65 65 - 70 70 - 75 75 - 80 80 - 85 85 + Volume 12:00 AM 1:00 AM 2:00 AM 3:00 AM 4:00 AM 5:00 AM 6:00 AM 7:00 AM 8:00 AM 9:00 AM 10:00 AM 11:00 AM 12:00 PM 1:00 PM 2:00 PM 3:00 PM 4:00 PM 5:00 PM 6:00 PM 7:00 PM 8:00 PM 9:00 PM 10:00 PM 11:00 PM 6,271 Total 1,015 1,941 2,016 Percent 0.7% 4.6% 16.2% 32.1% 12.9% 2.2% 0.2% 0.1% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 31.0%

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Spe	ed Summa	ıry	Total Study Spee	d Statistics	
50th Percentile (Median)	24.7	mph	Mean (Average) Speed	24.4	mph
85th Percentile	30.1	mph	10 mph Pace	20.0 - 30.0	mph
95th Percentile	33.2	mph	Percent in Pace	62.8	%

Date Range: 7/22/2021 to 7/24/2021

Site Code: 03

DATA SOLUTIONS

Total Study Average Southbound

Speed Range (mph) Total Time 0 - 10 10 - 15 15 - 20 20 - 25 25 - 30 30 - 35 35 - 40 40 - 45 45 - 50 50 - 55 55 - 60 60 - 65 65 - 70 70 - 75 75 - 80 80 - 85 85 + Volume 12:00 AM 1:00 AM 2:00 AM 3:00 AM 4:00 AM 5:00 AM 6:00 AM 7:00 AM 8:00 AM 9:00 AM 10:00 AM 11:00 AM 12:00 PM 1:00 PM 2:00 PM 3:00 PM 4:00 PM 5:00 PM 6:00 PM 7:00 PM 8:00 PM 9:00 PM 10:00 PM 11:00 PM 6,510 Total 1,603 1,990 1,315 Percent 1.0% 4.8% 13.3% 30.6% 20.2% 4.8% 0.6% 0.1% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 24.6%

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Spe	ed Summa	Total Study Speed Statistics							
50th Percentile (Median)	26.1	mph	Mean (Average) Speed	25.7	mph				
85th Percentile	32.0	mph	10 mph Pace	21.9 - 31.9	mph				
95th Percentile	35.3	mph	Percent in Pace	57.7	%				



Location: Lake Washington Blvd N-O NE 60th St Date Range: 7/22/2021 - 7/28/2021 Site Code: 03

	1	Thursday 7/22/2021		Friday 7/23/2021		Saturday 7/24/2021		Sunday 7/25/2021			Monday 7/26/2021			Tuesday 7/27/2021			Wednesday 7/28/2021							
	7																			Mid-Week Average				
Time	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	18	19	37	39	25	64	52	64	116	-	-	-	-	-	-	-	-	-	-	-	-	18	19	37
1:00 AM	12	11	23	19	9	28	43	45	88	-	-	-	-	-	-	-	-	-	-	-	-	12	11	23
2:00 AM	3	5	8	12	7	19	19	17	36	-	-	-	-	-	-	-	-	-	-	-	-	3	5	8
3:00 AM	2	4	6	6	9	15	8	7	15	-	-	-	-	-	-	-	-	-	-	-	-	2	4	6
4:00 AM	4	25	29	2	17	19	7	5	12	-	-	-	-	-	-	-	-	-	-	-	-	4	25	29
5:00 AM	19	61	80	23	40	63	12	18	30	-	-	-	-	-	-	-	-	-	-	-	-	19	61	80
6:00 AM	59	200	259	56	180	236	21	53	74	-	-	-	-	-	-	-	-	-	-	-	-	59	200	259
7:00 AM	125	406	531	119	323	442	65	109	174	-	-	-	-	-	-	-	-	-	-	-	-	125	406	531
8:00 AM	232	466	698	216	393	609	127	181	308	-	-	-	-	-	-	-	-	-	-	-	-	232	466	698
9:00 AM	255	485	740	318	401	719	236	252	488	-	-	-	-	-	-	-	-	-	-	-	-	255	485	740
10:00 AM	280	375	655	292	321	613	287	358	645	-	-	-	-	-	-	-	-	-	-	-	-	280	375	655
11:00 AM	401	401	802	392	446	838	431	435	866	-	-	-	-	-	-	-	-	-	-	-	-	401	401	802
12:00 PM	473	401	874	519	458	977	455	400	855	-	-	-	-	-	-	-	-	-	-	-	-	473	401	874
1:00 PM	494	454	948	523	502	1,025	478	410	888	-	-	-	-	-	-	-	-	-	-	-	-	494	454	948
2:00 PM	501	466	967	507	532	1,039	476	421	897	-	-	-	-	-	-	-	-	-	-	-	-	501	466	967
3:00 PM	519	482	1,001	583	533	1,116	461	453	914	_	-	-	_	_	-	-	-	-	-	_	-	519	482	1,001
4:00 PM	543	468	1,011	571	444	1,015	423	447	870	-	-	-	-	-	-	-	-	-	-	_	-	543	468	1,011
5:00 PM	594	457	1,051	584	464	1,048	433	437	870	_	_	-	_	_	-	-	-	_	_	_	_	594	457	1,051
6:00 PM	486	378	864	476	387	863	431	441	872	_	_	_	_	_	_	_	_	_	_	_	_	486	378	864
7:00 PM	428	379	807	412	372	784	440	387	827	-	-	-	-	-	-	-	-	-	-	-	-	428	379	807
8:00 PM	344	350	694	359	391	750	404	378	782	_	_	-	_	-	_	-	_	_	-	-	_	344	350	694
9:00 PM	273	281	554	304	281	585	315	304	619	-	-	-	-	-	-	-	-	-	-	-	-	273	281	554
10:00 PM	172	161	333	171	199	370	173	198	371	_	_	_	_	_	_	_	_	_	_	_	_	172	161	333
11:00 PM	73	66	139	106	97	203	111	98	209	-	-	-	-	-	-	-	-	-	-	-	-	73	66	139
Total	6,310	6,801	13,111	6,609	6,831	13,440	5,908	5,918	11,826	-	-	-	-	-	-	-	-	-	-	-	-	6,310	6,801	13,111
Percent	48%	52%	-	49%	51%	-	50%	50%	-	-	-	-	-	-	-	-	-	-	-	-	-	48%	52%	-

^{1.} Mid-week average includes data between Tuesday and Thursday.











Lake Street/Lake Washington Boulevard Parking Study

transpogroup

X-X

Appendix C - Parking Occupancy Maps















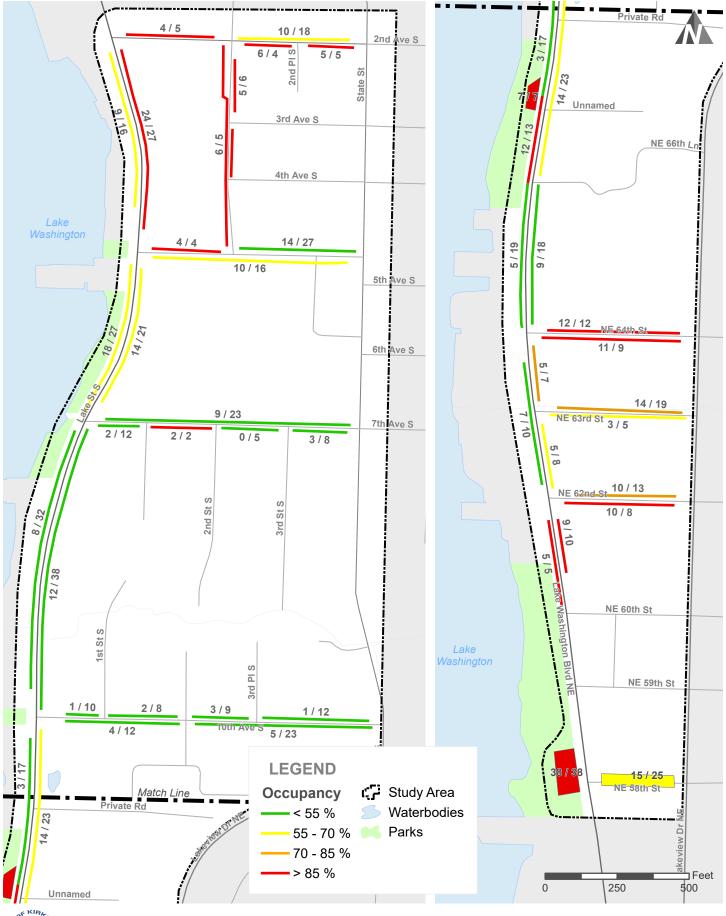








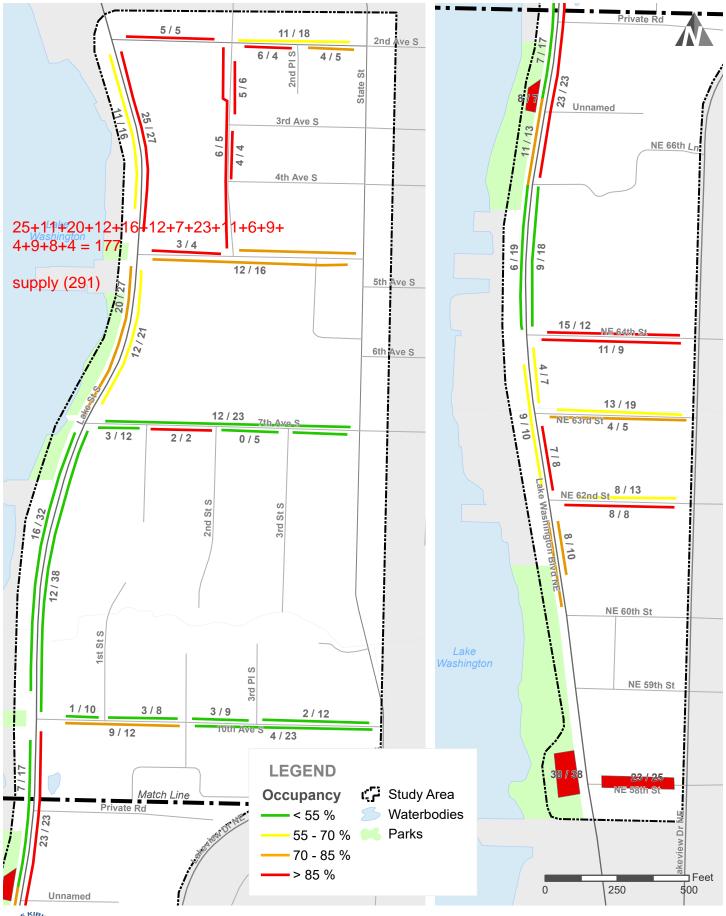






Lake Street/Lake Washington Boulevard Parking Study







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