PREPARED BY

Mead & Hunt

PRELIMINARY

HOLLAND LANE

CORRIDOR ACCESS AND SAFETY IMPROVEMENTS TRAFFIC ANALYSIS STUDY

March 29, 2024

CITY OF ALEXANDRIA VIRGINIA

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1. Project Background

Holland Lane is a four-lane, undivided roadway in the Carlyle / Eisenhower East neighborhood of Alexandria. It provides access to high-density housing, retail, restaurants, parks, and more. While the surrounding area is largely urban and walkable, Holland Lane provides limited infrastructure for people walking and biking. In particular, there are limited crossing opportunities and no on-street bicycle facilities.

The City of Alexandria is committed to enhancing mobility, access, safety, and comfort for all roadway users. The City's Complete Streets Policy calls for making multimodal improvements via existing projects wherever possible, including with street resurfacing. The City's adopted Alexandria Mobility Plan (AMP) calls for "build[ing] out a continuous, connected, and accessible pedestrian network that enables people of all ages and abilities to move safely and comfortably". The AMP Proposed Bicycle Network also includes a recommended *enhanced bicycle facility* on Holland Lane.

As part of an upcoming resurfacing project (scheduled for Summer 2025), The City is planning to implement improvements to enhance the street function for multimodal road users.

2. Existing Conditions

A. Site Description

The study corridor is an approximately 0.26-mile segment of Holland Lane running north-south through the Caryle and Eisenhower East neighborhood. Between Eisenhower Avenue and Jamieson Avenue, Holland Lane is an undivided, four-lane, two-way road classified as a minor arterial. Between Jamieson Avenue and Duke Street, the road widens to a five-lane cross-section with a raised median. No on-street parking is permitted at any point along the corridor; however, during field observations, casual curbside parking and loading was noted to occur. No transit routes or bicycle facilities are present on the study corridor. Land use is a mix between residential and commercial, with a park and cemetery located along the east side of the road south of Jamieson Avenue.

Five intersections are located along the study corridor: three are signalized (Duke Street, Jamieson Avenue, and Eisenhower Avenue), while two are unsignalized (Ballenger Avenue and Emerson Avenue). A map of the study corridor is presented in Figure 1.

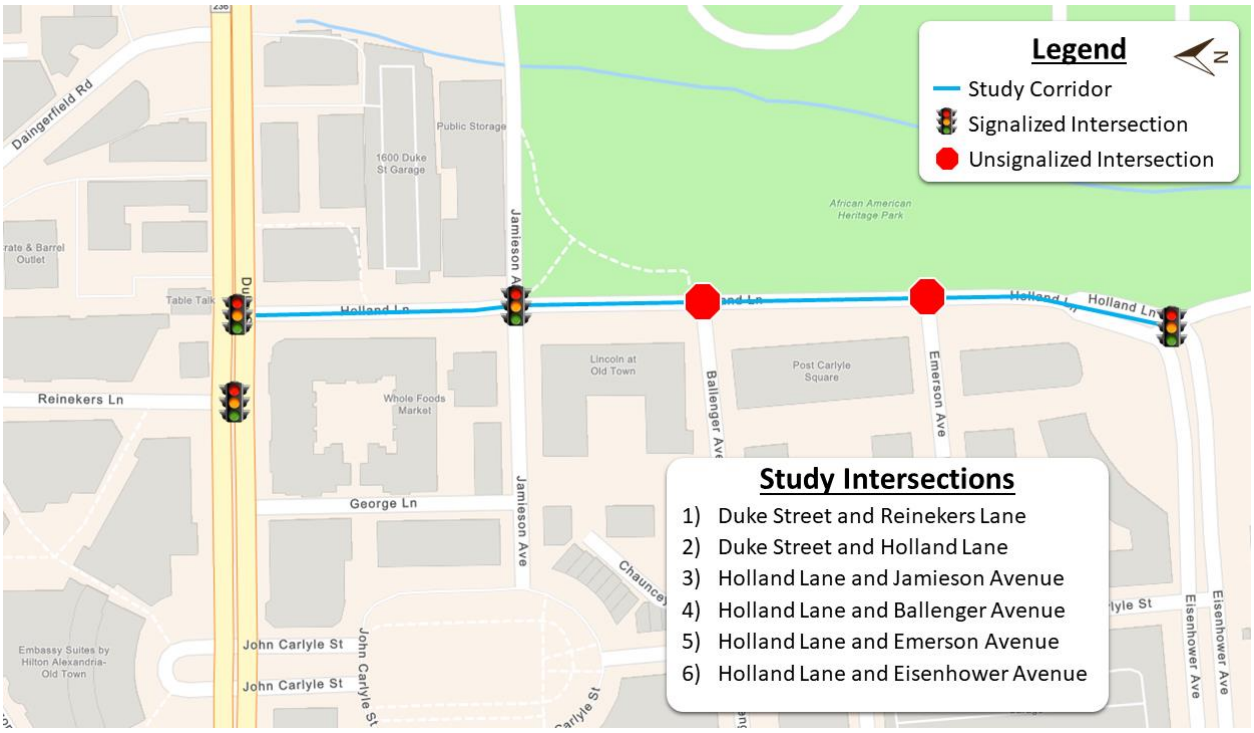


FIGURE 1: MAP OF THE STUDY CORRIDOR

The typical cross-section between Eisenhower Avenue and Jamieson Avenue is presented in Figure 2; the cross-section between Jamieson Avenue and Duke Street is presented in Figure 3.

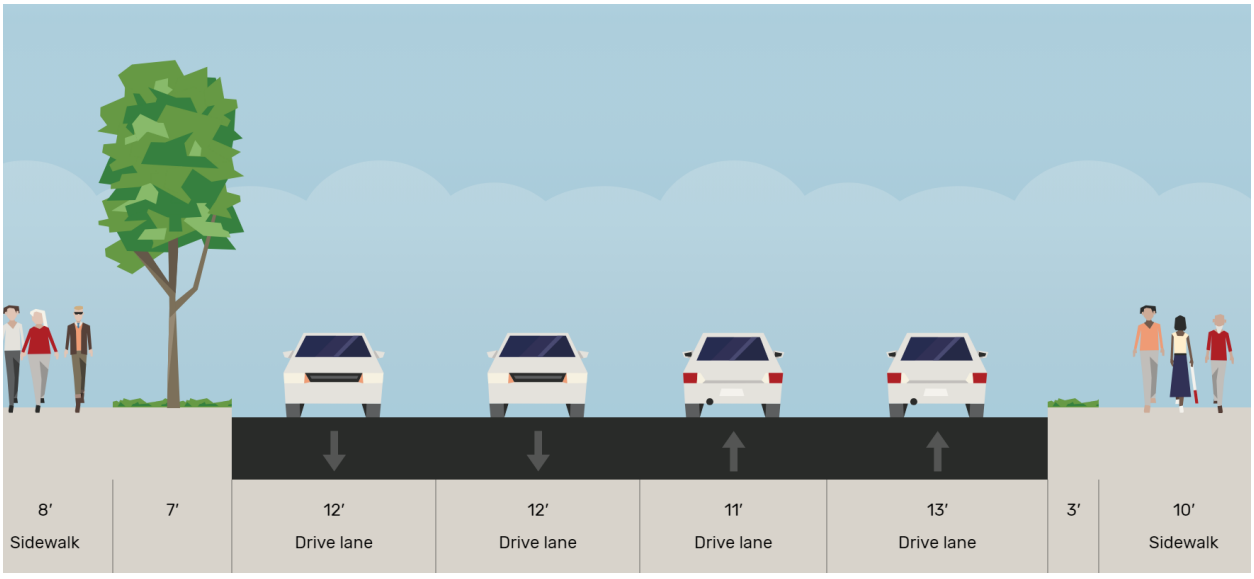


FIGURE 2: EXISTING HOLLAND LANE CROSS-SECTION FROM EISENHOWER AVENUE TO JAMIESON AVENUE

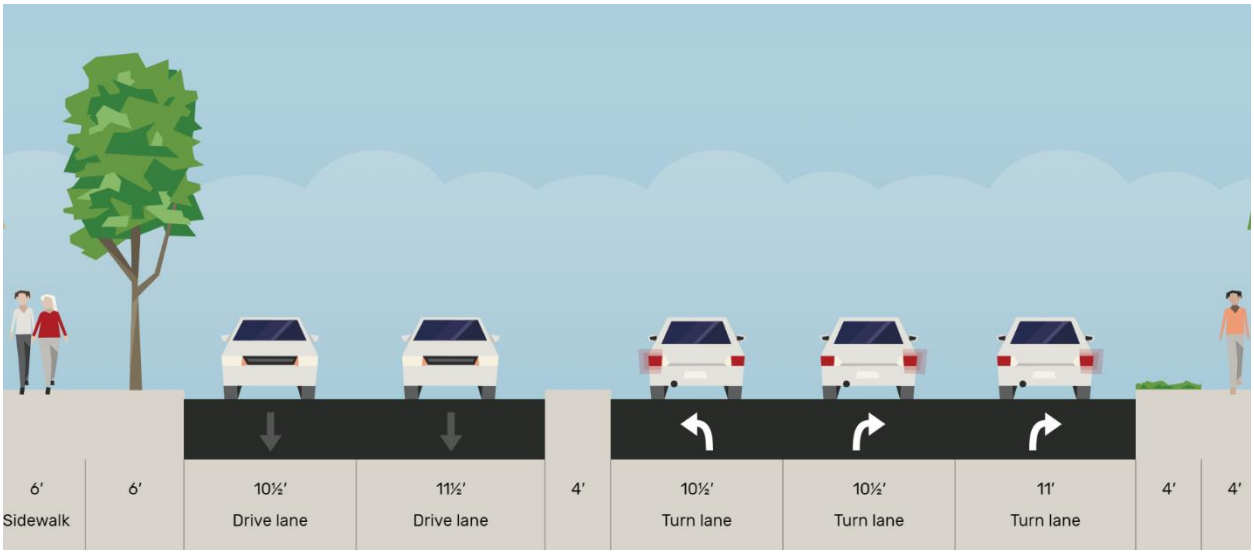


FIGURE 3: EXISTING HOLLAND LANE CROSS-SECTION FROM JAMIESON AVENUE TO DUKE STREET

B. Volume Data

The City of Alexandria provided Mead & Hunt with volume data that were collected in June 2023. Intersection turning movement counts (TMCs) were collected at five intersections along Holland Lane, while tube counts were also collected at two points along the corridor. To obtain a uniform analysis peak hour, the peak hour at the Duke Street and Holland Lane intersection was chosen and applied to all other intersections along the study corridor. The morning (AM) peak hour was 8:00 AM – 9:00 AM; the afternoon (PM) peak hour was 5:00 PM – 6:00 PM. All TMC data provided by The City are included as part of Appendix A.

In addition to TMC data, the City also provided Mead & Hunt with ADT data collected over multiple days in June 2023 at two locations along the corridor: between Jamieson Avenue and Ballenger Avenue, and between Emerson Avenue and Eisenhower Avenue. The ADT for each location is summarized below in Table 1.

TABLE 1: HOLLAND LANE ADT SUMMARY

Data Collection Date	Location	
	Between Jamieson Avenue and Ballenger Avenue	Between Emerson Avenue and Eisenhower Avenue
Tuesday, June 6, 2023	8,812	7,100
Wednesday June 7, 2023	9,356	7,878
Thursday June 8, 2023	8,579	7,143
3-Day Average	**8,916**	**7,374**

C. Crash Data

Mead & Hunt reviewed the crash data available on VDOT's Crash Analysis Tool and identified all crashes that occurred on the study corridor. The City of Alexandria provided detailed narratives for these crashes. From January 1, 2018, to November 30, 2023, 13 crashes occurred along the study corridor. The most predominant crash type was pedestrian-related crashes, of which there were six (6). The remaining crash

types included two (2) sideswipe, two (2) left turn, two (2) fixed object, and one (1) rear end. A breakdown of the crashes by intersection is presented in Figure 4. A further breakdown of the crashes by type and intersection is presented in Table 2.

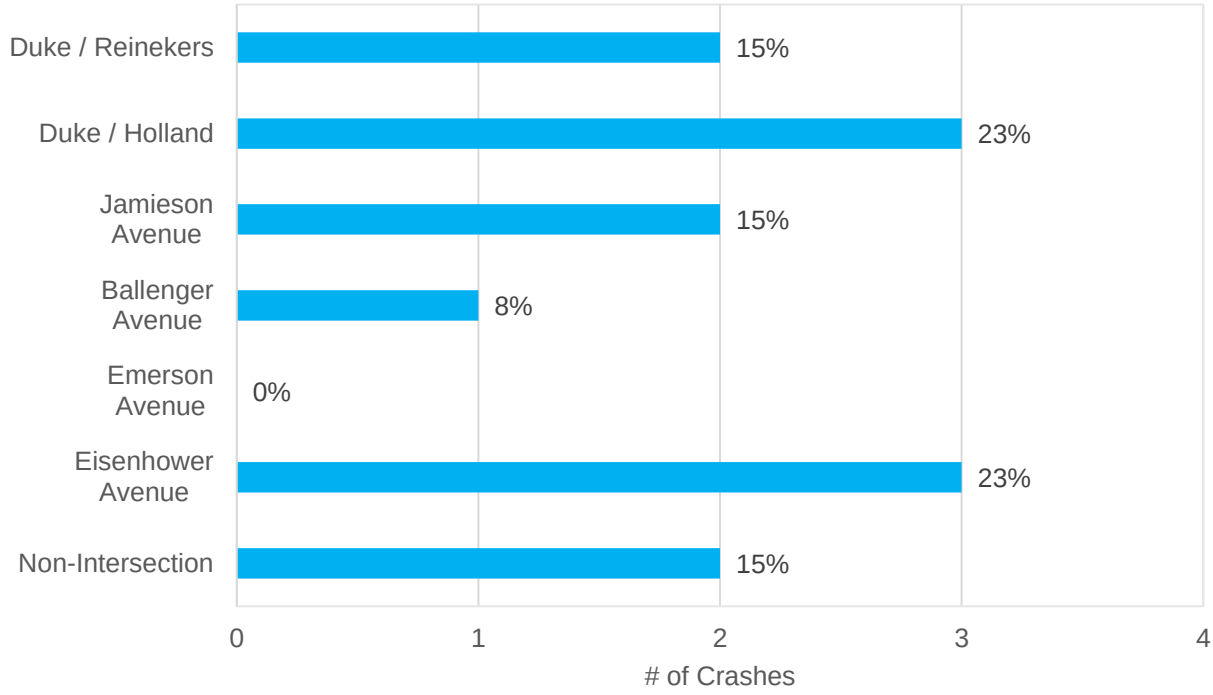


FIGURE 4: HOLLAND LANE CRASH BREAKDOWN BY INTERSECTION

TABLE 2: HOLLAND LANE CRASH BREAKDOWN BY TYPE AND INTERSECTION

Intersection	Duke / Reinekers	Duke / Holland	Jamieson Avenue	Ballenger Avenue	Emerson Avenue	Eisenhower Avenue	Non-Intersection
Sideswipe	1					1	
Rear End		1					
Left Turn		1	1				
Bicycle							
Pedestrian	1	1	1	1			2
Angle							
Parked Vehicle							
Fixed Object						2	
Backing							
Head On							
Unknown							
Total	**2**	**3**	**2**	**1**	**0**	**3**	**2**
Percentage	**15%**	**23%**	**15%**	**8%**	**0%**	**23%**	**15%**

A review of the detailed crash narratives indicates several trends in the data. First, two pedestrian-involved crashes were reported involving a vehicle exiting the Whole Foods driveway just north of Jamieson Avenue. Second, the two fixed object crashes both occurred at the intersection of Eisenhower Avenue and Holland Lane. One involved a piece of construction equipment during the signal installation project; the other occurred during a police chase. Third, two of the remaining pedestrian crashes occurred on Holland Lane: one at Ballenger Avenue and one at Jamieson Avenue. Both crashes involved vehicles turning left off the side streets and striking a pedestrian crossing Holland Lane. And finally, the remaining two pedestrian crashes occurred on Duke Street. One involved a pedestrian crossing Duke Street on the west leg of Holland Lane where no marked crosswalk is present; the other involved a pedestrian crossing Reinekers Lane and a vehicle turning right from Reienkers Lane to Duke Street.

D. Speed Data

The City of Alexandria provided Mead & Hunt with 24-hour speed data that was collected in June 2023. The measurements were taken at two locations along the corridor: between Jamieson Avenue and Ballenger Avenue, and between Emerson Avenue and Eisenhower Avenue. Average speed by direction over a 24-hour period is presented for both sites in Figure 5 and Figure 6.

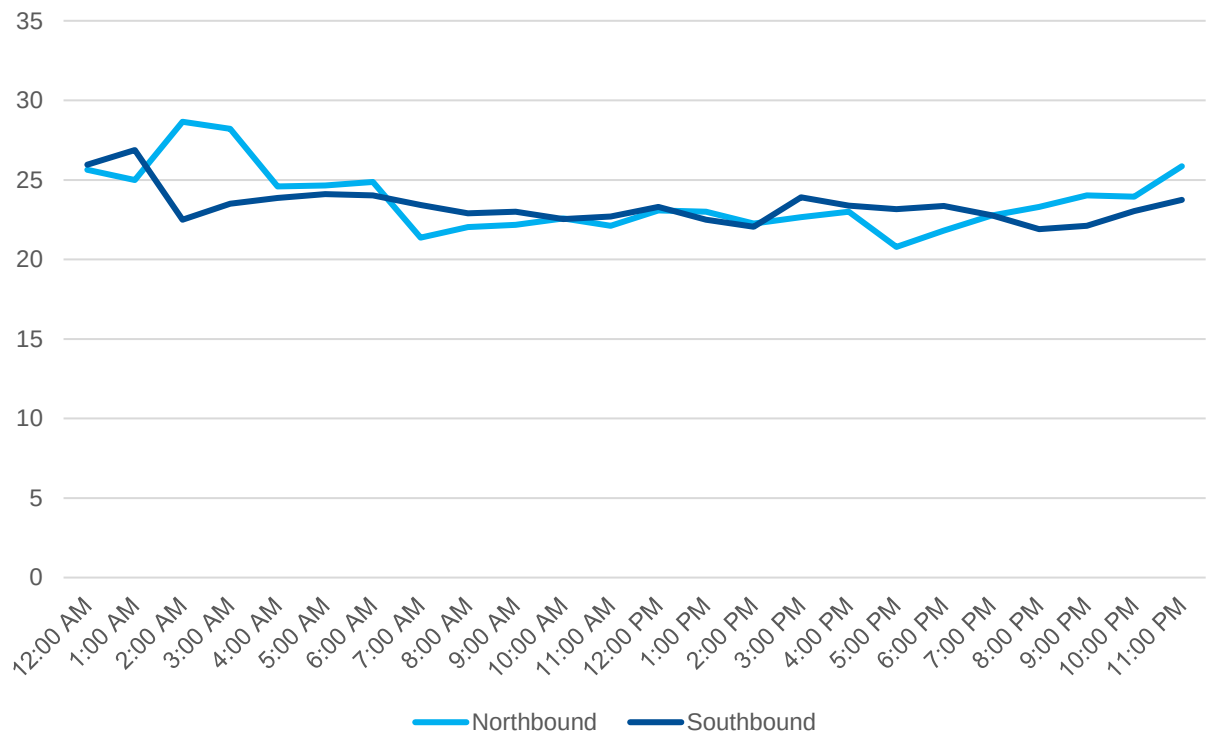


FIGURE 5: AVERAGE SPEED - HOLLAND LANE BETWEEN JAMIESON AVENUE AND BALLENGER AVENUE

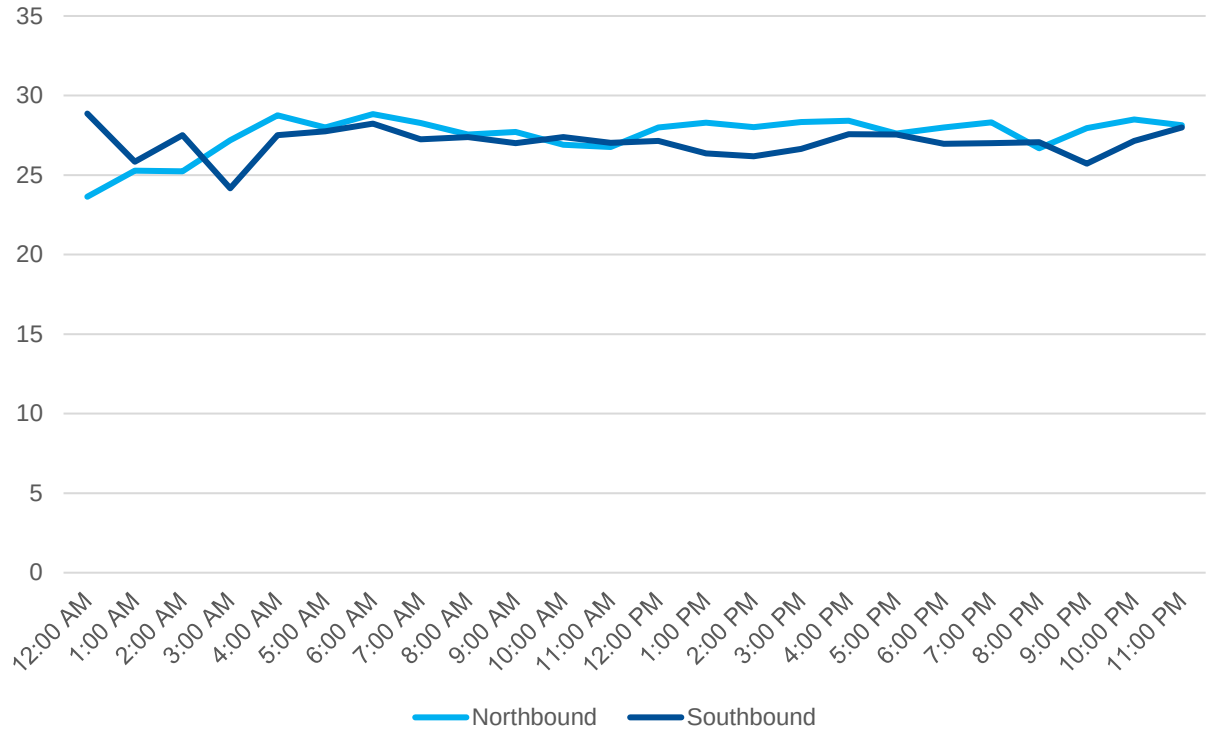


FIGURE 6: AVERAGE SPEED - HOLLAND LANE BETWEEN EMERSON AVENUE AND EISENHOWER AVENUE

When referencing Figure 5 and Figure 6, it does not appear that there are large fluctuations in speed by time of day, with the exception of a slight uptick in averages speed in the early morning hours (2:00 AM – 3:00 AM) in the northern segment (between Jamieson Avenue and Ballenger Avenue).

In addition to 24-hour speed measurements, aggregated speed data is presented for both sites by direction in Table 3. Metrics provided include posted speed limit, average speed, 85th-percentile speed, and percent enforceable (defined as the percent of vehicles traveling over 10 mph above the posted speed limit).

TABLE 3: HOLLAND LANE SPEED DATA

Direction	Posted Speed Limit (mph)	Average Speed (mph)	85th-Percentile Speed (mph)	Percent Enforceable (%)
Between Jamieson Avenue and Ballenger Avenue				
Northbound	25	22	29	1%
Southbound	25	23	28	1%
Between Emerson Avenue and Eisenhower Avenue				
Northbound	25	28	33	3%
Southbound	25	27	32	2%

As shown in Table 3, speeds along the southern segment of the corridor are slightly higher than those in the northern section for all metrics. This may be due in part to the lack of traffic control along the southern segment of the corridor, as Holland Lane is uncontrolled at both Emerson Avenue and Ballenger Avenue. Along the northern segment of the corridor, vehicles may be more impacted by the signalized intersections at Jamieson Avenue and Duke Street, resulting in lower speeds. Overall, however, the percent enforceable was noted to be low along the entire study corridor.

3. Proposed Countermeasures

The following section details the treatments and alternatives considered to improve safety and multimodal mobility along Holland Lane. The alternatives analyzed as part of this study were developed and refined during a design charrette facilitated by Mead & Hunt involving over a dozen City staff from various internal stakeholders. The charrette included a review of existing corridor conditions, evaluation and debate of multiple cross-sections and treatment alternatives, and a preliminary selection of a set of alternatives to advance to this study.

The alternatives and treatments selected to advance maximize the potential safety and mobility benefits to the corridor. Examples of treatments that were considered and the primary reasons they were not advanced are shown in Table 4.

TABLE 4: REJECTED TREATMENTS FOR THE HOLLAND LANE CORRIDOR

Rejected Treatment	Primary Reason for Rejection
Two-Way Left Turn Lanes (TWLTL) and/or left turn pockets at intersections	Precludes the provision of median refuge islands
Unbuffered/unprotected standard bicycle lanes	Increased potential for vulnerable user conflicts and bike lane blockage
Parking boxes on one or both sides of Holland Avenue	Parking boxes reduce width available for bicycle lanes, buffers, and median refuges; there are also limited opportunities to provide parking due to driveways on the west side and limited demand on the east side of Holland Lane

Ultimately these treatments were not included as part of the proposed alternatives except that a parking box is proposed along the west side of Holland Avenue between Jamieson Avenue and Duke Street in one of the alternatives.

A. Bicycle Improvements

On-street protected bicycle lanes were included as a treatment in each of the corridor alternatives in accordance with the *enhanced bicycle facility* envisioned for Holland Lane as part of the Alexandria Mobility Plan. Three (3) alternative corridor configurations for on-street protected bicycle lanes were considered and evaluated as part of this study:

- **Corridor Alternative 1:** One-Way Protected Bike Lane Pairs
- **Corridor Alternative 2:** Two-Way Protected Bike Lane on the east side of Holland Lane,
- **Corridor Alternative 3:** Two-Way Protected Bike Lane on the east side of Holland Lane with a One-Way Protected Bike Lane southbound on the west side of Holland Lane.

The following figures illustrate the typical sections for each of the corridor alternatives. Figure 7, Figure 9, and Figure 11 show the typical cross-sections between Eisenhower Avenue and Jamieson Avenue for each corridor alternative; Figure 8, Figure 10, and Figure 12 show the typical the cross-sections between Jamieson Avenue and Duke Street for each corridor alternative. Note that the medians shown in the typical sections below may consist of continuous raised concrete medians, painted medians, and/or median refuge islands at intersections.

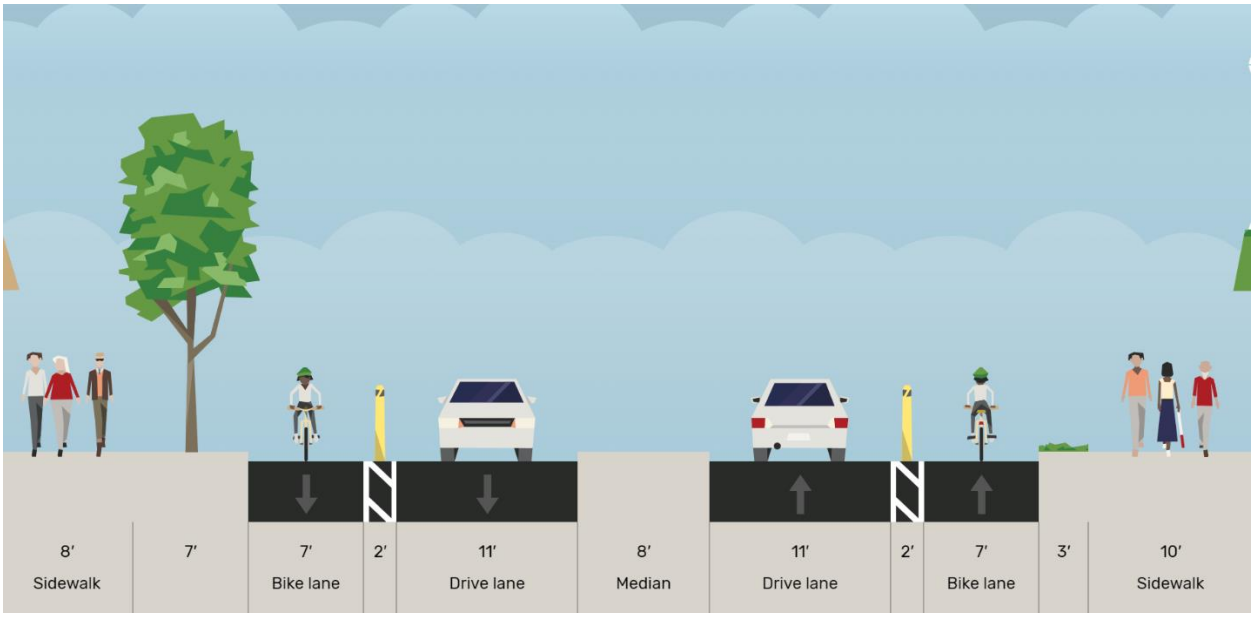


FIGURE 7: HOLLAND LANE CORRIDOR ALTERNATIVE 1 CROSS-SECTION FROM EISENHOWER AVENUE TO JAMIESON AVENUE

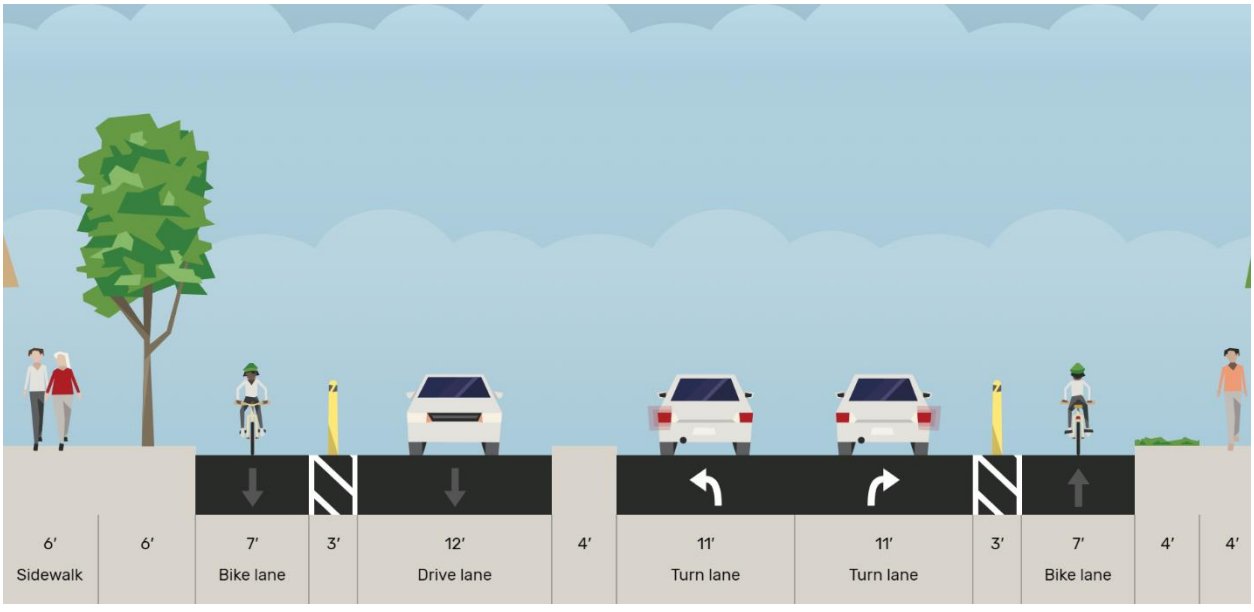


FIGURE 8: HOLLAND LANE CORRIDOR ALTERNATIVE 1 CROSS-SECTION FROM JAMIESON AVENUE TO DUKE STREET

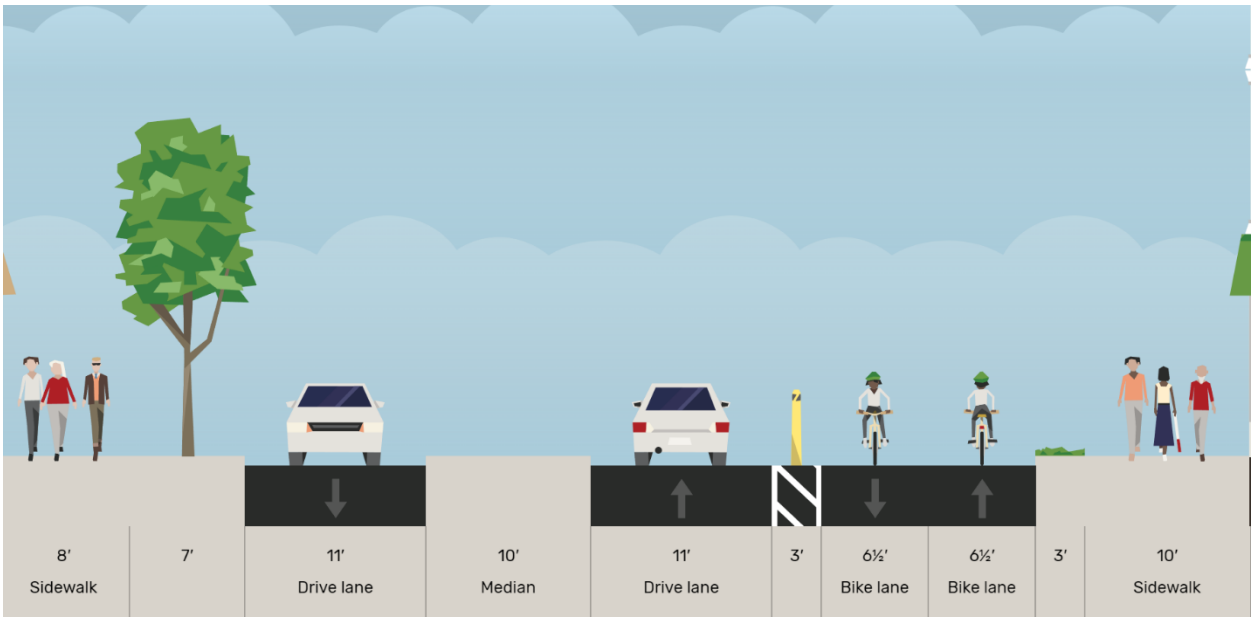


FIGURE 9: HOLLAND LANE CORRIDOR ALTERNATIVE 2 CROSS-SECTION FROM EISENHOWER AVENUE TO JAMIESON AVENUE

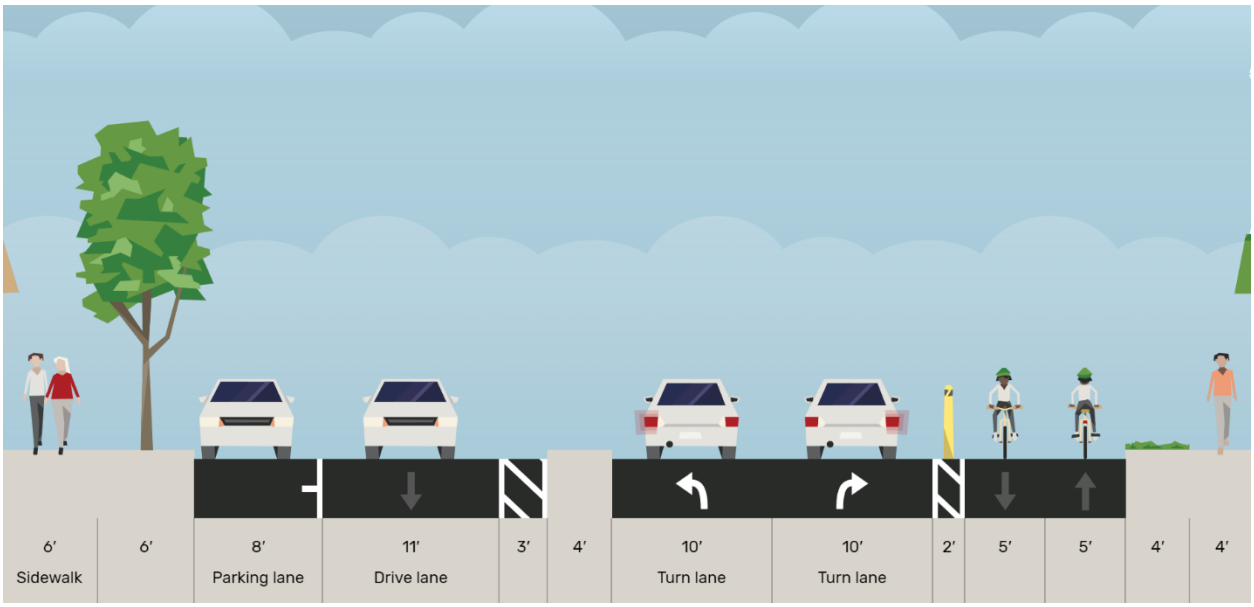


FIGURE 10: HOLLAND LANE CORRIDOR ALTERNATIVE 2 CROSS-SECTION FROM JAMIESON AVENUE TO DUKE STREET

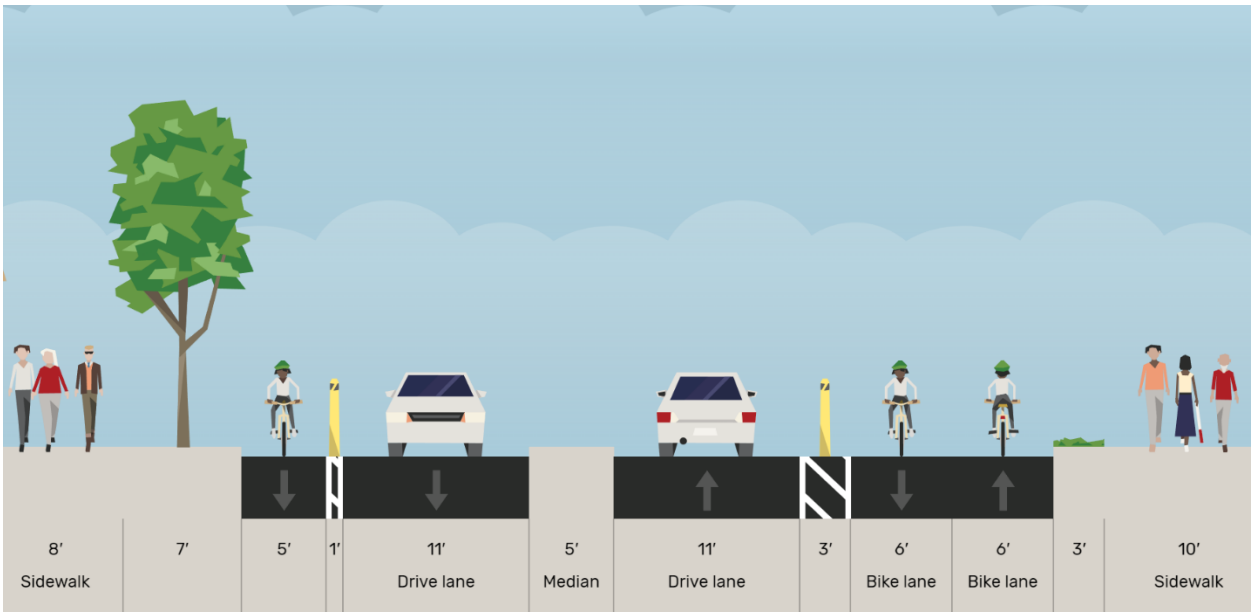


FIGURE 11: HOLLAND LANE CORRIDOR ALTERNATIVE 3 CROSS-SECTION FROM EISENHOWER AVENUE TO JAMIESON AVENUE

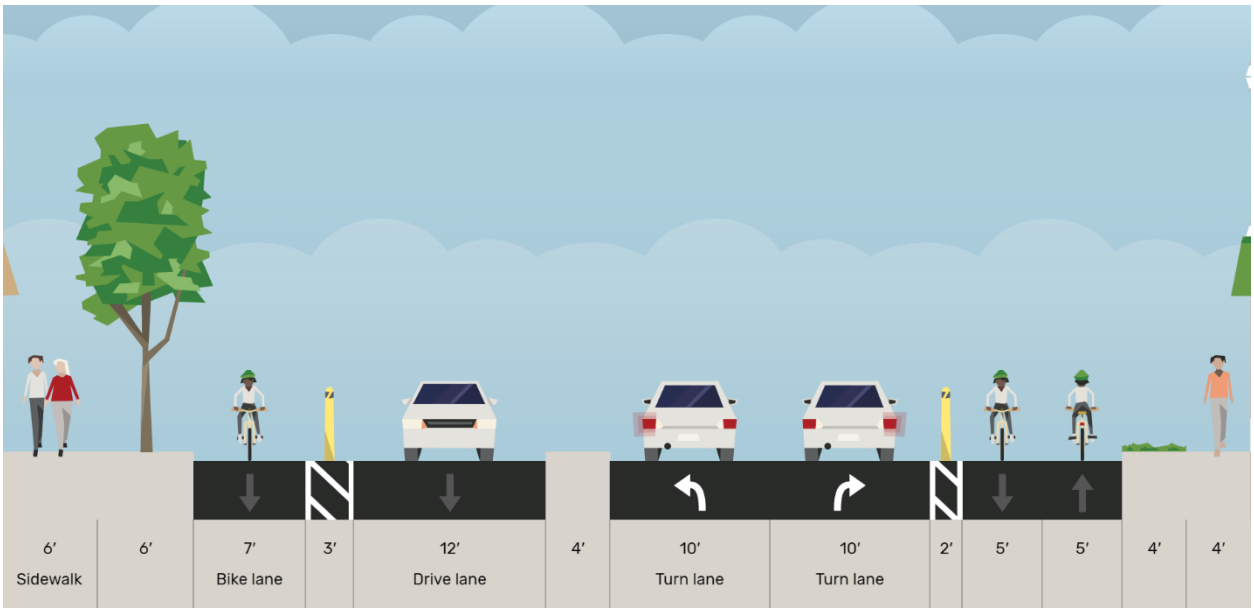


FIGURE 12: HOLLAND LANE CORRIDOR ALTERNATIVE 3 CROSS-SECTION FROM JAMIESON AVENUE TO DUKE STREET

B. Pedestrian Improvements

In addition to bicycle improvements, several significant pedestrian safety and mobility improvements are included as part of each alternative. The following pedestrian improvements are included:

- Jamieson Avenue
  - Pedestrian Refuge Island on the south leg of the intersection
- Ballenger Avenue
  - Pedestrian Refuge Islands on the north and south legs of the intersection
  - New crosswalk on the south leg of the intersection

- Emerson Avenue
    - Pedestrian Refuge Islands on the north and south legs of the intersection
    - New crosswalks on the north and south legs of the intersection

4. Traffic Analysis

To evaluate the impacts of the proposed cross-section and lane configuration changes on traffic operations along Holland Lane, the No-Build and Build conditions were modeled in Synchro 11. The City provided the latest signal timing data for the signalized intersections of Duke Street and Holland Lane and Holland Lane and Jamieson Avenue. As the intersection of Eisenhower Avenue and Holland Lane had recently been reconstructed as part of a VDOT project and operation of the signal had not been turned over to The City, Mead & Hunt developed baseline signal timings for this intersection.

It is important to note that the traffic volumes used in this analysis were collected prior to the start of AlexRenew's RiverRenew project. The RiverRenew project has temporarily closed Jamieson Avenue to through traffic starting at Holland Lane and instituted a detour to Duke Street. The RiverRenew project is currently expected to reopen Jamieson Avenue to all traffic in early March 2024. Therefore, the volumes used in this analysis are representative of the ultimate conditions following completion of the RiverRenew project and do not reflect the current field conditions with the detour in place.

The proposed typical vehicular lane configuration is substantially the same (i.e. one lane in each direction) across all three corridor alternatives. However, specific intersection-level scenarios were evaluated which vary the operations and configurations at several of the intersections. The following sections detail the capacity analysis performed for each intersection in the corridor, including any applicable intersection-level scenarios.

A. Duke Street and Holland Lane

As the northernmost intersection on the study corridor, the signalized intersection of Duke Street and Holland Lane is a critical intersection as the termination of the proposed bicycle facilities. No on-street bicycle facilities are present on Duke Street; therefore, it is anticipated that the proposed bicycle facilities on Holland Lane would connect to a future bicycle facility on Reinekers Lane via the use of shared lanes on Duke Street.

Under each of the proposed alternatives, the northbound bicycle lane will terminate at Duke Street to the right of a right turn only lane. Under the current traffic signal phasing, the bicycle movement would directly conflict with this right turn movement when northbound Holland Lane receives a green signal indication. This configuration of a through bicycle lane to the right of a right turn only lane is not acceptable per the requirements of the 2009 MUTCD. As a specific exception to these requirements, this configuration is acceptable if the bicycle movement is protected from conflicts from the right turn only lane. Therefore, to safely exit the bicycle lane without conflicting with the right turning traffic it is necessary to introduce a separate bicycle phase or time separation to allow the northbound bicycles to proceed into the intersection separately from the northbound right turn movement.

In order to accommodate a proposed bicycle facility on the northbound approach of Holland Lane at Duke Street, the following Build scenarios for this intersection were identified:

- **Duke Street Build Scenario 1:** Single Northbound Right Turn Lane + Single Left Turn Lane
    - Actuated Leading Bicycle Phase runs concurrently with northbound left turn phase and east leg crosswalk.
    - Northbound right turn operates permissively after Leading Bicycle Phase terminates; east leg crosswalk continues during this phase.
    - Northbound right turn overlaps with westbound left turn phase.
- **Duke Street Build Scenario 1a:** Single Northbound Right Turn Lane + Single Left Turn Lane
    - Bicycles proceed concurrently with northbound left turn phase (may optionally use bicycle signal) and east leg crosswalk.
    - Northbound right turn overlaps exclusively with westbound left turn phase; no permissive northbound right turn movement.
- **Duke Street Build Scenario 2:** Shared Northbound Left/Right Turn Lane + Dedicated Right Turn Lane
    - Actuated Exclusive Bicycle Phase; east leg crosswalk begins during this phase.
    - Northbound right turns and left turns run concurrently with east leg crosswalk.
- **Duke Street Build Scenario 3:** Median Removal + Dual Northbound Right Turn Lanes + Single Left Turn Lane
    - Bicycles proceed concurrently with northbound left turn phase (may optionally use bicycle signal) and east leg crosswalk.
    - Northbound right turn overlaps exclusively with westbound left turn phase; no permissive northbound right turn movement.

In all scenarios, northbound bicyclists would proceed on a green bike signal to queue within a two-stage turn box located inside the intersection. Bicyclists would then proceed westbound on Duke Street when Duke Street vehicular traffic receives a green signal indication. Given the lack of on-street bicycle facilities on Duke Street, it assumed that bicyclists would immediately turn right to continue north on Reinekers Lane. This configuration, including two-stage left turn box and bicycle crossing, are presented in Figure 13.

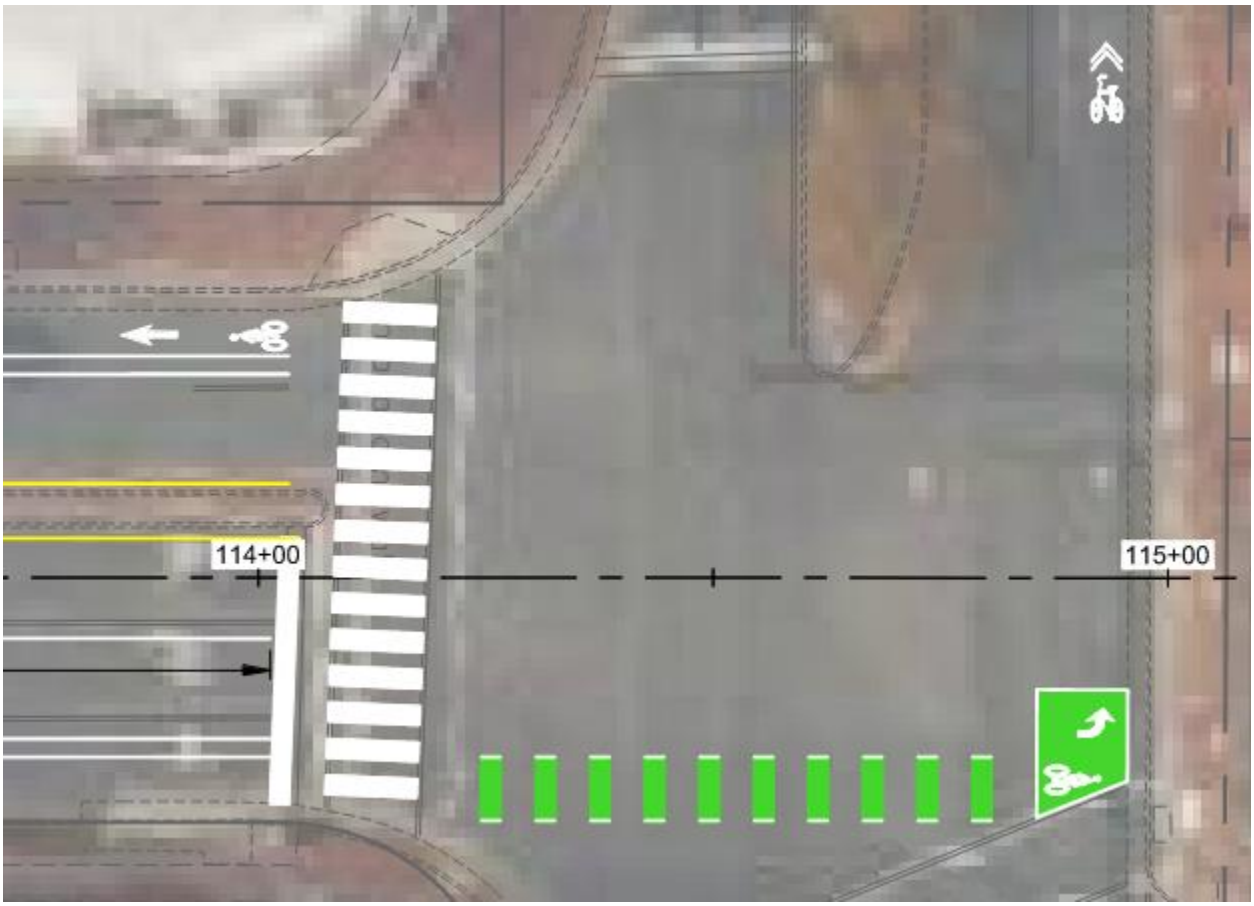


FIGURE 13: PROPOSED BICYCLE CROSSING AND TWO-STAGE TURN BOX AT DUKE STREET AND HOLLAND LANE

During field observations, it was noted that the east leg crosswalk conflicts with a permissive dual northbound right turn conflict. This type of conflict can be hazardous for pedestrians since it requires turning drivers in two separate lanes to identify crossing pedestrians and yield to them. However, the driver's view of pedestrians may be obstructed by vehicles in the other turn lane. As a secondary benefit, Duke Street Build Scenarios 1, 1A, and 3 mitigate the permissive dual northbound right turn conflict by reducing the northbound approach to a single right turn lane and/or separating the right turn movement from any conflicts with the east leg crosswalk. However, Duke Street Build Scenario 2 retains the permissive dual northbound right turn conflict.

A capacity analysis was conducted for each of the Duke Street Build Scenarios for both the Holland Lane and Duke Street intersection as well as the Duke Street and Reinekers Lane intersection since they operate together under a single clustered controller operation. The results of this analysis are presented in Table 5.

Static 95th-percentile queues were evaluated using Synchro for each of the Duke Street Build Scenarios for both the Holland Lane and Duke Street intersection as well as the Duke Street and Reinekers Lane intersection. A summary of the AM and PM peak hour 95th-percentile queues can be found in Table 6 and queue lengths highlighted in red indicate locations where storage capacity is exceeded.

TABLE 5: DUKE STREET AT HOLLAND LANE AND REINEKERS LANE AM (PM) CAPACITY ANALYSIS

Intersection	Approach	No-Build		Build Scenario 1		Build Scenario 1a		Build Scenario 2		Build Scenario 3	
		Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
Duke Street and Reinekers Lane	**Overall**	**30.6 (26.3)**	**C (C)**	**32.3 (25.8)**	**C (C)**	**38.2 (22.7)**	**D (C)**	**32.2 (61.9)**	**C (E)**	**23.4 (21.2)**	**C (C)**
	Eastbound	43.6 (48.0)	D (D)	46.2 (46.9)	D (D)	54.9 (40.5)	D (D)	45.9 (122.7)	D (F)	32.9 (37.3)	C (D)
	Westbound	0.3 (0.3)	A (A)	0.3 (0.3)	A (A)	0.2 (0.3)	A (A)	0.5 (0.4)	A (A)	0.2 (0.3)	A (A)
	Southbound	45.2 (45.9)	D (D)	45.8 (46.0)	D (D)	46.7 (46.0)	D (D)	47.3 (47.4)	D (D)	46.7 (46.0)	D (D)
Holland Lane and Duke Street	**Overall**	**24.7 (25.5)**	**C (C)**	**19.6 (24.8)**	**B (C)**	**17.1 (23.6)**	**B (C)**	**21.6 (28.0)**	**C (C)**	**18.3 (21.9)**	**B (C)**
	Eastbound	5.9 (18.6)	A (B)	7.0 (19.2)	A (B)	5.7 (16.0)	A (B)	5.8 (19.7)	A (B)	5.2 (15.5)	A (B)
	Westbound	20.6 (25.3)	C (C)	22.0 (25.9)	C (C)	14.1 (20.1)	B (C)	22.6 (29.2)	C (C)	14.0 (20.4)	B (C)
	Northbound	86.1 (47.6)	F (D)	50.4 (38.2)	D (D)	55.4 (60.7)	E (E)	64.3 (48.8)	E (D)	63.8 (47.9)	E (D)

TABLE 6: DUKE STREET AT HOLLAND LANE AND REINEKERS LANE AM (PM) QUEUING ANALYSIS

Intersection	Approach	Movement	Storage (ft)	No-Build	Build Scenario 1	Build Scenario 1a	Build Scenario 2	Build Scenario 3
				95th-% Queue (ft)				
Duke Street & Reinekers Lane	**Overall**		**- (-)**	**- (-)**	**- (-)**	**- (-)**	**- (-)**	**- (-)**
	Eastbound	Left	160	#364 (#137)	#364 (#137)	#364 (#137)	#351 (#128)	#364 (#137)
		Through	288	406 (#470)	406 (#470)	406 (#470)	394 (#443)	406 (#470)
	Westbound	Through-Right	55	2 (3)	2 (3)	2 (3)	5 (4)	2 (3)
	Southbound	Left	335	61 (156)	61 (156)	61 (156)	63 (158)	61 (156)
Holland Lane & Duke Street	**Overall**		**- (-)**	**- (-)**	**- (-)**	**- (-)**	**- (-)**	**- (-)**
	Eastbound	Through-Right	48	44 (142)	46 (144)	46 (144)	20 (m81)	46 (144)
	Westbound	Left	155	129 (194)	129 (194)	129 (185)	#195 (#341)	129 (180)
		Through	292	144 (274)	144 (274)	144 (274)	162 (313)	144 (274)
	Northbound	Left	340	76 (88)	76 (88)	77 (88)	189 (155)	77 (88)
		Right	340	#321 (177)	#179 (102)	#418 (#238)	#211 (161)	#169 (111)

m – Volume for 95th-percentile queue is metered by upstream signal

 # – Volume for 95th-percentile queue exceeds capacity

The results of the capacity analysis indicate that each of the proposed Duke Street Build Scenarios provide acceptable overall operations with some showing moderate improvement over the existing conditions. Notably, the northbound approach of Holland Lane and Duke Street improves during the AM Peak under all of the Build Scenarios and is improved or substantially the same during the PM Peak except under Build Scenario 1a which experiences approximately 13 seconds of additional delay. The improvement on the northbound approach, particularly during the AM Peak, can be partially attributed the uneven lane use observed in the No-Build condition. This uneven lane use does not exist in the single right turn lane scenarios (1 and 1a) and is assumed to improve under the future scenarios with two right turn lanes (2 and 3). It should also be noted that the Synchro models provided by the City included Fixed Force Off settings which allow unused green time on the actuated phases to be reallocated to other phases with more demand. In general, this unused green time becomes available to the northbound right turn in scenarios where it operates as an overlap phase (1, 1a, and 3) and results in acceptable operations for those scenarios. In the analysis, this leads to some delay and queueing impacts to the eastbound Duke Street approaches at both Holland Lane and Reinekers Lane, as spare green time is reallocated to the westbound left turn phase. It should be noted that if the field controllers do not operate with Fixed Force Offs or the City does not desire to operate them with Fixed Force Offs in the future, the overall results would be degraded for several of the scenarios, though operations would be improved on Duke Street.

The results of the queuing analysis indicate some queuing deficiencies, even in the No-Build condition, along Duke Street. These Duke Street queue lengths are generally not impacted by the proposed project, with the exception of Build Scenario 2 which reduces available green time for Duke Street to accommodate the exclusive bike phase. Queue lengths along Holland Lane vary by scenario, due to the changes in lane configuration and signal phasing, though no queuing deficiencies are noted except for the northbound right turn movement in Build Scenario 1a. In this scenario both signal capacity and lane capacity are reduced for the right turn movement, leading to increased queuing that would spill back to Jameison Avenue. Queue lengths denoted with a "#" symbol indicate the 95th-percentile volume exceeds capacity and queue lengths may in fact be longer than shown.

While the capacity and queueing analysis results show generally acceptable operations across the scenarios, there are some key differences among them that should be considered. Duke Street Build Scenarios 1 and 1a reduce the northbound approach from two right turn lanes to one right turn lane. In doing so, they both provide space for the proposed bicycle facility and eliminate the permissive dual northbound right turn conflict with pedestrians in the east side crosswalk. However, Build Scenario 1 retains a permissive right turn operation within the signal cycle while Build Scenario 1a allows right turns to operate only as an overlap when the westbound left turn is in operation. Maintaining the permissive portion of the right turn operation in Build Scenario 1 provides better overall operations for the right turn movement and is not tied completely to the duration of the westbound left turn phase as Build Scenario 1a is.

Duke Street Build Scenarios 2 and 3 maintain two northbound right turn lanes. In Build Scenario 2 the second right turn lane is a shared left/right turn lane while in Build Scenario 3 the existing center median along Duke Street is removed to provide space to install a second dedicated right turn only lane. In Build Scenario 2, the dual right turn lanes provide additional operational capacity but the right turns in the shared left/right turn lane may make the approach less efficient for the left turning traffic, and this scenario

maintains the permissive dual northbound right turn conflict with pedestrians in the east side crosswalk. While Build Scenario 3 also has two northbound right turn lanes, they operate only as an overlap with the westbound left turn which eliminates the permissive dual northbound right turn conflict. This operation is the same as Build Scenario 1a but would require the westbound left turn phase to operate for a shorter duration since there are two northbound right turn lanes in Build Scenario 3. Ultimately, the selected Duke Street Build Scenario should include an appropriate balance of safety, operations, and constructability considerations.

B. Holland Lane and Jamieson Avenue

As part of safety and access improvements to the corridor, The City requested that Mead & Hunt evaluate the operational impacts of converting the existing signal control to All-Way Stop Control (AWSC) at Holland Lane and Jamieson Avenue. This analysis was conducted for both the No-Build and Build conditions (i.e., without and with the proposed bicycle facility). As with the intersection of Duke Street and Holland Lane and following discussion with City staff, high volumes of right turning traffic conflicting with a proposed bicycle facility necessitate the implementation of a dedicated bicycle phase. This dedicated bike phase is modeled in the Build Scenario under signal control. The results of this capacity analysis are presented in Table 7.

Static 95th-percentile queues were evaluated using Synchro for each of the four scenarios. A summary of the AM and PM peak hour 95th-percentile queues can be found in Table 8 and queue lengths highlighted in red indicate locations where storage capacity is exceeded.

TABLE 7: HOLLAND LANE AND JAMIESON AVENUE INTERSECTION CONTROL AM (PM) CAPACITY ANALYSIS

Approach	No-Build		No-Build (AWSC)		Build (Signal) Corridor Alternatives 1-3		Build (AWSC) Corridor Alternatives 1-3	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
Control Type	Signal		Stop (All-Way)		Signal		Stop (All-Way)	
Overall	**14.9 (15.4)**	**B (B)**	**11.5 (13.0)**	**A (C)**	**41.0 (35.3)**	**D (D)**	**16.6 (18.0)**	**B (C)**
Eastbound	14.1 (14.9)	B (B)	10.3 (12.1)	B (B)	24.1 (22.8)	C (C)	10.6 (12.9)	B (B)
Westbound	14.5 (18.4)	B (B)	10.3 (13.0)	B (B)	25.2 (31.0)	C (C)	10.7 (13.9)	B (B)
Northbound	15.5 (14.5)	B (B)	12.8 (14.6)	A (A)	54.4 (37.2)	D (D)	20.9 (22.3))	C (C)
Southbound	13.7 (15.1)	B (B)	8.8 (11.1)	A (B)	20.9 (41.2)	C (D)	10.8 (16.8)	B (C)

TABLE 8: HOLLAND LANE AND JAMIESON AVENUE INTERSECTION CONTROL AM (PM) QUEUING ANALYSIS

Approach	Storage (ft)	No-Build	No-Build (AWSC)	Build (Signal) Corridor Alternatives 1-3	Build (AWSC) Corridor Alternatives 1-3
		95th-% Queue (ft)			
Overall	**- (-)**	**- (-)**	**- (-)**	**- (-)**	**- (-)**
Eastbound	360	58 (86)	N/A	85 (111)	N/A
Westbound	1188	58 (115)	N/A	85 (#153)	N/A
Northbound	219	81 (59)	N/A	#488 (#373)	N/A
Southbound	340	45 (76)	N/A	130 (#263)	N/A

 # – Volume for 95th-percentile queue exceeds capacity

The analysis results indicate that conversion of Holland Lane and Jamieson Avenue from signal control to AWSC would result in minor impacts to traffic operations for all approaches. However, following further discussion with The City, it was determined that the AWSC conversion would not be advanced as part of this project. Therefore, the results presented in the Build scenario under signal control are the proposed conditions for this project. These results apply to each of the three alternative bicycle lane cross-sections since the resultant vehicular cross-sections are identical in all scenarios for this intersection. The Build scenario signal control results show that the Level of Service changes from B to D during both the AM and PM Peaks for the overall intersection, and from B to C or D for each of the approaches during both the AM and PM Peaks. With respect to vehicular queuing, 95th-percentile queues are expected to increase for all approaches, with particular impacts to northbound and southbound Holland Lane. The southbound vehicular queues, while increasing, are not anticipated to spill back to Duke Street. However, northbound vehicular queues would be projected to spill back through the uncontrolled crosswalk at Ballenger Avenue. These changes in delay and queueing are attributed to the reduction in the number of vehicular travel lanes (from two to one) on Holland Lane as well as the introduction of the dedicated bicycle phase. Overall, the results indicate that the intersection will continue to operate below vehicular capacity in the proposed condition, though with impacts to queuing in the higher-volume northbound direction.

C. Holland Lane and Eisenhower Avenue

The signalized intersection of Holland Lane and Eisenhower Avenue forms the southern terminus of the study corridor. As such, the transition of the proposed bicycle facilities on Holland Lane is an important consideration at this intersection. The west leg of the intersection was recently reconfigured as part of the Eisenhower Avenue Corridor Improvement Project, which implemented a five-lane cross-section (two westbound receiving lanes and three eastbound approach lanes). The three eastbound approach lanes consist of two left turn only lanes and one right turn only lane.

In addition to the three eastbound vehicular approach lanes, a standard bicycle lane was installed to the right of the right turn only lane. Such a configuration is not permitted per the MUTCD 2009; therefore, during conversation with The City it was determined to install a dedicated bicycle phase with bicycle signal for the eastbound bike movement. This will also help facilitate the connection for eastbound cyclists to the proposed northbound bicycle facility along Holland Lane. Therefore, the proposed bicycle signal and associated dedicated bicycle signal phasing is included in all Build scenarios for this intersection.

Under each of the three proposed corridor alternatives, Holland Lane will be reduced from two northbound lanes to one northbound lane north of Eisenhower Avenue. However, as noted, there are two eastbound left turn approach lanes on Eisenhower Avenue at this intersection. To accommodate the proposed lane configuration along Holland Lane, two Build scenarios for this intersection were identified:

- **Eisenhower Avenue Build Scenario 1:** Maintain two eastbound left turn only lanes on Eisenhower Avenue and institute a merge from two northbound receiving lanes to one northbound travel lane on Holland Avenue immediately to the north of Eisenhower Avenue.
- **Eisenhower Avenue Build Scenario 2:** Reduce the eastbound approach to one eastbound left turn only lane with one northbound receiving lane on Holland Avenue.

A capacity analysis of these two Build scenarios compared to the No-Build scenario was performed and is presented in Table 9.

Static 95th-percentile queues were evaluated using Synchro for each of the two three scenarios. A summary of the AM and PM peak hour 95th-percentile queues can be found in Table 10 and queue lengths highlighted in red indicate locations where storage capacity is exceeded.

TABLE 9: HOLLAND LANE AND EISENHOWER AVENUE AM (PM) CAPACITY ANALYSIS

Approach	No-Build		Build Scenario 1 Corridor Alternatives 1-3 Dual Eastbound Left		Build Scenario 2 Corridor Alternatives 1-3 Single Eastbound Left	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
Overall	**4.7 (4.8)**	**A (A)**	**9.4 (11.2)**	**A (B)**	**14.2 (15.4)**	**B (B)**
Eastbound	4.7 (5.3)	A (A)	8.0 (11.5)	A (B)	11.6 (14.4)	B (B)
Northbound	13.2 (11.7)	B (B)	11.8 (7.9)	B (A)	20.0 (12.2)	B (B)
Southbound	3.4 (3.3)	A (A)	14.6 (11.1)	B (B)	24.1 (17.6)	C (B)

TABLE 10: HOLLAND LANE AND EISENHOWER AVENUE AM (PM) QUEUING ANALYSIS

Approach	Movement	Storage (ft)	No-Build	Build Scenario 1 Corridor Alternatives 1-3 Dual Eastbound Left	Build Scenario 2 Corridor Alternatives 1-3 Single Eastbound Left
			95th-% Queue (ft)		
Overall		**- (-)**	**- (-)**	**- (-)**	**- (-)**
Eastbound	Left	335	137 (95)	131 (95)	#389 (231)
	Right	335	11 (5)	14 (5)	13 (5)
Northbound	Left	180	8 (9)	11 (10)	14 (14)
	Through	180	7 (11)	9 (11)	11 (16)
Southbound	Through	315	8 (6)	- (-)	- (-)
	Through-Right	315	- (-)	81 (98)	100 (144)
	Right	315	1 (2)	- (-)	- (-)

 # – Volume for 95th-percentile queue exceeds capacity

The analysis results show that the Eisenhower Avenue Build Scenario 1 with two eastbound lanes performs marginally better than the Eisenhower Avenue Build Scenario 2 with a single eastbound lane, though both operate well under vehicular capacity. Although under capacity, the reduction from two lanes to one lane does cause the left turn queue to spill back through the upstream signalized crosswalk at John Carlyle Street during the AM peak hour. However, it should be noted that Scenario 1 with two eastbound lanes does not account for any capacity impacts caused by the merging activity from two northbound receiving lanes to one northbound travel lane since such downstream effects are not captured by Synchro. Accordingly, the change in operations under the Build scenario with two eastbound lanes is only changed from the No-Build scenario due to the addition of the eastbound bike phase.

While not captured in this analysis, it is possible that the merge condition will result in unequal lane use between the two left turn only lanes on eastbound Eisenhower Avenue as drivers may tend to avoid being in the lane that is forced to merge. In this case the actual operation of Build Scenario 1 with two eastbound lanes would be somewhat worse than what is presented above though it would still perform better than the single eastbound left turn lane scenario. Note that this analysis has been performed using current traffic volumes rather than projected future traffic volumes. If future traffic volumes increase significantly, the single eastbound left turn lane may not have sufficient capacity to absorb the higher volumes resulting in delays and congestion.

D. Uncontrolled Intersections: Holland Lane and Ballenger Avenue, and Holland Lane and Emerson Avenue

The intersections of Holland Lane and Ballenger Avenue, and Holland Lane and Emerson Avenue are uncontrolled in the northbound and southbound directions along Holland Lane and stop-controlled along the eastbound approaches to the intersections. Under each of the three proposed corridor alternatives, the Holland Lane approaches to these intersections will be reduced from two vehicular travel lanes to one vehicular travel lane in each direction. The eastbound approaches will maintain their existing lane configurations and stop-control. A capacity analysis of the No-Build and Build conditions for the three proposed corridor alternatives is presented in Table 11.

Static 95th-percentile queues were evaluated using Synchro for each of the two scenarios. A summary of the AM and PM peak hour 95th-percentile queues can be found in Table 12 and queue lengths highlighted in red indicate locations where storage capacity is exceeded.

TABLE 11: HOLLAND LANE AT BALLENGER AVENUE AND EMERSON AVENUE AM (PM) CAPACITY ANALYSIS

Intersection	Approach	No-Build		Corridor Alternatives 1-3	
		Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
Holland Lane and Ballenger Avenue	**Overall**	**14.5 (18.5)**	**B (C)**	**18.8 (22.6)**	**C (C)**
	Eastbound	14.5 (18.5)	B (C)	18.8 (22.6)	C (C)
	Northbound	0.0 (0.1)	A (A)	0.0 (0.1)	A (A)
	Southbound	0.0 (0.0)	A (A)	0.0 (0.0)	A (A)
Holland Lane and Emerson Avenue	**Overall**	**11.7 (15.4)**	**B (C)**	**14.1 (18.2)**	**B (C)**
	Eastbound	11.7 (15.4)	B (C)	14.1 (18.2)	B (C)
	Northbound	0.1 (0.0)	A (A)	0.1 (0.0)	A (A)
	Southbound	0.0 (0.0)	A (A)	0.0 (0.0)	A (A)

TABLE 12: HOLLAND LANE AT BALLENGER AVENUE AND EMERSON AVENUE AM (PM) QUEUING ANALYSIS

Intersection	Approach	Movement	Storage (ft)	No-Build	Corridor Alternatives 1-3
				95th-% Queue (ft)	
Holland Lane & Ballenger Avenue	**Overall**		**- (-)**	**- (-)**	**- (-)**
	Eastbound	Left	455	15 (20)	21 (26)
	Northbound	Left-Through	290	0 (0)	0 (0)
	Southbound	Through-Right	219	0 (0)	0 (0)
Holland Lane & Emerson Avenue	**Overall**		**- (-)**	**- (-)**	**- (-)**
	Eastbound	Left	425	6 (13)	8 (17)
	Northbound	Left-Through	315	0 (0)	0 (0)
	Southbound	Through-Right	290	0 (0)	0 (0)

The capacity analysis indicates that the eastbound approaches at both intersections will experience an increase in delay of less than 5 seconds per vehicle during the AM and PM peak periods. This relatively small increase in delay can be attributed to the reduction in the number of vehicular travel lanes on Holland Lane and subsequently the availability of fewer gaps in the uncontrolled northbound and southbound vehicular traffic streams. Similarly, 95th-percentile queue lengths for the eastbound stop-controlled approaches at both intersections are projected to experience minor increases in queueing. Overall, the changes in delay and queuing at these intersections appears to be acceptable within the context of the proposed project.

E. Traffic Analysis Summary

The preceding traffic analysis was performed to evaluate the overall corridor and intersection specific impacts of the proposed installation of multimodal mobility and safety improvements on the Holland Lane Corridor between Eisenhower Avenue and Duke Street. Specifically, the analysis evaluated the installation of three primary corridor alternatives: One-Way Protected Bike Lane Pairs, Two-Way Protected Bike Lanes on the east side of Holland Lane, and Two-Way Protected Bike Lanes on the east side of Holand Lane with a One-Way Protected Bike Lane southbound on the west side of Holland Lane.

Among the three primary corridor alternatives the basic Holland Lane vehicular cross-section is functionally identical with one vehicular travel lane in each direction. The intersections of Jamieson Avenue, Ballenger Avenue, and Emerson Street were therefore analyzed with one vehicular travel lane in each direction. At the intersections of Holland Lane and Duke Street, and Holland Lane and Eisenhower Avenue, alternative lane configurations were evaluated to facilitate safe bicycle travel at the end points of the corridor.

Due to geometric and traffic volume conditions, the analysis also evaluated changes to traffic signal phasing to facilitate protected bike movements at the intersections with Eisenhower Avenue, Jamieson Avenue, and Duke Street. The potential for conversion of the Jamieson Avenue intersection to All-Way Stop Control was also evaluated.

Overall, the traffic analysis indicates that each of the three proposed corridor alternatives will provide generally acceptable traffic operations, with respect to vehicle delay, under the traffic volume conditions used for this analysis, though some queueing impacts are noted as a result of the reduction in number of travel lanes. The intersection-level analysis findings are summarized below:

- **Holland Lane and Duke Street:** Four (4) Build Scenarios (1, 1a, 2, and 3) were evaluated that provide for geometric and signal phasing accommodation for the bicycle facility. All of the Build Scenarios were found to operate with acceptable impacts to vehicle delay, though Build Scenarios 1 and 3 can provide more overall capacity for the northbound right turns while simultaneously eliminating the permissive dual northbound right turn conflict with pedestrians. Also, it is noted that Build Scenario 1a introduced queue spillback during the AM peak hour for northbound Holland Lane as a result of the reduced lane capacity and signal capacity. Similarly, Build Scenario 2 resulted in queue spillback along Duke Street due to the introduction of an exclusive bicycle phase.
- **Holland Lane and Jamieson Avenue:** Conversion of this intersection from a traffic signal to All-Way Stop Control (AWSC) was evaluated and found to operate well, but the City ultimately determined that the intersection will remain a traffic signal. The operation of the traffic signal in the Build condition, including a dedicated bicycle phase, was evaluated and found to operate below vehicular capacity. However, despite the signal operating below capacity, queue spillback was noted for northbound Holland Lane as a result of the reduced lane capacity and signal capacity.
- **Holland Lane and Eisenhower Avenue:** Eisenhower Avenue Build Scenarios 1 and 2 were analyzed for this intersection with dual and single eastbound left turn lanes, respectively. In both scenarios, dedicated bicycle phasing was included to facilitate bicycle access to and from the existing bicycle lanes on Eisenhower Avenue. Both Build Scenarios were shown to operate well under vehicular capacity, though with the following caveats. First, the dual lane scenario does not account for downstream merge effects on Holland Avenue. Second, left turn queues are projected to spill back through John Carlyle Street under the signal left turn lane scenario. And third, the single lane scenario may not be robust enough should future volumes increase significantly.

- **Holland Lane and Ballenger Avenue, and Holland Lane and Emerson Avenue:** Both intersections remain uncontrolled along Holland Lane and stop-controlled along the eastbound approaches in the proposed condition. Reduction of Holland Lane from two lanes in each direction to one lane in each direction results in minor increases in delay and vehicular queues for the eastbound approaches due to the reduced availability of gaps in the Holland Lane traffic stream.

5. Conclusion

This document summarizes the operational impacts of proposed multimodal enhancements to the Holland Lane corridor between Eisenhower Avenue and Duke Street in the Carlyle / Eisenhower East neighborhood of Alexandria. The proposed enhancements include on-street protected bicycle lanes, additional crosswalks, and pedestrian refuge islands. Three (3) alternative corridor configurations for on-street protected bicycle lanes were considered: One-Way Projected Bike Lane Pairs, Two-Way Protected Bike Lane on the east side of Holland Lane, and Two-Way Protected Bike Lane on the east side of Holland Lane with a One-Way Protected Bike Lane southbound on the west side of Holland Lane.
Each of the alternative corridor configurations results in a reduction from two vehicular travel lanes to a single vehicular travel lane in each direction of Holland Lane for most of the corridor. Additional lanes are provided at the corridor end points to merge traffic from two lanes to one lane (just north of Eisenhower Avenue) and provide adequate capacity for turning traffic (northbound approach at Duke Street). At Duke Street, alternate geometric and signal phasing configurations of the northbound approach were evaluated. In addition, the need for dedicated bicycle phasing was identified and analyzed at Duke Street, Jamieson Avenue, and Eisenhower Avenue. Overall, this analysis demonstrates that impacts to vehicular delay may be within the threshold of acceptability throughout the project limits, though some vehicular queueing concerns are noted at selected intersections.

As indicated in the traffic analysis, the corridor will operate at an acceptable level under each of the alternative corridor configurations. Therefore, selection of one of the corridor alternatives can be made on the basis of other factors such as available width for median refuges, ease of bicycle access to side streets and other bicycle facilities, and flexibility for future adjustments to the corridor cross-section. Operationally, the primary decision to be made concerns the lane configuration and traffic signal operations for the northbound approach of Holland Lane at Duke Street. The traffic analysis shows that each of the scenarios identified for this approach can operate acceptably, though some can provide more robust capacity and safety benefits. Ultimately, the selected configurations for the corridor and individual approaches should include an appropriate balance of safety, operations, and constructability considerations.

APPENDIX A
TURNING MOVEMENT COUNTS

Type of peak hour being reported: User-Defined

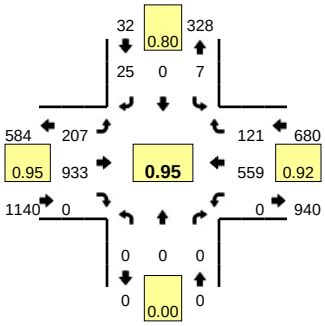
Method for determining peak hour: Total Entering Volume

LOCATION: Reinekers Ln -- Duke St

CITY/STATE: Alexandria, VA

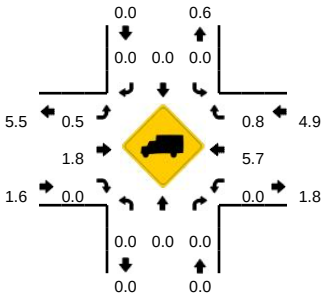
QC JOB #: 14707723

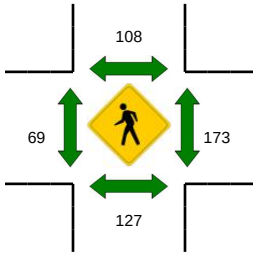
DATE: Wed, Jun 06 2018

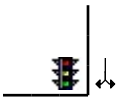


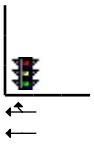
Peak-Hour: 7:30 AM -- 8:30 AM

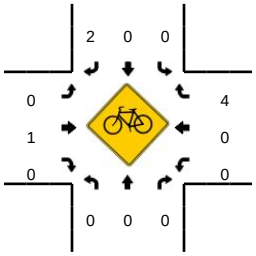
Peak 15-Min: 7:45 AM -- 8:00 AM

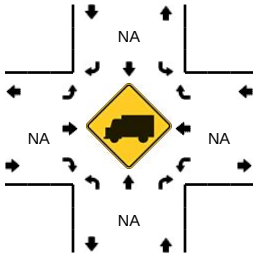


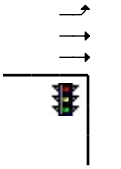


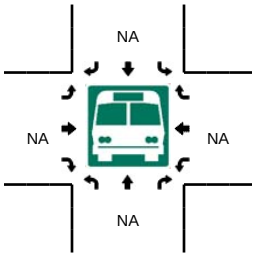












15-Min Count Period Beginning At	Reinekers Ln (Northbound)				Reinekers Ln (Southbound)				Duke St (Eastbound)				Duke St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:30 AM	0	0	0	0	0	0	3	0	11	107	0	0	0	57	4	0	182	
6:45 AM	0	0	0	0	2	0	6	0	19	173	0	0	0	67	8	0	275	
7:00 AM	0	0	0	0	2	0	4	0	20	148	0	0	0	76	10	0	260	
7:15 AM	0	0	0	0	3	0	2	0	32	202	0	0	0	110	8	0	357	1074
7:30 AM	0	0	0	0	1	0	4	0	32	224	0	0	0	131	17	0	409	1301
7:45 AM	0	0	0	0	2	0	7	0	49	244	0	0	0	141	43	0	486	1512
8:00 AM	0	0	0	0	2	0	6	0	52	238	0	0	0	148	35	0	481	1733
8:15 AM	0	0	0	0	2	0	8	0	74	227	0	0	0	139	26	0	476	1852
8:30 AM	0	0	0	0	4	0	6	0	50	242	0	0	0	112	37	0	451	1894
8:45 AM	0	0	0	0	2	0	9	0	51	261	0	0	0	136	35	0	494	1902
9:00 AM	0	0	0	0	3	0	5	0	40	215	0	0	0	124	23	0	410	1831
9:15 AM	0	0	0	0	3	0	6	0	28	224	0	0	0	102	25	0	388	1743

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	8	0	28	0	196	976	0	0	0	564	172	0	1944
Heavy Trucks	0	0	0		0	0	0		4	20	0		0	16	0		40
Pedestrians		132				96				80				116			424
Bicycles	0	0	0		0	0	0		0	0	0		0	0	3		3
Railroad																	
Stopped Buses																	

Comments:

Report generated on 7/16/2018 5:32 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: User-Defined

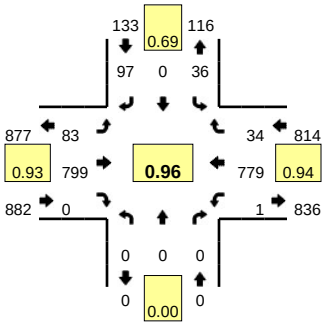
Method for determining peak hour: Total Entering Volume

LOCATION: Reinekers Ln -- Duke St

CITY/STATE: Alexandria, VA

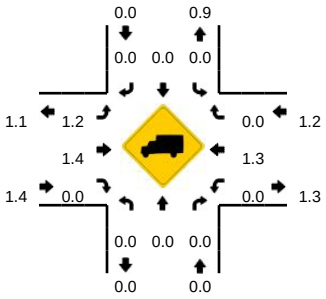
QC JOB #: 14707724

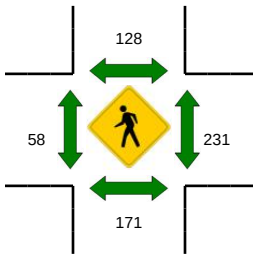
DATE: Wed, Jun 06 2018

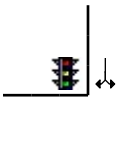


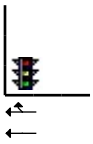
Peak-Hour: 5:00 PM -- 6:00 PM

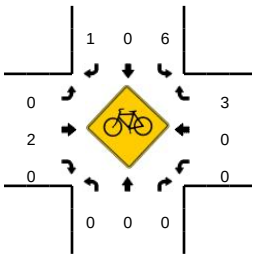
Peak 15-Min: 5:00 PM -- 5:15 PM

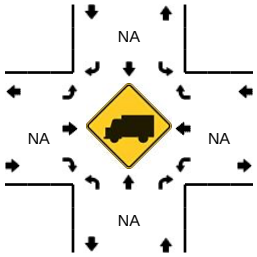


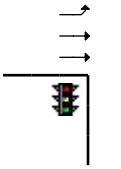


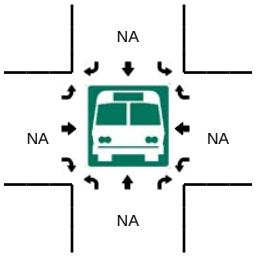












15-Min Count Period Beginning At	Reinekers Ln (Northbound)				Reinekers Ln (Southbound)				Duke St (Eastbound)				Duke St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	5	0	17	0	13	184	0	1	0	207	12	0	439	
4:15 PM	0	0	0	0	3	0	22	0	8	161	0	0	0	189	6	0	389	
4:30 PM	0	0	0	0	9	0	18	0	14	189	0	0	0	190	5	0	425	
4:45 PM	0	0	0	0	6	0	19	0	18	204	0	1	0	205	15	0	468	1721
5:00 PM	0	0	0	0	13	0	35	0	23	190	0	0	0	207	9	1	478	1760
5:15 PM	0	0	0	0	7	0	20	0	17	195	0	1	0	181	7	0	428	1799
5:30 PM	0	0	0	0	9	0	23	0	20	200	0	0	0	187	10	0	449	1823
5:45 PM	0	0	0	0	7	0	19	0	22	214	0	0	0	204	8	0	474	1829
6:00 PM	0	0	0	0	3	0	29	0	24	190	0	0	0	204	1	0	451	1802
6:15 PM	0	0	0	0	3	0	18	0	18	177	0	0	0	189	4	0	409	1783
6:30 PM	0	0	0	0	4	0	12	0	14	178	0	0	0	168	11	0	387	1721
6:45 PM	0	0	0	0	8	0	13	0	8	210	0	2	0	160	3	0	404	1651

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	52	0	140	0	92	760	0	0	0	828	36	4	1912
Heavy Trucks	0	0	0		0	0	0		0	8	0		0	8	0		16
Pedestrians		164				124				56				280			624
Bicycles	0	0	0		1	0	0		0	0	0		0	0	1		2
Railroad																	
Stopped Buses																	

Comments:

Report generated on 7/16/2018 5:36 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

National Data & Surveying Services Intersection Turning Movement Count

Location: Holland Ln & Duke St
City: Alexandria
Control: Signalized

Project ID: 23-260092-004
Date: 6/6/2023

Data - Total

NS/EW Streets:	Holland Ln				Holland Ln				Duke St				Duke St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0	2	0	0	1	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	1	0	16	0	1	0	0	0	0	36	2	0	21	19	0	0	96
6:15 AM	1	0	19	0	0	0	0	0	0	50	1	0	14	33	1	0	119
6:30 AM	0	0	21	0	0	0	1	0	1	62	3	0	18	34	0	1	141
6:45 AM	2	2	33	0	0	0	0	0	0	103	5	0	24	70	0	0	239
7:00 AM	10	0	28	0	0	0	1	0	0	80	4	0	16	68	0	0	207
7:15 AM	4	0	54	0	0	0	1	0	0	133	13	0	29	70	0	0	304
7:30 AM	10	0	52	0	0	0	0	0	0	134	8	0	31	90	0	0	325
7:45 AM	15	0	75	0	0	0	1	0	2	152	4	0	32	85	0	0	366
8:00 AM	14	0	75	0	0	0	3	0	0	163	8	0	41	96	3	1	404
8:15 AM	14	1	59	1	0	0	1	0	0	189	14	0	30	95	1	0	405
8:30 AM	10	0	49	0	0	0	4	0	0	174	9	0	46	102	1	3	398
8:45 AM	11	1	42	0	0	0	3	0	1	200	13	0	47	102	3	0	423
9:00 AM	6	0	54	1	0	0	3	0	0	159	7	0	42	89	1	0	362
9:15 AM	12	0	42	0	0	0	4	0	0	142	13	0	43	78	0	2	336
9:30 AM	9	2	37	0	1	0	4	0	0	132	11	0	32	84	1	2	315
9:45 AM	7	0	34	1	1	0	4	0	0	151	13	0	33	84	2	1	331
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	126	6	690	3	3	0	30	0	4	2060	128	0	499	1199	13	10	4771
APPROACH %'s :	15.27%	0.73%	83.64%	0.36%	9.09%	0.00%	90.91%	0.00%	0.18%	93.98%	5.84%	0.00%	28.99%	69.67%	0.76%	0.58%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	49	2	225	1	0	0	11	0	1	726	44	0	164	395	8	4	1630
PEAK HR FACTOR :	0.875	0.500	0.750	0.250	0.000	0.000	0.688	0.000	0.250	0.908	0.786	0.000	0.872	0.968	0.667	0.333	0.963
	0.778				0.688				0.901				0.939				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0	2	0	0	1	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	16	0	26	0	0	0	3	0	1	134	16	0	37	126	0	0	359
3:15 PM	7	1	29	0	0	0	1	0	1	169	29	0	43	144	0	0	424
3:30 PM	11	0	31	0	0	0	2	0	0	162	16	0	46	127	0	1	396
3:45 PM	15	0	26	0	0	0	1	0	0	159	24	0	44	162	0	1	432
4:00 PM	20	0	45	0	0	0	2	0	0	138	14	0	46	127	0	0	392
4:15 PM	21	0	34	0	0	0	0	0	0	174	21	0	48	175	0	1	474
4:30 PM	16	0	38	1	0	0	0	0	0	160	18	0	41	144	0	0	418
4:45 PM	10	1	45	0	0	1	0	0	0	165	25	0	50	183	0	0	480
5:00 PM	22	0	52	0	0	0	0	0	0	153	19	0	49	178	0	0	473
5:15 PM	20	0	50	0	0	0	0	0	0	185	18	0	53	174	0	0	500
5:30 PM	15	0	47	0	0	0	0	0	0	155	25	0	76	176	0	0	494
5:45 PM	11	0	30	2	0	0	0	0	0	189	25	0	55	186	0	1	499
6:00 PM	16	0	47	0	0	0	0	0	0	155	17	0	66	139	0	0	440
6:15 PM	12	0	31	0	0	0	0	0	0	192	18	0	57	157	0	0	467
6:30 PM	13	0	43	1	0	0	0	0	0	154	21	0	43	117	0	1	393
6:45 PM	12	0	36	0	0	0	0	0	0	178	12	0	44	109	0	0	391
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	237	2	610	4	0	1	9	0	2	2622	318	0	798	2424	0	5	7032
APPROACH %'s :	27.78%	0.23%	71.51%	0.47%	0.00%	10.00%	90.00%	0.00%	0.07%	89.12%	10.81%	0.00%	24.73%	75.12%	0.00%	0.15%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	68	0	179	2	0	0	0	0	0	682	87	0	233	714	0	1	1966
PEAK HR FACTOR :	0.773	0.000	0.861	0.250	0.000	0.000	0.000	0.000	0.000	0.902	0.870	0.000	0.766	0.960	0.000	0.250	0.983
	0.841								0.898				0.940				

National Data & Surveying Services Intersection Turning Movement Count

Location: Holland Ln & Duke St
City: Alexandria
Control: Signalized

Project ID: 23-260092-004
Date: 6/6/2023

Data - Cars

NS/EW Streets:	Holland Ln				Holland Ln				Duke St				Duke St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0	2	0	0	1	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	1	0	14	0	0	0	0	0	0	34	2	0	21	19	0	0	91
6:15 AM	1	0	17	0	0	0	0	0	0	44	1	0	14	31	0	0	108
6:30 AM	0	0	20	0	0	0	0	0	1	57	3	0	17	32	0	1	131
6:45 AM	2	2	33	0	0	0	0	0	0	94	5	0	24	67	0	0	227
7:00 AM	10	0	28	0	0	0	1	0	0	70	4	0	15	66	0	0	194
7:15 AM	4	0	50	0	0	0	1	0	0	127	13	0	29	67	0	0	291
7:30 AM	10	0	51	0	0	0	0	0	0	125	8	0	28	87	0	0	309
7:45 AM	14	0	68	0	0	0	1	0	2	146	2	0	30	81	0	0	344
8:00 AM	14	0	72	0	0	0	3	0	0	156	8	0	39	92	3	1	388
8:15 AM	14	1	56	1	0	0	1	0	0	184	14	0	30	88	1	0	390
8:30 AM	9	0	46	0	0	0	4	0	0	169	9	0	46	99	1	3	386
8:45 AM	11	1	40	0	0	0	3	0	1	194	13	0	43	96	2	0	404
9:00 AM	6	0	48	1	0	0	2	0	0	156	7	0	39	84	1	0	344
9:15 AM	12	0	35	0	0	0	4	0	0	138	12	0	39	75	0	2	317
9:30 AM	8	2	36	0	1	0	4	0	0	128	11	0	30	77	1	2	300
9:45 AM	6	0	32	1	1	0	4	0	0	150	13	0	33	82	2	1	325
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	122	6	646	3	2	0	28	0	4	1972	125	0	477	1143	11	10	4549
APPROACH %'s :	15.70%	0.77%	83.14%	0.39%	6.67%	0.00%	93.33%	0.00%	0.19%	93.86%	5.95%	0.00%	29.07%	69.65%	0.67%	0.61%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	48	2	214	1	0	0	11	0	1	703	44	0	158	375	7	4	1568
PEAK HR FACTOR :	0.857	0.500	0.743	0.250	0.000	0.000	0.688	0.000	0.250	0.906	0.786	0.000	0.859	0.947	0.583	0.333	0.970
	0.770				0.688				0.899				0.913				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0	2	0	0	1	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	16	0	26	0	0	0	3	0	1	133	15	0	37	120	0	0	351
3:15 PM	6	1	29	0	0	0	1	0	1	164	29	0	42	141	0	0	414
3:30 PM	10	0	31	0	0	0	1	0	0	158	16	0	45	124	0	1	386
3:45 PM	14	0	23	0	0	0	1	0	0	156	24	0	43	159	0	1	421
4:00 PM	20	0	45	0	0	0	2	0	0	133	14	0	45	122	0	0	381
4:15 PM	20	0	34	0	0	0	0	0	0	171	21	0	48	164	0	1	459
4:30 PM	15	0	38	1	0	0	0	0	0	158	18	0	41	139	0	0	410
4:45 PM	10	1	45	0	0	1	0	0	0	165	25	0	50	178	0	0	475
5:00 PM	22	0	51	0	0	0	0	0	0	153	19	0	48	171	0	0	464
5:15 PM	19	0	49	0	0	0	0	0	0	180	18	0	50	172	0	0	488
5:30 PM	15	0	46	0	0	0	0	0	0	154	25	0	75	173	0	0	488
5:45 PM	11	0	28	2	0	0	0	0	0	186	25	0	54	176	0	1	483
6:00 PM	16	0	47	0	0	0	0	0	0	155	17	0	66	138	0	0	439
6:15 PM	12	0	31	0	0	0	0	0	0	190	18	0	57	149	0	0	457
6:30 PM	13	0	43	1	0	0	0	0	0	153	21	0	43	114	0	1	389
6:45 PM	12	0	35	0	0	0	0	0	0	174	12	0	43	106	0	0	382
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	231	2	601	4	0	1	8	0	2	2583	317	0	787	2346	0	5	6887
APPROACH %'s :	27.57%	0.24%	71.72%	0.48%	0.00%	11.11%	88.89%	0.00%	0.07%	89.01%	10.92%	0.00%	25.08%	74.76%	0.00%	0.16%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	67	0	174	2	0	0	0	0	0	673	87	0	227	692	0	1	1923
PEAK HR FACTOR :	0.761	0.000	0.853	0.250	0.000	0.000	0.000	0.000	0.000	0.905	0.870	0.000	0.757	0.983	0.000	0.250	0.985
	0.832								0.900				0.927				

National Data & Surveying Services Intersection Turning Movement Count

Location: Holland Ln & Duke St
City: Alexandria
Control: Signalized

Project ID: 23-260092-004
Date: 6/6/2023

Data - HT

AM

NS/EW Streets:	Holland Ln				Holland Ln				Duke St				Duke St				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0	2	0	0	1	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	0	0	2	0	1	0	0	0	0	2	0	0	0	0	0	0	5
6:15 AM	0	0	2	0	0	0	0	0	0	6	0	0	0	2	1	0	11
6:30 AM	0	0	1	0	0	0	1	0	0	5	0	0	1	2	0	0	10
6:45 AM	0	0	0	0	0	0	0	0	0	9	0	0	0	3	0	0	12
7:00 AM	0	0	0	0	0	0	0	0	0	10	0	0	1	2	0	0	13
7:15 AM	0	0	4	0	0	0	0	0	0	6	0	0	0	3	0	0	13
7:30 AM	0	0	1	0	0	0	0	0	0	9	0	0	3	3	0	0	16
7:45 AM	1	0	7	0	0	0	0	0	0	6	2	0	2	4	0	0	22
8:00 AM	0	0	3	0	0	0	0	0	0	7	0	0	2	4	0	0	16
8:15 AM	0	0	3	0	0	0	0	0	0	5	0	0	0	7	0	0	15
8:30 AM	1	0	3	0	0	0	0	0	0	5	0	0	0	3	0	0	12
8:45 AM	0	0	2	0	0	0	0	0	0	6	0	0	4	6	1	0	19
9:00 AM	0	0	6	0	0	0	1	0	0	3	0	0	3	5	0	0	18
9:15 AM	0	0	7	0	0	0	0	0	0	4	1	0	4	3	0	0	19
9:30 AM	1	0	1	0	0	0	0	0	0	4	0	0	2	7	0	0	15
9:45 AM	1	0	2	0	0	0	0	0	0	1	0	0	0	2	0	0	6
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	4	0	44	0	1	0	2	0	0	88	3	0	22	56	2	0	222
APPROACH %'s :	8.33%	0.00%	91.67%	0.00%	33.33%	0.00%	66.67%	0.00%	0.00%	96.70%	3.30%	0.00%	27.50%	70.00%	2.50%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	1	0	11	0	0	0	0	0	0	23	0	0	6	20	1	0	62
PEAK HR FACTOR :	0.250	0.000	0.917	0.000	0.000	0.000	0.000	0.000	0.000	0.821	0.000	0.000	0.375	0.714	0.250	0.000	0.816
	0.750									0.821				0.614			

PM

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0	2	0	0	1	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	0	0	0	0	0	0	0	0	0	1	1	0	0	6	0	0	8
3:15 PM	1	0	0	0	0	0	0	0	0	5	0	0	1	3	0	0	10
3:30 PM	1	0	0	0	0	0	1	0	0	4	0	0	1	3	0	0	10
3:45 PM	1	0	3	0	0	0	0	0	0	3	0	0	1	3	0	0	11
4:00 PM	0	0	0	0	0	0	0	0	0	5	0	0	1	5	0	0	11
4:15 PM	1	0	0	0	0	0	0	0	0	3	0	0	0	11	0	0	15
4:30 PM	1	0	0	0	0	0	0	0	0	2	0	0	0	5	0	0	8
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5
5:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	7	0	0	9
5:15 PM	1	0	1	0	0	0	0	0	0	5	0	0	3	2	0	0	12
5:30 PM	0	0	1	0	0	0	0	0	0	1	0	0	1	3	0	0	6
5:45 PM	0	0	2	0	0	0	0	0	0	3	0	0	1	10	0	0	16
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
6:15 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	8	0	0	10
6:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	4
6:45 PM	0	0	1	0	0	0	0	0	0	4	0	0	1	3	0	0	9
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	6	0	9	0	0	0	1	0	0	39	1	0	11	78	0	0	145
APPROACH %'s :	40.00%	0.00%	60.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	97.50%	2.50%	0.00%	12.36%	87.64%	0.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	1	0	5	0	0	0	0	0	0	9	0	0	6	22	0	0	43
PEAK HR FACTOR :	0.250	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.450	0.000	0.000	0.500	0.550	0.000	0.000	0.672
	0.750									0.450				0.636			

National Data & Surveying Services Intersection Turning Movement Count

Location: Holland Ln & Duke St
City: Alexandria
Control: Signalized

Project ID: 23-260092-004
Date: 6/6/2023

Data - Bikes

NS/EW Streets:	Holland Ln				Holland Ln				Duke St				Duke St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0	2	0	0	1	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	2
7:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
8:00 AM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:15 AM	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	3
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	1	0	2	0	0	0	0	0	0	3	0	0	0	0	0	0	6
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	5	0	5	0	0	0	0	0	0	3	1	0	3	4	0	0	21
APPROACH %'s :	50.00%	0.00%	50.00%	0.00%					0.00%	75.00%	25.00%	0.00%	42.86%	57.14%	0.00%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	5
PEAK HR FACTOR :	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.625
	0.375												0.500				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0	2	0	0	1	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3
3:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2
4:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	3
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2
5:00 PM	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	3
5:15 PM	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2
5:30 PM	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2
5:45 PM	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	2
6:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	1	1	0	0	4
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	2	0	3	0	0	0	0	0	1	4	8	0	7	5	0	0	30
APPROACH %'s :	40.00%	0.00%	60.00%	0.00%					7.69%	30.77%	61.54%	0.00%	58.33%	41.67%	0.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	1	0	3	0	0	0	0	0	1	1	2	0	1	0	0	0	9
PEAK HR FACTOR :	0.250	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.500	0.000	0.250	0.000	0.000	0.000	0.750
	1.000								1.000				0.250				

National Data & Surveying Services Intersection Turning Movement Count

Location: Holland Ln & Duke St
City: Alexandria
Project ID: 23-260092-004
Date: 6/6/2023

Data - Pedestrians (Crosswalks)

NS/EW Streets:	Holland Ln		Holland Ln		Duke St		Duke St		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
6:00 AM	1	2	1	0	0	2	0	0	6
6:15 AM	2	0	3	2	1	0	0	0	8
6:30 AM	2	0	0	1	0	0	0	0	3
6:45 AM	0	4	3	2	5	0	0	0	14
7:00 AM	1	2	1	3	9	0	0	0	16
7:15 AM	3	4	4	4	4	2	1	0	22
7:30 AM	2	5	5	8	6	1	0	0	27
7:45 AM	2	2	6	7	4	0	0	0	21
8:00 AM	7	5	5	9	7	0	2	1	36
8:15 AM	8	6	8	5	4	3	0	0	34
8:30 AM	3	5	9	5	4	3	0	0	29
8:45 AM	9	1	5	6	6	0	0	0	27
9:00 AM	5	3	6	4	1	3	0	0	22
9:15 AM	1	2	8	6	2	3	0	0	22
9:30 AM	2	4	7	9	1	2	1	0	26
9:45 AM	1	3	7	6	3	1	0	0	21
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	49	48	78	77	57	20	4	1	334
APPROACH %'s :	50.52%	49.48%	50.32%	49.68%	74.03%	25.97%	80.00%	20.00%	
PEAK HR :	08:00 AM - 09:00 AM								TOTAL
PEAK HR VOL :	27	17	27	25	21	6	2	1	126
PEAK HR FACTOR :	0.750	0.708	0.750	0.694	0.750	0.500	0.250	0.250	0.875
	0.786		0.929		0.964		0.250		

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
3:00 PM	8	3	14	2	2	2	0	1	32
3:15 PM	3	3	2	9	1	4	0	0	22
3:30 PM	1	5	13	3	1	1	0	0	24
3:45 PM	3	3	3	2	0	2	0	0	13
4:00 PM	2	4	8	4	2	2	0	0	22
4:15 PM	5	1	3	16	3	1	0	0	29
4:30 PM	6	10	7	5	1	2	0	0	31
4:45 PM	6	1	18	15	1	4	0	0	45
5:00 PM	8	5	12	5	5	7	0	1	43
5:15 PM	5	12	21	9	6	12	0	1	66
5:30 PM	15	7	19	6	10	4	0	0	61
5:45 PM	2	6	10	15	1	9	0	0	43
6:00 PM	6	6	7	5	4	4	0	0	32
6:15 PM	7	4	8	10	4	5	0	0	38
6:30 PM	6	3	17	15	3	3	0	0	47
6:45 PM	3	13	5	8	2	6	0	0	37
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	86	86	167	129	46	68	0	3	585
APPROACH %'s :	50.00%	50.00%	56.42%	43.58%	40.35%	59.65%	0.00%	100.00%	
PEAK HR :	05:00 PM - 06:00 PM								TOTAL
PEAK HR VOL :	30	30	62	35	22	32	0	2	213
PEAK HR FACTOR :	0.500	0.625	0.738	0.583	0.550	0.667		0.500	0.807
	0.682		0.808		0.750		0.500		

Prepared by National Data & Surveying Services

Holland Ln & Duke St

Peak Hour Turning Movement Count

ID: 23-260092-004
City: Alexandria

Day: Tuesday
Date: 6/6/2023

PEAK HOURS	COUNT PERIODS
08:00 AM - 09:00 AM	6:00 AM - 10:00 AM
NONE	NONE
05:00 PM - 06:00 PM	3:00 PM - 07:00 PM

SOUTHBOUND (Holland Ln)

AM	11	0	0	0	11	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM
	0	1	0	0		

EASTBOUND (Duke St)

AM	NOON	PM	
455	0	782	
0	0	0	0
1	0	0	0
726	0	682	2
44	0	87	0
AM	NOON	PM	

WESTBOUND (Duke St)

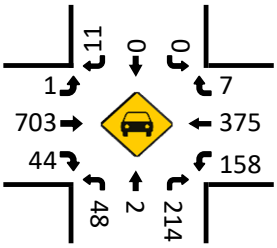
PM	NOON	AM	
0	0	8	0
714	0	395	2
233	0	164	1
1	0	4	0
862	0	955	
PM	NOON	AM	

NORTHBOUND (Holland Ln)

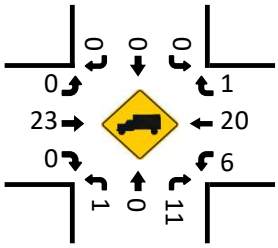
PM	322	2	68	0	179	PM
NOON	0	0	0	0	0	NOON
AM	209	1	49	2	225	AM
		0	1	0	2	

CONTROL			
Signalized			
TEV	1630 AM	0 NOON	1966 PM
PHF	0.96		0.98

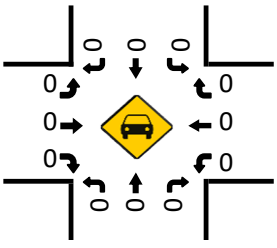
Cars (AM)



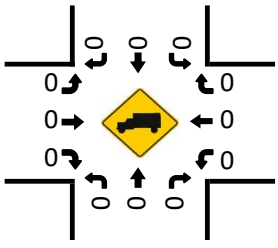
HT (AM)



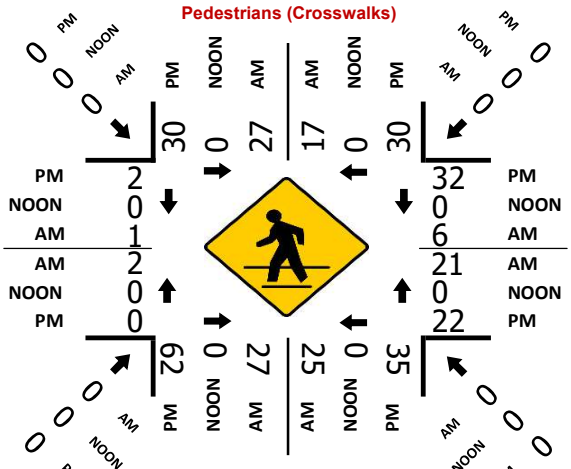
Cars (NOON)



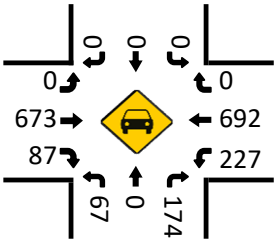
HT (NOON)



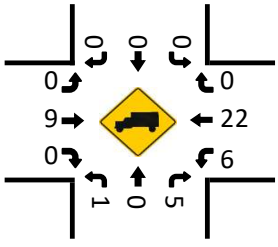
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



National Data & Surveying Services Intersection Turning Movement Count

Location: Holland Ln & Jamieson Ave
City: Alexandria
Control: Signalized

Project ID: 23-260092-003
Date: 6/6/2023

Data - Total

NS/EW Streets:	Holland Ln				Holland Ln				Jamieson Ave				Jamieson Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0.5	1	0.5	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	0	14	14	0	2	19	1	0	3	3	0	0	2	3	1	0	62
6:15 AM	0	20	23	0	1	12	3	0	0	5	2	0	8	1	2	0	77
6:30 AM	0	21	17	0	1	15	1	0	0	5	2	0	4	2	2	0	70
6:45 AM	0	40	28	0	1	16	5	0	1	9	0	0	7	1	3	0	111
7:00 AM	2	33	43	0	4	15	1	0	7	13	1	0	10	2	2	0	133
7:15 AM	1	56	53	0	5	29	9	0	6	16	0	0	9	4	2	0	190
7:30 AM	0	60	63	0	7	24	9	0	4	17	0	0	9	0	1	0	194
7:45 AM	1	86	85	0	4	33	4	0	11	20	1	0	16	7	2	0	270
8:00 AM	2	88	65	0	1	29	6	0	6	17	3	0	25	9	1	0	252
8:15 AM	2	62	82	0	9	25	15	0	13	20	4	0	16	5	1	0	254
8:30 AM	3	53	69	0	8	32	7	0	0	19	1	0	8	8	4	0	212
8:45 AM	3	59	49	0	13	38	13	1	3	13	0	1	11	6	3	0	213
9:00 AM	0	52	43	0	7	34	6	0	5	13	0	1	24	7	1	0	193
9:15 AM	1	49	37	0	9	31	15	0	7	12	3	0	7	10	3	0	184
9:30 AM	3	44	27	0	9	29	8	0	4	13	3	0	13	6	3	0	162
9:45 AM	2	29	30	0	6	29	5	0	6	5	4	0	9	3	4	0	132
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	20	766	728	0	87	410	108	1	76	200	24	2	178	74	35	0	2709
APPROACH %'s :	1.32%	50.59%	48.08%	0.00%	14.36%	67.66%	17.82%	0.17%	25.17%	66.23%	7.95%	0.66%	62.02%	25.78%	12.20%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	8	289	301	0	22	119	32	0	30	76	9	0	65	29	8	0	988
PEAK HR FACTOR :	0.667	0.821	0.885	0.000	0.611	0.902	0.533	0.000	0.577	0.950	0.563	0.000	0.650	0.806	0.500	0.000	0.915
	0.869				0.883				0.777				0.729				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0.5	1	0.5	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	4	38	30	0	13	33	7	0	3	5	5	0	19	6	1	0	164
3:15 PM	2	28	44	0	17	27	15	0	3	16	4	0	18	5	2	0	181
3:30 PM	1	37	62	0	13	30	14	0	2	23	2	0	29	2	1	0	216
3:45 PM	2	40	49	0	11	33	14	0	0	16	1	0	25	5	3	0	199
4:00 PM	1	56	44	0	15	43	16	0	3	26	0	0	28	6	3	0	241
4:15 PM	4	39	48	0	17	35	9	1	7	19	3	0	27	11	1	0	221
4:30 PM	3	43	60	0	13	41	10	0	4	20	2	0	31	6	2	0	235
4:45 PM	4	53	52	0	19	53	12	0	4	35	4	0	34	6	3	0	279
5:00 PM	0	54	68	0	19	45	16	0	5	42	3	0	30	11	3	0	296
5:15 PM	1	59	65	0	15	41	17	0	5	37	2	0	34	13	3	0	292
5:30 PM	0	42	77	0	10	74	10	0	3	28	2	0	35	7	1	0	289
5:45 PM	0	39	50	0	14	58	7	0	2	25	2	0	39	11	2	0	249
6:00 PM	3	54	66	1	19	53	15	0	7	33	5	0	24	10	4	0	294
6:15 PM	4	42	49	0	8	41	10	0	2	30	4	0	33	5	2	0	230
6:30 PM	1	48	63	0	19	43	14	0	3	19	2	0	29	7	1	0	249
6:45 PM	2	45	63	0	10	43	17	0	3	23	2	0	23	5	1	0	237
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	32	717	890	1	232	693	203	1	56	397	43	0	458	116	33	0	3872
APPROACH %'s :	1.95%	43.72%	54.27%	0.06%	20.55%	61.38%	17.98%	0.09%	11.29%	80.04%	8.67%	0.00%	75.45%	19.11%	5.44%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	5	208	262	0	63	213	55	0	17	142	11	0	133	37	10	0	1156
PEAK HR FACTOR :	0.313	0.881	0.851	0.000	0.829	0.720	0.809	0.000	0.850	0.845	0.688	0.000	0.950	0.712	0.833	0.000	0.976
	0.950				0.880				0.850				0.900				

National Data & Surveying Services Intersection Turning Movement Count

Location: Holland Ln & Jamieson Ave
City: Alexandria
Control: Signalized

Project ID: 23-260092-003
Date: 6/6/2023

Data - Cars

NS/EW Streets:	Holland Ln				Holland Ln				Jamieson Ave				Jamieson Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0.5	1	0.5	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	0	12	14	0	2	19	1	0	3	3	0	0	2	3	1	0	60
6:15 AM	0	18	23	0	1	12	3	0	0	5	2	0	8	1	2	0	75
6:30 AM	0	21	17	0	1	14	1	0	0	5	2	0	4	2	1	0	68
6:45 AM	0	40	28	0	1	16	5	0	1	9	0	0	6	1	3	0	110
7:00 AM	2	32	42	0	4	14	1	0	7	13	1	0	10	2	1	0	129
7:15 AM	1	54	51	0	5	29	9	0	5	15	0	0	9	4	2	0	184
7:30 AM	0	60	61	0	5	24	8	0	4	15	0	0	9	0	1	0	187
7:45 AM	1	80	83	0	3	32	2	0	10	19	1	0	15	7	1	0	254
8:00 AM	2	86	62	0	1	28	6	0	5	16	2	0	23	9	1	0	241
8:15 AM	2	60	82	0	8	25	15	0	12	20	3	0	15	5	1	0	248
8:30 AM	2	49	66	0	8	32	7	0	0	19	1	0	8	8	4	0	204
8:45 AM	3	58	48	0	11	37	12	1	3	13	0	1	10	6	2	0	205
9:00 AM	0	46	41	0	6	33	5	0	5	13	0	1	24	7	1	0	182
9:15 AM	1	42	35	0	9	28	13	0	7	11	3	0	7	10	3	0	169
9:30 AM	3	43	26	0	9	27	8	0	4	13	3	0	12	6	2	0	156
9:45 AM	2	26	29	0	6	29	5	0	6	4	4	0	8	3	4	0	126
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	19	727	708	0	80	399	101	1	72	193	22	2	170	74	30	0	2598
APPROACH %'s :	1.31%	50.00%	48.69%	0.00%	13.77%	68.67%	17.38%	0.17%	24.91%	66.78%	7.61%	0.69%	62.04%	27.01%	10.95%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	7	275	293	0	20	117	30	0	27	74	7	0	61	29	7	0	947
PEAK HR FACTOR :	0.875	0.799	0.883	0.000	0.625	0.914	0.500	0.000	0.563	0.925	0.583	0.000	0.663	0.806	0.438	0.000	0.932
	0.877				0.870				0.771				0.735				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0.5	1	0.5	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	4	38	29	0	13	32	7	0	3	5	5	0	19	6	1	0	162
3:15 PM	2	27	44	0	17	26	15	0	3	16	4	0	18	5	2	0	179
3:30 PM	1	36	61	0	13	29	14	0	2	23	2	0	29	2	1	0	213
3:45 PM	2	36	48	0	11	32	14	0	0	16	1	0	25	5	2	0	192
4:00 PM	1	56	44	0	15	42	16	0	3	26	0	0	27	6	3	0	239
4:15 PM	4	38	48	0	17	35	9	1	7	19	3	0	26	11	1	0	219
4:30 PM	3	42	60	0	13	41	10	0	4	20	2	0	31	6	2	0	234
4:45 PM	4	53	52	0	19	53	12	0	4	35	4	0	33	6	3	0	278
5:00 PM	0	53	68	0	19	44	16	0	5	42	3	0	30	11	2	0	293
5:15 PM	1	57	64	0	15	38	17	0	5	37	2	0	34	13	3	0	286
5:30 PM	0	42	77	0	9	74	10	0	2	28	2	0	35	7	1	0	287
5:45 PM	0	37	50	0	14	57	7	0	2	25	2	0	39	11	2	0	246
6:00 PM	3	54	66	1	19	53	15	0	7	33	5	0	24	10	4	0	294
6:15 PM	4	42	49	0	8	41	10	0	2	30	4	0	33	5	2	0	230
6:30 PM	1	48	63	0	19	43	14	0	3	19	2	0	29	7	1	0	249
6:45 PM	2	44	63	0	10	42	17	0	3	23	2	0	23	5	1	0	235
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	32	703	886	1	231	682	203	1	55	397	43	0	455	116	31	0	3836
APPROACH %'s :	1.97%	43.34%	54.62%	0.06%	20.68%	61.06%	18.17%	0.09%	11.11%	80.20%	8.69%	0.00%	75.58%	19.27%	5.15%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	5	205	261	0	62	209	55	0	16	142	11	0	132	37	9	0	1144
PEAK HR FACTOR :	0.313	0.899	0.847	0.000	0.816	0.706	0.809	0.000	0.800	0.845	0.688	0.000	0.943	0.712	0.750	0.000	0.976
	0.965				0.876				0.845				0.890				

National Data & Surveying Services Intersection Turning Movement Count

Location: Holland Ln & Jamieson Ave
City: Alexandria
Control: Signalized

Project ID: 23-260092-003
Date: 6/6/2023

Data - HT

NS/EW Streets: Holland Ln | Holland Ln | Jamieson Ave | Jamieson Ave

AM

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0.5	1	0.5	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
6:15 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
6:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	2
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
7:00 AM	0	1	1	0	0	1	0	0	0	0	0	0	0	0	1	0	4
7:15 AM	0	2	2	0	0	0	0	0	1	1	0	0	0	0	0	0	6
7:30 AM	0	0	2	0	2	0	1	0	0	2	0	0	0	0	0	0	7
7:45 AM	0	6	2	0	1	1	2	0	1	1	0	0	1	0	1	0	16
8:00 AM	0	2	3	0	0	1	0	0	1	1	1	0	2	0	0	0	11
8:15 AM	0	2	0	0	1	0	0	0	1	0	1	0	1	0	0	0	6
8:30 AM	1	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	8
8:45 AM	0	1	1	0	2	1	1	0	0	0	0	0	1	0	1	0	8
9:00 AM	0	6	2	0	1	1	1	0	0	0	0	0	0	0	0	0	11
9:15 AM	0	7	2	0	0	3	2	0	0	1	0	0	0	0	0	0	15
9:30 AM	0	1	1	0	0	2	0	0	0	0	0	0	1	0	1	0	6
9:45 AM	0	3	1	0	0	0	0	0	0	1	0	0	1	0	0	0	6
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	39	20	0	7	11	7	0	4	7	2	0	8	0	5	0	111
APPROACH %'s :	1.67%	65.00%	33.33%	0.00%	28.00%	44.00%	28.00%	0.00%	30.77%	53.85%	15.38%	0.00%	61.54%	0.00%	38.46%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	1	14	8	0	2	2	2	0	3	2	2	0	4	0	1	0	41
PEAK HR FACTOR :	0.250	0.583	0.667	0.000	0.500	0.500	0.250	0.000	0.750	0.500	0.500	0.000	0.500	0.000	0.250	0.000	0.641
		0.719				0.375				0.583				0.625			

PM

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0.5	1	0.5	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
3:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
3:30 PM	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3
3:45 PM	0	4	1	0	0	1	0	0	0	0	0	0	0	0	1	0	7
4:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	2
4:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
5:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	3
5:15 PM	0	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	6
5:30 PM	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2
5:45 PM	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	14	4	0	1	11	0	0	1	0	0	0	3	0	2	0	36
APPROACH %'s :	0.00%	77.78%	22.22%	0.00%	8.33%	91.67%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	60.00%	0.00%	40.00%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	0	3	1	0	1	4	0	0	1	0	0	0	1	0	1	0	12
PEAK HR FACTOR :	0.000	0.375	0.250	0.000	0.250	0.333	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.500
		0.333				0.417				0.250				0.500			

National Data & Surveying Services Intersection Turning Movement Count

Location: Holland Ln & Jamieson Ave
City: Alexandria
Control: Signalized

Project ID: 23-260092-003
Date: 6/6/2023

Data - Bikes

NS/EW Streets:	Holland Ln				Holland Ln				Jamieson Ave				Jamieson Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0.5	1	0.5	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
6:15 AM	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	2
6:30 AM	0	0	2	0	0	0	0	0	0	1	0	0	0	0	1	0	4
6:45 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
7:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	2
7:15 AM	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	3
7:30 AM	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	3
7:45 AM	0	0	1	0	0	0	0	0	0	3	0	0	0	2	0	0	6
8:00 AM	0	0	2	0	0	0	0	0	0	2	0	0	0	0	0	0	4
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4
8:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	3
8:45 AM	0	0	1	0	0	0	0	0	0	2	0	0	3	1	0	0	7
9:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	1	4	1	0	8
9:15 AM	0	0	4	0	0	0	0	0	0	0	0	0	0	1	0	0	5
9:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	3
9:45 AM	0	1	0	0	0	0	0	0	1	1	0	0	0	1	1	0	5
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	3	11	0	0	2	2	0	2	16	0	0	5	16	5	0	62
APPROACH %'s :	0.00%	21.43%	78.57%	0.00%	0.00%	50.00%	50.00%	0.00%	11.11%	88.89%	0.00%	0.00%	19.23%	61.54%	19.23%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	0	3	0	0	1	0	0	0	5	0	0	0	7	1	0	17
PEAK HR FACTOR :	0.000	0.000	0.375	0.000	0.000	0.250	0.000	0.000	0.000	0.417	0.000	0.000	0.000	0.438	0.250	0.000	0.708
			0.375				0.250				0.417				0.500		

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0.5	1	0.5	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	0	0	2	0	0	1	0	0	0	2	0	0	1	2	0	0	8
3:15 PM	0	0	1	0	1	0	0	0	0	1	0	0	1	1	0	0	5
3:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	3
3:45 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	2	1	0	5
4:00 PM	0	0	2	0	0	1	0	0	0	1	0	0	0	1	1	0	6
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0	0	4
4:30 PM	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	3
4:45 PM	0	0	0	0	0	0	0	0	0	5	0	0	0	1	0	0	6
5:00 PM	0	0	0	0	0	0	1	0	0	4	0	0	0	2	1	0	8
5:15 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	2	1	0	5
5:30 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	3
5:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	1	0	4
6:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2
6:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
6:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1	5	0	2	6	3	0	0	22	0	0	3	19	5	0	66
APPROACH %'s :	0.00%	16.67%	83.33%	0.00%	18.18%	54.55%	27.27%	0.00%	0.00%	100.00%	0.00%	0.00%	11.11%	70.37%	18.52%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	1	0	0	13	0	0	0	6	2	0	22
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.650	0.000	0.000	0.000	0.750	0.500	0.000	0.688
							0.250				0.650				0.667		

National Data & Surveying Services Intersection Turning Movement Count

Location: Holland Ln & Jamieson Ave
City: Alexandria
Project ID: 23-260092-003
Date: 6/6/2023

Data - Pedestrians (Crosswalks)

NS/EW Streets:	Holland Ln		Holland Ln		Jamieson Ave		Jamieson Ave		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
6:00 AM	1	2	2	0	2	0	4	2	13
6:15 AM	1	2	0	3	2	3	3	2	16
6:30 AM	0	1	3	1	0	0	4	2	11
6:45 AM	0	3	1	1	0	0	7	1	13
7:00 AM	0	2	3	0	2	1	11	0	19
7:15 AM	0	2	6	7	0	0	13	6	34
7:30 AM	0	6	6	10	3	4	13	4	46
7:45 AM	2	1	6	2	4	2	11	4	32
8:00 AM	1	1	5	4	3	2	11	1	28
8:15 AM	2	3	3	10	5	3	10	6	42
8:30 AM	5	7	7	9	0	2	11	4	45
8:45 AM	7	4	2	7	3	3	15	6	47
9:00 AM	1	4	7	4	1	2	5	4	28
9:15 AM	4	6	3	3	2	1	1	3	23
9:30 AM	8	10	2	3	0	3	4	5	35
9:45 AM	6	8	5	6	5	2	6	2	40
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	38	62	61	70	32	28	129	52	472
APPROACH %'s :	38.00%	62.00%	46.56%	53.44%	53.33%	46.67%	71.27%	28.73%	
PEAK HR :	07:45 AM - 08:45 AM								TOTAL
PEAK HR VOL :	10	12	21	25	12	9	43	15	147
PEAK HR FACTOR :	0.500	0.429	0.750	0.625	0.600	0.750	0.977	0.625	0.817
	0.458		0.719		0.656		0.906		

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
3:00 PM	0	3	3	3	0	1	10	6	26
3:15 PM	2	1	2	4	3	1	2	7	22
3:30 PM	1	1	4	3	0	0	5	14	28
3:45 PM	3	2	4	4	0	4	5	8	30
4:00 PM	4	2	3	6	2	0	3	9	29
4:15 PM	3	4	6	7	0	0	9	12	41
4:30 PM	0	0	5	1	0	0	7	7	20
4:45 PM	2	0	5	3	2	3	13	10	38
5:00 PM	4	3	7	6	4	4	7	6	41
5:15 PM	2	1	10	15	4	7	11	8	58
5:30 PM	8	2	12	4	7	4	8	18	63
5:45 PM	10	3	5	5	2	1	17	20	63
6:00 PM	10	4	11	10	2	3	13	17	70
6:15 PM	3	2	20	8	0	2	3	17	55
6:30 PM	4	1	3	5	0	1	5	11	30
6:45 PM	3	5	11	16	5	6	10	12	68
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	59	34	111	100	31	37	128	182	682
APPROACH %'s :	63.44%	36.56%	52.61%	47.39%	45.59%	54.41%	41.29%	58.71%	
PEAK HR :	04:45 PM - 05:45 PM								TOTAL
PEAK HR VOL :	16	6	34	28	17	18	39	42	200
PEAK HR FACTOR :	0.500	0.500	0.708	0.467	0.607	0.643	0.750	0.583	0.794
	0.550		0.620		0.795		0.779		

Prepared by National Data & Surveying Services

Holland Ln & Jamieson Ave

Peak Hour Turning Movement Count

ID: 23-260092-003
City: Alexandria

Day: Tuesday
Date: 6/6/2023

PEAK HOURS	COUNT PERIODS
07:45 AM - 08:45 AM	6:00 AM - 10:00 AM
NONE	NONE
04:45 PM - 05:45 PM	3:00 PM - 07:00 PM

CONTROL: Signalized

	AM	NOON	PM
TEV	988	0	1156
PHF	0.91		0.98

SOUTHBOUND (Holland Ln)

	L	T	R	U	Total	
AM	32	119	22	0	327	AM
NOON	0	0	0	0	0	NOON
PM	55	213	63	0	235	PM

EASTBOUND (Jamieson Ave)

	L	T	R	U	Total	
AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

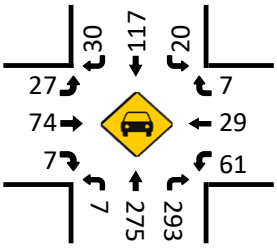
WESTBOUND (Jamieson Ave)

	L	T	R	U	Total	
AM	69	0	97	0	0	AM
NOON	0	0	0	0	0	NOON
PM	76	0	142	0	0	PM

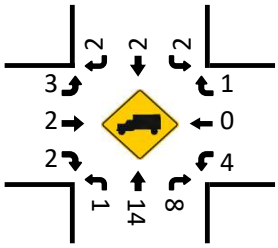
NORTHBOUND (Holland Ln)

	L	T	R	U	Total	
AM	10	0	8	0	0	AM
NOON	37	0	29	0	0	NOON
PM	133	0	65	0	0	PM

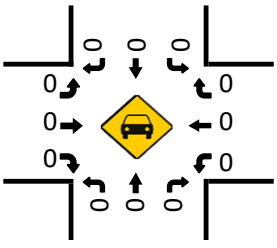
Cars (AM)



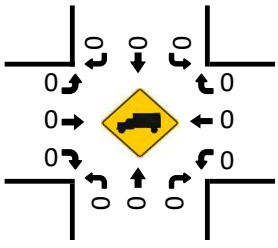
HT (AM)



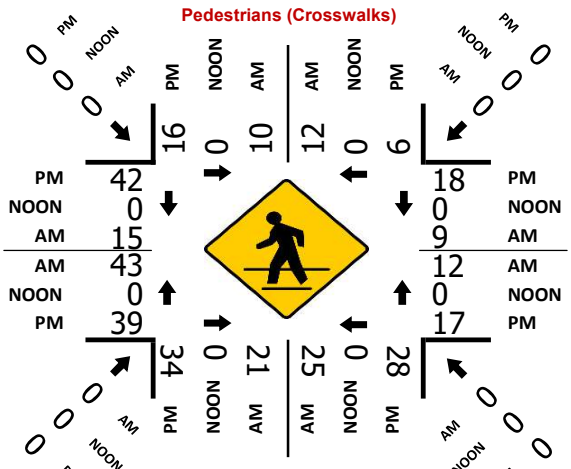
Cars (NOON)



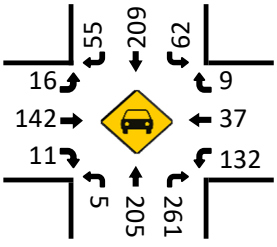
HT (NOON)



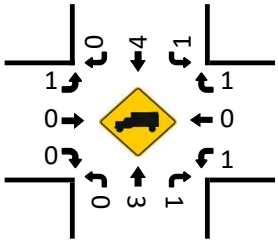
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



National Data & Surveying Services Intersection Turning Movement Count

Location: Holland Ln & Ballenger Ave
City: Alexandria
Control: 1-Way Stop (EB)

Project ID: 23-260092-002
Date: 6/6/2023

Data - Total

NS/EW Streets:	Holland Ln				Holland Ln				Ballenger Ave				Ballenger Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	0	19	0	0	0	19	3	0	10	0	1	0	0	0	0	0	52
6:15 AM	0	35	0	0	0	17	4	0	7	0	1	0	0	0	0	0	64
6:30 AM	0	35	0	0	0	18	3	0	4	0	1	0	0	0	0	0	61
6:45 AM	1	59	0	0	0	13	9	0	10	0	0	0	0	0	0	0	92
7:00 AM	2	66	0	0	0	19	7	0	11	0	0	0	0	0	0	0	105
7:15 AM	0	93	0	1	0	26	14	0	17	0	0	0	0	0	0	0	151
7:30 AM	1	114	0	0	0	25	11	0	12	0	1	0	0	0	0	0	164
7:45 AM	1	150	0	0	0	30	17	0	19	0	0	0	0	0	0	0	217
8:00 AM	0	144	0	0	0	41	15	0	19	0	2	0	0	0	0	0	221
8:15 AM	1	123	0	0	0	32	13	0	15	0	2	0	0	0	0	0	186
8:30 AM	0	116	0	0	0	28	14	0	12	0	2	0	0	0	0	0	172
8:45 AM	0	101	0	0	0	35	14	0	8	0	3	0	0	0	0	0	161
9:00 AM	3	86	0	0	0	41	17	0	8	0	1	0	0	0	0	0	156
9:15 AM	0	74	0	0	0	23	19	0	13	0	3	0	0	0	0	0	132
9:30 AM	2	64	0	0	0	31	11	0	11	0	1	0	0	0	0	0	120
9:45 AM	2	43	0	0	0	30	13	0	16	0	6	1	0	0	0	0	111
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	13	1322	0	1	0	428	184	0	192	0	24	1	0	0	0	0	2165
APPROACH %'s :	0.97%	98.95%	0.00%	0.07%	0.00%	69.93%	30.07%	0.00%	88.48%	0.00%	11.06%	0.46%					
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	2	533	0	0	0	131	59	0	65	0	6	0	0	0	0	0	796
PEAK HR FACTOR :	0.500	0.888	0.000	0.000	0.000	0.799	0.868	0.000	0.855	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.900
		0.886				0.848				0.845							

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	2	61	0	0	0	48	10	0	13	0	4	0	0	0	0	0	138
3:15 PM	0	62	0	0	0	35	11	0	10	0	1	0	0	0	0	0	119
3:30 PM	3	92	0	0	0	48	15	0	11	0	2	0	0	0	0	0	171
3:45 PM	2	85	0	0	0	44	14	0	11	0	1	0	0	0	0	0	157
4:00 PM	3	91	0	0	0	53	20	0	8	0	2	0	0	0	0	0	177
4:15 PM	2	78	0	0	0	52	11	0	9	0	6	0	0	0	0	0	158
4:30 PM	3	98	0	0	0	55	19	0	12	0	4	0	0	0	0	0	191
4:45 PM	1	100	0	0	0	71	17	0	12	0	1	0	0	0	0	0	202
5:00 PM	1	97	0	0	0	63	18	0	19	0	5	0	0	0	0	0	203
5:15 PM	0	113	0	0	0	59	18	0	17	0	3	0	0	0	0	0	210
5:30 PM	3	103	0	0	0	92	18	0	8	0	2	0	0	0	0	0	226
5:45 PM	0	77	0	0	0	92	11	0	13	0	1	0	0	0	0	0	194
6:00 PM	0	107	0	0	0	59	21	0	14	0	2	0	0	0	0	0	203
6:15 PM	1	92	0	0	0	71	9	0	7	0	5	0	0	0	0	0	185
6:30 PM	1	97	0	0	0	58	14	0	15	0	3	0	0	0	0	0	188
6:45 PM	1	99	0	0	0	54	16	0	10	0	2	0	0	0	0	0	182
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	23	1452	0	0	0	954	242	0	189	0	44	0	0	0	0	0	2904
APPROACH %'s :	1.56%	98.44%	0.00%	0.00%	0.00%	79.77%	20.23%	0.00%	81.12%	0.00%	18.88%	0.00%					
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	5	413	0	0	0	285	71	0	56	0	11	0	0	0	0	0	841
PEAK HR FACTOR :	0.417	0.914	0.000	0.000	0.000	0.774	0.986	0.000	0.737	0.000	0.550	0.000	0.000	0.000	0.000	0.000	0.930
		0.925				0.809				0.698							

National Data & Surveying Services Intersection Turning Movement Count

Location: Holland Ln & Ballenger Ave
City: Alexandria
Control: 1-Way Stop (EB)

Project ID: 23-260092-002
Date: 6/6/2023

Data - Cars

NS/EW Streets:	Holland Ln				Holland Ln				Ballenger Ave				Ballenger Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	0	17	0	0	0	19	3	0	10	0	1	0	0	0	0	0	50
6:15 AM	0	33	0	0	0	17	4	0	7	0	1	0	0	0	0	0	62
6:30 AM	0	35	0	0	0	17	3	0	4	0	0	0	0	0	0	0	59
6:45 AM	1	59	0	0	0	12	9	0	10	0	0	0	0	0	0	0	91
7:00 AM	2	63	0	0	0	18	7	0	11	0	0	0	0	0	0	0	101
7:15 AM	0	90	0	1	0	26	14	0	17	0	0	0	0	0	0	0	148
7:30 AM	1	112	0	0	0	25	11	0	12	0	1	0	0	0	0	0	162
7:45 AM	1	142	0	0	0	28	17	0	19	0	0	0	0	0	0	0	207
8:00 AM	0	140	0	0	0	38	14	0	18	0	1	0	0	0	0	0	211
8:15 AM	1	121	0	0	0	30	13	0	15	0	2	0	0	0	0	0	182
8:30 AM	0	109	0	0	0	28	14	0	11	0	2	0	0	0	0	0	164
8:45 AM	0	99	0	0	0	33	14	0	8	0	3	0	0	0	0	0	157
9:00 AM	3	78	0	0	0	40	17	0	8	0	1	0	0	0	0	0	147
9:15 AM	0	66	0	0	0	20	19	0	12	0	2	0	0	0	0	0	119
9:30 AM	2	62	0	0	0	29	10	0	11	0	1	0	0	0	0	0	115
9:45 AM	2	41	0	0	0	29	13	0	14	0	6	1	0	0	0	0	106
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	13	1267	0	1	0	409	182	0	187	0	21	1	0	0	0	0	2081
APPROACH %'s :	1.01%	98.91%	0.00%	0.08%	0.00%	69.20%	30.80%	0.00%	89.47%	0.00%	10.05%	0.48%					
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	2	512	0	0	0	124	58	0	63	0	5	0	0	0	0	0	764
PEAK HR FACTOR :	0.500	0.901	0.000	0.000	0.000	0.816	0.853	0.000	0.829	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.905
		0.899				0.875				0.895							

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	2	60	0	0	0	47	10	0	13	0	4	0	0	0	0	0	136
3:15 PM	0	61	0	0	0	34	11	0	10	0	1	0	0	0	0	0	117
3:30 PM	2	90	0	0	0	47	15	0	11	0	2	0	0	0	0	0	167
3:45 PM	1	80	0	0	0	43	14	0	11	0	0	0	0	0	0	0	149
4:00 PM	3	91	0	0	0	51	20	0	8	0	2	0	0	0	0	0	175
4:15 PM	2	77	0	0	0	51	11	0	9	0	6	0	0	0	0	0	156
4:30 PM	3	98	0	0	0	55	19	0	11	0	3	0	0	0	0	0	189
4:45 PM	1	100	0	0	0	70	17	0	12	0	1	0	0	0	0	0	201
5:00 PM	1	96	0	0	0	62	18	0	19	0	5	0	0	0	0	0	201
5:15 PM	0	110	0	0	0	57	17	0	17	0	3	0	0	0	0	0	204
5:30 PM	3	103	0	0	0	92	18	0	8	0	2	0	0	0	0	0	226
5:45 PM	0	77	0	0	0	91	11	0	11	0	1	0	0	0	0	0	191
6:00 PM	0	107	0	0	0	59	21	0	14	0	2	0	0	0	0	0	203
6:15 PM	1	92	0	0	0	71	9	0	7	0	4	0	0	0	0	0	184
6:30 PM	1	97	0	0	0	58	14	0	15	0	3	0	0	0	0	0	188
6:45 PM	1	98	0	0	0	53	16	0	10	0	2	0	0	0	0	0	180
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	21	1437	0	0	0	941	241	0	186	0	41	0	0	0	0	0	2867
APPROACH %'s :	1.44%	98.56%	0.00%	0.00%	0.00%	79.61%	20.39%	0.00%	81.94%	0.00%	18.06%	0.00%					
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	5	409	0	0	0	281	70	0	56	0	11	0	0	0	0	0	832
PEAK HR FACTOR :	0.417	0.930	0.000	0.000	0.000	0.764	0.972	0.000	0.737	0.000	0.550	0.000	0.000	0.000	0.000	0.000	0.920
		0.941				0.798				0.698							

National Data & Surveying Services Intersection Turning Movement Count

Location: Holland Ln & Ballenger Ave
City: Alexandria
Control: 1-Way Stop (EB)

Project ID: 23-260092-002
Date: 6/6/2023

Data - HT

NS/EW Streets:	Holland Ln				Holland Ln				Ballenger Ave				Ballenger Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
6:15 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
6:30 AM	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	2
6:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
7:00 AM	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	4
7:15 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
7:30 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:45 AM	0	8	0	0	0	2	0	0	0	0	0	0	0	0	0	0	10
8:00 AM	0	4	0	0	0	3	1	0	1	0	1	0	0	0	0	0	10
8:15 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4
8:30 AM	0	7	0	0	0	0	0	0	1	0	0	0	0	0	0	0	8
8:45 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4
9:00 AM	0	8	0	0	0	1	0	0	0	0	0	0	0	0	0	0	9
9:15 AM	0	8	0	0	0	3	0	0	1	0	1	0	0	0	0	0	13
9:30 AM	0	2	0	0	0	2	1	0	0	0	0	0	0	0	0	0	5
9:45 AM	0	2	0	0	0	1	0	0	2	0	0	0	0	0	0	0	5
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	55	0	0	0	19	2	0	5	0	3	0	0	0	0	0	84
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	90.48%	9.52%	0.00%	62.50%	0.00%	37.50%	0.00%					
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	21	0	0	0	7	1	0	2	0	1	0	0	0	0	0	32
PEAK HR FACTOR :	0.000	0.656	0.000	0.000	0.000	0.583	0.250	0.000	0.500	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.800
		0.656				0.500				0.375							

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
3:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
3:30 PM	1	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	4
3:45 PM	1	5	0	0	0	1	0	0	0	0	1	0	0	0	0	0	8
4:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
4:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
4:30 PM	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
5:15 PM	0	3	0	0	0	2	1	0	0	0	0	0	0	0	0	0	6
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	1	0	0	2	0	0	0	0	0	0	0	3
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	2	15	0	0	0	13	1	0	3	0	3	0	0	0	0	0	37
APPROACH %'s :	11.76%	88.24%	0.00%	0.00%	0.00%	92.86%	7.14%	0.00%	50.00%	0.00%	50.00%	0.00%					
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	0	4	0	0	0	4	1	0	0	0	0	0	0	0	0	0	9
PEAK HR FACTOR :	0.000	0.333	0.000	0.000	0.000	0.500	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.375
		0.333				0.417											

National Data & Surveying Services Intersection Turning Movement Count

Location: Holland Ln & Ballenger Ave
City: Alexandria
Control: 1-Way Stop (EB)

Project ID: 23-260092-002
Date: 6/6/2023

Data - Bikes

NS/EW Streets:	Holland Ln				Holland Ln				Ballenger Ave				Ballenger Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:30 AM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
7:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2
8:00 AM	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	1	0	0	0	2	1	0	0	0	0	0	0	0	0	0	4
9:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
9:15 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
9:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
9:45 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	9	0	0	0	4	4	0	4	0	0	0	0	0	0	0	21
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	50.00%	50.00%	0.00%	100.00%	0.00%	0.00%	0.00%					
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	2	0	0	0	0	2	0	1	0	0	0	0	0	0	0	5
PEAK HR FACTOR :	0.000	0.500	0.000	0.000	0.000	0.000	0.500	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.625
		0.500				0.500				0.250							

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	3
3:15 PM	0	3	0	0	0	1	0	0	0	0	1	0	0	0	0	0	5
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2
4:00 PM	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	3
4:15 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
4:30 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2
5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	1	0	0	0	2	1	0	0	0	0	0	0	0	0	0	4
5:45 PM	1	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	4
6:00 PM	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3
6:15 PM	0	2	0	0	0	1	0	0	1	0	0	0	0	0	0	0	4
6:30 PM	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
6:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	15	0	0	0	15	3	0	4	0	1	1	0	0	0	0	40
APPROACH %'s :	6.25%	93.75%	0.00%	0.00%	0.00%	83.33%	16.67%	0.00%	66.67%	0.00%	16.67%	16.67%					
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	0	2	0	0	0	4	1	0	1	0	0	0	0	0	0	0	8
PEAK HR FACTOR :	0.000	0.500	0.000	0.000	0.000	0.500	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500
		0.500				0.417				0.250							

National Data & Surveying Services Intersection Turning Movement Count

Location: Holland Ln & Ballenger Ave
City: Alexandria
Project ID: 23-260092-002
Date: 6/6/2023

Data - Pedestrians (Crosswalks)

NS/EW Streets:	Holland Ln		Holland Ln		Ballenger Ave		Ballenger Ave		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
6:00 AM	2	0	0	0	0	0	3	1	6
6:15 AM	1	4	0	0	0	0	5	2	12
6:30 AM	0	1	2	0	0	0	5	1	9
6:45 AM	3	0	0	0	0	0	4	4	11
7:00 AM	1	4	0	0	0	0	9	2	16
7:15 AM	5	2	0	0	0	0	8	5	20
7:30 AM	6	4	0	0	0	0	11	6	27
7:45 AM	4	5	1	0	0	0	4	5	19
8:00 AM	2	2	0	0	0	0	8	3	15
8:15 AM	3	5	0	0	0	0	5	7	20
8:30 AM	5	3	0	0	0	0	12	4	24
8:45 AM	0	3	0	0	0	0	7	7	17
9:00 AM	2	3	0	0	0	0	3	6	14
9:15 AM	0	1	1	0	0	0	1	2	5
9:30 AM	3	2	0	0	0	0	2	3	10
9:45 AM	1	2	0	0	0	0	3	5	11
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	38	41	4	0	0	0	90	63	236
APPROACH %'s :	48.10%	51.90%	100.00%	0.00%			58.82%	41.18%	
PEAK HR :	07:45 AM - 08:45 AM								TOTAL
PEAK HR VOL :	14	15	1	0	0	0	29	19	78
PEAK HR FACTOR :	0.700	0.750	0.250				0.604	0.679	0.813
	0.806		0.250				0.750		

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
3:00 PM	3	3	0	0	0	0	8	7	21
3:15 PM	1	3	0	0	0	0	4	1	9
3:30 PM	1	2	0	0	0	0	2	12	17
3:45 PM	1	2	0	0	0	0	3	6	12
4:00 PM	2	2	0	0	0	0	6	12	22
4:15 PM	2	3	0	0	0	0	6	6	17
4:30 PM	5	3	0	0	0	0	5	8	21
4:45 PM	1	2	0	0	0	0	9	8	20
5:00 PM	8	4	1	0	0	0	11	9	33
5:15 PM	5	4	0	0	0	0	15	10	34
5:30 PM	9	4	1	0	0	0	16	19	49
5:45 PM	9	1	1	0	0	0	13	11	35
6:00 PM	7	5	0	0	0	0	5	11	28
6:15 PM	3	5	0	0	0	0	11	16	35
6:30 PM	3	10	0	0	0	0	18	20	51
6:45 PM	6	6	1	1	0	0	13	11	38
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	66	59	4	1	0	0	145	167	442
APPROACH %'s :	52.80%	47.20%	80.00%	20.00%			46.47%	53.53%	
PEAK HR :	04:45 PM - 05:45 PM								TOTAL
PEAK HR VOL :	23	14	2	0	0	0	51	46	136
PEAK HR FACTOR :	0.639	0.875	0.500				0.797	0.605	0.694
	0.712		0.500				0.693		

Prepared by National Data & Surveying Services

Holland Ln & Ballenger Ave

Peak Hour Turning Movement Count

ID: 23-260092-002
City: Alexandria

Day: Tuesday
Date: 6/6/2023

PEAK HOURS

AM: 07:45 AM - 08:45 AM
NOON: NONE
PM: 04:45 PM - 05:45 PM

COUNT PERIODS

AM: 6:00 AM - 10:00 AM
NOON: NONE
PM: 3:00 PM - 07:00 PM

CONTROL: 1-Way Stop (EB)

	AM	NOON	PM
TEV	796	0	841
PHF	0.90		0.93

SOUTHBOUND (Holland Ln)

	Left	Thru	Right	U-Turn	Total	
AM	59	131	0	0	598	AM
NOON	0	0	0	0	0	NOON
PM	71	285	0	0	469	PM
	0	2	0	0		

EASTBOUND (Ballenger Ave)

AM	NOON	PM	
61	0	76	
0	0	0	0
65	0	56	0
0	0	0	1
6	0	11	0

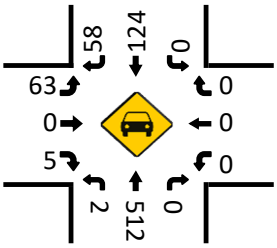
WESTBOUND (Ballenger Ave)

PM	NOON	AM	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	

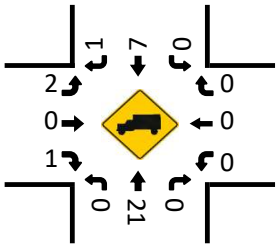
NORTHBOUND (Holland Ln)

	Left	Thru	Right	U-Turn	Total	
PM	296	0	5	413	0	PM
NOON	0	0	0	0	0	NOON
AM	137	0	2	533	0	AM
	0	0	2	0		

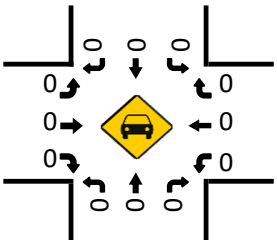
Cars (AM)



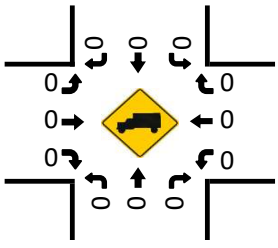
HT (AM)



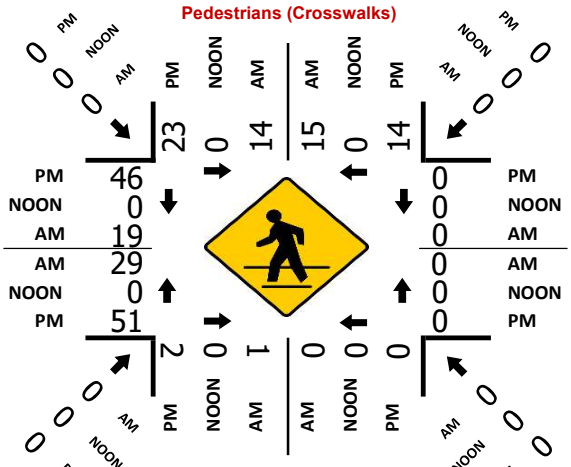
Cars (NOON)



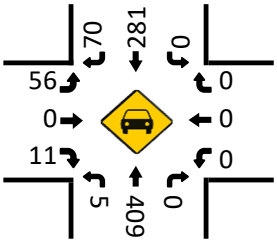
HT (NOON)



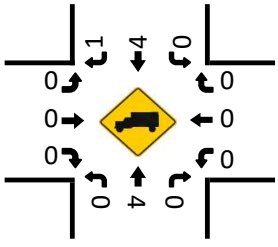
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



National Data & Surveying Services Intersection Turning Movement Count

Location: Holland Ln & Emerson Ave
City: Alexandria
Control: 1-Way Stop (EB)

Project ID: 23-260092-001
Date: 6/6/2023

Data - Total

NS/EW Streets:	Holland Ln				Holland Ln				Emerson Ave				Emerson Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	0	16	0	0	0	18	2	0	1	0	0	0	0	0	0	0	37
6:15 AM	0	32	0	0	0	17	1	0	5	0	0	0	0	0	0	0	55
6:30 AM	1	26	0	0	0	14	3	0	6	0	0	0	0	0	0	0	50
6:45 AM	0	51	0	0	0	13	1	0	10	0	1	0	0	0	0	0	76
7:00 AM	1	58	0	0	0	15	3	0	8	0	3	0	0	0	0	0	88
7:15 AM	0	87	0	0	0	22	5	0	7	0	0	0	0	0	0	0	121
7:30 AM	2	111	0	0	0	21	4	0	4	0	0	0	0	0	0	0	142
7:45 AM	2	143	0	0	0	27	3	0	8	0	0	0	0	0	0	0	183
8:00 AM	0	146	0	0	0	34	10	0	7	0	3	0	0	0	0	0	200
8:15 AM	1	108	0	0	0	25	7	0	7	0	2	0	0	0	0	0	150
8:30 AM	0	111	0	0	0	24	6	0	6	0	3	0	0	0	0	0	150
8:45 AM	2	99	0	0	0	31	4	0	3	0	3	0	0	0	0	0	142
9:00 AM	0	80	0	0	0	30	11	0	7	0	1	0	0	0	0	0	129
9:15 AM	0	71	0	0	0	23	3	0	6	0	0	0	0	0	0	0	103
9:30 AM	0	63	0	0	0	26	5	0	3	0	1	0	0	0	0	0	98
9:45 AM	0	40	0	1	0	28	7	0	4	0	0	0	0	0	0	0	80
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	9	1242	0	1	0	368	75	0	92	0	17	0	0	0	0	0	1804
APPROACH %'s :	0.72%	99.20%	0.00%	0.08%	0.00%	83.07%	16.93%	0.00%	84.40%	0.00%	15.60%	0.00%					
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	3	508	0	0	0	110	26	0	28	0	8	0	0	0	0	0	683
PEAK HR FACTOR :	0.375	0.870	0.000	0.000	0.000	0.809	0.650	0.000	0.875	0.000	0.667	0.000	0.000	0.000	0.000	0.000	0.854
		0.875				0.773				0.900							

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	0	59	0	0	0	49	3	0	6	0	3	1	0	0	0	0	121
3:15 PM	0	55	0	0	0	33	2	0	6	0	1	0	0	0	0	0	97
3:30 PM	0	85	0	1	0	41	6	0	9	0	1	0	0	0	0	0	143
3:45 PM	0	81	0	1	0	41	5	0	8	0	2	0	0	0	0	0	138
4:00 PM	1	87	0	0	0	48	8	1	5	0	0	0	0	0	0	0	150
4:15 PM	0	72	0	0	0	47	10	0	6	0	0	0	0	0	0	0	135
4:30 PM	2	94	0	1	0	53	7	0	8	0	0	0	0	0	0	0	165
4:45 PM	0	93	0	0	0	63	8	0	7	0	2	0	0	0	0	0	173
5:00 PM	0	83	0	0	0	55	12	0	12	0	2	0	0	0	0	0	164
5:15 PM	1	104	0	0	0	60	1	0	12	0	1	0	0	0	0	0	179
5:30 PM	0	93	0	0	0	87	9	0	16	0	1	0	0	0	0	0	206
5:45 PM	0	64	0	0	0	87	4	0	10	0	0	0	0	0	0	0	165
6:00 PM	1	104	0	0	0	55	6	0	6	0	1	0	0	0	0	0	173
6:15 PM	3	76	0	0	0	71	7	0	13	0	0	0	0	0	0	0	170
6:30 PM	0	91	0	0	0	55	6	0	9	0	1	0	0	0	0	0	162
6:45 PM	0	96	0	0	0	54	3	0	5	0	0	0	0	0	0	0	158
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	8	1337	0	3	0	899	97	1	138	0	15	1	0	0	0	0	2499
APPROACH %'s :	0.59%	99.18%	0.00%	0.22%	0.00%	90.17%	9.73%	0.10%	89.61%	0.00%	9.74%	0.65%					
PEAK HR :	05:15 PM - 06:15 PM																TOTAL
PEAK HR VOL :	2	365	0	0	0	289	20	0	44	0	3	0	0	0	0	0	723
PEAK HR FACTOR :	0.500	0.877	0.000	0.000	0.000	0.830	0.556	0.000	0.688	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.877
		0.874				0.805				0.691							

National Data & Surveying Services Intersection Turning Movement Count

Location: Holland Ln & Emerson Ave
City: Alexandria
Control: 1-Way Stop (EB)

Project ID: 23-260092-001
Date: 6/6/2023

Data - Cars

NS/EW Streets:	Holland Ln				Holland Ln				Emerson Ave				Emerson Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	0	14	0	0	0	18	2	0	1	0	0	0	0	0	0	0	35
6:15 AM	0	30	0	0	0	17	1	0	5	0	0	0	0	0	0	0	53
6:30 AM	1	26	0	0	0	12	3	0	6	0	0	0	0	0	0	0	48
6:45 AM	0	51	0	0	0	12	1	0	10	0	1	0	0	0	0	0	75
7:00 AM	1	55	0	0	0	14	3	0	8	0	3	0	0	0	0	0	84
7:15 AM	0	84	0	0	0	22	5	0	7	0	0	0	0	0	0	0	118
7:30 AM	1	109	0	0	0	21	4	0	4	0	0	0	0	0	0	0	139
7:45 AM	1	135	0	0	0	25	3	0	8	0	0	0	0	0	0	0	172
8:00 AM	0	142	0	0	0	32	8	0	7	0	3	0	0	0	0	0	192
8:15 AM	1	106	0	0	0	23	7	0	7	0	2	0	0	0	0	0	146
8:30 AM	0	104	0	0	0	24	6	0	6	0	3	0	0	0	0	0	143
8:45 AM	2	97	0	0	0	29	4	0	3	0	3	0	0	0	0	0	138
9:00 AM	0	73	0	0	0	29	11	0	6	0	1	0	0	0	0	0	120
9:15 AM	0	63	0	0	0	19	3	0	6	0	0	0	0	0	0	0	91
9:30 AM	0	61	0	0	0	24	5	0	3	0	1	0	0	0	0	0	94
9:45 AM	0	38	0	0	0	27	7	0	4	0	0	0	0	0	0	0	76
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	7	1188	0	0	0	348	73	0	91	0	17	0	0	0	0	0	1724
APPROACH %'s :	0.59%	99.41%	0.00%	0.00%	0.00%	82.66%	17.34%	0.00%	84.26%	0.00%	15.74%	0.00%					
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	2	487	0	0	0	104	24	0	28	0	8	0	0	0	0	0	653
PEAK HR FACTOR :	0.500	0.857	0.000	0.000	0.000	0.813	0.750	0.000	0.875	0.000	0.667	0.000	0.000	0.000	0.000	0.000	0.850
		0.861				0.800				0.900							

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	0	58	0	0	0	48	3	0	6	0	3	1	0	0	0	0	119
3:15 PM	0	54	0	0	0	32	2	0	6	0	1	0	0	0	0	0	95
3:30 PM	0	82	0	1	0	40	6	0	9	0	0	0	0	0	0	0	138
3:45 PM	0	76	0	1	0	40	4	0	7	0	2	0	0	0	0	0	130
4:00 PM	1	87	0	0	0	46	8	1	5	0	0	0	0	0	0	0	148
4:15 PM	0	71	0	0	0	46	10	0	6	0	0	0	0	0	0	0	133
4:30 PM	2	94	0	1	0	52	7	0	8	0	0	0	0	0	0	0	164
4:45 PM	0	93	0	0	0	62	8	0	7	0	2	0	0	0	0	0	172
5:00 PM	0	82	0	0	0	54	12	0	12	0	2	0	0	0	0	0	162
5:15 PM	1	101	0	0	0	58	1	0	12	0	1	0	0	0	0	0	174
5:30 PM	0	93	0	0	0	87	9	0	16	0	1	0	0	0	0	0	206
5:45 PM	0	64	0	0	0	86	4	0	10	0	0	0	0	0	0	0	164
6:00 PM	1	104	0	0	0	55	6	0	6	0	1	0	0	0	0	0	173
6:15 PM	3	76	0	0	0	70	7	0	13	0	0	0	0	0	0	0	169
6:30 PM	0	91	0	0	0	55	6	0	9	0	1	0	0	0	0	0	162
6:45 PM	0	95	0	0	0	53	3	0	5	0	0	0	0	0	0	0	156
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	8	1321	0	3	0	884	96	1	137	0	14	1	0	0	0	0	2465
APPROACH %'s :	0.60%	99.17%	0.00%	0.23%	0.00%	90.11%	9.79%	0.10%	90.13%	0.00%	9.21%	0.66%					
PEAK HR :	05:15 PM - 06:15 PM																TOTAL
PEAK HR VOL :	2	362	0	0	0	286	20	0	44	0	3	0	0	0	0	0	717
PEAK HR FACTOR :	0.500	0.870	0.000	0.000	0.000	0.822	0.556	0.000	0.688	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.870
		0.867				0.797				0.691							

National Data & Surveying Services Intersection Turning Movement Count

Location: Holland Ln & Emerson Ave
City: Alexandria
Control: 1-Way Stop (EB)

Project ID: 23-260092-001
Date: 6/6/2023

Data - HT

NS/EW Streets:	Holland Ln				Holland Ln				Emerson Ave				Emerson Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
6:15 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
6:30 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
6:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
7:00 AM	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	4
7:15 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
7:30 AM	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
7:45 AM	1	8	0	0	0	2	0	0	0	0	0	0	0	0	0	0	11
8:00 AM	0	4	0	0	0	2	2	0	0	0	0	0	0	0	0	0	8
8:15 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4
8:30 AM	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
8:45 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4
9:00 AM	0	7	0	0	0	1	0	0	1	0	0	0	0	0	0	0	9
9:15 AM	0	8	0	0	0	4	0	0	0	0	0	0	0	0	0	0	12
9:30 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4
9:45 AM	0	2	0	1	0	1	0	0	0	0	0	0	0	0	0	0	4
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	2	54	0	1	0	20	2	0	1	0	0	0	0	0	0	0	80
APPROACH %'s :	3.51%	94.74%	0.00%	1.75%	0.00%	90.91%	9.09%	0.00%	100.00%	0.00%	0.00%	0.00%					
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	1	21	0	0	0	6	2	0	0	0	0	0	0	0	0	0	30
PEAK HR FACTOR :	0.250	0.656	0.000	0.000	0.000	0.750	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.682
	0.611				0.500												

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
3:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
3:30 PM	0	3	0	0	0	1	0	0	0	0	1	0	0	0	0	0	5
3:45 PM	0	5	0	0	0	1	1	0	1	0	0	0	0	0	0	0	8
4:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
4:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
4:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
5:15 PM	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	0	5
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	16	0	0	0	15	1	0	1	0	1	0	0	0	0	0	34
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	93.75%	6.25%	0.00%	50.00%	0.00%	50.00%	0.00%					
PEAK HR :	05:15 PM - 06:15 PM																TOTAL
PEAK HR VOL :	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	6
PEAK HR FACTOR :	0.000	0.250	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.300
	0.250				0.375												

National Data & Surveying Services Intersection Turning Movement Count

Location: Holland Ln & Emerson Ave
City: Alexandria
Control: 1-Way Stop (EB)

Project ID: 23-260092-001
Date: 6/6/2023

Data - Bikes

NS/EW Streets:	Holland Ln				Holland Ln				Emerson Ave				Emerson Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2
9:00 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
9:15 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	8	0	0	0	4	0	0	1	0	0	0	0	0	0	0	13
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%					
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
PEAK HR FACTOR :	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500
		0.500															

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
3:15 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:00 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
5:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
6:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
6:15 PM	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	0	5
6:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
6:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	13	0	0	0	12	1	0	1	0	0	0	0	0	0	0	27
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	92.31%	7.69%	0.00%	100.00%	0.00%	0.00%	0.00%					
PEAK HR :	05:15 PM - 06:15 PM																TOTAL
PEAK HR VOL :	0	4	0	0	0	3	0	0	0	0	0	0	0	0	0	0	7
PEAK HR FACTOR :	0.000	1.000	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.875
		1.000				0.750											

National Data & Surveying Services Intersection Turning Movement Count

Location: Holland Ln & Emerson Ave
City: Alexandria
Project ID: 23-260092-001
Date: 6/6/2023

Data - Pedestrians (Crosswalks)

NS/EW Streets:	Holland Ln		Holland Ln		Emerson Ave		Emerson Ave		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
6:00 AM	0	0	0	1	0	0	1	0	2
6:15 AM	1	0	1	1	0	0	5	1	9
6:30 AM	0	0	0	1	0	0	4	3	8
6:45 AM	0	0	2	0	0	0	1	2	5
7:00 AM	1	0	1	1	0	0	3	1	7
7:15 AM	1	0	3	0	0	0	3	7	14
7:30 AM	0	0	1	2	0	0	6	2	11
7:45 AM	0	0	1	1	0	0	4	4	10
8:00 AM	0	0	2	0	0	0	4	2	8
8:15 AM	2	0	2	2	0	0	3	4	13
8:30 AM	2	0	0	1	0	0	2	3	8
8:45 AM	0	0	1	1	0	0	6	4	12
9:00 AM	0	0	0	0	0	0	0	1	1
9:15 AM	0	0	0	0	0	0	2	0	2
9:30 AM	0	0	0	1	0	0	3	2	6
9:45 AM	0	1	1	0	0	0	3	4	9
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	7	1	15	12	0	0	50	40	125
APPROACH %'s :	87.50%	12.50%	55.56%	44.44%			55.56%	44.44%	
PEAK HR :	07:45 AM - 08:45 AM								TOTAL
PEAK HR VOL :	4	0	5	4	0	0	13	13	39
PEAK HR FACTOR :	0.500		0.625	0.500			0.813	0.813	0.750
	0.500		0.563				0.813		

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
3:00 PM	0	0	0	0	0	0	6	4	10
3:15 PM	1	1	0	0	0	0	1	3	6
3:30 PM	0	0	1	1	0	0	2	9	13
3:45 PM	0	0	1	1	0	0	3	4	9
4:00 PM	0	0	0	1	0	0	3	7	11
4:15 PM	0	0	3	2	0	0	6	5	16
4:30 PM	0	0	0	1	0	0	4	7	12
4:45 PM	0	0	2	0	0	0	5	8	15
5:00 PM	1	0	0	1	0	0	6	3	11
5:15 PM	3	1	3	0	0	0	9	13	29
5:30 PM	0	2	1	3	0	0	10	18	34
5:45 PM	0	0	1	1	0	0	7	6	15
6:00 PM	0	0	0	2	0	0	1	5	8
6:15 PM	0	0	1	1	0	0	11	11	24
6:30 PM	2	2	1	3	0	0	13	7	28
6:45 PM	2	2	3	3	0	0	11	11	32
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	9	8	17	20	0	0	98	121	273
APPROACH %'s :	52.94%	47.06%	45.95%	54.05%			44.75%	55.25%	
PEAK HR :	05:15 PM - 06:15 PM								TOTAL
PEAK HR VOL :	3	3	5	6	0	0	27	42	86
PEAK HR FACTOR :	0.250	0.375	0.417	0.500			0.675	0.583	0.632
	0.375		0.688				0.616		

Prepared by National Data & Surveying Services

Holland Ln & Emerson Ave

Peak Hour Turning Movement Count

ID: 23-260092-001
City: Alexandria

Day: Tuesday
Date: 6/6/2023

PEAK HOURS		COUNT PERIODS
AM	07:45 AM - 08:45 AM	AM
NOON	NONE	NOON
PM	05:15 PM - 06:15 PM	PM

SOUTHBOUND (Holland Ln)

AM	26	110	0	0	536	AM
NOON	0	0	0	0	0	NOON
PM	20	289	0	0	409	PM

EASTBOUND (Emerson Ave)

AM	NOON	PM	
29	0	22	
0	0	0	0
28	0	44	0
0	0	0	1
8	0	3	0

WESTBOUND (Emerson Ave)

PM	NOON	AM	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	

NORTHBOUND (Holland Ln)

PM	292	0	2	365	0	PM
NOON	0	0	0	0	0	NOON
AM	118	0	3	508	0	AM

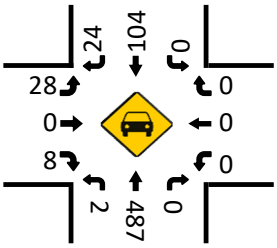
	0	2	0	0
	0	0	2	0

CONTROL

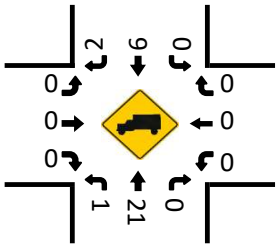
1-Way Stop (EB)

TEV	683 AM	0 NOON	723 PM
PHF	0.85		0.88

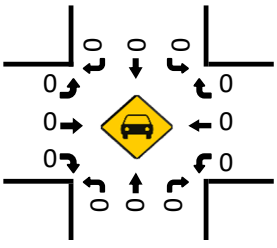
Cars (AM)



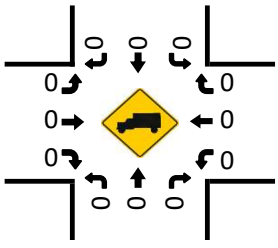
HT (AM)



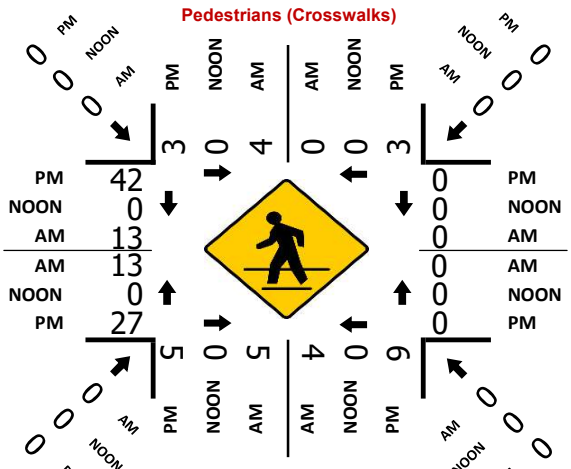
Cars (NOON)



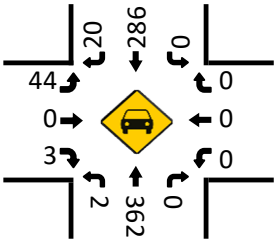
HT (NOON)



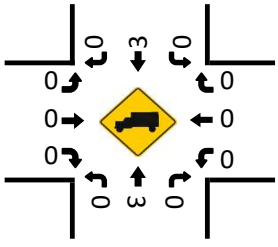
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



File Name: 17. Holland Ave @ Eisenhower Ave
Start Date: 6/7/2023
Start Time: 6:00:00 AM
Site Code: 017
Comment 1:
Comment 2:
Comment 3:
Comment 4:

	Holland Ave From North				From East				Holland Ave From South				Eisenhower Ave From West			
Start Time	Left	Thru	Right	U Turns	Left	Thru	Right	U Turns	Left	Thru	Right	U Turns	Left	Thru	Right	U Turns
6:00:00 AM	0	3	15	0	0	0	0	0	2	0	0	0	19	0	9	0
6:15:00 AM	0	3	12	0	0	0	0	0	1	4	0	0	22	0	9	0
6:30:00 AM	0	2	9	1	0	0	0	0	0	1	0	0	40	0	6	1
6:45:00 AM	0	2	10	0	0	0	0	0	1	3	0	0	48	0	9	0
7:00:00 AM	0	2	13	1	0	0	0	0	2	8	0	0	53	0	3	1
7:15:00 AM	0	5	14	0	0	0	0	0	1	0	0	0	67	0	4	0
7:30:00 AM	0	1	18	0	0	0	0	0	3	3	0	0	105	0	3	0
7:45:00 AM	0	3	23	0	0	0	0	0	1	2	0	0	147	0	2	1
8:00:00 AM	0	4	30	0	0	0	0	0	5	3	0	0	157	0	1	0
8:15:00 AM	0	2	28	0	0	0	0	0	1	2	0	0	121	0	3	0
8:30:00 AM	0	1	25	0	0	0	0	0	1	1	0	0	142	0	1	2
8:45:00 AM	0	1	40	0	0	0	0	0	2	1	0	0	108	0	2	1
9:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00:00 AM	0	2	29	0	0	0	0	0	1	3	0	0	49	0	0	0
11:15:00 AM	0	2	35	0	0	0	0	0	3	4	0	0	37	0	0	0
11:30:00 AM	0	3	27	0	0	0	0	0	5	2	0	0	54	0	3	0
11:45:00 AM	0	1	30	2	0	0	0	0	1	0	0	0	47	0	5	0
12:00:00 PM	0	5	37	0	0	0	0	0	2	3	0	0	37	0	0	0
12:15:00 PM	0	3	34	0	0	0	0	0	3	3	0	0	38	0	3	0
12:30:00 PM	0	2	30	0	0	0	0	0	2	3	0	0	53	0	1	0
12:45:00 PM	0	3	40	0	0	0	0	0	0	2	0	0	47	0	1	0
1:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30:00 PM	0	2	32	1	0	0	0	0	10	12	0	0	62	0	6	0
3:45:00 PM	0	2	41	0	0	0	0	0	15	4	0	0	73	0	3	0
4:00:00 PM	0	2	25	0	0	0	0	0	20	12	0	0	77	0	1	0
4:15:00 PM	0	0	48	0	0	0	0	0	8	6	0	0	82	0	0	0
4:30:00 PM	0	0	56	0	0	0	0	0	3	1	0	0	85	0	0	0
4:45:00 PM	0	3	68	0	0	0	0	0	6	9	0	0	87	0	0	0
5:00:00 PM	0	3	51	0	0	0	0	0	4	8	0	0	94	0	0	0
5:15:00 PM	0	1	74	0	0	0	0	0	2	8	0	0	102	0	3	0
5:30:00 PM	0	1	55	0	0	0	0	0	1	1	0	0	103	0	0	0
5:45:00 PM	0	1	57	0	0	0	0	0	7	0	0	0	82	0	0	1
6:00:00 PM	0	1	72	0	0	0	0	0	0	3	0	0	82	0	0	1
6:15:00 PM	0	0	57	0	0	0	0	0	4	6	0	0	80	0	0	1

File Name: 17. Holland Ave @ Eisenhower Ave
Start Date: 6/7/2023
Start Time: 6:00:00 AM
Site Code: 017
Comment 1:
Comment 2:
Comment 3:
Comment 4:

	Holland Ave From North				From East				Holland Ave From South				Eisenhower Ave From West			
Start Time	Left	Thru	Right	U Turns	Left	Thru	Right	U Turns	Left	Thru	Right	U Turns	Left	Thru	Right	U Turns
6:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	1	0	1	0
6:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0
6:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
7:00:00 AM	0	0	1	0	0	0	0	0	1	2	0	0	2	0	0	0
7:15:00 AM	0	0	2	0	0	0	0	0	0	2	0	0	3	0	1	0
7:30:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	2	0	1	0
7:45:00 AM	0	0	3	0	0	0	0	0	0	2	0	0	3	0	0	0
8:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
8:15:00 AM	0	1	0	0	0	0	0	0	1	0	0	0	5	0	0	0
8:30:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45:00 AM	0	0	3	0	0	0	0	0	0	0	0	0	2	0	2	0
9:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00:00 AM	0	0	2	0	0	0	0	0	1	1	0	0	0	0	0	1
11:15:00 AM	0	0	3	0	0	0	0	0	0	0	0	0	3	0	2	0
11:30:00 AM	0	1	2	0	0	0	0	0	2	0	0	0	3	0	2	0
11:45:00 AM	0	0	1	0	0	0	0	0	0	3	0	0	1	0	0	2
12:00:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
12:15:00 PM	0	0	1	0	0	0	0	0	1	1	0	0	1	0	0	0
12:30:00 PM	0	0	3	0	0	0	0	0	0	0	0	0	2	0	0	0
12:45:00 PM	0	2	2	0	0	0	0	0	0	1	0	0	1	0	0	0
1:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30:00 PM	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0
3:45:00 PM	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0
4:00:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
4:15:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0
4:30:00 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
4:45:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
5:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15:00 PM	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0
5:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
5:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
6:15:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0

File Name: 17. Holland Ave @ Eisenhower Ave
Start Date: 6/7/2023
Start Time: 6:00:00 AM
Site Code: 017
Comment 1:
Comment 2:
Comment 3:
Comment 4:

	Holland Ave From North				From East				Holland Ave From South				Eisenhower Ave From West			
Start Time	Left	Thru	Right	Bikes	Left	Thru	Right	Bikes	Left	Thru	Right	Bikes	Left	Thru	Right	Bikes
6:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
7:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
7:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
8:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
11:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
12:30:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0
4:00:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15:00 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
5:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0
5:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
6:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

File Name: 17. Holland Ave @ Eisenhower Ave
Start Date: 6/7/2023
Start Time: 6:00:00 AM
Site Code: 017
Comment 1:
Comment 2:
Comment 3:
Comment 4:

	Holland Ave From North				From East				Holland Ave From South				Eisenhower Ave From West			
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
6:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1
6:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
6:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
7:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
7:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2
8:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
8:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
9:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
12:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
1:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
4:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
4:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
4:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
5:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
5:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
5:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	1
5:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
6:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0