

WICKES ABORIST
TRAFFIC IMPACT STUDY
VILLAGE OF NEW HEMPSTEAD, NY

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Prepared By:
Harry Baker & Associates
190 Old Colony Road
Hyannis, Ma 02601

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INTRODUCTION

Wickes Arborist is located on McNamara Road in the Village of Wesley Hills. The site is located in an R-35 zone with a lot size of 2.2 acres. Located near the southerly border of the property is a two-story concrete block building having a gross square footage of 6,321 sq. ft. In this building are offices, workspace, storage, and truck and trailer parking. The parking lot is constructed with gravel and the access is from McNamara Road. There is also a two-family home located in the northeasterly corner with accessory structures.

The current site plan has been revised from the 2010 plan that was submitted and approved by the Village's Planning Board. We have added emergency access to Union Road. The site will now have two access points in compliance with the current zoning. Even with this emergency access point, vehicles will use the McNamara Road driveway.

There are currently 18 employees. Two will stay on site and the remainder take a truck and go into the for their daily work. Most employees arrive between 6:30 to 7:00 am. As you can see from the traffic counts, there are a few that arrive after 7:00 am. Between 7:00 am and 8:00 am, the trucks leave the yard. As shown in the traffic counts, not all the trucks leave by 8:00 am and not all of the trucks go into the field each day. There are days when there are two-person crews due to the nature of that day's work.

Over the next few years, Wickes hopes to add six additional employees. Several may stay on site to oversee material deliveries, but the remainder will team up with a current truck driver to create a two-person team. There will be no additional trucks added to the fleet.

Figure 1 shows the project location. We have based our analysis on the site plan prepared by Civil Tec, dated December 7, 2022. For traffic purposes, the future build-year is 2025.

The purpose of this study is to determine the potential traffic impact of the proposed increase in staff will have on the adjacent roadway network, and where necessary, make recommendations for roadway improvements necessary to serve the existing and future traffic volumes.

EXISTING ROADWAY NETWORK

The proposed project is located on McNamara Road. A description of the existing local roadway system is provided below.

- Union Road (CR80) is a two-lane roadway that runs in a north-south direction under the control of Rockland County. It

Untitled Map

Write a description for your map.

Legend

Brant Point Wildlife Sanctuary

Bungalow Bar

Dubos Point Wildlife Sanctuary

Feature 1

Feature 2

Jamaica Bay Wildlife Refuge

Marina 59

Rockaway Brewing Company

Stop & Shop

Tacoway Beach (SUMMER ONLY)

PROJECT LOCATION

PROJECT LOCATION
FIGURE 1



begins at its intersection with Maple Avenue in Spring Valley and continues north to the intersection of Summit/Park Road/New Hempstead Road/Hempstead Road at its northern terminus. The posted speed limit is 30-mph. Near the project site, Union Road has one travel lane in each direction. The land-use composition is comprised of single-family homes. There are signalized intersections along Union Road. At the project site, McNamara Road (CR67) intersects approaching from the west forming a T-intersection.

- McNamara Road (CR67) is a two-lane roadway that runs in an east-west direction under the control of Rockland County. The posted speed limit is 30 mph. It begins at the intersection of Union Road and continues west and then turns north to its terminus at Pomona Road. Development in the vicinity is comprised of single-family homes.

EXISTING TRAFFIC CONDITIONS – WEEKDAY

Manual Traffic Counts -

In order to properly assess the impacts of the proposed project, manual turning movement counts were taken during a typical weekday. The manual counts were conducted on Tuesday, December May 5, 2023, at the following intersections:

- Union Road/McNamara Road – unsignalized
- McNamara Road/Wickes Arborist Driveway – unsignalized

The traffic counts were conducted in 15-minute intervals. The counts were classified by cars, trucks, buses, and school buses. Full size school buses were considered trucks for this study.

The time periods analyzed are as follows:

- 7:00 to 8:00 am and 4:00-5:00 pm.

The traffic volumes are shown in **Figures 2 and 3** and show the peak our traffic. Appendix C shows the traffic counts for the manual counts.

The current staff has 18 employees. Most arrive before 7 am to get their trucks ready and leave between 7 to 8 am. The trucks return between 4 and 5 pm. On a typical day, there are 16 staff members in the field and 2 in the office. Deliveries of materials such as mulch, stone, and wood chips are made throughout the day. Deliveries are based on project needs. Therefore, there could be days when there

are no deliveries. The company does work on Saturday and Sundays, as necessary. Vehicles typically leave by 9 am and return when the project is completed. These projects are typically related to the removal of debris. There are also deliveries made of wood chips.

Capacity Analysis

The Synchro 11 software (standard Highway Capacity Manual) was used to calculate the Level of Service for each intersection. The traffic analysis is performed by calculating the capacity of the facility (e.g., intersection approach roadway) to process traffic. In general, the capacity of a facility is defined as the maximum number of vehicles or pedestrians that can reasonably be expected to traverse a point or section of roadway during a given time period under prevailing roadway, traffic, and control conditions. Therefore, capacity analyses are a set of procedures used to estimate the traffic carrying capabilities of facilities over a range of defined operational conditions. They provide tools for the analysis and improvement of existing facilities and for the planning and design of future facilities.

Unsignalized Intersections

The operation of signalized intersections in the Study Area was analyzed by applying the Percentile Delay Methodology included in the Synchro 11 traffic signal software (latest version approved by NYSDOT).

LOS can be characterized for the entire intersection, each intersection approach, and each lane group. Control delay alone is used to characterize LOS for the entire intersection or an approach. Delay quantifies the increase in travel time due to traffic signal control. It is also a surrogate measure of driver discomfort and fuel consumption. The volume-to-capacity ratio quantifies the degree to which a phase's capacity is utilized by a lane group.

LOS A describes operation with a control delay of 10 seconds per vehicle or less and volume-to capacity ratio no greater than 1.0. This level is typically assigned when the volume-to capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.

LOS B describes operation with a control delay between 10 and 20 seconds per vehicle or less and volume-to capacity ratio no greater than 1.0. This level is typically assigned when the volume-to capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. More vehicles will stop than with LOS A.

LOS C describes operation with a control delay between 20 and 35 seconds per vehicle or less and volume-to capacity ratio no greater than 1.0. This level is typically assigned when the volume-to capacity ratio is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.

LOS D describes operation with a control delay between 35 and 55 seconds per vehicle or less and volume-to capacity ratio no greater than 1.0. This level is typically assigned when the volume-to capacity ratio is high and either progression is ineffective, or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.

LOS E describes operation with a control delay between 55 and 80 seconds per vehicle or less and volume-to capacity ratio no greater than 1.0. This level is typically assigned when the volume-to capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.

LOS F describes operation with a control delay is greater than 80 seconds per vehicle or less and volume-to capacity ratio greater than 1.0. This level is typically assigned when the volume-to capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

A lane group can incur a delay less than 80 seconds per vehicle when the volume-to capacity ratio exceeds 1.0. This condition typically occurs when the cycle length is short, the signal progression is favorable, or both. As a result, both the delay and volume-to capacity ratio are considered when lane group LOS is established. A ratio of 1.0 or more indicates that cycle capacity is fully utilized and represents failure from a capacity perspective (just as delay in excess of 50 seconds per vehicle represents failure from a delay perspective.)

The LOS criteria for both TWSC and AWSC unsignalized intersections are summarized in **Table 1**.

Control Delay Per Vehicle	Level of Service (LOS)	
	v/c ratio $\leq$ 1.0	v/c ratio $\geq$ 1.0
≤ 10.0 Seconds	A	F
>10.0 and 15.0 seconds	B	F
>15.0 and 25.0 seconds	C	F
>25.0 and 35.0 seconds	D	F
>35.0 and 50.0 seconds	E	F
>50.0 seconds	F	F
Source: Transportation Research Board 2016 <i>Highway Capacity Manual</i>		

Note: (1) For TWSC intersections, the LOS criteria apply to each lane on a given approach and to each approach on the minor street (for TWSC intersections.) LOS is not calculated for major-street approaches or for the intersection as a whole.

Note that the LOS criteria for unsignalized intersections are somewhat different from the criteria used in signalized intersections. At TWSC intersections, drivers on the stop-controlled approaches are required to select gaps in the major-street flow in order to execute crossing or turning maneuvers. In the presence of a queue, each driver on the controlled approach must also use some time to move into the front-of-queue position and prepare to evaluate gaps in the major-street flow. AWSC intersections require drivers on all approaches to stop before proceeding into the intersection.

The results of the existing capacity analyses are shown in **Tables 2** for the existing conditions.

At the Union Road/McNamara Road intersection, the McNamara Road eastbound approach is operating at LOS “D” in the morning peak hour. The remaining approaches and intersections are operating at LOS “C” or better.

2025 NO-BUILD CONDITIONS

The no-build conditions represent the traffic volumes that would be on the street network prior to the completion of the development. We used a background growth rate of 1.02% based on the NYMTC projections for Rockland County.

The traffic volumes are shown in **Figures 3 and 4** show the peak hour traffic

The results the weekday capacity analyses are shown in **Tables 3** for the 2025 no-build conditions.

At the Union Road/McNamara Road intersection, the McNamara Road eastbound approach is projected to change from LOS “C” to “D” in the evening peak hour.

The remaining approaches will remain at the LOS for the existing conditions.,

2025 BUILD CONDITIONS

There are currently 18 employees. Two will stay on site and the remainder take a truck and go into the for their daily work. Most employees arrive between 6:30 to 7:00 am. As you can see from the traffic counts, there are a few that arrive after 7:00 am. Between 7:00 am and 8:00 am, the trucks leave the yard. As shown in

TABLE 2
CAPACITY ANALYSIS SUMMARY
2023 EXISTING CONDITIONS WEEKDAY
UNSIGNALIZED INTERSECTIONS

	7:00-8:00 V/C			4:00-5:00 V/C		
	LOS	Ratio	Delay	LOS	Ratio	Delay
Union Road/McNamara Road						
Union Road						
Northbound Lt + Th	A	0.09	9.3	A	0.08	9.1
McNamara Road						
Eastbound Lt + Rt	D	0.58	31.2	C	0.48	24.7
McNamara Road/Wickes Driveway						
McNamara Road						
Westbound Lt + th	A	0.00	7.6	A	0.00	0.0
Wickes Driveway						
Northbound Lt + Rt	B	0.01	10.6	A	0.01	10.0

the traffic counts, not all the trucks leave by 8:00 am and not all of the trucks go into the field each day. There are days when there are two-person crews due to the nature of that day's work.

Over the next few years, Wickes hopes to add six additional employees. Several may stay on site to oversee material deliveries, but the remainder will team up with a current truck driver to create a two-person team. There will be no additional trucks added to the fleet. For this analysis, we have assumed that six new cars will enter between 7:00 am and 8:00 am and leave between 4:00 pm and 5:00 pm. There will be no change in the truck operations.

Figure 6 shows the distribution for the six vehicle trips and **Figures 7 and 8** show the peak hour traffic volumes for the 2025 Build condition.

There will be no change in the LOS for any of the movements from the No-Build to the Build conditions.

CALCULATION OF SIGHT DISTANCE

The intersection sight distance is based on the AASHTO Design Manual "A Policy for Geometric Design of Highways and Streets." Chapter 9 discusses the sight triangle requirements for a stop-controlled intersection and how to calculate the sight distance.

The sight triangle area must be clear of obstructions so a driver sitting in the driveway can see oncoming traffic and vice versa. Plantings in the sight triangle should not be more than two feet high. It is preferable that there be no plantings in the sight triangle.

The intersection sight distance is calculated based on the formula on Page 9-37. For a left turn from stop, Table 9-5 provides the Time Gap in seconds for the Design Speed of Major Road. For a passenger car, the Time Gap is 7.5 seconds. For a single unit truck, 9.5 seconds and for a combination truck 11.5 seconds. We measured the sight distance in the field and the results are as follows:

For the existing driveway on McNamara Road, if approaching from the east to make a right-turn into the driveway, the sight distance is 313 feet. Looking to the right making a left-turn out of the driveway, the sight distance is 222 feet to the stop bar on McNamara Road at its intersection with Union Road. For 30 mph, the required sight distance is 335 feet. The stopping sight distance is 200 feet. We are short by 22 feet for the intersection sight distance but do meet the stopping sight distance. Since we meet the stopping sight distance, the location of the driveway is acceptable.

TABLE 3
CAPACITY ANALYSIS SUMMARY
2025 NO-BUILD CONDITIONS WEEKDAY
UNSIGNALIZED INTERSECTIONS

	7:00-8:00 V/C			4:00-5:00 V/C		
	LOS	Ratio	Delay	LOS	Ratio	Delay
Union Road/McNamara Road						
Union Road						
Northbound Lt + Th	A	0.09	9.3	A	0.08	9.1
McNamara Road						
Eastbound Lt + Rt	D	0.60	33.4	D	0.50	25.9
McNamara Road/Wickes Driveway						
McNamara Road						
Westbound Lt + th	A	0.00	7.6	A	0.00	0.0
Wickes Driveway						
Northbound Lt + Rt	B	0.01	10.7	A	0.01	10.0

TABLE 4
CAPACITY ANALYSIS SUMMARY
2025 BUILD CONDITIONS WEEKDAY
UNSIGNALIZED INTERSECTIONS

	7:00-8:00 V/C			4:00-5:00 V/C		
	LOS	Ratio	Delay	LOS	Ratio	Delay
Union Road/McNamara Road						
Union Road						
Northbound Lt + Th	A	0.10	9.4	A	0.08	9.1
McNamara Road						
Eastbound Lt + Rt	D	0.61	34.1	D	0.52	26.7
McNamara Road/Wickes Driveway						
McNamara Road						
Westbound Lt + th	A	0.00	7.6	A	0.00	0.0
Wickes Driveway						
Northbound Lt + Rt	B	0.01	10.7	A	0.02	9.9

CONCLUSIONS

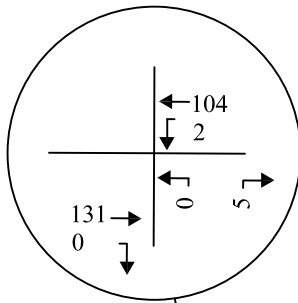
1. The existing Wickes Arborist business plans to add six new employees over the next several years.
2. The LOS for the existing driveway is “A” or “B” and the McNamara Road eastbound approach is projected to operate at LOS “D” when these employees are added.

APPENDIX A
TRAFFIC VOLUME FIGURES



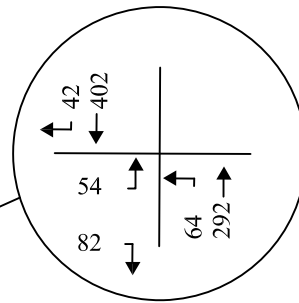
OFFICE DWY

UNION ROAD



MCNAMARA ROAD

WICKES DWY

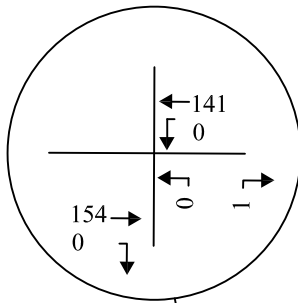


2023 EXISTING AM PEAK HOUR TRAFFIC
7:00 AM - 8:00 AM
FIGURE 2



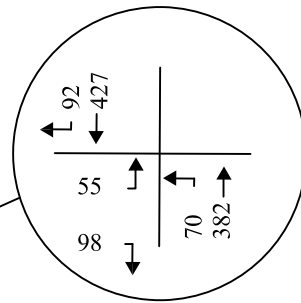
OFFICE DWY

UNION ROAD



MCNAMARA ROAD

WICKES DWY



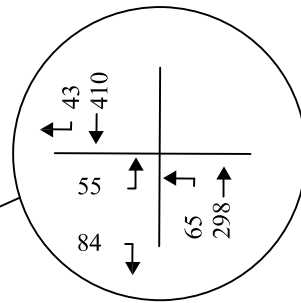
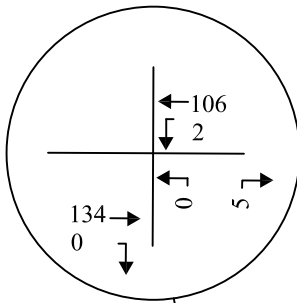
2023 EXISTING PM PEAK HOUR TRAFFIC
4:00 PM - 5:00 PM
FIGURE 3



UNION ROAD

MCNAMARA ROAD

WICKES DWY

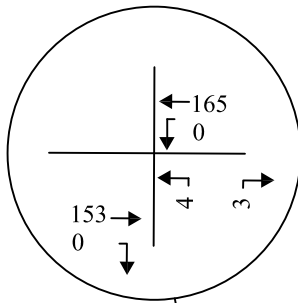


2025 NO-BUILD AM PEAK HOUR TRAFFIC
7:00 AM - 8:00 AM
FIGURE 4



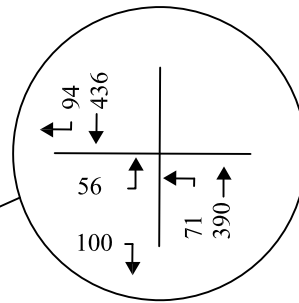
OFFICE DWY

UNION ROAD



MCNAMARA ROAD

WICKES DWY



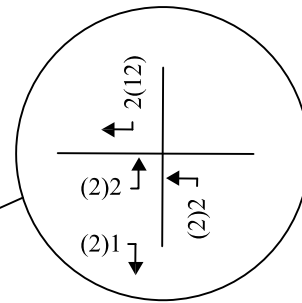
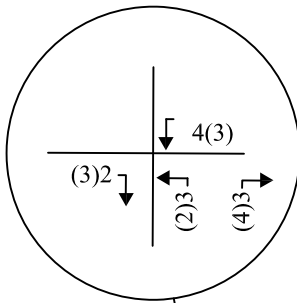
2025 NO-BUILD PM PEAK HOUR TRAFFIC
4:00 PM - 5:00 PM
FIGURE 5



UNION ROAD

MCNAMARA ROAD

WICKES DWY



LEGEND
AM PEAK HR - 00
PM PEAK HR - (00)

TRIP DISTRIBUTION

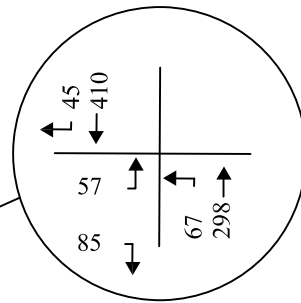
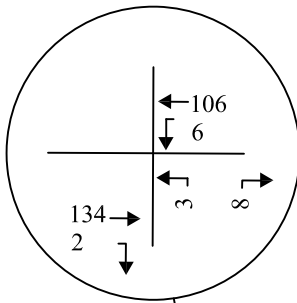
FIGURE 6



UNION ROAD

MCNAMARA ROAD

WICKES DWY

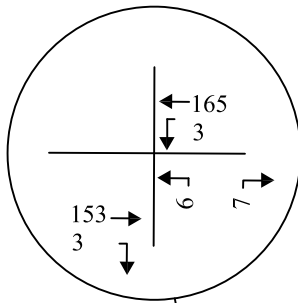


2025 NO-BUILD AM PEAK HOUR TRAFFIC
7:00 AM - 8:00 AM
FIGURE 4



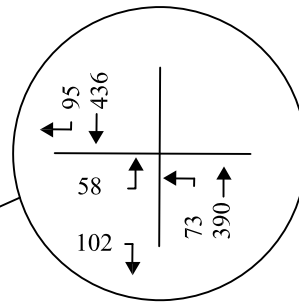
OFFICE DWY

UNION ROAD



MCNAMARA ROAD

WICKES DWY



2025 BUILD PM PEAK HOUR TRAFFIC
4:00 PM - 5:00 PM
FIGURE 8

APPENDIX B
CAPACITY ANALYSIS SUMMARIES

CAPACITY ANALYSIS SUMMARY
EXISTING CONDITIONS

Intersection

Int Delay, s/veh 5.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
----------	-----	-----	-----	-----	-----	-----

Lane Configurations						
---------------------	---	--	--	---	---	--

Traffic Vol, veh/h	54	83	64	292	402	42
--------------------	----	----	----	-----	-----	----

Future Vol, veh/h	54	83	64	292	402	42
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Conflicting Peds, #/hr	0	0	0	0	0	0
------------------------	---	---	---	---	---	---

Sign Control	Stop	Stop	Free	Free	Free	Free
--------------	------	------	------	------	------	------

RT Channelized	-	None	-	None	-	None
----------------	---	------	---	------	---	------

Storage Length	0	-	-	-	-	-
----------------	---	---	---	---	---	---

Veh in Median Storage, #	0	-	-	0	0	-
--------------------------	---	---	---	---	---	---

Grade, %	0	-	-	0	0	-
----------	---	---	---	---	---	---

Peak Hour Factor	76	76	76	76	76	76
------------------	----	----	----	----	----	----

Heavy Vehicles, %	11	16	17	14	12	17
-------------------	----	----	----	----	----	----

Mvmt Flow	71	109	84	384	529	55
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Major/Minor	Minor2	Major1	Major2
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Conflicting Flow All	1109	557	584
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Stage 1	557	-	-
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Stage 2	552	-	-
---------	-----	---	---

Critical Hdwy	6.51	6.36	4.27
---------------	------	------	------

Critical Hdwy Stg 1	5.51	-	-
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Critical Hdwy Stg 2	5.51	-	-
---------------------	------	---	---

Follow-up Hdwy	3.599	3.444	2.353
----------------	-------	-------	-------

Pot Cap-1 Maneuver	223	504	921
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Stage 1	556	-	-
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Stage 2	559	-	-
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Platoon blocked, %			
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Mov Cap-1 Maneuver	197	504	921
--------------------	-----	-----	-----

Mov Cap-2 Maneuver	197	-	-
--------------------	-----	---	---

Stage 1	492	-	-
---------	-----	---	---

Stage 2	559	-	-
---------	-----	---	---

Approach	EB	NB	SB
----------	----	----	----

HCM Control Delay, s	31.2	1.7	0
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HCM LOS	D		
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Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
-----------------------	-----	-----	-------	-----	-----

Capacity (veh/h)	921	-	312	-	-
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HCM Lane V/C Ratio	0.091	-	0.578	-	-
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HCM Control Delay (s)	9.3	0	31.2	-	-
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HCM Lane LOS	A	A	D	-	-
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HCM 95th %tile Q(veh)	0.3	-	3.4	-	-
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Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	131	0	2	104	0	5
Future Vol, veh/h	131	0	2	104	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	66	66	66	66	66	66
Heavy Vehicles, %	11	0	0	17	0	100
Mvmt Flow	198	0	3	158	0	8
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	198	0	362	198
Stage 1	-	-	-	-	198	-
Stage 2	-	-	-	-	164	-
Critical Hdwy	-	-	4.1	-	6.4	7.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	4.2
Pot Cap-1 Maneuver	-	-	1387	-	641	646
Stage 1	-	-	-	-	840	-
Stage 2	-	-	-	-	870	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1387	-	640	646
Mov Cap-2 Maneuver	-	-	-	-	640	-
Stage 1	-	-	-	-	840	-
Stage 2	-	-	-	-	868	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	0.1		10.6		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	646	-	-	1387	-	
HCM Lane V/C Ratio	0.012	-	-	0.002	-	
HCM Control Delay (s)	10.6	-	-	7.6	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Intersection						
Int Delay, s/veh	3.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	55	98	70	382	427	92
Future Vol, veh/h	55	98	70	382	427	92
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	13	14	13	14	9	9
Mvmt Flow	59	105	75	411	459	99

Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1070	509	558	0	-	0
Stage 1	509	-	-	-	-	-
Stage 2	561	-	-	-	-	-
Critical Hdwy	6.53	6.34	4.23	-	-	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.426	2.317	-	-	-
Pot Cap-1 Maneuver	233	541	960	-	-	-
Stage 1	582	-	-	-	-	-
Stage 2	550	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	209	541	960	-	-	-
Mov Cap-2 Maneuver	209	-	-	-	-	-
Stage 1	523	-	-	-	-	-
Stage 2	550	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	24.7	1.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	960	-	344	-	-
HCM Lane V/C Ratio	0.078	-	0.478	-	-
HCM Control Delay (s)	9.1	0	24.7	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.3	-	2.5	-	-

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	150	0	0	162	4	3
Future Vol, veh/h	150	0	0	162	4	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	13	0	0	10	0	0
Mvmt Flow	167	0	0	180	4	3
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	167	0	347	167
Stage 1	-	-	-	-	167	-
Stage 2	-	-	-	-	180	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1423	-	654	882
Stage 1	-	-	-	-	867	-
Stage 2	-	-	-	-	856	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1423	-	654	882
Mov Cap-2 Maneuver	-	-	-	-	654	-
Stage 1	-	-	-	-	867	-
Stage 2	-	-	-	-	856	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	0		10		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	735	-	-	1423	-	
HCM Lane V/C Ratio	0.011	-	-	-	-	
HCM Control Delay (s)	10	-	-	0	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	0	-	

**CAPACITY ANALYSIS SUMMARY
2025 NO-BUILD CONDITIONS**

Intersection						
Int Delay, s/veh	5.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	55	84	65	298	410	43
Future Vol, veh/h	55	84	65	298	410	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	11	16	17	14	12	17
Mvmt Flow	72	111	86	392	539	57
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1132	568	596	0	-	0
Stage 1	568	-	-	-	-	-
Stage 2	564	-	-	-	-	-
Critical Hdwy	6.51	6.36	4.27	-	-	-
Critical Hdwy Stg 1	5.51	-	-	-	-	-
Critical Hdwy Stg 2	5.51	-	-	-	-	-
Follow-up Hdwy	3.599	3.444	2.353	-	-	-
Pot Cap-1 Maneuver	216	497	911	-	-	-
Stage 1	550	-	-	-	-	-
Stage 2	552	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	190	497	911	-	-	-
Mov Cap-2 Maneuver	190	-	-	-	-	-
Stage 1	483	-	-	-	-	-
Stage 2	552	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	33.4	1.7		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	911	-	303	-	-	
HCM Lane V/C Ratio	0.094	-	0.604	-	-	
HCM Control Delay (s)	9.4	0	33.4	-	-	
HCM Lane LOS	A	A	D	-	-	
HCM 95th %tile Q(veh)	0.3	-	3.7	-	-	

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	134	0	2	106	0	5
Future Vol, veh/h	134	0	2	106	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	66	66	66	66	66	66
Heavy Vehicles, %	11	0	0	17	0	100
Mvmt Flow	203	0	3	161	0	8

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	203	0	370	203
Stage 1	-	-	-	-	203	-
Stage 2	-	-	-	-	167	-
Critical Hdwy	-	-	4.1	-	6.4	7.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	4.2
Pot Cap-1 Maneuver	-	-	1381	-	634	641
Stage 1	-	-	-	-	836	-
Stage 2	-	-	-	-	867	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1381	-	633	641
Mov Cap-2 Maneuver	-	-	-	-	633	-
Stage 1	-	-	-	-	836	-
Stage 2	-	-	-	-	865	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	10.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	641	-	-	1381	-
HCM Lane V/C Ratio	0.012	-	-	0.002	-
HCM Control Delay (s)	10.7	-	-	7.6	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection						
Int Delay, s/veh	4.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	56	100	71	390	436	94
Future Vol, veh/h	56	100	71	390	436	94
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	13	14	13	14	9	9
Mvmt Flow	60	108	76	419	469	101
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1091	520	570	0	-	0
Stage 1	520	-	-	-	-	-
Stage 2	571	-	-	-	-	-
Critical Hdwy	6.53	6.34	4.23	-	-	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.426	2.317	-	-	-
Pot Cap-1 Maneuver	226	533	950	-	-	-
Stage 1	575	-	-	-	-	-
Stage 2	544	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	202	533	950	-	-	-
Mov Cap-2 Maneuver	202	-	-	-	-	-
Stage 1	515	-	-	-	-	-
Stage 2	544	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	25.9	1.4		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	950	-	336	-	-	
HCM Lane V/C Ratio	0.08	-	0.499	-	-	
HCM Control Delay (s)	9.1	0	25.9	-	-	
HCM Lane LOS	A	A	D	-	-	
HCM 95th %tile Q(veh)	0.3	-	2.7	-	-	

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	153	0	0	165	4	3
Future Vol, veh/h	153	0	0	165	4	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	13	0	0	10	0	0
Mvmt Flow	170	0	0	183	4	3

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	170
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	4.1	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	2.2	-
Pot Cap-1 Maneuver	-	1420	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1420	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	731	-	-	1420	-
HCM Lane V/C Ratio	0.011	-	-	-	-
HCM Control Delay (s)	10	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

**CAPACITY ANALYSIS SUMMARY
2025 BUILD CONDITIONS**

Intersection						
Int Delay, s/veh	5.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	55	84	67	298	410	45
Future Vol, veh/h	55	84	67	298	410	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	11	16	17	14	12	17
Mvmt Flow	72	111	88	392	539	59
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1137	569	598	0	-	0
Stage 1	569	-	-	-	-	-
Stage 2	568	-	-	-	-	-
Critical Hdwy	6.51	6.36	4.27	-	-	-
Critical Hdwy Stg 1	5.51	-	-	-	-	-
Critical Hdwy Stg 2	5.51	-	-	-	-	-
Follow-up Hdwy	3.599	3.444	2.353	-	-	-
Pot Cap-1 Maneuver	214	496	909	-	-	-
Stage 1	549	-	-	-	-	-
Stage 2	550	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	187	496	909	-	-	-
Mov Cap-2 Maneuver	187	-	-	-	-	-
Stage 1	481	-	-	-	-	-
Stage 2	550	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	34.1	1.7		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	909	-	300	-	-	
HCM Lane V/C Ratio	0.097	-	0.61	-	-	
HCM Control Delay (s)	9.4	0	34.1	-	-	
HCM Lane LOS	A	A	D	-	-	
HCM 95th %tile Q(veh)	0.3	-	3.7	-	-	

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	134	2	4	106	0	5
Future Vol, veh/h	134	2	4	106	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	66	66	66	66	66	66
Heavy Vehicles, %	11	0	0	17	0	100
Mvmt Flow	203	3	6	161	0	8

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	206	0	378
Stage 1	-	-	-	-	205
Stage 2	-	-	-	-	173
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	1377	-	628
Stage 1	-	-	-	-	834
Stage 2	-	-	-	-	862
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1377	-	625
Mov Cap-2 Maneuver	-	-	-	-	625
Stage 1	-	-	-	-	834
Stage 2	-	-	-	-	858

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	10.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	640	-	-	1377	-
HCM Lane V/C Ratio	0.012	-	-	0.004	-
HCM Control Delay (s)	10.7	-	-	7.6	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection						
Int Delay, s/veh	4.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	58	102	71	390	436	94
Future Vol, veh/h	58	102	71	390	436	94
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	13	14	13	14	9	9
Mvmt Flow	62	110	76	419	469	101
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1091	520	570	0	-	0
Stage 1	520	-	-	-	-	-
Stage 2	571	-	-	-	-	-
Critical Hdwy	6.53	6.34	4.23	-	-	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.426	2.317	-	-	-
Pot Cap-1 Maneuver	226	533	950	-	-	-
Stage 1	575	-	-	-	-	-
Stage 2	544	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	202	533	950	-	-	-
Mov Cap-2 Maneuver	202	-	-	-	-	-
Stage 1	515	-	-	-	-	-
Stage 2	544	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	26.7	1.4		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	950	-	334	-	-	
HCM Lane V/C Ratio	0.08	-	0.515	-	-	
HCM Control Delay (s)	9.1	0	26.7	-	-	
HCM Lane LOS	A	A	D	-	-	
HCM 95th %tile Q(veh)	0.3	-	2.8	-	-	

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	153	0	0	165	6	7
Future Vol, veh/h	153	0	0	165	6	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	13	0	0	10	0	0
Mvmt Flow	170	0	0	183	7	8
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	170	0	353	170
Stage 1	-	-	-	-	170	-
Stage 2	-	-	-	-	183	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1420	-	649	879
Stage 1	-	-	-	-	865	-
Stage 2	-	-	-	-	853	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1420	-	649	879
Mov Cap-2 Maneuver	-	-	-	-	649	-
Stage 1	-	-	-	-	865	-
Stage 2	-	-	-	-	853	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	0		9.9		
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	755	-	-	1420	-	
HCM Lane V/C Ratio	0.019	-	-	-	-	
HCM Control Delay (s)	9.9	-	-	0	-	
HCM Lane LOS	A	-	-	A	-	
HCM 95th %tile Q(veh)	0.1	-	-	0	-	

APPENDIX C

TRAFFIC COUNTS

COUNT TYPE: Turning Movement
NODE ID:
LOCATION 1: Wickes Driveway
LOCATION 2: McNamara Rd
BOROUGH CODE:
COLLECT DATE:
START DATE: 12/05/2023
START TIME: 07:00:00
END DATE: 12/05/2023
END TIME: 19:00:00
PERIOD: 2
INTERVAL (Min): 15
COMMENT:

From	To	DIR Vehicle Class	WB L	WB T	WB U	NB L	NB R	NB U	EB T	EB R	EB U			
07:00:00	07:15:00	Auto	0	12	0	0	0	0	21	0	0	33		
		Trucks	0	0	0	0	0	0	0	0	0	0		
		Bus	0	5	0	0	0	0	1	0	0	6	39	
07:15:00	07:30:00	Auto	1	11	0	0	0	0	26	0	0	38		
		Trucks	0	0	0	0	5	0	0	0	0	5		
		Bus	0	2	0	0	0	0	2	0	0	4	47	
07:30:00	07:45:00	Auto	0	21	0	0	0	0	33	0	0	54		
		Trucks	0	0	0	0	0	0	1	0	0	1		
		Bus	0	5	0	0	0	0	4	0	0	9	64	
07:45:00	08:00:00	Auto	1	42	0	0	0	0	37	0	0	80		
		Trucks	0	1	0	0	0	0	1	0	0	2		
		Bus	0	5	0	0	0	0	5	0	0	10	92	242
08:00:00	08:15:00	Auto	0	50	0	0	0	0	27	0	0	77		0.66
		Trucks	0	0	0	0	1	0	1	0	0	2		
		Bus	0	5	0	0	0	0	4	0	0	9	88	291
08:15:00	08:30:00	Auto	0	39	0	1	0	0	34	0	0	74		
		Trucks	0	0	0	0	0	0	0	0	0	0		
		Bus	0	6	0	0	0	0	8	0	0	14	88	332
08:30:00	08:45:00	Auto	0	44	0	0	0	0	34	0	0	78		
		Trucks	0	2	0	0	0	0	1	0	0	3		
		Bus	0	3	0	0	0	0	2	0	0	5	86	354
08:45:00	09:00:00	Auto	0	42	0	0	1	0	57	0	0	100		
		Trucks	0	0	0	0	0	0	0	0	0	0		
		Bus	0	2	0	0	0	0	3	0	0	5	105	367
16:00:00	16:15:00	Auto	0	35	0	4	2	0	41	0	0	82		0.87
		Trucks	0	0	0	0	0	0	1	0	0	1		
		Bus	0	4	0	0	0	0	2	0	0	6	89	
16:15:00	16:30:00	Auto	0	45	0	0	0	0	24	0	0	69		
		Trucks	0	2	0	0	0	0	0	0	0	2		
		Bus	0	5	0	0	0	0	4	0	0	9	80	
16:30:00	16:45:00	Auto	0	29	0	0	1	0	32	0	0	62		
		Trucks	0	1	0	0	0	0	3	0	0	4		
		Bus	0	1	0	0	0	0	5	0	0	6	72	
16:45:00	17:00:00	Auto	0	36	0	0	0	0	33	0	0	69		
		Trucks	0	1	0	0	0	0	3	0	0	4		
		Bus	0	3	0	0	0	0	2	0	0	5	78	319
17:00:00	17:15:00	Auto	0	48	0	0	0	0	52	0	0	100		0.90
		Trucks	0	0	0	0	0	0	1	0	0	1		
		Bus	0	1	0	0	0	0	6	0	0	7	108	338
17:15:00	17:30:00	Auto	0	41	0	0	0	0	24	0	0	65		0.78
		Trucks	0	0	0	0	0	0	0	0	0	0		
		Bus	0	1	0	0	0	0	4	0	0	5	70	328
17:30:00	17:45:00	Auto	0	39	0	0	0	0	36	0	0	75		
		Trucks	0	0	0	0	0	0	0	0	0	0		
		Bus	0	3	0	0	0	0	2	0	0	5	80	336
17:45:00	18:00:00	Auto	0	34	0	0	0	0	34	0	0	68		
		Trucks	0	0	0	0	0	0	1	0	0	1		
		Bus	0	2	0	0	0	0	3	0	0	5	74	332
8:00-9:00		Auto	WB LT	WB TH		NB LT	NB RT		EB ST	EB RT		Totals		
		Trucks	0	175		1	1		152	0		329		
		Bus	0	2		0	1		2	0		5		
		Totals	0	16		0	0		17	0		33		
		% HV	0	193		1	2		171	0		367		
		PHF	#####	9%		0%	50%		11%	#####		10%		
		PHF	0.87	0.87		0.87	0.87		0.87	0.87		0.87		
4:15-5:15		Auto	WB LT	WB TH		NB LT	NB RT		EB ST	EB RT		Totals		
		Trucks	0	158		0	1		141	0		300		
		Bus	0	4		0	0		7	0		11		
		Totals	0	10		0	0		17	0		27		
		% HV	0	154		0	1		141	0		296		
		PHF	#####	9%		#####	0%		17%	#####		13%		
		PHF	0.78	0.78		0.78	0.78		0.78	0.78		0.78		
7:00-8:00		Auto	WB LT	WB TH		NB LT	NB RT		EB ST	EB RT		Totals		
		Trucks	2	86		0	0		117	0		205		
		Bus	0	1		0	5		2	0		8		
		Totals	0	17		0	0		12	0		29		
		% HV	2	104		0	5		131	0		242		
		PHF	0%	17%		#####	100%		11%	#####		15%		
		PHF	0.66	0.66		0.66	0.66		0.66	0.66		0.66		
4:00-5:00		Auto	WB LT	WB TH		NB LT	NB RT		EB ST	EB RT		Totals		
		Trucks	0	145		4	3		130	0		282		
		Bus	0	4		0	0		7	0		11		
		Totals	0	13		0	0		13	0		26		
		% HV	0	162		4	3		150	0		319		
		PHF	#####	10%		0%	0%		13%	#####		12%		
		PHF	0.90	0.90		0.90	0.90		0.90	0.90		0.90		

COUNT TYPE: Turning Movement
NODE ID:
LOCATION 1: Union Rd
LOCATION 2: McNamara Rd
BOROUGH CODE:
COLLECT DATE:
START DATE: 12/05/2023
START TIME: 07:00:00
END DATE: 12/05/2023
END TIME: 19:00:00
PERIOD: 2
INTERVAL (Min): 15
COMMENT:

		DIR	SB T	SB R	SB U	NB L	NB T	NB U	EB L	EB R	EB U				
From	To	Vehicle Class													
07:00:00	07:15:00	Auto	55	4	0	8	43	0	12	10	0	132			
		Trucks	2	0	0	0	2	0	0	0	0	4			
		Bus	8	1	0	4	9	0	0	1	0	23	159		
07:15:00	07:30:00	Auto	77	7	0	5	54	0	16	9	0	168			
		Trucks	6	0	0	0	2	0	4	1	0	13			
		Bus	8	1	0	1	8	0	1	1	0	20	201		
07:30:00	07:45:00	Auto	113	9	0	12	67	0	11	22	0	234			
		Trucks	6	0	0	0	4	0	0	1	0	11			
		Bus	7	1	0	4	6	0	1	3	0	22	267		
07:45:00	08:00:00	Auto	108	15	0	28	88	0	9	28	0	276			
		Trucks	2	1	0	0	4	0	0	1	0	8			
		Bus	10	3	0	2	5	0	0	5	0	25	309	936	0.76
08:00:00	08:15:00	Auto	90	21	0	29	81	0	12	15	0	248			
		Trucks	3	0	0	0	4	0	0	2	0	9			
		Bus	11	1	0	4	3	0	0	4	0	23	280	1057	
08:15:00	08:30:00	Auto	80	16	0	23	75	0	13	21	0	228			
		Trucks	2	0	0	0	2	0	0	0	0	4			
		Bus	8	2	0	4	5	0	2	4	0	25	257	1113	
08:30:00	08:45:00	Auto	93	15	0	29	76	0	17	19	0	249			
		Trucks	4	2	0	0	2	0	1	0	0	9			
		Bus	9	1	0	2	5	0	1	1	0	19	277	1123	
08:45:00	09:00:00	Auto	108	15	0	27	80	0	19	39	0	288			
		Trucks	3	0	0	0	3	0	0	0	0	6			
		Bus	4	0	0	2	13	0	2	1	0	22	316	1130	0.89
16:00:00	16:15:00	Auto	100	23	0	12	97	0	17	26	0	275			
		Trucks	4	0	0	0	4	0	0	1	0	9			
		Bus	10	2	0	2	9	0	0	2	0	25	309		
16:15:00	16:30:00	Auto	97	29	0	16	93	0	9	15	0	259			
		Trucks	1	2	0	0	2	0	0	0	0	5			
		Bus	11	2	0	3	12	0	1	4	0	33	297		
16:30:00	16:45:00	Auto	89	13	0	16	64	0	11	21	0	214			
		Trucks	3	0	0	1	3	0	2	1	0	10			
		Bus	6	0	0	1	6	0	2	3	0	18	242		
16:45:00	17:00:00	Auto	104	19	0	17	76	0	11	22	0	249			
		Trucks	1	0	0	1	5	0	2	1	0	10			
		Bus	1	2	0	1	11	0	0	2	0	17	276	1124	
17:00:00	17:15:00	Auto	91	20	0	28	87	0	11	41	0	278			
		Trucks	1	0	0	0	2	0	0	1	0	4			
		Bus	6	1	0	0	4	0	1	5	0	17	299	1114	0.93
17:15:00	17:30:00	Auto	99	20	0	21	80	0	6	18	0	244			
		Trucks	2	0	0	0	1	0	0	0	0	3			
		Bus	3	0	0	1	8	0	1	3	0	16	263	1080	
17:30:00	17:45:00	Auto	73	21	0	18	57	0	12	24	0	205			
		Trucks	0	0	0	0	0	0	0	0	0	0			
		Bus	5	0	0	3	4	0	2	0	0	14	219	1057	
17:45:00	18:00:00	Auto	97	13	0	21	79	0	12	22	0	244			
		Trucks	1	0	0	0	1	0	0	1	0	3			
		Bus	3	0	0	2	3	0	2	1	0	11	258	1039	0.87
8:00-9:00		SBST	SBRT	NBLT		NBST	EBLT		EBRT	Totals					
		Auto	371	67	108		312		61	94					
		Trucks	12	2	0		11		1	2					
		Bus	32	4	12		26		5	10					
		Totals	415	73	120		349		67	106					
		% HV	11%	8%	10%		11%		9%	11%					
		PHF	0.89	0.89	0.89		0.89		0.89	0.89					
4:15-5:15		SBST	SBRT	NBLT		NBST	EBLT		EBRT	Totals					
		Auto	381	81	77		320		42	99					
		Trucks	6	2	2		12		4	3					
		Bus	24	5	5		33		4	14					
		Totals	411	88	84		365		50	116					
		% HV	7%	8%	8%		12%		16%	15%					
		PHF	0.93	0.93	0.93		0.93		0.93	0.93					
7:00-8:00		SBST	SBRT	NBLT		NBST	EBLT		EBRT	Totals					
		Auto	353	35	53		252		48	69					
		Trucks	16	1	0		12		4	3					
		Bus	33	6	11		28		2	10					
		Totals	402	42	64		292		54	82					
		% HV	12%	17%	17%		14%		11%	16%					
		PHF	0.76	0.76	0.76		0.76		0.76	0.76					
4:00-5:00		SBST	SBRT	NBLT		NBST	EBLT		EBRT	Totals					
		Auto	390	84	61		330		48	84					
		Trucks	9	2	2		14		4	3					
		Bus	28	6	7		38		3	11					
		Totals	427	92	70		382		55	98					
		% HV	9%	9%	13%		14%		13%	14%					
		PHF	0.93	0.93	0.93		0.93		0.93	0.93					