

156-160 WAYNE AVENUE
TRAFFIC IMPACT STUDY
SUFFERN, NY

May 29, 2025
Revised September 12, 2025

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TABLE OF CONTENTS

	Page
INTRODUCTION	1
EXISTING ROADWAY NETWORK	1
EXISTING TRAFFIC CONDITIONS	2
Manual Traffic Counts	2
Capacity Analysis – Existing Conditions	2
2028 NO-BUILD CONDITIONS	6
2028 BUILD CONDITIONS	6
PARKING ANALYSIS	7
VEHICLE QUEUES	7
CRASH ANALYSIS	7
SIGHT DISTANCE	8
CONCLUSIONS	8
APPENDICES	
A. TRAFFIC VOLUME FIGURES	
B. CAPACITY ANALYSIS SUMMARIES	
C. TRAFFIC COUNTS	
D. CRASH ANALYSIS	

LIST OF TABLES

1. LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS
2. LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS
3. CAPACITY ANALYSIS SUMMARY – 2025 EXISTING CONDITIONS
4. CAPACITY ANALYSIS SUMMARY - 2028 NO-BUILD CONDITIONS
5. CALCULATION OF PEAK HOUR TRIPS – TOWNHOUSE
6. CAPACITY ANALYSIS SUMMARY – 2028 BUILD CONDITIONS
7. VEHICLE QUEUE ANALYSIS
8. CRASH ANALYSIS 2021
9. CRASH ANALYSIS 2022
10. CRASH ANALYSIS 2023
11. CRASH ANALYSIS 2024

LIST OF FIGURES

1. PROJECT LOCATION
2. 2023 EXISTING 7:00 AM TO 8:00 AM PEAK HOUR TRAFFIC
3. 2023 EXISTING 5:00 PM TO 6:00 PM PEAK HOUR TRAFFIC
4. 2028 NO-BUILD 7:00 AM TO 8:00AM PEAK HOUR TRAFFIC
5. 2028 NO-BUILD 5:00 PM TO 6:00 PM PEAK HOUR TRAFFIC
6. TRIP DISTRIBUTION – TOWNHOUSE
7. 2028 BUILD 7:00 AM TO 8:00 AM PEAK HOUR TRAFFIC
8. 2028 BUILD 5:00 PM TO 6:00 PM PEAK HOUR TRAFFIC

INTRODUCTION

A 23-unit townhouse housing development is proposed to be constructed at 156-160 Wayne Avenue in the Village of Suffern, NY. The project is located in the MR-15 multi-family low rise townhouses. According to the zoning, 46 parking spaces are required. The site plan was prepared by C&J Engineers, D.P.C., dated September 3, 2025. The future build year for this project is 2028. **Figure 1** shows the project location.

The purpose of this study is to determine the potential traffic and parking impacts of the proposed development on the adjacent roadway network and existing parking lots, and where necessary, make recommendations for roadway improvements necessary to serve the existing and future traffic volumes.

EXISTING ROADWAY NETWORK

The access to the proposed building will be via Wayne Avenue. There will be one driveway to access the building. A description of the existing local roadway system is provided below.

- Wayne Avenue (AKA Route 202) is a roadway under the NYSDOT. Near the site, the roadway has a north-south orientation. The roadway originates to the north at Route 45 and continues south to Orange Avenue. The intersections along Wayne Avenue are unsignalized in the section near the proposed project.

In the immediate area of the site, Wayne Avenue consists of one travel lane in each direction. The existing development is a combination of single-family and multi-family apartments.

- Chadick Place is a roadway under the authority of the Village of Suffern Valley. Near the site, the roadway has an east-west orientation. The roadway originates at Wayne Avenue and continues east to Utopian Avenue. The existing development in the vicinity of the project includes single family homes.
- Memorial Drive is a roadway under the authority of the Village of Suffern. Near the site, the roadway has an east-west orientation. The roadway originates to the west at Wayne Avenue and continues east to the intersection of Lake Road and Montebello Road. Memorial Drive has one lane in each direction. The existing development along Memorial Drive includes a park with a swimming pool and ball fields.



PROJECT
LOCATION

Berkeley Square Apartments

PROJECT LOCATION
FIGURE 1

200 ft

- Orchard Street is a roadway under the authority of the Village of Suffern. Near the site, the roadway has an east-west orientation. The roadway originates to the west at Wayne Avenue and continues east to Memorial Drive. Orchard Street has one lane in each direction. The existing development in the vicinity of the project includes single family homes.

EXISTING TRAFFIC CONDITIONS

Manual Traffic Counts

To properly assess the impacts of the proposed project, manual turning movement counts were taken during a typical weekday for the AM and PM peak hours. For the AM peak period, traffic counts were taken between 7:00 AM and 9:00 AM. For the PM peak period, traffic counts were taken between 4:00 PM and 6:00 PM. The manual counts were conducted on Tuesday, May 20, 2025 at the following intersections:

- Wayne Avenue (Rte. 202)/Chadick Place - unsignalized
- Wayne Avenue (Rte. 202)/Orchard Street - unsignalized
- Wayne Avenue (Rte. 202)/Memorial Drive - unsignalized

The traffic counts were conducted in 15-minute intervals. The counts were classified by cars, trucks, and buses.

The weighted peak hour traffic volumes were calculated by adding the rolling hourly counts for each intersection together and determining which hour had the highest traffic volume. The traffic volumes are shown in **Figures 2 and 3** show the AM and PM peak hours, respectively.

Capacity Analysis - Existing Conditions

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.

Signalized 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). This methodology builds on the methodologies presented in the Source: Transportation Research Board *Highway Capacity Manual* 2016 (HCM6) for signalized intersections and evaluates signalized intersections for average control delay per vehicle and Level of Service (LOS).

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 an 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 80 seconds per vehicle represents failure from a delay perspective.)

The control delay criteria for the range of service levels for signalized intersections are shown in **Table 1**.

Control Delay Per Vehicle	Level of Service (LOS)	
	v/c ratio \leq 1.0	v/c ratio \geq 1.0
\leq 10.0 Seconds	A	F
>10.0 and 20.0 seconds	B	F
>20.0 and 35.0 seconds	C	F
>35.0 and 55.0 seconds	D	F
>55.0 and 80.0 seconds	E	F
>80.0 seconds	F	F
Source: Source: Transportation Research Board <i>Highway Capacity Manual</i> 2016 (HCM6)		
Note: (1) for approach- based and intersection wide assessments, LOS is defined solely by control delay.		

Unsignalized Intersections

LOS for a two-way stop-controlled (TWSC) and all-way stop-controlled (AWSC) intersections is determined by the computed or measured control delay. For motor vehicles, LOS is determined for each minor-street movement (or shared movement) as well as major-street left turns at TWSC intersections and for all movements at AWSC intersections. LOS is not defined for the intersection as a whole for TWSC and AWSC intersections.

The LOS criteria for both TWSC and AWSC unsignalized intersections are summarized in **Table 2**.

Control Delay Per Vehicle	Level of Service (LOS)	
	v/c ratio ≤ 1.0	v/c ratio ≥ 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: Source: Transportation Research Board *Highway Capacity Manual* 2016 (HCM6). 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 drive 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 capacity analyses are shown in **Table 3**.

The results of the existing capacity analysis are as follows:

- For the Wayne Avenue/Orchard Street intersection, the Orchard Street westbound approach is operating at LOS “D” in the PM peak hour.
- The remaining approaches are operating at LOS “C” or better.

TABLE 3
 CAPACITY ANALYSIS SUMMARY
 2025 EXISTING CONDITIONS
 160 WAYNE AVENUE

WEEKDAY						
	AM Peak			PM Peak		
	LOS	V/C Ratio	Delay	LOS	V/C Ratio	Delay
Wayne Avenue/Orchard Street						
Wayne Avenue						
Southbound Lt + Th	A	0.01	8.7	A	0.01	9.4
Orchard Street						
Westbound Lt + Th	C	0.28	24.7	D	0.49	34.0
Wayne Avenue/Chadick Place						
Wayne Avenue						
Southbound Lt + Th	A	0.01	8.6	A	0.01	9.1
Chadick Place						
Westbound Lt + Th	C	0.10	16.2	C	0.08	19.9
Wayne Avenue/Memorial Drive						
Wayne Avenue						
Southbound Lt + Th	A	0.00	9.6	A	0.01	9.1
Memorial Drive						
Westbound Lt + Rt	C	0.06	21.6	C	0.03	19.5

2028 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. A background growth rate of 2.0% per year compounded was used to increase the base traffic volumes from 2025 to 2028. We checked with the Suffern Planning Department and there are no other projects in the study area.

Figures 4 and 5 show the 2028 No-Build traffic volumes for the AM and PM peak hours, respectively. The results of the capacity analyses are shown in **Table 4**.

The results of the capacity analysis are as follows:

- For the Wayne Avenue/Orchard Street intersection, the Orchard Street westbound approach is projected to change from LOS “C” to “D” in the AM peak hour and “D” to “E” in the PM peak hour.
- The remaining approaches will remain as in the existing conditions.

2028 BUILD CONDITIONS

To determine the number of vehicular trips generated by this proposed development, the Institute of Transportation Engineers “Trip Generation Manual” 11th Edition, Land Use Code 220 (Low-Rise Townhouse Building Not Close to Train Station) was used for this development. **Table 5** shows the calculations of the peak hour trips for the townhouse development.

TABLE 5- Calculation of Weekday Peak Hour Trips	
Townhouse – 23 units	
Morning Peak Hour	Afternoon Peak Hour
Total Trips = 1.30 x 23 units = 30 trips	Total Trips = 1.35 x 23 units = 31 trips
Trips Entering = 0.24 x 30 trips = 7 trips	Trips Entering = 0.63 x 31 trips = 20 trips
Trips Exiting = 0.76 x 30 trips = 23 trips	Trips Exiting = 0.37 x 31 trips = 11 trips

Figure 6 shows the trip distribution for the proposed townhouse development. **Figures 7 and 8** show the 2028 Build traffic volumes. The results of the capacity analysis as shown in **Table 6** are as follows:

- There will be no changes to the LOS.
- The project driveway is projected to operate at LOS “C” in both peak hours.
- The remaining approaches will remain as in the existing conditions.

TABLE 4
 CAPACITY ANALYSIS SUMMARY
 2028 NO-BUILD CONDITIONS
 160 WAYNE AVENUE

WEEKDAY						
	AM Peak			PM Peak		
	LOS	V/C Ratio	Delay	LOS	V/C Ratio	Delay
Wayne Avenue/Orchard Street						
Wayne Avenue						
Southbound Lt + Th	A	0.01	8.8	A	0.01	9.6
Orchard Street						
Westbound Lt + Th	D	0.33	27.7	E	0.56	41.6
Wayne Avenue/Chadick Place						
Wayne Avenue						
Southbound Lt + Th	A	0.01	8.7	A	0.01	9.3
Chadick Place						
Westbound Lt + Th	C	0.12	17.3	C	0.1	21.7
Wayne Avenue/Memorial Drive						
Wayne Avenue						
Southbound Lt + Th	A	0.00	9.7	A	0.01	9.2
Memorial Drive						
Westbound Lt + Rt	C	0.07	23.6	C	0.04	21.0

Change in LOS

TABLE 6A1:G30
 CAPACITY ANALYSIS SUMMARY
 2028 BUILD CONDITIONS
 160 WAYNE AVENUE

WEEKDAY						
	AM Peak			PM Peak		
	LOS	V/C Ratio	Delay	LOS	V/C Ratio	Delay
Wayne Avenue/Orchard Street						
Wayne Avenue						
Southbound Lt + Th	A	0.01	8.9	A	0.01	9.6
Orchard Street						
Westbound Lt + Th	D	0.33	28.4	E	0.58	43.4
Wayne Avenue/Chadick Place						
Wayne Avenue						
Southbound Lt + Th	A	0.01	8.8	A	0.01	9.3
Chadick Place						
Westbound Lt + Th	C	0.12	17.6	C	0.10	22.0
Wayne Avenue/Memorial Drive						
Wayne Avenue						
Southbound Lt + Th	A	0.00	9.8	A	0.01	9.2
Memorial Drive						
Westbound Lt + Rt	C	0.08	24.1	C	0.04	21.4
Wayne Avneue/Proj Dwy						
Wayne Avenue						
Northbound Lt + Th	A	0.00	8.5	A	0.01	8.7
Proj Dwy						
Eastbund Lt + Rt	C	0.08	18.3	C	0.05	20.9

Change in LOS

PARKING ANALYSIS

The proposed project will provide 46 parking spaces or 2.0 parking spaces per unit. The project requires 46 parking spaces. To ensure that there is sufficient parking for the project, one parking space will be assigned to each apartment. With 23 townhouses proposed, this leaves 23 parking spaces for guest parking unless the owner decides to assign more than one parking space to a particular unit. By assigning parking spaces to each apartment, the owner can control the parking use and demand.

We also checked the ITE Parking Generation Manual, 6th Edition. For Land Use 221, the formula to calculate the number of parking spaces is $1.23 \times \#$ of dwelling units. We did not use the formula because the formula is based on an average of 231 units per development. We have only 23. Based on 23 apartments, 24 parking spaces would be required. The project provides 46 parking spaces and 46 are required. The ITE formula is based on a national average.

VEHICLE QUEUE ANALYSIS

Table 7 summarizes the 95% vehicle queues for the existing, no-build and build conditions for each intersection. The distances shown are for one block to the next intersection. If the queue is higher than one block dimension, then the next intersection would be blocked. There are no issues with the vehicle queues.

CRASH ANALYSIS

Tables 8 thru 11 summarize the crash data provided by NYSDOT. For 2021, there was a total of 1 crash with no injuries.

- At the intersection of Route 202/Orchard Street, there was an unknown crash and no injuries.

For 2022, there was a total of 4 crashes with 1 injury.

- At the intersection of Route 202/Orchard Street, there was 1 other crash with no injuries.
- At the intersection of Route 202/Chadick Place, there was 1 rear-end crash with 1 injury.
- At the intersection of Route 202/Haverstraw Road, there was 1 other (hit animal) crash with no injuries.
- At the intersection of Wayne Avenue/Chadick Place, there was 1 overtaking crash with no injuries.

TABLE 7
95% Vehicle Queues

Wayne Avenue/Orchard Street	Distance	Existing		2028 No-Build		2028 Build	
		AM	PM	AM	PM	AM	PM
Wayne Avenue							
Southbound Lt + Th	700	0	0	0	0	0	0
Orchard Street							
Westbound Lt + Th	1257	28	60	35	78	35	80
Wayne Avenue/Chadick Place							
Wayne Avenue							
Southbound Lt + Th	725	0	0	0	0	0	0
Chadick Place							
Westbound Lt + Th	551	8	8	10	8	10	8
Wayne Avenue/Memorial Drive							
Wayne Avenue							
Southbound Lt + Th	111	0	0	0	0	0	0
Memorial Drive							
Westbound Lt + Rt	287	5	3	5	3	5	3
Wayne Avneue/Proj Dwy							
Wayne Avenue							
Northbound Lt + Th	110					0	0
Proj Dwy							
Eastbund Lt + Rt	50					5	3

Vehicle queue extends past next street

For 2023, there were a total of 2 crashes with no injuries.

- At the intersection of Wayne Avenue/Haverstraw Road, there were 1 rear-end and 1 other crashes, and no injuries.

For 2024, there were a total of 4 crashes with 2 injuries.

- At the Haverstraw Road/Orchard Street intersection, there were 2 rear-end and 1 right angle crashes with 1 injury.
- At the Wayne Avenue/Memorial Drive intersection, there was 1 rear-end crash with 1 injury.

There were several rear-end crashes that occurred due to driver inattentiveness. This means the driver was distracted by the phone and/or people in the vehicle. There were also crashes with animals as noted.

SIGHT DISTANCE

The posted speed limit on Wayne Avenue is 30 mph. To calculate the sight distance required, we used 35 mph since NYSDOT does not have a count station where the 85th percentile speed would be listed. The following table shows the required sight distances.

	Intersection Sight Distance			Stopping Sight Distance		
	Required	Available Looking North	Available Looking South	Required	North Bound Traffic	South Bound Traffic
	(ft)	(L)	(R)	(ft)	(L)	(R)
Case B1	390	498	423	250	498	423
Case B2	335	498		250	498	
Case F	285	498		250	498	

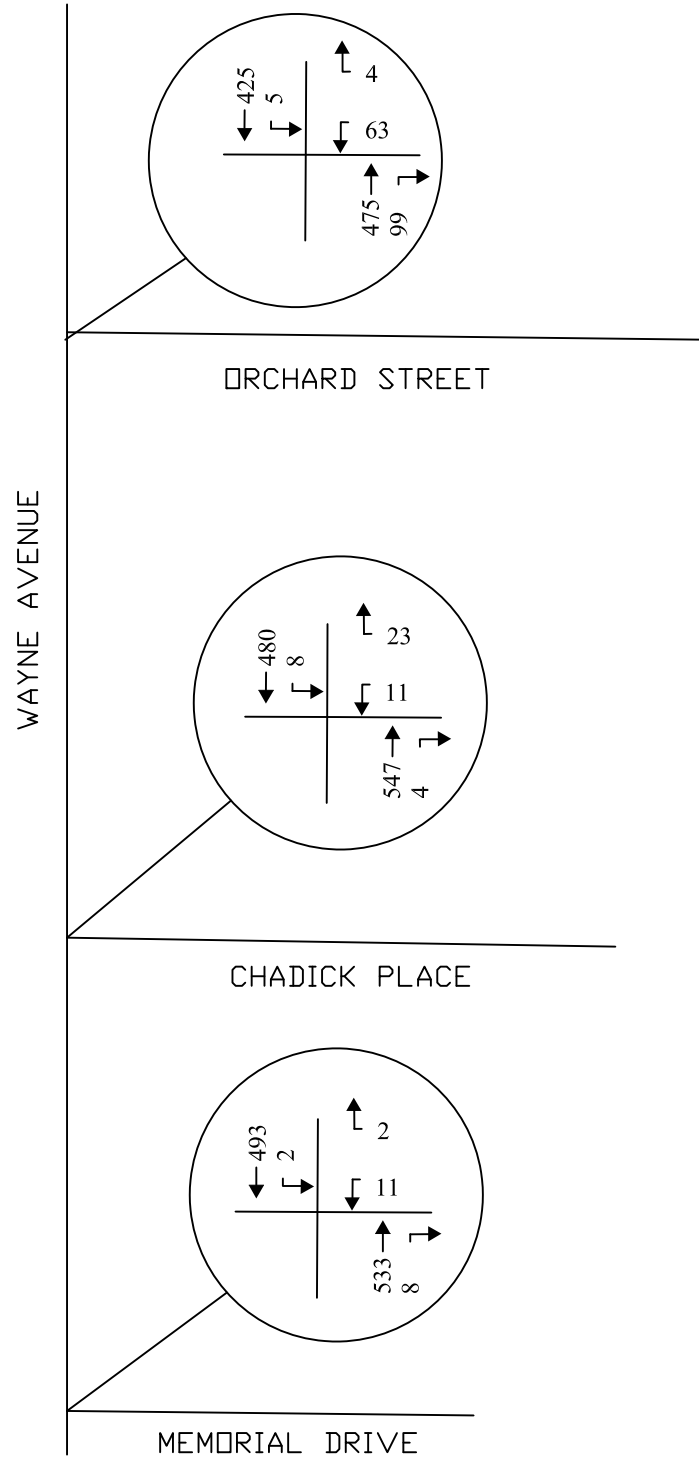
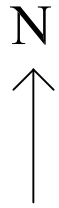
We exceed the sight distances required for both the intersection and stopping sight distances.

CONCLUSIONS

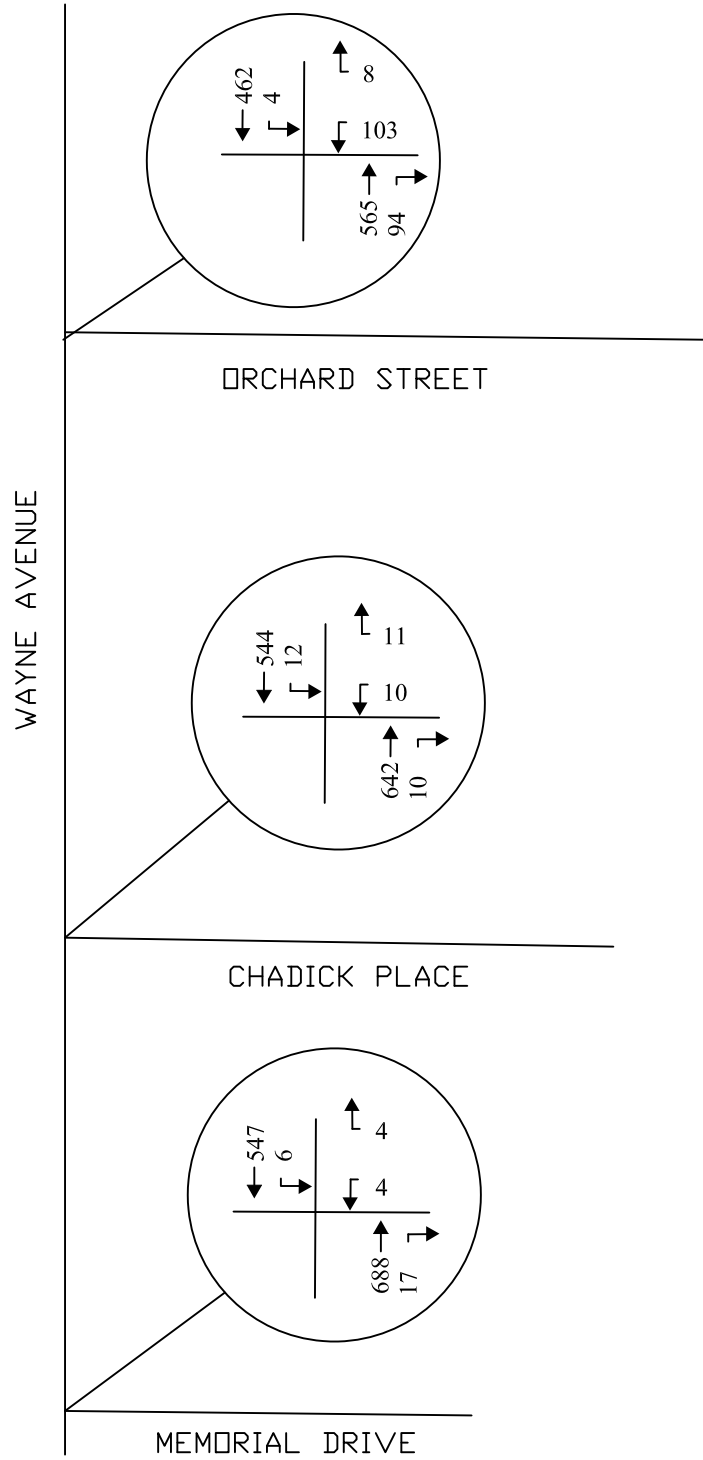
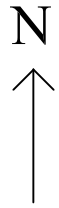
1. The proposed residential development will generate 30 vehicles trips in the AM peak hour with 7 vehicles entering and 23 vehicles exiting. In the PM peak hour, 31 vehicle trips will be generated with 20 vehicles entering and 11 vehicles exiting.

2. The results of the capacity analysis show that the project driveway exit will operate at LOS "C" in both peak hours.
3. There is no mitigation required for the intersection operations.
4. The proposed number of parking spaces is sufficient to meet the needs of this project.

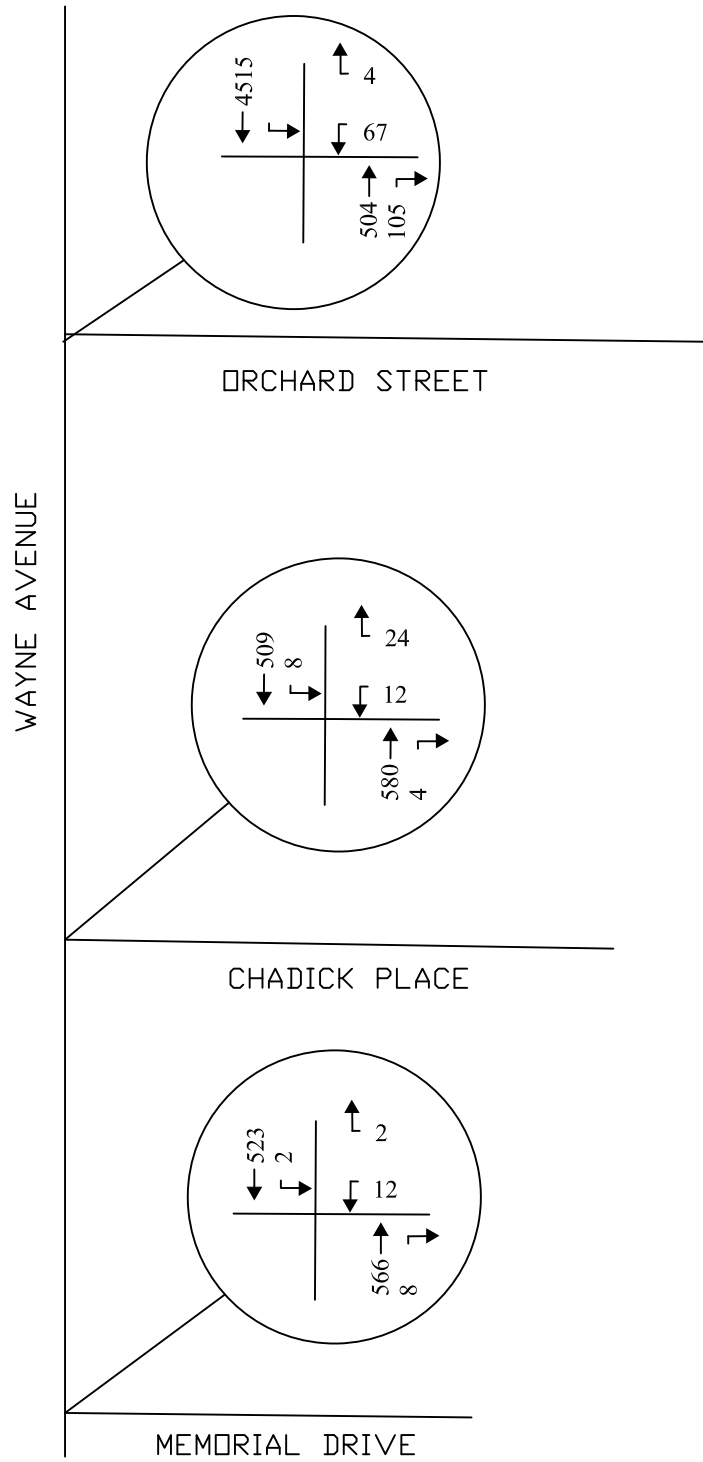
APPENDIX A
TRAFFIC VOLUME FIGURES



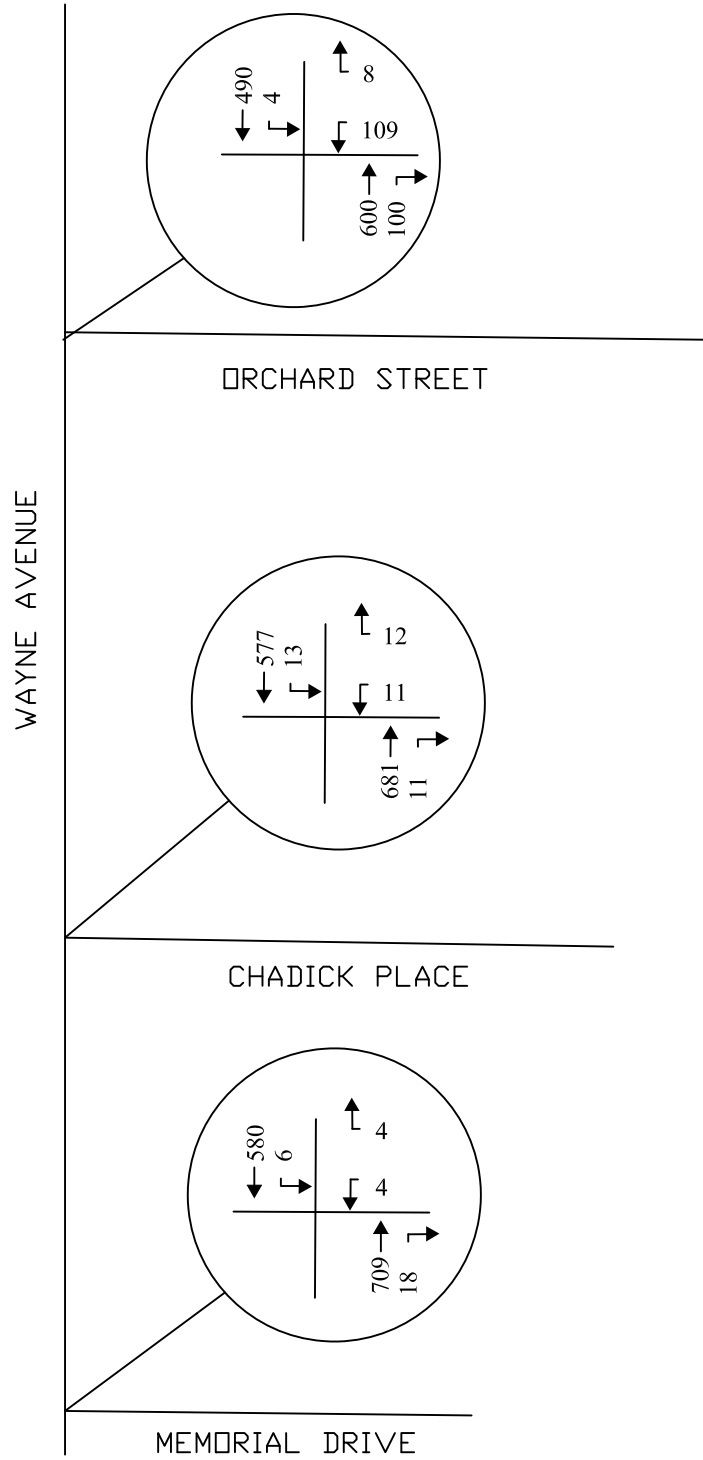
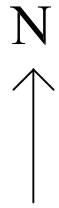
EXISTING AM PEAK HOUR
7:00 AM - 8:00 AM
FIGURE 2



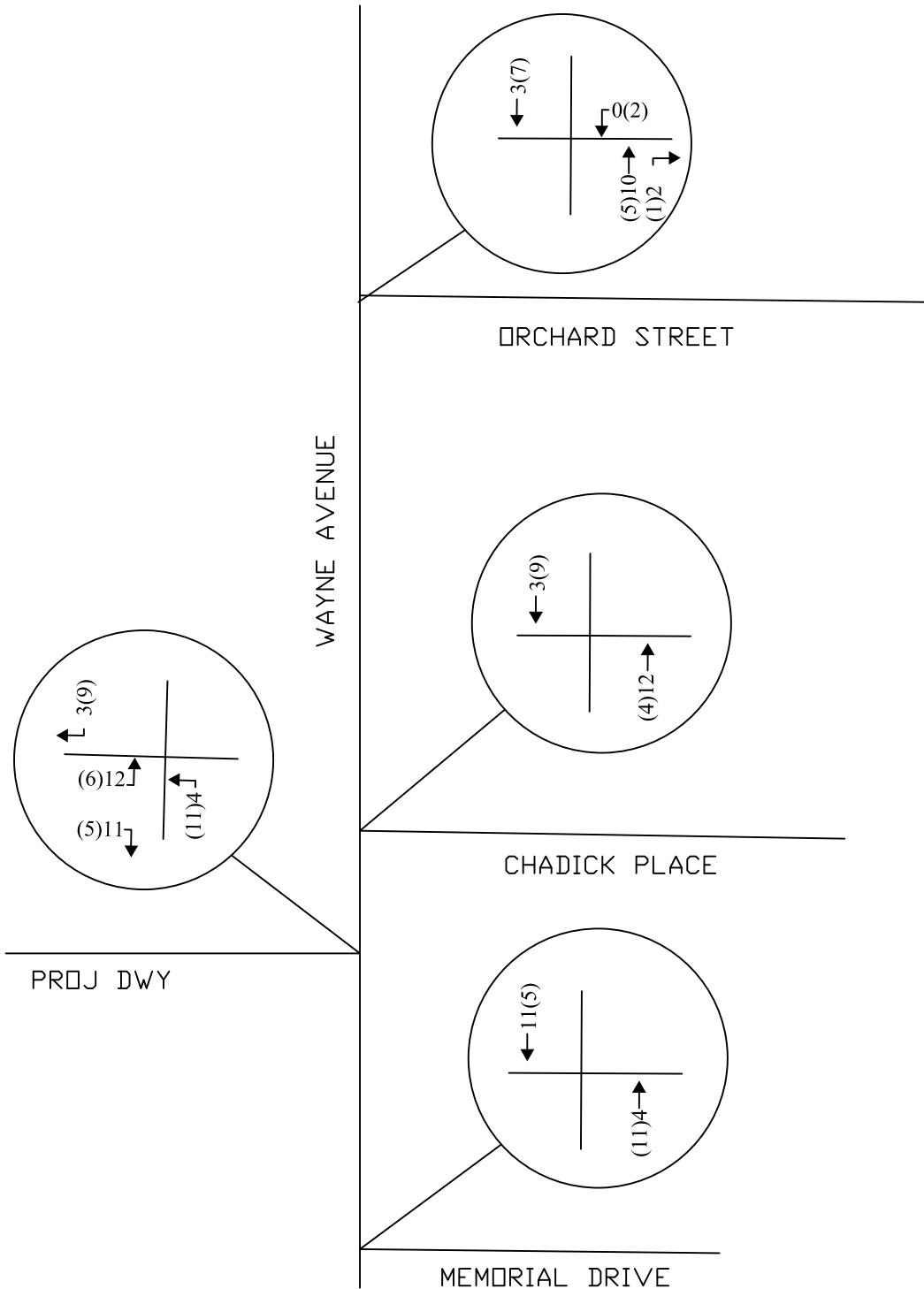
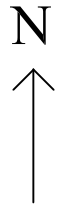
EXISTING PM PEAK HOUR
5:00 PM - 6:00 PM
FIGURE 3



2028 NO-BUILD AM PEAK HOUR
7:00 AM - 8:00 AM
FIGURE 4

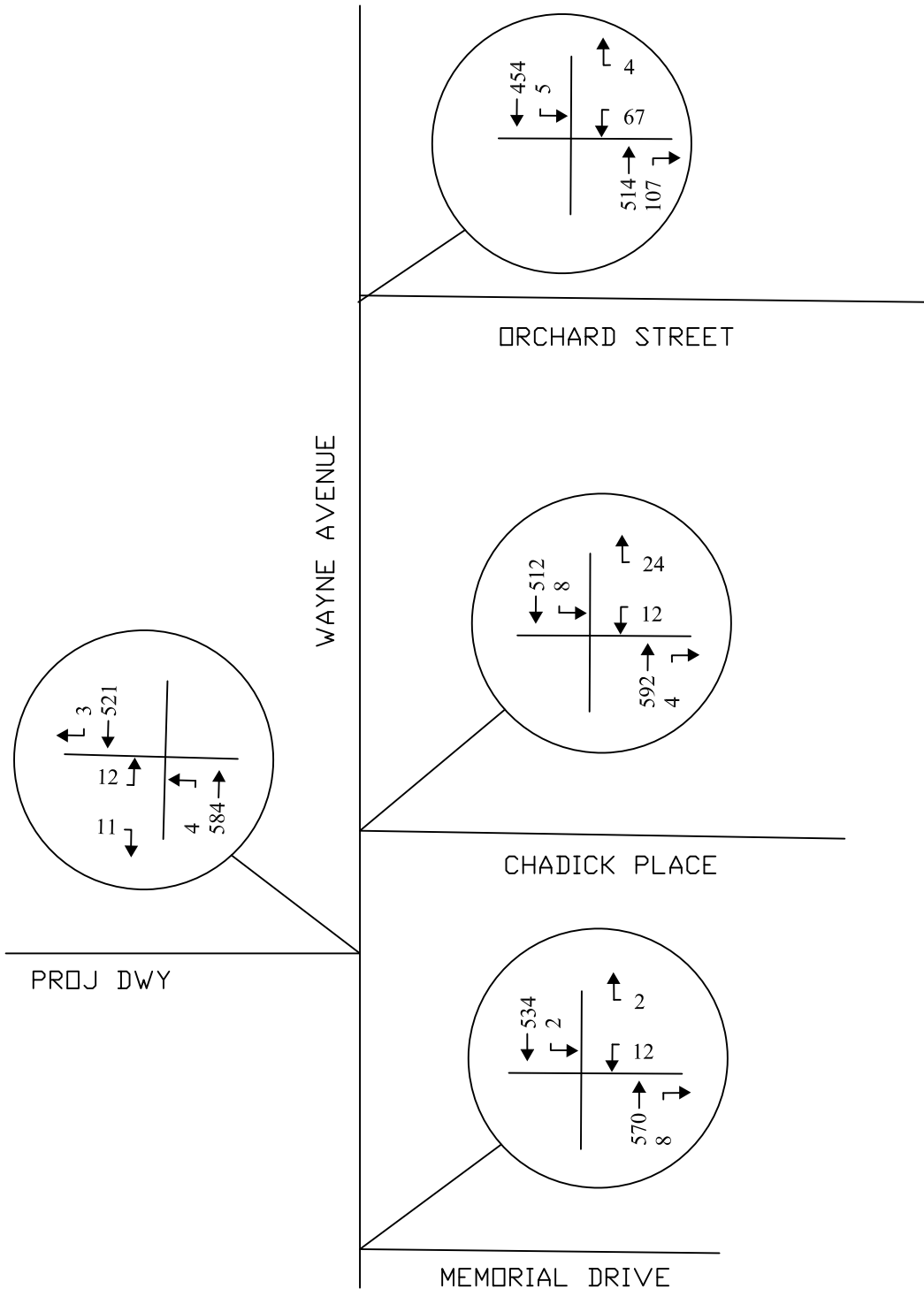
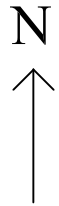


2028 NO-BUILD PM PEAK HOUR
5:00 PM - 6:00 PM
FIGURE 5

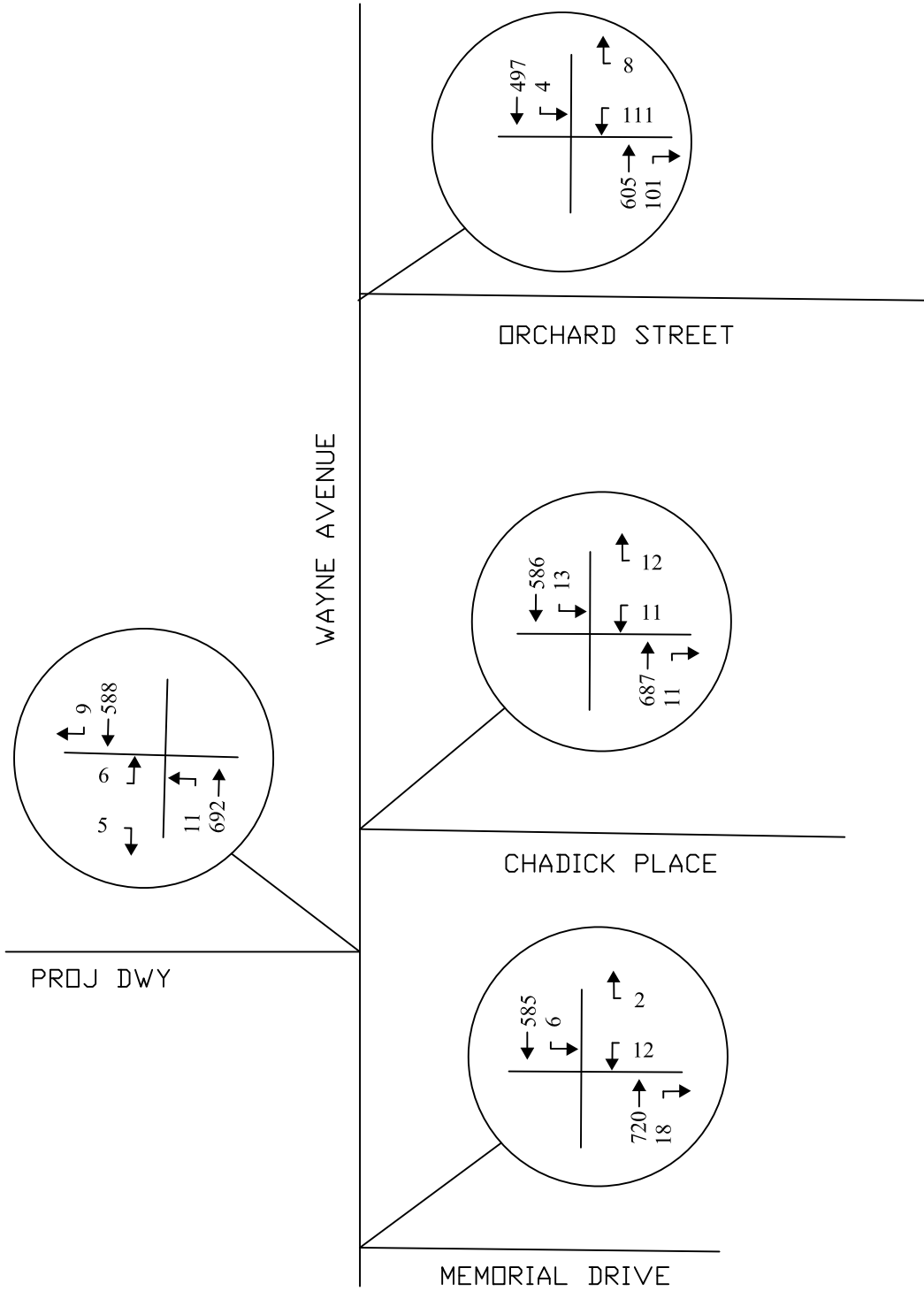
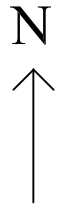


TRIP DISTRIBUTION

FIGURE 6



2028 BUILD AM PEAK HOUR
7:00 AM - 8:00 AM
FIGURE 7



2028 BUILD PM PEAK HOUR
5:00 PM - 6:00 PM
FIGURE 8

APPENDIX B
CAPACITY ANALYSIS SUMMARIES

CAPACITY ANALYSIS SUMMARY
EXISTING CONDITIONS

Intersection						
Int Delay, s/veh	1.6					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	63	4	475	99	5	425
Future Vol, veh/h	63	4	475	99	5	425
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, %	10	25	17	12	0	10
Mvmt Flow	68	4	511	106	5	457

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1031	564	0	0	617	0
Stage 1	564	-	-	-	-	-
Stage 2	467	-	-	-	-	-
Critical Hdwy	6.5	6.45	-	-	4.1	-
Critical Hdwy Stg 1	5.5	-	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-	-
Follow-up Hdwy	3.59	3.525	-	-	2.2	-
Pot Cap-1 Maneuver	249	484	-	-	973	-
Stage 1	554	-	-	-	-	-
Stage 2	615	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	247	484	-	-	973	-
Mov Cap-2 Maneuver	247	-	-	-	-	-
Stage 1	554	-	-	-	-	-
Stage 2	611	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	24.7	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	254	973	-
HCM Lane V/C Ratio	-	-	0.284	0.006	-
HCM Control Delay (s)	-	-	24.7	8.7	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	1.1	0	-

Intersection						
Int Delay, s/veh	0.6					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	11	23	547	4	8	480
Future Vol, veh/h	11	23	547	4	8	480
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	94	94	94	94	94	94
Heavy Vehicles, %	9	4	17	0	0	10
Mvmt Flow	12	24	582	4	9	511

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1113	584	0	0	586	0
Stage 1	584	-	-	-	-	-
Stage 2	529	-	-	-	-	-
Critical Hdwy	6.49	6.24	-	-	4.1	-
Critical Hdwy Stg 1	5.49	-	-	-	-	-
Critical Hdwy Stg 2	5.49	-	-	-	-	-
Follow-up Hdwy	3.581	3.336	-	-	2.2	-
Pot Cap-1 Maneuver	224	508	-	-	999	-
Stage 1	544	-	-	-	-	-
Stage 2	577	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	221	508	-	-	999	-
Mov Cap-2 Maneuver	221	-	-	-	-	-
Stage 1	544	-	-	-	-	-
Stage 2	569	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	16.2	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NERNWLn1	SWL	SWT
Capacity (veh/h)	-	-	358	999
HCM Lane V/C Ratio	-	-	0.101	0.009
HCM Control Delay (s)	-	-	16.2	8.6
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.3	0

Intersection						
Int Delay, s/veh	0.3					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	11	2	533	8	2	493
Future Vol, veh/h	11	2	533	8	2	493
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	92	92	92	92	92	92
Heavy Vehicles, %	18	0	17	13	50	9
Mvmt Flow	12	2	579	9	2	536

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1124	584	0	0	588
Stage 1	584	-	-	-	-
Stage 2	540	-	-	-	-
Critical Hdwy	6.58	6.2	-	-	4.6
Critical Hdwy Stg 1	5.58	-	-	-	-
Critical Hdwy Stg 2	5.58	-	-	-	-
Follow-up Hdwy	3.662	3.3	-	-	2.65
Pot Cap-1 Maneuver	211	515	-	-	790
Stage 1	527	-	-	-	-
Stage 2	553	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	210	515	-	-	790
Mov Cap-2 Maneuver	210	-	-	-	-
Stage 1	527	-	-	-	-
Stage 2	551	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	21.6	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	231	790	-
HCM Lane V/C Ratio	-	-	0.061	0.003	-
HCM Control Delay (s)	-	-	21.6	9.6	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection						
Int Delay, s/veh	3.1					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	103	8	565	94	4	462
Future Vol, veh/h	103	8	565	94	4	462
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	97	97	97	97	97	97
Heavy Vehicles, %	4	0	3	0	25	6
Mvmt Flow	106	8	582	97	4	476

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1115	631	0	0	679
Stage 1	631	-	-	-	-
Stage 2	484	-	-	-	-
Critical Hdwy	6.44	6.2	-	-	4.35
Critical Hdwy Stg 1	5.44	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-
Follow-up Hdwy	3.536	3.3	-	-	2.425
Pot Cap-1 Maneuver	228	485	-	-	814
Stage 1	526	-	-	-	-
Stage 2	616	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	226	485	-	-	814
Mov Cap-2 Maneuver	226	-	-	-	-
Stage 1	526	-	-	-	-
Stage 2	612	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	34	0	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	235	814	-
HCM Lane V/C Ratio	-	-	0.487	0.005	-
HCM Control Delay (s)	-	-	34	9.4	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	2.4	0	-

Intersection						
Int Delay, s/veh	0.4					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	10	11	642	10	12	544
Future Vol, veh/h	10	11	642	10	12	544
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	97	97	97	97	97	97
Heavy Vehicles, %	10	0	3	0	8	6
Mvmt Flow	10	11	662	10	12	561

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1252	667	0	0	672
Stage 1	667	-	-	-	-
Stage 2	585	-	-	-	-
Critical Hdwy	6.5	6.2	-	-	4.18
Critical Hdwy Stg 1	5.5	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-
Follow-up Hdwy	3.59	3.3	-	-	2.272
Pot Cap-1 Maneuver	183	462	-	-	891
Stage 1	496	-	-	-	-
Stage 2	541	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	179	462	-	-	891
Mov Cap-2 Maneuver	179	-	-	-	-
Stage 1	496	-	-	-	-
Stage 2	530	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	19.9	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	264	891	-
HCM Lane V/C Ratio	-	-	0.082	0.014	-
HCM Control Delay (s)	-	-	19.9	9.1	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection						
Int Delay, s/veh	0.2					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	4	4	668	17	6	547
Future Vol, veh/h	4	4	668	17	6	547
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	96	96	96	96	96	96
Heavy Vehicles, %	0	0	3	0	0	6
Mvmt Flow	4	4	696	18	6	570

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1287	705	0	0	714
Stage 1	705	-	-	-	-
Stage 2	582	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	183	440	-	-	895
Stage 1	494	-	-	-	-
Stage 2	563	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	181	440	-	-	895
Mov Cap-2 Maneuver	181	-	-	-	-
Stage 1	494	-	-	-	-
Stage 2	557	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	19.5	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	256	895	-
HCM Lane V/C Ratio	-	-	0.033	0.007	-
HCM Control Delay (s)	-	-	19.5	9.1	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

**CAPACITY ANALYSIS SUMMARY
2028 NO-BUILD CONDITIONS**

Intersection						
Int Delay, s/veh	1.8					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	67	4	504	105	5	451
Future Vol, veh/h	67	4	504	105	5	451
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, %	10	25	17	12	0	10
Mvmt Flow	72	4	542	113	5	485

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1094	599	0	0	655
Stage 1	599	-	-	-	-
Stage 2	495	-	-	-	-
Critical Hdwy	6.5	6.45	-	-	4.1
Critical Hdwy Stg 1	5.5	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-
Follow-up Hdwy	3.59	3.525	-	-	2.2
Pot Cap-1 Maneuver	229	462	-	-	942
Stage 1	533	-	-	-	-
Stage 2	596	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	227	462	-	-	942
Mov Cap-2 Maneuver	227	-	-	-	-
Stage 1	533	-	-	-	-
Stage 2	592	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	27.7	0	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	234	942	-
HCM Lane V/C Ratio	-	-	0.326	0.006	-
HCM Control Delay (s)	-	-	27.7	8.8	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	1.4	0	-

Intersection						
Int Delay, s/veh	0.6					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	12	24	580	4	8	509
Future Vol, veh/h	12	24	580	4	8	509
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	94	94	94	94	94	94
Heavy Vehicles, %	9	4	17	0	0	10
Mvmt Flow	13	26	617	4	9	541

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1178	619	0	0	621	0
Stage 1	619	-	-	-	-	-
Stage 2	559	-	-	-	-	-
Critical Hdwy	6.49	6.24	-	-	4.1	-
Critical Hdwy Stg 1	5.49	-	-	-	-	-
Critical Hdwy Stg 2	5.49	-	-	-	-	-
Follow-up Hdwy	3.581	3.336	-	-	2.2	-
Pot Cap-1 Maneuver	204	485	-	-	969	-
Stage 1	524	-	-	-	-	-
Stage 2	559	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	201	485	-	-	969	-
Mov Cap-2 Maneuver	201	-	-	-	-	-
Stage 1	524	-	-	-	-	-
Stage 2	552	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	17.3	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NERNWLn1	SWL	SWT
Capacity (veh/h)	-	-	330	969
HCM Lane V/C Ratio	-	-	0.116	0.009
HCM Control Delay (s)	-	-	17.3	8.7
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.4	0

Intersection						
Int Delay, s/veh	0.3					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	12	2	566	8	2	523
Future Vol, veh/h	12	2	566	8	2	523
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	92	92	92	92	92	92
Heavy Vehicles, %	18	0	17	13	50	9
Mvmt Flow	13	2	615	9	2	568

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1192	620	0	0	624	0
Stage 1	620	-	-	-	-	-
Stage 2	572	-	-	-	-	-
Critical Hdwy	6.58	6.2	-	-	4.6	-
Critical Hdwy Stg 1	5.58	-	-	-	-	-
Critical Hdwy Stg 2	5.58	-	-	-	-	-
Follow-up Hdwy	3.662	3.3	-	-	2.65	-
Pot Cap-1 Maneuver	192	492	-	-	763	-
Stage 1	507	-	-	-	-	-
Stage 2	534	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	191	492	-	-	763	-
Mov Cap-2 Maneuver	191	-	-	-	-	-
Stage 1	507	-	-	-	-	-
Stage 2	532	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	23.6	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	209	763	-
HCM Lane V/C Ratio	-	-	0.073	0.003	-
HCM Control Delay (s)	-	-	23.6	9.7	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection						
Int Delay, s/veh	3.8					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	109	8	600	100	4	490
Future Vol, veh/h	109	8	600	100	4	490
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	97	97	97	97	97	97
Heavy Vehicles, %	4	0	3	0	25	6
Mvmt Flow	112	8	619	103	4	505

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1184	671	0	0	722	0
Stage 1	671	-	-	-	-	-
Stage 2	513	-	-	-	-	-
Critical Hdwy	6.44	6.2	-	-	4.35	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.3	-	-	2.425	-
Pot Cap-1 Maneuver	207	460	-	-	784	-
Stage 1	504	-	-	-	-	-
Stage 2	597	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	206	460	-	-	784	-
Mov Cap-2 Maneuver	206	-	-	-	-	-
Stage 1	504	-	-	-	-	-
Stage 2	593	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	41.6	0	0.1
HCM LOS	E		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	214	784	-
HCM Lane V/C Ratio	-	-	0.564	0.005	-
HCM Control Delay (s)	-	-	41.6	9.6	0
HCM Lane LOS	-	-	E	A	A
HCM 95th %tile Q(veh)	-	-	3.1	0	-

Intersection						
Int Delay, s/veh	0.5					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	11	12	681	11	13	577
Future Vol, veh/h	11	12	681	11	13	577
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	97	97	97	97	97	97
Heavy Vehicles, %	10	0	3	0	8	6
Mvmt Flow	11	12	702	11	13	595

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1329	708	0	0	713
Stage 1	708	-	-	-	-
Stage 2	621	-	-	-	-
Critical Hdwy	6.5	6.2	-	-	4.18
Critical Hdwy Stg 1	5.5	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-
Follow-up Hdwy	3.59	3.3	-	-	2.272
Pot Cap-1 Maneuver	164	438	-	-	860
Stage 1	474	-	-	-	-
Stage 2	521	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	160	438	-	-	860
Mov Cap-2 Maneuver	160	-	-	-	-
Stage 1	474	-	-	-	-
Stage 2	509	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	21.7	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	239	860	-
HCM Lane V/C Ratio	-	-	0.099	0.016	-
HCM Control Delay (s)	-	-	21.7	9.3	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection						
Int Delay, s/veh	0.2					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	4	4	709	18	6	580
Future Vol, veh/h	4	4	709	18	6	580
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	96	96	96	96	96	96
Heavy Vehicles, %	0	0	3	0	0	6
Mvmt Flow	4	4	739	19	6	604

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1365	749	0	0	758
Stage 1	749	-	-	-	-
Stage 2	616	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	164	415	-	-	862
Stage 1	471	-	-	-	-
Stage 2	543	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	162	415	-	-	862
Mov Cap-2 Maneuver	162	-	-	-	-
Stage 1	471	-	-	-	-
Stage 2	538	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	21	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	233	862	-
HCM Lane V/C Ratio	-	-	0.036	0.007	-
HCM Control Delay (s)	-	-	21	9.2	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

CAPACITY ANALYSIS SUMMARY
2028 BUILD CONDITIONS

Intersection						
Int Delay, s/veh	1.8					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	67	4	514	107	5	454
Future Vol, veh/h	67	4	514	107	5	454
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, %	10	25	17	12	0	10
Mvmt Flow	72	4	553	115	5	488

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1109	611	0	0	668	0
Stage 1	611	-	-	-	-	-
Stage 2	498	-	-	-	-	-
Critical Hdwy	6.5	6.45	-	-	4.1	-
Critical Hdwy Stg 1	5.5	-	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-	-
Follow-up Hdwy	3.59	3.525	-	-	2.2	-
Pot Cap-1 Maneuver	224	454	-	-	931	-
Stage 1	527	-	-	-	-	-
Stage 2	595	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	222	454	-	-	931	-
Mov Cap-2 Maneuver	222	-	-	-	-	-
Stage 1	527	-	-	-	-	-
Stage 2	591	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	28.4	0	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	229	931	-
HCM Lane V/C Ratio	-	-	0.333	0.006	-
HCM Control Delay (s)	-	-	28.4	8.9	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	1.4	0	-

Intersection						
Int Delay, s/veh	0.6					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	12	24	592	4	8	512
Future Vol, veh/h	12	24	592	4	8	512
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	94	94	94	94	94	94
Heavy Vehicles, %	9	4	17	0	0	10
Mvmt Flow	13	26	630	4	9	545

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1195	632	0	0	634	0
Stage 1	632	-	-	-	-	-
Stage 2	563	-	-	-	-	-
Critical Hdwy	6.49	6.24	-	-	4.1	-
Critical Hdwy Stg 1	5.49	-	-	-	-	-
Critical Hdwy Stg 2	5.49	-	-	-	-	-
Follow-up Hdwy	3.581	3.336	-	-	2.2	-
Pot Cap-1 Maneuver	199	477	-	-	959	-
Stage 1	517	-	-	-	-	-
Stage 2	556	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	196	477	-	-	959	-
Mov Cap-2 Maneuver	196	-	-	-	-	-
Stage 1	517	-	-	-	-	-
Stage 2	549	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	17.6	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NERNWLn1	SWL	SWT
Capacity (veh/h)	-	-	323	959
HCM Lane V/C Ratio	-	-	0.119	0.009
HCM Control Delay (s)	-	-	17.6	8.8
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.4	0

Intersection						
Int Delay, s/veh	0.3					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	12	2	570	8	2	534
Future Vol, veh/h	12	2	570	8	2	534
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	92	92	92	92	92	92
Heavy Vehicles, %	18	0	17	13	50	9
Mvmt Flow	13	2	620	9	2	580

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1209	625	0	0	629	0
Stage 1	625	-	-	-	-	-
Stage 2	584	-	-	-	-	-
Critical Hdwy	6.58	6.2	-	-	4.6	-
Critical Hdwy Stg 1	5.58	-	-	-	-	-
Critical Hdwy Stg 2	5.58	-	-	-	-	-
Follow-up Hdwy	3.662	3.3	-	-	2.65	-
Pot Cap-1 Maneuver	187	488	-	-	760	-
Stage 1	504	-	-	-	-	-
Stage 2	527	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	186	488	-	-	760	-
Mov Cap-2 Maneuver	186	-	-	-	-	-
Stage 1	504	-	-	-	-	-
Stage 2	525	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	24.1	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	204	760	-
HCM Lane V/C Ratio	-	-	0.075	0.003	-
HCM Control Delay (s)	-	-	24.1	9.8	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection						
Int Delay, s/veh	0.4					
Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	12	11	4	584	521	3
Future Vol, veh/h	12	11	4	584	521	3
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	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	17	0	10
Mvmt Flow	13	12	4	621	554	3

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1185	556	557	0	-	0
Stage 1	556	-	-	-	-	-
Stage 2	629	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	211	534	1024	-	-	-
Stage 1	578	-	-	-	-	-
Stage 2	535	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	210	534	1024	-	-	-
Mov Cap-2 Maneuver	210	-	-	-	-	-
Stage 1	575	-	-	-	-	-
Stage 2	535	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	18.3	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NEL	NET SELn1	SWT	SWR
Capacity (veh/h)	1024	-	296	-
HCM Lane V/C Ratio	0.004	-	0.083	-
HCM Control Delay (s)	8.5	0	18.3	-
HCM Lane LOS	A	A	C	-
HCM 95th %tile Q(veh)	0	-	0.3	-

Intersection						
Int Delay, s/veh	3.9					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	111	8	605	101	4	497
Future Vol, veh/h	111	8	605	101	4	497
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	97	97	97	97	97	97
Heavy Vehicles, %	4	0	3	0	25	6
Mvmt Flow	114	8	624	104	4	512

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1196	676	0	0	728	0
Stage 1	676	-	-	-	-	-
Stage 2	520	-	-	-	-	-
Critical Hdwy	6.44	6.2	-	-	4.35	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.3	-	-	2.425	-
Pot Cap-1 Maneuver	204	457	-	-	779	-
Stage 1	502	-	-	-	-	-
Stage 2	593	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	203	457	-	-	779	-
Mov Cap-2 Maneuver	203	-	-	-	-	-
Stage 1	502	-	-	-	-	-
Stage 2	589	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	43.4	0	0.1
HCM LOS	E		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	211	779	-
HCM Lane V/C Ratio	-	-	0.581	0.005	-
HCM Control Delay (s)	-	-	43.4	9.6	0
HCM Lane LOS	-	-	E	A	A
HCM 95th %tile Q(veh)	-	-	3.2	0	-

Intersection						
Int Delay, s/veh	0.5					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	11	12	687	11	13	586
Future Vol, veh/h	11	12	687	11	13	586
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	97	97	97	97	97	97
Heavy Vehicles, %	10	0	3	0	8	6
Mvmt Flow	11	12	708	11	13	604

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1344	714	0	0	719
Stage 1	714	-	-	-	-
Stage 2	630	-	-	-	-
Critical Hdwy	6.5	6.2	-	-	4.18
Critical Hdwy Stg 1	5.5	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-
Follow-up Hdwy	3.59	3.3	-	-	2.272
Pot Cap-1 Maneuver	161	435	-	-	855
Stage 1	471	-	-	-	-
Stage 2	516	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	157	435	-	-	855
Mov Cap-2 Maneuver	157	-	-	-	-
Stage 1	471	-	-	-	-
Stage 2	504	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	22	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	236	855	-
HCM Lane V/C Ratio	-	-	0.1	0.016	-
HCM Control Delay (s)	-	-	22	9.3	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection						
Int Delay, s/veh	0.2					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	4	4	720	18	6	585
Future Vol, veh/h	4	4	720	18	6	585
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	96	96	96	96	96	96
Heavy Vehicles, %	0	0	3	0	0	6
Mvmt Flow	4	4	750	19	6	609

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1381	760	0	0	769
Stage 1	760	-	-	-	-
Stage 2	621	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	160	409	-	-	854
Stage 1	465	-	-	-	-
Stage 2	540	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	158	409	-	-	854
Mov Cap-2 Maneuver	158	-	-	-	-
Stage 1	465	-	-	-	-
Stage 2	534	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	21.4	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	228	854	-
HCM Lane V/C Ratio	-	-	0.037	0.007	-
HCM Control Delay (s)	-	-	21.4	9.2	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection						
Int Delay, s/veh	0.2					
Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	6	5	11	692	588	9
Future Vol, veh/h	6	5	11	692	588	9
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	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	3	0	6
Mvmt Flow	6	5	11	713	606	9

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1346	611	615	0	-	0
Stage 1	611	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	169	497	974	-	-	-
Stage 1	546	-	-	-	-	-
Stage 2	478	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	166	497	974	-	-	-
Mov Cap-2 Maneuver	166	-	-	-	-	-
Stage 1	536	-	-	-	-	-
Stage 2	478	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	20.9	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NEL	NET SELn1	SWT	SWR
Capacity (veh/h)	974	-	238	-
HCM Lane V/C Ratio	0.012	-	0.048	-
HCM Control Delay (s)	8.7	0	20.9	-
HCM Lane LOS	A	A	C	-
HCM 95th %tile Q(veh)	0	-	0.1	-

APPENDIX C
TRAFFIC COUNTS

APPENDIX D
2021-2024 ACCIDENT SUMMARY TABLES

TABLE 8

	Crash Date	Crash Time	Crash Severity	Collision Type	Crash Type	Light Conditions	Road Characteristics	Road Surface Conditions	Intersection Indicator	Closest Cross Street	Distance From (Meters)	On Street
1	6/16/2021	1:01 PM	PROPERTY DAMAGE	UNKNOWN	COLLISION WITH MOTOR VEHICLE	DAYLIGHT	STRAIGHT AND LEVEL	DRY	AT-INTERSECTION	ORCHARD ST	0.0	ROUTE 202

TABLE 9

	Crash Date	Crash Time	Crash Severity	Collision Type	Crash Type	Light Conditions	Road Characteristics	Road Surface Conditions	Intersection Indicator	Closest Cross Street	Distance From (Meters)	On Street
1	2/4/2022	8:30 AM	PROPERTY DAMAGE	OTHER	COLLISION WITH ANIMAL	DAYLIGHT	STRAIGHT AND LEVEL	WET	INTERSECTION-RELATED	[Route] 202	0.0	HAYERSTRAW RD
2	6/7/2022	8:21 PM	PROPERTY DAMAGE	OTHER	COLLISION WITH MOTOR VEHICLE	DUSK	STRAIGHT AND LEVEL	WET	AT-INTERSECTION	ORCHARD ST	0.0	HAYERSTRAW RD
3	6/24/2022	4:58 PM	INJURY	REAR END	COLLISION WITH MOTOR VEHICLE	DAYLIGHT	STRAIGHT AND LEVEL	DRY	AT-INTERSECTION	CHADICK PL	0.0	[Route] 202
4	7/6/2022	7:52 PM	PROPERTY DAMAGE	OVERTAKING	COLLISION WITH MOTOR VEHICLE	DAYLIGHT	STRAIGHT AND LEVEL	DRY	AT-INTERSECTION	CHADICK PLACE	0.0	WAYNE AVENUE

TABLE 10

	Crash Date	Crash Time	Crash Severity	Collision Type	Crash Type	Light Conditions	Road Characteristics	Road Surface Conditions	Intersection Indicator	Closest Cross Street	Distance From (Meters)	On Street
1	9/21/2023	3:16 PM	PROPERTY DAMAGE	REAR END	COLLISION WITH MOTOR VEHICLE	DAYLIGHT	STRAIGHT AND LEVEL	DRY	AT-INTERSECTION	HAYERSTRAW ROAD	0.0	WAYNE AVENUE
2	10/13/2023	9:50 AM	PROPERTY DAMAGE	OTHER	COLLISION WITH MOTOR VEHICLE	DAYLIGHT	STRAIGHT AND LEVEL	DRY	AT-INTERSECTION	HAYERSTRAW ROAD	0.0	WAYNE AVENUE

TABLE 11

	Crash Date	Crash Time	Crash Severity	Collision Type	Crash Type	Light Conditions	Road Characteristics	Road Surface Conditions	Intersection Indicator	Closest Cross Street	Distance From (Meters)	On Street
1	5/14/2024	9:05 AM	PROPERTY DAMAGE	REAR END	COLLISION WITH MOTOR VEHICLE	DAYLIGHT	STRAIGHT AND LEVEL	DRY	INTERSECTION-RELATED	ORCHARD STREET	80.2	HAYERSTRAW ROAD
2	7/10/2024	2:25 PM	PROPERTY DAMAGE	REAR END	COLLISION WITH MOTOR VEHICLE	DAYLIGHT	STRAIGHT AND LEVEL	DRY	INTERSECTION-RELATED	ORCHARD STREET	100.0	HAYERSTRAW ROAD
3	8/13/2024	12:43 PM	INJURY	REAR END	COLLISION WITH MOTOR VEHICLE	DAYLIGHT	STRAIGHT AND LEVEL	DRY	AT-INTERSECTION	MEMORIAL DRIVE	0.0	WAYNE AVENUE
4	9/30/2024	6:17 AM	INJURY	RIGHT ANGLE	COLLISION WITH MOTOR VEHICLE	DAWN	STRAIGHT AND LEVEL	DRY	AT-INTERSECTION	ORCHARD STREET	20.8	HAYERSTRAW ROAD