TOWN OF NEWBURGH
PLANNING BOARD
TECHNICAL REVIEW COMMENTS

PROJECT NAME:	**DRURY HEIGHTS**
PROJECT NO.:	**1994-41**
PROJECT LOCATION:	**SECTION 89, BLOCK 1, LOT 4.4 & 6 MULTIPLE OTHER LOTS**
REVIEW DATE:	**11 DECEMBER 2024**
MEETING DATE:	**19 DECEMBER 2024**
PROJECT REPRESENTATIVE:	**BOOKER ENGINEERING / BRIAN BOOKER, P.E.**

1. The applicants have prepared an updated Traffic Study for the subject project. The updated Traffic Study is based on certain improvements performed by NYSDOT, creating the new intersection of 747/Route 17K, a fully signalized intersection. The former Drury Lane intersection now serves only traffic from the subject project and several pre-existing houses along what was Drury Lane, a through road now a no outlet roadway.

2. Project received Conditional Final Approval on 2 April 2009. The project also subject to a court approved stipulation regarding an Article 78 challenge. Special condition No. 4 on Page 6 states "the intersection of Route 17K and Rock Cut Road has been identified as a constrained intersection requiring improvements". The developer has agreed to make a fair share contribution (by Agreement with the Town Board) for the implementation of the west bound right turn lane. In addition, as announced in the Amended SEQRA Finding Statement the developer will be responsible for widening Route 17K for a center turn lane at Drury Lane, which should be completed by or under construction by approximately 50% occupancy of the project site". Applicants are rapidly approaching the 50% occupancy or 50 residential Certificates of Occupancy.

Respectfully submitted,

MHE Engineering, D.P.C.

Patrick J. Hines
Principal
PJH/kmm

Michael W. Week, P.E.
Principal

NEW YORK OFFICE
33 Airport Center Drive, Suite 202, New Windsor, NY 12553
845-567-3100 | F: 845-567-3232 | mheny@mhepc.com

PENNSYLVANIA OFFICE
111 Wheatfield Drive, Suite 1, Milford, PA 18337
570-296-2765 | F: 570-296-2767 | mhepa@mhepc.com

DRURY HEIGHTS SUBDIVISION
100 HOME DEVELOPMENT ON WILDWOOD DRIVE
TRAFFIC IMPACT STUDY
NEWBURGH, NY

May 15, 2023

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

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

INTRODUCTION

A single-family development comprised of 100 homes is proposed to be constructed on Wildwood Drive with access to South Drury Road. A portion of South Drury Drive is in the Town of Newburgh and a portion is on the Town of Montgomery, NY. Drury Road is maintained by the Town of Newburgh. Twenty-five homes have already been constructed and are occupied. The proposed street will have one travel lane in each direction and be 30 feet wide. The right-of-way is 50 feet wide. The plan used for this study was prepared by Brooker Engineering, PLLC dated 12/6/2021. **Figure 1** shows the location of the project.

The purpose of the traffic study is to determine the potential impact to the local residents, including in the existing development at the intersection of Route 17K/North Drury Road/South Drury Road.

EXISTING ROADWAY CONDITIONS

Access to the proposed development will be via Wildwood Drive, which connects to South Drury Road. Wildwood Drive is under the authority of the Town of Newburgh. Wildwood Drive is a local street with one travel lane in each direction.

South Drury Road is a local road that dead ends currently. South Drury Road intersects with Route 17K which is maintained by NYSDOT. Development along this section of South Drury Road has single family homes.

EXISTING TRAFFIC CONDITIONS

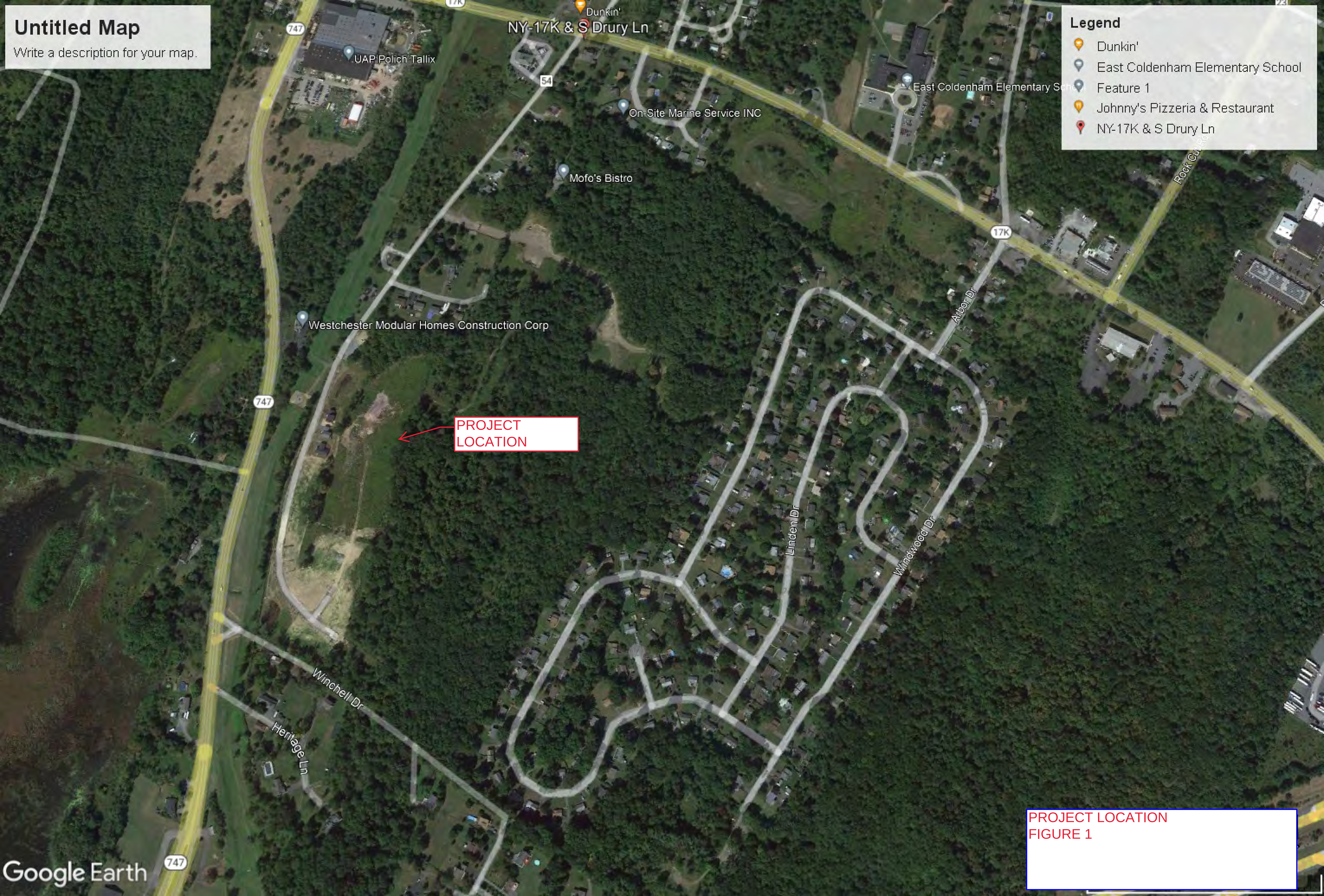
Manual Traffic Counts

To accurately assess the impacts of the proposed project, manual turning movement counts were taken during a typical weekday 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 Thursday, March 2, 2023, at the following intersection.

- Route 17K/North Drury Road/South Drury Road - unsignalized

This intersection was chosen because traffic entering and exiting the proposed development will use this intersection. The traffic counts were conducted in 15-minute intervals. The counts were classified by cars, trucks, and buses which include school buses.

The weighted peak hour traffic volumes were calculated by adding the rolling hourly counts for this intersection together and determining which hour had the highest traffic volume. The traffic volumes are shown in **Figures 2 and 3** show the existing traffic volumes for the peak hours of 7:15-8:15 AM and 4:30-5:30 PM.


Untitled Map
Write a description for your map.
Legend
Dunkin'
East Coldenham Elementary School
Feature 1
Johnny's Pizzeria & Restaurant
NY-17K & S Drury Ln
NY-17K & S Drury Ln
Dunkin'
UAP Polich Tallix
On-Site Marine Service INC
East Coldenham Elementary Sch
Mofo's Bistro
Westchester Modular Homes Construction Corp
PROJECT LOCATION
Arbor Dr
Linden Dr
Windwood Dr
Winchell Dr
Heritage Ln
17K
747
54
Google Earth
PROJECT LOCATION
FIGURE 1

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.

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 1**.

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: Transportation Research Board 2016 *Highway Capacity Manual* 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.

Table 2 summarizes the results of the capacity analysis. The results of the Synchro analysis show that the South Drury Road southbound approach is operating at LOS "D" in the AM peak hour. The North and South Drury Road approaches are operating at LOS "D" in the PM peak hour. The remainder of the approaches are operating at LOS "C" or better.

2026 NO-BUILD CONDITIONS

The no-build conditions represent the traffic volumes that would be on the street network without the completion of the development. A background growth rate of 1.01% per year compounded was used to increase the base traffic volumes from 2023 to 2026. This is the background growth rate for Orange County published by NYMTC.

Figures 4 and 5 show the 2026 No-Build traffic volumes for the AM and PM peak hours, respectively. The results of the capacity analyses are shown in **Table 3**.

The results of the capacity analysis are as follows:

The LOS did not change for any of the movements.

2026 BUILD CONDITIONS

A single-family development comprised of 100 homes is proposed to be constructed on Wildwood Drive, Rustic Drive, and Whispering Hill with access to South Drury Road in the Town of Montgomery and the Town of Newburgh, NY. The proposed street will have one travel lane in each direction and be 30 feet wide. The right-of-way is 50 feet wide. Twenty-five homes have already been built and are occupied. **Table 4** shows the calculation of the vehicles that will be generated by this project for Land Use 210 – Single Family Detached Housing.

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 210 (Single Family Detached Housing) was used. **Table 4** shows the calculations of the peak hour trips for the proposed balance of the 75-house development.

TABLE 2

CAPACITY ANALYSIS SUMMARY
EXISTING CONDITIONS
UNSIGNALIZED INTERSECTIONS

	Weekday					
	AM PEAK HOUR			PM PEAK HOUR		
	LOS	V/C Ratio	Delay	LOS	V/C Ratio	Delay
Route 17K/Drury Road						
Route 17K						
Eastbound LTR	A	0.05	8.6	A	0.04	9.0
Westbound LTR	A	0.01	8.2	A	0.02	8.7
Drury Road						
Northbound LTR	C	0.19	19.4	D	0.30	26.0
Southbound LTR	D	0.29	26.7	D	0.20	31.2

TABLE 3

CAPACITY ANALYSIS SUMMARY
2026 NO-BUILD CONDITIONS
UNSIGNALIZED INTERSECTIONS

	Weekday					
	AM PEAK HOUR			PM PEAK HOUR		
	LOS	V/C Ratio	Delay	LOS	V/C Ratio	Delay
Route 17K/Drury Road						
Route 17K						
Eastbound LTR	A	0.05	8.7	A	0.04	9.0
Westbound LTR	A	0.01	8.2	A	0.02	8.8
Drury Road						
Northbound LTR	C	0.21	20.4	D	0.32	28.1
Southbound LTR	D	0.31	28.3	D	0.22	34.0

TABLE 4 - Calculation of Weekday Peak Hour Trips	
Single Family Detached Housing – 75 houses	
Morning Peak Hour	Afternoon Peak Hour
Total Trips = 1.00 x 75 houses = 75 trips	Total Trips = 1.07 x 75 houses= 80 trips
Trips Entering = 0.25 x 16 trips = 19 trips	Trips Entering = 0.63 x 80 trips = 50 trips
Trips Exiting = 0.75 x 16 trips = 56 trips	Trips Exiting = 0.37 x 80 trips =30 trips

Using the existing traffic counts for the traffic entering and exiting South Drury Road, we calculated the number of proposed vehicle trips that would enter and exit South Drury Road. **Figure 6** shows the trip distribution of these trips. **Figures 7 and 8** show the 2026 Build traffic volumes. **Table 5** compares the 2026 No-Build and 2026 Build LOS results. The results of the Synchro analysis show that in the AM peak hour, the South Drury Road northbound approach is projected to change from LOS "C" to "D." In the PM peak hour, the northbound and southbound Drury Road approaches are projected to change from LOS "D" to "E." It should be pointed out that construction of new homes is on-going and as a result, workers and support staff are using the intersection to access Wildwood Drive to build the homes. When these workers have completed the construction and are replaced by the homeowners, we would expect a reduction in vehicle trips thereby improving the LOS.

CONCLUSIONS

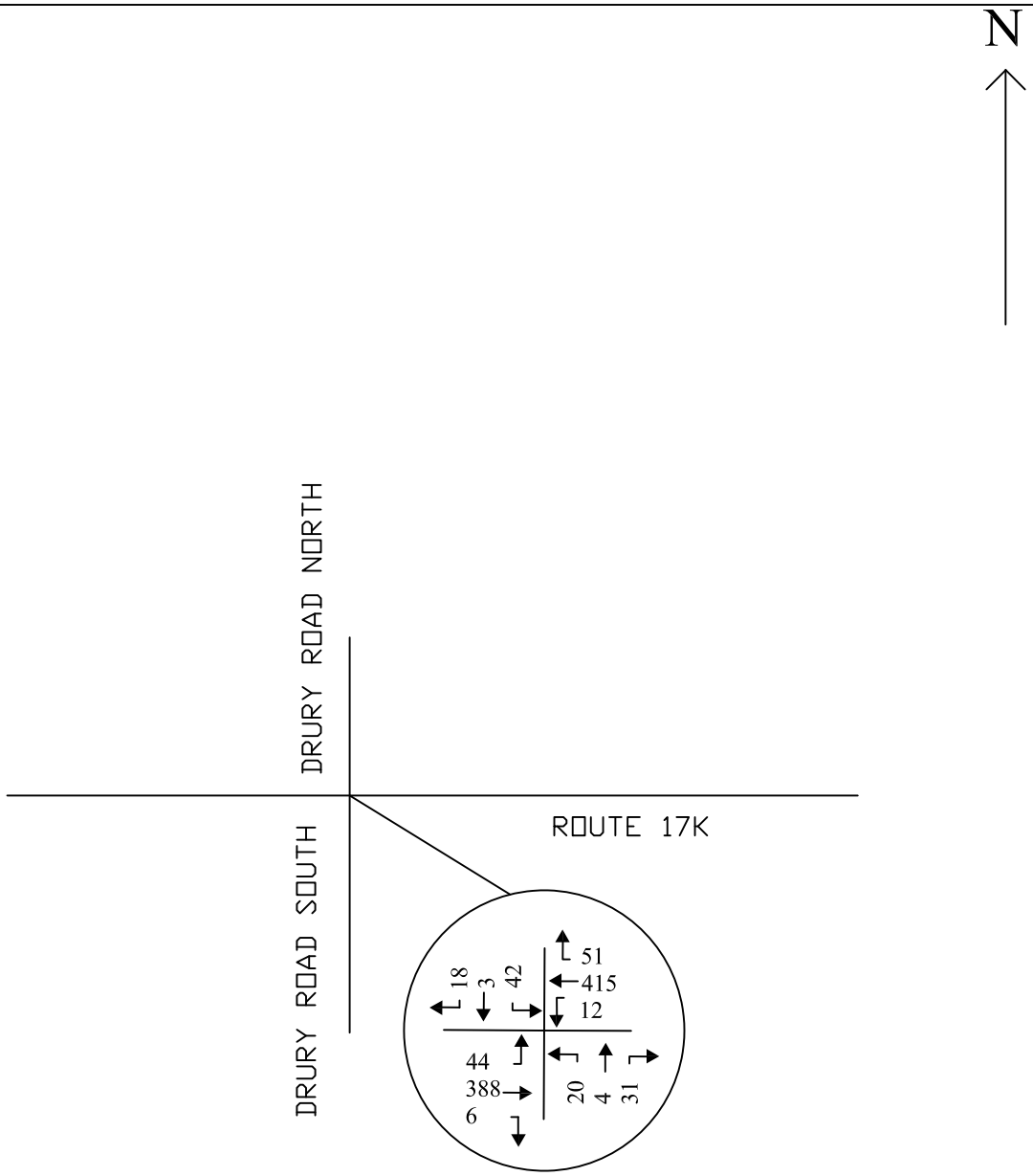
1. The proposed single-family residential development will generate a total of 75 vehicle trips in the AM peak hour with 19 vehicles entering and 56 vehicles exiting. In the PM peak hour, a total of 80 vehicle trips will be generated with 50 vehicles entering and 30 vehicles exiting.
2. The results of the Synchro analysis show that the South Drury Road is projected to operate at LOS "E" in 2026. The volume-to-capacity ratio is 0.53 for the South Drury Road northbound approach.
3. The construction of an exclusive left-turn lane on Route 17K at the South Drury Road intersection is not warranted.

TABLE 5

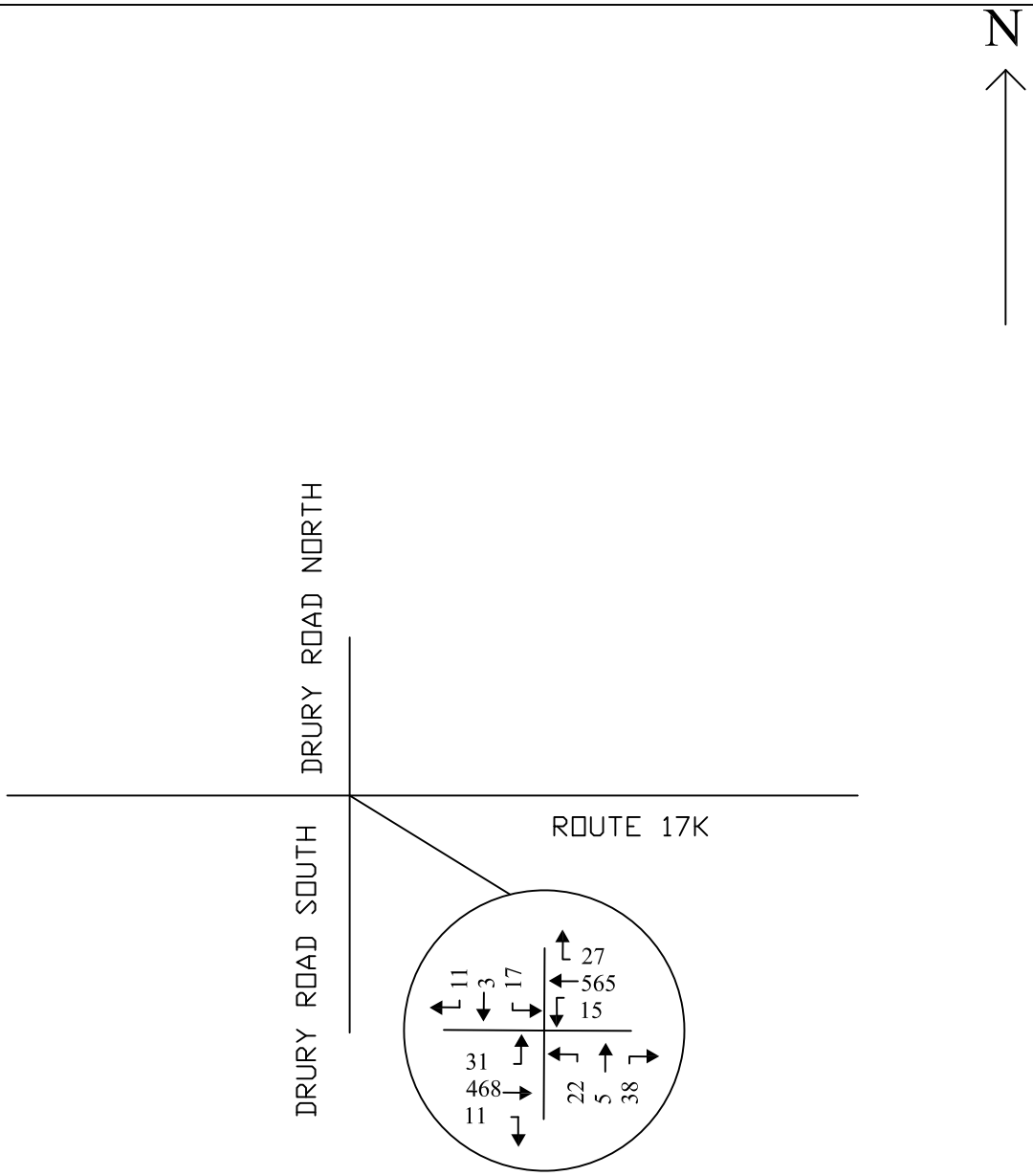
CAPACITY ANALYSIS SUMMARY
2026 NO-BUILD VS. 2026 BUILD CONDITIONS
UNSIGNALIZED INTERSECTIONS

	2026 NO-BUILD						2026 \BUILD					
	AM PEAK HOUR			PM PEAK HOUR			AM PEAK HOUR			PM PEAK HOUR		
	LOS	V/C Ratio	Delay	LOS	V/C Ratio	Delay	LOS	V/C Ratio	Delay	LOS	V/C Ratio	Delay
Route 17K/Drury Road												
Route 17K												
Eastbound LTR	A	0.05	8.7	A	0.04	9.0	A	0.05	8.7	A	0.04	9.0
Westbound LTR	A	0.01	8.2	A	0.02	8.8	A	0.02	8.3	A	0.05	9.0
Drury Road												
Northbound LTR	C	0.21	20.4	D	0.32	28.1	D	0.45	29.0	E	0.53	41.9
Southbound LTR	D	0.31	28.3	D	0.22	34.0	D	0.35	32.8	E	0.27	42.7

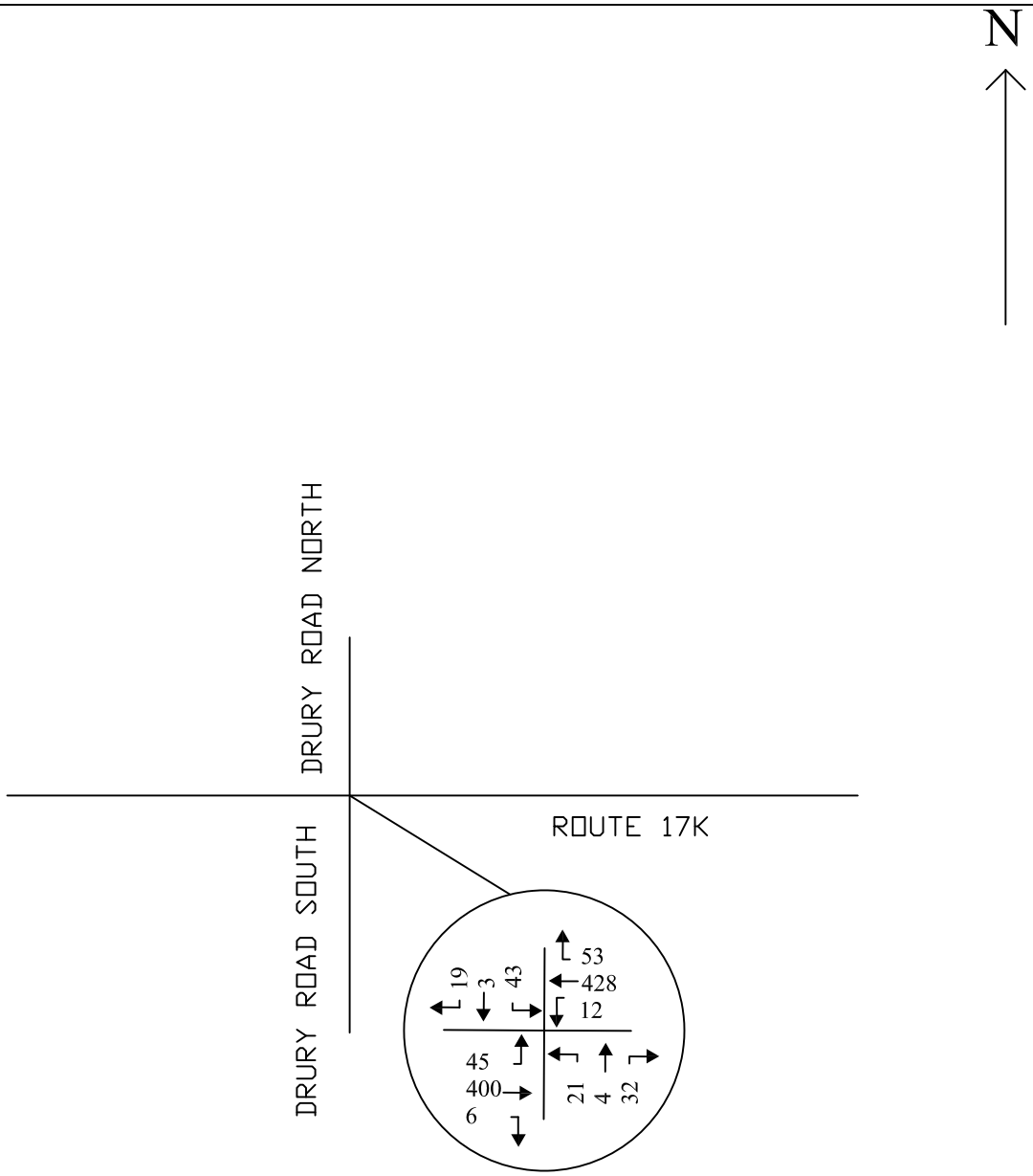
APPENDIX A
TRAFFIC VOLUME FIGURES



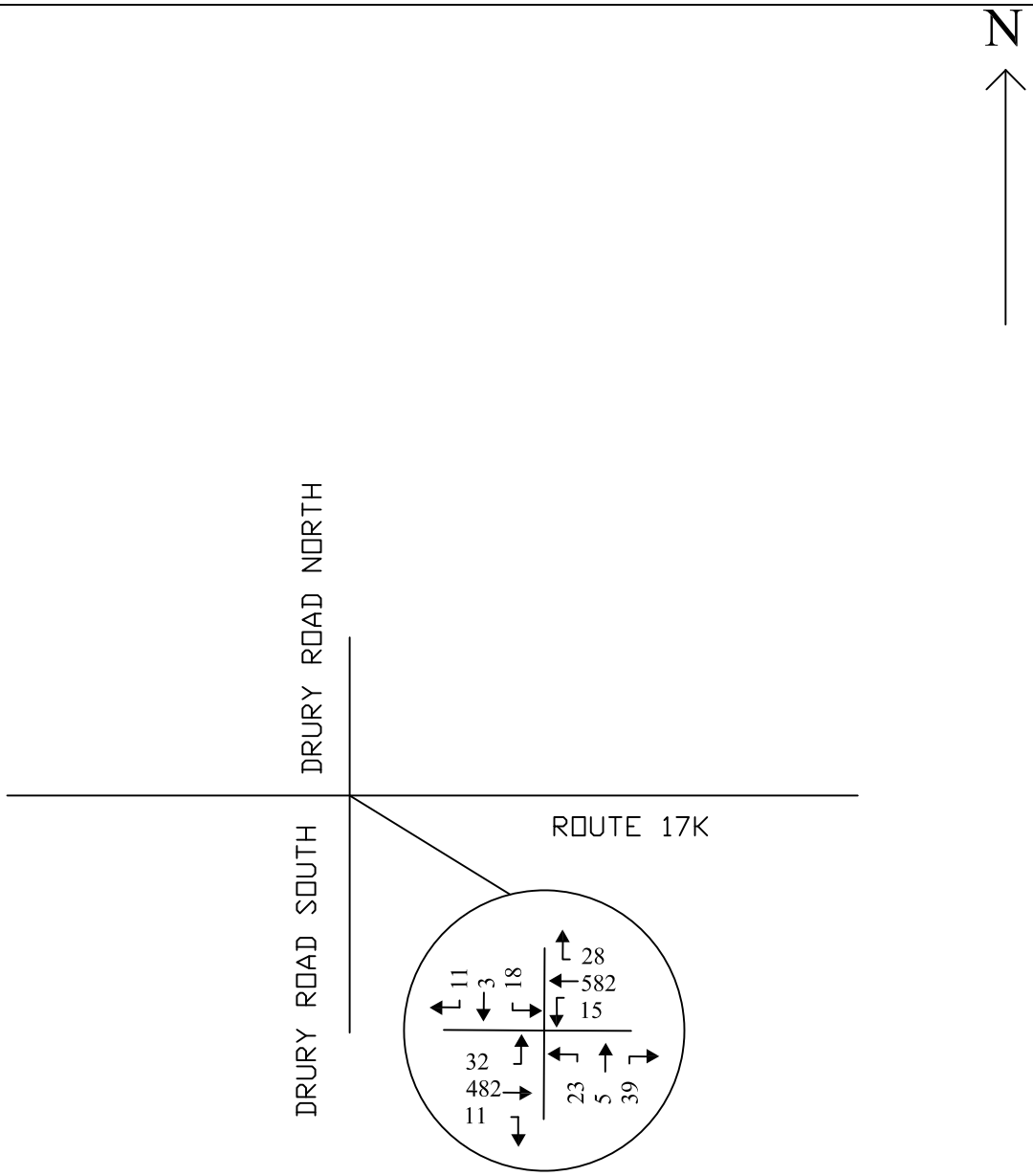
EXISTING AM PEAK HOUR TRAFFIC
7:15 AM – 8:15 AM
FIGURE 2



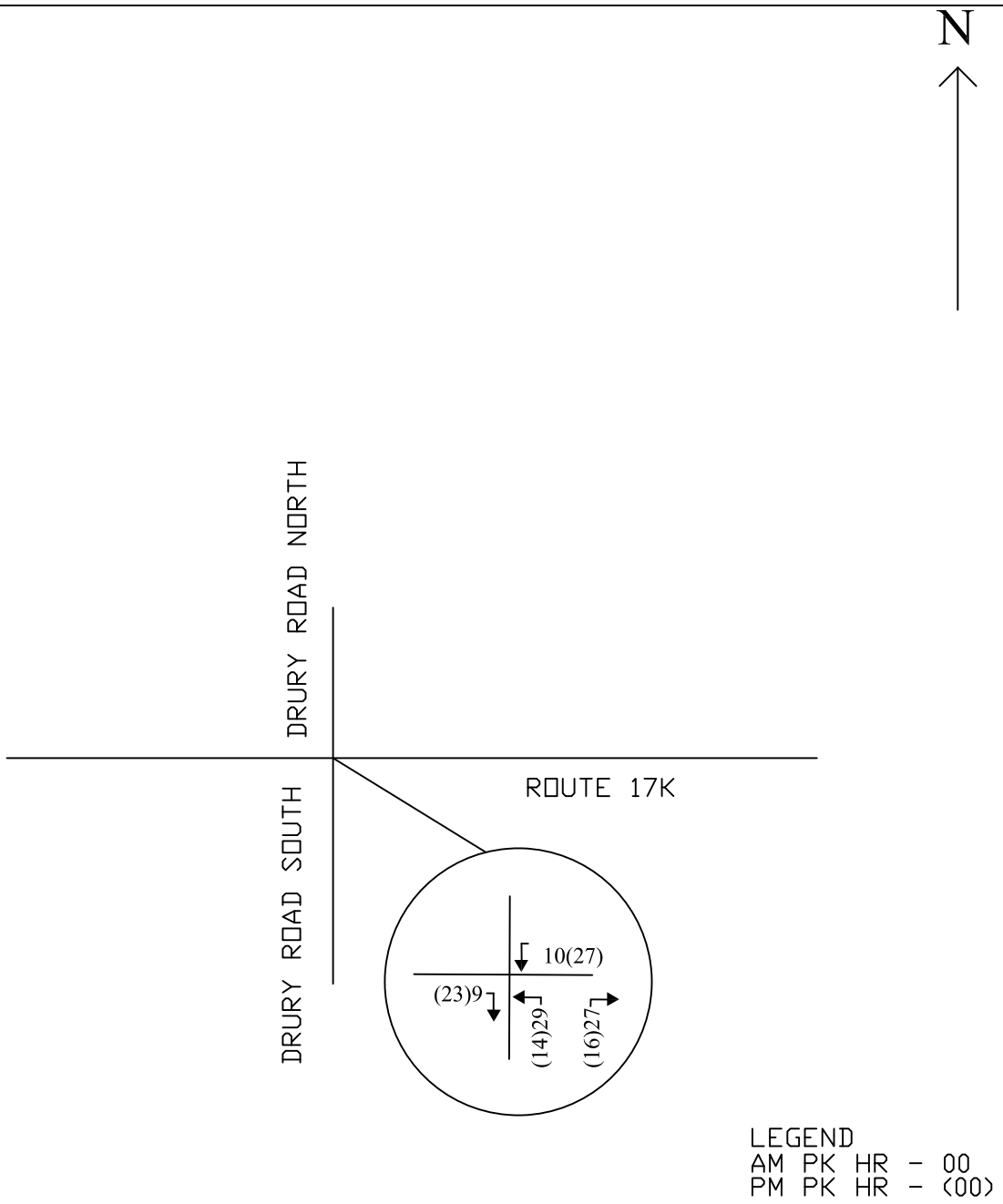
EXISTING PM PEAK HOUR TRAFFIC
4:30 PM – 5:30 PM
FIGURE 3



2026 NO-BUILD PEAK HOUR TRAFFIC
7:15 AM - 8:15 AM
FIGURE 4

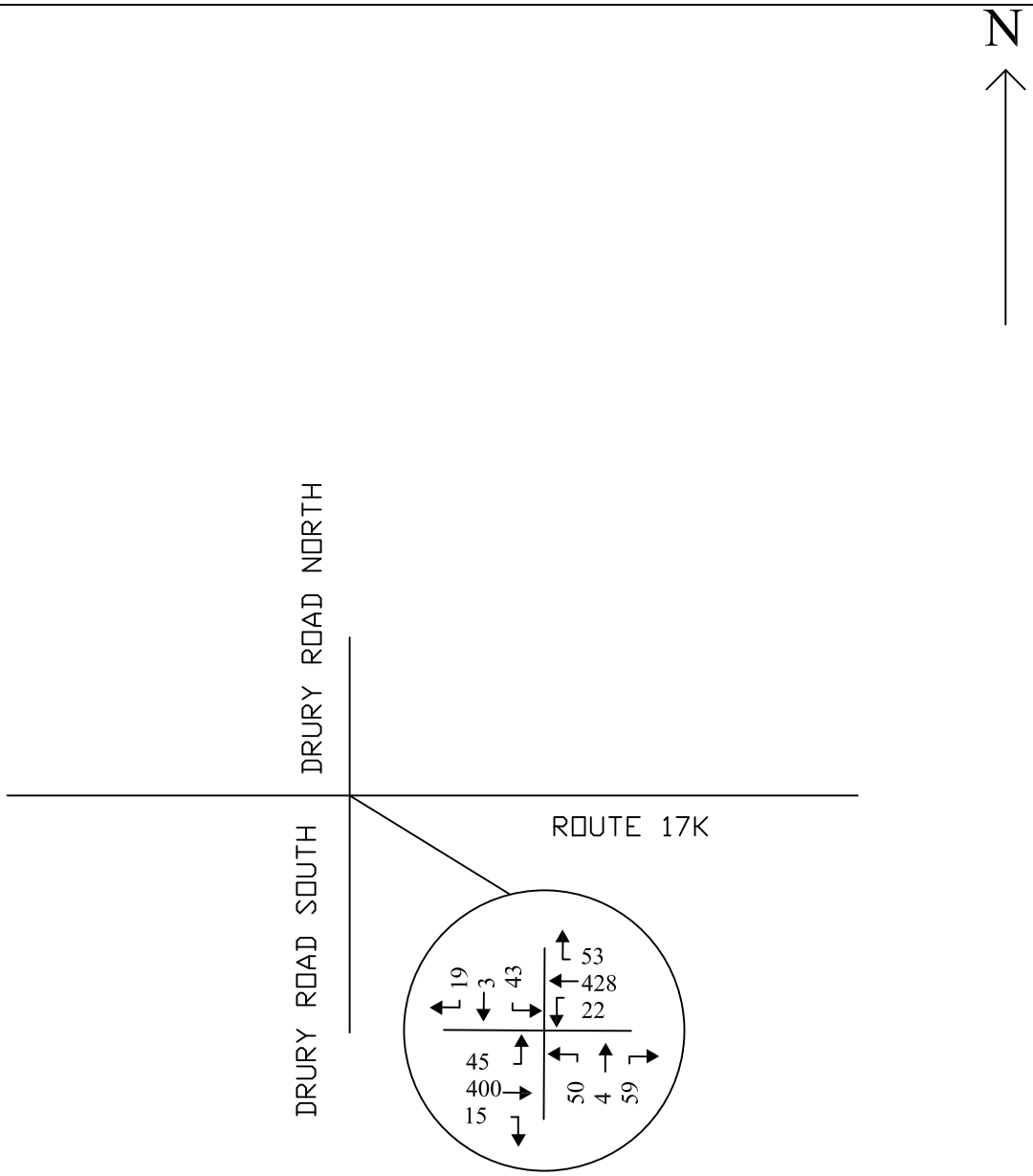


2026 NO-BUILD PM PEAK HOUR TRAFFIC
4:30 PM - 5:30 PM
FIGURE 5

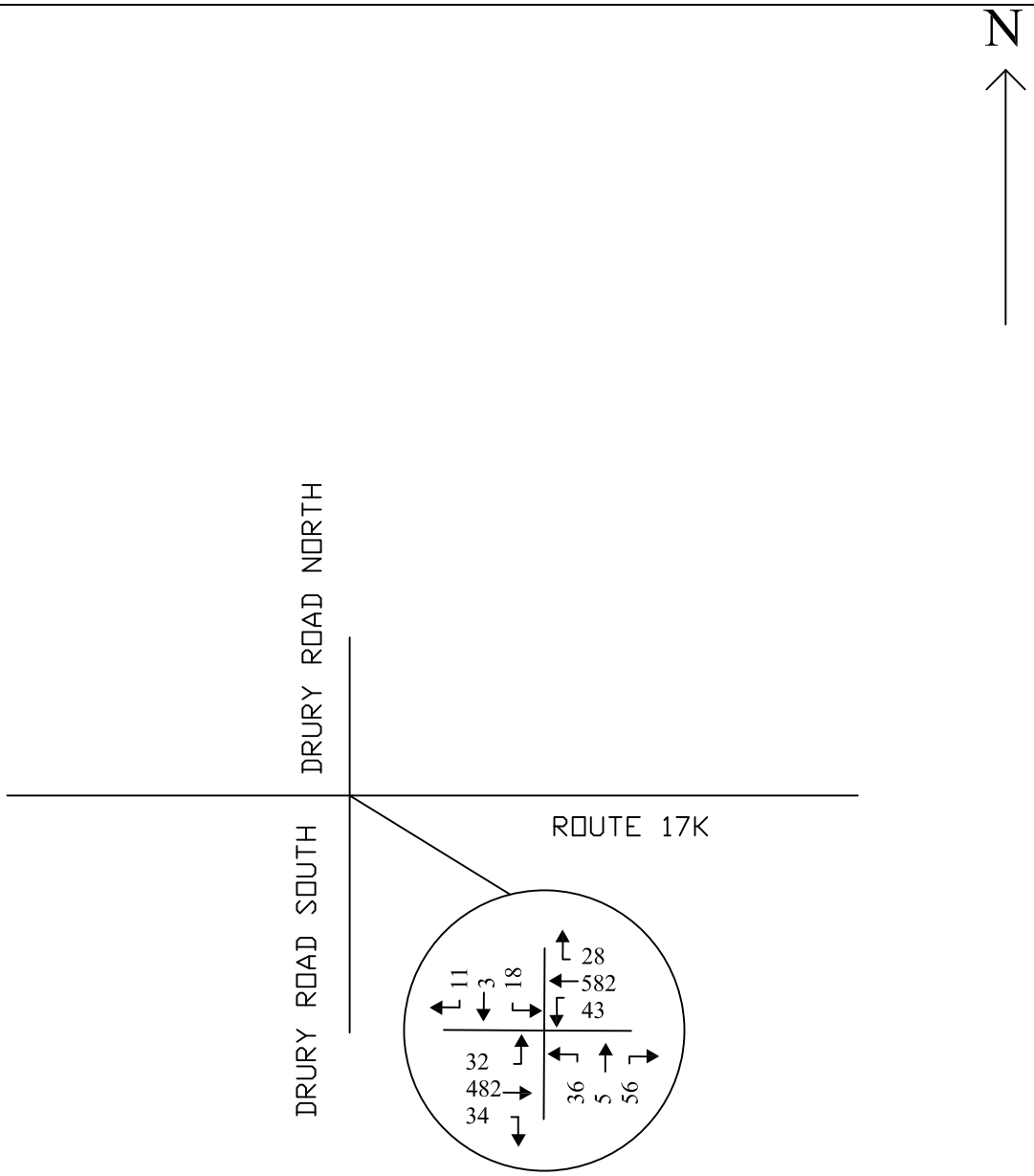


TRIP DISTIRBUTION

FIGURE 6



2026 BUILD PEAK HOUR TRAFFIC
7:15 AM – 8:15 AM
FIGURE 7



2026 BUILD PM PEAK HOUR TRAFFIC
4:30 PM - 5:30 PM
FIGURE 8

APPENDIX B
CAPACITY ANALYSIS SUMMARIES

CAPACITY ANALYSIS SUMMARY
EXISTING CONDITIONS

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	44	388	6	12	415	51	20	4	31	42	3	18
Future Vol, veh/h	44	388	6	12	415	51	20	4	31	42	3	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	7	8	33	0	8	0	5	0	32	0	0	11
Mvmt Flow	47	417	6	13	446	55	22	4	33	45	3	19

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	501	0	0	423	0	0	1025	1041	420	1033	1017	474
Stage 1	-	-	-	-	-	-	514	514	-	500	500	-
Stage 2	-	-	-	-	-	-	511	527	-	533	517	-
Critical Hdwy	4.17	-	-	4.1	-	-	7.15	6.5	6.52	7.1	6.5	6.31
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.263	-	-	2.2	-	-	3.545	4	3.588	3.5	4	3.399
Pot Cap-1 Maneuver	1038	-	-	1147	-	-	211	232	574	213	239	572
Stage 1	-	-	-	-	-	-	538	539	-	557	546	-
Stage 2	-	-	-	-	-	-	540	532	-	534	537	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1038	-	-	1147	-	-	190	215	574	186	221	572
Mov Cap-2 Maneuver	-	-	-	-	-	-	190	215	-	186	221	-
Stage 1	-	-	-	-	-	-	506	507	-	524	537	-
Stage 2	-	-	-	-	-	-	510	523	-	469	505	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0.2	19.4	26.7
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	309	1038	-	-	1147	-	-	233
HCM Lane V/C Ratio	0.191	0.046	-	-	0.011	-	-	0.291
HCM Control Delay (s)	19.4	8.6	0	-	8.2	0	-	26.7
HCM Lane LOS	C	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	0.7	0.1	-	-	0	-	-	1.2

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	468	11	15	565	27	22	5	38	17	3	11
Future Vol, veh/h	31	468	11	15	565	27	22	5	38	17	3	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	4	0	13	4	0	0	20	5	0	0	0
Mvmt Flow	34	514	12	16	621	30	24	5	42	19	3	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	651	0	0	526	0	0	1264	1271	520	1280	1262	636
Stage 1	-	-	-	-	-	-	588	588	-	668	668	-
Stage 2	-	-	-	-	-	-	676	683	-	612	594	-
Critical Hdwy	4.1	-	-	4.23	-	-	7.1	6.7	6.25	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.7	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.7	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.317	-	-	3.5	4.18	3.345	3.5	4	3.3
Pot Cap-1 Maneuver	945	-	-	987	-	-	148	155	550	144	171	481
Stage 1	-	-	-	-	-	-	499	468	-	451	459	-
Stage 2	-	-	-	-	-	-	446	423	-	484	496	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	945	-	-	987	-	-	134	143	550	122	158	481
Mov Cap-2 Maneuver	-	-	-	-	-	-	134	143	-	122	158	-
Stage 1	-	-	-	-	-	-	474	444	-	428	447	-
Stage 2	-	-	-	-	-	-	420	412	-	419	471	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.2	26	31.2
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	242	945	-	-	987	-	-	171
HCM Lane V/C Ratio	0.295	0.036	-	-	0.017	-	-	0.199
HCM Control Delay (s)	26	9	0	-	8.7	0	-	31.2
HCM Lane LOS	D	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	1.2	0.1	-	-	0.1	-	-	0.7

CAPACITY ANALYSIS SUMMARY
2026 NO-BUILD CONDITIONS

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	45	400	6	12	428	53	21	4	32	43	3	19
Future Vol, veh/h	45	400	6	12	428	53	21	4	32	43	3	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	7	8	33	0	8	0	5	0	32	0	0	11
Mvmt Flow	48	430	6	13	460	57	23	4	34	46	3	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	517	0	0	436	0	0	1055	1072	433	1063	1047	489
Stage 1	-	-	-	-	-	-	529	529	-	515	515	-
Stage 2	-	-	-	-	-	-	526	543	-	548	532	-
Critical Hdwy	4.17	-	-	4.1	-	-	7.15	6.5	6.52	7.1	6.5	6.31
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.263	-	-	2.2	-	-	3.545	4	3.588	3.5	4	3.399
Pot Cap-1 Maneuver	1024	-	-	1134	-	-	201	222	564	203	230	561
Stage 1	-	-	-	-	-	-	528	530	-	546	538	-
Stage 2	-	-	-	-	-	-	530	523	-	524	529	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1024	-	-	1134	-	-	180	205	564	177	212	561
Mov Cap-2 Maneuver	-	-	-	-	-	-	180	205	-	177	212	-
Stage 1	-	-	-	-	-	-	495	497	-	512	529	-
Stage 2	-	-	-	-	-	-	499	515	-	458	496	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0.2	20.4	28.3
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	295	1024	-	-	1134	-	-	223
HCM Lane V/C Ratio	0.208	0.047	-	-	0.011	-	-	0.313
HCM Control Delay (s)	20.4	8.7	0	-	8.2	0	-	28.3
HCM Lane LOS	C	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	0.8	0.1	-	-	0	-	-	1.3

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	482	11	15	582	28	23	5	39	18	3	11
Future Vol, veh/h	32	482	11	15	582	28	23	5	39	18	3	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	4	0	13	4	0	0	20	5	0	0	0
Mvmt Flow	35	530	12	16	640	31	25	5	43	20	3	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	671	0	0	542	0	0	1301	1309	536	1318	1300	656
Stage 1	-	-	-	-	-	-	606	606	-	688	688	-
Stage 2	-	-	-	-	-	-	695	703	-	630	612	-
Critical Hdwy	4.1	-	-	4.23	-	-	7.1	6.7	6.25	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.7	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.7	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.317	-	-	3.5	4.18	3.345	3.5	4	3.3
Pot Cap-1 Maneuver	929	-	-	974	-	-	139	147	539	136	163	469
Stage 1	-	-	-	-	-	-	487	460	-	440	450	-
Stage 2	-	-	-	-	-	-	436	414	-	473	487	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	929	-	-	974	-	-	125	135	539	114	150	469
Mov Cap-2 Maneuver	-	-	-	-	-	-	125	135	-	114	150	-
Stage 1	-	-	-	-	-	-	461	435	-	416	438	-
Stage 2	-	-	-	-	-	-	411	403	-	407	461	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.2	28.1	34
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	228	929	-	-	974	-	-	159
HCM Lane V/C Ratio	0.323	0.038	-	-	0.017	-	-	0.221
HCM Control Delay (s)	28.1	9	0	-	8.8	0	-	34
HCM Lane LOS	D	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	1.3	0.1	-	-	0.1	-	-	0.8

CAPACITY ANALYSIS SUMMARY
2026 BUILD CONDITIONS

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	45	400	15	22	428	53	50	4	59	43	3	19
Future Vol, veh/h	45	400	15	22	428	53	50	4	59	43	3	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	7	8	33	0	8	0	5	0	32	0	0	11
Mvmt Flow	48	430	16	24	460	57	54	4	63	46	3	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	517	0	0	446	0	0	1082	1099	438	1105	1079	489
Stage 1	-	-	-	-	-	-	534	534	-	537	537	-
Stage 2	-	-	-	-	-	-	548	565	-	568	542	-
Critical Hdwy	4.17	-	-	4.1	-	-	7.15	6.5	6.52	7.1	6.5	6.31
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.263	-	-	2.2	-	-	3.545	4	3.588	3.5	4	3.399
Pot Cap-1 Maneuver	1024	-	-	1125	-	-	192	214	560	190	220	561
Stage 1	-	-	-	-	-	-	524	528	-	532	526	-
Stage 2	-	-	-	-	-	-	515	511	-	511	523	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1024	-	-	1125	-	-	170	195	560	154	200	561
Mov Cap-2 Maneuver	-	-	-	-	-	-	170	195	-	154	200	-
Stage 1	-	-	-	-	-	-	492	495	-	499	510	-
Stage 2	-	-	-	-	-	-	478	496	-	421	491	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0.4	29	32.8
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	269	1024	-	-	1125	-	-	198
HCM Lane V/C Ratio	0.452	0.047	-	-	0.021	-	-	0.353
HCM Control Delay (s)	29	8.7	0	-	8.3	0	-	32.8
HCM Lane LOS	D	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	2.2	0.1	-	-	0.1	-	-	1.5

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	32	482	34	43	582	28	36	5	56	18	3	11
Future Vol, veh/h	32	482	34	43	582	28	36	5	56	18	3	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	4	0	13	4	0	0	20	5	0	0	0
Mvmt Flow	35	530	37	47	640	31	40	5	62	20	3	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	671	0	0	567	0	0	1376	1384	549	1402	1387	656
Stage 1	-	-	-	-	-	-	619	619	-	750	750	-
Stage 2	-	-	-	-	-	-	757	765	-	652	637	-
Critical Hdwy	4.1	-	-	4.23	-	-	7.1	6.7	6.25	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.7	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.7	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.317	-	-	3.5	4.18	3.345	3.5	4	3.3
Pot Cap-1 Maneuver	929	-	-	953	-	-	124	132	530	119	144	469
Stage 1	-	-	-	-	-	-	480	453	-	407	422	-
Stage 2	-	-	-	-	-	-	403	387	-	460	475	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	929	-	-	953	-	-	107	115	530	91	125	469
Mov Cap-2 Maneuver	-	-	-	-	-	-	107	115	-	91	125	-
Stage 1	-	-	-	-	-	-	454	428	-	385	389	-
Stage 2	-	-	-	-	-	-	359	356	-	379	449	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.6	41.9	42.7
HCM LOS			E	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	200	929	-	-	953	-	-	130
HCM Lane V/C Ratio	0.533	0.038	-	-	0.05	-	-	0.27
HCM Control Delay (s)	41.9	9	0	-	9	0	-	42.7
HCM Lane LOS	E	A	A	-	A	A	-	E
HCM 95th %tile Q(veh)	2.8	0.1	-	-	0.2	-	-	1

APPENDIX C
TRAFFIC COUNTS

Location : Drury Ln @ Route 17K

Location 1 (N/S): N Drury Ln/S. Drury Ln

Location 2 (E/W): Route 17K

Collect Date: 3/2/23

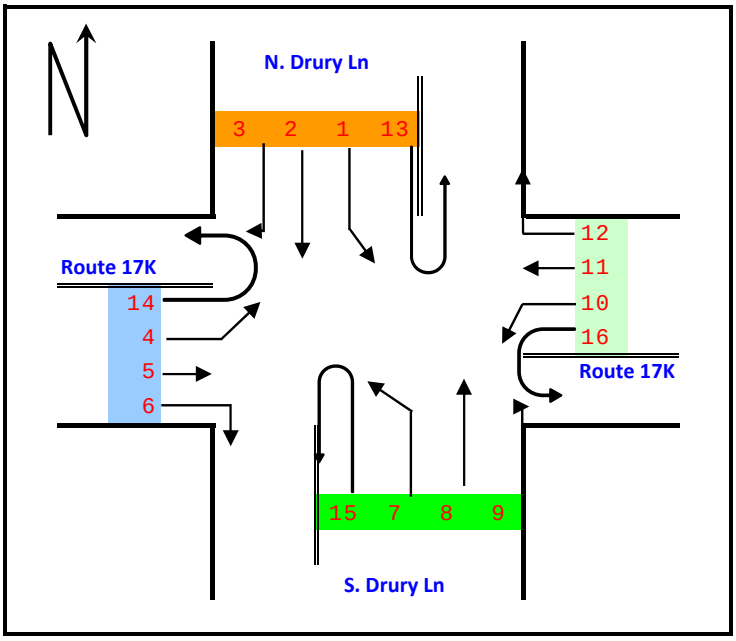
Period: AM, PM

Interval (min): 15

Start Time: 7:00

End Time: 18:00

Vehicle Type	
Cars	Y
Buses	Y
Trucks	Y



Total:	58	15	117	0	35	1588	145	0	141	20	93	0	143	1815	58	0	4228
7:15-8:15	SBRT	SBST	SBLT		EBRT	EBST	EBLT		NBRT	NBST	NBLT		WBRT	WBST	WBLT		Totals
Cars	16	3	42		4	356	41		21	4	19		51	380	12		949
Buses	1	0	0		1	6	1		2	0	0		0	9	0		20
Trucks	1	0	0		1	26	2		8	0	1		0	26	0		65
Totals	18	3	42		6	388	44		31	4	20		51	415	12		1034
% HV	11%	0%	0%		33%	8%	7%		32%	0%	5%		0%	8%	0%		8%
PHF	0.93	0.93	0.93		0.93	0.93	0.93		0.93	0.93	0.93		0.93	0.93	0.93		0.93
4:30-5:30	SBRT	SBST	SBLT		EBRT	EBST	EBLT		NBRT	NBST	NBLT		WERT	WBST	WBLT		Totals
Cars	11	3	17		11	447	31		36	4	22		27	542	13		1164
Buses	0	0	0		0	14	0		0	0	0		0	3	2		19
Trucks	0	0	0		0	7	0		2	1	0		0	20	0		30
Totals	11	3	17		11	468	31		38	5	22		27	565	15		1213
% HV	0%	0%	0%		0%	4%	0%		5%	20%	0%		0%	4%	13%		4%
PHF	0.91	0.91	0.91		0.91	0.91	0.91		0.91	0.91	0.91		0.91	0.91	0.91		0.91