KBP CONSULTING, INC.

MEMORANDUM

To: Jonathan Overton, P.E.
Dalila Fernandez, P.E.

From: Karl B. Peterson, P.E.

Date: February 7, 2023

Subject: 2050 Hammondville Road – Pompano Beach, Florida
Preliminary Traffic Data and Analyses

2050 Hammondville Road is a proposed multifamily residential development to be located in the southeast quadrant of the intersection at Hammondville Road (Dr. MLK Boulevard) and S. Powerline Road (State Road 845) in Pompano Beach, Broward County, Florida. More specifically the Broward County Folio Numbers for the subject site are 4842 34 00 0270 and 4842 34 00 0271. A project location map is presented in Attachment A to this memorandum.

The subject site has a land area of approximately 3.765 acres (164,009 square feet). There is an existing +/- 1,308 square foot convenience store on this site. Vehicular access to the site is currently provided by one (1) right-turn in / right-turn out only driveway on Hammondville Road and by one (1) right-turn in / right-turn out only driveway on S. Powerline Road.

The proposed development will consist of four (4) eight-story buildings with a total of 261 residential dwelling units. Vehicular access to the site will be provided by one (1) right-turn in / right-turn out only driveway and one (1) right-turn out only driveway to be located on Hammondville Road. The buildout year is projected to be 2025. Attachment B contains the site plan and the project data.

The purpose of this memorandum is to document the trip generation characteristics of this proposed development and the traffic impacts at the intersection of Hammondville Road (Dr. MLK Boulevard) and S. Powerline Road (State Road 845).

TRIP GENERATION ANALYSIS

The trip generation analysis for the 2050 Hammondville Road development is based upon information contained in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual (11th Edition)*. According to the subject ITE manual, the most appropriate land use categories for the existing and proposed development are Land Use #221 – Multifamily Housing (Mid-Rise) and Land Use #851 – Convenience Store. The trip generation rates and equations used to determine the vehicle trips associated with this analysis are presented on the following page. Relevant excerpts from the referenced ITE manual are presented in Attachment C to this memorandum.

MULTIFAMILY HOUSING (MID-RISE) (ITE LAND USE #221)

- Weekday: T = 4.77 (X) – 46.46
  where T = number of trips and X = number of dwelling units
- AM Peak Hour: T = 0.44 (X) – 11.61 (23% in / 77% out)
- PM Peak Hour: T = 0.39 (X) + 0.34 (61% in / 39% out)

CONVENIENCE STORE (ITE LAND USE #851)

- Weekday: T = 762.28 (X)
  where T = number of trips and X = 1,000 square feet of gross floor area
- AM Peak Hour: T = 62.54 (X) (50% in / 50% out)
- PM Peak Hour: T = 49.11 (X) (51% in / 49% out)

The resulting daily and peak hour (AM and PM) trip generation analysis for the 2050 Hammondville Road site is presented in Table 1 below.

Table 1
2050 Hammondville Road
Trip Generation Analysis
Pompano Beach, Florida

Land Use	Size	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
			In	Out	Total	In	Out	Total
Existing Convenience Store	1,308 SF	997	41	41	82	33	31	64
Proposed Multifamily Housing (Mid-Rise)	261 DU	1,199	24	79	103	62	40	102
Difference (Proposed - Existing)		**202**	**(17)**	**38**	**21**	**29**	**9**	**38**

Compiled by: KBP Consulting, Inc. (February 2023).
Source: ITE Trip Generation Manual (11th Edition).

As indicated in Table1 above, the 2050 Hammondville Road development is anticipated to generate 1,199 daily vehicle trips, 103 AM peak hour vehicle trips (24 inbound and 79 outbound), and 102 vehicle trips during the PM peak hour (62 inbound and 40 outbound). As mentioned previously, there is an existing convenience store on the site that is estimated to generate 997 daily vehicle trips, 82 AM peak hour vehicle trips (41 inbound and 41 outbound), and 64 vehicle trips during the PM peak hour (33 inbound and 31 outbound). While the net difference in trips is projected to be minimal, the remaining analyses have been conducted assuming that there is no existing development or corresponding trips associated with this site.

OPERATIONAL ANALYSES

During meetings with the Florida Department of Transportation (FDOT) – District Four regarding this site, an operational analysis of the intersection at Hammondville Road and S. Powerline Road (SR 845) was requested. The intersection geometry of this intersection and the project driveways is presented in Attachment D.

Existing Traffic Counts. The first step in this analytical process is the collection of existing traffic volumes at the study intersection. This data was collected during the AM and PM peak periods on Wednesday, January 25, 2023. The data, as collected in the field, is presented in Attachment E.

Peak Season Conversion Factor. Traffic data collected on January 25, 2023, was reviewed with respect to average peak season conditions. Based on FDOT's current Peak Season Factor Category report (see Attachment F), the adjustment factor for traffic data collected during this time period is 1.07. Utilizing this adjustment factor, seasonally adjusted existing traffic volumes were developed and are presented in Attachment G.

Historic Traffic Volumes and Background Growth Rate. Research relative to the background traffic growth in the area was conducted. Historic traffic count data (i.e. the past 5 years between 2017 and 2021) was obtained from the FDOT and is presented in Attachment H of this report. Traffic growth on the following roadway segments was considered for this analysis:

- #860449 – SR 845 / Powerline Road – South of Hammondville Road
- #867773 – Hammondville Road – West of NW 15th Avenue

The referenced data indicates that the study area has exhibited moderately declining traffic volumes between 2017 and 2021. For the purposes of this analysis, a 1.0% annual growth rate has been applied.

Project Traffic Distribution & Assignment. Project traffic generated by the 2050 Hammondville Road development has been assigned to the adjacent street network based upon the surrounding land use patterns, the nearby transportation network and background traffic conditions. The resulting trip distribution and assignment patterns are presented in Attachment I.

Future Traffic Volumes. The future traffic calculations (existing traffic volumes, background traffic growth, committed development traffic and the traffic associated with the MXU Margate project) for the study intersections are contained in Attachment J in tabular format. These volumes are also presented graphically in this attachment.

Level of Service (LOS) Analyses. Intersection capacity / level of service (LOS) analyses were conducted for the study intersection. These analyses were undertaken following the capacity / level of service procedures outlined in the 2010 Highway Capacity Manual (HCM) using the Synchro software. The results of these capacity analyses are summarized in Table 2 on the following page and the Synchro output is presented in Attachment K. Signal timing information obtained from the Broward County Traffic Engineering Division is presented in Attachment L.

Table 2
2050 Hammondville Road
Intersection Levels of Service
Pompano Beach, Florida

Intersection / Movement	Existing (2023) Conditions AM Peak	Existing (2023) Conditions PM Peak	Future (2025) Conditions Without Project Traffic AM Peak	Future (2025) Conditions Without Project Traffic PM Peak	Future (2025) Conditions With Project Traffic AM Peak	Future (2025) Conditions With Project Traffic PM Peak
Signalized Intersection						
Hammondville Rd & Powerline Rd	**D (53.4)**	**E (72.3)**	**D (54.7)**	**E (76.5)**	**E (56.8)**	**E (77.6)**
- Northbound Approach	D (38.1)	D (43.7)	D (39.3)	D (45.1)	D (39.8)	D (45.9)
- Southbound Approach	D (41.5)	F (83.2)	D (43.3)	F (91.3)	D (43.5)	F (91.1)
- Eastbound Approach	E (58.9)	E (61.8)	E (58.9)	E (62.0)	E (59.6)	E (62.4)
- Westbound Approach	F (90.6)	F (102.0)	F (93.2)	F (106.8)	F (101.5)	F (110.3)
Hammondville Rd & Powerline Rd *Optimized*	--	--	--	--	***D (54.9)***	***E (75.5)***

Source: Highway Capacity Manual and SYNCHRO.
Legend: D (37.7) = LOS (Average Delay - Seconds / Vehicle)

- **Hammondville Road & S. Powerline Road –** Overall, this intersection currently operates at Level of Service (LOS) "D" in the AM peak hour and LOS "E" in the PM peak hour. This condition continues in the future (2025) background condition without the project traffic associated with the 2050 Hammondville Road project. When the project traffic is considered in this analysis, the LOS in the AM peak hour degrades to LOS "E" while the PM peak hour LOS remains "E". However, the additional operational delay attributed to the project is minimal (i.e. +2.1 seconds / vehicle in the AM peak hour and +1.1 seconds / vehicle in the PM peak hour).

  An optimization analysis (i.e. holding the cycle length constant and adjusting the green times) was performed for both time periods. The results indicate that during the AM peak hour the LOS will be improved to "D" (+0.2 seconds / vehicle) and during the PM peak hour the LOS will remain at "E". However, during the PM peak hour the delay can be reduced below the amount of delay for the future background conditions (-1.0 seconds / vehicle).

Turn Lane Storage Analysis (95th Percentile Queues). The storage capacities of the exclusive turn lanes and the projected 95th percentile queues at the study intersection have been evaluated and are documented in Table 3 on the following page.

Table 3
2050 Hammondville Road
Turn Lane Storage Analysis
Pompano Beach, Florida

Intersection / Movement		Existing (2023) Conditions		Future (2025) Conditions Without Project Traffic		Future (2025) Conditions With Project Traffic	
		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
Signalized Intersection	**Cap.***	**95th Percentile Queues**					
Hammondville Rd & Powerline Rd							
- Northbound Left-Turn	300'	132'	278'	135'	287'	135'	287'
- Southbound Left-Turn	275'	97'	87'	98'	88'	103'	99'
- Eastbound Left-Turn	590'	507'	412'	524'	421'	524'	421'
- Eastbound Right-Turn	145'	218'	65'	226'	68'	230'	69'
- Westbound Left-Turn	325'	150'	202'	153'	204'	163'	216'

Source: Highway Capacity Manual and SYNCHRO.
* Cap. = Amount of full width storage capacity of the turn lane in feet.

- **Hammondville Road & S. Powerline Road –** According to the operational analyses, with the exception of the eastbound right-turn lane, each of the exclusive turn lanes has adequate capacity to accommodate the 95th percentile queues in each of the time periods / scenarios considered. Regarding the eastbound right-turn lane, the 2050 Hammondville Road project traffic has no direct impact on this turning movement and the secondary impacts are considered to be minimal (i.e. an increase in the 95th percentile queue of 4 feet, or +1.8%).

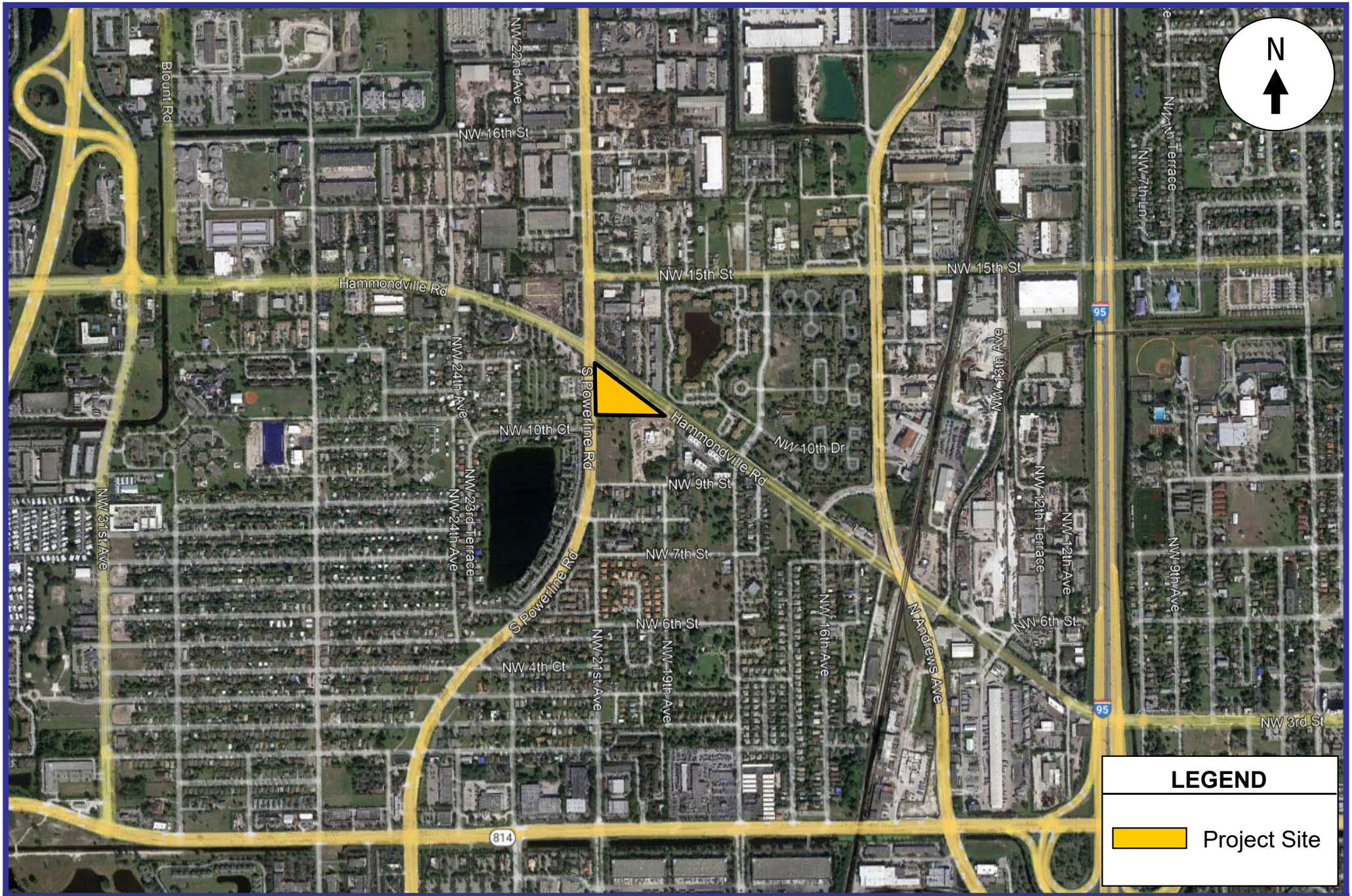
Conclusions. Based upon the analyses of the study intersection at Hammondville Road and S. Powerline Road, it is evident that the project traffic associated with the 2050 Hammondville Road project will have a minimal impact on the intersection operations.

In summary, the LOS in the AM peak hour degrades from LOS "D" to LOS "E" while the PM peak hour LOS remains "E". However, the additional operational delay attributed to the project is minimal (i.e. +2.1 seconds / vehicle in the AM peak hour and +1.1 seconds / vehicle in the PM peak hour). Additionally, the signal timings can be optimized for the future total traffic conditions such that the AM peak hour LOS will remain at "D" and the PM peak hour LOS will remain at "E"; however, the overall intersection delay can be reduced.

Attachment A

2050 Hammondville Road – Pompano Beach, FL

Project Location Map



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Project Location Map

FIGURE A-1
2050 Hammondville Road
Pompano Beach, Florida

Attachment B

2050 Hammondville Road – Pompano Beach, FL

Preliminary Site Plan

1 **CONCEPTUAL SITE PLAN - TEST 1**
1" = 30'-0"
0' 10' 30' 60'

BUILDING A - 71 UNITS - 8 STORIES

4 BEDROOM UNIT - 7 UNITS - 9,128 SF
3 BEDROOM UNIT - 24 UNITS - 24,816 SF
2 BEDROOM UNIT - 24 UNITS - 19,584 SF
1 BEDROOM UNIT - 16 UNITS - 10,400 SF

TOTAL UNITS AREA - 63,928 SF

TOTAL GROSS AREA* - 79,720 SF
*BOH, UNITS & CIRCULATION

BUILDING B1 - 63 UNITS - 8 STORIES

4 BEDROOM UNIT - 15 UNITS - 19,560 SF
3 BEDROOM UNIT - 24 UNITS - 24,816 SF
2 BEDROOM UNIT - 24 UNITS - 19,584 SF

TOTAL UNITS AREA - 63,960 SF

TOTAL GROSS AREA* - 79,408 SF
*BOH, UNITS & CIRCULATION

BUILDING B2 - 63 UNITS - 8 STORIES

4 BEDROOM UNIT - 15 UNITS - 19,560 SF
3 BEDROOM UNIT - 24 UNITS - 24,816 SF
2 BEDROOM UNIT - 24 UNITS - 19,584 SF

TOTAL UNITS AREA - 63,960 SF

TOTAL GROSS AREA* - 79,408 SF
*BOH, UNITS & CIRCULATION

BUILDING C - 68 UNITS - 8 STORIES

4 BEDROOM UNIT - 10 UNITS - 13,040 SF
3 BEDROOM UNIT - 24 UNITS - 24,816 SF
2 BEDROOM UNIT - 24 UNITS - 19,584 SF
1 BEDROOM UNIT - 10 UNITS - 6,500 SF

TOTAL UNITS AREA - 63,940 SF

TOTAL GROSS AREA* - 79,400 SF
*BOH, UNITS & CIRCULATION

BUILDING HEIGHT = 75'

PARKING CALCULATION

REQUIRED PARKING:
317,936 GS (RESIDENTIAL) / 1,000 = 317.93 = **318 SPOTS**

ADDITIONAL **20%** REDUCTION BASED ON TABLE 155.2421 (SITE IS WITHIN A DESIGNATED BROWNFIELD)

318 SPOTS - 20% (63.6 SPOTS) = 254.4 = **255 REQUIRED SPOTS**

PROVIDED PARKING SPACES = **255 SPOTS**

UNITS AREA

4 BEDROOM UNIT - 1,304 SF
3 BEDROOM UNIT - 1,034 SF
2 BEDROOM UNIT - 816 SF
1 BEDROOM UNIT - 650 SF

RENTABLE AREA

BUILDING A - 63,928 SF
BUILDING B1 - 63,960 SF
BUILDING B2 - 63,960 SF
BUILDING C - 63,940 SF

TOTAL RENTABLE AREA - 255,788 SF

GROSS AREA

BUILDING A - 79,720 SF
BUILDING B1 - 79,408 SF
BUILDING B2 - 79,408 SF
BUILDING C - 79,400 SF
PARKING GARAGE - 98,005 SF

TOTAL GROSS AREA - 415,941

GROSS AREA - RESIDENTIAL

BUILDING A - 79,720 SF
BUILDING B1 - 79,408 SF
BUILDING B2 - 79,408 SF
BUILDING C - 79,400 SF

TOTAL RES. GROSS AREA - 317,936

TOTAL UNITS

4 BEDROOM - 47 UNITS
3 BEDROOM - 94 UNITS
2 BEDROOM - 94 UNITS
1 BEDROOM - 26 UNITS

TOTAL - 261 UNITS

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700 SW 1ST STREET
MIAMI, FL 33130
OFFICE@PREMIUMDEVELOPMENT.US

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501 EAST LAS OLAS BLVD #300
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2050 HAMMONDVILLE RDPOMPANO BEACH, FL 33069

CONCEPTUAL 8 FLOOR SITE PLAN

01-05-23

Attachment C

2050 Hammondville Road – Pompano Beach, FL

Relevant Excerpts from the ITE *Trip Generation Manual (11th Edition)*

Land Use: 221
Multifamily Housing (Mid-Rise)

Description

Mid-rise multifamily housing includes apartments and condominiums located in a building that has between four and 10 floors of living space. Access to individual dwelling units is through an outside building entrance, a lobby, elevator, and a set of hallways.

Multifamily housing (low-rise) (Land Use 220), multifamily housing (high-rise) (Land Use 222), off-campus student apartment (mid-rise) (Land Use 226), and mid-rise residential with ground-floor commercial (Land Use 231) are related land uses.

Land Use Subcategory

Data are presented for two subcategories for this land use: (1) not close to rail transit and (2) close to rail transit. A site is considered close to rail transit if the walking distance between the residential site entrance and the closest rail transit station entrance is ½ mile or less.

Additional Data

For the six sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.5 residents per occupied dwelling unit.

For the five sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 96 percent of the total dwelling units were occupied.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

It is expected that the number of bedrooms and number of residents are likely correlated to the trips generated by a residential site. To assist in future analysis, trip generation studies of all multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).

The sites were surveyed in the 1990s, the 2000s, the 2010s, and the 2020s in Alberta (CAN), California, District of Columbia, Florida, Georgia, Illinois, Maryland, Massachusetts, Minnesota, Montana, New Jersey, New York, Ontario (CAN), Oregon, Utah, and Virginia.

Source Numbers

168, 188, 204, 305, 306, 321, 818, 857, 862, 866, 901, 904, 910, 949, 951, 959, 963, 964, 966, 967, 969, 970, 1004, 1014, 1022, 1023, 1025, 1031, 1032, 1035, 1047, 1056, 1057, 1058, 1071, 1076

Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

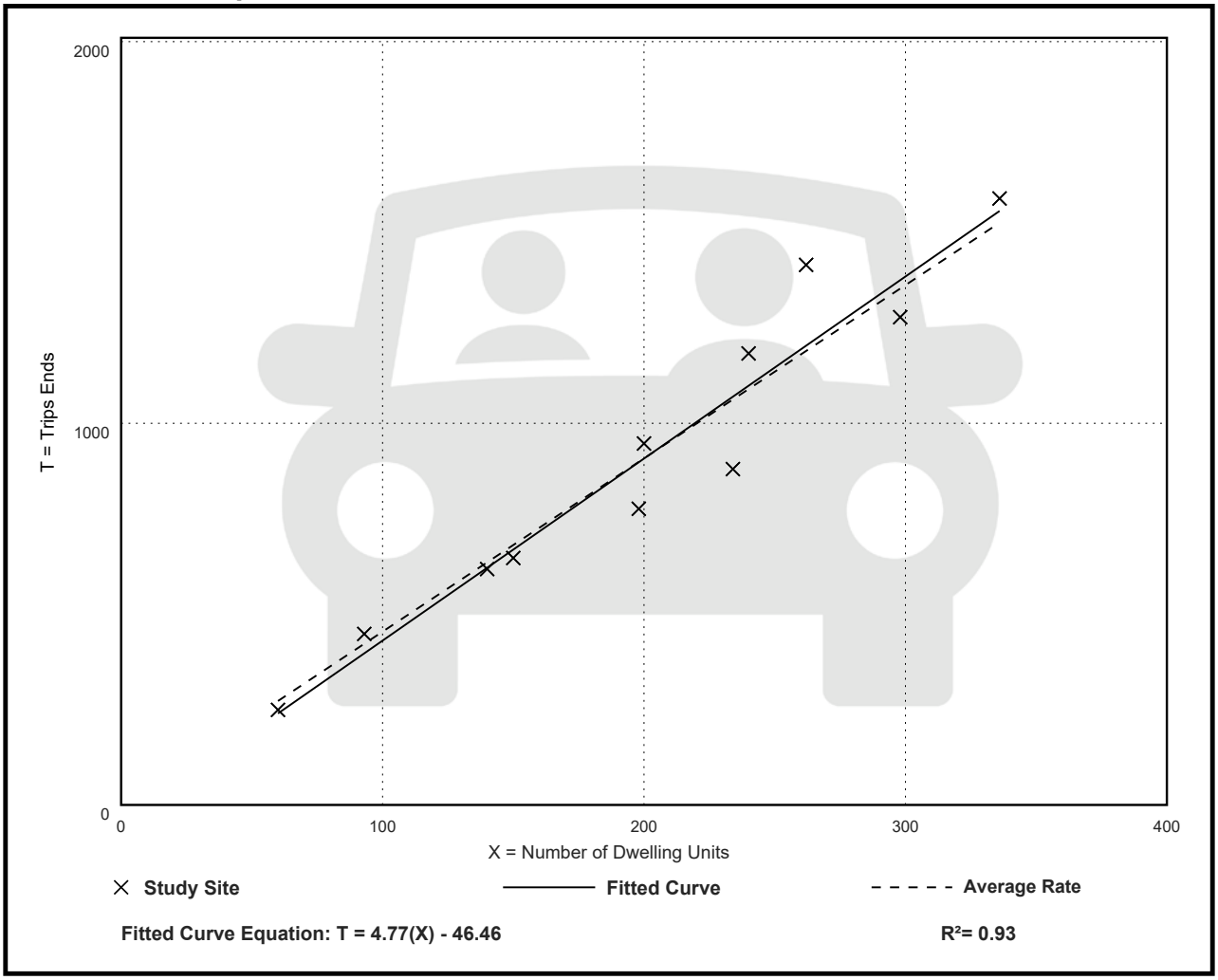
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 11
Avg. Num. of Dwelling Units: 201
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.54	3.76 - 5.40	0.51

Data Plot and Equation



Fitted Curve Equation: T = 4.77(X) - 46.46

R^2= 0.93

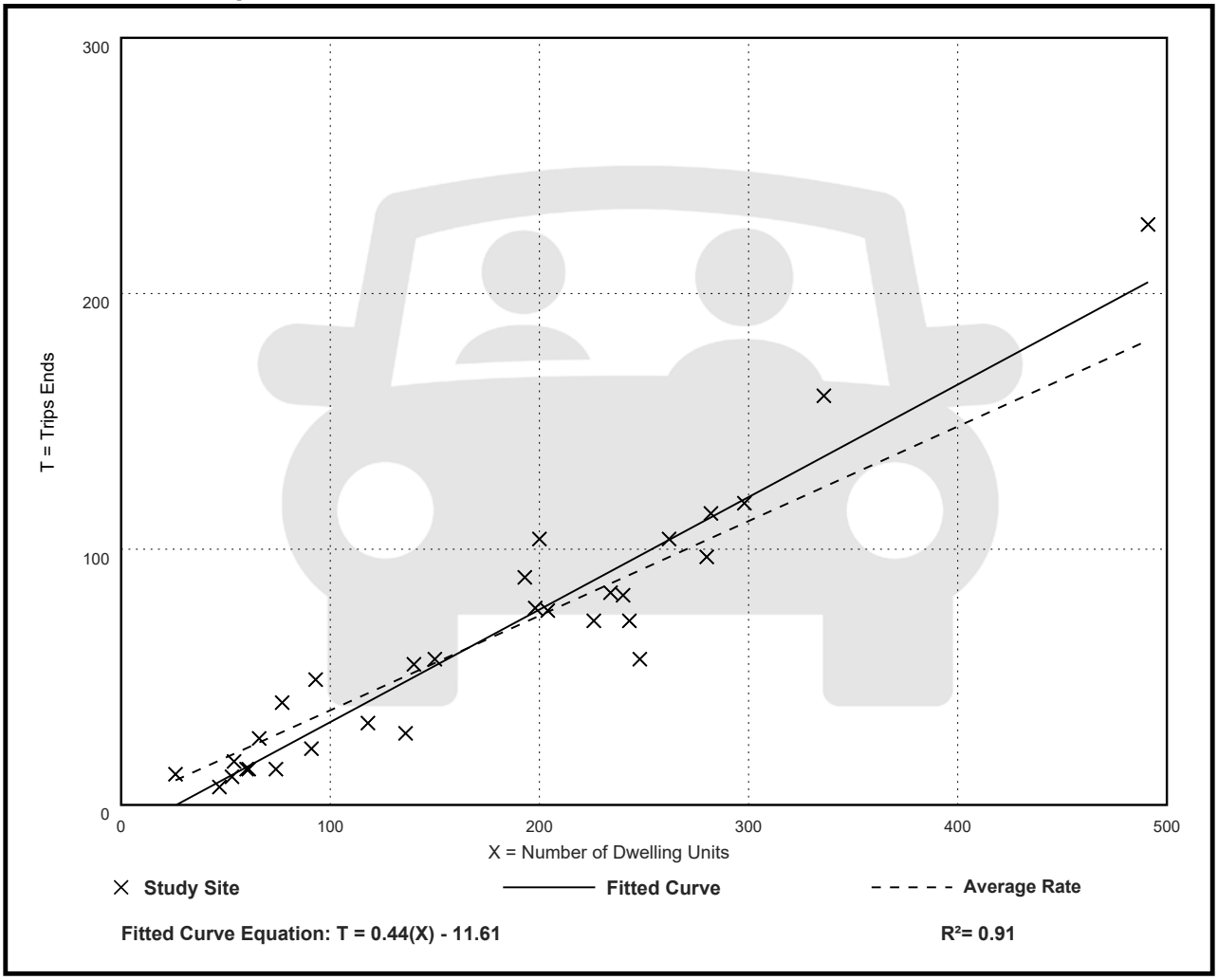
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 30
Avg. Num. of Dwelling Units: 173
Directional Distribution: 23% entering, 77% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.37	0.15 - 0.53	0.09

Data Plot and Equation



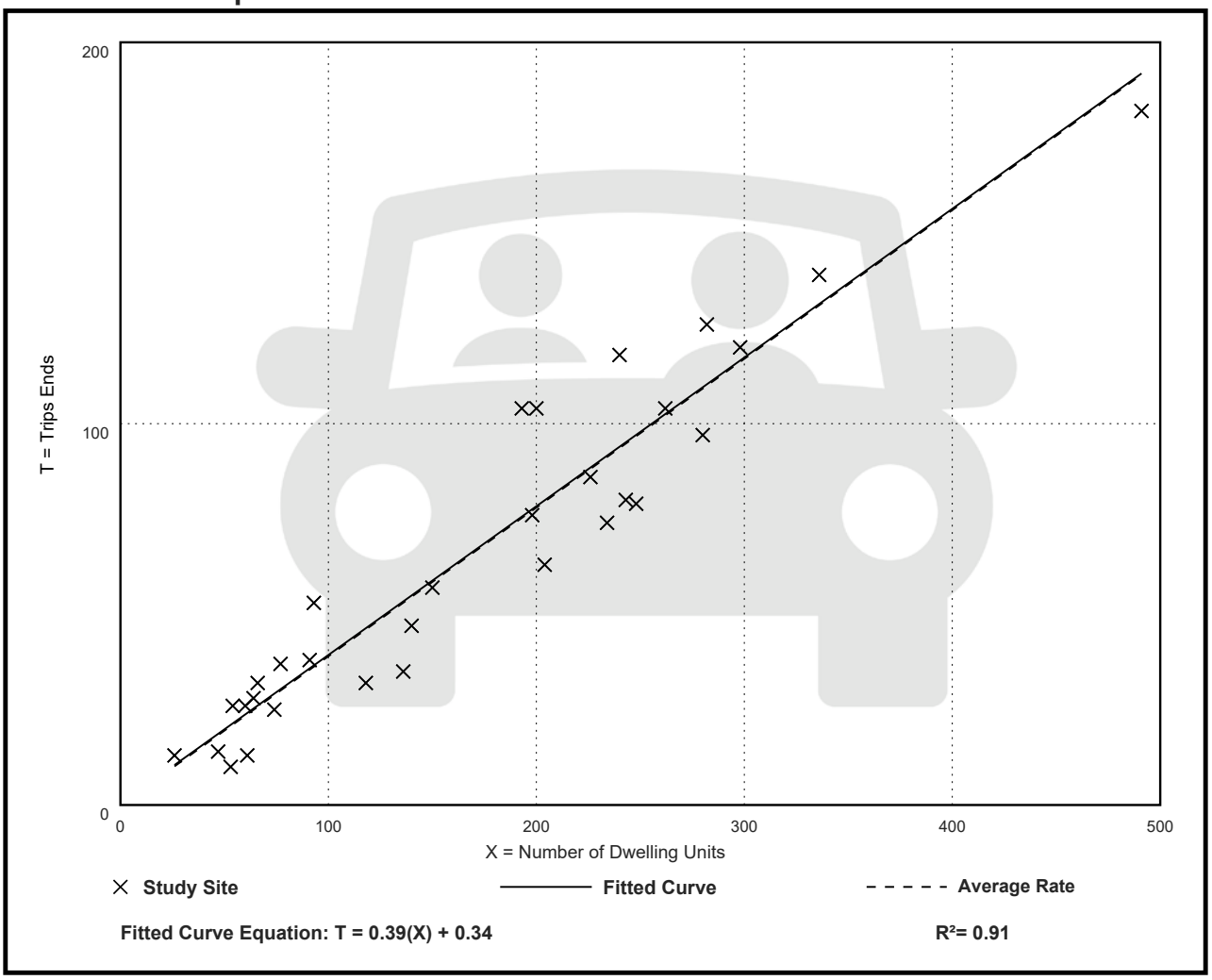
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 31
Avg. Num. of Dwelling Units: 169
Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.39	0.19 - 0.57	0.08

Data Plot and Equation



Land Use: 851
Convenience Store

Description

A convenience store is a small retail business that sells grocery and other everyday items that a person may need or want as a matter of convenience. Convenience stores are typically located along major thoroughfares to optimize motorist convenience. Extended hours of operation (with many open 24 hours, 7 days a week) further support the convenience of the store. A convenience store is also commonly called a convenience market.

The product mix typically includes pre-packaged grocery items, beverages, dairy products, snack foods, confectionary, tobacco products, over-the-counter drugs, and toiletries. A convenience store may sell alcohol, often limited to beer and wine.

Coffee and pre-made sandwiches are also commonly sold at a convenience store. Made-to-order food orders are sometimes offered. Some stores offer limited seating.

Convenience store/gas station (Land Use 945) is a related use.

Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), Arizona, California, New Jersey, New York, Ontario, Canada, Oregon, Pennsylvania, Texas, and Virginia.

Source Numbers

168, 253, 282, 542, 550, 862, 863, 882, 931, 955, 975

Convenience Store
(851)

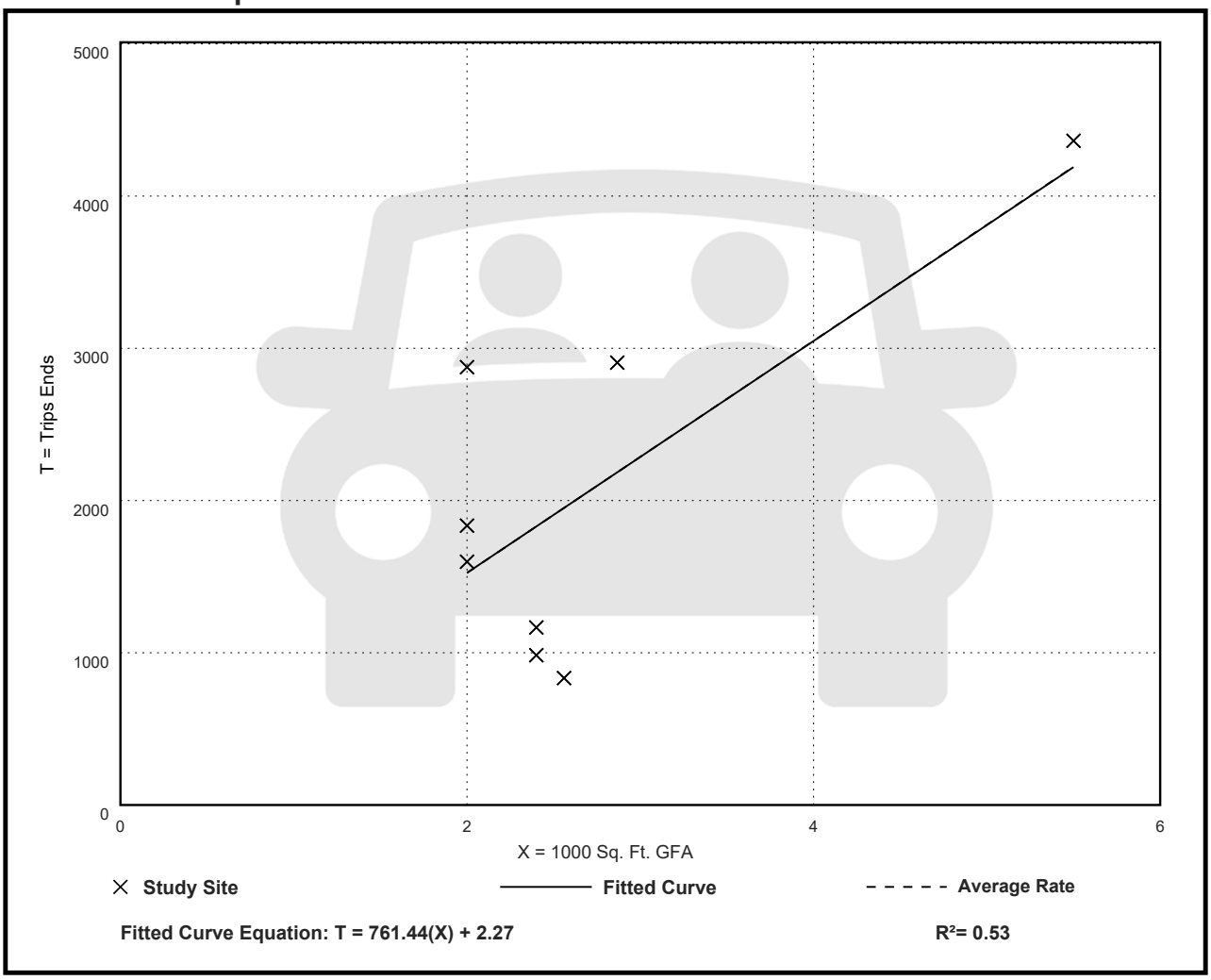
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 8
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
762.28	325.78 - 1438.00	333.89

Data Plot and Equation



Fitted Curve Equation: T = 761.44(X) + 2.27

R^2= 0.53

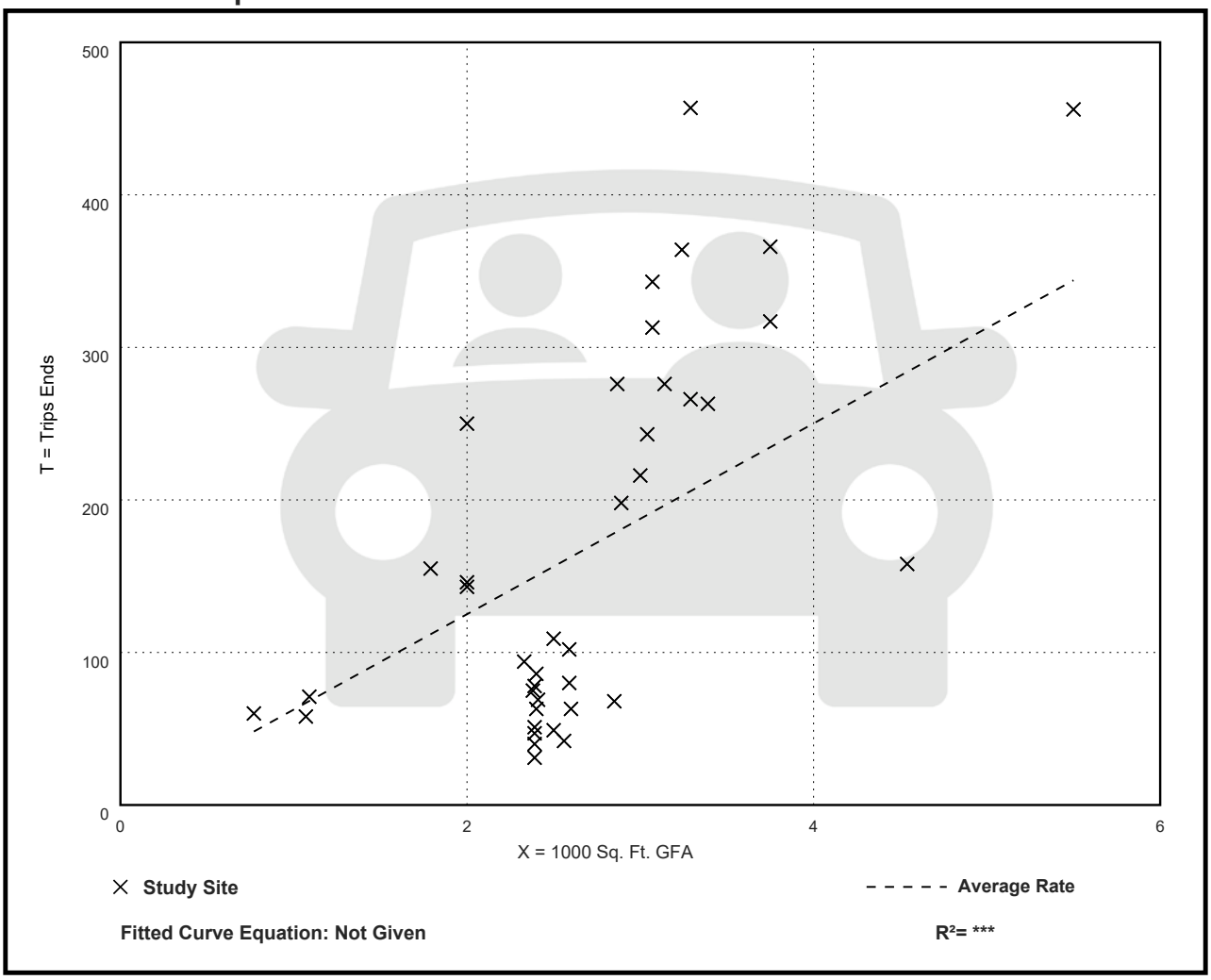
Convenience Store
(851)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 39
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
62.54	12.97 - 138.91	35.04

Data Plot and Equation



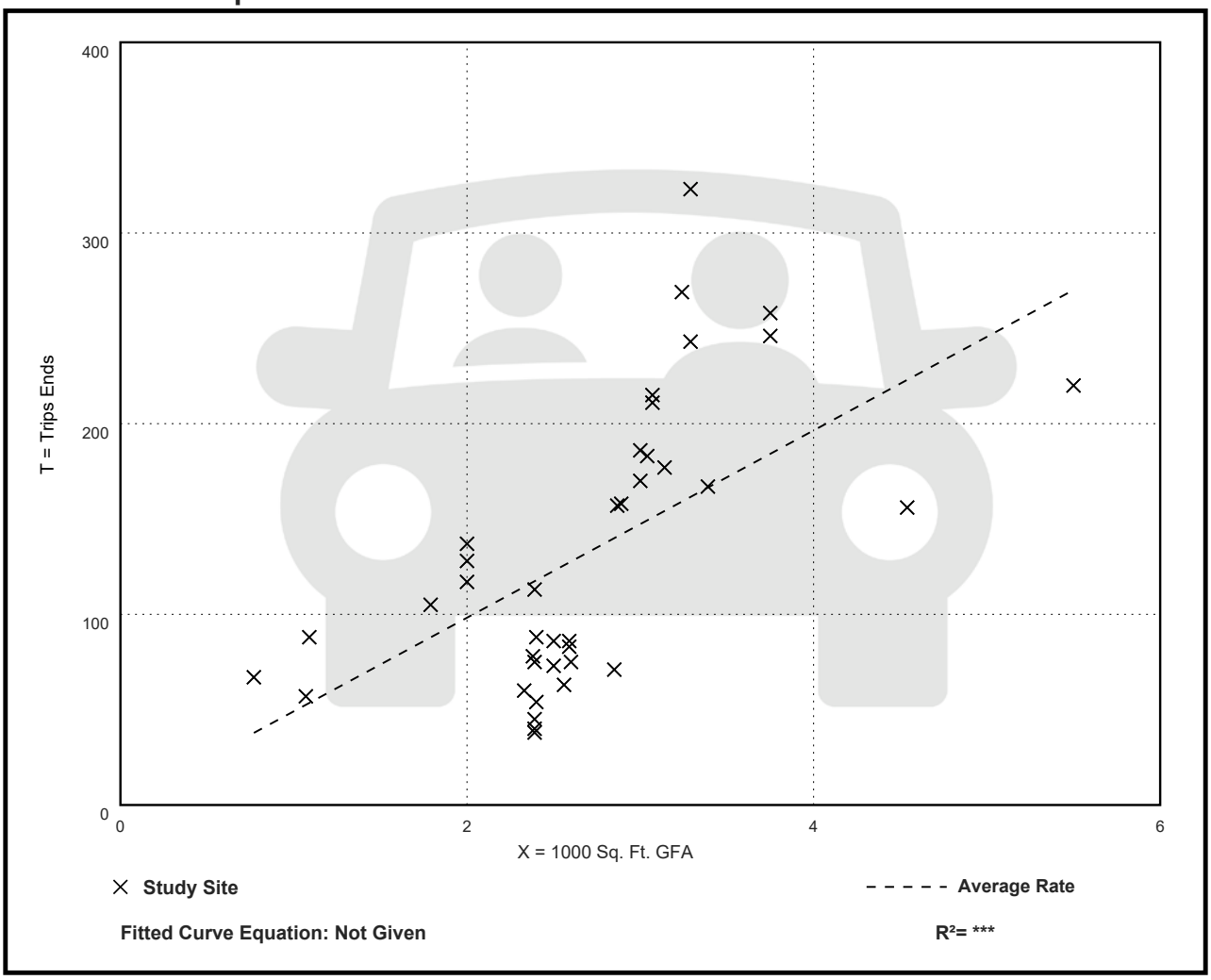
Convenience Store
(851)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 39
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
49.11	15.90 - 98.18	20.84

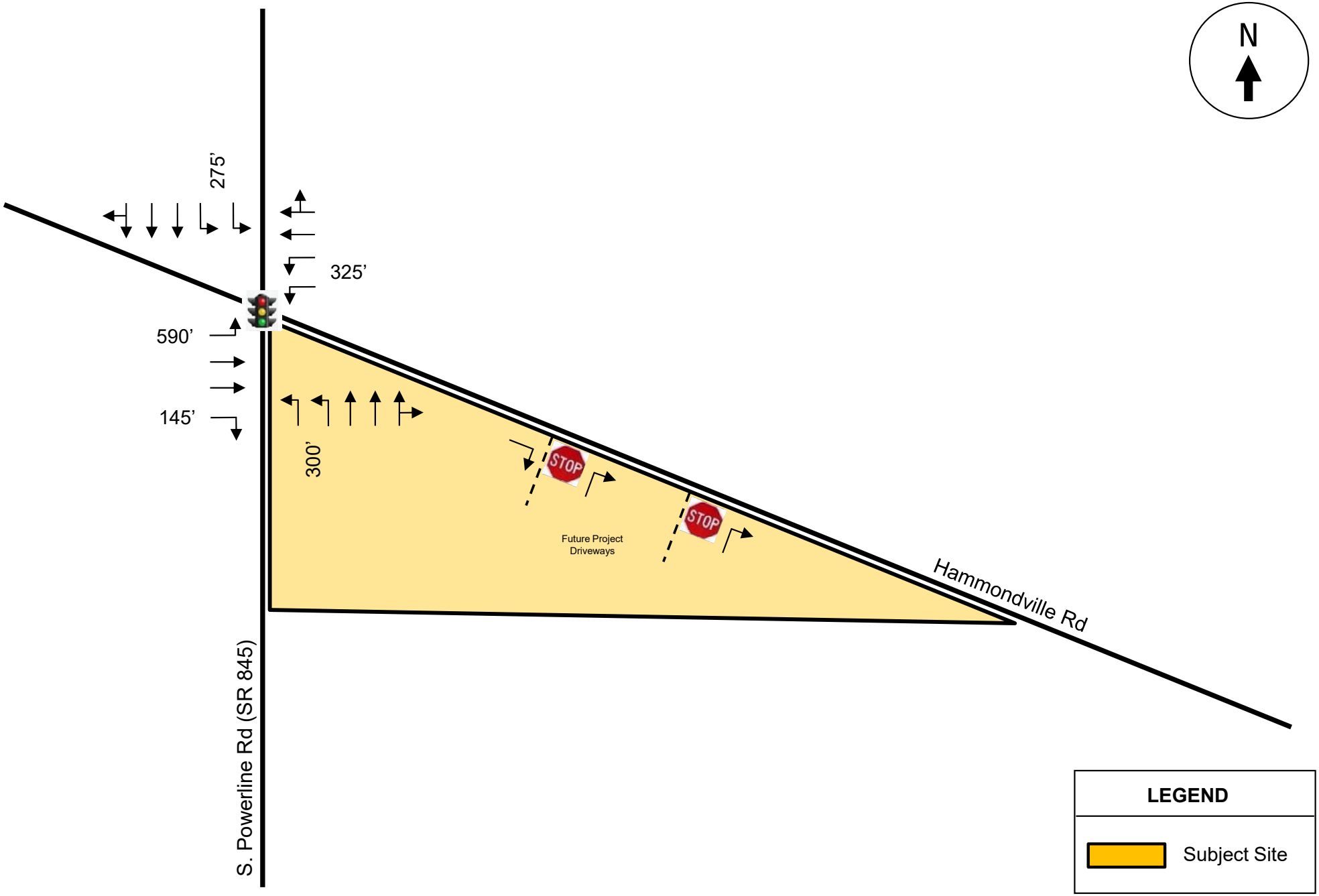
Data Plot and Equation



Attachment D

2050 Hammondville Road – Pompano Beach, FL

Intersection Geometry



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Existing & Future Lane Geometry

FIGURE D-1
2050 Hammondville Road
Pompano Beach, Florida

Attachment E

2050 Hammondville Road – Pompano Beach, FL

Traffic Counts

Traffic Survey Specialists, Inc.
85 SE 4th Avenue, Unit 109, Delray Beach, Florida 33483
Phone (561) 272-3255

HAMMONDVILLE ROAD & POWERLINE ROAD
POMPANO BEACH, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : hammondville & powerline
Site Code : 230016
Start Date : 1/25/2023

Groups Printed- LIGHT VEHICLES - HEAVY VEHICLES

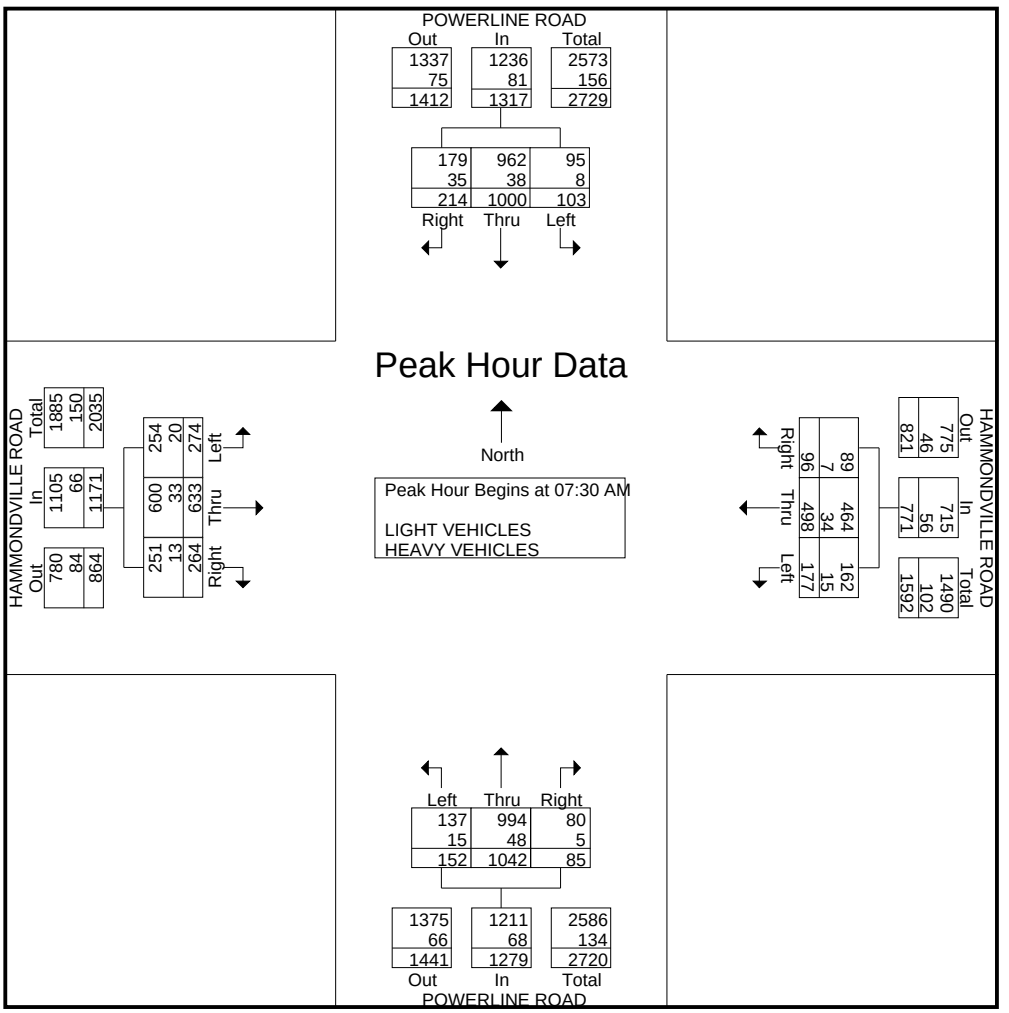
	POWERLINE ROAD From North				HAMMONDVILLE ROAD From East				POWERLINE ROAD From South				HAMMONDVILLE ROAD From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:00 AM	0	15	165	42	1	37	117	31	1	30	209	22	0	68	117	48	903
07:15 AM	2	24	203	40	1	37	112	28	0	38	242	19	0	68	122	53	989
07:30 AM	1	18	248	48	0	55	129	19	1	32	302	25	0	90	148	60	1176
07:45 AM	2	32	258	44	0	43	135	32	3	42	282	21	0	71	187	71	1223
Total	5	89	874	174	2	172	493	110	5	142	1035	87	0	297	574	232	4291
08:00 AM	1	23	251	63	0	37	119	22	1	39	244	17	0	57	153	75	1102
08:15 AM	0	26	243	59	0	42	115	23	0	34	214	22	0	56	145	58	1037
08:30 AM	2	49	220	52	0	26	111	24	2	28	206	21	0	73	197	68	1079
08:45 AM	4	27	218	52	0	41	109	35	0	23	204	21	0	67	193	62	1056
Total	7	125	932	226	0	146	454	104	3	124	868	81	0	253	688	263	4274
04:00 PM	2	21	215	59	2	37	180	26	2	59	250	18	0	52	108	40	1071
04:15 PM	3	21	261	93	0	41	198	27	1	48	226	24	0	58	127	33	1161
04:30 PM	2	26	251	100	0	52	186	22	0	68	220	21	0	54	126	34	1162
04:45 PM	1	16	278	89	0	67	164	17	0	69	281	23	0	45	96	31	1177
Total	8	84	1005	341	2	197	728	92	3	244	977	86	0	209	457	138	4571
05:00 PM	3	19	326	93	2	40	174	22	1	81	253	22	0	45	99	25	1205
05:15 PM	2	22	321	94	0	66	170	22	2	79	291	18	0	62	108	35	1292
05:30 PM	2	26	274	74	1	82	198	24	1	70	224	22	0	56	133	27	1214
05:45 PM	2	18	255	91	0	72	178	19	1	56	240	23	0	59	104	29	1147
Total	9	85	1176	352	3	260	720	87	5	286	1008	85	0	222	444	116	4858
Grand Total	29	383	3987	1093	7	775	2395	393	16	796	3888	339	0	981	2163	749	17994
Apprch %	0.5	7	72.6	19.9	0.2	21.7	67.1	11	0.3	15.8	77.2	6.7	0	25.2	55.6	19.2	
Total %	0.2	2.1	22.2	6.1	0	4.3	13.3	2.2	0.1	4.4	21.6	1.9	0	5.5	12	4.2	
LIGHT VEHICLES	28	352	3852	987	7	742	2223	360	15	746	3706	320	0	879	2057	705	16979
% LIGHT VEHICLES	96.6	91.9	96.6	90.3	100	95.7	92.8	91.6	93.8	93.7	95.3	94.4	0	89.6	95.1	94.1	94.4
HEAVY VEHICLES	1	31	135	106	0	33	172	33	1	50	182	19	0	102	106	44	1015
% HEAVY VEHICLES	3.4	8.1	3.4	9.7	0	4.3	7.2	8.4	6.2	6.3	4.7	5.6	0	10.4	4.9	5.9	5.6

Traffic Survey Specialists, Inc.
85 SE 4th Avenue, Unit 109, Delray Beach, Florida 33483
Phone (561) 272-3255

HAMMONDVILLE ROAD & POWERLINE ROAD
POMPANO BEACH, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : hammondville & powerline
Site Code : 230016
Start Date : 1/25/2023
Page No : 2

	POWERLINE ROAD From North					HAMMONDVILLE ROAD From East					POWERLINE ROAD From South					HAMMONDVILLE ROAD From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	1	18	248	48	315	0	**55**	129	19	203	1	32	**302**	**25**	**360**	0	**90**	148	60	298	1176
07:45 AM	**2**	**32**	**258**	44	336	0	43	**135**	**32**	**210**	**3**	**42**	282	21	348	0	71	**187**	71	**329**	**1223**
08:00 AM	1	23	251	**63**	**338**	0	37	119	22	178	1	39	244	17	301	0	57	153	**75**	285	1102
08:15 AM	0	26	243	59	328	0	42	115	23	180	0	34	214	22	270	0	56	145	58	259	1037
Total Volume	4	99	1000	214	1317	0	177	498	96	771	5	147	1042	85	1279	0	274	633	264	1171	4538
% App. Total	0.3	7.5	75.9	16.2		0	23	64.6	12.5		0.4	11.5	81.5	6.6		0	23.4	54.1	22.5		
PHF	.500	.773	.969	.849	.974	.000	.805	.922	.750	.918	.417	.875	.863	.850	.888	.000	.761	.846	.880	.890	.928
LIGHT VEHICLES																					
% LIGHT VEHICLES	100	91.9	96.2	83.6	93.8	0	91.5	93.2	92.7	92.7	100	89.8	95.4	94.1	94.7	0	92.7	94.8	95.1	94.4	94.0
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	8.1	3.8	16.4	6.2	0	8.5	6.8	7.3	7.3	0	10.2	4.6	5.9	5.3	0	7.3	5.2	4.9	5.6	6.0



Traffic Survey Specialists, Inc.
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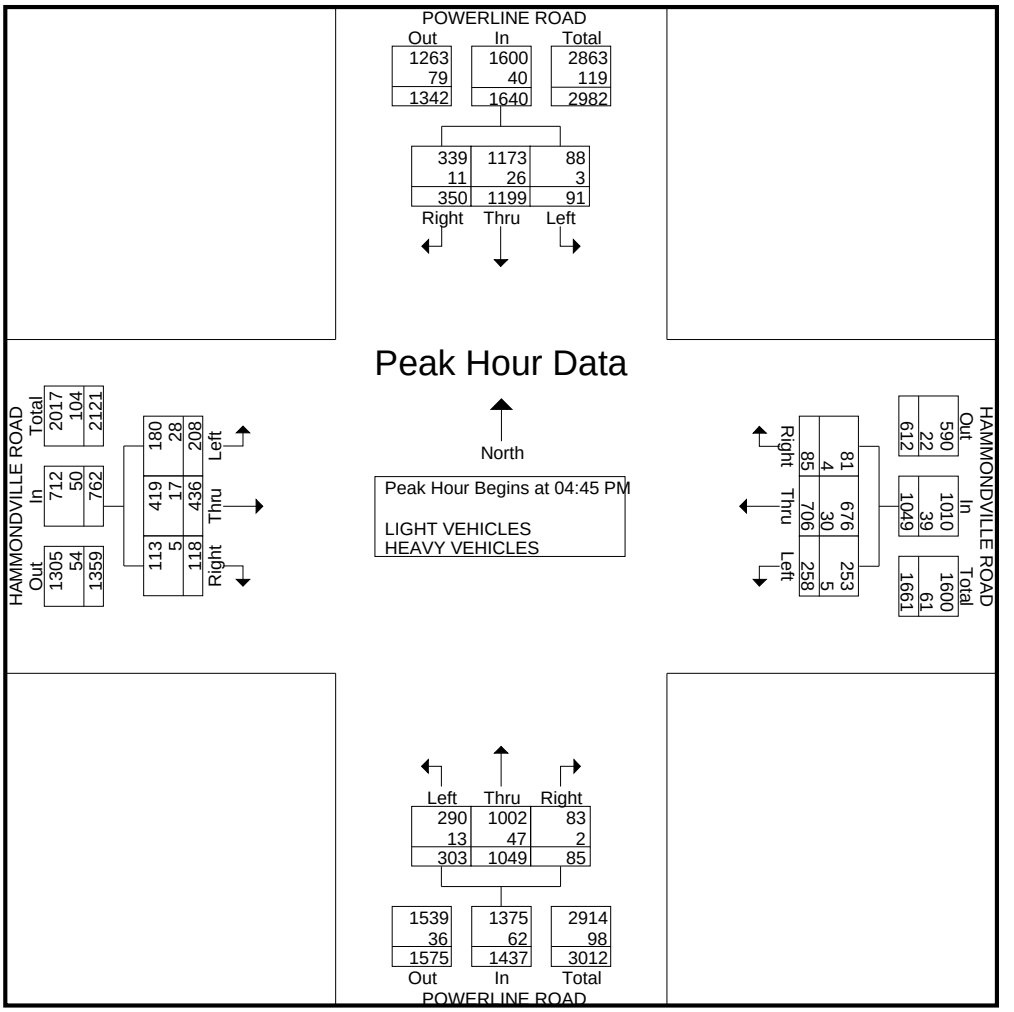
HAMMONDVILLE ROAD & POWERLINE ROAD
POMPANO BEACH, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : hammondville & powerline
Site Code : 230016
Start Date : 1/25/2023
Page No : 3

	POWERLINE ROAD From North					HAMMONDVILLE ROAD From East					POWERLINE ROAD From South					HAMMONDVILLE ROAD From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	1	16	278	89	384	0	67	164	17	248	0	69	281	**23**	373	0	45	96	31	172	1177
05:00 PM	**3**	19	**326**	93	**441**	**2**	40	174	22	238	1	**81**	253	22	357	0	45	99	25	169	1205
05:15 PM	2	22	321	**94**	439	0	66	170	22	258	**2**	79	**291**	18	**390**	0	**62**	108	**35**	205	**1292**
05:30 PM	2	**26**	274	74	376	1	**82**	**198**	**24**	**305**	1	70	224	22	317	0	56	**133**	27	**216**	1214
Total Volume	8	83	1199	350	1640	3	255	706	85	1049	4	299	1049	85	1437	0	208	436	118	762	4888
% App. Total	0.5	5.1	73.1	21.3		0.3	24.3	67.3	8.1		0.3	20.8	73	5.9		0	27.3	57.2	15.5		
PHF	.667	.798	.919	.931	.930	.375	.777	.891	.885	.860	.500	.923	.901	.924	.921	.000	.839	.820	.843	.882	.946
LIGHT VEHICLES			1173										1002								
% LIGHT VEHICLES	100	96.4	97.8	96.9	97.6	100	98.0	95.8	95.3	96.3	100	95.7	95.5	97.6	95.7	0	86.5	96.1	95.8	93.4	96.1
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	3.6	2.2	3.1	2.4	0	2.0	4.2	4.7	3.7	0	4.3	4.5	2.4	4.3	0	13.5	3.9	4.2	6.6	3.9



Traffic Survey Specialists, Inc.
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HAMMONDVILLE ROAD & POWERLINE ROAD
POMPANO BEACH, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : hammondville & powerline
Site Code : 230016
Start Date : 1/25/2023
Page No : 1

Groups Printed- BICYCLES ON THE ROAD

	POWERLINE ROAD From North				HAMMONDVILLE ROAD From East				POWERLINE ROAD From South				HAMMONDVILLE ROAD From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:45 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	3
Total	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	3
04:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Grand Total	0	0	1	0	0	0	1	1	0	0	0	0	0	0	3	0	6
Apprch %	0	0	100	0	0	0	50	50	0	0	0	0	0	0	100	0	
Total %	0	0	16.7	0	0	0	16.7	16.7	0	0	0	0	0	0	50	0	

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HAMMONDVILLE ROAD & POWERLINE ROAD
POMPANO BEACH, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : hammondville & powerline
Site Code : 230016
Start Date : 1/25/2023

Groups Printed- PEDESTRIANS & BIKES

	POWERLINE ROAD From North				HAMMONDVILLE ROAD From East				POWERLINE ROAD From South				HAMMONDVILLE ROAD From West				
Start Time	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Int. Total
07:00 AM	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	3
07:15 AM	0	0	0	0	2	0	0	0	1	0	0	0	1	0	0	0	4
07:30 AM	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	4
07:45 AM	0	0	0	0	2	0	1	0	1	0	0	0	0	0	0	0	4
Total	2	0	1	0	4	0	2	0	5	0	0	0	1	0	0	0	15
08:00 AM	0	0	0	0	0	0	0	0	3	0	0	0	2	0	0	0	5
08:15 AM	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	3
08:30 AM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2
08:45 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Total	0	0	0	0	1	0	1	0	5	0	0	0	3	0	1	0	11
04:00 PM	0	0	1	0	2	0	0	0	2	0	0	0	0	0	1	0	6
04:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	2
04:30 PM	0	0	0	0	1	0	1	0	3	0	0	0	1	0	0	0	6
04:45 PM	0	0	0	0	1	0	1	0	4	0	0	0	0	0	0	0	6
Total	0	0	2	0	4	0	2	0	9	0	0	0	1	0	2	0	20
05:00 PM	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	3
05:15 PM	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	4
05:30 PM	0	0	1	0	1	0	0	0	1	0	0	0	0	0	2	0	5
05:45 PM	0	0	0	0	2	0	2	0	1	0	2	0	0	0	2	0	9
Total	0	0	1	0	7	0	3	0	2	0	2	0	2	0	4	0	21
Grand Total	2	0	4	0	16	0	8	0	21	0	2	0	7	0	7	0	67
Apprch %	33.3	0	66.7	0	66.7	0	33.3	0	91.3	0	8.7	0	50	0	50	0	
Total %	3	0	6	0	23.9	0	11.9	0	31.3	0	3	0	10.4	0	10.4	0	

Attachment F

2050 Hammondville Road – Pompano Beach, FL

FDOT Peak Season Conversion Factor

2021 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 8601 CEN.-W OF US1 TO SR7

MOCF: 0.97

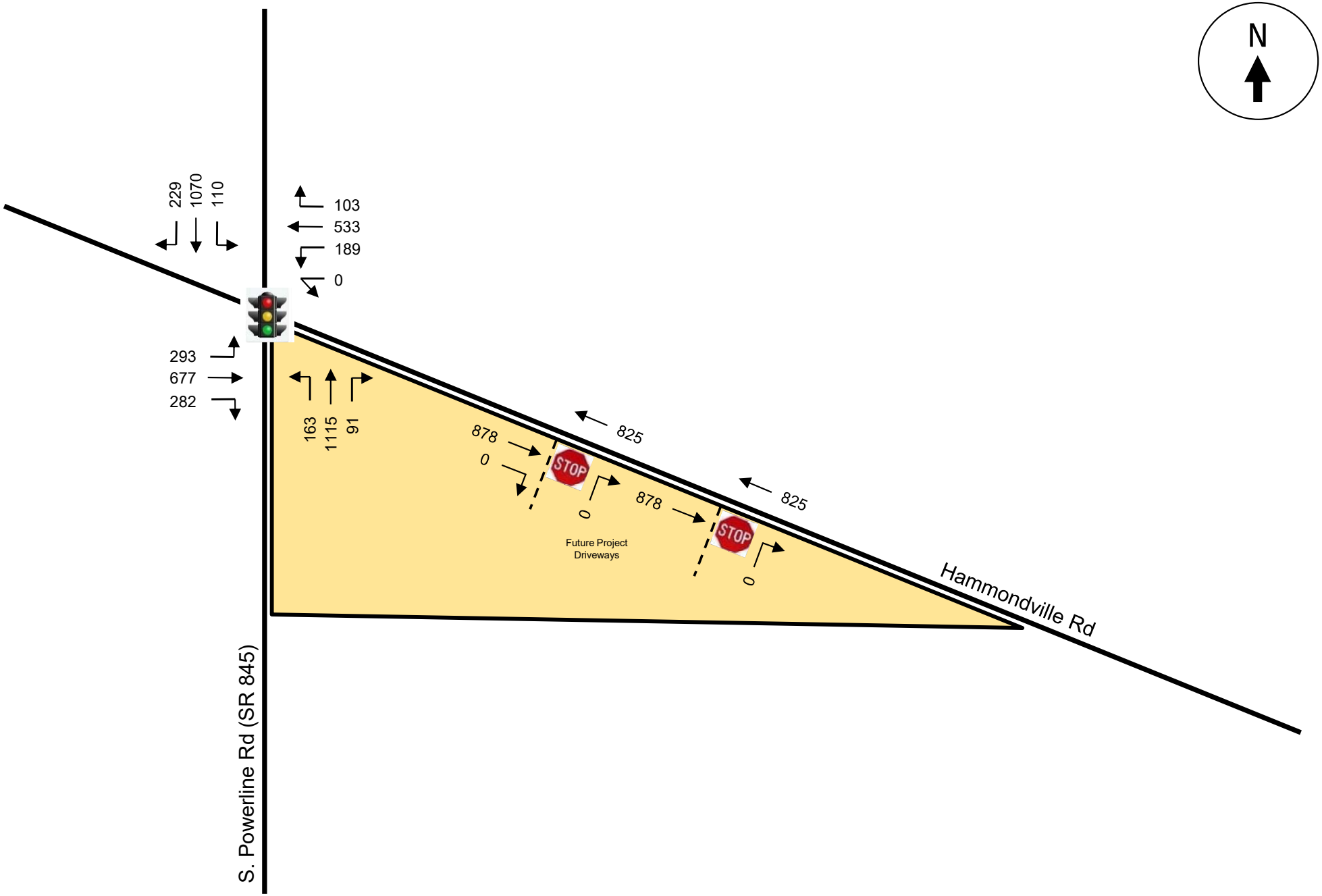
WEEK	DATES	SF	PSCF
1	01/01/2021 - 01/02/2021	1.04	1.07
2	01/03/2021 - 01/09/2021	1.05	1.08
3	01/10/2021 - 01/16/2021	1.06	1.09
4	01/17/2021 - 01/23/2021	1.05	1.08
5	01/24/2021 - 01/30/2021	1.04	1.07
6	01/31/2021 - 02/06/2021	1.03	1.06
7	02/07/2021 - 02/13/2021	1.02	1.05
8	02/14/2021 - 02/20/2021	1.01	1.04
9	02/21/2021 - 02/27/2021	1.00	1.03
10	02/28/2021 - 03/06/2021	0.99	1.02
*11	03/07/2021 - 03/13/2021	0.98	1.01
*12	03/14/2021 - 03/20/2021	0.97	1.00
*13	03/21/2021 - 03/27/2021	0.96	0.99
*14	03/28/2021 - 04/03/2021	0.96	0.99
*15	04/04/2021 - 04/10/2021	0.96	0.99
*16	04/11/2021 - 04/17/2021	0.96	0.99
*17	04/18/2021 - 04/24/2021	0.96	0.99
*18	04/25/2021 - 05/01/2021	0.96	0.99
*19	05/02/2021 - 05/08/2021	0.96	0.99
*20	05/09/2021 - 05/15/2021	0.97	1.00
*21	05/16/2021 - 05/22/2021	0.97	1.00
*22	05/23/2021 - 05/29/2021	0.98	1.01
*23	05/30/2021 - 06/05/2021	0.99	1.02
24	06/06/2021 - 06/12/2021	1.00	1.03
25	06/13/2021 - 06/19/2021	1.01	1.04
26	06/20/2021 - 06/26/2021	1.00	1.03
27	06/27/2021 - 07/03/2021	1.00	1.03
28	07/04/2021 - 07/10/2021	1.00	1.03
29	07/11/2021 - 07/17/2021	1.00	1.03
30	07/18/2021 - 07/24/2021	1.00	1.03
31	07/25/2021 - 07/31/2021	1.00	1.03
32	08/01/2021 - 08/07/2021	1.00	1.03
33	08/08/2021 - 08/14/2021	1.00	1.03
34	08/15/2021 - 08/21/2021	1.00	1.03
35	08/22/2021 - 08/28/2021	1.01	1.04
36	08/29/2021 - 09/04/2021	1.02	1.05
37	09/05/2021 - 09/11/2021	1.03	1.06
38	09/12/2021 - 09/18/2021	1.04	1.07
39	09/19/2021 - 09/25/2021	1.03	1.06
40	09/26/2021 - 10/02/2021	1.02	1.05
41	10/03/2021 - 10/09/2021	1.01	1.04
42	10/10/2021 - 10/16/2021	1.00	1.03
43	10/17/2021 - 10/23/2021	1.01	1.04
44	10/24/2021 - 10/30/2021	1.01	1.04
45	10/31/2021 - 11/06/2021	1.02	1.05
46	11/07/2021 - 11/13/2021	1.02	1.05
47	11/14/2021 - 11/20/2021	1.03	1.06
48	11/21/2021 - 11/27/2021	1.03	1.06
49	11/28/2021 - 12/04/2021	1.03	1.06
50	12/05/2021 - 12/11/2021	1.03	1.06
51	12/12/2021 - 12/18/2021	1.04	1.07
52	12/19/2021 - 12/25/2021	1.05	1.08
53	12/26/2021 - 12/31/2021	1.06	1.09

* PEAK SEASON

Attachment G

2050 Hammondville Road – Pompano Beach, FL

Existing (Seasonally Adjusted) Peak Hour Traffic Volumes

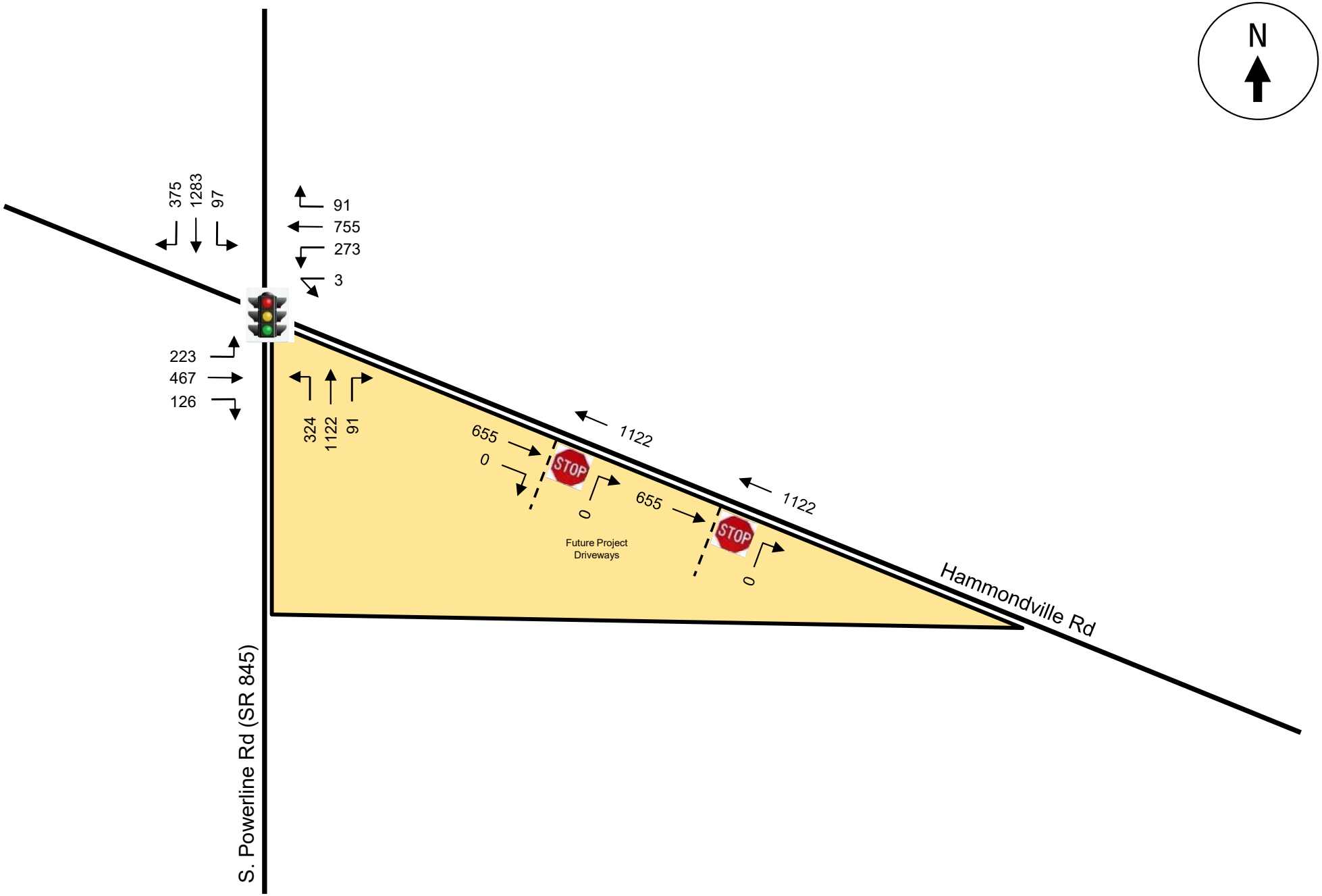


KBP
CONSULTING, INC.

Existing (2023) AM Peak Hour Traffic Counts

Source: Traffic Survey Specialists, Inc. (1/25/23)
Adjusted for Average Peak Season Conditions

FIGURE G-1
2050 Hammondville Road
Pompano Beach, Florida



KBP
CONSULTING, INC.

Existing (2023) PM Peak Hour Traffic Counts

Source: Traffic Survey Specialists, Inc. (1/25/23)
Adjusted for Average Peak Season Conditions

FIGURE G-2
2050 Hammondville Road
Pompano Beach, Florida

Attachment H

2050 Hammondville Road – Pompano Beach, FL

Historic Traffic Counts
& Growth Rate Analysis

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2021 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 0449 - SR 845 / POWERLINE RD - S OF HAMMONDVILLE RD

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2021	32000 C	N 15500	S 16500	9.00	53.80	6.70
2020	37500 F	N 19000	S 18500	9.00	53.90	7.80
2019	39500 C	N 20000	S 19500	9.00	54.60	7.80
2018	38000 C	N 19500	S 18500	9.00	54.50	7.80
2017	35500 C	N 16500	S 19000	9.00	51.90	5.10
2016	33500 C	N 16500	S 17000	9.00	54.10	5.10
2015	31500 C	N 16000	S 15500	9.00	54.00	5.10
2014	33500 C	N 16000	S 17500	9.00	54.20	8.60
2013	34500 C	N 17000	S 17500	9.00	53.60	8.60
2012	36500 C	N 17500	S 19000	9.00	52.20	5.40
2011	32500 C	N 16000	S 16500	9.00	52.50	5.40
2010	30500 C	N 15500	S 15000	8.35	52.69	5.40
2009	36000 C	N 18000	S 18000	8.53	53.89	4.70
2008	38500 C	N 20000	S 18500	8.81	54.16	4.70
2007	39500 C	N 20000	S 19500	8.63	55.75	7.50
2006	37000 C	N 19000	S 18000	8.40	55.34	3.10

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2021 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 7773 - HAMMONDVILLE RD, W OF NW 15 AVE

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2021	15700 F	E 7400	W 8300	9.00	53.80	14.30
2020	15700 C	E 7400	W 8300	9.00	53.90	8.80
2019	23000 T	E 11000	W 12000	9.00	54.60	5.50
2018	23000 S	E 11000	W 12000	9.00	54.50	6.00
2017	23000 F	E 11000	W 12000	9.00	51.90	6.20
2016	23000 C	E 11000	W 12000	9.00	54.10	2.90
2015	17000 V	0	0	9.00	54.00	3.40
2014	16500 R			9.00	54.20	7.40
2013	16500 T	0	0	9.00	53.60	7.60
2012	16500 S	0	0	9.00	52.20	5.90
2011	16500 F	0	0	9.00	52.50	6.30
2010	16500 C	E 7800	W 8700	8.35	52.69	9.30
2009	18000 F	E 8900	W 9100	8.53	53.89	5.30
2008	18500 C	E 9100	W 9400	8.81	54.16	6.50
2007	22000 C	E 10500	W 11500	8.63	55.75	4.80
2006	29500 C	E 15000	W 14500	8.40	55.34	2.90

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

2050 Hammondville Road

Pompano Beach, FL

Growth Rate Analysis

Site #860449 - SR 845 / Powerline Road - South of Hammondville Road

Year	Volume	Growth Rate
2017	35,500	
2021	32,000	-2.05%

Site #867773 - Hammondville Road - West of NW 15th Avenue

Year	Volume	Growth Rate
2017	23,000	
2021	15,700	-7.35%

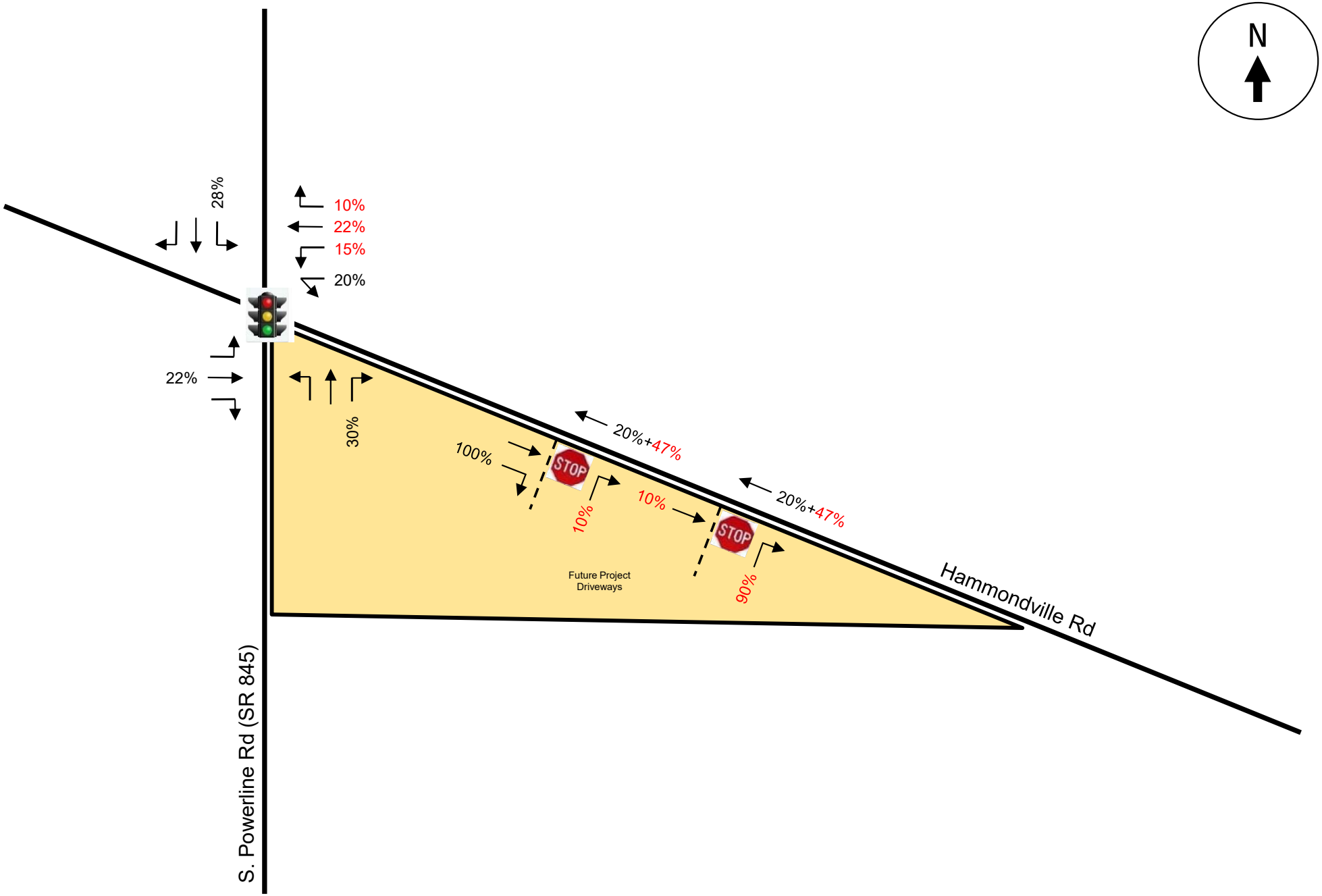
Total - All Count Stations

Year	Volume	Growth Rate
2017	58,500	
2021	47,700	-4.00%

Attachment I

2050 Hammondville Road – Pompano Beach, FL

Trip Distribution & Traffic Assignment



KBP
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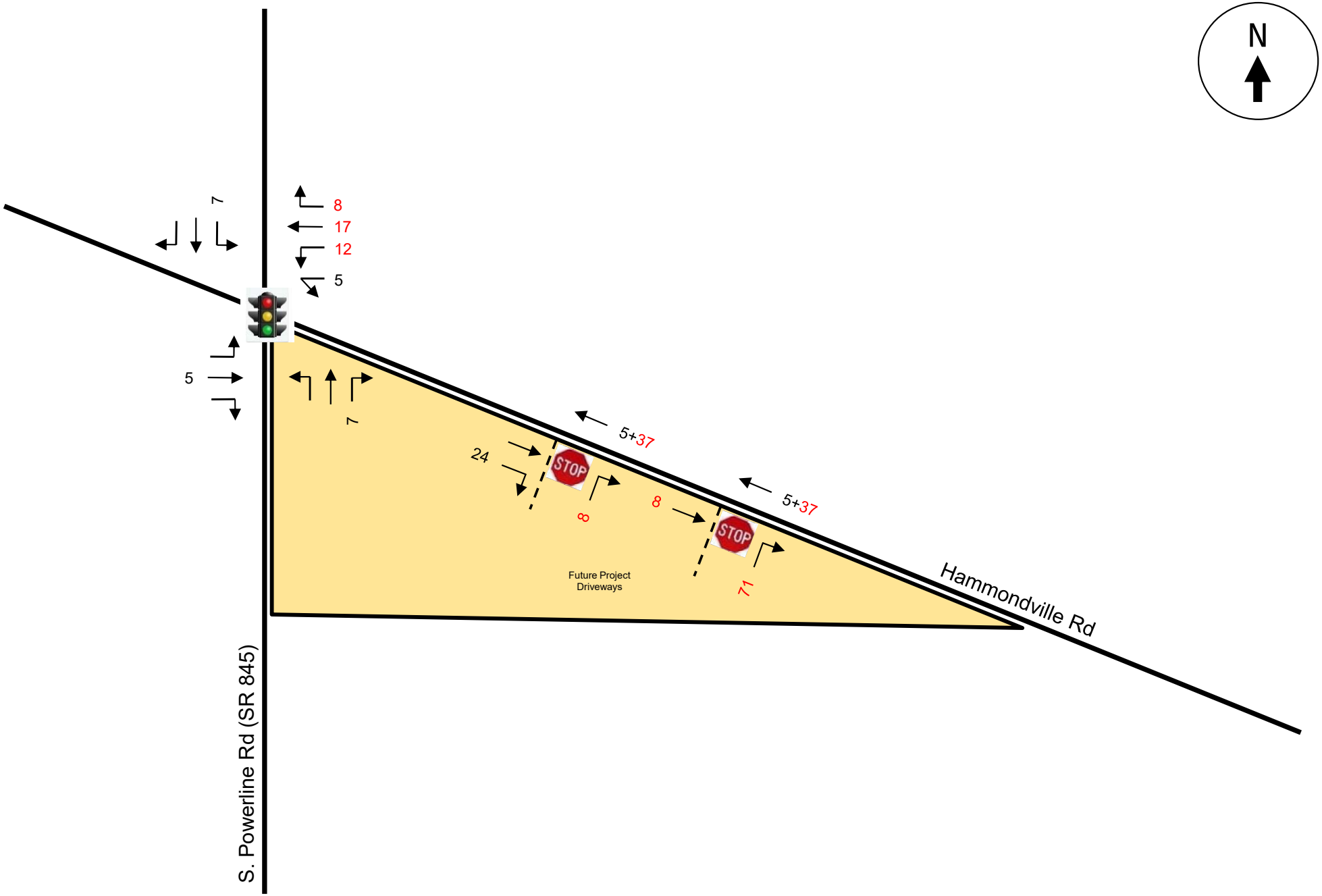
Trip Distribution

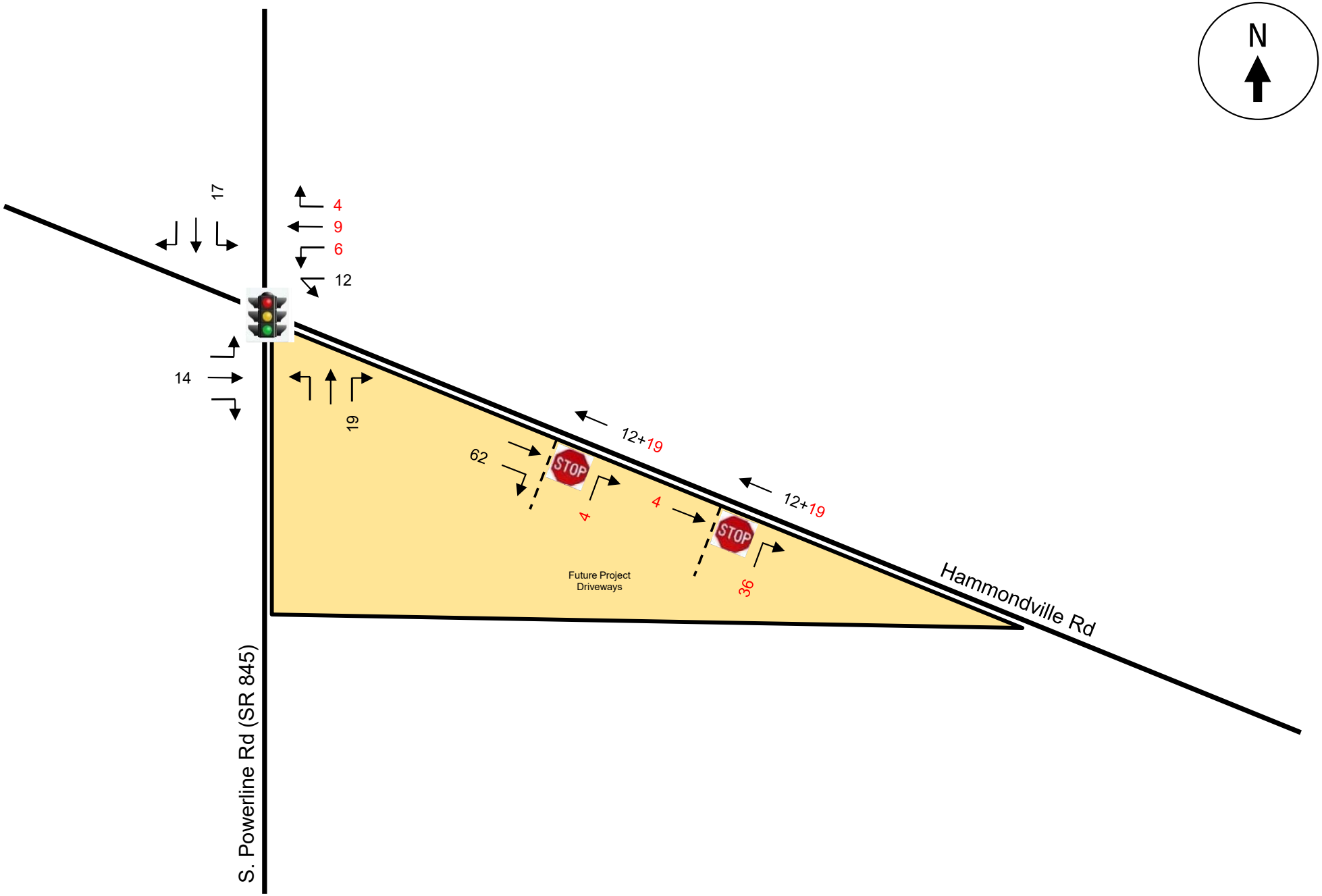
FIGURE I-1
2050 Hammondville Road
Pompano Beach, Florida



KBP
CONSULTING, INC.

Project Traffic Assignment
AM Peak Hour

FIGURE I-2
2050 Hammondville Road
Pompano Beach, Florida



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Project Traffic Assignment
PM Peak Hour

FIGURE I-3
2050 Hammondville Road
Pompano Beach, Florida

Attachment J

2050 Hammondville Road – Pompano Beach, FL

Development of Future Traffic Volumes

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Hammondville Road and S. Powerline Road
AM Peak Hour

Description	Powerline Road Northbound			Powerline Road Southbound			Hammondville Road Eastbound			Hammondville Road Westbound			
	Left	Through	Right	Left	Through	Right	Left	Through	Right	U-Turn	Left	Through	Right
Existing Traffic (1/25/2023)	152	1,042	85	103	1,000	214	274	633	264	0	177	498	96
Season Adjustment Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
2023 Peak Season Traffic	163	1,115	91	110	1,070	229	293	677	282	0	189	533	103
Annual Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
2025 Background Traffic	166	1,137	93	112	1,092	234	299	691	288	0	193	544	105
2050 Hammondville Road			7	7				5		5	12	17	8
2025 Total Traffic	**166**	**1,137**	**100**	**119**	**1,092**	**234**	**299**	**696**	**288**	**5**	**205**	**561**	**113**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Hammondville Road and S. Powerline Road
PM Peak Hour

Description	Powerline Road Northbound			Powerline Road Southbound			Hammondville Road Eastbound			Hammondville Road Westbound			
	Left	Through	Right	Left	Through	Right	Left	Through	Right	U-Turn	Left	Through	Right
Existing Traffic (1/25/2023)	303	1,049	85	91	1,199	350	208	436	118	3	255	706	85
Season Adjustment Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
2023 Peak Season Traffic	324	1,122	91	97	1,283	375	223	467	126	3	273	755	91
Annual Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
2025 Background Traffic	331	1,145	93	99	1,309	382	227	476	129	3	278	771	93
2050 Hammondville Road			19	17				14		12	6	9	4
2025 Total Traffic	**331**	**1,145**	**112**	**116**	**1,309**	**382**	**227**	**490**	**129**	**15**	**284**	**780**	**97**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Hammondville Road and West Driveway
AM Peak Hour

Description	West Driveway Northbound			Southbound			Hammondville Road Eastbound			Hammondville Road Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (1/25/2023)	0	0	0	0	0	0	0	821	0	0	771	0
Season Adjustment Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
2023 Peak Season Traffic	0	0	0	0	0	0	0	878	0	0	825	0
Annual Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
2025 Background Traffic	0	0	0	0	0	0	0	896	0	0	842	0
2050 Hammondville Road			8						24		42	
2025 Total Traffic	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**896**	**24**	**0**	**884**	**0**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Hammondville Road and West Driveway
PM Peak Hour

Description	West Driveway Northbound			Southbound			Hammondville Road Eastbound			Hammondville Road Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (1/25/2023)	0	0	0	0	0	0	0	612	0	0	1,049	0
Season Adjustment Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
2023 Peak Season Traffic	0	0	0	0	0	0	0	655	0	0	1,122	0
Annual Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
2025 Background Traffic	0	0	0	0	0	0	0	668	0	0	1,145	0
2050 Hammondville Road			4						62		31	
2025 Total Traffic	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**668**	**62**	**0**	**1,176**	**0**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

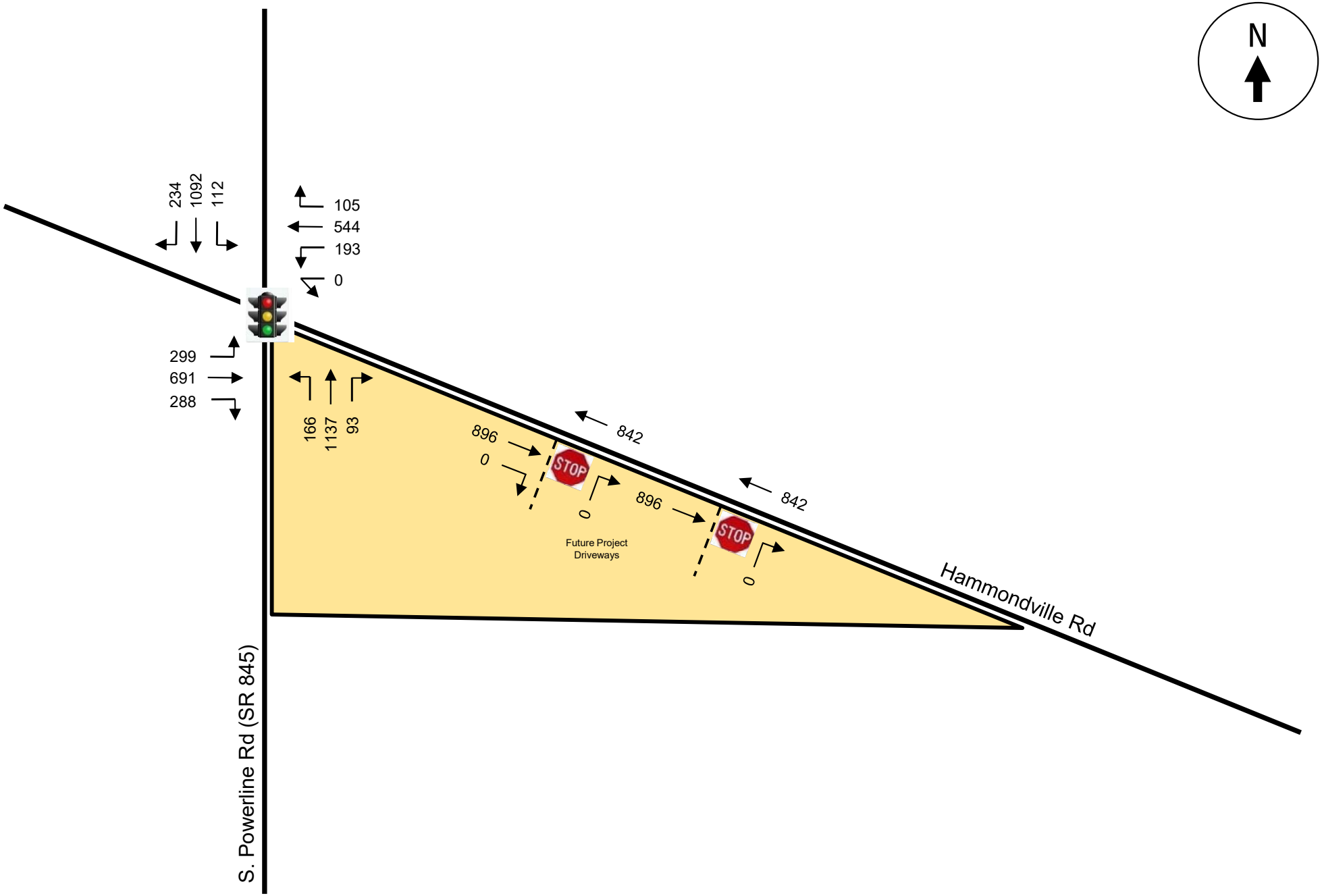
Hammondville Road and East Driveway
AM Peak Hour

Description	East Driveway Northbound			Southbound			Hammondville Road Eastbound			Hammondville Road Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (1/25/2023)	0	0	0	0	0	0	0	821	0	0	771	0
Season Adjustment Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
2023 Peak Season Traffic	0	0	0	0	0	0	0	878	0	0	825	0
Annual Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
2025 Background Traffic	0	0	0	0	0	0	0	896	0	0	842	0
2050 Hammondville Road			71					8			42	
2025 Total Traffic	**0**	**0**	**71**	**0**	**0**	**0**	**0**	**904**	**0**	**0**	**884**	**0**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Hammondville Road and East Driveway
PM Peak Hour

Description	East Driveway Northbound			Southbound			Hammondville Road Eastbound			Hammondville Road Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (1/25/2023)	0	0	0	0	0	0	0	612	0	0	1,049	0
Season Adjustment Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
2023 Peak Season Traffic	0	0	0	0	0	0	0	655	0	0	1,122	0
Annual Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
2025 Background Traffic	0	0	0	0	0	0	0	668	0	0	1,145	0
2050 Hammondville Road			36					4			31	
2025 Total Traffic	**0**	**0**	**36**	**0**	**0**	**0**	**0**	**672**	**0**	**0**	**1,176**	**0**



KBP
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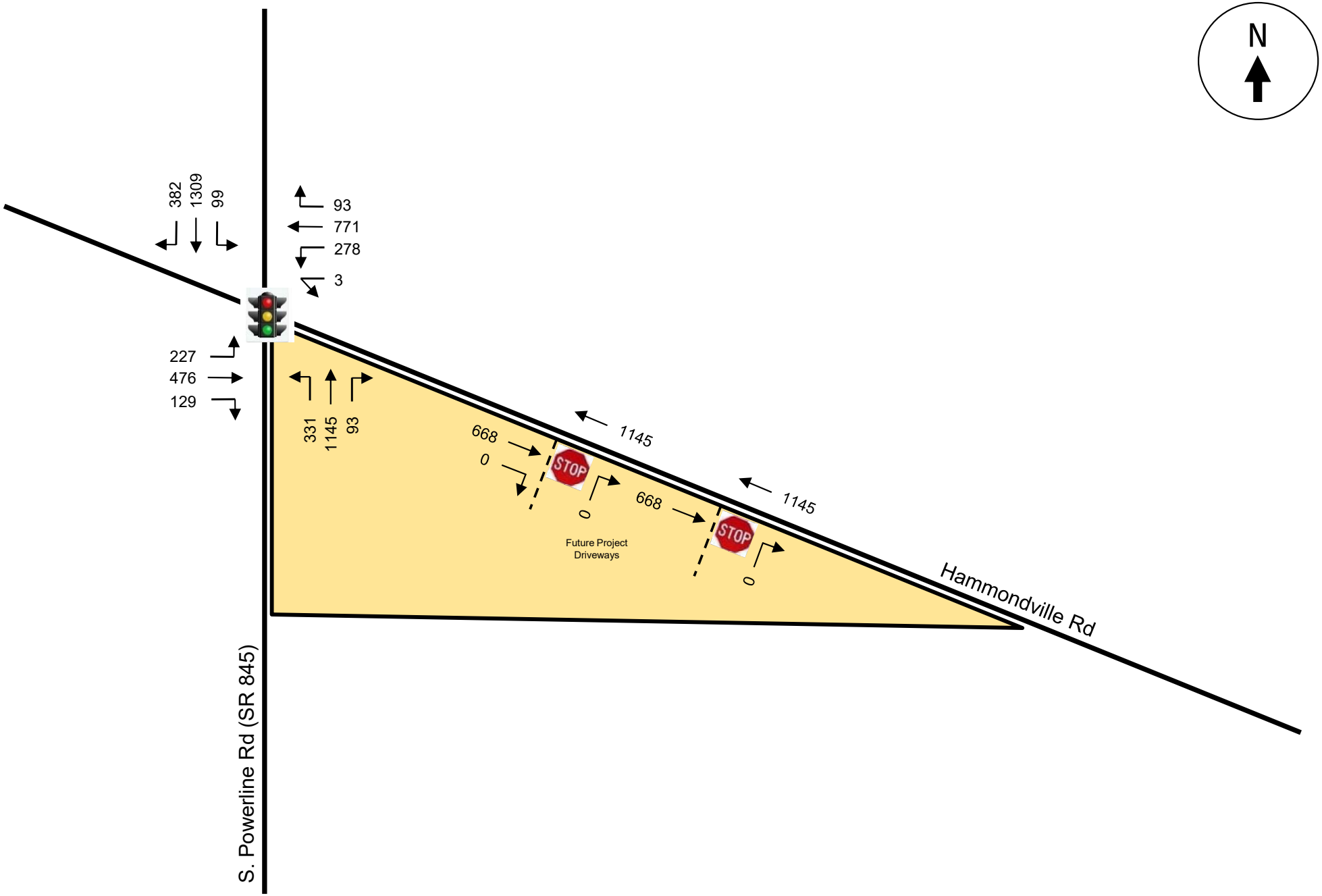
Future (2025) Background (w/out Project) Traffic Volumes
AM Peak Hour

FIGURE J-1
2050 Hammondville Road
Pompano Beach, Florida



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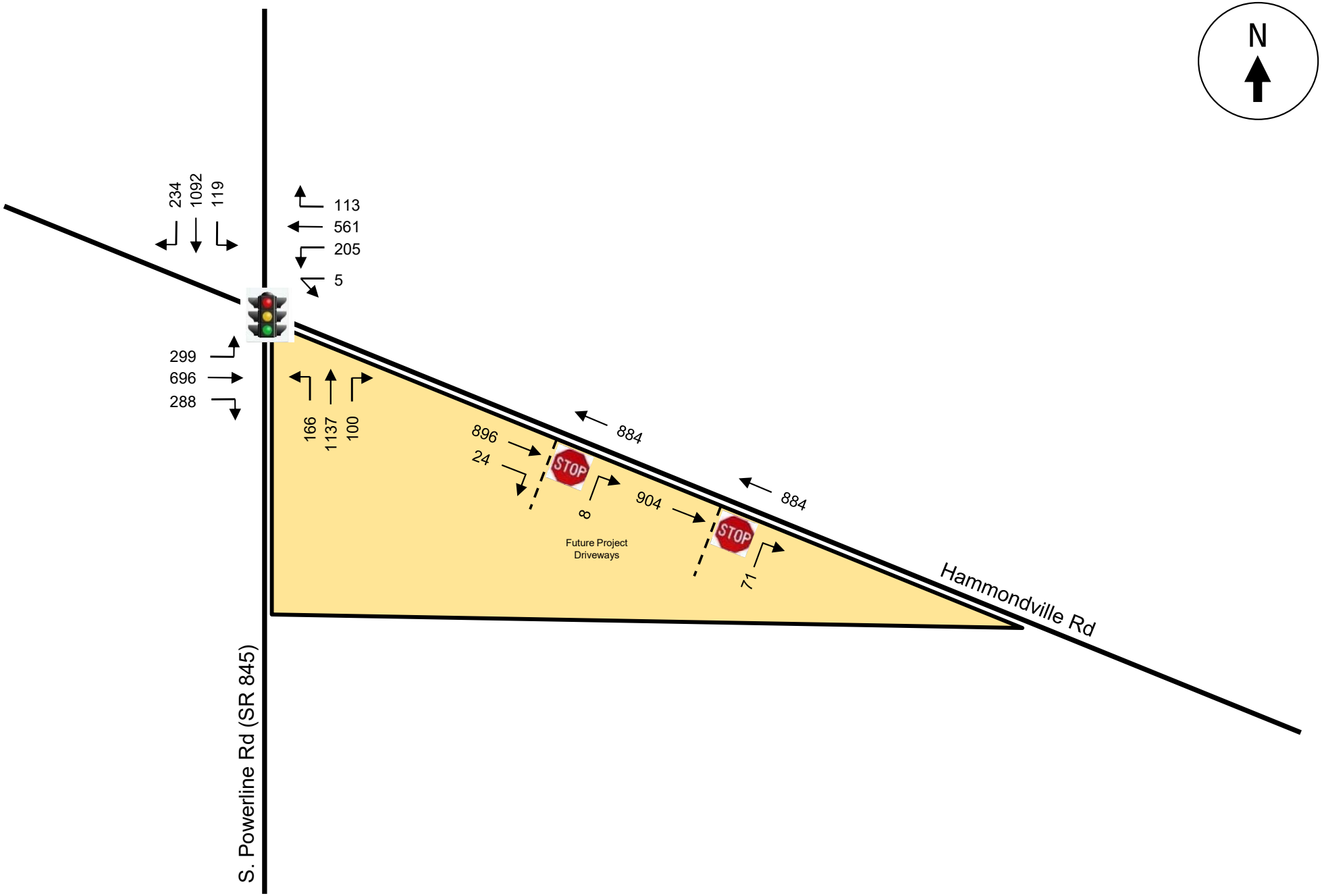
Future (2025) Background (w/out Project) Traffic Volumes
PM Peak Hour

FIGURE J-2
2050 Hammondville Road
Pompano Beach, Florida



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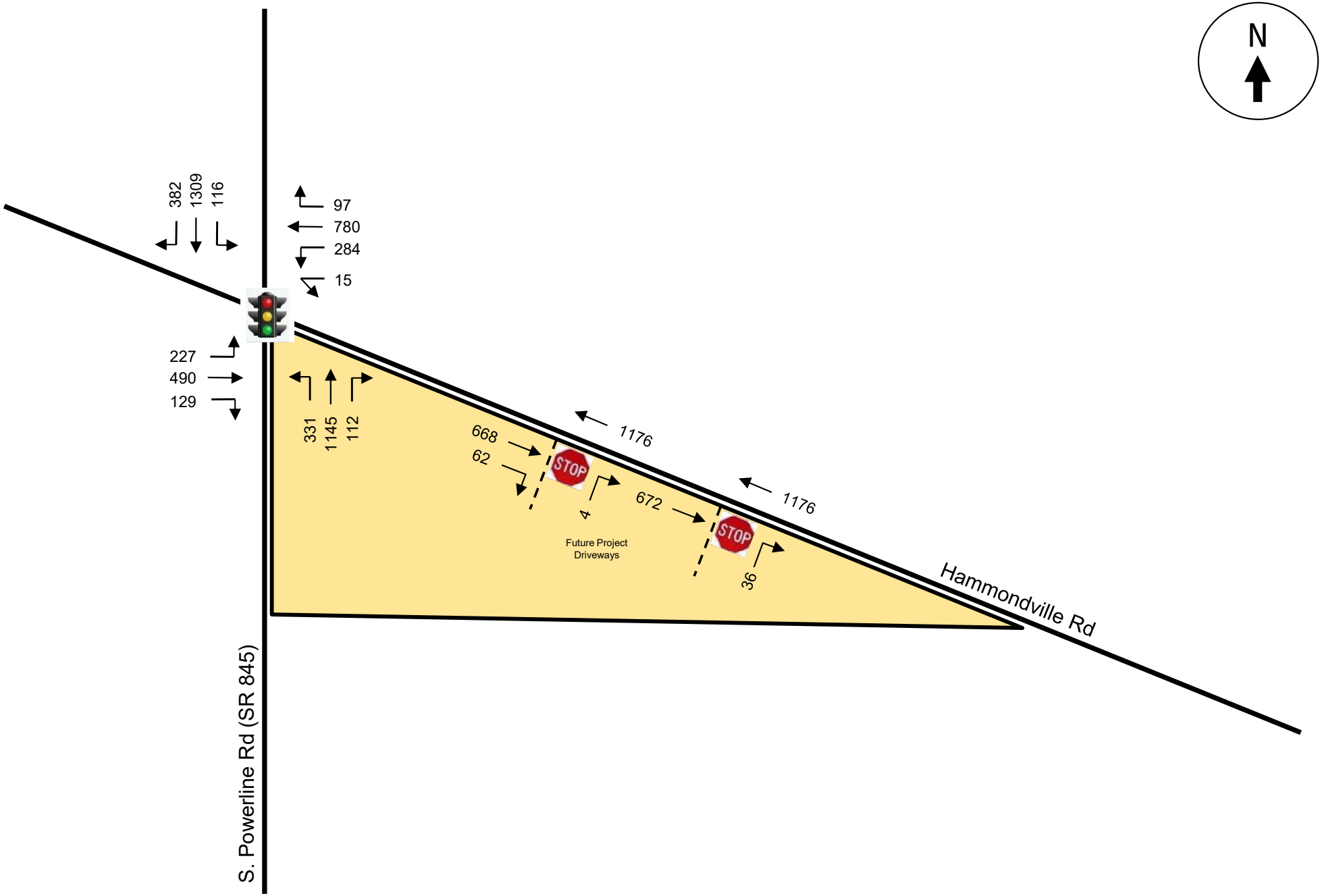
Future (2025) Total (w/ Project) Traffic Volumes
AM Peak Hour

FIGURE J-3
2050 Hammondville Road
Pompano Beach, Florida



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Future (2025) Total (w/ Project) Traffic Volumes
PM Peak Hour

FIGURE J-4
2050 Hammondville Road
Pompano Beach, Florida

Attachment K

2050 Hammondville Road – Pompano Beach, FL

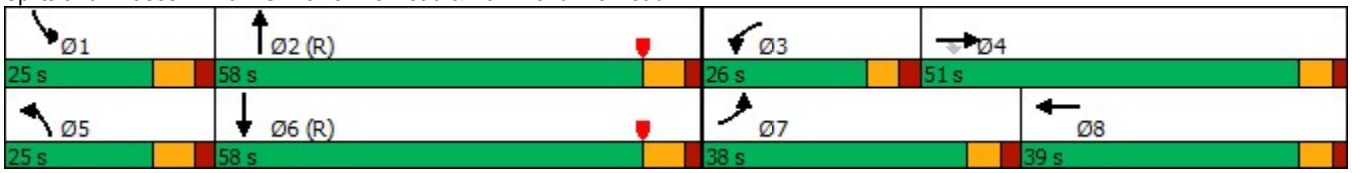
Intersection Analyses – SYNCHRO Output

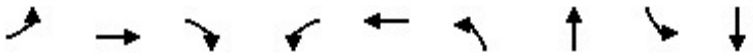
Existing (2023) SYNCHRO Output

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	293	677	282	189	533	163	1115	110	1070
Future Volume (vph)	293	677	282	189	533	163	1115	110	1070
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	5.0	10.0	5.0	10.0
Minimum Split (s)	11.5	43.0	43.0	11.5	39.0	12.5	44.0	12.5	44.0
Total Split (s)	38.0	51.0	51.0	26.0	39.0	25.0	58.0	25.0	58.0
Total Split (%)	23.8%	31.9%	31.9%	16.3%	24.4%	15.6%	36.3%	15.6%	36.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.5	2.0	2.0	2.5	2.0	2.5	2.0	2.5	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	6.0	6.5	6.0	7.5	7.0	7.5	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	30.3	49.3	49.3	13.8	32.9	12.5	60.0	9.9	57.4
Actuated g/C Ratio	0.19	0.31	0.31	0.09	0.21	0.08	0.38	0.06	0.36
v/c Ratio	0.94	0.67	0.51	0.69	0.95	0.65	0.69	0.56	0.78
Control Delay	99.6	51.9	22.8	82.9	84.9	83.0	44.6	82.8	49.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	99.6	51.9	22.8	82.9	84.9	83.0	44.6	82.8	49.0
LOS	F	D	C	F	F	F	D	F	D
Approach Delay		56.5			84.4		49.2		51.7
Approach LOS		E			F		D		D

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 93 (58%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 125	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 57.8	Intersection LOS: E
Intersection Capacity Utilization 93.1%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 101: S. Powerline Road & Hammondville Road



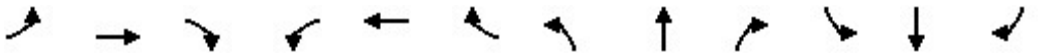


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	315	728	303	203	684	175	1297	118	1397
v/c Ratio	0.94	0.67	0.51	0.69	0.95	0.65	0.69	0.56	0.78
Control Delay	99.6	51.9	22.8	82.9	84.9	83.0	44.6	82.8	49.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	99.6	51.9	22.8	82.9	84.9	83.0	44.6	82.8	49.0
Queue Length 50th (ft)	326	346	112	108	370	93	421	62	474
Queue Length 95th (ft)	#507	435	218	150	#495	132	492	97	556
Internal Link Dist (ft)		1508			988		1808		1334
Turn Bay Length (ft)	590		145	325		300		275	
Base Capacity (vph)	348	1090	593	418	722	375	1890	375	1790
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.67	0.51	0.49	0.95	0.47	0.69	0.31	0.78

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary
101: S. Powerline Road & Hammondville Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	293	677	282	189	533	103	163	1115	91	110	1070	229
Future Volume (veh/h)	293	677	282	189	533	103	163	1115	91	110	1070	229
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	315	728	303	203	573	111	175	1199	98	118	1151	246
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	334	1140	505	248	608	117	219	1883	154	161	1575	337
Arrive On Green	0.19	0.32	0.32	0.07	0.21	0.21	0.08	0.52	0.52	0.06	0.50	0.50
Sat Flow, veh/h	1781	3554	1575	3456	2965	573	3456	4804	393	3456	4199	897
Grp Volume(v), veh/h	315	728	303	203	343	341	175	849	448	118	933	464
Grp Sat Flow(s),veh/h/ln	1781	1777	1575	1728	1777	1760	1728	1702	1793	1728	1702	1693
Q Serve(g_s), s	27.9	28.0	25.9	9.3	30.4	30.6	8.0	28.6	28.6	5.4	34.6	34.6
Cycle Q Clear(g_c), s	27.9	28.0	25.9	9.3	30.4	30.6	8.0	28.6	28.6	5.4	34.6	34.6
Prop In Lane	1.00		1.00	1.00		0.33	1.00		0.22	1.00		0.53
Lane Grp Cap(c), veh/h	334	1140	505	248	365	361	219	1334	703	161	1277	635
V/C Ratio(X)	0.94	0.64	0.60	0.82	0.94	0.95	0.80	0.64	0.64	0.73	0.73	0.73
Avail Cap(c_a), veh/h	351	1140	505	421	366	363	378	1334	703	378	1277	635
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.1	46.4	45.7	73.2	62.6	62.7	72.3	30.1	30.1	74.1	33.7	33.7
Incr Delay (d2), s/veh	32.1	1.1	1.7	2.5	31.7	33.0	2.6	2.3	4.4	2.4	3.7	7.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.7	12.7	10.5	4.2	17.0	17.0	3.6	11.5	12.5	2.4	14.2	14.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	96.2	47.5	47.4	75.7	94.4	95.7	74.8	32.5	34.5	76.5	37.4	41.0
LnGrp LOS	F	D	D	E	F	F	E	C	C	E	D	D
Approach Vol, veh/h		1346			887			1472			1515	
Approach Delay, s/veh		58.9			90.6			38.1			41.5	
Approach LOS		E			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	69.7	18.0	57.3	17.6	67.0	36.5	38.8
Change Period (Y+Rc), s	7.5	7.0	6.5	6.0	7.5	7.0	6.5	6.0
Max Green Setting (Gmax), s	17.5	51.0	19.5	45.0	17.5	51.0	31.5	33.0
Max Q Clear Time (g_c+I1), s	7.4	30.6	11.3	30.0	10.0	36.6	29.9	32.6
Green Ext Time (p_c), s	0.1	9.3	0.2	4.6	0.2	8.2	0.1	0.2

Intersection Summary	
HCM 6th Ctrl Delay	53.4
HCM 6th LOS	D

Notes

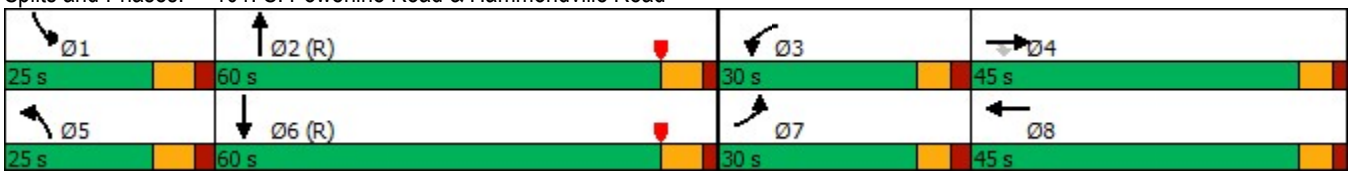
User approved pedestrian interval to be less than phase max green.

Timings
101: S. Powerline Road & Hammondville Road

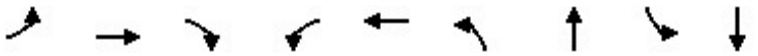
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	223	467	126	276	755	324	1121	97	1283
Future Volume (vph)	223	467	126	276	755	324	1121	97	1283
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	5.0	10.0	5.0	10.0
Minimum Split (s)	11.5	43.0	43.0	11.5	45.0	12.5	44.0	12.5	44.0
Total Split (s)	30.0	45.0	45.0	30.0	45.0	25.0	60.0	25.0	60.0
Total Split (%)	18.8%	28.1%	28.1%	18.8%	28.1%	15.6%	37.5%	15.6%	37.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.5	2.0	2.0	2.5	2.0	2.5	2.0	2.5	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	6.0	6.5	6.0	7.5	7.0	7.5	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	22.8	44.6	44.6	17.9	39.7	17.3	61.3	9.2	53.2
Actuated g/C Ratio	0.14	0.28	0.28	0.11	0.25	0.11	0.38	0.06	0.33
v/c Ratio	0.94	0.50	0.26	0.76	1.03	0.92	0.66	0.52	1.05
Control Delay	109.2	51.1	10.2	81.6	94.3	100.4	42.7	82.4	86.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	109.2	51.1	10.2	81.6	94.3	100.4	42.7	82.4	86.3
LOS	F	D	B	F	F	F	D	F	F
Approach Delay		60.6			91.2		54.9		86.1
Approach LOS		E			F		D		F

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 28 (18%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 74.0	Intersection LOS: E
Intersection Capacity Utilization 101.1%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 101: S. Powerline Road & Hammondville Road



Queues
101: S. Powerline Road & Hammondville Road



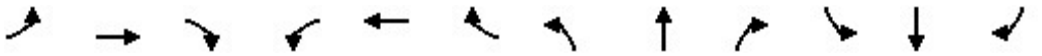
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	235	492	133	291	891	341	1276	102	1746
v/c Ratio	0.94	0.50	0.26	0.76	1.03	0.92	0.66	0.52	1.05
Control Delay	109.2	51.1	10.2	81.6	94.3	100.4	42.7	82.4	86.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	109.2	51.1	10.2	81.6	94.3	100.4	42.7	82.4	86.3
Queue Length 50th (ft)	246	228	8	154	~526	185	400	54	~717
Queue Length 95th (ft)	#412	301	65	202	#666	#278	468	87	#812
Internal Link Dist (ft)		1508			988		1808		1334
Turn Bay Length (ft)	590		145	325		300		275	
Base Capacity (vph)	259	986	521	504	869	375	1930	375	1661
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.50	0.26	0.58	1.03	0.91	0.66	0.27	1.05

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary
101: S. Powerline Road & Hammondville Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	223	467	126	276	755	91	324	1121	91	97	1283	375
Future Volume (veh/h)	223	467	126	276	755	91	324	1121	91	97	1283	375
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	235	492	133	291	795	96	341	1180	96	102	1351	395
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	255	1027	456	338	776	94	378	1936	157	144	1310	381
Arrive On Green	0.14	0.29	0.29	0.10	0.24	0.24	0.15	0.54	0.54	0.06	0.45	0.45
Sat Flow, veh/h	1781	3554	1577	3456	3185	385	3456	4805	391	3456	3907	1138
Grp Volume(v), veh/h	235	492	133	291	443	448	341	836	440	102	1176	570
Grp Sat Flow(s),veh/h/ln	1781	1777	1577	1728	1777	1792	1728	1702	1792	1728	1702	1640
Q Serve(g_s), s	20.8	18.3	10.5	13.3	39.0	39.0	15.5	27.1	27.1	4.6	53.6	53.6
Cycle Q Clear(g_c), s	20.8	18.3	10.5	13.3	39.0	39.0	15.5	27.1	27.1	4.6	53.6	53.6
Prop In Lane	1.00		1.00	1.00		0.21	1.00		0.22	1.00		0.69
Lane Grp Cap(c), veh/h	255	1027	456	338	433	437	378	1371	722	144	1141	550
V/C Ratio(X)	0.92	0.48	0.29	0.86	1.02	1.02	0.90	0.61	0.61	0.71	1.03	1.04
Avail Cap(c_a), veh/h	262	1027	456	508	433	437	378	1371	722	378	1141	550
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.7	47.0	44.2	71.1	60.5	60.5	67.5	28.5	28.5	74.6	44.3	44.3
Incr Delay (d2), s/veh	34.5	0.3	0.3	6.5	49.5	49.4	23.5	2.0	3.8	2.4	34.9	48.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.0	8.2	4.2	6.2	23.5	23.7	7.9	10.8	11.7	2.1	26.9	27.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	102.2	47.2	44.4	77.6	110.0	109.9	91.0	30.5	32.3	77.0	79.3	92.3
LnGrp LOS	F	D	D	E	F	F	F	C	C	E	F	F
Approach Vol, veh/h		860			1182			1617			1848	
Approach Delay, s/veh		61.8			102.0			43.7			83.2	
Approach LOS		E			F			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.2	71.5	22.1	52.2	25.0	60.6	29.4	45.0
Change Period (Y+Rc), s	7.5	7.0	6.5	6.0	7.5	7.0	6.5	6.0
Max Green Setting (Gmax), s	17.5	53.0	23.5	39.0	17.5	53.0	23.5	39.0
Max Q Clear Time (g_c+I1), s	6.6	29.1	15.3	20.3	17.5	55.6	22.8	41.0
Green Ext Time (p_c), s	0.1	9.8	0.4	2.9	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	72.3
HCM 6th LOS	E

Notes

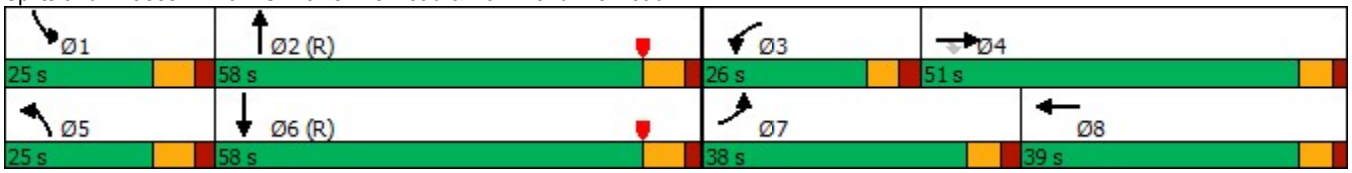
User approved pedestrian interval to be less than phase max green.

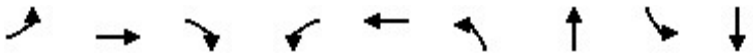
Future (2025) Background SYNCHRO Output

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	299	691	288	193	544	166	1137	112	1092
Future Volume (vph)	299	691	288	193	544	166	1137	112	1092
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	5.0	10.0	5.0	10.0
Minimum Split (s)	11.5	43.0	43.0	11.5	39.0	12.5	44.0	12.5	44.0
Total Split (s)	38.0	51.0	51.0	26.0	39.0	25.0	58.0	25.0	58.0
Total Split (%)	23.8%	31.9%	31.9%	16.3%	24.4%	15.6%	36.3%	15.6%	36.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.5	2.0	2.0	2.5	2.0	2.5	2.0	2.5	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	6.0	6.5	6.0	7.5	7.0	7.5	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	30.6	49.7	49.7	14.0	33.1	12.7	59.3	10.0	56.6
Actuated g/C Ratio	0.19	0.31	0.31	0.09	0.21	0.08	0.37	0.06	0.35
v/c Ratio	0.95	0.68	0.52	0.69	0.97	0.66	0.71	0.56	0.81
Control Delay	101.3	52.2	23.5	82.8	87.0	82.9	45.7	82.7	50.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	101.3	52.2	23.5	82.8	87.0	82.9	45.7	82.7	50.5
LOS	F	D	C	F	F	F	D	F	D
Approach Delay		57.2			86.0		50.1		53.0
Approach LOS		E			F		D		D

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 93 (58%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 125	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 58.9	Intersection LOS: E
Intersection Capacity Utilization 93.9%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 101: S. Powerline Road & Hammondville Road



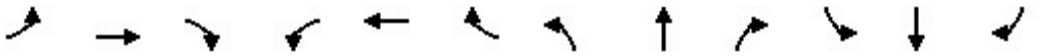


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	322	743	310	208	698	178	1323	120	1426
v/c Ratio	0.95	0.68	0.52	0.69	0.97	0.66	0.71	0.56	0.81
Control Delay	101.3	52.2	23.5	82.8	87.0	82.9	45.7	82.7	50.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	101.3	52.2	23.5	82.8	87.0	82.9	45.7	82.7	50.5
Queue Length 50th (ft)	335	355	118	110	379	94	433	63	489
Queue Length 95th (ft)	#524	446	226	153	#512	135	506	98	572
Internal Link Dist (ft)		1508			988		1808		1334
Turn Bay Length (ft)	590		145	325		300		275	
Base Capacity (vph)	348	1098	597	418	723	375	1868	375	1766
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.68	0.52	0.50	0.97	0.47	0.71	0.32	0.81

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary
101: S. Powerline Road & Hammondville Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	299	691	288	193	544	105	166	1137	93	112	1092	234
Future Volume (veh/h)	299	691	288	193	544	105	166	1137	93	112	1092	234
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	322	743	310	208	585	113	178	1223	100	120	1174	252
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	341	1152	511	253	612	118	222	1857	152	163	1550	333
Arrive On Green	0.19	0.32	0.32	0.07	0.21	0.21	0.09	0.51	0.51	0.06	0.49	0.49
Sat Flow, veh/h	1781	3554	1575	3456	2966	571	3456	4804	393	3456	4196	901
Grp Volume(v), veh/h	322	743	310	208	350	348	178	867	456	120	953	473
Grp Sat Flow(s),veh/h/ln	1781	1777	1575	1728	1777	1761	1728	1702	1793	1728	1702	1692
Q Serve(g_s), s	28.5	28.6	26.5	9.5	31.1	31.3	8.1	29.9	29.9	5.5	36.3	36.3
Cycle Q Clear(g_c), s	28.5	28.6	26.5	9.5	31.1	31.3	8.1	29.9	29.9	5.5	36.3	36.3
Prop In Lane	1.00		1.00	1.00		0.32	1.00		0.22	1.00		0.53
Lane Grp Cap(c), veh/h	341	1152	511	253	366	363	222	1316	693	163	1258	625
V/C Ratio(X)	0.94	0.64	0.61	0.82	0.95	0.96	0.80	0.66	0.66	0.74	0.76	0.76
Avail Cap(c_a), veh/h	351	1152	511	421	366	363	378	1316	693	378	1258	625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.9	46.2	45.5	73.1	62.8	62.8	72.2	31.1	31.1	74.0	34.9	34.9
Incr Delay (d2), s/veh	33.0	1.1	1.8	2.5	35.1	36.3	2.6	2.6	4.9	2.4	4.3	8.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.1	12.9	10.7	4.3	17.7	17.7	3.6	12.1	13.2	2.5	15.0	15.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	96.8	47.3	47.3	75.6	97.8	99.2	74.8	33.7	36.0	76.4	39.2	43.2
LnGrp LOS	F	D	D	E	F	F	E	C	D	E	D	D
Approach Vol, veh/h		1375			906			1501			1546	
Approach Delay, s/veh		58.9			93.2			39.3			43.3	
Approach LOS		E			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	68.8	18.2	57.9	17.8	66.1	37.1	39.0
Change Period (Y+Rc), s	7.5	7.0	6.5	6.0	7.5	7.0	6.5	6.0
Max Green Setting (Gmax), s	17.5	51.0	19.5	45.0	17.5	51.0	31.5	33.0
Max Q Clear Time (g_c+I1), s	7.5	31.9	11.5	30.6	10.1	38.3	30.5	33.3
Green Ext Time (p_c), s	0.1	9.1	0.2	4.6	0.2	7.7	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	54.7
HCM 6th LOS	D

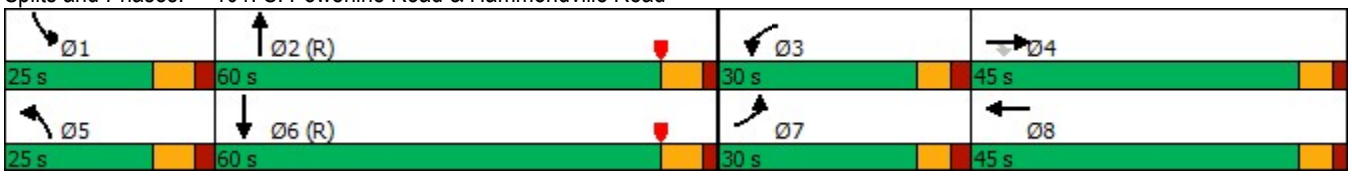
Notes

User approved pedestrian interval to be less than phase max green.

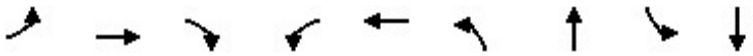
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	227	476	129	281	771	331	1145	99	1309
Future Volume (vph)	227	476	129	281	771	331	1145	99	1309
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	5.0	10.0	5.0	10.0
Minimum Split (s)	11.5	43.0	43.0	11.5	45.0	12.5	44.0	12.5	44.0
Total Split (s)	30.0	45.0	45.0	30.0	45.0	25.0	60.0	25.0	60.0
Total Split (%)	18.8%	28.1%	28.1%	18.8%	28.1%	15.6%	37.5%	15.6%	37.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.5	2.0	2.0	2.5	2.0	2.5	2.0	2.5	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	6.0	6.5	6.0	7.5	7.0	7.5	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	22.9	44.4	44.4	18.1	39.6	17.4	61.3	9.2	53.1
Actuated g/C Ratio	0.14	0.28	0.28	0.11	0.25	0.11	0.38	0.06	0.33
v/c Ratio	0.94	0.51	0.26	0.76	1.05	0.93	0.68	0.53	1.07
Control Delay	110.8	51.5	10.7	81.7	101.2	102.0	43.2	82.5	93.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	110.8	51.5	10.7	81.7	101.2	102.0	43.2	82.5	93.7
LOS	F	D	B	F	F	F	D	F	F
Approach Delay		61.3			96.4		55.6		93.1
Approach LOS		E			F		E		F

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 28 (18%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.07	
Intersection Signal Delay: 77.8	Intersection LOS: E
Intersection Capacity Utilization 102.7%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 101: S. Powerline Road & Hammondville Road



Queues
101: S. Powerline Road & Hammondville Road



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	239	501	136	296	910	348	1303	104	1780
v/c Ratio	0.94	0.51	0.26	0.76	1.05	0.93	0.68	0.53	1.07
Control Delay	110.8	51.5	10.7	81.7	101.2	102.0	43.2	82.5	93.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	110.8	51.5	10.7	81.7	101.2	102.0	43.2	82.5	93.7
Queue Length 50th (ft)	251	233	10	157	~548	189	412	55	~744
Queue Length 95th (ft)	#421	306	68	204	#687	#287	481	88	#839
Internal Link Dist (ft)		1508			988		1808		1334
Turn Bay Length (ft)	590		145	325		300		275	
Base Capacity (vph)	259	982	520	504	865	375	1927	375	1656
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.51	0.26	0.59	1.05	0.93	0.68	0.28	1.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary
101: S. Powerline Road & Hammondville Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	227	476	129	281	771	93	331	1145	93	99	1309	382
Future Volume (veh/h)	227	476	129	281	771	93	331	1145	93	99	1309	382
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	239	501	136	296	812	98	348	1205	98	104	1378	402
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	258	1029	457	343	776	94	378	1923	156	146	1302	378
Arrive On Green	0.15	0.29	0.29	0.10	0.24	0.24	0.15	0.53	0.53	0.06	0.44	0.44
Sat Flow, veh/h	1781	3554	1577	3456	3185	384	3456	4805	391	3456	3910	1135
Grp Volume(v), veh/h	239	501	136	296	453	457	348	854	449	104	1199	581
Grp Sat Flow(s),veh/h/ln	1781	1777	1577	1728	1777	1792	1728	1702	1792	1728	1702	1641
Q Serve(g_s), s	21.2	18.7	10.7	13.5	39.0	39.0	15.9	28.2	28.2	4.7	53.3	53.3
Cycle Q Clear(g_c), s	21.2	18.7	10.7	13.5	39.0	39.0	15.9	28.2	28.2	4.7	53.3	53.3
Prop In Lane	1.00		1.00	1.00		0.21	1.00		0.22	1.00		0.69
Lane Grp Cap(c), veh/h	258	1029	457	343	433	437	378	1362	717	146	1134	546
V/C Ratio(X)	0.92	0.49	0.30	0.86	1.05	1.05	0.92	0.63	0.63	0.71	1.06	1.06
Avail Cap(c_a), veh/h	262	1029	457	508	433	437	378	1362	717	378	1134	546
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.5	47.0	44.2	71.0	60.5	60.5	67.7	29.0	29.0	74.5	44.6	44.6
Incr Delay (d2), s/veh	35.3	0.3	0.3	7.0	55.7	55.6	26.9	2.2	4.1	2.4	43.3	56.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	8.4	4.3	6.3	24.3	24.5	8.3	11.3	12.2	2.1	28.1	29.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	102.8	47.3	44.5	78.0	116.2	116.1	94.6	31.2	33.2	76.9	87.8	101.1
LnGrp LOS	F	D	D	E	F	F	F	C	C	E	F	F
Approach Vol, veh/h		876			1206			1651			1884	
Approach Delay, s/veh		62.0			106.8			45.1			91.3	
Approach LOS		E			F			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.3	71.0	22.4	52.3	25.0	60.3	29.7	45.0
Change Period (Y+Rc), s	7.5	7.0	6.5	6.0	7.5	7.0	6.5	6.0
Max Green Setting (Gmax), s	17.5	53.0	23.5	39.0	17.5	53.0	23.5	39.0
Max Q Clear Time (g_c+I1), s	6.7	30.2	15.5	20.7	17.9	55.3	23.2	41.0
Green Ext Time (p_c), s	0.1	9.8	0.4	3.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	76.5
HCM 6th LOS	E

Notes

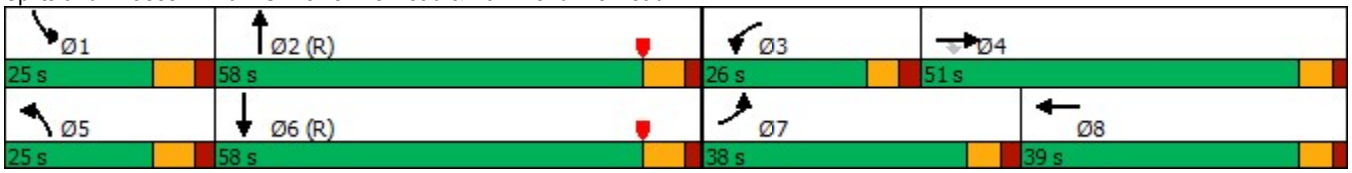
User approved pedestrian interval to be less than phase max green.

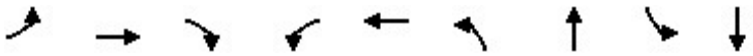
Future (2025) Total SYNCHRO Output

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	299	696	288	210	561	166	1137	119	1092
Future Volume (vph)	299	696	288	210	561	166	1137	119	1092
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	5.0	10.0	5.0	10.0
Minimum Split (s)	11.5	43.0	43.0	11.5	39.0	12.5	44.0	12.5	44.0
Total Split (s)	38.0	51.0	51.0	26.0	39.0	25.0	58.0	25.0	58.0
Total Split (%)	23.8%	31.9%	31.9%	16.3%	24.4%	15.6%	36.3%	15.6%	36.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.5	2.0	2.0	2.5	2.0	2.5	2.0	2.5	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	6.0	6.5	6.0	7.5	7.0	7.5	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	30.6	49.6	49.6	14.9	33.9	12.7	58.1	10.4	55.8
Actuated g/C Ratio	0.19	0.31	0.31	0.09	0.21	0.08	0.36	0.06	0.35
v/c Ratio	0.95	0.68	0.52	0.71	0.98	0.66	0.73	0.58	0.82
Control Delay	101.3	52.6	24.1	82.6	89.4	82.9	46.9	82.8	51.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	101.3	52.6	24.1	82.6	89.4	82.9	46.9	82.8	51.4
LOS	F	D	C	F	F	F	D	F	D
Approach Delay		57.5			87.8		51.2		54.0
Approach LOS		E			F		D		D

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 93 (58%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 125	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay: 60.1	Intersection LOS: E
Intersection Capacity Utilization 94.5%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 101: S. Powerline Road & Hammondville Road





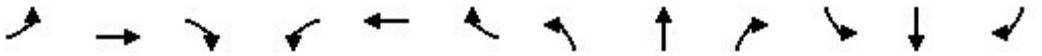
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	322	748	310	226	725	178	1331	128	1426
v/c Ratio	0.95	0.68	0.52	0.71	0.98	0.66	0.73	0.58	0.82
Control Delay	101.3	52.6	24.1	82.6	89.4	82.9	46.9	82.8	51.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	101.3	52.6	24.1	82.6	89.4	82.9	46.9	82.8	51.4
Queue Length 50th (ft)	335	362	121	120	~402	94	438	68	489
Queue Length 95th (ft)	#524	454	230	163	#545	135	512	103	572
Internal Link Dist (ft)		1508			988		1808		1334
Turn Bay Length (ft)	590		145	325		300		275	
Base Capacity (vph)	348	1097	596	418	739	375	1829	375	1741
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.68	0.52	0.54	0.98	0.47	0.73	0.34	0.82

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary
101: S. Powerline Road & Hammondville Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	299	696	288	210	561	113	166	1137	100	119	1092	234
Future Volume (veh/h)	299	696	288	210	561	113	166	1137	100	119	1092	234
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	322	748	310	226	603	122	178	1223	108	128	1174	252
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	341	1134	502	271	606	122	222	1832	162	171	1550	333
Arrive On Green	0.19	0.32	0.32	0.08	0.21	0.21	0.09	0.51	0.51	0.07	0.49	0.49
Sat Flow, veh/h	1781	3554	1575	3456	2940	593	3456	4770	421	3456	4196	901
Grp Volume(v), veh/h	322	748	310	226	364	361	178	873	458	128	953	473
Grp Sat Flow(s),veh/h/ln	1781	1777	1575	1728	1777	1756	1728	1702	1787	1728	1702	1692
Q Serve(g_s), s	28.5	29.0	26.7	10.3	32.7	32.9	8.1	30.4	30.5	5.8	36.3	36.3
Cycle Q Clear(g_c), s	28.5	29.0	26.7	10.3	32.7	32.9	8.1	30.4	30.5	5.8	36.3	36.3
Prop In Lane	1.00		1.00	1.00		0.34	1.00		0.24	1.00		0.53
Lane Grp Cap(c), veh/h	341	1134	502	271	366	362	222	1308	686	171	1258	625
V/C Ratio(X)	0.94	0.66	0.62	0.83	0.99	1.00	0.80	0.67	0.67	0.75	0.76	0.76
Avail Cap(c_a), veh/h	351	1134	502	421	366	362	378	1308	686	378	1258	625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.9	47.0	46.2	72.7	63.4	63.4	72.2	31.5	31.6	73.7	34.9	34.9
Incr Delay (d2), s/veh	33.0	1.3	2.0	4.6	45.0	46.4	2.6	2.7	5.1	2.4	4.3	8.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.1	13.2	10.8	4.8	19.4	19.4	3.6	12.3	13.4	2.6	15.0	15.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	96.8	48.3	48.2	77.3	108.4	109.8	74.8	34.3	36.6	76.2	39.2	43.2
LnGrp LOS	F	D	D	E	F	F	E	C	D	E	D	D
Approach Vol, veh/h		1380			951			1509			1554	
Approach Delay, s/veh		59.6			101.5			39.8			43.5	
Approach LOS		E			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.4	68.5	19.1	57.1	17.8	66.1	37.1	39.0
Change Period (Y+Rc), s	7.5	7.0	6.5	6.0	7.5	7.0	6.5	6.0
Max Green Setting (Gmax), s	17.5	51.0	19.5	45.0	17.5	51.0	31.5	33.0
Max Q Clear Time (g_c+I1), s	7.8	32.5	12.3	31.0	10.1	38.3	30.5	34.9
Green Ext Time (p_c), s	0.1	9.1	0.2	4.5	0.2	7.7	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	56.8
HCM 6th LOS	E

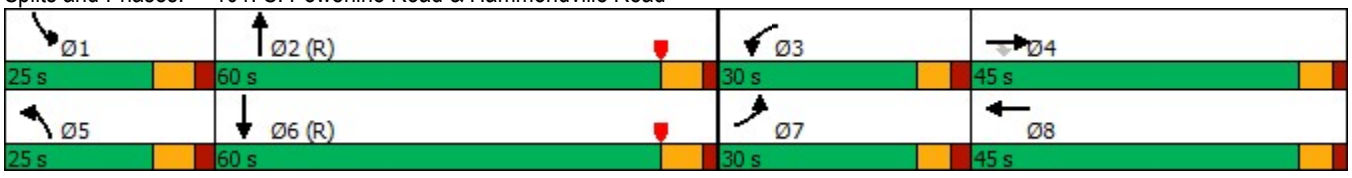
Notes

User approved pedestrian interval to be less than phase max green.

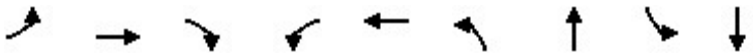
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	227	490	129	299	780	331	1145	116	1309
Future Volume (vph)	227	490	129	299	780	331	1145	116	1309
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	5.0	10.0	5.0	10.0
Minimum Split (s)	11.5	43.0	43.0	11.5	45.0	12.5	44.0	12.5	44.0
Total Split (s)	30.0	45.0	45.0	30.0	45.0	25.0	60.0	25.0	60.0
Total Split (%)	18.8%	28.1%	28.1%	18.8%	28.1%	15.6%	37.5%	15.6%	37.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.5	2.0	2.0	2.5	2.0	2.5	2.0	2.5	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	6.0	6.5	6.0	7.5	7.0	7.5	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	22.9	43.6	43.6	18.9	39.6	17.4	60.4	10.1	53.1
Actuated g/C Ratio	0.14	0.27	0.27	0.12	0.25	0.11	0.38	0.06	0.33
v/c Ratio	0.94	0.54	0.27	0.78	1.07	0.93	0.70	0.56	1.07
Control Delay	110.8	52.6	10.9	81.8	105.7	102.0	44.4	82.6	93.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	110.8	52.6	10.9	81.8	105.7	102.0	44.4	82.6	93.7
LOS	F	D	B	F	F	F	D	F	F
Approach Delay		61.9			99.7		56.4		93.0
Approach LOS		E			F		E		F

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 28 (18%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.07	
Intersection Signal Delay: 78.9	Intersection LOS: E
Intersection Capacity Utilization 103.0%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 101: S. Powerline Road & Hammondville Road



Queues
101: S. Powerline Road & Hammondville Road



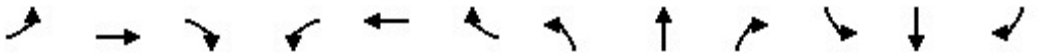
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	239	516	136	315	923	348	1323	122	1780
v/c Ratio	0.94	0.54	0.27	0.78	1.07	0.93	0.70	0.56	1.07
Control Delay	110.8	52.6	10.9	81.8	105.7	102.0	44.4	82.6	93.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	110.8	52.6	10.9	81.8	105.7	102.0	44.4	82.6	93.7
Queue Length 50th (ft)	251	244	10	167	~564	189	424	64	~744
Queue Length 95th (ft)	#421	318	69	216	#703	#287	495	99	#839
Internal Link Dist (ft)		1508			988		1808		1334
Turn Bay Length (ft)	590		145	325		300		275	
Base Capacity (vph)	259	964	512	504	864	375	1898	375	1656
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.54	0.27	0.63	1.07	0.93	0.70	0.33	1.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary
101: S. Powerline Road & Hammondville Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	227	490	129	299	780	97	331	1145	112	116	1309	382
Future Volume (veh/h)	227	490	129	299	780	97	331	1145	112	116	1309	382
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	239	516	136	315	821	102	348	1205	118	122	1378	402
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	258	1010	448	362	773	96	378	1863	182	165	1302	378
Arrive On Green	0.15	0.28	0.28	0.10	0.24	0.24	0.15	0.52	0.52	0.06	0.44	0.44
Sat Flow, veh/h	1781	3554	1577	3456	3173	394	3456	4719	462	3456	3910	1135
Grp Volume(v), veh/h	239	516	136	315	460	463	348	869	454	122	1199	581
Grp Sat Flow(s),veh/h/ln	1781	1777	1577	1728	1777	1790	1728	1702	1777	1728	1702	1641
Q Serve(g_s), s	21.2	19.5	10.8	14.4	39.0	39.0	15.9	29.4	29.4	5.6	53.3	53.3
Cycle Q Clear(g_c), s	21.2	19.5	10.8	14.4	39.0	39.0	15.9	29.4	29.4	5.6	53.3	53.3
Prop In Lane	1.00		1.00	1.00		0.22	1.00		0.26	1.00		0.69
Lane Grp Cap(c), veh/h	258	1010	448	362	433	436	378	1343	701	165	1134	546
V/C Ratio(X)	0.92	0.51	0.30	0.87	1.06	1.06	0.92	0.65	0.65	0.74	1.06	1.06
Avail Cap(c_a), veh/h	262	1010	448	508	433	436	378	1343	701	378	1134	546
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.5	48.0	44.9	70.6	60.5	60.5	67.7	30.0	30.0	73.9	44.6	44.6
Incr Delay (d2), s/veh	35.3	0.3	0.3	8.8	60.5	60.3	26.9	2.4	4.6	2.4	43.3	56.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	8.8	4.3	6.8	24.9	25.0	8.3	11.8	12.8	2.5	28.1	29.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	102.8	48.3	45.1	79.4	121.0	120.9	94.6	32.4	34.6	76.4	87.8	101.1
LnGrp LOS	F	D	D	E	F	F	F	C	C	E	F	F
Approach Vol, veh/h		891			1238			1671			1902	
Approach Delay, s/veh		62.4			110.3			45.9			91.1	
Approach LOS		E			F			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.1	70.1	23.2	51.5	25.0	60.3	29.7	45.0
Change Period (Y+Rc), s	7.5	7.0	6.5	6.0	7.5	7.0	6.5	6.0
Max Green Setting (Gmax), s	17.5	53.0	23.5	39.0	17.5	53.0	23.5	39.0
Max Q Clear Time (g_c+I1), s	7.6	31.4	16.4	21.5	17.9	55.3	23.2	41.0
Green Ext Time (p_c), s	0.1	9.8	0.4	3.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	77.6
HCM 6th LOS	E

Notes

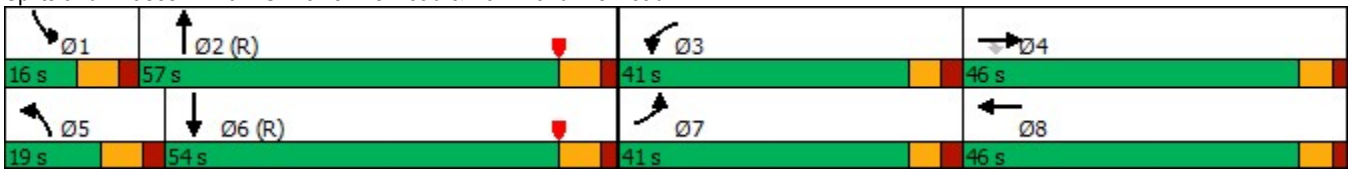
User approved pedestrian interval to be less than phase max green.

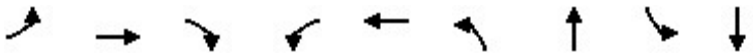
Future (2025) Total (Optimized) SYNCHRO Output

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	299	696	288	210	561	166	1137	119	1092
Future Volume (vph)	299	696	288	210	561	166	1137	119	1092
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	5.0	10.0	5.0	10.0
Minimum Split (s)	11.5	43.0	43.0	11.5	39.0	12.5	44.0	12.5	44.0
Total Split (s)	41.0	46.0	46.0	41.0	46.0	19.0	57.0	16.0	54.0
Total Split (%)	25.6%	28.8%	28.8%	25.6%	28.8%	11.9%	35.6%	10.0%	33.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.5	2.0	2.0	2.5	2.0	2.5	2.0	2.5	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	6.0	6.5	6.0	7.5	7.0	7.5	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	31.7	54.1	54.1	15.0	37.4	11.1	55.4	8.5	52.8
Actuated g/C Ratio	0.20	0.34	0.34	0.09	0.23	0.07	0.35	0.05	0.33
v/c Ratio	0.92	0.62	0.49	0.71	0.89	0.75	0.76	0.70	0.87
Control Delay	93.5	46.8	21.6	82.3	72.0	92.1	50.8	94.3	56.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	93.5	46.8	21.6	82.3	72.0	92.1	50.8	94.3	56.3
LOS	F	D	C	F	E	F	D	F	E
Approach Delay		52.0			74.4		55.7		59.4
Approach LOS		D			E		E		E

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 93 (58%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 125	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 59.1	Intersection LOS: E
Intersection Capacity Utilization 94.5%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 101: S. Powerline Road & Hammondville Road



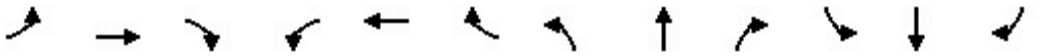


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	322	748	310	226	725	178	1331	128	1426
v/c Ratio	0.92	0.62	0.49	0.71	0.89	0.75	0.76	0.70	0.87
Control Delay	93.5	46.8	21.6	82.3	72.0	92.1	50.8	94.3	56.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	93.5	46.8	21.6	82.3	72.0	92.1	50.8	94.3	56.3
Queue Length 50th (ft)	327	330	115	120	376	95	475	69	533
Queue Length 95th (ft)	#488	413	214	163	456	#145	538	#114	#638
Internal Link Dist (ft)		1508			988		1808		1334
Turn Bay Length (ft)	590		145	325		300		275	
Base Capacity (vph)	381	1197	630	740	871	249	1742	188	1648
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.62	0.49	0.31	0.83	0.71	0.76	0.68	0.87

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary
101: S. Powerline Road & Hammondville Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	299	696	288	210	561	113	166	1137	100	119	1092	234
Future Volume (veh/h)	299	696	288	210	561	113	166	1137	100	119	1092	234
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	322	748	310	226	603	122	178	1223	108	128	1174	252
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	342	1206	535	274	667	135	219	1734	153	169	1464	314
Arrive On Green	0.19	0.34	0.34	0.08	0.23	0.23	0.08	0.48	0.48	0.06	0.46	0.46
Sat Flow, veh/h	1781	3554	1575	3456	2940	593	3456	4770	421	3456	4195	901
Grp Volume(v), veh/h	322	748	310	226	364	361	178	873	458	128	953	473
Grp Sat Flow(s),veh/h/ln	1781	1777	1575	1728	1777	1757	1728	1702	1787	1728	1702	1692
Q Serve(g_s), s	28.5	28.2	25.9	10.3	31.9	32.0	8.1	32.1	32.2	5.8	38.2	38.2
Cycle Q Clear(g_c), s	28.5	28.2	25.9	10.3	31.9	32.0	8.1	32.1	32.2	5.8	38.2	38.2
Prop In Lane	1.00		1.00	1.00		0.34	1.00		0.24	1.00		0.53
Lane Grp Cap(c), veh/h	342	1206	535	274	403	398	219	1238	650	169	1188	590
V/C Ratio(X)	0.94	0.62	0.58	0.82	0.90	0.91	0.81	0.71	0.71	0.76	0.80	0.80
Avail Cap(c_a), veh/h	384	1206	535	745	444	439	248	1238	650	184	1188	590
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.7	44.2	43.5	72.5	60.1	60.2	72.3	34.6	34.6	73.9	38.1	38.1
Incr Delay (d2), s/veh	28.5	0.9	1.4	2.4	19.9	20.6	14.5	3.4	6.3	13.2	5.8	11.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.7	12.7	10.4	4.7	16.6	16.6	4.0	13.2	14.4	2.9	16.1	16.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	92.2	45.1	44.8	74.9	80.0	80.8	86.9	38.0	40.9	87.1	43.9	49.1
LnGrp LOS	F	D	D	E	F	F	F	D	D	F	D	D
Approach Vol, veh/h		1380			951			1509			1554	
Approach Delay, s/veh		56.0			79.1			44.6			49.0	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.3	65.2	19.2	60.3	17.6	62.8	37.2	42.3
Change Period (Y+Rc), s	7.5	7.0	6.5	6.0	7.5	7.0	6.5	6.0
Max Green Setting (Gmax), s	8.5	50.0	34.5	40.0	11.5	47.0	34.5	40.0
Max Q Clear Time (g_c+I1), s	7.8	34.2	12.3	30.2	10.1	40.2	30.5	34.0
Green Ext Time (p_c), s	0.0	8.3	0.4	3.8	0.0	4.7	0.2	2.0

Intersection Summary	
HCM 6th Ctrl Delay	54.9
HCM 6th LOS	D

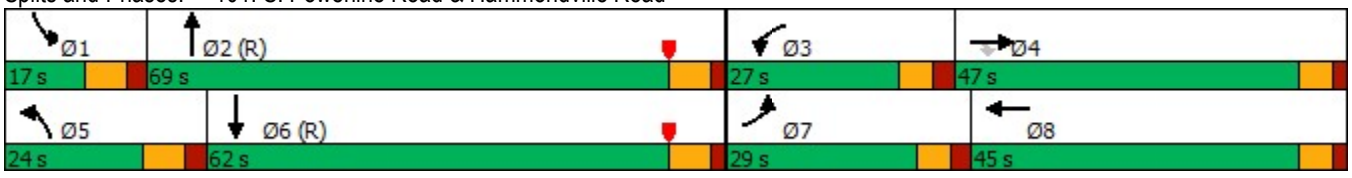
Notes

User approved pedestrian interval to be less than phase max green.

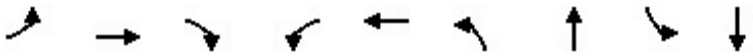
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	227	490	129	299	780	331	1145	116	1309
Future Volume (vph)	227	490	129	299	780	331	1145	116	1309
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	5.0	10.0	5.0	10.0
Minimum Split (s)	11.5	45.0	45.0	11.5	45.0	12.5	44.0	12.5	44.0
Total Split (s)	29.0	47.0	47.0	27.0	45.0	24.0	69.0	17.0	62.0
Total Split (%)	18.1%	29.4%	29.4%	16.9%	28.1%	15.0%	43.1%	10.6%	38.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.5	2.0	2.0	2.5	2.0	2.5	2.0	2.5	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	6.0	6.5	6.0	7.5	7.0	7.5	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	22.5	43.3	43.3	18.2	39.0	16.5	62.6	8.9	55.0
Actuated g/C Ratio	0.14	0.27	0.27	0.11	0.24	0.10	0.39	0.06	0.34
v/c Ratio	0.96	0.54	0.27	0.81	1.08	0.98	0.67	0.65	1.04
Control Delay	115.4	52.8	10.7	85.4	110.8	113.9	42.0	89.8	81.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	115.4	52.8	10.7	85.4	110.8	113.9	42.0	89.8	81.2
LOS	F	D	B	F	F	F	D	F	F
Approach Delay		63.2			104.3		57.0		81.8
Approach LOS		E			F		E		F

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 43 (27%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay: 76.5	Intersection LOS: E
Intersection Capacity Utilization 103.0%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 101: S. Powerline Road & Hammondville Road



Queues
101: S. Powerline Road & Hammondville Road



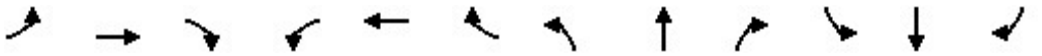
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	239	516	136	315	923	348	1323	122	1780
v/c Ratio	0.96	0.54	0.27	0.81	1.08	0.98	0.67	0.65	1.04
Control Delay	115.4	52.8	10.7	85.4	110.8	113.9	42.0	89.8	81.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	115.4	52.8	10.7	85.4	110.8	113.9	42.0	89.8	81.2
Queue Length 50th (ft)	252	246	10	167	~564	190	416	65	~719
Queue Length 95th (ft)	#433	312	67	221	#703	#299	471	102	#814
Internal Link Dist (ft)		1508			988		1808		1334
Turn Bay Length (ft)	590		145	325		300		275	
Base Capacity (vph)	248	957	510	439	852	354	1968	203	1715
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.54	0.27	0.72	1.08	0.98	0.67	0.60	1.04

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary
101: S. Powerline Road & Hammondville Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	227	490	129	299	780	97	331	1145	112	116	1309	382
Future Volume (veh/h)	227	490	129	299	780	97	331	1145	112	116	1309	382
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	239	516	136	315	821	102	348	1205	118	122	1378	402
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	250	996	442	359	773	96	356	1886	185	163	1344	390
Arrive On Green	0.14	0.28	0.28	0.10	0.24	0.24	0.14	0.53	0.53	0.06	0.46	0.46
Sat Flow, veh/h	1781	3554	1577	3456	3173	394	3456	4720	462	3456	3910	1135
Grp Volume(v), veh/h	239	516	136	315	460	463	348	869	454	122	1199	581
Grp Sat Flow(s),veh/h/ln	1781	1777	1577	1728	1777	1790	1728	1702	1777	1728	1702	1641
Q Serve(g_s), s	21.3	19.6	10.9	14.4	39.0	39.0	16.1	29.0	29.0	5.6	55.0	55.0
Cycle Q Clear(g_c), s	21.3	19.6	10.9	14.4	39.0	39.0	16.1	29.0	29.0	5.6	55.0	55.0
Prop In Lane	1.00		1.00	1.00		0.22	1.00		0.26	1.00		0.69
Lane Grp Cap(c), veh/h	250	996	442	359	433	436	356	1360	710	163	1170	564
V/C Ratio(X)	0.95	0.52	0.31	0.88	1.06	1.06	0.98	0.64	0.64	0.75	1.02	1.03
Avail Cap(c_a), veh/h	250	996	442	443	433	436	356	1360	710	205	1170	564
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.2	48.5	45.3	70.7	60.5	60.5	68.8	29.3	29.3	74.0	43.4	43.4
Incr Delay (d2), s/veh	43.8	0.4	0.3	13.4	60.5	60.3	41.1	2.3	4.4	7.8	32.7	45.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.8	8.8	4.4	7.1	24.9	25.0	9.0	11.6	12.5	2.6	27.2	28.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	112.1	48.8	45.6	84.1	121.0	120.9	109.9	31.6	33.7	81.8	76.1	89.4
LnGrp LOS	F	D	D	F	F	F	F	C	C	F	F	F
Approach Vol, veh/h		891			1238			1671			1902	
Approach Delay, s/veh		65.3			111.5			48.5			80.5	
Approach LOS		E			F			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.1	70.9	23.1	50.9	24.0	62.0	29.0	45.0
Change Period (Y+Rc), s	7.5	7.0	6.5	6.0	7.5	7.0	6.5	6.0
Max Green Setting (Gmax), s	9.5	62.0	20.5	41.0	16.5	55.0	22.5	39.0
Max Q Clear Time (g_c+I1), s	7.6	31.0	16.4	21.6	18.1	57.0	23.3	41.0
Green Ext Time (p_c), s	0.0	11.4	0.3	3.1	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	75.5
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

Attachment L

2050 Hammondville Road – Pompano Beach, FL

Signal Timing Information

BROWARD COUNTY TRAFFIC ENGINEERING
ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	1009	**Initial Operation Date**	6/29/64
Controller Type	2070 LN	**System Number**	1009
Modification Number	15	**Modification Date**	06/18/2018
Drawing/Project No	228110-1-52-01	**FPL Grid Number**	87588769600
Intersection	POWERLINE ROAD (SR 845) and DR. M L KING JR. BLVD		
Municipality	POMPANO BEACH		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	1	2	3	4	5	6	7	8
Direction	SBL	NB	WBL	EB	NBL	SB	EBL	WB
Initial Green(MIN)	5	10	5	6	5	10	5	6
Vehicle Ext.(GAP)	2.0	3.0	2.0	2.5	2.0	3.0	2.0	2.5
Maximum Green I	12	50	18	30	12	50	18	30
Maximum Green II								
Yellow Clearance	5.0	5.0	4.0	4.0	5.0	5.0	4.0	4.0
All Red Clearance	2.5	2.0	2.5	2.0	2.5	2.0	2.5	2.0
Phase Recall	OFF	MIN	OFF	OFF	OFF	MIN	OFF	OFF
Detector Delay								
Walk		7		7		7		7
Pedestrian Clearance		30		30		30		30
Permissive	DUAL		DUAL		DUAL		NO	
Flash Operation	RED	RED	RED	RED	RED	RED	RED	RED

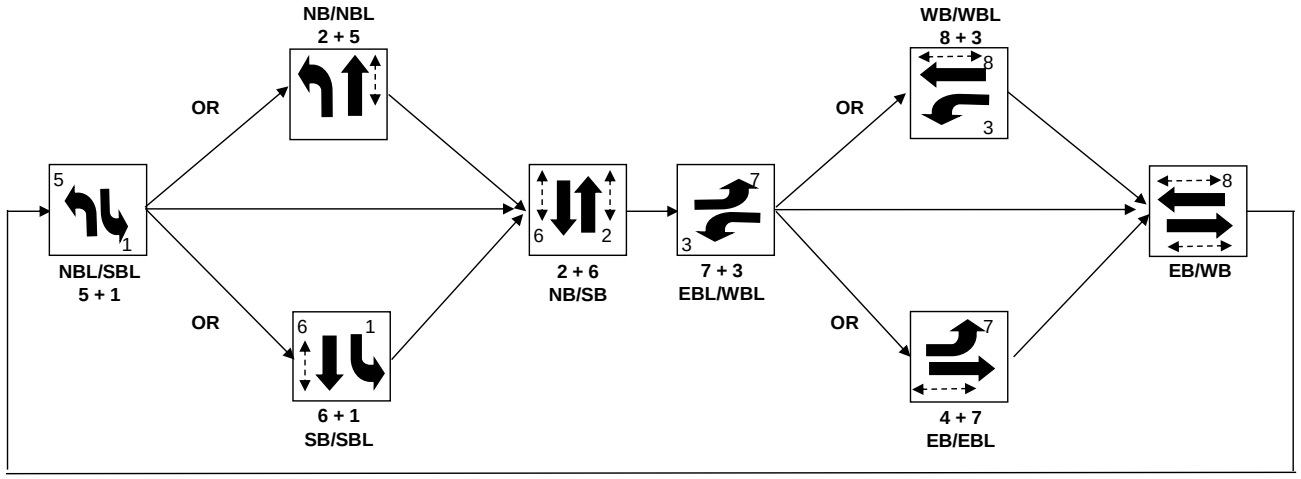
Attachment

NOTES:

1. DUAL ENTRY HARDWIRED EAST/WEST.
2. MOD. 15 UPDATES PH. 4 & 8 WALK VALUES.

Submitted By _____ **Approved By** _____

Sequence of Operation for (1009) Powerline Road(SR 845) and Hammondville Road Pompano Beach



Denotes pedestrian signal

Station : 1009 - Powerline Rd & Dr M L King Blvd (Standard File)

Phase	1 (SL)	2 (NT)	3 (WL)	4 (ET)	5 (NL)	6 (ST)	7 (EL)	8 (WT)	9	10	11	12	13	14	15	16
Walk		7		7		7		7								
Ped Clearance		30		30		30		30								
Min Green	5	10	5	6	5	10	5	6								
Gap Ext	2	3	2	2.5	2	3	2	2.5								
Max1	12	50	18	30	12	50	18	30								
Max2																
Yellow Clr	5	5	4	4	5	5	4	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2.5	2	2.5	2	2.5	2	2.5	2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON	ON	ON	ON	ON	ON	ON	ON								
Auto Flash Entry				ON				ON								
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call	ON		ON		ON		ON		ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry				ON				ON								
Sim Gap Enable									ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																

Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash	ON	ON	ON	ON	ON	ON
Override Higher Preempt	ON	ON	ON	ON	ON	ON
Flash in Dwell	ON	ON	ON	ON	ON	ON
Link to Preempt						
Delay						
Min Duration						
Min Green						
Min Walk						
Ped Clear						
Track Green						
Min Dwell						
Max Presence						
Track Veh 1						
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1						
Dwell Cyc Veh 2						
Dwell Cyc Veh 3						
Dwell Cyc Veh 4						
Dwell Cyc Veh 5						
Dwell Cyc Veh 6						

Preempt LP

Channel	1	2	3	4
Min				
Max				
Enable				
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt				
No Skip				
Priority P1				
Priority P2				
Priority P3				
Priority P4				
Lock				
Headway				
Group Lock				
Queue Jump				
Free Mode				
Alt Table				

Dwell Cyc Veh 7						
Dwell Cyc Veh 8						
Dwell Cyc Veh 9						
Dwell Cyc Veh 10						
Dwell Cyc Veh 11						
Dwell Cyc Veh 12						
Dwell Cyc Ped1						
Dwell Cyc Ped2						
Dwell Cyc Ped3						
Dwell Cyc Ped4						
Dwell Cyc Ped5						
Dwell Cyc Ped6						
Dwell vPed7						
Dwell Cyc Ped8						
Exit 1						
Exit 2						
Exit 3						
Exit 4						

Prepared By	Date Implemented
Reviewed By	Traffic Engineer

Broward County Timing Sheet 2/2/2023 10:15:09 AM

Station : 1009 - Powerline Rd & Dr M L King Blvd (Standard File)

Coordination

Hour	Minute	Action	Pattern	Cycle	Offset	Split	seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 1											**Easy**															
		100	254																							
6		2	2	160	93	2	1		50		25	58	26	51	25	58	38	39								
9		3	3	160	68	3	1		50		26	60	23	51	26	60	35	39								
15		4	4	160	28	4	1		50		25	60	30	45	25	60	30	45								
20		3	3	160	68	3	1		50		26	60	23	51	26	60	35	39								
Day Plan 2											**Easy**															
		3	3	160	68	3	1		50		26	60	23	51	26	60	35	39								
1		100	254																							
6	30	3	3	160	68	3	1		50		26	60	23	51	26	60	35	39								

Day Plan 3												**Easy**																	
		3	3	160	68	3	1		50		26	60	23	51	26	60	35	39											
1		100	254																										
6	30	3	3	160	68	3	1		50		26	60	23	51	26	60	35	39											
23		100	254																										

Station : 1009 - Powerline Rd & Dr M L King Blvd (Standard File)

Hour	Minute	Action	Pattern	Cycle	Offset	Split	seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 4											**Easy**															

Scheduler

	Month											Day of Weekk							Day of Month										1										2										3		
Plan	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	Day Plan
1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
3	1	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
4	1												1	1	1	1	1		1																																2
5	1												1							1																																2
6					1								1																																1	1	1	1	1	1	1	2
7							1											1				1																													2
8							1						1	1	1	1	1						1																												2
9							1						1											1																												2
10									1				1							1	1	1	1	1	1	1																										2
11											1						1																																			2
12											1							1																																			2
13												1		1				1																																			2
14												1		1	1	1	1	1																																			2
15												1		1																																							2
16												1		1				1																																			2
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User Comments: