

August 13, 2025

Joshua Arnold
Lead Environmental Scientist
National Grid

RE: **Traffic Impact Study for Proposed CNG Energy Transfer Site**
Spring Avenue, Town of Brunswick, Rensselaer County, New York
LaBella Project No.: 2202528.071

Dear Mr. Arnold:

LaBella Associates (LaBella) has completed a Traffic Impact Study (TIS) for the proposed CNG Energy Transfer Station to be located in the Town of Brunswick on the parcel identified on the Rensselaer County Tax Map (SCTM) as SBL# 113.3-4-1.2 and SBL#113-6-1. This assessment, prepared at the request of National Grid, is based on industry-standard engineering guidelines and the Site Plan prepared by BL Companies, dated December 12, 2024. Further, the proposed routing of National Grid vehicles to and from the subject site, originating and returning to the City of Troy and generally points west, was used as the basis for establishing the study area.

1. PROJECT DESCRIPTION

The proposed project consists of constructing a compressed natural gas energy transfer station. The proposed energy transfer station will be supported by 26 truck off-loading bays. Access to the site will be via a proposed full-movement driveway on Spring Avenue. National Grid intends to operate the Brunswick facility when it is truly needed, typically during extremely cold days when the average temperature in the region drops to -5 degrees Fahrenheit or below. According to the historical weather data these conditions are rare. The facility may also run briefly each spring before trailers are demobilized for the season. When in operation, trailers carrying CNG will be offloaded at the facility by employees and put into use. When inactive, the facility will not be staffed and will generate virtually no traffic. Therefore, the analysis herein examines the facility in rare instances when it is operating.

The study evaluates the potential traffic impacts associated with the proposed project, assuming a build year of 2028. It should be noted that this design year was selected to provide a conservative analysis. However, it is expected that the project will be completed and occupied by end of 2026. Exhibit 1 is an aerial image that depicts the subject site, the adjacent roadway network, and key landmarks.





Exhibit 1: Overall Site



2. EXISTING CONDITIONS

Study Area Roadways

Pawling Avenue (Route 66) is classified as an Urban Minor Arterial roadway under the jurisdiction of the City of Troy. The roadway runs primarily north-south through the City. In the vicinity of the subject site, the roadway provides one 11-foot-wide travel lane with 6-foot bicycle lanes in each direction. Sidewalks are located on both sides of the roadway. The posted speed limit is 30-mph.

Spring Avenue is classified as an Urban Collector roadway and is under the jurisdiction of the Rensselaer County Highway Department near the subject site and under the jurisdiction of the City of Troy within the City boundary. The roadway runs primarily east-west through the City of Troy and the Town of Brunswick. In the vicinity of the subject site, the roadway provides two 10-foot-wide travel lanes in one direction. There are no sidewalks within the vicinity of the site. The posted speed limit is 45-mph.

Study Intersection

Pawling Avenue (Route 66) and Congress Street/Brunswick Road (Route 2) is a three-leg signalized intersection. The eastbound Congress Street approach provides a through lane and a channelized right-turn lane. The westbound Brunswick Road approach provides a through lane and an exclusive left-turn lane. The northbound Pawling Avenue approach provides an exclusive left-turn lane and an exclusive right-turn lane.



Exhibit 2: Pawling Ave and Congress St/Brunswick Rd

Pedestrian accommodation at the intersection includes curb ramps, marked crosswalks, and pedestrian signals with a push button for the northbound approach. The westbound approach provides curb ramps and pedestrian signals with a push button but does not include marked crosswalk. The study utilized signal timing information collected in the field, which was also compared with the timing data provided by the City of Troy Department of Public Works (Troy DPW), both sets of data are included in Attachment A. Exhibit 2 depicts an aerial image of the study intersection.



Pawling Avenue (Route 66) and Spring Avenue is four-legged offset signalized intersection. The eastbound Spring Avenue approach provides a through lane and an exclusive right-turn lane, and the westbound approach provides a shared through/right turn lane. Left-turn movements onto Pawling Avenue are prohibited from Spring Avenue. Northbound Pawling Avenue provides an exclusive left-turn lane and a shared through/right-turn lane. The southbound Pawling Avenue approach provides an exclusive left-turn lane and a shared through/right-turn lane. It should be noted that the Spring Avenue approaches are offset with two signals at the intersection acting as one.



Exhibit 3: Pawling Ave and Spring Ave

Pedestrian accommodation at the intersection includes curb ramps, marked crosswalks and pedestrian signals with push buttons at all approaches. There are right-turn-on-red restrictions on the Spring Avenue approaches. The study utilized signal timing information collected in the field, which was also compared with the timing data provided by the City of Troy Department of Public Works (Troy DPW), both sets of data are included in Attachment A. Exhibit 3 depicts an aerial image of the study intersection.

Spring Avenue and Mountainview Avenue is a three-leg unsignalized intersection with stop control on Mountainview Avenue. The eastbound Spring Avenue approach is free-flowing and provides a shared through/right-turn lane. The westbound Spring Avenue approach is free-flowing and provides a shared left-turn/through lane. The northbound Mountain View Avenue approach is stop-controlled and provides a shared left-turn/right-turn lane. There is no pedestrian accommodation at this intersection. Exhibit 4 depicts an aerial image of the study intersection.



Exhibit 4: Spring Ave and Mountainview Ave



Transit

The subject site is served by the Capital District Transportation Authority (CDTA). Bus stops located at the intersection of Pawling Avenue and Spring Avenue serve Route 286, which connects Wynantskill to Downtown Troy. Route 286 operates every 60 minutes on weekdays and does not operate on weekends. These bus stops also serve Route 802, which connects Wynantskill to Troy High School and operate during school arrival and dismissal. Bus schedules are included under Attachment B.

Data Collection

LaBella collected turning movement counts (TMCs) at the intersections of (1) Pawling Avenue and Congress Street/Brunswick Road and (2) Spring Avenue and Mountainview Avenue on Tuesday, April 8, 2025; TMCs were collected at (3) Pawling Avenue and Spring Avenue on Thursday, April 10, 2025. The counts were conducted during the typical peak commuter periods – 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m. The observed peak hours varied between 7:15 a.m. to 8:15 a.m. and 7:30 a.m. and 8:30 a.m. during the AM peak period. During the PM peak period, the observed peak hours varied between 4:00 p.m. to 5:00 p.m. and 4:15 p.m. to 5:15 p.m. These 2025 Existing traffic volumes formed the basis of the traffic analysis herein and are shown in Figure 1-1 for AM and PM peak hours. The raw TMC data is included under Attachment C.

3. TRAFFIC ASSESSMENT

Traffic Forecasting (i.e. No-Build Traffic Volumes)

To evaluate the impact of the proposed project, traffic projections were prepared for the design year of 2028. It should be noted that this design year was selected to provide a conservative analysis as it is expected that the project will be completed and occupied sooner than 2028. The City of Troy and the Town of Brunswick indicated that no new developments are expected in the vicinity that would significantly affect traffic volumes in the study area. Historical traffic volume data from the NYSDOT Traffic Viewer was also reviewed. To provide a conservative analysis, a 1.0% annual growth rate was applied to the Existing 2025 traffic volumes and compounded over a three-year period. The 2028 No-Build traffic volumes are shown in Figure 1-2 for AM and PM peak hours. No-Build volumes represent the forecasted traffic volumes for 2028 *without* the proposed project.

Figure 1-1: 2025 Existing Peak Hour Traffic Volumes

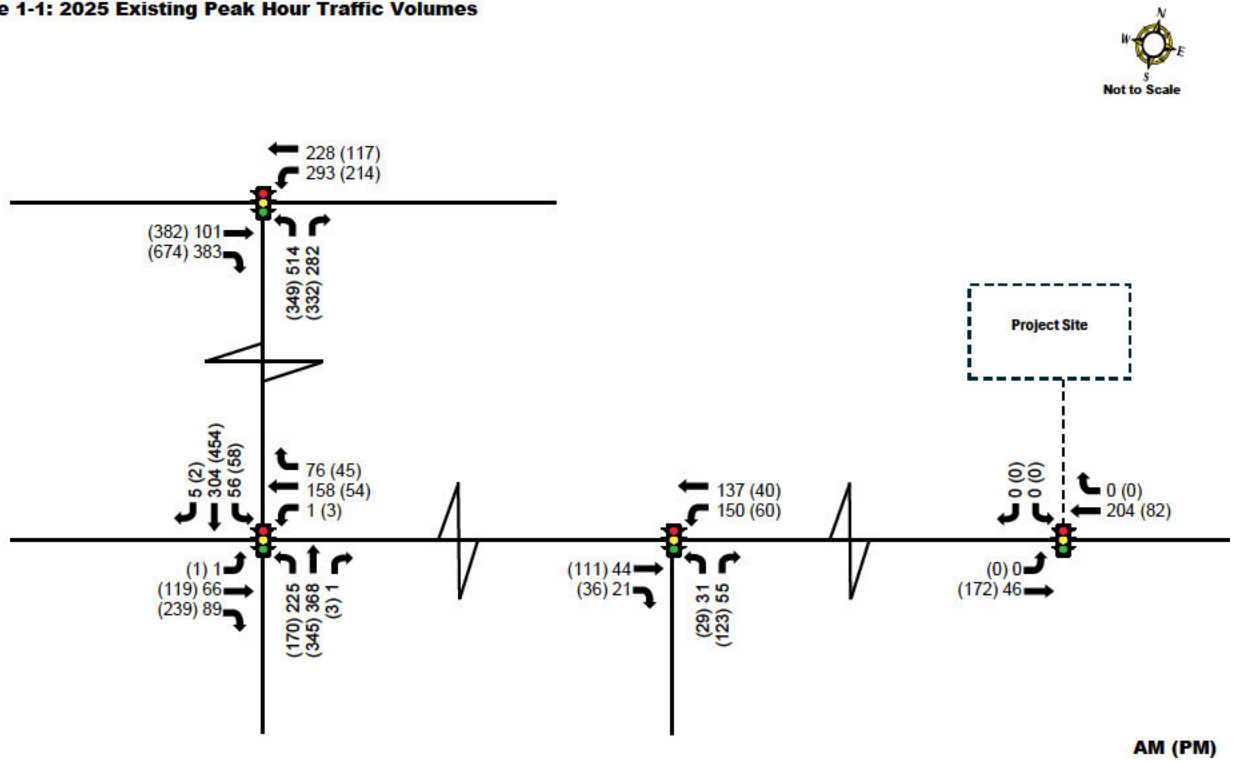
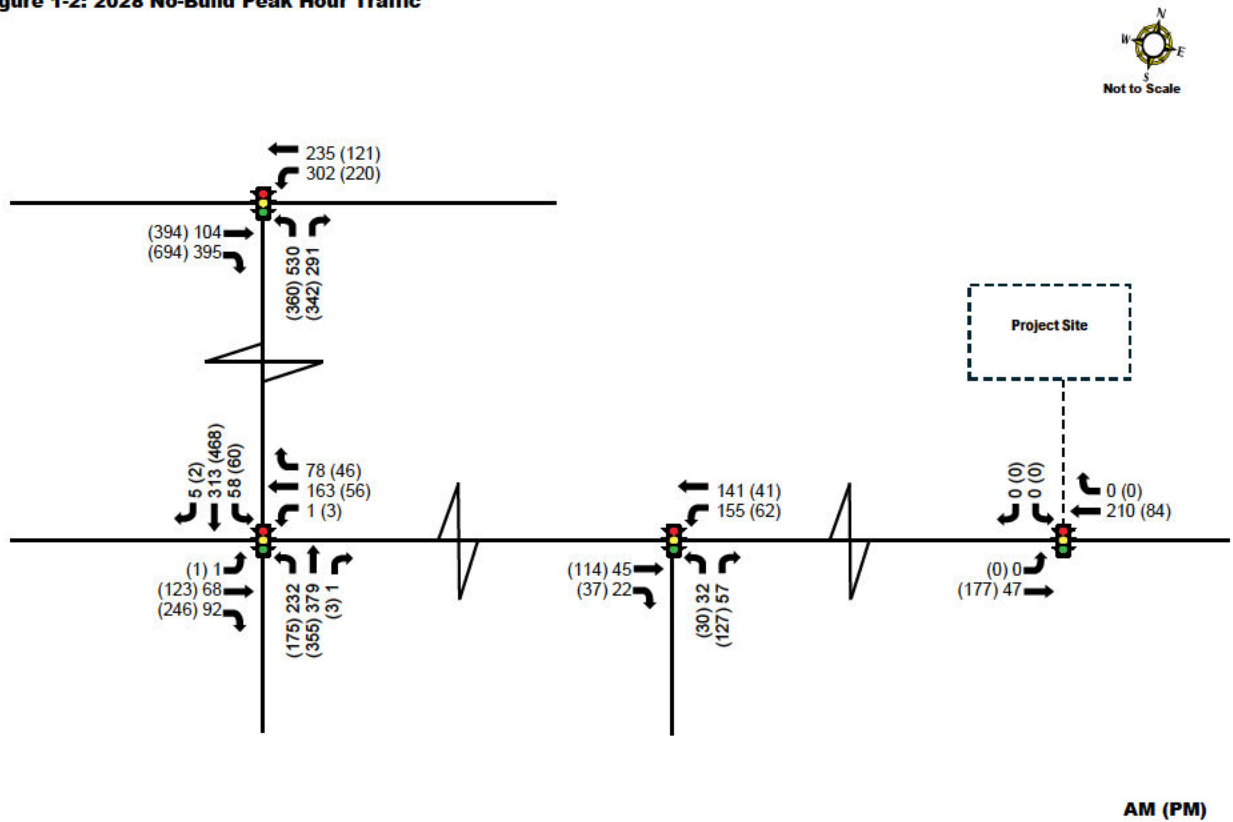


Figure 1-2: 2028 No-Build Peak Hour Traffic



**2025 Existing/2028 No-Build AM/PM Peak
Hour Traffic Volumes**

CNG Troy Energy

FIGURE - 1

May 2025

Town of Brunswick
Rensselaer County
New York



Trip Generation

Trip generation determines the quantity of traffic expected to travel to/from a given site. The anticipated trip generation for the proposed project was developed based on the information provided by National Grid and the intended operation of the facility. National Grid intends to operate the Brunswick facility when it's truly needed, typically during extremely cold days when the average temperature in the region drops to -5°F or below, the facility will be activated, and the 24 CNG trailers stationed at the facility will be off-loaded by approximately four employees who arrive in the early morning of the given day. The trailers will depart and be replaced by new trailers carrying more CNG. This process will repeat throughout the day as shown in Table 1 below.

Table 1 – Vehicular Trip Generation

Time	Worst Case Scenario	
	Enter	Exit
12:00AM	0	0
1:00AM	0	0
2:00AM	0	0
3:00AM	0	0
4:00AM	1 ¹	0
5:00AM	3 ¹	0
6:00AM	0	0
7:00AM	0	0
8:00AM	0	0
9:00AM	0	0
10:00AM	0	8
11:00AM	0	8
12:00PM	8	8
1:00PM	8	0
2:00PM	8	0
3:00PM	0	0
4:00PM	0	0
5:00PM	0	0
6:00PM	0	8
7:00PM	0	8
8:00PM	8	8
9:00PM	8	0
10:00PM	8	4 ¹
11:00PM	0	0

¹Vehicles are passenger vehicles used by employees to access site.

As shown in Table 2, the peak trip generation occurs between 12:00PM and 1:00PM and again between 8:00PM and 9:00PM with 8 trucks entering the site and 8 trucks exiting the site.



Table 2 – Summary of Peak Hour Vehicular Trip Generation

Trip Type	Weekday AM Peak Hour			Weekday PM Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total
Passenger Vehicle Trips	0	0	0	0	0	0
Truck Trips	8	8	16	8	8	16
Total	8	8	16	8	8	16

As shown in Table 2, the proposed project is expected to generate 16 total vehicular trips during the weekday AM peak hour and the weekday PM peak hour in the worst-case scenario. Although the site peak hours do not coincide with the existing roadway peak hours, LaBella analyzed them concurrently to be conservative.

The previously mentioned trip generation only happens when the temperature is at or below negative five degrees Fahrenheit. These conditions are rare, according to historical weather data. The facility may also run briefly each spring before trailers are demobilized for the season.

Trip Distribution

As shown in Exhibit 5, this site will utilize the Spring Avenue Option (the red route). As such, 100% "new" trips will enter and exit via Spring Avenue. The trips will continue to/from I-787 via Pawling Avenue and Congress St. There are no "Pass-by" trips associated with this project. The trip distribution for the project is shown in Figure 2-1. The project generated trips are shown in Figure 2-2 for AM and PM Peak Hours.

Exhibit 5- Truck Route

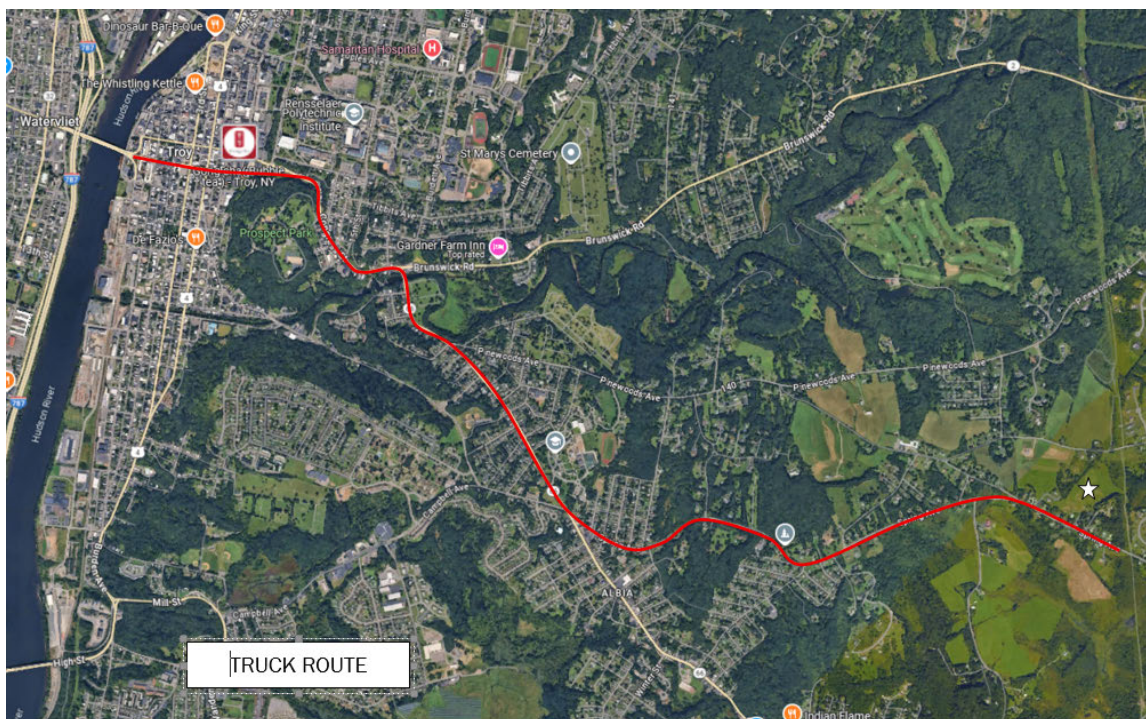


Figure 2-1: Peak Hour trip Distribution

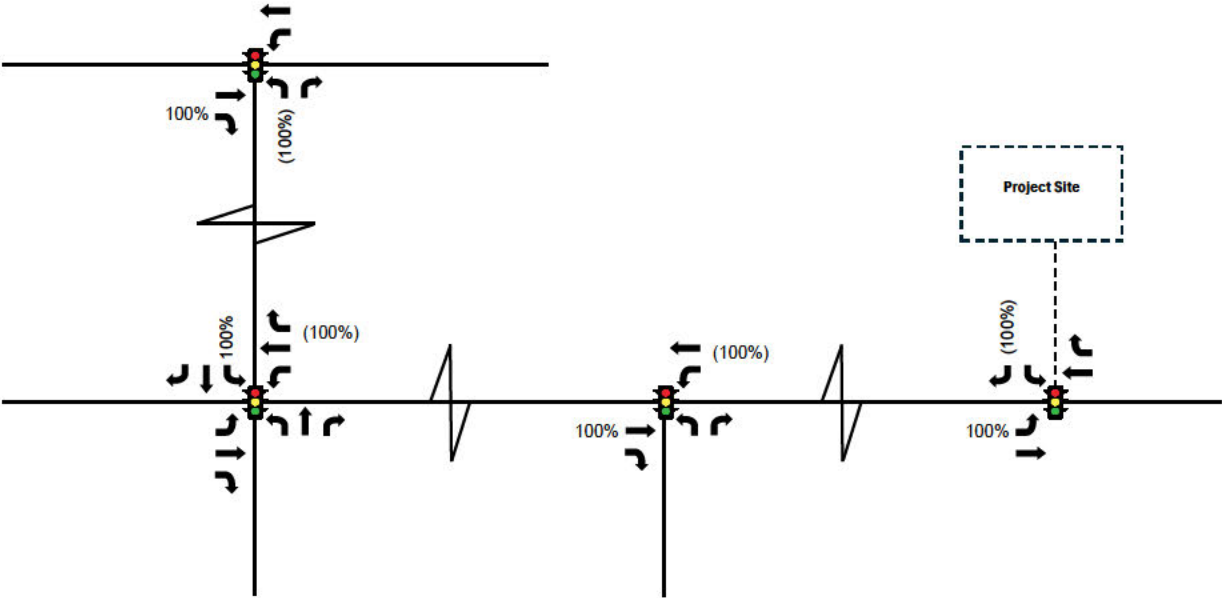
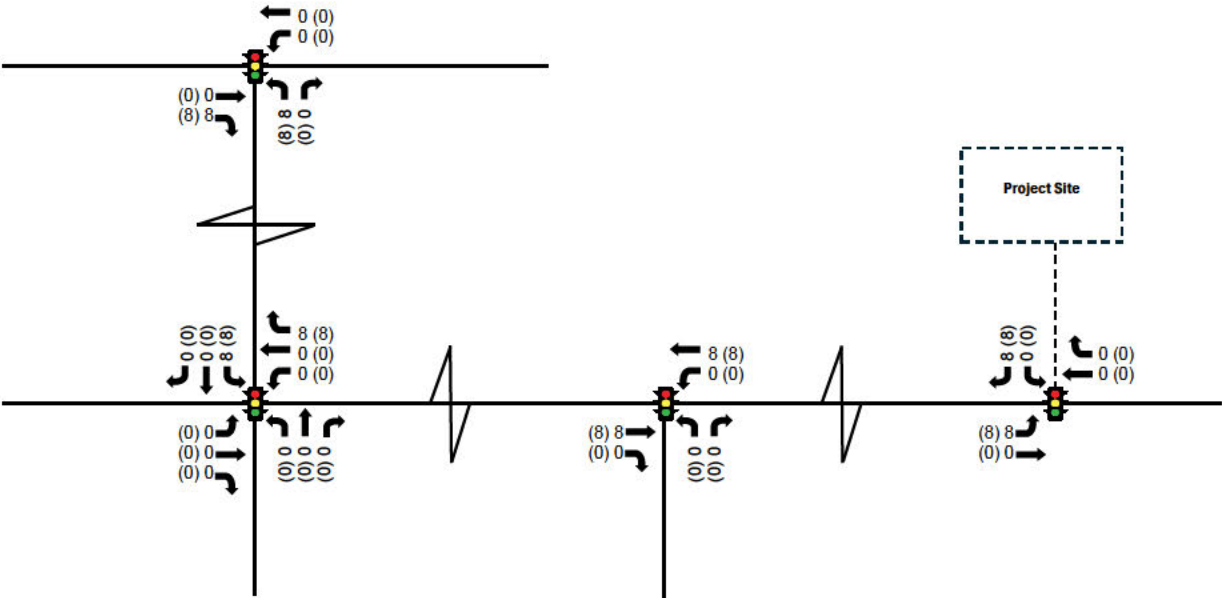


Figure 2-2: Project -Generated Trip



AM (PM)



Trip Distribution and
Project-Generated Trips

CNG Troy Energy

FIGURE - 2

May 2025

Town of Brunswick
Rensselaer County
New York



Based on the designated truck route and the proposed project trip distribution, the increase in truck traffic volumes at the study intersections is summarized in Table 2A, which also includes existing truck volumes for comparison.

Table 2A – Comparison of Heavy Vehicles at Study Intersections

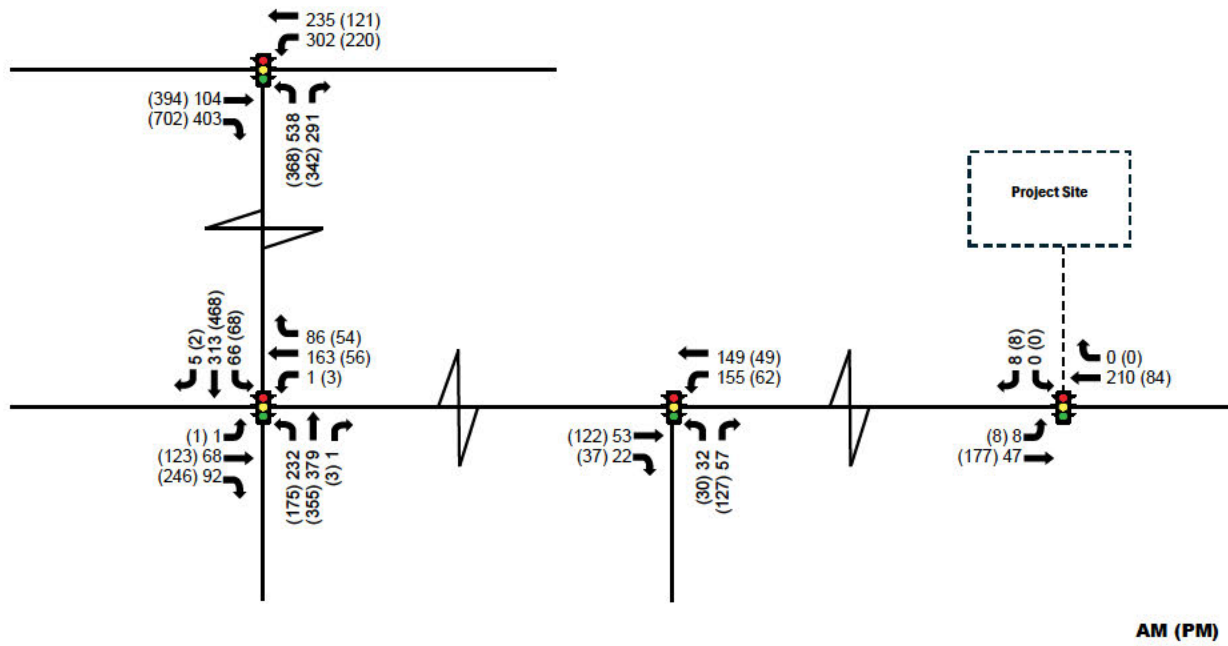
Intersection	Lane Group	AM Peak Hour		PM Peak Hour	
		Existing Heavy Vehicle	Projected Heavy Vehicle	Existing Heavy Vehicle	Projected Heavy Vehicle
Pawling Ave and Congress St/ Brunswick Rd	EBR	33	41	11	19
	NBL	25	33	8	16
Pawling Ave and Spring Ave	WBR	2	10	0	8
	SBL	2	10	1	9
Spring Ave and Mountainview Ave	EBT	8	16	1	9
	WBT	9	17	3	11

As seen from Table 2A, there is a minor increase in truck volume at the intersections. It should be noted that this increase in truck volumes is infrequent based on historical weather data. The facility may also run briefly each spring before trailers are demobilized for the season.

Future Traffic Forecasting (i.e. Build Traffic Volumes)

The 2028 Build traffic volumes are the sum of the project-generated traffic volumes and the 2028 No-Build traffic volumes. The 2028 Build traffic volumes are shown in Figure 3 for the AM and PM peak hours.

Figure 3-1: 2028 Build Peak Hour Traffic Volumes





Capacity Analysis

The capacity analysis relates traffic volumes to the physical characteristics of an intersection. Intersection evaluations were made using the procedures contained in the *Highway Capacity Manual (HCM), 7th Edition*. Tables 3A and 3B summarize the results of the level of service calculations for the Existing, No-Build, and Build conditions during the weekday AM and weekday PM peak hours. The Level of Service reports are included under Attachment D.

Table 3A – Weekday AM LOS Summary

Intersection		Weekday AM Peak Hour			
Approach	Lane Group	2025 Existing	2028 No-Build	2028 Build	Δ No-Build vs Build
Pawling Avenue and Congress Street/Brunswick Road - Signalized					
Congress St, EB	T	C/23.5	C/24.0	C/24.3	+0.3
	R	A/8.0	A/8.2	A/8.3	+0.1
Brunswick Rd, WB	L	C/26.7	C/27.9	C/28.4	+0.5
Pawling Avenue, NB	T	C/23.9	C/24.5	C/24.9	+0.4
	L	D/44.0	D/45.0	D/45.8	+0.8
	R	A/19	A/19	A/19	0.0
Overall		C/23.2	C/23.9	C/24.3	+0.4
Pawling Avenue and Spring Avenue - Signalized					
Spring Ave, EB	LTR	C/20.3	C/20.3	C/20.3	0.0
Spring Ave, WB	LTR	C/23.8	C/24.1	C/24.4	+0.3
Pawling Ave, NB	L	C/24.5	C/25.6	C/25.4	-0.2
Pawling Ave, SB	TR	B/14.7	B/14.9	B/14.9	0.0
	LT	B/18.3	B/18.7	B/19.4	+0.7
	R	B/13.8	B/14.0	B/14.0	0.0
Overall		B/18.5	B/18.8	B/18.9	+0.1
Spring Avenue and Mountainview Avenue - Unsignalized					
Spring Ave, EB	TR	--	--	--	--
Spring Ave, WB	LT	A/7.7	A/7.7	A/7.7	0.0
Mountainview Ave, NB	LR	B/11.2	B/11.3	B/11.5	+0.2
Spring Avenue and Site Driveway - Unsignalized					
Spring Ave, EB	LT	--	--	A/8.9	--
Spring Ave, WB	TR	--	--	--	--
Site Driveway SB	LR	--	--	B/10.9	--

EB, WB, NB, SB = Eastbound, Westbound, Northbound, and Southbound intersection approaches

L, T, R = Left-turn, Through, and/or Right-turn movements

X / X.X = Level of service / Average delay in seconds per vehicle



Table 3B – Weekday PM LOS Summary

Intersection		Weekday AM Peak Hour			
Approach	Lane Group	2025 Existing	2028 No-Build	2028 Build	Δ No-Build vs Build
Pawling Avenue and Congress Street/Brunswick Road - Signalized					
Congress St, EB	T	C/22.4	C/23.2	C/23.9	+0.7
	R	A/7.7	A/7.9	A/8.2	+0.3
Brunswick Rd, WB	L	C/20.4	C/21.9	C/23.1	+1.2
	T	B/16.1	B/16.5	B/17.1	+0.6
Pawling Avenue, NB	L	D/39.9	D/40.1	D/40.7	+0.6
	R	A/6.7	A/7.3	A/7.2	-0.1
Overall		B/17.5	B/18.0	B/18.5	+0.5
Pawling Avenue and Spring Avenue - Signalized					
Spring Ave, EB	LTR	C/25.8	C/26.3	C/26.3	0.0
Spring Ave, WB	LTR	B/19.7	B/19.8	C/20.0	+0.2
Pawling Ave, NB	L	C/26.5	C/27.8	C/27.8	0.0
	TR	B/13.8	B/14.0	B/14.0	0.0
Pawling Ave, SB	LT	B/16.9	B/17.2	B/17.7	+0.5
	R	B/15.7	B/16.0	B/16.0	0.0
Overall		B/18.8	B/19.2	B/19.2	0.0
Spring Avenue and Mountainview Avenue - Unsignalized					
Spring Ave, EB	TR	--	--	--	--
Spring Ave, WB	LT	A/7.7	A/7.8	A/7.8	0.0
Mountainview Ave, NB	LR	B/10.2	B/10.3	B/10.4	+0.1
Spring Avenue and Site Driveway - Unsignalized					
Spring Ave, EB	LT	--	--	A/8.4	--
Spring Ave, WB	TR	--	--	--	--
Site Driveway, SB	LR	--	--	A/9.8	--

EB, WB, NB, SB = Eastbound, Westbound, Northbound, and Southbound intersection approaches

L, T, R = Left-turn, Through, and/or Right-turn movements

X / X.X = Level of service / Average delay in seconds per vehicle

The impact of the project can be described by comparing the analysis of the No-Build and Build operating conditions. The following observations are evident from the analysis:

Pawling Avenue and Congress Street/Brunswick Road: The level of service analysis indicates that the intersection currently operates at an overall LOS C during the AM peak hour and an overall LOS B during the PM peak hour. These conditions are expected to remain unchanged under No-Build and Build conditions. The maximum increase in overall delay between the No-Build and Build conditions occurs during the weekday AM peak hour, with delay increasing by +0.4 seconds from 23.9 seconds to 24.3 seconds. Based on the analysis, the proposed project will not have a significant adverse impact on the operations of the intersection.

Pawling Avenue and Spring Avenue: The level of service analysis indicates that the intersection currently operates at an overall LOS C during the both peak hours. These conditions are expected to remain unchanged under No-Build and Build conditions. The



maximum increase in overall delay between the No-Build and Build conditions occurs during the weekday AM peak hour with delay increasing by +0.5 seconds from 18.0 seconds to 18.5 seconds. Based on the analysis, the proposed project will not have a significant adverse impact on the operations of the intersection.

Spring Avenue and Mountainview Avenue:

The level of service analysis indicates that the intersection approaches currently operate at a LOS B or better during both study peak hours and will continue to do in the No-Build and Build conditions. Based on this analysis, the proposed project is not expected to have a significant adverse impact on the operations of the intersection.

Spring Avenue and Site Driveway:

The level of service analysis indicates that the intersection approaches currently operate at a LOS B or better during both study peak hours and will remain unchanged under No-Build and Build conditions. Based on this analysis, the proposed project is not expected to have a significant adverse impact on the operations of the intersection.

4. LEFT-TURN LANE WARRANT ANALYSIS

A left-turn lane analysis was conducted at the intersection of Spring Avenue and the site driveway to determine if the Existing, No-Build and Build traffic volumes warrant a westbound left-turn lane into the driveway. The opposing, advancing, and left-turn volumes were compared to the warrant criteria contained in AASHTO's *A Policy on Geometric Design of Highways and Streets* (2018). Based on data provided in Table 9-24 and Figure 9-35a, the three-legged intersection meets the suggest warrant for a left-turn lane for the Existing, No-Build and Build conditions. However, it is important to note that the level of service for the left-turn is acceptable, and no operational constraints are expected., Since the facility will operate only during rare extreme weather instances and since operations without a left-turn lane are acceptable, Therefore, a left-turn lane is not recommended at this time.

5. SITE ACCESS AND CIRCULATION

The project site is proposed to be accessed via a proposed full-movement driveway. This proposed driveway will be stop-controlled with Spring Avenue continuing to be free-flowing. Vehicles will circulate the site using a one-way counterclockwise movement around the building to their loading bay. When leaving the loading bays, they will use the same counterclockwise movement to exit via the proposed driveway.



6. CONCLUSION

The proposed project consists of constructing a compressed natural gas facility. The proposed facility will be accessed via a new full-movement driveway on Spring Avenue.

Traffic volumes for this analysis were collected in April 2025. The volumes for the 2028 design year traffic volumes were developed by growing the 2025 existing volumes using a conservative annual growth rate of +1.0%. Likewise, the Build 2028 volumes were determined using a trip generation that was developed based on the information provided by the client and understanding of facility operations.

This conservative analysis indicates that the proposed project will not have a significant adverse impact on the operations of the roadway network. There will be no significant changes in LOS or delay between the No-Build and Build conditions. It should also be noted that this scenario would only occur when it's truly needed, typically during extremely cold days when the average temperature in the region drops to -5°F or below, or each spring before trailers are demobilized for the season, which is an unlikely occurrence.

Please contact me at [REDACTED] or on my cell phone [REDACTED] should you have any questions on this traffic analysis.

Sincerely,

LaBella Associates DPC

Frank A. Filiciotto, PE
Principal Traffic Engineer

Vaishali Thiruvengadam
Transportation Engineer



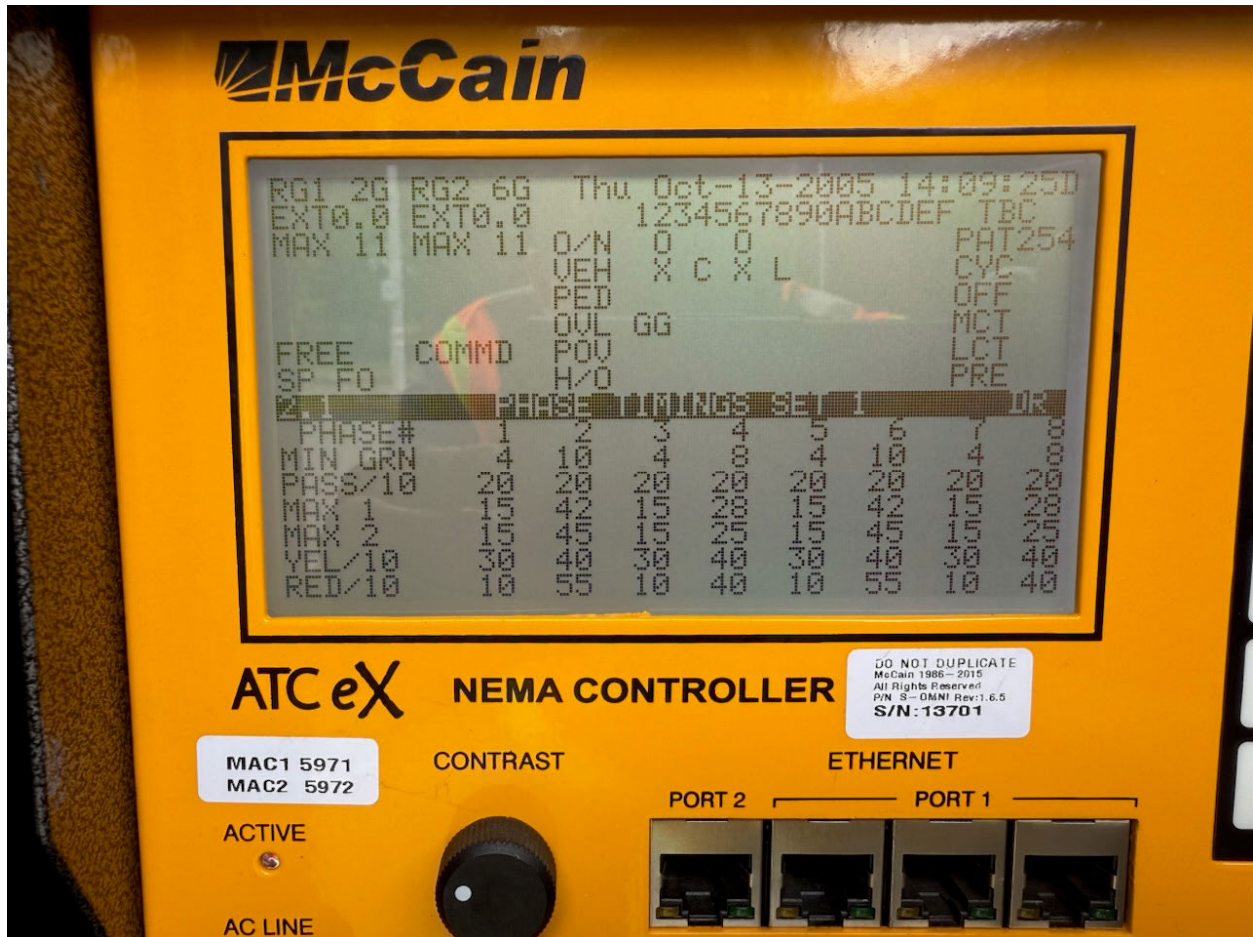
ATTACHMENT A

CITY OF TROY SIGNAL TIMINGS

**CNG ENERGY TRANSFER SITE
TOWN OF BRUNSWICK
RENSSELAER COUNTY, NY**



ATTACHMENT A-1: Pawling Avenue (Route 66) And Congress St/Brunswick Road (Route 2) Intersection Signal Timings



ATTACHMENT A-2: Pawling Avenue (Route 66) and Spring Avenue Intersection Signal Timings



ATTACHMENT B

TRANSIT TIMETABLES

**CNG ENERGY TRANSFER SITE
TOWN OF BRUNSWICK
RENSSELAER COUNTY, NY**

RPI to Downtown Troy

9 6 7 8 6 5 4 3 2 1

Sunset Terr & Forsyth Dr	Sage & 87 Gymnasium PE Building	River & Front	4th & Fulton St	Sage & 87 Gymnasium PE Building	15th & Congress	Myrtle Avenue	Pawling & Spring	Main & Atlantic	Vanderheyden Hall
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SATURDAY

.....		930a	935a	938a	940a		945a	950a	954a
.....		1030a	1035a	1038a	1040a		1045a	1050a	1054a
.....	.....	1130a	1135a	1138a	1140a	.....	1145a	1150a	1154a
.....	.....	1230p	1235p	1238p	1240p	.....	1245p	1250p	1254p
.....	.....	130p	135p	138p	140p	.....	145p	150p	154p
.....	.....	230p	235p	238p	240p	.....	245p	250p	254p
.....	.....	330p	335p	338p	340p	.....	345p	350p	354p
.....	.....	430p	435p	438p	440p	.....	445p	450p	454p
.....	.....	530p	535p	538p	540p	.....	545p	550p	554p
.....	.....	630p	635p	638p	640p	.....	645p	650p	654p
.....	.....	730p	735p	738p	740p	.....	745p	750p	754p
.....	.....	830p	835p	838p	840p	845p	.....	.....	.....

(These trips do not run while RPI is in session)

930p	934p	938p	943p	947p	949p	953p	.....	.....	.....
1030p	1034p	1038p	1043p	1047p	1049p	1053p	.....	.....	.....
1130p	1134p	1138p	1143p	1147p	1149p	1153p	.....	.....	.....
1230a	1234a	1238a	1243a	1247a	1249a	1253a	.....	.....	.....

FARE INFORMATION

Fares (US coins and \$1, \$5 – dollar bills are accepted; fareboxes do not make change)

Cash Fares:

Base Fare	\$1.50
Base Half Fare	\$0.75
BusPlus Fare	\$2.00
BusPlus Half Fare	\$1.00

Navigator Smart Card and Mobile App Fares:

Pay As You Go Fare - \$1.30 for each of the first three rides, while the fourth and up are free for the rest of the day.

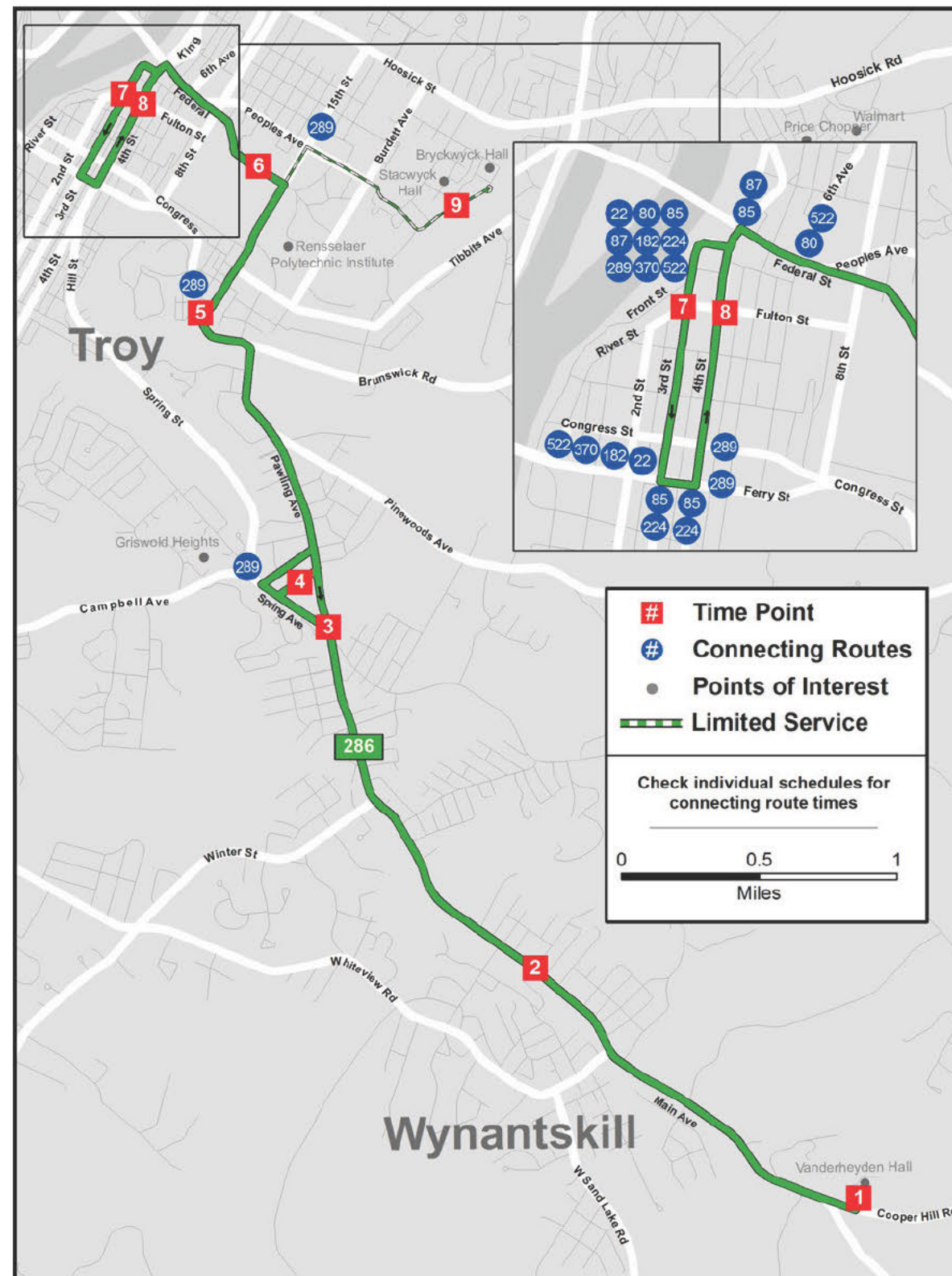
Pay As You Go Half Fare - \$0.65 for each of the first three rides, while the fourth and up are free for the rest of the day.

Frequent Rider - \$65 for unlimited rides for 31 consecutive days from the first day of use.

Frequent Rider Half Fare - \$32.50 for unlimited rides for 31 consecutive days from the first day of use.

Citizens age 65 and over, disabled individuals, Medicare card holder, and veterans are entitled to ride for half fare on CDTA's fixed route service. A valid Half Fare Navigator card is required when paying half fare on the bus. Children 46" and under ride free when accompanied by a fare paying adult.

CDTA's policy is to be fully compliant with Title VI of the 1964 Civil Right Act, which states that no one shall be excluded from participation in, denied the benefits of or discriminated against due to race, color, or national origin. Members of public may request information on this policy or file a Title VI complaint thru CDTA's website @ www.cdt.org or by calling 518-482-8822.



286

iride™

Troy / Wynantskill via RPI Campus

between Downtown Troy, RPI, and Wynantskill

Schedule

EFFECTIVE SEPTEMBER 13, 2020

CDTA

www.cdt.org

518-482-8822

Downtown Troy to RPI									
1	2	3	4	5	6	7	8	6	9
Vanderheyden Hall	Main & Atlantic	Pawling & Spring	Myrtle Avenue	Congress & 15th	Sage & Anderson Field	River & Front	4th & Fulton St	Sage & Anderson Field	Sunset Terr & Forsyth Dr
MONDAY - FRIDAY									

657a	701a	706a	707a	711a	713a	718a	.....	.....	.....
757a	801a	806a	807a	811a	813a	818a	.....	.....	.....
857a	901a	906a	907a	911a	913a	918a	.....	.....	.....
957a	1001a	1006a	1007a	1011a	1013a	1018a	.....	.....	.....
1057a	1101a	1106a	1107a	1111a	1113a	1118a	.....	.....	.....
1157a	1201p	1206p	1207p	1211p	1213p	1218p	.....	.....	.....
1257p	101p	106p	107p	111p	113p	118p	.....	.....	.....
157p	201p	206p	207p	211p	213p	218p	.....	.....	.....
257p	301p	306p	307p	311p	313p	318p	.....	.....	.....
400p	404p	409p	410p	414p	416p	421p	.....	.....	.....
500p	504p	509p	510p	514p	516p	521p	.....	.....	.....
600p	604p	609p	610p	614p	616p	621p	.....	.....	.....
700p	704p	709p	710p	714p	716p	721p	.....	.....	.....
800p	804p	809p	810p	814p	816p	821p	.....	.....	.....

(These trips do not run while RPI is in session)									
F = Friday ONLY									
.....	.....	.....	900p	903p	905p	910p	915p	919p	924p
.....	.....	.....	1000p	1003p	1005p	1010p	1015p	1019p	1024p
.....	.....	.....	F 1100p	1103p	1105p	1110p	1115p	1119p	1124p
.....	.....	.....	F 1200a	1203a	1205a	1210a	1215a	1219a	1224a

RPI to Downtown Troy									
9	6	7	8	6	5	4	3	2	1
Sunset Terr & Forsyth Dr	Sage & 87 Gymnasium PE Building	River & Front	4th & Fulton St	Sage & 87 Gymnasium PE Building	15th & Congress	Myrtle Avenue	Pawling & Spring	Main & Atlantic	Vanderheyden Hall
MONDAY - FRIDAY									

.....	.....	630a	635a	639a	642a	647a	648a	653a	656a
.....	.....	730a	735a	739a	742a	747a	748a	753a	756a
.....	.....	830a	835a	839a	842a	847a	848a	853a	856a
.....	.....	930a	935a	939a	942a	947a	948a	953a	956a
.....	.....	1030a	1035a	1039a	1042a	1047a	1048a	1053a	1056a
.....	.....	1130a	1135a	1139a	1142a	1147a	1148a	1153a	1156a
.....	.....	1230p	1235p	1239p	1242p	1247p	1248p	1253p	1256p
.....	.....	130p	135p	139p	142p	147p	148p	153p	156p
.....	.....	230p	235p	239p	242p	247p	248p	253p	256p
.....	.....	330p	335p	339p	342p	347p	348p	353p	356p
.....	.....	430p	435p	439p	442p	447p	448p	453p	456p
.....	.....	530p	535p	539p	542p	547p	548p	553p	556p
.....	.....	630p	635p	639p	642p	647p	648p	653p	656p
.....	.....	730p	735p	739p	742p	747p	748p	753p	756p
.....	.....	830p	835p	839p	842p	847p	.....	.....	.....

(These trips do not run while RPI is in session)									
F = Friday ONLY									
930p	934p	938p	943p	947p	949p	953p	.....	.....	.....
1030p	1034p	1038p	1043p	1047p	1049p	1053p	.....	.....	.....
F 1130p	1134p	1138p	1143p	1147p	1149p	1153p	.....	.....	.....
F 1230a	1234a	1238a	1243a	1247a	1249a	1253a	.....	.....	.....

Downtown Troy to RPI									
1	2	3	4	5	6	7	8	6	9
Vanderheyden Hall	Main & Atlantic	Pawling & Spring	Myrtle Avenue	Congress & 15th	Sage & Anderson Field	River & Front	4th & Fulton St	Sage & Anderson Field	Sunset Terr & Forsyth Dr
SATURDAY									

.....	956a	1000a	1004a	1008a	1010a	1015a	.....	.....	.....
.....	1056a	1100a	1104a	1108a	1110a	1115a	.....	.....	.....
.....	1156a	1200p	1204p	1208p	1210p	1215p	.....	.....	.....
.....	1256p	100p	104p	108p	110p	115p	.....	.....	.....
.....	156p	200p	204p	208p	210p	215p	.....	.....	.....
.....	256p	300p	304p	308p	310p	315p	.....	.....	.....
.....	356p	400p	404p	408p	410p	415p	.....	.....	.....
.....	456p	500p	504p	508p	510p	515p	.....	.....	.....
.....	556p	600p	604p	608p	610p	615p	.....	.....	.....
.....	656p	700p	704p	708p	710p	715p	.....	.....	.....
.....	756p	800p	804p	808p	810p	815p	.....	.....	.....

(These trips do not run while RPI is in session)									
.....	.....	.....	900p	903p	905p	910p	915p	919p	924p
.....	.....	.....	1000p	1003p	1005p	1010p	1015p	1019p	1024p
.....	.....	.....	1100p	1103p	1105p	1110p	1115p	1119p	1124p
.....	.....	.....	1200a	1203a	1205a	1210a	1215a	1219a	1224a

The timetable shows WHEN the bus stops.
Times are approximate and depend upon
traffic and weather conditions. Arrive at the bus
stop 5 minutes early to avoid missing the bus.

These trips do not run when RPI is not in session.

F - FRIDAY ONLY

FARE INFORMATION

Fares (U.S. coins and \$1-dollar bills are accepted; fare boxes do not make change)

BusPlus Fare*	\$2.00
BusPlus Half Fare**	\$1.00
Base Fare*	\$1.50
Half Fare**	75¢

Navigator

Pay As You Go - Costs just \$1.30 for the first three rides, while the fourth and up are free for the rest of the transit day.

Frequent Rider - Valid for unlimited access to CDTA's regular route network for 31 days from the first day of use (\$65.00)

Half Fare Navigator** \$32.50 (Frequent Rider).

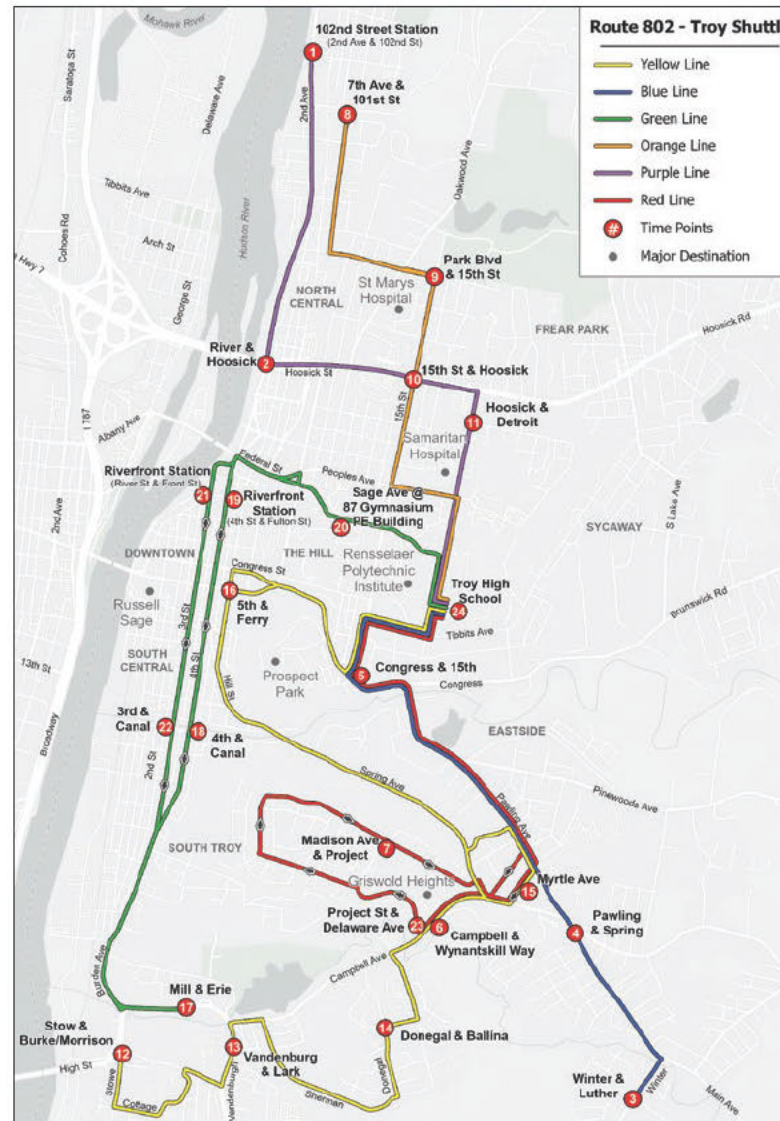
****Citizens** age 65 and over, disabled individuals, Medicare card and CDTA half-fare ID cardholders are entitled to ride for **half-fare** on CDTA's fixed route service.

***Children 46" and under ride free when accompanied by a fare paying adult. The limit is three children per adult.**

CDTA's policy is to be fully compliant with Title VI of the 1964 Civil Rights Act, which states that no one shall be excluded from participation in, denied the benefits of or discriminated against due to race, color, or national origin. Members of the public may request information on this policy or file a Title VI complaint through CDTA's website @ CDTA.org or by calling (518) 482-8822.

S – Trip operates when school is in session

Service available to/from Troy High School only when school is in session. All services are accessible to the general public.



802

CDTA

Troy Shuttle

EFFECTIVE SEPTEMBER 5, 2024

Schedule

Morning/Inbound																		
12	13	14	15	16	17	18	19	20	3	4	23	5	8	9	10	1	2	24
Slow Ave & Burke St	Vandenburg Ave & Lark St	Donegal Ave & Ballina St	Myrtle Ave	5th Ave & Ferry St	Mill St & Erie St	4th St & Canal St	Riverfront Station	Sage Ave @ 87 Gymnasium PE Building	Winter St & Luther St	Pawling Ave & Spring Ave	Project St & Delaware Ave	Congress St & 15th St	7th Ave & 101st St	Park Blvd & 15th St	15th St & Hoosick St	102nd Street Station	River St & Hoosick St	Troy High School
MONDAY – FRIDAY																		
S-741a	S-745a	S-749a	S-753a	S-800a	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	S-805a
.....	.....	.....	.....	.....	S-742a	S-750a	S-757a	S-802a	.....	.....	.....	.....	.....	.....	.....	.....	.....	S-805a
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	S-745a	S-802a	.....	.....	.....	.....	.....	S-805a
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	S-745a	S-753a	S-805a
.....	.....	.....	.....	.....	.....	.....	.....	.....	S-749a	S-756a	.....	S-802a	.....	.....	.....	.....	.....	S-805a
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	S-755a	S-759a	S-802a	.....	.....	S-805a

Afternoon/Outbound																
24	16	7	6	14	13	12	21	22	17	10	9	8	4	3	2	1
Troy High School	5th Ave & Ferry St	Madison Ave & Project St	Campbell Ave & Wynantskill Way	Donegal Ave & Ballina St	Vandenburg Ave & Lark St	Slow Ave & Burke/Morrison	Riverfront Station	3rd St & Canal Ave	Mill St & Erie St	15th St & Hoosick St	15th St & Park Blvd	7th Ave & 101st St	Pawling Ave & Spring Ave	Winter St & Luther St	Hoosick St & River St	102nd Street Station
MONDAY – FRIDAY																
S-325p	.....	S-342p	S-345p	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
S-325p	.....	.....	.....	.....	.....	.....	S-332p	S-339p	S-347p	.....	.....	.....	.....	.....	.....	.....
S-325p	.....	.....	.....	.....	.....	.....	.....	.....	.....	S-328p	S-331p	S-335p	.....	.....	.....	.....
S-325p	S-329p	.....	S-334p	S-337p	S-341p	S-344p	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
S-325p	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	S-333p	S-342p
S-325p	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	S-334p	S-341p	.....	.....



ATTACHMENT C

TURNING MOVEMENT COUNT DATA

**CNG ENERGY TRANSFER SITE
TOWN OF BRUNSWICK
RENSSELAER COUNTY, NY**

National Data & Surveying Services

Intersection Turning Movement Count

Location: Mountain View Ave & CR 130/Spring Ave

City: Troy

Control: 1-Way Stop(NB)

Project ID: 25-380030-001

Date: 4/8/2025

Data - Total

EW/NS Streets:	CR 130/Spring Ave				CR 130/Spring Ave				Mountain View Ave				Mountain View Ave				
AM	EASTBOUND				WESTBOUND				NORTHBOUND				SOUTHBOUND				TOTAL
	0 EL	1 ET	0 ER	0 EU	0 WL	1 WT	0 WR	0 WU	0 NL	1 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	
7:00 AM	0	1	6	0	19	24	0	0	3	0	7	0	0	0	0	0	60
7:15 AM	0	4	5	0	26	24	0	0	8	0	3	0	0	0	0	0	70
7:30 AM	0	9	4	0	41	53	0	0	8	0	7	0	0	0	0	0	122
7:45 AM	0	12	4	0	45	28	0	0	13	0	14	0	0	0	0	0	116
8:00 AM	0	14	8	0	29	26	0	0	4	0	21	0	0	0	1	0	103
8:15 AM	0	9	5	0	35	30	0	0	6	0	13	0	0	0	0	0	98
8:30 AM	0	9	2	0	25	25	0	0	7	0	11	0	0	0	0	0	79
8:45 AM	0	2	5	0	18	24	0	0	5	0	7	0	0	0	0	0	61
TOTAL VOLUMES :	EL	ET	ER	EU	WL	WT	WR	WU	NL	NT	NR	NU	SL	ST	SR	SU	TOTAL
APPROACH %'s :	0	60	39	0	238	234	0	0	54	0	83	0	0	0	1	0	709
	0.00%	60.61%	39.39%	0.00%	50.42%	49.58%	0.00%	0.00%	39.42%	0.00%	60.58%	0.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	44	21	0	150	137	0	0	31	0	55	0	0	0	1	0	439
PEAK HR FACTOR :	0.000	0.786	0.656	0.000	0.833	0.646	0.000	0.000	0.596	0.000	0.655	0.000	0.000	0.000	0.250	0.000	0.900
	0.739				0.763				0.796				0.250				

PM	EASTBOUND				WESTBOUND				NORTHBOUND				SOUTHBOUND				TOTAL
	0 EL	1 ET	0 ER	0 EU	0 WL	1 WT	0 WR	0 WU	0 NL	1 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	
4:00 PM	0	28	12	0	21	5	0	0	8	0	28	0	0	0	0	0	102
4:15 PM	0	28	10	0	8	12	0	0	8	0	33	0	0	0	0	0	99
4:30 PM	0	23	8	0	14	15	0	0	7	0	27	0	0	0	0	0	94
4:45 PM	0	32	6	0	17	8	0	0	6	1	35	0	0	0	0	0	105
5:00 PM	0	22	10	0	16	12	0	0	5	0	32	0	1	0	0	0	98
5:15 PM	0	20	8	0	16	13	0	0	4	0	32	0	0	0	0	0	93
5:30 PM	0	24	6	0	11	14	0	0	4	0	25	0	0	0	0	0	84
5:45 PM	0	18	9	0	15	7	0	0	4	0	24	0	0	0	0	0	77
TOTAL VOLUMES :	EL	ET	ER	EU	WL	WT	WR	WU	NL	NT	NR	NU	SL	ST	SR	SU	TOTAL
APPROACH %'s :	0	195	69	0	118	86	0	0	46	1	236	0	1	0	0	0	752
	0.00%	73.86%	26.14%	0.00%	57.84%	42.16%	0.00%	0.00%	16.25%	0.35%	83.39%	0.00%	100.00%	0.00%	0.00%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	0	111	36	0	60	40	0	0	29	1	123	0	0	0	0	0	400
PEAK HR FACTOR :	0.000	0.867	0.750	0.000	0.714	0.667	0.000	0.000	0.906	0.250	0.879	0.000	0.000	0.000	0.000	0.000	0.952
	0.919				0.862				0.911								

National Data & Surveying Services

Intersection Turning Movement Count

Location: SR 66/Pawling Ave & CR 130/Spring Ave
City: Troy
Control: Signalized

Project ID: 25-380030-002
Date: 4/10/2025

Data - Total

EW/NS Streets:	CR 130/Spring Ave				CR 130/Spring Ave				SR 66/Pawling Ave				SR 66/Pawling Ave				
AM	EASTBOUND				WESTBOUND				NORTHBOUND				SOUTHBOUND				TOTAL
	0 EL	1 ET	1 ER	0 EU	0 WL	1 WT	0 WR	0 WU	1 NL	1 NT	0 NR	0 NU	1 SL	1 ST	0 SR	0 SU	
7:00 AM	0	4	10	0	0	29	13	0	31	52	1	0	3	42	0	0	185
7:15 AM	0	6	18	0	0	30	14	0	57	84	0	0	9	82	0	0	300
7:30 AM	1	19	22	0	0	45	8	0	55	91	0	0	8	73	0	0	322
7:45 AM	0	25	28	0	0	42	17	0	41	97	1	0	21	89	4	0	365
8:00 AM	0	16	21	0	1	41	37	0	72	96	0	0	18	60	1	0	363
8:15 AM	0	6	31	0	0	31	14	0	44	84	0	0	5	56	0	0	271
8:30 AM	0	4	30	0	0	34	8	0	47	88	2	0	6	59	0	0	278
8:45 AM	0	5	26	0	0	20	9	0	39	76	0	0	8	68	2	0	253
TOTAL VOLUMES :	EL 1	ET 85	ER 186	EU 0	WL 1	WT 272	WR 120	WU 0	NL 386	NT 668	NR 4	NU 0	SL 78	ST 529	SR 7	SU 0	TOTAL 2337
APPROACH %'s :	0.37%	31.25%	68.38%	0.00%	0.25%	69.21%	30.53%	0.00%	36.48%	63.14%	0.38%	0.00%	12.70%	86.16%	1.14%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	1	66	89	0	1	158	76	0	225	368	1	0	56	304	5	0	1350
PEAK HR FACTOR :	0.250	0.660	0.795	0.000	0.250	0.878	0.514	0.000	0.781	0.948	0.250	0.000	0.667	0.854	0.313	0.000	0.925
	0.736				0.744				0.884				0.800				

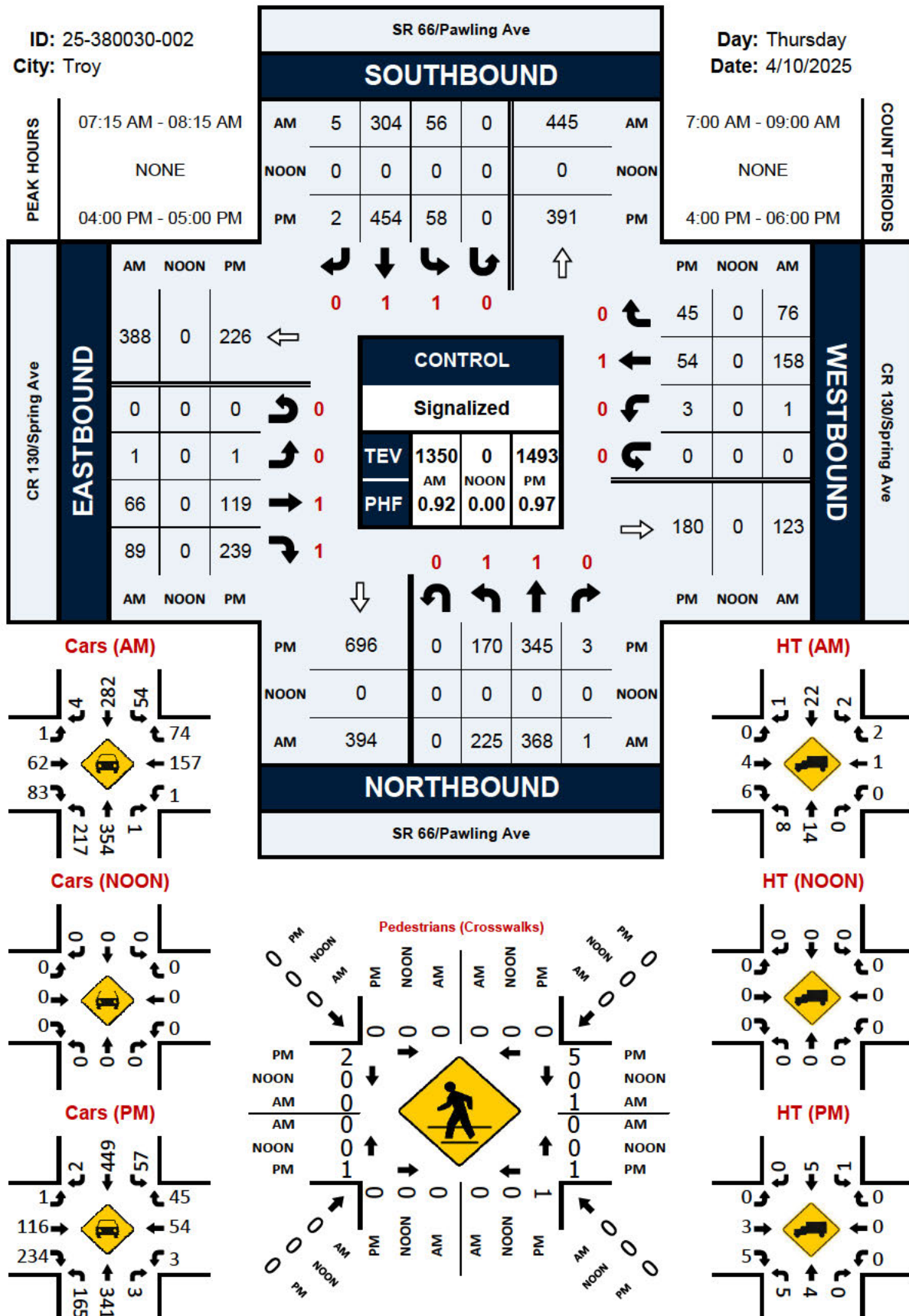
PM	EASTBOUND				WESTBOUND				NORTHBOUND				SOUTHBOUND				TOTAL
	0 EL	1 ET	1 ER	0 EU	0 WL	1 WT	0 WR	0 WU	1 NL	1 NT	0 NR	0 NU	1 SL	1 ST	0 SR	0 SU	
4:00 PM	0	31	61	0	0	16	11	0	37	90	0	0	11	129	0	0	386
4:15 PM	0	23	53	0	3	11	8	0	50	82	1	0	10	115	1	0	357
4:30 PM	0	29	61	0	0	14	18	0	46	91	0	0	15	103	1	0	378
4:45 PM	1	36	64	0	0	13	8	0	37	82	2	0	22	107	0	0	372
5:00 PM	0	40	46	0	0	12	15	0	33	90	1	0	6	109	1	0	353
5:15 PM	0	33	61	0	0	11	11	0	38	94	0	0	15	108	3	0	374
5:30 PM	0	31	45	0	0	18	9	0	35	80	1	0	12	90	2	0	323
5:45 PM	0	27	40	0	0	13	13	0	36	77	0	0	10	80	1	0	297
TOTAL VOLUMES :	EL 1	ET 250	ER 431	EU 0	WL 3	WT 108	WR 93	WU 0	NL 312	NT 686	NR 5	NU 0	SL 101	ST 841	SR 9	SU 0	TOTAL 2840
APPROACH %'s :	0.15%	36.66%	63.20%	0.00%	1.47%	52.94%	45.59%	0.00%	31.11%	68.39%	0.50%	0.00%	10.62%	88.43%	0.95%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	1	119	239	0	3	54	45	0	170	345	3	0	58	454	2	0	1493
PEAK HR FACTOR :	0.250	0.826	0.934	0.000	0.250	0.844	0.625	0.000	0.850	0.948	0.375	0.000	0.659	0.880	0.500	0.000	0.967
	0.889				0.797				0.945				0.918				

SR 66/Pawling Ave & CR 130/Spring Ave

Peak Hour Turning Movement Count

ID: 25-380030-002
City: Troy

Day: Thursday
Date: 4/10/2025



National Data & Surveying Services

Intersection Turning Movement Count

Location: SR 66/Pawling Ave & SR 2/Congress St/Brunswick Rd

City: Troy

Control: Signalized

Project ID: 25-380030-003

Date: 4/8/2025

Data - Total

EW/NS Streets:		SR 2/Congress St/Brunswick Rd				SR 2/Congress St/Brunswick Rd				SR 66/Pawling Ave				SR 66/Pawling Ave				
AM		EASTBOUND				WESTBOUND				NORTHBOUND				SOUTHBOUND				TOTAL
		0 EL	1 ET	1 ER	0 EU	1 WL	1 WT	0 WR	0 WU	1 NL	0 NT	1 NR	0 NU	0 SL	0 ST	0 SR	0 SU	
	7:00 AM	0	18	56	0	39	69	0	0	86	0	33	0	0	0	0	0	301
	7:15 AM	0	23	80	0	63	46	0	0	94	0	57	0	0	0	0	0	363
	7:30 AM	0	27	99	0	98	71	0	0	113	0	55	0	0	0	0	0	463
	7:45 AM	0	32	94	0	66	54	0	0	137	0	88	0	0	0	0	0	471
	8:00 AM	0	26	88	0	69	51	0	0	123	0	66	0	0	0	0	0	423
	8:15 AM	0	16	102	0	60	52	0	0	141	0	73	0	0	0	0	0	444
	8:30 AM	0	21	86	0	40	46	0	0	127	0	45	0	0	0	0	0	365
	8:45 AM	0	23	77	0	38	53	0	0	111	0	40	0	0	0	0	0	342
TOTAL VOLUMES :		EL	ET	ER	EU	WL	WT	WR	WU	NL	NT	NR	NU	SL	ST	SR	SU	TOTAL
APPROACH %'s :		0	186	682	0	473	442	0	0	932	0	457	0	0	0	0	0	3172
		0.00%	21.43%	78.57%	0.00%	51.69%	48.31%	0.00%	0.00%	67.10%	0.00%	32.90%	0.00%					
PEAK HR :		07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :		0	101	383	0	293	228	0	0	514	0	282	0	0	0	0	0	1801
PEAK HR FACTOR :		0.000	0.789	0.939	0.000	0.747	0.803	0.000	0.000	0.911	0.000	0.801	0.000	0.000	0.000	0.000	0.000	0.956
		0.960				0.771				0.884								

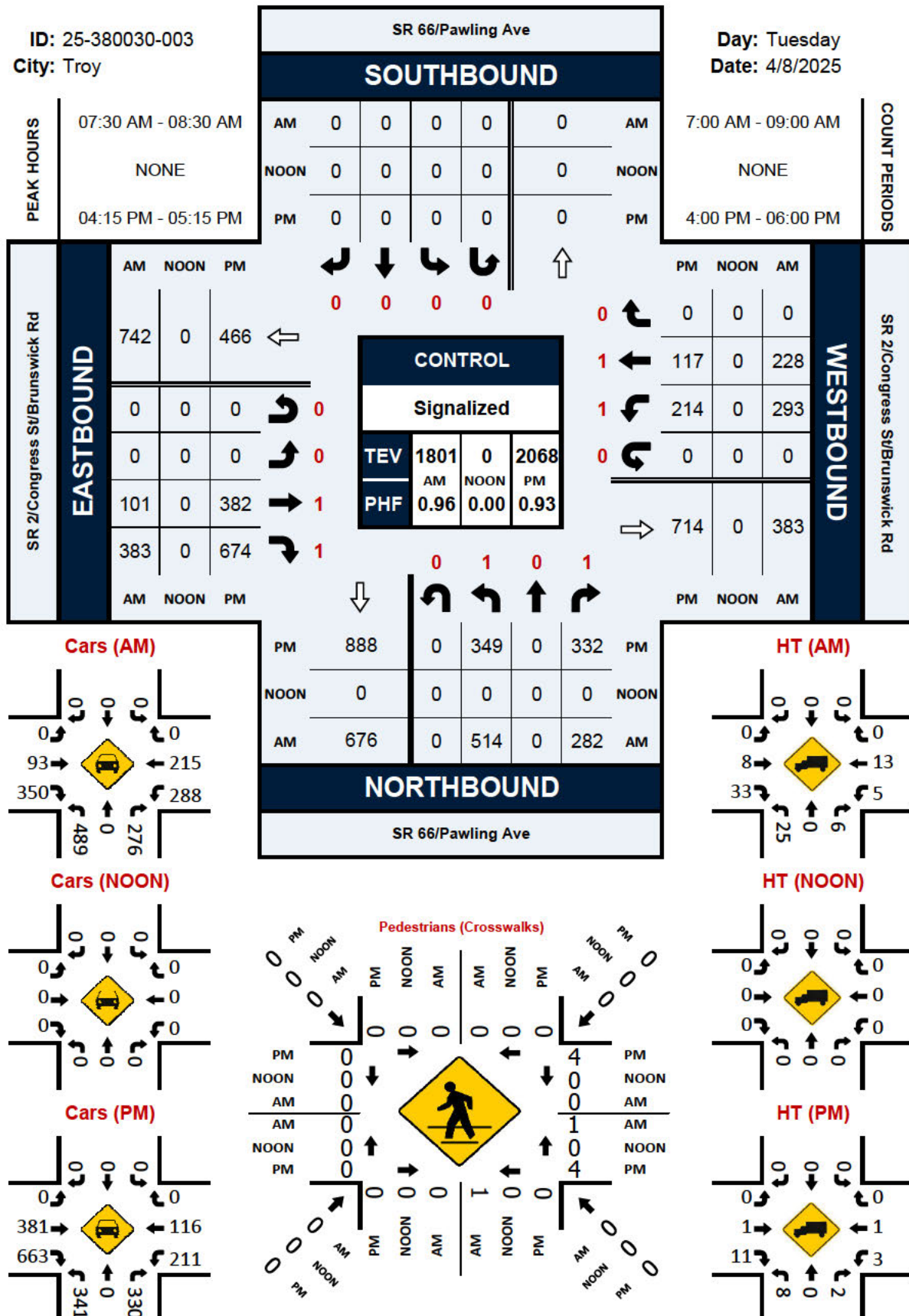
PM		EASTBOUND				WESTBOUND				NORTHBOUND				SOUTHBOUND				TOTAL
		0 EL	1 ET	1 ER	0 EU	1 WL	1 WT	0 WR	0 WU	1 NL	0 NT	1 NR	0 NU	0 SL	0 ST	0 SR	0 SU	
	4:00 PM	0	91	150	0	52	28	0	0	85	0	71	0	0	0	0	0	477
	4:15 PM	0	82	168	0	48	31	0	0	96	0	88	0	0	0	0	0	513
	4:30 PM	0	115	181	0	61	30	0	0	89	0	79	0	0	0	0	0	555
	4:45 PM	0	103	157	0	45	17	0	0	75	0	92	0	0	0	0	0	489
	5:00 PM	0	82	168	0	60	39	0	0	89	0	73	0	0	0	0	0	511
	5:15 PM	0	87	179	0	50	25	0	0	87	0	48	0	0	0	0	0	476
	5:30 PM	0	79	137	0	34	26	0	0	92	0	53	0	0	0	0	0	421
	5:45 PM	0	61	114	0	35	26	0	0	90	0	52	0	0	0	0	0	378
TOTAL VOLUMES :		EL	ET	ER	EU	WL	WT	WR	WU	NL	NT	NR	NU	SL	ST	SR	SU	TOTAL
APPROACH %'s :		0	700	1254	0	385	222	0	0	703	0	556	0	0	0	0	0	3820
		0.00%	35.82%	64.18%	0.00%	63.43%	36.57%	0.00%	0.00%	55.84%	0.00%	44.16%	0.00%					
PEAK HR :		04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :		0	382	674	0	214	117	0	0	349	0	332	0	0	0	0	0	2068
PEAK HR FACTOR :		0.000	0.830	0.931	0.000	0.877	0.750	0.000	0.000	0.909	0.000	0.902	0.000	0.000	0.000	0.000	0.000	0.932
		0.892				0.836				0.925								

SR 66/Pawling Ave & SR 2/Congress St/Brunswick Rd

Peak Hour Turning Movement Count

ID: 25-380030-003
City: Troy

Day: Tuesday
Date: 4/8/2025



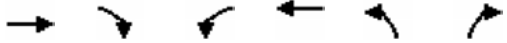


ATTACHMENT D
SYNCHRO LEVEL OF SERVICE REPORTS

CNG ENERGY TRANSFER SITE
TOWN OF BRUNSWICK
RENSSELAER COUNTY, NY

Lanes, Volumes, Timings
1: Pawling Ave & Congress St/Brunswick Rd

2202528.071; CNG Energy Troy Site
Existing_AM

							
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø9
Lane Configurations	↑	↗	↖	↑	↖	↗	
Traffic Volume (vph)	101	383	293	228	514	282	
Future Volume (vph)	101	383	293	228	514	282	
Satd. Flow (prot)	1759	1679	1770	1852	1719	1689	
Flt Permitted			0.600		0.950		
Satd. Flow (perm)	1759	1640	1115	1852	1719	1650	
Satd. Flow (RTOR)		399				294	
Lane Group Flow (vph)	105	399	305	238	535	294	
Number of Detectors	2	1	1	2	1	1	
Detector Template	Thru	Right	Left	Thru	Left	Right	
Leading Detector (ft)	100	20	20	100	20	20	
Trailing Detector (ft)	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	
Detector 1 Size(ft)	6	20	20	6	20	20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	94			94			
Detector 2 Size(ft)	6			6			
Detector 2 Type	Cl+Ex			Cl+Ex			
Detector 2 Channel							
Detector 2 Extend (s)	0.0			0.0			
Turn Type	NA	custom	pm+pt	NA	Prot	pm+ov	
Protected Phases	4 9		3	8	2	3	9
Permitted Phases		4	8			2	
Detector Phase	4 9	4	3	8	2	3	
Switch Phase							
Minimum Initial (s)		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)		20.0	8.0	20.0	23.0	8.0	10.0
Total Split (s)		25.0	16.0	41.0	51.0	16.0	14.0
Total Split (%)		23.6%	15.1%	38.7%	48.1%	15.1%	13%
Maximum Green (s)		20.0	13.0	36.0	46.0	13.0	9.0
Yellow Time (s)		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)		2.0	0.0	2.0	2.0	0.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.0	3.0	5.0	5.0	3.0	
Lead/Lag		Lag	Lead			Lead	
Lead-Lag Optimize?		Yes					
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode		None	Max	Max	None	Max	Max
Walk Time (s)		3.0		3.0	7.0		
Flash Don't Walk (s)		12.0		12.0	11.0		
Pedestrian Calls (#/hr)		5		5	5		
Act Effect Green (s)	34.3	20.2	38.3	36.3	33.5	48.6	
Actuated g/C Ratio	0.36	0.21	0.41	0.39	0.36	0.52	
v/c Ratio	0.16	0.60	0.56	0.33	0.87	0.29	
Control Delay (s/veh)	23.5	8.0	26.7	23.9	44.0	1.9	

Lanes, Volumes, Timings
1: Pawling Ave & Congress St/Brunswick Rd

2202528.071; CNG Energy Troy Site
Existing_AM

	→	↘	↙	←	↖	↗	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	23.5	8.0	26.7	23.9	44.0	1.9	
LOS	C	A	C	C	D	A	
Approach Delay (s/veh)	11.3			25.5	29.1		
Approach LOS	B			C	C		
Queue Length 50th (ft)	42	0	127	98	292	0	
Queue Length 95th (ft)	94	84	241	190	423	32	
Internal Link Dist (ft)	544			347	424		
Turn Bay Length (ft)		350					
Base Capacity (vph)	641	665	545	715	847	1001	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.16	0.60	0.56	0.33	0.63	0.29	

Intersection Summary

Cycle Length: 106

Actuated Cycle Length: 94

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay (s/veh): 23.2

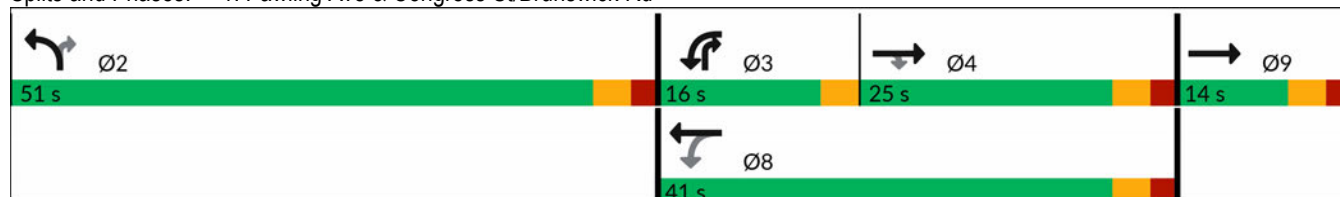
Intersection LOS: C

Intersection Capacity Utilization 59.7%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: Pawling Ave & Congress St/Brunswick Rd



HCM 7th Signalized Intersection Summary 2: Pawling Ave & Spring Ave

2202528.071; CNG Energy Troy Site
Existing_AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↖		↖	↖		↖	↖	
Traffic Volume (veh/h)	0	66	89	0	158	76	225	368	1	56	304	5
Future Volume (veh/h)	0	66	89	0	158	76	225	368	1	56	304	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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	0	1811	1796	0	1961	1856	1841	1841	1900	1841	1796	1604
Adj Flow Rate, veh/h	0	72	97	0	172	83	245	400	1	61	330	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	6	7	0	1	3	4	4	0	4	7	20
Cap, veh/h	0	517	435	0	357	172	454	852	2	408	819	12
Arrive On Green	0.00	0.29	0.29	0.00	0.29	0.29	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	0	1811	1522	0	1249	603	1028	1835	5	968	1765	27
Grp Volume(v), veh/h	0	72	97	0	0	255	245	0	401	61	0	335
Grp Sat Flow(s),veh/h/ln	0	1811	1522	0	0	1852	1028	0	1840	968	0	1791
Q Serve(g_s), s	0.0	2.1	3.4	0.0	0.0	8.0	14.4	0.0	10.5	3.2	0.0	8.6
Cycle Q Clear(g_c), s	0.0	2.1	3.4	0.0	0.0	8.0	23.1	0.0	10.5	13.7	0.0	8.6
Prop In Lane	0.00		1.00	0.00		0.33	1.00		0.00	1.00		0.01
Lane Grp Cap(c), veh/h	0	517	435	0	0	529	454	0	854	408	0	832
V/C Ratio(X)	0.00	0.14	0.22	0.00	0.00	0.48	0.54	0.00	0.47	0.15	0.00	0.40
Avail Cap(c_a), veh/h	0	517	435	0	0	529	454	0	854	408	0	832
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	18.6	19.1	0.0	0.0	20.7	20.0	0.0	12.8	17.5	0.0	12.4
Incr Delay (d2), s/veh	0.0	0.6	1.2	0.0	0.0	3.1	4.6	0.0	1.8	0.8	0.0	1.5
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	0.0	0.9	1.3	0.0	0.0	3.7	3.8	0.0	4.3	0.8	0.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	19.2	20.3	0.0	0.0	23.8	24.5	0.0	14.7	18.3	0.0	13.8
LnGrp LOS		B	C			C	C		B	B		B
Approach Vol, veh/h	169			255			646			396		
Approach Delay, s/veh	19.8			23.8			18.4			14.5		
Approach LOS	B			C			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	42.0			28.0			42.0			28.0		
Change Period (Y+Rc), s	9.5			8.0			9.5			8.0		
Max Green Setting (Gmax), s	32.5			20.0			32.5			20.0		
Max Q Clear Time (g_c+l1), s	25.1			5.4			15.7			10.0		
Green Ext Time (p_c), s	2.2			0.5			2.1			1.0		
Intersection Summary												
HCM 7th Control Delay, s/veh			18.5									
HCM 7th LOS			B									

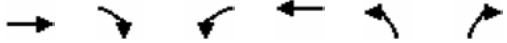
Intersection						
Int Delay, s/veh	4.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	44	21	150	137	31	55
Future Vol, veh/h	44	21	150	137	31	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	18	0	7	7	0	15
Mvmt Flow	49	23	167	152	34	61
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	72	0	546	61
Stage 1	-	-	-	-	61	-
Stage 2	-	-	-	-	486	-
Critical Hdwy	-	-	4.17	-	6.4	6.35
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.263	-	3.5	3.435
Pot Cap-1 Maneuver	-	-	1497	-	502	969
Stage 1	-	-	-	-	967	-
Stage 2	-	-	-	-	623	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1497	-	441	969
Mov Cap-2 Maneuver	-	-	-	-	441	-
Stage 1	-	-	-	-	967	-
Stage 2	-	-	-	-	547	-
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		4.03		11.19	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	677	-	-	941	-	
HCM Lane V/C Ratio	0.141	-	-	0.111	-	
HCM Control Delay (s/veh)	11.2	-	-	7.7	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.5	-	-	0.4	-	

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	46	204	0	0	0
Future Vol, veh/h	0	46	204	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	2	6	0	0	0
Mvmt Flow	0	49	219	0	0	0
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	219	0	-	0	269	219
Stage 1	-	-	-	-	219	-
Stage 2	-	-	-	-	49	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1362	-	-	-	725	825
Stage 1	-	-	-	-	822	-
Stage 2	-	-	-	-	978	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1362	-	-	-	725	825
Mov Cap-2 Maneuver	-	-	-	-	725	-
Stage 1	-	-	-	-	822	-
Stage 2	-	-	-	-	978	-
Approach	EB	WB		SB		
HCM Control Delay, s/v	0	0		0		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1362	-	-	-	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s/veh)	0	-	-	-	0	
HCM Lane LOS	A	-	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	-	

Lanes, Volumes, Timings

1: Pawling Ave & Congress St/Brunswick Rd

Baseline_Default

							
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø9
Lane Configurations	↑	↗	↖	↑	↖	↗	
Traffic Volume (vph)	382	674	214	117	349	332	
Future Volume (vph)	382	674	214	117	349	332	
Satd. Flow (prot)	1900	1794	1787	1944	1770	1706	
Flt Permitted			0.243		0.950		
Satd. Flow (perm)	1900	1794	457	1944	1770	1632	
Satd. Flow (RTOR)		725				204	
Lane Group Flow (vph)	411	725	230	126	375	357	
Number of Detectors	2	1	1	2	1	1	
Detector Template	Thru	Right	Left	Thru	Left	Right	
Leading Detector (ft)	100	20	20	100	20	20	
Trailing Detector (ft)	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	
Detector 1 Size(ft)	6	20	20	6	20	20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	94			94			
Detector 2 Size(ft)	6			6			
Detector 2 Type	Cl+Ex			Cl+Ex			
Detector 2 Channel							
Detector 2 Extend (s)	0.0			0.0			
Turn Type	NA	custom	pm+pt	NA	Prot	pm+ov	
Protected Phases	4 9		3	8	2	3	9
Permitted Phases		4	8			2	
Detector Phase	4 9	4	3	8	2	3	
Switch Phase							
Minimum Initial (s)		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)		20.0	8.0	20.0	23.0	8.0	10.0
Total Split (s)		25.0	16.0	41.0	51.0	16.0	14.0
Total Split (%)		23.6%	15.1%	38.7%	48.1%	15.1%	13%
Maximum Green (s)		20.0	13.0	36.0	46.0	13.0	9.0
Yellow Time (s)		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)		2.0	0.0	2.0	2.0	0.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.0	3.0	5.0	5.0	3.0	
Lead/Lag		Lag	Lead			Lead	
Lead-Lag Optimize?		Yes					
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode		None	Max	Max	None	Max	Max
Walk Time (s)		3.0		3.0	7.0		
Flash Don't Walk (s)		12.0		12.0	11.0		
Pedestrian Calls (#/hr)		5		5	5		
Act Effect Green (s)	34.2	20.1	38.2	36.2	22.4	37.5	
Actuated g/C Ratio	0.41	0.24	0.46	0.44	0.27	0.45	
v/c Ratio	0.52	0.74	0.55	0.15	0.78	0.41	
Control Delay (s/veh)	22.4	7.7	20.4	16.1	39.9	6.7	

Lanes, Volumes, Timings

1: Pawling Ave & Congress St/Brunswick Rd

Baseline_Default

	→	↘	↙	←	↖	↗	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	22.4	7.7	20.4	16.1	39.9	6.7	
LOS	C	A	C	B	D	A	
Approach Delay (s/veh)	13.0			18.9	23.7		
Approach LOS	B			B	C		
Queue Length 50th (ft)	154	0	70	38	179	42	
Queue Length 95th (ft)	283	102	142	85	275	92	
Internal Link Dist (ft)	544			347	424		
Turn Bay Length (ft)		350					
Base Capacity (vph)	784	984	421	850	989	862	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.52	0.74	0.55	0.15	0.38	0.41	

Intersection Summary

Cycle Length: 106

Actuated Cycle Length: 82.7

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay (s/veh): 17.5

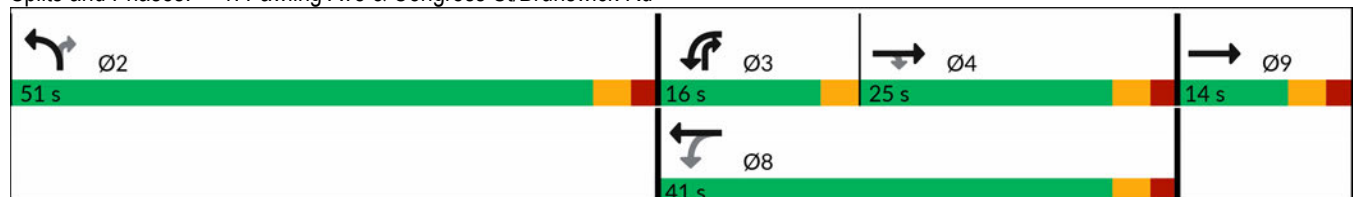
Intersection LOS: B

Intersection Capacity Utilization 63.0%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: Pawling Ave & Congress St/Brunswick Rd



HCM 7th Signalized Intersection Summary

2: Pawling Ave & Spring Ave

Baseline_Default



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↖		↗	↖		↗	↖	
Traffic Volume (veh/h)	0	119	239	0	54	45	170	345	3	58	454	2
Future Volume (veh/h)	0	119	239	0	54	45	170	345	3	58	454	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	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	0	1856	1870	0	1976	1900	1856	1885	1900	1870	1885	1900
Adj Flow Rate, veh/h	0	123	246	0	56	46	175	356	3	60	468	2
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	3	2	0	0	0	3	1	0	2	1	0
Cap, veh/h	0	530	452	0	287	235	364	867	7	448	871	4
Arrive On Green	0.00	0.29	0.29	0.00	0.29	0.29	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	0	1856	1582	0	1003	824	914	1866	16	1020	1876	8
Grp Volume(v), veh/h	0	123	246	0	0	102	175	0	359	60	0	470
Grp Sat Flow(s),veh/h/ln	0	1856	1582	0	0	1828	914	0	1882	1020	0	1884
Q Serve(g_s), s	0.0	3.5	9.2	0.0	0.0	3.0	11.8	0.0	8.8	2.9	0.0	12.5
Cycle Q Clear(g_c), s	0.0	3.5	9.2	0.0	0.0	3.0	24.3	0.0	8.8	11.7	0.0	12.5
Prop In Lane	0.00		1.00	0.00		0.45	1.00		0.01	1.00		0.00
Lane Grp Cap(c), veh/h	0	530	452	0	0	522	364	0	874	448	0	875
V/C Ratio(X)	0.00	0.23	0.54	0.00	0.00	0.20	0.48	0.00	0.41	0.13	0.00	0.54
Avail Cap(c_a), veh/h	0	530	452	0	0	522	364	0	874	448	0	875
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	19.1	21.1	0.0	0.0	18.9	22.1	0.0	12.4	16.3	0.0	13.4
Incr Delay (d2), s/veh	0.0	1.0	4.6	0.0	0.0	0.8	4.5	0.0	1.4	0.6	0.0	2.4
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	0.0	1.6	3.8	0.0	0.0	1.3	2.8	0.0	3.7	0.7	0.0	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	20.1	25.8	0.0	0.0	19.7	26.5	0.0	13.8	16.9	0.0	15.7
LnGrp LOS		C	C			B	C		B	B		B
Approach Vol, veh/h	369			102			534			530		
Approach Delay, s/veh	23.9			19.7			18.0			15.9		
Approach LOS	C			B			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	42.0			28.0			42.0			28.0		
Change Period (Y+Rc), s	9.5			8.0			9.5			8.0		
Max Green Setting (Gmax), s	32.5			20.0			32.5			20.0		
Max Q Clear Time (g_c+l1), s	26.3			11.2			14.5			5.0		
Green Ext Time (p_c), s	1.7			1.0			3.1			0.4		
Intersection Summary												
HCM 7th Control Delay, s/veh			18.8									
HCM 7th LOS			B									

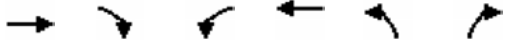
Intersection						
Int Delay, s/veh	5.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	111	36	60	40	29	123
Future Vol, veh/h	111	36	60	40	29	123
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	1	3	10	8	0	2
Mvmt Flow	117	38	63	42	31	129
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	155	0	304	137
Stage 1	-	-	-	-	136	-
Stage 2	-	-	-	-	168	-
Critical Hdwy	-	-	4.2	-	6.4	6.22
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.29	-	3.5	3.318
Pot Cap-1 Maneuver	-	-	1378	-	692	912
Stage 1	-	-	-	-	896	-
Stage 2	-	-	-	-	866	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1378	-	659	911
Mov Cap-2 Maneuver	-	-	-	-	659	-
Stage 1	-	-	-	-	896	-
Stage 2	-	-	-	-	825	-
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		4.64		10.22	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	849	-	-	1080	-	
HCM Lane V/C Ratio	0.188	-	-	0.046	-	
HCM Control Delay (s/veh)	10.2	-	-	7.7	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.7	-	-	0.1	-	

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	172	82	0	0	0
Future Vol, veh/h	0	172	82	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	1	7	0	0	0
Mvmt Flow	0	185	88	0	0	0
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	88	0	-	0	273	88
Stage 1	-	-	-	-	88	-
Stage 2	-	-	-	-	185	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1520	-	-	-	721	976
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	852	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1520	-	-	-	721	976
Mov Cap-2 Maneuver	-	-	-	-	721	-
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	852	-
Approach	EB	WB		SB		
HCM Control Delay, s/v	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1520	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s/veh)	0	-	-	-	-	0
HCM Lane LOS	A	-	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-	-

Lanes, Volumes, Timings

1: Pawling Ave & Congress St/Brunswick Rd

Baseline_Default

							
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø9
Lane Configurations	↑	↗	↖	↑	↖	↗	
Traffic Volume (vph)	104	395	302	235	530	291	
Future Volume (vph)	104	395	302	235	530	291	
Satd. Flow (prot)	1759	1679	1770	1852	1719	1689	
Flt Permitted			0.598		0.950		
Satd. Flow (perm)	1759	1640	1111	1852	1719	1650	
Satd. Flow (RTOR)		411				303	
Lane Group Flow (vph)	108	411	315	245	552	303	
Number of Detectors	2	1	1	2	1	1	
Detector Template	Thru	Right	Left	Thru	Left	Right	
Leading Detector (ft)	100	20	20	100	20	20	
Trailing Detector (ft)	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	
Detector 1 Size(ft)	6	20	20	6	20	20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	94			94			
Detector 2 Size(ft)	6			6			
Detector 2 Type	Cl+Ex			Cl+Ex			
Detector 2 Channel							
Detector 2 Extend (s)	0.0			0.0			
Turn Type	NA	custom	pm+pt	NA	Prot	pm+ov	
Protected Phases	4 9		3	8	2	3	9
Permitted Phases		4	8			2	
Detector Phase	4 9	4	3	8	2	3	
Switch Phase							
Minimum Initial (s)		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)		20.0	8.0	20.0	23.0	8.0	10.0
Total Split (s)		25.0	16.0	41.0	51.0	16.0	14.0
Total Split (%)		23.6%	15.1%	38.7%	48.1%	15.1%	13%
Maximum Green (s)		20.0	13.0	36.0	46.0	13.0	9.0
Yellow Time (s)		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)		2.0	0.0	2.0	2.0	0.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.0	3.0	5.0	5.0	3.0	
Lead/Lag		Lag	Lead			Lead	
Lead-Lag Optimize?		Yes					
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode		None	Max	Max	None	Max	Max
Walk Time (s)		3.0		3.0	7.0		
Flash Don't Walk (s)		12.0		12.0	11.0		
Pedestrian Calls (#/hr)		5		5	5		
Act Effect Green (s)	34.2	20.1	38.3	36.3	34.5	49.6	
Actuated g/C Ratio	0.36	0.21	0.40	0.38	0.36	0.52	
v/c Ratio	0.17	0.61	0.58	0.35	0.88	0.30	
Control Delay (s/veh)	24.0	8.2	27.9	24.5	45.0	1.9	

Lanes, Volumes, Timings

1: Pawling Ave & Congress St/Brunswick Rd

Baseline_Default

	→	↘	↙	←	↖	↗	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	24.0	8.2	27.9	24.5	45.0	1.9	
LOS	C	A	C	C	D	A	
Approach Delay (s/veh)	11.5			26.4	29.7		
Approach LOS	B			C	C		
Queue Length 50th (ft)	44	0	136	104	305	0	
Queue Length 95th (ft)	96	86	250	196	442	32	
Internal Link Dist (ft)	544			347	424		
Turn Bay Length (ft)		350					
Base Capacity (vph)	634	671	539	707	839	1011	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.17	0.61	0.58	0.35	0.66	0.30	

Intersection Summary

Cycle Length: 106

Actuated Cycle Length: 94.9

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay (s/veh): 23.9

Intersection LOS: C

Intersection Capacity Utilization 61.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: Pawling Ave & Congress St/Brunswick Rd

↖ Ø2	↖ Ø3	→ Ø4	→ Ø9
51 s	16 s	25 s	14 s
	↖ Ø8		
	41 s		

HCM 7th Signalized Intersection Summary

2: Pawling Ave & Spring Ave

Baseline_Default



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↖		↗	↖		↗	↖	
Traffic Volume (veh/h)	0	68	92	0	163	78	232	379	1	58	313	5
Future Volume (veh/h)	0	68	92	0	163	78	232	379	1	58	313	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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	0	1811	1796	0	1961	1856	1841	1841	1900	1841	1796	1604
Adj Flow Rate, veh/h	0	74	100	0	177	85	252	412	1	63	340	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	6	7	0	1	3	4	4	0	4	7	20
Cap, veh/h	0	517	435	0	358	172	446	852	2	399	820	12
Arrive On Green	0.00	0.29	0.29	0.00	0.29	0.29	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	0	1811	1522	0	1251	601	1019	1835	4	957	1766	26
Grp Volume(v), veh/h	0	74	100	0	0	262	252	0	413	63	0	345
Grp Sat Flow(s),veh/h/ln	0	1811	1522	0	0	1852	1019	0	1840	957	0	1792
Q Serve(g_s), s	0.0	2.1	3.5	0.0	0.0	8.2	15.3	0.0	10.9	3.4	0.0	8.9
Cycle Q Clear(g_c), s	0.0	2.1	3.5	0.0	0.0	8.2	24.2	0.0	10.9	14.3	0.0	8.9
Prop In Lane	0.00		1.00	0.00		0.32	1.00		0.00	1.00		0.01
Lane Grp Cap(c), veh/h	0	517	435	0	0	529	446	0	854	399	0	832
V/C Ratio(X)	0.00	0.14	0.23	0.00	0.00	0.50	0.57	0.00	0.48	0.16	0.00	0.41
Avail Cap(c_a), veh/h	0	517	435	0	0	529	446	0	854	399	0	832
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	18.6	19.1	0.0	0.0	20.8	20.5	0.0	13.0	17.9	0.0	12.4
Incr Delay (d2), s/veh	0.0	0.6	1.2	0.0	0.0	3.3	5.1	0.0	2.0	0.8	0.0	1.5
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	0.0	0.9	1.3	0.0	0.0	3.8	4.0	0.0	4.5	0.8	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	19.2	20.3	0.0	0.0	24.1	25.6	0.0	14.9	18.7	0.0	14.0
LnGrp LOS		B	C			C	C		B	B		B
Approach Vol, veh/h	174			262			665			408		
Approach Delay, s/veh	19.9			24.1			19.0			14.7		
Approach LOS	B			C			B			B		
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	42.0		28.0		42.0		28.0					
Change Period (Y+Rc), s	9.5		8.0		9.5		8.0					
Max Green Setting (Gmax), s	32.5		20.0		32.5		20.0					
Max Q Clear Time (g_c+l1), s	26.2		5.5		16.3		10.2					
Green Ext Time (p_c), s	2.1		0.6		2.2		1.0					
Intersection Summary												
HCM 7th Control Delay, s/veh			18.8									
HCM 7th LOS			B									

Intersection						
Int Delay, s/veh	4.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	45	22	155	141	32	57
Future Vol, veh/h	45	22	155	141	32	57
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	18	0	7	7	0	15
Mvmt Flow	50	24	172	157	36	63
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	74	0	563	62
Stage 1	-	-	-	-	62	-
Stage 2	-	-	-	-	501	-
Critical Hdwy	-	-	4.17	-	6.4	6.35
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.263	-	3.5	3.435
Pot Cap-1 Maneuver	-	-	1494	-	491	967
Stage 1	-	-	-	-	966	-
Stage 2	-	-	-	-	613	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1494	-	429	967
Mov Cap-2 Maneuver	-	-	-	-	429	-
Stage 1	-	-	-	-	966	-
Stage 2	-	-	-	-	535	-
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		4.04		11.34	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1		EBT	EBR	WBL	WBT
Capacity (veh/h)	666		-	-	943	-
HCM Lane V/C Ratio	0.148		-	-	0.115	-
HCM Control Delay (s/veh)	11.3		-	-	7.7	0
HCM Lane LOS	B		-	-	A	A
HCM 95th %tile Q(veh)	0.5		-	-	0.4	-

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	47	210	0	0	0
Future Vol, veh/h	0	47	210	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	2	6	0	0	0
Mvmt Flow	0	51	226	0	0	0
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	226	0	-	0	276	226
Stage 1	-	-	-	-	226	-
Stage 2	-	-	-	-	51	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1355	-	-	-	718	819
Stage 1	-	-	-	-	816	-
Stage 2	-	-	-	-	977	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1355	-	-	-	718	819
Mov Cap-2 Maneuver	-	-	-	-	718	-
Stage 1	-	-	-	-	816	-
Stage 2	-	-	-	-	977	-
Approach	EB	WB		SB		
HCM Control Delay, s/v	0	0		0		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1355	-	-	-	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s/veh)	0	-	-	-	0	
HCM Lane LOS	A	-	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	-	

Lanes, Volumes, Timings

1: Pawling Ave & Congress St/Brunswick Rd

Baseline_Default

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø9
Lane Configurations	↑	↑	↑	↑	↑	↑	
Traffic Volume (vph)	394	694	220	121	360	342	
Future Volume (vph)	394	694	220	121	360	342	
Satd. Flow (prot)	1900	1794	1787	1944	1770	1706	
Flt Permitted			0.222		0.950		
Satd. Flow (perm)	1900	1794	418	1944	1770	1632	
Satd. Flow (RTOR)		746				193	
Lane Group Flow (vph)	424	746	237	130	387	368	
Number of Detectors	2	1	1	2	1	1	
Detector Template	Thru	Right	Left	Thru	Left	Right	
Leading Detector (ft)	100	20	20	100	20	20	
Trailing Detector (ft)	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	
Detector 1 Size(ft)	6	20	20	6	20	20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	94			94			
Detector 2 Size(ft)	6			6			
Detector 2 Type	Cl+Ex			Cl+Ex			
Detector 2 Channel							
Detector 2 Extend (s)	0.0			0.0			
Turn Type	NA	custom	pm+pt	NA	Prot	pm+ov	
Protected Phases	4 9		3	8	2	3	9
Permitted Phases		4	8			2	
Detector Phase	4 9	4	3	8	2	3	
Switch Phase							
Minimum Initial (s)		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)		20.0	8.0	20.0	23.0	8.0	10.0
Total Split (s)		25.0	16.0	41.0	51.0	16.0	14.0
Total Split (%)		23.6%	15.1%	38.7%	48.1%	15.1%	13%
Maximum Green (s)		20.0	13.0	36.0	46.0	13.0	9.0
Yellow Time (s)		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)		2.0	0.0	2.0	2.0	0.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.0	3.0	5.0	5.0	3.0	
Lead/Lag		Lag	Lead			Lead	
Lead-Lag Optimize?		Yes					
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode		None	Max	Max	None	Max	Max
Walk Time (s)		3.0		3.0	7.0		
Flash Don't Walk (s)		12.0		12.0	11.0		
Pedestrian Calls (#/hr)		5		5	5		
Act Effect Green (s)	34.2	20.1	38.2	36.2	23.1	38.2	
Actuated g/C Ratio	0.41	0.24	0.46	0.43	0.28	0.46	
v/c Ratio	0.54	0.75	0.58	0.15	0.79	0.43	
Control Delay (s/veh)	23.2	7.9	21.9	16.5	40.1	7.3	

Lanes, Volumes, Timings

1: Pawling Ave & Congress St/Brunswick Rd

Baseline_Default

	→	↘	↙	←	↖	↗	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	23.2	7.9	21.9	16.5	40.1	7.3	
LOS	C	A	C	B	D	A	
Approach Delay (s/veh)	13.5			20.0	24.1		
Approach LOS	B			B	C		
Queue Length 50th (ft)	163	0	74	40	186	49	
Queue Length 95th (ft)	299	105	150	88	284	101	
Internal Link Dist (ft)	544			347	424		
Turn Bay Length (ft)		350					
Base Capacity (vph)	778	998	406	843	981	863	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.54	0.75	0.58	0.15	0.39	0.43	

Intersection Summary

Cycle Length: 106

Actuated Cycle Length: 83.4

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay (s/veh): 18.0

Intersection LOS: B

Intersection Capacity Utilization 64.5%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: Pawling Ave & Congress St/Brunswick Rd

↖ Ø2	↖ Ø3	→ Ø4	→ Ø9
51 s	16 s	25 s	14 s
	↖ Ø8		
	41 s		

HCM 7th Signalized Intersection Summary

2: Pawling Ave & Spring Ave

Baseline_Default



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↖		↗	↖		↗	↖	
Traffic Volume (veh/h)	0	123	246	0	56	46	175	355	3	60	468	2
Future Volume (veh/h)	0	123	246	0	56	46	175	355	3	60	468	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	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	0	1856	1870	0	1976	1900	1856	1885	1900	1870	1885	1900
Adj Flow Rate, veh/h	0	127	254	0	58	47	180	366	3	62	482	2
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	3	2	0	0	0	3	1	0	2	1	0
Cap, veh/h	0	530	452	0	289	234	355	867	7	440	871	4
Arrive On Green	0.00	0.29	0.29	0.00	0.29	0.29	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	0	1856	1582	0	1010	819	902	1867	15	1011	1876	8
Grp Volume(v), veh/h	0	127	254	0	0	105	180	0	369	62	0	484
Grp Sat Flow(s),veh/h/ln	0	1856	1582	0	0	1829	902	0	1882	1011	0	1884
Q Serve(g_s), s	0.0	3.7	9.6	0.0	0.0	3.0	12.6	0.0	9.1	3.0	0.0	13.0
Cycle Q Clear(g_c), s	0.0	3.7	9.6	0.0	0.0	3.0	25.5	0.0	9.1	12.2	0.0	13.0
Prop In Lane	0.00		1.00	0.00		0.45	1.00		0.01	1.00		0.00
Lane Grp Cap(c), veh/h	0	530	452	0	0	522	355	0	874	440	0	875
V/C Ratio(X)	0.00	0.24	0.56	0.00	0.00	0.20	0.51	0.00	0.42	0.14	0.00	0.55
Avail Cap(c_a), veh/h	0	530	452	0	0	522	355	0	874	440	0	875
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	19.2	21.3	0.0	0.0	18.9	22.7	0.0	12.5	16.6	0.0	13.5
Incr Delay (d2), s/veh	0.0	1.1	5.0	0.0	0.0	0.9	5.1	0.0	1.5	0.7	0.0	2.5
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	0.0	1.7	3.9	0.0	0.0	1.4	3.0	0.0	3.8	0.7	0.0	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	20.2	26.3	0.0	0.0	19.8	27.8	0.0	14.0	17.2	0.0	16.0
LnGrp LOS		C	C			B	C		B	B		B
Approach Vol, veh/h	381			105			549			546		
Approach Delay, s/veh	24.2			19.8			18.5			16.2		
Approach LOS	C			B			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	42.0			28.0			42.0			28.0		
Change Period (Y+Rc), s	9.5			8.0			9.5			8.0		
Max Green Setting (Gmax), s	32.5			20.0			32.5			20.0		
Max Q Clear Time (g_c+I1), s	27.5			11.6			15.0			5.0		
Green Ext Time (p_c), s	1.5			1.0			3.2			0.4		
Intersection Summary												
HCM 7th Control Delay, s/veh	19.2											
HCM 7th LOS	B											

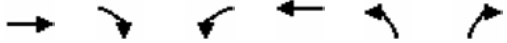
Intersection						
Int Delay, s/veh	5.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	114	37	62	41	30	127
Future Vol, veh/h	114	37	62	41	30	127
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	1	3	10	8	0	2
Mvmt Flow	120	39	65	43	32	134
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	159	0	313	140
Stage 1	-	-	-	-	139	-
Stage 2	-	-	-	-	174	-
Critical Hdwy	-	-	4.2	-	6.4	6.22
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.29	-	3.5	3.318
Pot Cap-1 Maneuver	-	-	1373	-	684	907
Stage 1	-	-	-	-	892	-
Stage 2	-	-	-	-	861	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1373	-	650	907
Mov Cap-2 Maneuver	-	-	-	-	650	-
Stage 1	-	-	-	-	892	-
Stage 2	-	-	-	-	820	-
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		4.67		10.31	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	843	-	-	1083	-	
HCM Lane V/C Ratio	0.196	-	-	0.048	-	
HCM Control Delay (s/veh)	10.3	-	-	7.8	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.7	-	-	0.1	-	

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	177	84	0	0	0
Future Vol, veh/h	0	177	84	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	1	7	0	0	0
Mvmt Flow	0	190	90	0	0	0
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	90	0	-	0	281	90
Stage 1	-	-	-	-	90	-
Stage 2	-	-	-	-	190	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1518	-	-	-	714	973
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	847	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1518	-	-	-	714	973
Mov Cap-2 Maneuver	-	-	-	-	714	-
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	847	-
Approach	EB	WB		SB		
HCM Control Delay, s/v	0	0		0		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1518	-	-	-	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s/veh)	0	-	-	-	0	
HCM Lane LOS	A	-	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	-	

Lanes, Volumes, Timings

1: Pawling Ave & Congress St/Brunswick Rd

Baseline_Default

							
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø9
Lane Configurations	↑	↗	↖	↑	↖	↗	
Traffic Volume (vph)	104	403	302	235	538	291	
Future Volume (vph)	104	403	302	235	538	291	
Satd. Flow (prot)	1759	1664	1770	1852	1703	1689	
Flt Permitted			0.598		0.950		
Satd. Flow (perm)	1759	1625	1111	1852	1703	1650	
Satd. Flow (RTOR)		420				303	
Lane Group Flow (vph)	108	420	315	245	560	303	
Number of Detectors	2	1	1	2	1	1	
Detector Template	Thru	Right	Left	Thru	Left	Right	
Leading Detector (ft)	100	20	20	100	20	20	
Trailing Detector (ft)	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	
Detector 1 Size(ft)	6	20	20	6	20	20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	94			94			
Detector 2 Size(ft)	6			6			
Detector 2 Type	Cl+Ex			Cl+Ex			
Detector 2 Channel							
Detector 2 Extend (s)	0.0			0.0			
Turn Type	NA	custom	pm+pt	NA	Prot	pm+ov	
Protected Phases	4 9		3	8	2	3	9
Permitted Phases		4	8			2	
Detector Phase	4 9	4	3	8	2	3	
Switch Phase							
Minimum Initial (s)		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)		20.0	8.0	20.0	23.0	8.0	10.0
Total Split (s)		25.0	16.0	41.0	51.0	16.0	14.0
Total Split (%)		23.6%	15.1%	38.7%	48.1%	15.1%	13%
Maximum Green (s)		20.0	13.0	36.0	46.0	13.0	9.0
Yellow Time (s)		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)		2.0	0.0	2.0	2.0	0.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.0	3.0	5.0	5.0	3.0	
Lead/Lag		Lag	Lead			Lead	
Lead-Lag Optimize?		Yes					
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode		None	Max	Max	None	Max	Max
Walk Time (s)		3.0		3.0	7.0		
Flash Don't Walk (s)		12.0		12.0	11.0		
Pedestrian Calls (#/hr)		5		5	5		
Act Effect Green (s)	34.2	20.1	38.3	36.3	35.3	50.4	
Actuated g/C Ratio	0.36	0.21	0.40	0.38	0.37	0.53	
v/c Ratio	0.17	0.62	0.59	0.35	0.89	0.30	
Control Delay (s/veh)	24.3	8.3	28.4	24.9	45.8	1.9	

Lanes, Volumes, Timings

1: Pawling Ave & Congress St/Brunswick Rd

Baseline_Default

	→	↘	↙	←	↖	↗	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	24.3	8.3	28.4	24.9	45.8	1.9	
LOS	C	A	C	C	D	A	
Approach Delay (s/veh)	11.6			26.9	30.4		
Approach LOS	B			C	C		
Queue Length 50th (ft)	45	0	139	106	313	0	
Queue Length 95th (ft)	96	86	250	196	455	32	
Internal Link Dist (ft)	544			347	424		
Turn Bay Length (ft)		350					
Base Capacity (vph)	629	673	534	701	824	1017	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.17	0.62	0.59	0.35	0.68	0.30	

Intersection Summary

Cycle Length: 106

Actuated Cycle Length: 95.7

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay (s/veh): 24.3

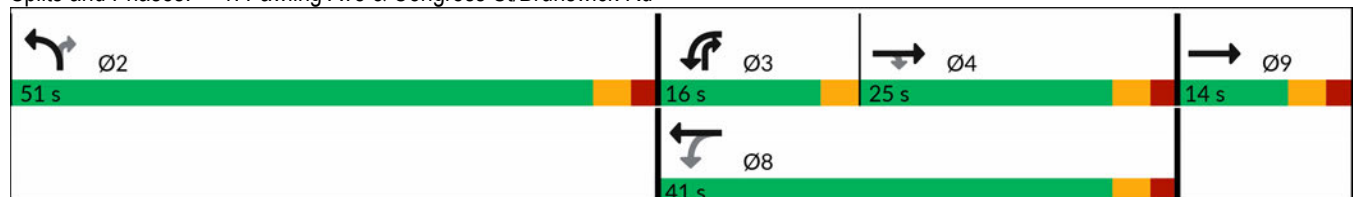
Intersection LOS: C

Intersection Capacity Utilization 61.5%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: Pawling Ave & Congress St/Brunswick Rd



HCM 7th Signalized Intersection Summary

2: Pawling Ave & Spring Ave

Baseline_Default



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↖		↗	↖		↗	↖	
Traffic Volume (veh/h)	0	68	92	0	163	86	232	379	1	66	313	5
Future Volume (veh/h)	0	68	92	0	163	86	232	379	1	66	313	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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	0	1811	1796	0	1961	1722	1856	1841	1900	1678	1796	1604
Adj Flow Rate, veh/h	0	74	100	0	177	93	252	412	1	72	340	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	6	7	0	1	12	3	4	0	15	7	20
Cap, veh/h	0	517	435	0	346	182	448	852	2	373	820	12
Arrive On Green	0.00	0.29	0.29	0.00	0.29	0.29	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	0	1811	1522	0	1210	636	1027	1835	4	873	1766	26
Grp Volume(v), veh/h	0	74	100	0	0	270	252	0	413	72	0	345
Grp Sat Flow(s),veh/h/ln	0	1811	1522	0	0	1846	1027	0	1840	873	0	1792
Q Serve(g_s), s	0.0	2.1	3.5	0.0	0.0	8.6	15.1	0.0	10.9	4.3	0.0	8.9
Cycle Q Clear(g_c), s	0.0	2.1	3.5	0.0	0.0	8.6	24.0	0.0	10.9	15.2	0.0	8.9
Prop In Lane	0.00		1.00	0.00		0.34	1.00		0.00	1.00		0.01
Lane Grp Cap(c), veh/h	0	517	435	0	0	527	448	0	854	373	0	832
V/C Ratio(X)	0.00	0.14	0.23	0.00	0.00	0.51	0.56	0.00	0.48	0.19	0.00	0.41
Avail Cap(c_a), veh/h	0	517	435	0	0	527	448	0	854	373	0	832
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	18.6	19.1	0.0	0.0	20.9	20.4	0.0	13.0	18.2	0.0	12.4
Incr Delay (d2), s/veh	0.0	0.6	1.2	0.0	0.0	3.5	5.0	0.0	2.0	1.2	0.0	1.5
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	0.0	0.9	1.3	0.0	0.0	4.0	4.0	0.0	4.5	0.9	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	19.2	20.3	0.0	0.0	24.4	25.4	0.0	14.9	19.4	0.0	14.0
LnGrp LOS		B	C			C	C		B	B		B
Approach Vol, veh/h	174			270			665			417		
Approach Delay, s/veh	19.9			24.4			18.9			14.9		
Approach LOS	B			C			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	42.0			28.0			42.0			28.0		
Change Period (Y+Rc), s	9.5			8.0			9.5			8.0		
Max Green Setting (Gmax), s	32.5			20.0			32.5			20.0		
Max Q Clear Time (g_c+l1), s	26.0			5.5			17.2			10.6		
Green Ext Time (p_c), s	2.1			0.6			2.2			1.1		
Intersection Summary												
HCM 7th Control Delay, s/veh	18.9											
HCM 7th LOS	B											

HCM 7th TWSC

3: Mountainview Ave & Spring Ave

Baseline_Default

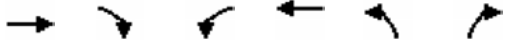
Intersection						
Int Delay, s/veh	4.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	53	22	155	149	32	57
Future Vol, veh/h	53	22	155	149	32	57
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	30	0	7	11	0	14
Mvmt Flow	59	24	172	166	36	63
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	83	0	581	71
Stage 1	-	-	-	-	71	-
Stage 2	-	-	-	-	510	-
Critical Hdwy	-	-	4.17	-	6.4	6.34
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.263	-	3.5	3.426
Pot Cap-1 Maneuver	-	-	1483	-	479	959
Stage 1	-	-	-	-	957	-
Stage 2	-	-	-	-	607	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1483	-	418	959
Mov Cap-2 Maneuver	-	-	-	-	418	-
Stage 1	-	-	-	-	957	-
Stage 2	-	-	-	-	529	-
Approach	EB	WB		NB		
HCM Control Delay, s/v	0	3.95		11.48		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	654	-	-	918	-	
HCM Lane V/C Ratio	0.151	-	-	0.116	-	
HCM Control Delay (s/veh)	11.5	-	-	7.7	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.5	-	-	0.4	-	

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	47	210	0	0	8
Future Vol, veh/h	8	47	210	0	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	100	2	6	0	0	100
Mvmt Flow	9	51	226	0	0	9
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	226	0	-	0	294	226
Stage 1	-	-	-	-	226	-
Stage 2	-	-	-	-	68	-
Critical Hdwy	5.1	-	-	-	6.4	7.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	3.1	-	-	-	3.5	4.2
Pot Cap-1 Maneuver	928	-	-	-	702	621
Stage 1	-	-	-	-	816	-
Stage 2	-	-	-	-	960	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	928	-	-	-	695	621
Mov Cap-2 Maneuver	-	-	-	-	695	-
Stage 1	-	-	-	-	809	-
Stage 2	-	-	-	-	960	-
Approach	EB	WB		SB		
HCM Control Delay, s/v	1.3	0		10.88		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	262	-	-	-	621	
HCM Lane V/C Ratio	0.009	-	-	-	0.014	
HCM Control Delay (s/veh)	8.9	0	-	-	10.9	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0	

Lanes, Volumes, Timings

1: Pawling Ave & Congress St/Brunswick Rd

Baseline_Default

							
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø9
Lane Configurations	↑	↗	↖	↑	↖	↗	
Traffic Volume (vph)	394	702	220	121	368	342	
Future Volume (vph)	394	702	220	121	368	342	
Satd. Flow (prot)	1900	1777	1787	1944	1736	1706	
Flt Permitted			0.215		0.950		
Satd. Flow (perm)	1900	1777	404	1944	1736	1632	
Satd. Flow (RTOR)		755				193	
Lane Group Flow (vph)	424	755	237	130	396	368	
Number of Detectors	2	1	1	2	1	1	
Detector Template	Thru	Right	Left	Thru	Left	Right	
Leading Detector (ft)	100	20	20	100	20	20	
Trailing Detector (ft)	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	
Detector 1 Size(ft)	6	20	20	6	20	20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	94			94			
Detector 2 Size(ft)	6			6			
Detector 2 Type	Cl+Ex			Cl+Ex			
Detector 2 Channel							
Detector 2 Extend (s)	0.0			0.0			
Turn Type	NA	custom	pm+pt	NA	Prot	pm+ov	
Protected Phases	4 9		3	8	2	3	9
Permitted Phases		4	8			2	
Detector Phase	4 9	4	3	8	2	3	
Switch Phase							
Minimum Initial (s)		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)		20.0	8.0	20.0	23.0	8.0	10.0
Total Split (s)		25.0	16.0	41.0	51.0	16.0	14.0
Total Split (%)		23.6%	15.1%	38.7%	48.1%	15.1%	13%
Maximum Green (s)		20.0	13.0	36.0	46.0	13.0	9.0
Yellow Time (s)		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)		2.0	0.0	2.0	2.0	0.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.0	3.0	5.0	5.0	3.0	
Lead/Lag		Lag	Lead			Lead	
Lead-Lag Optimize?		Yes					
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode		None	Max	Max	None	Max	Max
Walk Time (s)		3.0		3.0	7.0		
Flash Don't Walk (s)		12.0		12.0	11.0		
Pedestrian Calls (#/hr)		5		5	5		
Act Effect Green (s)	34.2	20.1	38.2	36.2	24.1	39.1	
Actuated g/C Ratio	0.41	0.24	0.45	0.43	0.29	0.46	
v/c Ratio	0.55	0.76	0.60	0.16	0.80	0.42	
Control Delay (s/veh)	23.9	8.2	23.1	17.1	40.7	7.2	

Lanes, Volumes, Timings

1: Pawling Ave & Congress St/Brunswick Rd

Baseline_Default

	→	↘	↙	←	↖	↗	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	23.9	8.2	23.1	17.1	40.7	7.2	
LOS	C	A	C	B	D	A	
Approach Delay (s/veh)	13.9			21.0	24.5		
Approach LOS	B			C	C		
Queue Length 50th (ft)	167	0	76	41	192	49	
Queue Length 95th (ft)	306	110	#154	90	293	100	
Internal Link Dist (ft)	544			347	424		
Turn Bay Length (ft)		350					
Base Capacity (vph)	769	998	397	834	951	871	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.55	0.76	0.60	0.16	0.42	0.42	

Intersection Summary

Cycle Length: 106

Actuated Cycle Length: 84.4

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay (s/veh): 18.5

Intersection LOS: B

Intersection Capacity Utilization 65.0%

ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Pawling Ave & Congress St/Brunswick Rd

↖ Ø2	↻ Ø3	→ Ø4	→ Ø9
51 s	16 s	25 s	14 s
	↙ Ø8		
	41 s		

HCM 7th Signalized Intersection Summary

2: Pawling Ave & Spring Ave

Baseline_Default



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↖		↖	↖		↗	↖	
Traffic Volume (veh/h)	0	123	246	0	56	54	175	355	3	68	468	2
Future Volume (veh/h)	0	123	246	0	56	54	175	355	3	68	468	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	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	0	1870	1870	0	1976	1678	1856	1885	1900	1707	1885	1900
Adj Flow Rate, veh/h	0	127	254	0	58	56	180	366	3	70	482	2
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	0	0	15	3	1	0	13	1	0
Cap, veh/h	0	534	452	0	264	255	355	867	7	411	871	4
Arrive On Green	0.00	0.29	0.29	0.00	0.29	0.29	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	0	1870	1582	0	924	892	902	1867	15	923	1876	8
Grp Volume(v), veh/h	0	127	254	0	0	114	180	0	369	70	0	484
Grp Sat Flow(s),veh/h/ln	0	1870	1582	0	0	1815	902	0	1882	923	0	1884
Q Serve(g_s), s	0.0	3.6	9.6	0.0	0.0	3.4	12.6	0.0	9.1	3.8	0.0	13.0
Cycle Q Clear(g_c), s	0.0	3.6	9.6	0.0	0.0	3.4	25.5	0.0	9.1	13.0	0.0	13.0
Prop In Lane	0.00		1.00	0.00		0.49	1.00		0.01	1.00		0.00
Lane Grp Cap(c), veh/h	0	534	452	0	0	519	355	0	874	411	0	875
V/C Ratio(X)	0.00	0.24	0.56	0.00	0.00	0.22	0.51	0.00	0.42	0.17	0.00	0.55
Avail Cap(c_a), veh/h	0	534	452	0	0	519	355	0	874	411	0	875
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	19.2	21.3	0.0	0.0	19.1	22.7	0.0	12.5	16.8	0.0	13.5
Incr Delay (d2), s/veh	0.0	1.0	5.0	0.0	0.0	1.0	5.1	0.0	1.5	0.9	0.0	2.5
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	0.0	1.7	3.9	0.0	0.0	1.5	3.0	0.0	3.8	0.9	0.0	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	20.2	26.3	0.0	0.0	20.0	27.8	0.0	14.0	17.7	0.0	16.0
LnGrp LOS		C	C			C	C		B	B		B
Approach Vol, veh/h	381			114			549			554		
Approach Delay, s/veh	24.2			20.0			18.5			16.2		
Approach LOS	C			C			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	42.0			28.0			42.0			28.0		
Change Period (Y+Rc), s	9.5			8.0			9.5			8.0		
Max Green Setting (Gmax), s	32.5			20.0			32.5			20.0		
Max Q Clear Time (g_c+I1), s	27.5			11.6			15.0			5.4		
Green Ext Time (p_c), s	1.5			1.0			3.3			0.4		
Intersection Summary												
HCM 7th Control Delay, s/veh			19.2									
HCM 7th LOS			B									

Intersection						
Int Delay, s/veh	5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	122	37	62	49	30	127
Future Vol, veh/h	122	37	62	49	30	127
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	7	3	10	22	0	2
Mvmt Flow	128	39	65	52	32	134
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	167	0	330	149
Stage 1	-	-	-	-	148	-
Stage 2	-	-	-	-	182	-
Critical Hdwy	-	-	4.2	-	6.4	6.22
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.29	-	3.5	3.318
Pot Cap-1 Maneuver	-	-	1363	-	669	898
Stage 1	-	-	-	-	885	-
Stage 2	-	-	-	-	854	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1363	-	636	897
Mov Cap-2 Maneuver	-	-	-	-	636	-
Stage 1	-	-	-	-	885	-
Stage 2	-	-	-	-	812	-
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		4.34		10.4	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	832	-	-	1005	-	
HCM Lane V/C Ratio	0.199	-	-	0.048	-	
HCM Control Delay (s/veh)	10.4	-	-	7.8	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.7	-	-	0.2	-	

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	177	84	0	0	8
Future Vol, veh/h	8	177	84	0	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	100	1	7	0	0	100
Mvmt Flow	9	190	90	0	0	9
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	90	0	-	0	298	90
Stage 1	-	-	-	-	90	-
Stage 2	-	-	-	-	208	-
Critical Hdwy	5.1	-	-	-	6.4	7.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	3.1	-	-	-	3.5	4.2
Pot Cap-1 Maneuver	1062	-	-	-	698	754
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	832	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1062	-	-	-	691	754
Mov Cap-2 Maneuver	-	-	-	-	691	-
Stage 1	-	-	-	-	930	-
Stage 2	-	-	-	-	832	-
Approach	EB	WB		SB		
HCM Control Delay, s/v	0.36	0		9.83		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	78	-	-	-	-	754
HCM Lane V/C Ratio	0.008	-	-	-	-	0.011
HCM Control Delay (s/veh)	8.4	0	-	-	-	9.8
HCM Lane LOS	A	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-	0