

STONEFIELD

October 28, 2019

Township of Long Hill
Planning Board
Long Hill Town Hall
915 Valley Road
Gilette, New Jersey 07933

**RE: Traffic Impact Assessment Report
Proposed Mixed-Use Multi-Family & Commercial Development
Enclave at Millington
Block 12301, Lot 1 & Block 10100, Lot 7.01
Millington Township of Long Hill, Morris County, New Jersey
SE&D Job No. S-16074**

Dear Board Members:

Stonefield Engineering and Design, LLC (“Stonefield”) has prepared this analysis to examine the potential traffic and parking impacts of the proposed mixed-use multi-family and commercial development located at the northwest quadrant of the intersection of Division Avenue and Stone House Road in the unincorporated community of Millington located within the Township of Long Hill, Morris County, New Jersey. The site location is shown on appended **Figure I**. The subject property is designated as Block 12301, Lot 1 and Block 10100, Lot 7.01 on the Township of Long Hill Tax Map. The site has approximately 533 feet of frontage along Division Avenue, approximately 808 feet of frontage along Stone House Road, and approximately 340 feet of frontage along Commerce Street. The site is presently developed with four (4) industrial/commercial buildings. Access is currently provided via two (2) full-movement driveways along Commerce Street and one (1) curb cut along Stone House Road. As part of the redevelopment plan, the existing on-site structures would be razed and 140 multifamily residential units and 4,992 square feet of retail space would be constructed. Access is proposed via one (1) full-movement driveway along Division Avenue and one (1) full-movement driveway along Stone House Road.

2019 Existing Condition

2019 Existing Roadway Conditions

The subject property is located at the northwest quadrant of the intersection of Division Avenue and Stone House Road in the unincorporated community of Millington located within the Township of Long Hill, Morris County, New Jersey. The subject property is designated as Block 12301, Lot 1 and Block 10100, Lot 7.01 on the Township of Long Hill Tax Map. The site is bounded by Division Avenue to the east, Commerce Street to the north, Stone House Road to the south, and the Passaic River to the west.

Long Hill Road (a.k.a. CR 605) is classified as an Urban Major Collector roadway with a general east-west orientation and is under the jurisdiction of Morris County. In the site vicinity, the roadway provides one (1) lane of travel in each direction. Curb and sidewalk are provided along both sides of the roadway, shoulders are not provided, and on-street parking is periodically permitted along the northerly side of the roadway. Long Hill Road provides east-west mobility within Long Hill and neighboring municipalities from Commerce Street at its western terminus to Bridge Avenue at its eastern terminus for a mix of commercial, residential, and industrial uses along its length. To the east of Northfield Road, Long Hill Road becomes CR 657.

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Division Avenue (a.k.a. CR 605) is classified as an Urban Major Collector roadway with a general north-south orientation and is under the jurisdiction of Morris County. Along the site frontage, the roadway provides one (1) lane of travel in each direction. Curb and sidewalk are provided along portions of the easterly side of the roadway, shoulders are provided south of the site, and on-street parking is not permitted. Division Avenue provides north-south mobility within Long Hill from Long Hill Road at its northern terminus to Valley Road at its southern terminus for a mix of commercial and industrial uses along its length.

Commerce Street is a local roadway with a general east-west orientation and is under the jurisdiction of the Township of Long Hill. Along site frontage, the roadway provides one (1) lane of travel in each direction. Curb is provided along both sides of the roadway, sidewalk and shoulders are not provided, and on-street parking is not permitted. Commerce Street provides access to the subject property and Long Hill Road to the west.

Meadowview Road is a local roadway with a general east-west orientation and is under the jurisdiction of the Township of Long Hill. The roadway provides one (1) lane of travel in each direction. Curb is provided along both sides of the roadway, sidewalk is provided along portions of the southerly side of the roadway, shoulders are not provided, and on-street parking is not permitted. Meadowview Road provides east-west mobility within Long Hill from Northfield Road at its eastern terminus to Division Avenue at its western terminus for residential uses along its length.

Stone House Road is a local roadway with a general east-west orientation and is under the jurisdiction of the Township of Long Hill. Along site frontage, the roadway provides one (1) lane of travel in each direction. Curb, sidewalk, and shoulders are not provided along the roadway and on-street parking is not permitted. Stone House Road provides east-west mobility within Long Hill for access to commercial and industrial uses. To the west of the Passaic River, Stone House Road becomes Haas Road.

Sunny Slope is a local roadway with a general north-south orientation and is under the jurisdiction of the Township of Long Hill. The roadway provides one (1) lane of travel in each direction. Curb, sidewalk, and shoulders are not provided and on-street parking is permitted along both sides of the roadway. Sunny Slope provides access from Division Avenue to Sunset Place for residential uses along its length.

Long Hill Road, Division Avenue, and Sunny Slope intersect to form an unsignalized four (4)-leg intersection with the Division Avenue and Sunny Slope approaches operating under stop control. The eastbound and westbound approaches of Long Hill Road each provide one (1) full-movement lane. The northbound approach of Division Avenue and the southbound approach of Sunny Slope each provide one (1) full-movement lane. Crosswalks are provided across the eastbound, westbound, and southbound approaches of the intersection.

Division Avenue and Commerce Street intersect to form an unsignalized T-intersection with the Commerce Street approach operating under stop control. The eastbound approach of Commerce Street provides one (1) shared left-turn/right-turn lane. The northbound approach of Division Avenue provides one (1) shared left-turn/through lane and the southbound approach provides one (1) shared through/right-turn lane.

Division Avenue and Meadowview Road intersect to form an unsignalized T-intersection with the Meadowview Road approach operating under stop control. The westbound approach of Meadowview Road provides one (1) shared left-turn/right-turn lane. The northbound approach of Division Avenue provides one (1) shared through/right-turn lane and the southbound approach provides one (1) shared left-turn/through lane. A crosswalk is provided across the westbound approach of the intersection.

Division Avenue and Stone House Road intersect to form an unsignalized T-intersection with the Stone House Road approach operating under stop control. The eastbound approach of Stone House Road provides one (1) shared left-turn/right-turn lane. The northbound approach of Division Avenue provides one (1) shared left-turn/through lane and the southbound approach provides one (1) shared through/right-turn lane.



2019 Existing Traffic Volumes

Manual turning movement counts were collected during the typical weekday morning, weekday evening, and Saturday midday time periods to evaluate existing traffic conditions and identify the specific hours when traffic activity on the adjacent roadways is at a maximum and could be potentially impacted by the development of the site. Turning movement counts were collected at the following locations:

- Long Hill Road, Division Avenue & Sunny Slope
- Stone House Road & Division Avenue
- Commerce Street & Division Avenue
- Meadowview Road & Division Avenue

Specifically, manual turning movement counts were conducted on the following dates:

- Saturday, June 4, 2016, from 11:00 a.m. to 2:00 p.m.
- Tuesday, June 7, 2016, from 7:00 a.m. to 9:00 a.m. and from 4:00 p.m. to 7:00 p.m.

The study time periods were chosen as they are representative of the peak periods of both the adjacent roadway network and the proposed development. The traffic volume data was collected and analyzed to identify the design peak hour in accordance with HCM and ITE guidelines. Based on the review of the count data, the weekday morning peak hour occurred from 8:00 a.m. to 9:00 a.m., the weekday evening peak hour occurred from 5:15 p.m. to 6:15 p.m., and the Saturday midday peak hour occurred from 11:00 a.m. to 12:00 p.m. The 2016 count data was grown three (3) years to establish the traffic conditions at the time of the preparation of this study. The 2019 Existing weekday morning, weekday evening, and Saturday midday peak hour volumes are summarized on appended **Figure 2**.

2019 Existing LOS/Capacity Analysis

A Level of Service and Volume/Capacity analysis was conducted for the 2019 Existing Condition during the weekday morning, weekday evening, and Saturday midday peak hours. The approaches of the intersection of Long Hill Road and Division Avenue/Sunny Slope are calculated to operate at Level of Service B or better during the peak hours studied. The approaches of the intersection of Stone House Road and Division Avenue are calculated to operate at Level of Service B or better during the study peak hours. The approaches of the intersection of Commerce Street and Division Avenue are calculated to operate at Level of Service A during each of the study peak hours. The approaches of the intersection of Meadowview Road and Division Avenue are calculated to operate at Level of Service B or better during the study peak hours.

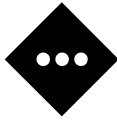
2021 No-Build Condition

Background Growth

The 2019 Existing Condition was grown to a future horizon year of 2021, which is a conservative estimate for when the proposed mixed-use multi-family and commercial development is expected to be fully constructed. In accordance with industry guidelines, the existing traffic volumes at the study intersections were increased by 1.00% annually for two (2) years. The 1.00% background growth rate was obtained from the New Jersey Department of Transportation's (NJDOT) Annual Background Growth Rate Table.

2021 No-Build Traffic Volumes

The background growth rate was applied to the 2019 Existing Traffic Volumes to calculate the 2021 No-Build Traffic Volumes for the weekday morning, weekday evening, and Saturday midday peak hours. These volumes are summarized on appended **Figure 3**.



2021 No-Build LOS/Capacity Analysis

A Level of Service and Volume/Capacity analysis was also conducted for the 2021 No-Build Condition during the weekday morning, weekday evening, and Saturday midday peak hours at the study intersections. The approaches at each of the study intersections are calculated to operate generally consistently with the Existing Condition.

2021 Build Condition

The site-generated traffic volume of the proposed mixed-use multi-family and commercial development was estimated to identify the potential impacts of the project. For the purpose of this analysis, a complete project “build out” is assumed within two (2) years of the preparation of this study.

Trip Generation

Trip generation projections for the proposed uses were prepared utilizing the Institute of Transportation Engineers’ (ITE) Trip Generation Manual, 10th Edition. Trip generation rates associated with Land Use 220 “Multifamily Housing (Low-Rise)” and ITE Land Use 820 “Shopping Center” were cited for the proposed mixed-use multi-family and commercial development consisting of 140 multifamily residential units and 4,992 square feet of retail space. **Table I** provides the unadjusted the weekday morning, weekday evening, and Saturday midday trip generation volumes associated with the proposed development.

TABLE I – UNADJUSTED TRIP GENERATION

	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Saturday Midday Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
140-Unit “Multifamily Housing (Low-Rise)” <i>ITE Land Use 220</i>	15	49	64	49	29	78	49	49	98
4,992 SF “Shopping Center” <i>ITE Land Use 820</i>	3	2	5	9	10	19	11	11	22
Total	18	51	69	58	39	97	60	60	120

Chapter 6 of ITE’s Trip Generation Handbook, 3rd Edition, states that internally captured trips can be a component of travel patterns in multi-use developments similar to the proposed development. When combined within a single development, individual land uses tend to interact and attract a portion of each other’s trip generation; such as a resident visiting the retail store. Utilizing the published data, internal trips were calculated between the retail and residential components during the weekday morning, weekday evening, and Saturday midday peak hours. It is noted that the Trip Generation Handbook does not contain published data for the weekday morning and Saturday midday peak hours. However, it is logical that an interaction equal or greater than experienced during the weekday evening peak period would occur during the Saturday midday peak period. As such, the weekday evening rates have been utilized for the Saturday midday peak hour.

The location of the proposed development is particularly suited to foster public transit usage by its occupants as it is located in close proximity to Millington Station, which serves the NJ Transit Gladstone Branch Line. The NJ Transit Gladstone Branch Line provides stops at various municipalities and points of interest including Millburn, South Orange, Orange, East Orange, Newark Broad Street, Secaucus Junction, Hoboken Terminal, and New York Penn Station. To account for the reduced vehicle traffic to the site as a result of transit use, a 10% credit was applied to the trip generation.

As stated within Chapter 10 of ITE’s Trip Generation Handbook, 3rd Edition, there are instances when the total number of external trips generated by a site is different from the amount of new traffic added to the



street system by the generator. Retail stores are specifically located on or adjacent to busy streets to attract motorists already on the roadway. Therefore, the proposed site would be expected to attract a portion of its trips from the traffic passing the site on the way from an origin to an ultimate destination. These trips do not add new traffic to the adjacent roadway system and are referred to as pass-by trips. Based upon the published ITE data for Land Use 820 “Shopping Centers”, approximately 34% of the site-generated traffic during the weekday evening peak hour and approximately 26% during the Saturday midday peak hour is comprised of pass-by traffic. The ITE does not publish pass-by rates for the weekday morning peak hour for this use. **Table 2** provides the adjusted trip generation after taking into consideration internally captured trips, the proximity to transit options, and the portion of trips generated through pass-by traffic.

TABLE 2 – ADJUSTED TRIP GENERATION

LUC	Land Use	Size	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Saturday Midday Peak Hour		
			Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
220	Multifamily Housing	140 Units	15	49	64	49	29	78	49	49	98
820	Shopping Center	4,992 SF	3	2	5	9	10	19	11	11	22
ITE Trip Generation Total			18	51	69	58	39	97	60	60	120
Internal Capture Trip Reduction			--	--	--	-4	-4	-8	-4	-4	-8
10.0% Transit Trip Reduction			-2	-5	-7	-5	-3	-8	-5	-5	-10
Pass-By Trip Reduction			--	--	--	-2	-2	-4	-2	-2	-4
Total New Vehicular Trips			16	46	62	47	30	77	49	49	98

It is important to note that an approximately 154,200-square-foot industrial building currently exists on the subject property. Therefore, it is important to consider the net change in the site trip generation. The trip generation rates associated with Land Use 110 “General Light Industrial” were cited for the existing use. **Table 3** shows the expected net increase in site-generated traffic associated with the proposed development.

TABLE 3 – PROJECTED INCREASE IN SITE-GENERATED TRIPS

	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Saturday Midday Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
Existing Site 154,200 SF “General Light Industrial” <i>ITE Land Use 110</i>	95	13	108	13	84	97	30	33	63
Proposed Site	16	46	62	47	30	77	49	49	98
Projected Site Trip Increase	-79	+33	-46	+34	-54	-20	+19	+16	+35

As shown in Table 3, the site is calculated to generate 46 less trips during the weekday morning peak hour, 20 less trips during the weekday evening peak hour, and 35 additional trips during the Saturday midday peak hour. Based on Transportation Impact Analysis for Site Development published by the ITE, a trip increase of less than 100 trips would likely not change the Level of Service of the roadway system or appreciably increase the volume-to-capacity ratio of an intersection approach. Furthermore, the traffic associated with the proposed development would primarily be comprised of passenger vehicles whereas the historic use of the site utilized heavy vehicles. As such, the proposed site improvements are not anticipated to significantly impact the operations of the site driveways and adjacent roadway network.



Trip Assignment/Distribution

The trips generated by the proposed development were distributed according to the roadway geometry, the existing travel patterns on the adjacent roadway network, and the access management plan of the site. The “New” Site-Generated Traffic Volumes are illustrated on **Figure 4** and the “Pass-By” Site-Generated Traffic Volumes are illustrated on **Figure 5**.

2021 Build Traffic Volumes

The site-generated trips were added to the 2021 No-Build Traffic Volumes to calculate the 2021 Build Traffic Volumes and are shown on appended **Figure 6**.

2021 Build LOS/Capacity Analysis

A Level of Service and Volume/Capacity analysis was also conducted for the 2021 Build Condition during the weekday morning, weekday evening, and Saturday midday peak hours at the study intersections. The approaches at each of the study intersections are calculated to operate generally consistently with the Existing and No-Build Conditions. The approaches at the proposed site driveways are calculated to operate at Level of Service B or better during the study peak hours. Appended **Table AI** compares the Existing, No-Build, and Build Conditions Level of Service and delay values.

Site Circulation & Parking Supply

A review was conducted of the proposed mixed-use multi-family and commercial development using the Site Plan prepared by our office, dated October 25, 2019. In completing this review, particular attention was focused on the site access, circulation, and parking supply.

Access is proposed via one (1) full-movement driveway along Division Avenue and one (1) full-movement driveway along Stone House Road. Site circulation and parking maneuvers would be facilitated via a minimum 24-foot-wide drive aisle in the vicinity of the parking supply.

Regarding the parking requirements of the proposed development, the Township of Long Hill Ordinance refers to the New Jersey Administrative Code Residential Site Improvement Standards (RSIS) (NJAC 5:21) for residential uses, which requires two (2) spaces per two-bedroom unit and 2.1 spaces per three-bedroom unit for garden residential units. The Township of Long Hill Ordinance requires one (1) space per 200 square feet of gross floor area for retail uses. For the proposed mixed-use multi-family and commercial development consisting of 126 two-bedroom garden units, 14 three-bedroom garden units, and a 4,992-square-foot retail space, this equates to 306 required spaces. The site would provide 307 parking spaces which meets the Ordinance requirement.

Additionally, RSIS requires provisions for guest parking equal to or greater than 0.5 spaces per dwelling unit. For the proposed 140 residential units, this equates to 70 required spaces for guest parking. The site would provide 114 parking spaces accessible to guests, which meets the requirement. All parking spaces not included within garages and driveways are considered guest parking.

Based on data provided by ITE within Parking Generation, 5th Edition, for Land Use 220 “Multifamily Housing (Low-Rise)” and Land Use 820 “Shopping Center,” the 85th percentile peak-period parking demand is 1.61 vehicles per dwelling unit for multifamily residences and 3.78 vehicles per 1,000 square-foot of gross floor area for retail uses. Based on these demand rates, the proposed mixed-use multi-family and commercial development consisting of 140 multifamily residential units and 4,992-square-foot retail space would be expected to generate a total of 244 parked vehicles. Therefore, the proposed parking supply of 307 parking spaces would be sufficient to accommodate the anticipated peak-period parking demand of the proposed development.

As the development plan consists of two individual land uses, the site would be expected to exhibit characteristics of “shared” parking in which a parking space would serve the two land uses without conflict or encroachment. This condition of shared parking decreases the total number of parking spaces required to serve



a mixed-use development. Typically, the maximum parking demand of residential uses will occur during the overnight period when retail parking demands are at a minimum. Likewise, retail parking demands are expected to peak during the midday period, when residential parking demands are lower. Thus, the variation in peak periods creates a shared parking condition in which parking spaces that may be occupied by residents during the overnight periods would be able to be utilized by patrons of the retail uses during the midday period. In addition, the retail portion of the development would largely serve the residents of the proposed development and would likely reduce the parking demand for the project. Furthermore, Millington Station is located within a two (2)-minute walk (approximately 480 feet) from the proposed site and therefore, a portion of the residents would likely utilize the adjacent transit option to commute to work and other destinations. As such, the proposed parking supply would be sufficient to accommodate the anticipated future parking demand of the proposed mixed-use multi-family and commercial development.

Conclusions

This report was prepared to examine the potential traffic impact of the proposed mixed-use multi-family and commercial development. The analysis findings, which have been based on industry standard guidelines, indicate that the proposed development would not have a significant impact on the traffic operations of the adjacent roadway network. The site driveways and on-site layout have been designed to provide for effective access to and from the subject property and the parking supply would be sufficient to support this project.

If you have any comments regarding the above information, please contact our office.

Best regards,

Charles D. Olivo, PE, PP, PTOE
Stonefield Engineering and Design, LLC

Matthew J. Seckler, PE, PP, PTOE
Stonefield Engineering and Design, LLC

via FedEx with Enclosures

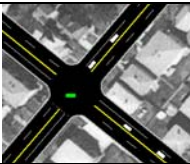
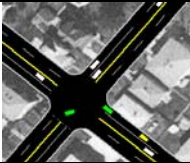


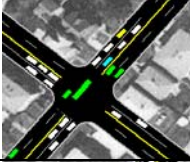
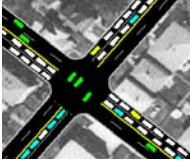
TECHNICAL APPENDIX

LEVEL OF SERVICE/AVERAGE CONTROL DELAY CRITERIA

LEVEL OF SERVICE /AVERAGE CONTROL DELAY CRITERIA

The ability of a roadway to effectively accommodate traffic demand is determined through an assessment of the volume-to-capacity ratio, delay and Level of Service of the lane group and/or intersection. The volume-to-capacity ratio is the ratio of traffic flow rate to capacity for a given transportation facility. As defined within the Highway Capacity Manual, 6th Edition (HCM), intersection delay is the total additional travel time experienced by drivers, passengers, or pedestrians as a result of control measures and interaction with other users of the facility, divided by the volume departing from the corresponding cross section of the facility. Level of service is a qualitative measure describing operational conditions within a traffic stream, based on service measures such as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience.

For an unsignalized intersection, LOS A indicates operations with delay less than 10 seconds per vehicle, while LOS F describes operations with delay in excess of 50 seconds per vehicle. For a signalized intersection, LOS A indicates operations with delay less than 10 seconds per vehicle and LOS F denotes operations with delay in excess of 80 seconds per vehicle.

	Level Of Service (LOS)	Signalized Delay Range (average control delay in sec/veh)	Unsignalized Delay Range (average control delay in sec/veh)
	A	<=10	<=10
	B	>10 and <=20	>10 and <=15
	C	>20 and <=35	>15 and <=25
	D	>35 and <=55	>25 and <=35
	E	>55 and <=80	>35 and <=50
	F	>80	>50

Source: Highway Capacity Manual, 6th Edition

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Table A1
Comparative Level of Service (Delay) Table
X (n) = Level of Service (seconds of delay)

Intersection	Lane Group	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Saturday Midday Peak Hour		
		2019 Existing	2021 No-Build	2021 Build	2019 Existing	2021 No-Build	2021 Build	2019 Existing	2021 No-Build	2021 Build
Long Hill Road (EB/WB) & Division Avenue/Sunny Slope (NB/SB)	EB Left/Through/Right	A (0.0)	A (0.0)	A (0.0)	A (7.2)	A (7.2)	A (7.2)	A (7.2)	A (7.2)	A (7.2)
	WB Left/Through/Right	A (7.5)	A (7.5)	A (7.5)	A (7.5)	A (7.5)	A (7.6)	A (7.5)	A (7.5)	A (7.5)
	NB Left/Through/Right	B (10.0)	B (10.0)	B (10.1)	A (9.4)	A (9.4)	A (9.5)	A (9.9)	B (10.0)	B (10.1)
Stone House Road (EB) & Division Avenue	SB Left/Through/Right	B (12.2)	B (12.3)	B (12.6)	B (12.8)	B (12.9)	B (13.5)	B (11.3)	B (11.4)	B (12.0)
	EB Left/Right	B (10.6)	B (10.7)	B (10.8)	B (11.2)	B (11.3)	B (11.6)	B (10.0)	B (10.0)	B (10.2)
	NB Left/Through	A (7.6)	A (7.6)	A (7.6)	A (7.8)	A (7.8)	A (7.8)	A (7.6)	A (7.6)	A (7.6)
Commerce Street (EB) & Division Avenue	EB Left/Right	A (9.8)	A (9.8)	A (9.9)	A (9.7)	A (9.8)	A (9.9)	A (9.7)	A (9.7)	B (10.0)
	NB Left/Through	A (7.5)	A (7.5)	A (7.6)	A (7.6)	A (7.6)	A (7.7)	A (7.5)	A (7.5)	A (7.5)
	WB Left/Right	B (10.4)	B (10.4)	B (10.5)	B (10.5)	B (10.6)	B (10.4)	A (9.1)	A (9.1)	A (9.2)
Meadowview Road (WB) & Division Avenue	SB Left/Through	A (7.6)	A (7.6)	A (7.6)	A (7.5)	A (7.5)	A (7.6)	A (7.4)	A (7.4)	A (7.5)
	EB Left/Right			B (10.3)			B (10.6)			B (10.0)
	NB Left/Through			A (7.6)			A (7.7)			A (7.6)
Site Driveway (EB) & Division Avenue	EB Left/Through			A (7.4)			A (7.5)			A (7.4)
	SB Left/Right			A (9.1)			A (9.4)			A (9.0)

TURNING MOVEMENT COUNT DATA

Stonefield Engineering & Design, LLC

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Intersection of Long Hill Road (E/W)
& Division Avenue/Sunny Slope (N/S)
Township of Long Hill, Morris County, New Jersey
Tuesday, June 7, 2016

File Name : S-16074.01
Site Code : 00016074
Start Date : 6/7/2016
Page No : 1

Groups Printed- Auto - HV - B/SB

Start Time	Long Hill Road Eastbound				Long Hill Road Westbound				Division Avenue Northbound				Sunny Slope Southbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	4	9	13	10	3	0	13	5	3	19	27	0	0	0	0	53
07:15 AM	0	2	4	6	24	3	0	27	3	0	19	22	0	1	0	1	56
07:30 AM	0	3	11	14	24	4	0	28	6	1	29	36	0	0	0	0	78
07:45 AM	0	0	5	5	20	2	0	22	4	1	36	41	0	0	0	0	68
Total	0	9	29	38	78	12	0	90	18	5	103	126	0	1	0	1	255
08:00 AM	0	1	11	12	23	5	3	31	9	2	38	49	1	0	0	1	93
08:15 AM	0	5	10	15	19	2	1	22	4	0	21	25	2	1	0	3	65
08:30 AM	0	2	3	5	29	2	0	31	5	3	34	42	2	1	0	3	81
08:45 AM	0	4	10	14	26	5	4	35	8	2	17	27	0	4	0	4	80
Total	0	12	34	46	97	14	8	119	26	7	110	143	5	6	0	11	319
*** BREAK ***																	
04:00 PM	0	3	4	7	27	3	0	30	5	1	22	28	1	3	0	4	69
04:15 PM	0	2	2	4	23	2	0	25	2	1	18	21	3	4	0	7	57
04:30 PM	0	1	1	2	31	0	0	31	3	0	22	25	0	4	0	4	62
04:45 PM	0	1	6	7	30	4	2	36	4	1	15	20	2	3	0	5	68
Total	0	7	13	20	111	9	2	122	14	3	77	94	6	14	0	20	256
05:00 PM	0	0	5	5	28	0	0	28	5	0	22	27	1	2	0	3	63
05:15 PM	0	1	2	3	42	2	0	44	3	2	30	35	1	7	0	8	90
05:30 PM	0	2	5	7	39	0	1	40	1	0	29	30	1	2	0	3	80
05:45 PM	1	3	4	8	37	2	1	40	3	1	30	34	1	1	0	2	84
Total	1	6	16	23	146	4	2	152	12	3	111	126	4	12	0	16	317
06:00 PM	0	2	5	7	38	3	1	42	3	1	26	30	0	0	0	0	79
06:15 PM	0	3	3	6	21	3	1	25	9	1	27	37	2	2	0	4	72
06:30 PM	0	2	7	9	21	1	0	22	6	1	24	31	0	2	1	3	65
06:45 PM	1	1	1	3	13	1	0	14	2	0	12	14	0	0	0	0	31
Total	1	8	16	25	93	8	2	103	20	3	89	112	2	4	1	7	247
Grand Total	2	42	108	152	525	47	14	586	90	21	490	601	17	37	1	55	1394
Apprch %	1.3	27.6	71.1		89.6	8	2.4		15	3.5	81.5		30.9	67.3	1.8		
Total %	0.1	3	7.7	10.9	37.7	3.4	1	42	6.5	1.5	35.2	43.1	1.2	2.7	0.1	3.9	
Auto	2	42	107	151	521	47	14	582	90	21	488	599	16	37	1	54	1386
% Auto	100	100	99.1	99.3	99.2	100	100	99.3	100	100	99.6	99.7	94.1	100	100	98.2	99.4
HV	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	2
% HV	0	0	0.9	0.7	0	0	0	0	0	0	0.2	0.2	0	0	0	0	0.1
B/SB	0	0	0	0	4	0	0	4	0	0	1	1	1	0	0	1	6
% B/SB	0	0	0	0	0.8	0	0	0.7	0	0	0.2	0.2	5.9	0	0	1.8	0.4

Stonefield Engineering & Design, LLC

92 Park Avenue, Rutherford, NJ 07070

201.340.4468 t. 201.340.4472 f.

Intersection of Long Hill Road (E/W)
 & Division Avenue/Sunny Slope (N/S)
 Township of Long Hill, Morris County, New Jersey
 Tuesday, June 7, 2016

File Name : S-16074.01
 Site Code : 00016074
 Start Date : 6/7/2016
 Page No : 2

Start Time	Long Hill Road Eastbound				Long Hill Road Westbound				Division Avenue Northbound				Sunny Slope Southbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	1	11	12	23	5	3	31	9	2	38	49	1	0	0	1	93
08:15 AM	0	5	10	15	19	2	1	22	4	0	21	25	2	1	0	3	65
08:30 AM	0	2	3	5	29	2	0	31	5	3	34	42	2	1	0	3	81
08:45 AM	0	4	10	14	26	5	4	35	8	2	17	27	0	4	0	4	80
Total Volume	0	12	34	46	97	14	8	119	26	7	110	143	5	6	0	11	319
% App. Total	0	26.1	73.9		81.5	11.8	6.7		18.2	4.9	76.9		45.5	54.5	0		
PHF	.000	.600	.773	.767	.836	.700	.500	.850	.722	.583	.724	.730	.625	.375	.000	.688	.858
Auto	0	12	34	46	95	14	8	117	26	7	109	142	4	6	0	10	315
% Auto	0	100	100	100	97.9	100	100	98.3	100	100	99.1	99.3	80.0	100	0	90.9	98.7
HV	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
% HV	0	0	0	0	0	0	0	0	0	0	0.9	0.7	0	0	0	0	0.3
B/SB	0	0	0	0	2	0	0	2	0	0	0	0	1	0	0	1	3
% B/SB	0	0	0	0	2.1	0	0	1.7	0	0	0	0	20.0	0	0	9.1	0.9

Peak Hour Analysis From 05:15 PM to 06:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:15 PM

05:15 PM	0	1	2	3	42	2	0	44	3	2	30	35	1	7	0	8	90
05:30 PM	0	2	5	7	39	0	1	40	1	0	29	30	1	2	0	3	80
05:45 PM	1	3	4	8	37	2	1	40	3	1	30	34	1	1	0	2	84
06:00 PM	0	2	5	7	38	3	1	42	3	1	26	30	0	0	0	0	79
Total Volume	1	8	16	25	156	7	3	166	10	4	115	129	3	10	0	13	333
% App. Total	4	32	64		94	4.2	1.8		7.8	3.1	89.1		23.1	76.9	0		
PHF	.250	.667	.800	.781	.929	.583	.750	.943	.833	.500	.958	.921	.750	.357	.000	.406	.925
Auto	1	8	16	25	156	7	3	166	10	4	115	129	3	10	0	13	333
% Auto	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0	100	100
HV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% HV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B/SB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% B/SB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Stonefield Engineering & Design, LLC

92 Park Avenue, Rutherford, NJ 07070

201.340.4468 t. 201.340.4472 f.

Intersection of Stone House Road (E/W)
& Division Avenue (N/S)
Township of Long Hill, Morris County, New Jersey
Tuesday, June 7, 2016

File Name : S-16074.02
Site Code : 00016074
Start Date : 6/7/2016
Page No : 1

Groups Printed- Auto - HV - B/SB

Start Time	Stone House Road Eastbound				Westbound				Division Avenue Northbound				Division Avenue Southbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	4	0	4	8	0	0	0	0	5	22	0	27	0	13	11	24	59
07:15 AM	12	0	3	15	0	0	0	0	7	15	0	22	0	14	10	24	61
07:30 AM	16	0	3	19	0	0	0	0	10	25	0	35	0	24	12	36	90
07:45 AM	14	0	3	17	0	0	0	0	6	32	0	38	0	17	9	26	81
Total	46	0	13	59	0	0	0	0	28	94	0	122	0	68	42	110	291
08:00 AM	24	0	6	30	0	0	0	0	5	31	0	36	0	14	12	26	92
08:15 AM	10	0	5	15	0	0	0	0	6	17	0	23	0	20	12	32	70
08:30 AM	14	0	8	22	0	0	0	0	5	24	0	29	0	16	14	30	81
08:45 AM	10	0	3	13	0	0	0	0	6	20	0	26	0	26	13	39	78
Total	58	0	22	80	0	0	0	0	22	92	0	114	0	76	51	127	321
*** BREAK ***																	
04:00 PM	10	0	7	17	0	0	0	0	5	24	0	29	0	21	12	33	79
04:15 PM	6	0	10	16	0	0	0	0	7	16	0	23	0	29	12	41	80
04:30 PM	13	0	3	16	0	0	0	0	8	12	0	20	0	26	15	41	77
04:45 PM	11	0	6	17	0	0	0	0	5	15	0	20	0	23	16	39	76
Total	40	0	26	66	0	0	0	0	25	67	0	92	0	99	55	154	312
05:00 PM	14	0	7	21	0	0	0	0	8	19	0	27	0	26	16	42	90
05:15 PM	18	0	10	28	0	0	0	0	8	16	0	24	0	24	28	52	104
05:30 PM	6	0	8	14	0	0	0	0	15	17	0	32	0	32	18	50	96
05:45 PM	15	0	4	19	0	0	0	0	8	20	0	28	0	27	16	43	90
Total	53	0	29	82	0	0	0	0	39	72	0	111	0	109	78	187	380
06:00 PM	12	0	8	20	0	0	0	0	8	16	0	24	0	24	16	40	84
06:15 PM	12	0	2	14	0	0	0	0	6	20	0	26	0	18	11	29	69
06:30 PM	9	0	12	21	0	0	0	0	5	16	0	21	0	26	21	47	89
06:45 PM	6	0	4	10	0	0	0	0	2	7	0	9	0	10	9	19	38
Total	39	0	26	65	0	0	0	0	21	59	0	80	0	78	57	135	280
Grand Total	236	0	116	352	0	0	0	0	135	384	0	519	0	430	283	713	1584
Apprch %	67	0	33		0	0	0		26	74	0		0	60.3	39.7		
Total %	14.9	0	7.3	22.2	0	0	0	0	8.5	24.2	0	32.8	0	27.1	17.9	45	
Auto	232	0	111	343	0	0	0	0	131	380	0	511	0	427	279	706	1560
% Auto	98.3	0	95.7	97.4	0	0	0	0	97	99	0	98.5	0	99.3	98.6	99	98.5
HV	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
% HV	0.8	0	0	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0.1
B/SB	2	0	5	7	0	0	0	0	4	4	0	8	0	3	4	7	22
% B/SB	0.8	0	4.3	2	0	0	0	0	3	1	0	1.5	0	0.7	1.4	1	1.4

Stonefield Engineering & Design, LLC

92 Park Avenue, Rutherford, NJ 07070

201.340.4468 t. 201.340.4472 f.

Intersection of Stone House Road (E/W)
 & Division Avenue (N/S)
 Township of Long Hill, Morris County, New Jersey
 Tuesday, June 7, 2016

File Name : S-16074.02
 Site Code : 00016074
 Start Date : 6/7/2016
 Page No : 2

Start Time	Stone House Road Eastbound				Westbound				Division Avenue Northbound				Division Avenue Southbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	24	0	6	30	0	0	0	0	5	31	0	36	0	14	12	26	92
08:15 AM	10	0	5	15	0	0	0	0	6	17	0	23	0	20	12	32	70
08:30 AM	14	0	8	22	0	0	0	0	5	24	0	29	0	16	14	30	81
08:45 AM	10	0	3	13	0	0	0	0	6	20	0	26	0	26	13	39	78
Total Volume	58	0	22	80	0	0	0	0	22	92	0	114	0	76	51	127	321
% App. Total	72.5	0	27.5		0	0	0		19.3	80.7	0		0	59.8	40.2		
PHF	.604	.000	.688	.667	.000	.000	.000	.000	.917	.742	.000	.792	.000	.731	.911	.814	.872
Auto	57	0	20	77	0	0	0	0	22	90	0	112	0	76	49	125	314
% Auto	98.3	0	90.9	96.3	0	0	0	0	100	97.8	0	98.2	0	100	96.1	98.4	97.8
HV	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% HV	1.7	0	0	1.3	0	0	0	0	0	0	0	0	0	0	0	0	0.3
B/SB	0	0	2	2	0	0	0	0	0	2	0	2	0	0	2	2	6
% B/SB	0	0	9.1	2.5	0	0	0	0	0	2.2	0	1.8	0	0	3.9	1.6	1.9

Peak Hour Analysis From 05:15 PM to 06:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:15 PM

05:15 PM	18	0	10	28	0	0	0	0	8	16	0	24	0	24	28	52	104
05:30 PM	6	0	8	14	0	0	0	0	15	17	0	32	0	32	18	50	96
05:45 PM	15	0	4	19	0	0	0	0	8	20	0	28	0	27	16	43	90
06:00 PM	12	0	8	20	0	0	0	0	8	16	0	24	0	24	16	40	84
Total Volume	51	0	30	81	0	0	0	0	39	69	0	108	0	107	78	185	374
% App. Total	63	0	37		0	0	0		36.1	63.9	0		0	57.8	42.2		
PHF	.708	.000	.750	.723	.000	.000	.000	.000	.650	.863	.000	.844	.000	.836	.696	.889	.899
Auto	51	0	30	81	0	0	0	0	37	69	0	106	0	107	78	185	372
% Auto	100	0	100	100	0	0	0	0	94.9	100	0	98.1	0	100	100	100	99.5
HV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% HV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B/SB	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	2
% B/SB	0	0	0	0	0	0	0	0	5.1	0	0	1.9	0	0	0	0	0.5

Stonefield Engineering & Design, LLC

92 Park Avenue, Rutherford, NJ 07070

201.340.4468 t. 201.340.4472 f.

Intersection of Commerce Street (E/W)
& Division Avenue (N/S)
Township of Long Hill, Morris County, New Jersey
Tuesday, June 7, 2016

File Name : S-16074.03
Site Code : 00016074
Start Date : 6/7/2016
Page No : 1

Groups Printed- Auto - HV - B/SB

Start Time	Commerce Street Eastbound				Westbound				Division Avenue Northbound				Division Avenue Southbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
*** BREAK ***																	
08:00 AM	2	0	2	4	0	0	0	0	1	52	0	53	0	24	0	24	81
08:15 AM	1	0	4	5	0	0	0	0	2	23	0	25	0	28	0	28	58
08:30 AM	3	0	2	5	0	0	0	0	1	37	0	38	0	28	3	31	74
08:45 AM	1	0	2	3	0	0	0	0	4	24	0	28	0	37	1	38	69
Total	7	0	10	17	0	0	0	0	8	136	0	144	0	117	4	121	282
*** BREAK ***																	
05:15 PM	1	0	2	3	0	0	0	0	2	31	0	33	0	51	0	51	87
05:30 PM	1	0	3	4	0	0	0	0	1	22	0	23	0	45	2	47	74
05:45 PM	0	0	1	1	0	0	0	0	3	32	0	35	0	42	1	43	79
Total	2	0	6	8	0	0	0	0	6	85	0	91	0	138	3	141	240
06:00 PM	2	0	3	5	0	0	0	0	0	27	0	27	0	37	0	37	69
*** BREAK ***																	
Total	2	0	3	5	0	0	0	0	0	27	0	27	0	37	0	37	69
Grand Total	11	0	19	30	0	0	0	0	14	248	0	262	0	292	7	299	591
Apprch %	36.7	0	63.3		0	0	0		5.3	94.7	0		0	97.7	2.3		
Total %	1.9	0	3.2	5.1	0	0	0	0	2.4	42	0	44.3	0	49.4	1.2	50.6	
Auto	11	0	19	30	0	0	0	0	14	245	0	259	0	290	7	297	586
% Auto	100	0	100	100	0	0	0	0	100	98.8	0	98.9	0	99.3	100	99.3	99.2
HV	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
% HV	0	0	0	0	0	0	0	0	0	0.4	0	0.4	0	0	0	0	0.2
B/SB	0	0	0	0	0	0	0	0	0	2	0	2	0	2	0	2	4
% B/SB	0	0	0	0	0	0	0	0	0	0.8	0	0.8	0	0.7	0	0.7	0.7

Start Time	Commerce Street Eastbound				Westbound				Division Avenue Northbound				Division Avenue Southbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	2	0	2	4	0	0	0	0	1	52	0	53	0	24	0	24	81
08:15 AM	1	0	4	5	0	0	0	0	2	23	0	25	0	28	0	28	58
08:30 AM	3	0	2	5	0	0	0	0	1	37	0	38	0	28	3	31	74
08:45 AM	1	0	2	3	0	0	0	0	4	24	0	28	0	37	1	38	69
Total Volume	7	0	10	17	0	0	0	0	8	136	0	144	0	117	4	121	282
% App. Total	41.2	0	58.8		0	0	0		5.6	94.4	0		0	96.7	3.3		
PHF	.583	.000	.625	.850	.000	.000	.000	.000	.500	.654	.000	.679	.000	.791	.333	.796	.870
Auto	7	0	10	17	0	0	0	0	8	133	0	141	0	115	4	119	277
% Auto	100	0	100	100	0	0	0	0	100	97.8	0	97.9	0	98.3	100	98.3	98.2
HV	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
% HV	0	0	0	0	0	0	0	0	0	0.7	0	0.7	0	0	0	0	0.4
B/SB	0	0	0	0	0	0	0	0	0	2	0	2	0	2	0	2	4
% B/SB	0	0	0	0	0	0	0	0	0	1.5	0	1.4	0	1.7	0	1.7	1.4

Stonefield Engineering & Design, LLC

92 Park Avenue, Rutherford, NJ 07070

201.340.4468 t. 201.340.4472 f.

Intersection of Commerce Street (E/W)
& Division Avenue (N/S)
Township of Long Hill, Morris County, New Jersey
Tuesday, June 7, 2016

File Name : S-16074.03
Site Code : 00016074
Start Date : 6/7/2016
Page No : 2

Start Time	Commerce Street Eastbound				Westbound				Division Avenue Northbound				Division Avenue Southbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 05:15 PM to 06:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:15 PM																	
05:15 PM	1	0	2	3	0	0	0	0	2	31	0	33	0	51	0	51	87
05:30 PM	1	0	3	4	0	0	0	0	1	22	0	23	0	45	2	47	74
05:45 PM	0	0	1	1	0	0	0	0	3	32	0	35	0	42	1	43	79
06:00 PM	2	0	3	5	0	0	0	0	0	27	0	27	0	37	0	37	69
Total Volume	4	0	9	13	0	0	0	0	6	112	0	118	0	175	3	178	309
% App. Total	30.8	0	69.2		0	0	0		5.1	94.9	0		0	98.3	1.7		
PHF	.500	.000	.750	.650	.000	.000	.000	.000	.500	.875	.000	.843	.000	.858	.375	.873	.888
Auto	4	0	9	13	0	0	0	0	6	112	0	118	0	175	3	178	309
% Auto	100	0	100	100	0	0	0	0	100	100	0	100	0	100	100	100	100
HV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% HV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B/SB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% B/SB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Stonefield Engineering & Design, LLC

92 Park Avenue, Rutherford, NJ 07070

201.340.4468 t. 201.340.4472 f.

Intersection of Meadowview Road (E/W)
 & Division Avenue (N/S)
 Township of Long Hill, Morris County, New Jersey
 Tuesday, June 7, 2016

File Name : S-16074.04
 Site Code : 00016074
 Start Date : 6/7/2016
 Page No : 1

Groups Printed- Auto - HV - B/SB

Start Time	Eastbound				Meadowview Road Westbound				Division Avenue Northbound				Division Avenue Southbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	2	0	0	2	0	26	0	26	2	22	0	24	52
07:15 AM	0	0	0	0	4	0	1	5	0	25	2	27	4	20	0	24	56
07:30 AM	0	0	0	0	4	0	0	4	0	38	3	41	4	32	0	36	81
07:45 AM	0	0	0	0	1	0	0	1	0	41	5	46	1	25	0	26	73
Total	0	0	0	0	11	0	1	12	0	130	10	140	11	99	0	110	262
08:00 AM	0	0	0	0	3	0	0	3	0	53	2	55	3	23	0	26	84
08:15 AM	0	0	0	0	3	0	1	4	0	24	3	27	3	29	0	32	63
08:30 AM	0	0	0	0	2	0	1	3	0	37	1	38	2	28	0	30	71
08:45 AM	0	0	0	0	2	0	1	3	0	27	3	30	2	37	0	39	72
Total	0	0	0	0	10	0	3	13	0	141	9	150	10	117	0	127	290
*** BREAK ***																	
04:00 PM	0	0	0	0	0	0	1	1	0	29	5	34	0	33	0	33	68
04:15 PM	0	0	0	0	5	0	0	5	0	20	2	22	0	36	0	36	63
04:30 PM	0	0	0	0	4	0	1	5	0	25	0	25	0	37	0	37	67
04:45 PM	0	0	0	0	0	0	0	0	0	22	4	26	0	39	0	39	65
Total	0	0	0	0	9	0	2	11	0	96	11	107	0	145	0	145	263
05:00 PM	0	0	0	0	4	0	0	4	0	32	1	33	1	38	0	39	76
05:15 PM	0	0	0	0	0	0	1	1	0	32	2	34	1	52	0	53	88
05:30 PM	0	0	0	0	3	0	0	3	0	23	0	23	1	47	0	48	74
05:45 PM	0	0	0	0	1	0	0	1	0	35	0	35	1	42	0	43	79
Total	0	0	0	0	8	0	1	9	0	122	3	125	4	179	0	183	317
06:00 PM	0	0	0	0	2	0	0	2	0	27	1	28	2	38	0	40	70
06:15 PM	0	0	0	0	1	0	0	1	0	30	2	32	1	28	0	29	62
06:30 PM	0	0	0	0	1	0	1	2	0	24	1	25	1	46	0	47	74
06:45 PM	0	0	0	0	1	0	0	1	0	13	0	13	0	18	0	18	32
Total	0	0	0	0	5	0	1	6	0	94	4	98	4	130	0	134	238
Grand Total	0	0	0	0	43	0	8	51	0	583	37	620	29	670	0	699	1370
Apprch %	0	0	0	0	84.3	0	15.7	0	0	94	6	100	4.1	95.9	0	100	0
Total %	0	0	0	0	3.1	0	0.6	3.7	0	42.6	2.7	45.3	2.1	48.9	0	51	0
Auto	0	0	0	0	43	0	8	51	0	576	36	612	29	663	0	692	1355
% Auto	0	0	0	0	100	0	100	100	0	98.8	97.3	98.7	100	99	0	99	98.9
HV	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
% HV	0	0	0	0	0	0	0	0	0	0.3	0	0.3	0	0	0	0	0.1
B/SB	0	0	0	0	0	0	0	0	0	5	1	6	0	7	0	7	13
% B/SB	0	0	0	0	0	0	0	0	0	0.9	2.7	1	0	1	0	1	0.9

Stonefield Engineering & Design, LLC

92 Park Avenue, Rutherford, NJ 07070

201.340.4468 t. 201.340.4472 f.

Intersection of Meadowview Road (E/W)
 & Division Avenue (N/S)
 Township of Long Hill, Morris County, New Jersey
 Tuesday, June 7, 2016

File Name : S-16074.04
 Site Code : 00016074
 Start Date : 6/7/2016
 Page No : 2

Start Time	Eastbound				Meadowview Road Westbound				Division Avenue Northbound				Division Avenue Southbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	0	0	0	3	0	0	3	0	53	2	55	3	23	0	26	84
08:15 AM	0	0	0	0	3	0	1	4	0	24	3	27	3	29	0	32	63
08:30 AM	0	0	0	0	2	0	1	3	0	37	1	38	2	28	0	30	71
08:45 AM	0	0	0	0	2	0	1	3	0	27	3	30	2	37	0	39	72
Total Volume	0	0	0	0	10	0	3	13	0	141	9	150	10	117	0	127	290
% App. Total	0	0	0	0	76.9	0	23.1		0	94	6		7.9	92.1	0		
PHF	.000	.000	.000	.000	.833	.000	.750	.813	.000	.665	.750	.682	.833	.791	.000	.814	.863
Auto	0	0	0	0	10	0	3	13	0	138	9	147	10	115	0	125	285
% Auto	0	0	0	0	100	0	100	100	0	97.9	100	98.0	100	98.3	0	98.4	98.3
HV	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
% HV	0	0	0	0	0	0	0	0	0	0.7	0	0.7	0	0	0	0	0.3
B/SB	0	0	0	0	0	0	0	0	0	2	0	2	0	2	0	2	4
% B/SB	0	0	0	0	0	0	0	0	0	1.4	0	1.3	0	1.7	0	1.6	1.4

Peak Hour Analysis From 05:15 PM to 06:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:15 PM

05:15 PM	0	0	0	0	0	0	1	1	0	32	2	34	1	52	0	53	88
05:30 PM	0	0	0	0	3	0	0	3	0	23	0	23	1	47	0	48	74
05:45 PM	0	0	0	0	1	0	0	1	0	35	0	35	1	42	0	43	79
06:00 PM	0	0	0	0	2	0	0	2	0	27	1	28	2	38	0	40	70
Total Volume	0	0	0	0	6	0	1	7	0	117	3	120	5	179	0	184	311
% App. Total	0	0	0	0	85.7	0	14.3		0	97.5	2.5		2.7	97.3	0		
PHF	.000	.000	.000	.000	.500	.000	.250	.583	.000	.836	.375	.857	.625	.861	.000	.868	.884
Auto	0	0	0	0	6	0	1	7	0	117	3	120	5	179	0	184	311
% Auto	0	0	0	0	100	0	100	100	0	100	100	100	100	100	0	100	100
HV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% HV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B/SB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% B/SB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Stonefield Engineering & Design, LLC

92 Park Avenue, Rutherford, NJ 07070

201.340.4468 t. 201.340.4472 f.

Intersection of Long Hill Road (E/W)
& Division Avenue/Sunny Slope (N/S)
Township of Long Hill, Morris County, New Jersey
Saturday, June 4, 2016

File Name : S-16074.01 SAT
Site Code : 00016074
Start Date : 6/4/2016
Page No : 1

Groups Printed- Cars - HV - B/SB

Start Time	Long Hill Road Eastbound				Long Hill Road Westbound				Division Avenue Northbound				Sunny Slope Southbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
11:00 AM	0	8	7	15	19	4	1	24	8	0	20	28	3	2	2	7	74
11:15 AM	0	8	4	12	17	8	0	25	8	2	19	29	2	2	1	5	71
11:30 AM	2	6	8	16	30	3	1	34	8	0	17	25	3	4	0	7	82
11:45 AM	0	6	2	8	28	4	0	32	1	1	18	20	3	3	1	7	67
Total	2	28	21	51	94	19	2	115	25	3	74	102	11	11	4	26	294
12:00 PM	0	3	8	11	25	1	1	27	4	0	20	24	3	2	0	5	67
12:15 PM	0	2	6	8	23	2	0	25	5	0	17	22	0	6	0	6	61
12:30 PM	0	1	5	6	29	6	0	35	5	1	21	27	0	2	1	3	71
12:45 PM	0	3	1	4	19	1	0	20	4	1	17	22	0	1	0	1	47
Total	0	9	20	29	96	10	1	107	18	2	75	95	3	11	1	15	246
01:00 PM	0	0	5	5	21	1	0	22	5	0	11	16	0	0	0	0	43
01:15 PM	0	0	4	4	11	1	0	12	3	0	9	12	0	0	0	0	28
01:30 PM	0	3	1	4	18	1	1	20	4	0	16	20	0	0	0	0	44
01:45 PM	0	2	5	7	22	2	1	25	1	0	18	19	0	0	0	0	51
Total	0	5	15	20	72	5	2	79	13	0	54	67	0	0	0	0	166
Grand Total	2	42	56	100	262	34	5	301	56	5	203	264	14	22	5	41	706
Apprch %	2	42	56		87	11.3	1.7		21.2	1.9	76.9		34.1	53.7	12.2		
Total %	0.3	5.9	7.9	14.2	37.1	4.8	0.7	42.6	7.9	0.7	28.8	37.4	2	3.1	0.7	5.8	
Cars	2	42	55	99	253	32	4	289	55	4	193	252	14	21	5	40	680
% Cars	100	100	98.2	99	96.6	94.1	80	96	98.2	80	95.1	95.5	100	95.5	100	97.6	96.3
HV	0	0	1	1	5	2	1	8	1	1	6	8	0	1	0	1	18
% HV	0	0	1.8	1	1.9	5.9	20	2.7	1.8	20	3	3	0	4.5	0	2.4	2.5
B/SB	0	0	0	0	4	0	0	4	0	0	4	4	0	0	0	0	8
% B/SB	0	0	0	0	1.5	0	0	1.3	0	0	2	1.5	0	0	0	0	1.1

Start Time	Long Hill Road Eastbound				Long Hill Road Westbound				Division Avenue Northbound				Sunny Slope Southbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	

Peak Hour Analysis From 11:00 AM to 11:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 11:00 AM

11:00 AM	0	8	7	15	19	4	1	24	8	0	20	28	3	2	2	7	74
11:15 AM	0	8	4	12	17	8	0	25	8	2	19	29	2	2	1	5	71
11:30 AM	2	6	8	16	30	3	1	34	8	0	17	25	3	4	0	7	82
11:45 AM	0	6	2	8	28	4	0	32	1	1	18	20	3	3	1	7	67
Total Volume	2	28	21	51	94	19	2	115	25	3	74	102	11	11	4	26	294
% App. Total	3.9	54.9	41.2		81.7	16.5	1.7		24.5	2.9	72.5		42.3	42.3	15.4		
PHF	.250	.875	.656	.797	.783	.594	.500	.846	.781	.375	.925	.879	.917	.688	.500	.929	.896
Cars	2	28	21	51	93	18	2	113	25	2	72	99	11	11	4	26	289
% Cars	100	100	100	100	98.9	94.7	100	98.3	100	66.7	97.3	97.1	100	100	100	100	98.3
HV	0	0	0	0	0	1	0	1	0	1	1	2	0	0	0	0	3
% HV	0	0	0	0	0	5.3	0	0.9	0	33.3	1.4	2.0	0	0	0	0	1.0
B/SB	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	2
% B/SB	0	0	0	0	1.1	0	0	0.9	0	0	1.4	1.0	0	0	0	0	0.7

Stonefield Engineering & Design, LLC

92 Park Avenue, Rutherford, NJ 07070

201.340.4468 t. 201.340.4472 f.

Intersection of Stone House Road (E/W)
& Division Avenue (N/S)
Township of Long Hill, Morris County, New Jersey
Saturday, June 4, 2016

File Name : S-16074.02 SAT
Site Code : 00016074
Start Date : 6/4/2016
Page No : 1

Groups Printed- Cars - HV - B/SB

Start Time	Stone House Road Eastbound				Westbound				Division Avenue Northbound				Division Avenue Southbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
11:00 AM	5	0	4	9	0	0	0	0	3	22	0	25	0	17	8	25	59
11:15 AM	13	0	1	14	0	0	0	0	5	17	0	22	0	13	9	22	58
11:30 AM	10	0	9	19	0	0	0	0	4	15	0	19	0	25	12	37	75
11:45 AM	12	0	3	15	0	0	0	0	6	12	0	18	0	24	11	35	68
Total	40	0	17	57	0	0	0	0	18	66	0	84	0	79	40	119	260
12:00 PM	11	0	1	12	0	0	0	0	2	12	0	14	0	18	14	32	58
12:15 PM	6	0	8	14	0	0	0	0	3	14	0	17	0	31	7	38	69
12:30 PM	9	0	2	11	0	0	0	0	7	13	0	20	0	20	13	33	64
12:45 PM	12	0	3	15	0	0	0	0	1	14	0	15	0	17	7	24	54
Total	38	0	14	52	0	0	0	0	13	53	0	66	0	86	41	127	245
01:00 PM	7	0	4	11	0	0	0	0	7	12	0	19	0	23	8	31	61
01:15 PM	10	0	2	12	0	0	0	0	6	8	0	14	0	13	4	17	43
01:30 PM	11	0	5	16	0	0	0	0	8	13	0	21	0	13	11	24	61
01:45 PM	3	0	6	9	0	0	0	0	4	16	0	20	0	18	10	28	57
Total	31	0	17	48	0	0	0	0	25	49	0	74	0	67	33	100	222
Grand Total	109	0	48	157	0	0	0	0	56	168	0	224	0	232	114	346	727
Apprch %	69.4	0	30.6		0	0	0		25	75	0		0	67.1	32.9		
Total %	15	0	6.6	21.6	0	0	0	0	7.7	23.1	0	30.8	0	31.9	15.7	47.6	
Cars	105	0	48	153	0	0	0	0	54	161	0	215	0	226	111	337	705
% Cars	96.3	0	100	97.5	0	0	0	0	96.4	95.8	0	96	0	97.4	97.4	97.4	97
HV	4	0	0	4	0	0	0	0	2	5	0	7	0	4	3	7	18
% HV	3.7	0	0	2.5	0	0	0	0	3.6	3	0	3.1	0	1.7	2.6	2	2.5
B/SB	0	0	0	0	0	0	0	0	0	2	0	2	0	2	0	2	4
% B/SB	0	0	0	0	0	0	0	0	0	1.2	0	0.9	0	0.9	0	0.6	0.6

Start Time	Stone House Road Eastbound				Westbound				Division Avenue Northbound				Division Avenue Southbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 11:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:00 AM																	
11:00 AM	5	0	4	9	0	0	0	0	3	22	0	25	0	17	8	25	59
11:15 AM	13	0	1	14	0	0	0	0	5	17	0	22	0	13	9	22	58
11:30 AM	10	0	9	19	0	0	0	0	4	15	0	19	0	25	12	37	75
11:45 AM	12	0	3	15	0	0	0	0	6	12	0	18	0	24	11	35	68
Total Volume	40	0	17	57	0	0	0	0	18	66	0	84	0	79	40	119	260
% App. Total	70.2	0	29.8		0	0	0		21.4	78.6	0		0	66.4	33.6		
PHF	.769	.000	.472	.750	.000	.000	.000	.000	.750	.750	.000	.840	.000	.790	.833	.804	.867
Cars	40	0	17	57	0	0	0	0	17	64	0	81	0	78	40	118	256
% Cars	100	0	100	100	0	0	0	0	94.4	97.0	0	96.4	0	98.7	100	99.2	98.5
HV	0	0	0	0	0	0	0	0	1	2	0	3	0	1	0	1	4
% HV	0	0	0	0	0	0	0	0	5.6	3.0	0	3.6	0	1.3	0	0.8	1.5
B/SB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% B/SB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Stonefield Engineering & Design, LLC

92 Park Avenue, Rutherford, NJ 07070

201.340.4468 t. 201.340.4472 f.

Intersection of Commerce Street (E/W)
& Division Avenue (N/S)
Township of Long Hill, Morris County, New Jersey
Saturday, June 4, 2016

File Name : S-16074.03 SAT
Site Code : 00016074
Start Date : 6/4/2016
Page No : 1

Groups Printed- Cars - HV - B/SB

Start Time	Commerce Street Eastbound				Westbound				Division Avenue Northbound				Division Avenue Southbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
11:00 AM	1	0	0	1	0	0	0	0	0	28	0	28	0	26	1	27	56
11:15 AM	1	0	0	1	0	0	0	0	1	32	0	33	0	24	2	26	60
11:30 AM	1	0	1	2	0	0	0	0	1	24	0	25	0	37	0	37	64
11:45 AM	1	0	1	2	0	0	0	0	0	24	0	24	0	34	1	35	61
Total	4	0	2	6	0	0	0	0	2	108	0	110	0	121	4	125	241
Grand Total	4	0	2	6	0	0	0	0	2	108	0	110	0	121	4	125	241
Apprch %	66.7	0	33.3		0	0	0		1.8	98.2	0		0	96.8	3.2		
Total %	1.7	0	0.8	2.5	0	0	0	0	0.8	44.8	0	45.6	0	50.2	1.7	51.9	
Cars	4	0	2	6	0	0	0	0	2	106	0	108	0	120	4	124	238
% Cars	100	0	100	100	0	0	0	0	100	98.1	0	98.2	0	99.2	100	99.2	98.8
HV	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	3
% HV	0	0	0	0	0	0	0	0	0	1.9	0	1.8	0	0.8	0	0.8	1.2
B/SB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% B/SB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Start Time	Commerce Street Eastbound				Westbound				Division Avenue Northbound				Division Avenue Southbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 11:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:00 AM																	
11:00 AM	1	0	0	1	0	0	0	0	0	28	0	28	0	26	1	27	56
11:15 AM	1	0	0	1	0	0	0	0	1	32	0	33	0	24	2	26	60
11:30 AM	1	0	1	2	0	0	0	0	1	24	0	25	0	37	0	37	64
11:45 AM	1	0	1	2	0	0	0	0	0	24	0	24	0	34	1	35	61
Total Volume	4	0	2	6	0	0	0	0	2	108	0	110	0	121	4	125	241
% App. Total	66.7	0	33.3		0	0	0		1.8	98.2	0		0	96.8	3.2		
PHF	1.00	.000	.500	.750	.000	.000	.000	.000	.500	.844	.000	.833	.000	.818	.500	.845	.941
Cars	4	0	2	6	0	0	0	0	2	106	0	108	0	120	4	124	238
% Cars	100	0	100	100	0	0	0	0	100	98.1	0	98.2	0	99.2	100	99.2	98.8
HV	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	3
% HV	0	0	0	0	0	0	0	0	0	1.9	0	1.8	0	0.8	0	0.8	1.2
B/SB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% B/SB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Stonefield Engineering & Design, LLC

92 Park Avenue, Rutherford, NJ 07070

201.340.4468 t. 201.340.4472 f.

Intersection of Meadowview Road (E/W)
& Division Avenue (N/S)
Township of Long Hill, Morris County, New Jersey
Saturday, June 4, 2016

File Name : S-16074.04 SAT
Site Code : 00016074
Start Date : 6/4/2016
Page No : 1

Groups Printed- Cars - HV - B/SB

Start Time	Eastbound				Meadowview Road Westbound				Division Avenue Northbound				Division Avenue Southbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
11:00 AM	0	0	0	0	0	0	1	1	0	27	0	27	1	25	0	26	54
11:15 AM	0	0	0	0	0	0	2	2	0	29	1	30	1	22	0	23	55
11:30 AM	0	0	0	0	0	0	0	0	0	25	0	25	1	37	0	38	63
11:45 AM	0	0	0	0	1	0	0	1	0	24	0	24	1	34	0	35	60
Total	0	0	0	0	1	0	3	4	0	105	1	106	4	118	0	122	232
12:00 PM	0	0	0	0	0	0	0	0	0	23	0	23	0	32	0	32	55
12:15 PM	0	0	0	0	0	0	0	0	0	20	0	20	0	38	0	38	58
12:30 PM	0	0	0	0	1	0	1	2	0	22	0	22	0	32	0	32	56
12:45 PM	0	0	0	0	0	0	0	0	0	25	1	26	0	24	0	24	50
Total	0	0	0	0	1	0	1	2	0	90	1	91	0	126	0	126	219
01:00 PM	0	0	0	0	2	0	0	2	0	18	1	19	0	29	0	29	50
01:15 PM	0	0	0	0	0	0	0	0	0	17	1	18	0	17	0	17	35
01:30 PM	0	0	0	0	2	0	0	2	0	23	1	24	0	22	0	22	48
01:45 PM	0	0	0	0	2	0	0	2	0	17	2	19	0	26	0	26	47
Total	0	0	0	0	6	0	0	6	0	75	5	80	0	94	0	94	180
Grand Total	0	0	0	0	8	0	4	12	0	270	7	277	4	338	0	342	631
Apprch %	0	0	0		66.7	0	33.3		0	97.5	2.5		1.2	98.8	0		
Total %	0	0	0	0	1.3	0	0.6	1.9	0	42.8	1.1	43.9	0.6	53.6	0	54.2	
Cars	0	0	0	0	8	0	4	12	0	259	7	266	4	329	0	333	611
% Cars	0	0	0	0	100	0	100	100	0	95.9	100	96	100	97.3	0	97.4	96.8
HV	0	0	0	0	0	0	0	0	0	9	0	9	0	7	0	7	16
% HV	0	0	0	0	0	0	0	0	0	3.3	0	3.2	0	2.1	0	2	2.5
B/SB	0	0	0	0	0	0	0	0	0	2	0	2	0	2	0	2	4
% B/SB	0	0	0	0	0	0	0	0	0	0.7	0	0.7	0	0.6	0	0.6	0.6

Start Time	Eastbound				Meadowview Road Westbound				Division Avenue Northbound				Division Avenue Southbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	

Peak Hour Analysis From 11:00 AM to 11:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 11:00 AM

11:00 AM	0	0	0	0	0	0	1	1	0	27	0	27	1	25	0	26	54
11:15 AM	0	0	0	0	0	0	2	2	0	29	1	30	1	22	0	23	55
11:30 AM	0	0	0	0	0	0	0	0	0	25	0	25	1	37	0	38	63
11:45 AM	0	0	0	0	1	0	0	1	0	24	0	24	1	34	0	35	60
Total Volume	0	0	0	0	1	0	3	4	0	105	1	106	4	118	0	122	232
% App. Total	0	0	0	0	25	0	75	100	0	99.1	0.9	100	3.3	96.7	0	100	99.2
PHF	.000	.000	.000	.000	.250	.000	.375	.500	.000	.905	.250	.883	1.00	.797	.000	.803	.921
Cars	0	0	0	0	1	0	3	4	0	103	1	104	4	117	0	121	229
% Cars	0	0	0	0	100	0	100	100	0	98.1	100	98.1	100	99.2	0	99.2	98.7
HV	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	3
% HV	0	0	0	0	0	0	0	0	0	1.9	0	1.9	0	0.8	0	0.8	1.3
B/SB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% B/SB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

INTERNAL CAPTURE CALCULATION SHEETS

Project Name:	Enclave at Millington
Analysis Period:	AM Street Peak Hour

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	3	3	1.00	2	2
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	15	15	1.00	49	49
Hotel	1.00	0	0	1.00	0	0

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	1		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	0	10	0		0
Hotel	0	0	0	0	0	

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		1	0	0	0	0
Retail	0		0	0	0	0
Restaurant	0	0		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	1	0	0		0
Hotel	0	0	0	0	0	

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	0	3	3	3	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	15	15	15	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	0	2	2	2	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	49	49	49	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A
²Person-Trips
³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator
*Indicates computation that has been rounded to the nearest whole number.

Project Name:	Enclave at Millington
Analysis Period:	PM Street Peak Hour

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	9	9	1.00	10	10
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	49	49	1.00	29	29
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		3	0	3	1
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	12	6	0		1
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		1	0	0	2	0
Retail	0		0	0	23	0
Restaurant	0	5		0	8	0
Cinema/Entertainment	0	0	0		2	0
Residential	0	1	0	0		0
Hotel	0	0	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	1	8	9	8	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	3	46	49	46	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	3	7	10	7	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	1	28	29	28	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

²Person-Trips

³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

Project Name:	Enclave at Millington
Analysis Period:	SAT Street Peak Hour

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	11	11	1.00	11	11
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	49	49	1.00	49	49
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		3	0	3	1
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	2	21	10	0		1
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		1	0	0	2	0
Retail	0		0	0	23	0
Restaurant	0	6		0	8	0
Cinema/Entertainment	0	0	0		2	0
Residential	0	1	0	0		0
Hotel	0	0	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	1	10	11	10	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	3	46	49	46	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	3	8	11	8	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	1	48	49	48	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

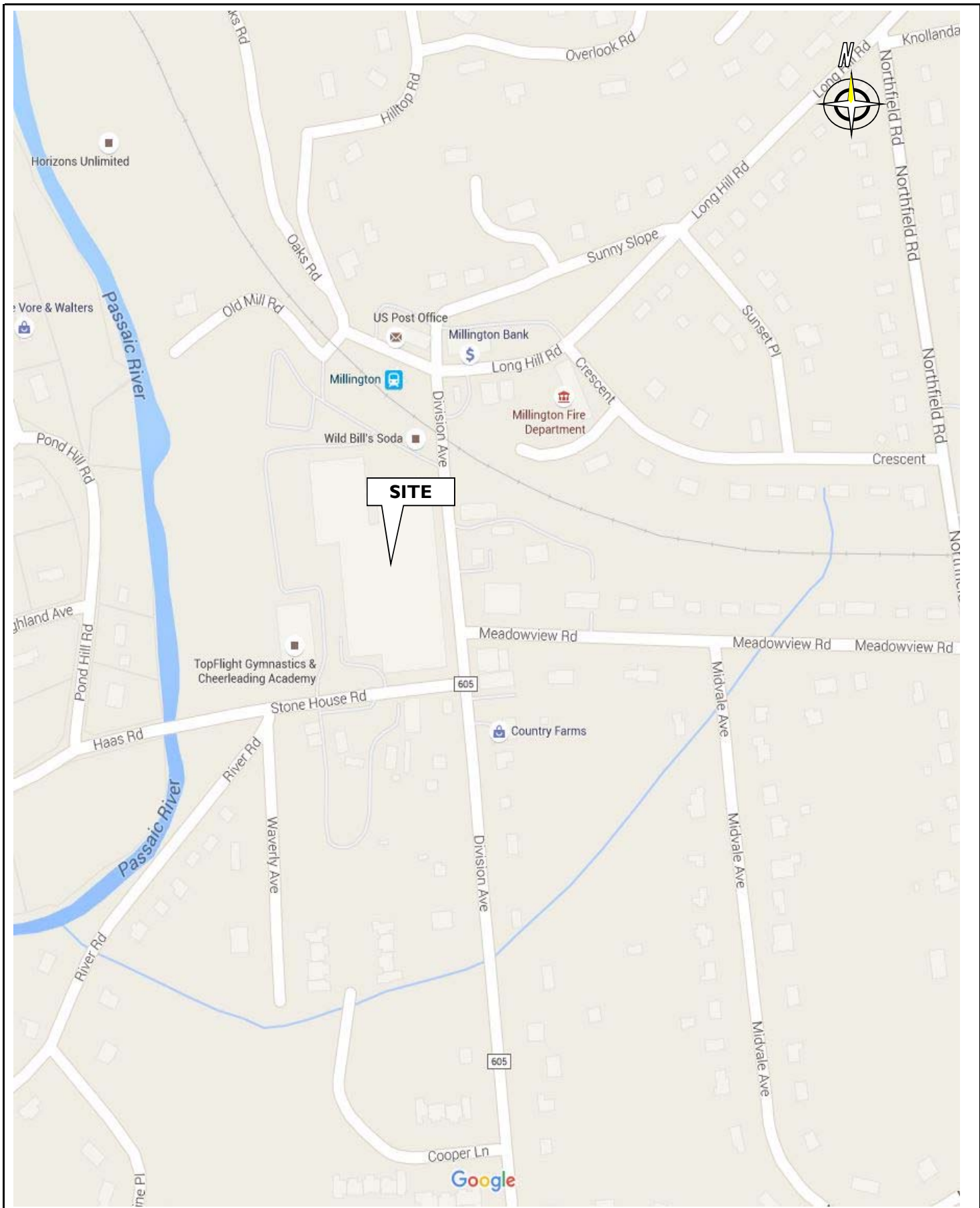
¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

²Person-Trips

³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

FIGURES



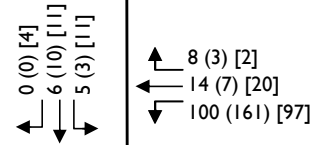
STONEFIELD

Enclave at Millington
Block 12301, Lot 1 & Block 10100, Lot 7.01
Township of Long Hill, Morris County, New Jersey
Traffic Impact Assessment Report

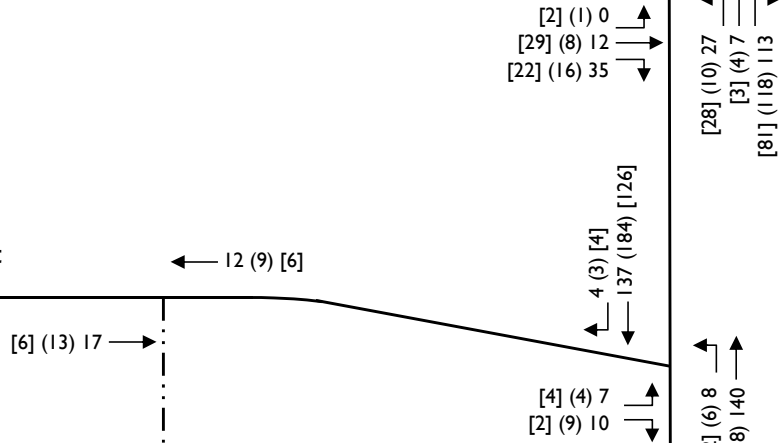
FIGURE I
Site Location Map



Long Hill Road



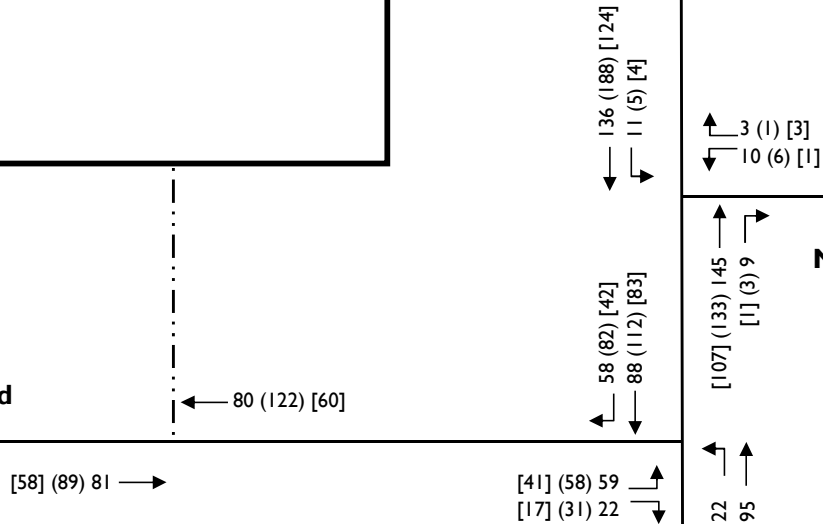
Commerce Street



Proposed Mixed-Use Development



Stone House Road



Meadowview Road

LEGEND

- Existing Roadway
- - - Proposed Driveway
- · - Existing Private Driveway
- ← AM (PM) [SAT] Peak Hour Volumes

not to scale

STONEFIELD

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Block 12301, Lot 1 & Block 10100, Lot 7.01
Township of Long Hill, Morris County, New Jersey
Traffic Impact Assessment Report

FIGURE 2
2019 Existing Traffic
Volumes



Long Hill Road

0 (0) [4]
 6 (10) [11]
 5 (3) [11]

8 (3) [2]
 14 (7) [20]
 102 (165) [100]

Commerce Street

12 (9) [6]

[2] (1) 0
 [30] (8) 12
 [22] (16) 36

4 (3) [4]
 140 (188) [129]

[29] (10) 28
 [3] (4) 7
 [83] (121) 115

[7] (13) 17

[5] (4) 7
 [2] (9) 10

[2] (6) 8
 [110] (131) 143

Division Avenue



Proposed Mixed-Use Development

Stone House Road

139 (192) [127]
 11 (5) [4]

59 (84) [43]
 90 (114) [85]

81 (125) [61]

[109] (136) 148
 [1] (3) 9

[42] (59) 60
 [17] (32) 22

[18] (41) 22
 [68] (80) 97

3 (1) [3]
 10 (6) [1]

Meadowview Road

LEGEND

- Existing Roadway
- - - Proposed Driveway
- · - Existing Private Driveway
- ← AM (PM) [SAT] Peak Hour Volumes

not to scale

STONEFIELD

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 Township of Long Hill, Morris County, New Jersey
 Traffic Impact Assessment Report

FIGURE 3
 2021 No-Build Traffic Volumes



Long Hill Road

6 (16) [17]

Commerce Street

6 (16) [17]

[17] (11) 16

[17] (11) 16

Division Avenue

6 (16) [17]

[17] (11) 16
[15] (9) 12

[18] (17) 7

Proposed Mixed-Use Development

10 (8) [13]
2 (1) [2]

1 (2) [2]

Stone House Road

12 (6) [11]
6 (4) [6]

1 (3) [3]
0 (1) [2]

0 (1) [2]
10 (7) [11]

Meadowview Road

[16] (15) 6

[11] (11) 2
[2] (2) 1

[2] (2) 1
[6] (4) 6

[3] (3) 1
[14] (13) 5

LEGEND

- Existing Roadway
- - - Proposed Driveway
- · - Existing Private Driveway
- ← AM (PM) [SAT] Peak Hour Volumes

not to scale

STONEFIELD

Enclave at Millington
Block 12301, Lot 1 & Block 10100, Lot 7.01
Township of Long Hill, Morris County, New Jersey
Traffic Impact Assessment Report

FIGURE 4
"New" Site-Generated
Traffic Volumes



Long Hill Road

Commerce Street

Division Avenue



Proposed Mixed-Use Development

[2] (2) 0 →

← [2] (2) 0
← [-2] (-2) 0

Stone House Road

Meadowview Road

LEGEND

- Existing Roadway
- - - Proposed Driveway
- · - Existing Private Driveway
- ← AM (PM) [SAT] Peak Hour Volumes

not to scale

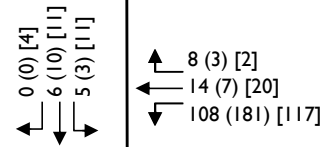
STONEFIELD

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 Traffic Impact Assessment Report

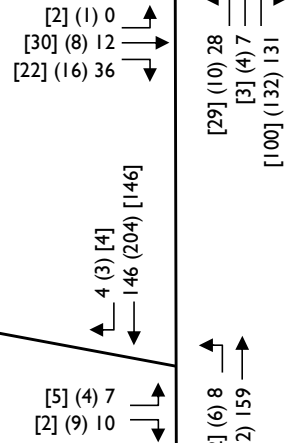
FIGURE 5
 "Pass-By" Site-Generated
 Traffic Volumes



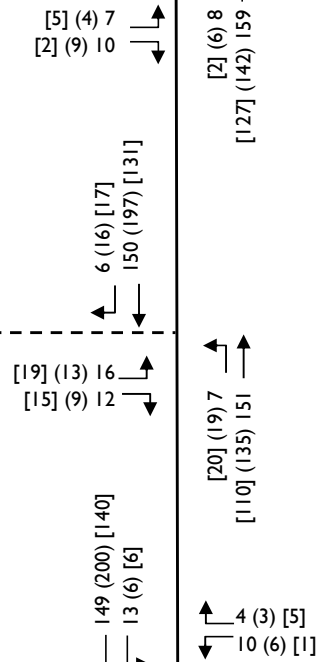
Long Hill Road



Commerce Street

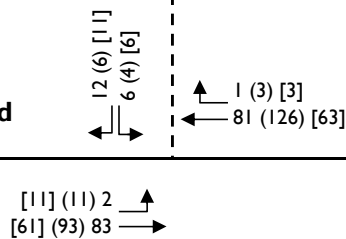


Proposed Mixed-Use Development

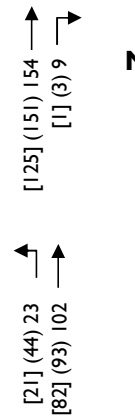


Division Avenue

Stone House Road



Meadowview Road



LEGEND

- Existing Roadway
- - - Proposed Driveway
- · - Existing Private Driveway
- ← AM (PM) [SAT] Peak Hour Volumes

not to scale

STONEFIELD

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Block 12301, Lot 1 & Block 10100, Lot 7.01
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Traffic Impact Assessment Report

FIGURE 6
2021 Build Traffic Volumes

CAPACITY ANALYSIS DETAIL SHEETS

HCM 6th TWSC
 1: Division Avenue/Sunny Slope & Long Hill Road

2019 Existing Condition
 Weekday Morning Peak Hour

Intersection												
Int Delay, s/veh	7.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	12	35	100	14	8	27	7	113	5	6	0
Future Vol, veh/h	0	12	35	100	14	8	27	7	113	5	6	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	2	0	0	0	0	1	20	0	0
Mvmt Flow	0	14	41	116	16	9	31	8	131	6	7	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	25	0	0	55	0	0	291	292	35	357	308	21
Stage 1	-	-	-	-	-	-	35	35	-	253	253	-
Stage 2	-	-	-	-	-	-	256	257	-	104	55	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.1	6.5	6.21	7.3	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.3	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.3	5.5	-
Follow-up Hdwy	2.2	-	-	2.218	-	-	3.5	4	3.309	3.68	4	3.3
Pot Cap-1 Maneuver	1603	-	-	1550	-	-	665	622	1041	566	609	1062
Stage 1	-	-	-	-	-	-	986	870	-	713	701	-
Stage 2	-	-	-	-	-	-	753	699	-	860	853	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1603	-	-	1550	-	-	620	575	1041	461	563	1062
Mov Cap-2 Maneuver	-	-	-	-	-	-	620	575	-	461	563	-
Stage 1	-	-	-	-	-	-	986	870	-	713	648	-
Stage 2	-	-	-	-	-	-	688	646	-	744	853	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	6.2	10	12.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	895	1603	-	-	1550	-	-	512
HCM Lane V/C Ratio	0.191	-	-	-	0.075	-	-	0.025
HCM Control Delay (s)	10	0	-	-	7.5	0	-	12.2
HCM Lane LOS	B	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.7	0	-	-	0.2	-	-	0.1

Intersection						
Int Delay, s/veh	3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	59	22	22	95	88	58
Future Vol, veh/h	59	22	22	95	88	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	9	0	2	0	4
Mvmt Flow	68	25	25	109	101	67

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	294	135	168	0	-	0
Stage 1	135	-	-	-	-	-
Stage 2	159	-	-	-	-	-
Critical Hdwy	6.42	6.29	4.1	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.381	2.2	-	-	-
Pot Cap-1 Maneuver	697	895	1422	-	-	-
Stage 1	891	-	-	-	-	-
Stage 2	870	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	684	895	1422	-	-	-
Mov Cap-2 Maneuver	684	-	-	-	-	-
Stage 1	874	-	-	-	-	-
Stage 2	870	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.6	1.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1422	-	731	-	-
HCM Lane V/C Ratio	0.018	-	0.127	-	-
HCM Control Delay (s)	7.6	0	10.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	7	10	8	140	137	4
Future Vol, veh/h	7	10	8	140	137	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	1	1	0
Mvmt Flow	8	12	9	163	159	5

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	343	162	164	0	-	0
Stage 1	162	-	-	-	-	-
Stage 2	181	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	657	888	1427	-	-	-
Stage 1	872	-	-	-	-	-
Stage 2	855	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	652	888	1427	-	-	-
Mov Cap-2 Maneuver	652	-	-	-	-	-
Stage 1	866	-	-	-	-	-
Stage 2	855	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.8	0.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1427	-	773	-	-
HCM Lane V/C Ratio	0.007	-	0.026	-	-
HCM Control Delay (s)	7.5	0	9.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

HCM 6th TWSC
4: Division Avenue & Meadowview Road

2019 Existing Condition
Weekday Morning Peak Hour

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	10	3	145	9	11	136
Future Vol, veh/h	10	3	145	9	11	136
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	2	0	0	2
Mvmt Flow	12	3	169	10	13	158

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	358	174	0	0	179	0
Stage 1	174	-	-	-	-	-
Stage 2	184	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	644	875	-	-	1409	-
Stage 1	861	-	-	-	-	-
Stage 2	852	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	638	875	-	-	1409	-
Mov Cap-2 Maneuver	638	-	-	-	-	-
Stage 1	852	-	-	-	-	-
Stage 2	852	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	0.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	681	1409
HCM Lane V/C Ratio	-	-	0.022	0.009
HCM Control Delay (s)	-	-	10.4	7.6
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

HCM 6th TWSC
 1: Division Avenue/Sunny Slope & Long Hill Road

2019 Existing Condition
 Weekday Evening Peak Hour

Intersection												
Int Delay, s/veh	7.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	8	16	161	7	3	10	4	118	3	10	0
Future Vol, veh/h	1	8	16	161	7	3	10	4	118	3	10	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	9	17	173	8	3	11	4	127	3	11	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	11	0	0	26	0	0	381	377	18	441	384	10
Stage 1	-	-	-	-	-	-	20	20	-	356	356	-
Stage 2	-	-	-	-	-	-	361	357	-	85	28	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1621	-	-	1601	-	-	581	558	1066	530	553	1077
Stage 1	-	-	-	-	-	-	1004	883	-	666	633	-
Stage 2	-	-	-	-	-	-	662	632	-	928	876	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1621	-	-	1601	-	-	523	497	1066	425	492	1077
Mov Cap-2 Maneuver	-	-	-	-	-	-	523	497	-	425	492	-
Stage 1	-	-	-	-	-	-	1003	882	-	665	564	-
Stage 2	-	-	-	-	-	-	579	563	-	813	875	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			7.1			9.4			12.8		
HCM LOS							A			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	957	1621	-	-	1601	-	-	475
HCM Lane V/C Ratio	0.148	0.001	-	-	0.108	-	-	0.029
HCM Control Delay (s)	9.4	7.2	0	-	7.5	0	-	12.8
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.5	0	-	-	0.4	-	-	0.1

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	58	31	40	78	112	82
Future Vol, veh/h	58	31	40	78	112	82
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	9	9	5	0	0	0
Mvmt Flow	64	34	44	87	124	91

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	345	170	215	0	0
Stage 1	170	-	-	-	-
Stage 2	175	-	-	-	-
Critical Hdwy	6.49	6.29	4.15	-	-
Critical Hdwy Stg 1	5.49	-	-	-	-
Critical Hdwy Stg 2	5.49	-	-	-	-
Follow-up Hdwy	3.581	3.381	2.245	-	-
Pot Cap-1 Maneuver	638	856	1337	-	-
Stage 1	843	-	-	-	-
Stage 2	839	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	616	856	1337	-	-
Mov Cap-2 Maneuver	616	-	-	-	-
Stage 1	813	-	-	-	-
Stage 2	839	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.2	2.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1337	-	683	-	-
HCM Lane V/C Ratio	0.033	-	0.145	-	-
HCM Control Delay (s)	7.8	0	11.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	4	9	6	128	184	3
Future Vol, veh/h	4	9	6	128	184	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	4	10	6	138	198	3

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	350	200	201	0	0
Stage 1	200	-	-	-	-
Stage 2	150	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	651	846	1383	-	-
Stage 1	838	-	-	-	-
Stage 2	883	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	648	846	1383	-	-
Mov Cap-2 Maneuver	648	-	-	-	-
Stage 1	834	-	-	-	-
Stage 2	883	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.7	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1383	-	773	-	-
HCM Lane V/C Ratio	0.005	-	0.018	-	-
HCM Control Delay (s)	7.6	0	9.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	1	133	3	5	188
Future Vol, veh/h	6	1	133	3	5	188
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	7	1	148	3	6	209

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	371	150	0	0	151
Stage 1	150	-	-	-	-
Stage 2	221	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	634	902	-	-	1442
Stage 1	883	-	-	-	-
Stage 2	821	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	631	902	-	-	1442
Mov Cap-2 Maneuver	631	-	-	-	-
Stage 1	879	-	-	-	-
Stage 2	821	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.5	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	659	1442
HCM Lane V/C Ratio	-	-	0.012	0.004
HCM Control Delay (s)	-	-	10.5	7.5
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 6th TWSC
1: Division Avenue/Sunny Slope & Long Hill Road

2019 Existing Condition
Saturday Midday Peak Hour

Intersection												
Int Delay, s/veh	6.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	29	22	97	20	2	28	3	81	11	11	4
Future Vol, veh/h	2	29	22	97	20	2	28	3	81	11	11	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	1	5	0	0	33	3	0	0	0
Mvmt Flow	2	32	24	108	22	2	31	3	90	12	12	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	24	0	0	56	0	0	295	288	44	334	299	23
Stage 1	-	-	-	-	-	-	48	48	-	239	239	-
Stage 2	-	-	-	-	-	-	247	240	-	95	60	-
Critical Hdwy	4.1	-	-	4.11	-	-	7.1	6.83	6.23	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.83	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.83	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.209	-	-	3.5	4.297	3.327	3.5	4	3.3
Pot Cap-1 Maneuver	1604	-	-	1555	-	-	661	573	1023	623	616	1060
Stage 1	-	-	-	-	-	-	971	798	-	769	711	-
Stage 2	-	-	-	-	-	-	761	653	-	917	849	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1604	-	-	1555	-	-	613	532	1023	535	572	1060
Mov Cap-2 Maneuver	-	-	-	-	-	-	613	532	-	535	572	-
Stage 1	-	-	-	-	-	-	970	797	-	768	661	-
Stage 2	-	-	-	-	-	-	692	607	-	832	848	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	6.1	9.9	11.3
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	858	1604	-	-	1555	-	-	597
HCM Lane V/C Ratio	0.145	0.001	-	-	0.069	-	-	0.048
HCM Control Delay (s)	9.9	7.2	0	-	7.5	0	-	11.3
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.5	0	-	-	0.2	-	-	0.2

Intersection						
Int Delay, s/veh	2.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	41	17	18	67	83	42
Future Vol, veh/h	41	17	18	67	83	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	6	3	1	0
Mvmt Flow	47	20	21	77	95	48

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	238	119	143	0	0
Stage 1	119	-	-	-	-
Stage 2	119	-	-	-	-
Critical Hdwy	6.4	6.2	4.16	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.254	-	-
Pot Cap-1 Maneuver	755	938	1415	-	-
Stage 1	911	-	-	-	-
Stage 2	911	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	743	938	1415	-	-
Mov Cap-2 Maneuver	743	-	-	-	-
Stage 1	896	-	-	-	-
Stage 2	911	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	1.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1415	-	791	-	-
HCM Lane V/C Ratio	0.015	-	0.084	-	-
HCM Control Delay (s)	7.6	0	10	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	4	2	2	108	126	4
Future Vol, veh/h	4	2	2	108	126	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	3	1	0
Mvmt Flow	4	2	2	120	140	4

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	266	142	144	0	-	0
Stage 1	142	-	-	-	-	-
Stage 2	124	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	727	911	1451	-	-	-
Stage 1	890	-	-	-	-	-
Stage 2	907	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	726	911	1451	-	-	-
Mov Cap-2 Maneuver	726	-	-	-	-	-
Stage 1	889	-	-	-	-	-
Stage 2	907	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.7	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1451	-	779	-	-
HCM Lane V/C Ratio	0.002	-	0.009	-	-
HCM Control Delay (s)	7.5	0	9.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	3	107	1	4	124
Future Vol, veh/h	1	3	107	1	4	124
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	1	3	116	1	4	135

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	260	117	0	0	117	0
Stage 1	117	-	-	-	-	-
Stage 2	143	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	733	941	-	-	1484	-
Stage 1	913	-	-	-	-	-
Stage 2	889	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	731	941	-	-	1484	-
Mov Cap-2 Maneuver	731	-	-	-	-	-
Stage 1	910	-	-	-	-	-
Stage 2	889	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	878	1484
HCM Lane V/C Ratio	-	-	0.005	0.003
HCM Control Delay (s)	-	-	9.1	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 6th TWSC
 1: Division Avenue/Sunny Slope & Long Hill Road

2021 No-Build Condition
 Weekday Morning Peak Hour

Intersection												
Int Delay, s/veh	7.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	12	36	102	14	8	28	7	115	5	6	0
Future Vol, veh/h	0	12	36	102	14	8	28	7	115	5	6	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	2	0	0	0	0	1	20	0	0
Mvmt Flow	0	14	42	119	16	9	33	8	134	6	7	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	25	0	0	56	0	0	297	298	35	365	315	21
Stage 1	-	-	-	-	-	-	35	35	-	259	259	-
Stage 2	-	-	-	-	-	-	262	263	-	106	56	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.1	6.5	6.21	7.3	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.3	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.3	5.5	-
Follow-up Hdwy	2.2	-	-	2.218	-	-	3.5	4	3.309	3.68	4	3.3
Pot Cap-1 Maneuver	1603	-	-	1549	-	-	659	617	1041	559	604	1062
Stage 1	-	-	-	-	-	-	986	870	-	708	697	-
Stage 2	-	-	-	-	-	-	747	694	-	857	852	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1603	-	-	1549	-	-	614	569	1041	453	557	1062
Mov Cap-2 Maneuver	-	-	-	-	-	-	614	569	-	453	557	-
Stage 1	-	-	-	-	-	-	986	870	-	708	643	-
Stage 2	-	-	-	-	-	-	681	640	-	740	852	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			6.2			10			12.3		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	891	1603	-	-	1549	-	-	504
HCM Lane V/C Ratio	0.196	-	-	-	0.077	-	-	0.025
HCM Control Delay (s)	10	0	-	-	7.5	0	-	12.3
HCM Lane LOS	B	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.7	0	-	-	0.2	-	-	0.1

HCM 6th TWSC
 2: Division Avenue & Stone House Road

2021 No-Build Condition
 Weekday Morning Peak Hour

Intersection						
Int Delay, s/veh	3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	60	22	22	97	90	59
Future Vol, veh/h	60	22	22	97	90	59
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	9	0	2	0	4
Mvmt Flow	69	25	25	111	103	68

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	298	137	171	0	-	0
Stage 1	137	-	-	-	-	-
Stage 2	161	-	-	-	-	-
Critical Hdwy	6.42	6.29	4.1	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.381	2.2	-	-	-
Pot Cap-1 Maneuver	693	893	1418	-	-	-
Stage 1	890	-	-	-	-	-
Stage 2	868	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	680	893	1418	-	-	-
Mov Cap-2 Maneuver	680	-	-	-	-	-
Stage 1	873	-	-	-	-	-
Stage 2	868	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.7	1.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1418	-	726	-	-
HCM Lane V/C Ratio	0.018	-	0.13	-	-
HCM Control Delay (s)	7.6	0	10.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

HCM 6th TWSC
 3: Division Avenue & Commerce Street

2021 No-Build Condition
 Weekday Morning Peak Hour

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	7	10	8	143	140	4
Future Vol, veh/h	7	10	8	143	140	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	1	1	0
Mvmt Flow	8	12	9	166	163	5

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	350	166	168	0	-	0
Stage 1	166	-	-	-	-	-
Stage 2	184	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	651	884	1422	-	-	-
Stage 1	868	-	-	-	-	-
Stage 2	852	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	646	884	1422	-	-	-
Mov Cap-2 Maneuver	646	-	-	-	-	-
Stage 1	862	-	-	-	-	-
Stage 2	852	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.8	0.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1422	-	768	-	-
HCM Lane V/C Ratio	0.007	-	0.026	-	-
HCM Control Delay (s)	7.5	0	9.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	3	148	9	11	139
Future Vol, veh/h	10	3	148	9	11	139
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	2	0	0	2
Mvmt Flow	12	3	172	10	13	162

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	365	177	0	0	182	0
Stage 1	177	-	-	-	-	-
Stage 2	188	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	639	871	-	-	1405	-
Stage 1	859	-	-	-	-	-
Stage 2	849	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	633	871	-	-	1405	-
Mov Cap-2 Maneuver	633	-	-	-	-	-
Stage 1	850	-	-	-	-	-
Stage 2	849	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	0.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	676	1405
HCM Lane V/C Ratio	-	-	0.022	0.009
HCM Control Delay (s)	-	-	10.4	7.6
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

HCM 6th TWSC
1: Division Avenue/Sunny Slope & Long Hill Road

2021 No-Build Condition
Weekday Evening Peak Hour

Intersection												
Int Delay, s/veh	7.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	8	16	165	7	3	10	4	121	3	10	0
Future Vol, veh/h	1	8	16	165	7	3	10	4	121	3	10	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	9	17	177	8	3	11	4	130	3	11	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	11	0	0	26	0	0	389	385	18	451	392	10
Stage 1	-	-	-	-	-	-	20	20	-	364	364	-
Stage 2	-	-	-	-	-	-	369	365	-	87	28	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1621	-	-	1601	-	-	574	552	1066	522	547	1077
Stage 1	-	-	-	-	-	-	1004	883	-	659	627	-
Stage 2	-	-	-	-	-	-	655	627	-	926	876	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1621	-	-	1601	-	-	516	490	1066	416	486	1077
Mov Cap-2 Maneuver	-	-	-	-	-	-	516	490	-	416	486	-
Stage 1	-	-	-	-	-	-	1003	882	-	658	557	-
Stage 2	-	-	-	-	-	-	571	557	-	808	875	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			7.1			9.4			12.9		
HCM LOS							A			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	957	1621	-	-	1601	-	-	468
HCM Lane V/C Ratio	0.152	0.001	-	-	0.111	-	-	0.03
HCM Control Delay (s)	9.4	7.2	0	-	7.5	0	-	12.9
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.5	0	-	-	0.4	-	-	0.1

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	59	32	41	80	114	84
Future Vol, veh/h	59	32	41	80	114	84
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	9	9	5	0	0	0
Mvmt Flow	66	36	46	89	127	93

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	355	174	220	0	-	0
Stage 1	174	-	-	-	-	-
Stage 2	181	-	-	-	-	-
Critical Hdwy	6.49	6.29	4.15	-	-	-
Critical Hdwy Stg 1	5.49	-	-	-	-	-
Critical Hdwy Stg 2	5.49	-	-	-	-	-
Follow-up Hdwy	3.581	3.381	2.245	-	-	-
Pot Cap-1 Maneuver	629	852	1332	-	-	-
Stage 1	840	-	-	-	-	-
Stage 2	834	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	606	852	1332	-	-	-
Mov Cap-2 Maneuver	606	-	-	-	-	-
Stage 1	810	-	-	-	-	-
Stage 2	834	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.3	2.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1332	-	674	-	-
HCM Lane V/C Ratio	0.034	-	0.15	-	-
HCM Control Delay (s)	7.8	0	11.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

HCM 6th TWSC
 3: Division Avenue & Commerce Street

2021 No-Build Condition
 Weekday Evening Peak Hour

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	4	9	6	131	188	3
Future Vol, veh/h	4	9	6	131	188	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	4	10	6	141	202	3

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	357	204	205	0	-	0
Stage 1	204	-	-	-	-	-
Stage 2	153	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	645	842	1378	-	-	-
Stage 1	835	-	-	-	-	-
Stage 2	880	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	642	842	1378	-	-	-
Mov Cap-2 Maneuver	642	-	-	-	-	-
Stage 1	831	-	-	-	-	-
Stage 2	880	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.8	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1378	-	768	-	-
HCM Lane V/C Ratio	0.005	-	0.018	-	-
HCM Control Delay (s)	7.6	0	9.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

HCM 6th TWSC
4: Division Avenue & Meadowview Road

2021 No-Build Condition
Weekday Evening Peak Hour

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	1	136	3	5	192
Future Vol, veh/h	6	1	136	3	5	192
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	7	1	151	3	6	213

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	378	153	0	0	154
Stage 1	153	-	-	-	-
Stage 2	225	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	628	898	-	-	1439
Stage 1	880	-	-	-	-
Stage 2	817	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	625	898	-	-	1439
Mov Cap-2 Maneuver	625	-	-	-	-
Stage 1	876	-	-	-	-
Stage 2	817	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.6	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	653	1439
HCM Lane V/C Ratio	-	-	0.012	0.004
HCM Control Delay (s)	-	-	10.6	7.5
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 6th TWSC
 1: Division Avenue/Sunny Slope & Long Hill Road

2021 No-Build Condition
 Saturday Midday Peak Hour

Intersection												
Int Delay, s/veh	7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	30	22	100	20	2	29	3	83	11	11	4
Future Vol, veh/h	2	30	22	100	20	2	29	3	83	11	11	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	1	5	0	0	33	3	0	0	0
Mvmt Flow	2	33	24	111	22	2	32	3	92	12	12	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	24	0	0	57	0	0	302	295	45	342	306	23
Stage 1	-	-	-	-	-	-	49	49	-	245	245	-
Stage 2	-	-	-	-	-	-	253	246	-	97	61	-
Critical Hdwy	4.1	-	-	4.11	-	-	7.1	6.83	6.23	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.83	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.83	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.209	-	-	3.5	4.297	3.327	3.5	4	3.3
Pot Cap-1 Maneuver	1604	-	-	1554	-	-	654	568	1022	616	611	1060
Stage 1	-	-	-	-	-	-	969	797	-	763	707	-
Stage 2	-	-	-	-	-	-	756	649	-	914	848	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1604	-	-	1554	-	-	605	527	1022	527	566	1060
Mov Cap-2 Maneuver	-	-	-	-	-	-	605	527	-	527	566	-
Stage 1	-	-	-	-	-	-	968	796	-	762	656	-
Stage 2	-	-	-	-	-	-	686	602	-	827	847	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			6.1			10			11.4		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	853	1604	-	-	1554	-	-	590
HCM Lane V/C Ratio	0.15	0.001	-	-	0.072	-	-	0.049
HCM Control Delay (s)	10	7.2	0	-	7.5	0	-	11.4
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.5	0	-	-	0.2	-	-	0.2

Intersection						
Int Delay, s/veh	2.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	42	17	18	68	85	43
Future Vol, veh/h	42	17	18	68	85	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	6	3	1	0
Mvmt Flow	48	20	21	78	98	49

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	243	123	147	0	0
Stage 1	123	-	-	-	-
Stage 2	120	-	-	-	-
Critical Hdwy	6.4	6.2	4.16	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.254	-	-
Pot Cap-1 Maneuver	750	933	1411	-	-
Stage 1	907	-	-	-	-
Stage 2	910	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	738	933	1411	-	-
Mov Cap-2 Maneuver	738	-	-	-	-
Stage 1	892	-	-	-	-
Stage 2	910	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	1.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1411	-	785	-	-
HCM Lane V/C Ratio	0.015	-	0.086	-	-
HCM Control Delay (s)	7.6	0	10	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

HCM 6th TWSC
3: Division Avenue & Commerce Street

2021 No-Build Condition
Saturday Midday Peak Hour

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	5	2	2	110	129	4
Future Vol, veh/h	5	2	2	110	129	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	3	1	0
Mvmt Flow	6	2	2	122	143	4

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	271	145	147	0	0
Stage 1	145	-	-	-	-
Stage 2	126	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	723	908	1447	-	-
Stage 1	887	-	-	-	-
Stage 2	905	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	722	908	1447	-	-
Mov Cap-2 Maneuver	722	-	-	-	-
Stage 1	886	-	-	-	-
Stage 2	905	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.7	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1447	-	767	-	-
HCM Lane V/C Ratio	0.002	-	0.01	-	-
HCM Control Delay (s)	7.5	0	9.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	3	109	1	4	127
Future Vol, veh/h	1	3	109	1	4	127
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	1	3	118	1	4	138

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	265	119	0	0	119	0
Stage 1	119	-	-	-	-	-
Stage 2	146	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	728	938	-	-	1482	-
Stage 1	911	-	-	-	-	-
Stage 2	886	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	726	938	-	-	1482	-
Mov Cap-2 Maneuver	726	-	-	-	-	-
Stage 1	908	-	-	-	-	-
Stage 2	886	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	874	1482
HCM Lane V/C Ratio	-	-	0.005	0.003
HCM Control Delay (s)	-	-	9.1	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 6th TWSC
1: Division Avenue/Sunny Slope & Long Hill Road

2021 Build Condition
Weekday Morning Peak Hour

Intersection												
Int Delay, s/veh	7.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	12	36	108	14	8	28	7	131	5	6	0
Future Vol, veh/h	0	12	36	108	14	8	28	7	131	5	6	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	2	0	0	0	0	1	20	0	0
Mvmt Flow	0	14	42	126	16	9	33	8	152	6	7	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	25	0	0	56	0	0	311	312	35	388	329	21
Stage 1	-	-	-	-	-	-	35	35	-	273	273	-
Stage 2	-	-	-	-	-	-	276	277	-	115	56	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.1	6.5	6.21	7.3	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.3	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.3	5.5	-
Follow-up Hdwy	2.2	-	-	2.218	-	-	3.5	4	3.309	3.68	4	3.3
Pot Cap-1 Maneuver	1603	-	-	1549	-	-	645	606	1041	540	593	1062
Stage 1	-	-	-	-	-	-	986	870	-	695	688	-
Stage 2	-	-	-	-	-	-	735	685	-	848	852	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1603	-	-	1549	-	-	598	556	1041	427	544	1062
Mov Cap-2 Maneuver	-	-	-	-	-	-	598	556	-	427	544	-
Stage 1	-	-	-	-	-	-	986	870	-	695	631	-
Stage 2	-	-	-	-	-	-	667	628	-	717	852	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			6.3			10.1			12.6		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	896	1603	-	-	1549	-	-	484
HCM Lane V/C Ratio	0.215	-	-	-	0.081	-	-	0.026
HCM Control Delay (s)	10.1	0	-	-	7.5	0	-	12.6
HCM Lane LOS	B	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.8	0	-	-	0.3	-	-	0.1

Intersection						
Int Delay, s/veh	3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	61	28	23	102	100	59
Future Vol, veh/h	61	28	23	102	100	59
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	9	0	2	0	4
Mvmt Flow	70	32	26	117	115	68

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	318	149	183	0	-	0
Stage 1	149	-	-	-	-	-
Stage 2	169	-	-	-	-	-
Critical Hdwy	6.42	6.29	4.1	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.381	2.2	-	-	-
Pot Cap-1 Maneuver	675	879	1404	-	-	-
Stage 1	879	-	-	-	-	-
Stage 2	861	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	662	879	1404	-	-	-
Mov Cap-2 Maneuver	662	-	-	-	-	-
Stage 1	861	-	-	-	-	-
Stage 2	861	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.8	1.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1404	-	718	-	-
HCM Lane V/C Ratio	0.019	-	0.142	-	-
HCM Control Delay (s)	7.6	0	10.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	7	10	8	159	146	4
Future Vol, veh/h	7	10	8	159	146	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	1	1	0
Mvmt Flow	8	12	9	185	170	5

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	376	173	175	0	-	0
Stage 1	173	-	-	-	-	-
Stage 2	203	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	629	876	1414	-	-	-
Stage 1	862	-	-	-	-	-
Stage 2	836	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	625	876	1414	-	-	-
Mov Cap-2 Maneuver	625	-	-	-	-	-
Stage 1	856	-	-	-	-	-
Stage 2	836	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.9	0.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1414	-	752	-	-
HCM Lane V/C Ratio	0.007	-	0.026	-	-
HCM Control Delay (s)	7.6	0	9.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

HCM 6th TWSC
4: Division Avenue & Meadowview Road

2021 Build Condition
Weekday Morning Peak Hour

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	4	154	9	13	149
Future Vol, veh/h	10	4	154	9	13	149
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	2	0	0	2
Mvmt Flow	12	5	179	10	15	173

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	387	184	0	0	189
Stage 1	184	-	-	-	-
Stage 2	203	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	620	864	-	-	1397
Stage 1	852	-	-	-	-
Stage 2	836	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	613	864	-	-	1397
Mov Cap-2 Maneuver	613	-	-	-	-
Stage 1	852	-	-	-	-
Stage 2	826	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.5	0	0.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	668	1397
HCM Lane V/C Ratio	-	-	0.024	0.011
HCM Control Delay (s)	-	-	10.5	7.6
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	16	12	7	151	150	6
Future Vol, veh/h	16	12	7	151	150	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	1	1	0
Mvmt Flow	19	14	8	176	174	7

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	370	178	181	0	-	0
Stage 1	178	-	-	-	-	-
Stage 2	192	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	634	870	1407	-	-	-
Stage 1	858	-	-	-	-	-
Stage 2	845	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	630	870	1407	-	-	-
Mov Cap-2 Maneuver	630	-	-	-	-	-
Stage 1	853	-	-	-	-	-
Stage 2	845	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.3	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1407	-	714	-	-
HCM Lane V/C Ratio	0.006	-	0.046	-	-
HCM Control Delay (s)	7.6	0	10.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

HCM 6th TWSC
6: Stone House Road & Site Driveway

2021 Build Condition
Weekday Morning Peak Hour

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	2	83	81	1	6	12
Future Vol, veh/h	2	83	81	1	6	12
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	87	87	87	87	87	87
Heavy Vehicles, %	0	1	1	0	0	0
Mvmt Flow	2	95	93	1	7	14

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	94	0	-	0	193
Stage 1	-	-	-	-	94
Stage 2	-	-	-	-	99
Critical Hdwy	4.1	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	2.2	-	-	-	3.5
Pot Cap-1 Maneuver	1513	-	-	-	800
Stage 1	-	-	-	-	935
Stage 2	-	-	-	-	930
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1513	-	-	-	799
Mov Cap-2 Maneuver	-	-	-	-	799
Stage 1	-	-	-	-	934
Stage 2	-	-	-	-	930

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1513	-	-	-	904
HCM Lane V/C Ratio	0.002	-	-	-	0.023
HCM Control Delay (s)	7.4	0	-	-	9.1
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

HCM 6th TWSC
1: Division Avenue/Sunny Slope & Long Hill Road

2021 Build Condition
Weekday Evening Peak Hour

Intersection												
Int Delay, s/veh	7.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	8	16	181	7	3	10	4	132	3	10	0
Future Vol, veh/h	1	8	16	181	7	3	10	4	132	3	10	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	9	17	195	8	3	11	4	142	3	11	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	11	0	0	26	0	0	425	421	18	493	428	10
Stage 1	-	-	-	-	-	-	20	20	-	400	400	-
Stage 2	-	-	-	-	-	-	405	401	-	93	28	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1621	-	-	1601	-	-	543	527	1066	490	522	1077
Stage 1	-	-	-	-	-	-	1004	883	-	630	605	-
Stage 2	-	-	-	-	-	-	626	604	-	919	876	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1621	-	-	1601	-	-	483	462	1066	382	457	1077
Mov Cap-2 Maneuver	-	-	-	-	-	-	483	462	-	382	457	-
Stage 1	-	-	-	-	-	-	1003	882	-	629	531	-
Stage 2	-	-	-	-	-	-	538	530	-	792	875	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			7.2			9.5			13.5		
HCM LOS							A			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	953	1621	-	-	1601	-	-	437
HCM Lane V/C Ratio	0.165	0.001	-	-	0.122	-	-	0.032
HCM Control Delay (s)	9.5	7.2	0	-	7.6	0	-	13.5
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.6	0	-	-	0.4	-	-	0.1

HCM 6th TWSC
2: Division Avenue & Stone House Road

2021 Build Condition
Weekday Evening Peak Hour

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	61	36	44	93	121	85
Future Vol, veh/h	61	36	44	93	121	85
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	9	9	5	0	0	0
Mvmt Flow	68	40	49	103	134	94

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	382	181	228	0	-	0
Stage 1	181	-	-	-	-	-
Stage 2	201	-	-	-	-	-
Critical Hdwy	6.49	6.29	4.15	-	-	-
Critical Hdwy Stg 1	5.49	-	-	-	-	-
Critical Hdwy Stg 2	5.49	-	-	-	-	-
Follow-up Hdwy	3.581	3.381	2.245	-	-	-
Pot Cap-1 Maneuver	607	844	1323	-	-	-
Stage 1	834	-	-	-	-	-
Stage 2	816	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	583	844	1323	-	-	-
Mov Cap-2 Maneuver	583	-	-	-	-	-
Stage 1	801	-	-	-	-	-
Stage 2	816	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.5	2.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1323	-	659	-	-
HCM Lane V/C Ratio	0.037	-	0.164	-	-
HCM Control Delay (s)	7.8	0	11.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-

HCM 6th TWSC
 3: Division Avenue & Commerce Street

2021 Build Condition
 Weekday Evening Peak Hour

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	4	9	6	142	204	3
Future Vol, veh/h	4	9	6	142	204	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	4	10	6	153	219	3

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	386	221	222	0	-	0
Stage 1	221	-	-	-	-	-
Stage 2	165	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	621	824	1359	-	-	-
Stage 1	821	-	-	-	-	-
Stage 2	869	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	618	824	1359	-	-	-
Mov Cap-2 Maneuver	618	-	-	-	-	-
Stage 1	817	-	-	-	-	-
Stage 2	869	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.9	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1359	-	747	-	-
HCM Lane V/C Ratio	0.005	-	0.019	-	-
HCM Control Delay (s)	7.7	0	9.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

HCM 6th TWSC
4: Division Avenue & Meadowview Road

2021 Build Condition
Weekday Evening Peak Hour

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	6	3	151	3	6	200
Future Vol, veh/h	6	3	151	3	6	200
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	7	3	168	3	7	222

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	406	170	0	0	171	0
Stage 1	170	-	-	-	-	-
Stage 2	236	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	605	879	-	-	1418	-
Stage 1	865	-	-	-	-	-
Stage 2	808	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	601	879	-	-	1418	-
Mov Cap-2 Maneuver	601	-	-	-	-	-
Stage 1	865	-	-	-	-	-
Stage 2	803	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	672	1418
HCM Lane V/C Ratio	-	-	0.015	0.005
HCM Control Delay (s)	-	-	10.4	7.6
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 6th TWSC
5: Division Avenue & Site Driveway

2021 Build Condition
Weekday Evening Peak Hour

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	13	9	19	135	197	16
Future Vol, veh/h	13	9	19	135	197	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	14	10	20	145	212	17

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	406	221	229	0	0
Stage 1	221	-	-	-	-
Stage 2	185	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	605	824	1351	-	-
Stage 1	821	-	-	-	-
Stage 2	852	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	595	824	1351	-	-
Mov Cap-2 Maneuver	595	-	-	-	-
Stage 1	808	-	-	-	-
Stage 2	852	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.6	1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1351	-	671	-	-
HCM Lane V/C Ratio	0.015	-	0.035	-	-
HCM Control Delay (s)	7.7	0	10.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

HCM 6th TWSC
6: Stone House Road & Site Driveway

2021 Build Condition
Weekday Evening Peak Hour

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	11	93	126	3	4	6
Future Vol, veh/h	11	93	126	3	4	6
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, %	0	0	1	0	0	0
Mvmt Flow	12	103	140	3	4	7

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	143	0	0	269	142
Stage 1	-	-	-	142	-
Stage 2	-	-	-	127	-
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	1452	-	-	725	911
Stage 1	-	-	-	890	-
Stage 2	-	-	-	904	-
Platoon blocked, %		-	-		
Mov Cap-1 Maneuver	1452	-	-	718	911
Mov Cap-2 Maneuver	-	-	-	718	-
Stage 1	-	-	-	882	-
Stage 2	-	-	-	904	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1452	-	-	-	823
HCM Lane V/C Ratio	0.008	-	-	-	0.014
HCM Control Delay (s)	7.5	0	-	-	9.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

HCM 6th TWSC
1: Division Avenue/Sunny Slope & Long Hill Road

2021 Build Condition
Saturday Midday Peak Hour

Intersection												
Int Delay, s/veh	7.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	30	22	117	20	2	29	3	100	11	11	4
Future Vol, veh/h	2	30	22	117	20	2	29	3	100	11	11	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	1	5	0	0	33	3	0	0	0
Mvmt Flow	2	33	24	130	22	2	32	3	111	12	12	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	24	0	0	57	0	0	340	333	45	389	344	23
Stage 1	-	-	-	-	-	-	49	49	-	283	283	-
Stage 2	-	-	-	-	-	-	291	284	-	106	61	-
Critical Hdwy	4.1	-	-	4.11	-	-	7.1	6.83	6.23	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.83	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.83	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.209	-	-	3.5	4.297	3.327	3.5	4	3.3
Pot Cap-1 Maneuver	1604	-	-	1554	-	-	618	540	1022	574	582	1060
Stage 1	-	-	-	-	-	-	969	797	-	728	681	-
Stage 2	-	-	-	-	-	-	721	624	-	905	848	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1604	-	-	1554	-	-	565	494	1022	475	532	1060
Mov Cap-2 Maneuver	-	-	-	-	-	-	565	494	-	475	532	-
Stage 1	-	-	-	-	-	-	968	796	-	727	623	-
Stage 2	-	-	-	-	-	-	644	571	-	802	847	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			6.3			10.1			12		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	850	1604	-	-	1554	-	-	546
HCM Lane V/C Ratio	0.173	0.001	-	-	0.084	-	-	0.053
HCM Control Delay (s)	10.1	7.2	0	-	7.5	0	-	12
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.6	0	-	-	0.3	-	-	0.2

Intersection						
Int Delay, s/veh	2.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	44	23	21	82	96	45
Future Vol, veh/h	44	23	21	82	96	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	6	3	1	0
Mvmt Flow	51	26	24	94	110	52

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	278	136	162	0	0
Stage 1	136	-	-	-	-
Stage 2	142	-	-	-	-
Critical Hdwy	6.4	6.2	4.16	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.254	-	-
Pot Cap-1 Maneuver	716	918	1393	-	-
Stage 1	895	-	-	-	-
Stage 2	890	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	703	918	1393	-	-
Mov Cap-2 Maneuver	703	-	-	-	-
Stage 1	879	-	-	-	-
Stage 2	890	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	1.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1393	-	764	-	-
HCM Lane V/C Ratio	0.017	-	0.101	-	-
HCM Control Delay (s)	7.6	0	10.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

HCM 6th TWSC
 3: Division Avenue & Commerce Street

2021 Build Condition
 Saturday Midday Peak Hour

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	5	2	2	127	146	4
Future Vol, veh/h	5	2	2	127	146	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	3	1	0
Mvmt Flow	6	2	2	141	162	4

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	309	164	166	0	0
Stage 1	164	-	-	-	-
Stage 2	145	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	687	886	1424	-	-
Stage 1	870	-	-	-	-
Stage 2	887	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	686	886	1424	-	-
Mov Cap-2 Maneuver	686	-	-	-	-
Stage 1	868	-	-	-	-
Stage 2	887	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1424	-	733	-	-
HCM Lane V/C Ratio	0.002	-	0.011	-	-
HCM Control Delay (s)	7.5	0	10	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCM 6th TWSC
4: Division Avenue & Meadowview Road

2021 Build Condition
Saturday Midday Peak Hour

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	5	125	1	6	140
Future Vol, veh/h	1	5	125	1	6	140
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	1	5	136	1	7	152

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	303	137	0	0	137	0
Stage 1	137	-	-	-	-	-
Stage 2	166	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	693	917	-	-	1459	-
Stage 1	895	-	-	-	-	-
Stage 2	868	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	690	917	-	-	1459	-
Mov Cap-2 Maneuver	690	-	-	-	-	-
Stage 1	895	-	-	-	-	-
Stage 2	864	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	869	1459
HCM Lane V/C Ratio	-	-	0.008	0.004
HCM Control Delay (s)	-	-	9.2	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 6th TWSC
5: Division Avenue & Site Driveway

2021 Build Condition
Saturday Midday Peak Hour

Intersection						
Int Delay, s/veh	1.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	19	15	20	110	131	17
Future Vol, veh/h	19	15	20	110	131	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	3	1	0
Mvmt Flow	21	16	22	120	142	18

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	315	151	160	0	-	0
Stage 1	151	-	-	-	-	-
Stage 2	164	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	682	901	1432	-	-	-
Stage 1	882	-	-	-	-	-
Stage 2	870	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	671	901	1432	-	-	-
Mov Cap-2 Maneuver	671	-	-	-	-	-
Stage 1	868	-	-	-	-	-
Stage 2	870	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	1.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1432	-	756	-	-
HCM Lane V/C Ratio	0.015	-	0.049	-	-
HCM Control Delay (s)	7.6	0	10	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

HCM 6th TWSC
6: Stone House Road & Site Driveway

2021 Build Condition
Saturday Midday Peak Hour

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	11	61	63	3	6	11
Future Vol, veh/h	11	61	63	3	6	11
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	87	87	87	87	87	87
Heavy Vehicles, %	0	0	1	0	0	0
Mvmt Flow	13	70	72	3	7	13

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	75	0	-	0	170
Stage 1	-	-	-	-	74
Stage 2	-	-	-	-	96
Critical Hdwy	4.1	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	2.2	-	-	-	3.5
Pot Cap-1 Maneuver	1537	-	-	-	825
Stage 1	-	-	-	-	954
Stage 2	-	-	-	-	933
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1537	-	-	-	818
Mov Cap-2 Maneuver	-	-	-	-	818
Stage 1	-	-	-	-	945
Stage 2	-	-	-	-	933

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1537	-	-	-	923
HCM Lane V/C Ratio	0.008	-	-	-	0.021
HCM Control Delay (s)	7.4	0	-	-	9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1