Suzuki Affordable Housing Project
DRAFT Transportation Impact Analysis

May 30, 2019

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SUZUKI AFFORDABLE HOUSING PROJECT
TRANSPORTATION IMPACT ANALYSIS

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TRANSPORTATION IMPACT ANALYSIS

Introduction

This study examines the traffic and transportation impacts related to the proposed Suzuki Affordable Housing development located to the southeast of the Sportsman Club Road NE/NE New Brooklyn Road intersection. The analysis reviews existing and future traffic conditions to determine impacts to the transportation system and the need for mitigation measures. The analysis looks at peak hour traffic conditions during the morning, end of the school day, and evening commute. The study reviews the sight distance at the driveway and parking needs for the development.

Organization of the Transportation Study

The study follows the standard practice and the City of Bainbridge Island Traffic Impact Analysis guidelines. The report is divided into four major sections:

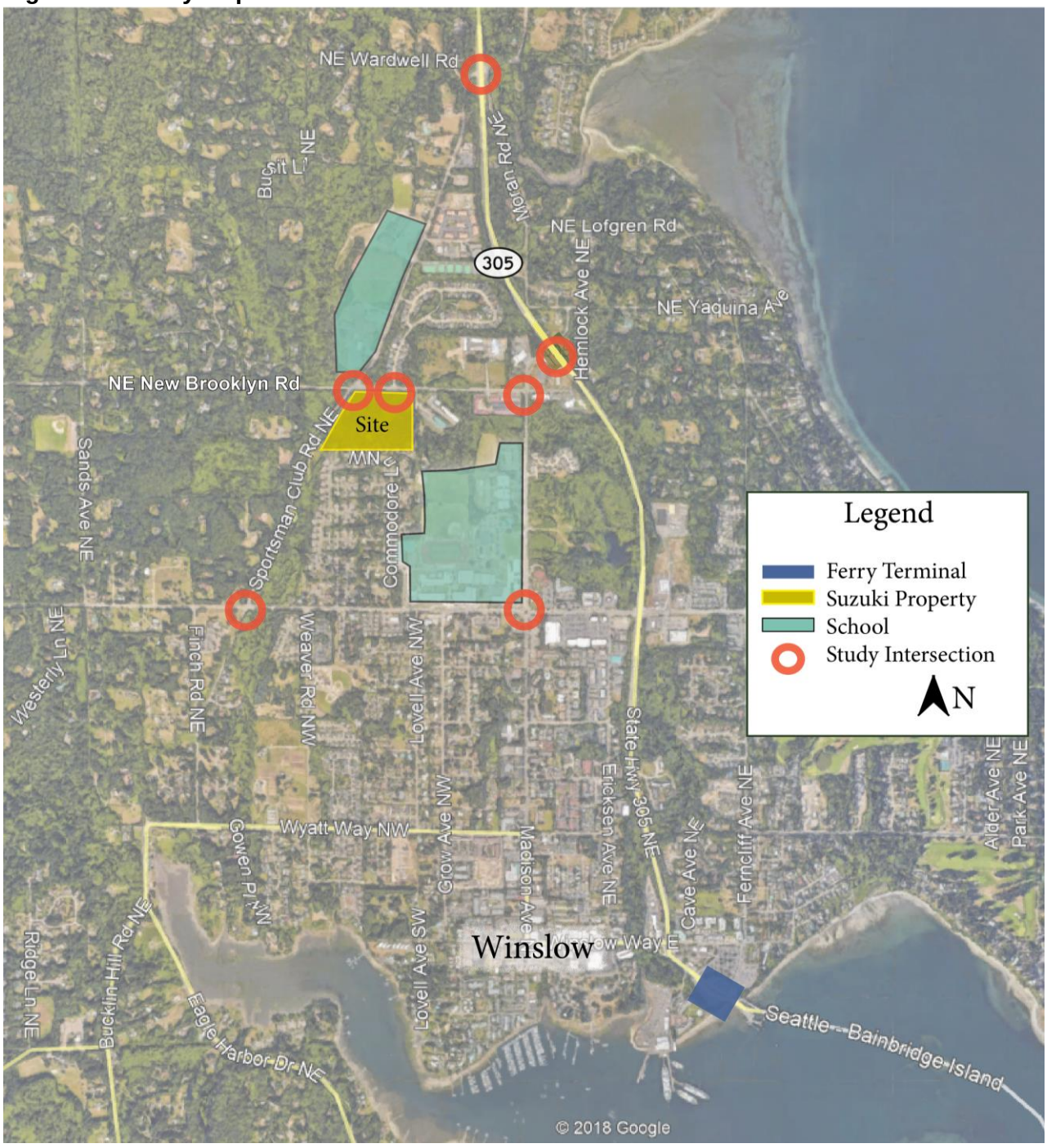
- *Project Description* reviews the project site, its location and a summary of the proposed development.
- *Existing Conditions* refers to the existing traffic, parking, non-motorized and transit conditions.
- *Background Conditions* is a forecast of traffic conditions for the project completion year **without** construction of the project. This section takes into consideration such elements as growth in area traffic volumes, changes to the roadway network, and traffic from other proposed developments.
- *Project Conditions* examines conditions in the future year **with** the project completed. The section identifies the impacts of the project and proposes actions to mitigate those impacts.

Figures, tables, and text are used to illustrate and describe the results of the study for each section. Supplemental detailed analysis information is found in the appendices of this document.

Project Description

The Suzuki property (parcel #222502-4-006-2005) is currently owned by the City of Bainbridge Island. The plan is to develop the property to provide affordable housing in a compact, environmentally-conscious manner. The site is located just east of the NE New Brooklyn Road/Sportsman Club Road NE intersection, with access to SR 305 at the Madison Avenue N intersection. The site is approximately 2 miles from the Washington State Ferry (WSF) Terminal. Nearby trail, bicycle and pedestrian connections provide possibilities for non-motorized access to the Winslow Town Center, ferry terminal, and nearby schools and shopping. **Figure 1** is a vicinity map that shows the location of the site in the context of the adjacent street system and land uses.

Figure 1. Vicinity Map



At this time the City has not decided how many housing units will be developed. This report will assist the city council in evaluating traffic impacts for the highest potential density of 91 units. **Table 1** summarizes the potential development.

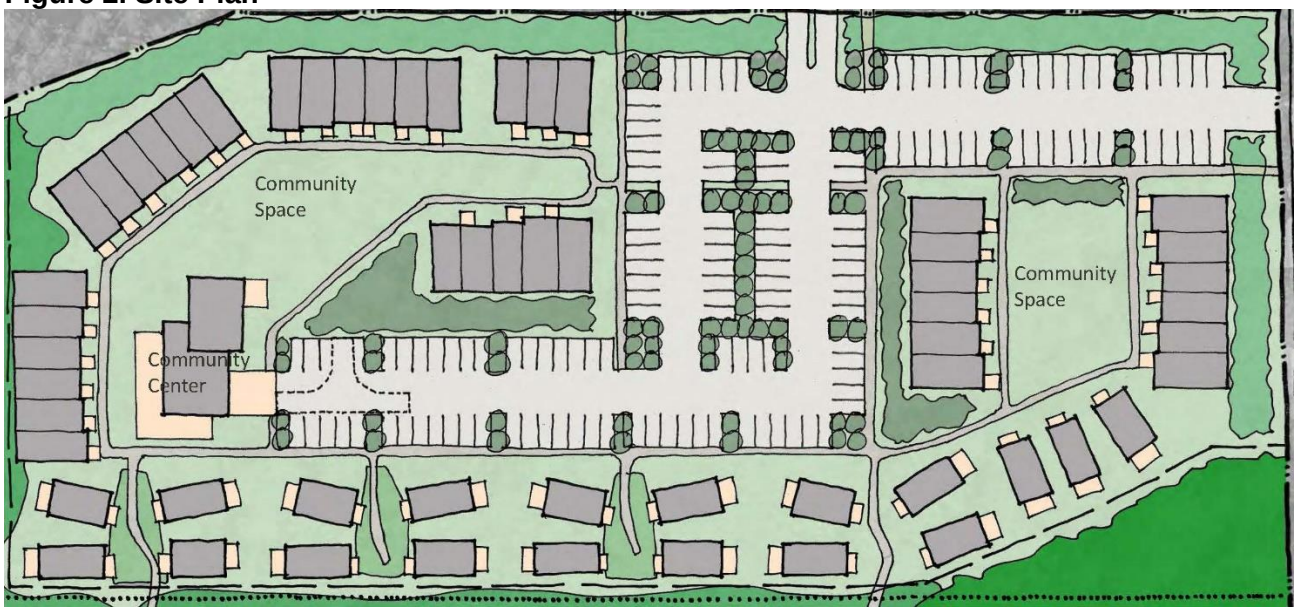
Table 1. Potential Development and Phasing

Unit Type	Square Footage	Bedrooms	Phase 1	Phase 2	Type Total
Single Family Residence	1,200-1,400 SF	2-3	19	0	19
Attached Town Houses	1,000-1,200 SF	2-3	36	0	36
Accessory Dwelling Units	500-600 SF	1	0	36	36

The accessory dwelling units will be located on the ground level, below the attached town houses. The footprint of the development will not change with the construction of Phase 2.

Figure 2 is the site plan (as of May 2019) used in the analysis. The site plan shows the main features of the development including the location of buildings, parking, internal circulation and driveways.

Figure 2. Site Plan



Existing Conditions

The existing conditions analysis documents the transportation facilities and operations within the study area. This includes analysis of traffic volumes, intersection operations, collision history, non-motorized facilities, and transit.

The roadways serving the project are described below.

NE New Brooklyn Road – Two-lane secondary arterial with a 30 mph speed limit, paved shoulders on both sides of the street and sidewalk on south side of street.

Sportsman Club Road NE – Two-lane secondary arterial with a 35 mph speed limit and paved shoulders on both sides of the street. School zone speed limit of 20 mph in effect Monday-Friday from 7 am to 5 pm.

Madison Avenue N – Two-lane secondary arterial with a 25 mph speed limit, paved shoulders on both sides of the street, sidewalk on the west side of the street.

High School Road – Two-lane secondary arterial with a 25 mph speed limit, paved shoulders on both sides of the street, and sidewalks on both sides of the street.

SR 305 – Two-lane primary arterial with a 50 mph speed limit and paved shoulders on both sides of the street.

North Town Drive NE – A two-lane local access street with a 20 mph speed limit and sidewalks on both sides of the street primarily serving a subdivision of single-family homes.

The intersections of these six roadways make up the seven study intersections included in this analysis. Of the study intersections, two are signalized intersections at SR 305/Madison Ave NE and SR 305/ Sportsman Club Road NE; two are all-way stops at Sportsman Club Road NE/NE New Brooklyn Road and Sportsman Club Road NE/High School Road; one is a minor street stop at Madison Avenue N/NE New Brooklyn Road; and one is a roundabout at Madison Avenue N/ High School Road.

Figure 3 shows the existing traffic control and channelization at study intersections.

Traffic Volumes

The following seven intersections were included in the analysis of traffic conditions. **Table 2** indicates the locations and date of the traffic counts used in this analysis. Two-hour counts were collected between 7:30 AM and 9:30 AM, 2:00 PM and 4:00 PM, and 4:00 PM and 6:00 PM to include the peak hour of the morning commute, afterschool period, and evening commute. For counts that were more than one year old, the counts were adjusted by a 1 percent annual growth rate.

The morning peak hour varies by intersection, with the peak hour occurring as early as 7:30 AM - 8:30 AM and as late as 8:00 AM - 9:00 AM. Afterschool peak hour occurred between 3:00 PM and 4:00 PM. The PM peak hour also varies by intersection with the peak hour occurring as early as 4:00 PM - 5:00 PM and as late as 5:00 PM - 6:00 PM. The variation in peak hour times are influenced by multiple factors including ferry operations, proximity to schools, and typical shopping and commuting patterns.

Table 2. Traffic Count Data

Location	Collection Date	AM Peak Hour	Afterschool Peak Hour	PM Peak Hour
Sportsman Club Rd NE/ N Madison Rd NE/SR 305	12/1/2016 (AM) 2/27/2019 (School/PM)	7:30-8:30	3:00-4:00	4:30-5:30
Madison Ave N/ SR 305	1/9/2019	7:45-8:45	3:00-4:00	4:15-5:15
NE New Brooklyn Rd/ Sportsman Club Rd NE	6/12/2018	8:00-9:00	3:00-4:00	4:15-5:15
NE New Brooklyn Rd/ North Town Dr NE	1/9/2019	8:00-9:00	3:00-4:00	4:00-5:00
NE New Brooklyn Rd/ Madison Ave N	1/9/2019	8:00-9:00	3:00-4:00	4:45-5:45
High School Rd/ Sportsman Club Rd NE	1/9/2019	7:45-8:45	3:00-4:00	4:00-5:00
High School Rd/ Madison Ave N	2/2/2017 (AM) 2/27/2019 (School/PM)	8:00-9:00	3:00-4:00	5:00-6:00

Figure 4, **Figure 5, and Figure 6** show the existing AM, Afterschool, and PM peak hour traffic volumes at study area intersections, respectively.

Figure 3. Existing Intersection Control and Channelization

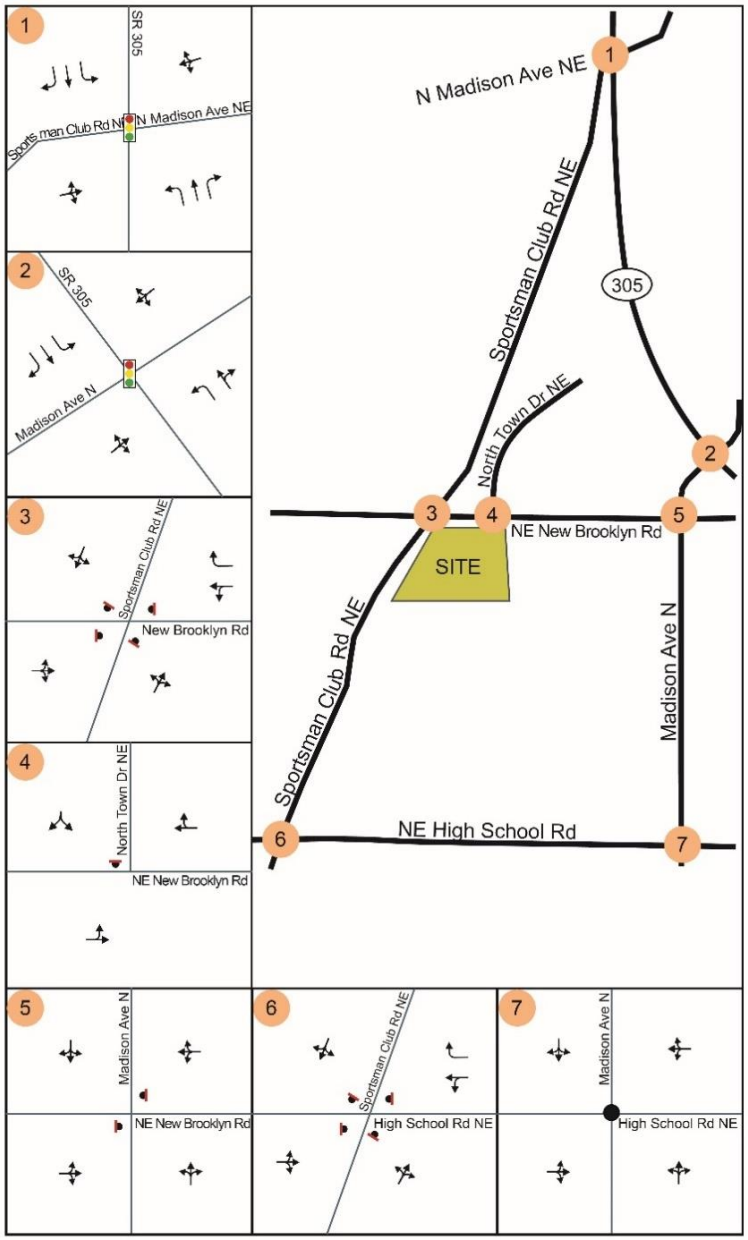


Figure 4. Existing AM Peak Hour Traffic Volumes

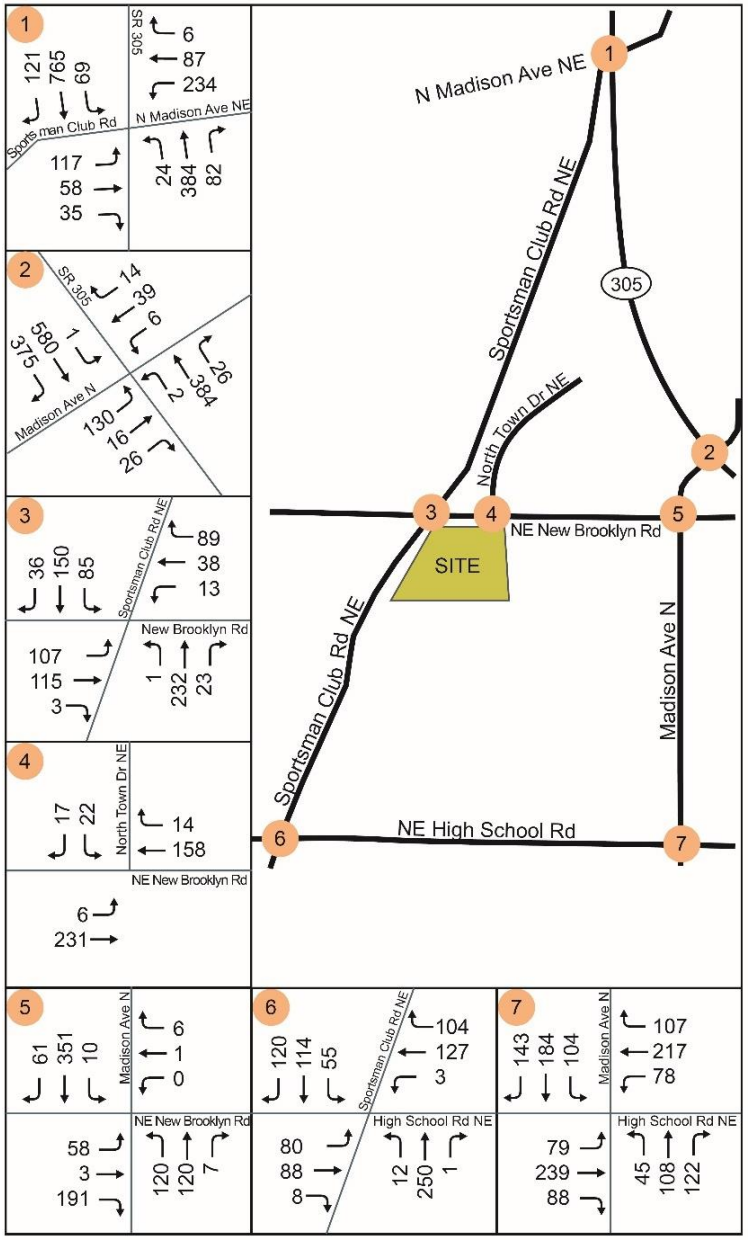


Figure 5. Existing Afterschool Traffic Volumes

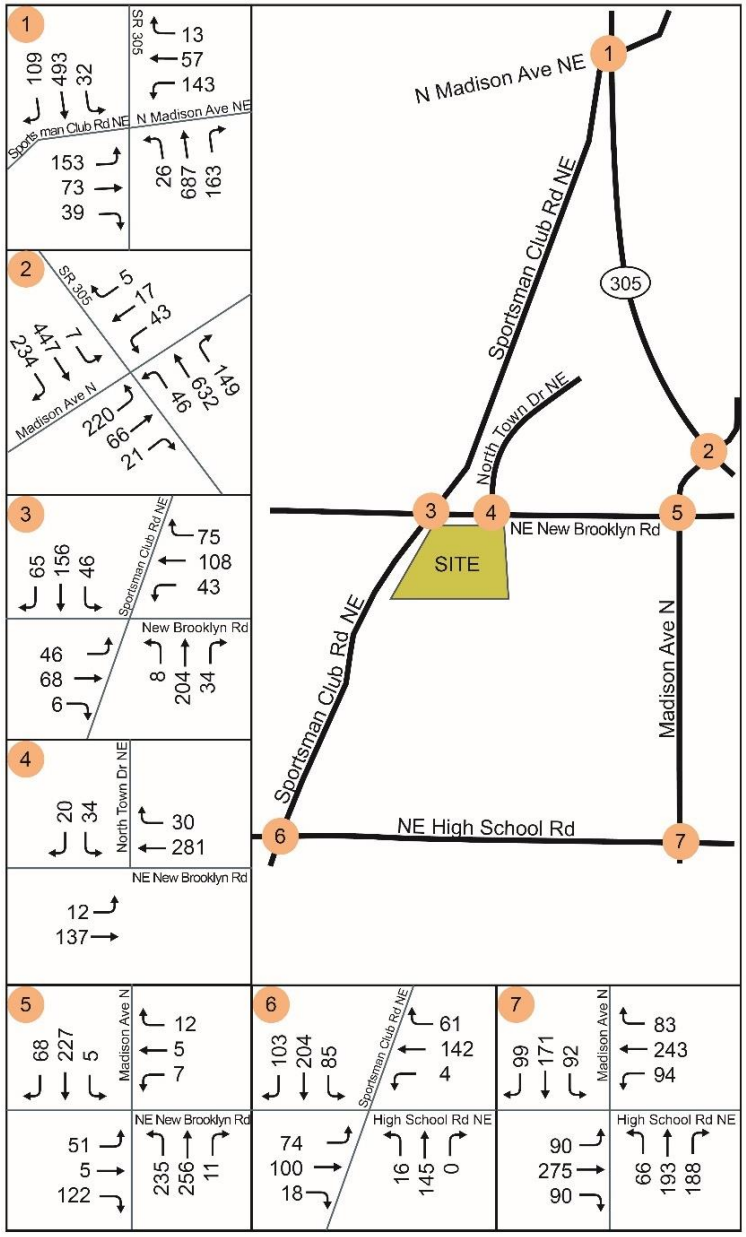
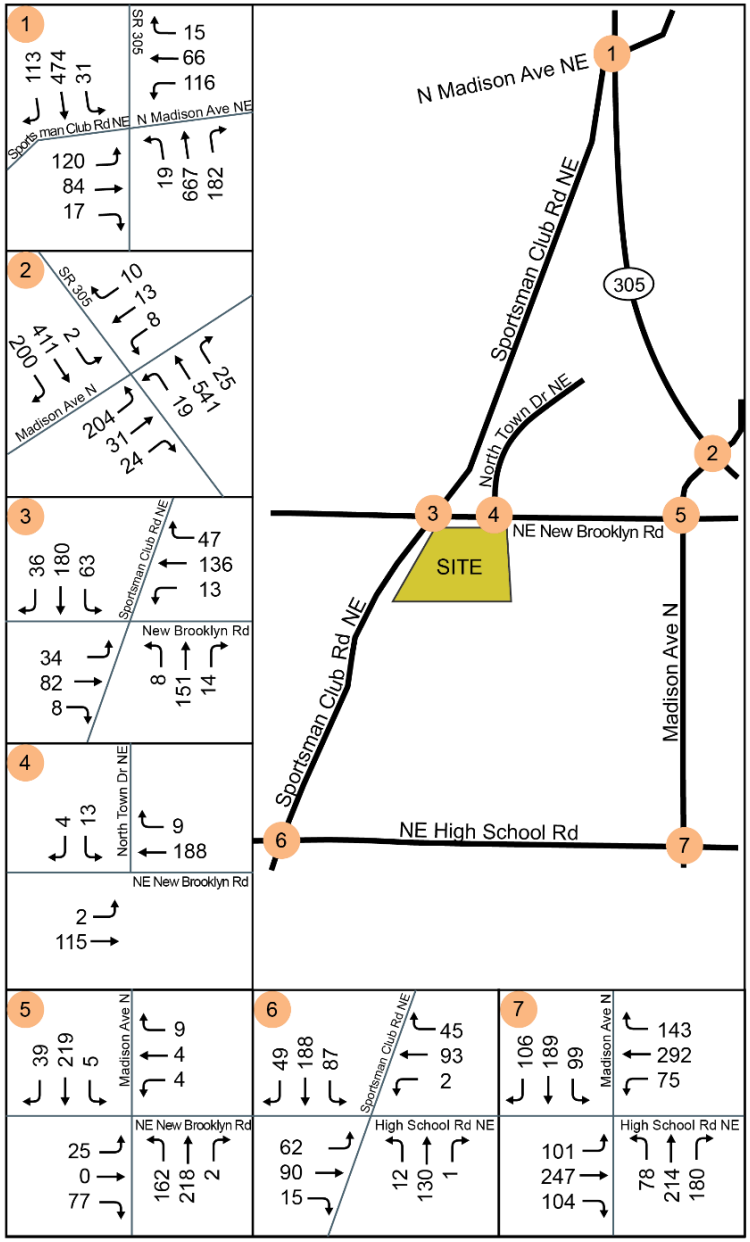


Figure 6. Existing PM Peak Hour Traffic Volumes



Level of Service

Level of Service (LOS) is a qualitative assessment of intersection operations based on the average delay (measured in seconds) incurred by vehicles. The Highway Capacity Manual 6th edition (Transportation Research Board) sets the methodology for calculating the LOS at intersections. For signalized and all-way stop-controlled intersections, the overall intersection LOS is reported. At unsignalized intersections where only the minor movements are stop-controlled (two-way stop controlled intersections), the LOS for the worst performing intersection approach is reported. **Table 3** lists the LOS criteria for signalized and unsignalized intersections.

Table 3. Level of Service Definitions

Level of Service	Signalized Average Delay per Vehicle (seconds)	Unsignalized Average Delay per Vehicle (seconds)
A	0 to 10	0 to 10
B	10 to 20	10 to 15
C	20 to 35	15 to 25
D	35 to 55	25 to 35
E	55 to 80	35 to 50
F	> 80	> 50

The *Island-Wide Transportation Plan* (2017) establishes the LOS standard for roadways by area of the city and by street classifications. For intersections outside of the Winslow area, the standard is LOS C. The Washington State Department of Transportation (WSDOT) standard for intersections along SR 305 is LOS D. These standards are typically applied to PM peak hour conditions for planning and development review purposes.

Intersection Operations

Table 4 shows the LOS for the existing AM, afterschool and PM peak hours at each of the study intersections. All intersections operate at LOS C or better during the PM peak hour. During the AM and afterschool peaks, the NE New Brooklyn Road/Madison Avenue N intersection operates at LOS F. All other study intersections operate at LOS C or better and the intersections along SR 305 operate at LOS D or better.

Table 4. Existing Peak Hour LOS and Delay (Seconds)

Intersection	Traffic Control	AM Peak Hr LOS (Delay)	School Peak Hr LOS (Delay)	PM Peak Hr LOS (Delay)
Sportsman Club Rd NE/N Madison Rd NE/SR 305	Signal	D (49)	D (45)	C (31)
Madison Ave N/SR 305	Signal	B (11)	C (25)	B (14)
NE New Brooklyn Rd/Sportsman Club Rd NE	All-Way Stop	B (15)	B (12)	B (12)
NE New Brooklyn Rd/North Town Dr NE*	Stop	B (13)	B (14)	B (11)
NE New Brooklyn Rd/Madison Ave N*	Stop	**F (55)**	**F (53)**	B (15)
High School Rd/Sportsman Club Rd NE	All-Way Stop	C (16)	C (17)	B (11)
High School Rd/ Madison Ave N	Round-about	A (6)	A (8)	A (9)

*LOS and delay reported for worst-operating approach at 2-way Stop intersections.

Collision Data

Table 5 lists the five-year (2013-2017) injury and non-injury collision data provided by WSDOT for each of the study intersections. Collisions are highest at the two intersections along SR 305 where rear-end collisions on the State Route are common.

Table 5. 2013-2017 Collision Data

Intersection	2013-2017 Collision	
	Injury	Non-injury
Sportsman Club Rd NE/N Madison Rd NE/SR 305	14	29
NE New Brooklyn Rd/Sportsman Club Rd NE	0	2
NE New Brooklyn Rd/North Town Dr NE	0	0
NE New Brooklyn Rd/Madison Ave N	1	0
Madison Ave N /SR 305	11	18
High School Rd/Sportsman Club Rd NE	1	0
High School Rd/ Madison Ave N	1	2
Total	28	51

Non-Motorized Facilities

Residents of the Suzuki Affordable Housing development will be located close to many of the island's destinations. This will allow many bicycle or walking trips and likely reduce the impact on the area streets and intersections. **Table 6** lists some of the nearby destinations as well as the distance and time it will take to reach these places by car, foot or bicycle. Distances are provided in miles and travel time in minutes.

Table 6. Travel Distance and Travel Time (Minutes) to Nearby Destinations

Destination	Car Miles (minutes)	Foot Miles (minutes)	Bicycle Miles (minutes)
Ordway Elementary	0.6 (2)	0.6 (12)	0.6 (4)
Woodward Middle School	0.2 (1)	0.2 (3)	0.2 (1)
Sakai Intermediate School	0.4 (1)	0.4 (8)	0.4 (1)
Bainbridge High School	0.95 (3)	0.5 (10)	0.5 (4)
Bainbridge Island Aquatic Center	0.5 (1)	0.5 (10)	0.5 (4)
Library	0.8 (2)	0.8 (17)	0.8 (5)
Downtown Winslow	1.7 (7)	1.7 (33)	1.7 (9)
Ferry Terminal	2.0 (6)	2.0 (40)	2.0 (11)

Trail Connections

The City of Bainbridge Island maintains intra-island trails for non-motorized users. These trails combine separated, multi-use pathways and low-volume roadways to increase the density of the pedestrian and bicycle network and link designated centers, schools, and parks.

There are two trails adjacent to the Suzuki Affordable Housing site. To the west, there is an unpaved north-south trail along the east side of Sportsman Club Road NE between NE New Brooklyn Road and High School Road. There is a trail located to the east of the project site that connects NE New Brooklyn Road and the Bainbridge High School athletic fields. It provides an off-street walking and biking route from the site to the High School and Ordway Elementary School.

Pedestrian Facilities

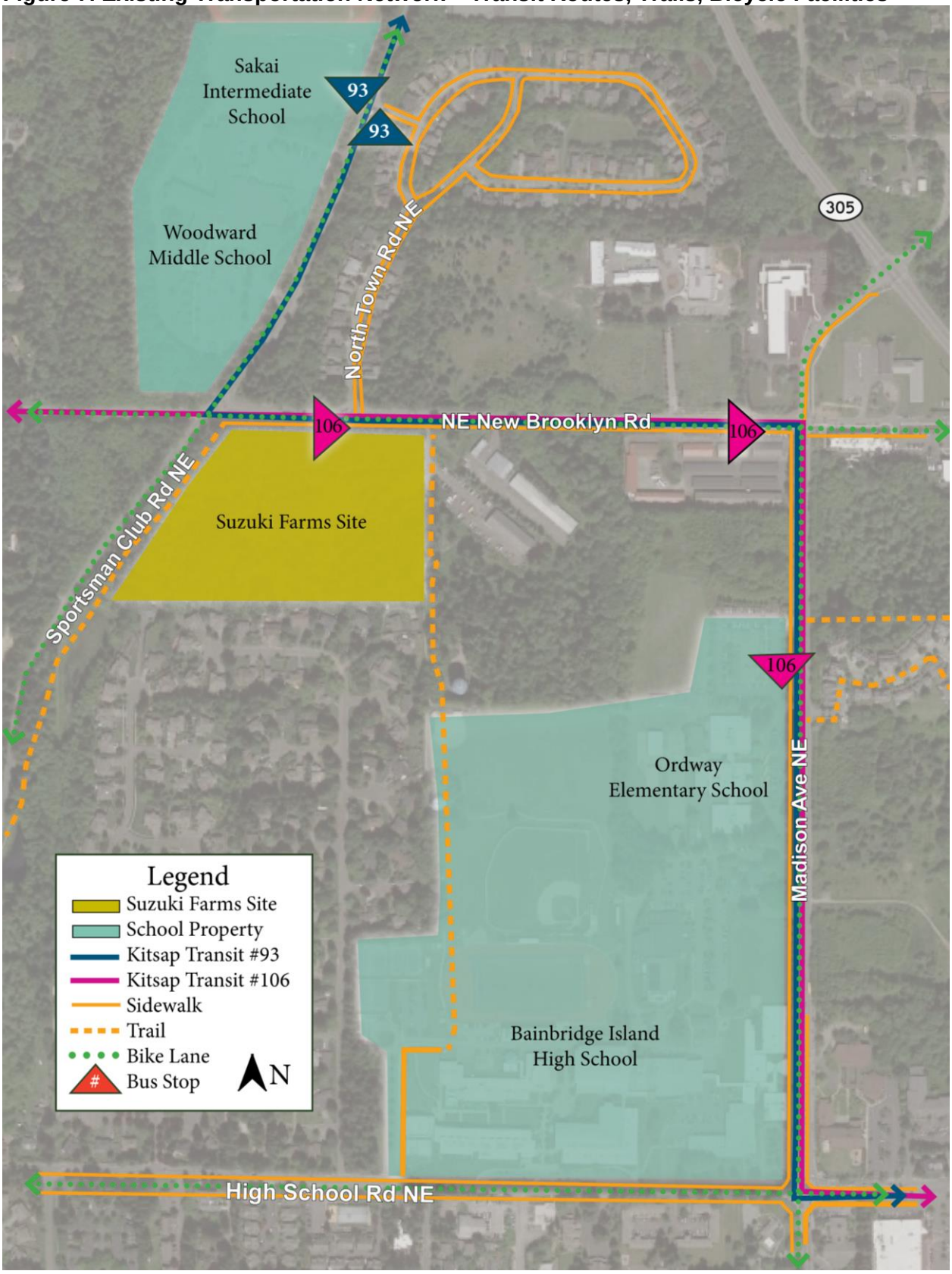
The south side of NE New Brooklyn Road has a sidewalk that provides a continuous walkway between the Suzuki property, schools along Madison Avenue N and the Winslow Town Center. There is a crosswalk on the east leg of the NE New Brooklyn Road/North Town Drive NE intersection connecting to the sidewalks in the North Town Woods neighborhood.

Bicycle Facilities

The site is located within a short (1-11 minute) bicycle ride to the Washington State Ferry terminal, area schools and businesses, City Hall and the Winslow Town Center. Bicyclists currently use many of the roads in the vicinity of the site including SR 305, NE New Brooklyn Road, Sportsman Club Road NE, and Madison Avenue N. These streets have painted bicycle lanes or widened, paved shoulders that provide space for people to ride bicycles with relative comfort.

Figure 7 shows the location of trail connections, sidewalks, bicycle facilities and transit routes in the vicinity of the proposed development.

Figure 7. Existing Transportation Network – Transit Routes, Trails, Bicycle Facilities



Transit Service

Kitsap Transit provides limited bus service between the project site and the Winslow core area and the Washington State Ferry terminal with walk-on, bicycle and vehicle service to Seattle. Routes 93 and 106 operate in the vicinity of the project site. These two commuter-oriented routes operate toward the ferry terminal between 4:40 AM and 8:30 AM in the mornings and in the reverse direction between 3:40 PM and 7:30 PM in the evenings. No midday, night or reverse commute direction service is provided.

- *Route 93 – Manzanita to Ferry Terminal via Sportsman Club Road NE, NE New Brooklyn Road, Madison Avenue NE, and High School Road NE*
- *Route 106 – Fletcher Bay to Ferry Terminal via NE New Brooklyn Road*

There is a marked bus stop and shelter located on the south side of the North Town Drive NE/NE New Brooklyn Road intersection. In addition, Kitsap Transit allows "flag stops" where passengers can wave at a bus to pick them up, without a marked bus stop.

The Bainbridge Island-Seattle ferry, located approximately 2 miles to the southeast of the site, is a major transit facility and officially a part of the Washington State Highway System, connecting SR 305 to downtown Seattle. There are 23 departures from Bainbridge Island between the hours of 4:45 AM and 12:55 AM on weekdays. Weekend departures are only slightly lower, with 21 departures on Saturdays and holidays, and 20 departures on Sundays.

Background Conditions

Background conditions provide a forecast of future operating conditions without the project. This allows the project conditions to be compared with intersection operations during the same project year. The two project years for this study are 2020 and 2022 related to the two development phases for the Suzuki property.

Planned Transportation Improvements

A roundabout is planned for the Sportsman Club Road NE and NE New Brooklyn Road intersection to increase capacity at the intersection and address anticipated future traffic growth. The City's 2019-2025 Transportation Improvement Program (TIP) identifies construction of the roundabout in 2020. The project is funded by a $703,000 federal grant and $217,000 from Transportation Impact Fees collected by the City of Bainbridge Island. This planned improvement is included in the 2020 and 2022 analyses of background and project conditions.

Growth Rate Estimate

A 1.3% annual growth rate was applied to all 2018 volumes to estimate the 2020 and 2022 traffic conditions. A 1.3% rate represents the typical growth in traffic on Bainbridge Island outside of the urban area.

Pipeline Trips

The City provided a list of pipeline developments for inclusion in the calculation of background volumes. These represent developments that are permitted or under construction, but have not yet been occupied. The following projects are included in the background volumes for 2020 and 2022.

- Madrona School (140 students) - currently located on Madison Avenue and Winslow Way.
- Bainbridge Landing (115 apartments, 25 attached single-family townhomes, and 1-acre public park)
- CKCB Madison Avenue (8 units multifamily)
- Madison Grove (7 single-family homes)
- Madison Landing (24 attached single-family townhomes and 4,056 SF office)
- Madison Place (17 net new single-family homes)
- Madrona Townhomes (48 attached single-family townhomes)
- Finch Plat/Reserve at Winslow (10 net new single-family homes)
- Wallace Cottages (19 single-family homes)
- Winslow Grove (19 single-family homes)
- Wyatt Apartments (36 apartments and 6 townhomes)

Figures 8, 9 and 10 show the background turning movements for 2020 conditions and **Figures 11, 12 and 13** for the 2022 background conditions for the AM, School and PM peak hours.

Figure 8. 2020 AM Peak Hour Background Traffic Volumes

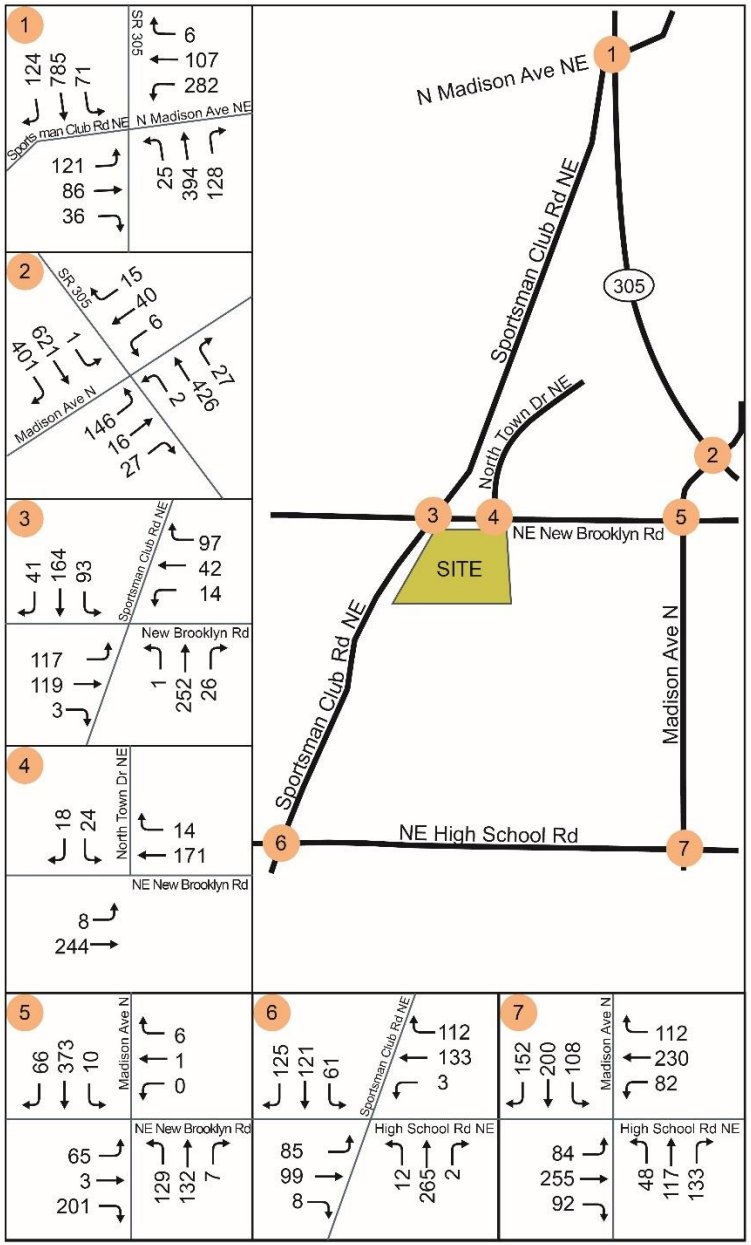


Figure 9. 2020 School Peak Hour Background Traffic Volumes

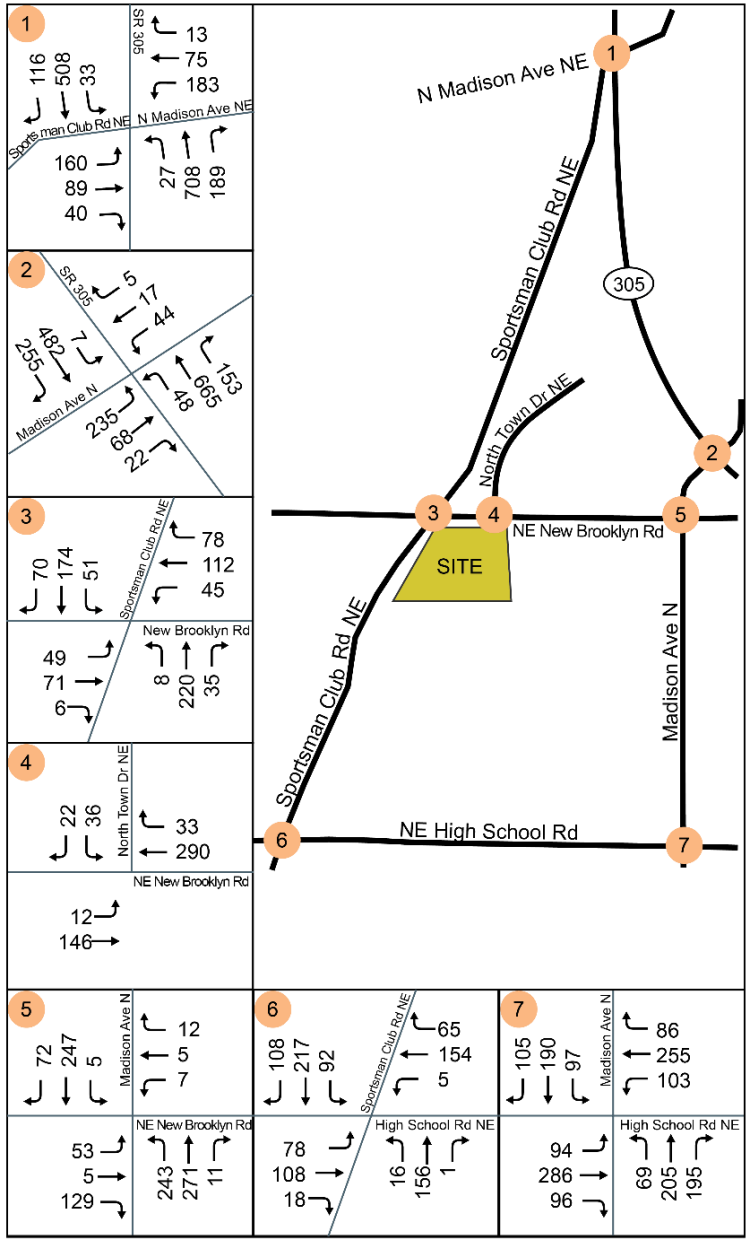


Figure 10. 2020 Background PM Peak Hour Traffic Volumes

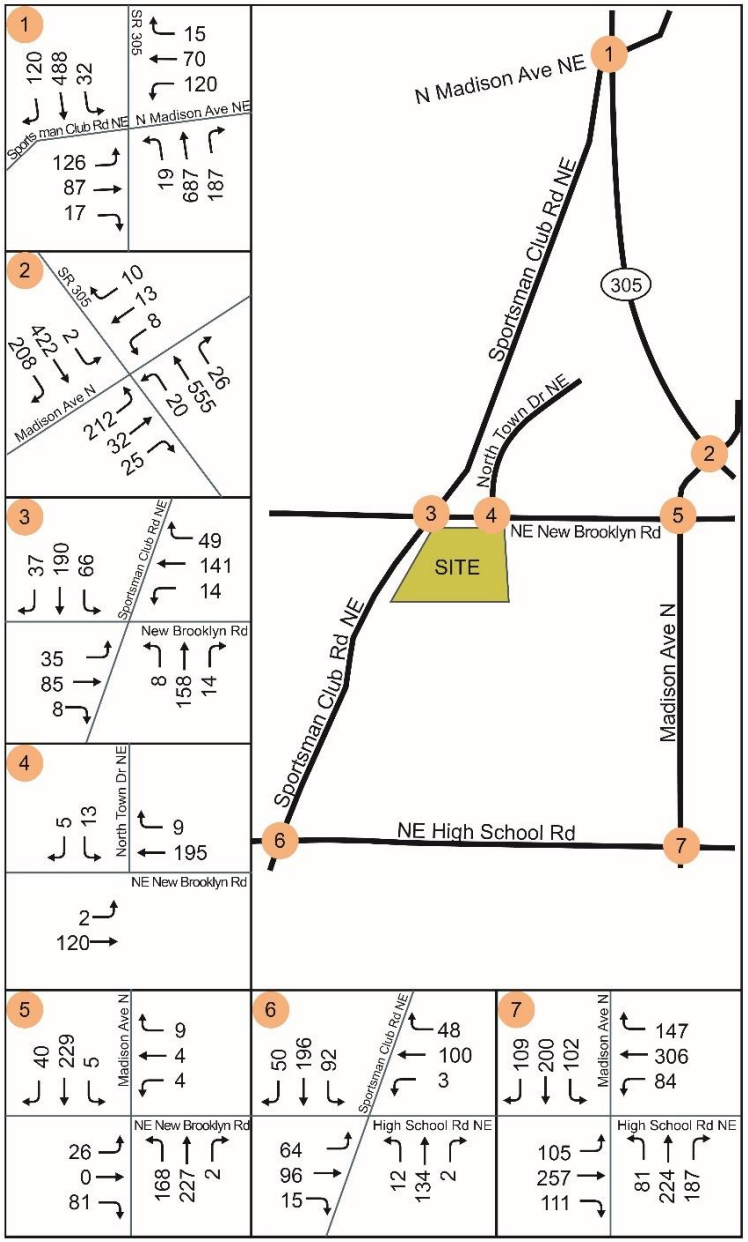


Figure 11. 2022 Background AM Peak Hour Traffic Volumes

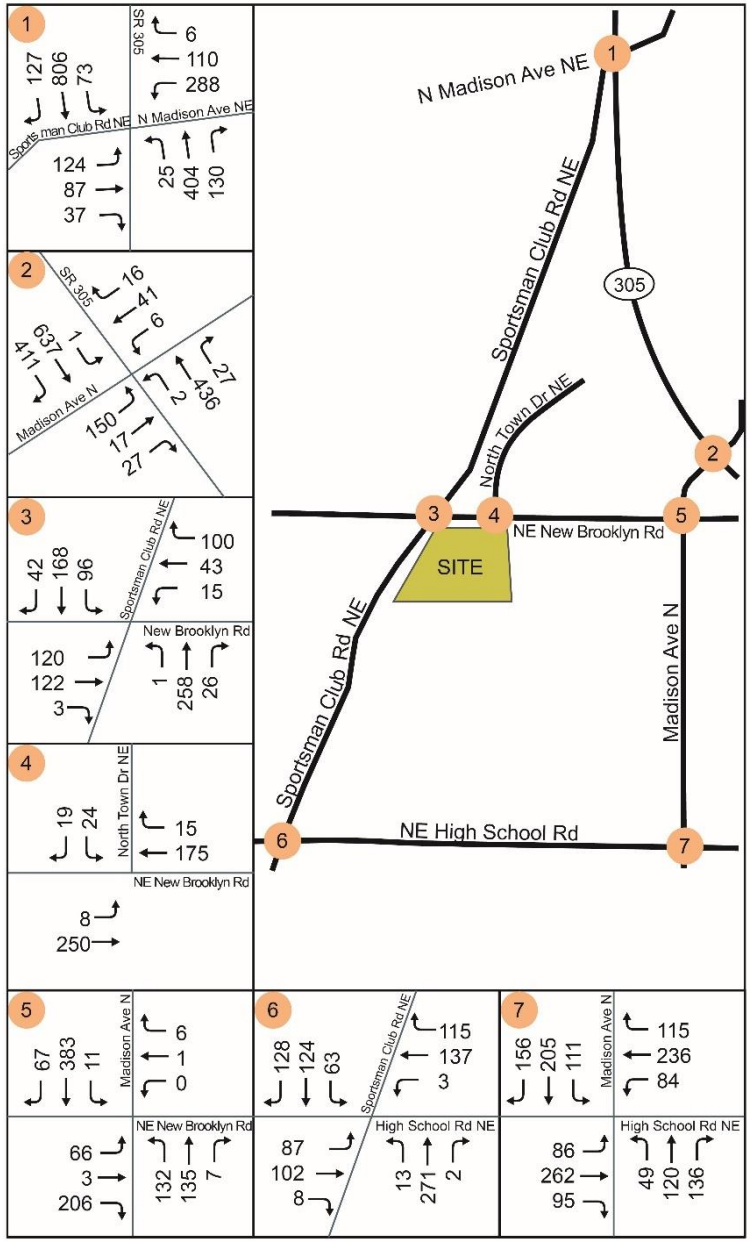


Figure 12. 2022 Background School Peak Hour Traffic Volumes

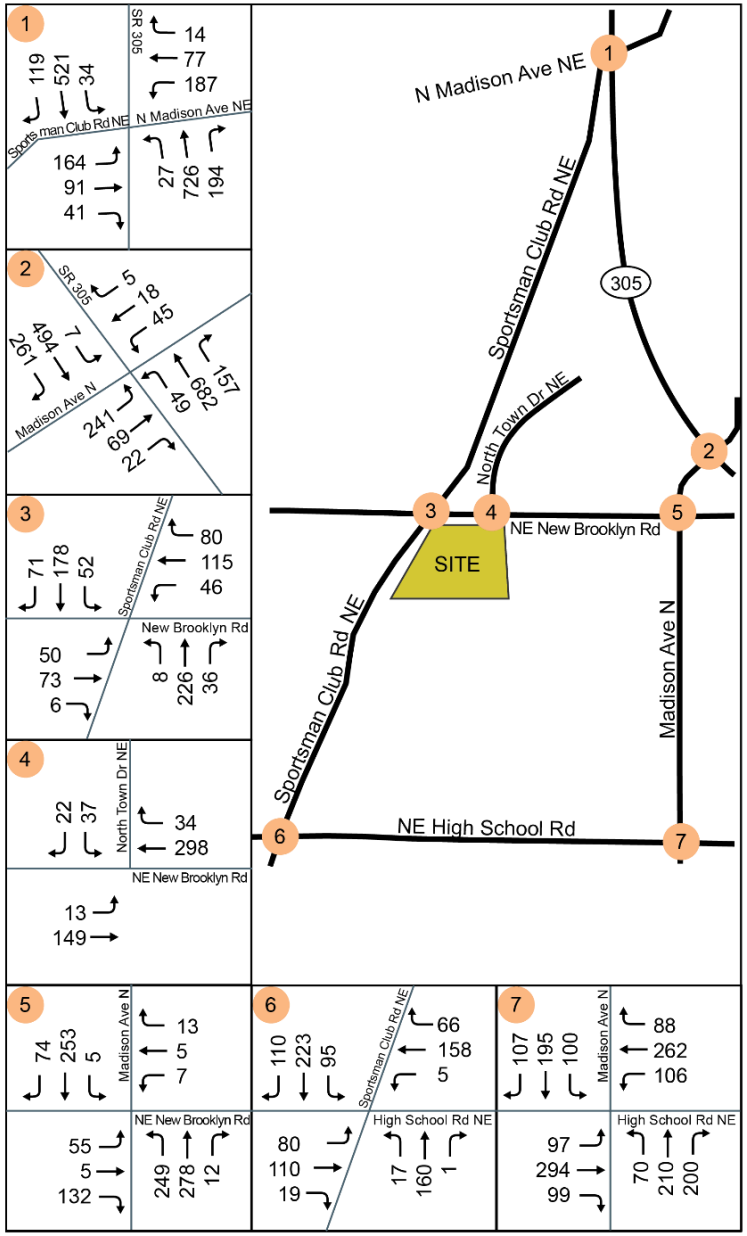
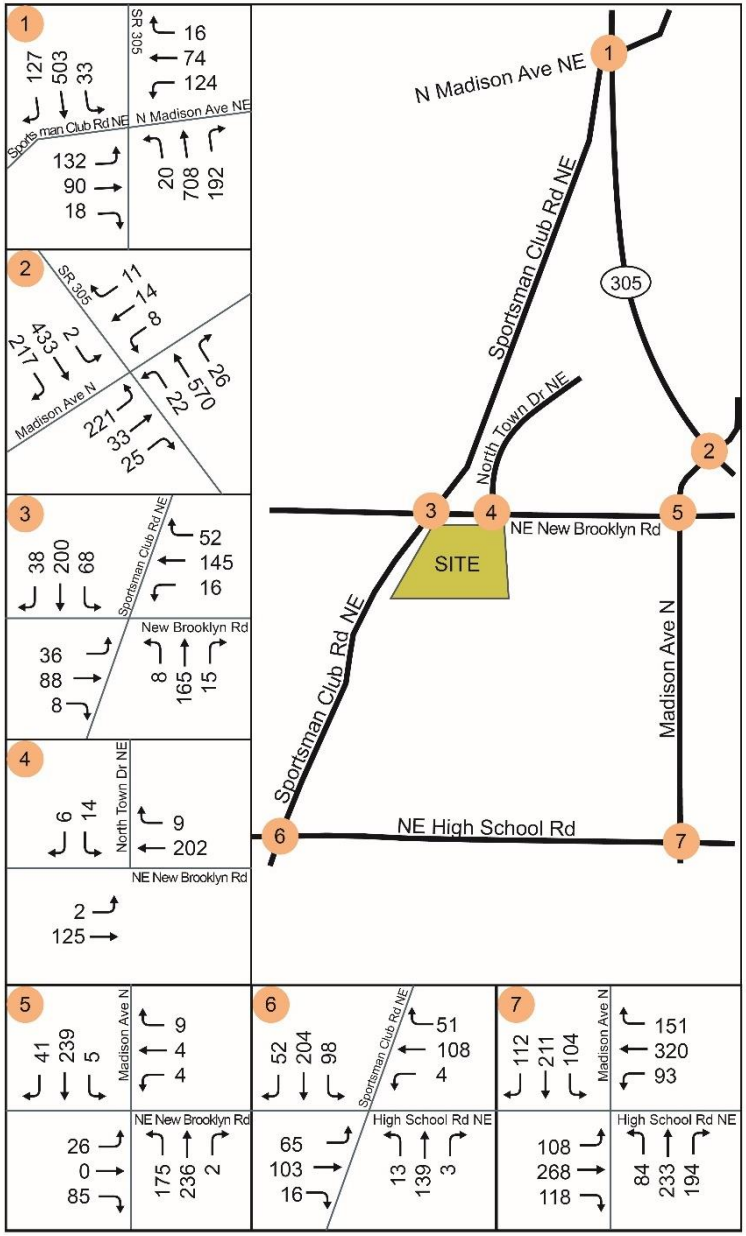


Figure 13. 2022 Background PM Peak Hour Traffic Volumes



Intersection Operations

Background intersection operations were evaluated in 2020, corresponding to the year in which Phase 1 of the project is expected to be completed. Background conditions include the annual growth factor and all pipeline projects. **Table 7** below compares the existing and 2020 background operating conditions. With the addition of the pipeline trips, the Sportsman Club Road NE/N Madison Road NE/SR 305 intersection will exceed the WSDOT LOS D standard during the AM and afterschool peak hours. The intersection at NE New Brooklyn Road/Madison Avenue N will continue to operate at LOS F with average higher delays during the AM and afterschool peak hours. All intersections meet the LOS standards during the PM peak hour.

Table 7. 2020 Background Peak Hour LOS and Delay (Seconds)

Intersection	2020 Traffic Control	AM Peak Hour		Afterschool Peak Hour		PM Peak Hour	
		Existing	2020	Existing	2020	Existing	2020
Sportsman Club Rd NE/N Madison Rd NE/SR 305	Signal	D (49)	**E (67**)	D (45)	**E (59)**	C (31)	C (34)
Madison Ave N/SR 305	Signal	B (11)	B (11)	C (25)	C (31)	B (14)	B (14)
NE New Brooklyn Rd/ Sportsman Club Rd NE	Round-about	B (15)	A (7)	B (12)	A (6)	B (12)	A (6)
NE New Brooklyn Rd/ North Town Dr NE*	2-way Stop	B (14)	B (13)	B (14)	B (14)	B (11)	B (11)
NE New Brooklyn Rd/Madison Ave N*	2-way Stop	**F (55)**	**F (96)**	**F (53)**	**F (78)**	B (15)	C (15)
High School Rd/Sportsman Club Rd NE	4-way Stop	C (16)	C (18)	C (17)	C (27)	B (11)	B (12)
High School Rd/ Madison Ave N	Round-about	A (6)	A (7)	A (8)	A (9)	A (9)	B (11)

*LOS and delay reported for worst-operating approach at 2-way Stop intersections.

The 2022 background analysis reflects the year when Phase 2 of the project is completed. Background conditions include the annual growth factor and all pipeline projects. **Table 7** below compares the existing and 2022 background operating conditions. With the addition of the pipeline trips, the Sportsman Club Road NE/N Madison Road NE/SR 305 intersection will exceed the LOS D standard. The intersection at NE New Brooklyn Road/Madison Avenue N will continue to operate at LOS F with average higher delays during the AM and afterschool peak hours. All intersections will meet LOS standards during the PM peak hour.

Table 8 shows the existing and 2022 background operating conditions.

Table 8. 2022 Background Peak Hour LOS and Delay (Seconds)

Intersection	2022 Traffic Control	AM Peak Hour		Afterschool Peak Hour		PM Peak Hour	
		Existing	2022	Existing	2022	Existing	2022
Sportsman Club Rd NE/N Madison Rd NE/SR 305	Signal	D (49)	**E (71)**	D (45)	**E (65)**	C (31)	D (36)
Madison Ave N/SR 305	Signal	B (11)	B (12)	C (25)	C(35)	B (14)	B (15)
NE New Brooklyn Rd/Sportsman Club Rd NE	Round-about	B (15)	A (7)	B (12)	A (6)	B (12)	A (6)
NE New Brooklyn Rd/North Town Dr NE*	2-way Stop	B (13)	B (13)	B (14)	B (14)	B (11)	B (11)
NE New Brooklyn Rd/Madison Ave N*	2-way Stop	**F (55)**	**F (115)**	**F (53)**	**F (98)**	B (15)	C (16)
High School Rd/Sportsman Club Rd NE	4-way Stop	C (16)	C (20)	C (17)	C (22)	B (11)	B (12)
High School Rd/ Madison Ave N	Round-about	A (6)	A (7)	A (8)	B (10)	A (9)	B (13)

*LOS and delay reported for worst-operating approach at 2-way Stop intersections.

Other Projects

Police Station/Courthouse Development – The City of Bainbridge Island has been looking for a site to develop a new police station and municipal courthouse. In March 2019, the City entered into an agreement to purchase Harrison Medical Center Building located east of the intersection of NE New Brooklyn Road and Madison Avenue N. The traffic volumes from the Suzuki Affordable Housing project will be part of the pipeline projects for this future development.

Project Conditions – Phase 1 and Phase 2

The Suzuki Affordable Housing project may include a mix of housing types including single-family, townhome, and accessory dwelling units. This analysis shows the impacts of constructing the project using two phases: Phase 1 with 55 units completed by 2020, followed by an additional 36 units constructed by 2022, for a total of 91 units. The City has not decided how many housing units will be developed or if the project will be phased. This report will assist the city council in evaluating the potential traffic impacts related to the maximum potential density of 91 units.

Site Access & Circulation

The Suzuki Affordable Housing project is planned with a single driveway access to NE New Brooklyn Road, forming the south leg of the existing intersection at North Town Center Drive. An emergency access will be constructed connecting to the School District access road, east of the site. The main access driveway opens up into the development's parking lot and vehicle circulation through the site uses the circulation aisles of the parking lot. The center of the parking lot has two parallel aisles that can assist in maneuvering larger vehicles within the site. The parking lot is connected to the residential buildings via a series of connected pathways. These pathways

will also connect to adjacent off-site trails to the south. The site plan as it is further defined, will consider the access needs of trash collection, truck access and other circulation requirements.

A sight distance analysis was conducted at the proposed driveway location to assess whether sightlines are adequate for drivers to determine if it is safe enter the roadway. The WSDOT *Design Manual,* Section 1340.06 requires that drivers have a minimum of 200 feet sight distance from a driveway located along a 30 mph roadway. Results of the analysis found that there is more than 200 feet of sight distance in either direction, exceeding the minimum standard.

Trip Generation

The trip generation represents the number of net new vehicle trips created by the development and added to the roadway network. The Institute of Transportation Engineers (ITE) *Trip Generation,* 10th Edition was used to estimate the number of peak hour and daily vehicle trips generated. The project will be a mix of housing types including single-family, townhome, and accessory dwelling units. For the AM peak hour and PM peak hour, the ITE rate for peak commute hour was used, to reflect the periods when adjacent street traffic is normally at the highest volume. For the school peak hour, the highest trip generation (PM peak hour of the generator) was used to reflect the afterschool peak. The trip generation is calculated for each phase of the development with 55 units completed by 2020 (Phase 1), followed an additional 36 units constructed by 2022 (Phase 2). **Table 8** summarizes the trip generation for each phase. Appendix A provides trip generation for each analysis period.

Table 9. Project Vehicle Trip Generation

Land Use	ITE Land Use	AM Peak Hour Trips	Afterschool Peak Hour Trips	PM Peak Hour Trips	Daily Trips
Single Family Housing (19 units)	LU 210	14	22	21	226
Apartment Housing (36 units)	LU 220	17	25	24	231
Phase 1 Total		**31**	**47**	**45**	**457**
Accessory Dwelling Units (36 units)	LU 220	17	25	24	231
Phase 2 Total		**17**	**25**	**24**	**231**
Phase 1 & 2 Total		**48**	**72**	**69**	**688**

Source: ITE Trip Generation, 10th edition

Trip Distribution and Assignment

The trip distributions for inbound trips (trips entering the project site) and outbound trips (trips leaving the project site) are represented as percentages. The trip distributions are based on traffic volumes and general travel patterns in the area. The analysis uses the same trip distribution for each analysis period.

Figures 14-15 show the trip distribution and assignment for the project trips for the AM peak hour for the 2020 and 2022 study years, **Figures 16-17** show the school peak hour for both study years,

and **Figures 18-19** show the commute PM peak hour for the two study years. The trip assignment represents the number of new trips added to the street network as a result of the proposed project. The trip assignment is the number of trips generated multiplied by the trip distribution.

Figure 14. 2020 AM Peak Hour Project Trip Distribution and Assignment (Phase 1)

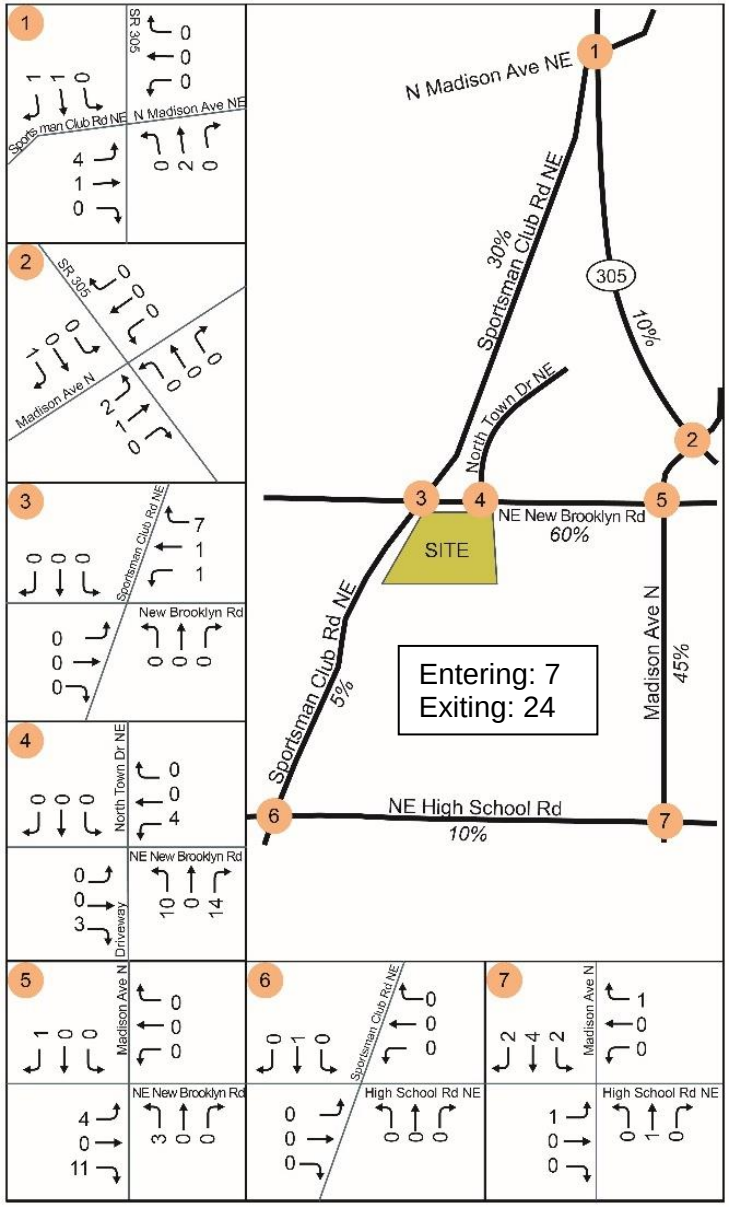


Figure 15. 2022 AM Peak Hour Project Trip Distribution and Assignment (Phase 2)

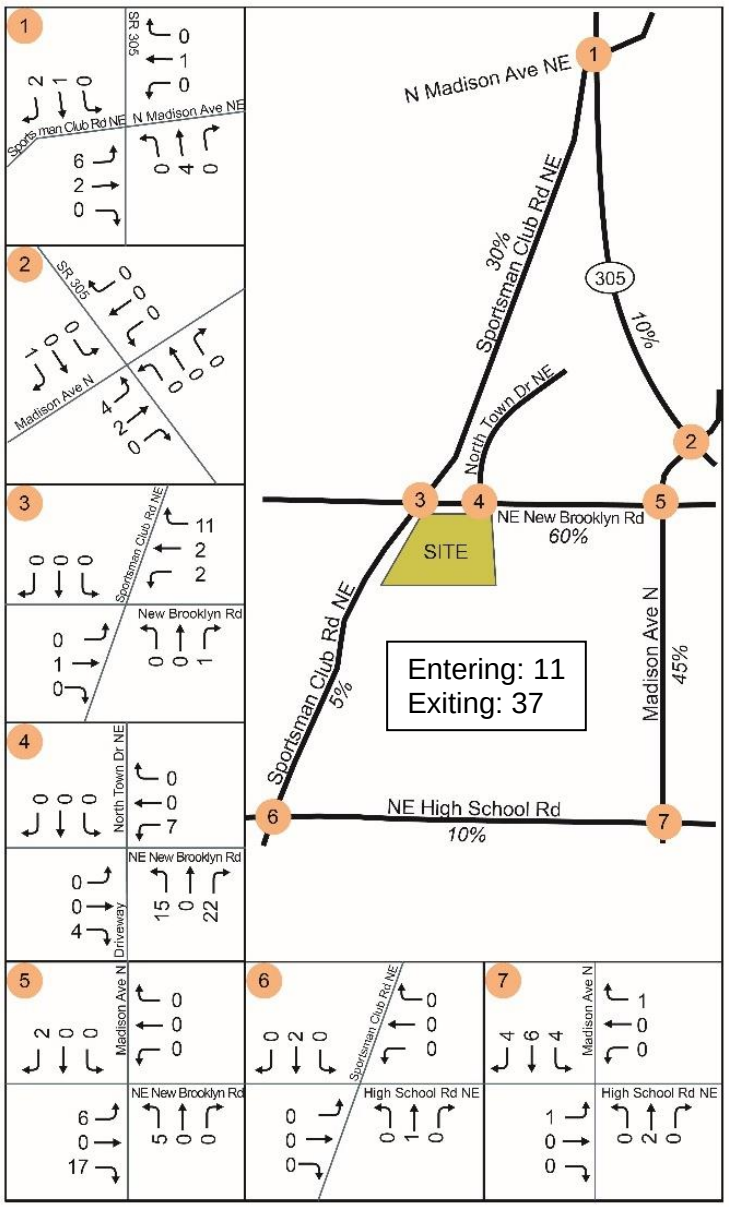


Figure 16. 2020 School Peak Hour Project Trip Distribution and Assignment (Phase 1)

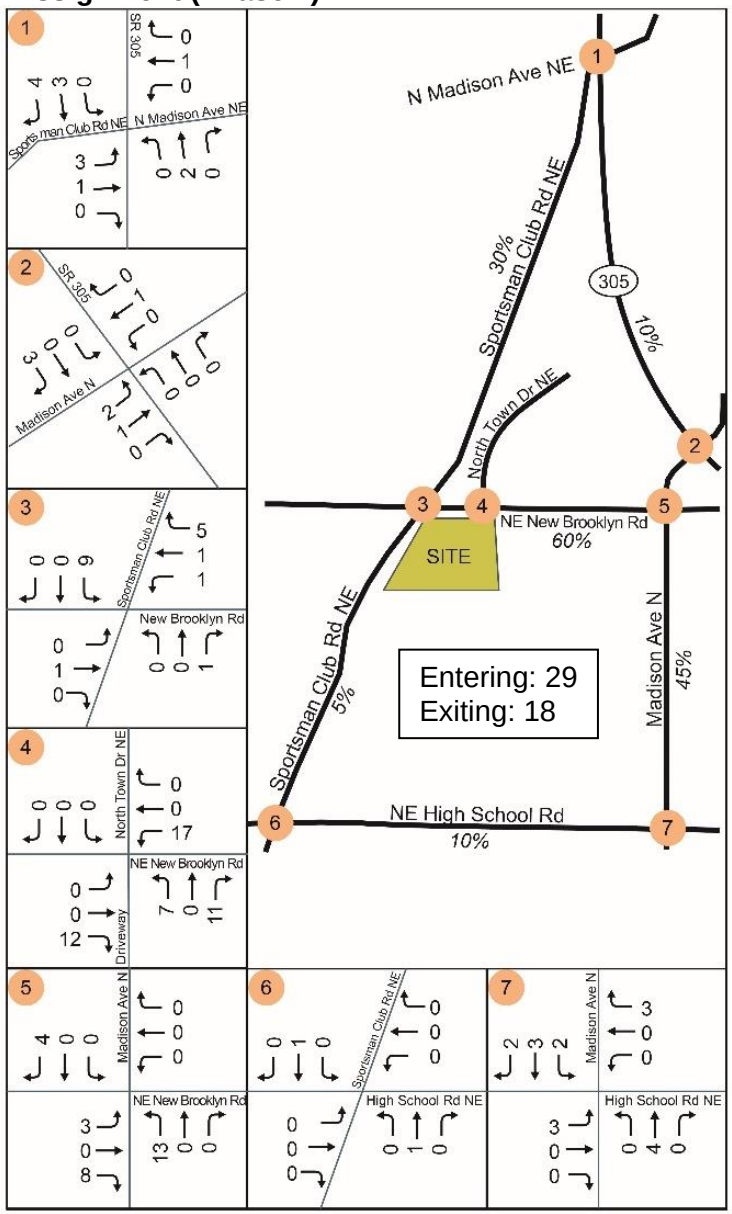


Figure 17. 2022 School Peak Hour Project Trip Distribution and Assignment (Phase 2)

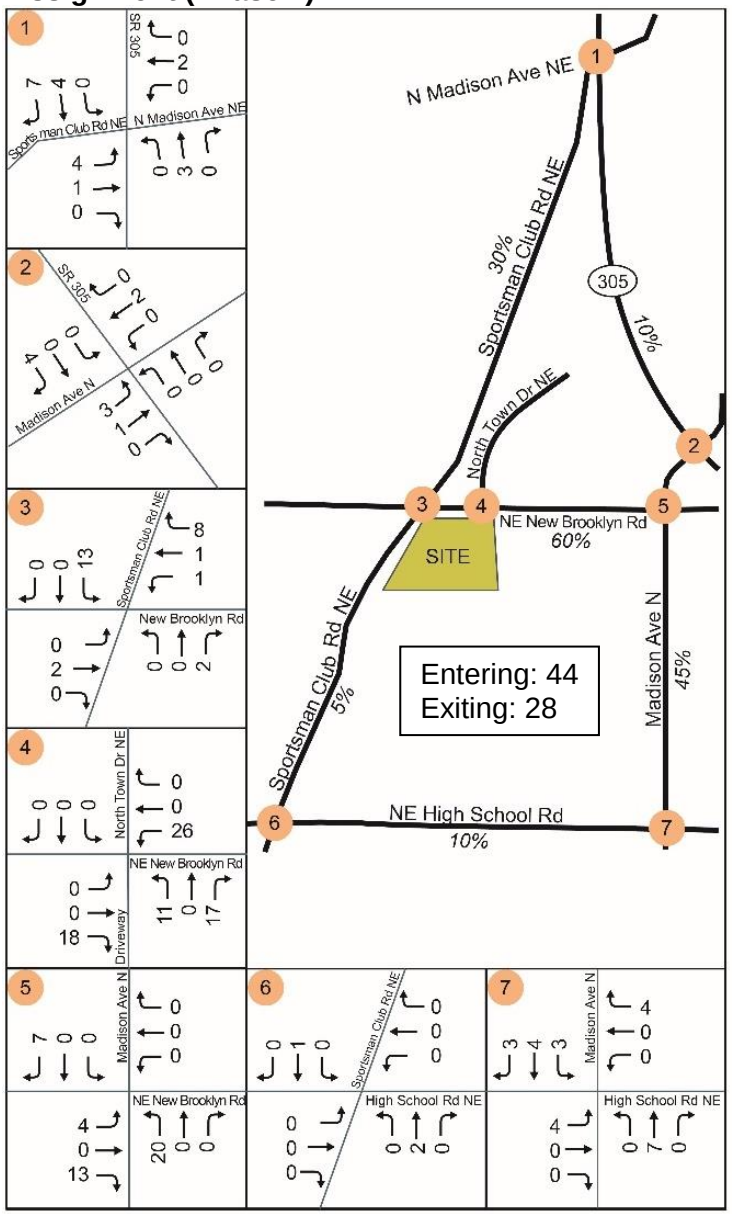


Figure 18. 2020 PM Peak Hour Project Trip Distribution and Assignment (Phase 1)

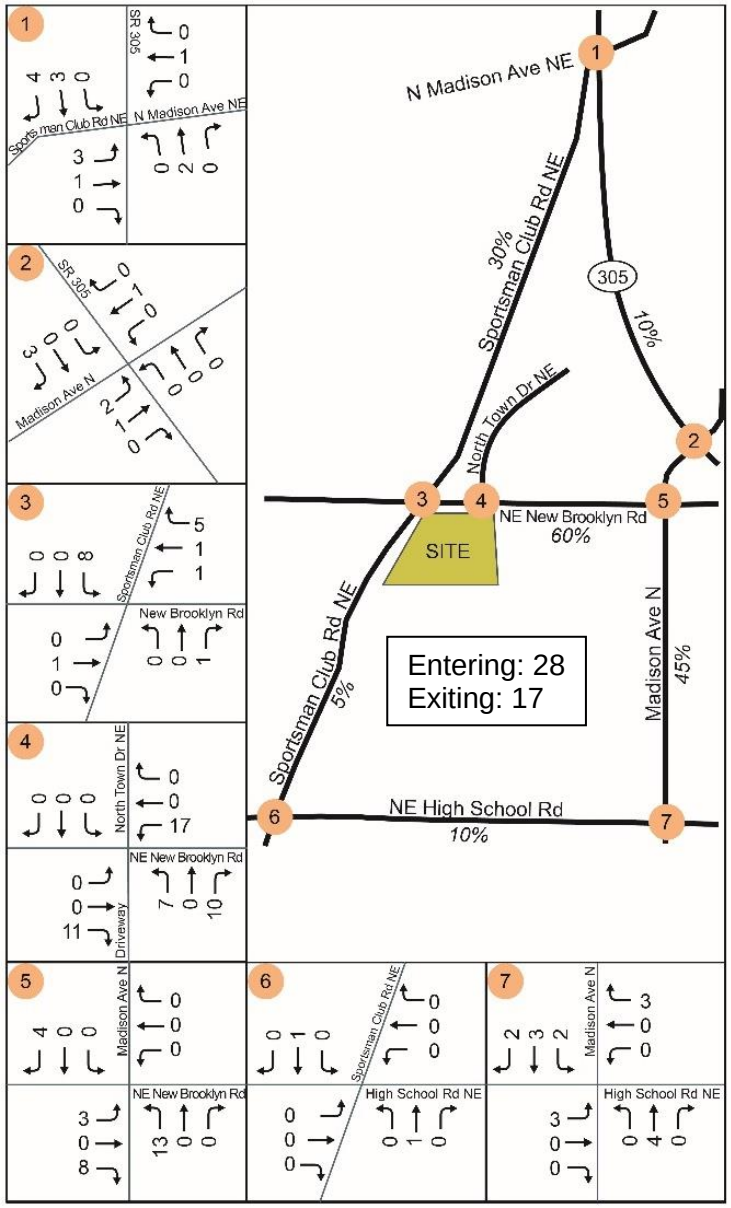
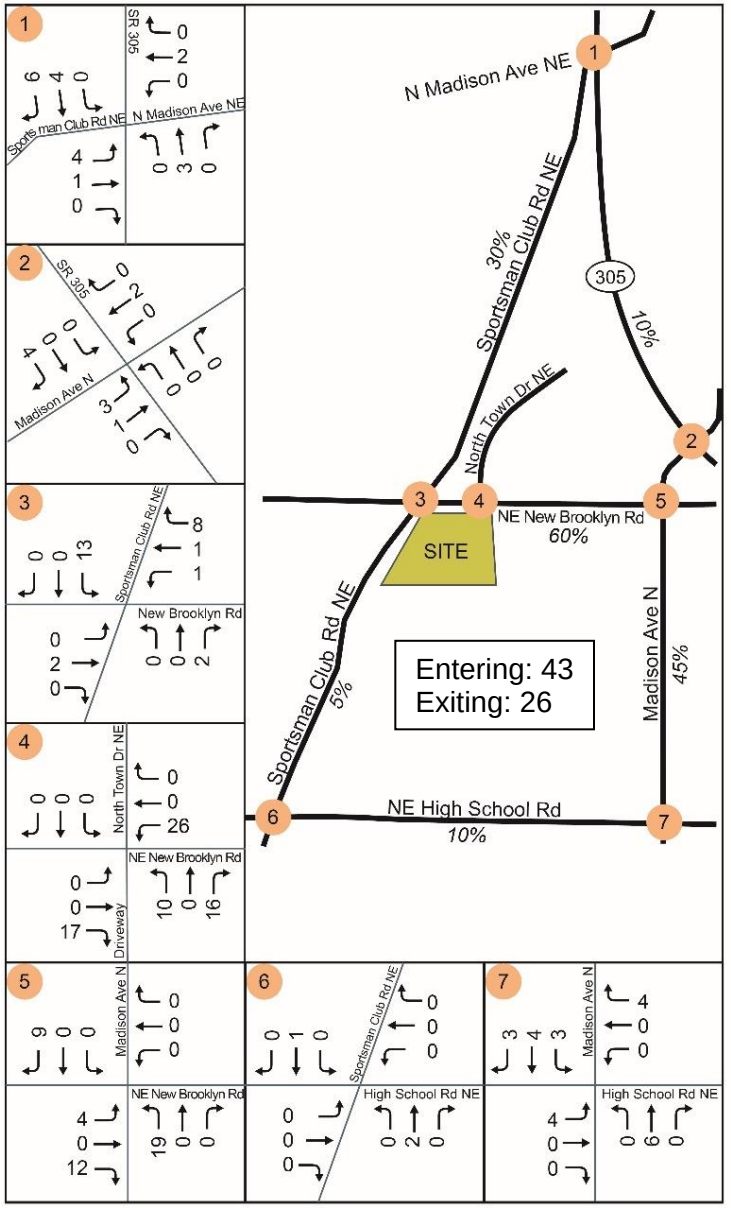


Figure 19. 2022 PM Peak Hour Project Trip Distribution and Assignment (Phase 2)



Project Volumes

Figures 20-22 show the addition of the 2020 background volumes and the proposed project volumes for Phase 1 for each of the peak hours. **Figures 22-25** show the addition of the 2022 background volumes and the proposed project volumes for Phases 1 and 2 for each of the peak hours.

Intersection Operations - 2020

Table 9 compares 2020 background LOS with 2020 conditions with the completion of Phase 1. For each peak period, the level of service and seconds of intersection delay is listed. All study intersections remain at the background LOS levels and meet the LOS standards during the PM peak hour. The average delay for the stop-controlled intersection at NE New Brooklyn Road/Madison Avenue N (operating at LOS F) continues to worsen during the AM and afterschool peak periods with the addition of the project trips.

Table 10. 2020 Peak Hour LOS and Delay without and with the Proposed Project (Phase 1)

	2020 Background LOS (Delay)			2020 with Project Phase 1 - LOS (Delay)		
Intersection	**AM Peak Hour**	**School Peak Hour**	**PM Peak Hour**	**AM Peak Hour**	**School Peak Hour**	**PM Peak Hour**
Sportsman Club Rd NE/N Madison Rd NE/SR 305	**E (67)**	**E (59)**	C (34)	**E (68)**	**E (61)**	C (34)
Madison Ave N/SR 305	B (11)	C (31)	B (14)	B (11)	C (31)	B (14)
NE New Brooklyn Rd/Sportsman Club Rd NE	A (7)	A (6)	A (6)	A (7)	A (6)	A (6)
NE New Brooklyn Rd/North Town Dr NE* (Project Driveway)	B (13)	B (14)	B (11)	B (13)	B (14)	B (11)
NE New Brooklyn Rd/Madison Ave N*	**F (96)**	**F (78)**	C (15)	**F (115)**	**F (103)**	C (16)
High School Rd/Sportsman Club Rd NE	C (18)	C (27)	B (12)	C (18)	C (20)	B (12)
High School Rd/ Madison Ave N	A (7)	A (9)	B (11)	A (7)	A (10)	B (11)

* LOS and delay reported for worst-operating approach at 2-way Stop intersections.

Figure 20. 2020 AM Peak Hour Traffic Volumes with Project (Phase 1)

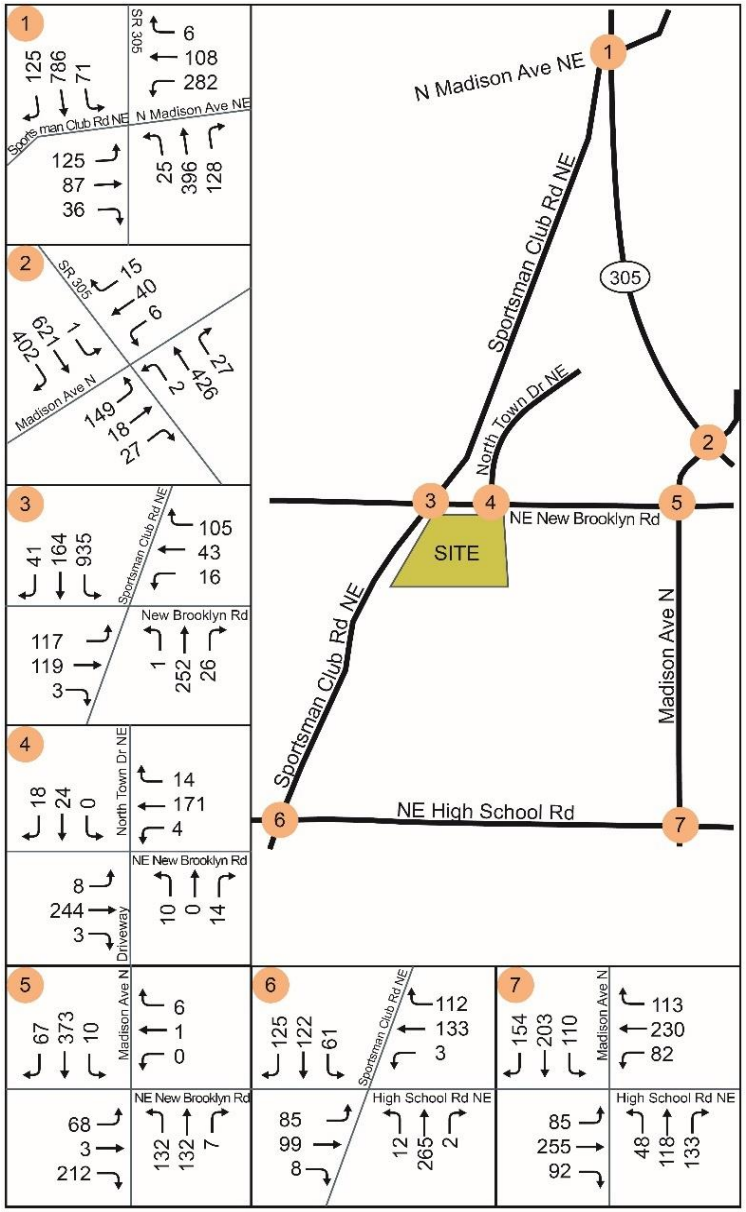


Figure 21. 2020 School Peak Hour Traffic Volumes with Project (Phase 1)

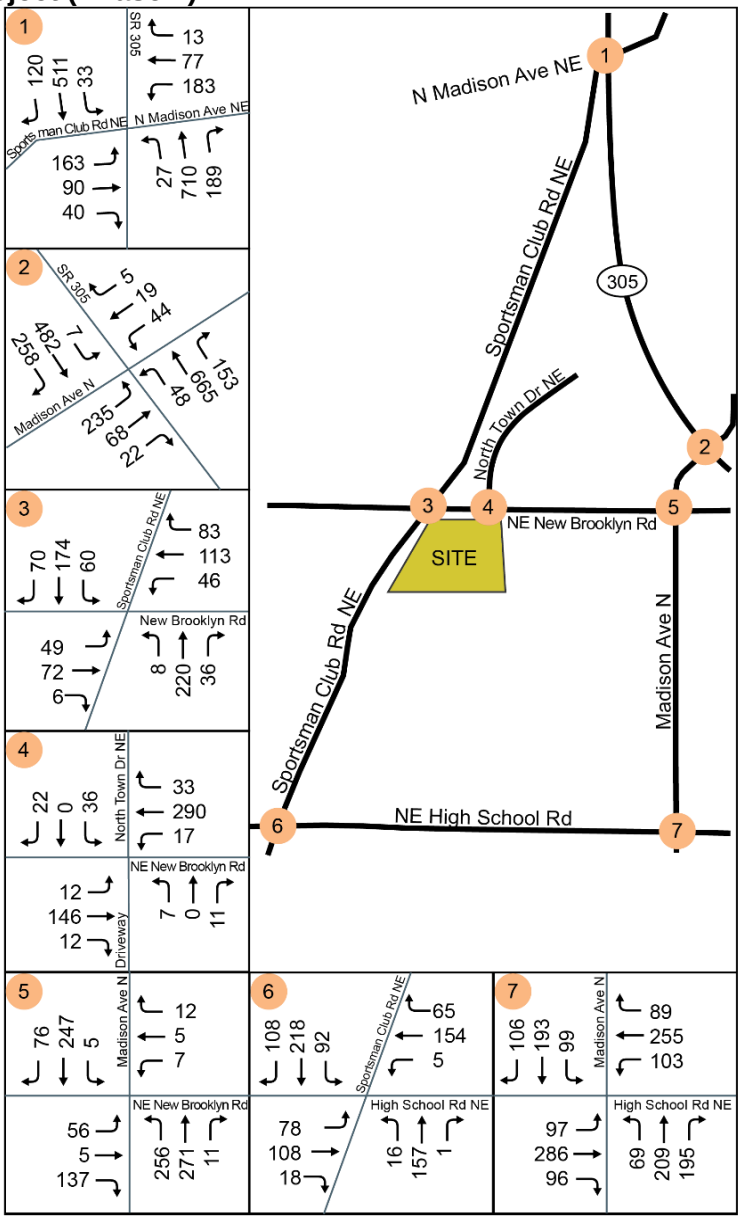


Figure 22. 2020 PM Peak Hour Traffic Volumes with Project (Phase 1)

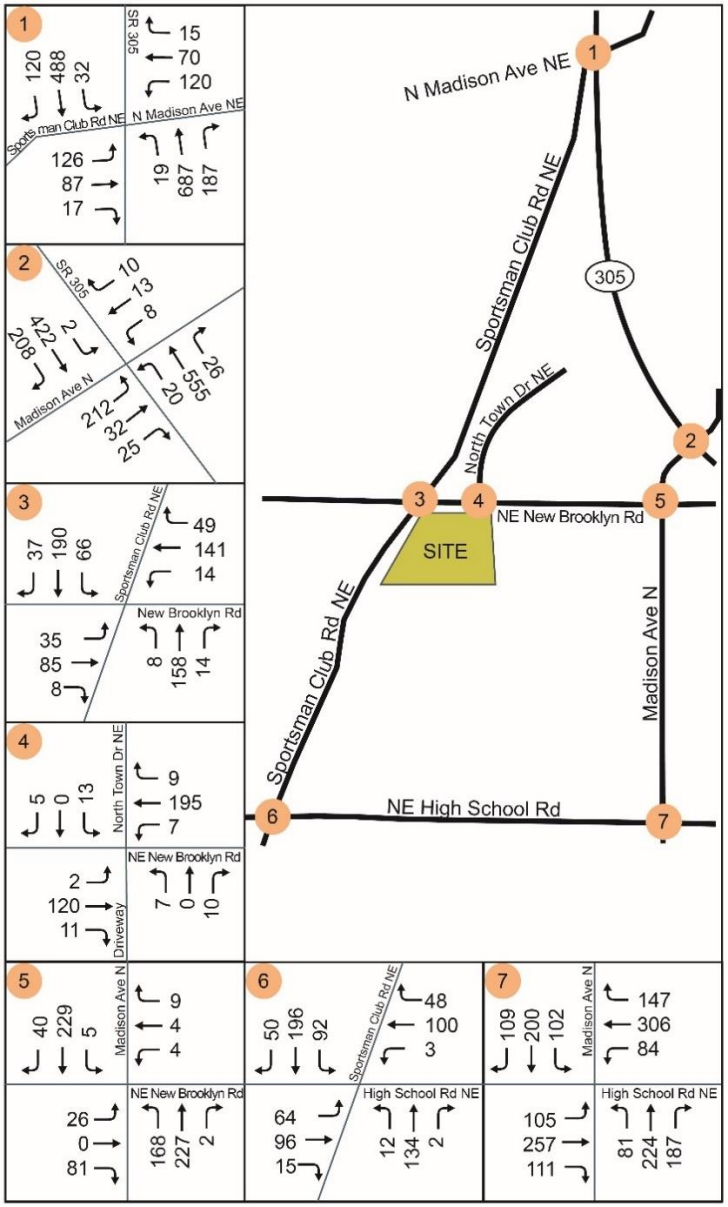


Figure 23. 2022 AM Peak Hour Traffic Volumes with Project (Phase 2)

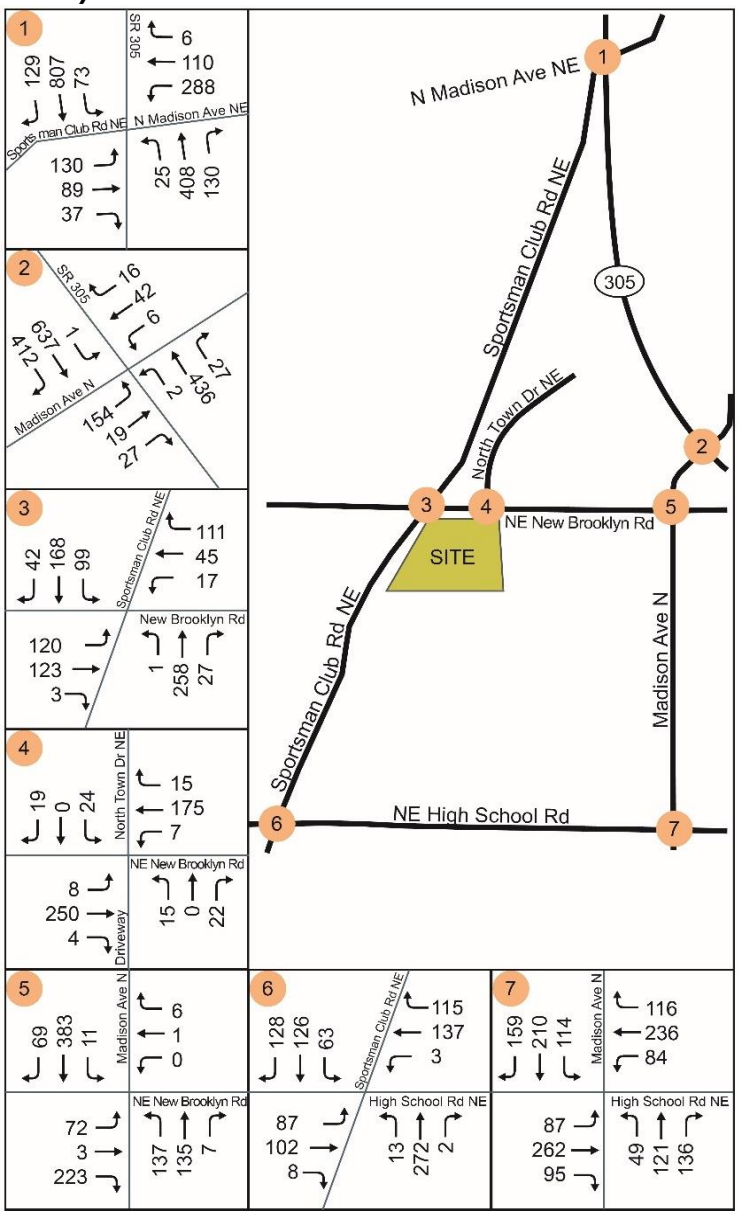


Figure 24. 2022 School Peak Hour Traffic Volumes with Project (Phase 2)

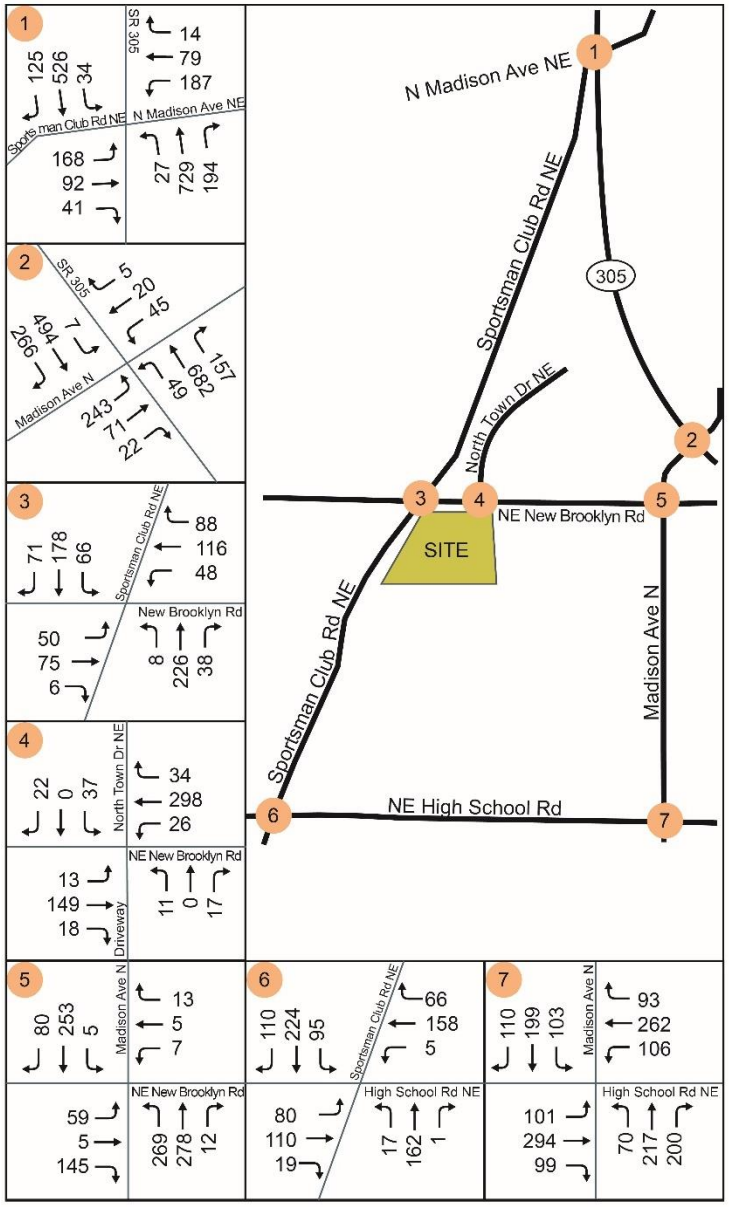
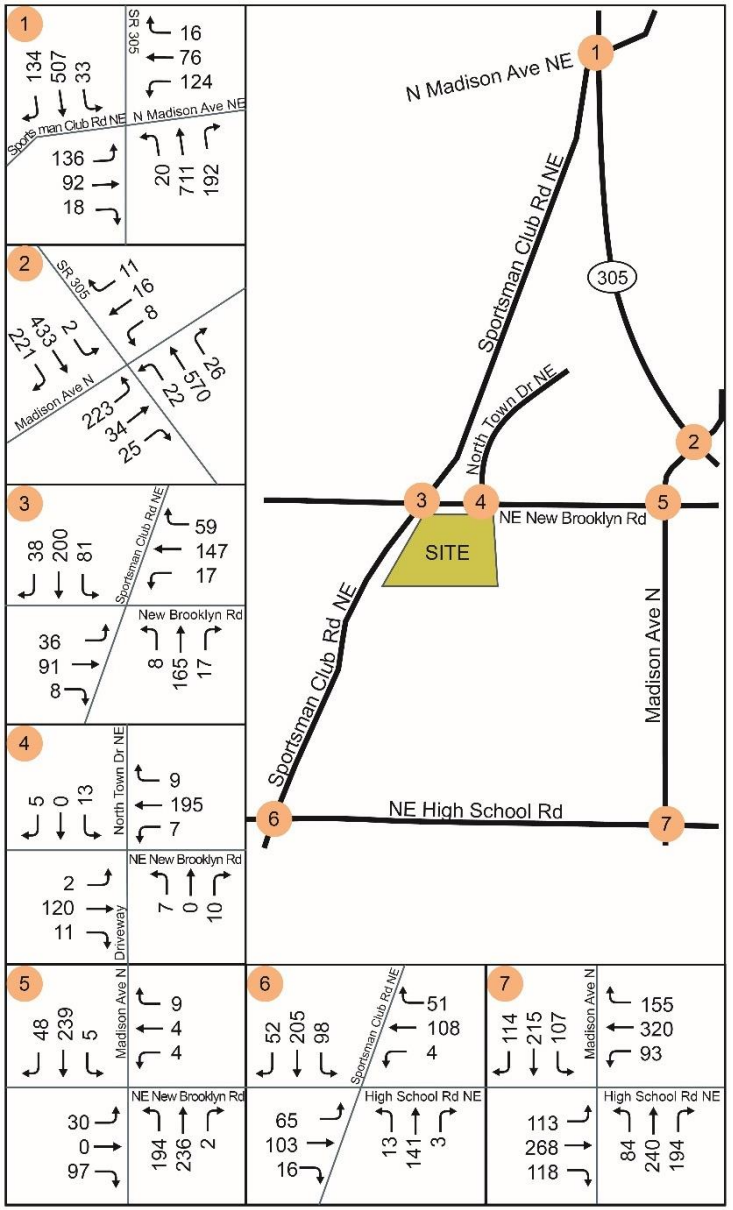


Figure 25. 2022 PM Peak Hour Traffic Volumes with Project (Phase 2)



Intersection Operations - 2022

Table 10 compares 2022 background operations to conditions with the completion of both Phases 1 and 2. For each peak hour period, the level of service and seconds of intersection delay are listed. All study intersections continue to remain at the background LOS levels; however, there are increases in intersection delays due to the addition of project trips. All intersections continue to meet LOS standard during the PM peak hour.

Table 11. 2022 Intersection Operations without and with the Proposed Project (Phases 1 and 2)

	2022 Background LOS (Delay)			2022 with Project Phases 1 and 2 - LOS (Delay)		
Intersection	**AM Peak Hour**	**School Peak Hour**	**PM Peak Hour**	**AM Peak Hour**	**School Peak Hour**	**PM Peak Hour**
Sportsman Club Rd NE/ N Madison Rd NE/SR 305	E (71)	E (65)	D (36)	E (72)	E (67)	D (37)
Madison Ave N/ SR 305	B (12)	C (35)	B (15)	B (12)	C (35)	B (15)
NE New Brooklyn Rd/ Sportsman Club Rd NE	A (7)	A (6)	A (6)	A (7)	A (6)	A (6)
NE New Brooklyn Rd/ North Town Dr NE* (Project Driveway)	B (13)	B (14)	B (11)	B (13)	C (17)	B (11)
NE New Brooklyn Rd/ Madison Ave N*	**F (115)**	**F (99)**	C (16)	**F (155)**	**F (154)**	C (17)
High School Rd/ Sportsman Club Rd NE	C (20)	C (22)	B (12)	C (20)	C (22)	B (12)
High School Rd/ Madison Ave N	A (7)	B (10)	B (13)	A (7)	B (11)	B (14)

*LOS and delay reported for worst-operating approach at 2-way Stop intersections.

Parking Analysis

Under City of Bainbridge Island Ordinance No. 2013-25, the Housing Design Demonstration Project (HDDP) program, residential parking requirements may be modified to require 1 parking space for homes under 800 square feet and 1.5 parking spaces for homes between 800-1,200 square feet. A limited number of parking spaces may be designed to accommodate alternative fuel or sub-compact vehicles. Development projects requesting a reduction in required parking through the HDDP program are required to integrate at least one guest parking space for every five dwelling units. Consistent with the city requirements, the project is currently proposing 144 parking spaces, or approximately 1.58 spaces per unit which includes residential and guest parking.

The study used the ITE *Parking Generation 4th Edition* manual to estimate the typical maximum parking demand for each land use found in the Suzuki development. Single family detached housing (Land Use 210) has an average peak period parking demand of 1.83 parking spaces per dwelling unit. For the project's proposed townhomes, the low/mid-rise apartment (Land Use 221) has an average peak period parking demand of 1.23 parking spaces per dwelling unit. The proposed accessory dwelling units are most similar to senior adult housing (Land Use 252), which has an average peak period parking demand of 0.59 parking spaces per dwelling unit.

Table 12 shows that the total estimated maximum parking demand using the ITE Parking Generation Manual is 100 parking spaces. Phase 1 requires 79 spaces and Phase 2 requires 21 spaces to meet the estimated demand.

Table 12. Summary of Maximum Parking Demand

Land Use	# Units Proposed	ITE Land Use	Peak Demand per Unit	Parking Demand
Single Family Housing	19	LU 210	1.83	35
Apartment Housing	36	LU 221	1.23	44
Phase 1 Total	55			**79**
Accessory Dwelling Units	36	LU 252	0.59	21
Phase 2 Total	36			**21**
Phase 1 and 2 Trip Generation	91			**100**

The ITE estimates a maximum demand of 100 parking spaces. To meet this demand and provide for guest parking, a supply of approximately 120-140 parking spaces will be sufficient. The Suzuki Affordable Housing project is proposing 144 parking spaces.

There are a number of strategies that can be implemented to help manage parking demand at the Suzuki Affordable Housing development. The design of the site locates parking areas away from the homes and without garages, encouraging residents to consider other modes of travel.

The following parking strategies can further reduce parking demand on the site:

- Parking Unbundling – By leasing parking spaces separately from housing, more residents may consider forgoing a second car, going car-free, or participating in a car sharing program.
- Community Character – Creating a community design and character that attracts individuals who are interested in reducing their impact on the environment.
- Car Sharing – An on-site car share program can reduce vehicle ownership and provide users with vehicles that are maintained and insured by the program (i.e. Zipcar™). Informal car share programs can allow vehicle owners to rent out personal vehicles when not in use (i.e. Turo™).
- Second Car Storage – Provide off-site storage options for individuals who still have an occasional need for a second vehicle. This type of program can also help residents transition to a one-car lifestyle, by only having on-site access to one vehicle.

Mitigation

The Suzuki Affordable Housing project will construct frontage improvements along NE New Brooklyn Road as required by city code and will contribute to the City's Transportation Impact Fee program.

The City of Bainbridge Island typically uses the PM peak hour to plan and design transportation facilities. The analysis of the Suzuki Affordable Housing project indicates that none of the study intersections will fall below the City's or WSDOT's LOS standards during the PM peak hour with the project, therefore no further mitigation is required.

Under existing conditions, the intersection at NE New Brooklyn Road/Madison Avenue N operates at LOS F and will have higher delays with the addition of the project trips during the AM and Afterschool peak hours. The City should conduct further analysis of this intersection and identify an appropriate improvement project for this location.

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Appendix A: Trip Generation

The following tables detail the ITE *Trip Generation* (10th Edition) calculations used to estimate the entering and exiting trips for the Suzuki Affordable Housing project. The trip generation is provided for each peak hour of the analysis and for daily trips.

AM Peak Hour (8:00-9:00 am) Trip Generation

Land Use	Units	ITE Land Use	ITE Rate	AM Peak Hour Trips		
				Total	Entering	Exiting
Single Family Housing	19	LU 210	T= 0.71(X) +4.80	14	3	11
Apartment Housing	36	LU 220	Ln(T)= 0.95* Ln(X)-0.51	17	4	13
Phase 1 Total	55	--	--	**31**	**7**	**24**
Accessory Dwelling Units	36	LU 220	Ln(T)= 0.95* Ln(X)-0.51	17	4	13
Phase 2 Total	36	--	--	**17**	**4**	**13**
Total – Phases 1 and 2	91	--	--	**48**	**11**	**37**

Afterschool Peak Hour (3:00-4:00 pm) Trip Generation

Land Use	Units	ITE Land Use	ITE Rate	After School Peak Hour Trips		
				Total	Entering	Exiting
Single Family Housing	19	LU 210	T = 0.71(X) +4.80	22	14	8
Apartment Housing	36	LU 220	Ln(T)=0.95* Ln(X)-0.51	25	15	10
Phase 1 Total	55	--	--	**47**	**29**	**18**
Accessory Dwelling Units	36	LU 220	Ln(T)=0.95* Ln(X)-0.51	25	15	10
Phase 2 Total	36	--	--	**25**	**15**	**10**
Total – Phases 1 and 2	91	--	--	**72**	**44**	**28**

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PM Peak Hour (4:30-5:30 pm) Trip Generation

Land Use	Units	ITE Land Use	ITE Rate	PM Peak Hour Trips		
				Total	**Entering**	**Exiting**
Single Family Housing	19	LU 210	T = 0.71(X) +4.80	21	13	8
Apartment Housing	36	LU 220	Ln(T)=0.95* Ln(X)-0.51	24	15	9
Phase 1 Total	55	--	--	**45**	**28**	**17**
Accessory Dwelling Units	36	LU 220	Ln(T)=0.95* Ln(X)-0.51	24	15	9
Phase 2 Total	36	--	--	**24**	**15**	**9**
Total – Phases 1 and 2	91	--	--	**69**	**43**	**26**

Daily Trip Generation

Land Use	Units	ITE Land Use	ITE Rate	Daily Trips		
				Total	**Entering**	**Exiting**
Single Family Housing	19	LU 210	T = 0.71(X) +4.80	226	113	113
Apartment Housing	36	LU 220	Ln(T)=0.95* Ln(X)-0.51	231	115	116
Phase 1 Total	55	--	--	**457**	**228**	**229**
Accessory Dwelling Units	36	LU 220	Ln(T)=0.95* Ln(X)-0.51	231	115	116
Phase 2 Total	36	--	--	**231**	**115**	**116**
Total – Phases 1 and 2	91	--	--	**688**	**343**	**345**

Appendix B: Community Concerns

Representatives of the design team have talked with many community members about concerns related to the project. This section identifies some of the issues heard and includes responses to the concerns.

Concern: There is a dip in New Brooklyn Road looking east from the ingress/egress for the Suzuki property, which aligns with the ingress/egress for North Town Woods. There were also related concerns about headlights issues across the intersection and the crosswalk safety.
Answer: The roadway does have a noticeable vertical curve to the east of the site. An analysis was conducted that found that site distance is adequate from the proposed driveway. Aligning the two driveways is considered best engineering practice so that vehicles have clear delineation of travel movements and placement of the crosswalk to the right of a driveway is the preferred location. A review of five years of collision data did not identify any history of collisions at this location.

Concern: Why one ingress/egress?
Answer: The site does not have a good option to the West due to stream, wetlands, slope and proximity to the proposed roundabout). An emergency access will connect to the private road to the east, owned by the School District.

Concern: How many available spaces per unit and are you counting in parking along the street?
Answer: All parking that is required by City Code will be provided onsite. We are not counting or creating parking along Sportsman Club Road NE or NE New Brooklyn Road. There is a formula for how many stalls are required, based on the size of the unit.

Concern: Worried about a shortage of parking, and it flowing into North Town Woods.
Answer: Once we know what number of units are being built, the traffic consultant will look at the parking and make sure it's adequate. We can always do more stalls, the trade-off is that some people will be unhappy with the increase in impervious surface. Whoever owns the site will not want to deal with there not being enough parking.

Concern: The crosswalk by North Town Woods Drive will we look at the safety of that? There is a pattern of usage there.
Answer: There is a lot of pedestrian activity in the area and there are 20-25 pedestrians using the crosswalk during peak times. We looked at 5 years of collision data and found no issues related to the crosswalk. The crosswalk has street lighting and crossing flags.

Concern: There appears to another ingress/egress on the driveway of the BISD property.
Answer: Yes, for emergency use only, not for everyday use.

Concern: Is it a consideration to do underground parking?
Answered: Underground parking is very expensive and can have its own set of environmental issues. A goal of the project was to maintain the housing affordability of the units.

Concern: A North Town Woods resident was concerned about parking and that it hasn't been thoroughly thought about. He has people parked in front of his house all the time.
Answered: Noted. This project won't address existing parking issues within North Town Woods. However, the project should not make that parking issue worse. A goal of this project is to provide affordable housing for the elderly, one of the biggest needs on the island. Seniors tend to have lower vehicle ownership rates and parking demand is frequently lower.

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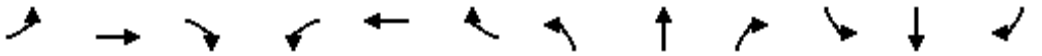
Appendix C: HCM Intersection Analysis Results



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	58	35	234	87	6	24	384	82	69	765	121
Future Volume (veh/h)	117	58	35	234	87	6	24	384	82	69	765	121
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.95	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	1885	1841	1841	1841	1870	1870	1870
Adj Flow Rate, veh/h	123	61	37	246	92	6	26	417	89	73	805	127
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	1	1	1	4	4	4	2	2	2
Cap, veh/h	139	69	42	274	102	7	66	812	672	99	858	724
Arrive On Green	0.14	0.14	0.14	0.21	0.21	0.21	0.04	0.44	0.44	0.06	0.46	0.46
Sat Flow, veh/h	979	485	294	1296	485	32	1753	1841	1525	1781	1870	1578
Grp Volume(v), veh/h	221	0	0	344	0	0	26	417	89	73	805	127
Grp Sat Flow(s),veh/h/ln	1758	0	0	1813	0	0	1753	1841	1525	1781	1870	1578
Q Serve(g_s), s	16.4	0.0	0.0	24.6	0.0	0.0	1.9	21.8	4.6	5.4	54.4	6.3
Cycle Q Clear(g_c), s	16.4	0.0	0.0	24.6	0.0	0.0	1.9	21.8	4.6	5.4	54.4	6.3
Prop In Lane	0.56		0.17	0.72		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	250	0	0	383	0	0	66	812	672	99	858	724
V/C Ratio(X)	0.89	0.00	0.00	0.90	0.00	0.00	0.39	0.51	0.13	0.74	0.94	0.18
Avail Cap(c_a), veh/h	304	0	0	504	0	0	132	969	803	134	985	831
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.0	0.0	0.0	51.1	0.0	0.0	62.5	26.9	22.1	61.8	34.2	21.2
Incr Delay (d2), s/veh	22.3	0.0	0.0	15.6	0.0	0.0	3.8	0.5	0.1	13.1	14.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	0.0	0.0	12.8	0.0	0.0	0.9	9.2	1.6	2.7	26.4	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.3	0.0	0.0	66.7	0.0	0.0	66.3	27.4	22.2	75.0	48.9	21.3
LnGrp LOS	E	A	A	E	A	A	E	C	C	E	D	C
Approach Vol, veh/h		221			344			532			1005	
Approach Delay, s/veh		78.3			66.7			28.4			47.3	
Approach LOS		E			E			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.4	63.6		23.9	10.0	66.0		33.1				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	70.0		23.0	10.0	70.0		37.0				
Max Q Clear Time (g_c+I1), s	7.4	23.8		18.4	3.9	56.4		26.6				
Green Ext Time (p_c), s	0.0	2.7		0.5	0.0	4.7		1.5				

Intersection Summary												
HCM 6th Ctrl Delay			49.0									
HCM 6th LOS			D									

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	2	384	26	1	580	375	130	16	26	6	39	14
Future Volume (veh/h)	2	384	26	1	580	375	130	16	26	6	39	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.96	0.98		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1909	1909	1909	1885	1885	1885	1894	1894	1894
Adj Flow Rate, veh/h	2	413	28	1	624	403	140	17	28	6	42	15
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	5	5	5	2	2	2	1	1	1	0	0	0
Cap, veh/h	5	766	52	4	863	713	347	42	43	106	245	81
Arrive On Green	0.00	0.45	0.45	0.00	0.45	0.45	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1739	1691	115	1818	1909	1579	1035	220	224	66	1283	421
Grp Volume(v), veh/h	2	0	441	1	624	403	185	0	0	63	0	0
Grp Sat Flow(s),veh/h/ln	1739	0	1805	1818	1909	1579	1479	0	0	1770	0	0
Q Serve(g_s), s	0.0	0.0	7.5	0.0	11.3	8.0	3.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	7.5	0.0	11.3	8.0	4.7	0.0	0.0	1.2	0.0	0.0
Prop In Lane	1.00		0.06	1.00		1.00	0.76		0.15	0.10		0.24
Lane Grp Cap(c), veh/h	5	0	818	4	863	713	432	0	0	431	0	0
V/C Ratio(X)	0.42	0.00	0.54	0.23	0.72	0.56	0.43	0.00	0.00	0.15	0.00	0.00
Avail Cap(c_a), veh/h	411	0	2559	430	2707	2239	1333	0	0	1533	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.1	0.0	8.4	21.1	9.4	8.5	15.7	0.0	0.0	14.4	0.0	0.0
Incr Delay (d2), s/veh	49.4	0.0	0.6	25.6	1.2	0.7	0.7	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	1.7	0.0	2.8	1.6	1.5	0.0	0.0	0.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.5	0.0	8.9	46.7	10.6	9.2	16.3	0.0	0.0	14.5	0.0	0.0
LnGrp LOS	E	A	A	D	B	A	B	A	A	B	A	A
Approach Vol, veh/h		443			1028			185			63	
Approach Delay, s/veh		9.2			10.1			16.3			14.5	
Approach LOS		A			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.1	24.2		13.1	5.1	24.1		13.1				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	60.0		35.0	10.0	60.0		35.0				
Max Q Clear Time (g_c+I1), s	2.0	9.5		6.7	2.0	13.3		3.2				
Green Ext Time (p_c), s	0.0	2.6		1.1	0.0	5.9		0.3				

Intersection Summary												
HCM 6th Ctrl Delay			10.7									
HCM 6th LOS			B									

Intersection	
Intersection Delay, s/veh	14.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	107	115	3	13	38	89	1	232	23	85	150	36
Future Vol, veh/h	107	115	3	13	38	89	1	232	23	85	150	36
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	1	1	1	2	2	2	6	6	6	5	5	5
Mvmt Flow	127	137	4	15	45	106	1	276	27	101	179	43
Number of Lanes	0	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NE	SW
Opposing Approach	WB	EB	SW	NE
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SW	NE	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NE	SW	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	15.1	10.6	15.1	15.7
HCM LOS	C	B	C	C

Lane	NELn1	EBLn1	WBLn1	WBLn2	SWLn1
Vol Left, %	0%	48%	25%	0%	31%
Vol Thru, %	91%	51%	75%	0%	55%
Vol Right, %	9%	1%	0%	100%	13%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	256	225	51	89	271
LT Vol	1	107	13	0	85
Through Vol	232	115	38	0	150
RT Vol	23	3	0	89	36
Lane Flow Rate	305	268	61	106	323
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.508	0.475	0.12	0.185	0.536
Departure Headway (Hd)	6	6.384	7.129	6.282	5.984
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	600	565	503	570	603
Service Time	4.029	4.417	4.876	4.029	4.012
HCM Lane V/C Ratio	0.508	0.474	0.121	0.186	0.536
HCM Control Delay	15.1	15.1	10.9	10.5	15.7
HCM Lane LOS	C	C	B	B	C
HCM 95th-tile Q	2.9	2.5	0.4	0.7	3.2

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	231	158	14	22	17
Future Vol, veh/h	6	231	158	14	22	17
Conflicting Peds, #/hr	0	0	0	21	21	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, %	-	1	3	-	1	-
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	5	5	2	2	0	0
Mvmt Flow	9	330	226	20	31	24

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	267	0	-	0	626	257
Stage 1	-	-	-	-	257	-
Stage 2	-	-	-	-	369	-
Critical Hdwy	4.15	-	-	-	6.6	6.3
Critical Hdwy Stg 1	-	-	-	-	5.6	-
Critical Hdwy Stg 2	-	-	-	-	5.6	-
Follow-up Hdwy	2.245	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1280	-	-	-	436	781
Stage 1	-	-	-	-	779	-
Stage 2	-	-	-	-	689	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1257	-	-	-	417	767
Mov Cap-2 Maneuver	-	-	-	-	417	-
Stage 1	-	-	-	-	758	-
Stage 2	-	-	-	-	677	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	12.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1257	-	-	-	521
HCM Lane V/C Ratio	0.007	-	-	-	0.107
HCM Control Delay (s)	7.9	0	-	-	12.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Intersection	
Int Delay, s/veh	16.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	58	3	191	0	1	6	120	120	7	10	351	61
Future Vol, veh/h	58	3	191	0	1	6	120	120	7	10	351	61
Conflicting Peds, #/hr	5	0	6	9	0	8	6	0	9	8	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	-1	-	-	2	-	-	-2	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	2	2	2
Mvmt Flow	74	4	245	0	1	8	154	154	9	13	450	78

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1000	1001	504	1125	1036	176	534	0	0	172	0	0
Stage 1	521	521	-	476	476	-	-	-	-	-	-	-
Stage 2	479	480	-	649	560	-	-	-	-	-	-	-
Critical Hdwy	7.3	6.7	6.3	6.9	6.3	6.1	4.1	-	-	4.12	-	-
Critical Hdwy Stg 1	6.3	5.7	-	5.9	5.3	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.3	5.7	-	5.9	5.3	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.218	-	-
Pot Cap-1 Maneuver	212	231	564	196	247	877	1044	-	-	1405	-	-
Stage 1	527	520	-	589	575	-	-	-	-	-	-	-
Stage 2	556	543	-	479	530	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	179	188	557	92	201	864	1039	-	-	1394	-	-
Mov Cap-2 Maneuver	179	188	-	92	201	-	-	-	-	-	-	-
Stage 1	439	511	-	489	477	-	-	-	-	-	-	-
Stage 2	457	451	-	261	520	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	54.8	11.2	4.4	0.2
HCM LOS	F	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1039	-	-	369	587	1394	-	-
HCM Lane V/C Ratio	0.148	-	-	0.876	0.015	0.009	-	-
HCM Control Delay (s)	9.1	0	-	54.8	11.2	7.6	0	-
HCM Lane LOS	A	A	-	F	B	A	A	-
HCM 95th %tile Q(veh)	0.5	-	-	8.5	0	0	-	-

Intersection	
Intersection Delay, s/veh	15.6
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	80	88	8	3	127	104	12	250	1	55	114	120
Future Vol, veh/h	80	88	8	3	127	104	12	250	1	55	114	120
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	3	3	3	5	5	5
Mvmt Flow	94	104	9	4	149	122	14	294	1	65	134	141
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13.8	14.7	16.3	16.7
HCM LOS	B	B	C	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	45%	1%	19%
Vol Thru, %	95%	50%	54%	39%
Vol Right, %	0%	5%	44%	42%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	263	176	234	289
LT Vol	12	80	3	55
Through Vol	250	88	127	114
RT Vol	1	8	104	120
Lane Flow Rate	309	207	275	340
Geometry Grp	1	1	1	1
Degree of Util (X)	0.536	0.382	0.472	0.567
Departure Headway (Hd)	6.235	6.645	6.17	6.005
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	576	540	581	598
Service Time	4.29	4.71	4.23	4.059
HCM Lane V/C Ratio	0.536	0.383	0.473	0.569
HCM Control Delay	16.3	13.8	14.7	16.7
HCM Lane LOS	C	B	B	C
HCM 95th-tile Q	3.2	1.8	2.5	3.5

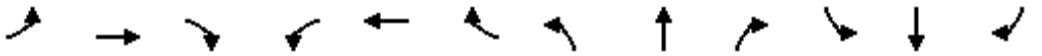
MOVEMENT SUMMARY

Site: 101 [Madison Ave / High School Rd]

Existing - AM Peak Hour
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Madison Ave N												
3	L2	49	0.0	0.396	9.1	LOS A	2.5	62.7	0.71	0.72	0.71	24.3
8	T1	117	0.0	0.396	4.8	LOS A	2.5	62.7	0.71	0.72	0.71	24.1
18	R2	133	0.0	0.396	5.3	LOS A	2.5	62.7	0.71	0.72	0.71	23.6
Approach		299	0.0	0.396	5.7	LOS A	2.5	62.7	0.71	0.72	0.71	23.9
East: High School Rd												
1	L2	85	1.0	0.463	7.8	LOS A	3.3	83.2	0.61	0.56	0.61	24.5
6	T1	236	1.0	0.463	3.5	LOS A	3.3	83.2	0.61	0.56	0.61	24.3
16	R2	116	1.0	0.463	3.9	LOS A	3.3	83.2	0.61	0.56	0.61	23.8
Approach		437	1.0	0.463	4.4	LOS A	3.3	83.2	0.61	0.56	0.61	24.2
North: Madison Ave N												
7	L2	113	1.0	0.565	10.0	LOS A	4.7	119.4	0.76	0.79	0.84	24.1
4	T1	200	1.0	0.565	5.7	LOS A	4.7	119.4	0.76	0.79	0.84	23.8
14	R2	155	1.0	0.565	6.1	LOS A	4.7	119.4	0.76	0.79	0.84	23.4
Approach		468	1.0	0.565	6.9	LOS A	4.7	119.4	0.76	0.79	0.84	23.7
West: High School Rd												
5	L2	86	0.0	0.553	10.1	LOS B	4.5	112.0	0.77	0.80	0.85	24.1
2	T1	260	0.0	0.553	5.8	LOS A	4.5	112.0	0.77	0.80	0.85	23.9
12	R2	96	0.0	0.553	6.2	LOS A	4.5	112.0	0.77	0.80	0.85	23.4
Approach		441	0.0	0.553	6.7	LOS A	4.5	112.0	0.77	0.80	0.85	23.8
All Vehicles		1646	0.6	0.565	6.0	LOS A	4.7	119.4	0.71	0.72	0.76	23.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	153	73	39	143	57	13	26	687	163	32	493	109
Future Volume (veh/h)	153	73	39	143	57	13	26	687	163	32	493	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1885	1885	1885	1885	1885	1885	1841	1841	1841
Adj Flow Rate, veh/h	170	81	43	159	63	14	29	763	181	36	548	121
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	5	5	5	1	1	1	1	1	1	4	4	4
Cap, veh/h	184	88	47	189	75	17	87	786	666	85	768	650
Arrive On Green	0.18	0.18	0.18	0.16	0.16	0.16	0.05	0.42	0.42	0.05	0.42	0.42
Sat Flow, veh/h	997	475	252	1216	482	107	1795	1885	1598	1753	1841	1560
Grp Volume(v), veh/h	294	0	0	236	0	0	29	763	181	36	548	121
Grp Sat Flow(s),veh/h/ln	1724	0	0	1805	0	0	1795	1885	1598	1753	1841	1560
Q Serve(g_s), s	17.3	0.0	0.0	13.1	0.0	0.0	1.6	40.8	7.7	2.1	25.4	5.0
Cycle Q Clear(g_c), s	17.3	0.0	0.0	13.1	0.0	0.0	1.6	40.8	7.7	2.1	25.4	5.0
Prop In Lane	0.58		0.15	0.67		0.06	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	318	0	0	281	0	0	87	786	666	85	768	650
V/C Ratio(X)	0.92	0.00	0.00	0.84	0.00	0.00	0.33	0.97	0.27	0.42	0.71	0.19
Avail Cap(c_a), veh/h	318	0	0	456	0	0	122	788	667	119	769	652
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.3	0.0	0.0	42.2	0.0	0.0	47.4	29.4	19.7	47.6	24.9	19.0
Incr Delay (d2), s/veh	31.5	0.0	0.0	7.5	0.0	0.0	2.2	24.9	0.2	3.3	3.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.0	0.0	0.0	6.4	0.0	0.0	0.7	22.0	2.7	0.9	10.7	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.7	0.0	0.0	49.7	0.0	0.0	49.6	54.3	19.9	50.9	28.1	19.1
LnGrp LOS	E	A	A	D	A	A	D	D	B	D	C	B
Approach Vol, veh/h		294			236			973			705	
Approach Delay, s/veh		72.7			49.7			47.8			27.7	
Approach LOS		E			D			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	47.9		24.0	10.0	47.9		21.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	7.0	43.0		19.0	7.0	43.0		26.0				
Max Q Clear Time (g_c+I1), s	4.1	42.8		19.3	3.6	27.4		15.1				
Green Ext Time (p_c), s	0.0	0.1		0.0	0.0	3.1		1.0				

Intersection Summary			
HCM 6th Ctrl Delay		44.9	
HCM 6th LOS		D	

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	46	632	149	7	447	234	220	66	21	43	17	5
Future Volume (veh/h)	46	632	149	7	447	234	220	66	21	43	17	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1924	1924	1924	1885	1885	1885	1864	1864	1864
Adj Flow Rate, veh/h	52	710	167	8	502	263	247	74	24	48	19	6
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	2	2	2
Cap, veh/h	81	748	176	19	916	776	378	87	28	326	120	32
Arrive On Green	0.05	0.51	0.51	0.01	0.48	0.48	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1781	1462	344	1833	1924	1631	1097	329	107	912	456	123
Grp Volume(v), veh/h	52	0	877	8	502	263	345	0	0	73	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1806	1833	1924	1631	1533	0	0	1491	0	0
Q Serve(g_s), s	2.0	0.0	32.2	0.3	12.9	7.0	12.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.0	0.0	32.2	0.3	12.9	7.0	14.8	0.0	0.0	2.4	0.0	0.0
Prop In Lane	1.00		0.19	1.00		1.00	0.72		0.07	0.66		0.08
Lane Grp Cap(c), veh/h	81	0	923	19	916	776	493	0	0	479	0	0
V/C Ratio(X)	0.64	0.00	0.95	0.42	0.55	0.34	0.70	0.00	0.00	0.15	0.00	0.00
Avail Cap(c_a), veh/h	255	0	956	262	1019	863	696	0	0	673	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	32.8	0.0	16.2	34.4	13.0	11.4	24.2	0.0	0.0	19.8	0.0	0.0
Incr Delay (d2), s/veh	8.2	0.0	17.9	14.4	0.5	0.3	1.8	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	14.3	0.2	4.5	2.1	5.3	0.0	0.0	0.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.0	0.0	34.1	48.8	13.5	11.7	26.0	0.0	0.0	19.9	0.0	0.0
LnGrp LOS	D	A	C	D	B	B	C	A	A	B	A	A
Approach Vol, veh/h		929			773			345			73	
Approach Delay, s/veh		34.5			13.3			26.0			19.9	
Approach LOS		C			B			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.7	40.7		23.4	8.2	38.3		23.4				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	37.0		28.0	10.0	37.0		28.0				
Max Q Clear Time (g_c+I1), s	2.3	34.2		16.8	4.0	14.9		4.4				
Green Ext Time (p_c), s	0.0	1.5		1.6	0.0	3.7		0.3				

Intersection Summary												
HCM 6th Ctrl Delay			24.9									
HCM 6th LOS			C									

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	46	68	6	43	108	75	8	204	34	46	156	65
Future Vol, veh/h	46	68	6	43	108	75	8	204	34	46	156	65
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	3	3	3	4	4	4	4	4	4	5	5	5
Mvmt Flow	52	76	7	48	121	84	9	229	38	52	175	73
Number of Lanes	0	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NE	SW
Opposing Approach	WB	EB	SW	NE
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SW	NE	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NE	SW	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	11.2	11.2	12.7	13.2
HCM LOS	B	B	B	B

Lane	NELn1	EBLn1	WBLn1	WBLn2	SWLn1
Vol Left, %	3%	38%	28%	0%	17%
Vol Thru, %	83%	57%	72%	0%	58%
Vol Right, %	14%	5%	0%	100%	24%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	246	120	151	75	267
LT Vol	8	46	43	0	46
Through Vol	204	68	108	0	156
RT Vol	34	6	0	75	65
Lane Flow Rate	276	135	170	84	300
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.426	0.232	0.308	0.133	0.458
Departure Headway (Hd)	5.551	6.202	6.544	5.687	5.496
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	647	576	548	628	654
Service Time	3.608	4.272	4.304	3.447	3.551
HCM Lane V/C Ratio	0.427	0.234	0.31	0.134	0.459
HCM Control Delay	12.7	11.2	12.2	9.3	13.2
HCM Lane LOS	B	B	B	A	B
HCM 95th-tile Q	2.1	0.9	1.3	0.5	2.4

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	137	281	30	34	20
Future Vol, veh/h	12	137	281	30	34	20
Conflicting Peds, #/hr	5	0	0	24	24	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	3	-	1	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	1	1	1	1	0	0
Mvmt Flow	14	165	339	36	41	24

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	399	0	-	0	598	386
Stage 1	-	-	-	-	381	-
Stage 2	-	-	-	-	217	-
Critical Hdwy	4.11	-	-	-	6.6	6.3
Critical Hdwy Stg 1	-	-	-	-	5.6	-
Critical Hdwy Stg 2	-	-	-	-	5.6	-
Follow-up Hdwy	2.209	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1165	-	-	-	453	659
Stage 1	-	-	-	-	680	-
Stage 2	-	-	-	-	814	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1141	-	-	-	428	642
Mov Cap-2 Maneuver	-	-	-	-	428	-
Stage 1	-	-	-	-	656	-
Stage 2	-	-	-	-	797	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	13.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1141	-	-	-	488
HCM Lane V/C Ratio	0.013	-	-	-	0.133
HCM Control Delay (s)	8.2	0	-	-	13.5
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.5

Intersection	
Int Delay, s/veh	12.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	51	5	122	7	5	12	235	256	11	5	227	68
Future Vol, veh/h	51	5	122	7	5	12	235	256	11	5	227	68
Conflicting Peds, #/hr	3	0	11	13	0	5	11	0	13	5	0	3
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	-1	-	-	2	-	-	-2	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	1	1	1	0	0	0	2	2	2	0	0	0
Mvmt Flow	59	6	142	8	6	14	273	298	13	6	264	79

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1193	1197	328	1267	1230	323	354	0	0	324	0	0
Stage 1	327	327	-	864	864	-	-	-	-	-	-	-
Stage 2	866	870	-	403	366	-	-	-	-	-	-	-
Critical Hdwy	7.31	6.71	6.31	6.9	6.3	6.1	4.12	-	-	4.1	-	-
Critical Hdwy Stg 1	6.31	5.71	-	5.9	5.3	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.31	5.71	-	5.9	5.3	-	-	-	-	-	-	-
Follow-up Hdwy	3.509	4.009	3.309	3.5	4	3.3	2.218	-	-	2.2	-	-
Pot Cap-1 Maneuver	154	175	709	158	192	729	1205	-	-	1247	-	-
Stage 1	675	638	-	369	392	-	-	-	-	-	-	-
Stage 2	333	353	-	642	639	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	113	123	694	93	135	718	1193	-	-	1233	-	-
Mov Cap-2 Maneuver	113	123	-	93	135	-	-	-	-	-	-	-
Stage 1	483	628	-	264	280	-	-	-	-	-	-	-
Stage 2	230	252	-	497	629	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	53.1	27.7	4.2	0.1
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1193	-	-	267	186	1233	-	-
HCM Lane V/C Ratio	0.229	-	-	0.775	0.15	0.005	-	-
HCM Control Delay (s)	8.9	0	-	53.1	27.7	7.9	0	-
HCM Lane LOS	A	A	-	F	D	A	A	-
HCM 95th %tile Q(veh)	0.9	-	-	5.8	0.5	0	-	-

Intersection	
Intersection Delay, s/veh	16.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	74	100	18	4	142	61	16	145	0	85	204	103
Future Vol, veh/h	74	100	18	4	142	61	16	145	0	85	204	103
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	5	5	5	1	1	1	2	2	2	1	1	1
Mvmt Flow	85	115	21	5	163	70	18	167	0	98	234	118
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13.7	13.4	12.4	21.6
HCM LOS	B	B	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	39%	2%	22%
Vol Thru, %	90%	52%	69%	52%
Vol Right, %	0%	9%	29%	26%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	161	192	207	392
LT Vol	16	74	4	85
Through Vol	145	100	142	204
RT Vol	0	18	61	103
Lane Flow Rate	185	221	238	451
Geometry Grp	1	1	1	1
Degree of Util (X)	0.325	0.395	0.407	0.713
Departure Headway (Hd)	6.314	6.438	6.154	5.696
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	568	558	583	640
Service Time	4.369	4.496	4.211	3.696
HCM Lane V/C Ratio	0.326	0.396	0.408	0.705
HCM Control Delay	12.4	13.7	13.4	21.6
HCM Lane LOS	B	B	B	C
HCM 95th-tile Q	1.4	1.9	2	5.9

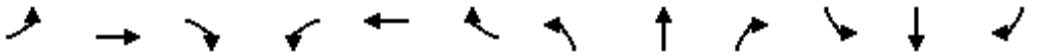
MOVEMENT SUMMARY

Site: 101 [Madison Ave / High School Rd]

Existing - After School PM Peak
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Madison Ave N												
3	L2	72	0.0	0.671	13.7	LOS B	6.9	171.8	0.89	1.03	1.16	23.2
8	T1	210	0.0	0.671	9.4	LOS A	6.9	171.8	0.89	1.03	1.16	23.0
18	R2	204	0.0	0.671	9.9	LOS A	6.9	171.8	0.89	1.03	1.16	22.6
Approach		486	0.0	0.671	10.2	LOS B	6.9	171.8	0.89	1.03	1.16	22.9
East: High School Rd												
1	L2	102	1.0	0.554	9.9	LOS A	4.7	118.5	0.77	0.79	0.85	24.1
6	T1	264	1.0	0.554	5.6	LOS A	4.7	118.5	0.77	0.79	0.85	23.9
16	R2	90	1.0	0.554	6.1	LOS A	4.7	118.5	0.77	0.79	0.85	23.4
Approach		457	1.0	0.554	6.7	LOS A	4.7	118.5	0.77	0.79	0.85	23.8
North: Madison Ave N												
7	L2	100	1.0	0.512	10.1	LOS B	4.0	100.6	0.78	0.81	0.85	24.0
4	T1	186	1.0	0.512	5.9	LOS A	4.0	100.6	0.78	0.81	0.85	23.8
14	R2	108	1.0	0.512	6.3	LOS A	4.0	100.6	0.78	0.81	0.85	23.3
Approach		393	1.0	0.512	7.1	LOS A	4.0	100.6	0.78	0.81	0.85	23.7
West: High School Rd												
5	L2	98	0.0	0.613	10.8	LOS B	5.6	139.0	0.80	0.85	0.93	23.9
2	T1	299	0.0	0.613	6.6	LOS A	5.6	139.0	0.80	0.85	0.93	23.7
12	R2	98	0.0	0.613	7.0	LOS A	5.6	139.0	0.80	0.85	0.93	23.2
Approach		495	0.0	0.613	7.5	LOS A	5.6	139.0	0.80	0.85	0.93	23.6
All Vehicles		1830	0.5	0.671	7.9	LOS A	6.9	171.8	0.81	0.87	0.95	23.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	84	17	116	66	15	19	667	182	31	474	113
Future Volume (veh/h)	120	84	17	116	66	15	19	667	182	31	474	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1856	1856	1856
Adj Flow Rate, veh/h	132	92	19	127	73	16	21	733	200	34	521	124
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	3	3	3
Cap, veh/h	161	112	23	158	91	20	91	819	675	90	806	682
Arrive On Green	0.16	0.16	0.16	0.15	0.15	0.15	0.05	0.43	0.43	0.05	0.43	0.43
Sat Flow, veh/h	983	685	142	1063	611	134	1795	1885	1555	1767	1856	1571
Grp Volume(v), veh/h	243	0	0	216	0	0	21	733	200	34	521	124
Grp Sat Flow(s),veh/h/ln	1811	0	0	1807	0	0	1795	1885	1555	1767	1856	1571
Q Serve(g_s), s	12.8	0.0	0.0	11.4	0.0	0.0	1.1	35.5	8.2	1.8	21.8	4.8
Cycle Q Clear(g_c), s	12.8	0.0	0.0	11.4	0.0	0.0	1.1	35.5	8.2	1.8	21.8	4.8
Prop In Lane	0.54		0.08	0.59		0.07	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	296	0	0	269	0	0	91	819	675	90	806	682
V/C Ratio(X)	0.82	0.00	0.00	0.80	0.00	0.00	0.23	0.90	0.30	0.38	0.65	0.18
Avail Cap(c_a), veh/h	643	0	0	642	0	0	182	1147	946	179	1129	956
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.8	0.0	0.0	40.6	0.0	0.0	44.9	25.8	18.1	45.3	21.9	17.1
Incr Delay (d2), s/veh	5.7	0.0	0.0	5.6	0.0	0.0	1.3	7.1	0.2	2.6	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	0.0	0.0	5.4	0.0	0.0	0.5	15.6	2.7	0.8	8.7	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.5	0.0	0.0	46.2	0.0	0.0	46.2	32.9	18.3	47.9	22.8	17.2
LnGrp LOS	D	A	A	D	A	A	D	C	B	D	C	B
Approach Vol, veh/h		243			216			954			679	
Approach Delay, s/veh		45.5			46.2			30.1			23.0	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	47.8		21.1	10.0	47.8		19.6				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	60.0		35.0	10.0	60.0		35.0				
Max Q Clear Time (g_c+I1), s	3.8	37.5		14.8	3.1	23.8		13.4				
Green Ext Time (p_c), s	0.0	5.3		1.3	0.0	3.5		1.2				

Intersection Summary												
HCM 6th Ctrl Delay			31.3									
HCM 6th LOS			C									

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	19	541	25	2	411	200	204	31	24	8	13	10
Future Volume (veh/h)	19	541	25	2	411	200	204	31	24	8	13	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1909	1909	1909	1900	1900	1900	1894	1894	1894
Adj Flow Rate, veh/h	21	608	28	2	462	225	229	35	27	9	15	11
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	1	1	1	2	2	2	0	0	0	0	0	0
Cap, veh/h	46	761	35	5	770	652	430	51	35	165	240	142
Arrive On Green	0.03	0.43	0.43	0.00	0.40	0.40	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1795	1786	82	1818	1909	1618	1148	200	138	272	934	553
Grp Volume(v), veh/h	21	0	636	2	462	225	291	0	0	35	0	0
Grp Sat Flow(s),veh/h/ln	1795	0	1868	1818	1909	1618	1486	0	0	1759	0	0
Q Serve(g_s), s	0.6	0.0	14.2	0.1	9.1	4.6	7.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.6	0.0	14.2	0.1	9.1	4.6	8.6	0.0	0.0	0.7	0.0	0.0
Prop In Lane	1.00		0.04	1.00		1.00	0.79		0.09	0.26		0.31
Lane Grp Cap(c), veh/h	46	0	796	5	770	652	517	0	0	547	0	0
V/C Ratio(X)	0.46	0.00	0.80	0.40	0.60	0.34	0.56	0.00	0.00	0.06	0.00	0.00
Avail Cap(c_a), veh/h	376	0	2346	381	2398	2032	1213	0	0	1318	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.0	0.0	11.9	23.8	11.2	9.9	16.3	0.0	0.0	13.4	0.0	0.0
Incr Delay (d2), s/veh	7.0	0.0	1.9	44.8	0.8	0.3	1.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	4.1	0.1	2.7	1.1	2.7	0.0	0.0	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.0	0.0	13.8	68.6	12.0	10.2	17.2	0.0	0.0	13.5	0.0	0.0
LnGrp LOS	C	A	B	E	B	B	B	A	A	B	A	A
Approach Vol, veh/h		657			689			291			35	
Approach Delay, s/veh		14.4			11.6			17.2			13.5	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.1	25.3		17.3	6.2	24.3		17.3				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	60.0		35.0	10.0	60.0		35.0				
Max Q Clear Time (g_c+I1), s	2.1	16.2		10.6	2.6	11.1		2.7				
Green Ext Time (p_c), s	0.0	4.2		1.8	0.0	3.5		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		13.7	
HCM 6th LOS		B	

Intersection	
Intersection Delay, s/veh	11.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	34	82	8	13	136	47	8	151	14	63	180	36
Future Vol, veh/h	34	82	8	13	136	47	8	151	14	63	180	36
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	2	2	2
Mvmt Flow	40	96	9	15	160	55	9	178	16	74	212	42
Number of Lanes	0	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NE	SW
Opposing Approach	WB	EB	SW	NE
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SW	NE	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NE	SW	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	10.9	11.1	11.2	13.4
HCM LOS	B	B	B	B

Lane	NELn1	EBLn1	WBLn1	WBLn2	SWLn1
Vol Left, %	5%	27%	9%	0%	23%
Vol Thru, %	87%	66%	91%	0%	65%
Vol Right, %	8%	6%	0%	100%	13%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	173	124	149	47	279
LT Vol	8	34	13	0	63
Through Vol	151	82	136	0	180
RT Vol	14	8	0	47	36
Lane Flow Rate	204	146	175	55	328
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.316	0.242	0.306	0.085	0.488
Departure Headway (Hd)	5.592	5.96	6.285	5.529	5.35
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	641	601	571	646	673
Service Time	3.646	4.017	4.036	3.28	3.397
HCM Lane V/C Ratio	0.318	0.243	0.306	0.085	0.487
HCM Control Delay	11.2	10.9	11.8	8.8	13.4
HCM Lane LOS	B	B	B	A	B
HCM 95th-tile Q	1.4	0.9	1.3	0.3	2.7

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	115	188	9	13	4
Future Vol, veh/h	2	115	188	9	13	4
Conflicting Peds, #/hr	0	0	0	0	3	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, %	-	1	3	-	1	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	10	10	3	3	0	0
Mvmt Flow	2	128	209	10	14	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	219	0	-	0	349	214
Stage 1	-	-	-	-	214	-
Stage 2	-	-	-	-	135	-
Critical Hdwy	4.2	-	-	-	6.6	6.3
Critical Hdwy Stg 1	-	-	-	-	5.6	-
Critical Hdwy Stg 2	-	-	-	-	5.6	-
Follow-up Hdwy	2.29	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1304	-	-	-	640	826
Stage 1	-	-	-	-	817	-
Stage 2	-	-	-	-	890	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1304	-	-	-	639	826
Mov Cap-2 Maneuver	-	-	-	-	639	-
Stage 1	-	-	-	-	815	-
Stage 2	-	-	-	-	890	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	10.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1304	-	-	-	675
HCM Lane V/C Ratio	0.002	-	-	-	0.028
HCM Control Delay (s)	7.8	0	-	-	10.5
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	25	0	77	4	4	9	162	218	2	5	219	39
Future Vol, veh/h	25	0	77	4	4	9	162	218	2	5	219	39
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	-1	-	-	2	-	-	-2	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	0	0	0	0	0	0	1	1	1
Mvmt Flow	26	0	80	4	4	9	169	227	2	5	228	41

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	832	826	249	865	845	228	269	0	0	229	0	0
Stage 1	259	259	-	566	566	-	-	-	-	-	-	-
Stage 2	573	567	-	299	279	-	-	-	-	-	-	-
Critical Hdwy	7.32	6.72	6.32	6.9	6.3	6.1	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.32	5.72	-	5.9	5.3	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.32	5.72	-	5.9	5.3	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.5	4	3.3	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	275	293	784	290	316	821	1306	-	-	1345	-	-
Stage 1	735	684	-	529	527	-	-	-	-	-	-	-
Stage 2	489	491	-	726	694	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	238	249	784	230	268	821	1306	-	-	1345	-	-
Mov Cap-2 Maneuver	238	249	-	230	268	-	-	-	-	-	-	-
Stage 1	626	681	-	451	449	-	-	-	-	-	-	-
Stage 2	408	418	-	649	691	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.1	14.6	3.5	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1306	-	-	502	393	1345	-	-
HCM Lane V/C Ratio	0.129	-	-	0.212	0.045	0.004	-	-
HCM Control Delay (s)	8.2	0	-	14.1	14.6	7.7	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0.8	0.1	0	-	-

Intersection	
Intersection Delay, s/veh	11.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	62	90	15	2	93	45	12	130	1	87	188	49
Future Vol, veh/h	62	90	15	2	93	45	12	130	1	87	188	49
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	1	1	1	4	4	4	3	3	3	1	1	1
Mvmt Flow	66	96	16	2	99	48	13	138	1	93	200	52
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.6	10	10	12.7
HCM LOS	B	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	37%	1%	27%
Vol Thru, %	91%	54%	66%	58%
Vol Right, %	1%	9%	32%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	143	167	140	324
LT Vol	12	62	2	87
Through Vol	130	90	93	188
RT Vol	1	15	45	49
Lane Flow Rate	152	178	149	345
Geometry Grp	1	1	1	1
Degree of Util (X)	0.228	0.271	0.223	0.482
Departure Headway (Hd)	5.39	5.495	5.392	5.03
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	666	654	666	717
Service Time	3.424	3.532	3.43	3.058
HCM Lane V/C Ratio	0.228	0.272	0.224	0.481
HCM Control Delay	10	10.6	10	12.7
HCM Lane LOS	A	B	A	B
HCM 95th-tile Q	0.9	1.1	0.8	2.6

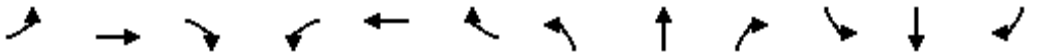
MOVEMENT SUMMARY

Site: 101 [Madison Ave / High School Rd]

Existing - PM Peak Hour
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Madison Ave N												
3	L2	85	0.0	0.673	13.6	LOS B	7.4	183.2	0.91	1.04	1.17	23.2
8	T1	233	0.0	0.673	9.3	LOS A	7.4	183.2	0.91	1.04	1.17	23.0
18	R2	196	0.0	0.673	9.8	LOS A	7.4	183.2	0.91	1.04	1.17	22.6
Approach		513	0.0	0.673	10.2	LOS B	7.4	183.2	0.91	1.04	1.17	22.9
East: High School Rd												
1	L2	82	1.0	0.698	13.3	LOS B	8.1	202.8	0.91	1.01	1.16	23.3
6	T1	317	1.0	0.698	9.0	LOS A	8.1	202.8	0.91	1.01	1.16	23.1
16	R2	155	1.0	0.698	9.5	LOS A	8.1	202.8	0.91	1.01	1.16	22.7
Approach		554	1.0	0.698	9.8	LOS A	8.1	202.8	0.91	1.01	1.16	23.0
North: Madison Ave N												
7	L2	108	1.0	0.579	11.7	LOS B	5.3	133.2	0.85	0.93	1.01	23.6
4	T1	205	1.0	0.579	7.5	LOS A	5.3	133.2	0.85	0.93	1.01	23.4
14	R2	115	1.0	0.579	7.9	LOS A	5.3	133.2	0.85	0.93	1.01	22.9
Approach		428	1.0	0.579	8.7	LOS A	5.3	133.2	0.85	0.93	1.01	23.3
West: High School Rd												
5	L2	110	0.0	0.594	10.7	LOS B	5.6	139.4	0.81	0.85	0.93	23.9
2	T1	268	0.0	0.594	6.4	LOS A	5.6	139.4	0.81	0.85	0.93	23.7
12	R2	113	0.0	0.594	6.9	LOS A	5.6	139.4	0.81	0.85	0.93	23.2
Approach		491	0.0	0.594	7.5	LOS A	5.6	139.4	0.81	0.85	0.93	23.6
All Vehicles		1987	0.5	0.698	9.1	LOS A	8.1	202.8	0.87	0.96	1.07	23.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	121	86	36	282	107	6	25	394	128	71	785	124
Future Volume (veh/h)	121	86	36	282	107	6	25	394	128	71	785	124
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	1885	1841	1841	1841	1870	1870	1870
Adj Flow Rate, veh/h	127	91	38	297	113	6	27	428	139	75	826	131
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	1	1	1	4	4	4	2	2	2
Cap, veh/h	131	94	39	310	118	6	57	788	653	97	843	711
Arrive On Green	0.15	0.15	0.15	0.24	0.24	0.24	0.03	0.43	0.43	0.05	0.45	0.45
Sat Flow, veh/h	878	629	263	1295	493	26	1753	1841	1525	1781	1870	1578
Grp Volume(v), veh/h	256	0	0	416	0	0	27	428	139	75	826	131
Grp Sat Flow(s),veh/h/ln	1770	0	0	1814	0	0	1753	1841	1525	1781	1870	1578
Q Serve(g_s), s	22.3	0.0	0.0	35.0	0.0	0.0	2.3	26.8	8.9	6.4	67.2	7.7
Cycle Q Clear(g_c), s	22.3	0.0	0.0	35.0	0.0	0.0	2.3	26.8	8.9	6.4	67.2	7.7
Prop In Lane	0.50		0.15	0.71		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	263	0	0	434	0	0	57	788	653	97	843	711
V/C Ratio(X)	0.97	0.00	0.00	0.96	0.00	0.00	0.48	0.54	0.21	0.77	0.98	0.18
Avail Cap(c_a), veh/h	263	0	0	434	0	0	113	833	690	115	846	714
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.5	0.0	0.0	58.1	0.0	0.0	73.6	32.9	27.8	72.2	41.8	25.5
Incr Delay (d2), s/veh	47.7	0.0	0.0	32.6	0.0	0.0	6.1	0.6	0.2	23.1	26.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.6	0.0	0.0	20.0	0.0	0.0	1.1	11.7	3.2	3.5	35.5	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	113.2	0.0	0.0	90.7	0.0	0.0	79.6	33.6	28.0	95.3	67.8	25.6
LnGrp LOS	F	A	A	F	A	A	E	C	C	F	E	C
Approach Vol, veh/h		256			416			594			1032	
Approach Delay, s/veh		113.2			90.7			34.4			64.5	
Approach LOS		F			F			C			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.4	71.2		28.0	10.0	74.7		42.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	70.0		23.0	10.0	70.0		37.0				
Max Q Clear Time (g_c+I1), s	8.4	28.8		24.3	4.3	69.2		37.0				
Green Ext Time (p_c), s	0.0	2.9		0.0	0.0	0.5		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			66.9									
HCM 6th LOS			E									

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	2	426	27	1	621	401	146	16	27	6	40	15
Future Volume (veh/h)	2	426	27	1	621	401	146	16	27	6	40	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.96	0.99		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1909	1909	1909	1885	1885	1885	1894	1894	1894
Adj Flow Rate, veh/h	2	458	29	1	668	431	157	17	29	6	43	16
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	5	5	5	2	2	2	1	1	1	0	0	0
Cap, veh/h	5	800	51	4	897	742	355	39	42	97	257	88
Arrive On Green	0.00	0.47	0.47	0.00	0.47	0.47	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1739	1699	108	1818	1909	1579	1069	192	210	60	1275	436
Grp Volume(v), veh/h	2	0	487	1	668	431	203	0	0	65	0	0
Grp Sat Flow(s),veh/h/ln	1739	0	1806	1818	1909	1579	1471	0	0	1770	0	0
Q Serve(g_s), s	0.1	0.0	9.0	0.0	13.1	9.2	4.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	0.0	9.0	0.0	13.1	9.2	5.7	0.0	0.0	1.4	0.0	0.0
Prop In Lane	1.00		0.06	1.00		1.00	0.77		0.14	0.09		0.25
Lane Grp Cap(c), veh/h	5	0	851	4	897	742	436	0	0	443	0	0
V/C Ratio(X)	0.42	0.00	0.57	0.25	0.74	0.58	0.47	0.00	0.00	0.15	0.00	0.00
Avail Cap(c_a), veh/h	378	0	2353	395	2487	2057	1223	0	0	1409	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	22.9	0.0	8.8	23.0	10.0	8.9	16.8	0.0	0.0	15.2	0.0	0.0
Incr Delay (d2), s/veh	49.5	0.0	0.6	30.6	1.3	0.7	0.8	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	2.1	0.0	3.4	1.9	1.8	0.0	0.0	0.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.4	0.0	9.4	53.6	11.2	9.6	17.6	0.0	0.0	15.4	0.0	0.0
LnGrp LOS	E	A	A	D	B	A	B	A	A	B	A	A
Approach Vol, veh/h		489			1100			203			65	
Approach Delay, s/veh		9.7			10.6			17.6			15.4	
Approach LOS		A			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.1	26.7		14.3	5.1	26.6		14.3				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	60.0		35.0	10.0	60.0		35.0				
Max Q Clear Time (g_c+I1), s	2.0	11.0		7.7	2.1	15.1		3.4				
Green Ext Time (p_c), s	0.0	3.0		1.2	0.0	6.5		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		11.3	
HCM 6th LOS		B	

MOVEMENT SUMMARY

Site: 101 [Sportsman Club & New BrooklyIn Roundabout]

2020 Background AM Peak Hour 8-9
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
East: NE New Brooklyn Rd												
1a	L1	14	2.1	0.162	10.3	LOS B	0.8	20.9	0.51	0.63	0.51	35.8
6	T1	42	2.1	0.162	5.9	LOS A	0.8	20.9	0.51	0.63	0.51	36.2
16b	R3	97	2.1	0.162	6.1	LOS A	0.8	20.9	0.51	0.63	0.51	34.7
Approach		153	2.1	0.162	6.4	LOS A	0.8	20.9	0.51	0.63	0.51	35.2
NorthEast: Sportsman Club Road NE												
1bx	L3	93	5.2	0.253	11.2	LOS B	1.4	37.1	0.22	0.51	0.22	36.4
6x	T1	164	5.2	0.253	4.4	LOS A	1.4	37.1	0.22	0.51	0.22	36.0
16ax	R1	41	5.2	0.253	4.0	LOS A	1.4	37.1	0.22	0.51	0.22	35.7
Approach		298	5.2	0.253	6.4	LOS A	1.4	37.1	0.22	0.51	0.22	36.1
West:												
5a	L1	117	0.9	0.228	9.9	LOS A	1.2	29.2	0.44	0.62	0.44	35.1
2	T1	119	0.9	0.228	5.5	LOS A	1.2	29.2	0.44	0.62	0.44	35.4
12b	R3	3	0.9	0.228	5.6	LOS A	1.2	29.2	0.44	0.62	0.44	34.1
Approach		239	0.9	0.228	7.6	LOS A	1.2	29.2	0.44	0.62	0.44	35.2
SouthWest: Sportsman Club Road NE												
5bx	L3	1	6.3	0.296	12.9	LOS B	1.6	42.5	0.52	0.59	0.52	36.3
2x	T1	252	6.3	0.296	6.1	LOS A	1.6	42.5	0.52	0.59	0.52	35.9
12ax	R1	26	6.3	0.296	5.7	LOS A	1.6	42.5	0.52	0.59	0.52	35.6
Approach		279	6.3	0.296	6.1	LOS A	1.6	42.5	0.52	0.59	0.52	35.9
All Vehicles		969	4.0	0.296	6.6	LOS A	1.6	42.5	0.41	0.58	0.41	35.7

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	244	171	14	24	18
Future Vol, veh/h	8	244	171	14	24	18
Conflicting Peds, #/hr	0	0	0	21	21	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, %	-	1	3	-	1	-
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	5	5	2	2	0	0
Mvmt Flow	11	349	244	20	34	26

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	285	0	-	0	667	275
Stage 1	-	-	-	-	275	-
Stage 2	-	-	-	-	392	-
Critical Hdwy	4.15	-	-	-	6.6	6.3
Critical Hdwy Stg 1	-	-	-	-	5.6	-
Critical Hdwy Stg 2	-	-	-	-	5.6	-
Follow-up Hdwy	2.245	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1260	-	-	-	412	763
Stage 1	-	-	-	-	764	-
Stage 2	-	-	-	-	672	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1237	-	-	-	393	749
Mov Cap-2 Maneuver	-	-	-	-	393	-
Stage 1	-	-	-	-	742	-
Stage 2	-	-	-	-	660	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	13.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1237	-	-	-	494
HCM Lane V/C Ratio	0.009	-	-	-	0.121
HCM Control Delay (s)	7.9	0	-	-	13.3
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Intersection	
Int Delay, s/veh	27.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	65	3	201	0	1	6	129	132	7	10	373	66
Future Vol, veh/h	65	3	201	0	1	6	129	132	7	10	373	66
Conflicting Peds, #/hr	5	0	6	9	0	8	6	0	9	8	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	-1	-	-	2	-	-	-2	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	2	2	2
Mvmt Flow	83	4	258	0	1	8	165	169	9	13	478	85

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1069	1070	536	1200	1108	191	569	0	0	187	0	0
Stage 1	553	553	-	513	513	-	-	-	-	-	-	-
Stage 2	516	517	-	687	595	-	-	-	-	-	-	-
Critical Hdwy	7.3	6.7	6.3	6.9	6.3	6.1	4.1	-	-	4.12	-	-
Critical Hdwy Stg 1	6.3	5.7	-	5.9	5.3	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.3	5.7	-	5.9	5.3	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.218	-	-
Pot Cap-1 Maneuver	189	210	540	175	225	860	1013	-	-	1387	-	-
Stage 1	505	502	-	564	555	-	-	-	-	-	-	-
Stage 2	530	522	-	457	512	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	157	167	533	74	179	847	1008	-	-	1376	-	-
Mov Cap-2 Maneuver	157	167	-	74	179	-	-	-	-	-	-	-
Stage 1	411	492	-	458	450	-	-	-	-	-	-	-
Stage 2	425	423	-	229	502	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	96.3	11.6	4.5	0.2
HCM LOS	F	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1008	-	-	332	552	1376	-	-
HCM Lane V/C Ratio	0.164	-	-	1.039	0.016	0.009	-	-
HCM Control Delay (s)	9.3	0	-	96.3	11.6	7.6	0	-
HCM Lane LOS	A	A	-	F	B	A	A	-
HCM 95th %tile Q(veh)	0.6	-	-	12.2	0.1	0	-	-

Intersection	
Intersection Delay, s/veh	17.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	85	99	8	3	133	112	12	265	2	61	121	125
Future Vol, veh/h	85	99	8	3	133	112	12	265	2	61	121	125
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	3	3	3	5	5	5
Mvmt Flow	100	116	9	4	156	132	14	312	2	72	142	147
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	15.4	16.6	18.9	19.7
HCM LOS	C	C	C	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	44%	1%	20%
Vol Thru, %	95%	52%	54%	39%
Vol Right, %	1%	4%	45%	41%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	279	192	248	307
LT Vol	12	85	3	61
Through Vol	265	99	133	121
RT Vol	2	8	112	125
Lane Flow Rate	328	226	292	361
Geometry Grp	1	1	1	1
Degree of Util (X)	0.595	0.437	0.525	0.632
Departure Headway (Hd)	6.528	6.959	6.472	6.297
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	548	513	554	571
Service Time	4.614	5.053	4.56	4.381
HCM Lane V/C Ratio	0.599	0.441	0.527	0.632
HCM Control Delay	18.9	15.4	16.6	19.7
HCM Lane LOS	C	C	C	C
HCM 95th-tile Q	3.9	2.2	3	4.4

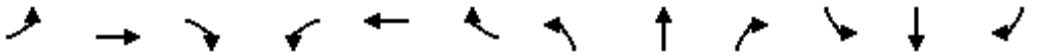
MOVEMENT SUMMARY

Site: 101 [Madison Ave / High School Rd]

2020 Background - AM Peak Hour
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Madison Ave N												
3	L2	52	0.0	0.442	9.6	LOS A	3.0	74.5	0.76	0.77	0.78	24.2
8	T1	127	0.0	0.442	5.4	LOS A	3.0	74.5	0.76	0.77	0.78	24.0
18	R2	145	0.0	0.442	5.8	LOS A	3.0	74.5	0.76	0.77	0.78	23.5
Approach		324	0.0	0.442	6.3	LOS A	3.0	74.5	0.76	0.77	0.78	23.8
East: High School Rd												
1	L2	89	1.0	0.498	8.0	LOS A	3.7	92.4	0.65	0.60	0.65	24.4
6	T1	250	1.0	0.498	3.7	LOS A	3.7	92.4	0.65	0.60	0.65	24.2
16	R2	122	1.0	0.498	4.2	LOS A	3.7	92.4	0.65	0.60	0.65	23.8
Approach		461	1.0	0.498	4.7	LOS A	3.7	92.4	0.65	0.60	0.65	24.1
North: Madison Ave N												
7	L2	117	1.0	0.617	11.1	LOS B	5.8	146.0	0.81	0.87	0.95	23.8
4	T1	217	1.0	0.617	6.8	LOS A	5.8	146.0	0.81	0.87	0.95	23.6
14	R2	165	1.0	0.617	7.3	LOS A	5.8	146.0	0.81	0.87	0.95	23.1
Approach		500	1.0	0.617	8.0	LOS A	5.8	146.0	0.81	0.87	0.95	23.5
West: High School Rd												
5	L2	91	0.0	0.604	11.2	LOS B	5.4	136.2	0.82	0.88	0.96	23.8
2	T1	277	0.0	0.604	6.9	LOS A	5.4	136.2	0.82	0.88	0.96	23.6
12	R2	100	0.0	0.604	7.4	LOS A	5.4	136.2	0.82	0.88	0.96	23.1
Approach		468	0.0	0.604	7.9	LOS A	5.4	136.2	0.82	0.88	0.96	23.5
All Vehicles		1753	0.5	0.617	6.8	LOS A	5.8	146.0	0.76	0.78	0.84	23.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	89	40	183	75	13	27	708	189	33	508	116
Future Volume (veh/h)	160	89	40	183	75	13	27	708	189	33	508	116
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1885	1885	1885	1885	1885	1885	1841	1841	1841
Adj Flow Rate, veh/h	178	99	44	203	83	14	30	787	210	37	564	129
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	5	5	5	1	1	1	1	1	1	4	4	4
Cap, veh/h	170	94	42	231	94	16	84	756	641	82	738	626
Arrive On Green	0.18	0.18	0.18	0.19	0.19	0.19	0.05	0.40	0.40	0.05	0.40	0.40
Sat Flow, veh/h	959	533	237	1224	500	84	1795	1885	1598	1753	1841	1560
Grp Volume(v), veh/h	321	0	0	300	0	0	30	787	210	37	564	129
Grp Sat Flow(s),veh/h/ln	1729	0	0	1809	0	0	1795	1885	1598	1753	1841	1560
Q Serve(g_s), s	19.0	0.0	0.0	17.3	0.0	0.0	1.7	43.0	9.7	2.2	28.4	5.8
Cycle Q Clear(g_c), s	19.0	0.0	0.0	17.3	0.0	0.0	1.7	43.0	9.7	2.2	28.4	5.8
Prop In Lane	0.55		0.14	0.68		0.05	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	306	0	0	341	0	0	84	756	641	82	738	626
V/C Ratio(X)	1.05	0.00	0.00	0.88	0.00	0.00	0.36	1.04	0.33	0.45	0.76	0.21
Avail Cap(c_a), veh/h	306	0	0	439	0	0	117	756	641	114	738	626
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.1	0.0	0.0	42.3	0.0	0.0	49.6	32.1	22.2	49.8	27.7	21.0
Incr Delay (d2), s/veh	64.5	0.0	0.0	15.1	0.0	0.0	2.6	43.9	0.3	3.9	4.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.5	0.0	0.0	9.1	0.0	0.0	0.8	27.0	3.4	1.0	12.4	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	108.6	0.0	0.0	57.4	0.0	0.0	52.1	76.0	22.4	53.7	32.5	21.1
LnGrp LOS	F	A	A	E	A	A	D	F	C	D	C	C
Approach Vol, veh/h		321			300			1027			730	
Approach Delay, s/veh		108.6			57.4			64.4			31.6	
Approach LOS		F			E			E			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	48.0		24.0	10.0	48.0		25.2				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	7.0	43.0		19.0	7.0	43.0		26.0				
Max Q Clear Time (g_c+I1), s	4.2	45.0		21.0	3.7	30.4		19.3				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	3.0		0.9				

Intersection Summary			
HCM 6th Ctrl Delay		59.4	
HCM 6th LOS		E	

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	48	665	153	7	482	255	235	68	22	44	17	5
Future Volume (veh/h)	48	665	153	7	482	255	235	68	22	44	17	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1924	1924	1924	1885	1885	1885	1864	1864	1864
Adj Flow Rate, veh/h	54	747	172	8	542	287	264	76	25	49	19	6
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	2	2	2
Cap, veh/h	81	748	172	19	911	772	389	87	29	336	122	33
Arrive On Green	0.05	0.51	0.51	0.01	0.47	0.47	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1781	1469	338	1833	1924	1631	1106	318	105	926	446	121
Grp Volume(v), veh/h	54	0	919	8	542	287	365	0	0	74	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1807	1833	1924	1631	1529	0	0	1493	0	0
Q Serve(g_s), s	2.2	0.0	36.9	0.3	15.0	8.2	13.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.2	0.0	36.9	0.3	15.0	8.2	16.4	0.0	0.0	2.5	0.0	0.0
Prop In Lane	1.00		0.19	1.00		1.00	0.72		0.07	0.66		0.08
Lane Grp Cap(c), veh/h	81	0	920	19	911	772	505	0	0	492	0	0
V/C Ratio(X)	0.66	0.00	1.00	0.43	0.59	0.37	0.72	0.00	0.00	0.15	0.00	0.00
Avail Cap(c_a), veh/h	245	0	920	252	979	830	670	0	0	649	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	34.1	0.0	17.8	35.8	14.0	12.2	24.9	0.0	0.0	20.0	0.0	0.0
Incr Delay (d2), s/veh	8.9	0.0	29.4	14.5	0.9	0.3	2.6	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	19.0	0.2	5.4	2.4	6.0	0.0	0.0	0.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.1	0.0	47.2	50.3	14.9	12.5	27.5	0.0	0.0	20.1	0.0	0.0
LnGrp LOS	D	A	D	D	B	B	C	A	A	C	A	A
Approach Vol, veh/h		973			837			365			74	
Approach Delay, s/veh		47.0			14.4			27.5			20.1	
Approach LOS		D			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.7	42.0		24.9	8.3	39.4		24.9				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	37.0		28.0	10.0	37.0		28.0				
Max Q Clear Time (g_c+I1), s	2.3	38.9		18.4	4.2	17.0		4.5				
Green Ext Time (p_c), s	0.0	0.0		1.5	0.0	3.9		0.3				

Intersection Summary												
HCM 6th Ctrl Delay			30.8									
HCM 6th LOS			C									

MOVEMENT SUMMARY

Site: 101 [Sportsman Club & New BrooklyIn Roundabout]

2020 Background School Peak Hour 2-4
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
East: NE New Brooklyn Rd												
1a	L1	45	3.5	0.238	10.0	LOS A	1.2	31.0	0.46	0.60	0.46	35.6
6	T1	112	3.5	0.238	5.6	LOS A	1.2	31.0	0.46	0.60	0.46	36.0
16b	R3	78	3.5	0.238	5.7	LOS A	1.2	31.0	0.46	0.60	0.46	34.5
Approach		235	3.5	0.238	6.5	LOS A	1.2	31.0	0.46	0.60	0.46	35.4
NorthEast: Sportsman Club Road NE												
1bx	L3	51	4.5	0.272	11.8	LOS B	1.5	39.0	0.39	0.53	0.39	36.4
6x	T1	174	4.5	0.272	5.0	LOS A	1.5	39.0	0.39	0.53	0.39	36.0
16ax	R1	70	4.5	0.272	4.6	LOS A	1.5	39.0	0.39	0.53	0.39	35.7
Approach		295	4.5	0.272	6.1	LOS A	1.5	39.0	0.39	0.53	0.39	36.0
West:												
5a	L1	49	2.5	0.123	9.8	LOS A	0.6	15.0	0.42	0.59	0.42	35.3
2	T1	71	2.5	0.123	5.3	LOS A	0.6	15.0	0.42	0.59	0.42	35.6
12b	R3	6	2.5	0.123	5.5	LOS A	0.6	15.0	0.42	0.59	0.42	34.3
Approach		126	2.5	0.123	7.1	LOS A	0.6	15.0	0.42	0.59	0.42	35.4
SouthWest: Sportsman Club Road NE												
5bx	L3	8	3.7	0.240	11.8	LOS B	1.2	32.1	0.37	0.49	0.37	36.9
2x	T1	220	3.7	0.240	5.0	LOS A	1.2	32.1	0.37	0.49	0.37	36.4
12ax	R1	35	3.7	0.240	4.6	LOS A	1.2	32.1	0.37	0.49	0.37	36.1
Approach		263	3.7	0.240	5.1	LOS A	1.2	32.1	0.37	0.49	0.37	36.4
All Vehicles		919	3.7	0.272	6.0	LOS A	1.5	39.0	0.40	0.55	0.40	35.9

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	146	290	33	36	22
Future Vol, veh/h	12	146	290	33	36	22
Conflicting Peds, #/hr	5	0	0	24	24	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	3	-	1	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	1	1	1	1	0	0
Mvmt Flow	14	176	349	40	43	27

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	413	0	-	0	621	398
Stage 1	-	-	-	-	393	-
Stage 2	-	-	-	-	228	-
Critical Hdwy	4.11	-	-	-	6.6	6.3
Critical Hdwy Stg 1	-	-	-	-	5.6	-
Critical Hdwy Stg 2	-	-	-	-	5.6	-
Follow-up Hdwy	2.209	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1151	-	-	-	439	649
Stage 1	-	-	-	-	672	-
Stage 2	-	-	-	-	804	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1127	-	-	-	415	633
Mov Cap-2 Maneuver	-	-	-	-	415	-
Stage 1	-	-	-	-	648	-
Stage 2	-	-	-	-	787	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	13.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1127	-	-	-	477
HCM Lane V/C Ratio	0.013	-	-	-	0.146
HCM Control Delay (s)	8.2	0	-	-	13.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.5

Intersection	
Int Delay, s/veh	16.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	53	5	129	7	5	12	243	271	11	5	247	72
Future Vol, veh/h	53	5	129	7	5	12	243	271	11	5	247	72
Conflicting Peds, #/hr	3	0	11	13	0	5	11	0	13	5	0	3
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	-1	-	-	2	-	-	-2	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	1	1	1	0	0	0	2	2	2	0	0	0
Mvmt Flow	62	6	150	8	6	14	283	315	13	6	287	84

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1255	1259	353	1333	1295	340	382	0	0	341	0	0
Stage 1	352	352	-	901	901	-	-	-	-	-	-	-
Stage 2	903	907	-	432	394	-	-	-	-	-	-	-
Critical Hdwy	7.31	6.71	6.31	6.9	6.3	6.1	4.12	-	-	4.1	-	-
Critical Hdwy Stg 1	6.31	5.71	-	5.9	5.3	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.31	5.71	-	5.9	5.3	-	-	-	-	-	-	-
Follow-up Hdwy	3.509	4.009	3.309	3.5	4	3.3	2.218	-	-	2.2	-	-
Pot Cap-1 Maneuver	139	160	686	143	176	714	1176	-	-	1229	-	-
Stage 1	654	621	-	353	378	-	-	-	-	-	-	-
Stage 2	317	338	-	621	622	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	99	109	672	80	120	703	1165	-	-	1215	-	-
Mov Cap-2 Maneuver	99	109	-	80	120	-	-	-	-	-	-	-
Stage 1	455	611	-	245	262	-	-	-	-	-	-	-
Stage 2	212	235	-	470	612	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	77.9	31.4	4.2	0.1
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1165	-	-	242	164	1215	-	-
HCM Lane V/C Ratio	0.243	-	-	0.899	0.17	0.005	-	-
HCM Control Delay (s)	9.1	0	-	77.9	31.4	8	0	-
HCM Lane LOS	A	A	-	F	D	A	A	-
HCM 95th %tile Q(veh)	1	-	-	7.6	0.6	0	-	-

Intersection	
Intersection Delay, s/veh	19.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	78	108	18	5	154	65	16	156	1	92	217	108
Future Vol, veh/h	78	108	18	5	154	65	16	156	1	92	217	108
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	5	5	5	1	1	1	2	2	2	1	1	1
Mvmt Flow	90	124	21	6	177	75	18	179	1	106	249	124
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	15	14.9	13.5	27.1
HCM LOS	B	B	B	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	38%	2%	22%
Vol Thru, %	90%	53%	69%	52%
Vol Right, %	1%	9%	29%	26%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	173	204	224	417
LT Vol	16	78	5	92
Through Vol	156	108	154	217
RT Vol	1	18	65	108
Lane Flow Rate	199	234	257	479
Geometry Grp	1	1	1	1
Degree of Util (X)	0.365	0.439	0.46	0.784
Departure Headway (Hd)	6.616	6.739	6.438	5.892
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	541	532	556	614
Service Time	4.685	4.806	4.504	3.944
HCM Lane V/C Ratio	0.368	0.44	0.462	0.78
HCM Control Delay	13.5	15	14.9	27.1
HCM Lane LOS	B	B	B	D
HCM 95th-tile Q	1.7	2.2	2.4	7.5

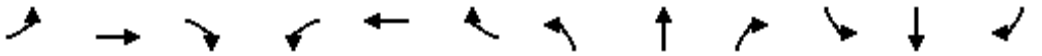
MOVEMENT SUMMARY

Site: 101 [Madison Ave / High School Rd]

2020 Background - After School PM Peak
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Madison Ave N												
3	L2	75	0.0	0.724	15.5	LOS B	8.3	206.5	0.94	1.13	1.30	22.8
8	T1	223	0.0	0.724	11.3	LOS B	8.3	206.5	0.94	1.13	1.30	22.6
18	R2	212	0.0	0.724	11.7	LOS B	8.3	206.5	0.94	1.13	1.30	22.2
Approach		510	0.0	0.724	12.1	LOS B	8.3	206.5	0.94	1.13	1.30	22.4
East: High School Rd												
1	L2	112	1.0	0.599	10.9	LOS B	5.6	141.2	0.82	0.86	0.94	23.9
6	T1	277	1.0	0.599	6.6	LOS A	5.6	141.2	0.82	0.86	0.94	23.6
16	R2	93	1.0	0.599	7.1	LOS A	5.6	141.2	0.82	0.86	0.94	23.2
Approach		483	1.0	0.599	7.7	LOS A	5.6	141.2	0.82	0.86	0.94	23.6
North: Madison Ave N												
7	L2	105	1.0	0.560	11.2	LOS B	4.8	121.0	0.82	0.89	0.95	23.7
4	T1	207	1.0	0.560	6.9	LOS A	4.8	121.0	0.82	0.89	0.95	23.5
14	R2	105	1.0	0.560	7.4	LOS A	4.8	121.0	0.82	0.89	0.95	23.1
Approach		417	1.0	0.560	8.1	LOS A	4.8	121.0	0.82	0.89	0.95	23.5
West: High School Rd												
5	L2	102	0.0	0.665	12.4	LOS B	6.7	168.5	0.85	0.95	1.07	23.5
2	T1	311	0.0	0.665	8.1	LOS A	6.7	168.5	0.85	0.95	1.07	23.3
12	R2	104	0.0	0.665	8.6	LOS A	6.7	168.5	0.85	0.95	1.07	22.9
Approach		517	0.0	0.665	9.0	LOS A	6.7	168.5	0.85	0.95	1.07	23.3
All Vehicles		1927	0.5	0.724	9.3	LOS A	8.3	206.5	0.86	0.96	1.07	23.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	87	17	120	70	15	19	687	187	32	488	120
Future Volume (veh/h)	126	87	17	120	70	15	19	687	187	32	488	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1856	1856	1856
Adj Flow Rate, veh/h	138	96	19	132	77	16	21	755	205	35	536	132
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	3	3	3
Cap, veh/h	165	115	23	161	94	20	86	833	687	84	820	694
Arrive On Green	0.17	0.17	0.17	0.15	0.15	0.15	0.05	0.44	0.44	0.05	0.44	0.44
Sat Flow, veh/h	988	687	136	1061	619	129	1795	1885	1555	1767	1856	1571
Grp Volume(v), veh/h	253	0	0	225	0	0	21	755	205	35	536	132
Grp Sat Flow(s),veh/h/ln	1811	0	0	1808	0	0	1795	1885	1555	1767	1856	1571
Q Serve(g_s), s	14.2	0.0	0.0	12.6	0.0	0.0	1.2	39.0	8.9	2.0	23.7	5.4
Cycle Q Clear(g_c), s	14.2	0.0	0.0	12.6	0.0	0.0	1.2	39.0	8.9	2.0	23.7	5.4
Prop In Lane	0.55		0.08	0.59		0.07	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	303	0	0	275	0	0	86	833	687	84	820	694
V/C Ratio(X)	0.83	0.00	0.00	0.82	0.00	0.00	0.25	0.91	0.30	0.41	0.65	0.19
Avail Cap(c_a), veh/h	605	0	0	604	0	0	171	1080	891	169	1063	900
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.2	0.0	0.0	43.0	0.0	0.0	48.1	27.2	18.8	48.5	22.9	17.8
Incr Delay (d2), s/veh	6.0	0.0	0.0	6.0	0.0	0.0	1.5	9.1	0.2	3.2	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	0.0	0.0	6.1	0.0	0.0	0.5	17.8	3.0	0.9	9.6	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.2	0.0	0.0	49.0	0.0	0.0	49.5	36.2	19.0	51.7	23.8	17.9
LnGrp LOS	D	A	A	D	A	A	D	D	B	D	C	B
Approach Vol, veh/h		253			225			981			703	
Approach Delay, s/veh		48.2			49.0			32.9			24.1	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	51.3		22.5	10.0	51.3		20.9				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	60.0		35.0	10.0	60.0		35.0				
Max Q Clear Time (g_c+I1), s	4.0	41.0		16.2	3.2	25.7		14.6				
Green Ext Time (p_c), s	0.0	5.3		1.4	0.0	3.7		1.2				

Intersection Summary												
HCM 6th Ctrl Delay			33.5									
HCM 6th LOS			C									

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	20	555	26	2	422	208	212	32	25	8	13	10
Future Volume (veh/h)	20	555	26	2	422	208	212	32	25	8	13	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1909	1909	1909	1900	1900	1900	1894	1894	1894
Adj Flow Rate, veh/h	22	624	29	2	474	234	238	36	28	9	15	11
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	1	1	1	2	2	2	0	0	0	0	0	0
Cap, veh/h	47	772	36	5	781	662	434	50	36	165	244	146
Arrive On Green	0.03	0.43	0.43	0.00	0.41	0.41	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1795	1785	83	1818	1909	1618	1156	191	138	280	927	553
Grp Volume(v), veh/h	22	0	653	2	474	234	302	0	0	35	0	0
Grp Sat Flow(s),veh/h/ln	1795	0	1868	1818	1909	1618	1484	0	0	1759	0	0
Q Serve(g_s), s	0.6	0.0	15.2	0.1	9.7	5.0	8.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.6	0.0	15.2	0.1	9.7	5.0	9.3	0.0	0.0	0.7	0.0	0.0
Prop In Lane	1.00		0.04	1.00		1.00	0.79		0.09	0.26		0.31
Lane Grp Cap(c), veh/h	47	0	808	5	781	662	520	0	0	554	0	0
V/C Ratio(X)	0.47	0.00	0.81	0.40	0.61	0.35	0.58	0.00	0.00	0.06	0.00	0.00
Avail Cap(c_a), veh/h	361	0	2251	365	2301	1950	1164	0	0	1267	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.9	0.0	12.3	24.8	11.6	10.2	16.9	0.0	0.0	13.8	0.0	0.0
Incr Delay (d2), s/veh	6.9	0.0	2.0	44.9	0.8	0.3	1.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	4.5	0.1	2.9	1.3	2.9	0.0	0.0	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.8	0.0	14.3	69.7	12.3	10.5	17.9	0.0	0.0	13.8	0.0	0.0
LnGrp LOS	C	A	B	E	B	B	B	A	A	B	A	A
Approach Vol, veh/h		675			710			302			35	
Approach Delay, s/veh		14.8			11.9			17.9			13.8	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.1	26.5		18.1	6.3	25.4		18.1				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	60.0		35.0	10.0	60.0		35.0				
Max Q Clear Time (g_c+I1), s	2.1	17.2		11.3	2.6	11.7		2.7				
Green Ext Time (p_c), s	0.0	4.3		1.8	0.0	3.6		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		14.1	
HCM 6th LOS		B	

MOVEMENT SUMMARY

Site: 101 [Sportsman Club & New BrooklyIn Roundabout]

2020 Background PM Peak Hour
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
East: NE New Brooklyn Rd												
1a	L1	14	2.0	0.188	9.5	LOS A	0.9	23.7	0.38	0.52	0.38	36.1
6	T1	141	2.0	0.188	5.0	LOS A	0.9	23.7	0.38	0.52	0.38	36.4
16b	R3	49	2.0	0.188	5.2	LOS A	0.9	23.7	0.38	0.52	0.38	35.0
Approach		204	2.0	0.188	5.4	LOS A	0.9	23.7	0.38	0.52	0.38	36.1
NorthEast: Sportsman Club Road NE												
1bx	L3	66	2.2	0.262	11.7	LOS B	1.4	36.0	0.37	0.54	0.37	36.3
6x	T1	190	2.2	0.262	4.9	LOS A	1.4	36.0	0.37	0.54	0.37	35.9
16ax	R1	37	2.2	0.262	4.5	LOS A	1.4	36.0	0.37	0.54	0.37	35.6
Approach		293	2.2	0.262	6.4	LOS A	1.4	36.0	0.37	0.54	0.37	35.9
West:												
5a	L1	35	2.4	0.124	9.7	LOS A	0.6	15.3	0.42	0.57	0.42	35.5
2	T1	85	2.4	0.124	5.3	LOS A	0.6	15.3	0.42	0.57	0.42	35.9
12b	R3	8	2.4	0.124	5.5	LOS A	0.6	15.3	0.42	0.57	0.42	34.5
Approach		128	2.4	0.124	6.5	LOS A	0.6	15.3	0.42	0.57	0.42	35.7
SouthWest: Sportsman Club Road NE												
5bx	L3	8	4.6	0.169	11.8	LOS B	0.8	21.0	0.36	0.49	0.36	36.8
2x	T1	158	4.6	0.169	5.0	LOS A	0.8	21.0	0.36	0.49	0.36	36.4
12ax	R1	14	4.6	0.169	4.6	LOS A	0.8	21.0	0.36	0.49	0.36	36.1
Approach		180	4.6	0.169	5.3	LOS A	0.8	21.0	0.36	0.49	0.36	36.4
All Vehicles		805	2.7	0.262	5.9	LOS A	1.4	36.0	0.38	0.53	0.38	36.0

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	120	195	9	13	5
Future Vol, veh/h	2	120	195	9	13	5
Conflicting Peds, #/hr	0	0	0	0	3	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, %	-	1	3	-	1	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	10	10	3	3	0	0
Mvmt Flow	2	133	217	10	14	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	227	0	-	0	362	222
Stage 1	-	-	-	-	222	-
Stage 2	-	-	-	-	140	-
Critical Hdwy	4.2	-	-	-	6.6	6.3
Critical Hdwy Stg 1	-	-	-	-	5.6	-
Critical Hdwy Stg 2	-	-	-	-	5.6	-
Follow-up Hdwy	2.29	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1295	-	-	-	628	818
Stage 1	-	-	-	-	810	-
Stage 2	-	-	-	-	885	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1295	-	-	-	627	818
Mov Cap-2 Maneuver	-	-	-	-	627	-
Stage 1	-	-	-	-	808	-
Stage 2	-	-	-	-	885	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	10.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1295	-	-	-	670
HCM Lane V/C Ratio	0.002	-	-	-	0.03
HCM Control Delay (s)	7.8	0	-	-	10.5
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	26	0	81	4	4	9	168	227	2	5	229	40
Future Vol, veh/h	26	0	81	4	4	9	168	227	2	5	229	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	-1	-	-	2	-	-	-2	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	0	0	0	0	0	0	1	1	1
Mvmt Flow	27	0	84	4	4	9	175	236	2	5	239	42

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	864	858	260	899	878	237	281	0	0	238	0	0
Stage 1	270	270	-	587	587	-	-	-	-	-	-	-
Stage 2	594	588	-	312	291	-	-	-	-	-	-	-
Critical Hdwy	7.32	6.72	6.32	6.9	6.3	6.1	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.32	5.72	-	5.9	5.3	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.32	5.72	-	5.9	5.3	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.5	4	3.3	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	262	281	773	275	303	812	1293	-	-	1335	-	-
Stage 1	725	676	-	516	516	-	-	-	-	-	-	-
Stage 2	475	480	-	715	686	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	225	236	773	215	255	812	1293	-	-	1335	-	-
Mov Cap-2 Maneuver	225	236	-	215	255	-	-	-	-	-	-	-
Stage 1	612	673	-	436	436	-	-	-	-	-	-	-
Stage 2	392	405	-	634	683	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.6	15.1	3.5	0.1
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1293	-	-	486	375	1335	-	-
HCM Lane V/C Ratio	0.135	-	-	0.229	0.047	0.004	-	-
HCM Control Delay (s)	8.2	0	-	14.6	15.1	7.7	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0.5	-	-	0.9	0.1	0	-	-

Intersection	
Intersection Delay, s/veh	11.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	64	96	15	3	100	48	12	134	2	92	196	50
Future Vol, veh/h	64	96	15	3	100	48	12	134	2	92	196	50
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	1	1	1	4	4	4	3	3	3	1	1	1
Mvmt Flow	68	102	16	3	106	51	13	143	2	98	209	53
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.9	10.3	10.3	13.4
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	37%	2%	27%
Vol Thru, %	91%	55%	66%	58%
Vol Right, %	1%	9%	32%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	148	175	151	338
LT Vol	12	64	3	92
Through Vol	134	96	100	196
RT Vol	2	15	48	50
Lane Flow Rate	157	186	161	360
Geometry Grp	1	1	1	1
Degree of Util (X)	0.24	0.29	0.245	0.511
Departure Headway (Hd)	5.497	5.6	5.494	5.12
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	652	640	652	705
Service Time	3.539	3.64	3.537	3.154
HCM Lane V/C Ratio	0.241	0.291	0.247	0.511
HCM Control Delay	10.3	10.9	10.3	13.4
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	0.9	1.2	1	2.9

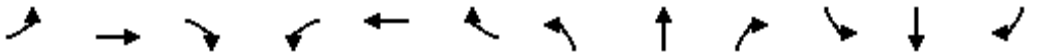
MOVEMENT SUMMARY

Site: 101 [Madison Ave / High School Rd]

2020 Background - PM Peak Hour
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Madison Ave N												
3	L2	88	0.0	0.719	15.2	LOS B	8.6	214.8	0.95	1.12	1.29	22.8
8	T1	243	0.0	0.719	10.9	LOS B	8.6	214.8	0.95	1.12	1.29	22.7
18	R2	203	0.0	0.719	11.4	LOS B	8.6	214.8	0.95	1.12	1.29	22.2
Approach		535	0.0	0.719	11.8	LOS B	8.6	214.8	0.95	1.12	1.29	22.5
East: High School Rd												
1	L2	91	1.0	0.751	15.2	LOS B	9.8	246.0	0.96	1.12	1.31	22.9
6	T1	333	1.0	0.751	10.9	LOS B	9.8	246.0	0.96	1.12	1.31	22.7
16	R2	160	1.0	0.751	11.4	LOS B	9.8	246.0	0.96	1.12	1.31	22.3
Approach		584	1.0	0.751	11.7	LOS B	9.8	246.0	0.96	1.12	1.31	22.6
North: Madison Ave N												
7	L2	111	1.0	0.626	13.1	LOS B	6.3	157.4	0.90	1.01	1.12	23.3
4	T1	217	1.0	0.626	8.8	LOS A	6.3	157.4	0.90	1.01	1.12	23.1
14	R2	118	1.0	0.626	9.3	LOS A	6.3	157.4	0.90	1.01	1.12	22.6
Approach		447	1.0	0.626	10.0	LOS A	6.3	157.4	0.90	1.01	1.12	23.0
West: High School Rd												
5	L2	114	0.0	0.639	11.8	LOS B	6.6	164.3	0.86	0.93	1.04	23.6
2	T1	279	0.0	0.639	7.6	LOS A	6.6	164.3	0.86	0.93	1.04	23.4
12	R2	121	0.0	0.639	8.0	LOS A	6.6	164.3	0.86	0.93	1.04	23.0
Approach		514	0.0	0.639	8.6	LOS A	6.6	164.3	0.86	0.93	1.04	23.4
All Vehicles		2079	0.5	0.751	10.6	LOS B	9.8	246.0	0.92	1.05	1.20	22.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	87	36	282	108	6	25	396	128	71	786	125
Future Volume (veh/h)	125	87	36	282	108	6	25	396	128	71	786	125
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	1885	1841	1841	1841	1870	1870	1870
Adj Flow Rate, veh/h	132	92	38	297	114	6	27	430	139	75	827	132
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	1	1	1	4	4	4	2	2	2
Cap, veh/h	133	92	38	309	119	6	57	789	653	97	843	711
Arrive On Green	0.15	0.15	0.15	0.24	0.24	0.24	0.03	0.43	0.43	0.05	0.45	0.45
Sat Flow, veh/h	892	622	257	1292	496	26	1753	1841	1525	1781	1870	1578
Grp Volume(v), veh/h	262	0	0	417	0	0	27	430	139	75	827	132
Grp Sat Flow(s),veh/h/ln	1771	0	0	1814	0	0	1753	1841	1525	1781	1870	1578
Q Serve(g_s), s	22.9	0.0	0.0	35.1	0.0	0.0	2.3	27.0	8.9	6.4	67.4	7.8
Cycle Q Clear(g_c), s	22.9	0.0	0.0	35.1	0.0	0.0	2.3	27.0	8.9	6.4	67.4	7.8
Prop In Lane	0.50		0.15	0.71		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	263	0	0	434	0	0	57	789	653	97	843	711
V/C Ratio(X)	1.00	0.00	0.00	0.96	0.00	0.00	0.48	0.55	0.21	0.77	0.98	0.19
Avail Cap(c_a), veh/h	263	0	0	434	0	0	113	833	690	115	846	714
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.8	0.0	0.0	58.2	0.0	0.0	73.6	33.0	27.8	72.2	41.8	25.5
Incr Delay (d2), s/veh	54.1	0.0	0.0	33.2	0.0	0.0	6.1	0.7	0.2	23.1	26.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.3	0.0	0.0	20.2	0.0	0.0	1.1	11.8	3.2	3.5	35.5	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	119.9	0.0	0.0	91.4	0.0	0.0	79.7	33.6	28.0	95.3	68.0	25.6
LnGrp LOS	F	A	A	F	A	A	E	C	C	F	E	C
Approach Vol, veh/h		262			417			596			1034	
Approach Delay, s/veh		119.9			91.4			34.4			64.6	
Approach LOS		F			F			C			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.4	71.3		28.0	10.0	74.7		42.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	70.0		23.0	10.0	70.0		37.0				
Max Q Clear Time (g_c+I1), s	8.4	29.0		24.9	4.3	69.4		37.1				
Green Ext Time (p_c), s	0.0	3.0		0.0	0.0	0.4		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		67.9	
HCM 6th LOS		E	

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	2	426	27	1	621	402	149	18	27	6	40	15
Future Volume (veh/h)	2	426	27	1	621	402	149	18	27	6	40	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.96	0.99		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1909	1909	1909	1885	1885	1885	1894	1894	1894
Adj Flow Rate, veh/h	2	458	29	1	668	432	160	19	29	6	43	16
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	5	5	5	2	2	2	1	1	1	0	0	0
Cap, veh/h	5	799	51	4	895	740	356	41	42	97	262	89
Arrive On Green	0.00	0.47	0.47	0.00	0.47	0.47	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1739	1699	108	1818	1909	1579	1065	202	205	59	1275	436
Grp Volume(v), veh/h	2	0	487	1	668	432	208	0	0	65	0	0
Grp Sat Flow(s),veh/h/ln	1739	0	1806	1818	1909	1579	1472	0	0	1770	0	0
Q Serve(g_s), s	0.1	0.0	9.1	0.0	13.3	9.3	4.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	0.0	9.1	0.0	13.3	9.3	5.9	0.0	0.0	1.4	0.0	0.0
Prop In Lane	1.00		0.06	1.00		1.00	0.77		0.14	0.09		0.25
Lane Grp Cap(c), veh/h	5	0	849	4	895	740	440	0	0	448	0	0
V/C Ratio(X)	0.42	0.00	0.57	0.26	0.75	0.58	0.47	0.00	0.00	0.15	0.00	0.00
Avail Cap(c_a), veh/h	375	0	2335	392	2468	2041	1215	0	0	1398	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.1	0.0	8.9	23.1	10.1	9.0	16.9	0.0	0.0	15.2	0.0	0.0
Incr Delay (d2), s/veh	49.5	0.0	0.6	31.1	1.3	0.7	0.8	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	2.2	0.0	3.5	2.0	1.9	0.0	0.0	0.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.6	0.0	9.5	54.3	11.3	9.7	17.7	0.0	0.0	15.4	0.0	0.0
LnGrp LOS	E	A	A	D	B	A	B	A	A	B	A	A
Approach Vol, veh/h		489			1101			208			65	
Approach Delay, s/veh		9.8			10.8			17.7			15.4	
Approach LOS		A			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.1	26.8		14.5	5.1	26.8		14.5				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	60.0		35.0	10.0	60.0		35.0				
Max Q Clear Time (g_c+I1), s	2.0	11.1		7.9	2.1	15.3		3.4				
Green Ext Time (p_c), s	0.0	3.0		1.3	0.0	6.5		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		11.4	
HCM 6th LOS		B	

MOVEMENT SUMMARY

Site: 101 [Sportsman Club & New BrooklyIn Roundabout]

2010 with Project (55 units) AM Peak Hour 8-9
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
East: NE New Brooklyn Rd												
1a	L1	16	2.1	0.174	10.4	LOS B	0.9	22.5	0.51	0.64	0.51	35.8
6	T1	43	2.1	0.174	5.9	LOS A	0.9	22.5	0.51	0.64	0.51	36.2
16b	R3	105	2.1	0.174	6.1	LOS A	0.9	22.5	0.51	0.64	0.51	34.7
Approach		164	2.1	0.174	6.5	LOS A	0.9	22.5	0.51	0.64	0.51	35.2
NorthEast: Sportsman Club Road NE												
1bx	L3	95	5.2	0.256	11.2	LOS B	1.4	37.5	0.23	0.51	0.23	36.3
6x	T1	164	5.2	0.256	4.4	LOS A	1.4	37.5	0.23	0.51	0.23	36.0
16ax	R1	41	5.2	0.256	4.0	LOS A	1.4	37.5	0.23	0.51	0.23	35.7
Approach		300	5.2	0.256	6.5	LOS A	1.4	37.5	0.23	0.51	0.23	36.0
West:												
5a	L1	117	0.9	0.229	9.9	LOS A	1.2	29.4	0.45	0.62	0.45	35.0
2	T1	119	0.9	0.229	5.5	LOS A	1.2	29.4	0.45	0.62	0.45	35.4
12b	R3	3	0.9	0.229	5.6	LOS A	1.2	29.4	0.45	0.62	0.45	34.1
Approach		239	0.9	0.229	7.6	LOS A	1.2	29.4	0.45	0.62	0.45	35.2
SouthWest: Sportsman Club Road NE												
5bx	L3	1	6.3	0.297	12.9	LOS B	1.6	42.6	0.52	0.60	0.52	36.3
2x	T1	252	6.3	0.297	6.1	LOS A	1.6	42.6	0.52	0.60	0.52	35.9
12ax	R1	26	6.3	0.297	5.7	LOS A	1.6	42.6	0.52	0.60	0.52	35.6
Approach		279	6.3	0.297	6.1	LOS A	1.6	42.6	0.52	0.60	0.52	35.9
All Vehicles		982	3.9	0.297	6.6	LOS A	1.6	42.6	0.41	0.58	0.41	35.6

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	8	244	3	4	171	14	10	0	14	24	0	18
Future Vol, veh/h	8	244	3	4	171	14	10	0	14	24	0	18
Conflicting Peds, #/hr	0	0	0	0	0	21	0	0	0	21	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, %	-	1	-	-	3	-	-	0	-	-	1	-
Peak Hour Factor	70	70	92	92	70	70	92	92	92	70	92	70
Heavy Vehicles, %	5	5	2	2	2	2	2	2	2	0	2	0
Mvmt Flow	11	349	3	4	244	20	11	0	15	34	0	26

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	285	0	0	352	0	0	648	666	372	684	657	275
Stage 1	-	-	-	-	-	-	373	373	-	283	283	-
Stage 2	-	-	-	-	-	-	275	293	-	401	374	-
Critical Hdwy	4.15	-	-	4.12	-	-	7.12	6.52	6.22	7.3	6.72	6.3
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.3	5.72	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.3	5.72	-
Follow-up Hdwy	2.245	-	-	2.218	-	-	3.518	4.018	3.318	3.5	4.018	3.3
Pot Cap-1 Maneuver	1260	-	-	1207	-	-	383	380	674	352	371	763
Stage 1	-	-	-	-	-	-	648	618	-	717	666	-
Stage 2	-	-	-	-	-	-	731	670	-	616	605	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1237	-	-	1207	-	-	366	367	662	328	359	749
Mov Cap-2 Maneuver	-	-	-	-	-	-	366	367	-	328	359	-
Stage 1	-	-	-	-	-	-	641	611	-	696	651	-
Stage 2	-	-	-	-	-	-	703	655	-	584	598	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.1	12.7	14.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	495	1237	-	-	1207	-	-	432
HCM Lane V/C Ratio	0.053	0.009	-	-	0.004	-	-	0.139
HCM Control Delay (s)	12.7	7.9	0	-	8	0	-	14.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.5

Intersection	
Int Delay, s/veh	33.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	68	3	212	0	1	6	132	132	7	10	373	67
Future Vol, veh/h	68	3	212	0	1	6	132	132	7	10	373	67
Conflicting Peds, #/hr	5	0	6	9	0	8	6	0	9	8	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	-1	-	-	2	-	-	-2	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	2	2	2
Mvmt Flow	87	4	272	0	1	8	169	169	9	13	478	86

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1077	1078	536	1215	1117	191	570	0	0	187	0	0
Stage 1	553	553	-	521	521	-	-	-	-	-	-	-
Stage 2	524	525	-	694	596	-	-	-	-	-	-	-
Critical Hdwy	7.3	6.7	6.3	6.9	6.3	6.1	4.1	-	-	4.12	-	-
Critical Hdwy Stg 1	6.3	5.7	-	5.9	5.3	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.3	5.7	-	5.9	5.3	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.218	-	-
Pot Cap-1 Maneuver	187	208	540	171	222	860	1013	-	-	1387	-	-
Stage 1	505	502	-	558	551	-	-	-	-	-	-	-
Stage 2	525	517	-	454	512	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	154	165	533	69	176	847	1008	-	-	1376	-	-
Mov Cap-2 Maneuver	154	165	-	69	176	-	-	-	-	-	-	-
Stage 1	409	492	-	451	445	-	-	-	-	-	-	-
Stage 2	419	417	-	216	502	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	115.1	11.7	4.5	0.2
HCM LOS	F	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1008	-	-	330	548	1376	-	-
HCM Lane V/C Ratio	0.168	-	-	1.099	0.016	0.009	-	-
HCM Control Delay (s)	9.3	0	-	115.1	11.7	7.6	0	-
HCM Lane LOS	A	A	-	F	B	A	A	-
HCM 95th %tile Q(veh)	0.6	-	-	13.9	0.1	0	-	-

Intersection	
Intersection Delay, s/veh	18
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	85	99	8	3	133	112	12	265	2	61	122	125
Future Vol, veh/h	85	99	8	3	133	112	12	265	2	61	122	125
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	3	3	3	5	5	5
Mvmt Flow	100	116	9	4	156	132	14	312	2	72	144	147
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	15.4	16.6	18.9	19.8
HCM LOS	C	C	C	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	44%	1%	20%
Vol Thru, %	95%	52%	54%	40%
Vol Right, %	1%	4%	45%	41%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	279	192	248	308
LT Vol	12	85	3	61
Through Vol	265	99	133	122
RT Vol	2	8	112	125
Lane Flow Rate	328	226	292	362
Geometry Grp	1	1	1	1
Degree of Util (X)	0.596	0.437	0.525	0.634
Departure Headway (Hd)	6.533	6.963	6.478	6.3
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	548	513	551	569
Service Time	4.617	5.059	4.566	4.383
HCM Lane V/C Ratio	0.599	0.441	0.53	0.636
HCM Control Delay	18.9	15.4	16.6	19.8
HCM Lane LOS	C	C	C	C
HCM 95th-tile Q	3.9	2.2	3	4.4

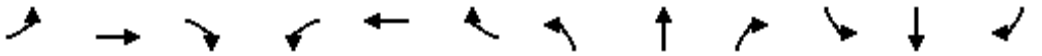
MOVEMENT SUMMARY

Site: 101 [Madison Ave / High School Rd]

2020 with Project (55 units) - AM Peak Hour
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Madison Ave N												
3	L2	52	0.0	0.445	9.7	LOS A	3.0	75.6	0.76	0.77	0.78	24.2
8	T1	128	0.0	0.445	5.5	LOS A	3.0	75.6	0.76	0.77	0.78	24.0
18	R2	145	0.0	0.445	5.9	LOS A	3.0	75.6	0.76	0.77	0.78	23.5
Approach		325	0.0	0.445	6.3	LOS A	3.0	75.6	0.76	0.77	0.78	23.8
East: High School Rd												
1	L2	89	1.0	0.500	8.0	LOS A	3.7	92.9	0.65	0.60	0.65	24.4
6	T1	250	1.0	0.500	3.8	LOS A	3.7	92.9	0.65	0.60	0.65	24.2
16	R2	123	1.0	0.500	4.2	LOS A	3.7	92.9	0.65	0.60	0.65	23.8
Approach		462	1.0	0.500	4.7	LOS A	3.7	92.9	0.65	0.60	0.65	24.1
North: Madison Ave N												
7	L2	120	1.0	0.627	11.2	LOS B	6.0	151.3	0.82	0.88	0.97	23.7
4	T1	221	1.0	0.627	7.0	LOS A	6.0	151.3	0.82	0.88	0.97	23.5
14	R2	167	1.0	0.627	7.4	LOS A	6.0	151.3	0.82	0.88	0.97	23.1
Approach		508	1.0	0.627	8.1	LOS A	6.0	151.3	0.82	0.88	0.97	23.4
West: High School Rd												
5	L2	92	0.0	0.609	11.4	LOS B	5.6	138.8	0.82	0.89	0.98	23.8
2	T1	277	0.0	0.609	7.1	LOS A	5.6	138.8	0.82	0.89	0.98	23.6
12	R2	100	0.0	0.609	7.6	LOS A	5.6	138.8	0.82	0.89	0.98	23.1
Approach		470	0.0	0.609	8.0	LOS A	5.6	138.8	0.82	0.89	0.98	23.5
All Vehicles		1764	0.5	0.627	6.9	LOS A	6.0	151.3	0.76	0.79	0.85	23.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	163	90	40	183	77	13	27	710	189	33	511	120
Future Volume (veh/h)	163	90	40	183	77	13	27	710	189	33	511	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1885	1885	1885	1885	1885	1885	1841	1841	1841
Adj Flow Rate, veh/h	181	100	44	203	86	14	30	789	210	37	568	133
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	5	5	5	1	1	1	1	1	1	4	4	4
Cap, veh/h	170	94	41	231	98	16	84	755	639	82	737	624
Arrive On Green	0.18	0.18	0.18	0.19	0.19	0.19	0.05	0.40	0.40	0.05	0.40	0.40
Sat Flow, veh/h	963	532	234	1212	514	84	1795	1885	1598	1753	1841	1560
Grp Volume(v), veh/h	325	0	0	303	0	0	30	789	210	37	568	133
Grp Sat Flow(s),veh/h/ln	1729	0	0	1810	0	0	1795	1885	1598	1753	1841	1560
Q Serve(g_s), s	19.0	0.0	0.0	17.5	0.0	0.0	1.7	43.0	9.8	2.2	28.8	6.0
Cycle Q Clear(g_c), s	19.0	0.0	0.0	17.5	0.0	0.0	1.7	43.0	9.8	2.2	28.8	6.0
Prop In Lane	0.56		0.14	0.67		0.05	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	306	0	0	344	0	0	84	755	639	82	737	624
V/C Ratio(X)	1.06	0.00	0.00	0.88	0.00	0.00	0.36	1.05	0.33	0.45	0.77	0.21
Avail Cap(c_a), veh/h	306	0	0	438	0	0	117	755	639	114	737	624
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.2	0.0	0.0	42.3	0.0	0.0	49.7	32.2	22.2	49.9	27.9	21.1
Incr Delay (d2), s/veh	69.0	0.0	0.0	15.5	0.0	0.0	2.6	45.3	0.3	3.9	5.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.9	0.0	0.0	9.2	0.0	0.0	0.8	27.2	3.5	1.0	12.6	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	113.2	0.0	0.0	57.8	0.0	0.0	52.2	77.5	22.5	53.8	33.0	21.3
LnGrp LOS	F	A	A	E	A	A	D	F	C	D	C	C
Approach Vol, veh/h		325			303			1029			738	
Approach Delay, s/veh		113.2			57.8			65.6			31.9	
Approach LOS		F			E			E			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	48.0		24.0	10.0	48.0		25.4				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	7.0	43.0		19.0	7.0	43.0		26.0				
Max Q Clear Time (g_c+I1), s	4.2	45.0		21.0	3.7	30.8		19.5				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	3.0		0.9				

Intersection Summary			
HCM 6th Ctrl Delay		60.7	
HCM 6th LOS		E	

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	48	665	153	7	482	258	237	69	22	44	19	5
Future Volume (veh/h)	48	665	153	7	482	258	237	69	22	44	19	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1924	1924	1924	1885	1885	1885	1864	1864	1864
Adj Flow Rate, veh/h	54	747	172	8	542	290	266	78	25	49	21	6
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	2	2	2
Cap, veh/h	81	745	172	19	908	770	390	89	29	331	133	33
Arrive On Green	0.05	0.51	0.51	0.01	0.47	0.47	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1781	1469	338	1833	1924	1631	1102	323	104	902	479	118
Grp Volume(v), veh/h	54	0	919	8	542	290	369	0	0	76	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1807	1833	1924	1631	1529	0	0	1499	0	0
Q Serve(g_s), s	2.2	0.0	37.0	0.3	15.1	8.3	14.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.2	0.0	37.0	0.3	15.1	8.3	16.7	0.0	0.0	2.6	0.0	0.0
Prop In Lane	1.00		0.19	1.00		1.00	0.72		0.07	0.64		0.08
Lane Grp Cap(c), veh/h	81	0	917	19	908	770	508	0	0	496	0	0
V/C Ratio(X)	0.66	0.00	1.00	0.43	0.60	0.38	0.73	0.00	0.00	0.15	0.00	0.00
Avail Cap(c_a), veh/h	244	0	917	251	976	827	667	0	0	649	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	34.3	0.0	18.0	35.9	14.2	12.4	24.9	0.0	0.0	20.0	0.0	0.0
Incr Delay (d2), s/veh	9.0	0.0	30.3	14.5	0.9	0.3	2.8	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	19.2	0.2	5.4	2.5	6.1	0.0	0.0	1.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.2	0.0	48.2	50.4	15.0	12.7	27.6	0.0	0.0	20.1	0.0	0.0
LnGrp LOS	D	A	F	D	B	B	C	A	A	C	A	A
Approach Vol, veh/h		973			840			369			76	
Approach Delay, s/veh		47.9			14.6			27.6			20.1	
Approach LOS		D			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.7	42.0		25.2	8.3	39.4		25.2				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	37.0		28.0	10.0	37.0		28.0				
Max Q Clear Time (g_c+I1), s	2.3	39.0		18.7	4.2	17.1		4.6				
Green Ext Time (p_c), s	0.0	0.0		1.5	0.0	4.0		0.3				

Intersection Summary												
HCM 6th Ctrl Delay			31.3									
HCM 6th LOS			C									

MOVEMENT SUMMARY

Site: 101 [Sportsman Club & New Brooklyln Roundabout]

2020 With Project (55 units) Afterschool Peak Hour
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
East: NE New Brooklyn Rd												
1a	L1	46	3.5	0.246	10.0	LOS A	1.3	32.2	0.46	0.60	0.46	35.6
6	T1	113	3.5	0.246	5.6	LOS A	1.3	32.2	0.46	0.60	0.46	36.0
16b	R3	83	3.5	0.246	5.7	LOS A	1.3	32.2	0.46	0.60	0.46	34.5
Approach		242	3.5	0.246	6.5	LOS A	1.3	32.2	0.46	0.60	0.46	35.4
NorthEast: Sportsman Club Road NE												
1bx	L3	60	4.5	0.281	11.8	LOS B	1.6	40.7	0.39	0.54	0.39	36.3
6x	T1	174	4.5	0.281	5.0	LOS A	1.6	40.7	0.39	0.54	0.39	35.9
16ax	R1	70	4.5	0.281	4.7	LOS A	1.6	40.7	0.39	0.54	0.39	35.6
Approach		304	4.5	0.281	6.3	LOS A	1.6	40.7	0.39	0.54	0.39	35.9
West:												
5a	L1	49	2.5	0.125	9.8	LOS A	0.6	15.3	0.43	0.59	0.43	35.2
2	T1	72	2.5	0.125	5.4	LOS A	0.6	15.3	0.43	0.59	0.43	35.6
12b	R3	6	2.5	0.125	5.5	LOS A	0.6	15.3	0.43	0.59	0.43	34.2
Approach		127	2.5	0.125	7.1	LOS A	0.6	15.3	0.43	0.59	0.43	35.4
SouthWest: Sportsman Club Road NE												
5bx	L3	8	3.7	0.243	11.8	LOS B	1.3	32.5	0.38	0.50	0.38	36.8
2x	T1	220	3.7	0.243	5.0	LOS A	1.3	32.5	0.38	0.50	0.38	36.4
12ax	R1	36	3.7	0.243	4.7	LOS A	1.3	32.5	0.38	0.50	0.38	36.1
Approach		264	3.7	0.243	5.2	LOS A	1.3	32.5	0.38	0.50	0.38	36.4
All Vehicles		937	3.7	0.281	6.1	LOS A	1.6	40.7	0.41	0.55	0.41	35.8

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	12	146	12	17	290	33	7	0	11	36	0	22
Future Vol, veh/h	12	146	12	17	290	33	7	0	11	36	0	22
Conflicting Peds, #/hr	5	0	0	0	0	24	0	0	0	24	0	5
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, %	-	1	-	-	3	-	-	0	-	-	1	-
Peak Hour Factor	83	83	92	92	83	83	92	92	92	83	92	83
Heavy Vehicles, %	1	1	2	2	1	1	2	2	2	0	2	0
Mvmt Flow	14	176	13	18	349	40	8	0	12	43	0	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	413	0	0	189	0	0	635	660	207	670	646	398
Stage 1	-	-	-	-	-	-	211	211	-	429	429	-
Stage 2	-	-	-	-	-	-	424	449	-	241	217	-
Critical Hdwy	4.11	-	-	4.12	-	-	7.12	6.52	6.22	7.3	6.72	6.3
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.3	5.72	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.3	5.72	-
Follow-up Hdwy	2.209	-	-	2.218	-	-	3.518	4.018	3.318	3.5	4.018	3.3
Pot Cap-1 Maneuver	1151	-	-	1385	-	-	391	383	833	360	377	649
Stage 1	-	-	-	-	-	-	791	728	-	594	570	-
Stage 2	-	-	-	-	-	-	608	572	-	757	715	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1127	-	-	1385	-	-	364	363	816	332	358	633
Mov Cap-2 Maneuver	-	-	-	-	-	-	364	363	-	332	358	-
Stage 1	-	-	-	-	-	-	780	718	-	573	548	-
Stage 2	-	-	-	-	-	-	570	550	-	720	705	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.3	11.8	15.7
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	550	1127	-	-	1385	-	-	405
HCM Lane V/C Ratio	0.036	0.013	-	-	0.013	-	-	0.173
HCM Control Delay (s)	11.8	8.2	0	-	7.6	0	-	15.7
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.6

Intersection	
Int Delay, s/veh	21.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	56	5	137	7	5	12	256	271	11	5	247	76
Future Vol, veh/h	56	5	137	7	5	12	256	271	11	5	247	76
Conflicting Peds, #/hr	3	0	11	13	0	5	11	0	13	5	0	3
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	-1	-	-	2	-	-	-2	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	1	1	1	0	0	0	2	2	2	0	0	0
Mvmt Flow	65	6	159	8	6	14	298	315	13	6	287	88

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1287	1291	355	1370	1329	340	386	0	0	341	0	0
Stage 1	354	354	-	931	931	-	-	-	-	-	-	-
Stage 2	933	937	-	439	398	-	-	-	-	-	-	-
Critical Hdwy	7.31	6.71	6.31	6.9	6.3	6.1	4.12	-	-	4.1	-	-
Critical Hdwy Stg 1	6.31	5.71	-	5.9	5.3	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.31	5.71	-	5.9	5.3	-	-	-	-	-	-	-
Follow-up Hdwy	3.509	4.009	3.309	3.5	4	3.3	2.218	-	-	2.2	-	-
Pot Cap-1 Maneuver	132	153	684	135	168	714	1172	-	-	1229	-	-
Stage 1	652	620	-	340	367	-	-	-	-	-	-	-
Stage 2	304	327	-	615	620	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	93	102	670	73	112	703	1161	-	-	1215	-	-
Mov Cap-2 Maneuver	93	102	-	73	112	-	-	-	-	-	-	-
Stage 1	443	610	-	231	249	-	-	-	-	-	-	-
Stage 2	199	222	-	456	610	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	103.4	33.9	4.4	0.1
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1161	-	-	231	152	1215	-	-
HCM Lane V/C Ratio	0.256	-	-	0.997	0.184	0.005	-	-
HCM Control Delay (s)	9.2	0	-	103.4	33.9	8	0	-
HCM Lane LOS	A	A	-	F	D	A	A	-
HCM 95th %tile Q(veh)	1	-	-	9.2	0.6	0	-	-

Intersection	
Intersection Delay, s/veh	19.8
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	78	108	18	5	154	65	16	157	1	92	218	108
Future Vol, veh/h	78	108	18	5	154	65	16	157	1	92	218	108
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	5	5	5	1	1	1	2	2	2	1	1	1
Mvmt Flow	90	124	21	6	177	75	18	180	1	106	251	124
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	15.1	15	13.5	27.4
HCM LOS	C	B	B	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	38%	2%	22%
Vol Thru, %	90%	53%	69%	52%
Vol Right, %	1%	9%	29%	26%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	174	204	224	418
LT Vol	16	78	5	92
Through Vol	157	108	154	218
RT Vol	1	18	65	108
Lane Flow Rate	200	234	257	480
Geometry Grp	1	1	1	1
Degree of Util (X)	0.368	0.44	0.461	0.787
Departure Headway (Hd)	6.62	6.751	6.45	5.897
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	540	532	556	610
Service Time	4.694	4.819	4.518	3.953
HCM Lane V/C Ratio	0.37	0.44	0.462	0.787
HCM Control Delay	13.5	15.1	15	27.4
HCM Lane LOS	B	C	B	D
HCM 95th-tile Q	1.7	2.2	2.4	7.5

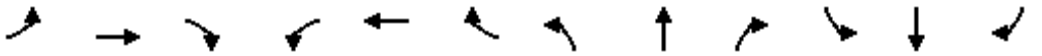
MOVEMENT SUMMARY

Site: 101 [Madison Ave / High School Rd]

2020 with Project (55 units) - After School PM Peak
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Madison Ave N												
3	L2	75	0.0	0.734	16.0	LOS B	8.6	214.4	0.95	1.16	1.34	22.7
8	T1	227	0.0	0.734	11.7	LOS B	8.6	214.4	0.95	1.16	1.34	22.5
18	R2	212	0.0	0.734	12.2	LOS B	8.6	214.4	0.95	1.16	1.34	22.1
Approach		514	0.0	0.734	12.6	LOS B	8.6	214.4	0.95	1.16	1.34	22.3
East: High School Rd												
1	L2	112	1.0	0.608	11.1	LOS B	5.8	145.9	0.83	0.88	0.97	23.8
6	T1	277	1.0	0.608	6.9	LOS A	5.8	145.9	0.83	0.88	0.97	23.6
16	R2	97	1.0	0.608	7.3	LOS A	5.8	145.9	0.83	0.88	0.97	23.1
Approach		486	1.0	0.608	7.9	LOS A	5.8	145.9	0.83	0.88	0.97	23.5
North: Madison Ave N												
7	L2	108	1.0	0.581	11.5	LOS B	5.2	130.4	0.84	0.91	0.98	23.7
4	T1	210	1.0	0.581	7.3	LOS A	5.2	130.4	0.84	0.91	0.98	23.5
14	R2	115	1.0	0.581	7.7	LOS A	5.2	130.4	0.84	0.91	0.98	23.0
Approach		433	1.0	0.581	8.4	LOS A	5.2	130.4	0.84	0.91	0.98	23.4
West: High School Rd												
5	L2	105	0.0	0.673	12.6	LOS B	7.0	173.9	0.86	0.97	1.09	23.4
2	T1	311	0.0	0.673	8.4	LOS A	7.0	173.9	0.86	0.97	1.09	23.2
12	R2	104	0.0	0.673	8.8	LOS A	7.0	173.9	0.86	0.97	1.09	22.8
Approach		521	0.0	0.673	9.3	LOS A	7.0	173.9	0.86	0.97	1.09	23.2
All Vehicles		1953	0.5	0.734	9.6	LOS A	8.6	214.4	0.87	0.98	1.10	23.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	88	17	120	71	15	19	689	187	32	491	124
Future Volume (veh/h)	129	88	17	120	71	15	19	689	187	32	491	124
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1856	1856	1856
Adj Flow Rate, veh/h	142	97	19	132	78	16	21	757	205	35	540	136
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	3	3	3
Cap, veh/h	169	116	23	161	95	19	85	834	688	83	821	695
Arrive On Green	0.17	0.17	0.17	0.15	0.15	0.15	0.05	0.44	0.44	0.05	0.44	0.44
Sat Flow, veh/h	997	681	133	1056	624	128	1795	1885	1555	1767	1856	1571
Grp Volume(v), veh/h	258	0	0	226	0	0	21	757	205	35	540	136
Grp Sat Flow(s),veh/h/ln	1811	0	0	1809	0	0	1795	1885	1555	1767	1856	1571
Q Serve(g_s), s	14.6	0.0	0.0	12.8	0.0	0.0	1.2	39.7	9.0	2.0	24.3	5.6
Cycle Q Clear(g_c), s	14.6	0.0	0.0	12.8	0.0	0.0	1.2	39.7	9.0	2.0	24.3	5.6
Prop In Lane	0.55		0.07	0.58		0.07	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	308	0	0	275	0	0	85	834	688	83	821	695
V/C Ratio(X)	0.84	0.00	0.00	0.82	0.00	0.00	0.25	0.91	0.30	0.42	0.66	0.20
Avail Cap(c_a), veh/h	598	0	0	597	0	0	169	1067	880	167	1050	889
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.6	0.0	0.0	43.6	0.0	0.0	48.7	27.6	19.0	49.1	23.3	18.1
Incr Delay (d2), s/veh	6.1	0.0	0.0	6.0	0.0	0.0	1.5	9.4	0.2	3.3	1.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	0.0	0.0	6.2	0.0	0.0	0.6	18.2	3.0	0.9	9.9	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.7	0.0	0.0	49.6	0.0	0.0	50.2	37.0	19.2	52.4	24.3	18.2
LnGrp LOS	D	A	A	D	A	A	D	D	B	D	C	B
Approach Vol, veh/h		258			226			983			711	
Approach Delay, s/veh		48.7			49.6			33.6			24.5	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	51.9		23.0	10.0	51.9		21.1				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	60.0		35.0	10.0	60.0		35.0				
Max Q Clear Time (g_c+I1), s	4.0	41.7		16.6	3.2	26.3		14.8				
Green Ext Time (p_c), s	0.0	5.2		1.4	0.0	3.7		1.2				

Intersection Summary			
HCM 6th Ctrl Delay		34.1	
HCM 6th LOS		C	

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	20	555	26	2	422	211	214	33	25	8	15	10
Future Volume (veh/h)	20	555	26	2	422	211	214	33	25	8	15	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1909	1909	1909	1900	1900	1900	1894	1894	1894
Adj Flow Rate, veh/h	22	624	29	2	474	237	240	37	28	9	17	11
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	1	1	1	2	2	2	0	0	0	0	0	0
Cap, veh/h	47	771	36	5	780	661	435	51	36	158	261	139
Arrive On Green	0.03	0.43	0.43	0.00	0.41	0.41	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1795	1785	83	1818	1909	1618	1154	193	136	258	983	525
Grp Volume(v), veh/h	22	0	653	2	474	237	305	0	0	37	0	0
Grp Sat Flow(s),veh/h/ln	1795	0	1868	1818	1909	1618	1484	0	0	1766	0	0
Q Serve(g_s), s	0.6	0.0	15.3	0.1	9.8	5.1	8.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.6	0.0	15.3	0.1	9.8	5.1	9.4	0.0	0.0	0.8	0.0	0.0
Prop In Lane	1.00		0.04	1.00		1.00	0.79		0.09	0.24		0.30
Lane Grp Cap(c), veh/h	47	0	807	5	780	661	522	0	0	558	0	0
V/C Ratio(X)	0.47	0.00	0.81	0.40	0.61	0.36	0.58	0.00	0.00	0.07	0.00	0.00
Avail Cap(c_a), veh/h	359	0	2240	363	2289	1940	1157	0	0	1267	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.0	0.0	12.4	24.9	11.6	10.3	16.9	0.0	0.0	13.8	0.0	0.0
Incr Delay (d2), s/veh	7.0	0.0	2.0	44.9	0.8	0.3	1.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	4.6	0.1	3.0	1.3	3.0	0.0	0.0	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.0	0.0	14.4	69.8	12.4	10.6	17.9	0.0	0.0	13.8	0.0	0.0
LnGrp LOS	C	A	B	E	B	B	B	A	A	B	A	A
Approach Vol, veh/h		675			713			305			37	
Approach Delay, s/veh		14.9			12.0			17.9			13.8	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.1	26.6		18.3	6.3	25.4		18.3				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	60.0		35.0	10.0	60.0		35.0				
Max Q Clear Time (g_c+I1), s	2.1	17.3		11.4	2.6	11.8		2.8				
Green Ext Time (p_c), s	0.0	4.3		1.9	0.0	3.6		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		14.2	
HCM 6th LOS		B	

MOVEMENT SUMMARY

Site: 101 [Sportsman Club & New Brooklyln Roundabout]

2020 with Project (55 units) PM Peak Hour
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
East: NE New Brooklyn Rd												
1a	L1	14	2.0	0.188	9.5	LOS A	0.9	23.7	0.38	0.52	0.38	36.1
6	T1	141	2.0	0.188	5.0	LOS A	0.9	23.7	0.38	0.52	0.38	36.4
16b	R3	49	2.0	0.188	5.2	LOS A	0.9	23.7	0.38	0.52	0.38	35.0
Approach		204	2.0	0.188	5.4	LOS A	0.9	23.7	0.38	0.52	0.38	36.1
NorthEast: Sportsman Club Road NE												
1bx	L3	66	2.2	0.262	11.7	LOS B	1.4	36.0	0.37	0.54	0.37	36.3
6x	T1	190	2.2	0.262	4.9	LOS A	1.4	36.0	0.37	0.54	0.37	35.9
16ax	R1	37	2.2	0.262	4.5	LOS A	1.4	36.0	0.37	0.54	0.37	35.6
Approach		293	2.2	0.262	6.4	LOS A	1.4	36.0	0.37	0.54	0.37	35.9
West:												
5a	L1	35	2.4	0.124	9.7	LOS A	0.6	15.3	0.42	0.57	0.42	35.5
2	T1	85	2.4	0.124	5.3	LOS A	0.6	15.3	0.42	0.57	0.42	35.9
12b	R3	8	2.4	0.124	5.5	LOS A	0.6	15.3	0.42	0.57	0.42	34.5
Approach		128	2.4	0.124	6.5	LOS A	0.6	15.3	0.42	0.57	0.42	35.7
SouthWest: Sportsman Club Road NE												
5bx	L3	8	4.6	0.169	11.8	LOS B	0.8	21.0	0.36	0.49	0.36	36.8
2x	T1	158	4.6	0.169	5.0	LOS A	0.8	21.0	0.36	0.49	0.36	36.4
12ax	R1	14	4.6	0.169	4.6	LOS A	0.8	21.0	0.36	0.49	0.36	36.1
Approach		180	4.6	0.169	5.3	LOS A	0.8	21.0	0.36	0.49	0.36	36.4
All Vehicles		805	2.7	0.262	5.9	LOS A	1.4	36.0	0.38	0.53	0.38	36.0

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	120	11	17	195	9	7	0	10	13	0	5
Future Vol, veh/h	2	120	11	17	195	9	7	0	10	13	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	3	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, %	-	1	-	-	3	-	-	0	-	-	1	-
Peak Hour Factor	90	90	92	92	90	90	92	92	92	90	92	90
Heavy Vehicles, %	10	10	2	2	3	3	2	2	2	0	2	0
Mvmt Flow	2	133	12	18	217	10	8	0	11	14	0	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	227	0	0	145	0	0	404	406	142	410	407	222
Stage 1	-	-	-	-	-	-	143	143	-	258	258	-
Stage 2	-	-	-	-	-	-	261	263	-	152	149	-
Critical Hdwy	4.2	-	-	4.12	-	-	7.12	6.52	6.22	7.3	6.72	6.3
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.3	5.72	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.3	5.72	-
Follow-up Hdwy	2.29	-	-	2.218	-	-	3.518	4.018	3.318	3.5	4.018	3.3
Pot Cap-1 Maneuver	1295	-	-	1437	-	-	557	534	906	543	522	818
Stage 1	-	-	-	-	-	-	860	779	-	740	684	-
Stage 2	-	-	-	-	-	-	744	691	-	848	768	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1295	-	-	1437	-	-	546	525	904	528	514	818
Mov Cap-2 Maneuver	-	-	-	-	-	-	546	525	-	528	514	-
Stage 1	-	-	-	-	-	-	858	777	-	739	674	-
Stage 2	-	-	-	-	-	-	729	681	-	834	766	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.6	10.2	11.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	712	1295	-	-	1437	-	-	586
HCM Lane V/C Ratio	0.026	0.002	-	-	0.013	-	-	0.034
HCM Control Delay (s)	10.2	7.8	0	-	7.5	0	-	11.4
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	28	0	89	4	4	9	181	227	2	5	229	44
Future Vol, veh/h	28	0	89	4	4	9	181	227	2	5	229	44
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	-1	-	-	2	-	-	-2	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	0	0	0	0	0	0	1	1	1
Mvmt Flow	29	0	93	4	4	9	189	236	2	5	239	46

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	894	888	262	934	910	237	285	0	0	238	0	0
Stage 1	272	272	-	615	615	-	-	-	-	-	-	-
Stage 2	622	616	-	319	295	-	-	-	-	-	-	-
Critical Hdwy	7.32	6.72	6.32	6.9	6.3	6.1	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.32	5.72	-	5.9	5.3	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.32	5.72	-	5.9	5.3	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.5	4	3.3	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	249	269	771	261	291	812	1289	-	-	1335	-	-
Stage 1	723	674	-	499	502	-	-	-	-	-	-	-
Stage 2	458	466	-	709	684	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	211	223	771	199	241	812	1289	-	-	1335	-	-
Mov Cap-2 Maneuver	211	223	-	199	241	-	-	-	-	-	-	-
Stage 1	601	671	-	415	417	-	-	-	-	-	-	-
Stage 2	372	387	-	621	681	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.3	15.6	3.7	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1289	-	-	472	356	1335	-	-
HCM Lane V/C Ratio	0.146	-	-	0.258	0.05	0.004	-	-
HCM Control Delay (s)	8.3	0	-	15.3	15.6	7.7	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0.5	-	-	1	0.2	0	-	-

Intersection	
Intersection Delay, s/veh	11.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	64	96	15	3	100	48	12	136	2	92	197	50
Future Vol, veh/h	64	96	15	3	100	48	12	136	2	92	197	50
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	1	1	1	4	4	4	3	3	3	1	1	1
Mvmt Flow	68	102	16	3	106	51	13	145	2	98	210	53
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.9	10.4	10.3	13.5
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	37%	2%	27%
Vol Thru, %	91%	55%	66%	58%
Vol Right, %	1%	9%	32%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	150	175	151	339
LT Vol	12	64	3	92
Through Vol	136	96	100	197
RT Vol	2	15	48	50
Lane Flow Rate	160	186	161	361
Geometry Grp	1	1	1	1
Degree of Util (X)	0.244	0.29	0.246	0.514
Departure Headway (Hd)	5.501	5.609	5.505	5.126
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	651	640	651	703
Service Time	3.545	3.654	3.551	3.161
HCM Lane V/C Ratio	0.246	0.291	0.247	0.514
HCM Control Delay	10.3	10.9	10.4	13.5
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1	1.2	1	3

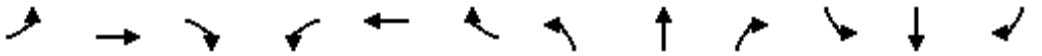
MOVEMENT SUMMARY

Site: 101 [Madison Ave / High School Rd]

2020 with 55 units - PM Peak Hour
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Madison Ave N												
3	L2	88	0.0	0.719	15.2	LOS B	8.6	214.8	0.95	1.12	1.29	22.8
8	T1	243	0.0	0.719	10.9	LOS B	8.6	214.8	0.95	1.12	1.29	22.7
18	R2	203	0.0	0.719	11.4	LOS B	8.6	214.8	0.95	1.12	1.29	22.2
Approach		535	0.0	0.719	11.8	LOS B	8.6	214.8	0.95	1.12	1.29	22.5
East: High School Rd												
1	L2	91	1.0	0.751	15.2	LOS B	9.8	246.0	0.96	1.12	1.31	22.9
6	T1	333	1.0	0.751	10.9	LOS B	9.8	246.0	0.96	1.12	1.31	22.7
16	R2	160	1.0	0.751	11.4	LOS B	9.8	246.0	0.96	1.12	1.31	22.3
Approach		584	1.0	0.751	11.7	LOS B	9.8	246.0	0.96	1.12	1.31	22.6
North: Madison Ave N												
7	L2	111	1.0	0.626	13.1	LOS B	6.3	157.4	0.90	1.01	1.12	23.3
4	T1	217	1.0	0.626	8.8	LOS A	6.3	157.4	0.90	1.01	1.12	23.1
14	R2	118	1.0	0.626	9.3	LOS A	6.3	157.4	0.90	1.01	1.12	22.6
Approach		447	1.0	0.626	10.0	LOS A	6.3	157.4	0.90	1.01	1.12	23.0
West: High School Rd												
5	L2	114	0.0	0.639	11.8	LOS B	6.6	164.3	0.86	0.93	1.04	23.6
2	T1	279	0.0	0.639	7.6	LOS A	6.6	164.3	0.86	0.93	1.04	23.4
12	R2	121	0.0	0.639	8.0	LOS A	6.6	164.3	0.86	0.93	1.04	23.0
Approach		514	0.0	0.639	8.6	LOS A	6.6	164.3	0.86	0.93	1.04	23.4
All Vehicles		2079	0.5	0.751	10.6	LOS B	9.8	246.0	0.92	1.05	1.20	22.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	87	37	288	110	6	25	404	130	73	806	127
Future Volume (veh/h)	124	87	37	288	110	6	25	404	130	73	806	127
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	1885	1841	1841	1841	1870	1870	1870
Adj Flow Rate, veh/h	131	92	39	303	116	6	27	439	141	77	848	134
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	1	1	1	4	4	4	2	2	2
Cap, veh/h	131	92	39	309	118	6	57	788	653	99	845	713
Arrive On Green	0.15	0.15	0.15	0.24	0.24	0.24	0.03	0.43	0.43	0.06	0.45	0.45
Sat Flow, veh/h	885	621	263	1294	495	26	1753	1841	1525	1781	1870	1578
Grp Volume(v), veh/h	262	0	0	425	0	0	27	439	141	77	848	134
Grp Sat Flow(s),veh/h/ln	1770	0	0	1814	0	0	1753	1841	1525	1781	1870	1578
Q Serve(g_s), s	22.9	0.0	0.0	36.1	0.0	0.0	2.3	27.8	9.0	6.6	70.0	7.9
Cycle Q Clear(g_c), s	22.9	0.0	0.0	36.1	0.0	0.0	2.3	27.8	9.0	6.6	70.0	7.9
Prop In Lane	0.50		0.15	0.71		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	263	0	0	433	0	0	57	788	653	99	845	713
V/C Ratio(X)	1.00	0.00	0.00	0.98	0.00	0.00	0.48	0.56	0.22	0.78	1.00	0.19
Avail Cap(c_a), veh/h	263	0	0	433	0	0	113	831	689	115	845	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.0	0.0	0.0	58.7	0.0	0.0	73.7	33.3	27.9	72.2	42.5	25.5
Incr Delay (d2), s/veh	54.8	0.0	0.0	38.2	0.0	0.0	6.1	0.7	0.2	24.5	31.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.4	0.0	0.0	21.2	0.0	0.0	1.1	12.2	3.3	3.6	38.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	120.8	0.0	0.0	96.8	0.0	0.0	79.8	34.0	28.1	96.7	74.4	25.6
LnGrp LOS	F	A	A	F	A	A	E	C	C	F	F	C
Approach Vol, veh/h		262			425			607			1059	
Approach Delay, s/veh		120.8			96.8			34.7			69.9	
Approach LOS		F			F			C			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.6	71.4		28.0	10.0	75.0		42.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	70.0		23.0	10.0	70.0		37.0				
Max Q Clear Time (g_c+I1), s	8.6	29.8		24.9	4.3	72.0		38.1				
Green Ext Time (p_c), s	0.0	3.0		0.0	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		71.3	
HCM 6th LOS		E	

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	2	436	27	1	637	411	150	17	27	6	41	16
Future Volume (veh/h)	2	436	27	1	637	411	150	17	27	6	41	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.96	0.99		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1909	1909	1909	1885	1885	1885	1894	1894	1894
Adj Flow Rate, veh/h	2	469	29	1	685	442	161	18	29	6	44	17
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	5	5	5	2	2	2	1	1	1	0	0	0
Cap, veh/h	5	814	50	4	910	753	354	39	42	94	258	92
Arrive On Green	0.00	0.48	0.48	0.00	0.48	0.48	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1739	1702	105	1818	1909	1579	1075	191	205	57	1262	449
Grp Volume(v), veh/h	2	0	498	1	685	442	208	0	0	67	0	0
Grp Sat Flow(s),veh/h/ln	1739	0	1807	1818	1909	1579	1471	0	0	1768	0	0
Q Serve(g_s), s	0.1	0.0	9.4	0.0	13.9	9.6	4.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	0.0	9.4	0.0	13.9	9.6	6.0	0.0	0.0	1.5	0.0	0.0
Prop In Lane	1.00		0.06	1.00		1.00	0.77		0.14	0.09		0.25
Lane Grp Cap(c), veh/h	5	0	864	4	910	753	435	0	0	444	0	0
V/C Ratio(X)	0.42	0.00	0.58	0.26	0.75	0.59	0.48	0.00	0.00	0.15	0.00	0.00
Avail Cap(c_a), veh/h	366	0	2284	383	2414	1997	1186	0	0	1367	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.6	0.0	8.9	23.7	10.1	9.0	17.3	0.0	0.0	15.6	0.0	0.0
Incr Delay (d2), s/veh	49.6	0.0	0.6	32.7	1.3	0.7	0.8	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	2.3	0.0	3.7	2.1	1.9	0.0	0.0	0.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.2	0.0	9.5	56.3	11.4	9.8	18.1	0.0	0.0	15.8	0.0	0.0
LnGrp LOS	E	A	A	E	B	A	B	A	A	B	A	A
Approach Vol, veh/h		500			1128			208			67	
Approach Delay, s/veh		9.8			10.8			18.1			15.8	
Approach LOS		A			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.1	27.7		14.7	5.1	27.6		14.7				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	60.0		35.0	10.0	60.0		35.0				
Max Q Clear Time (g_c+I1), s	2.0	11.4		8.0	2.1	15.9		3.5				
Green Ext Time (p_c), s	0.0	3.0		1.3	0.0	6.7		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		11.5	
HCM 6th LOS		B	

MOVEMENT SUMMARY

Site: 101 [Sportsman Club & New Brooklyln Roundabout]

2022 Background AM Peak Hour 8-9
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
East: NE New Brooklyn Rd												
1a	L1	15	2.1	0.170	10.4	LOS B	0.9	21.9	0.51	0.64	0.51	35.7
6	T1	43	2.1	0.170	6.0	LOS A	0.9	21.9	0.51	0.64	0.51	36.1
16b	R3	100	2.1	0.170	6.1	LOS A	0.9	21.9	0.51	0.64	0.51	34.7
Approach		158	2.1	0.170	6.5	LOS A	0.9	21.9	0.51	0.64	0.51	35.2
NorthEast: Sportsman Club Road NE												
1bx	L3	96	5.2	0.261	11.2	LOS B	1.5	38.5	0.23	0.51	0.23	36.3
6x	T1	168	5.2	0.261	4.4	LOS A	1.5	38.5	0.23	0.51	0.23	36.0
16ax	R1	42	5.2	0.261	4.0	LOS A	1.5	38.5	0.23	0.51	0.23	35.7
Approach		306	5.2	0.261	6.5	LOS A	1.5	38.5	0.23	0.51	0.23	36.0
West:												
5a	L1	120	0.9	0.236	9.9	LOS A	1.2	30.4	0.45	0.63	0.45	35.0
2	T1	122	0.9	0.236	5.5	LOS A	1.2	30.4	0.45	0.63	0.45	35.4
12b	R3	3	0.9	0.236	5.7	LOS A	1.2	30.4	0.45	0.63	0.45	34.0
Approach		245	0.9	0.236	7.7	LOS A	1.2	30.4	0.45	0.63	0.45	35.2
SouthWest: Sportsman Club Road NE												
5bx	L3	1	6.3	0.306	12.9	LOS B	1.7	44.2	0.53	0.60	0.53	36.2
2x	T1	258	6.3	0.306	6.1	LOS A	1.7	44.2	0.53	0.60	0.53	35.9
12ax	R1	26	6.3	0.306	5.8	LOS A	1.7	44.2	0.53	0.60	0.53	35.6
Approach		285	6.3	0.306	6.1	LOS A	1.7	44.2	0.53	0.60	0.53	35.8
All Vehicles		994	4.0	0.306	6.7	LOS A	1.7	44.2	0.42	0.58	0.42	35.6

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	250	175	15	24	19
Future Vol, veh/h	8	250	175	15	24	19
Conflicting Peds, #/hr	0	0	0	21	21	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, %	-	1	3	-	1	-
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	5	5	2	2	0	0
Mvmt Flow	11	357	250	21	34	27

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	292	0	-	0	682	282
Stage 1	-	-	-	-	282	-
Stage 2	-	-	-	-	400	-
Critical Hdwy	4.15	-	-	-	6.6	6.3
Critical Hdwy Stg 1	-	-	-	-	5.6	-
Critical Hdwy Stg 2	-	-	-	-	5.6	-
Follow-up Hdwy	2.245	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1253	-	-	-	403	756
Stage 1	-	-	-	-	758	-
Stage 2	-	-	-	-	666	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1230	-	-	-	384	742
Mov Cap-2 Maneuver	-	-	-	-	384	-
Stage 1	-	-	-	-	736	-
Stage 2	-	-	-	-	654	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	13.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1230	-	-	-	488
HCM Lane V/C Ratio	0.009	-	-	-	0.126
HCM Control Delay (s)	8	0	-	-	13.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Intersection	
Int Delay, s/veh	32.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	66	3	206	0	1	6	132	135	7	11	383	67
Future Vol, veh/h	66	3	206	0	1	6	132	135	7	11	383	67
Conflicting Peds, #/hr	5	0	6	9	0	8	6	0	9	8	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	-1	-	-	2	-	-	-2	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	2	2	2
Mvmt Flow	85	4	264	0	1	8	169	173	9	14	491	86

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1096	1097	549	1230	1136	195	583	0	0	191	0	0
Stage 1	568	568	-	525	525	-	-	-	-	-	-	-
Stage 2	528	529	-	705	611	-	-	-	-	-	-	-
Critical Hdwy	7.3	6.7	6.3	6.9	6.3	6.1	4.1	-	-	4.12	-	-
Critical Hdwy Stg 1	6.3	5.7	-	5.9	5.3	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.3	5.7	-	5.9	5.3	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.218	-	-
Pot Cap-1 Maneuver	181	202	531	167	217	856	1001	-	-	1383	-	-
Stage 1	495	494	-	556	548	-	-	-	-	-	-	-
Stage 2	522	515	-	448	504	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	149	159	524	68	171	843	996	-	-	1372	-	-
Mov Cap-2 Maneuver	149	159	-	68	171	-	-	-	-	-	-	-
Stage 1	399	484	-	448	441	-	-	-	-	-	-	-
Stage 2	415	415	-	215	494	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	114.8	11.8	4.5	0.2
HCM LOS	F	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	996	-	-	322	540	1372	-	-
HCM Lane V/C Ratio	0.17	-	-	1.095	0.017	0.01	-	-
HCM Control Delay (s)	9.4	0	-	114.8	11.8	7.7	0	-
HCM Lane LOS	A	A	-	F	B	A	A	-
HCM 95th %tile Q(veh)	0.6	-	-	13.6	0.1	0	-	-

Intersection	
Intersection Delay, s/veh	19.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	87	102	8	3	137	115	13	271	2	63	124	128
Future Vol, veh/h	87	102	8	3	137	115	13	271	2	63	124	128
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	3	3	3	5	5	5
Mvmt Flow	102	120	9	4	161	135	15	319	2	74	146	151
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	16.5	18	20.8	22.2
HCM LOS	C	C	C	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	44%	1%	20%
Vol Thru, %	95%	52%	54%	39%
Vol Right, %	1%	4%	45%	41%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	286	197	255	315
LT Vol	13	87	3	63
Through Vol	271	102	137	124
RT Vol	2	8	115	128
Lane Flow Rate	336	232	300	371
Geometry Grp	1	1	1	1
Degree of Util (X)	0.632	0.465	0.559	0.677
Departure Headway (Hd)	6.764	7.22	6.712	6.572
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	532	498	537	552
Service Time	4.82	5.285	4.773	4.572
HCM Lane V/C Ratio	0.632	0.466	0.559	0.672
HCM Control Delay	20.8	16.5	18	22.2
HCM Lane LOS	C	C	C	C
HCM 95th-tile Q	4.4	2.4	3.4	5.1

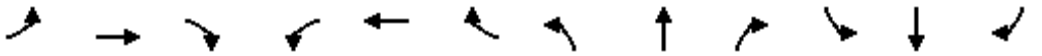
MOVEMENT SUMMARY

Site: 101 [Madison Ave / High School Rd]

2022 Background - AM Peak Hour
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Madison Ave N												
3	L2	53	0.0	0.459	10.0	LOS B	3.2	80.4	0.77	0.80	0.81	24.1
8	T1	130	0.0	0.459	5.8	LOS A	3.2	80.4	0.77	0.80	0.81	23.9
18	R2	148	0.0	0.459	6.2	LOS A	3.2	80.4	0.77	0.80	0.81	23.4
Approach		332	0.0	0.459	6.6	LOS A	3.2	80.4	0.77	0.80	0.81	23.7
East: High School Rd												
1	L2	91	1.0	0.514	8.1	LOS A	3.8	96.9	0.66	0.61	0.66	24.4
6	T1	257	1.0	0.514	3.8	LOS A	3.8	96.9	0.66	0.61	0.66	24.2
16	R2	125	1.0	0.514	4.3	LOS A	3.8	96.9	0.66	0.61	0.66	23.7
Approach		473	1.0	0.514	4.8	LOS A	3.8	96.9	0.66	0.61	0.66	24.1
North: Madison Ave N												
7	L2	121	1.0	0.640	11.6	LOS B	6.3	159.0	0.83	0.91	1.00	23.6
4	T1	223	1.0	0.640	7.4	LOS A	6.3	159.0	0.83	0.91	1.00	23.4
14	R2	170	1.0	0.640	7.8	LOS A	6.3	159.0	0.83	0.91	1.00	23.0
Approach		513	1.0	0.640	8.5	LOS A	6.3	159.0	0.83	0.91	1.00	23.3
West: High School Rd												
5	L2	93	0.0	0.629	11.8	LOS B	6.0	148.9	0.84	0.92	1.02	23.7
2	T1	285	0.0	0.629	7.6	LOS A	6.0	148.9	0.84	0.92	1.02	23.5
12	R2	103	0.0	0.629	8.0	LOS A	6.0	148.9	0.84	0.92	1.02	23.0
Approach		482	0.0	0.629	8.5	LOS A	6.0	148.9	0.84	0.92	1.02	23.4
All Vehicles		1799	0.5	0.640	7.2	LOS A	6.3	159.0	0.78	0.81	0.88	23.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	91	41	187	77	14	27	726	194	34	521	119
Future Volume (veh/h)	164	91	41	187	77	14	27	726	194	34	521	119
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1885	1885	1885	1885	1885	1885	1841	1841	1841
Adj Flow Rate, veh/h	182	101	46	208	86	16	30	807	216	38	579	132
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	5	5	5	1	1	1	1	1	1	4	4	4
Cap, veh/h	168	93	43	235	97	18	83	751	637	81	734	622
Arrive On Green	0.18	0.18	0.18	0.19	0.19	0.19	0.05	0.40	0.40	0.05	0.40	0.40
Sat Flow, veh/h	956	531	242	1213	502	93	1795	1885	1598	1753	1841	1560
Grp Volume(v), veh/h	329	0	0	310	0	0	30	807	216	38	579	132
Grp Sat Flow(s),veh/h/ln	1728	0	0	1808	0	0	1795	1885	1598	1753	1841	1560
Q Serve(g_s), s	19.0	0.0	0.0	18.0	0.0	0.0	1.7	43.0	10.1	2.3	29.8	6.0
Cycle Q Clear(g_c), s	19.0	0.0	0.0	18.0	0.0	0.0	1.7	43.0	10.1	2.3	29.8	6.0
Prop In Lane	0.55		0.14	0.67		0.05	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	304	0	0	350	0	0	83	751	637	81	734	622
V/C Ratio(X)	1.08	0.00	0.00	0.89	0.00	0.00	0.36	1.07	0.34	0.47	0.79	0.21
Avail Cap(c_a), veh/h	304	0	0	436	0	0	116	751	637	114	734	622
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.5	0.0	0.0	42.3	0.0	0.0	49.9	32.5	22.6	50.2	28.5	21.3
Incr Delay (d2), s/veh	74.9	0.0	0.0	16.4	0.0	0.0	2.6	54.6	0.3	4.1	5.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.4	0.0	0.0	9.6	0.0	0.0	0.8	29.2	3.6	1.1	13.2	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	119.4	0.0	0.0	58.8	0.0	0.0	52.5	87.1	22.9	54.3	34.3	21.5
LnGrp LOS	F	A	A	E	A	A	D	F	C	D	C	C
Approach Vol, veh/h		329			310			1053			749	
Approach Delay, s/veh		119.4			58.8			72.9			33.0	
Approach LOS		F			E			E			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	48.0		24.0	10.0	48.0		25.9				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	7.0	43.0		19.0	7.0	43.0		26.0				
Max Q Clear Time (g_c+I1), s	4.3	45.0		21.0	3.7	31.8		20.0				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	2.9		0.9				

Intersection Summary		
HCM 6th Ctrl Delay		65.2
HCM 6th LOS		E

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	49	682	157	7	494	261	241	69	22	45	18	5
Future Volume (veh/h)	49	682	157	7	494	261	241	69	22	45	18	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1924	1924	1924	1885	1885	1885	1864	1864	1864
Adj Flow Rate, veh/h	55	766	176	8	555	293	271	78	25	51	20	6
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	2	2	2
Cap, veh/h	82	743	171	19	904	766	395	89	29	341	125	33
Arrive On Green	0.05	0.51	0.51	0.01	0.47	0.47	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1781	1470	338	1833	1924	1631	1108	319	102	929	449	116
Grp Volume(v), veh/h	55	0	942	8	555	293	374	0	0	77	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1808	1833	1924	1631	1529	0	0	1494	0	0
Q Serve(g_s), s	2.2	0.0	37.0	0.3	15.7	8.5	14.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.2	0.0	37.0	0.3	15.7	8.5	17.0	0.0	0.0	2.6	0.0	0.0
Prop In Lane	1.00		0.19	1.00		1.00	0.72		0.07	0.66		0.08
Lane Grp Cap(c), veh/h	82	0	913	19	904	766	512	0	0	500	0	0
V/C Ratio(X)	0.67	0.00	1.03	0.43	0.61	0.38	0.73	0.00	0.00	0.15	0.00	0.00
Avail Cap(c_a), veh/h	243	0	913	250	972	824	665	0	0	645	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	34.4	0.0	18.1	36.0	14.5	12.6	24.9	0.0	0.0	19.9	0.0	0.0
Incr Delay (d2), s/veh	9.1	0.0	38.1	14.5	1.0	0.3	2.9	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	21.3	0.2	5.7	2.6	6.2	0.0	0.0	1.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.5	0.0	56.2	50.5	15.5	12.9	27.8	0.0	0.0	20.0	0.0	0.0
LnGrp LOS	D	A	F	D	B	B	C	A	A	C	A	A
Approach Vol, veh/h		997			856			374			77	
Approach Delay, s/veh		55.5			14.9			27.8			20.0	
Approach LOS		E			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.8	42.0		25.5	8.4	39.4		25.5				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	37.0		28.0	10.0	37.0		28.0				
Max Q Clear Time (g_c+I1), s	2.3	39.0		19.0	4.2	17.7		4.6				
Green Ext Time (p_c), s	0.0	0.0		1.5	0.0	4.0		0.4				

Intersection Summary												
HCM 6th Ctrl Delay			34.8									
HCM 6th LOS			C									

MOVEMENT SUMMARY

Site: 101 [Sportsman Club & New BrooklyIn Roundabout]

2022 Background School Peak Hour
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
East: NE New Brooklyn Rd												
1a	L1	46	3.5	0.246	10.0	LOS B	1.3	32.3	0.47	0.61	0.47	35.5
6	T1	115	3.5	0.246	5.6	LOS A	1.3	32.3	0.47	0.61	0.47	36.0
16b	R3	80	3.5	0.246	5.8	LOS A	1.3	32.3	0.47	0.61	0.47	34.5
Approach		241	3.5	0.246	6.5	LOS A	1.3	32.3	0.47	0.61	0.47	35.4
NorthEast: Sportsman Club Road NE												
1bx	L3	52	4.5	0.279	11.8	LOS B	1.6	40.3	0.39	0.54	0.39	36.3
6x	T1	178	4.5	0.279	5.0	LOS A	1.6	40.3	0.39	0.54	0.39	36.0
16ax	R1	71	4.5	0.279	4.7	LOS A	1.6	40.3	0.39	0.54	0.39	35.7
Approach		301	4.5	0.279	6.1	LOS A	1.6	40.3	0.39	0.54	0.39	35.9
West:												
5a	L1	50	2.5	0.127	9.8	LOS A	0.6	15.5	0.42	0.59	0.42	35.2
2	T1	73	2.5	0.127	5.4	LOS A	0.6	15.5	0.42	0.59	0.42	35.6
12b	R3	6	2.5	0.127	5.5	LOS A	0.6	15.5	0.42	0.59	0.42	34.2
Approach		129	2.5	0.127	7.1	LOS A	0.6	15.5	0.42	0.59	0.42	35.4
SouthWest: Sportsman Club Road NE												
5bx	L3	8	3.7	0.248	11.8	LOS B	1.3	33.3	0.37	0.49	0.37	36.8
2x	T1	226	3.7	0.248	5.0	LOS A	1.3	33.3	0.37	0.49	0.37	36.4
12ax	R1	36	3.7	0.248	4.6	LOS A	1.3	33.3	0.37	0.49	0.37	36.1
Approach		270	3.7	0.248	5.2	LOS A	1.3	33.3	0.37	0.49	0.37	36.4
All Vehicles		941	3.7	0.279	6.1	LOS A	1.6	40.3	0.41	0.55	0.41	35.9

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	13	149	298	34	37	22
Future Vol, veh/h	13	149	298	34	37	22
Conflicting Peds, #/hr	5	0	0	24	24	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	3	-	1	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	1	1	1	1	0	0
Mvmt Flow	16	180	359	41	45	27

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	424	0	-	0	640	409
Stage 1	-	-	-	-	404	-
Stage 2	-	-	-	-	236	-
Critical Hdwy	4.11	-	-	-	6.6	6.3
Critical Hdwy Stg 1	-	-	-	-	5.6	-
Critical Hdwy Stg 2	-	-	-	-	5.6	-
Follow-up Hdwy	2.209	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1141	-	-	-	427	639
Stage 1	-	-	-	-	663	-
Stage 2	-	-	-	-	797	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1117	-	-	-	403	623
Mov Cap-2 Maneuver	-	-	-	-	403	-
Stage 1	-	-	-	-	638	-
Stage 2	-	-	-	-	780	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	14.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1117	-	-	-	464
HCM Lane V/C Ratio	0.014	-	-	-	0.153
HCM Control Delay (s)	8.3	0	-	-	14.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.5

Intersection	
Int Delay, s/veh	20.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	55	5	132	7	5	13	249	278	12	5	253	74
Future Vol, veh/h	55	5	132	7	5	13	249	278	12	5	253	74
Conflicting Peds, #/hr	3	0	11	13	0	5	11	0	13	5	0	3
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	-1	-	-	2	-	-	-2	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	1	1	1	0	0	0	2	2	2	0	0	0
Mvmt Flow	64	6	153	8	6	15	290	323	14	6	294	86

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1286	1290	361	1365	1326	348	391	0	0	350	0	0
Stage 1	360	360	-	923	923	-	-	-	-	-	-	-
Stage 2	926	930	-	442	403	-	-	-	-	-	-	-
Critical Hdwy	7.31	6.71	6.31	6.9	6.3	6.1	4.12	-	-	4.1	-	-
Critical Hdwy Stg 1	6.31	5.71	-	5.9	5.3	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.31	5.71	-	5.9	5.3	-	-	-	-	-	-	-
Follow-up Hdwy	3.509	4.009	3.309	3.5	4	3.3	2.218	-	-	2.2	-	-
Pot Cap-1 Maneuver	132	153	679	136	169	707	1168	-	-	1220	-	-
Stage 1	647	616	-	343	370	-	-	-	-	-	-	-
Stage 2	307	330	-	613	617	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	93	103	665	74	114	696	1157	-	-	1206	-	-
Mov Cap-2 Maneuver	93	103	-	74	114	-	-	-	-	-	-	-
Stage 1	443	606	-	234	253	-	-	-	-	-	-	-
Stage 2	202	225	-	459	607	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	98.3	32.6	4.2	0.1
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1157	-	-	229	159	1206	-	-
HCM Lane V/C Ratio	0.25	-	-	0.975	0.183	0.005	-	-
HCM Control Delay (s)	9.1	0	-	98.3	32.6	8	0	-
HCM Lane LOS	A	A	-	F	D	A	A	-
HCM 95th %tile Q(veh)	1	-	-	8.8	0.6	0	-	-

Intersection	
Intersection Delay, s/veh	21.5
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	80	110	19	5	158	66	17	160	1	95	223	110
Future Vol, veh/h	80	110	19	5	158	66	17	160	1	95	223	110
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	5	5	5	1	1	1	2	2	2	1	1	1
Mvmt Flow	92	126	22	6	182	76	20	184	1	109	256	126
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	15.7	15.6	14	30.6
HCM LOS	C	C	B	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	38%	2%	22%
Vol Thru, %	90%	53%	69%	52%
Vol Right, %	1%	9%	29%	26%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	178	209	229	428
LT Vol	17	80	5	95
Through Vol	160	110	158	223
RT Vol	1	19	66	110
Lane Flow Rate	205	240	263	492
Geometry Grp	1	1	1	1
Degree of Util (X)	0.383	0.458	0.48	0.818
Departure Headway (Hd)	6.74	6.862	6.563	5.985
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	530	521	545	600
Service Time	4.826	4.943	4.641	4.048
HCM Lane V/C Ratio	0.387	0.461	0.483	0.82
HCM Control Delay	14	15.7	15.6	30.6
HCM Lane LOS	B	C	C	D
HCM 95th-tile Q	1.8	2.4	2.6	8.3

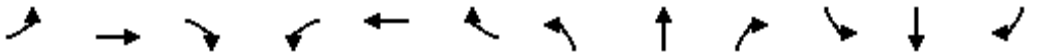
MOVEMENT SUMMARY

Site: 101 [Madison Ave / High School Rd]

2022 Background - After School PM Peak
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Madison Ave N												
3	L2	76	0.0	0.754	16.9	LOS B	9.2	230.1	0.97	1.20	1.40	22.5
8	T1	228	0.0	0.754	12.7	LOS B	9.2	230.1	0.97	1.20	1.40	22.3
18	R2	217	0.0	0.754	13.1	LOS B	9.2	230.1	0.97	1.20	1.40	21.9
Approach		522	0.0	0.754	13.5	LOS B	9.2	230.1	0.97	1.20	1.40	22.1
East: High School Rd												
1	L2	115	1.0	0.623	11.4	LOS B	6.1	153.9	0.84	0.90	1.00	23.7
6	T1	285	1.0	0.623	7.1	LOS A	6.1	153.9	0.84	0.90	1.00	23.5
16	R2	96	1.0	0.623	7.6	LOS A	6.1	153.9	0.84	0.90	1.00	23.1
Approach		496	1.0	0.623	8.2	LOS A	6.1	153.9	0.84	0.90	1.00	23.5
North: Madison Ave N												
7	L2	109	1.0	0.595	11.9	LOS B	5.4	137.2	0.85	0.94	1.02	23.6
4	T1	212	1.0	0.595	7.7	LOS A	5.4	137.2	0.85	0.94	1.02	23.4
14	R2	116	1.0	0.595	8.1	LOS A	5.4	137.2	0.85	0.94	1.02	22.9
Approach		437	1.0	0.595	8.9	LOS A	5.4	137.2	0.85	0.94	1.02	23.3
West: High School Rd												
5	L2	105	0.0	0.693	13.2	LOS B	7.5	187.1	0.88	1.00	1.14	23.3
2	T1	320	0.0	0.693	9.0	LOS A	7.5	187.1	0.88	1.00	1.14	23.1
12	R2	108	0.0	0.693	9.4	LOS A	7.5	187.1	0.88	1.00	1.14	22.7
Approach		533	0.0	0.693	9.9	LOS A	7.5	187.1	0.88	1.00	1.14	23.1
All Vehicles		1987	0.5	0.754	10.2	LOS B	9.2	230.1	0.89	1.02	1.15	23.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	90	18	124	74	16	20	708	192	33	503	127
Future Volume (veh/h)	132	90	18	124	74	16	20	708	192	33	503	127
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1856	1856	1856
Adj Flow Rate, veh/h	145	99	20	136	81	18	22	778	211	36	553	140
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	3	3	3
Cap, veh/h	171	117	24	163	97	22	80	847	698	79	833	705
Arrive On Green	0.17	0.17	0.17	0.16	0.16	0.16	0.04	0.45	0.45	0.04	0.45	0.45
Sat Flow, veh/h	995	679	137	1046	623	138	1795	1885	1555	1767	1856	1571
Grp Volume(v), veh/h	264	0	0	235	0	0	22	778	211	36	553	140
Grp Sat Flow(s),veh/h/ln	1811	0	0	1807	0	0	1795	1885	1555	1767	1856	1571
Q Serve(g_s), s	15.8	0.0	0.0	14.1	0.0	0.0	1.3	43.3	9.7	2.2	26.2	6.0
Cycle Q Clear(g_c), s	15.8	0.0	0.0	14.1	0.0	0.0	1.3	43.3	9.7	2.2	26.2	6.0
Prop In Lane	0.55		0.08	0.58		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	311	0	0	282	0	0	80	847	698	79	833	705
V/C Ratio(X)	0.85	0.00	0.00	0.83	0.00	0.00	0.27	0.92	0.30	0.46	0.66	0.20
Avail Cap(c_a), veh/h	566	0	0	565	0	0	160	1011	834	158	995	842
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.9	0.0	0.0	45.8	0.0	0.0	51.7	28.9	19.6	52.1	24.2	18.6
Incr Delay (d2), s/veh	6.4	0.0	0.0	6.4	0.0	0.0	1.8	11.7	0.2	4.1	1.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	0.0	0.0	6.8	0.0	0.0	0.6	20.4	3.3	1.0	10.8	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.4	0.0	0.0	52.2	0.0	0.0	53.5	40.6	19.9	56.2	25.5	18.8
LnGrp LOS	D	A	A	D	A	A	D	D	B	E	C	B
Approach Vol, veh/h		264			235			1011			729	
Approach Delay, s/veh		51.4			52.2			36.5			25.7	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	55.2		24.2	10.0	55.2		22.4				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	60.0		35.0	10.0	60.0		35.0				
Max Q Clear Time (g_c+I1), s	4.2	45.3		17.8	3.3	28.2		16.1				
Green Ext Time (p_c), s	0.0	4.9		1.4	0.0	3.8		1.3				

Intersection Summary												
HCM 6th Ctrl Delay			36.4									
HCM 6th LOS			D									

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	22	570	26	2	433	217	221	33	25	8	14	11
Future Volume (veh/h)	22	570	26	2	433	217	221	33	25	8	14	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1909	1909	1909	1900	1900	1900	1894	1894	1894
Adj Flow Rate, veh/h	25	640	29	2	487	244	248	37	28	9	16	12
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	1	1	1	2	2	2	0	0	0	0	0	0
Cap, veh/h	52	784	36	5	787	667	439	49	36	157	249	154
Arrive On Green	0.03	0.44	0.44	0.00	0.41	0.41	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1795	1787	81	1818	1909	1618	1168	181	133	263	925	570
Grp Volume(v), veh/h	25	0	669	2	487	244	313	0	0	37	0	0
Grp Sat Flow(s),veh/h/ln	1795	0	1868	1818	1909	1618	1482	0	0	1758	0	0
Q Serve(g_s), s	0.7	0.0	16.2	0.1	10.4	5.4	9.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.7	0.0	16.2	0.1	10.4	5.4	10.1	0.0	0.0	0.8	0.0	0.0
Prop In Lane	1.00		0.04	1.00		1.00	0.79		0.09	0.24		0.32
Lane Grp Cap(c), veh/h	52	0	819	5	787	667	524	0	0	560	0	0
V/C Ratio(X)	0.48	0.00	0.82	0.40	0.62	0.37	0.60	0.00	0.00	0.07	0.00	0.00
Avail Cap(c_a), veh/h	346	0	2162	351	2209	1872	1116	0	0	1219	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.8	0.0	12.7	25.8	12.0	10.6	17.4	0.0	0.0	14.1	0.0	0.0
Incr Delay (d2), s/veh	6.6	0.0	2.1	44.9	0.8	0.3	1.1	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	5.0	0.1	3.2	1.4	3.2	0.0	0.0	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.4	0.0	14.8	70.8	12.8	10.9	18.5	0.0	0.0	14.2	0.0	0.0
LnGrp LOS	C	A	B	E	B	B	B	A	A	B	A	A
Approach Vol, veh/h		694			733			313			37	
Approach Delay, s/veh		15.4			12.3			18.5			14.2	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.1	27.7		19.0	6.5	26.4		19.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	60.0		35.0	10.0	60.0		35.0				
Max Q Clear Time (g_c+I1), s	2.1	18.2		12.1	2.7	12.4		2.8				
Green Ext Time (p_c), s	0.0	4.5		1.9	0.0	3.8		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		14.7	
HCM 6th LOS		B	

MOVEMENT SUMMARY

Site: 101 [Sportsman Club & New BrooklyIn Roundabout]

2022 Background PM Peak Hour
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
East: NE New Brooklyn Rd												
1a	L1	16	2.0	0.197	9.5	LOS A	1.0	25.2	0.39	0.53	0.39	36.0
6	T1	145	2.0	0.197	5.1	LOS A	1.0	25.2	0.39	0.53	0.39	36.4
16b	R3	52	2.0	0.197	5.3	LOS A	1.0	25.2	0.39	0.53	0.39	35.0
Approach		213	2.0	0.197	5.5	LOS A	1.0	25.2	0.39	0.53	0.39	36.0
NorthEast: Sportsman Club Road NE												
1bx	L3	68	2.2	0.275	11.7	LOS B	1.5	38.4	0.38	0.54	0.38	36.3
6x	T1	200	2.2	0.275	5.0	LOS A	1.5	38.4	0.38	0.54	0.38	35.9
16ax	R1	38	2.2	0.275	4.6	LOS A	1.5	38.4	0.38	0.54	0.38	35.6
Approach		306	2.2	0.275	6.4	LOS A	1.5	38.4	0.38	0.54	0.38	35.9
West:												
5a	L1	36	2.4	0.130	9.8	LOS A	0.6	16.1	0.43	0.57	0.43	35.4
2	T1	88	2.4	0.130	5.4	LOS A	0.6	16.1	0.43	0.57	0.43	35.8
12b	R3	8	2.4	0.130	5.5	LOS A	0.6	16.1	0.43	0.57	0.43	34.4
Approach		132	2.4	0.130	6.6	LOS A	0.6	16.1	0.43	0.57	0.43	35.6
SouthWest: Sportsman Club Road NE												
5bx	L3	8	4.6	0.177	11.8	LOS B	0.9	22.2	0.36	0.49	0.36	36.8
2x	T1	165	4.6	0.177	5.0	LOS A	0.9	22.2	0.36	0.49	0.36	36.4
12ax	R1	15	4.6	0.177	4.7	LOS A	0.9	22.2	0.36	0.49	0.36	36.1
Approach		188	4.6	0.177	5.3	LOS A	0.9	22.2	0.36	0.49	0.36	36.4
All Vehicles		839	2.7	0.275	6.0	LOS A	1.5	38.4	0.39	0.53	0.39	36.0

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	125	202	9	14	6
Future Vol, veh/h	2	125	202	9	14	6
Conflicting Peds, #/hr	0	0	0	0	3	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, %	-	1	3	-	1	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	10	10	3	3	0	0
Mvmt Flow	2	139	224	10	16	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	234	0	-	0	375	229
Stage 1	-	-	-	-	229	-
Stage 2	-	-	-	-	146	-
Critical Hdwy	4.2	-	-	-	6.6	6.3
Critical Hdwy Stg 1	-	-	-	-	5.6	-
Critical Hdwy Stg 2	-	-	-	-	5.6	-
Follow-up Hdwy	2.29	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1288	-	-	-	617	810
Stage 1	-	-	-	-	803	-
Stage 2	-	-	-	-	879	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1288	-	-	-	616	810
Mov Cap-2 Maneuver	-	-	-	-	616	-
Stage 1	-	-	-	-	801	-
Stage 2	-	-	-	-	879	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1288	-	-	-	664
HCM Lane V/C Ratio	0.002	-	-	-	0.033
HCM Control Delay (s)	7.8	0	-	-	10.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	26	0	85	4	4	9	175	236	2	5	239	41
Future Vol, veh/h	26	0	85	4	4	9	175	236	2	5	239	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	-1	-	-	2	-	-	-2	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	0	0	0	0	0	0	1	1	1
Mvmt Flow	27	0	89	4	4	9	182	246	2	5	249	43

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	899	893	271	936	913	247	292	0	0	248	0	0
Stage 1	281	281	-	611	611	-	-	-	-	-	-	-
Stage 2	618	612	-	325	302	-	-	-	-	-	-	-
Critical Hdwy	7.32	6.72	6.32	6.9	6.3	6.1	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.32	5.72	-	5.9	5.3	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.32	5.72	-	5.9	5.3	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.5	4	3.3	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	247	267	762	261	290	802	1281	-	-	1324	-	-
Stage 1	715	668	-	501	504	-	-	-	-	-	-	-
Stage 2	461	468	-	704	679	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	210	222	762	201	241	802	1281	-	-	1324	-	-
Mov Cap-2 Maneuver	210	222	-	201	241	-	-	-	-	-	-	-
Stage 1	597	665	-	418	421	-	-	-	-	-	-	-
Stage 2	377	391	-	619	676	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.1	15.6	3.5	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1281	-	-	472	356	1324	-	-
HCM Lane V/C Ratio	0.142	-	-	0.245	0.05	0.004	-	-
HCM Control Delay (s)	8.3	0	-	15.1	15.6	7.7	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0.5	-	-	1	0.2	0	-	-

Intersection	
Intersection Delay, s/veh	12.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	65	103	16	4	108	51	13	139	3	98	204	52
Future Vol, veh/h	65	103	16	4	108	51	13	139	3	98	204	52
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	1	1	1	4	4	4	3	3	3	1	1	1
Mvmt Flow	69	110	17	4	115	54	14	148	3	104	217	55
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.4	10.8	10.6	14.4
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	35%	2%	28%
Vol Thru, %	90%	56%	66%	58%
Vol Right, %	2%	9%	31%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	155	184	163	354
LT Vol	13	65	4	98
Through Vol	139	103	108	204
RT Vol	3	16	51	52
Lane Flow Rate	165	196	173	377
Geometry Grp	1	1	1	1
Degree of Util (X)	0.258	0.311	0.271	0.546
Departure Headway (Hd)	5.622	5.718	5.617	5.224
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	636	626	638	689
Service Time	3.677	3.772	3.672	3.268
HCM Lane V/C Ratio	0.259	0.313	0.271	0.547
HCM Control Delay	10.6	11.4	10.8	14.4
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1	1.3	1.1	3.3

MOVEMENT SUMMARY

Site: 101 [Madison Ave / High School Rd]

2022 Background - PM Peak Hour
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Madison Ave N												
3	L2	91	0.0	0.768	17.2	LOS B	10.2	254.1	0.99	1.23	1.45	22.4
8	T1	253	0.0	0.768	13.0	LOS B	10.2	254.1	0.99	1.23	1.45	22.2
18	R2	211	0.0	0.768	13.4	LOS B	10.2	254.1	0.99	1.23	1.45	21.8
Approach		555	0.0	0.768	13.9	LOS B	10.2	254.1	0.99	1.23	1.45	22.1
East: High School Rd												
1	L2	101	1.0	0.809	17.9	LOS B	12.1	303.5	1.00	1.25	1.50	22.2
6	T1	348	1.0	0.809	13.6	LOS B	12.1	303.5	1.00	1.25	1.50	22.0
16	R2	164	1.0	0.809	14.1	LOS B	12.1	303.5	1.00	1.25	1.50	21.7
Approach		613	1.0	0.809	14.4	LOS B	12.1	303.5	1.00	1.25	1.50	22.0
North: Madison Ave N												
7	L2	113	1.0	0.679	14.8	LOS B	7.4	186.1	0.95	1.11	1.25	22.9
4	T1	229	1.0	0.679	10.6	LOS B	7.4	186.1	0.95	1.11	1.25	22.7
14	R2	122	1.0	0.679	11.0	LOS B	7.4	186.1	0.95	1.11	1.25	22.3
Approach		464	1.0	0.679	11.7	LOS B	7.4	186.1	0.95	1.11	1.25	22.6
West: High School Rd												
5	L2	117	0.0	0.688	13.3	LOS B	7.8	194.5	0.91	1.02	1.16	23.3
2	T1	291	0.0	0.688	9.0	LOS A	7.8	194.5	0.91	1.02	1.16	23.1
12	R2	128	0.0	0.688	9.4	LOS A	7.8	194.5	0.91	1.02	1.16	22.6
Approach		537	0.0	0.688	10.0	LOS B	7.8	194.5	0.91	1.02	1.16	23.0
All Vehicles		2170	0.5	0.809	12.6	LOS B	12.1	303.5	0.96	1.16	1.35	22.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	89	37	288	110	6	25	408	130	73	807	129
Future Volume (veh/h)	130	89	37	288	110	6	25	408	130	73	807	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	1885	1841	1841	1841	1870	1870	1870
Adj Flow Rate, veh/h	137	94	39	303	116	6	27	443	141	77	849	136
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	1	1	1	4	4	4	2	2	2
Cap, veh/h	133	91	38	309	118	6	57	788	653	99	845	713
Arrive On Green	0.15	0.15	0.15	0.24	0.24	0.24	0.03	0.43	0.43	0.06	0.45	0.45
Sat Flow, veh/h	899	617	256	1294	495	26	1753	1841	1525	1781	1870	1578
Grp Volume(v), veh/h	270	0	0	425	0	0	27	443	141	77	849	136
Grp Sat Flow(s),veh/h/ln	1771	0	0	1814	0	0	1753	1841	1525	1781	1870	1578
Q Serve(g_s), s	23.0	0.0	0.0	36.1	0.0	0.0	2.3	28.1	9.0	6.6	70.0	8.0
Cycle Q Clear(g_c), s	23.0	0.0	0.0	36.1	0.0	0.0	2.3	28.1	9.0	6.6	70.0	8.0
Prop In Lane	0.51		0.14	0.71		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	263	0	0	433	0	0	57	788	653	99	845	713
V/C Ratio(X)	1.03	0.00	0.00	0.98	0.00	0.00	0.48	0.56	0.22	0.78	1.01	0.19
Avail Cap(c_a), veh/h	263	0	0	433	0	0	113	831	689	115	845	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.0	0.0	0.0	58.7	0.0	0.0	73.7	33.4	27.9	72.2	42.5	25.5
Incr Delay (d2), s/veh	62.8	0.0	0.0	38.2	0.0	0.0	6.1	0.8	0.2	24.5	32.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.0	0.0	0.0	21.2	0.0	0.0	1.1	12.3	3.3	3.6	38.1	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	128.8	0.0	0.0	96.8	0.0	0.0	79.8	34.2	28.1	96.7	74.7	25.6
LnGrp LOS	F	A	A	F	A	A	E	C	C	F	F	C
Approach Vol, veh/h		270			425			611			1062	
Approach Delay, s/veh		128.8			96.8			34.8			70.0	
Approach LOS		F			F			C			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.6	71.4		28.0	10.0	75.0		42.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	70.0		23.0	10.0	70.0		37.0				
Max Q Clear Time (g_c+I1), s	8.6	30.1		25.0	4.3	72.0		38.1				
Green Ext Time (p_c), s	0.0	3.1		0.0	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		72.4	
HCM 6th LOS		E	

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	2	436	27	1	637	412	154	19	27	6	42	16
Future Volume (veh/h)	2	436	27	1	637	412	154	19	27	6	42	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.96	0.99		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1909	1909	1909	1885	1885	1885	1894	1894	1894
Adj Flow Rate, veh/h	2	469	29	1	685	443	166	20	29	6	45	17
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	5	5	5	2	2	2	1	1	1	0	0	0
Cap, veh/h	5	812	50	4	908	751	358	41	42	93	266	93
Arrive On Green	0.00	0.48	0.48	0.00	0.48	0.48	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1739	1702	105	1818	1909	1579	1075	198	198	55	1272	443
Grp Volume(v), veh/h	2	0	498	1	685	443	215	0	0	68	0	0
Grp Sat Flow(s),veh/h/ln	1739	0	1807	1818	1909	1579	1471	0	0	1770	0	0
Q Serve(g_s), s	0.1	0.0	9.6	0.0	14.1	9.8	4.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	0.0	9.6	0.0	14.1	9.8	6.3	0.0	0.0	1.5	0.0	0.0
Prop In Lane	1.00		0.06	1.00		1.00	0.77		0.13	0.09		0.25
Lane Grp Cap(c), veh/h	5	0	862	4	908	751	441	0	0	452	0	0
V/C Ratio(X)	0.42	0.00	0.58	0.26	0.75	0.59	0.49	0.00	0.00	0.15	0.00	0.00
Avail Cap(c_a), veh/h	362	0	2259	379	2387	1974	1174	0	0	1353	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.9	0.0	9.1	23.9	10.3	9.2	17.4	0.0	0.0	15.6	0.0	0.0
Incr Delay (d2), s/veh	49.6	0.0	0.6	33.4	1.3	0.7	0.8	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	2.4	0.0	3.8	2.1	2.0	0.0	0.0	0.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.5	0.0	9.7	57.4	11.6	9.9	18.2	0.0	0.0	15.8	0.0	0.0
LnGrp LOS	E	A	A	E	B	A	B	A	A	B	A	A
Approach Vol, veh/h		500			1129			215			68	
Approach Delay, s/veh		9.9			11.0			18.2			15.8	
Approach LOS		A			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.1	27.9		15.0	5.1	27.8		15.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	60.0		35.0	10.0	60.0		35.0				
Max Q Clear Time (g_c+I1), s	2.0	11.6		8.3	2.1	16.1		3.5				
Green Ext Time (p_c), s	0.0	3.0		1.3	0.0	6.7		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		11.7	
HCM 6th LOS		B	

MOVEMENT SUMMARY

Site: 101 [Sportsman Club & New Brooklyln Roundabout]

2022 with Project (91 units) AM Peak Hour 8-9
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
East: NE New Brooklyn Rd												
1a	L1	17	2.1	0.186	10.4	LOS B	1.0	24.3	0.52	0.65	0.52	35.7
6	T1	45	2.1	0.186	6.0	LOS A	1.0	24.3	0.52	0.65	0.52	36.1
16b	R3	111	2.1	0.186	6.2	LOS A	1.0	24.3	0.52	0.65	0.52	34.7
Approach		173	2.1	0.186	6.6	LOS A	1.0	24.3	0.52	0.65	0.52	35.2
NorthEast: Sportsman Club Road NE												
1bx	L3	99	5.2	0.265	11.2	LOS B	1.5	39.2	0.24	0.51	0.24	36.3
6x	T1	168	5.2	0.265	4.4	LOS A	1.5	39.2	0.24	0.51	0.24	35.9
16ax	R1	42	5.2	0.265	4.0	LOS A	1.5	39.2	0.24	0.51	0.24	35.6
Approach		309	5.2	0.265	6.5	LOS A	1.5	39.2	0.24	0.51	0.24	36.0
West:												
5a	L1	120	0.9	0.238	10.0	LOS A	1.2	30.8	0.46	0.63	0.46	35.0
2	T1	123	0.9	0.238	5.5	LOS A	1.2	30.8	0.46	0.63	0.46	35.4
12b	R3	3	0.9	0.238	5.7	LOS A	1.2	30.8	0.46	0.63	0.46	34.0
Approach		246	0.9	0.238	7.7	LOS A	1.2	30.8	0.46	0.63	0.46	35.2
SouthWest: Sportsman Club Road NE												
5bx	L3	1	6.3	0.308	13.0	LOS B	1.7	44.6	0.54	0.61	0.54	36.2
2x	T1	258	6.3	0.308	6.2	LOS A	1.7	44.6	0.54	0.61	0.54	35.9
12ax	R1	27	6.3	0.308	5.8	LOS A	1.7	44.6	0.54	0.61	0.54	35.6
Approach		286	6.3	0.308	6.2	LOS A	1.7	44.6	0.54	0.61	0.54	35.8
All Vehicles		1014	3.9	0.308	6.7	LOS A	1.7	44.6	0.42	0.59	0.42	35.6

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	250	4	7	175	15	15	0	22	24	0	19
Future Vol, veh/h	8	250	4	7	175	15	15	0	22	24	0	19
Conflicting Peds, #/hr	0	0	0	0	0	21	0	0	0	21	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, %	-	1	-	-	3	-	-	0	-	-	1	-
Peak Hour Factor	70	70	92	92	70	70	92	92	92	70	92	70
Heavy Vehicles, %	5	5	2	2	2	2	2	2	2	0	2	0
Mvmt Flow	11	357	4	8	250	21	16	0	24	34	0	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	292	0	0	361	0	0	671	689	380	712	681	282
Stage 1	-	-	-	-	-	-	381	381	-	298	298	-
Stage 2	-	-	-	-	-	-	290	308	-	414	383	-
Critical Hdwy	4.15	-	-	4.12	-	-	7.12	6.52	6.22	7.3	6.72	6.3
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.3	5.72	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.3	5.72	-
Follow-up Hdwy	2.245	-	-	2.218	-	-	3.518	4.018	3.318	3.5	4.018	3.3
Pot Cap-1 Maneuver	1253	-	-	1198	-	-	370	369	667	336	359	756
Stage 1	-	-	-	-	-	-	641	613	-	703	656	-
Stage 2	-	-	-	-	-	-	718	660	-	605	599	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1230	-	-	1198	-	-	352	355	655	307	346	742
Mov Cap-2 Maneuver	-	-	-	-	-	-	352	355	-	307	346	-
Stage 1	-	-	-	-	-	-	634	606	-	683	639	-
Stage 2	-	-	-	-	-	-	686	643	-	566	592	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.2	13.1	15.2
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	486	1230	-	-	1198	-	-	414
HCM Lane V/C Ratio	0.083	0.009	-	-	0.006	-	-	0.148
HCM Control Delay (s)	13.1	8	0	-	8	0	-	15.2
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.5

Intersection	
Int Delay, s/veh	45.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	72	3	223	0	1	6	137	135	7	11	383	69
Future Vol, veh/h	72	3	223	0	1	6	137	135	7	11	383	69
Conflicting Peds, #/hr	5	0	6	9	0	8	6	0	9	8	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	-1	-	-	2	-	-	-2	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	2	2	2
Mvmt Flow	92	4	286	0	1	8	176	173	9	14	491	88

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1111	1112	550	1256	1152	195	585	0	0	191	0	0
Stage 1	569	569	-	539	539	-	-	-	-	-	-	-
Stage 2	542	543	-	717	613	-	-	-	-	-	-	-
Critical Hdwy	7.3	6.7	6.3	6.9	6.3	6.1	4.1	-	-	4.12	-	-
Critical Hdwy Stg 1	6.3	5.7	-	5.9	5.3	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.3	5.7	-	5.9	5.3	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.218	-	-
Pot Cap-1 Maneuver	177	198	530	160	213	856	1000	-	-	1383	-	-
Stage 1	495	493	-	546	541	-	-	-	-	-	-	-
Stage 2	513	507	-	441	503	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	145	155	523	59	166	843	995	-	-	1372	-	-
Mov Cap-2 Maneuver	145	155	-	59	166	-	-	-	-	-	-	-
Stage 1	396	483	-	435	431	-	-	-	-	-	-	-
Stage 2	404	404	-	194	493	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	155.1	11.9	4.6	0.2
HCM LOS	F	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	995	-	-	316	533	1372	-	-
HCM Lane V/C Ratio	0.177	-	-	1.209	0.017	0.01	-	-
HCM Control Delay (s)	9.4	0	-	155.1	11.9	7.7	0	-
HCM Lane LOS	A	A	-	F	B	A	A	-
HCM 95th %tile Q(veh)	0.6	-	-	16.8	0.1	0	-	-

Intersection	
Intersection Delay, s/veh	19.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	87	102	8	3	137	115	13	272	2	63	126	128
Future Vol, veh/h	87	102	8	3	137	115	13	272	2	63	126	128
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	3	3	3	5	5	5
Mvmt Flow	102	120	9	4	161	135	15	320	2	74	148	151
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	16.5	18.1	21	22.5
HCM LOS	C	C	C	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	44%	1%	20%
Vol Thru, %	95%	52%	54%	40%
Vol Right, %	1%	4%	45%	40%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	287	197	255	317
LT Vol	13	87	3	63
Through Vol	272	102	137	126
RT Vol	2	8	115	128
Lane Flow Rate	338	232	300	373
Geometry Grp	1	1	1	1
Degree of Util (X)	0.636	0.466	0.561	0.682
Departure Headway (Hd)	6.776	7.239	6.73	6.586
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	533	496	534	552
Service Time	4.834	5.308	4.793	4.586
HCM Lane V/C Ratio	0.634	0.468	0.562	0.676
HCM Control Delay	21	16.5	18.1	22.5
HCM Lane LOS	C	C	C	C
HCM 95th-tile Q	4.4	2.4	3.4	5.2

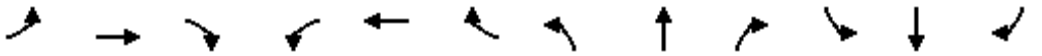
MOVEMENT SUMMARY

Site: 101 [Madison Ave / High School Rd]

2022 with Project (91 units) - AM Peak Hour
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Madison Ave N												
3	L2	53	0.0	0.463	10.1	LOS B	3.3	81.7	0.78	0.80	0.82	24.1
8	T1	132	0.0	0.463	5.9	LOS A	3.3	81.7	0.78	0.80	0.82	23.9
18	R2	148	0.0	0.463	6.3	LOS A	3.3	81.7	0.78	0.80	0.82	23.4
Approach		333	0.0	0.463	6.7	LOS A	3.3	81.7	0.78	0.80	0.82	23.7
East: High School Rd												
1	L2	91	1.0	0.517	8.1	LOS A	3.9	97.5	0.67	0.61	0.67	24.4
6	T1	257	1.0	0.517	3.9	LOS A	3.9	97.5	0.67	0.61	0.67	24.2
16	R2	126	1.0	0.517	4.3	LOS A	3.9	97.5	0.67	0.61	0.67	23.7
Approach		474	1.0	0.517	4.8	LOS A	3.9	97.5	0.67	0.61	0.67	24.1
North: Madison Ave N												
7	L2	124	1.0	0.655	11.9	LOS B	6.7	168.0	0.84	0.93	1.03	23.6
4	T1	228	1.0	0.655	7.7	LOS A	6.7	168.0	0.84	0.93	1.03	23.4
14	R2	173	1.0	0.655	8.1	LOS A	6.7	168.0	0.84	0.93	1.03	22.9
Approach		525	1.0	0.655	8.8	LOS A	6.7	168.0	0.84	0.93	1.03	23.3
West: High School Rd												
5	L2	95	0.0	0.636	12.1	LOS B	6.1	153.2	0.85	0.94	1.04	23.6
2	T1	285	0.0	0.636	7.8	LOS A	6.1	153.2	0.85	0.94	1.04	23.4
12	R2	103	0.0	0.636	8.3	LOS A	6.1	153.2	0.85	0.94	1.04	22.9
Approach		483	0.0	0.636	8.8	LOS A	6.1	153.2	0.85	0.94	1.04	23.3
All Vehicles		1814	0.6	0.655	7.4	LOS A	6.7	168.0	0.79	0.82	0.90	23.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	168	92	41	187	79	14	27	729	194	34	526	125
Future Volume (veh/h)	168	92	41	187	79	14	27	729	194	34	526	125
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1885	1885	1885	1885	1885	1885	1841	1841	1841
Adj Flow Rate, veh/h	187	102	46	208	88	16	30	810	216	38	584	139
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	5	5	5	1	1	1	1	1	1	4	4	4
Cap, veh/h	170	93	42	235	99	18	83	750	636	81	733	621
Arrive On Green	0.18	0.18	0.18	0.19	0.19	0.19	0.05	0.40	0.40	0.05	0.40	0.40
Sat Flow, veh/h	965	526	237	1205	510	93	1795	1885	1598	1753	1841	1560
Grp Volume(v), veh/h	335	0	0	312	0	0	30	810	216	38	584	139
Grp Sat Flow(s),veh/h/ln	1729	0	0	1808	0	0	1795	1885	1598	1753	1841	1560
Q Serve(g_s), s	19.0	0.0	0.0	18.1	0.0	0.0	1.8	43.0	10.2	2.3	30.2	6.4
Cycle Q Clear(g_c), s	19.0	0.0	0.0	18.1	0.0	0.0	1.8	43.0	10.2	2.3	30.2	6.4
Prop In Lane	0.56		0.14	0.67		0.05	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	304	0	0	352	0	0	83	750	636	81	733	621
V/C Ratio(X)	1.10	0.00	0.00	0.89	0.00	0.00	0.36	1.08	0.34	0.47	0.80	0.22
Avail Cap(c_a), veh/h	304	0	0	435	0	0	116	750	636	114	733	621
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.5	0.0	0.0	42.3	0.0	0.0	50.0	32.5	22.6	50.2	28.7	21.5
Incr Delay (d2), s/veh	81.8	0.0	0.0	16.7	0.0	0.0	2.6	56.4	0.3	4.2	6.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.0	0.0	0.0	9.6	0.0	0.0	0.8	29.6	3.6	1.1	13.5	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	126.3	0.0	0.0	59.0	0.0	0.0	52.6	89.0	22.9	54.4	34.8	21.7
LnGrp LOS	F	A	A	E	A	A	D	F	C	D	C	C
Approach Vol, veh/h		335			312			1056			761	
Approach Delay, s/veh		126.3			59.0			74.4			33.4	
Approach LOS		F			E			E			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	48.0		24.0	10.0	48.0		26.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	7.0	43.0		19.0	7.0	43.0		26.0				
Max Q Clear Time (g_c+I1), s	4.3	45.0		21.0	3.8	32.2		20.1				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	2.9		0.9				

Intersection Summary												
HCM 6th Ctrl Delay			66.9									
HCM 6th LOS			E									

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	49	682	157	7	494	266	243	71	22	45	20	5
Future Volume (veh/h)	49	682	157	7	494	266	243	71	22	45	20	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1924	1924	1924	1885	1885	1885	1864	1864	1864
Adj Flow Rate, veh/h	55	766	176	8	555	299	273	80	25	51	22	6
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	2	2	2
Cap, veh/h	82	740	170	19	900	763	396	91	29	336	136	32
Arrive On Green	0.05	0.50	0.50	0.01	0.47	0.47	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1781	1470	338	1833	1924	1631	1104	323	101	905	481	114
Grp Volume(v), veh/h	55	0	942	8	555	299	378	0	0	79	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1808	1833	1924	1631	1528	0	0	1500	0	0
Q Serve(g_s), s	2.2	0.0	37.0	0.3	15.8	8.8	14.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.2	0.0	37.0	0.3	15.8	8.8	17.2	0.0	0.0	2.7	0.0	0.0
Prop In Lane	1.00		0.19	1.00		1.00	0.72		0.07	0.65		0.08
Lane Grp Cap(c), veh/h	82	0	910	19	900	763	515	0	0	504	0	0
V/C Ratio(X)	0.67	0.00	1.03	0.43	0.62	0.39	0.73	0.00	0.00	0.16	0.00	0.00
Avail Cap(c_a), veh/h	242	0	910	249	969	821	663	0	0	645	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	34.5	0.0	18.2	36.1	14.6	12.7	24.9	0.0	0.0	19.8	0.0	0.0
Incr Delay (d2), s/veh	9.2	0.0	39.2	14.5	1.1	0.3	3.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	21.5	0.2	5.8	2.7	6.3	0.0	0.0	1.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.7	0.0	57.4	50.7	15.7	13.1	27.9	0.0	0.0	20.0	0.0	0.0
LnGrp LOS	D	A	F	D	B	B	C	A	A	B	A	A
Approach Vol, veh/h		997			862			378			79	
Approach Delay, s/veh		56.7			15.1			27.9			20.0	
Approach LOS		E			B			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.8	42.0		25.7	8.4	39.4		25.7				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	37.0		28.0	10.0	37.0		28.0				
Max Q Clear Time (g_c+I1), s	2.3	39.0		19.2	4.2	17.8		4.7				
Green Ext Time (p_c), s	0.0	0.0		1.5	0.0	4.0		0.4				

Intersection Summary			
HCM 6th Ctrl Delay		35.3	
HCM 6th LOS		D	

MOVEMENT SUMMARY

Site: 101 [Sportsman Club & New BrooklyIn Roundabout]

2022 with Project (91 units) School Peak Hour
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
East: NE New Brooklyn Rd												
1a	L1	48	3.5	0.257	10.1	LOS B	1.3	34.2	0.47	0.61	0.47	35.5
6	T1	116	3.5	0.257	5.6	LOS A	1.3	34.2	0.47	0.61	0.47	35.9
16b	R3	88	3.5	0.257	5.8	LOS A	1.3	34.2	0.47	0.61	0.47	34.5
Approach		252	3.5	0.257	6.5	LOS A	1.3	34.2	0.47	0.61	0.47	35.4
NorthEast: Sportsman Club Road NE												
1bx	L3	66	4.5	0.293	11.9	LOS B	1.7	42.9	0.40	0.55	0.40	36.2
6x	T1	178	4.5	0.293	5.1	LOS A	1.7	42.9	0.40	0.55	0.40	35.8
16ax	R1	71	4.5	0.293	4.7	LOS A	1.7	42.9	0.40	0.55	0.40	35.5
Approach		315	4.5	0.293	6.4	LOS A	1.7	42.9	0.40	0.55	0.40	35.8
West:												
5a	L1	50	2.5	0.130	9.9	LOS A	0.6	16.1	0.44	0.60	0.44	35.2
2	T1	75	2.5	0.130	5.5	LOS A	0.6	16.1	0.44	0.60	0.44	35.6
12b	R3	6	2.5	0.130	5.6	LOS A	0.6	16.1	0.44	0.60	0.44	34.2
Approach		131	2.5	0.130	7.1	LOS A	0.6	16.1	0.44	0.60	0.44	35.4
SouthWest: Sportsman Club Road NE												
5bx	L3	8	3.7	0.252	11.9	LOS B	1.3	34.0	0.39	0.50	0.39	36.8
2x	T1	226	3.7	0.252	5.1	LOS A	1.3	34.0	0.39	0.50	0.39	36.4
12ax	R1	38	3.7	0.252	4.7	LOS A	1.3	34.0	0.39	0.50	0.39	36.1
Approach		272	3.7	0.252	5.3	LOS A	1.3	34.0	0.39	0.50	0.39	36.3
All Vehicles		970	3.7	0.293	6.2	LOS A	1.7	42.9	0.42	0.56	0.42	35.8

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	13	149	18	26	298	34	11	0	17	37	0	22
Future Vol, veh/h	13	149	18	26	298	34	11	0	17	37	0	22
Conflicting Peds, #/hr	5	0	0	0	0	24	0	0	0	24	0	5
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, %	-	1	-	-	3	-	-	0	-	-	1	-
Peak Hour Factor	83	83	92	92	83	83	92	92	92	83	92	83
Heavy Vehicles, %	1	1	2	2	1	1	2	2	2	0	2	0
Mvmt Flow	16	180	20	28	359	41	12	0	18	45	0	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	424	0	0	200	0	0	676	702	214	715	692	409
Stage 1	-	-	-	-	-	-	222	222	-	460	460	-
Stage 2	-	-	-	-	-	-	454	480	-	255	232	-
Critical Hdwy	4.11	-	-	4.12	-	-	7.12	6.52	6.22	7.3	6.72	6.3
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.3	5.72	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.3	5.72	-
Follow-up Hdwy	2.209	-	-	2.218	-	-	3.518	4.018	3.318	3.5	4.018	3.3
Pot Cap-1 Maneuver	1141	-	-	1372	-	-	367	362	826	335	353	639
Stage 1	-	-	-	-	-	-	780	720	-	570	552	-
Stage 2	-	-	-	-	-	-	586	554	-	743	703	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1117	-	-	1372	-	-	339	340	809	304	331	623
Mov Cap-2 Maneuver	-	-	-	-	-	-	339	340	-	304	331	-
Stage 1	-	-	-	-	-	-	768	708	-	549	527	-
Stage 2	-	-	-	-	-	-	544	529	-	699	692	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.5	12.3	16.8
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	524	1117	-	-	1372	-	-	376
HCM Lane V/C Ratio	0.058	0.014	-	-	0.021	-	-	0.189
HCM Control Delay (s)	12.3	8.3	0	-	7.7	0	-	16.8
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0.7

Intersection	
Int Delay, s/veh	31.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	59	5	145	7	5	13	269	278	12	5	253	80
Future Vol, veh/h	59	5	145	7	5	13	269	278	12	5	253	80
Conflicting Peds, #/hr	3	0	11	13	0	5	11	0	13	5	0	3
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	-1	-	-	2	-	-	-2	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	1	1	1	0	0	0	2	2	2	0	0	0
Mvmt Flow	69	6	169	8	6	15	313	323	14	6	294	93

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1336	1340	365	1422	1379	348	398	0	0	350	0	0
Stage 1	364	364	-	969	969	-	-	-	-	-	-	-
Stage 2	972	976	-	453	410	-	-	-	-	-	-	-
Critical Hdwy	7.31	6.71	6.31	6.9	6.3	6.1	4.12	-	-	4.1	-	-
Critical Hdwy Stg 1	6.31	5.71	-	5.9	5.3	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.31	5.71	-	5.9	5.3	-	-	-	-	-	-	-
Follow-up Hdwy	3.509	4.009	3.309	3.5	4	3.3	2.218	-	-	2.2	-	-
Pot Cap-1 Maneuver	122	142	675	124	157	707	1161	-	-	1220	-	-
Stage 1	644	613	-	324	353	-	-	-	-	-	-	-
Stage 2	289	313	-	605	613	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	83	92	661	63	101	696	1150	-	-	1206	-	-
Mov Cap-2 Maneuver	83	92	-	63	101	-	-	-	-	-	-	-
Stage 1	424	603	-	213	232	-	-	-	-	-	-	-
Stage 2	182	206	-	439	603	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	154.1	37.6	4.5	0.1
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1150	-	-	212	139	1206	-	-
HCM Lane V/C Ratio	0.272	-	-	1.146	0.209	0.005	-	-
HCM Control Delay (s)	9.3	0	-	154.1	37.6	8	0	-
HCM Lane LOS	A	A	-	F	E	A	A	-
HCM 95th %tile Q(veh)	1.1	-	-	11.7	0.8	0	-	-

Intersection	
Intersection Delay, s/veh	21.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	80	110	19	5	158	66	17	162	1	95	224	110
Future Vol, veh/h	80	110	19	5	158	66	17	162	1	95	224	110
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	5	5	5	1	1	1	2	2	2	1	1	1
Mvmt Flow	92	126	22	6	182	76	20	186	1	109	257	126
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	15.7	15.7	14.1	30.9
HCM LOS	C	C	B	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	38%	2%	22%
Vol Thru, %	90%	53%	69%	52%
Vol Right, %	1%	9%	29%	26%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	180	209	229	429
LT Vol	17	80	5	95
Through Vol	162	110	158	224
RT Vol	1	19	66	110
Lane Flow Rate	207	240	263	493
Geometry Grp	1	1	1	1
Degree of Util (X)	0.388	0.459	0.481	0.821
Departure Headway (Hd)	6.751	6.88	6.578	5.997
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	530	521	545	602
Service Time	4.835	4.961	4.659	4.06
HCM Lane V/C Ratio	0.391	0.461	0.483	0.819
HCM Control Delay	14.1	15.7	15.7	30.9
HCM Lane LOS	B	C	C	D
HCM 95th-tile Q	1.8	2.4	2.6	8.4

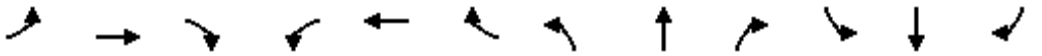
MOVEMENT SUMMARY

Site: 101 [Madison Ave / High School Rd]

2022 with Project 91 units - After School PM Peak
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Madison Ave N												
3	L2	76	0.0	0.772	17.8	LOS B	9.8	245.2	0.98	1.24	1.46	22.3
8	T1	236	0.0	0.772	13.6	LOS B	9.8	245.2	0.98	1.24	1.46	22.1
18	R2	217	0.0	0.772	14.0	LOS B	9.8	245.2	0.98	1.24	1.46	21.7
Approach		529	0.0	0.772	14.4	LOS B	9.8	245.2	0.98	1.24	1.46	21.9
East: High School Rd												
1	L2	115	1.0	0.638	11.9	LOS B	6.4	162.4	0.86	0.93	1.04	23.6
6	T1	285	1.0	0.638	7.6	LOS A	6.4	162.4	0.86	0.93	1.04	23.4
16	R2	101	1.0	0.638	8.1	LOS A	6.4	162.4	0.86	0.93	1.04	23.0
Approach		501	1.0	0.638	8.7	LOS A	6.4	162.4	0.86	0.93	1.04	23.4
North: Madison Ave N												
7	L2	112	1.0	0.611	12.2	LOS B	5.8	145.2	0.86	0.96	1.05	23.5
4	T1	216	1.0	0.611	8.0	LOS A	5.8	145.2	0.86	0.96	1.05	23.3
14	R2	120	1.0	0.611	8.4	LOS A	5.8	145.2	0.86	0.96	1.05	22.8
Approach		448	1.0	0.611	9.1	LOS A	5.8	145.2	0.86	0.96	1.05	23.2
West: High School Rd												
5	L2	110	0.0	0.705	13.7	LOS B	7.8	195.1	0.90	1.03	1.18	23.2
2	T1	320	0.0	0.705	9.4	LOS A	7.8	195.1	0.90	1.03	1.18	23.0
12	R2	108	0.0	0.705	9.9	LOS A	7.8	195.1	0.90	1.03	1.18	22.6
Approach		537	0.0	0.705	10.4	LOS B	7.8	195.1	0.90	1.03	1.18	22.9
All Vehicles		2015	0.5	0.772	10.7	LOS B	9.8	245.2	0.90	1.05	1.19	22.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	136	92	18	124	76	16	20	711	192	33	507	134
Future Volume (veh/h)	136	92	18	124	76	16	20	711	192	33	507	134
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1856	1856	1856
Adj Flow Rate, veh/h	149	101	20	136	84	18	22	781	211	36	557	147
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	3	3	3
Cap, veh/h	174	118	23	162	100	21	79	847	698	78	833	705
Arrive On Green	0.17	0.17	0.17	0.16	0.16	0.16	0.04	0.45	0.45	0.04	0.45	0.45
Sat Flow, veh/h	999	677	134	1033	638	137	1795	1885	1555	1767	1856	1571
Grp Volume(v), veh/h	270	0	0	238	0	0	22	781	211	36	557	147
Grp Sat Flow(s),veh/h/ln	1811	0	0	1808	0	0	1795	1885	1555	1767	1856	1571
Q Serve(g_s), s	16.5	0.0	0.0	14.6	0.0	0.0	1.4	44.4	9.9	2.3	26.9	6.5
Cycle Q Clear(g_c), s	16.5	0.0	0.0	14.6	0.0	0.0	1.4	44.4	9.9	2.3	26.9	6.5
Prop In Lane	0.55		0.07	0.57		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	316	0	0	284	0	0	79	847	698	78	833	705
V/C Ratio(X)	0.85	0.00	0.00	0.84	0.00	0.00	0.28	0.92	0.30	0.46	0.67	0.21
Avail Cap(c_a), veh/h	556	0	0	556	0	0	158	993	819	155	977	827
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.6	0.0	0.0	46.6	0.0	0.0	52.7	29.5	20.0	53.1	24.7	19.1
Incr Delay (d2), s/veh	6.6	0.0	0.0	6.5	0.0	0.0	1.9	12.4	0.2	4.3	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	0.0	0.0	7.0	0.0	0.0	0.6	21.1	3.4	1.1	11.2	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.2	0.0	0.0	53.2	0.0	0.0	54.6	41.9	20.2	57.4	26.1	19.2
LnGrp LOS	D	A	A	D	A	A	D	D	C	E	C	B
Approach Vol, veh/h		270			238			1014			740	
Approach Delay, s/veh		52.2			53.2			37.7			26.3	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	56.2		24.9	10.0	56.2		22.9				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	60.0		35.0	10.0	60.0		35.0				
Max Q Clear Time (g_c+I1), s	4.3	46.4		18.5	3.4	28.9		16.6				
Green Ext Time (p_c), s	0.0	4.8		1.4	0.0	3.9		1.3				

Intersection Summary			
HCM 6th Ctrl Delay		37.3	
HCM 6th LOS		D	

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	22	570	26	2	433	221	223	34	25	8	16	11
Future Volume (veh/h)	22	570	26	2	433	221	223	34	25	8	16	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1909	1909	1909	1900	1900	1900	1894	1894	1894
Adj Flow Rate, veh/h	25	640	29	2	487	248	251	38	28	9	18	12
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	1	1	1	2	2	2	0	0	0	0	0	0
Cap, veh/h	52	783	35	5	786	666	441	50	36	151	266	148
Arrive On Green	0.03	0.44	0.44	0.00	0.41	0.41	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1795	1787	81	1818	1909	1618	1168	182	131	244	977	543
Grp Volume(v), veh/h	25	0	669	2	487	248	317	0	0	39	0	0
Grp Sat Flow(s),veh/h/ln	1795	0	1868	1818	1909	1618	1481	0	0	1764	0	0
Q Serve(g_s), s	0.7	0.0	16.4	0.1	10.5	5.6	9.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.7	0.0	16.4	0.1	10.5	5.6	10.3	0.0	0.0	0.9	0.0	0.0
Prop In Lane	1.00		0.04	1.00		1.00	0.79		0.09	0.23		0.31
Lane Grp Cap(c), veh/h	52	0	818	5	786	666	527	0	0	565	0	0
V/C Ratio(X)	0.48	0.00	0.82	0.40	0.62	0.37	0.60	0.00	0.00	0.07	0.00	0.00
Avail Cap(c_a), veh/h	344	0	2146	348	2193	1859	1107	0	0	1217	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	25.0	0.0	12.9	26.0	12.1	10.7	17.5	0.0	0.0	14.1	0.0	0.0
Incr Delay (d2), s/veh	6.6	0.0	2.1	44.9	0.8	0.3	1.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	5.0	0.1	3.3	1.5	3.3	0.0	0.0	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.6	0.0	14.9	70.9	12.9	11.0	18.6	0.0	0.0	14.2	0.0	0.0
LnGrp LOS	C	A	B	E	B	B	B	A	A	B	A	A
Approach Vol, veh/h		694			737			317			39	
Approach Delay, s/veh		15.5			12.5			18.6			14.2	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.1	27.9		19.2	6.5	26.5		19.2				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	60.0		35.0	10.0	60.0		35.0				
Max Q Clear Time (g_c+I1), s	2.1	18.4		12.3	2.7	12.5		2.9				
Green Ext Time (p_c), s	0.0	4.5		1.9	0.0	3.8		0.2				

Intersection Summary												
HCM 6th Ctrl Delay			14.8									
HCM 6th LOS			B									

MOVEMENT SUMMARY

Site: 101 [Sportsman Club & New Brooklyln Roundabout]

2022 with Project (91 units) PM Peak Hour
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
East: NE New Brooklyn Rd												
1a	L1	17	2.0	0.207	9.5	LOS A	1.0	26.7	0.39	0.53	0.39	36.0
6	T1	147	2.0	0.207	5.1	LOS A	1.0	26.7	0.39	0.53	0.39	36.4
16b	R3	59	2.0	0.207	5.3	LOS A	1.0	26.7	0.39	0.53	0.39	35.0
Approach		223	2.0	0.207	5.5	LOS A	1.0	26.7	0.39	0.53	0.39	36.0
NorthEast: Sportsman Club Road NE												
1bx	L3	81	2.2	0.288	11.8	LOS B	1.6	40.6	0.39	0.56	0.39	36.2
6x	T1	200	2.2	0.288	5.0	LOS A	1.6	40.6	0.39	0.56	0.39	35.7
16ax	R1	38	2.2	0.288	4.6	LOS A	1.6	40.6	0.39	0.56	0.39	35.5
Approach		319	2.2	0.288	6.7	LOS A	1.6	40.6	0.39	0.56	0.39	35.8
West:												
5a	L1	36	2.4	0.134	9.9	LOS A	0.7	16.8	0.44	0.58	0.44	35.4
2	T1	91	2.4	0.134	5.5	LOS A	0.7	16.8	0.44	0.58	0.44	35.8
12b	R3	8	2.4	0.134	5.6	LOS A	0.7	16.8	0.44	0.58	0.44	34.4
Approach		135	2.4	0.134	6.6	LOS A	0.7	16.8	0.44	0.58	0.44	35.6
SouthWest: Sportsman Club Road NE												
5bx	L3	8	4.6	0.182	11.9	LOS B	0.9	22.8	0.38	0.50	0.38	36.7
2x	T1	165	4.6	0.182	5.1	LOS A	0.9	22.8	0.38	0.50	0.38	36.3
12ax	R1	17	4.6	0.182	4.8	LOS A	0.9	22.8	0.38	0.50	0.38	36.0
Approach		190	4.6	0.182	5.4	LOS A	0.9	22.8	0.38	0.50	0.38	36.3
All Vehicles		867	2.7	0.288	6.1	LOS A	1.6	40.6	0.40	0.54	0.40	35.9

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	125	11	7	202	9	7	0	10	14	0	6
Future Vol, veh/h	2	125	11	7	202	9	7	0	10	14	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	3	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, %	-	1	-	-	3	-	-	0	-	-	1	-
Peak Hour Factor	90	90	92	92	90	90	92	92	92	90	92	90
Heavy Vehicles, %	10	10	2	2	3	3	2	2	2	0	2	0
Mvmt Flow	2	139	12	8	224	10	8	0	11	16	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	234	0	0	151	0	0	398	399	148	403	400	229
Stage 1	-	-	-	-	-	-	149	149	-	245	245	-
Stage 2	-	-	-	-	-	-	249	250	-	158	155	-
Critical Hdwy	4.2	-	-	4.12	-	-	7.12	6.52	6.22	7.3	6.72	6.3
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.3	5.72	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.3	5.72	-
Follow-up Hdwy	2.29	-	-	2.218	-	-	3.518	4.018	3.318	3.5	4.018	3.3
Pot Cap-1 Maneuver	1288	-	-	1430	-	-	562	539	899	549	526	810
Stage 1	-	-	-	-	-	-	854	774	-	753	694	-
Stage 2	-	-	-	-	-	-	755	700	-	842	763	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1288	-	-	1430	-	-	554	535	897	537	522	810
Mov Cap-2 Maneuver	-	-	-	-	-	-	554	535	-	537	522	-
Stage 1	-	-	-	-	-	-	852	772	-	751	690	-
Stage 2	-	-	-	-	-	-	744	696	-	828	761	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.2	10.2	11.3
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	715	1288	-	-	1430	-	-	597
HCM Lane V/C Ratio	0.026	0.002	-	-	0.005	-	-	0.037
HCM Control Delay (s)	10.2	7.8	0	-	7.5	0	-	11.3
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	30	0	97	4	4	9	194	236	2	5	239	48
Future Vol, veh/h	30	0	97	4	4	9	194	236	2	5	239	48
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	-1	-	-	2	-	-	-2	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	0	0	0	0	0	0	1	1	1
Mvmt Flow	31	0	101	4	4	9	202	246	2	5	249	50

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	942	936	274	986	960	247	299	0	0	248	0	0
Stage 1	284	284	-	651	651	-	-	-	-	-	-	-
Stage 2	658	652	-	335	309	-	-	-	-	-	-	-
Critical Hdwy	7.32	6.72	6.32	6.9	6.3	6.1	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.32	5.72	-	5.9	5.3	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.32	5.72	-	5.9	5.3	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.5	4	3.3	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	231	252	759	242	273	802	1274	-	-	1324	-	-
Stage 1	712	666	-	478	485	-	-	-	-	-	-	-
Stage 2	437	448	-	696	675	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	193	205	759	180	222	802	1274	-	-	1324	-	-
Mov Cap-2 Maneuver	193	205	-	180	222	-	-	-	-	-	-	-
Stage 1	581	663	-	390	396	-	-	-	-	-	-	-
Stage 2	349	366	-	600	672	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.4	16.5	3.8	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1274	-	-	448	330	1324	-	-
HCM Lane V/C Ratio	0.159	-	-	0.295	0.054	0.004	-	-
HCM Control Delay (s)	8.4	0	-	16.4	16.5	7.7	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0.6	-	-	1.2	0.2	0	-	-

Intersection	
Intersection Delay, s/veh	12.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	65	103	16	4	108	51	13	141	3	98	205	52
Future Vol, veh/h	65	103	16	4	108	51	13	141	3	98	205	52
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	1	1	1	4	4	4	3	3	3	1	1	1
Mvmt Flow	69	110	17	4	115	54	14	150	3	104	218	55
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.4	10.8	10.7	14.5
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	35%	2%	28%
Vol Thru, %	90%	56%	66%	58%
Vol Right, %	2%	9%	31%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	157	184	163	355
LT Vol	13	65	4	98
Through Vol	141	103	108	205
RT Vol	3	16	51	52
Lane Flow Rate	167	196	173	378
Geometry Grp	1	1	1	1
Degree of Util (X)	0.261	0.312	0.271	0.549
Departure Headway (Hd)	5.627	5.729	5.627	5.229
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	636	626	636	687
Service Time	3.683	3.783	3.685	3.273
HCM Lane V/C Ratio	0.263	0.313	0.272	0.55
HCM Control Delay	10.7	11.4	10.8	14.5
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1	1.3	1.1	3.4

MOVEMENT SUMMARY

Site: 101 [Madison Ave / High School Rd]

2022 with Project (91 units) - PM Peak Hour
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Madison Ave N												
3	L2	91	0.0	0.783	18.1	LOS B	10.8	270.2	1.00	1.26	1.50	22.2
8	T1	261	0.0	0.783	13.9	LOS B	10.8	270.2	1.00	1.26	1.50	22.0
18	R2	211	0.0	0.783	14.3	LOS B	10.8	270.2	1.00	1.26	1.50	21.6
Approach		563	0.0	0.783	14.7	LOS B	10.8	270.2	1.00	1.26	1.50	21.9
East: High School Rd												
1	L2	101	1.0	0.837	19.8	LOS B	13.6	341.4	1.00	1.32	1.60	21.8
6	T1	348	1.0	0.837	15.5	LOS B	13.6	341.4	1.00	1.32	1.60	21.6
16	R2	179	1.0	0.837	16.0	LOS B	13.6	341.4	1.00	1.32	1.60	21.3
Approach		628	1.0	0.837	16.3	LOS B	13.6	341.4	1.00	1.32	1.60	21.6
North: Madison Ave N												
7	L2	116	1.0	0.690	15.1	LOS B	7.7	194.4	0.95	1.13	1.27	22.8
4	T1	234	1.0	0.690	10.9	LOS B	7.7	194.4	0.95	1.13	1.27	22.6
14	R2	124	1.0	0.690	11.3	LOS B	7.7	194.4	0.95	1.13	1.27	22.2
Approach		474	1.0	0.690	12.0	LOS B	7.7	194.4	0.95	1.13	1.27	22.5
West: High School Rd												
5	L2	123	0.0	0.699	13.7	LOS B	8.1	203.1	0.92	1.05	1.20	23.2
2	T1	291	0.0	0.699	9.4	LOS A	8.1	203.1	0.92	1.05	1.20	23.0
12	R2	128	0.0	0.699	9.9	LOS A	8.1	203.1	0.92	1.05	1.20	22.5
Approach		542	0.0	0.699	10.5	LOS B	8.1	203.1	0.92	1.05	1.20	22.9
All Vehicles		2208	0.5	0.837	13.6	LOS B	13.6	341.4	0.97	1.20	1.40	22.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Appendix D: Traffic Count Data

Prepared for: **Transportation Solutions, Inc.**

Traffic Count Consultants, Inc.

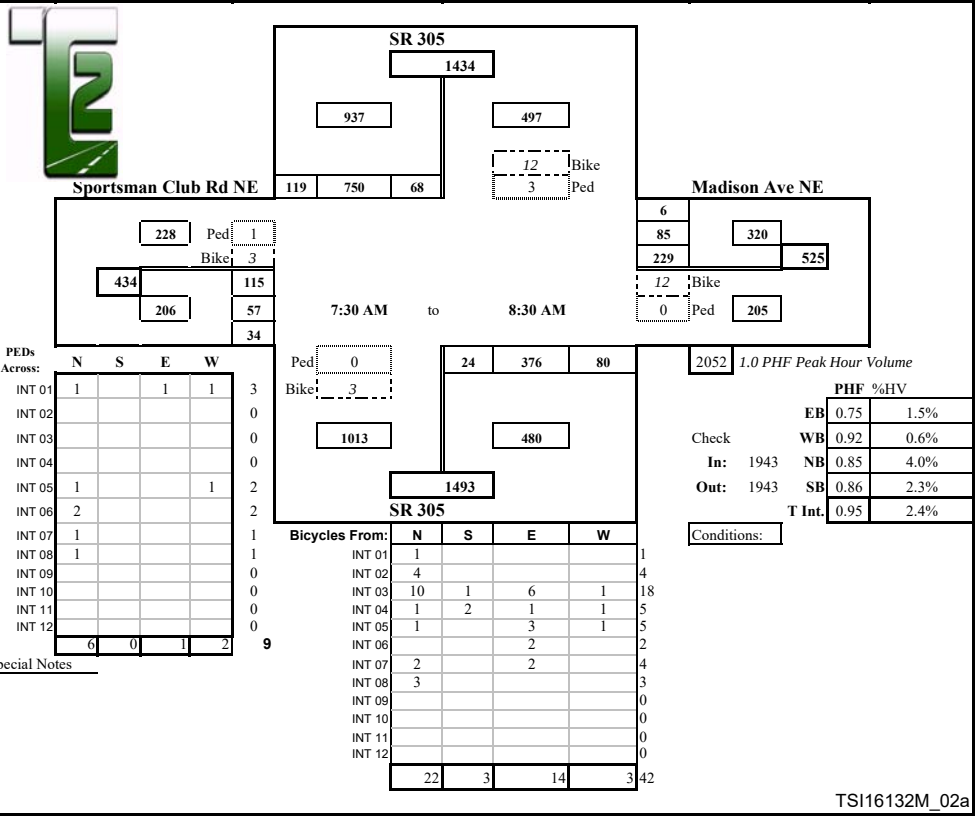
Phone: (253) 926-6009 FAX: (253) 922-7211 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: SR 305 & Madison Ave NE/Sportsman Club Rd NE **Date of Count:** Thurs 12/01/2016

Location: Bainbridge Island, Washington **Checked By:** Jess

Time Interval	From North on (SB) SR 305				From South on (NB) SR 305				From East on (WB) Madison Ave NE				From West on (EB) Sportsman Club Rd NE				Interval Total
Ending at	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
7:15 A	4	3	135	23	10	4	68	10	1	17	4	5	1	17	4	1	291
7:30 A	7	7	202	23	3	3	44	5	2	46	8	5	1	15	6	4	368
7:45 A	9	39	200	32	5	8	89	22	0	56	16	1	2	20	12	5	500
8:00 A	4	14	202	29	9	8	120	13	0	51	29	2	1	27	12	6	513
8:15 A	5	6	174	31	1	3	69	20	2	60	15	3	0	32	16	7	436
8:30 A	4	9	174	27	4	5	98	25	0	62	25	0	0	36	17	16	494
8:45 A	7	4	144	26	6	4	122	28	1	74	14	8	2	35	17	19	495
9:00 A	12	14	171	27	4	3	88	19	1	60	13	4	0	27	10	9	445
9:15 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	52	96	1402	218	42	38	698	142	7	426	124	28	7	209	94	67	3542
Peak Hour: 7:30 AM to 8:30 AM																	
Total	22	68	750	119	19	24	376	80	2	229	85	6	3	115	57	34	1943
Approach	937				480				320				206				1943
%HV	2.3%				4.0%				0.6%				1.5%				2.4%
PHF	0.86				0.85				0.92				0.75				0.95



2052 *1.0 PHF Peak Hour Volume*

PEDs Across:	N	S	E	W	
INT 01	1		1	1	3
INT 02					0
INT 03					0
INT 04					0
INT 05	1			1	2
INT 06	2				2
INT 07	1				1
INT 08	1				1
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	6	0	1	2	9

Bicycles From:	N	S	E	W	
INT 01	1				1
INT 02	4				4
INT 03	10	1	6	1	18
INT 04	1	2	1	1	5
INT 05	1		3	1	5
INT 06			2		2
INT 07	2		2		4
INT 08	3				3
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	22	3	14	3	42

		PHF	%HV
	EB	0.75	1.5%
Check	WB	0.92	0.6%
In: 1943	NB	0.85	4.0%
Out: 1943	SB	0.86	2.3%
	T Int.	0.95	2.4%

Conditions:

Special Notes

TSI16132M_02a

Prepared for: **KPG**

Traffic Count Consultants, Inc.

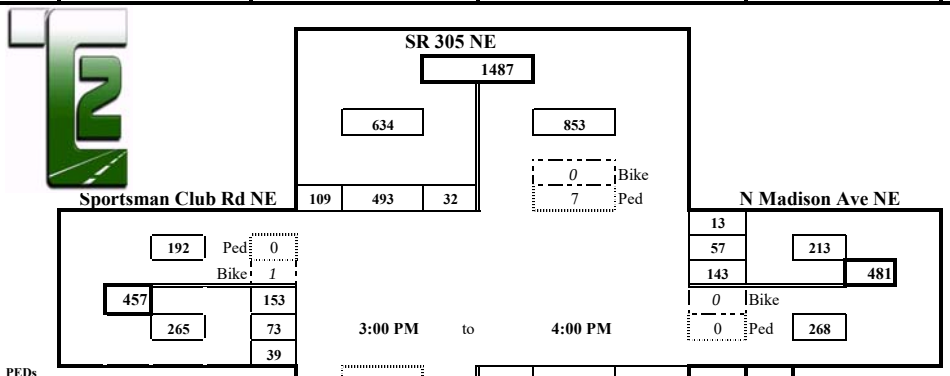
Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: SR 305 NE & N Madison Ave NE/Sportsman Club Rd NE **Date of Count:** Wed 2/27/2019

Location: Bainbridge Island, Washington **Checked By:** Jess

Time Interval	From North on (SB) SR 305 NE				From South on (NB) SR 305 NE				From East on (WB) N Madison Ave NE				From West on (EB) Sportsman Club Rd NE				Interval Total
Ending at	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
2:15 P	1	3	102	21	8	2	96	30	0	27	3	0	1	23	5	4	316
2:30 P	5	7	106	22	1	3	110	34	0	29	11	5	2	37	14	6	384
2:45 P	2	1	138	24	3	4	163	30	3	43	16	4	2	28	11	13	475
3:00 P	0	6	80	25	6	9	176	37	2	39	10	4	4	27	16	5	434
3:15 P	8	6	113	32	0	6	121	29	1	39	15	2	1	41	4	2	410
3:30 P	12	7	138	24	1	8	171	49	0	36	15	4	3	50	23	22	547
3:45 P	1	5	144	22	3	5	205	43	0	40	12	3	5	35	32	8	554
4:00 P	2	14	98	31	7	7	190	42	0	28	15	4	3	27	14	7	477
4:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	31	49	919	201	29	44	1232	294	6	281	97	26	21	268	119	67	3597
	Peak Hour: 3:00 PM to 4:00 PM																
Total	23	32	493	109	11	26	687	163	1	143	57	13	12	153	73	39	1988
Approach	634				876				213				265				1988
%HV	3.6%				1.3%				0.5%				4.5%				2.4%
PHF	0.93				0.87				0.95				0.70				0.90



PEDs Across:

	N	S	E	W	
INT 01					0
INT 02					0
INT 03					0
INT 04					0
INT 05					0
INT 06	1				1
INT 07	5				5
INT 08	1				1
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	7	0	0	0	7

Bicycles From:

	N	S	E	W	
INT 01					0
INT 02	1				1
INT 03					0
INT 04				1	1
INT 05					0
INT 06				1	1
INT 07					0
INT 08					0
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	1	0	0	2	3

2216 *1.0 PHF Peak Hour Volume*

		PHF	%HV
	EB	0.70	4.5%
Check	WB	0.95	0.5%
In: 1988	NB	0.87	1.3%
Out: 1988	SB	0.93	3.6%
	T Int.	0.90	2.4%

Conditions:

Special Notes

Prepared for: **KPG**

Traffic Count Consultants, Inc.

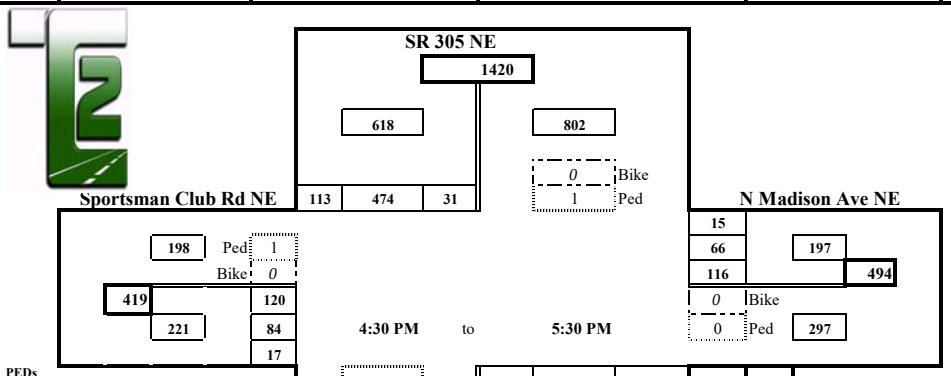
Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: SR 305 NE & N Madison Ave NE/Sportsman Club Rd NE **Date of Count:** Wed 2/27/2019

Location: Bainbridge Island, Washington **Checked By:** Jess

Time Interval	From North on (SB) SR 305 NE				From South on (NB) SR 305 NE				From East on (WB) N Madison Ave NE				From West on (EB) Sportsman Club Rd NE				Interval Total
Ending at	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	8	7	106	30	1	10	131	48	3	50	16	5	1	41	27	8	479
4:30 P	3	10	114	23	2	7	106	51	0	33	8	6	1	38	16	4	416
4:45 P	4	10	104	25	8	7	218	60	0	29	13	4	1	37	12	4	523
5:00 P	1	3	132	21	1	1	133	29	0	32	14	3	0	14	11	6	399
5:15 P	11	13	136	37	1	7	135	45	0	32	15	4	0	30	29	4	487
5:30 P	1	5	102	30	1	4	181	48	1	23	24	4	1	39	32	3	495
5:45 P	2	7	94	33	8	7	207	46	0	24	11	5	2	24	19	4	481
6:00 P	4	8	115	28	0	3	108	46	0	27	12	6	1	27	19	4	403
6:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	34	63	903	227	22	46	1219	373	4	250	113	37	7	250	165	37	3683
	Peak Hour: 4:30 PM to 5:30 PM																
Total	17	31	474	113	11	19	667	182	1	116	66	15	2	120	84	17	1904
Approach	618				868				197				221				1904
%HV	2.8%				1.3%				0.5%				0.9%				1.6%
PHF	0.83				0.76				0.97				0.75				0.91



PEDs Across:

	N	S	E	W	
INT 01					0
INT 02					0
INT 03					0
INT 04	1			1	2
INT 05					0
INT 06					0
INT 07	1			1	2
INT 08					0
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	2	0	0	2	4

Bicycles From:

	N	S	E	W	
INT 01					0
INT 02					0
INT 03		4			4
INT 04					0
INT 05					0
INT 06		4			4
INT 07	1	6		1	8
INT 08		2			2
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	1	16	0	1	18

2092 *1.0 PHF Peak Hour Volume*

		PHF	%HV
	EB	0.75	0.9%
Check	WB	0.97	0.5%
In: 1904	NB	0.76	1.3%
Out: 1904	SB	0.83	2.8%
	T Int.	0.91	1.6%

Conditions:

Special Notes

KPG19031M_01p3

Prepared for: **KPG**

Traffic Count Consultants, Inc.

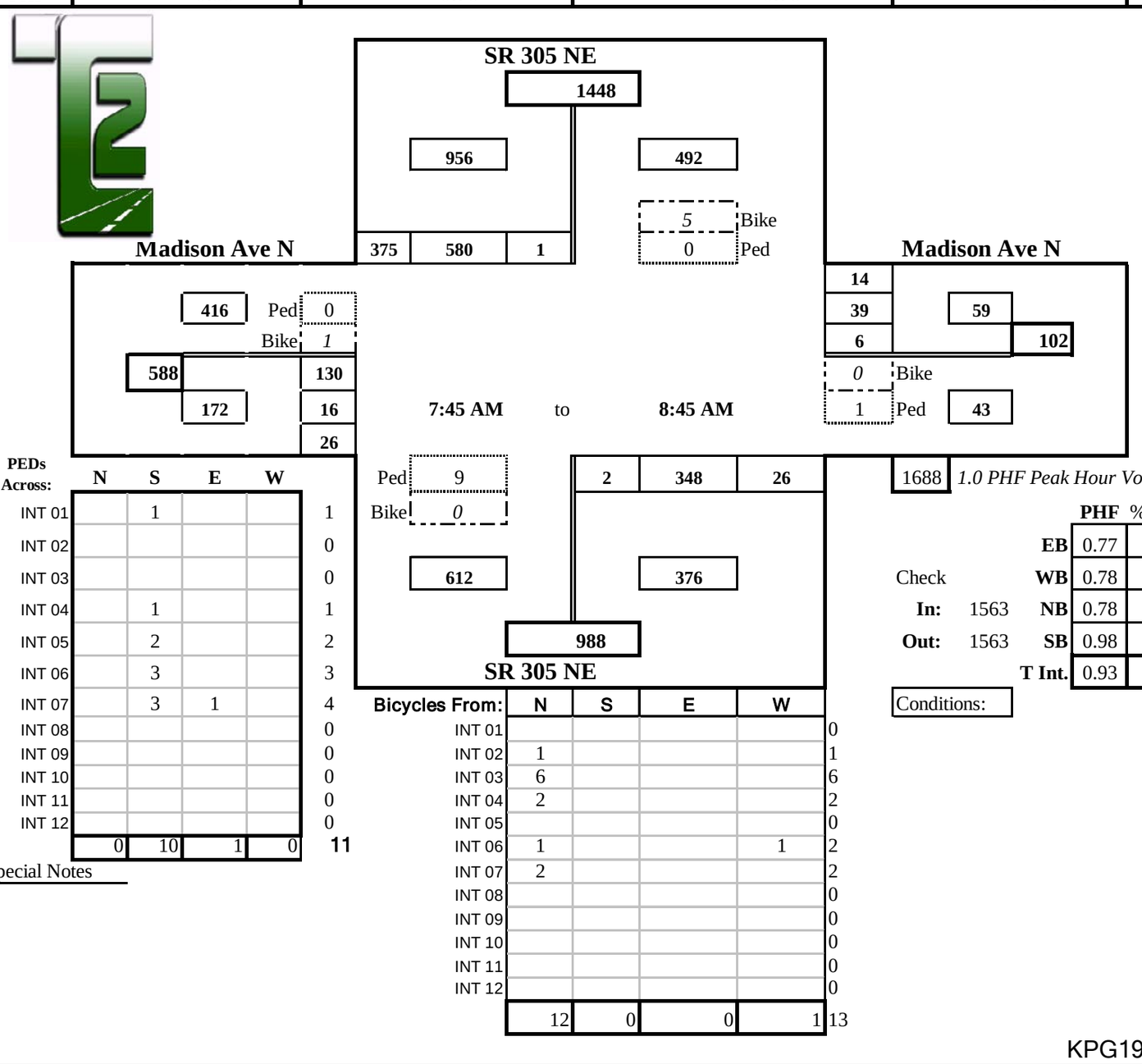
Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: SR 305 NE & Madison Ave N **Date of Count:** Wed 1/09/2019

Location: Bainbridge Island, Washington **Checked By:** Jess

Time Interval Ending at	From North on (SB) SR 305 NE				From South on (NB) SR 305 NE				From East on (WB) Madison Ave N				From West on (EB) Madison Ave N				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
7:15 A	1	0	90	53	9	0	47	2	0	0	3	3	2	8	3	1	210
7:30 A	2	0	145	71	0	0	48	1	0	0	1	4	0	13	0	2	285
7:45 A	3	0	152	97	1	1	53	3	0	2	15	0	0	19	4	13	359
8:00 A	3	0	135	98	10	2	112	6	0	2	8	3	0	33	2	6	407
8:15 A	3	0	150	95	2	0	63	4	0	4	5	5	1	27	4	5	362
8:30 A	6	0	156	87	1	0	70	7	0	0	9	4	1	25	4	10	372
8:45 A	4	1	139	95	6	0	103	9	0	0	17	2	0	45	6	5	422
9:00 A	7	1	143	84	3	1	89	7	0	0	7	4	0	35	9	8	388
9:15 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	29	2	1110	680	32	4	585	39	0	8	65	25	4	205	32	50	2805
Peak Hour: 7:45 AM to 8:45 AM																	
Total	16	1	580	375	19	2	348	26	0	6	39	14	2	130	16	26	1563
Approach	956				376				59				172				1563
%HV	1.7%				5.1%				n/a				1.2%				2.4%
PHF	0.98				0.78				0.78				0.77				0.93



Special Notes

KPG19005M_04a

Prepared for: **KPG**

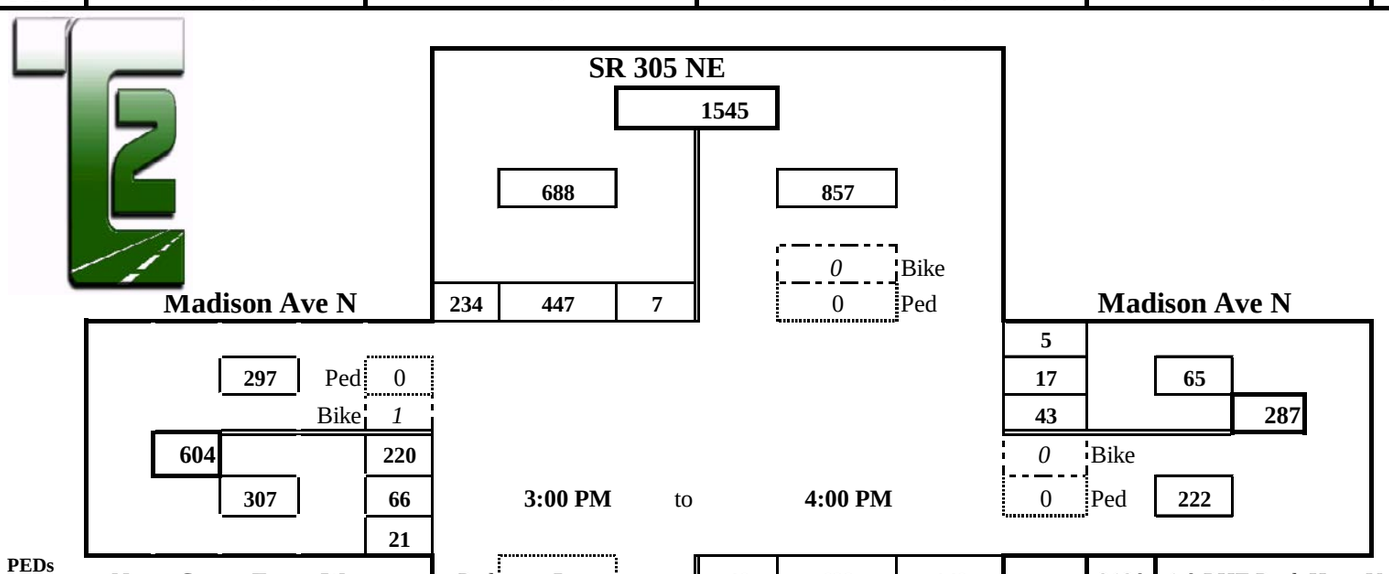
Traffic Count Consultants, Inc.

Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: SR 305 NE & Madison Ave N
Location: Bainbridge Island, Washington
Date of Count: Wed 1/09/2019
Checked By: Jess

Time Interval Ending at	From North on (SB) SR 305 NE				From South on (NB) SR 305 NE				From East on (WB) Madison Ave N				From West on (EB) Madison Ave N				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
2:15 P	0	1	103	48	3	1	126	2	0	3	7	1	5	51	3	8	354
2:30 P	2	2	103	45	0	2	126	2	0	2	7	4	2	42	6	4	345
2:45 P	3	1	143	41	0	6	180	3	2	7	2	2	3	48	10	9	452
3:00 P	3	1	119	41	3	9	182	16	3	16	3	2	1	44	5	5	443
3:15 P	4	3	88	62	0	8	128	34	0	7	6	3	1	40	9	7	395
3:30 P	8	1	146	66	4	19	174	30	0	15	2	2	0	64	8	3	530
3:45 P	1	2	121	44	2	7	169	29	0	15	3	0	1	60	27	6	483
4:00 P	1	1	92	62	3	12	161	56	1	6	6	0	2	56	22	5	479
4:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	22	12	915	409	15	64	1246	172	6	71	36	14	15	405	90	47	3481
Peak Hour: 3:00 PM to 4:00 PM																	
Total	14	7	447	234	9	46	632	149	1	43	17	5	4	220	66	21	1887
Approach	688				827				65				307				1887
%HV	2.0%				1.1%				1.5%				1.3%				1.5%
PHF	0.81				0.90				0.86				0.83				0.89



Special Notes

There was a power outage from 14:59-15:20PM; vehicles treated signal as a 4-way stop sign.

KPG19005M_04m

Prepared for: **KPG**

Traffic Count Consultants, Inc.

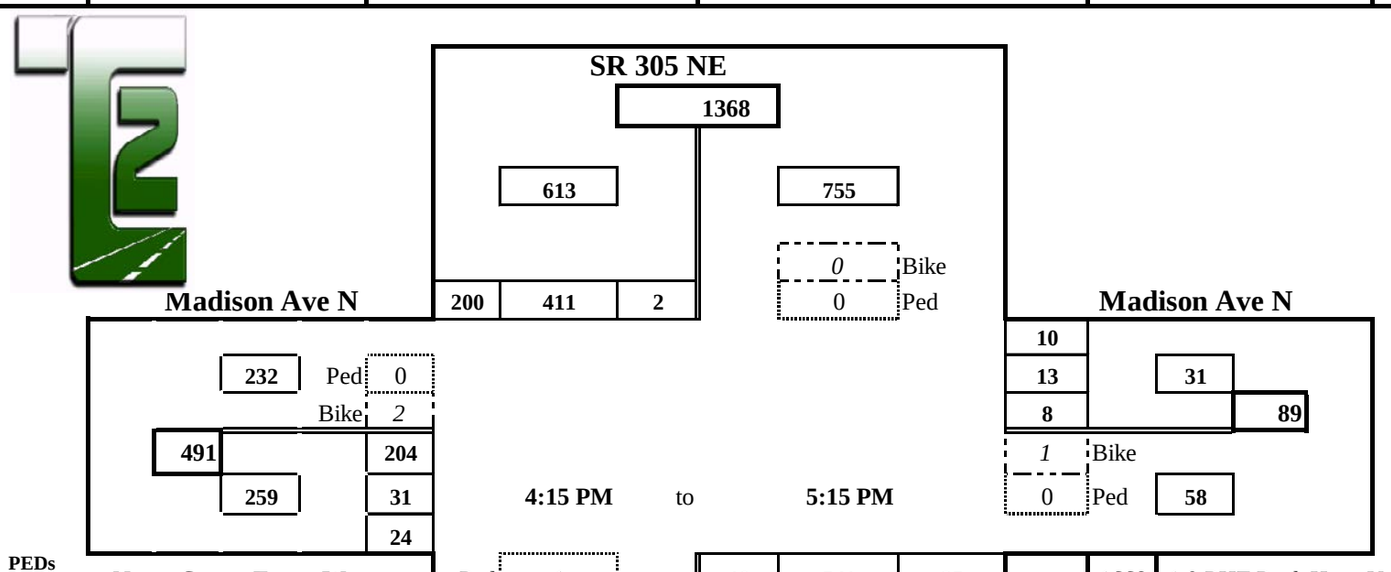
Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: SR 305 NE & Madison Ave N **Date of Count:** Wed 1/09/2019

Location: Bainbridge Island, Washington **Checked By:** Jess

Time Interval Ending at	From North on (SB) SR 305 NE				From South on (NB) SR 305 NE				From East on (WB) Madison Ave N				From West on (EB) Madison Ave N				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	7	4	89	50	2	14	102	7	1	2	4	0	0	58	15	2	347
4:30 P	5	0	129	48	1	5	125	7	0	4	3	3	0	45	6	9	384
4:45 P	0	0	91	42	7	9	207	3	0	0	3	1	0	47	10	4	417
5:00 P	1	1	84	64	0	5	88	10	0	3	5	3	0	44	6	7	320
5:15 P	8	1	107	46	0	0	121	5	0	1	2	3	1	68	9	4	367
5:30 P	2	4	95	57	0	5	116	3	0	1	6	0	0	50	5	5	347
5:45 P	2	2	68	48	6	9	222	8	0	2	7	2	0	39	9	1	417
6:00 P	2	1	70	59	0	7	107	6	0	0	7	0	0	35	7	2	301
6:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	27	13	733	414	16	54	1088	49	1	13	37	12	1	386	67	34	2900
Peak Hour: 4:15 PM to 5:15 PM																	
Total	14	2	411	200	8	19	541	25	0	8	13	10	1	204	31	24	1488
Approach	613				585				31				259				1488
%HV	2.3%				1.4%				n/a				0.4%				1.5%
PHF	0.87				0.67				0.70				0.80				0.89



KPG19005M_04p

Prepared for: **Transportation Solutions, Inc.**

Traffic Count Consultants, Inc.

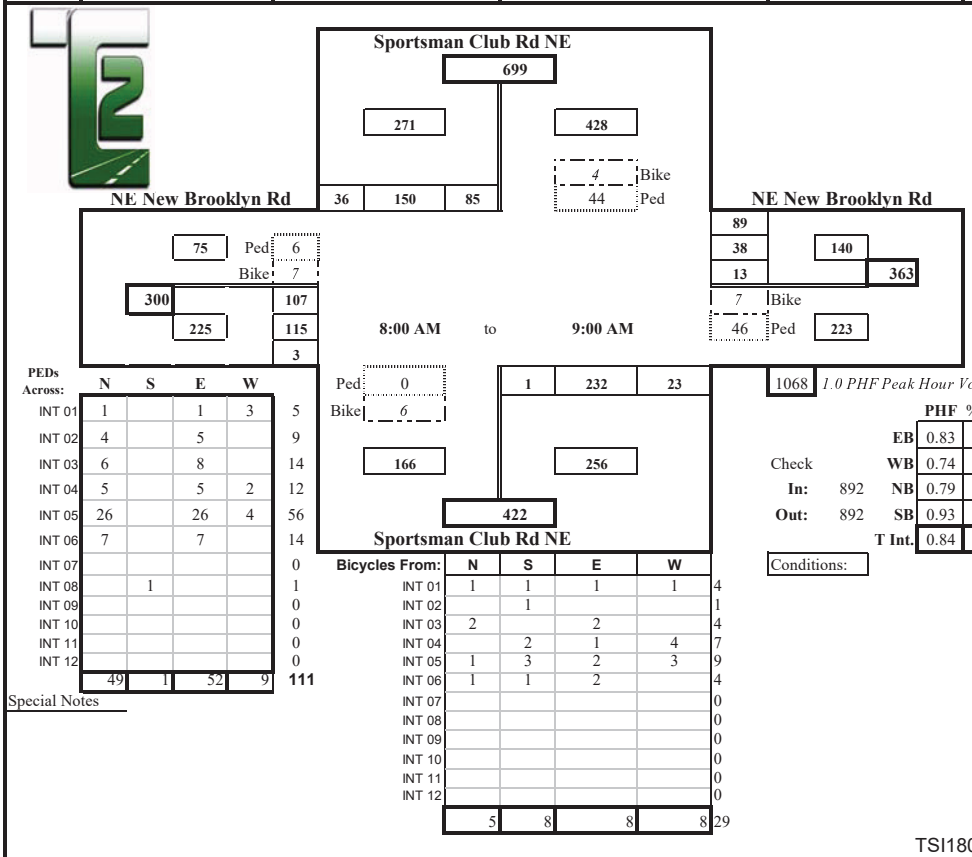
Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Sportsman Club Rd NE & NE New Brooklyn Rd **Date of Count:** Tues 6/12/2018

Location: Bainbridge Island, Washington **Checked By:** Jess

Time Interval	From North on (SB) Sportsman Club Rd NE				From South on (NB) Sportsman Club Rd NE				From East on (WB) NE New Brooklyn Rd				From West on (EB) NE New Brooklyn Rd				Interval Total
Ending at	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
7:45 A	2	16	18	2	0	0	31	7	1	3	5	9	2	6	49	0	146
8:00 A	0	7	23	8	4	0	42	9	0	3	17	14	0	20	25	0	168
8:15 A	1	19	37	13	2	0	46	2	1	4	10	24	0	22	30	1	208
8:30 A	3	13	36	8	5	0	64	8	0	5	6	13	1	28	40	0	221
8:45 A	8	30	37	6	8	1	71	9	1	2	12	33	0	34	31	1	267
9:00 A	2	23	40	9	1	0	51	4	1	2	10	19	1	23	14	1	196
9:15 A	0	2	35	5	0	0	31	2	0	1	15	1	0	5	17	2	116
9:30 A	4	13	34	10	2	2	30	2	0	5	14	5	0	13	20	1	149
9:45 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	20	123	260	61	22	3	366	43	4	25	89	118	4	151	226	6	1471
Peak Hour: 8:00 AM to 9:00 AM																	
Total	14	85	150	36	16	1	232	23	3	13	38	89	2	107	115	3	892
Approach	271				256				140				225				892
%HV	5.2%				6.3%				2.1%				0.9%				3.9%
PHF	0.93				0.79				0.74				0.83				0.84



PEDs Across:	N	S	E	W	
INT 01	1		1	3	5
INT 02	4		5		9
INT 03	6		8		14
INT 04	5		5	2	12
INT 05	26		26	4	56
INT 06	7		7		14
INT 07					0
INT 08		1			1
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	49	1	52	9	**111**

Bicycles From:	N	S	E	W	
INT 01	1	1	1	1	4
INT 02		1			1
INT 03	2		2		4
INT 04		2	1	4	7
INT 05	1	3	2	3	9
INT 06	1	1	2		4
INT 07					0
INT 08					0
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	5	8	8	8	29

1068 *1.0 PHF Peak Hour Volume*

		PHF	%HV
	EB	0.83	0.9%
Check	WB	0.74	2.1%
In: 892	NB	0.79	6.3%
Out: 892	SB	0.93	5.2%
	T Int.	0.84	3.9%

Conditions:

Special Notes

TSI18071TM_01a

Prepared for: **Transportation Solutions, Inc.**

Traffic Count Consultants, Inc.

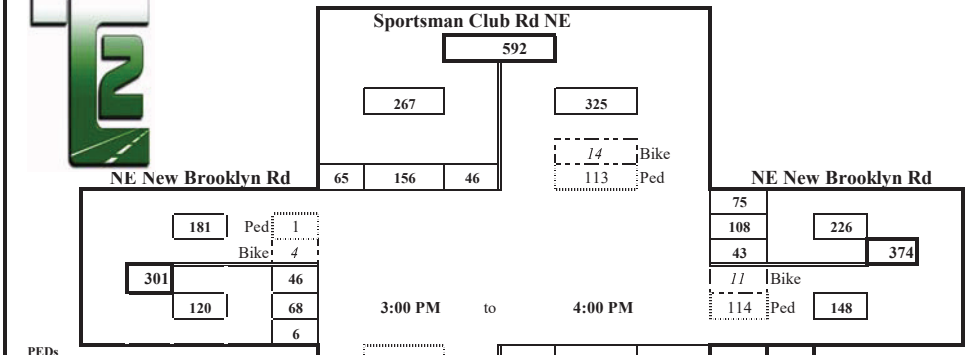
Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Sportsman Club Rd NE & NE New Brooklyn Rd **Date of Count:** Tues 6/12/2018

Location: Bainbridge Island, Washington **Checked By:** Jess

Time Interval Ending at	From North on (SB) Sportsman Club Rd NE				From South on (NB) Sportsman Club Rd NE				From East on (WB) NE New Brooklyn Rd				From West on (EB) NE New Brooklyn Rd				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
2:15 P	5	14	37	8	4	3	31	5	5	4	16	7	0	13	16	3	157
2:30 P	1	4	27	6	6	2	39	5	0	5	22	9	0	8	16	1	144
2:45 P	2	7	37	14	3	0	30	4	3	4	21	7	0	7	21	0	152
3:00 P	2	9	25	6	0	4	29	2	1	3	15	12	0	8	18	1	132
3:15 P	2	6	28	4	1	1	58	2	1	6	16	26	1	18	18	1	184
3:30 P	0	9	24	13	7	7	56	21	2	13	38	23	2	15	21	2	242
3:45 P	10	23	54	28	1	0	42	9	0	13	28	12	0	7	15	1	232
4:00 P	0	8	50	20	0	0	48	2	5	11	26	14	0	6	14	2	201
4:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	22	80	282	99	22	17	333	50	17	59	182	110	3	82	139	11	1444
Peak Hour: 3:00 PM to 4:00 PM																	
Total	12	46	156	65	9	8	204	34	8	43	108	75	3	46	68	6	859
Approach	267				246				226				120				859
%HV	4.5%				3.7%				3.5%				2.5%				3.7%
PHF	0.64				0.73				0.76				0.79				0.89



968 *1.0 PHF Peak Hour Volume*

PEDs Across:	N	S	E	W	
INT 01					0
INT 02	4		4		8
INT 03	1		1		2
INT 04	3		3		6
INT 05	2		2		4
INT 06	76		75	1	152
INT 07	33		35		68
INT 08	2		2		4
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	121	0	122	1	**244**

Bicycles From:	N	S	E	W	
INT 01	1			1	2
INT 02			1		1
INT 03			1	2	3
INT 04					0
INT 05	1		2		3
INT 06	10		4	1	15
INT 07	3		2	1	6
INT 08			3	2	5
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	15	0	13	7	35

		PHF	%HV
	EB	0.79	2.5%
Check	WB	0.76	3.5%
In: 859	NB	0.73	3.7%
Out: 859	SB	0.64	4.5%
	T Int.	0.89	3.7%

Conditions:

Special Notes

TSI18071TM_01m

Prepared for: **Transportation Solutions, Inc.**

Traffic Count Consultants, Inc.

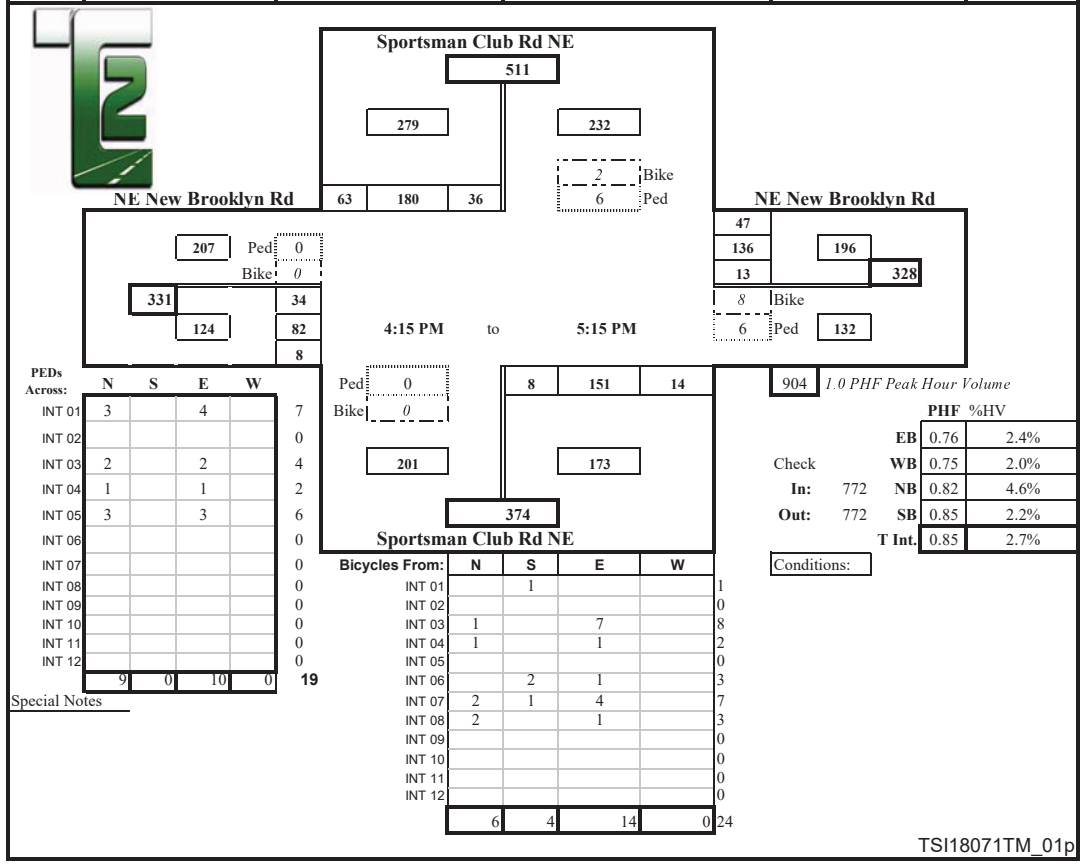
Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Sportsman Club Rd NE & NE New Brooklyn Rd **Date of Count:** Tues 6/12/2018

Location: Bainbridge Island, Washington **Checked By:** Jess

Time Interval Ending at	From North on (SB) Sportsman Club Rd NE				From South on (NB) Sportsman Club Rd NE				From East on (WB) NE New Brooklyn Rd				From West on (EB) NE New Brooklyn Rd				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	2	12	35	14	3	0	26	2	0	5	25	16	0	6	17	3	161
4:30 P	3	10	39	13	4	1	34	5	0	2	27	13	3	9	30	2	185
4:45 P	1	7	39	11	2	4	27	3	3	6	45	14	0	4	12	0	172
5:00 P	0	9	55	18	0	2	47	4	1	4	40	12	0	14	17	4	226
5:15 P	2	10	47	21	2	1	43	2	0	1	24	8	0	7	23	2	189
5:30 P	0	10	38	12	2	2	35	5	0	5	35	6	0	9	19	2	178
5:45 P	1	6	38	10	2	0	38	3	1	4	42	10	1	8	16	3	178
6:00 P	0	5	35	8	1	2	33	9	0	3	30	9	0	8	16	3	161
6:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	9	69	326	107	16	12	283	33	5	30	268	88	4	65	150	19	1450
	Peak Hour: 4:15 PM to 5:15 PM																
Total	6	36	180	63	8	8	151	14	4	13	136	47	3	34	82	8	772
Approach	279				173				196				124				772
%HV	2.2%				4.6%				2.0%				2.4%				2.7%
PHF	0.85				0.82				0.75				0.76				0.85



PEDs Across:

	N	S	E	W	
INT 01	3		4		7
INT 02					0
INT 03	2		2		4
INT 04	1		1		2
INT 05	3		3		6
INT 06					0
INT 07					0
INT 08					0
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	9	0	10	0	19

Bicycles From:

	N	S	E	W	
INT 01		1			1
INT 02					0
INT 03	1		7		8
INT 04	1		1		2
INT 05					0
INT 06		2	1		3
INT 07	2	1	4		7
INT 08	2		1		3
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	6	4	14	0	24

904 *1.0 PHF Peak Hour Volume*

		PHF	%HV
	EB	0.76	2.4%
Check	WB	0.75	2.0%
In: 772	NB	0.82	4.6%
Out: 772	SB	0.85	2.2%
	T Int.	0.85	2.7%

Conditions:

Special Notes

TSI18071TM_01p

Prepared for: **KPG**

Traffic Count Consultants, Inc.

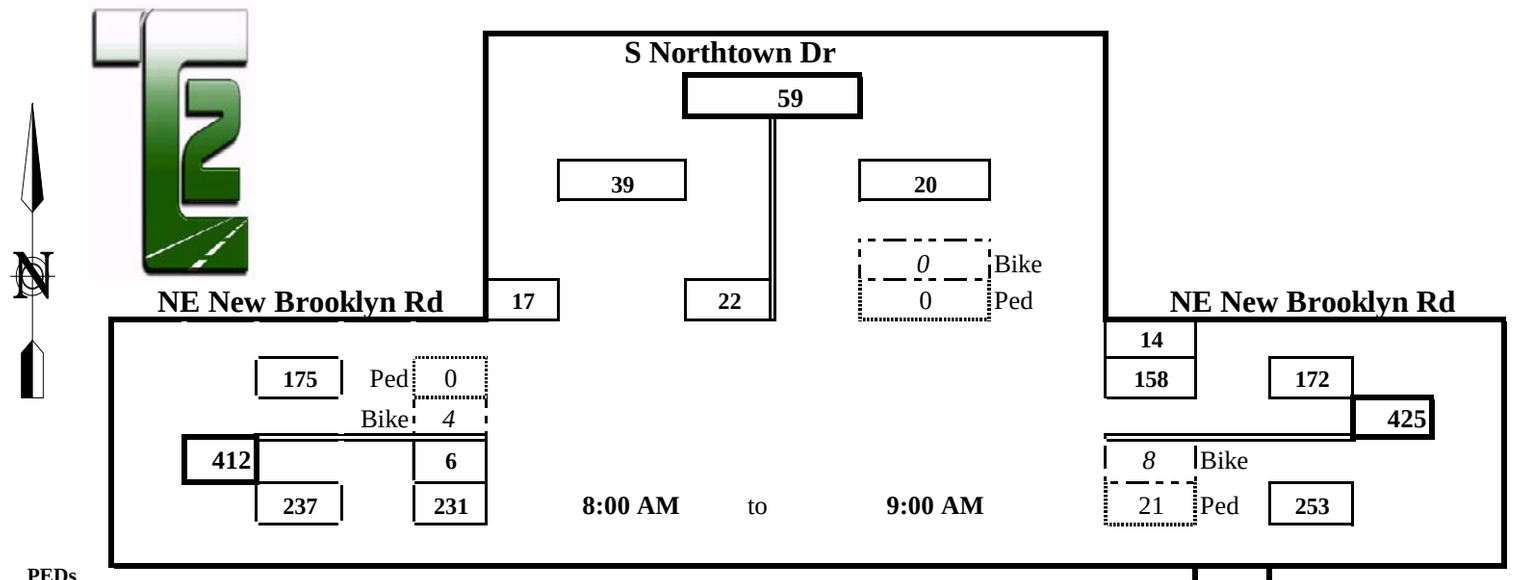
Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: S Northtown Dr & NE New Brooklyn Rd **Date of Count:** Wed 1/09/2019

Location: Bainbridge Island, Washington **Checked By:** Jess

Time Interval Ending at	From North on (SB) S Northtown Dr				From South on (NB) 0				From East on (WB) NE New Brooklyn Rd				From West on (EB) NE New Brooklyn Rd				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
7:15 A	0	4	0	0	0	0	0	0	2	0	11	2	0	1	11	0	29
7:30 A	0	2	0	0	0	0	0	0	0	0	8	1	0	0	23	0	34
7:45 A	0	8	0	2	0	0	0	0	0	0	6	1	0	0	63	0	80
8:00 A	0	4	0	1	0	0	0	0	2	0	37	4	0	0	37	0	83
8:15 A	0	3	0	1	0	0	0	0	1	0	22	1	0	1	27	0	55
8:30 A	0	4	0	1	0	0	0	0	0	0	30	5	4	1	69	0	110
8:45 A	0	4	0	9	0	0	0	0	2	0	62	7	6	2	77	0	161
9:00 A	0	11	0	6	0	0	0	0	0	0	44	1	3	2	58	0	122
9:15 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	0	40	0	20	0	0	0	0	7	0	220	22	13	7	365	0	674
Peak Hour: 8:00 AM to 9:00 AM																	
Total	0	22	0	17	0	0	0	0	3	0	158	14	13	6	231	0	448
Approach	39				0				172				237				448
%HV	n/a				n/a				1.7%				5.5%				3.6%
PHF	0.57				n/a				0.62				0.75				0.70



644 *1.0 PHF Peak Hour Volume*

		PHF	%HV
	EB	0.75	5.5%
Check	WB	0.62	1.7%
In: 448	NB	n/a	n/a
Out: 448	SB	0.57	n/a
	T Int.	0.70	3.6%

Conditions:

PEDs Across:

	N	S	E	W	
INT 01					0
INT 02			4		4
INT 03			1		1
INT 04	1		2		3
INT 05			4		4
INT 06		1	4		5
INT 07		2	12		14
INT 08		1	1		2
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	1	4	28	0	**33**

Bicycles From:

	N	S	E	W	
INT 01			1		1
INT 02					0
INT 03	1			1	2
INT 04				1	1
INT 05			1		1
INT 06			2	1	3
INT 07			3	2	5
INT 08			2	1	3
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	1	0	9	6	16

Special Notes

KPG19005M_01a

Prepared for: **KPG**

Traffic Count Consultants, Inc.

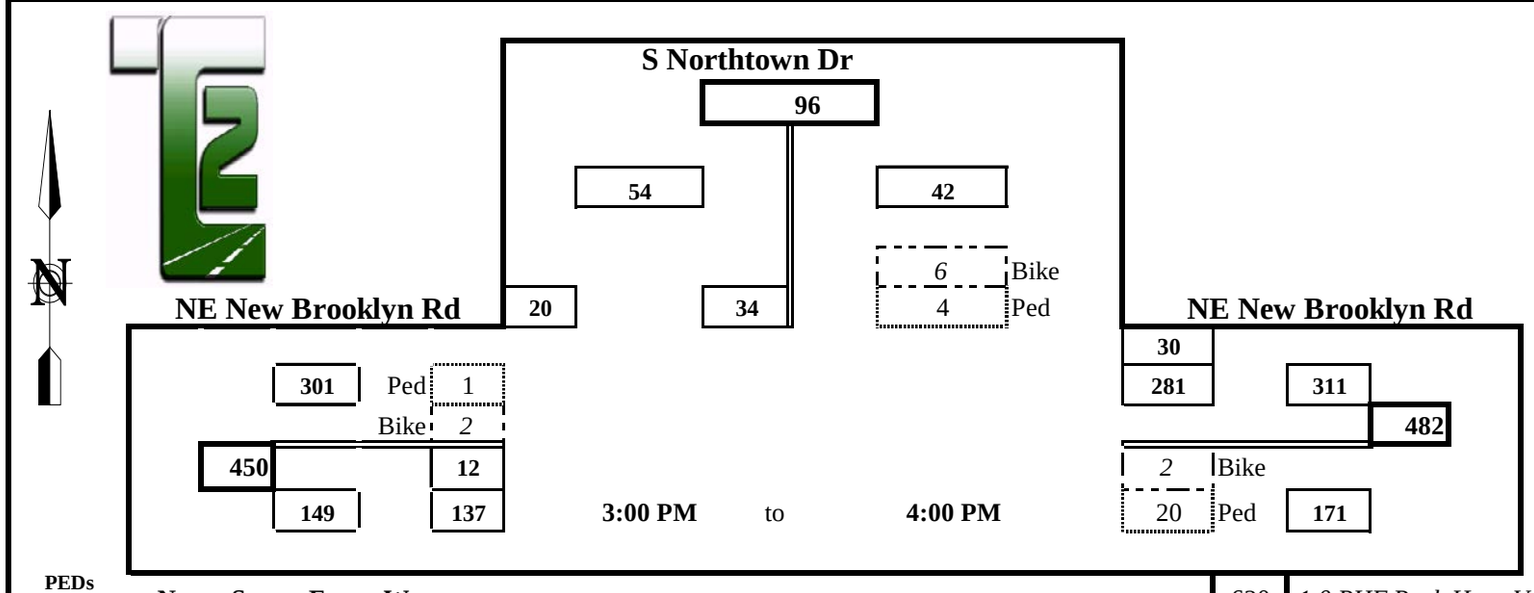
Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: S Northtown Dr & NE New Brooklyn Rd **Date of Count:** Wed 1/09/2019

Location: Bainbridge Island, Washington **Checked By:** Jess

Time Interval Ending at	From North on (SB) S Northtown Dr				From South on (NB) 0				From East on (WB) NE New Brooklyn Rd				From West on (EB) NE New Brooklyn Rd				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
2:15 P	0	1	0	2	0	0	0	0	6	0	31	5	1	2	32	0	73
2:30 P	0	3	0	1	0	0	0	0	2	0	22	3	1	2	31	0	62
2:45 P	0	4	0	0	0	0	0	0	1	0	25	5	0	0	27	0	61
3:00 P	0	1	0	0	0	0	0	0	2	0	34	1	1	3	24	0	63
3:15 P	0	4	0	1	0	0	0	0	0	0	66	9	0	4	18	0	102
3:30 P	0	16	0	11	0	0	0	0	0	0	87	8	0	3	30	0	155
3:45 P	0	10	0	5	0	0	0	0	3	0	55	8	0	5	55	0	138
4:00 P	0	4	0	3	0	0	0	0	2	0	73	5	1	0	34	0	119
4:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	0	43	0	23	0	0	0	0	16	0	393	44	4	19	251	0	773
Peak Hour: 3:00 PM to 4:00 PM																	
Total	0	34	0	20	0	0	0	0	5	0	281	30	1	12	137	0	514
Approach	54				0				311				149				514
%HV	n/a				n/a				1.6%				0.7%				1.2%
PHF	0.50				n/a				0.82				0.62				0.83



620 *1.0 PHF Peak Hour Volume*

		PHF	%HV
	EB	0.62	0.7%
Check	WB	0.82	1.6%
In: 514	NB	n/a	n/a
Out: 514	SB	0.50	n/a
	T Int.	0.83	1.2%

Conditions:

PEDs Across:

	N	S	E	W	
INT 01		1			1
INT 02					0
INT 03			1		1
INT 04					0
INT 05		2	3		5
INT 06	2	5	7		14
INT 07	2	9	6	1	18
INT 08		9	4		13
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	4	26	21	1	52

Bicycles From:

	N	S	E	W	
INT 01					0
INT 02			1		1
INT 03			1		1
INT 04					0
INT 05	1				1
INT 06	2		1	1	4
INT 07	2			1	3
INT 08	1		1		2
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	6	0	4	2	12

Special Notes

KPG19005M_01m

Prepared for: **KPG**

Traffic Count Consultants, Inc.

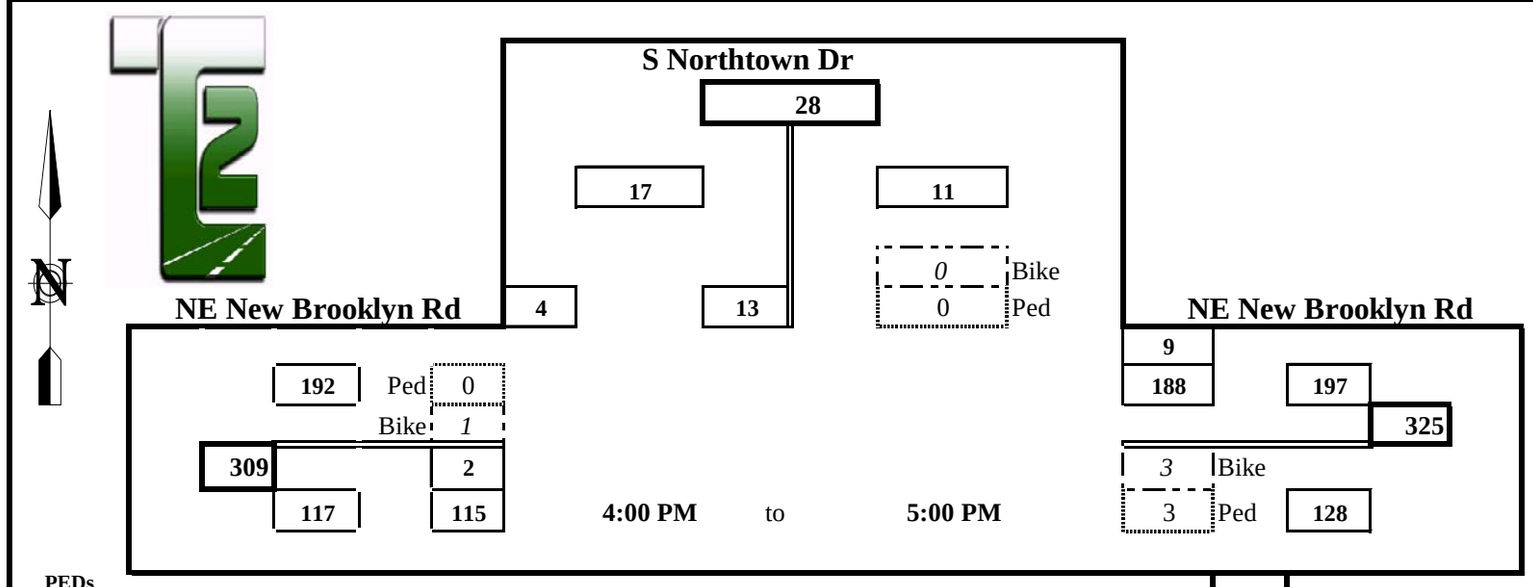
Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: S Northtown Dr & NE New Brooklyn Rd **Date of Count:** Wed 1/09/2019

Location: Bainbridge Island, Washington **Checked By:** Jess

Time Interval Ending at	From North on (SB) S Northtown Dr				From South on (NB) 0				From East on (WB) NE New Brooklyn Rd				From West on (EB) NE New Brooklyn Rd				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	0	5	0	3	0	0	0	0	4	0	52	2	2	1	29	0	92
4:30 P	0	3	0	0	0	0	0	0	0	0	34	0	7	0	38	0	75
4:45 P	0	2	0	0	0	0	0	0	1	0	59	3	3	0	22	0	86
5:00 P	0	3	0	1	0	0	0	0	0	0	43	4	0	1	26	0	78
5:15 P	0	3	0	0	0	0	0	0	0	0	32	3	2	0	27	0	65
5:30 P	0	4	0	1	0	0	0	0	0	0	39	7	0	0	21	0	72
5:45 P	0	3	0	0	0	0	0	0	2	0	66	1	1	0	12	0	82
6:00 P	0	3	0	1	0	0	0	0	1	0	49	5	0	1	23	0	82
6:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	0	26	0	6	0	0	0	0	8	0	374	25	15	3	198	0	632
Peak Hour: 4:00 PM to 5:00 PM																	
Total	0	13	0	4	0	0	0	0	5	0	188	9	12	2	115	0	331
Approach	17				0				197				117				331
%HV	n/a				n/a				2.5%				10.3%				5.1%
PHF	0.53				n/a				0.79				0.77				0.90



368 *1.0 PHF Peak Hour Volume*

			PHF	%HV
		EB	0.77	10.3%
Check		WB	0.79	2.5%
In:	331	NB	n/a	n/a
Out:	331	SB	0.53	n/a
		T Int.	0.90	5.1%

PEDs Across:

	N	S	E	W	
INT 01			1		1
INT 02		2	1		3
INT 03			1		1
INT 04					0
INT 05			2		2
INT 06					0
INT 07					0
INT 08					0
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	0	2	5	0	7

Bicycles From:

	N	S	E	W	
INT 01				1	1
INT 02			2		2
INT 03			1		1
INT 04					0
INT 05					0
INT 06					0
INT 07			4		4
INT 08					0
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	0	0	7	1	8

N U's	S U's	E U's	W U's
			0
			1
			0
			0
			0
			0
			0
			0
0	0	0	1

Special Notes

KPG19005M_01p

Prepared for: **KPG**

Traffic Count Consultants, Inc.

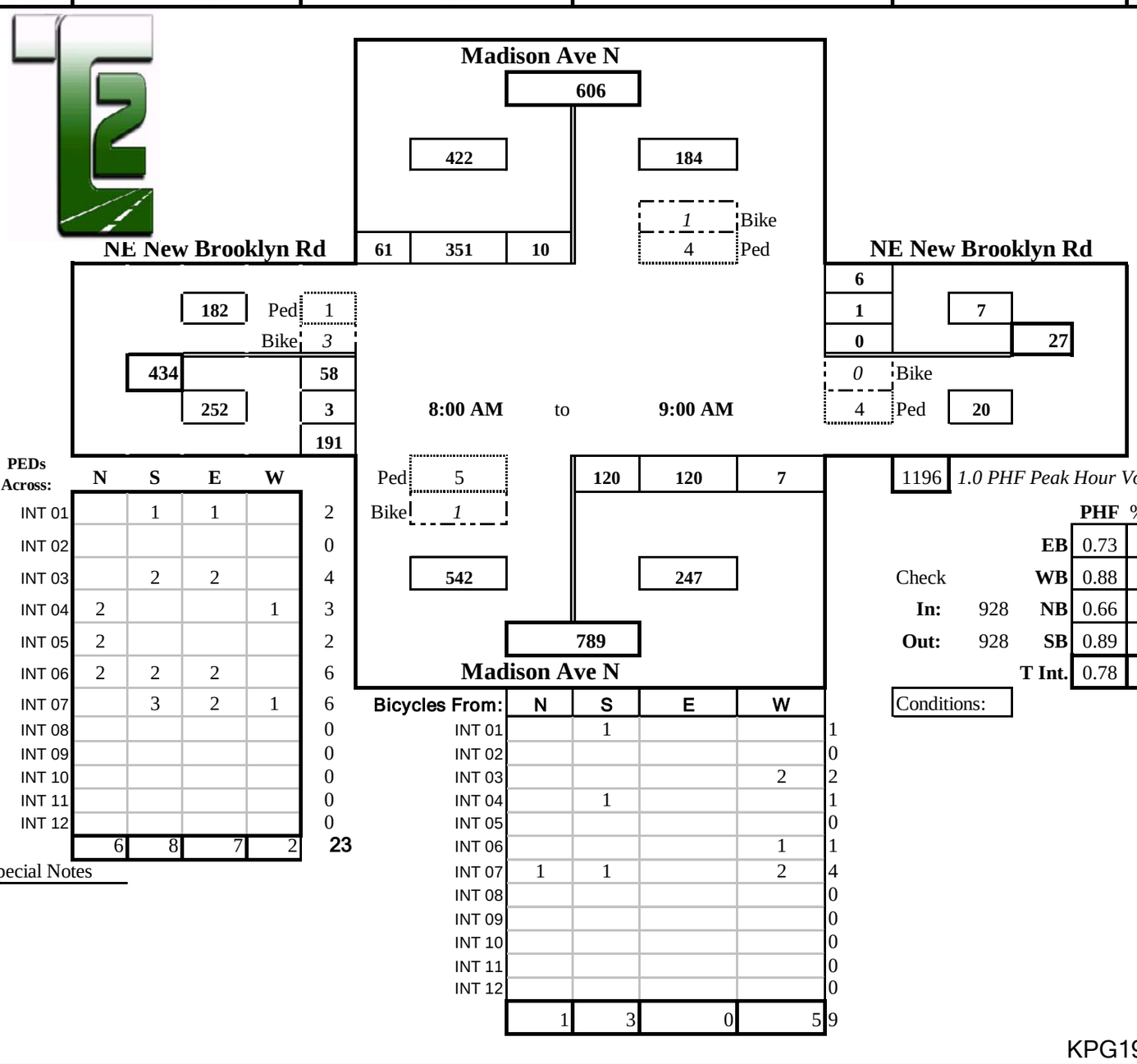
Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Madison Ave N & NE New Brooklyn Rd **Date of Count:** Wed 1/09/2019

Location: Bainbridge Island, Washington **Checked By:** Jess

Time Interval Ending at	From North (SB) Madison Ave N				From South (NB) Madison Ave N				From East (WB) NE New Brooklyn Rd				From West (EB) NE New Brooklyn Rd				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
7:15 A	1	4	45	5	0	10	6	0	0	1	0	2	4	4	1	14	92
7:30 A	1	1	65	3	0	7	12	3	0	0	0	0	0	2	1	21	115
7:45 A	0	2	112	2	0	7	24	1	0	0	0	0	3	13	0	51	212
8:00 A	1	3	99	12	3	30	32	1	0	0	0	0	0	8	1	39	225
8:15 A	1	1	95	7	0	17	19	1	0	0	0	2	0	11	0	19	172
8:30 A	2	0	88	15	1	27	24	1	0	0	0	2	1	14	2	54	227
8:45 A	0	4	95	19	0	47	46	1	0	0	0	1	0	11	0	75	299
9:00 A	4	5	73	20	0	29	31	4	0	0	1	1	0	22	1	43	230
9:15 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	10	20	672	83	4	174	194	12	0	1	1	8	8	85	6	316	1572
Peak Hour: 8:00 AM to 9:00 AM																	
Total	7	10	351	61	1	120	120	7	0	0	1	6	1	58	3	191	928
Approach	422				247				7				252				928
%HV	1.7%				0.4%				n/a				0.4%				1.0%
PHF	0.89				0.66				0.88				0.73				0.78



PEDs Across:	N	S	E	W	
INT 01		1	1		2
INT 02					0
INT 03		2	2		4
INT 04	2			1	3
INT 05	2				2
INT 06	2	2	2		6
INT 07		3	2	1	6
INT 08					0
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	6	8	7	2	23

Bicycles From:	N	S	E	W	
INT 01		1			1
INT 02					0
INT 03				2	2
INT 04		1			1
INT 05					0
INT 06				1	1
INT 07	1	1		2	4
INT 08					0
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	1	3	0	5	9

	PHF	%HV
EB	0.73	0.4%
WB	0.88	n/a
NB	0.66	0.4%
SB	0.89	1.7%
T Int.	0.78	1.0%

Check In: 928 Out: 928

Conditions:

Special Notes

KPG19005M_03a

Prepared for: **KPG**

Traffic Count Consultants, Inc.

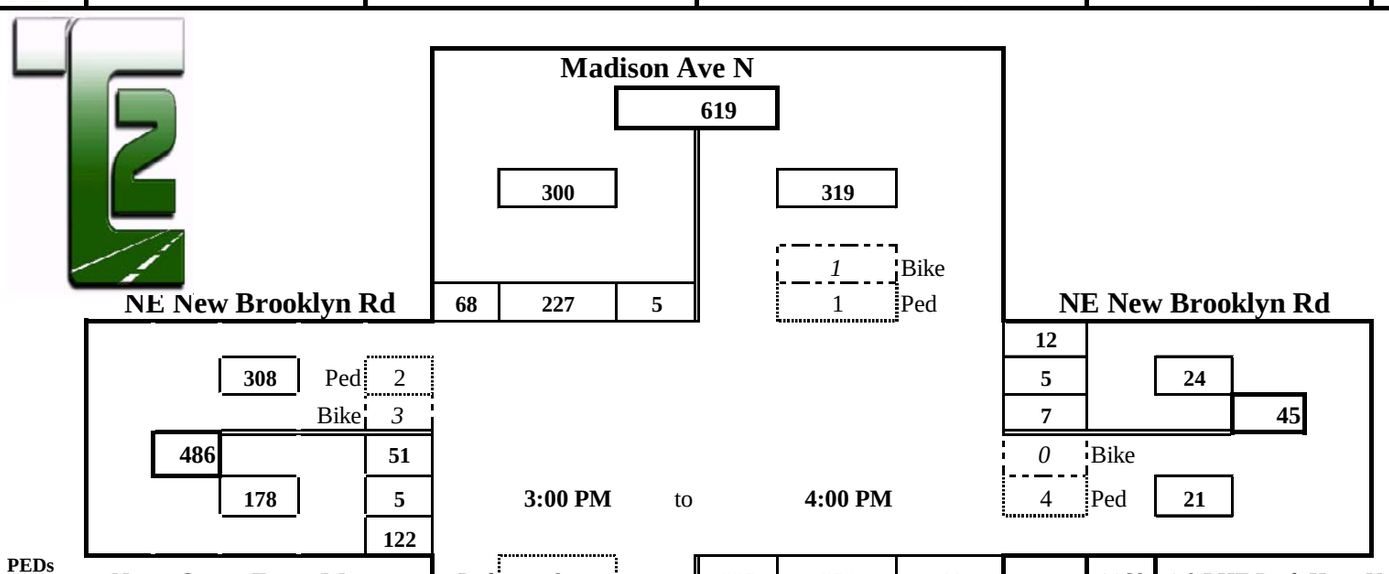
Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Madison Ave N & NE New Brooklyn Rd **Date of Count:** Wed 1/09/2019

Location: Bainbridge Island, Washington **Checked By:** Jess

Time Interval Ending at	From North on (SB) Madison Ave N				From South on (NB) Madison Ave N				From East on (WB) NE New Brooklyn Rd				From West on (EB) NE New Brooklyn Rd				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
2:15 P	0	4	44	8	1	20	38	3	0	1	0	5	5	17	1	30	171
2:30 P	0	3	46	5	2	21	43	2	0	1	3	1	4	10	2	32	169
2:45 P	1	0	45	6	3	25	51	0	0	2	0	3	0	15	0	16	163
3:00 P	2	2	39	13	0	26	34	3	0	5	1	6	1	7	1	11	148
3:15 P	0	2	61	14	1	63	49	3	0	4	3	2	0	12	0	15	228
3:30 P	1	1	62	25	0	62	79	0	0	3	1	4	0	14	1	40	292
3:45 P	0	1	41	13	2	55	65	5	0	0	0	3	0	12	0	36	231
4:00 P	0	1	63	16	6	55	63	3	0	0	1	3	1	13	4	31	253
4:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	4	14	401	100	15	327	422	19	0	16	9	27	11	100	9	211	1655
Peak Hour: 3:00 PM to 4:00 PM																	
Total	1	5	227	68	9	235	256	11	0	7	5	12	1	51	5	122	1004
Approach	300				502				24				178				1004
%HV	0.3%				1.8%				n/a				0.6%				1.1%
PHF	0.85				0.89				0.67				0.81				0.86



Special Notes

NB and EB vehicles backed up from 15:14-15:49PM.

KPG19005M_03m

Prepared for: **KPG**

Traffic Count Consultants, Inc.

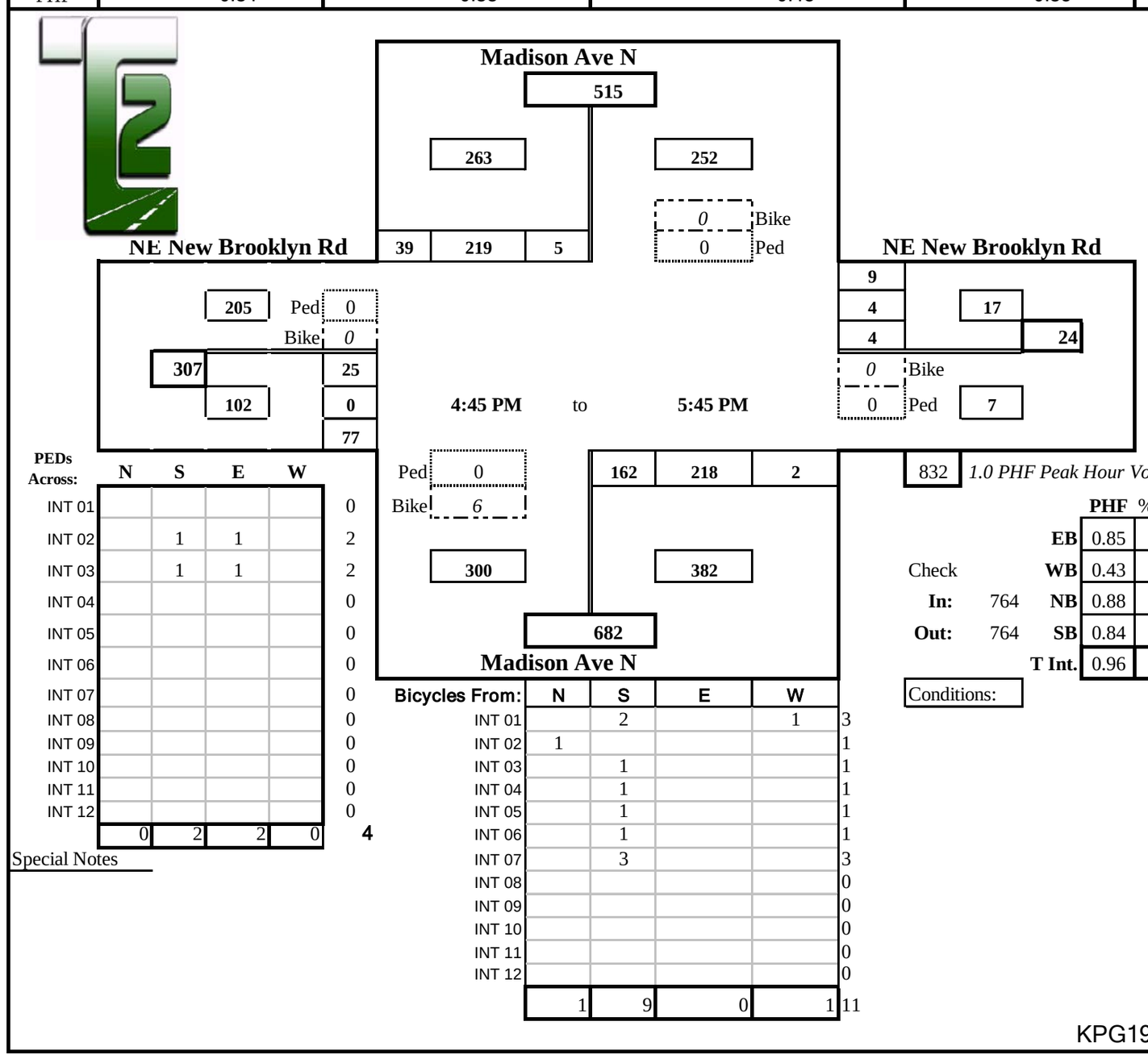
Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Madison Ave N & NE New Brooklyn Rd **Date of Count:** Wed 1/09/2019

Location: Bainbridge Island, Washington **Checked By:** Jess

Time Interval Ending at	From North on (SB) Madison Ave N				From South on (NB) Madison Ave N				From East on (WB) NE New Brooklyn Rd				From West on (EB) NE New Brooklyn Rd				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	4	4	44	20	1	32	60	1	1	1	1	6	1	8	2	29	208
4:30 P	3	1	48	12	1	26	36	2	0	2	1	1	0	10	0	25	164
4:45 P	0	1	40	10	1	40	52	0	0	2	4	1	0	8	0	22	180
5:00 P	0	2	66	10	0	34	49	1	0	3	3	4	0	7	0	21	200
5:15 P	0	0	48	3	0	33	74	1	0	1	1	2	1	6	0	24	193
5:30 P	1	2	54	13	0	37	50	0	0	0	0	3	0	6	0	21	186
5:45 P	1	1	51	13	1	58	45	0	0	0	0	0	1	6	0	11	185
6:00 P	0	4	56	15	0	45	41	3	0	1	2	3	0	1	0	20	191
6:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	9	15	407	96	4	305	407	8	1	10	12	20	3	52	2	173	1507
Peak Hour: 4:45 PM to 5:45 PM																	
Total	2	5	219	39	1	162	218	2	0	4	4	9	2	25	0	77	764
Approach	263				382				17				102				764
%HV	0.8%				0.3%				n/a				2.0%				0.7%
PHF	0.84				0.88				0.43				0.85				0.96



PEDs Across:	N	S	E	W	
INT 01					0
INT 02		1	1		2
INT 03		1	1		2
INT 04					0
INT 05					0
INT 06					0
INT 07					0
INT 08					0
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	0	2	2	0	4

Bicycles From:	N	S	E	W	
INT 01		2		1	3
INT 02	1				1
INT 03		1			1
INT 04		1			1
INT 05		1			1
INT 06		1			1
INT 07		3			3
INT 08					0
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	1	9	0	1	11

Special Notes

KPG19005M_03p

Prepared for: **KPG**

Traffic Count Consultants, Inc.

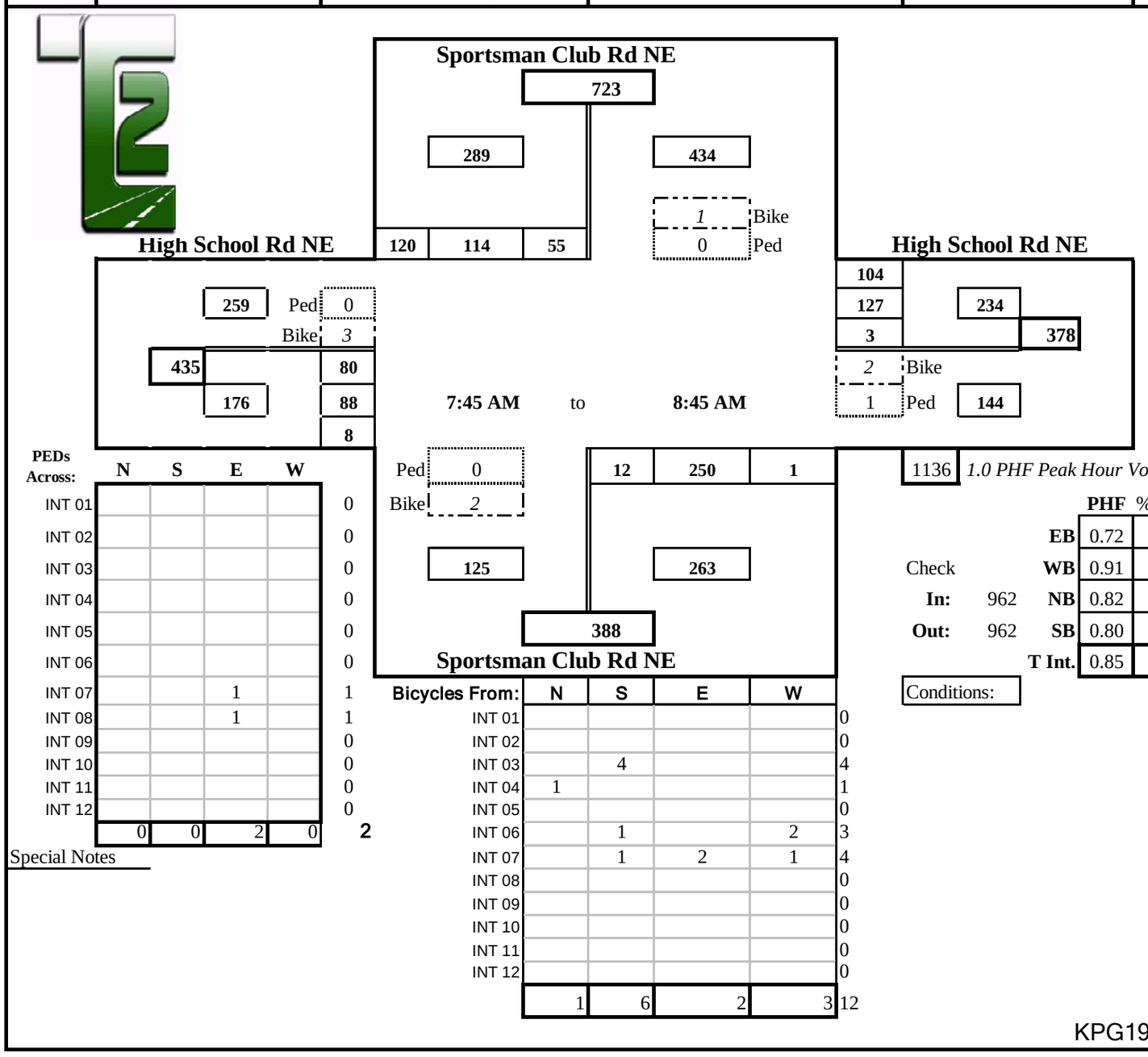
Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Sportsman Club Rd NE & High School Rd NE **Date of Count:** Wed 1/09/2019

Location: Bainbridge Island, Washington **Checked By:** Jess

Time Interval Ending at	From North on (SB) Sportsman Club Rd NE				From South on (NB) Sportsman Club Rd NE				From East on (WB) High School Rd NE				From West on (EB) High School Rd NE				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
7:15 A	2	10	9	4	1	1	11	0	0	0	15	7	1	1	14	0	72
7:30 A	1	5	8	7	2	3	18	1	0	0	20	16	1	4	15	2	99
7:45 A	1	18	16	14	4	4	72	1	1	0	26	39	1	7	18	2	217
8:00 A	1	20	28	24	0	4	58	0	0	1	27	27	0	14	22	1	226
8:15 A	0	9	22	20	0	3	46	0	0	0	36	18	2	16	20	2	192
8:30 A	8	13	26	37	7	2	77	1	3	1	28	35	2	18	19	3	260
8:45 A	6	13	38	39	2	3	69	0	1	1	36	24	0	32	27	2	284
9:00 A	0	16	24	18	1	0	52	0	0	0	39	12	2	29	27	6	223
9:15 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	19	104	171	163	17	20	403	3	5	3	227	178	9	121	162	18	1573
Peak Hour: 7:45 AM to 8:45 AM																	
Total	15	55	114	120	9	12	250	1	4	3	127	104	4	80	88	8	962
Approach	289				263				234				176				962
%HV	5.2%				3.4%				1.7%				2.3%				3.3%
PHF	0.80				0.82				0.91				0.72				0.85



KPG19005M_02a

Prepared for: **KPG**

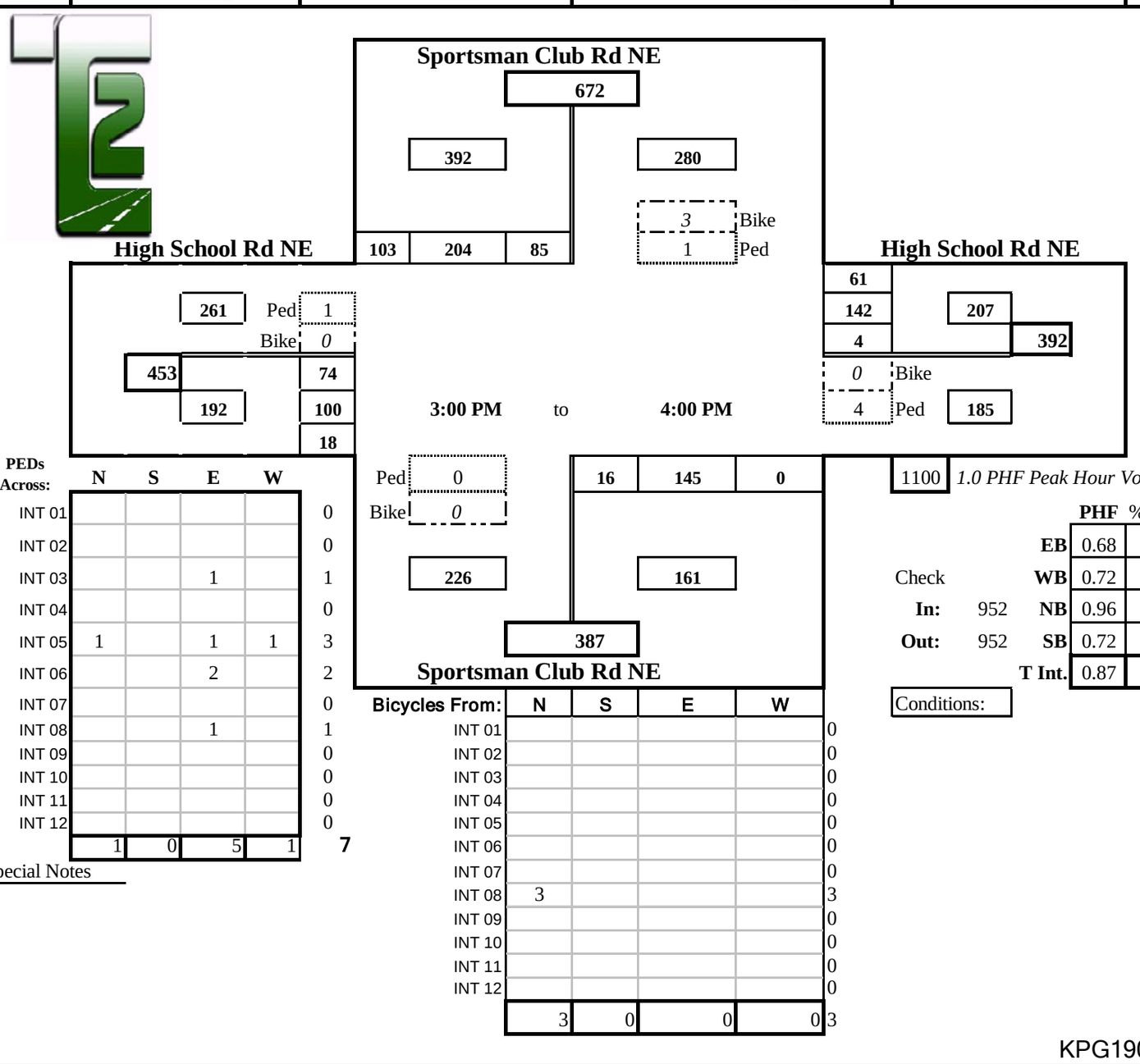
Traffic Count Consultants, Inc.

Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Sportsman Club Rd NE & High School Rd NE
Location: Bainbridge Island, Washington
Date of Count: Wed 1/09/2019
Checked By: Jess

Time Interval Ending at	From North on (SB) Sportsman Club Rd NE				From South on (NB) Sportsman Club Rd NE				From East on (WB) High School Rd NE				From West on (EB) High School Rd NE				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
2:15 P	2	13	31	7	1	3	35	0	3	0	21	21	8	9	25	10	175
2:30 P	1	15	29	9	3	6	37	1	0	0	17	10	0	7	22	1	154
2:45 P	1	22	30	11	0	1	27	0	2	1	21	20	0	9	16	0	158
3:00 P	0	17	37	10	0	6	31	0	1	0	31	7	4	7	17	4	167
3:15 P	0	17	41	31	2	3	37	0	2	0	55	17	0	13	17	1	232
3:30 P	4	29	72	36	0	5	36	0	0	2	36	19	1	13	24	3	275
3:45 P	0	17	41	19	0	1	37	0	0	1	28	14	1	28	36	7	229
4:00 P	1	22	50	17	1	7	35	0	1	1	23	11	7	20	23	7	216
4:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	9	152	331	140	7	32	275	1	9	5	232	119	21	106	180	33	1606
Peak Hour: 3:00 PM to 4:00 PM																	
Total	5	85	204	103	3	16	145	0	3	4	142	61	9	74	100	18	952
Approach	392				161				207				192				952
%HV	1.3%				1.9%				1.4%				4.7%				2.1%
PHF	0.72				0.96				0.72				0.68				0.87



KPG19005M_02m

Prepared for: **KPG**

Traffic Count Consultants, Inc.

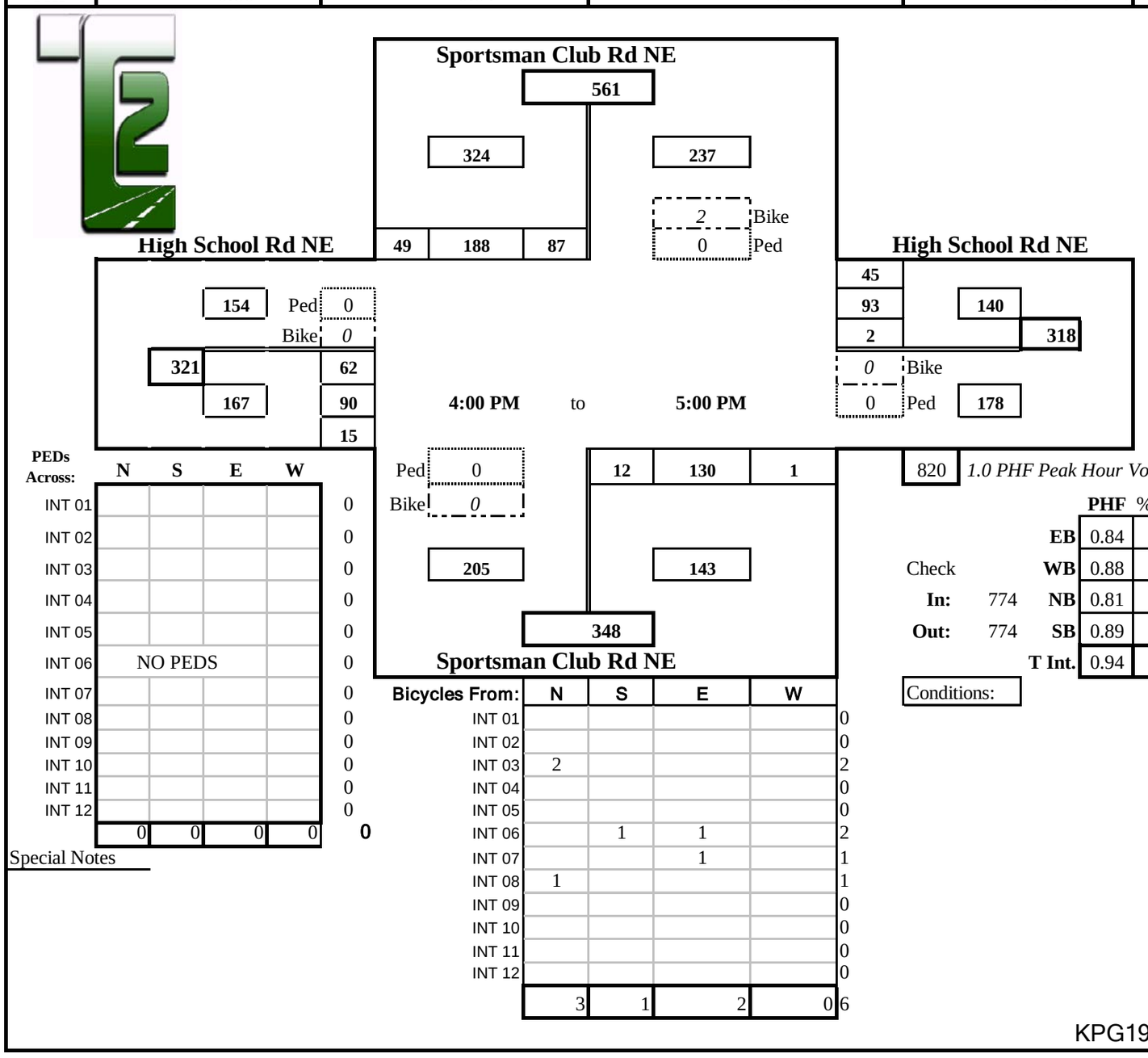
Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Sportsman Club Rd NE & High School Rd NE **Date of Count:** Wed 1/09/2019

Location: Bainbridge Island, Washington **Checked By:** Jess

Time Interval Ending at	From North on (SB) Sportsman Club Rd NE				From South on (NB) Sportsman Club Rd NE				From East on (WB) High School Rd NE				From West on (EB) High School Rd NE				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	0	17	49	7	1	2	31	0	0	0	28	9	0	19	26	5	193
4:30 P	1	21	38	17	1	5	24	1	2	0	28	12	0	14	20	5	185
4:45 P	1	27	50	14	2	2	42	0	2	2	13	13	0	14	27	1	205
5:00 P	0	22	51	11	0	3	33	0	1	0	24	11	1	15	17	4	191
5:15 P	1	20	27	13	1	2	36	0	1	0	18	16	1	18	15	1	166
5:30 P	0	23	35	14	0	6	24	0	2	0	27	16	0	13	24	2	184
5:45 P	0	17	40	11	0	2	19	0	2	0	7	10	0	8	19	6	139
6:00 P	2	26	47	12	0	3	30	1	0	0	24	7	0	14	16	4	184
6:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	5	173	337	99	5	25	239	2	10	2	169	94	2	115	164	28	1447
Peak Hour: 4:00 PM to 5:00 PM																	
Total	2	87	188	49	4	12	130	1	5	2	93	45	1	62	90	15	774
Approach	324				143				140				167				774
%HV	0.6%				2.8%				3.6%				0.6%				1.6%
PHF	0.89				0.81				0.88				0.84				0.94



Special Notes

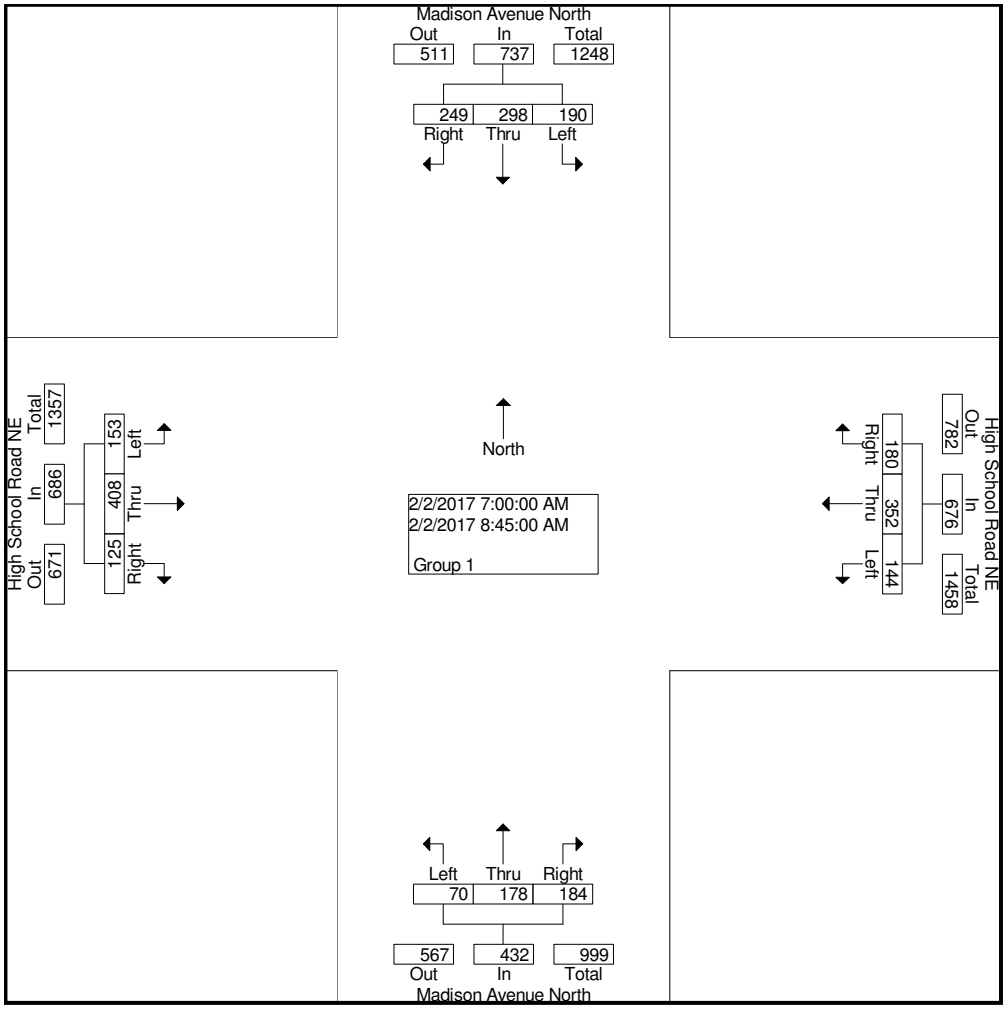
KPG19005M_02p

Heath & Associates, Inc.
2214 Tacoma Road
Puyallup, WA 98371

File Name : 3911a
Site Code : 00003911
Start Date : 2/2/2017
Page No : 1

Groups Printed- Group 1

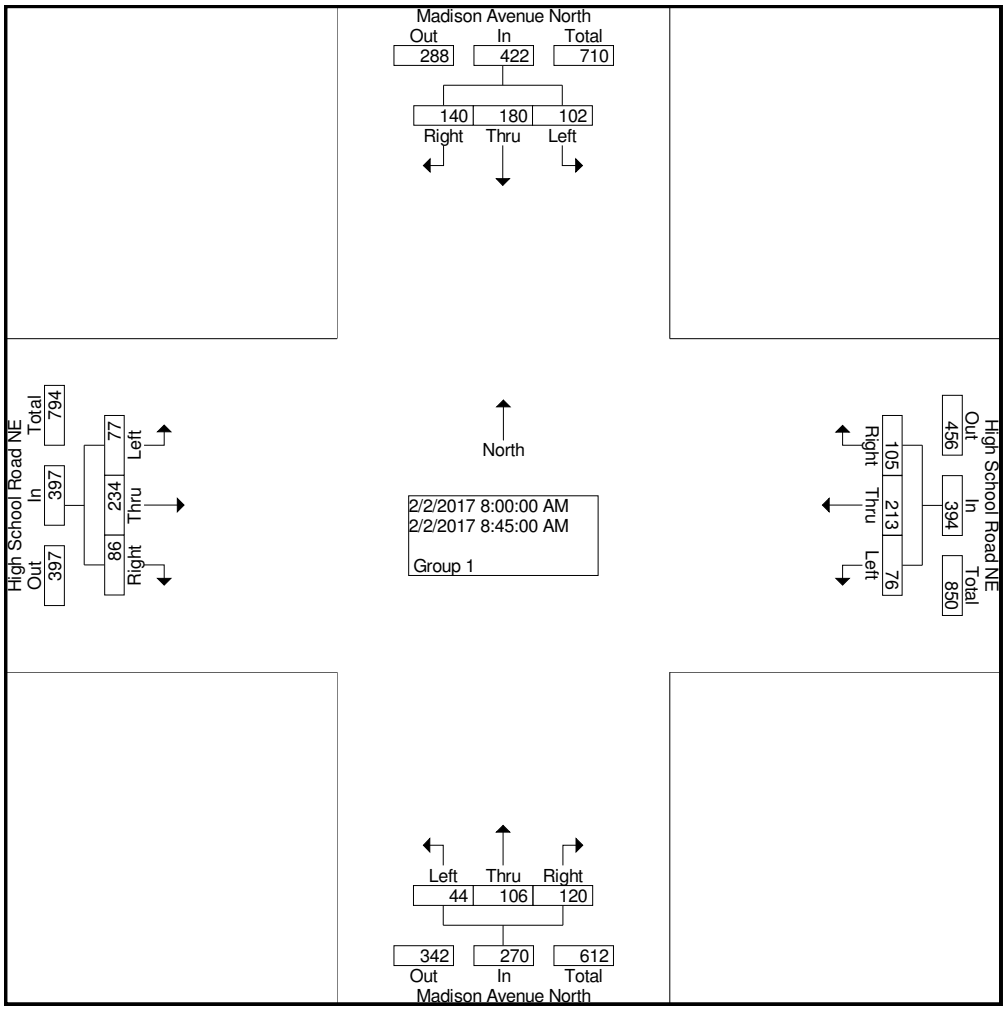
	Madison Avenue North Southbound			High School Road NE Westbound			Madison Avenue North Northbound			High School Road NE Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	18	33	6	7	29	6	9	14	1	6	13	6	148
07:15 AM	28	16	18	10	32	26	10	16	4	5	36	17	218
07:30 AM	31	14	37	25	29	20	21	25	9	10	78	27	326
07:45 AM	32	55	27	33	49	16	24	17	12	18	47	26	356
Total	109	118	88	75	139	68	64	72	26	39	174	76	1048
08:00 AM	28	47	24	20	38	18	27	18	8	20	54	20	322
08:15 AM	55	34	11	28	77	19	27	36	16	15	61	27	406
08:30 AM	25	52	35	25	52	21	35	27	9	19	73	19	392
08:45 AM	32	47	32	32	46	18	31	25	11	32	46	11	363
Total	140	180	102	105	213	76	120	106	44	86	234	77	1483
Grand Total	249	298	190	180	352	144	184	178	70	125	408	153	2531
Apprch %	33.8	40.4	25.8	26.6	52.1	21.3	42.6	41.2	16.2	18.2	59.5	22.3	
Total %	9.8	11.8	7.5	7.1	13.9	5.7	7.3	7.0	2.8	4.9	16.1	6.0	



Heath & Associates, Inc.
2214 Tacoma Road
Puyallup, WA 98371

File Name : 3911a
Site Code : 00003911
Start Date : 2/2/2017
Page No : 2

	Madison Avenue North Southbound				High School Road NE Westbound				Madison Avenue North Northbound				High School Road NE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Intersection	08:00 AM																
Volume	140	180	102	422	105	213	76	394	120	106	44	270	86	234	77	397	1483
Percent	33.2	42.7	24.2		26.6	54.1	19.3		44.4	39.3	16.3		21.7	58.9	19.4		
08:15 Volume	55	34	11	100	28	77	19	124	27	36	16	79	15	61	27	103	406
Peak Factor																	0.913
High Int.	08:30 AM				08:15 AM				08:15 AM				08:30 AM				
Volume	25	52	35	112	28	77	19	124	27	36	16	79	19	73	19	111	
Peak Factor				0.942				0.794				0.854				0.894	



Prepared for: **KPG**

Traffic Count Consultants, Inc.

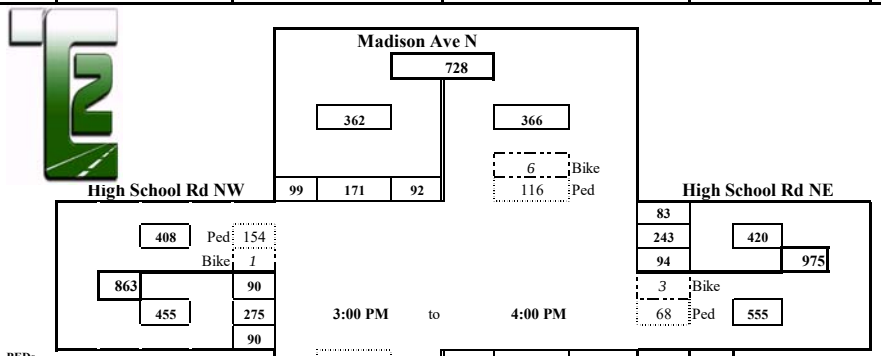
Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Madison Ave N & High School Rd NE/NW **Date of Count:** Wed 2/27/2019

Location: Bainbridge Island, Washington **Checked By:** Jess

Time Interval	From North on (SB) Madison Ave N				From South on (NB) Madison Ave N				From East on (WB) High School Rd NE				From West on (EB) High School Rd NW				Interval Total
Ending at	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
2:15 P	0	26	41	29	0	8	19	21	1	23	32	17	0	19	54	10	299
2:30 P	0	30	45	35	1	10	24	25	3	29	46	21	0	24	62	15	366
2:45 P	2	23	39	18	1	17	37	38	0	33	56	12	6	15	57	18	363
3:00 P	0	17	32	26	0	30	31	42	1	25	75	19	0	10	49	13	369
3:15 P	0	24	36	16	0	22	48	48	1	19	57	18	0	20	45	11	364
3:30 P	2	25	54	24	2	14	46	39	2	19	44	23	0	33	96	62	479
3:45 P	0	24	51	32	0	16	40	60	0	36	68	24	1	21	70	10	452
4:00 P	0	19	30	27	0	14	59	41	3	20	74	18	0	16	64	7	389
4:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	4	188	328	207	4	131	304	314	11	204	452	152	7	158	497	146	3081
Peak Hour: 3:00 PM to 4:00 PM																	
Total	2	92	171	99	2	66	193	188	6	94	243	83	1	90	275	90	1684
Approach	362				447				420				455				1684
%HV	0.6%				0.4%				1.4%				0.2%				0.7%
PHF	0.85				0.95				0.82				0.60				0.88



1916 *1.0 PHF Peak Hour Volume*

PEDs Across:	N	S	E	W	
INT 01	19	4	7	3	33
INT 02	30	6	12	6	54
INT 03	5	10	5	9	29
INT 04	3	2	0	2	7
INT 05	34	24	11	36	105
INT 06	27	108	8	98	241
INT 07	23	13	18	8	62
INT 08	32	20	31	12	95
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	173	187	92	174	**626**

	PHF	%HV
EB	0.60	0.2%
WB	0.82	1.4%
NB	0.95	0.4%
SB	0.85	0.6%
T Int.	0.88	0.7%

Check In: 1684 Out: 1684

Bicycles From:	N	S	E	W		N U's	S U's	E U's	W U's
INT 01					0	0			0
INT 02	1	1			2	0			0
INT 03	1	1			2	1			0
INT 04		1	1		2	0			1
INT 05				1	1	0			2
INT 06	2		1		3	0			0
INT 07	4	1	1		6	0			0
INT 08		3	1		4	0			0
INT 09					0				
INT 10					0				
INT 11					0				
INT 12					0				
	8	7	4	1	20	1	0	0	3

Special Notes

KPG19031M_02p1

Prepared for: **KPG**

Traffic Count Consultants, Inc.

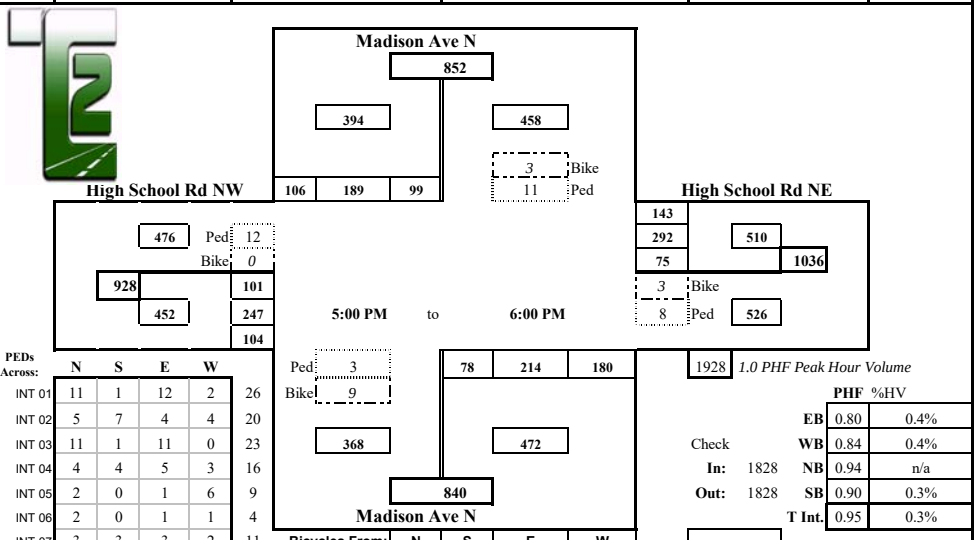
Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Madison Ave N & High School Rd NE/NW **Date of Count:** Wed 2/27/2019

Location: Bainbridge Island, Washington **Checked By:** Jess

Time Interval	From North on (SB) Madison Ave N				From South on (NB) Madison Ave N				From East on (WB) High School Rd NE				From West on (EB) High School Rd NW				Interval Total
Ending at	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	0	19	31	20	1	22	57	36	1	18	47	18	4	22	71	27	388
4:30 P	0	26	35	20	0	11	40	32	0	16	29	11	0	14	60	30	324
4:45 P	0	13	26	21	0	8	36	44	2	23	45	26	2	10	57	15	324
5:00 P	0	17	32	22	1	17	34	26	0	29	57	16	2	15	64	15	344
5:15 P	0	21	45	33	0	21	55	48	0	15	65	38	2	36	63	42	482
5:30 P	1	26	59	24	0	18	52	56	0	6	76	27	0	23	69	17	453
5:45 P	0	24	39	18	0	15	69	39	2	19	86	47	0	15	51	17	439
6:00 P	0	28	46	31	0	24	38	37	0	35	65	31	0	27	64	28	454
6:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	1	174	313	189	2	136	381	318	5	161	470	214	10	162	499	191	3208
	Peak Hour: 5:00 PM to 6:00 PM																
Total	1	99	189	106	0	78	214	180	2	75	292	143	2	101	247	104	1828
Approach			394				472				510				452		1828
%HV			0.3%				n/a				0.4%				0.4%		0.3%
PHF			0.90				0.94				0.84				0.80		0.95



PEDs Across:	N	S	E	W	
INT 01	11	1	12	2	26
INT 02	5	7	4	4	20
INT 03	11	1	11	0	23
INT 04	4	4	5	3	16
INT 05	2	0	1	6	9
INT 06	2	0	1	1	4
INT 07	3	3	3	2	11
INT 08	4	0	3	3	10
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	42	16	40	21	**119**

Bicycles From:	N	S	E	W	
INT 01	1				1
INT 02				1	1
INT 03		2			2
INT 04			1		1
INT 05					0
INT 06	3	5	1		9
INT 07		3	2		5
INT 08		1			1
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	4	11	4	1	20

1928 *1.0 PHF Peak Hour Volume*

		PHF	%HV
	EB	0.80	0.4%
Check	WB	0.84	0.4%
In: 1828	NB	0.94	n/a
Out: 1828	SB	0.90	0.3%
	T Int.	0.95	0.3%

Special Notes