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THE CORPORATION OF THE TOWN OF TECUMSEH

Brighton Road Corridor Review

Review of Intersection Traffic Control Operations

October 24, 2019



The Corporation of the Town of Tecumseh
917 Lesperance Road
Tecumseh, Ontario
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Attention: Mr. Phil Bartnik, P.Eng.
Director, Public Works & Environmental Services

Brighton Road Corridor – Review of Intersection Traffic Control Operations

We are pleased to provide you with our report that reviewed intersection traffic control operations and conditions along the Brighton Road corridor in the town of Tecumseh. This report provides some recommendations to help address traffic operations along Brighton Road.

Sincerely,

DILLON CONSULTING LIMITED

A handwritten signature in black ink, appearing to read "Mike Walters".

Mike Walters, P.Eng.
Associate

A handwritten signature in blue ink, appearing to read "Flavio Forest".

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1.0 Background

In 2006, a Class Environmental Assessment (EA) was completed as part of the early planning and functional design for roadway and infrastructure improvements on Brighton Road, from the Town of Tecumseh's south boundary at the VIA railway line north to Riverside Drive East at Pentilly Road. Ultimately, the preferred design solution introduced an all-way stop at Brighton Road and (Old) Tecumseh Road, a roundabout at the intersection of Brighton Road and Tecumseh Road East, two traffic circles along Brighton Road at the intersections with Aloha Drive and Southwind Crescent and three raised centre medians found largely at the north and south limits of Brighton Road. These modifications were introduced in 2008 and 2009.

Following the introduction of the roundabout and traffic circles, residents expressed concerns with the overall functionality and operating characteristics of the roundabout and two traffic circles. In 2011, Ourston Roundabout Engineering (since acquired by MSA Professional Services) and Dillon Consulting Limited completed a review of the roundabout and two traffic circles to provide recommendations and enhancements following their construction. In 2012, modifications, improvements and changes were introduced. At the roundabout, these included raising the truck apron and constructing a modified curb, reducing the width of the truck apron, and widening and enhancing the painted yield lines. At the two traffic circles, improvements included raising the truck apron and splitter islands, adding signage in advance of the traffic circle as well as widening and enhancing the painted yield lines.

The Town of Tecumseh has received some more recent complaints regarding the traffic circles along Brighton Road from area residents and commuters. In late 2018, the Town initiated a follow-up review of the Brighton Road corridor to provide recommendations for either modifying or replacing the traffic circles with alternative intersection controls. Other improvements to better address traffic operations within the Brighton Road corridor were also evaluated.

2.0 Brighton Road Corridor

Brighton Road in Tecumseh connects Riverside Drive East in the north with West Pike Creek Road (Essex Road 21) in the south. It is oriented in a north-south fashion near the eastern limits of the Town of Tecumseh and parallels Pike Creek, which can be found slightly farther to the east. The portion of Brighton Road from the south limits of Tecumseh (VIA Rail line) through the roundabout of Tecumseh Road East and up to (Old) Tecumseh Road is classified as a minor arterial road and is considered a connecting link within Essex County's road network. The balance of Brighton Road north of this segment is classified as a collector road. In both directions, a single travel lane is provided, with no turning lanes present at any intersection along Brighton Road.

Several forms of traffic control are present along Brighton Road. A three-legged roundabout controls the intersection of Tecumseh Road East and Brighton Road. All-way stop control (AWSC) is present at the three-legged intersection of (Old) Tecumseh Road and Brighton Road. Two traffic circles are present on Brighton Road at Aloha Drive and Southwind Crescent. All other intersections are controlled via two-way stop control (TWSC), with traffic on Brighton Road having the right-of-way.

Pedestrian / cycling facilities are provided along Brighton Road for the majority of the corridor's length. From the roundabout with Tecumseh Road East north, a concrete sidewalk is found on the west side of Brighton Road, while an asphalt multi-use pathway is found on the east side. South of the roundabout, the concrete sidewalk and asphalt pathway switch sides. The multi-use pathway terminates approximately 75 metres south of the roundabout, while the sidewalk on the east side of Brighton Road transitions to an at-grade asphalt pathway that crosses over the VIA railway line into the town of Lakeshore.

Tecumseh Transit operates a community shuttle vehicle in the northbound direction only once an hour along Brighton Road between Tecumseh Road East and Riverside Drive. This service operates between 6:00 AM and 6:00 PM from Monday to Saturday.

3.0 Public Feedback

Since the improvements were introduced on Brighton Road in 2008 and 2009, residents have expressed concerns to the Town of Tecumseh regarding several factors including:

- Overall driver behaviour;
- Operating speeds; and
- Lack of understanding on the proper use and functionality of the roundabout / traffic circles.

Following the improvements that were introduced in 2012, area residents and commuters have raised some additional concerns. In 2018, the Town initiated a follow-up comprehensive review of the corridor, which included an on-line survey in April 2019 and a community open house in July 2019.

3.1 Spring 2019 On-line Survey

In April 2019, an on-line survey was circulated to solicit feedback from the local community regarding Brighton Road and the operations of the traffic circles, roundabouts and the corridor.

The survey was open for the month of April 2019, with a project page and survey link provided on the Town's website. Postcards were also hand-delivered by Town staff to approximately 375 properties as shown in **Figure 1**.

Figure 1: Brighton Road Mail-out - Distribution Area



A total of 285 responses to the on-line survey were received. The raw data from the survey is provided in **Appendix A**, while a memorandum summary of the on-line survey results can be seen in **Appendix B**.

3.2 Summer 2019 Community Open House

On Thursday, July 11, 2019, a community open house was held at the Town of Tecumseh Municipal Hall in the Council Chambers from 3:00 PM to 5:00 PM and again from 6:00 PM to 8:00 PM. The community open house display boards are found within **Appendix C**.

During the four-hour period when the open house was open, 24 people signed in, and 14 attendees completed a comment form. The completed sign-in sheets and comment forms can be seen in **Appendix D**.

The comment forms contained two questions. The first question asked, “In April 2019, did you complete the Brighton Road on-line survey?” All 14 respondents indicated they had completed the survey. The second question asked, “Do you agree with the overall recommendations along Brighton Road?” Seven respondents indicated “YES”, five respondents indicated “NO” while two respondents did not answer the question.

Compared to the responses from the on-line survey in April 2019, attendance and feedback was minimal. Just over half of attendees chose to complete a feedback form, while half of all comment forms noted that they were in support of the recommended changes.

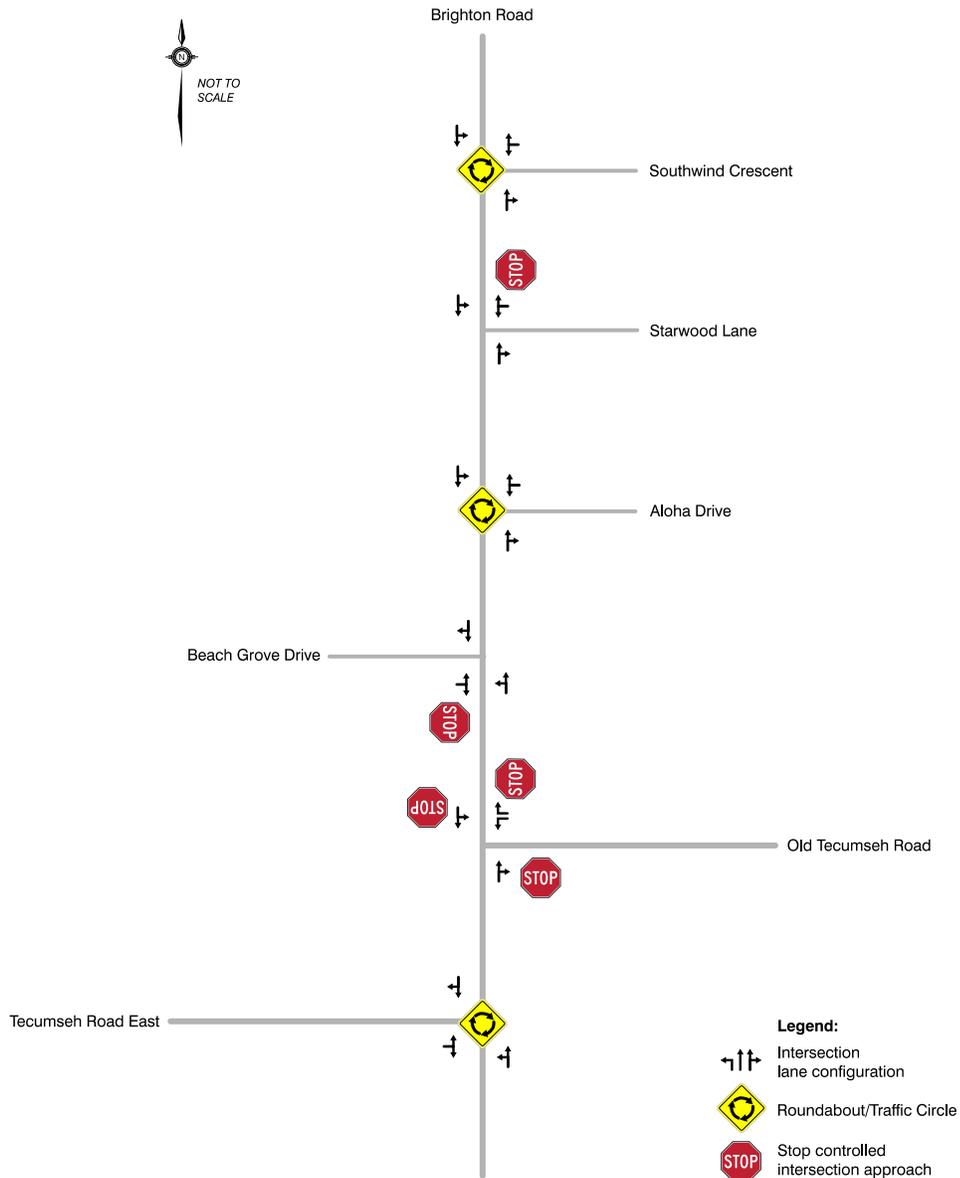
The most frequent theme that was raised in the comment forms was the need for traffic calming (raised deflection) on Brighton Road at the north limits closer to Riverside Drive East. From a traffic calming perspective, it was noted to a number of open house attendees that the 85th percentile speeds at this location were acceptable based on the speed data that was collected. As a result, traffic calming would likely not be warranted along that portion of the Brighton Road corridor.

4.0 Transportation Review

In May 2019, field data collection and an on-site review of operations occurred. This included counting turning movements at the traffic circles and roundabouts, measuring vehicle speeds at three locations along the corridor, and performing a walkthrough along the entire corridor during both the AM and PM peak hours. The raw data can be seen in **Appendix F**.

Figure 2 shows the current intersection controls along Brighton Road within the study area.

Figure 2: Brighton Road Laning and Intersection Control



4.1 Transportation Data & Analysis

4.1.1 Turning Movement Counts

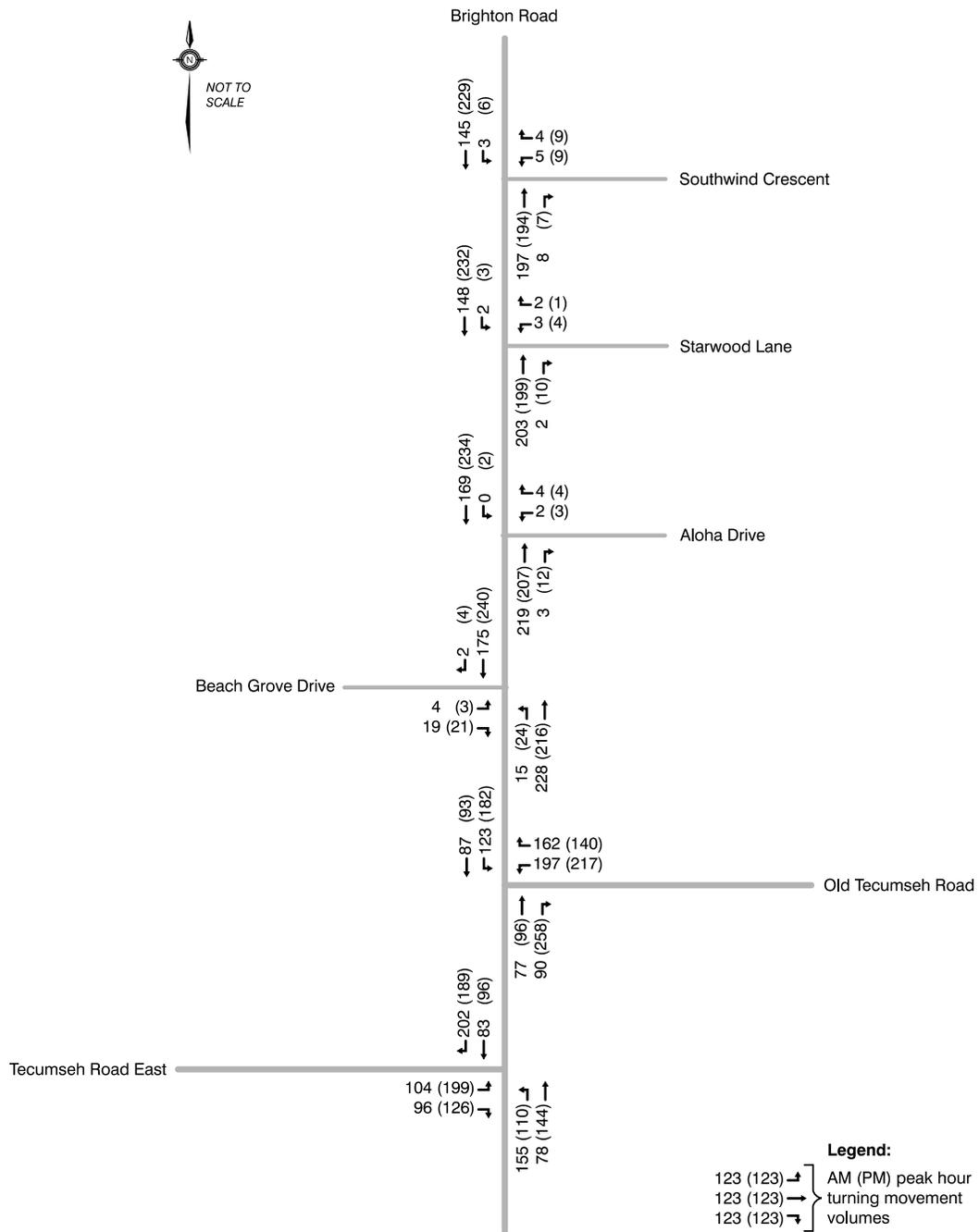
Turning movement count (TMC) data was collected at each of the intersections during the morning peak (7:00 AM to 9:00 AM) and afternoon peak (4:00 PM to 6:00 PM) as shown in **Table 1**:

Table 1: Turning Movement Count Data Collection

Intersection	Traffic Control	TMC Data Collection Date
Brighton Road & Tecumseh Road East	Roundabout	Wednesday, May 8, 2019
Brighton Road & (Old) Tecumseh Road	All-Way Stop	Thursday, May 30, 2019
Brighton Road & Beach Grove Drive	Two-Way Stop	Thursday, May 30, 2019
Brighton Road & Aloha Drive	Traffic Circle	Wednesday, May 8, 2019
Brighton Road & Starwood Lane	Two-Way Stop	Thursday, May 30, 2019
Brighton Road & Southwind Crescent	Traffic Circle	Wednesday, May 8, 2019

The existing volumes in both the AM and PM peak hours can be seen in **Figure 3**.

Figure 3: Existing (2019) Traffic Volumes



4.1.2 Historical Traffic Growth and Background Volume Increases

Utilizing data from the County of Essex’s website, average daily traffic volume data along two parts of Brighton Road are available back to the late 1960s. Data has been collected at two locations, with the first being on Brighton Road between the roundabout at Tecumseh Road East and the all-way stop



control intersection with (Old) Tecumseh Road. The second being on Essex County Road 21 (West Pike Creek Road) in the Town of Lakeshore, south of the VIA rail line and Town of Tecumseh limits.

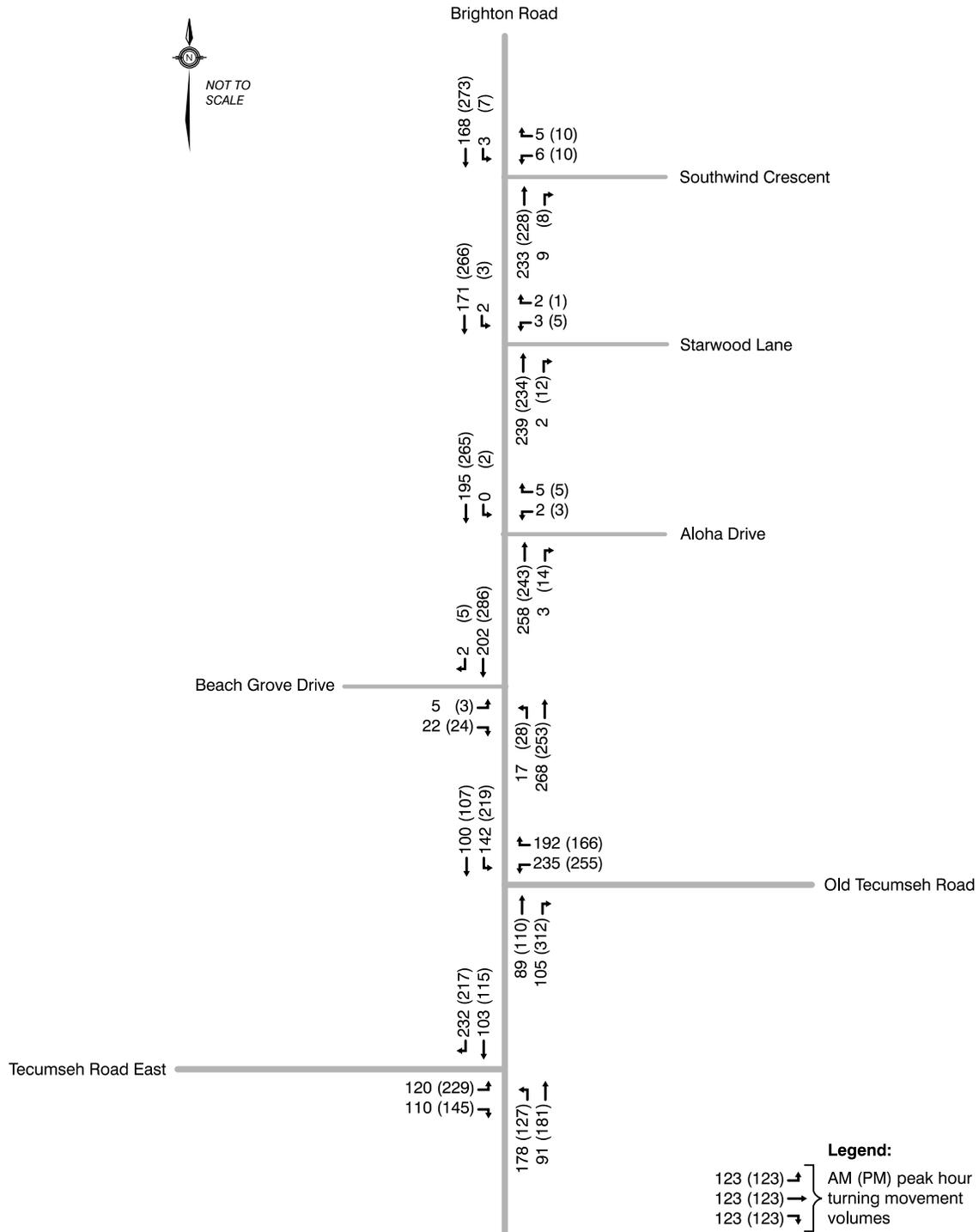
Since 1998, the traffic volume has grown by an average of 0.5% on Brighton Road within the town of Tecumseh and by 1.4% on Essex County Road 21 (West Pike Creek Road), just south of the Tecumseh town limits.

Therefore, for analysis purposes, a conservative 1.5% growth rate was utilized to forecast increased traffic volumes through to a 10-year horizon (2029).

Separately, additional volumes were included as calculated within the December 2017 Traffic Impact Study prepared by RC Spencer Associates Inc. in support of the planned residential and commercial development at Bay Harbour. This development has up to 75 residential condominium units planned as well as approximately 3,000 sq. ft. of commercial retail space on the ground floor.

The forecast 2029 traffic volumes are shown in **Figure 4**.

Figure 4: Forecast (2029) Traffic Volumes



4.1.3 Intersection Operations

Traffic operations along the Brighton Road corridor at the roundabout with Tecumseh Road East and the all-way stop control intersection with (Old) Tecumseh Road were analyzed based on the methodology outlined in the 6th edition of the *Highway Capacity Manual (HCM)*, using the Synchro (version 10) software package.

At these intersections, the overall level of service¹ and average vehicle delay are noted. In addition, for each individual movement, the volume-to-capacity ratio, level of service, average delay and 95th percentile queue are noted. The results were reviewed to identify any critical movements, defined as follows:

- Any lane / movement with a v/c ratio of 0.85 or higher;
- Any movement operating at LOS E or F; and
- Any turning movement with a 95th percentile queue exceeding the available storage.

Synchro analysis worksheets for the two intersections are provided in **Appendix G**.

4.1.3.1 Brighton Road and Tecumseh Road East (Roundabout)

Synchro analysis results for the Brighton Road and Tecumseh Road East roundabout based on existing and forecast volumes are summarized in **Table 2**.

Table 2: Brighton Road and Tecumseh Road East – Existing and Forecast Conditions

Scenario	Movement	Weekday AM peak hour				Weekday PM peak hour			
		v/c	LOS	Delay (s/veh)	95 th %ile queue (veh)	v/c	LOS	Delay (s/veh)	95 th %ile queue (veh)
Existing (2019)	EB approach	0.23	A	5.2	1	0.29	A	5.6	1
	NB approach	0.28	A	5.8	1	0.25	A	5.6	1
	SB approach	0.35	A	6.8	2	0.26	A	5.4	1
	Overall	—	A	6.0	—	—	A	5.5	—
Forecast (2029)	EB approach	0.27	A	5.8	1	0.34	A	6.3	2
	NB approach	0.33	A	6.5	1	0.32	A	6.5	1
	SB approach	0.42	A	7.9	2	0.31	A	6.0	1
	Overall	—	A	6.9	—	—	A	6.3	—

¹ Level of Service (LOS), applied to an intersection, is a measure qualifying the amount of delay experienced by motorists, expressed either for specific turning movements or for the intersection as a whole. A more detailed explanation of LOS is provided in **Appendix E**.

In both the AM and PM peak hours under existing and forecast conditions, the roundabout at Brighton Road and Tecumseh Road East operates at LOS A with little or no delay, queuing, or congestion identified during either peak hour under either existing or forecast conditions.

4.1.3.2 Brighton Road and (Old) Tecumseh Road (All-Way Stop)

Synchro analysis results for the Brighton Road & (Old) Tecumseh Road intersection under existing and forecast volumes are summarized in **Table 3**.

Table 3: Brighton Road and (Old) Tecumseh Road – Existing and Forecast Conditions

Scenario	Movement	Weekday AM peak hour				Weekday PM peak hour			
		v/c	LOS	Delay (s/veh)	95 th %ile queue (veh)	v/c	LOS	Delay (s/veh)	95 th %ile queue (veh)
Existing (2019)	NB approach	0.29	B	10.4	1	0.60	C	15.6	4
	WB left	0.41	B	13.2	2	0.49	C	16.1	3
	WB right	0.27	A	9.7	1	0.26	B	10.5	1
	SB approach	0.38	B	11.8	2	0.52	C	15.3	3
	Overall	—	B	11.4	—	—	B	14.9	—
Forecast (2029)	NB approach	0.36	B	11.6	2	0.76	C	24.3	7
	WB left	0.50	C	15.7	3	0.61	C	21.1	4
	WB right	0.34	B	10.8	2	0.33	B	12.0	1
	SB approach	0.46	B	13.5	2	0.67	C	21.1	5
	Overall	—	B	13.1	—	—	C	21.0	—

In both the weekday AM and PM peak hours under both existing and forecast conditions, the all-way stop control intersection at Brighton Road and (Old) Tecumseh Road operates at LOS B, with a 95th percentile queue of four vehicles (occurring in the northbound direction during the PM peak hour). The delay at all approaches would be under 20 seconds per vehicle. Under forecast conditions, the intersection is anticipated to operate at LOS C overall in the PM peak hour, with a 95th percentile queue of seven vehicles (occurring in the northbound direction).

At both the all-way stop control intersection and roundabout intersection, operations are envisioned to be acceptable through the horizon year. No traffic control modifications are recommended at either intersection.

4.1.4 Traffic Speed

At three locations along Brighton Road, traffic speed data was collected over a 48-hour period in early May 2019. For two weeks in June 2019, the Town of Tecumseh also placed a trailer on Brighton Road that measured and displayed the speed of approaching vehicles. The locations and times are identified in **Table 4**.

Table 4: Brighton Road Speed Data Collection

Location	Speed Data Collection Dates
Brighton Road south of Tecumseh Road East	Tuesday, May 7 & Wednesday, May 8, 2019
Brighton Road Between Aloha Drive and Starwood Lane	Tuesday, May 7 & Wednesday, May 8, 2019
Brighton Road north of Southwind Crescent	Tuesday, May 7 & Wednesday, May 8, 2019
Brighton Road north of Southwind Crescent	Thursday, June 6 – Wednesday, June 19, 2019

The specific location of the speed data collection equipment (pneumatic tubes) is shown in **Figure 5** to **Figure 7**.

Figure 5: Brighton Road Counter - South of Tecumseh Road East (looking north)

This pneumatic counter was mounted in front of 562 Brighton Road, approximately 25 metres north of the raised centre median's northerly limits.

Figure 6: Brighton Road Counter - between Aloha Drive and Starwood Crescent (looking north)



This pneumatic counter was located in front of 325 Brighton Road, approximately 75 metres north of the traffic circle at Aloha Drive and 150 metres south of the traffic circle at Southwind Crescent.

Figure 7: Brighton Road Counter - north of Southwind Crescent (looking south)



This pneumatic counter was located in front of 159 Brighton Road, approximately 125 metres north of the traffic circle at Southwind Crescent, 35 metres south of the south limit of the raised centre island, and 100 metres south of the curve between Brighton Road and Riverside Drive East.

The speed data trailer measured the speed of northbound vehicles on Brighton Road, and was located approximately 170 metres north of the traffic circle at Southwind Crescent, and adjacent to the existing raised centre median.

The speed data recorded at these four locations are summarized in **Table 5**.

Table 5: Brighton Road Speed and Volume Data

Location	Measuring Device	Average Daily Traffic	Posted Speed Limit	Average Speed	85 th Percentile speed ²
Brighton Road south of Tecumseh Road East	Pneumatic Tubes	4,586	50 km/h	53 km/h	68 km/h
Brighton Road between Aloha Drive and Starwood Lane	Pneumatic Tubes	4,573	50 km/h	44 km/h	50 km/h
Brighton Road north of Southwind Crescent	Pneumatic Tubes	4,378	50 km/h	51 km/h	56 km/h
Brighton Road north of Southwind Crescent	Speed Trailer	2,361 ³	50 km/h	45 km/h	50 km/h

Throughout the corridor, average traffic volumes are consistent from the north to the south limits. However, volumes between the roundabout at Tecumseh Road East and the all-way stop at (Old) Tecumseh Road are assumed to be slightly higher due to the requirement for east-west traffic to use this segment of Brighton Road to connect between the east-west corridors. No speed or volume data was collected within this segment.

Between the two traffic circles (approximately 225 metres apart), the average and 85th percentile speeds is noticeably lower than what was measured along Brighton Road to the north and to the south.

In addition, the speed data collected with the speed trailer is also slightly lower compared to the pneumatic tube data, noting that vehicle speeds are recorded prior to the speed being actively displayed. This could be due to three factors. The first was that the speed trailer actively displays the speed of an approaching vehicle, which may assist in some vehicles that are exceeding the posted speed limit of 50 km/h to slow down. Secondly, the speed trailer was located adjacent to the raised centre median, while the pneumatic tube was located approximately 35 metres farther south. Thirdly, the speed trailer collected data for vehicles approximately 300 metres away from the trailer, which would be farther to the south, and between the two traffic circles. As a result, the average speed and 85th

² The 85th percentile speed is the speed at which 85% of all measured traffic is travelling at or below.

³ This value measured northbound traffic only. Speed data was collected farther south between Aloha Drive and Starwood Lane.

percentile speed are nearly identical to the pneumatic tube count data collected between Aloha Drive and Starwood Lane, as vehicles were measured generally in the same location.

4.1.5 On-Site Review & Observations

The on-site review occurred on Thursday, May 9, 2019, in which Dillon staff walked along and reviewed the entire corridor during the AM peak and PM peak hours. During the walkthrough, it was noted that construction was occurring at the north end of Brighton Road for some utility work. No through lanes were closed, although during the PM peak period, it was observed that the northeast quadrant of the Aloha Drive and Brighton Road traffic circle was blocked, as seen in **Figure 8**.

Figure 8: Construction at Aloha Drive & Brighton Road



Overall, in both the AM and PM peak hour, there was no congestion or delays observed at any intersection. Volumes along Brighton Road between (Old) Tecumseh Road and Tecumseh Road East were observed to be higher due to the need for east-west vehicles to use this portion of Brighton Road. The additional volumes can be easily accommodated as this section of Brighton Road is considered a minor arterial roadway (with a higher traffic carrying capacity) and is also part of the County road network through a connecting link.

The on-site review noted the following:

General Observations

- The yellow flashers facing northbound and eastbound traffic at the curve at the north limits of the study area have been spun around (by the wind) where they are not facing the approaching travel lane. This can be seen in **Figure 9**.

Figure 9: Overhead Flashers not facing the approaching travel lanes



Multi-use Pathway

- The multi-use pathway along Brighton Road seemed to be quite popular by area residents and was used by both pedestrians and cyclists; and
- The “STOP” tabs at most intersections may cause confusion about who has the right-of-way between vehicles on the main street and pathway users. This can be seen in **Figure 10**.

Figure 10: STOP control tabs facing pathway users



Raised Islands

- These raised islands do not appear to be effective in reducing speeds, as average speeds were measured above the posted speed limit within close proximity of the two raised islands. An example of one of the raised islands along Brighton Road can be seen in **Figure 11**.

Figure 11: Raised Island on Brighton Road



Roundabout with Tecumseh Road East

- Vehicles typically did not signal their turning movement when approaching the roundabout and/or traffic circles;
- Vehicles typically did not stop and yield the right-of-way to pedestrians crossing any of the three legs;
- Minimal deflection for making the northbound through movement and eastbound right turn movement around the circle;
- Minimal conflicts and little or no delays were observed;
- Difficult to see the edge between the truck apron and the drive aisle due to consistent surfacing;
- Drive aisle around the circle appeared to be oversized; and
- The existing utility building on the southwest quadrant is quite close to the edge of the roadway, and does slightly impact sightlines.

All-way stop with (Old) Tecumseh Road

- No observed issues, with good compliance and yielding to both pedestrians and cyclists at the intersection.

Traffic Circles

General

- The splitter islands have limited effect on deflecting through traffic or discouraging left turning traffic from cutting the corner when turning left (i.e., not driving around the circle) due to the flush nature of the splitter islands;
- Yielding to traffic turning to or from the side streets / residential driveways is not occurring in a consistent manner. Vehicles on the side street (Aloha & Southwind) typically wait for traffic on Brighton Road to clear and then proceed when safe to do so; similar to how a two-way stop control approach would operate; and
- The advisory “10 km/h” speed sign when approaching the traffic circles is arbitrarily low, and does not need to be adhered to in order to travel through the traffic circles in the northbound and southbound directions based on the geometric design of the traffic circles.

With Aloha Drive

- Good sightlines on both the northeast and southeast quadrants;
- Two westbound vehicles were observed making an illegal move by cutting the corner to turn left and head south on Brighton Road rather than travel around the circle;
- Limited traffic volumes / demand going to or from the east leg; and
- Eastbound vehicles on Brighton Road typically waited for northbound and /or southbound traffic to clear prior to entering the intersection.

With Southwind Crescent

- Good sightlines on the northeast quadrant;
- Moderate sightlines on the southeast quadrant, partially due to construction fencing associated with ongoing utility work;
- Limited traffic volumes / demand going to or from the east leg;
- One southbound vehicle was observed making an illegal move by cutting the corner to turn left and head east on Southwind Crescent; and
- One westbound vehicle was observed going properly around the traffic circle to turn left and head south, but completed the movement at a very slow rate of speed due to the tight geometry of the traffic circle.

5.0 Recommendations

5.1 Multi-use Pathway

- Level out and better define the location of the multi-use pathway on the east side of Brighton Road where it crosses over the commercial access north of (Old) Tecumseh Road. This would include resurfacing the newly constructed access with asphalt to better highlight the location of the pathway compared to the concrete driveway letdown and access and re-profiling the access to level it out for pathway users. Additional pavement markings (bicycle and pedestrian symbols) across the commercial driveway access could also be considered. This access can be seen in **Figure 12**

Figure 12: Commercial Access going through Multi-Use Pathway



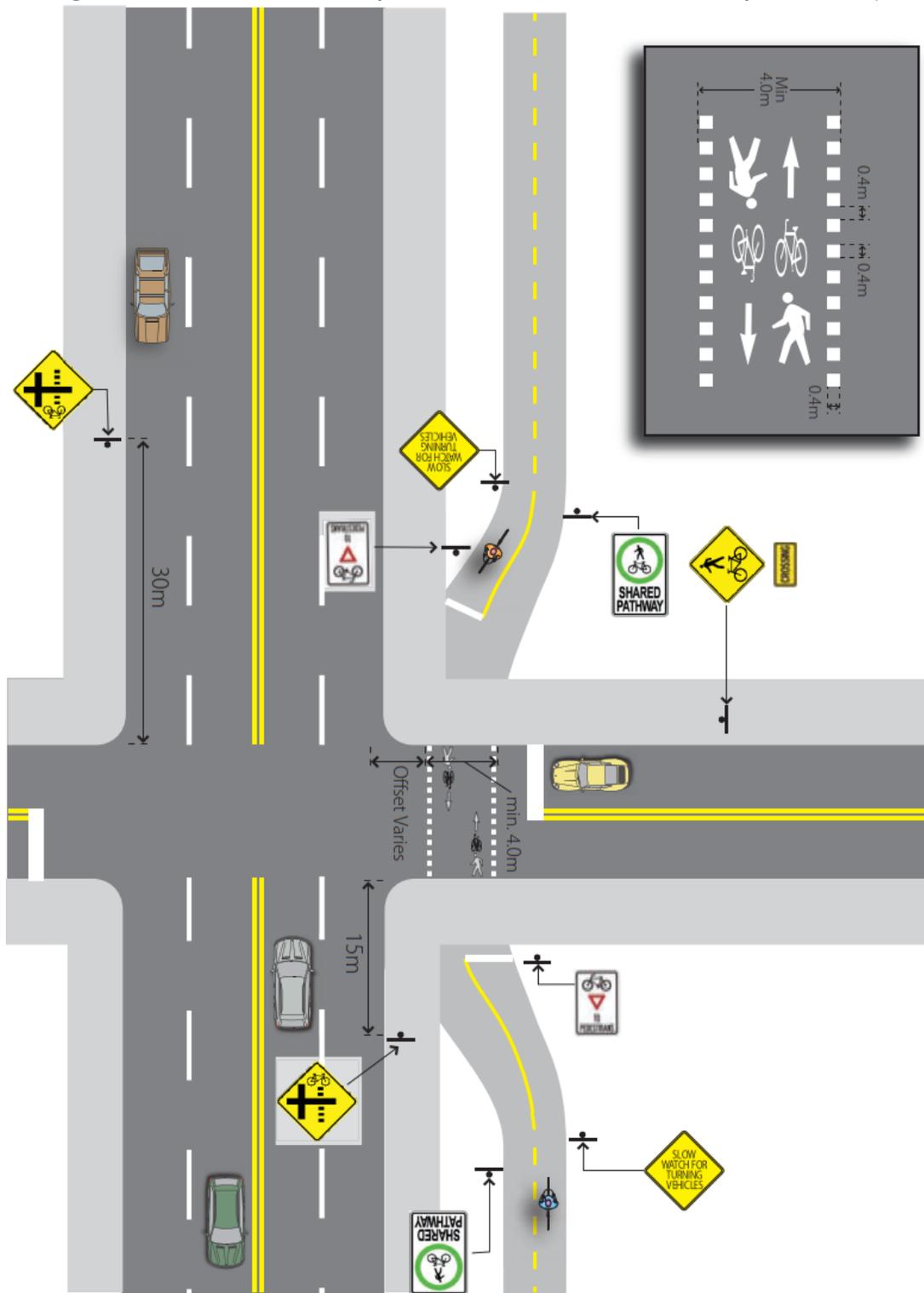
- Where the multi-use pathway crosses a side street that is stop-controlled, the pathway users should be granted the right-of-way, and any turning vehicles would need to yield and wait for the pathway users to clear the intersection. The stop sign paddles on the pathway should be removed at the following locations:
 - The north leg of the Brighton Road, Riverside Drive East and Cove Drive intersection;
 - All three legs of the Brighton Road and Southwind Crescent traffic circle;
 - The east leg of the Brighton Road and Starwood Lane intersection;
 - All three legs of the Brighton Road and Aloha Drive traffic circle;
 - The east leg of the Brighton Road and (Old) Tecumseh Road intersection; and
 - The east leg of the Brighton Road and Mei Lin Crescent intersection.
- An example is seen in **Figure 13**.

Figure 13: Stop control facing pathway users (looking northbound on Brighton Road at Mei Lin Crescent)



- Introduce pavement markings and signage in accordance to OTM Book 18 to have a mixed pedestrian and cyclist crossrides introduced at locations where the multi-use pathway crosses a side street (such as at Mei Lin Crescent; (Old) Tecumseh Road; Starwood Lane; and Cove Drive);
- Introduce “Shared Pathway” signage and pavement markings with bike / pedestrian symbols to highlight the pathway’s multi-modal use. An example of these pavement marking and signage improvements can be seen in **Figure 14**; and
- Determine if there are opportunities to extend the paved multi-use pathway farther south to the town of Tecumseh limits along the west side of Brighton Road, which may in the future be able to cross over the rail line and extend farther south.

Figure 14: Mixed Pedestrian and Cyclist Cross-Ride and Multi-Use Pathway Treatments (OTM Book 18)



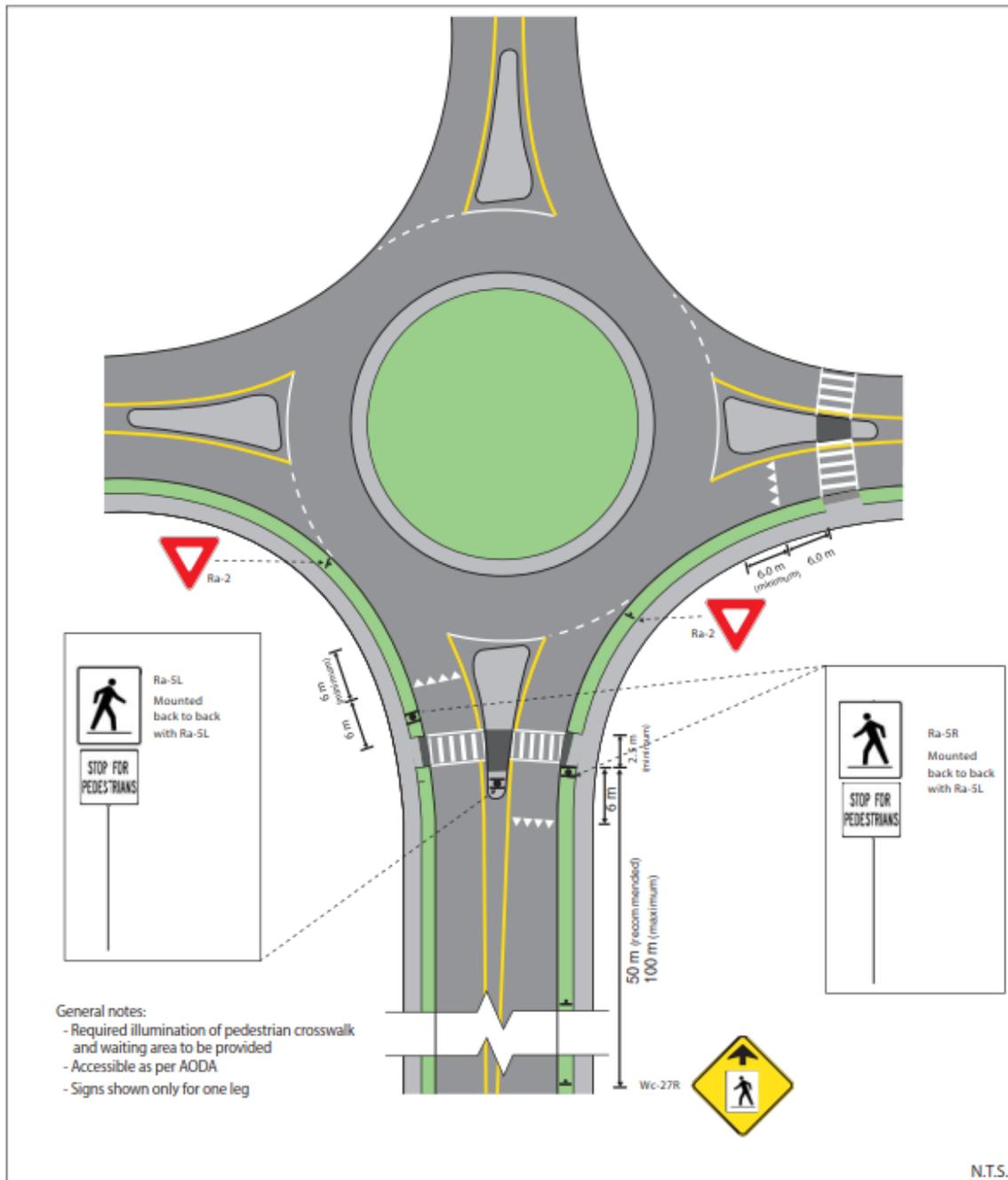
5.2 Raised Islands

- The raised islands can be retained, although they do not appear to be an effective traffic calming measure along the Brighton Road corridor as they do not have an impact on reducing overall vehicle speeds.

5.3 Roundabout with Tecumseh Road East

- Provide pedestrian crossovers (PXO) across all legs to give pedestrians the right-of-way. The south leg could be considered to be a shared bicycle / pedestrian crossride, as the asphalt multi-use pathway crosses Brighton Road at this intersection. This can be seen in **Figure 15**.

Figure 15: Type D Pedestrian Crossover at Roundabout



- Consider painting / striping a solid yellow line around the edge of the truck apron to better delineate the edge of the drive aisle. This treatment was introduced in 2014 at the Riverside Drive East and Manning Road roundabout; and
- If possible, use different colouring / surfacing between the truck apron and the drive aisle to enhance visibility between the two areas. On-site, it was difficult to see the edge of the drive aisle compared to the truck apron due to the uniform surfacing (concrete). This can be seen in **Figure 16** and **Figure 17**.

Figure 16: Looking North on Brighton Road at Tecumseh Road East



Figure 17: Looking West from Brighton Road towards Tecumseh Road East



5.4 All-Way Stop with (Old) Tecumseh Road

- Replace the Wa-8 CHECKERBOARD sign with a Wa-8LR CHECKERBOARD at the top of the “T-Intersection”. This is because westbound vehicles on (Old) Tecumseh Road are permitted to turn right and left onto Brighton Road.

5.5 Traffic Circles

There are some advantages and disadvantages to retaining the traffic circles. The primary benefit to retaining the traffic circles is that they do have a positive impact on reducing overall speeds within this segment of Brighton Road. However, based on the lack of balanced traffic from the approaches and tight configuration, most vehicles on Brighton Road do not yield the right of way to vehicles approaching on the side street (Aloha Drive or Southwind Crescent). Northbound and southbound vehicles do not need to significantly deflect when approaching the traffic circles nor slow down significantly to travel through the traffic circles. Separately, a number of left turning vehicles were observed to make an illegal movement by cutting the corner both inbound and outbound from the side street rather than travel correctly around the circle during the on-site review.

Given the feedback from the on-line survey and at the community open house, respondents were split with the presence of the traffic circles, largely due to the behaviour of some motorists at the traffic circles. However, they are seen as effective in reducing overall vehicle speeds and with several improvements (enhancements), increased safety for all modes can be provided.

Therefore, it is recommended to retain the two traffic circles but provide the following enhancements:

- Enhance and introduce durable pavement markings along all legs, including centrelines and yield lines;
- Introduce a shared bicycle and pedestrian crossing on the east leg, linking the multi-use pathway together;
- Increase the advisory speed tab from 10 km/h to 30 km/h on the northbound and southbound approaches;
- Remove the stop sign tabs / paddles facing pedestrians / cyclists on all legs;
- Remove the street lighting found within the middle of the two circles;
- At both of the traffic circles, elevate the median splitter island on the east leg only to be mountable (75mm) above the surface of the road so they would be mountable by larger turning vehicles, but would discourage smaller vehicles from cutting the corner when making the left turn movement either into or out of the side street (Aloha Drive and Southwind Crescent);
 - These splitter islands would be constructed at generally the same high as the current truck apron found within the middle of the traffic circles. The splitter islands at both traffic circles could be constructed on both sides of the pedestrian crossing, tapering down in line with the painted yellow centreline.

5.6 Traffic Calming

South of the roundabout at Tecumseh Road East to the VIA Rail Line:

- Retain the existing raised median between the VIA Rail Line and Tecumseh Road. Also, consider introducing two sets of speed cushions on Brighton Road approximately 90 metres south of the roundabout and also approximately 50 metres south of the raised median island, taking into

consideration the locations of driveways and other features that may impact the location of these traffic calming measures. Additional consultation with Essex County may be required to implement traffic calming along this stretch of roadway, as this portion of Brighton Road is classified as a connecting link with Essex County.

Between the roundabout at Tecumseh Road East and the all-way stop at (Old) Tecumseh Road:

- No recommended changes as Brighton Road within this segment is classified as a minor arterial roadway, is a connecting link within Essex County's road network, and is intended to serve higher volumes of traffic.

North of the all-way stop at (Old) Tecumseh Road to the curve with Riverside Drive North:

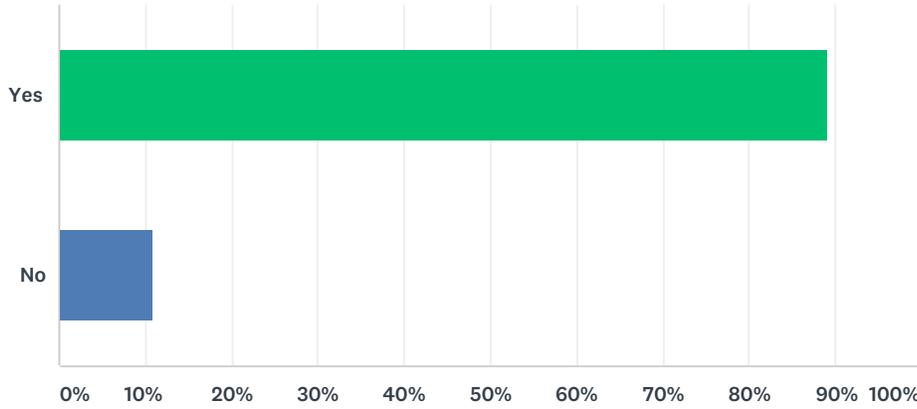
- Make geometric enhancements to the two traffic circles and retain the raised islands found on both sides of the curve between Brighton Road and Riverside Drive East.

Appendix A

Raw On-line Survey Responses

Q1 Do you live in the Town of Tecumseh?

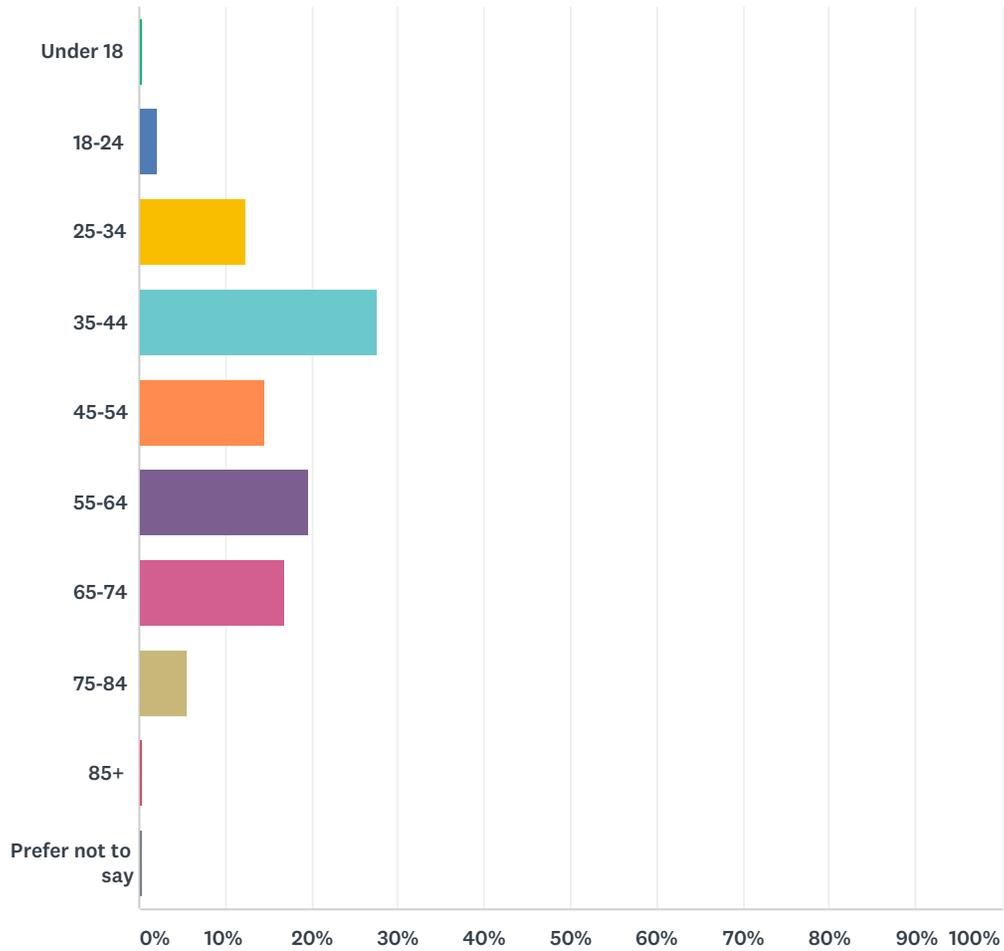
Answered: 285 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	89.12%	254
No	10.88%	31
TOTAL		285

Q2 What age group do you fall under?

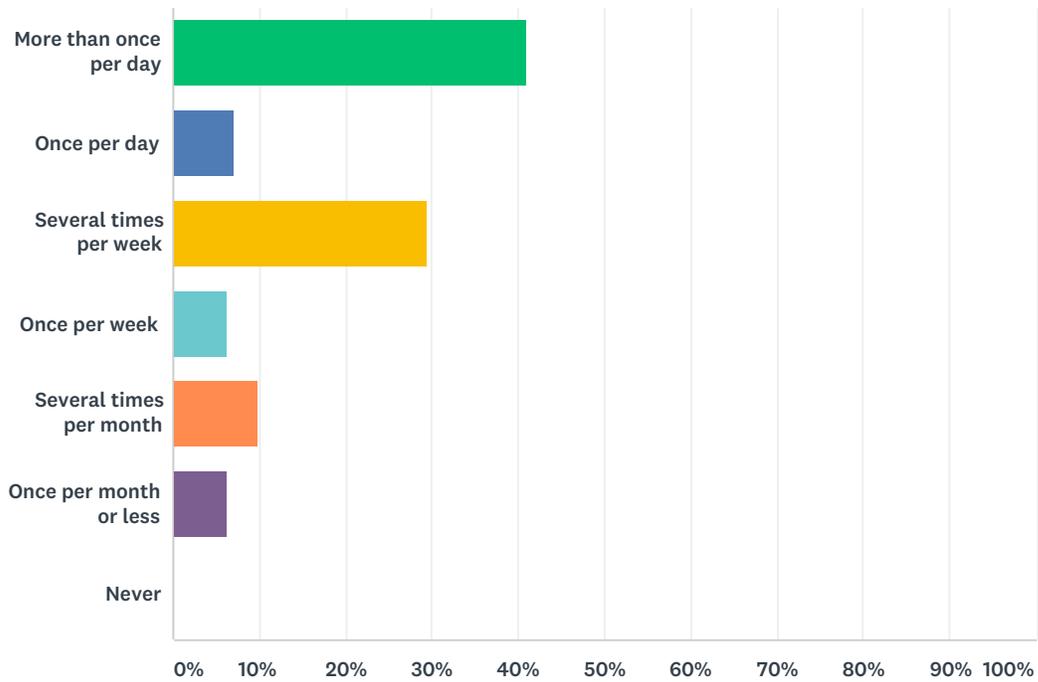
Answered: 285 Skipped: 0



ANSWER CHOICES	RESPONSES	
Under 18	0.35%	1
18-24	2.11%	6
25-34	12.28%	35
35-44	27.72%	79
45-54	14.74%	42
55-64	19.65%	56
65-74	16.84%	48
75-84	5.61%	16
85+	0.35%	1
Prefer not to say	0.35%	1
TOTAL		285

Q3 How often do you travel on Brighton Road between Tecumseh Road East and Riverside Drive East?

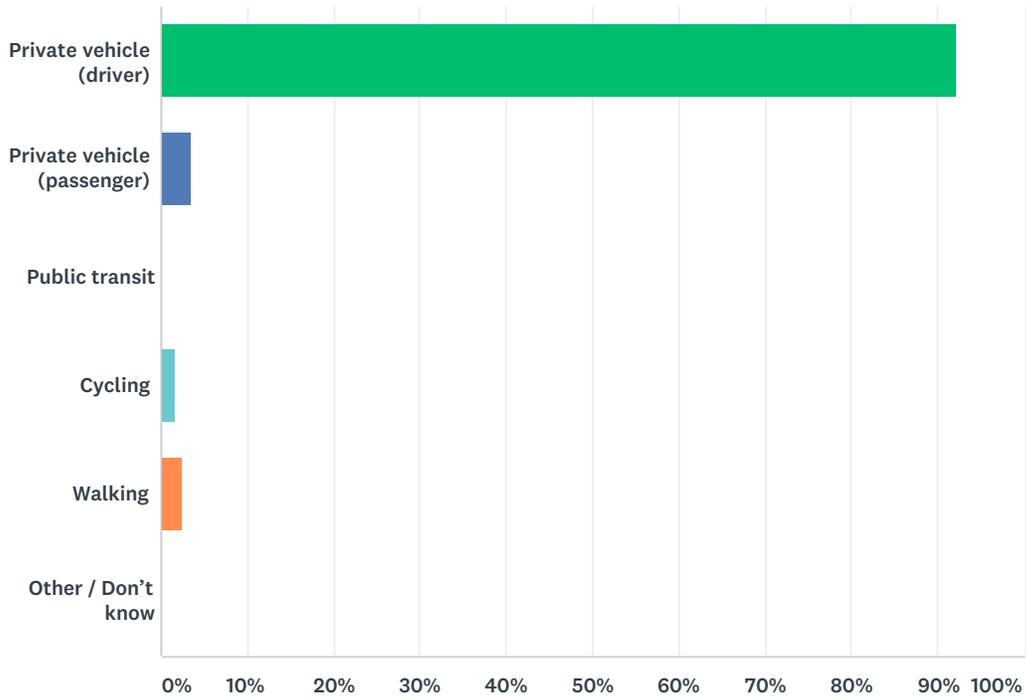
Answered: 285 Skipped: 0



ANSWER CHOICES	RESPONSES	
More than once per day	41.05%	117
Once per day	7.02%	20
Several times per week	29.47%	84
Once per week	6.32%	18
Several times per month	9.82%	28
Once per month or less	6.32%	18
Never	0.00%	0
TOTAL		285

Q4 How do you most often travel on Brighton Road?

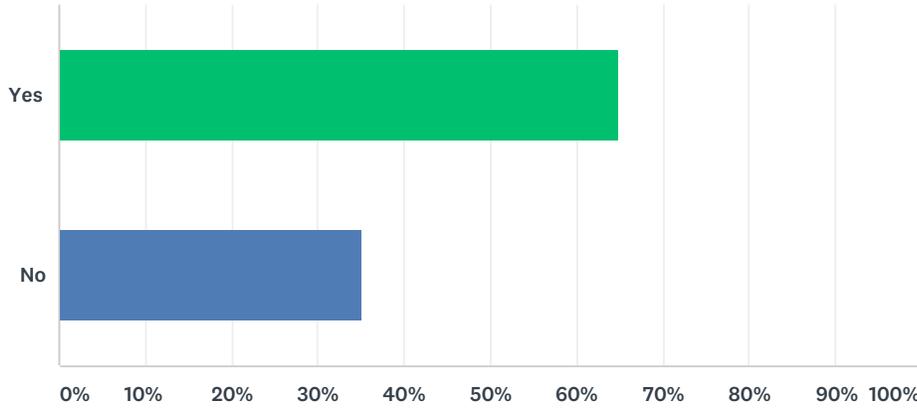
Answered: 285 Skipped: 0



ANSWER CHOICES	RESPONSES	
Private vehicle (driver)	92.28%	263
Private vehicle (passenger)	3.51%	10
Public transit	0.00%	0
Cycling	1.75%	5
Walking	2.46%	7
Other / Don't know	0.00%	0
TOTAL		285

Q5 Do you ever walk along Brighton Road?

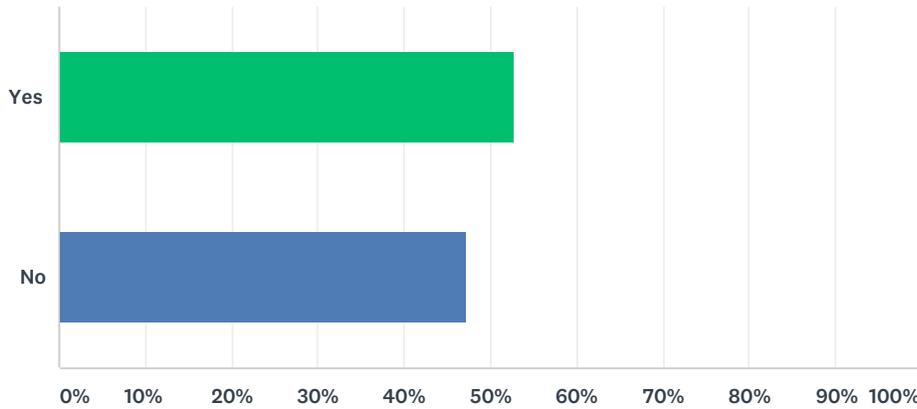
Answered: 284 Skipped: 1



ANSWER CHOICES	RESPONSES	
Yes	64.79%	184
No	35.21%	100
TOTAL		284

Q6 Do you ever ride your bicycle along Brighton Road?

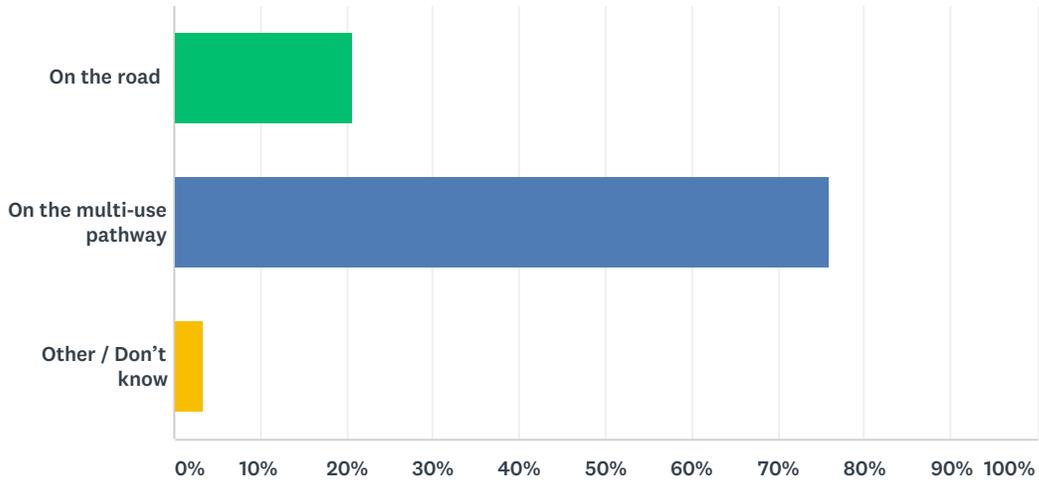
Answered: 285 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	52.63%	150
No	47.37%	135
TOTAL		285

Q7 When riding your bicycle along Brighton Road, where do you prefer to ride?

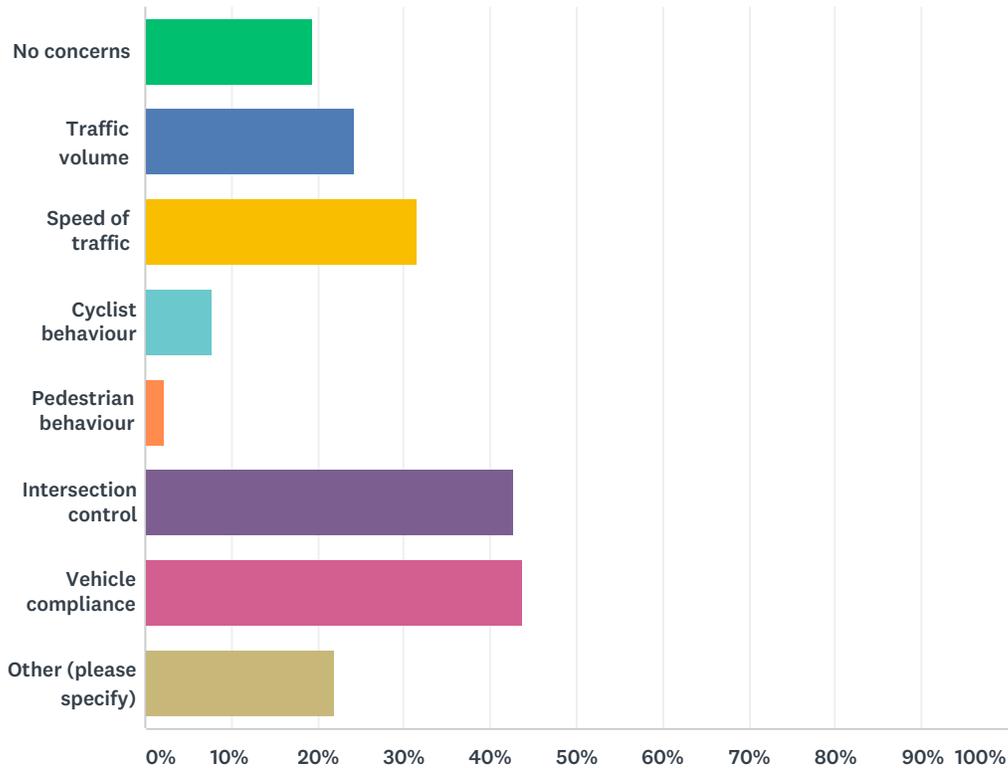
Answered: 150 Skipped: 135



ANSWER CHOICES	RESPONSES	
On the road	20.67%	31
On the multi-use pathway	76.00%	114
Other / Don't know	3.33%	5
TOTAL		150

Q8 Do you have any concerns with Brighton Road? (select all that apply)

Answered: 256 Skipped: 29



ANSWER CHOICES	RESPONSES
No concerns	19.53% 50
Traffic volume (number of vehicles)	24.22% 62
Speed of traffic	31.64% 81
Cyclist behaviour	7.81% 20
Pedestrian behaviour	2.34% 6
Intersection control (roundabouts / traffic circles / signals, all-way stops, etc.)	42.58% 109
Vehicle compliance (not stopping/ yielding, speeding, etc.)	43.75% 112
Other (please specify) (max 100 characters)	21.88% 56
Total Respondents: 256	

#	OTHER (PLEASE SPECIFY) (MAX 100 CHARACTERS)	DATE
1	back-up and noise at the intersection of old Tecumseh and Brighton roads	4/29/2019 3:27 PM
2	most slow down in the circles, at time there are a few drives that dont slow down.	4/28/2019 7:55 AM
3	circles help control speed and flow of vehicles,most slow down and yield	4/28/2019 7:48 AM
4	Difficult to walk through winter snowfalls.	4/25/2019 11:47 AM
5	i feel that this road is too narrow to warrant roundabouts and the rd at brighton &tec. is dangerous	4/25/2019 10:46 AM
6	Lot of people not informed about roundabout entry/exit	4/25/2019 10:27 AM

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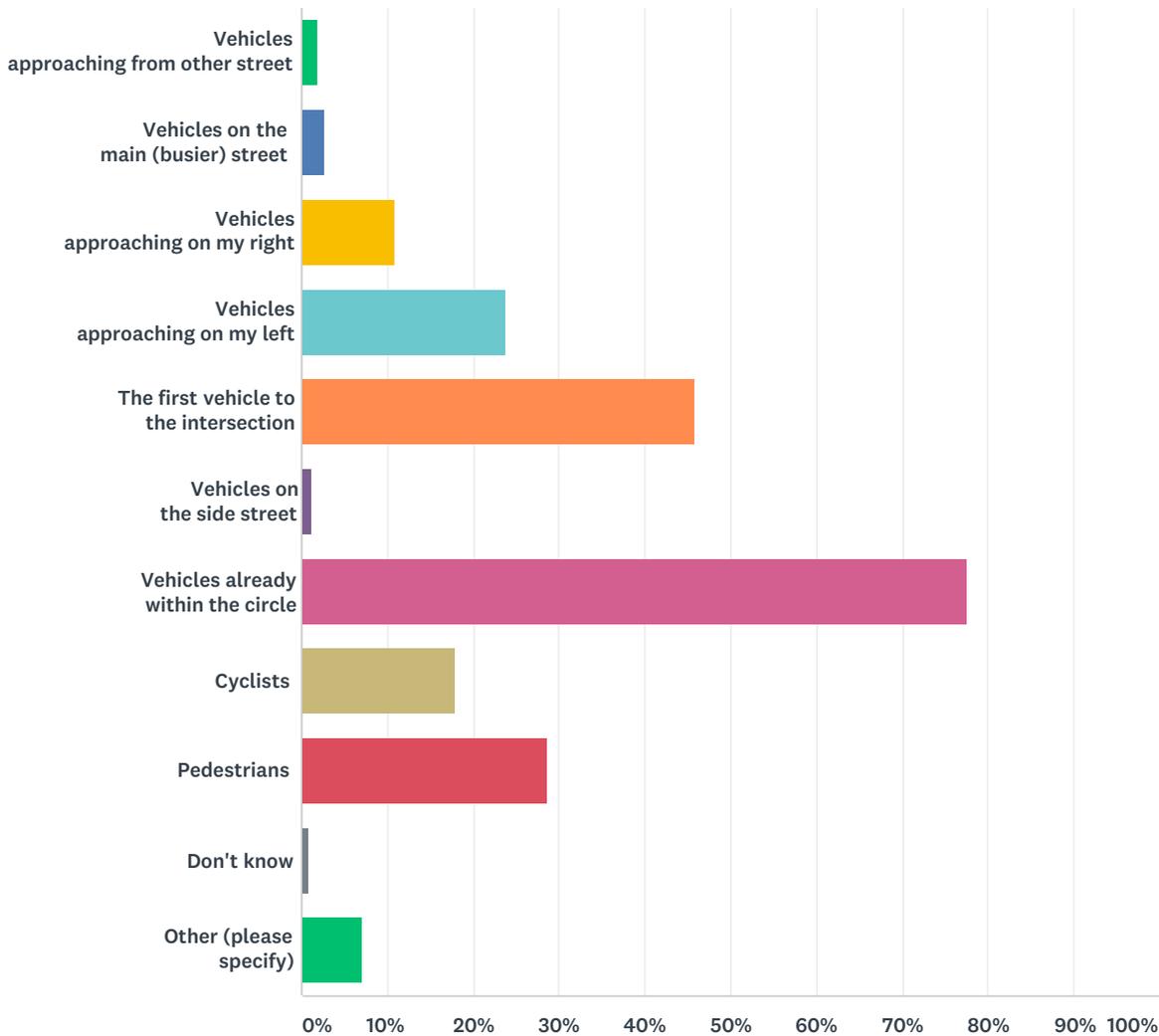
7	The speed people leaving the traffic circle and heading south on Brighton	4/23/2019 10:07 AM
8	Driving wrong way in small traffic circle to make left turn	4/23/2019 4:11 AM
9	There needs to be a pedestrian walk at the round-a-bout.	4/22/2019 3:16 PM
10	Traffic circle at Aloha and Southwind are hazards	4/18/2019 7:25 AM
11	Narrowness of road	4/13/2019 9:32 PM
12	cars speed around roundabouts & if a car loses control the pedestrian will be hit!	4/12/2019 1:04 PM
13	inability to safely get onto Brighton from caritas unless someone lets u in esp at peak times .	4/10/2019 9:45 PM
14	Many people don't know how to use the circle. They stop whether or not there r other vehicles.	4/10/2019 9:27 AM
15	The space where cars and bikes are to share becomes too narrow for sharing in spots.	4/9/2019 11:22 AM
16	Motorists lack of courtesy to sidewalk and casual cyclists.	4/7/2019 9:32 PM
17	Cars driving to close the bikes in the roundabouts	4/7/2019 3:24 PM
18	vehicles bouncing off the curbs trying to get around traffic circles.	4/7/2019 10:41 AM
19	Railroad tracks have insufficient lighting - not safe	4/6/2019 6:55 PM
20	Many blind spots making crossing dangerous with speed of drivers	4/6/2019 12:07 PM
21	dogs	4/5/2019 9:57 PM
22	Signs and lines could be better. Too many drivers "vague" about anything new.	4/5/2019 8:49 PM
23	Do not want through traffic to/from Riverside Drive	4/5/2019 3:21 PM
24	B rd and Tec intersection; rolling stops, cars speeding , excessive noise, excessive car lights.	4/5/2019 12:20 PM
25	the sound and feel of the traffic can feel more like a highway especially at peek hours	4/5/2019 11:08 AM
26	WHEN WALKING OR RIDING MY BIKE, I NOTICE THAT MOST COMPLY WITH TRAFFIC FLOW	4/5/2019 5:41 AM
27	i usually notice that the circles help control the flow and speed of travel	4/5/2019 5:32 AM
28	No regard for cyclists.	4/4/2019 8:03 PM
29	Drivers do not understand how to operate their vehicles at the traffic circles	4/4/2019 3:51 PM
30	The 2 traffic circles at South Wind and Aloha are useless. No one abides the yield signs.	4/4/2019 1:11 PM
31	Get rid of calming circles	4/4/2019 9:18 AM
32	I'm a very nervous driver but this road is easy to travel on i feel safe when using road	4/3/2019 7:04 PM
33	my brothers family live on Brighton and we visist #times per month,we don't have any issues	4/3/2019 7:00 PM
34	NICE STREET, EASY TO MANOUVER AROUND CIRCLES AND ROUNDABOUTS, WE LIKE THEM	4/3/2019 6:54 PM
35	when i arrive at my friends on Brighton vehicles observe the circle procedure, slow down & proceed	4/3/2019 6:49 PM
36	The small traffic island/circles are of unclear purpose	4/3/2019 1:10 PM
37	Not safe for kids to bike down	4/3/2019 6:52 AM
38	Large round about is fantastic, the two small one are useless.	4/2/2019 6:06 PM
39	Need more police presence	4/2/2019 5:57 PM
40	I LIKE THE LOOK OF THE TRAFFIC CIRCLES, GETS PEOPLE TO SLOW DOWN IF OVER LIMIT, EASY TO DRIVE	4/2/2019 4:25 PM
41	NO concerns, traffic flows nice around all of the roundabouts and circles, everyone takes their turn	4/2/2019 4:21 PM
42	vehicles drive sometimes over posted signs, but when they come to circles, most really slow down	4/2/2019 4:17 PM
43	vehicles mostly slow down at the circles.	4/2/2019 2:48 PM
44	Not well lit. Shoulders (for cyclists/pedestrians) are narrow.	4/2/2019 1:40 PM

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45	Incredibly Congested... No room for more cars or a new solution.	4/2/2019 1:02 PM
46	Turning onto and off Caritas.	4/2/2019 12:37 PM
47	Motor vehicles not understanding how to share roadway with cyclist.	4/2/2019 12:09 PM
48	I LIKE THE TRAFFIC CIRCLES, HELPS CONTROL TRAFFIC AND SPEED	4/2/2019 11:42 AM
49	Ineffective driver education on the use of roundabouts	4/2/2019 11:25 AM
50	Better pedestrian pathway needed between train tracks and E.C. Row.	4/2/2019 11:23 AM
51	People do not know how to use the roundabout.. and it is a very simple concept	4/2/2019 11:22 AM
52	lighting on Brighton Road going towards Amy Croft, zig zag section of the road	4/2/2019 11:20 AM
53	No bike lanes	4/2/2019 11:04 AM
54	Vehicles still going too fast W/B Brighton and Riverside bend	4/2/2019 11:03 AM
55	No lighting after Brighton on Pike Creek road	4/2/2019 10:50 AM
56	Roundabout too small.	4/1/2019 11:03 AM

Q9 When approaching a roundabout / traffic circle, who do you think has the right-of-way? (select all that apply)

Answered: 255 Skipped: 30



ANSWER CHOICES	RESPONSES	
Vehicles approaching from the other street	1.96%	5
Vehicles on the main (busier) street	2.75%	7
Vehicles approaching on my right	10.98%	28
Vehicles approaching on my left	23.92%	61
The first vehicle to enter the intersection	45.88%	117
Vehicles on the side street	1.18%	3
Vehicles already within the circle / roundabout	77.65%	198
Cyclists	18.04%	46
Pedestrians	28.63%	73

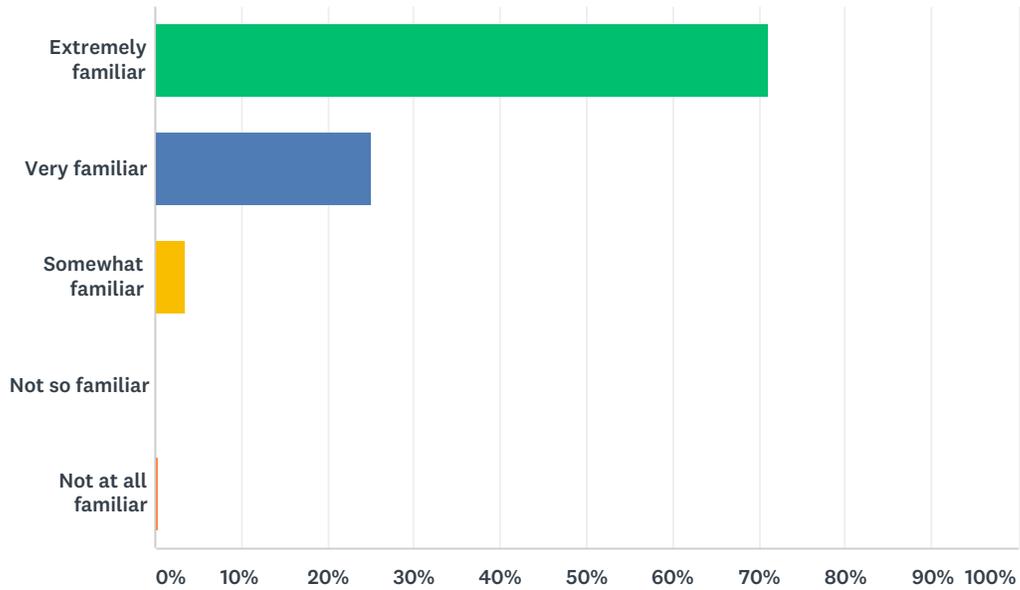
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Don't know	0.78%	2
Other (please specify)	7.06%	18
Total Respondents: 255		

#	OTHER (PLEASE SPECIFY)	DATE
1	when i ride my bike i have noticed that most cars slow down when approaching the circle	4/28/2019 7:58 AM
2	i have noticed that homes located at the circles enter the circles with ease, cars slow down to let them enter	4/28/2019 7:55 AM
3	i live right at one of the circles and at time when i pull out of my driveway, flow of traffic will stop	4/28/2019 7:48 AM
4	brighton and tec. roundabout has poor visibilityto traffic entering north and south	4/25/2019 10:46 AM
5	Should be changed to a zipper merge	4/23/2019 4:11 AM
6	vehiclestravel at normal speed limits	4/5/2019 9:57 PM
7	- but difficult to perceive at small circles - maybe something different needed.	4/5/2019 8:49 PM
8	MOST SLOW DOWN WHEN VEHICLES APPROACH THE CIRCLES THAT ALLOW FLOW TO CONTINUE	4/5/2019 5:41 AM
9	i notice that many vehicles, slow down when other vehicles approach the circles, then it works	4/5/2019 5:32 AM
10	we think the circles allow for flow of traffic, the home we visit is at one of the circles. No issues	4/3/2019 7:00 PM
11	CIRCILES TO ALLOW THE FLOW OF TRAFFIC TO MOVE EASY AND SECURE AND WITHOUT DELAY, NICE	4/3/2019 6:54 PM
12	it appears that the circles do what they are designed to do, slow down and keep traffic flowing	4/3/2019 6:49 PM
13	MOST GIVE WAY TO TRAFFIC APPROACHING AND OR ALREADY DRIVING IN THE CIRCLE, I LIKE THEM	4/2/2019 4:25 PM
14	i have seen everyone give and take when using the circles, no congestion, and no horns & polite mergers	4/2/2019 4:21 PM
15	when approaching circles, many slow down and observe who is trying to merge into the circle	4/2/2019 4:17 PM
16	good flow of traffice in all the circles and roundabouts no issues	4/2/2019 2:52 PM
17	I OFTEN SEE VEHICLES SLOW DOWN IN ALL DIRECTIONS WHEN APPROACHING THE CIRCLES, THEY HELP CONTROL TRAFFICE	4/2/2019 11:42 AM
18	N	4/2/2019 10:50 AM

Q10 How familiar are you with Brighton Road?

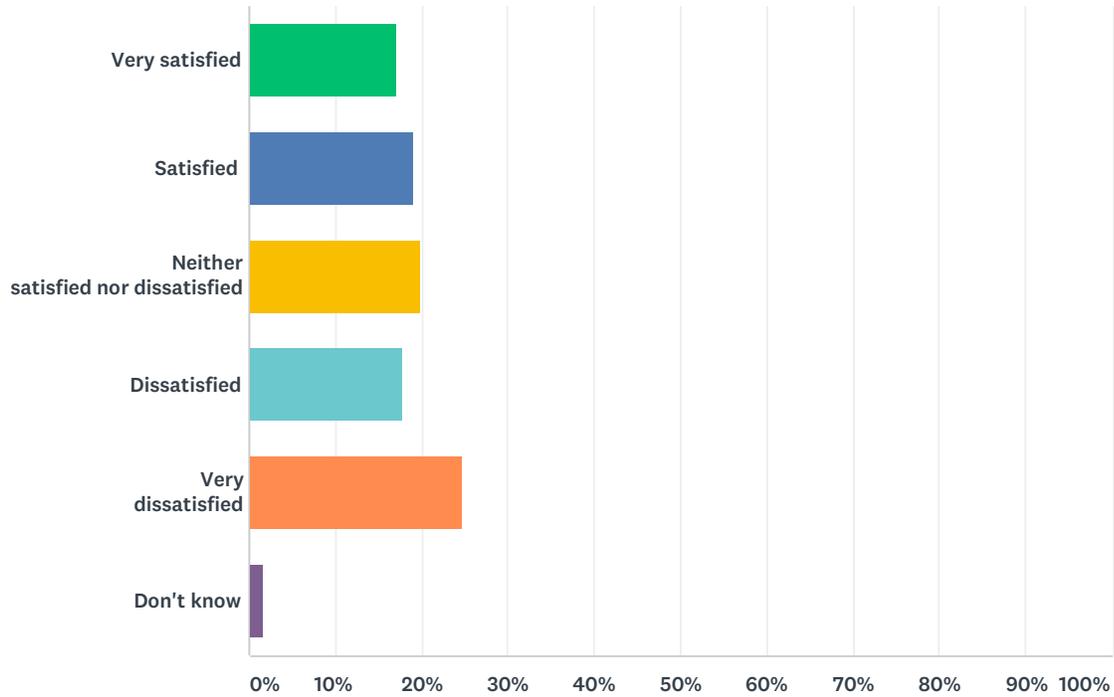
Answered: 259 Skipped: 26



ANSWER CHOICES	RESPONSES	
Extremely familiar	71.04%	184
Very familiar	25.10%	65
Somewhat familiar	3.47%	9
Not so familiar	0.00%	0
Not at all familiar	0.39%	1
TOTAL		259

Q11 How satisfied are you with the traffic circle at Brighton Road and Southwind Crescent?

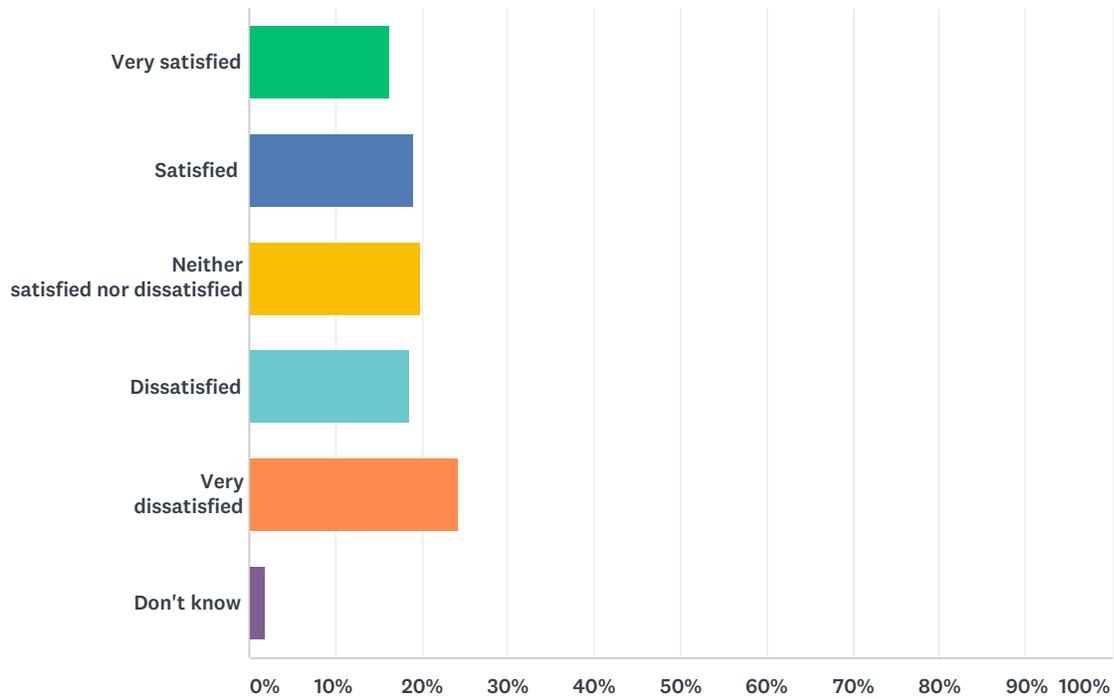
Answered: 252 Skipped: 33



ANSWER CHOICES	RESPONSES	
Very satisfied	17.06%	43
Satisfied	19.05%	48
Neither satisfied nor dissatisfied	19.84%	50
Dissatisfied	17.86%	45
Very dissatisfied	24.60%	62
Don't know	1.59%	4
TOTAL		252

Q12 How satisfied are you with the traffic circle at Brighton Road and Aloha Drive?

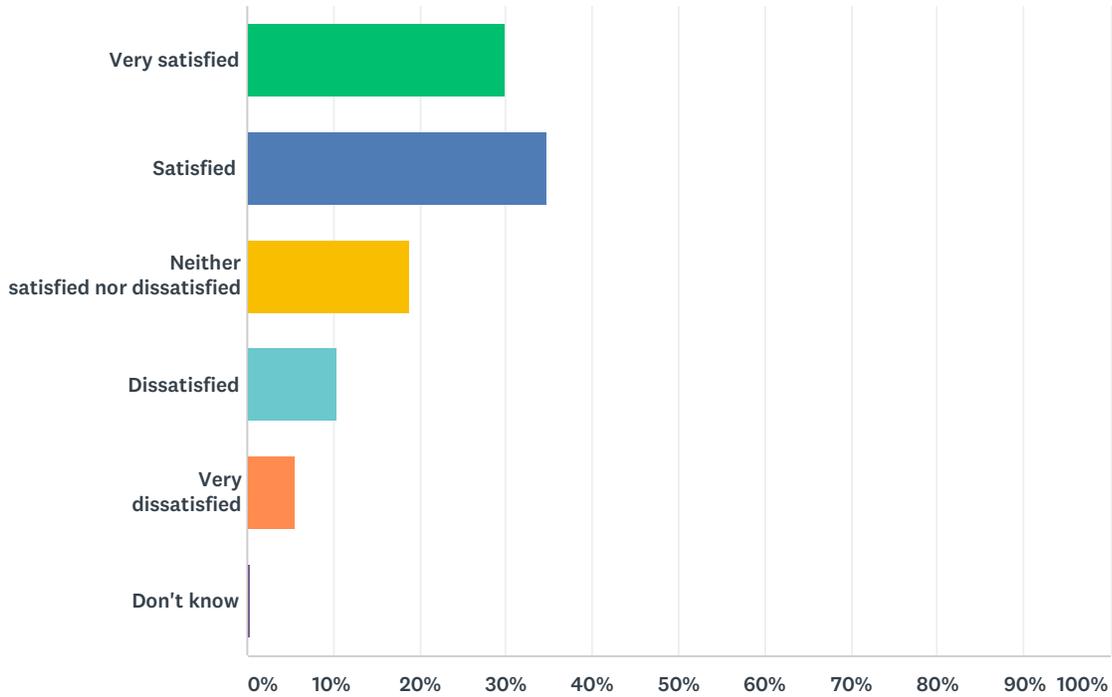
Answered: 252 Skipped: 33



ANSWER CHOICES	RESPONSES	
Very satisfied	16.27%	41
Satisfied	19.05%	48
Neither satisfied nor dissatisfied	19.84%	50
Dissatisfied	18.65%	47
Very dissatisfied	24.21%	61
Don't know	1.98%	5
TOTAL		252

Q13 How satisfied are you with the all-way stop at Brighton Road and (Old) Tecumseh Road?

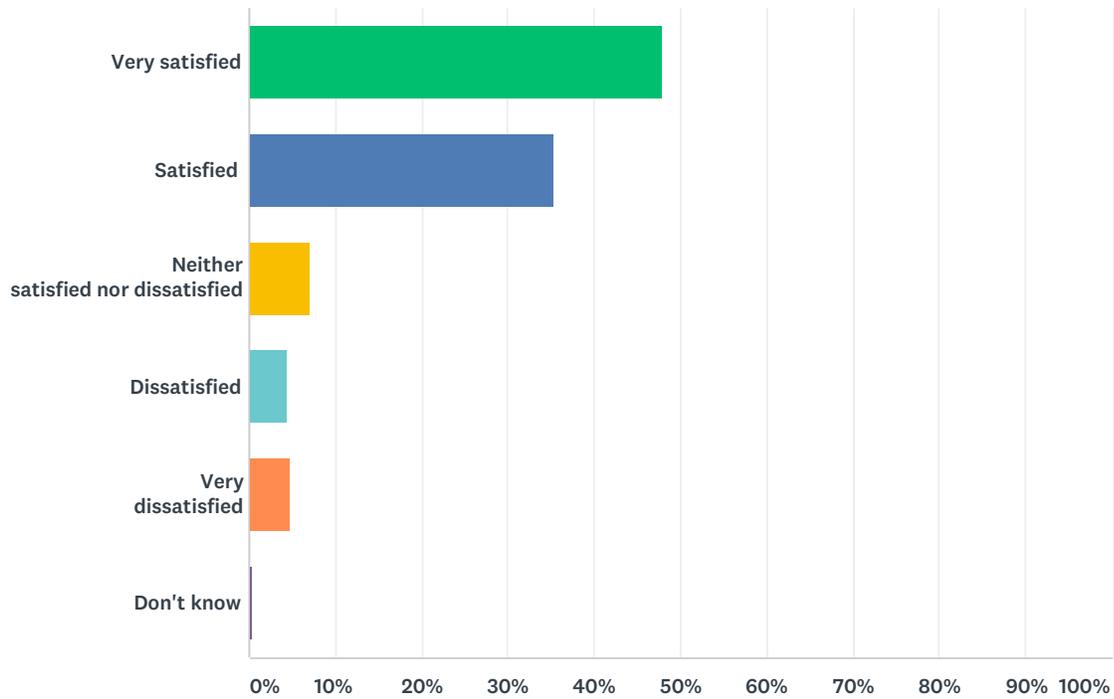
Answered: 250 Skipped: 35



ANSWER CHOICES	RESPONSES	
Very satisfied	30.00%	75
Satisfied	34.80%	87
Neither satisfied nor dissatisfied	18.80%	47
Dissatisfied	10.40%	26
Very dissatisfied	5.60%	14
Don't know	0.40%	1
TOTAL		250

Q14 How satisfied are you with the roundabout at Brighton Road and Tecumseh Road East?

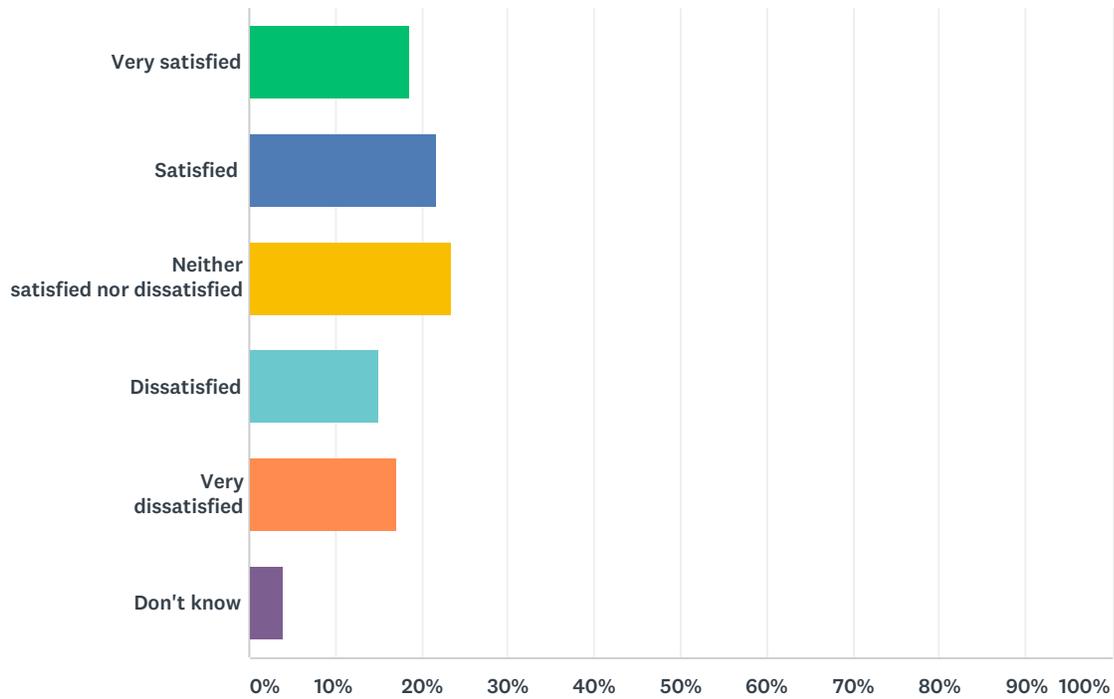
Answered: 251 Skipped: 34



ANSWER CHOICES	RESPONSES	
Very satisfied	47.81%	120
Satisfied	35.46%	89
Neither satisfied nor dissatisfied	7.17%	18
Dissatisfied	4.38%	11
Very dissatisfied	4.78%	12
Don't know	0.40%	1
TOTAL		251

Q15 How satisfied are you with the two raised centre medians along Brighton Road?

Answered: 252 Skipped: 33



ANSWER CHOICES	RESPONSES	
Very satisfied	18.65%	47
Satisfied	21.83%	55
Neither satisfied nor dissatisfied	23.41%	59
Dissatisfied	15.08%	38
Very dissatisfied	17.06%	43
Don't know	3.97%	10
TOTAL		252

Q16 Is there anything else you'd like to let us know about? (max 200 characters)

Answered: 132 Skipped: 153

#	RESPONSES	DATE
1	High traffic volume and noise from vehicles traveling on Brighton rd. Safety when trying to pull out of my driveways onto Brighton	4/29/2019 3:34 PM
2	circles, look nice when i ride my bike, cars slow down	4/28/2019 7:59 AM
3	many locations in province now have circles, they are good	4/28/2019 7:56 AM
4	i like the circles, they do what they are meant to do,control traffic flow	4/28/2019 7:49 AM
5	The round about at Tec. and Brighton works great. Traffic circles are dangerous because you have to stop when on Brighton when car approaches side one of the side streets	4/27/2019 8:36 AM
6	this raod is confusing indeed but our street is the most dangerous of any street in Tecumseh MCnorton stree lower the speed limit from 40 to 25 klms	4/26/2019 7:29 AM
7	brighton rd has too many roundabouts for such a short stretch of road	4/25/2019 10:51 AM
8	The increased traffic from the condo at Pike Creek under construction will have a very negative impact on the area. This will be your responsibility for allowing this and for increasing density.	4/24/2019 2:04 PM
9	Traffic circles should be a zipper merge	4/23/2019 4:14 AM
10	The large roundabouts are very effective. The end of Brighton merging onto Riverside dr has had several accidents crashing into Pilots Cove. Something should be done about that curve to make it safer.	4/22/2019 9:59 PM
11	There needs to be speed bumps at the Brighton and Tecumseh round-a-bout. Children walk across to get to DM Eagle School. There is no pedestrian walkway signs	4/22/2019 3:18 PM
12	With the addition of the new condo build this road will need electronic signals at Brighton and Old Tecumseh. It is very bad now and will get worse.	4/21/2019 6:17 PM
13	Congestion at entrance to new commercial space off O.T.R. close to Brighton. Recommend than entry to space is from Brighton or right turn from O.T.R.; exit right turn only onto O.T.R.	4/21/2019 1:15 AM
14	Brighton is fine; people educate yourselves on roundabout rules. Volume? How? Speed? Needs enforcement. Pathway is built, now maintain; it is starting to deteriorate.	4/20/2019 3:13 PM
15	Bikes are squeezed the raised medians - not good.	4/19/2019 12:20 PM
16	Roundabouts on southwind and aloha do not slow down traffic and no one lets you on	4/18/2019 7:05 PM
17	The two small roundabouts are not necessary, but one at Brighton/Riverside would help.	4/18/2019 2:41 PM
18	Many motorists are clueless about traffic circles. They approach too fast and have no intention of giving way to traffic in the circle.	4/17/2019 4:35 PM
19	Needs a walk way painted for children crossing and a sign to indicate children at play there are allot of children living around this area and a school less than 75 meters away	4/16/2019 7:56 PM
20	I would never ride my bike on Brighton Road. There is not enough room for bikes and vehicles. Also, people do not stop at the all way stop at Tecumseh and Brighton. They just roll through.	4/13/2019 9:36 PM
21	Landscaping @Roundabout on Tec/Brighton blocks visibility of traffic - safer to see moving traffic	4/12/2019 1:08 PM
22	We live at the Aloa roundabout. Traffic does not slow down very much but just find a way to drive fast around it. Maybe speed bumps would help.	4/12/2019 9:12 AM
23	Also the raisedisland @Riverside Drive & Brighton is more of a hazard than a requirement..	4/11/2019 5:00 PM
24	There is a need for some sort of sound barrier to protect the residents in Brighton Gardens because of the added traffic that will occur due the new development onOle Tecumseh road	4/11/2019 10:26 AM

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25	Noise and it pollution from cars/motorcycles stop +starting up to 10x when busy and 3xav / turn. ? Stoplight. ? Concrete wall barrier for noise and exhaust fumes. With > traffic to come??	4/10/2019 9:54 PM
26	Circles are stupid. Large vehicles cannot navigate. No one yields	4/10/2019 1:19 PM
27	The lanes at Boulevard at 500 block narrow and makes it very dangerous for the bike traffic. Bike lanes r marked. Snow ploughs have to raise the shovel to go through.	4/10/2019 9:31 AM
28	Traffic circles are too small....cars and many trucks speed down Pentilly Lane to skip the circles or get ahead of the school buses	4/9/2019 6:48 PM
29	Use more roundabouts, when used properly they are most efficient.	4/7/2019 9:34 PM
30	Use roundabouts, they keep traffic moving. I do not want a set of traffic lights at Tecumseh/Brighton three way stop.	4/7/2019 6:14 PM
31	Traffic never yeilds to traffic on aloha drive. Just drive straight through roundabout. Almost been in several accidents	4/7/2019 6:11 PM
32	Drivers approaching the roundabout at Brighton and Tecumseh often don't know that they have to yield to traffic in the roundabout.	4/7/2019 4:03 PM
33	Instead of the baby round about use speed bumps like the one by the WYC and Solidarity on Riverside Dr. To slow the traffic down	4/7/2019 3:25 PM
34	The majority of divers DO NOT know the rules of a roundabout, therefore, when exiting Aloha orSouthwind, we come to a full STOP knowing that oncoming cars will not do so if we approach roundabout.	4/7/2019 2:44 PM
35	Roundabouts are too small in diameter. People don't know how to use them. Center barriers impede smooth traffic flow.	4/7/2019 12:22 PM
36	Do not replace roundabouts with speed bumps. Roundabout landscaping should not impede driving line of vision.	4/7/2019 10:47 AM
37	Traffic yes. Most slow down please leave as is	4/6/2019 9:44 PM
38	Most people do not know how to use a round about it high is what makes it unsafe for all	4/6/2019 7:51 PM
39	Please leave existing structures alone.	4/6/2019 7:51 PM
40	roundabouts at aloha and southwind are dangerous and are like F1 chicanes. Too small a circle	4/6/2019 7:12 PM
41	The issue on Brighton Road is more to do with speeding and impatience of drivers which is prevalent in Tecumseh . Traffic calming is a must	4/6/2019 3:11 PM
42	Road is dangerous with blind spots and speeding. No sidewalk past tracks is dangerous. Needs speedbumps	4/6/2019 12:09 PM
43	No need to waste tax payer dollars to change this road. People need to get with the times and learn to use a traffic circle and roundabout properly.	4/6/2019 9:26 AM
44	The roundabout on Brighton Road and Tecumseh Road East is excellent, however the all the other roundabouts are an absolute fail. Horrible idea, not to mention it is very unsafe.	4/6/2019 8:47 AM
45	Speeding cars is a concern, along with noise of vehicles. Will worsen with the addition of condos on Old Tecumseh. Rd.	4/6/2019 8:20 AM
46	please remove the landsacping and tall trees in the brighton and tecumseh roundabout...it is very difficult to see entering cars and cars on otherside of roundabout.	4/6/2019 7:27 AM
47	brighten road has a nice appeal to itwith the circles in the light standardsi like it	4/5/2019 10:00 PM
48	Aloha/Southwind too narrow w/snow accumulation. Not sure are necessary but need to be kept clear to edges. Hit curb Sometimes	4/5/2019 9:52 PM
49	I never trust on coming traffic at Aloha or southwind .I always stop & let brighton traffic by ,to be safe.I believe most feel it,s a right of way on Brighton	4/5/2019 9:44 PM
50	the flow of traffic through through the intersection of Brighton Rd and Tecumseh road.	4/5/2019 9:33 PM
51	The new building at the north east corner of Tecumseh Rd. and Brighton has increased traffic congestion and partially hidden the intersection. Was that also a on a Tecumseh traffic study?	4/5/2019 8:56 PM
52	Keep up the good work - don't back off now.	4/5/2019 8:52 PM

Brighton Road Transportation & Operational Review

53	I live on Brighton by Aloha and I am surprised there are not more accidents at the small roundabouts. Observe a lot of verbal road rage. These are too small and useless.	4/5/2019 8:50 PM
54	educated drivers must like the european style roundabout,safer,no T-bone accidents	4/5/2019 7:55 PM
55	Several large and high speed humps from the drive to stop sign	4/5/2019 5:43 PM
56	The street needs traffic humps to slow people down and possibly dissuade them from flying down this street	4/5/2019 5:40 PM
57	My vehicle was hit by another vehicle that entered the roundabout after mine, deemed a write-off. Not used properly in winter, only plowed in on direction.	4/5/2019 5:06 PM
58	The traffic circle at Brighton and Old Tecumseh Road people both motorists, cyclists and pedestrians do not understand who has right of way	4/5/2019 3:24 PM
59	I like the traffic circles as they slow down the traffic.	4/5/2019 1:03 PM
60	Educate people on how to use the roundabout, the vast majority don't have a clue on how to use it properly. most people do not yield to people already in the circle or signal.	4/5/2019 12:59 PM
61	Police should monitor traffic at brighton and tecumseh. Speeding, rolling stops and noise	4/5/2019 12:22 PM
62	I cant imagine the traffic and bottleneaking that will happen when condo is built 140 more cars on Brighton per day hopefully a solution can be made to improve the neighborhood feel	4/5/2019 11:12 AM
63	Dangerous small turning circles should go	4/5/2019 10:18 AM
64	Education for both motorist and pedestrian, pedestrians run across. Tec and Brighton, works, the issue is that the motorists speeding away from the stop sign. . Better policing	4/5/2019 10:04 AM
65	THE CIRCLES ADD A NICE PLEASING TOUCH TO THE ROAD AND MOST VEHICLES OBSERVE THE RULES	4/5/2019 5:42 AM
66	the circles placements control traffic flow and are good	4/5/2019 5:33 AM
67	Brighton Road needs a 3 way stop sign on intersection with Amy Croft	4/4/2019 9:22 PM
68	Need proper bike lanes. Vehicles have no regard for cyclists or pedestrians.	4/4/2019 8:05 PM
69	the speed needs to be monitored	4/4/2019 6:58 PM
70	I live near traffic circle---traffic has NOT slowed.I'm afraid to walk on east sidewalk.	4/4/2019 6:31 PM
71	Only physical impedances will impact driver speed and actions	4/4/2019 3:54 PM
72	no one sees the mini roundabouts as real. brighton is a throughway for the Patillo plants and "shift change" speeds are too high weekend motorcycles are a noisy pain the road is now dangerous	4/4/2019 3:27 PM
73	remove the 2 traffic circles as they are too small. A regular stop sign at Aloha and South Wind is more effective	4/4/2019 1:13 PM
74	traffic flow is followed at the circles, easy to use, I like them and the look of the lights	4/3/2019 7:05 PM
75	we use to live in Tec and the road is great to travel on. Most drive to speed limits	4/3/2019 7:01 PM
76	IF THERE IS AN ISSUE WITH THE CICLES, WE HOPE THEY STAY AS THEY LOOK GOOD AND ALLOW SAFE TRAVEL	4/3/2019 6:55 PM
77	i live in Hamilton and the Brighton road is very appealing to the eye and easy to drive around	4/3/2019 6:50 PM
78	Small roundabouts are too small...confusing. Like the big one at Tecumseh.	4/3/2019 4:43 PM
79	I hate roundabouts! The streets in Tecumseh are too small for the amount of traffic. Banwell and EC row is a nightmare. EC row and Manning is a nightmare ..Come on do the roads right!	4/3/2019 4:06 PM
80	Either those two little islands are traffic circles or they aren't. Make it clear. The circle at Tecumseh was an excellent improvement	4/3/2019 1:12 PM
81	The 2 small traffic circles on Brighton are awkward when driving. They are narrow and while walking/jogging you are very close to traffic. Traffic does not slow down when navigating this area.	4/3/2019 9:52 AM
82	The 2 small roundabouts on Brighton rd are a terrible design. They are way too small. I can't even go in a circle without my truck tires riding on top of the roundabout.	4/3/2019 7:40 AM
83	The same heavy traffic and speeding is in old tecumseh rd. Ruins it for kids trying to bike or walk around Beachgrove. Why are there no traffic tickets given.	4/3/2019 6:55 AM

Brighton Road Transportation & Operational Review

84	Brighton and Amy Croft needs to be looked at. Needs a stop sign to slow the drivers down. People, kids especially cannot cross there. To dangerous. Probably lakeshores problem but I'll leave this here	4/3/2019 4:50 AM
85	All way stop: Cars not waiting for their turn; All way stop: cars turning east onto Old Tecumseh Rd driving onto the turn lane marked on Old Tecumseh Rd	4/2/2019 10:42 PM
86	The round about on Brighton at Starwood and Aloha are not safe, as most drivers do not treated it as a proper round about. They assume the vehicles on Brighton have the right of way	4/2/2019 8:32 PM
87	Need a round a bout to slow Traffic on Patillo and old Tecumseh	4/2/2019 7:54 PM
88	The two smaller round abouts are not big enough to determine who would be in the roundabout first when traffic approaches at right angles. They are actually a bit of a hazard.	4/2/2019 6:49 PM
89	The smaller roundabouts at aloha and south wind need to be larger. The three way stop at old TECUMSEH road should be a large roundabout too	4/2/2019 6:46 PM
90	Large trucks keep damaging curbs	4/2/2019 6:38 PM
91	I am most dissatisfied with Brighton rd south of the tracks. There is no sidewalk for those walking to Amy Croft. It is quite dangerous especially at the curve.	4/2/2019 6:30 PM
92	I love this town and keep doing what you are doing.	4/2/2019 6:08 PM
93	Manning and Tec rnd about is so ugly. Look at it and really look. Do you really need all the signage ? Last count was over 20!! Just to use a roundabout. It's so ugly	4/2/2019 6:00 PM
94	Aloha/Southwind roundabouts obstruct drivers view of pedestrians	4/2/2019 5:28 PM
95	It's so unsafe for walkers and cyclists from the train tracks to ec row. There needs to be a safe path. Cars come around the bend near amy croft way to fast and it's very dangerous for walkers.	4/2/2019 5:25 PM
96	I'm noticing a lot of flags and markings along Brighton road...are there plans for immediate construction?	4/2/2019 5:20 PM
97	Roundabouts at Southwind & Aloha increase risk	4/2/2019 5:09 PM
98	The small traffic circles seem pointless - they do nothing to slow down through traffic.	4/2/2019 5:07 PM
99	Feel unsafe walking/biking around Brighton and Amy croft area. cars speed an cross into bike line. maybe sidewalks on both sides?	4/2/2019 4:29 PM
100	Sidewalks are too close to the busy road.	4/2/2019 4:28 PM
101	WHEN driving, we like the look of the lighting, the flowers etc around the standards. Please keep them	4/2/2019 4:26 PM
102	Should be more traffice circles everywhere, easy to drive	4/2/2019 4:22 PM
103	The circles, look great, well maintained, and slow traffic, i like them	4/2/2019 4:18 PM
104	The 2 smaller circle are way to small to function correctly as traffic circles should. This needs to be changed.	4/2/2019 3:38 PM
105	I am actually in favour of traffic circles, they are a great traffic calming feature if done right. The small ones are dangerous and don't calm traffic	4/2/2019 3:36 PM
106	I am worried about how much traffic the new condos will bring to the area	4/2/2019 3:11 PM
107	like the look of the circles and light standards, kee them please	4/2/2019 2:53 PM
108	round abouts and circles help control the flow and slow down traffic	4/2/2019 2:49 PM
109	Drivers need to learn to actually stop at stop signs	4/2/2019 2:23 PM
110	The roundabouts at southwind and aloha were mistakes from the beginning. Police are always in the area patrolling for speeders. We don't need them, please finally remove theM	4/2/2019 2:16 PM
111	Many children live in this area and parents should not need be concerned about their safety any more than if they were on another street in this subdivision.	4/2/2019 1:45 PM
112	VERY congested, and to think a developer wants to put a CONDO up? The town has not thought this through. Adding concended dwellings is going to make matters worse.	4/2/2019 1:07 PM
113	Na	4/2/2019 1:03 PM

Brighton Road Transportation & Operational Review

114	There is no place for a boat owner to park their boat now. What is the point of living near the lake when there are no public marinas in Tecumseh?	4/2/2019 12:29 PM
115	Study should have been conducted before roundabouts installed	4/2/2019 12:24 PM
116	Two traffic circles are too small. Making them dangerous to traffic entering from East.	4/2/2019 12:13 PM
117	I feel the two smaller roundabouts on Brighton (at aloha and the other street I can't remember) are useless. They create more issues than if there were a stop sign on the cross streets.	4/2/2019 12:11 PM
118	The round about seems useless when so small. Just put a stop sign for the side streets and remove the round about. That way we can have a bike lane on Brighton to connect Old Tec to Riverside!	4/2/2019 12:09 PM
119	We live at 224 Brighton and want the circles to stay.They control traffic flow. They are well maintained. We have not heard of anyone saying that they should be removed. No traffic concerns	4/2/2019 11:58 AM
120	Pedestrians making their way to and from Amy Croft subdivision need a safer pathway along Brighton near the tracks	4/2/2019 11:46 AM
121	Add roundabout at Old Tecumseh and one at Amy Croft .	4/2/2019 11:45 AM
122	Due to ROW size, the circles at Aloha & Southwind are smaller and make pedestrian and cyclist use difficult. The Harbour Club development is likely to make Tecumseh and Brighton intersection worse	4/2/2019 11:33 AM
123	Please increase the use of roundabouts across the city to improve traffic control and flow	4/2/2019 11:26 AM
124	I would put speed bumps and some cops past the round about past amy croft as every car seems to think it is a race track and speeds.	4/2/2019 11:23 AM
125	The small roundabouts are very dangerous	4/2/2019 11:15 AM
126	Down Bright where it becomes East Pike at Amy Croft speeding at corner and dangerous to walk as there are no sidewalks. Would like to see them there so ppl can walk safely to Amy Croft and beyond	4/2/2019 11:13 AM
127	Potential new school development on Amy Croft means potential bus traffic, increased pedestrian & active transportation along Brighton.	4/2/2019 11:08 AM
128	Bend at Riverside and Brighton still most dangerous	4/2/2019 11:05 AM
129	Where Brighton turns into Pike Creek is dangerous. You can't see pedestrians at night and it is very unsafe	4/2/2019 10:52 AM
130	Those small traffic circles between Riverside Dr and old Tecumseh road are useless and should be removed	4/2/2019 10:41 AM
131	Old Tecumseh & brighton, high traffic volume, needs round about instead of stop signs	4/2/2019 10:41 AM
132	I believe the traffic calming measures on Brighton Road contribute to safety, walkability, and cyclability of our community and other roadways would benefit from similar measures.	4/2/2019 10:38 AM

Q17 Please enter your postal code (optional).Note that this information will only be used to understand the geographic distribution of survey respondents.

Answered: 219 Skipped: 66

#	RESPONSES	DATE
1	N8N1K1	4/30/2019 4:48 PM
2	N8N 2L7	4/29/2019 3:34 PM
3	N8n4x3	4/28/2019 2:53 PM
4	n8x3z8	4/28/2019 9:09 AM
5	N8N2L5	4/28/2019 7:59 AM
6	N8N2N7	4/28/2019 7:56 AM
7	n8n2l3	4/28/2019 7:50 AM
8	N8N 2L9	4/27/2019 8:37 AM
9	n8n3z7	4/26/2019 7:30 AM
10	N8N 2L6	4/25/2019 7:13 PM
11	N8N2K9	4/25/2019 11:48 AM
12	n8n3z2	4/25/2019 10:51 AM
13	n8n2g8	4/25/2019 10:29 AM
14	N9A 6J3	4/24/2019 2:05 PM
15	N8n2h3	4/23/2019 3:25 PM
16	N8N 2L6	4/23/2019 10:09 AM
17	N8n4j2	4/23/2019 4:15 AM
18	N8N 3Z4	4/22/2019 9:59 PM
19	N8N2K8	4/22/2019 5:46 PM
20	N8N2L6	4/22/2019 3:18 PM
21	N8N4K2	4/21/2019 6:17 PM
22	N8N 4K5	4/21/2019 1:15 AM
23	N8N 2L3	4/20/2019 3:13 PM
24	N8N 3E9	4/19/2019 12:20 PM
25	n8n3e9	4/19/2019 12:19 PM
26	N8n4y5	4/18/2019 7:06 PM
27	N8N 4K1	4/18/2019 2:42 PM
28	N8N3M1	4/18/2019 7:26 AM
29	N8N 4Y4	4/17/2019 4:35 PM
30	N8N 3Y5	4/17/2019 4:10 PM
31	N8n4V8	4/16/2019 7:57 PM
32	N8N3S4	4/16/2019 2:33 PM
33	n8n2l6	4/16/2019 11:35 AM

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34	N8N 2J6	4/13/2019 9:37 PM
35	N8N 2L2	4/12/2019 1:08 PM
36	N8N 2I2	4/12/2019 9:12 AM
37	N8N4K3	4/11/2019 5:00 PM
38	N8N4Y4	4/11/2019 10:26 AM
39	N8N4Y4	4/10/2019 9:54 PM
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44	N8N 2K9	4/8/2019 4:33 PM
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46	N8N 2K9	4/8/2019 10:09 AM
47	N8n4c2	4/8/2019 7:46 AM
48	N8N 3C9	4/7/2019 9:34 PM
49	N8N2L2	4/7/2019 6:34 PM
50	N8N3C9	4/7/2019 6:14 PM
51	N8N3C5	4/7/2019 5:00 PM
52	N8N4V8	4/7/2019 3:58 PM
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54	N8N 4Y5	4/7/2019 2:45 PM
55	N8N4A3	4/7/2019 12:22 PM
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68	N8n2I6	4/6/2019 12:09 PM
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72	n8n3w2	4/6/2019 8:34 AM
73	N8N4Y4	4/6/2019 8:21 AM
74	N8N2K9	4/6/2019 7:27 AM

Brighton Road Transportation & Operational Review

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81	n8n4y4	4/5/2019 9:33 PM
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83	N8N 4Y5	4/5/2019 8:53 PM
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101	N8N4Y5	4/5/2019 10:19 AM
102	N8N 4V8	4/5/2019 10:04 AM
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104	N8N2N7	4/5/2019 5:33 AM
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114	N8N4Y5	4/4/2019 1:13 PM
115	N8N4M8	4/4/2019 12:31 PM

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119	N8N 3G2	4/4/2019 8:42 AM
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121	N8N 2G7	4/3/2019 8:45 PM
122	N8N3C7	4/3/2019 8:21 PM
123	N8N2A8	4/3/2019 7:06 PM
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185	N8n 1Z4	4/2/2019 12:42 PM
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187	N8N 2Y1	4/2/2019 12:29 PM
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189	N8N 4n9	4/2/2019 12:19 PM
190	n9k1g2	4/2/2019 12:16 PM
191	N8N 4T1	4/2/2019 12:14 PM
192	N8n2y1	4/2/2019 12:12 PM
193	N8N 1Z2	4/2/2019 12:03 PM
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195	N8n2c3	4/2/2019 11:52 AM
196	N8N2M7	4/2/2019 11:50 AM
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Brighton Road Transportation & Operational Review

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201	N8N 5C3	4/2/2019 11:33 AM
202	N8N2Y1	4/2/2019 11:27 AM
203	n9k0a6	4/2/2019 11:23 AM
204	N8N1B6	4/2/2019 11:22 AM
205	N8N4C5	4/2/2019 11:22 AM
206	N8n4b2	4/2/2019 11:16 AM
207	N8N 1J5	4/2/2019 11:15 AM
208	N8N0C9	4/2/2019 11:13 AM
209	N9K 0A4	4/2/2019 11:13 AM
210	N8N 2N6	4/2/2019 11:08 AM
211	N8R 2J3	4/2/2019 11:05 AM
212	N8N 3Z4	4/2/2019 11:05 AM
213	N8n2I9	4/2/2019 11:02 AM
214	N8n 4b8	4/2/2019 11:01 AM
215	n8n3m7	4/2/2019 10:53 AM
216	N8N1Y8	4/2/2019 10:52 AM
217	N8N3M1	4/2/2019 10:42 AM
218	n8n4n3	4/2/2019 10:41 AM
219	N8N 2J8	4/2/2019 10:38 AM

Appendix B

On-line Survey Results Memorandum – June 2019



MEMO

TO: Phil Bartnik, P.Eng., Town of Tecumseh
FROM: Mike Walters, P.Eng., Dillon Consulting Limited
cc: Tim Kooistra, C.E.T., Dillon Consulting Limited
DATE: June 26, 2019
SUBJECT: Brighton Road – Online Survey Responses & Results
OUR FILE: 19-9169

Following several transportation improvements introduced along Brighton Road in 2012, various complaints along the corridor have continued to come through from area residents and commuters. In 2018, the Town initiated a follow-up comprehensive review of the corridor. In April 2019, an online survey was circulated to solicit feedback from the local community regarding Brighton Road and the operations of the traffic circles, roundabouts and the corridor. This memorandum details the responses from the local community.

The online survey was open for the month of April 2019, with a project page and survey link provided on the Town's website. Postcards were hand delivered by Town staff to approximately 375 properties as shown in **Figure 1**.

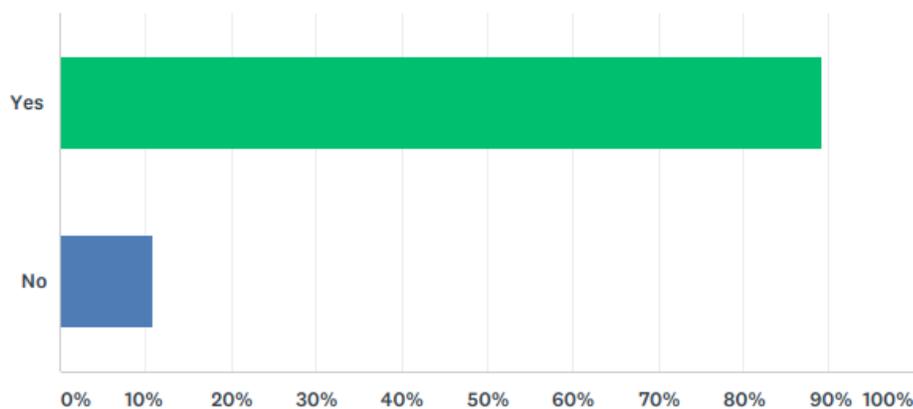
FIGURE 1: BRIGHTON ROAD MAIL-OUT - DISTRIBUTION AREA

When reviewing the final survey results, 285 responses were provided. A summary of the on-line survey results is summarized below. The raw data report is provided in **Appendix A**.

Question 1

The initial question of the survey asked if the respondents were living in the Town of Tecumseh, with the results provided in **Figure 2**.

FIGURE 2: RESPONSES TO QUESTION 1 – DO YOU LIVE IN THE TOWN OF TECUMSEH?

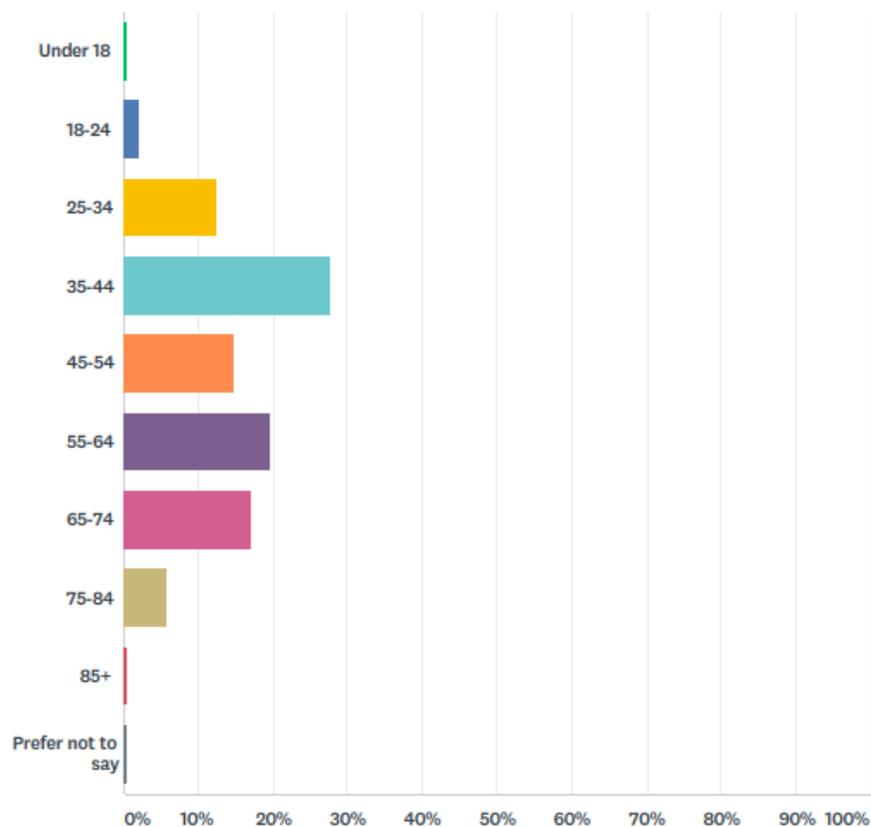


Just under 90% of the 285 respondents who answered Question 1 live in the town of Tecumseh. Question 17 (the last question of the survey) asks respondents for the respondent's postal code to determine the geographic location of the survey respondents.

Question 2

The second question of the survey looked at the age group the respondents fit into, with the results provided in **Figure 3**.

FIGURE 3: RESPONSES TO QUESTION 2 – WHAT AGE GROUP DO YOU FALL UNDER?

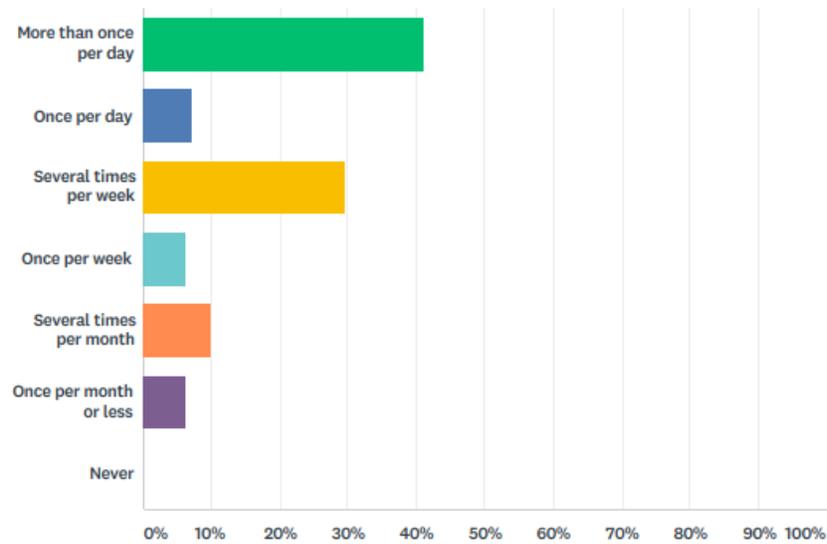


Just over a quarter of 285 responses were found in the largest age group, which spanned respondents in the 35 to 44 age group. Just under a quarter of respondents are 65 years old or older.

Question 3

Question 3 asked respondents how often they travelled on Brighton Road in Tecumseh. The responses can be seen in **Figure 4**.

FIGURE 4: RESPONSES TO QUESTION 3 – HOW OFTEN DO YOU TRAVEL ON BRIGHTON ROAD?

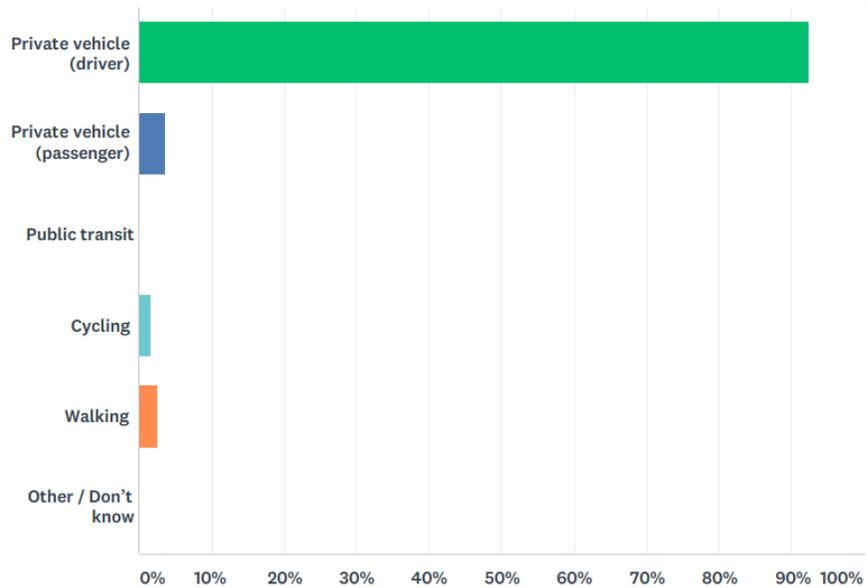


Given the responses provided, all 285 responses demonstrated that there was some level of familiarity with the Brighton Road corridor. Over 75% of respondents travelled on Brighton Road at least several times per week.

Question 4

Question 4 asked respondents how they typically travelled along Brighton Road. The results can be seen in **Figure 5**.

FIGURE 5: RESPONSES TO QUESTION 4 – HOW DO YOU MOST OFTEN TRAVEL ON BRIGHTON ROAD?



Similar to the overall modal split in Tecumseh, private vehicles trips make up the vast majority of trips along Brighton Road.

Question 5 & Question 6

Question 5 and Question 6 asked respondents if they ever walked or bicycled along Brighton Road. The responses can be seen in **Figure 6** and **Figure 7**

FIGURE 6: RESPONSES TO QUESTION 5 – DO YOU EVER WALK ALONG BRIGHTON ROAD?

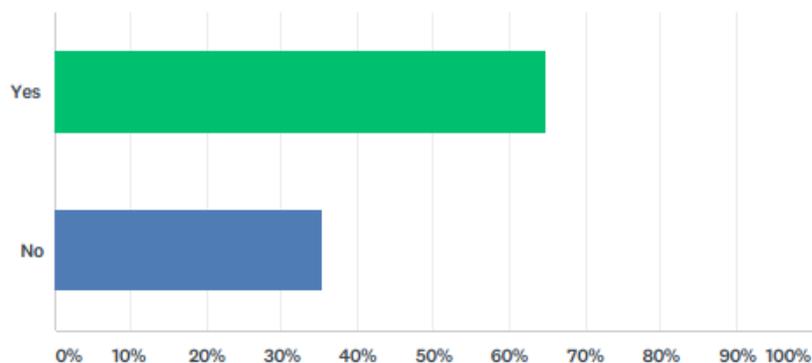
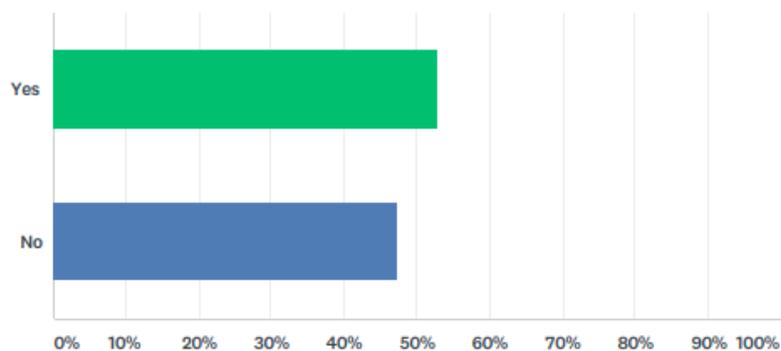


FIGURE 7: RESPONSES TO QUESTION 6 – DO YOU EVER RIDE YOUR BICYCLE ALONG BRIGHTON ROAD?

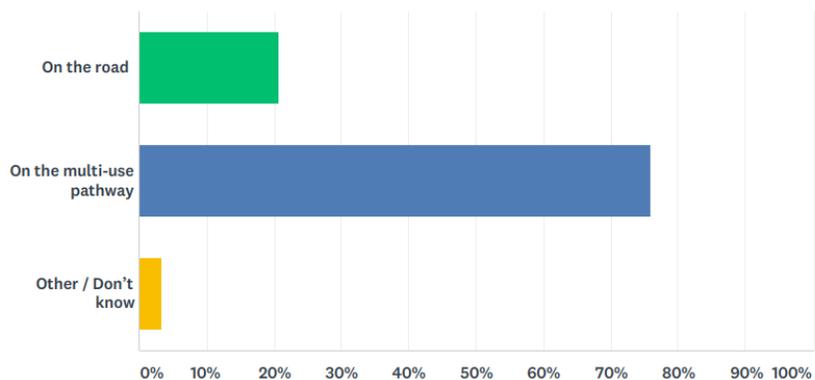


Within the responses to both questions, over the majority of respondents had both walked and/or ridden a bicycle along Brighton Road.

Question 7

For the 150 respondents who said they had ridden a bicycle along Brighton Road, feedback as to where they rode a bicycle along Brighton Road was requested. The responses can be seen in **Figure 8**.

FIGURE 8: RESPONSES TO QUESTION 7 – WHERE DO YOU PREFER TO RIDE YOUR BICYCLE ALONG BRIGHTON ROAD?



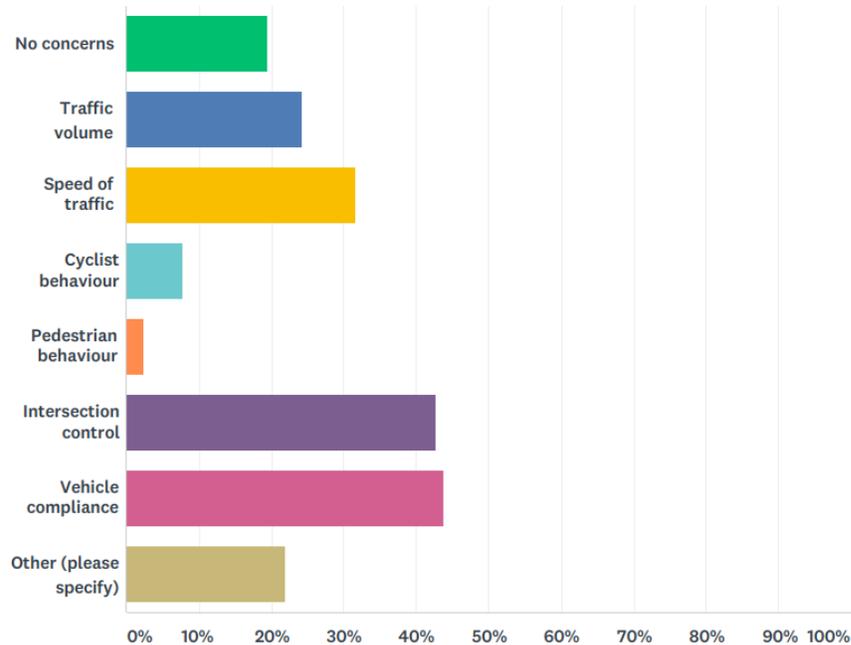
The vast majority (over 75%) of cyclists prefer to ride on the multi-use pathway compared to the roadway.

Question 8

Following this brief section, the online survey shifted its focus and asked respondents on the nature and type of concerns they may have with Brighton Road as a whole. 256 respondents responded to this question, with 50 respondents (20%) having no concerns with the corridor.

This has been tabulated in **Figure 9**.

FIGURE 9: RESPONSES TO QUESTION 8 – SPECIFIC CONCERNS ON BRIGHTON ROAD

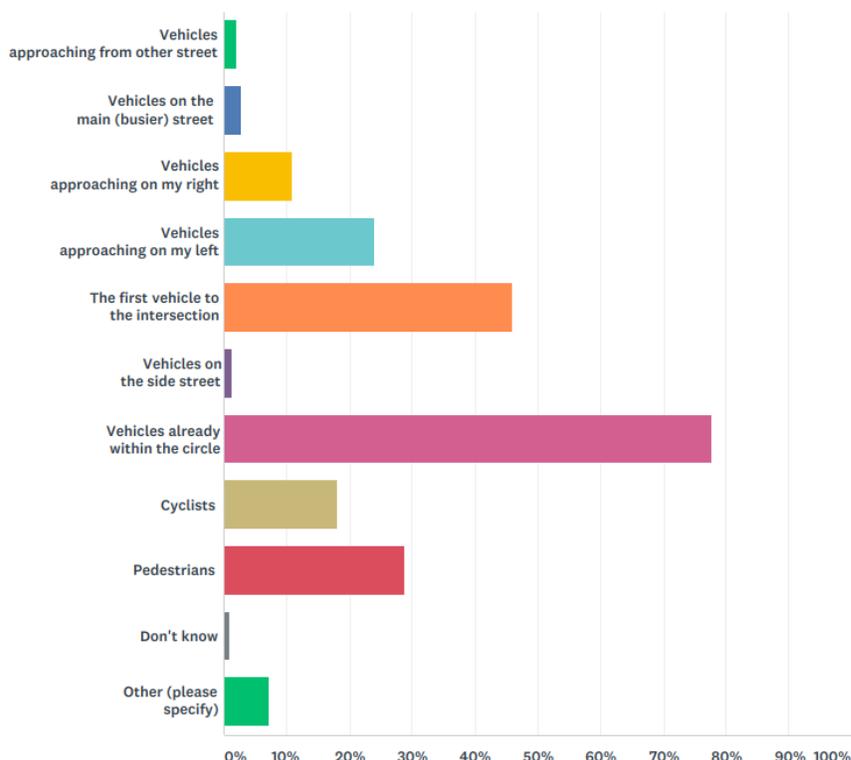


In order, the issue with the most concerns was vehicle compliance, such as vehicles not stopping at stop signs, yielding at yield signs, etc. Just 112 of the 256 of respondents selected this category. The second-most concerns were based on the current intersection control, being the roundabouts, traffic circles, all-way stops, etc., with 109 respondents indicating a concern. Following that, 81 respondents highlighted the speed of traffic was a concern. For respondents having other concerns, a text box to enter comments were provided. These individual comments can be seen in **Appendix A**.

Question 9

The following question looked to see whether or not respondents were familiar with the rules of a roundabout/traffic circle, regardless of context with the traffic control devices on Brighton Road. The survey responses can be seen in **Figure 10**.

FIGURE 10: RESPONSES TO QUESTION 9 – WHO HAS THE RIGHT-OF-WAY AT A ROUNDABOUT / TRAFFIC CIRCLE?



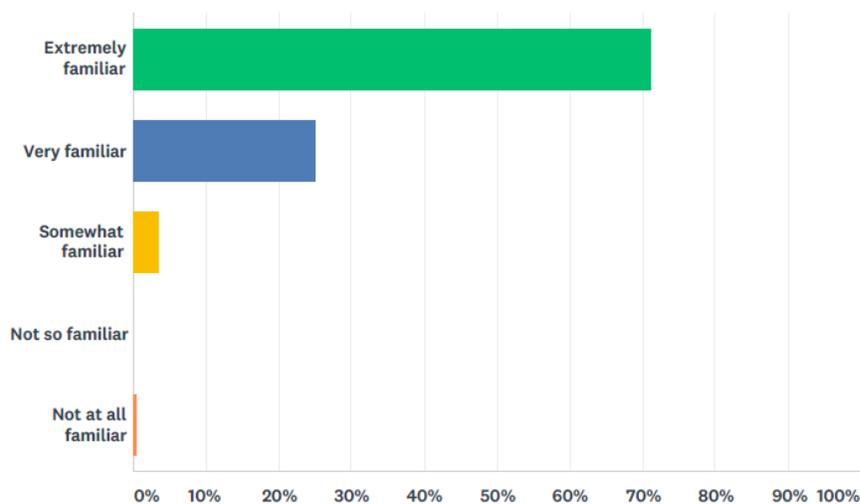
For this question, respondents were able to select all options that would apply. Overall, the most popular choice is the correct choice, with 77% of all respondents correctly responding that vehicles already within the circle have the right-of-way. The second most popular choice (the first vehicle to enter the roundabout) is also partially correct. However, dependent on the size of the roundabout and how separate the approaches are from one another, it may be possible for vehicles from different approaches to enter the circle at the same time without impeding the movement of another vehicle. The third most popular choice is also somewhat correct, as any pedestrians wishing to cross a leg of the roundabout may have the right-of-way should a pedestrian crossover (PXO) be present.

Incorrect options were vehicles approaching from the side street, busier street, on the right, on the left. Out of these incorrect options, vehicles approaching on the left was the most popular option, with 24% of respondents choosing this option.

Question 10

The balance of the online survey shifted back to focusing on Brighton Road. Question #10 in the survey asked respondents how familiar they were with Brighton Road. The results are provided in **Figure 11**.

FIGURE 11: RESPONSES TO QUESTION 10 – HOW FAMILIAR ARE YOU WITH BRIGHTON ROAD?



Over 95% of respondents noted they were either extremely or very familiar with Brighton Road.

Question 11 & Question 12

The following two questions focused on the two traffic circles on Brighton Road at Southwind Crescent and Aloha Drive. The responses can be seen in **Figure 12** and **Figure 13**.

FIGURE 12: RESPONSES TO QUESTION 11 – HOW SATISFIED ARE YOU WITH THE TRAFFIC CIRCLE AT BRIGHTON ROAD AND SOUTHWIND CRESCENT?

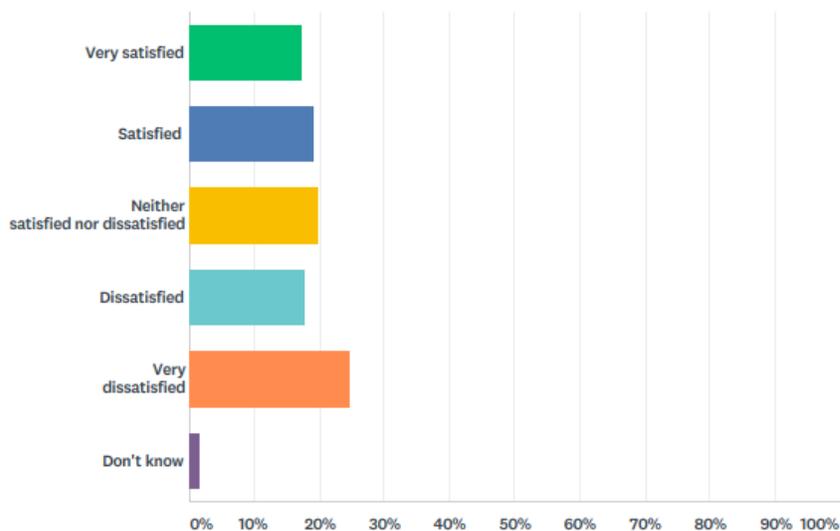
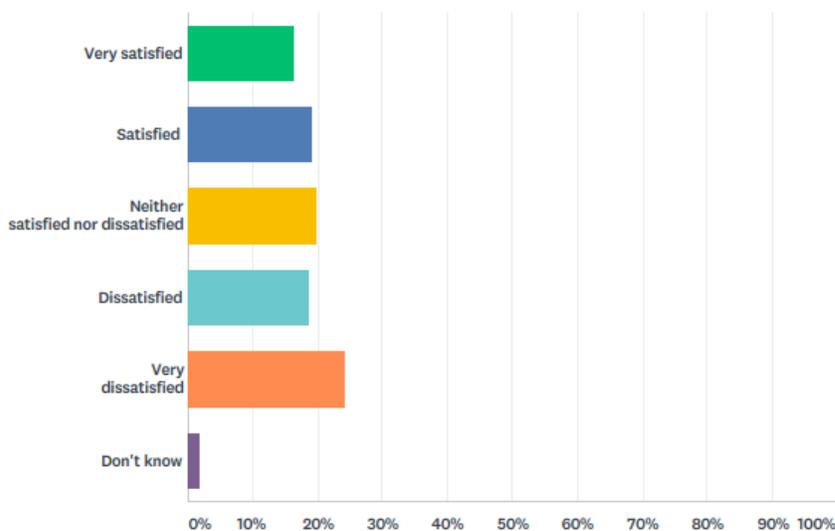


FIGURE 13: RESPONSES TO QUESTION 12 – HOW SATISFIED ARE YOU WITH THE TRAFFIC CIRCLE AT BRIGHTON ROAD AND ALOHA DRIVE?

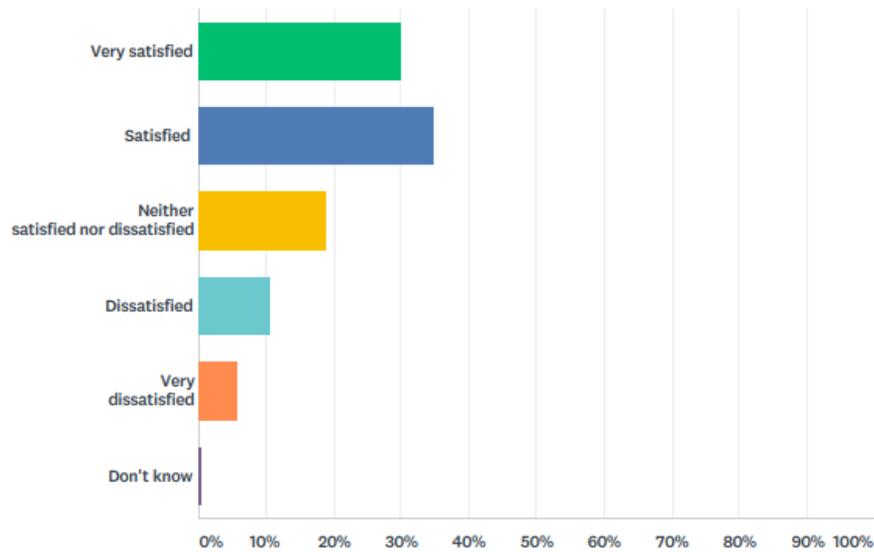


For both questions, the responses were nearly identical and generally evenly split. Only the “very dissatisfied” response had more than 20% of the total response. All categories (minus “don’t know”) had a share between 16% and 24%.

Question 13

The following question moved further south down the Brighton Road corridor, to the intersection with (Old) Tecumseh Road. The question and responses can be seen in **Figure 14**.

FIGURE 14: RESPONSES TO QUESTION 13 – HOW SATISFIED ARE YOU WITH THE ALL-WAY STOP AT BRIGHTON ROAD AND (OLD) TECUMSEH ROAD?

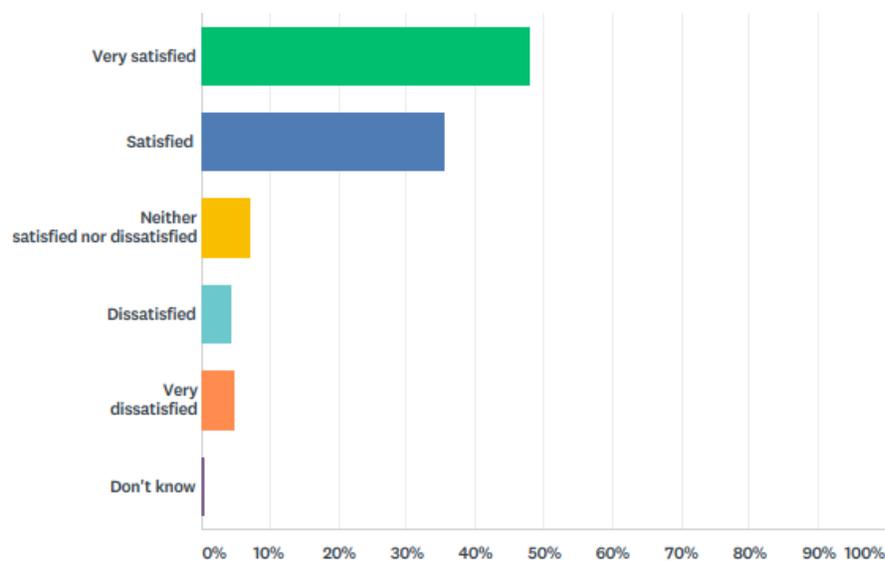


Out of the 250 responses to the question, approximately 65% of the respondents were satisfied or very satisfied with the all-way stop.

Question 14

The following question asked respondents about their satisfaction with the roundabout at Brighton Road and Tecumseh Road East. The responses can be seen in **Figure 15**.

FIGURE 15: RESPONSES TO QUESTION 14 – HOW SATISFIED ARE YOU WITH THE ROUNDABOUT AT BRIGHTON ROAD AND TECUMSEH ROAD EAST?

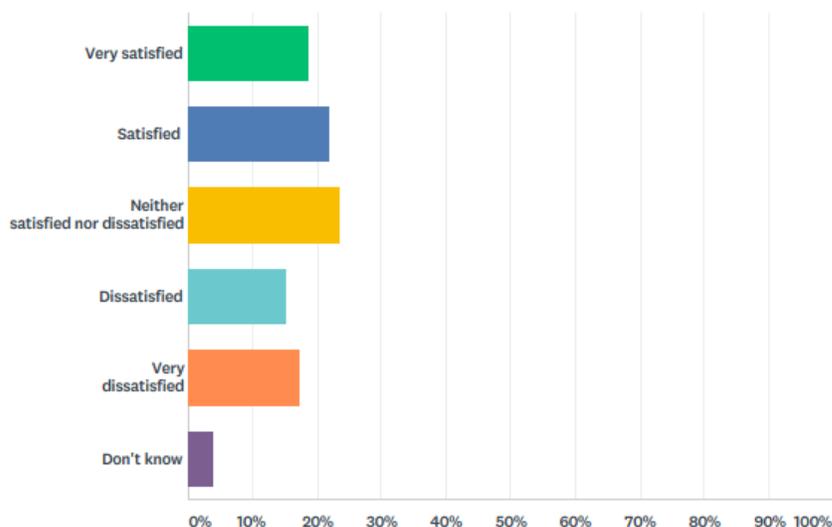


For all intersections along Brighton Road, the roundabout with Tecumseh Road East has the highest level of satisfaction from respondents. Over 83% of all respondents were either satisfied or very satisfied with the roundabout provided at this intersection.

Question 15

The final specific question within the online survey was with regard to the raised centre medians along Brighton Road. The responses are seen in **Figure 16**.

FIGURE 16: RESPONSES TO QUESTION 15 – HOW SATISFIED ARE YOU WITH THE RAISED CENTRE MEDIANS ALONG BRIGHTON ROAD?



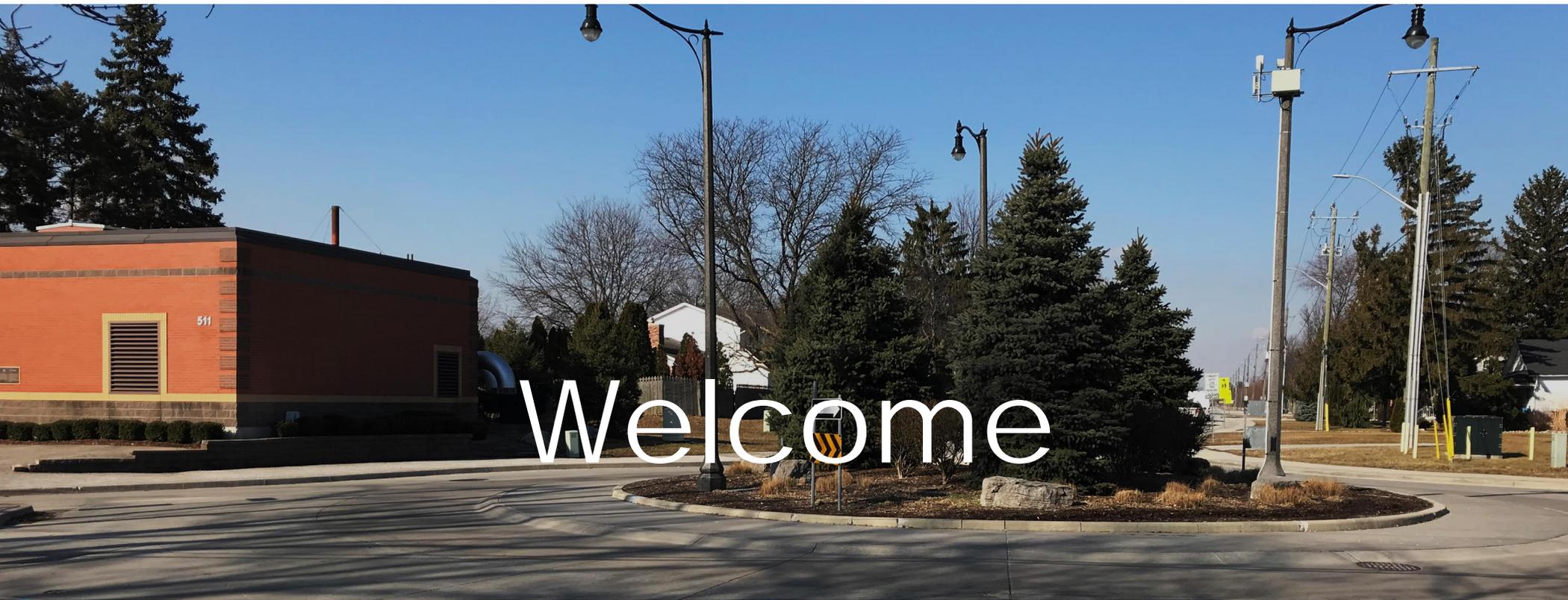
Pertaining the raised medians, there is mixed reaction from respondents. However, overall there is a slightly higher percentage of respondents satisfied or very satisfied (40%) compared to those dissatisfied or very dissatisfied (32%) with the raised medians.

Additional Feedback

Respondents were then able to provide written comments (up to a maximum of 200 characters) should they had any other specific information to share. 132 respondents (approximately 46% of all respondents) chose to provide additional feedback. This can be seen in **Appendix A**.

Appendix C

Community Open House Display Boards – July 2019



Welcome

Brighton Road Traffic Review

July 11, 2019 – Community Open House

Session 1: 3:00 p.m. – 5:00 p.m.

Session 2: 6:00 p.m. – 8:00 p.m.

Background

- 2008 / 2009: Improvements on Brighton Road included a roundabout, multi-use pathway, three raised medians and two traffic circles
- 2012: Further modifications / enhancements were introduced at both the roundabout and two traffic circles
- 2018: Tecumseh Council initiated a follow-up review along the Brighton Road corridor
- 2019: Online survey was completed in April; Community Open House in July



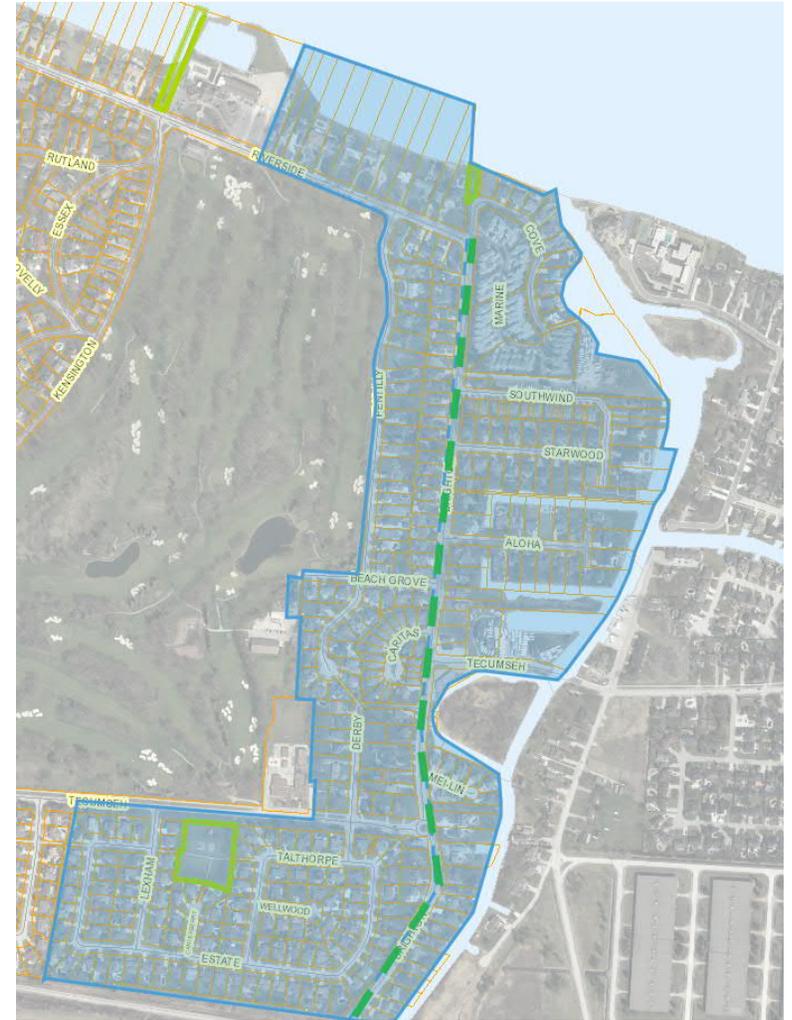
Brighton Road / Southwind Crescent in 2009 (looking south)



Brighton Road / Southwind Crescent in 2014 (looking south)

Online Survey Results - 1

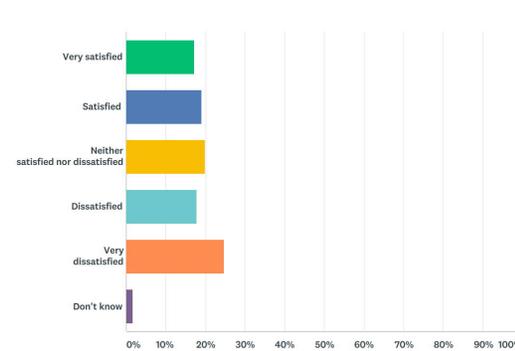
- Online survey open through April 2019
- Postcards were hand delivered to approximately 375 properties surrounding Brighton Road in Tecumseh
- 285 responses provided; 89% of respondents lived in the town of Tecumseh
- Vast majority (78%) of respondents drive on Brighton Road at least several times per week
- Majority of respondents had also walked (65%) / cycled (53%) along Brighton Road
- Vast majority (76%) of cyclists preferred riding on the asphalt multi-use pathway



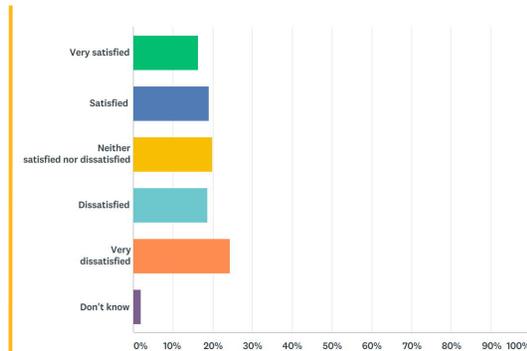
Distribution Area for Online Survey Postcard

Online Survey Results - 2

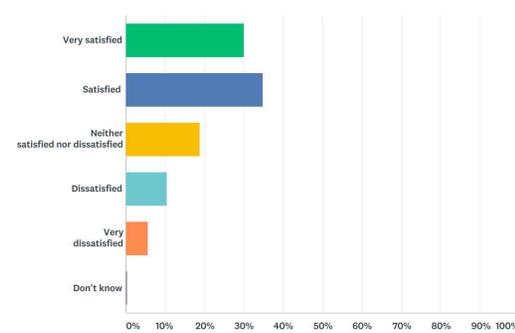
- Vast majority (77%) of respondents correctly identified that at a traffic circle / roundabout, vehicles within the circle have the right-of-way
- Traffic circles: 36% of respondents satisfied with 20% neutral and 42% dissatisfied with the two traffic circles
- All-way stop: 65% of respondents satisfied with 19% neutral and 16% dissatisfied with the all-way stop at (Old) Tecumseh Road
- Roundabout: 83% of respondents satisfied with 7% neutral and 9% dissatisfied with the roundabout at Tecumseh Road East



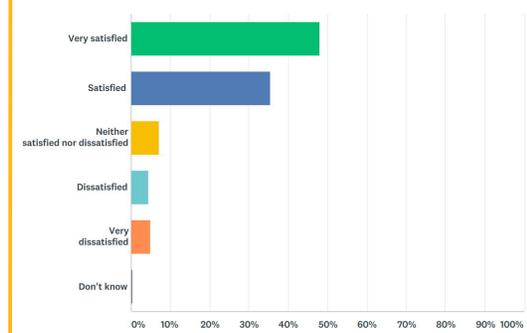
Satisfaction of Traffic Circle @ Southwind Crescent



Satisfaction of Traffic Circle @ Aloha Drive



Satisfaction of All-Way Stop @ (Old) Tecumseh Road

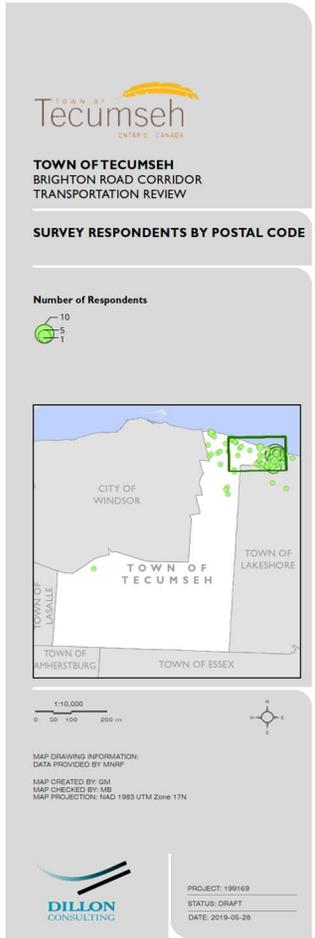


Satisfaction of Roundabout @ Tecumseh Road East

Online Survey Results - 3



FILE LOCATION: I:\GIS\199169 - Brighton Rd Traffic Circles\Figure 1 Study Area.mxd



Vast majority of respondents lived within the mail-out (distribution) area, as sorted by postal code

On-Site Review - 1

- Both the roundabout and all-way stop intersections operate acceptably with minimal delays and queuing
- Speed and volume data was collected at 3 locations over a 48-hour period in early April 2019:

Location	Average Daily Traffic (Two-Way)	Posted Speed Limit	Average Speed	85 th Percentile speed
Brighton Road south of Tecumseh Road East	4,586	50 km/h	53 km/h	68 km/h
Brighton Road between Aloha Drive and Starwood Lane	4,573	50 km/h	44 km/h	50 km/h
Brighton Road north of Southwind Crescent	4,378	50 km/h	51 km/h	56 km/h

The 85th percentile speed is the speed at which 85% of all measured traffic is travelling at or below



Multi-Use Pathway:

- Well used by both pedestrians and cyclists
- Potential signage modifications necessary to clarify the right-of-way at intersections between drivers and pathway users

All-way Stop (with Old Tecumseh Road)

- No observed issues, with minimal delay and good compliance, including yielding to pedestrians and cyclists



On-Site Review - 2

Roundabout (with Tecumseh Road East)

- Drivers were observed to not yield to pedestrians, although not legally required to
- Edge of raised truck apron could use better delineation adjacent to drive aisle due to uniform (concrete) surfacing
- Minimal deflection through roundabout for northbound through and eastbound right turn movements



Brighton Road Traffic Review



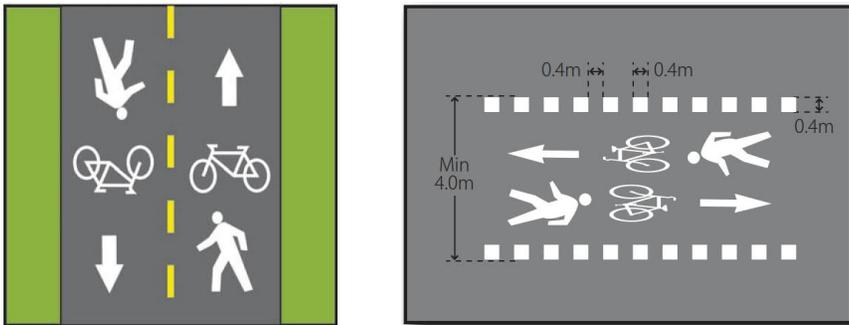
Traffic Circles (with Aloha Drive & Southwind Crescent)

- A number of drivers were observed making illegal movements when turning left to / from the side street
- Drivers on Brighton Road typically did not yield to pedestrians, although not legally required to
- Drivers on Brighton Road typically did not yield the right-of-way to vehicles entering from the side street
- Drivers on the side street would typically wait until traffic on Brighton Road had cleared
- Generally effective in maintaining acceptable speeds

Recommendations - 1

Multi-Use Pathway

- Introduce pavement markings and signage along the pathway
- Introduce “crossrides” where the pathway crosses a stop-control side street



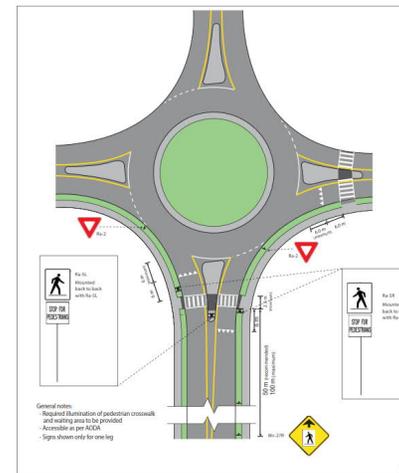
Typical Pavement Markings along Boulevard Multi-Use Pathway (mid-block & crossrides)

Raised Islands

- Retain existing median islands

Roundabout (with Tecumseh Road East)

- Introduce pedestrian crossovers (PXOs) on the west and north legs
- Introduce a “crossride” where the pathway crosses the south leg
- Introduce a painted yellow line between the truck apron and the drive aisle



PXO Standard at Roundabouts



Painted Yellow Line on Inside of Roundabout

Recommendations - 2

All-Way Stop (with (Old) Tecumseh Road)

- Undertake minor signage changes and enhancements

Traffic Circles (with Aloha Drive and Southwind Crescent)

- Retain both traffic circles with the following enhancements:
 - Introduce a “crossride” where the multi-use pathway crosses the east legs
 - Introduce pedestrian crossovers (PXOs) on the north and south legs
 - Raise the splitter island on the east legs only to be 75mm above the surface of the road (similar to the existing truck apron)



Example - Raised Splitter Island

Traffic Calming

- Introduce additional traffic calming measures on Brighton Road between the VIA rail corridor and the roundabout at Tecumseh Road East



Potential Option:
2 Sets of Speed Cushions

Appendix D

Completed Community Open House Sign-in Sheets & Comment Forms – July 2019

Brighton Road Traffic Review

July 11, 2019 - Community Open House

SIGN-IN SHEET

	Name	Address	Phone #	Email
1	GARY FAUTEUX	168 MARINE DRIVE	519 979 9308	
2	Jed Casper	372 Brighton	979 9310	
3	Chris Ide	193 Brighton	979 9437	
4	GAYNOR CHITTLE	224 BRIGATON	979 8399	
5	STEVE ARSEC	461 "	979 8245	
6	M. C. LAMPLE	156 Marine Drive	979-9188	
7	Jim Peier	155 MARINA DRIVE	979-7436	
8	Douglas Vichy Paulak	520 Brighton Rd	56 -- 1777	
9	CAROL A. READER	306 Russel Woods Dr, Lakeshore N8N 4K5	519-739-6238	creader@uwindSOR.ca
10	CLIFF SEARY	235 BRIGHTON RD.	519-979-8349	

Brighton Road Traffic Review

July 11, 2019 - Community Open House

SIGN-IN SHEET

	Name	Address	Phone #	Email
1	Fiona	523 Talchoipe	226. 946.2242	froberson101@gmail.com
2	PAUL	As ABOVE		
3	CHRIS HALES	215 BRIGHTON RD	519-735-3201	ccshales@gmail.com
4	LARRY & PAT LOEBACH	225 " "	519 956 8236	lploebach@cogeco.ca
5	Brenda Harling	254 Southwind Cres — N8W 445		
6	Derek Harling			
7				
8	Stevehinda Martin	13947 Riverside Dr E.	519 979 7389	Smartin643@gmail.com
9	Andrew Dowlle	461 Ambely Cr	519 818 2047	adowlle@tecumseh.ca
10	DAVID McNAIR.	215 STARWOOD LANE	519 919 7325	dave1008@COGECO.CA.



Brighton Road Traffic Review

July 11, 2019 - Community Open House

SIGN-IN SHEET

	Name	Address	Phone #	Email
1	Bill Altenhof	266 EDGEWATER	(519) 818-1067	baltenhof@tecumseh.ca
2	Rob & Dot Webster	395 Brighton Rd.	519-715-9493	
3	Joe Baccetti	1918 Corbi Lane	519 979 3339	j.baccetti@tecumseh.ca
4	LUCIANO CARLONE	314 BRIGHTON	519-562-1170	lcarlone01@gmail.com
5				
6				
7				
8				
9				
10				

Brighton Road Traffic Review

July 11, 2019 - Community Open House

COMMENT FORM

1. In April 2019, did you complete the Brighton Road online survey?

YES

NO

2. Do you agree with the overall recommendations along Brighton Road?

YES

NO

3. Do you have any other comments that you wish to share?

① Onsite Review 2 - Drivers on Brighton Rd not yielding to traffic entering (waiting) at side street — In part this is because cars on side street do not enter roundabout despite approaching vehicles slowing for them.

Problem is that too many people don't fully understand how to use roundabouts !!

(Optional) Should you wish, please provide your contact information:

Name: Carol A. Reader Address: 306 Russel Woods Dr Lakeshore N8N4K5

Phone #: 519-739-6238 Email: creader@uwindSOR.ca

Roundabouts are great, for keeping traffic moving.

P.T.O.

2. Comment re small roundabouts on Brighton.

I have been told that trucks ^w trailers cannot get around the roundabouts.

I suggest that small roundabouts also need truck apron with smaller "solid" centre so that all vehicles can navigate. South Port Seiling Club and Marina's in Lakeshore, which are all used by Tecumseth residents, need this access.

3. We had/have "crosswalks"; the problem is enforcement. Drivers are generally good at 3way stop at Brighton & Tecumseth, but only because they have to stop. So the problem is driver education.

Who wants to stop for a "crosswalk" when they can see a large F350 roaring up behind them!!

Slowing traffic unnecessarily just leads to frustration and does little to resolve the problem of speeding, impatient drivers
A rock and a hard place.

Brighton Road Traffic Review

July 11, 2019 - Community Open House

COMMENT FORM

1. In April 2019, did you complete the Brighton Road online survey?

YES

NO

2. Do you agree with the overall recommendations along Brighton Road?

YES

NO

3. Do you have any other comments that you wish to share?

I would like Tecumseh to make increased use of roundabouts. When used properly they keep traffic moving, thus reducing emissions, which all our governments continually want to address. Drivers in Tecumseh & this intersection area do not treat pedestrians/cyclists with sufficient respect. We are crowded out of the road.

(Optional) Should you wish, please provide your contact information:

Name: Fiona Bryden. Address: 523 Taithorpe St. Clair Beach
Phone #: 226 946 2242 Email: froberson101@gmail.com

regularly passed with less than 1 metre of space. We are shouted at & abused by a minority of drivers.

Improved education / practical lessons in the correct use of roundabouts would benefit everyone.

I would like to see more use of 'zebra' crossings. Tecumseh Road is fast becoming uncrossable at certain times of day. Pedestrian "orange flashing light" courtesy crossings as used in Leamington would be appreciated in our increasingly busy St. Clair Beach neighbourhood.

Please put cyclists & pedestrians first, encourage residents to get out on their feet, health will improve, people may get more in touch with the beauty of the nature around them that they miss by rushing by in cars.

Parents dropping / collecting children are some of the worst offenders, disregarding "No parking" signs + pedestrians vs. the sidewalks + crossings roads

Brighton Road Traffic Review

July 11, 2019 - Community Open House

COMMENT FORM

1. In April 2019, did you complete the Brighton Road online survey?

YES

NO

2. Do you agree with the overall recommendations along Brighton Road?

YES

NO

3. Do you have any other comments that you wish to share?

THE PROBLEM WITH THE ROAD IS
NON COMPLIANCE BY MOTORIST IT IS
NOT THE TOWNS RESPONSIBILITY TO
CHANGE ROAD LAYOUTS TO SUIT NON
COMPLIANT MOTORISTS IT IS THE LAW
ENFORCEMENT TO IMPLEMENT THE LAW
OF THE LAND

(Optional) Should you wish, please provide your contact information:

Name: PWBj Address: 523 TaHoipe

Phone #: 226.946.2242 Email: paulwbryden@G.Max.ca

Brighton Road Traffic Review

July 11, 2019 - Community Open House

COMMENT FORM

1. In April 2019, did you complete the Brighton Road online survey?

YES

NO

2. Do you agree with the overall recommendations along Brighton Road?

YES

NO

3. Do you have any other comments that you wish to share?

NOTHING BEING DONE FROM RIV. DR. TO
ROUNDAABOUT TO CALM TRAFFIC WHATSOEVER.

THE TRAFFIC CIRCLES DO NOT WORK. ELIMINATE THEM
AND INTRODUCE SPEED BUMPS ALL ALONG. A MISTAKE
WAS MADE. CORRECT IT!

(Optional) Should you wish, please provide your contact information:

Name: LARRY LOEBACH Address: 225 BRIGHTON RD

Phone #: 519 956 8236 Email: _____

Brighton Road Traffic Review

July 11, 2019 - Community Open House

COMMENT FORM

1. In April 2019, did you complete the Brighton Road online survey?

YES

NO

2. Do you agree with the overall recommendations along Brighton Road?

YES

NO

3. Do you have any other comments that you wish to share?

Its NOT The Roads - its some of the
drivers!

(Optional) Should you wish, please provide your contact information:

Name: Harling B. D. Address: 254 Southwind

Phone #: 979 1157

Email:

Brighton Road Traffic Review

July 11, 2019 - Community Open House

COMMENT FORM

1. In April 2019, did you complete the Brighton Road online survey?

YES

NO

2. Do you agree with the overall recommendations along Brighton Road?

YES

NO

3. Do you have any other comments that you wish to share?

Please consider 2 sets of speed cushions
on Brighton Rd. south of Southwinds
like you recommend on Brighton
between Via Rail Corridor & the
roundabout @ Tec Rd E.
if you won't remove the 2 traffic
circles.

(Optional) Should you wish, please provide your contact information:

Name: M. Hales Address: 215 Brighton Rd.
Phone #: _____ Email: marcella.hales@gmail.com.

Brighton Road Traffic Review

July 11, 2019 - Community Open House

COMMENT FORM

1. In April 2019, did you complete the Brighton Road online survey?

YES

NO

2. Do you agree with the overall recommendations along Brighton Road?

YES

NO

3. Do you have any other comments that you wish to share?

Walking on East sidewalk of Brighton Rd
@ ~~the~~ Southwinds; Starwood is still
high risk because of fast drivers - you
still need to slow down that traffic -!
As a pedestrian cars are aiming right at me
walking the sidewalk.

(Optional) Should you wish, please provide your contact information:

Name: Marvie Hales Address: 215 Brighton Rd.

Phone #: _____ Email: marcellahales@gmail.com

Brighton Road Traffic Review

July 11, 2019 - Community Open House

COMMENT FORM

1. In April 2019, did you complete the Brighton Road online survey?

YES

NO

2. Do you agree with the overall recommendations along Brighton Road?

YES

NO

3. Do you have any other comments that you wish to share?

1) ADD ONE SPEED HUMP BETWEEN SOUTHWIND and
ALOHA

2) Raised Splitter island on Brighton Rd at Southwind -
on North Side of circle ~~on South side~~
grasses

3) Get rid of ~~grasses~~ in island at Southwind.

(Optional) Should you wish, please provide your contact information:

Name: Patricia Lebach Address: 225 Brighton

Phone #: 519-956-8236 Email: 1ploebach@copeco.ca

Brighton Road Traffic Review

July 11, 2019 - Community Open House

COMMENT FORM

1. In April 2019, did you complete the Brighton Road online survey?

YES

NO

2. Do you agree with the overall recommendations along Brighton Road?

YES

NO

3. Do you have any other comments that you wish to share?

Extend traffic calming, cross-overs
and delineate use on multi-use path
for Riverside Dr East as well.
Thank-you.

(Optional) Should you wish, please provide your contact information:

Name: Steve-Linda Martin Address: 13967 Riverside Dr. E.

Phone #: _____ Email: linda.edwards481@gmail.com

Brighton Road Traffic Review

July 11, 2019 - Community Open House

COMMENT FORM

1. In April 2019, did you complete the Brighton Road online survey?

YES

NO

2. Do you agree with the overall recommendations along Brighton Road?

YES

NO

3. Do you have any other comments that you wish to share?

THE SPEED OF TRAFFIC GOING THROUGH THE
NORTH CIRCLE ON BRIGHTON RD. IS WAY OUT OF
CONTROL. YOUR 24 HOUR SPEED TESTING IS A JOKE.
POSTED SIGNS SAY 10/KM. DO YOUR TESTING AT THESE
POINTS.

YOUR RECOMMENDATIONS ARE USELESS.

ALSO SIGHT LINES LOOKING ^{INTO} AT THESE CIRCLES, HAVE TO BE CLEARED OUT.

(Optional) Should you wish, please provide your contact information:

Name: CLIFF SEARY Address: 235 BRIGHTON RD.

Phone #: 519-979-8349 Email: _____

SPEED BUMPS NEED TO BE INSTALLED ALL THE WAY TO RIVERSIDE DR. CORNER NORTH

Brighton Road Traffic Review

July 11, 2019 - Community Open House

COMMENT FORM

1. In April 2019, did you complete the Brighton Road online survey?

YES

NO

2. Do you agree with the overall recommendations along Brighton Road?

YES

NO

3. Do you have any other comments that you wish to share?

*- 3 problems NOISE, TRAFFIC VOLUME, SPEED.
- survey seems to downplay back-ups
- additional condos + commercial will increase all problems.
- recommendations are superficial and inadequate*

(Optional) Should you wish, please provide your contact information:

Name: DAVID MCNAIR Address: 215 STARWOOD LANE.

Phone #: 519-979-7325 Email: _____

Brighton Road Traffic Review

July 11, 2019 - Community Open House

COMMENT FORM

1. In April 2019, did you complete the Brighton Road online survey?

YES

NO

2. Do you agree with the overall recommendations along Brighton Road?

YES

NO

3. Do you have any other comments that you wish to share?

GLAD TO SEE NO MASON RIP OUT OF THE
WORK DONE NOT SO LONG AGO.

(Optional) Should you wish, please provide your contact information:

Name: LUCIANO CARLONE Address: 314 BRIGHTON

Phone #: 519-562-1170 Email: lcarlone01@gmail.com

Brighton Road Traffic Review

July 11, 2019 - Community Open House

COMMENT FORM

1. In April 2019, did you complete the Brighton Road online survey?

YES

NO

2. Do you agree with the overall recommendations along Brighton Road?

YES

NO

3. Do you have any other comments that you wish to share?

The main issue is BRIGHTON IS USED AS AN ARTERIAL ROAD THAT FEEDS
THE PLANTS ON PATILLO RD. FOUR X A DAY, HIGH SPEED TRAFFIC IGNORES
THEY CIRCLES ^{SMALL} & DO NOT OBEY THE RULES OF THE ROAD. THIS IS AN
ACCIDENT WAITING TO HAPPEN! I AGREE THAT WE NEED TRAFFIC
CALMING BUT NOT AT THE EXPENSE OF THE SAFETY OF PEOPLE
LIVING ON THE SIDE STREETS. I AGREE WE NEED CALMING BUT
WE CANNOT "TEACH" 200K PEOPLE HOW TO USE THE SMALL TRAFFIC
CIRCLE

(Optional) Should you wish, please provide your contact information:

Name: CHRIS HALES Address: 215 BRIGHTON RD

Phone #: 519-735-3201 Email: ccshales@gmail.com

Appendix E

Level of Service Definitions

LEVEL OF SERVICE¹

Level of Service (LOS) is defined as a qualitative measure describing operational conditions within a traffic stream, and their perception by motorists and/or passengers. This concept was introduced in the 1965 *Highway Capacity Manual* as a criteria for interrupted flow conditions. The 2000 *Highway Capacity Manual* changed the basis for measuring Level of Service at intersections to control delay².

Six Levels of Service are defined with LOS A representing the best operating conditions, and LOS F the worst (briefly described below). It should be noted that there is often significant variability in the amount of delay experienced by individual drivers.

- LOS A:** This Level of Service describes the highest quality of traffic flow and is referred to as free flow. The approach appears open, turning movements are easily made and drivers have freedom of operation. Control delay is less than 10 seconds/vehicle.
- LOS B:** This Level of Service is referred to as a stable flow. Drivers feel somewhat restricted and occasionally may have to wait to complete the minor movement. Control delay is 10-15 seconds/vehicle for unsignalized intersections and 10-20 seconds/vehicle for signalized intersections.
- LOS C:** At this level, the operation is stable. Drivers feel more restricted and may have to wait, with queues developing for short periods. Control delay is 15-25 seconds/vehicle at unsignalized intersections and 20-35 seconds/vehicle at signalized intersections.
- LOS D:** At this level, traffic is approaching unstable flow. The motorist experiences increasing restriction and instability of flow. There are substantial delays to approaching vehicles during short peaks within the peak period, but there are enough gaps to lower demand to permit occasional clearance of developing queues and prevent excessive back-ups. Control delay is 25-35 seconds/vehicle at unsignalized intersections and 35-55 seconds/vehicle at signalized intersections.
- LOS E:** At this level capacity occurs. Long queues of vehicles exist and delays to vehicles may extend. Control delay is 35-50 seconds/vehicle at unsignalized intersections and 55-80 seconds/vehicle at signalized intersections.
- LOS F:** At this Level of Service, the intersection has failed. Capacity of the intersection has been exceeded. Control delay exceeds 50 seconds/vehicle at unsignalized intersections and exceeds 80 seconds/vehicle at signalized intersections.

¹

Transportation Research Board: Highway Capacity Manual 1965, 2000

²

Control delay is defined as the component of delay that results when a control signal causes a lane group to reduce speed or to stop; it is measured by comparison with the uncontrolled condition.

Appendix F

Raw Traffic Data

North of Southwind

Day	Veh	NB	SB	Average Speed	85th percentile	%HV
Tuesday 07-May-19	4287	2188	2099	50	56	7%
Wednesday 08-May-19	4468	2257	2211	51	57	9%
AVERAGE	4378	2223	2155	51	56	8%

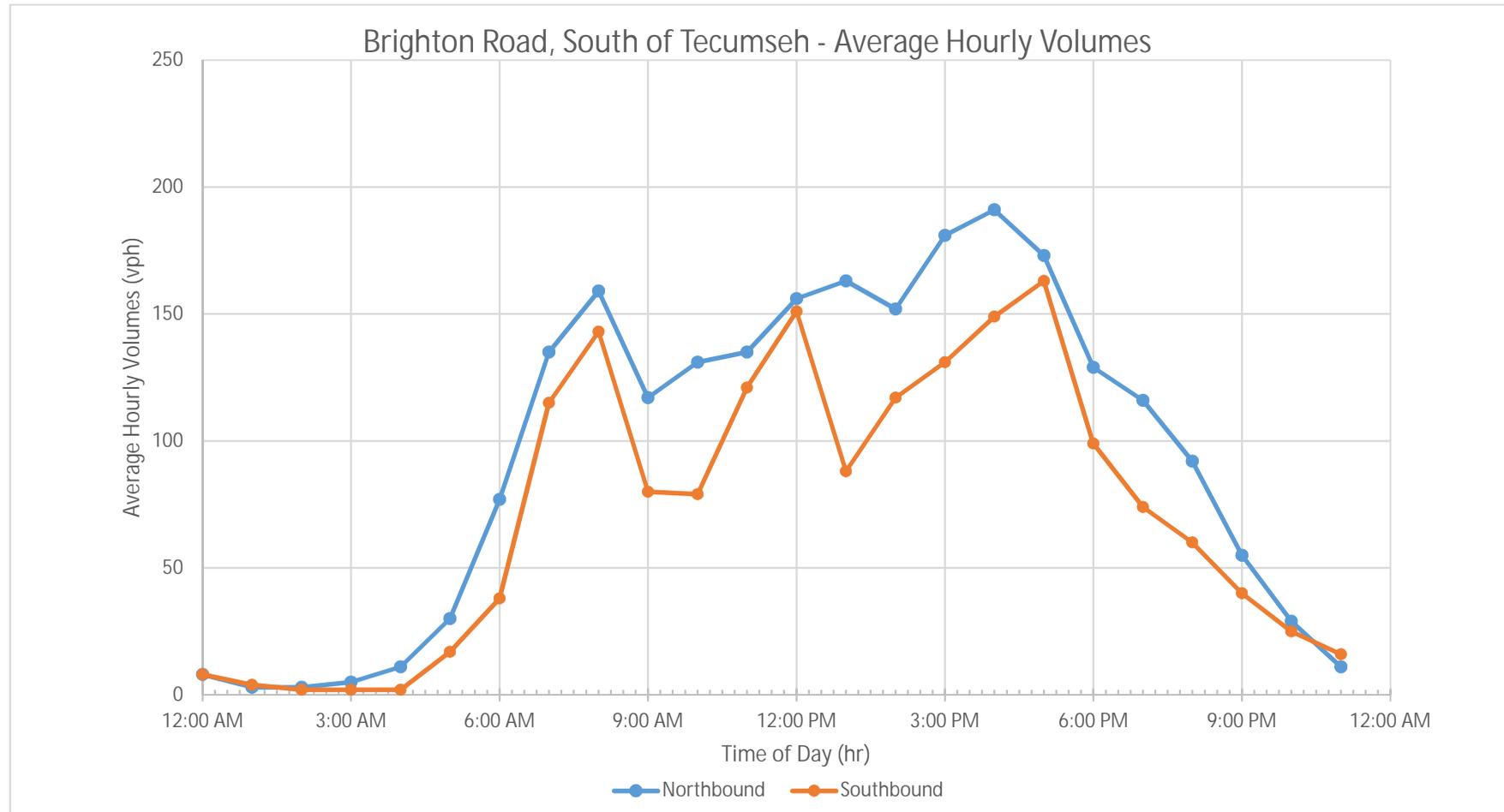
Starwood to Aloha

Day	Veh	NB	SB	Average Speed	85th percentile	%HV
Tuesday 07-May-19	4459	2292	2167	43	49	13%
Wednesday 08-May-19	4686	2399	2287	45	51	11%
AVERAGE	4573	2346	2227	44	50	12%

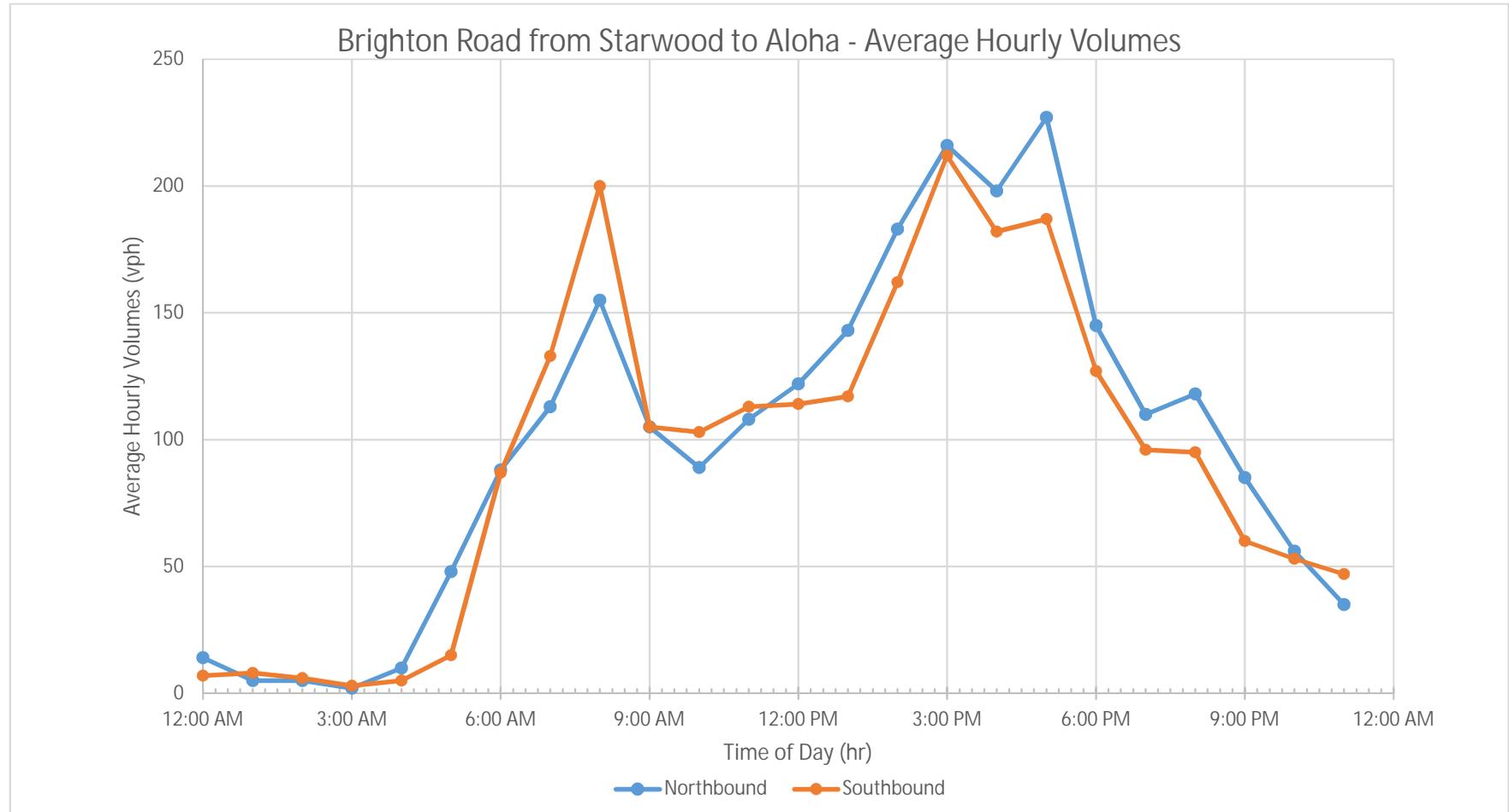
South of Tecumseh

Day	Veh	NB	SB	Average Speed	85th percentile	%HV
Tuesday 07-May-19	4308	2412	1896	54	68	5%
Wednesday 08-May-19	4864	2484	2380	53	67	7%
AVERAGE	4586	2448	2138	53	68	6%

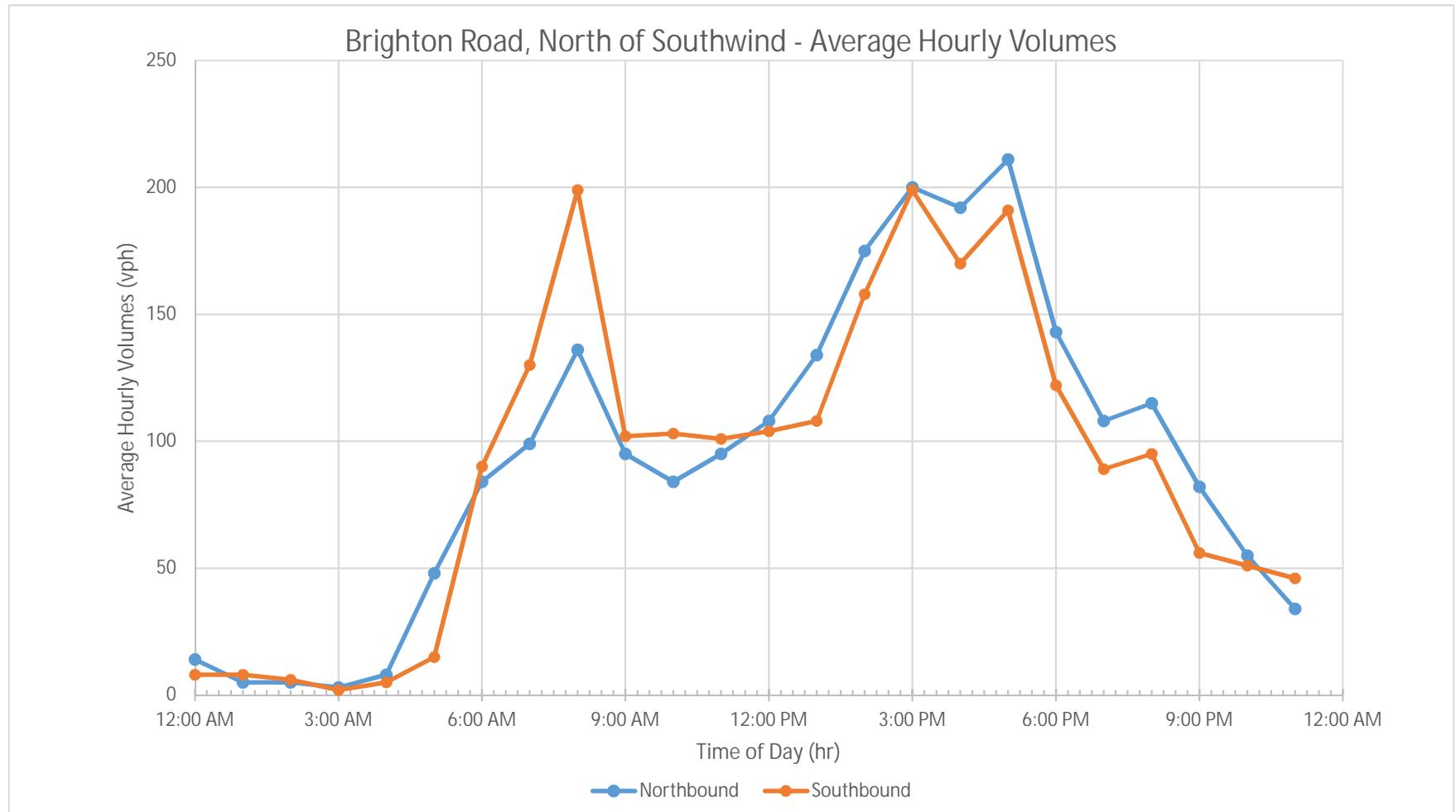
Date Time	Hourly Total		
	NB Avg	SB Avg	All Avg
12:00 AM	8	8	16
1:00 AM	3	4	7
2:00 AM	3	2	5
3:00 AM	5	2	7
4:00 AM	11	2	12
5:00 AM	30	17	47
6:00 AM	77	38	115
7:00 AM	135	115	250
8:00 AM	159	143	301
9:00 AM	117	80	198
10:00 AM	131	79	210
11:00 AM	135	121	256
12:00 PM	156	151	307
1:00 PM	163	88	251
2:00 PM	152	117	269
3:00 PM	181	131	312
4:00 PM	191	149	340
5:00 PM	173	163	336
6:00 PM	129	99	228
7:00 PM	116	74	190
8:00 PM	92	60	152
9:00 PM	55	40	94
10:00 PM	29	25	54
11:00 PM	11	16	27



Date Time	Hourly Total		
	NB Avg	SB Avg	All Avg
12:00 AM	14	7	21
1:00 AM	5	8	13
2:00 AM	5	6	10
3:00 AM	2	3	5
4:00 AM	10	5	15
5:00 AM	48	15	64
6:00 AM	88	87	175
7:00 AM	113	133	247
8:00 AM	155	200	354
9:00 AM	105	105	210
10:00 AM	89	103	191
11:00 AM	108	113	221
12:00 PM	122	114	236
1:00 PM	143	117	260
2:00 PM	183	162	345
3:00 PM	216	212	428
4:00 PM	198	182	379
5:00 PM	227	187	414
6:00 PM	145	127	273
7:00 PM	110	96	206
8:00 PM	118	95	213
9:00 PM	85	60	145
10:00 PM	56	53	109
11:00 PM	35	47	81



	Hourly Total		
Date Time	NB Avg	SB Avg	All Avg
12:00 AM	14	8	22
1:00 AM	5	8	13
2:00 AM	5	6	11
3:00 AM	3	2	5
4:00 AM	8	5	13
5:00 AM	48	15	62
6:00 AM	84	90	174
7:00 AM	99	130	229
8:00 AM	136	199	336
9:00 AM	95	102	197
10:00 AM	84	103	187
11:00 AM	95	101	196
12:00 PM	108	104	212
1:00 PM	134	108	242
2:00 PM	175	158	333
3:00 PM	200	199	399
4:00 PM	192	170	362
5:00 PM	211	191	401
6:00 PM	143	122	266
7:00 PM	108	89	197
8:00 PM	115	95	210
9:00 PM	82	56	138
10:00 PM	55	51	106
11:00 PM	34	46	80



Turning Movement Count Report

Report Generated Using Turning Movement Count for Android by PortableStudies.com

Study Information

Study Summary	Count Name	Notes	U = U Turn L = Left Turn T = Thru R = Right Turn P1 = Pedestrian Direction 1 P2 = Pedestrian Direction 2 Veh = Total Vehicles for Approach	Peak Hour Volume	
	Brighton Road Traffic Circles			718	
	Location			% Bank 1	% Bank 2
	Brighton Road at Tecumseh Road , Not Available			95.1%	0.0%
	Performed By			% Bank 3	% Bank 4
	Amy Dupuis			0.0%	4.9%
	Date			Pedestrians Volume	
May 8, 2019	7				

Peak Hour Data

Time Period	Eastbound Tecumseh Road							Northbound Brighton Road							Southbound Brighton Road							Total Vehicles	Total Pedestrians							
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh									
7:45 AM	0	24	0	37	0	0	61	0	0	0	0	0	0	0	0	46	15	0	0	0	61	0	0	10	42	2	0	52	174	2
8:00 AM	0	16	0	16	0	0	32	0	0	0	0	0	0	0	0	47	14	0	1	2	61	0	0	17	47	1	0	64	157	4
8:15 AM	0	25	0	16	0	0	41	0	0	0	0	0	0	0	0	26	19	0	0	0	45	0	0	25	41	1	0	66	152	1
8:30 AM	0	39	0	27	0	0	66	0	0	0	0	0	0	0	0	36	30	0	0	0	66	0	0	31	72	0	0	103	235	0

Vehicle Movement Summary

Movement / Details	Eastbound Tecumseh Road							Northbound Brighton Road							Southbound Brighton Road							Entire Intersection								
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	Vehicles	Pedestrians							
Movement Volume	0	104	0	96	0	0	200	0	0	0	0	0	0	0	0	155	78	0	1	2	233	0	0	83	202	4	0	285	718	7
PHF	-	0.67	-	0.65	-	-	0.76	-	-	-	-	-	-	-	-	0.82	0.65	-	0.25	0.25	0.88	-	-	0.67	0.70	0.50	-	0.69	0.76	0.44
% Bank 1	0.0%	93.3%	0.0%	91.7%								0.0%	0.0%	0.0%	0.0%								Need a custom report? Contact: support@portablestudies.com							
% Bank 2	0.0%	0.0%	0.0%	0.0%								0.0%	0.0%	0.0%	0.0%															
% Bank 3	0.0%	0.0%	0.0%	0.0%								0.0%	0.0%	0.0%	0.0%															
% Bank 4	0.0%	6.7%	0.0%	8.3%								0.0%	5.2%	10.3%	0.0%															

Turning Movement Count Report

Report Generated Using Turning Movement Count for Android by PortableStudies.com

Study Information

Study Summary	Count Name	Notes	U = U Turn L = Left Turn T = Thru R = Right Turn P1 = Pedestrian Direction 1 P2 = Pedestrian Direction 2 Veh = Total Vehicles for Approach	Peak Hour Volume	
	Brighton Road Traffic Circles			865	
	Location			% Bank 1	% Bank 2
	Brighton Road at Tecumseh Road , Not Available			98.7%	0.0%
	Performed By			% Bank 3	% Bank 4
	Amy Dupuis			0.0%	1.3%
	Date			Pedestrians Volume	
May 8, 2019	13				

Peak Hour Data

Time Period	Eastbound Tecumseh Road							Northbound Brighton Road							Southbound Brighton Road							Total Vehicles	Total Pedestrians							
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh									
5:00 PM	0	55	0	25	0	0	80	0	0	0	0	4	0	0	0	29	34	0	0	0	63	0	0	26	46	0	0	72	215	4
5:15 PM	0	57	0	34	0	0	91	0	0	0	0	0	2	0	0	30	39	0	0	0	69	0	0	20	38	0	0	58	218	2
5:30 PM	0	34	0	31	0	0	65	0	0	0	0	0	0	0	0	26	30	1	0	0	57	0	0	30	46	0	2	76	198	2
5:45 PM	0	53	0	36	0	1	89	0	0	0	0	1	0	0	0	25	41	0	0	0	66	0	0	20	59	0	3	79	234	5

Vehicle Movement Summary

Movement / Details	Eastbound Tecumseh Road							Northbound Brighton Road							Southbound Brighton Road							Entire Intersection								
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	Vehicles	Pedestrians							
Movement Volume	0	199	0	126	0	1	325	0	0	0	0	5	2	0	0	110	144	1	0	0	255	0	0	96	189	0	5	285	865	13
PHF	-	0.87	-	0.88	-	0.25	0.89	-	-	-	-	0.31	0.25	-	-	0.92	0.88	0.25	-	-	0.92	-	-	0.80	0.80	-	0.42	0.90	0.92	0.65
% Bank 1	0.0%	99.5%	0.0%	98.4%								0.0%	100.0%	99.3%	100.0%								Need a custom report? Contact: support@portablestudies.com							
% Bank 2	0.0%	0.0%	0.0%	0.0%								0.0%	0.0%	0.0%	0.0%															
% Bank 3	0.0%	0.0%	0.0%	0.0%								0.0%	0.0%	0.0%	0.0%															
% Bank 4	0.0%	0.5%	0.0%	1.6%								0.0%	0.0%	0.7%	0.0%															

Combined																									
Time Period	Eastbound Tecumseh Road												Northbound Brighton Road						Southbound Brighton Road						
	U	L	T	R	P1	P2	U	L	T	R	P1	P2	U	L	T	R	P1	P2	U	L	T	R	P1	P2	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	61	0	35	0	1	0	0	0	0	0	0	0	24	34	0	0	0	0	0	22	34	0	0	0
4:15 PM	0	45	0	31	0	0	0	0	0	0	0	0	0	32	37	0	1	0	0	0	21	33	0	0	0
4:30 PM	0	61	0	37	0	2	0	0	0	0	0	0	0	20	27	0	0	0	0	0	25	45	2	2	2
4:45 PM	0	43	0	29	1	0	0	0	0	0	0	0	0	24	41	0	0	0	0	0	20	37	0	1	1
5:00 PM	0	55	0	25	0	0	0	0	0	0	4	0	0	29	34	0	0	0	0	0	26	46	0	0	0
5:15 PM	0	57	0	34	0	0	0	0	0	0	0	2	0	30	39	0	0	0	0	0	20	38	0	0	0
5:30 PM	0	34	0	31	0	0	0	0	0	0	0	0	0	26	30	1	0	0	0	0	30	46	0	2	2

Bank 1																
Time Period	Eastbound Tecumseh Road								Northbound Brighton Road				Southbound Brighton Road			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	60	0	34	0	0	0	0	0	23	34	0	0	0	22	34
4:15 PM	0	43	0	31	0	0	0	0	0	31	37	0	0	0	21	32
4:30 PM	0	60	0	37	0	0	0	0	0	20	27	0	0	0	25	45
4:45 PM	0	43	0	29	0	0	0	0	0	24	41	0	0	0	20	37
5:00 PM	0	55	0	24	0	0	0	0	0	29	34	0	0	0	23	46
5:15 PM	0	56	0	33	0	0	0	0	0	30	39	0	0	0	20	38
5:30 PM	0	34	0	31	0	0	0	0	0	26	29	1	0	0	28	46

Bank 4																
Time Period	Eastbound Tecumseh Road								Northbound Brighton Road				Southbound Brighton Road			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0
4:15 PM	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	1
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3	0
5:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0

Turning Movement Count Report

Report Generated Using Turning Movement Count for Android by PortableStudies.com

Study Information

Study Summary	Count Name	Notes	U = U Turn L = Left Turn T = Thru R = Right Turn P1 = Pedestrian Direction 1 P2 = Pedestrian Direction 2 Veh = Total Vehicles for Approach	Peak Hour Volume	
	Brighton Road Traffic Circle			740	
	Location			% Bank 1	% Bank 2
	Brighton Road at Old Tecumseh Road , Not Available			96.8%	0.0%
	Performed By			% Bank 3	% Bank 4
	Adrienne McDonald			0.0%	3.2%
	Date			Pedestrians Volume	
May 30, 2019	6				

Peak Hour Data

Time Period								Westbound Old Tecumseh Road						Northbound Brighton Road						Southbound Brighton Road						Total Vehicles	Total Pedestrians			
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R			P1	P2	Veh
7:45 AM	0	0	0	0	0	0	0	0	35	0	32	0	0	67	0	0	14	28	0	0	42	0	41	20	1	0	0	62	171	0
8:00 AM	0	1	0	0	0	0	1	0	51	0	22	0	0	73	0	0	14	15	0	0	29	0	28	15	1	0	0	44	147	0
8:15 AM	0	1	0	0	0	1	1	0	58	0	53	0	2	111	0	0	24	23	0	0	47	0	23	19	0	1	1	42	201	5
8:30 AM	0	0	0	0	1	0	0	0	53	0	55	0	0	108	0	0	25	24	0	0	49	0	31	33	0	0	0	64	221	1

Vehicle Movement Summary

Movement / Details								Westbound Old Tecumseh Road						Northbound Brighton Road						Southbound Brighton Road						Entire Intersection				
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	Vehicles	Pedestrians
Movement Volume	0	2	0	0	1	1	2	0	197	0	162	0	2	359	0	0	77	90	0	0	167	0	123	87	2	1	1	212	740	6
PHF	-	0.50	-	-	0.25	0.25	0.50	-	0.85	-	0.74	-	0.25	0.81	-	-	0.77	0.80	-	-	0.85	-	0.75	0.66	0.50	0.25	0.25	0.83	0.84	0.30
% Bank 1	0.0%	100.0%	0.0%	0.0%				0.0%	98.5%	0.0%	95.1%				0.0%	0.0%	90.9%	95.6%				0.0%	99.2%	98.9%	100.0%	Need a custom report? Contact: support@portablestudies.com				
% Bank 2	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%					
% Bank 3	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%					
% Bank 4	0.0%	0.0%	0.0%	0.0%				0.0%	1.5%	0.0%	4.9%				0.0%	0.0%	9.1%	4.4%				0.0%	0.8%	1.1%	0.0%					

Combined																									
Time Period							Westbound Old Tecumseh Road						Northbound Brighton Road						Southbound Brighton Road						
	U	L	T	R	P1	P2	U	L	T	R	P1	P2	U	L	T	R	P1	P2	U	L	T	R	P1	P2	
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	23	0	21	1	0	0	0	12	8	0	0	0	12	13	0	0	0	0
7:15 AM	0	1	0	0	1	0	0	26	0	29	0	0	0	1	9	16	0	0	0	24	9	1	0	0	0
7:30 AM	0	1	0	0	0	0	0	37	0	26	0	0	0	0	13	11	0	0	0	21	15	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	35	0	32	0	0	0	0	14	28	0	0	0	41	20	1	0	0	0
8:00 AM	0	1	0	0	0	0	0	51	0	22	0	0	0	0	14	15	0	0	0	28	15	1	0	0	0
8:15 AM	0	1	0	0	0	1	0	58	0	53	0	2	0	0	24	23	0	0	0	23	19	0	1	1	1
8:30 AM	0	0	0	0	1	0	0	53	0	55	0	0	0	0	25	24	0	0	0	31	33	0	0	0	0

Bank 1																
Time Period					Westbound Old Tecumseh Road				Northbound Brighton Road				Southbound Brighton Road			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	22	0	19	0	0	11	8	0	12	13	0
7:15 AM	0	1	0	0	0	26	0	29	0	1	8	15	0	23	9	1
7:30 AM	0	1	0	0	0	37	0	25	0	0	13	10	0	21	13	0
7:45 AM	0	0	0	0	0	35	0	29	0	0	14	27	0	41	20	1
8:00 AM	0	1	0	0	0	50	0	22	0	0	11	14	0	28	14	1
8:15 AM	0	1	0	0	0	57	0	48	0	0	22	21	0	22	19	0
8:30 AM	0	0	0	0	0	52	0	55	0	0	23	24	0	31	33	0

Bank 4																
Time Period					Westbound Old Tecumseh Road				Northbound Brighton Road				Southbound Brighton Road			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	1	0	2	0	0	1	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0
7:30 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	0
7:45 AM	0	0	0	0	0	0	0	3	0	0	0	1	0	0	0	0
8:00 AM	0	0	0	0	0	1	0	0	0	0	3	1	0	0	1	0
8:15 AM	0	0	0	0	0	1	0	5	0	0	2	2	0	1	0	0
8:30 AM	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0

Turning Movement Count Report

Report Generated Using Turning Movement Count for Android by PortableStudies.com

Study Information

Study Summary	Count Name	Notes	U = U Turn L = Left Turn T = Thru R = Right Turn P1 = Pedestrian Direction 1 P2 = Pedestrian Direction 2 Veh = Total Vehicles for Approach	Peak Hour Volume	
	Brighton Road Traffic Circle			989	
	Location			% Bank 1	% Bank 2
	Brighton Road at Old Tecumseh Road , Not Available			99.3%	0.0%
	Performed By			% Bank 3	% Bank 4
	Adrienne McDonald			0.0%	0.7%
	Date			Pedestrians Volume	
May 30, 2019	18				

Peak Hour Data

Time Period								Westbound Old Tecumseh Road						Northbound Brighton Road						Southbound Brighton Road						Total Vehicles	Total Pedestrians			
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R			P1	P2	Veh
5:00 PM	0	0	0	0	2	2	0	0	58	0	49	1	0	107	0	0	22	66	0	0	88	0	58	34	0	0	1	92	287	6
5:15 PM	0	0	0	1	0	1	1	0	52	0	32	0	0	84	0	0	22	66	0	0	88	0	46	20	1	2	0	67	240	3
5:30 PM	0	0	0	0	4	0	0	0	49	0	28	0	0	77	0	0	26	54	0	0	80	0	39	18	0	4	1	57	214	9
5:45 PM	0	0	0	1	0	0	1	0	58	0	31	0	0	89	0	0	26	72	0	0	98	0	39	21	0	0	0	60	248	0

Vehicle Movement Summary

Movement / Details								Westbound Old Tecumseh Road						Northbound Brighton Road						Southbound Brighton Road						Entire Intersection				
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	Vehicles	Pedestrians
Movement Volume	0	0	0	2	6	3	2	0	217	0	140	1	0	357	0	0	96	258	0	0	354	0	182	93	1	6	2	276	989	18
PHF	-	-	-	0.50	0.38	0.38	0.50	-	0.94	-	0.71	0.25	-	0.83	-	-	0.92	0.90	-	-	0.90	-	0.78	0.68	0.25	0.38	0.50	0.75	0.86	0.50
% Bank 1	0.0%	0.0%	0.0%	100.0%				0.0%	100.0%	0.0%	98.6%				0.0%	0.0%	100.0%	100.0%				0.0%	98.4%	97.8%	100.0%				Need a custom report? Contact: support@portablestudies.com	
% Bank 2	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%					
% Bank 3	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%					
% Bank 4	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	1.4%				0.0%	0.0%	0.0%	0.0%				0.0%	1.6%	2.2%	0.0%					

Combined																									
Time Period							Westbound Old Tecumseh Road						Northbound Brighton Road						Southbound Brighton Road						
	U	L	T	R	P1	P2	U	L	T	R	P1	P2	U	L	T	R	P1	P2	U	L	T	R	P1	P2	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:00 PM	0	0	0	0	2	0	0	52	0	33	0	0	0	0	15	71	1	0	0	39	15	1	1	0	
4:15 PM	0	0	0	0	1	0	0	28	1	40	1	2	0	0	20	64	0	0	0	35	13	0	0	0	
4:30 PM	0	0	0	0	1	2	0	37	0	30	0	1	0	0	23	60	0	0	0	35	15	0	0	0	
4:45 PM	0	0	0	0	0	0	0	55	0	29	1	0	0	0	23	70	0	0	0	41	19	0	0	0	
5:00 PM	0	0	0	0	2	2	0	58	0	49	1	0	0	0	22	66	0	0	0	58	34	0	0	1	
5:15 PM	0	0	0	1	0	1	0	52	0	32	0	0	0	0	22	66	0	0	0	46	20	1	2	0	
5:30 PM	0	0	0	0	4	0	0	49	0	28	0	0	0	0	26	54	0	0	0	39	18	0	4	1	

Bank 1																
Time Period					Westbound Old Tecumseh Road				Northbound Brighton Road				Southbound Brighton Road			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	52	0	33	0	0	14	71	0	38	15	1
4:15 PM	0	0	0	0	0	28	1	40	0	0	20	63	0	35	13	0
4:30 PM	0	0	0	0	0	37	0	30	0	0	23	60	0	35	12	0
4:45 PM	0	0	0	0	0	54	0	29	0	0	23	70	0	41	18	0
5:00 PM	0	0	0	0	0	58	0	48	0	0	22	66	0	55	32	0
5:15 PM	0	0	0	1	0	52	0	32	0	0	22	66	0	46	20	1
5:30 PM	0	0	0	0	0	49	0	27	0	0	26	54	0	39	18	0

Turning Movement Count Report

Report Generated Using Turning Movement Count for Android by PortableStudies.com

Study Information

Study Summary	Count Name	Notes	U = U Turn L = Left Turn T = Thru R = Right Turn P1 = Pedestrian Direction 1 P2 = Pedestrian Direction 2 Veh = Total Vehicles for Approach	Peak Hour Volume	
	Brighton Road Traffic Circles			443	
	Location			% Bank 1	% Bank 2
	Brighton Road at Beach Grove Drive , Not Available			95.3%	0.0%
	Performed By			% Bank 3	% Bank 4
	Bill Marshall			0.0%	4.7%
	Date			Pedestrians Volume	
Thursday, May 30, 2019	11				

Peak Hour Data

Time Period	Eastbound Beach Grove Drive							Northbound Brighton Road							Southbound Brighton Road							Total Vehicles	Total Pedestrians							
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh									
8:00 AM	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2	32	0	0	0	34	0	0	42	0	0	1	42	78	1
8:15 AM	0	1	0	7	1	1	8	0	0	0	0	1	1	0	0	3	73	0	0	0	76	0	0	39	2	0	1	41	125	5
8:30 AM	0	1	0	3	1	0	4	0	0	0	0	1	0	0	0	2	71	0	1	0	73	0	0	48	0	0	0	48	125	3
8:45 AM	0	2	0	7	1	1	9	0	0	0	0	0	0	0	0	8	52	0	0	0	60	0	0	46	0	0	0	46	115	2

Vehicle Movement Summary

Movement / Details	Eastbound Beach Grove Drive							Northbound Brighton Road							Southbound Brighton Road							Entire Intersection								
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	Vehicles	Pedestrians							
Movement Volume	0	4	0	19	3	2	23	0	0	0	0	2	1	0	0	15	228	0	1	0	243	0	0	175	2	0	2	177	443	11
PHF	-	0.50	-	0.68	0.75	0.50	0.64	-	-	-	-	0.50	0.25	-	-	0.47	0.78	-	0.25	-	0.80	-	-	0.91	0.25	-	0.50	0.92	0.89	0.55
% Bank 1	0.0%	100.0%	0.0%	100.0%				0.0%	0.0%	0.0%	0.0%				0.0%	93.3%	93.0%	0.0%				0.0%	0.0%	97.7%	100.0%	Need a custom report? Contact: support@portablestudies.com				
% Bank 2	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%					
% Bank 3	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%					
% Bank 4	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	6.7%	7.0%	0.0%				0.0%	0.0%	2.3%	0.0%					

Combined																									
Time Period	Eastbound Beach Grove Drive												Northbound Brighton Road						Southbound Brighton Road						
	U	L	T	R	P1	P2	U	L	T	R	P1	P2	U	L	T	R	P1	P2	U	L	T	R	P1	P2	
7:00 AM	0	0	0	3	0	0	0	0	0	0	1	0	0	1	29	0	0	0	0	0	23	0	0	0	
7:15 AM	0	0	0	1	0	0	0	0	0	0	1	1	0	2	34	0	0	0	0	0	34	1	0	0	
7:30 AM	0	0	0	4	0	1	0	0	0	0	0	0	0	2	44	0	0	0	0	0	31	0	0	0	
7:45 AM	0	0	0	5	0	0	0	0	0	0	0	0	0	5	39	0	0	0	0	0	57	0	0	0	
8:00 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	2	32	0	0	0	0	0	42	0	0	1	
8:15 AM	0	1	0	7	1	1	0	0	0	0	1	1	0	3	73	0	0	0	0	0	39	2	0	1	
8:30 AM	0	1	0	3	1	0	0	0	0	0	1	0	0	2	71	0	1	0	0	0	48	0	0	0	
8:45 AM	0	2	0	7	1	1	0	0	0	0	0	0	0	8	52	0	0	0	0	0	46	0	0	0	

Bank 1																
Time Period	Eastbound Beach Grove Drive								Northbound Brighton Road				Southbound Brighton Road			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
7:00 AM	0	0	0	3	0	0	0	0	0	1	26	0	0	0	23	0
7:15 AM	0	0	0	1	0	0	0	0	0	2	31	0	0	0	33	1
7:30 AM	0	0	0	4	0	0	0	0	0	2	41	0	0	0	29	0
7:45 AM	0	0	0	5	0	0	0	0	0	5	36	0	0	0	57	0
8:00 AM	0	0	0	2	0	0	0	0	0	2	29	0	0	0	40	0
8:15 AM	0	1	0	7	0	0	0	0	0	2	67	0	0	0	38	2
8:30 AM	0	1	0	3	0	0	0	0	0	2	66	0	0	0	48	0
8:45 AM	0	2	0	7	0	0	0	0	0	8	50	0	0	0	45	0

Bank 4																
Time Period	Eastbound Beach Grove Drive								Northbound Brighton Road				Southbound Brighton Road			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
7:00 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0
8:15 AM	0	0	0	0	0	0	0	0	0	1	6	0	0	0	1	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0

Turning Movement Count Report

Report Generated Using Turning Movement Count for Android by PortableStudies.com

Study Information

Study Summary	Count Name	Notes	U = U Turn L = Left Turn T = Thru R = Right Turn P1 = Pedestrian Direction 1 P2 = Pedestrian Direction 2 Veh = Total Vehicles for Approach	Peak Hour Volume	
	Brighton Road Traffic Circles			508	
	Location			% Bank 1	% Bank 2
	Brighton Road at Beach Grove Drive , Not Available			98.8%	0.0%
	Performed By			% Bank 3	% Bank 4
	Amy Dupuis			0.0%	1.2%
	Date			Pedestrians Volume	
Thursday, May 30, 2019	9				

Peak Hour Data

Time Period	Eastbound Beach Grove Drive							Northbound Brighton Road							Southbound Brighton Road							Total Vehicles	Total Pedestrians							
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh									
4:45 PM	0	1	0	7	0	0	8	0	0	0	0	0	0	0	0	2	57	0	0	0	59	0	0	51	2	1	0	53	120	1
5:00 PM	0	1	0	6	1	0	7	0	0	0	0	1	0	0	0	9	63	0	0	0	72	0	0	73	0	0	0	73	152	2
5:15 PM	0	0	0	7	0	2	7	0	0	0	0	2	0	0	0	4	52	0	0	0	56	0	0	63	1	1	0	64	127	5
5:30 PM	0	1	0	1	0	0	2	0	0	0	0	0	1	0	0	9	44	0	0	0	53	0	0	53	1	0	0	54	109	1

Vehicle Movement Summary

Movement / Details	Eastbound Beach Grove Drive							Northbound Brighton Road							Southbound Brighton Road							Entire Intersection								
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	Vehicles	Pedestrians							
Movement Volume	0	3	0	21	1	2	24	0	0	0	0	3	1	0	0	24	216	0	0	0	240	0	0	240	4	2	0	244	508	9
PHF	-	0.75	-	0.75	0.25	0.25	0.75	-	-	-	-	0.38	0.25	-	-	0.67	0.86	-	-	-	0.83	-	-	0.82	0.50	0.50	-	0.84	0.84	0.45
% Bank 1	0.0%	100.0%	0.0%	100.0%								0.0%	0.0%	0.0%	0.0%								Need a custom report? Contact: support@portablestudies.com							
% Bank 2	0.0%	0.0%	0.0%	0.0%								0.0%	0.0%	0.0%	0.0%															
% Bank 3	0.0%	0.0%	0.0%	0.0%								0.0%	0.0%	0.0%	0.0%															
% Bank 4	0.0%	0.0%	0.0%	0.0%								0.0%	0.0%	0.9%	0.0%															

Combined																									
Time Period	Eastbound Beach Grove Drive												Northbound Brighton Road						Southbound Brighton Road						
	U	L	T	R	P1	P2	U	L	T	R	P1	P2	U	L	T	R	P1	P2	U	L	T	R	P1	P2	
4:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	44	0	0	0	0	0	43	0	0	0	
4:15 PM	0	0	0	3	0	0	0	0	0	0	0	0	0	0	4	57	0	0	1	0	0	39	1	0	0
4:30 PM	0	0	0	3	1	2	0	0	0	0	0	0	0	0	5	48	0	0	0	0	0	50	0	0	0
4:45 PM	0	1	0	7	0	0	0	0	0	0	0	0	0	0	2	57	0	0	0	0	0	51	2	1	0
5:00 PM	0	1	0	6	1	0	0	0	0	0	1	0	0	0	9	63	0	0	0	0	0	73	0	0	0
5:15 PM	0	0	0	7	0	2	0	0	0	0	2	0	0	0	4	52	0	0	0	0	0	63	1	1	0
5:30 PM	0	1	0	1	0	0	0	0	0	0	0	1	0	0	9	44	0	0	0	0	0	53	1	0	0
5:45 PM	0	0	0	3	1	0	0	0	0	0	0	0	0	0	8	57	0	0	1	0	0	51	0	0	2
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0

Turning Movement Count Report

Report Generated Using Turning Movement Count for Android by PortableStudies.com

Study Information

Study Summary	Count Name	Notes	U = U Turn L = Left Turn T = Thru R = Right Turn P1 = Pedestrian Direction 1 P2 = Pedestrian Direction 2 Veh = Total Vehicles for Approach	Peak Hour Volume	
	Brighton Road Traffic Circle			240	
	Location			% Bank 1	% Bank 2
	Brighton Road at Aloha Drive, Not Available			99.2%	0.0%
	Performed By			% Bank 3	% Bank 4
	Liam McDonald			0.0%	0.8%
	Date			Pedestrians Volume	
May 8, 2019	4				

Peak Hour Data

Time Period								Westbound Aloha Drive						Northbound Brighton Road						Southbound Brighton Road						Total Vehicles	Total Pedestrians			
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R			P1	P2	Veh
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	0	0	0	30	0	0	16	0	0	0	16	46	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	29	0	0	0	29	0	0	28	0	1	0	28	59	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	38	0	0	0	38	0	0	33	0	0	0	33	73	0
8:45 AM	0	0	0	0	1	0	0	0	2	0	0	1	0	2	0	0	32	1	0	0	33	0	0	27	0	0	1	27	62	3

Vehicle Movement Summary

Movement / Details								Westbound Aloha Drive						Northbound Brighton Road						Southbound Brighton Road						Entire Intersection				
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	Vehicles	Pedestrians
Movement Volume	0	0	0	0	1	0	0	0	2	0	4	1	0	6	0	0	129	1	0	0	130	0	0	104	0	1	1	104	240	4
PHF	-	-	-	-	0.25	-	-	-	0.25	-	0.50	0.25	-	0.75	-	-	0.85	0.25	-	-	0.86	-	-	0.79	-	0.25	0.25	0.79	0.82	0.33
% Bank 1	0.0%	0.0%	0.0%	0.0%				0.0%	100.0%	0.0%	100.0%				0.0%	0.0%	98.4%	100.0%				0.0%	0.0%	100.0%	0.0%	Need a custom report? Contact: support@portablestudies.com				
% Bank 2	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%					
% Bank 3	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%					
% Bank 4	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	1.6%	0.0%				0.0%	0.0%	0.0%	0.0%					

Combined																									
Time Period							Westbound Aloha Drive						Northbound Brighton Road						Southbound Brighton Road						
	U	L	T	R	P1	P2	U	L	T	R	P1	P2	U	L	T	R	P1	P2	U	L	T	R	P1	P2	
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	15	1	0	0	0	0	9	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	32	2	0	0	0	0	10	0	0	0	
7:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	21	1	0	0	0	0	19	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	2	0	0	0	0	19	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	0	0	0	0	0	16	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	29	0	0	0	0	0	28	0	1	0	
8:30 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	38	0	0	0	0	0	33	0	0	0	
8:45 AM	0	0	0	0	1	0	0	2	0	0	1	0	0	0	32	1	0	0	0	0	27	0	0	1	
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Turning Movement Count Report

Report Generated Using Turning Movement Count for Android by PortableStudies.com

Study Information

Study Summary	Count Name	Notes	U = U Turn L = Left Turn T = Thru R = Right Turn P1 = Pedestrian Direction 1 P2 = Pedestrian Direction 2 Veh = Total Vehicles for Approach	Peak Hour Volume	
	Brighton Road Traffic Circle			285	
	Location			% Bank 1	% Bank 2
	Brighton Road at Aloha Drive, Not Available			99.3%	0.0%
	Performed By			% Bank 3	% Bank 4
	Liam McDonald			0.0%	0.7%
	Date			Pedestrians Volume	
May 8, 2019	4				

Peak Hour Data

Time Period								Westbound Aloha Drive						Northbound Brighton Road						Southbound Brighton Road						Total Vehicles	Total Pedestrians			
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R			P1	P2	Veh
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	30	1	0	0	31	0	1	23	0	0	0	24	55	4
5:15 PM	0	0	0	0	0	0	0	0	1	0	3	0	0	4	0	0	31	3	0	0	34	0	0	40	0	0	0	40	78	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	23	2	0	0	25	0	1	44	0	0	0	45	71	0
5:45 PM	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	41	3	0	0	44	0	0	35	0	0	0	35	81	0

Vehicle Movement Summary

Movement / Details								Westbound Aloha Drive						Northbound Brighton Road						Southbound Brighton Road						Entire Intersection				
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	Vehicles	Pedestrians
Movement Volume	0	0	0	0	0	0	0	0	3	0	4	4	0	7	0	0	125	9	0	0	134	0	2	142	0	0	0	144	285	4
PHF	-	-	-	-	-	-	-	-	0.38	-	0.33	0.25	-	0.44	-	-	0.76	0.75	-	-	0.76	-	0.50	0.81	-	-	-	0.80	0.88	0.25
% Bank 1	0.0%	0.0%	0.0%	0.0%				0.0%	100.0%	0.0%	100.0%				0.0%	0.0%	100.0%	100.0%				0.0%	100.0%	98.6%	0.0%	Need a custom report? Contact: support@portablestudies.com				
% Bank 2	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%					
% Bank 3	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%					
% Bank 4	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	1.4%	0.0%					

Combined																									
Time Period							Westbound Aloha Drive						Northbound Brighton Road						Southbound Brighton Road						
	U	L	T	R	P1	P2	U	L	T	R	P1	P2	U	L	T	R	P1	P2	U	L	T	R	P1	P2	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:00 PM	0	0	0	0	0	0	0	0	3	1	0	0	0	0	19	0	0	0	0	0	18	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	26	1	0	0	0	0	26	0	0	0	
4:30 PM	0	0	0	0	0	0	0	1	0	3	0	0	0	0	37	1	0	0	0	0	31	0	0	0	
4:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	19	1	0	0	0	0	23	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	30	1	0	0	0	1	23	0	0	0	
5:15 PM	0	0	0	0	0	0	0	1	0	3	0	0	0	0	31	3	0	0	0	0	40	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	23	2	0	0	0	1	44	0	0	0	

Bank 1																
Time Period					Westbound Aloha Drive				Northbound Brighton Road				Southbound Brighton Road			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	3	1	0	0	19	0	0	0	18	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	26	1	0	0	26	0
4:30 PM	0	0	0	0	0	1	0	2	0	0	37	1	0	0	31	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	19	1	0	0	23	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	30	1	0	1	22	0
5:15 PM	0	0	0	0	0	1	0	3	0	0	31	3	0	0	40	0
5:30 PM	0	0	0	0	0	0	0	1	0	0	23	2	0	1	44	0

Turning Movement Count Report

Report Generated Using Turning Movement Count for Android by PortableStudies.com

Study Information

Study Summary	Count Name	Notes	U = U Turn L = Left Turn T = Thru R = Right Turn P1 = Pedestrian Direction 1 P2 = Pedestrian Direction 2 Veh = Total Vehicles for Approach	Peak Hour Volume	
	Brighton and Starwood			174	
	Location			% Bank 1	% Bank 2
	Unknown, Not Available			98.3%	0.0%
	Performed By			% Bank 3	% Bank 4
	Liam McDonald			0.0%	1.7%
	Date			Pedestrians Volume	
May 30, 2019	3				

Peak Hour Data

Time Period								Westbound Starwood Lane						Northbound Brighton Road						Southbound Brighton Road						Total Vehicles	Total Pedestrians			
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R			P1	P2	Veh
8:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	27	0	0	2	27	0	0	15	0	0	0	15	43	2
8:30 AM	0	0	0	0	1	0	0	1	1	0	0	0	0	2	0	0	30	0	0	0	30	0	1	23	0	0	0	24	56	1
8:45 AM	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	35	1	0	0	36	0	1	23	0	0	0	24	62	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	5	0	0	0	5	0	0	7	0	0	0	7	13	0

Vehicle Movement Summary

Movement / Details								Westbound Starwood Lane						Northbound Brighton Road						Southbound Brighton Road						Entire Intersection				
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	Vehicles	Pedestrians
Movement Volume	0	0	0	0	1	0	0	1	3	0	2	0	0	6	0	0	97	1	0	2	98	0	2	68	0	0	0	70	174	3
PHF	-	-	-	-	0.25	-	-	0.25	0.38	-	0.50	-	-	0.75	-	-	0.69	0.25	-	0.25	0.68	-	0.50	0.74	-	-	-	0.73	0.70	0.38
% Bank 1	0.0%	0.0%	0.0%	0.0%				100.0%	100.0%	0.0%	50.0%				0.0%	0.0%	99.0%	100.0%				0.0%	100.0%	98.5%	0.0%				Need a custom report? Contact: support@portablestudies.com	
% Bank 2	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%					
% Bank 3	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%					
% Bank 4	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	50.0%				0.0%	0.0%	1.0%	0.0%				0.0%	0.0%	1.5%	0.0%					

Turning Movement Count Report

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Study Information

Study Summary	Count Name	Notes	U = U Turn L = Left Turn T = Thru R = Right Turn P1 = Pedestrian Direction 1 P2 = Pedestrian Direction 2 Veh = Total Vehicles for Approach	Peak Hour Volume	
	Brighton and Starwood			334	
	Location			% Bank 1	% Bank 2
	Unknown, Not Available			99.1%	0.0%
	Performed By			% Bank 3	% Bank 4
	Liam McDonald			0.0%	0.9%
	Date			Pedestrians Volume	
May 30, 2019	5				

Peak Hour Data

Time Period								Westbound Starwood Lane						Northbound Brighton Road						Southbound Brighton Road						Total Vehicles	Total Pedestrians			
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R			P1	P2	Veh
5:00 PM	0	0	0	0	0	0	0	1	3	0	1	3	0	5	0	0	38	0	0	0	38	0	0	35	0	0	0	35	78	3
5:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	49	1	0	0	50	0	1	58	1	0	0	60	110	1
5:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	37	0	0	0	37	0	1	29	0	0	0	30	68	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	35	4	0	0	41	0	1	35	1	0	0	37	78	0

Vehicle Movement Summary

Movement / Details								Westbound Starwood Lane						Northbound Brighton Road						Southbound Brighton Road						Entire Intersection				
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	Vehicles	Pedestrians
Movement Volume	0	0	0	0	0	1	0	1	4	0	1	3	1	6	0	2	159	5	0	0	166	0	3	157	2	0	0	162	334	5
PHF	-	-	-	-	-	0.25	-	0.25	0.33	-	0.25	0.25	0.25	0.30	-	0.25	0.81	0.31	-	-	0.83	-	0.75	0.68	0.50	-	-	0.68	0.76	0.42
% Bank 1	0.0%	0.0%	0.0%	0.0%				100.0%	100.0%	0.0%	100.0%				0.0%	100.0%	99.4%	100.0%				0.0%	100.0%	98.7%	100.0%				Need a custom report? Contact: support@portablestudies.com	
% Bank 2	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%					
% Bank 3	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%					
% Bank 4	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.6%	0.0%				0.0%	0.0%	1.3%	0.0%					

Combined																									
Time Period																									
	U	L	T	R	P1	P2	U	L	T	R	P1	P2	U	L	T	R	P1	P2	U	L	T	R	P1	P2	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	22	0	0	0	0	0	0	23	0	0	0
4:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	43	1	0	0	0	0	2	32	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	1	0	0	0	0	1	26	0	0	0
4:45 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	1	28	3	0	0	0	0	2	28	0	0	0
5:00 PM	0	0	0	0	0	0	1	3	0	1	3	0	0	0	38	0	0	0	0	0	0	35	0	0	0
5:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	49	1	0	0	0	0	1	58	1	0	0
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	37	0	0	0	0	0	1	29	0	0	0

Bank 1																
Time Period																
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	1	22	0	0	0	23	0
4:15 PM	0	0	0	0	0	1	0	0	0	0	43	1	0	2	32	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	15	1	0	1	24	0
4:45 PM	0	0	0	1	0	0	0	0	0	1	28	3	0	2	27	0
5:00 PM	0	0	0	0	1	3	0	1	0	0	38	0	0	0	34	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	48	1	0	1	57	1
5:30 PM	0	0	0	0	0	1	0	0	0	0	37	0	0	1	29	0

Turning Movement Count Report

Report Generated Using Turning Movement Count for Android by PortableStudies.com

Study Information

Study Summary	Count Name	Notes	U = U Turn L = Left Turn T = Thru R = Right Turn P1 = Pedestrian Direction 1 P2 = Pedestrian Direction 2 Veh = Total Vehicles for Approach	Peak Hour Volume	
	Brighton Road Traffic Circle			364	
	Location			% Bank 1	% Bank 2
	Brighton Road at Southwind Crescent , Not Available			96.7%	0.0%
	Performed By			% Bank 3	% Bank 4
	Kayla/Adrienne McDonald			0.0%	3.3%
	Date			Pedestrians Volume	
May 8, 2019	4				

Peak Hour Data

Time Period								Westbound Southwind Crescent						Northbound Brighton Road						Southbound Brighton Road						Total Vehicles	Total Pedestrians			
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R			P1	P2	Veh
8:00 AM	0	0	0	0	0	0	0	0	1	0	1	0	0	2	0	0	42	1	0	0	43	0	1	27	0	0	0	28	73	0
8:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	2	1	0	0	52	2	0	0	54	0	1	39	0	0	0	40	95	2
8:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	1	1	0	0	59	2	0	0	61	0	0	48	0	0	0	48	110	2
8:45 AM	0	0	0	0	0	0	0	0	3	0	3	0	0	6	0	0	44	3	0	0	47	0	1	31	1	0	0	33	86	0

Vehicle Movement Summary

Movement / Details								Westbound Southwind Crescent						Northbound Brighton Road						Southbound Brighton Road						Entire Intersection				
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	Vehicles	Pedestrians
Movement Volume	0	0	0	0	0	0	0	0	5	1	4	1	3	10	0	0	197	8	0	0	205	0	3	145	1	0	0	149	364	4
PHF	-	-	-	-	-	-	-	-	0.42	0.25	0.33	0.25	0.38	0.42	-	-	0.83	0.67	-	-	0.84	-	0.75	0.76	0.25	-	-	0.78	0.83	0.50
% Bank 1	0.0%	0.0%	0.0%	0.0%				0.0%	100.0%	100.0%	100.0%				0.0%	0.0%	94.4%	100.0%				0.0%	66.7%	100.0%	100.0%					
% Bank 2	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%					
% Bank 3	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%					
% Bank 4	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	5.6%	0.0%				0.0%	33.3%	0.0%	0.0%					

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Combined																									
Time Period							Westbound Southwind Crescent						Northbound Brighton Road						Southbound Brighton Road						
	U	L	T	R	P1	P2	U	L	T	R	P1	P2	U	L	T	R	P1	P2	U	L	T	R	P1	P2	
7:00 AM	0	1	0	0	0	0	0	1	0	0	0	0	0	0	31	0	0	0	0	0	13	0	0	0	
7:15 AM	0	0	0	1	0	0	0	0	0	0	1	1	0	0	37	2	0	0	0	1	19	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	35	0	0	0	0	0	27	0	0	0	
7:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	43	0	0	0	0	0	32	0	0	0	
8:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	42	1	0	0	0	1	27	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	1	0	0	2	0	0	52	2	0	0	0	1	39	0	0	0	
8:30 AM	0	0	0	0	0	0	0	1	0	0	1	1	0	0	59	2	0	0	0	0	48	0	0	0	
8:45 AM	0	0	0	0	0	0	0	3	0	3	0	0	0	0	44	3	0	0	0	1	31	1	0	0	
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Turning Movement Count Report

Report Generated Using Turning Movement Count for Android by PortableStudies.com

Study Information

Study Summary	Count Name	Notes	U = U Turn L = Left Turn T = Thru R = Right Turn P1 = Pedestrian Direction 1 P2 = Pedestrian Direction 2 Veh = Total Vehicles for Approach	Peak Hour Volume	
	Brighton Road Traffic Circle			458	
	Location			% Bank 1	% Bank 2
	Brighton Road at Southwind Crescent , Not Available			98.5%	0.0%
	Performed By			% Bank 3	% Bank 4
	Kayla/Adrienne McDonald			0.0%	1.5%
	Date			Pedestrians Volume	
May 8, 2019	17				

Peak Hour Data

Time Period								Westbound Southwind Crescent						Northbound Brighton Road						Southbound Brighton Road						Total Vehicles	Total Pedestrians			
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R			P1	P2	Veh
5:00 PM	0	0	0	1	1	0	1	0	1	0	3	1	1	4	0	0	64	2	0	0	66	0	1	59	0	0	0	60	131	3
5:15 PM	0	0	0	1	0	1	1	0	2	0	1	7	2	3	0	0	53	3	0	0	56	0	0	55	0	0	0	55	115	10
5:30 PM	0	0	0	0	0	0	0	0	4	0	3	1	1	7	0	0	35	0	0	0	35	0	1	77	0	0	0	78	120	2
5:45 PM	0	0	1	0	1	0	1	0	2	0	2	0	1	4	0	1	42	2	0	0	45	0	4	38	0	0	0	42	92	2

Vehicle Movement Summary

Movement / Details								Westbound Southwind Crescent						Northbound Brighton Road						Southbound Brighton Road						Entire Intersection				
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	Vehicles	Pedestrians
Movement Volume	0	0	1	2	2	1	3	0	9	0	9	9	5	18	0	1	194	7	0	0	202	0	6	229	0	0	0	235	458	17
PHF	-	-	0.25	0.50	0.50	0.25	0.75	-	0.56	-	0.75	0.32	0.63	0.64	-	0.25	0.76	0.58	-	-	0.77	-	0.38	0.74	-	-	-	0.75	0.87	0.43
% Bank 1	0.0%	0.0%	100.0%	100.0%				0.0%	100.0%	0.0%	100.0%				0.0%	100.0%	98.5%	100.0%				0.0%	100.0%	98.3%	0.0%	Need a custom report? Contact: support@portablestudies.com				
% Bank 2	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%					
% Bank 3	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%					
% Bank 4	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	1.5%	0.0%				0.0%	0.0%	1.7%	0.0%					

Combined																									
Time Period							Westbound Southwind Crescent						Northbound Brighton Road						Southbound Brighton Road						
	U	L	T	R	P1	P2	U	L	T	R	P1	P2	U	L	T	R	P1	P2	U	L	T	R	P1	P2	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:00 PM	0	0	0	0	1	0	0	0	0	3	1	0	0	0	55	2	0	0	0	1	52	0	0	0	
4:15 PM	0	0	0	0	0	0	0	2	0	0	0	1	0	0	38	1	0	0	0	2	44	0	0	0	
4:30 PM	0	0	0	0	0	0	0	1	0	1	5	1	0	0	44	1	0	0	0	2	53	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	3	1	0	0	35	1	0	0	0	0	48	0	0	0	
5:00 PM	0	0	0	1	1	0	0	1	0	3	1	1	0	0	64	2	0	0	0	1	59	0	0	0	
5:15 PM	0	0	0	1	0	1	0	2	0	1	7	2	0	0	53	3	0	0	0	0	55	0	0	0	
5:30 PM	0	0	0	0	0	0	0	4	0	3	1	1	0	0	35	0	0	0	0	1	77	0	0	0	

Bank 1																
Time Period					Westbound Southwind Crescent				Northbound Brighton Road				Southbound Brighton Road			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	3	0	0	54	2	0	1	52	0
4:15 PM	0	0	0	0	0	2	0	0	0	0	38	1	0	2	44	0
4:30 PM	0	0	0	0	0	1	0	1	0	0	44	1	0	2	53	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	35	1	0	0	45	0
5:00 PM	0	0	0	1	0	1	0	3	0	0	63	2	0	1	57	0
5:15 PM	0	0	0	1	0	2	0	1	0	0	52	3	0	0	55	0
5:30 PM	0	0	0	0	0	4	0	3	0	0	34	0	0	1	76	0

Bank 4																
Time Period					Westbound Southwind Crescent				Northbound Brighton Road				Southbound Brighton Road			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0

Appendix G

Synchro Analysis Worksheets

Intersection			
Intersection Delay, s/veh	6.0		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	263	307	377
Demand Flow Rate, veh/h	283	327	383
Vehicles Circulating, veh/h	110	147	214
Vehicles Exiting, veh/h	487	246	260
Ped Vol Crossing Leg, #/h	0	3	4
Ped Cap Adj	1.000	1.000	0.999
Approach Delay, s/veh	5.2	5.8	6.8
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	283	327	383
Cap Entry Lane, veh/h	1233	1188	1109
Entry HV Adj Factor	0.929	0.938	0.984
Flow Entry, veh/h	263	307	377
Cap Entry, veh/h	1146	1114	1091
V/C Ratio	0.229	0.275	0.345
Control Delay, s/veh	5.2	5.8	6.8
LOS	A	A	A
95th %tile Queue, veh	1	1	2

Intersection

Intersection Delay, s/veh

Intersection LOS B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	197	162	77	90	123	87
Future Vol, veh/h	197	162	77	90	123	87
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	2	5	9	4	1	1
Mvmt Flow	235	193	92	107	146	104
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	11.6	10.4	11.8
HCM LOS	B	B	B

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	59%
Vol Thru, %	46%	0%	0%	41%
Vol Right, %	54%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	167	197	162	210
LT Vol	0	197	0	123
Through Vol	77	0	0	87
RT Vol	90	0	162	0
Lane Flow Rate	199	235	193	250
Geometry Grp	2	7	7	2
Degree of Util (X)	0.289	0.407	0.273	0.379
Departure Headway (Hd)	5.24	6.251	5.09	5.452
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	688	577	706	663
Service Time	3.249	3.976	2.815	3.459
HCM Lane V/C Ratio	0.289	0.407	0.273	0.377
HCM Control Delay	10.4	13.2	9.7	11.8
HCM Lane LOS	B	B	A	B
HCM 95th-tile Q	1.2	2	1.1	1.8

Intersection			
Intersection Delay, s/veh	5.5		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	353	277	309
Demand Flow Rate, veh/h	358	279	316
Vehicles Circulating, veh/h	111	218	120
Vehicles Exiting, veh/h	325	251	377
Ped Vol Crossing Leg, #/h	1	5	0
Ped Cap Adj	1.000	0.999	1.000
Approach Delay, s/veh	5.6	5.6	5.4
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	358	279	316
Cap Entry Lane, veh/h	1232	1105	1221
Entry HV Adj Factor	0.986	0.994	0.977
Flow Entry, veh/h	353	277	309
Cap Entry, veh/h	1215	1098	1193
V/C Ratio	0.291	0.253	0.259
Control Delay, s/veh	5.6	5.6	5.4
LOS	A	A	A
95th %tile Queue, veh	1	1	1

Intersection

Intersection Delay, s/veh 13.9

Intersection LOS B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	217	140	96	258	182	93
Future Vol, veh/h	217	140	96	258	182	93
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	0	1	0	0	2	2
Mvmt Flow	252	163	112	300	212	108
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Lane	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	13.9	15.6	15.3
HCM LOS	B	C	C

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	66%
Vol Thru, %	27%	0%	0%	34%
Vol Right, %	73%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	354	217	140	275
LT Vol	0	217	0	182
Through Vol	96	0	0	93
RT Vol	258	0	140	0
Lane Flow Rate	412	252	163	320
Geometry Grp	2	7	7	2
Degree of Util (X)	0.594	0.486	0.259	0.523
Departure Headway (Hd)	5.191	6.936	5.733	5.883
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	692	520	625	611
Service Time	3.243	4.688	3.485	3.937
HCM Lane V/C Ratio	0.595	0.485	0.261	0.524
HCM Control Delay	15.6	16.1	10.5	15.3
HCM Lane LOS	C	C	B	C
HCM 95th-tile Q	3.9	2.6	1	3

Intersection			
Intersection Delay, s/veh	6.9		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	303	354	441
Demand Flow Rate, veh/h	326	378	448
Vehicles Circulating, veh/h	137	169	246
Vehicles Exiting, veh/h	557	294	301
Ped Vol Crossing Leg, #/h	0	3	4
Ped Cap Adj	1.000	1.000	0.999
Approach Delay, s/veh	5.8	6.5	7.9
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	326	378	448
Cap Entry Lane, veh/h	1200	1161	1074
Entry HV Adj Factor	0.929	0.937	0.984
Flow Entry, veh/h	303	354	441
Cap Entry, veh/h	1115	1087	1055
V/C Ratio	0.272	0.326	0.417
Control Delay, s/veh	5.8	6.5	7.9
LOS	A	A	A
95th %tile Queue, veh	1	1	2

Intersection

Intersection Delay, s/veh	13.1
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	235	192	89	105	142	100
Future Vol, veh/h	235	192	89	105	142	100
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	2	5	9	4	1	1
Mvmt Flow	280	229	106	125	169	119
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	13.5	11.6	13.5
HCM LOS	B	B	B

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	59%
Vol Thru, %	46%	0%	0%	41%
Vol Right, %	54%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	194	235	192	242
LT Vol	0	235	0	142
Through Vol	89	0	0	100
RT Vol	105	0	192	0
Lane Flow Rate	231	280	229	288
Geometry Grp	2	7	7	2
Degree of Util (X)	0.354	0.504	0.338	0.457
Departure Headway (Hd)	5.516	6.491	5.328	5.713
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	651	557	674	631
Service Time	3.553	4.222	3.058	3.747
HCM Lane V/C Ratio	0.355	0.503	0.34	0.456
HCM Control Delay	11.6	15.7	10.8	13.5
HCM Lane LOS	B	C	B	B
HCM 95th-tile Q	1.6	2.8	1.5	2.4

Intersection			
Intersection Delay, s/veh	6.3		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	407	335	361
Demand Flow Rate, veh/h	412	337	370
Vehicles Circulating, veh/h	134	251	138
Vehicles Exiting, veh/h	374	295	450
Ped Vol Crossing Leg, #/h	1	5	0
Ped Cap Adj	1.000	0.999	1.000
Approach Delay, s/veh	6.3	6.5	6.0
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	412	337	370
Cap Entry Lane, veh/h	1204	1068	1199
Entry HV Adj Factor	0.988	0.994	0.976
Flow Entry, veh/h	407	335	361
Cap Entry, veh/h	1189	1061	1170
V/C Ratio	0.342	0.316	0.309
Control Delay, s/veh	6.3	6.5	6.0
LOS	A	A	A
95th %tile Queue, veh	2	1	1

Intersection

Intersection Delay, s/veh 21
Intersection LOS C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	255	166	110	312	219	107
Future Vol, veh/h	255	166	110	312	219	107
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	0	1	0	0	2	2
Mvmt Flow	297	193	128	363	255	124
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	17.5	24.3	21.1
HCM LOS	C	C	C

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	67%
Vol Thru, %	26%	0%	0%	33%
Vol Right, %	74%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	422	255	166	326
LT Vol	0	255	0	219
Through Vol	110	0	0	107
RT Vol	312	0	166	0
Lane Flow Rate	491	297	193	379
Geometry Grp	2	7	7	2
Degree of Util (X)	0.76	0.608	0.331	0.664
Departure Headway (Hd)	5.576	7.378	6.17	6.309
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	643	486	579	569
Service Time	3.659	5.161	3.951	4.396
HCM Lane V/C Ratio	0.764	0.611	0.333	0.666
HCM Control Delay	24.3	21.1	12	21.1
HCM Lane LOS	C	C	B	C
HCM 95th-tile Q	7	4	1.4	4.9