

# 1869 Maple Grove Road

## Transportation Impact Assessment

**Type of Document**  
Final Report

**Project Number**  
OTT-00254810-A0

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**Date Submitted**  
April 6, 2020  
*Revised: September 25<sup>th</sup>, 2020*





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10886378 Canada Inc.

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**Approved By:**

A handwritten signature in blue ink, appearing to read "Aly Elgayar".

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**Date + Time Submitted:**

April 6<sup>th</sup>, 2020

*Revised: September 25<sup>th</sup>, 2020*

## Legal Notification

This report was prepared by EXP Services Inc. for the account of **10886378 Canada Inc.**

Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. EXP Services Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this project.

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## 1. Screening Forms

A Traffic Impact Assessment (TIA) screening form for the proposed development was completed by Foteen and submitted on July 19, 2019. A copy of the completed screening form is attached to this report as Appendix A.

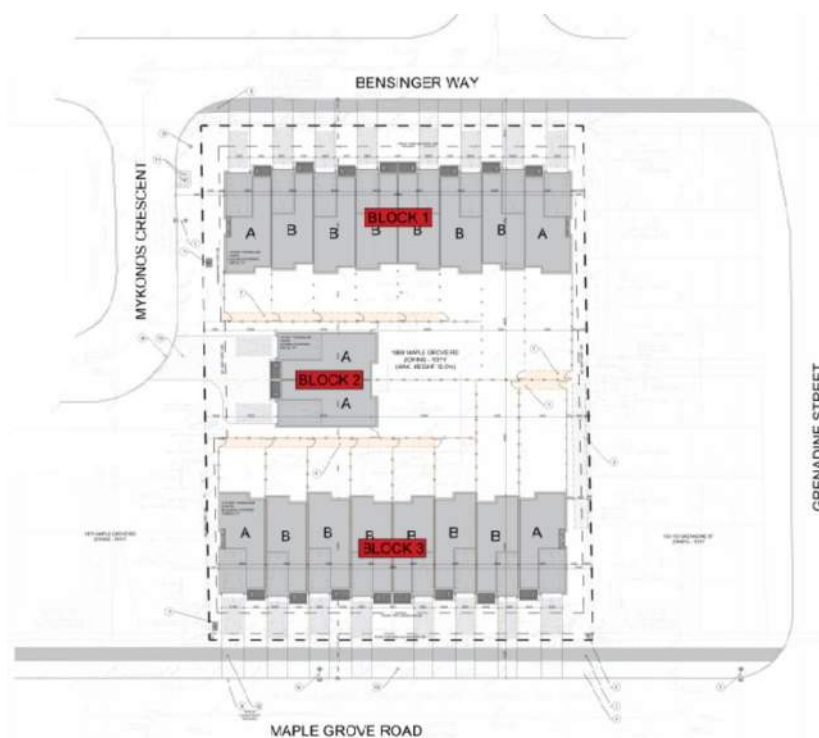
During the pre-consultation meeting and through communications with the City, a Traffic Impact Assessment (TIA) is required in order to review community concerns with on-street parking in the area. The City acknowledges that the review of the Maple Grove Road and Huntmar Road intersection has been the focus of several TIA studies in recent years. Given the modest nature of the development, the scope of the TIA is limited to the background network travel demand (Module 3.2) and to the design review components (Modules 4.1 and 4.3). The network analysis components (Modules 3.1, 3.3 and 4.5-4.9) and the parking and access intersections design review (Modules 4.2 and 4.4) have been excluded.

## 2. Scope

### 2.1 Existing and Planned Conditions

#### 2.1.1 Proposed Development

10886378 Canada Inc. is proposing a residential development consisting of 18 townhouse units, 8 traditional townhouses fronting on Bensinger Way, 8 traditional townhouses fronting on Maple Grove Road and 2 semi-detached townhouses fronting on Mykonos Crescent. Refer to Figure 1 for the Site plan and Appendix B for the full-size Site plan.



**Figure 1 – Site Plan**

The proposed residential development allocates 32 parking spaces for the traditional townhouses (16 residential, 16 visitor) and 4 parking spaces for the semi-detached townhouses (2 residential, 2 visitor).

The proposed residential development is in a General Urban Area (section 3.6.1) of the Official Plan. The property currently is occupied by a 1-storey single-detached dwelling and is zoned as DR – Development Reserve Zone. The property will undergo Major Zoning By-law Amendment to be rezoned as R3 – Residential Third Density Zone (subzone YY) for the development.

The zone R3 – Residential Third Density Zone (subzone YY) permits semi-detached and townhouse dwellings as detailed in Part 5, Section 138 of the Zoning By-Law. Additional applicable planning regulations are noted as By-Laws 2010-307, 2012-334 and 2014-189.

The proposed 18 residential units (2 semi-detached townhouses and 16 traditional townhouses) will be constructed in a single phase with expected occupancy to be in 2022.

The proposed development is arranged with all units to be freehold residential units on existing public streets, namely Maple Grove Road, Bensinger Way and Mykonos Crescent. The 16 traditional townhouses fronting on Maple Grove Road and Bensinger Way will be provided direct pedestrian access to the existing sidewalks on the boundary streets.

### 2.1.2 Existing Conditions

The following boundary roads are adjacent to the proposed development:

- **Maple Grove Road** is classified as a collector road west of the intersection of Huntmar Drive and Maple Grove Road (TMP Map 6, 2015 Revision). The road is under the jurisdiction of the City of Ottawa with a 2-lane, 2-way, undivided cross-section. The posted speed limit is 50 km/h west of Huntmar Drive.
- **Bensinger Way** is a local road under the jurisdiction of the City of Ottawa with a two-lane, two-way, undivided cross-section. A speed limit is not posted along the road; however, the posted speed limit for surrounding roads within the neighborhood is predominantly 40 km/h.
- **Mykonos Crescent** is a local road under the jurisdiction of the City of Ottawa with a two-lane, two-way, undivided cross-section. A speed limit is not posted along the road; however, the posted speed limit for surrounding roads within the neighborhood is predominantly 40 km/h.
- **Grenadine Street** is a local road under the jurisdiction of the City of Ottawa with a two-lane, two-way, undivided cross-section. A 40 km/hr. speed limit is posted along the road.

Huntmar Drive is classified as an arterial road north of and as a major collector south of the intersection of Huntmar Drive and Maple Grove Road (TMP Map 6, 2015 Revision). The road is under the jurisdiction of the City of Ottawa with a two-lane, two-way, undivided cross-section north of and divided cross-section south of the intersection of Huntmar Drive and Maple Grove Road. The posted speed limit is 50 km/h.

Huntmar Drive and Maple Grove Road is a signalized intersection with a left-turn auxiliary lane only on the south approach of Huntmar Drive. Bensinger Way and Mykonos Crescent is a three-leg, one-way, stop controlled intersection. The intersection of Bensinger Way and Grenadine Street is a stop controlled 3 leg intersection, as is the intersection of Grenadine Street and Maple Grove Road. Refer to Figure 2 for the existing control and lane configuration at each intersection.

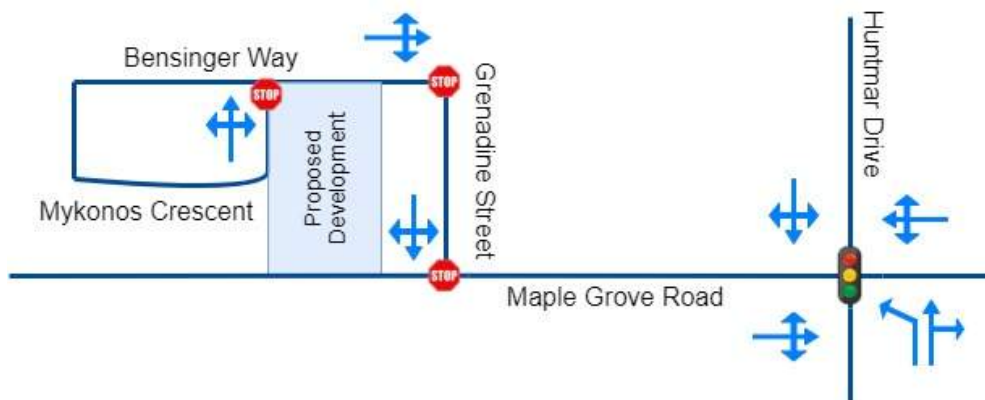
Several driveways exist within 200m of the proposed development on both sides of Maple Grove Road, Bensinger Way and Mykonos Crescent. Opposite of the proposed residential units fronting on Maple Grove Road is a driveway to an existing hydro substation. The remainder of individual driveways serve various residential dwelling types.

On-street painted cycle lanes are not provided on either side of the boundary roads adjacent to the proposed development or Huntmar Drive. Sidewalks abut Maple Grove Road on both sides, Bensinger Way on the south side and Mykonos on the north side. Sidewalks abut Huntmar Drive on both sides south of and are not provided north of the intersection of Huntmar Drive and Maple Grove Road.

There are currently two (2) OC Transpo bus routes that provide service within the study area. Stop 1300 and 1301 are located on Maple Grove Road within 300m of the proposed development.

- **Route 162** provides bus service from Fernbank Road to the Terry Fox Station via the Tanger Outlet Mall. The route has bus stops located along Maple Grove Road from Santolina Street to Huntmar Drive. The service does not operate during peak-periods and operates during off-peak hours with 60-minute intervals. All-day service is offered on Saturdays with 20-minute intervals. Service is not offered on Sundays.

- **Routes 261** are peak-only connection routes which travel from Stittsville Main directly to Tunney's Pasture via Huntmar Drive, Highway 417, and the Transitway. The route provides weekday service with approximately 20 to 30-minute intervals and does not operate on the weekend.



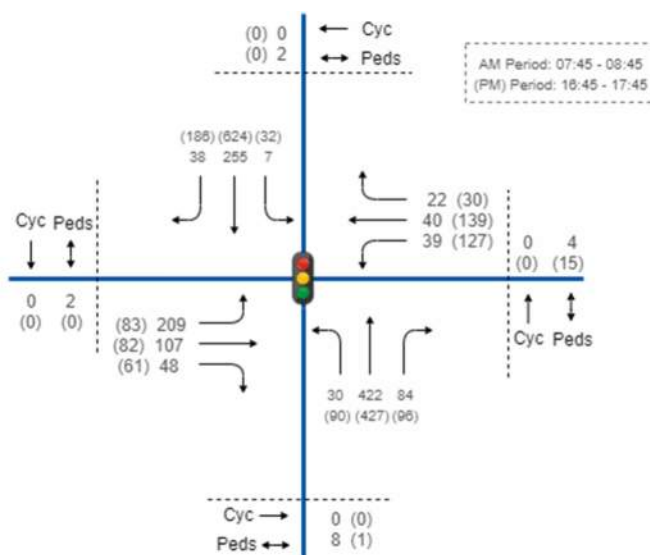
**Figure 2 – Existing Traffic Control and Lane Configuration**

An examination of the existing traffic management measures was completed by completing a site visit and through the use of Street View in Google Earth to assess the study area. The following existing traffic management measures were identified within the study area:

- Information signage indicating that the direction has “Limited Sight Distance” and the speed is reduced to 40 km/h is located at the intersection of Maple Grove Road and Grenadine Street, along the north bound direction of Maple Grove Road.
- Information signage indicating that the area has been designated as a “Traffic Calmed Neighbourhood” is located on the east side of Maple Grove Road, north of Montserrat Street/Warmstone Drive.
- Flexible traffic separator stakes are provided as vertical centerline treatment along Maple Grove Road between Montserrat Street/Warmstone Drive and Alon Street.
- Gateway speed limit signs and speed display signs are present throughout the study area,

The existing peak hour travel demands (by mode) at the signalized intersection of Maple Grove Road and Huntmar Drive are shown in Figure 3. The demands were obtained from a City of Ottawa traffic count conducted in November 2017 (attached as Appendix C). While the observed active transportation mode split is very low, it is noted that these counts were taken in the fall and the mode split may change during warmer weather.





**Figure 3 – Existing Peak Hour Travel Demands by Mode**

A review of the historical collision data is provided. The most recent five (5) years of collision data for the Huntmar Drive and Maple Grove Road intersection was requested; however, the data provided by the City of Ottawa spanned from January 2014 to December 2018. Nineteen (19) collisions occurred at the subject intersection within the time period the provided data spans, which is an average of 4.75 collisions per year. Thirteen (13) of these collisions were rear end collisions, two (2) were angle collisions, two (2) were turning movement collisions, and two (2) were Single Motor Vehicle (SMV) collisions where vehicles were travelling east or west along Maple Grove Road or north or south along Huntmar Drive. One of the collisions was classified as non-fatal injury while the rest were classified as property damage only. The detailed collisions report is provided in Appendix D.

The City requires a safety review to be conducted if at least six (6) collisions have occurred for any one movement or of a discernible pattern over a five (5) year period. A review of the thirteen (13) rear end collisions indicates that:

- Five (5) of the collisions occurred during adverse environmental conditions such as rain, freezing rain and snow.
- Two (2) of the collisions occurred during the PM peak hour.

Most of the collisions occurred either during the PM peak hour or during adverse environmental conditions. Thus, it should be noted that the occurrence of the collisions was most likely due to inclement weather and not necessarily a result of the intersection design.

### 2.1.3 Planned Conditions

A review of the Transportation Mater Plan (TMP) Map 10 (Road Network – 2031 Concept) and Map 11 (Road Network – 2031 Affordable Network) identified the future road modifications that may impact the study area traffic. The noted road modification projects are as follows:

- Widening of Huntmar Drive between Campeau Drive and Maple Grove Road (2026-2031).
- Widening of Maple Grove Road between Terry Fox Drive and Huntmar Drive (Concept 2031).
- Realignment of Palladium Road to a proposed north-south arterial road near Huntmar Drive (2020-2025).
- Proposed north south arterial road between Fernbank Road and Palladium Road (2020-2025).

- Proposed Stittsville Main Street extension to connect to the north south arterial road continuing to Palladium Road (2026-2031).

The proposed north south arterial road between Fernbank Road and Palladium Road will be a transit priority corridor (isolated measures) with park and ride facilities at select intersections along the arterial. Hazeldean Road is a proposed transit priority corridor (isolated measures) as per Map 5 (Rapid Transit and Transit Priority Network - 2031 Affordable Network).

It is our understanding that there are three (3) proposed developments within approximately one kilometer of the site, which are currently under construction, approved or in the approval process. The first development is located at 1919 Maple Grove Road and is a property of approximately 6.1 hectares proposing the development of 79 townhouses/semi-detached residential units and 440 apartment units. The second development is located at 1981 Maple Grove Road and is a property of approximately 7.7 hectares proposing the development of 139 townhouses/semi-detached residential units and 57 single family homes. The third mixed-use development is located at 195 Huntmar Drive and is proposing the development of 155 single detached and 418 townhouses residential units, two car dealerships with an approximate building size of 4,000 m<sup>2</sup> per dealership, and a 41,948 m<sup>2</sup> office building.

Based upon the size and nature of these developments, we expect that the additional site traffic can be accommodated by the infrastructure required to support these other planned developments.

## 2.2 Study Area and Time Periods

### 2.2.1 Study Area

We propose that the study area to be the boundary streets (i.e. Bensinger Way and Mykonos Crescent) and should include the intersection of Huntmar Drive and Maple Grove Road as highlighted in Figure 4.



**Figure 4 – Study Area**

### 2.2.2 Time Periods

It is expected that the proposed residential development will generate peak traffic in the weekday AM and PM peak periods.

### 2.2.3 Horizon Years

The proposed residential development of 18 units is anticipated to generate a relatively small number of trips. Therefore, it is proposed to analyze only the full build-out year of the development (2021).

## 2.3 Exemptions Review

Based upon Table 4 in the City of Ottawa TIA Guidelines, the following exemptions apply to the proposed development:

- Module 3.1 – Development generated Travel Demand is not required for sites that do not meet the trip generation trigger;
- Module 3.3 – Demand Rationalization is only required when the existing network cannot support the future vehicle volumes, which is not the case for this proposed development;
- Modules 4.1 and 4.2 – As the modules are only required for site plans or for new street networks, which are not the cases for the proposed development as it is a plan of subdivision and new roads are not proposed; and
- Modules 4.5 – 4.9 – As the Trip Generation Trigger was not satisfied, the Traffic Impact Assessment is exempt from the Network Impact Component.

A discussion on the parking supply is provided in section 4.2.1 to address the parking concerns as indicated by the City of Ottawa.

### 3. Forecasting

#### 3.4 Exemptions Review

##### 3.2.1 Transportation Network Plans

As outlined in Section 2.1.3 – Planned Conditions, Map 10 (Road Network – 2031 Concept) and Map 11 (Road Network – 2031 Affordable Network) of the TMP identified the widening of Huntmar Drive and Maple Grove Road, realignment of Palladium Road, construction of a new arterial road between Palladium Road and Fernbank Road, and the extension of Stittsville Main Street. Refer to section 2.1.3.

The proposed north south arterial road between Fernbank Road and Palladium Road will be a transit priority corridor (isolated measures) with park and ride facilities at select intersections along the arterial as per Map 5 (Rapid Transit and Transit Priority Network - 2031 Affordable Network).

##### 3.2.2 Background Growth

Based upon the size of the proposed development, we expect that the traffic impact from the proposed development will be negligible compared to the existing traffic at the Huntmar Drive and Maple Grove Road intersection as outlined in Tables 1, 2 and 3 and Figure 4 (below). The estimated trip generation and distribution calculations were completed for full build-out of the development expected in 2021.

**Table 1 – Estimated Trip Generation (ITE 10th Edition)**

ITE Land Use	Size	Period	Rate	Total Trips	Entering		Exiting	
#220 Multi-Family Housing (Low Rise)	18 units	AM Peak	0.46	8	23%	2	77%	6
		PM Peak	0.56	10	63%	6	37%	4

**Table 2 – Estimated Mode Split Person – Trip Rate Generation**

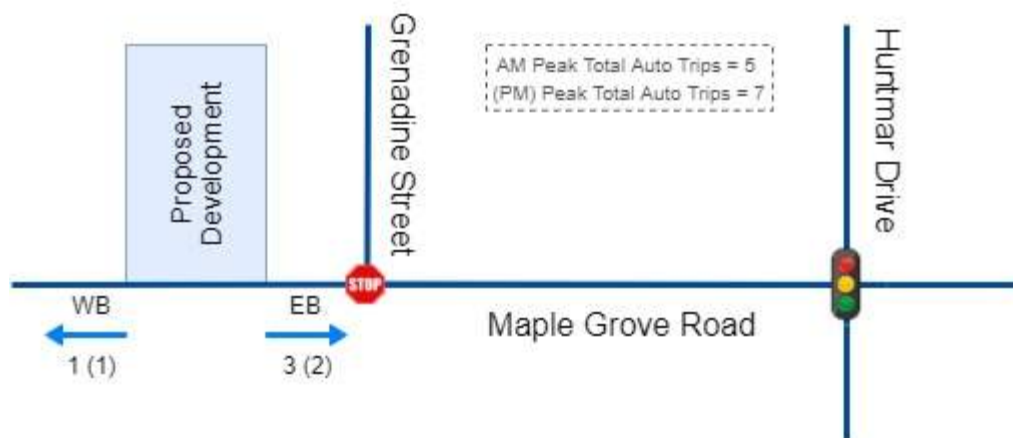
Travel Mode	Proposed Site Mode Share Targets (AM Peak Hour)			Proposed Site Mode Share Targets (PM Peak Hour)		
	Mode Share Target	Vehicle-Trip Rate (ITE)	Person-Trip Rate	Mode Share Target	Vehicle-Trip Rate (ITE)	Person-Trip Rate
Auto Driver	59%	5	5	73%	7	9
Auto Passenger	9%	1	1	17%	2	2
Transit	24%	2	2	7%	1	1
Bicycle	0%	0	0	0%	0	0
Walk	0%	0	0	0%	0	0
Other	7%	0	1	3%	0	0

**Table 3 – Proposed Site Automobile Trip Distribution**

To/From	Existing Trip Distribution	AM Peak Period Trips		PM Peak Period Trips	
		In	Out	In	Out
			1	4	5
Maple Grove EB*	70%	1	3	3	2
Maple Grove WB**	30%	0	1	2	1

\*EB - East Bound

\*\*WB - West Bound



**Figure 5 – Proposed Site Trip Distribution**

Examination of the existing and proposed intersection capacity was completed using the existing intersection geometry and signal timing to evaluate the Intersection Capacity Utilization (ICU) Level of Service in previous TIA reports prepared for the identified proposed developments within the vicinity of the subject site. A review of the previous reports indicated that there is an existing capacity issue at the intersection of Huntmar Drive and Maple Grove Road. Moreover, the reports determined that the intersection will operate well above its theoretical capacity by 2026, regardless of whether the proposed developments are constructed. Traffic signal timing provided by the City of Ottawa were requested and are presented in Appendix E.

The automobile traffic impact from the site is negligible in comparison to the existing traffic volumes, and estimated traffic impacts of the surrounding proposed developments. The proposed development is expected to contribute an additional 8 automobile trips (total both directions) on Maple Grove Road during the PM peak hour.

## 4. Analysis

### 4.2 Parking

#### 4.2.1 Parking Supply

The site is following the City's Subdivision planning process and is exempt from the 'Parking Supply' and the 'Spillover Parking' elements per Section 2.3 – Exemptions Review. However, the Parking Supply analysis is conducted to address the City of Ottawa's concern with parking in the area.

The proposed development provides 36 parking spaces (18 for residents, 18 for visitors) for the semi-detached and traditional townhouses. The townhouses meet the City requirements of 1.0 residential parking spaces per dwelling and exceed the requirements of 0.2 visitor parking spaces per dwelling. The proposed supply of parking is consistent with parking requirements for elsewhere in the City of Ottawa.

From discussions with City staff, we understand that on street parking is a concern for residents of the area, and that there is a lack of peak period parking restrictions along the south side of Maple Grove Road.

We expect that the modest development will not produce any significant amount of spillover parking in the study area. The area is well served by transit and the site plan shows an adequate level of parking. Driveways will be spaced as to minimize the number of on-street parking spaces impacted, where possible.

Garages are provided for each townhouse to accommodate bicycle parking/storage. No additional bicycle parking is required.

### 4.3 Boundary Street Design

The boundary street for the proposed development is Maple Grove Road as identified in section 2.2.1. The widening of Maple Grove Road is planned between Terry Fox Drive and Huntmar Drive as per Map 10 (Road Network – 2031 Concept). The existing roadway geometry consists of the following features:

- Approximately 26m R.O.W. road allowance, street width of 11.0m;
- One (1) vehicular traffic lane in each direction;
- Sidewalk width of 1.8m;
- Less than 3,000 vehicles per day;
- Posted speed limit of 50km/h, assumed operating speed of 40-50km;
- No dedicated transit facilities;
- No dedicated cycling facilities,
- No shoulder of road; and
- On-street parking with no peak hour restrictions on the south side of the road.

The Multi-Modal Level of Service (MMLOS) analysis for the road segment along Maple Grove Road was thoroughly conducted by the previous TIA reports of the two (2) proposed developments to the west of the site along Maple Grove Road. However, the projected MMLOS of the boundary road was reconducted and is summarized below in Table 4. The truck level of service has not been analyzed as Maple Grove Road is not a designated truck route.

**Table 4 – MMLOS – Projected Maple Grove Road Segment (Both Sides of Roadway)**

Road Segment	Level of Service					
	Pedestrian (PLOS)		Bicycle (BLOS)		Transit (TLOS)	
	PLOS	Target	BLOS	Target	TLOS	Target
<b>Maple Grove Road</b>	<b>B</b>	<b>B</b>	<b>D</b>	<b>C</b>	<b>D</b>	<b>D</b>

Based upon the location of the development in a general suburban area, adjacent to a local roadway with pedestrian facilities, and no dedicated bike facilities with a Level of Traffic Stress (LTS) score of LTS3, the target levels of service for pedestrians and cyclists are PLOS 'B' and BLOS 'C'. The road currently does not have dedicated transit facilities or transit priority plans; however, there is low friction on the road and the ratio of the average transit travel speed to the posted speed limit is equal to or greater than 80%. Therefore, the target level of service for transit is TLOS 'D'.

#### 4.4 Neighborhood Traffic Management

##### 4.4.1 Traffic Calming

From discussions with City staff, we understand that speeding is a major concern for areas residents. The City has implemented several traffic calming measures in the area to reduce excessive speed by motorists. Flexible traffic separator signs and on-street parking are two physical measures that reduce speeds by changing the level of comfort for the driver. Other supportive measures are special traffic calming zone signs, lower speed limit signs, and speed display boards. Periodic enforcement should also play a role in managing excessive speeds.

We do not expect that the proposed development will contribute to an increase in speed in the area. The modest increase in traffic and the proposed driveways on Maple Grove Road should result in slower speeds along Maple Grove Road, by increasing driver load and decreasing driver comfort for excessive speed.



## 5. Conclusions

Based upon the information examined and presented in this report, the following transportation related conclusions are provided:

- A total of 18 residential units (2 semidetached and 16 traditional townhouses) are being proposed at 1869 Maple Grove Road;
- Parking provided exceeds the minimum required by the City;
- Driveways will be spaced as to minimize the number of on-street parking spaces impacted, where possible;
- Transit services are provided by OC Transpo and are located beyond the south east corner of the site along the Maple Grove Road R.O.W. within 100m walking distance of the site;
- The traffic impacts from the proposed development can be considered negligible on the Huntmar Drive and Maple Grove Road signalized intersection; and
- Based upon the results of the report, Roadway Modification Application or Monitoring Plan are not required.

## Appendix A – TIA Screening Form (By Foteen)

## City of Ottawa 2017 TIA Guidelines Screening Form

### 1. Description of Proposed Development

Municipal Address	1869 Maple Grove Road
Description of Location	North side of Maple Grove Road, west of Grenadine St
Land Use Classification	Planned Unit Development
Development Size (units)	18
Development Size (m <sup>2</sup> )	
Number of Accesses and Locations	1-2 (depending on layout)
Phase of Development	1 phase
Buildout Year	2021-2022

**If available, please attach a sketch of the development or site plan to this form.**

### 2. Trip Generation Trigger

Considering the Development's Land Use type and Size (as filled out in the previous section), please refer to the Trip Generation Trigger checks below.

Land Use Type	Minimum Development Size
Single-family homes	40 units
Townhomes or apartments	90 units
Office	3,500 m <sup>2</sup>
Industrial	5,000 m <sup>2</sup>
Fast-food restaurant or coffee shop	100 m <sup>2</sup>
Destination retail	1,000 m <sup>2</sup>
Gas station or convenience market	75 m <sup>2</sup>

*\* If the development has a land use type other than what is presented in the table above, estimates of person-trip generation may be made based on average trip generation characteristics represented in the current edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual.*

**If the proposed development size is greater than the sizes identified above, the Trip Generation Trigger is satisfied.**

### 3. Location Triggers

	Yes	No
Does the development propose a new driveway to a boundary street that is designated as part of the City's Transit Priority, Rapid Transit or Spine Bicycle Networks?		X
Is the development in a Design Priority Area (DPA) or Transit-oriented Development (TOD) zone?*		X

\*DPA and TOD are identified in the City of Ottawa Official Plan (DPA in Section 2.5.1 and Schedules A and B; TOD in Annex 6). See Chapter 4 for a list of City of Ottawa Planning and Engineering documents that support the completion of TIA).

**If any of the above questions were answered with 'Yes,' the Location Trigger is satisfied.**

### 4. Safety Triggers

	Yes	No
Are posted speed limits on a boundary street are 80 km/hr or greater?		X
Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway?		X
Is the proposed driveway within the area of influence of an adjacent traffic signal or roundabout (i.e. within 300 m of intersection in rural conditions, or within 150 m of intersection in urban/ suburban conditions)?		X
Is the proposed driveway within auxiliary lanes of an intersection?		X
Does the proposed driveway make use of an existing median break that serves an existing site?		X
Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?		X
Does the development include a drive-thru facility?		X

**If any of the above questions were answered with 'Yes,' the Safety Trigger is satisfied.**

### 5. Summary

	Yes	No
Does the development satisfy the Trip Generation Trigger?		X
Does the development satisfy the Location Trigger?		X
Does the development satisfy the Safety Trigger?		X

**If none of the triggers are satisfied, the TIA Study is complete. If one or more of the triggers is satisfied, the TIA Study must continue into the next stage (Screening and Scoping).**

## Appendix B – Site Plan



## Appendix C – Existing Turning Movement Counts





## Turning Movement Count - Study Results

### HUNTMAR DR @ MAPLE GROVE RD

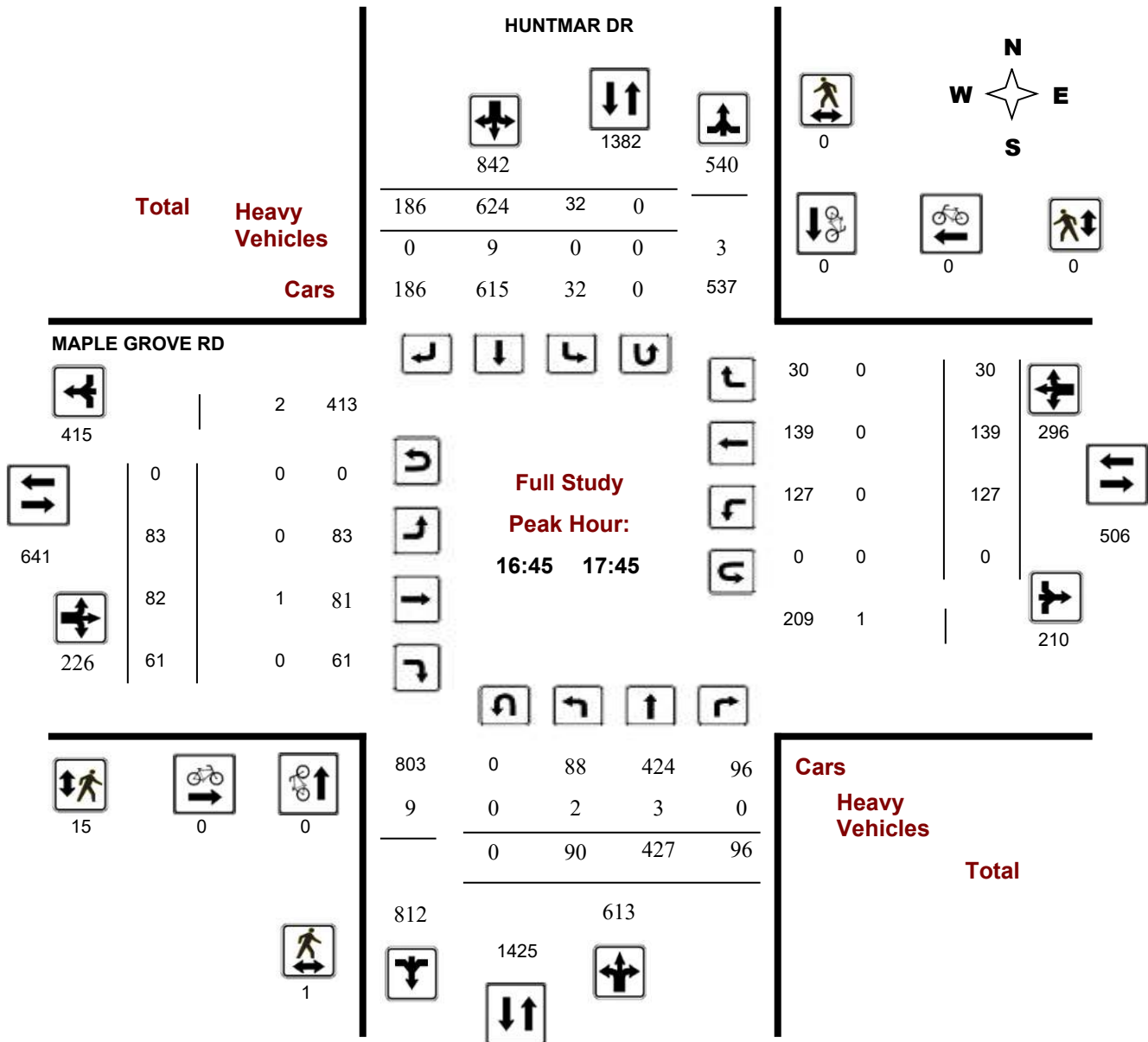
**Survey Date:** Thursday, November 23, 2017

**WO No:** 37335

**Start Time:** 07:00

**Device:** Miovision

### Full Study Peak Hour Diagram





# Transportation Services - Traffic Services

## Turning Movement Count - Peak Hour Diagram

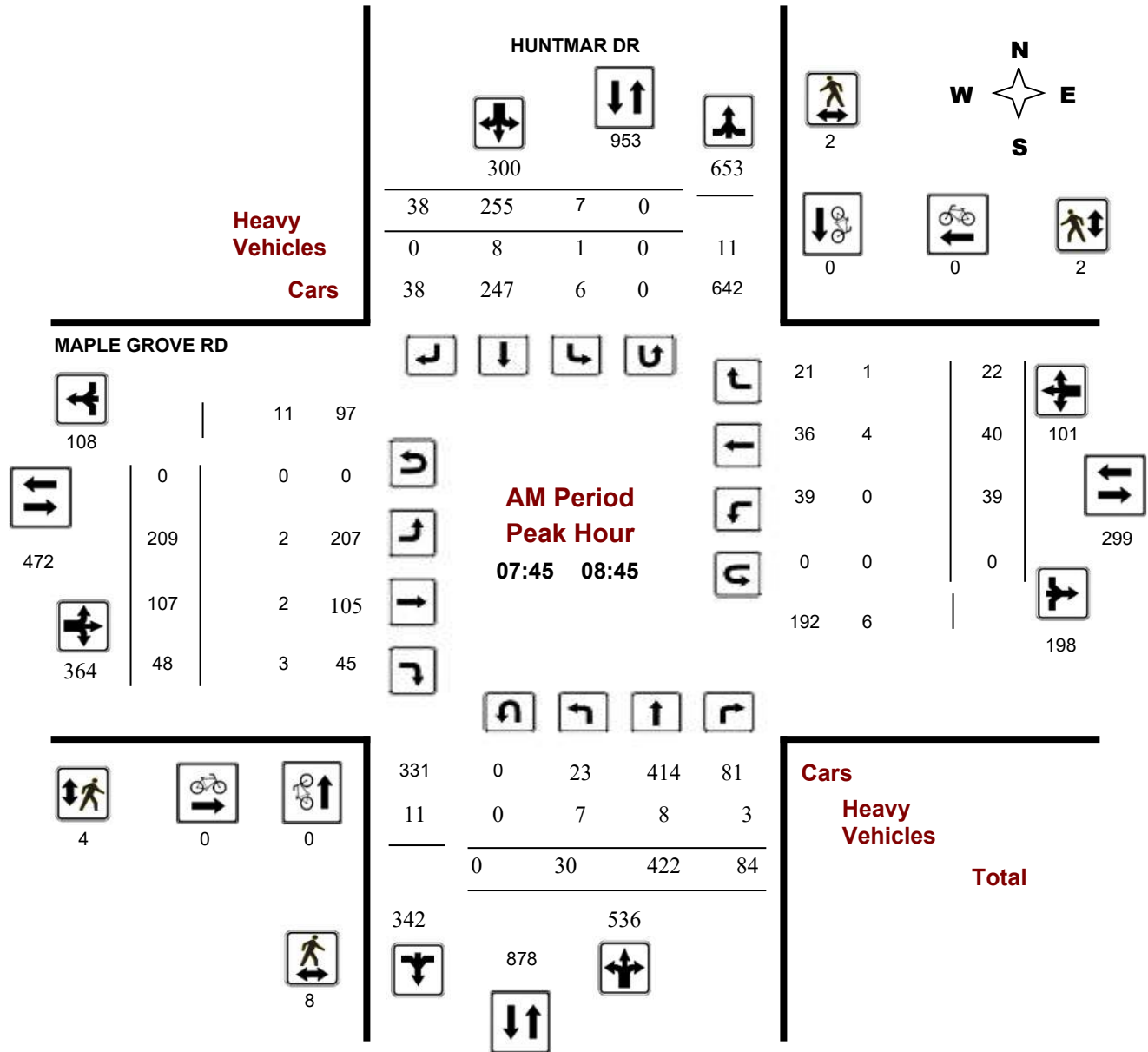
### HUNTMAR DR @ MAPLE GROVE RD

**Survey Date:** Thursday, November 23, 2017

**Start Time:** 07:00

**WO No:** 37335

**Device:** Miovision



**Comments**



# Transportation Services - Traffic Services

## Turning Movement Count - Peak Hour Diagram

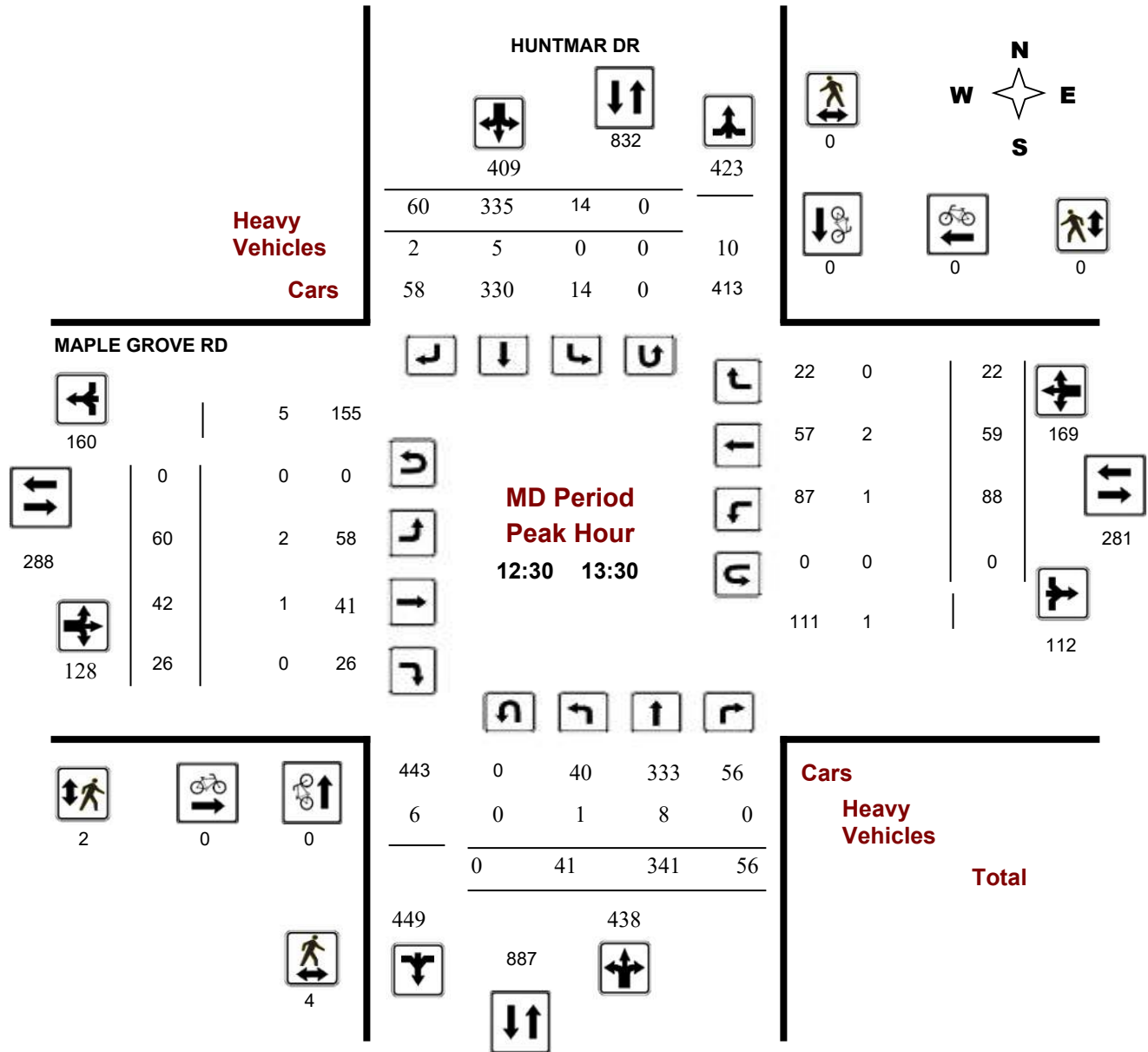
### HUNTMAR DR @ MAPLE GROVE RD

**Survey Date:** Thursday, November 23, 2017

**Start Time:** 07:00

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**Device:** Miovision



**Comments**



# Transportation Services - Traffic Services

## Turning Movement Count - Peak Hour Diagram

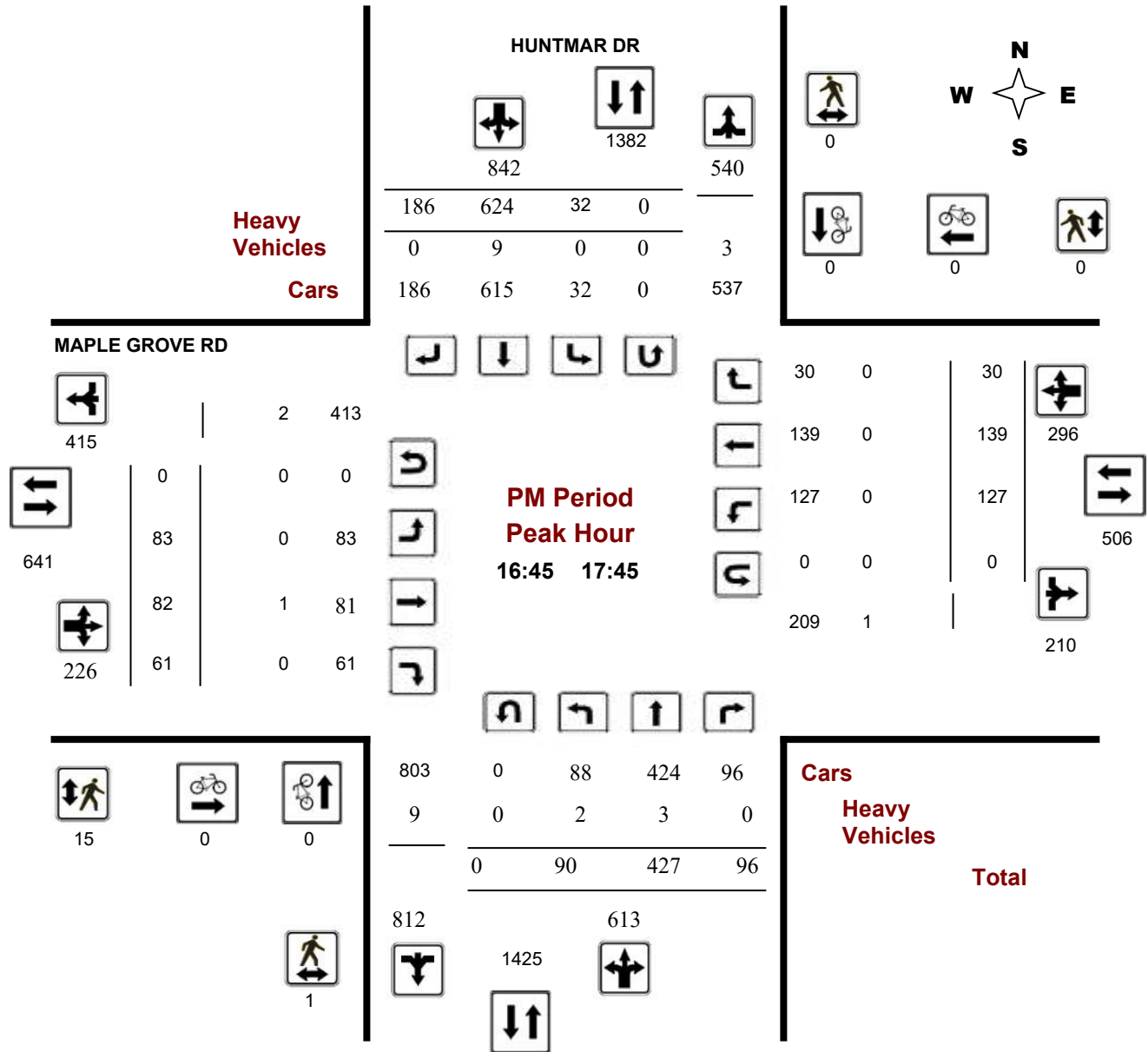
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# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### HUNTMAR DR @ MAPLE GROVE RD

**Survey Date:** Thursday, November 23, 2017

**WO No:** 37335

**Start Time:** 07:00

**Device:** Miovision

### Full Study Summary (8 HR Standard)

**Survey Date:** Thursday, November 23, 2017

**Total Observed U-Turns**

**AADT Factor**

Northbound: 0      Southbound: 0

.90

Eastbound: 0      Westbound: 0

#### HUNTMAR DR

#### MAPLE GROVE RD

Period	Northbound					Southbound					Eastbound					Westbound					Grand Total
	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	LT	ST	RT	WB TOT	STR TOT			
07:00 08:00	14	385	52	451	15	238	54	307	758	224	93	45	362	11	38	14	63	425	1183		
08:00 09:00	32	385	80	497	5	251	33	289	786	186	93	58	337	45	37	23	105	442	1228		
09:00 10:00	27	359	57	443	18	265	46	329	772	108	56	48	212	33	24	17	74	286	1058		
11:30 12:30	36	286	76	398	16	324	61	401	799	63	64	37	164	77	50	21	148	312	1111		
12:30 13:30	41	341	56	438	14	335	60	409	847	60	42	26	128	88	59	22	169	297	1144		
15:00 16:00	44	411	83	538	19	566	142	727	1265	68	48	49	165	103	79	22	204	369	1634		
16:00 17:00	66	366	75	507	23	623	192	838	1345	67	75	72	214	118	125	29	272	486	1831		
17:00 18:00	88	412	94	594	31	551	185	767	1361	88	81	62	231	114	125	28	267	498	1859		
<b>Sub Total</b>	348	2945	573	3866	141	3153	773	4067	7933	864	552	397	1813	589	537	176	1302	3115	11048		
<b>U Turns</b>				0				0	0				0				0	0	0		
<b>Total</b>	348	2945	573	3866	141	3153	773	4067	7933	864	552	397	1813	589	537	176	1302	3115	11048		
<b>EQ 12Hr</b>	484	4094	796	5374	196	4383	1074	5653	11027	1201	767	552	2520	819	746	245	1810	4330	15357		
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.																	<b>1.39</b>				
<b>AVG 12Hr</b>	410	3472	676	4558	166	3717	911	4795	9924	1019	651	468	2138	694	633	208	1535	3897	13821		
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.																	<b>0.9</b>				
<b>AVG 24Hr</b>	537	4549	885	5971	218	4870	1194	6281	12252	1334	853	613	2800	910	829	272	2011	4811	17063		

Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor. **1.31**

Note: U-Turns provided for approach totals. Refer to 'U-Turn' Report for specific breakdown.



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### HUNTMAR DR @ MAPLE GROVE RD

**Survey Date:** Thursday, November 23, 2017

**WO No:** 37335

**Start Time:** 07:00

**Device:** Miovision

### Full Study 15 Minute Increments

#### HUNTMAR DR

#### MAPLE GROVE RD

Northbound

Southbound

Eastbound

Westbound

Time Period	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00 07:15	1	76	8	85	7	49	14	70	8	56	24	12	92	1	10	4	15	8	262
07:15 07:30	5	80	10	95	3	55	14	72	8	66	22	13	101	5	7	2	14	8	282
07:30 07:45	1	111	12	124	3	55	13	71	8	39	17	13	69	2	9	4	15	8	279
07:45 08:00	7	118	22	147	2	79	13	94	10	63	30	7	100	3	12	4	19	10	360
08:00 08:15	8	93	20	121	4	65	9	78	8	56	25	11	92	17	5	3	25	8	316
08:15 08:30	7	101	23	131	1	50	6	57	5	44	26	24	94	9	11	4	24	5	306
08:30 08:45	8	110	19	137	0	61	10	71	4	46	26	6	78	10	12	11	33	4	319
08:45 09:00	9	81	18	108	0	75	8	83	8	40	16	17	73	9	9	5	23	8	287
09:00 09:15	8	115	13	136	5	58	15	78	7	28	12	16	56	12	5	4	21	7	291
09:15 09:30	7	78	17	102	3	80	13	96	5	33	8	11	52	7	8	2	17	5	267
09:30 09:45	5	86	8	99	2	61	10	73	4	22	10	11	43	11	6	6	23	4	238
09:45 10:00	7	80	19	106	8	66	8	82	8	25	26	10	61	3	5	5	13	8	262
11:30 11:45	10	80	24	114	6	118	10	134	9	17	14	7	38	20	11	5	36	9	322
11:45 12:00	12	59	12	83	4	72	17	93	5	9	20	11	40	27	7	7	41	5	257
12:00 12:15	7	74	14	95	3	74	17	94	3	22	16	10	48	15	16	3	34	3	271
12:15 12:30	7	73	26	106	3	60	17	80	5	15	14	9	38	15	16	6	37	5	261
12:30 12:45	12	85	14	111	3	83	18	104	4	15	10	6	31	20	19	8	47	4	293
12:45 13:00	7	92	7	106	1	96	14	111	4	22	12	8	42	18	11	2	31	4	290
13:00 13:15	6	82	18	106	5	91	18	114	5	10	9	9	28	26	19	6	51	5	299
13:15 13:30	16	82	17	115	5	65	10	80	3	13	11	3	27	24	10	6	40	3	262
15:00 15:15	6	99	19	124	5	122	39	166	8	13	7	13	33	21	10	2	33	8	356
15:15 15:30	9	81	26	116	6	127	30	163	10	25	16	19	60	22	21	7	50	10	389
15:30 15:45	10	131	20	161	5	154	34	193	4	8	12	6	26	27	21	10	58	4	438
15:45 16:00	19	100	18	137	3	163	39	205	9	22	13	11	46	33	27	3	63	9	451
16:00 16:15	13	84	14	111	3	156	45	204	1	18	17	12	47	25	27	8	60	1	422
16:15 16:30	12	97	14	123	6	152	55	213	6	20	23	24	67	25	31	6	62	6	465
16:30 16:45	20	88	20	128	7	132	46	185	3	17	13	20	50	33	38	10	81	3	444
16:45 17:00	21	97	27	145	7	183	46	236	3	12	22	16	50	35	29	5	69	3	500
17:00 17:15	14	140	26	180	8	151	41	200	2	24	13	18	55	37	37	12	86	2	521
17:15 17:30	23	95	21	139	13	146	46	205	6	20	22	13	55	27	41	5	73	6	472
17:30 17:45	32	95	22	149	4	144	53	201	3	27	25	14	66	28	32	8	68	3	484
17:45 18:00	19	82	25	126	6	110	45	161	3	17	21	17	55	22	15	3	40	3	382
<b>Total:</b>	<b>348</b>	<b>2945</b>	<b>573</b>	<b>3866</b>	<b>141</b>	<b>3153</b>	<b>773</b>	<b>4067</b>	<b>179</b>	<b>864</b>	<b>552</b>	<b>397</b>	<b>1813</b>	<b>589</b>	<b>537</b>	<b>176</b>	<b>1302</b>	<b>179</b>	<b>11,048</b>

Note: U-Turns are included in Totals.



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### HUNTMAR DR @ MAPLE GROVE RD

**Survey Date:** Thursday, November 23, 2017

**WO No:** 37335

**Start Time:** 07:00

**Device:** Miovision

### Full Study Cyclist Volume

#### HUNTMAR DR

#### MAPLE GROVE RD

Time Period	Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	Grand Total
07:00 07:15	0	0	0	0	0	0	0
07:15 07:30	0	0	0	0	0	0	0
07:30 07:45	0	0	0	0	0	0	0
07:45 08:00	0	0	0	0	0	0	0
08:00 08:15	0	0	0	0	0	0	0
08:15 08:30	0	0	0	0	0	0	0
08:30 08:45	0	0	0	0	0	0	0
08:45 09:00	0	0	0	0	0	0	0
09:00 09:15	0	0	0	0	0	0	0
09:15 09:30	0	0	0	0	0	0	0
09:30 09:45	0	0	0	0	0	0	0
09:45 10:00	0	0	0	0	0	0	0
11:30 11:45	0	0	0	0	0	0	0
11:45 12:00	0	0	0	0	0	0	0
12:00 12:15	0	0	0	0	0	0	0
12:15 12:30	0	0	0	0	0	0	0
12:30 12:45	0	0	0	0	0	0	0
12:45 13:00	0	0	0	0	0	0	0
13:00 13:15	0	0	0	0	0	0	0
13:15 13:30	0	0	0	0	0	0	0
15:00 15:15	0	0	0	0	0	0	0
15:15 15:30	0	0	0	0	0	0	0
15:30 15:45	0	0	0	0	0	0	0
15:45 16:00	0	0	0	0	0	0	0
16:00 16:15	0	0	0	0	0	0	0
16:15 16:30	0	0	0	0	0	0	0
16:30 16:45	0	0	0	0	0	0	0
16:45 17:00	0	0	0	0	0	0	0
17:00 17:15	0	0	0	0	0	0	0
17:15 17:30	0	0	0	0	0	0	0
17:30 17:45	0	0	0	0	0	0	0
17:45 18:00	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### HUNTMAR DR @ MAPLE GROVE RD

**Survey Date:** Thursday, November 23, 2017

**WO No:** 37335

**Start Time:** 07:00

**Device:** Miovision

### Full Study Pedestrian Volume

#### HUNTMAR DR

#### MAPLE GROVE RD

Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	Total	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	Total	Grand Total
07:00 07:15	8	0	8	3	1	4	12
07:15 07:30	8	1	9	2	1	3	12
07:30 07:45	4	0	4	0	1	1	5
07:45 08:00	8	1	9	4	1	5	14
08:00 08:15	0	0	0	0	0	0	0
08:15 08:30	0	1	1	0	1	1	2
08:30 08:45	0	0	0	0	0	0	0
08:45 09:00	2	2	4	1	1	2	6
09:00 09:15	0	1	1	0	1	1	2
09:15 09:30	1	1	2	0	1	1	3
09:30 09:45	1	0	1	0	0	0	1
09:45 10:00	0	0	0	0	0	0	0
11:30 11:45	0	0	0	0	0	0	0
11:45 12:00	0	0	0	0	0	0	0
12:00 12:15	3	1	4	1	0	1	5
12:15 12:30	2	0	2	1	0	1	3
12:30 12:45	1	0	1	0	0	0	1
12:45 13:00	0	0	0	2	0	2	2
13:00 13:15	2	0	2	0	0	0	2
13:15 13:30	1	0	1	0	0	0	1
15:00 15:15	3	0	3	2	0	2	5
15:15 15:30	1	0	1	0	0	0	1
15:30 15:45	2	0	2	1	2	3	5
15:45 16:00	2	3	5	5	2	7	12
16:00 16:15	1	0	1	5	0	5	6
16:15 16:30	2	0	2	4	0	4	6
16:30 16:45	0	1	1	1	0	1	2
16:45 17:00	1	0	1	5	0	5	6
17:00 17:15	0	0	0	5	0	5	5
17:15 17:30	0	0	0	5	0	5	5
17:30 17:45	0	0	0	0	0	0	0
17:45 18:00	1	0	1	1	0	1	2
<b>Total</b> .....	<b>54</b>	<b>12</b>	<b>66</b>	<b>48</b>	<b>12</b>	<b>60</b>	<b>126</b>





# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### HUNTMAR DR @ MAPLE GROVE RD

**Survey Date:** Thursday, November 23, 2017

**WO No:** 37335

**Start Time:** 07:00

**Device:** Miovision

### Full Study Heavy Vehicles

#### HUNTMAR DR

#### MAPLE GROVE RD

Northbound

Southbound

Eastbound

Westbound

Time Period	Northbound			N TOT	Southbound			S TOT	STR TOT	Eastbound			E TOT	Westbound			W TOT	STR TOT	Grand Total	
	LT	ST	RT		LT	ST	RT			LT	ST	RT		LT	ST	RT				
07:00 07:15	0	4	0	4	0	2	2	4	8	0	2	1	3	0	3	1	4	7	15	
07:15 07:30	1	4	0	5	0	1	2	3	8	2	0	0	2	0	4	1	5	7	15	
07:30 07:45	0	6	0	6	1	0	1	2	8	0	1	0	1	0	0	0	0	1	9	
07:45 08:00	1	7	1	9	0	1	0	1	10	0	0	0	0	0	0	0	0	0	10	
08:00 08:15	3	0	1	4	1	3	0	4	8	1	0	0	1	0	1	0	1	2	10	
08:15 08:30	2	1	0	3	0	2	0	2	5	1	2	2	5	0	0	0	0	5	10	
08:30 08:45	1	0	1	2	0	2	0	2	4	0	0	1	1	0	3	1	4	5	9	
08:45 09:00	0	3	0	3	0	5	0	5	8	1	0	0	1	0	0	0	0	1	9	
09:00 09:15	0	3	0	3	1	2	1	4	7	1	0	0	1	0	1	0	1	2	9	
09:15 09:30	0	1	0	1	0	3	1	4	5	0	0	0	0	1	1	0	2	2	7	
09:30 09:45	0	2	0	2	0	2	0	2	4	1	0	2	3	0	0	0	0	3	7	
09:45 10:00	0	4	1	5	1	2	0	3	8	0	0	0	0	0	1	0	1	1	9	
11:30 11:45	0	3	0	3	1	4	1	6	9	0	1	0	1	1	1	1	3	4	13	
11:45 12:00	0	1	0	1	1	3	0	4	5	0	2	0	2	0	0	2	2	4	9	
12:00 12:15	0	1	0	1	0	2	0	2	3	2	1	1	4	0	1	0	1	5	8	
12:15 12:30	0	1	0	1	0	2	2	4	5	0	0	1	1	0	1	0	1	2	7	
12:30 12:45	0	3	0	3	0	0	1	1	4	0	0	0	0	0	2	0	2	2	6	
12:45 13:00	1	1	0	2	0	2	0	2	4	0	1	0	1	1	0	0	1	2	6	
13:00 13:15	0	1	0	1	0	3	1	4	5	1	0	0	1	0	0	0	0	1	6	
13:15 13:30	0	3	0	3	0	0	0	0	3	1	0	0	1	0	0	0	0	1	4	
15:00 15:15	1	1	0	2	0	5	1	6	8	2	0	0	2	1	2	0	3	5	13	
15:15 15:30	2	3	3	8	0	2	0	2	10	0	2	1	3	1	0	0	1	4	14	
15:30 15:45	0	1	0	1	0	3	0	3	4	1	1	0	2	0	1	0	1	3	7	
15:45 16:00	1	5	0	6	0	3	0	3	9	1	0	0	1	0	0	1	1	2	11	
16:00 16:15	0	0	0	0	0	1	0	1	1	0	1	0	1	0	2	0	2	3	4	
16:15 16:30	1	3	0	4	0	2	0	2	6	0	2	1	3	0	1	0	1	4	10	
16:30 16:45	1	1	0	2	0	1	0	1	3	0	0	1	1	0	0	0	0	1	4	
16:45 17:00	1	0	0	1	0	2	0	2	3	0	1	0	1	0	0	0	0	1	4	
17:00 17:15	0	0	0	0	0	2	0	2	2	0	0	0	0	0	0	0	0	0	2	
17:15 17:30	0	3	0	3	0	3	0	3	6	0	0	0	0	0	0	0	0	0	6	
17:30 17:45	1	0	0	1	0	2	0	2	3	0	0	0	0	0	0	0	0	0	3	
17:45 18:00	0	0	0	0	0	2	1	3	3	0	1	0	1	0	0	0	0	1	4	
<b>Total:</b>	None	17	66	7	90	6	69	14	89	179	15	18	11	44	5	25	7	37	81	260



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### HUNTMAR DR @ MAPLE GROVE RD

**Survey Date:** Thursday, November 23, 2017

**WO No:** 37335

**Start Time:** 07:00

**Device:** Miovision

### Full Study 15 Minute U-Turn Total

HUNTMAR DR

MAPLE GROVE RD

Time Period		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00	07:15	0	0	0	0	0
07:15	07:30	0	0	0	0	0
07:30	07:45	0	0	0	0	0
07:45	08:00	0	0	0	0	0
08:00	08:15	0	0	0	0	0
08:15	08:30	0	0	0	0	0
08:30	08:45	0	0	0	0	0
08:45	09:00	0	0	0	0	0
09:00	09:15	0	0	0	0	0
09:15	09:30	0	0	0	0	0
09:30	09:45	0	0	0	0	0
09:45	10:00	0	0	0	0	0
11:30	11:45	0	0	0	0	0
11:45	12:00	0	0	0	0	0
12:00	12:15	0	0	0	0	0
12:15	12:30	0	0	0	0	0
12:30	12:45	0	0	0	0	0
12:45	13:00	0	0	0	0	0
13:00	13:15	0	0	0	0	0
13:15	13:30	0	0	0	0	0
15:00	15:15	0	0	0	0	0
15:15	15:30	0	0	0	0	0
15:30	15:45	0	0	0	0	0
15:45	16:00	0	0	0	0	0
16:00	16:15	0	0	0	0	0
16:15	16:30	0	0	0	0	0
16:30	16:45	0	0	0	0	0
16:45	17:00	0	0	0	0	0
17:00	17:15	0	0	0	0	0
17:15	17:30	0	0	0	0	0
17:30	17:45	0	0	0	0	0
17:45	18:00	0	0	0	0	0
Total		0	0	0	0	0

## Appendix D – Collision Details Report



# City Operations - Transportation Services

## Collision Details Report - Public Version

**From:** January 1, 2014    **To:** December 31, 2018

**Location:** HUNTMAR DR @ MAPLE GROVE RD

**Traffic Control:** Stop sign

**Total Collisions:** 19

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2015-Jan-29, Thu,22:30	Snow	Rear end	P.D. only	Packed snow	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					East	Stopped	Automobile, station wagon	Other motor vehicle	
					East	Stopped	Passenger van	Other motor vehicle	
2015-Apr-29, Wed,16:23	Clear	Rear end	P.D. only	Dry	South	Going ahead	Pick-up truck	Other motor vehicle	
					South	Stopped	Police vehicle	Other motor vehicle	
2015-Feb-24, Tue,18:00	Clear	Rear end	P.D. only	Ice	East	Slowing or stopping	Pick-up truck	Other motor vehicle	
					East	Stopped	Pick-up truck	Other motor vehicle	
2015-Aug-14, Fri,08:48	Clear	Angle	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	
					South	Going ahead	Passenger van	Other motor vehicle	
2016-Feb-25, Thu,15:30	Rain	Turning movement	P.D. only	Wet	North	Making "U" turn	Automobile, station wagon	Other motor vehicle	
					North	Going ahead	Pick-up truck	Other motor vehicle	

2016-Oct-19, Wed,13:50	Clear	Rear end	P.D. only	Dry	South	Going ahead	Pick-up truck	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2016-May-11, Wed,16:53	Clear	Rear end	P.D. only	Dry	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2016-Jul-03, Sun,14:52	Clear	Turning movement	Non-fatal injury	Dry	North	Turning left	Automobile, station wagon	Cyclist
					South	Going ahead	Bicycle	Other motor vehicle
2016-Oct-02, Sun,11:05	Rain	Rear end	P.D. only	Wet	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
2016-Dec-16, Fri,09:19	Clear	Rear end	P.D. only	Ice	North	Going ahead	Passenger van	Other motor vehicle
					North	Stopped	Pick-up truck	Other motor vehicle
					South	Going ahead	Pick-up truck	Other motor vehicle
2016-Dec-26, Mon,10:17	Freezing Rain	Rear end	P.D. only	Wet	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
2016-Dec-30, Fri,16:38	Clear	SMV other	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Curb

2018-Jan-03, Wed,14:09	Snow	SMV other	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Pole (utility, power)
2018-Feb-01, Thu,09:47	Clear	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Skidding/sliding
					South	Stopped	Automobile, station wagon	Other motor vehicle
2018-Jul-07, Sat,12:55	Clear	Rear end	P.D. only	Dry	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2018-Sep-29, Sat,13:00	Rain	Rear end	P.D. only	Wet	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2018-Nov-06, Tue,16:13	Clear	Angle	P.D. only	Wet	East	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2018-Sep-25, Tue,13:15	Rain	Rear end	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2018-Aug-10, Fri,13:25	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle

## Appendix E – Signal Timing Report

# Traffic Signal Timing

City of Ottawa, Transportation Services Department

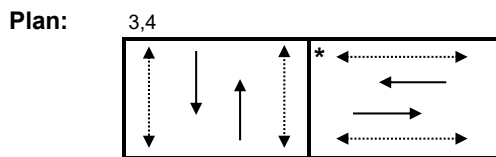
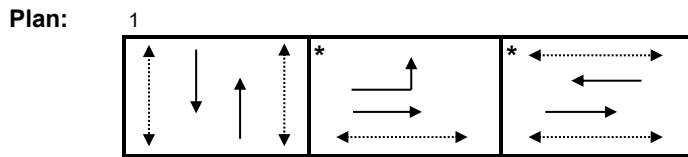
## Traffic Signal Operations Unit

<b>Intersection:</b>	Main: Huntmar	Side: Maple Grove
<b>Controller:</b>	MS-3200	<b>TSD:</b> 5476
<b>Author:</b>	R. Doueidar	<b>Date:</b> 06-Mar-2020

### Existing Timing Plans†

	Plan			Ped Minimum Time		
	AM Peak 1	PM Peak 3	Night 4	Walk	DW	A+R
<b>Cycle</b>	Free	Free	Free			
<b>Offset</b>	X	X	X			
NB Thru	min=51.1	min=81.1	min=51.1	7	8	3.3+2.8
SB Thru	min=51.1	min=81.1	min=51.1	7	8	3.3+2.8
EB Left	max=26.2	-	-	-	-	3.3+2.9
EB Thru	max=61.2	max=51.2	max=61.2	7	16	3.3+2.9
WB Thru	max=61.2	max=51.2	max=61.2	7	16	3.3+2.9

### Phasing Sequence‡



### Schedule

Weekday		Saturday		Sunday	
Time	Plan	Time	Plan	Time	Plan
00:15	4	00:10	4	00:10	4
06:30	1	22:30	4	23:30	4
09:30	4				
15:00	3				
18:30	4				

### Notes

- †: Time for each direction includes amber and all red intervals
- ‡: Start of first phase should be used as reference point for offset
- Asterisk (\*) Indicates actuated phase
- (fp): Fully Protected Left Turn
- ←.....→ Pedestrian signal

Cost is \$58.78 (\$52.02 + HST)



## Appendix F – Certification Form



## **TIA Plan Reports**

On 14 June 2017, the Council of the City of Ottawa adopted new Transportation Impact Assessment (TIA) Guidelines. In adopting the guidelines, Council established a requirement for those preparing and delivering transportation impact assessments and reports to sign a letter of certification.

Individuals submitting TIA reports will be responsible for all aspects of development-related transportation assessment and reporting, and undertaking such work, in accordance and compliance with the City of Ottawa's Official Plan, the Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines.

By submitting the attached TIA report (and any associated documents) and signing this document, the individual acknowledges that s/he meets the four criteria listed below.

### **CERTIFICATION**

1. I have reviewed and have a sound understanding of the objectives, needs and requirements of the City of Ottawa's Official Plan, Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines;
2. I have a sound knowledge of industry standard practice with respect to the preparation of transportation impact assessment reports, including multi modal level of service review;
3. I have substantial experience (more than 5 years) in undertaking and delivering transportation impact studies (analysis, reporting and geometric design) with strong background knowledge in transportation planning, engineering or traffic operations; and
4. I am either a licensed<sup>1</sup> or registered<sup>2</sup> professional in good standing, whose field of expertise [check  appropriate field(s)] is either transportation engineering  or transportation planning .

**1,2 License of registration body that oversees the profession is required to have a code of conduct and ethics guidelines that will ensure appropriate conduct and representation for transportation planning and/or transportation engineering works.**

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Infrastructure Services and Community  
Sustainability  
Planning and Growth Management  
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collectivités  
Urbanisme et Gestion de la croissance  
110, avenue Laurier Ouest  
Ottawa (Ontario) K1P 1J1  
Tél. : 613-580-2424  
Télécopieur: 613-560-6006

Dated at Ottawa this 29th day of September, 2020.  
(City)

Name: Louis P. Desmarais, P. Eng.  
(Please Print)

Professional Title: Senior Project Manager

\_\_\_\_\_  
Signature of Individual certifier that s/he meets the above four criteria

<b>Office Contact Information (Please Print)</b>
Address: 100 - 2650 Queensview Road
City / Postal Code: Ottawa, ON K2B 8H6
Telephone / Extension: 613 688 1899 extension 3248
E-Mail Address: phil.desmarais@exp.com

Stamp