4497 O'Keefe Court

TIA Forecasting & Strategy Report

DRAFT

August 2023

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[1] or registered[2] 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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4497 O'Keefe Court

TIA Scoping Report

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SCOPING REPORT

Parsons has been retained by O'Keefe Court Properties Ltd. to prepare a Transportation Impact Assessment (TIA) in support of a Site Plan Application (SPA) for a warehousing development located at 4497 O'Keefe Court in the Nepean South District. This document follows the TIA process, as outlined in the City Transportation Impact Assessment (TIA) Guidelines (2017). The following report represents Step 3 & 4 – Forecasting & Strategy Report.

1.0 SCREENING FORM

The screening form confirmed the need for a TIA Report based on the Trip Generation trigger, given that the proposed development will consist of three warehousing buildings with a total GFA of approximately 23,850m^2. The Location Trigger and the Safety Trigger were not met. The Screening Form has been provided in **Appendix A**.

2.0 SCOPING REPORT

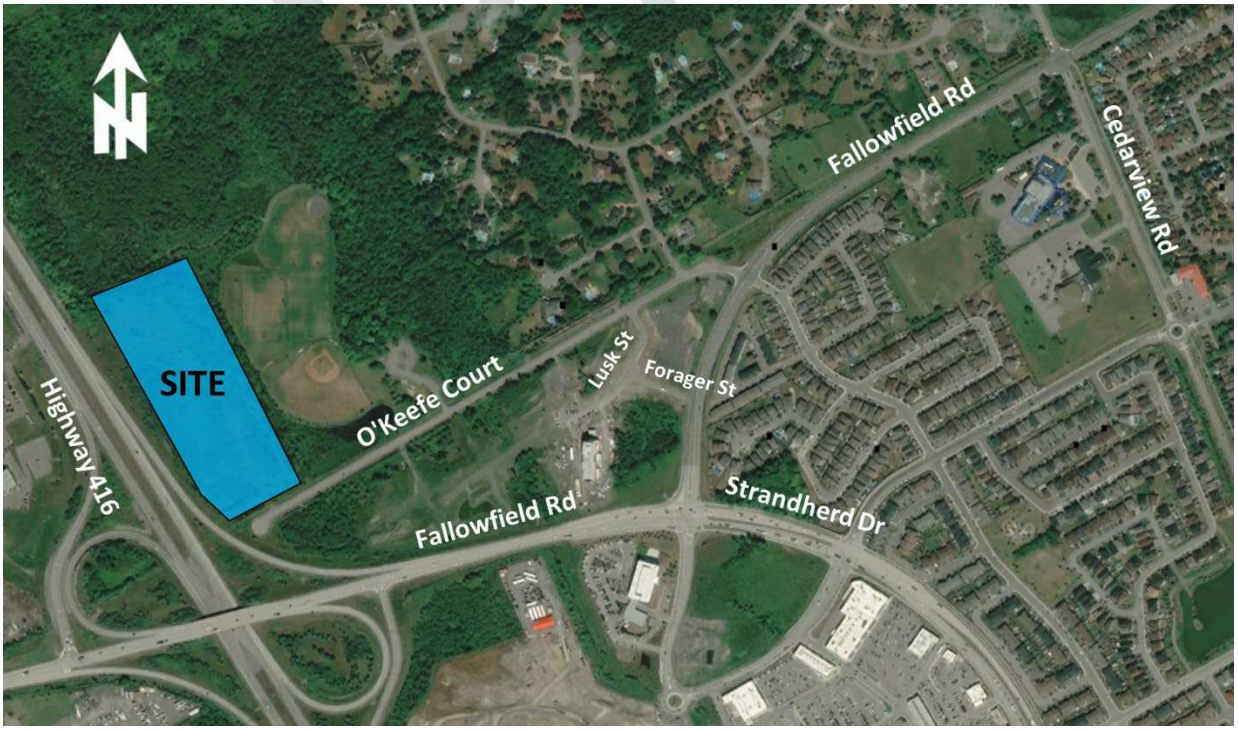
2.1. Existing and Planned Conditions

2.1.1. Proposed Development

The proposed development is located at the municipal address of 4497 O'Keefe Court, bounded by Highway 416 to the west, Lytle Park to the east, a MUP to the north, and O'Keefe Court to south. The site is currently zoned as Rural General Industrial Zone RG(401r)-h, where the local context is illustrated in **Figure 1**.

The development will consist of three warehousing buildings totaling approximately 23,850 m^2 of GFA and will provide two full-movement accesses on to O'Keefe Court. There will be an at-grade parking lot located on the west side of the development that will provide a total of 210 parking spaces. The east side of the warehouses, or back side of buildings will have truck loading zones. **Figure 2** illustrates the proposed Concept Plan, which is assumed to be constructed in one phase with an estimated buildout year of 2025.

Figure 1: Local Context

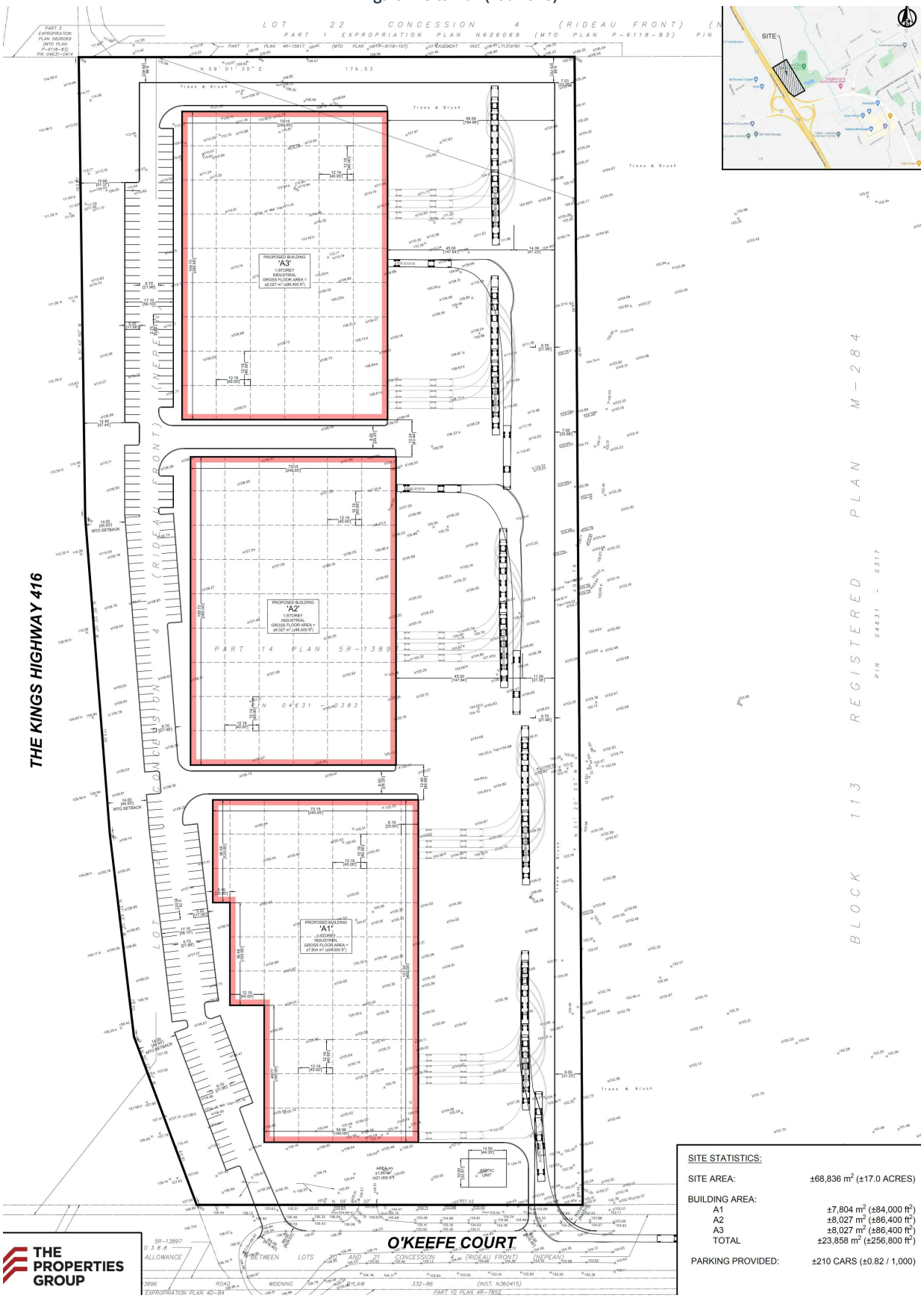


As per the Public Transportation Improvement Act – Ministry of Transportation Ontario, any development located within 395m from an intersection point and 45m from MTO property line is subject to a traffic impact study.

In this case, MTO agreed that a detailed analysis of the Highway 416/Fallowfield interchange ramp terminal intersections was not required and may be assessed from a broad perspective based on the following reasons:

- The development is located approximately 1.5km driving distance away from the Highway 416/Fallowfield interchange, and the subject site does not propose direct access to the MTO ramps.
- The development is forecasted to generate less than 75 two-way vehicle trips during the peak hours by full buildout year (approximately 1 new vehicle per minute).
- The trip distribution of the forecasted trips suggests that the majority of the routes taken to anticipated destinations will not use the 416/Fallowfield interchange (to be confirmed in Step 3) and will therefore have an insignificant effect to the future performance of the ramps.

Figure 2: Site Plan (Feb 2023)



2.1.2. Existing Conditions

Area Road Network

Description of roads included within the study area has been provided below.

Highway 416 is a north-south 400-series provincial highway that extends from Highway 417 in the north to Highway 401 in the south. The roadway consists of a two-way four-lane cross section with a posted speed limit of 100km/h.

Fallowfield Road is an east-west municipal arterial roadway that extends from west of the Highway 416 to McCaffrey Trail. Within the study area, the road typically consists of a two-way two-lane cross-section with a posted speed limit of 60km/h.

Strandherd Drive is an east-west municipal arterial roadway that extends from Fallowfield Rd in the west to River Rd in the east, where it continues as Earl Armstrong Rd. The road generally consists of a two-way four-lane cross-section with auxiliary turn lanes and a 70km/h posted speed limit.

Cedarview Road is a north-south municipal arterial roadway that extends from Baseline Rd in the north to south of Kennevale Dr. The roadway consists of a two-way two-lane cross-section with a posted speed limit of 40km/h in the vicinity of Fallowfield Rd.

O'Keefe Court is an east-west municipal local roadway which extends from the proposed site accesses in the west to Fallowfield Rd in the east. Within the study area, the roadway consists of a two-way two-lane cross-section with an assumed posted speed limit of 50km/h.

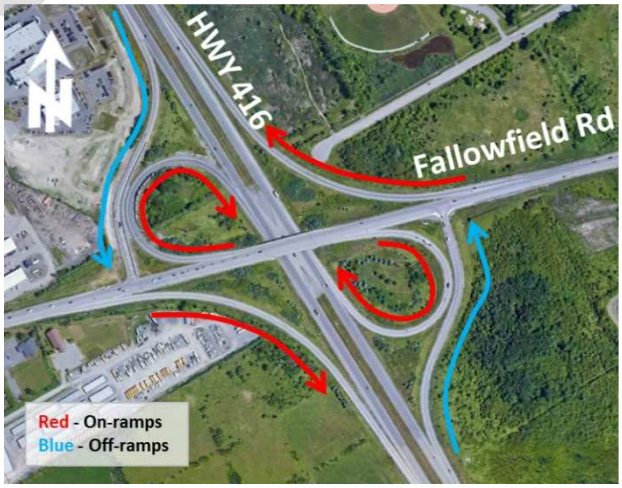
Cobble Hill Drive is a north-south municipal local roadway which extends from Fallowfield Rd in the north to Moffat Pond Ct in the south, where it continues as Anjana Cir. The roadway consists of a two-way two-lane cross-section with a posted speed limit of 40 km/h.

Citigate Drive is a north-south municipal local roadway which extends from Fallowfield Rd–Strandherd Dr in the north to Systemhouse St in the south. The roadway consists of a two-way two-lane cross-section with an assumed speed limit of 50km/h.

Existing Study Area Intersections

Highway 416/Fallowfield Rd

The Highway 416/Fallowfield Rd interchange is a four-legged interchange consisting of 4 on-ramps and 2 off-ramps. The northbound exit ramp consists of one lane that splits into one left-turn lane and one right-turn lane and is serviced by a traffic signal on approach to the southside of Fallowfield Rd. The southbound exit ramp consists of one-lane that splits into a left-turn lane and a left/right-turn lane that is also serviced by a traffic signal on approach to the north side of Fallowfield Rd. The northbound and southbound on-ramps have free-flow entrances and exits that all consist of one-lane and are accessible from the east and west along Fallowfield Rd.



Strandherd Dr/Fallowfield Rd/Citigate Dr

The Strandherd Dr/Fallowfield Rd/Citigate Dr intersection is a four-legged signalized intersection. The north approach (Fallowfield Rd) consists of one left-turn lane, one through lane, and one channelized right-turn lane. The south approach (Citigate Dr) consists of two left-turn lanes and one shared through/right-turn lane. The west approach (Fallowfield Rd) consists of two left-turn lanes, two through lanes, and one right-turn lane. The east approach (Strandherd Dr) consists of one left-turn lane, two through lanes, and one right-turn lane. There are no restricted movements at this intersection. Pedestrian crossings are provided on all legs of the intersection.

Fallowfield Rd/O'Keefe Crt– Cobble Hill Dr

The Fallowfield Rd/O'Keefe Crt – Cobble Hill Dr intersection is an unsignalized four-legged intersection, with stop control on the east and west legs of the intersection. The north and south approach consists of one left-turn lane, one through lane, and one right-turn lane. The west approach consists of one left-turn lane and a right-turn lane. The east approach consists of one all-movement lane. There are no pedestrian crossings across Fallowfield Rd.

Fallowfield Rd/Cedarview Rd

The Fallowfield Rd/Cedarview Rd intersection is a signalized four-legged intersection. The north, east, and west approaches all consist of one left-turn lane, one through lane, and one right-turn lane. The south approach consists of one left-turn lane and one through/right-turn lane. There are no restricted movements at this intersection. Pedestrian crossings are provided on all legs of the intersection.

Existing Driveways to Adjacent Developments

There are no adjacent driveways within 200m of the proposed future site accesses. The only other adjacent accesses on O'Keefe are located approximately 240m east of the site on the north side providing access to Lytle Park, and 600m east of the site on the south side providing access to the Hampton Inn & Suites as illustrated in **Figure 3**.

Figure 3: Adjacent Driveways within 200m of Site Access

Existing Area Traffic Management Measures

There are no existing area traffic management measures within the study area.

Pedestrian/Cycling Network

The dedicated pedestrian and cycling facilities provided within the study area are as follows:

- Sidewalks along both sides of Strandherd Dr
- Sidewalks along both sides of Cobble Hill Dr
- Sidewalk along the west side of Citigate Dr
- Multi-Use Pathway (MUP) that runs along the east side of Cedarview Rd south of Fallowfield Rd and continues west towards Highway 416 on the north side of Fallowfield Rd and O'Keefe Ct, then north along the east side of the highway.
- Cycle tracks along both sides of Strandherd Dr
- Paved shoulders along Fallowfield Rd

See **Figure 4** for an illustration of all active transportation facilities within the study area.

Figure 4: Study Area Active Transportation Facilities

Transit Network

The following description of OC Transpo routes within the study area reflect the current bus operations (June 2023):

- **Route #99 (Barrhaven Centre <-> Greenboro & Hurdman):** identified by OC Transpo as a "Rapid Route", this route only operates occasionally near the site. The nearest bus stops to the site are at the intersections of Citigate Dr/CrossKeys Pl, an approximate 1.3 km walking distance to/from the site.
- **Route #110 (Innovation <-> Fallowfield):** identified by OC Transpo as a "Local Route", this route operates all day on weekdays. The nearest bus stops to the site are at the intersections of Citigate Dr/CrossKeys Pl, an approximate 1.3 km walking distance to/from the site.
- **Route #170 (Fallowfield & CFIA <-> Barrhaven Centre):** identified by OC Transpo as a "Local Route", this route operates all day, 7 days a week. The nearest bus stops to the site are at the intersections of Citigate Dr/CrossKeys Pl, an approximate 1.3 km walking distance to/from the site.
- **Route #272 (Tunney's Pasture <-> Cobble Hill):** identified by OC Transpo as a "Connexion Route", this route operates during weekday peak-periods exclusively. The nearest bus stops to the site are at the intersections of Cobble Hill Dr/Fallowfield Rd, an approximate 850 m walking distance to/from the site.

The transit network for the study area is illustrated in **Figure 5** and the transit route maps are provided in **Appendix B**. The nearest bus stop to the site is currently approximately 850m from the site. See **Figure 6** for an illustration of the bus stop locations near the proposed development.

Figure 5: Area Transit Network

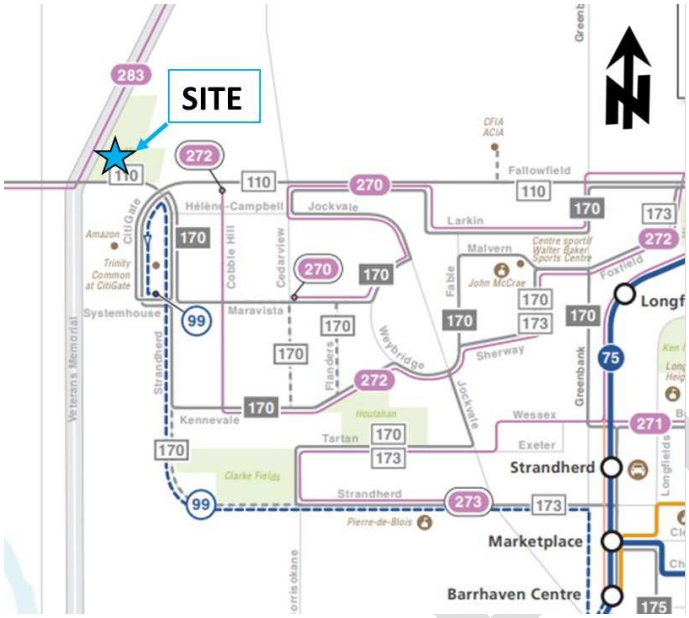
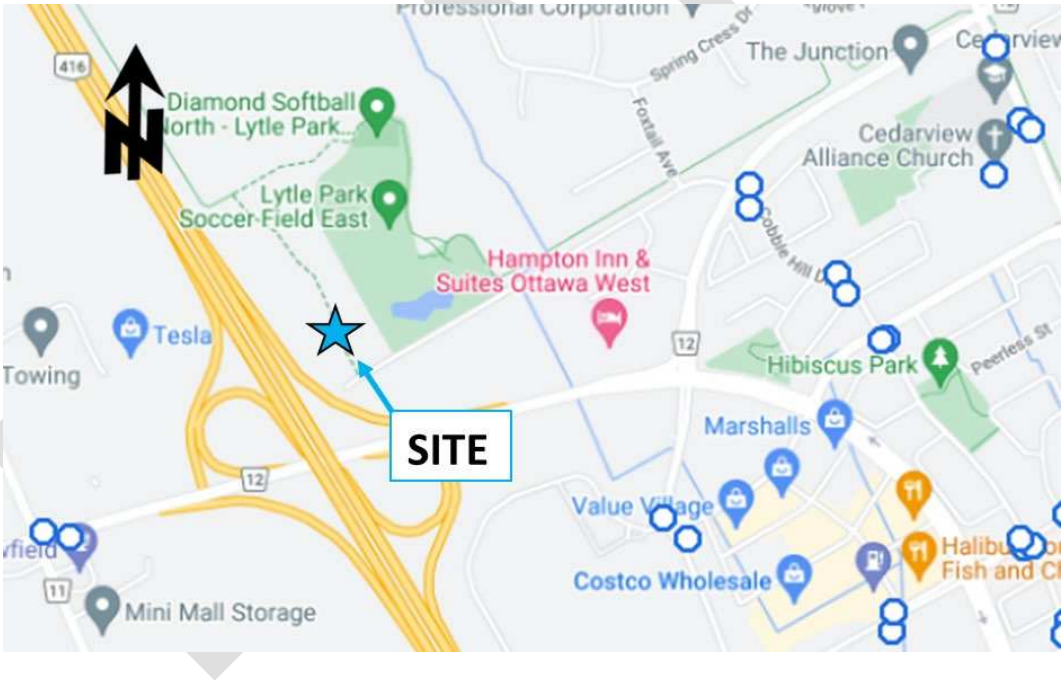


Figure 6: Adjacent Transit Stops



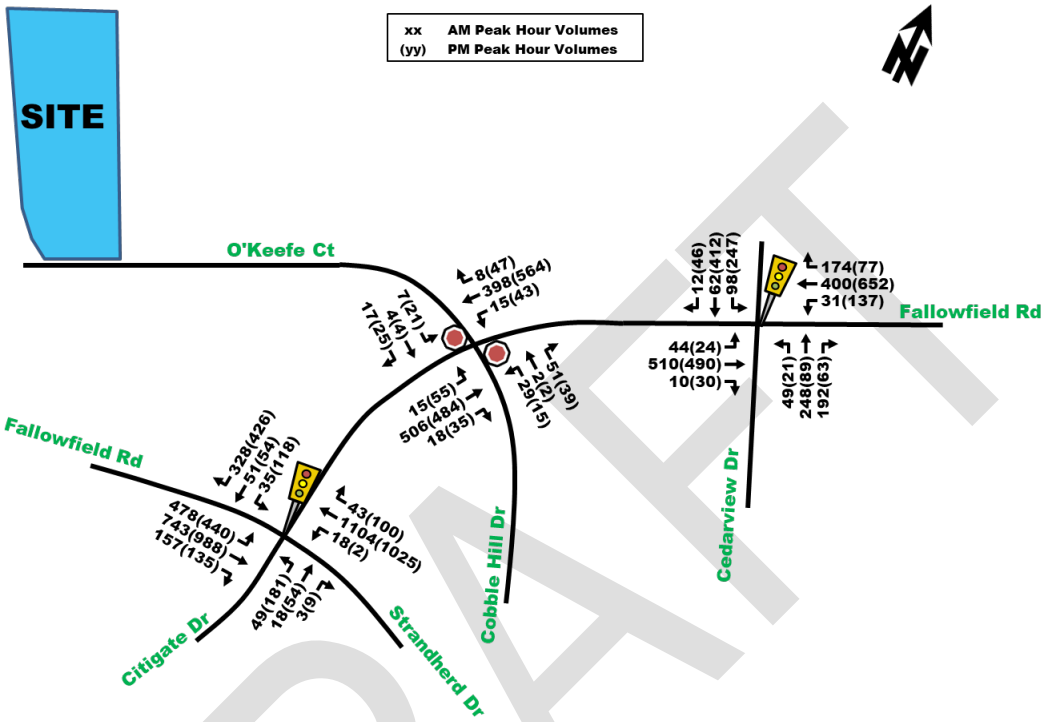
Peak Hour Travel Demands

The existing peak hour traffic and pedestrian volumes at the intersections within the study area were obtained from both the City of Ottawa and by Parsons for the following intersections:

- Fallowfield Rd/Strandherd Dr/Citigate Dr – Conducted by the Traffic Specialist on Wednesday, October 22, 2022
- Fallowfield Rd/O'Keefe Crt – Conducted by City of Ottawa on Tuesday, October 25, 2022
- Cedarview Rd/Fallowfield Rd – Conducted by City of Ottawa on Tuesday, January 7, 2020

The traffic volumes at study area intersections are illustrated in **Figure 7**. Raw traffic count data is provided in **Appendix C.** Volume differences of 50 vehicles or more between intersections were balanced to reflect consistency in volumes throughout the network. Less than 10 pedestrians/cyclists were observed over all intersections between the morning and afternoon peak hours combined.

Figure 7: Existing Peak Hour Traffic Volumes



Existing Road Safety Conditions

A five-year collision history data (2017-2021, inclusive) was obtained from the City of Ottawa Open Data Source for all intersections and road segments within the study area. Upon review of the collision data, it was determined that a total of 82 collisions have occurred within the five-year period. Of the reported collisions, 44 (54%) from rear ends, 9 (11%) from angled collisions, 9 (11%) from sideswipes, 9 (11%) from turning movements, 9 (11%) from single vehicle (other), 1 (1%) resulted in from approaching, and 1 (1%) from other. Furthermore, 65 (79%) collisions resulted in property damage and 17 (21%) resulted in non-fatal injuries. There were no fatal injuries recorded.

Within the study area, the quantity of collisions, collisions per million entering vehicles (MEV) and/or distance of mid-block at each location has occurred at a rate of:

- Fallowfield Rd/Strandherd Dr/Citigate Dr: 52, MEV 0.79
- Cedarview Rd/Fallowfield Rd, 24, MEV 0.51
- Fallowfield Rd/O'Keefe Crt: 2, MEV 0.09
- Mid-block O'Keefe Crt, O'Keefe Crt end to Foxtail Ave: 2 (735m)
- Mid-block Fallowfield Rd, Cedarview Rd to O'Keefe Crt: 2 (490m)

Fallowfield Rd/Strandherd Dr/Citigate Dr and Cedarview Rd/Fallowfield Rd had 33 (63%) and 11 (46%) collisions that were rear ends, respectively. For both intersections, this result is likely associated with higher traffic volumes, congestion, and stop and go driving patterns. Of the total collisions, 43 (83%) for Fallowfield Rd/Strandherd Dr and 19 (79%) for Cedarview Rd/Fallowfield Rd resulted in property damage only, suggesting lower speed collisions.

With regards to active transportation, there were no collisions that involved either a pedestrian or cyclist.

Based on the collision data, there are no identifiable safety concerns at any of the intersections or road segments within the study area. The source collision data provided by the City of Ottawa and the detailed analysis results are provided in **Appendix D**.

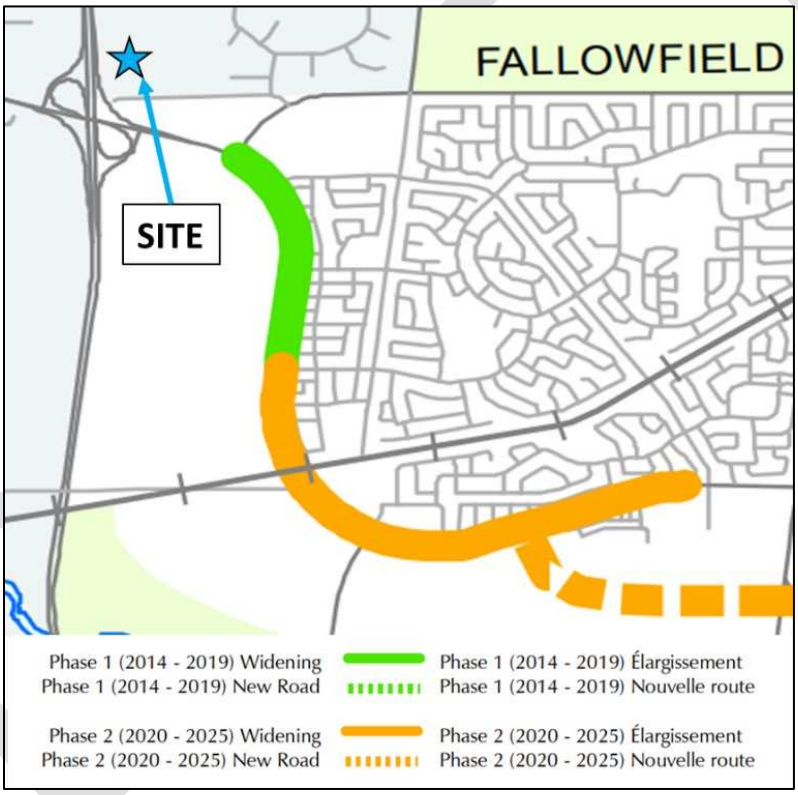
2.1.3. Planned Conditions

Future Transportation Network Changes

Strandherd Drive Widening

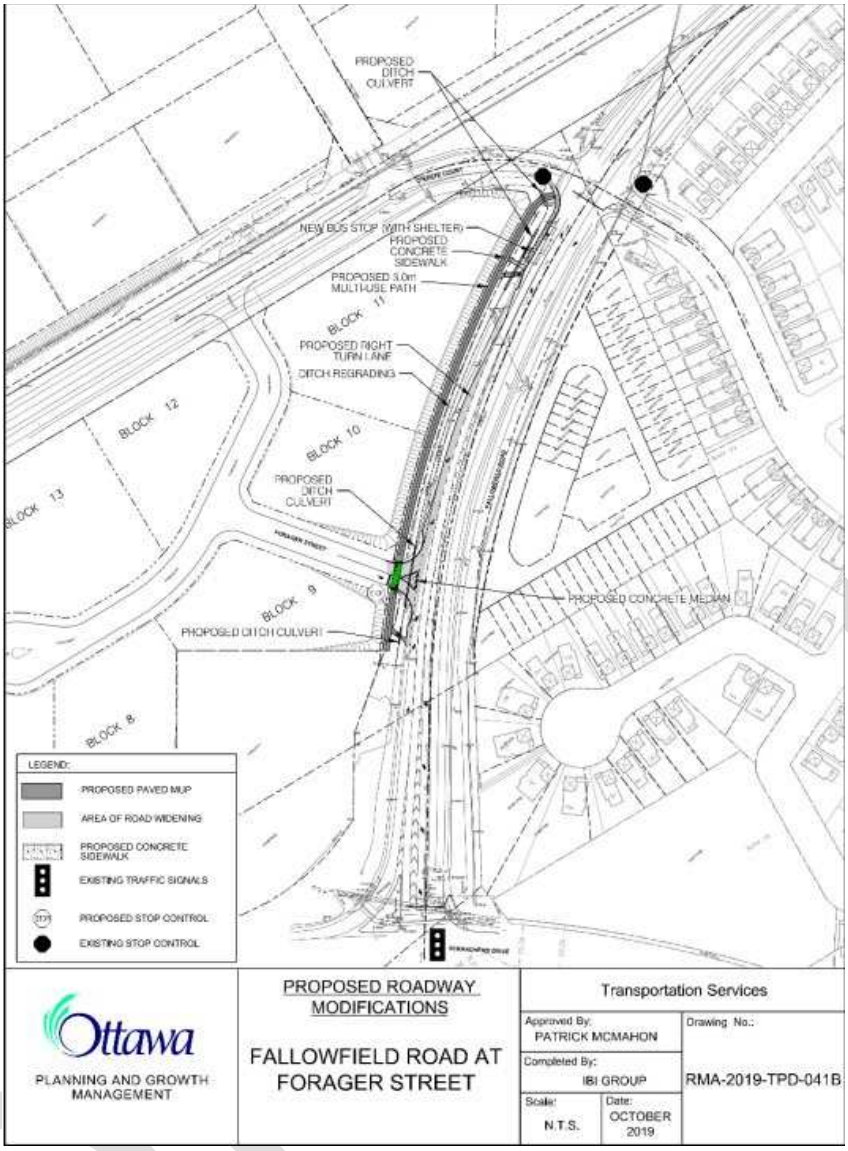
Strandherd Dr is currently being widened from two to four lanes from Marivista Dr to Jockvale Rd in the Barrhaven area. The project will also include sidewalks and cycle tracks in both directions and a grade separation (vehicular bridge) over the VIA Rail tracks. The project is outlined in the Transportation Master Plan and is currently in Phase 2 with an expected completion date of Fall 2023. See **Figure 8** for an illustration of the project location and phasing.

Figure 8: Strandherd Dr Road Widening Project



4401 Fallowfield Rd Roadway Modifications

The 140 Lusk TIA by IBI Group, located within the 4401 Fallowfield subdivision, indicated that roadway modifications (RMA-2019-TPD-041B) have been completed to satisfy requirements for the subdivision. The modifications included a new southbound auxiliary right turn lane at Forager St/Fallowfield Rd, a right-in/right-out intersection at Fallowfield Rd/Forager St, and a MUP along the west side of Fallowfield Rd. The RMA originally included a new southbound bus stop south of Fallowfield Rd/O'Keefe Crt, however, OC Transpo has deferred the installation of the future stop until the intersection is signalized.



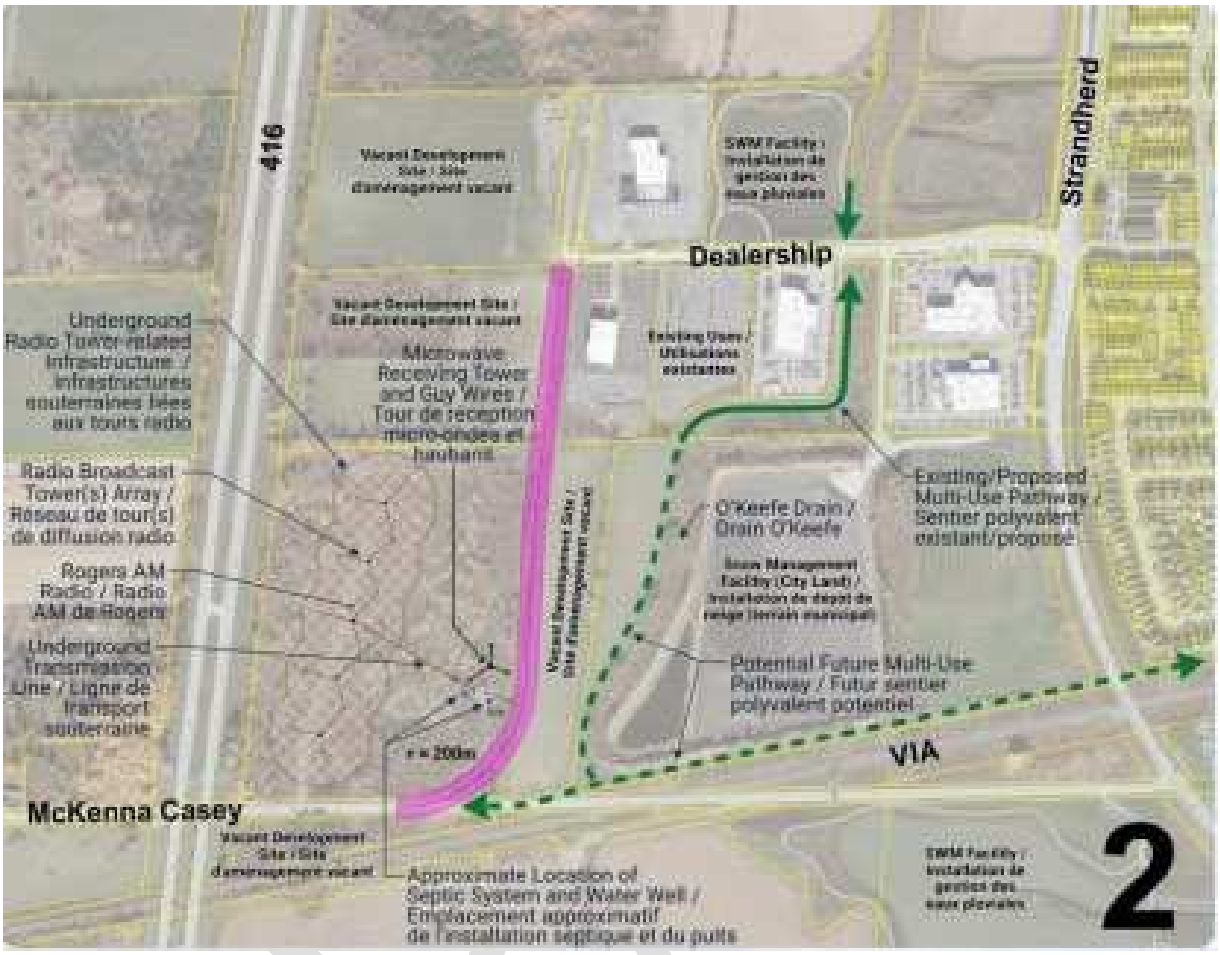
Fallowfield Rd/O'Keefe Crt Signalized Intersection

The intersection of Fallowfield Rd/O'Keefe Crt is planned to be converted from a two-way stop control to a signalized intersection in 2023, however, after contacting City staff there has been no updates regarding the project timeline or detailed design plans. It is assumed that the intersection will be built as a contemporary protected intersection design.

McKenna Casey Drive Realignment

McKenna Casey Dr is planned to undergo a realignment to provide connectivity between the existing Mckenna Casey Dr and Strandherd Dr via Dealership Dr. The realignment will provide an additional point of access to the Highway 416 Employment Lands by connecting to the Citigate Dr/Dealership Dr roundabout from the south via Moodie Dr and through a Highway 416 underpass. Although several design alternatives have been proposed, the typical design features would include a two-way two-lane divided cross section, sidewalks on both sides of the road and uni-directional cycle tracks. See **Figure 9** for an illustration of the preferred alignment (Alternative 2) that forms the basis of the draft recommended plan.

Figure 9: McKenna Casey Drive Realignment (Alternative 2)



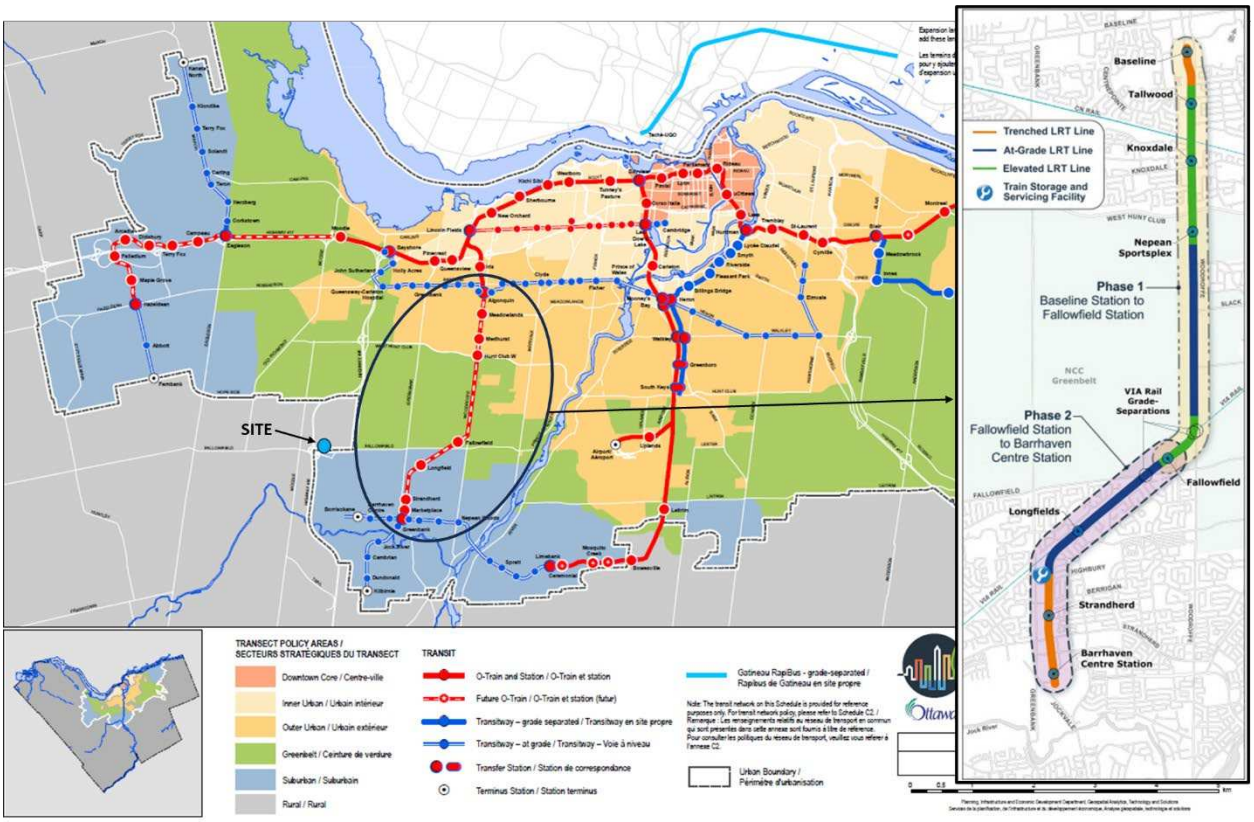
Stage 2 LRT Expansion

The City of Ottawa is currently in the process of expanding its two LRT Lines as part of Stage 2 Expansion. Stage 2 is a package of three extensions – south, east and west – totaling 44 km of new rail and 24 new LRT stations. The southernmost station as part of Stage 2 will be Limebank Station, located in Riverside South neighbourhood, across the Rideau River from Barrhaven. A park and ride will be provided at Limebank Station, allowing for commuters to/from Barrhaven to access the LRT system.

Barrhaven LRT and Rail Grade-Separations (Stage 3 LRT)

Upon completion of the O-Train west extensions to Baseline Station as part of the Stage 2 LRT, preliminary plans are underway to investigate the feasibility of converting the existing at-grade north-south bus transitway between Nepean Sportsplex and the Barrhaven Centre Station to a twin-track fully grade-separated LRT system. The major improvements would include rail-grade separations at the Woodroffe Ave, Southwest transit and Fallowfield Rd VIA Rail line crossing, modifying the existing Fallowfield, Longfields, and Strandherd Stations, and combining the existing Marketplace and Barrhaven Centre station into one terminus. In addition to expanding to Barrhaven, Stage 3 proposes an extension into Kanata/Stittsville based on the New Official Plan for the City of Ottawa, as shown in **Figure 10.** Funding for this project has not been secured yet and the timing for this project is currently unknown.

Figure 10: Stage 3 LRT Network Concept – New Official Plan



Other Study Area Developments

The following section outlines adjacent developments in the general area to be considered in the TIA. The criteria for inclusion of other area developments are the proximity to the proposed development site and the potential impact to study area intersections. Developments that are either approved or have an active planning application in the City are included below in **Table 1** and illustrated as part of the map in **Figure 11**.

Table 1: Proposed Adjacent Developments

Map Ref.	Development	Land Use and Size	Projected Build-Out Year	Projected Vehicle Trips Generated			
				AM		PM	
				In	Out	In	Out
1	100 Lusk [1]	General Office Space 1,895 m²	2021[3]	20	3	3	19
2	115 Lusk St [1]	Medical Offices 560 m²; Quality Restaurant 280 m²	2023[4]	8	5	17	15
3	135 Lusk St [1]	Hotel 99 units	2023[4]	25	17	27	26
4	140 Lusk St [2,3]	Hotel 88 units	2023[4]	20	16	23	22
5	4190, 4200, 4210, 4236 Fallowfield and 2740 Cedarview	195 Residential Units	2023	108	33	131	76
6	Citigate – 4433 Strandherd [2]	99 & 83 hotel rooms (P1 & P2)	(P1)[3]; (P2)[4]	29	20	27	26
7	4149 Strandherd [2]	Auto dealerships 6,400 m²	2023[3]	79	30	57	86
8	Citigate – 416 Employement Lands (Lot 3)	Prestige Business Park/Office (43,560 ft²)	2029	–	–	–	–
9	444 Citigate & 560 Dealership	Light Industrial 1,174,800 ft²	Unknown[4]	979	133	137	841
10	575 Dealership	Warehouse 320,000 ft²	Unknown[4]	54	15	20	54
11	4433 Strandherd [2]	255 hotel rooms;10,000 ft² of restaurant	Unknown[4]	147	120	157	129
12	Future Prestige Business Park	500,000 ft²	Unknown	756	95	116	718
13	Future Business Park	275,000 ft²	Unknown	388	68	119	338
			Total Combined	2,613	555	834	2,350

Note: 1. Within the 4401 Fallowfield development 2. Within the Citigate – 416 Employment Lands 3. Occupancy assumed by 2025. 4. Occupancy assumed by 2030.

Figure 11: Other Area Developments

2.2. Study Area and Time Periods

Full buildout of the proposed development is assumed to be 2025. As such, the horizon years being analyzed in this report are 2025 and 2030 (five years after full buildout) horizon years, using the weekday morning and afternoon peak hour time periods.

Proposed study area intersections and boundary roads are outlined below and highlighted in **Figure 12**.

- Fallowfield Rd/O'Keefe Crt - Cobble Hill Dr (unsignalized)
- Fallowfield Rd/Strandherd Rd/Citigate Dr (signalized)
- Fallowfield Rd/Cedarview Rd (signalized)

Figure 12: Proposed Study Area

3.0 FORECASTING REPORT

3.1. Development Generated Travel Demand

3.1.1. Trip Generation and Mode Shares

The proposed development will consist of 23,850m² light industrial/warehouse. The appropriate trip generation rates for each land use were obtained from the ITE Trip Generation Manual (11th Edition). The site is assumed to be primarily a warehouse, however, the total trips projected based on the ITE Warehousing land-use was found to be too low, since a higher number of auto-trips are expected based on the number of parking spaces provided. The description of the ITE General Light Industrial land use coincides with the proposed development but is considered broad as it includes several types of industrial land uses and can be overly conservative when projecting auto-driver trips for developments where the use is unspecified. As a result, it was assumed a 75% and 25% split between the Warehousing and the General Light Industrial land uses would produce a reasonable projection of the site generated trips for the proposed development. The vehicle-trip rates during the AM and PM peak hours are summarized in **Table 2** below.

Table 2: Trip Generation Trip Rates

Land Use	Size (m²)	Data Source	Trip Rates	
			AM Peak Hour	PM Peak Hour
General Light Industrial	5,962.5	ITE 110	T = 0.74(x); T = 0.68(x) +3.81	T = 0.65(x); Ln(T) = 0.72Ln(x) + 0.38
Warehousing	17,887.5	ITE 150	T = 0.17(x); T = 0.12(x) +23.62	T = 0.18(x); T = 0.12(x) + 26.48
Notes T = Average Vehicle Trip End; x = 1,000 ft² Floor Area :				

As shown in **Table 3**, a custom mode share for the site was developed based on a blended rate from the 2020 TRANS Manual for commercial developments located in the "South Nepean" district and the 2020 222 Citigate Dr TIA (Amazon Distribution Facility). The custom mode shares were adjusted based on 2022 cycling and pedestrian volumes observed at nearby intersections and mode share percentages from other nearby developments. Additionally, the site context, land-use, and proximity to nearby transit and active transportation facilities were also considered and reflected in the adjust mode share percentages.

Table 3: Mode Share Assumptions

Travel Mode	TRANS 2020 Mode Share	Amazon Distribution Facility Mode Share	Custom Mode Share	Rationale
Auto Driver	74%	56%	60%	Generally consistent with TRANS 2020 and the Amazon Distribution Facility.
Auto Passenger	14%	14%	15%	
Transit	1%	23%	18%	Existing transit services are available within a 700m walk.
Non-Motorized	0%	8%	7%	Active transportation facilities are located adjacent to the site.
Total Person Trips	**100%**	**100%**	**100%**	–

The total number of person trips per hour generated by the proposed development are calculated by multiplying the vehicle trip rates from **Table 2** by 1.28 factor, as per the ITE Trip Generation Manual to account for typical North American auto occupancy, transit use and non-motorized mode. The resulting person trips per peak hour are then divided by the different mode shares assumed in **Table 3**. The resultant site generated trips for the warehouse component, the light industrial component and total combined have been summarized in **Table 4**, **Table 5**, and **Table 6** respectively.

Table 4: Warehouse Peak Hour Site Generated Trips

Travel Mode	Mode Share	AM Peak (Person Trips/hr)			PM Peak (Person Trips/hr)		
		In	Out (12%)	Total	In (14%)	Out (86%)	Total
Auto Driver	60%	28	9	37	11	28	39
Auto Passenger	15%	7	3	10	2	7	9
Transit	18%	8	2	10	3	8	11
Non-Motorized	7%	3	0	3	1	3	4
Total Person Trips	100%	46	14	60	17	46	63
Total 'New' Auto Trips		**28**	**9**	**37**	**11**	**28**	**39**

Table 5: Light Industrial Peak Hour Site Generated Trips

Travel Mode	Mode Share	AM Peak (Person Trips/hr)			PM Peak (Person Trips/hr)		
		In	Out (12%)	Total	In (14%)	Out (86%)	Total
Auto Driver	60%	32	5	37	3	20	23
Auto Passenger	15%	8	2	10	1	5	6
Transit	18%	10	1	11	1	5	6
Non-Motorized	7%	3	0	3	0	2	2
Total Person Trips	100%	53	8	61	5	32	37
Total 'New' Auto Trips		**32**	**5**	**37**	**3**	**20**	**23**

Table 6: Total Combined Peak Hour Site Generated Trips

Travel Mode	Mode Share	AM Peak (Person Trips/hr)			PM Peak (Person Trips/hr)		
		In	Out (12%)	Total	In (14%)	Out (86%)	Total
Auto Driver	60%	60	14	74	14	48	62
Auto Passenger	15%	15	5	20	3	12	15
Transit	18%	18	3	21	4	13	17
Non-Motorized	7%	6	0	6	1	5	6
Total Person Trips	100%	99	22	121	22	78	100
Total 'New' Auto Trips		**60**	**14**	**74**	**14**	**48**	**62**

As shown in **Table 6**, the proposed development is anticipated to generate a total of approximately 75 and 60 'new' auto trips during the morning and afternoon peak hours, where 2% of the total auto driver trips are expected to be heavy vehicles. The transit mode shares are projected to generate 20 and 15 trips during morning and afternoon peak hours while active transportation mode shares (cycling and walking) are expected to generate 5 trips during both the morning and afternoon peak hours.

3.1.2. Trip Distribution and Assignment

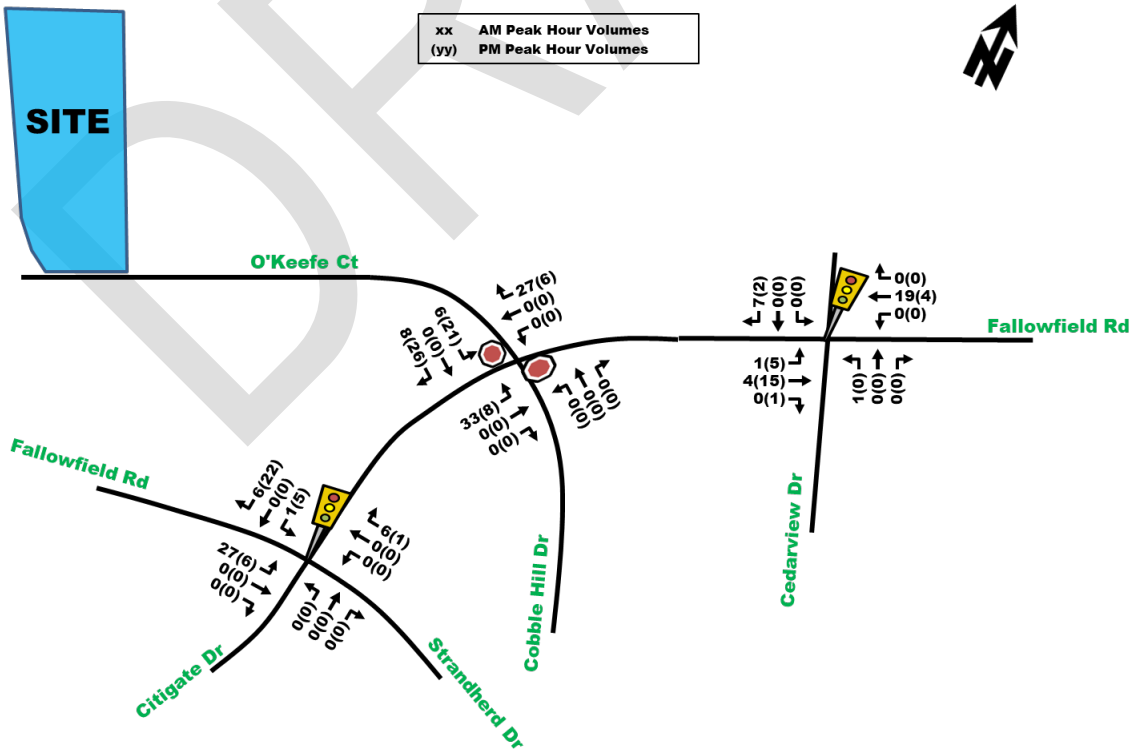
Based on the 2011 OD Survey (South Nepean district) and the location of adjacent arterial roadways and neighbourhoods, the distribution of site-generated traffic volumes was estimated as follows and illustrated in **Figure 13** and **Figure 14.**

Figure 13: Inbound Trip Distribution Percentages

Figure 14: Outbound Trip Distribution Percentages

The anticipated new auto trips for the proposed development (provided in **Table 4**) were then assigned to the road network as shown in **Figure 15**.

Figure 15: Site-Generated Traffic Volumes



3.2. Background Network Traffic

3.2.1. Transportation Network Plans

Refer to Section 2.1.3 for a detailed description of future transportation network changes. Major changes include the Strandherd Drive widening project that is currently underway and the conversion of Fallowfield Rd/O'Keefe Crt to a signalized intersection.

3.2.2. Background Growth

After review of the background growth rates applied for adjacent development TIAs, it was found the consensus was to utilize a 2% background growth rate per annum. However, upon further review of each TIA, there were generally fewer adjacent developments included on the background volumes (575 Dealership Dr, 444 Citigate Dr & 560 Dealership Dr, 4149 Fallowfield Rd, and 4433 Strandherd Dr future hotels were typically not included), likely due to uncertainty regarding each development's timeline. For the proposed development, it was assumed each development outlined in Section 2.1.3 would be constructed by the 2030 horizon year based on previously indicated buildout years and approximated rate of construction of developments on adjacent lots.

A review of the historic background growth rates demonstrated significant growth in the area as expected, however, since several significant adjacent developments with indefinite timelines were layered on to the background volumes, a 1% annual growth rate was maintained to all the major movements of the study area intersections to account for regional growth and any unanticipated future development within the horizon years. Considering the implications of COVID-19 with new work from home culture and maturing transit systems (Stage 2 & 3 LRT, See Future Transportation Network Changes in Section 2.1.3), the 1% growth rate may be considered conservative.

3.2.3. Other Developments

As mentioned in Section 2.1.3, several adjacent future developments with active or approved development applications have been identified in the study area.

Recently constructed developments such as the Hampton Inn & Suites (125 Lusk St), the Amazon Distribution Facility (222 Citigate Dr), and the Volkswagen dealership (4149 Fallowfield Rd) will have considerable impact to the background network and may not be captured by count data prior to 2022. For accuracy, new count data was obtained to capture the background traffic generated by these developments, eliminating the need to layer each sites generated traffic to the existing count data. Additionally, a review of 24-hour count data at Fallowfield Rd/Strandherd Dr/Citigate Dr indicated a surge of traffic entering Citigate Dr between 6:15 AM and 7:30 AM, suggesting the arrival of Amazon workers prior to their shift. As a result, majority of the volumes generated by the facility during the morning will be captured outside of the intersection peak hour.

The adjacent developments outlined in Section 2.1.3 were added to the background volumes and distributed along the road network in accordance with the trip distribution utilized for each developments respective TIA. All adjacent developments were added to the background volumes except for Lot 3 of the Citigate – 416 Employment Lands due to the limited information available and the current sale of the lot, suggesting there will be no development in the foreseeable future. Nevertheless, the inclusion of the remaining adjacent lots is considered very conservative, given the fact that most developments will likely be constructed beyond the projected buildout year. Although some developments did not include some or all the intersections within the scope of this study, their volumes were distributed in consideration of the adjacent developments land-use and each intersections directional splits.

Figures illustrating future site-generated traffic volumes of adjacent development were obtained from their respective TIA Reports and provided in Appendix E. The future adjacent development traffic volumes were added

to existing traffic volumes to produce future background 2025 and 2030 volumes, illustrated in **Figure 16** and **Figure 17**.

Figure 16: Future Background 2025 Traffic Volumes

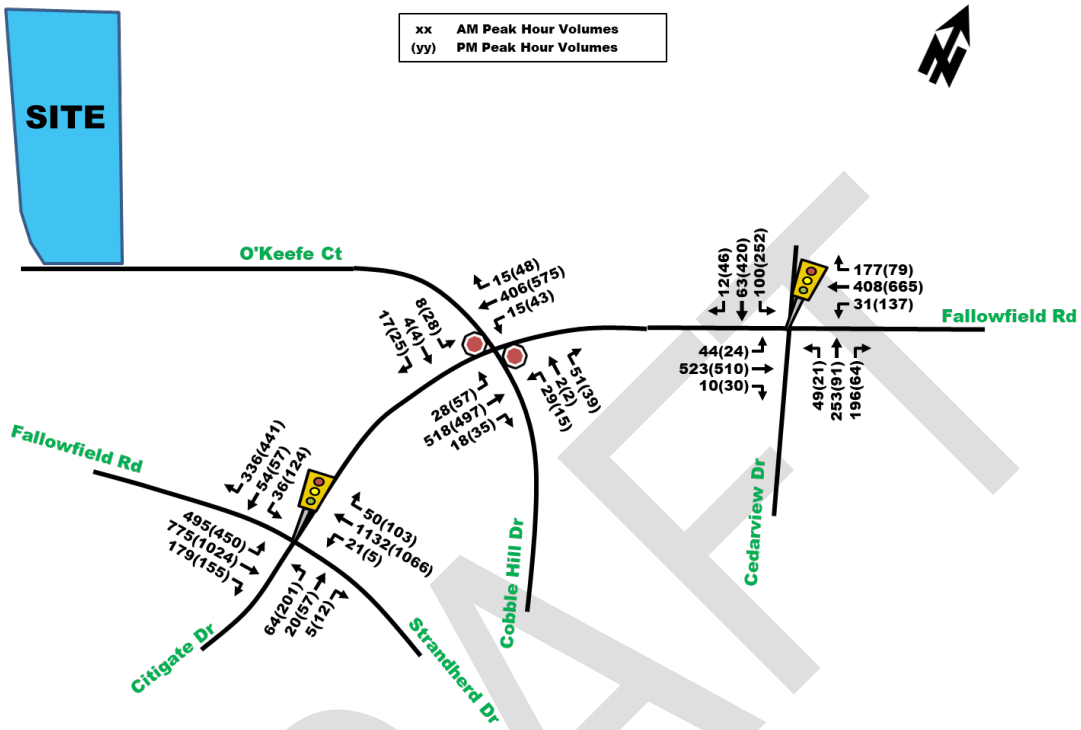
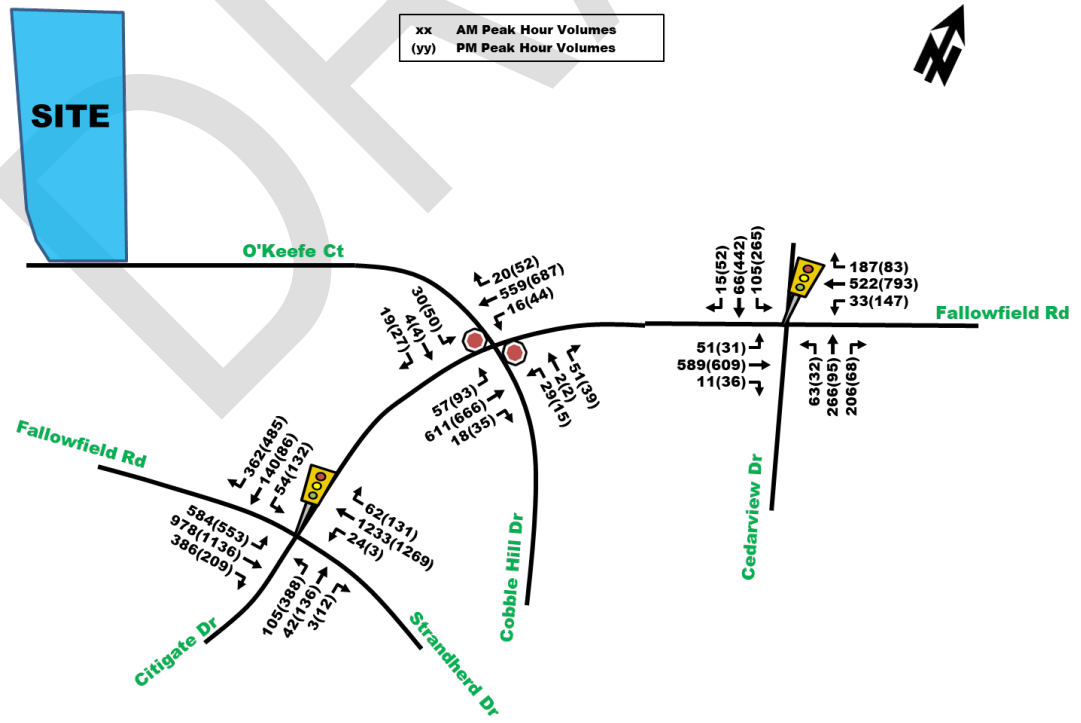


Figure 17: Future Background 2030 Traffic Volumes



3.3. Demand Rationalization

The following section indicates factors that may be used to rationalize the future travel demands in the study area and determine if there are potential capacity limitations and how they may be addressed.

The total projected 2025 and 2030 traffic volumes can be calculated by superimposing the site-generated traffic shown in **Figure 15**, onto the total future background traffic shown in **Figure 16** and **Figure 17**.

Site-Generated and Background Traffic Volumes

The proposed development is anticipated to add 75 and 60 'new' two-way vehicle trips (approximately 1 vehicle per minute) to the Fallowfield Rd/O'Keefe Crt intersection and the surrounding road network during peak hours. The additional trips entering/exiting the Fallowfield Rd/O'Keefe Crt intersection will be a very small fraction of the arterial road volumes (Fallowfield Rd) and the overall intersection volumes. Additionally, the traffic volumes along O'Keefe Crt are already considerably low, therefore the traffic implications to the O'Keefe Crt approach are considered negligible. Overall, the site-generated traffic volumes are not expected to result in any notable impact to the study area intersections, relative to future background volumes.

By the 2030 horizon year, the overall traffic along Strandherd Dr and Fallowfield Rd is expected to increase considerably due to the nature of adjacent developments and their anticipated high auto-driver mode shares. As the area further develops with more active transportation facilities, particularly along O'Keefe Crt and within the 4401 Fallowfield subdivision, it can be assumed there will be some reduction in auto-driver trips and increase in active transport trips.

Additionally, transit facilities will further develop within the City of Ottawa and Barrhaven, particularly the future Stage 3 LRT extension to Barrhaven Centre. It is expected there will be an increase in transit mode share trips and a reduction in auto-driver trips city wide.

Total projected traffic volumes illustrated in **Figure 18** and **Figure 19** indicate that the traffic along Fallowfield Rd between Cedarview Rd and Strandherd Dr may reach approximately 650 to 700 veh/h in the peak direction, which is considered acceptable for an arterial road. Additionally, the total projected traffic along Strandherd Dr may reach approximately 1,200 to 1,250 veh/h in the peak direction, which is also considered acceptable for a major arterial road.

TDM Measures

Transportation Demand Management (TDM) are measures implemented by developers to encourage users of the future development to use alternative travel modes to personal vehicles, such as transit and active transport (walking and biking). For transit, example measures include potentially subsidizing public transport passes and having high quality walking routes to transit stations. For walking and biking, measures include providing walkable routes and sufficient bicycle parking. It is expected that the proposed development and future developments in the area will have TDM measures in place that will reduce reliance on personal vehicles and increase alternative travel modes.

Figure 18: Total Projected 2025 Traffic Volumes

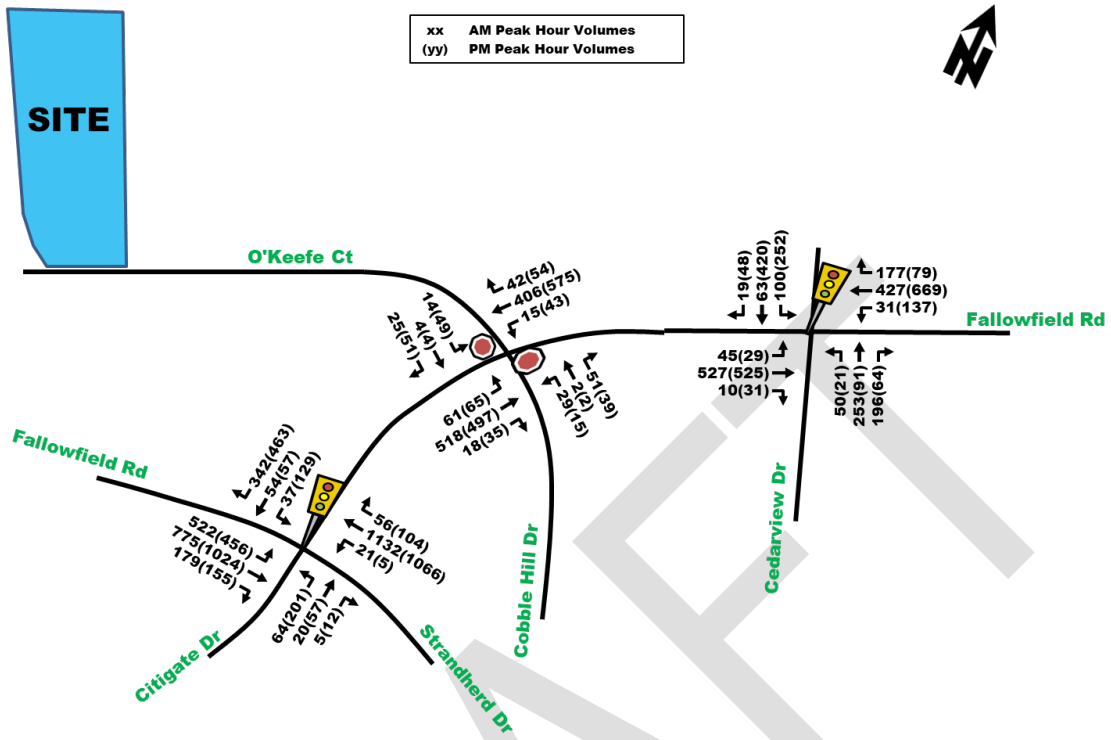
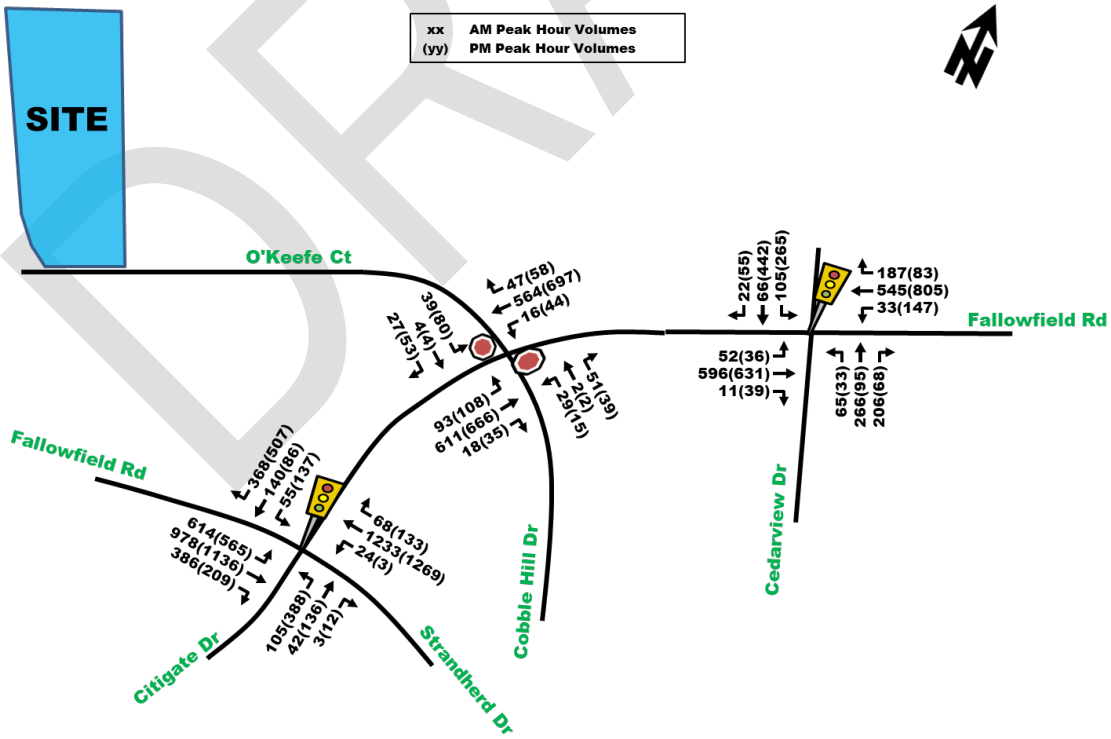


Figure 19: Total Projected 2030 Traffic Volumes



4.0 ANALYSIS

4.1. Development Design

4.2. Exemption Review

The modules/elements in **Table 7** are recommended to be exempt from the TIA Report based on the City's TIA guidelines.

Table 7: Exemptions Review Summary

Module	Element	Exemption Consideration
4.1 Development Design	4.1.3 New Street Networks	Not required for applications involving SPA
4.3 Boundary Street Design	All Elements	No available active-transportation facilities on boundary streets
4.6 Neighbourhood Traffic Calming	All Elements	Application for SPA and < 75 site-generated auto trips
4.7 Transit	All Elements	Anticipated low transit mode share
4.8 Network Concept	4.8 Network Concept	Only required if proposed development is anticipated to generate more than 200 person-trips over the permitted zoning
4.9 Intersection Design	All Elements	Site generates <75 auto-driver trips

4.2.1. Design for Sustainable Modes

Based on the latest available concept plan, there are limited dedicated pedestrian facilities provided within the site and to the adjacent network. The south site frontage on to O'Keefe Crt does not currently have any pedestrian or cycling infrastructure. Approximately 275m east of the site, located just east of Lytle Park, there is a MUP on the north side of O'Keefe Crt which provides connectivity to Fallowfield Rd. The existing MUP on the north side of O'Keefe Crt bends around Lytle Park and wraps around the north quadrant of the site, providing an opportunity for the site to connect to this pedestrian and cycling facility. Alternatively, the opportunity to extend part of the MUP along the south side of Lytle Park to the edge of the proposed site exists; however, this would be on property not owned by the developer and associated costs of construction should not be an obligation to the developer.

Given the nature of this development which forecasts very few active transportation trips and site context located on a dead-end street with very low vehicular volumes, the need for active transportation facilities extending to the site edge may not be warranted at this time.

4.2.2. Circulation and Access

The site will be accessible via two driveways located on the north side of O'Keefe Crt approximately 95m apart along the southern site boundary. The east access has been designed to provide trucks access to the loading bays of each building and will provide ample space for trucks to enter and exit the site without obstructions, as well as turnaround internally to the site. Although the garbage pickup and drop off locations have not been finalized, it is assumed the garbage trucks will utilize the east access and circulate the site between the loading bays and parking areas to pick up garbage from each building. The west access has been designed to accommodate entry and exit to staff parking areas. Additional details of each access will be discussed in detail in **Section 4.5**.

4.3. Parking

4.3.1. Parking Supply

Based on the City of Ottawa Parking Provisions, the proposed development is located in "Area D", where off-street motor vehicle parking must be provided, and bicycle parking is not mandatory. Based on Section 101 and Table 101 within the parking provisions, the minimum required parking was determined in **Table 8** below.

Table 8: Minimum Required Parking

Land Use	GFA		Parking Space Rate	Minimum Required Parking
N95 (Warehouse)	23,858 m²	5,000 m²	0.8/100 m² for the first 5,000 m² of GFA	40
		18,858 m²	0.4/100 m² above 5,000 m² of GFA	75
			Total	**115**

As shown in Table 6, the minimum parking requirement for the proposed development is 115 spaces. As previously mentioned in **Section 2.1.1**, the development proposes approximately 210 parking spaces resulting in an additional 95 parking spaces and therefore providing a sufficient parking supply. Since the site is providing a surplus of parking spaces and adequate loading and circulation space for trucks, there is no concern regarding off-site parking due to the proposed development.

4.4. Boundary Street Design

Exempt — see **Table 1**

4.5. Access Intersection Design

Two site accesses are proposed along O'Keefe Crt where the west access will primarily serve employees and visitors while the east access will provide access for trucks to the loading bays. The employee access will be located at the end of the cul-de-sac on O'Keefe Crt while the truck access will be approximately 95m east of the employee access. Both accesses are anticipated to be STOP controlled upon exit of the site.

Figure 20: Proposed Developments Preliminary Site Access Design

Additionally, the City of Ottawa Private Approach by laws were reviewed with the following notes:

- Section 25 (1) (a) (iv) – The site provides approximately 130m of frontage and is permitted to have two two-way private approaches.
- Section 25 (1) (c) – The employee access abides by the maximum 9m private approach width (proposed access approximately 8.5m wide).
- Section 25 (1) (e) – The east access has a wide flared radii to accommodate the access's primary use as a transport loading area. The extra wide radii narrows down to approximately 9m in width 14m from the street line, considered adequate.
- Section 25 (1) (g) – The distance between the nearest limits of the two private approaches to the same property exceed the 9m minimum.

Therefore, the access designs are in conformance with the City of Ottawa Private Approach By-law 2003-447.

4.6. Transportation Demand Management

4.6.1. Context for TDM

Due to the developments land-use as a warehouse building, it is expected that all the site generated trips are work-based and will occur during typical AM and PM peak hours, where AM trips will be employees entering the site and PM trips will be employees exiting the site. Based on other similar nearby developments, it is understood that trucking activity normally takes place throughout the day, outside of the normal AM and PM peak hours of the adjacent streets. It is assumed the development will operate during typical working hours between 9:00am and 5:00pm. **Sections 3.1.1** and **3.1.2** describe the anticipated site generated trips per travel mode and predicts the destinations of travelers based on the 2011 OD-Survey for Ottawa.

4.6.2. Need and Opportunity

Considering the nature of the development and the generally high auto-driver mode share of the study area, the proposed development and its occupants could benefit from TDM measures that are geared towards educating commuters, providing resources, and providing information on existing and future active transportation facilities, transit schedules, and the benefits of sustainable travel modes.

4.6.3. TDM Program

Both the TDM Supportive Design and Infrastructure Checklist and the TDM Measures Checklist has been provided in **Appendix F**. Note that this development is located in Area D for parking by-laws (eliminating need for bike parking), is within a rural context and is meant to function as a warehouse/light industrial building which normally relies motorized vehicles and trucks. The development is not located within 600m of any major transit station.

The proposed measures are as follows:

TDM Supportive Development Design and Infrastructure Checklist

- Some of the ten (10) required measures related to Walking and Cycling (facilities and bicycle parking) and Vehicle Parking have been satisfied, while others were not applicable.
- Two (2) of the fourteen (14) basic measures related to Walking and Cycling, Parking and Ridesharing have been satisfied, namely:
    - Locating building close to street with no parking areas between entrance and street.
    - Provide wayfinding signage for site accesses.

TDM Measures Checklist

- Four (4) of the seven (7) basic measures related to the Walking and Cycling, Transit, Parking, and TDM Marketing & Communications have been recommended and are as follows:
    - Display local area maps with walking/cycling access routes.
    - Display relevant transit schedules and route maps at entrances.
    - Provide online links to OC Transpo and STO information.
    - Provide a multimodal travel option information package to new residents.
- None of the better measures have been proposed at this time.

4.7. Neighbourhood Traffic Calming

Exempt – see **Table 7**.

4.8. Transit

Exempt – see **Table 7**.

4.9. Review of Network Concept

Exempt – see **Table 7**.

4.10. Intersection Design

4.10.1. Traffic Signal Warrants

Due to significant growth with the study area, the City envisions the conversion of the O'Keefe/Fallowfield intersection from two-way stop controlled to signalized when it is found to be warranted. Therefore, a traffic signal warrant was conducted for the intersection under the 2030 total projected conditions and was found to not be warranted. See **Appendix G** for the detailed traffic signal warrant analysis for O'Keefe Crt/Fallowfield Rd.

The remainder of the section was exempted – see **Table 7**.

5.0 FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Based on the results summarized herein, the following transportation related conclusions are offered:

Proposed Development

- O'Keefe Court Properties Ltd. is proposing the development of three warehouse buildings totaling 23,850 m^2 of GFA that will be located at 4497 O'Keefe Court. The development is anticipated to be constructed in a single phase by 2025.
- Approximately 210 vehicle parking spaces will be provided in an at-grade parking lot west of the warehouses. The development will provide 95 spaces above the minimum required parking bylaw for this site and does not exceed the maximum parking allowed.
- The development is anticipated to generate approximately 120 and 100 person trips, which comprises of 75 and 60 new vehicle trips, 20 and 15 passenger trips, 20 and 15 transit trips and 5 active transport (walking and cycling) trips for the AM and PM peaks respectively.
- Two site accesses will be provided on the south boundary of the site on O'Keefe Crt. The west access will function primarily as an employee entrance/exit while the east access will primarily service trucks utilizing the loading bays. Both accesses will be STOP controlled on the southbound approach from the site. The access locations and design were found to meet the requirements of the City of Ottawa's Private Approach By-Law and internal circulation.
- Some TDM measures will be adopted by O'Keefe Court Properties Ltd. for the purpose of promoting sustainable modes of transportation. Some of the measures includes displaying multi-modal travel information such as transit maps and schedules and walking and cycling routes.

Existing and Future Background Conditions

- A background traffic growth rate of 1% per year was applied to the study area intersections based on anticipated future traffic trends, where numerous adjacent developments are expected to be constructed within the 2030 horizon year.
- The 2030 future background conditions anticipate a significant increase of traffic volume due to number of adjacent developments within the study area which were layered on individually. The Fallowfield Rd/Strandherd Dr/Citigate Dr intersection demonstrated the largest increases relative to the other study area intersections, due its location along a major arterial and connection to Highway 416.

Projected Conditions

- The proposed development is projected to generate 75 and 60 vehicle trips during the morning and afternoon peak hours which equates to approximately 1 new vehicle per minute.
- The 2025 and 2030 total projected conditions are expected to operate similar to background conditions and are expected to have minimal impact to the surrounding road network, given the low site-generated traffic.

Future Study Area Modifications

- The Fallowfield Rd/O'Keefe Crt intersection is expected to be converted into a signalized intersection once found to be warranted. There is currently no detailed design for the intersection. The City should periodically review the needs and warrants to signalize this intersection.
- Strandherd Dr is currently being expanded from two-lanes to four-lanes between Marivista Dr to Jockvale Rd in the Barrhaven area. The road widening project will help accommodate the anticipated increase in background traffic in the study area.

- No additional off-site roadway modifications are currently proposed or triggered by the proposed development.

Overall, based on the proposed land-use, the site context, and the low auto-driver trips generated, the proposed development will have minimal impact to the adjacent road network and is recommended to proceed from a transportation perspective.

Prepared By:

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Reviewed By:

Juan Lavin, P.Eng.
Transportation Engineer

APPENDIX A

Screening Form

Office: +1 613.738.4160
1223 Michael Street, Suite 100|Ottawa, ON K1J 7T2

City of Ottawa 2017 TIA Guidelines

TIA Screening Form

Date	21-Jun-23
Project	4497 O'Keefe Court TIA
Project Number	478714

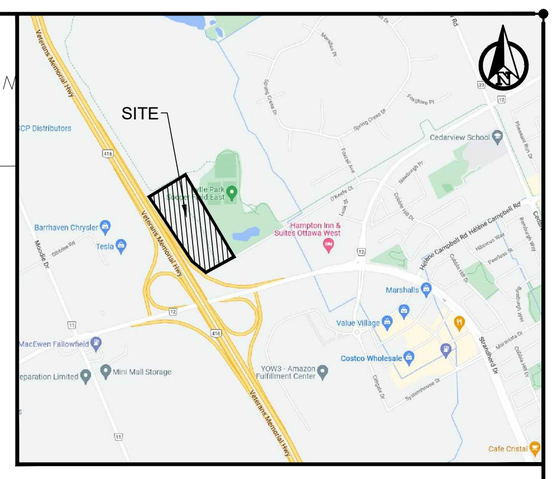
Results of Screening	Yes/No
Development Satisfies the Trip Generation Trigger	Yes
Development Satisfies the Location Trigger	No
Development Satisfies the Safety Trigger	No

Module 1.1 - Description of Proposed Development	
Municipal Address	4497 O'Keefe Crt
Description of location	Greenfield site located east of Highway 416 and north of O'Keefe Court
Land Use	Light Industrial buildings
Development Size	23,850 m2
Number of Accesses and Locations	2
Development Phasing	One Phase
Buildout Year	Assumed 2025
Sketch Plan / Site Plan	See attached

Module 1.2 - Trip Generation Trigger		
Land Use Type	Industrial	
Development Size	23850	sq. m
Trip Generation Trigger Met?	Yes	

Module 1.3 - Location Triggers	
Development Proposes a new driveway to a boundary street that is designated as part of the City's Transit Priority, Rapid Transit, or Spine Bicycle Networks (See Sheet 3)	No
Development is in a Design Priority Area (DPA) or Transit-oriented Development (TOD) zone. (See Sheet 3)	No
Location Trigger Met?	No

Module 1.4 - Safety Triggers		
Posted Speed Limit on any boundary road	<80	km/h
Horizontal / Vertical Curvature on a boundary street limits sight lines at a proposed driveway	No	
A proposed driveway is 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) or within auxiliary lanes of an intersection;	No	
A proposed driveway makes use of an existing median break that serves an existing site	No	
There is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development	No	
The development includes a drive-thru facility	No	
Safety Trigger Met?	No	



PART 3 EXPROPRIATION PLAN N626069 (MTO PLAN P-6118-83) PIN 04631-0414

LOT 22 CONCESSION 4 (RIDEAU FRONT) (NEPEAN)

PART 1 EXPROPRIATION PLAN N626069 (MTO PLAN P-6118-83) PIN 04631-0383

PART 1 PLAN 4R-15617 (MTO PLAN P-6118-107)

EASEMENT INST. LT1319761

N 59° 01' 30" E 176.53

Trees & Brush

PROPOSED BUILDING 'A3' 1-STOREY INDUSTRIAL GROSS FLOOR AREA = ±8,027 m² (±86,400 ft²)

PROPOSED BUILDING 'A2' 1-STOREY INDUSTRIAL GROSS FLOOR AREA = ±8,027 m² (±86,400 ft²)

PROPOSED BUILDING 'A1' 1-STOREY INDUSTRIAL GROSS FLOOR AREA = ±7,804 m² (±84,000 ft²)

Top of Well Cap=111.61

Top of Well Cap=107.70

SEPTIC UNIT

AREA = ±1,951m² (±21,000 ft²)

PART 14 PLAN 5R-13897

PIN 04631-0383

LOT 21 CONCESSION 4 (RIDEAU FRONT) (NEPEAN)

N 31° 43' 50" W

N 31° 20' 20" W

N 31° 27' 10" W

THE KINGS HIGHWAY 416

O'KEEFE COURT

0388 ALLOWANCE BETWEEN LOTS 20 AND 21 CONCESSION 4 (RIDEAU FRONT) (NEPEAN)

5R-13896 ROAD WIDENING BYLAW 332-86 (INST. N360415)

EXPROPRIATION PLAN 4D-84 PART 10 PLAN 4R-7852

BLOCK 113 REGISTERED PLAN M-2840

PIN 04631-0317

SITE STATISTICS:

SITE AREA:	±68,836 m² (±17.0 ACRES)
BUILDING AREA:	
A1	±7,804 m² (±84,000 ft²)
A2	±8,027 m² (±86,400 ft²)
A3	±8,027 m² (±86,400 ft²)
TOTAL	±23,858 m² (±256,800 ft²)
PARKING PROVIDED:	±210 CARS (±0.82 / 1,000)

THE PROPERTIES GROUP

KWA SITE DEVELOPMENT CONSULTING
KWA SITE DEVELOPMENT CONSULTING INC.
2453 Auckland Drive
Burlington, ON L7L 7A9

REVISION BLOCK

#	DATE	DESCRIPTION
1.	02/07/2023	ISSUED FOR DISCUSSION

CONCEPTUAL SITE PLAN

THE PROPERTIES GROUP
O'KEEFE COURT (NEPEAN)
NEPEAN, ONTARIO

PROJECT No: 21684 | DRAWN BY: BH | CHECKED BY:

NORTH ARROW

GRAPHIC SCALE 0m 5m 10m 15m

SP-013

APPENDIX B

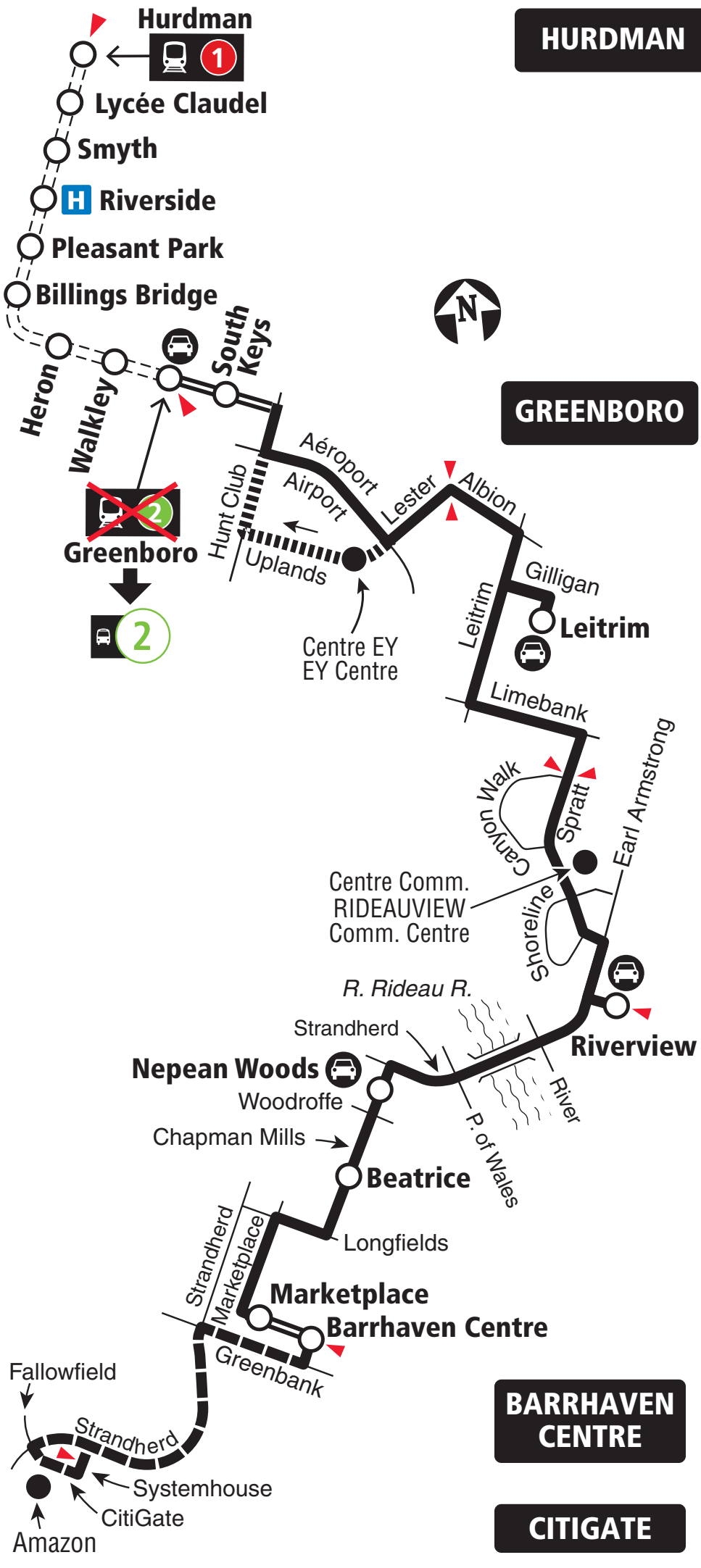
Transit Route Maps

99 Rapide

CITIGATE
BARRHAVEN CENTRE

HURDMAN
GREENBORO

7 days a week / 7 jours par semaine



Transitway & Station

Transitway & Station
Peak period / Période de pointe

Saturday & Sunday only / Sam. et dim. seulement

Limited service / Service limité

Park & Ride / Parc-o-bus

Timepoint / Heures de passage

2021.09

Schedule / Horaire 613-560-1000

Text / Texto* 560560

plus your four digit bus stop number / *plus* votre numéro d'arrêt à quatre chiffres

*Standard message rates may apply / Les tarifs réguliers de messagerie texte peuvent s'appliquer

Customer Service
Service à la clientèle **613-560-5000**

Lost and Found / Objets perdus..... **613-563-4011**

Security / Sécurité **613-741-2478**

Effective September 5, 2021
En vigueur 5 septembre 2021

OC Transpo

INFO 613-560-5000
octranspo.com

110

FALLOWFIELD

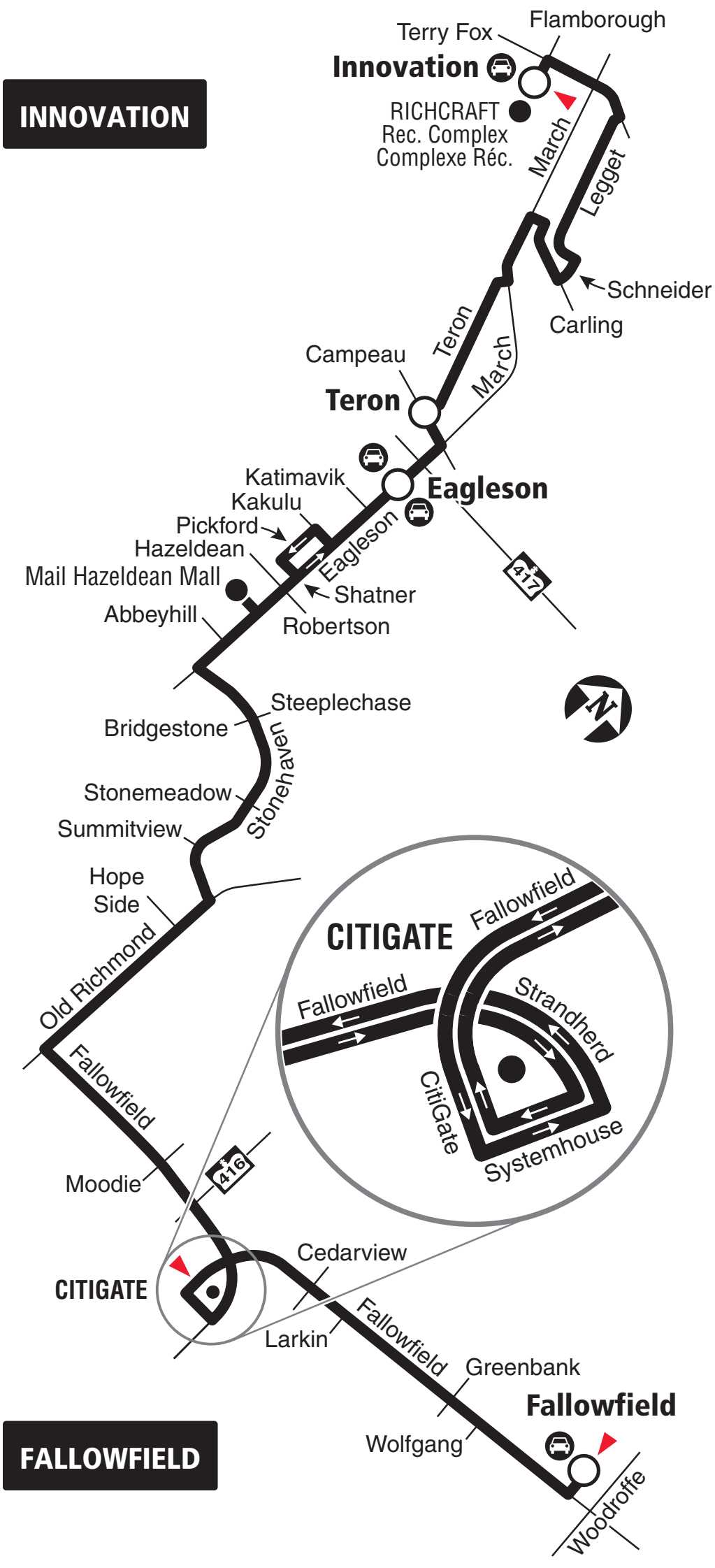
INNOVATION

Local

Monday to Friday / Lundi au vendredi

No late evening service

Aucun service en fin de soirée



Stations

Park & Ride / Parc-o-bus

Timepoint / Heures de passage

2021.06

Schedule / Horaire 613-560-1000

Text / Texto* 560560

plus your four digit bus stop number / *plus* votre numéro d'arrêt à quatre chiffres

*Standard message rates may apply / Les tarifs réguliers de messagerie texte peuvent s'appliquer

Customer Service
Service à la clientèle **613-741-4390**

Lost and Found / Objets perdus..... **613-563-4011**

Security / Sécurité **613-741-2478**

Effective June 20, 2021

En vigueur 20 juin 2021

OC Transpo

INFO 613-741-4390
octranspo.com

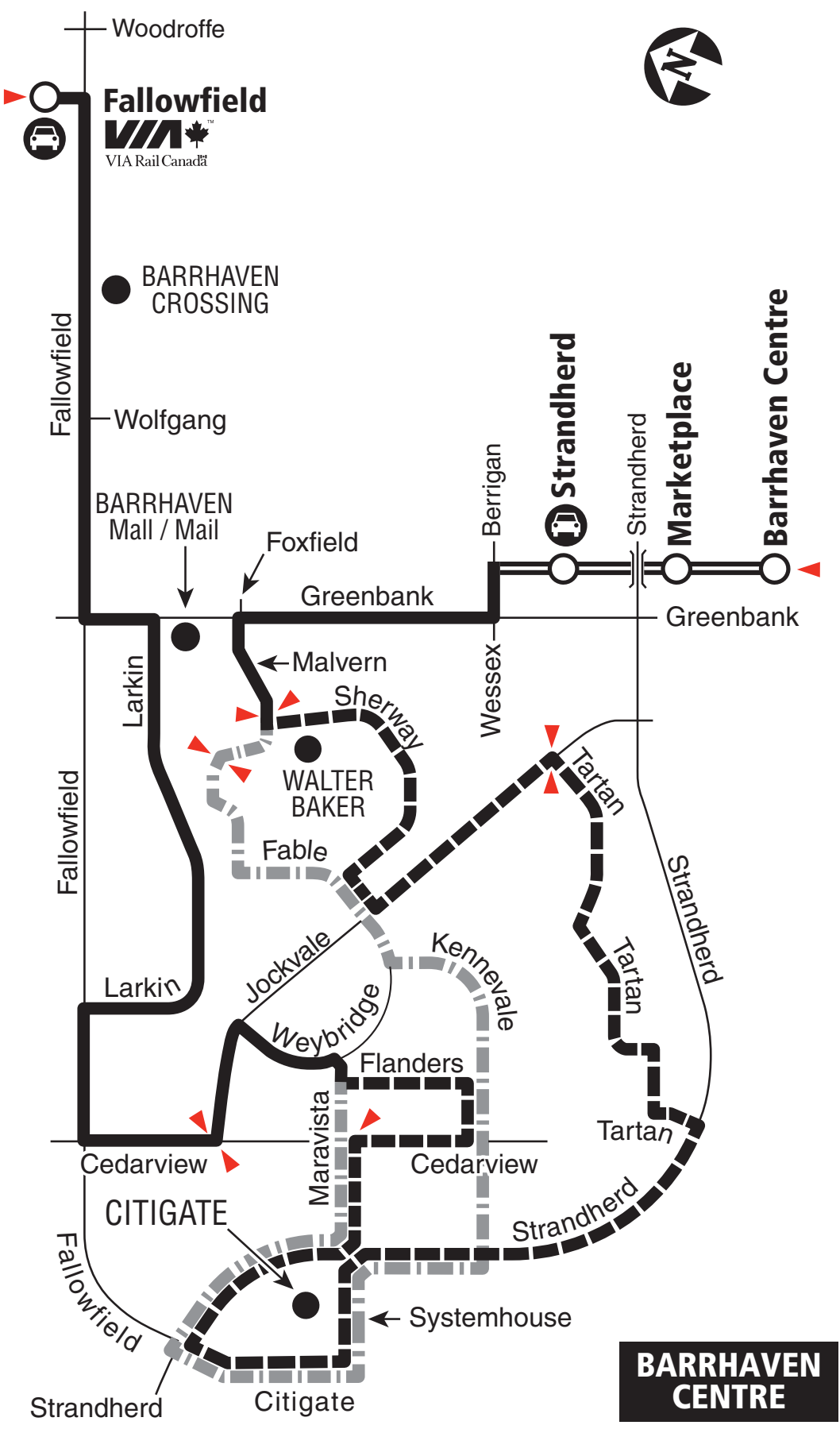
170

FALLOWFIELD
BARRHAVEN CENTRE

Local

7 days a week / 7 jours par semaine
All day service
Service toute la journée

FALLOWFIELD



BARRHAVEN CENTRE

	Transitway & Station
	Evenings and weekends only / Soirs et fins de semaine seulement
	No service evenings and weekends / Pas de service le soir et les fins de semaine
	Park & Ride / Parc-o-bus
	Timepoint / Heures de passage

2021.06

Schedule / Horaire 613-560-1000
Text / Texto* 560560
plus your four digit bus stop number / *plus* votre numéro d'arrêt à quatre chiffres
*Standard message rates may apply / Les tarifs réguliers de messagerie texte peuvent s'appliquer

Customer Service
Service à la clientèle **613-741-4390**

Lost and Found / Objets perdus..... **613-563-4011**

Security / Sécurité **613-741-2478**

Effective June 20, 2021
En vigueur 20 juin 2021

OC Transpo

INFO 613-741-4390
octranspo.com

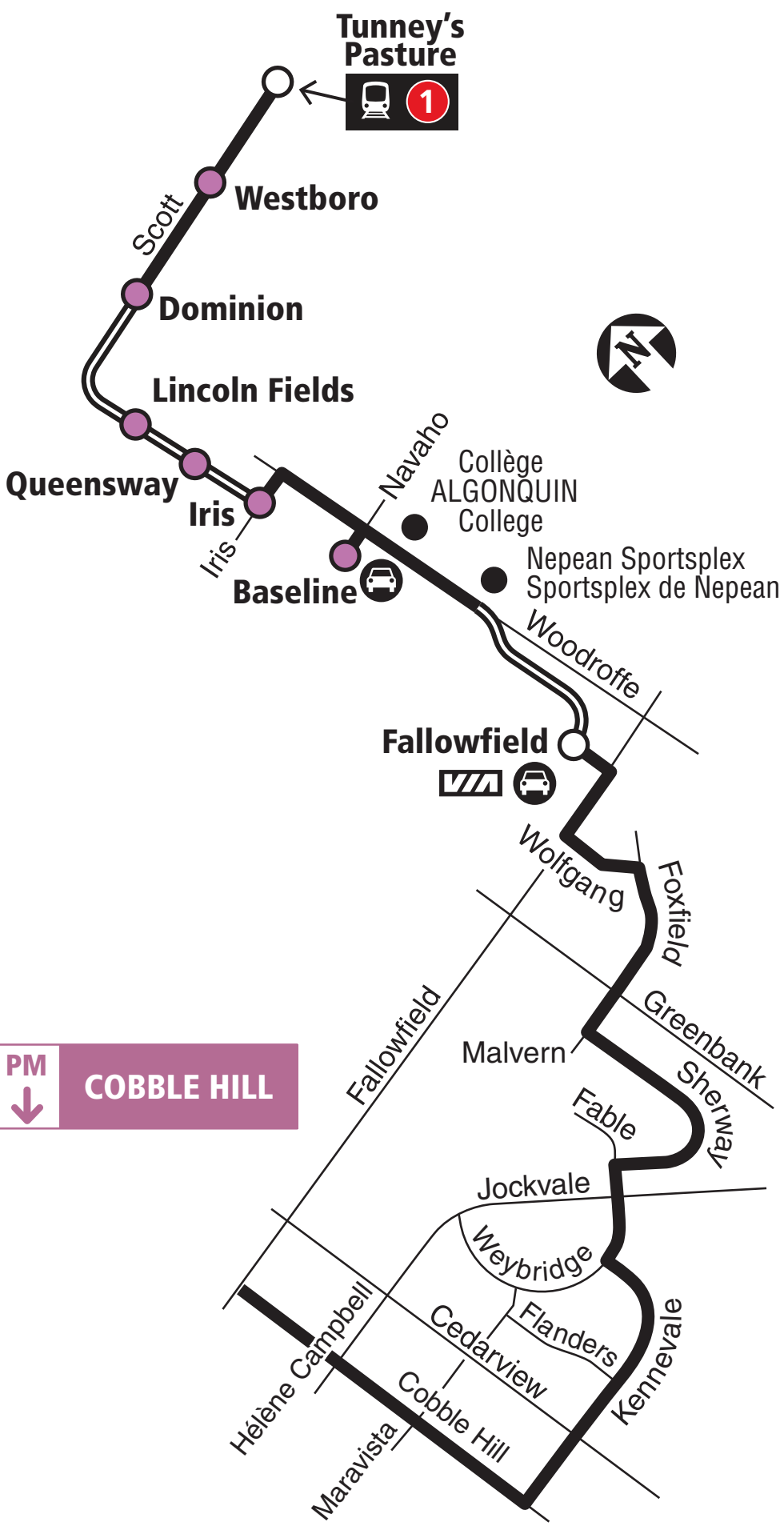
272 Connexion

COBBLE HILL
TUNNEY'S PASTURE

Monday to Friday / Lundi au vendredi

Peak periods only
Périodes de pointe seulement

AM ↑ TUNNEY'S PASTURE



PM ↓ COBBLE HILL

06.2022

Transitway & Station

Limited stops: Off only in AM / No stop in PM
Arrêts limités : débarquement en AM seul. / aucun arrêt en PM

Park & Ride / Parc-o-bus

Schedule / Horaire 613-560-1000
Text / Texto* 560560
plus your four digit bus stop number / *plus* votre numéro d'arrêt à quatre chiffres

*Standard message rates may apply / Les tarifs réguliers de messagerie texte peuvent s'appliquer

Customer Service
Service à la clientèle **613-560-5000**

Lost and Found / Objets perdus..... **613-563-4011**

Security / Sécurité **613-741-2478**

Effective June 26, 2022
En vigueur 26 juin 2022

OC Transpo

INFO 613-560-5000
octranspo.com

APPENDIX C

Traffic Data

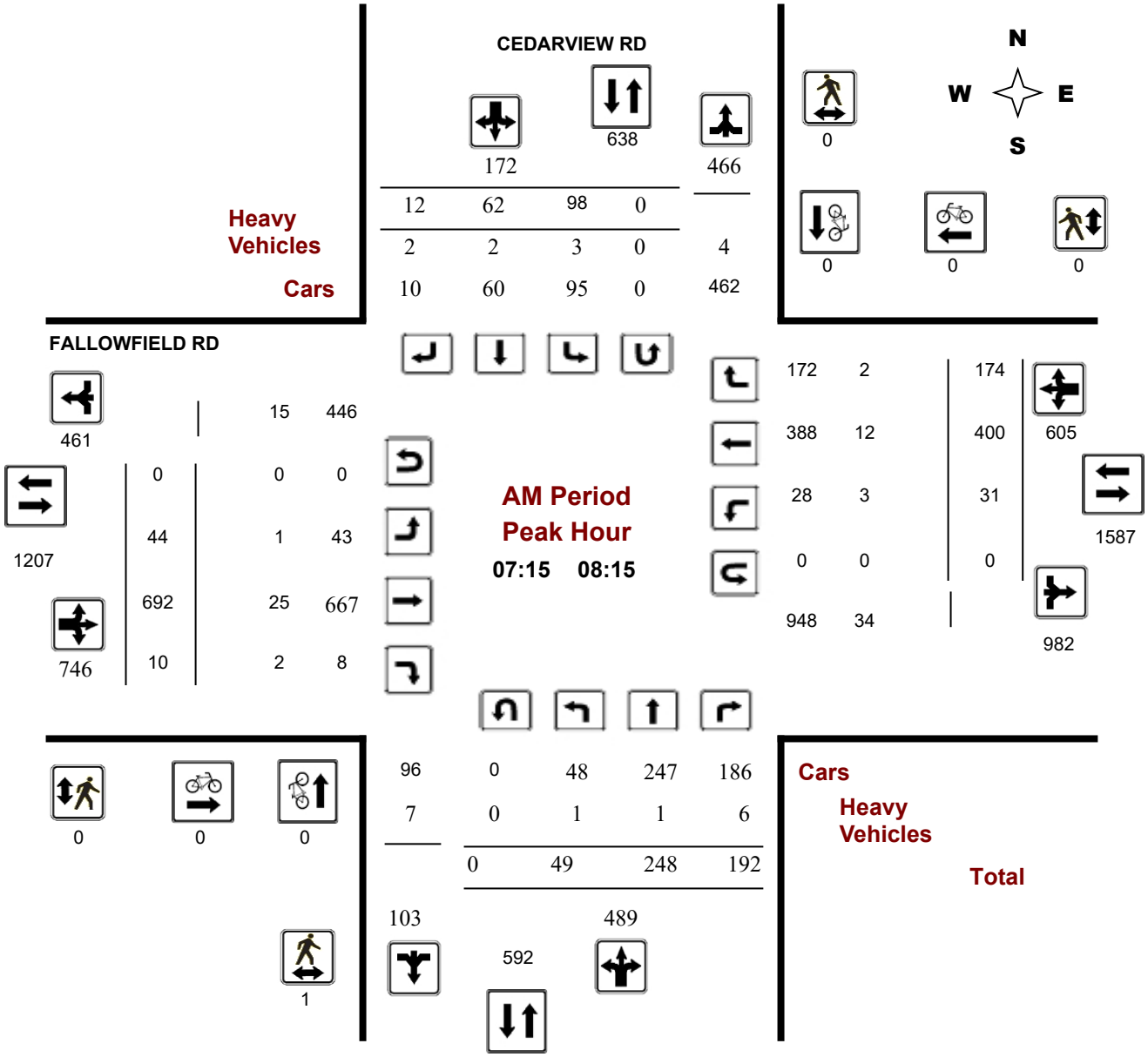
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

CEDARVIEW RD @ FALLOWFIELD RD

Survey Date: Tuesday, January 07, 2020 **WO No:** 39248

Start Time: 07:00 **Device:** Miovision



Comments 5469190 - TUE JAN 07 2020 - 8HRS - LORETTA

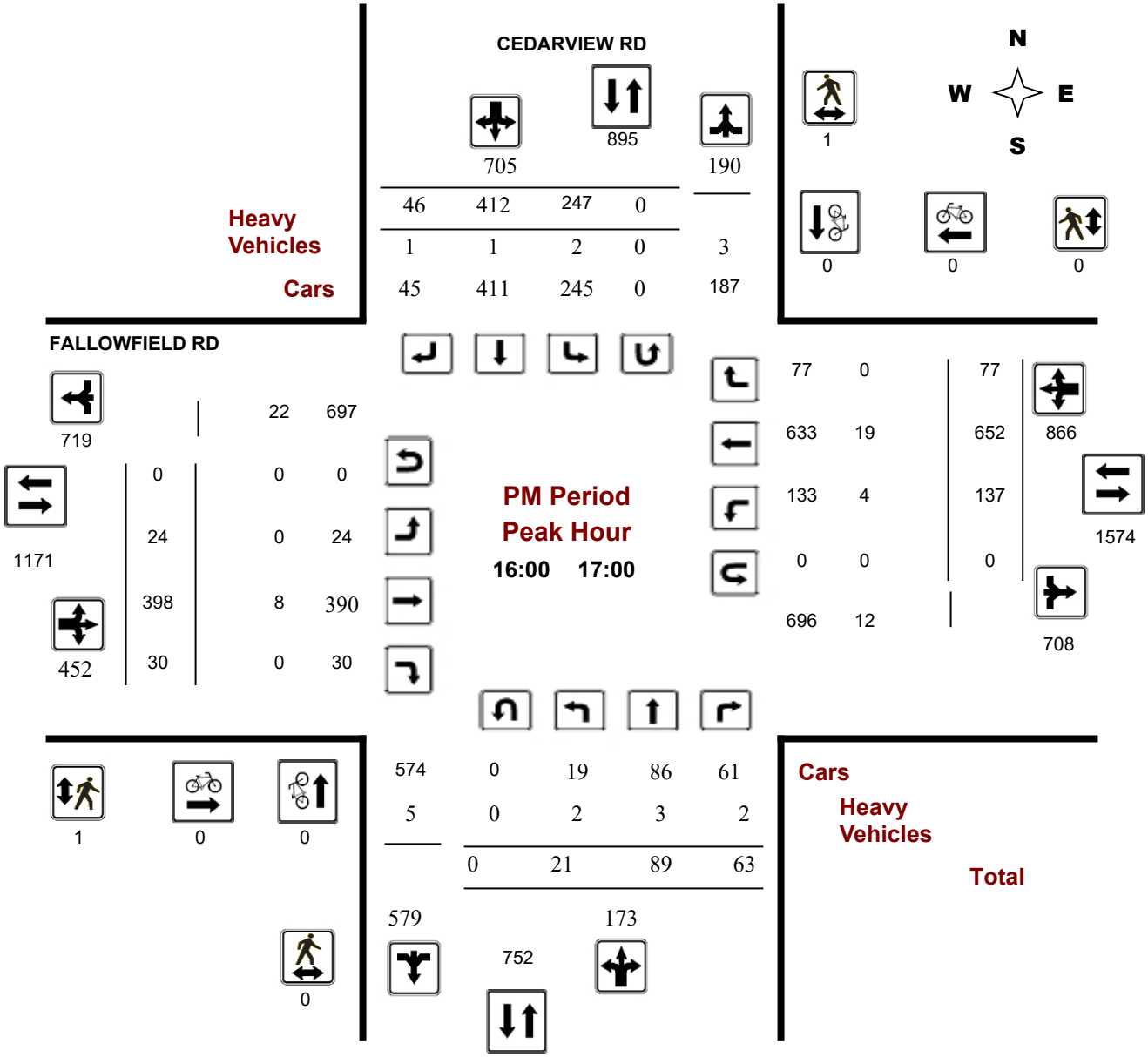
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

CEDARVIEW RD @ FALLOWFIELD RD

Survey Date: Tuesday, January 07, 2020 **WO No:** 39248

Start Time: 07:00 **Device:** Miovision



Comments 5469190 - TUE JAN 07 2020 - 8HRS - LORETTA

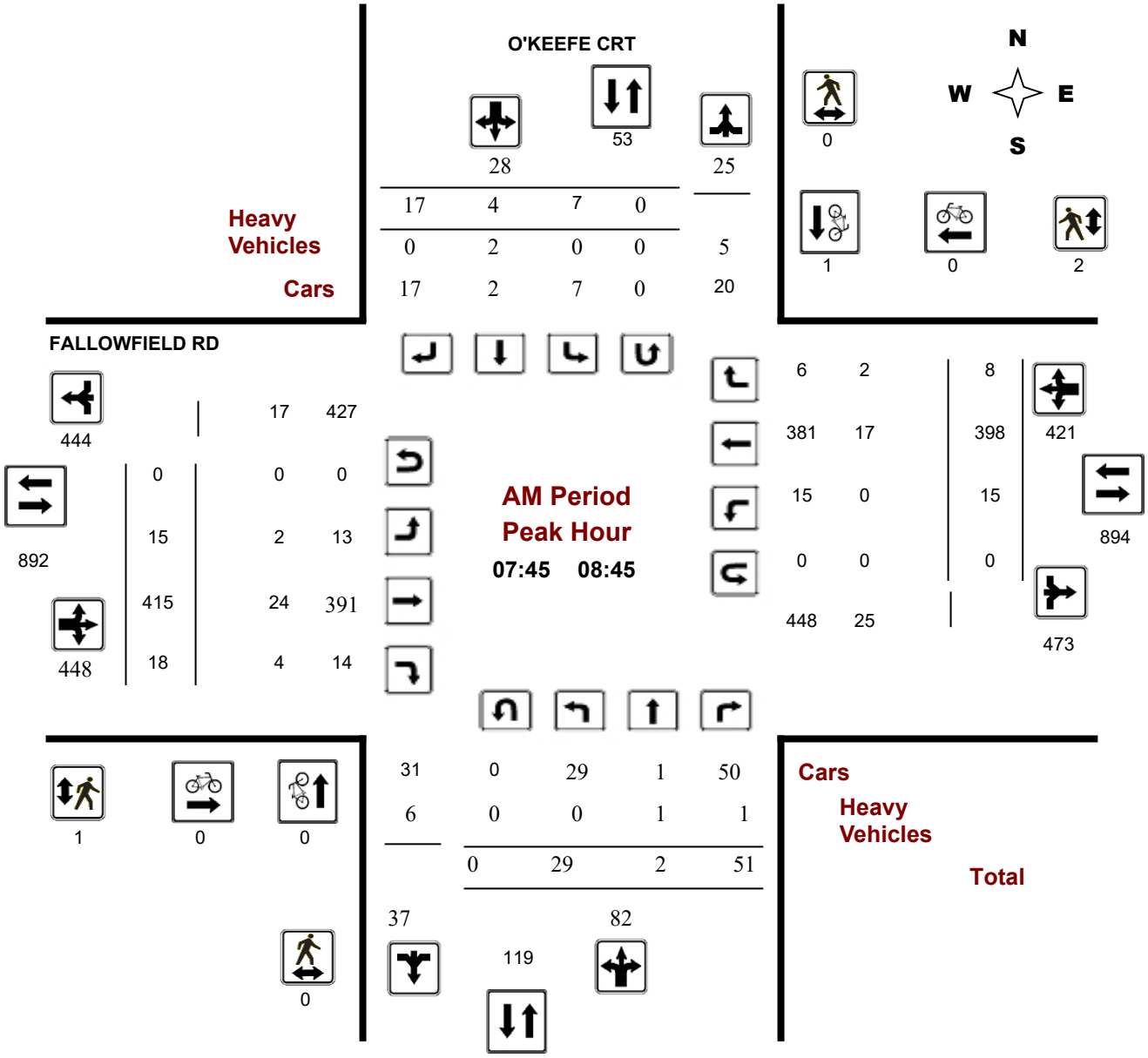
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

FALLOWFIELD RD @ O'KEEFE CRT

Survey Date: Tuesday, October 25, 2022 **WO No:** 40639

Start Time: 07:00 **Device:** Miovision



Comments

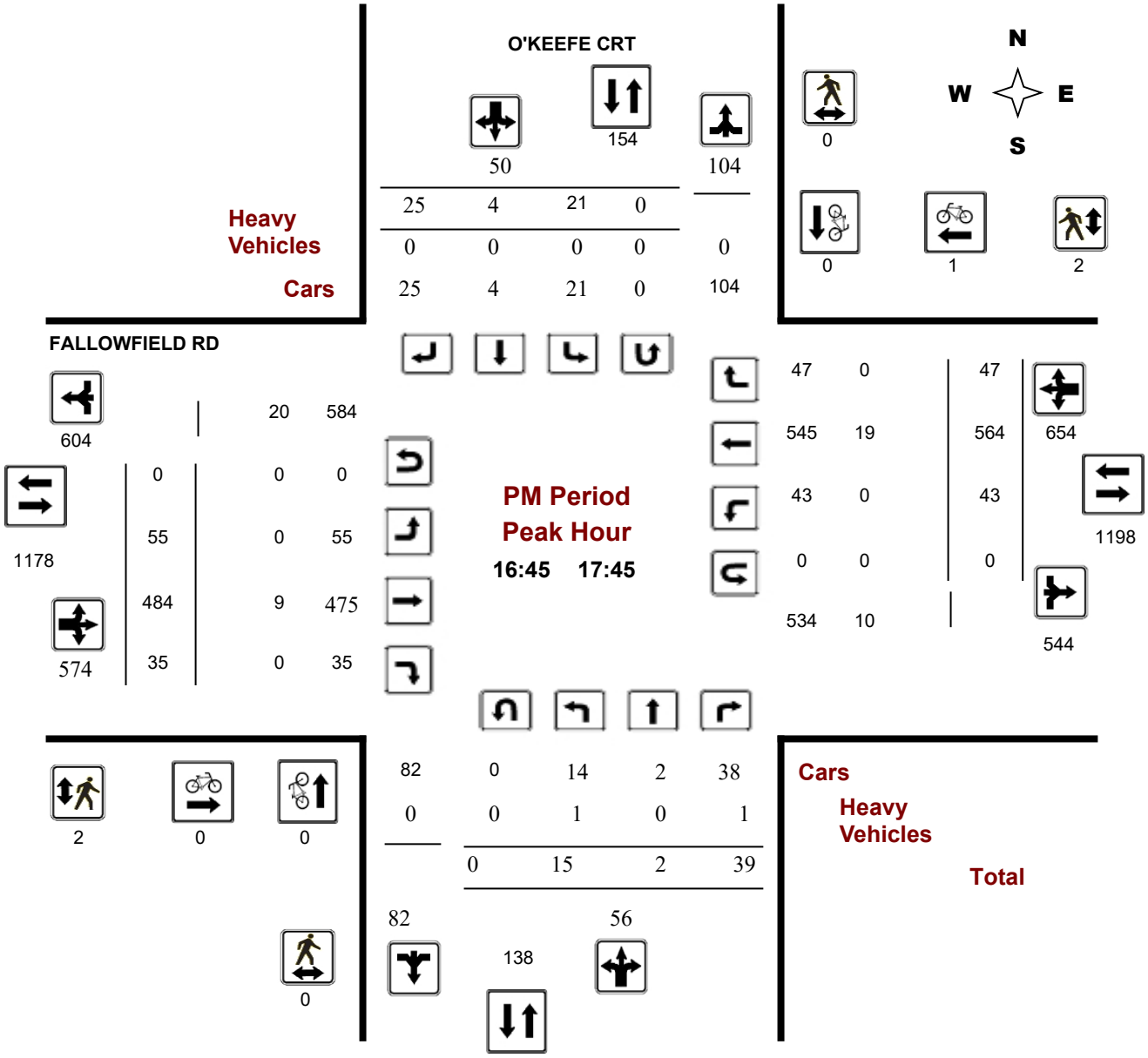
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

FALLOWFIELD RD @ O'KEEFE CRT

Survey Date: Tuesday, October 25, 2022 **WO No:** 40639

Start Time: 07:00 **Device:** Miovision



Comments

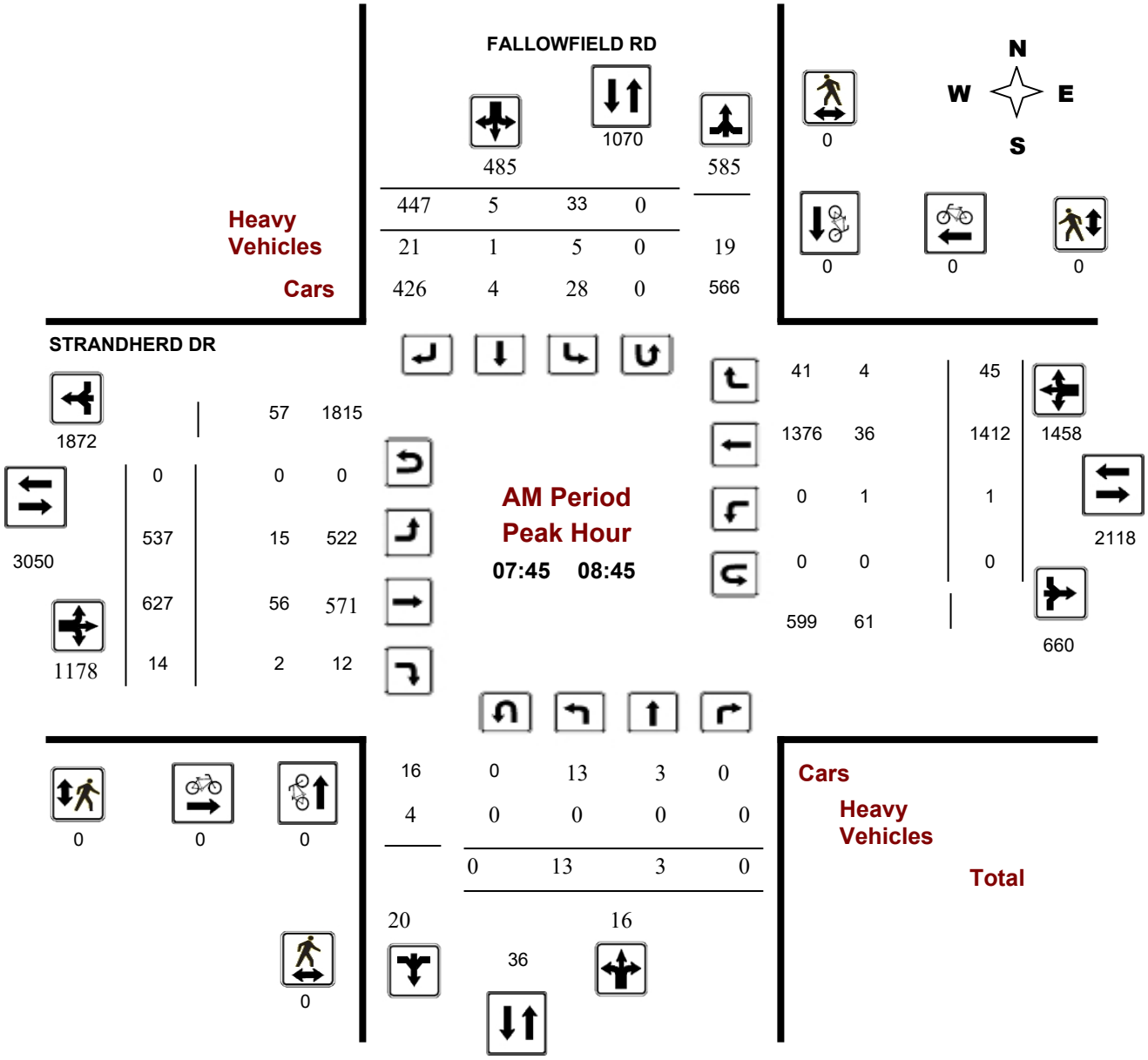
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

FALLOWFIELD RD @ STRANDHERD DR

Survey Date: Thursday, March 08, 2018 **WO No:** 37594

Start Time: 07:00 **Device:** Miovision



Comments

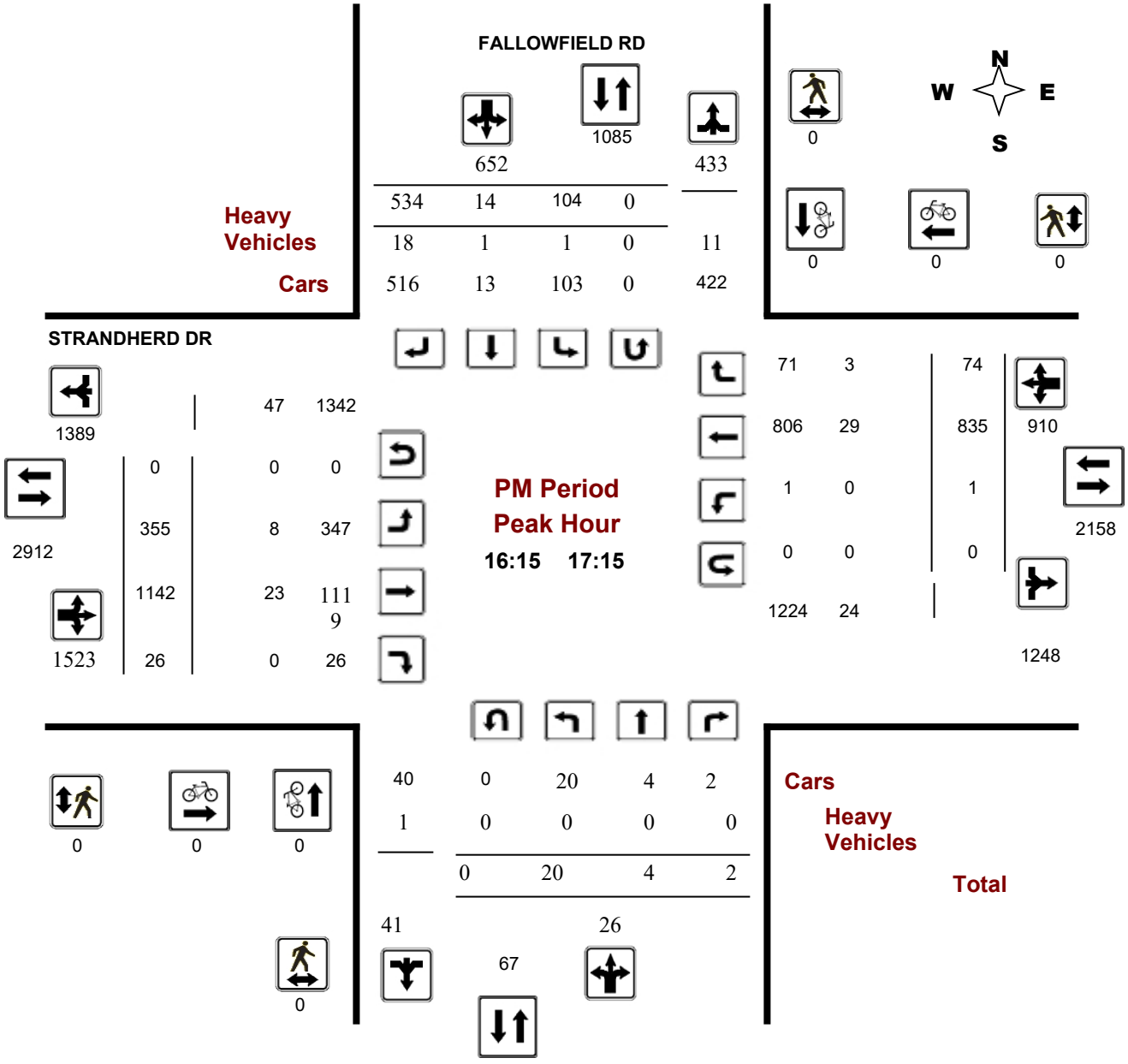
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

FALLOWFIELD RD @ STRANDHERD DR

Survey Date: Thursday, March 08, 2018 **WO No:** 37594

Start Time: 07:00 **Device:** Miovision



Comments

APPENDIX D

Collision Data

Total Area

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	SMV other	SMV unattended vehicle	Other	Total	
P.D. only	39	7	8	4	1	5	0	1	65	79%
Non-fatal injury	5	2	1	5	0	4	0	0	17	21%
Non-reportable	0	0	0	0	0	0	0	0	0	0%
Total	**44**	**9**	**9**	**9**	**1**	**9**	**0**	**1**	**82**	100%
	#1 or 54%	#2 or 11%	#2 or 11%	#2 or 11%	#6 or 1%	#2 or 11%	#8 or 0%	#6 or 1%		

O'KEEFE CRT, END to FOXTAIL AVE

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2017-2021	2	n/a	1825	**n/a**

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	SMV other	SMV unattended vehicle	Other	Total	
P.D. only	0	0	0	0	0	1	0	0	1	50%
Non-fatal injury	0	0	0	0	0	1	0	0	1	50%
Non-reportable	0	0	0	0	0	0	0	0	0	0%
Total	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**2**	100%
	0%	0%	0%	0%	0%	100%	0%	0%		

FALLOWFIELD RD/O'KEEFE CRT

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2017-2021	2	12,778	1825	**0.09**

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	SMV other	SMV unattended vehicle	Other	Total	
P.D. only	0	0	0	0	0	1	0	0	1	50%
Non-fatal injury	0	0	0	0	0	1	0	0	1	50%
Non-reportable	0	0	0	0	0	0	0	0	0	0%
Total	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**2**	100%
	0%	0%	0%	0%	0%	100%	0%	0%		

FALLOWFIELD RD/STRANDHERD DR

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2017-2021	52	36,211	1825	**0.79**

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	SMV other	SMV unattended vehicle	Other	Total	
P.D. only	29	2	8	1	1	2	0	0	43	83%
Non-fatal injury	4	0	0	4	0	1	0	0	9	17%
Non-reportable	0	0	0	0	0	0	0	0	0	0%
Total	**33**	**2**	**8**	**5**	**1**	**3**	**0**	**0**	**52**	100%
	63%	4%	15%	10%	2%	6%	0%	0%		

FALLOWFIELD RD, CEDARVIEW RD to O'KEEFE CRT

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2017-2021	2	n/a	1825	**n/a**

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	SMV other	SMV unattended vehicle	Other	Total	
P.D. only	0	0	0	0	0	1	0	0	1	50%
Non-fatal injury	0	0	0	0	0	1	0	0	1	50%
Non-reportable	0	0	0	0	0	0	0	0	0	0%
Total	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**2**	100%
	0%	0%	0%	0%	0%	100%	0%	0%		

CEDARVIEW RD/FALLOWFIELD RD

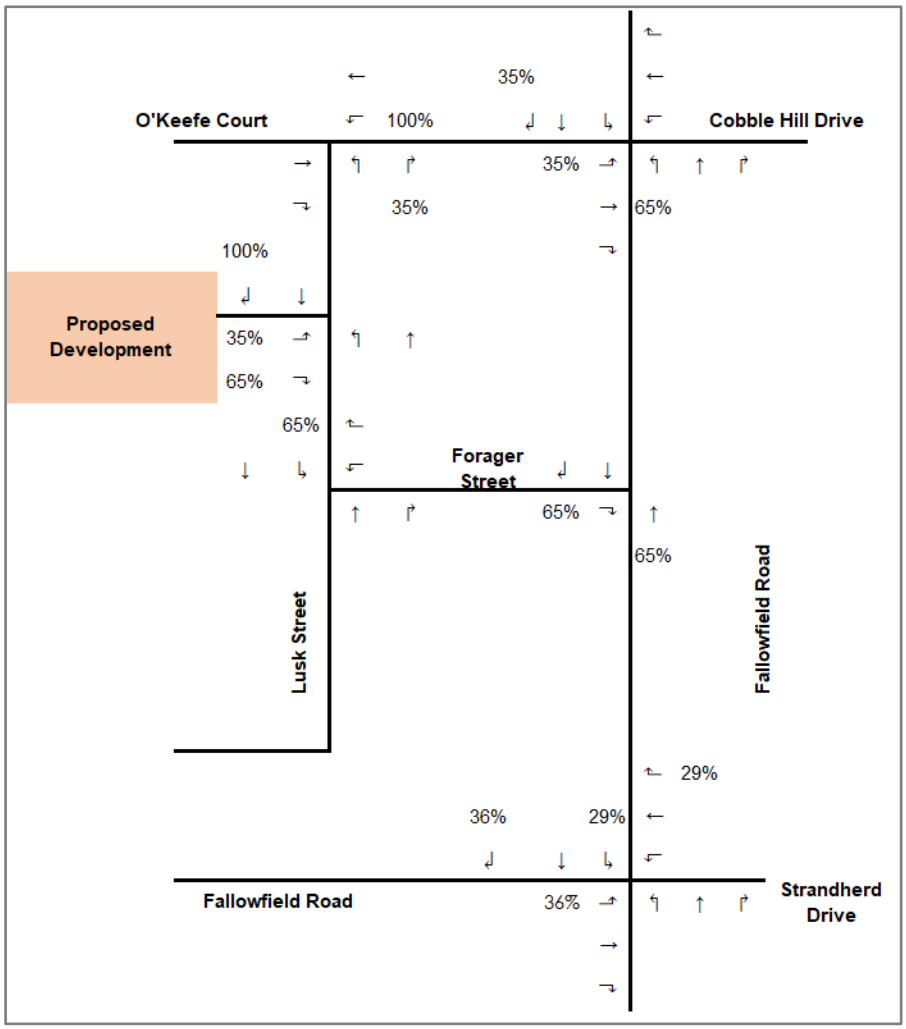
Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2017-2021	24	25,793	1825	**0.51**

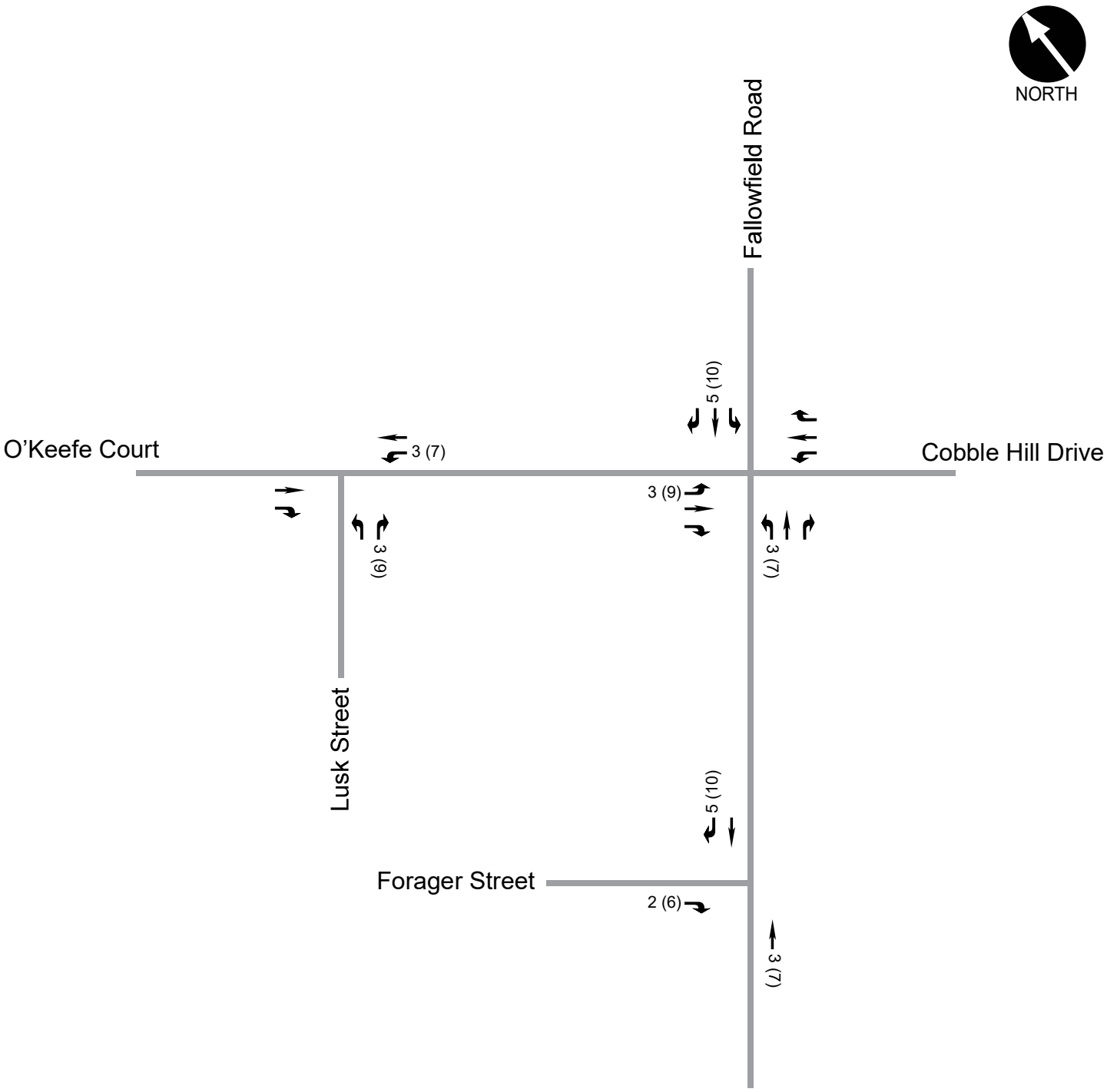
Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	SMV other	SMV unattended vehicle	Other	Total	
P.D. only	10	5	0	3	0	0	0	1	19	79%
Non-fatal injury	1	2	1	1	0	0	0	0	5	21%
Non-reportable	0	0	0	0	0	0	0	0	0	0%
Total	**11**	**7**	**1**	**4**	**0**	**0**	**0**	**1**	**24**	100%
	46%	29%	4%	17%	0%	0%	0%	4%		

APPENDIX E

Adjacent Development Site Generated Traffic Volumes

Figure 7 - Site Traffic Assignment

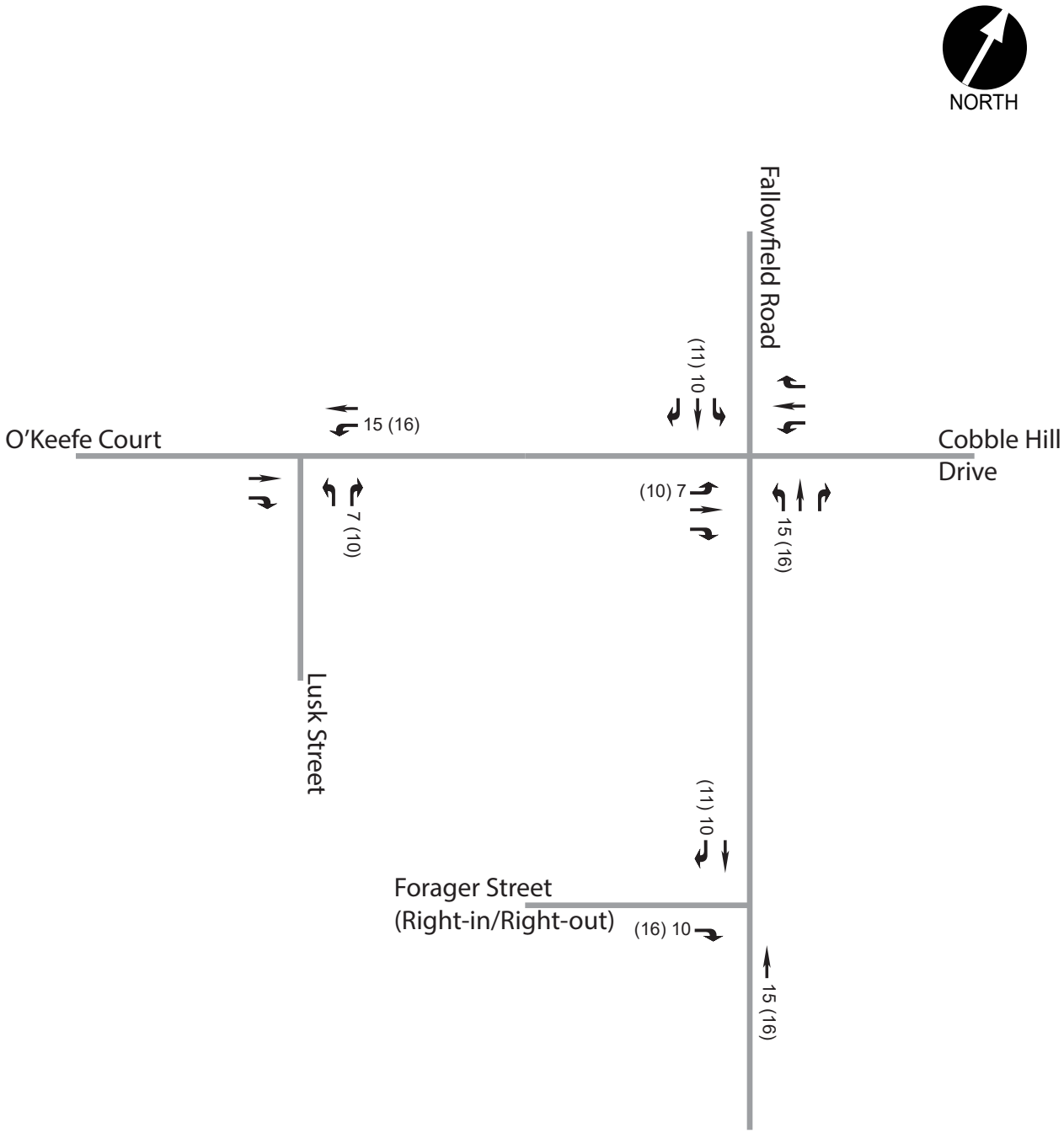


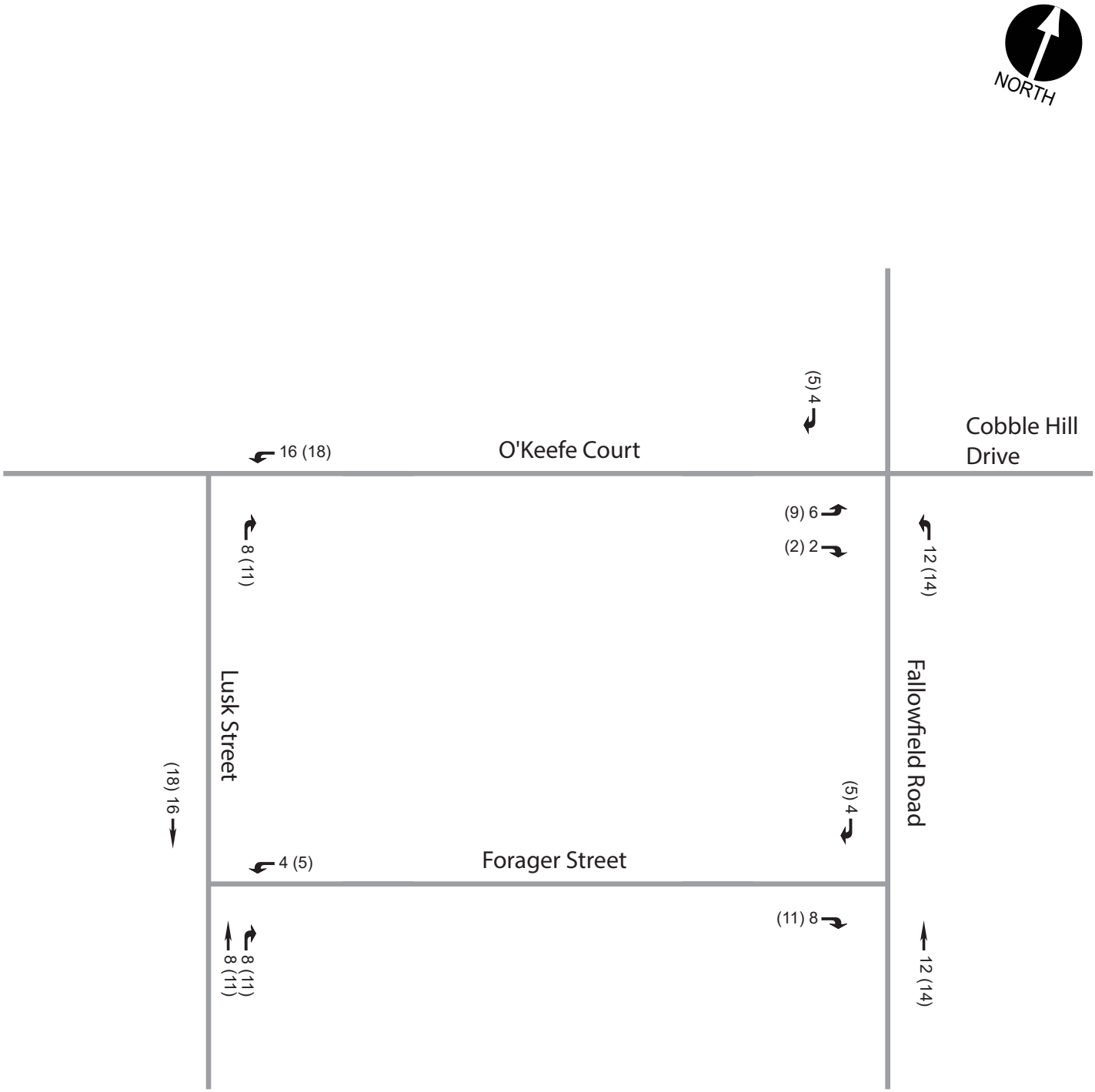


115 Lusk Street
Transportation Impact Assessment

Exhibit 4:
Site-Generated
AM & PM Peak Hour
Traffic

PROJECT No. 122508
DATE: January 2021
SCALE: N.T.S.


NORTH
Fallowfield Road
O'Keefe Court
Cobble Hill Drive
Lusk Street
Forager Street
(Right-in/Right-out)
15 (16)
(11) 10
7 (10)
(10) 7
15 (16)
(11) 10
(16) 10
15 (16)
LEGEND
Permitted Movements
Weekday AM (PM) Peak Hour Vehicular Volume
xxx (xx)



LEGEND

Permitted Movements

xxx (xxx) xxx (xxx) xxx (xxx)

Weekday AM (PM) Peak Hour Vehicular Volume

ARCADIS IBI GROUP

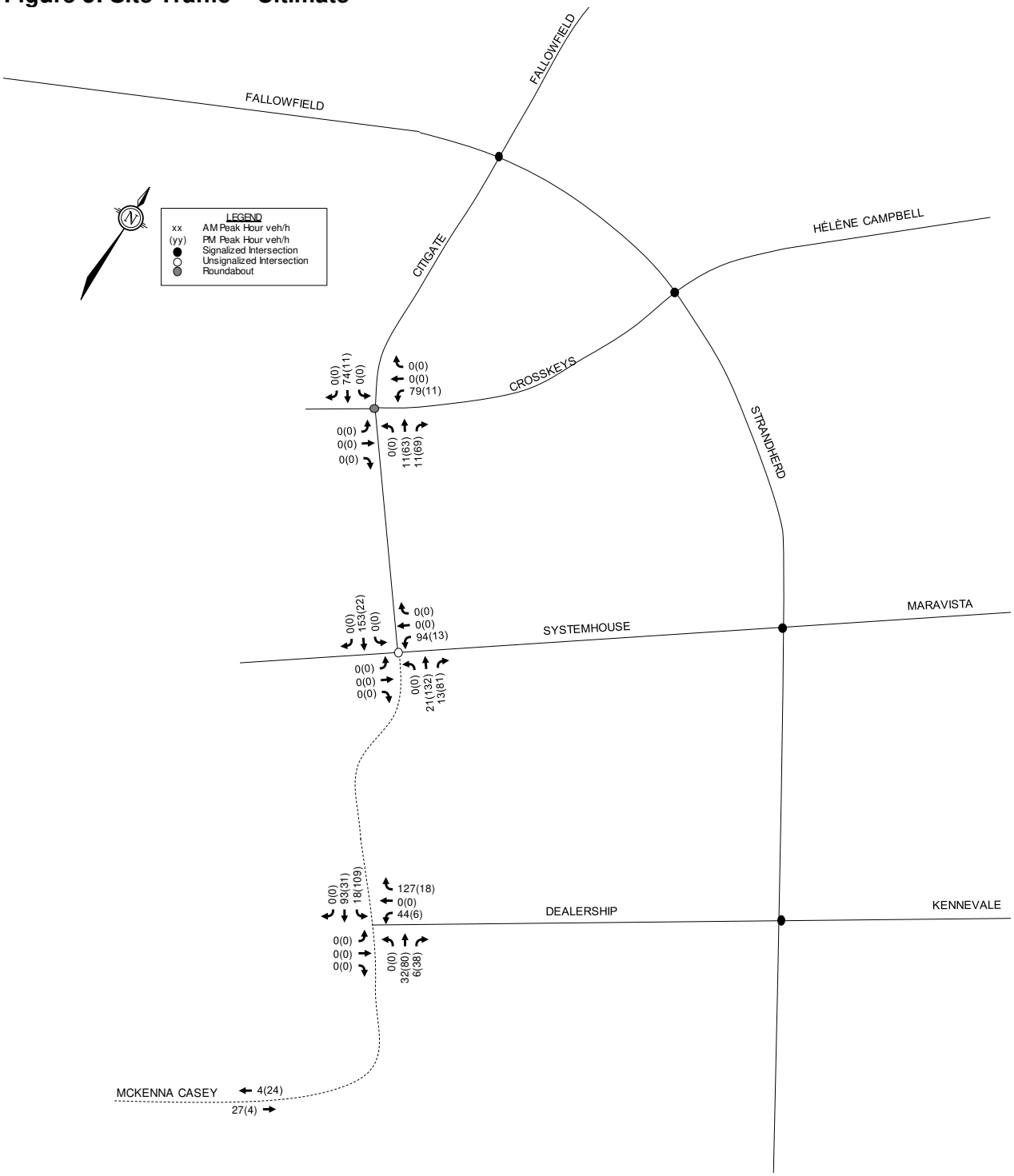
140 Lusk Street Transportation Impact Assessment

Exhibit 6: Site-Generated Traffic

PROJECT No. 140895

SCALE: N.T.S.

Figure 5: Site Traffic – Ultimate



Suite 200, 240 Michael Cowpland Drive, Ottawa ON K2M 1P6 Tel: 613.254.9643 Fax: 613.254.5867 www.novatech-eng.com

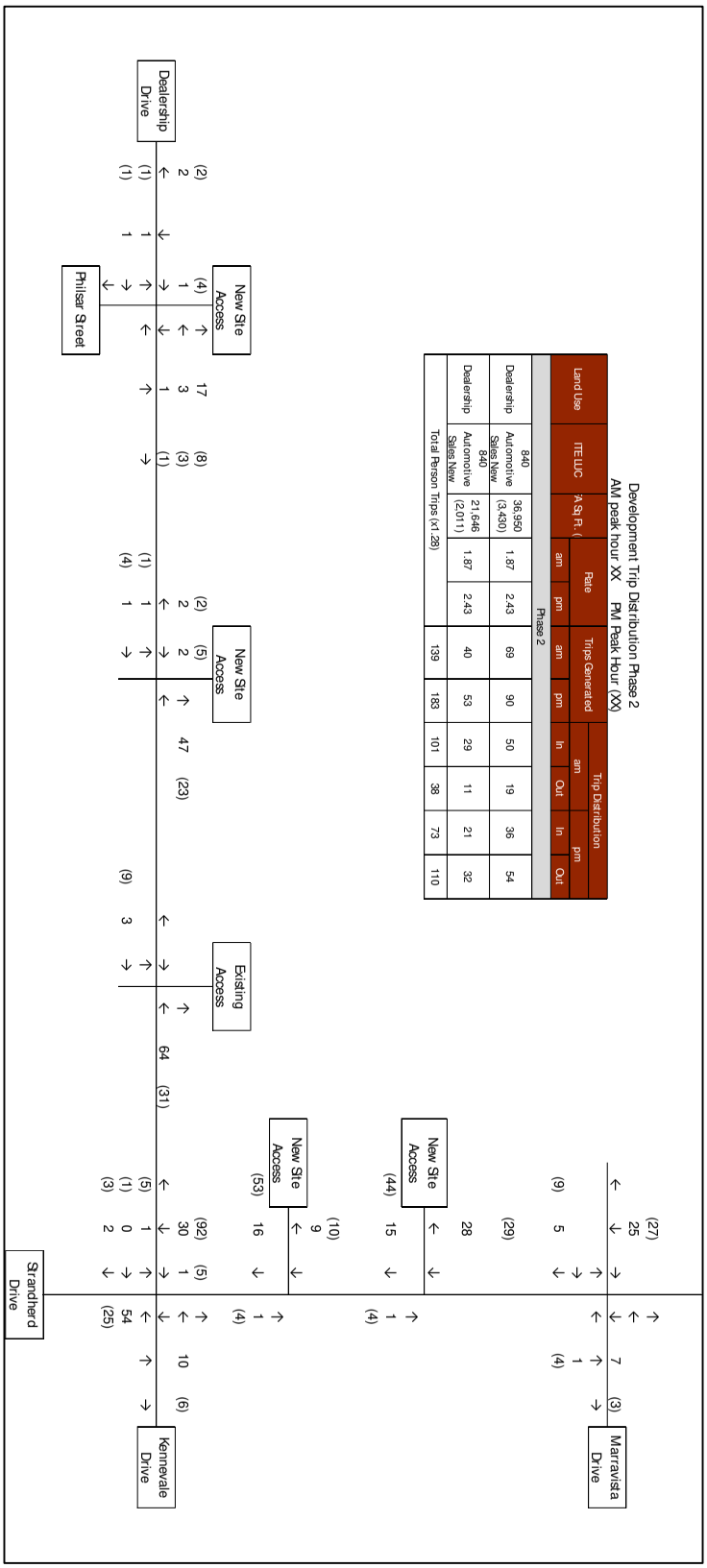
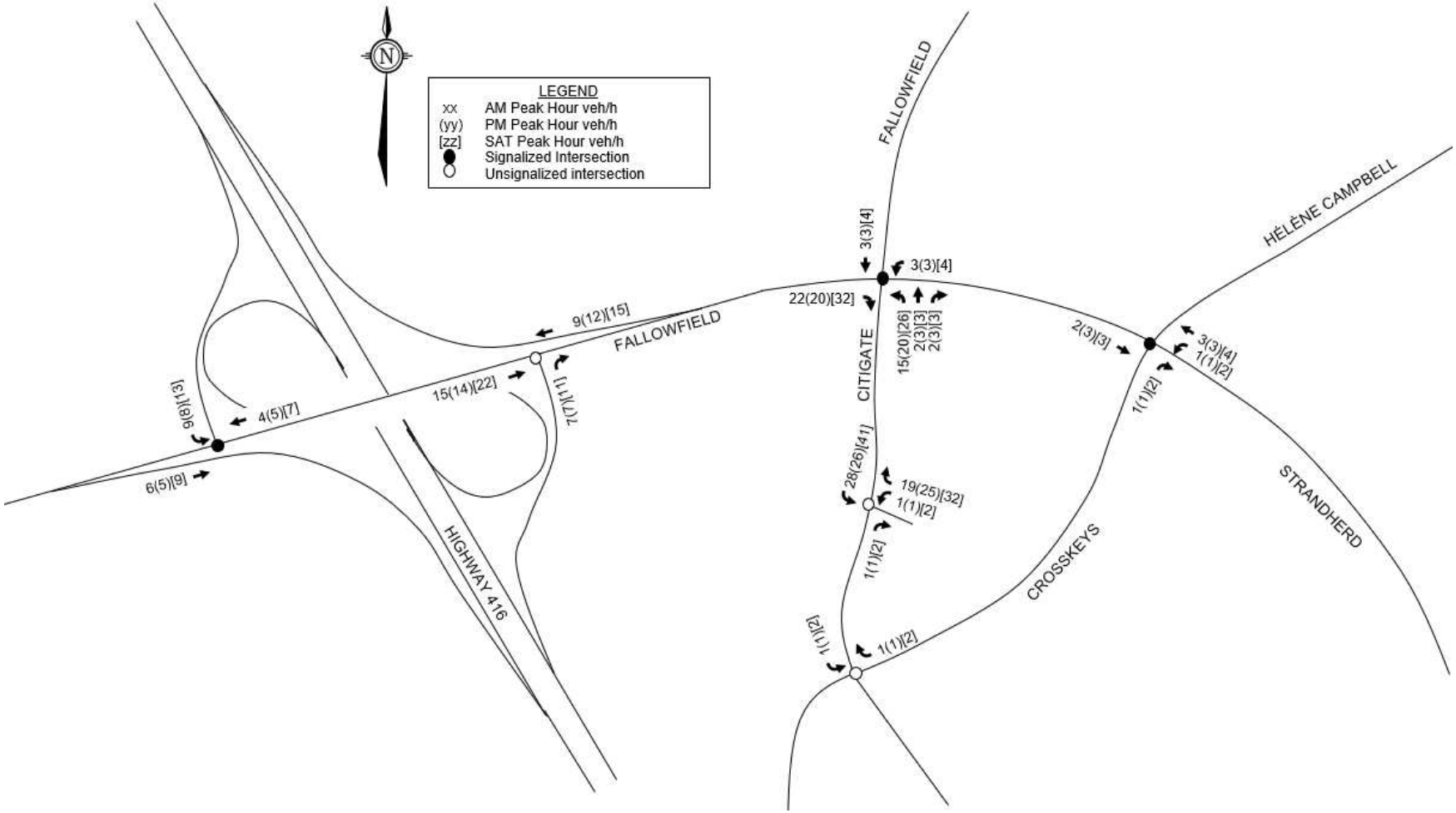


Figure 7.2 Phase Two Development Generated traffic

Figure 4: Site Generated Traffic Volumes



Trips generated by the Amazon facility and the proposed hotel at 101 CitiGate Drive have been assigned using the assumptions outlined in their respective traffic studies. Trips generated by the hotel at 4433 Strandherd Drive have been assigned in a similar manner to the traffic study for the hotel at 101 CitiGate Drive. Trips generated by the future warehouse, prestige business park and business park lands have been assigned in a manner consistent with the 2012 CTS.

The Amazon facility and proposed hotel at 101 CitiGate Drive have been assumed to be in place for the subject site buildout year. For the ultimate development scenario, the McKenna Casey Drive realignment is anticipated to be in place and 5% of Amazon traffic destined to the west has been reassigned to this connection. All other developments and the McKenna Casey Drive realignment are assumed to be in place for the ultimate condition.

Table 5: Other CitiGate Traffic – Vehicle Trips

Land Use	Auto Driver Share	Size	AM Peak			PM Peak		
			IN	OUT	TOT	IN	OUT	TOT
Amazon Distribution Facility								
Distribution Facility	56%	2,728,000 ft^2	284	295	579	375	381	756
Proposed Hotel – 101 CitiGate								
Phases 1 and 2 (two hotels)	85%	184 rooms	51	36	87	47	44	91
Future Hotel – 4433 Strandherd								
Phases 1 and 2 (two hotels and two restaurants)	85%	255 rooms, 10,000 ft^2 restaurant	125	102	227	133	110	243
Future Warehouse - 575 Dealership								
Warehouse	56%	320,000 ft^2	30	8	38	11	30	41
Future Prestige Business Park (lands south of Dealership Drive)								
Office Park	56%	500,000 ft^2	423	53	476	65	402	467
Future Business Park (lands south of Dealership Drive)								
Business Park	56%	275,000 ft^2	217	38	255	67	189	256

Background and total traffic volumes are shown in the following figures:

- **Figure 6** shows the background traffic (not including subject site) for the buildout year.
- **Figure 7** shows the background traffic (not including the subject site) for the ultimate condition.
- **Figure 8** shows the total traffic (including the subject site) for the buildout year.
- **Figure 9** shows the total traffic (including the subject site) for the ultimate condition.

Suite 200, 240 Michael Cowpland Drive, Ottawa ON K2M 1P6 Tel: 613.254.9643 Fax: 613.254.5867 www.novatech-eng.com

APPENDIX F

TDM Measures Checklist

TDM-Supportive Development Design and Infrastructure Checklist:
Non-Residential Developments (office, institutional, retail or industrial)

Legend

REQUIRED	The Official Plan or Zoning By-law provides related guidance that must be followed
BASIC	The measure is generally feasible and effective, and in most cases would benefit the development and its users
BETTER	The measure could maximize support for users of sustainable modes, and optimize development performance

		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	1.	**WALKING & CYCLING: ROUTES**	
	1.1	**Building location & access points**	
BASIC	1.1.1	Locate building close to the street, and do not locate parking areas between the street and building entrances	☑ *parking provided to sides of building*
BASIC	1.1.2	Locate building entrances in order to minimize walking distances to sidewalks and transit stops/stations	☐
BASIC	1.1.3	Locate building doors and windows to ensure visibility of pedestrians from the building, for their security and comfort	☐ *Development proposed as warehouse/light industrial.*
	1.2	**Facilities for walking & cycling**	
REQUIRED	1.2.1	Provide convenient, direct access to stations or major stops along rapid transit routes within 600 metres; minimize walking distances from buildings to rapid transit; provide pedestrian-friendly, weather-protected (where possible) environment between rapid transit accesses and building entrances; ensure quality linkages from sidewalks through building entrances to integrated stops/stations *(see Official Plan policy 4.3.3)*	☐ *not many transit trips forecasted. A MUP on the north side of O'Keefe exists which provides connectivity to transit stops.*
REQUIRED	1.2.2	Provide safe, direct and attractive pedestrian access from public sidewalks to building entrances through such measures as: reducing distances between public sidewalks and major building entrances; providing walkways from public streets to major building entrances; within a site, providing walkways along the front of adjoining buildings, between adjacent buildings, and connecting areas where people may congregate, such as courtyards and transit stops; and providing weather protection through canopies, colonnades, and other design elements wherever possible *(see Official Plan policy 4.3.12)*	☐ *internal sidewalks proposed which separate walking areas and parking spaces. O'Keefe fronting the site has a rural cross-section with no facilities to receive pedestrians from this site.*

		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
REQUIRED	1.2.3	Provide sidewalks of smooth, well-drained walking surfaces of contrasting materials or treatments to differentiate pedestrian areas from vehicle areas, and provide marked pedestrian crosswalks at intersection sidewalks *(see Official Plan policy 4.3.10)*	☑ *internal sidewalks proposed which separate walking areas and parking spaces.*
REQUIRED	1.2.4	Make sidewalks and open space areas easily accessible through features such as gradual grade transition, depressed curbs at street corners and convenient access to extra-wide parking spaces and ramps *(see Official Plan policy 4.3.10)*	☑ *internal sidewalks proposed which separate walking areas and parking spaces. To be built to meet accessibility standards.*
REQUIRED	1.2.5	Include adequately spaced inter-block/street cycling and pedestrian connections to facilitate travel by active transportation. Provide links to the existing or planned network of public sidewalks, multi-use pathways and on-road cycle routes. Where public sidewalks and multi-use pathways intersect with roads, consider providing traffic control devices to give priority to cyclists and pedestrians *(see Official Plan policy 4.3.11)*	☐ *The site has an opportunity to connect to the MUP fronting the north edge of the site. Alternatively, a MUP extension from the east side of Lytle Park to the southern edge of the site could be completed.*
BASIC	1.2.6	Provide safe, direct and attractive walking routes from building entrances to nearby transit stops	☐
BASIC	1.2.7	Ensure that walking routes to transit stops are secure, visible, lighted, shaded and wind-protected wherever possible	☐
BASIC	1.2.8	Design roads used for access or circulation by cyclists using a target operating speed of no more than 30 km/h, or provide a separated cycling facility	☐
	1.3	**Amenities for walking & cycling**	
BASIC	1.3.1	Provide lighting, landscaping and benches along walking and cycling routes between building entrances and streets, sidewalks and trails	☐
BASIC	1.3.2	Provide wayfinding signage for site access (where required, e.g. when multiple buildings or entrances exist) and egress (where warranted, such as when directions to reach transit stops/stations, trails or other common destinations are not obvious)	☑

		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	2.	**WALKING & CYCLING: END-OF-TRIP FACILITIES**	
	2.1	**Bicycle parking**	
REQUIRED	2.1.1	Provide bicycle parking in highly visible and lighted areas, sheltered from the weather wherever possible *(see Official Plan policy 4.3.6)*	☑ *Bicycle parking not required.*
REQUIRED	2.1.2	Provide the number of bicycle parking spaces specified for various land uses in different parts of Ottawa; provide convenient access to main entrances or well-used areas *(see Zoning By-law Section 111)*	☑ *Bicycle parking not required.*
REQUIRED	2.1.3	Ensure that bicycle parking spaces and access aisles meet minimum dimensions; that no more than 50% of spaces are vertical spaces; and that parking racks are securely anchored *(see Zoning By-law Section 111)*	☑ *Bicycle parking not required.*
BASIC	2.1.4	Provide bicycle parking spaces equivalent to the expected number of commuter cyclists (assuming the cycling mode share target is met), plus the expected peak number of customer/visitor cyclists	☐
BETTER	2.1.5	Provide bicycle parking spaces equivalent to the expected number of commuter and customer/visitor cyclists, plus an additional buffer (e.g. 25 percent extra) to encourage other cyclists and ensure adequate capacity in peak cycling season	☐
	2.2	**Secure bicycle parking**	
REQUIRED	2.2.1	Where more than 50 bicycle parking spaces are provided for a single office building, locate at least 25% of spaces within a building/structure, a secure area (e.g. supervised parking lot or enclosure) or bicycle lockers *(see Zoning By-law Section 111)*	☑ *Bicycle parking not required.*
BETTER	2.2.2	Provide secure bicycle parking spaces equivalent to the expected number of commuter cyclists (assuming the cycling mode share target is met)	☐
	2.3	**Shower & change facilities**	
BASIC	2.3.1	Provide shower and change facilities for the use of active commuters	☐
BETTER	2.3.2	In addition to shower and change facilities, provide dedicated lockers, grooming stations, drying racks and laundry facilities for the use of active commuters	☐
	2.4	**Bicycle repair station**	
BETTER	2.4.1	Provide a permanent bike repair station, with commonly used tools and an air pump, adjacent to the main bicycle parking area (or secure bicycle parking area, if provided)	☐

		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	3.	**TRANSIT**	
	3.1	**Customer amenities**	
BASIC	3.1.1	Provide shelters, lighting and benches at any on-site transit stops	☐
BASIC	3.1.2	Where the site abuts an off-site transit stop and insufficient space exists for a transit shelter in the public right-of-way, protect land for a shelter and/or install a shelter	☐
BETTER	3.1.3	Provide a secure and comfortable interior waiting area by integrating any on-site transit stops into the building	☐
	4.	**RIDESHARING**	
	4.1	**Pick-up & drop-off facilities**	
BASIC	4.1.1	Provide a designated area for carpool drivers (plus taxis and ride-hailing services) to drop off or pick up passengers without using fire lanes or other no-stopping zones	☐
	4.2	**Carpool parking**	
BASIC	4.2.1	Provide signed parking spaces for carpools in a priority location close to a major building entrance, sufficient in number to accommodate the mode share target for carpools	☐
BETTER	4.2.2	At large developments, provide spaces for carpools in a separate, access-controlled parking area to simplify enforcement	☐
	5.	**CARSHARING & BIKESHARING**	
	5.1	**Carshare parking spaces**	
BETTER	5.1.1	Provide carshare parking spaces in permitted non-residential zones, occupying either required or provided parking spaces *(see Zoning By-law Section 94)*	☐
	5.2	**Bikeshare station location**	
BETTER	5.2.1	Provide a designated bikeshare station area near a major building entrance, preferably lighted and sheltered with a direct walkway connection	☐

		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	6.	**PARKING**	
	6.1	**Number of parking spaces**	
REQUIRED	6.1.1	Do not provide more parking than permitted by zoning, nor less than required by zoning, unless a variance is being applied for	☑ *Minimum parking requirement met, no maximum parking restriction.*
BASIC	6.1.2	Provide parking for long-term and short-term users that is consistent with mode share targets, considering the potential for visitors to use off-site public parking	☐
BASIC	6.1.3	Where a site features more than one use, provide shared parking and reduce the cumulative number of parking spaces accordingly *(see Zoning By-law Section 104)*	☐
BETTER	6.1.4	Reduce the minimum number of parking spaces required by zoning by one space for each 13 square metres of gross floor area provided as shower rooms, change rooms, locker rooms and other facilities for cyclists in conjunction with bicycle parking *(see Zoning By-law Section 111)*	☐
	6.2	**Separate long-term & short-term parking areas**	
BETTER	6.2.1	Separate short-term and long-term parking areas using signage or physical barriers, to permit access controls and simplify enforcement (i.e. to discourage employees from parking in visitor spaces, and vice versa)	☐
	7.	**OTHER**	
	7.1	**On-site amenities to minimize off-site trips**	
BETTER	7.1.1	Provide on-site amenities to minimize mid-day or mid-commute errands	☐

TDM Measures Checklist:
Non-Residential Developments (office, institutional, retail or industrial)

Legend

BASIC — The measure is generally feasible and effective, and in most cases would benefit the development and its users

BETTER — The measure could maximize support for users of sustainable modes, and optimize development performance

* — The measure is one of the most dependably effective tools to encourage the use of sustainable modes

		TDM measures: *Non-residential developments*	Check if proposed & add descriptions
		1. TDM PROGRAM MANAGEMENT	
		1.1 Program coordinator	
BASIC	*	1.1.1 Designate an internal coordinator, or contract with an external coordinator	☐
		1.2 Travel surveys	
BETTER		1.2.1 Conduct periodic surveys to identify travel-related behaviours, attitudes, challenges and solutions, and to track progress	☐
		2. WALKING AND CYCLING	
		2.1 Information on walking/cycling routes & destinations	
BASIC		2.1.1 Display local area maps with walking/cycling access routes and key destinations at major entrances	☑
		2.2 Bicycle skills training	
		Commuter travel	
BETTER	*	2.2.1 Offer on-site cycling courses for commuters, or subsidize off-site courses	☐
		2.3 Valet bike parking	
		Visitor travel	
BETTER		2.3.1 Offer secure valet bike parking during public events when demand exceeds fixed supply (e.g. for festivals, concerts, games)	☐

		TDM measures: *Non-residential developments*	Check if proposed & add descriptions
		3. TRANSIT	
		3.1 Transit information	
BASIC		3.1.1 Display relevant transit schedules and route maps at entrances	☑
BASIC		3.1.2 Provide online links to OC Transpo and STO information	☑
BETTER		3.1.3 Provide real-time arrival information display at entrances	☐
		3.2 Transit fare incentives	
		Commuter travel	
BETTER		3.2.1 Offer preloaded PRESTO cards to encourage commuters to use transit	☐
BETTER	*	3.2.2 Subsidize or reimburse monthly transit pass purchases by employees	☐
		Visitor travel	
BETTER		3.2.3 Arrange inclusion of same-day transit fare in price of tickets (e.g. for festivals, concerts, games)	☐
		3.3 Enhanced public transit service	
		Commuter travel	
BETTER		3.3.1 Contract with OC Transpo to provide enhanced transit services (e.g. for shift changes, weekends)	☐
		Visitor travel	
BETTER		3.3.2 Contract with OC Transpo to provide enhanced transit services (e.g. for festivals, concerts, games)	☐
		3.4 Private transit service	
		Commuter travel	
BETTER		3.4.1 Provide shuttle service when OC Transpo cannot offer sufficient quality or capacity to serve demand (e.g. for shift changes, weekends)	☐
		Visitor travel	
BETTER		3.4.2 Provide shuttle service when OC Transpo cannot offer sufficient quality or capacity to serve demand (e.g. for festivals, concerts, games)	☐

		TDM measures: *Non-residential developments*	Check if proposed & add descriptions
		4. RIDESHARING	
		4.1 Ridematching service	
		Commuter travel	
BASIC	*	4.1.1 Provide a dedicated ridematching portal at OttawaRideMatch.com	☐
		4.2 Carpool parking price incentives	
		Commuter travel	
BETTER		4.2.1 Provide discounts on parking costs for registered carpools	☐
		4.3 Vanpool service	
		Commuter travel	
BETTER		4.3.1 Provide a vanpooling service for long-distance commuters	☐
		5. CARSHARING & BIKESHARING	
		5.1 Bikeshare stations & memberships	
BETTER		5.1.1 Contract with provider to install on-site bikeshare station for use by commuters and visitors	☐
		Commuter travel	
BETTER		5.1.2 Provide employees with bikeshare memberships for local business travel	☐
		5.2 Carshare vehicles & memberships	
		Commuter travel	
BETTER		5.2.1 Contract with provider to install on-site carshare vehicles and promote their use by tenants	☐
BETTER		5.2.2 Provide employees with carshare memberships for local business travel	☐
		6. PARKING	
		6.1 Priced parking	
		Commuter travel	
BASIC	*	6.1.1 Charge for long-term parking (daily, weekly, monthly)	☐
BASIC		6.1.2 Unbundle parking cost from lease rates at multi-tenant sites	
		Visitor travel	
BETTER		6.1.3 Charge for short-term parking (hourly)	

		TDM measures: *Non-residential developments*	Check if proposed & add descriptions
		7. TDM MARKETING & COMMUNICATIONS	
		7.1 Multimodal travel information	
		Commuter travel	
BASIC	*	7.1.1 Provide a multimodal travel option information package to new/relocating employees and students	☑
		Visitor travel	
BETTER	*	7.1.2 Include multimodal travel option information in invitations or advertising that attract visitors or customers (e.g. for festivals, concerts, games)	☐
		7.2 Personalized trip planning	
		Commuter travel	
BETTER	*	7.2.1 Offer personalized trip planning to new/relocating employees	☐
		7.3 Promotions	
		Commuter travel	
BETTER		7.3.1 Deliver promotions and incentives to maintain awareness, build understanding, and encourage trial of sustainable modes	☐
		8. OTHER INCENTIVES & AMENITIES	
		8.1 Emergency ride home	
		Commuter travel	
BETTER	*	8.1.1 Provide emergency ride home service to non-driving commuters	☐
		8.2 Alternative work arrangements	
		Commuter travel	
BASIC	*	8.2.1 Encourage flexible work hours	☐
BETTER		8.2.2 Encourage compressed workweeks	☐
BETTER	*	8.2.3 Encourage telework	☐
		8.3 Local business travel options	
		Commuter travel	
BASIC	*	8.3.1 Provide local business travel options that minimize the need for employees to bring a personal car to work	☐
		8.4 Commuter incentives	
		Commuter travel	
BETTER		8.4.1 Offer employees a taxable, mode-neutral commuting allowance	☐
		8.5 On-site amenities	
		Commuter travel	
BETTER		8.5.1 Provide on-site amenities/services to minimize mid-day or mid-commute errands	☐

APPENDIX G

O'Keefe Crt/Fallowfield Rd Traffic Signal Warrant Analysis

O'Keefe/Fallowfield - (peak hour signal warrant)

Signal Warrant			Description	Minimum Requirement for Two Lane Roadways	Compliance		
				Restricted Flow - Operating Speed Less Than 70 km/h	Sectional %	Entire %	Warrant
Intersection	1. Minimum Vehicular Volume	(1) A	Vehicle Volume, All Approaches for Each of the Heaviest 8 Hours of on Average Day, and	720	115%	51%	**57% No**
		(4) B	Vehicle Volume, Along Minor Streets for Each of the Same 8 Hours	170	51%		
	2. Delay to Cross Traffic	(1) A	Vehicle Volume, Along Major Street for Each of the Heaviest 8 Hours of an Average Day, and	720	103%	57%	
		(2) B	Combined Vehicle and Pedestrian Volume Crossing the Major Street for Each of the Same 8 Hours	75	57%		

Notes

1 *Vehicle Volume Warrants (1A), (2A) and (5B) for Roadways Having Two or More Moving Lanes in one Direction Should Be 25% Higher Than Values Given Above* **No**

2 *For Definition of Crossing Volume Refer to Note 4 on the Signal Warrant Analysis Form B2.03.08*

3 *The Lowest Sectional Percentage Governs the Entire Warrant*

4 *For "T" Intersections the Warrant Values for Minor Street Should be Increased by 50% (Warrant 1B only)* **No**