

City of Ottawa 2017 TIA Guidelines Screening Form

1. Description of Proposed Development

Municipal Address	100 Lusk Street
Description of Location	Block 12 Registered Plan 4M-1634, City of Ottawa - Vacant Land
Land Use Classification	IP Industrial
Development Size (units)	Multi-tenant Office
Development Size (m ²)	2200 sm total [3 floors]
Number of Accesses and Locations	2 proposed
Phase of Development	One Phase
Buildout Year	2020 - 2021

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 ²
Industrial	5,000 m ²
Fast-food restaurant or coffee shop	100 m ²
Destination retail	1,000 m ²
Gas station or convenience market	75 m ²

** 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.

Does the proposed land use generate more than 60 person trips?



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?		✓
Is the development in a Design Priority Area (DPA) or Transit-oriented Development (TOD) zone?*		✓
*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,' <u>the Location Trigger is satisfied.</u>		

4. Safety Triggers

	Yes	No
Are posted speed limits on a boundary street are 80 km/hr or greater?		✓
Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway?	✓	
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)?		✓
Is the proposed driveway within auxiliary lanes of an intersection?		✓
Does the proposed driveway make use of an existing median break that serves an existing site?		✓
Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?		✓
Does the development include a drive-thru facility?		✓
If any of the above questions were answered with 'Yes,' <u>the Safety Trigger is satisfied.</u>		

5. Summary

	Yes	No
Does the development satisfy the Trip Generation Trigger?	✓	
Does the development satisfy the Location Trigger?		✓
Does the development satisfy the Safety Trigger?	✓	
If none of the triggers are satisfied, <u>the TIA Study is complete.</u> If one or more of the triggers is satisfied, <u>the TIA Study must continue into the next stage</u> (Screening and Scoping).		



**100 Lusk Street
Transportation Impact
Assessment**

Forecasting Report

20 May 2020

Prepared for:

N45 Architecture Inc.

Prepared by:

Stantec Consulting Ltd.

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Screening

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1.0 SCREENING

1.1 SUMMARY OF DEVELOPMENT

Municipal Address	100 Lusk Street
Description of Location	Southwest corner of the intersection of O'Keefe Court at Lusk Street
Land Use Classification	Commercial (General Office)
Development Size (units)	N / A
Development Size (m ²)	1,895 m ²
Number of Accesses and Locations	1 full movements access from Lusk Street
Phase of Development	1 Phase
Buildout Year	Assumed build-out and occupancy by 2021

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

1.2 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	Triggered
Single-family homes	40 units	✗
Townhomes or apartments	90 units	✗
Office	3,500 m ²	✗
Industrial	5,000 m ²	✗
Fast-food restaurant or coffee shop	100 m ²	✗
Destination retail	1,000 m ²	✗
Gas station or convenience market	75 m ²	✗
Will the development generate more than 60 person trips?		✗

* 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.



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1.3 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.**

1.4 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?	✓	
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)?	✓	
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 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.**

1.5 SUMMARY

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

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).



2.0 SCOPING

2.1 EXISTING AND PLANNED CONDITIONS

2.1.1 Proposed Development

N45 Architecture Inc. is preparing a development application for Site Plan Control of a proposed development in the Greenbelt neighbourhood of Ottawa, Ontario. The proposed development is located at 100 Lusk Street. The site is bound by O'Keefe Court to the north, Lusk Street to the south and east, and future developments to the west.

Figure 1 illustrates the location of the subject development. The subject site is currently zoned as an IP – Business Park Industrial Zone, the purpose of which according to the City of Ottawa Official Plan, is to:

- *accommodate mixed office, office-type uses and low impact, light industrial uses in a business park setting, in accordance with the Enterprise Area designations of the Official Plan or, the Employment Area or the General Urban Area designation where applicable;*
- *allow in certain Enterprise or General Urban Areas, a variety of complementary uses such as recreational, health and fitness uses and service commercial (e.g. convenience store, personal service business, restaurant, automobile service station and gas bar), occupying small sites as individual occupancies or in groupings as part of a small plaza, to serve the employees of the Enterprise, Employment or General Urban Area, the general public in the immediate vicinity, and passing traffic;*
- *prohibit retail uses in areas designated as Enterprise Area but allow limited sample and showroom space that is secondary and subordinate to the primary use of buildings for the manufacturing or warehousing of the product;*
- *prohibit uses which are likely to generate noise, fumes, odours, or other similar obnoxious impacts, or are hazardous; and*
- *provide development standards that would ensure compatibility between uses and would minimize the negative impact of the uses on adjacent non-industrial areas*

The existing property is currently an empty lot. Lusk Street can be accessed from O'Keefe Court or from Forager Street (off Fallowfield Road). The development will have one full movements access situated on the south edge of the site which can be accessed from Lusk Street. A total of 66 vehicle parking spaces (including 3 accessible parking spaces) and 8 bicycle parking spaces will be provided as part of the proposed site.

The proposed site will be constructed in one phase with build-out and occupancy occurring in 2021.

Table 1 outlines the proposed land uses assumed for the analysis which were obtained from the *Institute of Transportation (ITE) Trip Generation Manual 10th Edition*.

Figure 2 illustrates the proposed site plan.



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Figure 1 - Site Location



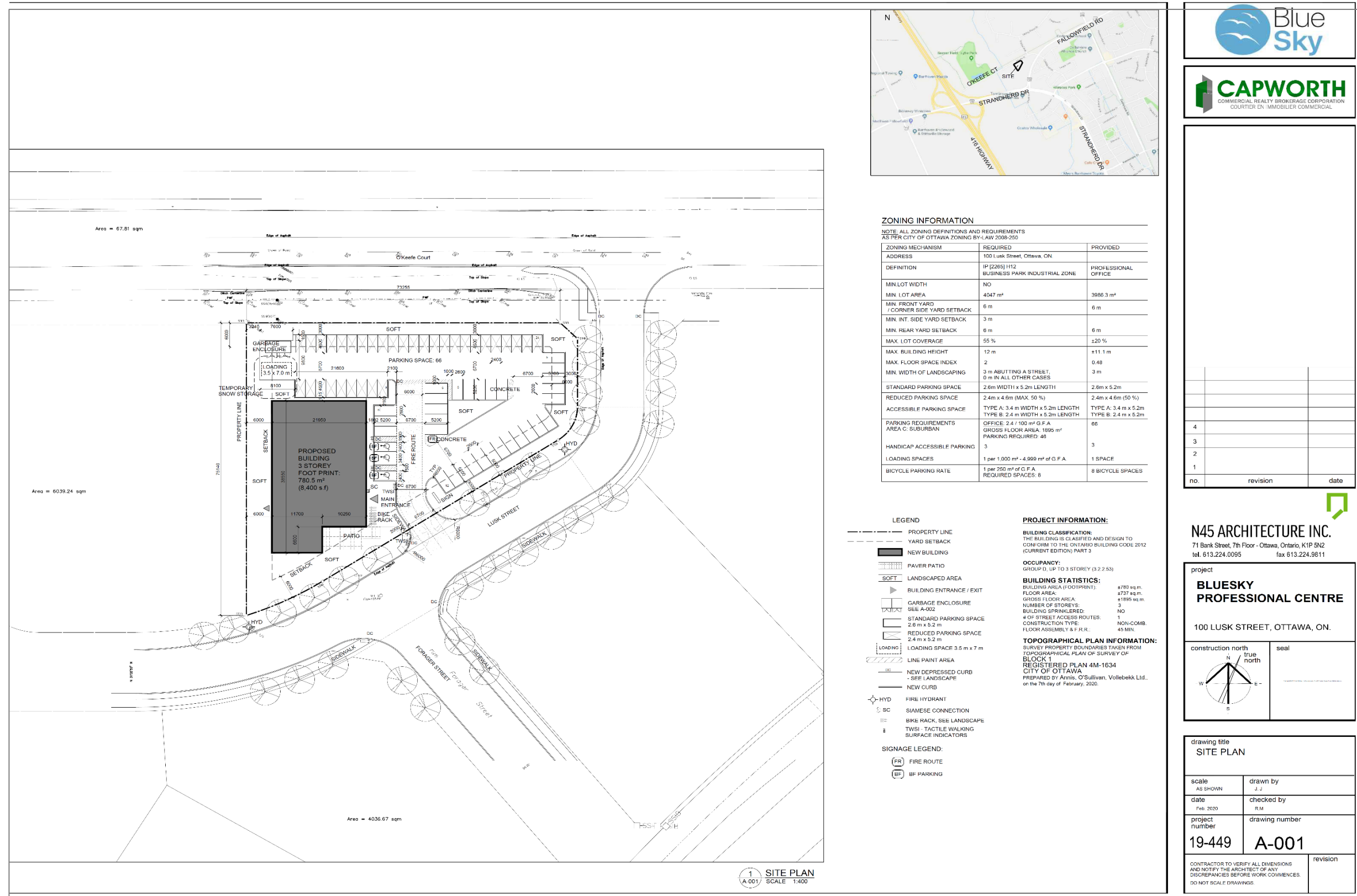
Table 1 - Proposed Land Uses / Land Use Codes

Land Use	Size	Land Use Code (LUC)
LUC 710	1,895 m ² GFA	General Office Space



Scoping
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Figure 2 - Site Plan



2.1.2 Existing Conditions

2.1.2.1 Roads and Traffic Control

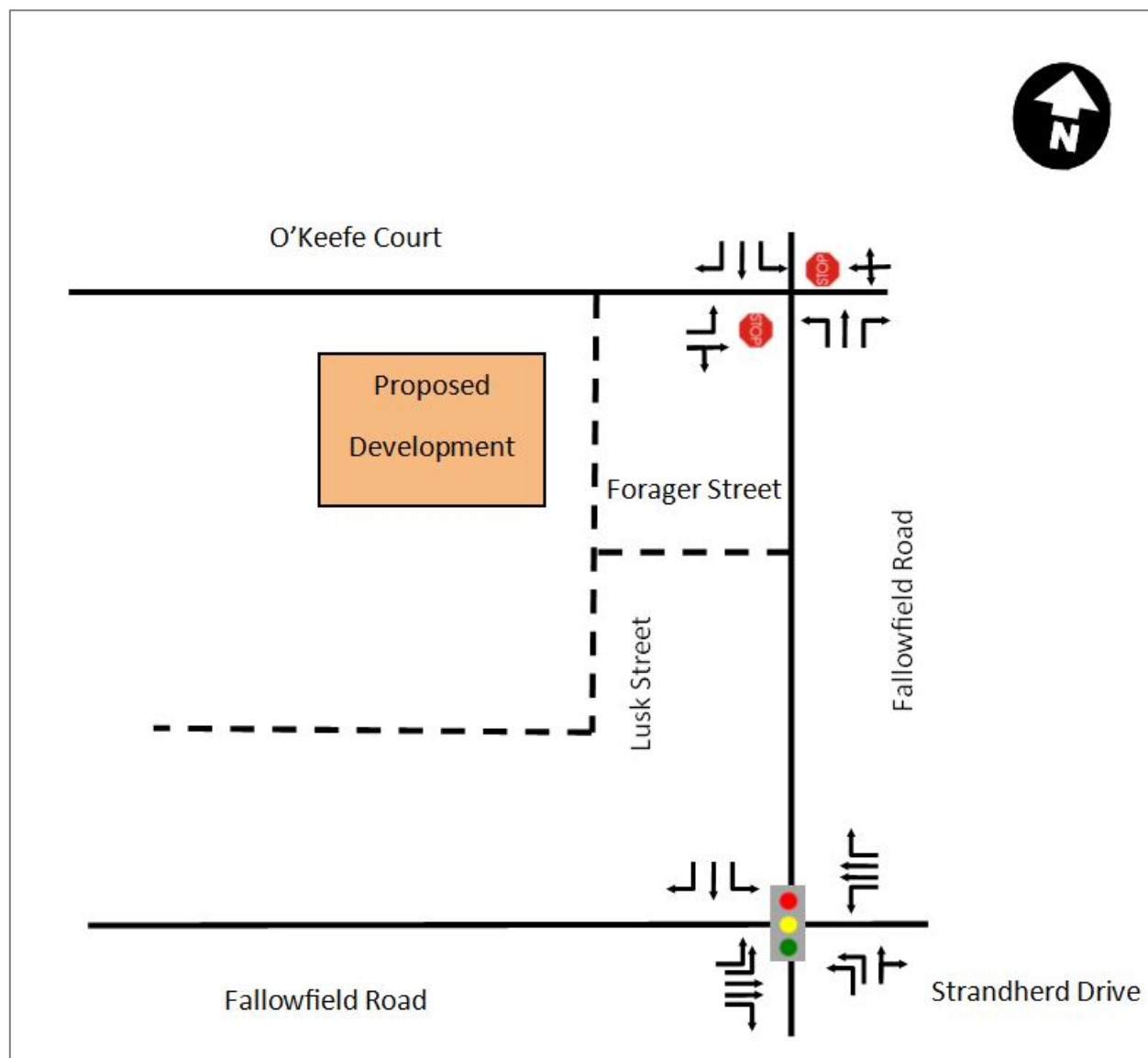
The roadways under consideration in the study area are described as follows:

Fallowfield Road	Within the vicinity of the subject site, Fallowfield Road is a two-lane arterial roadway with a posted speed limit of 60 km/h and a rural cross-section. There are no sidewalks provided along either side of the road. The intersection with O'Keefe Court is two-way stop-controlled along the minor approaches with auxiliary right and left turn lanes in the northbound and southbound directions. There is also an auxiliary left turn lane along the west leg. The intersection with Strandherd Drive is signalized with numerous auxiliary left and right turn lanes as well as a southbound right turn channel. As outlined in the City's Cycling Plan, Fallowfield Road is designated as Spine Cycling Route in the vicinity of the subject site.
Strandherd Drive	Within the vicinity of the subject site, Strandherd Drive is a four-lane arterial roadway with a posted speed limit of 80 km/h and an urban cross-section. There are sidewalks / multi-use pathways along both sides of the roadway. As outlined in the City's Cycling Plan, Strandherd Drive is designated as a Spine Cycling Route and Major Pathway.
O'Keefe Court	Within the vicinity of the subject site, O'Keefe Court is a two-lane local roadway with a rural cross-section. In the absence of a posted speed limit, the default speed is assumed to be 50 km/h. The intersection with Fallowfield Road is two-way stop-controlled with an auxiliary left turn lane along the west leg.

Figure 3 illustrates the existing lane configuration and traffic control.



Figure 3 - Existing Lane Configuration and Traffic Control



2.1.2.2 Walking and Cycling

Within the vicinity of the subject site, paved shoulders are provided along both sides of Fallowfield Road and sidewalks are provided along both sides of Strandherd Drive. Across the frontage of the subject site, gravel shoulders are provided along both sides of O'Keefe Court and a multi-use pathway is provided along the north side of O'Keefe Court. Both Fallowfield Road and Strandherd Drive are designated as 'spine' cycling routes in the City of Ottawa's Ultimate Cycling Network, with Strandherd Drive also listed as a major cycling pathway.



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2.1.2.3 Transit

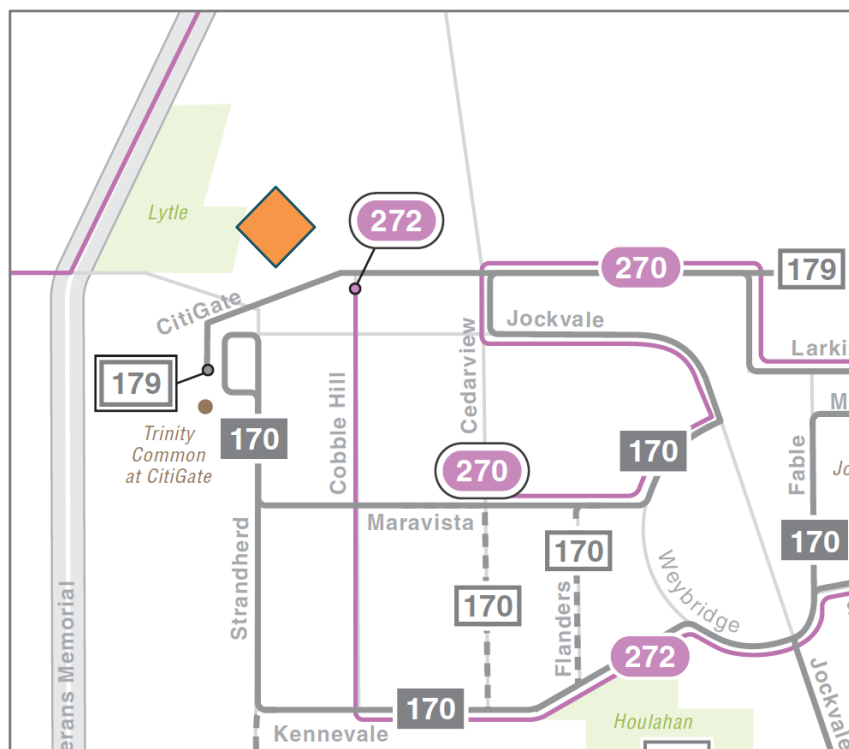
Transit service is currently provided in the immediate vicinity of the proposed site via the following routes:

- Route 170 Route 170 is a Local route that runs between Fallowfield and Barrhaven Center seven days per week. During the weekday morning and afternoon peaks it runs with 60-minute headways.
- Route 179 Route 179 is a Local peak period route that runs Monday through Friday between Fallowfield and Citi Gate. At the time of the subject study, this route was not operating therefore the headways for this route are not known.
- Route 272 Route 272 is a Connexion peak period route that runs Monday through Friday between Tunney's Pasture and Cobble Hill. During the peak periods, it runs with 60-minute headways.

The closest transit stop to the proposed site is at the intersection of Fallowfield Road at O'Keefe Court.

Figure 4 illustrates the transit routes in the vicinity of the subject site.

Figure 4 - Study Area Transit Routes



(Source: OC Transpo System Map, accessed April 22nd, 2020)

2.1.2.4 Traffic Management Measures

No traffic management measures are currently provided in the vicinity of the subject site.



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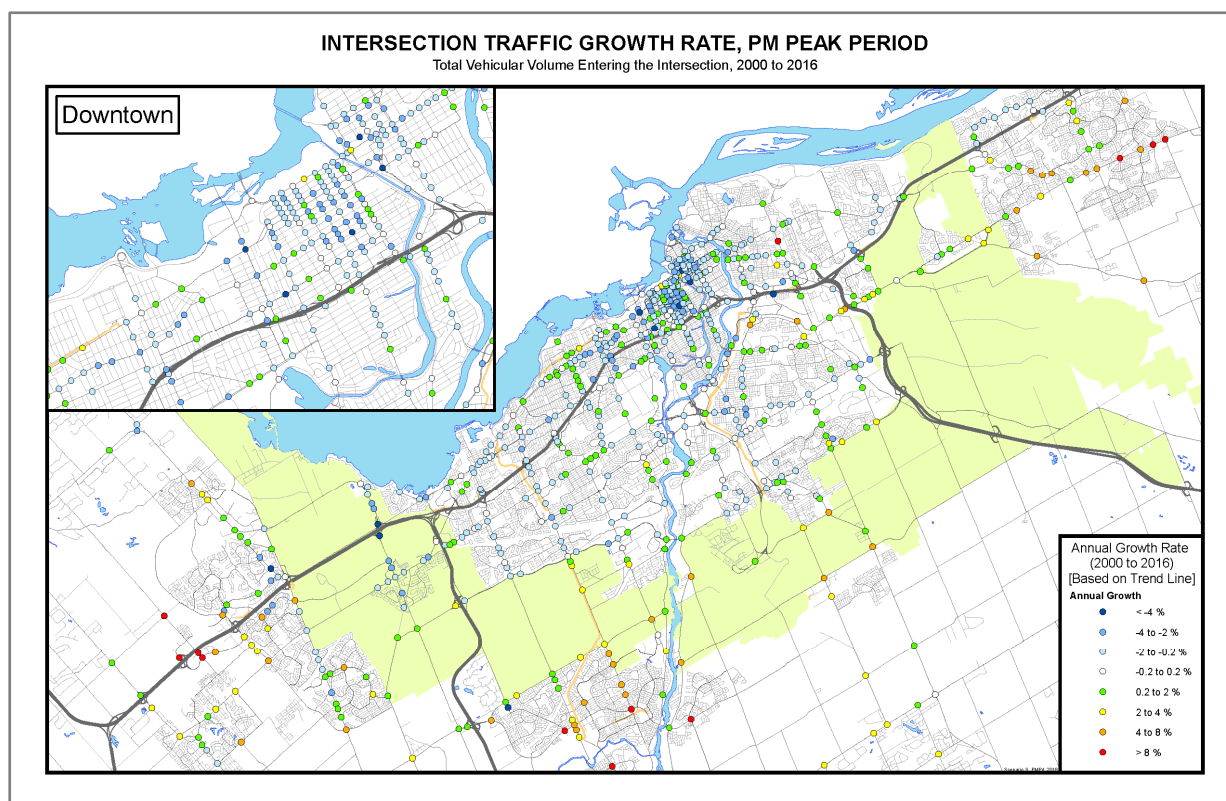
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2.1.2.5 Traffic Volumes

Traffic volumes at the study area intersections were obtained by the City of Ottawa. The counts were performed in March and June of 2018. A growth rate of 4% per year was applied to all movements at the intersection of Fallowfield Road and Strandherd Drive and to the through movements along Fallowfield Road at the intersection with O'Keefe Court. This rate of growth is consistent with the City's intersection traffic growth rates, as depicted in **Figure 5** below. As this figure does not indicate the growth rates for the Fallowfield Road at O'Keefe Court intersection, it was assumed that growth along Fallowfield Road will grow at the 4% annual rate. It was assumed that growth on the east leg of this intersection will grow at a conservative 2% per annum to account for the new developments occurring within this area. It was also assumed that since the Cedarhill development is mostly established, the west leg at this intersection will not see any growth. The existing volumes are shown in **Figure 6** below.

Figure 5 - City of Ottawa Growth Rates

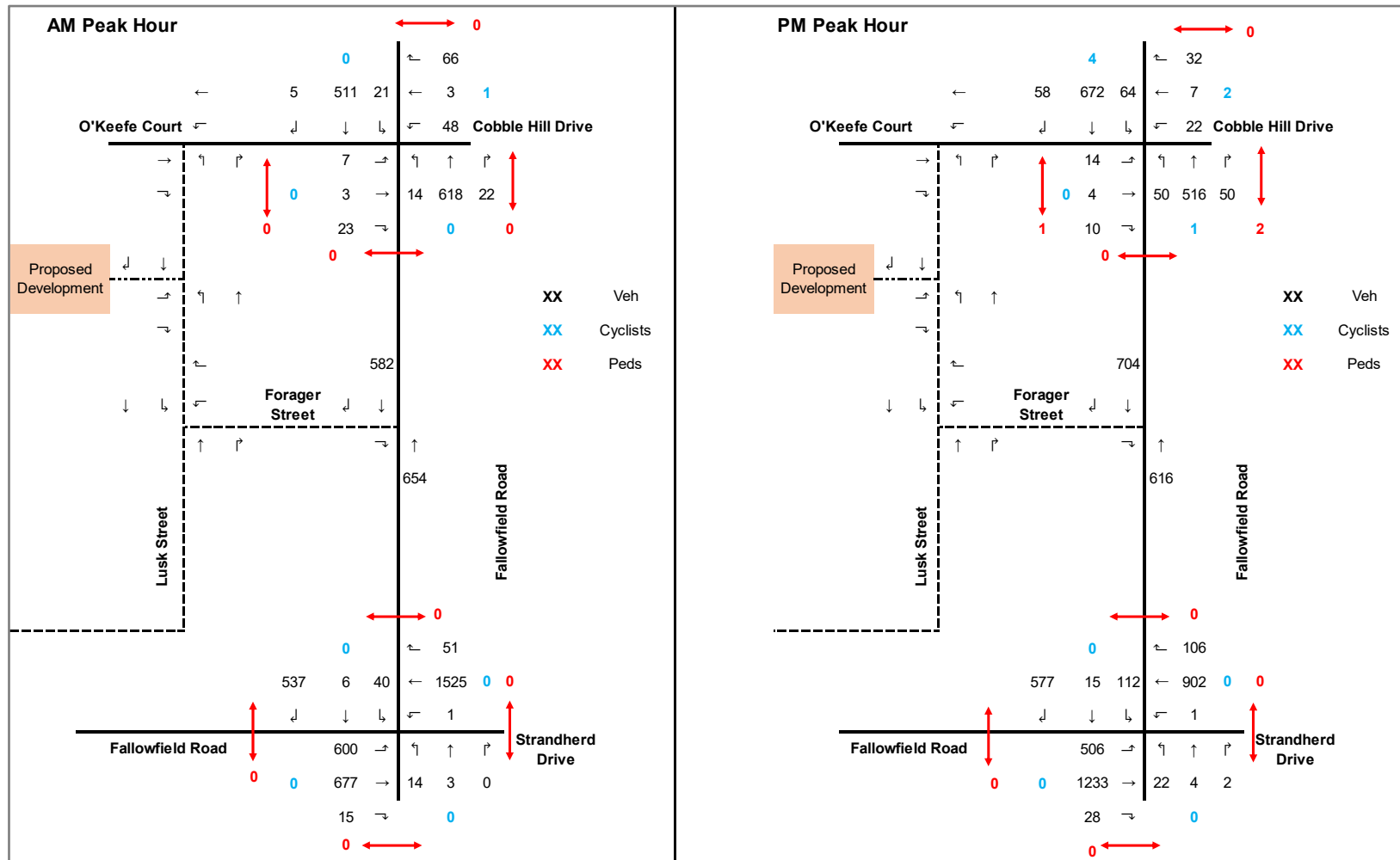


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Figure 6 - 2020 Existing Traffic Volumes



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2.1.2.6 Collision History

Collision data was provided by the City of Ottawa for the period January 2014 to December 2018 in the vicinity of the subject site. The data was reviewed to determine if any intersections or road segments exhibited an identifiable collision pattern during the five (5) year period.

Table 2 includes the collision summary for each road segment and intersection in the study area.

Table 2 - Collision Summary

		Fallowfield Road at Strandherd Drive	Fallowfield Road at O'Keefe Court	Fallowfield Road between Strandherd Drive and O'Keefe Court	O'Keefe Court between Foxtail Avenue and Fallowfield Road	O'Keefe Court Between Foxtail Avenue and Cul-de-Sac
Classification	Property Damage Only	26	1	1	1	1
	Non-Fatal Injury	9				2
Collision Type	Rear End	22		1	1	
	Angle / Turning	4	1			
	Sideswipe	5				
	Single Motor Vehicle	2				3
Event	Other Motor Vehicle	31	1	1	1	
	Ran off Road					1
	Pedestrian	1				
	Skidding	2				
	Physical (curb, pole, barrier, ditch)	1				2

Based on the collision data summarized in **Table 2** above, it was found that the majority of the collisions in the study area intersections and segments resulted in property damage only (73%), which suggests that the collisions occurred at speeds low enough as to not cause injury or harm to road users.

The Fallowfield Road at Strandherd Drive intersection experienced the highest number of collisions. Upon further review, it was found that the majority of the collisions at this intersection were rear end collisions. **Table 3** below provides a summary of the rear end collisions at the aforementioned intersection classified according to the environment, pavement surface condition, as well as direction of vehicle.



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Table 3 – Rear End Collisions at the Fallowfield Road and Strandherd Drive Intersection

The majority of the rear-end collisions occurred in clear environmental conditions (86%) and on dry pavement (82%). Based on the vehicular direction, of the 22 rear-end collisions at the intersection, 50% were westbound vehicles, 23% were eastbound vehicles, and 27% were southbound vehicles. As such, there is no evidence to suggest that the rear-end collisions at the intersection conform to a pattern or a trend.

2.1.3 Planned Conditions

2.1.3.1 Road Network Modifications

There are two improvements is scheduled to occur within the vicinity of the subject development, as outlined in the City of Ottawa's Transportation Master Plan and described in **Table 4** below.

Table 4 - Transportation Improvements in the vicinity of the study area

Project	Description	TMP Network
Fallowfield Road	Widen from two to four lanes between Strandherd Drive and Greenbank Road	2031 Road Network Concept
Strandherd Drive	Widen from two to four lanes between Fallowfield Road and Jockvale Road	2020 - 2024
	Widen from four to six lanes between Jockvale Road and Woodroffe Avenue	2020 - 2024

Note: 1. The portion of Strandherd Drive, between Fallowfield Road and Maravista Drive, has already been widened to four lanes at the time of this subject study

2.1.3.2 Future Background Developments

There are six developments scheduled to occur within the vicinity of the subject site, as illustrated in **Figure 7** and described in **Table 5**.

Table 5 - Background Developments

Key Plan Reference	Development	Location	Description	Build-Out Horizon
A	4401 Fallowfield Road	North side of Fallowfield Road just west of the intersection with Strandherd Drive	Hotel with 102 bedrooms	2021*
B	4433 Strandherd Drive	South of Strandherd Drive between Citi Gate Drive and Crosskeys Place	Five storey hotel with 99 rooms	2021 ¹
C	4190 Fallowfield Road	South side of Fallowfield Road just west of the intersection with Cedarview Road	Five low rise apartment dwellings (90 units), five stacked dwellings (56 units), and four terra flats stacked dwellings (48 units) for a total of 195 units	2023
D	120 Lusk Street	Directly west of the proposed development. ¹	Medical office building (1,752 m ²), general office space (1,513 m ²), and a shopping center (594 m ²)	2021 ²
E	4497 O'Keefe Court	East of Highway 416, north of O'Keefe Court	20,700 m ² of office / showroom / warehouse space	2021 ¹



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F	222 Citi Gate	South of Fallowfield Road, East of Highway 416, West of Strandherd Drive	250,000 m ² of office and light industrial	2021
G	4149 Strandherd Drive	Northwest quadrant of the Strandherd Drive at Dealership Drive	121,275 ft ² of office space	2021 ¹
H	Remaining Citi Gate Employment Lands	West of Strandherd Drive, south of Fallowfield Road, north of the train tracks, and east of the Highway 416	Approximately 25% of the total Citi Gate Development	2026 ³

Notes:

1. occupancy assumed to occur on the same year as the proposed development's buildout. Horizon will be adjusted if more information becomes available in the following steps of this study
2. the development is not yet on the City's development applications but the approval process is underway
3. Occupancy assumed to be by 2026 (the +5 horizon)

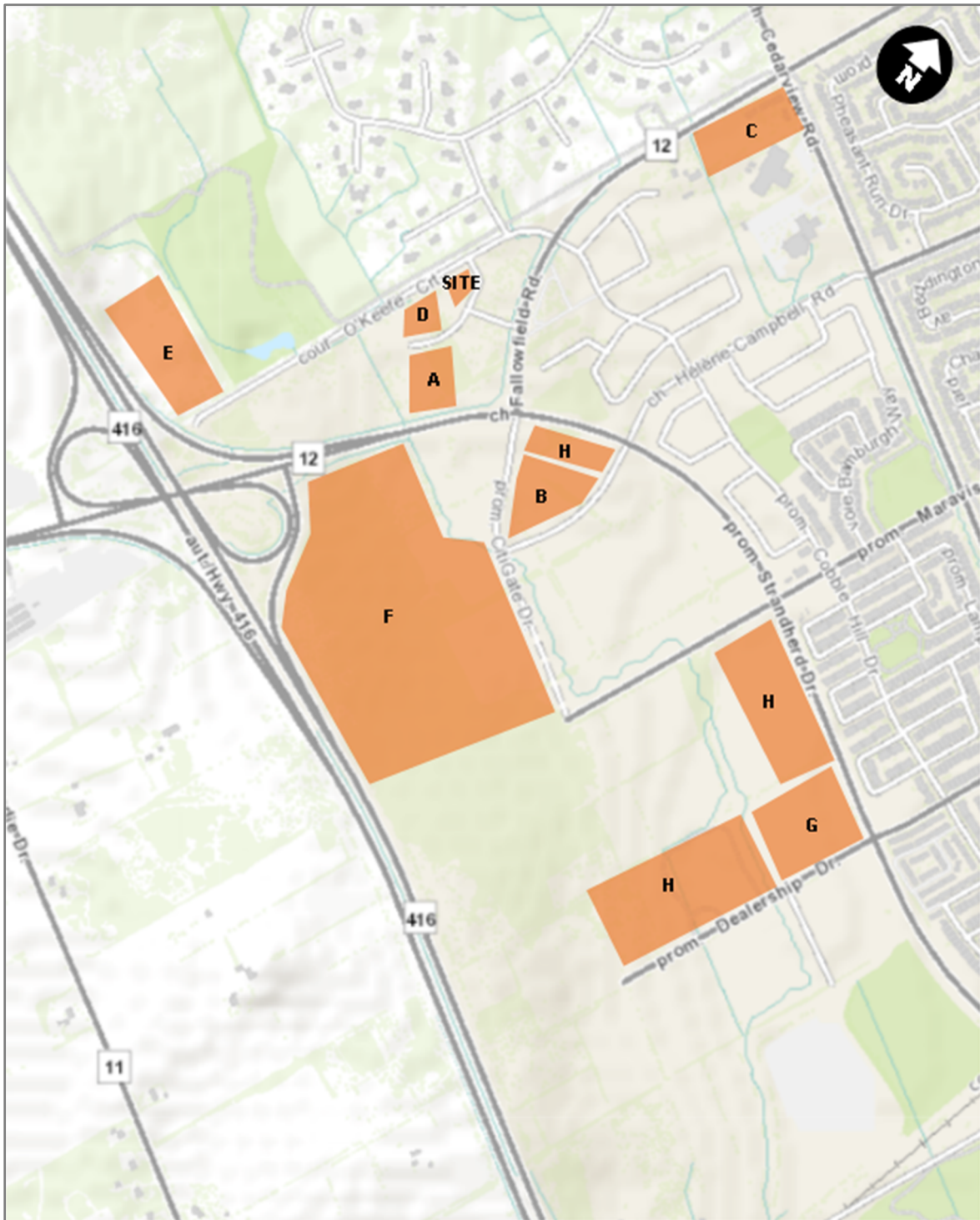


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Figure 7 - Background Developments



2.2 STUDY AREA AND TIME PERIODS

2.2.1 Study Area

The proposed study area is limited to the following intersections:

- Fallowfield Road at Strandherd Drive;
- Fallowfield Road at O'Keefe Court; and
- Fallowfield Road at Forager Street.

2.2.2 Time Periods

The proposed scope of the transportation assessment includes the following analysis time periods:

- Weekday AM peak hour of roadway; and
- Weekday PM peak hour of roadway.

2.2.3 Horizon Years

The scope of the transportation assessment proposes the following horizon years:

- 2020 existing conditions;
- 2021 future background conditions;
- 2021 total future conditions (site build-out); and
- 2026 total future conditions (5 years beyond build-out).



2.3 EXEMPTIONS REVIEW

Table 6 summarizes the Exemptions Review table from the City of Ottawa's *2017 Transportation Impact Assessment Guidelines*.

Table 6 - Exemptions Review

Module	Element	Exemption Considerations	Exempted?
Design Review Component			
4.1 Development Design	4.1.2 Circulation and Access	Only required for site plans	No
	4.1.3 New Street Networks	Only required for plans of subdivision	Yes
4.2 Parking	4.2.1 Parking Supply	Only required for site plans	No
	4.2.2 Spillover Parking	Only required for site plans where parking supply is 15% below unconstrained demand	Yes
Network Impact Component			
4.5 Transportation Demand Management	All Elements	Not required for site plans expected to have fewer than 60 employees and/or students on location at any given time	No
4.6 Neighbourhood Traffic Management	4.6.1 Adjacent Neighbourhoods	Only required when the development relies on local or collector streets for access and total volumes exceed ATM capacity thresholds	TBD
4.8 Network Concept		Only required when proposed development generates more than 200 person-trips during the peak hour in excess of the equivalent volume permitted by established zoning	Yes
4.9 Intersection Design	All Elements	Not required if site generation trigger is not met.	Yes



3.0 FORECASTING

3.1 DEVELOPMENT GENERATED TRAVEL DEMAND

3.1.1 Trip Generation and Mode Shares

The *Institute of Transportation (ITE) Trip Generation Manual* (10th edition) was used to forecast auto trip generation for the proposed office building. Land use code 710 – General Office Space (ITE) was thought to be the most representative of the proposed land use. **Table 7** outlines the assumed land use and the trip generation rate.

As per the City of Ottawa's *2017 TIA Guidelines*, the auto trip generation rate of the general office land use was converted to person trips using a conversion factor of 1.28. **Table 8** outlines development-generated person trips for the land use.

Table 7 - Land Use and Trip Generation Rates

LUC	Land Use	Size	Weekday AM Peak Hour			Weekday PM Peak Hour		
			In	Out	Rate	In	Out	Total
710	General Office Space	20,400 ft ² GFA (1,895 m ²)	86%	14%	1.16	16%	84%	1.15

Table 8 - Person Trips Generated by Land Use

LUC	Land Use	Trip Conversion	Weekday AM Peak Hour			Weekday PM Peak Hour		
			In	Out	Total	In	Out	Total
710	General Office Space	Auto Trips	21	3	24	4	19	23
		Conversion Factor	1.28	1.28	1.28	1.28	1.28	1.28
		Person Trips	27	4	31	5	24	29

To reflect local travel characteristics, the person trips were assigned to the four primary modal shares (i.e. auto, passenger, transit, and active moves) according to the TRANS Committee's 2011 Origin-Destination (O-D) Survey for the South Nepean District. The subject site is not located within any planned transit corridors. In combination with the TRANS O-D district information, and as per the requirement of the 4401 Subdivision Conditions, the analysis was carried out considering a 15% alternative transportation modal split maximum including transit, walking, and cycling.

Table 9 outlines the anticipated trip generation potential of the proposed development by travel mode based on assumed mode share targets.

Table 9 - Trips Generated by Travel Mode

LUC	Land Use	Trip Conversion		Weekday AM Peak Hour			Weekday PM Peak Hour		
				In	Out	Total	In	Out	Total
710	General Office Space	Auto	75%	20	3	23	3	19	22
		Passenger	10%	3	0	3	1	2	3
		Walk / Bike	5%	1	0	1	0	1	1
		Transit	10%	3	1	4	1	2	3



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3.1.2 Trip Distribution

The distribution of traffic to / from the proposed development was determined through examination of the Trans Committee's 2011 Origin-Destination (O-D) Survey for the South Nepean District. **Table 10** provides a summary of the estimated distribution for the traffic generated by the proposed development.

Table 10 - Traffic Distribution Assumptions

Cardinal Direction		Via (to / from)		
		Fallowfield Road	Fallowfield Road	Strandherd Drive
		(East)	(West)	(East)
North	20%	10%	10%	
East	30%	9%	21%	
South	0%			
West	5%		5%	
Internal (South Nepean)	45%	16%		29%
Total	100%	35%	36%	29%

3.1.3 Trip Assignment

Site generated trips were assigned to the study area road network based on the trip distribution assumptions outlined in **Table 10** above. **Figure 8** outlines the site assignment assumptions.

Figure 9 illustrates the site generated trips for the proposed site during the AM and PM peak hours

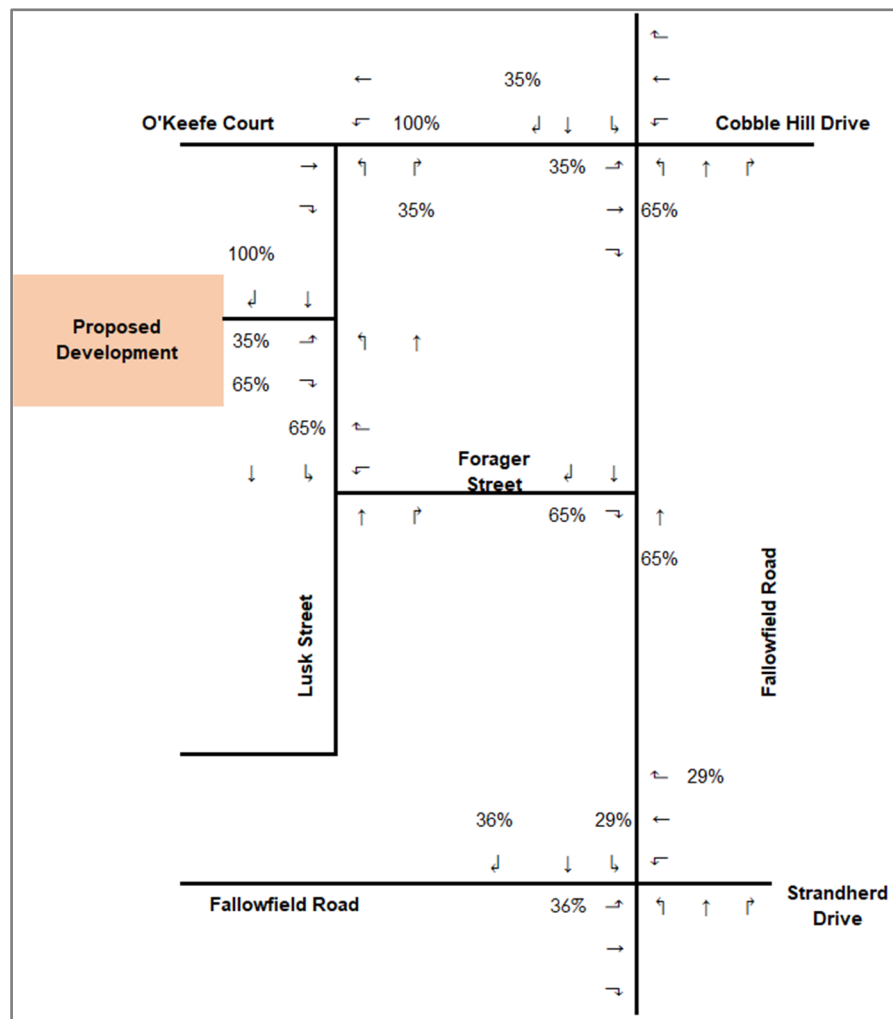


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Figure 8 - Site Traffic Assignment

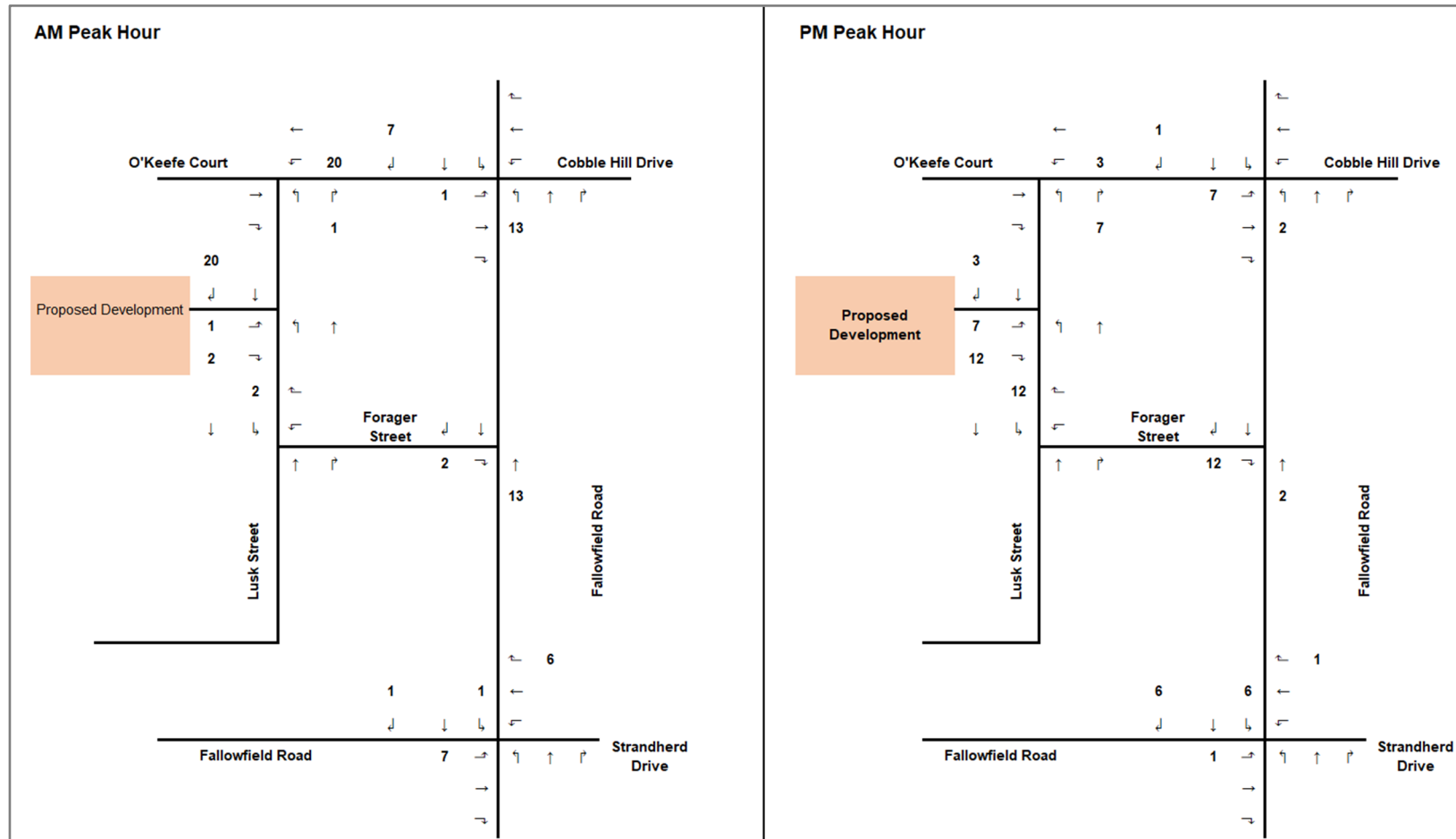


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Figure 9 - Site Generated Traffic Volumes



3.2 BACKGROUND NETWORK TRAVEL DEMAND

3.2.1 Transportation Network Plans

As outlined in **Table 4**, there are three scheduled transportation improvement projects in the vicinity of the subject site. The widening of Strandherd Drive to from two to four lanes between Fallowfield Road and Maravista Drive has been completed prior to the commencement of this study. The widening of Strandherd Drive, between Maravista Drive and Jockvale Road, is scheduled to occur by 2024, as per recent direction from the City of Ottawa. Another improvement project on the 2031 Network Concept is the widening of Fallowfield Road between Strandherd Drive and Greenbank Road from two to four lanes. As this project is not part of the 2031 Affordable Network, it was assumed that it won't be implemented during the horizons of the subject study (i.e. it won't be constructed prior to 2026).

3.2.2 Background Growth

The City of Ottawa provided **Figure 10** below, which outlines the average annual growth rates based on trend lines. As illustrated, the average annual growth at the intersection of Strandherd Drive and Fallowfield Road is 4 – 8%. The growth rate is not listed for other study area intersections including Fallowfield Road with Cobble Hill Drive / O'Keefe Court.

As such, a 4% growth rate was applied to all movements at the intersection of Fallowfield Road with Strandherd Drive and to the through movements along Fallowfield Road at the intersection with Cobble Hill Drive / O'Keefe Court. For the 2021 buildout year, a standard 2% growth rate was applied for the movements to / from Cobble Hill Drive at the intersection with Fallowfield Road (i.e. the east leg), while a 0% growth rate was applied for O'Keefe Court (i.e. west leg).

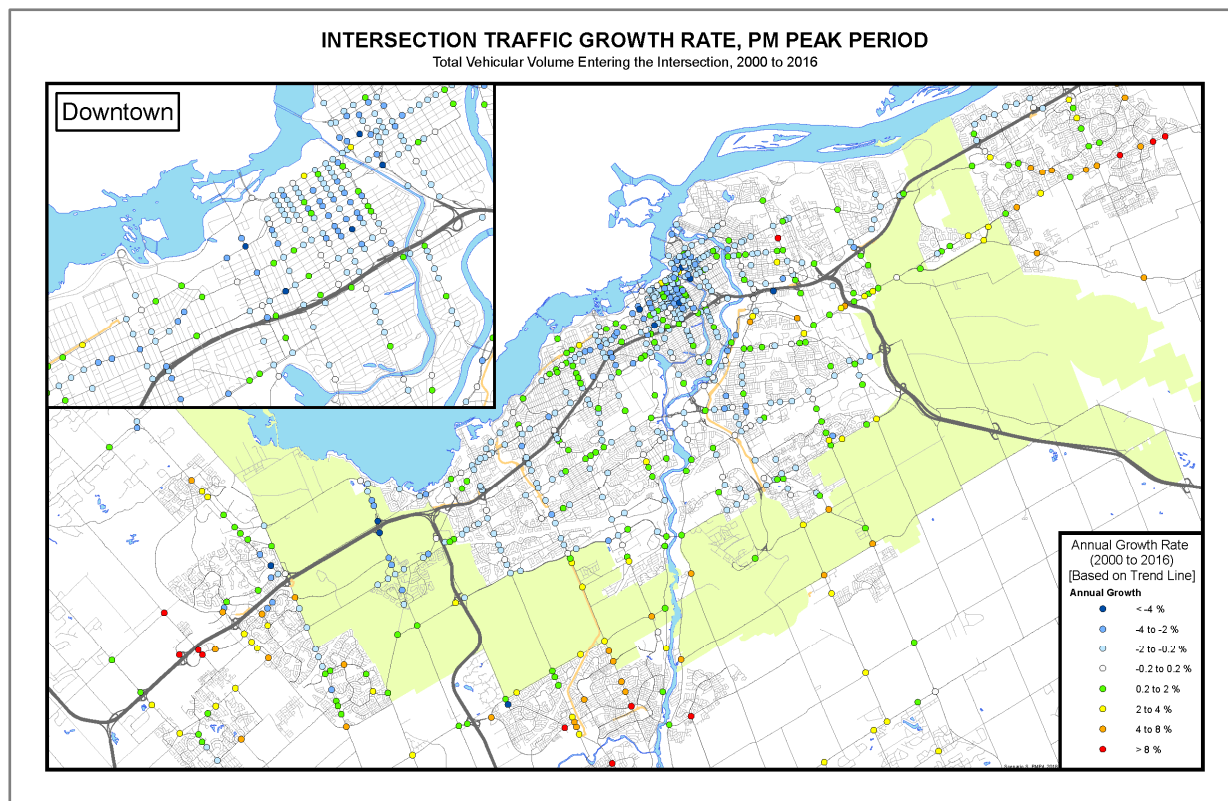
For the 2026 ultimate horizon, the same growth rates were applied at the aforementioned locations along with a 2% growth rate for movements to / from O'Keefe Court (i.e. the west leg of the Fallowfield Road at O'Keefe Road intersection).

3.2.3 Other Developments

In addition to the background growth rate outlined in **Section 3.2.2** above, there are several background developments that are assumed to be built by the opening year (2021) and beyond, per **Table 5**. The site trips were obtained from their respective traffic studies and explicitly added to the transportation network as background traffic.



Figure 10 – Annual Growth Rates



3.3 DEMAND RATIONALIZATION

3.3.1 2021 Future Background Traffic

Figure 11 illustrates the 2021 future background traffic volumes during the AM and PM peak hours.

The 2021 future background traffic demands are not expected to exceed capacity and therefore demand rationalization is not required.

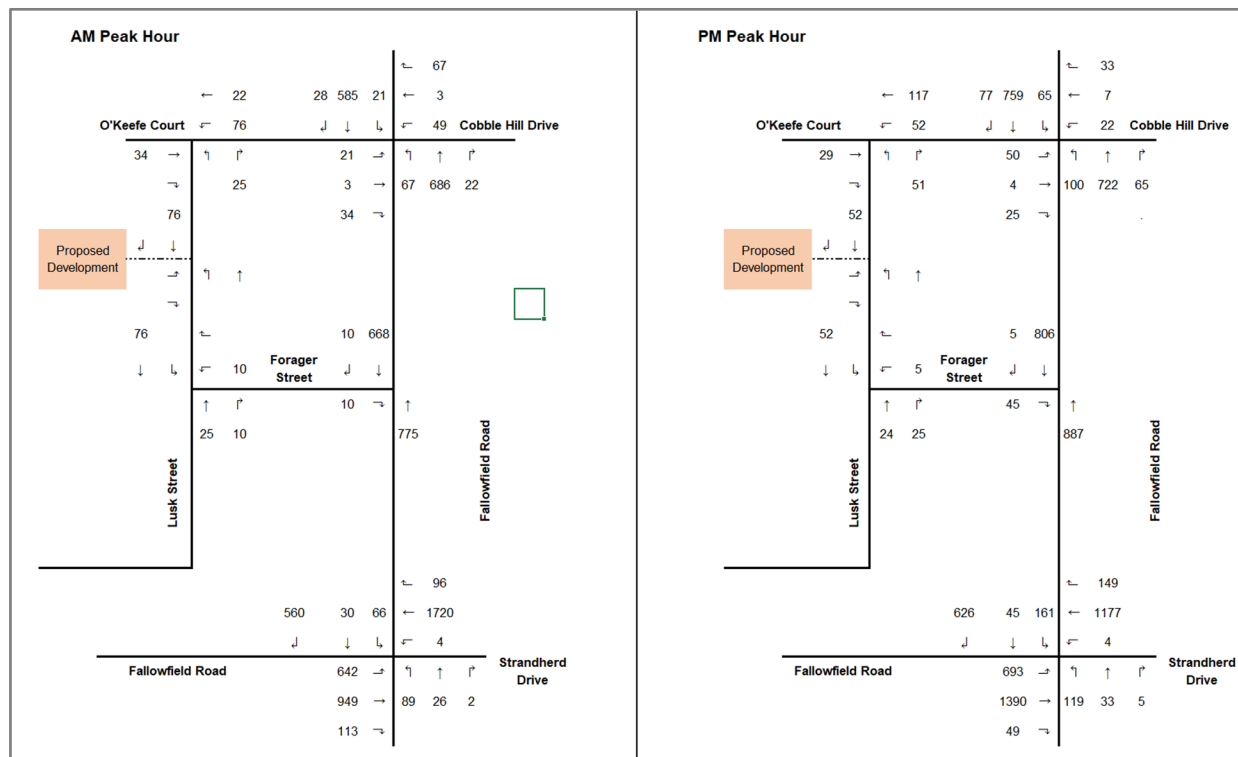


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Figure 11 - 2021 Future Background Traffic



3.3.2 2021 Total Future Traffic

Figure 12 illustrates the 2021 total future traffic volumes during the AM and PM peak hours.

The 2021 total future traffic demands are not expected to exceed capacity and therefore demand rationalization is not required.

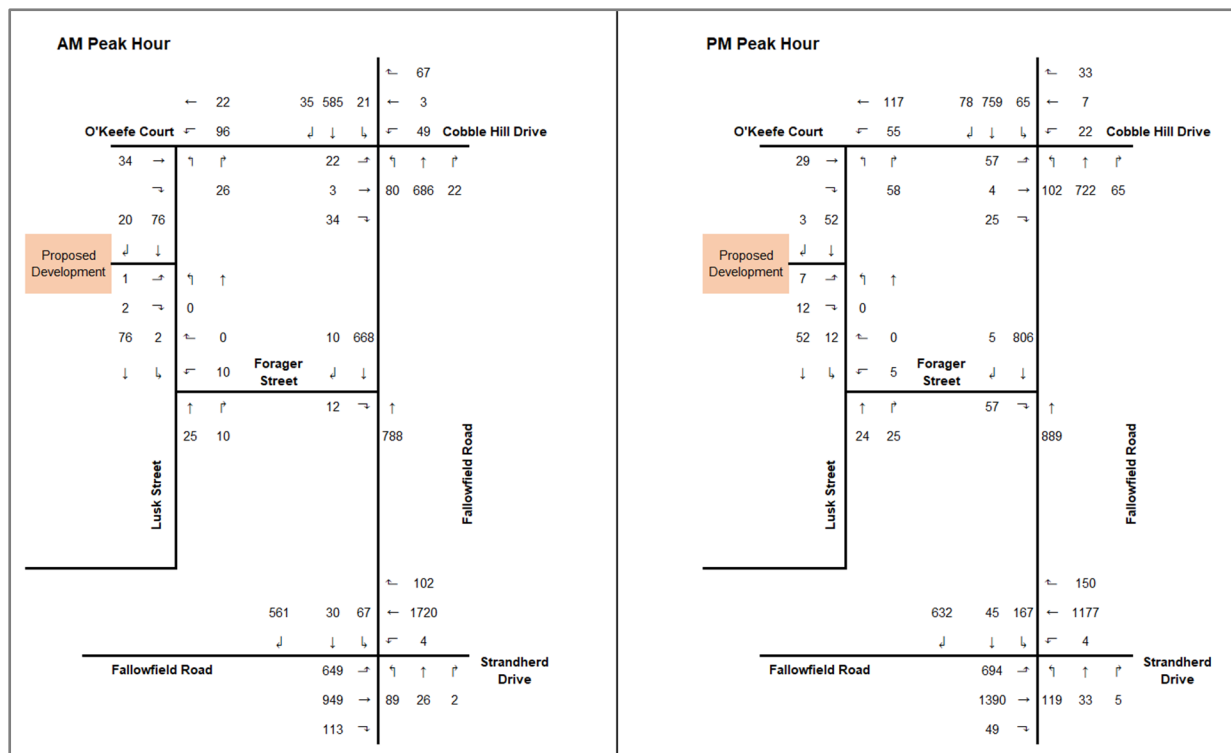


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Figure 12 - 2021 Total Traffic Volumes



3.3.3 2026 Ultimate Traffic

Figure 13 illustrates the 2026 ultimate traffic volumes during the AM and PM peak hours.

The 2026 ultimate traffic demands are not expected to exceed capacity and therefore demand rationalization is not required.



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Figure 13 - 2026 Ultimate Traffic Volumes

