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85 GEMINI WAY

Transportation Impact Assessment Report

27/02/2025



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Certification Form for Transportation Impact Assessment (TIA) Study

TIA Reports

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 and 2023 amendments.

Please note that the Certification is only required for the submission of a TIA. The Screening can be undertaken by a non-certified individual for the purpose of identifying if a TIA is needed or not.

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

CERTIFICATION



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; (Update effective July 2023)



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;



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



I am either a licensed or registered¹ professional in good standing, whose field of expertise



is either transportation engineering



or transportation planning.

¹ 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.

Dated at Houston this 01 day of April, 20 25.
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EXECUTIVE SUMMARY

This **Transportation Impact Assessment (TIA)** was prepared by Momentum Transport Consultancy on behalf of Centurion Appelt in support of a site plan application for the proposed apartment development at 85 Gemini Way in the Nepean neighbourhood of Ottawa, Ontario. As specified in the City of Ottawa's TIA Guidelines, the analysis included screening and scoping reports, forecasting for travel demand, and a strategy report. Momentum's team also conducted a site visit on Tuesday, 7 January 2025, to examine site conditions for the purpose of informing the analysis.

The **proposed development** will consist of a six-storey residential building with 148 units and gross floor area 10,986.6m² (118,258.8ft²). The expected build-out year is 2027. The site will include an underground parking garage for tenants and visitors. The parking garage will consist of one underground level and will include 68 car parking spaces and 74 bicycle parking spaces.

The site is located within the quadrilateral formed by Centrepont Drive, Baseline Road, and Constellation Drive. The site directly fronts onto Gemini Way, which is the main site access for all modes, and Baseline Road (no vehicle access). The following study area intersections were included in the multimodal transportation analysis: Baseline Road at Centrepont Drive / Highgate Road, Baseline Road at Constellation Drive, Centrepont Drive at Gemini Way, and Constellation Drive at Gemini Way.

Time periods for analysis were based on turning movement counts obtained from the City of Ottawa. Peak hours were determined to be 8AM to 9AM (weekday AM peak hour) and 3:15PM to 4:15PM (weekday PM peak hour, based on the closest intersections to the site). The analysis studied existing conditions as well as future horizon years of 2027 and 2032 – representing the anticipated opening year of the development and five years after the anticipated opening, respectively.

The development is expected to generate additional transportation demands. The analysis yielded a projected **62 person-trips during the weekday AM and PM peak hours** for the future horizon years. Using mode shares for Multi-Unit High-Rise from the Ottawa TRANS Trip Generation Manual, this is expected to include 23 two-way driver vehicle trips, 8 two-way auto passenger trips, 23 transit trips for the AM peak hour and 22 transit trips for the PM peak hour, and 8 two-way active transportation trips. The site is poised to benefit from the planned extension of OC Transpo's O-Train with the opening of Algonquin Station located less than 500m from the site. Additionally, the area is well served by bus transit and is located in close proximity to the City's Crosstown Bikeway Network. The boundary street recommendations provided in the report are proposed to ensure maximum access and connectivity for all modes of transport with particular emphasis on sustainable modes.

In conclusion, the analysis found that the proposed development will result in **minimal impact** to overall traffic operations in the area. From a transportation standpoint, the proposed apartment development can be accommodated by the future transportation network, particularly with the implementation of additional transit provision in the site vicinity and with the proposed Transportation Demand Management strategies outlined in this report.

Table of Contents	v
Executive Summary	1
Introduction	1
1. Screening	2
1.1 Summary of Development	2
1.2 Trip Generation Trigger	3
1.3 Location Triggers	3
1.4 Safety Triggers	4
1.5 Summary	4
2. Scoping	5
2.1 Existing and Planned Conditions	5
Proposed Development	5
Existing Conditions	7
Planned Conditions	21
Future Background Developments	25
2.2 Study Area and Time Periods	27
Study Area	27
Time Periods	27
Horizon Years	28
2.3 Exemptions Review	28
3. Forecasting	32
3.1 Development Generated Travel Demand	32
Existing Trip Generation	32
Future Trip Generation and Mode Shares	38
Trip Distribution	40
Trip Assignment	45
3.2 Background Network Travel Demand	51
3.3 Demand Rationalization	51
4. Analysis	52
4.1 Development Design	52
Design for Sustainable Modes	52
Circulation and Access	52
New Street Networks	54
4.2 Parking	54
Parking Supply	54
Existing On-street parking	55
4.3 Boundary Street Design	55
Design Concept	55

4.4	Access Intersection Design	55
4.5	Transportation Demand Management	55
	Context for TDM Measures	55
	Need and Opportunity	55
	TDM Program	56
4.6	Neighbourhood Traffic Calming	56
4.7	Transit	56
4.8	Review of Network Concept	56
4.9	Intersection Design	56
5.	Summary and Conclusions	57

Tables

Table 1-1:	Summary of Development	2
Table 1-2:	Trip Generation Trigger	3
Table 1-3:	Trip Generation Triggers	3
Table 1-4:	Safety Triggers	4
Table 1-5:	Summary	4
Table 2-1:	Collision history	21
Table 2-2:	Peak Hours at Intersections in the Study Area	28
Table 2-3:	Exemptions Review	29
Table 3-1:	Pedestrians and cyclists counts for the AM and PM peak hours for the Constellation Drive and Baseline Road intersection	32
Table 3-2:	Pedestrians and cyclists counts for the AM and PM peak hours for the Centerpointe Drive and Baseline Road intersection	33
Table 3-3:	Pedestrians and cyclists counts for the AM and PM peak hours for the Centerpointe Drive and Gemini Way intersection	33
Table 3-4:	Pedestrians and cyclists counts for the AM and PM peak hours for the Constellation Drive and Gemini Way intersection	34
Table 3-5:	Directional Splits for the AM and PM peak periods	38
Table 3-6:	Future Person Trips for the AM and PM peak periods	39
Table 3-7:	Trips Generated by Travel Mode for the AM and PM peak periods	39
Table 3-8:	Trips Generated by Travel Mode for the AM and PM peak hours	40
Table 3-9:	Origin and destination of vehicular trips in the Bayshore/Cedarview sector, 2011, AM peak period	40
Table 3-10:	Origin and destination of vehicular trips in the Bayshore/Cedarview sector, 2011, PM peak period	41
Table 3-11:	Percentage of trips and itineraries associated with the district groups for the AM and PM peak periods	43

Figures

Figure 2-1:	Proposed Development Site Plan	6
Figure 2-2:	Absence of sidewalk on Gemini Way	7
Figure 2-3:	Absence of Sidewalk on the Western Side of Constellation Drive	8
Figure 2-4:	Shared Bike Lane on Baseline Road	8

Figure 2-5: Bike Lane on Constellation Drive	9
Figure 2-6: Study Area Transit Route Map (OC Transpo)	10
Figure 2-7: Active and Public Transport Network	11
Figure 2-8: Walking catchment from the site project	13
Figure 2-9: Cycling catchment from the site project	14
Figure 2-10: View from Baseline Road at Centrepointhe Drive/Highgate Road	16
Figure 2-11: Existing Road Network	18
Figure 2-12: Existing Lane Configuration and Traffic Control	19
Figure 2-13: Future Algonquin Station	22
Figure 2-14 Baseline BRT design from the 2017 Environmental Assessment	23
Figure 2-15 Recommended cross-section between Richmond Road to Navaho Drive	24
Figure 2-16: Centrepointhe Drive Area Traffic Management Study	25
Figure 2-17: 2140 Baseline Road Site Plan	26
Figure 2-18: 19 Centrepointhe Drive Site Plan	27
Figure 3-1: Existing Vehicular Trips – AM Weekday	36
Figure 3-2: Existing Vehicular Trips - PM Weekday	37
Figure 3-3: Additional Vehicular Trips – AM Weekday	46
Figure 3-4: Additional Vehicular Trips – PM Weekday	47
Figure 3-5: Additional Active Transportation Trips – AM Weekday	49
Figure 3-6: Additional Active Transportation Trips – PM Weekday	50
Figure 4-1: Landscape Plan with Circulation	53

Appendices

Appendix A – TDM Checklist and Supportive Development Design and Infrastructure Checklist	59
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INTRODUCTION

- 1.1.1 This Transportation Impact Assessment (TIA) report has been prepared by Momentum Transport Consultancy for Centurion Appelt, in support of a site plan application for the proposed residential development at 85 Gemini Way in Ottawa, Ontario.
- 1.1.2 This TIA document follows the previous submissions of the Screening Report on December 20, 2024, and the Scoping Report on January 21, 2025, to the City of Ottawa.
- 1.1.3 The present document adheres to the guidelines outlined in the Transport Impact Assessment Guidelines (2017) from the City of Ottawa and in the update to the TIA effective since July 2023.
- 1.1.4 The site, located in a Mixed-Use Centre Zone and the Algonquin PMTSA, is strategically positioned for transit-oriented, sustainable development.
- 1.1.5 This TIA report covers screening and scoping, which involves regulatory triggers, existing and planned conditions, horizon years, and exemptions. The forecasting section analyzes travel demand across all modes of transport for the proposed development, considering its location within a future transit-oriented environment. The TIA report outlines the design, and recommendation for sustainable modes, circulation and access, parking and transportation demand management measures.
- 1.1.6 The proposed development is anticipated to generate 62 person-trips during the weekday AM and PM peak hours, with 23 two-way driver vehicle trips in the AM and PM peak hours. This is expected to result in minimal impacts to the area's overall traffic operations.
- 1.1.7 This section serves as the introduction to the TIA report for the proposed development. The following sections include:
 - Chapter 1: Screening
 - Chapter 2: Scoping
 - Chapter 3: Forecasting
 - Chapter 4: Analysis
 - Chapter 5: Summary and Conclusion

1. SCREENING

1.1 Summary of Development

Table 1-1: Summary of Development

Municipal Address	85 Gemini Way, Nepean, ON K2G 5L4, Canada
Description of Location	The proposed development concept is located within the quadrilateral formed by Gemini Way, Centrepont Drive, Baseline Road, and Constellation Drive, in Nepean, to the west of Ottawa's inner core. It is also located less than 500m from the future LRT "O-Train" station, Algonquin. The site is also within 500m of two educational institutions, Sir Guy Carleton Secondary School and Algonquin College.
Land Use Classification	Multi-Unit High Rise
Development Size (m ²) [ft ²] {units}	<u>Residential development:</u> - Gross floor area (10,986.6m²) [118,258.8ft²] - Six-storey building - Building height 24.4m / 80 ft - {148 units}
Number of Accesses and Locations	One planned exit access location: 1. Gemini Way / Site Access Driveway (leading to parking garage access ramp)
Phase of Development	Unknown
Buildout Year	2027

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.

Table 1-2: Trip Generation Trigger

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	✗

* 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.**

1.3 Location Triggers

Table 1-3: Trip Generation 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,' the Location Trigger is satisfied.

1.4 Safety Triggers

Table 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?		x
Is the proposed driveway within the area of influence of an adjacent traffic signal or roundabout (i.e. within 300 m of intersection in rural conditions, or within 150 m of intersection in urban/ suburban conditions)?		x
Is the proposed driveway within auxiliary lanes of an intersection?		x
Does the proposed driveway make use of an existing median break that serves an existing site?		x
Is there 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?		x

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

1.5 Summary

Table 1-5: 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, 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. SCOPING

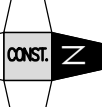
2.1 Existing and Planned Conditions

PROPOSED DEVELOPMENT

- 2.1.1 The proposed development is located within the Nepean neighbourhood of Ottawa, Ontario. The site is in a Mixed-Use Centre Zone aimed to accommodate high- and medium-density residential uses.¹ It is also within the Algonquin Protected Major Transit Station Areas (PMTSA).² It is bounded by Constellation Drive to the east, Baseline Road (Ottawa Road #16) to the north, CentrepoinTE Drive to the west, and Gemini Way to the south.
- 2.1.2 The new residential development is planned to replace an existing parking lot, located west of the Gemini Tower CentrepoinTE development.
- 2.1.3 The development will consist of a six-story residential building including 148 units, along with 68 underground parking spaces.
- 2.1.4 Vehicular access to the site will follow the current access configuration of the existing parking lot. A ramp connected to Gemini Way will provide access to the planned parking area.
- 2.1.5 Figure 2-1 illustrates the Proposed Development Site Plan.

¹ City of Ottawa, *City of Ottawa Zoning By-law 2008-250 Consolidation*, 2008, 10-53, Accessed from: [Part 10 – Mixed Use/Commercial Zones \(Sections 185-198\)](#)

² City of Ottawa. *Schedule C1 – Protected Major Transit Station Areas*, 2022, Accessed from: [Schedule C1 - Protected Major Transit Station Areas \(PMTSA\) | Annexe C1 - Zones protégées de grande station de transport en commun](#)



All drawings and the information contained therein are the sole property of the Architect and are not to be altered, reproduced, or reconstituted in any way without the express permission of the Architect.

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Figure 2-1: Proposed Development Site Plan

EXISTING CONDITIONS

Study Area

- 2.1.6 The proposed development site is bounded by Constellation Drive to the east, Baseline Road (Ottawa Road #16) to the north, CentrepoinTE Drive to the west, and Gemini Way to the south.
- 2.1.7 In addition to the site itself, the TIA examines the wider area beyond the site and the surrounding context for all modes of travel. This includes the road network connectivity and active and public transport networks in the Nepean neighbourhood and other areas of west Ottawa, as shown in Figure 2-7, Figure 2-8, Figure 2-9 and Figure 2-11 in Section 2.1. For example, the 15-minute cycling catchment shown in Figure 2-9 extends nearly four kilometres beyond the site in all directions, reaching to Byron Avenue East to the north, West Hunt Club Road to the south, Merivale Road to the east, and nearly reaching Cedarview Road to the west.

Active Transportation

- 2.1.8 Figure 2-7 illustrates the existing active and public transportation networks.
- 2.1.9 Active transportation network is limited around the site. The state and availability of active transportation facilities was reviewed during a site visit undertaken on January 7th, 2025.
- 2.1.10 There is no sidewalk on Gemini Way, nor on the western side of Constellation Drive near the Sir Guy Carleton secondary school, as illustrated on Figure 2-2 and Figure 2-3.

Figure 2-2: Absence of sidewalk on Gemini Way



Figure 2-3: Absence of Sidewalk on the Western Side of Constellation Drive



- 2.1.11 There is currently a marked bike lane on Baseline Road between Transitway and Navaho Drive, and a shared lane for bicycles and buses between Constellation Drive and Centrepointhe Drive, illustrated on Figure 2-4.

Figure 2-4: Shared Bike Lane on Baseline Road



- 2.1.12 There is a multi-use pathway on Transitway that connects with the Ottawa River Pathway.

- 2.1.13 The west side of Constellation Drive has a marked bike lane implemented which is approximately 1.4m in width. However, while there is a RB-84A (reserved lane) sign south of Gemini Way, indicating the bike lane as illustrated on Figure 2-5, the bike lane is not clearly marked on the ground, as per the site visit photo. In addition, older Google Street View imagery from 2021 shows a second RB-84A sign with “BEGINS” tab at the southwest corner of Baseline Road and Constellation Drive. This second RB-84A sign was not currently installed during the site visit on January 7th 2025, given ongoing construction activities at the 2140 Baseline development.

Figure 2-5: Bike Lane on Constellation Drive



Public transportation

- 2.1.14 The site is located less than 500m from the Baseline bus station that is operating as a transit hub for 19 different bus lines. A new bus service named New Ways to Bus is planned to be launched in April 2025.³ In this upcoming new bus network, Baseline station will be served with six Frequent bus routes. Other bus lines include five Local routes with service generally during all time periods and on all days of the week, four Local routes with limited service, one “shopper route” offering once-a-week service from rural communities to urban shopping destinations, and three Connexion routes offering connections to the O-Train during weekday peak-periods only. Bus routes are illustrated on Figure 2-6.

³ OC Transpo, *New Ways to Bus*, 2025, Accessed from: <https://www.octranspo.com/en/plan-your-trip/service-changes/new-ways-to-bus/>

- 2.1.15 Routes 68, 74, 75, 87, 88, 111 are Frequent Routes whose service operates seven days a week in all time periods. They run with 15-minute headways or less on weekdays between 6:00AM and 6:00PM.
- 2.1.16 Route 68 runs between Terry Fox and Baseline stations.
- 2.1.17 Route 74 connects Tunney's Pasture OC-Transpo Station (Line 1) to Limebank OC-Transpo Station (Line 2).
- 2.1.18 Route 75 connects the Minto Recreation Complex (Cambrian Road) and Barrhaven Centre to Tunney's Pasture Station with peak period service to Bayview Station, Pimisi Station, and Gatineau.
- 2.1.19 Route 87 connects Baseline to Tunney's Pasture OC-Transpo station.
- 2.1.20 Route 88 connects Bayshore station to Hurdman station via Baseline, stopping at Baseline / CentrepoinTE, Baseline / Highgate and Constellation / Gemini, all three stops accessible within a two-minute walk of the site.
- 2.1.21 Route 111 provides access to Mooney's Bay OC-Transpo Station (Line 2) and on weekday Carleton OC-Transpo Station (Line 2) which is close to Carleton University.
- 2.1.22 Route 277 offers a connection to the Tunney's Pasture O-Train Station on weekday during the AM peak-periods only.

Figure 2-6: Study Area Transit Route Map (OC Transpo)

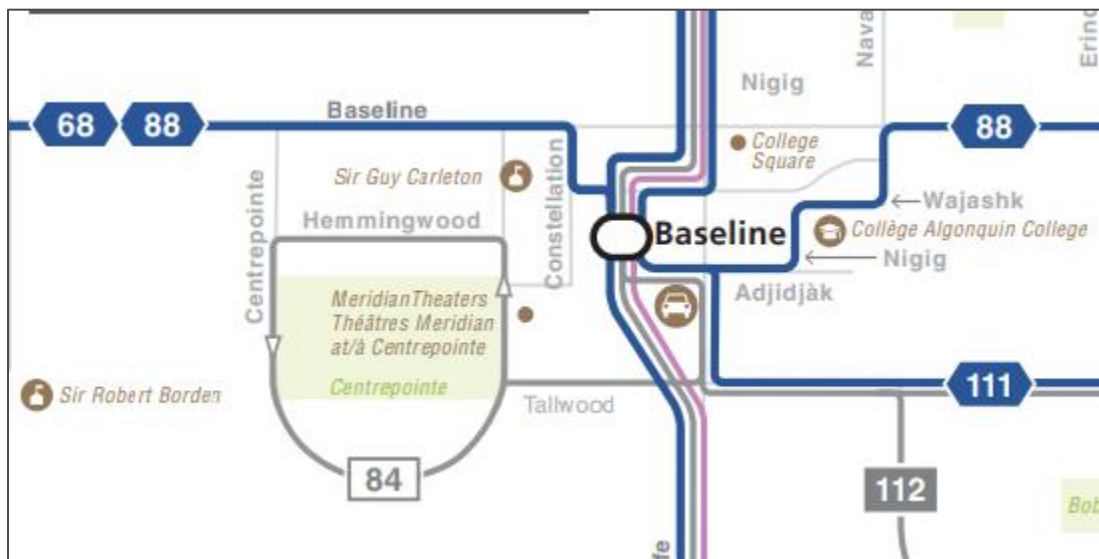
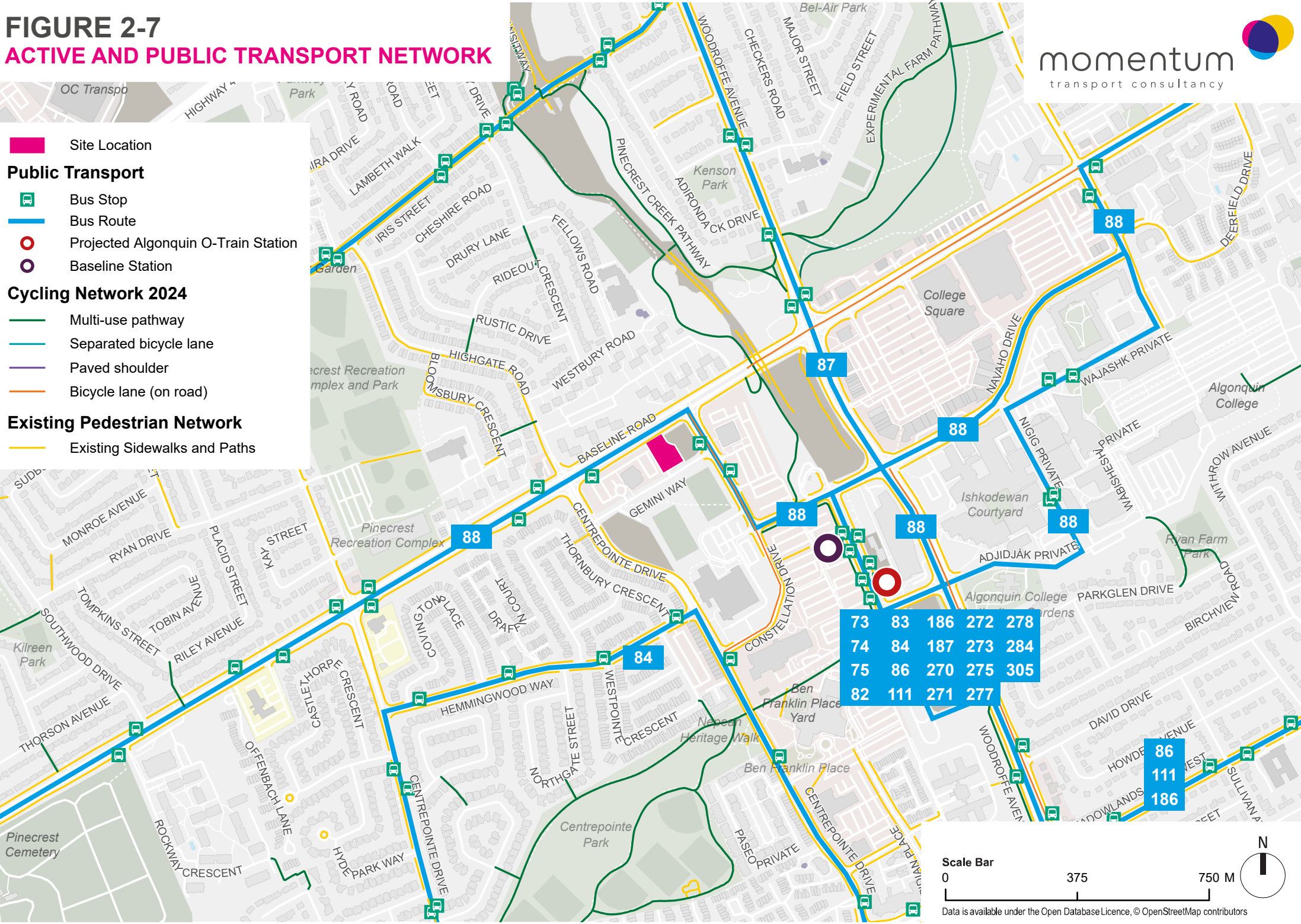


FIGURE 2-7
ACTIVE AND PUBLIC TRANSPORT NETWORK

- Site Location
- Public Transport**
 - Bus Stop
 - Bus Route
 - Projected Algonquin O-Train Station
 - Baseline Station
- Cycling Network 2024**
 - Multi-use pathway
 - Separated bicycle lane
 - Paved shoulder
 - Bicycle lane (on road)
- Existing Pedestrian Network**
 - Existing Sidewalks and Paths



73	83	186	272	278
74	84	187	273	284
75	86	270	275	305
82	111	271	277	

86
111
186

- 2.1.23 Figure 2-8 illustrates the walking catchment from the site project site.
- 2.1.24 The commercial area located at the intersection between Baseline Road and Centrepointhe Drive is located within a 5-minute walk from the site, using sidewalks, except on Gemini Way.
- 2.1.25 Algonquin College is less than a 10-minute walk from the site, as are Sir Guy Carleton Secondary School, the retail stores at College Square Mall located closest to Woodroffe Avenue. The future Algonquin O-Train Station will also be accessible within a 10-minute walk, highlighting the potential of transit-oriented trips for the area's future development. Several cultural points of interest are also accessible in less than 15-minutes from the site via Centrepointhe Dr : the Meridian Theatre and the Nepean Centrepointhe Ottawa Public Library.
- 2.1.26 Figure 2-9 illustrates the cycling catchment from the site project.
- 2.1.27 The cycling catchment analysis shows that three different schools, Algonquin College, Baseline Station, and the future Algonquin Station, are accessible within a five-minute bike ride. However, aside from the bike lanes on Constellation Drive and Navaho Drive, as well as the multi-use pathway along the Transitway serving Baseline Station and the College, other points of interest cannot be safely reached by bike. College Square Mall and other retail locations south of the site are also quickly accessible.
- 2.1.28 Other schools and retail areas could be reached in less than 10 minutes by bike. The Ottawa River Pathway that connects to greenspace and the city center is also accessible in around 15 minutes from the site using the Pinecrest Creek multi-use pathway.
- 2.1.29 The walking and cycling catchments demonstrate the potential higher mode shares for walking and cycling for the future development. This would be facilitated by the increase of safe and protected walking and cycling infrastructure around the site which will be highlighted in the rest of the report.

FIGURE 2-8
WALKING NETWORK

Site Location

Projected Algonquin O-Train Station

Baseline Station

Walking Catchment

in minutes (Based on speed of 5 km/ph)

5

10

15

Land Uses

Commercial / Retail

Education

Civic

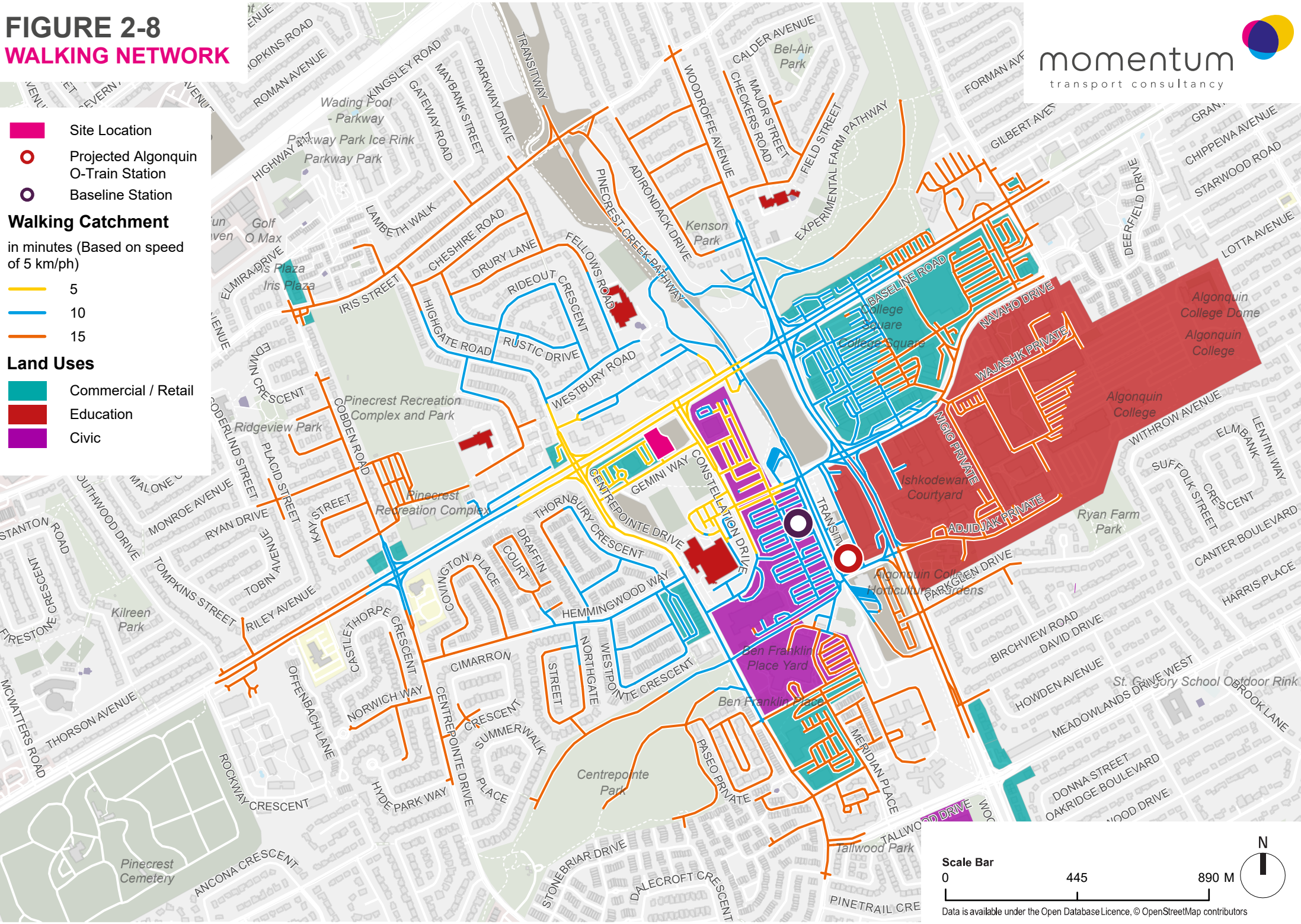
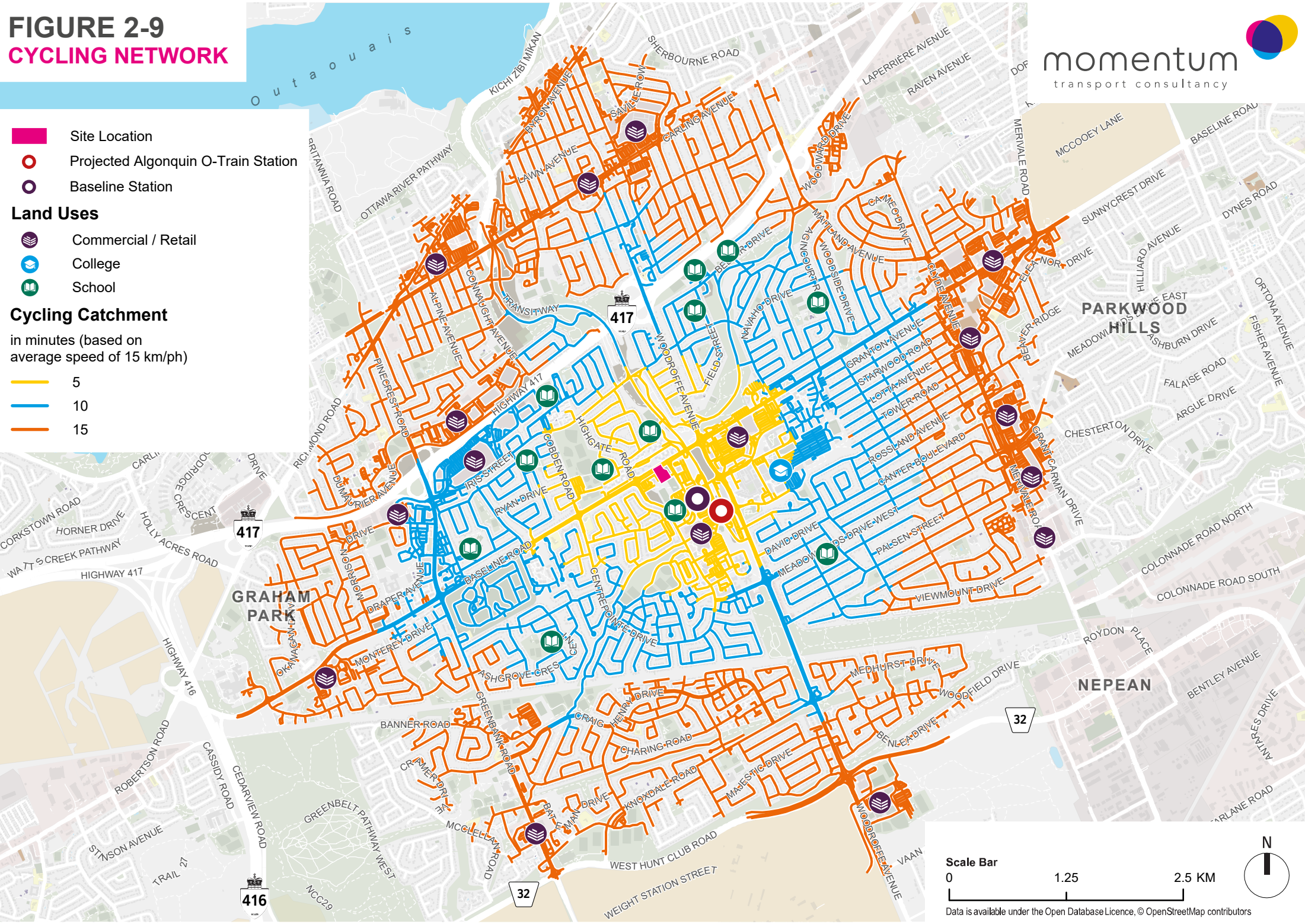


FIGURE 2-9
CYCLING NETWORK

- Site Location
- Projected Algonquin O-Train Station
- Baseline Station

- Land Uses**
- Commercial / Retail
 - College
 - School

- Cycling Catchment**
in minutes (based on
average speed of 15 km/ph)
- 5
 - 10
 - 15



Scale Bar
0 1.25 2.5 KM

Data is available under the Open Database Licence, © OpenStreetMap contributors

Roads

- 2.1.30 The roadways under consideration in the study area are described below:
- 2.1.31 **Gemini Way:** Gemini Way is a two-lane collector roadway with a posted speed limit of 40 km/h. The street is under the jurisdiction of the City of Ottawa. No sidewalk is provided on either side of the street. Gemini Way currently connects Constellation Drive and Centrepointhe Drive with a one-way stop. On-street parking on Gemini Way is only authorized on designated places on the northern side of the street. However, it is prohibited all times on the southern side of Gemini Way.
- 2.1.32 **Baseline Road:** Baseline Road, known as well as the Ottawa Road #16 is a six-lane arterial roadway with a posted speed limit of 60 km/h. Between Constellation Drive and Centrepointhe Drive, a shared lane for buses and bikes is marked in the westbound direction only and operates at all times. The roadway is under the jurisdiction of the City of Ottawa. It is designated as a truck route. Sidewalks are provided on both sides of Baseline Road. On-street parking is prohibited on both sides of the road.
- 2.1.33 **Constellation Drive:** Constellation Drive is a four-lane collector roadway with a posted speed limit of 60km/h. South of Gemini Way, a 40 km/h speed limit zone commences which signifies that all streets that fall within the posted entry sign and exit sign are limited to 40km/h.⁴ A marked bike lane (on road) of 1.4m is implemented on the western side of Constellation until the Sir Guy Carleton Secondary School entrance. Sidewalks are provided on both sides of Constellation Drive, from Baseline Road to the south of the school parking lot's entrance where only the eastern sidewalk continues. On-street parking on Constellation Drive is prohibited at all times.
- 2.1.34 **Centrepointhe Drive:** Centrepointhe Drive is a four-lane major collector roadway with a posted speed limit of 40 km/h from south of Gemini Way, which corresponds to the beginning of the Centrepointhe residential neighborhood area. Sidewalks are provided on both sides of Centrepointhe. On-street parking is prohibited at all times on Centrepointhe.
- 2.1.35 Figure 2-11 illustrates the existing road network.

Intersections and Traffic Control

- 2.1.36 The four intersections in the study area are analyzed and illustrated on Figure 2-12.

Baseline Road at Centrepointhe Drive /Highgate Road

- 2.1.37 The intersection at Baseline and Centrepointhe is signalized and features distinct traffic configurations for each approach:
- **Westbound (WB):** This approach includes three lanes for through traffic, one dedicated left-turn lane, and one channelized right-turn lane. The right-turn lane is restricted to buses and authorized vehicles on weekdays between 7:00 AM and 9:00 AM.

⁴ City of Ottawa, *Gateway and Speed Limit Signs*, 2018, Accessed from: <https://ottawa.ca/en/parking-roads-and-travel/traffic-services/street-lights-and-signs#section-e8310d23-780c-4fae-b824-1a837b3ee876>

- **Eastbound (EB):** This approach includes three lanes for through traffic, one dedicated left-turn lane, and one channelized right-turn lane that provides direct access to Centrepointe Drive.
- **Northbound (NB):** This approach does not include a lane for through movements as they are prohibited. This approach includes two lanes for left-turn movements and one channelized right-turn lane.
- **Southbound (SB):** This approach does not include a lane for through movements as they are prohibited. This approach includes a lane designated for left-turns and a lane designated for right-turns.

Figure 2-10: View from Baseline Road at Centrepointe Drive/Highgate Road



2.1.38 The intersection at Baseline Road and Constellation is also signalized, with the following lane configurations:

- **Westbound (WB):** This approach includes two lanes for through-traffic and two lanes dedicated to left-turn movements.
- **Eastbound (EB):** This approach includes three lanes for through-traffic and one designated right-turn lane.
- **Northbound (NB):** This approach includes two lanes for left-turn movements and one channelized right-turn lane.

Centrepointe Drive at Gemini Way

2.1.39 The intersection at Centrepointe Drive and Gemini Way is controlled by a stop sign on the Gemini Way approach. The right and left-turns lane on Gemini Way allow vehicles to merge onto Centrepointe Drive.

Constellation Drive at Gemini Way

- 2.1.40 The intersection at Constellation Drive and Gemini Way is controlled by a stop sign on the Gemini Way approach. There is a central island separating both directions on Constellation Drive which results in this intersection operating as a restricted right-in/right-out access to Gemini Way.

FIGURE 2-11
ROAD NETWORK

- Site Location
 - Projected Algonquin O-Train Station
 - Baseline Station
- Road Centrelines / Lignes médianes de route**
- Arterial Road
 - Collector Road
 - Local Road
 - Major Collector Road
 - Provincial Highway
 - Transit
- Traffic Collision Clusters from 2019 - 2022**
- Low
 - High

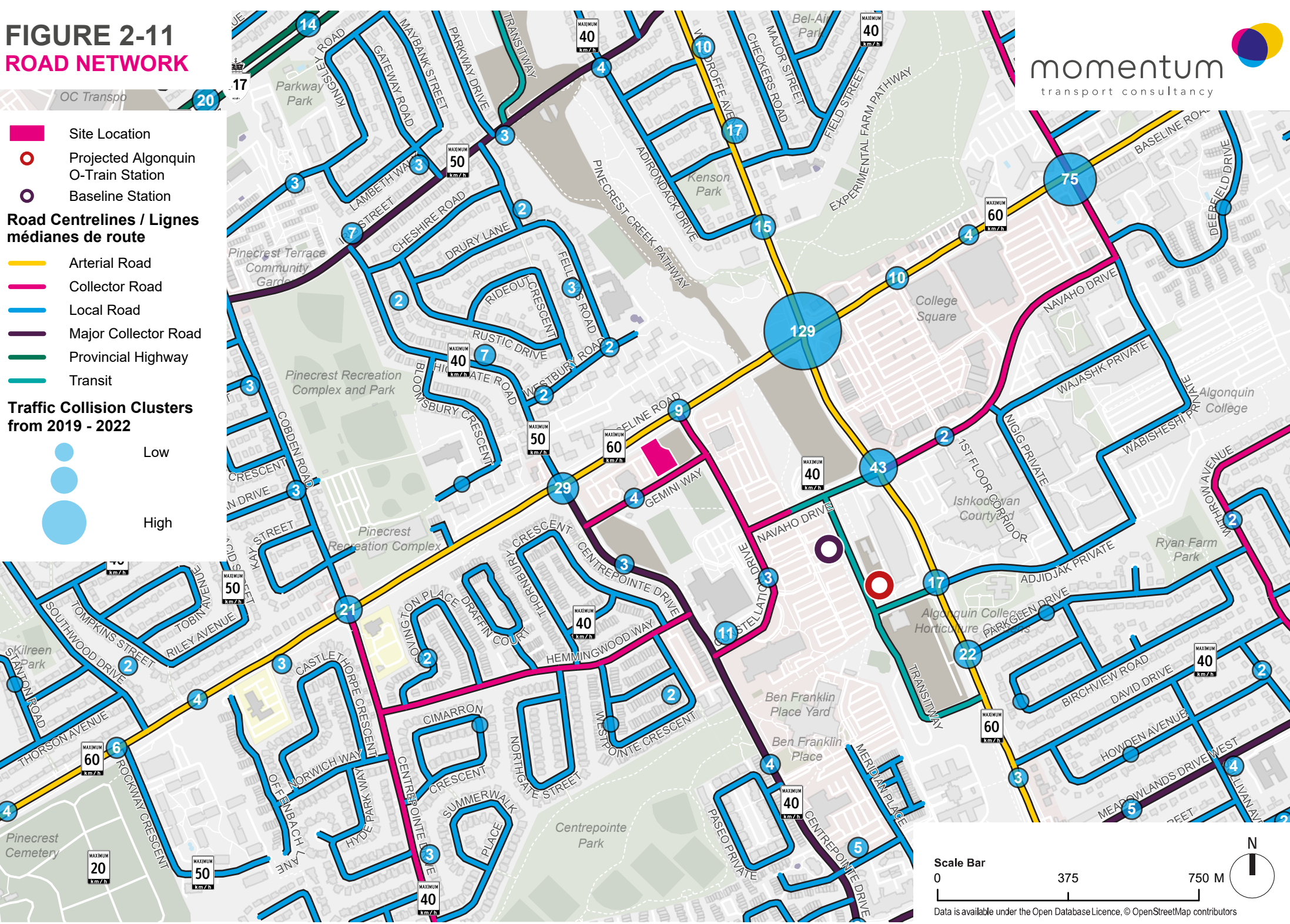
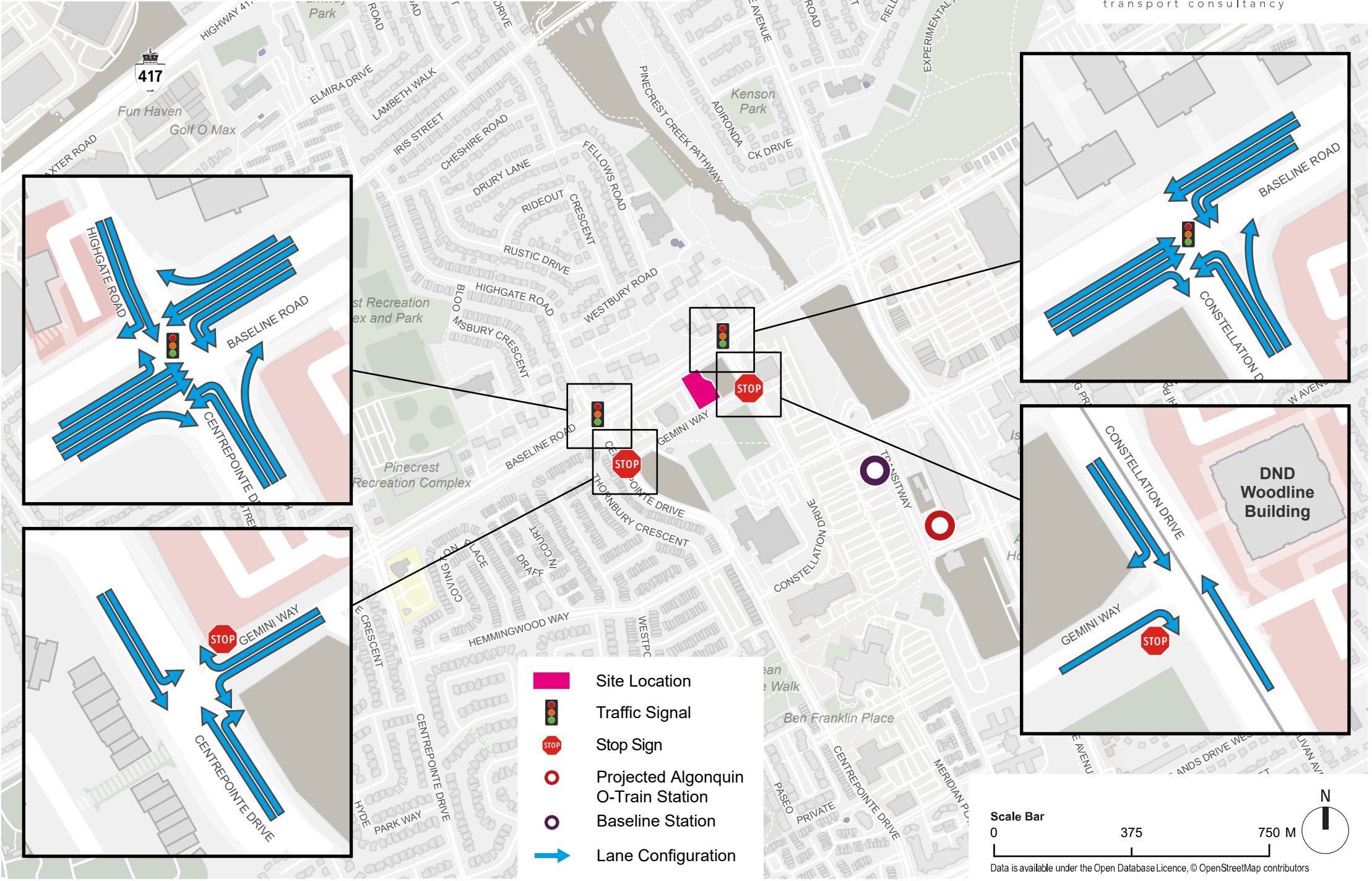


FIGURE 2-12

EXISTING LANE CONFIGURATION AND TRAFFIC CONTROL



Traffic Management Measures

- 2.1.41 All streets falling in the area located between Constellation Drive and Centrepointe Drive and south of Gemini Way are designated streets limited to 40km/h.
- 2.1.42 In addition, north-south through movements are prohibited on Baseline Road at Centrepointe Drive / Highgate Road.

Collision History

- 2.1.43 Collision data was provided by the City of Ottawa for the period January 2017 to December 2022 in the vicinity of the site. The data was reviewed to determine if any intersections exhibited identifiable collision patterns.
- 2.1.44 Table 2-1 summarizes the collision class and impact types for study area intersections.

Table 2-1: Collision history

Location	Class	Impact Type					Total
		Sideswipe	Angle / Turning	Rear End	Single Vehicle	Other	
Baseline Road at Centrepointhe Drive	Property Damage	4	3	22	2	0	41
	Non-Fatal Injury	0	2	6	2	0	
Baseline Road at Constellation Drive	Property Damage	0	0	8	0	0	10
	Non-Fatal Injury	0	0	2	0	0	
Centrepointhe Drive at Gemini Way	Property Damage	0	1	0	0	1	3
	Non-Fatal Injury	0	1	0	0	0	
Constellation Drive between Gemini Way & Centrepointhe Drive	Property Damage	0	3	1	3	1	11
	Non-Fatal Injury	1	0	0	2	0	
Gemini Way	Property Damage	2	1	0	3	0	7
	Non-Fatal Injury	0	1	0	0	0	
TOTAL	Property Damage	6	8	31	8	2	73
	Non-Fatal Injury	1	4	8	4	0	17

2.1.45 Based on the collision data summarized above, most of the collisions are classified as Property Damage only (76%), suggesting that most of the collisions occurred at low speeds.

2.1.46 It is noted that 2 Rear-end collisions have been recorded at Baseline Road and Centrepointhe Drive. A review of signal timing parameters is recommended, including amber and clearance times.

PLANNED CONDITIONS

2.1.47 As part of the O-Train West Extension, Line 1 will be extended to Algonquin Station, located 700m from the project site. This station will serve as the south-western terminus of the Line 1 and will be located between Adjidjāk Private and Navaho Drive, just west of the Algonquin College Building – Algonquin Centre for Construction Excellence (ACCE) and beneath the landscaped plaza. The

station will feature a central platform design and will have three entrances, as illustrated on Figure 2-13. One of the entrances will be a pedestrian bridge directly connecting to the Algonquin ACCE building, which would allow students safe access to the building. Other entrances will lead to the plaza and Adjidjāk Private.

Figure 2-13: Future Algonquin Station



2.1.48 Additionally, Algonquin Station will include the following connectivity enhancements.⁵

- Bike parking facilities for 60 bicycles near the station entrances, with provisions to double the capacity in the future as needed. Among them, 20 would be provided in a bicycle parking shelter.⁶
- A north-south multi-use pathway on Transitway connecting Navaho Drive to the south of Transitway, including a crossing at Navaho Drive to access the realigned Pinecrest Creek Pathway north of Navaho Drive.
- A connection from the north-south multi-use pathway on Transitway to the future multi-use pathway along Woodroffe Avenue, south of the station.

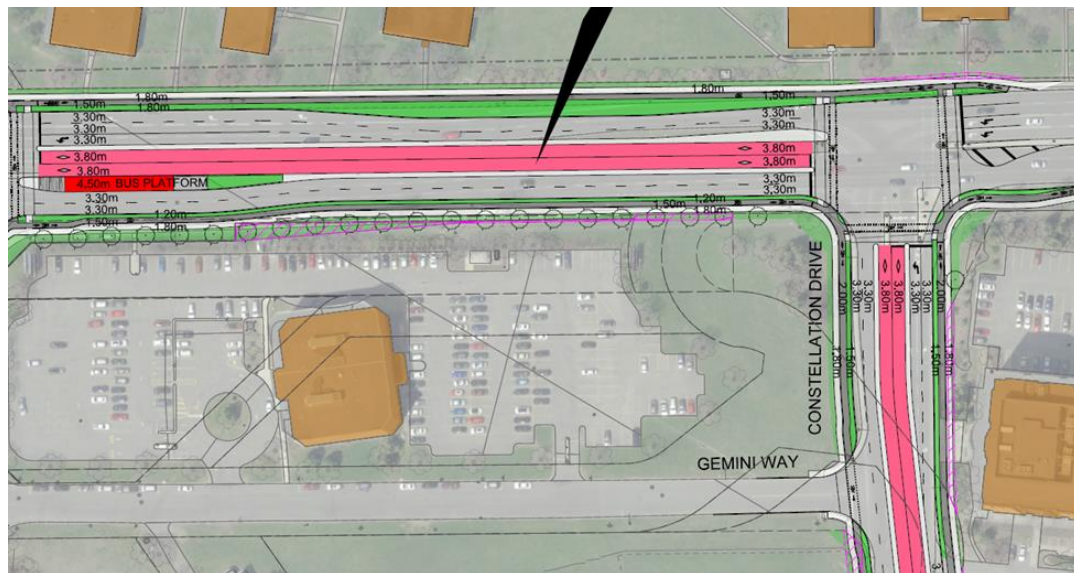
⁵ City of Ottawa, *Stage 2 LRT Station Connectivity Enhancement Study*, Accessed from: <https://ottawa.ca/en/city-hall/public-engagement/public-engagement-project-search/stage-2-lrt-station-connectivity-enhancement-study>

⁶ OC Transpo, *Algonquin Station – Amenities*, 2025, Accessed from: <https://www.octranspo.com/en/our-services/stations-2/algonquin-01/#amenities>

2.1.49 Other key transit improvements include the implementation of a Bus Rapid Transit facility on Baseline Road between Bayshore Station and Heron Station.⁷

- Under the ultimate plan, fully segregated median bus-only lanes are planned on Baseline Road between Bayshore Station and Heron Station.
- Transit improvements along Baseline Road are anticipated to occur over several phases, with Phase 1 providing interim transit priority measures, dedicated bus priority lanes, new sidewalks, raised cycle tracks, and enhanced bus stops and shelters to be provided between Greenbank and Constellation by Fall 2026.
- Phase 2 improvements include providing a new Transitway corridor on Baseline Road with median running transit lanes and 14 new stations between Algonquin Station and Heron Station. Projects needs and timing of this phase is currently under review as part of the ongoing TMP update.
- Phase 3 improvements include upgrading the transit priority measures on Baseline Station, between Bayshore Station and Constellation, with median running Transitway lanes and 11 new stations. Project timing for Phase 3 is expected to be a long-term improvement currently under review as part of the ongoing TMP update.

Figure 2-14 Baseline BRT design from the 2017 Environmental Assessment



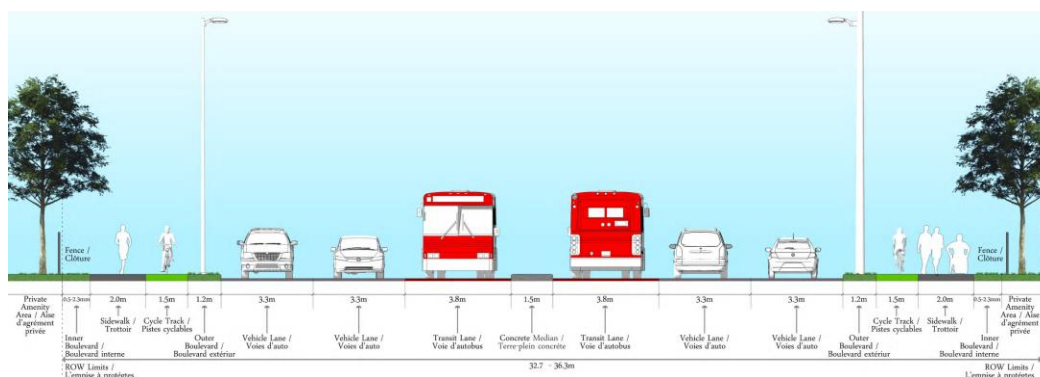
2.1.50 The implementation of this project is unlikely to impact the functioning of the intersection of Constellation Drive and Gemini Way, as the number of lanes for general traffic will remain at two, according to the City's plan. The addition of the two central bus lanes will continue to prevent left-

⁷ City of Ottawa, *Baseline Road Rapid Transit Corridor (Bayshore Station to Heron Station) Planning and Environmental Assessment Study*, February 26, 2025, Accessed from: <https://ottawa.ca/en/parking-roads-and-travel/transportation-planning/environmental-assessment-completed-projects/baseline-road-rapid-transit-corridor-bayshore-station-heron-station-planning-and-environmental-assessment-study>

turns from Gemini Way towards Constellation Drive, and from Constellation Drive, into Gemini Way.

- 2.1.51 In terms of active transportation, the BRT plan outlines the recommended cross-section for Baseline Road between Richmond Road and Constellation Drive, as well as along Constellation Drive between Baseline Road and Navaho Drive. The design includes a 2-metre sidewalk, a 1.5-metre cycle track, and a 1.2-metre separation (outer boulevard) between the cycle track and the road on both sides, as shown in Figure 2-15.⁸, making active transportation trips safer and more comfortable.

Figure 2-15 Recommended cross-section between Richmond Road to Navaho Drive



- 2.1.52 Finally, a new recommended traffic calming plan is underway on Centrepointhe Drive and has an estimated construction date of 2026. The following elements are included in the Centrepointhe Drive Area Traffic Management Study and illustrated on Figure 2-16.⁹

- Parking will be retained on the west side of Centrepointhe Drive.
- A 1.5-meter bicycle lane is planned on the east side of Centrepointhe Drive.
- A 2.0-meter bicycle lane is planned on the west side of Centrepointhe Drive.
- To continue on Baseline Road, cyclists must merge into a shared lane with vehicles.
- Bicycle lane and parking will be separated with pinned curb and flex-posts.

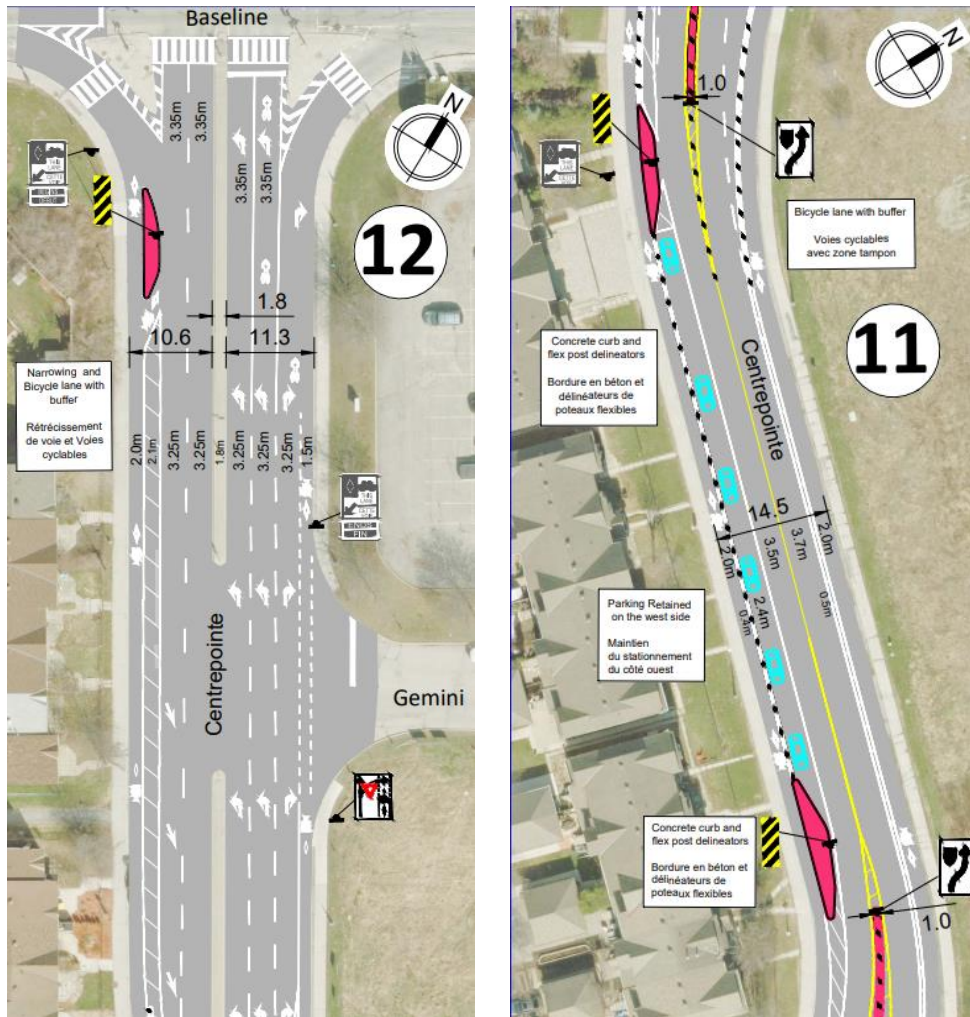
- 2.1.53 The implementation of this plan could make it easier and safer for active transportation users to reach 85 Gemini Way by securing their movements along Centerpointe Drive, especially considering there is already a bicycle lane on Constellation Drive. This would complete the active transportation network around 85 Gemini Way. However, as shown in Figure 2-15, there does not appear to be a planned crossing to connect the residents of 85 Gemini Way to the bicycle lanes

⁸ City of Ottawa, *Baseline Road Bus Rapid Transit Corridor Planning and EA Study Boards*, February 26, 2025, Accessed from: https://documents.ottawa.ca/sites/default/files/baseline_brtboards_final_en.pdf

⁹ City of Ottawa, *Centrepointhe Drive - Final Active Traffic Management Plan*, 2024 Accessed from: [CENTREPOINTE DRIVE AREA TRAFFIC MANAGEMENT STUDY | ÉTUDE DE GESTION DE LA CIRCULATION LOCALE SUR LA PROMENADE CENTREPOINTE](#)

on the opposite side of the road. Therefore, adding a safe crossing is recommended to fully maximise the benefits of the bicycle lanes.

Figure 2-16: Centrepointhe Drive Area Traffic Management Study



FUTURE BACKGROUND DEVELOPMENTS

- 2.1.54 Two significant developments are currently under construction near the 85 Gemini Way site and should be factored into the assessment of background network travel demands: 2140 Baseline Road and 19 Centerpointe Drive.
- 2.1.55 The lot adjacent to the project site at 2140 Baseline Road is currently under construction and will soon host the Gemini Tower Centrepointhe. This 14-storey, mixed-use residential development will feature 271 dwelling units, ranging from studio apartments to three-bedroom units. Additionally, the development will include a 1.8-metre-wide sidewalk along the north side of Gemini Way. Figure 2-17 illustrates the site plan.

Figure 2-17: 2140 Baseline Road Site Plan



- 2.1.56 The site to the south is currently an empty lot, with one development under construction at 19 Centrepointhe Drive. At present, no additional permits have been proposed or planned for this site.
- 2.1.57 The site at 19 Centrepointhe Drive is being developed to accommodate two proposed residential towers, standing at 22 and 24 storeys. Tower A is planned to feature 198 dwelling units, while Tower B will offer 218 units, bringing the total to 575 units. These will range from studio apartments to two-bedroom plus den configurations. Figure 2-18 illustrates the site plan for the proposed development at 19 Centrepointhe Drive.

The site plan illustrates the layout of the 4M-623 project. It features two main apartment buildings: Tower 'A' (22 storeys) and Tower 'B' (24 storeys). The plan includes extensive parking areas, landscaping with trees and lawns, and various utility lines. Surrounding streets include Centrepointe Drive, Gemini Way, and Highway 417. The plan is divided into several sections, including a 'PART OF BLOCK 25' and 'LOT 101A'. The project is located in the City of Ottawa, and the plan is registered under the name '4M-623'.

PROJECT INFORMATION

PROJECT INFORMATION		CAR PARKING	
PROJECT NAME	4M-623	PROJECT NAME	4M-623
PROJECT ADDRESS	101A GEMINI WAY, OTTAWA, ONTARIO K1H 1B1	PROJECT ADDRESS	101A GEMINI WAY, OTTAWA, ONTARIO K1H 1B1
PROJECT OWNER	4M-623	PROJECT OWNER	4M-623
PROJECT ARCHITECT	4M-623	PROJECT ARCHITECT	4M-623
PROJECT ENGINEER	4M-623	PROJECT ENGINEER	4M-623
PROJECT LANDSCAPE ARCHITECT	4M-623	PROJECT LANDSCAPE ARCHITECT	4M-623
PROJECT CIVIL ENGINEER	4M-623	PROJECT CIVIL ENGINEER	4M-623
PROJECT ELECTRICAL ENGINEER	4M-623	PROJECT ELECTRICAL ENGINEER	4M-623
PROJECT MECHANICAL ENGINEER	4M-623	PROJECT MECHANICAL ENGINEER	4M-623
PROJECT PLUMBING ENGINEER	4M-623	PROJECT PLUMBING ENGINEER	4M-623
PROJECT FIRE ENGINEER	4M-623	PROJECT FIRE ENGINEER	4M-623
PROJECT STRUCTURAL ENGINEER	4M-623	PROJECT STRUCTURAL ENGINEER	4M-623
PROJECT ENVIRONMENTAL ENGINEER	4M-623	PROJECT ENVIRONMENTAL ENGINEER	4M-623
PROJECT HISTORIC PRESERVATION ENGINEER	4M-623	PROJECT HISTORIC PRESERVATION ENGINEER	4M-623
PROJECT TRANSPORTATION ENGINEER	4M-623	PROJECT TRANSPORTATION ENGINEER	4M-623
PROJECT WATER ENGINEER	4M-623	PROJECT WATER ENGINEER	4M-623
PROJECT WIND ENGINEER	4M-623	PROJECT WIND ENGINEER	4M-623
PROJECT SEISMIC ENGINEER	4M-623	PROJECT SEISMIC ENGINEER	4M-623
PROJECT SOUND ENGINEER	4M-623	PROJECT SOUND ENGINEER	4M-623
PROJECT VIBRATION ENGINEER	4M-623	PROJECT VIBRATION ENGINEER	4M-623
PROJECT LIGHTING ENGINEER	4M-623	PROJECT LIGHTING ENGINEER	4M-623
PROJECT SECURITY ENGINEER	4M-623	PROJECT SECURITY ENGINEER	4M-623
PROJECT ACCESSIBILITY ENGINEER	4M-623	PROJECT ACCESSIBILITY ENGINEER	4M-623
PROJECT ENERGY ENGINEER	4M-623	PROJECT ENERGY ENGINEER	4M-623
PROJECT SUSTAINABILITY ENGINEER	4M-623	PROJECT SUSTAINABILITY ENGINEER	4M-623
PROJECT QUALITY ENGINEER	4M-623	PROJECT QUALITY ENGINEER	4M-623
PROJECT RISK ENGINEER	4M-623	PROJECT RISK ENGINEER	4M-623
PROJECT COMPLIANCE ENGINEER	4M-623	PROJECT COMPLIANCE ENGINEER	4M-623
PROJECT LEGAL ENGINEER	4M-623	PROJECT LEGAL ENGINEER	4M-623
PROJECT FINANCIAL ENGINEER	4M-623	PROJECT FINANCIAL ENGINEER	4M-623
PROJECT MARKETING ENGINEER	4M-623	PROJECT MARKETING ENGINEER	4M-623
PROJECT SALES ENGINEER	4M-623	PROJECT SALES ENGINEER	4M-623
PROJECT CUSTOMER SERVICE ENGINEER	4M-623	PROJECT CUSTOMER SERVICE ENGINEER	4M-623
PROJECT TRAINING ENGINEER	4M-623	PROJECT TRAINING ENGINEER	4M-623
PROJECT HUMAN RESOURCES ENGINEER	4M-623	PROJECT HUMAN RESOURCES ENGINEER	4M-623
PROJECT INFORMATION TECHNOLOGY ENGINEER	4M-623	PROJECT INFORMATION TECHNOLOGY ENGINEER	4M-623
PROJECT OPERATIONS ENGINEER	4M-623	PROJECT OPERATIONS ENGINEER	4M-623
PROJECT MAINTENANCE ENGINEER	4M-623	PROJECT MAINTENANCE ENGINEER	4M-623
PROJECT REPAIR ENGINEER	4M-623	PROJECT REPAIR ENGINEER	4M-623
PROJECT REPLACEMENT ENGINEER	4M-623	PROJECT REPLACEMENT ENGINEER	4M-623
PROJECT UPGRADE ENGINEER	4M-623	PROJECT UPGRADE ENGINEER	4M-623
PROJECT MODERNIZATION ENGINEER	4M-623	PROJECT MODERNIZATION ENGINEER	4M-623
PROJECT RENOVATION ENGINEER	4M-623	PROJECT RENOVATION ENGINEER	4M-623
PROJECT RESTORATION ENGINEER	4M-623	PROJECT RESTORATION ENGINEER	4M-623
PROJECT PRESERVATION ENGINEER	4M-623	PROJECT PRESERVATION ENGINEER	4M-623
PROJECT PROTECTION ENGINEER	4M-623	PROJECT PROTECTION ENGINEER	4M-623
PROJECT REPAIR ENGINEER	4M-623	PROJECT REPAIR ENGINEER	4M-623
PROJECT REPLACEMENT ENGINEER	4M-623	PROJECT REPLACEMENT ENGINEER	4M-623
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PROJECT PROTECTION ENGINEER	4M-623	PROJECT PROTECTION ENGINEER	4M-623
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PROJECT REPLACEMENT ENGINEER	4M-623	PROJECT REPLACEMENT ENGINEER	4M-623
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PROJECT MODERNIZATION ENGINEER	4M-623	PROJECT MODERNIZATION ENGINEER	4M-623
PROJECT RENOVATION ENGINEER	4M-623	PROJECT RENOVATION ENGINEER	4M-623
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PROJECT RENOVATION ENGINEER	4M-623	PROJECT RENOVATION ENGINEER	4M-623
PROJECT RESTORATION ENGINEER	4M-623	PROJECT RESTORATION ENGINEER	4M-623
PROJECT PRESERVATION ENGINEER	4M-623	PROJECT PRESERVATION ENGINEER	4M-623
PROJECT PROTECTION ENGINEER	4M-623	PROJECT PROTECTION ENGINEER	4M-623
PROJECT REPAIR ENGINEER	4M-623	PROJECT REPAIR ENGINEER	4M-623

2.2 Study Area and Time Periods

2.2.1 The following study area intersections are proposed for analysis:

- Baseline Road at Centrepont Drive / Highgate Road
- Baseline Road at Constellation Drive
- Centrepont Drive at Gemini Way
- Constellation Drive at Gemini Way
- Gemini Way at Site Access

27

Table 2-2 Peak Hours at Intersections in the Study Area

Intersection	Weekday AM Peak Hour of Roadway	Weekday PM Peak Hour of Roadway
Baseline Road at Centrepont Drive / Highgate Road	8AM – 9AM	4PM – 5PM
Baseline Road at Constellation Drive	8AM – 9AM	3:45PM – 4:45PM
Centrepont Drive at Gemini Way	8AM – 9AM	3:15PM – 4:15PM
Constellation Drive at Gemini Way	7:45AM – 8:45AM	3PM – 4PM

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

- Weekday AM peak hour of roadway – 8AM to 9AM.
- Weekday PM peak hour of roadway – 3:15PM to 4:15PM based on the closest intersections to the site.

2.2.4 In the analysis that follows, it should be noted that intersection counts may not always be representative of peak conditions given Ottawa’s seasonal variations. The winter and early spring timeframes in which these counts were collected imply that there is greater potential for walking and cycling across the four seasons, with peak numbers likely to occur in warmer months.

HORIZON YEARS

2.2.5 The proposed scope of the transportation assessment includes the following horizon years:

- **Existing Conditions** - Representative of current operating conditions in the study area vicinity.
- **2027** - Representing the anticipated build-out and opening of the development.
- **2032** - Representing five years after the anticipated build-out and opening of the development.

2.3 Exemptions Review

2.3.1 Table 2-3 summarizes the Exemptions Review table from the City of Ottawa’s 2017 Transportation Impact Assessment Guidelines and the 2023 Transportation Impact Assessment Guidelines Revisions.

Table 2-3: Exemptions Review

Module	Element	Exemption Considerations	Exempted?
Design Review Component			
4.1 Development Design	4.1.1 Design for Sustainable Modes	All	No
	4.1.2 Circulation and Access	All site plan and zoning by-law applications	No
	4.1.3 New Street Networks	All plans of subdivision	Yes
4.2 Parking	4.2.1 Parking Supply - Include language that asks for justification of change to Zoning By-law parking requirements	All site plan and zoning by-law applications	No
4.3 Boundary Street Design		All	No
Network Impact Component			
4.5 Transportation Demand Management	4.5.1 Context for TDM	All	No
	4.5.2 Need and Opportunity	All	No
	4.5.3 TDM Program	All	No
4.6 Neighbourhood Traffic Calming	4.6.1 Adjacent Neighbourhoods	If the development meets all of the following criteria along the route(s) site generated traffic is expected to utilize between an arterial road and the site's access: 1. Access to Collector or Local;	Yes

Module	Element	Exemption Considerations	Exempted?
		2. "Significant sensitive land use presence" exists, where there is at least two of the following adjacent to the subject street segment: • School (within 250m walking distance); • Park; • Retirement / Older Adult Facility (i.e. long-term care and retirement homes); • Licenced Child Care Centre; • Community Centre; or • 50%, or greater, of adjacent property along the route(s) is occupied by residential lands and a minimum of 10 occupied residential units are present on the route. 3. Application is for Zoning By-Law Amendment or Draft Plan of Subdivision; 4. At least 75 site-generated auto trips; 5. Site Trip Infiltration is expected. Site traffic will increase peak hour vehicle volumes along the route by 50% or more	
4.7 Transit	4.7.1 Transit Route Capacity	> 75 site transit trips	Yes

Module	Element	Exemption Considerations	Exempted?
	4.7.2 Transit Priority Requirements	> 75 site auto trips	Yes
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	4.9.1 Intersection Controls (including site accesses)	> 75 site auto trips	Yes
	4.9.2 Intersection Design	> 75 site auto trips	Yes

3. FORECASTING

3.1 Development Generated Travel Demand

EXISTING TRIP GENERATION

- 3.1.1 The area surrounding the 85 Gemini Way development site consists mainly of residential properties and features two significant developments currently under construction (2140 Baseline Road and 19 Centerpointe Drive).
- 3.1.2 The current vehicular trip generation characteristics of the site are captured through Turning Movement Count (TMC) data provided by the City of Ottawa for Thursday 14th March 2024 for the intersection of Constellation Drive and Baseline Road and for Wednesday 18th December 2024 for the following intersections: Baseline Road and Centrepointe Drive/Highgate Road, Gemini Way and Centrepointe Drive/Highgate Road and Gemini Way and Constellation Drive.

Existing active transportation trips

- 3.1.3 Based on the data provided by the City of Ottawa and described above, the Table 3-1, Table 3-2, Table 3-4 and Table 3-3 summarize the traffic volumes of pedestrians and cyclists at each studied intersection.
- 3.1.4 Table 3-1 shows the number of pedestrians and cyclists at each approach on Baseline Road at Constellation Drive.
- 3.1.5 This intersection is signalized and equipped with pedestrian push buttons.
- 3.1.6 The data indicates a very low number of cyclists at this intersection, with no pedestrians crossing the eastbound approach.
- 3.1.7 Overall, pedestrian activity is higher during the PM peak hour, with the northbound crossing being the most frequently used.

Table 3-1: Pedestrians and cyclists counts for the AM and PM peak hours for the Constellation Drive and Baseline Road intersection

Period	Mode	Westbound	Northbound	Eastbound
AM	Pedestrians	13	8	0
	Cyclists	3	0	0
PM	Pedestrians	13	19	0
	Cyclists	0	1	0

- 3.1.8 Table 3-2 shows the number of pedestrians and cyclists at each approach on Baseline Road at Centerpointe Drive.
- 3.1.9 This intersection is signalized and equipped with pedestrian push buttons.
- 3.1.10 Cyclist activity is minimal, with only four cyclists recorded across both peak hours.

- 3.1.11 This intersection experiences significantly higher pedestrian activity than the other three intersections, with a total of **65 pedestrians recorded during the PM peak hour**.
- 3.1.12 The southbound crossing is the most frequently used during both the AM and PM peak hours.

Table 3-2: Pedestrians and cyclists counts for the AM and PM peak hours for the Centerpointe Drive and Baseline Road intersection

Period	Mode	Southbound	Westbound	Northbound	Eastbound
AM	Pedestrians	32	25	7	0
	Cyclists	0	0	2	0
PM	Pedestrians	30	23	9	2
	Cyclists	1	0	1	0

- 3.1.13 Table 3-3 shows the number of pedestrians and cyclists at each approach on Centerpointe Drive at Gemini Way.
- 3.1.14 This intersection is controlled by a two-way stop sign and has no pedestrian markings.
- 3.1.15 Pedestrian and cyclist activity at this intersection is minimal, with a total of nine pedestrians and one cyclist recorded during the AM peak hour, and none during the PM peak hour.
- 3.1.16 The westbound crossing is the most frequently used, likely due to lower vehicle volumes on Gemini Way, making it easier to cross without signalization.

Table 3-3: Pedestrians and cyclists counts for the AM and PM peak hours for the Centerpointe Drive and Gemini Way intersection

Period	Mode	Southbound	Westbound	Northbound
AM	Pedestrians	0	8	1
	Cyclists	0	0	1
PM	Pedestrians	0	0	0
	Cyclists	0	0	0

- 3.1.17 Table 3-4 shows the number of pedestrians and cyclists at each approach on Constellation Drive at Gemini Way.
- 3.1.18 This intersection is controlled by a two-way stop sign and has pedestrian markings only on the eastbound crossing.
- 3.1.19 No cyclists were recorded at this intersection.
- 3.1.20 Pedestrian activity at this intersection is higher compared to the Centerpointe Drive and Gemini Way intersection, likely due to people heading south towards the Baseline bus station.
- 3.1.21 This is confirmed by the eastbound crossing being the most frequently used, with 17 pedestrians recorded during the PM peak hour.

Table 3-4: Pedestrians and cyclists counts for the AM and PM peak hours for the Constellation Drive and Gemini Way intersection

Period	Mode	Southbound	Northbound	Eastbound
AM	Pedestrians	2	7	11
	Cyclists	0	0	0
PM	Pedestrians	4	7	17
	Cyclists	0	0	0

Existing vehicular trips

- 3.1.22 Figure 3-1 illustrates the existing peak-hour traffic volumes for Weekday AM at the studied intersections.
- 3.1.23 The **busiest intersection is on Baseline Road at Centerpointe Drive / Highgate Road**, with a total of 2,816 vehicles. The most significant movement at this intersection is the eastbound through movement along Baseline Road, carrying 1,189 vehicles.
- 3.1.24 The **second busiest intersection is on Constellation Drive at Baseline Road**, with a total of 1,861 vehicles. The most important movement is the eastbound through movement continuing along Baseline Road with 875 vehicles.
- 3.1.25 The **third busiest intersection is on Centerpointe Drive at Gemini Way**, with 893 vehicles. The most important movement is the southbound through movement continuing on Centerpointe Drive with 500 vehicles.
- 3.1.26 The **least busy intersection is on Constellation Drive at Gemini Way**, with 555 vehicles. The most important movement is the southbound through movement along Constellation Drive, with 380 vehicles.
- 3.1.27 Figure 3-2 illustrate the existing peak-hour traffic volumes for Weekday PM at the studied intersections.
- 3.1.28 Similar to the AM peak hour, the intersection of **Baseline Road and Centerpointe Drive is the busiest** of the four studied intersections, with 3,171 vehicles. The movement with the highest volume is the westbound through movement continuing along Baseline Road, with 1,227 vehicles.
- 3.1.29 The **second busiest intersection is at Constellation Drive and Baseline Road**, with a total of 2,665 vehicles. The most significant movement is the westbound through movement continuing along Baseline Road with 1,375 vehicles.
- 3.1.30 The **third busiest intersection is at Centerpointe Drive and Gemini Way**, with 911 vehicles. The most trafficked movement is the northbound through movement along Centerpointe Drive.
- 3.1.31 The **least busy intersection is at Constellation Drive and Gemini Way**, with 484 vehicles. The most important movement is the northbound through movement along Constellation Drive, with 383 vehicles.

- 3.1.32 A site visit was conducted on January 7, 2025, to document existing conditions and observe traffic operations during PM peak hour conditions. All study area intersections were observed to operate acceptably with no congestion or significant queuing.

FIGURE 3-1
VEHICULAR TRIPS

AM WEEKDAY

- Site Location
- Vehicular Flows

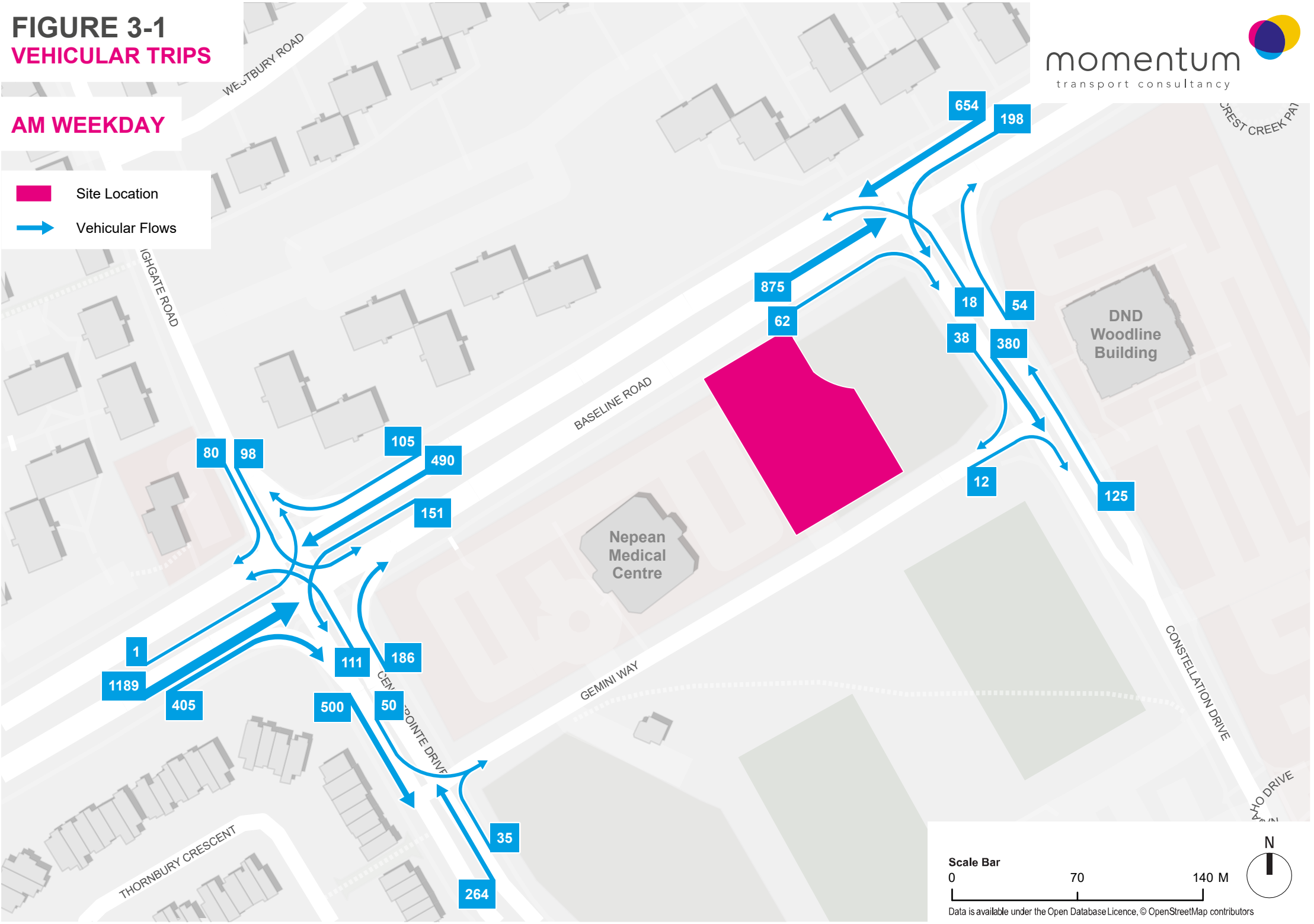
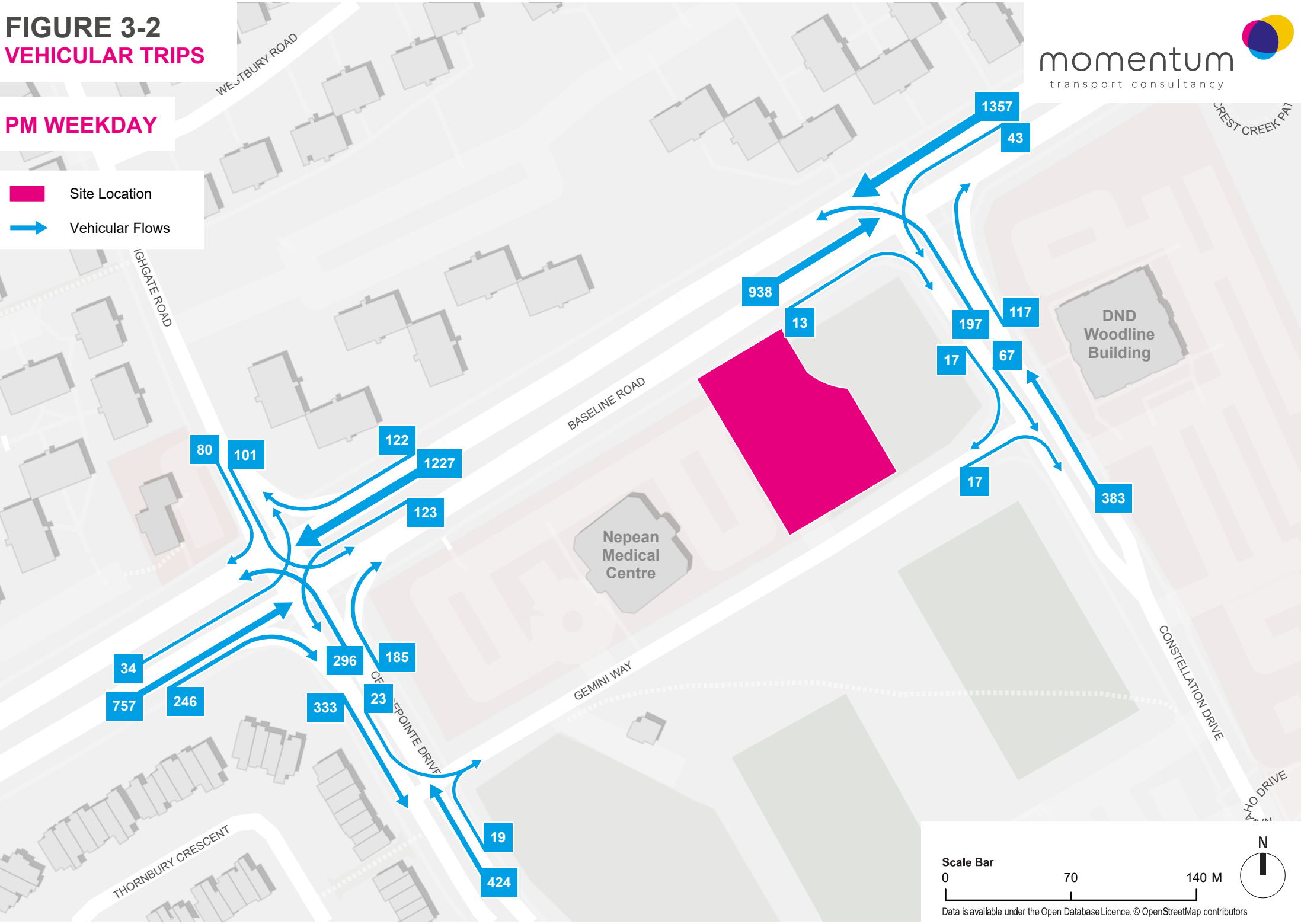


FIGURE 3-2
VEHICULAR TRIPS

PM WEEKDAY

 Site Location

 Vehicular Flows



FUTURE TRIP GENERATION AND MODE SHARES

- 3.1.33 The construction of 85 Gemini Way, a residential tower, is anticipated to generate additional transport demand. The travel demands arising from this development have been forecast for a five-year period following the project's completion, which is assumed to occur by 2027.
- 3.1.34 To estimate the trip generation potential of the project, the Ottawa TRANS Trip Generation Manual was utilised.
- 3.1.35 The land use code 222, corresponding to Multi-Unit (High-Rise) residential developments, was applied to determine the directional split for Weekday AM and PM peak hours, as outlined in Table 9 of the TRANS Trip Generation Manual.

Table 3-5: Directional Splits for the AM and PM peak periods

LUC	Land Use	Weekday AM Peak Period		Weekday PM Peak Period	
		Inbound	Outbound	Inbound	Outbound
222	Multi-Unit (High-Rise)	31%	69%	58%	42%

- 3.1.36 Table 3 of the manual indicates that the Person-Trip Rates for the AM and PM peak period for Multi-Unit (High-Rise) are 0.80 and 0.90, respectively.
- 3.1.37 Using this information as well as the fact that the development will have 148 units, the Person Trips are calculated for the weekday AM and PM peak periods as presented in Table 3-6.

Table 3-6: Future Person Trips for the AM and PM peak periods

LUC	Land Use	Weekday AM Peak Period			Weekday PM Peak Period		
		Inbound	Outbound	Total	Inbound	Outbound	Total
222	Multi-Unit (High-Rise)	37	82	118	77	56	133

- 3.1.38 Table 8 of the TRANS trip generation manual provides the residential mode share for High-Rise Multifamily Housing for the Bayshore/Cedarview district. Table 3-7 shows the trips generated by travel mode for the peak periods.

Table 3-7: Trips Generated by Travel Mode for the AM and PM peak periods

LUC	Land Use	Mode Share		Weekday AM Peak Period			Weekday PM Peak Period		
		Mode	%	In	Out	Total	In	Out	Total
222	Multi-Unit (High-Rise)	Auto Driver	40%	15	33	47	31	22	53
		Auto Passenger	14%	5	11	16	10	8	18
		Transit	35%	13	29	42	27	20	47
		Cycling	1%	1	1	2	1	1	2
		Walking	10%	4	9	12	8	6	14

- 3.1.39 The adjustment factors for residential trips generation rates for the different modes presented in Table 4 of the TRANS trip generation are then used to convert anticipated peak period demands to Weekday AM and PM peak hour demands. The results are presented in Table 3-8.

Table 3-8: Trips Generated by Travel Mode for the AM and PM peak hours

Mode	Peak period to peak hour conversion factor AM	Weekday AM Peak Hour			Peak period to peak hour conversion factor PM	Weekday PM Peak Hour		
		In	Out	Total		In	Out	Total
Auto Driver	0.48	7	16	23	0.44	14	10	23
Auto Passenger	0.48	2	5	8	0.44	5	3	8
Transit	0.55	7	16	23	0.47	13	9	22
Cycling	0.58	0	1	1	0.48	1	0	1
Walking	0.58	2	5	7	0.52	4	3	7
Total	n/a	19	43	62	n/a	36	26	62

- 3.1.40 In total, the development is projected to generate 62 person-trips during the weekday AM and PM peak hours. Out of this total, approximately 23 two-way driver vehicle trips are estimated to be generated in the AM and PM peak hours.

TRIP DISTRIBUTION

- 3.1.41 Trip distribution to and from the site was developed based on the 2011 TRANS Origin-Destination Survey for the Ottawa Inner Area region.
- 3.1.42 Table 3-9 and Table 3-10 show the percentage of vehicular trips for each district to and from Bayshore/Cedarview district, in which the site is located.

Table 3-9: Origin and destination of vehicular trips in the Bayshore/Cedarview sector, 2011, AM peak period

Districts	% Origin	% Destination
Rural Southwest	0%	2%
Kanata / Stittsville	6%	14%
Rural West	1%	2%
Bayshore / Cedarview	37%	41%
South Nepean	2%	9%
Alta Vista	6%	2%
Hunt Club	1%	2%
Merivale	12%	8%
Ottawa West	12%	6%
South Gloucester / Leirtrim	0%	0%
Rural Southeast	0%	1%
Ottawa Centre	9%	0%

Districts	% Origin	% Destination
Ottawa Inner Area	7%	2%
Ottawa East	1%	1%
Beacon Hill	1%	1%
Orléans	1%	3%
Rural East	0%	0%
Île de Hull	2%	0%
Hull Periphery	1%	1%
Plateau	0%	0%
Aylmer	0%	1%
Rural Northwest	0%	0%
Pointe Gatineau	0%	0%
Gatineau Est	0%	0%
Rural Northeast	0%	0%
Buckingham / Masson-Angers	0%	0%
Total	100%	100%

Table 3-10: Origin and destination of vehicular trips in the Bayshore/Cedarview sector, 2011, PM peak period

Districts	% Origin	% Destination
Rural Southwest	2%	1%
Kanata / Stittsville	13%	8%
Rural West	2%	1%
Bayshore / Cedarview	38%	36%
South Nepean	8%	3%
Alta Vista	3%	4%
Hunt Club	1%	1%
Merivale	11%	15%
Ottawa West	8%	10%
South Gloucester / Leitrim	0%	0%
Rural Southeast	0%	0%
Ottawa Centre	1%	8%

Ottawa Inner Area	3%	7%
Ottawa East	1%	1%
Beacon Hill	1%	1%
Orléans	3%	1%
Rural East	0%	0%
Île de Hull	0%	2%
Hull Periphery	1%	0%
Plateau	0%	0%
Aylmer	1%	0%
Rural Northwest	0%	0%
Pointe Gatineau	0%	0%
Gatineau Est	0%	0%
Rural Northeast	0%	0%
Buckingham / Masson-Angers	0%	0%
Total	100%	100%

3.1.43 To assign the trips generated by the site to the intersections within the study area, the districts were categorised based on their relative position to the site. Table 3-11 outlines these district groups, providing a breakdown of the total percentage of trips originating from and to each group. Additionally, it specifies the routes utilized by vehicles travelling between the site and these district groups. For some groups, more than one possible itinerary is available.

Table 3-11: Percentage of trips and itineraries associated with the district groups for the AM and PM peak periods

Group No.	Districts in the Group	AM		PM		Itinerary
		% Origin	% Destination	% Origin	% Destination	
1	Kanata / Stittsville	8%	19%	17%	10%	Gemini Way, Centreponte Drive/Highgate Road, Baseline Road
	Rural West					
	Rural Southwest					
2	Bayshore / Cedarview	37%	41%	38%	36%	Gemini Way, Centrepont Drive /Highgate Road
						Gemini Way, Baseline Road, Centreponte Drive/Highgate Road
						Gemini Way, Constellation Drive, Baseline Road, Centreponte Drive/Highgate Road (<i>Not an option for vehicles leaving the site</i>)
3	South Nepean	2%	9%	8%	3%	Gemini Way, Centreponte Drive/Highgate Road
						Gemini Way, Centreponte Drive/Highgate Road, Baseline Road
4	Hunt Club	19%	12%	15%	20%	Gemini Way, Centreponte Drive/Highgate Road, Baseline Road, Constellation Drive
	Merivale					
	Alta Vista					
5	Ottawa West	12%	6%	8%	10%	Gemini Way, Centreponte Drive/Highgate Road, Baseline Road, Constellation Drive
6	South Gloucester / Leitrim	0%	0%	0%	0%	Gemini Way, Centreponte Drive/Highgate Road, Baseline Road, Constellation Drive
						Gemini Way, Centreponte Drive
7	Rural Southeast	0%	1%	0%	0%	Gemini Way, Centreponte Drive/Highgate Road, Baseline Road, Constellation Drive
						Gemini Way, Centreponte Drive

Group No.	Districts in the Group	AM		PM		Itinerary
		% Origin	% Destination	% Origin	% Destination	
8	Ottawa Centre	22%	12%	12%	20%	Gemini Way, Centrepointhe Drive/Highgate Road, Baseline Road, Constellation Drive
	Ottawa Inner Area					
	Ottawa East					
	Beacon Hill					
	Orléans					
	Île de Hull					
	Hull Periphery					
	Plateau					
	Aylmer					
	Rural Northwest					
	Pointe Gatineau					
	Gatineau Est					
	Rural Northeast					
	Rural East					
	Buckingham / Masson-Angers					

- 3.1.44 As shown in Table 3-8, the site is anticipated to generate a total of 8 active transportation trips during both the AM and PM peak hours. Those trips are distributed on the network based on land use as well as points of interest, such as schools and retail facilities, primarily located to the east and southeast of the site.
- 3.1.45 60% of trips are directly routed to the southeast of the site via the Gemini Way and Constellation Drive intersection.
- 3.1.46 30% of trips are directed to the east of the site, utilising the intersections of Gemini Way and Constellation Drive, as well as Baseline Road and Constellation Drive.
- 3.1.47 5% of trips are directed to the southwest, using the Gemini Way and Centrepointhe Drive intersection.
- 3.1.48 5% of trips are routed to the east of the site through the intersections of Gemini Way and Centrepointhe Drive, and Baseline Road and Centrepointhe Drive.
- 3.1.49 Table 3-8 indicates that the site is expected to generate 23 transit trips during the AM peak hour and 22 during the PM peak hour.
- 3.1.50 It is anticipated that 95% of these trips will be directed towards the Baseline bus station, located southeast of the site. This stop is served by 13 different bus routes, including six frequent bus lines, and will also connect to the future Algonquin O-Train station. These trips will utilise the Gemini Way and Constellation Drive intersection.
- 3.1.51 The remaining 5% of trips are expected to head towards the Baseline/Centrepointhe bus stop, which is served by three bus routes. These trips will pass through the intersections of Gemini Way and Centrepointhe Drive, as well as Baseline Road and Centrepointhe Drive.

TRIP ASSIGNMENT

- 3.1.52 Drawing on the Origin-Destination survey and the assumptions outlined in the previous sections, the vehicular trips projected to be generated by the site were allocated within the network as illustrated in Figure 3-3 and Figure 3-4 for the AM and PM peak hour, respectively.

FIGURE 3-3
ADDITIONAL VEHICULAR TRIPS

AM WEEKDAY

- Site Location
- Vehicular Flows

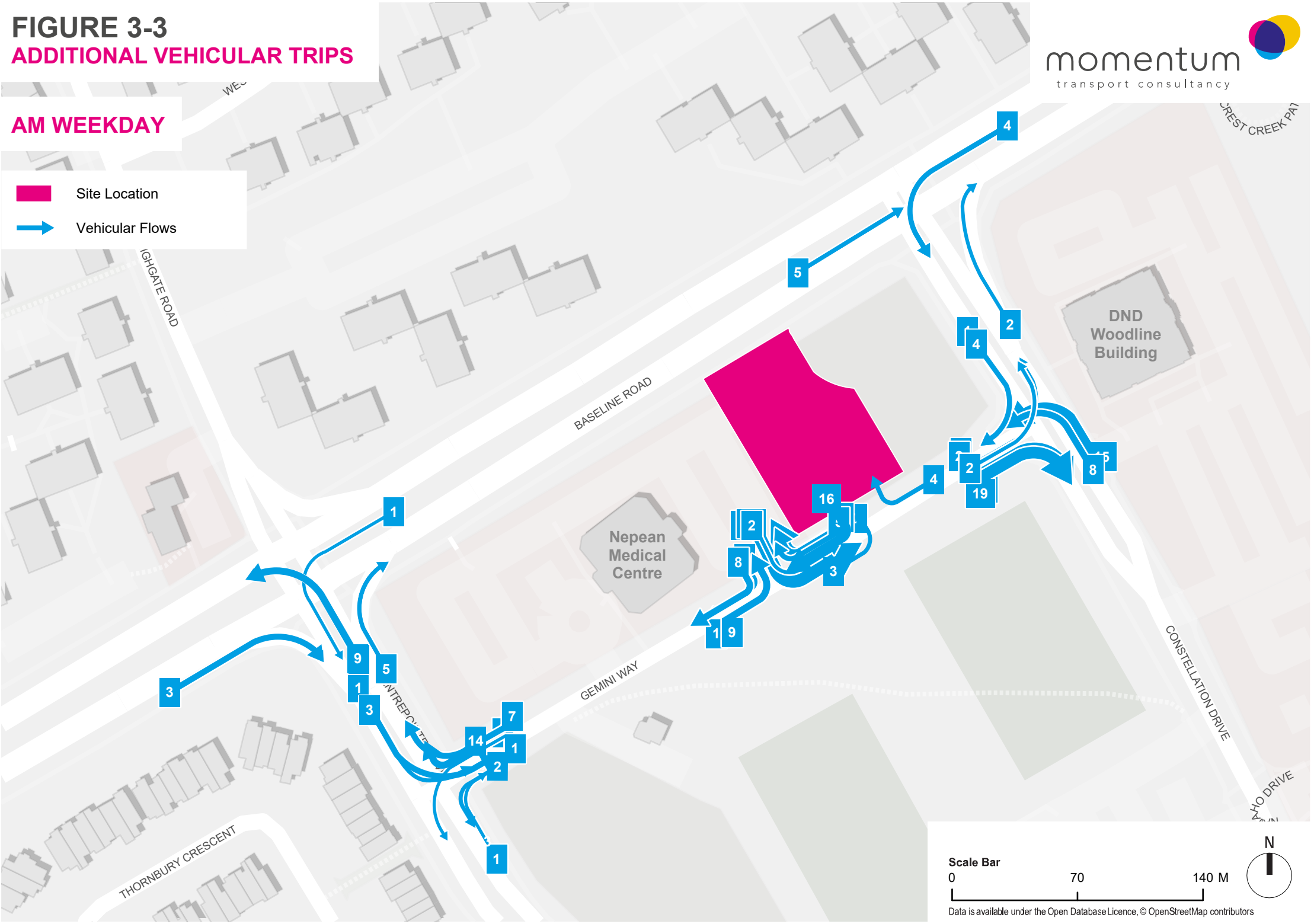
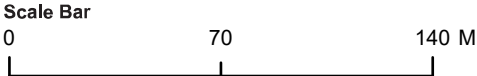
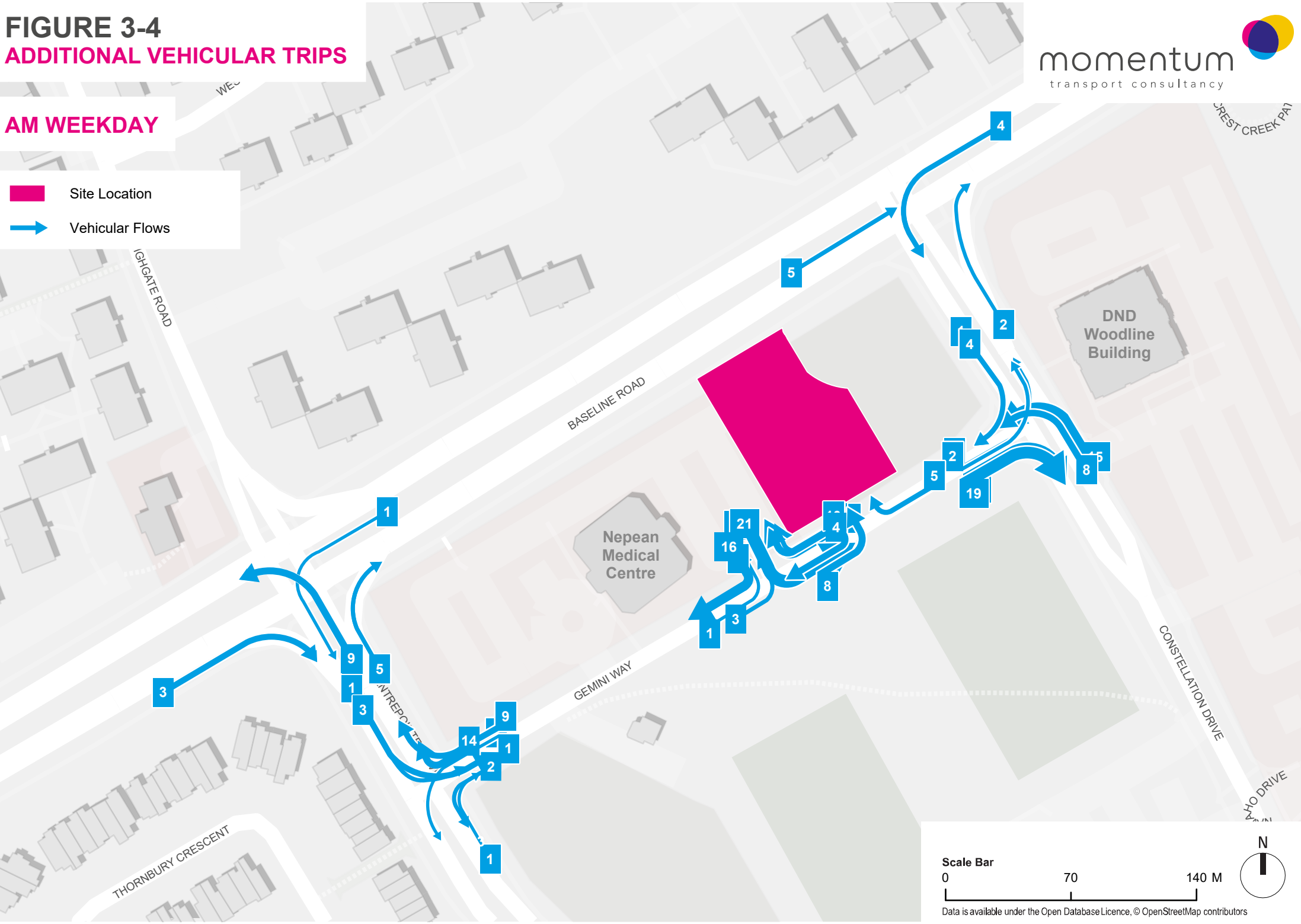


FIGURE 3-4
ADDITIONAL VEHICULAR TRIPS

AM WEEKDAY

Site Location

Vehicular Flows



Data is available under the Open Database Licence, © OpenStreetMap contributors

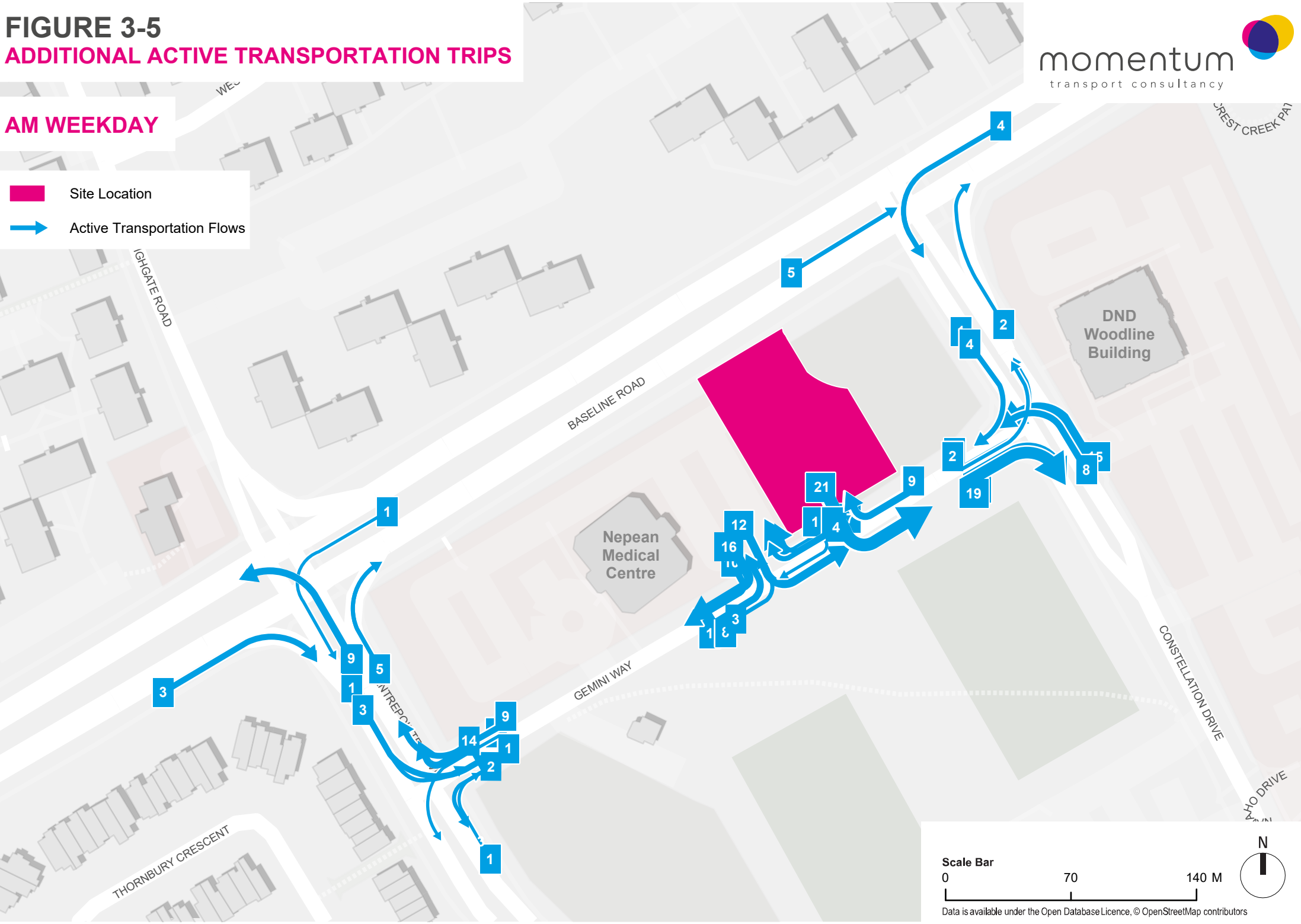


- 3.1.53 The active transportation trips projected to be generated by the site, including trips completed entirely via active transportation as well as walking to transit, have been allocated within the network. These allocations are illustrated in Figure 3-5 and Figure 3-6 for the AM and PM peak hours, respectively.

FIGURE 3-5
ADDITIONAL ACTIVE TRANSPORTATION TRIPS

AM WEEKDAY

- Site Location
- Active Transportation Flows



Scale Bar
0 70 140 M

Data is available under the Open Database Licence, © OpenStreetMap contributors

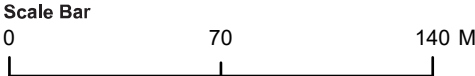
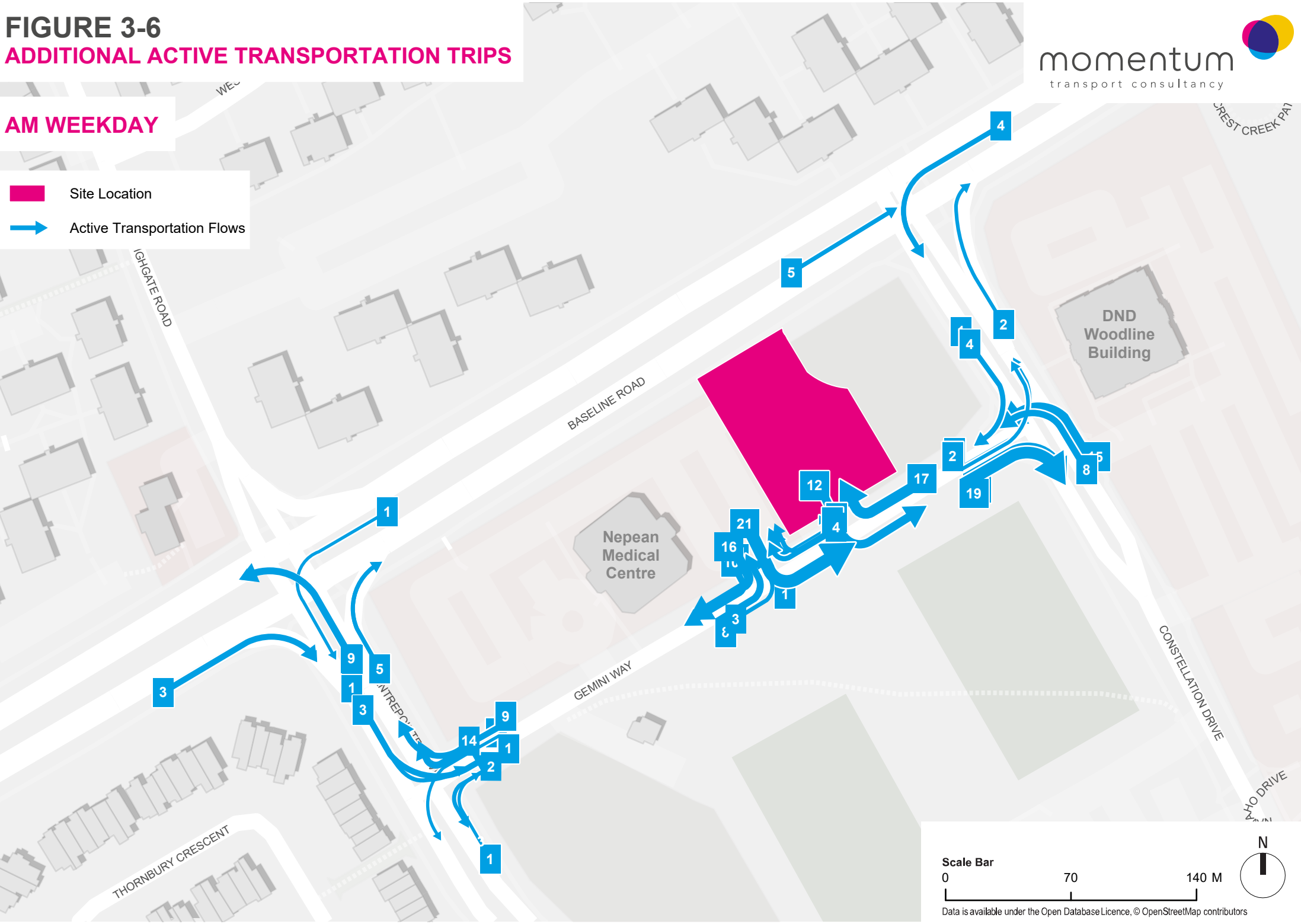


FIGURE 3-6
ADDITIONAL ACTIVE TRANSPORTATION TRIPS

AM WEEKDAY

 Site Location

 Active Transportation Flows



Data is available under the Open Database Licence, © OpenStreetMap contributors



3.2 Background Network Travel Demand

- 3.2.1 As outlined in the **FUTURE BACKGROUND DEVELOPMENTS** section, the developments at 19 Centrepointhe Drive and 2140 Baseline Drive must be considered and the trips generated by these developments should be accounted for as background network travel demand. Specifically, 19 Centrepointhe Drive generates 380 trips during the AM peak hour and 398 trips during the PM peak hour, while 2140 Baseline Drive generates 379 trips in the AM peak hour and 359 trips in the PM peak hour.

3.3 Demand Rationalization

- 3.3.1 According to the exemption table reviewed in section 2.3 and summarized in Table 2-3, this TIA is exempted from this section.

4. ANALYSIS

4.1 Development Design

DESIGN FOR SUSTAINABLE MODES

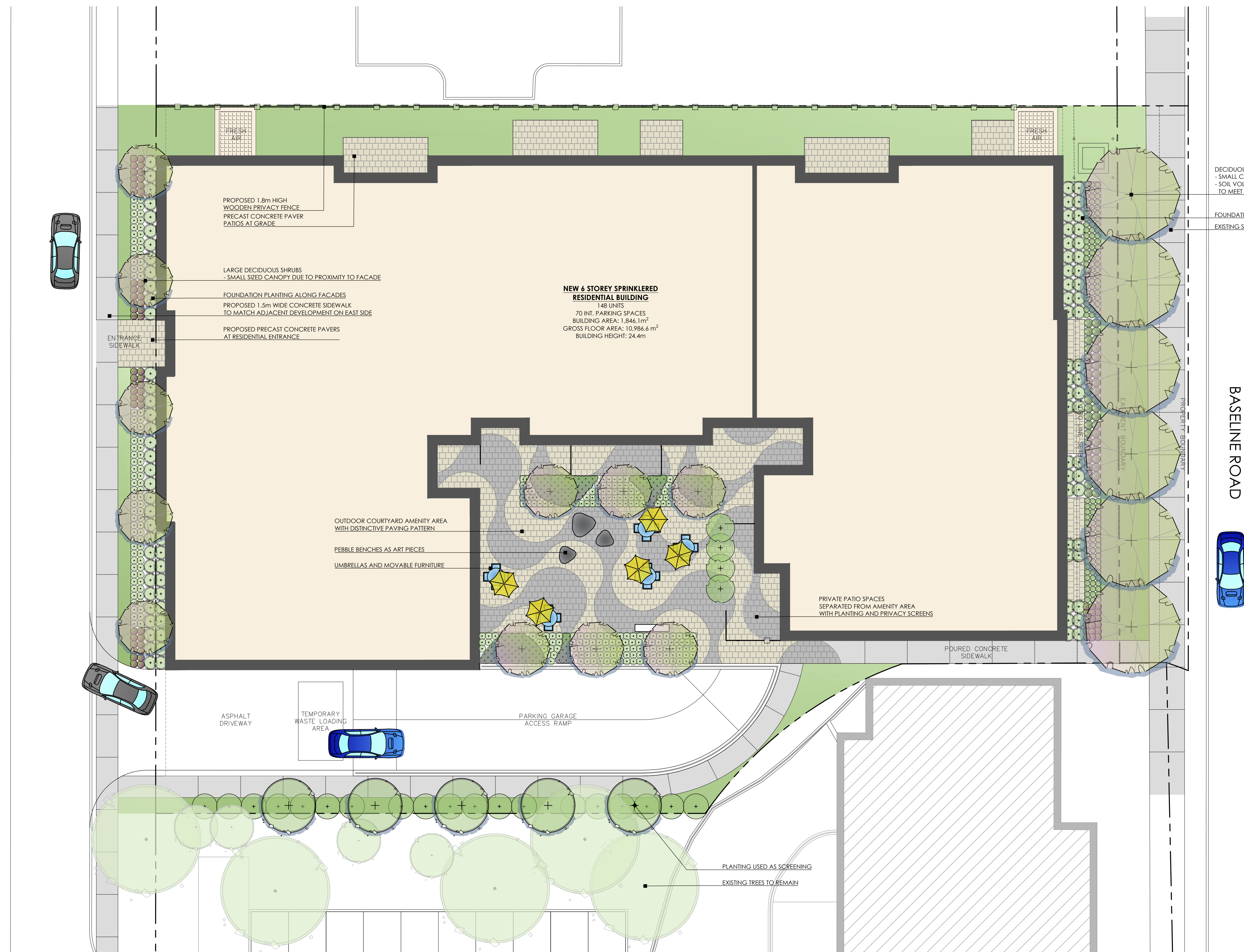
- 4.1.1 **Bicycle facilities:** The development will accommodate and encourage cycling. Based on the required 0.5 bicycle parking spaces per dwelling unit according to the Zoning By-Law 2008-250 Consolidation ¹⁰, 74 total bicycle parking spaces will be provided for the development and will be located within the underground parking garage in secure and enclosed bike parking storage areas.
- 4.1.2 **Pedestrian facilities:** Pathways to the site will be provided for pedestrian access to Gemini Way and to Baseline Road. Sidewalks will be provided along the length of the site on both of these street frontages to provide connectivity and enhance safety. Where the proposed sidewalk on Gemini Way crosses the site access driveway, different colours and textures of pavement can be used to enhance pedestrian safety by signifying to drivers that pedestrians would be present.
- 4.1.3 **Parking areas:** The development will include an underground parking garage, accessed from Gemini Way, with a total of 68 car parking spaces. There are no minimum parking requirements based on local zoning, and the 68 spaces is expected to provide adequate car parking due to the site's location in a PMTSA with its proximity to Baseline Station, and the future Algonquin O-Train Station currently under-construction.
- 4.1.4 **Transit facilities:** The site is positioned to benefit from existing bus transit access at bus stops near the site, including Baseline / CentrepoinTE, Constellation / Gemini, Baseline / Highgate, and Baseline Station. The bus lines and bus stops serving the area are shown in Figure 2-6. As part of the O-Train West Extension, Line 1 will be extended to Algonquin Station (currently Baseline Station), located 700m from the project site.

CIRCULATION AND ACCESS

- 4.1.5 Ingress and egress to the underground parking garage will be provided via a site access driveway from Gemini Way, as shown in Figure 4-1. The asphalt driveway leads to an access ramp for the parking garage.

¹⁰ City of Ottawa, *Zoning By-law 2008-250, Part 4, Section 111: Bicycle Parking Space Regulations*, Accessed from:
https://documents.ottawa.ca/sites/default/files/zoning_bylaw_part4_section111_en.pdf.

A circular feature with a north arrow pointing upwards. Below the circle is a scale bar with markings at 0, 2, 4, and 6, labeled 1:150 (m).



A map of the study area in Ottawa, Ontario. The map shows a network of roads including Highway 404, Baseline Road, Concession D, Concession E, Concession F, and Concession G. A green shaded area represents Pinecrest Park. A black square labeled 'Site' is located on Baseline Road, south of Highway 404 and east of Concession D. A north arrow is shown in the bottom right corner. The word 'OTTAWA' is printed in large letters at the bottom right.

	property line
	existing tree to remain
	proposed deciduous tree
	proposed coniferous tree
	proposed shrub
	min. 150mm topsoil, fine grade & so
	C.I.P. concrete
	precast concrete unit pavers
	proposed transformer
	1.8m height wooden privacy fence

#	DATE	DESCRIPTION
1	2025-01-10	Issued for pre Urban Design Review Panel

CLIENT
Appelt Properties

MUNICIPALITY
City of Ottawa

PROJECT
85 Gemini Way
Ottawa, ON

MUNICIPAL FILE NUMBER

SHEET
Landscape
Concept Plan

L-01

adesso design inc.
landscape architecture



69 John Street South, Suite 250
Hamilton, ON L8N 2B9
t. 905.526.8876
www.adessodesigninc.ca

- 4.1.6 As shown in Figure 4-1, the asphalt driveway area includes a temporary waste loading area, where six-yard waste bins would be wheeled when waste collection takes place. There will be overhead doors directly adjacent to that area that allow for bins to be moved quickly in and out.
- 4.1.7 Tenant loading for pickups, drop-offs, and ride share will occur on Gemini Way, and are expected to be accommodated based on the low through-traffic flow on Gemini Way.

NEW STREET NETWORKS

- 4.1.8 According to the exemption table reviewed in section 2.3 and summarized in Table 2-3, this TIA is exempted from this section.

4.2 Parking

PARKING SUPPLY

Auto parking

- 4.2.1 The site is in Area Z which includes area near major LRT Stations.¹¹ Within this area, no minimum off-street motor vehicle parking is required to be provided according to the City's Zoning By-Law.¹²
- 4.2.2 Based on the following factors, a single level of underground parking with 68 spaces is recommended:
- The development will benefit from excellent transit access, particularly with the upcoming O-Train extension at Algonquin Station, projected to open in 2026.
 - The site offers convenient cycling access to the Pinecrest Creek Trail and the City's broader cycling network.
 - Since the development will consist of rental units only, tenant demand for parking spaces is expected to be lower compared to owner-occupied properties.
 - According to the City of Ottawa's 2020 *TRANS Trip Generation Manual*, vehicular trips during weekday peak hours represent approximately 40% of generated trips in the Bayshore/Cedarview district.
- 4.2.3 Based on the proposed allocation of 68 parking spaces for 148 units, the parking ratio would be 0.46 spaces per unit.

Bicycle parking

- 4.2.4 74 sheltered bicycle parking spaces are planned to be in the underground parking lot, which satisfies the minimum of 0.5 bicycle parking spaces required per dwelling unit.

¹¹ City of Ottawa, *Zoning By-law 2008-250, Schedule 1A: Minimum Parking Requirements by Land Use*, Accessed from: [Schedule 1A - Zoning Bylaw](#).

¹² City of Ottawa, *Zoning By-law 2008-250, Part 4, Section 101: Minimum Parking Space Requirements*, Accessed from: [Minimum Parking Space Rates \(Section 101\)](#)

EXISTING ON-STREET PARKING

- 4.2.5 The north side of Gemini Way includes 15 paid on-street parking spaces, with an hourly rate of \$3.50. A site visit conducted on January 7th recorded peak parking occupancy at 2:00 PM, with 10 vehicles parked on the northern side. Additionally, 10 vehicles were observed parked on the southern side, where parking is prohibited.
- 4.2.6 There is residual capacity for on-street parking on Gemini Way.

4.3 Boundary Street Design

DESIGN CONCEPT

- 4.3.1 As part of the site plan, a 1.8-metre-wide sidewalk will be constructed along the north side of Gemini Way across the south frontage of the site, providing connectivity to the existing sidewalk network.
- 4.3.2 Similarly, other sidewalk improvements are included in upcoming projects in the area which will improve the pedestrian environment around the site project. Indeed, a 1.8-metre-wide sidewalk is planned to be constructed along the north side of Gemini Way across the south frontage of the residential project located on 2140 Baseline Road and a 2-metre-wide sidewalk is planned to be constructed along the south side of Gemini Way across the north frontage of the 19 CentrepoinTE Drive development.

4.4 Access Intersection Design

- 4.4.1 According to the exemption table reviewed in section 2.3 and summarized in Table 2-3, this TIA is exempted from this section.

4.5 Transportation Demand Management

CONTEXT FOR TDM MEASURES

- 4.5.1 85 Gemini Way is located within a Design Priority Area (DPA) and a Protected Major Transit Area (PMTSA), as specified by the Official Plan. The site is located less than 500m from the future LRT "O-Train" station, Algonquin.
- 4.5.2 The development features only residential use, and it is assumed that most trips generated within the peak morning and afternoon periods will be carried out by residents and not visitors. Section 3.1 details the predicted number of trips generated by each travel mode during the peak periods, and their relative origins or destinations.

NEED AND OPPORTUNITY

- 4.5.3 As a result of the site's location within a DPA and a PMTSA, measures should be taken to boost sustainable modes of transport to and from the development.
- 4.5.4 It is important to provide secure and organised links to the surrounding pedestrian and cyclist networks. This will also encourage the use of nearby transit, including the bus stops along Baseline Road, and the nearby Algonquin Station.

- 4.5.5 The location of the site and development type also signify that is subject to specific zoning by-law requirements, such as minimum bike parking and maximum auto parking ratios.

TDM PROGRAM

- 4.5.6 The City of Ottawa's TDM-Supportive Design and Infrastructure checklist and TDM Measures checklist were consulted to identify and incorporate TDM supportive measures and are provided in Appendix A.
- 4.5.7 The proposed measures include:
- 74 sheltered bicycle parking spaces located in the underground parking lot.
 - On-site sidewalks connecting building entrances to both Gemini Way and Baseline Road.
 - Continuous sidewalk at site entrance.
- 4.5.8 Some measures will be confirmed with the development of the project:
- Display of local area maps with walking, cycling, and transit routes at the building entrances.
 - Provision of a multimodal travel option information package to new residents.
 - Separation of long-term resident and short-term visitor parking.

4.6 Neighbourhood Traffic Calming

- 4.6.1 According to the exemption table reviewed in section 2.3 and summarized in Table 2-3, this TIA is exempted from this section.

4.7 Transit

- 4.7.1 According to the exemption table reviewed in section 2.3 and summarized in Table 2-3, this TIA is exempted from this section.

4.8 Review of Network Concept

- 4.8.1 According to the exemption table reviewed in section 2.3 and summarized in Table 2-3, this TIA is exempted from this section.

4.9 Intersection Design

- 4.9.1 According to the exemption table reviewed in section 2.3 and summarized in Table 2-3, this TIA is exempted from this section.

5. SUMMARY AND CONCLUSIONS

- 5.1.1 This Transportation Impact Assessment (TIA) was prepared by Momentum Transport Consultancy on behalf of Centurion Appelt in support of a site plan application for the proposed apartment development at 85 Gemini Way in the Nepean neighbourhood of Ottawa, Ontario. The analysis included screening and scoping reports, forecasting for travel demand, and a strategy report.
- 5.1.2 Momentum's team conducted a site visit on Tuesday, 7 January 2025, to examine site conditions for the purpose of informing the analysis.
- 5.1.3 The proposed development will consist of a six-storey residential building with 148 units and gross floor area 10,986.6m², or 118,258.8ft². The expected build-out year is 2027.
- 5.1.4 The site will include an underground parking garage for tenants and visitors. The parking garage will consist of one underground level and will include 68 auto parking spaces and 74 bicycle parking spaces.
- 5.1.5 The site is located within the quadrilateral formed by Centrepont Drive, Baseline Road, and Constellation Drive. The site directly fronts onto Gemini Way, which is the main site access for all modes, and Baseline Road (no vehicle access). The following study area intersections were included in the analysis:
- Baseline Road at Centrepont Drive / Highgate Road
 - Baseline Road at Constellation Drive
 - Centrepont Drive at Gemini Way
 - Constellation Drive at Gemini Way
- 5.1.6 Time periods for analysis were based on turning movement counts obtained from the City of Ottawa, and the following peak hours were determined:
- Weekday AM peak hour of roadway – 8AM to 9AM
 - Weekday PM peak hour of roadway – 3:15PM to 4:15PM based on the closest intersections to the site
- 5.1.7 The analysis included the following horizon years:
- Existing Conditions – Representative of current operating conditions in the study area
 - 2027 – Representing the anticipated build-out and opening of the development
 - 2032 – Representing five years after the anticipated build-out and opening of the development
- 5.1.8 The development is expected to generate additional transportation demands. Using the Ottawa TRANS Trip Generation Manual and the land use code 222 (Multi-Unit High-Rise), the analysis yielded a projected 62 person-trips during the weekday AM and PM peak hours for the future horizon years. This includes:
- 23 two-way driver vehicle trips
 - 8 two-way vehicular passenger trips
 - 23 transit trips for the AM peak hour and 22 transit trips for the PM peak hour
 - 8 two-way active transportation trips

- 5.1.9 The site is poised to benefit from the planned extension of OC Transpo's O-Train with the opening of Algonquin Station located less than 500m from the site. Additionally, the area is well served by bus transit and is located in close proximity to the City's Crosstown Bikeway Network. The boundary street recommendations provided in the report are proposed to ensure maximum access and connectivity for all modes of transport with particular emphasis on sustainable modes.
- 5.1.10 In conclusion, the analysis found that the proposed development will result in a minimal impact to overall traffic operations in the area. From a transportation standpoint, the proposed apartment development can be accommodated by the future transportation network, particularly with the implementation of the proposed Transportation Demand Management strategies outlined in this report.

APPENDIX A – TDM CHECKLISTS AND SUPPORTIVE DEVELOPMENT DESIGN AND INFRASTRUCTURE CHECKLIST



TDM MEASURES CHECKLIST

RESIDENTIAL DEVELOPMENTS (MULTI-FAMILY, CONDOMINIUM OR SUBDIVISION)

Project	85 Gemini Way
Report Title	TDM Measures Checklist Residential Developments
Date	26/02/2025
Prepared by	Momentum Transport Consultancy
Prepared for	Centurion Appelt

1. TDM PROGRAM MANAGEMENT

1.1 Program coordinator

1.1.1. Designate an internal coordinator, or contract with an external coordinator

✓ **The designation of a coordinator will be considered.**

1.2 Travel surveys

1.2.1. Conduct periodic surveys to identify travel-related behaviors, attitudes, challenges and solutions, and to track progress

✗ Not applicable due to size of development.

2. WALKING AND CYCLING

2.1 Information on walking/cycling routes & destinations

2.1.1. Display local area maps with walking/cycling access routes and key destinations at major entrances

✓ **The display of a local area map at the entrance will be considered.**

2.2 Bicycle skills training

2.2.1. Offer on-site cycling courses for residents, or subsidize off-site courses

✗ Not applicable due to the size of development and proximity to transit.

3. TRANSIT

3.1 Transit information

3.1.1. Display relevant transit schedules and route maps at entrances

✓ **The display of local route maps and transit schedules at the entrance will be considered.**

3.1.2. Provide real-time arrival information display at entrances

✖ Not applicable.

3.2 Transit fare incentives

3.2.1. Offer PRESTO cards preloaded with one monthly transit pass on residence purchase/move-in, to encourage residents to use transit

✖ Not applicable.

3.2.2. Offer at least one year of free monthly transit passes on residence purchase/move-in.

✖ Not applicable as no units are available for purchase.

3.3 Enhanced public transit service

3.3.1. Contract with OC Transpo to provide early transit services until regular services are warranted by occupancy levels

✖ Not applicable as the site is not a subdivision.

3.4 Private transit vehicles

3.4.1. Provide shuttle service for seniors homes or lifestyle communities (e.g. scheduled mall or supermarket runs)

✖ Not applicable due to the size of the development and proximity to amenities and transit.

4. CARSHARING & BIKESHARING

4.1 Bikeshare stations & memberships

4.1.1. Contract with provider to install on-site bikeshare station

✖ Not applicable as no bike share system is currently available in Ottawa.

4.1.2. Provide residents with bikeshare memberships, either free or subsidized

✖ Not applicable as no bike share system is currently available in Ottawa.

4.2 Carshare vehicles & memberships

4.2.1. Contract with provider to install on-site carshare vehicles and promote their use by residents

✖ Not included in the proposed development.

4.2.2. Provide residents with car share memberships, either free or subsidized

✖ Not applicable.

5. PARKING

5.1 Priced parking

5.1.1. Unbundle parking cost from purchase price

✖ Not applicable as no units are available for purchase.



5.1.2. Unbundle parking cost from monthly rent

✖ Not applicable.

6. TDM MARKETING & COMMUNICATIONS

6.1 Multimodal travel information

6.1.1. Provide a multimodal travel option information package to new residents

✓ **The provision of an information package for new residents will be considered.**

6.2 Personalized trip planning

6.2.1. Offer personalized trip planning to new residents

✖ Not applicable due to the size of the development.

Project & Document Details

Project Name	85 Gemini Way - TIA
Project Number	C000235
Document Title	TDM Measures Checklist- Residential Developments

Document History

Issue	Status	Reason for Issue	Issued to
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TDM – SUPPORTIVE DEVELOPMENT DESIGN AND INFRASTRUCTURE CHECKLIST (OFFICE, INSTITUTIONAL OR INDUSTRIAL)

Project	85 Gemini Way
Report Title	TDM Measures Checklist for Residential Developments
Date	26/02/25
Prepared by	Momentum Transport Consultancy
Prepared for	Centurion Appelt

1. WALKING & CYCLING: ROUTES

1.1 Building location & access points

1.1.1. Locate building close to the street, and do not locate parking areas between the street and building entrances

✓ **Pedestrian access from sidewalks along Gemini Way and Baseline Road. On-site parking located in underground parking garage.**

1.1.2. Locate building entrances in order to minimize walking distances to sidewalks and transit stops/stations

✓ **Convenient pedestrian links from building entrances to Baseline Road and Gemini Way.**

1.1.3. Locate building doors and windows to ensure visibility of pedestrians from the building, for their security and comfort

✓ **Sidewalks surrounding and within the site are visible from windows and doors of the building.**

1.2 Facilities for walking & cycling

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)

✓ **Convenient pedestrian links from building entrances to Baseline Road and Gemini Way. The construction of a sidewalk along Gemini Way is recommended to improve pedestrian connectivity to destinations south of Baseline Road.**

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)

- ✓ **Pedestrian walkways within the site connecting building entrances, Gemini Way, Baseline Road, and the courtyard amenity area in front of the main building entrance, as seen in Figure 1 below.**

Figure 1: Landscape concept plan for 85 Gemini Way



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)

- ✓ **Smooth and well drained pedestrian sidewalks of contrasting materials will be provided within the site, as seen in Figure 1.**

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)

- ✓ **Sidewalks and open spaces are designed to be easily accessible. A continuous sidewalk is proposed at the site entrance, as pictured in Figure 1. In the underground parking lot, two extra-wide parking spaces will be located adjacent to elevators providing access to the building.**



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)

- ✓ **Sidewalks planned within the site link to Gemini Way and the existing sidewalk on Baseline Road. The construction of a sidewalk along Gemini Way is recommended to improve pedestrian connectivity to destinations south of Baseline Road. The on-road cycle route on Constellation Drive is located approximately 50m from the site entrance, accessible via the low-traffic Gemini Way. Improvements to the marking of this cycle route are recommended.**

1.2.6. Provide safe, direct and attractive walking routes from building entrances to nearby transit stops

- ✓ **The sidewalks within the site leading to Baseline Road create a link to the surrounding pedestrian network, and to the bus stops on Baseline Road. The construction of sidewalks along Gemini Way is recommended to improve pedestrian connectivity to destinations south of Baseline Road, including Algonquin Station.**

1.2.7. Ensure that walking routes to transit stops are secure, visible, lighted, shaded and wind-protected wherever possible

- ✓ **Features to render walking routes secure will be considered in the final landscape plan.**

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

- ✗ Not applicable as vehicles are unlikely to reach high speeds due to the short length of access road.

1.3 Amenities for walking & cycling

1.3.1. Provide lighting, landscaping and benches along walking and cycling routes between building entrances and streets, sidewalks and trails

- ✓ **Lighting and benches are to be considered in the final landscape plan.**

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)

- ✗ Not applicable due to size of development.

2. WALKING & CYCLING: END-OF-TRIP FACILITIES

2.1 Bicycle parking

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 is provided in the underground parking garage in secure and enclosed spaces.**

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)

- ✓ **74 bicycle parking spaces will be available in the underground parking lot, as per the 0.5 parking spaces per dwelling unit requirement, specified in the Zoning By-law Section 111.**

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 design will meet requirements.**

2.1.4. Provide bicycle parking spaces equivalent to the expected number of resident-owned bicycles, plus the expected peak number of visitor cyclists.

- ✗ The provision of 0.5 parking spaces per dwelling unit is satisfactory due to the site's proximity to transit.

2.2 Secure bicycle parking

2.2.1. Where more than 50 bicycle parking spaces are provided for a single residential 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)

- ✓ **All proposed bicycle spaces will be located in the underground parking garage.**

2.2.2. Provide secure bicycle parking spaces equivalent at to at least the number of units at condominiums or multi-family residential developments.

- ✗ **The provision of 0.5 parking spaces per dwelling unit is satisfactory due to the site's proximity to transit.**

2.3 Bicycle repair station

2.3.1. 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)

- ✗ Bicycle repair stations are located nearby at Baseline Station and Nepean Centrepointhe library.

3. TRANSIT

3.1 Customer amenities

3.1.1. Provide shelters, lighting and benches at any on-site transit stops

- ✗ Not applicable as no on-site transit stops are provided.

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

- ✗ Not applicable as the site does not abut any transit stops.

3.1.3. Provide a secure and comfortable interior waiting area by integrating any on-site transit stops into the building



- ✗ Not applicable

4. RIDESHARING

4.1 Pick-up & drop-off facilities

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

- ✗ Passengers can be dropped off or picked up on the low-traffic Gemini Way.

5. CARSHARING AND BIKESHARING

5.1 Carshare parking spaces

5.1.1. Provide up to three carshare parking spaces in an R3, R4 or R5 Zone for specified residential uses (see Zoning By-law Section 94)

- ✗ No carshare parking space will be included in the proposed development.

5.2 Bikeshare station location

5.2.1. Provide a designated bikeshare station area near a major building entrance, preferably lighted and sheltered with a direct walkway connection

- ✗ Not applicable

6. Parking

6.1 Number of parking spaces

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

- ✓ **The proposed 68 car parking spaces is permitted by zoning. The site's location in an Area Z, near a major LRT station, signifies that there are no minimum parking requirements, and the maximum requirements are 1.75 spaces / dwelling unit.**

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

- ✓ **The underground parking garage provides 53 long-term parking spaces and 15 short-term visitor parking spaces.**

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)

- ✗ Not applicable as site only features residential use.

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).

- ✗ Not applicable as site only features residential use.

6.2 Separate long-term & short-term parking areas

6.2.1. Provide separate areas for short-term and long-term parking (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)

✖ Not applicable as site only features residential use.



Project & Document Details

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Project Number	C000235
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Document History

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