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Proposed Residential Development
295 and 355 Deschâtelets Avenue

Transportation Impact Assessment

Proposed Residential Development
295 and 355 Deschâtelets Avenue

Transportation Impact Assessment

Prepared By:

NOVATECH
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario
K2M 1P6

Dated: August 2024
Revised: October 2024

Novatech File: 114025
Ref: R-2023-156

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Engineers, Planners & Landscape Architects

October 17, 2024

City of Ottawa
Planning, Real Estate, and Economic Development Department
110 Laurier Ave. W., 4th Floor
Ottawa, Ontario K1P 1J1

Attention: **Mr. Wally Dubyk**
Transportation Project Manager, Infrastructure Approvals

Dear Mr. Dubyk:

Reference: **295 and 355 Deschâtelets Avenue**
Transportation Impact Assessment
Novatech File No. 114025

We are pleased to submit the following Transportation Impact Assessment (TIA), in support of Zoning By-Law Amendment and Site Plan Control applications at 295 and 355 Deschâtelets Avenue, for your review and signoff. The structure and format of this report is in accordance with the City of Ottawa's *Transportation Impact Assessment Guidelines* (June 2017) and *Revisions to the Transportation Impact Assessment Guidelines* (June 2023).

If you have any questions or comments regarding this report, please feel free to contact Brad Byvelds, or the undersigned.

Yours truly,

NOVATECH

Joshua Audia, P.Eng.
Project Engineer | Transportation

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

Certification Form for Transportation Impact Assessment (TIA) Study Program Manager

TIA Plan Reports

On April 14, 2022, the Province's Bill 109 received Royal Assent providing legislative direction to implement the More Homes for Everyone Act, 2022 aiming to increase the supply of a range of housing options to make housing more affordable. Revisions have been made to the TIA guidelines to comply with Bill 109 and streamline the process for applicants and staff.

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

By submitting the attached TIA report (and any associated documents) and signing this document, the individual acknowledges that 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

City of Ottawa
Transportation Engineering Services
Planning, Real Estate and Economic Development
110 Laurier Avenue West, 4th fl.
Ottawa, ON K1P 1J1
Tel. : 613-580-2424
Fax: 613-560-6006

☑ I am either a licensed or registered[1] professional in good standing, whose field of expertise [check ✓ appropriate field(s)]:

- ☑ is either transportation engineering
- ☐ or transportation planning.

Dated at Ottawa (City) this 17th day of October, 20 24.

Name: Brad Byvelds, P.Eng.

Professional Title: Project Manager

Signature of Individual certifier that they meet the above four criteria

Office Contact Information (Please Print)	
Address:	240 Michael Cowpland Drive, Suite 200
City / Postal Code:	Ottawa, ON K2M 1P6
Telephone / Extension:	613-254-9643 x 286
E-Mail Address:	j.audia@novatech-eng.com

Stamp

[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.

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EXECUTIVE SUMMARY

This Transportation Impact Assessment (TIA) has been prepared in support of Zoning By-Law Amendment and Site Plan Control applications for the properties located at 295 and 355 Deschâtelets Avenue. The two subject properties have a combined area of approximately 1.22 acres, and are currently vacant.

The subject site forms part of the Greystone Village subdivision, and is surrounded by the following:

- Oblats Avenue, followed by residences to the north,
- Deschâtelets Avenue, followed by residences to the south,
- The Forecourt and Deschâtelets Building, followed by Scholastic Drive to the east, and
- Deschâtelets Avenue, followed by residences and the Grande Alleé to the west.

The proposed development consists of a total of 30 townhouse dwellings. A total of 39 parking spaces are proposed, with 21 dwellings including a single-vehicle garage and nine dwellings including a double-vehicle garage. Access to the townhouses will be provided via five accesses to Deschâtelets Avenue and one access to Oblats Avenue. The development will be constructed in a single phase, with a buildout year of 2026.

The subject site is designated as 'Evolving Neighbourhood' on Schedule B2 of the City of Ottawa's Official Plan. The implemented zoning for the properties is 'Residential, Third Density' (R3Q), and the site is within the Old Ottawa East Community Design Plan.

The study area for this report includes the boundary roadways Oblats Avenue and Deschâtelets Avenue, as well as the intersections at Main Street/Oblats Avenue and Main Street/Hazel Street.

The selected time periods for this study are the weekday AM and PM peak hours, as they represent the 'worst case' combination of site generated traffic and adjacent street traffic. The buildout year 2026 and horizon year 2031 have been considered.

Development-Generated Traffic

- The proposed development is estimated to generate 22 person trips (including six vehicle trips) during the AM peak hour, and 21 person trips (including six vehicle trips) during the PM peak hour.

Access Design

- The proposed development at 295 Deschâtelets Avenue will include one private approach to Oblats Avenue and two private approaches to Deschâtelets Avenue. The proposed development at 355 Deschâtelets Avenue will include three private approaches to Deschâtelets Avenue.

- Section 25(1)(a) of the PABL identifies that, for sites with 46m to 150m of frontage to a given roadway, a maximum of two two-way private approaches to that roadway are permitted. The 355 Deschâtelets Avenue site does not meet the requirement, as three private approaches to Deschâtelets Avenue are proposed. Each proposed private approach will serve four to six dwellings, which will generate minimal trips at any time of day.

- Section 25(1)(o) of the PABL identifies that no private approach shall be within 1.5m of the point of tangency of a corner radius at an intersection, or within 6m of the intersecting street line. For the 355 Deschâtelets Avenue site, the northernmost private approach to Deschâtelets Avenue does not meet this requirement, as the proposed location is within 6m of the intersection with Hazel Street. Shifting the proposed private approach further north to increase the distance to the Hazel Street intersection is anticipated to cause turning movement and access issues for the first unit on the north side. Given the low projected traffic volumes generated by the proposed units, safety concerns resulting from the proximity to Hazel Street are not anticipated. Further, the offset of the proposed private approach and Hazel Street will not result in overlapping left turns.

- The proposed access location on Oblats Avenue is anticipated to provide drivers with 100m or more of stopping sight distance and intersection sight distance in both directions, and therefore this access meets the requirements. The minimum stopping sight distance of 50m is anticipated to be provided at all proposed accesses to Deschâtelets Avenue, for drivers travelling in both directions on the roadway.

- To improve the intersection sight distances at the Deschâtelets Avenue accesses, the street trees can be maintained such that drivers will be able to see below any branches, and the future bus shelter on Deschâtelets Avenue will consist of glass walls to maintain sightlines for outbound drivers. Given the low traffic volumes on Deschâtelets Avenue and the low projected traffic volumes exiting each access, potential conflicts between vehicles exiting the proposed development and vehicle travelling on Deschâtelets Avenue are anticipated to be infrequent. Drivers along Deschâtelets Avenue will have adequate distance to slow or stop, in the event that a driver exiting the proposed development chooses an inadequate gap in traffic.

- Turning movements show that the Personen Kraftwagen design vehicle can generally drive into the more challenging garages in one motion. Reversing out of the garage will require drivers to reverse near opposing garage doors or residential entrances, but multiple manoeuvres to exit the garage are not required. To ensure that turning movements are not impacted, it is recommended that no encumbrances are provided within the parking bay areas (i.e. no curbs, vehicle parking, trash receptacles, snow storage, etc.). Signage prohibiting parking and other encumbrances within the internal car courts is recommended.

- While drivers entering and exiting the closer garages may take longer to park due to increased caution, vehicle spillover to Deschâtelets Avenue or Oblats Avenue is not anticipated, as each access will serve a total of four to six dwelling units. The low operating speed on the boundary streets and small curb radii at each access also mitigates the likelihood of vehicles turning into an access and colliding with a vehicle attempting to enter or exit a nearby garage.

Development Design

- All units are accessed via internal pathways that connect to the sidewalks on Oblats Avenue and Deschâtelets Avenue. Sidewalks along the subject site's frontages to Oblats Avenue and Deschâtelets Avenue are planned to be completed after construction of the proposed townhouses.

- The proposed development includes single or double garages for each unit, which are anticipated to include room for bicycle storage.

- OC Transpo's service design guideline for peak period service is to provide service within a five-minute (400m) walk of home, work, or school for 95% of urban residents. All proposed dwellings will be within this walking distance of at least one transit stop. The previously planned bus stop at the southeast corner of Oblats Avenue/Deschâtelets Avenue is proposed to be relocated to an area appropriately spaced from the southernmost access to 295 Deschâtelets Avenue and the future pedestrian crossover aligned with the Grand Alleé.

- A review of the *Transportation Demand Management (TDM)-Supportive Design and Infrastructure Checklist* has been conducted. All required TDM-supportive design and infrastructure measures in the TDM checklist are met.

- Small moving trucks, snowplows, and snow removal trucks are anticipated to drive forward into each access, and reverse out. Large moving trucks are anticipated to load on-street.

- No on-site fire route is identified for the proposed development, and therefore, fire trucks will park curbside on Oblats Avenue or Deschâtelets Avenue. Garbage collection will also occur curbside on Oblats Avenue or Deschâtelets Avenue.

Parking

- The minimum vehicle parking requirements are met by the proposed development. As each proposed residential unit will include a single or double garage, there is no additional bicycle parking requirement.

Boundary Streets

- Oblats Avenue and Deschâtelets Avenue both meet the target pedestrian level of service (PLOS) A and target bicycle level of service (BLOS) D.

Transportation Demand Management

- The following measures will be implemented at the sales centre within the proposed development:
    - Display local area maps with walking/cycling routes and key destinations;
    - Display relevant transit schedules and route maps;
    - Provide multimodal travel option information package to new residents.

- The proposed development is recommended from a transportation perspective.

1.0 SCREENING

1.1 Introduction

This Transportation Impact Assessment (TIA) has been prepared in support of Zoning By-Law Amendment and Site Plan Control applications for the properties located at 295 and 355 Deschâtelets Avenue. The two subject properties have a combined area of approximately 1.22 acres, and are currently vacant.

The subject site forms part of the Greystone Village subdivision, and is surrounded by the following:

- Oblats Avenue, followed by residences to the north,
- Deschâtelets Avenue, followed by residences to the south,
- The Forecourt and Deschâtelets Building, followed by Scholastic Drive to the east, and
- Deschâtelets Avenue, followed by residences and the Grande Alleé to the west.

An aerial of the vicinity around the subject site is provided in **Figure 1**.

1.2 Proposed Development

The proposed development consists of a total of 30 townhouse dwellings. A total of 39 parking spaces are proposed, with 21 dwellings including a single-vehicle garage and nine dwellings including a double-vehicle garage. Access to the townhouses will be provided via five accesses to Deschâtelets Avenue and one access to Oblats Avenue. The development will be constructed in a single phase, with a buildout year of 2026.

The subject site is designated as 'Evolving Neighbourhood' on Schedule B2 of the City of Ottawa's Official Plan. The implemented zoning for the properties is 'Residential, Third Density' (R3Q), and the site is within the Old Ottawa East Community Design Plan.

A copy of the site plan is included in **Appendix A**.

1.3 Screening Form

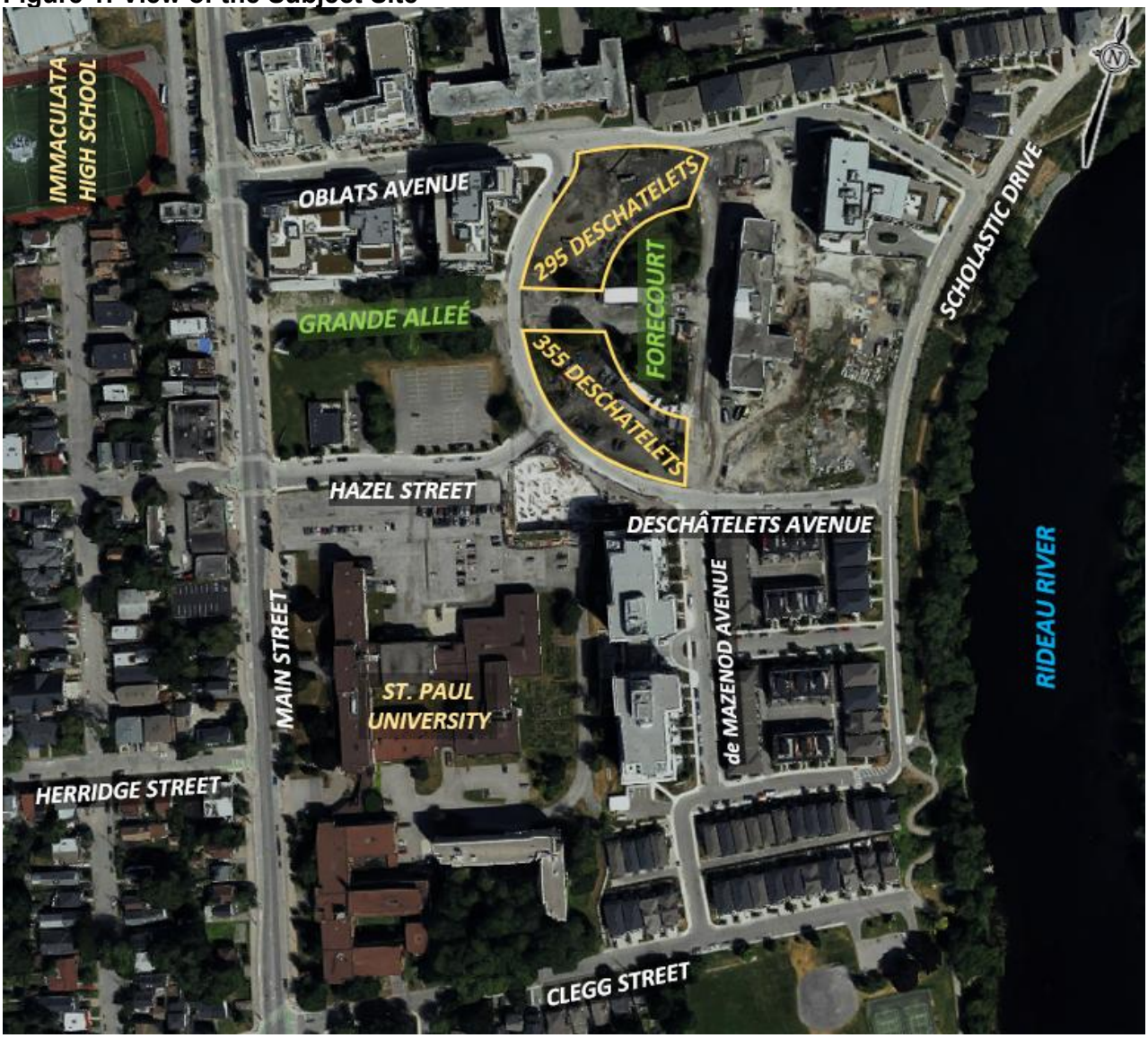
The City's *2017 TIA Guidelines* identify three triggers for completing a TIA report, including trip generation, location, and safety. The criteria for each trigger are outlined in the City's TIA Screening Form, which is included in **Appendix B**. The trigger results are as follows:

- Trip Generation Trigger – The development is not anticipated to generate over 60 peak hour person trips; further assessment is **not required** based on this trigger.

- Location Triggers – The development does not propose a new connection to a designated Rapid Transit or Transit Priority (RTTP) corridor or a Crosstown Bikeway, and is not located within a Hub, Protected Major Transit Station Area (PMTSA), or Design Priority Area (DPA); further assessment is **not required** based on this trigger.

- Safety Triggers – Horizontal curvatures are anticipated to limit sightlines at the proposed driveways; further assessment is **required** based on this trigger.

Figure 1: View of the Subject Site



2.0 SCOPING

2.1 Existing Conditions

2.1.1 Roadways

All roadways within the study area fall under the jurisdiction of the City of Ottawa.

Main Street is an arterial roadway that generally runs on a north-south alignment within the study area, running between Colonel By Drive and Rideau River Drive. South of Rideau River Drive, the roadway continues as Smyth Road. Within the study area, Main Street has a two-lane undivided urban cross-section, a posted speed limit of 50 km/h, and sidewalks and cycle tracks on both sides of the roadway. Main Street is classified as a truck route, allowing full loads. On-street parking is permitted in select lay-by areas.

The following roadways are located within the Greystone Village subdivision, which is not complete at the time of writing. Descriptions of the roadways below discuss the ultimate design, including sidewalk locations and posted speed limits.

Oblats Avenue is a local roadway that generally runs on an east-west alignment, running between Main Street and Scholastic Drive. Within the study area, Oblats Avenue has a two-lane undivided urban cross-section, a posted speed limit of 30 km/h, and sidewalks on both sides of the roadway. Oblats Avenue is not classified as a truck route. On-street parking is permitted in select lay-by areas.

Hazel Street is a local roadway that generally runs on an east-west alignment, running between Echo Drive and Deschâtelets Avenue. Within the study area, Hazel Street has a two-lane undivided urban cross-section, a posted speed limit of 30 km/h, and sidewalks on both sides of the roadway. Hazel Street is not classified as a truck route. On-street parking is not permitted.

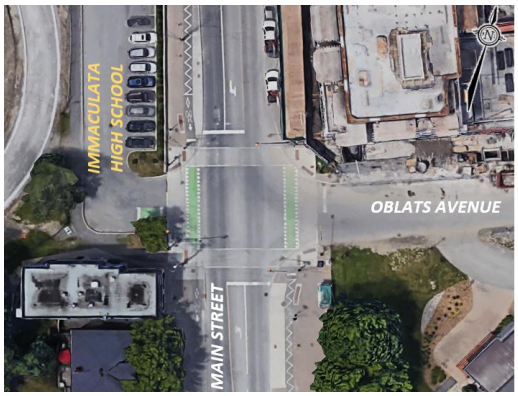
Deschâtelets Avenue is a local roadway that generally runs on a north-south alignment between Oblats Avenue and Hazel Street, transitioning to an east-west alignment between Hazel Street and Scholastic Drive. Within the study area, Deschâtelets Avenue has a two-lane undivided urban cross-section, a posted speed limit of 30 km/h, and sidewalks on both sides of the roadway. Deschâtelets Avenue is not classified as a truck route. On-street parking is permitted in select lay-by areas.

The roadway of the greater area surrounding the subject site is illustrated in **Figure 2**.

2.1.2 Intersections

Main Street/Oblats Avenue

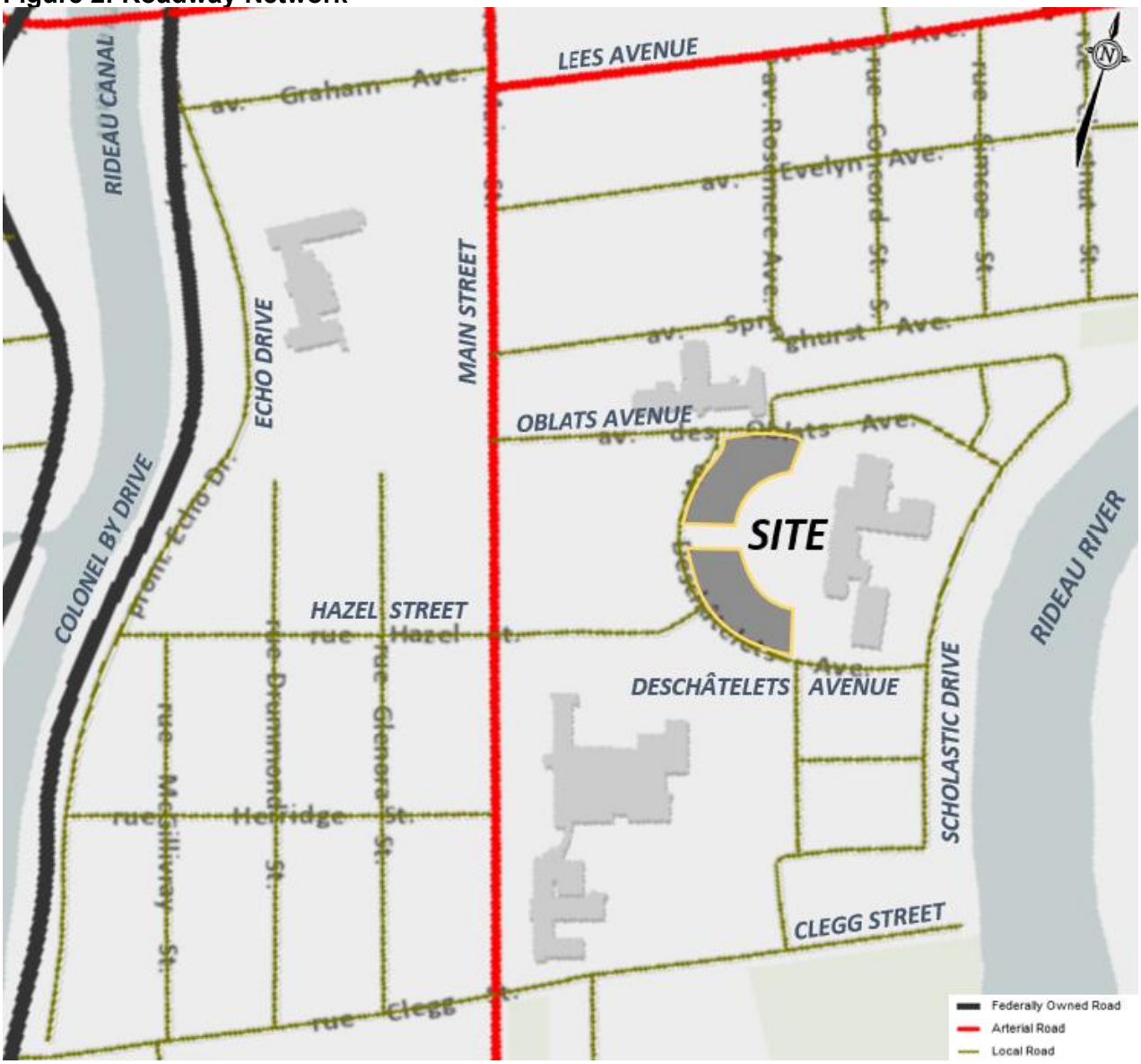
- Signalized four-legged intersection
- North/South Approaches (Main Street):
  one left turn lane and one shared through/right turn lane
- East Approach (Oblats Avenue):
  one left turn lane and one shared through/right turn lane
- West Approach (Immaculata High School):
  one shared left turn/through/right turn lane



Main Street/Hazel Street

- Signalized four-legged intersection
- North/South Approaches (Main Street):
  one left turn lane and one shared through/right turn lane
- East Approach (Hazel Street):
  one shared left turn/through lane and one right turn lane
- West Approach (Hazel Street):
  one shared left turn/through/right turn lane

Figure 2: Roadway Network



2.1.3 Driveways

In accordance with the *2017 TIA Guidelines*, a review of the existing adjacent driveways along the boundary roads are provided as follows:

Oblats Avenue, north side

- One driveway to residences at 133 Main Street
- Off-street parking serving the residences at 15 Oblats Avenue
- Two driveways to residences at 27-99 Oblats Avenue and 300-324 Sanctuary Private

Oblats Avenue, south side

- Two driveways to residences at 10 Oblats Avenue and 175 Main Street
- One driveway to residences at 225 Scholastic Drive

Deschâtelets Avenue, north side

- No driveways

Deschâtelets Avenue, south side

- One driveway to residences at 370-384 Deschâtelets Avenue, 537-555 de Mazenod Avenue, and 201-217 Jeremiah Kealey Street
- One driveway to residences at 117-119 Scholastic Drive, 390 Deschâtelets Avenue, and 223 Jeremiah Kealey Street
- One driveway (under construction) to residences at 360 Deschâtelets Avenue

2.1.4 Pedestrian and Cycling Facilities

Concrete sidewalks are provided on both sides of Main Street, Oblats Avenue, Hazel Street, and Deschâtelets Avenue. Midblock pedestrian crossovers are provided on Hazel Street (between Main Street and Deschâtelets Avenue), on Oblats Avenue (between Deschâtelets Avenue and Scholastic Drive), and on Deschâtelets Avenue (between Oblats Avenue and Hazel Street, and between Hazel Street and Scholastic Drive opposite de Mazenod Avenue). These pedestrian crossovers provide connectivity from the area pedestrian network to the Forecourt and Grand Allée.

Cycle tracks are provided in both directions on Main Street, and an asphalt multi-use pathway is provided on the east side of Scholastic Drive. Bike boxes are provided behind the crosswalks on Oblats Avenue and Hazel Street at the Main Street signalized intersections.

In vicinity of the subject site, Main Street (south of Clegg Drive), Clegg Drive (west of Main Street), and Hawthorne Avenue are included in the City's Crosstown Bikeway network.

The pedestrian and cycling network of the greater area surrounding the subject site is illustrated in **Figure 3**.

2.1.5 Area Traffic Management

Within the study area, there are no Area Traffic Management (ATM) studies that are in progress.

The Main Street Renewal was completed in 2017, which included road narrowings, curb extensions and bulb-outs, off-road cycling facilities, and improved pedestrians facilities. The posted speed limit of Main Street remains at 50 km/h, however some features such as bulb-outs serve as traffic management measures on Main Street. All roadways within the Greystone Village subdivision have been designed to include narrow lane widths ranging between 3.0m-3.5m, with curb extensions and bulb-outs at select intersections. All roadways within this subdivision will have a posted speed limit of 30 km/h.

2.1.6 Transit

Existing Transit

The locations of OC Transpo bus stops in the vicinity of the subject site are described in **Table 1**, and are shown in **Figure 4**. A summary of the various routes which serve the study area is included in **Table 2**. Detailed route information and an excerpt from the OC Transpo System Map are included in **Appendix C**.

Figure 3: Pedestrian and Cycling Network

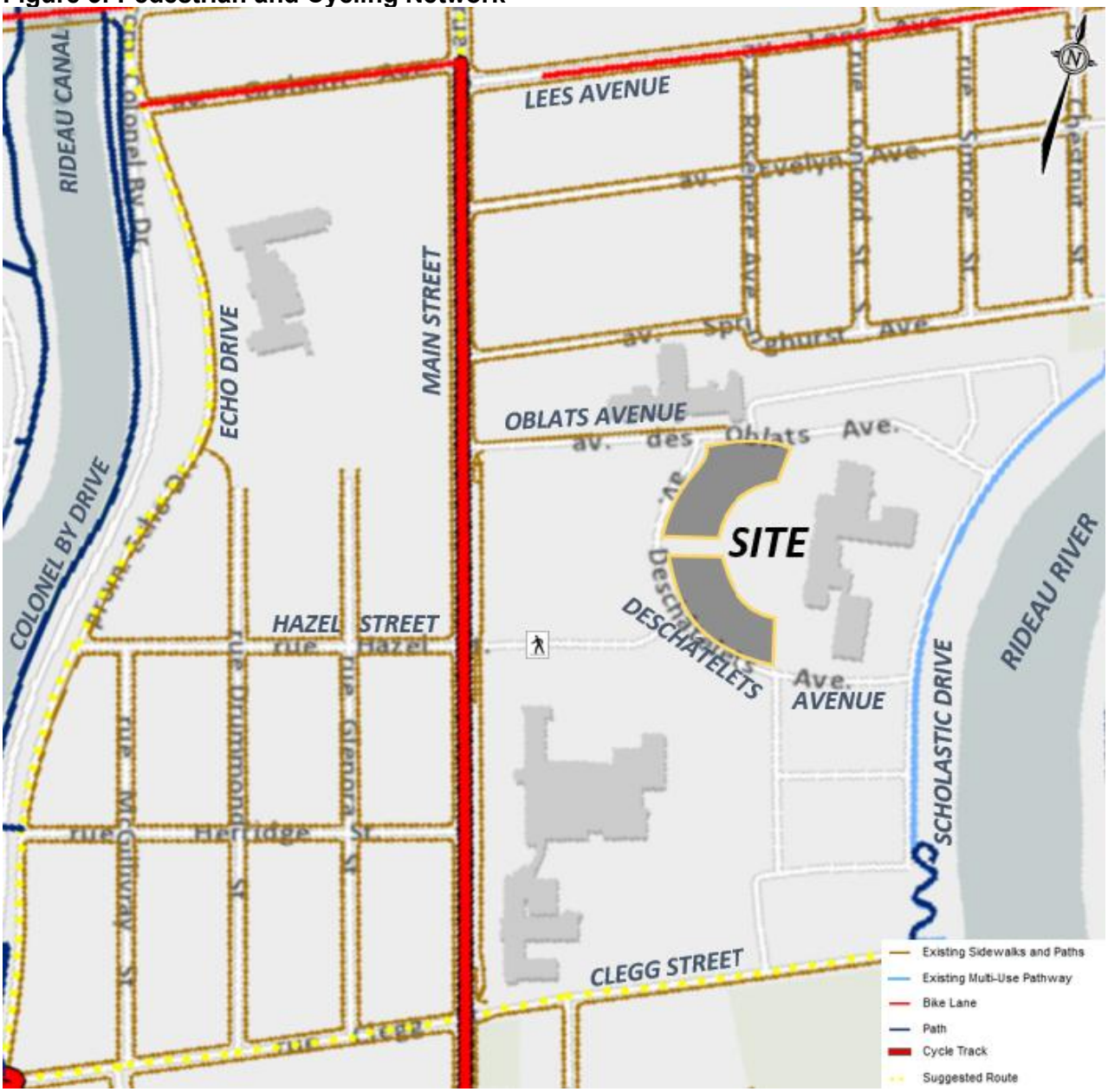


Table 1: OC Transpo Transit Stops

Stop	Location	Routes Serviced
#5824	North side of Oblats Avenue, east of Main Street	16, 56
#5825	South side of Hazel Street, west of Deschâtelets Avenue	16, 56
#6809	West side of Main Street, north of Oblats Avenue	5, 16, 55, 613
#7636	East side of Main Street, south of Oblats Avenue	5, 55
#7638	East side of Main Street, north of Herridge Street	5, 55
#7639	West side of Main Street, south of Hazel Street	5, 55, 613

Figure 4: OC Transpo Bus Stop Locations

Table 2: OC Transpo Route Information

Route	From ↔ To	Frequency
5	Billings Bridge ↔ Rideau	All day service, seven days a week; 30-minute headways
16	Main ↔ Tunney's Pasture / Westboro	All day service, seven days a week; 30-minute headways
55	Elmvale ↔ Westgate	All day service, seven days a week; 15- to 30-minute headways
56	Civic / King Edward ↔ Tunney's Pasture	Peak period service, weekdays only; select times in study area (during midday)
613	Orléans ↔ Louis Riel H.S.	Service at select times on school days only

Future Transit ('New Ways to Bus')
It is understood that OC Transpo's future network (referred to as 'New Ways to Bus') will include changes to bus service within the study area, and these changes are anticipated to be in effect by the buildout of the proposed development.

Within the study area, Route 16 will be replaced by a new Route 10, which will operate from Main/St. Paul's University to Lyon Station. Route 55 will be replaced by an extended Route 5, which will operate from Rideau Station to Elmvale Shopping Centre. Route 56 will continue to operate on its current route.

2.1.7 Existing Traffic Volumes

Weekday traffic counts completed by the City of Ottawa have been used to determine the existing pedestrian, cyclist, and vehicular traffic volumes at the study area intersections. The most recent traffic counts at Main Street/Oblats Avenue and Main Street/Hazel Street were both conducted on Tuesday, March 7, 2017. Traffic counts at Main Street/Lees Avenue/Graham Avenue (dated July 2017) and Main Street/Hawthorne Avenue (dated March 2020) were used to compare the north-south volumes on Main Street between the two intersections, which was then used to calibrate the north-south volumes within the study area. This approach can be justified, as the distance between the two intersections is relatively short (approximately 70m, measuring centre-to-centre). Further, the 2020 count at Main Street/Hawthorne Avenue was considered to account for the reopening of the eastbound Highway 417 on-ramp at Lees Avenue, which opened in October 2019.

A comparison of the two-way peak hour volumes on Main Street at Lees Avenue/Graham Avenue and Hawthorne Avenue indicates that volumes are approximately 10% higher during the AM peak hour and approximately 5% lower during the PM peak hour. To maintain a conservative analysis, all AM peak hour volumes within the study area have been increased by 10% and all PM peak hour volumes have not been adjusted.

All traffic count data previously discussed are included in **Appendix D**. Traffic volumes within the study area are shown in **Figure 5**.

2.1.8 Collision Records

Historical collision data from the last five years available was obtained from the City's Public Works and Service Department for the study area intersections and midblock segments. Copies of the collision summary reports are included in **Appendix E**.

The collision data has been evaluated to determine if there are any identifiable collision patterns, which are defined in the *2017 TIA Guidelines* as 'more than six collisions in five years' for any one movement. The number of collisions at each intersection from January 1, 2017 to December 31, 2021 is summarized in **Table 3**.

Figure 5: Existing Traffic Volumes

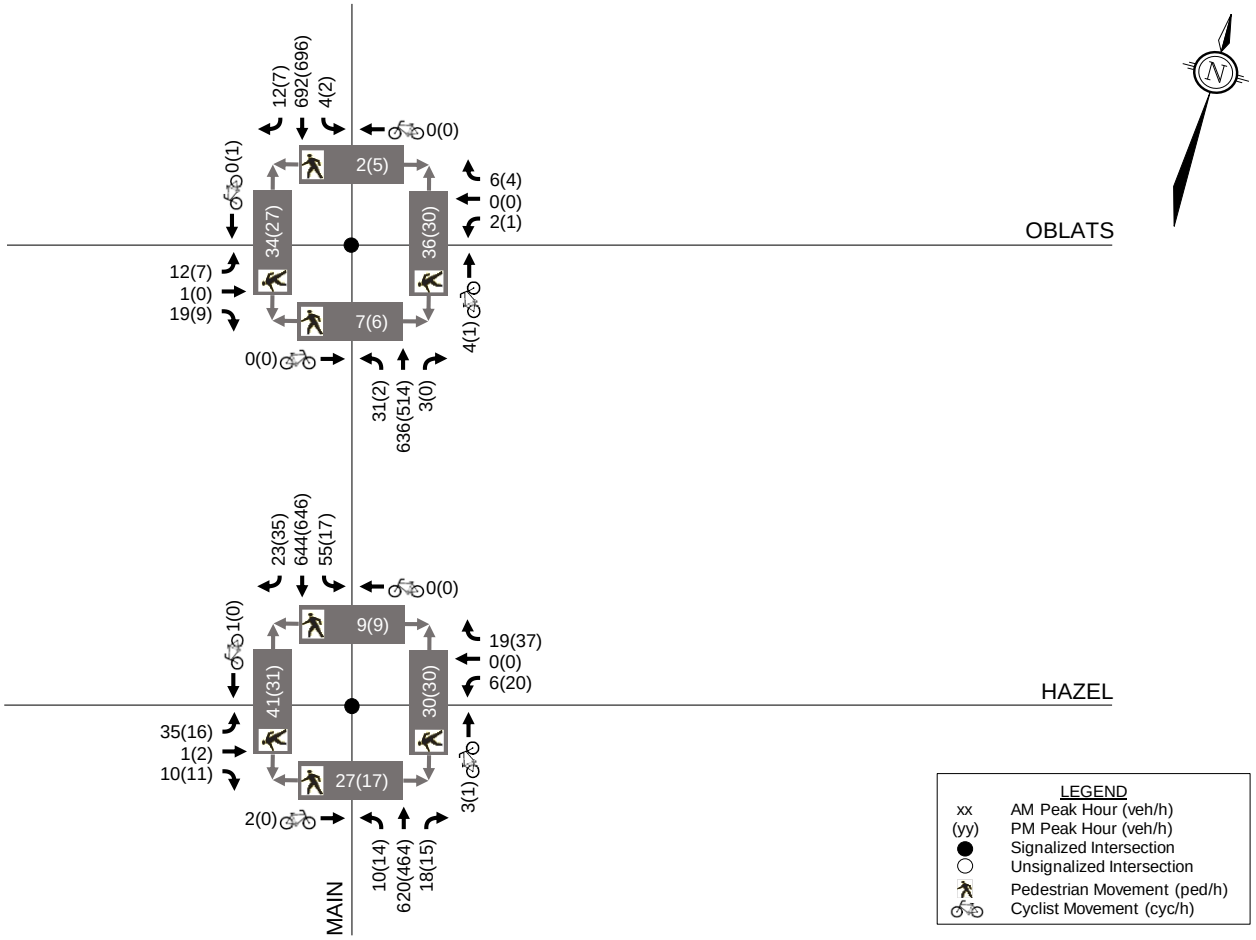


Table 3: Reported Collisions

Intersection or Segment	Impact Types						Total
	Approach	Angle	Rear End	Sideswipe	Turning Movement	SMV[1]/ Other	
Main Street/ Oblats Avenue	-	2	1	-	1	-	**4**
Main Street/ Hazel Street	-	1	9	1	4	3	**18**
Main Street btwn Oblats Avenue & Hazel Street	-	1	3	1	1	-	**6**
Oblats Avenue btwn Main Street & Deschâtelets Avenue	-	-	-	-	-	-	**0**
Hazel Street btwn Main Street & Deschâtelets Avenue	-	-	-	-	-	1	**1**
Deschâtelets Avenue btwn Oblats Avenue & Hazel Street	-	-	-	-	-	-	**0**

1. SMV = Single Motor Vehicle

Main Street/Oblats Avenue
A total of four collisions were reported at this intersection over the last five years, consisting of two angle impacts, one rear-end impact, and one turning movement impact. The turning movement impact involved a cyclist. No collisions involved pedestrians. One of the collisions caused injuries, but none caused fatalities. One of the four collisions (25%) occurred in poor driving conditions.

Main Street/Hazel Street
A total of 18 collisions were reported at this intersection over the last five years, consisting of one angle impact, nine rear-end impacts, one sideswipe impact, four turning movement impacts, and three single vehicle/other impacts. The angle impact and one of the turning movement impacts each involved a cyclist, and two of the single vehicle impacts involved a pedestrian. Six of the collisions caused injuries, but none caused fatalities. Nine of the 18 collisions (50%) occurred in poor driving conditions.

Of the nine rear-end impacts, four occurred at the northbound approach, three occurred at the southbound approach, one occurred at the eastbound approach, and one occurred at the westbound approach.

Main Street between Oblats Avenue and Hazel Street
A total of six collisions were reported along this segment over the last five years, consisting of one angle impact, three rear-end impacts, one sideswipe impact, and one turning movement impact. One of the rear-end impacts involved a cyclist. No collisions involved pedestrians. Two of the collisions caused injuries, but none caused fatalities. Two of the six collisions (33%) occurred in poor driving conditions.

Oblats Avenue between Main Street and Deschâtelets Avenue
One impact involving an unattended vehicle has been reported along this segment over the last five years. This impact did not result in injuries or fatalities.

Hazel Street between Main Street and Deschâtelets Avenue
No collisions have been reported along this segment over the last five years.

Deschâtelets Avenue between Oblats Avenue and Hazel Street
No collisions have been reported along this segment over the last five years.

2.2 Planned Conditions

2.2.1 Planned Transportation Projects

The City of Ottawa's 2013 Transportation Master Plan (TMP) does not identify any projects within the study area in its Rapid Transit and Transit Priority (RTTP) or Affordable Road Networks.

Approved by City Council in April 2023, the City's *Transportation Master Plan – Part 1* includes a list of upcoming active transportation projects, and supersedes the City's *2013 Ottawa Cycling Plan* and *2013 Ottawa Pedestrian Plan*. The *TMP – Part 1* does not identify any planned active transportation projects in the study area. In proximity of the subject site, the *TMP – Part 1* identifies a westbound bike lane on Hawthorne Avenue from Lees Avenue to Main Street, and bike lanes (where feasible) on Riverdale Avenue from Bank Street to Main Street.

The 'Greenfield Avenue, Main Street, Hawthorne Avenue et al. reconstruction project' is an ongoing renewal project north of the study area, and will include additional connectivity to the study area for cyclists. The project is anticipated to be completed in 2025.

2.2.2 Other Area Developments

A review of the City's Development Application search tool identifies that, outside of the Greystone Village subdivision, there are two nearby developments that are constructed or in the approval process, and significant enough to be noted in this TIA. In addition, relevant traffic studies related to the Greystone Village subdivision have also been considered. A description of the relevant other area developments are included below.

15-17 Oblats Avenue
The development is currently in the approval process. At full buildout, the development will retrofit an existing building and will include 284 apartment dwellings. A TIA was prepared by CGH in March 2023, and identifies an estimated buildout year of 2025.

141 Main Street (Corners on Main)
The development is constructed, but was not complete prior to the traffic counts listed in Section 2.1.7. A TIA and addendum were prepared by Delcan/Parsons in November 2013 and June 2014, identifying 144 dwellings and 13,283 ft^2 of ground-floor commercial space.

Greystone Village Community Transportation Study (CTS)
The Greystone Village subdivision area is approximately 10.3 hectares in area, east of Main Street, south of Springhurst Avenue, and north of Clegg Street. The original CTS, prepared by Novatech in January 2015, includes approximately 40 single-detached dwellings, 779 condominium/ townhouse dwellings, 150 retirement home dwellings, and 36,539 ft^2 of retail space. An addendum dated May 2017 included 110 additional condominium/townhouse dwellings and 10 fewer retirement dwellings. An Addendum dated May 2017 was prepared in support of revisions to Phase 3 of the subdivision, which included residences at 205 Scholastic Drive (i.e. the historic Deschâtelets Building), retirement home at 225 Scholastic Drive (now constructed), and residences at 375 Deschâtelets Avenue. A subsequent TIA dated July 2020 was prepared in support of a school at 205 Scholastic Drive instead of residences, as previously assumed.

The developments listed below form parts of the Greystone Village subdivision, and were supported by site-specific traffic studies, which further adjusted the number of dwellings and commercial floor area. Full buildout of the subdivision was initially anticipated to occur in 2021.

175 Main Street (Milieu) & 10 Oblats Avenue (Ballantyne)
The development is constructed, but was not complete prior to the traffic counts listed in Section 2.1.7. A TIA was prepared by Novatech in March and December 2018, identifying 235 dwellings and 20,000 ft^2 of ground-floor commercial space.

205 Scholastic Drive (Deschâtelets Building)
The development is currently in the approval process. The proposal is for the Conseil des école catholiques du Centre-Est (CECCE) to renovate the existing historic Deschâtelets Building, and repurpose it to include a school with 17 classrooms and two daycare rooms, for up to 351 students.

360 Deschâtelets Avenue
The development is currently under construction. At full buildout, the development will include a nine-storey apartment building, with 85 dwellings.

375 Deschâtelets Avenue
The development is currently in the approval process. At full buildout, the development will include a six-storey apartment building and a seven-storey apartment building, with a total of 281 dwellings. A TIA was prepared by Novatech in July 2021, and revised in June and August 2022, and identifies an estimated buildout year of 2028.

530 de Mazenod Avenue (River Terraces I & II)
The development is constructed, but was not complete prior to the traffic counts listed in Section 2.1.7. A Transportation Overview and addendum were prepared by Novatech in March and December 2018, identifying 200 dwellings.

2.3 Study Area and Time Periods

The study area for this report includes the boundary roadways Oblats Avenue and Deschâtelets Avenue, as well as the intersections at Main Street/Oblats Avenue and Main Street/Hazel Street.

The selected time periods for this study are the weekday AM and PM peak hours, as they represent the 'worst case' combination of site generated traffic and adjacent street traffic. The buildout year 2026 and horizon year 2031 have been considered.

2.4 Development-Generated Travel Demand

2.4.1 Trip Generation

The number of peak hour person trips generated by the proposed development has been estimated using the *TRANS Trip Generation Manual*, which present peak period trip generation rates and mode shares for different types of housing for the AM and PM peak periods. The data is divided into trip generation rates and mode shares for Single-Family Detached Housing, Low-Rise Multifamily Housing (one or two storeys), and High-Rise Multifamily Housing (three or more storeys). For the Low-Rise Multifamily Housing land use, the process of converting the trip generation estimates from peak period to peak hour is shown below.

The *TRANS Trip Generation Manual* identifies the subject site as being located within the Ottawa Inner Area district, which has the following observed mode shares for low-rise multifamily housing during the peak periods:

- Auto Driver: 27% in AM peak, 31% in PM peak;
- Auto Passenger: 8% in AM peak, 9% in PM peak;
- Transit: 26% in AM peak, 20% in PM peak;
- Cyclist: 9% in AM peak, 9% in PM peak;
- Pedestrian: 30% in AM peak, 31% in PM peak.

A single set of mode shares for both peak hours has been assumed for the proposed development, which can be summarized as 30% driver, 10% passenger, 20% transit, 10% cyclist, and 30% pedestrian. The process of converting the trip generation estimates from peak period to peak hour is shown in the following tables.

The estimated number of person trips generated by the proposed development during the AM and PM peak periods are shown in **Table 4**. A breakdown of these trips by mode share is shown in **Table 5**.

Table 4: Proposed Residential – Peak Period Trip Generation

Land Use	TRANS Rate	Units	AM Peak Period (ppp[1])			PM Peak Period (ppp)		
			IN	OUT	TOT	IN	OUT	TOT
Low-Rise Multifamily Housing	AM: 1.35 PM: 1.58	30	12	29	*41*	26	21	*47*

1. ppp: Person Trips per Peak Period

Table 5: Proposed Residential – Peak Period Trips by Mode Share

Travel Mode	Mode Share	AM Peak Period			PM Peak Period		
		IN	OUT	TOT	IN	OUT	TOT
Residential Person Trips		**12**	**29**	***41***	**26**	**21**	***47***
Auto Driver	30%	4	8	*12*	8	6	*14*
Auto Passenger	10%	1	3	*4*	3	2	*5*
Transit	20%	2	7	*9*	4	5	*9*
Cyclist	10%	1	3	*4*	3	2	*5*
Pedestrian	30%	4	8	*12*	8	6	*14*

Table 4 of the *TRANS Trip Generation Manual* includes adjustment factors to convert the estimated number of trips generated for each mode from peak period to peak hour. A breakdown of the peak hour trips by mode is shown in **Table 6**.

Table 6: Proposed Residential – Peak Hour Trips by Mode Share

Travel Mode	Adj. Factor		AM Peak Hour			PM Peak Hour		
	AM	PM	IN	OUT	TOT	IN	OUT	TOT
Auto Driver	0.48	0.44	2	4	*6*	3	3	*6*
Auto Passenger	0.48	0.44	1	1	*2*	1	1	*2*
Transit	0.55	0.47	1	3	*4*	2	2	*4*
Cyclist	0.58	0.48	1	2	*3*	1	1	*2*
Pedestrian	0.58	0.52	2	5	*7*	4	3	*7*
Peak Hour Person Trips			**7**	**15**	***22***	**11**	**10**	***21***

From the previous table, the proposed development is estimated to generate 22 person trips (including six vehicle trips) during the AM peak hour, and 21 person trips (including six vehicle trips) during the PM peak hour.

2.4.2 Trip Distribution and Assignment

The proposed development is not projected to generate more than 60 person trips during the peak hours, and the Trip Generation trigger is not met. Therefore, the distribution and assignment of site-generated trips is exempt from this TIA.

2.5 Access Design

The proposed development at 295 Deschâtelets Avenue will include one private approach to Oblats Avenue and two private approaches to Deschâtelets Avenue. The proposed development at 355 Deschâtelets Avenue will include three private approaches to Deschâtelets Avenue. Curbs will be depressed and continuous across the proposed accesses to Oblats Avenue and Deschâtelets Avenue. The design of the proposed accesses have been evaluated using the relevant provisions of the City's *Private Approach By-Law* (PABL) and *Zoning By-Law* (ZBL), and the Transportation Association of Canada (TAC)'s *Geometric Design Guide for Canadian Roads*.

The 295 Deschâtelets Avenue site has approximately 68m of frontage to Deschâtelets Avenue and 52m of frontage to Oblats Avenue. The 355 Deschâtelets Avenue site has approximately 107m of frontage to Deschâtelets Avenue. Section 25(1)(a) of the PABL identifies that, for sites with 46m to 150m of frontage to a given roadway, a maximum of two two-way private approaches to that roadway are permitted. The 295 Deschâtelets Avenue site meets this requirement. The 355 Deschâtelets Avenue site does not meet the requirement, as three private approaches to Deschâtelets Avenue are proposed. Each proposed private approach will serve four to six dwellings, which will generate minimal trips at any time of day. Therefore, it is requested that the requirements of Section 25(a) be waived for the proposed development at 355 Deschâtelets Avenue.

Section 25(1)(c) of the PABL identifies a maximum width requirement of 9.0m for any two-way private approach, as measured at the street line. Section 107(3) of the ZBL identifies a minimum width requirement of 2.6m for any driveway providing access to permitted parking space for townhouse dwellings. Since all proposed private approaches are approximately 4.5m in width, these requirements are met.

Section 25(1)(g) of the PABL identifies a minimum separation requirement of 9m between a two-way private approach and any other private approach to the same property, as measured at the street line. Each proposed private approach to Deschâtelets Avenue meets this requirement, as the nearest edges are approximately 22m apart or more.

Section 25(1)(o) of the PABL identifies that no private approach shall be within 1.5m of the point of tangency of a corner radius at an intersection, or within 6m of the intersecting street line. For the 355 Deschâtelets Avenue site, the northernmost private approach to Deschâtelets Avenue does not meet this requirement, as the proposed location is within 6m of the intersection with Hazel Street. Shifting the proposed private approach further north to increase the distance to the Hazel Street intersection is anticipated to cause turning movement and access issues for the first unit on the north side. Turning movements for the first unit on the north side are included in **Appendix F**. Given the low projected traffic volumes generated by the proposed units, safety concerns resulting from the proximity to Hazel Street are not anticipated. Further, the offset of the proposed private approach and Hazel Street will not result in overlapping left turns. Therefore, it is requested that the requirements of Section 25(1)(o) be waived.

Section 25(1)(p) of the PABL identifies a minimum separation requirement of 3m between a private approach and the nearest property line, as measured at the street line. All proposed private approaches meet this requirement.

Section 25(1)(t) of the PABL identifies a requirement that any private approach serving a parking area with fewer than 50 parking spaces shall not have a grade exceeding 2% for the first 6m inside the property line. This requirement is met at each proposed private approach.

TAC's *Geometric Design Guide* suggests minimum corner clearances between private approaches and the nearest intersecting street, based on the class of roadway being accessed. As Oblats Avenue and Deschâtelets Avenue are local roadways, the suggested corner clearance is 15m (measured nearest edge to nearest edge). The proposed private approach to Oblats Avenue is approximately 30m from the nearest edge of Deschâtelets Avenue, and therefore meets the requirement. The northernmost private approach to Deschâtelets Avenue is approximately 15m, and therefore meets the requirement.

TAC's *Geometric Design Guide* identifies sight distance requirements, based on the design speed of a roadway (taken as the posted speed limit plus 10 km/h). The proposed accesses to Oblats Avenue and Deschâtelets Avenue have been reviewed for stopping sight distance and intersection sight distance, as they are located on the inside of the roadway curve. For a design speed of 40 km/h, the required stopping sight distance and desired intersection sight distances can be summarized as follows:

- Stopping sight distance, SSD: 50m;
- Intersection sight distance, ISD: 85m for drivers looking right to turn left;
  75m for drivers looking left to turn right.

The proposed access location on Oblats Avenue is anticipated to provide drivers with 100m or more of stopping sight distance and intersection sight distance in both directions, and therefore this access meets the requirements.

The minimum stopping sight distance of 50m is anticipated to be provided at all proposed accesses to Deschâtelets Avenue, for drivers travelling in both directions on the roadway. Stopping sight distance figures are included in **Appendix G**.

For the two proposed accesses to 295 Deschâtelets Avenue, drivers are anticipated to have clear sightlines to the Oblats Avenue intersection (i.e. looking to their right to turn left). However, drivers looking to their left to turn right are not anticipated to meet the desired ISD. For the proposed accesses to 355 Deschâtelets Avenue, drivers are not anticipated to meet the desired ISD for left turns or right turns. This is due to the proposed building envelopes and street trees that are proposed along Deschâtelets Avenue. To improve the sight distances, the street trees can be maintained such that drivers will be able to see below any branches, and the future bus shelter on Deschâtelets Avenue will consist of glass walls to maintain sightlines for outbound drivers. Given the low traffic volumes on Deschâtelets Avenue and the low projected traffic volumes exiting each access, potential conflicts between vehicles exiting the proposed development and vehicle travelling on Deschâtelets Avenue are anticipated to be infrequent. Drivers along Deschâtelets Avenue will have adequate distance to slow or stop, in the event that a driver exiting the proposed development chooses an inadequate gap in traffic. Intersection sight distance figures at each Deschâtelets Avenue access are also included in **Appendix G**.

Due to the compact nature of the proposed development, turning movements have been prepared for the units adjacent to each access. TAC's *Geometric Design Guide* includes a passenger design vehicle, with dimensions of 5.6m for an overall length, 2.0m for an overall width without mirrors, and a wheel base of 3.2m. This vehicle is intended to represent all standard vehicles that traverse Canadian roadways, and therefore has a conservative vehicle envelope for design purposes. Most of the proposed units include garages that are only marginally deeper than the length of a TAC Passenger Vehicle (i.e. one metre or less of clearance), and therefore smaller vehicles will be parked within those garages.

Turning movements have been included for the critical units located closest to Deschâtelets Avenue. TAC Passenger Vehicle movements have been completed for the units labelled as 'B2' on the Site Plan, as the garages for these units are deeper and could accommodate a TAC Passenger Vehicle. These movements are included in **Appendix F**.

Turning movements for all other critical units have been prepared using the German design vehicle Personen Kraftwagen. The dimensions of this design vehicle are comparable to mid-size North American SUVs, with an overall length of 4.88m, overall width of 1.89m (without mirrors), and a wheel base of 2.86m. Vehicle turning movements are included in **Appendix F**. The movements show that the design vehicle can generally drive into the more challenging garages in one motion. Reversing out of the garage will require drivers to reverse near opposing garage doors or residential entrances, but multiple manoeuvres to exit the garage are not required. To ensure that turning movements are not impacted, it is recommended that no encumbrances are provided within the parking bay areas (i.e. no curbs, vehicle parking, trash receptacles, snow storage, etc.). Signage prohibiting parking and other encumbrances within the internal car courts is recommended.

While drivers entering and exiting the closer garages may take longer to park due to increased caution, vehicle spillover to Deschâtelets Avenue or Oblats Avenue is not anticipated, as each access will serve a total of four to six dwelling units. The low operating speed on the boundary streets and small curb radii at each access also mitigates the likelihood of vehicles turning into an access and colliding with a vehicle attempting to enter or exit a nearby garage. Additionally, TAC's *Geometric Design Guide* does not identify a clear throat requirement to the first on-site conflict point, since Deschâtelets Avenue is classified as a local roadway.

2.6 Exemptions Review

This module reviews possible exemptions from the final TIA, as outlined in the *2017 TIA Guidelines* and *2023 Revisions to the TIA Guidelines*. The applicable exemptions for this site are shown in **Table 7**.

Table 7: TIA Exemptions

Module	Element	Exemption Criteria	Status
4.1 Development Design	*4.1.2* Circulation and Access	• Required for site plan control and zoning by-law amendment applications	Not Exempt
	4.1.3 New Street Networks	• Required for draft plan of subdivision applications	Exempt
4.2 Parking	*All elements*	• Required for site plan control and zoning by-law amendment applications	Not Exempt
4.6 Neighbourhood Traffic Calming	*All elements*	• If all of the following criteria are met: 1. Access is provided to a collector or local roadway 2. Application is for zoning by-law amendment or draft plan of subdivision 3. Proposed development generates more than 75 vehicle trips 4. Site trip infiltration is expected, and site-generated traffic will increase peak hour volumes by 50% or more along the route between the site and an arterial roadway 5. The subject street segment is adjacent to two or more of the following significant sensitive land uses: ○ School (within 250m walking distance) ○ Park ○ Retirement/older adult facility ○ Licensed child care centre ○ Community centre ○ 50+% of adjacent properties along the route(s) are occupied by residential lands and at least ten dwellings are occupied	Exempt
4.7 Transit	*4.7.1* Transit Route Capacity	• Required when proposed development generates more than 75 transit trips	Exempt
	4.7.2 Transit Priority Requirements	• Required when proposed development generated more than 75 vehicle trips	Exempt
4.8 Network Concept	*All elements*	• Required when proposed development generates more than 200 person trips during the peak hour in excess of the equivalent volume permitted by the established zoning	Exempt
4.9 Intersection Design	*All elements*	• Required when proposed development generated more than 75 vehicle trips	Exempt

Based on the foregoing, the following modules will be included in the TIA report:

- Module 4.1: Development Design
- Module 4.2: Parking
- Module 4.3: Boundary Streets
- Module 4.5: Transportation Demand Management

3.0 BACKGROUND NETWORK TRAVEL DEMAND

3.1 General Background Growth Rate

The original Greystone Village CTS prepared by Novatech anticipated that the now-completed Main Street Renewal would significantly affect traffic volumes on Main Street. For this reason, historic traffic counts were not considered to estimate a growth rate for traffic within the area.

The Greystone Village CTS established a growth rate of -2% per annum based on AM peak hour volume snapshots from the City's Strategic Long-Range Model for the 2011 and 2031 years, and applied it to all through movements on Main Street for the years analyzed in that study (2021 and 2026). The traffic counts conducted at the study area intersections on March 7, 2017 indicate that through volumes on Main Street are significantly lower than the volumes projected in the CTS for 2021 or 2026. No background growth rate has been applied to the traffic volumes rather than a negative background growth rate, to maintain a conservative approach in this study.

3.2 Other Area Developments

The other area developments listed below are significant enough to be considered and added to the future background traffic volumes. Relevant excerpts of the traffic studies prepared for the below developments are included in **Appendix H**.

15-17 Oblats Avenue
The development will retrofit an existing building and will include 284 apartment dwellings, with an estimated buildout year of 2025. Traffic generated by this development has been added to the 2026 and 2031 background traffic volumes.

141 Main Street (Corners on Main)
The development includes 144 dwellings and 13,283 ft^2 of ground-floor commercial space, and was constructed after the traffic counts shown in Section 2.1.7. Traffic generated by this development has been added to the 2026 and 2031 background traffic volumes.

Greystone Village Community Transportation Study (CTS)
The conceptual Greystone Village subdivision initially included approximately 40 single-detached dwellings, 779 condominium/townhouse dwellings, 150 retirement home dwellings, and 36,539 ft^2 of retail space. An addendum dated May 2017 included 110 additional condominium/townhouse dwellings and 10 fewer retirement dwellings. Full buildout of the subdivision was initially anticipated to occur in 2021, and traffic generated has been added to the 2026 and 2031 background traffic volumes. The following developments included site-specific traffic projections, which have been described below.

175 Main Street (Milieu) & 10 Oblats Avenue (Ballantyne)
The development includes 235 dwellings and 20,000 ft^2 of ground-floor commercial space, and was constructed after the traffic counts shown in Section 2.1.7. Traffic generated by this development has been added to the 2026 and 2031 background traffic volumes.

205 Scholastic Drive (Deschâtelets Building)
The development includes a renovation of the existing historic Deschâtelets Building, repurposing it to include a school with 17 classrooms and two daycare rooms, for up to 351 students. Traffic generated by this development has been added to the 2026 and 2031 background traffic volumes.

375 Deschâtelets Avenue
The development will include 281 apartment dwellings, with an estimated buildout year of 2028. Traffic generated by this development has been added to the 2031 background traffic volumes.

530 de Mazenod Avenue (River Terraces I & II)
The development includes 200 dwellings, and was constructed after the traffic counts shown in Section 2.1.7. Traffic generated by this development has been added to the 2026 and 2031 background traffic volumes.

3.3 Future Traffic Conditions

The figures listed below show the following traffic volumes:

- Other area development traffic in 2026 is shown in **Figure 6**;
- Other area development traffic in 2031 is shown in **Figure 7**;
- Background traffic volumes in 2026 is shown in **Figure 8**;
- Background traffic volumes in 2031 is shown in **Figure 9**.

3.4 Demand Rationalization

The Demand Rationalization module includes identifying any locations and approaches where total auto demand is projected to exceed capacity, and what reduction in peak hour volumes are required for demand to meet capacity. However, determining whether any approach has volumes that exceed capacity requires intersection capacity analysis, which is outside the scope of this TIA (as shown in **Table 7**).

Figure 6: 2026 Other Area Development-Generated Traffic Volumes

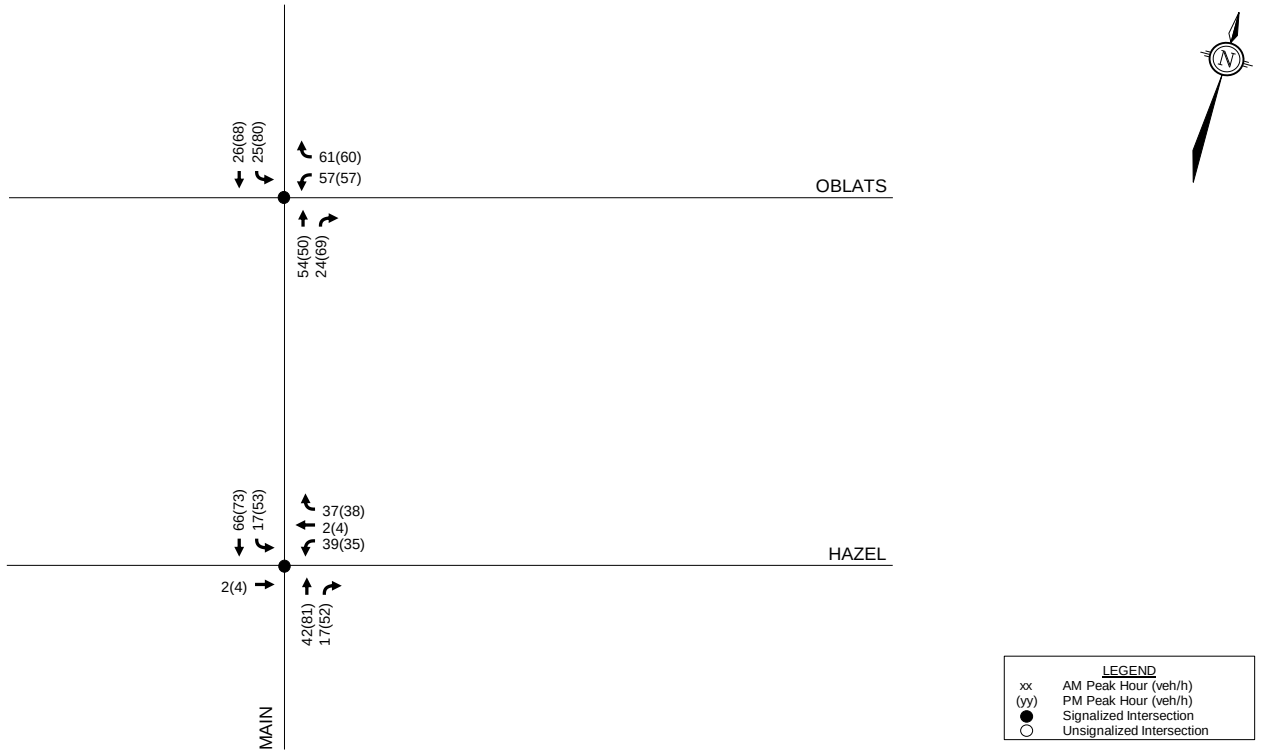


Figure 7: 2031 Other Area Development-Generated Traffic Volumes

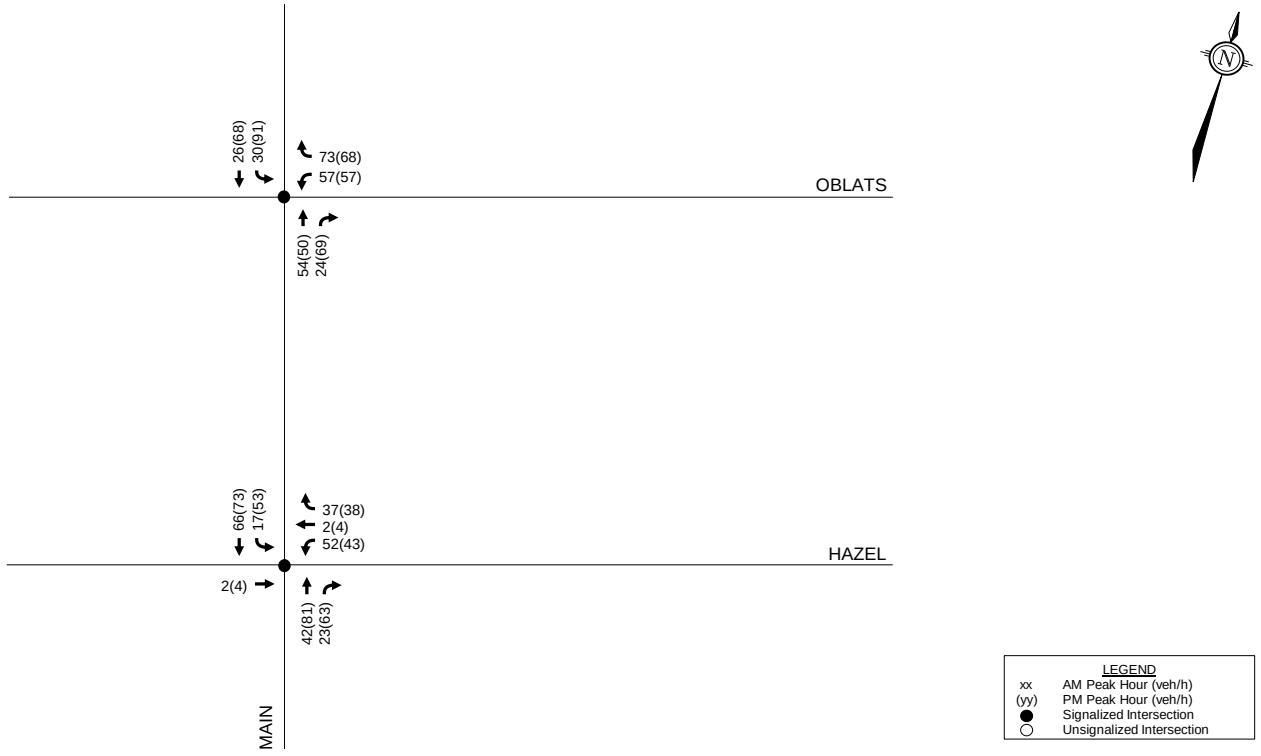


Figure 8: 2026 Background Traffic Volumes

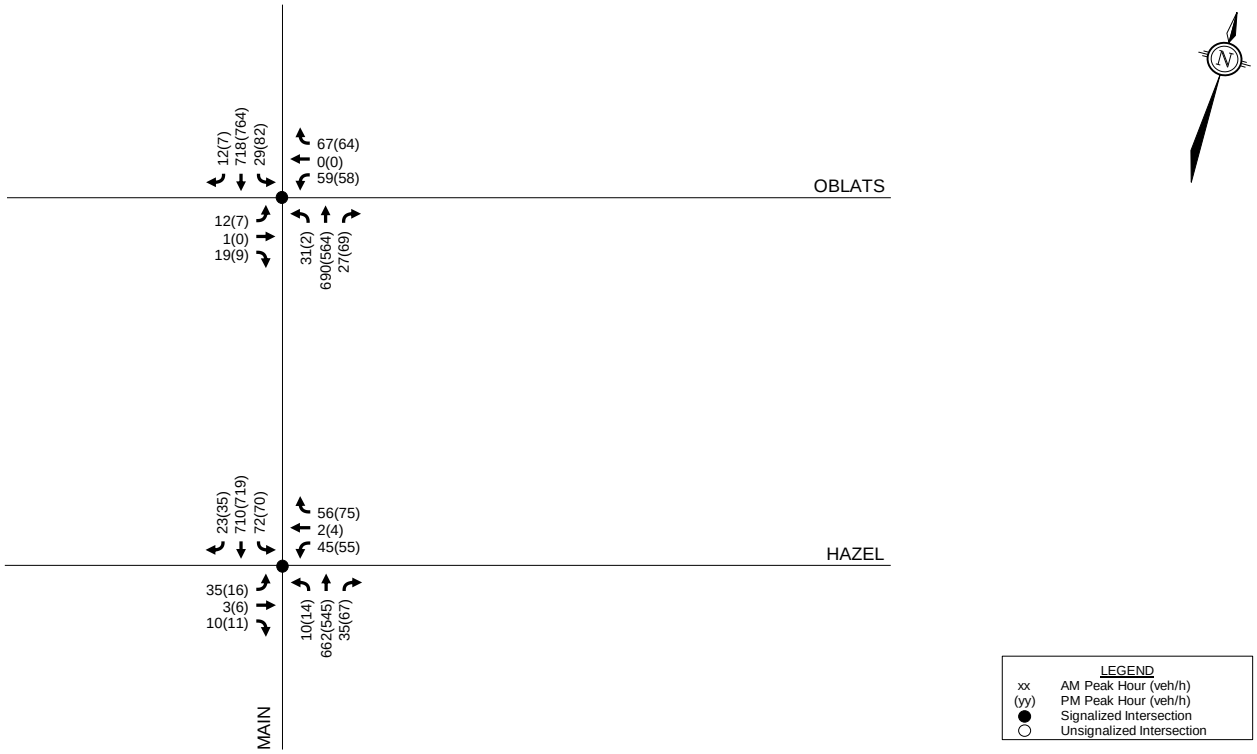
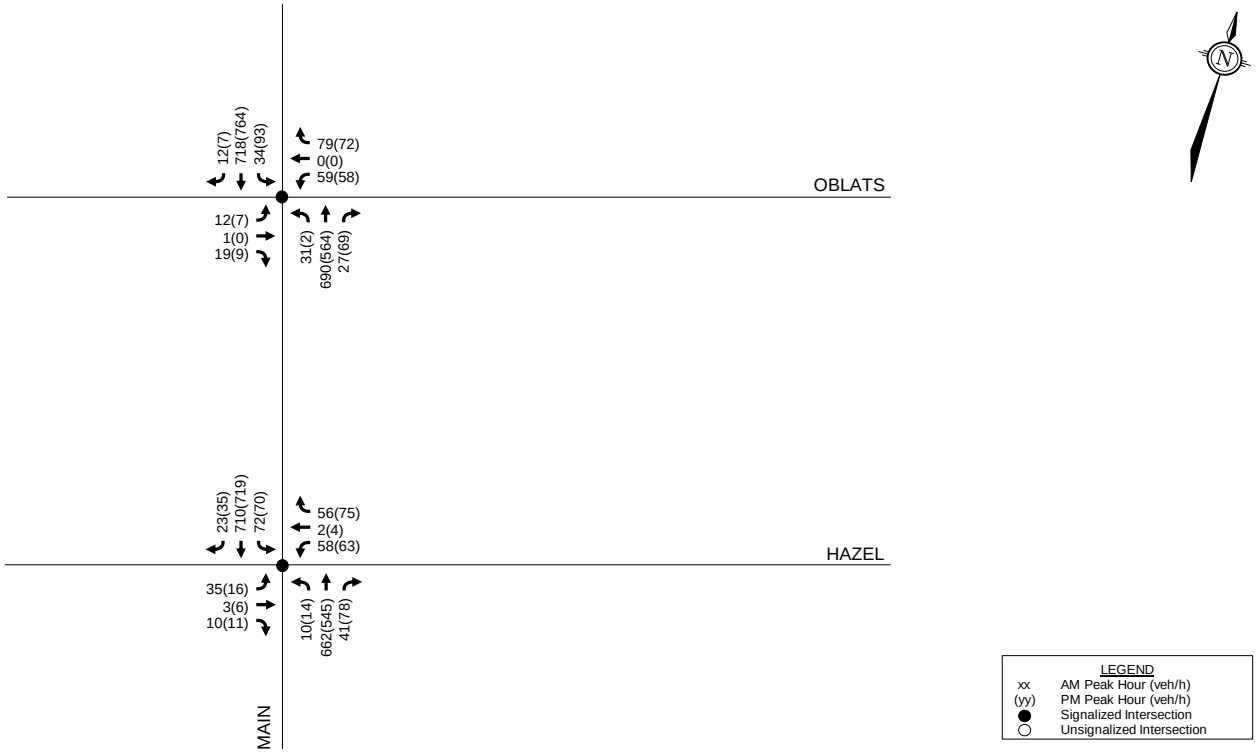


Figure 9: 2031 Background Traffic Volumes



4.0 ANALYSIS

4.1 Development Design

4.1.1 Design for Sustainable Modes

All units are accessed via internal pathways that connect to the sidewalks on Oblats Avenue and Deschâtelets Avenue. Sidewalks along the subject site's frontages to Oblats Avenue and Deschâtelets Avenue are planned to be completed as part of the subdivision works and after construction of the proposed townhouses.

The proposed development includes single or double garages for each unit, which are anticipated to include room for bicycle storage. The bicycle parking requirements per the City's ZBL are reviewed in Section 4.2.

OC Transpo's service design guideline for peak period service is to provide service within a five-minute (400m) walk of home, work, or school for 95% of urban residents. All proposed dwellings will be within this walking distance of at least one transit stop. The previously planned bus stop at the southeast corner of Oblats Avenue/Deschâtelets Avenue is proposed to be relocated to an area that is appropriately spaced from the southernmost access to 295 Deschâtelets Avenue and the future pedestrian crossover on Deschâtelets Avenue aligned with the Grand Alleé. As stated in Section 2.5, the future bus shelter on Deschâtelets Avenue will consist of glass walls to maintain sightlines for outbound drivers.

A review of the *Transportation Demand Management (TDM)-Supportive Design and Infrastructure Checklist* has been conducted, and is included in **Appendix I**. All required TDM-supportive design and infrastructure measures in the TDM checklist are met. In addition to the required measures, the proposed development also meets the following 'basic' or 'better' measures as defined in the *TDM-Supportive Development Design and Infrastructure Checklist*:

- Locate building close to the street, and do not locate parking areas between the street and building entrances;
- Locate building doors and windows to ensure visibility of pedestrians from the building, for their security and comfort;
- Provide safe, direct, and attractive walking routes from building entrances to nearby transit stops;
- Provide lighting, landscaping, and benches along walking and cycling routes between building entrances and streets, sidewalks, and trails;
- Provide secure bicycle parking spaces equivalent to at least the number of units at condominiums or multi-family residential developments.

4.1.2 Circulation and Access

Small moving trucks, snowplows, and snow removal trucks are anticipated to drive forward into each access, and reverse out. Garbage collection will occur curbside on Oblats Avenue and Deschâtelets Avenue. Turning movements for a Light Single Unit (LSU) design vehicle entering and exiting each access is included in **Appendix F**. Due to the narrow width of the accesses, larger moving trucks will be required to load on-street.

No on-site fire route is identified for the proposed development, and therefore, fire trucks will park curbside on Oblats Avenue or Deschâtelets Avenue.

4.2 Parking

The subject site is located in Area B on Schedule 1 and Area X on Schedule 1A of the City's ZBL. Minimum vehicular and bicycle parking rates for the proposed residential land use are provided in Sections 101, 102, and 111 of the ZBL. The proposed parking supply for each block and the parking rates outlined in the ZBL are summarized in **Table 8**.

Table 8: Parking Requirements Per Zoning By-Law

Parking	Rate	Units	Required	Proposed
295 Deschâtelets Avenue				
Resident Parking	0.75 per dwelling unit (townhouse) 1.0 per dwelling unit (semi-detached)	**14** 4 towns 10 semis	13 (3 + 10)	19
Visitor Parking	0.1 per dwelling unit, minus the first 12 units		0	0
Bicycle Parking	No requirement; garage is provided for each unit		0	19
355 Deschâtelets Avenue				
Resident Parking	0.75 per dwelling unit (townhouse) 1.0 per dwelling unit (semi-detached)	**16** 8 towns 8 semis	14 (6 + 8)	20
Visitor Parking	0.1 per dwelling unit, minus the first 12 units		0	0
Bicycle Parking	No requirement; garage is provided for each unit		0	20

Note: Each garage space has been counted as one vehicle space and one bicycle space

Based on the previous table, the minimum vehicle parking requirements are met by the proposed development. As each proposed residential unit will include a single or double garage, there is no additional bicycle parking requirement.

4.3 Boundary Streets

This section provides a review of the boundary streets Oblats Avenue and Deschâtelets Avenue, using complete streets principles. The *MMLOS Guidelines*, produced by IBI Group in October 2015, were used to evaluate the levels of service for each alternative mode of transportation, based on the approved cross-sections for each roadway. Oblats Avenue and Deschâtelets Avenue have been evaluated based on the targets associated with roadways 'within 300m of a school.'

A detailed segment MMLOS review of Innes Road is included in **Appendix J**. A summary of the segment MMLOS analysis is provided below in **Table 9**.

Table 9: Segment MMLOS Summary

Segment	PLOS		BLOS		TLOS		TkLOS	
	Actual	Target	Actual	Target	Actual	Target	Actual	Target
Oblats Avenue	A	A	A	D	F	-	C	-
Deschâtelets Avenue	A		A		F		C	

Based on the previous table, the boundary streets meet the target pedestrian level of service (PLOS) A and target bicycle level of service (BLOS) D.

The boundary streets do not have a target transit level of service (TLOS) or truck level of service (TkLOS), but these modes were still evaluated as transit service is provided on these roadways. A TLOS F is achieved, as there is frequent driveway or on-street parking friction on both.

4.4 Transportation Demand Management

4.4.1 Context for TDM

The proposed development includes 30 dwellings, consisting of 18 semi-detached dwellings and 12 townhouse dwellings.

4.4.2 Need and Opportunity

The mode shares for the proposed development are assumed to generally follow the mode shares for the Ottawa Inner Area. Given the relatively small number of proposed dwellings, failure to meet the assumed auto driver share of 30% is anticipated to have negligible impacts to the level of service for intersections within the study area. For example, if a 40% driver share was achieved instead of 30%, the proposed development would generate two extra vehicle trips during the peak hours (i.e. eight vehicle trips instead of six).

4.4.3 TDM Program

The proposed development conforms to the City's TDM initiatives by providing easy access to local pedestrian, bicycle, and transit systems, as outlined in Section 4.1.1. Additionally, a review of the City's *TDM Measures Checklist* has been conducted, and is included in **Appendix I**. The following measures will be implemented at the sales centre for the proposed development:

- Display local area maps with walking/cycling routes and key destinations;
- Display relevant transit schedules and route maps;
- Provide multimodal travel option information package to new residents.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the foregoing, the conclusions and recommendations of this TIA can be summarized as follows:

Development-Generated Traffic

- The proposed development is estimated to generate 22 person trips (including six vehicle trips) during the AM peak hour, and 21 person trips (including six vehicle trips) during the PM peak hour.

Access Design

- The proposed development at 295 Deschâtelets Avenue will include one private approach to Oblats Avenue and two private approaches to Deschâtelets Avenue. The proposed development at 355 Deschâtelets Avenue will include three private approaches to Deschâtelets Avenue.

- Section 25(1)(a) of the PABL identifies that, for sites with 46m to 150m of frontage to a given roadway, a maximum of two two-way private approaches to that roadway are permitted. The 355 Deschâtelets Avenue site does not meet the requirement, as three private approaches to Deschâtelets Avenue are proposed. Each proposed private approach will serve four to six dwellings, which will generate minimal trips at any time of day.

- Section 25(1)(o) of the PABL identifies that no private approach shall be within 1.5m of the point of tangency of a corner radius at an intersection, or within 6m of the intersecting street line. For the 355 Deschâtelets Avenue site, the northernmost private approach to Deschâtelets Avenue does not meet this requirement, as the proposed location is within 6m of the intersection with Hazel Street. Shifting the proposed private approach further north to increase the distance to the Hazel Street intersection is anticipated to cause turning movement and access issues for the first unit on the north side. Given the low projected traffic volumes generated by the proposed units, safety concerns resulting from the proximity to Hazel Street are not anticipated. Further, the offset of the proposed private approach and Hazel Street will not result in overlapping left turns.

- The proposed access location on Oblats Avenue is anticipated to provide drivers with 100m or more of stopping sight distance and intersection sight distance in both directions, and therefore this access meets the requirements. The minimum stopping sight distance of 50m is anticipated to be provided at all proposed accesses to Deschâtelets Avenue, for drivers travelling in both directions on the roadway.

- To improve the intersection sight distances at the Deschâtelets Avenue accesses, the street trees can be maintained such that drivers will be able to see below any branches, and the future bus shelter on Deschâtelets Avenue will consist of glass walls to maintain sightlines for outbound drivers. Given the low traffic volumes on Deschâtelets Avenue and the low projected traffic volumes exiting each access, potential conflicts between vehicles exiting the proposed development and vehicle travelling on Deschâtelets Avenue are anticipated to be infrequent. Drivers along Deschâtelets Avenue will have adequate distance to slow or stop, in the event that a driver exiting the proposed development chooses an inadequate gap in traffic.

- Turning movements show that the Personen Kraftwagen design vehicle can generally drive into the more challenging garages in one motion. Reversing out of the garage will require drivers to reverse near opposing garage doors or residential entrances, but multiple manoeuvres to exit the garage are not required. To ensure that turning movements are not impacted, it is recommended that no encumbrances are provided within the parking bay areas (i.e. no curbs, vehicle parking, trash receptacles, snow storage, etc.). Signage prohibiting parking and other encumbrances within the internal car courts is recommended.

- While drivers entering and exiting the closer garages may take longer to park due to increased caution, vehicle spillover to Deschâtelets Avenue or Oblats Avenue is not anticipated, as each access will serve a total of four to six dwelling units. The low operating speed on the boundary streets and small curb radii at each access also mitigates the likelihood of vehicles turning into an access and colliding with a vehicle attempting to enter or exit a nearby garage.

Development Design

- All units are accessed via internal pathways that connect to the sidewalks on Oblats Avenue and Deschâtelets Avenue. Sidewalks along the subject site's frontages to Oblats Avenue and Deschâtelets Avenue are planned to be completed as part of the subdivision works and after construction of the proposed townhouses.

- The proposed development includes single or double garages for each unit, which are anticipated to include room for bicycle storage.

- OC Transpo's service design guideline for peak period service is to provide service within a five-minute (400m) walk of home, work, or school for 95% of urban residents. All proposed dwellings will be within this walking distance of at least one transit stop. The previously planned bus stop at the southeast corner of Oblats Avenue/Deschâtelets Avenue is proposed to be relocated to an area appropriately spaced from the southernmost access to 295 Deschâtelets Avenue and the future pedestrian crossover aligned with the Grand Alleé.

- A review of the *Transportation Demand Management (TDM)-Supportive Design and Infrastructure Checklist* has been conducted. All required TDM-supportive design and infrastructure measures in the TDM checklist are met.

- Small moving trucks, snowplows, and snow removal trucks are anticipated to drive forward into each access, and reverse out. Large moving trucks are anticipated to load on-street.

- No on-site fire route is identified for the proposed development, and therefore, fire trucks will park curbside on Oblats Avenue or Deschâtelets Avenue. Garbage collection will also occur curbside on Oblats Avenue or Deschâtelets Avenue.

Parking

- The minimum vehicle parking requirements are met by the proposed development. As each proposed residential unit will include a single or double garage, there is no additional bicycle parking requirement.

Boundary Streets

- Oblats Avenue and Deschâtelets Avenue both meet the target pedestrian level of service (PLOS) A and target bicycle level of service (BLOS) D.

Transportation Demand Management

- The following measures will be implemented at the sales centre within the proposed development:
    - Display local area maps with walking/cycling routes and key destinations;
    - Display relevant transit schedules and route maps;
    - Provide multimodal travel option information package to new residents.

Based on the foregoing, the proposed development is recommended from a transportation perspective.

NOVATECH

Prepared by:

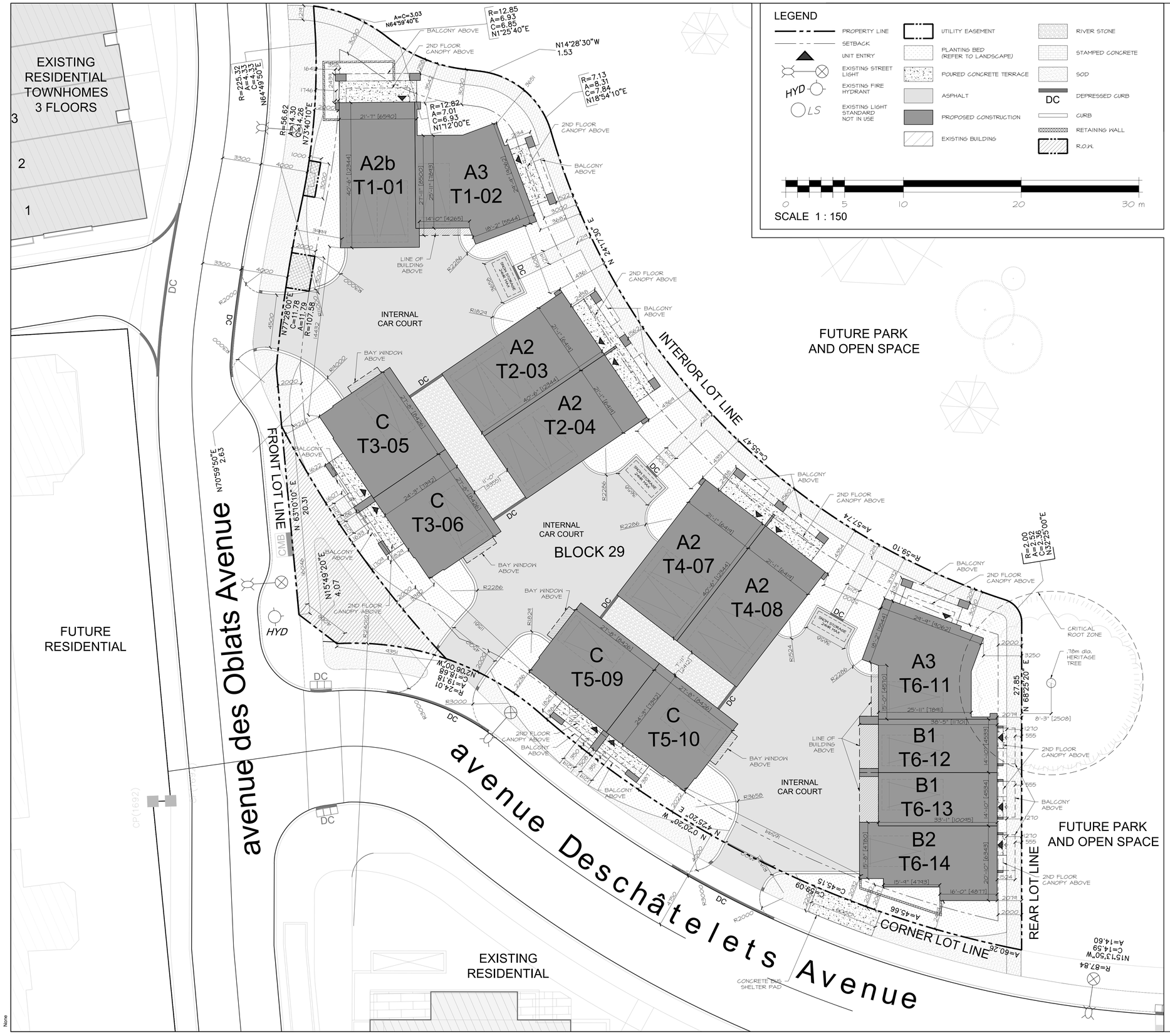
Joshua Audia, P.Eng.
Project Engineer | Transportation

Reviewed by:

Brad Byvelds, P.Eng.
Project Manager | Transportation

APPENDIX A

Site Plan



LEGEND

- PROPERTY LINE
- SETBACK
- UNIT ENTRY
- EXISTING STREET LIGHT
- EXISTING FIRE HYDRANT
- EXISTING LIGHT STANDARD NOT IN USE
- UTILITY EASEMENT
- PLANTING BED (REFER TO LANDSCAPE)
- POURED CONCRETE TERRACE
- ASPHALT
- PROPOSED CONSTRUCTION
- EXISTING BUILDING
- RIVER STONE
- STAMPED CONCRETE
- SOD
- DEPRESSED CURB
- CURB
- RETAINING WALL
- R.O.W.

0 5 10 20 30 m

SCALE 1 : 150

SURVEY INFORMATION TAKEN FROM:

PART OF BLOCKS
26, 28, 29, 30, 31 & 32
REGISTERED PLAN 4M-1596 AND PART OF BLOCK 58
REGISTERED PLAN 4M-1583
CITY OF OTTAWA

ANNIS O'SULLIVAN VOLLEBEKK LTD. 2017

ZONING SUMMARY (BLOCK 29)

R3Q[2306], Planned Unit Development (Detached Dwellings and Townhouse Dwellings)

		REQUIRED	PROVIDED
MINIMUM LOT WIDTH (m)		N/A	N/A
MINIMUM LOT AREA (m^2)		1,400 m^2	2,416 m^2
MINIMUM FRONT YARD (m)		3.0 m	2.0 m
MINIMUM CORNER SIDE YARD (m)		3.0 m	2.0 m
MINIMUM INTERIOR SIDE YARD (m)		1.8 m	3.0 m
MINIMUM REAR YARD (m)		18.5m (25% LOT DEPTH)	2.0 m
MAXIMUM BUILDING HEIGHT (m)		11 m	11 m
(5)(b)(i)	FRONT YARD	0.6m	N/A
	IN. SIDE YARD	NO LIMIT	1.5 m
	C. SIDE YARD	0.6m	0.2 m
	REAR YARD	NO LIMIT	1.2 m
(6)(b)(iv)	FRONT YARD	2.0 m (MAX PROJ.) / 1.0 m (TO PROP.)	0.4 m / 1.6 m
	IN. SIDE YARD	2.0 m (MAX PROJ.) / 1.0 m (TO PROP.)	2.5 m / 1.2 m
	C. SIDE YARD	2.0 m (MAX PROJ.) / 1.0 m (TO PROP.)	2.0 m / 0.2 m
	REAR YARD	2.0 m (MAX PROJ.) / 1.0 m (TO PROP.)	1.6 m / 0.5 m

PLANNED UNIT DEVELOPMENT - PART 5, SECTION 131
(1)(c) the entire planned unit development complies with all applicable Sections of the By-law, the provisions set out in this Section and Table 131, however, development parcels within the planned unit development, whether severed or not, that have vehicular access off of the private way only, need not comply with the dwelling type specific provisions indicated in Part 6 other than maximum permitted building height.

MINIMUM WIDTH OF PRIVATE WAY	6.0 m	4.5 m
MIN. SETBACK FOR ANY WALL OF RESIDENTIAL USE BUILDING TO PRIVATE WAY	1.8 m	0 m
MIN. SETBACK FOR ANY GARAGE OR CARPORT ENTRANCE FROM PRIVATE WAY	5.2 m	0 m
MINIMUM SEPARATION BETWEEN BUILDINGS	1.2 m	2.4 m

PARKING
a) In addition to providing parking pursuant to Section 100 of this by-law, parking within a planned unit development may be located anywhere within the development, whether or not the development parcels within the planned unit development are severed.

LANDSCAPE AND PARKING		
a) In the case of a planned unit development consisting of detached, linked-detached, semi-detached, three-unit or townhouse dwellings, or any combination thereof, all lands located between the dwelling unit or oversize dwelling unit, the extension of the main wall of the dwelling unit or oversize dwelling unit, and the private way are to be landscaped with soft landscaping, other than the area used for a driveway leading to the dwelling unit's associated parking space, garage or carport.	COMPLIES	DOES NOT COMPLY
b) In no case may any dwelling unit or oversize dwelling unit located within a Planned Unit Development that has its own driveway leading to its associated parking space, garage or carport have a driveway that is wider than the associated parking space, garage, or carport. Furthermore, the remaining area between the dwelling unit or oversize dwelling unit and the private way must be landscaped with soft landscaping, and a walkway extending from the private way back to the principal entranceway is prohibited. A path, that is mostly parallel to the street, that provides pedestrian access from the driveway to the principal entranceway of no more than 1.2 m is permitted.	COMPLIES	COMPLIES
c) Despite (a) and (b), where a development parcel containing a dwelling unit or oversize dwelling unit, located within a Planned Unit Development in an R1, R2, R3 or R4 Zone within Schedule 342 has frontage on a public street, whether severed or not, the area between the dwelling unit or oversize dwelling unit and the street lot line is subject to the requirements of Sections 139 and 140.	N/A	N/A

PARKING REQUIREMENTS		
MINIMUM PARKING SPACES (1.00 / SEMI-DETACHED)	10	15
MINIMUM PARKING SPACES (0.75 / TOWNHOUSE)	3	4
MINIMUM PARKING VISITOR PARKING SPACES	0	0
TOTAL PARKING SPACES	13	19

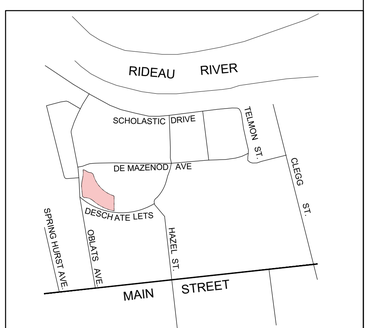
NOTE: CELLS HIGHLIGHTED IN RED INDICATE REQUESTED RELIEF FROM PROVISIONS OF ZONING BY-LAW (2008-250)

SITE STATISTICS

RESIDENTIAL BLOCK #	# OF UNITS	GROSS FLOOR AREA (m^2)
T1	2	386 m^2
T2	2	384 m^2
T3	2	315 m^2
T4	2	384 m^2
T5	2	315 m^2
T6	4	601 m^2
	14 UNITS (TOTAL)	2,385 m^2 (TOTAL)

UNIT TYPOLOGIES	
SEMI-DETACHED	10
TOWNHOUSE	4

SITE COVERAGE	
TOTAL LOT AREA (m^2)	2,416 m^2
TOTAL GROSS BUILDING AREA (m^2 / % LOT COVERAGE)	1141 m^2 / 34.3%
TOTAL HARD LANDSCAPING AREA (m^2 / % LOT COVERAGE)	251 m^2 / 10.6%
TOTAL SOFT LANDSCAPING AREA (m^2 / % LOT COVERAGE)	549 m^2 / 22.7%
TOTAL VEHICULAR SURFACE AREA (m^2 / % LOT COVERAGE)	661 m^2 / 27.4%



KEY PLAN - NTS

PROJECT CONSULTANTS

DEVELOPER / OWNER
EQ HOMES INC.
THE REGIONAL GROUP
1731 WOODWARD DRIVE - 2ND FLOOR
OTTAWA, ON, K2C 0P9
PHONE: (613) 230-2100

ARCHITECT
HOBIN ARCHITECTURE INC.
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OTTAWA, ON, K1S 3K7
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PHONE: (613) 238-7200 x 105

PLANNING
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240 MICHAEL COWPLAND DRIVE SUITE 200
OTTAWA, ON, K2M 1P6
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LANDSCAPE
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240 MICHAEL COWPLAND DRIVE SUITE 200
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CONTACT: RYAN JAMES
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SURVEYOR
ANNIS, O'SULLIVAN, VOLLEBEKK LTD.
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OTTAWA, ON, K2E 7S6
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PHONE: (613) 727-4552 x 226

GEOTECHNICAL
PATERSON GROUP INC.
9 AURIGA DRIVE
OTTAWA, ON, K2E 7T9
CONTACT: SCOTT S. DENNIS
PHONE: (613) 226-7381

no.	date	revision
5	2024-10-10	ISSUED FOR COORDINATION
4	2024-09-19	ISSUED FOR COORDINATION
3	2024-08-14	SPC PRECONSULT 3
2	2024-08-09	ISSUED FOR COORDINATION
1	2024-07-16	ISSUED FOR REVIEW

It is the responsibility of the appropriate contractor to check and verify all dimensions on site and report all errors and/or omissions to the architect.

All contractors must comply with all pertinent codes and by-laws.

Do not scale drawings.

This drawing may not be used for construction until signed.

Hobin Architecture Incorporated
63 Pamilla Street
Ottawa, Ontario
Canada K1S 3K7
T: 613-238-7200
F: 613-235-2005
E: mail@hobinarc.com
hobinarc.com

HOBIN ARCHITECTURE

PROJECT/LOCATION:
FORECOURT TOWNHOMES
175 MAIN STREET - GREYSTONE

DRAWING TITLE:
SITEPLAN - BLOCK 29
4M-1596
295 DESCHÂTELETS AVE.

DRAWN BY:	DATE:	SCALE:
	24/03/15	1:150

PROJECT:

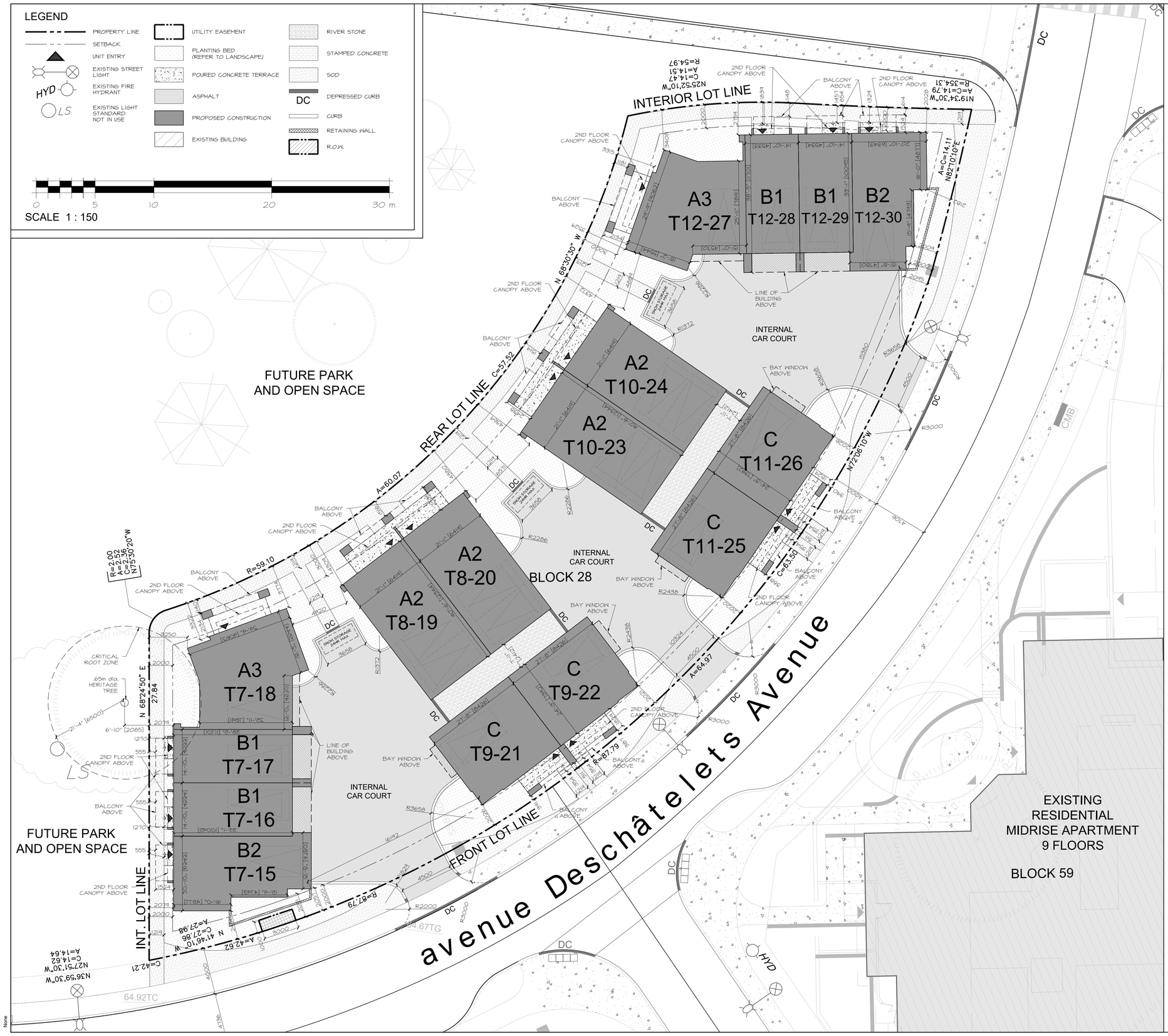
DRAWING NO.: A1.02

REVISION NO.:

City Plan No.: XXXXX

File Number: D07-XX-XX-XXXX

None
None



SURVEY INFORMATION TAKEN FROM:

PART OF BLOCKS
26, 28, 29, 30, 31 & 32
REGISTERED PLAN 4M-1596 AND PART OF BLOCK 58
REGISTERED PLAN 4M-1583
CITY OF OTTAWA

ANNIS O'SULLIVAN VOLLEBEKK LTD. 2017

ZONING SUMMARY (BLOCK 28)

R3Q[2306], Planned Unit Development (Detached Dwellings and Townhouse Dwellings)

	REQUIRED	PROVIDED
MINIMUM LOT WIDTH (m)	N/A	N/A
MINIMUM LOT AREA (m^2)	1,400 m^2	2,416 m^2
MINIMUM FRONT YARD (m)	3.0 m	2.0 m
MINIMUM INTERIOR SIDE YARD (m)	1.8 m	2.0 m
MINIMUM REAR YARD (m)	7.1m (25% LOT DEPTH)	3.0 m
MAXIMUM BUILDING HEIGHT (m)	11 m	11 m

PERMITTED PROJECTION INTO YARDS - PART 2, SECTION 65

(5)(b)(i)	FRONT YARD	0.6 m	0.2 m
	IN. SIDE YARD	NO LIMIT	1.2 m
	REAR YARD	NO LIMIT	1.1 m
(6)(b)(iv)	FRONT YARD	2.0 m (MAX PROJ.)	2.0 m
		1.0 m (TO PROP.)	0.2 m
	IN. SIDE YARD	2.0 m (MAX PROJ.)	1.6 m
		1.0 m (TO PROP.)	0.5 m
	REAR YARD	2.0 m (MAX PROJ.)	2.5 m
		1.0 m (TO PROP.)	1.1 m

PLANNED UNIT DEVELOPMENT - PART 5, SECTION 131
(1)(c) the entire planned unit development complies with all applicable Sections of the By-law, the provisions set out in this Section and Table 131, however, development parcels within the planned unit development, whether severed or not, that have vehicular access off of the private way only, need not comply with the dwelling type specific provisions indicated in Part 6 other than maximum permitted building height.

MINIMUM WIDTH OF PRIVATE WAY	6.0 m	4.5 m
MIN. SETBACK FOR ANY WALL OF RESIDENTIAL USE BUILDING TO PRIVATE WAY	1.8 m	0 m
MIN. SETBACK FOR ANY GARAGE OR CARPORT ENTRANCE FROM PRIVATE WAY	5.2 m	0 m
MINIMUM SEPARATION BETWEEN BUILDINGS	1.2 m	2.4 m

PARKING
a) In addition to providing parking pursuant to Section 100 of this by-law, parking within a planned unit development may be located anywhere within the development, whether or not the development parcels within the planned unit development are severed.

LANDSCAPE AND PARKING

a) In the case of a planned unit development consisting of detached, linked-detached, semi-detached, three-unit or townhouse dwellings, or any combination thereof, all lands located between the dwelling unit or oversize dwelling unit, the extension of the main wall of the dwelling unit or oversize dwelling unit, and the private way are to be landscaped with soft landscaping, other than the area used for a driveway leading to the dwelling unit's associated parking space, garage or carport.	COMPLIES	DOES NOT COMPLY
b) In no case may any dwelling unit or oversize dwelling unit located within a Planned Unit Development that has its own driveway leading to its associated parking space, garage or carport have a driveway that is wider than the associated parking space, garage, or carport. Furthermore, the remaining area between the dwelling unit or oversize dwelling unit and the private way must be landscaped with soft landscaping, and a walkway extending from the private way back to the principal entranceway is prohibited. A path, that is mostly parallel to the street, that provides pedestrian access from the driveway to the principal entranceway of no more than 1.2 m is permitted.	COMPLIES	COMPLIES
c) Despite (a) and (b), where a development parcel containing a dwelling unit or oversize dwelling unit, located within a Planned Unit Development in an R1, R2, R3 or R4 Zone within Schedule 342 has frontage on a public street, whether severed or not, the area between the dwelling unit or oversize dwelling unit and the street lot line is subject to the requirements of Sections 139 and 140.	N/A	N/A

PARKING REQUIREMENTS

MINIMUM PARKING SPACES (1.00 / SEMI-DETACHED)	8	12
MINIMUM PARKING SPACES (0.75 / TOWNHOUSE)	6	8
MINIMUM PARKING VISITOR PARKING SPACES	0	0
TOTAL PARKING SPACES	14	20

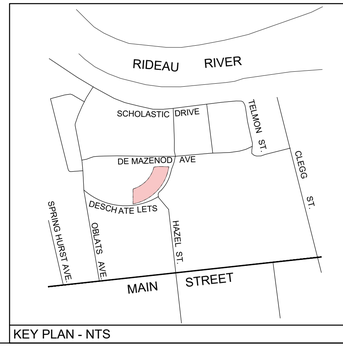
NOTE: CELLS HIGHLIGHTED IN RED INDICATE REQUESTED RELIEF FROM PROVISIONS OF ZONING BY-LAW (2008-250)

SITE STATISTICS

RESIDENTIAL BLOCK #	# OF UNITS	GROSS FLOOR AREA (m^2)
T7	4	601 m^2
T8	2	384 m^2
T9	2	315 m^2
T10	2	384 m^2
T11	2	315 m^2
T12	4	601 m^2
	16 UNITS (TOTAL)	2,600 m^2 (TOTAL)

UNIT TYPOLOGIES	
SEMI-DETACHED	8
TOWNHOUSE	8

SITE COVERAGE	
TOTAL LOT AREA (m^2)	2,416 m^2
TOTAL GROSS BUILDING AREA (m^2 / % LOT COVERAGE)	1,022 m^2 / 42.3%
TOTAL HARD LANDSCAPING AREA (m^2 / % LOT COVERAGE)	350 m^2 / 14.5%
TOTAL SOFT LANDSCAPING AREA (m^2 / % LOT COVERAGE)	441 m^2 / 18.5%
TOTAL VEHICULAR SURFACE AREA (m^2 / % LOT COVERAGE)	581 m^2 / 24.1%



KEY PLAN - NTS

PROJECT CONSULTANTS

DEVELOPER / OWNER
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CONTACT: ROBERT TRAN
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GEOTECHNICAL
PATERSON GROUP INC.
9 AURIGA DRIVE
OTTAWA, ON, K2E 7T9
CONTACT: SCOTT S. DENNIS
PHONE: (613) 226-7381

no.	date	revision
5	2024-10-10	ISSUED FOR COORDINATION
4	2024-09-19	ISSUED FOR COORDINATION
3	2024-08-19	SPC PRECONSULT 3
2	2024-08-09	ISSUED FOR COORDINATION
1	2024-07-16	ISSUED FOR REVIEW

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E: mail@hobinarc.com
hobinarc.com

HOBIN ARCHITECTURE

PROJECT/LOCATION:
FORECOURT TOWNHOMES
175 MAIN STREET - GREYSTONE

DRAWING TITLE:
SITEPLAN - BLOCK 28
4M-1596
355 DESCHÂTELETS AVE.

DRAWN BY:	DATE:	SCALE:
	24/03/15	1:150

PROJECT:

DRAWING NO.: A1.01

REVISION NO.:

City Plan No.: XXXXXX

File Number: D07-XX-XX-XXXX

APPENDIX B

TIA Screening Form

City of Ottawa 2017 TIA Guidelines TIA Screening

1. Description of Proposed Development

Municipal Address	295 and 355 Deschâtelets Avenue
Description of Location	E of Deschâtelets Ave b/w Oblats Ave & de Mezenod Ave
Land Use Classification	Residential
Development Size (units)	30 Units
Development Size square metre (m^2)	N/A
Number of Accesses and Locations	Five on Deschâtelets Ave, One on Oblats Ave
Phase of Development	One
Buildout Year	2026

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

2. Trip Generation Trigger

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

Table notes:

1. Table 2, Table 3 & Table 4 TRANS Trip Generation Manual
2. Institute of Transportation Engineers (ITE) Trip Generation Manual 11.1 Ed.

Land Use Type	Minimum Development Size
Single-family homes	**60 units**
Multi-Use Family (Low-Rise)[1]	**90 units**
Multi-Use Family (High-Rise)[1]	**150 units**
Office[2]	**1,400 m^2**
Industrial[2]	**7,000 m^2**
Fast-food restaurant or coffee shop[2]	**110 m^2**
Destination retail[2]	**1,800 m^2**
Gas station or convenience market[2]	**90 m^2**

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

3. Location Triggers

	Yes	No
Does the development propose a new driveway to a boundary street that is designated as part of the Transit Priority Network, Rapid Transit network or Cross-Town Bikeways?	☐	☑
Is the development in a Hub, a Protected Major Transit Station Area (PMTSA), or a Design Priority Area (DPA)?[2]	☐	☑

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

4. Safety Triggers

	Yes	No
Are posted speed limits on a boundary street are 80 kilometers per hour (km/h) or greater?	☐	☑
Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway?	☑	☐
Is the proposed driveway within the area of influence of an adjacent traffic signal or roundabout (i.e. within 300 metre [m] of intersection in rural conditions, or within 150 m of intersection in urban/ suburban conditions)?	☐	☑
Is the proposed driveway within auxiliary lanes of an intersection?	☐	☑
Does the proposed driveway make use of an existing median break that serves an existing site?	☐	☑

[2] Hubs are identified in Schedules B1 to B8 of the City of Ottawa Official Plan. PMTSAs are identified in Schedule C1 of the Official Plan. DPAs are identified in Schedule C7A and C7B of the Official. See Chapter 4 for a list of City of Ottawa Planning and Engineering documents that support the completion of TIA.

	Yes	No
Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?	☐	☑
Does the development include a drive-thru facility?	☐	☑

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

5. Summary

Results of Screening	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).

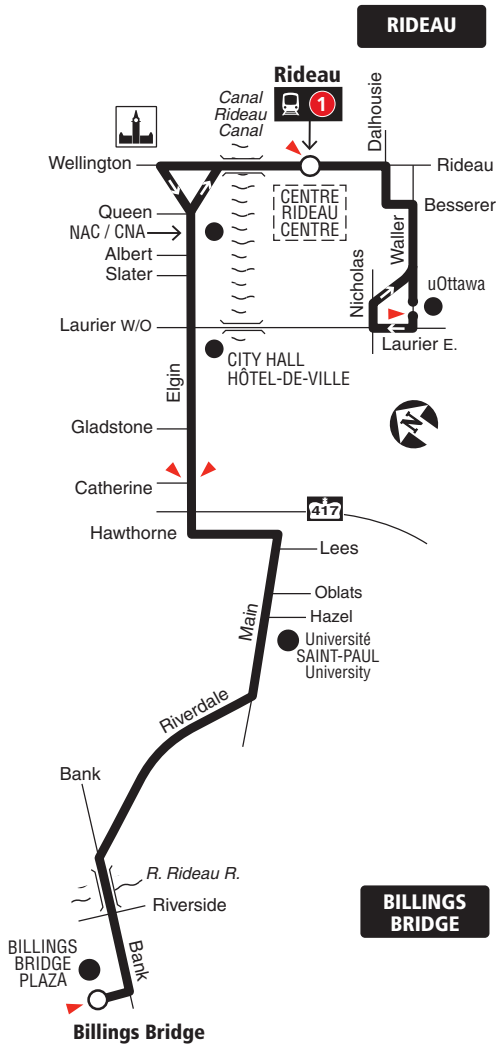
APPENDIX C

OC Transpo Route Maps

5 BILLINGS BRIDGE / RIDEAU

Local

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



Station

Timepoint / Heures de passage

08.2020

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

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

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

Security / Sécurité **613-741-2478**

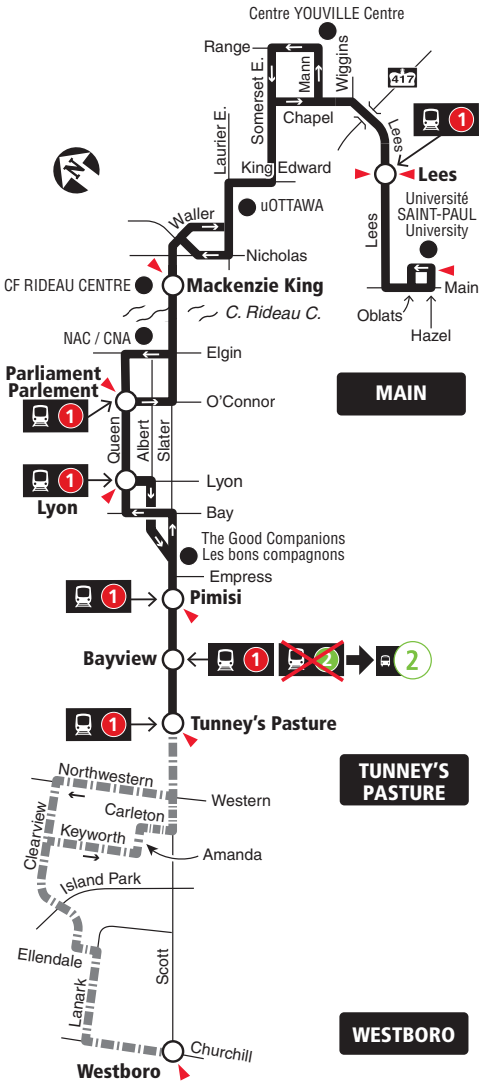
Effective April 26, 2020
En vigueur 26 avril 2020

OC Transpo
INFO 613-560-5000
octranspo.com

16 MAIN

TUNNEY'S PASTURE
WESTBORO

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



Station
No Sunday service / Aucun service le dimanche
Timepoint / Heures de passage

2020.04

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

Customer Service
Service à la clientèle **613-741-4390**
Lost and Found / Objets perdus..... **613-563-4011**
Security / Sécurité **613-741-2478**

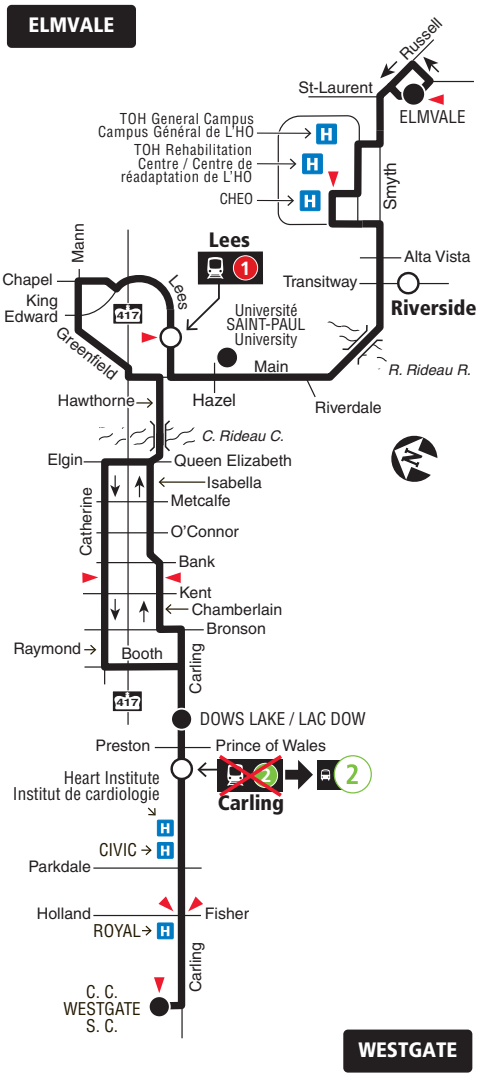
Effective May 3, 2020
En vigueur 3 mai 2020

OC Transpo
INFO 613-741-4390
octranspo.com

55 ELMVALE / WESTGATE

Local

7 days a week / 7 jours par semaine



Stations

Timepoint / Heures de passage

2021.06

Schedule / Horaire 613-560-1000

Text / Texto* 560560

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

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

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

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

Security / Sécurité **613-741-2478**

Effective June 20, 2021
En vigueur 20 juin 2021

OC Transpo

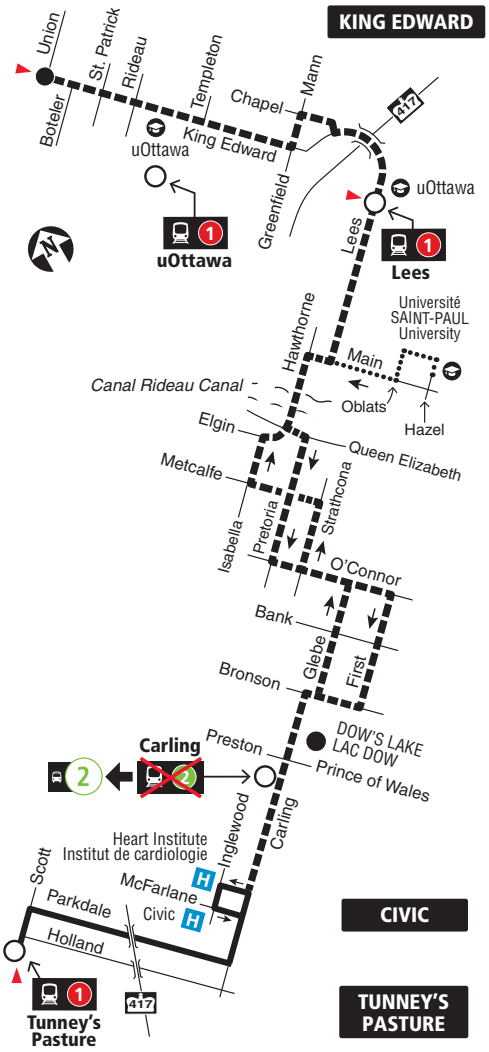
INFO 613-741-4390
octranspo.com

56

CIVIC
KING EDWARD
TUNNEY'S PASTURE

Local

7 days a week / 7 jours par semaine



Station

7 days a week / 7 jours par semaine

Monday to Friday only (Peak periods)
Lundi au vendredi seulement (Périodes de pointe)

Some trips / Quelques trajets

Timepoint / Heures de passage

2021.06

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

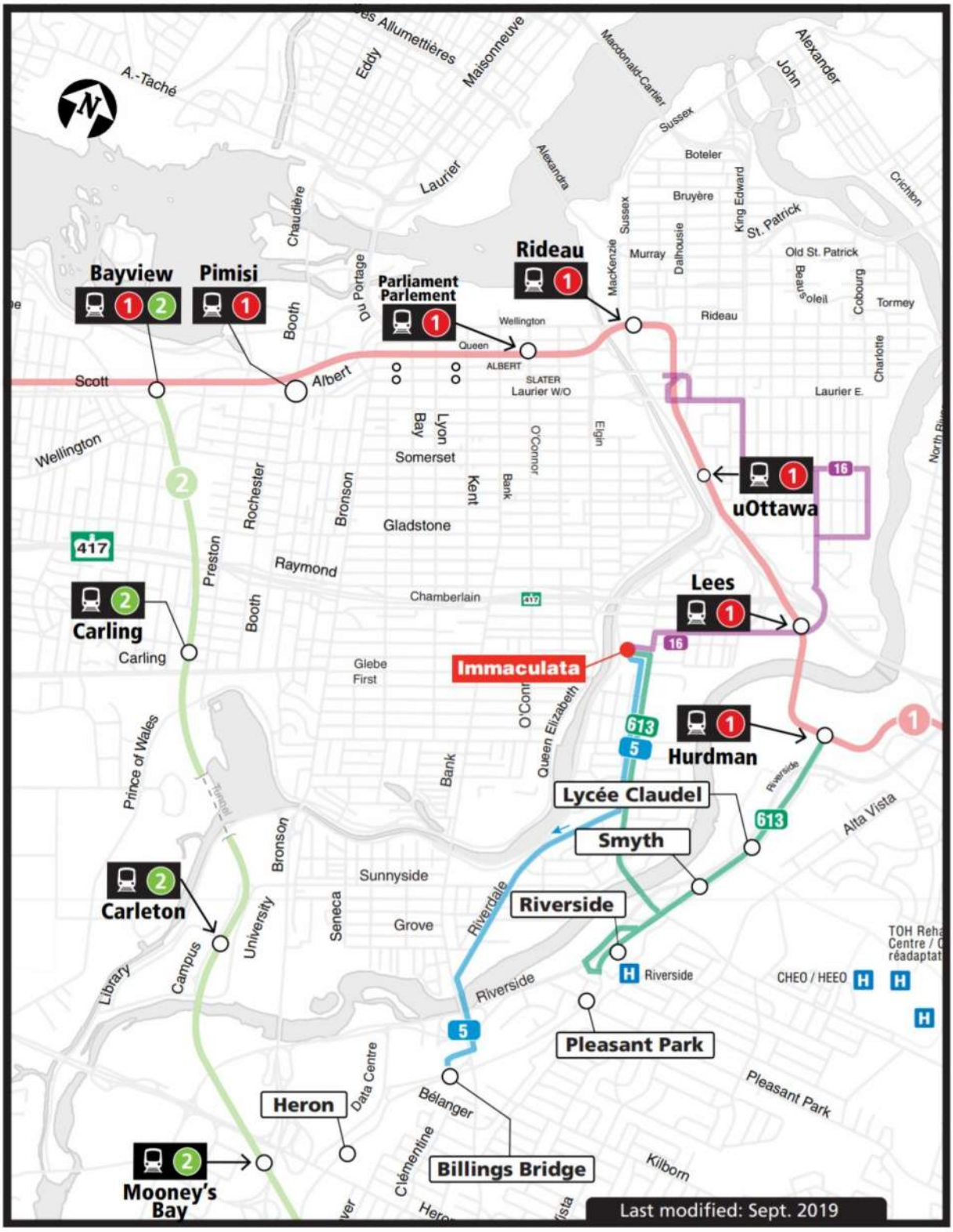
Customer Service
Service à la clientèle **613-741-4390**

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

Security / Sécurité **613-741-2478**

Effective June 20, 2021
En vigueur 20 juin 2021

OC Transpo
INFO 613-741-4390
octranspo.com


Bayview
Pimisi
Parliament
Parlement
Rideau
uOttawa
Lees
Hurdman
Immaculata
Lycée Claudel
Smyth
Riverside
Pleasant Park
Billings Bridge
Heron
Mooney's Bay
Carling
Carleton
Scott
Albert
Wellington
Queen
ALBERT
SLATER
Laurier W/O
Somerset
Gladstone
Chamberlain
Raymond
Glebe
First
Sunnyside
Grove
Bélanger
Kilborn
Pleasant Park
Alta Vista
Riverside
CHEO / HEEO
Last modified: Sept. 2019


uOttawa
56
16
Range
Mann
Lees
Greenfield
Queen Elizabeth
Rideau Canal
Main
55
1
14
5
Canadian Museum of Nature
Musée canadien de la nature
Catherine
QUEENSWAY
Isabella
Pretoria
56
Hawthorne
Lees
16
55
56
Lees
Springhurst
University of Ottawa
Université d'Ottawa
6
7
Strathcona
Immaculata
56
Oblats
Hurdman
O'Connor
Metcalfe
Reine-Élizabeth
Colonel By
Main
16
SITE
Lycée
Claudel
5
55
Saint-Paul University
Université Saint-Paul
TD Place
Place TD
Lansdowne Park
Parc Lansdowne
Lansdowne
Riverside
Transitway
Lycée Claudel
Alta Vista
Riverdale
Smyth
44
Windsor
Riverside
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49
45
CHEO
Smyth
Pleasant Park
97
98
99
10
88
90
Billings Estate
Domaine Billings
Billings

APPENDIX D

Traffic Count Data

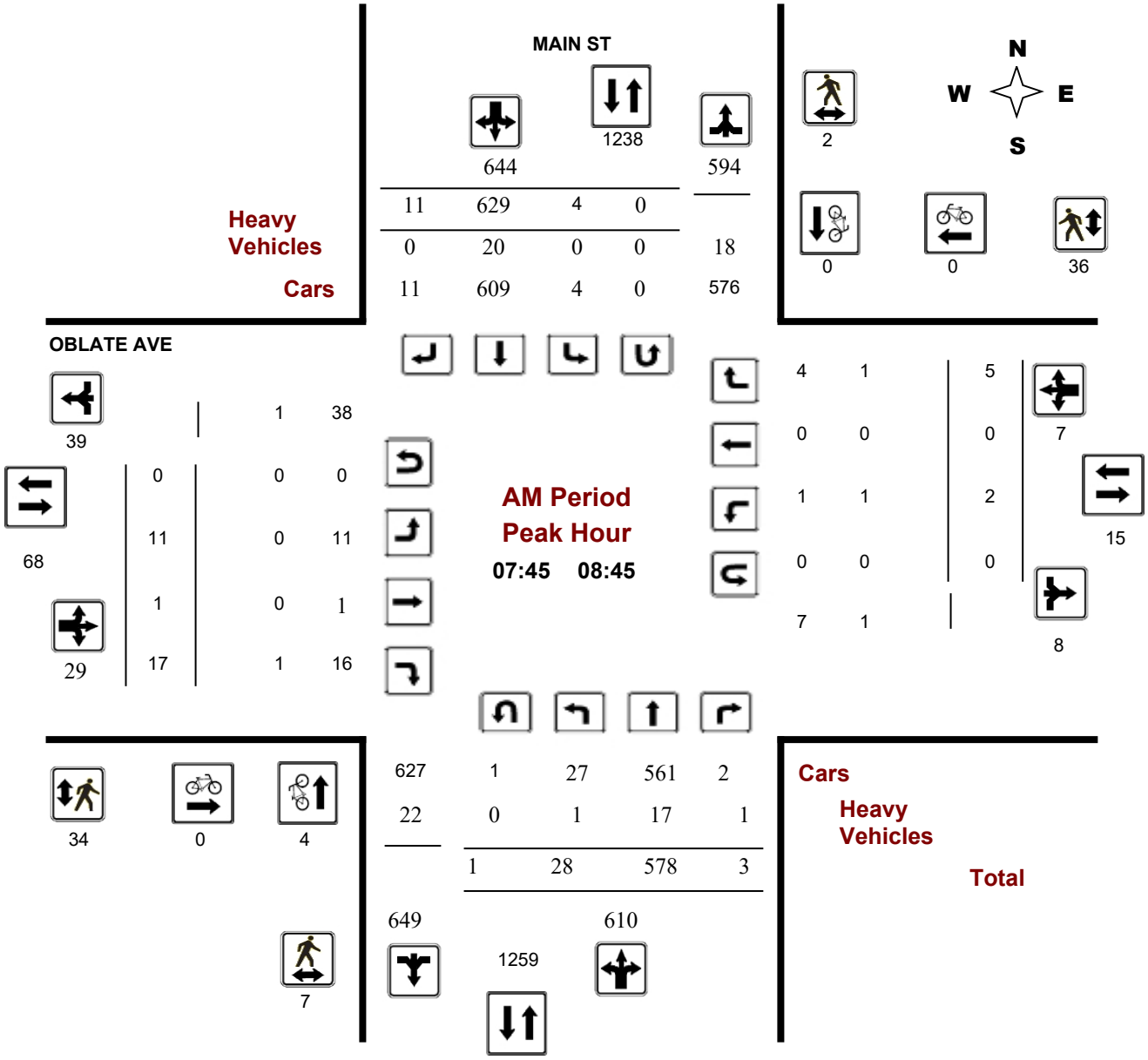
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

MAIN ST @ OBLATE AVE

Survey Date: Tuesday, March 07, 2017 **WO No:** 36739

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



Comments

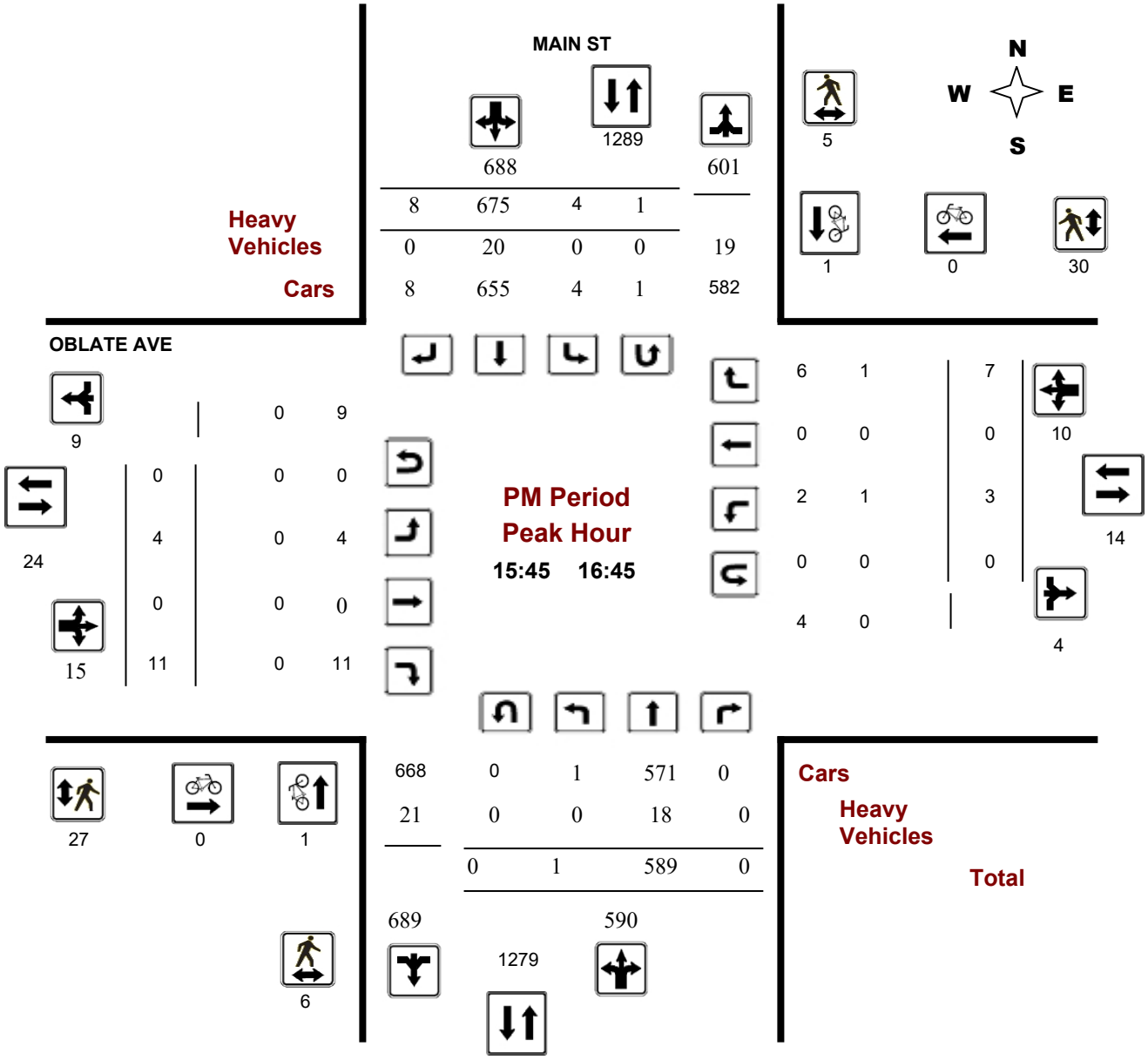
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

MAIN ST @ OBLATE AVE

Survey Date: Tuesday, March 07, 2017
Start Time: 07:00

WO No: 36739
Device: Miovision



Comments

Transportation Services - Traffic Services

Turning Movement Count - Study Results

MAIN ST @ OBLATE AVE

Survey Date: Tuesday, March 07, 2017 **WO No:** 36739

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

Full Study Summary (8 HR Standard)

Survey Date: Tuesday, March 07, 2017

Total Observed U-Turns

Northbound: 3 Southbound: 1

Eastbound: 0 Westbound: 0

AADT Factor

1.00

	MAIN ST									OBLATE AVE									
	Northbound				Southbound					Eastbound				Westbound					
Period	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	LT	ST	RT	WB TOT	STR TOT	Grand Total
07:00 08:00	14	402	4	**420**	10	624	8	**642**	**1062**	5	1	10	**16**	5	0	5	**10**	**26**	**1088**
08:00 09:00	19	559	2	**580**	2	646	10	**658**	**1238**	8	0	14	**22**	1	0	4	**5**	**27**	**1265**
09:00 10:00	3	427	2	**432**	3	448	6	**457**	**889**	3	0	8	**11**	4	0	8	**12**	**23**	**912**
11:30 12:30	4	350	2	**356**	9	438	6	**453**	**809**	5	1	12	**18**	6	0	13	**19**	**37**	**846**
12:30 13:30	6	337	4	**347**	7	458	7	**472**	**819**	4	0	14	**18**	3	0	4	**7**	**25**	**844**
15:00 16:00	1	563	1	**565**	4	568	5	**577**	**1142**	10	0	7	**17**	7	1	18	**26**	**43**	**1185**
16:00 17:00	3	536	0	**539**	2	693	8	**703**	**1242**	4	0	13	**17**	3	0	3	**6**	**23**	**1265**
17:00 18:00	2	470	0	**472**	4	673	5	**682**	**1154**	3	0	7	**10**	1	0	7	**8**	**18**	**1172**
Sub Total	52	3644	15	**3711**	41	4548	55	**4644**	**8355**	42	2	85	**129**	30	1	62	**93**	**222**	**8577**
U Turns				**3**				**1**	**4**				**0**				**0**	**0**	**4**
Total	52	3644	15	**3714**	41	4548	55	**4645**	**8359**	42	2	85	**129**	30	1	62	**93**	**222**	**8581**
EQ 12Hr	72	5065	21	**5162**	57	6322	76	**6457**	**11619**	58	3	118	**179**	42	1	86	**129**	**309**	**11928**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														**1.39**					
AVG 12Hr	68	4774	20	**4865**	54	5958	72	**6085**	**11619**	55	3	111	**169**	39	1	81	**122**	**309**	**11928**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														**1**					
AVG 24Hr	89	6253	26	**6374**	70	7805	94	**7971**	**14345**	72	3	146	**221**	51	2	106	**160**	**381**	**14726**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.														**1.31**					

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

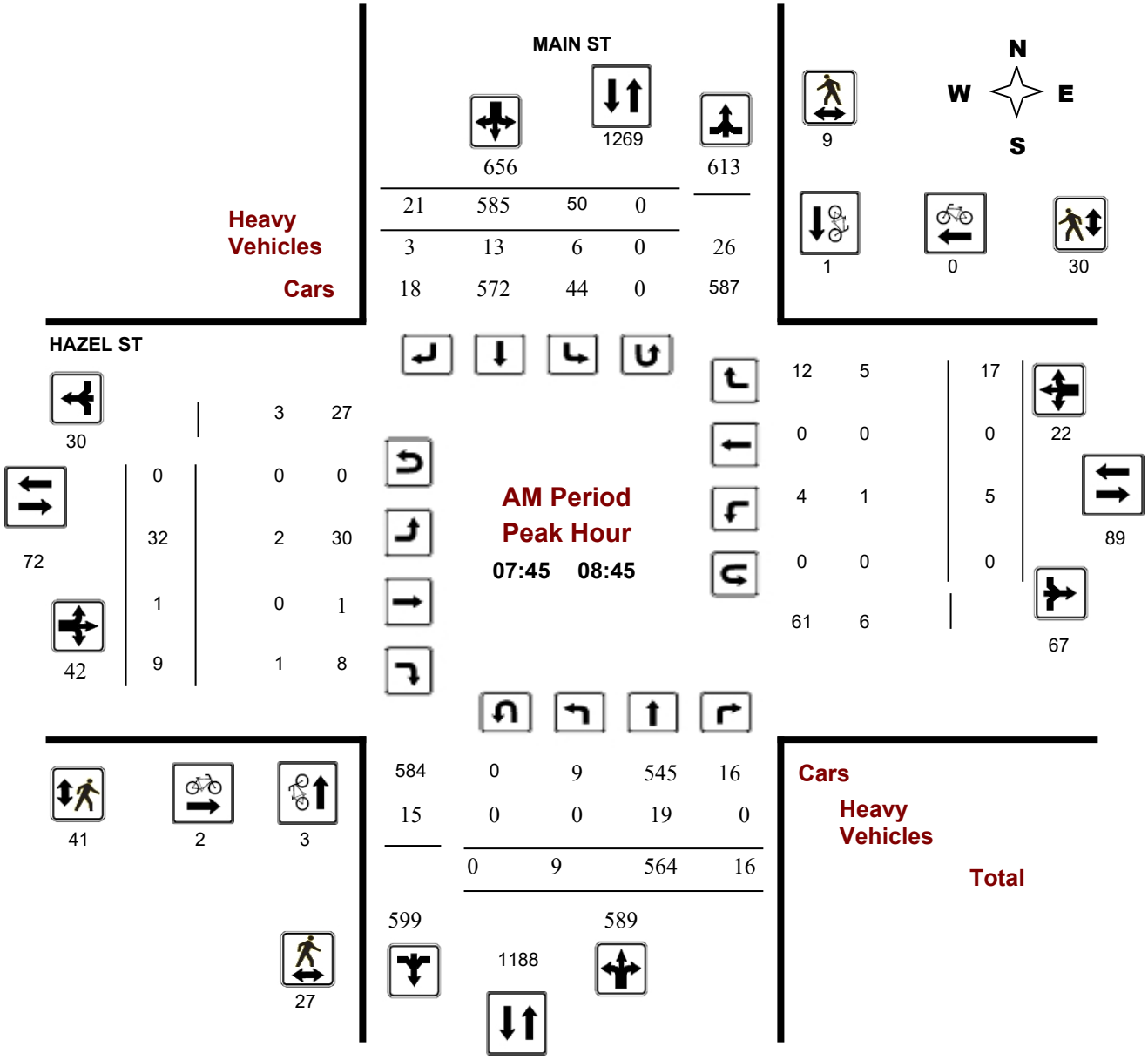
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

HAZEL ST @ MAIN ST

Survey Date: Tuesday, March 07, 2017
Start Time: 07:00

WO No: 36733
Device: Miovision



Comments

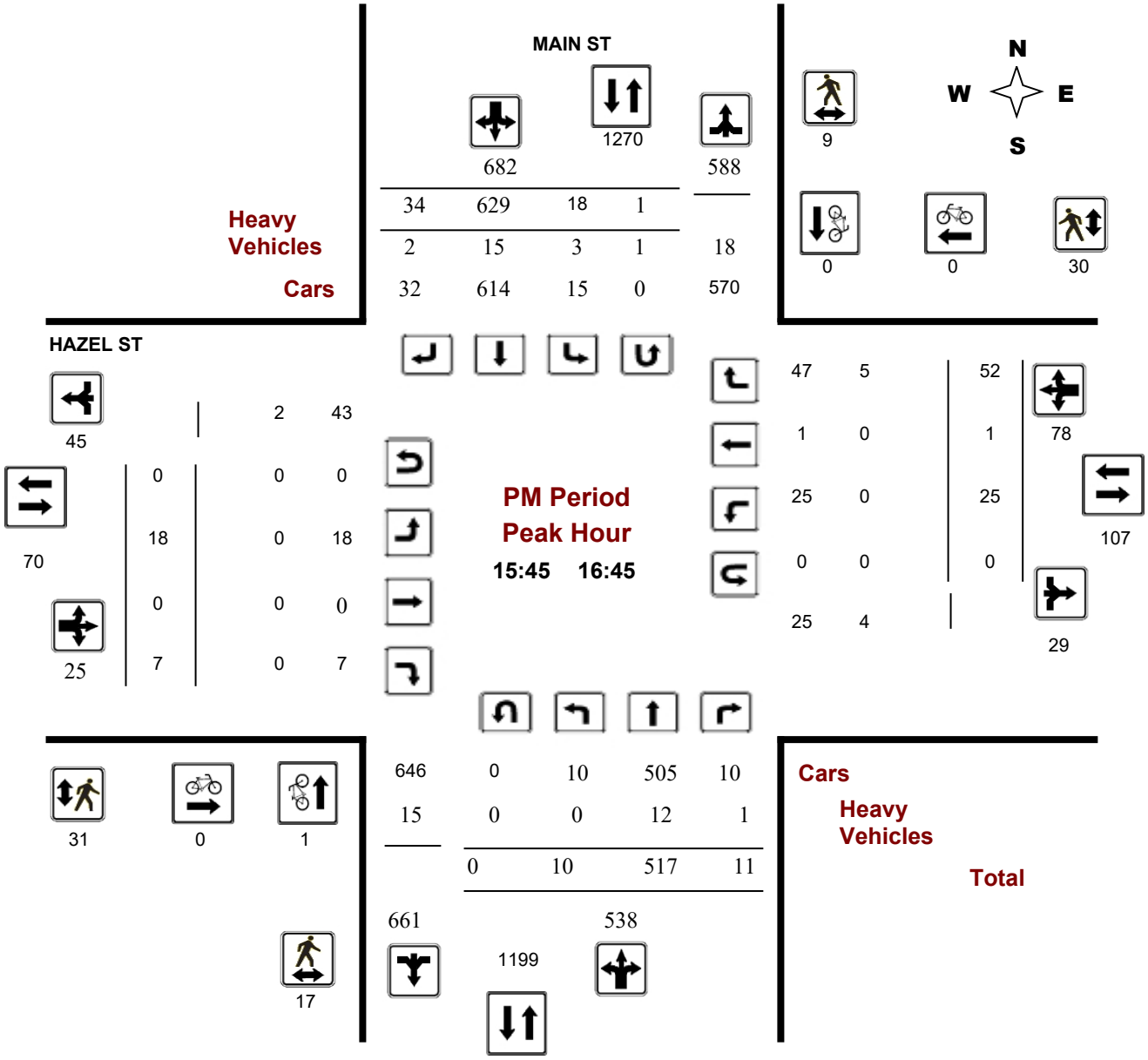
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

HAZEL ST @ MAIN ST

Survey Date: Tuesday, March 07, 2017
Start Time: 07:00

WO No: 36733
Device: Miovision



Comments

Transportation Services - Traffic Services

Turning Movement Count - Study Results

HAZEL ST @ MAIN ST

Survey Date: Tuesday, March 07, 2017 **WO No:** 36733

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

Full Study Summary (8 HR Standard)

Survey Date: Tuesday, March 07, 2017

Total Observed U-Turns

Northbound: 3 Southbound: 4

Eastbound: 0 Westbound: 0

AADT Factor

1.00

	MAIN ST									HAZEL ST									
	Northbound				Southbound					Eastbound				Westbound					
Period	LT	ST	RT	**NB TOT**	LT	ST	RT	**SB TOT**	**STR TOT**	LT	ST	RT	**EB TOT**	LT	ST	RT	**WB TOT**	**STR TOT**	**Grand Total**
07:00 08:00	3	400	10	**413**	32	579	13	**624**	**1037**	16	1	3	**20**	2	0	9	**11**	**31**	**1068**
08:00 09:00	12	552	20	**584**	69	567	27	**663**	**1247**	23	1	9	**33**	10	0	17	**27**	**60**	**1307**
09:00 10:00	12	390	12	**414**	39	400	26	**465**	**879**	20	3	8	**31**	8	0	20	**28**	**59**	**938**
11:30 12:30	31	302	6	**339**	22	405	27	**454**	**793**	15	0	18	**33**	16	0	27	**43**	**76**	**869**
12:30 13:30	13	312	12	**337**	23	427	26	**476**	**813**	21	2	13	**36**	6	1	14	**21**	**57**	**870**
15:00 16:00	11	502	8	**521**	15	535	34	**584**	**1105**	22	0	13	**35**	19	1	29	**49**	**84**	**1189**
16:00 17:00	12	473	10	**495**	20	659	31	**710**	**1205**	11	1	8	**20**	24	1	52	**77**	**97**	**1302**
17:00 18:00	12	436	15	**463**	20	635	36	**691**	**1154**	13	1	15	**29**	19	0	29	**48**	**77**	**1231**
Sub Total	106	3367	93	**3566**	240	4207	220	**4667**	**8233**	141	9	87	**237**	104	3	197	**304**	**541**	**8774**
U Turns				**3**				**4**	**7**				**0**				**0**	**0**	**7**
Total	106	3367	93	**3569**	240	4207	220	**4671**	**8240**	141	9	87	**237**	104	3	197	**304**	**541**	**8781**
EQ 12Hr	147	4680	129	**4961**	334	5848	306	**6493**	**11454**	196	13	121	**329**	145	4	274	**423**	**752**	**12206**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														**1.39**					
AVG 12Hr	139	4411	122	**4675**	314	5511	288	**6119**	**11454**	185	12	114	**310**	136	4	258	**398**	**752**	**12206**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														**1**					
AVG 24Hr	182	5778	160	**6125**	412	7220	378	**8016**	**14141**	242	15	149	**407**	178	5	338	**522**	**929**	**15070**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.														**1.31**					

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

APPENDIX E

Collision Records

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2017 **To:** December 31, 2021

Location: MAIN ST @ OBLATE AVE

Traffic Control: Traffic signal **Total Collisions:** 4

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2018-Dec-04, Tue,11:00	Clear	Angle	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Turning left	Pick-up truck	Other motor vehicle	
2019-Feb-02, Sat,10:01	Snow	Angle	P.D. only	Loose snow	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Turning left	Automobile, station wagon	Other motor vehicle	
2019-Jun-11, Tue,13:55	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2021-Aug-22, Sun,11:14	Clear	Turning movement	Non-fatal injury	Dry	South	Turning left	Automobile, station wagon	Cyclist	0
					North	Going ahead	Bicycle	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2017 **To:** December 31, 2021

Location: HAZEL ST @ MAIN ST

Traffic Control: Traffic signal **Total Collisions:** 18

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Oct-25, Wed,15:20	Clear	Angle	Non-fatal injury	Dry	South	Going ahead	Bicycle	Other motor vehicle	0
					East	Stopped	Municipal transit bus	Cyclist	
2017-Dec-23, Sat,16:51	Clear	Rear end	P.D. only	Loose snow	North	Unknown	Automobile, station wagon	Other motor vehicle	0
					North	Slowing or stopping	Pick-up truck	Other motor vehicle	
					North	Slowing or stopping	Pick-up truck	Other motor vehicle	
2018-Feb-09, Fri,12:20	Clear	SMV other	Non-fatal injury	Dry	West	Turning left	Automobile, station wagon	Pedestrian	1
2018-Feb-13, Tue,15:52	Clear	Rear end	P.D. only	Wet	North	Turning right	Truck - dump	Other motor vehicle	0
					North	Stopped	Passenger van	Other motor vehicle	
2018-Oct-05, Fri,12:02	Clear	Turning movement	Non-fatal injury	Dry	South	Turning left	Automobile, station wagon	Cyclist	0
					North	Going ahead	Bicycle	Other motor vehicle	
2018-Nov-09, Fri,14:25	Snow	SMV other	Non-fatal injury	Wet	West	Turning left	Automobile, station wagon	Pedestrian	1
2019-Mar-13, Wed,18:15	Snow	Rear end	Non-fatal injury	Loose snow	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
					East	Stopped	Unknown	Other motor vehicle	
2019-Mar-16, Sat,12:49	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Passenger van	Other motor vehicle	
2019-Oct-23, Wed,18:00	Clear	Rear end	P.D. only	Dry	North	Unknown	Unknown	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Nov-08, Fri,17:40	Clear	Turning movement	P.D. only	Wet	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Turning right	Automobile, station wagon	Other motor vehicle	
2019-Nov-28, Thu,18:13	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Jan-22, Wed,23:25	Clear	SMV other	P.D. only	Loose snow	South	Going ahead	Automobile, station wagon	Pole (sign, parking meter)	0

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2017 **To:** December 31, 2021

Location: HAZEL ST @ MAIN ST

Traffic Control: Traffic signal **Total Collisions:** 18

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2020-Feb-26, Wed,15:52	Snow	Rear end	Non-fatal injury	Wet	South	Slowing or stopping	Delivery van	Other motor vehicle	0
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2020-May-13, Wed,08:20	Clear	Turning movement	P.D. only	Dry	West	Turning right	Truck - dump	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Jun-19, Fri,12:43	Clear	Rear end	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Turning right	Truck - dump	Other motor vehicle	
2020-Nov-25, Wed,10:44	Snow	Rear end	P.D. only	Loose snow	North	Unknown	Automobile, station wagon	Other motor vehicle	0
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2021-Aug-01, Sun,21:08	Clear	Turning movement	P.D. only	Dry	East	Making "U" turn	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2021-Sep-17, Fri,13:58	Clear	Sideswipe	P.D. only	Dry	North	Going ahead	Ambulance	Other motor vehicle	0
					North	Going ahead	Pick-up truck	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2017 **To:** December 31, 2021

Location: MAIN ST btwn HAZEL ST & OBLATE AVE

Traffic Control: No control **Total Collisions:** 6

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2018-Jan-06, Sat,19:31	Clear	Rear end	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2018-Apr-19, Thu,20:49	Clear	Turning movement	P.D. only	Dry	South	Making "U" turn	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jul-06, Sat,12:00	Clear	Angle	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Nov-08, Fri,12:00	Clear	Sideswipe	P.D. only	Dry	North	Stopped	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2021-Jan-12, Tue,12:14	Clear	Rear end	Non-fatal injury	Wet	North	Going ahead	Passenger van	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					North	Unknown	Automobile, station wagon	Other motor vehicle	
2021-Oct-27, Wed,13:45	Clear	Rear end	Non-fatal injury	Dry	South	Going ahead	Unknown	Cyclist	0
					South	Going ahead	Bicycle	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2017 **To:** December 31, 2021

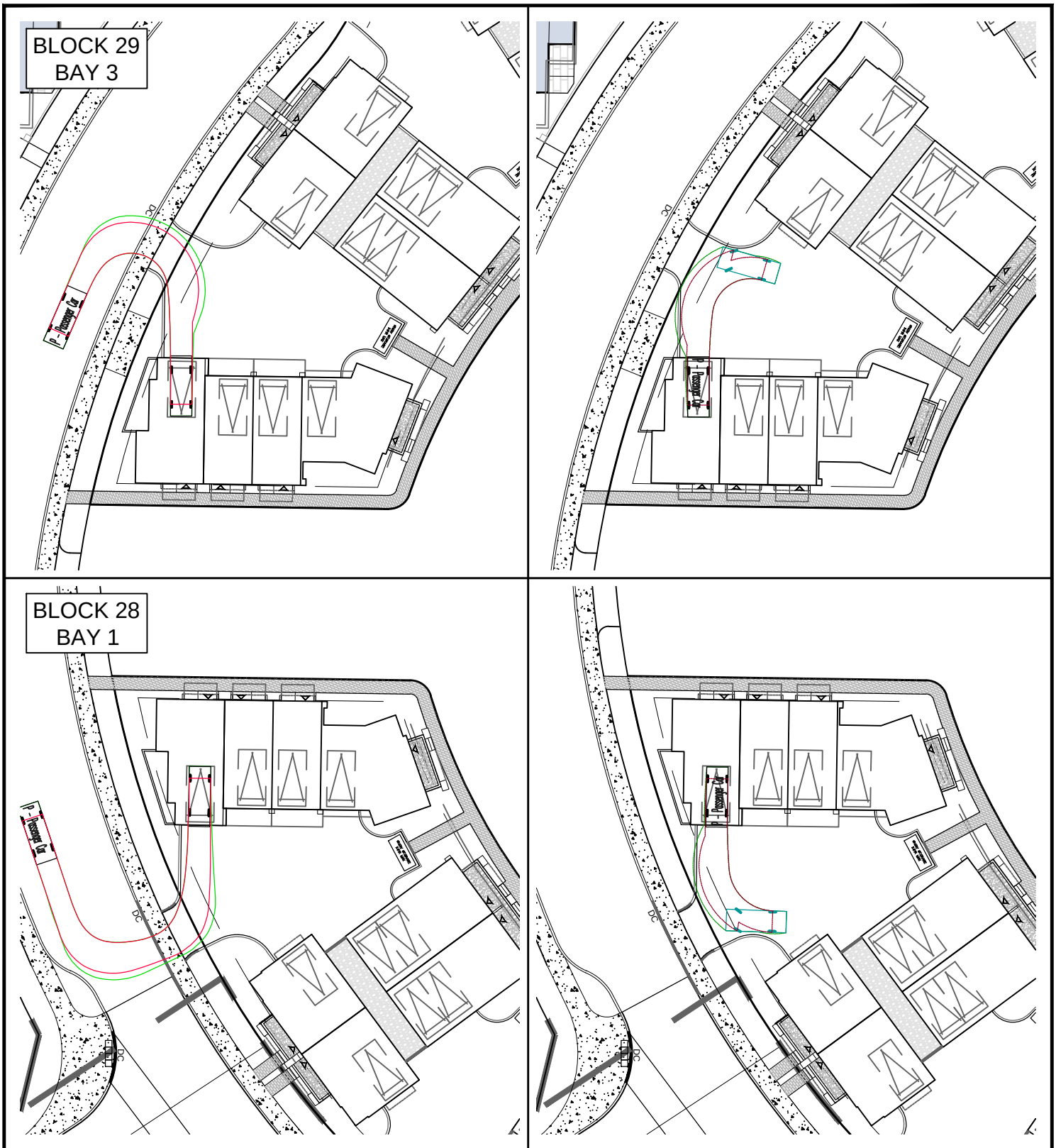
Location: DES OBLATS AVE btwn DESCHATELETS AVE & MAIN ST

Traffic Control: No control **Total Collisions:** 1

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2018-Apr-27, Fri,14:49	Clear	SMV unattended vehicle	P.D. only	Dry	West	Going ahead	Construction equipment	Unattended vehicle	0

APPENDIX F

Turning Movement Figures



NOVATECH
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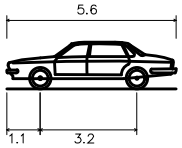
Ottawa, Ontario, Canada K2M 1P6

Telephone (613) 254-9643
Facsimile (613) 254-5867
Website www.novatech-eng.com



P - Passenger Car

Overall Length	5.600m
Overall Width	2.000m
Overall Body Height	1.555m
Min Body Ground Clearance	0.340m
Track Width	2.000m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6.300m

GREYSTONE VILLAGE FORECOURT TOWNS

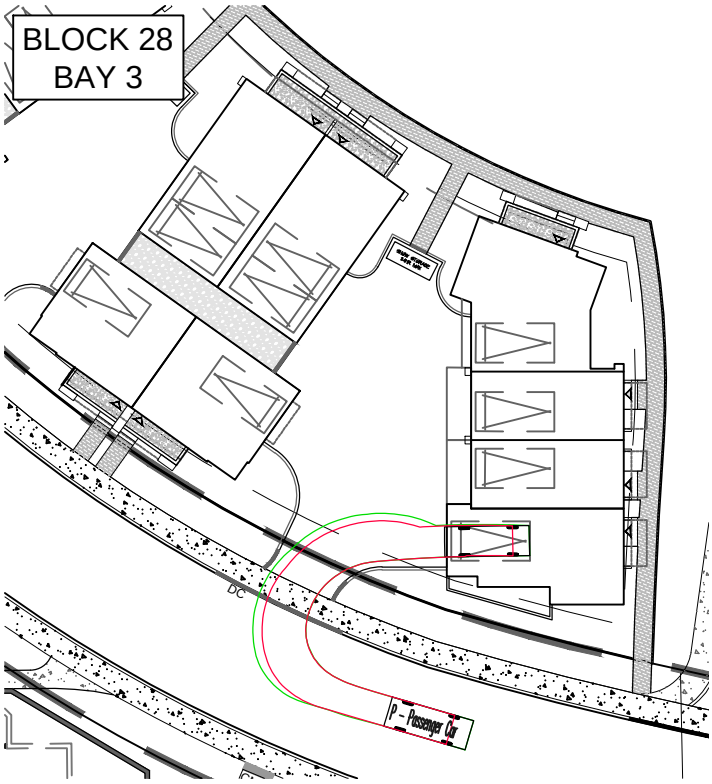
UNIT TURNING MOVEMENTS (P-CAR)

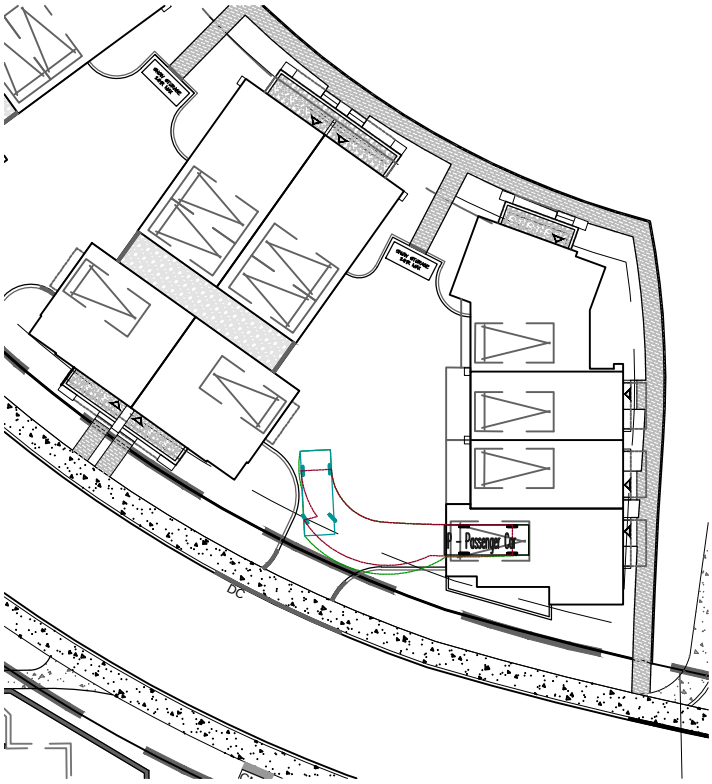
SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 1

SHT8X11.DWG - 216mmx279mm

\\novatech2018\nova2\2014\114025\CAD\Design\Figures\Traffic\114025-TIA-Figs.dwg, Fig1, Oct 16, 2024 - 2:33pm, channa





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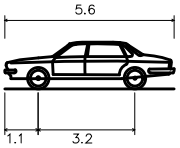
Facsimile (613) 254-5867
Website www.novatech-eng.com



P - Passenger Car

Overall Length	5.600m
Overall Width	2.000m
Overall Body Height	1.555m
Min Body Ground Clearance	0.340m
Track Width	2.000m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6.300m

GREYSTONE VILLAGE FORECOURT TOWNS

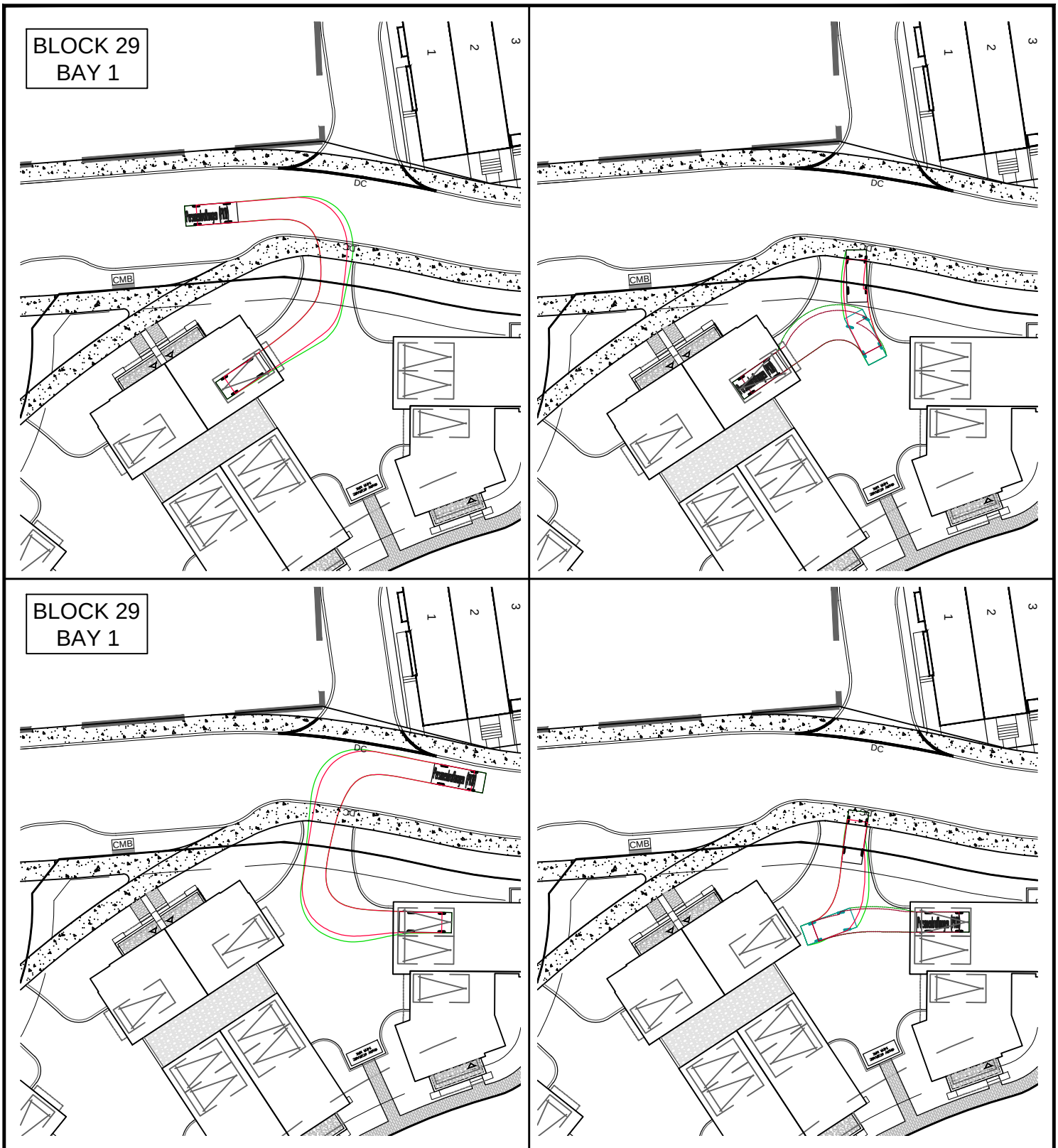
UNIT TURNING MOVEMENTS (P-CAR)

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 2

SHT8X11.DWG - 216mmx279mm

\\novatech2018\nova2\2014\114025\CAD\Design\Figures\Traffic\114025-TIA-Figs.dwg, Fig2, Oct 16, 2024 - 2:33pm, channa



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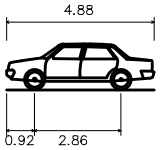


Personenkraftwagen (PKW)

Overall Length	4.880m
Overall Width	1.890m
Overall Body Height	1.519m
Min Body Ground Clearance	0.280m
Track Width	1.890m
Lock-to-lock time	4.00s
Wall to Wall Turning Radius	5.850m

GREYSTONE VILLAGE FORECOURT TOWNS

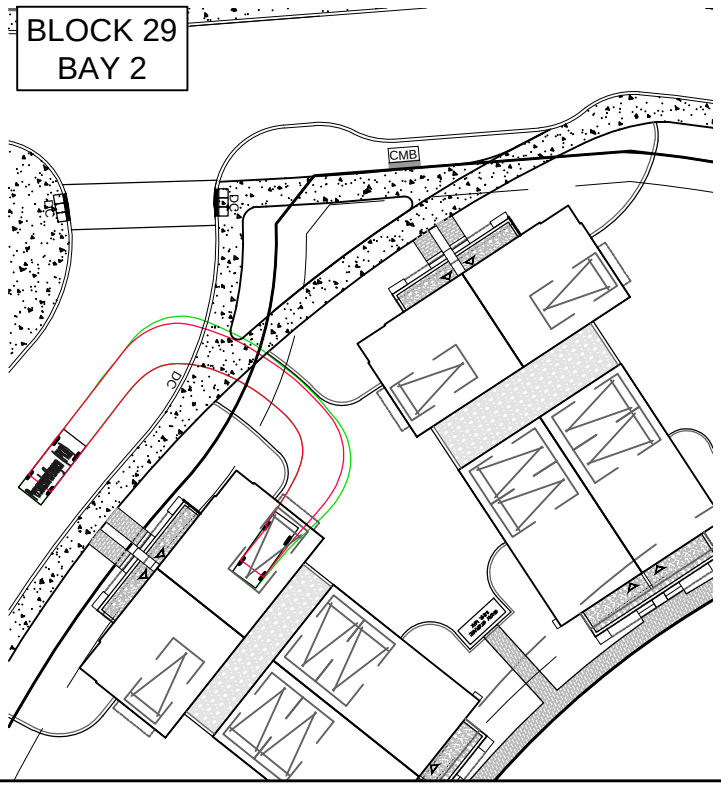
UNIT TURNING MOVEMENTS (ALTERNATIVE VEHICLE)

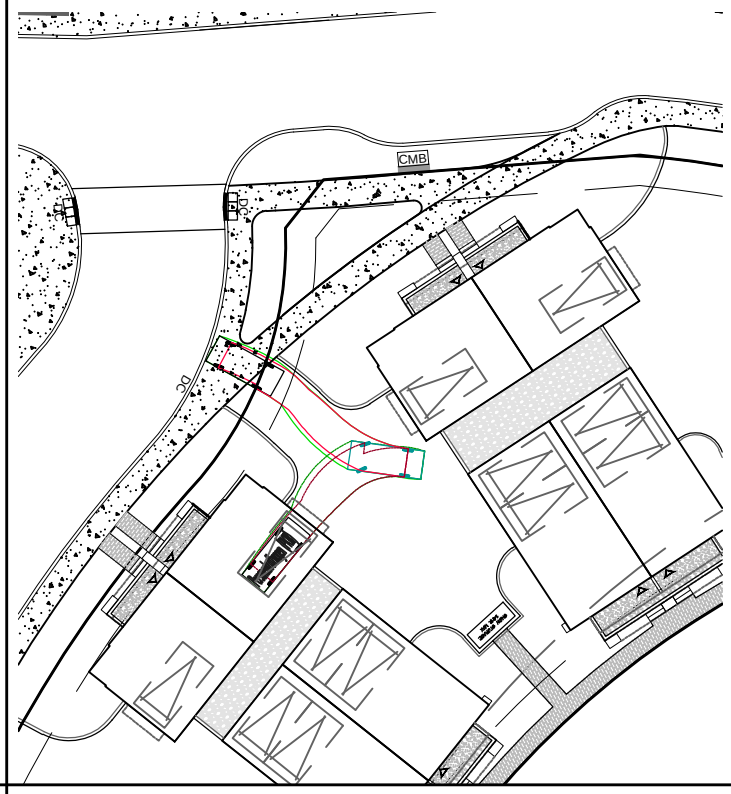
SCALE 1 : 500 (0, 5m, 10m, 20m)

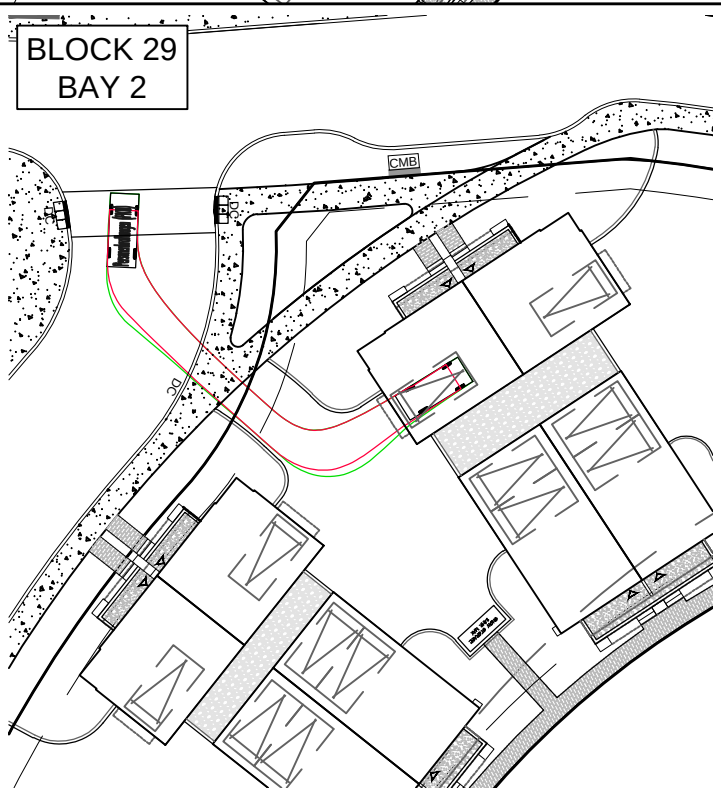
DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 3

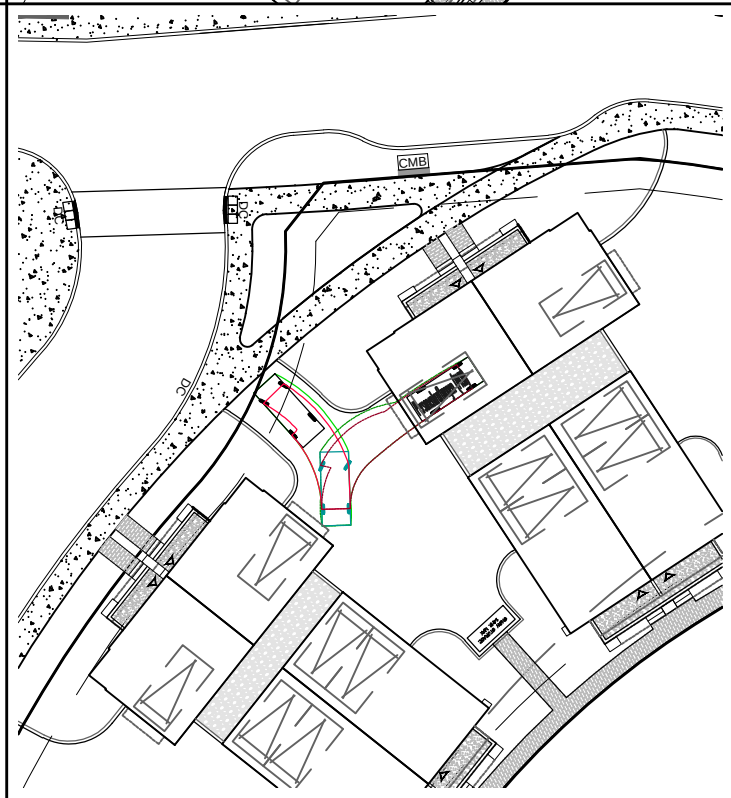
SHT8X11.DWG - 216mmx279mm

\\novatech2018\nova2\2014\114025\CAD\Design\Figures\Traffic\114025-BLK28_29-TM-Front_Units_Only.dwg, Fig3, Oct 16, 2024 - 2:18pm, channa









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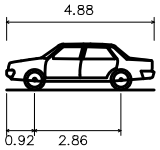

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Overall Body Height	1.519m
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Track Width	1.890m
Lock-to-lock time	4.00s
Wall to Wall Turning Radius	5.850m

GREYSTONE VILLAGE FORECOURT TOWNS

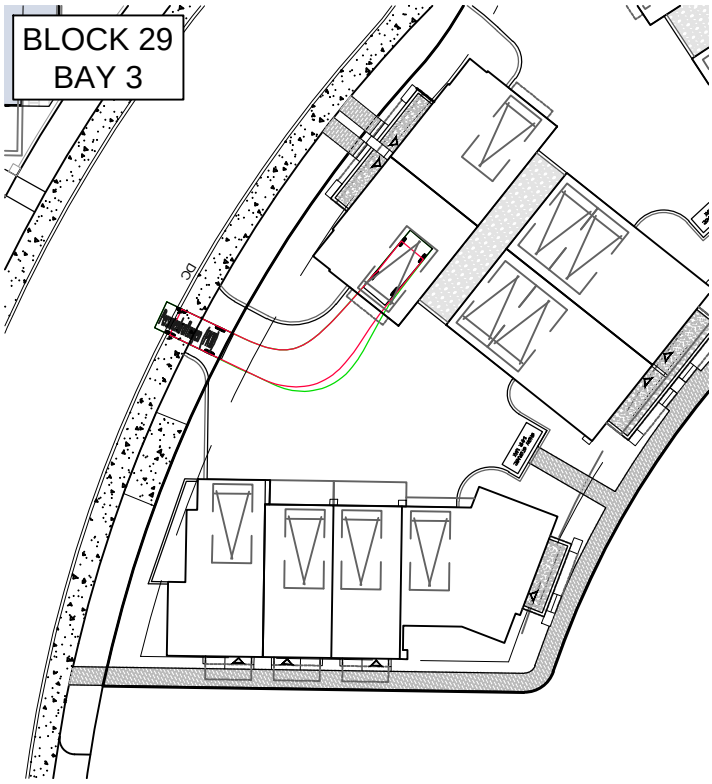
UNIT TURNING MOVEMENTS (ALTERNATIVE VEHICLE)

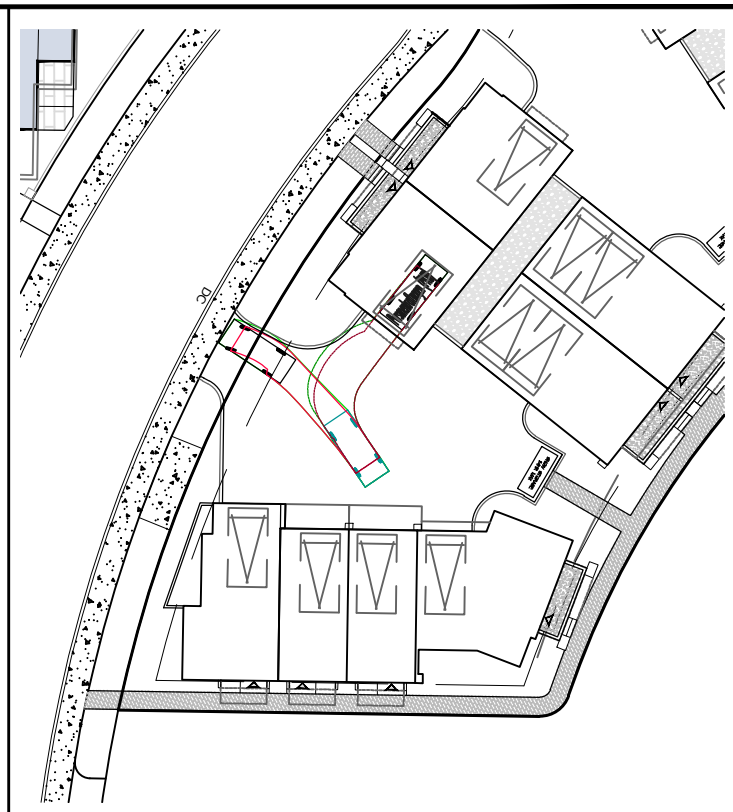
SCALE 1 : 500 (0, 5m, 10m, 20m)

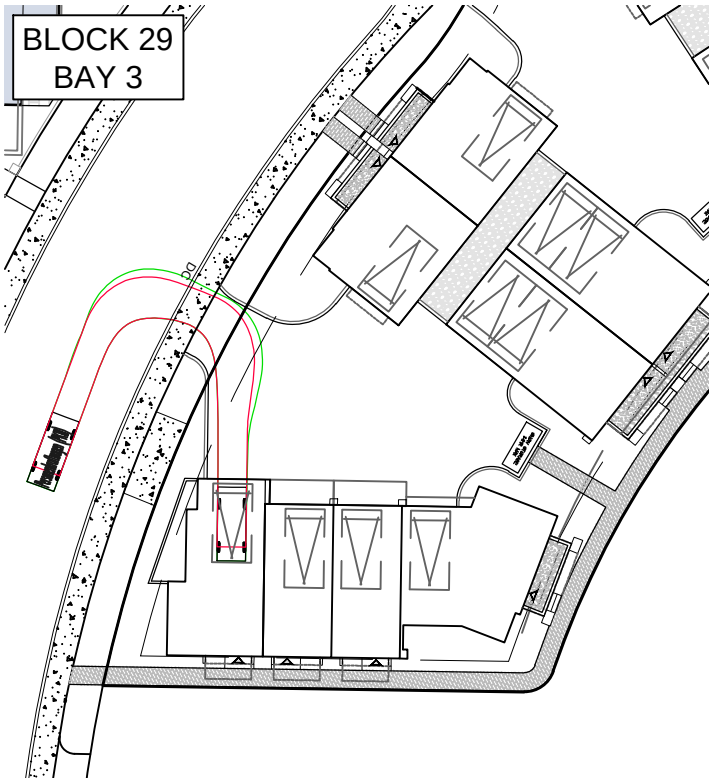
DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 4

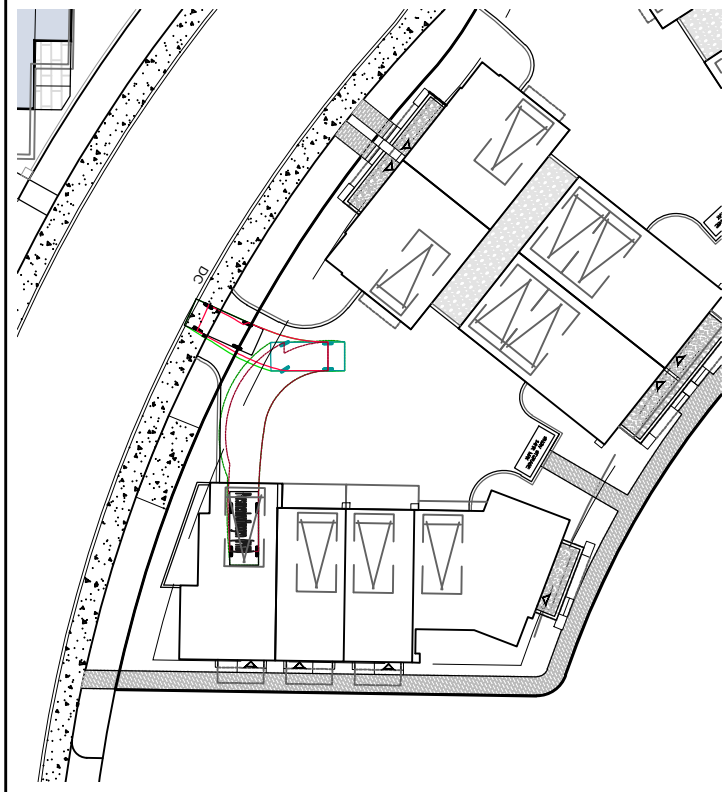
SHT8X11.DWG - 216mmx279mm

\\novatech2018\nova2\2014\114025\CAD\Design\Figures\Traffic\114025-BLK28_29-TM-Front_Units_Only.dwg, Fig4, Oct 16, 2024 - 2:18pm, channa









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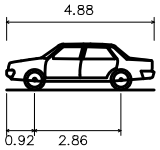

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GREYSTONE VILLAGE FORECOURT TOWNS

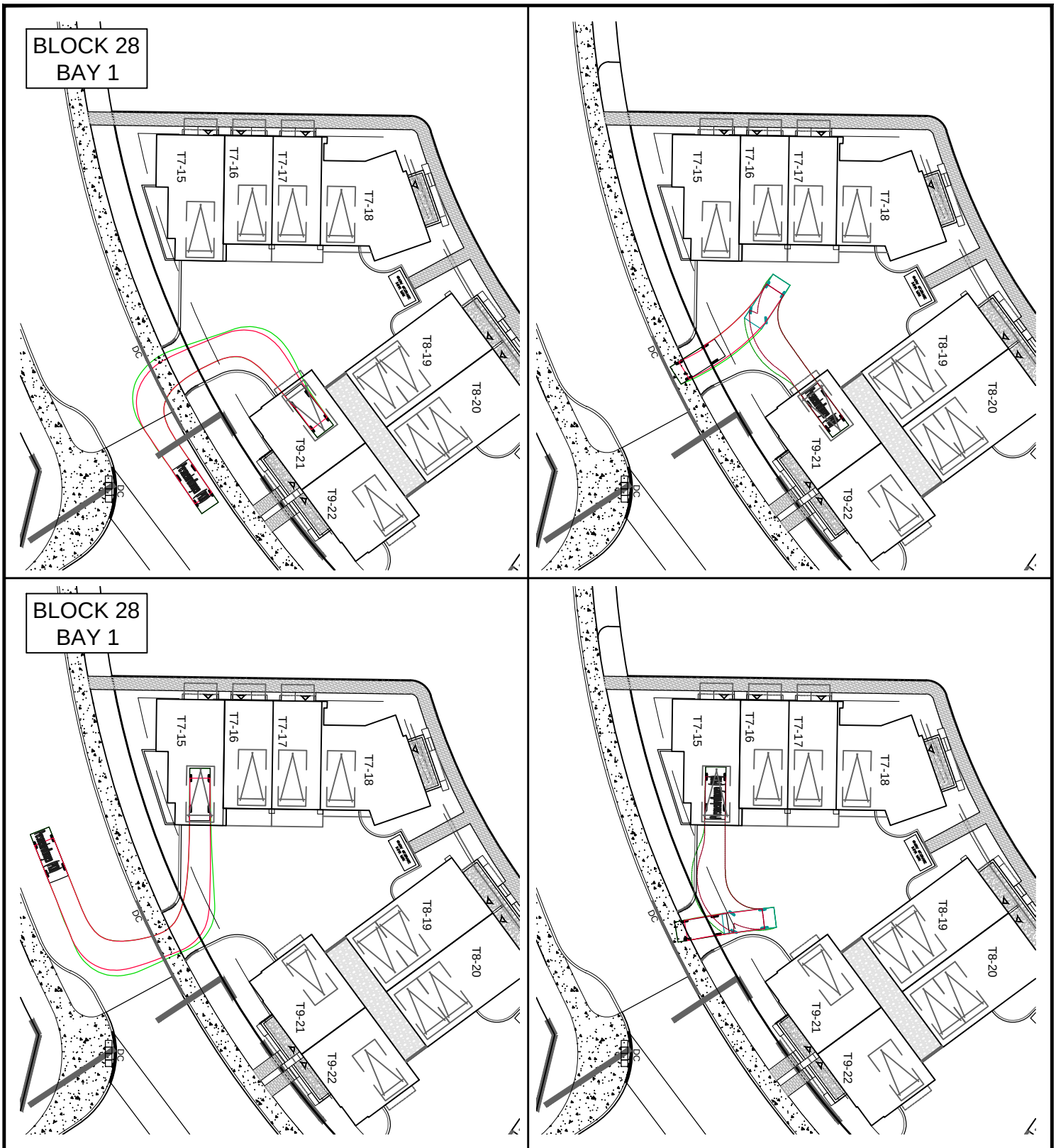
UNIT TURNING MOVEMENTS (ALTERNATIVE VEHICLE)

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 5

SHT8X11.DWG - 216mmx279mm

\\novatech2018\nova2\2014\114025\CAD\Design\Figures\Traffic\114025-BLK28_29-TM-Front_Units_Only.dwg, Fig5, Oct 16, 2024 - 2:18pm, channa



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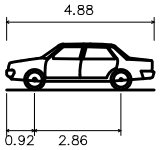

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GREYSTONE VILLAGE FORECOURT TOWNS

UNIT TURNING MOVEMENTS (ALTERNATIVE VEHICLE)

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 6

SHT8X11.DWG - 216mmx279mm

\\novatech2018\nova2\2014\114025\CAD\Design\Figures\Traffic\114025-BLK28_29-TM-Front_Units_Only.dwg, Fig6, Oct 16, 2024 - 2:18pm, channa

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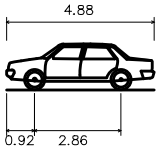

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Lock-to-lock time	4.00s
Wall to Wall Turning Radius	5.850m

GREYSTONE VILLAGE FORECOURT TOWNS

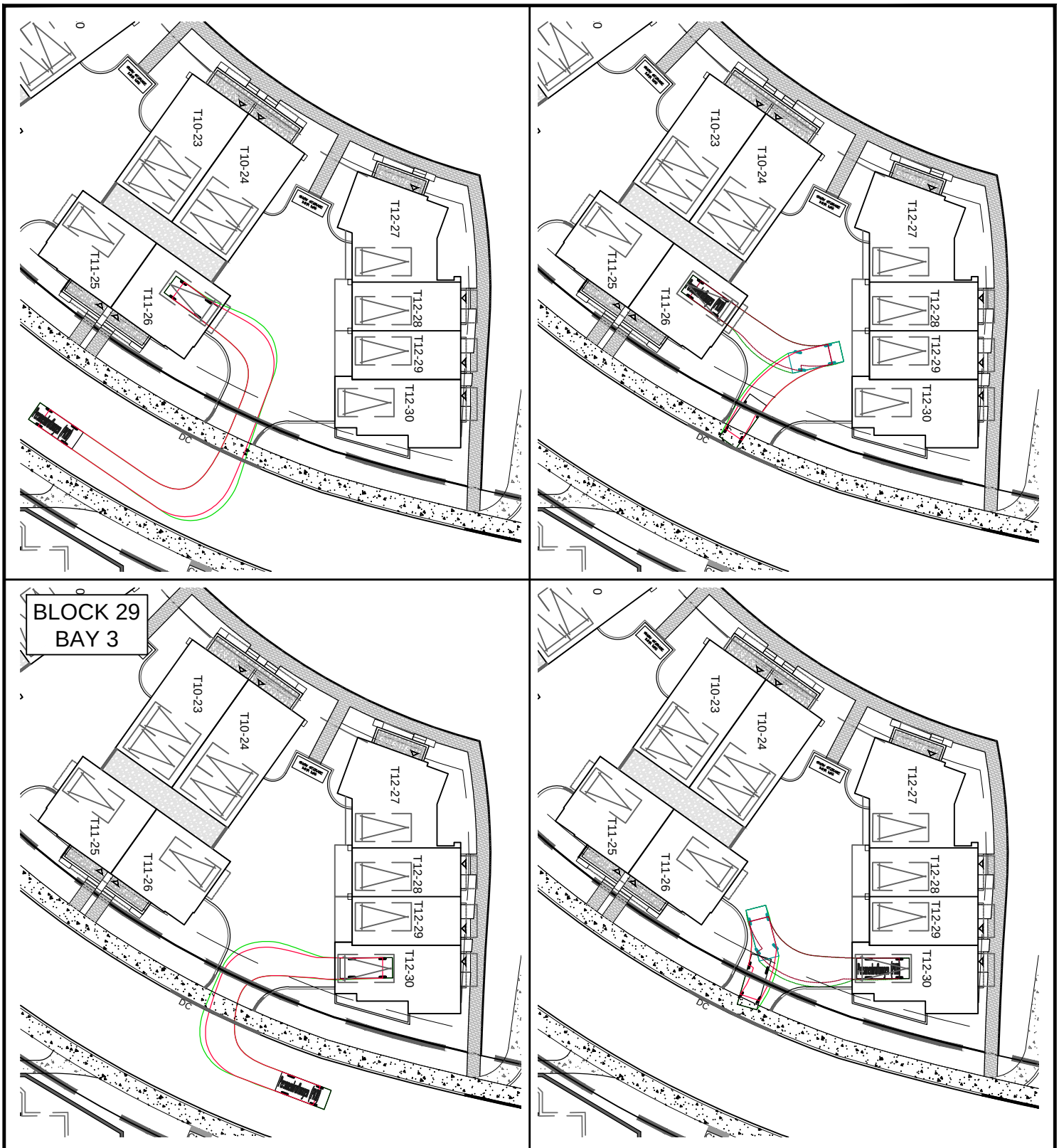
UNIT TURNING MOVEMENTS (ALTERNATIVE VEHICLE)

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 7

SHT8X11.DWG - 216mmx279mm

\\novatech2018\nova2\2014\114025\CAD\Design\Figures\Traffic\114025-BLK28_29-TM-Front_Units_Only.dwg, Fig7, Oct 16, 2024 - 2:18pm, channa



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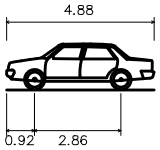

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Overall Body Height	1.519m
Min Body Ground Clearance	0.280m
Track Width	1.890m
Lock-to-lock time	4.00s
Wall to Wall Turning Radius	5.850m

GREYSTONE VILLAGE FORECOURT TOWNS

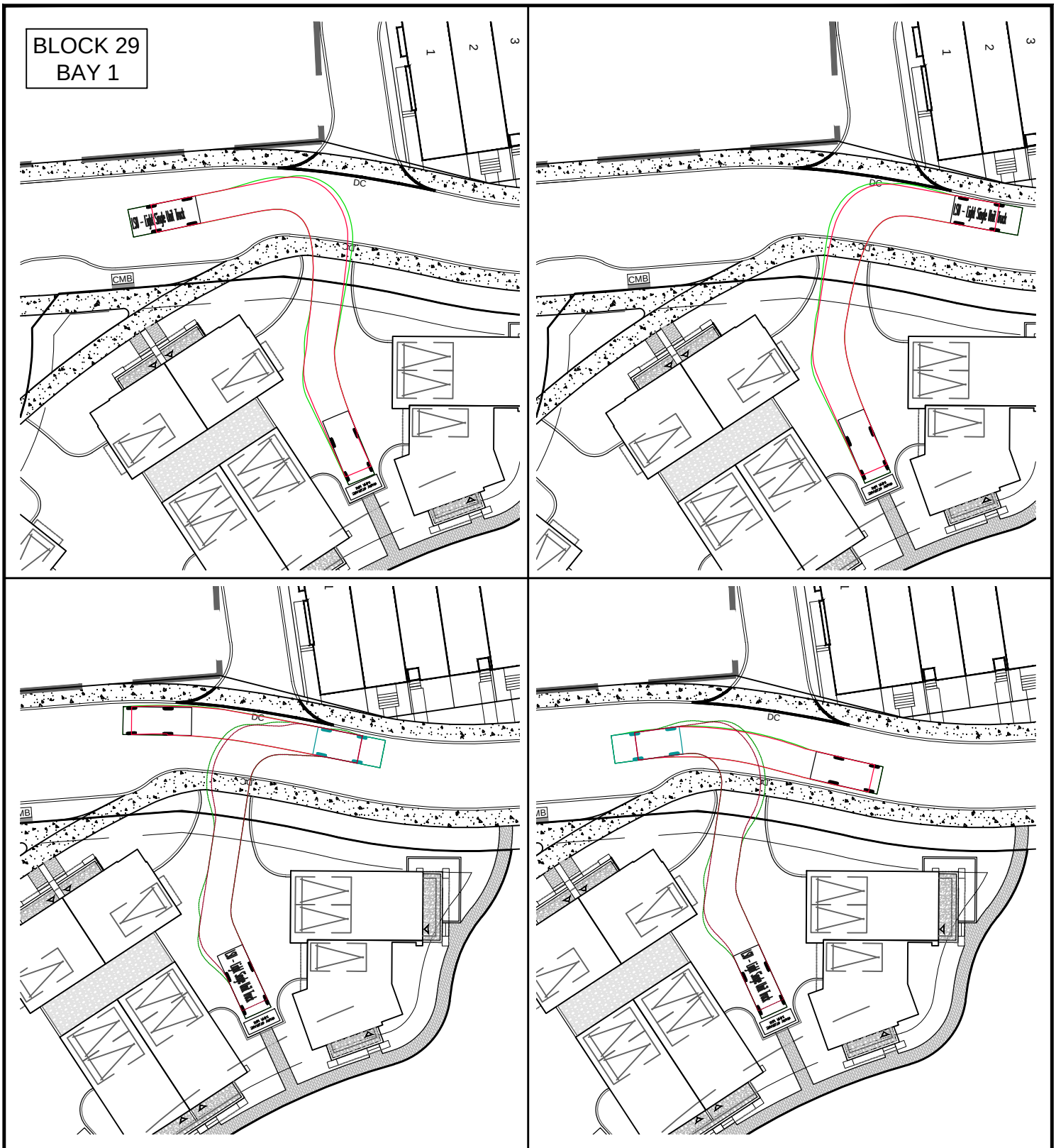
UNIT TURNING MOVEMENTS (ALTERNATIVE VEHICLE)

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 8

SHT8X11.DWG - 216mmx279mm

\\novatech2018\nova2\2014\114025\CAD\Design\Figures\Traffic\114025-BLK28_29-TM-Front_Units_Only.dwg, Fig8, Oct 16, 2024 - 2:18pm, channa



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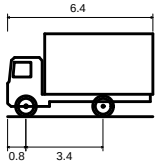


LSU - Light Single Unit Truck

Overall Length	6.400m
Overall Width	2.600m
Overall Body Height	3.650m
Min Body Ground Clearance	0.445m
Track Width	2.600m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6.300m

GREYSTONE VILLAGE FORECOURT TOWNS

UNIT TURNING MOVEMENTS (LSU)

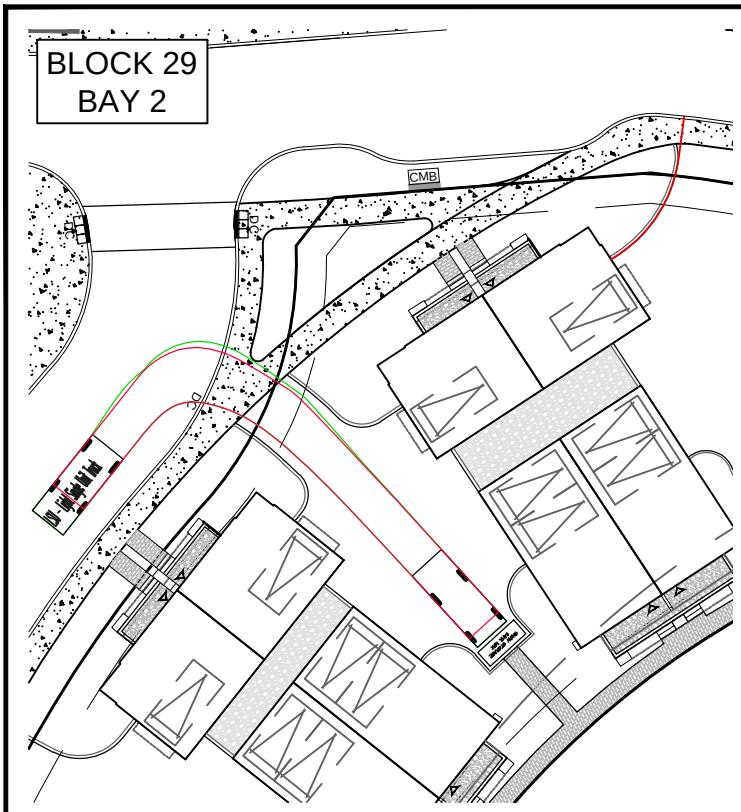
SCALE 1 : 500 (0, 5m, 10m, 20m)

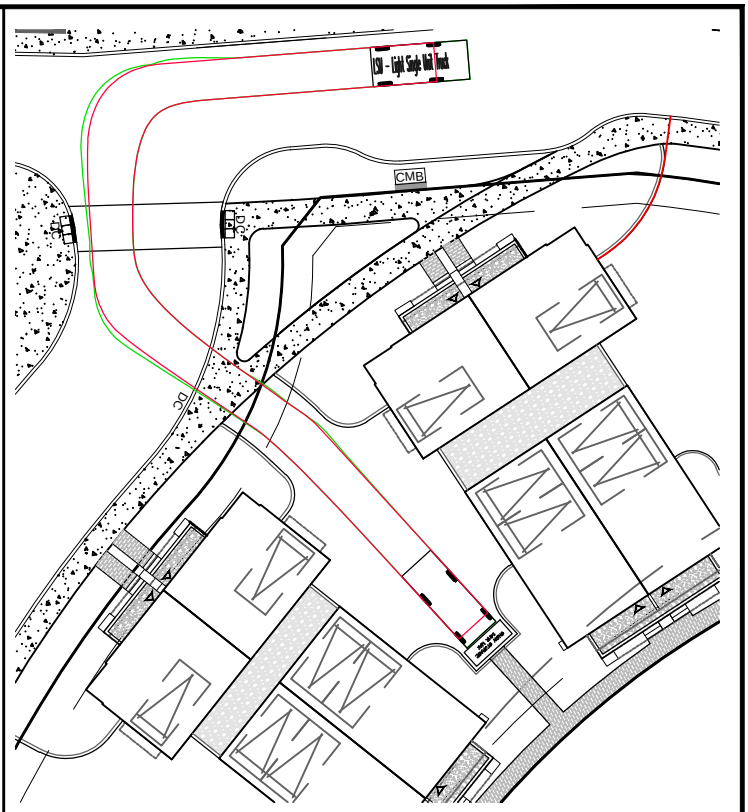
DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 9

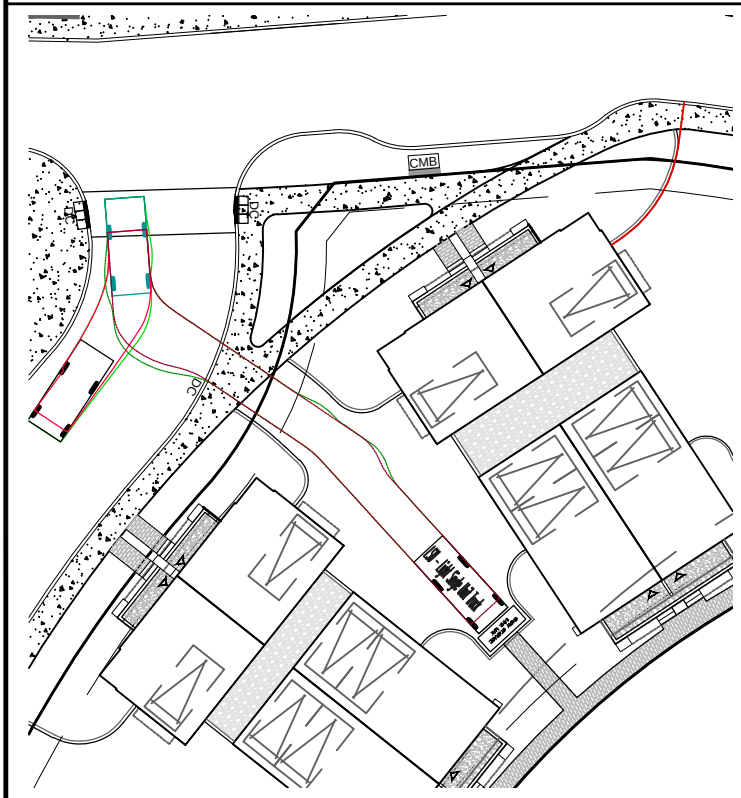
SHT8X11.DWG - 216mmx279mm

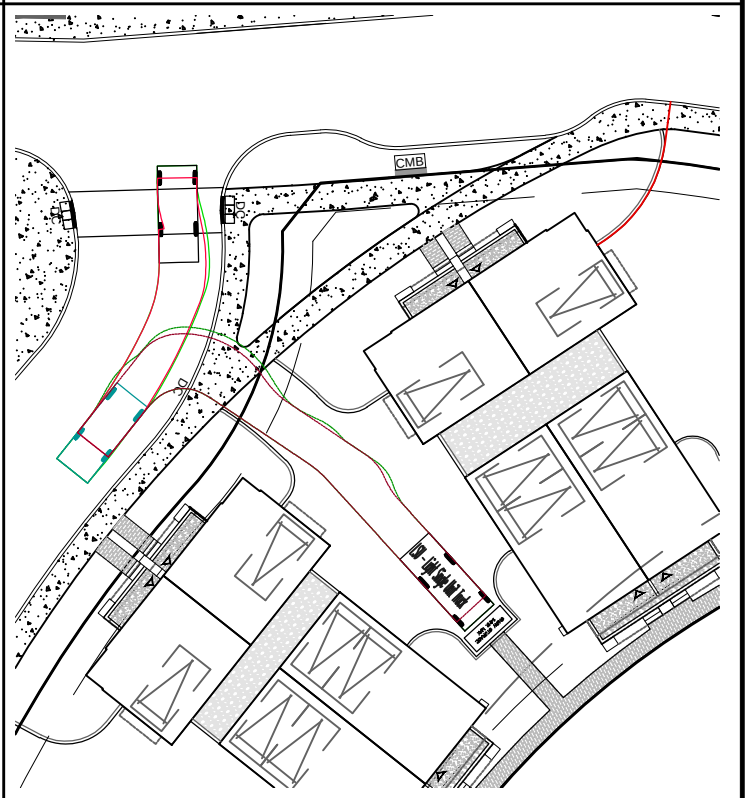
\\novatech2018\nova2\2014\114025\CAD\Design\Figures\Traffic\114025-TIA-Figs.dwg, Fig9, Oct 16, 2024 - 2:33pm, channa

BLOCK 29
BAY 2









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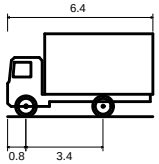

LSU - Light Single Unit Truck

Overall Length	6.400m
Overall Width	2.600m
Overall Body Height	3.650m
Min Body Ground Clearance	0.445m
Track Width	2.600m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6.300m

GREYSTONE VILLAGE FORECOURT TOWNS

UNIT TURNING MOVEMENTS (LSU)

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 10

SHT8X11.DWG - 216mmx279mm

\\novatech2018\nova2\2014\114025\CAD\Design\Figures\Traffic\114025-TIA-Figs.dwg, Fig10, Oct 16, 2024 - 2:33pm, channa

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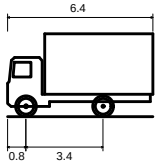

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GREYSTONE VILLAGE FORECOURT TOWNS

UNIT TURNING MOVEMENTS (LSU)

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 11

SHT8X11.DWG - 216mmx279mm

\\novatech2018\nova2\2014\114025\CAD\Design\Figures\Traffic\114025-TIA-Figs.dwg, Fig11, Oct 16, 2024 - 2:33pm, channa

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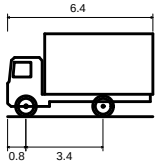

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GREYSTONE VILLAGE FORECOURT TOWNS

UNIT TURNING MOVEMENTS (LSU)

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 12

SHT8X11.DWG - 216mmx279mm

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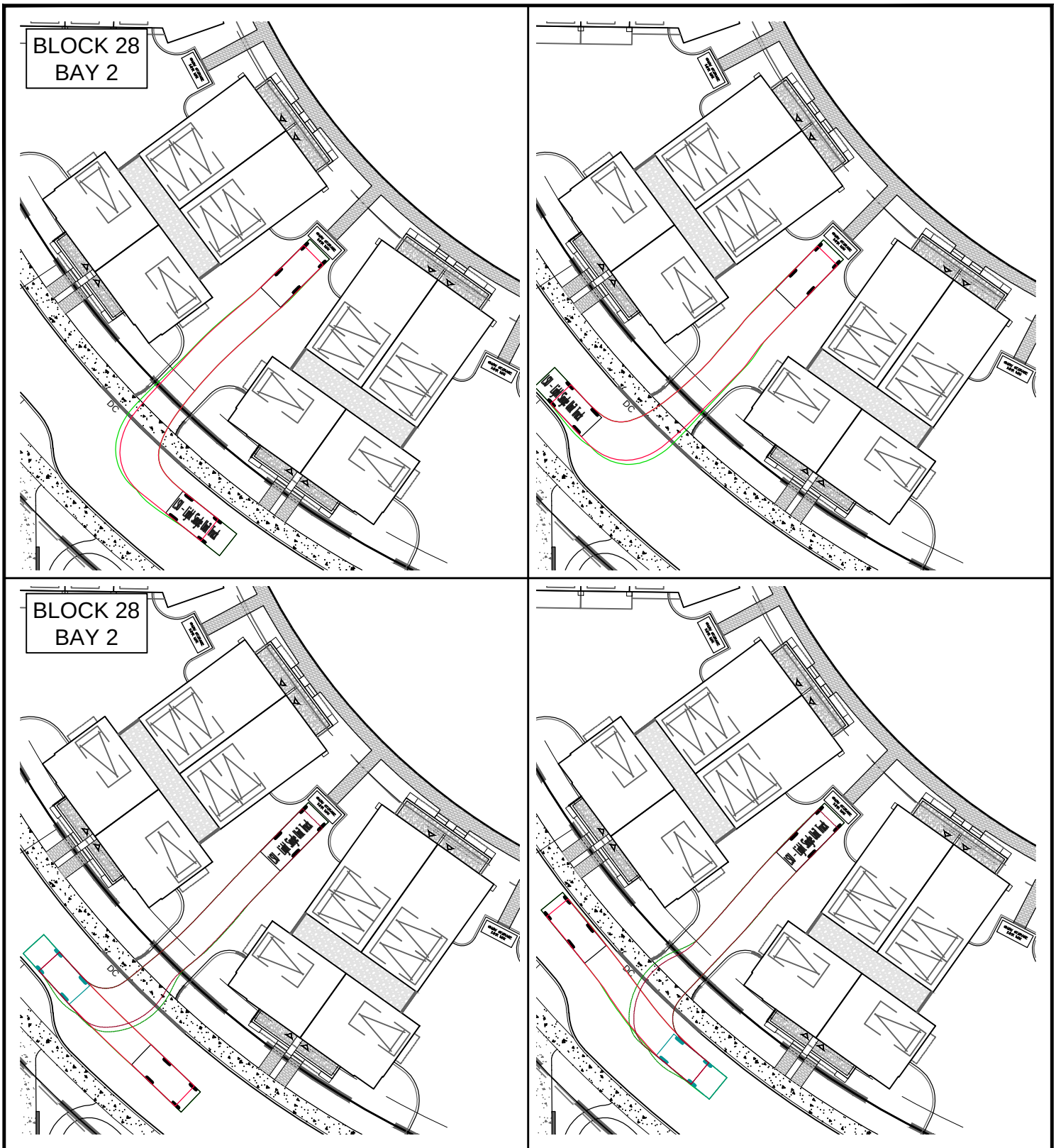

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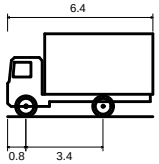

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GREYSTONE VILLAGE FORECOURT TOWNS

UNIT TURNING MOVEMENTS (LSU)

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 13

SHT8X11.DWG - 216mmx279mm

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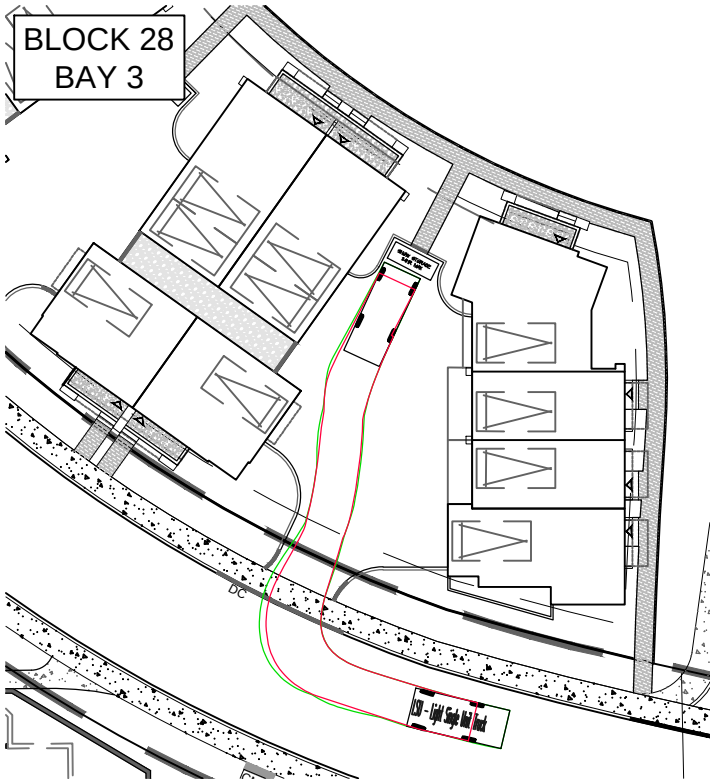

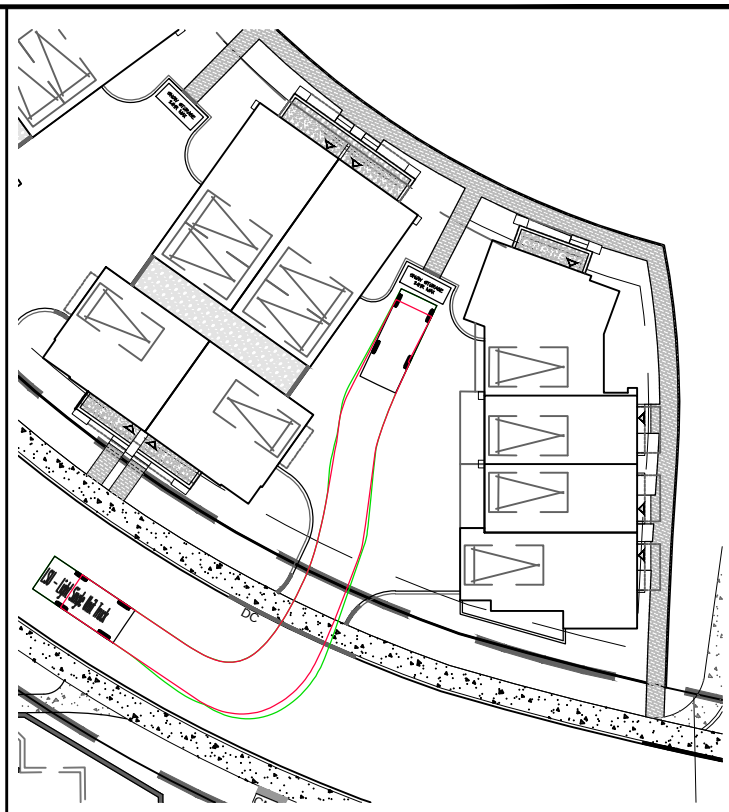

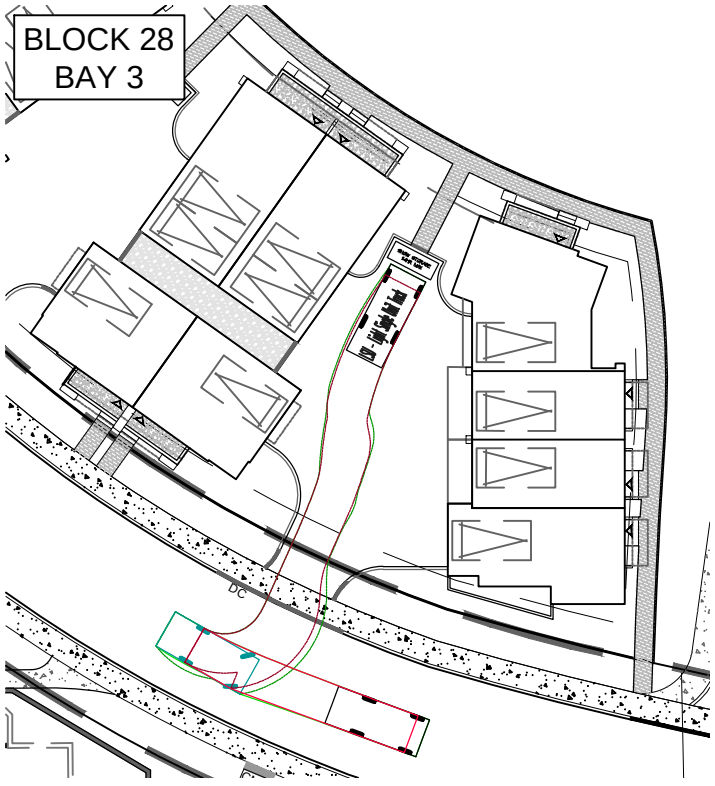

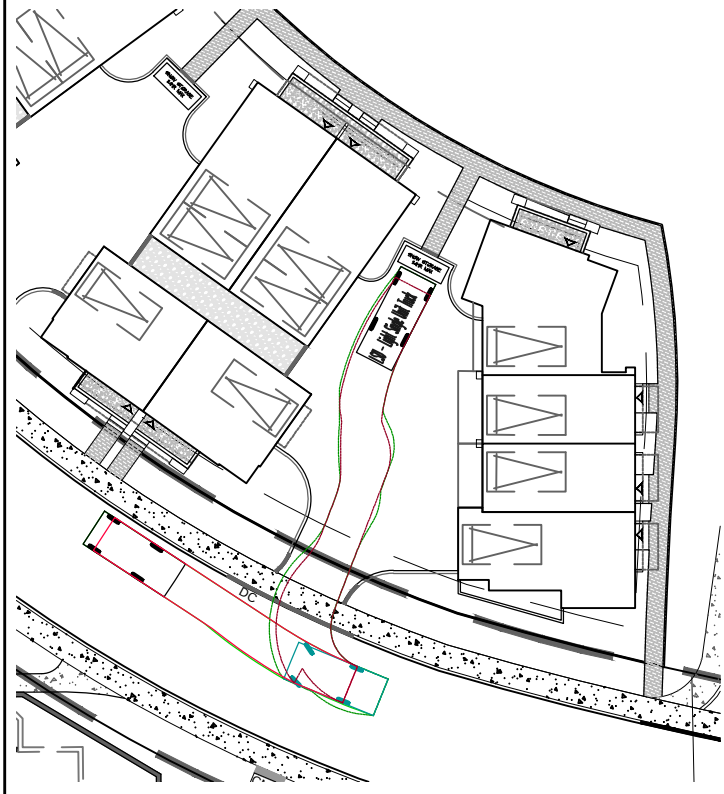

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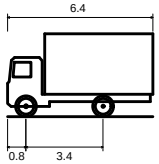

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GREYSTONE VILLAGE FORECOURT TOWNS

UNIT TURNING MOVEMENTS (LSU)

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 14

SHT8X11.DWG - 216mmx279mm

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APPENDIX G

Sight Distances

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GREYSTONE VILLAGE FORECOURT TOWNS

STOPPING SIGHT DISTANCE

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 1

SHT8X11.DWG - 216mmx279mm

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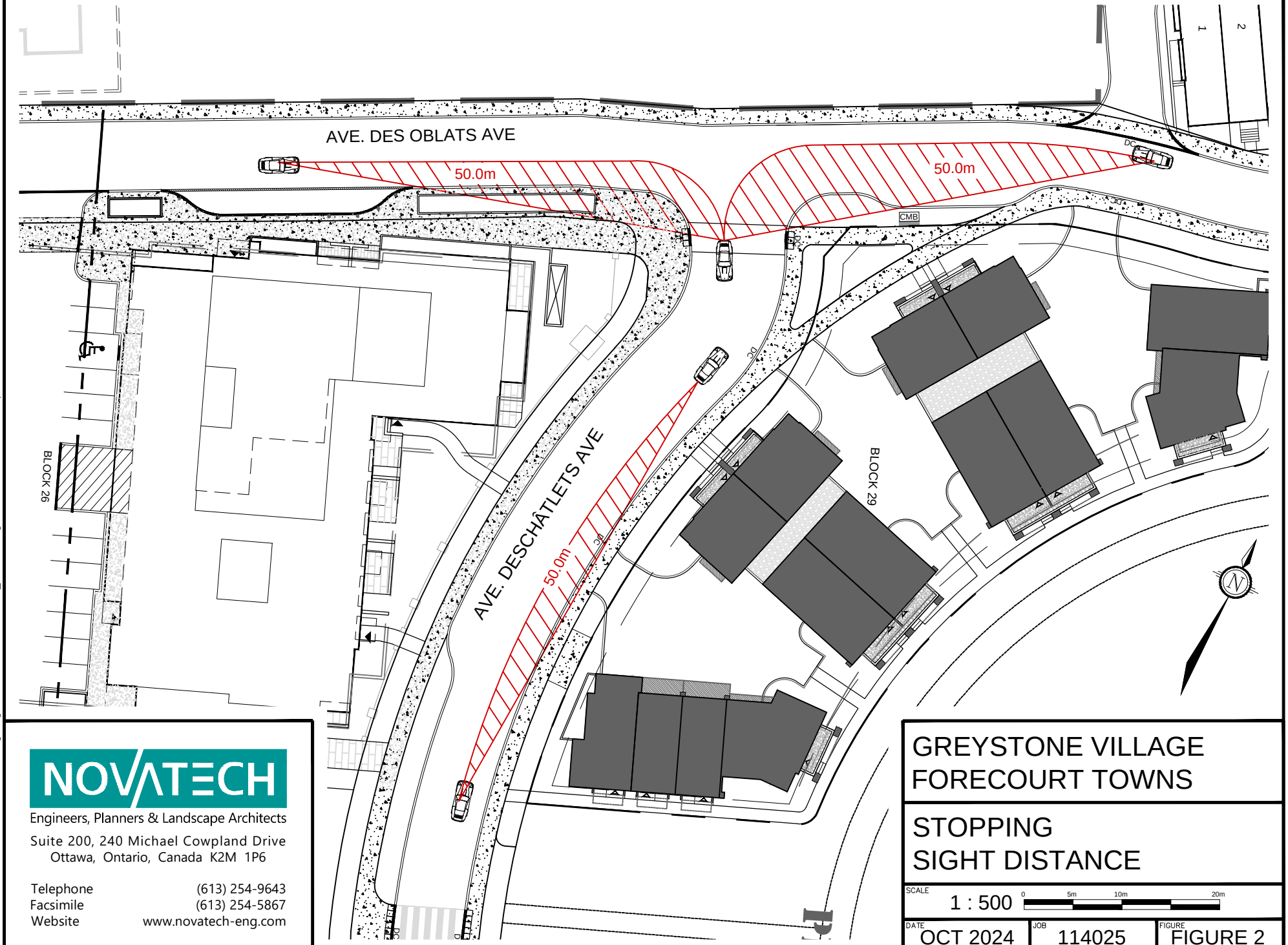

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GREYSTONE VILLAGE FORECOURT TOWNS

STOPPING SIGHT DISTANCE

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 2

SHT8X11.DWG - 216mmx279mm

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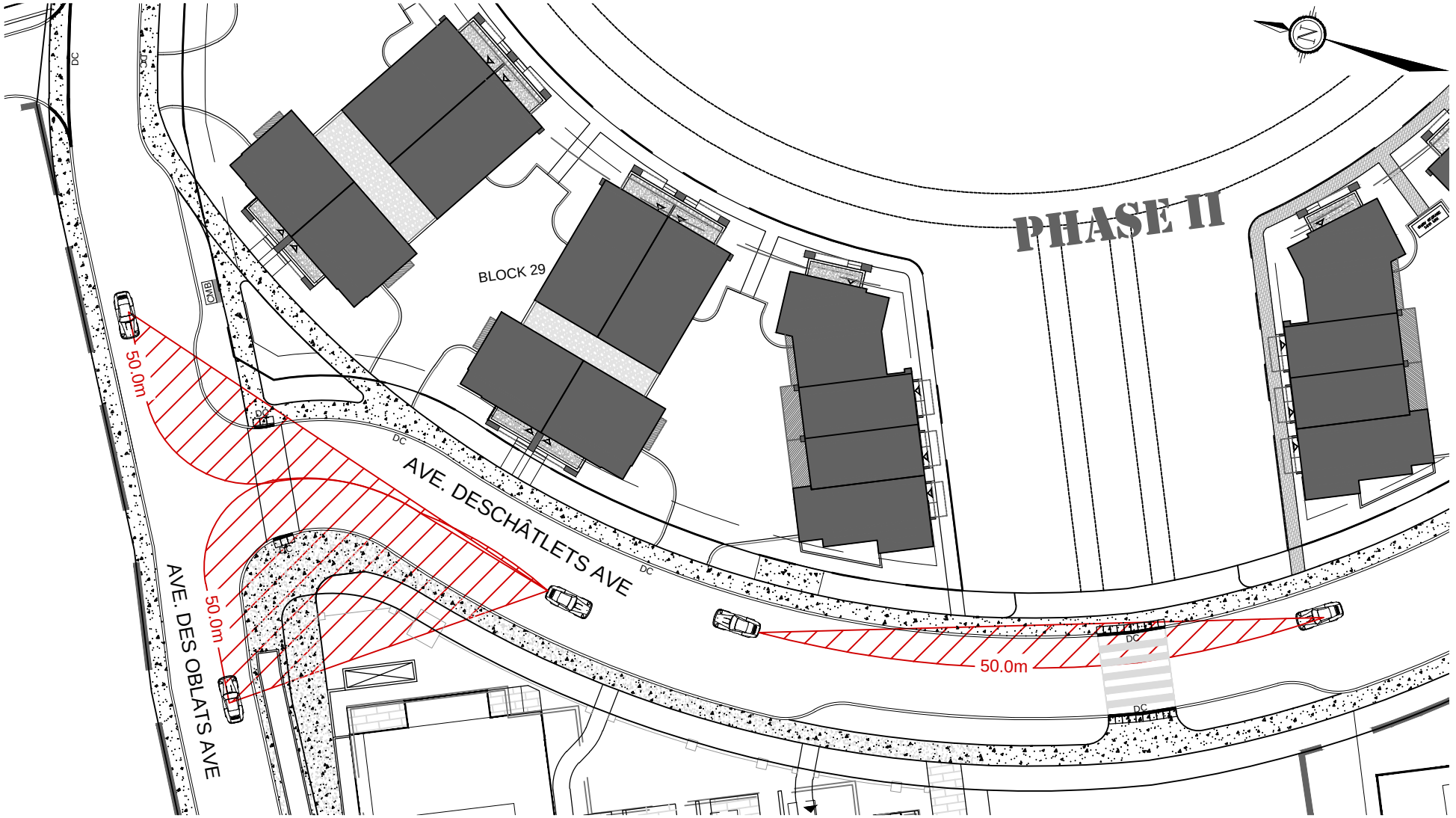

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GREYSTONE VILLAGE FORECOURT TOWNS

STOPPING SIGHT DISTANCE

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 3

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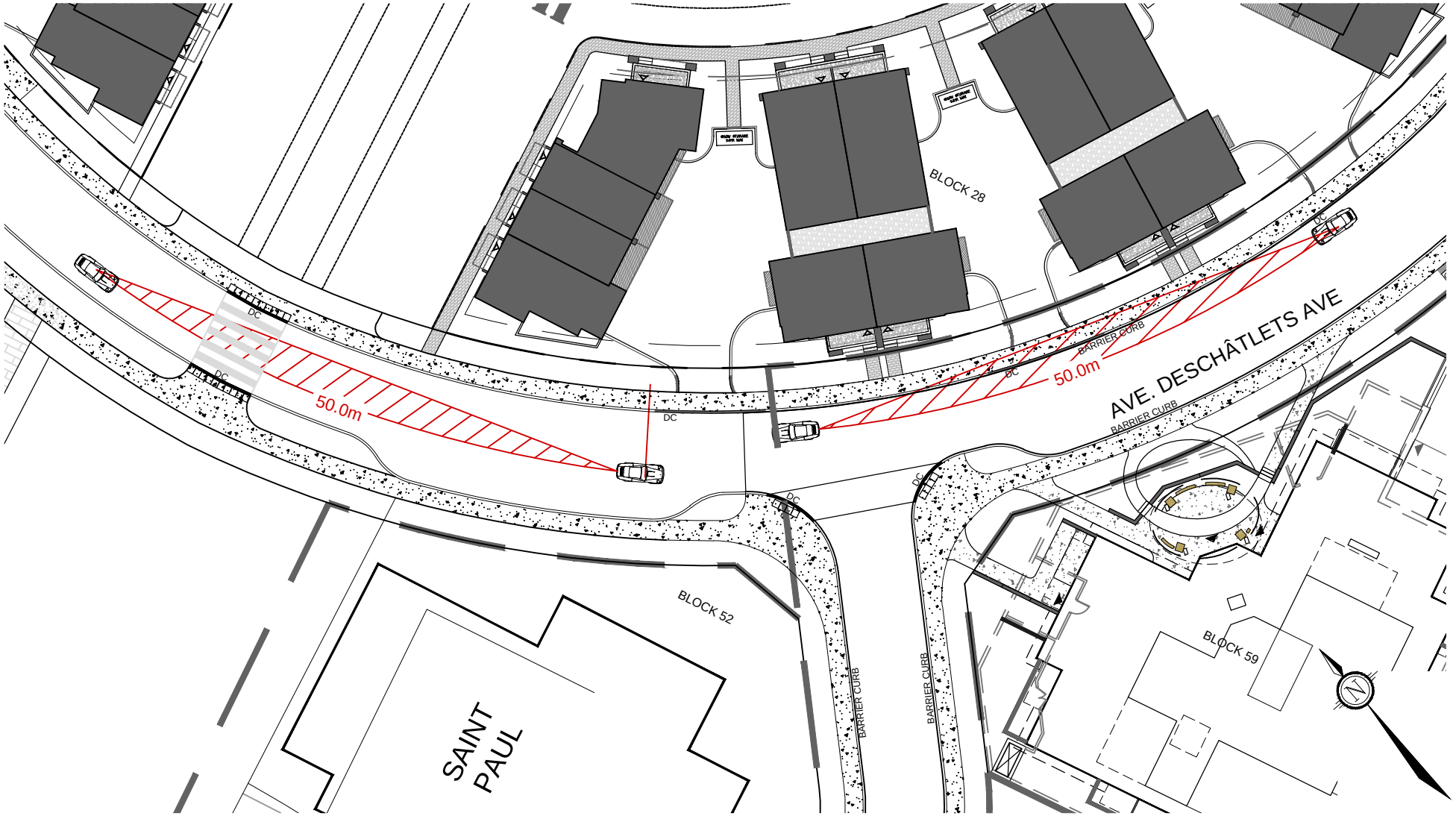

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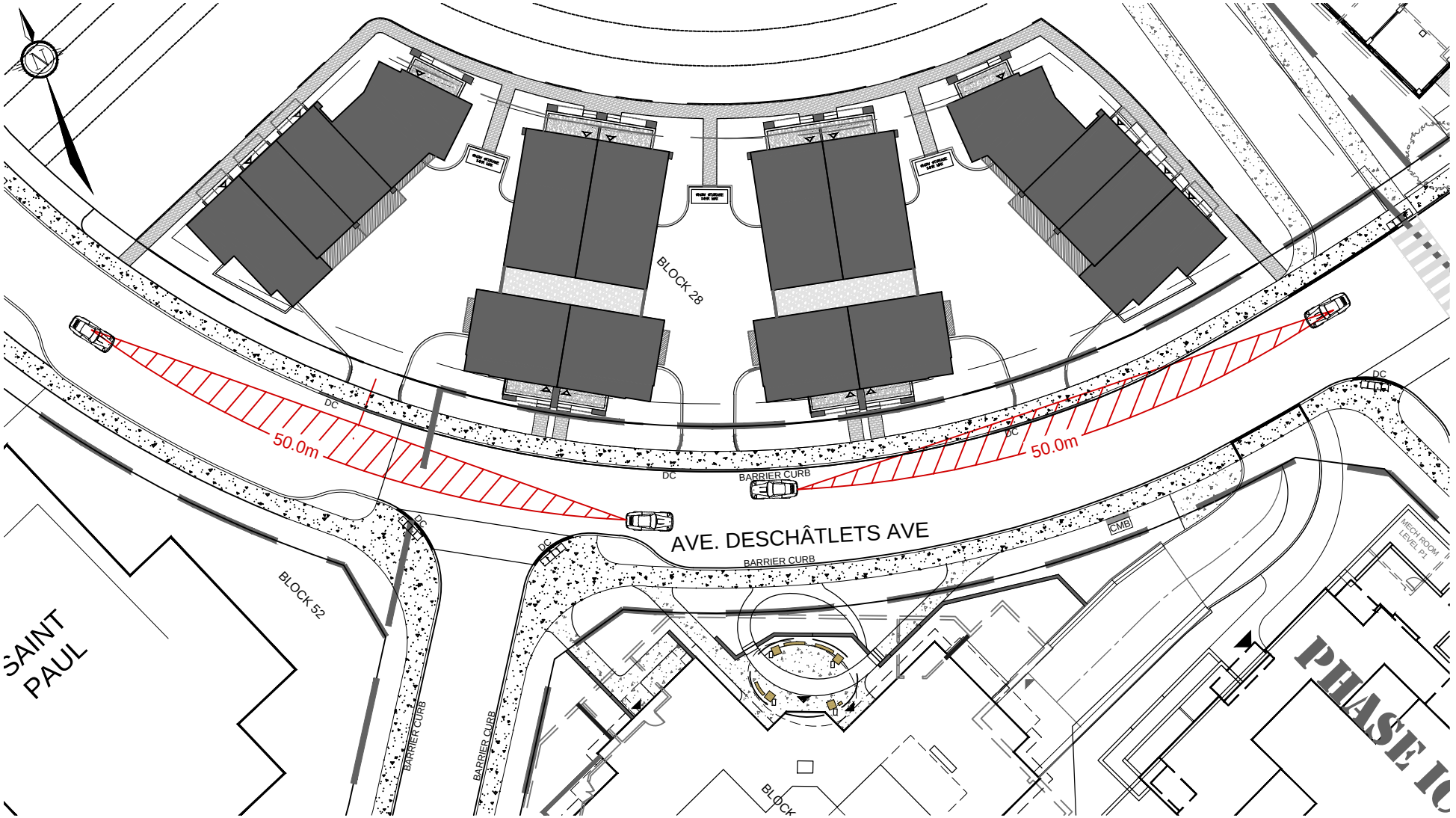
GREYSTONE VILLAGE FORECOURT TOWNS

STOPPING SIGHT DISTANCE

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 4

SHT8X11.DWG - 216mmx279mm



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GREYSTONE VILLAGE FORECOURT TOWNS

STOPPING SIGHT DISTANCE

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 5

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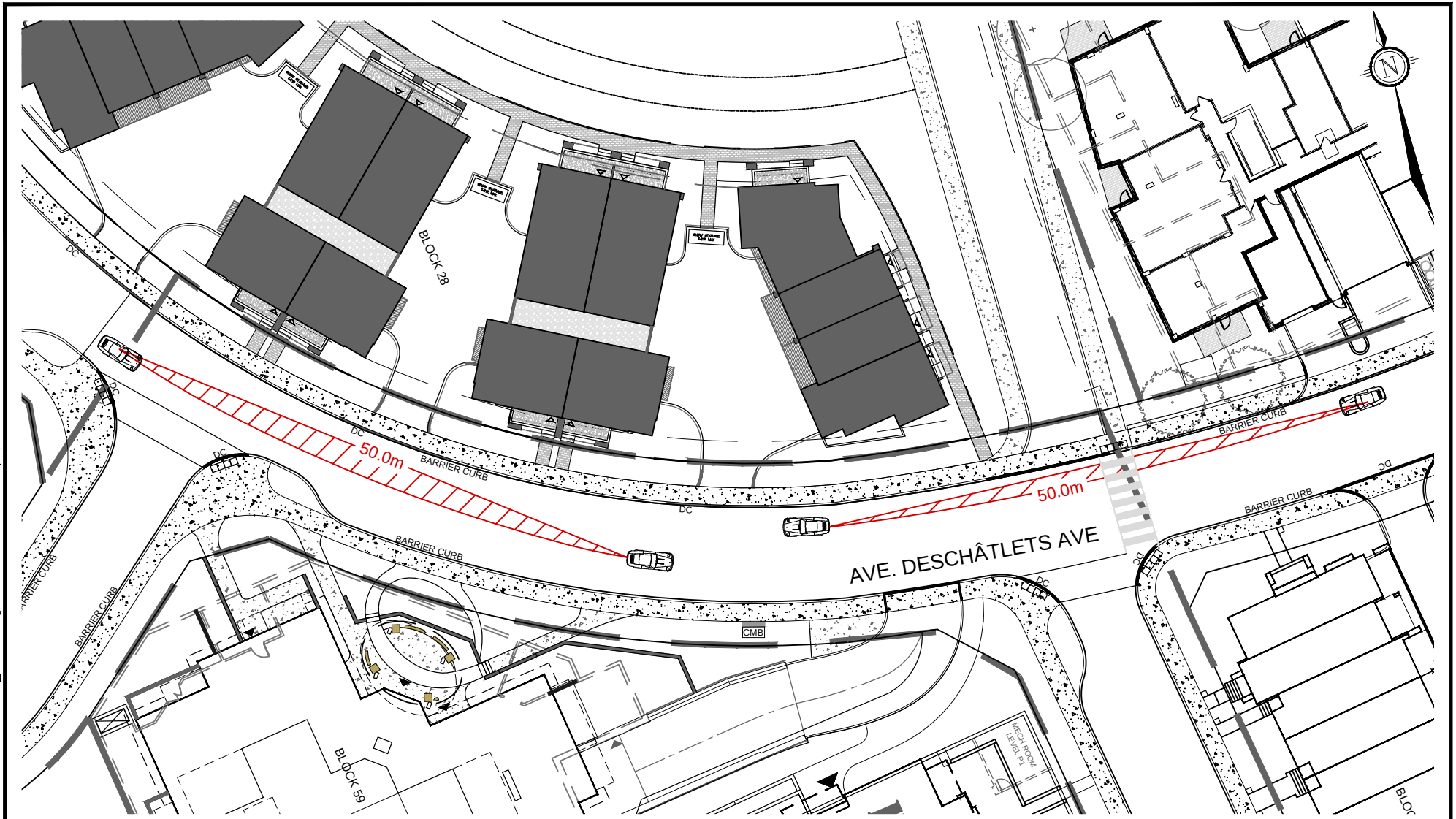

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GREYSTONE VILLAGE FORECOURT TOWNS

STOPPING SIGHT DISTANCE

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 6

SHT8X11.DWG - 216mmx279mm

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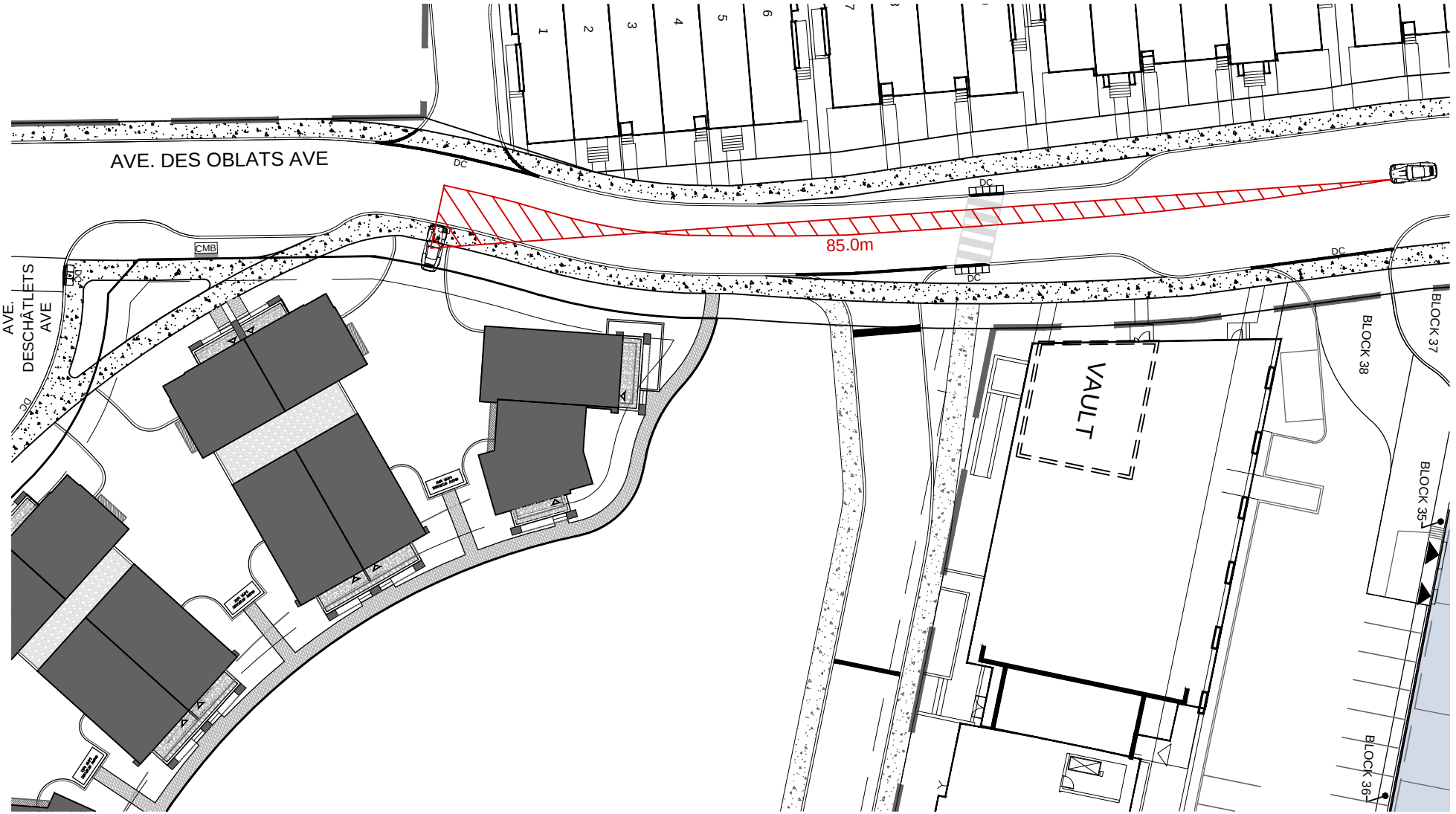

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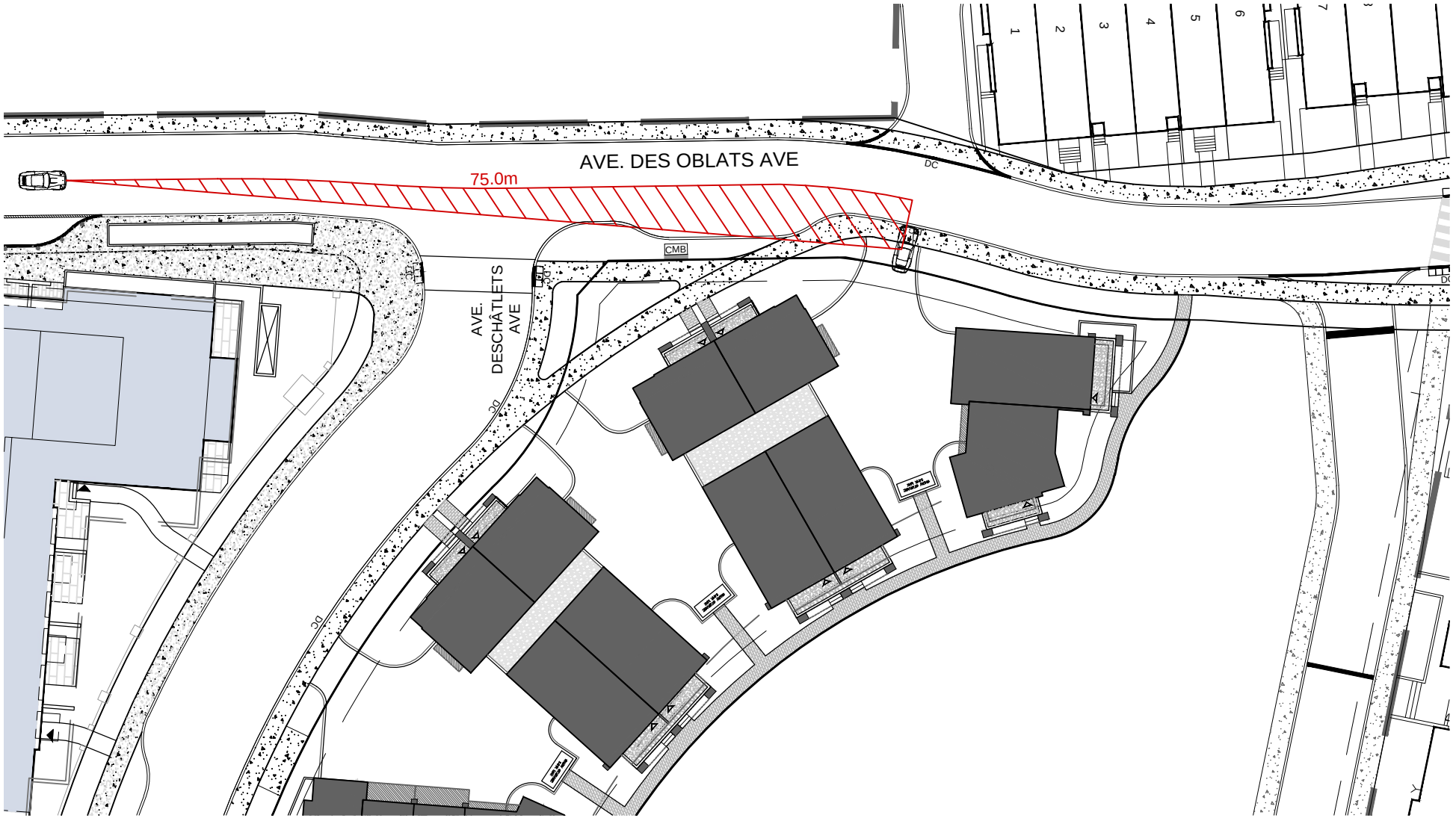
GREYSTONE VILLAGE FORECOURT TOWNS

TURNING SIGHT DISTANCE

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 7

SHT8X11.DWG - 216mmx279mm



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GREYSTONE VILLAGE FORECOURT TOWNS

TURNING SIGHT DISTANCE

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 8

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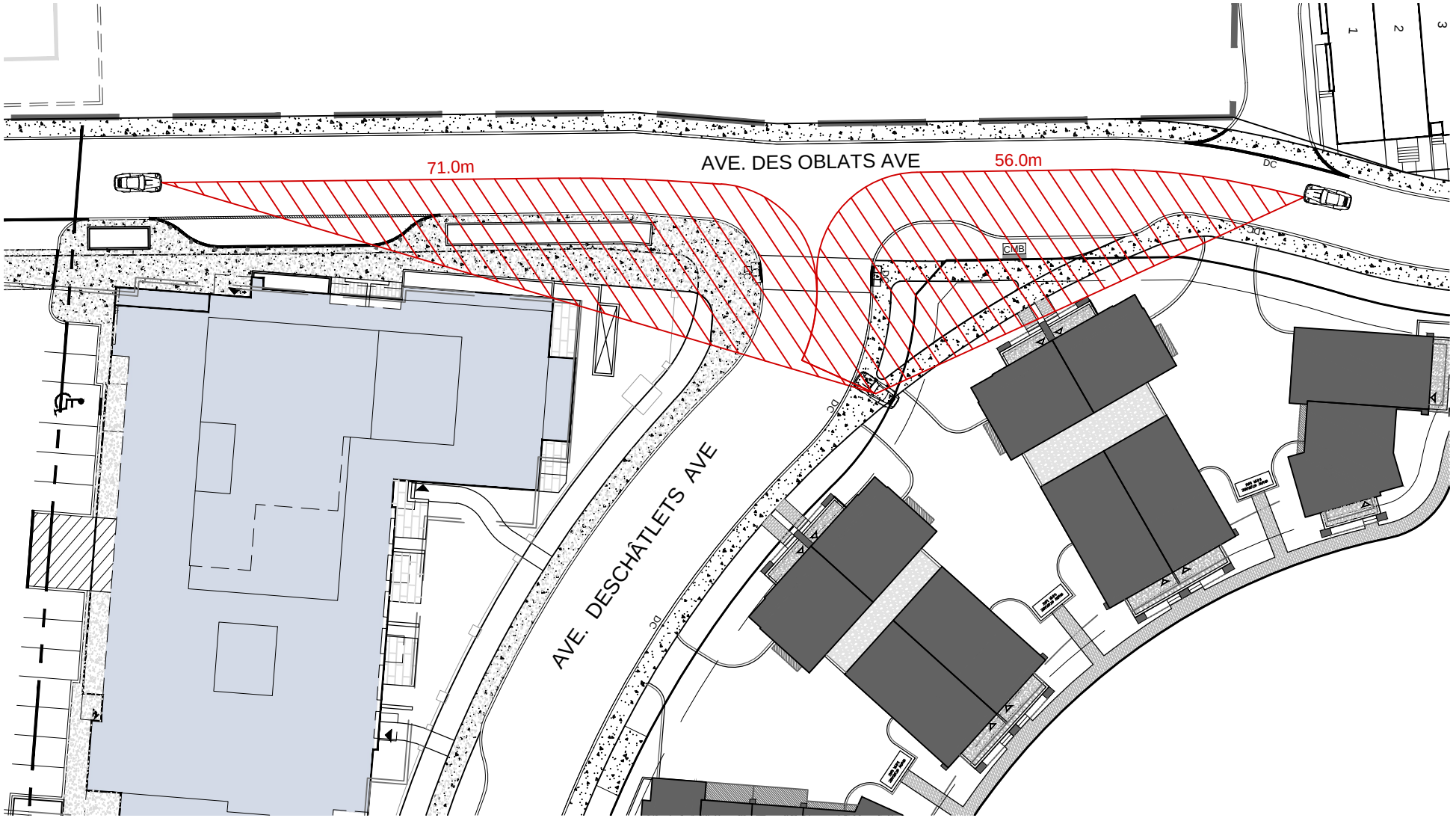

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GREYSTONE VILLAGE FORECOURT TOWNS

TURNING SIGHT DISTANCE

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 9

SHT8X11.DWG - 216mmx279mm

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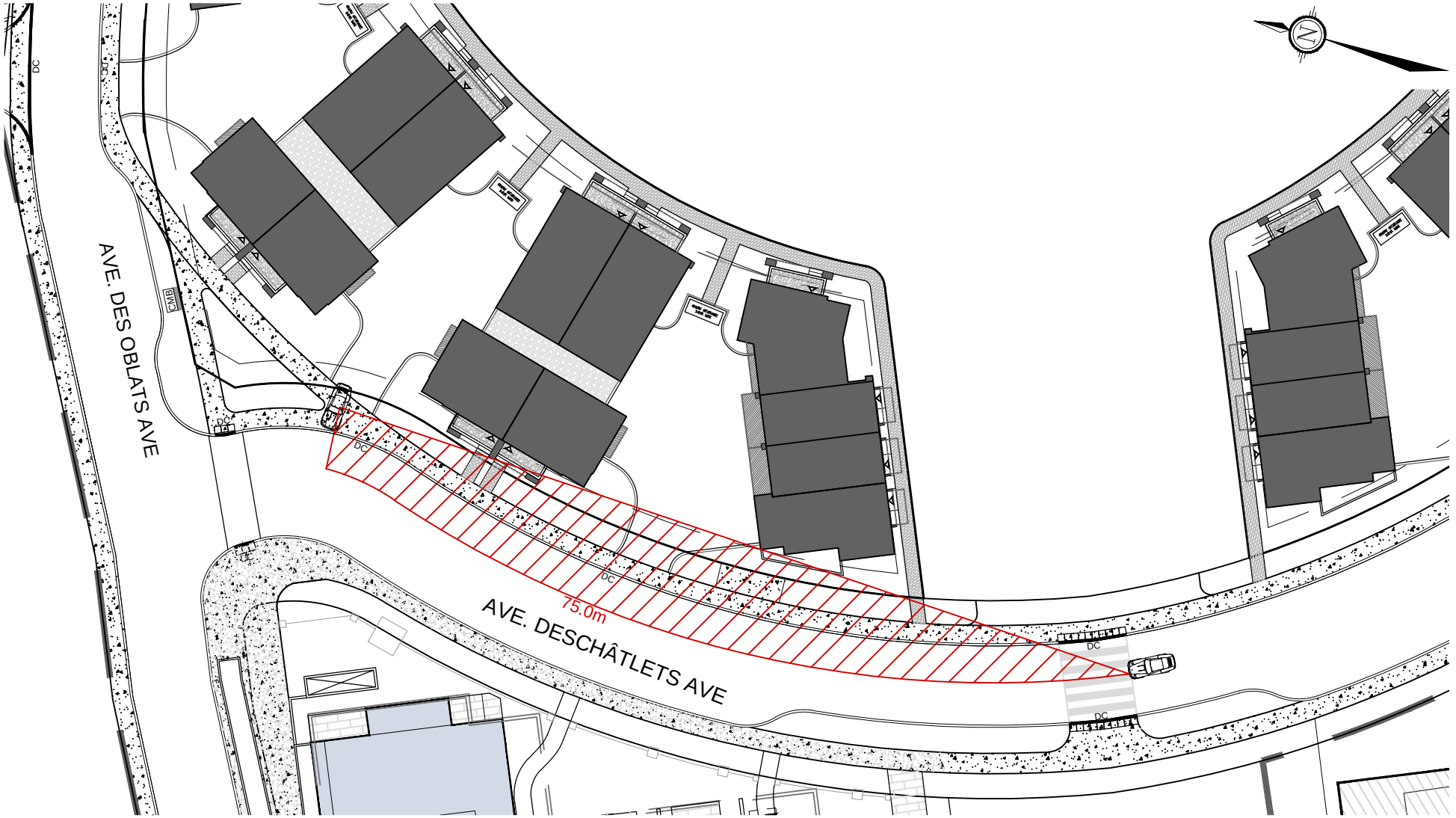

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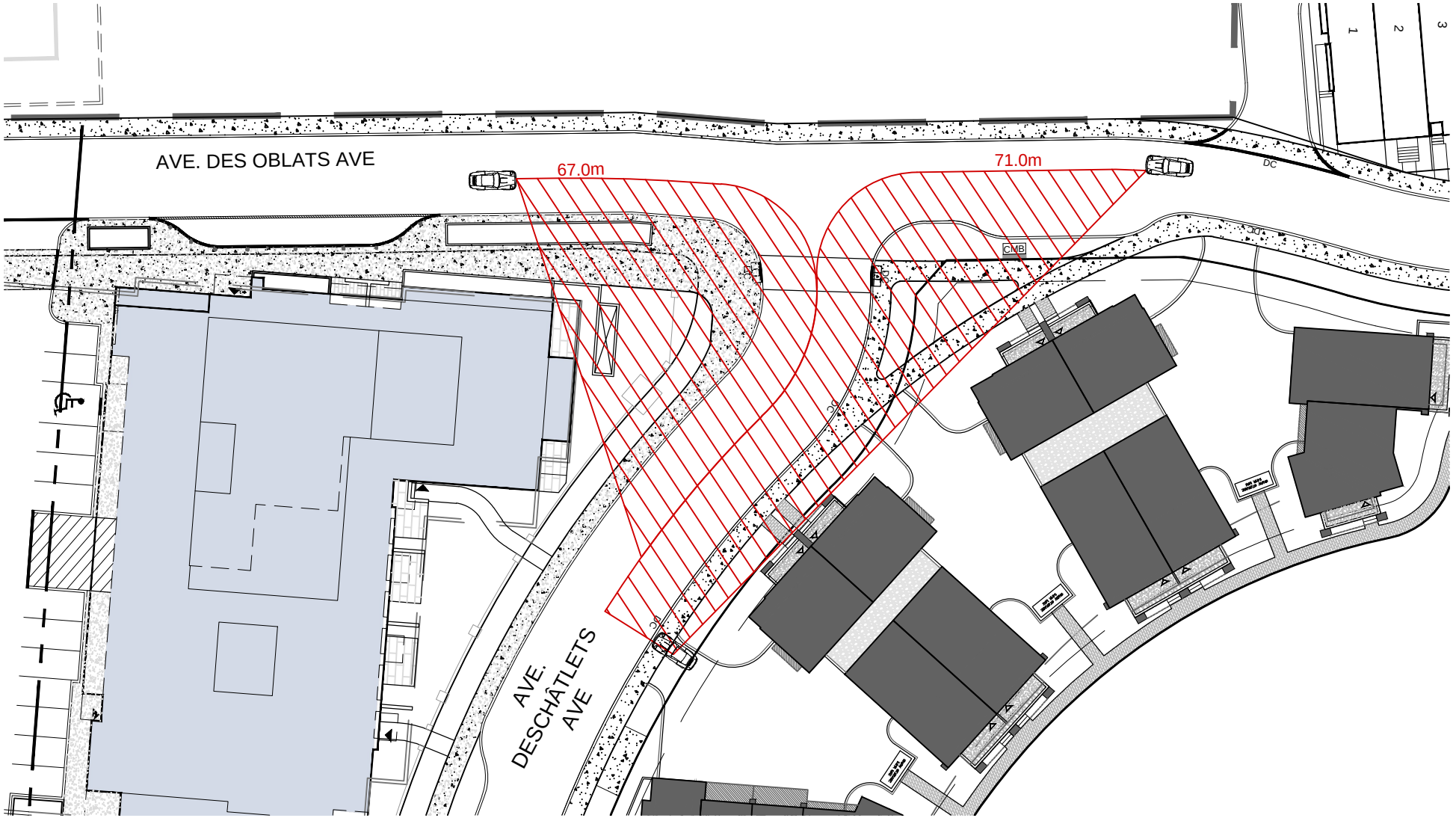
GREYSTONE VILLAGE FORECOURT TOWNS

TURNING SIGHT DISTANCE

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 10

SHT8X11.DWG - 216mmx279mm



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GREYSTONE VILLAGE FORECOURT TOWNS

TURNING SIGHT DISTANCE

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 11

SHT8X11.DWG - 216mmx279mm

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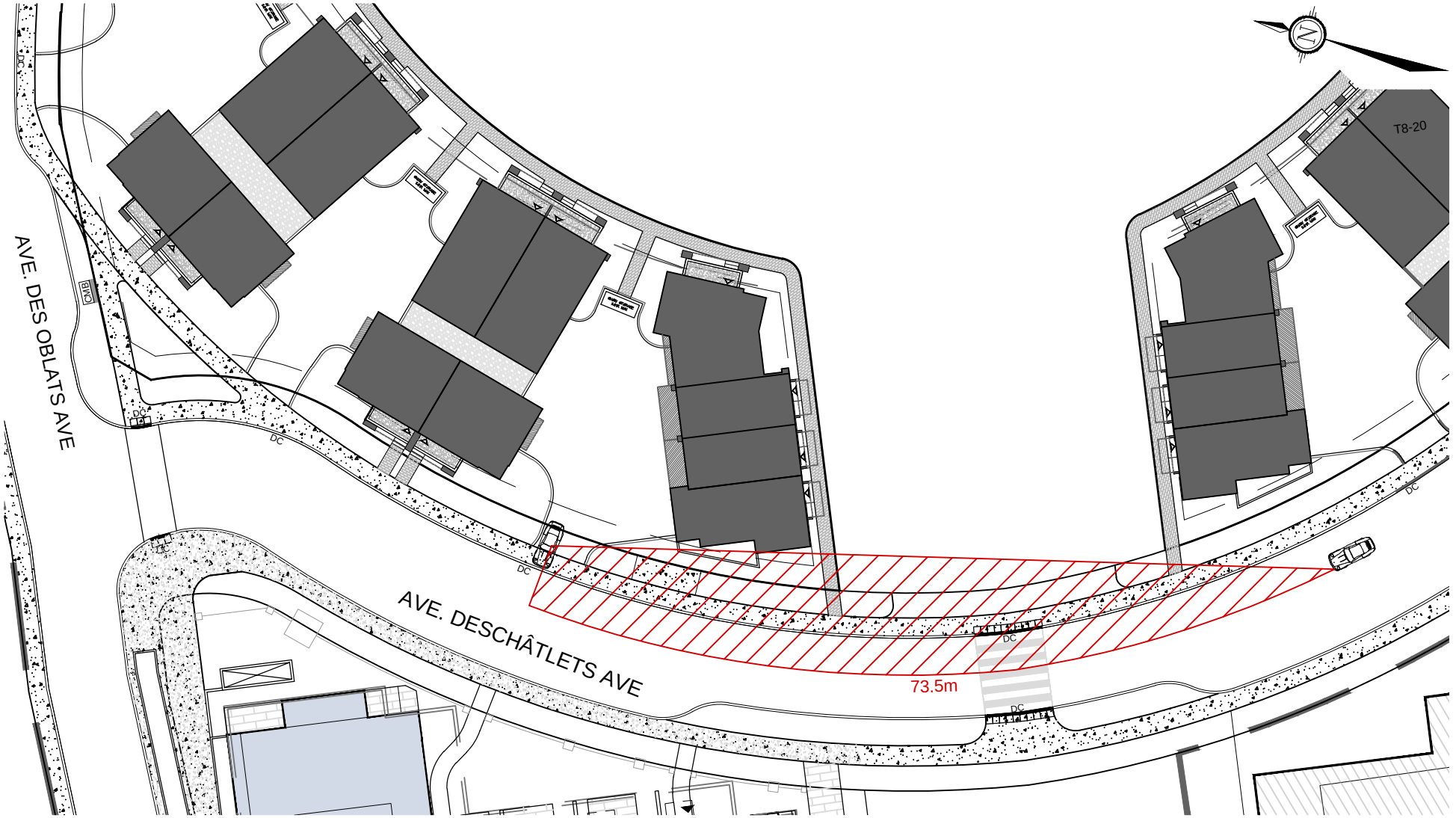

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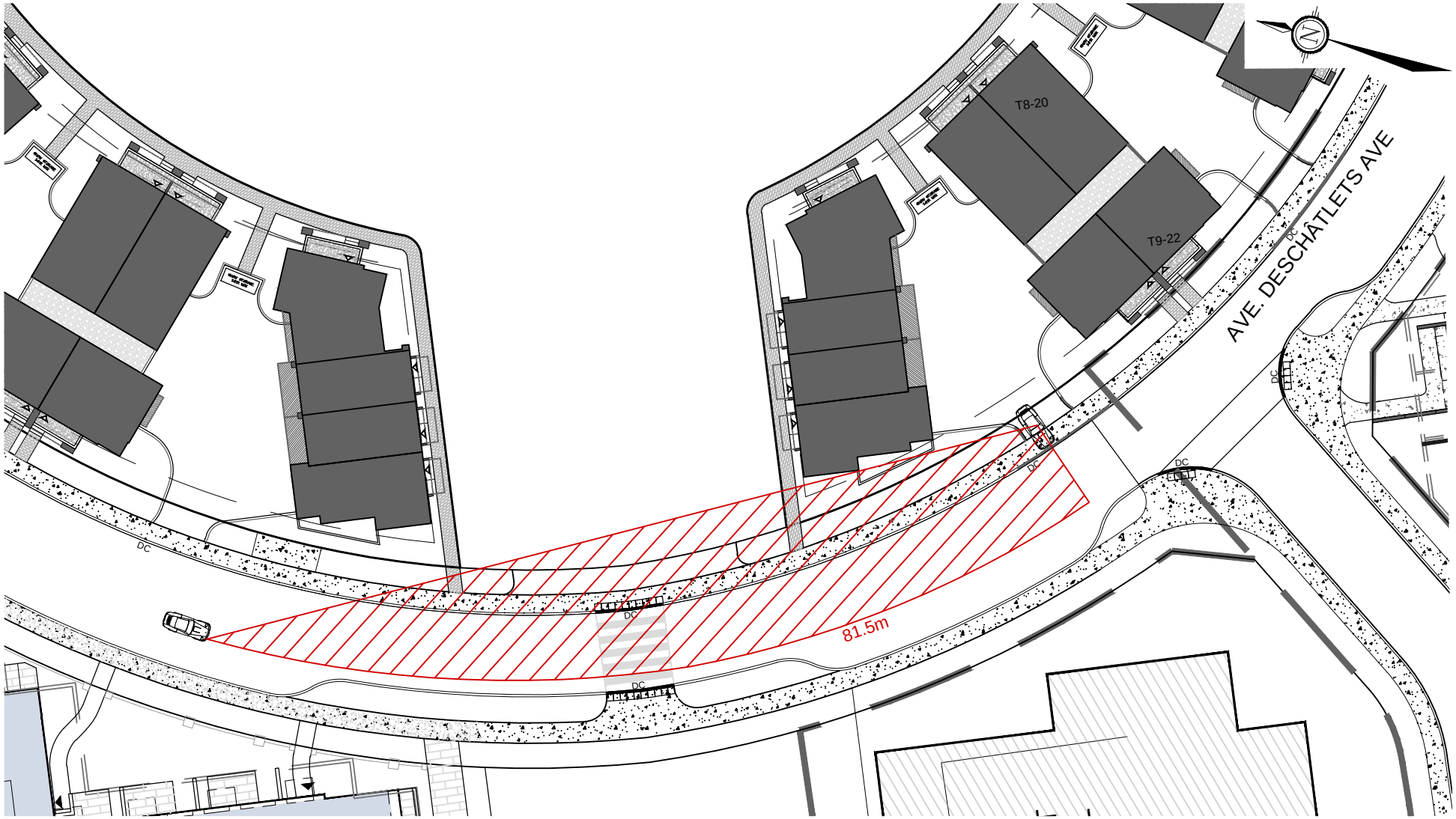
GREYSTONE VILLAGE FORECOURT TOWNS

TURNING SIGHT DISTANCE

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 12

SHT8X11.DWG - 216mmx279mm



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GREYSTONE VILLAGE FORECOURT TOWNS

TURNING SIGHT DISTANCE

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 13

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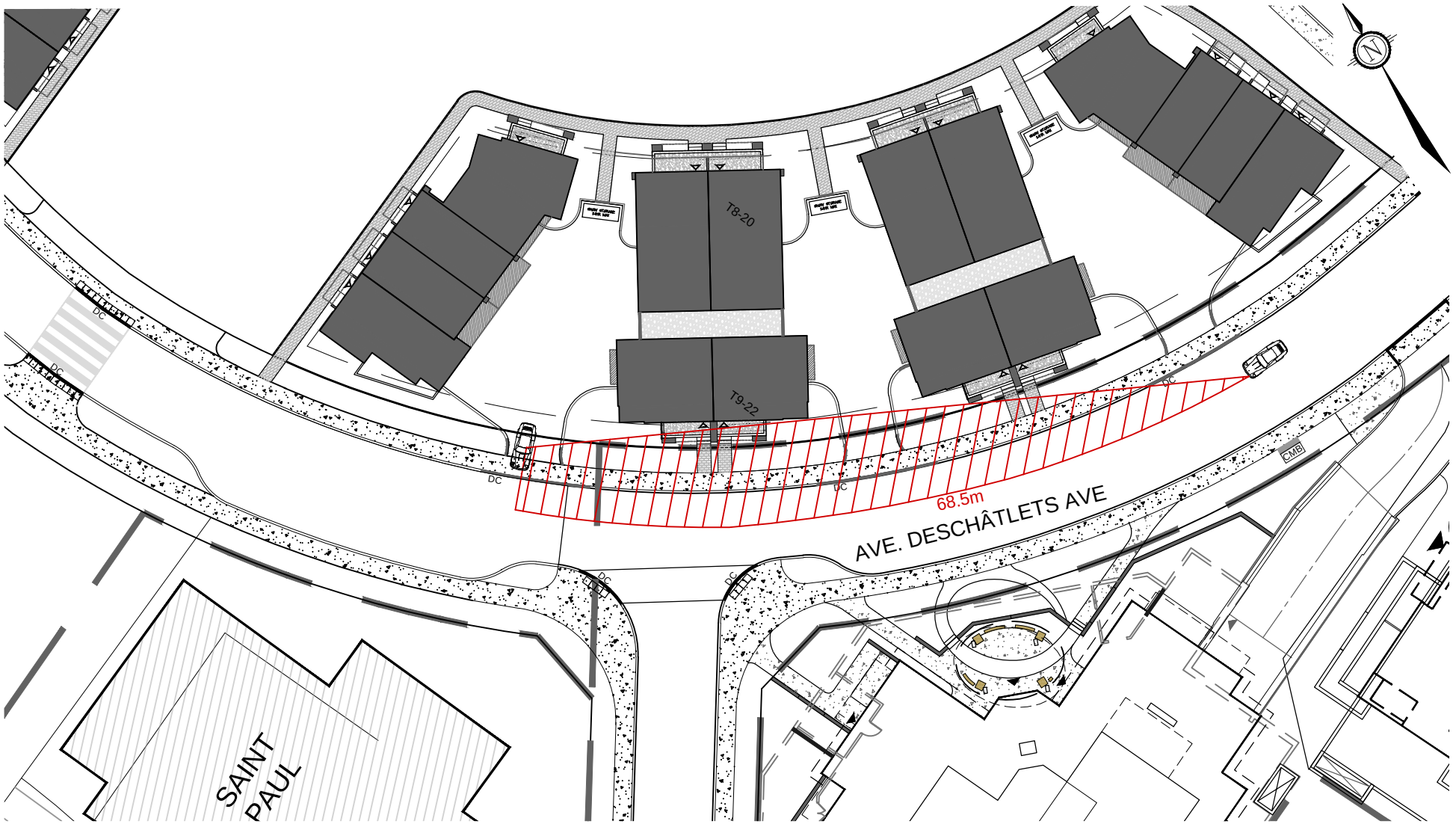

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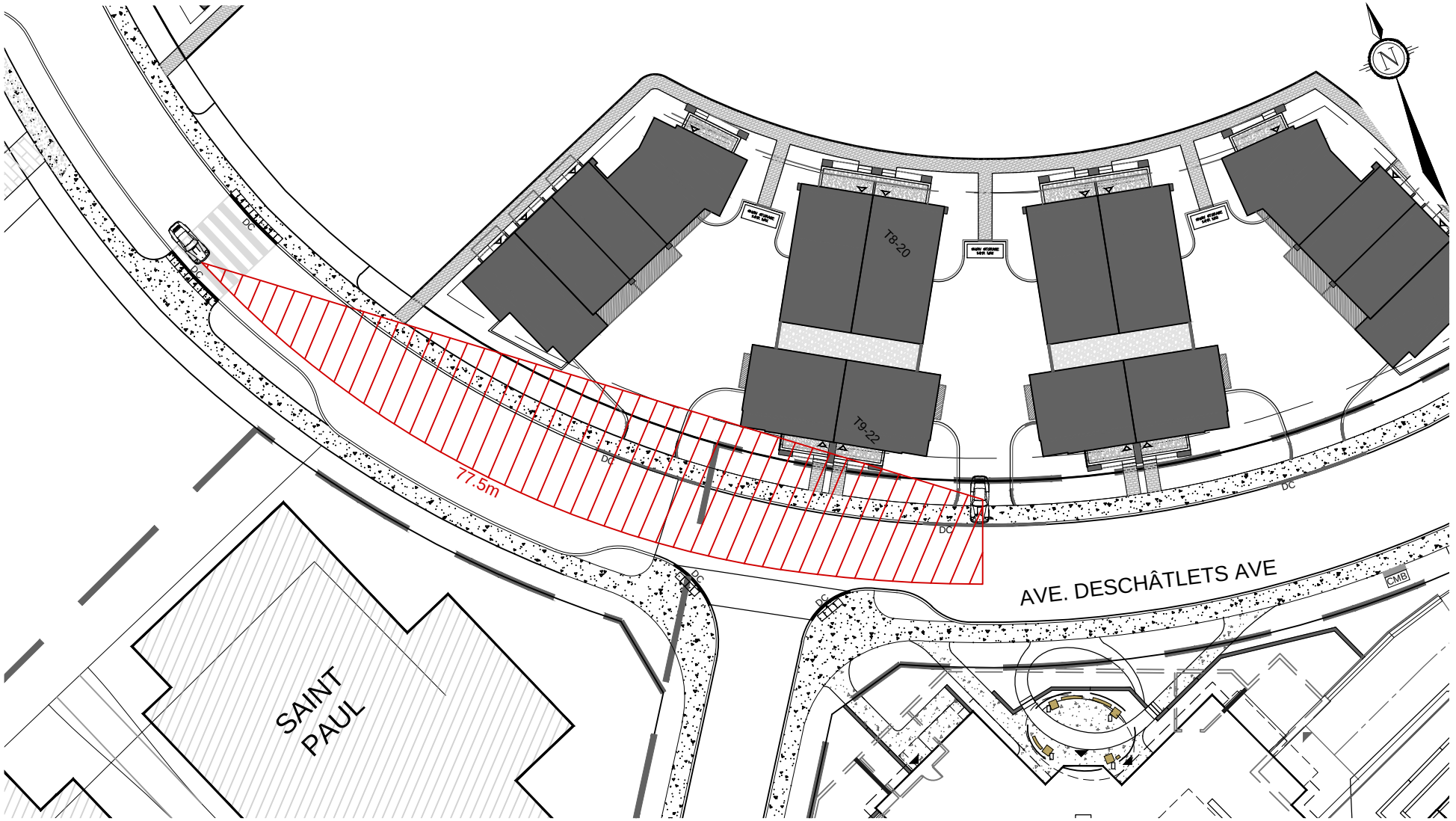
GREYSTONE VILLAGE FORECOURT TOWNS

TURNING SIGHT DISTANCE

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 14

SHT8X11.DWG - 216mmx279mm



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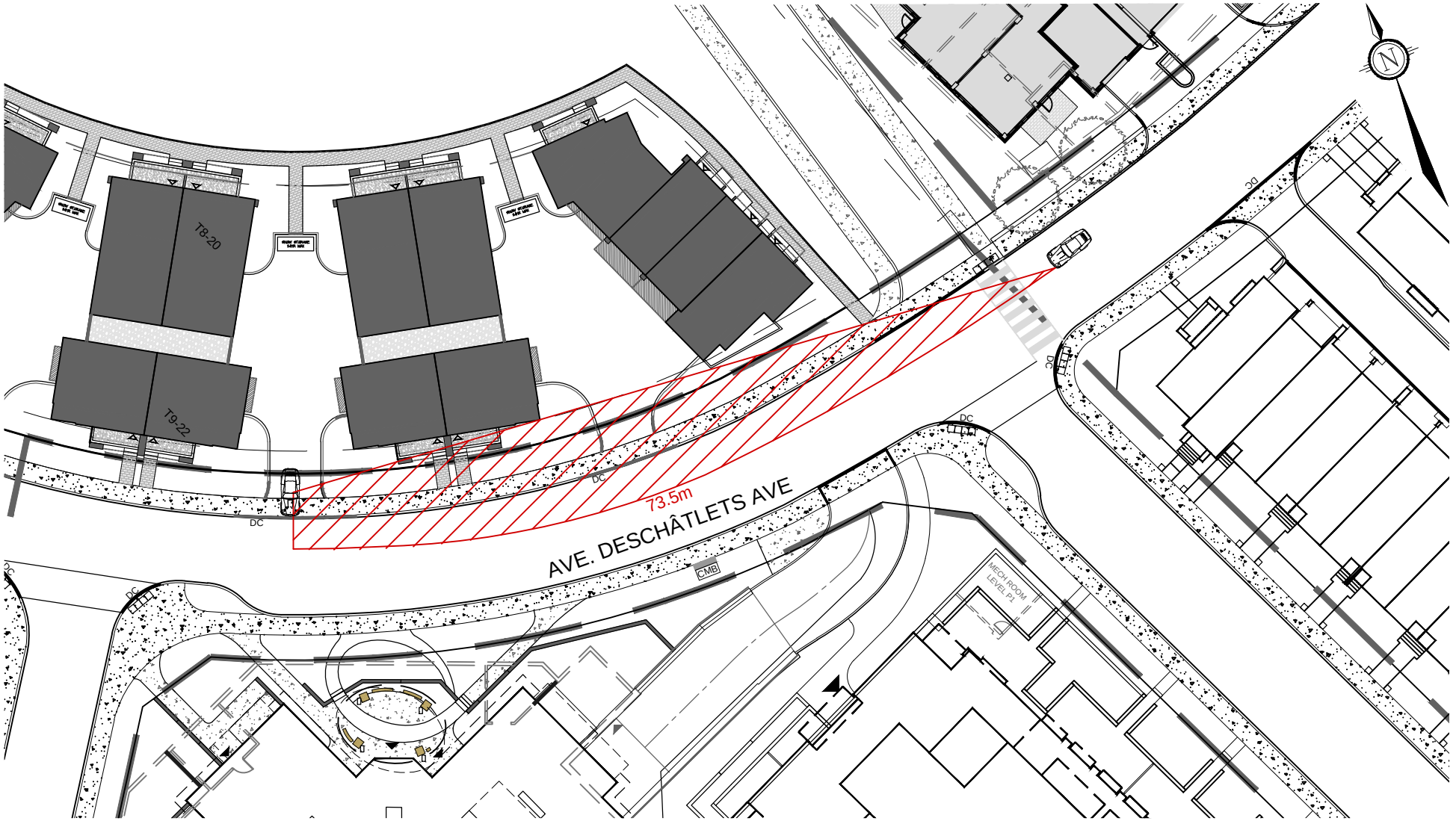
GREYSTONE VILLAGE FORECOURT TOWNS

TURNING SIGHT DISTANCE

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 15

SHT8X11.DWG - 216mmx279mm



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GREYSTONE VILLAGE FORECOURT TOWNS

TURNING SIGHT DISTANCE

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 16

SHT8X11.DWG - 216mmx279mm

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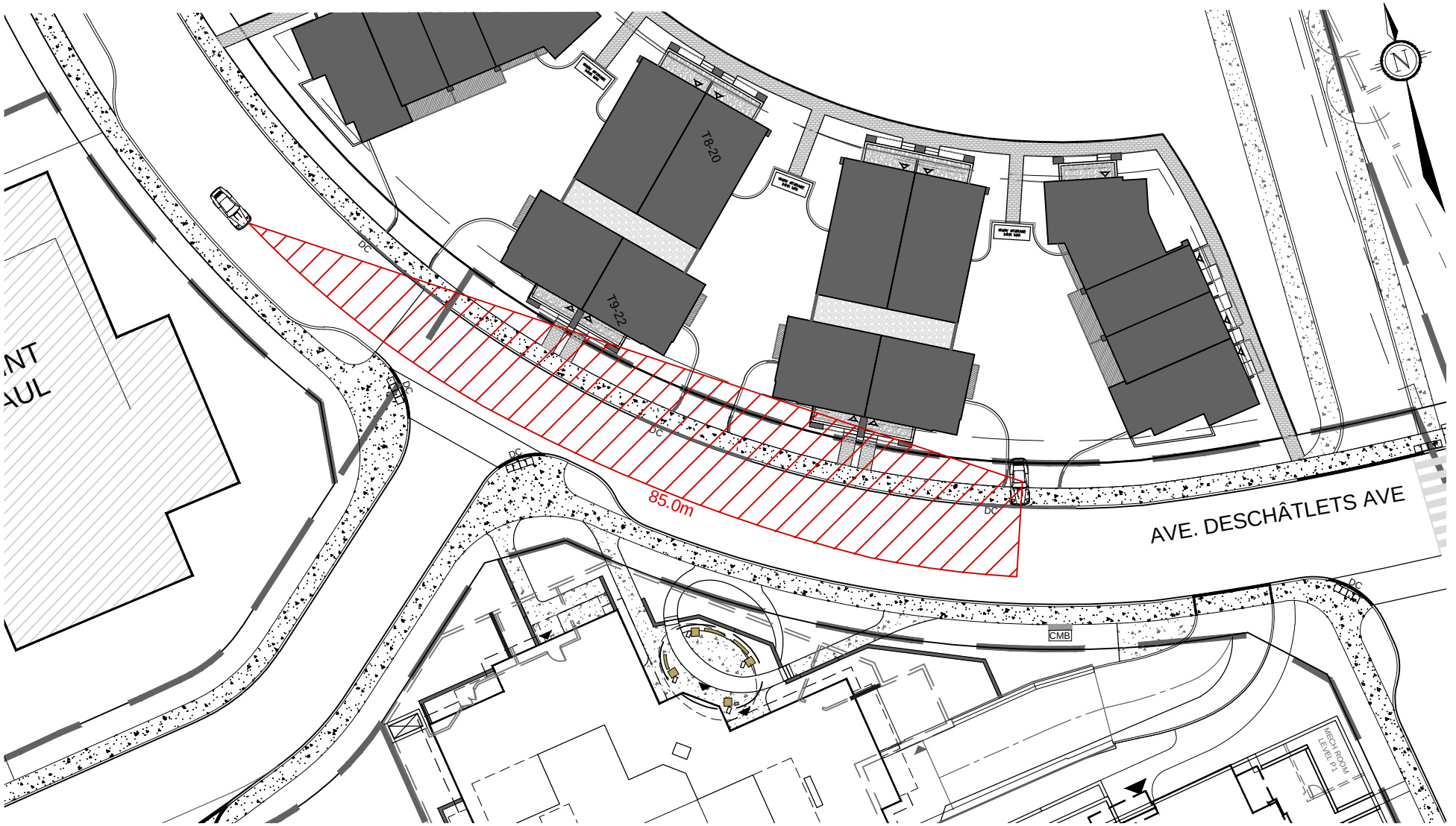

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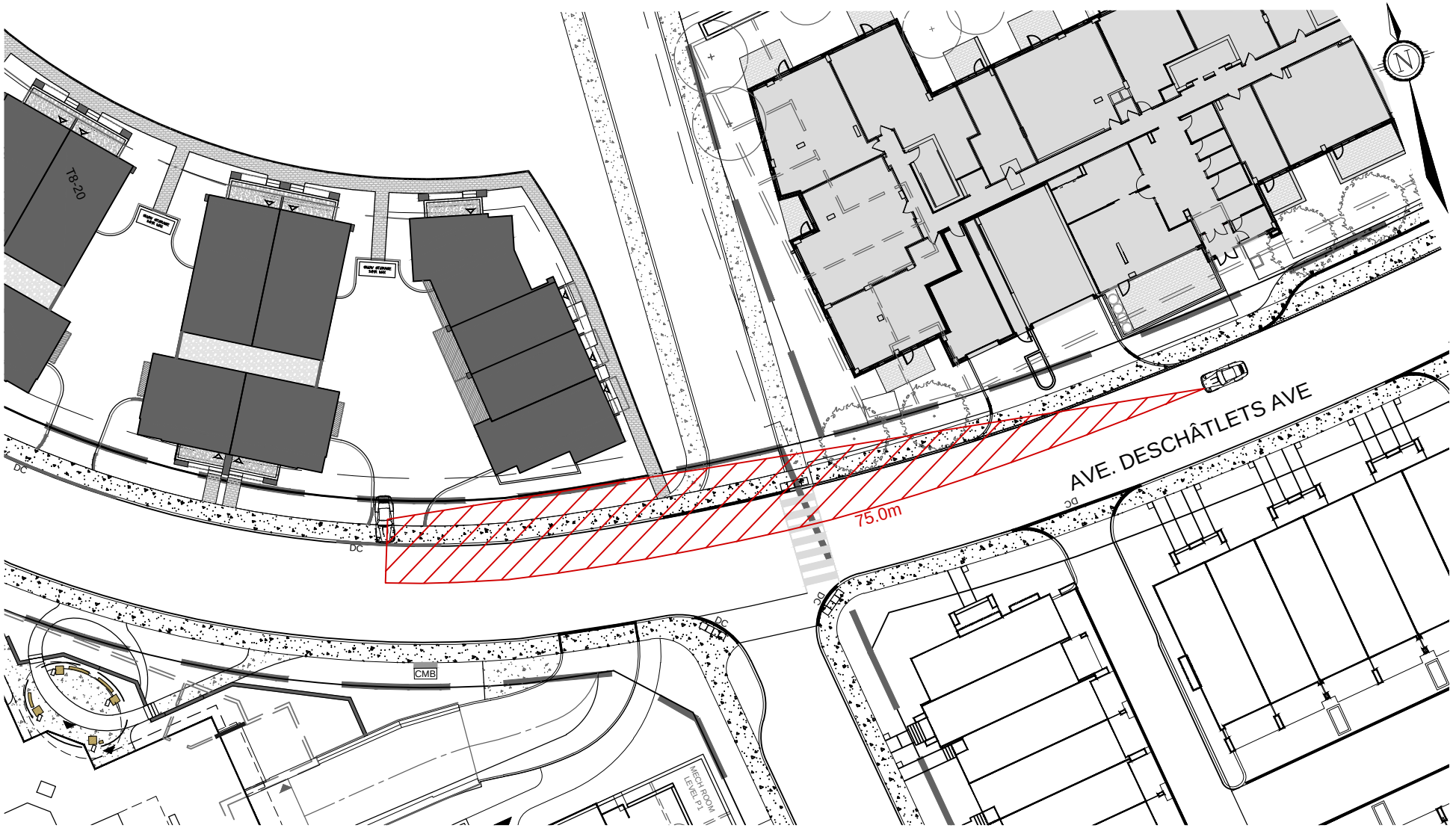
GREYSTONE VILLAGE FORECOURT TOWNS

TURNING SIGHT DISTANCE

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 17

SHT8X11.DWG - 216mmx279mm



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GREYSTONE VILLAGE FORECOURT TOWNS

TURNING SIGHT DISTANCE

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE OCT 2024 | JOB 114025 | FIGURE FIGURE 18

SHT8X11.DWG - 216mmx279mm

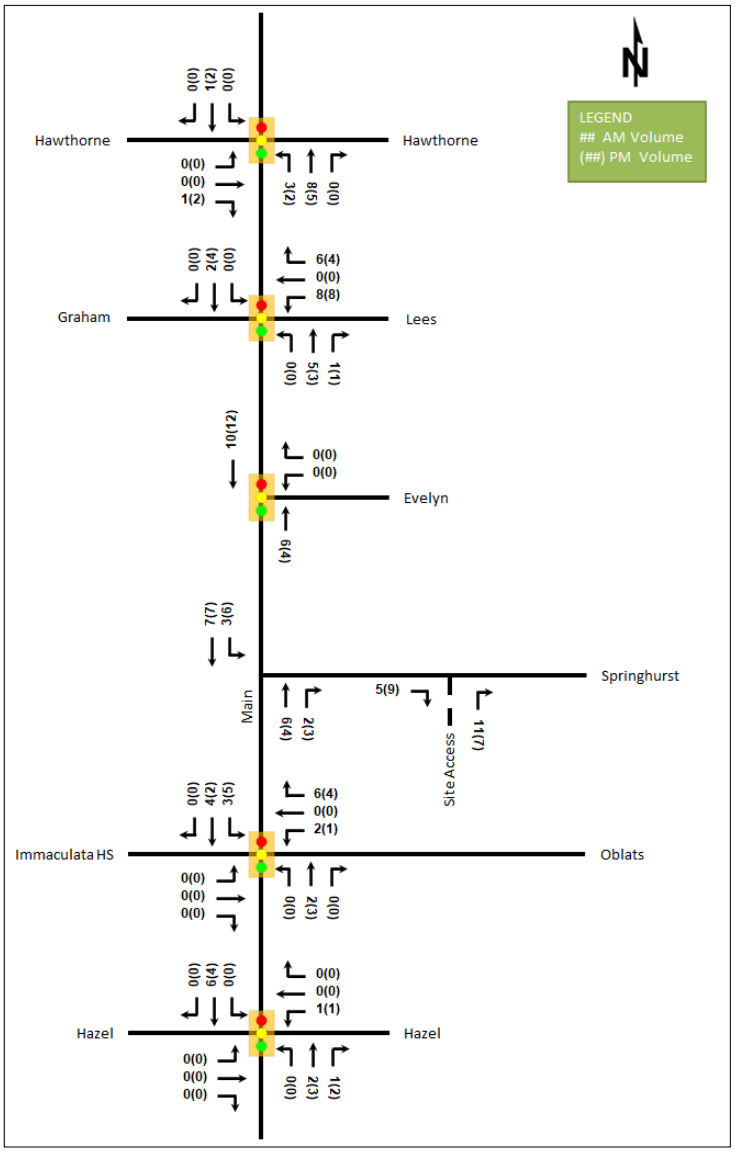
APPENDIX H

Other Area Developments

Table 11: Trip Assignment

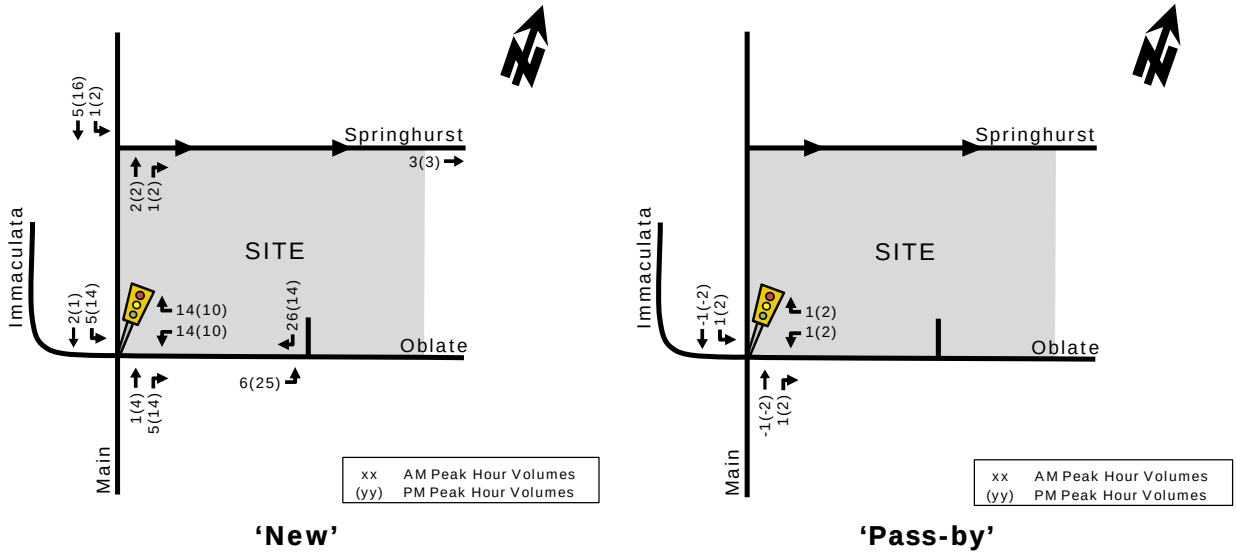
To/From	Inbound Via	Outbound Via
North	10% Main St (N) 5% Lees Ave (E)	15% Main St (N)
South	30% Main St (S)	30% Main St (S)
East	10% Lees Ave (E)	10 % Lees Ave (E)
West	25% Lees Ave (E) 15% Hawthorne Ave (W) 5% Main St (S)	25% Main St (N) 15% Hawthorne Ave (W) 5% Main St (S)
Total	**100%**	**100%**

Figure 12: New Site Generation Auto Volumes



Based on the foregoing assumptions, 'New' and 'Pass-by' site-generated trips are illustrated as Figure 5.

Figure 5: Site-Generated Traffic Volumes

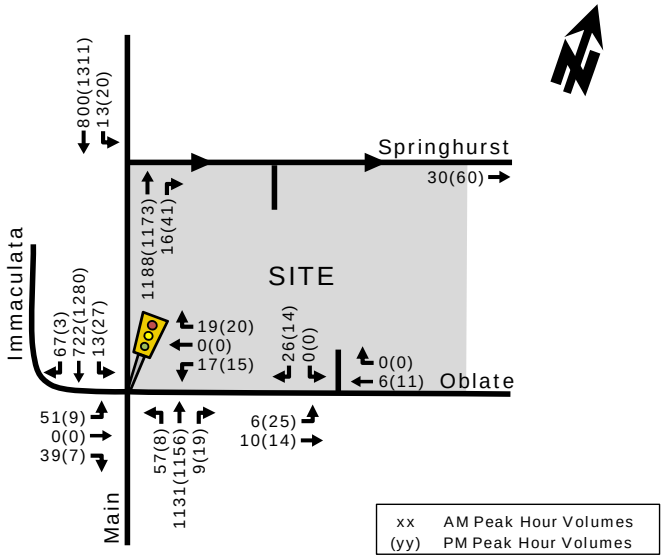


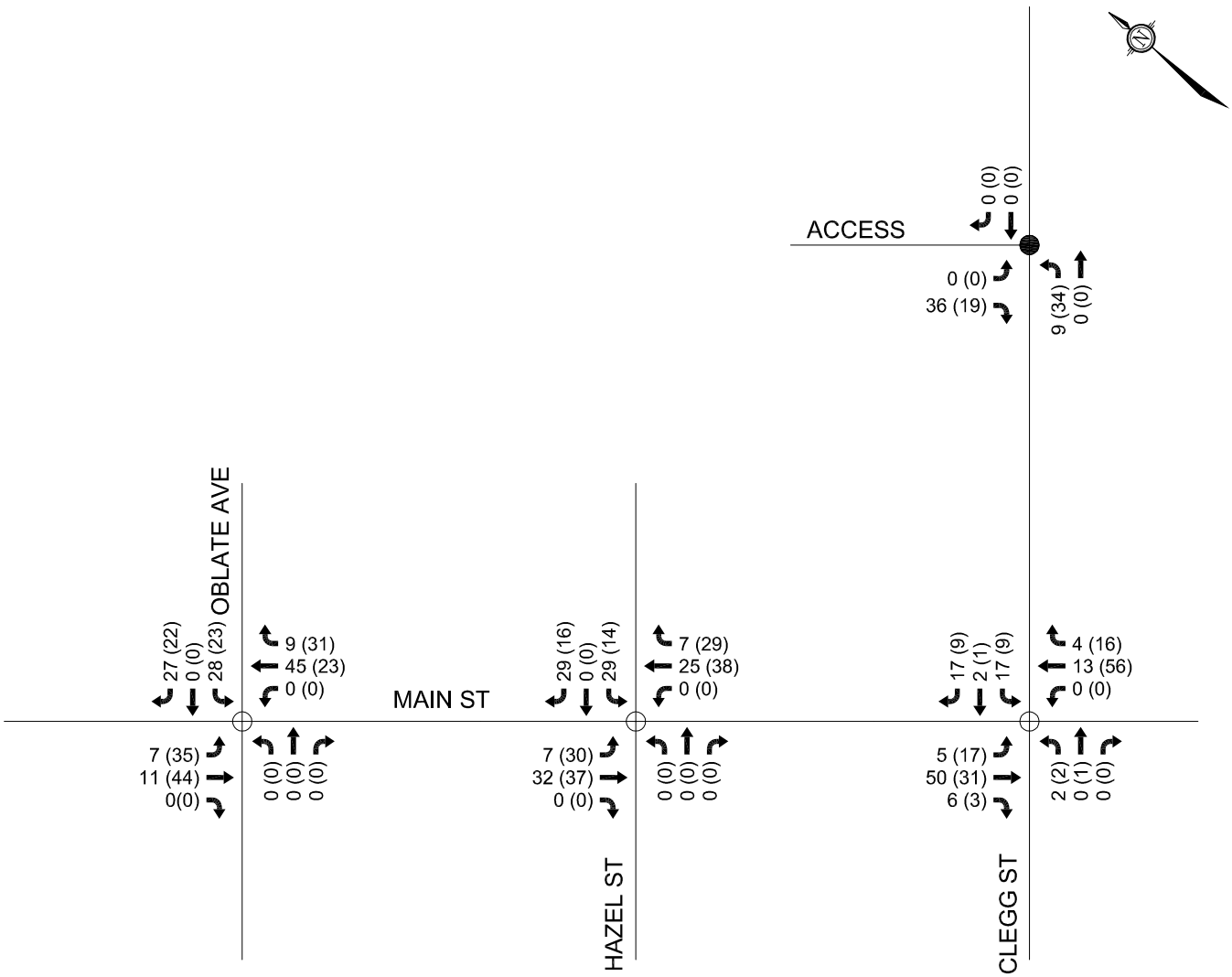
It should be noted that the imbalances in site-generated traffic depicted in Figure 5 are attributed to the use of on-street parking by site patrons.

4. FUTURE TRAFFIC OPERATIONS

For the purpose of this study, total projected traffic volumes were derived by superimposing 'new' and 'pass-by' site-generated traffic (Figure 5) onto existing volumes (Figure 3). The resulting total projected traffic volumes used in the subsequent analysis are illustrated as Figure 6.

Figure 6: Projected Traffic Volumes





LEGEND

- Unsignalized Intersection
- Signalized Intersection
- xx VPH AM Peak Hour
- (xx) VPH PM Peak Hour

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CITY OF OTTAWA
GREYSTONE VILLAGE
(175 MAIN STREET)

SITE GENERATED TRAFFIC VOLUMES

JAN 2015 114025 FIGURE 6

This addendum has been prepared in support of Phase 2 and 3 registration. It will provide an update of the estimated Phase 3 site traffic and review the proposed widening of Scholastic Drive between Oblates Avenue and Deschâtelets Avenue.

1.0 REVISED DEVELOPMENT

The revised Phase 3 development now includes three five-storey condo buildings and a retirement home along Scholastic Drive, in addition to the previously proposed Deschâtelets Building expansion and two four-storey apartment buildings.

Access to the Deschâtelets Building was previously proposed on Scholastic Drive. Access to the four-storey apartment buildings and town house blocks was previously proposed on Oblates Avenue and Deschâtelets Avenue. A shared underground parking garage is now proposed for the three condo buildings and the southerly apartment building, with an access to Scholastic Drive. Limited surface parking and a shared underground parking garage is proposed for the northerly apartment building and the Deschâtelets Building, with an access to Oblates Avenue. The retirement building will have an at-grade visitor pick-up/drop-off area and an underground parking garage, with an access to Scholastic Drive.

The proposed right-of-way (ROW) width of Scholastic Drive between Oblates Avenue and Deschâtelets Avenue has been widened from 10.5m to 13m, with a road width of 6m to accommodate two-way traffic versus the previous proposal of 4m for one-way traffic. The ROW has been widened to the west, away from the 3m multi-use pathway and the Rideau River. The revised cross section is shown in the Phase 2 and 3 Concept Plan included in **Appendix A**.

The revised Phase 3 concept consists of approximately 230 condo/apartment units and 140 retirement units, which represents an increase of 100 units from the previous proposal. On-site parking will be accommodated in accordance with the requirements of the Zoning By-Law. The proposed on-site parking will be reviewed in detail as part of future site plan applications for each block.

2.0 TRIP GENERATION

Trips generated by the revised Phase 3 development have been estimated using the methodology presented in the original CTS.

Weekday peak hour trip generation for the previous concept and the revised concept is outlined in the following table.

Table 1: ITE Trip Generation

Land Use	ITE Code	GFA / Units	AM Peak (vph)			PM Peak (vph)		
			In	Out	Total	In	Out	Total
Previous Phase 3 Concept								
Condominium/Townhouse	230	120	10	50	60	47	23	70

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Land Use	ITE Code	GFA / Units	AM Peak (vph)			PM Peak (vph)		
			In	Out	Total	In	Out	Total
Congregate Care Facility[1]	253	150	5	4	9	14	12	26
Previous Total			15	54	69	61	35	96
Revised Phase 3 Concept								
Condominium/Townhouse	230	230	17	84	101	80	39	119
Congregate Care Facility[1]	253	140	5	3	8	13	11	24
Revised Total			22	87	109	93	50	143
Net Difference			**+7**	**+33**	**+40**	**+32**	**+15**	**+47**

1. Independent living developments that provide centralized amenities such as dining, housekeeping, transportation and organized social/recreational activities

An overall vehicle trip to person trip adjustment factor of approximately 1.42 was applied to the vehicle trips projected using the ITE rates. The projected person trips were then categorized by modal share using observed percentages from the 2011 TRANS O-D Survey Report for the Ottawa Inner Area. A breakdown of the projected person trips by modal share is shown in the following table.

Table 2: Phase 3 Person Trips by Modal Share

Travel Mode	Modal Share	AM Peak			PM Peak		
		In	Out	Total	In	Out	Total
Previous Person Trips		*21*	*77*	*98*	*87*	*49*	*136*
Auto Driver	**40%**	**9**	**31**	**40**	**34**	**20**	**54**
Auto Passenger	10%	2	8	10	9	5	14
Transit	25%	5	19	24	22	12	34
Non-Motorized	25%	5	19	24	22	12	34
Revised Person Trips		*31*	*124*	*155*	*132*	*71*	*203*
Auto Driver	**40%**	**12**	**50**	**62**	**53**	**28**	**81**
Auto Passenger	10%	3	12	15	13	7	20
Transit	25%	8	31	39	33	18	51
Non-Motorized	25%	8	31	39	33	18	51

The revised Phase 3 development is anticipated to generate approximately 60 vehicle trips during the weekday AM peak hour and approximately 80 vehicle trips during the weekday PM peak hour. This is an increase of 20 to 30 trips during the weekday peak hours compared to the previous Phase 3 concept.

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The modal shares for the proposed development are anticipated to be consistent with the modal shares proposed in the Greystone Village CTS. The projected person trips by modal share, compared to the assumed trip generation for the subject site in the CTS is summarized below.

Table 2: Person Trips by Modal Share

Travel Mode	Modal Share	AM Peak			PM Peak		
		IN	OUT	TOTAL	IN	OUT	TOTAL
Greystone Village CTS							
Condo Person Trips		23	112	135	107	54	161
Auto Driver	40%	9	45	54	43	22	65
Auto Passenger	10%	2	11	13	11	5	16
Transit	25%	6	28	34	27	13	40
Non-Auto	25%	6	28	34	26	14	40
Retail Person Trips		16	20	36	62	79	141
Auto Driver	20%	4	4	8	12	16	28
Auto Passenger	10%	2	2	4	6	8	14
Transit	10%	1	2	3	6	8	14
Non-Auto	60%	9	12	21	38	47	85
Auto Driver (Total)		**13**	**49**	**62**	**55**	**38**	**93**
Auto Passenger (Total)		**4**	**13**	**17**	**17**	**13**	**30**
Transit (Total)		**7**	**30**	**37**	**33**	**21**	**54**
Non-Auto (Total)		**15**	**40**	**55**	**64**	**61**	**125**
Proposed Development							
Apartment Person Trips		34	141	175	139	77	216
Auto Driver	40%	13	57	70	55	31	86
Auto Passenger	10%	3	14	17	14	8	22
Transit	25%	9	35	44	35	19	54
Non-Auto	25%	9	35	44	35	19	54
Retail Person Trips		9	11	20	34	43	77
Auto Driver	20%	2	2	4	7	8	15
Auto Passenger	10%	1	1	2	4	4	8
Transit	10%	1	1	2	3	5	8
Non-Auto	60%	5	7	12	20	26	46
Auto Driver (Total)		**15**	**59**	**74**	**62**	**39**	**101**
Auto Passenger (Total)		**4**	**15**	**19**	**18**	**12**	**30**
Transit (Total)		**10**	**36**	**46**	**38**	**24**	**62**
Non-Auto (Total)		**14**	**42**	**56**	**55**	**45**	**100**
Auto Driver (Difference)		2	10	12	7	1	8
Auto Pass. (Difference)		0	2	2	1	-1	0
Transit (Difference)		3	6	9	5	3	8
Non-Auto (Difference)		-1	2	1	-9	-16	-25

Based on the foregoing, the proposed development is anticipated to generate an additional 12 vehicle trips during the AM peak hour and 8 vehicle trips during the PM peak hour. In general, background traffic and the assignment of the additional vehicle trips generated by the proposed development will be consistent with the Greystone Village CTS. The revised 2026 total traffic

Table 2: Site-Generated Person Trips by Modal Share

Travel Mode	Modal Share	AM Peak			PM Peak		
		IN	OUT	TOTAL	IN	OUT	TOTAL
TOTAL PERSON TRIPS		*7*	*6*	*13*	*20*	*16*	*36*
Auto Driver	**40%**	**3**	**2**	**5**	**8**	**6**	**14**
Auto Passenger	10%	1	0	1	2	2	4
Transit	25%	2	2	4	5	4	9
Non-Motorized	25%	1	2	3	5	4	9

Based on the foregoing, the proposed development is anticipated to generate five vehicle trips during the weekday AM peak hour and 14 vehicle trips during the weekday PM peak hour.

The addendum to the Greystone Village CTS included trip generation for the subject site, and estimated a development of 140 units for the subject site. The additional six units proposed will have no significant impact on the operating conditions identified in the Greystone Village subdivision CTS/addendum.

5.0 PROVISIONS FOR NON-AUTO MODES

Sidewalks are provided on both sides of Oblats Avenue and the west side of Scholastic Drive. Pedestrian facilities will be provided adjacent to the south side of the building, connecting building entrances to the sidewalk on the west side of Scholastic Drive.

The proposed number of bicycle parking spaces and minimum requirements identified in the City of Ottawa's *Zoning By-law* (ZBL) are outlined in Section 6.0 below.

OC Transpo bus stops #6809 and #7636 are located in the northwest and southeast corners of the Oblats Avenue/Main Street intersection, at a walking distance of approximately 450m from the main building entrance. These bus stops serve OC Transpo Route 5 and Route 16. OC Transpo Route 5 is a local route that travels between the Rideau Centre and the Billings Bridge transit station. OC Transpo Route 16 is a local route that travels between St. Pauls University and Britannia Park. Both OC Transpo Route 5 and Route 16 provide all day service, seven days a week.

It is noteworthy that as development progresses within the Greystone Village subdivision, OC Transpo Route 16 will travel east on Hazel Street, north on on Deschatelets Avenue, and west on Oblats Avenue. This will reduce the walking distance for residents to OC Transpo Route 16 to 250m.

6.0 ON-SITE DESIGN

6.1 Proposed Access

Access to the proposed development will be provided on Scholastic Drive. The proposed access will serve an underground parking garage as well as an on-site lay-by near the main building entrance.

Figure 6: Proposed Site-Generated Volumes

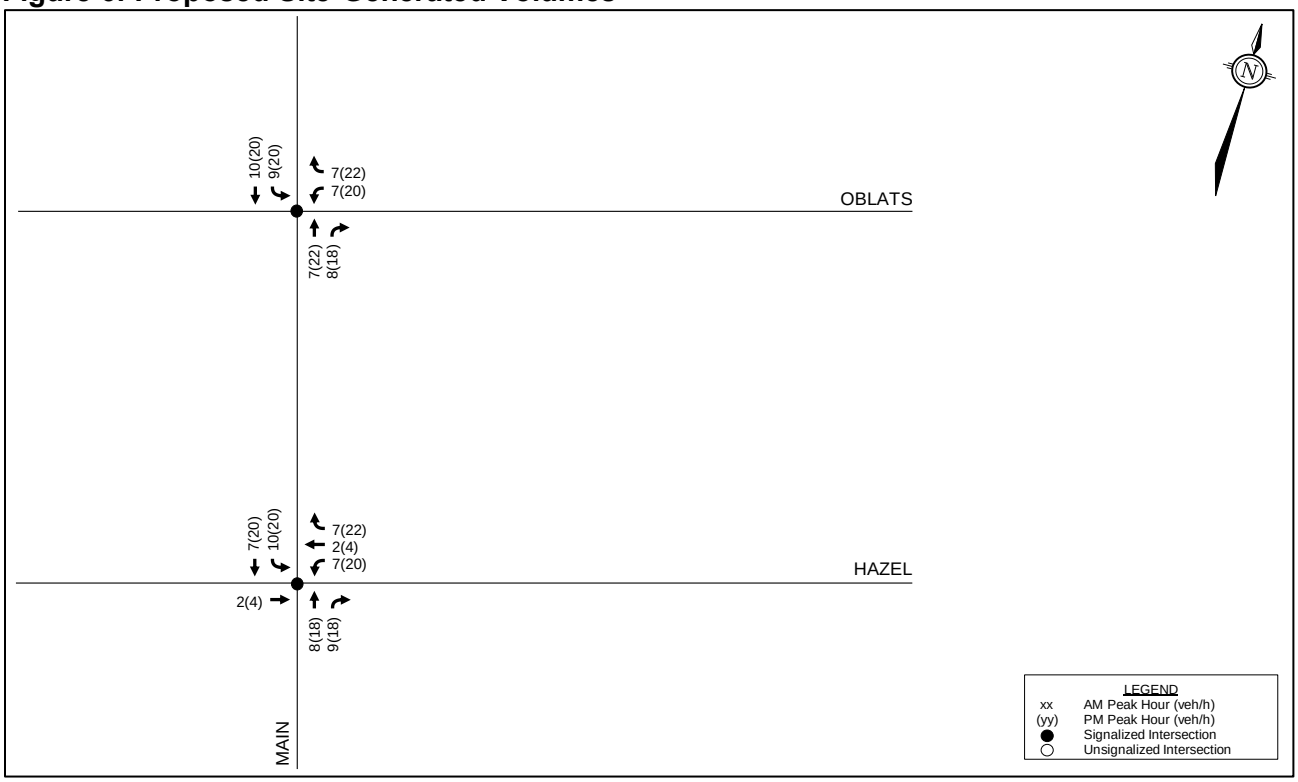
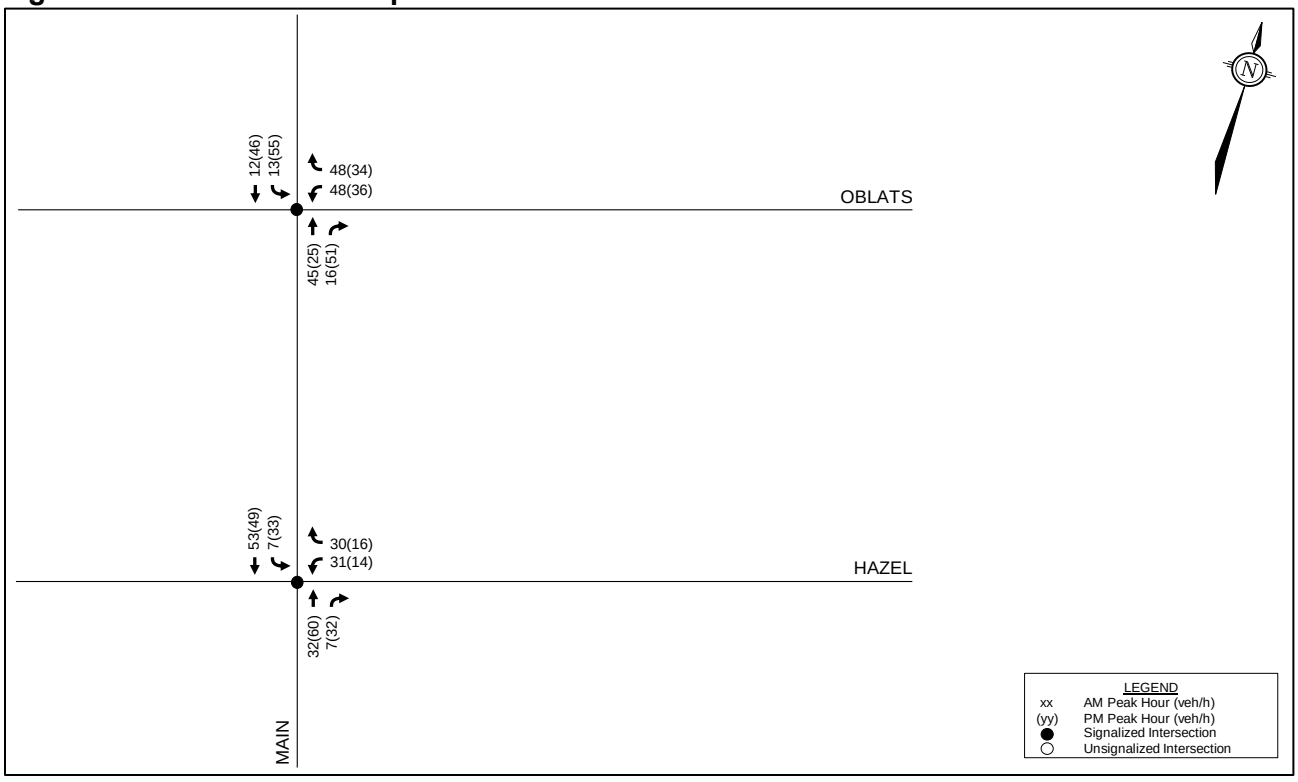


Figure 7: Other Area Development-Generated Volumes



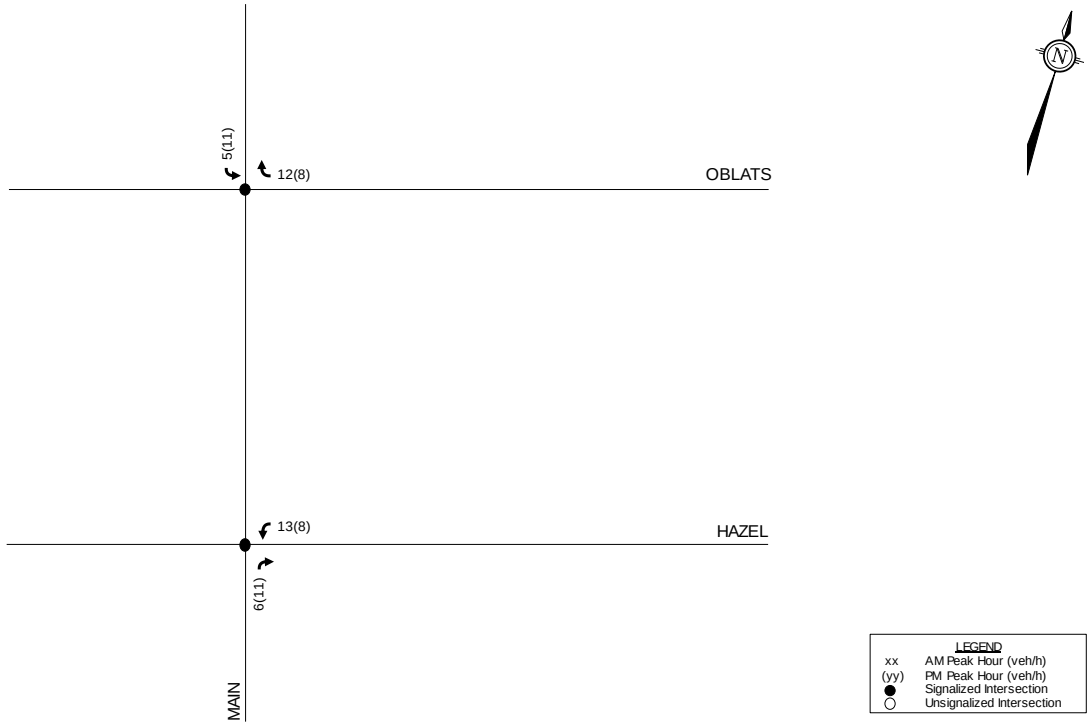
commercial space. Additional traffic generated by this development has been added to the 2028 and 2033 background traffic volumes.

225 Scholastic Drive (Retirement Residence)
A Transportation Overview was prepared by Novatech in October 2017 for this development, which will include an eight-storey retirement home containing 146 dwellings. Compared to the Greystone Village CTS/Addendum, this equates to an additional six units. Traffic generated by this development has already been accounted for in the Addendum to the Greystone Village CTS.

205 Scholastic Drive (Deschâtelets Building)
A TIA was prepared by Novatech in July 2020 for this development, which will include an elementary school and daycare. The school will have a capacity of approximately 350 students, and daycare will accommodate 45 children/staff. Traffic generated by this development has been added to the 2028 and 2033 background traffic volumes.

Trips generated by the proposed development are shown in **Figure 6** and trips generated by other area developments are shown in **Figure 7**. Background and total traffic volumes in 2028/2033 are shown in **Figure 8** and **Figure 9**, respectively.

Figure 6: Proposed Site-Generated Volumes



March 23rd, 2017

City of Ottawa
Planning and Growth Management Branch
110 Laurier Ave. W., 4th Floor
Ottawa, ON K1P 1J1

Attention: **Mr. Wally Dubyk**
Project Manager, Infrastructure Approvals

Dear Sir:

Reference: **175 Main Street – Greystone Village Condo Development**
Transportation Overview – Addendum
Our File No.: 114025

A Transportation Overview was submitted to the City of Ottawa in August 2015, in support of a Site Plan Control application for the development of two nine-storey condominium buildings within the Greystone Village subdivision. Following the submission, the site plan has been revised, increasing the number of dwelling units and altering the layout of the underground parking garage and access locations.

The following addendum will assess the impact of the revised development on the area road network.

1.0 REVISED DEVELOPMENT

Since the original Site Plan Control application, the layout of the underground parking garage has been revisited. The underground parking garages for both phase one and phase two will now be accessed through a shared driveway on De Mazenod Avenue, across from Jeremiah Kealey Street.

The previously proposed access on Telmon Street will remain, and will be used for surface visitor parking and delivery/moving activities for the proposed development as well as the single detached dwellings to the south. The previously proposed access on Deschâtelets Avenue will now primarily serve the future building to the north/west of the subject site. This future driveway will straddle the northern property line, and the adjacent sidewalk will provide pedestrian connectivity to the northern pedestrian entrance of the proposed development. The driveway connecting to the future building will be constructed as part of a future Site Plan Control application, while the adjacent sidewalk will be constructed as part of this development to provide pedestrian connectivity during the interim.

The revised development consists of a total of 212 dwelling units (106 dwelling units per phase), which is an increase of 18 units from the previous proposal. The revised underground parking garage will contain a total of 205 parking spaces (113 spaces for Phase One and 92 spaces for Phase 2). A total of 152 bicycle parking spaces (76 spaces per phase) will be provided for the proposed development.

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

A revised site plan is shown in **Figure 1**. A Greystone Village subdivision plan is provided in **Appendix A**.

2.0 TRIP GENERATION AND DISTRIBUTION

Trips generated by the revised development have been estimated using the methodology presented in the original Transportation Overview. Based on the foregoing, the revised development is anticipated to generate a total of 53 vehicle trips during the weekday AM peak hour and 63 vehicle trips during the weekday PM peak hour. This is an increase of two trips during the AM peak hour and five trips during the PM peak hour compared to the previous development proposal.

As the revised site access will maintain all movements in/out, the new access location is not anticipated to alter the distribution of traffic generated by the revised development. Consistent with the previous development proposal, the revised development is not anticipated to impact the surrounding roadway network further to the results identified in the approved Greystone Village Community Transportation Study (dated January 2015).

3.0 ON-SITE DESIGN

3.1 Proposed Access

3.1.1 De Mazenod Access

The proposed shared parking garage access will contain an ingress and egress separated by a 9m wide landscaped island and a curb extension to restrict southbound through movements along De Mazenod Avenue. The northern driveway will function as the ingress and the southern driveway will function as the egress, permitting all movements in/out of the subject site.

The proposed access on De Mazenod Avenue will function as a shared space for all modes of transportation (pedestrian, cyclist, vehicle). The proposed ingress and egress will consist of a 4.5m wide asphalt vehicular driveway, and an adjacent 2.2m unit paver sidewalk at grade with the asphalt driveway. The overall 6.7m width will be depressed along the roadway edge and serve as the proposed fire route between the curbline and the ROW limit. Within the subject site, the proposed driveway width will permit vehicles to stop for drop-off/pick-up activity. Signage is recommended to indicate the one-way circulation pattern and prohibit parking within the fire route.

3.1.2 Telmon Street Access

The proposed access on Telmon Street will be 6m in width and located 3.8m from the southern property line. This access will serve six parking spaces for visitors to the proposed condominium building and the single detached dwellings to the south. This access and parking lot will also serve as a fire route for the single detached dwellings to the south. The location and width of the proposed access conforms to the minimum requirements of the City's *Private Approach By-law*.

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APPENDIX I

Transportation Demand Management

TDM-Supportive Development Design and Infrastructure Checklist:
Residential Developments (multi-family or condominium)

Legend

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

		TDM-supportive design & infrastructure measures: *Residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	1.	**WALKING & CYCLING: ROUTES**	
	1.1	**Building location & access points**	
BASIC	1.1.1	Locate building close to the street, and do not locate parking areas between the street and building entrances	☑
BASIC	1.1.2	Locate building entrances in order to minimize walking distances to sidewalks and transit stops/stations	☐
BASIC	1.1.3	Locate building doors and windows to ensure visibility of pedestrians from the building, for their security and comfort	☑
	1.2	**Facilities for walking & cycling**	
REQUIRED	1.2.1	Provide convenient, direct access to stations or major stops along rapid transit routes within 600 metres; minimize walking distances from buildings to rapid transit; provide pedestrian-friendly, weather-protected (where possible) environment between rapid transit accesses and building entrances; ensure quality linkages from sidewalks through building entrances to integrated stops/stations *(see Official Plan policy 4.3.3)*	☐ - N/A
REQUIRED	1.2.2	Provide safe, direct and attractive pedestrian access from public sidewalks to building entrances through such measures as: reducing distances between public sidewalks and major building entrances; providing walkways from public streets to major building entrances; within a site, providing walkways along the front of adjoining buildings, between adjacent buildings, and connecting areas where people may congregate, such as courtyards and transit stops; and providing weather protection through canopies, colonnades, and other design elements wherever possible *(see Official Plan policy 4.3.12)*	☑

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

		TDM-supportive design & infrastructure measures: *Residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	2.	**WALKING & CYCLING: END-OF-TRIP FACILITIES**	
	2.1	**Bicycle parking**	
REQUIRED	2.1.1	Provide bicycle parking in highly visible and lighted areas, sheltered from the weather wherever possible *(see Official Plan policy 4.3.6)*	☑
REQUIRED	2.1.2	Provide the number of bicycle parking spaces specified for various land uses in different parts of Ottawa; provide convenient access to main entrances or well-used areas *(see Zoning By-law Section 111)*	☑
REQUIRED	2.1.3	Ensure that bicycle parking spaces and access aisles meet minimum dimensions; that no more than 50% of spaces are vertical spaces; and that parking racks are securely anchored *(see Zoning By-law Section 111)*	☑
BASIC	2.1.4	Provide bicycle parking spaces equivalent to the expected number of resident-owned bicycles, plus the expected peak number of visitor cyclists	☐
	2.2	**Secure bicycle parking**	
REQUIRED	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)*	☐ - N/A
BETTER	2.2.2	Provide secure bicycle parking spaces equivalent to at least the number of units at condominiums or multi-family residential developments	☑ - Garages proposed for all units
	2.3	**Bicycle repair station**	
BETTER	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)	☐
	3.	**TRANSIT**	
	3.1	**Customer amenities**	
BASIC	3.1.1	Provide shelters, lighting and benches at any on-site transit stops	☐
BASIC	3.1.2	Where the site abuts an off-site transit stop and insufficient space exists for a transit shelter in the public right-of-way, protect land for a shelter and/or install a shelter	☐
BETTER	3.1.3	Provide a secure and comfortable interior waiting area by integrating any on-site transit stops into the building	☐

		TDM-supportive design & infrastructure measures: *Residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	4.	**RIDESHARING**	
	4.1	**Pick-up & drop-off facilities**	
BASIC	4.1.1	Provide a designated area for carpool drivers (plus taxis and ride-hailing services) to drop off or pick up passengers without using fire lanes or other no-stopping zones	☐
	5.	**CARSHARING & BIKESHARING**	
	5.1	**Carshare parking spaces**	
BETTER	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)*	☐
	5.2	**Bikeshare station location**	
BETTER	5.2.1	Provide a designated bikeshare station area near a major building entrance, preferably lighted and sheltered with a direct walkway connection	☐
	6.	**PARKING**	
	6.1	**Number of parking spaces**	
REQUIRED	6.1.1	Do not provide more parking than permitted by zoning, nor less than required by zoning, unless a variance is being applied for	☑
BASIC	6.1.2	Provide parking for long-term and short-term users that is consistent with mode share targets, considering the potential for visitors to use off-site public parking	☐
BASIC	6.1.3	Where a site features more than one use, provide shared parking and reduce the cumulative number of parking spaces accordingly *(see Zoning By-law Section 104)*	☐
BETTER	6.1.4	Reduce the minimum number of parking spaces required by zoning by one space for each 13 square metres of gross floor area provided as shower rooms, change rooms, locker rooms and other facilities for cyclists in conjunction with bicycle parking *(see Zoning By-law Section 111)*	☐
	6.2	**Separate long-term & short-term parking areas**	
BETTER	6.2.1	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 residents from parking in visitor spaces, and vice versa)	☐

TDM Measures Checklist:
Residential Developments (multi-family, condominium or subdivision)

Legend

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

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

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

			TDM measures: *Residential developments*	Check if proposed & add descriptions
		1.	**TDM PROGRAM MANAGEMENT**	
		1.1	**Program coordinator**	
BASIC	★	1.1.1	Designate an internal coordinator, or contract with an external coordinator	☐
		1.2	**Travel surveys**	
BETTER		1.2.1	Conduct periodic surveys to identify travel-related behaviours, attitudes, challenges and solutions, and to track progress	☐
		2.	**WALKING AND CYCLING**	
		2.1	**Information on walking/cycling routes & destinations**	
BASIC		2.1.1	Display local area maps with walking/cycling access routes and key destinations at major entrances *(multi-family, condominium)*	☑
		2.2	**Bicycle skills training**	
BETTER		2.2.1	Offer on-site cycling courses for residents, or subsidize off-site courses	☐

			TDM measures: *Residential developments*	Check if proposed & add descriptions
		3.	**TRANSIT**	
		3.1	**Transit information**	
BASIC		3.1.1	Display relevant transit schedules and route maps at entrances *(multi-family, condominium)*	☑
BETTER		3.1.2	Provide real-time arrival information display at entrances *(multi-family, condominium)*	☐
		3.2	**Transit fare incentives**	
BASIC	★	3.2.1	Offer PRESTO cards preloaded with one monthly transit pass on residence purchase/move-in, to encourage residents to use transit	☐
BETTER		3.2.2	Offer at least one year of free monthly transit passes on residence purchase/move-in	☐
		3.3	**Enhanced public transit service**	
BETTER	★	3.3.1	Contract with OC Transpo to provide early transit services until regular services are warranted by occupancy levels *(subdivision)*	☐
		3.4	**Private transit service**	
BETTER		3.4.1	Provide shuttle service for seniors homes or lifestyle communities (e.g. scheduled mall or supermarket runs)	☐
		4.	**CARSHARING & BIKESHARING**	
		4.1	**Bikeshare stations & memberships**	
BETTER		4.1.1	Contract with provider to install on-site bikeshare station (*multi-family)*	☐
BETTER		4.1.2	Provide residents with bikeshare memberships, either free or subsidized *(multi-family)*	☐
		4.2	**Carshare vehicles & memberships**	
BETTER		4.2.1	Contract with provider to install on-site carshare vehicles and promote their use by residents	☐
BETTER		4.2.2	Provide residents with carshare memberships, either free or subsidized	☐
		5.	**PARKING**	
		5.1	**Priced parking**	
BASIC	★	5.1.1	Unbundle parking cost from purchase price *(condominium)*	☐
BASIC	★	5.1.2	Unbundle parking cost from monthly rent *(multi-family)*	☐

TDM measures: *Residential developments*				Check if proposed & add descriptions
		6.	**TDM MARKETING & COMMUNICATIONS**	
		6.1	**Multimodal travel information**	
BASIC	★	6.1.1	Provide a multimodal travel option information package to new residents	☑
		6.2	**Personalized trip planning**	
BETTER	★	6.2.1	Offer personalized trip planning to new residents	☐

APPENDIX J

MMLOS Analysis

Segment MMLOS Analysis

This section provides a review of the boundary streets Oblats Avenue and Deschâtelets Avenue, using complete streets principles. The *Multi-Modal Level of Service (MMLOS) Guidelines*, produced by IBI Group in October 2015, were used to evaluate the levels of service for each alternative mode of transportation on the boundary streets. Evaluation of the boundary streets is based on the approved cross-sections of Oblats Avenue and Deschâtelets Avenue, as construction of the subdivision is ongoing at the time of writing. Both boundary streets have been evaluated using the targets associated with roadways within 300m of a school.

Exhibit 4 of the *MMLOS Guidelines* has been used to evaluate the segment pedestrian level of service (PLOS) of the boundary streets. Exhibit 22 of the *MMLOS Guidelines* identifies a target PLOS A for all roadways within 300m of a school. The results of the segment PLOS analysis are summarized in **Table 1**.

Exhibit 11 of the *MMLOS Guidelines* has been used to evaluate the segment bicycle level of service (BLOS) of the boundary streets. Exhibit 22 of the *MMLOS Guidelines* identifies a target BLOS D for all roadways within 300m of a school that do not have a cycling route designation. The results of the segment BLOS analysis are summarized in **Table 2**.

Exhibit 15 of the *MMLOS Guidelines* has been used to evaluate the segment transit level of service (TLOS) of the boundary streets. While the boundary streets do not have a transit route designation, and therefore do not have a target TLOS, the roadways have still been evaluated for TLOS as transit service is provided on both. The results of the segment TLOS analysis are summarized in **Table 3**.

Exhibit 20 of the *MMLOS Guidelines* has been used to evaluate the segment truck level of service (TkLOS) of the boundary streets. While the boundary streets do not have a truck route designation, and therefore do not have a target TkLOS, the roadways have still been evaluated as transit vehicles travel on both. The results of the segment TkLOS analysis are summarized in **Table 4**.

Table 1: PLOS Segment Analysis

Sidewalk Width	Boulevard Width	Avg. Daily Curb Lane Traffic Volume	Presence of On-Street Parking	Operating Speed[1]	PLOS
Oblats Avenue (north side, Deschâtelets Avenue to Scholastic Drive)					
1.8m	0m	≤ 3,000 vpd	Yes	30 km/h	A
Oblats Avenue (south side, Deschâtelets Avenue to Scholastic Drive)					
1.8m	0m	≤ 3,000 vpd	Yes	30 km/h	A
Deschâtelets Avenue (inside of curve, Oblats Avenue to de Mazenod Avenue)					
1.8m	0m	≤ 3,000 vpd	No	30 km/h	A
Deschâtelets Avenue (outside of curve, Oblats Avenue to de Mazenod Avenue)					
1.8m	0m	≤ 3,000 vpd	Yes	30 km/h	A

1. Operating speed is assumed to equal posted speed limit

Table 2: BLOS Segment Analysis

Road Class	Route Type	Bikeway Type	Travel Lanes	Operating Speed	BLOS
Oblats Avenue (Deschâtelets Avenue to Scholastic Drive)					
Local	No Class	Mixed Traffic	2	30 km/h	A
Deschâtelets Avenue (Oblats Avenue to de Mazenod Avenue)					
Local	No Class	Mixed Traffic	2	30 km/h	A

Table 3: TLOS Segment Analysis

Facility Type	Exposure to Congestion Delay, Friction, and Incidents			TLOS
	Congestion	Friction	Incident Potential	
Oblats Avenue (Deschâtelets Avenue to Scholastic Drive)				
Mixed Traffic – Frequent Parking/Driveway Friction	Yes	High	High	F
Deschâtelets Avenue (Oblats Avenue to de Mazenod Avenue)				
Mixed Traffic – Frequent Parking/Driveway Friction	Yes	High	High	F

Table 4: TkLOS Segment Analysis

Curb Lane Width	Number of Travel Lanes Per Direction	TkLOS
Oblats Avenue (Deschâtelets Avenue to Scholastic Drive)		
3.5m to 3.7m	1	C
Deschâtelets Avenue (Oblats Avenue to de Mazenod Avenue)		
3.5m to 3.7m	1	C