RC SPENCER ASSOCIATES INC.
Consulting Engineers

15 May 2025
File No.: 25-1781

Avant Group Inc.
5980 Tecumseh Road East
Windsor, Ontario N8T 1E3

Via email: **mohhanash81@gmail.com**

Attention: **Mohammad Hanash**

Re: **619 Cabana Road West, Windsor, ON**
Traffic Impact Statement

A residential apartment building complex is proposed for lands on the south side of Cabana Road West, approximately 275m west of Dougall Avenue, in Windsor, Ontario. The site is currently occupied by a single-family residential dwelling. The area plan is illustrated on **Figure 1**. Cabana Road West is an east / west arterial roadway that begins at Huron Church Road and runs east to Dougall Avenue, where it transitions to Cabana Road East; it joins Division Road west of Walker Road and continues east through Essex County as County Road 42. The site is located north of the Roseland Golf and Curling Club.

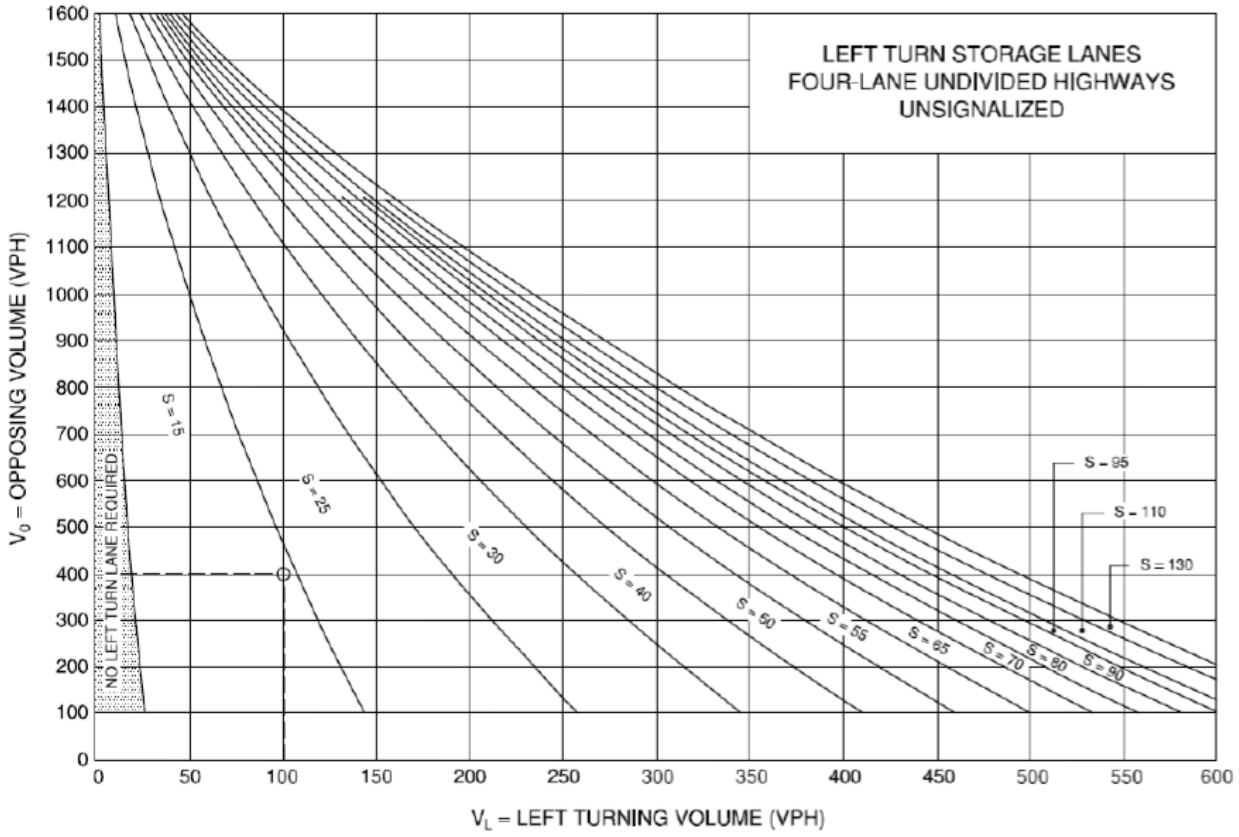
The proposed site plan is illustrated on **Figure 2**; the development proposal consists of three eight-unit apartment buildings. One joint access is proposed at Cabana Road West; the joint access will service the three buildings. The developer is proposing nine parking spaces to accommodate each building, with one accessible space for each.

The purpose of this traffic impact brief is to address the proposed development's impact on Cabana Road West traffic operations; a traffic impact statement was deemed to be sufficient in addressing the subject development's traffic impact.

Trip generation for the proposed development was estimated from the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition). The dataset's average rate was used instead of the fitted curve equation because the value of the independent variables is in the lower range of the dataset; the fitted curve equation does not pass through the origin. The trip generation calculations are provided in **Appendix A**. ITE Land Use Code 220 – Multifamily Housing (Low-Rise) is the most appropriate code for the residential buildings. This land use code provides trip generation rates of 0.40 trips per dwelling unit in the AM peak hour, with 24% entering and 76% exiting, and 0.51 trips per dwelling unit in the PM peak hour, with 63% entering and 37% exiting. Accordingly, this portion of the development is expected to generate 10 trips in the AM peak hour, with 2 entering and 8 exiting, and 12 trips in the PM peak hour, with 8 entering and 4 exiting. Site generated traffic was distributed to and from Cabana Road West based on the east / west flow of traffic noted in recent turning movement counts collected on Cabana Road West; this data indicated a 50-50 east / west split. **Figure 3** depicts the anticipated traffic distribution.

The proposed northbound stop-controlled site access at Cabana Road West is to be comprised of a shared lane on the northbound approach (approximately 6m in width) and a four-lane cross-section on Cabana Road West. There are no dedicated turning lanes on any approach. Based on the anticipated site generated traffic volumes, it is anticipated that the proposed site access will exhibit a satisfactory level of service during the critical peak hours.

According to Exhibit 9A-31 of the MTO Design Supplement (October 2023) to the TAC Geometric Design Guide for Canadian Roads (June 2017), shown below, the left turning volumes are simply too low to warrant a dedicated westbound left turn lane at the subject site access; no geometric and / or traffic control improvements are warranted for this section of Cabana Road West:

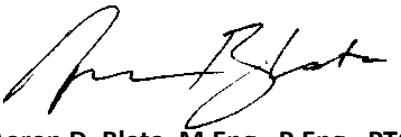


A sight line analysis was completed for the site accesses at Cabana Road West. The analysis was completed per the TAC Geometric Design Guide for Canadian Roads (2017). The speed limit on Cabana Road West is 50 km/h, so the analysis was completed for a 60 km/h design speed; a passenger car was selected as the design vehicle. According to the TAC Geometric Design Guide for Canadian Roads (2017), the sight line should be evaluated with the design vehicle located at 4.4m from the edge of the nearest travelled lane. As calculated in **Appendix B**, the minimum intersection sight distance is 125m for the worst-case left turn egress maneuver and 108m for the less-critical right turn egress maneuver. The critical "left turn from stop" and the less-critical "right turn from stop" is illustrated on **Figure 4** for the site access. Based on the illustrated sight lines, it is the engineers' opinion that there is sufficient sight distance for safe egress from the proposed site access.

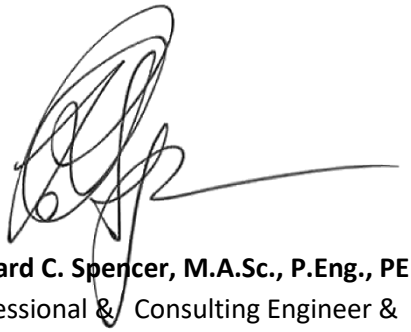
Therefore, based on the results of the analysis, it is the engineers' opinion that the proposed development will not adversely impact area traffic operations. Geometric and / or traffic control improvements are not required to support the proposed residential development.

All of which is respectfully submitted,

RC Spencer Associates Inc.



Aaron D. Blata, M.Eng., P.Eng., PTOE, RSP1
Consulting Engineer, Road Safety
Professional Traffic Operations Engineer
Associate / Leamington Office Manager



Richard C. Spencer, M.A.Sc., P.Eng., PE
Professional & Consulting Engineer &
Fellow ITE Member
President / Windsor Office Manager

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Professional Engineers Ontario

NO.	REVISION	DATE	BY	APP
1.	COMPLETED REPORT FIGURES	08 MAY 2025	N.M	A.D.B.

DESIGN	N.M.
CHECKED	A.D.B.
DRAWN	N.M.
CHECKED	A.D.B.
DATE	MAY 2025
SCALE	N.T.S.

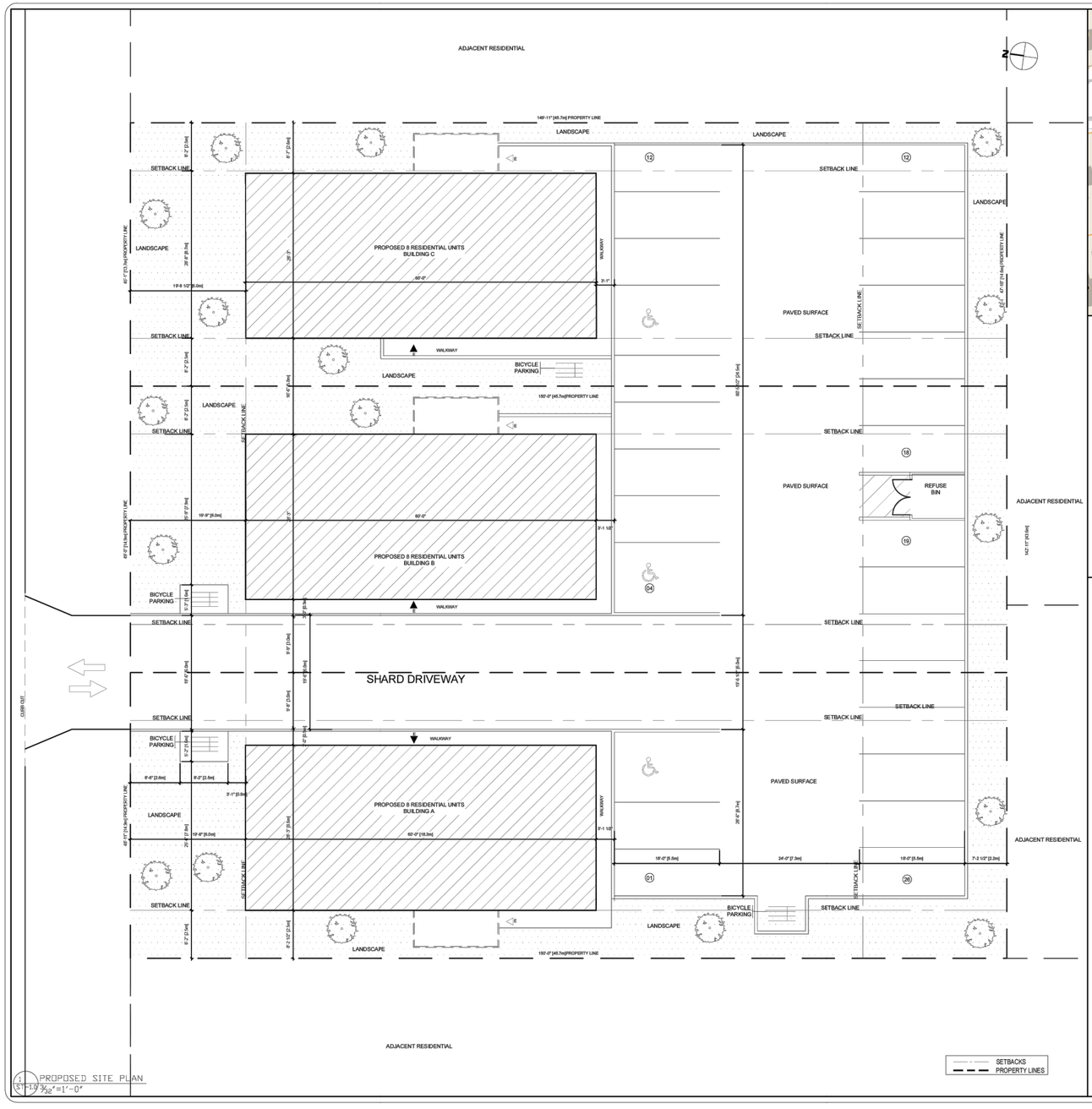
619 CABANA ROAD WEST, WINDSOR ON.

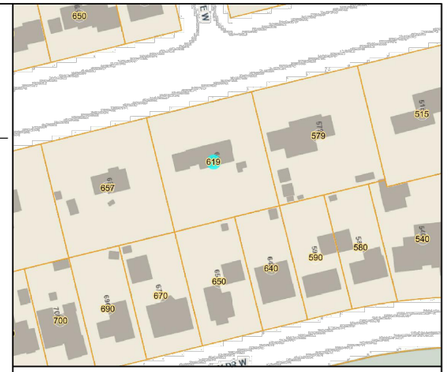
PROJECT NO. 25–1781

AREA PLAN

FIGURE NO. 1

OF 4





PROPOSED ZONING RD2.5

CLASSIFICATION OF BUILDING
Group C, UP TO 4 STORYS NONCOMBUSTIBLE CONSTRUCTION
AREA (BUILD UP AREA)

BUILDING A	BASEMENT AND 1st-3th @	1,875 sqft
	SUBTOTAL (4 FLOORS)	7,50D sq.f
BUILDING B	BASEMENT AND 1st-3th @	1,500 sqft
	SUBTOTAL (4 FLOORS)	6,000 sq.f
BUILDING C	BASEMENT AND 1st-3th @	1,500 sqft
	SUBTOTAL (4 FLOORS)	6,000 sq.f

TOTAL FOR ALL FLOORS..... 19,50D sqft

COVERAGE 27%
LANDSCAPE OPEN 36.3%

ESTIMATE UNIT PER BUILDING

BUILDING A (4STOREYS) SUB - TOTAL	8 UNITS
BUILDING B (8 STOREYS) SUB- TOTAL	8 UNITS
BUILDING C (8 STOREYS) SUB- TOTAL	8 UNITS
TOTAL.....	24 UNITS

REQUIRED PARKING
(2.5m X5.5m) 24 X1.25 = 30 PARKING SPACE EACH BUILDING
ACCESSIBLE PARKING TYPE A 1 EACH BUILDING

Item	Site Data Matrix 3 Lots					OBC Reference
1	Project Description: 619 CABANA RD W ON Canada		X New Addition Alteration Change of Use			Part 3 X Part 9 Part 11
2	Zoning Proposed :	Residential District RD2.5				
3	Existing Land Use:	Residential Unit				
4	Major Occupancy(s):	Residential Units				
5	Building Classification:	3.2.2.44. Group C, up to 4 Storeys (each building)				
6	**Site Area**		**Building Area (3 BULDING)**		**Gross Area (3 BULDING)**	
	Existing:	1,991.6sq.m	Existing:	0.0 sq.m	Existing:	0.0 sq.m
	Proposed:	0.0 sq.m	Proposed:	453 sq.m	Proposed:	1812 sq.m
	Total:	1,991.6sq.m	Total (3 buildings) :	453sq.m	Total (3 building):	1812 sq.m
7	**Lot Coverage**		**Minimum Lot Width**		**Building Height**	
	Maximum:	50%	Required:	20m	Maximum:	18m
	Provided:	27%	Provided:	Lot (A) 14.9m Lot (B) 14.9m Lot (C) 13.7m	Provided:	13.2m
8	**Minimum Front Yard Depth**		**Minimum Rear yard Depth**		**Minimum Side Yard Depth**	
	Required:	6 m	Required:	7.5m	Required:	2.5m
	Provided:	6 m	Provided:	PROVIDED	Provided:	2.5m
9	**Parking**		**Bicycle Spaces**		**Loading Spaces**	
	Use Classification:	1.25 /per unit	Existing:	0	Existing:	0
	Existing:	0	Proposed:	9	Proposed:	0
	Proposed:	26	Required:	3	Required:	0
	Required:	30	Total:	9	Total:	0
	Total:	26				
10	**Landscaped Area**		**Curbing Length**		**Screening Fence Length**	
	Existing:	N/A	Existing:	0.0	Existing:	0.0
	Proposed:	N/A	Proposed:	49m EACH	Proposed:	122m EACH
	Total:	N/A	Total:	147m	Total:	366 m

Should archaeological deposits be found during construction activities, all work in the area must stop immediately and the City's Manager of Cultural Affairs and the Ontario Ministry of Tourism, Culture and Sport must be notified, and clearance given by the Ministry.
In the event that human remains are encountered during construction, all work in that area must be stopped immediately and the site secured. The local police or coroner must be contacted to determine whether or not the skeletal remains are human, and whether the remains constitute a part of a crime scene. The Ontario Ministry of Tourism, Culture and Sport and the Registrar of the Cemeteries Regulation Unit of the Ministry of Consumer Services must then be notified, and clearance be given by the Ministry of Tourism,
Culture and Sport.
A building shall not be located beneath existing above ground electrical conductors.
Where a building is to
be constructed in proximity to above ground electrical conductors, horizontal clearances

AVANT GROUP INCORPORATION
850 OUELETTE AVE, WINDSOR, ON, N9A 4M9
Phone: 519 300-9838
Email: info@raindropsconcepts.com
Website: https://raindropsconcepts.com

The Architect noted above has exercised responsible control with respect to design activities. The Architect's Seal Number is the Architect's BCDN.

PROJECT TITLE

RESIDENTIAL UNITS
619 CABANA RD W. WINDSOR, ON

DRAWING TITLE

PROPOSED SITE PLAN
OPTION 1

NOTE

KEY PLAN

GENERAL NOTES:
1. DO NOT SCALE DRAWINGS

2. VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AS REQUIRED PRIOR TO BIDDING AND COMMENCEMENT OF WORK.

3. COORDINATE ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS PRIOR TO COMMENCEMENT OF WORK.

4. SHOULD ANY CONFLICTS AND/OR DISCREPANCIES ARISE, NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY, IN WRITING PRIOR TO PROCEEDING WITH ANY WORK.

5. ALL WORK SHALL COMPLY OR EXCEED THE REQUIREMENTS OF THE ONTARIO BUILDING CODE, FIRE CODE, PLUMBING CODE, ELECTRICAL CODE, AND LOCAL BY-LAWS.

REVISION RECORD

#	DESCRIPTION	DATE
1	CLIENT REVIEW	2024-04-02
2	CLIENT REVIEW	2024-05-31
3	CLIENT REVIEW	2025-02-20

PROJECT NOTE

PROJECT NUMBER	23-017
DATE	2022-01-10
DRAWN BY	M.H.
CHECKED BY	M.H.
APPROVED BY	M.H.

SHEET SIZE
ARCH D (24" x 36")

SHEET NUMBER
ST-1.0

SCALE AS NOTED

DO NOT SCALE DRAWING

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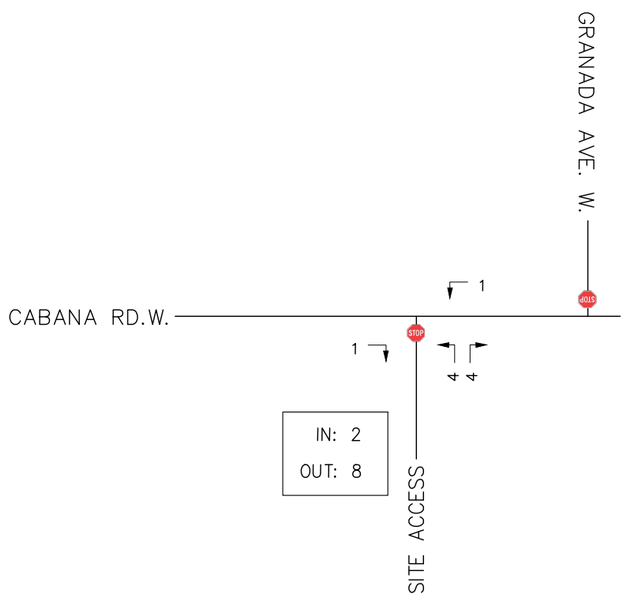
SCALE N.T.S.

619 CABANA ROAD WEST, WINDSOR ON.

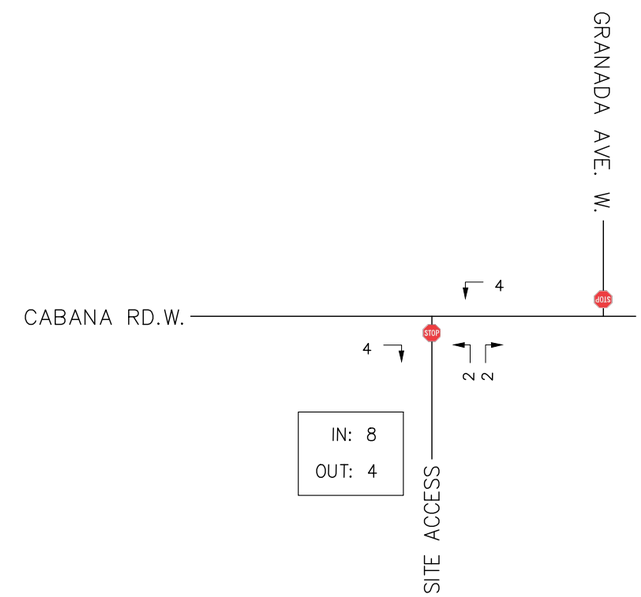
PROPOSED SITE PLAN

PROJECT NO. 25-1781
FIGURE NO. 2
OF 4

SITE GENERATED TRAFFIC
(AM PEAK HOUR)



SITE GENERATED TRAFFIC
(PM PEAK HOUR)



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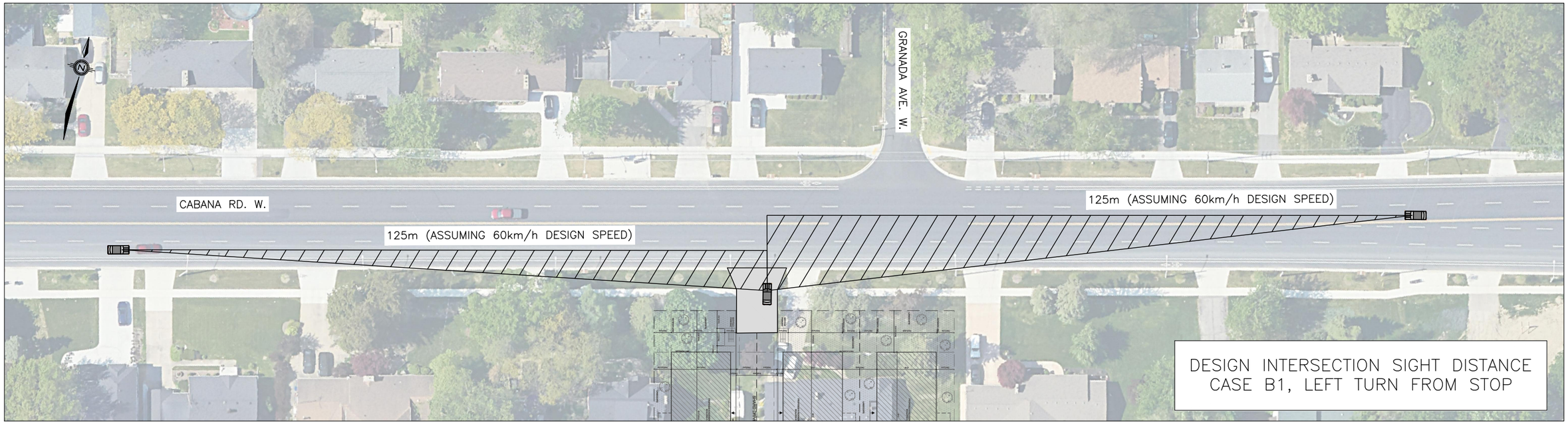
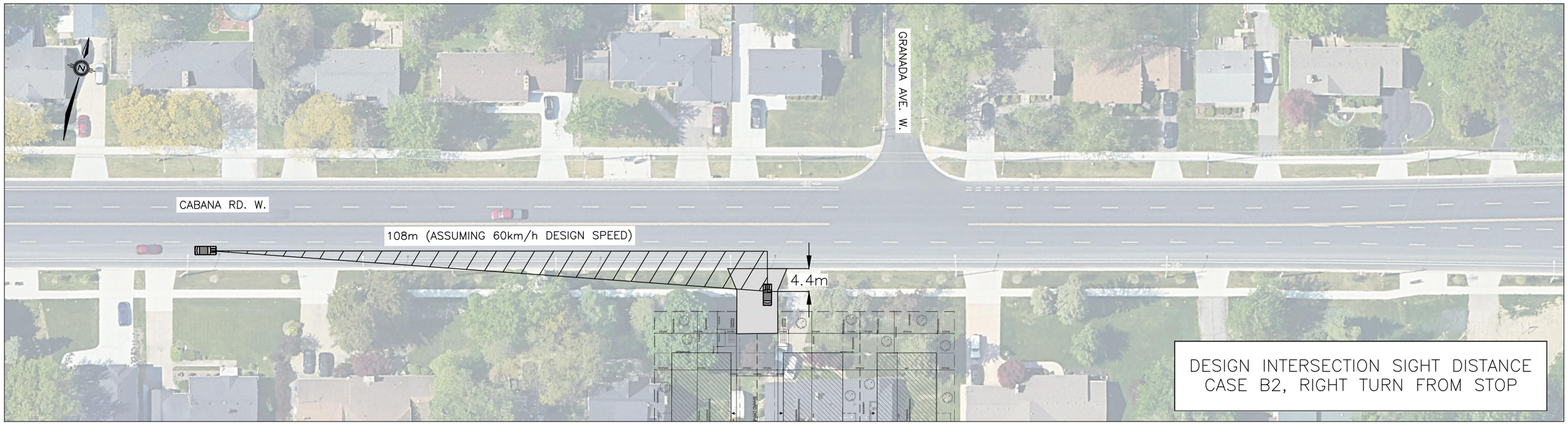
619 CABANA ROAD WEST, WINDSOR ON.

SITE TURNING MOVEMENTS (AM/PM PEAK HOUR)

PROJECT NO. 25–1781
FIGURE NO. 3
OF 4



DESIGN INTERSECTION SIGHT DISTANCE
CASE B1, LEFT TURN FROM STOP



DESIGN INTERSECTION SIGHT DISTANCE
CASE B2, RIGHT TURN FROM STOP

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619 CABANA ROAD WEST, WINDSOR ON.

SIGHT LINE ANALYSIS: SITE ACCESS

PROJECT NO. 25–1781
FIGURE NO. 4
OF 4

Appendix A

ITE TRIP GENERATION MANUAL – 11TH EDITION REFERENCES

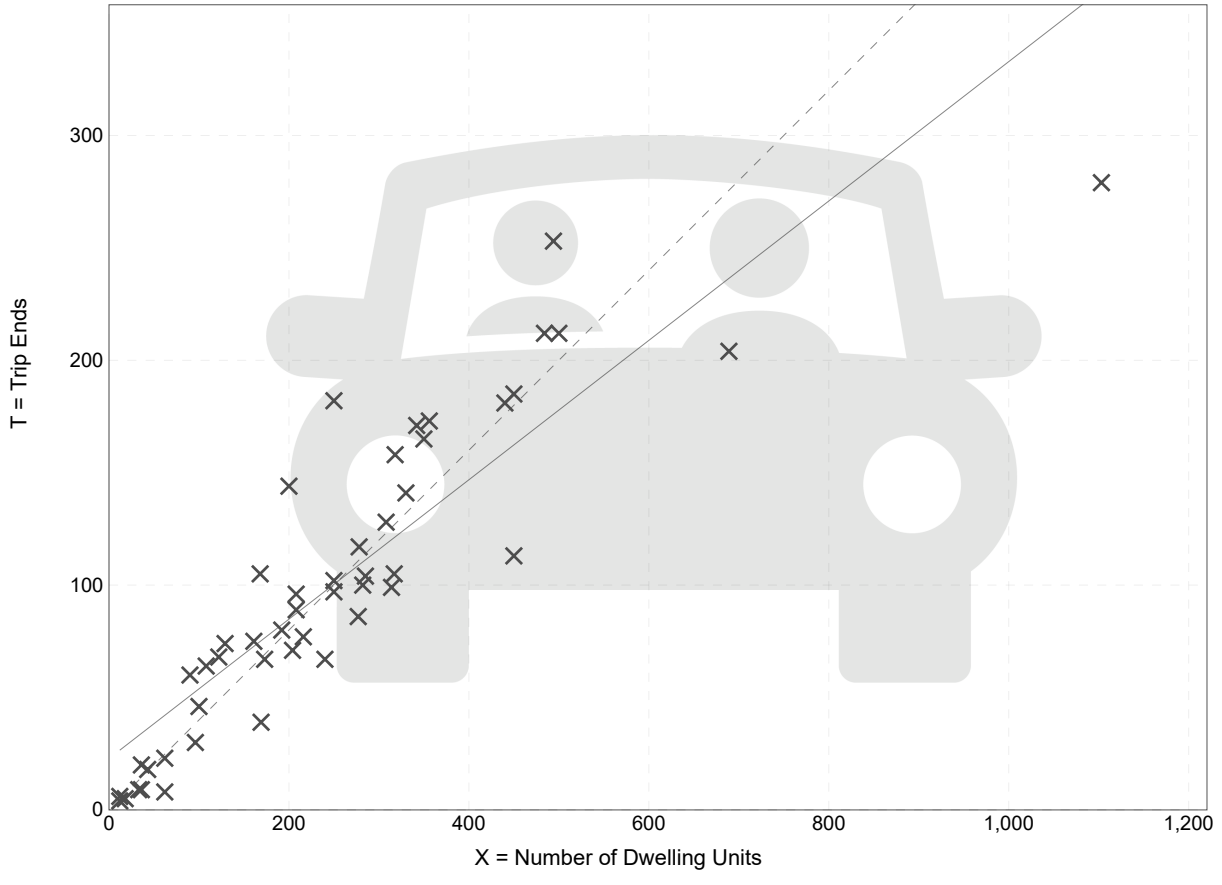
Multifamily Housing (Low-Rise)
Not Close to Rail Transit (220)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 49
Avg. Num. of Dwelling Units: 249
Directional Distribution: 24% entering, 76% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.40	0.13 - 0.73	0.12

Data Plot and Equation



Fitted Curve Equation: T = 0.31(X) + 22.85

R^2= 0.79

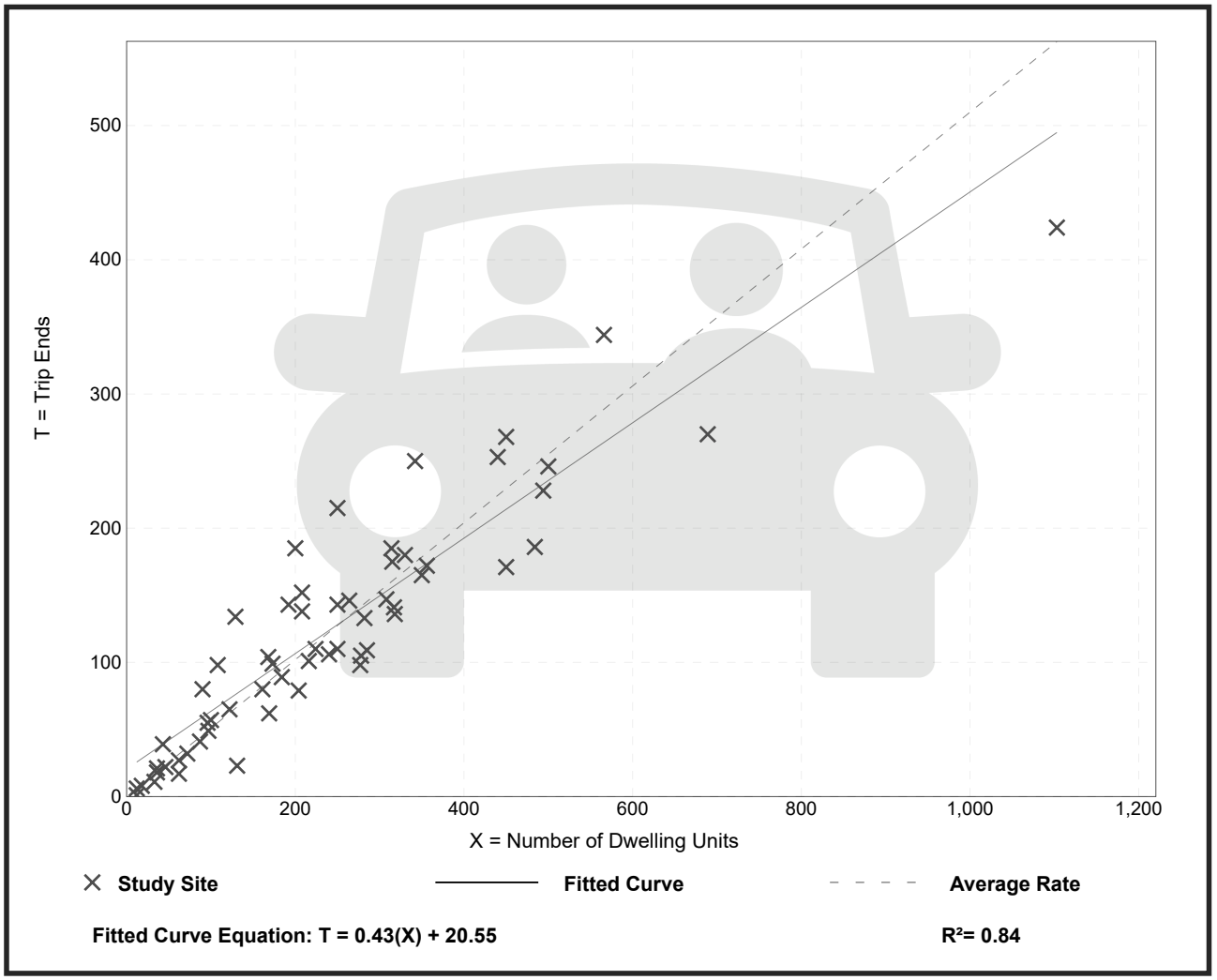
Multifamily Housing (Low-Rise)
Not Close to Rail Transit (220)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 59
Avg. Num. of Dwelling Units: 241
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.51	0.08 - 1.04	0.15

Data Plot and Equation



Proposed Site Development Trip Generation and Distribution

Project: 619 Cabana Road West

Site: Windsor, Ontario

Assumed Land Use (1): Multifamily Housing (Low-rise) - ITE No. 220

Average Vehicle Trip Ends vs.: Dwelling Units

ITE Trip Generation Data collected on a: Weekday

AM Peak Hour:	0.40	= Average Rate	24	% Entering
			76	% Exiting
PM Peak Hour:	0.51	= Average Rate	63	% Entering
			37	% Exiting

Assumed Land Use (1): Multifamily Housing (Low-rise) - ITE No. 220				
	Dwelling Units	**Trips Generated**	**Trips Entering**	**Trips Exiting**
AM Peak	24	10	2	8
PM Peak	24	12	8	4

Appendix B

SIGHT LINE CALCULATIONS

Site Accesses at Cabana Road West

24-1642: 619 Cabana Rd. W., Windsor, Ontario - Sight Line Analysis

Design Intersection Sight Distance (TAC Geometric Design Guide for Canadian Roads)

Design Speed: 60km/h (Posted Speed Limit = 50 km/h)

Table 9.9.3: Time Gap for Case B1, Left Turn from Stop

Design Vehicle	Time Gap (t_g)(s) at Design Speed of Major Road
Passenger car	7.5
Single-unit truck	9.5
Combination truck (WB 19 and WB 20)	11.5
Longer truck	To be established by road authority

Intersection Stopping Distance **(ISD)** = 0.278 V_{major} t_g

Where:

ISD = intersection sight distance (m)
(length of the leg of sight triangle along the major road)
V_{major} = design speed of the major road (km/h)
t_g = time gap for minor road vehicle to enter the major road (s)

ISD $_{passenger\ car}$ (left turn from stop) = 0.278 x 60 x 7.5 = **125 m**

Table 9.9.5: Time Gap for Case B2—Right Turn from Stop and Case B3—Crossing Maneuver

Design Vehicle	Time Gap (t_g)(s) at Design Speed of Major Road
Passenger car	6.5
Single-unit truck	8.5
Combination truck (WB 19 and WB 20)	10.5

ISD $_{passenger\ car}$ (right turn from stop) = 0.278 x 60 x 6.5 = **108 m**