



January 15, 2024

Mr. Robert Whyte Ecometrix Incorporated 6800 Campbello Road Mississauga, Ontario L5N 2L8

Re: Stellar Estates Phase 2 Residential Development

Mulloy Court, Town of Caledon

Traffic Brief Update

CGE Consulting is pleased to submit this Traffic Brief for the proposed residential development located at the northwest & southwest corners of the Mulloy Court and Mount Pleasant Road intersection, in the Town of Caledon.

The study concludes that the incremental site traffic generated by the proposed development can be accommodated by the existing transportation network, no roadway improvements are required. The proposed site access can adequately support the forecasted traffic operations.

Should you have any questions regarding this study, please do not hesitate to contact the undersigned.

Yours truly,

CGE CONSULTING

Casey Ge, P.Eng.

President

Email: casey@cgeconsulting.ca |Phone: 416-602-1885 |

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1.0 Introduction

CGE Consulting was retained by Ecometrix Incorporated to prepare a Traffic Brief for the expansion of Stellar Estates Phase 1 Residential Development, which includes the addition of five residential lots. The project site is located at the intersection of Mulloy Court and Mount Pleasant Road in the Town of Caledon, as shown in Figure 1

1.1 Existing Site Descriptions:

Stellar Estates Phase 1 originally comprised ten residential units, with six units currently occupied and four units under construction. Phase 2 plans to add five new residential units between the Phase 1 site and Mount Pleasant Road, as shown in Figure 2.

The site is generally bounded by rural residential development to the north and south, Mount Pleasant Road to the east, vacant land (future development) to the west and south, and estate residential development to the east (i.e., Stellar Estates Phase 1). In accordance with information obtained from the Town of Caledon, an ongoing proposal for residential units, including an access road opposite Mulloy Court, is currently underway to the east of Mount Pleasant Road. At this time, it is anticipated that the traffic impact resulting from this development is expected to be negligible.

The location of the proposed development is illustrated in Figure 1.

1.2 Scope of Work:

The Town has examined the proposed scope of work for the Traffic Brief and offered comments. In response to these comments, the revised scope of work will primarily focus on the following:

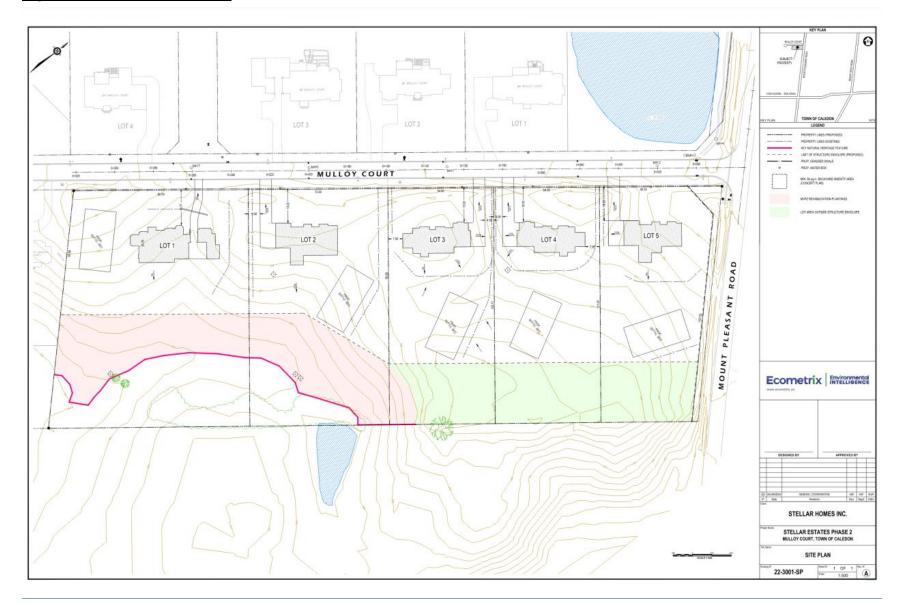
- A qualitative review of the traffic generated by the proposed development and how
 this will impact the existing roadway and intersection. Estimation of the sitegenerated trip will utilize the Trip Generation Manual, 11th Edition, published by
 the Institute of Transportation Engineers (ITE). The analysis is developed for the
 weekday morning and weekday afternoon peak hours.
- Proposing a minimum access spacing requirement from Mulloy Court access for future development purposes.
- Sightline distance review at proposed driveways.
- Prepare AutoTURN diagrams for garbage trucks and fire trucks to determine if these vehicles can be sufficiently accommodated on-site.

Figure 1 Site Location



Source: Google Maps

Figure 2 Proposed Site Plan

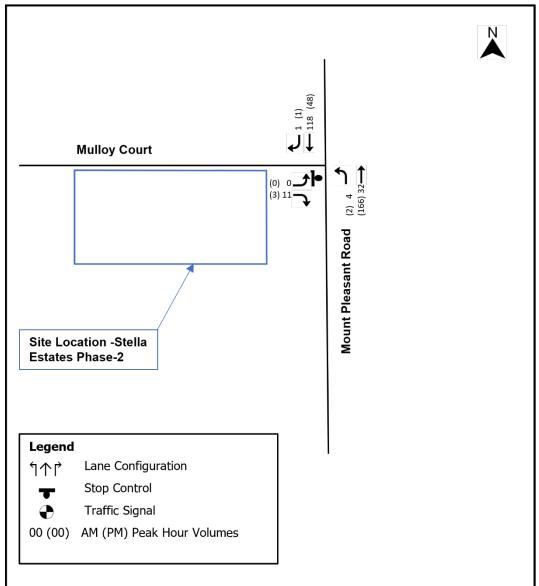


2.0 EXISTING TRAFFIC VOLUMES

Existing traffic volumes on Mount Pleasant Road were established by using the link volumes from the turning movement counts at the intersection of Mount Pleasant Road and Mulloy Court, collected by Accu-Traffic Inc. on Thursday, October 12, 2023, during the weekday AM (7:00 to 9:00) and PM (4:00 to 6:00) peak periods.

The existing traffic volumes are illustrated in Figure 3 and a copy of the traffic data are provided in Appendix A.

Figure 3 Baseline Traffic Volumes



2.1 Site Traffic Projection

2.1.1 Trip Generation

The projection of new additional traffic volumes generated by the development proposal is estimated based on the *Trip Generation Manual*, 11th Edition, published by the Institute of Transportation Engineers (ITE) for "Single-Family Detached Housing" (LUC 210). A copy of the ITE excerpt is provided in Appendix B.

Table 1 summarizes the total site trip generation for the proposed development.

Table 1 Site Trip Generation

Land Use			Weekday AM Peak Hour			Weekday PM Peak Hour		
		In	Out	Total	In	Out	Total	
	Rates	0.14	0.56	0. 7	0.63	0.31	0.94	
Single-Family Detached Housing	Distribution	25%	75%	100%	63%	37%	100%	
(ITE Code 210) 5 units	Fitted Curve	Ln(T) =	0.91 Ln(X	() + 0.12	Ln(T) =	0.94 Ln(X	() + 0.27	
	Trips	1	4	5	4	2	6	

Based on the foregoing, the site is expected to generate approximately 5 (1 in and 4 out) and 6 (4 in and 2 out) two-way trips during the weekday AM and PM peak hours, respectively.

The subject site trip generation is minimal and within the expected daily variation of traffic and would not impact the intersection of Mount Pleasant Road and Mulloy Court operations, capacity or delays during the AM and PM peak hours.

2.1.2 Trip Distribution and Assignment

The estimated site traffic volumes were assigned onto the area road network based on a review of the existing road network traffic patterns and overall connectivity.

Table 2 summaries the applied trip distribution pattern and new site traffic volumes are illustrated in Figure 5.

Table 2 Site Trip Distribution

Direction	Via	Weekday AM Peak Hour	Weekday PM Peak Hour		
		In / Out			
North	Mulloy Court	15%	10%		
South	Mulloy Court	85%	90%		
	Total	100%	100%		

The anticipated traffic from the new site is minimal. Specifically, we expect around 5 inbound and 4 outbound trips during the morning rush, and 6 inbound and 2 outbound trips during the evening rush. These figures fall within the usual daily traffic patterns. Consequently, it is unlikely that the traffic generated by the new site will significantly affect the Mount Pleasant Road and Mulloy Court intersection during peak hours. Overall, the projected traffic impact is expected to be minor and should not disrupt the existing traffic flow.

3.0 DRIVEWAY CONFIGURATION AND SPACING REQUIREMENTS

In accordance with the Town of Caledon Zoning By-Law – Section 4 [General Provisions], the minimum access spacing is set at 22.5 meters. Therefore, any proposed access point along Mount Pleasant Road must maintain a minimum distance of 22.5 meters from the intersection of Mulloy Court and Mount Pleasant. This requirement is in place to ensure compliance with local regulations and to promote safe and efficient traffic flow in the area.

Per the Town of Caledon Zoning By-Law, the minimum entrance setback requirement is 9 meters. Notably, for Lot 5, which is the closest lot to Mount Pleasant Road, the proposed driveway is situated 30 meters away from the intersection of Mulloy Court and Mount Pleasant. This alignment adheres to local regulations and contributes to the preservation of safe and efficient traffic circulation within the area.

4.0 SIGHT TRIANGLES

The access to the development through Mulloy Court intersects with Mount Pleasant Road, classified as a non-regional road. It is imperative to note that the current development not only complies with but also exceeds the Town of Caledon Zoning By-Law regulations, which stipulate a minimum sight distance of 9 meters.

5.0 CONCLUSIONS

The site is generally bounded by rural residential development to the north and south, Mount Pleasant Road to the east, vacant land (future development) to the west and south, and estate residential development to the east (i.e., Stellar Estates Phase 1).

The subject site is extension of the existing Stella Estates development that consists of 10 lots. Vehicular access to the site will be accommodated by Mulloy Court (to be shared with future Phase 2 development) via Mount Pleasant Road.

The key findings are summarized below:

- The proposed development is expected to generate 5 two-way trips (1 in and 4 out) and 6 two-way trips (4 in and 2 out) during the weekday AM and PM peak hour, respectively.
- Anticipated traffic from the proposed and the neighboring site is minimal and falls within typical daily traffic fluctuations, indicating no significant impact on the intersection's capacity or congestion during morning and evening peak hours.
- The sight distance for vehicles exiting the development via Mulloy Court surpasses the minimum requirement of 9 meters, ensuring safe and compliant traffic flow.
- Future driveways along Mount Pleasant Road should be situated at a minimum distance of 22.5 meters from Mulloy Court.

Appendix A:

Existing Traffic Data



Morning Peak Diagram	Specified Period One Hour Peak From: 7:00:00 From: 7:45:00 To: 9:00:00 To: 8:45:00
Municipality: Caledon Site #: 2322400001 ntersection: Mount Pleasant Rd & Mulloy Court FFR File #: 1 Count date: 12-Oct-23 ** Non-Signalized Intersection **	Weather conditions: Person counted: Person prepared: Person checked: Major Road: Mount Pleasant Rd runs N/S
Peds Cross: ► Totals 1 118	1 1
Mulloy Court W Heavys Trucks Cars Totals 0 0 0 0	E S
0 0 3 3 3 Mount Pleasant Rd	句 ①
West Peds: 1 Trucks 0 Truc	ars 4 30 34 Peds Cross: ► South Peds: 0 rys 0 1 1 South Entering: 36

Comments



Afternoon Peak Diagran	Specified Period From: 16:00:00 To: 18:00:00	One Hour Peak From: 17:00:00 To: 18:00:00
Municipality: Caledon Site #: 2322400001 ntersection: Mount Pleasant Rd & Mulloy (FFR File #: 1 Count date: 12-Oct-23	Person counted: Person prepared: Person checked:	s:
** Non-Signalized Intersection **	Major Road: Mount	t Pleasant Rd runs N/S
North Leg Total: 215 North Entering: 49 North Peds: 0 Peds Cross: Heavys 0 0 Trucks 0 1 Cars 1 47 Totals 1 48 Heavys Trucks Cars Totals 0 0 3 3 Mulloy Court Heavys Trucks Cars Totals	0 Heavys 1 Trucks 4 Cars 161 Totals 166 Mount Pleasant Rd	
	S	
0 0 11 11	sant Rd	
Peds Cross: ☒ Cars 58 West Peds: 0 Trucks 1 West Entering: 11 Heavys 0	Cars 2 161 163 Trucks 0 4 4 Heavys 0 1 1	South Peds: 0 South Entering: 168
West Leg Total: 14 Totals 59	Totals 2 166	South Leg Total: 227

Comments



Total Count Diagram

Municipality: Caledon

Site #: 2322400001

Intersection: Mount Pleasant Rd & Mulloy Court

TFR File #:

Count date: 12-Oct-23 Weather conditions:

Person counted: Person prepared:

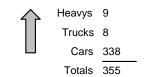
Person checked:

** Non-Signalized Intersection **

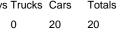
Major Road: Mount Pleasant Rd runs N/S

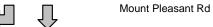
North Leg Total: 666 North Entering: 311 North Peds: Peds Cross:

Heavys 0 6 4 Trucks 0 Cars 4 301 Totals 4



Heavys Trucks Cars Totals 0 20 20

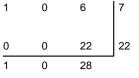












Heavys Trucks Cars





X Peds Cross: West Peds: West Entering: 29 West Leg Total: 49

Cars 319 Trucks 4 Heavys 6 Totals 329

Cars 16 332 348 Trucks 0 8 8 Heavys 0 8 8 Totals 16 348

Peds Cross: M South Peds: 0 South Entering: 364 South Leg Total: 693

Comments



Traffic Count Summary

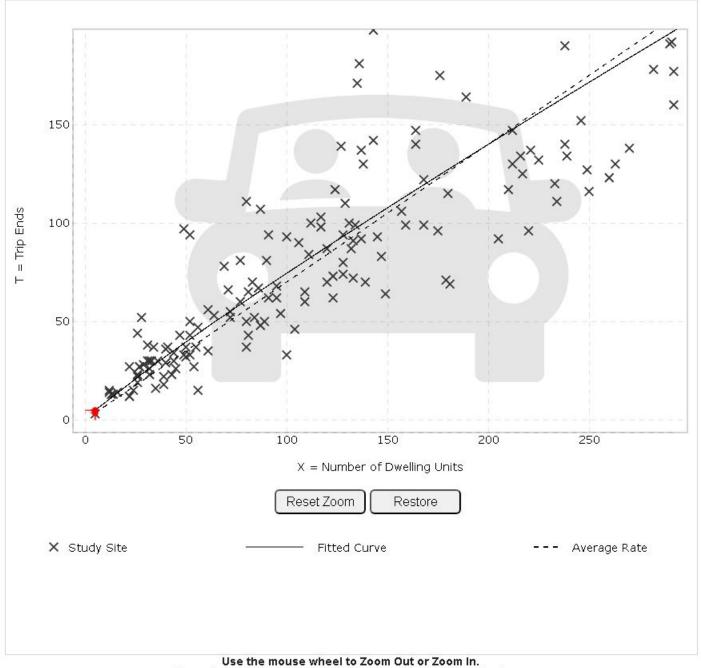
Intersection:	Mount C	leacant	Dd o w	ulloy Co	urt Count I	Date: 12-Oct-23		unicipality: Ca	lodon			
				-	וון ככנוויי	12-001-23	· ''''			and Ta	tolo	
	North Approach Totals Hour Includes Cars, Trucks, & Heavys Total					North/South		South Approach Totals Hour Includes Cars, Trucks, & Heavys Total				
Hour Ending	meruu	es Cars, 1	Tucks, & I	Grand	Total Peds	Total Approaches	Hour Ending		es Cars, I	Tucks, & I	Grand	Total Peds
	Left	Thru	Right	Total		' '		Left	Thru	Right	Total	
7:00:00	0	0	0	0	0	0	7:00:0		0	0	0	0
8:00:00	0	102	1	103	0	139	8:00:0		29	0	36	0
9:00:00 16:00:00	0	101 0	0	101	0 0	144 0	9:00:0		39	0	43 0	0 0
17:00:00	0 0	56	2	0 58	0	175	16:00:0 17:00:0		0 114	0	117	0
18:00:00	0	48	1	49	o	217	18:00:0		166	Ö	168	o
10.00.00		"	,	"		277	10.00.0		700		100	Ü
Totals:	0	307	4	311	0	675	S Total	s: 16	348	0	364	0
		t Appro			-	East/West				ach Tot		
Hour	Includ	es Cars, T	rucks, & F	leavys	Total	Total	Hour	Includ	es Cars, T	rucks, & F	leavys	Total
Ending	Left	Thru	Right	Grand Total	Peds	Approaches	Ending	Left	Thru	Right	Grand Total	Peds
7:00:00	0	0	0	0	0	0	7:00:0	0 0	0	0	0	0
8:00:00	0	0	0	0	0	1	8:00:0		0	1	1	2
9:00:00	0	0	0	0	0	5	9:00:0		0	3	5	0
16:00:00	0	0	0	0	0	0	16:00:0		0	0 7	0	0
17:00:00 18:00:00	0 0	0	0	0	0 0	12 11	17:00:0 18:00:0		0 0	11	12 11	1 0
10.00.00	U	"	"			''	70.00.0	,0 0		''	''	U
											1	
,		1										
Totals:	0	0	0	0	0	29	W Total	s: 7	0	22	29	3
Totals:	0	0				29 or Traffic Cr	•			22	29	3
Totals: Hours E	nding:	7:00					•	Major Str		22	29	3

Appendix B:

ITE Excerpts – Proposed Development

DATA SOURCE: Trip Generation Manual, 11th Ed ~ SEARCH BY LAND USE CODE: Q LAND USE GROUP: (200-299) Residential V LAND USE: 210 - Single-Family Detached Housing ~ LAND USE SUBCATEGORY: All Sites SETTING/LOCATION: General Urban/Suburban INDEPENDENT VARIABLE (IV): Dwelling Units TIME PERIOD: Weekday, Peak Hour of Adjacent Street Traffic > TRIP TYPE: Vehicle **ENTER IV VALUE TO CALCULATE TRIPS:** Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.

Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:

Single-Family Detached Housing (210) Click for

Description and Data Plots

Independent Variable:

Dwelling Units

Time Period:

Weekday

Peak Hour of Adjacent Street Traffic

One Hour Between 7 and 9 a.m.

Setting/Location:

General Urban/Suburban

Trip Type:

Vehicle

Number of Studies:

92

Avg. Num. of Dwelling Units:

226

Average Rate:

0.70

Range of Rates:

0.27 - 2.27

Standard Deviation:

0.24

Fitted Curve Equation:

Ln(T) = 0.91 Ln(X) + 0.12

n2

0.90

Directional Distribution:

25% entering, 75% exiting

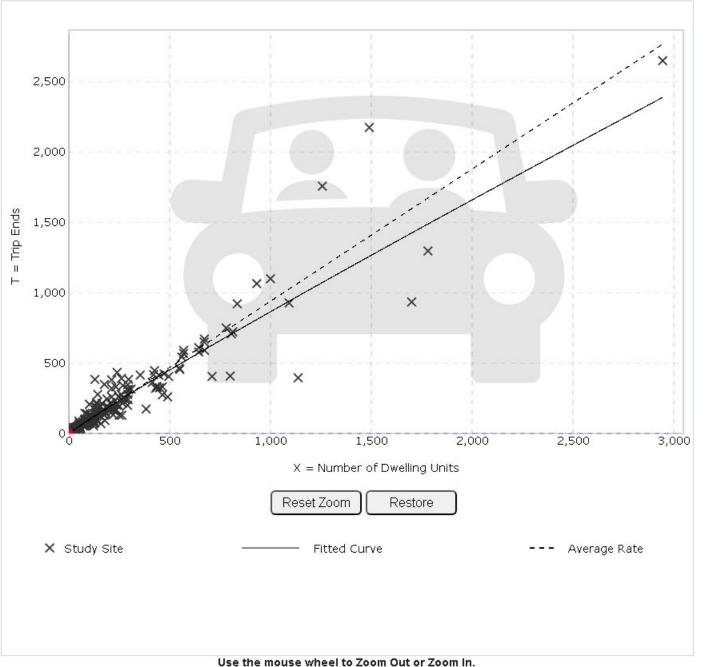
Calculated Trip Ends:

Average Rate: 4 (Total), 1 (Entry), 3 (Exit)

Fitted Curve: 5 (Total), 1 (Entry), 4 (Exit)

DATA SOURCE:	
Trip Generation Manual, 11	th Ed 🗸
SEARCH BY LAND USE CODE:	Trip Generation Manual, 11th E
210	
LAND USE GROUP:	
(200-299) Residential	~
LAND USE :	
210 - Single-Family Detach	ed Housing 🗸
LAND USE SUBCATEGORY:	
All Sites	~
SETTING/LOCATION:	
General Urban/Suburban	~
INDEPENDENT VARIABLE (IV):	
Dwelling Units	~
TIME PERIOD:	
Weekday, Peak Hour of Ad	jacent Street Traffic 🗸
TRIP TYPE:	
Vehicle	~
ENTER IV VALUE TO CALCULAT	F TDIDS:
5 Calcul	

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In. Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:

Single-Family Detached Housing (210) Click for

Description and Data Plots

Independent Variable:

Dwelling Units

Time Period:

Weekday

Peak Hour of Adjacent Street Traffic

One Hour Between 4 and 6 p.m.

Setting/Location:

General Urban/Suburban

Trip Type:

Vehicle

Number of Studies:

208

Avg. Num. of Dwelling Units:

248

Average Rate:

0.94

Range of Rates:

0.35 - 2.98

Standard Deviation:

0.31

Fitted Curve Equation:

Ln(T) = 0.94 Ln(X) + 0.27

0.92

Directional Distribution:

63% entering, 37% exiting

Calculated Trip Ends:

Average Rate: 5 (Total), 3 (Entry), 2 (Exit)

Fitted Curve: 6 (Total), 4 (Entry), 2 (Exit)