

20 April 2018

OUR REF: 476088 - 01000

Holloway Lodging Corporation
6009 Quinpool Road, 10th Floor
Halifax, NS
B3K 5J7

Attention: Gavin MacDonald

Dear Gavin:

Re: **1354 Carling Avenue CTS/TIS**
Addendum #1

1. INTRODUCTION

The Community Transportation Study/Transportation Impact Study (CTS/TIS) for the proposed residential development located at 1354 Carling Avenue was submitted in April 2017. Comments have been received on the CTS/TIS from the City of Ottawa and the Site Plan for Phases 1 and 2 has been revised and is attached (Attachment #1). This Addendum #1 has been prepared to address the comments received and address the transportation related changes to the proposed Site Plan, which include:

- Phase 1:
 - Revised number of residential units from 342 units to 381 units;
 - Revised ground floor retail land use size from 9,440 ft² to 6,663 ft²;
 - Two driveway connections to Archibald Street (revised from 4 driveways);
 - 372 parking spaces proposed for Phase 1.
- Phase 2
 - Revised number of residential buildings from 4 buildings to 5 buildings;
 - Revised number of residential units for Phase 2 from 914 units to 870 units (total units);
 - One proposed driveway connection to Meath Street.

2. REVISED SITE PLAN

2.1. REVISED TRIP GENERATION

Given the revised land use sizes outlined above the trip-generation analysis was revised following the same method outlined in the original CTS/TIS. The resultant Phase 1 site-generated person trips are outlined in Table 1.

Table 1: Phase 1 Revised Site Trip-Generation

Travel Mode	Mode Share		AM Peak (Person Trips/h)			PM Peak (Person Trips/h)		
	Residential	Retail	In	Out	In	Out	Total	Total
Auto Driver	50%	50%	24	88	112	89	53	142
Auto Passenger	10%	15%	6	19	25	19	13	32
Transit	25%	15%	10	41	51	42	24	66
Non-motorized	15%	20%	6	26	32	27	16	43
Total Person Trips	100%	100%	46	174	220	177	106	283
Less Retail Pass-by (25%)			-2	-2	-4	-3	-3	-6
Total 'New' Auto Trips			22	86	108	86	50	136
<i>Original CTS Vehicle Trips</i>			<i>21</i>	<i>80</i>	<i>101</i>	<i>81</i>	<i>48</i>	<i>129</i>
Difference in Vehicle Trips			1	6	7	5	2	7

As shown, the revised Site Plan has minimal impact on the number of vehicle and person trips generated by Phase 1 of the development and will have negligible impact of the findings, conclusions and recommendations of the original CTS/TIS.

For Phase 2, the revised trip-generation is outlined in Table 2.

Table 2: Phase 1 and 2 Revised Site Trip-Generation

Travel Mode	Mode Share		AM Peak (Person Trips/h)		PM Peak (Person Trips/h)			
	Residential	Retail	In	Out	In	Out	Total	Total
Auto Driver	50%	50%	47	171	218	178	108	286
Auto Passenger	10%	15%	12	36	48	39	26	65
Transit	25%	15%	20	81	101	84	47	131
Non-motorized	15%	20%	15	52	67	55	34	89
Total Person Trips	100%	100%	94	340	434	356	215	571
Less Retail Pass-by (25%)			-4	-4	-8	-7	-7	-14
Total 'New' Auto Trips			43	167	210	171	101	272
Less Existing Hotel Trips			-10	-21	-31	-19	-10	-29
Net New Auto Trips			33	146	179	152	91	243
<i>Original CTS Vehicle Trips</i>			<i>34</i>	<i>152</i>	<i>186</i>	<i>159</i>	<i>94</i>	<i>253</i>
Difference in Vehicle Trips			-1	-6	-7	-7	-3	-10

As shown, the revised Site Plan has a minimal impact on the number of vehicle and person trips generated by Phases 1 and 2 of the development and will have negligible impact of the findings, conclusions and recommendations of the original CTS/TIS.

2.2. REVISED SITE PLAN REVIEW

Vehicle and Bicycle Parking

A total of 372 parking spaces are proposed for Phase 1 of the development, which meets the City's By-Law requirements. For Phase 2, a total number of parking spaces will be refined during the Site Plan Application for Phase 2.

Bicycle parking for Phase 1 is proposed underground (166 spaces) and surface (20 spaces) for a total of 186 spaces, which meets the City's By-Law requirements. For Phase 2, the number of bicycle parking spaces will be refined during the Site Plan Application for Phase 2.

Access Requirements

Access for Phase 1 is provided via one full-movement connection to Archibald Street and the existing hotel driveways. The driveway connection is located approximately 50 m south of Carling Avenue. For Phase 2, access is proposed via two full-movement driveway connections; one to Archibald Street and one to Meath Street and a right-in/right-out connection to Carling Avenue.

3. CITY COMMENTS

3.1. TRANSIT SERVICES

Comment 2.1: As per the TMP, Carling Ave has been identified as a transit priority corridor with potential continuous bus only-lanes.

Response 2.1: Agreed.

PARSONS

Comment 2.2: There is a bus stop (# 2346) located adjacent to the site along eastbound Carling Ave, west of Archibald St. The bus stop is to be maintained. A) The applicant shall construct a new concrete shelter pad at no cost to the City, as per City specification SC-11 attached, in order to allow for improved transit amenities. The Site Plan should be revised to show how this bus stop and shelter pad will be accommodated. B) The applicant is to contact Transit Services prior to construction to ensure the safe continued operation of the afore-mentioned bus stop.

Response 2.2: Noted, and the architect has been advised.

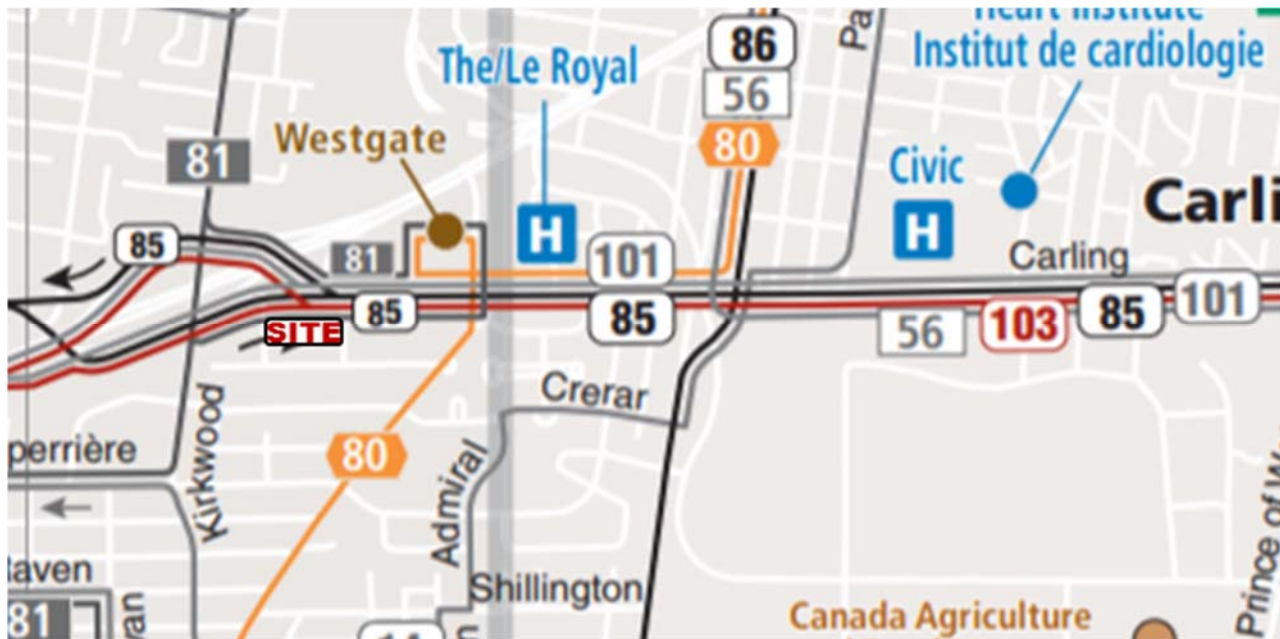
Comment 2.3: Barrier free transit stop loading area is to be 1.5-2 m wide and long enough (minimum 15.0 m) to serve both the front and rear doors of the longest transit vehicles.

Response 2.3: Noted, and the architect has been advised.

Comment 2.4: The April service change saw route 151 renumbered to 81. The transit network exhibit in this section is out of date. Several other routes illustrated have had their number changed: e.g. 6 to 56, 176 to 80, and 150 to 80.

Response 2.4: Noted, the revised transit map is shown as Figure 1.

Figure 1: Updated Transit Map



Comment 2.5: Site will generate 105 to 135 new two-way transit person trips. TIA indicates that it can be accommodated by the transit priority corridor. While giving priority to transit will lead to a reduction to external delay and this relative travel time advantage is important to transit mode share gains, there is no indication that sufficient capacity is provided to meet this additional ridership demand. Please revise.

Response 2.5: The existing transit ridership data is outlined in Table 3 (obtained from OC Transpo). This information reflects the weekday morning and afternoon peak period times (6AM – 9AM) and (3PM to 6PM) for the eastbound and westbound stops closest to the site (Stops 8080 and 2346).

Table 3: Peak Period Transit Ridership Data

Stop	Time Period	Route #	Total Boardings	Total Alightings	Approximate # of Busses during Peak Period	Average Load at Departure
Stop 8080	AM PEAK	81	1	0	5	4
		85	14	14	13	19
		101	3	10	8	15
		103	13	10	10	16
	PM PEAK	81	8	4	6	6
		85	41	35	14	29
		101	24	23	12	25
Stop 2346	AM PEAK	81	0	2	6	4
		85	5	4	11	28
		101	1	7	11	26
	PM PEAK	81	0	3	6	6
		85	6	6	13	31
		101	1	3	9	14
		103	2	0	11	14

As this data represents the number of persons boarding and alighting the busses over a 3-hour period, the number of persons per hour boarding/alighting each bus is estimated to range between 0 to 25 two-way persons per hour, with 4 to 30 persons on board at departure (on average).

The total projected number of transit riders ranges from 100 to 130 two-way persons per hour during the peak hours. As shown there are 28 to 36 buses per stop during the 3-hour morning peak period and 32 to 39 buses per stop during the 3-hour afternoon peak period. This results in an average of 10 to 12 additional boardings and alightings per bus during the peak hours, which can be accommodated on these existing routes.

3.2. TRAFFIC ENGINEERING

Comment 2.16: *Carling Avenue/Westgate intersection - Forecasted eastbound left turn volumes (and U-turns, as included in the study) from this development and others in the area result in a range of 237-365 vehicles per hour during the peaks. Mitigation measures should be considered for this location. With the introduction of transit priority along the corridor, the proposed cross-section of Carling Avenue will consist of two vehicle travel lanes. Queues extending past the available storage in the eastbound left turn lane will block the through lane leaving only a single lane available for eastbound traffic.*

Response 2.16: For left-turn movements that have traffic volumes of 300 veh/h or more, dual left-turn lanes can be considered. Given the space constraints on Carling Avenue and the future BRT along this corridor, dual left-turn lanes at this location are not feasible. As mentioned in the Westgate Transportation Impact Assessment, there are limited mitigative measures apart from signal timing adjustment that are feasible in this area.

Comment 2.17: *The signal west of Carling Avenue and Westgate must be included in the analysis.*

Response 2.17: Noted. The revised existing conditions for the Carling/73 m East of Archibald signal are summarized below.

Figure 2: Existing Peak Hour Traffic Volumes

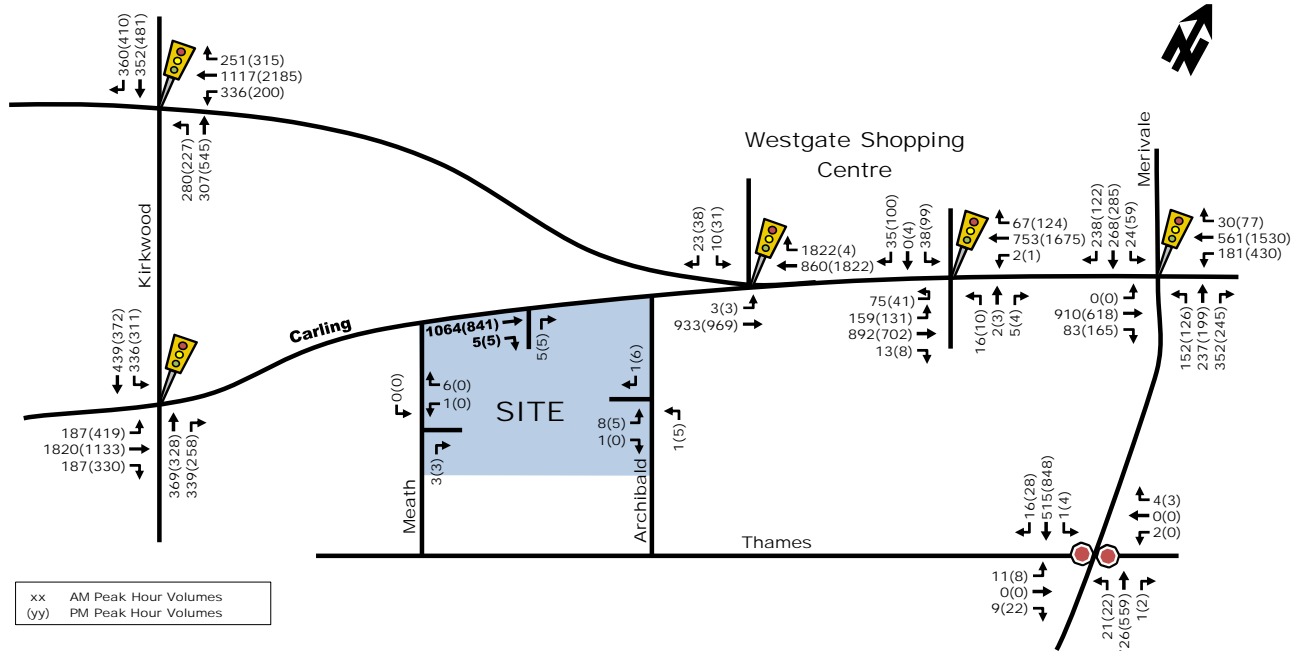


Table 4: Existing Intersection Performance

Intersection	Weekday AM Peak (PM Peak)					
	Critical Movement			Intersection 'as a whole'		
	LoS	max. v/c or avg. delay (s)	Movement	Delay (s)	LoS	v/c
Carling/73m E of Archibald	A(A)	0.22(0.48)	EBT(WBT)	0.1(11.4)	A(A)	0.22(0.41)

Note: Analysis of signalized intersections assumes a PHF of 0.95 and a saturation flow rate of 1800 veh/h/lane.

As shown, the intersection located approximately 70 m east of the Carling/Archibald intersection is currently operating at an excellent level of service of LoS 'A' during peak hours.

The total projected traffic volumes at study area intersections are illustrated as Figure 3 and the projected intersection performance is included in Table 5.

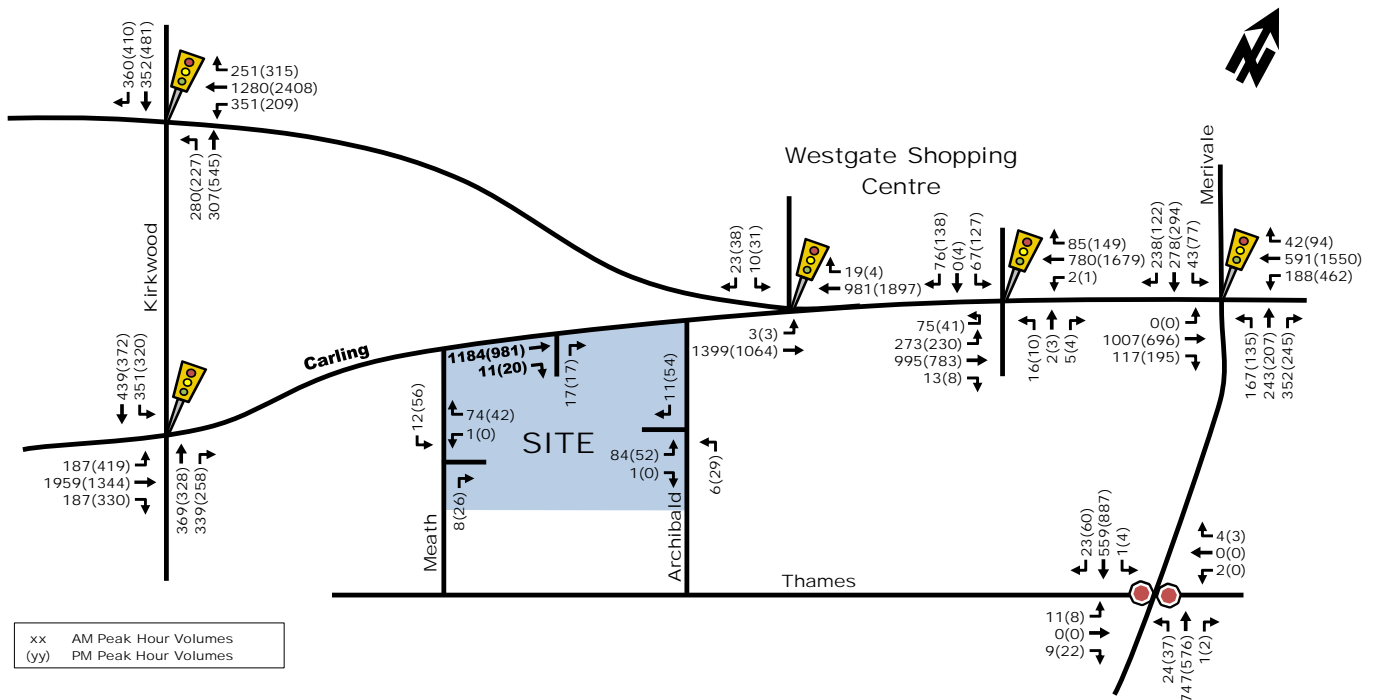
Table 5: Projected Intersection Performance

Intersection	Weekday AM Peak (PM Peak)					
	Critical Movement			Intersection 'as a whole'		
	LoS	max. v/c or avg. delay (s)	Movement	Delay (s)	LoS	v/c
Carling/73m E of Archibald	A(C)	0.54(0.72)	EBT(WBT)	6.7(8.5)	A(B)	0.53(0.61)

Note: Analysis of signalized intersections assumes a PHF of 0.95 and a saturation flow rate of 1800 veh/h/lane.

The results in Table 5 reflect the two-lane cross-section along Carling Avenue, which represents the future condition with bus lanes along Carling Avenue. As shown, the Carling/Westgate (73m east of Archibald) intersection is projected to operate with acceptable levels of service of LoS 'C' or better.

Figure 3: Projected Peak Hour Traffic Volumes



Comment 2.18: Please provide revised Synchro files saved as Synchro Version 8.

Response 2.18: SYNCHRO Version 8 files are provided on CD with resubmission.

3.3. TRANSPORTATION PLANNING

Comment 2.19: The site's four proposed accesses plus four underground parking accesses off local roads and the internal connection of parking in the ultimate plan makes the Carling Avenue access redundant and unnecessary. The access is projected to have low usage and will also create a conflict point with the proposed Carling Avenue transit only and cycling lanes.

Response 2.19: The revised Site Plan has a reduced number of site accesses. For Phase 1, the existing driveway for the hotel to Carling Avenue will be maintained and two full-movement accesses to Archibald Street are proposed. For Phase 2, one right-in/right-out driveway connection to Carling Avenue, one full-movement access to Meath Street and the two Phase 1 full-movement driveway connections to Archibald Street are proposed.

Comment 2.20: There are too many proposed accesses (4 on Meath Street and 4 on Archibald Street) that exceed the Private Approach By-Law based on length of frontage. Also the proposed northerly accesses on Archibald Street are too close to each other. Please review and reduce the number of accesses as stated in the by-law.

Response 2.20: As mentioned in Response 2.19, the number of proposed accesses has been reduced. The revised number of accesses meets the City's By-Law requirements.

Comment 2.21: The use of Thames Street as a west-bound access is an issue, and Carling Avenue options need to be reviewed. Please address cut-through traffic in your revised CTS. Any option looking at a west-bound Carling Avenue left-turn lane would require an RMA and discussions with MTO and City Staff.

Response 2.21: Traffic projected to access the proposed development via Thames Street is not considered 'cut-through' traffic. 'Cut-through' traffic is commuter traffic travelling along an arterial roadway that uses a local roadway to bypass part of the arterial network (i.e. a vehicle uses Archibald or Meath Street and Thames Street to cut through the neighbourhood from Carling Avenue to Merivale Road). The site-generated traffic associated with this development is considered local residential traffic. An increase in local residential traffic along Thames Street, Archibald Street and Meath Street is expected given the site's proposed connections to Archibald Street and Meath Street. As mentioned in the original CTS/TIS, approximately 30% of inbound traffic to the proposed development is projected to travel via Thames Street, Archibald Street/Meath Street, which equates to approximately 10 to 50 new veh/h during the peak hours. This amount of traffic represents less than 1 new vehicle each minute on average and the total traffic travelling along Thames Street in the westbound direction is projected to be less than 100 veh/h during the afternoon peak hours, which is appropriate for a local roadway.

This topic is further discussed in the attached Technical Memorandum, which was prepared by Parsons in March 2018 (Attachment #2). A meeting was organized with the local City Councillor and it was proposed that Meath Street would be closed and a narrowing along Archibald Street would be implemented at the one-way location (using a bulb-out). This is shown in the attached drawing (Attachment #3). There are several concerns from a transportation perspective with this option:

- 1) Existing 'cut-through' traffic using Meath Street will likely continue to 'cut-through' the neighbourhood using Archibald Street instead;
- 2) Trucks at the Meath Street dead-end have no public turn-around location. An agreement to use the subject site's driveway connection to Meath Street would be required, otherwise, trucks would be required to reverse to Carling Avenue and back up onto Carling Avenue to turn around; and
- 3) Trucks at the Thames Street dead-end currently reverse approximately 120 m to turn around using Meath Street. With the closure of Meath Street, trucks will have to reverse 300 m to Archibald Street to turn around.

Based on the foregoing, the closure of Meath Street is not recommended from a transportation perspective, as it will not prevent cut-through traffic through the neighbourhood and will cause issues with truck movements in the area. The narrowing of both Meath Street and Archibald Street using bulb-outs, as outlined in the attached memo, is recommended. However, it is understood that through consultation with the local Councillor and community, the planning department may elect to close Meath and develop a channelized one-way lane at Archibald, to which the proponent is agreeable.

Comment 2.22: *Modifications to Meath Street and Archibald Street may be required to control movements from the site. Provide a road plan showing the location of the existing accesses on both sides of these streets.*

Response 2.22: The options for improvements to the bulb outs on Archibald Street and Meath Street were also assessed as part of the Technical Memorandum prepared in March. The following Figure 4 shows a proposed options to help enforce the one-way operation of Meath Street and Archibald Street at their intersections with Thames Street. As shown there are private driveways just north of each of the proposed bulb-outs.

Figure 4: Possible Bulb-Out Option along Archibald and Meath



Comment 2.23: *Sidewalks must be continuous and depressed through all accesses and should be continuous along the frontage of Archibald Street and Meath Street to Carling Avenue. (see DWG SC7.1 attached).*

Response 2.23: Noted, and the architect has been advised.

Comment 2.24: *With the redevelopment at 1309 Carling and 1335 Carling Avenue underway, review the need for the additional traffic signal to the west of the Carling Avenue/Westgate intersection. The need for additional storage for EB LT vehicles at the Westgate Shopping Centre intersection will extend through this signalized T-intersection.*

Response 2.24: The signalized intersection located west of the Carling/Westgate intersection is understood to be required for truck access and would impact the operations of the Westgate development if removed.

Comment 2.25: *Carling Avenue is designated as an Arterial road within the City's Official Plan with a ROW protection of 44.5 metres. The ROW limits are to be shown on all the drawings and the offset distance (22.25 metres) to be dimensioned from a distance 2.5 metres north of the existing curb. The 2.5 metres represents half the width of a 5.0 metres median which would have been present if not for the roadway divide.*

Response 2.25: Noted and the proponent has been advised.

Comment 2.26: *All underground and above ground building footprints and permanent walls need to be shown on the plan to confirm that any permanent structure does not extend either above or below into the existing property lines, sight triangles and/or future road widening protection limits.*

Response 2.26: Noted, and the proponent has been advised.

Comment 2.27: *Please refer to TAC Manual Part 2; Table 3.2.9.3 and Figure 3.2.5.2 for appropriate throat length and dimensioning.*

Response 2.27: The throat length for the proposed Carling Avenue driveway connection has been redesigned and is included in the updated Phase 2 Site Plan.

Comment 2.28: *The closure of an existing private approach shall reinstate the sidewalk, shoulder, curb and boulevard to City standards*

Response 2.28: Noted and the proponent has been advised.

PARSONS

Comment 2.29: *Ensure that the driveway grade does not exceed 2-6% within the private property for a distance of 9.0 metres from the ROW limit; see Section 25 (t) of the Private Approach By-Law #2003-447. Any grade exceeding 6% will require a subsurface melting device.*

Response 2.29: Noted, and the architect has been advised.

Comment 2.30: *The Tactile Walking Surface Indicator (TWSI) should be provided at pedestrian crossings. Under the Integrated Accessibility Standards of the Accessibility for Ontarians with Disabilities Act, 2005, and the City of Ottawa Accessibility Design Standards, TWSI's are required for new construction and the redevelopment of elements in public spaces, such as for exterior paths of travel (e.g. sidewalks and at the top of stairs).*

Response 2.30: Noted, and the architect has been advised.

Comment 2.31: *Minimum lane width for fire trucks is 6.0 metres. A fire truck three-point turn as it relates to the proposed lane configurations is to be confirmed by the Fire Chief.*

Response 2.31: Noted and the architect has been advised.

Comment 2.32: *Bicycle parking spaces are required as per Section 111 of the Ottawa Comprehensive Zoning By-law. Bicycle parking spaces should be located in safe, secure places near main entrances and preferably protected from the weather.*

Response 2.32: Noted, and the architect has been advised.

Comment 2.33: *For the interlock pavers, landscaped areas and public art on City's road right-of-way the developer has to sign a "Maintenance Agreement" with the City to cover any claims.*

Response 2.33: Noted, and the architect has been advised.

Based on the foregoing, the proposed 1354-1376 Carling Avenue development continues to be recommended from a transportation perspective.

Prepared by :



André Sponder, B.A.Sc.
Transportation Analyst

Reviewed by :



Christopher Gordon, P.Eng.
Senior Project Manager



Attachment #1

Phase 1 and 2 Revised Site Plans

Do not scale directly off drawings
all dimensions and site conditions are
to be verified on site prior to
beginning any work.
Never proceed in uncertainty.



Prepared by Annis, O'Sullivan, Vollebekk Ltd

Révision

Landscape

Mécanical - Électrical

1354 - 1376
Carling Avenue
Ottawa, On.
Phase 1

Scale: 1:300	Drawn by: a.b.	
date: 03.06.2018	approve par: E.H.	

A-0.1

○ MH-S
T/G=76.0%

PROJECT CONTACTS		
CLIENT	LANDSCAPE	MECHANICAL & ELECTRICAL
HOLLOWAY COSGROVE	POTTER PLANNING AND URBAN DESIGN	DESIGNING EXPERTS CONSULT
6000 SUTHERLAND AVE.	233 MCCORD STREET	616 PLACE D'ERIE,
HARFAIR, NS	OTTAWA, ON	LAVAIL, QC
BUS 152	K2P 0C8	410-757
ARCHITECT	SUBPOVER	CIVIL ENGINEER
GEIGER HODOT ARCHITECTS	OSIEL	OSIEL
424 RUE GUY, SUITE 104	130 WEBER ROAD, UNIT 103	130 WEBER ROAD, UNIT 103
MONTREAL, QC	STITTSVILLE, ON	STITTSVILLE, ON
H3K 1S6	K2S 1E9	K2S 1E9
PLANNER	STRUCTURAL	TRANSPORTATION & TRAFFIC
POTTER PLANNING AND URBAN DESIGN	LEICKE & CYR	PARSONS
233 MCCORD STREET	500 ROLLO, GOUVERN. ST. BUREAU 306	3233 MICHAEL STREET, SUITE 100
OTTAWA, ON	MONTREAL, QC	OTTAWA, ON
K2P 0C8	H3L 8B9	K1L 7T2

PROJECT CONTACTS	
CLIENT HOLLOWAY LOGGINGS 6009 Dunlop Rd. Hawthorn, NS B1K 5J7	LANDSCAPE TOTTEN PLANNING AND URBAN DESIGN 223 MCCLEOD STREET OTTAWA, ON K2P 0Z8
ARCHITECT GREG HOLT ARCHITECTS 418 RUEL GUY, SUITE 104 MONTREAL, QC H3K 1S6	SURVIVOR DSEL 120 WEBB ROAD, UNIT 103 STITTVILLE, ON K2S 1B9
PLANNER TOTTEN PLANNING AND URBAN DESIGN 223 MCCLEOD STREET OTTAWA, ON K2P 0Z8	STRUCTURAL LEBOUR & C° 500 BOUL. GOUIN EST, BUREAU 306 MONTREAL, QC H3B 3B5
	TRANSPORTATION & TRAFFIC PARSONS 1223 MICHAEL STREET, SUITE 102 OTTAWA, ON K1T 7T2
	MECHANICAL & ELECTRICAL DESARMOIS EXPERTS CONGRES 166 PLACE DE L'EREE, LAWAC, QC H1K 797
	CIVIL ENGINEER DSEL 120 WEBB ROAD, UNIT 103 STITTVILLE, ON K2S 1B9



10 7.5 5.0 2.5 0 5 10 Metres

DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

1354-1376
CARLING AVE
CONCEPT SITE PLAN



DEVELOPMENT STATISTICS

CURRENT ZONING AM10 & R4N

SITE AREA
Total Site Area: 18,559m²

SETBACKS	REQUIRED	PROVIDED
F.Y.	0m	Road widening
C.Y. (A/B)	0m	3,5m
C.Y. (C/D)	3m	5m
R.Y.	7.5m	11.5m/26m

HEIGHT	Storeys
Commercial Ground Floor:	1(6m)
A/B/C	18/20/18
D/C	8
Total:	20

RESIDENTIAL UNITS	
Building A	175
Building B	195
Building C	273
Building D	104
Building E	108

TOTAL: 855
Assumes an 85% efficiency and 75m² units

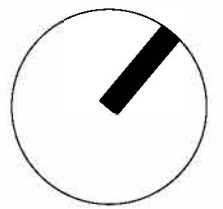
PARKING	Above Ground
	49

NOTES

- Assumes a typical residential floor height of 3m. Assumes a minimum commercial ground floor height of 6m.
- For the purposes of this concept, an average unit size of 75m² (800sf) is used to calculate the approximate number of units.
- GFA: Assumes 85% efficiency for apartment buildings. Areas are approximate.
* Building includes interior amenity areas for the residents;

LEGEND

- PROPERTY LINE
- PHASING LINE
- EXISTING HOTEL
- ORIGINAL PROPERTY LINE
- ROAD WIDENING
- SEWER EASEMENT



6	ACCESS ROAD THROAT	2018.04.18	RP
5	FOR CLIENT REVIEW	2018.01.30	EL
4	FOR CLIENT REVIEW	2017.11.10	RP
3	FOR CLIENT REVIEW	2017.09.13	RP
2	REVIEW	2017.09.12	RP
1	DRAWING	2017.09.07	RP

CREATED BY: RP
REVIEWED BY: PB
DATE: 2017.11.10

CLIENT
HOLLOWAY LODGING CORPORATION



FOTENN
Planning + Design

OTTAWA
223 McLeod Street
Ottawa, ON K2P 0Z8
T 613 730 5709

Attachment #2

Archibald and Meath Street Tech Memo

Technical Memorandum

To: Gavin MacDonald
Copy: Paul Black, Fotenn
From: André Sponder/Christopher Gordon, P.Eng.

Date: 19 March 2018
Project: 476213 - 01000

Re: 1354-1376 Carling Avenue
Local Street Traffic

1. INTRODUCTION

Holloway Lodging is proposing a new residential development consisting of five buildings on the properties municipally known as 1376 and 1354 Carling Avenue. The site is bordered by Carling Avenue to the north, Archibald Street to the east and Meath Street to the west. The Community Transportation Study (CTS) was completed in April 2017 in support of the development. We are advised that there are concerns from the local Councilor and residents regarding site-generated traffic along Thames Street, which provides access to Archibald Street and Meath Street. This Technical Memo has been prepared to assess different options regarding the functionality of the local roadways in close proximity to the site and to assess opportunities to minimize additional site-generated traffic along Thames Street.

2. ARCHIBALD AND MEATH STREETS

The proposed site has vehicle access to Carling Avenue (in the eastbound direction only) and full-movement access to Archibald Street and Meath Street. Both Archibald Street and Meath Street operate as two-way roadways adjacent to the subject site, and transition into one-way roadways in the northbound direction, south of the site. It is understood that this one-way restriction was implemented to help prevent cut-through traffic through the neighbourhood. Vehicles travelling along Carling Avenue destined to Merivale Road could use Archibald/Meath Streets and Thames Street to access Merivale Road and avoid congestion on Carling Avenue. It is noteworthy that the purpose of local streets is to provide access to local residents, including the future residents of the subject development.

Several options are presented herein for discussion regarding Archibald and Meath Streets. These Options are listed below with the corresponding transportation discussion.

2.1. CURRENT PROPOSAL

Option 1 is to maintain the current proposal and allow site-generated traffic to access the site along Meath Street and Archibald Street via Thames Street. The following points of discussion are provided for this Option:

- Based on the location of the proposed development and its connections to Carling Avenue (arterial road), there is minimal site-generated traffic projected to travel along local streets within the vicinity of the subject site as the majority of drivers will be travelling to the development via HWY 417;
- The purpose of a local street is to provide access to residents within the community;
- Given the existing one-way configuration of Archibald Street and Meath Street, site-generated traffic can use these streets to access the development, however, they are restricted from using Archibald Street and Meath Street to travel southbound to Thames Street to exit the site;
- Approximately 30% of inbound traffic to the site is projected to travel via Thames Street, Archibald Street and Meath Street, which equates to approximately 10 to 55 veh/h during peak hours for the ultimate condition. This amount of traffic represents less than 1 vehicle each minute on average; and

- The total traffic travelling along Thames Street in the westbound direction is less than 100 veh/h during the afternoon peak hour, which is appropriate for a local roadway. This amount of traffic represents approximately 2 vehicles every minute.

2.2. EXTEND BULB-OUT

Option 2 is to extend the proposed bulb-out at the Archibald and Meath Street to clearly mark these streets as one-way roadways. Signage exists along Archibald Street and Meath Street to identify that the roadways operate as one-way roadways in the northbound direction. Given the northern portion of these roadways operate as two-way roadways, it could be confusing to drivers and drivers may not follow the signage and obey the one-way signage. Providing bulb-outs will clarify that these roadways change from two-way to one-way and will reduce the width of the roadway to one lane instead of two. This will help enforce the one-way operations of the southern portion of these two local streets. The following Figure 1 provides a visual representation of this option.

Figure 1: Curb Bulb-Outs at Archibald and Meath Streets



2.3. CLOSE LOCAL ROADWAYS

Option 3 is to close Archibald and Meath Streets to through traffic. This Option would result in:

- All traffic destined to the subject development would be required to use Carling Avenue to access the site;
- All residential traffic along Thames Street would be required to use Merivale Road to access their houses. Thames Street residents would no longer have direct access to Carling Avenue;
- A slight increase of vehicle traffic along Thames Street would result as drivers travelling from the west end of Thames Street to Merivale Road would no longer have direct access to Carling Avenue via Archibald and Meath Streets and all traffic would have to use the unsignalized Thames/Merivale intersection traveling onto and off of Thames Street; and
- Ensures that no traffic destined for the subject site travels via Thames Street to access the development.

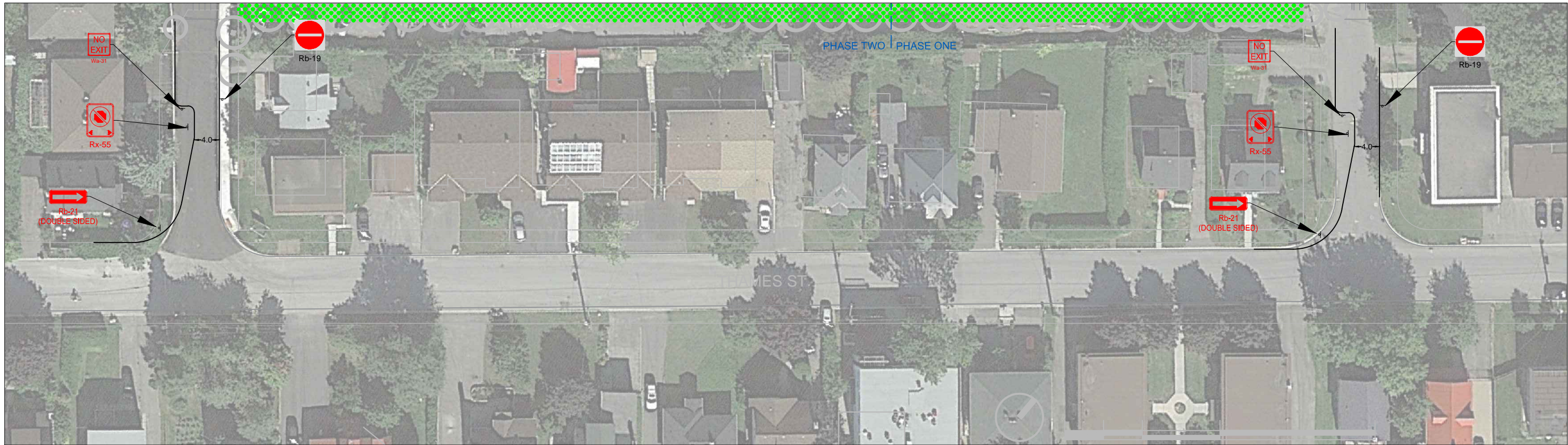
2.4. NEW INTERSECTION AT ARCHIBALD STREET

Option 4 is to provide a new intersection at Archibald Street and Carling Avenue. This option proposes to move the existing signalized truck access for the Westgate Shopping Centre to align with Archibald Street to form a traditional 4-legged intersection. This would allow full-movement access from the site onto Carling Avenue and would potentially minimize the amount of site-generated vehicles along Thames Street. This option presents several challenges:

- The existing intersection is on RioCan's Westgate property and if it was shifted towards Archibald Street, it would no longer be on their property, removing one of their accesses;
- The property to the north of Carling Avenue, adjacent to Westgate Shopping Centre, would require modifications to the site and no redevelopment of this parcel is proposed or anticipated at this time;
- The cost to remove and rebuild a signalized intersection along a major arterial road would be significant;
- MTO is removing the HWY 417 on-ramp adjacent to the Westgate Shopping Centre, however, there could still be some concerns from MTO with regards to this Option; and
- There could be issues with the existing median break and alignment.

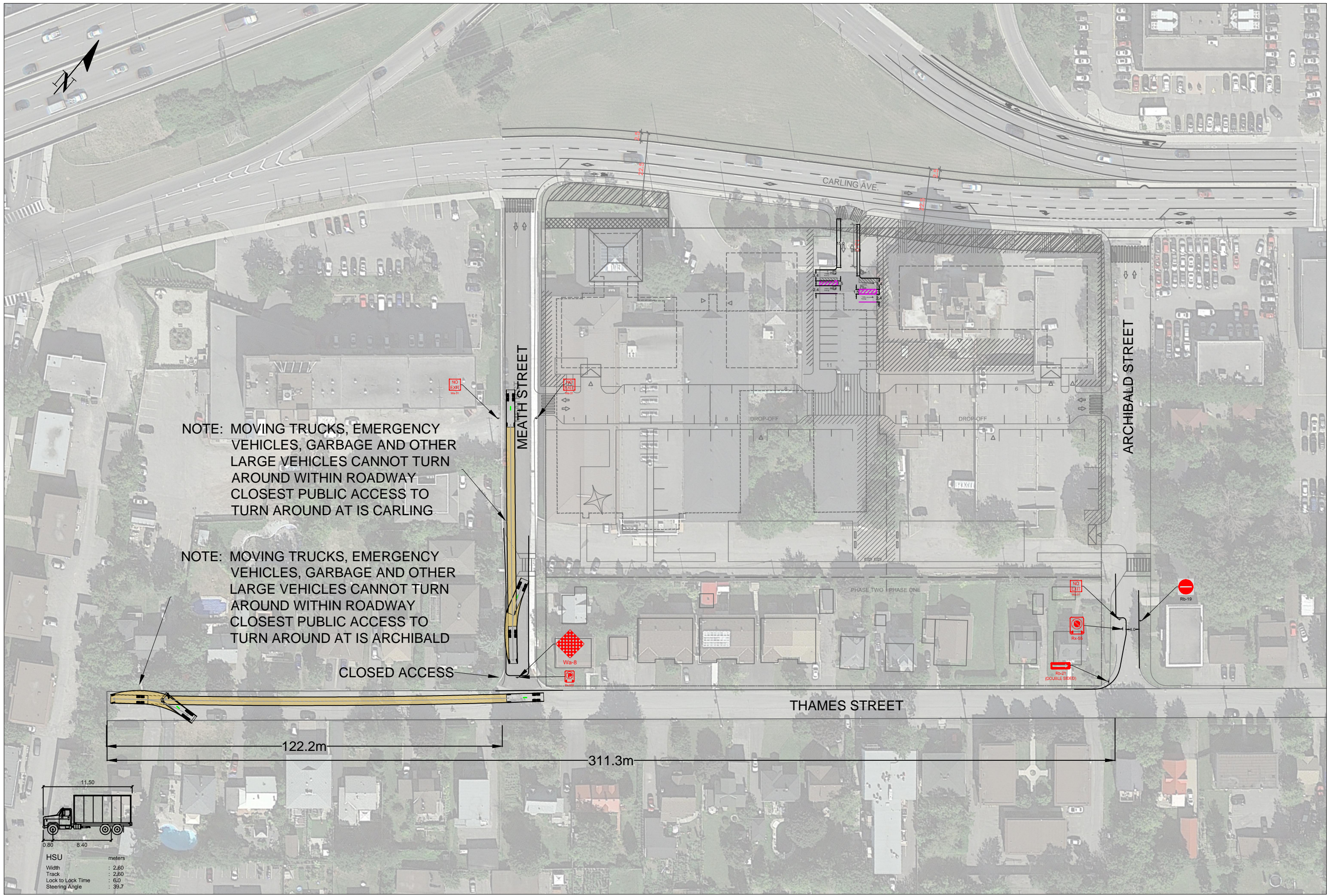
3. CONCLUSION

Based on the foregoing, Option 2 is recommended from a transportation perspective. The majority of site-generated traffic is expected to travel to/from HWY 417 and will use the Carling Avenue site driveways. Approximately 30% of site-generated traffic travelling to the site is projected to use Thames Street to Archibald or Meath Streets to access the site, which equates to less than one additional vehicle every minute (10 to 55 veh/h). This amount of traffic is reasonable for a local roadway. Providing bulb-outs will help to enforce the one-way operations of the southern portion of these two local streets. To completely eliminate the possibility of traffic from the proposed development using Thames Street, Meath Street and Archibald Street would have to be closed to through traffic (Option 3). This is not recommended as it will limit access for the Thames Street residents to Carling Avenue and all Thames Street residents will have to use the unsignalized Thames/Merivale intersection to egress their neighbourhood. There are several challenges with Option 4, to move the existing RioCan signalized intersection, and as such it is not recommended. Given the available options and the minimal amount of site-generated traffic projected to travel along Thames Street to Archibald Street and Meath Street, it is recommended to construct bulb-out along the southern portion of Archibald and Meath Street to maintain the existing one-way operation.



Attachment #3

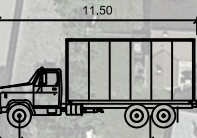
Proposed Closure of Meath Street Drawing



NOTE: MOVING TRUCKS, EMERGENCY VEHICLES, GARBAGE AND OTHER LARGE VEHICLES CANNOT TURN AROUND WITHIN ROADWAY CLOSEST PUBLIC ACCESS TO TURN AROUND AT IS CARLING

NOTE: MOVING TRUCKS, EMERGENCY VEHICLES, GARBAGE AND OTHER LARGE VEHICLES CANNOT TURN AROUND WITHIN ROADWAY CLOSEST PUBLIC ACCESS TO TURN AROUND AT IS ARCHIBALD

CLOSED ACCESS



HSU	meters
Width	: 2.60
Track	: 2.60
Lock to Lock Time	: 6.0
Steering Angle	: 39.7