

Traffic Impact Assessment - Addendum 1

To: Blueprint Construction Services Ltd.
From: McIntosh Perry Consulting Engineers Ltd.
Date: 11 February, 2019
Re: 119-121 Beechwood Avenue TIA Addendum

1.0 INTRODUCTION

McIntosh Perry Consulting Engineers (MP) was retained by Blueprint Construction Services Ltd. to complete a Traffic Impact Assessment (TIA) in support of a proposed site plan application within the City of Ottawa. The Final TIA was submitted to the city in September, 2018.

Since the time of submission, the Site Plan and has been updated and is provided as **Attachment #1**. The previous Site Plan, dated September 3, 2018 involved a two-storey multi-use building with a GFA of 318 m². The ground floor was expected to be used as an optometrist clinic while the second floor was expected to be leased as general office space.

Overall, the building footprint and the ground floor land use remains the same. The new Site Plan however proposes the removal of the second storey general office space and in its place includes 3, 2-storey self contained residential units with private rooftop patios. Additionally, a basement tenant is now proposed which would use the basement as medical and general office space. Below is a description of the areas and use of each floor:

- Basement – Medical/Office Space – 1,892 ft² (176 m²);
- First Floor – Office/Optometrist clinic– 1,892 ft² (176 m²);
- Second Floor – 3 residential units – 1,976 ft² (184 m²);
- Third Floor – 3 residential units continued – 1,973 ft² (183 m²), and
- Roof – 3 residential units 358 ft² (33 m²).

The total GFA of the new proposed 3-storey building is 8,091 ft² (752 m²). Some additional minor changes which are required to facilitate the residential units include an additional stairwell exit at the rear of the building, adjacent to the parking lot. Additionally, access to the main stairs leading to the second floor has been recollected to the exterior of the second floor which were previously accessed via the entrance vestibule. Also, in order to facilitate the residential units, a single parking space was removed from the site plan for a total of 9 parking spaces including 1 barrier free space. A garbage disposal area is now located at the rear of the building with sufficient space for waste collection.

Due to the Site Plan changes, MP has updated the City of Ottawa 2017 TIA guidelines Screening Form. The updated Screening Form has been provided in [Attachment # 2](#).

2.0 TRIP GENERATION

The Site Plan updates are expected to affect the previous trip generation estimates. [Table 2.0](#) below, summarizes the expected trip generation as per the updated Site Plan. Trip generation was calculated in accordance with the institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition. At this time, it is not certain what percentage of the basement will be general office space compared to medical office space. As such, since a Medical-Dental Office land use provides the higher trip generation estimates, the entire basement floor area was considered to have this land use type. This is expected to provide the most conservative trip generation estimate. Similar to the methodology employed within the previously submitted TIA, a factor of 1.28 was applied to the site generated trips and rounded up in order to estimate the total site generated person-trips. This factor of 1.28 assumes a 10% non-auto mode share and an average vehicle occupancy of 1.15.

Table 2.0: Development-Generated Person-Trips

ITE Land Use	Unit of Measure	Quantity	Rate		AM Peak Hour			PM Peak Hour		
			AM	PM	In	Out	Total	In	Out	Total
Multifamily Housing, Mid-Rise (Code 221)	du	3	*	**	0	1	1	1	1	3
Medical-Dental Office Building (Code 720)	ksf	3.8	***	****	12	4	15	5	14	19
Total:					12	5	16	6	15	22
* Fitted Curve - $\ln(T) = 0.98 \ln(X) - 0.98$ ** Fitted Curve - $\ln(T) = 0.95 \ln(X) - 0.63$ *** Fitted Curve - $\ln(T) = 0.89 \ln(X) + 1.31$ **** Fitted Curve - $T = 3.39(X) + 2.02$ Ksf = 1000 ft ² du = Dwelling Units										

As shown, the expected development-generated in-person-trips during the AM peak hour is 16 trips and 22 total trips during the PM peak hour. Overall, the expected development-generated in-person trips remains relatively low and is not expected to meet the criteria for the City of Ottawa TIA trip generation trigger. As such, [Section 9.0](#) of the previously submitted TIA pertaining to the development-generated traffic can still be omitted from the report.

3.0 PARKING

The updated Site Plan includes a total of 9 parking spaces including 1 barrier free space. As stated in the previously submitted TIA, the City of Ottawa Zoning By-Law does not require off-street parking for a development with a non-residential ground floor in Area Y and a GFA of less than 500 m² (By-law 2016-249). The proposed developments non-residential land use is expected to be located on the ground floor and basement and has a total GFA of 352 m². As such, the proposed development still does not require off-street parking and is not subject to a parking supply limit either.

Table 13.0.1 of the TIA has been updated with Table 3.0 below which incorporates the 85th percentile peak period parking demand of the new proposed Site Plan.

Table 3.0: ITE Parking Generation Summary

Land Use	Unit of Measure	Quantity	Peak Period Parking Demand Rate	Peak Period Parking Demand
Medical Clinic (Code 630, Pg 197)	Ksf	3.8	4.96	19
Low/Mid-Rise Apartment (Code 221, Pg 53)	du	3	1.94	6

As stated, previously within the TIA, each land use type can have different parking demands during different times of the day. Given the nature of this proposed mixed-use development, it can be expected that parking spaces on weekends would mostly be generated by the residential units. During the weekdays, parking demand for the residential units will typically be at a peak from evenings through to mornings while the parking demand for the commercial/medical clinic land use would typically peak from mornings to evenings. Figure 3.0 below illustrates the 85th percentile parking demand by time of day for the two land uses types.

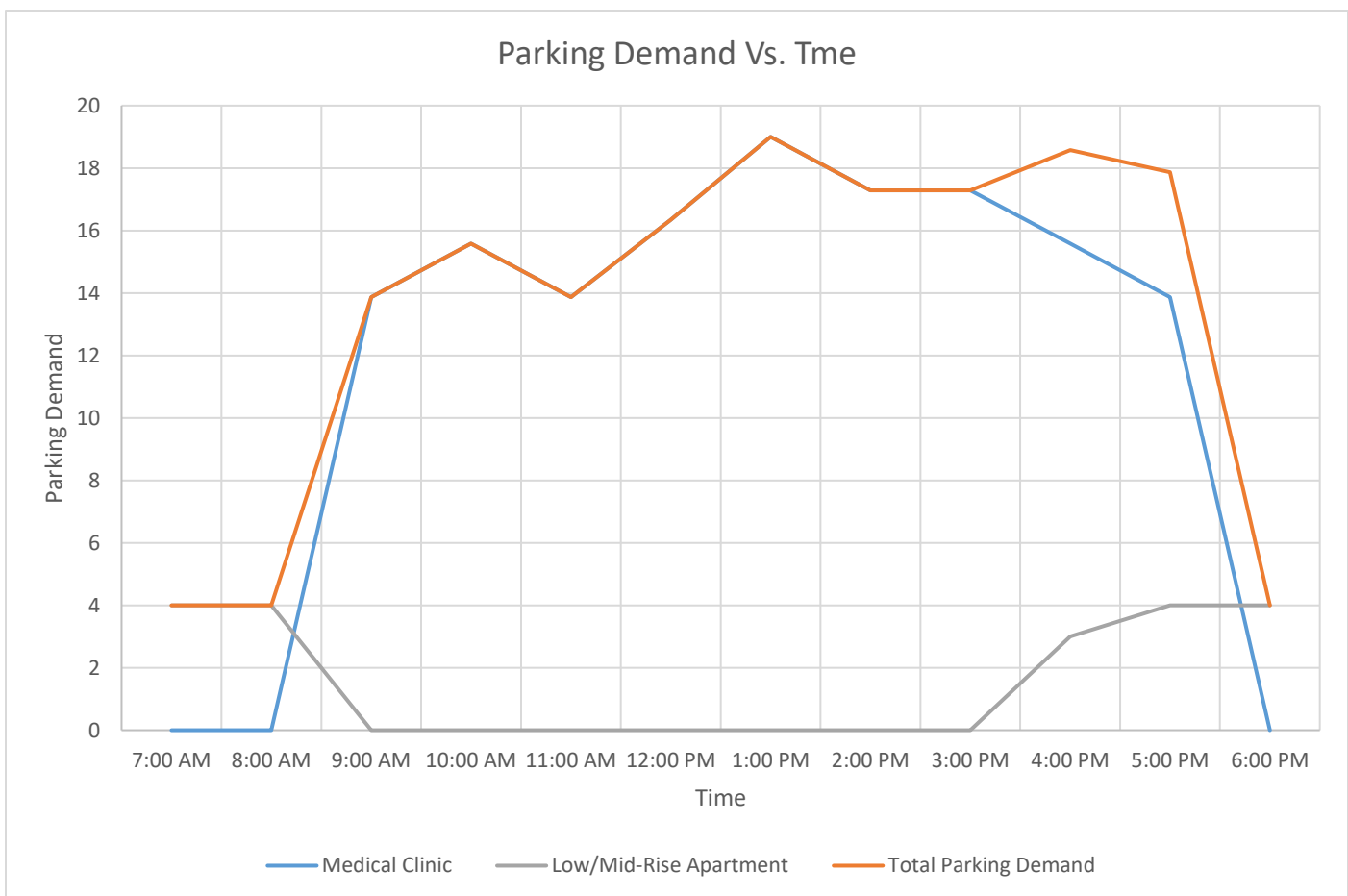


Figure 3.0: Parking Demand vs. Time

As shown, the time of peak period parking demand is different for the two land uses and the total peak parking demand of the proposed development as a whole is 19 spaces at approximately 1:00 PM and 5:00 PM. As such, the proposed development is short 10 parking spaces compared to 4 with the previous Site Plan. The previously submitted TIA recommended assigning parking stalls to the office tenant since the turn-over rate of the medical office was expected to be much higher than the office. It is recommended that parking spaces be assigned to the residential tenants and the remainder be available for the entire development.

The City of Ottawa Zoning By-Law 2008-250 *Section 111*, states the minimum number of bicycle parking spaces for an a low-rise/mid-rise apartment building or a dwelling unit in the same building as a non-residential use is 0.5 per dwelling unit. For a medical facility the minimum number is 1 per every 1,000 m² of gross floor area. As such, the minimum number of bicycle stall for the updated proposed Site Plan is 3. Since a total of six spaces are expected to be provided, the proposed development surpasses the By-Law requirements.

4.0 ADDITIONAL CONSIDERATIONS

In the previously submitted TIA, the estimated trip generation was expected to be under 60 person-trips during the AM and Peak Hours. As, such according to the TIA guidelines, this allowed for the omission of modules pertaining to the analysis of future traffic conditions with the development-generated traffic applied to the roadway network. As such, since the expected development-generated trips are expected to remain below 60-person trips the same modules can be omitted (3.1, 3.3 and 4.5 to 4.9). No change is expected to the background traffic, site access, or roadway network. As such, no changes are expected to be required for [Section 1.2](#), [Section 1.3](#), [Section 2.0 to 12.0](#), and [Section 14.0 to 15.0](#) of the previously submitted TIA.

5.0 SUMMARY

This addendum addresses changes made to the Site Plan for the proposed development located at 119-121 Beechwood Avenue in which a Traffic Impact Assessment (TIA) was previously submitted in September, 2018. Trip generation based on the previous site plan was significantly low enough to allow for the omission of several sections regarding the impacts to traffic as a result of the added development-generated traffic. The updated Site Plan has a similarly low expected number of development-generate trips. As such, all sections which met the criteria for omission from the previously completed TIA continue to meet the criteria for omission. The proposed development is expected to generate an additional 9 in-person trips in the AM peak hour and an additional 12 in-person trips in the PM peak hour compared to the previous Site Plan. The expected peak period parking demand is expected to be 19 spaces which is 5 more spaces than what was expected with the previous Site Plan. There is still however, some potential for spill-over parking which is expected to be able to be accommodated with the on-street parking within the vicinity of the proposed development.

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Attachment # 1

	Lot Boundary
	Zoning Setbacks
	Concrete Curb
	Exterior Wall of Building
	Landscaped Area, Refer to Landscape Plan
	Paver Walkway
	Fire Hydrant
	Manhole (Typical)
	Building Entrance/Exit
	Pylon Sign
	Concrete Curb Ramp

	Painted Lines
	Barrier-free Parking Space
	Proposed Bike Rack (# Spaces - 0.6m x 1.8m/Space)
	Proposed Bench
	Proposed Waste Receptacle
	Proposed Sign
	Proposed Steel Bollard
	Proposed Wall Mounted Light Fixture
	Proposed Pole Mounted Light Standard - Refer to Electrical

 NOTES

- 1- Bike Racks to be City of Ottawa Standard B Rack Installed on concrete pads as per City of Ottawa Standard Details SF06 and SF07.
- 2- Bollards to be City of Ottawa Standard 100mm diameter steel bollard for parking lots / parks as per City of Ottawa Standard Details F1, P1, colour to be black instead of red.
- 3- Property boundary Information was derived from a topographic survey prepared by OLS Amlin, O'Sullivan, Vollebek Ltd, dated February 26, 2016.
- 4- No snow storage on site. Snow shall be removed from site.
- 5- Refer to landscape plan for proposed trees landscaping.



	Sheet #
	A2.1

Attachment # 2

City of Ottawa 2017 TIA Guidelines Screening Form

1. Description of Proposed Development

Municipal Address	119-121 Beachwood Avenue Road
Description of Location	Residential with Ground Floor Medical/Office Space
Land Use Classification	Residential/Commercial
Development Size (units)	5
Development Size (m ²)	752 m²
Number of Accesses and Locations	1 on Chapleau Avenue
Phase of Development	Planning
Buildout Year	2019

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.

Land Use Type	Minimum Development Size
Single-family homes	40 units
Townhomes or apartments	90 units
Office	3,500 m ²
Industrial	5,000 m ²
Fast-food restaurant or coffee shop	100 m ²
Destination retail	1,000 m ²
Gas station or convenience market	75 m ²

** If the development has a land use type other than what is presented in the table above, estimates of person-trip generation may be made based on average trip generation characteristics represented in the current edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual.*

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

3. Location Triggers

	Yes	No
Does the development propose a new driveway to a boundary street that is designated as part of the City's Transit Priority, Rapid Transit or Spine Bicycle Networks?		NO
Is the development in a Design Priority Area (DPA) or Transit-oriented Development (TOD) zone? *	*YES	

*DPA and TOD are identified in the City of Ottawa Official Plan (DPA in Section 2.5.1 and Schedules A and B; TOD in Annex 6). See Chapter 4 for a list of City of Ottawa Planning and Engineering documents that support the completion of TIA).

* Located on a Traditional Mainstreet

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 km/hr or greater?		NO
Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway?		NO
Is the proposed driveway within the area of influence of an adjacent traffic signal or roundabout (i.e. within 300 m of intersection in rural conditions, or within 150 m of intersection in urban/ suburban conditions)?		NO
Is the proposed driveway within auxiliary lanes of an intersection?		NO
Does the proposed driveway make use of an existing median break that serves an existing site?		NO
Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?		NO
Does the development include a drive-thru facility?		NO

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

5. Summary

	Yes	No
Does the development satisfy the Trip Generation Trigger?		NO
Does the development satisfy the Location Trigger?	YES	
Does the development satisfy the Safety Trigger?		NO

Transportation Impact Assessment Screening Form

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).