

August 9th, 2013

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

Attention: Mr. Wally Dubyk, C.E.T.
Project Manager, Infrastructure Approvals

Dear Sir:

Reference: Residential Development – 87 Mann Avenue, Ottawa ON
Transportation Overview
Our File No.: 113130 Report Number: R-2013-090

1.0 INTRODUCTION

The following Transportation Overview has been prepared in support of Site Plan Control (SPC) and Zoning By-law Amendment (ZBL) applications for a residential re-development located at 87 Mann Avenue. This Transportation Overview will identify any transportation impacts associated with the proposed re-development.

This Transportation Overview provides a description of the proposed re-development, summarizes the existing conditions in the vicinity of the subject site and calculates projected trip generation volumes for the weekday AM and PM peak hours. The on-site design and provisions for non-auto modes of transportation (including possible TDM strategies) have also been analyzed as part of this Transportation Overview.

2.0 PROPOSED DEVELOPMENT

The subject site is located at 87 Mann Avenue, in the northeast quadrant of the Mann Avenue / Russell Avenue intersection. The Viscount Alexander School is located 50m west of the site, along Mann Avenue midblock between Russell Avenue and King Edward Avenue. The Sandy Hill Arena is located south of Mann Avenue opposite the Viscount Alexander School. The University of Ottawa campus is located approximately 400m west of the site and the Sandy Hill Park and Community Centre are located approximately 450m northwest of the subject site. The subject site has an area of approximately 0.14ha, and is currently zoned I1A (Minor Institutional Zone, Subzone A) and R4H[480] (Residential Fourth Density – Special Exception 480).

The subject site is currently occupied by the former St. Clement Church, and is proposed to be re-developed as a three storey residential apartment building containing a maximum of 60 units. A full movement driveway is proposed on Russell Avenue to provide access to an at grade

parking lot. There is approximately 1650s.f. of leasable space on the ground floor that could be used for businesses such as a yoga studio or sports therapist, or rentable meeting space for the community.

A site plan for the proposed development is included in this Transportation Overview as **Appendix A**.

3.0 EXISTING CONDITIONS

Mann Avenue is a two way collector roadway that runs on an east-west alignment between Nicholas Street and Range Road. Mann Avenue has a two lane undivided urban cross section with on-street parking permitted along both sides. Concrete sidewalks are provided along both sides of Mann Avenue in the vicinity of the subject site. School Area signs are posted on Mann Avenue west of Russell Avenue. During school hours the posted speed limit along Mann Avenue is 40kph. Curb extensions are provided on Mann Avenue to reduce vehicle speeds, protect on-street parking and reduce pedestrian crossing distances.

Russell Avenue is a two way local roadway that runs on a north-south alignment between Mann Avenue and Laurier Avenue. Russell Avenue has a two lane undivided urban cross section with one hour parking permitted along one side of the road between 8AM-6PM Monday to Friday, permit holders exempted. Parking is permitted along the west side for the southerly half of the block between Mann Avenue and Templeton Street and along the east side for the northerly half of the block. Concrete sidewalks are provided along both sides of Russell Avenue. Russell Avenue has a regulatory speed limit of 50kph under the *Ontario Highway Traffic Act*. Midblock bulb outs are provided as a safety measure to reduce vehicle speeds along Russell Avenue.

The Mann Avenue / Russell Avenue intersection is an unsignalized tee-intersection with stop control provided along Russell Avenue, allowing free flow conditions along Mann Avenue. A crosswalk is provided across Russell Avenue.

The Mann Avenue / Chapel Street intersection is an all-way stop 4-leg intersection one block east of the site. Crosswalks are provided on all four legs. Advanced signage is provided on Mann Avenue identifying this intersection as a school crossing.

The City of Ottawa has traffic count data completed on the following dates at the intersection of King Edward Avenue / Mann Avenue:

- Thursday June 11th, 2009
- Monday July 9th, 2012

The 2009 count has been used to estimate existing volumes on Mann Avenue in order to reflect traffic generated by the adjacent school.

Peak hour summary sheet for the 2012 and 2009 traffic counts are included in this report as **Appendix B**.

4.0 TRIP GENERATION AND DISTRIBUTION

Trips generated by the proposed re-development have been estimated using relevant peak hour trip generation rates identified in the *Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition*.

No deduction of trips generated by the former development has been accounted for, as the peak trips generated by St. Clement Church occurred on Sundays. For reference, based on a capacity of 460 people and the modal shares identified in the 2011 *TRANS O-D Survey Report* for the Ottawa Inner Area, it is estimated that the church generated the following trips on a Sunday at full capacity:

- **90** auto driver trips;
- **45** auto passenger trips;
- **45** transit trips;
- **280** non-auto trips.

The estimated peak hour vehicle trips generated by the proposed apartments during the weekday AM and PM peak hours are outlined in **Table 1**. The rentable community meeting space / business space to be provided on the ground floor is not expected to generate a significant amount of traffic during the AM and PM peak hours.

Table 1: Trip Generation

Land Use	ITE Code	Dwelling Units	AM Peak (vph)			PM Peak (vph)		
			IN	OUT	TOTAL	IN	OUT	TOTAL
Apartment	220	60	7	26	33	33	18	51

The trip generation surveys compiled in the *ITE Trip Generation Manual* only record vehicle trips, and the sites surveyed are typically located in the suburban locations in the United States where non-auto modes of transportation typically have a modal share of 10% or less. For urban infill developments where multiple modes of transportation are readily available, it is considered good practice to express projected trip generation volumes in terms of person trips, instead of vehicle trips. To convert ITE vehicle trip rates to person trip rates, two adjustment factors have been applied:

- Vehicle occupancy factor: 1.29 (taken from the 2011 TRANS O-D Survey Report)
- Non-auto usage factor: 1.1 (non-auto trips not counted in ITE surveys, assumed 10%)

Combining the two factors gives an overall vehicle trip to person trip adjustment factor of approximately 1.42. Applying this factor to the vehicle trips projected by the ITE rates yields the following person trip generation:

Table 2: Person Trips

Land Use	IN (vph)	OUT (vph)	TOTAL (vph)	Person Trip Factor	IN (pph)	OUT (pph)	TOTAL (pph)
<i>AM Peak</i>							
Apartment	7	26	33	x 1.42 →	10	37	47
<i>PM Peak</i>							
Apartment	33	18	51	x 1.42 →	47	26	73

The number of car trips that the site will generate has been estimated by categorizing the person trips by modal share. The modal shares are based on observed percentages in the 2011 TRANS O-D Survey Report that are specific to the region referred to as the Ottawa Inner Area.

A full breakdown of the projected person trips by modal share and arrival/departure is shown in **Table 3** below.

Table 3: Site-Generated Person Trips by Modal Share

Travel Mode	Modal Share	AM Peak			PM Peak		
		IN	OUT	TOTAL	IN	OUT	TOTAL
TOTAL PERSON TRIPS		10	37	47	47	26	73
Auto Driver	20%	2	7	9	9	5	14
Auto Passenger	10%	1	4	5	5	3	8
Transit	10%	1	4	5	5	3	8
Non-Motorized	60%	6	22	28	28	15	43

This is considered a conservative estimate of vehicular trips as the site is to be marketed to tenants without vehicles.

The assumed distribution of trips generated by the proposed re-development during the weekday AM and PM peak hours has been derived from the existing traffic volumes at the Mann Avenue / King Edward Avenue intersection and is summarized as follows:

- 15% east via Mann Avenue;
- 75% west via Mann Avenue;
- 10% north via Russell Avenue.

The additional volume of trips generated by the proposed re-development during the weekday AM and PM peak hours is very low compared to the existing traffic volumes along Mann Avenue (less than 1% of the existing traffic volumes). Therefore, the marginal increase in traffic volumes attributable to the additional trips generated by the proposed re-development is not anticipated to have any significant impact on the operating conditions along Mann Avenue.

The operating hours of the Viscount Alexander School are 8AM to 2:30PM. The peak hours of site generated traffic are expected to coincide with the peak hours of adjacent street traffic, which are 8:00-9:00AM and 3:15-4:15PM according to recent counts completed at the King Edward Avenue / Mann Avenue intersection. Peak site generated traffic will only coincide with the school's operating hours on weekday mornings. In the afternoon the site's peak traffic is expected to occur after school dismissal. The site's AM peak vehicular traffic is estimated at approximately 10 vehicles and is not expected to have a significant impact on child pedestrians walking to school.

5.0 PROVISIONS FOR NON AUTO MODES

Concrete sidewalk will be depressed and continuous across the vehicular access. As part of the proposed development, pathway connections are provided between the proposed building entrances and the existing pedestrian facilities along Mann Avenue and Russell Avenue.

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 #7621 and #7617 are located in the northwest and southeast quadrants of the Mann Avenue / Chapel Street intersection, at a walking distance of approximately 45m and 110m from the easternmost pedestrian pathway respectively. The aforementioned bus stops provide service to the regular route 16, which generally travels east-west between Main Street / St. Pauls University and Britannia Park. The regular route 16 travels on 20 minute headways during weekday peak hours and 30 minute headways on weekends.

The site is also located within a walking distance of 730m of the Lees transitway station with service to numerous OC Transpo routes providing coverage across the City of Ottawa.

6.0 ON-SITE DESIGN

6.1 Proposed Access

Access to the re-development is proposed through an all movement access onto Russell Avenue, as shown on the proposed site plan in **Appendix A**. The curb-to-curb width of the proposed access driveway is 5.2m at the property line. The access is located 32m north of Mann Avenue, measuring from the nearest edge of the driveway to the Right of Way (ROW) limit. The location and spacing of the proposed access driveway is compliant with the City of Ottawa's *Private Approach By-law*.

The existing access to the site is approximately 10m in width and 26m north of Mann Avenue, and will be removed as part of the re-development. The proposed access will reduce the pedestrian-vehicular conflict area compared to the existing driveway and be further away from the Mann Avenue / Russell Avenue intersection.

The proposed driveway and on-site parking area will accommodate vehicles entering and leaving the site in a safe forward motion as opposed to the existing configuration which requires a reverse movement either entering or leaving the site.

6.2 On-Site Parking

The subject site is located in Area B of Schedule 1 to the City of Ottawa's ZBL. Minimum parking rates for the proposed development are identified in the ZBL as follows:

- Occupant Parking Spaces: 0.5 per dwelling unit
- Visitors Parking Spaces: 0.2 per dwelling unit after the first 12 dwelling units
- Community Parking Spaces: 4 per 100m²
- Retail Parking Spaces: 2.5 per 100m²
- Bicycle Parking Spaces: 0.5 per dwelling unit

Based on the foregoing, the ZBL identifies a requirement to provide 30 parking spaces for residents, 10 parking spaces for visitors, a maximum of 6 parking spaces for the community / commercial space and 30 bicycle parking spaces on site. As shown on the proposed site plan in **Appendix A**, a total of 6 vehicle parking spaces and 30 bicycle parking spaces will be provided on site.

It is anticipated that trips generated by visitors and the leasable community / commercial space will utilize the existing on-street parking along the surrounding roadways. Existing on-street parking in the vicinity of the subject site is outlined in **Table 2**.

Table 2: Existing On-Street Parking

Location	Parking Restrictions	# of Parking Spaces
Mann Avenue between King Edward Avenue and Russell Avenue	3hr max	31
Mann Avenue between Russell Avenue and Chapel Street	3hr max	12
Mann Avenue between Chapel Street and Blackburn Avenue	3hr max – 7AM-7PM *	7
Russell Avenue between Mann Avenue and Templeton Street	1hr max – Weekdays 8AM-6PM *	9
Chapel Street between Mann Avenue and Templeton Street	1hr max – Weekdays 8AM-6PM *	9
TOTAL		68

* Permit Holders Exempted

As noted previously, it is intended that the residential units be marketed to tenants without vehicles. Tenants may be required to sign a lease stating they won't have a vehicle. The lease is used by the City to approve on-street parking permits and the decision to issue permits or not would then be up to the City. The proposed reduction in on-site parking will be addressed through the ZBL amendment application process.

It is worth noting that the peak on-street parking demand of the former church may have occurred at different time periods than the anticipated peak parking demand of the current proposal however the total demand would have been significantly higher based on the estimated trip generation identified in **Section 4.0**.

6.3 Garbage Collection / Loading

A garbage enclosure is proposed in the northwest corner of the proposed at-grade parking lot, as shown on the proposed site plan in **Appendix A**. Garbage collection/loading will take place on site adjacent to the proposed garbage enclosure. The geometry of the proposed access and parking lot can adequately accommodate the garbage truck.

7.0 TRANSPORTATION DEMAND MANAGEMENT

The City of Ottawa has developed a comprehensive Transportation Demand Management (TDM) strategy as part of its efforts to reduce automobile dependency. TDM measures can reduce transportation infrastructure requirements by encouraging people to change their travel mode, timing or destination.

The proposed re-development conforms to the City's TDM principles by providing minimal on-site parking and targeting tenants who don't own vehicles. The proponent is pursuing the

provision of one Vrtucar parking spot as Sandy Hill is the most ideal neighbourhood in Ottawa in terms of Vrtucar usage based on the dynamics and profile of the community. In order for Vrtucar to add a new location, it has to be feasible in terms of number of users it will serve. There are 2 adjacent locations (Voisins Co-op and Conservation Co-op) that might currently make the subject location not feasible, but this cannot be assessed until the project completion date. If a Vrtucar spot is provided on-site, Vrtucar would be willing to provide tenants with a preferential package/pricing, such as \$500 deposit or waiving the monthly fees that a standard member would have to pay which provides the tenants with a cheap alternative to owning a car.

The site is within a 600m radius of the Lees Transitway Station and provides easy access for non-auto travel modes as described in **Section 5.0**.

8.0 CONCLUSIONS AND RECOMMENDATIONS

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

- The marginal increase in traffic volumes attributable to the additional trips generated by the proposed re-development is not anticipated to have any significant impact on the operating conditions along Mann Avenue.
- The site's AM peak vehicular traffic is estimated at approximately 10 vehicles and is not expected to have a significant impact on child pedestrians walking to school.
- The location and spacing of the proposed access driveway is compliant with the City of Ottawa's *Private Approach By-law*. The proposed access reduces the pedestrian-vehicle conflict area and is further from the Mann Avenue / Russell Avenue intersection than the existing access. The proposed driveway and on-site parking area will accommodate vehicles entering and leaving the site in a safe forward motion as opposed to the existing configuration which requires a reverse movement either entering or leaving the site.
- Six on-site parking spaces are proposed. The residential units are to be marketed to tenants without vehicles. The proposed reduction in on-site parking will be addressed through the ZBL amendment application process.
- Bicycle parking will be provided in accordance with the minimum requirements of the City of Ottawa *Zoning By-law*.
- Garbage collection/loading will take place on site adjacent to the proposed garbage enclosure. The geometry of the proposed access and parking lot can adequately accommodate the garbage truck.

- The re-development conforms to the City's TDM principles by providing minimum on-site parking.
- The site is within a 600m radius of the Lees Transitway Station and provides easy access for non-auto travel modes.

Yours truly,

NOVATECH ENGINEERING CONSULTANTS LTD.

Prepared by:

B. Byvelde

Brad Byvelde, B. Eng
E.I.T.

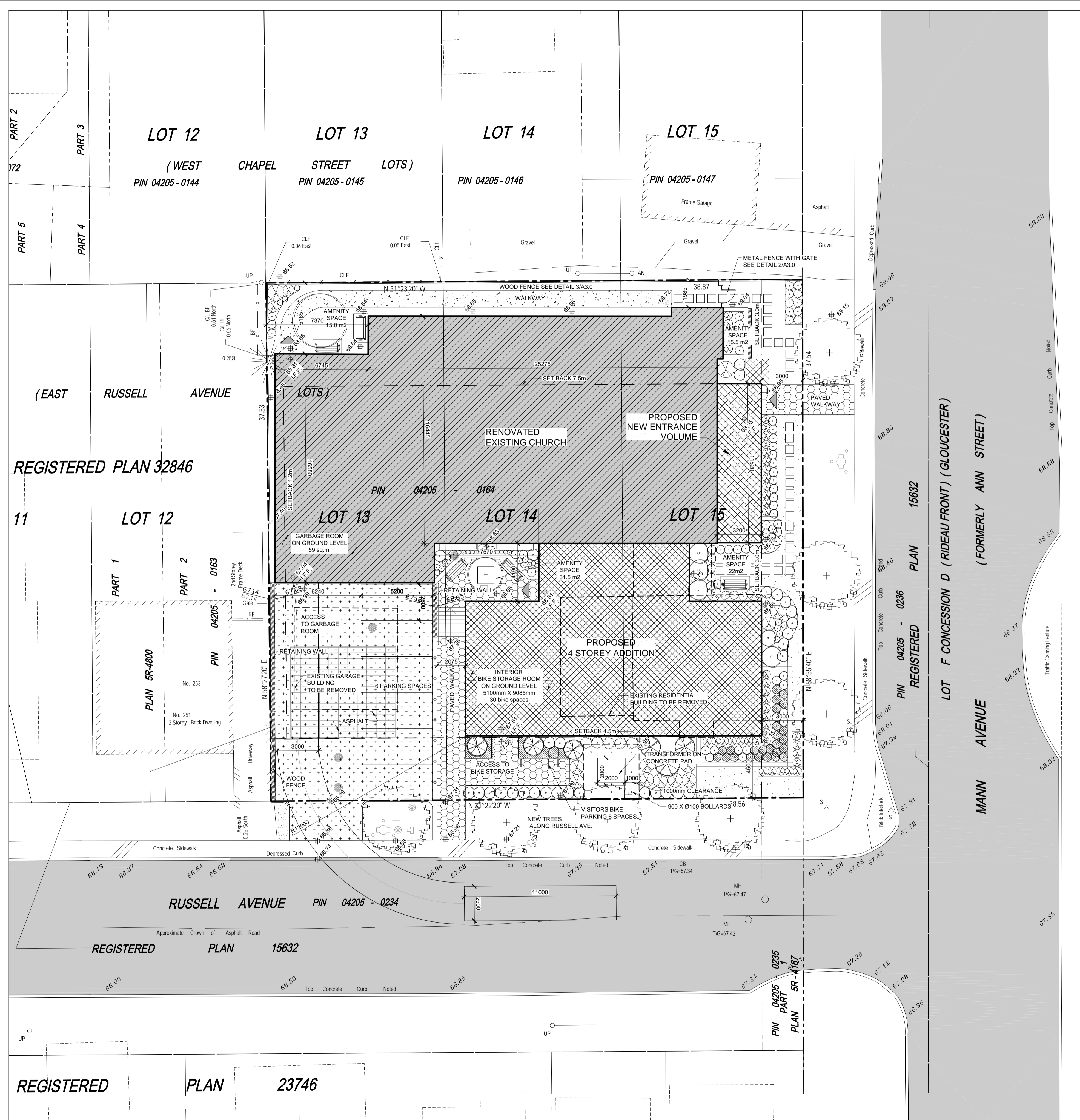
Reviewed By:



Jennifer Luong, P.Eng
Project Engineer

APPENDIX A

Proposed Site Plan



LOTS 13, 14 And 15
 (East Side Russell Avenue)
REGISTERED PLAN 32846
 CITY OF OTTAWA
 Based on Annis, O'Sullivan, Vollebek Ltd.
 Field Work Completed May 8, 2013

Existing Zoning	
I1A Area (approx.)	973.3 m ² (67%)
R4H Area (approx.)	473.2 m ² (33%)

Proposed Zoning: (Rezoning I1A to R4H)		
R4H Area		
Setbacks for R4H	Required	Proposed
Front Yard (Mann)	3.0 m (min)	3.0 m
Front Yard (Russell)	4.5 m (min)	4.5 m
Rear Yard	7.5 m (min)	7.5 m (EXISTING CONDITION)
Side Yard	1.2 m (min)	1.2 m (EXISTING CONDITION)
Building Height R4H	11.0 m (max)	12.0 m
Building Height I1A	15.0 m (max)	12.0 m
Total Site AREA: 1446 m ²		

Landscaped Proposed Area	430 m ² 29.7% of Site Area
Maximum Building Height Proposed	11.0 m
Storey Proposed	4
Total Building Area	839 m ²
Proposed Lot Coverage	58%
Proposed Gross Area	3147 m ²
First floor	837 m ²
Second floor	837 m ²
Third floor	787 m ²
Fourth floor	686 m ²

Parking By Law Requirements
Parking Calculations:
 Based on Zoning By Law
 0.5 Per Dwelling Unit
 0.5 X 60 = **30 Spaces**
Visitor Parking (Based on Table 102(a))
 None for first 12 and 0.02 per remaining units.
 60-12-48x0.02 = 9.6 or **10 spaces**
Parking Summary
 Required spaces: 30
 Required visitors parking: 10
 Total required: 40 spaces
 Parking provided: 6 spaces
Bicycle Parking - Table 111A (b)
 0.5 Per Unit
 60 units x 0.5 = 30 Spaces
 Provided bicycle parking = 30 Interior + 5 exterior

Amenities space (Section 137)	
Calculation	
6 m ² per unit - 60 Units = 360m ²	
Provided at basement	130m ²
Provided at Roof top	150m ²
Provided outdoor	80m ²
Total	360m²

Waste Collection
 A 59 sq.m. Garbage Room is located at the first floor.
 2 x 6 Cu. Yd. Bins are provided for garbage.
 4 x 2 Cu. Yd. Bins are provided for recycling.
 2 x 240 L. Bins are provided for compost.
 Private collection as needed.

LEGEND

- PROPERTY LINE
- - - SET BACK
- DEMOLITION UNLESS OTHERWISE INDICATED
- [Hatched Box] PROPOSED 3 STOREY ADDITION
- [Hatched Box] RENOVATED EXISTING
- [Hatched Box] PROPOSED NEW ENTRANCE - 1 STOREY
- [Dotted Box] PERMEABLE PAVING
- [Stippled Box] ASPHALT
- [Stippled Box] STONE DUST PATH

- MHS1 MAINTENANCE HOLE (STORM SEWER)
- MHS MAINTENANCE HOLE (SANITARY)
- MH MAINTENANCE HOLE (UNIDENTIFIED)
- UP UTILITY POLE
- CB CATCH BASIN
- TIG TOP OF GRATE
- GM GAS METER
- LS LIGHT STANDARD
- Δ S SIGN
- CLF CHAIN LINK FENCE
- BF BOARD FENCE
- Ø DIAMETER
- + 65.00 TOP OF CONCRETE CURB ELEVATION
- OVERHEAD UTILITY WIRES
- ▲ MAIN DOOR / EXIT DOOR
- [IFF] INTERIOR FINISH FLOOR

Robertson Martin
 Architects
 216 Pretoria Ave.,
 Ottawa, ON, K1S1X2
 Phone: 613-567-1361
 Fax: 613-567-9462
 Email: mail@robertsonmartin.com

SEAL:

01	ISSUED FOR SITE PLAN	AUGUST 12, 2013
----	----------------------	-----------------

DRAWINGS COPYRIGHT ROBERTSON MARTIN ARCHITECTS
 DO NOT COPY. DO NOT SCALE DRAWINGS
 ALL DIMENSIONS TO BE CHECKED AND VERIFIED

NORTH:

PROJECT: **87 MANN AVE. ADAPTIVE REUSE**

87 MANN OTTAWA, ONTARIO
 DRAWING:

SITE PLAN

DESIGNED BY: RM, LB	APPROVED BY: RM
DRAWN BY: NB	
DATE: MAY, 2013	SCALE: AS SHOWN
RMA PROJECT NUMBER: 13330	SHEET NUMBER:

A-0.2

APPENDIX B

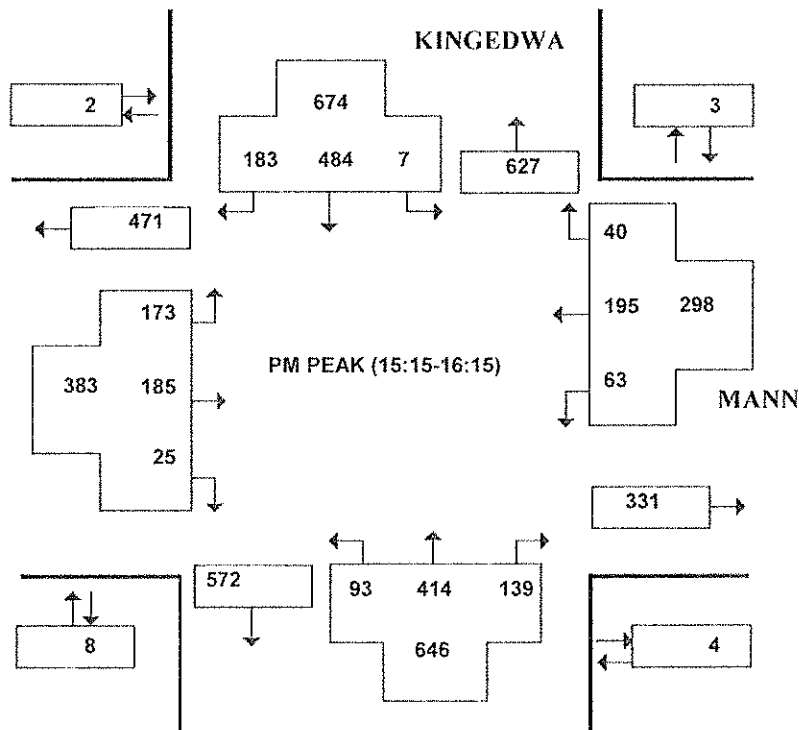
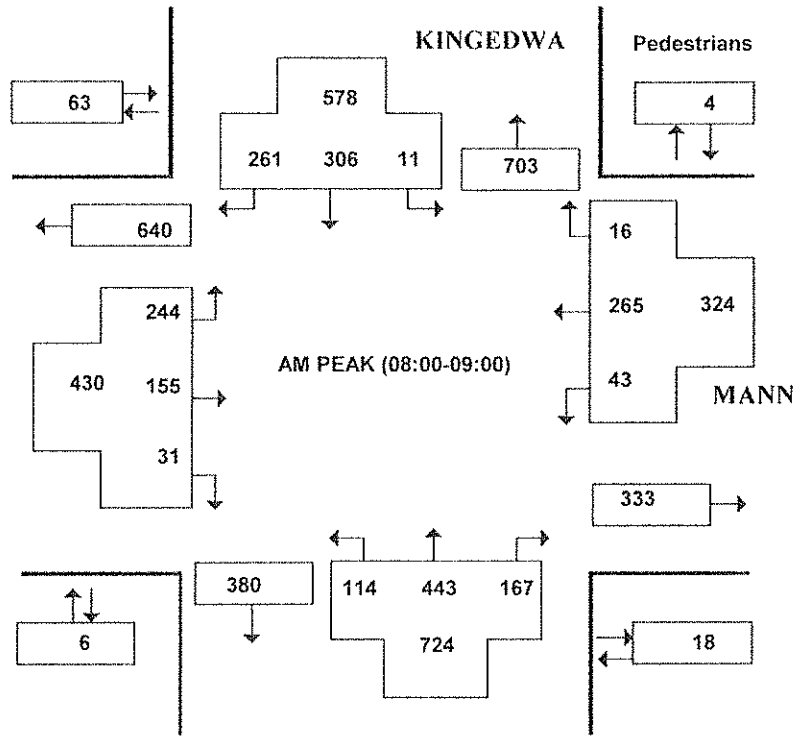
Traffic Count Data

KING EDWARD AVE and MANN AVE
(ULRS Listing KINGEDWA & MANN)

Survey Date: Monday 9 July 2012
 Conditions: dry
 Start Time: 0700

Total Observed U-Turns
 Northbound: 1 Southbound: 0
 Eastbound: 1 Westbound: 0

AADT Factor
 Monday in July is
 1



KING EDWARD AVE and MANN AVE
(ULRS Listing KINGEDWA & MANN)

Survey Date: Thursday 11 June 2009
Conditions: dry
Start Time: 0700

Total Observed U-Turns
Northbound: 0 Southbound: 3
Eastbound: 0 Westbound: 0

AADT Factor
Thursday in June is 9

