

# Technical Memorandum

**To:** Wally Dubyk C.E.T.(City of Ottawa)

**Date:** October 6, 2022

**From:** Jake Berube, P.Eng, Juan Lavin, E.I.T

**Project:** 478016-01000

**Copy:** Alex Turner, Development Manager

**Subject:** *989 Somerset Street Residential Development – Transportation Addendum No. 2, Rev. 1*

---

## 1.0 Introduction

The following memo serves as a transportation addendum to the previously submitted Transportation Overview (August, 2014), Addendum No. 1 (September, 2014) and TIA Strategy Report (July, 2019) regarding the 989 Somerset Street Site Plan Application. This revision has been prepared in response to City of Ottawa comments (See attached response letter).

The following Appendices are included:

- Appendix A – Update Site Plan and Response to City Comments.
- Appendix B – Waste vehicle turning movements diagrams.
- Appendix C – TDM Measures, Design and Infrastructure Checklists.
- Appendix D – MMLOS table.

## 2.0 Revised Site Plan

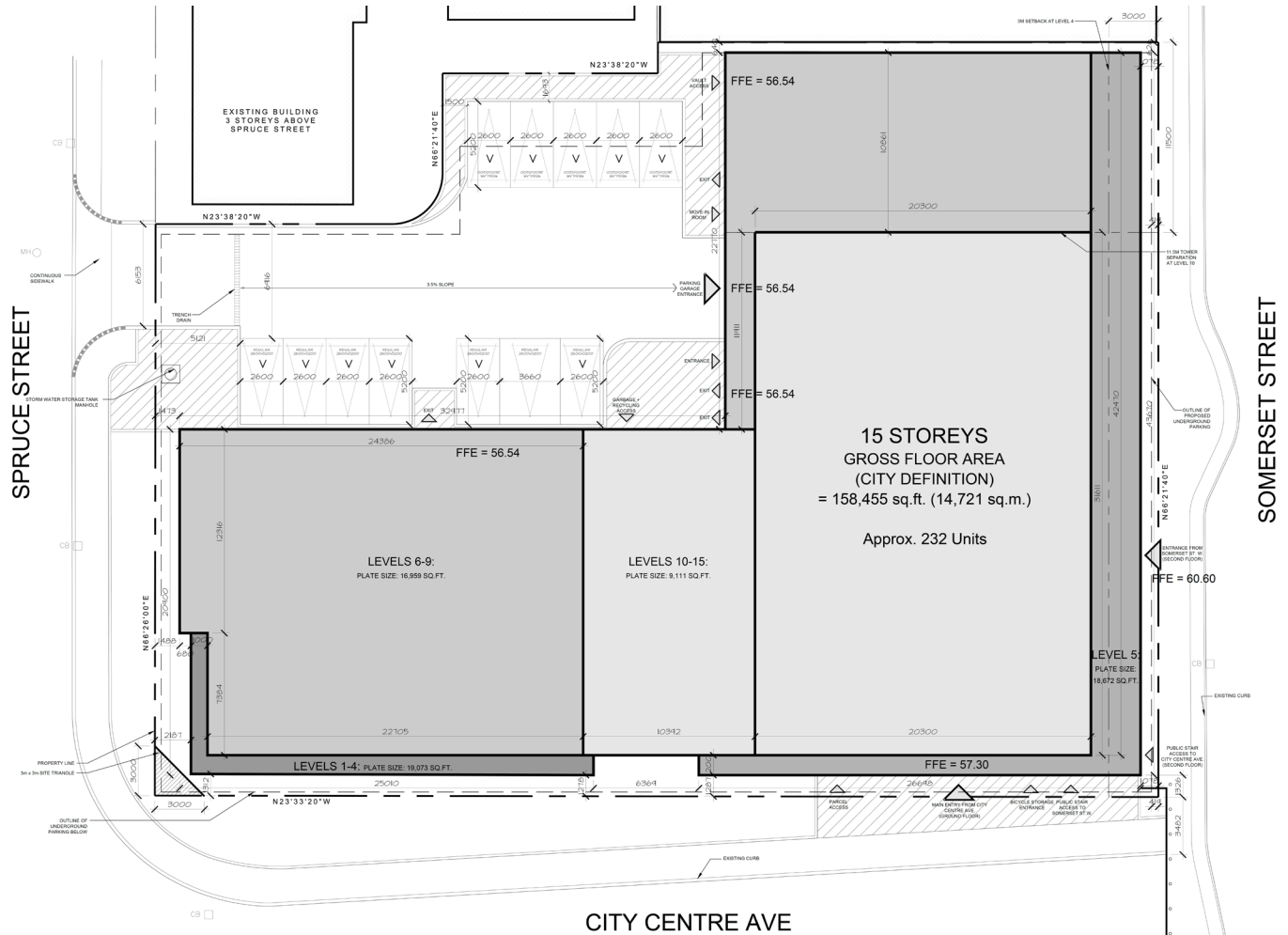
**Table 1** compares the 2019 site plan statistics to the latest site plan prepared by Taggart (City Centre) Ltd, illustrated in **Figure 1** which has adopted a similar floor plate and the same maximum height. The site plan is also included in Appendix A.

Notable changes include an additional 91 bicycle stalls while reducing the overall tenant auto parking ratio to 0.65 stalls/unit. The revised site plan meets minimum and maximum City of Ottawa zoning parking requirements for both auto and bicycle stalls.

Table 1: Comparison of Site Statistics

INDEPENDENT VARIABLE	JUYL, 2019	AUGUST, 2022	NET DIFFERENCE
Residential Units Proposed	191	232	+ 41 units
Floors proposed	15	15	0
Residential parking spots proposed	163	151	- 12
Visitor parking spots proposed	15	24	+ 9
Bicycle parking spots proposed	98	189	+ 91

Figure 1: Site Plan – October 2022



### 3.0 Background Conditions

Since the previous TIA submission, Line 1 has become operational and the surrounding transit system has changed substantially. The following section presents the supporting transit network within the study area.

#### 3.1 Update to Existing Transit Network

Latest transit data has been provided in the figure below with descriptions as follows:

- **Line 1 LRT (Blair <-> Tunney's Pasture):** identified by OC Transpo as a "O-Train", this light rail transit route operates 7 days a week in all time periods. Line 1 is fully grade separated and provides rapid transit east to west via downtown Ottawa. The nearest LRT station is located at Bayview, approximately 550 meters from the site.
- **Line 2 LRT (Bayview <-> Greenboro):** identified by OC Transpo as a "O-Train", this light rail transit route operates 7 days a week in all time periods. Line 2 is fully grade separated and provides rapid transit north to south. The nearest LRT station is located at Bayview, approximately 550 meters from the site. Note that this line is currently closed for construction purposes and is being temporarily replaced by bus service route R2 but is expected to be operational before this development's opening day.
- **Route #61 (Gatineau <-> Stittsville):** identified by OC Transpo as a "Rapid Transit", this route operates 7 days a week in all time periods. Route #61 provides quick connection between the City of Gatineau in Quebec to Stittsville

via the major east-west BRT Transitway. Bus stops for this route are available on both sides of Albert Street, approximately 350 to 450 meters from the site.

- **Route #63 (Gatineau <-> Briarbrook):** identified by OC Transpo as a “Rapid Transit”, this route operates 7 days a week in all time periods. Route #63 provides quick connection between the City of Gatineau in Quebec to Briarbrook via the major east-west BRT Transitway with connectivity to Innovation Center. Bus stops for this route are available on both sides of Albert Street, approximately 350 to 450 meters from the site.
- **Route #75 (Gatineau <-> Barrhaven Center):** identified by OC Transpo as a “Rapid Transit”, this route operates 7 days a week in all time periods. Route #75 provides quick connection between the City of Gatineau in Quebec to Barrhaven Center via the north-south BRT Transitway. Bus stops for this route are available on both sides of Albert Street, approximately 350 to 450 meters from the site.
- **Route #11 (Parliament <-> Bayshore):** identified by OC Transpo as a “Frequent Route”, this route operates at a frequency of every 15 minutes or less on weekdays and operates 7 days a week. Route #11 provides service on Somerset Street, Richmond Road and Bank Street. Bus stops for this route are available on both sides of Somerset Street W, approximately 150 meters from the site.
- **Route #85 (Gatineau <-> Bayshore):** identified by OC Transpo as a “Frequent Route”, this route operates at a frequency of every 15 minutes or less on weekdays and operates 7 days a week. Route #85 provides service on Preston Street and Carling Avenue. Bus stops for this route are available on both sides of Preston Street, approximately 160 to 200 meters from the site.
- **Route #16 (Main <-> Westboro):** identified by OC Transpo as a “Local Route”, this route operates on custom routing and schedules. Route #16 provides local service to parts of downtown and University of Ottawa. Bus stops for this route are available on both sides of Albert Street, approximately 350 to 450 meters from the site.
- **Route #66 (Gatineau <-> Kanata Solandt):** identified by OC Transpo as a “Local Route”, this route operates on custom routing and schedules. Route #66 provides local service to parts of Kanata via Bayshore Mall. Bus stops for this route are available on both sides of Albert Street, approximately 350 to 450 meters from the site.

Figure 2: OC Transpo System Network Map, August 2022



### 3.2 Existing Peak Hour Volumes

The existing traffic volumes as established by the July 2019 TIA Strategy Report are considered to remain a valid representation of existing conditions as traffic patterns were substantially disrupted due to the Covid -19 pandemic. Therefore, the background traffic and resulting analysis is considered to remain unchanged and the conclusions from the previous submission remain relevant.

### 4.0 Planned Conditions

#### 4.1 Other Area Developments

Several site plan applications have been advanced in the previous years as illustrated by the numerical correlation in **Figure 2**. Within the figure, newly added other area developments have been illustrated in yellow shapes while still open previously noted developments have been illustrated in red shapes.

Figure 3: Updated Figure for Other Area Developments



The development applications numbered as 1, 2, 3, and 4 on the map remain unchanged (red shapes). The new developments, shown in yellow, include:

- 5. 967 Wellington: proposed 275-unit residential development with ground floor commercial. The TIA by CGH projects approximately 10 two-way trips in the AM peak and 15 two-way trips in the PM peak using Albert Street towards our study area intersection. This very modest increase in traffic is not anticipated to have any adverse effects on our intersection performance.
- 6. 56 Bayswater: proposed 40-unit residential development. No TIA was found; however, it is unlikely that many trips from this development will interact with our study intersection of Albert / City Centre given its location and size.
- 7. Gladstone Village: Gladstone Village proposes a plan of subdivision containing approximately 1,048 residential units as well as some commercial uses. Given that neither this site nor the Gladstone Village site provides access

to Somerset Street, it is unlikely that many trips from Gladstone Village will interact with our study intersection of Albert / City Centre.

8. 29 Balsam: proposed 23-unit residential development. It will replace existing units, causing a negligible increase in traffic.
9. Rochester Village: Rochester Village Phase 2 proposes mixed-use development containing approximately 270 residential units as well as some commercial uses. Given the distance between the sites, it is unlikely that many trips from Rochester Village will interact with our study intersection of Albert / City Centre.
10. 301 Lett: Part of Lebreton Flats East Phase 1, a proposed 25 and 30-storey mixed-use building consisting of 272 residential condominium units, 314 residential rental apartments, a 4,640 ft<sup>2</sup> daycare and 3,400 ft<sup>2</sup> ground floor retail. A TIA prepared by Novatech in January 2020 projected approximately 80 to 85 new two-way vehicular trips for the AM and PM peaks respectively. Of these trips in their TIA report, none were anticipated to use Albert Street west of Booth Street and to our study area intersection.
11. 665 Albert: Part of Lebreton Flats Library Parcel, a proposed 31 and 36-storey residential high-rise buildings with approximately 601 units. At the moment, only a scoping report is available within Devapps by the City of Ottawa, as the application is currently on-going.
12. 557 Wellington: City of Ottawa Central Library is currently under construction and assumed to be completed by 2023. A TIA prepared by Stantec in April 2018 projects approximately 6 and 17 vehicles two-ways on Albert Street west of Booth Street for the AM and PM peaks respectively. Given the very low number of trips projected to use our study area intersection and the very good existing intersection performance, it is anticipated that no changes to performance will occur.

No other relevant other area developments were noted within the former TIA or new applications which would impact future conditions. The impacts to Albert Street from the updated other area developments is minimal and no changes to the study area intersection are anticipated from recently commenced site plan applications. Therefore, projected background conditions are anticipated to be similar to those presented within the previous Strategy Report TIA.

### 5.0 Revised Trip Generation

The Trans Trip Generation Manual for the City of Ottawa (October, 2020) was referenced to develop new traffic generation forecasts for comparison to the previous submission.

**Table 2** summarizes the new forecast trip generation based on 232 residential high-rise units and adopting the TOD-mode shares presented with the TIA Strategy Report. TOD mode shares were considered appropriate due to the site’s proximity to the Bayview LRT Station (less than 600m) and transit along Somerset.

**Table 3** provides a trip generation forecast assuming TRANS 2020 non-TOD-mode shares for the ‘Ottawa Inner Area’ and 232 residential high rise units.

Both tables adopted a multi-unit high rise person trip rates of 0.80 for the morning peak period and 0.90 for the afternoon peak period.

Table 2: 989 Somerset Trip Generation – TOD Mode Shares

TRAVEL MODE	MODE SHARE	AM PEAK (PERSON TRIPS/H)			MODE SHARE	PM PEAK (PERSON TRIPS/H)		
		IN	OUT	TOTAL		IN	OUT	TOTAL
Auto Driver	15%	5	10	15	15%	9	6	15
Auto Passenger	5%	2	3	5	5%	3	2	5
Transit	65%	20	45	65	65%	38	27	65
Cycling	5%	2	3	5	5%	3	2	5
Walking	10%	3	7	10	10%	6	4	10
<b>Total Person Trips</b>	<b>100%</b>	<b>32</b>	<b>68</b>	<b>100</b>	<b>100%</b>	<b>59</b>	<b>41</b>	<b>100</b>
<b>Total 'New' Residential Auto Trips</b>		<b>5</b>	<b>10</b>	<b>15</b>	<b>-</b>	<b>9</b>	<b>6</b>	<b>15</b>

Table 3: 989 Somerset Trip Generation – Non-TOD Mode Shares

TRAVEL MODE	MODE SHARE	AM PEAK (PERSON TRIPS/H)			MODE SHARE	PM PEAK (PERSON TRIPS/H)		
		IN	OUT	TOTAL		IN	OUT	TOTAL
Auto Driver	26%	8	18	26	25%	15	11	25
Auto Passenger	6%	2	4	6	8%	5	3	8
Transit	28%	9	20	29	21%	12	9	21
Cycling	5%	2	3	5	6%	4	2	6
Walking	34%	11	24	35	39%	22	17	42
<b>Total Person Trips</b>	<b>100%</b>	<b>31</b>	<b>69</b>	<b>100</b>	<b>100%</b>	<b>58</b>	<b>42</b>	<b>100</b>
<b>Total 'New' Residential Auto Trips</b>		<b>8</b>	<b>17</b>	<b>25</b>	<b>-</b>	<b>14</b>	<b>9</b>	<b>23</b>

The TIA Strategy Report projected approximately 20 AM and 20 PM peak hour vehicle trips in both directions.

In comparison, when adopting identical mode shares, the new TRANS 2020 methodology was found to generate approximate 15 auto trips in the peak hours, which is 5 less vehicle trips than previously documented. The non-TOD mode shares generate approximately 25 vehicles per hour two-way for the AM and PM peak hours which is negligibly greater than the previous methodology.

The new vehicle trip generation equates to approximately a single vehicle entering or leaving the site every 2 to 4 minutes. Given that the new trip generation is very similar to the former trip generation, then all previous transportation capacity and performance conclusions are still valid with no anticipated change.

### 6.0 Conclusion

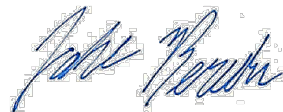
With respect to changes that have occurred to background conditions, planned conditions and the proposed number of units, the findings and conclusions as presented within the Strategy Report TIA (July, 2019) remain unchanged. The increase in the number of units is anticipated to have a nominal impact on the surrounding transportation network.

The 989 Somerset Street West development application, from a transportation perspective, is recommended to proceed.

Sincerely;



Juan Lavin, E.I.T.  
Traffic Analyst



Jake Berube, P.Eng.  
Transportation Engineer

# Appendix A

Response to City of Ottawa Comments

---

6 October 2022

City of Ottawa  
Development Review Services  
110 Laurier Avenue West  
Ottawa, ON K1P 1J1

Attention: Wally Dubyk, P.Eng

Dear Wally;

**Re: 989 Somerset Street**  
**TIA Addendum #2 – Response to City Comments**

**TIA Strategy Report – Parsons, Dated July 23, 2022**  
**TIA Addendum #2 – Parsons, Dated August 03, 2022**  
**Site Plan, Dated August 03, 2022 (within the Addendum #2)**

The following response form has been prepared to address City of Ottawa comments received on September 19, 2022. City comments are noted in black with the corresponding responses from Parsons in Green.

#### TRANSPORTATION ENGINEERING SERVICES

General:

1. Confirm the City of Ottawa Asset Management Group has been consulted for conditions with respect to the adjacent Somerset Street structure over City Centre Avenue.  
Noted, Asset Management (Sajjed Haque and Jon Grimes) has been contacted regarding the Somerset Street bridge and retaining wall.  
It is worthwhile to note that the proponent has undertaken geotechnical borehole investigations according to direction by John Wu (Engineering Review). Exploratory testing has taken place regarding the abutment.

The proponent, John Wu and Asset Management will coordinate as the project moves towards construction.

Section 2.0 Revised Site Plan & General Site Design:

2. The site plan in Figure 1 lacks detail and is difficult to review. Please attach a detailed copy of the latest site plan to the Addendum for review. The site servicing and grading plan would also be helpful.  
New Site Plan as well as site servicing and grading plans provided as an attachment.
3. Figure 1 does not show a continuous concrete sidewalk on the south side of Spruce Street across the new access. Confirm new access will be constructed per City of Ottawa standard detail SC7.1. An attached site servicing and grading plan would help alleviate concerns.  
New Site Plan provided.
4. Please provide site access grades and ensure compliance with Section 25 (1) (s) and 25 (1) (u) of the Private Approach By-Law. An attached site servicing and grading plan would help alleviate concerns.  
The grading plan indicates that the private approach serving the parking area does not exceed 2% near to the roadway, adhering to Section 25 (1) (s).  
The grading plan also indicates that a 3.5% slope begins approximately 9.8m away from the highway line, which is compliant with Section 25 1 (u).  
Site Servicing and grading plan have been provided as an attachment (Appendix A).



5. Provide more detail on the public stairs being provided between Somerset Street and City Centre Avenue (as indicated by Figure 1). These stairs were not discussed in the 2019 TIA Strategy. Ensure the stairs meet all requirements of the Section 2.3 of the City of Ottawa Accessibility Design Standard, including the provision of TWSIs per Section 2.3.1.3. The stairs are located outside, and are entirely inset into the building with the upper floors directly above the stairs. They are 100% located on private property. The rendering below illustrates its location (see bright red entrance to stairs at Somerset level). The stairs will be constructed according to the City of Ottawa Accessibility Design Standards, including TWSI installations.



 **989 SOMERSET STREET**  
VIEW FROM SOUTH-EAST

6. Please discuss the location of the increased number of bicycle parking stalls, and how residents will access the bicycle parking area.  
Hobin Architecture has provided the following description of the bicycle parking stall location:  
*“The bicycle stalls for 989 Somerset are located within the building on the ground level and at parking levels P1, P2, and P3 within designed storage rooms. The parking stalls located on the ground level have direct access to the exterior via a door leading to City Centre Avenue. Additionally, residents using these bicycles stalls may access the*

*exterior via a corridor and vestibule leading to a surface parking lot accessed by Spruce Street. The corridor also connects these residents to the amenity/lounge space at grade, and therefore the elevator core. Residents may use the elevator to reach level 2 where they can access Somerset Street West.*

*The bicycle parking stalls located within the parking garage levels are accessible via elevator. Users are able to reach ground level and access either City Centre Avenue via a corridor and vestibule, or Spruce Street, via the surface parking lot, or, reach level two, and access Somerset Street West.*

*Cyclists accessing the building at level two on Somerset Street West may use the elevator to access ground level or the parking levels to store their bicycle.”*

Section 4.0 Planned Conditions:

7. An integrated road, sewer, and water project is currently under design for City Centre between Albert Street and Elm Street, and for Elm Street between City Centre Avenue and Preston Street. The project also includes pavement marking and signage modifications to add bike lanes on City Centre between Elm Street and Somerset Avenue. Please contact the project manager, Mario Kotowski, for additional details, project integration opportunities, and construction coordination. Please reference any changes proposed by the integrated road, sewer, and water project in the Addendum and on the site plan.

*Proponent has shared the site plan with Mario Kotowski and noted an estimated construction start data for 989 Somerset of October 2023. Mario has stated that pipe work and base lift would also be completed in late 2023, with final asphalt in 2024. Mario noted that the developer may need to coordinate construction access with the City of Ottawa.*

Appendix B TDM Measures Checklist:

8. Please also include the TDM Supportive Development Design and Infrastructure Checklist  
*TDM Design and Infrastructure Checklist has been provided as an attachment (Appendix D).*
9. Transit fare incentives (TDM measure 3.2.1 and 3.2.2) continue to be encourage by Transportation Engineering Services for the development to meet TOD mode share targets).  
*Noted, the comment has been brought to the proponent for consideration. However, at this time, a transit fare incentive will not be provided.*
10. Consider on-site carshare vehicles (TDM measure 4.2.1) and subsidizing the carshare memberships of residents (TDM measure 4.2.2).  
*Noted, the proponent is willing to commit to providing a space for car share on-site. Subsidizing of the car share space will be reviewed at a further time.*

Appendix D MMLOS:

11. The segment MMLOS form indicates that sidewalk width on Spruce Street and City Centre Avenue (east side) is  $\geq 2$  m. However, previous site plans and site grading plans have shown 1.8m sidewalks in these locations. Please confirm sidewalk along the site frontage will be upgraded to a width of at least 2.0 m.  
*The proponent will provide 2-meter sidewalks for Spruce Street (south side) and City Centre Avenue (east side) adjacent to the site. This has been demonstrated on the site plan (See Appendix A)*

**TRAFFIC SIGNAL DESIGN**

12. No comments with the current TIA (Addendum) circulation. Traffic Signal Design Unit reserves the right to make future comments based on subsequent submissions.
13. If there are any future proposed changes in the existing roadway geometry that would require the installation of a pedestrian crossover (Type B or Type C), the signalization of an intersection or modifications to an existing signalized intersection, the City of Ottawa Traffic Signal Design Unit would be required to complete a traffic signal plant design and would need to be engaged in reviews during the functional design stage.  
*Noted*

**STREETLIGHTING**

14. No comments with the TIA for this circulation. Street lighting reserves the right to make future comments based on subsequent submissions.

Noted.

Future considerations are as follows:

15. If there are any proposed changes to the existing roadway geometry, the City of Ottawa Street Light Asset Management Group is required to provide a full street light design.

Noted

16. Be advised that the applicant will be 100% responsible for all costs associated with any relocations/modifications to the existing street light plant. Should a conflict arise or if you have any questions, please contact Barrie Forrester at (613) 580-2424 ext 23332 or Barrie.Forrester@ottawa.ca.

Noted

**PROJECT TEAM**

**ARCHITECT**  
HOBIN ARCHITECTURE  
PATRICK BISSON  
T 613-238-7200

**PLANNING**  
FOTENH CONSULTANTS INC.  
MAT MACLELLAND  
T 613-730-5709

**CIVIL**  
DISE (David Schaeffer Engineering Ltd.)  
ALEX TOURIGNY  
T 613-836-0856

**LANDSCAPE ARCHITECT**  
GLIA INC.  
GRIO J. AIELLO  
T 613-286-5130

**TRANSPORTATION**  
XXX

**ENVIRONMENTAL**  
XXX

**SURVEYOR**  
XXX

LOCATION PLAN - 1:2000

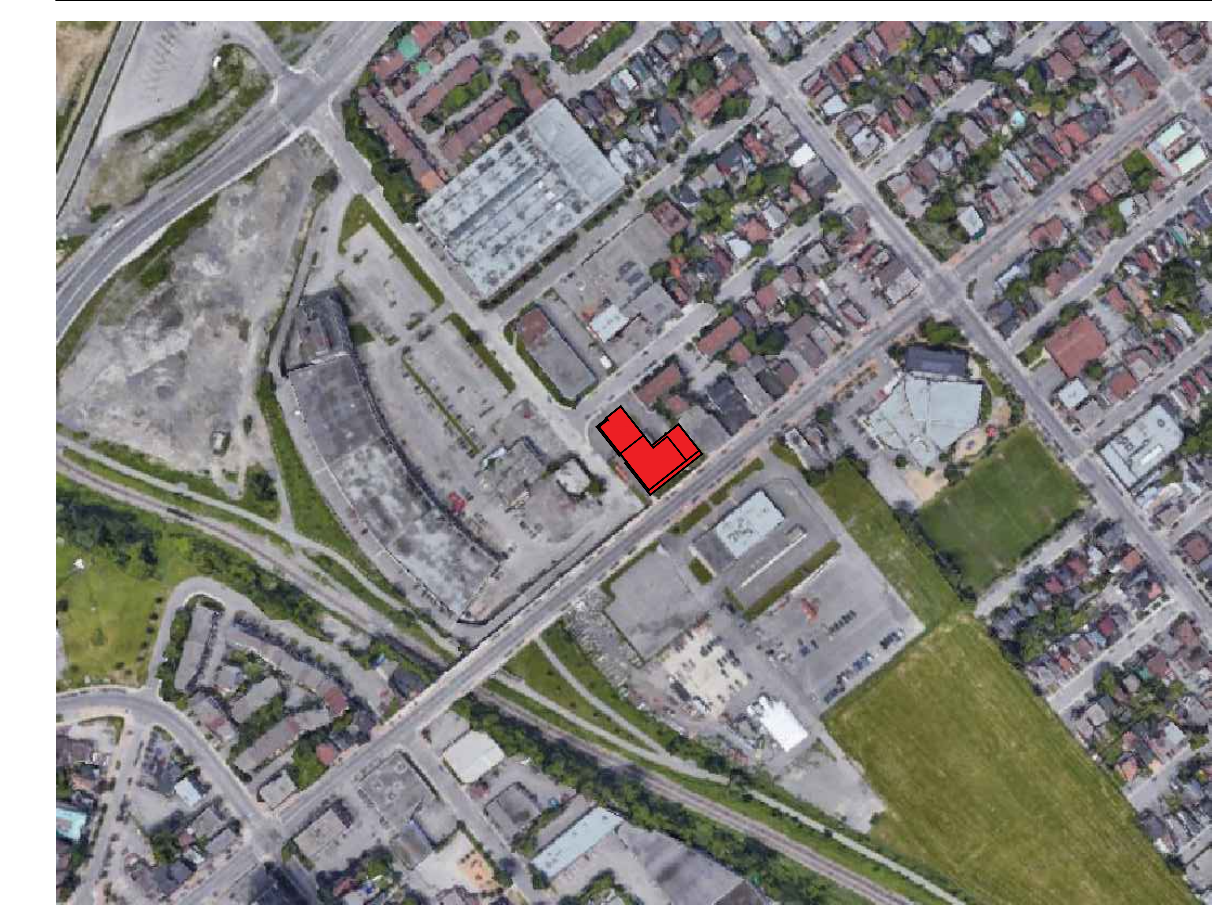
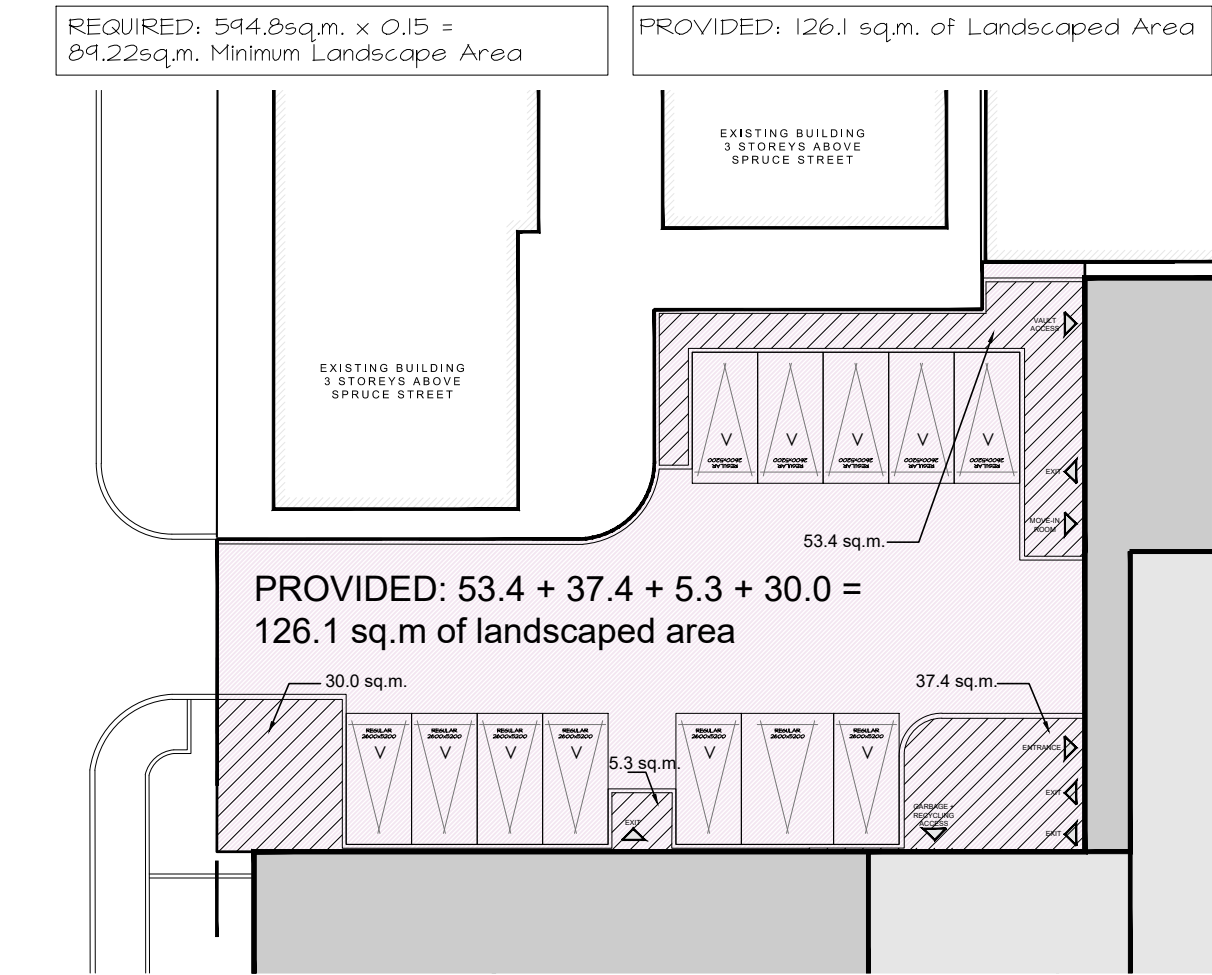


DIAGRAM OF REAR PARKING LOT LANDSCAPE CALCULATION - 1:300

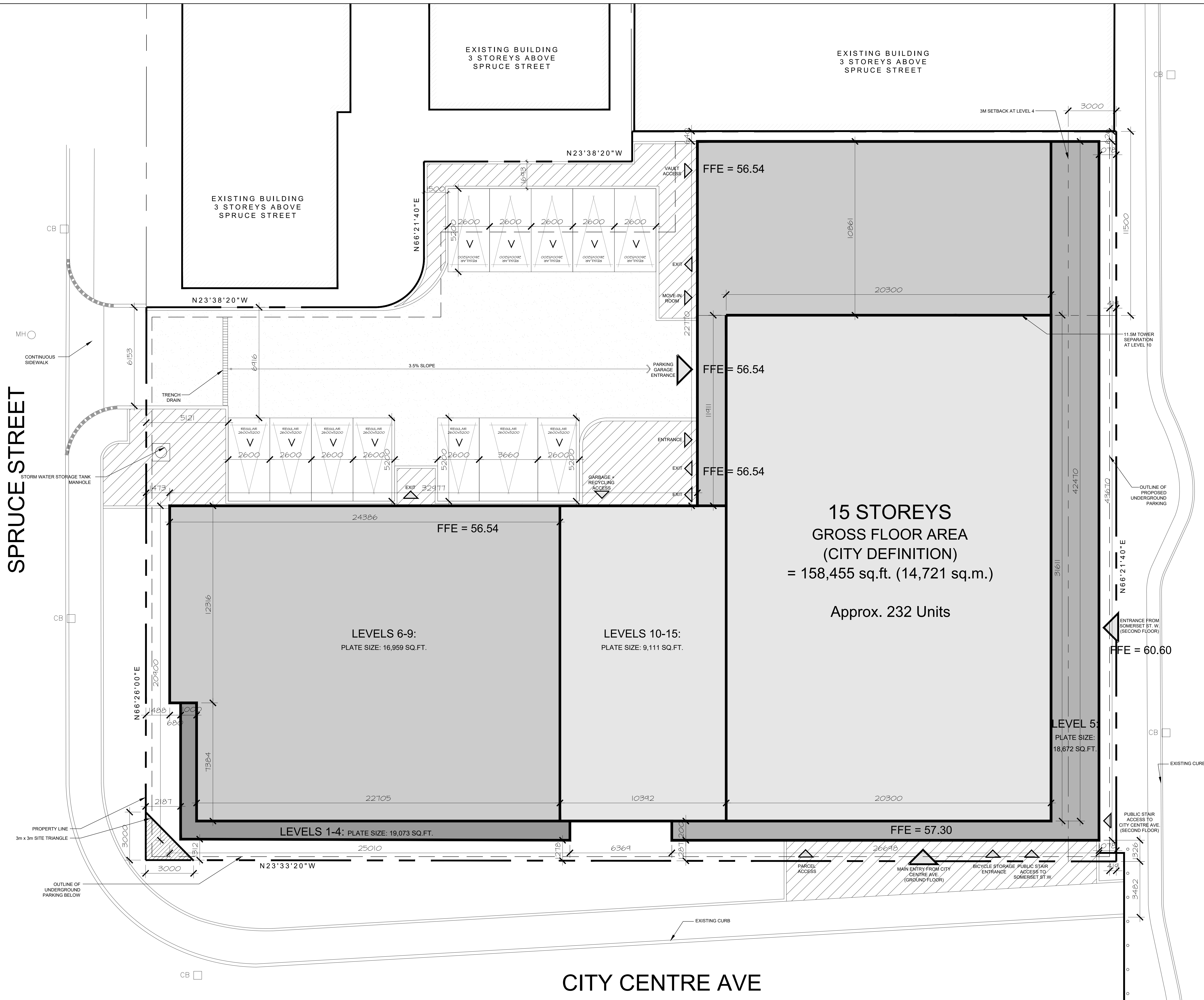


LEGEND:

- PROPOSED FIRE ROUTE
- PROPOSED BUILDING
- BUILDING TO BE DEMOLISHED
- MHO EXISTING MAN HOLE
- TSP EXISTING TRAFFIC LIGHT
- EXISTING FIRE HYDRANT
- COND. CURB DETAIL TO CITY OF OTTAWA STANDARD
- BIKE PARKING SPACE
- EDGE OF SIDEWALK
- PROPERTY LINE
- SETBACK
- PROPOSED DEPRESSED CURB DETAIL TO CITY OF OTTAWA STANDARD (C-7)
- EXTENT OF PRIVATELY OWNED PUBLIC SPACE
- CURB TO BE REBUILT
- ROLL CURB
- EXISTING UTILITY POLE
- EXISTING CATCH BASIN
- PROPOSED CATCH BASIN
- SPACE FOR ACCESSIBLE PARKING SPACE
- FRS SPACE FOR FIRE ROUTE ACCESS
- EXISTING SIGN
- EXISTING LIGHT POLE
- NEW LIGHT POLE
- PROPOSED WALL MOUNTED LIGHT
- EXISTING STREET LIGHTING BOX
- EXISTING TRAFFIC SIGNAL BOX



SCALE 1 : 200



**ZONING NOTES:**

CURRENT ZONING: Mc(2036) 5164  
LOT AREA: 2550 m<sup>2</sup>

DEVELOPMENT STATS PHASE 1 + PHASE 2	REQUIRED	PROPOSED
LOT WIDTH		45.6m IRREGULAR
LOT DEPTH		60.6m IRREGULAR
FRONT YARD SETBACK	SOMERSET AVE. NO MINIMUM, 3m @ LEVEL 4	VARIES 1.0, 4m @ LEVEL 4
REAR YARD SETBACK	SPRUCE ST. NO MINIMUM	VARIES 1.4-2.2m
SIDE YARD SETBACK	CITY CENTRE AVE. NO MINIMUM	VARIES 1.2-1.3m
INTERIOR SIDE YARD SETBACK	NO MINIMUM, 1.5m @ Level 10 FOR TOWER SEPARATION	VARIES = 0.6m, 1.5m @ LEVEL 10

**BUILDING STATISTICS:**

BUILDING 1	REQUIRED	PROPOSED
TOTAL UNIT COUNT		232
STUDIOS		21 (9.1%)
1 BEDROOM		98 (42.2%)
1 BEDROOM + DEN		40 (17.2%)
2 BEDROOM (1 INBOARD BED)		24 (10.3%)
2 BEDROOM		44 (19.1%)
MAXIMUM HEIGHT		48m
NUMBER OF STOREYS		15 STOREYS
AREA - BUILDING AREA		1771 SQ.M.
AREA - TYPICAL PODIUM		1771 SQ.M.
AREA - TYPICAL PLATE		846 SQ.M.
AREA - TOTAL GROSS BUILDING AREA		+/- 20,200 SQ.M. (211,460 SQ.FT.)
AREA - TOTAL NET AREA		+/- 15,844 SQ.M. (167,304 SQ.FT.)

**BUILDING PARKING REQUIREMENTS**

LAND USE	PROVIDED VEHICLE PARKING
CONDO	151 RESIDENTIAL PARKING SPACES PROVIDED FOR 232 UNITS (0.65/UNIT) * LOCATED IN UNDERGROUND PARKING GARAGE
LAND USE	PROVIDED VISITOR PARKING
CONDO	24 VISITOR PARKING SPACES PROVIDED FOR 232 UNITS (0.1/UNIT) * LOCATED IN PARKING GARAGE AND AT GRADE
<b>TOTAL PARKING PROVIDED</b>	<b>175 TOTAL PARKING SPACES PROVIDED (164 INTERIOR, 11 EXTERIOR)</b>

**BUILDING BICYCLE PARKING REQUIREMENTS**

LAND USE	PROVIDED BICYCLE PARKING
CONDO	104 BICYCLE PARKING SPACES PROVIDED FOR 232 UNITS (0.45/UNIT) * LOCATED IN UNDERGROUND PARKING GARAGE AND AT GRADE (INTERIOR)

**AMENITY SPACE REQUIREMENTS**

REQUIRED AMENITY SPACE: 6 m<sup>2</sup> REQUIRED PER UNIT  
232 UNITS X 6 SQ.M. = 1392 SQ.M. TOTAL AMENITY REQUIRED  
REQUIRED AMENITY SPACE TO BE COMMON = 646 SQ.M.  
PROVIDED COMMON AMENITY SPACE = 646 SQ.M.

no.	date	revision
2	23-07-29	RE-ISSUED FOR SITE PLAN CONTROL
1	23-04-22	ISSUED FOR SITE PLAN CONTROL

It is the responsibility of the appropriate contractor to check and verify all dimensions on site and report all errors and/or omissions to the architect.

All contractors must comply with all pertinent codes and by-laws.

Do not scale drawings.

This drawing may not be used for construction until signed.

Copyright reserved.

**Hobin Architecture Incorporated**  
63 Patricia Street  
Ottawa, Ontario  
Canada K1S 3K7  
T: 613 238 7200  
F: 613 235 2005  
E: info@hobinarc.com  
hobinarc.com

**PROJECT LOCATION:**  
TAGGART  
989 SOMERSET  
OTTAWA ON.

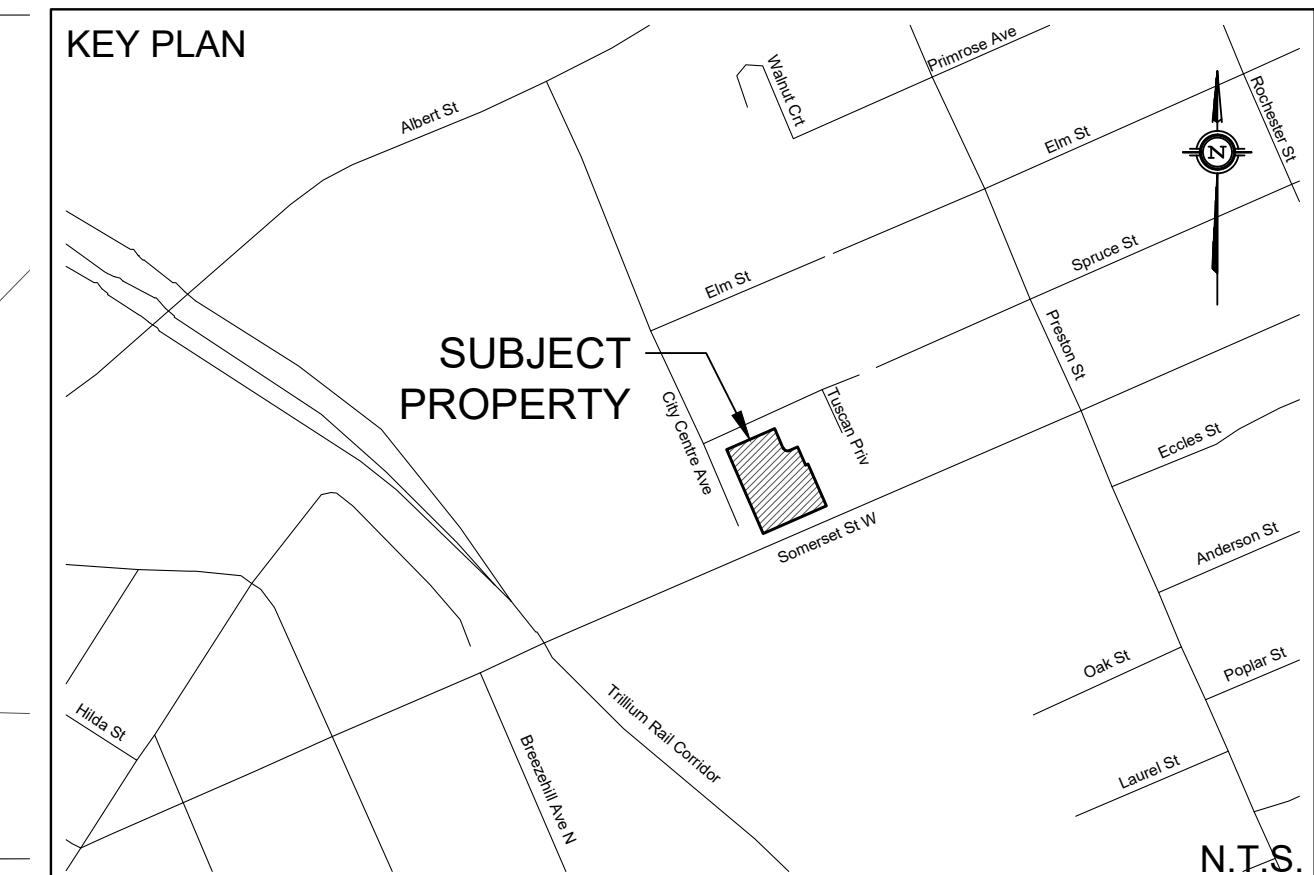
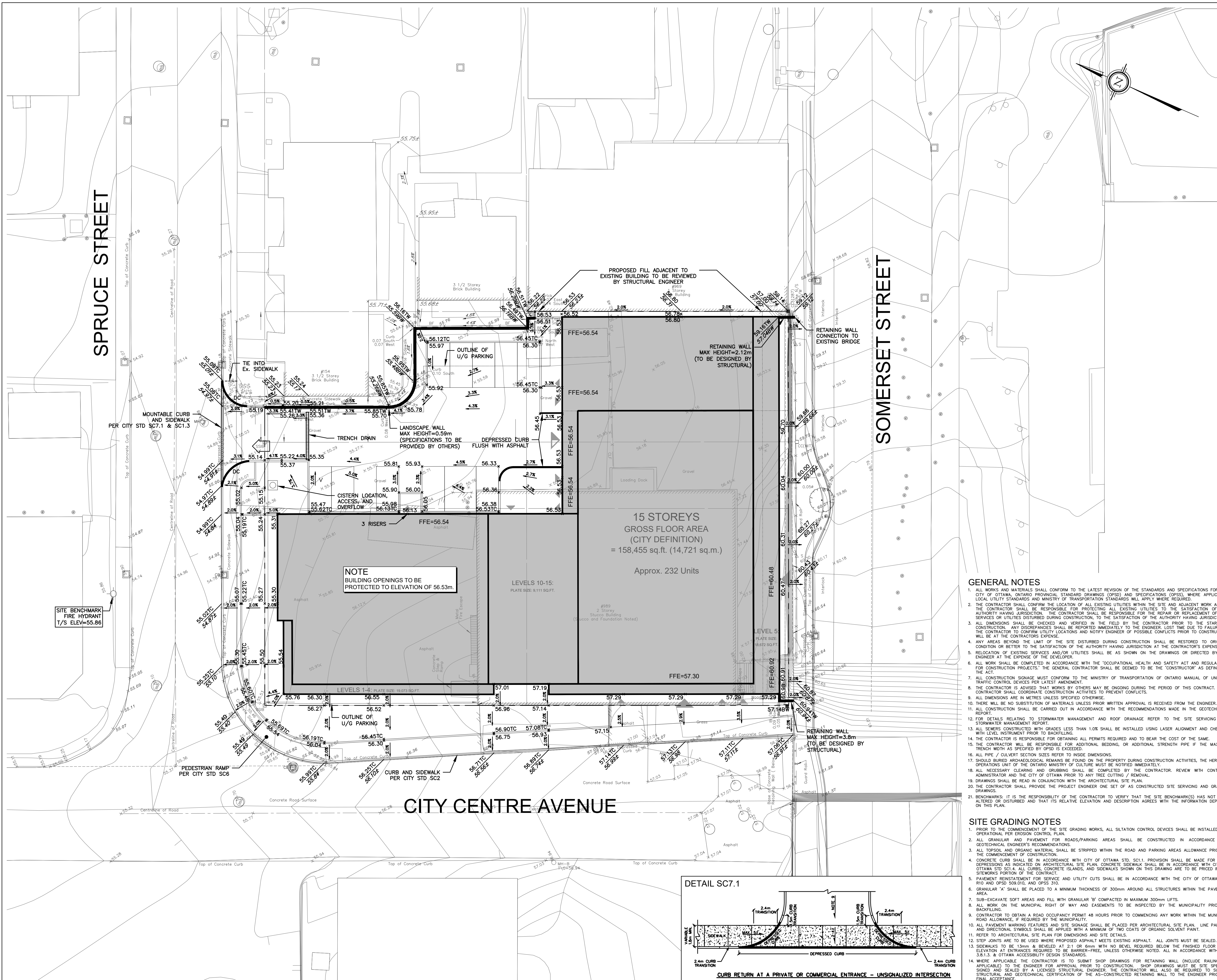
**DRAWING TITLE:**  
SITE PLAN

**DRAWN BY:** P/B **DATE:** 22-04-24 **SCALE:** 1/100

**PROJECT:** 2110

**DRAWING NO.:** A1.00

**REVISION NO.:**



**LEGEND**

---	PROPERTY LINE	○	PROPOSED STORM MANHOLE
x100.00	EXISTING SPOT ELEVATION	●	PROPOSED SANITARY MANHOLE
x100.00	PROPOSED SPOT ELEVATION	■	PROPOSED CATCH BASIN
x100.00TC	PROPOSED TOP OF CURB ELEVATION	○	PROPOSED CB 'T'
x100.00BW	PROPOSED BOTTOM OF WALL ELEVATION	⊕	PROPOSED FIRE HYDRANT
100.00TW	PROPOSED TOP OF WALL ELEVATION	→	EMERGENCY FLOW ROUTE
100.00TL	PROPOSED TOP OF LID ELEVATION		
1.0%	EXISTING GRADE AND DIRECTION		
1.0%	PROPOSED GRADE AND DIRECTION		
DC	DEPRESSED CURB		
3:1 SLOPE	PROPOSED 3:1 TERRACING		
100.00	PROPOSED/EXISTING SPOT ELEVATION		

**TOPOGRAPHIC INFORMATION**  
 TOPOGRAPHIC INFORMATION PROVIDED BY ANNIS, O'SULLIVAN, VOLLEBEKK LTD  
 PROJ. NO. 13817-13  
 DATED DECEMBER 17, 2013

**SITE PLAN INFORMATION**  
 SITE PLAN PROVIDED BY HOBIN ARCHITECTURE  
 PROJ. NO. 2110  
 DATED JULY 29, 2022

**GEOTECHNICAL STUDY**  
 GEOTECHNICAL RECOMMENDATIONS PROVIDED BY PATERSON GROUP  
 PROJ. NO. PG3158-1  
 DATED JANUARY 24, 2017

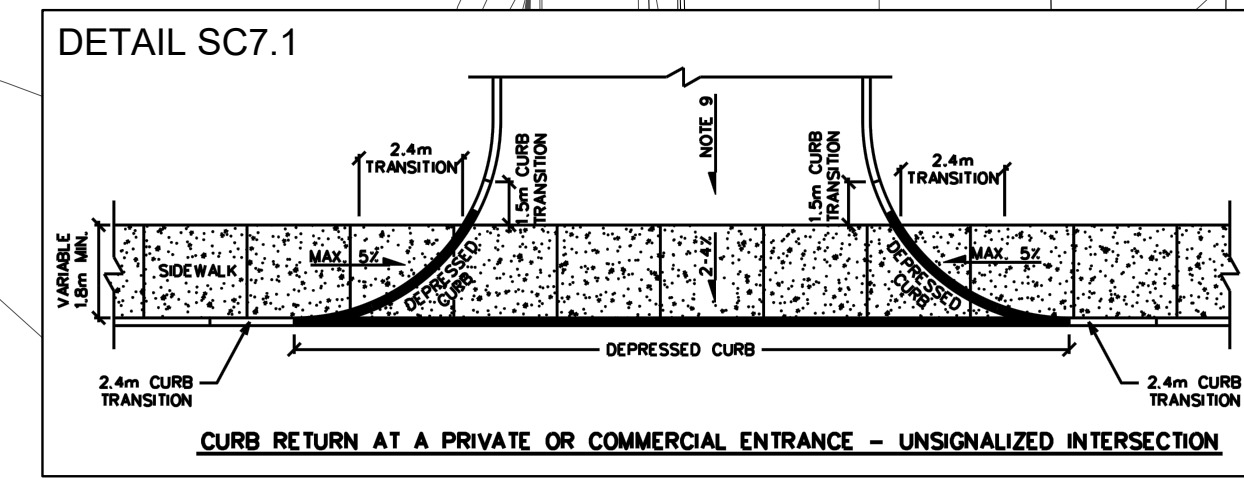
**SITE SERVICING AND STORMWATER MANAGEMENT STUDY**  
 SERVICING AND STORMWATER MANAGEMENT RECOMMENDATIONS PROVIDED BY DSEL  
 PROJ. NO. 21-1239  
 DATED APRIL 2022

**BENCH MARK**  
 TOP OF SPRINDLE OF FIRE HYDRANT LOCATED AT WEST END OF SPRUCE STREET NEAR CITY CENTRE INTERSECTION  
 ELEV=55.86

No.	BY	YY.MM.DD	DESCRIPTION
7	G.G.G.	22.08.31	REVISED PER SITE PLAN
6	B.N.C.	22.08.15	REVISED PER SITE PLAN
5	B.N.C.	22.04.12	REVISED PER SITE PLAN
4	A.D.F.	21.12.01	REVISED PER MUNICIPAL COMMENTS
3	A.D.F.	21.11.18	REVISED PER MUNICIPAL COMMENTS
2	B.N.C.	21.11.16	ISSUED FOR MUNICIPAL REVIEW
1	B.N.C.	21.06.29	ISSUED FOR MUNICIPAL REVIEW

- GENERAL NOTES**
- ALL WORKS AND MATERIALS SHALL CONFORM TO THE LATEST REVISION OF THE STANDARDS AND SPECIFICATIONS FOR THE CITY OF OTTAWA, ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS), WHERE APPLICABLE. LOCAL UTILITY STANDARDS AND MINISTRY OF TRANSPORTATION STANDARDS WILL APPLY WHERE REQUIRED.
  - THE CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL EXISTING UTILITIES WITHIN THE SITE AND ADJACENT WORK AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF ANY SERVICES OR UTILITIES DISTURBED DURING CONSTRUCTION, TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION.
  - ALL DIMENSIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER. LOST TIME DUE TO FAILURE OF THE CONTRACTOR TO CONFIRM UTILITY LOCATIONS AND NOTIFY ENGINEER OF POSSIBLE CONFLICTS PRIOR TO CONSTRUCTION WILL BE AT THE CONTRACTOR'S EXPENSE.
  - ANY AREAS BEYOND THE LIMIT OF THE SITE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION AT THE CONTRACTOR'S EXPENSE.
  - RELOCATION OF EXISTING SERVICES AND/OR UTILITIES SHALL BE AS SHOWN ON THE DRAWINGS OR DIRECTED BY THE ENGINEER AT THE EXPENSE OF THE DEVELOPER.
  - ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS. THE GENERAL CONTRACTOR SHALL BE DEEMED TO BE THE 'CONTRACTOR' AS DEFINED IN THE ACT.
  - ALL CONSTRUCTION SHALL CONFORM TO THE MINISTRY OF TRANSPORTATION OF ONTARIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES PER LATEST AMENDMENT.
  - THE CONTRACTOR IS ADVISED THAT WORKS BY OTHERS MAY BE ONGOING DURING THE PERIOD OF THIS CONTRACT. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES TO PREVENT CONFLICTS.
  - ALL DIMENSIONS ARE IN METRES UNLESS SPECIFIED OTHERWISE.
  - THERE WILL BE NO SUBSTITUTION OF MATERIALS UNLESS PRIOR WRITTEN APPROVAL IS RECEIVED FROM THE ENGINEER.
  - ALL CONSTRUCTION SHALL BE CARRIED OUT IN ACCORDANCE WITH THE RECOMMENDATIONS MADE IN THE GEOTECHNICAL REPORT.
  - FOR DETAILS RELATING TO STORMWATER MANAGEMENT AND ROOF DRAINAGE REFER TO THE SITE SERVICING AND STORMWATER MANAGEMENT REPORT.
  - ALL SEWERS CONSTRUCTED WITH GRADES LESS THAN 1.0% SHALL BE INSTALLED USING LASER ALIGNMENT AND CHECKED WITH LEVEL INSTRUMENT PRIOR TO BACKFILLING.
  - THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED AND TO BEAR THE COST OF THE SAME.
  - THE CONTRACTOR WILL BE RESPONSIBLE FOR ADDITIONAL BEDDING, OR ADDITIONAL STRENGTH PIPE IF THE MAXIMUM TRENCH WIDTH AS SPECIFIED BY OPSD IS EXCEEDED.
  - ALL PIPE / CULVERT SECTION SIZES REFER TO INSIDE DIMENSIONS.
  - SHOULD BURIED ARCHAEOLOGICAL REMAINS BE FOUND ON THE PROPERTY DURING CONSTRUCTION ACTIVITIES, THE HERITAGE OPERATIONS UNIT OF THE ONTARIO MINISTRY OF CULTURE MUST BE NOTIFIED IMMEDIATELY.
  - ALL NECESSARY CLEARING AND GRUBBING SHALL BE COMPLETED BY THE CONTRACTOR. REVIEW WITH CONTRACT ADMINISTRATOR AND THE CITY OF OTTAWA PRIOR TO ANY TREE CUTTING / REMOVAL.
  - DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE ARCHITECTURAL SITE PLAN.
  - THE CONTRACTOR SHALL PROVIDE THE PROJECT ENGINEER ONE SET OF AS CONSTRUCTED SITE SERVICING AND GRADING DRAWINGS.
  - BENCHMARKS: IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THAT THE SITE BENCHMARK(S) HAS NOT BEEN ALTERED OR DISTURBED AND THAT ITS RELATIVE ELEVATION AND DESCRIPTION AGREES WITH THE INFORMATION DEPICTED ON THIS PLAN.

- SITE GRADING NOTES**
- PRIOR TO THE COMMENCEMENT OF THE SITE GRADING WORKS, ALL SITUATION CONTROL DEVICES SHALL BE INSTALLED AND OPERATIONAL PER EROSION CONTROL PLAN.
  - ALL GRANULAR AND PAVEMENT FOR ROADS/PARKING AREAS SHALL BE CONSTRUCTED IN ACCORDANCE WITH GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
  - ALL TOPSOIL AND ORGANIC MATERIAL SHALL BE STRIPPED WITHIN THE ROAD AND PARKING AREAS ALLOWANCE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
  - CONCRETE CURB SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. SC1.1. PROVISION SHALL BE MADE FOR CURB DEPRESSIONS AS INDICATED ON ARCHITECTURAL SITE PLAN. CONCRETE SIDEWALK SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. SC1.4. ALL CURBS, CONCRETE ISLANDS, AND SIDEWALKS SHOWN ON THIS DRAWING ARE TO BE PRICED IN THE SITEMARKS PORTION OF THE CONTRACT.
  - PAVEMENT REINSTATEMENT FOR SERVICE AND UTILITY CUTS SHALL BE IN ACCORDANCE WITH THE CITY OF OTTAWA STD. R10 AND OPSD 509.010, AND OPSD 510.
  - GRANULAR 'X' SHALL BE PLACED TO A MINIMUM THICKNESS OF 300mm AROUND ALL STRUCTURES WITHIN THE PAVEMENT AREA.
  - SUB-EVIDENCE SOFT AREAS AND FILL WITH GRANULAR 'X' COMPACTED IN MAXIMUM 300mm LIFTS.
  - ALL WORK ON THE MUNICIPAL RIGHT OF WAY AND EASEMENTS TO BE INSPECTED BY THE MUNICIPALITY PRIOR TO BACKFILLING.
  - CONTRACTOR TO OBTAIN A ROAD OCCUPANCY PERMIT 48 HOURS PRIOR TO COMMENCING ANY WORK WITHIN THE MUNICIPAL ROAD ALLOWANCE, IF REQUIRED BY THE MUNICIPALITY.
  - ALL PAVEMENT MARKING FEATURES AND SITE SIGNAGE SHALL BE PLACED PER ARCHITECTURAL SITE PLAN. LINE PAINTING AND DIRECTIONAL SYMBOLS SHALL BE APPLIED WITH A MINIMUM OF TWO COATS OF ORGANIC SOLVENT PAINT.
  - REFER TO ARCHITECTURAL SITE PLAN FOR DIMENSIONS AND SITE DETAILS.
  - STEP JOINTS ARE TO BE USED WHERE PROPOSED ASPHALT MEETS EXISTING ASPHALT. ALL JOINTS MUST BE SEALED.
  - SIDEWALKS TO BE 150mm & REVELED AT 2.1 OR 6mm WITH NO BEVEL REQUIRED BELOW THE FINISHED FLOOR SLAB ELEVATION AT ENTRANCES REQUIRED TO BE BARRIER-FREE, UNLESS OTHERWISE NOTED. ALL IN ACCORDANCE WITH OBC 3.8.1.3 & OTTAWA ACCESSIBILITY DESIGN STANDARDS.
  - WHERE APPLICABLE THE CONTRACTOR IS TO SUBMIT SHOP DRAWINGS FOR RETAINING WALL (INCLUDE RAILINGS IF APPLICABLE) TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION. SHOP DRAWINGS MUST BE SITE SPECIFIC, SIGNED AND SEALED BY A LICENSED STRUCTURAL ENGINEER. THE CONTRACTOR WILL ALSO BE REQUIRED TO SUPPLY STRUCTURAL AND GEOTECHNICAL CERTIFICATION OF THE AS-CONSTRUCTED RETAINING WALL TO THE ENGINEER PRIOR TO FINAL ACCEPTANCE.



**NOTE**  
 BUILDING OPENINGS TO BE PROTECTED TO ELEVATION OF 56.53m.

LEVELS 10-15:  
 PLATE SIZE: 9.111 90.FT.

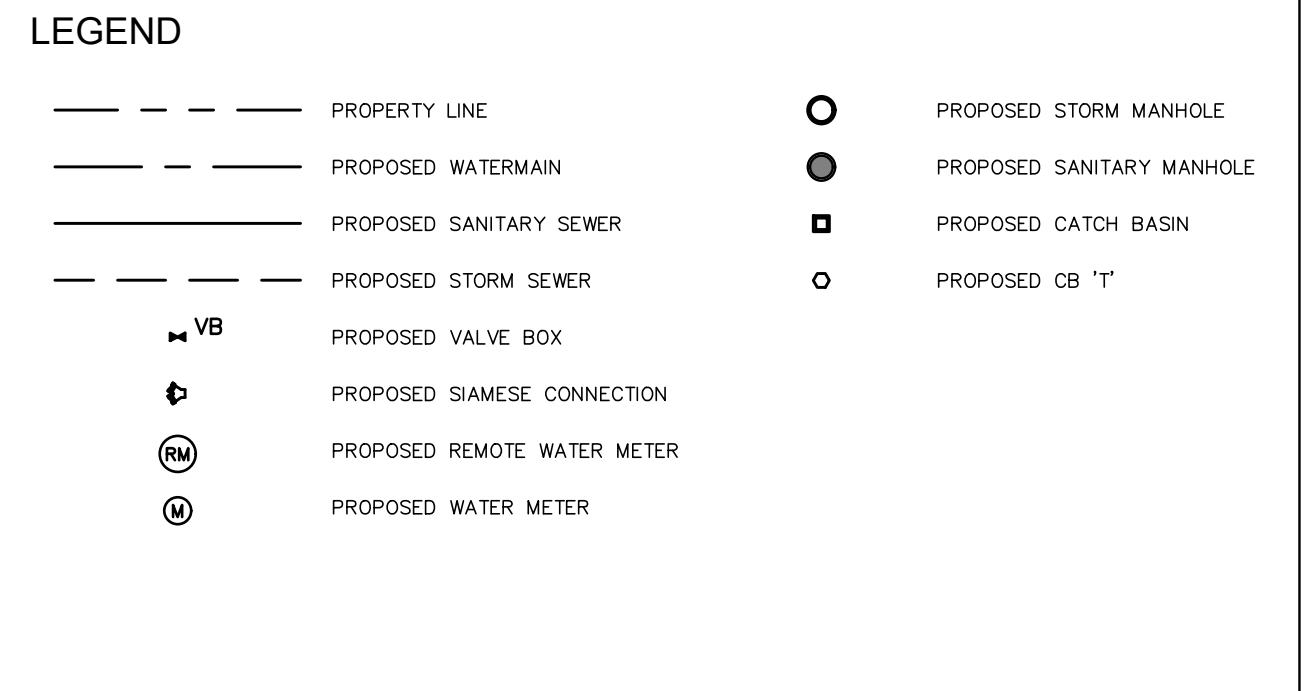
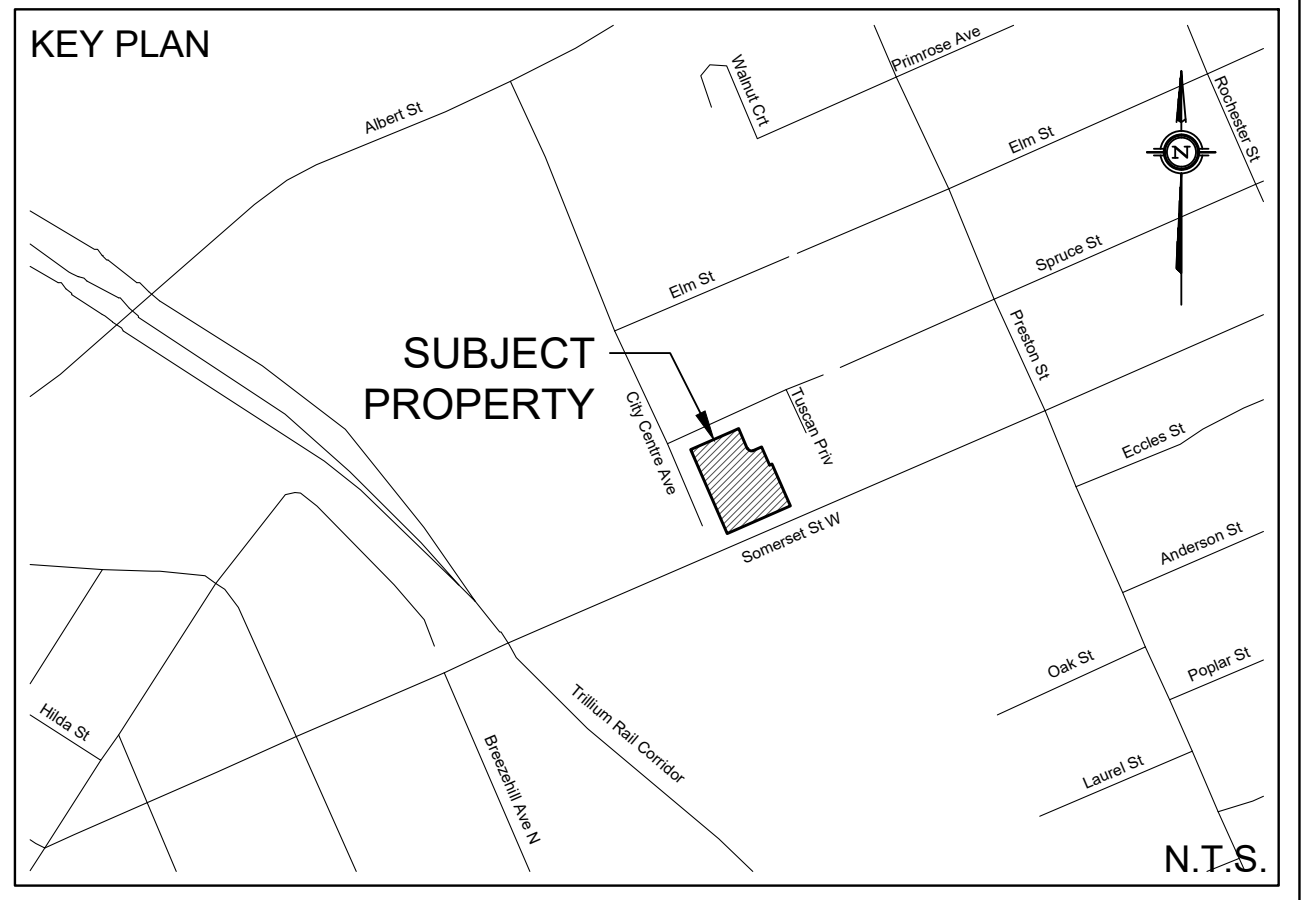
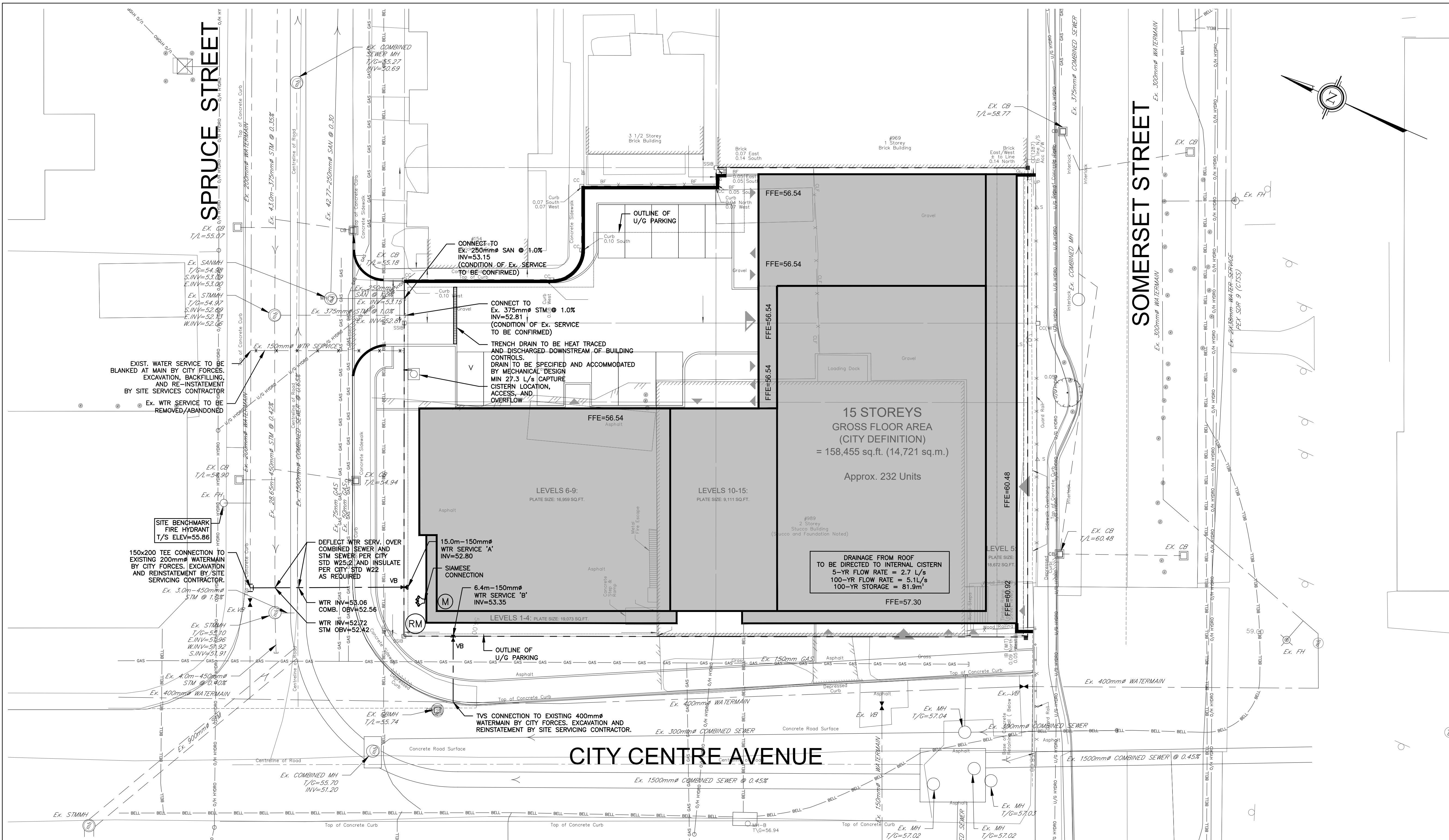
LEVELS 1-4:  
 PLATE SIZE: 19.073 90.FT.

15 STOREYS  
 GROSS FLOOR AREA  
 (CITY DEFINITION)  
 = 158,455 sq.ft. (14,721 sq.m.)  
 Approx. 232 Units

PROPOSED FILL ADJACENT TO EXISTING BUILDING TO BE REVIEWED BY STRUCTURAL ENGINEER

RETAINING WALL  
 MAX HEIGHT=2.12m  
 (TO BE DESIGNED BY STRUCTURAL)

RETAINING WALL  
 MAX HEIGHT=3.8m  
 (TO BE DESIGNED BY STRUCTURAL)



EXISTING UNDERGROUND SERVICES AND UTILITY LOCATIONS DERIVED FROM THE BEST AVAILABLE DATA, AS-CONSTRUCTED DRAWINGS, UTILITY DRAWINGS AND INFRASTRUCTURE MAPPING PROVIDED BY THE CITY OF OTTAWA.

CONTRACTOR TO CONFIRM ELEVATIONS AND LOCATIONS OF EXISTING UNDERGROUND SERVICES AND UTILITIES WITHIN THE RIGHT OF WAY PRIOR TO INSTALLATION OF SITE SERVICING INFRASTRUCTURE.

THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE. DURING CONSTRUCTION ACTIVITIES, THE CONTRACTOR ACKNOWLEDGES THAT THE FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.

**TOPOGRAPHIC INFORMATION**  
 TOPOGRAPHIC INFORMATION PROVIDED BY ANNIS, O'SULLIVAN, VOLLEBEKK LTD  
 PROJ. NO. 13817-13  
 DATED DECEMBER 17, 2013

**SITE PLAN INFORMATION**  
 SITE PLAN PROVIDED BY HOBIN ARCHITECTURE  
 PROJ. NO. 2110  
 DATED JULY 29, 2022

**GEO TECHNICAL STUDY**  
 GEO TECHNICAL RECOMMENDATIONS PROVIDED BY PATERSON GROUP  
 PROJ. NO. PG3158-1  
 DATED JANUARY 24, 2017

**SITE SERVICING AND STORMWATER MANAGEMENT STUDY**  
 SERVICING AND STORMWATER MANAGEMENT RECOMMENDATIONS PROVIDED BY DSEL  
 DATED APRIL 2022

**BENCH MARK**  
 TOP OF SPINDLE OF FIRE HYDRANT LOCATED AT WEST END OF SPRUCE STREET NEAR CITY CENTRE INTERSECTION  
 ELEV=55.86

No.	BY	YY.MM.DD	DESCRIPTION
7	G.G.G.	22.08.31	REVISED PER SITE PLAN
6	B.N.C.	22.08.15	REVISED PER SITE PLAN
5	B.N.C.	22.04.12	REVISED PER SITE PLAN
4	A.D.F.	21.12.01	REVISED PER MUNICIPAL COMMENTS
3	A.D.F.	21.11.18	REVISED PER MUNICIPAL COMMENTS
2	B.N.C.	21.11.16	ISSUED FOR MUNICIPAL REVIEW
1	B.N.C.	21.06.29	ISSUED FOR MUNICIPAL REVIEW

- GENERAL NOTES**
- ALL WORKS AND MATERIALS SHALL CONFORM TO THE LATEST REVISION OF THE STANDARDS AND SPECIFICATIONS FOR THE CITY OF OTTAWA, ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS), WHERE APPLICABLE TO LOCAL CONDITIONS.
  - THE CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL EXISTING UTILITIES WITHIN THE SITE AND ADJACENT WORK AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF ANY SERVICES OR UTILITIES DISTURBED DURING CONSTRUCTION, TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION.
  - ALL DIMENSIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER. THE LIMIT OF THE SITE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION AT THE CONTRACTOR'S EXPENSE.
  - RELOCATION OF EXISTING SERVICES AND/OR UTILITIES SHALL BE AS SHOWN ON THE DRAWINGS OR DIRECTED BY THE ENGINEER AT THE EXPENSE OF THE DEVELOPER.
  - ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS. THE GENERAL CONTRACTOR SHALL BE DEEMED TO BE THE "CONTRACTOR" AS DEFINED IN THE ACT.
  - ALL CONSTRUCTION SIGNAGE MUST CONFORM TO THE MINISTRY OF TRANSPORTATION OF ONTARIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES PER LATEST AMENDMENT.
  - THE CONTRACTOR IS ADVISED THAT WORKS BY OTHERS MAY BE ONGOING DURING THE PERIOD OF THIS CONTRACT. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES TO PREVENT CONFLICTS.
  - ALL DIMENSIONS ARE IN METRES UNLESS SPECIFIED OTHERWISE.
  - THERE WILL BE NO SUBSTITUTION OF MATERIALS WITHOUT WRITTEN APPROVAL AS RECEIVED FROM THE ENGINEER.
  - ALL CONSTRUCTION SHALL BE CARRIED OUT IN ACCORDANCE WITH THE RECOMMENDATIONS MADE IN THE GEOTECHNICAL REPORT.
  - FOR DETAILS RELATING TO STORMWATER MANAGEMENT AND ROOF DRAINAGE REFER TO THE SITE SERVICING AND STORMWATER MANAGEMENT REPORT PREPARED BY DSEL.
  - ALL SEWERS CONSTRUCTED WITH GRADES LESS THAN 1.0% SHALL BE INSTALLED USING LASER ALIGNMENT AND CHECKED WITH LEVEL INSTRUMENT PRIOR TO BACKFILLING.
  - THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED AND TO BEAR THE COST OF THE SAME.
  - THE CONTRACTOR WILL BE RESPONSIBLE FOR ADDITIONAL BEDDING, OR ADDITIONAL STRENGTH PIPE IF THE MAXIMUM TRENCH WIDTH AS SPECIFIED BY OPSD IS EXCEEDED.
  - ALL PIPE / CULVERT SECTION SIZES REFER TO INSIDE DIMENSIONS.
  - SHOULD BURIED ARCHAEOLOGICAL REMAINS BE FOUND ON THE PROPERTY DURING CONSTRUCTION ACTIVITIES, THE HERITAGE OPERATIONS UNIT OF THE ONTARIO MINISTRY OF CULTURE MUST BE NOTIFIED IMMEDIATELY.
  - ALL NECESSARY CLEARING AND GRUBBING SHALL BE COMPLETED BY THE CONTRACTOR. REVIEW WITH CONTRACT ADMINISTRATOR AND THE CITY OF OTTAWA PRIOR TO ANY TREE CUTTING / REMOVAL.
  - DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE ARCHITECTURAL SITE PLAN.
  - THE CONTRACTOR SHALL PROVIDE THE PROJECT ENGINEER ONE SET OF AS CONSTRUCTED SITE SERVICING AND GRADING DRAWINGS.
  - BENCHMARKS: IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THAT THE SITE BENCHMARK(S) HAS NOT BEEN ALTERED OR DISTURBED AND THAT ITS RELATIVE ELEVATION AND DESCRIPTION AGREES WITH THE INFORMATION DEPICTED ON THIS PLAN.

- WATERMAIN NOTES**
- ALL WATERMAIN INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE CITY OF OTTAWA AND THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS).
  - ALL PVC WATERMANS SHALL BE AWWA C-900 CLASS 150, DR 18 OR APPROVED EQUIVALENT.
  - WATERMAIN TRENCH AND BEDDING SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARD W17, UNLESS SPECIFIED OTHERWISE. BEDDING AND COVER MATERIAL SHALL BE SPECIFIED BY THE PROJECT GEOTECHNICAL ENGINEER.
  - ALL PVC WATERMANS SHALL BE INSTALLED WITH A 10 GAUGE STRANDED COPPER TWO OR RWI TRACER WIRE IN ACCORDANCE WITH CITY OF OTTAWA STD. W.36.
  - CATHODIC PROTECTION IS REQUIRED ON ALL METALLIC FITTINGS PER CITY OF OTTAWA STD. W40 AND W42.
  - VALVE BOXES SHALL BE INSTALLED PER CITY OF OTTAWA STD. W24.
  - WATERMAIN IN FILL AREAS TO BE INSTALLED WITH RESTRAINED JOINTS PER CITY OF OTTAWA STD.25.5 AND W25.6.
  - THROUGH BLOCKING OF WATERMANS TO BE INSTALLED PER CITY OF OTTAWA STD. W25.3 AND W25.4.
  - THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY CAPS, PLUGS, BLOW-OFFS, AND NOZZLES REQUIRED FOR TESTING AND DISINFECTION OF THE WATERMAIN.
  - WATERMAIN CROSSING OVER AND BELOW SEWERS SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. W25.2 AND W25, RESPECTIVELY.
  - WATER SERVICES ARE TO BE INSULATED PER CITY STD. W23 WHERE SEPARATION BETWEEN SERVICES AND MAINTENANCE HOLES ARE LESS THAN 2.4m.
  - THE MINIMUM VERTICAL CLEARANCE BETWEEN WATERMAIN AND SEWER / UTILITY IS 600mm PER MUSE GUIDELINES. FOR CROSSING UNDER SEWERS, ADEQUATE STRUCTURAL SUPPORT FOR THE SEWERS IS REQUIRED TO PREVENT EXCESSIVE DEFLECTION OF JOINTS AND SETTLING. THE LENGTH OF WATER PIPE SHALL BE CENTERED AT THE POINT OF CROSSING TO ENSURE PROTECTION OF THE SEWER.
  - ALL WATERMANS SHALL HAVE A MINIMUM COVER OR 2.4m, OTHERWISE THERMAL INSULATION IS REQUIRED AS PER STD DWG W22.
  - GENERAL WATER PLANT TO UTILITY CLEARANCE AS PER STD DWG R20
  - FIRE HYDRANT INSTALLATION AS PER STD DWG W19. ALL BOTTOM OF HYDRANT FLANGE ELEVATIONS TO BE INSTALLED 0.10m ABOVE PROPOSED FINISHED GRADE AT HYDRANT; FIRE HYDRANT LOCATION AS PER STD DWG W19 UNLESS OTHERWISE NOTED.
  - BUILDING SERVICE TO BE CAPPED 1.0m OFF THE FACE OF THE BUILDING UNLESS OTHERWISE NOTED AND MUST BE RESTRAINED A MINIMUM OF 12m BACK FROM STUB.
  - ALL WATERMANS SHALL BE HYDROSTATICALLY TESTED IN ACCORDANCE WITH THE CITY OF OTTAWA AND ONTARIO GUIDELINES UNLESS OTHERWISE DIRECTED. PROVISIONS FOR FLUSHING WATER LINE PRIOR TO TESTING, ETC. MUST BE PROVIDED.
  - ALL WATERMANS SHALL BE BACTERIOLOGICALLY TESTED IN ACCORDANCE WITH THE CITY OF OTTAWA AND ONTARIO GUIDELINES. ALL CHLORINATED WATER TO BE DISCHARGED AND PRETREATED TO ACCEPTABLE LEVELS PRIOR TO DISCHARGE. ALL DISCHARGED WATER MUST BE CONTROLLED AND TREATED SO AS NOT TO ADVERSELY AFFECT THE ENVIRONMENT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL MUNICIPAL AND/OR PROVINCIAL REQUIREMENTS ARE FOLLOWED.
  - ALL WATERMAIN STUBS SHALL BE TERMINATED WITH A PLUG AND 50mm BLOW OFF UNLESS OTHERWISE NOTED.

- SANITARY AND STORM SEWER NOTES**
- GENERAL**
- LASER ALIGNMENT CONTROL TO BE UTILIZED ON ALL SEWER INSTALLATIONS.
  - CLAY SEALS TO BE INSTALLED AS PER CITY STANDARD DRAWING 58. THE SEALS SHOULD BE AT LEAST 1.5m LONG (ON THE TRENCH DIRECTION) AND SHOULD EXTEND FROM TRENCH WALL TO TRENCH WALL. THE SEALS SHOULD EXTEND FROM THE FRONT LINE AND FULLY PENETRATE THE BEDDING, SUB-BEDDING, AND COVER MATERIAL. THE BARRIERS SHOULD CONSIST OF RELATIVELY DRY AND COMPACTIBLE BROWN SILTY CLAY PLACED IN MAXIMUM 225mm LIFTS AND COMPACTED TO A MINIMUM OF 95% S.M.D. THE CLAY SEALS SHOULD BE PLACED AT THE SITE BOUNDARIES AND AT 60m INTERVALS IN THE SERVICE TRENCHES.
  - SERVICES TO BUILDINGS TO BE TERMINATED 1.0m FROM THE OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.
  - ALL MAINTENANCE STRUCTURE AND CATCH BASIN EXCAVATIONS TO BE BACKFILLED WITH GRANULAR MATERIAL COMPACTED TO 98% STANDARD PROCTOR DENSITY, A MINIMUM OF 300mm AROUND STRUCTURES.
  - "MOUND" OR APPROVED PRE-CAST MAINTENANCE STRUCTURE AND CATCH BASIN ADJUSTERS TO BE USED IN LIEU OF BRICKING. PARGE ADJUSTING UNITS ON THE OUTSIDE ONLY.
  - SAFETY PLATFORMS SHALL BE PER OPSD 404.02.
  - DROP STRUCTURES SHALL BE IN ACCORDANCE WITH OPSD 1003.01 AND 1003.02, IF APPLICABLE.
  - THE CONTRACTOR IS TO PROVIDE CITY CAMERA INSPECTIONS OF ALL SEWERS INCLUDING PICTORIAL REPORT, ONE (1) CD COPY AND TWO (2) VIDEO RECORDINGS IN A FORMAT ACCEPTABLE TO THE ENGINEER. ALL SEWERS ARE TO BE FLUSHED PRIOR TO CAMERA INSPECTION. ASPHALT WEAR COURSE SHALL NOT BE PLACED UNTIL THE VIDEO INSPECTION OF SEWERS AND NECESSARY REPAIRS HAVE BEEN COMPLETED TO THE SATISFACTION OF THE ENGINEER.
  - CONTRACTOR SHALL PERFORM LEAKAGE TESTING, IN THE PRESENCE OF THE CONSULTANT, FOR SANITARY SEWERS IN ACCORDANCE WITH OPSD 410 AND OPSD 407. CONTRACTOR SHALL PERFORM VIDEO INSPECTION OF ALL SEWERS. A COPY OF THE VIDEO AND INSPECTION REPORT SHALL BE SUBMITTED TO THE CONSULTANT FOR REVIEW AND APPROVAL PRIOR TO PROCEEDMENT OF WEAR COURSE ASPHALT.
  - FROST PROTECTION RECOMMENDATIONS FOR STORM SEWERS WITH LESS THAN 1.5m AND SANITARY SEWERS WITH LESS THAN 1.8m FROM GROUND SURFACE TO PIPE OVERTO TO BE PROVIDED BY GEOTECHNICAL ENGINEER.
- SANITARY**
- ALL SANITARY SEWER INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE CITY OF OTTAWA AND THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS).
  - ALL SANITARY GRAVITY SEWER SHALL BE PVC SDR 35, IPEX "RING-TITE" (OR APPROVED EQUIVALENT) PER CSA STANDARD B182.2 OR LATEST AMENDMENT, UNLESS SPECIFIED OTHERWISE.
  - EXISTING MAINTENANCE STRUCTURES TO BE RE-BEDDING WHERE A NEW CONNECTION IS MADE.
  - SANITARY GRAVITY SEWER TRENCH AND BEDDING SHALL BE PER CITY OF OTTAWA STD. 56 AND 57, CLASS 'B' BEDDING, UNLESS SPECIFIED OTHERWISE.
  - SANITARY MAINTENANCE STRUCTURE FRAME AND COVERS SHALL BE PER CITY OF OTTAWA STD. 524 AND 525.
  - SANITARY MAINTENANCE STRUCTURES SHALL BE BENCHED PER OPSD 701.021.
- STORM**
- ALL REINFORCED CONCRETE STORM SEWER PIPE SHALL BE IN ACCORDANCE WITH CSA A257.2, OR LATEST AMENDMENT. ALL NON-REINFORCED CONCRETE STORM SEWER PIPE SHALL BE IN ACCORDANCE WITH CSA A257.1, OR LATEST AMENDMENT. PIPE SHALL BE JOINED WITH STD. RUBBER GASKETS AS PER CSA A257.3, OR LATEST AMENDMENT.
  - ALL STORM SEWER TRENCH AND BEDDING SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. 56 AND 57 CLASS 'B' UNLESS OTHERWISE SPECIFIED. BEDDING AND COVER MATERIAL SHALL BE SPECIFIED BY GEOTECHNICAL ENGINEER.
  - ALL PVC STORM SEWERS ARE TO BE SDR 35 APPROVED PER C.S.A. B182.2 OR LATEST AMENDMENT, UNLESS OTHERWISE SPECIFIED.
  - CATCH BASINS SHALL BE IN ACCORDANCE WITH OPSD 705.01.
  - CATCH BASIN LEADS SHALL BE 200MM DIA. AT 1% SLOPE (MIN) UNLESS SPECIFIED OTHERWISE.
  - ALL CATCH BASINS SHALL HAVE ROOMA SUMP, UNLESS SPECIFIED OTHERWISE.
  - ALL CATCH BASIN LEAD INVERTS TO BE 1.5m BELOW FINISHED GRADE UNLESS SPECIFIED OTHERWISE.
  - THE STORM SEWER CLASSES HAVE BEEN DESIGNATED BASED ON BEDDING CONDITIONS SPECIFIED ABOVE, WHERE THE SPECIFIED TRENCH WIDTH IS EXCEEDED, THE CONTRACTOR IS REQUIRED TO PROVIDE AND SHALL BE RESPONSIBLE FOR EXTRA TEMPORARY AND/OR PERMANENT REPAIRS MADE NECESSARY BY THE MODIFIED TRENCH.
  - PERFORATED SUBDRAIN FOR ROAD AND PARKING LOT CATCH BASIN SHALL BE PER CITY STD R1 AND GEOTECHNICAL RECOMMENDATIONS UNLESS OTHERWISE NOTED.
  - PERFORATED SUBDRAIN FOR REAR YARD AND LANDSCAPING APPLICATIONS SHALL BE INSTALLED PER CITY STD S29, S30, AND S31, WHERE APPLICABLE.
  - RO-TRAP TREATMENT FOR SEWER AND CULVERT OUTLETS SHALL BE PER OPSD 810.01.
  - ALL STORM SEWERS / CULVERTS TO BE INSTALLED WITH FROST TREATMENT PER OPSD 803.031 WHERE APPLICABLE.
  - STORM MAINTENANCE STRUCTURE FRAME AND COVERS SHALL BE PER CITY OF OTTAWA STD S25 AND S24, UNLESS OTHERWISE NOTED.
  - CATCH BASIN FRAME AND COVER SHALL BE PER OPSD 400.02 AND CITY STD 519.1, UNLESS OTHERWISE NOTED.

PROPOSED 150mm WATER SERVICE 'A'

STATION	FINISHED GROUND	TOP OF WATERMAIN	DESCRIPTION
0+000.00	55.03	52.83	CONNECT TO EXISTING WM
0+001.16	55.06	52.66	45° VERTICAL BEND
0+001.40	55.07	52.87	45° VERTICAL BEND
0+002.40	55.09	52.87	DEFLECT WTR SERVICE PER CITY STD W25.2
0+004.60	55.22	53.21	DEFLECT WTR SERVICE PER CITY STD W25.2
0+006.45	55.18	53.21	45° VERTICAL BEND
0+006.71	55.17	52.77	45° VERTICAL BEND
0+014.95	55.49	53.09	150Ø V&B
0+015.33	55.50	53.10	CONNECTION TO PROP. BLDG

PROPOSED 150mm WATER SERVICE 'B'

STATION	FINISHED GROUND	TOP OF WATERMAIN	DESCRIPTION
0+000.00	55.85	53.45	CONNECT TO EXISTING WM
0+006.21	55.08	53.68	150Ø V&B
0+006.40	56.10	53.70	CONNECTION TO PROP. BLDG

PROJECT No21-1239

REVIEWED BY

**SITE SERVICING PLAN**  
**989 SOMERSET STREET** © DSEL

TAGGART REALTY MANAGEMENT  
 708-225 Metcalfe Street  
 Ottawa, Ontario, K2P 1P9

**DSEL**  
 david schaeffer engineering ltd  
 SMART SUBDIVISIONS

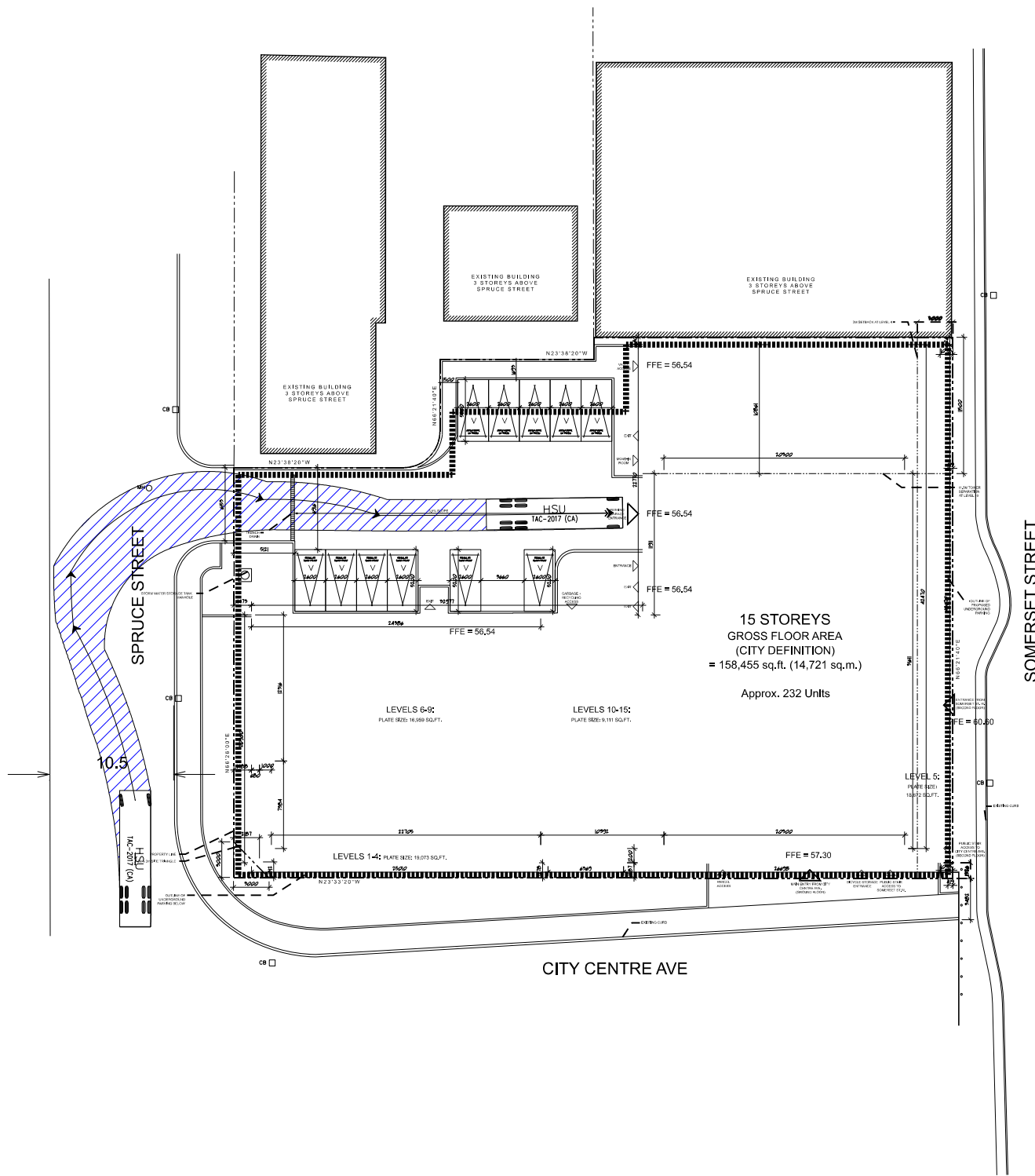
120 Iber Road Unit 103  
 Stittsville, Ontario, K2S 1E9  
 Tel. (613) 836-0856  
 Fax. (613) 836-7183  
 www.DSEL.ca

DRAWN BY: B.N.C. CHECKED BY: A.D.F. DRAWING NO. SHEET NO.  
 DESIGNED BY: B.N.C. CHECKED BY: A.D.F.  
 SCALE: 1:200 DATE: JUNE 2021 **SSP-1** 3 of 4

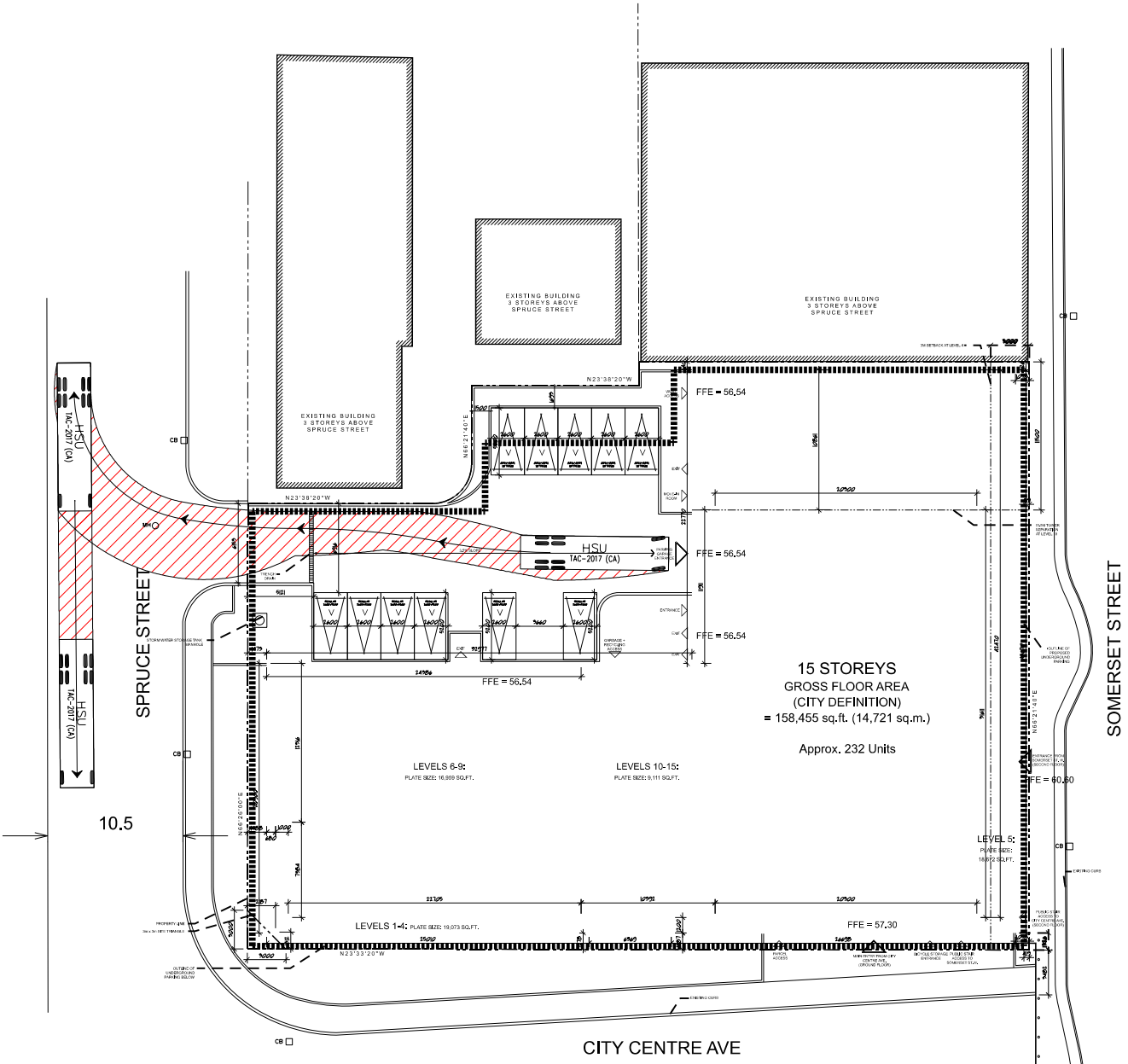
# Appendix B

Waste Vehicle Turning Movements

---







# Appendix C

TDM Measures, Infrastructure and Design Checklist

---

## TDM-Supportive Development Design and Infrastructure Checklist: *Residential Developments (multi-family or condominium)*

<b>Legend</b>	
<b>REQUIRED</b>	The Official Plan or Zoning By-law provides related guidance that must be followed
<b>BASIC</b>	The measure is generally feasible and effective, and in most cases would benefit the development and its users
<b>BETTER</b>	The measure could maximize support for users of sustainable modes, and optimize development performance

TDM-supportive design & infrastructure measures: <i>Residential developments</i>		Check if completed & add descriptions, explanations or plan/drawing references
<b>1. WALKING &amp; CYCLING: ROUTES</b>		
<b>1.1 Building location &amp; access points</b>		
<b>BASIC</b>	1.1.1 Locate building close to the street, and do not locate parking areas between the street and building entrances	<input checked="" type="checkbox"/> <i>Building fronting City Center and Somerset Street</i>
<b>BASIC</b>	1.1.2 Locate building entrances in order to minimize walking distances to sidewalks and transit stops/stations	<input checked="" type="checkbox"/> <i>Building fronting City Center and Somerset Street</i>
<b>BASIC</b>	1.1.3 Locate building doors and windows to ensure visibility of pedestrians from the building, for their security and comfort	<input checked="" type="checkbox"/> <i>Modern design building with windows</i>
<b>1.2 Facilities for walking &amp; cycling</b>		
<b>REQUIRED</b>	1.2.1 Provide convenient, direct access to stations or major stops along rapid transit routes within 600 metres; minimize walking distances from buildings to rapid transit; provide pedestrian-friendly, weather-protected (where possible) environment between rapid transit accesses and building entrances; ensure quality linkages from sidewalks through building entrances to integrated stops/stations <i>(see Official Plan policy 4.3.3)</i>	<input checked="" type="checkbox"/> <i>Various paved alternatives to transit exist, including the Trillium Pathway, sidewalks on City Centre Avenue to Bayview Station or paved sidewalks on Somerset St W to on-street bus routes.</i>
<b>REQUIRED</b>	1.2.2 Provide safe, direct and attractive pedestrian access from public sidewalks to building entrances through such measures as: reducing distances between public sidewalks and major building entrances; providing walkways from public streets to major building entrances; within a site, providing walkways along the front of adjoining buildings, between adjacent buildings, and connecting areas where people may congregate, such as courtyards and transit stops; and providing weather protection through canopies, colonnades, and other design elements wherever possible <i>(see Official Plan policy 4.3.12)</i>	<input checked="" type="checkbox"/> <i>Pedestrian connectivity proposed to City Centre Avenue on the ground floor and to Somerset St W via the 2<sup>nd</sup> floor on a connecting walkway.</i>

TDM-supportive design & infrastructure measures: <i>Residential developments</i>		Check if completed & add descriptions, explanations or plan/drawing references
REQUIRED	1.2.3 Provide sidewalks of smooth, well-drained walking surfaces of contrasting materials or treatments to differentiate pedestrian areas from vehicle areas, and provide marked pedestrian crosswalks at intersection sidewalks (see <i>Official Plan policy 4.3.10</i> )	<input checked="" type="checkbox"/> Sidewalks to be built to meet City Standards.
REQUIRED	1.2.4 Make sidewalks and open space areas easily accessible through features such as gradual grade transition, depressed curbs at street corners and convenient access to extra-wide parking spaces and ramps (see <i>Official Plan policy 4.3.10</i> )	<input checked="" type="checkbox"/> Sidewalks to be built to meet City Standards.
REQUIRED	1.2.5 Include adequately spaced inter-block/street cycling and pedestrian connections to facilitate travel by active transportation. Provide links to the existing or planned network of public sidewalks, multi-use pathways and on-road cycle routes. Where public sidewalks and multi-use pathways intersect with roads, consider providing traffic control devices to give priority to cyclists and pedestrians (see <i>Official Plan policy 4.3.11</i> )	<input checked="" type="checkbox"/> Building will connect to existing infrastructure on Somerset St W and proposes a new sidewalk fronting the development.
BASIC	1.2.6 Provide safe, direct and attractive walking routes from building entrances to nearby transit stops	<input checked="" type="checkbox"/> Refer to comments for 1.2.1 and 1.2.2
BASIC	1.2.7 Ensure that walking routes to transit stops are secure, visible, lighted, shaded and wind-protected wherever possible	<input checked="" type="checkbox"/> Street lighting already exists on adjacent roads.
BASIC	1.2.8 Design roads used for access or circulation by cyclists using a target operating speed of no more than 30 km/h, or provide a separated cycling facility	<input type="checkbox"/> grade separated Trillium MUP located approximately 150 m away
<b>1.3 Amenities for walking &amp; cycling</b>		
BASIC	1.3.1 Provide lighting, landscaping and benches along walking and cycling routes between building entrances and streets, sidewalks and trails	<input type="checkbox"/>
BASIC	1.3.2 Provide wayfinding signage for site access (where required, e.g. when multiple buildings or entrances exist) and egress (where warranted, such as when directions to reach transit stops/stations, trails or other common destinations are not obvious)	<input type="checkbox"/>

TDM-supportive design & infrastructure measures: <i>Residential developments</i>		Check if completed & add descriptions, explanations or plan/drawing references
<b>2. WALKING &amp; CYCLING: END-OF-TRIP FACILITIES</b>		
<b>2.1 Bicycle parking</b>		
REQUIRED	2.1.1 Provide bicycle parking in highly visible and lighted areas, sheltered from the weather wherever possible (see <i>Official Plan policy 4.3.6</i> )	<input checked="" type="checkbox"/> <i>Bike parking to be located underground and at grade (interior).</i>
REQUIRED	2.1.2 Provide the number of bicycle parking spaces specified for various land uses in different parts of Ottawa; provide convenient access to main entrances or well-used areas (see <i>Zoning By-law Section 111</i> )	<input checked="" type="checkbox"/> <i>rate of 0.81 bike parking per unit, exceeding minimum of 0.5. Can be accessed via elevators.</i>
REQUIRED	2.1.3 Ensure that bicycle parking spaces and access aisles meet minimum dimensions; that no more than 50% of spaces are vertical spaces; and that parking racks are securely anchored (see <i>Zoning By-law Section 111</i> )	<input checked="" type="checkbox"/> <i>bike parking to meet or exceed parking regulations.</i>
BASIC	2.1.4 Provide bicycle parking spaces equivalent to the expected number of resident-owned bicycles, plus the expected peak number of visitor cyclists	<input type="checkbox"/>
<b>2.2 Secure bicycle parking</b>		
REQUIRED	2.2.1 Where more than 50 bicycle parking spaces are provided for a single residential building, locate at least 25% of spaces within a building/structure, a secure area (e.g. supervised parking lot or enclosure) or bicycle lockers (see <i>Zoning By-law Section 111</i> )	<input checked="" type="checkbox"/> <i>bike parking to meet or exceed parking regulations.</i>
BETTER	2.2.2 Provide secure bicycle parking spaces equivalent to at least the number of units at condominiums or multi-family residential developments	<input type="checkbox"/>
<b>2.3 Bicycle repair station</b>		
BETTER	2.3.1 Provide a permanent bike repair station, with commonly used tools and an air pump, adjacent to the main bicycle parking area (or secure bicycle parking area, if provided)	<input type="checkbox"/>
<b>3. TRANSIT</b>		
<b>3.1 Customer amenities</b>		
BASIC	3.1.1 Provide shelters, lighting and benches at any on-site transit stops	<input type="checkbox"/>
BASIC	3.1.2 Where the site abuts an off-site transit stop and insufficient space exists for a transit shelter in the public right-of-way, protect land for a shelter and/or install a shelter	<input type="checkbox"/>
BETTER	3.1.3 Provide a secure and comfortable interior waiting area by integrating any on-site transit stops into the building	<input type="checkbox"/>

TDM-supportive design & infrastructure measures: <i>Residential developments</i>		Check if completed & add descriptions, explanations or plan/drawing references
<b>4. RIDESHARING</b>		
<b>4.1 Pick-up &amp; drop-off facilities</b>		
BASIC	4.1.1 Provide a designated area for carpool drivers (plus taxis and ride-hailing services) to drop off or pick up passengers without using fire lanes or other no-stopping zones	<input type="checkbox"/>
<b>5. CARSHARING &amp; BIKESHARING</b>		
<b>5.1 Carshare parking spaces</b>		
BETTER	5.1.1 Provide up to three carshare parking spaces in an R3, R4 or R5 Zone for specified residential uses (see <i>Zoning By-law Section 94</i> )	<input type="checkbox"/>
<b>5.2 Bikeshare station location</b>		
BETTER	5.2.1 Provide a designated bikeshare station area near a major building entrance, preferably lighted and sheltered with a direct walkway connection	<input type="checkbox"/>
<b>6. PARKING</b>		
<b>6.1 Number of parking spaces</b>		
REQUIRED	6.1.1 Do not provide more parking than permitted by zoning, nor less than required by zoning, unless a variance is being applied for	<input checked="" type="checkbox"/> <i>Parking meets by-law requirements.</i>
BASIC	6.1.2 Provide parking for long-term and short-term users that is consistent with mode share targets, considering the potential for visitors to use off-site public parking	<input checked="" type="checkbox"/> <i>majority of short-term visitor parking is located outdoors, separate from long-term.</i>
BASIC	6.1.3 Where a site features more than one use, provide shared parking and reduce the cumulative number of parking spaces accordingly (see <i>Zoning By-law Section 104</i> )	<input type="checkbox"/>
BETTER	6.1.4 Reduce the minimum number of parking spaces required by zoning by one space for each 13 square metres of gross floor area provided as shower rooms, change rooms, locker rooms and other facilities for cyclists in conjunction with bicycle parking (see <i>Zoning By-law Section 111</i> )	<input type="checkbox"/>
<b>6.2 Separate long-term &amp; short-term parking areas</b>		
BETTER	6.2.1 Provide separate areas for short-term and long-term parking (using signage or physical barriers) to permit access controls and simplify enforcement (i.e. to discourage residents from parking in visitor spaces, and vice versa)	<input type="checkbox"/>

**TDM Measures Checklist:**  
*Residential Developments (multi-family, condominium or subdivision)*

<b>Legend</b>	
<b>BASIC</b>	The measure is generally feasible and effective, and in most cases would benefit the development and its users
<b>BETTER</b>	The measure could maximize support for users of sustainable modes, and optimize development performance
<b>*</b>	The measure is one of the most dependably effective tools to encourage the use of sustainable modes

TDM measures: <i>Residential developments</i>		Check if proposed & add descriptions
<b>1. TDM PROGRAM MANAGEMENT</b>		
<b>1.1 Program coordinator</b>		
<b>BASIC</b>	<b>*</b> 1.1.1 Designate an internal coordinator, or contract with an external coordinator	<input type="checkbox"/>
<b>1.2 Travel surveys</b>		
<b>BETTER</b>	1.2.1 Conduct periodic surveys to identify travel-related behaviours, attitudes, challenges and solutions, and to track progress	<input type="checkbox"/>
<b>2. WALKING AND CYCLING</b>		
<b>2.1 Information on walking/cycling routes &amp; destinations</b>		
<b>BASIC</b>	2.1.1 Display local area maps with walking/cycling access routes and key destinations at major entrances ( <i>multi-family, condominium</i> )	<input checked="" type="checkbox"/> <b>To be provided at main entries</b>
<b>2.2 Bicycle skills training</b>		
<b>BETTER</b>	2.2.1 Offer on-site cycling courses for residents, or subsidize off-site courses	<input type="checkbox"/>

TDM measures: Residential developments		Check if proposed & add descriptions
<b>3. TRANSIT</b>		
<b>3.1 Transit information</b>		
BASIC	3.1.1 Display relevant transit schedules and route maps at entrances ( <i>multi-family, condominium</i> )	<input checked="" type="checkbox"/> <b>To be provided at main entries</b>
BETTER	3.1.2 Provide real-time arrival information display at entrances ( <i>multi-family, condominium</i> )	<input type="checkbox"/>
<b>3.2 Transit fare incentives</b>		
BASIC	* 3.2.1 Offer PRESTO cards preloaded with one monthly transit pass on residence purchase/move-in, to encourage residents to use transit	<input type="checkbox"/> Not to be offered at this time
BETTER	3.2.2 Offer at least one year of free monthly transit passes on residence purchase/move-in	<input type="checkbox"/>
<b>3.3 Enhanced public transit service</b>		
BETTER	* 3.3.1 Contract with OC Transpo to provide early transit services until regular services are warranted by occupancy levels ( <i>subdivision</i> )	<input type="checkbox"/>
<b>3.4 Private transit service</b>		
BETTER	3.4.1 Provide shuttle service for seniors homes or lifestyle communities (e.g. scheduled mall or supermarket runs)	<input type="checkbox"/>
<b>4. CARSHARING &amp; BIKESHARING</b>		
<b>4.1 Bikeshare stations &amp; memberships</b>		
BETTER	4.1.1 Contract with provider to install on-site bikeshare station ( <i>multi-family</i> )	<input type="checkbox"/>
BETTER	4.1.2 Provide residents with bikeshare memberships, either free or subsidized ( <i>multi-family</i> )	<input type="checkbox"/>
<b>4.2 Carshare vehicles &amp; memberships</b>		
BETTER	4.2.1 Contract with provider to install on-site carshare vehicles and promote their use by residents	<input checked="" type="checkbox"/> Ride Share stall(s) to be provided
BETTER	4.2.2 Provide residents with carshare memberships, either free or subsidized	<input type="checkbox"/>
<b>5. PARKING</b>		
<b>5.1 Priced parking</b>		
BASIC	* 5.1.1 Unbundle parking cost from purchase price ( <i>condominium</i> )	<input type="checkbox"/>
BASIC	* 5.1.2 Unbundle parking cost from monthly rent ( <i>multi-family</i> )	<input checked="" type="checkbox"/> <b>Residential costs to be unbundled</b>



TDM measures: <i>Residential developments</i>		Check if proposed & add descriptions
<b>6. TDM MARKETING &amp; COMMUNICATIONS</b>		
<b>6.1 Multimodal travel information</b>		
<b>BASIC</b>	* 6.1.1 Provide a multimodal travel option information package to new residents	<input checked="" type="checkbox"/> <i>To be provided on move-in</i>
<b>6.2 Personalized trip planning</b>		
<b>BETTER</b>	* 6.2.1 Offer personalized trip planning to new residents	<input type="checkbox"/>

# Appendix D

MMLOS Table

---

**Multi-Modal Level of Service - Intersections Form**

Consultant	<b>Parsons</b>
Scenario	<b>989 Somerset St. W</b>
Comments	

Project	<b>477039 - 01000</b>
Date	<b>27-Jul-22</b>

Unlocked Rows for Replicating

INTERSECTIONS														
Crossing Side		Albert / City Centre												
		NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	
Pedestrian	Lanes	4	5	6	6									
	Median	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m									
	Conflicting Left Turns	Protected/ Permissive	Permissive	Permissive	Permissive									
	Conflicting Right Turns	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control									
	Right Turns on Red (RTor) ?	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed									
	Ped Signal Leading Interval?	No	No	No	No									
	Right Turn Channel	No Channel	No Channel	No Channel	No Channel									
	Corner Radius	10-15m	10-15m	5-10m	10-15m									
	Crosswalk Type	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings									
	<b>PETSI Score</b>		<b>56</b>	<b>40</b>	<b>24</b>	<b>23</b>								
	<b>Ped. Exposure to Traffic LoS</b>		<b>D</b>	<b>E</b>	<b>F</b>	<b>F</b>	-	-	-	-	-	-	-	-
	Cycle Length	120	120	120	120									
Effective Walk Time	21	21	23	23										
<b>Average Pedestrian Delay</b>		<b>41</b>	<b>41</b>	<b>39</b>	<b>39</b>	<b>38</b>	<b>38</b>	<b>39</b>	<b>39</b>					
<b>Pedestrian Delay LoS</b>		<b>E</b>	<b>E</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	-	-	-	-	
<b>Level of Service</b>		<b>E</b>	<b>E</b>	<b>F</b>	<b>F</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	-	-	-	-	
		<b>F</b>				<b>D</b>				<b>-</b>				
Approach From		NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	
Bicycle	Bicycle Lane Arrangement on Approach		Mixed Traffic	Curb Bike Lane, Cycletrack or MUP	Mixed Traffic									
	Right Turn Lane Configuration		≤ 50 m	Not Applicable	≤ 50 m									
	Right Turning Speed		≤ 25 km/h	Not Applicable	≤ 25 km/h									
	<b>Cyclist relative to RT motorists</b>		-	<b>D</b>	<b>Not Applicable</b>	<b>D</b>	-	-	-	-	-	-	-	-
	<b>Separated or Mixed Traffic</b>		-	<b>Mixed Traffic</b>	<b>Separated</b>	<b>Mixed Traffic</b>	-	-	-	-	-	-	-	-
	Left Turn Approach		No lane crossed	No lane crossed	One lane crossed									
	Operating Speed		> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h									
<b>Left Turning Cyclist</b>		-	<b>C</b>	<b>C</b>	<b>E</b>	-	<b>C</b>	<b>C</b>	<b>C</b>	-	-	-	-	
<b>Level of Service</b>		-	<b>D</b>	<b>C</b>	<b>E</b>	-	-	-	-	-	-	-	-	
		<b>E</b>				<b>-</b>				<b>-</b>				
Transit	Average Signal Delay		≤ 30 sec	≤ 30 sec	≤ 30 sec									
	<b>Level of Service</b>		-	<b>D</b>	<b>D</b>	<b>D</b>	-	-	-	-	-	-	-	-
		<b>D</b>				<b>-</b>				<b>-</b>				
Truck	Effective Corner Radius		10 - 15 m		10 - 15 m									
	Number of Receiving Lanes on Departure from Intersection		≥ 2		1									
	<b>Level of Service</b>		-	<b>B</b>	-	<b>E</b>	-	-	-	-	-	-	-	-
		<b>E</b>				<b>-</b>				<b>-</b>				
Auto	Volume to Capacity Ratio													
	<b>Level of Service</b>		<b>-</b>				<b>-</b>				<b>-</b>			

# Multi-Modal Level of Service - Segments Form

Consultant	<b>Parsons</b>
Scenario	<b>989 Somerset St. W</b>
Comments	

Project	<b>477039 - 01000</b>
Date	<b>27-Jul-22</b>

SEGMENTS	Street A	City Centre	City Centre	Somerset	Spruce	Section	Section	Section	Section	Section	
		West Side	East Side	Both Sides	Both Sides	5	6	7	8	9	
<b>Pedestrian</b>	Sidewalk Width	no sidewalk	≥ 2 m	≥ 2 m	≥ 2 m						
	Boulevard Width	n/a	< 0.5	< 0.5	< 0.5						
	Avg Daily Curb Lane Traffic Volume	≤ 3000	≤ 3000	> 3000	≤ 3000						
	Operating Speed	> 50 to 60 km/h	> 50 to 60 km/h	> 50 to 60 km/h	> 50 to 60 km/h						
	On-Street Parking	yes	yes	yes	yes						
	<b>Exposure to Traffic PLoS</b>	<b>-</b>	<b>F</b>	<b>C</b>	<b>D</b>	<b>C</b>	-	-	-	-	-
	Effective Sidewalk Width										
	Pedestrian Volume										
<b>Crowding PLoS</b>		-	-	-	-	-	-	-	-	-	
<b>Level of Service</b>		-	-	-	-	-	-	-	-	-	
<b>Bicycle</b>	Type of Cycling Facility	Mixed Traffic	Mixed Traffic	Parking beside Bike Lane	Mixed Traffic						
	Number of Travel Lanes	≤ 2 (no centreline)	≤ 2 (no centreline)	1 each direction	≤ 2 (no centreline)						
	Operating Speed	≥ 50 to 60 km/h	≥ 50 to 60 km/h	>50 to <70 km/h	≥ 50 to 60 km/h						
	<b># of Lanes &amp; Operating Speed LoS</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	-	-	-	-	-	
	Bike Lane (+ Parking Lane) Width			≤ 4 m biking + parking width							
	<b>Bike Lane Width LoS</b>	-	-	<b>C</b>	-	-	-	-	-	-	
	Bike Lane Blockages			Rare							
	<b>Blockage LoS</b>	-	-	<b>A</b>	-	-	-	-	-	-	
	Median Refuge Width (no median = < 1.8 m)	< 1.8 m refuge	< 1.8 m refuge	< 1.8 m refuge	< 1.8 m refuge						
	No. of Lanes at Unsignalized Crossing	≤ 3 lanes	≤ 3 lanes	≤ 3 lanes	≤ 3 lanes						
	Sidestreet Operating Speed	>50 to 60 km/h	>50 to 60 km/h	>50 to 60 km/h	>50 to 60 km/h						
<b>Unsignalized Crossing - Lowest LoS</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	-	-	-	-	-		
<b>Level of Service</b>		<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	-	-	-	-		
<b>Transit</b>	Facility Type			Mixed Traffic							
	Friction or Ratio Transit:Posted Speed			Vt/Vp ≥ 0.8							
	<b>Level of Service</b>		-	-	<b>D</b>	-	-	-	-	-	
<b>Truck</b>	Truck Lane Width			≤ 3.5 m							
	Travel Lanes per Direction			1							
	<b>Level of Service</b>		-	-	<b>C</b>	-	-	-	-	-	