Servicing and Stormwater Report

Site Plan Control
Building Renovation Design
360 Laurier Avenue, Ottawa ON

Prepared for:

CLV Developments in Trust
485 Bank Street, Suite 200
Ottawa, ON, K2J 1Z2

Attention: Josie Tavares

LRL File No.: 220868

May 8th , 2023

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1 INTRODUCTION AND SITE DESCRIPTION

LRL Associates Ltd. was retained by CLV Developments In Trust to complete a Stormwater Management Analysis and Servicing Brief for the conversion of a high rise office building into a residential apartment building. The subject building spans over two (2) lots. The existing office building proposed for conversion is an eleven (11) storey high rise building with five (5) levels of underground parking. The site location is legally described as Lots 28 and 29, Registered Plan 2996 in the City of Ottawa. The subject lot is zoned MD S25 (Mixed-Use Downtown Zone).

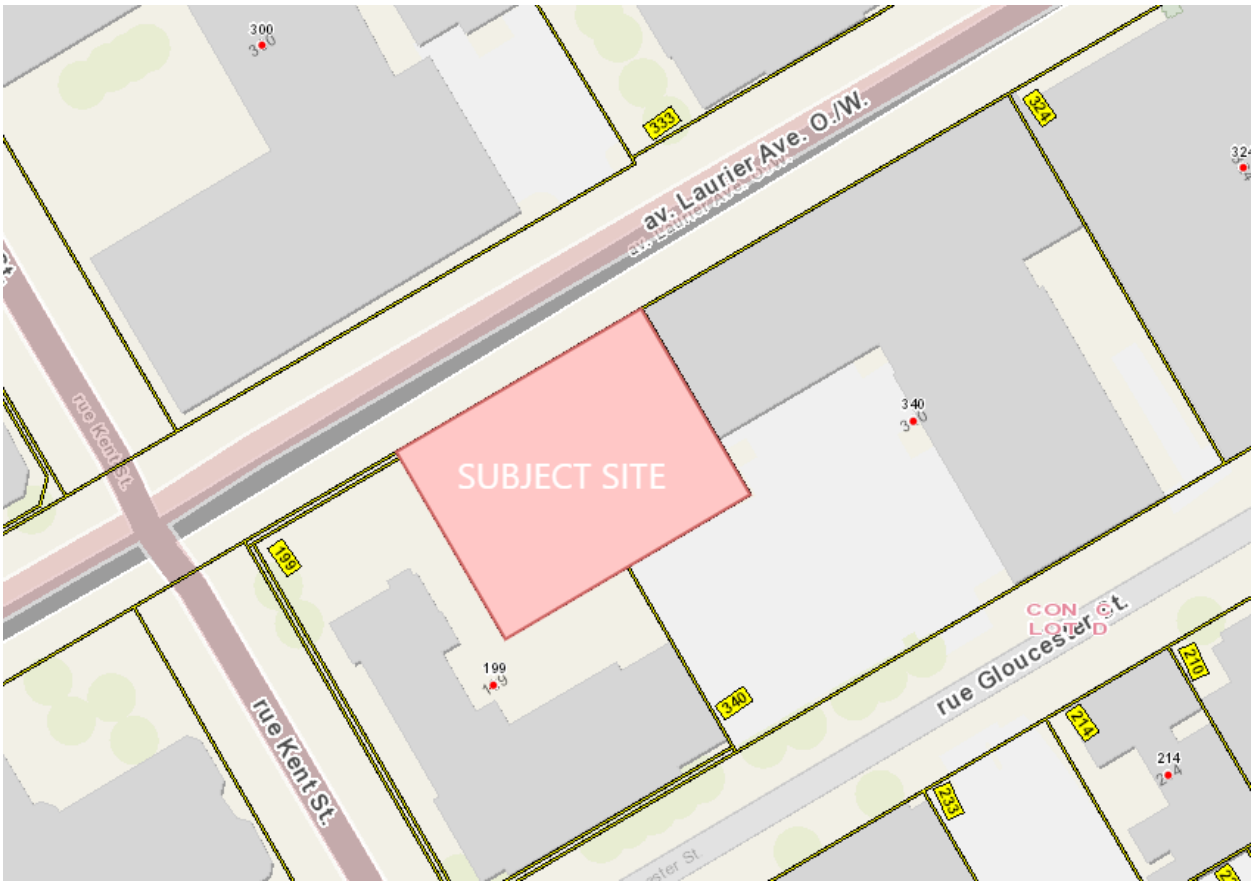

Figure 1: Aerial View of Subject Lands

The subject development boundary measures approximately 40.5m in frontage along Laurier Avenue and has a depth of approximately 31m. Based on locations of the existing property line, the total site area is approximately **0.12 ha**.

The existing building envelope will remain in existing conditions and the interior of the building will be renovated to include 139 dwelling units. Alterations will be made to the front entrance of the building envelope to alter the current set of stairs. The building is also proposed to include 1,115.55m^2 of amenity space. Refer to the ***Site Plan*** from Linebox Studio included in ***Appendix F*** for more details***.***

This report has been prepared in consideration of the terms and conditions noted above and with the civil drawings prepared for the new development. Should there be any changes in the design

features, which may relate to the stormwater and servicing considerations, LRL Associates Ltd. should be advised to review the report recommendations.

2 Existing Site and Drainage Description

The subject site measures **0.12 ha** and currently consists of an eleven-storey office high rise building with five levels of underground parking. There is one existing vehicular entrance to the undergoing parkade via Laurier Avenue. The existing building currently covers the majority of the site. Elevations at the building along Laurier Avenue range between 73.25m and 73.42. The sidewalk along Laurier Avenue slopes away from the building and towards Laurier Avenue.

Sewer and watermain mapping, along with as-built information collected from the City of Ottawa indicate the following existing infrastructure located within the adjacent right-of-ways:

Laurier Avenue:

- 450mm CONC storm sewer
- 375mm CONC sanitary sewer
- 305mm DI watermain

3 Scope of Work

As per applicable guidelines, the scope of work includes the following:

Stormwater management

- Calculate the anticipated post-development stormwater release rates for the 5-Year and 100-Year storms and confirm that release rates will not increase in post-development conditions.

Water services

- Calculate the expected water supply demand at average and peak conditions.
- Calculate the required fire flow as per the Fire Underwriters Survey (FUS) method.
- Confirm the adequacy of water supply and pressure during peak flow and fire flow.
- Describe the proposed water distribution network and connection to the existing system.

Sanitary services

- Describe the existing sanitary sewers available to receive wastewater from the building.
- Calculate peak flow rates from the development.
- Describe the proposed sanitary sewer system.
- Review impact of increased sanitary flow on downstream sanitary sewer.

4 REGULATORY APPROVALS

An MECP Environmental Compliance Approval is not expected to be required for installation of the proposed storm and sanitary sewers within the site. A Permit to Take Water is not anticipated to be required for pumping requirements for sewer installation. No other approval requirements from other regulatory agencies are anticipated.

5 WATER SUPPLY AND FIRE PROTECTION

5.1 Existing Water Supply Services and Fire Hydrant Coverage

The subject property lies within the City of Ottawa 1W water distribution network pressure zone. There is an existing 305 mm DI watermain within Laurier Avenue W. There are currently at least four (4) existing fire hydrants within proximity to the subject property. Refer to ***Appendix B*** for the location of fire hydrants.

5.2 Water Supply Servicing Design

According to the City of Ottawa Water Distribution Guidelines (Technical Bulletin ISDTB-2014-02), since the subject site is anticipated to house more than 50 residential units, it is required to be serviced by two water service laterals, separated by an isolation valve, for redundancy and to avoid the creation of a vulnerable service area. Additionally, considering the presence of an automatic sprinkler system inside the building and a recommended size to service the sprinkler system, the subject property is proposed to be serviced via two (2) 150 mm diameter service laterals connected to the existing 305mm DI watermain within Laurier Avenue W.

The current site appears to be serviced by a 150mm water service that connects to the 305mm DI watermain located within Laurier Avenue. Additionally, based on the City's mapping there appears to be a 150mm water service connected to the 203mm DI watermain located within Gloucester Avenue; however, upon further site review this has not been located.

Due to the unknown condition of the existing connections and the complexity of determining their current condition for usability, it is our recommendation that these services be abandoned and to install two new services along Laurier Avenue. In addition, due to the expected age and material of the existing service connections, there is a high potential for buildup along the inside diameter of the pipes. This buildup could have an impact on the functional serviceability of the connections to provide required pressures for the building water demands. Refer to *Site Servicing Plan* C.401 in ***Appendix E*** for servicing layout and connection points.

Shall the condition of the existing water service be further examined, or the lateral from Gloucester Avenue be located during selective demolition in the construction phase for the building renovation, a review of the condition could take place to further determine if the existing connections are in acceptable condition to support the residential use.

We have analyzed the water demand requirements for the proposed 11-storey redevelopment. The residential water demands, and anticipated population were determined using Appendix 4-A, Table 4.1 and Table 4.2 from the *City of Ottawa Water Distribution Design Guidelines* and Table 3-3 from the *MOE Design Guidelines for Drinking Water Systems*.

Through reviewing the architectural floor plans, it was determined that the building will have a total combined aboveground floorspace of approximately **9,650 m²**, **139** residential units and **1170 m²** of amenity space.

The water supply requirements for the residential units and commercial space in the proposed development have been calculated using the following formulas:

$$Q = (q \times P \times M), \text{ for the residential and}$$
$$Q = (q \times A \times M), \text{ for the commercial space.}$$

Where:
q = average water consumption (L/capita/day) or (L/ha/day)
P = design population (capita)
M = Peak factor
A = area (ha)

Residential Demands

The proposed building will include **40** one-bedroom units, **40** studio units and **59** two-bedroom units. Based on the City of Ottawa Design guidelines for population projection, this translates to approximately **243.9** residents. *Table 1* below summarizes the proposed residential population count as interpreted using Table 4-1 from the *City of Ottawa Water Distribution Design Guideline.*

Table 1: Development Residential Population Estimate

Proposed Unit Type	Persons Per Unit	Number of Units	Total Population
1 Bedroom	1.4	20	28.0
1 Bedroom + Den	1.8	20	36.0
Studio	1.4	40	56.0
2 Bedroom	2.1	40	84.0
2 Bedroom + Den	2.1	19	39.9
	Total	**139**	**243.9**

With reference to *Table 4.1 of the City of Ottawa Water Distribution Design Guidelines*, an average water consumption rate of 280 L/c/d was used. With reference to Table 3-3 of the MOE *Design Guidelines for Drinking Water Systems* a Maximum Daily Demand Factor and Maximum Hour Demand Factor were calculated to be approximately 3.9 and 5.9*,* respectively. The anticipated residential demands were calculated as follows:

- Average daily domestic water demand is **0.79 L/s**,
- Maximum daily demand is **3.11 L/s**, and
- Maximum hourly demand is **4.65 L/s**.

Commercial/Amenity Demands

Appendix 4-A and *Table 4.2 of the City of Ottawa Water Distribution Design Guidelines* were used to determine the consumption rates and peak factors of the commercial/amenity spaces. A water consumption rate of 28,000L/ha/d was used to calculate water demands. The Maximum Daily

Demand Factor and the Maximum Hourly Demand Factor were 1.5 and 1.8 respectively. *Table 2* below summarizes the proposed commercial demands.

Table 2: Institutional/ Commercial Demands

Property Type	Unit	Rate	Units	Demand (L/d)
Commercial Space	28,000	L/ha/d	0.117 ha	**3265.5**

Using the peak factors, the anticipated commercial demands were calculated as follows:

- Average daily domestic water demand is **0.038 L/s**,
- Maximum daily demand is **0.057 L/s**, and
- Maximum hourly demand is **0.068 L/s**.

<u>Combined - Residential/Commercial/Amenity</u>

The combined residential and amenity demands for the site are anticipated to equal the following:

- Average daily domestic water demand is **0.83 L/s**,
- Maximum daily demand is **3.17 L/s**, and
- Maximum hourly demand is **4.72L L/s**.

Refer to ***Appendix B*** for water demand calculations.

The City of Ottawa was contacted to obtain boundary conditions associated with the estimated water demand, as indicated in the boundary request correspondence included in ***Appendix B***. *Table 3* below summarizes boundary conditions for the proposed development.

Table 3: Summary of Boundary Conditions

Design Parameter	Anticipated Demand (L/s)	Boundary Conditions @ Laurier Avenue
		Connection 1* (m H2O / kPa)
Average Daily Demand	0.83	107.0 / 354.1
Max Day + Max Fire Flow (per FUS)	3.17 + 216.7	107.5/ 359.0
Peak Hour	4.72	115.6 / 438.5
**Ground Elevation assumed at 70.90 for Connections 1 & 2 @ Laurier Avenue*		

As indicated in Table 3, pressures in all scenarios meet the required pressure range stated in the City of Ottawa Design Guidelines – Water Distribution (Section 4.2.2). Refer to ***Appendix B*** for Boundary Conditions.

The estimated fire flow for the proposed buildings was calculated in accordance with *ISTB-2018-02*. The following parameters were provided by the Architect:

- Type of construction – Non-combustible construction
- Occupancy type – Limited Combustible

- Sprinkler Protection –Fully Automatic Sprinkler System

The fire flow demand was estimated to be **13,000 L/min**, see ***Appendix B*** for details.

There are four (4) existing fire hydrants in proximity to the proposed buildings that are available to provide the required fire flow demands of 13,000 L/min. Refer to ***Appendix B*** for fire hydrant locations. Table 4 below summarizes the aggregate fire flow of the contributing hydrants in proximity to the proposed development based on Table 18.5.4.3 of *ISTB-2018-02*.

Table 4: Fire Protection Summary Table

	Max. Fire Flow Demand (L/min)	Fire Hydrants(s) within 75m	Fire Hydrant(s) within 150m	Available Combined Fire Flow (L/min)
Contemplated Development	13,000	2	2	(2 x 5678) + (2 x 3785) = 18,926

The total available fire flow from contributing hydrants is equal to **18,926 L/min** which is sufficient to provide adequate fire flow for the proposed development. A certified fire protection system specialist will need to be employed to design the building's fire suppression system and confirm the actual fire flow demand.

The proposed water supply design conforms to all relevant City Guidelines and Policies.

6 SANITARY SERVICE

6.1 Existing Sanitary Sewer Services

There is an existing 375mm CONC Sanitary sewer located in Laurier Avenue W. It is anticipated that the contemplated development will be connected to the existing 375mm CONC sanitary sewer located within Laurier Avenue.

6.2 Sanitary Sewer Servicing Design

The proposed development will be serviced via a 150 mm dia. sanitary service connected to the existing 375mm CONC sanitary sewer located within Laurier Avenue W. The current site is being serviced by a 150mm sanitary service that connects to the 375mm CONC sanitary sewer located within Laurier Avenue. As a result of the demands for the building renovation requiring the same diameter of lateral that is currently in place, this can be utilized to support the renovation. However, prior to connecting to the existing lateral, a CCTV must be performed and reviewed (by the project engineer) to ensure that the condition of the sewer is useable and significant lifespan remains to ensure it is acceptable. Shall the condition of the existing 150mm sanitary service be deemed unacceptable, it will be recommended that is it abandoned and a new connection is installed to service the building. Refer to LRL drawing C.401, included in **Appendix D,** for the proposed sanitary servicing.

The parameters used to calculate the anticipated residential sanitary flows are an average population count of 1.4 person per single unit, 2.1 persons per two-bedroom unit, 1.8 persons for

the average unit, a residential daily demand of 280 L/p/day, a residential peaking factor of 3.5 and a total infiltration rate of 0.33 L/s/ha. The parameters used to calculate the anticipated commercial sanitary flows are a daily flow of 28,000L/ha/day and a commercial peaking factor of 1.5. Based on these parameters and a total site area of 0.12 ha, the total anticipated wet wastewater flow was estimated to be **2.86 L/s**. Refer to ***Appendix C*** for the site sanitary sewer design sheet.

7 STORMWATER MANAGEMENT

7.1 Existing Stormwater Infrastructure

The subject property is tributary to the Ottawa River West sub-watershed. Stormwater runoff from the subject property is tributary to the City of Ottawa sewer system as such, approvals for the proposed development within this area are under the approval authority of the City of Ottawa.

In consideration of stormwater analysis, the proposed renovation project located at 360 Laurier Avenue W. will ultimately entail interior building renovations and façade upgrades to convert the existing commercial and office spaces within the building into residential units. Recognizing this, the existing building envelope, and overall site conditions relating to pervious/impervious areas, the post-development runoff coefficients will remain almost consistent with the existing conditions present on site. In post development conditions most of the roof will be used as amenity space. Stormwater will be captured on the roof via roof drains and will flow uncontrolled to City storm sewers within Laurier Avenue W.

The pre-development catchment area was analyzed, and it was concluded that the pre-development weighted runoff coefficient has a value of C=0.9. In post-development conditions, the proposed rooftop will include some landscaped areas (see architectural drawing A2-112), based on this, it was calculated that the post-development weighted runoff coefficient would have a value of C=0.87. Table 5 below summarizes the stormwater characteristics of the site in the pre and post-development conditions.

Table 5: Building Conversion Post to Pre Stormwater Management Statistics

	Existing Site (Current Office/Commercial Use)	Post-Renovation (Residential Apartment Conversion)
Building Footprint (m^2)	1232.00	1232.00
Runoff Coefficient	C = 0.9	C = 0.87
5-Year Release Rate (L/s)	Q = 2.78CIA = 32.14	Q = 2.78CIA = 31.05
100-Year Release Rate (L/s)	Q = 2.78CIA = 55.05	Q = 2.78CIA = 53.22
Direction of Runoff	Towards Laurier Avenue West	Towards Laurier Avenue West

As seen in Table 5 above, the post-development release rates are almost unchanged and are slightly reduced from the existing release rates. The proposed landscaping areas on the rooftop will provide some opportunity for rainwater to infiltrate. As a result, it is expected that during the spring through to the fall, a small reduction in runoff will occur. For the reasons mentioned above, it is understood that there will be no additional stormwater management quantity control requirements.

8 EROSION AND SEDIMENT CONTROL

Best management practices (BMPs) shall be undertaken during the construction phase along Laurier Avenue. Construction works along Laurier Avenue will include abandoning the existing water and sanitary services, the connection and installation dual water service, review of existing sanitary lateral (with potential for new install), the removal of the existing stairs at the primary building entrance location, regrading works, and the removal of existing concrete sidewalk and replacement with pavers. During construction, erosion and sediment controls will be provided primarily via inlet sediment control devices that will be installed in any catch basins and/or manholes in and around the construction area that may be impacted by the construction works.

BMPs aim to minimize soil erosion, sedimentation, and other negative impacts on water quality and natural habitats. Some examples of BMPs for erosion and sediment control are;

- Controlling mud tracking: By means of installing, maintaining, and using stabilized construction entrances and exits at all access locations. Mud matts shall be maintained and cleaned on a regular basis. These could be utilized if construction vehicles are continually accessing one location of the building.
- Inlet sediment control devices: To prevent surface erosion from entering any storm sewer system during construction, filter bags will be placed under grates of nearby catchbasins and structures.
- Manage construction activities: Proper management of construction activities is essential to minimize soil disturbance and sedimentation. This may include controlling runoff from disturbed areas, using proper excavation techniques, and minimizing the amount of time that soil is exposed.
- Implement good housekeeping practices: This includes properly managing and disposing of waste materials, regularly maintaining equipment to prevent leaks and spills, and keeping work areas clean and free of debris.

It's important to note that the specific BMPs used for erosion and sediment control will vary depending on the site conditions and project requirements. Construction and maintenance requirements for erosion and sediment controls are to comply with Ontario Provincial Standard Specification OPSS 577.

9 CONCLUSION

This Servicing and Stormwater Management Report for the building renovation (conversion to residential uses) proposed at 360 Laurier Avenue W presents the rationale and details for the servicing requirements for the subject property.

In accordance with the report objectives, the servicing requirements for the development are summarized below:

Water Service

- The maximum required fire flow was calculated to be **13,000 L/min** using the FUS method.
- There are at least four (4) existing fire hydrants available to service the proposed development. They will provide a combined fire flow of **18,926 L/min** to the site which is acceptable and above the calculated fire flow.
- The current site appears to be serviced by a 150mm water service that connects to the 305mm DI watermain located within Laurier Avenue and mapping shows a 150mm water service connected to the 203mm DI watermain located within Gloucester Avenue. However, further field verification was unable to located the Gloucester Avenue service.
- Due to the age of these existing services and the complexity of determining their current condition for usability, it is our recommendation that these services be abandoned unless located and further reviewed (hydrostatic pressure test, visual observations) and deemed acceptable by project engineer during the selective demolition during the construction phase
- Assuming two new services, the renovated building will be serviced via two (2) 150mm diameter services separated by an isolation valve, that will be connected to the existing 305mm DI watermain within Laurier Avenue W.
- Boundary conditions received from the City of Ottawa indicate that sufficient pressure is available to service the proposed site.

Sanitary Service

- The total calculated wet wastewater flow from the proposed development is **2.86 L/s.**
- The current site appears to be serviced by a 150mm water service that connects to the 375mm CONC watermain located within Laurier Avenue. Due to the age of this service, it is recommended that the service further reviewed prior to the building occupancy. If a CCTV is performed and the existing sanitary service is found to be in good condition and acceptable by the project engineer, the existing service may be used to service the site.
- The proposed development will discharge **2.86 L/s** to the existing 375mm CONC sanitary sewer located within Laurier Avenue W via the existing 150mm PVC sanitary service lateral which will first be reviewed (CCTV) during the selective demolition taking place in the construction phase.

Stormwater Management

- The proposed development will ultimately entail interior building renovations and façade upgrades to convert the existing commercial and office spaces within the building into residential units**.** The post-development release rates will be slightly reduced from the existing release rates as a result of rooftop landscaping proposed.
- Based on communications with the City of Ottawa it is understood that no additional stormwater management quantity controls will be required for the building.

10 REPORT CONDITIONS AND LIMITATIONS

The report conclusions are applicable only to this specific project described in the preceding pages. Any changes, modifications or additions will require a subsequent review by LRL Associates Ltd. to ensure compatibility with the recommendations contained in this document.

If you have any questions or comments, please contact the undersigned.

Prepared by:
LRL Associates Ltd.

Tamara Harb, EIT, SPESC-IT
Civil Designer

Virginia Johnson, P. Eng.
Civil Engineer

APPENDIX A

Pre-consultation / Correspondance

Pre-Application Consultation Meeting Minutes & Preliminary Comments

Property Address: 360 Laurier Avenue
PC2023-0033: Meeting #1

Thursday, February 23rd, 2023, between 1:00PM to 2:15PM via Microsoft Teams

Attendees: Andrew McCreight, Manager, Development Review Central – City of Ottawa
Randolph Wang, Urban Designer – City of Ottawa
John Wu, Infrastructure Project Manager – City of Ottawa
Josiane Gervais, Transportation Project Manager – City of Ottawa
Eric Forhan, Development Review Planner – City of Ottawa
Josie Tavares, CLV Group Developments Inc.
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Mark Crockford, CGH Transportation
Mary Huang, Centretown Community Association – City of Ottawa
Daniela Veisman, Centretown Community Association – City of Ottawa

Regrets: Mike Russett, Parks Planner – City of Ottawa
Mark Richardson, Forestry Planner – City of Ottawa
Sami Rehman, Environmental Planner – City of Ottawa
Emmett Proulx, Transportation – City of Ottawa

Subject Site: 360 Laurier Avenue

Meeting notes & Preliminary Comments:

1. Overview of Proposal (Applicant)

- The applicant proposes to repurpose an existing commercial/ office building for a mix-used building, consisting of 139 dwelling units, including studios, 1-bedroom and 2-bedrooms, ranging in type and size:
    - The applicant proposes to repurpose the ground floor for a mix of retail, residential amenity space and a leasing and administration office (e,g. property management).
    - The applicant proposes to maintain the existing underground parking garage, ramp and parking and loading entrance.

- The proposed development proposes internal garbage collection for the multi-residential use, as well as the retail use.

- The development proposal aims to revitalize the downtown core and increase the local housing stock with rental units. The developer is experienced with these types of conversions and plans to do more projects in the downtown core.

- The proposed development currently requires a (minor) Zoning By-Law Amendment or Minor Variance, as there maybe some zoning compliance issues. For instance, the proposed development does not comply with the minimum zoning requirement for ground floor commercial. An application for Site Plan Control is required.

- City Staff provided their comments and expressed general support for the proposed conversion.

- The Centretown Community Association (CCA) was present to provide their comments, which are attached to this letter.

2. <u>Planning</u>

<u>Relevant Policies:</u>

- **Official Plan:** The subject property is in the "Hub" designation within the Downtown Transect Policy Area. The subject property fronts onto a Mainstreet Corridor (Laurier Avenue). Generally, the Official Plan supports commercial-to-residential conversions to achieve the City's housing targets. The most relevant policies:

    - Section 3.2, Table 3a of the Official Plan provides the large household dwelling targets for sites found within the Hub designation. The target for large household dwellings is 10 percent of all proposed dwellings, with a minimum requirement of 5 percent of all proposed dwellings.

      The definition of large household dwelling is:

      > *Large-household dwellings are units with three or more bedrooms <u>or an equivalent floor area</u> and are typically within ground-oriented built forms.*

    - Section 5.1.1: policies encourage the development of a healthy 15-minute neighbourhood within a highly mixed-use environment, where employment is maintained and increased.

    - Section 6.1.1: policies strongly encourage a mix of uses to locate close to transit stations, including commercial uses on the ground floor of otherwise residential buildings.

    - Schedule C6-A to the Official Plan shows the subject property immediately next to a key viewshed of the City's skyline and significant heritage buildings from the

Alexandra bridge. Schedule C6-B to the Official Plan shows the site outside the angular planes that protect parliament.

- **Secondary Plan:** The proposed development is subject to the policies of the 'Central and East Core' Secondary Plan. The subject property is designated "Downtown Mixed-Use", in the "Core" Character Area. The following should be noted:

  - The policies of the Secondary Plan take precedence.

  - Policy 2.3(4)(a) calls for development to provide active uses along the entire ground floor frontage. In the context of this policy, active uses can include residential uses, provided that they contribute to the activity and animation to the adjacent public realm.

    Please note: in the context of this policy, offices are considered uses which do not contribute to activity and animation to the public realm and should be located away from the building's frontage. However, the proposed "retail leasing office" would qualify as an active use, as it is not technically an office use as defined in the zoning by-law, has an active entrance and will be inviting to the public realm and building users.

  - Policy 4.3.2(6) calls for development to provide continuous active frontages and active uses along streets.

Zoning By-Law 2008-250

- The subject property is zoned Mixed Use Downtown Zone, Schedule '25' (MD S25). The proposed change of use requires a review of the permitted uses and zone standards. Relevant provisions:

  - The proposed retail space and apartment dwelling, high-rise are listed as permitted uses under Section 193(1).

  - Section 193(2) requires: *"at least 50% of the ground floor of any building must be occupied by one or more of the following uses subject to:*
    (a) not applying to a building occupied by a courthouse, diplomatic mission, emergency service, place of worship and a school;
    (b) having separate and direct access to the street when located at ground floor abutting a street; and (By-law 2019-41)
    (c) occupying 100% of that part of the ground floor fronting on a street, excluding lobby area, mechanical room and access to other floors, for a minimum depth of 3.0 metres, when abutting one of the following streets:

  - Section 193(3)(h) requires a minimum width of landscaped area:

No minimum, except that where a yard is provided and not used for required driveways, aisles, parking, loading spaces or outdoor commercial patio, the whole yard must be landscaped.

- Regarding Section 193, Table 193(3)(j), which provides provisions for buildings 10 storeys and higher, the proposed high-rise is considered existing. This means that the building should have legal non-complying rights (setbacks, lot area etc.) as a high-rise building, regardless of use, and the provisions which prescribe new high-rise buildings (e.g. Section 77) should be considered non-applicable.

- Maximum Height Schedule '25'. **Please note:** in accordance with Section 64, for areas shown on Schedules 11 to 88, maximum height limits also apply to structures listed under Section 64. Please review based on the proposed height increase to confirm compliance.

- The proposed change of use will convert commercial parking spaces into residential parking spaces. Relevant parking provisions of Zoning By-Law 2008-250:

  - Section 106(1) of Zoning By-Law 2008-250 requires the following dimensions for parking spaces:
    (a) At least 2.6 m wide
    (b) Not more than 3.1 m wide
    (c) At least 5.2 m long.

  - Section 106(2) further provides:

    *Despite Subsection (1), **up to 50%** of the parking spaces in an underground parking garage may be reduced to a minimum of 4.6 m in length and 2.4 m wide, provided that any such space:*
    (a) Is visibly identified as being for a compact car.
    (b) Is not a visitor parking space required under Section 102
    (c) Is not abutting or near a wall, column or similar surface that obstructs the opening of the doors of a parked vehicle or limits access to a parking space, in which case the minimum width is 2.6 metres.

  - Section 107(1) of Zoning By-Law 2008-250 requires the following:

    a) A driveway providing access to a parking lot or parking garage must have a minimum width of:
    *iii) **in the case of a parking garage, 6.0 metres for a double traffic lane** (By-law 2016-249)*
    (aa) Despite clause 107(1)(a), in the case of an apartment dwelling, low-rise, stacked dwelling, or an apartment mid-rise, or apartment high-rise, **the maximum permitted width for a double traffic lane that leads to**: (i) Less than 20 parking spaces: 3.6m (ii) **20 or more parking spaces: 6.7m** (By-law 2014-289)

Comments:

- Staff support the proposed conversion from a commercial (office) building to a mixed-use building that is mostly residential. The proposal aims to add housing near rapid transit and revitalize the City's downtown core without significantly altering the existing conditions of the site or generating any potential adverse impacts on neighbouring properties. The proposed conversion is welcomed in this urban, mixed-use context.

- Please review the minimum requirement for large household dwellings, which are three-bedroom units or an equivalent floor area.

- Please review the provisions of Zoning By-Law 2008-250 for compliance. Zoning deficiencies resulting from the proposed change of use include the amount of commercial space proposed on the ground floor. Existing conditions which may need to be formalized through an application for Minor Variance or Zoning By-Law Amendment include the number of compact parking spaces provided and the widths of drive aisles in the underground parking garage. We have identified some zoning compliance concerns:

    - Section 193(2): Based on the proposal, commercial uses represent less than half of the percentage of uses proposed on the ground floor.

    - Section 106(2): Based on the proposal, compact spaces represent over 50 percent of the parking spaces proposed for the residential units.

    - Section 107(1)(a)(iii): At its minimum, the existing ramp is a double traffic lane which provides a width of 3.0 metres descending from the ground level, and a minimum width of 4.5 metres in the parking garage. In the case of a parking garage, the minimum required width for double traffic lane is 6.0 metres.

    - Section 107(1)(a)(iii)(aa)(ii): The maximum width of a drive aisle in an underground parking garage is proposed at approximately 6.85 metres. In the case of a parking garage, the maximum width for double traffic lane is 6.7 metres for an apartment dwelling, high-rise. Since the parking spaces provided are all residential spaces for the apartment dwelling, high-rise, the maximum width for a double traffic lane applies.

  Please note: Staff have conducted a preliminary zoning compliance review and encourage the applicant team to consider the options to resolve zoning deficiencies through either an application for Minor Variance or Zoning By-Law Amendment. A zoning compliance table/ checklist is typically required in a Planning Rationale. Staff are generally supportive of planning applications that seek some relief from the applicable zoning provisions, as these requests are generally made to formalize or reflect the existing conditions of the site/ buildings to allow for the change of use.

- The intent of the applicable policies is to encourage active uses that front the street and animate the public realm in front of the building. Based on this and the zoning requirement for at-grade commercial, Staff would encourage the applicant team to

consider providing more at-grade commercial, or at least provide an active entrance for the ground floor lobby/ amenity area. This would maintain some flexibility for conversion back to commercial, should the market demand change in the future. Additional amenity space could be added elsewhere in the building to make up for any potential loss.

- Please note: the proposed “retail leasing office” would qualify as an active use, as it is not technically an office use as defined in the zoning by-law, has an active entrance and will be inviting to the public realm and building users. If proposed, a standard office use would not be permitted to count towards the calculation of ground floor commercial, as this is not considered an active use in the context of the applicable policies and is not a permitted as a ground floor use by the current zoning.

- According to Section 193(3)(h): the provided front yard must be entirely landscaped, excluding the area of the site where an entrance to the underground parking garage is provided. The landscaped area may consist of a mix of soft and hard landscaping materials. Staff understand that it may be difficult to maintain soft landscaping on this site, so we would encourage the applicant team to explore alternatives to enhance the public realm, such as widened walking areas or unique seating options / public art.

- An increase in bicycle parking spaces beyond the minimum requirement is encouraged based on the projected residential density, as well as adjacency to the Laurier Avenue cycling infrastructure, which provides great connections to the broader cycling network. Please consider securing all bicycle parking spaces within storage rooms within the building and in the underground parking garage (e.g. 18 spaces on the ground floor). Please ensure that bike parking (e.g. stacked) complies with Section 111 of the ZBL.

- Please review the proposed internal loading and waste collection area to better optimize the use of this “laneway” and collection areas for both the retail and multi-residential uses. The separate collection rooms are a good start. However, direct access is typically required for multi-residential (City) pick ups and should be explored adjacent to the laneway/ entrance that leads to the underground parking garage.

- Additional safety elements (mirrors, stop/go lights etc.) to improve the building’s relationship with the abutting cycling track and better control traffic on the ramp and within the underground parking garage, should be explored given the existing conditions of the ramp and internal laneway entrance.

- We understand that Electric Vehicle (EV) charging stations and parking spaces have been provided in some of your other development projects. Staff would also encourage EV parking in this development.

Planning Requirements:

- **Planning Application Requirements:** You have the option of addressing any zoning deficiencies through a (Minor) Zoning By-Law Amendment or a Minor Variance from the Committee of Adjustment.

Zoning By-Law Amendment (Minor): A Minor Zoning By-Law Amendment is a reduced fee. Given the nature of the proposed development, a scoped Planning Rationale would be acceptable for this Zoning By-Law Amendment application. The rationale should provide an analysis of the policies of the City's Official Plan (November 4th, 2022), the Secondary Plan, and the applicable zoning, including the site-specific zoning exceptions being requested through the Amendment. The rationale may be brief and focus on the appropriateness of the conversion based on context, policy and relationship with the public realm. Please review the attached Terms of Reference (TOR) for the scoped Planning Rationale.

Minor Variance: Should you choose to pursue a Minor Variance from the Committee of Adjustment, we would recommend that you consult this application and variances required with a Committee of Adjustment planner.

Site Plan Control (Standard): An application for Site Plan Control is triggered for the proposed conversion in accordance with the City's current Site Plan Control by-law. A Site Plan Control (Standard) application is required. This is a reduced fee which is applicable to conversion proposals.

Please note: The City is currently accepting concurrent applications for Zoning By-Law Amendment and Site Plan Control. This is however subject to change and the applications would need to be filed before the City's Bill 109 procedures come into effect.

- **Community Benefits Charge:** The former Section 37 regime has been replaced with a "Community Benefits Charge", By-law No. 2022-307, of 4% of the land value. This charge will be required for ALL buildings that are 5 or more storeys and 10 or more units and will be required at the time of building permit unless the development is subject to an existing registered Section 37 agreement. Questions regarding this change can be directed to ranbir.Singh@ottawa.ca.

If you have any questions, comments or concerns, please contact Eric Forhan: eric.forhan@otttawa.ca

3. Urban Design

Please find below urban design comments on the formal pre-consultation for 360 Laurier Ave:

- A Design Brief is required. The Terms of Reference is attached for convenience.
- The site is within a Design Priority Area; however, this proposed conversion will be exempt from the City's Urban Design Review Panel process.
- A few comments on the design presented at the meeting:
    - The pedestrian realm along Laurier is very narrow at this location. The proposed development should make best efforts possible to create a more generous pedestrian realm.

- On the ground level, consider recessing the entrances of the office and the retail so that when the doors swing out, they won't pinch the sidewalk. Also consider increasing the setback of the glass wall of the main entrance as much as possible.

- Please re-evaluate the benefits of the proposed planters. Given the limited pedestrian realm and the floor to ceiling height of the ground floor, perhaps priority should be given to creating/maintaining a generous pedestrian realm and maximizing windows at grade to allow for a better interior/exterior interaction.

If you have any questions, please contact Randolph Wang: randolph.wang@ottawa.ca

4. <u>Engineering</u>

- Note that the information is considered preliminary, and the assigned Development Review Project Manager may modify and/or add additional requirements and conditions upon review of an application if deemed necessary.

Comments:

- Staff require a Servicing Study which will be addressing if there is any sanitary sewer constrains in the system, and the water servicing including fire flow required for fire fighting.

- Storm water management report:

  Due to the proposed conversion from office to residential, a SWM review will be focused on demonstrating the post-development flows are consistent with, and making an improvement, from the pre-development flows. The SWM review can be provided in a section in the servicing report, or a full storm water management report can be prepared.

  Staff will need the existing peak run off volume in a 5 year's storm event, and in a 100 year's storm event and how it can be reduced to make the City better, including:

  - what is the existing storm sewer on the street capacity; and

  - how can it contribute to a possible reduced peak volume by using roof storage etc.

- Staff need a phase one ESA report, and a noise study (because the site fronts onto Laurier Street). A RSC condition will be required as it changes to a more sensitive land use.

- A noise study also needs to include the stationary noise study, which addresses the impact from its own HVAC to its amenity space, and to the neighboring residential properties.

- Staff need the updated grading plan and a possible servicing plan. The water service maybe needs to be updated to two water services if the daily water consumption is over

50 cubic meters) or maybe not if there are already two water service connections (this should be verified by your engineering consultant).

If you have any questions, please contact Infrastructure Project Manager (IPM), John Wu: john.wu@ottawa.ca

5. Transportation Engineering

- Follow Transportation Impact Assessment Guidelines:
    - A reduced scope TIA is required. Please submit the Scoping report to Josiane.gervais@ottawa.ca at your earliest convenience. Note that Forecasting and Strategy can be submitted together.
    - Start this process asap. The application will not be deemed complete until the submission of the draft step 1-4, including the functional draft RMA package (if applicable) and/or monitoring report (if applicable).
    - Request base mapping asap if RMA is required. Contact Engineering Services (https://ottawa.ca/en/city-hall/planning-and-development/engineering-services)
    - An update to the *TRANS Trip Generation Manual* has been completed (October 2020). This manual is to be utilized for this TIA. A copy of this document can be provided upon request.
- ROW protection on Laurier West between Bronson and Elgin is 20m even. Future ROW line must be shown on the site plan. Note: Maximum land requirement from property abutting existing ROW (0.9m).
- Transportation Engineering Services have identified issues with the proposed loading zone. The proposed loading zone (existing) will need to be evaluated and reviewed by City staff.
    - Consider improvements to the loading zone to prohibit vehicles from parking in the cycling lane (i.e. potential addition of pin-curbs).
    - Describe/address any impacts to the driving lane.
    - Note the “No Parking” zones along the frontage and adjacent to the site.
- Site is within 400m from Lyon Station.
- As the proposed site is multi-use, AODA legislation applies.
    - Clearly define accessible parking stalls and ensure they meet AODA standards (include an access aisle next to the parking stall and a pedestrian curb ramp at the end of the access aisle, as required).
    - Please consider using the City’s Accessibility Design Standards, which provide a summary of AODA requirements. https://ottawa.ca/en/city-hall/creating-equal-

inclusive-and-diverse-city/accessibility-services/accessibility-design-standards-features#accessibility-design-standards

- On site plan:
  - Ensure site access meets the City's Private Approach Bylaw.
  - Show all details of the roads abutting the site; include such items as pavement markings, accesses and/or sidewalks.
  - Turning movement diagrams required for all accesses showing the largest vehicle to access/egress the site.
  - Turning movement diagrams required for internal movements (loading areas, garbage).
  - Show dimensions for site elements (i.e. lane/aisle widths, access width and throat length, parking stalls, sidewalks, pedestrian pathways, etc.)
  - Sidewalk is to be continuous across access as per City Specification 7.1. Remove TWSIs at the site access.
  - Show slope of garage ramp on site plan. Note that underground ramps should be limited to a 12% grade and must contain a subsurface melting device when exceeding 6%. Ramp grades greater than 15% can be psychological barriers to some drivers.

If you have any questions, please contact Transportation Project Manager (TPM), Josiane Gervais: josiane.gervais@ottawa.ca

Please note: Staff recognize, in the instance of the proposed development, that the building, including the garage and ramp, are existing conditions. Following submission, requirements will be reviewed and may be refined to better reflect the existing conditions of the site.

6. Parks

Parks has reviewed the proposed conversion from an existing commercial building to a mixed-use building:

- The application is subject to applicable parkland conveyance requirements;
- The applicant/owner is to demonstrate that the initial construction/development (commercial) provided parkland conveyance; and
- Subject to confirming prior parkland conveyance, application would require cash-in-lieu for change in use from commercial to residential.

If you have any questions, please contact Parks Planner, Mike Russett: mike.russett@ottawa.ca

7. Environment

- Given that the building is over 4-storeys, please review and incorporate design elements from the City's Bird-safe Design guidelines into their proposal's design. Bird-Safe Design Guidelines | City of Ottawa

- It is recommended that locally appropriate native trees/shrubs/plants be planted into the proposed landscape planters.

8. Forestry

Note: The comments provided below are for general awareness. Staff recognize that due to the existing site conditions and conversion that new street trees are unlikely.

The assigned Forestry Planner will review the Landscape Plan. These comments are relevant if trees are proposed to be planted:

- Please note that all process for reviewing and approving LP tree planting has changed at the City – in order to effectively review your submission in a timely manner the Planning Forester will need to ensure that all the bullets listed below have been addressed

Tree Planting requirements for Landscape Plan:

1) Minimum Setbacks
   - Maintain 1.5m from sidewalk or MUP/cycle track or water service laterals.
   - Maintain 2.5m from curb
   - Coniferous species require a minimum 4.5m setback from curb, sidewalk or MUP/cycle track/pathway.
   - Maintain 7.5m between large growing trees, and 4m between small growing trees. Park or open space planting should consider 10m spacing, except where otherwise approved in naturalization / afforestation areas. Adhere to Ottawa Hydro's planting guidelines (species and setbacks) when planting around overhead primary conductors.

2) Tree specifications
   - Minimum stock size: 50mm tree caliper for deciduous, 200cm height for coniferous.
   - Maximize the use of large deciduous species wherever possible to maximize future canopy coverage
   - Tree planting on city property shall be in accordance with the City of Ottawa's Tree Planting Specification; and include watering and warranty as described in the specification (can be provided by Forestry Services).
   - Plant native trees whenever possible
   - No root barriers, dead-man anchor systems, or planters are permitted.
   - No tree stakes unless necessary (and only 1 on the prevailing winds side of the tree)

3) Hard surface planting
   - Curb style planter is highly recommended
   - No grates are to be used and if guards are required, City of Ottawa standard (which can be provided) shall be used.
   - Trees are to be planted at grade

4) Soil Volume
   - Please document on the LP that adequate soil volumes can be met:

Tree Type/Size	Single Tree Soil Volume (m3)	Multiple Tree Soil Volume (m3/tree)
Ornamental	15	9
Columnar	15	9
Small	20	12
Medium	25	15
Large	30	18
Conifer	25	15

Please note that these soil volumes are not applicable in cases with Sensitive Marine Clay.

- Sensitive Marine Clay
  - Please follow the City's 2017 Tree Planting in Sensitive Marine Clay guidelines

9. City Surveyor

- The determination of property boundaries, minimum setbacks and other regulatory constraints are a critical component of development. An Ontario Land Surveyor (O.L.S.) needs to be consulted at the outset of a project to ensure properties are properly defined and can be used as the geospatial framework for the development.

- Topographic details may also be required for a project and should be either carried out by the O.L.S. that has provided the Legal Survey or done in consultation with the O.L.S. to ensure that the project is integrated to the appropriate control network.

Questions regarding the above requirements can be directed to the City's Surveyor, Bill Harper, at Bill.Harper@ottawa.ca

10. Waste Services

- New multi-unit residential development, defined as containing six (6) or more units, intending to receive City waste collection services will be required, as of June 1, 2022, to participate in the City's Green Bin program in accordance with Council's approval of

the multi-residential waste diversion strategy. The development must include adequate facilities for the proper storage of allocated garbage, recycling, and green bin containers and such facilities built in accordance with the approved site design. Questions regarding this change and requirements can be directed to Andre.Laplante@ottawa.ca.

11. Construction Approach

- Please contact the Right-of-Ways Permit Office TMconstruction@ottawa.ca early in the Site Plan process to determine the ability to construct site and copy File Lead.

12. Centretown Community Association representative

- Please review the attached letter, dated February 23, 2023, provided by Daniela Veisman and Mary Huang on behalf of the Centretown Community Association.

13. Submission requirements and fees

- Outline the submission requirements and fees.
- Additional information regarding fees related to planning applications can be found here.
- Plans are to be standard A1 size (594 mm x 841 mm) or Arch D size (609.6 mm x 914.4 mm) sheets, dimensioned in metric and utilizing an appropriate Metric scale (1:200, 1:250, 1:300, 1:400 or 1:500).
- All PDF submitted documents are to be unlocked and flattened.

Next steps

- Please review the attached required list of plans and studies and please let us know if there are any questions, comments or concerns.
- It is anticipated that, as a result of the *More Homes for Everyone Act, 2022*, for applications for zoning by-law amendment and site plan approval, new processes in respect of pre-application consultation and application submission may be in place prior to your application being submitted and/or deemed complete to/by City Staff in accordance with *Planning Act* requirements. The new processes are anticipated to require a multiple phase pre-application consultation approach before an application will be deemed complete. Applicants who have not filed a complete application by the effective date may be required to undertake further pre-application consultation(s) consistent with the provincial changes. The by-laws to be amended include By-law 2009-320, the Pre-Consultation By-law, By-law 2022-239, the planning fees by-law and By-law 2022-254, the Information and Materials for Planning Application By-law.
- City Staff encourage the applicant team to discuss the proposal with the Ward Councillor, community groups and neighbours.
- Subject to the above, these pre-con comments are only valid for one year.

Thank you,

Eric Forhan
Development Review Planner

APPENDIX B

Water Supply Calculations & Fire Hydrant Coverage

Water Supply Calculations
LRL File No. 220868
Date 2023-04-07
Prepared by Tamara Harb

Water Demand based on the City of Ottawa Design Guidelines-Water Distribution, 2010

Domestic Demand			
Unit Type	**Persons Per Unit**	**Number of Units**	**Population**
1 Bedroom	1.4	20	28.0
1 Bedroom + Den	1.8	20	36.0
Studio	1.4	40	56.0
2 Bedroom	2.1	40	84.0
2 Bedroom + Den	2.1	19	39.9
	Total	**139**	**243.9**

**Based on a daily demand of 280L/day per person as identified by Appendix 4-A of the Sewer design guidelines.*

Average Water Consumption Rate	280	L/c/d		
Average Day Demand	**68,292**	**L/d**	**0.79**	**L/s**
Maximum Day Factor	3.9		Table (3-3) MOE Peaking Factors	
Maximum Daily Demand	**268,590**	**L/d**	**3.11**	**L/s**
Peak Hour Factor	5.9		Table (3-3) MOE Peaking Factors	
Maximum Hour Demand	**401,580**	**L/d**	**4.65**	**L/s**

Institutional / Commercial / Industrial Demand					
Property Type	**Unit Rate**		**Units**		**Demand (L/d)**
Commercial/ Ammenity Space	28000	L/ha/d	0.117	ha	3265.5

Average Day Demand	**3,266**	**L/d**	**0.038**	**L/s**
Maximum Day Factor	1.5	(Design Guidelines-Water Distribution Table 4.2)		
Maximum Daily Demand	**4,898**	**L/d**	**0.057**	**L/s**
Peak Hour Factor	1.8	(Design Guidelines-Water Distribution Table 4.2)		
Maximum Hour Demand	**5,878**	**L/d**	**0.068**	**L/s**

TOTAL DEMAND				
Average Day Demand	**71,558**	**L/d**	**0.83**	**L/s**
Maximum Daily Demand	**273,488**	**L/d**	**3.17**	**L/s**
Maximum Hour Demand	**407,458**	**L/d**	**4.72**	**L/s**

Water Service Pipe Sizing

Q = VA

Where: V = velocity
A = area of pipe
Q = flow rate

Assuming a maximum velocity of 1.8m/s, the diameter of pipe is calculated as:

Minimum pipe diameter (d) = $(4Q/\pi V)^{1/2}$
= 0.058 m
= 58 mm

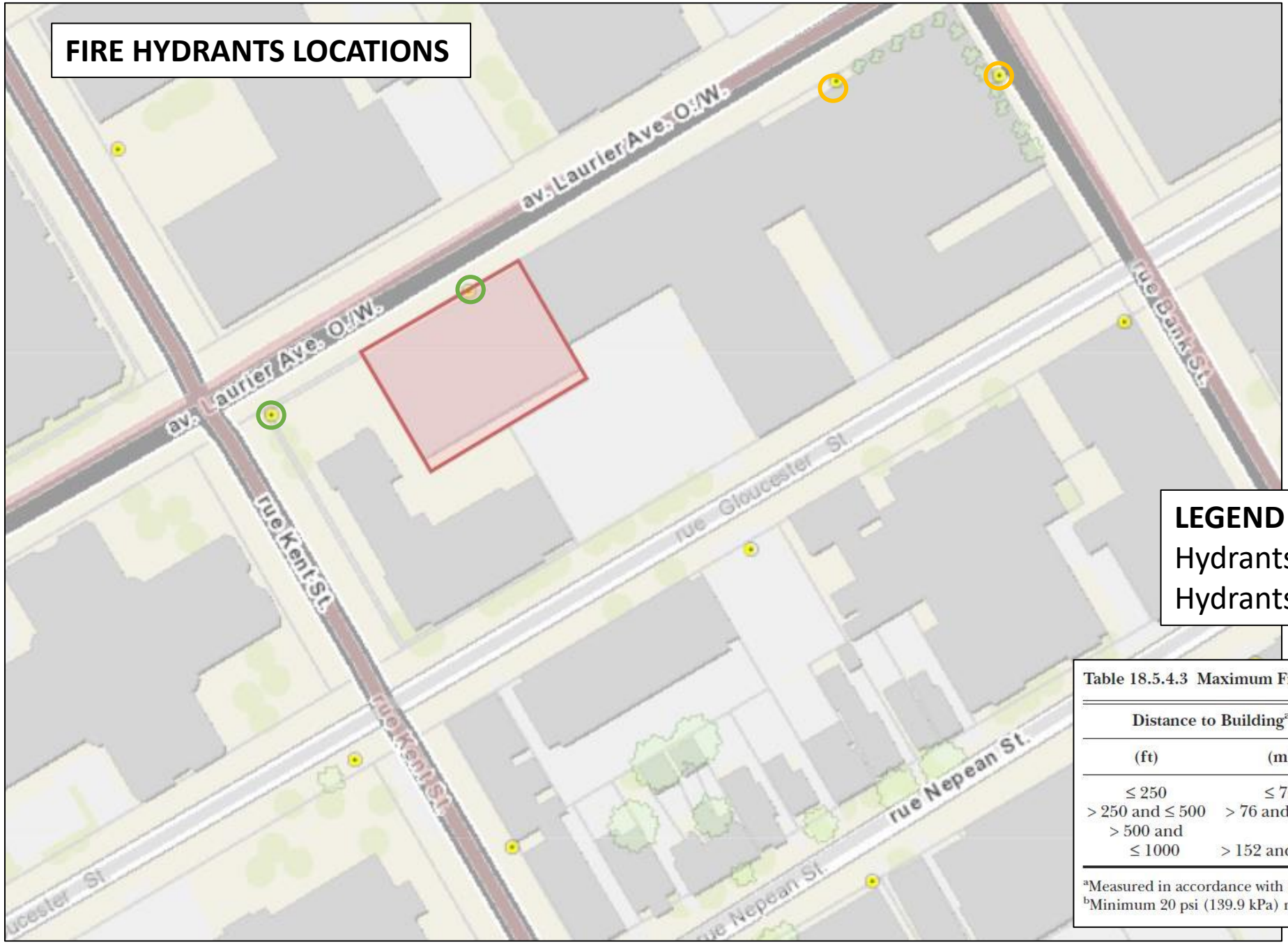
Proposed pipe diameter (d) = **150** mm
= **6** Inches

Fire Flow Calculations

LRL File No.	220868
Date	April 7, 2023
Method	Fire Underwriters Survey (FUS)
Prepared by	Tamara Harb

Step	Task	Term	Options	Multiplier	Choose:	Value	Unit	Fire Flow
Structural Framing Material								
1	Choose frame used for building	Coefficient C related to the type of construction	Wood Frame	1.5	Non-combustible construction	**0.8**		
			Ordinary Construction	1.0				
			Non-combustible construction	0.8				
			Fire resistive construction <2 hrs	0.7				
			Fire resistive construction >2 hrs	0.6				
Floor Space Area (A)								
2	Total area					**5,240**	m^2	
3	Obtain fire flow before reductions	Required fire flow *(rounded to nearest 1,000 L/min)*	Fire Flow = 220 x C x $A^{0.5}$				L/min	**13,000**
Reductions or surcharge due to factors affecting burning								
4	Choose combustibility of contents	Occupancy hazard reduction or surcharge	Non-combustible	-25%	Limited combustible	**-15%**	L/min	**11,050**
			Limited combustible	-15%				
			Combustible	0%				
			Free burning	15%				
			Rapid burning	25%				
5	Choose reduction for sprinklers	Sprinkler reduction	Full automatic sprinklers	-30%	True	**-30%**	L/min	**5,525**
			Water supply is standard for both the system and fire department hose lines	-10%	True	**-10%**		
			Fully supervised system	-10%	True	**-10%**		
6	Choose separation	Exposure distance between units	Northwest side	20.1 to 30m	10%		L/min	**13,260**
			Northeast side	0 to 3m	25%			
			Southeast	10.1 to 20m	15%			
			Southwest	3.1 to 10m	20%	**70%**		
Net required fire flow								
7	Obtain fire flow, duration, and volume	Minimum required fire flow rate (rounded to nearest 1000)					L/min	**13,000**
		Minimum required fire flow rate					L/s	**216.7**
		Required duration of fire flow					hr	**2.75**

FIRE HYDRANTS LOCATIONS



LEGEND

Hydrants within 75m

Hydrants within 150m

Table 18.5.4.3 Maximum Fire Hydrant Fire Flow Capacity

Distance to Building[a]		Maximum Capacity[b]	
(ft)	(m)	(gpm)	(L/min)
≤ 250	≤ 76	1500	5678
> 250 and ≤ 500	> 76 and ≤ 152	1000	3785
> 500 and ≤ 1000	> 152 and ≤ 305	750	2839

[a]Measured in accordance with 18.5.1.4 and 18.5.1.5.
[b]Minimum 20 psi (139.9 kPa) residual pressure.

APPENDIX C

Wastewater Collection Calculations

LRL File No. 220868
Project: Civil Services for Building Conversion to Residential
Location: 360 Laurier Avenue
Date: April 13, 2023

Sanitary Design Parameters

Commercial & Institutional Flow = 28000 L/ha/day
Light Industrial Flow = 35000 L/ha/day
Heavy Industrial Flow = 55000 L/ha/day
Maximum Residential Peak Factor = 4.0
Commercial & Institutional Peak Factor = 1.5

Average Daily Flow = 280 L/p/day
Daily Flow for Places of Employment = 75L/p/day
Industrial Peak Factor = as per Appendix 4-B = 7
Extraneous Flow = 0.33L/s/gross ha

Pipe Design Parameters

Minimum Velocity = 0.60 m/s
Manning's n = 0.013

LOCATION			RESIDENTIAL AREA AND POPULATION						COMMERCIAL		INDUSTRIAL			OFFICE		C+I+I	INFILTRATION			TOTAL FLOW (l/s)	PIPE					
STREET	FROM	TO	AREA (Ha)	POP.	CUMMULATIVE AREA (Ha)	CUMMULATIVE POP.	PEAK FACT.	PEAK FLOW (l/s)	AREA (Ha)	ACCU. AREA (Ha)	AREA (Ha)	ACCU. AREA (Ha)	PEAK FACT.	POP	ACCU. POP	PEAK FLOW (l/s)	TOTAL AREA (Ha)	ACCU. AREA (Ha)	INFILT. FLOW (l/s)		LENGTH (m)	DIA. (mm)	SLOPE (%)	MATERIAL	CAP. (FULL) (l/s)	VEL. (FULL) (m/s)
Laurier Avenue	Bldg		0.120	243.9	0.120	243.9	3.5	2.76	0.117	0.117	0.00	0.00	7.0	0.0	0.0	0.06	0.120	0.120	0.04	**2.86**	9.3	150	2.00%	PVC	**21.54**	**1.22**

NOTES Existing inverts and slopes are estimated. They are to be confirmed on-site.

Designed:	PROJECT:		
TH	**Civil Services for Building Conversion to Residential**		
Checked:	LOCATION:		
VJ	**360 Laurier Avenue**		
Dwg. Reference:	File Ref.:	Date:	Sheet No.
C.401	**220868**	**2023-04-13**	1 of 1

APPENDIX D

Civil Engineering Drawings

SITE PLAN CONTROL DESIGN
360 LAURIER AVENUE, OTTAWA ON

REVISION 01

KEY PLAN (N.T.S.)

DRAWING INDEX	
TITLE PAGE	
GRADING AND DRAINAGE PLAN	C301
SERVICING PLAN	C401
PRE-DEVELOPMENT WATERSHED PLAN	C701
POST-DEVELOPMENT WATERSHED PLAN	C702
CONSTRUCTION DETAIL PLAN	C901

LRL
ENGINEERING | INGÉNIERIE
5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lrl.ca | (613) 842-3434

SITE PLAN CONTROL DESIGN
360 LAURIER AVENUE, OTTAWA ON
REV.01 - ISSUED FOR APPROVAL - 2023-04-27
LRL PROJECT no: 220868

LICENSED PROFESSIONAL ENGINEER
V. JOHNSON
100510576
04-27-2023
PROVINCE OF ONTARIO

NOT AUTHENTIC UNLESS SIGNED AND DATED

GENERAL NOTES

1. ALL WORKS MATERIALS SHALL CONFIRM TO THE LAST 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.
2. THE CONTRACTORS SHALL CONFIRM THE LOCATION OF ALL EXISTING UTILITIES WITHIN THE SITE AND ADJACENT WORK AREAS. THE CONTRACTORS 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.
3. 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 CONTRACTORS TO CONFIRM UTILITY LOCATIONS AND NOTIFY ENGINEER OF POSSIBLE CONFLICTS PRIOR TO CONSTRUCTION WILL BE AT CONTRACTORS EXPENSE.
4. ANY AREA 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.
   RELOCATING OF EXISTING SERVICES AND/OR UTILITIES SHALL BE AS SHOWN ON THE DRAWINGS OR DETECTED BY THE ENGINEER AT THE EXPENSE OF DEVELOPERS.
5. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE 'OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS'. THE GENERAL CONTRACTORS SHALL BE DEEMED TO BE THE 'CONTRACTOR' AS DEFINED IN THE ACT.
6. ALL THE CONSTRUCTION SIGNAGE MUST CONFIRM TO THE MINISTRY OF TRANSPORTATION OF ONTARIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES PER LATEST AMENDMENT.
7. THE CONTRACTOR IS ADVISED THAT WORKS BY OTHERS MAY BE ONGOING DURING THE PERIOD OF THE CONTRACT. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES TO PREVENT CONFLICTS.
8. ALL DIMENSIONS ARE IN METRES UNLESS SPECIFIED OTHERWISE.
9. THERE WILL BE NO SUBSTITUTION OF MATERIALS UNLESS PRIOR WRITTEN APPROVAL IS RECEIVED FROM THE ENGINEER.
10. ALL CONSTRUCTION SHALL BE CARRIED OUT IN ACCORDANCE WITH THE RECOMMENDATIONS MADE IN THE GEOTECHNICAL REPORT.
11. FOR DETAILS RELATING TO STORMWATER MANAGEMENT AND ROOF DRAINAGE REFER TO THE SITE SERVICING AND STORMWATER MANAGEMENT REPORT.
12. ALL SEWERS CONSTRUCTED WITH GRADES LESS THAN 1.0% SHALL BE INSTALLED USING LASER ALIGNMENT AND CHECKED WITH LEVEL INSTRUMENT PRIOR TO BACKFILLING.
13. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED AND TO BEAR THE COST OF THE SAME.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADDITIONAL BEDDING, OR ADDITIONAL STRENGTH PIPE IF THE MAXIMUM TRENCH WIDTH AS SPECIFIED BY OPSD IS EXCEEDED.
15. ALL PIPE/CULVERT SECTION SIZES REFER TO INSIDE DIMENSIONS.
16. SHOULD DEEPLY 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.
17. 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.
18. DRAWINGS SHALL BE READ ON CONJUNCTION WITH ARCHITECTURAL SITE PLAN.
19. THE CONTRACTOR SHALL PROVIDE THE PROJECT ENGINEER ON SET OF AS CONSTRUCTED SITE SERVICING AND GRADING DRAWINGS.
20. 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.

EROSION AND SEDIMENT CONTROL NOTES

GENERAL

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 FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.

THE CONTRACTOR ACKNOWLEDGES THAT SURFACE EROSION AND SEDIMENT RUNOFF RESULTING FROM THEIR CONSTRUCTION OPERATIONS HAS POTENTIAL TO CAUSE A DETRIMENTAL IMPACT TO ANY DOWNSTREAM WATERCOURSE OR SEWER, AND THAT ALL CONSTRUCTION OPERATIONS THAT MAY IMPACT UPON WATER QUALITY SHALL BE CARRIED OUT IN MANNER THAT STRICTLY MEETS THE REQUIREMENT OF ALL APPLICABLE LEGISLATION AND REGULATIONS.

AS SUCH, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CARRYING OUT THEIR OPERATIONS, AND SUPPLYING AND INSTALLING ANY APPROPRIATE CONTROL MEASURES, SO AS TO PREVENT SEDIMENT LADEN RUNOFF ENTERING ANY SEWER OR WATERCOURSE WITHIN OR DOWNSTREAM OF THE WORKING AREA.

THE CONTRACTOR ACKNOWLEDGES THAT NO ONE MEASURE IS LIKELY TO BE 100% EFFECTIVELY FOR EROSION PROTECTION AND CONTROLLING SEDIMENT RUNOFF AND DISCHARGES FROM THE SITE. THEREFORE, WHERE NECESSARY THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL MEASURES ARRANGED IN SUCH MANNER AS TO MITIGATE SEDIMENT RELEASE FROM THE CONSTRUCTION OPERATIONS AND ACHIEVE SPECIFIC MAXIMUM PERMITTED CRITERIA WHERE APPLICABLE. SUGGESTED ON-SITE MEASURES MAY INCLUDE, BUT SHALL NOT BE LIMITED TO, THE FOLLOWING METHODS: SEDIMENT PONDS, FILTER BAGS, PUMP FILTERS, SETTLING TANKS, SILT FENCE, STRAW BALES, FILTER CLOTHS, CATCH BASIN FILTERS, CHECK DAMS AND/OR OTHER RECOGNIZED TECHNOLOGIES AND METHOD AVAILABLE AT THE TIME OF CONSTRUCTION. SPECIFIC MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH REQUIREMENTS OF OPSS 577 WHERE APPROPRIATE, OR IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

WHERE, IN THE OPINION OF THE CONTRACT ADMINISTRATOR OR REGULATORY AGENCY, THE INSTALLED CONTROL MEASURES FAIL TO PERFORM ADEQUATELY, THE CONTRACTOR SHALL SUPPLY AND INSTALL ADDITIONAL OR ALTERNATIVE MEASURES AS DIRECTED BY THE CONTRACT ADMINISTRATOR OR REGULATORY AGENCY, AS SUCH, THE CONTRACTOR SHALL HAVE ADDITIONAL CONTROL MATERIALS ON SITE AT ALL TIME WHICH ARE EASILY ACCESSIBLE AND MAY BE IMPLEMENTED BY HIM AT THE MOMENT'S NOTICE.

PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL SUBMIT TO THE CONTRACT ADMINISTRATOR SIX COPIES OF A DETAILED EROSION AND SEDIMENT CONTROL PLAN (ESCP). THE ESCP WILL CONSIST OF WRITTEN DESCRIPTION AND DETAILED DRAWINGS INDICATING THE ON-SITE ACTIVITIES AND MEASURES TO BE USED TO CONTROL EROSION AND SEDIMENT MOVEMENT FOR EACH STEP OF THE WORK.

CONTRACTOR'S RESPONSIBILITIES

THE CONTRACTOR SHALL ENSURE THAT ALL WORKERS, INCLUDING SUB-CONTRACTOR, IN THE WORKING ARE ARE AWARE OF THE IMPORTANCE OF THE EROSION AND SEDIMENT CONTROL MEASURES AND INFORMED OF THE CONSEQUENCES OF THE FAILURE TO COMPLY WITH THE REQUIREMENTS OF ALL REGULATORY AGENCIES.

THE CONTRACTOR SHALL PERIODICALLY, AND WHEN REQUESTED BY THE CONTRACT ADMINISTRATOR, CLEAN OUT ACCUMULATED SEDIMENT DEPOSITS AS REQUIRED AT THE SEDIMENT CONTROL DEVICES, INCLUDING THOSE DEPOSITS THAT MAY ORIGINATE FROM OUTSIDE THE CONSTRUCTION AREA. ACCUMULATED SEDIMENT SHALL BE REMOVED IN SUCH A MANNER THAT PREVENTS THE DEPOSITION OF THIS MATERIAL INTO THE SEWER WATERCOURSE AND AVOIDS DAMAGE TO CONTROL MEASURES. THE SEDIMENT SHALL BE REMOVED FROM THE SITE AT THE CONTRACTOR'S EXPENSE AND MANAGED IN COMPLIANCE WITH REQUIREMENTS FRO EXCESS EARTH MATERIAL, AS SPECIFIED ELSEWHERE IN THE CONTRACT.

THE CONTRACTOR SHALL IMMEDIATELY REPORT TO THE CONTRACT ADMINISTRATOR ANY ACCIDENTAL DISCHARGES OF SEDIMENT MATERIAL INTO EITHER THE WATERCOURSE OR THE STORM SEWER SYSTEM. FAILURE TO REPORT WILL BE CONSTITUTE A BRACH OF THIS SPECIFICATION AND THE CONTRACTOR MAY ALSO BE SUBJECT TO THE PENALTIES IMPOSED BY THE APPLICABLE REGULATORY AGENCY. APPROPRIATE RESPONSE MEASURES, INCLUDING ANY REPAIRS TO EXISTING CONTROL MEASURES OR THE IMPLEMENTATION OF ADDITIONAL CONTROL MEASURES, SHALL BE CARRIED OUT BY THE CONTRACTOR WITHOUT DELAY.

THE SEDIMENT CONTROL MEASURES SHALL ONLY BE REMOVED WHEN, IN THE OPINION OF THE CONTRACT ADMINISTRATOR, THE MEASURE OR MEASURES, IS NO LONGER REQUIRED. NO CONTROL MEASURE MAY BE PERMANENTLY REMOVED WITHOUT PRIOR AUTHORIZATION FROM THE CONTRACT ADMINISTRATOR. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED IN A MANNER THAT AVOIDS THE ENTRY OF ANY EQUIPMENT, OTHER THAN HAND-HELD EQUIPMENT, INTO ANY WATERCOURSE, AND PREVENTS THE RELEASE OF ANY SEDIMENT OR DEBRIS INTO ANY SEWER OR WATERCOURSE WITHIN OR DOWNSTREAM OF THE WORKING AREA. ALL ACCUMULATED SEDIMENT SHALL BE REMOVED FROM THE WORKING AREA AT THE CONTRACTOR'S EXPENSE AND MANAGED IN COMPLIANCE WITH THE REQUIREMENTS FOR EXCESS EARTH MATERIAL

WHERE, IN THE OPINION OF EITHER THE CONTRACT ADMINISTRATOR OR A REGULATORY AGENCY, ANY OF THE TERMS SPECIFIED HEREIN HAVE NOT BEEN COMPLIED WITH OR PERFORMED IN A SUITABLE MANNER, OR TAT ALL, THE CONTRACTOR ADMINISTRATOR OR A REGULATORY AGENCY HAS THE RIGHT TO IMMEDIATELY WITHDRAW ITS PERMISSION TO CONTINUE THE WORK BUT MAY RENEW ITS PERMISSION UPON BEING SATISFIED THAT THE DEFAULTS OR DEFICIENCIES IN THE PERFORMANCE OF THIS SPECIFICATION BY THE CONTRACTOR HAVE BEEN REMEDIED.

SPILL CONTROL NOTES

1. ALL CONSTRUCTION EQUIPMENT SHALL BE RE-FUELED, MAINTAINED, AND STORED NO LESS THAN 30 METRES FROM WATERCOURSE, STEAMS, CREEKS, WOODLOTS, AND ANY ENVIRONMENTALLY SENSITIVE AREAS, OR AS OTHERWISE SPECIFIED.
2. THE CONTRACTOR MUST IMPLEMENT ALL NECESSARY MEASURES IN ORDER TO PREVENT LEAKS, DISCHARGES OR SPILLS OF POLLUTANTS, DELETERIOUS MATERIALS, OR OTHER SUCH MATERIALS OR SUBSTANCES WHICH WOULD OR COULD CAUSE AN ADVERSE IMPACT TO THE NATURAL ENVIRONMENT.
3. IN THE EVENT OF A LEAK, DISCHARGE OR SPILL OF POLLUTANT, DELETERIOUS MATERIAL OR OTHER SUCH MATERIAL OR SUBSTANCE WHICH WOULD OR COULD CAUSE AN ADVERSE IMPACT TO THE NATURAL ENVIRONMENT, THE CONTRACTOR SHALL:
   - 3.1. IMMEDIATELY NOTIFY APPROPRIATE FEDERAL, PROVINCIAL, AND LOCAL GOVERNMENT MINISTRIES, DEPARTMENTS, AGENCIES, AND AUTHORITIES OF THE INCIDENT IN ACCORDANCE WITH ALL CURRENT LAWS, LEGISLATION, ACTS, BY-LAWS, PERMITS, APPROVALS, ETC.
   - 3.2. TAKE IMMEDIATE MEASURES TO CONTAIN THE MATERIAL OR SUBSTANCE, AND TO TAKE SUCH MEASURES TO MITIGATE AGAINST ADVERSE IMPACTS TO THE NATURAL ENVIRONMENT.
   - 3.3. RESTORE THE AFFECTED AREA TO THE ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE AUTHORITIES HAVING JURISDICTION.

MUD MAT NOTES

1. THE GRANULAR MATERIAL WILL REQUIRE PERIODIC REPLACEMENT AS IT BECOMES CONTAMINATED BY VEHICLE TRAFFIC.
2. SEDIMENT SHALL BE CLEANED FROM PUBLIC ROADS AT THE END OF EACH DAY.
3. SEDIMENT SHALL BE REMOVED FROM PUBLIC ROADS BY SHOVELING OR SWEEPING AND DISPOSED OR PROPERLY IN A CONTROLLED SEDIMENT DISPOSAL AREA.

SITE GRADING NOTES

1. PRIOR TO THE COMMENCEMENT OF THE SITE GRADING WORKS, ALL SILTATION CONTROL DEVICES SHALL BE INSTALLED AND OPERATIONAL PER EROSION CONTROL PLAN.
2. ALL GRANULAR AND PAVEMENT FOR ROADS/PARKING AREAS SHALL BE CONSTRUCTED IN ACCORDANCE WITH GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
3. ALL TOPSOIL AND ORGANIC MATERIAL SHALL BE STRIPPED WITHIN THE ROAD AND PARKING AREAS ALLOWANCE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
4. CONCRETE CURB SHALL BE IN ACCORDANCE WITH THE CITY OF OTTAWA STD. SC1.1 PROVISION SHALL BE MADE OR 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 O THIS DRAWING ARE TO BR PRICED IN SITE WORKS PORTION OF THE CONTRACT.
5. PAVEMENT REINSTATEMENT FOR SERVICE AND UTILITY CUTS SHALL BE IN ACCORDANCE WITH THE CITY OF OTTAWA STD. R10 AND OPSD 509.010 AND OPSS 310.
6. GRANULAR 'A' SHALL BE PLACED TO A MINIMUM THICKNESS OF 30MM AROUND ALL STRUCTURES WITHIN THE PAVEMENT AREA.
7. SUB-EXCAVATE SOFT AREAS AND FILL WITH GRANULAR 'B' COMPACTED IN MAXIMUM 30MM LIFTS.
8. ALL WORK ON THE MUNICIPAL RIGHT OF WAY AND EASEMENTS TO BE INSPECTED BY THE MUNICIPALITY PRIOR BACKFILLING.
9. CONTRACTOR TO OBTAIN A ROAD OCCUPANCY PERMIT 48 HOURS PRIOR TO COMMENCING ANY WORK WITHIN THE MUNICIPAL ROAD ALLOWANCE, IF REQUIRED BY THE MUNICIPALITY.
10. 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.
11. REFER TO ARCHITECTURAL SITE PLAN FOR DIMENSIONS AND SITE DETAILS.
12. STEP JOINTS ARE TO BE USED WHERE PROPOSED ASPHALT MEETS EXISTING ASPHALT. ALL JOINTS MUST BE SEALED.
13. SIDEWALKS TO BE 13MM & BEVELED 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.
14. WHERE APPLICABLE THE CONTRACTOR IS TO SUBMIT SHOP DRAWINGS 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 AND GEOTECHNICAL CERTIFICATION OF THE AS-CONSTRUCTED RETAINING WALL TO THE ENGINEER PRIOR TO FINAL ACCEPTANCE.

ROADWORK SPECIFICATIONS

15. ROADWORK TO BE COMPLETED IN ACCORDANCE WITH GEOTECHNICAL REPORT, PREPARED BY LRL ASSOCIATES. DATED NOVEMBER 2020.
16. AL TOPSOIL AND ORGANIC MATERIAL SHALL BE STRIPPED WITHIN THE ROAD ALLOWANCE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND STOCK PILLED ON SITE AS DIRECTED BY NATIONAL MUNICIPALITY.
17. THE SUBGRADE SHALL BE CROWNED AND SLOPED AT LEAST 2% AND PROOF ROLLED WITH HEAVY ROLLERS.
18. SUB-EXCAVATE SOFT AREAS AND FILL WITH GRANULAR 'A', TYPE II COMPACTED IN MAXIMUM 300MM LIFTS.
19. ALL GRANULAR FOR ROADS SHALL BE COMPACTED TO MINIMUM OF 100% STANDARD PROCTOR DENSITY MAXIMUM DRY DENSITY (SPMDD).
20. CONCRETE RAMP C/W TACTILE WALKING SURFACE INDICATORS COMPONENT AS PER OPSD 310.039. TACTILE WALKING SURFACE INDICATORS TO BE INSTALLED AT ALL RAMPS. MATERIAL TO BE POLYMER COMPOSITE, COLOR GREY.

SANITARY, FOUNDATION DRAIN, STORM SEWER AND WATERMAIN NOTES

GENERAL

1. LASER ALIGNMENT CONTROL TO BE UTILIZED ON ALL SEWER INSTALLATIONS.
2. CLAY SEALS TO BE INSTALLED AS PER CITY STANDARD DRAWING S8. THE SEALS SHOULD BE AT LEAST 1.5M LONG (IN THE TRENCH DIRECTION) AND SHOULD EXTEND FROM TRENCH WALL TO TRENCH WALL. THE SEALS SHOULD EXTEND FROM THE FROST LINE AND FULLY PENETRATE THE BEDDING, SUB-BEDDING, AND COVER MATERIAL. THE BARRIERS SHOULD CONSIST OF RELATIVELY DRY AND COMPATIBLE BROWN SILTY CLAY PLACED IN MAXIMUM 225MM LIFTS AND COMPACTED TO A MINIMUM OF 95% SPMDD. THE CLAY SEALS SHOULD BE PLACED AT THE SITE BOUNDARIES AND AT 60M INTERVALS IN THE SERVICE TRENCHES.
3. SERVICES TO BUILDING TO BE TERMINATED 1.0M FROM THE OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.
4. 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.
5. "MODULOC" OR APPROVED PRE-CAST MAINTENANCE STRUCTURE AND CATCH BASIN ADJUSTERS TO BE USED IN LIEU OF BRICKING. PARGE ADJUSTING UNITS ON THE OUTSIDE ONLY.
6. SAFETY PLATFORMS SHALL BE PER OPSD 404.02.
7. DROP STRUCTURES SHALL BE IN ACCORDANCE WITH OPSD 1003.01, IF APPLICABLE.
8. THE CONTRACTOR IS TO PROVIDE CCTV CAMERA INSPECTIONS OF ALL SEWERS, INCLUDING PICTORIAL REPORT, ONE (1) CD COPY AND TWO (2) VIDEO RECORDING IN A FORMAT ACCEPTABLE TO ENGINEER. ALL SEWER 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.
9. CONTRACTOR SHALL PERFORM LEAKAGE TESTING, IN THE PRESENCE OF THE CONSULTANT, FOR SANITARY SEWERS IN ACCORDANCE WITH OPSS 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 PLACEMENT OF WEAR COURSE ASPHALT.

SANITARY

10. 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).
11. 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.
12. EXISTING MAINTENANCE STRUCTURES TO BE RE-BENCHED WHERE A NEW CONNECTION IS MADE.
13. SANITARY GRAVITY SEWER TRENCH AND BEDDING SHALL BE PER CITY OF OTTAWA STD. S6 AND S7 CLASS 'B' BEDDING, UNLESS SPECIFIED OTHERWISE.
14. SANITARY MAINTENANCE STRUCTURE FRAME AND COVERS SHALL BE PER CITY OF OTTAWA STD. S24 AND S25.
15. SANITARY MAINTENANCE STRUCTURES SHALL BE BENCHED PER OPSD 701.021.
16. 100MM THICK HIGH-DENSITY GRADE 'A' POLYSTYRENE INSULATION TO BE INSTALLED IN ACCORDANCE WITH CITY STD W22 WHERE INDICATED ON DRAWING SSP-1.

STORM

17. 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.
18. ALL STORM SEWER TRENCH AND BEDDING SHALL BE IN ACCORDANCE WITH THE CITY OF OTTAWA STD. S6 AND S7 CLASS 'B' UNLESS OTHERWISE SPECIFIED. BEDDING AND COVER MATERIAL SHALL BE SPECIFIED BY PROJECT GEOTECHNICAL ENGINEER.
19. ALL PVC STORM SEWERS ARE TO BE SDR 35 APPROVED PER C.S.A. B182.2 OR LATEST AMENDMENT, UNLESS OTHERWISE SPECIFIED.
20. CATCH BASIN SHALL BE IN ACCORDANCE WITH OPSD 705.010.
21. CATCH BASIN LEADS SHALL BE IN 200MM DIA. AT 1% SLOPE (MIN) UNLESS SPECIFIED OTHERWISE.
22. ALL CATCH BASINS SHALL HAVE 600MM SUMPS, UNLESS SPECIFIED OTHERWISE.
23. ALL CATCH BASIN LEAD INVERTS TO BE 1.5M BELOW FINISHED GRADE UNLESS SPECIFIED OTHERWISE.
24. THE STORM SEWER CLASSES HAVE BEEN DESIGNED 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 WIDENED TRENCH.
25. ALL ROAD AND PARKING LOT CATCH BASINS TO BE INSTALLED WITH ORTHOGONALLY PLACED SUBDRAINS IN ACCORDANCE WITH DETAIL. PERFORATED SUBDRAIN FOR ROAD AND PARKING LOT CATCH BASIN SHALL BE INSTALLED PER CITY STD R1 UNLESS OTHERWISE NOTED.
26. PERFORATED SUBDRAIN FOR REAR YARD AND LANDSCAPING APPLICATIONS SHALL BE INSTALLED PER CITY STD S29, S30 AND S31, WHERE APPLICABLE.
27. RIP-RAP TREATMENT SEWER AND CULVERT OUTLETS PER OPSD 810.010.
28. ALL STORM SEWER/ CULVERTS TO BE INSTALLED WITH FROST TREATMENT PER OPSD 803.031 WHERE APPLICABLE.
29. ALL STORM MANHOLES WITH PIPE LESS THAN 900MM IN DIAMETER SHALL BE CONSTRUCTED WITH A 300MM SUMP AS PER SDG, CLAUSE 6.2.6.

WATERMAIN

30. ALL WATERMAIN INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE CITY OF OTTAWA AND THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS).
31. ALL PVC WATERMAINS SHALL BE AWWA C-900 CLASS 150, SDR 18 OR APPROVED EQUIVALENT.
32. ALL WATER SERVICES LESS THAN OR EQUAL TO 50MM IN DIAMETER TO BE TYPE 'K' COPPER.
33. 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.
34. ALL PVC WATERMAINS, SHALL BE INSTALLED WITH A 10 GAUGE STRANDED COPPER TWU OR RWU TRACER WIRE IN ACCORDANCE WITH CITY OF OTTAWA STD. W.36.
35. CATHODIC PROTECTION IS REQUIRED ON ALL METALLIC FITTINGS PER CITY OF OTTAWA STD.25.5 AND W25.6.
36. VALVE BOXES SHALL BE INSTALLED PER CITY OF OTTAWA STD W24.
37. WATERMAIN IN FILL AREAS TO BE INSTALLED WITH RESTRAINED JOINTS PER CITY OF OTTAWA STD.25.5 AND W25.6.
38. THRUST BLOCKING OF WATERMAINS TO BE INSTALLED PER CITY OF OTTAWA STD. W25.3 AND W25.4.
39. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY CAPS, PLUGS, BLOW-OFFS, AND NOZZLES REQUIRED FOR TESTING AND DISINFECTION OF THE WATERMAIN.
40. WATERMAIN CROSSING OVER AND BELOW SEWERS SHALL BE IN ACCORDANCE WITH THE CITY OF OTTAWA STD. W25,2 AND W25, RESPECTIVELY.
41. WATER SERVICES ARE TO BE INSULATED PER CITY STD. W23 WHERE SEPARATION BETWEEN SERVICES AND MAINTENANCE HOLES ARE LESS THAN 2.4M.
42. THE MINIMUM VERTICAL CLEARANCE BETWEEN WATERMAIN AND SEWER/UTILITY IS 0.5M PER MOE GUIDELINES. FOR CROSSING UNDER SEWERS, ADEQUATE STRUCTURAL SUPPORT FOR THE SEWER 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 THAT THE JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE SEWER.
43. ALL WATERMAINS SHALL HAVE A MINIMUM COVER OR 2.4M, OTHERWISE THERMAL INSULATION IS REQUIRED AS PER STD DWG W22.
44. GENERAL WATER PLANT TO UTILITY CLEARANCE AS PER STD DWG R20.
45. 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 W18.
46. 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.
47. ALL WATERMAINS 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.
48. ALL WATERMAINS 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 EFFECT ENVIRONMENT. IT IS RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL MUNICIPAL AND/OR PROVINCIAL REQUIREMENTS ARE FOLLOWED.
49. ALL WATERMAIN STUBS SHALL BE TERMINATED WITH A PLUG AND 50MM BLOW OFF UNLESS OTHERWISE NOTED.

USE AND INTERPRETATION OF DRAWINGS

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION ARE PART OF THE CONTRACT DOCUMENTS AND DESCRIBE USE AND INTENT OF THE DRAWING. THE CONTRACT DOCUMENTS INCLUDE NOT ONLY THE DRAWINGS, BUT ALSO THE OWNER-CONTRACTOR AGREEMENTS, CONDITIONS OF THE CONTRACT, THE SPECIFICATIONS, ADDENDA, AND MODIFICATIONS ISSUED AFTER EXECUTION OF THE CONTRACT. THESE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ANY ONE SHALL BE BINDING AS IF REQUIRED BY ALL. WORK NOT COMPLETELY DELINEATED HEREON SHALL BE CONSTRUCTED OF THE SAME MATERIALS AND DETAILED SIMILARLY AS WORK SHOWN MORE COMPLETELY ELSEWHERE IN THE CONTRACT DOCUMENTS.

BY USE OF THE DRAWINGS FOR CONSTRUCTION OF THE PROJECT, THE OWNER CONFIRMS THAT HE HAS REVIEWED AND APPROVED THE DRAWINGS. THE CONTRACTOR CONFIRMS THAT HE HAS VISITED THE SITE, FAMILIARIZED HIMSELF WITH THE LOCAL CONDITIONS, VERIFIED FIELD DIMENSIONS AND CORRELATED HIS OBSERVATIONS WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

AS INSTRUMENTS OF SERVICE, ALL DRAWINGS, SPECIFICATIONS, CADD FILES OR OTHER ELECTRONIC MEDIA AND COPIED THERE OF FURNISHED BY THE ENGINEER ARE HIS PROPERTY. THEY ARE TO BE USED ONLY FOR THIS PROJECT AND ARE NOT TO BE USED ON ANY OTHER PROJECT, INCLUDING REPEATS OF THE PROJECT. CHANGES TO THE DRAWINGS MAY ONLY BE MADE BY THE ENGINEER.

UNLESS THE REVISION TITLE IS "ISSUED FOR CONSTRUCTION", THESE DRAWINGS SHALL BE CONSIDERED PRELIMINARY AND SHALL NOT BE USED AS A CONSTRUCTION DOCUMENT.

THESE DRAWINGS ILLUSTRATES THE WORK TO BE DONE. THE ENGINEER IS NOT RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES USED TO DO THE WORK, OR THE SAFETY ASPECTS OF CONSTRUCTION, AND NOTHING ON THESE DRAWINGS EXPRESSED OR IMPLIED CHANGES THIS CONDITION. CONTRACTOR SHALL DETERMINE ALL CONDITIONS AT THE SITE AND SHALL BE RESPONSIBLE FOR KNOWING HOW THEY AFFECT THE WORK. SUBMITTAL OF A BID TO PERFORM THIS WORK IS ACKNOWLEDGEMENT OF THE RESPONSIBILITIES, AND THAT THEY HAVE BEEN FULLY CONSIDERED IN PLANNING OF THE WORK, AND THE BID PRICE. NO CLAIMS FOR EXTRA CHARGES DUE TO THESE CONDITIONS WILL BE FORTHCOMING.

UNAUTHORIZED CHANGES:

IN THE EVENT THE CLIENT, THE CLIENT'S CONTRACTORS OR SUBCONTRACTORS, OR ANYONE FOR WHOM THE CLIENT IS LEGALLY LIABLE MAKES OR PERMITS TO BE MADE ANY CHANGES TO ANY REPORTS, PLANS, SPECIFICATIONS OR OTHER CONSTRUCTION DOCUMENTS PREPARED BY LRL ASSOCIATES LTD. (LRL) WITHOUT OBTAINING LRL'S PRIOR WRITTEN CONSENT, THE CLIENT SHALL ASSUME FULL RESPONSIBILITY FOR THE RESULTS OF SUCH CHANGES. THEREFORE THE CLIENT AGREES TO WAIVE ANY CLAIM AGAINST LRL AND TO RELEASE LRL FROM ANY LIABILITY ARISING DIRECTLY OR INDIRECTLY FROM SUCH UNAUTHORIZED CHANGES.

IN ADDITION, THE CLIENT AGREES, TO THE FULLEST EXTENT PERMITTED BY LAW, TO INDEMNIFY AND HOLD HARMLESS LRL FROM ANY DAMAGES, LIABILITIES OR COST, INCLUDING REASONABLE ATTORNEY'S FEES AND COST OF DEFENSE, ARISING FROM SUCH CHANGES.

IN ADDITION, THE CLIENT AGREES TO INCLUDE IN ANY CONTRACTS FOR CONSTRUCTION APPROPRIATE LANGUAGE THAT PROHIBITS THE CONTRACTOR OR ANY SUBCONTRACTORS OF ANY TIER FROM MAKING ANY CHANGES OR MODIFICATIONS TO LRL'S CONSTRUCTION DOCUMENTS WITHOUT THE PRIOR WRITTEN APPROVAL OF LRL AND THAT FURTHER REQUIRES THE CONTRACTOR TO INDEMNIFY BOTH LRL AND THE CLIENT FROM ANY LIABILITY OR COST ARISING FROM SUCH CHANGES MADE WITHOUT SUCH PROPER AUTHORIZATION.

GENERAL NOTES:

EXISTING SERVICES AND UTILITIES SHOWN ON THESE DRAWINGS ARE TAKEN FROM THE BEST AVAILABLE RECORDS, BUT MAY NOT BE COMPLETE OR TO DATE. CONTRACTOR SHALL VERIFY IN FIELD FOR LOCATION AND ELEVATION OF PIPES AND CHECK WITH THE UTILITY COMPANIES BEFORE DIGGING OR PERFORMING WORK.

CONTRACTOR IS ADVISED TO COLLECT INFORMATION ON SOIL CONDITIONS BEFORE START OF CONSTRUCTION.

THE ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS WHICH ARISE FROM OTHERS' FAILURE TO OBTAIN AND/OR FOLLOW THE ENGINEER'S GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES AMBIGUITIES OR CONFLICTS WHICH ARE ALLEGED.

CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE WORK COMMENCES. DO NOT SCALE DRAWINGS.

No.	REVISIONS	BY	DATE
01	ISSUED FOR APPROVAL	T.H.	04-27-2023

NOT AUTHENTIC UNLESS SIGNED AND DATED

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CLIENT
CLV Developments in Trust
485 Bank Street, Suite 200
Ottawa, ON, K2J 1Z2

DESIGNED BY:	DRAWN BY:	APPROVED BY:
T.H.	T.H.	V.J.

PROJECT

SITE PLAN CONTROL DESIGN
360 LAURIER AVENUE, OTTAWA ON

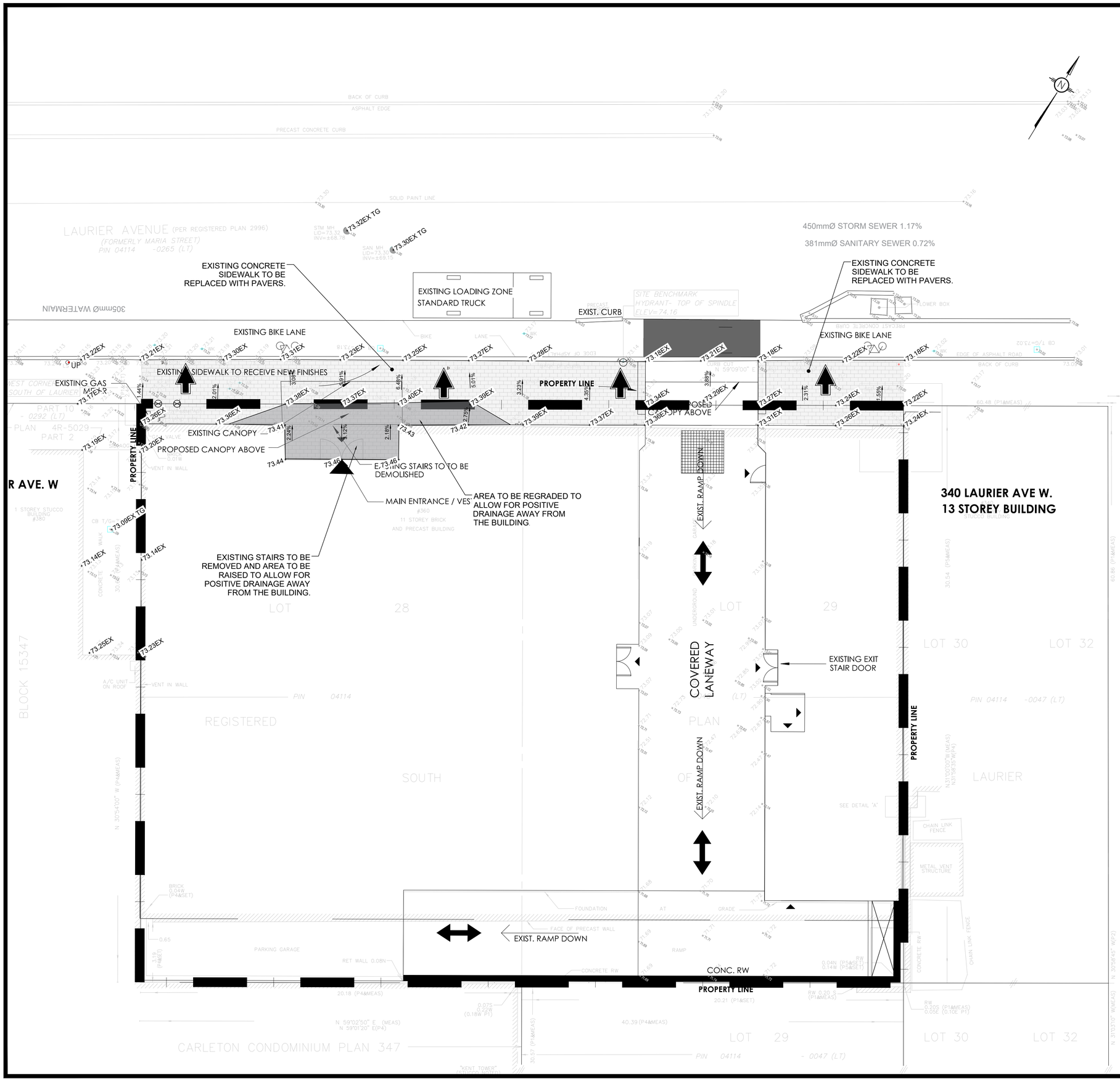
DRAWING TITLE

GENERAL NOTES

PROJECT NO.
220868

DATE
APRIL 2023

C001



LEGEND:

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- PROPOSED FENCE
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SCALE: 1:100

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LICENSED PROFESSIONAL ENGINEER
V. JOHNSON
100510576
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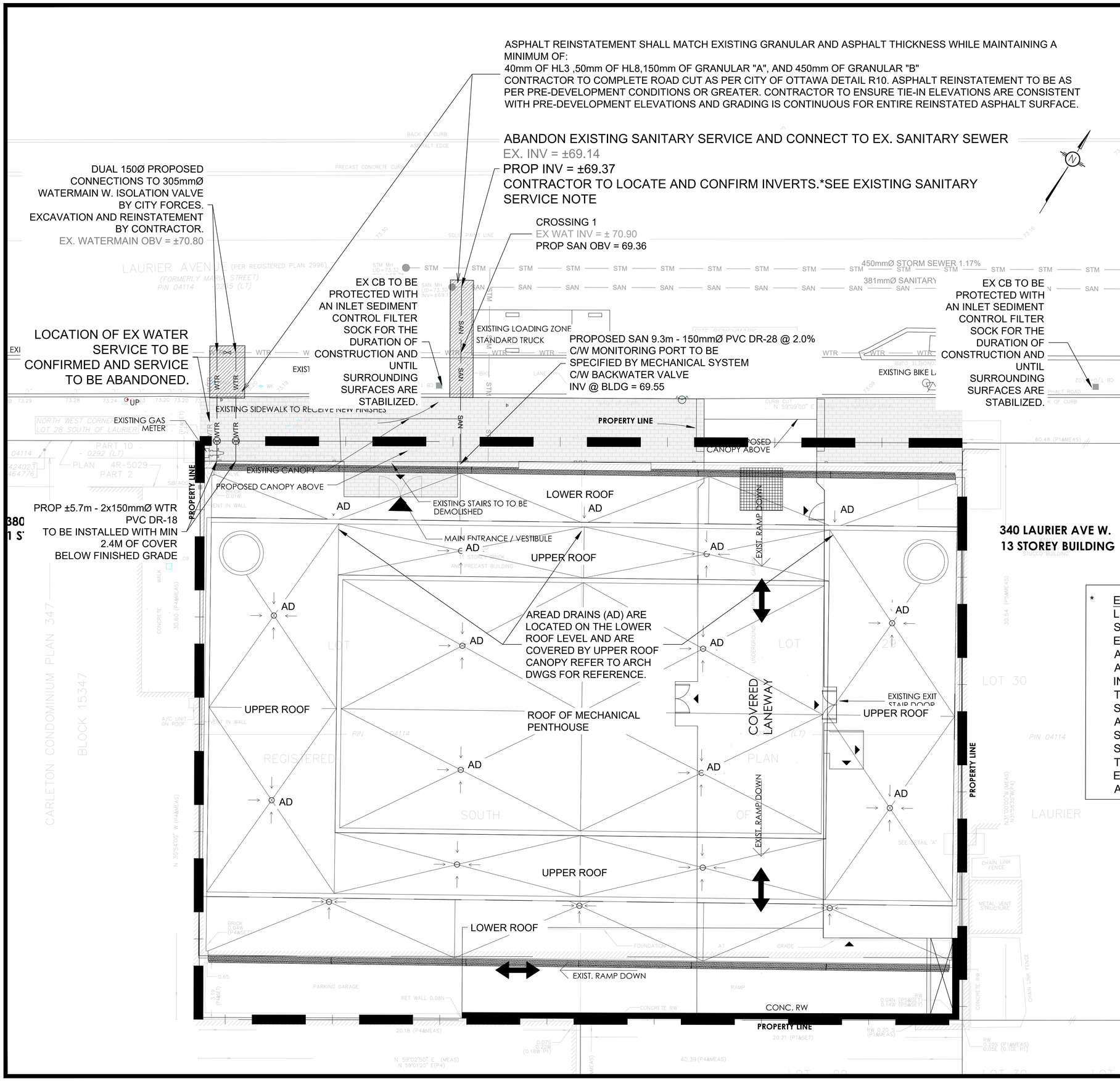
PROJECT
SITE PLAN CONTROL DESIGN
360 LAURIER AVENUE, OTTAWA ON

DRAWING TITLE
GRADING AND DRAINAGE PLAN

PROJECT NO. 220868

DATE APRIL 2023

C301



* EXISTING SANITARY SERVICE
LOCATION OF EXISTING SANITARY SERVICE SHALL BE CONFIRMED ONSITE. EXISTING SANITARY SERVICE TO BE ABANDONED. IF CCTV IS CONDUCTED AND EXISTING SERVICE IS FOUND TO BE IN GOOD AND USEABLE CONDITION FOR THE PROJECTED FUTURE, NO NEW SANITARY SERVICES WILL BE REQUIRED AND THE EXISTING SERVICE WILL SUFFICE. THE EX INVERTS AND SERVICE SIZE WILL HAVE TO BE CHECKED WITH THE ENGINEER TO ENSURE THERE IS ENOUGH CAPACITY FOR THE ANTICIPATED FUTURE FLOWS.

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DRAWING TITLE
SERVICING PLAN

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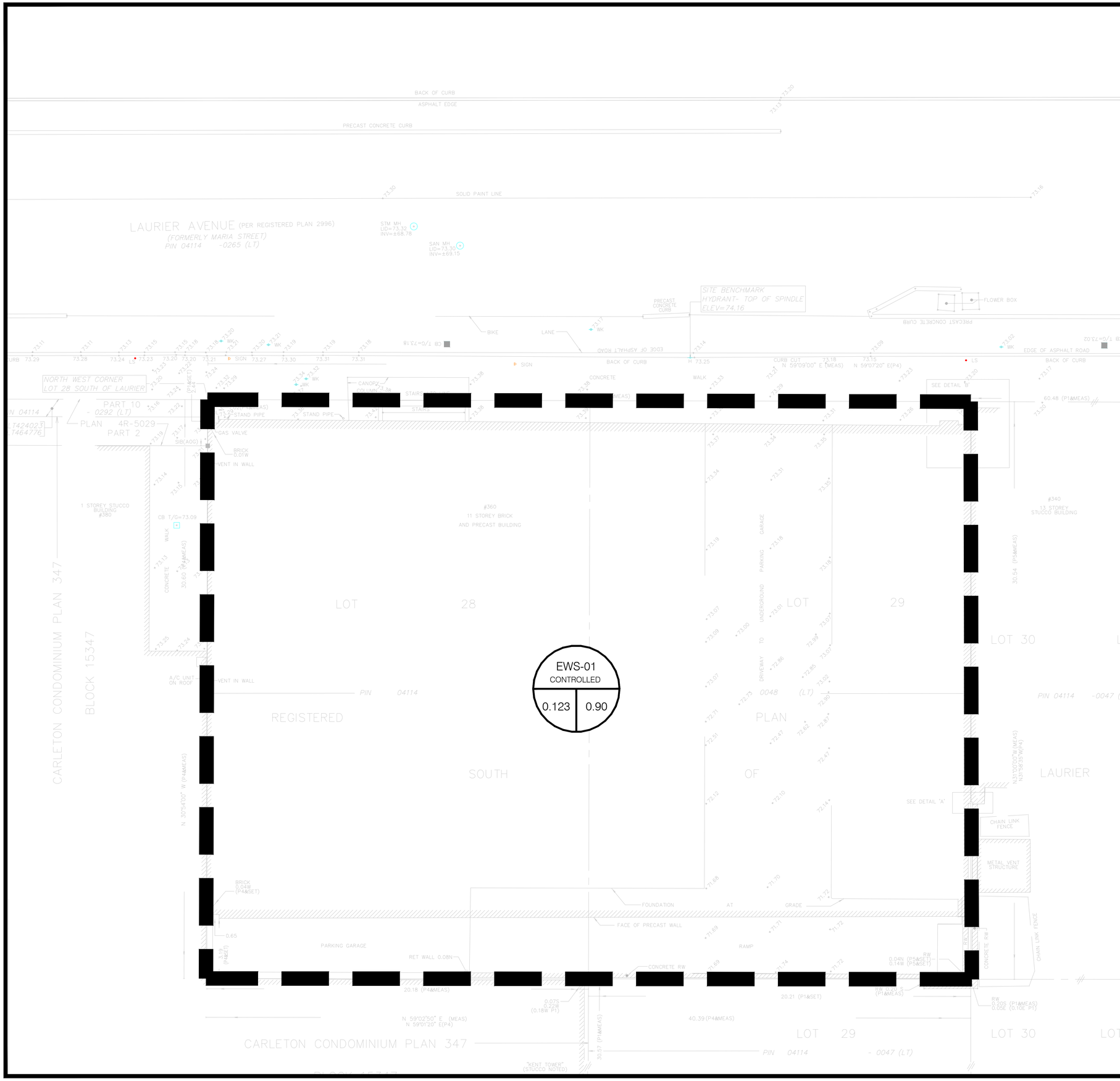

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PRE-DEVELOPMENT
WATERSHED PLAN

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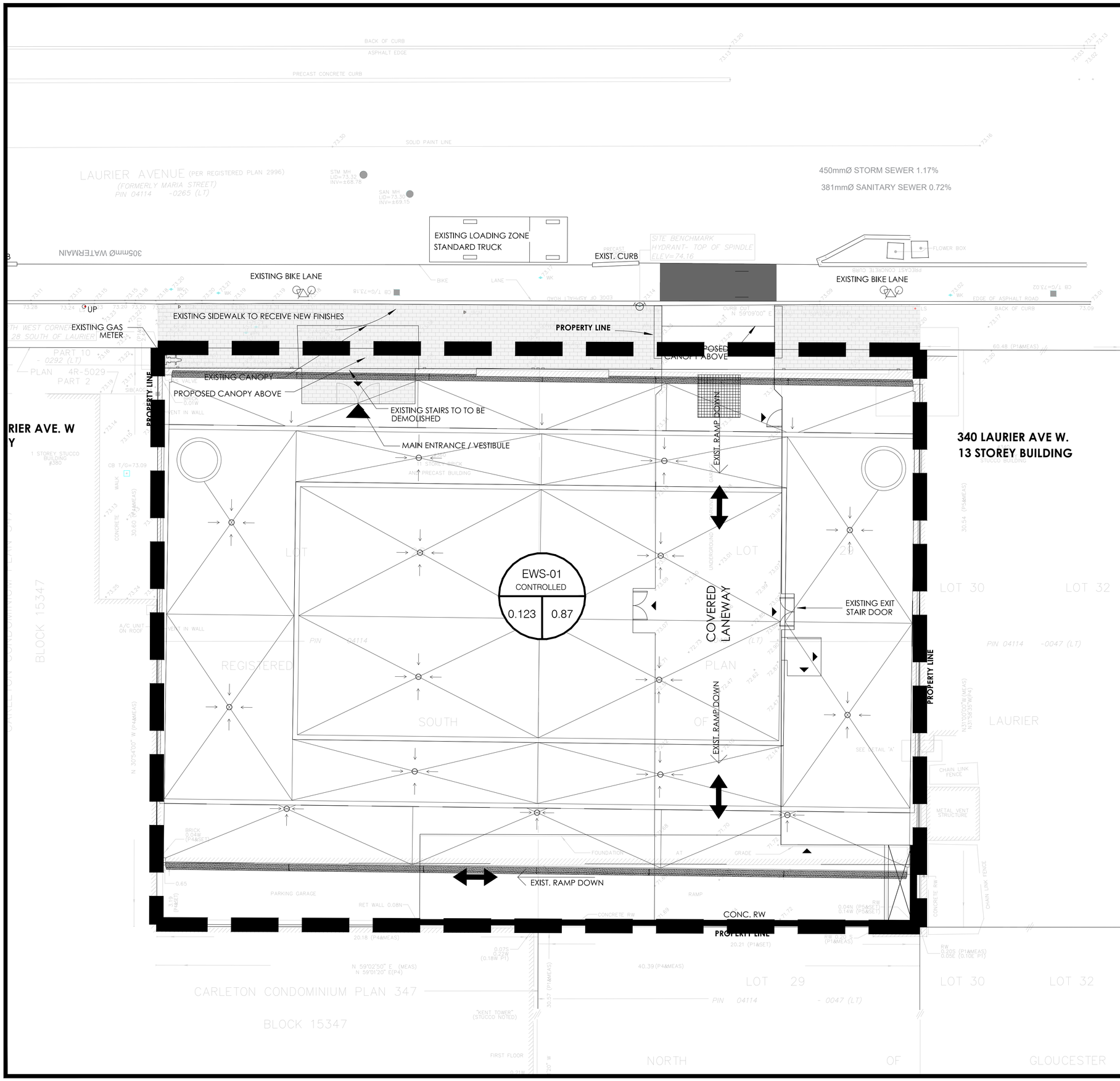

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CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE WORK COMMENCES. DO NOT SCALE DRAWINGS.

2m 0.5 0 2 4m

SCALE: 1:100

No.	REVISIONS	BY	DATE
01	ISSUED FOR APPROVAL	T.H.	04-27-2023

LICENSED PROFESSIONAL ENGINEER
V. JOHNSON
100510576
04-27-2023
PROVINCE OF ONTARIO

NOT AUTHENTIC UNLESS SIGNED AND DATED

LRL
ENGINEERING | INGÉNIERIE
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CLIENT
CLV Developments in Trust
485 Bank Street, Suite 200
Ottawa, ON, K2J 1Z2

DESIGNED BY:	DRAWN BY:	APPROVED BY:
T.H.	T.H.	V.J.

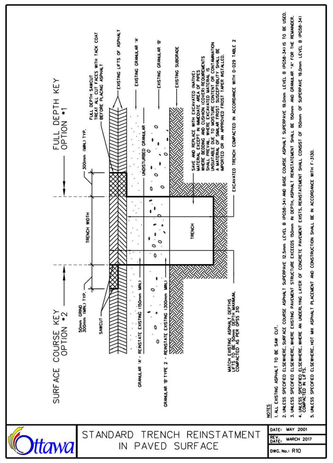
PROJECT
SITE PLAN CONTROL DESIGN
360 LAURIER AVENUE, OTTAWA ON

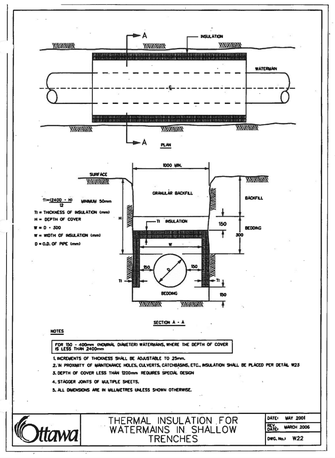
DRAWING TITLE
POST-DEVELOPMENT
WATERSHED PLAN

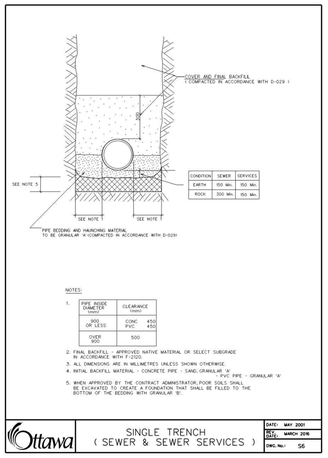
PROJECT NO.
220868

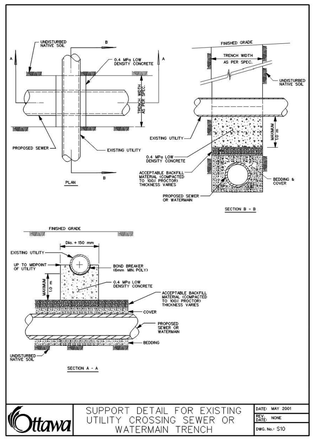
DATE
APRIL 2023

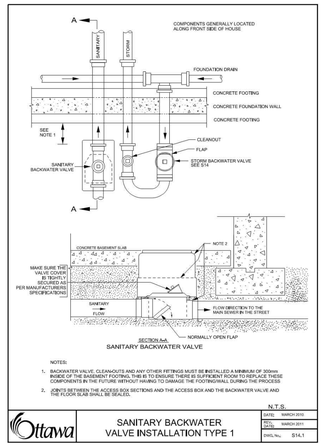
C702

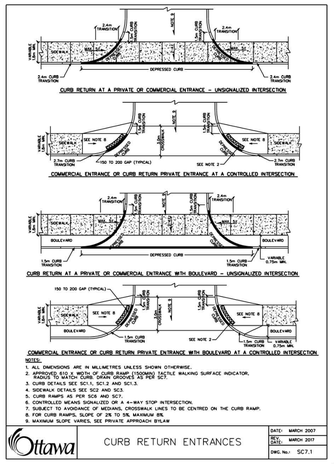


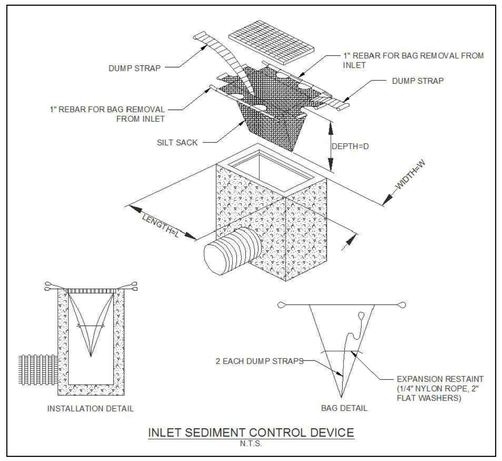


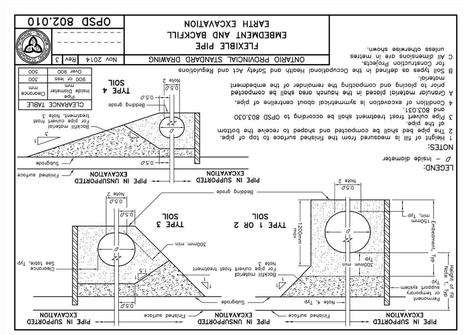












USE AND INTERPRETATION OF DRAWINGS

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION ARE PART OF THE CONTRACT DOCUMENTS AND DESCRIBE USE AND INTENT OF THE DRAWING. THE CONTRACT DOCUMENTS INCLUDE NOT ONLY THE DRAWINGS, BUT ALSO THE OWNER-CONTRACTOR AGREEMENTS, CONDITIONS OF THE CONTRACT, THE SPECIFICATIONS, ADDENDA, AND MODIFICATIONS ISSUED AFTER EXECUTION OF THE CONTRACT. THESE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ANY ONE SHALL BE BINDING AS IF REQUIRED BY ALL. WORK NOT COMPLETELY DELINEATED HEREON SHALL BE CONSTRUCTED OF THE SAME MATERIALS AND DETAILED SIMILARLY AS WORK SHOWN MORE COMPLETELY ELSEWHERE IN THE CONTRACT DOCUMENTS.

BY USE OF THE DRAWINGS FOR CONSTRUCTION OF THE PROJECT, THE OWNER CONFIRMS THAT HE HAS REVIEWED AND APPROVED THE DRAWINGS. THE CONTRACTOR CONFIRMS THAT HE HAS VISITED THE SITE, FAMILIARIZED HIMSELF WITH THE LOCAL CONDITIONS, VERIFIED FIELD DIMENSIONS AND CORRELATED HIS OBSERVATIONS WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

AS INSTRUMENTS OF SERVICE, ALL DRAWINGS, SPECIFICATIONS, CADD FILES OR OTHER ELECTRONIC MEDIA AND COPIED THERE OF FURNISHED BY THE ENGINEER ARE HIS PROPERTY. THEY ARE TO BE USED ONLY FOR THIS PROJECT AND ARE NOT TO BE USED ON ANY OTHER PROJECT, INCLUDING REPEATS OF THE PROJECT. CHANGES TO THE DRAWINGS MAY ONLY BE MADE BY THE ENGINEER.

UNLESS THE REVISION TITLE IS "ISSUED FOR CONSTRUCTION", THESE DRAWINGS SHALL BE CONSIDERED PRELIMINARY AND SHALL NOT BE USED AS A CONSTRUCTION DOCUMENT.

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PROJECT
SITE PLAN CONTROL DESIGN
360 LAURIER AVENUE, OTTAWA ON

DRAWING TITLE
CONSTRUCTION DETAIL PLAN

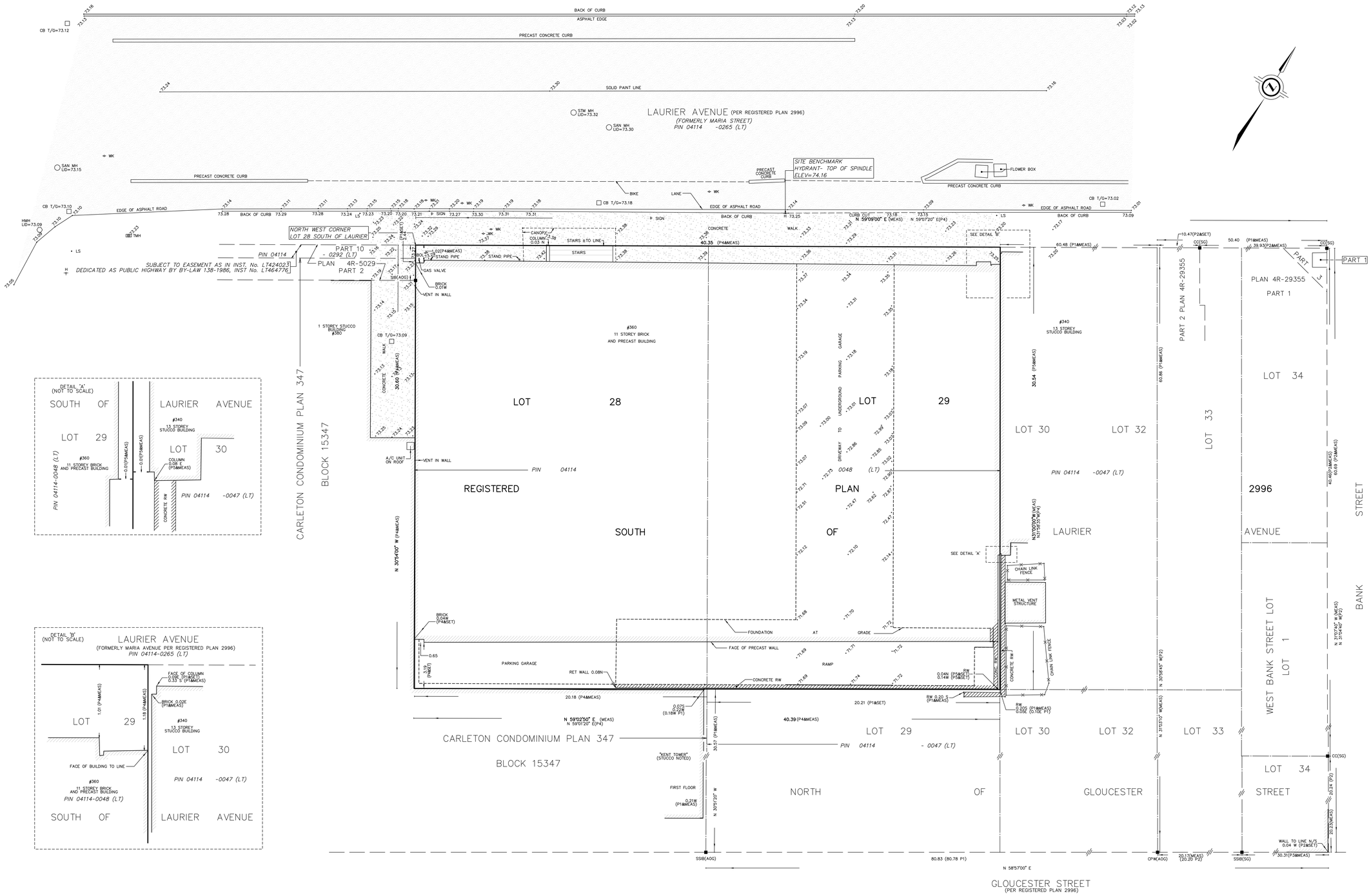
PROJECT NO.
220868

DATE
APRIL 2023

C901

APPENDIX E

Proposed Site Plan
Legal Survey
As-builts



PLAN OF SURVEY OF

LOTS 28 AND 29
REGISTERED PLAN 2996
CITY OF OTTAWA

SCALE 1 : 100

5 0 5 metres

J.D. BARNES LIMITED

© COPYRIGHT 2023

METRIC DISTANCES AND/OR COORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

NOTES

BEARINGS ARE MTM GRID, DERIVED FROM GLOBAL NAVIGATION SATELLITE SYSTEM OBSERVATIONS BY REAL TIME NETWORK (RTN), MTM ZONE 9, NAD83 (CSRS) (2010.0).

DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.999933.

LEGEND

■	DENOTES	SURVEY MONUMENT FOUND
□	DENOTES	SURVEY MONUMENT SET
SIB	DENOTES	STANDARD IRON BAR
SSIB	DENOTES	SHORT STANDARD IRON BAR
CC	DENOTES	CUT CROSS
CPW	DENOTES	CONCRETE PIN AND WASHER
MEAS	DENOTES	MEASURED
AOG	DENOTES	ANNIS, O'SULLIVAN, VOLLEBEKK LTD.
SG	DENOTES	STANTEC GEOMATICS LTD.
P1	DENOTES	SURVEYOR'S REAL PROPERTY REPORT BY ANNIS, O'SULLIVAN, VOLLEBEKK LTD., O.L.S., DATED NOV.22, 2010.
P2	DENOTES	PLAN 4R-29355
P3	DENOTES	PLAN 4R-22556
P4	DENOTES	SURVEYOR'S REAL PROPERTY REPORT BY FAIRHALL, MOFFATT & WOODLAND, O.L.S., DATED DEC.29, 1998.
P5	DENOTES	SURVEYOR'S REAL PROPERTY REPORT BY FARLEY, SMITH & DENIS SURVEYING LTD., O.L.S., DATED SEP.27, 2011.
RW	DENOTES	RETAINING WALL

ELEVATIONS

ELEVATIONS SHOWN ON THIS PLAN ARE RELATED TO GEODETIC DATUM CGVD28:78 AND ARE DERIVED FROM THE PUBLISHED BENCH MARK No 0011963U3622 HAVING A PUBLISHED ELEVATION OF 73.873 METRES.

TOPOGRAPHIC LEGEND

□	CB	DENOTES CATCHBASIN
○	GM	DENOTES GAS METER
○	HMH	DENOTES HYDRO MANHOLE
TMH	TMH	DENOTES TELEPHONE MANHOLE
◯	SAN MH	DENOTES SANITARY MANHOLE
◯	STM MH	DENOTES STORM MANHOLE
•	LS	DENOTES LIGHT STANDARD
✱	H	DENOTES FIRE HYDRANT
✱	WK	DENOTES WATER KEY

SURVEYOR'S CERTIFICATE

I CERTIFY THAT:

1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYOR'S ACT AND THE REGULATIONS MADE UNDER THEM.

2. THE SURVEY WAS COMPLETED ON MARCH 9, 2023.

MARCH 10, 2023
DATE

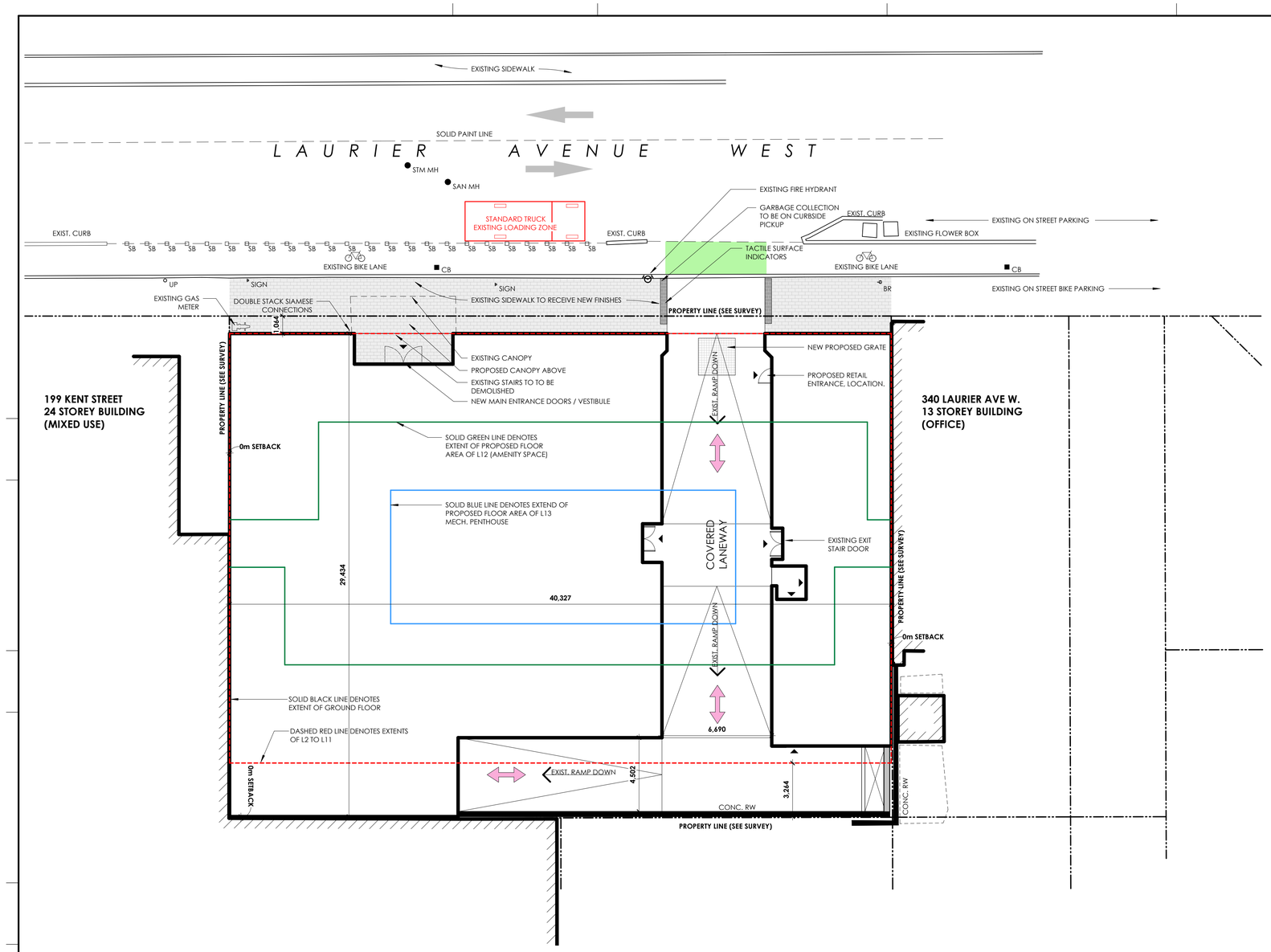
C.M. FOX
ONTARIO LAND SURVEYOR

THIS PLAN OF SURVEY RELATES TO AOLS PLAN SUBMISSION FORM NUMBER V-42000

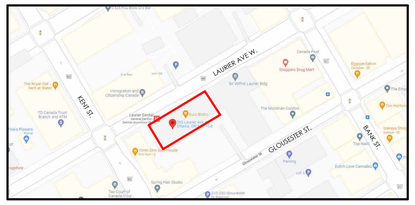
J.D.BARNES LIMITED
SURVEYING MAPPING GIS
LAND INFORMATION SPECIALISTS
62 STEACIE DRIVE, SUITE 103, KANATA, ON K2K 2A9
T: (613) 731-7244 F: (613) 254-8659 www.jdbarnes.com

DRAWN BY: CE	CHECKED BY: CF	REFERENCE NO.: 23-10-013-00
PLOTTED: 3/10/23		DATED: 03/10/23

FILE: G:\23-10-013\00\Drawing\23-10-013 P_S Lot 28 29 Plan 2996.dgn



1 A0-801 SITE PLAN - PROPOSED
1 : 150
A0-200



KEY PLAN

SITE PLAN LEGEND

CB	CATCH BASIN
SAN MH	SANITARY MAN HOLE
	BUILDING ENTRANCE
UP	UTILITY POLE
SIGN	TRAFFIC SIGN
	FIRE HYDRANT
BR	SINGLE BIKE RACK BOLLARD
SB	COLLAPSABLE SAFETY BOLLARD 3'-0" - 5'-0" O.C.
	BICYCLE LANE

VEHICLE PARKING PROVIDED (BY FLOOR)

TYPE	COUNT
LEVEL P5 BASEMENT	
COMPACT (2438x5300)	9
STANDARD (2600x5200)	6
LEVEL P4 BASEMENT	
COMPACT (2438x5300)	9
STANDARD (2600x5200)	4
LEVEL P3 BASEMENT	
ACCESSIBLE (3400x5200)	2
COMPACT (2438x5300)	7
STANDARD (2600x5200)	3
LEVEL P2 BASEMENT	
COMPACT (2438x5300)	6
STANDARD (2600x5200)	3
LEVEL P1 BASEMENT	
ACCESSIBLE (3400x5200)	1
COMPACT (2438x5300)	7
STANDARD (2600x5200)	2
GRAND TOTAL	**59**

BICYCLE PARKING PROVIDED (BY FLOOR)

TYPE	COUNT
LEVEL P4 BASEMENT	
HORIZONTAL DBL STACKED BICYCLE SPACE (OPEN PARKING)	2
HORIZONTAL DBL STACKED BICYCLE SPACE (SECURE)	6
LEVEL P2 BASEMENT	
HORIZONTAL DBL STACKED BICYCLE SPACE (SECURE)	6
LEVEL 01	
HORIZONTAL DBL STACKED BICYCLE SPACE (SECURE)	54
VERTICAL BICYCLE SPACE (SECURE)	10
GRAND TOTAL	**78**
REQUIRED	*70*

GENERAL NOTES:

UNLESS OTHERWISE NOTED:

A. SITE DEMOLITION PLAN AND SITE PLAN TO BE READ IN CONJUNCTION WITH LANDSCAPE AND CIVIL PACKAGE DRAWINGS.
B. ALL CONSTRUCTED ELEMENTS ARE TO BE RETAINED.
C. PROTECTION MEASURES ARE TO BE TAKEN TO PREVENT DAMAGE TO EXISTING STRUCTURES OR LANDSCAPE FROM OCCURING.
D. ANY PARKING SIGNAGE MOVED OR REMOVED DURING CONSTRUCTION WILL BE REINSTATED.
E. SIDEWALK/CURB TO BE REINSTATED WHERE PRIVATE DRIVEWAYS HAVE BEEN DEMOLISHED OR WHERE DAMAGED THROUGH CONSTRUCTION PROCESS.

RESIDENTIAL SUITE COUNTS

TYPE	COUNT
1 BDRM	1
1 BDRM (B.F.)	19
1 BDRM (B.F.) + DEN	1
1 BDRM + DEN	19
2 BDRM	29
2 BDRM (B.F.)	11
2 BDRM + DEN	19
STUDIO	40
TOTAL	139

GFA AREA SCHEDULE

LEVEL	EXISTING AREA	PROPOSED AREA	DIFFERENCE
P5-BASEMENT (PARK./MECH.)	-	-	-
P3-P4 BASEMENT (PARK./MECH.)	-	-	-
P1-P2 BASEMENT (PARK./MECH.)	-	-	-
LEVEL 01 (RETAIL/AMNTY.)	728.31 m²	587.15 m²	-141.16 m²
LEVEL 02 (RESIDENTIAL)	831.90 m²	828.41 m²	-3.49 m²
LEVEL 03 (RESIDENTIAL)	916.17 m²	915.35 m²	-0.82 m²
LEVEL 04 (RESIDENTIAL)	916.17 m²	915.35 m²	-0.82 m²
LEVEL 05 (RESIDENTIAL)	916.17 m²	915.35 m²	-0.82 m²
LEVEL 06 (RESIDENTIAL)	916.17 m²	915.35 m²	-0.82 m²
LEVEL 07 (RESIDENTIAL)	916.17 m²	915.35 m²	-0.82 m²
LEVEL 08 (RESIDENTIAL)	916.17 m²	915.35 m²	-0.82 m²
LEVEL 09 (RESIDENTIAL)	916.17 m²	915.35 m²	-0.82 m²
LEVEL 10 (RESIDENTIAL)	916.17 m²	915.35 m²	-0.82 m²
LEVEL 11 (RESIDENTIAL)	916.17 m²	915.35 m²	-0.82 m²
LEVEL 12 FFL (AMENITIES)	293.40 m²	404.75 m²	111.35 m²
LEVEL 13 (MECH.)	-	-	-
TOTAL	**10,099.12 m²**	**10,058.49 m²**	-

RESIDENTIAL SUITE AREAS

SUITE	TYPE	AREA (SQ.M)	AREA (SF)
LEVEL 02			
SUITE 01	1 BDRM (B.F.) + DEN	56.91 m²	612.59 ft²
SUITE 03	2 BDRM	69.61 m²	749.31 ft²
SUITE 04	2 BDRM (B.F.)	65.63 m²	706.45 ft²
SUITE 05	STUDIO	45.83 m²	493.31 ft²
SUITE 06	STUDIO	40.21 m²	432.78 ft²
SUITE 07	1 BDRM	47.66 m²	513.03 ft²
SUITE 08	1 BDRM + DEN	59.29 m²	638.24 ft²
SUITE 09	STUDIO	40.23 m²	433.04 ft²
SUITE 10	STUDIO	45.61 m²	490.96 ft²
SUITE 11	2 BDRM (B.F.)	65.84 m²	708.70 ft²
SUITE 12	2 BDRM	72.20 m²	777.17 ft²
SUITE 13	2 BDRM + DEN	73.82 m²	794.57 ft²
SUITE 14	1 BDRM (B.F.)	50.81 m²	546.88 ft²
LEVEL 03 TO LEVEL 11 (TYPICAL)			
SUITE 01	1 BDRM (B.F.)	52.08 m²	560.54 ft²
SUITE 02	2 BDRM + DEN	75.02 m²	807.47 ft²
SUITE 03	2 BDRM	73.68 m²	793.05 ft²
SUITE 04	2 BDRM (B.F.)	65.63 m²	706.45 ft²
SUITE 05	STUDIO	45.83 m²	493.31 ft²
SUITE 06	STUDIO	40.21 m²	432.78 ft²
SUITE 07	1 BDRM + DEN	57.01 m²	613.66 ft²
SUITE 08	1 BDRM + DEN	56.79 m²	611.31 ft²
SUITE 09	STUDIO	40.21 m²	432.84 ft²
SUITE 10	STUDIO	45.60 m²	490.89 ft²
SUITE 11	2 BDRM	66.29 m²	713.59 ft²
SUITE 12	2 BDRM	73.66 m²	792.87 ft²
SUITE 13	2 BDRM + DEN	75.41 m²	811.69 ft²
SUITE 14	1 BDRM (B.F.)	52.07 m²	560.51 ft²
TOTAL		**8,109.10 m²**	**87,285.60 ft²**

ZONING MATRIX

ITEM	FIELD	DATA
1	LEGAL DESCRIPTION	LOTS 28 AND 29 REGISTERED PLAN 2996
2	CURRENT ZONING PERMITTED USES:	MD S25 APARTMENT DWELLINGS (HIGH RISE), RESTAURANT (CONDITIONAL), OFFICE (CURRENT EXCEPTION)
3	LOT AREA	1,233.35 m² *(EXISTING UNCHANGED)*
4	LOT FRONTAGE	40.32 m *(EXISTING UNCHANGED)*
5	BUILDING AREA	1,057.83 m² *(EXISTING UNCHANGED)*
6	BUILDING SETBACKS	FRONT YARD REQUIRED: NO MINIMUM FRONT YARD (EXISTING) 1.02m REAR YARD (REQUIRED): NO MINIMUM REAR YARD (EXISTING): 0m INTERIOR SIDE YARD (REQUIRED) NO MINIMUM INTERIOR SIDE YARD (EXISTING) 0m
7	AMENITY SPACE	REQUIRED: 6m² x 139 DWELLING UNITS = 834 m² PROPOSED COMMUNAL AMENITY: GROUND LEVEL, INTERIOR: 238.48 m² L12, INTERIOR: 424.47 m² L12, EXTERIOR: 452.60 m² **TOTAL: 1,115.55 m²**
8	BUILDING HEIGHT	HEIGHTS: PROPOSED CHANGE TO USE AS FOLLOWS: **36.75 m** TO TOP OF MAIN ROOF AMENITY **40.62 m** TO TOP OF AMENITY PENTHOUSE (L12) **44.80 m** TO TOP OF MECHANICAL PENTHOUSE (L13)
9	LOADING ZONE	REQUIRED: RESIDENTIAL: 0 spaces (min) PROPOSED: 1 SHARED LOADING ZONE
10	PARKING	REQUIRED: RESIDENTIAL: 0 MAXIMUM: 1.5 PER UNIT = 209 spots VISITOR: 0.1 PER SUITE =14 spots TOTAL: **14** PROPOSED: TOTAL: **59**
11	BICYCLE PARKING	REQUIRED: RESIDENTIAL: 0.5 / UNIT = 70 SPACES TOTAL: **70 SPACES + 1 RETAIL SPACES (REFER TO SITE PLAN)** PROPOSED: TOTAL: **78**
12	LANDSCAPED AREAS	REQUIRED: NONE NOTED FOR THIS SITE PROPOSED: GROUND LEVEL: 335.22 m² L12 ROOF TERRACE: 496.81 m² TOTAL: **832.03 m²**
13	DRIVE AISLES	REQUIRED: SINGLE TRAFFIC LANE: 3m DOUBLE TRAFFIC LANE: MINIMUM: 6m; MAXIMUM: 3.6m FOR LESS THAN 20 PARKING SPACES, 6.7m FOR 20 OF MORE PARKING SPACES PROPOSED: SEE PLANS

CLV GROUP DEVELOPMENTS
485 BANK STREET, SUITE 200, OTTAWA K2P 1Z2
client | client

CLELAND JARDINE ENGINEERING LTD
200-300 SLATER STREET
OTTAWA, ONTARIO K1P 5H9
613.691.1970
structural engineers | ingénieur structure

Smith + Andersen
MEP engineers | ingénieur MEP

LRL ENGINEERING | INGÉNIERIE
civil engineers | ingénieur civil

CSW
landscape architect | architecte paysagiste

nord du projet project north

nord actuel true north

no	revision	date
0	ISSUED FOR SITE PLAN CONTROL	230419

stamp | timbre

FOR PRELIMINARY REVIEW ONLY
2023-04-19 3:07:36 PM
PROGRESS

architect | architecte
linebox STUDIO

general notes | note générale

1. CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND REPORT ALL ERRORS AND OMISSIONS TO THE ARCHITECT.
2. DO NOT SCALE THE DRAWINGS.
3. NOT FOR CONSTRUCTION UNTIL SIGNED BY THE ARCHITECT.

project title

360 LAURIER AVE W

PROPOSED MIXED-USE RENOVATION

360 LAURIER AVE W | OTTAWA | ON | K1P 1C8

drawing title | titre du dessin

SITE PLAN

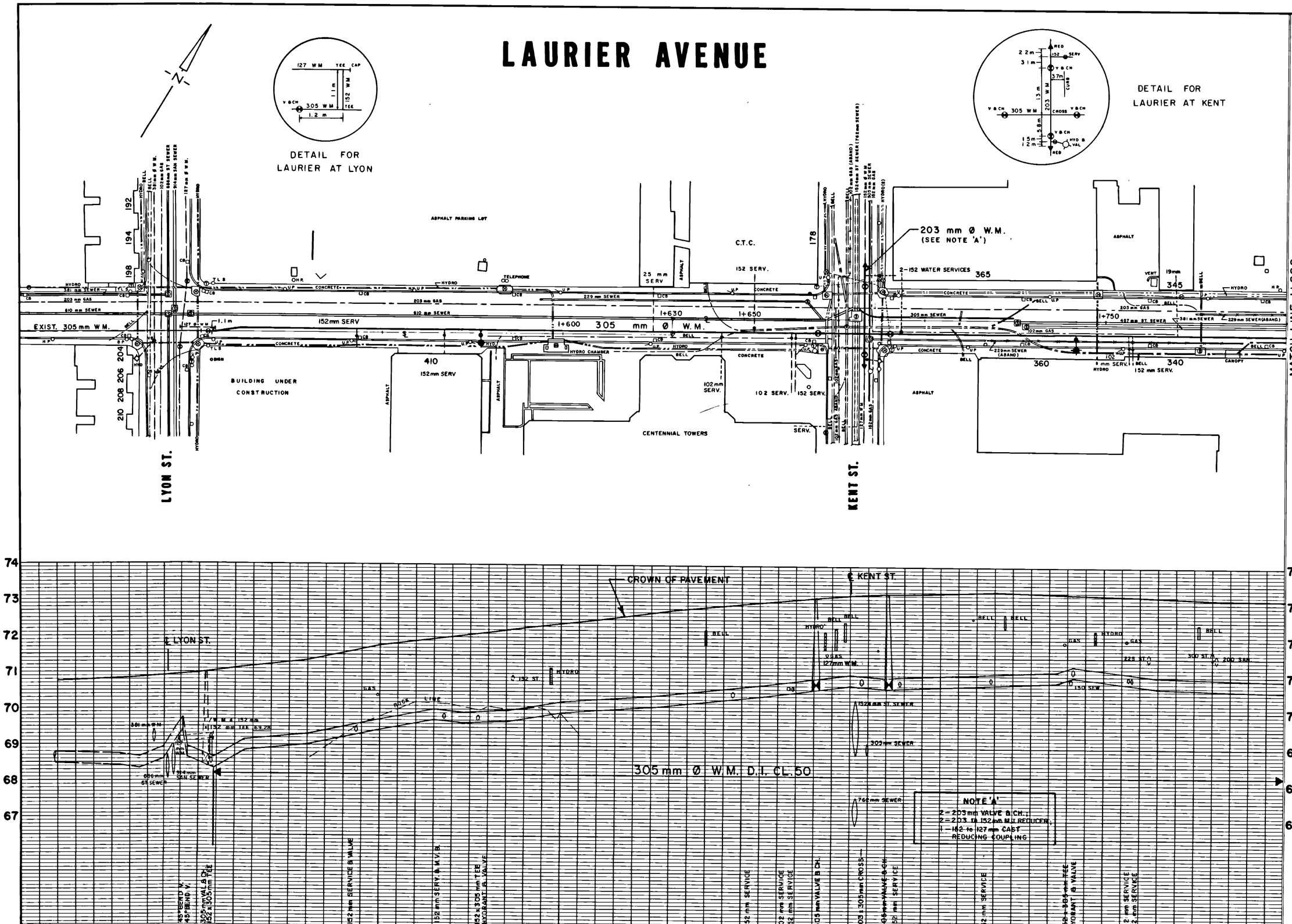
project number | numero du projet	**2225**
drawn | dessiné	**JH**
checked | verifié	**JAP / MAR / AR**
date | date	**12/08/22**
scale | échelle	**As indicated**

0 m 2 m 4 m

drawing number | numéro du dessin

A0-801

LAURIER AVENUE



Stations	Surface	Top of W.M.
1+495.6	70.80	68.78
1+496.8	70.84	68.74
1+500	71.01	68.67
1+502.5	70.97	68.92
1+503.7		68.95
1+543	71.11	68.65
1+550	71.35	69.14
1+567.3	71.77	69.30
1+577.2	71.88	69.39
1+600	72.00	69.52
1+650	72.26	69.58
1+652.7	72.48	69.69
1+663.4	72.75	70.01
1+664.2	72.94	69.92
1+670.5	73.13	69.94
1+683.2	73.20	69.96
1+690.4	73.24	70.23
1+693.5	73.27	70.40
1+700	73.32	70.56
1+718.2	73.32	70.76
1+720	73.24	70.87
1+741.7	73.20	70.95
1+750	73.12	70.92
1+756.9	73.09	70.91
1+757.9		70.97
1+800		71.08
		71.12
		71.29
		71.20
		71.08
		71.00
		70.94
		70.96
		70.90

Regional Municipality of Ottawa-Carleton Works Department

R.O. PICKARD
Works Commissioner

Engineer in Charge of Design & Construction
Date 26/03/84

Project Officer R. Horne — Date 28-03-84

Drawn by: M.J. Willmets — Date March '84

Approved by: WTC — Date 22 MAR. 84

Notes

"WATERMAINS AND SERVICE CONNECTIONS TO RECEIVE FROST PROTECTION AS REQUIRED, PER R.M.O.C. STANDARDS AND SPECIFICATIONS"

Scales
HOR: 1-500
VERT: 1-50

ALL EXISTING WATER SERVICES TO BE RECONNECTED

PLAN PREPARED FROM RMOC TRANSPORTATION AERIEL SURVEY & FIELD PICK-UPS. RECORDED IN FIELD BOOK 675 BY H PICKARD.

Revisions:
1. TEE CHANGED TO CROSS AT 1+683.5 JUNE 5/84 — M.J.W.
2. "AS BUILT" FROM FIELD BOOK NO. 683 & FIELD PRINT. DEC./84 - J.C.

Project Title

305 mm W.M. IN LAURIER AVE.

LYON ST. TO ELGIN ST.

STA. 1+500 TO STA. 1+800

Drawing No.: 3071 — Sheet 1

72-30