FARROW PARTNERS

ELMWOOD SCHOOL ADDITION
261 BUENA VISTA ROAD, OTTAWA, ON

SERVICING AND STORMWATER MANAGEMENT REPORT

MARCH 13, 2026

ELMWOOD SCHOOL ADDITION
261 BUENA VISTA ROAD
OTTAWA, ON

SERVICING AND STORMWATER MANAGEMENT REPORT

FARROW PARTNERS

SITE PLAN APPLICATION

PROJECT NO.: CA0063931.8278
DATE: MARCH 2026

WSP CANADA INC.
2611 QUEESVIEW DRIVE, SUITE 300
OTTAWA, ON, CANADA, K2B 8K2

TEL.: +1 613-829-2800

WSP.COM

SIGNATURES

PREPARED BY

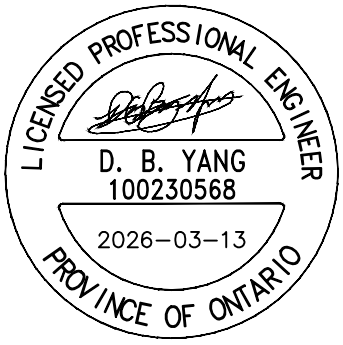
Mostafa Sayed

Digitally signed by Mostafa Sayed
DN: C=CA, E=mostafa.sayed@wsp.com, O=WSP, OU=Municipal, CN=Mostafa Sayed
Date: 2026.03.13 15:52:28-04'00'

Mostafa Sayed, P.Eng
Project Engineer

REVIEWED BY





Ding Bang (Winston) Yang, P.Eng., PMP.
Lead Civil Engineer

This report was prepared by WSP Canada Inc. for the account of Farrow Partners, in accordance with the professional services agreement. The disclosure of any information contained in this report is the sole responsibility of the intended recipient. The material in it reflects WSP Canada Inc.'s best judgement in light of the information available to it at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. WSP Canada Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report. This limitations statement is considered part of this report.

The original of the technology-based document sent herewith has been authenticated and will be retained by WSP for a minimum of ten years. Since the file transmitted is now out of WSP's control and its integrity can no longer be ensured, no guarantee may be given with regards to any modifications made to this document.

TABLE OF CONTENTS

1 GENERAL 12

1.1 Executive summary 12

1.2 Date and Revision Number 13

1.3 Location Map and Plan 13

1.4 Adherence to zoning and related requirements 14

1.5 Pre-Consultation meetings 14

1.6 Higher level studies 14

1.7 Statement of objectives and servicing criteria 15

1.8 Available existing and proposed infrastructure 15

1.9 Environmentally significant areas, watercourses and municIpal drains 15

1.10 Concept level master grading plan 15

1.11 Development phasing 15

1.12 Geotechnical study 16

2 WATER DISTRIBUTION 17

2.1 Consistency with master servicing study and availability of publIc infrastructure 17

2.2 System constraints and boundary conditions 17

2.3 Confirmation of adequate domestic supply and pressure 17

2.4 Confirmation of adequate fire flow protection 18

2.5 Check of high pressure 19

2.6 Phasing constraints 19

2.7 Reliability requirements 19

2.8 Capability of major infrastructure to supply sufficient water 19

2.9 Description of proposed water distribution network . 19
2.10 Off-site requirements 19
2.11 Calculation of water demands 19
2.12 Model Schematic 20

3 WASTEWATER DISPOSAL 21
3.1 Design Criteria 21
3.2 Consistency with master servicing study 21
3.3 Description of existing sanitary sewer 21
3.4 Verification of available capacity in downstream sewer 21
3.5 Calculations for New sanitary sewEr 22
3.6 Description of proposed sewer network 22

4 SITE STORM SERVICING 23
4.1 Existing condition 23
4.2 Analysis of availabLe capacity in public infrastructure 23
4.3 Drainage drawing 23
4.4 Water quantity control objective 23
4.5 Water quality control objective 24
4.6 Design criteria 24
4.7 Proposed minor system 24
4.8 Stormwater management 24
4.9 Inlet Controls 25
4.10 On-site detention 25
4.11 Pre and Post development peak flow rates 26

5 SEDIMENT AND EROSION CONTROL 27
5.1 General 27

6 APPROVAL AND PERMIT REQUIREMENTS 28
6.1 General 28
7 CONCLUSION CHECKLIST 29
7.1 Conclusions and recommendations 29
7.2 Comments received from review agencies 29

TABLES

TABLE 2-1 BOUNDARY CONDITION.....17
TABLE 4-1: ON-SITE STORAGE REQUIREMENTS.....26
TABLE 4-2: ICD TYPE.....26

FIGURES

FIGURE 1-1 SITE LOCATION..... 14

APPENDICES

A

- PRE-CONSULTATION MEETING NOTES
- ARCHITECTURAL SITE PLAN
- TOPO SURVEY

B

- FIRE UNDERWRITERS SURVEY – FIRE FLOW CALCULATION FOR BUILDING
- WATER DEMAND CALCULATION
- BOUNDARY CONDITION

C

- SANITARY SEWER DESIGN SHEET

D

- STORM SEWER DESIGN SHEET
- DWG C06 – PRE AND POST-DEVELOPMENT DRAINAGE PLAN
- STORMWATER MANAGEMENT CALCULATIONS

E

- DWG C03 – GRADING PLAN

- DWG C04 – SERVICING PLAN
- DWG C05 – EROSION AND SEDIMENT CONTROL PLAN

F

- SUBMISSION CHECK LIST

1 GENERAL

1.1 EXECUTIVE SUMMARY

WSP was retained by Farrow Partners to provide servicing, grading and stormwater management design services for the proposed addition for Elmwood School on a 0.127 ha site located at the north of the existing school at 261 Buena Vista Rd, Ottawa. All services for the new school addition site will be available from both Springfield and Hillcrest Roads. The subjected development is divided into 3 phases in which Phase A of the school development to the northwest end includes the development of a flexible gymnasium and a performance hall, while phase B includes the development of flexible fitness studio. Phase C includes the development of a soccer field that will be designed by the developer in a later date. This report outlines findings and calculations pertaining to the servicing of the proposed new addition (Phases A and B) with a gross building area of 1,270 square metres.

The proposed school addition is a two storey school building with gross floor area of 1,270 square metre and maximum building height will not be higher than 9.5 metres which is located at the north of the existing school, northwest corner of the Buena vista and Springfield Roads intersection. Also, a fire rerouting will take place south of Hillcrest Road. To the north of the proposed school addition, there will be a future soccer field. This soccer field development is considered to be part of phase C in the future development. The current grading and servicing design have been provided to allow for the future site plan changes with minimal changes to grading and servicing modifications only within the areas that will be impacted by the future development.

Currently the land proposed for the building addition abuts the Springfield Road which is located to the east of the subject site. The natural topography of the property slopes from the existing school towards east (Springfield road), west (Manor Avenue), south (Buena vista road) and north (Hillcrest road). The total study area of the new addition was considered to be 0.127 ha in size. It is lots 26 and 27, registered plan 4M-55, part of block A14, registered plan 4M in City of Ottawa. Based on the topographic survey, portion of the site is sloping from the existing school to the south and is draining toward Buena vista road. The east portion of the site is slopping and draining toward Springfield road. The west portion of the site is slopping and draining toward the existing residential block to the west. The north portion of the site is slopping and draining towards Hillcrest road. The existing piped stormwater system within Hillcrest road and Buena vista road conveys drainage to Manor Avenue then through as series of network it discharges to the Rideau River. While, the existing piped stormwater system within Springfield road conveys drainage through as series of network then it discharges to the Mckay Lake.

As per the City of Ottawa comments, the following criteria apply: runoff from all storm events up to and including the 1:100 year event must be restricted to a calculated rate based on an imperviousness ratio of 0.50, a 5-year storm event, 50% simulated flow due to the underground stormwater storage facility of 9.20 l/s. The subject site must provide sufficient storage to accommodate runoff from the 1:100 year event. Stormwater quality control is not required for this site since the runoff is considered clean from roof and pedestrian walkway. Design of a drainage and stormwater management system in this development must be prepared in accordance with the following documents:

- Sewer Design Guidelines, City of Ottawa, October 2012;
- Stormwater Management Planning and Design Manual, Ministry of the Environment, March 2003; and

- Stormwater Management Facility Design Guidelines, City of Ottawa, April 2012

This report was prepared utilizing servicing design criteria obtained from the City of Ottawa and outlines the design for water, sanitary wastewater, and stormwater facilities, including stormwater management.

The format of this report matches that of the servicing study checklist found in Section 4 of the City of Ottawa's Servicing Study Guidelines for Development Applications, November 2009.

The following municipal services are available at the property line as recorded from drawings received from the client:
Hillcrest Road (north):

- 300 mm storm sewer and 250mm sanitary sewer.

Springfield Road (east):

- 305 mm storm sewer, 250mm sanitary sewer and 203mm watermain.

Buena Vista Road (south):

- 300 mm storm sewer, 250mm sanitary sewer and 203mm watermain.

It is proposed that:

- On-site stormwater management systems, employing underground storage will be provided to attenuate flow rates leaving the proposed school addition. Existing drainage patterns previously established controlled flow rates and storm sewers will be maintained.

1.2 DATE AND REVISION NUMBER

This version of the report is the first revision, dated March 13, 2026.

1.3 LOCATION MAP AND PLAN

The proposed institutional development is located at 261 Buena vista Road, Ottawa, Ontario at the location shown in Figure 1-1 below.

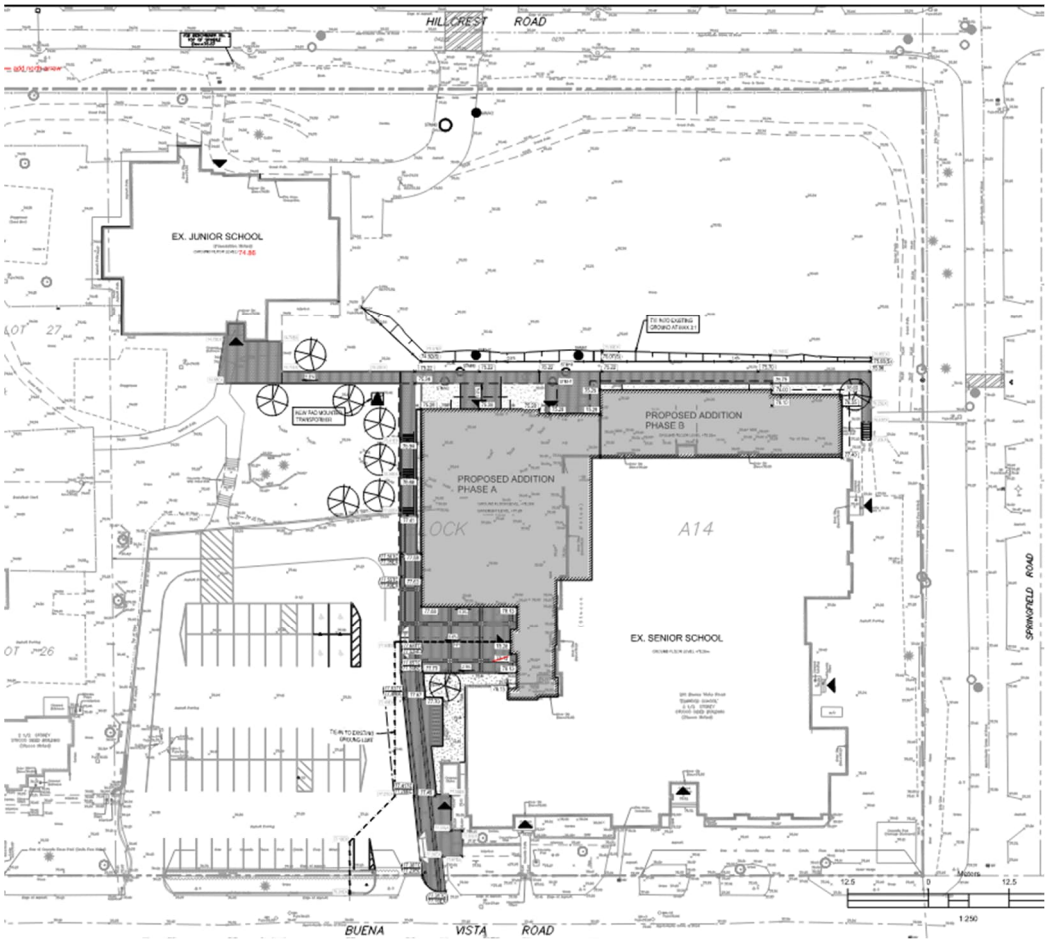


Figure 1-1 Site Location

1.4 ADHERENCE TO ZONING AND RELATED REQUIREMENTS

The proposed property use will be in conformance with zoning and related requirements prior to approval and construction and is understood to be in conformance with current zoning.

1.5 PRE-CONSULTATION MEETINGS

A pre-consultation meeting was held with the City of Ottawa on October 15, 2025. Notes from this meeting are provided in Appendix A.

1.6 HIGHER LEVEL STUDIES

The review for servicing has been undertaken in conformance with, and utilizing information from, the following documents:

- Ottawa Sewer Design Guidelines, Third Edition, Document SDG003, September 2025, City of Ottawa.
- Ottawa Design Guidelines – Water Distribution, July 2010 (WDG001), including:

- Technical Bulletin ISDTB-2014-02 (May 27, 2014)
- Technical Bulletin ISTB-2018-02 (21 March 2018)

- Stormwater Management Planning and Design Manual, Ontario Ministry of the Environment and Climate Change, March 2003 (SMPDM).

- Design Guidelines for Drinking-Water Systems, Ontario Ministry of the Environment and Climate Change, 2008 (GDWS).

- Fire Underwriters Survey, Water Supply for Public Fire Protection (FUS), 2020.

1.7 STATEMENT OF OBJECTIVES AND SERVICING CRITERIA

The objective of the site servicing is to meet the requirements for the proposed modification of the site while adhering to the stipulations of the applicable higher-level studies and City of Ottawa servicing design guidelines.

1.8 AVAILABLE EXISTING AND PROPOSED INFRASTRUCTURE

The existing storm and sanitary sewers in Hillcrest Road are available to service the school's new addition. The existing watermain in Springfield Road is available to service the school's new addition. Also, the sanitary and storm sewer can be extended from the existing sewers along Springfield Road to the proposed new school addition. Quality control is not required on the school site, but quantity control is required to restrict the discharge for all events up to a 100 year event to the 5 year flow rate.

Site access for vehicles will be provided from Buena Vista Road.

1.9 ENVIRONMENTALLY SIGNIFICANT AREAS, WATERCOURSES AND MUNICIPAL DRAINS

The proposed development site is surrounded by residential lands. Existing Runoff from the site is currently draining overland toward Rideau River and Mckay Lake. However, post development runoff will be reduced significantly due to the use of underground storage.

1.10 CONCEPT LEVEL MASTER GRADING PLAN

The existing and proposed grading are shown on Drawings C03 - Grading Plan. Existing grading was identified in a topographic survey and is noted in the background of Drawings C03. The proposed grading will be reviewed by the geotechnical engineer. The geotechnical investigation will be completed by Terrapex Environmental Ltd in April 2026. The site topographic survey provides evidence of direction of overland flow of the site. Minor grade changes will be made to grades at the development perimeter for the fire rerouting location. No changes will be made to grades at the property perimeter other than the addition area.

1.11 DEVELOPMENT PHASING

The proposed development includes building addition Phases A and B. Phase B will be constructed after the completion of Phase A. The impervious area associated with the Phase B has already been taken into account in the stormwater management calculations.

1.12 GEOTECHNICAL STUDY

A final geotechnical investigation report will be completed by Terrapex Environmental Ltd in April 2026, and its recommendations has already been taken into account in developing the engineering specifications.

2 WATER DISTRIBUTION

2.1 CONSISTENCY WITH MASTER SERVICING STUDY AND AVAILABILITY OF PUBLIC INFRASTRUCTURE

Currently, there is an existing 203mm diameter municipal watermain along Springfield Road providing water to the existing property. The new school addition will be protected with a supervised automatic fire protection sprinkler system and will require a 203mm diameter water service. The existing fire department connection is located at the south side of the building at the main entrance fronting Buena Vista Road. It is 45m away from the existing municipal FH on Buena Vista Road. No changes are required to the existing City water distribution system to allow servicing for this new addition. A single 203mm water service and an isolation valve in between will be made to the existing 203mm watermain along Springfield Road using a tee connection for the proposed addition. The 203mm diameter private watermain services connecting the existing 203mm municipal watermain will provide redundancy for the existing school and new addition. Water can be supplied to the school from both side of Springfield Road and Buena Vista Road. The 203mm dia. water service will be extended to the building mechanical room.

2.2 SYSTEM CONSTRAINTS AND BOUNDARY CONDITIONS

Boundary conditions have been provided by the City of Ottawa at the connection at Springfield Road. The fire flow of 167 l/s (10,000 l/min) was estimated for the proposed school with using the FUS calculation method and is included in Appendix B.

Table 2-1 Boundary Condition

BOUNDARY CONDITIONS AT SPRINGFIELD ROAD		
SCENARIO	Head (m)	Pressure (psi)
Basic Day (MAX HGL)	108.3	154.1
Peak Hour (MIN HGL)	118.4	168.5
Max Day + Fire Flow (ICI)	98.7	140.4

2.3 CONFIRMATION OF ADEQUATE DOMESTIC SUPPLY AND PRESSURE

Water demands are based on Table 4.2 of the Ottawa Design Guidelines – Water Distribution. As previously noted, the development is considered as institutional development, consisting of classroom, gymnasium and kitchen. A water demand calculation sheet is included in Appendix B, and the total water demands are summarized as follows:

	WSP
Average Day	0.60 l/s
Maximum Day	0.90 l/s
Peak Hour	1.62 l/s

The 2010 City of Ottawa Water Distribution Guidelines stated that the preferred practice for design of a new distribution system is to have normal operating pressures range between 345 kPa (50 psi) and 552 kPa (80 psi) under maximum daily flow conditions. Other pressure criteria identified in the guidelines are as follows:

Minimum Pressure	Minimum system pressure under peak hour demand conditions shall not be less than 276 kPa (40 psi)
Fire Flow	During the period of maximum day demand, the system pressure shall not be less than 140 kPa (20 psi) during a fire flow event.
Maximum Pressure	Maximum pressure at any point the distribution system shall not exceed 689 kPa (100 psi). In accordance with the Ontario Building/Plumbing Code, the maximum pressure should not exceed 552 kPa (80 psi). Pressure reduction controls may be required for buildings where it is not possible/feasible to maintain the system pressure below 552 kPa.

Water pressure at municipal connections check:

Min. HGL @ Connection 1 – Pavement elevation = 118.4m – 76.13m = 42.27m = 414.67 kPa

Water pressure at building connection (at average day) check:

Max. HGL @ Connection 1 – Finished floor elevation = 108.3m – 78.28 = 30.02m = 294.50 kPa

Water pressure at building connection (at max. hour demand) check:

Min. HGL @ Connection 1 – Finished floor elevation = 118.4m-78.28m = 40.12m = 393.58 kPa

Water pressure at building connection (at max. day + fire demand):

(Max Day + Fire) HGL @ Connection 1 - Finished floor elevation = 98.7m-78.28m = 20.42m = 200.32 kPa

The minimum water pressure inside the building at the connection is determined with the minimum HGL condition, resulting in a pressure of 393.58 kPa which exceed the minimum requirement of 276 kPa per the guidelines.

2.4 CONFIRMATION OF ADEQUATE FIRE FLOW PROTECTION

The fire flow rate has been calculated using the Fire Underwriters Survey (FUS) method. The method takes into account the type of building construction, the building occupancy, the use of sprinklers and the exposures to adjacent structures. Assuming ordinary construction and a partial sprinkler system, a fire flow demand of 10,000 l/min for the new school addition along with the existing school building, partial sprinkler credit has been applied to the required fire flow calculation due to the partial sprinkler coverage for the existing school. Copy of the FUS calculations are included in Appendix D.

The demand of 10,000 l/min can be delivered through two fire hydrants. The existing two public hydrants are located at the eastside of Springfield Road and the southside of Buena Vista Road, both of them are within 45 m to the building Siamese, and is rated at 5,700 l/min. The two hydrants have a combined total of 11,400 l/min.

The proposed school addition on site will be serviced by a single 203 mm service off the existing 203 mm watermain extended from the Springfield Road. The service will run into the water entry room. The proposed building will be fully sprinklered and fire protection will be provided with the fire department Siamese connection within 45 m of the existing municipal fire hydrant at Springfield Road.

The boundary condition for Maximum Day and Fire Flow results in a pressure of 200.32 kPa at the ground floor level. In the guidelines, a minimum residual pressure of 140 kPa must be maintained in the distribution system for a fire flow and maximum day event. As a pressure of 200.32 kPa is achieved, the fire flow requirement is exceeded.

2.5 CHECK OF HIGH PRESSURE

High pressure is not a concern. The maximum water pressure inside the building at the connection is determined with the maximum HGL condition, resulting in a pressure of 414.67 kPa which is less than the 552 kPa threshold in the guideline in which pressure control is required. Based on this result, pressure control is not required for this building.

2.6 PHASING CONSTRAINTS

There are two phases of the development, Phase A and Phase B. Proposed private services will be installed in Phase A. Internal mechanical stubs will be provided for Phase B connection. The projected full occupancy load has been taken into account in the fire demand and water demand calculations.

2.7 RELIABILITY REQUIREMENTS

One shut off valve is provided for the new private watermain at the study boundary from Springfield Road. Water can be supplied from both sides of Springfield Road and Buena Vista Road.

2.8 CAPABILITY OF MAJOR INFRASTRUCTURE TO SUPPLY SUFFICIENT WATER

The existing infrastructure for the site plan is capable of meeting the domestic demand based on City requirements and fire demand as determined by FUS requirements for the proposed school addition.

2.9 DESCRIPTION OF PROPOSED WATER DISTRIBUTION NETWORK

A 203 mm private water service is proposed to be extended into the proposed school new addition from the existing 203 mm watermain in Springfield Road. The 203 mm private water service will be split inside the building, one branch will be connected to the water meter, the other branch will be connected to the fire suppression system. No private hydrant is required for this site.

2.10 OFF-SITE REQUIREMENTS

No off-site improvements to watermains, feedermains, pumping stations, or other water infrastructure are required to maintain existing conditions and service the adjacent buildings, other than the connection of the new private watermain to the City watermain in the south frontage of the site.

2.11 CALCULATION OF WATER DEMANDS

Water demands were calculated as described in Sections 2.3 and 2.4 above and is also attached in Appendix B.

2.12 MODEL SCHEMATIC

The water works consist single building service, a model schematic is not required for this development.

3 WASTEWATER DISPOSAL

3.1 DESIGN CRITERIA

In accordance with the City of Ottawa's Sewer Design Guidelines, the following design criteria have been utilized in order to predict wastewater flows generated by the subject site and complete the sewer design;

- Minimum Velocity 0.6 m/s
- Maximum Velocity 3.0 m/s
- Manning Roughness Coefficient 0.013
- Total est. hectares institutional use 0.125
- Average sanitary flow for institutional use 28,000 L/Ha/day
- Commercial/Institutional Peaking Factor 1.5
- Infiltration Allowance (Total) 0.33 L/Ha/s
- Minimum Sewer Slopes – 200 mm diameter 0.32%

The area of 0.127 ha represents the lot area of the new building. This is the sanitary collection area that is being considered to contribute to the new 200mm sanitary service extending from the existing 250mm sanitary sewer from Hillcrest Road to the new building.

3.2 CONSISTENCY WITH MASTER SERVICING STUDY

The outlet for the sanitary service from the proposed new building is the 250 mm diameter municipal sewer at Hillcrest Road.

The Ottawa Sewer Design Guidelines provide estimates of sewage flows based on institutional development.

The criteria to determine anticipated actual peak flow based on site used as described in Ottawa Sewer Design Guidelines Appendix 4-A are as follows.

- Institutional 28000 L/Ha/day = 0.324 L/Ha/s
- Peak flow = (0.324 L/Ha/s x 0.127 ha x 1.5 peaking factor) + 0.33 l/Ha/s x 0.127 ha = 0.10 L/s

The on-site sanitary sewer network has been designed in accordance with 0.10 L/s as described above.

3.3 DESCRIPTION OF EXISTING SANITARY SEWER

The existing sanitary sewer for Hillcrest Road outlets by gravity towards Manor Avenue (west of the site plan) that directs sanitary to Ch. Park Road.

3.4 VERIFICATION OF AVAILABLE CAPACITY IN DOWNSTREAM SEWER

The capacity of the downstream 200 mm diameter sewer to existing sanitary pipe at Hillcrest Road has enough capacity according to City of Ottawa confirmation, which is adequate for the flow assumptions from the proposed site as noted above. The servicing pipe capacity is capable to handle the estimated peak sanitary flow rate of 0.10 L/s for the proposed development site. Please refer to sanitary sewer design sheet in Appendix C.

3.5 CALCULATIONS FOR NEW SANITARY SEWER

The 200 mm diameter sanitary service from the sanitary manhole SAMH1 to the building will have a slope of 1.0 %, and a capacity of 32.80 l/s, with a velocity of 1.04 m/s. The 200 mm diameter sanitary service from the sanitary manhole SAMH1 to sanitary manhole SAMH2 have a slope of 0.35%, and a capacity of 19.40 l/s with a velocity of 0.62 m/s. The slope of the 200mm diameter sanitary service from SAMH2 to SAMH3 is 0.35% with a capacity of 19.40 l/s and a velocity of 0.62 m/s. Finally, the sanitary service connecting from SAMH3 to existing sanitary sewer on Hillcrest Road has a slope of 0.34% with a capacity of 19.12 l/s and a velocity of 0.61 m/s. The servicing pipe capacity exceeds the estimated peak sanitary flow rate of 0.10 L/s for the proposed development site.

3.6 DESCRIPTION OF PROPOSED SEWER NETWORK

The proposed sanitary sewer network on site will consist of a 200 mm diameter building service, and three new 1200 mm diameter manholes.

4 SITE STORM SERVICING

4.1 EXISTING CONDITION

The existing school site consists of three existing school buildings, a parking lot and play yards. The site is currently sloping from the existing senior school building to north (Hillcrest Road), south (Buena Vista Road), east (Springfield Road) and west (adjacent residential houses).

Pre-development drainage area plan C06 has illustrated the existing drainage pattern that the runoff from area P1 0.125 ha respectively is draining overland toward Hillcrest Road.

4.2 ANALYSIS OF AVAILABLE CAPACITY IN PUBLIC INFRASTRUCTURE

Using the Modified Rational Method, with coefficient of 0.25 for pervious areas, 0.90 for asphalt and concrete pavement, and 1.0 for building roof, and a 10-minute time of concentration, results in an estimated 5-year flow of 18.39 l/s from this area. A pre-consultation meeting with the City of Ottawa was held prior to the design phase. As a result of that meeting, an underground storage will be proposed in order to reduce the allowable release rate by 50%. The storm network for the proposed new school addition has been designed allow a release rate of 9.20 l/s. The receiving 300 mm diameter storm sewer has been designed with the capacity to accept 9.20 l/s from the new school addition. Capacity in the minor system is not a concern.

4.3 DRAINAGE DRAWING

Drawing C04 shows the detail site sewer network. Drawings C03 provides proposed grading and drainage, and include existing grading information. Draw C06 provides a pre and post-construction drainage sub-area plan. Site sub-area information is also provided on the storm sewer design sheet attached in Appendix C.

4.4 WATER QUANTITY CONTROL OBJECTIVE

The water quantity objective for the site is to limit the flow release to 9.05 l/s. Excess flows above this limit for the school site up to those generated by the 100 year storm event from drainage on the new school addition are temporarily stored underground.

No provision is required on the school's site to accommodate any flow from the adjacent lands. All flows exceeding the defined minor system capacity and underground storage capability will be stored on the roof of the building's new addition.

The school's new addition is controlled using a series of roof drains that directs stormwater into an underground storm water system with a run of a super pipe acting as an underground storage. The maximum elevation for water in the super pipe is 74.12, and a IPEX - Tempest LMF ICD is proposed to be used on the outlet inside STMH3 to restrict the flow rate leaving the site to 9 l/s at 1.36 m head, based on the 100 year elevation of 74.12. In theory, the runoff water will be detained on site up to the 100-yr rainfall event. There is an available capacity within the proposed stormwater network for those scenarios exceeding 100-yr rainfall event since the super pipe was designed to accommodate a volume of 45 m^3 for 100-yr. The school's new addition storm water system can provide a total of 61 m^3 of storage volume, but the required storage for 100-yr will be only 45 m^3. The site has more storage capacity than required as a result of using a super pipe as an underground storage. This will allow extra detention of water on the site during extreme events, and will reduce stress on the existing stormwater system.

4.5 WATER QUALITY CONTROL OBJECTIVE

The site is not required to achieve water quality objectives. All the runoff from the proposed development is considered clean from building roof and pedestrian walkway.

4.6 DESIGN CRITERIA

The stormwater system was designed following the principles of dual drainage, making accommodation for both major and minor flow.

Some of the key criteria include the following:

• Design Storm (minor system)	1:5 year return (Ottawa)
• Rational Method Sewer Sizing	
• Initial Time of Concentration	10 minutes
• Runoff Coefficients	
Landscaped Areas	C = 0.25
Playground Mulch Areas	C = 0.40
Gravel Areas	C = 0.75
Asphalt/Concrete	C = 0.90
Traditional Roof	C = 1.00
• Pipe Velocities	0.80 m/s to 6.0 m/s
• Minimum Pipe Size	250 mm diameter (200 mm CB Leads and service pipes)

4.7 PROPOSED MINOR SYSTEM

The detailed design for this site will use the existing storm sewer at Hillcrest Road. The drainage system consists of a series of manholes and storm sewers, and a super pipe leading to the outlet STMH3 that drains water towards the existing storm sewer at Hillcrest Road. The roof of the school's new addition building is the only drainage area to be collected in the proposed site piped drainage system. There are no downspouts proposed. Separate outlet pipes are provided for foundation drains and roof drains, and therefore roof drainage will not negatively impact the foundation. The storm services are connected to the storm sewer downstream of STMH3 which is downstream of the controlled flow point, ensuring an unobstructed flow for these areas.

Using the above noted criteria, the existing on-site storm sewers were sized accordingly. A detailed storm sewer design sheet and the associated post development storm sewer drainage area plan are included in Appendix C.

4.8 STORMWATER MANAGEMENT

The subject site will be limited to a release rate of 9.20 l/s, this will be achieved through the inlet control devices at the downstream of STMH3. The release rate of 18.39 l/s generated from the pre development calculation based on a 1:5 year event. Since we are using a super pipe as an underground storage (as discussed with the City of Ottawa in the pre-consultation meeting), we are able to reduce the release rate by 50%. As a result, a 9.20 l/s is the allowable release rate.

Flows generated that are in excess of the site's allowable release rate will be stored on site in an underground super pipe and gradually released into the minor system so as not to exceed the site's allocation.

A 39.8m of 1200mm superpipe is proposed as an underground storage to manage a total runoff volume of 45 m^3 generated by a 1-in-100-year storm event. No surface ponding is considered.

There will be not Overland flow routes provided in the grading to permit emergency overland flow from the site since we are only controlling the roof area of the school's new addition.

The site servicing has been designed to control water generated during the 1:100-year event, with no overflow leaving the site at this control level. Please refer to the SWM Calculations in Appendix C.

4.9 INLET CONTROLS

The maximum allowable release rate for the 0.125 Ha site is 9.05 L/s as shown in the calculation below.

$Q_{(uncontrolled)}$	= 2.78 x C x I_{100yr} x A where:
C	= 0.5 (Weighted average pre-development C)
I_{100yr}	= Intensity of 5-year storm event (mm/hr)
	= 1735.688/((Tc+6.014)^(0.82)); where T_c = 10 minutes
A	= Area = 0.125 Ha

Therefore, the release rate based on 1-5 year event pre-development can be determined as:

= 18.39 L/s

Since we are using an underground storage this release rate can be reduced by 50%:

=9.20 L/s

Based on the flow allowance at the outlet location, STMH3, inlet control devices (ICD) were chosen in the design. The design of the inlet control device is unique to the associated drainage areas and is determined based on a number of factors, including hydraulic head and allowable release rate. The inlet control device will be designed according to the manufacturer's design charts. The restrictions will cause the on-site manholes and the underground storage (super pipe) to surcharge during 100-year storm event.

4.10 ON-SITE DETENTION

The proposed stormwater sewer system was designed to store any excess storm water up to the 100-year event and to be surcharged towards the downstream municipal storm sewer system with an acceptable release rate. As previously noted, the required volume of storage for a 100-year event is 45m^3.

The following Table summarizes the on-site storage requirements during the 1:100-year events.

Table 4-1: On-Site Storage Requirements

Total Area (Ha)	Location	Controlled/ Uncontrolled	Runoff Coefficient		Outlet Location	Total Storage Provided (m^3)	100-Year Controlled	
			2 & 5 Year	100 Year			Restricted Flow (L/s)	Required Storage (m^3)
0.125	Super pipe (1200mm)	Controlled	1.00	1.00	STMH3	45.00	9.05	45.00
-	The proposed stormwater system	-	-	-	STMH3	16.00	-	-
TOTAL						61.00	9.05	45.00

In all instances the required storage is met with an underground storage which retain the stormwater and discharge at the restricted flow rate to the sewer system. Refer to the servicing plan for storage information.

The following Table summarizes the proposed options for inlet control devices to be utilized on the site. ICD pre-set flow curves can be found in Appendix C.

Table 4-2: ICD Type

Structure ID	PROPOSED ICD			
	100-YR Head	Flow (L/s)	Type	OUTLET DIA.
STMH3	1.36	9.00	IPEX - Tempest LMF ICD	250 mm Dia. PVC.

As demonstrated above, the site uses new inlet control device to restrict the 100 year storm event to the criteria approved by the City of Ottawa. Restricted stormwater will be contained onsite by utilizing an underground storage. In the 100 year event, there will be no overflow off-site from restricted areas.

The restriction on the site is 9.00 L/s, which is less than the maximum allowable release of 9.20 L/s noted in Section 4.9.

4.11 PRE AND POST DEVELOPMENT PEAK FLOW RATES

The study area has an allowable lease rate of 9.20 L/s. The post-development 100-year peak flow rate has been designed to be 9.00 L/s which has been achieved through an orifice and on-site storage.

5 SEDIMENT AND EROSION CONTROL

5.1 GENERAL

During construction, existing storm sewer system can be exposed to sediment loadings. A number of construction techniques designed to reduce unnecessary construction sediment loadings will be used including the following.

- Silt sack will remain on open surface structures such as manholes and catchbasins until these structures are commissioned and put into use.
- Installation of silt fence, where applicable, around the perimeter of the proposed work area.
- The installation of straw bales within existing drainage features surrounds the site.

During construction of the services, any trench dewatering using pumps will be fitted with a "filter sock." Thus, any pumped groundwater will be filtered prior to release to the existing surface runoff. The contractor will inspect and maintain the filter sock as needed including sediment removal and disposal.

All catchbasins, and to a lesser degree, manholes, convey surface water to sewers. Consequently, until the surrounding surface has been completed, these structures will be covered to prevent sediment from entering the minor storm sewer system. These measures will stay in place and be maintained during construction and build-out until it is appropriate to remove them.

During construction of any development both imported and native soils are placed in stockpiles. Mitigative measures and proper management to prevent these materials entering the sewer system are needed.

During construction of the deeper watermains and sewers, imported granular bedding materials are temporarily stockpiled on site. These materials are however quickly used up and generally placed before any catchbasins are installed.

Refer to the Erosion and Sedimentation Control Plan C05 provided in Appendix E.

6 APPROVAL AND PERMIT REQUIREMENTS

6.1 GENERAL

The proposed development is subject to site plan approval and building permit approval.

No approvals related to municipal drains are required.

No permits or approvals are anticipated to be required from the Ontario Ministry of Transportation, National Capital Commission, Parks Canada, Public Works and Government Services Canada, or any other provincial or federal regulatory agency.

7 CONCLUSION CHECKLIST

7.1 CONCLUSIONS AND RECOMMENDATIONS

It is concluded that the proposed development can meet all provided servicing constraints and associated requirements. It is recommended that this report be submitted to the City of Ottawa in support of the application for site plan approval.

7.2 COMMENTS RECEIVED FROM REVIEW AGENCIES

This is the first submission, no comments has yet received.

APPENDIX

A

- PRE-CONSULTATION MEETING NOTES
- ARCHITECTURAL SITE PLAN
- TOPO SURVEY

File No.: PC2025-0254

October 15, 2025

Christopher Blackwell
Farrow Partners
Via email: christopherb@farrowpartners.ca

Subject: **Pre-Consultation: Meeting Feedback**
Proposed Site Plan Control Application – 261 Buena Vista Road

Please find below information regarding next steps as well as consolidated comments from the above-noted pre-consultation meeting held on October 10, 2025.

Pre-Consultation Preliminary Assessment

Next Steps

1. A review of the proposal and materials submitted for the above-noted pre-consultation has been undertaken. For your next submission, please submit the required Application Form, together with the necessary studies and/or plans to planningcirculations@ottawa.ca, copy (cc:) to the file lead and planning support.

2. In your application submission, please ensure that all comments or issues detailed herein are addressed. A detailed cover letter stating how each issue has been addressed is requested with the submission materials. Please coordinate the numbering of your responses within the cover letter with the comment number(s) herein.

3. Please note, if your development proposal changes significantly in scope, design, or density it is recommended that a subsequent pre-consultation application be submitted.

Supporting Information and Material Requirements

1. The attached **Study and Plan Identification List** outlines the information and material that has been identified, during this phase of pre-consultation, as either required (R) or advised (A) as part of a future complete application submission.

    a. The required plans and studies must meet the City's Terms of Reference (ToR) and/or Guidelines, as available on Ottawa.ca. These ToR and Guidelines outline the specific requirements that must be met for each plan or study to be deemed adequate.

Consultation with Technical Agencies

1. You are encouraged to consult with technical agencies early in the development process and throughout the development of your project concept. A list of technical agencies and their contact information is enclosed.

Planning

Comments:

1. The property is designated as Neighbourhood in the Official Plan. The property is within the Rockcliffe Park Secondary Plan and Rockcliffe Park Heritage Conservation District.

2. The school is designated as Special Use in the Rockcliffe Park Secondary Plan.

3. Please clarify if parking requirements are being met as per Section 101 of the Zoning By-law. The property is within Area X within Schedule 1A to the Zoning By-law. The proposal adds four new classrooms and reduces some existing parking spaces. A minor variance through the Committee of Adjustment would be required if the parking requirements are not met.

4. Please clarify if bicycle parking requirements are being met as per Section 111 of the Zoning By-law.

5. Please clarify if loading area requirements are being met as per Section 113 of the Zoning By-law.

6. Site plan, floor plans, roof plans and elevations are required. Please include all setbacks and height on the drawings.

7. A zoning table must be shown on the site plan.

8. A Zoning Confirmation Report is required to demonstrate compliance to the Zoning By-law.

9. Please contact the Rockcliffe Park Community Association and the Councillor to know about their comments/concerns.

Urban Design

Comments:

10. Please ensure that the final grading of the site pays close attention to providing direct paths of travel and eliminates stairs or retaining to the extent possible. Please avoid retaining along the perimeter of the site.

11. Please clarify where garbage and loading is located. Please ensure that these functions are screened from the public realm. It would be preferred for garbage to be located within the building.

12. Please provide street tree plantings along the perimeter of the site. There appears to be a gate along Springfield Road, if this is used for entry, please ensure that a clear path of travel is provided and this is highlighted by the landscape program.

Feel free to contact Lisa Stern, Planner III, Urban Design, for follow-up questions at lisa.stern@ottawa.ca.

Engineering

Comments:

13. The Stormwater Management Criteria, for the subject site, is to be based on the following:

    a. **Water Quality Control**: provide enhanced levels of protection of 80% for total suspended solids removal if required.

    b. **Water Quantity Control**: In the absence of area specific SWM criteria please control post-development runoff from the **re-developed area only**, up to and including the **100-year storm event**, to **a 5-year pre-development level**.

        i. The pre-development runoff coefficient will need to be determined as per existing conditions but in no case more than 0.5. [If 0.5 applies it needs to be clearly demonstrated in the report that the pre-development runoff coefficient is greater than 0.5].

        ii. The time of concentration (Tc) used to determine the pre-development condition should be calculated. Tc should not be less than 10 min. since IDF curves become unrealistic at less than 10 min; **Tc of 10 minutes shall be used for all post-development calculations.**

        iii. Any storm events greater than the established 5-year allowable release rate, up to and including the 100-year storm event, shall be detained on-site. For events greater than 100 years, spillage must be directed to a public ROW and not to neighboring private property.

    c. Please provide a Pre-Development Drainage Area Plan to define the pre-development drainage areas/patterns. Existing drainage patterns shall be maintained and discussed as part of the proposed SWM solution.

d. Ponding Notes:

   i. 100-year spill elevation must be 300mm lower than any building opening or ramp.

   ii. Demonstrate that the stress test spill elevation (100-year +20% event) does not spill onto any permanent structures.

   iii. The maximum permissible ponding depth for the 100-year storm event is 350mm. No spilling to adjacent sites.

   iv. Please note that as per Technical Bulletin PIEDTB-2016-01 section 8.3.11.1 (p.12 of 14) there shall be no surface ponding on private parking areas during the 2-year storm rainfall event. 100-year spill elevation must be 300mm lower than any building opening or ramp

e. Document how any foundation drainage system will be integrated into the servicing design and show the positive outlet on the plan. Foundation drainage is to be independently connected to sewer main unless being pumped with appropriate back up power, sufficient sized pump and back flow prevention. It is recommended that the foundation drainage system be drained by a sump pump connection to the storm sewer to minimize risk of basement flooding as it will provide the best protection from the uncontrolled sewer system compared to relying on the backwater valve.

f. Please note that the minimum orifice dia. for a plug style ICD is 83mm and the minimum flow rate from a vortex ICD is 6 L/s in order to reduce the likelihood of plugging.

g. If rooftop control and storage is proposed as part of the SWM solutions, sufficient details (Cl. 8.3.8.4) shall be discussed and documented in the report and on the plans. Roof drains are to be connected downstream of any incorporated ICDs within the SWM system and not to the foundation drain system. Provide a Roof Drain Plan as part of the submission.

h. **Underground Storage**: Please note that the Modified Rational Method for storage computation in the Sewer Design Guidelines was originally intended to be used for above ground storage (i.e. parking lot) where the change in head over the orifice varied from 1.5 m to 1.2 m (assuming a 1.2 m deep CB and a max ponding depth of 0.3 m). This change in head was small and hence the release rate fluctuated little, therefore there was no need to use an average release rate.

   i. When underground storage is used, the release rate fluctuates from a maximum peak flow based on maximum head down to a release rate of zero. This difference is large and has a significant impact on storage requirements. **We therefore require that an average release rate equal to 50% of the peak allowable rate shall be**

applied to estimate the required volume. Alternatively, the consultant may choose to use a submersible pump in the design to ensure a constant release rate. In the event that there is a disagreement from the designer regarding the required storage, The City will require that the designer demonstrate their rationale utilizing dynamic modelling, that will then be reviewed by City modelers in the Water Resources Group. Regarding all proposed UG storage, ground water levels (and in particular HGW levels) will need to be reviewed to ensure that the proposed system does not become surcharged and thereby ineffective.

ii. Provide information on type of underground storage system including product name and model, number of chambers, chamber configuration, confirm invert of chamber system, top of chamber system, required cover over system and details, interior bottom slope (for self-cleansing), chart of storage values, length, width and height, capacity, entry ports (maintenance) etc. UG storage to provide actual 5- and 100-year event storage requirements.

14. Storm Sewer

a. A 300mm dia. concrete storm sewer is available within Buena Vista Road.

b. A storm sewer monitoring maintenance hole is required to be installed at the property line (on the private side of the property) as per City of Ottawa Sewer-Use By-Law 2003-514 (14) Monitoring Devices.

15. Water:

a. A 200 mm PVC watermain is available for connection on Buena Vista Road and on Springfield Road.

b. Domestic water from the existing building can be extended into the addition with sufficient proof of demand capacity.

c. Water Supply Redundancy: Residential buildings with a basic day demand greater than 50m3/day (0.57 L/s) or with 50+ units are required to be connected to a minimum of two water services, with each their own meter, separated by an isolation valve to avoid a vulnerable service area.

d. Water Boundary condition requests must include the location of the service (map or plan with connection location(s) indicated) and the expected loads required by the proposed development, including calculations. Please provide the following information:

i. Plan showing the proposed location of service(s).

ii. Type of development and the amount of fire flow required (L/min). Note: The OBC method can be used if the fire demand for the private property is less than 9,000 L/min. If the OBC fire demand reaches 9000 L/min, then the FUS method is to be used.

iii. Average daily demand: __L/s.

iv. Maximum daily demand: __L/s.

v. Maximum hourly daily demand: __L/s.

vi. Note: Use Table 3-3 of the MOE Design Guidelines for Drinking-Water System to determine Maximum Day and Maximum Hour peaking factors for 0 to 500 persons and use Table 4.2 of the Ottawa Design Guidelines, Water Distribution for 501 to 3,000 persons.

e. Please review Technical Bulletin ISTB-2018-02, maximum fire flow hydrant capacity is provided in Section 3 Table 1 of Appendix I. A hydrant coverage figure shall be provided and demonstrate there is adequate fire protection for the proposal.

f. A Water Data Card will have to be submitted to size the water meter.

g. Any proposed emergency route is to be to the satisfaction of Fire Services.

16. Sanitary Sewer

a. A 250mm concrete sanitary sewer is available for connection on Buena Vista Road and on Springfield Road.

b. We do not see any issues with sanitary capacity, but we would like to see the sanitary flow demand for the addition to confirm it.

c. Include correspondence from the Architect within the Appendix of the report confirming the number of residential units per building and a unit type breakdown for each of the buildings to support the calculated building populations.

d. Please apply the wastewater design flow parameters in Technical Bulletin PIEDTB-2018-01.

e. Sanitary sewer monitoring maintenance hole is required to be installed at the property line (on the private side of the property) as per City of Ottawa Sewer-Use By-Law 2003-514 (14) Monitoring Devices.

f. A backwater valve is required on the sanitary service for protection.

17. General Servicing

a. Provide existing servicing information and the recommended location for the proposed connections. Services should ideally be grouped in a common trench to minimize the number of road cuts.

b. Where servicing involves three or more service trenches, either a full road width or full lane width 40 mm asphalt overlay will be required, as per amended Road Activity By-Law 2003-445 and City Standard Detail Drawing R10. The extent of the overlay must be shown on the grading plan or a road reinstatement plan.

c. CCTV sewer inspection of city infrastructure is required to record pre and post construction conditions and ensure there is no damage to City Assets.

d. Existing buildings sewer laterals require a CCTV inspection and report to ensure existing services to be re-used are in good working order and meet current minimum size requirements.

e. Connections to trunk sewers, easement sewers and backbone watermains are typically not permitted.

f. Sewer connections to be made above the springline of the sewer main as per:

    i. Std Dwg S11.1 for flexible main sewers – connections made using approved tee or wye fittings.

    ii. Std Dwg S11 (For rigid main sewers) – lateral must be less that 50% the diameter of the sewermain.

    iii. Std Dwg S11 (For rigid main sewers) – lateral must be less that 50% the diameter of the sewermain.

    iv. No submerged outlet connections.

18. Grading and Erosion

a. Post-development site grading shall match existing property line grades in order to minimize disruption to the adjacent properties. A topographical plan of survey shall be provided as part of the submission and a note provided on the plans.

b. Erosion and sediment control plan must be provided.

c. Any portion of the subject property which is intended to be used for permanent or temporary snow storage shall be as shown on the approved

site plan and grading plan. Snow storage shall not interfere with approved grading and drainage patters or servicing. Snow storage areas shall be setback from the property lines, foundations, fencing or landscaping a minimum of 1.5m. Snow storage areas shall not occupy driveways, aisles, required parking spaces or any portion of a road allowance. If snow is to be removed from the site, please indicate this on the plan(s).

d. Street catch basins are not to be located at any proposed entrances.

e. Depressed driveways are discouraged and are not allowed in sag locations. For other locations, the builder must ensure that the maximum depth of flow on the street during the 100-year and stress test events will not spill onto the depressed driveway.

f. If Window wells are proposed, they are to be indirectly connected to the footing drains. A detail of window well with indirect connection is required, as is a note at window well location speaking to indirect connection.

19. Environmental

a. A Phase I ESA is required to be completed in accordance with Ontario Regulation 153/04 in support of this development proposal to determine the potential for site contamination. Depending on the Phase I recommendations a Phase II ESA may be required.

b. The Phase I ESA shall provide all the required Environmental Source Information as required by O. Reg. 153/04. ERIS records are available to public at a reasonable cost and need to be included in the ESA report to comply with O. Reg. 153/04 and the Official Plan. The City will not be in a position to approve the Phase I ESA without the inclusion of the ERIS reports.

c. Official Plan: Section 10. Protection of Health and Safety (ottawa.ca)

d. A remediation plan may be required as per the outcome of the Phase one study. If required, a complete Phase Two study with the remediation activities will need to be submitted for our review.

20. Environmental Compliance Approval

a. Due to the recent changes by the Ministry of Environment, effective September 1, 2025, all on site private stormwater management facilities, storm sewer, sanitary sewer which were subject to ECA are now subject to EASR. The consultant must demonstrate that the requirements have been met.

b. Environmental Compliance Approval | Ontario.ca

21. Geotechnical

    a. A Geotechnical Study/Investigation shall be prepared in support of this development proposal.

    b. Geotechnical Study shall be consistent with the Geotechnical Investigation and Reporting Guidelines for Development Applications. Geotechnical Investigation and Reporting (ottawa.ca)

    c. If Sensitive marine clay soils are present in this area that are susceptible to soil shrinkage that can lead to foundation and building damages. All six (6) conditions listed in the Tree Planting in Sensitive Marine Clay Soils- 2017 Guidelines are required to be satisfied. Note that if the plasticity index of the soil is determined to be less than 40% a minimum separation between a street tree and the proposed building foundations of 4.5m will need to be achieved. A memorandum addressing the Tree in Clay Soil Guidelines prepared by a geotechnical engineer is required to be provided to the City. Tree Planting in Sensitive Marine Clay Soils - 2017 Guidelines (ottawa.ca)

22. Slope Stability Assessment Reports

    a. A report addressing the stability of slopes, prepared by a qualified geotechnical engineer licensed in the Province of Ontario, should be provided wherever a site has slopes (existing or proposed) steeper than 5 horizontal to 1 vertical (i.e., 11 degree inclination from horizontal) and/or more than 2 meter in height.

    b. A report is also required for sites having retaining walls greater than 1 meter high, that addresses the global stability of the proposed retaining walls.

    c. Slope Stability Guidelines for Development Applications (ottawa.ca)

23. Exterior Site Lighting

    a. Any proposed light fixtures (both pole-mounted and wall mounted) must be part of the approved Site Plan. All external light fixtures must meet the criteria for Full Cut-off Classification as recognized by the Illuminating Engineering Society of North America (IESNA or IES), and must result in minimal light spillage onto adjacent properties (as a guideline, 0.5 fc is normally the maximum allowable spillage). In order to satisfy these criteria, the please provide the City with a **Certification (Statement) Letter** from an acceptable professional engineer stating that the design is compliant.

24. General

a. It is the sole responsibility of the consultant to investigate the location of existing underground utilities in the proposed servicing area and submit a request for locates to avoid conflict(s). The location of existing utilities and services shall be documented on an **Existing Conditions Plan**.

b. Any easements on the subject site shall be identified and respected by any development proposal and shall adhere to the conditions identified in the easement agreement. A **legal survey plan** shall be provided, and all easements shall be shown on the engineering plans.

c. All underground and above ground building footprints and permanent walls need to be shown on the plans to confirm that any permanent structure does not extend either above or below into the existing property lines and sight triangles.

d. **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 on this request.

Please refer to the City of Ottawa Guide to Preparing Studies and Plans [Engineering]: Planning application submission information and materials**. The guides on the City website specify all required information to be presented within the required documents.**

Feel free to contact Anton Chetrar, Infrastructure Project Manager, for follow-up questions at anton.chetrar@ottawa.ca.

Noise

Comments:

25. Noise Control Study is required for the site as it is within proximity to Springfield Road (collector road).

Feel free to contact Anton Chetrar, Infrastructure Project Manager, for follow-up questions at anton.chetrar@ottawa.ca .

Transportation

Comments:

26. The addition does not warrant a Transportation Impact Assessment.

Feel free to contact Mike Giampa, Transportation Project Manager, for follow-up questions.

Environment

Comments:

27. There are no triggers for an Environmental Impact Study.

28. Bird-Safe Design Guidelines - Please review and incorporate bird safe design elements, where feasible. Some of the risk factors include glass and related design traps such as corner glass and fly-through conditions, ventilation grates and open pipes, landscaping, light pollution.

    The entrance is a very spectacular feature of this proposed addition with extensive glazing, please consider the bird-safe conditions here, the overhang may mitigate all the issues however please take a close look to ensure this does not create a bird hazard.

    More guidance and solutions are available in the guidelines which can be found here: https://documents.ottawa.ca/sites/documents/files/birdsafedesign_guidelines_en.pdf

29. Please consider if there are features that can be added reduce the urban heat island effect (see OP 10.3). For example, this impact can be reduced by adding large canopy trees, a green roof or vegetation walls, solar orientation and screens to limit summer sun and maximize winter sun and/or incorporating building with low heat absorbing materials.

Feel free to contact Matthew Hayley, Environmental Planner, for follow-up questions.

Forestry

Comments:

30. A Tree Conservation Report and Landscape Plan are submission requirements of this SPC application. They can be combined.

31. Please design the addition with the least impact to existing healthy trees as possible (OP Section 4.8.2)

32. The City of Ottawa is working towards a 40% canopy cover target. At a minimum replace the canopy lost from this development elsewhere on the property.

Tree Conservation Report requirements. The following Tree Conservation Report (TCR) requirements have been adapted from the Schedule E of the Urban Tree Protection Guidelines – for more information on these requirements please contact hayley.murray@ottawa.ca

a. A Tree Conservation Report (TCR) must be supplied for review along with the suite of other plans/reports required by the City

b. Any tree 10 cm in diameter or greater and City-owned trees of any diameter requires a tree permit issued under the Tree Protection Bylaw (Bylaw 2020 – 340); the permit will be based on an approved TCR and made available at or near plan approval.

c. The TCR must contain 2 separate plans/maps:

   i. Plan/Map 1 - show existing conditions with tree cover information.
   ii. Plan/Map 2 - show proposed development with tree cover information.

d. The TCR must list all trees on site, as well as off-site trees if the CRZ (critical root zone) extends into the developed area, by species, diameter, and health condition. Please note that averages can be used if there are forested areas.

e. Please identify trees by ownership – private onsite, private on adjoining site, city owned, co-owned (trees on a property line)

f. If trees are to be removed, the TCR must clearly show where they are, and document the reason they cannot be retained.

g. The removal of trees on a property line will require the permission of both property owners.

h. All retained trees must be shown, and all retained trees within the area impacted by the development process must be protected as per City guidelines available at Tree Protection Specification or by searching Ottawa.ca

i. The City encourages the retention of healthy trees; if possible, please seek opportunities for retention of trees that will contribute to the design/function of the site.

j. Removal of a City tree is not permitted unless justified. If justified, monetary compensation for the value of the tree must be paid before a tree removal permit is issued.

Landscape Plan (LP) requirements.

k. Landscape Plan Terms of Reference must be adhered to for all tree planting: Click Here. For more information on these requirements please contact hayley.murray@ottawa.ca

Additional Elements for Tree Planting in the Right of Way:

l. Please ensure any retained trees are shown on the LP

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

n. Soil Volume - Please demonstrate as per the Landscape Plan Terms of Reference that the available soil volumes for new plantings will meet or exceed the minimum soil volumes requested.

o. The city requests that consideration be given to planting native species wherever there is a high probability of survival to maturity.

p. Efforts shall be made to provide as much future canopy cover as possible at a site level, through tree planting and tree retention. The Landscape Plan shall show/document that the proposed tree planting and retention will contribute to the City's overall canopy cover over time. Please provide a projection of the future canopy cover for the site to 40 years

q. Minimum Setbacks

    i. Maintain 1.5m from sidewalk or MUP/cycle track or water service laterals.

    ii. Maintain 2.5m from curb

    iii. Coniferous species require a minimum 4.5m setback from curb, sidewalk, or MUP/cycle track/pathway.

    iv. 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.

    v. Adhere to Ottawa Hydro's planting guidelines (species and setbacks) when planting around overhead primary conductors.

r. Tree specifications

    i. Minimum stock size: 50mm tree caliper for deciduous, 200cm height for coniferous.

    ii. Maximize the use of large deciduous species wherever possible to maximize future canopy coverage.

    iii. Tree planting on city property shall be in accordance with the City of Ottawa's Tree Planting Specification; and if possible, include watering and warranty as described in the specification.

    iv. No root barriers, dead-man anchor systems, or planters are permitted.

v. No tree stakes unless necessary (and only 1 on the prevailing winds side of the tree)

Feel free to contact Hayley Murray, Planning Forester, for follow-up questions.

Parkland

Comments:

33. The project is exempt from Cash-in-Lieu of Parkland.

    Per Section 11 - Exemptions

    2. No conveyance of land or payment of cash-in-lieu under this by-law is required in the case of the development or redevelopment of:

       a college or university or a school as defined by subsection 1(1) of the Education Act, where the school provides for the students' outdoor recreational needs on-site at the time of development and maintains sufficient outdoor recreational space on-site at the time of redevelopment, all to the satisfaction of the General Manager

Feel free to contact Ryan Paliga, Parks Planner, for follow-up questions.

Heritage

Comments:

34. The subject property is designated under Part V of the Ontario Heritage Act as part of the Rockcliffe Park Heritage Conservation District. The policies of the Rockcliffe Park Heritage Conservation District Plan apply.

35. Given that the proposed addition exceeds 30% of gross floor area, a Council-level Heritage Permit will be required. A Heritage Act Acknowledgement Report is also required.

36. Detailed design comments will be provided as part of the Heritage Permit process.

Feel free to contact Ben Morin, Heritage Planner, for follow-up questions.

Other

37. The High Performance Development Standard (HPDS) is a collection of voluntary and required standards that raise the performance of new building projects to achieve sustainable and resilient design and will be applicable to Site Plan Control and Plan of Subdivision applications.

a. The HPDS was passed by Council on April 13, 2022, but is not in effect at this time, as Council has referred the 2023 HPDS Update Report back to staff with the direction to bring forward an updated report to Committee at a later date. The timing of an updated report to Committee is unknown at this time, and updates will be shared when they are available.

b. Please refer to the HPDS information at ottawa.ca/HPDS for more information.

Submission Requirements and Fees

1. Complex Site Plan Control application is required.
    a. Additional information regarding fees related to planning applications can be found here.
2. The attached **Study and Plan Identification List** outlines the information and material that has been identified as either required (R) or advised (A) as part of a future complete application submission.
    a. The required plans and studies must meet the City's Terms of Reference (ToR) and/or Guidelines, as available on Ottawa.ca. These ToR and Guidelines outline the specific requirements that must be met for each plan or study to be deemed adequate.
3. All of the above comments or issues should be addressed to ensure the effectiveness of the application submission review.

Should there be any questions, please do not hesitate to contact myself or the contact identified for the above areas / disciplines.

Yours Truly,
Sole Soyak
Planner II

Encl. Study and Plan Identification List
List of technical agencies to contact
Pre-consultation supplementary development information
Checklist of accessibility design standards
HPDS overview for applicants and example checklist

c.c. James Ireland, Planner III, Development Review All Wards
Nivethini Jekku Einkaran, Planner I, Development Review All Wards
Lisa Stern, Planner III, Urban Design
Anton Chertar, Infrastructure Project Manager
Abdul Mottalib, Senior Engineer Infrastructure Applications

Mike Giampa, Transportation Project Manager
Matthew Hailey, Environmental Planner
Hayley Murray, Planning Forester
Ryan Paliga, Parks Planner
Ben Morin, Heritage Planner
Ted Horton, Senior Planner, National Capital Commission

ELMWOOD SENIOR SCHOOL ADDITION

261 Buena Vista Rd. - Ottawa, ON - K1M 0V9

ISSUE FOR COORDINATION
09 DECEMBER, 2025

FARROW PARTNERS
ARCHITECT

CONTACT:
Christopher Blackwell
t: 416-966-3666
e: christopherb@farrowpartners.ca

LEA Consulting Ltd.
STRUCTURAL ENGINEER

CONTACT:
Ryan Brown
t: 647-979-745
e: rbrown@lea.ca

WSP
MECHANICAL, ELECTRICAL ENGINEER

CONTACT:
Langdon Liebregts
t: 613-690-3818
e: langdon.liebregts@wsp.com

PROJECT OVERVIEW

Farrow Partners has been involved with Elmwood since 2017 when we developed a strategic facilities master plan for the school. Growing out of this master plan, this proposed addition to the existing Senior School building includes:

- A new front entrance court and lobby, with lounge and improved reception
- A flexible combination Performing Arts Center/Gymnasium with a seating capacity of 240, with lower-level support spaces including green room and dressing rooms
- A ground level flexible fitness/athletics room overlooking the North playing field
- Lower level athletics office and change rooms accessible from the playing field
- Four new classrooms on the second level, overlooking the playing field
- Improvement of the arrival from Buena Vista Road by introducing a wide pavestone pathway, necessitating shifting of the parking exit lane further east and removal of 4 parking stalls
- Re-grading, re-sodding, and resizing of existing grass playing field to 70m x 35m with irrigation system.

Guided by the school's Strategic Direction, this addition is a key step forward for the school's variety and quality of educational, artistic, and athletic opportunities. The new performing arts, athletics, and learning spaces are much needed by the current student body and faculty. The project's intent is not to provide additional spaces for increased enrollment.

HERITAGE FACTORS

The proposed addition has been designed to sit sensitively within the Rockliffe Park Heritage Conservation District and pair harmoniously with the existing Tudor building to establish a new and coherent architectural character. Without attempting to falsely recreate the historic character of the existing Tudor Senior School (by timbering upper wall areas or adding gables, for example), the addition takes cues from the building's distinctive proportions, materiality, and timber ornamentation to establish a new architectural character that is coherent with the existing. Any interference with the front façade or the street frontage of the existing building has been avoided.

Following a Heritage Pre-Application Meeting on 3 November 2025, the City Heritage staff have been supportive of the design approach of the proposed addition. Several comments were returned and have been addressed in the current revision presented here.

ZONING COMPLIANCE CHART

A. Project Information			
Review Date:	17-Nov-25	Official Plan Designation:	Special Use
Municipal Address:	261 Buena Vista Dr.	Legal Description:	Parcel 26-1, Section 4M-50; being Lots 26 and 27 on Plan 4M-50; Part of Block A14, on Plan 4M-22 PID: 04222-0129 LT
Scope of Work:	The proposal includes a new entrance lobby, reception, and lounge adjacent to the existing Buena Vista Road parking lot; a double-height gymnasium with flexible performance-center capabilities; and at the rear a new fitness/athletics studio and four new classrooms all overlooking the existing playing field to the north.		
Existing Zoning Code:	I3A	By-law Number:	2008-250
Schedule 1 / 1A Area:	Area C / Area X: Inner Urban	Overlays Applicable:	Rockliffe Park Heritage Conservation District

B. Zoning Review			
Zoning Provision	By-Law Requirement or Applicable Section, Exception, or Schedule Reference	Proposal	Compliant (Y/N)
Principal Land Use	Various Incl. School	School	Y
Lot Width	15m	134.670m	Y
Lot Area	400m²	18.444m²	Y
Front Yard Set Back	3m	6.8m (Buena Vista Road)	Y
Corner Side Yard Setback	4.5m	10.5m (Springfield Road)	Y
Interior Side Yard Setback	7.5m	68.5m	Y
Rear Yard Setback	7.5m	46.75m (Hillcrest Road)	Y
Lot Coverage F.S.I.	35%	27%	Y (see comment A)
Building Height	15m	12m	Y
Accessory Buildings Section 55	N/A	N/A	Y
Projections into Height Limit Section 64	N/A	N/A	Y
Projections into Required Yard Section 65	N/A	N/A	Y
Required Parking Spaces Sections 101 and 103	NB1: 0.75 per classroom incl. portables = 30	64 Total Parking Stalls (4 existing stalls removed)	Y (see comment B)
Visitor Parking Spaces Section 102	N/A		
Size of Space Section 105 and 106	N/A		
Driveway Width Section 107	N/A		
Aisle Width Section 107	N/A		
Location of Parking Section 109	N/A		
Refuse Collection Section 110	Section 110 (3)(a),(b),(c)	Existing Refuse Loading Area to remain	N (see comment C)
Bicycle Parking Rates Section 111	Table 111A, (d) school: 1 per 100 m2 of gross floor area	12 Bicycle Stalls existing	N (see comment D)
Amenity Space Section 137	Not required	N/A	Y

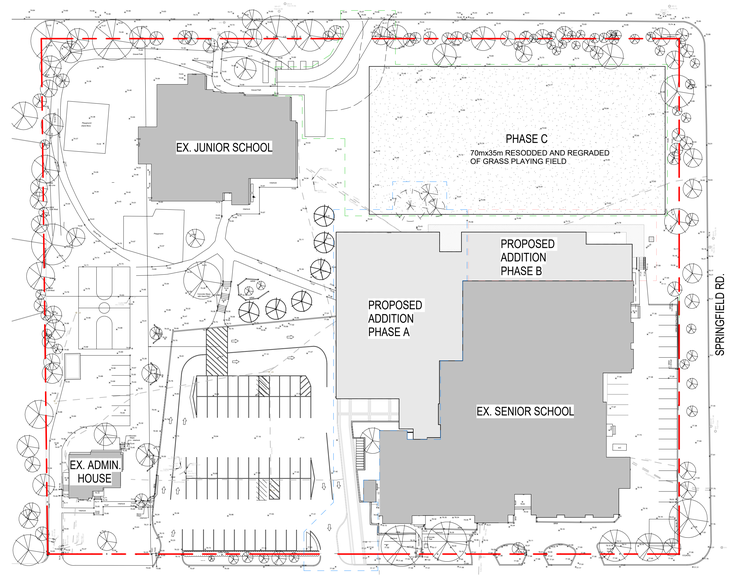
E. Comments / Calculations		
A) Note to Lot Coverage/ F.S.I.: Calculation	EXISTING JUNIOR SCHOOL FOOTPRINT	826 m²
	EXISTING HEADS'S HOUSE FOOTPRINT	122 m²
	EXISTING GARAGE FOOTPRINT	23 m²
	EXISTING SENIOR SCHOOL FOOTPRINT	2733 m²
	PROPOSED ADDITION FOOTPRINT	1312.5 m²
		826 + 122 + 23 + 2733 + 1230 = 5056.5 m²
	TOTAL NEW FOOTPRINT	
	MAXIMUM LOT COVERAGE	35% = 6455.4 m²
	PROPOSED LOT COVERAGE	27% = 5056.5 m²
	AVAILABLE LOT COVERAGE	8% = 1438.9 m²
B) Note to Required Parking Spaces: Calculation	0.75 x 40 Classrooms = 30	*30 Parking Stalls Required*
C) Refuse Collection Section 110: Comment	*Comment: Existing refuse area is ideally situated and entirely shielded from view by both a wood screen enclosure more than 2m in height and by ample planting. Relocation of this refuse area would diminish the ease of refuse loading and the architectural presence of both the existing heritage school and the new addition.*	
D) Note to Bicycle Parking Rates: Calculation	Proposed Senior School GFA = 6960.50m²	
	6960.50m² / 100m² = 69.605	*70 Bicycle Stalls Required*
	Comment: The proposed additions are not intended to facilitate increased enrollment or staffing of the school and so increased bicycle parking capacity is not required.	

BUILDING CODE DATA
Occupancy Type A Division 2

BUILDING SIZE & CONSTRUCTION TYPE
3.2.2.24.

REQUIRED EXITS

Lower Level	Required:	2
	Provided:	2
Ground Level	Required:	2
	Provided:	4
Second Level	Required:	2
	Provided:	2



1 SCOPE OF WORK
1 : 500



RENDER OF PROPOSED MAIN ENTRY



AERIAL VIEW OF EXISTING SITE AND BUILDINGS

NO.	DATE	REVISION / ISSUANCE
1	2025 08 05	ISSUE FOR COORDINATION
2	2025 08 27	ISSUE FOR REVIEW
3	2025 10 07	ISSUE FOR COSTING
5	2025 12 03	ISSUE FOR SITE PLAN CONTROL PRE-CONSULTATION

LEGEND

- PROPERTY LINE
- AREA OF PHASE A PROPOSED WORK
- AREA OF PHASE B PROPOSED WORK
- AREA OF PHASE C PROPOSED WORK
- PROPOSED ADDITION
- EXISTING BUILDING

Project North

The architect noted above has exercised responsible control with respect to design activities. The architect's seal number is the architect's BCIN (Building Code Designation Number).

Farrow
60 Pleasant Blvd, Unit 807
Toronto, ON, Canada
M4T 0A3
Ontario Association of Architects COP #5388

ELMWOOD SCHOOL

ELMWOOD SENIOR SCHOOL ADDITION

261 Buena Vista Rd. - Ottawa, ON - K1M 0V9

9114	
Scale at Arch E	As indicated
FARROW PARTNERS	Yazmin Enriquez
Reviewed by	Christopher Blackwell

Drawing title

COVER PAGE

Sheet no.

A000



PROPOSED ADDITION BEHIND EXISTING SCHOOL - VIEWED FROM BUENA VISTA RD.



PROPOSED MAIN ENTRY



PROPOSED REAR FACADE - VIEWED FROM NORTH



PROPOSED MAIN ENTRY - VIEWED FROM WEST



PROPOSED REAR FACADE - VIEWED FROM NORTH EAST



PROPOSED REAR FACADE - VIEWED FROM NORTH WEST

NO.	DATE	REVISION / ISSUANCE
1	2025 08 05	ISSUE FOR COORDINATION
2	2025 08 27	ISSUE FOR REVIEW
3	2025 10 07	ISSUE FOR COSTING
4	2025 11 22	ISSUE FOR HERITAGE PERMIT
5	2025 12 03	ISSUE FOR SITE PLAN CONTROL PRE-CONSULTATION

Project North

The architect noted above has exercised responsible control with respect to design activities. The architect's seal number is the architect's BCIN (Building Code Designation Number).

Farrow
60 Pleasant Blvd, Unit 801
Toronto, ON, Canada
M4T1T1
Ontario Association of Architects COP #5388

ELMWOOD SCHOOL

ELMWOOD SENIOR SCHOOL ADDITION

261 Buena Vista Rd. - Ottawa, ON - K1M 0V9

9114

Scale at Arch E

FARROW PARTNERS — Yazmin Enriquez

Reviewed by — Christopher Blackwell

Drawing title

EXTERIOR RENDERS

Sheet no.

A003



PROPOSED FLEXIBLE GYMNASIUM LOOKING NORTH



PROPOSED FLEXIBLE GYMNASIUM LOOKING WEST



PROPOSED FLEXIBLE PERFORMANCE SPACE LOOKING NORTH



PROPOSED FLEXIBLE PERFORMANCE SPACE LOOKING SOUTH



PROPOSED FLEXIBLE FITNESS STUDIO SPACE CONNECTING TO EXISTING GYMNASIUM



PROPOSED LOUNGE SPACE DURING THE WINTER

NO.	DATE	REVISION / ISSUANCE
1	2025 08 05	ISSUE FOR COORDINATION
2	2025 08 27	ISSUE FOR REVIEW
3	2025 10 07	ISSUE FOR COSTING
4	2025 11 22	ISSUE FOR HERITAGE PERMIT
5	2025 12 03	ISSUE FOR SITE PLAN CONTROL PRE-CONSULTATION

Project North

The architect noted above has exercised responsible control with respect to design activities. The architect's seal number is the architect's BCIN. (Building Code Designation Number).

Farrow
60 Pleasant Blvd, Unit 801
Toronto, ON, Canada
M4T 1K2
Ontario Association of Architects COP #5388

ELMWOOD SCHOOL

ELMWOOD SENIOR SCHOOL ADDITION

261 Buena Vista Rd. - Ottawa, ON - K1M 0V9

9114

Scale at Arch E

FARROW PARTNERS: Yazmin Enriquez

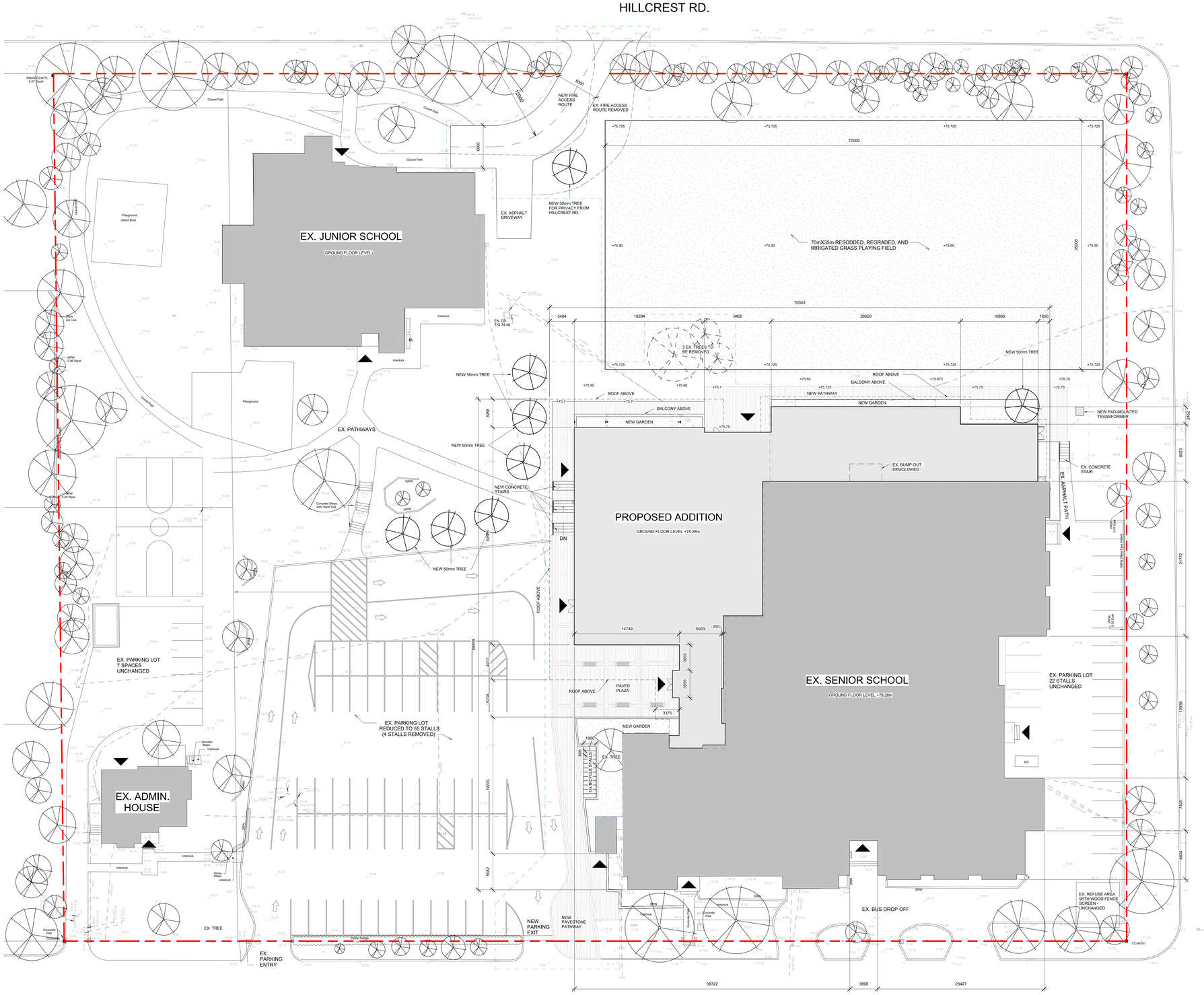
Reviewed by: Christopher Blackwell

Drawing title

INTERIOR RENDERS

Sheet no.

A004



1 Site Plan
1 : 200

ZONING COMPLIANCE CHART

A. Project Information			
Review Date:	17-Nov-25	**Official Plan Designation:**	Special Use
Municipal Address:	261 Buena Vista Dr.	**Legal Description:**	Parcel 26-1, Section 4M-55; being Lots 26 and 27 on Plan 4M-55; Part of Block A14, on Plan 4M-22 PID: 04222-0129 LT
Scope of Work:	The proposal includes a new entrance lobby, reception, and lounge adjacent to the existing Buena Vista Road parking lot; a double-height gymnasium with flexible performance center capabilities; and at the rear a new fitness/athletics studio and four new classrooms all overlooking the existing playing field to the north.		
Existing Zoning Code:	I1A	**By-law Number:**	2008-250
Schedule 1 / 1A Area:	Area C / Area X: Inner Urban	**Overlays Applicable:**	Rockliffe Park Heritage Conservation District

B. Zoning Review			
Zoning Provision	**By-law Requirement or Applicable Section, Exception, or Schedule Reference**	**Proposal**	**Compliant (Y/I/N)**
Principal Land Use	Various incl. School	School	Y
Lot Width	15m	124.670m	Y
Lot Area	400m²	18.446m²	Y
Front Yard Set Back	3m	6.8m (Buena Vista Road)	Y
Corner Side Yard Setback	4.5m	10.5m (Springfield Road)	Y
Interior Side Yard Setback	7.5m	68.5m	Y
Rear Yard Setback	7.5m	45.75m (Hillcrest Road)	Y
Lot Coverage F.S.I.	35%	27%	Y (see comment A)
Building Height	15m	12m	Y
Accessory Buildings Section 55	N/A	N/A	Y
Projections into Height Limit Section 64	N/A	N/A	Y
Projections into Required Yard Section 65	N/A	N/A	Y
Required Parking Spaces Sections 101 and 103	NB1: 0.75 per classroom incl. portables = 30	84 Total Parking Stalls (4 existing stalls removed)	Y (see comment B)
Visitor Parking Spaces Section 102	N/A		
Size of Space Section 105 and 106	N/A		
Driveway Width Section 107	N/A		
Aisle Width Section 107	N/A		
Location of Parking Section 109	N/A		
Refuse Collection Section 110	Section 110 (3)(a),(b),(c)	Existing Refuse Loading Area to remain	N (see comment C)
Bicycle Parking Rates Section 111	Table 111A, (d) school: 1 per 100 m2 of gross floor area	52 Bicycle Stalls existing	N (see comment D)
Amenity Space Section 137	Not required	N/A	Y

E. Comments / Calculations		
A) Note to Lot Coverage / F.S.I. Calculation	EXISTING JUNIOR SCHOOL FOOTPRINT EXISTING HEAD'S HOUSE FOOTPRINT EXISTING GARAGE FOOTPRINT EXISTING SENIOR SCHOOL FOOTPRINT PROPOSED ADDITION FOOTPRINT TOTAL NEW FOOTPRINT MAXIMUM LOT COVERAGE PROPOSED LOT COVERAGE AVAILABLE LOT COVERAGE	826 m² 122 m² 23 m² 2733 m² 1312.5 m² 826 + 122 + 23 + 2733 + 1230 = 5016.5 m² 35% = 6455.4 m² 27% = 5016.5 m² 8% = 1438.9 m²
B) Note to Required Parking Spaces: Calculation	0.75 x 40 Classrooms = 30	*30 Parking Stalls Required*
C) Refuse Collection Section 110: Comment	*Comment: Existing refuse area is ideally situated and entirely shielded from view by both a wood screen enclosure more than 2m in height and by ample planting. Relocation of this refuse area would diminish the ease of refuse loading and the architectural presence of both the existing heritage school and the new addition.*	
D) Note to Bicycle Parking Rates: Calculation	Proposed Senior School GFA = 6960.50m² 6960.50m² / 100m² = 69.605 *Comment: The proposed additions are not intended to facilitate increased enrollment or staffing of the school and so increased bicycle parking capacity is not required.*	*70 Bicycle Stalls Required*

NO.	DATE	REVISION / ISSUANCE
5	2025 12 03	ISSUE FOR SITE PLAN CONTROL PRE-CONSULTATION

LEGEND

- PROPERTY LINE
- AREA OF PHASE A PROPOSED WORK
- AREA OF PHASE B PROPOSED WORK
- AREA OF PHASE C PROPOSED WORK
- EXISTING BUILDING FOOTPRINT
- PROPOSED ADDITION FOOTPRINT
- PROPOSED PAVING
- GARDEN BED
- EXISTING TREE
- PROPOSED TREE
- EXISTING TREE REMOVED
- UTILITY LINE

Project North

The architect noted above has exercised responsible control with respect to design activities. The architect's seal number is the architect's BCIN (Building Code Designation Number).

Farrow
60 Pleasant Blvd, Unit 801
Toronto, ON, Canada
M4X1Y1
Ontario Association of Architects COP #5388

ELMWOOD SCHOOL

ELMWOOD SENIOR SCHOOL ADDITION

261 Buena Vista Rd. - Ottawa, ON - K1M 0V9

9114

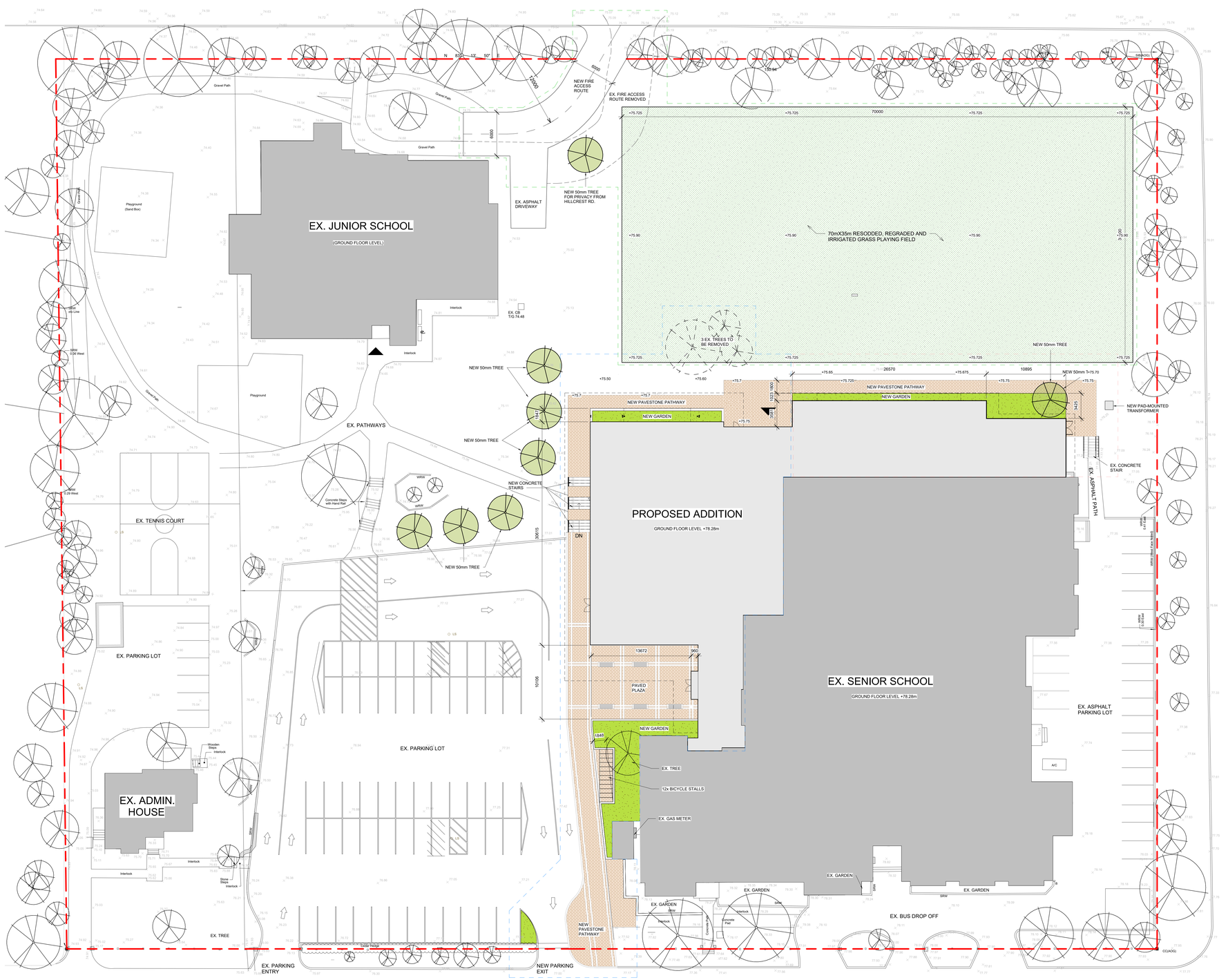
Scale at Arch E	As indicated
FARROW PARTNERS	Yazmin Enriquez
Reviewed by	Christopher Blackwell

Drawing title

PROPOSED SITE PLAN

Sheet no.

A103



1 Landscape Plan
1 : 200

COMMENT FROM ARBORIST, CHRIS MCINTYRE @ TRILLIUM TREE EXPERTS:
Following approval their will be a requirement for tree removal permits which I will apply for, all cost associated will be passed along to Elmwood School, fees for this should be $3165 for permits, 3 trees over 30cm recommended for removal ($1055 per tree), plus my time and payment on your behalf.

There will be a requirement to install 8 new trees, 50mm or greater, please ensure this is indicated on the planting plan at time of submission. If you don't have a planting yet, one should be developed prior to submission. If required we can offer this service.

NO.	DATE	REVISION / ISSUANCE
1	2025 08 05	ISSUE FOR COORDINATION
2	2025 08 27	ISSUE FOR REVIEW
5	2025 12 03	ISSUE FOR SITE PLAN CONTROL PRE-CONSULTATION

LEGEND

- PROPERTY LINE
- AREA OF PHASE A PROPOSED WORK
- AREA OF PHASE B PROPOSED WORK
- AREA OF PHASE C PROPOSED WORK
- PROPOSED ADDITION FOOTPRINT
- EXISTING BUILDING FOOTPRINT
- EXISTING LANDSCAPE
- PROPOSED GARDENS
- PROPOSED PAVING
- EXISTING TREE
- PROPOSED TREE
- EXISTING TREE REMOVED

Farrow
60 Pleasant Blvd, Unit 801
Toronto, ON, Canada
M4X1Y1
Ontario Association of Architects COP #5388

ELMWOOD SCHOOL

ELMWOOD SENIOR SCHOOL ADDITION

261 Buena Vista Rd. - Ottawa, ON - K1M 0V9

9114

Scale at Arch E	As indicated
FARROW PARTNERS	Yazmin Enriquez
Reviewed by	Christopher Blackwell

Drawing title

PROPOSED LANDSCAPE PLAN

Sheet no.

A104

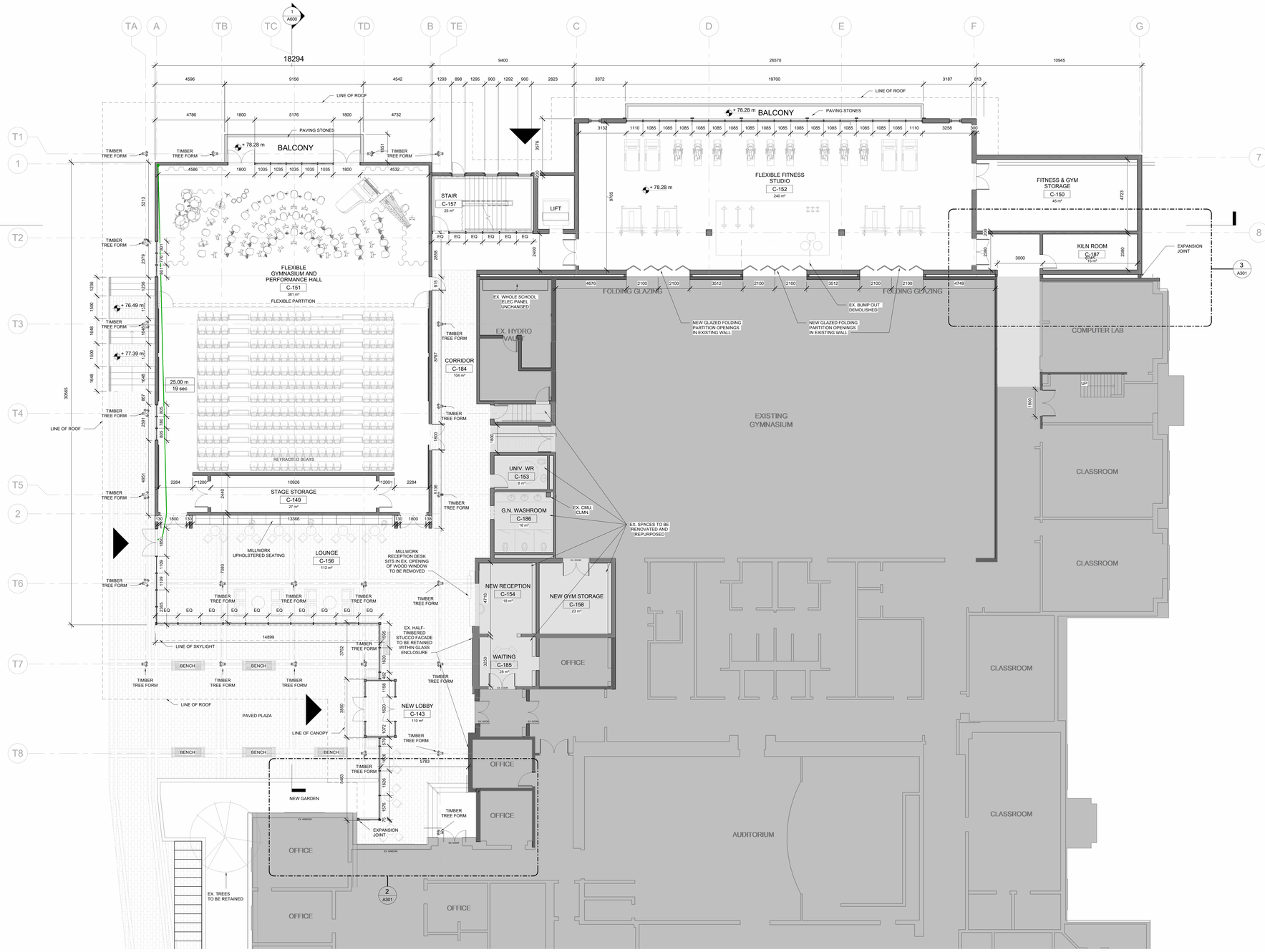
The architect noted above has exercised responsible control with respect to Building activities. The architect's seal number is the architect's BCIN. (Building Code Designation Number).

GROUND LEVEL OCCUPANT LOAD

Flexible Gymnasium and Performance Hall
Seating: 240 persons
Stage: 130m2 x 0.75m/person = 174 persons
Total: 414 Persons
Flexible Fitness Studio Space
275m2 x 1.85m2/person = 149 persons

EXIT WIDTH CALCULATION

Total Occupant Load: 414 + 149 = 563 persons
Exit Width Required: 563 x 6.1mm = 3434.3mm
Exit Width Provided: 6461mm



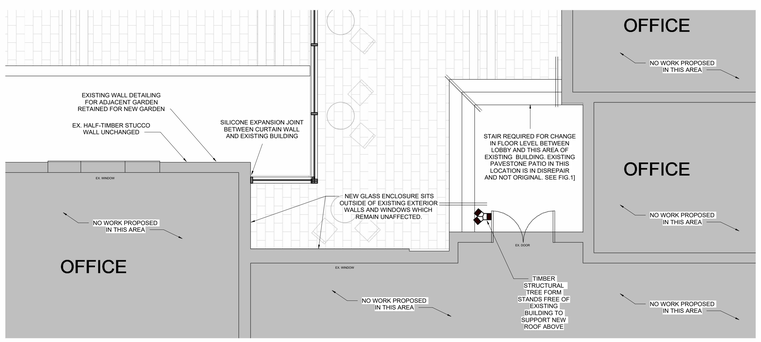
1 Ground Level
1 : 100

CONNECTION OF ADDITION TO EXISTING BUILDING

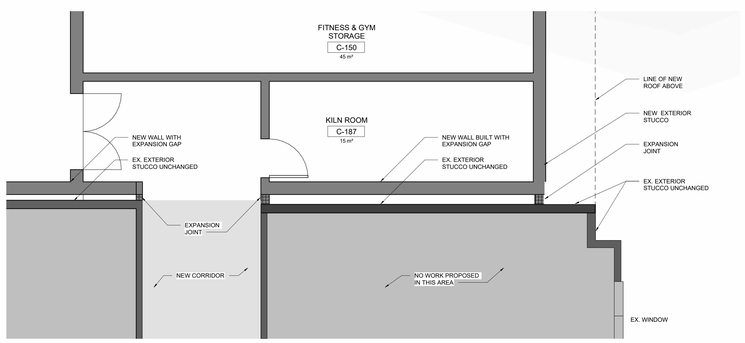
The West half-timbered stucco facade is to be retained within the new glass enclosure of the lobby, both preserving the character of the existing building and lending the lobby a unique indoor-outdoor atmosphere.

The East half-timbered stucco facade is to be retained and unchanged, and connected to the stucco East facade of the addition by expansion joint.

The North Facade, which is not original to the building, is to be completely disguised by the new addition, which is structurally independent and is joined to the existing building by expansion joints along its length.



2 Connection to Existing Building A
1 : 50



3 Connection to Existing Building B
1 : 50

NO.	DATE	REVISION / ISSUANCE
1	2025 08 05	ISSUE FOR COORDINATION
2	2025 08 27	ISSUE FOR REVIEW

LEGEND

- PROPOSED ADDITION
- PROPOSED PAVING
- EXISTING BUILDING AREAS TO BE RENOVATED
- EXISTING BUILDING

Project North

The architect noted above has exercised responsible control with respect to design activities. The architect's seal number is the architect's BCIN (Building Code Designation Number).

Farrow
60 Pleasant Blvd, Unit 801
Toronto, ON, Canada
M4T1T1
Ontario Association of Architects COP #5388

ELMWOOD SCHOOL

ELMWOOD SENIOR SCHOOL ADDITION

261 Buena Vista Rd. - Ottawa, ON - K1M 0V9

9114	
Scale at Arch E	As indicated
FARROW PARTNERS	Yazmin Enriquez
Reviewed by	Christopher Blackwell

Drawing title

GROUND LEVEL PLAN

Sheet no.

A301

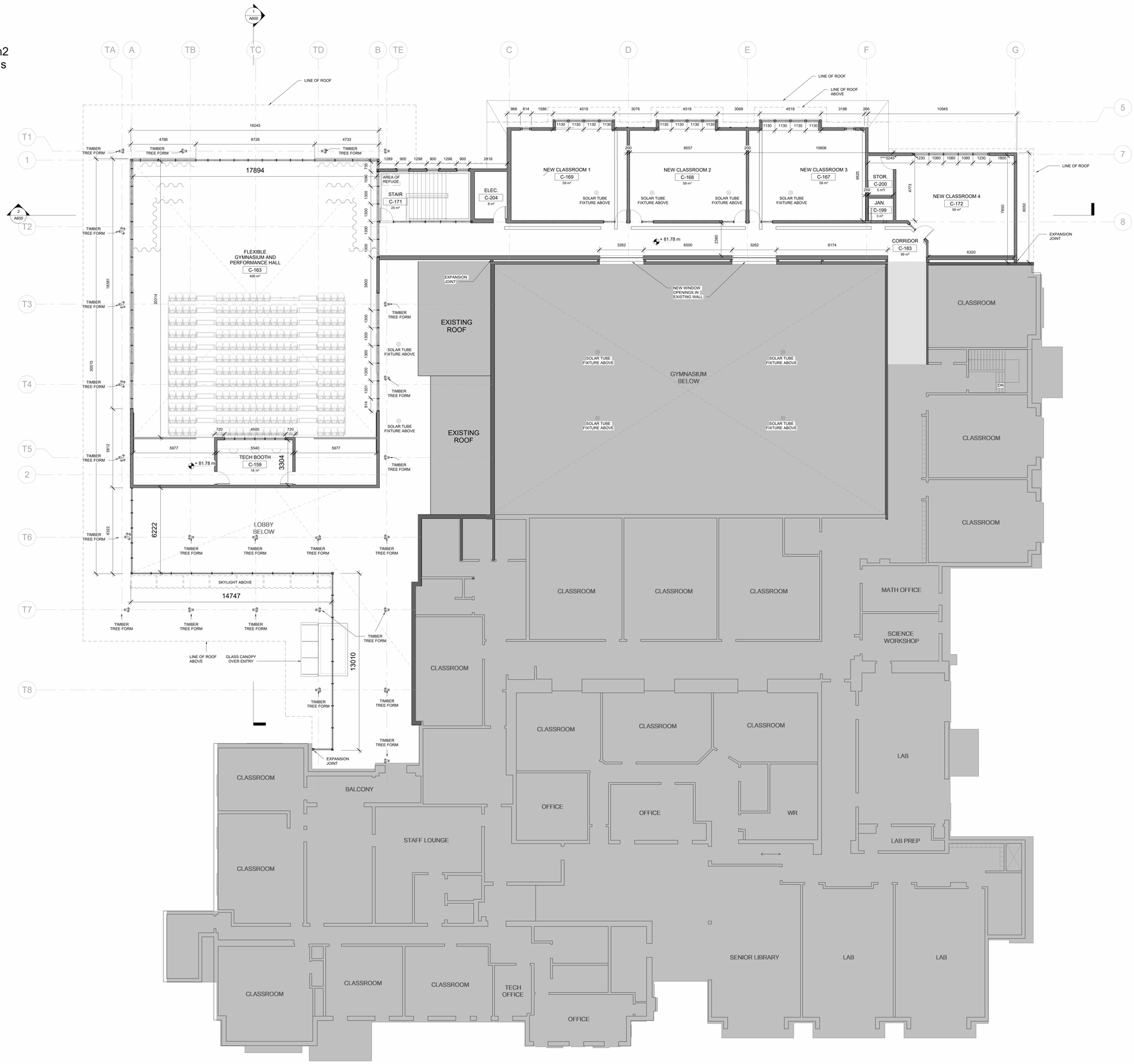
SECOND LEVEL OCCUPANT LOAD

Classrooms

68m2 + 66m2 + 68m2 + 63m2 = 265m2
265m2 x 1.85m2/person = 143 persons

EXIT WIDTH CALCULATION

Total Occupant Load: 143 persons
Exit Width Required: 143 x 6.1mm = 872.3mm
Exit Width Provided: 1956mm



1 Second Level
1 : 100

NO.	DATE	REVISION / ISSUANCE
1	2025 08 05	ISSUE FOR COORDINATION
2	2025 08 27	ISSUE FOR REVIEW

LEGEND

- PROPOSED ADDITION
- PROPOSED PAVING
- EXISTING BUILDING AREAS TO BE RENOVATED
- EXISTING BUILDING

Project North

The architect noted above has exercised responsible control with respect to design activities. The architect's seal number is the architect's BCIN (Building Code Designation Number).

Farrow
60 Pleasant Blvd, Unit 801
Toronto, ON, Canada
M4X1Y1
Ontario Association of Architects COP #5388

ELMWOOD SCHOOL

ELMWOOD SENIOR SCHOOL ADDITION

261 Buena Vista Rd. - Ottawa, ON - K1M 0V9

9114

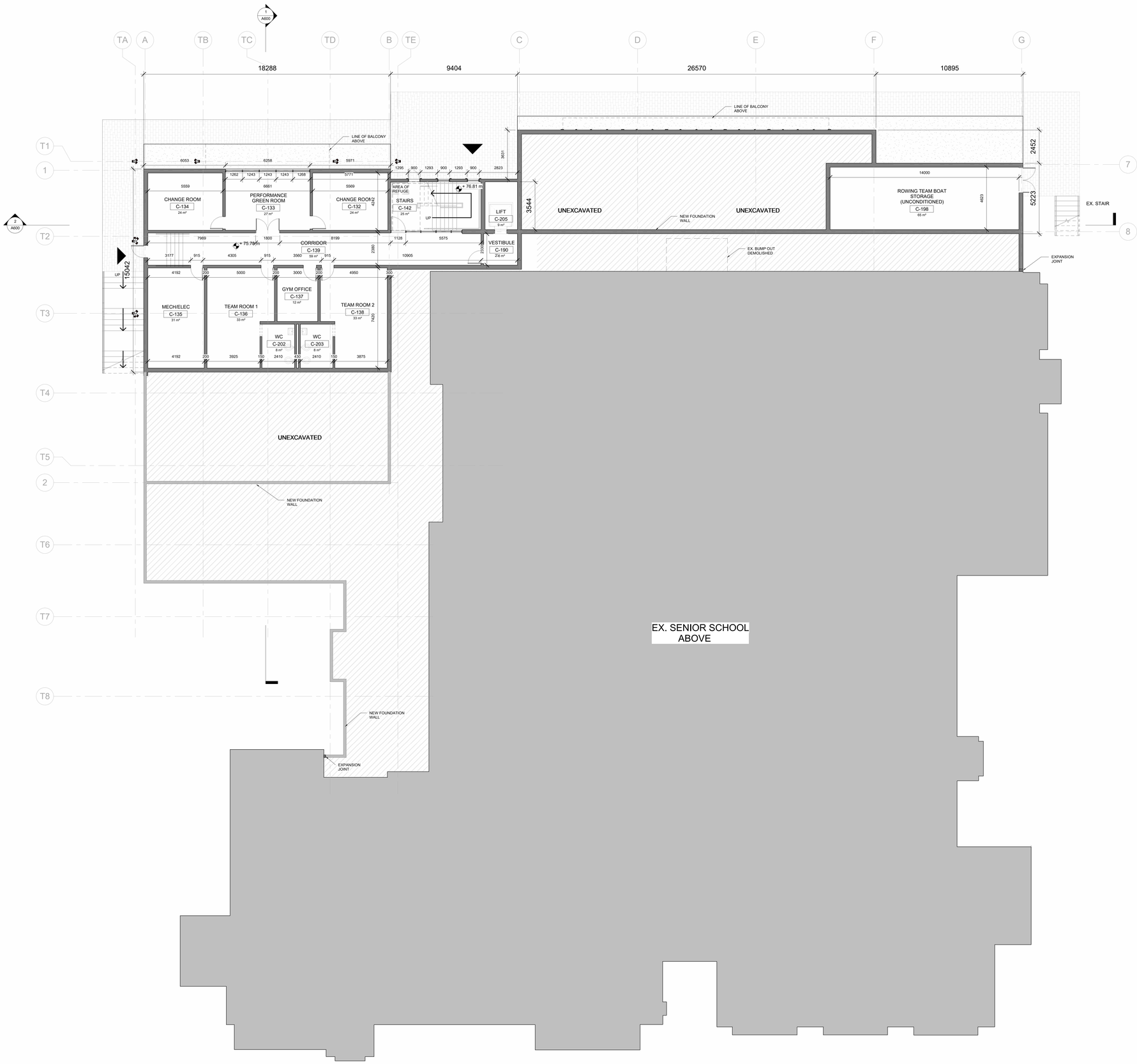
Scale at Arch E	As indicated
FARROW PARTNERS	Yazmin Enriquez
Reviewed by	Christopher Blackwell

Drawing title

SECOND LEVEL PLAN

Sheet no.

A302



1 Basement Level
1 : 100

NO.	DATE	REVISION / ISSUANCE
1	2025 08 05	ISSUE FOR COORDINATION
2	2025 08 27	ISSUE FOR REVIEW

LEGEND

- PROPOSED ADDITION
- PROPOSED PAVING
- EXISTING BUILDING AREAS TO BE RENOVATED
- EXISTING BUILDING

Project North

The architect noted above has exercised responsible control with respect to design activities. The architect's seal number is the architect's BCIN (Building Code Designation Number).

Farrow
60 Pleasant Blvd, Unit 801
Toronto, ON, Canada
M4T1T1
Ontario Association of Architects COP #5388

ELMWOOD SCHOOL

ELMWOOD SENIOR SCHOOL ADDITION

261 Buena Vista Rd. - Ottawa, ON - K1M 0V9

9114

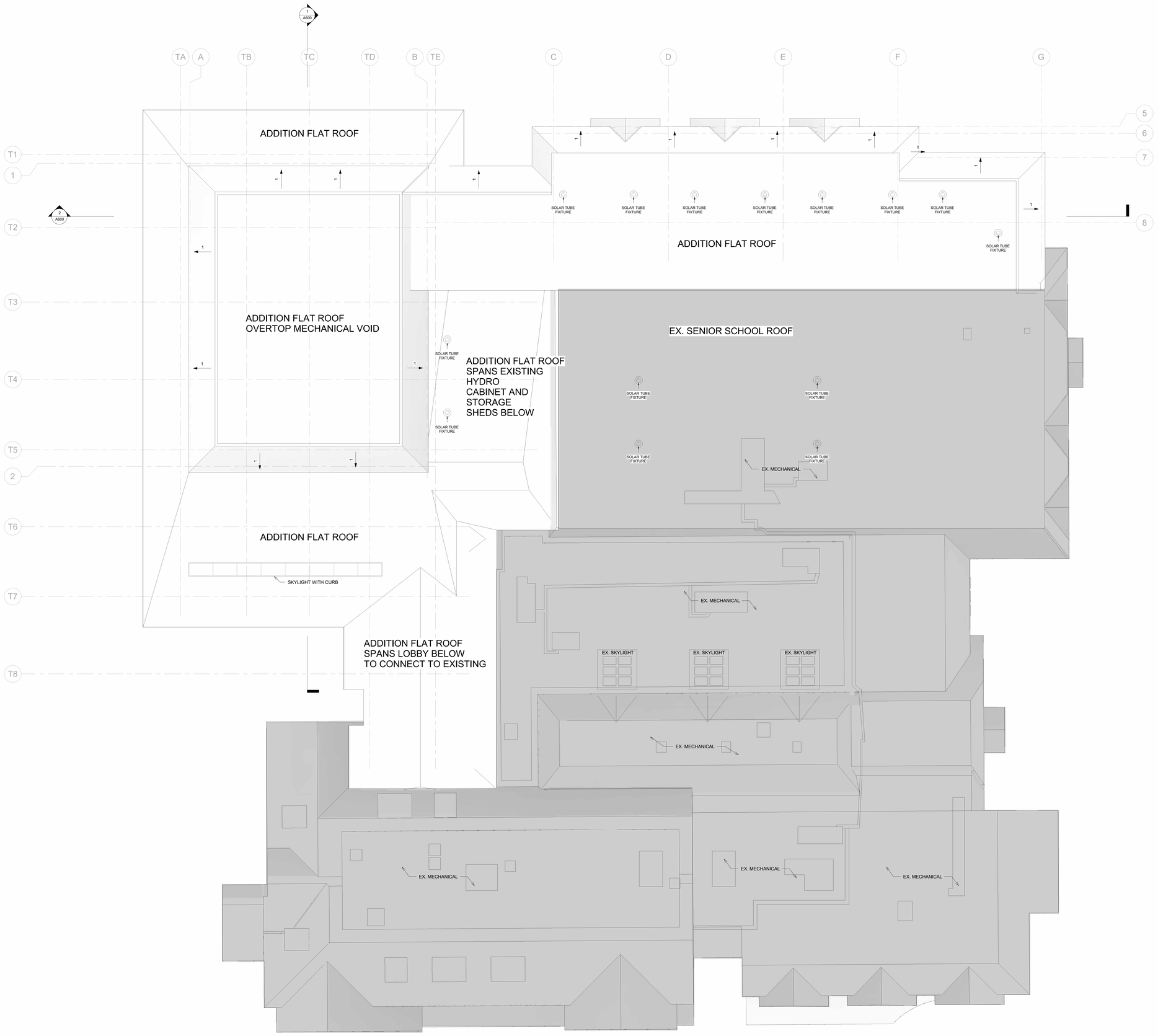
Scale at Arch E: As indicated
FARROW PARTNERS: Author
Reviewed by: Checker

Drawing title

BASEMENT LEVEL PLAN

Sheet no.

A303



1 Roof Level
1 : 100

NO.	DATE	REVISION / ISSUANCE
1	2025 08 05	ISSUE FOR COORDINATION
2	2025 08 27	ISSUE FOR REVIEW

LEGEND

- PROPOSED ADDITION
- PROPOSED PAVING
- EXISTING BUILDING AREAS TO BE RENOVATED
- EXISTING BUILDING

Project North

The architect noted above has exercised responsible control with respect to design activities. The architect's seal number is the architect's BCIN (Building Code Designation Number).

Farrow
60 Pleasant Blvd, Unit 801
Toronto, ON, Canada
M4T1T1
Ontario Association of Architects COP #5388

ELMWOOD SCHOOL

ELMWOOD SENIOR SCHOOL ADDITION

261 Buena Vista Rd. - Ottawa, ON - K1M 0V9

9114

Scale at Arch E	As indicated
FARROW PARTNERS	Yazmin Enriquez
Reviewed by	Christopher Blackwell

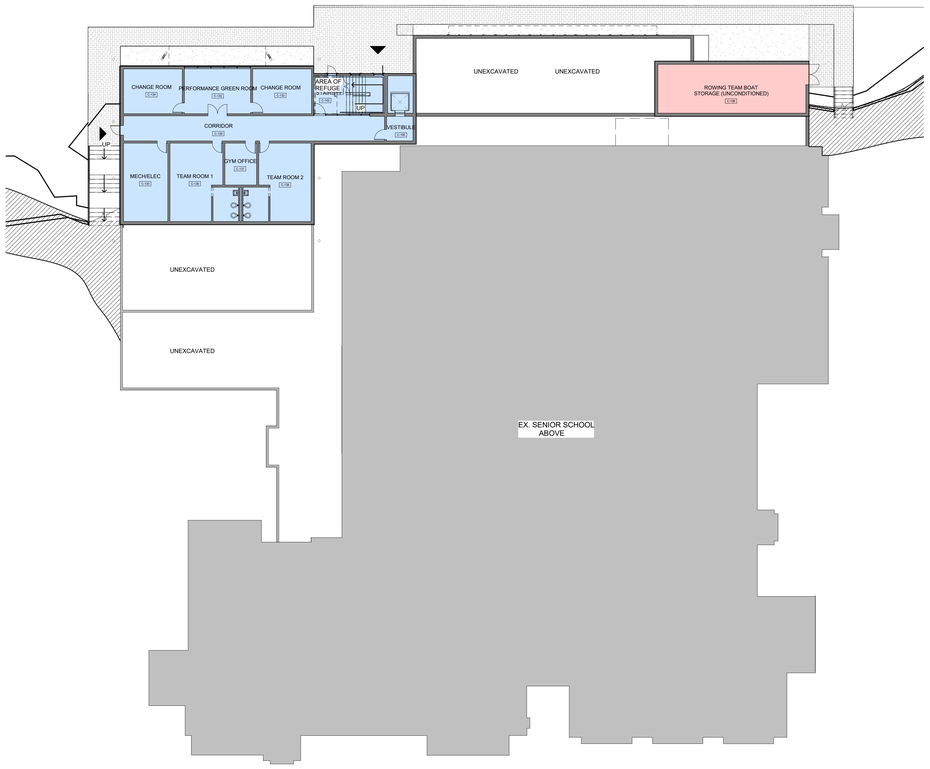
Drawing title

ROOF PLAN

Sheet no.

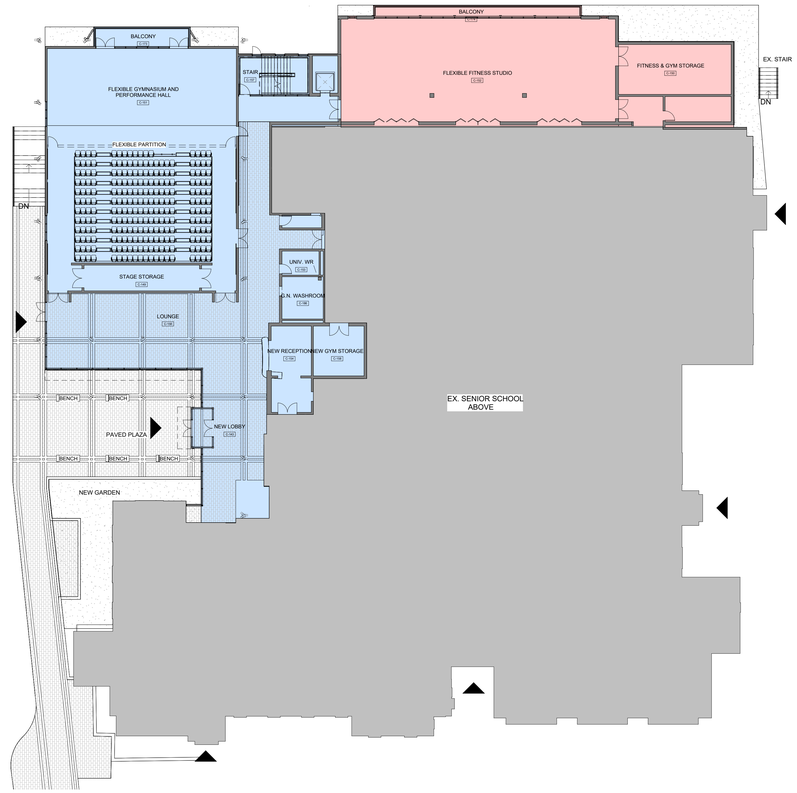
A304

422.51 m² / 4,547.85 sf



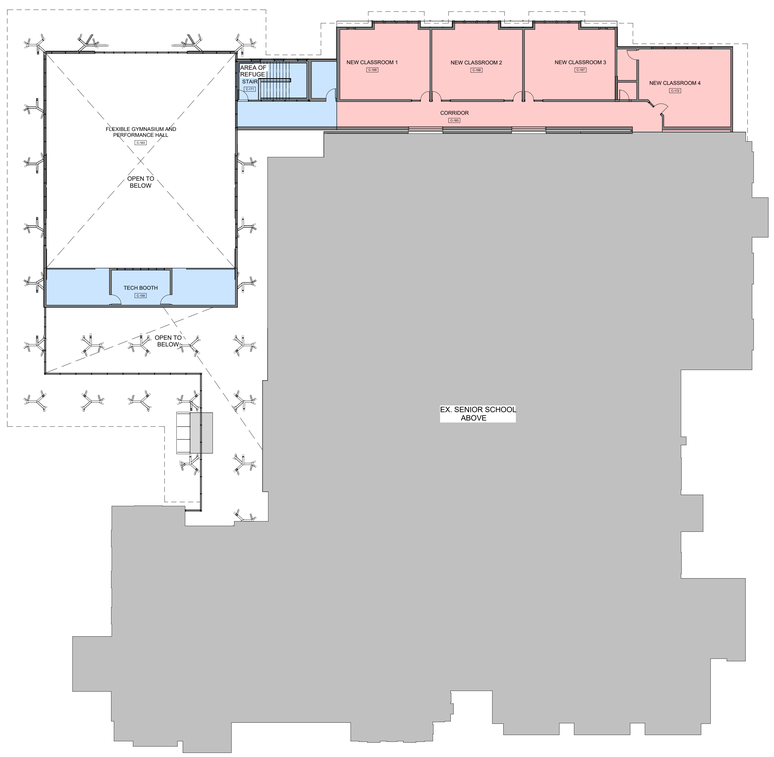
1 Basement Level GFA
1 : 200

1207.19 m² / 12,994.08 sf



2 Ground Level GFA
1 : 200

492.66 m² / 5,302.94 sf



3 Second Level GFA
1 : 200

PHASE A:

BASEMENT LEVEL GFA:	330.14 m² / 3,553.61 sf
GROUND LEVEL GFA:	799.39 m² / 8,604.56 sf
SECOND LEVEL GFA:	121.85 m² / 1,311.58 sf
TOTAL:	**1,251.38 m² / 13,469.74 sf**

PHASE B:

BASEMENT LEVEL GFA:	92.37m² / 994.26 sf
GROUND LEVEL GFA:	407.79 m² / 4,389.41 sf
SECOND LEVEL GFA:	370.81 m² / 3991.36 sf
TOTAL:	**870.97 m² / 9,375.04 sf**

PROJECT TOTAL:

BASEMENT LEVEL GFA:	422.51 m² / 4,547.85 sf
GROUND LEVEL GFA:	1,207.19 m² / 12,994.08 sf
SECOND LEVEL GFA:	492.66 m² / 1,643.21 sf
TOTAL:	**2,122.36 m2 / 22,844.89 sf**

NO.	DATE	REVISION / ISSUANCE

LEGEND

- PHASE A
- PHASE B
- EXISTING BUILDING

Project North

The architect noted above has exercised responsible control with respect to design activities. The architect's seal number is the architect's BCIN (Building Code Designation Number).

Farrow
60 Pleasant Blvd, Unit B01
Toronto, ON, Canada
M4M1T1
Ontario Association of Architects COP #5388

ELMWOOD SCHOOL

ELMWOOD SENIOR SCHOOL ADDITION

261 Buena Vista Rd. - Ottawa, ON - K1M 0V9

9114

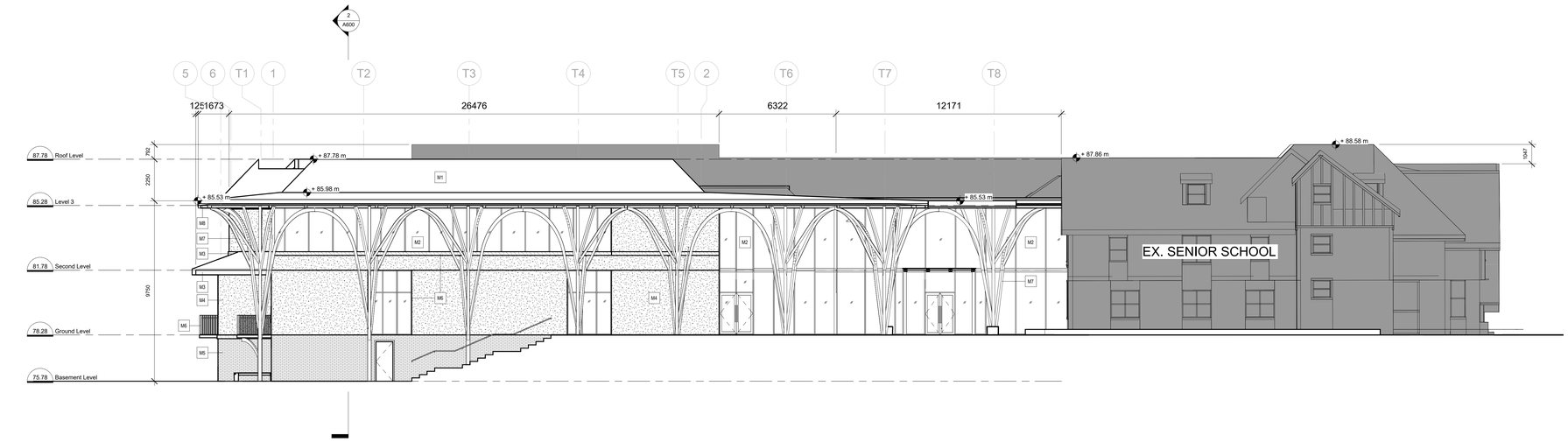
Scale at Arch E	As indicated
FARROW PARTNERS	Author
Reviewed by	Checker

Drawing title

PHASING PLAN

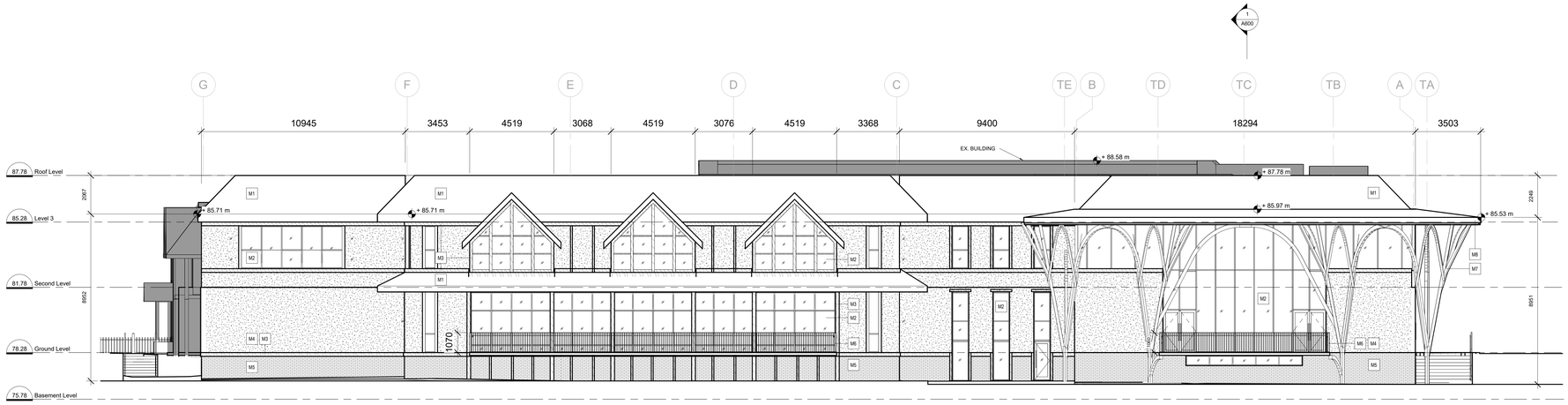
Sheet no.

A310



3 West Elevation

1 : 100



1 North Elevation

1 : 100

EXTERIOR MATERIAL PALETTE

M1 ROOF SHINGLES: RED TO MATCH EXISTING



M2 VISION GLASS



M3 WOODEN TRIM, DARK STAINED TO MATCH EXISTING TIMBERING



M4 IVORY PLASTER STUCCO

M5 BRICK TO COMPLEMENT EXISTING IN JUNIOR SCHOOL



M6 RAL-COATED HOLLOW METAL WINDOW-WALL FRAMES



M7 MASS TIMBER STRUCTURE, STAINED TO COMPLEMENT EXISTING TIMBERING



M8 STEEL FASCIA



NO.	DATE	REVISION / ISSUANCE
1	2025 08 05	ISSUE FOR COORDINATION
2	2025 08 27	ISSUE FOR REVIEW

EXTERIOR MATERIALS LEGEND

- M1 ROOF SHINGLES: RED TO MATCH EXISTING
- M2 VISION GLASS
- M3 WOODEN TRIM, DARK STAINED TO MATCH EXISTING TIMBERING
- M4 PLASTER STUCCO IVORY TO COMPLEMENT EXISTING
- M5 BRICK TO COMPLEMENT EXISTING IN JUNIOR SCHOOL
- M6 RAL-COATED HOLLOW METAL WINDOW-WALL FRAMES
- M7 MASS TIMBER STRUCTURE, STAINED TO COMPLEMENT EXISTING TIMBERING
- M8 STEEL FASCIA

Project North

The architect noted above has exercised responsible control with respect to design activities. The architect's seal number is the architect's BCIN (Building Code Designation Number).

Farrow
60 Pleasant Blvd, Unit 801
Toronto, ON, Canada
M4W1T1
Ontario Association of Architects COP #5388

ELMWOOD SCHOOL

ELMWOOD SENIOR SCHOOL ADDITION

261 Buena Vista Rd. - Ottawa, ON - K1M 0V9

9114

Scale at Arch E: As indicated

FARROW PARTNERS: Yazmin Enriquez

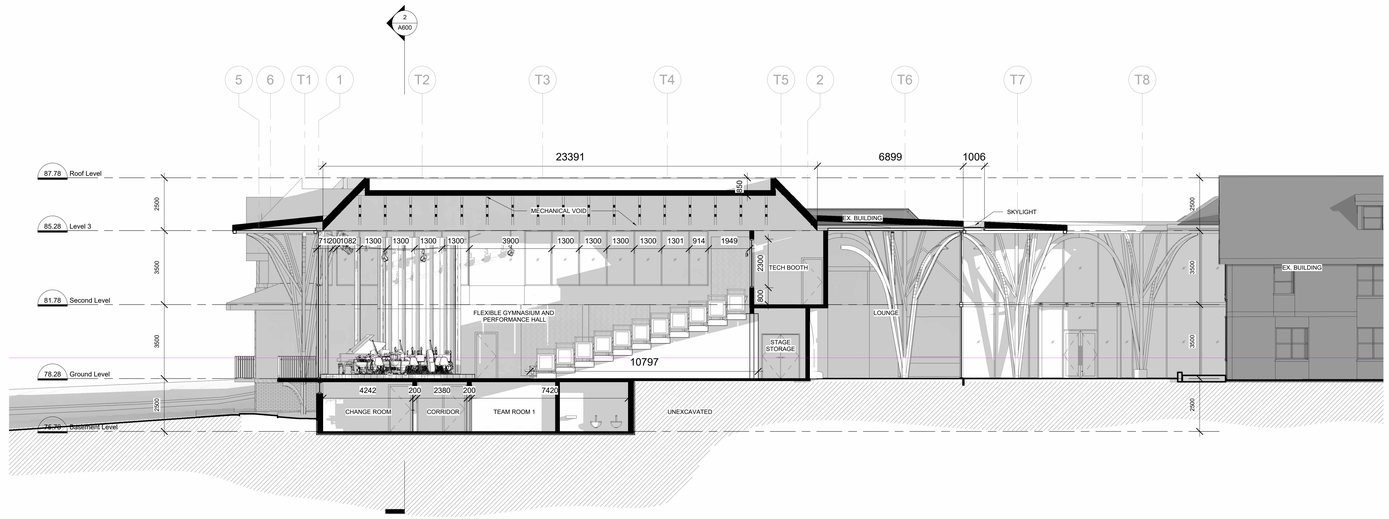
Reviewed by: Christopher Blackwell

Drawing title

BUILDING ELEVATIONS

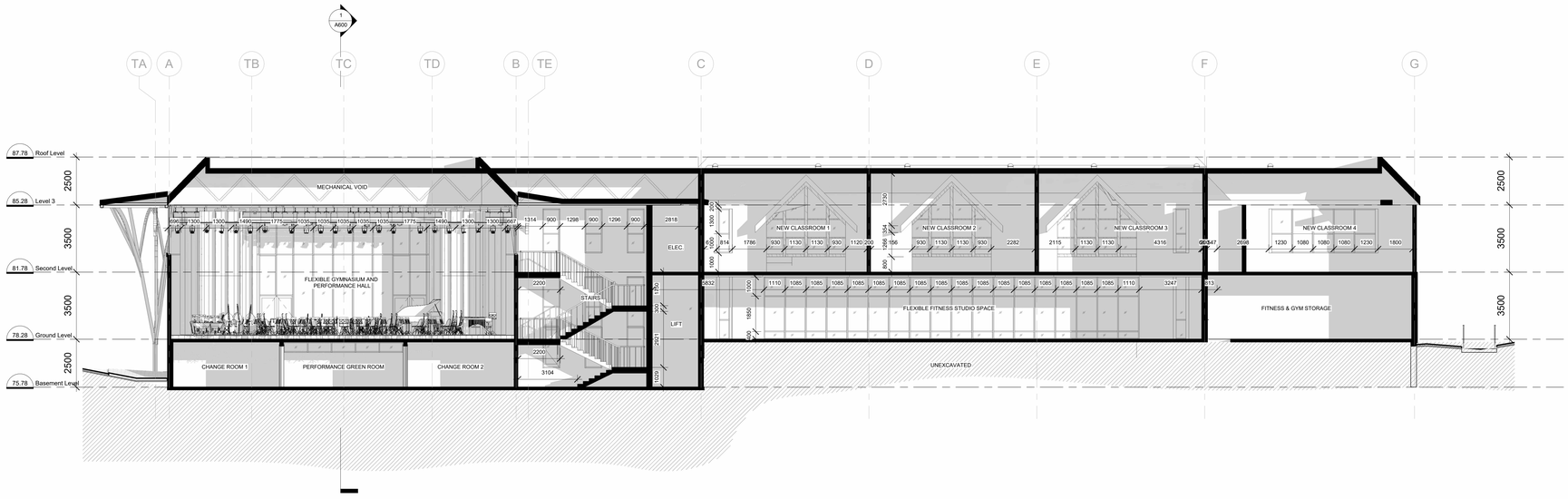
Sheet no.

A500



1 Section 1

1 : 100



2 Section 2

1 : 100

NO.	DATE	REVISION / ISSUANCE
1	2025 08 05	ISSUE FOR COORDINATION
2	2025 08 27	ISSUE FOR REVIEW

Project North

The architect noted above has exercised responsible control with respect to design activities. The architect's seal number is the architect's BCIN. (Building Code Designation Number).

Farrow
60 Pleasant Blvd, Unit 801
Toronto, ON, Canada
M4T 1K2
Ontario Association of Architects COP #5388

ELMWOOD SCHOOL

ELMWOOD SENIOR SCHOOL ADDITION

261 Buena Vista Rd. - Ottawa, ON - K1M 0V9

9114	
Scale at Arch E	1 : 100
FARROW PARTNERS	Yazmin Enriquez
Reviewed by	Christopher Blackwell

Drawing title

BUILDING SECTIONS

Sheet no.

A600

TOPOGRAPHICAL PLAN OF SURVEY OF

LOTS 26 and 27
REGISTERED PLAN 4M-55
PART OF BLOCK A14
REGISTERED PLAN 4M-22
CITY OF OTTAWA
Surveyed by Annis, O'Sullivan, Vollebekk Ltd.

Scale 1 : 200

0 2 4 6 8 10 Metres

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

Surveyor's Certificate

I CERTIFY THAT :

1. This survey and plan are correct and in accordance with the Surveys Act, the Surveyors Act and the Land Titles Act and the regulations made under them.
2. The survey was completed on the 8th day of August, 2018.

Date

V. Andrew Shelp
Ontario Land Surveyor

Notes & Legend

	Denotes	
—□—	•	Survey Monument Planted
—■—	•	Survey Monument Found
SIB	•	Standard Iron Bar
SSIB	•	Short Standard Iron Bar
IB	•	Iron Bar
CC	•	Cut Cross
(WIT)	•	Witness
Meas.	•	Measured
(AOO)	•	Annis, O'Sullivan, Vollebekk Ltd.
(P1)	•	Registered Plan 4M-55
(P2)	•	(990) Plan December 23, 1998 (Ref. 114A-98)
(P3)	•	(AOG) Plan July 8, 1988 (Ref. 0-389-88)
(P4)	•	(1619) Plan September 1, 2016
FH	•	Fire Hydrant
WV	•	Water Valve
MH-ST	•	Maintenance Hole (Storm Sewer)
MH-S	•	Maintenance Hole (Sanitary)
MH	•	Maintenance Hole (Unidentified)
ST	•	Underground Storm Sewer
S	•	Underground Sanitary Sewer
W	•	Underground Water
P	•	Underground Power
G	•	Underground Gas
B	•	Underground Bell
OHW	•	Overhead Wires
CB	•	Catch Basin
GM	•	Gas Meter
BOLLARD	•	Bollard
SIGN	•	Sign
CLF	•	Chain Link Fence
MF	•	Metal Fence
P&WF	•	Post and Wire Fence
LF	•	Lattice Fence
UP	•	Utility Pole
AN	•	Anchor
LS	•	Light Standard
FP	•	Flag Pole
WRW	•	Wooden Retaining Wall
SRW	•	Stone Retaining Wall
Ø	•	Diameter
ELEV.	•	Location of Elevations
TW/BW	•	Top of Wall Elevation
C/L	•	Centreline
T/G	•	Top of Grate
Inv.	•	Invert
Fdn.	•	Foundation
A/C	•	Air Conditioner
	•	Deciduous Tree
	•	Coniferous Tree

ASSOCIATION OF ONTARIO LAND SURVEYORS
PLAN SUBMISSION FORM
2058330
THIS PLAN IS NOT VALID UNLESS IT IS AN EMBOSSED ORIGINAL COPY SIGNED AND DATED BY THE SURVEYOR
Ontario Regulation 1026, Section 29 (3).

ELEVATION NOTES

1. Elevations shown are geodetic and are referred to the CGVD28 geodetic datum.
2. It is the responsibility of the user of this information to verify that the job benchmark has not been altered or disturbed and that it's relative elevation and description agrees with the information shown on this drawing.

UTILITY NOTES

1. This drawing cannot be accepted as acknowledging all of the utilities and it will be the responsibility of the user to contact the respective utility authorities for confirmation.
2. Only visible surface utilities were located.
3. A field location of underground plant by the pertinent utility authority is mandatory before any work involving breaking ground, probing, excavating etc.
4. Underground utilities and Inverts are shown as measured and marked on ground by Deepview Utility Locate and Concrete Scanning.

SITE AREA = 1.8305 Hectares

Bearings are grid, derived from the northerly limit of Buena Vista Drive shown to be N83°12'50"E on Plan by (990) dated December 23, 1998 (Ref. 114A-98) and are referred to the Central Meridian of MTM Zone 9 (76°30' West Longitude) NAD-83 (original).

For comparison purposes, bearings shown on Plans P1 and P3 are astronomic bearings.

© Annis, O'Sullivan, Vollebekk Ltd. 2018. "THIS PLAN IS PROTECTED BY COPYRIGHT"

ANNIS, O'SULLIVAN, VOLLEBEKK LTD.
14 Concourse Gate, Suite 500
Nepean, Ont. K2E 7S6
Phone: (613) 727-0850 / Fax: (613) 727-1079
Email: lsurvey@aovltd.com

Job No.18345-18 (Drawnout Sahsat P98b A-14 W-22 T F (OBeg Opn)

APPENDIX

B

- FIRE UNDERWRITERS SURVEY – FIRE FLOW CALCULATION FOR BUILDING
- WATER DEMAND CALCULATION
- BOUNDARY CONDITION

Fire Flow Design Sheet (FUS)
261 Buena Vista Road
Ottawa, ON
WSP Project No. CA0063931.8278
Date: 2026-03-13

Elmwood Senior School and Addition
Fire Flow Requirements Based on Fire Underwriters Survey (FUS) 2020

1. An estimate of the Fire Flow required for a given fire area may be estimated by: $F = 220\ C\ \sqrt{A}$

F = required fire flow in litres per minute
C = coefficient related to the type of construction
- 1.5 for **Type V** Wood Frame Construction
- 0.8 for **Type IV-A** Mass Timber Construction
- 0.9 for **Type IV-B** Mass Timber Construction
- 1.0 for **Type IV-C** Mass Timber Construction
- 1.5 for **Type IV-D** Mass Timber Construction
- 1.0 for **Type III** Ordinary Construction
- 0.8 for **Type II** Noncombustible Construction
- 0.6 for **Type I** Fire resistive Construction

A =2-b) The single largest Floor Area plus 25% of each of the two immediately adjoining floors

A = 5057 m^2
C = 1.0 Non combustible (with combustible roof)
F = 15644.6 L/min

rounded off to 16,000 L/min (min value of 2000 L/min)

2. The value obtained in 1. may be reduced by as much as 25% for occupancies having a low contents fire hazard.

Non-combustible	-25%
Limited Combustible	-15%
Combustible	0%
Free Burning	15%
Rapid Burning	25%

Reduction due to low occupancy hazard -15% x 16,000 = 13,600 L/min

3. The value obtained in 2. may be reduced by as much as 50% for buildings equipped with automatic sprinkler protection.
Note: The new addition and existing addition (constructed 2015) have sprinkler coverage, however the original building does not. Partial building coverage credits must be applied.

% of Sprinkler Coverage	66%
Adequate Sprinkler confirms to NFPA13	-30%
Water supply common for sprinklers & fire hoses	-10%
Fully supervised system	-10%
No Automatic Sprinkler System	0%

Reduction due to Sprinkler System -26% x 13,600 = -3,602 L/min

4. The value obtained in 2. is increased for structures exposed within 45 metres by the fire area under consideration.

Separation	Charge
0 to 3 m	25%
3.1 to 10 m	20%
10.1 to 20 m	15%
20.1 to 30 m	10%
30.1 to 45 m	0%

Side 1	82.7	0%	north side
Side 2	37.5	0%	east side
Side 3	37.9	0%	south side
Side 4	54	0%	west side
		0%	(Total shall not exceed 75%)

Increase due to separation 0% x 13,600 = 0 L/min

5. The flow requirement is the value obtained in 2., minus the reduction in 3., plus the addition in 4.

The fire flow requirement is 10,000 L/min (Rounded to nearest 1000 L/min)
or **167 L/sec**
or 2,642 gpm (us)
or 2,200 gpm (uk)

Based on method described in:
"Water Supply for Public Fire Protection - A Guide to Recommended Practice", 2020
by Fire Underwriters Survey

Water Demand Calculation Sheet

Project:	**Elmwood Senior School and Addition**	**Date:**	**2026-03-13**
Location:	**Ottawa, ON**	**Design:**	**WY**
WSP Project No.	**CA0063931.8278**	**Page:**	**1 of 1**

Proposed Buildings	Residential			School	Non-Residential			Avg Day			Max Day			Peak Hour			Fire
	Units			Students*	Industrial	Institutional	Commercial	Demand (L/s)			Demand (L/s)			Demand (L/s)			Demand
	SF	APT	ST		(ha)	(ha)	(ha)	Res.	Non-Res.	Total	Res.	Non-Res.	Total	Res.	Non-Res.	Total	(L/min)
Existing School with New Addition				308					0.60	0.60		0.90	0.90		1.62	1.62	10,000
Total				308					0.60	0.60		0.90	0.90		1.62	1.62	

Population Densities		
Single Family	3.4	person/unit
Semi-Detached	2.7	person/unit
Duplex	2.3	person/unit
Townhome (Row)	2.7	person/unit
Bachelor Apartment	1.4	person/unit
1 Bedroom Apartment	1.4	person/unit
2 Bedroom Apartment	2.1	person/unit
3 Bedroom Apartment	3.1	person/unit
4 Bedroom Apartment	4.1	person/unit
Avg. Apartment	1.8	person/unit

Avg Day Demand		
Residential	280	L/cap/day
Light Industrial	35000	L/ha/day
Institutional	28000	L/ha/day
Commercial	28000	L/ha/day
School	70	L/day/person

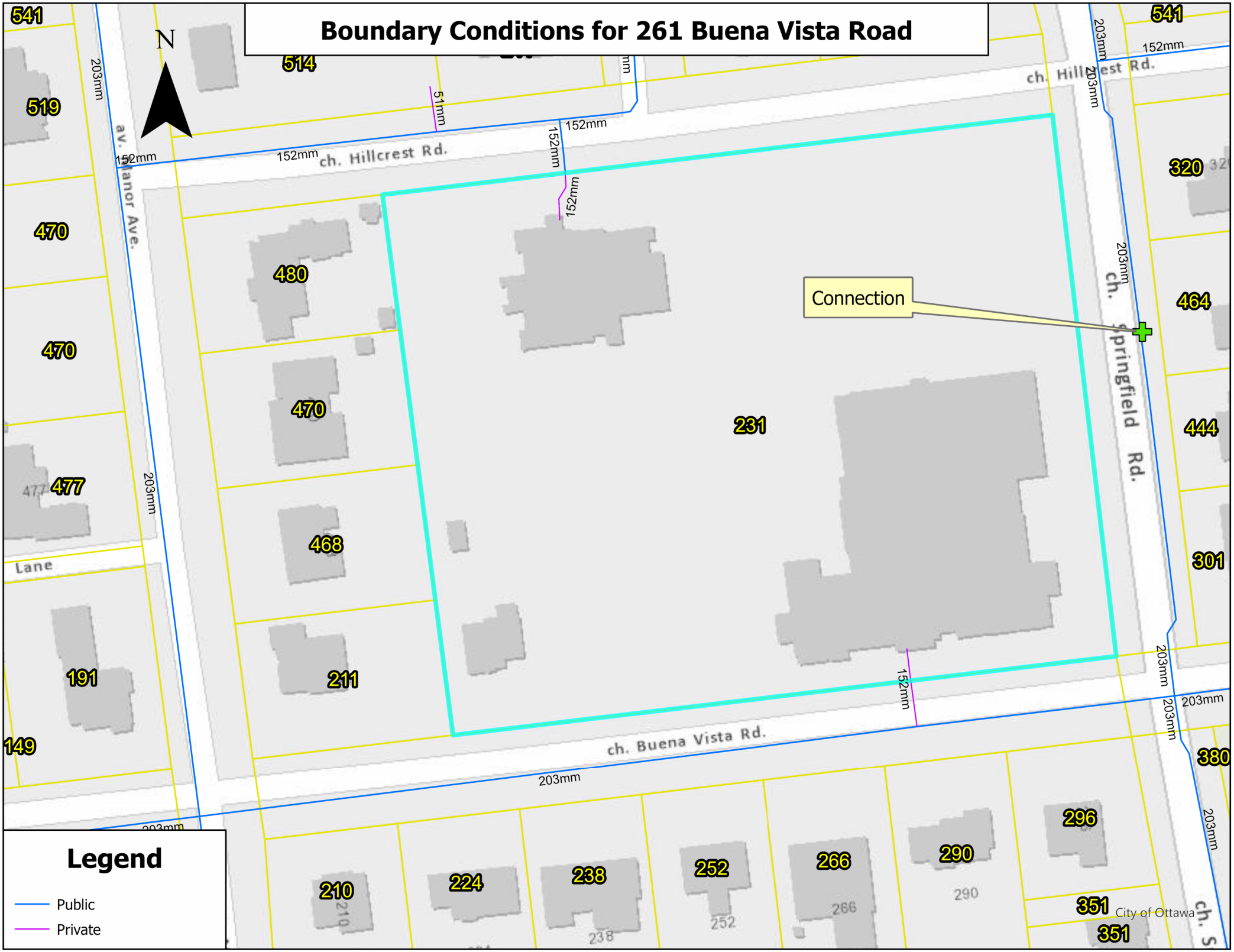
assume 10h/day

Max Day Demand		
Residential	2.5	x avg. day
Industrial	1.5	x avg. day
Institutional	1.5	x avg. day
Commercial	1.5	x avg. day

Peak Hour Demand		
Residential	2.2	x max. day
Industrial	1.8	x max. day
Institutional	1.8	x max. day
Commercial	1.8	x max. day

Notes: * Student and staff count provided by school

References: Ottawa Water Distribution Design Guidelines - Section 4
2020 Fire Underwriters Survey


Boundary Conditions for 261 Buena Vista Road
N
Connection
231
480
470
470
477
468
211
191
149
514
519
541
320
464
444
301
380
296
351
210
224
238
252
266
290
av. Manor Ave.
ch. Hillcrest Rd.
ch. Springfield Rd.
ch. Buena Vista Rd.
Lane
203mm
152mm
51mm
Legend
Public
Private
City of Ottawa

Outlook

RE: 261 Buena Vista Road - Elmwood School Addition

From Chetrar, Anton <anton.chetrar@ottawa.ca>
Date Tue 03/03/2026 07:54
To Yang, Winston <Winston.Yang@wsp.com>
Cc Mottalib, Abdul <Abdul.Mottalib@ottawa.ca>

1 attachment (2 MB)
261 Buena Vista Road February 2026.pdf;

Hi Winston,

Thanks for letting us know on the storm and sanitary connections.

Please find attached boundary conditions as requested:

The following are boundary conditions, HGL, for hydraulic analysis at 261 Buena Vista Road (zone 1E) assumed to be connected to the 203mm watermain on Springfield Road: (see attached PDF for location).

Minimum HGL = 108.3 m
Maximum HGL = 118.4 m
Max Day + Fire Flow (167 L/s) = 98.7 m

These are for current conditions and are based on computer model simulation.

Disclaimer: The boundary condition information is based on current operation of the city water distribution system. The computer model simulation is based on the best information available at the time. The operation of the water distribution system can change on a regular basis, resulting in a variation in boundary conditions. The physical properties of watermains deteriorate over time, as such must be assumed in the absence of actual field test data. The variation in physical watermain properties can therefore alter the results of the computer model simulation. Fire Flow analysis is a reflection of available flow in the watermain; there may be additional restrictions that occur between the watermain and the hydrant that the model cannot take into account.

Let us know if any questions or concerns.

Thanks,
Anton Chetrar | P. Eng
Project Manager, Infrastructure - Gestionnaire de projet, Projets d'infrastructure
Development Review – South Services | Direction de l'examen des projets d'aménagement – Service Sud
Planning, Development and Building Services Department (PDBS) and Direction générale des services de la planification, de l'aménagement et du bâtiment (DGSPAB)
City of Ottawa | Ville d'Ottawa
110 Laurier Avenue West |110 avenue Laurier Ouest
Ottawa, ON K1P 1J1
Tel.|Tél. 613.580.2424 ext.60865
anton.chetrar@ottawa.ca

Anton

Classified as City of Ottawa - Internal / Ville d'Ottawa - classé interne

From: Yang, Winston <Winston.Yang@wsp.com>
Sent: February 27, 2026 9:23 AM
To: Chetrar, Anton <anton.chetrar@ottawa.ca>
Cc: Mottalib, Abdul <Abdul.Mottalib@ottawa.ca>
Subject: RE: 261 Buena Vista Road - Elmwood School Addition

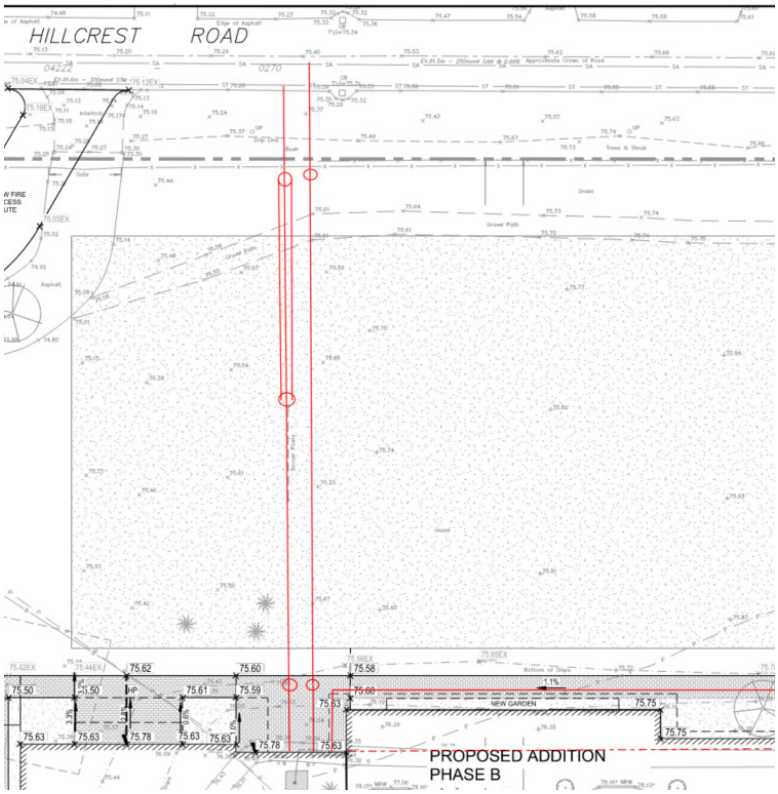
CAUTION: This email originated from an External Sender. Please do not click links or open attachments unless you recognize the source.

ATTENTION : Ce courriel provient d'un expéditeur externe. Ne cliquez sur aucun lien et n'ouvrez pas de pièce jointe, excepté si vous connaissez l'expéditeur.

Hi Anton,

I just wanted to let you know that we have noticed the sanitary and storm inverts along Springfield Road are significantly shallow according to the City record drawing.

Given this situation, we will need to connect both the sanitary and storm lines all the way to Hillcrest Road, while the watermain connection will remain on Springfield Road. I have attached a snapshot for your reference.



Feel free to reach out if you have any questions or need further details.

Thanks,

Winston Yang
Lead Engineer – Technical Lead,
Land Development & Municipal Engineering Ontario
P.Eng., PMP.

T+ 1 613-829-2800
T+ 1 613-690-0538 (Direct)

From: Yang, Winston
Sent: February 25, 2026 11:54 AM
To: 'Chetrar, Anton' <anton.chetrar@ottawa.ca>
Cc: 'Mottalib, Abdul' <Abdul.Mottalib@ottawa.ca>
Subject: RE: 261 Buena Vista Road - Elmwood School Addition

Hi Anton,

Please see attached revised FUS for your coordination.

The revised fire flow is 10,000 L/min (167 L/s).

Yours truly,

Winston Yang
Lead Engineer – Technical Lead,
Land Development & Municipal Engineering Ontario
P.Eng., PMP.

T+ 1 613-829-2800
T+ 1 613-690-0538 (Direct)

From: Yang, Winston
Sent: February 24, 2026 2:24 PM
To: 'Chetrar, Anton' <anton.chetrar@ottawa.ca>

Cc: Mottalib, Abdul <Abdul.Mottalib@ottawa.ca>
Subject: RE: 261 Buena Vista Road - Elmwood School Addition

Hi Anton,

I am available tomorrow at 11:30am.

Yours truly,

Winston Yang
Lead Engineer – Technical Lead,
Land Development & Municipal Engineering Ontario
P.Eng., PMP.

T+ 1 613-829-2800
T+ 1 613-690-0538 (Direct)

From: Chetrar, Anton <anton.chetrar@ottawa.ca>
Sent: February 24, 2026 1:55 PM
To: Yang, Winston <Winston.Yang@wsp.com>
Cc: Mottalib, Abdul <Abdul.Mottalib@ottawa.ca>
Subject: RE: 261 Buena Vista Road - Elmwood School Addition

Hi Winston,

We suggest to meet quickly and discuss the below to clarify your responses.
We are available tomorrow at 9:30 am or 11:30am.

Let us know if you are not available at these times and we will provide other times.

Thanks,
Anton

Classified as City of Ottawa - Internal / Ville d'Ottawa - classé interne

---

From: Yang, Winston <Winston.Yang@wsp.com>
Sent: February 20, 2026 11:42 AM
To: Chetrar, Anton <anton.chetrar@ottawa.ca>
Cc: Mottalib, Abdul <Abdul.Mottalib@ottawa.ca>
Subject: RE: 261 Buena Vista Road - Elmwood School Addition
Importance: High

CAUTION: This email originated from an External Sender. Please do not click links or open attachments unless you recognize the source.

ATTENTION : Ce courriel provient d'un expéditeur externe. Ne cliquez sur aucun lien et n'ouvrez pas de pièce jointe, excepté si vous connaissez l'expéditeur.

Hi Anton,

Based on the FUS2020, the building has been classified as non-combustible construction. The primary structural system, including the exterior walls, columns, beams, and floor assemblies, is non-combustible in accordance with OBC 3.2.2.24.
Although a heavy timber roof assembly is permitted under OBC 3.2.2.16 as an exception to non-combustible construction, it does not alter the overall building classification.
Under FUS2020, the construction type is determined by the predominant structural system rather than isolated permitted combustible elements.

Buildings with non-combustible structural frames and limited combustible roof components are appropriately classified as non-combustible (with combustible roof), not ordinary construction.
Ordinary construction under FUS2020 typically applies to buildings where combustible materials form a significant portion of the load-bearing structure, including walls and floors, which is not the case for this project.
Accordingly, classification as non-combustible construction is consistent with both the Ontario Building Code intent and FUS2020 methodology.

Regarding the sprinkler coverage, FUS2020 indicates that partial building coverage credit must be applied if the existing building is fully sprinklered.
However, the existing building is not fully sprinklered, only about half of the existing building area is covered.
Therefore, we have assumed the sprinkler coverage would be 66% (2/3), including the existing building. The reduction credit due to the sprinkler system is calculated as follows: 30% * 66% + 10% * 66% + 10% * 66% = 26%.

Please feel free to let me know if you have any further questions or need additional information.

Yours truly,

Winston Yang
Lead Engineer – Technical Lead,
Land Development & Municipal Engineering Ontario
P.Eng., PMP.

T+ 1 613-829-2800
T+ 1 613-690-0538 (Direct)

From: Chetrar, Anton <anton.chetrar@ottawa.ca>
Sent: February 20, 2026 10:54 AM
To: Yang, Winston <Winston.Yang@wsp.com>
Cc: Mottalib, Abdul <Abdul.Mottalib@ottawa.ca>
Subject: RE: 261 Buena Vista Road - Elmwood School Addition

Hi Winston,

Please see below comments on the provided fireflow calculations:

1. Based on the FUS 2020 - since the roof is combustible, Ordinary Construction coefficient should be used.
2. Please provide rationale/calculation on the reduction due to sprinkler system.

Let us know if you have any questions.

Thanks,
Anton Chetrar | P. Eng
Project Manager, Infrastructure - Gestionnaire de projet, Projets d'infrastructure
Development Review All Wards (DRAW) | Direction de l'examen des projets d'aménagement -Tous les quartiers (EPATQ)
Planning, Development and Building Services Department (PDBS) and Direction générale des services de la planification, de l'aménagement et du bâtiment (DGSPAB)
City of Ottawa | Ville d'Ottawa
110 Laurier Avenue West |110 avenue Laurier Ouest
Ottawa, ON K1P 1J1
Tel.|Tél. 613.580.2424 ext.60865
anton.chetrar@ottawa.ca

Classified as City of Ottawa - Internal / Ville d'Ottawa - classé interne

From: Yang, Winston <Winston.Yang@wsp.com>
Sent: February 18, 2026 4:59 PM
To: Chetrar, Anton <anton.chetrar@ottawa.ca>
Cc: Mottalib, Abdul <Abdul.Mottalib@ottawa.ca>
Subject: RE: 261 Buena Vista Road - Elmwood School Addition
Importance: High

CAUTION: This email originated from an External Sender. Please do not click links or open attachments unless you recognize the source.

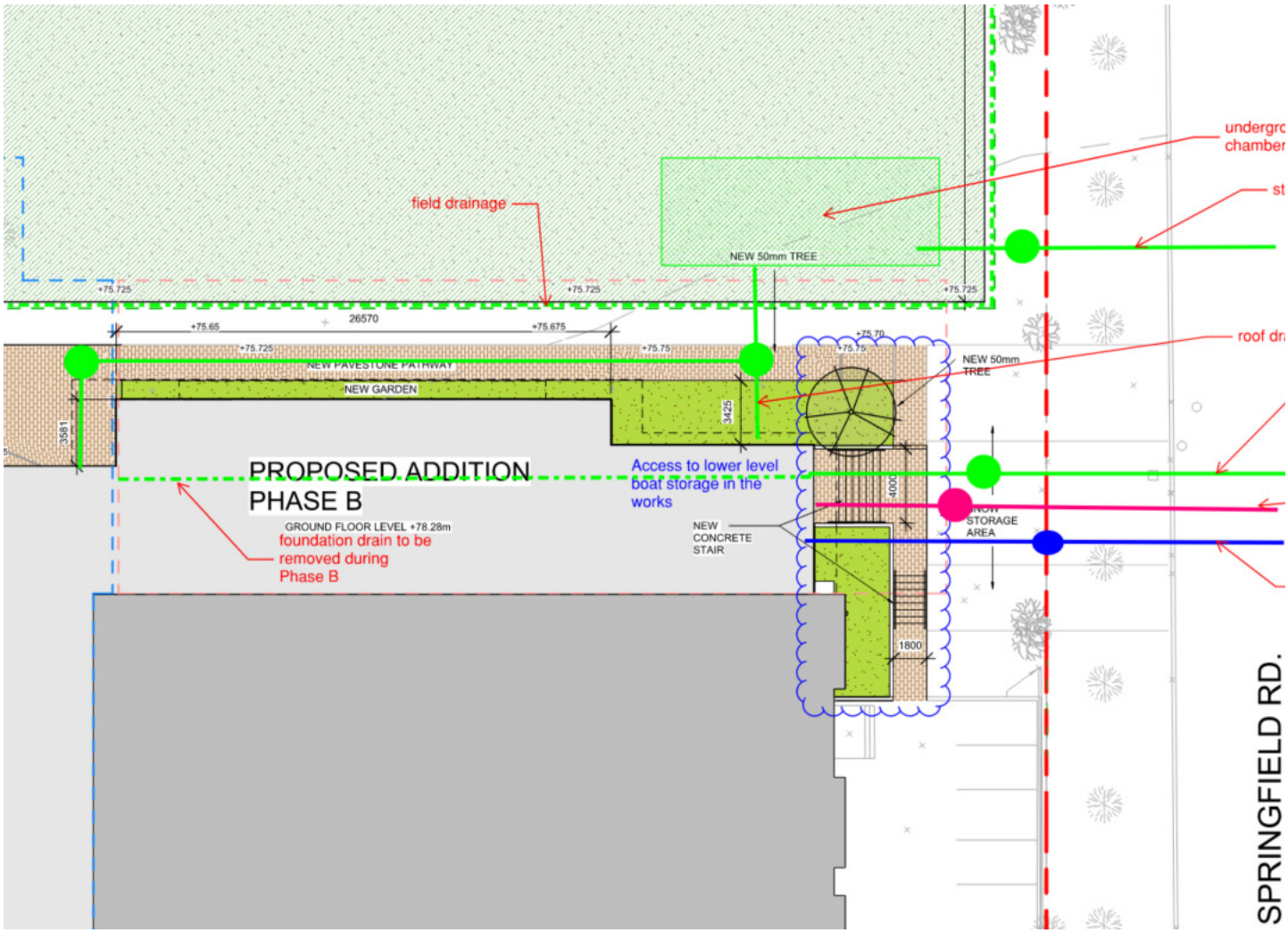
ATTENTION : Ce courriel provient d'un expéditeur externe. Ne cliquez sur aucun lien et n'ouvrez pas de pièce jointe, excepté si vous connaissez l'expéditeur.

Hi Anton,

The proposed addition footprint is about **1312.5** m². Base on the area, the pre-development flow at 5 year event is **19.00** L/s.

And please see below for the water boundary condition request for Elmwood Senior School Addition at 261 Buena Vista Road.

Proposed water service connection location plan is attached. New connection will be required to connect to Springfield Road. Existing water service is connected to Buena Vista Road from the Existing Building.
Water Supply Redundancy will be provided after Phase B is completed.



The required fire flow for the existing and proposed is calculated to be **8,000** L/min for the proposed building. Water demands are as follows:

Average daily demand: **0.60** L/s
Maximum daily demand: **0.90** L/s
Maximum hourly daily demand: **1.62** L/s

Feel free to let me know if you need additional information.

It will be much appreciated if you could provide the boundary conditions at your earliest convenience.

Yours truly,

Winston Yang
Lead Engineer – Technical Lead,
Land Development & Municipal Engineering Ontario
P.Eng., PMP.

T+ 1 613-829-2800
T+ 1 613-690-0538 (Direct)

From: Chetrar, Anton <anton.chetrar@ottawa.ca>
Sent: February 13, 2026 11:02 AM
To: Yang, Winston <Winston.Yang@wsp.com>
Cc: Mottalib, Abdul <Abdul.Mottalib@ottawa.ca>
Subject: RE: 261 Buena Vista Road - Elmwood School Addition

Yes. That works for us.

Thanks,
Anton Chetrar | P. Eng
Project Manager, Infrastructure - Gestionnaire de projet, Projets d'infrastructure
Development Review All Wards (DRAW) | Direction de l'examen des projets d'aménagement -Tous les quartiers (EPATQ)

Planning, Development and Building Services Department (PDBS) and Direction générale des services de la planification, de l'aménagement et du bâtiment (DGSPAB)
City of Ottawa | Ville d'Ottawa
110 Laurier Avenue West |110 avenue Laurier Ouest
Ottawa, ON K1P 1J1
Tel.|Tél. 613.580.2424 ext.60865
anton.chetrar@ottawa.ca

Classified as City of Ottawa - Internal / Ville d'Ottawa - classé interne

From: Yang, Winston <Winston.Yang@wsp.com>
Sent: February 13, 2026 10:58 AM
To: Chetrar, Anton <anton.chetrar@ottawa.ca>
Cc: Mottalib, Abdul <Abdul.Mottalib@ottawa.ca>
Subject: RE: 261 Buena Vista Road - Elmwood School Addition

CAUTION: This email originated from an External Sender. Please do not click links or open attachments unless you recognize the source.

ATTENTION : Ce courriel provient d'un expéditeur externe. Ne cliquez sur aucun lien et n'ouvrez pas de pièce jointe, excepté si vous connaissez l'expéditeur.

Hi Anton,

Thanks for the follow up. Can we have the meeting next Wednesday between 1pm-2pm?

Yours truly,

Winston Yang
Lead Engineer – Technical Lead,
Land Development & Municipal Engineering Ontario
P.Eng., PMP.

T+ 1 613-829-2800
T+ 1 613-690-0538 (Direct)

From: Chetrar, Anton <anton.chetrar@ottawa.ca>
Sent: February 13, 2026 10:36 AM
To: Yang, Winston <Winston.Yang@wsp.com>
Cc: Mottalib, Abdul <Abdul.Mottalib@ottawa.ca>
Subject: RE: 261 Buena Vista Road - Elmwood School Addition

Hi Winston,

We are available to meet and discuss next Wednesday at 9am-10am or 1pm-2pm.

Thanks,
Anton

Classified as City of Ottawa - Internal / Ville d'Ottawa - classé interne

From: Yang, Winston <Winston.Yang@wsp.com>
Sent: February 11, 2026 11:21 AM
To: Chetrar, Anton <anton.chetrar@ottawa.ca>
Subject: Re: 261 Buena Vista Road - Elmwood School Addition
Importance: High

CAUTION: This email originated from an External Sender. Please do not click links or open attachments unless you recognize the source.

ATTENTION : Ce courriel provient d'un expéditeur externe. Ne cliquez sur aucun lien et n'ouvrez pas de pièce jointe, excepté si vous connaissez l'expéditeur.

Hi Anton,

We are currently working on the Emwood School Addition at 261 Buena Vista Road and I noticed that your name is listed on the pre-consultation meeting feedback.

I was wondering if you have some time later this week or early next week for a brief discussion about the SWM strategy before we proceed with the detailed design.

Your input would be invaluable to ensure we are heading in the right direction. Please kindly let me know your availability.

Thanks,

Winston Yang
Lead Engineer – Technical Lead
Land Development & Municipal Engineering Ontario

P.Eng., PMP.

T+ 1 613-829-2800
T+ 1 613-690-0538 (Direct)

WSP
2611 Queensview Drive, Suite 300
Ottawa, Ontario
K2B 8K2 Canada

wsp.com



NOTICE: This communication and any attachments ("this message") may contain information which is privileged, confidential, proprietary or otherwise subject to restricted disclosure under applicable law. This message is for the sole use of the intended recipient(s). Any unauthorized use, disclosure, viewing, copying, alteration, dissemination or distribution of, or reliance on, this message is strictly prohibited. If you have received this message in error, or you are not an authorized or intended recipient, please notify the sender immediately by replying to this message, delete this message and all copies from your e-mail system and destroy any printed copies. You are receiving this communication because you are listed as a current WSP contact. Should you have any questions regarding WSP's electronic communications policy, please consult our Anti-Spam Commitment at www.wsp.com/casl. For any concern or if you believe you should not be receiving this message, please forward this message to caslcompliance@wsp.com so that we can promptly address your request. Note that not all messages sent by WSP qualify as commercial electronic messages.

AVIS : Ce message, incluant tout fichier l'accompagnant (« le message »), peut contenir des renseignements ou de l'information privilégiés, confidentiels, propriétaires ou à divulgation restreinte en vertu de la loi. Ce message est destiné à l'usage exclusif du/des destinataire(s) voulu(s). Toute utilisation non permise, divulgation, lecture, reproduction, modification, diffusion ou distribution est interdite. Si vous avez reçu ce message par erreur, ou que vous n'êtes pas un destinataire autorisé ou voulu, veuillez en aviser l'expéditeur immédiatement et détruire le message et toute copie électronique ou imprimée. Vous recevez cette communication car vous faites partie des contacts de WSP. Si vous avez des questions concernant la politique de communications électroniques de WSP, veuillez consulter notre Engagement anti-pourriel au www.wsp.com/lcap. Pour toute question ou si vous croyez que vous ne devriez pas recevoir ce message, prière de le transférer au conformitelcap@wsp.com afin que nous puissions rapidement traiter votre demande. Notez que ce ne sont pas tous les messages transmis par WSP qui constituent des messages électroniques commerciaux.

-LAEmHhHzdJzBITWfa4Hgs7pbKI
'

This e-mail originates from the City of Ottawa e-mail system. Any distribution, use or copying of this e-mail or the information it contains by other than the intended recipient(s) is unauthorized. Thank you.

Le présent courriel a été expédié par le système de courriels de la Ville d'Ottawa. Toute distribution, utilisation ou reproduction du courriel ou des renseignements qui s'y trouvent par une personne autre que son destinataire prévu est interdite. Je vous remercie de votre collaboration.

'
'

This e-mail originates from the City of Ottawa e-mail system. Any distribution, use or copying of this e-mail or the information it contains by other than the intended recipient(s) is unauthorized. Thank you.

Le présent courriel a été expédié par le système de courriels de la Ville d'Ottawa. Toute distribution, utilisation ou reproduction du courriel ou des renseignements qui s'y trouvent par une personne autre que son destinataire prévu est interdite. Je vous remercie de votre collaboration.

'
'

This e-mail originates from the City of Ottawa e-mail system. Any distribution, use or copying of this e-mail or the information it contains by other than the intended recipient(s) is unauthorized. Thank you.

Le présent courriel a été expédié par le système de courriels de la Ville d'Ottawa. Toute distribution, utilisation ou reproduction du courriel ou des renseignements qui s'y trouvent par une personne autre que son destinataire prévu est interdite. Je vous remercie de votre collaboration.

'
'

This e-mail originates from the City of Ottawa e-mail system. Any distribution, use or copying of this e-mail or the information it contains by other than the intended recipient(s) is unauthorized. Thank you.

Le présent courriel a été expédié par le système de courriels de la Ville d'Ottawa. Toute distribution, utilisation ou reproduction du courriel ou des renseignements qui s'y trouvent par une personne autre que son destinataire prévu est interdite. Je vous remercie de votre collaboration.

'
'

This e-mail originates from the City of Ottawa e-mail system. Any distribution, use or copying of this e-mail or the information it contains by other than the intended recipient(s) is unauthorized. Thank you.

Le présent courriel a été expédié par le système de courriels de la Ville d'Ottawa. Toute distribution, utilisation ou reproduction du courriel ou des renseignements qui s'y trouvent par une personne autre que son destinataire prévu est interdite. Je vous remercie de votre collaboration.

'

APPENDIX

C

- SANITARY SEWER DESIGN SHEET

SANITARY SEWER DESIGN SHEET
Elmwood school
Addition - Institutional Development
Ottawa, ON
Project: CA0063931.8278
Date: March 13, 2026

LOCATION			RESIDENTIAL AREA AND POPULATION												INDUSTRIAL				COMMERCIAL		INSTITUTIONAL		I+C+I	INFILTRATION			TOTAL	PIPE					
					NUMBER OF UNITS						POPULATION																						
LOCATION	FROM M.H.	TO M.H.	INDV AREA (ha)	ACCU AREA (ha)	SINGLES	SEMIS	AVG TOWNS	STACKED TOWNS	2-BED APT.	3-BED APT.	INDIV POP.	ACCU POP.	PEAK FACT.	PEAK FLOW (l/s)	GROSS AREA (ha)	DEVEL. AREA (ha)	ACCU. AREA (ha)	PEAK FACTOR	INDIV AREA (ha)	ACCU. AREA (ha)	INDIV AREA (ha)	ACCU. AREA (ha)	PEAK FLOW (l/s)	INDIV AREA (ha)	ACCU. AREA (ha)	INFILT. FLOW (l/s)	**TOTAL FLOW (l/s)**	LENGTH (m)	DIA. (mm)	SLOPE (%)	CAP. (FULL) (l/s)	VEL. (FULL) (m/s)	AVAIL. CAP. (%)
Contribution From Proposed school to EX. North Sanitary line																																
	School Addition	SAMH1																			0.13	0.13	0.06	0.127	0.13	0.04	**0.10**	8.00	200	1.00	32.80	1.04	**99.68%**
	SAMH1	SAMH2																				0.13	0.06	0.000	0.13	0.04	**0.10**	15.90	200	0.35	19.40	0.62	**99.47%**
	SAMH2	SAMH3																				0.13	0.06	0.000	0.13	0.04	**0.10**	37.70	200	0.35	19.40	0.62	**99.47%**
	SAMH3	*EX. N SAN LINE*																				0.13	0.06	0.000	0.13	0.04	**0.10**	11.80	200	0.34	19.12	0.61	**99.46%**

DESIGN PARAMETERS

RESIDENTIAL AVG. DAILY FLOW =	280	COMMERCIAL PEAK FACTOR =	1.5	(WHEN AREA > 20%)	PEAK POPULATION FLOW, (l/s) =	P*q*M/86400	UNIT TYPE	PERSONS/UNIT
COMMERCIAL AVG. DAILY FLOW =	28,000		1.0	(WHEN AREA < 20%)	PEAK EXTRANEOUS FLOW, (l/s) =	I*Ac	SINGLES	3.4
	0.324				RESIDENTIAL PEAKING FACTOR, M =	1+(14/(4+P^0.5))*K	SEMI-DETACHED	2.7
INSTITUTIONAL AVG. DAILY FLOW =	28,000	INSTITUTIONAL PEAK FACTOR =	1.5	(WHEN AREA > 20%)	Ac = CUMULATIVE AREA (ha)		TOWNHOMES	2.7
	0.324		1.0	(WHEN AREA < 20%)	P = POPULATION (THOUSANDS)		WALK UP TOWNS	1.8
LIGHT INDUSTRIAL FLOW =	35,000						2-BED APT. UNIT	2.1
	0.405	RESIDENTIAL CORRECTION FACTOR, K =	0.80		SEWER CAPACITY, Qcap (l/s) =	1/N S^(1/2) R^(2/3) Ac	3-BED APT. UNIT	3.1
HEAVY INDUSTRIAL FLOW =	55,000	MANNING N =	0.013		(MANNING'S EQUATION)			
	0.637	PEAK EXTRANEOUS FLOW, I (l/s/ha) =	0.33					

DESIGNED:	**NO.**	**REVISION**	**DATE**
M.S.	1.	City Submission No.1	2026-03-13
CHECKED:			
D.B.Y			
PROJECT:			
Elmwood school new addition			
Institutional Development			
LOCATION:			
Ottawa, Ontario			
PAGE NO:	**FILE & DWG. REFERENCE:**		
1 of 1	C04		

APPENDIX

D

- STORM SEWER DESIGN SHEET
- DWG C06 – PRE AND POST-DEVELOPMENT DRAINAGE PLAN
- STORMWATER MANAGEMENT CALCULATIONS
- IPEX – TEMPEST LMF ICD – FLOW CURVE

STORM SEWER DESIGN SHEET
Elmwood school
Addition - Institutional Development
Ottawa, ON
Project: CA0063931.8278
Date: March 13, 2026

LOCATION				AREA (Ha)						RATIONAL DESIGN FLOW												PROPSOED SEWER DATA								
LOCATION	AREA ID	FROM	TO	C= 0.25	C= 0.50	C= 0.70	C= 0.80	C= 0.90	C= 1.00	IND 2.78AC	CUM 2.78 AC	INLET (min)	TOTAL (min)	i (2) (mm/hr)	i (5) (mm/hr)	i (100) (mm/hr)	BLDG FLOW (L/s)	2yr PEAK FLOW (L/s)	5yr PEAK FLOW (L/s)	100yr PEAK FLOW (L/s)	ICD FIXED FLOW (L/s)	DESIGN FLOW (L/s)	MODIFIED DESIGN FLOW (L/s)	MATERIAL PIPE	SIZE (mm)	SLOPE (%)	LENGTH (m)	CAPACITY (l/s)	VELOCITY (m/s)	TIME IN PIPE	AVAIL CAP (2yr) (L/s)	AVAIL CAP (2yr) (%)
To Sweetvalley Drive																																
SCHOOL SITE	S1	New School Addition	STMH1						0.125	0.348	0.348	10.00	10.05	76.81	104.19	178.56			36.21			36.21		PVC DR-35	250.0	1.01	4.00	59.82	1.22	0.05	23.62	39.48%
		STMH1	STMH2							0.000	0.348	10.05	10.38	76.60	103.90	178.06			36.11			36.11		PVC DR-35	250.0	0.49	16.70	41.67	0.85	0.33	5.56	13.35%
		STMH2	STMH3							0.000	0.348	10.38	10.99	75.36	102.21	175.13			35.52			35.52		PVC DR-35	1200.0	0.10	39.80	1234.13	1.09	0.61	1198.61	97.12%
		STMH3	*EX. PIPE*							0.000	0.348	10.99	11.22	73.20	99.23	169.98			34.48		9.00	9.00		PVC DR-35	250.0	0.50	12.00	42.09	0.86	0.23	33.09	78.62%

Definition:
Q=2.78CiA, where:
Q = Peak Flow in Litres per Second (L/s)
A = Area in Hectares (Ha)
I = Rainfall Intensity in millimeters per hour (mm/hr)
i = 732.951/(TC+6.199)^0.810 — 2 Year
i = 1174.184/(TC+6.014)^0.816 — 5 Year
i = 1735.688/(TC+6.014)^0.820 — 100 Year

Notes:
1. Mannings coefficient (n) = 0.013

Time-of-Concentration in the Swale
FAA Equation: t (min) = 3.258 [(1.1 - C) L^0.5 / S^.33]
Where: Longest Watercourse Length, L (m). S (%)
Runoff Coef.C = Impervious

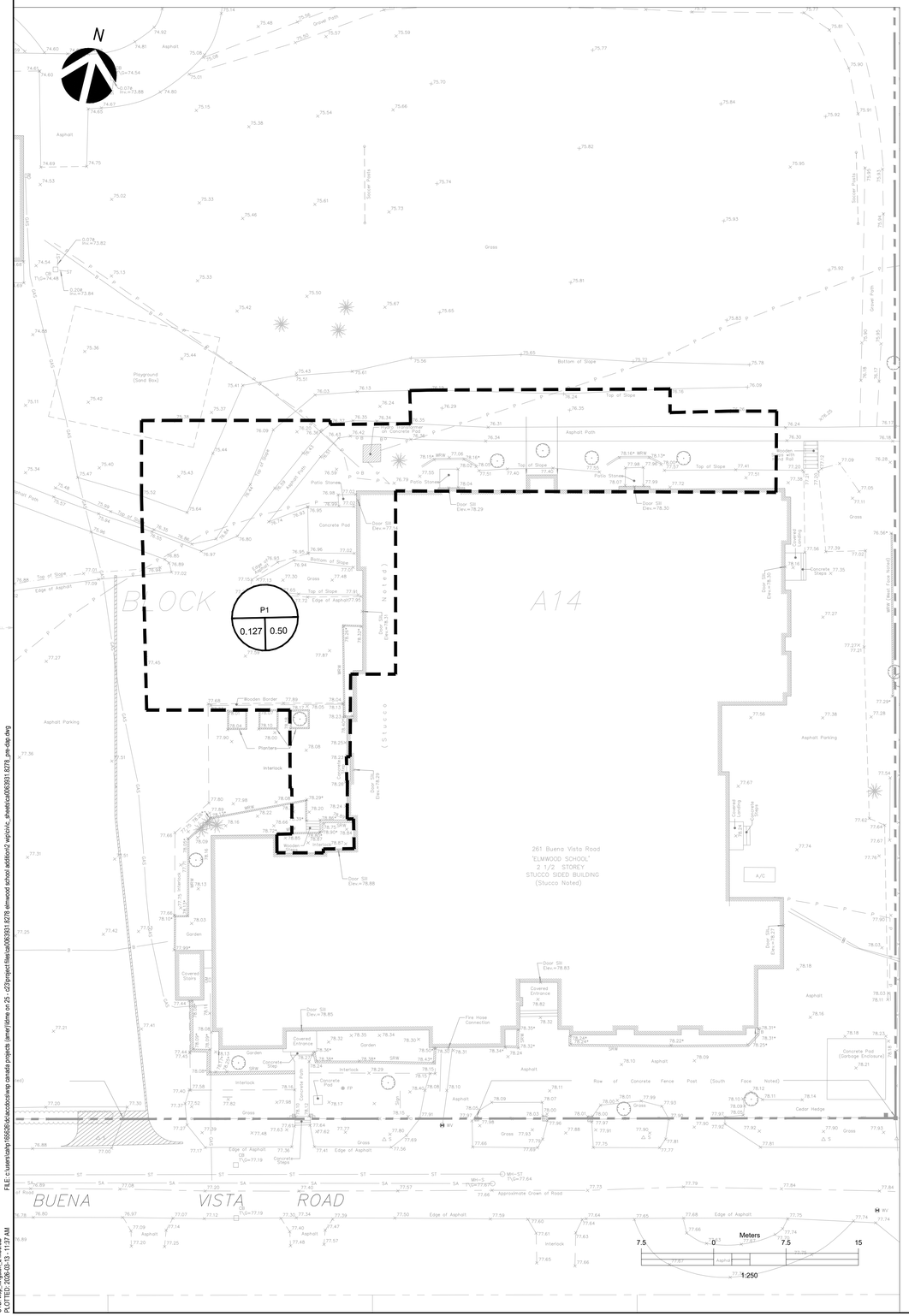
No.	L (m)	S %	Tc (min)
			10.00

Designed: M.S.
Checked: D.Y.
Dwg. Reference: C04

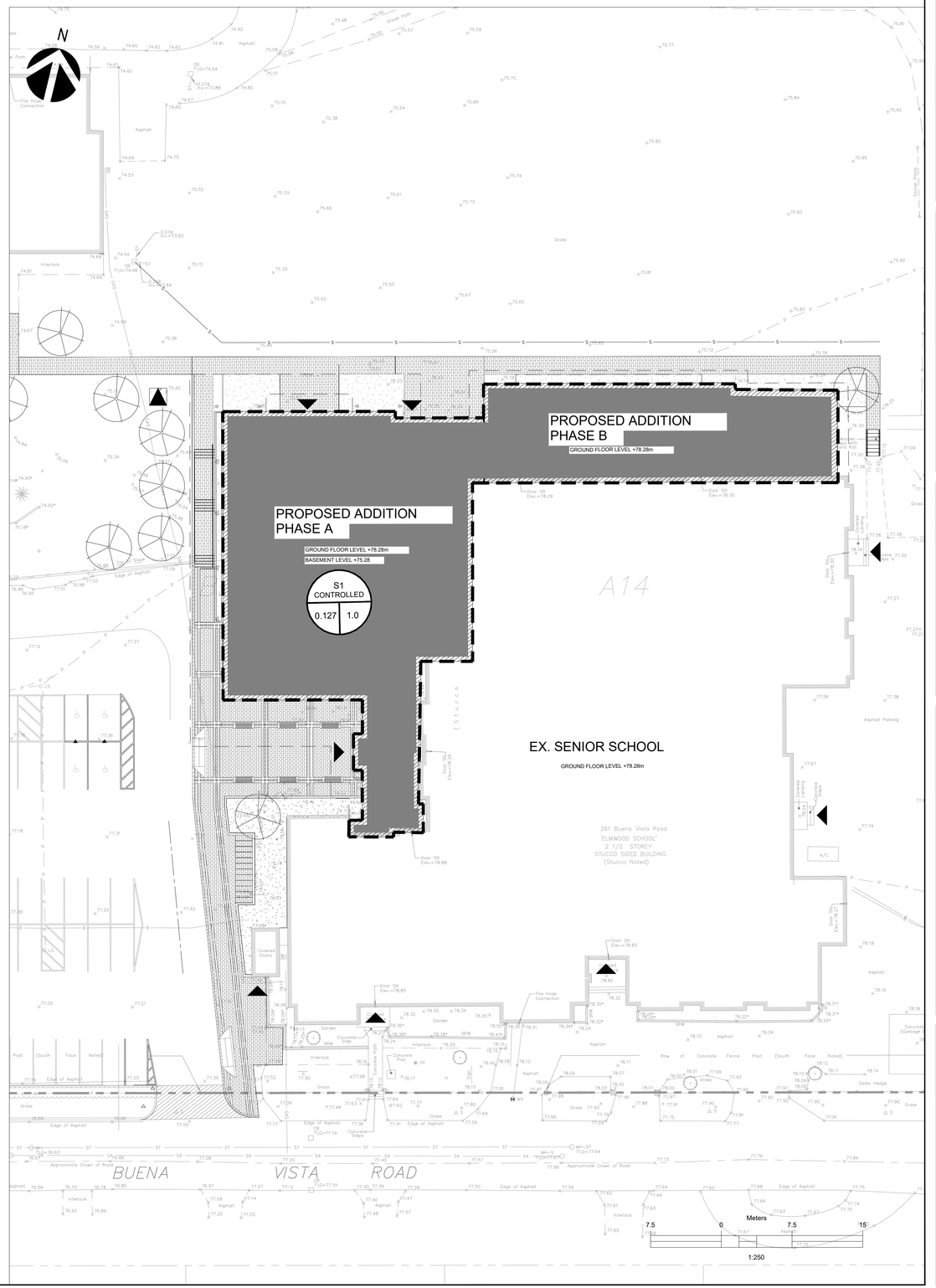
No.	Revision	Date
1	City of Ottawa submission	13-03-2026

File Reference: CA0063931.8278
Date: 2026-03-13
Sheet No: 1 of 1

PRE DEVELOPMENT



POST DEVELOPMENT



WSP CANADA INC.
2611 QUEENSVIEW DR, SUITE 300
OTTAWA, ONTARIO
CANADA K2B 8K2
PHONE: 613-829-2800
WWW.WSP.COM

CLIENT:

Farrow
60 Pleasant Blvd, Unit 801
Toronto, ON, Canada
M4K1T1
Ontario Association of Architects COP #6388

ELMWOOD SCHOOL

CLIENT REF. #:

KEY PLAN:



BEARING NOTES:

BEARINGS ARE GRID, DERIVED FROM THE NORTHERLY LIMIT OF BUENA VISTA DRIVE SHOWN TO BE N61°23'E ON PLAN BY (RB) DATED DECEMBER 23, 1958 (REF. 1144-RB) AND ARE REFERRED TO THE CENTRAL MERIDIAN OF MTM ZONE 9(76°30' WEST LONGITUDE) NAD-83 (ORIGINAL).

ELEVATION NOTES:

1. ELEVATIONS SHOWN ARE GEODETIC AND ARE REFERRED TO THE CGVD28 GEODETIC DATUM.
2. IT IS THE RESPONSIBILITY OF THE USER OF THIS INFORMATION TO VERIFY THAT THE JOB BENCHMARK HAS NOT BEEN ALTERED OR DISTURBED AND THAT IT'S RELATIVE ELEVATION AND DESCRIPTION AGREES WITH THE INFORMATION SHOWN ON THIS DRAWING..

REVISION:

REV	DATE	DESCRIPTION	BY
0	2026-03-13	ISSUED FOR SPA	DY

SEAL:

DISCLAIMER: COPYRIGHT:
THIS DRAWING AND DESIGN IS COPYRIGHT PROTECTED WHICH SHALL NOT BE USED, REPRODUCED OR REVISED WITHOUT WRITTEN PERMISSION BY WSP. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND UTILITY LOCATIONS AND REPORT ALL ERRORS AND OMISSIONS PRIOR TO COMMENCING WORK.

ORIGINAL SCALE: 1:250
DRAWN BY: JT/HA
DESIGNED AND CHECKED BY: MS/JT
APPROVED BY: DY
DATE: 2026-02-18

IF THIS BAR IS NOT 25mm LONG, ADJUST YOUR PLOTTING SCALE.

25mm

DISCIPLINE: CIVIL

PROJECT NUMBER :CA00636931.8278

PROJECT:

SENIOR ELMWOOD SCHOOL ADDITION
261 BUENA VISTA RD,
OTTAWA, ON, K1M 0V9

TITLE:

PRE AND POST DEVELOPMENT DRAINAGE AREA PLAN

DRAWING NUMBER: C06

REV. 0

FILE: c:\users\cahp166526\dc\acdocs\wsp canada projects (emea)\time on 25 - c2\project files\ca00636931.8278 elmwood school addition\2 wip\civil\c_sheets\ca00636931.8278_pre-dap.dwg
CTB: wsp_kingston_24c18.ctb
PLOTTED: 2026-03-13 - 11:37 AM

Elmwood School
addition - Institutional Development
Ottawa, ON
Project: CA0063931.8278

Stormwater Management Summary

Drainage Area I.D.	Location	Sub Area (ha)	Avg. Composite 'C' 5 yr	Avg. Composite 'C' 100 yr	Outlet Location	5 Year Uncontrolled/ Controlled Release (L/s)	5 year Storage Required (m^3)	100 Year Uncontrolled/Controlled Release (L/s)	100 year Storage Required (m^3)	Total Storage Provided (m^3)
5 Year Event										
					Total Allowable Release Rate	**9.20**				
CONTROLLED										
S1	STMH01	0.127	1.00	1.00	Springfield Road	15.61	18.73	23.24	41.83	45.00
Total		0.127				15.61	18.73	23.24	41.83	45.00

Elmwood School
addition - Institutional Development
Ottawa, ON
Project: CA0063931.8278

Table 1a - Allowable Release Rate (Pre-Development)

Runoff Coefficient Equation

$C = (A_{hard} \times 0.9 + A_{soft} \times 0.25)/A_{tot}$

5 Year Event

	C	Intensity	Area
5 Year	0.50	104.19	0.127
2.78CIA=	18.39		
	18.39	L/s	
50% due to underground tank	**9.20**	L/s	
*Use a	10.00	minute time of concentration for 5 year	

Equations:
Flow Equation
Q = 2.78 x C x I x A
Where:
C is the runoff coefficient
I is the intensity of rainfall, City of Ottawa IDF
Rainfall Intensity = $998.071/(T+6.053)^{\wedge -0.814}$ T= time in minutes
A is the total drainage area

Elmwood School
addition - Institutional Development
Ottawa, ON
Project: CA0063931.8278

TABLE 2 - Storage Required for Elmwood school addition

Maximum Allowable Release Rate to Ex. CTRL MH1:
9.20 l/s

Post Dev run-off Coefficient "C"

5 Year Event			5 Year Event		100 Year Event	
Area	Surface	Ha	"C"	C_{avg}	"C" x 1.25	$C_{100\ avg}$
Total	Asphalt		0.90	**1.00**	0.99	**1.00**
0.127	Roof	0.127	1.00		1.00	
	Grass		0.25		0.31	

*Areas are approximate based on Architectural site plan and Storm Draiange Area Plan

Runoff Coefficient Equation
$C = (A_{hard} \times 0.9 + A_{soft} \times 0.2)/A_{tot}$
$*C = (A_{hard} \times 1.0 + A_{soft} \times 0.25)/A_{tot}$

*Runoff coefficients increased by 25% up to a maximum value of 0.99 for the 100-Year event

QUANTITY STORAGE REQUIREMENTS - 5 Year

0.127 = Area(ha)
1.00 = C
9.2 l/s = max allowable release rate

Return Period	Time (min)	Intensity (mm/hr)	Flow Q (L/s)	Controlled Runoff (L/s)	Net Runoff To Be Stored (L/s)	Storage Req'd m^3	Storage Avail m^3
	10	104.19	36.79	9.20	27.59	16.55	45.00
	20	**70.25**	**24.80**	**9.20**	**15.61**	**18.73**	**45.00**
	30	53.93	19.04	9.20	9.84	17.72	45.00
5 YEAR	40	44.18	15.60	9.20	6.40	15.37	45.00
	50	37.65	13.29	9.20	4.10	12.29	45.00
	60	32.94	11.63	9.20	2.43	8.76	45.00

Orifice #1 Sizing
STMH4

Event	Flow (L/s)	Head (m)	Orifice Area (m2)	Square (1-side mm)	CIRC (mm)
5 YEAR	6.06	0.65	0.003	53.17	60.00
100 YEAR	8.76	1.36	0.003	53.17	60.00

ICD Type IPEX - Tempest LMF ICD Preset 9 L/s

Orifice Control Sizing
Q=0.6 x A x (2gh)1/2
Where
Q is the release rate in m3/s
A is the orifice area in m2
g is the acceleration due to gravity, 9.81m/s2
h is the head of water above the orifice centre in m
d is the diameter of the orifice in m

QUANTITY STORAGE REQUIREMENTS - 100 Year

0.127 = Area(ha)
1.00 = *C
9.2 l/s = max allowable release rate

Return Period	Time (min)	Intensity (mm/hr)	Flow Q (L/s)	Controlled Runoff (L/s)	Net Runoff To Be Stored (L/s)	Storage Req'd m^3	Storage Avail m^3
	10	178.56	63.04	9.20	53.85	32.31	45.00
	20	119.95	42.35	9.20	33.15	39.78	45.00
100 YEAR	**30**	**91.87**	**32.43**	**9.20**	**23.24**	**41.83**	**45.00**
	40	75.15	26.53	9.20	17.33	41.60	45.00
	50	63.95	22.58	9.20	13.38	40.15	45.00
	60	55.89	19.73	9.20	10.54	37.94	45.00
	70	49.79	17.58	9.20	8.38	35.20	45.00

Orifice invert =	72.73
Top of super pipe =	74.12
Top of water inside the super pipe for 5 year storm =	73.41

Equations:

Flow Equation
Q = 2.78 x C x I x A
Where:
C is the runoff coefficient
I is the intensity of rainfall, City of Ottawa IDF
A is the total drainage area

Chart 1: LMF 14 Preset Flow Curves

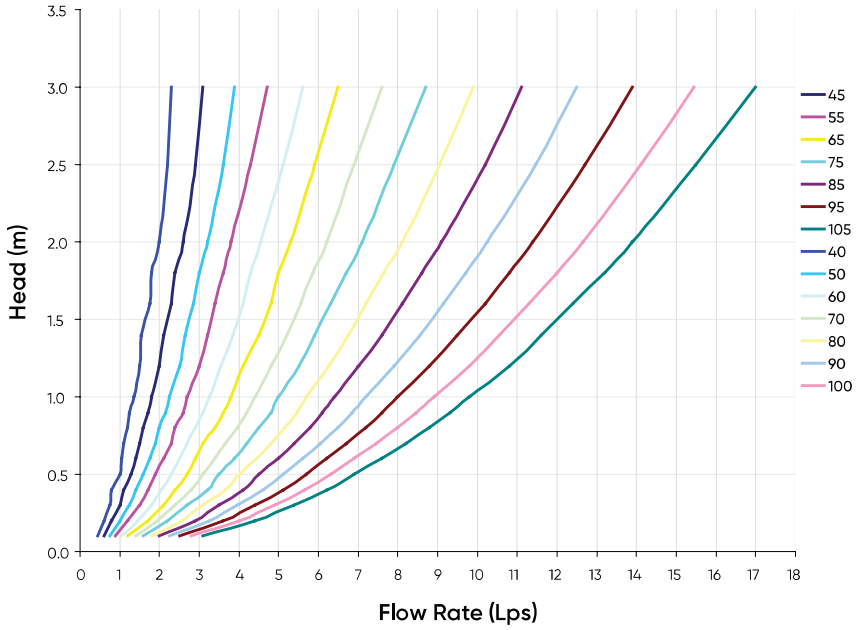
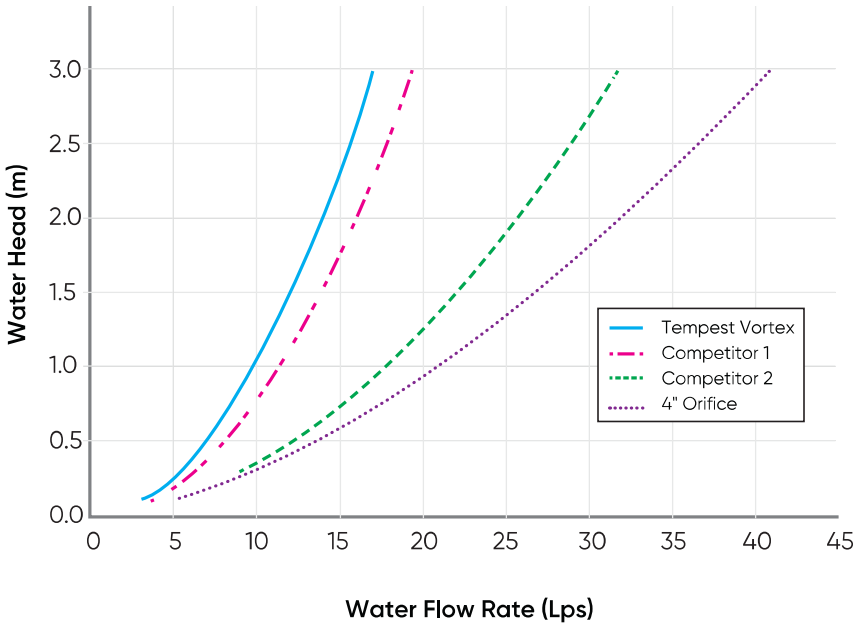


Chart 2: LMF Flow vs. ICD Alternatives

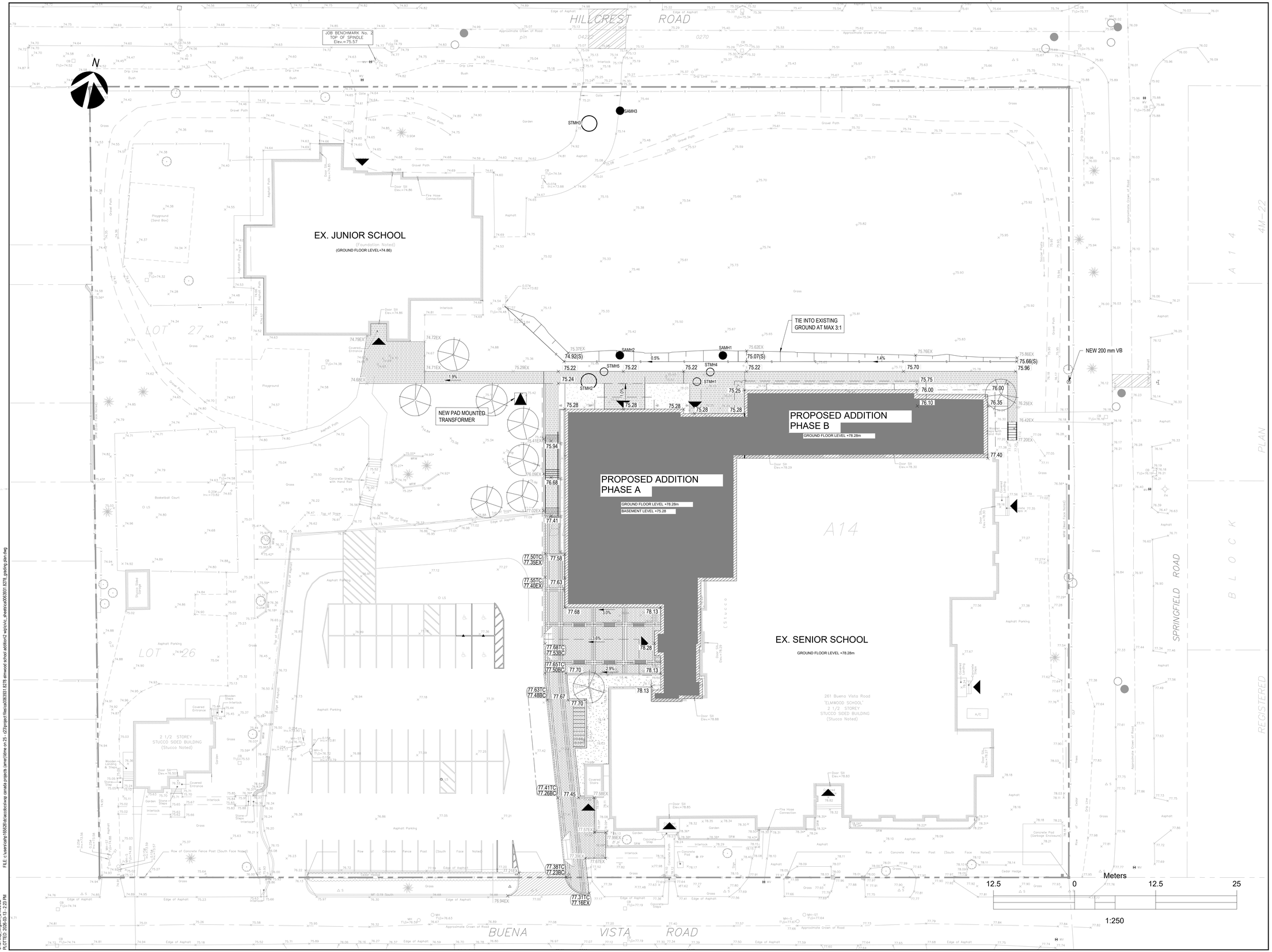


NOTE: Do not use or test the products in this manual with compressed air or other gases including air-over-water-boosters

APPENDIX

E

- DWG C03 – GRADING PLAN
- DWG C04 – SERVICING PLAN
- DWG C05 – EROSION AND SEDIMENT CONTROL PLAN



FILE: c:\users\tahy165626\dacdocs\wsp canada projects (amer)\dms on 25 - c23\project files\ca00636931.8278 elmwood school addition\2 wip\civil_sheets\ca00636931.8278_grading plan.dwg

CTB: wsp_kingston_24-06.ctb
PLOTTED: 2026-03-13 - 2:23 PM

WSP CANADA INC.
2611 QUEENSVIEW DR, SUITE 300
OTTAWA, ONTARIO
CANADA K2B 8K2
PHONE: 613-829-2800
WWW.WSP.COM

CLIENT:

Farrow
60 Pleasant Blvd, Unit 801
Toronto, ON, Canada
M4K1T1
Ontario Association of Architects COP #5388

ELMWOOD SCHOOL

CLIENT REF. #:

KEY PLAN:



BEARING NOTES:

BEARINGS ARE GRID, DERIVED FROM THE NORTHERLY LIMIT OF BUENA VISTA DRIVE SHOWN TO BE N65°12'30"E ON PLAN BY (RB) DATED DECEMBER 23, 1998 (REF. 1144-IB) AND ARE REFERRED TO THE CENTRAL MERIDIAN OF MTM ZONE 9(76°30' WEST LONGITUDE) NAD-83 (ORIGINAL).

ELEVATION NOTES:

1. ELEVATIONS SHOWN ARE GEODETIC AND ARE REFERRED TO THE CGVD28 GEODETIC DATUM.
2. IT IS THE RESPONSIBILITY OF THE USER OF THIS INFORMATION TO VERIFY THAT THE JOB BENCHMARK HAS NOT BEEN ALTERED OR DISTURBED AND THAT IT'S RELATIVE ELEVATION AND DESCRIPTION AGREES WITH THE INFORMATION SHOWN ON THIS DRAWING..

REVISION:

REV	DATE	DESCRIPTION	BY
0	2026-03-13	ISSUED FOR SPA	DY

SEAL:

DISCLAIMER: COPYRIGHT:
THIS DRAWING AND DESIGN IS COPYRIGHT PROTECTED WHICH SHALL NOT BE USED, REPRODUCED OR REVISED WITHOUT WRITTEN PERMISSION BY WSP. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND UTILITY LOCATIONS AND REPORT ALL ERRORS AND OMISSIONS PRIOR TO COMMENCING WORK.

ORIGINAL SCALE: 1:250
DRAWN BY: JT/HA
DESIGNED AND CHECKED BY: MS/JT
APPROVED BY: DY
DATE: 2026-02-18

IF THIS BAR IS NOT 25mm LONG, ADJUST YOUR PLOTTING SCALE.

25mm

DISCIPLINE: CIVIL

PROJECT NUMBER : CA00636931.8278

PROJECT:

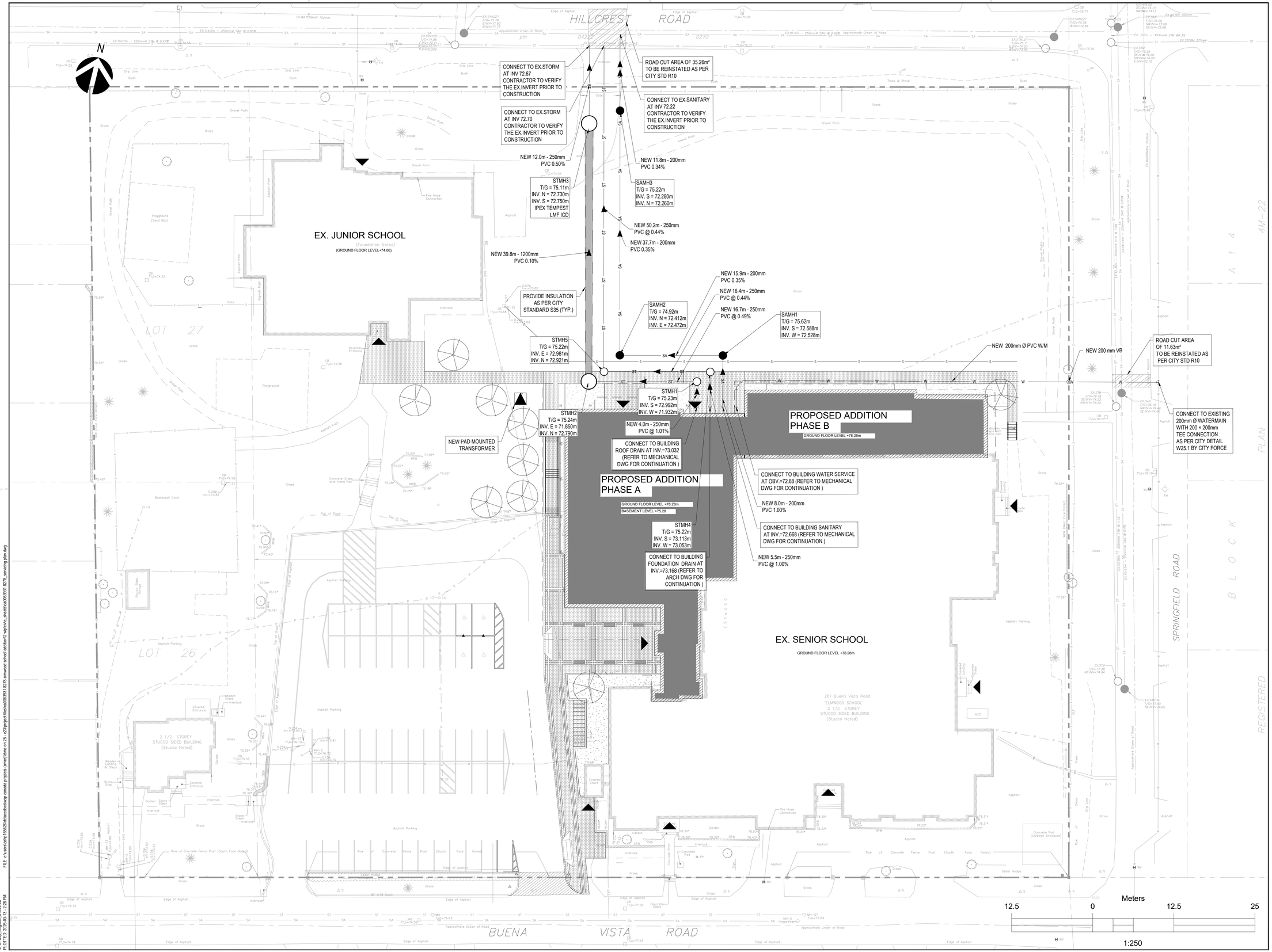
SENIOR ELMWOOD SCHOOL ADDITION
261 BUENA VISTA RD,
OTTAWA, ON, K1M 0V9

TITLE:

GRADING PLAN

DRAWING NUMBER: C03

REV. 0



WSP CANADA INC.
2611 QUEENSVIEW DR, SUITE 300
OTTAWA, ONTARIO
CANADA K2B 8K2
PHONE: 613-829-2800
WWW.WSP.COM

CLIENT:

Farrow
60 Pleasant Blvd, Unit 801
Toronto, ON, Canada
M4K1T1
Ontario Association of Architects COP #6388

ELMWOOD SCHOOL

CLIENT REF. #:

KEY PLAN:



BEARING NOTES:

BEARINGS ARE GRID, DERIVED FROM THE NORTHERLY LIMIT OF BUENA VISTA DRIVE SHOWN TO BE N61°12'37E ON PLAN BY (RB) DATED DECEMBER 23, 1998 (REF. 114A-98) AND ARE REFERRED TO THE CENTRAL MERIDIAN OF MTM ZONE 9(76°30' WEST LONGITUDE) NAD-83 (ORIGINAL).

ELEVATION NOTES:

1. ELEVATIONS SHOWN ARE GEODETIC AND ARE REFERRED TO THE CGVD28 GEODETIC DATUM.
2. IT IS THE RESPONSIBILITY OF THE USER OF THIS INFORMATION TO VERIFY THAT THE JOB BENCHMARK HAS NOT BEEN ALTERED OR DISTURBED AND THAT IT'S RELATIVE ELEVATION AND DESCRIPTION AGREES WITH THE INFORMATION SHOWN ON THIS DRAWING.

REVISION:

REV	DATE	DESCRIPTION	BY
0	2026-03-13	ISSUED FOR SPA	DY

SEAL:

DISCLAIMER: COPYRIGHT:
THIS DRAWING AND DESIGN IS COPYRIGHT PROTECTED WHICH SHALL NOT BE USED, REPRODUCED OR REVISED WITHOUT WRITTEN PERMISSION BY WSP. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND UTILITY LOCATIONS AND REPORT ALL ERRORS AND OMISSIONS PRIOR TO COMMENCING WORK.

ORIGINAL SCALE: 1:250
DRAWN BY: JT/HA
DESIGNED AND CHECKED BY: MS/JT
APPROVED BY: DY
DATE: 2026-02-18
IF THIS BAR IS NOT 25mm LONG, ADJUST YOUR PLOTTING SCALE.
25mm

DISCIPLINE: CIVIL

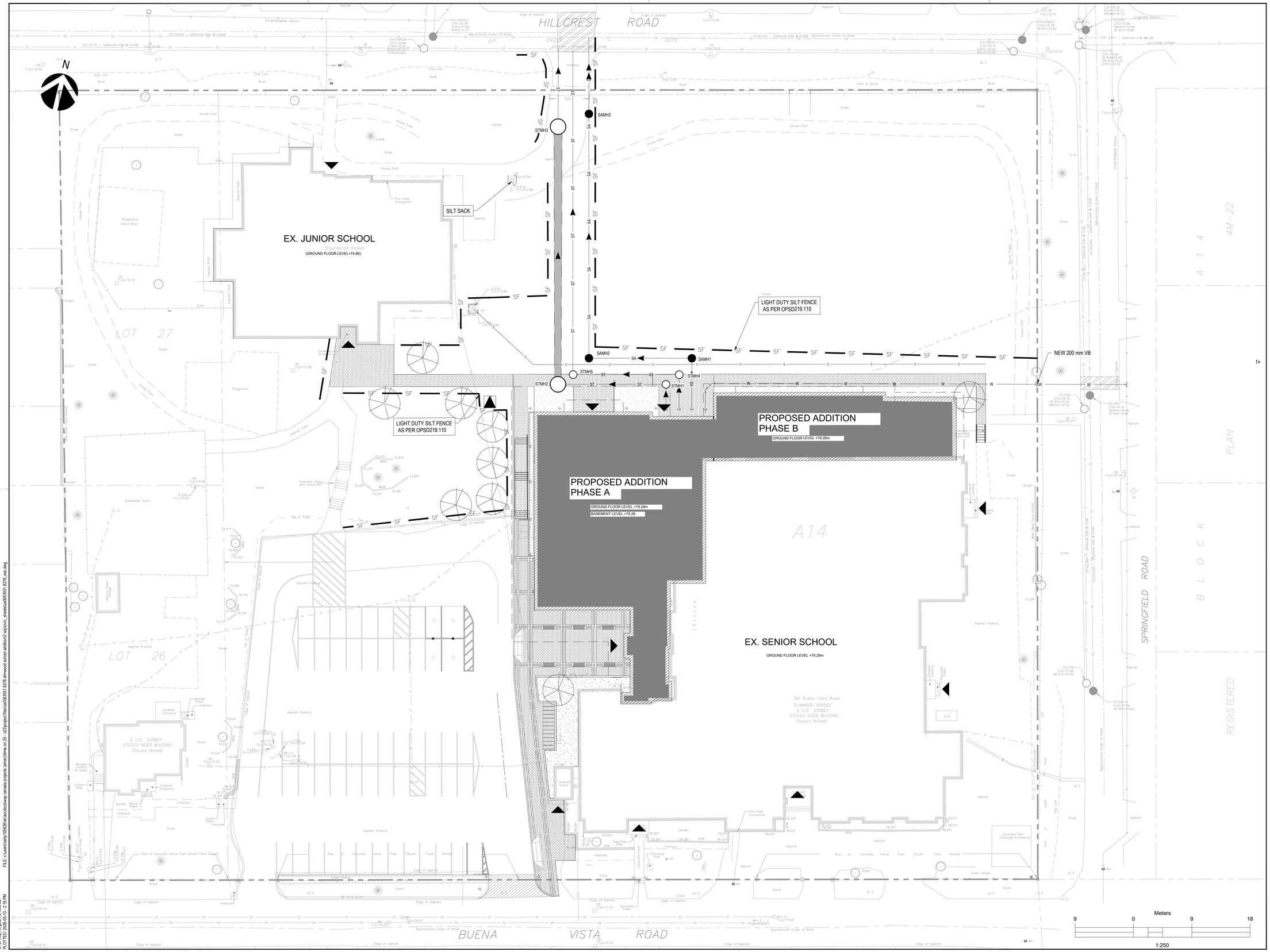
PROJECT NUMBER : CA00636931.8278
PROJECT:
SENIOR ELMWOOD SCHOOL ADDITION
261 BUENA VISTA RD,
OTTAWA, ON, K1M 0V9

TITLE:
SERVICING PLAN

DRAWING NUMBER: C04
REV. 0

4M-22 A 1 4

CTB: wsp_kingston_24v36.ctb
PLOTTED: 2026-03-13 - 2:28 PM
FILE: c:\users\ruchy165026\dacdocs\wsp canada projects (server)\dme on 25 - c2\0project files\ca00636931.8278 elmwood school addition\2 wip\civil\c_sheets\ca00636931.8278_servicing plan.dwg



FILE: c:\users\cahyo165526\dcs\documents\wsp canada projects (ame\rdme on 25 - c23\project files\ca00636931.8278 elmwood school addition\02 wip\civil\c_sheets\ca00636931.8278_esc.dwg
CTB: wsp_kingston_24-06.ctb
PLOTTED: 2026-03-13 2:19 PM

WSP CANADA INC.
2611 QUEENSVIEW DR, SUITE 300
OTTAWA, ONTARIO
CANADA K2B 8K2
PHONE: 613-829-2800
WWW.WSP.COM

CLIENT:

Farrow
60 Pleasant Blvd, Unit 801
Toronto, ON, Canada
M4K1T1
Ontario Association of Architects COP #6388

ELMWOOD SCHOOL

CLIENT REF. #:

KEY PLAN:



BEARING NOTES:

BEARINGS ARE GRID, DERIVED FROM THE NORTHERLY LIMIT OF BUENA VISTA DRIVE SHOWN TO BE N65°12'30"E ON PLAN BY (99) DATED DECEMBER 23, 1998 (REF. 1144-99) AND ARE REFERRED TO THE CENTRAL MERIDIAN OF MTM ZONE 9 (76°30' WEST LONGITUDE) NAD-83 (ORIGINAL).

ELEVATION NOTES:

1. ELEVATIONS SHOWN ARE GEODETIC AND ARE REFERRED TO THE CGVD28 GEODETIC DATUM.
2. IT IS THE RESPONSIBILITY OF THE USER OF THIS INFORMATION TO VERIFY THAT THE JOB BENCHMARK HAS NOT BEEN ALTERED OR DISTURBED AND THAT IT'S RELATIVE ELEVATION AND DESCRIPTION AGREES WITH THE INFORMATION SHOWN ON THIS DRAWING.

REVISION:

REV	DATE	DESCRIPTION	BY
0	2026-03-13	ISSUED FOR SPA	DY

SEAL:

DISCLAIMER: COPYRIGHT: THIS DRAWING AND DESIGN IS COPYRIGHT PROTECTED WHICH SHALL NOT BE USED, REPRODUCED OR REVISED WITHOUT WRITTEN PERMISSION BY WSP. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND UTILITY LOCATIONS AND REPORT ALL ERRORS AND OMISSIONS PRIOR TO COMMENCING WORK.

ORIGINAL SCALE: 1:250
DRAWN BY: JT/HA
DESIGNED AND CHECKED BY: MS/JT
APPROVED BY: DY
DATE: 2026-02-18

IF THIS BAR IS NOT 25mm LONG, ADJUST YOUR PLOTTING SCALE.
25mm

DISCIPLINE: CIVIL

PROJECT NUMBER : CA00636931.8278

PROJECT:

SENIOR ELMWOOD SCHOOL ADDITION
261 BUENA VISTA RD,
OTTAWA, ON, K1M 0V9

TITLE:

EROSION AND SEDIMENT CONTROL PLAN

DRAWING NUMBER: C05
REV.: 0

APPENDIX

F

- SUBMISSION CHECK LIST

4.1 General Content

☒ Executive Summary (for larger reports only).

Comments: Refer to Servicing Report Section 1.1

☒ Date and revision number of the report.

Comments: *Refer to front page of the Report*

☒ Location map and plan showing municipal address, boundary, and layout of proposed development.

Comments: *Refer to Figure 1.1 Site Location for Location Map and Plan*

☒ Plan showing the site and location of all existing services.

Comments: *Refer to drawing C04*

☒ Development statistics, land use, density, adherence to zoning and official plan, and reference to applicable subwatershed and watershed plans that provide context to which individual developments must adhere.

Comments: *Refer to Architectural Site Plan*

☒ Summary of Pre-consultation Meetings with City and other approval agencies.

Comments: Refer to Appendix A for Pre-Consultation Meeting Notes

☒ Reference and confirm conformance to higher level studies and reports (Master Servicing Studies, Environmental Assessments, Community Design Plans), or in the case where it is not in conformance, the proponent must provide justification and develop a defendable design criteria.

Comments: *N/A*

☒ Statement of objectives and servicing criteria.

Comments: Refer to Servicing Report Section 1.7

☒ Identification of existing and proposed infrastructure available in the immediate area.

Comments: *Refer to drawing C04*

☒ Identification of Environmentally Significant Areas, watercourses and Municipal Drains potentially impacted by the proposed development (Reference can be made to the Natural Heritage Studies, if available).

Comments: *N/A*

☒ Concept level master grading plan to confirm existing and proposed grades in the development. This is required to confirm the feasibility of proposed stormwater management and drainage, soil removal and fill constraints, and potential impacts to neighbouring properties. This is also required to confirm that the proposed grading will not impede existing major system flow paths.

Comments: *Refer to drawing C03*

☒ Identification of potential impacts of proposed piped services on private services (such as wells and septic fields on adjacent lands) and mitigation required to address potential impacts.

Comments: *N/A*

☒ Proposed phasing of the development, if applicable.

Comments: *Phase A and B for this proposal. Phase C is to be developed at a later stage.*

☒ Reference to geotechnical studies and recommendations concerning servicing.

Comments: *N/A*

☒ All preliminary and formal site plan submissions should have the following information:

- ☒ Metric scale
- ☒ North arrow (including construction North)
- ☒ Key plan
- ☒ Name and contact information of applicant and property owner
- ☒ Property limits including bearings and dimensions
- ☒ Existing and proposed structures and parking areas
- ☒ Easements, road widening and rights-of-way
- ☒ Adjacent street names

Comments: *Refer to drawing C02 to C06*

4.2 Development Servicing Report: Water

☒ Confirm consistency with Master Servicing Study, if available

Comments: *Refer to Servicing Report Section 2.1*

☒ Availability of public infrastructure to service proposed development

Comments: Refer to Servicing Report Section 2.1

☒ Identification of system constraints

Comments: N/A

☒ Identify boundary conditions

Comments: *Refer to Servicing Report Section 2.2*

☒ Confirmation of adequate domestic supply and pressure

Comments: *Refer to Servicing Report Section 2.3*

☒ Confirmation of adequate fire flow protection and confirmation that fire flow is calculated as per the Fire Underwriter's Survey. Output should show available fire flow at locations throughout the development.

Comments: *Refer to Servicing Report Section 2.4*

☒ Provide a check of high pressures. If pressure is found to be high, an assessment is required to confirm the application of pressure reducing valves.

Comments: *Refer to Servicing Report Section 2.5*

☒ Definition of phasing constraints. Hydraulic modeling is required to confirm servicing for all defined phases of the project including the ultimate design

Comments: *Refer to Servicing Report Section 2.6*

☒ Address reliability requirements such as appropriate location of shut-off valves

Comments: *Refer to Servicing Report Section 2.7*

☒ Check on the necessity of a pressure zone boundary modification.

Comments: N/A

☒ Reference to water supply analysis to show that major infrastructure is capable of delivering sufficient water for the proposed land use. This includes data that shows that the expected demands under average day, peak hour and fire flow conditions provide water within the required pressure range

Comments: *Refer to Servicing Report Section 2.8*

☒ Description of the proposed water distribution network, including locations of proposed connections to the existing system, provisions for necessary looping, and appurtenances (valves, pressure reducing valves, valve chambers, and fire hydrants) including special metering provisions.

Comments: *Refer to Servicing Report Section 2.9*

☒ Description of off-site required feedermains, booster pumping stations, and other water infrastructure that will be ultimately required to service proposed development, including financing, interim facilities, and timing of implementation.

Comments: Refer to Servicing Report Section 2.10

☒ Confirmation that water demands are calculated based on the City of Ottawa Design Guidelines.

Comments: *Refer to Servicing Report Section 2.11*

☒ Provision of a model schematic showing the boundary conditions locations, streets, parcels, and building locations for reference.

Comments: Refer to Servicing Report Section 2.12

4.3 Development Servicing Report: Wastewater

☒ Summary of proposed design criteria (Note: Wet-weather flow criteria should not deviate from the City of Ottawa Sewer Design Guidelines. Monitored flow data from relatively new infrastructure cannot be used to justify capacity requirements for proposed infrastructure).

Comments: *Refer to Servicing Report Section 3.1*

☒ Confirm consistency with Master Servicing Study and/or justifications for deviations.

Comments: *Refer to Servicing Report Section 3.2*

☒ Consideration of local conditions that may contribute to extraneous flows that are higher than the recommended flows in the guidelines. This includes groundwater and soil conditions, and age and condition of sewers.

Comments: *Refer to Servicing Report Section 3.2*

☒ Description of existing sanitary sewer available for discharge of wastewater from proposed development.

Comments: *Refer to Servicing Report Section 3.3*

☒ Verify available capacity in downstream sanitary sewer and/or identification of upgrades necessary to service the proposed development. (Reference can be made to previously completed Master Servicing Study if applicable)

Comments: *Refer to Servicing Report Section 3.4*

☒ Identification and implementation of the emergency overflow from sanitary pumping stations in relation to the hydraulic grade line to protect against basement flooding.

Comments: N/A

☒ Special considerations such as contamination, corrosive environment etc.

Comments: N/A

4.4 Development Servicing Report: Stormwater

☒ Description of drainage outlets and downstream constraints including legality of outlets (i.e. municipal drain, right-of-way, watercourse, or private property)

Comments: *Refer to Servicing Report Section 4.1*

☒ Analysis of available capacity in existing public infrastructure.

Comments: *Refer to Servicing Report Section 4.2*

☒ A drawing showing the subject lands, its surroundings, the receiving watercourse, existing drainage patterns, and proposed drainage pattern.

Comments: *Refer to drawing C06*

☒ Water quantity control objective (e.g. controlling post-development peak flows to pre-development level for storm events ranging from the 2 or 5 year event (dependent on the receiving sewer design) to 100 year return period); if other objectives are being applied, a rationale must be included with reference to hydrologic analyses of the potentially affected subwatersheds, taking into account long-term cumulative effects.

Comments: *Refer to Servicing Report Section 4.4*

☒ Water Quality control objective (basic, normal or enhanced level of protection based on the sensitivities of the receiving watercourse) and storage requirements.

Comments: *Refer to Servicing Report Section 4.5*

☒ Description of the stormwater management concept with facility locations and descriptions with references and supporting information.

Comments: *Refer to Servicing Report Section 4.6-4.10*

☒ Set-back from private sewage disposal systems.

Comments: *N/A*

☒ Watercourse and hazard lands setbacks.

Comments: N/A

☒ Record of pre-consultation with the Ontario Ministry of Environment and the Conservation Authority that has jurisdiction on the affected watershed.

Comments: N/A

☒ Confirm consistency with sub-watershed and Master Servicing Study, if applicable study exists.

Comments: *N/A*

☒ Storage requirements (complete with calculations) and conveyance capacity for minor events (1:5 year return period) and major events (1:100 year return period).

Comments: *Refer to Servicing Report Section 4.6-4.10 and Appendix D*

☒ Identification of watercourses within the proposed development and how watercourses will be protected, or, if necessary, altered by the proposed development with applicable approvals.

Comments: Refer to Servicing Report Section 4.10

☒ Calculate pre and post development peak flow rates including a description of existing site conditions and proposed impervious areas and drainage catchments in comparison to existing conditions.

Comments: *Refer to Servicing Report Section 4.11*

☒ Any proposed diversion of drainage catchment areas from one outlet to another.

Comments: N/A

☒ Proposed minor and major systems including locations and sizes of stormwater trunk sewers, and stormwater management facilities.

Comments: Refer to Servicing Report Section 4.6-4.10, Appendix D and drawing C03

☒ If quantity control is not proposed, demonstration that downstream system has adequate capacity for the post-development flows up to and including the 100-year return period storm event.

Comments: Refer to Servicing Report Section 4.6-4.10 and Appendix D

☒ Identification of potential impacts to receiving watercourses

Comments: N/A

☒ Identification of municipal drains and related approval requirements.

Comments: N/A

☒ Descriptions of how the conveyance and storage capacity will be achieved for the development.

Comments: *Refer to Servicing Report Section 4.10*

☒ 100 year flood levels and major flow routing to protect proposed development from flooding for establishing minimum building elevations (MBE) and overall grading.

Comments: Refer to drawings C03 and C04

☒ Inclusion of hydraulic analysis including hydraulic grade line elevations.

Comments: Refer to Servicing Report Section 4.10

☒ Description of approach to erosion and sediment control during construction for the protection of receiving watercourse or drainage corridors.

Comments: *Refer to Servicing Report Section 5.0*

☒ Identification of floodplains - proponent to obtain relevant floodplain information from the appropriate Conservation Authority. The proponent may be required to delineate floodplain elevations to the satisfaction of the Conservation Authority if such information is not available or if information does not match current conditions.

Comments: *N/A*

☒ Identification of fill constraints related to floodplain and geotechnical investigation.

Comments: *N/A*

4.5 Approval and Permit Requirements: Checklist

The Servicing Study shall provide a list of applicable permits and regulatory approvals necessary for the proposed development as well as the relevant issues affecting each approval. The approval and permitting shall include but not be limited to the following:

☐ Conservation Authority as the designated approval agency for modification of floodplain, potential impact on fish habitat, proposed works in or adjacent to a watercourse, cut/fill permits and Approval under Lakes and Rivers Improvement Act. The Conservation Authority is not the approval authority for the Lakes and Rivers Improvement Act. Where there are Conservation Authority regulations in place, approval under the Lakes and Rivers Improvement Act is not required, except in cases of dams as defined in the Act.

Comments: Not applicable.

☐ Application for Certificate of Approval (CofA) under the Ontario Water Resources Act.

Comments: Not applicable.

☐ Changes to Municipal Drains.

Comments: *Not applicable.*

☐ Other permits (National Capital Commission, Parks Canada, Public Works and Government Services Canada, Ministry of Transportation etc.)

Comments: *Not applicable.*

4.6 Conclusion Checklist

☒ Clearly stated conclusions and recommendations

Comments:

☐ Comments received from review agencies including the City of Ottawa and information on how the comments were addressed. Final sign-off from the responsible reviewing agency.

Comments: *Further comments to be added following site plan application review.*

☒ All draft and final reports shall be signed and stamped by a professional Engineer registered in Ontario

Comments: