

**re: Grading and Servicing Plan Review**  
Proposed Multi-Storey Building  
4836 Bank Street - Ottawa, Ontario

**to:** The Stirling Group – **Alison Clarke** – [alison@tsgdi.ca](mailto:alison@tsgdi.ca)

**date:** February 25, 2025

**file:** PG2934-MEMO.03

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Further to your request and authorization, Paterson Group (Paterson) prepared the current memorandum to document our grading and servicing plan reviews for the proposed building to be constructed at the aforementioned site. This memo should be read in conjunction with the Geotechnical Investigation Report (Paterson Group Report PG2934-1 Revision 1 dated October 4, 2024).

Paterson reviewed the following drawings prepared by Arcadis during the preparation of this memo:

- ☐ General Plan of Services – Seniors Apartments – Bank Street at Dun Skipper Drive – Project No.148290 – Sheet No.C-001– Revision 2 dated February 18, 2025.
- ☐ Grading Plan – Seniors Apartments – Bank Street at Dun Skipper Drive – Project No.148290 – Sheet No.C-200– Revision 1 dated February 18, 2025.

## **Grading Plan Review**

As per the Geotechnical Investigation Report, referenced above, there are no permissible grade rise restrictions for the proposed development at this site. Therefore, the proposed grading is considered acceptable, from a geotechnical perspective, and no lightweight fill or other considerations are required to accommodate the proposed grading.

## **Servicing Plan Review**

Any portion of the services installed at a depth of 2.0 m or deeper below finished grade for sewers, or 2.4 m or deeper below finished grade for watermains, is considered to have sufficient soil cover for frost protection.

However, there are sections of the site servicing, which are located within the frost zone. The sections of pipe and the required insulations thickness are highlighted on attached Figure 1- Site Servicing Insulation Plan. Where insufficient soil cover is present above the obvert of the pipe, the following frost protection criteria on the next page should be followed:



<b>Table 1 - Rigid Insulation Recommendations for Sewer Pipes with Reduced Soil Cover</b>			
<b>Thermal Condition</b>	<b>Soil Cover Provided (mm)</b>	<b>Insulation Dimensions</b>	
		<b>Thickness (mm)</b>	<b>Extension (mm)</b>
Unheated	600 to 1,000	100	Boxed on 3 sides or overtop and extending 2000 mm horizontally beyond edge face of the sewer
	1,100 to 1,400	75	Boxed on 3 sides or overtop and extending 900 mm horizontally beyond edge face of the sewer
	1,400 to 1,700	50	Boxed on 3 sides or overtop and extend 600 mm horizontally beyond edge face of the sewer
	1,700 to 2,000	25	Boxed on 3 sides or overtop and extend 300 mm horizontally beyond edge face of the sewer
<b>Notes:</b> All designs are based on a freezing index of 1000°C-days			

Table 2 - Rigid Insulation Recommendations for Water Service Pipes with Reduced Soil Cover			
Water Pipe	Soil Cover Provided (mm)	Insulation Dimensions	
		Thickness (mm)	Extension (mm)
Watermain	2000 to <2400	50	Boxed or overtop and extending 500 mm horizontally beyond edge face of the water pipe
		Pipe Insulation Details	
Water Service Laterals	1800 to <2400	150 mm thick Foamular XPS Pipe Insulation	
Notes: All designs are based on a freezing index of 1000°C-days			

All rigid insulation should consist of either Dow Chemical High-Load 40 (HI-40), Styro Rail SR.P400, or equivalent which is approved by Paterson. The placement of all insulation within the service trenches must be reviewed and approved by Paterson personnel at the time of construction.



We trust that this information satisfies your immediate requirements.

Best Regards,

**Paterson Group Inc.**

Deepak k Rajendran, E.I.T.



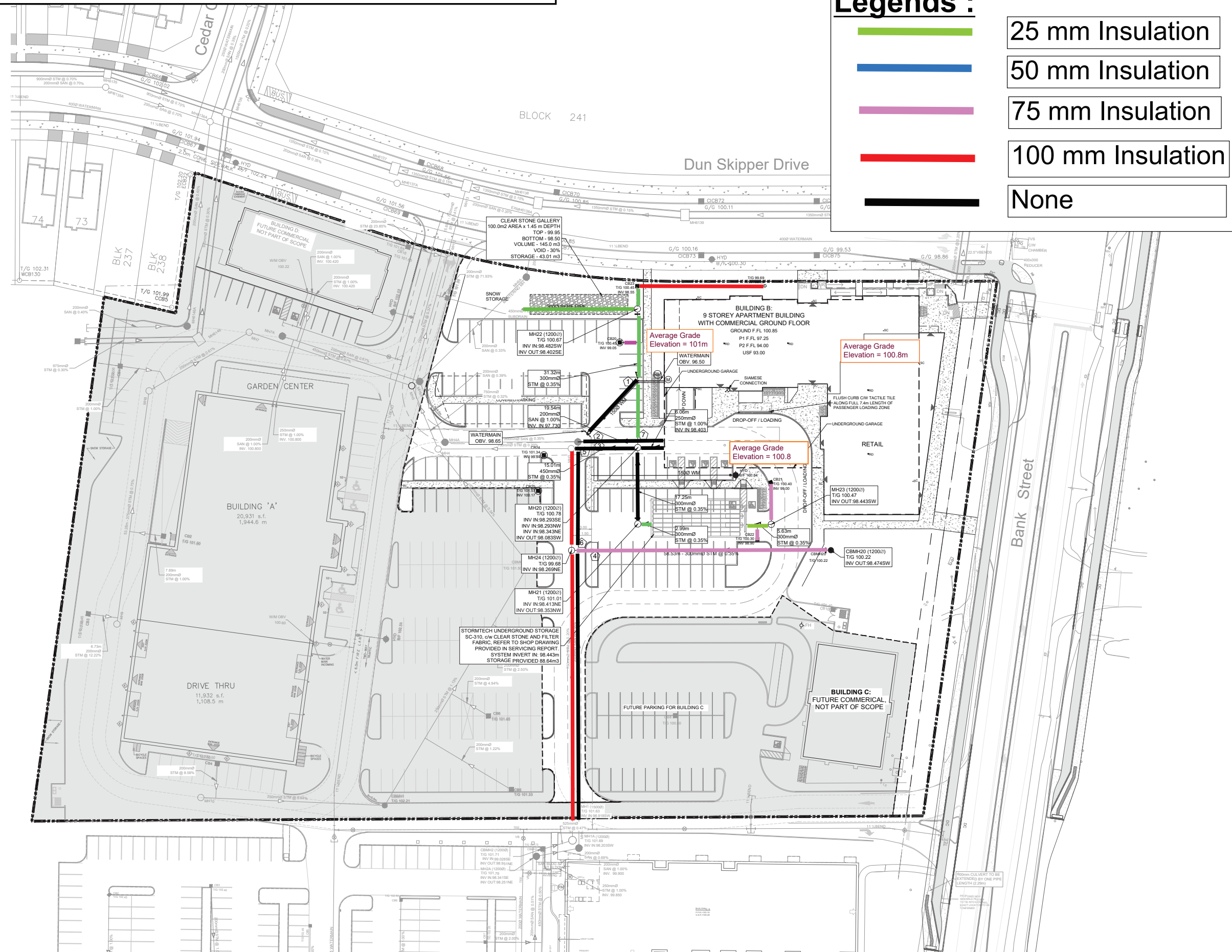
Scott S. Dennis, P.Eng.

**Attachments:**

Figure 1 – Site Servicing Insulation Plan



### Figure 1: Site Servicing Insulation Plan



CLIENT  
2668867 Ontario Inc.

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**Arcadis Professional Services (Canada) Inc.**  
formerly IHI Group Professional Services (Canada) Inc.

ISSUES		
No.	DESCRIPTION	DATE
1	SUBMISSION NO.1 FOR CITY REVIEW	2024-11-26
2	SUBMISSION NO.2 FOR CITY REVIEW	2025-02-18
3		
4		

SEE 010 FOR NOTES, LEGEND AND DETAILS



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PROJECT	SENIORS APARTMENTS
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BANK STREET AT DUN SKIPPER DRIVE

PROJECT NO:  
148200

148290	
DRAWN BY: M.M.	CHECKED BY: D.G.Y.

PROJECT MGR: R.M.	APPROVED BY: A.Z.
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SHEET TITLE	GENERAL PLAN OF SERVICES
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SHEET NUMBER	ISSUE
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C-001	2
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