

MEMORANDUM

DATE: OCTOBER 30, 2017 (REVISED FEBRUARY 14, 2018)

TO: RICHARD BUCHANAN

FROM: JUSTIN GAUTHIER

RE: 225 SCHOLASTIC DRIVE – GREYSTONE VILLAGE RETIREMENT
RESIDENCE: SITE SERVICING AND STORMWATER MANAGEMENT
MEMORANDUM

CC: JOHN RIDDELL

ATTACHED: 116143-GP: GENERAL PLAN OF SERVICES
116143-GR: GRADING, EROSION AND SEDIMENT CONTROL PLAN
116143-STM: STORMWATER MANAGEMENT PLAN
(116143)

This memo is supplementary to the “*Greystone Village - 175 Main Street: Site Servicing, Stormwater Management, Noise, Erosion and Sediment Control Brief (Phase 2 and 3), R-2017-089*”, dated May 26, 2017 to provide specifics related to the Greystone Village Retirement Residence which is part of the overall Greystone Village subdivision development.

The proposed development is located at 225 Scholastic Drive in Old Ottawa East, north/east of Deschâtelets Avenue, west of Scholastic Drive and south of des Oblats Avenue within the City of Ottawa. The existing property is currently vacant. The proposed re-development of this portion of the site will consist of an 8-storey building that will contain 146 units. A total of approximately 42 underground parking spaces will be provided on 1 level of underground parking.

The subject site is approximately 0.303 ha in area. The development will have a two-way vehicular access to the site located on Scholastic Drive and an internal ramp access to the underground parking garage.

This site servicing and stormwater management memorandum will outline how the site will be serviced with sanitary, storm and watermain; and will demonstrate that adequate municipal capacity is available within the proposed infrastructure to service the development.

Sanitary

The proposed 8-storey building at the corner of des Oblats Avenue/Scholastic Drive will be serviced by a 200mm dia. sanitary service that connects to the existing 250mm dia. sanitary sewer on des Oblats Avenue.

The ultimate outlet is the existing 1350mm Rideau River Interceptor trunk sewer that runs parallel to the Rideau River on the eastern portion of the overall site.

The development will consist of 146 suites, therefore:

$$Q_{\text{SAN}} = 146 \text{ units} \times 1.1 \text{ persons/unit} \times 350 \text{ L/cap/day} = 56,210 \text{ L/day}$$

$$\text{Average Sanitary Flow} = 56,210 \text{ L/day} = 0.65 \text{ L/sec}$$

$$\text{Peak Sanitary Flow} = 2.60 \text{ L/sec (with PF} = 4.0 \Rightarrow \text{max for residential)}$$

$$\text{Extraneous flow} = 0.28 \text{ L/sec/ha} \times 0.303 \text{ ha} = 0.085 \text{ L/sec}$$

Therefore,

$$\text{Total Site Average Sanitary Flow} = 0.74 \text{ L/sec}$$

$$\text{Total Site Peak Sanitary Flow} = 2.69 \text{ L/sec (with PF)}$$

* Based on predominantly one person per retirement unit.

The proposed development population estimates and sanitary flows accounted for in the “*Greystone Village - 175 Main Street: Site Servicing, Stormwater Management, Noise, Erosion and Sediment Control Brief (Phase 2 and 3)*” are based on the City of Ottawa Sewer Design Guidelines.

Stormwater

The site has an overall slope towards the Rideau River to the East. Storm runoff from the majority of the site is conveyed overland towards the Rideau River.

The proposed 8-storey building at the corner of des Oblats Avenue/Scholastic Drive will be serviced by a 200mm dia. storm service that connects to the existing 600mm dia. storm sewer on des Oblats Avenue. The site will also be serviced by a 300mm dia. storm sewer that will connect to the existing 375mm dia. storm sewer on Scholastic Drive.

The ultimate outlet is the Rideau River on the eastern portion of the overall site.

As discussed in the “*Greystone Village - 175 Main Street: Site Servicing, Stormwater Management, Noise, Erosion and Sediment Control Brief (Phase 2 and 3)*”, water quality control will be provided within the subdivision’s storm sewer system with Vortech type structures and water quantity control is not required, other than for the roof, since the sewers are ultimately discharging directly to the Rideau River, provided the outlets are designed with suitable erosion protection measures. The roof is to be controlled to 80L/s/ha.

The site will be graded such that flows in excess of the 100-year storm event will be conveyed overland to des Oblats Avenue, as well as Scholastic Drive. Erosion and sediment control measures will be implemented during all phases of construction and inspected regularly.

Watermain

The proposed 8-storey building at the corner of des Oblats Avenue/Scholastic Drive will be serviced by two 150mm dia. water services (for redundancy) that connects to the existing 250mm dia. watermain on des Oblats Avenue from Ph2. The existing 250mm dia. watermain on des Oblats Avenue is looped from the existing 200mm dia. watermain on Clegg Street to the new 400mm dia. watermain on Main Street.

Estimated domestic water demands for the development are roughly the same as the proposed development sanitary flows listed above. Therefore:

Average Day Demand Demand = 0.65L/s

Maximum Day Demand = 0.65L/s * 2.5 = 1.625L/s

Maximum Hourly Demand = 1.625 * 2.2 = 3.575L/s

The hydraulic analysis performed for the overall site as per the “*Greystone Village - 175 Main Street: Site Servicing, Stormwater Management, Noise, Erosion and Sediment Control Brief (Phase 2 and 3)*” shows the system will work for domestic water as well as fire demand/protection.

We submit the following and request your review and approval in order that we can receive site plan approval.

Thanks.

