



March 20, 2024

City of Hamilton  
Planning and Development Department  
Development Division - Engineering Section  
71 Main Street West 6th floor  
Hamilton, ON L8P 4Y5

Attn: Johnpaul Loiacono, Senior Planner  
Manal Youssef, P. Eng, Project Manager Engineering Approvals

Re: Saint Elizabeth Village - 393 Rymal Road West, Hamilton (ZAC-20-029)  
Engineering Comment Response Letter

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Dear Johnpaul and Manal,

Thank you for the provision of the engineering comments which we received via email on October 12<sup>th</sup>, 2023. At this time we wish to resubmit the Functional Servicing Report and associated engineering materials for the re-zoning applications for this address. Our responses to each of the comments received are as follows:

**Zoning By-law Amendment Comments:**

1. "...The Servicing Report shall calculate the population density based on 2.0ppu for 1- bedroom, 2.7ppu for 2-bedroom for a multi-storey building and 3.5ppu for townhouse units. The sanitary flow shall be calculated based on the number of person/unit/ha and the 360 l/c/d plus infiltration factor. In addition, the applicant shall submit a detailed sanitary capacity analysis for 750mm trunk all the way to the Twenty Road Sanitary Pumping Station. Note that all in-progress and approved developments within the additional catchment areas shall be included in the analysis. Please consult with the Development Engineering staff for any assistance with including the in-progress and approved developments located within the trunk sewer catchment areas."

Acknowledged. Calculations have been updated based on the criteria mentioned above. We kindly ask that you provide some indication as to how the required PPU values you are requesting that we use were derived as they are significantly higher than the City of Hamilton

census data included in the City's DC Background Study. There is a glaring issue if infrastructure is being designed based on census populations, then when we move to implementation, we are being asked to use higher densities than the infrastructure was designed for. There needs to be consistency between the City's high-level planning and the numbers used during implementation.

Please note that the site owners are currently studying the 750mm trunk sanitary sewer within the development area and have a consultant completing flow monitoring on the last downstream manhole within the Saint Elizabeth site. Some of the preliminary findings are included in the revised FSR.

2. The site sanitary flow is discharged into the existing 750mmØ sanitary trunk sewer and ultimately discharges to the Twenty Road Pumping Station. This pumping station also services Mount Hope and the Airport Employment Growth District. However, based on the AEGD Wastewater Servicing Update and Capacity Allocation Policy, the allocation for each development Application will be determined by the City based on the number of applications, contributed area, density, etc. The Applicant must enter into a wastewater capacity allocation Agreement with the City and pay the applicable security (for more information please refer to the AEGD Wastewater Capacity Allocation Program/ Policy (PED20040/PW20055))

Acknowledged.

3. The A watermain hydraulic analysis (WHA), identifying the modelled system pressures at pressure district level under various boundary conditions and demand scenarios, will be required to support the zoning bylaw amendment and future site plan approval applications.

As illustrated in the revised FSR, a recent watermain hydraulic analysis was completed for the Saint Elizabeth Village site in 2019. Some of the results of that WHA are included in the revised FSR for reference. As can be seen through review of the previous report, based on the 400mm trunk sanitary sewer along Rymal Road there is no question that the required fire-flow and domestic flows for the site can be provided through the proposed internal watermain network. We suggest that if a final WHA is required it can be completed at the Site Plan stage given there is no question that the existing system can provide ample capacity for the site.

**General Comments:**

4. Construction Management Plan (CMP) which complies with the City of Hamilton Construction Management Plan Guidelines shall be provided. The CMP shall address Traffic Management and road closure, parking during construction, Public Communication, etc.)

Acknowledged. We understand that a construction management plan will be required as a condition of future Site Plan approval. It will be completed at the time of the development of the Site Plan.

5. Pre-post site condition surveys and inspection report for the existing adjacent property, including items such as but not limited to, existing SWM Ponds, roads, buildings, driveways, etc. to ensure that there are no adverse impacts due to the proposed development. If any deficiencies are identified in the post-condition survey or inspection, the Owner shall be responsible for the restoration of all deficiencies and all disturbed areas.

Pre-condition surveys will be required to be completed by the Servicing contractor at the time of development of the property under Site Plan.

6. Any removal or replacement of the existing utilities on the subject site shall be coordinated with the designated utility companies. The Applicant shall obtain all required permits and be solely responsible for any utility replacement or removal cost.

Acknowledged.

7. A sidewalk from the edge of the travelled roadway of Bishop Ryan Way will be required, please refer to the Transportation Planning recommendation.

Acknowledged, the new Site Plan has been coordinated based on transportation planning recommendations and includes walkways along Bishop Ryan Way. Please refer to the updated Site Plan as presented in the revised FSR.

8. The Proponent will be solely responsible for the cost of the Bishop Ryan Way and Rymal Road West intersection improvement including street lighting, please refer to the Transportation Planning recommendation.

Acknowledged.

9. Geotechnical Engineering report/ Hydrogeological report to the City, prepared by a qualified professional, to assess impacts of the underground water, identify any significant recharge and discharge zone, and provide recommendations to mitigate the groundwater impacts during any construction within the subject site.

Acknowledged. A Geotechnical report has been completed and is referenced within the revised FSR. This report can be provided with the re-zoning resubmissions.

**Servicing Comments:**

10. The City's GIS database does not include servicing information (i.e. sanitary, storm sewer, and watermain) located on local roads. Therefore, conditional assessment/ CCTV investigation shall be provided to assess the condition of the existing services and determine the sewer material, and if repair, replacement or upgrade is required. Please note that existing clay pipes on the subject site are not supported by the City, all clay pipes shall be replaced as per City standards. To be addressed during the future Site Plan Application.

Acknowledged. The proponent has already undertaken the inspections noted and can provide this information at the time of Site Plan review all pipes within the site have been CCTV inspected and found to be in good condition at the connection points.

11. FSR and Servicing Plan shall demonstrate how building A, and C will be serviced. To be addressed during the future Site Plan Application.

The servicing for buildings A, B and C is indicated on the Site Servicing Plan provided with the submitted FSR. Note that although the towers are separate the buildings are connected via a common underground parking structure – as such one set of services will service all three buildings together. This will be co-ordinated with the Mechanical consultant at the time of the development under Site Plan.

**Applicant has to address the following during the site plan application stage:**

12. The Applicant shall provide an access easement over Bishop Ryan Way to ensure ongoing pedestrian and vehicular access to the Severed Parcel to the benefit of the future owner of the Severed Parcel. The easement shall be prepared to the satisfaction of the Director of Growth Management and Chief Development Engineer.

Acknowledged.

13. The dedication of any land required for road right of way / service access, as deemed necessary to facilitate the proposed development of the Severed Parcel to the satisfaction of the Director of Growth Management and Chief Development Engineer

Acknowledged.

14. The dedication of easements for the servicing of the severed parcel and adjacent properties to facilitate the proposed development of the severed parcel, subject to the terms of the existing Easement Agreement executed on October 30, 2019 regarding the maintenance and operation of stormwater management ponds located on the Lands (the “Easement Agreement”), as deemed necessary and to the satisfaction of the Director of Growth Management and Chief Development Engineer.

Acknowledged.

15. The Owner agrees to enter into a development agreement as deemed necessary, including Joint Use Agreements, to facilitate the proposed development in accordance with the current Sewer Drain by-law and other applicable City by-laws at the time of site plan application stage to service the severed parcel to the satisfaction of the Director of Growth Management and Chief Development Engineer.

Acknowledged.

### **Stormwater Management Comments**

1. The allowable peak flows through the proposed outlet to the existing 600mm storm sewer on Cardinal Mindszenty Blvd has been determined based on pre- development flows from entire site area minus the flows from uncontrolled area that is not acceptable. Allowable flow rates from the subject site to the proposed outlet to the existing 600mm storm sewer on Cardinal Mindszenty shall be determined based on existing condition drainage area that drains to the existing 600mm sewer; post-development flows from the subject site to the 600mm storm sewer on Cardinal Mindszenty Blvd shall be controlled to lesser of pre- development flows based on existing condition drainage area that drains to the existing 600mm sewer and the original design flow considered for the existing 600mm storm sewer design. Please confirm whether the existing 600mm storm sewers were designed for 5yr or 2yr storm events.

The revised FSR provides rationale for the re-use of the 600mm storm sewer based on all flows from the subject lands. We acknowledge that the original FSR did not provide the detailed calculations for the capacity of this storm sewer, however the revised FSR addresses the noted capacity constraint. The re-use of this pipe under the proposed condition of controlled flows from the site is acceptable based on the capacity of the pipe under the current design.

2. A sensitivity assessment should be carried out with different storm distributions to identify a conservative storm event to be used for stormwater quantity control design.

The Chicago 3-hour storm is a standard distribution typically used for small urban watersheds as its peaked hyetograph provides a high instantaneous peak flow rate that typically represents a worst case for urban catchments. Nevertheless, we have completed additional analysis utilizing the Chicago 6-hour storm and comparing this event with the 12-hour SCS distribution, as outlined in the revised FSR.

3. Please provide a table listing pre-development and post=development flow at all outlets including the outlets of uncontrolled drainage areas for 2,5,10,25,50 and 100yr storm events; post-development flows shall not exceed pre-development flows during all storm events at each outlet.

Please refer to the revised FSR in which all flows are further quantified for overall discharge from the site.

4. Total pre-development area shown on pre-development drainage area plan (digital page 31) is different from the total post-development area shown on the post-development area plan (digital page 32); please revise.

We believe that this discrepancy represents rounding errors based on all the sub-areas involved. In any case, this has been corrected within the revised FSR and pre and post areas are now equal.

5. As per the information in section 2.3.4 and Table 4, flows from Area 1 and 2 to Bishop Ryan Way will be uncontrolled; 5yr flow from these areas should be controlled that can be routed through the proposed quantity control measures.

The revised design contains storm sewers directing flows from these areas to the underground storage system and through the oil-grit separation unit.

6. Level 1 ‘Enhanced Protection’ stormwater quality control should be provided for the subject development.

This site flows to Lake Ontario where typically Level 1 ‘Normal level protection only is required as per MECP policies. We request clarification as to why enhanced level protection is being requested. Regardless, it will be possible to provide enhanced level protection if necessary and further details of this higher level of control can be provided at Site Plan stage.

7. The proposed Cultec Isolator rows will remove 10% TSS as per the FSR, therefore Cultec System will receive mostly untreated stormwater and the proposed design considered infiltration of untreated stormwater as per FSR. Please note that City doesn’t support infiltration of the untreated (only 10% TSS removed) stormwater runoff through the proposed Cultec system; please revise the design.

Please see revised information regarding the separator rows within the Cultec system illustrating that they can provide up to 70% long term TSS removal.

8. The design should demonstrate how the increased runoff volume will be managed; LIDs measures should be considered for infiltration.

The Cultec system represents an LID measure as it directs stormwater runoff to groundwater infiltration. Further details and possible LID features can be considered at the time of the development of the site at the site plan stage.

9. Outlet control details (orifice sizes and inverts ) should be shown on the plan.

Note that these are not detailed ‘for-construction’ plans but preliminary plans provided to functionally illustrate how the site can be serviced. Detailed plans completed at Site Plan stage will include all the relevant construction requirements.

10. Please clarify why a 200mm pipe has been proposed at the southeast outlet.

This represents a “typo” and has been corrected together with the revised FSR.

11. Proposed CULTEC Recharger 902HD: Please mention provided total storage volume for stormwater quantity control, the required storage volume for 100-yr storm, the total number of Cultec chambers and number of isolator row chambers, elevation of the top and bottom of the chambers and stone.

The CULTEC design details are contained within the Appendix of the report in preliminary fashion. Further details can be provided at Site Plan stage as required including detailed design and shop drawings for the underground storage facility. We suggest that the current FSR functionally illustrates how the stormwater management can be provided at the time of future development and that these details can be reviewed during Site Plan stage.

12. Please identify the location of the proposed OGS and mention the OGS model number on the plan.

Acknowledged, this additional detail has been provided together with the revised Site Servicing Plan within the revised FSR.

13. Slopes of the existing 600mm storm sewers on Cardinal Mindszenty Blvd and downstream of the proposed 200mm storm outlet pipe should be shown on the plan.

Acknowledged, this additional detail has been provided together with the revised Site Servicing Plan within the revised FSR.

#### **Water Servicing IP Comments**

14. The hydrant tests provided are outdated. Please provide a more recent two-hydrant flow test at the closest municipal hydrant through a licensed private contractor by the proponent. To determine the approximate static pressure of the watermain, and collect calibration data for hydraulic modelling if needed, two-hydrant flow tests should be conducted at the closest municipal hydrants by the proponent through a licensed private contractor.

Additional hydrant flow testing obtained by the site owners during the completion of the 2019 WHA for the Saint Elizabeth Village site is included within the revised FSR.

15. A watermain hydraulic analysis (WHA), identifying the modelled system pressures at pressure district level under various boundary conditions and demand scenarios, will be required to



support the zoning bylaw/official plan amendment and future site plan approval applications. This analysis should demonstrate that the required domestic and fire flows are available within the appropriate pressure ranges and that the impact of this development on the surrounding pressure district is not adverse.

Please see comment response to Comment 3 above – we submit that based on the previously completed WHA (2019) and the clear results from that report illustrating that the 400mm diameter watermain on Rymal Road is sufficient for the servicing of the site can be used as the basis of support for re-zoning. Updates to this WHA can be completed at Site Plan stage as required.

### **Source Water Protection Comments**

Acknowledged.

### **Recommendation:**

The Development Engineering recommends that this application be put in a holding provision that cannot be lifted until such time that the following to be demonstrated:

- Submit to the Director of Growth Management for review and acceptance, a Sanitary Sewer Capacity Analysis in accordance with City standards, to demonstrate that there is sufficient capacity within the municipal system to support the proposed development, or to identify any municipal infrastructure upgrades required to support the proposed development. (1)

Please see comment responses above – based on ongoing work by the owner’s consultant AECOM, including monitoring of the flow levels within the sanitary trunk sewer, it will be illustrated that there is ample capacity within the municipal sanitary sewer system for the development to take place. Although the proponent does not object to the use of a Holding Provision in principle, we believe that the data provided by the ongoing monitoring program will be sufficient to clear this condition, and that even the data available presently should be sufficient to waive the need for a holding provision relating to sanitary flows.

- Submit to the Director of Growth Management and Chief Development Engineer for review and acceptance, a revised Functional Servicing Report to demonstrate that (i) post-development flows from the subject site to the existing 600mm storm sewer on Cardinal Mindszenty Blvd shall be controlled to lesser of pre-development flows based on existing

condition drainage area that drains to the 600mm sewer and the original design flow considered for the existing 600mm storm sewer design, and (ii) post-development flows shall not exceed pre-development flows during all storm events at each outlet. (2)

We believe that the revised FSR illustrates clearly that these stormwater management criteria can be met and are being met based on the proposed preliminary design, thus a holding provision relating to this matter need not be required by the City.

- The Applicant has to obtain any permit or necessary approvals from the Ministry of Environment, Conservation and Parks (MECP) for the proposed stormwater management works on the subject land in accordance with the Ontario Water Resources Act, R.S.O., 1990 c. O.40, and Ontario Regulation 525/98, or provide a confirmation letter stating that no permit or approvals are required as verified by a professional and qualified engineer or the MECP, subject to the terms of the Easement Agreement, all to the satisfaction of the Director of Growth Management and Chief Development Engineer. (3)

Acknowledged, based on our reading of the Ontario regulations, no MECP for stormwater management would be required. We are in discussion with the MECP to obtain clarification in writing based on the nature of this development that this is indeed the case. A holding provision for this matter is acceptable until such time as we receive the confirmation in writing from the MECP.

- A watermain hydraulic analysis (WHA), identifying the modelled system pressures at pressure district level under various boundary conditions and demand scenarios, will be required to demonstrate that there is sufficient pressure and flow in the existing municipal water system to supply the required fire flow (RFF) and domestic demand of the proposed development applications. (4)

Please refer to comment responses above. It is our opinion that the ability of the existing watermain network to service the proposed development has already been illustrated by previous WHA for the site completed in 2019. A full version of this report can be provided for reference as required. As such we suggest that this should not included within the Holding provision, but that a WHA can be completed at site plan stage as required.

- Make satisfactory arrangements with City's Growth Management Division and enter into an External Works Agreement with the City for the design and construction of any improvements to the municipal infrastructure at the Owner's cost, should it be determined that upgrades are

required to the municipal infrastructure to support the proposed development, according to the Sanitary Sewer Capacity Analysis accepted by the Director of Growth Management and Chief Development Engineer.(5)

Based on the current information as presented within this report, we do not believe that any upgrades to municipal infrastructure should be required. However, if any upgrades are necessary, we do not believe that it is appropriate to complete fulsome design and implementation of an external works agreement prior to the approval of the zoning provisions. This can be added as a condition of Site Plan approval to be completed prior to servicing. There are means which the City can use at Site Plan stage to limit the development if any upgrades are identified in the future. For example, the City already has a policy for allocation of sanitary capacity within the AEGD district.

Thank-you for your consideration of our revised materials together with the responses to each specific comment which we have provided above. Should you have any questions pertaining to the revisions and responses please do not hesitate to contact the undersigned directly.

Yours Truly,



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ATTACHMENTS:

- A. Revised Preliminary Site Servicing Plan
- B. Revised Preliminary Site Grading Plan
- C. Revised Preliminary Erosion and Sediment Control Plan
- D. Revised Functional Servicing Report