



via email: mknight@mississippimills.ca

October 16, 2023

Melanie Knight, MCIP, RPP
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Municipality of Mississippi Mills
3131 Old Perth Road
Almonte, Ontario
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Dear Melanie:

Re: Hilan Village – response to municipal comments (June 15/23)

Thank you for providing your 2nd round of comments in the letter dated June 15, 2023. We have since reviewed the comments in detail and revised the Planning Rationale, Engineering design drawings and reports for you to consider.

Please find below, consolidated responses from ZanderPlan and Kollaard’s addressing your comments along with additional information where clarification was requested. Once received, please contact me to arrange a brief call with the relevant parties to discuss the responses and recent changes.

[Planning](#)

[Planning Rationale](#)

1. The response letter appears to quote an out-of-date Official Plan policy as it relates to density. Please provide information on the proposed density, specifically as it relates to the updated densities in Official Plan Amendment 22 and the ratio of Low Density to Medium Density residential uses. Official Plan Amendment 22 can be found online on the Municipality’s website here: [Official Plan - Mississippi Mills](#)

It is understood that Section 2.5.3.2.3(4) of the Official Plan was revised under OPA 22, and speaks to revised density targets. Specifically, the revised section states the following:

Residential areas that are generally greater than 4 hectares in size and generally developed by plan of subdivision will include a mix of housing types per Section 3.6.5 Range of Housing Types of the Plan with low density residential areas generally being in the range of 15 to 30 units per net hectare and medium density residential areas generally being in the range of 30 to 40 units per net hectare to an average maximum of 25 units per net hectare. Generally, density will be based on a net density approach. However, in certain instances, a gross density approach may be used where the site includes significant environmental features and/or constraints in an effort to protect these. In these situations, it is proposed to apply a 10.5 to 21 units per gross hectare for low density areas and a 21

to 28 units per gross hectare for medium density areas to an average maximum of 19.25 units per gross hectare.

The subject property includes a significant amount of natural area, and it has been agreed that the gross density calculation can apply to this site. With a total site area of 7.37 ha, the overall density per gross hectare is 15.7 units/hectare, which is well within the revised target density noted above.

Layout and Slopes

2. Due to the existing slopes in the rear yards of Lots 17 to 31, the Municipality will require a clause in the Agreements of Purchase and Sale for these lots noting the existing slope and that Block 64 is not owned by the Municipality.

Acknowledged, the Agreements of Purchase and Sale will refer to ownership of Block 64.

Park Blocks

3. The Municipality is satisfied with Block 67 as a Park Block. The Municipality requests further discussion with the applicant regarding the remaining Park Blocks that are proposed in terms of size, function and location.

The subdivision layout has been revised to retain Block 67, and reduce the size of Park Block 65. The other park blocks have been eliminated from the plan.

Buffering from the Ottawa Valley Recreation Trail (OVRT)

4. The Municipality is in agreement with a notice in the Agreement of Purchase and Sale for the lots backing onto the OVRT advising purchasers of the existence and use of the OVRT by the public, including snowmobiles and ATVs which may generate noise.

Acknowledged, the Agreements of Purchase and Sale will advise purchasers of the existence and use of the OVRT by the public, including snowmobiles and ATVs which may generate noise.

Zoning By-law Amendment

5. Staff acknowledge that the proposed single zone approach has been used elsewhere in previous subdivision applications; however, the proposed zoning of the property should more accurately reflect the proposed uses. Please separate Residential First, Second and Third Density subzones with special exceptions are required be proposed and identified. The Department is not supportive of an approach using Special R4 zone that permits uses from singles to apartment dwellings.

A revised zoning figure, to match the revised draft plan, has been prepared to show the single residential lots in an R1 zone, the semi-detached blocks in an R2 zone, the townhouse blocks in an R3, zone, and two Blocks (46 and 47) proposed in an R3 exception zone which would allow a single detached unit, semi-detached units or townhouse units.

Engineering

Water

6. Section 3.1. Please note that the watermain extended on Union Street to Carss Street will be 300 mm. A 66% milestone submission drawing is attached with this comment for the developer to update the water servicing study and design. On Carss Street, there will be a 300 mm watermain from Union Street to end of Cars Street north of Mississippi River

Details have been added to the proposed servicing drawings and plan & profile drawings. It is noted that these are preliminary drawings for Draft Plan approval. Detailed design drawings will be issued for final approval of the subdivision. Similarly, additional discussion has been added to the servicing report to address this comment.

7. Please note that a new round of Water/Wastewater Master Servicing Plan is ongoing. Before the completion of this new master plan, the 2018 Master Plan is still valid. The applicant shall refer to the recommended projects in the Master Plan for your servicing study and design.

Acknowledged, the servicing study and design will reference the 2018 Master Plan.

8. Please describe more on your proposed watermain stub. Please use Union Street 66% drawing to determine the connection point(s), bury depth, joint, reducer, and etc.

Details have been added to the proposed servicing drawings and plan & profile drawings.

9. Section 3.2. Please use 350 l/cap/d. Please use City of Ottawa design guide for peaking factors.

The criteria used in the report has been revised accordingly.

10. Section 3.3, the Municipality requires a FUS fire flow calculation. The requirement will be lowered to OBC method if the development site is in downtown area or in the area that water infrastructure update has been identified in the Master Plan but not implemented yet.

The Master Servicing Plan indicates that the watermain along Union Street will be updated to a 300mm diameter watermain. In addition, the Master Servicing Plan indicates that this 300mm watermain will be extended along Carss Street to the Mississippi River.

The City of Ottawa provides the following guidance with respect to the calculation of the fire flow for private property in urban areas: "The requirements for levels of fire protection on private property in urban areas are covered in Section 7.2.11 of the Ontario Building Code. If this approach yields a fire flow greater than 9,000 L/min then the Fire Underwriters Survey method shall be used to determine these requirements instead".

The City of Ottawa design guidelines indicate that the maximum fire demand for a rowhouse block may be capped at 10,000 L/min provided that the backs of the rowhouse units are further than 10m apart.

Since the proposed development will be serviced by a watermain indicated to be updated in the Master Servicing Study it is considered appropriate to use the Guidance provided in the City of Ottawa Water Distribution design manual and accompanying technical bulletins for the calculation of the fire demand.

11. Section 3.4, refer to City of Ottawa design guide for hydrant design.

The proposed hydrants are spaced in accordance with the City of Ottawa Design Guide. The FUS guidance has been left in the servicing report as it provides additional design information.

12. Section 3.5, with this development scale, the Municipality requests the applicant submit a request to the Municipality so that the Municipality can engage J.L. Richards, who maintains the system models for the Municipality, to confirm the servicing capacity from the municipal system. The Municipality understands a confirmation was made that “there would be sufficient water supply once the upgrades to the system are complete”. Please note that the commissioning timing of these upgrades are unknown at this time.

Acknowledged. A request will be submitted upon completion of the response to the review comments.

Wastewater

13. Section 2, please follow City of Ottawa design guide for sewer design.

The sanitary sewers for the proposed development have been designed using the City of Ottawa Sewer design guidelines as amended.

14. Please provide more information on the proposed pumping station, such as wetwell dimension. Please confirm 6.0 metres is the wetwell depth. The attached 66% milestone submission drawing provides the sanitary system information at Carss Street and Union Street. Please use this drawing to determine the forcemain design/construction limit.

Detailed design of the proposed pumping station is premature for the submission for Draft Plan approval. Details will be provided prior to final approval of the subdivision, following Draft Plan approval.

Additional information with respect to the forcemains has been added to the plan and profile drawings and to the servicing report to facilitate the connection to Union Street and the installation of the force main along Union Street.

15. The Municipality’s Union Street Construction will include the forcemain portion to Carss Street and Union Street and provide a cap, depending on the construction timing. The Municipality will cost share cost with the applicant on the twin forcemain portion from Carss Street and Union Street to Brookdale Street and Union Street and requests a meeting to discuss.

Acknowledged.

16. Since the forcemain portion before reaching Carss Street and Union Street is also within municipal ROW, the Municipality requests the design include Plan & Profile for the forcemain portion.

Plan & profile sheet (210864-PP-CARSS) has been added to the preliminary design package.

17. Please provide more information regarding your offsite sanitary analysis and work with the Municipality to properly size the pumping station. The Municipality is willing to cost share with the applicant and requests a meeting to discuss.

There is no information available as to what potential future off site development will consist of. As such the potential offsite flows were estimated based on available land area for development which was considered to be roughly equivalent to the area of the proposed development. Additional flows equal to the development flow were then added.

18. Please use $K=1.350l/cap/d$. For other design parameters, please use City of Ottawa design guide.

The report has been updated with this information.

19. Please provide sewer design sheet per manhole and pipe segment, which shall be consistent with your site servicing drawings.

It is acknowledged that this information will be required as part of the detailed design package to be issued prior to final approval of the subdivision. This additional level of detail is considered premature for the purposes of Draft Plan approval as details cannot yet be finalized.

It is noted that the structures on the servicing plan have currently been assigned a default label. During the detailed design phase, structures will be numbered in order and provided with a corresponding label. Calculation sheets will then be prepared and submitted with the detailed design submission.

20. The Municipality requests high slopes for the starting segments of the sanitary system.

Acknowledged. The slope of the first section or starting segment of the sanitary sewer will be 1% in keeping with the City of Ottawa standard design guidelines.

Road Layout and Traffic Impact Assessment (TIA)

21. Please provide more information with respect to Block 61. Conveyance of a 0.3 m reserve does not address the previous comment:

Please provide a temporary cul-de-sac at the termination of Street 1 or provide details as to how the termination of Street 1 will be dealt with respect to the access to Block 44 and the ability for the Municipality to maintain this area with respect to snow removal etc.

This item will be discussed with municipal staff in addition to comments brought forward following the public meeting.

22. Please consider the seasonal fluctuation the OVRT counting study result. The data shown in Table 2 does not reflect summer season.

This will be reviewed with the traffic consultants and a response will be provided to municipal staff.

23. The Municipality's Union Street project will provide a road improvement and slight re-alignment including the intersection of Carss and Union. The attached document will provide design information.

The information has been added to the preliminary design package for Carss Street.

24. Section 4.3, Union Street has been identified as a proposed collector in existing Transportation Master Plan. The Municipality requests working with the applicant to study the left turn option.

Prior to preparation of the Traffic Impact Study submitted, the traffic engineer obtained confirmation from municipal staff regarding the terms of reference of their study. The study provided has addressed the items noted in the terms of reference.

Stormwater Management

25. This application stormwater management component is reviewed by both MVCA and the Municipality.

Acknowledged.

26. Section 2.1, although there is no post-development flow control required, the Municipality will need make sure the flow velocity, energy dissipation, and erosion and sediment control are properly addressed in design and construction.

Acknowledged. Calculations for flow velocity and energy dissipation will be provided as part of the swale design during the detailed design stage. It is worth noting that as part of the MVCA permit application review, additional information will be provided to both parties for review – prior to final approval and construction.

27. Section 3, a drainage map indicating onsite and offsite (external) areas is needed per tributary of the culverts.

This information is provided on Drawing 210864-POST.

28. Section 3, culvert hydrology will be subject to review by MVCA and Lanark County.

Acknowledged.

29. Section 4, this section is difficult to understand. Please provide flow directions and discharge points on the associated drawing. Please differentiate the major and minor event when describing the flow pattern management.

Flow directions have been added to drawing 210864-POST.

30. For Table 4.1, please indicate the meanings of C, CN. Please explain what “the clean water” is. Please use City of Ottawa for assigning imperviousness coefficients and adding 25% for 100 years event.

C = Runoff Coefficient used in the Rational Method, CN = SCS Modified Curve Number

Clean = The catchment areas indicated as “clean” are those that contribute runoff from landscaped areas or impervious areas such as building roofs which are not considered to be significant sources of suspended solids in runoff.

The percent of impervious area is a ratio based on proposed surface coverings and is not a coefficient.

The runoff coefficient C was obtained from the City of Ottawa standard design guidelines.

The SCS curve number was calculated using United States Department of Agriculture Urban Hydrology for Small Watersheds TR-55 as the City of Ottawa standard design guidelines options with respect to the Curve Number are too limited.

The runoff coefficient is not used in the storm water management calculations. It has been included in the table for comparison purposes as it is a commonly used unitless coefficient used in stormwater management that has an expected range in value dependent on the surface covering or occupancy within the catchment area.

31. Section 5, the rainfall events are confusing. Please follow the City of Ottawa design guide.

The City of Ottawa standard design guidelines do not provide specific direction as to which design storm or storm analysis method is to be used. Rather the guidelines provide direction as to how to use various methods with guidance on when or when not various methods are applicable.

The number of storm events in the model has been reduced. In addition, the duration of the storm events have been reduced from 12 hrs to 6 hrs in keeping with section 5.4.3.1 of the guidelines.

32. Section 5.2.3, please follow the City of Ottawa design guide.

The City guidelines were followed for the post-development urban catchments. The method of determining the time of concentration provided in the guidelines is not accurate for determining the pre-development time of concentrations or that of the large undeveloped off-site area.

33. Section 5.3.2, is the minor system design for 100 years? Please confirm.

The minor system design is 5 years.

34. Section 5.3.4, please provide swale design.

A typical section has been added to the site grading plan drawing 210864-GR-2.

35. Please provide rear yard stormwater management to the south.

A shallow swale will be constructed along the rear of the lots in question ensuring that runoff is not directed to the adjacent property. Additional lot grading information will be provided on the detailed design drawings to be issued prior to final approval of the subdivision.

36. Section 5.3.5, please provide HGL and the freeboard indicator.

This level of detail will be provided as part of the final design drawing package final to final approval of the subdivision. Detailed calculations and design drawings will be provided following Draft Plan approval.

Since these outlet swales described in section 5.3.5 have in general elevations below the level of the footing levels for the adjacent proposed development, the HGL within the swale will have minimal effect on the proposed development.

37. Section 5.4.4, Please indicate the proposed device of CDS will be private or will be transferred to the Municipality. The Municipality requires detailed information on CDS, with description, TSS removal credit calculation, third-party certification, and an operations & maintenance manual.

Acknowledged. The CDS will be owned by the municipality once the public lands within the proposed development are conveyed to the municipality. Specifications of the CDS units will be provided during the detailed design phase.

38. The Municipality agrees with the MVCA comment that the pre and post calculations should be done.

Pre-development calculations have been added to the stormwater management model.

39. The Municipality also recommends that various LID measures should be included into the design since there is a very loose stormwater management criteria for this development.

LID measures will be incorporated where possible and feasible. The discussion with respect to the use of LIDs and LID design will be completed in greater depth in the detailed stormwater management design phase prior to final approval.

40. Please relocate the stormwater units out of the traveled portion of the road as the Municipality is not satisfied with the design justification to locate them within the traveled portion of the road.

All of the stormwater treatment units have been relocated and are now outside of the roadway.

Appendix B

41. Please provide 5 year and 100 years event calculations.

The storm sewer design sheet included in Appendix B presents a summary of the demand on the storm sewers by catchment area to ensure that the preliminary design is functional. That is, the storm sewer layout and discharge points represent a design that can be completed in detail in accordance with MECP guidelines for storm sewer design with no major revisions.

As indicated by the City of Ottawa standard design guidelines, storm sewers should be designed to convey the flow generated during a 5 year storm event under gravity flow conditions.

For the purposes of the preliminary design, a conservative approach was used and calculations were completed to demonstrate gravity flow based on a 10 year storm event. The sheet has been revised to show the 5 year storm event.

42. Sewer sheet needs to be arranged by manhole and sewer segments along the street, which shall be consistent with your site servicing drawings.

Acknowledged. The sewer design sheet submitted with during the detailed design phase will be arranged by manhole and sewer segment. To avoid multiple unnecessary revisions caused by slight changes during the Draft Plan Approval process, this work will be completed prior to final approval.

In addition see response to 19 above.

43. For $Q/Q_{full} > 100\%$, why not propose large pipe or large channel.

Q/Q_{full} is greater than 100% during the 100 year design storm event. Since the requirement is to achieve Q/Q_{full} less than 100% is during a 5 year storm event there is no requirement to upsize the storm sewer simply based on $Q/Q_{full} > 100\%$ during a 100 year storm.

Once the final layout is complete a detailed review and design will be completed with respect to the USF of adjacent units relative to the HGL in the storm sewer. Should the HGL in the storm sewer be less than 0.3 m below the USF during a 100 year storm event, the storm pipe size will be increased.

44. Please also include channel hydraulic calculation, since channels are part of the proposed STM system.

Detailed channel design and calculations will be completed during the detailed design phase submitted in support of final approval.

45. For 100 years event, the Municipality is interested in obtaining actual flow velocity in addition to full flow velocity.

The sheet has been revised to include actual flow velocity.

46. Please indicate C value of the pipe/channel.

The sheet has been revised to include the C value.

47. As a check point, page 14 Table 5-1 indicates 1.172 m³/s before northern treatment unit, where is this number in the sheet.

The sheet has been revised to correct the discrepancy.

Servicing Report

48. MVCA to confirm the existing swale is considered a natural waterbody.

MVCA is performing a technical review of the application and supporting studies and will provide input on the regulatory authority over watercourses, if any exist.

Site Servicing Drawings

49. A Significant fill is proposed along Street 1 North and Street 2 North. Please confirm.

Acknowledged, a portion of the site requires fill in order to adequately service and drain the proposed Lots, Blocks and Streets.

50. Storm structure 260 is not described in detail in the report.

The structure labeled as Storm Structure 260 is a rear yard catchbasin maintenance hole similar to the adjacent structures (261, 409, 258, etc).

The leader for the label of Storm Structure 260 has been placed through a proposed catchbasin labeled – Catchbasin Intercepting Offsite Flow from Existing Culvert.

This structure will be located on the site in-line with the existing culvert discharging beneath the former railway path. The culvert will consist of a ditch inlet catchbasin and will have a grate invert equal to the existing grade.

The culvert is intended to capture the flow directed onto the site from offsite catchments and direct it into the storm sewer. Additional discussion and design details will be provided during the detailed design phase.

51. Proposed twin forcemain should be shown on Plan & Profile all the way to Carss and Union.

A proposed twin 100mm diameter forcemain has been added to (210864-PP-S1-S) and (210864-PP-CARSS).

52. All drawings reflecting right of way should have a scale of 1:250 and 1:50.

The drawing scale used is sufficient for technical review and construction, as such we do not intend on changing the scale of drawings provided.

53. Please re-arrange the connection angle close to the proposed pumping station. A shape turning is not allowed.

We request that additional information / clarification be provided for this comment during an upcoming meeting with municipal staff.

Other

54. The Municipality defers to the MVCA to review slope stability report. Please note that in the correspondence from the MVCA, there is an indication that the MVCA has not received the slope stability report/response letter.

We have confirmed that MVCA did receive the Slope Stability Report.

55. Please confirm if a DFO review is triggered.

Confirmation is being sought from the biologist working on this file.

Closure

I trust the information contained herein adequately addresses your recent comments. Should any of the above or attached require further revision – please contact me at your convenience to discuss.

Regards,



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