



January 10, 2023

To: Municipality of Mississippi Mills

Re: Hilan Village Subdivision
Review of First Submission

Hilan Village Residential Subdivision Application,
38 Carss Street, Almonte Ontario
File Number 09-T-22003

The following review comments have been provided by the Municipality of Mississippi Mills in response to the first submission in support of the Hilan Village Draft Plan of Subdivision Application. The comments related to the civil and geotechnical aspects of the submission have been copied below. Kollaard Associates Inc.'s response is provided in italics immediately after each comment for clarity.

9. As noted above, Blocks 62 and 66 are identified as Parks on the Draft Plan; however, it appears that a pumping station and other infrastructure is proposed within Block 66. Please clarify.

It is acknowledged that the sanitary pumping station is currently represented by a manhole icon in the middle of Block 66. It is expected that the pumping station will be contained within a "Garden Shed" style or building or building of similar appearance having dimensions of less than 5 metres x 5 metres. It is also anticipated that the pumping station will be shifted to be closer to the south edge of the park block so that it is less intrusive. The exact positioning of the building as well as the requirements of the pumping station will be determined with consultation from the Municipality as it is understood that offsite sanitary sewer is to be directed to the pump station.

The remaining infrastructure will be underground. It is expected that the majority of the northern portion of Block 66 can be left undisturbed as required.

Park Block 65

13. Based on the Engineering submission, it appears that there is stormwater management infrastructure proposed within the Block 65. Please provide information in this regard and how these will impact the survivability of the mature tree stand and how this will correspond with any proposed trails within the Block.



The revised site plan dated 2022-11-28 has a proposed Street 2 crossing through the tree stand. The tree stand will be cleared and Park Block 67 will feature select planted trees.

15. It is noted that the concept (excerpt below) illustrated the easterly “tail” of the Park as being enhanced by a green boulevard which is part of the required 18 metre right-of-way. Please confirm if this is the intent of the Draft Plan and if so, please be advised that an increased green boulevard does not meet the Municipality’s 18 metre standard cross section and specific approval for a revised 18 metre cross section in this area will be required by Council as part of the Draft Plan approval process (this can be done in tandem with the Draft Plan approval process). Any other deviations from the 18 metre standard cross section will also require Council approval as part of the Draft Plan process.

The revised site plan dated 2022-11-28 has removed Street 2 and Street 3 intersections adjacent to Park Block 67 and the standard 18m Right of Way has been applied to the new Street 2 alignment.

Engineering

Please be advised that a peer review of the submission is currently underway and further comments will be provided to supplement the following comments.

General

19. Proposed easements should be shown on the plans.

Acknowledged - Specific location and details of all proposed easements (drainage, servicing, utilities, etc.) will be established during the detail design phase, prior to registration, and included on the Lot Grading and Drainage Plan and necessary Reference Plan of Survey.

20. Detail page(s) are missing.

Acknowledged – Details are contingent on the specifics of the final design. Revisions during the draft plan approval stage will result in changes to the details of the design. As such the Details page of the engineering design drawing package will be completed and provided to the commenting agencies during the detailed design phase, prior to registration.

21. If Block 61 is to be a lot addition to adjacent land, it should be treated as a property boundary in all plans and engineering design. See comments below under stormwater management.

Acknowledged, the proposed storm works will be rerouted along the rear of lot 31 and lot 30.

Road Layout and Traffic Impact Assessment (TIA)

22. Please provide justification for the offset alignment of Street 1 and Street 2 intersection.

The Transport Association of Canada (TAC) provides guidance on the design of roads and intersections in the Geometric Design Guide for Canadian Roads. The guidance provided in this design guide indicates that an intersection angle of between 70 degrees and 110 degrees is acceptable. The intersections are within this range.



The revised site plan dated 2022-11-28 has removed Street 2 and Street 3 intersections adjacent to Park Block 67

Stormwater Management

24. Multiple overland flow outlets from multiple storm treatment units. Provide additional details for the overland flow, if mechanical treatment of stormwater is to be completed, review options to limit the number of units required.

The revised site plan dated 2022-11-28 has resulted in a reduction to 2 treatment units with 2 overland flow locations out letting to the river from the valley slope.

25. Please confirm that Block 61 is intended to be a lot addition and if so, please clarify/confirm that there will be agreements in place to address the overland flow. It is preferred that Block 61 be treated as a property boundary if it is intended to be a lot addition to the adjacent lot.

It is understood that Block 61 will be part of the retained parcel. As such, the proposed storm sewer outlet that is currently shown to cross Block 61 will be redirected across the rear of Lots 31 and 30 on the drawings prepared for subdivision approval.

26. Please relocate the stormwater units out of the traveled portion of the road.

The stormwater treatment units are designed by the manufactures to be placed in manholes designed to be placed within the roadway. The maintenance demands for the treatment unit are similar to that of a regular maintenance hole in terms of access and equipment.

The revised Site Plan date 2022-11-28 has resulted in the reduction from 2 to 1 treatment units adjacent to Park Block 67.

The south treatment unit shown on Street 1 immediately adjacent Block 66 is currently proposed to remain within the traveled right of way. The storm sewer system has been set up to allow the clean water coming from the rear yards and undeveloped offsite catchment area to bypass the treatment unit. Relocating the treatment unit will significantly increase the flow through the treatment unit thereby increasing the size of the treatment unit.

27. Concentrated overland flow from stormwater across a path in a park and within the preserved mature tree stand should be reviewed and alternatives provided.

The revised Site Plan dated 2022-11-28 has removed the path and the tree stand will be replaced with select planted trees. The stormwater will be conveyed beyond any paths by means of storm sewers and or culverts as required. Details will be provided in the design for subdivision approval.

Grading and Drainage Plan

28. Backyard slopes to be reviewed. Many are between 10% and up to 25.4% slope and this will limit the functionality of the rear yards. The standard is generally no more than 8%. Please provide analysis and justification for these slopes.



Additional lot grading and drainage will be completed during the detailed design phase, prior to registration. Where necessary, retaining walls and other grading tools will be implemented to assist in transitioning between lots and between proposed lots and the existing topography.

In addition, lot specific grading plans will be completed for each block once the specific building information is known during the application for building permit. Specific details related to lot specific retaining walls and grading mitigation measures will be provided at this time.

We acknowledge the expectation of lot grading to be generally maximum 8% to ensure usable amenity space for each lot.

29. Retaining walls should be reviewed for other options, engineering details and guardrail will be required as a condition of draft approval and more detail on drainage around retaining walls will be required including cross sections.

Acknowledged, addition grading details and retaining wall specifications will be provided on the final grading plans prior to registration.

30. Please indicate the full extent of the Grading Plan of rear yards for lots 17-30 and 61.

The current grading plan limits the extent of the proposed grades to the top of the River Valley Slope. No alteration of the existing grade will occur beyond the top of slope as a result of lot grading.

The final grading plan submitted for subdivision approval will include proposed and existing grades at each corner of these lots.

31. Please indicate the setbacks related to the Erosion Hazard Limit.

As discussed in the slope stability evaluation report Assessment of Slope Stability and Limit of Hazard Lands Setback Report completed by Kollaard Associates Revision 1 dated September 20, 2022, the Erosion Hazard Limit setback is equal to 3.3 metres from the top of bank. This setback will be added to the grading plans submitted for subdivision approval.

The setback approaches the rear of the buildings indicated on Lots 19 and 20 but is more distant from the remaining buildings.

32. Site Grading Plan – 2 shows a retaining wall to be located through the detached garage on Lot 2. Please revise accordingly.

Lot 2 has a relatively unique design with respect to a detached garage located at the rear of the lot. The garage will be built into the slope with the rear and side walls of the garage foundation acting as retaining walls. The retaining wall extending along the rear of lots 3-6 and blocks 39 and 40 will end immediately adjacent the garage foundation. The retaining wall will resume adjacent the south side of the garage foundation and extend along the rear of lot 2 and lot 1 as indicated.

More detailed design information will be provided on the drawing submitted for subdivision approval.



33. On lots where detached garages are proposed, please provide driveway and grading information. a. Consideration should be given with respect to rear yard setbacks and alignment with the grading and drainage for detached garages.

Acknowledged. More detailed design information will be provided on the drawing submitted for subdivision approval.

The final Lot Grading and Drainage Plans prepared at the building permit stage will provide detailed grading for individual lots including driveway slopes will be provided. At that time, a lot specific review will be undertaken to provide the future builder with guidance on the relationship between garage slab elevations and anticipated terrace and finish grade for each home.

Site Servicing

34. Individual services running to units to be shown on servicing plan, services to be a minimum of 300 mm outside of driveway and curb stop to be located 300 mm from property line.

Acknowledged, These details will be incorporated into the final design and will be provided on the servicing drawings submitted in support of the subdivision approval.

Other

35. Easements for rear yard catch basin leads shall be 3.0m in width, if applicable.

Acknowledged

36. Access Easements shall have a preferred cross fall of up to 5%, but no greater than 7% at the discretion of the Municipality.

Acknowledged

37. Please acknowledge that upgrading Carss Street between the intersection of the Union Street North and Carss and the intersection of Carss Street and Street 1 of the proposed development. The Street upgrade shall be to a full urban cross section with sidewalk and street lighting.

Acknowledged, this information will be incorporated during the detailed design phase on all drawings impacted by these drawing.

38. Please be advised that a 1.5 m sidewalk on one side of each Street within the proposed plan of subdivision and on the north side of the Carss Street upgrade will be required.

Acknowledged, this information will be incorporated during the detailed design phase on all drawings impacted by these drawing.



39. Please be aware that the Municipality requires a 3.0 m access road to the SWM inlet and outlet once determined in their final locations.

Acknowledged, The engineer will coordinate with the municipality during the final design to ensure that their access requirements are met.

40. Please be advised that as a condition of draft plan approval, a landscape plan will be required which should reflect all plans and studies (Geotechnical Report, Tree Conservation Report, EIS, Servicing, Grading and Drainage etc.)

Acknowledged

We trust that this response provides sufficient information for your present purposes. If you have any questions concerning this response letter please do not hesitate to contact our office.

Sincerely,



Steven deWit, P.Eng.
Kollaard Associates Inc