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July 21, 2017

DSEL File No.: 16-855

City of Ottawa
Infrastructure Services and Community Sustainability
110 Laurier Avenue West
Ottawa, ON K1P 1J1

Attention: IAD Review Officer

Re: 102 Bill Leathem Drive
2nd Engineering Comments – Site Plan

Thank you for your review of our engineering submission dated October 21, 2016. We have reviewed your comments dated January 25, 2017 with the client and consultant team and have updated our design drawings in accordance with the below comments.

Please find the following summary of comments and actions taken below:

General:

1. All plans must be updated to show the correct detail for the proposed vehicle entrances (private approaches): please show the entrance detail as per the City Standard SC7.1 (unsignalized entrance), and include reference to the City Standard. **Not all plans are correctly updated: please update the Site Plans and Landscape Plans with the correct detail.**
To be addressed by Architect.
2. Resolved.
3. Consider changing walkway material type to concrete for all walkways/sidewalks that connect to the existing sidewalk.
Noted, please refer to Site Plan for walkway material.
4. All plans must show barrier curbs in the parking lot area and at entrances. **Please update to include barrier curb at the western entrance, and extend the temporary curb stop installation in the western portion of the parking lot (northern and southern limits).**
Noted, the drawing has been reviewed and revised to include barrier curbs at the western entrance.
5. Resolved.
6. The various plans submitted with this application show different amounts of the property as part of the site plan. The site plan (and other plans) should

identify and account for the entire property as appropriate to the design element. **Not all plans have been updated; please update the Civil Engineering plans and the Landscape Plan.**

A note indicating the section of the site that is being used for the development has been included within the report text for reference. In addition, the key plan on the drawings has been revised to indicate the entire property parcel.

Existing Conditions Plan, EX-1, prepared by David Schaeffer Engineering Ltd., 15-855 dated October 21, 2016.

12. Resolved.

Grading Plan, GP-1 and GP-2, prepared by David Schaeffer Engineering Ltd., 15-855 dated October 21, 2016.

13. Minimum slope for swales is 2% unless equipped with a subdrain. For this site, 1.5% minimum (without subdrain) may be accepted. Please review plan and update where necessary. **Please show the location of the subdrain on the Grading Plan.**
Please note that the drawings have been reviewed and revised to indicate subdrains on the Grading Plan.

14. Resolved.

15. Please include the building's underside of footing elevation and top of foundation elevation on this plan. **Please include the information on the plan.**
Please note that the proposed development is to be slab on grade with no basement; based on coordination with the Architect, the underside of footing elevation, 1.725m below finished floor, has been included on GP-1 and GP-1.

16. Resolved.

17. There appear to be grade changes proposed around existing trees that are to remain. Please confirm with the Landscape Architect that the proposed grade changes and machine work will not negatively impact the long-term health of the trees. **The DSEL response indicated that all site trees would be removed, however that is not the case, as per the Landscape Plan, and the above noted tree protection fencing that is required. Please discuss this with the Landscape Plan consultant and ensure that proposed site works will not negatively affect the trees that are to be protected and retained.**
Based on coordination with the Landscape Plan consultant, grading has been adjusted to ensure protection of the existing trees.

Site Servicing Plan, SSP-1 and SSP-2, prepared by David Schaeffer Engineering Ltd., 15-855 dated October 21, 2016.

18. Resolved.

19. Resolved.

Erosion Control Plan, EC-1, prepared by David Schaeffer Engineering Ltd., 15-855 dated October 21, 2016.

20. Resolved.

21. Resolved.

22. Resolved.

23. Resolved.

Servicing & Stormwater Management Report, prepared by David Schaeffer Engineering Ltd., 15-855 dated October 21, 2016.

24. Resolved.

25. Resolved.

26. Resolved.

27. Section 5.3: the outlet for stormwater runoff from the temporary swale is incorrectly identified as the LDHSMF, but should likely be the Leikin Drive ROW. The DSEL response indicated that the temporary swale was redirected to release to the LDHSMF, but this is not the case as per the included drawings (and please note that this site should not release directly to the LDHSMF). Please update the text in the report.

Please note that the text in the Section 5.3 of the report has been reviewed and revised for clarity.

28. Resolved.

29. Resolved.

30. Appendix D – Stormwater Management

a. Resolved.

b. Resolved.

c. Please include additional information for the Q(release): note indicates it is based on the orifice equation, but please provide equation, assumptions, and constants. The City standard orifice equation constant for a round ICD is 0.61, but DSEL is using 0.60. Please provide additional documentation to support this. **Please correct/verify the ICD size units (meters indicated in the equation, no units indicated when identifying the size of 100).**

Noted, the storm calculations have been reviewed and revised to indicate ICD units.

d. Resolved.

Stormwater Management Plan, SWM-1, prepared by David Schaeffer Engineering Ltd., 15-855 dated October 21, 2016.

31. Resolved.

32. Resolved.

33. Resolved.

The following are additional comments from the review of the resubmitted material:

Site Servicing Plan, SSP-1, prepared by David Schaeffer Engineering Ltd., 15-855 dated October 21, 2016.

42. Ensure there is an invert drop across all MHs, as per the City of Ottawa standards.

Please note that invert drops across pipes have been designed per Section 6.2.12 of the City of Ottawa Sewer Design Guidelines.

43. CB leads from CBs 101, 102 & 103 seem excessive; indicated as 1% minimum, but actually seem closer to 12%, which may increase full-flow velocity over 3m/s. Please review and update.

Noted, CB Leads have been reviewed and revised to ensure a 1% slope from catchbasin to manhole.

Servicing & Stormwater Management Report, prepared by David Schaeffer Engineering Ltd., 15-855 dated October 21, 2016.

44. Sub-drainage areas indicated (A101, etc.) are not shown on any of the submitted plans; please provide these with the next submission.

Please note that supplementary stormwater subcatchment plans, FIG-1 and FIG-2, have been included in Appendix D for reference.

45. Please adjust overlapping text on the Stormwater Management Plans (Bill Leathem Drive street name)

Noted, overlapping text on the Stormwater Management Plans have been reviewed and revised accordingly.

We trust the above will satisfy the comments above, should you have any questions or comments please feel free to contact the undersigned.

Yours truly,
David Schaeffer Engineering Ltd.



Per: Robert D. Freel, P.Eng

Yours truly,
David Schaeffer Engineering Ltd.

A handwritten signature, possibly "Adam D. Fobert", with the date "2017-07-21" and the number "16-855" written below it.

Per: Adam D. Fobert, P.Eng

Yours truly,
David Schaeffer Engineering Ltd.

A handwritten signature, likely "Alison J. Gosling", in cursive script.

Per: Alison J. Gosling, EIT.