NOVATECH
Engineers, Planners & Landscape Architects

November 7, 2022

Planning and Growth Management Department
City of Ottawa
110 Laurier Ave. West
Ottawa, ON K1P 1J1

Attention: Krishon Walker, MCIP, RPP

Reference: **4837 Albion Road**
Response to 2nd Engineering Review
Novatech File No: 116111, City File No.: D07-12-19-0191

This letter is in response to comments received from the City of Ottawa dated May 20, 2020. A copy of the comments and our response (red) are shown below.

Site Plan

1. Please add required and provided bicycle parking to the site statistics table. Section 111 of the Zoning By-law requires bicycle parking at a rate of 1 per 250 square metres for restaurant, retail and office uses, 1 per 100 square metres for hotels, and 1 per 1500 square metres for all other non-residential uses (in this case, the casino and theatre).

   Response: Comment Satisfied - Bicycle parking is not required as the proposed development is in Area D of Schedule 1 of the Zoning By-law. The Subject Property is not located within a Village boundary. Refer to attached correspondence from the city dismissing this comment.

Master Development Plan

2. This plan will not be included for approval but was satisfactory to address changes to the removal of holding provisions through By-law 2020-50. It is understood that a future site plan application will be made to redesign the north-south driveway and connect to Earl Armstrong Road, once this road is constructed.

   Response: Noted

Illustration Plan

3. This plan will not be included for approval, so a resubmission is not required, but please note that the sidewalk near the MUP has not been removed to match the other landscape plans.

   Response: Noted

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Maintenance and Liability Agreement

4. Thank you for removing the proposed private landscaping from the Albion Road right-of-way; however, it is acknowledged that the existing riprap in the ditch will remain. A maintenance and liability agreement will be required to address this.

   Response: Noted

Civil Engineering Plans and Studies

5. The grading from the spillover of the ponding ditch does not appear to have sufficient grading to keep rare flows away from the sanitary pump station.

   Response: The grading on the backslope of the ditch has been revised to ensure the 100year + 20% stress test ponding limits do not spill towards the pump station.

6. There are concerns with the ability of vehicles to not bottom out when crossing the culvert approaching the sanitary pump station.

   Response: The slopes on either side of the culvert are within specifications therefore there are no concerns with vehicles bottoming out.

7. Section A-A and B-B, cut on drawing 116111-GR2 and shown as sections on 116111-ND1 do not concur and the swale/ditch bottom width on 116111-GR2, but displayed with variation between the two on 16111-ND1.

   Response: The cross-section bottom width has been revised accordingly on drawing 116111-ND1. Only cross section A-A is required with the revised design as the ditch cross section is now consistent for the entire length.

8. It is suggested that curb cuts are required for the overland drainage from the new paving to the cedar hedge and racetrack.

   Response: Depressed curbs have been provided to control the overland spill locations to the cedar hedge and racetrack.

9. The previous request was for the survey monument used to establish datum for the plans. The consultant has provided the benchmark for the use and though this is useful, this is not what is being asked for. Please provide the cartographic monument used to establish the local benchmark at the site: the result should be something along the lines of OC4578832 with an elevation of 95.65 m ASL, located in the second step of the community centre 122 m east of the intersection of [example] and [example] Streets.

   Response: The cartographic monument information has been provided in General Note 7 on the revised Notes and Details drawing (11611-ND1)

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10. The index sheet's list of drawings does not match the actual list of drawings.

    Response: The index list of drawings on the cover page has been revised accordingly.

11. Additional drawing is required for the additional fire-fighting tank and structural engineer's proof of resistance against collapse for an exhaustive range of vehicles that may be on top of the tank in the parking lot.

    Response: General Note 13 has been provided on the revised Notes and Details drawing (11611-ND1) to ensure that a shop drawing provided by the contractor shall include a structural engineers seal and proof of collapse for the worst-case scenario of vehicles that could potentially park on top of the tank.

12. Please include bollards around the fire hydrants and a detail of the bollards.

    Response: Bollards and bollard details have been included on the revised plans.

13. Stormwater management response 1 refers to a section 3.5.2 that was not found.

    Response: Section 3.5.2 is a typo and should read section 4.4.2 (Stormwater Management Pond).

14. Stormwater management response 2 refers to sections 4.2.4 and 4.6.1. Section 4.2.4 does not appear to be pertinent to the issue; please provide alternative references.

    Response: Section 4.2.4 is a typo and should read 4.2.3 (Stormwater quantity Control).

15. Section 4.2.5 requires further discussion and should be comprehensive.

    Response: The purpose of section 4.2.5 is meant to be brief in order to outline the use of BMPs in the design. Detail on the underground storage / infiltration chambers are provided in section 4.4.1 of the report. Section 4.2.5 has been revised accordingly to refer to section 4.4.1 for further details.

16. The infiltration trenches mentioned in section 4.3 and roof storage, also mentioned in section 4.3 were not located on plans nor discussed.

    Response: The word infiltration has been added to the ditch in the north corner of the site to better match the detail shown on the notes and details drawing. The maximum roof storage ponding limits have been shown on the revised roof drainage area plan provided in appendix C. Also, section 4.3 in the report has been revised to indicate the proposed storm infrastructure, building rooftop release rates / storage has been moved from section 4.5.1 to section 4.5.2 for more clarity.

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17. The last sentence of section 4.3.3 is not reflected in the layout of ICDs in 116111-GP1.

    Response: All proposed ICD's on the existing structures have been added to the revised servicing plans.

18. The comments of the third paragraph of section 4.6.2 Proposed Conditions under the heading Major System Design and Analysis were not carried to other sections of the report- particularly the conclusions and recommendations section that could be misleading.

    Response: This paragraph has been removed as it did not reflect the proposed stormwater management design. Note that there is no ponding during the 2-year event within the existing and proposed areas and 100-year ponding depths are less than 0.35m for the existing and proposed areas.

19. Please provide confirmation from both Ms. Hunt and Mr. Evans of their acceptance of the fire design.

    Response: Confirmation to be provided upon receipt.

20. Please provide the hydrogeological report for the well water and discussion of how the well water will be provided to the fire tanks. Backwater prevention valves will be required, and any additional contamination protections suggested by the consultant.

    Response: A hydrogeological report is not required as the fire suppression water storage tanks will be filled by water trucks and not the well onsite. A declaration will be provided by the owner acknowledging this requirement.

21. Please show on the plans the connections from the wells to the fire tanks stated on sheet 35 of the Servicing and Stormwater Management Report.

    Response: The existing water feed from the well to the existing fire tanks has been shown on the revised servicing plans

22. The fire discussion is not stamped and sealed by a Professional Engineer licensed in Ontario.

    Response: A sealed copy of the fire discussion memo has been provided with the revised submission. Also please note that FUS calculations have not been provided with the understanding that these calculations are used to size Municipal watermains not to size fire suppression systems.

23. The pathway to the sanitary pump station should be repaired to necessary condition (anticipated to be heavy vehicles) and extended to the pump station as proposed by the Novatech sanitary pump station technical memorandum, dated November 1, 2019.

    Response: The pump station access road has been included as part of design, refer to 116111-GR2 for details.

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24. Absolute values are required for the scuppers for the roof drains (as opposed to relative elevations) and a plan of the roof drains and the full requirements of section 8.3.11.3 with this new proposal for rooftop storage. All of the values stated in section 8.3.11.3 are required. Further to the comment, the roof drains included shown on drawing 116111-SWM (not included in the drawing set) includes a roof drain reference table that could not be correlated with the plan shown.

    Response: The detailed roof drain and scupper design is by others and will be reviewed as part of the building permit application process. The Civil aspect of the design considers the number of drains and potential storage to provide a release rate for the roof. The roof drain locations are only provided on the roof drainage area figure as the roof drains are not part of the Civil design. Roof drainage is part of the building therefore the detailed design will fall under the mechanical and structural consultants' scope of work.

25. Inspection manholes were not located on the servicing plans as prescribed by the underground arch manufacturer on page 195 and detail number 3 on drawing sheet 3.

    Response: The chambers shown on the servicing plans are for location and perspective only. Exact details of the chamber construction are provided in the detailed design drawings of each chamber from the manufacturer. The manufacturers detailed drawings accompany the Civil design drawings in the re-submission package.

26. It is not clear how the isolator row will perform the necessary isolation duties.

    Response: Pre-treatment will be provided via the Isolator Row within the underground storage system. The Isolator Row is a row (typically first row) of Stormtech SC-740 arch-type chambers that designed to treat that "first flush". The Isolator Row accomplishes this in two ways. The first is by way of settlement. The Isolator Row length is provided to allow for larger particles to settle out as the flows travel down the Isolator Row. In addition to settling, the Isolator Row is surrounded by filter fabric (geotextile) and is not connected directly to the outlet and as such the water must pass through the filter fabric to make its way to the other chambers and ultimately to the outlet.

    The "first flush" Stormwater runoff is directed to the Isolator Row via a weir or elevated bypass. This is done to ensure that during frequent (small) storm events are directed to the Isolator and not large events with high velocities that can cause resuspension of the sediment. This protects the adjacent chambers & surrounding clearstone from sediment accumulation.

    Sediment will accumulate on the filter fabric within the Isolator Row. A such, the Isolator Row will require periodic maintenance (i.e. jet flushing / vacuuming).

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27. It is suggested that the loading dock and the catchbasin downstream of the garbage enclosure both be provided with an oil/grit separator.

    Response: The trench drain in the loading dock/ garbage area have been provided with and oil grit separator unit.

28. Please provide confirmation that the underground storage arches are provided the manufacturer's cover

    Response: The chamber storage details have been provided to the the manufacturer for review and detailed design. The manufacturer has no issues with the cover provided they have provided detailed design drawings for the revised submission.

29. Please provide a crossing table for the drawing 116111-GP3 and a cover table for the hydrant lines.

    Response: A pipe crossing table has been added to the revised servicing drawing 116111-GP3. However, a watermain cover table which included the pipe crossing information was included with the previous submission.

30. The storm sewer design sheet, not provided prior to this submission, sheet 182, shows a number of proposed sewers that do not have free flow conditions during the design event nor does the report show mitigation of existing sewers that exceed their capacity during the design event and this is contrary to the statements made by the report in section 4.2 and 4.2.1.

    Response: The proposed storm drainage and stormwater management design incorporates a portion of the existing storm sewer system. This includes the outlet pipe to the pond. The proposed storm sewers are limited in size due to the connecting downstream storm sewers. As such, under a free-flowing condition the storm sewer design sheet indicates that some pipe sections would surcharge.

    The existing and proposed storm sewer system includes inlet controls and underground storage to control peak flows within the storm sewer system and prevent surface ponding during the 2-year storm event. Note that the design ensures 'no 2-year ponding' for both the existing and proposed storm sewer system. This is achieved by adequately sizing the inlet control devices and utilizing the available storage within the existing and proposed stormwater management systems (arch-type infiltration chambers). This also promotes infiltration through the highly permeable soils, which greatly improves the capacity of the storm sewer system.

    The purpose of the design sheet is to show conveyance under a free-flowing condition. The stormwater management model accounts for inlet controls and infiltration and was used to confirm sewer hydraulic grade lines. The model properly sizes inlet controls and sewer pipes to ensure there is no surface ponding in the 2-year event, that 100-year surface ponding depths

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do not exceed 0.35m, and that there are no impacts to the building during the 100+20% stress test.

In order to provide a storm system capable of conveying the 2-year uncontrolled flows all the existing infrastructure would require upsizing. This option does not make sense logistically or economically as it would require the removal and reconstruction of approximately 700m of sewer, including modifications to the existing stormwater management pond. The majority of this sewer is located in areas on site where no construction was proposed. Also, it should be noted that the existing system has been in operation for 20 years with no issues.

Section 4.2, 4.2.1 and 4.2.2 have been updated to provide more clarity. These sections of the report are in reference to the proposed design which includes the proposed system as well as the existing system to remain. The storm sewer design sheet has been revised to include controlled flow rates from the stormwater management model. The controlled flows provide a better representation of the overall pipe capacities based on the proposed design.

31. There appears to be a gap in the accumulation of flows in the sewer design table line starting "R-02".

    Response: The storm sewer design sheet has been updated to provide more clarity when static flows are added. The static flows represent the controlled 100-year peak flow from the building rooftop.

32. There appears to be a gap in the accumulation of flows in the sewer design table line starting 'R-03, A-19"

    Response: Refer to response to comment #31(above).

33. For the sewer design table please confirm that "EXT STMMH 102" and "EXT STM 102" are different elements; it is suggested that more different names be used.

    Response: This was a typo and has been revised in the storm sewer design sheet. These are the same structures and should read EX STMMH 102.

34. For the sewer design table please discuss how the accumulated 2.78AR for the line above the line started A-17 is the total it is with the sum of the lines starting A-11 and A- 12.

    Response: The accumulated total 2.78AR is 22.16 which is the summation of all the flows entering EX STMMH 102 from Area A-11, A-12 and A-16. The 22.16 is based on the summation of 5.57+0.1+16.49 = 22.16.

35. For the sewer design table EX STM 102 does not appear to have an outlet.

    Response: Refer to response to comment #33 (above).

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36. Please provide robust rationale for the line below the table that "flows will be attenuated with ICD's which will increase the excess capacity in the pipes". Please also discuss the deficit in the pipes- please note that as per section 5.6.9.2 of the Sewer Design Guidelines design of sewers is not to be completed on the basis of ICD rates.

    Response: Please read the response to comment 30 as the same rationale applies. We understand section 5.6.9.2 of the sewer guidelines and we have followed that criteria by providing a design sheet with uncontrolled flows for a 2-year event. Again to summarize the storm sewer will ultimately be constructed with inlet control devices in catchbasins to limit flow entering the storm sewer system. The inlet controls will be supplemented with infiltration chambers to store and infiltrate the stormwater backed up by the inlet controls.

    For this project we feel the storm sewer design sheet is not a great representation on how the storm sewer system will operate as it doesn't consider many factors that will improve the conveyance capacities. The stormwater management model results are a better representation on how the system will function during the different storm events.

37. For the sewer design table, it is suggested that the design should be reviewed for re-directing flows to have more ideal Q/Qfull values.

    Response: Please read response to comment 30 and 36. Once again this is not possible without replacing the existing sewer or constructing new storm sewer system from the pond back to the site. This is a large cost that the owner does not wish to incur. We as the Civil Engineer have done our due diligence to provide the client with a cost-effective solution that will protect the public from any dangers.

    The revised storm sewer design sheet includes controlled flows from the stormwater management model which provides more realistic Q/Qfull values.

38. For the sewer design table, it is assumed that the ICDs placed in series were appropriately modeled.

    Response: There are no ICDs in series in this design, however all ICDs were incorporated into the stormwater model for accurate sizing.

Commence Work Notice

39. For the commence work notice please be reminded that:
    - an amendment to an existing ECA is required and that no civil works are permitted until a commence work notice is given
    - review of the sediment of the existing pond is required and likely, removal and rehabilitation
    - cleaning of the downstream sanitary sewers is required before securities will be permitted to be released

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- an agreement will need to be witnessed on a program, entirely at the cost of the owner, to clean the header rows of the underground, stormwater cleaning infrastructure- in perpetuity
- the Owner acknowledges the design leaves the existing system untouched and not to the lowest prescribed level of service
- As discussed on sheet 37 one of the existing fire tanks needs to repaired in due course.
- Without additions, and/or additional work, on the nearest water pumping station, the current water provision for water for the site will not be exceeded now or in future; notice of same will be put on title for the property.
- Scheduled sanitary pump station inspections will need to be witnessed as a program entirely at the cost of the owner
- A protocol for sanitary pump station alarms and catastrophic failure needs to be established, with cleaning of the trash basket and pump evaluation, and possible replacement, a priority.
- fulfillment of the entirety of the conclusions of the sanitary pump station investigation will be required before securities will be permitted to be released.
- The photo of the sanitary pump station (sheet 71) appears to show an unfinished development
- The owner will need to provide a signed letter solely accepting all risk of roof drains entering the building, if that is the case.

Response: Noted

40. Points above may require special conditions for the site plan agreement, which the proponent could propose for review by City staff.

Response: Noted

Transportation Impact Assessment - General Comments:

41. Please correct the statement in Section 6.5 that states that the ZBL does not require bicycle parking.

Response: This statement is correct bicycle parking is not required as the proposed development is located in Area D of Schedule 1 of the Zoning By-law. The Subject Property is not located within a Village boundary. Refer to attached correspondence from the city dismissing this comment.

42. Other comments raised in the January 14, 2020 summary of comments letter have been addressed.

Response: Noted

Ottawa Building Code Services

43. As the Hard Rock group has been in ongoing contact with BCSB and OFS concerning the fire access routes, water supply and demand, BCSB has no further comment in regards to the SPC application.

Response: Noted

Removal of Holding

44. Following the passing of By-law 2020-50, zoning exception 528r states that the holding symbol within Areas A, B and D of Schedule 381 may only be removed once an application for Site Plan Control under the Planning Act is approved, which addresses the following, and as more specifically described in report ACS2018-PIE-EDP-0021 and all to the satisfaction of the General Manager of Planning, Infrastructure and Economic Development:
    a. Transportation Demand Management strategies to support and encourage travel options to reduce reliance on single occupancy automobile use;

    b. Transit or shuttle services between the site and the nearest transit station;

    c. An update of the Transportation Impact Assessment submitted with the zoning by-law amendment application to provide for a more refined examination of impacts of the expanded facility (taking into consideration phasing) to local road networks and participation in implementation of measures that may accelerate Transportation Master Plan projects where practical and other possible measures such as participating in localized improvements that may alleviate current congestion.

Special conditions for the site plan agreement may be required to fulfill the above provisions and remove the holding.

Response: Noted

Special Condition - Transportation Demand Management strategies

45. The TIA Addendum includes the following for TDM measures:
    - The proponent would consider a carpooling and/or ridematching service.
    - Bike parking will be provided in a sheltered area.
    - A staff room with lockers will also be provided.

Please propose a special condition for the site plan agreement addressing the implementation of TDM measures.

Response: Noted

Special Condition - Transit or shuttle services between the site and the nearest transit station

46. OCTranspo staff advise that neither OC Transpo nor Legal Services have any records of a formal agreement with the casino for their current shuttle service to Greenboro. It

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appears that they have been operating with an informal agreement. Currently, the casino is offering service approximately every hour. Increasing this frequency could help draw more customers to use transit for accessing the casino. Because Bowesville station will have a bus loop in the fare-paid zone, the shuttle will have to use the passenger pick-up and drop-off spots that will be located adjacent to the station within the first phase of the park & ride facility. OCTranspo suggest the following general condition in the site plan agreement that requires the casino to arrange for access to the O-Train Line 2 with OC Transpo:

"The owner (or casino operator) agrees to provide a shuttle service at their own expense connecting to an O-Train Line 2 station, and to work with OC Transpo to identify a suitable location for passenger pick-ups and drop-offs. The shuttle service is to remain in place until an all-day OC Transpo route is provided on Albion Road adjacent to the casino property. The shuttle service may still be provided outside of the operating hours of any future OC Transpo route serving Albion Road adjacent to the casino."

The wording may be further developed with Legal staff if it is generally acceptable.

Response: Noted

Special Condition – Participation in Measures to Alleviate Congestion

47. Hard Rock's participation in implementing measures to alleviate congestion such as fronting-ending TMP projects (e.g. the Albion/Lester intersection) or constructing select traffic calming measures identified by Transportation Planning's Albion Road Traffic Study will require further discussion. Once an implementation approach is determined, a special condition within the site plan agreement would be appropriate.

    Response: Hard Rock has agreed to improving the City intersection at High Road and Albion Road as per the agreed upon scope. Construction costs have been on the rise and it is anticipated that all project allocated funds will be required to construct Phase 2 of the facility. In conclusion, Hard Rock Ottawa LP cannot entertain expenditures beyond the approved scope of the project

The noted drawings and reports, as discussed in the above noted comments have revised accordingly and are hereby submitted for review and approval.

Yours truly,

NOVATECH

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