SPA and ZBLA Application Response Matrix

Initially Prepared by Mansfield Ski Club Inc. August 25, 2016

Updated August 19, 2020

Comment	Response from	Initial response to Comment	August, 2020 response
NVCA Comment from Aug 25, 2016			
Engineering 1. Please confirm that the south-east outlet to the municipal road is acceptable to the municipality.	Mulmur		The SWM outlet has been revised in accordance with the RJB letter dated March 24, 2020.
2. Although the drainage area and peak flows have been reduced to the north-east outlet, we are concerned that volumes may still be increasing. Please confirm that overall water volume leaving this outlet is not increased. This location may require further consideration for securing permission to outlet.	WMI	As indicated within the Functional Site Servicing & Stormwater Management Report (FSR), both the peak flows and runoff volumes released to the northeast outlet are reduced in the post-development condition.	N/A
3. The drainage area to the pond ¡s below the minimum recommended for a wet pond or wetland. This may lead to challenge in maintaining sufficient water levels in the pond and may cause the quality of the pond water to be an issue.	WMI	The SWM design has been revised to include various LID's in conjunction with a dry detention basin for quantity control purposes.	N/A
4. Please demonstrate that the external flows can be conveyed without impacting the site if the entrance culvert is blocked.	WMI	The grading design has accounted for an overland flow route from the culvert, east through the parking lot and into the enhanced grass swale prior to entering the dry detention basin. The overflow spillway weir will be sized accordingly at the Site Plan stage.	A proposed by-pass storm sewer section and the site grading in conjunction with the proposed EGS at the east limit of the site will ensure all external flows are directed to the dry detention basin. The basins outlet structure has been designed to account for the external lands runoff and consists of an overflow spillway weir and swale in the event of a

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			blockage/storm event less frequent then the Regulatory storm event.
5. Please have the geotechnical engineer comment on the suitability of the pond from a geotechnical perspective, The review should include the suitability of the almost 2 meter high berm on the east side of the pond.	WMI	See attached letter response. Additional geotechnical testing may be required at Site Plan stage.	The geotechnical recommendations have been provided within Appendix H of the SS & SWM Report dated Aug. 2020.
6. For the development of IDF information the NVCA recommends the use of the MTO's online tool available at http://www.mto.gov.on.callDF Curves/terms.shtml.	WMI	IDF information has been updated using the MTO online tool as requested.	N/A
7. There does not appear to be snow storage area for the development. Please outline the measures to prevent the stormwater pond from being used as the snow storage area.	FRP	Response to follow at Site Plan stage	Snow storage areas shown.
ECOLOGY			
14. NVCA staff has no concerns with the proposed development from a natural heritage perspective.		N/A	N/A
NVCA Comments from Feb 23, 2018			
Stormwater 1. Please confirm that the municipality will accept the runoff flow at the outlet located to the south-east of the site.	WMI		The SWM outlet has been revised in accordance with the RJB letter dated March 24, 2020.
2. There does not appear to be a dedicated snow storage area for the development. Please outline the measures to prevent the stormwater pond from being used as the snow storage area.	FRP		Shown on latest drawings
3. The drawdown time for the proposed dry pond will need to be confirmed. It is required to have a minimum of 48 hours of drawdown time in the pond for the 25 mm storm event. If the 48 hour time requirement is not possible please complete a rapid geomorphic assessment for the receiving watercourse. If the minimum outlet diameter of 75mm is used and the drawdown time is still less than 48 hours, the rapid geomorphic assessment will not be required.	WMI		A 48 hour drawdown time for the 25mm storm event was targeted in the design of outlet structure for the proposed dry detention basin. A 75mm orifice is proposed and will result in a 16.2hr drawdown time which is greater than the 12 hour minimum as per MECP guidelines.

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4. The pre and post-development drainage plans and catchment areas need to be checked and verified. Swales or ditches seem to drain towards the west for the lands immediately south of the main chalet and the new residential Building 'B' and Block 6. The size and inverts of the existing culverts need to be shown.	WMI		The uncontrolled area noted is considered negligible, is relative in both the pre- and post-development condition and discharges to the undeveloped portion of the subject lands. The pre and post drainage areas are considered conservative from the overall SWM design perspective.
5. Please address phosphorus management requirements for the site and provide loading calculations for existing and proposed conditions, including "best efforts" to achieve a decrease in loading rates. A reference guide is available on our website at: http://www.nvca.on.ca/Shared%20Documents/NVCA%20Phosphorus%20Loa ding%20Tool%20Final%20Report%202014.pdf.	WMI		Phosphorous budget has been completed
6. Please provide a planting plan for the proposed dry stormwater management pond.	FRP		Planting plan included in submission.
Geotechnical			
7. As per section 2.3 of the NVCA SWM standards, please provide an opinion from a geotechnical engineer on the suitability of the dry pond from a geotechnical perspective. The review should include the feasibility/suitability of the almost 2 metre high berm on the east side of the pond.	Shad		See June 21, 2018 Shad Geotech report
8. A geotechnical letter from a qualified engineer is required to support the stormwater parameters, and proposed LID's and to note any groundwater issues.	Shad		See June 21, 2018 Shad Geotech report
9. The ski hill to be raised and the proposed fill placement upon it needs to be supported by a geotechnical engineer's study to ensure increased loading does not cause slope failure.	Shad		See June 21, 2018 Shad Geotech report
Proposed Snow Making Pond	WMI		The snow making pond has been detailed on the SMPLP drawing in

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16. The most recent engineering drawings include a pond for snow making purposes at the north end of the property adjacent the 17th Sideroad and may not be part of the ZBA or the Site Plan process. Original plans did not provide any detail of this pond and the Hydrogeology and Testing Drilling Report did not clearly indicate the purpose of the new water source other than it was for Ski Club purposes. The pond falls within the regulatory jurisdiction of the NVCA where a permit is required from the NVCA prior to development. The NVCA will require additional details to support the proposed pond. There may be a watercourse in the area of the pond and confirmation should be provided that this will not be an on-line pond.			conjunction with the latest version of the EIS.
17. The NVCA respectfully requests a copy of the Assimilative Capacity Study when it becomes available. Additional comment from a Natural Heritage perspective may be provided subsequent to our review of this document.	Hutchinson		Report provided
NVCA Comments from Feb 20, 2019			
Ecology 9. Section 4.4. in the Environmental Impact Study (EIS) discusses an 'ephemeral' drainage feature on the property, which will be directly impacted by the proposed expansion of the chalet footprint. Further, Section 5.2 notes a small wetland feature in proximity to the existing ski chalet, which is proposed to be completely removed for the proposed re-development. NVCA staff recognize that these features may be (at least in part) artificial in nature (resulting from parking lot drainage). However, the exact location and extent of these features should be identified in the EIS mapping. The EIS should also clarify if these features meet the definition of a Key Hydrologic Feature (KHF) and, if so, assess the proposal against relevant policy constraints (e.g. Growth Plan). 10. The EIS should provide mapping which clearly and accurately depicts the limits of natural heritage constraints (e.g. wetlands,	Hutchinson Hutchinson		Shown on drawings and studied See Jan 10, 2019 EIS

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drainage, SAR habitat) and associated regulatory and policy buffers (e.g. regulated extents, minimum vegetation protection zones (MVPZ) for KNHF/KHF). These constraints should be presented visually in relation to proposed and/or recommended development limits (e.g. infrastructure, grading limits).			N/A
11. NVCA staff support the recommendation made in 5.1.1 regarding an alternative location for the snow-making pond. To conform with policies of the Growth Plan, a 30m MVPZ must be maintained from the delineated edge of the adjacent wetland community. This alternative pond placement would also alleviate any concerns regarding impacts to habitat for SAR identified on the property (e.g. Eastern Meadowlark).	Hutchinson		See FRP landscaping plans
12. Section 6.3 of the EIS recommends implementing a naturalized stormwater management pond. NVCA support this concept and request that planting details be submitted in a formal report at detail design stage	FRP		
NVCA Comments from Sept 9, 2019			
Engineering 1. We note that several comments related to engineering (stormwater management and geotechnical) from our previous correspondence dated August 25, 2016 and February 23rd, 2018 remain outstanding. It is the applicant's intention to address all outstanding items within the Site Plan approval process. Staff consider this approach reasonable and sufficient information has been provided to demonstrate that the proposed development can be supported by servicing (e.g. water, sewage disposal, stormwater).			N/A
ECOLOGY 3. NVCA staff agree with the assessment of 'ephemeral' drainage feature associated riparian wetland community on the property not meeting the criteria with the Grown Plan of the Greater Golden Horseshoe to be considered Key Hydrological Features. The EIS does recommend that that the features will be wholly offset	FRP		Shown on FRP submission

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(feature and function) by the creation of a naturalized SWM system. NVCA support this concept and request that planting and design specification be submitted in a formal report at detail design stage.			
4. A large woodland area is located along the northwest corner of the property and may constitute a Significant Woodland feature, which is considered a Key Natural Heritage Feature as per Growth Plan criteria. Within the provincial Natural Heritage System, a Key Natural Heritage Feature requires a minimum vegetation protection zone of 30m. The EIS has not included an assessment of this woodland feature, or addressed conformity of proposed development activities (filling) adjacent to the woodland edge. NVCA staff recommend one of two options to address this concern: a. An assessment of woodland significance be undertaken to determine if the feature constitutes Significant Woodland and, therefore, requires a 30m minimum vegetation zone. b. The site plan be revised to incorporate a 30m setback between the edge (dripline) of the woodland feature and the limit of adjacent filling activities, along with installation of appropriate ESCs along this setback limit.	FRP		Setbacks shown on drawings
5. The EIS recommends revising the development concept to incorporate an alternative snow-making pond location, as depicted in Figure	WMI/FRP		This is reflected on latest drawings
4. Assuming this alternative location is reflected in the development design moving forward, NVCA staff have no further natural heritage concerns regarding the snow-making pond. The limits to wetland features in the vicinity of the snow-making pond should be surveyed, and 30m setbacks staked and delineated with ESCs, to ensure no encroachment into the features. Please provide in you next site plan submission.	FRP		Survey was completed, FRP asked to add appropriate notes to drawings

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Dufferin County Comments July 27, 2016	Response From	Initial Response to July 27, 2016 Comments	
1. Please note that without a building code matrix firefighting provisions cannot be properly reviewed i.e., building access, access routes, sprinklers, stand pipes, fire alarms, unprotected openings, etc.	+VG	Response to follow at Site Plan stage	+VG showing matrix on final SP package
2. A building that is more than 600 m2 in building area shall be provided with access routes for fire department vehicles to the building face having a principal entrance and to each building face having access openings for firefighting.	+VG/FRP	Response to follow at Site Plan stage	+VG and FRP showing adequate routes
3. Access routes shall be located so that the principal entrance and every access opening required are located not less than 3m and not more than 15m from the closest portion of the access route required for fire department use, measured horizontally from the face of the building.	+VG	Response to follow at Site Plan stage	Confirmed
4. Access routes shall be provided to a building so that,			
a. for a building provided with a fire department connection, a fire department pumper vehicle can be located adjacent to the hydrants	+VG	Response to follow at Site Plan stage	N/A
b. for a building not provided with a fire department connection, a fire department pumper vehicle can be located so that the length of the access route from a hydrant to the vehicle plus the unobstructed path of travel for the firefighter from the vehicle to the building is not more than 90m, and	+VG	Response to follow at Site Plan stage	Confirmed
c. the unobstructed path of travel for the firefighter from the vehicle to the building is not more than 45m.	+VG	Response to follow at Site Plan stage	Confirmed
Please note that the unobstructed path of travel for the firefighter from the vehicle to the building shall be measured from the vehicle to the fire department connection provided for the building, except that if no fire department connection is provided, the path of travel shall be measured to the principal entrance of the building.			Noted
5. lf a portion of a building is completely cut off from the remainder of the building so that there is no access to the remainder of the building, the access routes required shall be located so that the unobstructed path of travel from the vehicle to one entrance of each portion of the building is not more than 45m.	+VG	Response to follow at Site Plan stage	Confirmed

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6. Access routes for fire department vehicles shall be provided with,	+VG	Response to follow at Site Plan stage	Confirmed
a. a clear width not less than 6m,	+VG	Response to follow at Site Plan stage	Confirmed
b. have a centerline radius not less than 12m,	+VG	Response to follow at Site Plan stage	Confirmed
c. have an overhead clearance not less than 5m,	+VG	Response to follow at Site Plan stage	Confirmed
d. have a change in gradient not more than 1 in 12.5 over a minimum distance of 15m,	+VG	Response to follow at Site Plan stage	Confirmed
e. be designed to support the expected loads imposed by firefighting equipment and be surfaced with concrete, asphalt or other material designed to permit accessibility under all climatic conditions, f. have a turnaround facilities for any dead-end portion of the access route more than 90m long, and g. be connected with a public thoroughfare.	+VG	Response to follow at Site Plan stage	Confirmed
7. Adequate water supply for firefighting shall be provided for every building as per Sentence 3.2.5.7. (1) of the 2012 Ontario Building Code and Guideline-O3-1 999 of the Office of the Fire Marshal.	WMI	Fire water supply has been provided via a storage tanks	Confirmed
8. Hydrants shall be located within 90m horizontally of any portion of a building perimeter that is required to face a street by virtue of 3.2.2.	WMI	Hydrants are within 90m (unobstructed path of travel) from all building entrances	Confirmed
9. Fire Department Connections:			
a. The fire department connection for a standpipe system shall be located so that the distance from the fire department connection to a hydrant is not more than 45m and is unobstructed.	+VG	Response to follow at Site Plan stage	Confirmed
b. The fire department connection for an automatic sprinkler system shall be located so that the distance from the fire department connection to a hydrant is not more than 45m and is unobstructed.	+VG	Response to follow at Site Plan stage	Confirmed
c. The fire department connection required shall be,			

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i. Located on the outside of a building adjacent to a street or an access route, not less than 300mm and not more than 900mm above ground level, and	+VG	Response to follow at Site Plan stage	N/A
ii. Provided with two 65 mm hose connections with female swivel hose couplings.	+VG	Response to follow at Site Plan stage	N/A
10. Sewage Disposal Systems Applicable Legislation:			
a. Small (i.e., total daily design sanitary sewage flow of 10,000 L/d or less individual or multiple subsurface sewage disposal systems, located wholly within the boundaries of the lot or parcel of land on which are located the residence(s), building(s) or facility/ies which they serve, are subject to the requirements of Part I of Division B of the Building Code (O. Reg. 350/06) made under the Building Code Act, 1992. This Act is administered by the Ontario Ministry of Municipal Affairs and Housing. Under Part I of the Building Code, the means to determine the total daily design sewage flow are provided in Article 8.2.1.3. The values in Tables 8.2.1 .3.A. and 8.2.1.3.8. represent sewage flow generation rates from residential occupancies and other specific facilities. The design and construction of small subsurface sewage disposal systems, under the jurisdiction of the Building Code Act, 1992, should strictly adhere to standards contained in Part I of the Building Code relating to: ¡I iii iv Classification of sewage systems and site evaluation; . Sewage design flows and clearance requirements; types and design of tanks used to collect, treat, hold sanitary sewage; and the sewage subsurface disposal design, construction, operation and maintenance requirements.	WMI	Noted	
b. AII sewage works with a design capacity in excess of 10,000 L/d, including subsurface disposal systems, are subject to the requirements of Section 53 of the Ontario Water Resources Act (OWRA) administered by the Ontario Ministry of the Environment. Subsurface disposal systems with a design capacity in excess of 10,000L/d are referred to as large subsurface sewage disposal systems (LSSDS). The design of a LSSDS under OWRA jurisdiction is subject to the ministry engineering review and approval process (Section 1.5 - Ministry Approval Program for Sewage Works). To clarify it further: lf	WMI	Noted	

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a sewage system has a rated capacity of greater than 10,000 L/d, it is an OWRA sewage works regardless of location; lf a single property contains several small systems (each rated at less than 10,000 L/d but the combined rated capacity of the systems exceeds 10,000 L/d, all those systems are OWRA sewage works regardless of their individual capacity; and lf the system is not contained entirely within the property of the building (or buildings) it serves, it is an OWRA sewage works regardless of the capacity of the system. Please note that a copy of the Municipal Fire Department's fire prevention inspection report is required by the Building Department upon completion of the inspection.			
Dufferin County Comments Feb 24, 2020			
1. Please note that without a building code matrix firefighting provisions cannot be properly reviewed i.e., building access, access routes, sprinklers, stand pipes, fire alarms, unprotected openings, etc. Please update the package to include the building code matrix for the buildings.	+VG		+VG including in drawings
2. A building that is more than 600 m2 in building area shall be provided with access routes for fire department vehicles to the building face having a principal entrance and to each building face having access openings for firefighting.	+VG		+VG including in drawings
3. Access routes shall be located so that the principal entrance and every access opening required are located not less than 3m and not more than 15m from the closest portion of the access route required for fire department use, measured horizontally from the face of the building.	+VG		+VG including in drawings
4. Access routes shall be provided to a building so that, a. for a building provided with a fire department connection, a fire department pumper vehicle can be located adjacent to the hydrants,	+VG		+VG including in drawings

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b. for a building not provided with a fire department connection, a fire department pumper vehicle can be located so that the length of the access route from a hydrant to the vehicle plus the unobstructed path of travel for the firefighter from the vehicle to the building is not more than 90m, and c. the unobstructed path of travel for the firefighter from the vehicle to the building is not more than 45m.			
5. If a portion of a building is completely cut off from the remainder of the building so that there is no access to the remainder of the building, the access routes required shall be located so that the unobstructed path of travel from the vehicle to one entrance of each portion of the building is not more than 45m.	+VG		Confirmed
6. Access routes for fire department vehicles shall be provided with, a. a clear width not less than 6m, b. have a centerline radius not less than 12m, c. have an overhead clearance not less than 5m, d. have a change in gradient not more than 1 in 12.5 over a minimum distance of 15m, e. be designed to support the expected loads imposed by firefighting equipment and be surfaced with concrete, asphalt or other material designed to permit accessibility under all climatic conditions, f. have a turnaround facilities for any dead-end portion of the access route more than 90m long, and g. be connected with a public thoroughfare.	+VG		Confirmed
7. Adequate water supply for firefighting shall be provided for every building as per Sentence 3.2.5.7. (1) of the 2012 Ontario Building Code and Guideline-03-1999 of the Office of the Fire Marshal. Please provide the calculations used and all information on the water supply for firefighting.	WMI		All requested fire supply design calculations are provided within the SS & SWM Report dated Aug. 2020 and within the engineering drawing set dated Aug. 17, 2020.
8. Hydrants shall be located within 90m horizontally of any portion of a building perimeter that is required to face a street by	WMI		The hydrant locations have been indicated on the GENN drawing of

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virtue of 3.2.2. Please update the site plan to include the locations of the hydrants.			the engineering drawing set dated Aug. 17, 2020
9. Fire Department Connections: a. The fire department connection for a standpipe system shall be located so that the distance from the fire department connection to a hydrant is not more than 45m and is unobstructed. b. The fire department connection for an automatic sprinkler system shall be located so that the distance from the fire department connection to a hydrant is not more than 45m and is unobstructed. c. The fire department connection required shall be, i. Located on the outside of a building adjacent to a street or an access route, not less than 300mm and not more than 900mm above ground level, and ii. Provided with two 65 mm hose connections with female swivel hose couplings.	WMI		None of the proposed buildings will be sprinklered, therefore no fire department connections are needed.
10. Sewage Disposal Systems Applicable Legislation: a. All sewage works with a design capacity in excess of 10,000 L/d, including subsurface disposal systems, are subject to the requirements of Section 53 of the Ontario Water Resources Act (OWRA) administered by the Ontario Ministry of the Environment. Subsurface disposal systems with a design capacity in excess of 10,000L/d are referred to as large subsurface sewage disposal systems (LSSDS). The design of a LSSDS under OWRA jurisdiction is subject to the ministry engineering review and approval process (Section 1.5 – Ministry Approval Program for Sewage Works). Please provide confirmation from the MOE for the design of the septic system.	WMI		MECP approved the Assimilative Capacity Study which outlines the acceptable effluent objectives, limits and loading limits and the proposed on-site sewage system has been designed in accordance with these approved criteria. An MECP ECA will be applied for upon receiving input from this latest SPA submission.

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RJ Burnside Comments August 2017		**Initial Response from 2017**	
1. The total number of units differs between the information submitted. Based on the Site Landscaping Concept plan dated June 2016, the application includes the addition of 6 blocks of stacked townhouses, totaling 66 units, two blocks that consist of a total of 27 loft units with 1,595 m2 commercial retail space. They also propose a Ski Home, but it appears this is an existing dwelling on the property. This equates to a total of 94 units The applicant should confirm that this is the intended expansion.	+VG		Ski Home already exists, number of residences revised in latest submission to 91
2. There are easements on the plan and we do not know whether the proposed development meets the terms of the easements on the property. The applicant should provide the terms of all easements for review by the Township solicitor. For example, it appears there is an easement going through the proposed stormwater management pond. We do not know if this is an issue.	+VG		The development has been designed to be co-ordinated with existing easements. The only easement which is problematic is MF26327 (the ROW servicing 3 chalets from 15 SR). The existing ROW is not passable and the 3 owners have transited MSC property for years rather than using the ROW. MSC have offered the 3 owners to relocate the ROW to the existing MSC entrance on 15 SR provided they pay their share of legal costs.
Specific to Zoning Amendment Application			
3. The zoning amendment should be for short term occupancy and it should clearly indicate that the site is not for permanent residential occupancy.	Mulmur		Confirmed, the applicant expects this provision will be included in final SP Agreement
On-Site Sewage System			
4. Pre-consultation with the Ministry of Environment and Climate Change (MOECC) is essential for our review and until their criteria are known we do not recommend the Township approve the proposed zoning amendment application. We do offer the following comments that should be clarified by the applicant.	WMI	Pre-Consultation with the MOECC has been completed as recommended. Supporting correspondence is provided within Appendix G of the FSR.	Refer to Appendix G of the SS & SWM Report dated Aug. 2020.

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5. Section 2.4 makes reference to a restriction on typical leaching beds of a maximum of 5,000 L/day. We are not sure what restriction the proponent is referring to, as there are no such restrictions on leaching beds, with the exception of a septic tank and filter bed type of system.	WMI	The FSR has been updated to remove this reference.	Confirmed
6. Sections 2.4 and 2.4.1 make reference to the design being based on Waterloo Biofilter's BMEC Authorization for the Waterloo Biofilter Area Bed System, but the design report does not make reference to any type of subsurface area bed. We also point out that the BMEC Authorization was revoked on April 28, 2016 and no longer exists to permit an area type of bed. Please clarify the references to the area bed system.	WMI	The FSR has been updated to remove this reference. No area bed is proposed as the sewage treatment system will be a surface discharge system. An assimilative capacity study (ACS) in support of the proposed surface discharge system is currently underway.	MECP approved the Assimilative Capacity Study which outlines the acceptable effluent objectives, limits and loading limits and the proposed on-site sewage system has been designed in accordance with these approved criteria. An MECP ECA will be applied for upon receiving input from this latest SPA submission.
7. No information is provided with respect to the anticipated types of commercial/retail units. The types of uses (i.e., wet or dry uses, restaurants, spa, etc.) could significantly impact the sewage system design.	WMI	Details with respect to CRU space usage is currently unknown. This concern will be addressed during the Site Plan stage. To be conservative, a mix of CRU uses has been accounted for within the design calculations.	The CRU space usage is still unknown and a mix of CRU uses has been conservatively accounted for in the design calculations.
8. The existing metered flow data suggests that the maximum day is approximately 2.7 times the average day demand. The water demand calculations for the existing main chalet used an assumed maximum day factor of only 1.5 to calculate maximum day demand which is inconsistent with the actual data. This also means that the peaking factor of 3 is likely too low.	WMI	To be conservative, the maximum day factor used has been updated to 3.5 which is greater than the 2.7 value determined from the metered flow data. Correspondingly, the peaking factor has been updated to 7 (double the maximum day factor).	More recent metered flow data has been used to update the necessary flow calculations and associated peaking factors.
9. The sanitary service design calculations use a peaking factor of 2 on the existing chalet. This is not reflective in the water data provided as noted above.	WMI	Both the water and sanitary flow design calculations have been revised to ensure consistency is provided.	

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10. The water demand calculations indicate a peak day flow of 541, 015 L/day compared to the sewage design flow of 116,765 L/day which is substantially lower than the water demand. Additional clarification and justification of flows should be provided, particularly in light of the fluctuations in flows typically experienced in a resort style community.	WMI	Refer to the two previous responses provided above for Comments #8 and #9.	Confirmed
11. Flow balancing volume should be justified with actual calculations in relation to the treatment system capacity, to ensure adequate treatment and balancing capacity is provided over periods when there could be several maximum days in a row (e.g., during holiday periods, long weekends, etc.).	WMI	As indicated in Section 2.4.1 of the FSR, 1.13 days' worth of balancing/storage volume is accounted for within the design of the sewage treatment system. Additional details will be provided during the Site Plan stage.	Waterloo Biofilter have completed a detailed design of the sewage treatment system based on our provided design flows.
12. There is a Letter to the County of Dufferin in Appendix F regarding the use of the existing sewage treatment system to include the proposed Ski House. It is our understanding that the existing system is being abandoned and assume this letter is only meant to provide additional information about the existing sewage system which would be no longer relevant to the proposed development.	WMI	Correct. Appendix F is only provided to confirm the acceptance of the now constructed Ski House's servicing as well as to provide the background information for the Existing Main Chalets water/sewage flow calculations (metered flow data).	Appendix F is provided as a means of validating the design flow calculations for the existing uses on-site in addition to last ski seasons metered flow data. Phase 1A of the development is proposed to use the existing water and sewage treatment systems. The final water and sewage treatment systems are not proposed to be constructed until Phase 1B. Considering the above, the Appendix F is provided to also demonstrate the existing sewage treatment systems capacity.
13. There are concerns with the discharge of the treated effluent at the location proposed as part of the downstream system goes through private property before the ultimate outlet at Pine River. This	WMI	The treated effluent discharge location has been revised based on discussions with the MOECC.	Further discussions with the MECP resulted in the final approved discharge location being the Pine

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could generate potential complaints as the discharge will be continuous and not related to storm events and as a result there may be nuisance and erosion issues.		The revised discharge location is into the existing wetland located at the base of the ski hill just south of the 17th Sideroad. The effluent will remain within the MSC lands. A proposed storm sewer connection will convey the effluent to the existing wetland and another will convey it to the Pine River at the location of the existing pump house.	River at the existing pump house. The treated effluent will discharge from the sewage treatment system to the Pine River directly via a proposed storm sewer system.

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Hydrogeology			
14. For zoning purposes, we do not recommend the Township approve the zoning until a long term pumping test has been completed on both wells to prove the supply wells (PW1 and PW2) can pump the combined 40 lgpm (3 L/s) as proposed. We note that ideally you would want your well pumps to be capable of supplying at least the maximum day water demand which is greater than 40 lgpm. The hydrogeological report completed by Morrison did conduct a long term test on PW2, but only at a rate of 5.7 lgpm (0.43 L/s) to avoid obtaining a temporary permit to take water (PTTW). Additional testing of the wells at the proposed pumping rate (both wells pumping) will be required in order to obtain a permanent PTTW. The testing is to assess whether there are any potential connections to the nearby irrigation pond and the Pine River and to demonstrate that there are not limitations to the shallow aquifer that limit its long term capacity. This will require the installation of streambed piezometers in the irrigation pond and the Pine River and a monitoring well between the MSC wells and the Pine River. The western extent of the alluvial deposit is not defined and a monitoring well should be installed near the base of the escarpment so that any boundary effects can be monitored. In addition, water quality changes over time and groundwater under the direct influence (GUDI) indicator parameters will need to be monitored during the test.	Morrison	A total of 4 wells (each assumed to be capable of 91L/min yield) will ultimately be constructed to ensure that no less than the Maximum Day Demand (MDD) is provided directly from the wells.	Comment has been further addressed in Morrison final reporting letter

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15. The location of wells PW1 and PW2 are shown on Figures 3 and Figures A-1 and A-2 in the Morrison report. Both wells appear to be located less than 100 m from an irrigation pond on the MSC Property and also appear to be less than 200 m from the Pine River to the east. It is not clear how water levels in PW1 and PW2 relate to water levels in the nearby irrigation pond or in the Pine River. Figure A-2 in Appendix A has a line of cross section shown in plan view. It would be helpful if this cross section could be completed to show the relationship between water levels in PW1 and PW2, the pond and Pine River.	Morrison		Comment has been further addressed in Morrison final reporting letter
16. The trend between specific capacities for PW1 and PW2 is different compared to the driller's results and Morrison results. Though variations do occur, the opposite trend is not typical and should be explained.	Morrison		Comment has been further addressed in Morrison final reporting letter
Specific Capacity (lgpm/ft.)			
Well Driller Morrison			
PW1 2.8 lgpm/ft. 1.14 lgpm/ft			
PW2 1.2lgpm/ft. 2.54lgpm/ft.			
17. Morrison indicated that they used the Transmissivity and Storativity values of the aquifer and the storability to develop a spreadsheet to estimate the combined yield of PW1 and PW2. It is not clear from the review of the spreadsheet in Appendix E how the values were arrived at. Morrison should provide additional details on how the flow value of 40 lgpm was obtained for PW1 and PW2.	Morrison		Comment has been further addressed in Morrison final reporting letter

Comment	Response from	Initial response to Comment	August, 2020 response
18. For the water quality parameters tested, the only parameter that was found to exceed the Ontario Drinking Water Quality Standards was manganese at 0.057 mg/L which is just slightly above the guideline of 0.05 mg/1. The elevated manganese is an aesthetic parameter that can affect the taste of water, can stain clothes and can cause build up in household piping and fixtures. As a result, treatment may be required. In addition, the water bearing formation is fine grained (wells are constructed with B slot well screen) which suggests that the wells may be prone to plugging, necessitating regular well rehabilitation in order to maintain as constructed yields. A full ODWQS should be completed as part of the long term pumping test.	Morrison		Comment has been further addressed in Morrison final reporting letter
19. It appears that the best opportunity to construct wells capable of yielding more than 5 lgpm is on the eastern side of the site in the overburden deposits which is where PW1 and PW2 is proposed. However, these deposits are fine grained and as a result, the capacity of an individual well may be limited. Burnside review of the water well records in the area suggest that yields are generally quite low, typically less than 10 lpgm.	Morrison		Comment has been further addressed in Morrison final reporting letter

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Traffic			
20. The traffic report indicates that the project is not intended to increase membership but rather to provide additional amenities for their members. The traffic memo did not discuss change in trip generation time which is likely to be impacted as a result of the accommodations. Would Friday peak p.m. require a left turn lane to Sideroad 15 off of Airport Road? Won't these added amenities attract non-members to shop or eat at the Mansfield Ski Club or will they not be open to the public?	WMI	We agree that the proposed accommodations would generate more Friday PM traffic than what is currently experienced, and accordingly, we believe that this would decrease Saturday AM peak hour traffic. We don't believe that this anticipated shift in peak travel times will have detrimental effects on the surrounding local and county roads, and so it is not anticipated that external road improvements will be required. With regard to shops/ restaurant traffic, our understanding is that these facilities are to remain private (for members only) so it is not anticipated that they will generate additional traffic above and beyond the 'bolstered' amounts as detailed in the August 9, 2017 Traffic Opinion memo.	Further to the previous/ initial response, the increase in vehicular trips as a result of this development is expected to be negligible, and we anticipate that the shift in peak travel times will not detrimentally affect existing capacities of the surrounding local and County roads (as this traffic will already have been experienced during peak-season). As such, our opinion remains that a technical analysis of left turning traffic at Airport Rd. / Sideroad 15 is unjustified.
	MSC		The applicant also hereby confirms that no increase in the number of members is forseen given hillspace limitations. This means there is likely to be a reduction in vehicle trips because some members will be able to spend weekends on the

Comment	Response from	Initial response to Comment	August, 2020 response
			property rather than returning to Toronto
Stormwater Management			
21. It is unclear how the effluent from the on-site sewage system is accommodated for in the SWM Facility as it is not discussed in the Site Servicing and Stormwater Management Report. Assuming that the effluent does not impact the operation of the pond from a flow control perspective (which still needs to be verified), this intent must be clearly described in the ECA application as this is not a conventional use for a SWM facility.	WMI	The treated effluent discharge location has been revised as previously noted above.	Confirmed
22. Per MOE SWM Planning & Design Manual (2003), 5:1 sloping is to be provided above and below the permanent pool for at least 3 m. This is not accounted for in the layout. Further, it is our opinion that the pond does not reflect a 'wetland' design which would typically have varying depths (to support a variety of aquatic plant life) and curvilinear edges. There appears to be room to modify the shape of the pond, side slopes and depths.	WMI	The SWM design has been revised to include various LID's in conjunction with a dry detention basin for quantity control purposes. The dry detention basin will consist of 4:1 (H:V) side slopes and will not consist of a permanent pool.	Confirmed
23. Figures in the report are generally lacking information (roads not labelled, features described in the report not shown). Catchment Post 1 should be discretized further; there should only be one outlet per catchment and Post 1 presently outlets to the road via the by-pass channel and to the road via the SWM facility. Modelling will need to be updated accordingly.	WMI	Roads and features described within the FSR are labeled on the figures and drawings. The hydrologic modeling has been updated to as requested.	Confirmed
24. There is no table comparing pre and post flows for the combined area (site + external). It appears from a review of the modelling output that the post development flows closely align with the pre development flows but this information should be made available in the body of the report.	WMI	Additional tables have been provided within the FSR as requested.	Confirmed
25. There is mention that the Post 2 catchment area is smaller than the Pre 2 catchment area and that this will be beneficial because the	WMI	Additional details related to the POST2 and PRE2 catchment areas	Confirmed

Comment	Response from	Initial response to Comment	August, 2020 response
area lacks a sufficient outlet. How insufficient is the outlet and will the smaller catchment area be enough to resolve the problem? Can the minor events from this catchment be directed to the SWM facility?		has been provided within the FSR to further clarify how this uncontrolled area is being accommodated within the overall SWM design. Unfortunately the minor system cannot be directed to the SWM facility.	
26. It does not appear, from a review of the modelling, that the 'spill' from the by-pass channel towards the SWM facility been accounted for in the pond design. Please advise.	WMI	The grading design has accounted for an overland flow route from the culvert, east through the parking lot and into the enhanced grass swale prior to entering the dry detention basin. The overflow spillway weir will be sized accordingly at the Site Plan stage.	The dry detention basin and its associated outlet structure and spillway have been sized to accommodate all runoff from the by-pass channel.
27. There is a 'spill' identified at the 15th Sideroad culvert on Dwg. DOP. It is not clear where this spill is directed or how the spill will be conveyed to a sufficient outlet.	WMI	The post-development condition at the upstream end of the 15th Sideroad cross culvert is to remain the same as-is in the pre-development condition. The existing spill under less frequent storm events appears to be directed east along the north shoulder of the 15th Sideroad across a driveway.	The SWM outlet has been revised in accordance with the RJB letter dated March 24, 2020.
Specific to Site Plan Amendment Application			
28. A landscape concept plan has been submitted. As part of site plan application, a detailed planting plan is to be provided. Ensure to keep trees outside the 15th Sideroad right-of-way. With the overhead hydro line in close proximity, the species selecting abutting the property line by the overhead hydro should be selected as to avoid future conflict with the lines when the tree matures.	FRP	Noted.	

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29. Site lighting plan, including photometric and lighting/pole specifications are to be provided.	Electrical Eng.	Response to follow at Site Plan stage	Lot lighting plan submitted
30. Drawings are to be more detailed including general notes section for construction (pavement structure, minimum restoration details, pipe specifications, reference to OPSDs, etc.). Drawings should be stamped. Please also label each building to match the Landscape Concept Plan (Building A, Building B, Block 1, Block 2, etc.).	WMI	Additional details as requested will be provided at the Site Plan stage. All buildings have been labelled to match the Landscape Concept Plan.	All requested information has been provided within the engineering drawing set dated Aug. 17, 2020.
31. Site Servicing Plan comments:			
a) The plan should indicate the proposed watermain and sanitary sewer sizes. Valving on the water distribution system may be advantageous to limit disturbance during any pipe repairs. Blow offs should also be present for flushing purposes especially if it is anticipated that there will be low usage during some periods.	WMI	Watermain and sanitary sewers have been sized and valves and blow-offs (hydrants) have been provided.	Confirmed
b) The plan should show the proposed wells, the location of the raw water line to the proposed mechanical room, and subsequently the treated waterline from the mechanical room to service Mansfield Ski Club. The storage will need to be sized to ensure the system can adequately provide maximum day demand as well as peak demand. It will also need to be confirmed if fire protection is to be provided.	WMI	Provided.	Confirmed
32. Grading Plan comments:			
a) The existing elevations on the grading plan need to be made visible in order to review proposed grading. Since servicing is on a separate drawing, add top of grate and inverts at each MH on the grading plan.	WMI	Provided.	Confirmed
b) The proposed retaining wall exceeds 1 m in height and with the site where the public is admitted, the wall is a designed structure un the Ontario Building Code and will require a permit	WMI	Additional design details will be provided at the Site Plan stage.	The proposed retaining walls will be designed by the structural engineer at the building permit stage.
c) The driveway entrance within the right of way will be required to be asphalted.	WMI	A note and hatch has been added to the drawings to show that the entrance is required to be paved.	Confirmed.

Comment	Response from	Initial response to Comment	August, 2020 response
d) For the SWM facility, some of the aspects are deferred to detailed design. These details will be required as part of the site plan application with a revised report submitted that address the missing details	WMI	Understood.	Refer to the SS & SWM Report dated Aug. 2020 and the engineering drawing set dated Aug. 17, 2020.
e) Detailed grading for the sewage system will need to be shown and should be coordinated with Waterloo Biofilter to ensure appropriate depth of cover on tanks to allow maintenance.	WMI	These details will be provided at the Site Plan stage	Detailed grading has been provided. Refer to Biofilter Plan 1 (BIO1).
f) Swale slopes should be labelled. For example, the swale behind the most western townhouse block is sloped at 0.3% which is not sufficient. Ideally, a minimum of 2% would be achieved in areas where possible.	WMI	All swales have been labeled and graded to provide a minimum of 2.0%	All swales that are less than 2.0% are complete with a subdrain.
g) On the drawing, parking stall typical size (standard and accessible) should be labelled. The accessible parking spots should be identified with signage shown. In terms of the fire route, it should be identified with the aisle width (minimum 6 m) with the inclusion of no parking signs where needed, and the centerline turning radii (minimum 12 m) should be shown at all road bends. Snow storage locations and the garbage enclosure detail should be shown on the drawing.	+VG	Response to follow at Site Plan stage	
h) The proposed swale to the south of the existing chalet appears to be placed at a higher elevation then the surrounding existing elevations. Additional detail should be shown on the drawings to show that the chalet has positive drainage.	WMI	Grading has been revised to illustrate positive grading from the chalet	Confirmed
i) Between Building A and Block 4 additional grading should be shown. Though there is sufficient fall for positive drainage, runoff from the corner of Building A (elevation of 303.5) may be directed towards Block 4 corner (elevation of 303.0).	WMI	Grading has been revised	Refer to the engineering drawing set dated Aug. 17, 2020.
j) Additional elevations on the grading plan need to be shown to ensure no runoff from POST 1 is going to POST 2 drainage area, particularly at the western boundary of POST 2.	WMI	Additional grading has been added	Refer to the engineering drawing set dated Aug. 17, 2020. The figures have been updated to reflect the existing and proposed grading.
k) More grading details is required at the external outlet pipe to show where the 303.2 m elevation is located and the grading surrounding this area. Erosion protection should be provided at the overflow location.	WMI	Additional details will be provided at the Site Plan stage	The external outlet pipe is no longer proposed but an by-pass storm sewer is and additional grading in this area has been provided.

Comment	Response from	Initial response to Comment	August, 2020 response
l) The driveway culvert outlet and the external pipe outlet are relatively close together which may cause maintenance issues for the Township. The Township should not have to maintain the external by-pass culvert and there should be an encroachment agreement for this culvert, which should also include the Mansfield Ski Club Sign which is currently located in the ROW.	Mulmur		
RJ Burnside Comments of March 6, 2020			
Site Plan • I had expected the site plan area to include the entire property. There are three distinct areas of activity: the village core, the additional fill on top of the ski hill, and the snow making pond/ service area for wells, forcemains, and water supply lines. Typically, the "Site Plan" includes the entire area, all of which is covered in the Site Plan Agreement. • In the southwest corner of the side, near 15SR, the Landscape Architect has placed a note in the area immediately beside the Existing Residential Lot that says "Existing Vegetation to Remain". Yet on the Site Grading Plan- South, the Engineer shows an aggressive regrading in this area and a 2:1 slope. We will require assurances that the proposed 2:1 slope is stable and revegetated and minimizes impact to the existing lot. • Is there any fencing proposed? • Garbage trucks accessing their enclosure will interfere with traffic entering or leaving the site. • Has consideration been given to emergency access? There are a large number of vehicles that rely on a single point of access. The Site Plan should signage directing emergency vehicles to the various buildings. • Snow storage is not shown. • The "Site Plan" is the only part of the submission that addresses phasing. The engineering drawings show only the wells that service Phase 1 and amended drawings and site plan agreement will be needed to move into Phase 2. There is no indication on the current plans that indicates if infrastructure (not including buildings) will be part of Phase 1 or Phase 2. It appears that all lighting, tree planting, sidewalks and parking areas will be built in Phase 1 with only the buildings deferred to Phase 2, but this needs to be clarified. The Site Plan drawing does not indicate how the areas of the Phase 2 buildings will be vegetated pending advancement of Phase 2. • Arrangements for shared access to existing houses remains unknown. Our letter of July 27, 2016 had requested terms of existing easements to enable review impacts of proposed infrastructure being placed over top. • I don't know what happened to the Traffic Plan. We had outstanding comments about the needs for turning lanes that don't appear to have been resolved.	FRP WMI and FRP FRP FRP MSC FRP All WMI		Refer to the Overall Site Plan. A retaining wall has been added to maintain as much existing vegetation as possible. No MSC currently manage through schedule MSC is used to regular visits by Emerg services, we typically direct to one of the two lots while vehicles en route A phasing plan has been created. A response to the previous (single) traffic comment has been provided above.

Comment	Response from	Initial response to Comment	August, 2020 response
Site Grading Plan, North • Our previous comments questioned the possibility of water spilling from one drainage area to the next and these concerns remain. We note the road behind Block 2 which is approximately 1.4 m higher than the ground surrounding the Block 2 Building. **Site Grading Plan, South** • As noted in our previous letter, it would be advisable to have some amount of a stormwater collection system as significant areas of runoff have been allowed to accumulate. • The berm and collection swale along the east boundary of the site may not have sufficient capacity to prevent spillage/bypass. What provision has been made for major storms or for runoff events when the ground is frozen over the infiltration swales? • It is difficult to determine the existing and proposed grade lines, particularly in Sections CC and DD, where the Township ditch is being regraded. There are hydro poles in this area, and we were unable to determine whether or not they will be affected. • In general, the works on the Township road allowance will need to be more clearly detailed. In addition to general grading details, consideration must be given for the potential of scour by waters discharging from the 1,050 mm diameter driveway culvert, both at the location where the ditch changes direction and throughout the area that will be disturbed and regraded. I have not scheduled a meeting to review	WMI WMI		-The grading plan has been updated and detailed grading has been completed. Refer to the Site Grading Plan North (SGRN). -A storm sewer system has been added to convey the minor storm events from key areas such as the hard surfaced Village area. -There are no more infiltration swales proposed due to the presence of fill material in this area and the maintenance concerns associated with minimal pre-treatment upstream of a proposed surface infiltration feature. -The township ditch is no longer proposed to be re-graded as the SWM outlet has been revised based on the RJB letter dated March 24, 2020. -There is no longer any work being completed within the municipal ditch.

Comment	Response from	Initial response to Comment	August, 2020 response
these works with the Township's Public Works Director but I will do so when we receive more details. • There was no geotechnical report include in the most recent submission. Our file contains a Preliminary Geotechnical Investigation dated June 21, 2018 which raised concerns with the stability of the dry detention pond. A final report is needed, and any recommendations should be incorporated into the engineer's drawings. • As noted in our previous letter the detention pond design sloping does not comply with the MOE SWM Planning & Design Manual (2003) as the slopes are too steep. If the proposed configuration is maintained the pond will need to be fenced. **Site Servicing Plan, North** • Calculations were not provided to show how the watermains were sized or what fires flows were being provided. The are no details of the water supply system or reservoir. • Detailed design of the wastewater system was not submitted, nor were descriptions of the proposed commercial uses as we had requested. As noted in previous correspondence MECP approvals of the wastewater system and the well water taking are pre-requisite to entering a Site Plan Agreement. Presumably there has been an application to MECP for an Environmental Compliance Approval, and that design information should be integrated with the Site Plan submission. **Site Servicing Outlet Plan** • There are lines on the drawing that are not identified in the legend. They appear to indicate property boundaries and generally match with online mapping of parcel fabric. It appears that the proposed outlet sewer extends outside of the Mansfield Ski Club property which will necessitate a land acquisition or easement. We were unable to determine whether or not satisfactory arrangements have been made. **Wetland & Proposed Snow Making Pond Location Plan** • The drawing contains the following note "*Should the proximity of the existing wetland relative to the existing (2) and proposed (2) drilled wells be determined an issue with respect to the wetland negatively impacting the drilled wells water quality through a detailed hydrogeological assessment (Site Plan Approvals Stage) an appropriate…. "* We are now at the Site Plan Approvals Stage. All the assessments need to be done now and appropriate designs incorporated. • The Site Plan should include any safety measures that are proposed to prevent accidental drownings (i.e. fencing, signage etc). It appears that the design does not incorporate the gradual slopes used for stormwater management ponds and is more akin to a swimming pool or manure storage facility on private property. • The pond is labelled "future" without further explanation. **Erosion and Sediment Control Plan** • The plan does not extend beyond the Village Core area and therefore does not address erosion associated with the fill being added to the ski hill or the areas of the sewage forcemains and sewers that lead to the river.	WMI FRP		-The requested geotechnical information is provided within Appendix H of the SS & SWM Report dated Aug. 2020. - The proposed SWM facility is a dry facility and considering this the 4:1 (H:V) side slopes meet MOE guidelines. In addition, the basin is located far from the Village, ski hill and main parking area. Safety signs will be placed indicating that the basin could potentially fill with water during rainfall events, but it is our opinion that no fencing is required. -Fire flow and watermain calculations have been provided within the SS & SWM Report dated Aug. 2020. -Detailed design of the wastewater system has been provided. We require the Townships signature on the MECP ECA application. Our intent is to obtain the required signature once the Township has reviewed this latest submission and then submit for ECA approval. -The legal information has been updated. The outlet sewer is within the MSC property. -We are of the understanding that the hydrogeological assessments completed to date sufficiently address this concern which was a previously requested note at the functional design stage. -The proposed Snow Making Pond will include adequate safety measures such as signage. -Erosion controls have been added to the plans outside of the village core

Comment	Response from	Initial response to Comment	August, 2020 response
• The Environmental Impact Study (Hutchinson, January 10, 2019) contains recommendations for erosion and sediment control that do no appear to have been incorporated into the engineering drawings. (This omission extends to other recommendations from the EIS as well). • Timeliness for grass restoration should be noted. • The exposed area of re-ditching on 15SR needs to be addressed. • Please check the use of straw bale check dams on 15SR in relation to the volume and velocity of water in the ditch. The gradient averages about 8%.	FRP/WMI		-No re-ditching of the 15SR is proposed anymore and as a result, no straw bale check dams are proposed in this area.
• South Parking Area photometric and lighting layout are not included. • Photometric calculation for residential unit parking area should be provided. • Buildings' exterior lightings should be shown including their specifications. They should be 3000K CCT and fully cut-off. • North arrow should be indicated on the drawings.	Runge		Lighting plan included and discussed