



MAIN-LAND

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February 7, 2022

Department of Environmental Protection
Bureau of water Quality, Division of Environmental Assessment
Attn: Jami MacNeil, Project Manager
17 State House Station
Augusta, ME 04333

Subject: Sugarloaf West Mountain Expansion – Response to Soils Comments

Dear Jami,

VHB and Main-Land has received a memorandum of technical review, on the application for Sugarloaf – West Mountain Expansion, from William Noble dated November 30, 2021. The following letter is intended to address these review comments as well as provide an update on other plan revisions that are submitted as part of this package. It is organized with the reviewer comments in italics followed by our response on behalf of the Applicant.

- 1. The soil survey narrative report should be dated. See Part II, Section 11.A of the site application.*

The submission date has been added to the Soil Survey Narrative Report and the updated report is provided with this resubmission.

- 2. Soil survey maps (sheets E1.1 and E1.2) should include the following: NOTE referencing the standards by which the soil survey was conducted, and a light underlay of the proposed development. See Part II, Section 11.A.2 of the site application. In addition, footprints of proposed stormwater basins (underdrained soil filter basins and wetponds) should be shown and labeled.*

The above noted additions or corrections have been made and revised plans E1.1 and E1.2 are included with this submission.

- 3. Subsurface explorations TB-1 and TPD-2 were not found on the soil survey maps. TBD-2 was found on sheet E1.1, however, no corresponding log for it was found. This information should be clarified.*

Plan Sheet E1.1 was updated to include TB-1 and TPD-2. The revised E1.1 is provided with this submission. TBD-2 can be found on page 9 of the logs.

- 4. The application states that geotechnical investigations will be performed for specific portions of the development, including lift foundations and multistory condominium buildings. Reports on these investigations should be provided when available.*

The applicant takes no exception to this comment. Geotechnical studies are planned for the noted site improvements. This is anticipated to take place in the early summer once drilling equipment can safely traverse the site and during the production of contract documents and plans issued for construction. The applicant anticipates soil conditions to generally be bouldery till soils overlaying shallow bedrock. This may necessitate some ledge removal, but in general is anticipated to provide adequate subsurface support for foundations.

5. *Soil unit descriptions in the soil survey report indicate some soils are very limited for the proposed development (Brayton, Colonel, and Tunbridge-Lyman Complex series) due to a shallow water table, boulders, or bedrock, although a finding can be made that the soils present no limitations that cannot be overcome through standard engineering practices, provided the applicant follows the engineering and erosion control recommendations contained in the application.*

The applicant appreciates the note and does not take exception to the comment. It is anticipated that a local earthwork contractor with experience working in these challenging slope and soil conditions will perform the sitework. Standard engineering practices are called for on the plans and appropriate erosion and sedimentation control practices will be employed by the contractor.

6. *The Section 7 exhibit of the site application presents a narrative on wetlands investigation and mapping, however, if a separate wetlands report was prepared in conjunction with delineation of wetlands as shown on project site plans, then this report should be provided, which is signed and dated by the wetlands investigator responsible for its preparation.*

This appears to be a submittal oversight. The wetlands report has since been provided to the Department for distribution to technical staff and review by other agencies.

7. *The stormwater management narrative states that underdrained soil filter (UDSF) basins are not anticipated to be lined, however the cross-section in sheet C1.06 specifies impermeable liners for the basins. UDSF basins need to be lined to keep stormwater separated from any seasonal high groundwater table, unless the conditions in Appendix E, Section 4.b of the Stormwater Management Rules can be met.*

The UDSF basins are proposed to include impermeable liners. The cross-sectional detail in sheet C1.06 remains the same. The stormwater management narrative has been updated to include this revision.

8. *The 4 wetponds and 11 UDSFs shown on plan sheets CG-3.01 through CG-3.08 should be labeled as such and be numbered for identification and reference, perhaps by the "P" numbers used in the stormwater narrative. Note that CG-3.06 has no sheet number.*

The requested labels have been added to Plan Sheets CG-3.01 through CG-3.08. The missing sheet number for plan sheet CG-3.06 has been added. The updated plans are provided with this resubmission.

9. *The stormwater management narrative indicates that soil data logs at wetpond and UDSF locations are in Appendix 12-2 of the report, but no soil data was found, and should be provided. In addition, locations of these subsurface explorations should be shown on a plan, perhaps on the plan-view diagrams on sheets CG-3.01 through CG-3.08. Plans showing locations of these sub-surface*



explorations should identify the subsurface exploration symbol used and include a NOTE which identifies the responsible soil scientist, and also references the report where soil log data can be found.

Locations of subsurface explorations have been added to sheets CG-3.00 through CG-3.08, with a legend item and suggested note both added to sheet CG-3.00. The applicant made efforts to anticipate stormwater ponding locations during the design process and while the terrain was accessible to tracked excavator for deep test pits. Despite these efforts, some proposed pond locations do not have a deep test pit exploration. It is proposed that all ponds be lined, and the stormwater narrative has been revised accordingly. Additionally, ponds are proposed in areas where test pits identified shallow bedrock conditions and ledge removal is anticipated for installation of these ponds. Alternative locations and alternative stormwater BMPs to ponds were explored but were not found acceptable to Department standards due to the challenging terrain and other design constraints. As such, the Applicant proposes no further deep test pits be performed at pond locations with the rationale being: a) that ponds cannot move significantly if shallow bedrock or shallow seasonal high water table conditions are encountered; and b) the extra precaution of lining the ponds will be employed for all ponds.

- 10. The elevation table on plan sheet C1.06 for the UDSFs contains no elevation data, which should be provided. Note that elevation "C" (top edge of impermeable liner) should be at or above any seasonal high watertable.*

The elevations have been added to Plan Sheet C1.06. Elevation "C" (top edge of impermeable liner) has been conservatively set at the same elevation as elevation "B" (emergency spillway). The updated plan has been provided in this resubmission.

- 11. Plan sheets SW-1, SW-1.1, and SW-2, which show soil mapping names and data, should include a NOTE referencing the source of this information.*

The suggested note has been added to Plan Sheets SW-1, SW-1.1, and SW-2. These updated plans have been provided with this resubmission.

- 12. The following should be provided in regard to the Spill Prevention, Control, and Countermeasures (SPCC) plan:*

- a. Identification of where the plan will be kept for ease-of-reference.*
- b. Management approval signature at beginning of plan and in Appendix 3 of the plan.*
- c. Evidence of a subsequent required 5-year review. Plan provided is dated 2012.*

The Applicant takes no exception to the comment and is currently pursuing an updated and executed SPCC plan. The plan will be submitted separately once completed.

- 13. If blasting for construction will occur within 500 feet of non-owned off-site structures (buildings and wells), then a map showing anticipated blast locations, and blasting plan, prepared and signed by a qualified blaster, must be provided to the Department. See Part II, Sections 20.A and 20.B.2 of the application. The blasting plan must include blasting standards in the statute: 38 MRS §490-Z (14). The blasting plan must be provided prior to any blasting, and include an anticipated blast design/shot pattern specifically tailored to the project site. Submittal of the blasting plan, and a map showing anticipated blast locations, could be required as a condition of site approval.*



Blasting is anticipated within the project. There however is only a small portion of anticipated blasting area within 500' of non-owned off-site structures. Specifically, Timbers Road from approximately station 0+00 to 15+60 and Road A approximately station 0+50 to 2+10 and 35+5 to 37+50.

The applicant takes no exception to the comment and requests that an eventual approval be conditioned on the submittal of site-specific blasting plans, as outlined above, prior to any blasting related to the project.

14. To conform to subsection G of the blasting statute, item I in the Performance Standards section of the blasting exhibit should read:

- a. *"Blasting may not occur in the period between sundown and sunrise the following day or in the period between 7:00 p.m. and 7:00 a.m., whichever is greater. Routine production blasting is not allowed in the daytime on Sunday. Detonation of misfires may occur outside of these times but must be reported to the Department within 5 business days of the misfire detonation. Blasting may not occur more frequently than 4 times per day."*

The Sample Blasting Procedure Requirements has been updated to include wording above. The revised document has been provided in this resubmission.

Per these revisions based on the comments, please find the following revised documents:

- Soil Survey Narrative Report
- Soil Test Pit Logs
- Plans E1.1 and E1.2
- Map Indicating blasting locations within 500' of non-owned off-site structures
- Blasting Procedure
- Stormwater Narrative

Following the submittal of the application, the Applicant has made a slight improvement to the Timbers Road Extension design starting from its intersection with Bucksaw Drive. The improvements prioritize traffic flow on Timbers Road Extension over Bucksaw Drive resulting in a signed intersection for Bucksaw traffic and a significant reduction in sidehill cut slopes. Affected plans have been revised and are included in this submittal.

The Applicant has also made minor grading revisions in the vicinity of stormwater ponding areas. Affected site plans have been revised and are included in this submittal.

The following plans are re-submitted for your consideration and should replace previously submitted plan versions:

- C2.3 Timber Site Plan
- C2.4 Parking Lot G Site Plan
- C2.5 Drop-Off Area Site Plan
- C2.6 Skier Service Site Plan
- C2.8 Condo Site Plan
- C2.10 Townhomes Site Plan
- C5.1 Road Plan & Profile
- C5.2 Road Plan & Profile
- C5.3 Road Plan & Profile
- C5.5 Road Plan & Profile
- C5.6 Road Plan & Profile
- C5.7 Road Plan & Profile
- C5.8 Road Plan & Profile
- C5.10 Road Plan & Profile

- C7.2 Sewer Plan & Profile
- C7.3 Sewer Plan & Profile
- C7.4 Sewer Plan & Profile
- C7.5 Sewer Plan & Profile
- C7.7 Sewer Plan & Profile
- C7.11 Sewer Plan & Profile
- C7.12 Sewer Plan & Profile
- C7.13 Sewer Plan & Profile
- C7.14 Sewer Plan & Profile

- E1.1 Class B & C High Intensity Soil Survey
- E1.2 Class B & C High Intensity Soil Survey
- CG-1.00
- CG-1.06
- CG-3.00 through CG-3.08
- SW-1
- SW-1.1
- SW-2
- C1.06

Please do not hesitate to call or email with questions regarding this submission. The Applicant looks forward to further coordination DEP staff as project review continues.

Sincerely,

Main-Land Development Consultants, Inc.



Richard Dunton, P.E.
Director of Engineering