

August 22, 2019

Kari DuPrat  
Property Management Associates  
PO Box 1201  
Williston, VT 05495

RE: 19-024 Locust Hill Development, Shelburne, VT – Proposed Site Improvement Plan

Dear Ms. DuPrat,

Trudell Consulting Engineers (TCE) has reviewed the proposed project at the Locust Hill Condo Development off Locust Hill in Shelburne, VT, hereby referred to as the “project”. Upon review of existing conditions of the project site and the proposed improvements to pavement, parking, and drainage, TCE has prepared the following memorandum to summarize findings as well as outline future required permitting and construction costs.

### **EXISTING CONDITIONS**

The existing property, known as the Locust Hill Development, is approximately 27.2 acres and is home to a 74 unit condo association located on Locust Hill off US Route 7 in Shelburne, VT. The project currently has 150 total parking spaces, with 63 garage spaces and 87 striped spaces. The development is organized in a loop with a large area of forested open space in the center and additional forested open space to the east of the developed area. The northern property line is along the Shelburne-South Burlington town boundary.

The project was originally approved by the Town of Shelburne and Act 250 in 1980 as a Planned Unit Development (PUD) with the latest amendment approved by the Town in 1987. The project was approved by Act 250 under Land Use Permit (LUP) 4C0428. The original project did receive a State stormwater permit, originally under permit #2-0841, however this permit has been renewed multiple times over the years and is now under permit #3806-9010.R. The site has a stormwater collection and treatment system from the 80s which involves conveyance via overland flow to catch basins and swales which outlet to two sand filters which are still operating. In 2006, the site had minor improvements to fix drainage problems which primarily involved the addition of several yard drains.

The project property slopes generally from the east to the west. While the developed area is generally flat, 0-5% grade, the undeveloped area east of the developed area exhibits steeper slopes between 10-15%. The Natural Resource Conservation Service (NRCS) has identified several soil types on the property. Majority of the developed area

is within Belgrade and Eldridge soils, hydrologic soil group (HSG) B/D, and Enosburg and Whately soils, which is listed as hydric and HSG C/D. Additional on-site soils include Hinesburg fine sandy loam and Adams and Windsor loamy sands which are both listed as HSG A. There are mapped Class II wetlands and wetlands advisory areas on the property from the Vermont State Wetlands Inventory, however, the wetland mapping is inaccurate and there are no wetlands within the project area as it is existing development.

As of 2019, the site is experiencing extremely cracked pavement and drainage problems resulting in the flooding of units and garages. Further, it has been noted that additional parking is needed within the development.

## **PROPOSED IMPROVEMENTS**

*Paving* – The project proposes to remove existing pavement and repave the approximately 2.25 acres of existing drives, existing parking areas and proposed parking expansion areas. After initial investigations, TCE recommends that the pavement subbase and existing grades be retained to the greatest extent feasible. However, pavement will be proposed to be sloped away from all structures if it is not graded away as existing. TCE has also identified that perforated underdrain may be added beneath the pavement to help drain groundwater and minimize pavement cracking. The feasibility of installing underdrain beneath the pavement is dependent on being able to outlet the underdrain in an area which does not comingle with the operational stormwater. Detailed topographic survey will be necessary to determine proposed changes to pavement grades and pipe outlet locations. TCE further recommends that where sidewalks extend to the pavement edge a concrete block be removed and replaced with pavement to properly match grades between the newly paved drive/parking with the existing sidewalk.

*Parking* – The site walk with the Locust Hill property manager and Homeowners Associate members identified that additional parking was needed near units 122-176, 230-236 and 419-425. Per conversations at the site walk, 5 new parking spaces have been identified around the property and an improvement of one parking area has been identified near units 230-236 to upgrade an existing paved/gravel parking area to ten standard paved parking spots and widen the drive lane. It is expected that these additional parking spaces will increase the impervious area on the property by approximately 2,600 SF.

*Drainage* – Drainage problems have been identified primarily along the southern portion of condos near both the main buildings and garages in areas which are either poorly graded, equipped with undersized drainage structures or overloaded with roof downspouts. TCE proposes to connect roof drains directly to the drainage system to

minimize overland flow and pooling of runoff in poorly graded areas. Additionally, TCE proposes replacing three (3) undersized drainage structures, relocating existing structures to low spots and the addition of three (3) new catch basins.

## **REQUIRED PERMITTING**

The improvements described above are considered minor site changes and are not expected to require any full permit amendments at the local or State permitting levels, however, if additional site changes are requested such as a further increase in parking spaces, replacement of pavement sub base, or changes to landscaping, lighting, or signage, additional permitting may be required.

### ***Local***

Administrative Site Plan - The proposed improvements are eligible for Administrative Site Plan Review as described above, however, if further improvements are proposed, a Preliminary and Final Site Plan application may be warranted which would involve two Development Review Board (DRB) meetings.

Zoning Permit – After site plan approval, a zoning permit will be required prior to the start of construction. This permit would be required regardless of whether the site plan review is administrative or is in front of the DRB.

### ***State***

Highway Access Permit – If paving is proposed to the edge of Route 7, a highway access permit from the Vermont Department of Transportation will be required for access on to the State highway.

Stormwater Permitting - An amendment to the existing stormwater permit #3806-9010.R is not expected to be required for the proposed improvements as the project does not propose to change site drainage areas, redirect stormwater runoff away from treatment practices, propose greater than 5,000 SF of new impervious, or propose to replace roadway subbase which would be considered redevelopment by the State.

Further, it is important to understand that the State of Vermont recently adopted a revised Stormwater Permitting Rule (Chapter 22, Environmental Protection Rule) which requires existing properties with over three (3) acres of impervious to reevaluate stormwater treatment regardless of proposed site changes. Note that the Locust Hill Development has over three acres of impervious and will be required to have a stormwater review and potential updates to treatment and permitting by 2023. Because the Locust Hill Development has an existing treatment practice (two sand filters) which have been maintained and are operating as designed it is not expected

that any major site changes will be required to comply with the new Chapter 22 regulations. While these regulations are new and permitting documents have not yet been released by the State as of the date of this letter, TCE has considered this new regulation to ensure that any proposed site improvements at this time will not conflict with the three acre requirements.

Act 250 Permitting – Repaving, replacement and addition of drainage structures and a minor increase to parking should not be considered substantial site changes and therefore should not require an Act 250 permit amendment. Should additional changes be requested such as changes to lighting or signage, an Act 250 permit may be required although it would likely meet the requirements for an Administrative Permit Amendment.

Prior to proceeding to the Design Phase we recommend obtaining a Project Review Sheet from the Agency of Natural Resources to confirm the above permitting expectations.

### **COST ORDER OF MAGNITUDE**

TCE offers the following opinion of project costs to assist the HOA with budgeting, however, it should be understood that these cost estimates are intended to provide a general understanding of the cost order of magnitude of the proposed project and are not actual costs from a contractor. Further, TCE recommends that the HOA consider repaving in phases to break the estimated cost of paving in half over two periods. Since permitting requirements are expected to be limited to administrative local review, the costs of permitting are expected to be minimal and have not been included in this analysis. Additionally, costs associated with any 3-acre stormwater permitting have not been included in this analysis.

Table 1. Order of Magnitude Cost (Installed Price)

NO.	TYPE	UNIT	QUANTITY	UNIT PRICE (\$)	TOTAL COST
1	Engineering & Permitting	LS	1	30,000	30,000
2	24" Catch Basin	EA	6	3,000	18,000
3	4" PVC	LF	1,050	15	15,750
4	8" PVC	LF	650	30	19,500
5	12" HDPE	LF	450	50	22,500
6	Pavement	Ton	2,400	120	288,000
7	Additional Parking	LS	1	25,000	25,000
8	Drainage Improvements	LS	1	25,000	25,000
9	Contingency				50,000
<b>TOTAL ORDER OF MAGNITUDE COST (\$)</b>					<b>493,750</b>

The total expected construction cost is approximately \$500,000. This may be broken into two phases of approximate equal value. TCE can also provide an updated scope of work and contract to continue engineering services for survey, permitting and design, assisting with bid documents, and construction phase services upon request.

## **TIMELINE**

Due to the proposed site improvements being minor, it is not expected that permitting should be a time constraint for the project. An administrative site plan review by the Town of Shelburne should be completed in less than 60 days. However, if additional permitting is required, permit review periods could be up to 6 months.

In order to offer final design, permitting, and construction ready plans, TCE will need additional site review and investigation, primarily a limited topographic survey within the areas proposed for improvements and the preparation of CAD design plans. Ideally, a survey could be completed this fall and design and permitting completed over the winter, allowing for construction bids in the early Spring of 2020.

TCE understands that these proposed site improvements are contingent on HOA approval and available funding and recommends that the HOA begin the approval and funding process as early as possible to ensure that construction plans may be complete and ready for bid in the spring of 2020 when competitive construction bids will be available. Should you have any additional questions or concerns, please do not hesitate to contact me directly at (802) 879-6331 x101 or by email at [John.Pitrowiski@tcevt.com](mailto:John.Pitrowiski@tcevt.com).

Sincerely,



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