

Town of Hamden

Engineering Department

To: Chairman, Planning and Zoning Commission

From: Mark Austin, PE, Town Engineer

Subject: Site Plan 20-1511
Site Plan for restoration of adjacent properties
82/92 Crestway

Date: December 7, 2020

The Engineering Department reviewed the plans dated 11/6/2020 and revised through 11/30/2020 submitted with this application and have the following comments: For additional clarity, addressed comments have been removed, previous comments have been changed to italics, clarifications are in bold, and new comments in standard type. Due to the limited time frame provided to review the plans, additional comments may be generated with additional review. The Engineering Department has spent approximately eight hours reviewing the plans and reports. We acknowledge the complexity of the proposed proposal.

1. Missing from the Plan set
 - a. *This plan set does not address the encroachments on #100 Overlook or #72 Crest Way as previously submitted during the enforcement actions. **There is a conflict between the 11/30/2020 and the 12/2/2020 response. 11/30 indicates that the trespass will be addressed later in a separate plan/approval. The 12/2/2020 indicates the repairs have been made. The sited repairs in the 12/2/2020 have not been verified. There has been insufficient time to conduct a site walk to verify.***
 - b. *Provide a material handling plan.*
 - i. *Given the anticipated soil and woody debris, how will these two materials be handled and separated? Mechanically (screener) or by hand (excavator)? **What are the size requirements and how “clean” will the debris be? This will affect the disposal plans. Too much woody debris in the soils can cause rejection.***
 - ii. *How will potentially hazardous materials be handled if encountered? **Only bulk testing is proposed. What are the contingency plans if impacted materials are found during excavation? This could be as simple as oily smelling soils, trash, or other non-woody materials are found.***
2. Proposed remediation area:
 - a. Viability of the remediation plan:
 - i. Phasing in 20 foot sections: When excavating, the assumption is that the material is sufficient to support the excavator pad. There are no contingency plans if a pocket of woody debris or if voids are found when excavating.
 - ii. There are minimal details on how the material is to be handled within the excavation area regardless the phase. When the easternmost excavator casts to the east, the second excavator will pick and sort, loading into two different trucks.
 1. Where will the haul trucks be loaded, which side of the swale?
 2. Below are notes of if there is enough room to operate, both on the narrow excavator pad or where trucks will operate.
 3. Will there be screening of material conducted on site?
 4. What is the disposal plans for stumps?
 5. The Town of Hamden cannot be used as a disposal destination without formal notification and response from the Public Works Department. With the recent two storms of August 2020, the Town likely cannot accommodate additional debris.
 - iii. There are no details on how the original grades will be established.

1. Where were the original grades determined on the plans? Please source.
 2. Will a survey crew direct the excavators to the proper grades or will a soils professional determine the original O horizon of the original soils?
 3. If tree stumps are discovered in the
 - iv. Restoration plan
 1. How were the number of trees and other vegetation restoration determined?
 2. The soil conditions are unknown below the restoration area. At a minimum, soil compaction restoration should be considered to promote future growth. This is a very serious issue when planting trees.
 - b. *Provide a method to prevent site runoff from 82/92 Crestway from flowing towards 785 Sherman (restoration area). Currently runoff will flow down the access and can destabilize the work area. This should be addressed in each phase and especially phase 4 for the final conditions. **The proposed swale requires additional details and information:***
 - i. **Is this a permanent or temporary swale? If permanent, will need to size over a 10 year storm.**
 - ii. **Provide outlet protection where the swale discharges into the detention pond.**
 - iii. **The tributary area for the provided calculations is significantly undersized. The majority of the rear of the property appears to flow towards the swale. The originally proposed drainage system for this site has not been installed therefore cannot account for the drainage for the north side of the property.**
 - iv. **A wider detail for the swale in the area of the truck travel path may be warranted for easier crossings.**
 - v. **Without truck crossings into the excavation / restoration area, the swale may be subject to heavy sediment loads, due to the casting of excavated materials by the excavators. In the widest areas, it is not possible for two excavators to cast that far. (+ 80 ft).**
 - c. *On Phase 2, the northern portion of the proposed pad for the excavator may be too narrow depending on the size of the excavator. Is 15ft wide sufficient for a truck to traverse and be loaded by the excavator. (Excavator tracks aligned up and down slope which is safest for excavation. **Clarifications below:***
 - i. **A John Deere series 200 excavator is proposed. The track length is 12 feet, center axle to center axle. Fifteen feet is not sufficient for an excavator to turn and work.**
 - ii. **Where will the second excavator sit and work, at the swale or within the western proposed slope?**
 - iii. **In the widest areas, it is not possible for two excavators to cast that far if a slope is involved. (+ 80 ft). They might have the horizontal reach, but may not have the combined horizontal and vertical reach to cast and then load the trucks for piling in the stockpiles.**
 - d. *What is the material of the proposed pad for the excavator? **Add this to the plans. The material was not specified in either of the responses. “fill material presently on the site” is not sufficient.***
 - e. *Consider benching to provide a runoff break to prevent erosion.*
3. Access and Driveways:
- a. *Specify the material of the access drives / travel paths. **Please add this note to the plans.***
 - b. *Provide the location of the new wall west of the building. (as shown in the enforcement actions plans). **Please see clarifications and additions below:***
 - i. **We understand that it is at the noted at the “Face of Steep Slope”. This was previously shown as a rock outcropping in the original proposal. This note has been subsequently removed. Please clarify.**
 - ii. **With the proposed wood stockpile being shown near this wall, the material and size of the wall is important to verify it can handle the abuse of the proposed activity (becoming a push wall).**
 - iii. **Where will the existing equipment being shown as stored on the western edge of the property be stored? This is in direct conflict with the wood storage area**
 - c. *Any existing broken or damaged sidewalk, reconfigured or sections of sidewalk and/or driveway aprons damaged through the course of construction will need to be replaced to Town of Hamden standards. **Please see the entrance and exit to the site.***
4. Drainage:
- a. *Do not conduct work until the detention pond discharge is properly installed and inspected by the Engineering Department. **Clarifications below:***

- i. **The pond is shown as incomplete. The drainage pipes from the existing / originally proposed site drainage system need to be shown on the plans with inverts.**
 - ii. **The pond bottom is shown as three feet too shallow (present conditions 182, proposed conditions 179.1 as per the outfall structure inlet. Has the outlet structure been properly installed?**
 - iii. **The response indicates inspections have occurred by the Engineering Department. The Engineering Department has only inspected the pipe from the outfall to the catch basin leaving the site (not shown on the plans). The purpose of this inspection was for the water stops, not for the pond or the outfall structure.**
 - b. *Provide contours for the detention basin on the plans. Provide the existing approved plan and the drainage structures on the proposed plan. Clarifications below:*
 - i. **The 12/2/2020 response indicates that the pond is to be completed in phase 1. This was not changed on the plans. With the other necessary details, this needs to be corrected.**
 - ii. **The pond bottom is shown as three feet too shallow (present conditions 182, proposed conditions 179.1 as per the outfall structure inlet.**
 - c. *Provide contouring for the work areas draining to the detention basin. As referenced above, the calculation's tributary area is very insufficient. Please justify via a map. The current plan drains runoff to the slope being established. A simple swale along the eastern side of the site may be enough to prevent site water from destabilizing the work area. Please see the crossing details comments above. We are concerned that the depth of flow was not illustrated and the tributary area provides an incorrect assessment of the necessary size. What is the proposed freeboard for the swale?*
 - d. *Consider adding a multi-bay temporary design to catch the sediment before the outfall structure. This can be accomplished with crushed stone or hay bales. Hay bales have been shown. Provide the additional referenced plunge pools and revised contours on the plans. The bale barrier may need to be relocated. Consider adding the originally proposed stone checks.*
 - e. *The delineation of the detention pond is significantly in error. The northernmost extents as illustrated are approximately four feet higher than the southern side. (184 vs 188 feet elevation)*
 - f.
5. **Parking:**
 - a. *What has or has not been installed from the existing approved site plan. While we understand your approach that this is not necessary because the original use is not officially being utilized, this is relevant because this is an area that the restoration worker may use for parking and queuing of removal trucks. This is also relevant due to the apparent installation of an "tail" extension on the building which, if not properly marked and signed, may be a hazard for passing vehicles entering and existing. (there was a reference to a staircase).*
 - b. *With the installation of the parking lot, move the refueling of the equipment towards the building to prevent spillage on a hard and more controlled surface. If work is conducted in the winter, the DEF and other maintenance fluids can be better stored in the building.*
6. **Building**
 - a. *Will the building be active and where will those operations occur during this process? While we understand your approach that this is not necessary because the original use is not officially being utilized, this is relevant because this is an area that the restoration worker may use for breaks and sanitary facilities if the fixtures are activated. If the building is not in use, maintenance and refueling of the equipment would be better located at the building because it would be better controlled, maintenance equipment and lubricants stored internally, and the fueling would be better controlled on a hard surface.*
7. **Utilities**
 - a. *Provide existing, existing as proposed from the site plan, and proposed to be installed utilities for the site and new building. Is there a natural gas service to the building?*