

Memorandum of Meeting

Attendees: Allison McLeod, NJDEP, Government Relations (AM)
Audra Didzbalis, NJDEP, Division of Land Use Regulation (AD)
Damien Friebel, NJDEP, Division of Land Use Regulation (DF)
Patrick Ryan, NJDEP, Environmental Services (PR)
Michael Tropiano, NJDEP, Environmental Services (MT)
Craig Dunwell, Borough of Alpha, Mayor (CD)
Edward Hanics, Borough of Alpha, Council (EH)
Todd Pantuso, Borough of Alpha, Council (TP)
Frank J. Seney, PE, Remington & Vernick Engineers (FS)
Sara Miller, Remington & Vernick Engineers (SM)

Date: April 29, 2020

Time: 1:00 PM

Location: Video Conference via Microsoft Teams

Re: Pre-Application Conference – Homa Lane Reconstruction, Alpha Borough,
Warren County

This meeting was held to discuss permit requirements for the proposed culvert replacement activities.

1. After introductions were delivered by AM, FS opened the discussion with an overview of the project history and the currently proposed improvements. The majority of Alpha Borough's stormwater runoff is conveyed to a channel that is a perennial tributary to Pohatcong Creek. The channel is crossed by Homa Lane, a private driveway, underneath which two (2) culverts exist that are meant to carry flows from the channel under the road. The channel is typically dry, however during rain events flows are conveyed through the channel to the two (2) culverts, which do not have the capacity to accommodate even small storms. The result is flooding of the adjacent properties upstream and the overtopping of Homa Lane. The original design, intended to relieve flooding of adjacent properties, included a detention basin that was designed and submitted to NJDEP for approval under the flood hazard area and freshwater wetland regulations. After reviewing the environmental impacts associated with that design, it was determined that the mitigation requirements would result in an impractical additional expense to the project and it was abandoned. The currently proposed improvements include the replacement of the two (2) existing culverts with a box culvert that would have the capacity to convey the 2-year storm event. The box culvert conceptually proposed is a 2.5 feet x 10 feet culvert (25 sf hydraulic opening) which is the largest physically practical culvert

2. CD followed with a brief history of Alpha Borough's stormwater infrastructure. Over the past several decades, stormwater infrastructure has been designed and installed so that runoff is collected and conveyed to the south of the borough where it enters the channel and crosses Homa Lane. As a separate issue to be discussed later in the meeting, CD expressed concern with erosion of the channel and downstream sedimentation.
3. DF explained if it can be shown that the existing conditions overtop the roadway during a 2-year storm event, the culvert capacity can be increased to pass the flows from that storm event. Generally, if the existing conditions result in the overtopping of the roadway, then it is unlikely an adverse impact would result from increasing the culvert capacity. It still must be shown that the increase in culvert capacity does not result in negative impacts offsite.
4. SM discussed the preliminary analysis and benefits of the proposed improvements. An initial analysis of the drainage area, channel, and culverts revealed that Homa Lane overtops during a 2-year storm event. An increase in the capacity of the culvert will reduce the water surface elevation upstream significantly and is unlikely to result in adverse conditions downstream. Effects from the loss of attenuation from upstream storage will have to be analyzed to confirm.
5. DF provided discussion regarding permit requirements. The downstream conditions cannot be made worse than existing conditions, unless approval is given from property owners and water surface elevations are within the limits allowed by the flood hazard rules. The proposed improvements will require a Flood Hazard Area Individual Permit. A hardship waiver will not be required if we are able to comply with NJAC 7:13, subchapters 11 and 12. If it is impractical or impossible to comply with the requirements of those subchapters, then NJDEP would refer us to subchapter 15, which provides requirements for justifying a hardship exception.
6. FS explained the channel is typically dry, therefore if we install a box culvert, would the bottom have to be buried?
PR stated it is typical for the department to prefer a natural bottom. Even though the channel is typically dry, burying the culvert as much as possible is preferred.
DF explained it is up to the applicant to demonstrate the option of burying the bottom of the culvert was explored and demonstrate that it was deemed to be unpractical if that is the case. It is important that the environmental effects be taken into consideration when demonstrating the approach that is pursued.
7. FS inquired about mitigation requirements.
PR stated this project is in a different category than the previous application. As this is now just a culvert replacement, a specific amount of disturbance is allowed under table 11.2. In addition, the majority of the area surrounding the culvert is actively disturbed and therefore is not counted toward the disturbance limits in table 11.2. Due to the fact the channel contributes to a C1 waterway the Riparian Zone will be 300 feet.
8. CD inquired about the requirements surrounding stream cleaning and if the Borough's possession of a stream cleaning permit would require them to address sedimentation downstream.
DF explained the permit does not result in an obligation to perform stream cleaning, but if the activities are performed, they must be done so they are in concurrence with the permit conditions.
9. PR added the life of those permits is 5 years and the cleaning of C1 waters may not be included in the permit conditions.
10. CD inquired about bank stabilization as part of the culvert replacement project.

DF stated that bank stabilization activities would be reviewed separately from the culvert replacement. Bank stabilization activities may require mitigation because they would be performed on a C1 waterway. If the project is limited to using vegetation to stabilize the bank, then it should be fine, but channel modification or sediment removal would require a more in-depth review.

PR added that hard armoring such as gabion baskets or retaining walls is frowned upon, especially in C1 waters.

MT referred the group to USDA NRCS Engineering Field Handbook Chapter 16 – Streambank and Shoreline Protection; Chapter 18 – Soil Bioengineering for Upland Slope Protection and Erosion Reduction was also referenced.

PR added regarding vegetated stabilization that the desire is for the roots to maintain the bank and reiterated that the creation of a “chute” is discouraged.

DF added that an increase of the channel conveyance will reduce the erosive velocity, but it is encouraged to enlarge the bank using vegetation to stabilize and reduce the velocity. This would have to be ruled out as a viable design option before the department would entertain the use of hard armoring.

11. CD stated there has been significant erosion to the channel banks.

DF stated in order to correct the issue, it is important to obtain an understanding of why the erosion is happening and what can be done upstream to correct it.

12. FS inquired if the additional stabilization would count to disturbance limitation for mitigation

PR referred the group to table 11.2 for mitigation limits and added that if armoring or scour protection was needed in association with the culvert replacement (within approximately 100’ of the structure), then that activity could be associated with the culvert replacement activities; any further downstream and a different set of requirements apply.

13. EH inquired if any of the bank stabilization work could be performed under an emergency permit.

PR answered that the situation would be considered as an emergency if there is a structure being undermined, a structure collapse, or there is an imminent safety hazard.

DF added that if the situation appears that it would remain stable for 90 – 120 days, it would not be considered an emergency as that is the approximate amount of time required to apply for the necessary permit.

14. As a recap DF indicated that the culvert replacement project requires a Flood Hazard Area Individual Permit. PR stated for Freshwater Wetlands, a General Permit 10 would be required for the culvert replacement with state open water temporary impacts. If bank stabilization is included in the project a General Permit 20 is required plus a separate FHA IP.

15. FS stated the bank stabilization would be performed at a later time at which point an additional pre-application meeting would be requested.

16. Regarding fees for the culvert replacement permits, FS asked if the fees from the previous submission have been held.

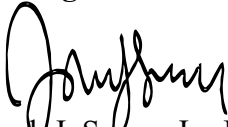
DF stated the previous permit was never cancelled and therefore we would be submitting an amended application in response to the last deficiency notice. As a result, the fees provided with the original submission are still available for the revised improvements. Public notice will have to be reissued and new application materials will have to be provided.

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17. MT stated that the original submission included a FWWL General Permit 16 which no longer applies to the proposed improvements.
18. PR added the Borough should request the withdrawal of the GP 16 and resubmit under a GP 10. This will require a new fee of \$1,000.00, however if resubmission under the FHA IP results in a fee reduction for that permit, the Borough may be able to apply the difference to the fee for the GP 10.

The above reflects the author's recollections of discussions that occurred during the meeting and decisions made. Please forward any suggested revisions within three working days of the receipt of this memorandum. If no suggested revisions are received within three (3) working days this memorandum will stand as issued.

Sincerely,
Remington & Vernick Engineers



Frank J. Senev, Jr., PE, PP, CME
Senior Associate

Distribution: All Attendees