

**TECHNICAL PROPOSAL**  
**REHABILITATION PLANS & ENVIRONMENTAL PERMITTING**  
**ROCK RIDGE LAKE DAM #25-134**  
**Denville Township, Morris County, NJ**

PREPARED BY:

Greenman-Pedersen Inc.  
100 Corporate Drive, Suite 301  
Lebanon, NJ 08833  
908-236-9001



March 25, 2019

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Rock Ridge Community Club (RRCC)  
Attn: Tony Titone/ Mark Fash  
P.O. Box 242  
Denville, N.J. 07834

**RE: Dam Safety Services – Overtopping Protection**

Rock Ridge Lake Dam #25-134  
Denville Township, Morris County, N.J.  
Our file #2006712

Dear Tony and Mark,

Thank you for this opportunity to provide this supplemental Proposal for Professional Services. The following services relate to the preparation of dam rehabilitation plans and obtaining the required environmental and construction permits for the dam in accordance with the New Jersey Department of Environmental Protection Bureau of Dam Safety and Flood Control comment letter January 7, 2016 in response to our Concept Report #2 dated February 4, 2015:

The following are NJDEP's comments (paraphrased from their letter for simplification) and my responses:

1. Compare breach vs non-breach models to assure that the slight increase in water surface elevation created by the stem wall concept will not adversely affect the hazard classification and spillway design flood for the dam. *Response: We will provide this additional modeling with the NJDEP dam construction permit application. The additional 4.5" of water elevation is not anticipated to have any measurable impact to the approved Significant Hazard classification and the currently approved 100-year (1,039 cfs) spillway design flood.*
2. Provide 1 foot of freeboard or provide more detailed justification for waiving all or some of the freeboard. *Response: We will provide the full 1 foot of freeboard unless topography at the left and right abutments does not permit it to tie in to existing ground at each end.*
3. If we reduce the limit of the stem wall to eliminate the wall between the spillway and the left (east) abutment, we would have to armor that area for overtopping protection. *Response: I suggest that we keep the full stem wall between the spillway and the left abutment. The armor could be more expensive to install and make the Freshwater Wetlands permitting more difficult.*
4. Confirm that the increase in the 100-year water surface elevation will not adversely affect adjoining property owners, or obtain written approval from the property owners who would be affected. *Response: Our sister company, Keller & Kirkpatrick, will provide survey mapping of the small area in question to confirm that all impacts from the new 100-year elevation of 525.4 will stay within property owned by RRCC.*

The letter further requires that a complete Permit Application be submitted to Dam Safety by June 30, 2016. A complete Dam Safety Application requires detailed survey mapping, finalized hydrology and hydraulics, and complete construction plans, specification, and details.

In addition, wetlands along the dam will have to be delineated and an NJDEP Freshwater Wetlands General Permit #18 must be obtained prior to construction for work within the wetlands and/or transition area on the dam.

The following scope of work is intended to cover all of the activities required to comply with NJDEP's comment letter as well as to submit and obtain a Dam Safety Construction Permit and a Freshwater Wetlands GP #18. The need for a Morris County Soil Erosion and Sediment Control Plan Certification will be based on the area of disturbance required for construction once the plans are developed. It is assumed that this permit will not be required; however, we have included this task in the proposal just in case the area of disturbance exceeds 5,000 square feet.

### **PROPOSED SCOPE OF SERVICES**

#### **TASK 1 – SUPPLEMENTAL SURVEY FOR DAM REHABILITATION AND PERMITTING:**

We will prepare additional topographic mapping on Block 61401, Lots 53, 62, 65, 73, & 73.1 near West Glen Road as shown on the provided Concept Report #2 to determine the location of the 525.4-foot contour (100-year flood water surface elevation) in the NAVD'88 datum as requested by NJDEP in their comment #4 above. *It is assumed that the 525.4 contour will be confirmed to stay within RRCC property and that no additional survey or flood easements will be required, nor are provided for under this scope of work.*

As-built features of the dam to be located will include water elevation, top of slope, walkway, bridge/deck, spillway, bottom of slope, and tree line/vegetation line, extending approximately 280 feet westerly of the spillway and 120 feet easterly of the spillway to the ends of the proposed curb or stem wall, as shown on the provided concept report. We will tie the topography into an elevation of at least 526.4 feet at both ends of the proposed curb or stem wall. We will tie the field work horizontally into New Jersey Zone State Plane Coordinates System, North American Datum of 1983 (NAD 1983), and vertically into the North American Vertical Datum of 1988 (NAVD 1988) unless otherwise directed. Final topographic mapping will be at a scale of one inch equals twenty feet (1" = 20') or other appropriate scale with one foot (1') contour.

We will also survey the location of wetlands flags within 150 feet of the Rock Ridge Lake dam and spillway.

FEE: \$8,700

#### **TASK 2 – WETLANDS/OPEN WATERS DETERMINATION**

In accordance with the New Jersey Freshwater Wetlands Protection Act, and outlined by the NJDEP, the extent of the wetlands and/or State open waters within 150 feet of the proposed dam will be determined by implementing the methodology that is currently accepted by the United States Environmental Protection Agency (USEPA) namely the "Federal Manual for Identifying and Delineating Jurisdictional Wetlands, January 1989 and supplements." The wetlands/state open waters will be staked within the area designated for the "study area."

The delineation of wetlands is a somewhat subjective science and in some cases, is subject to interpretation by the field investigator based on field conditions encountered at the time of the investigation. Wetland data sheets will be provided to be used in support of the Wetlands General Permit Application. *It is assumed that an NJDEP Letter of Interpretation and/or any threatened or endangered species supplemental studies (for example Indiana /Northern Long Eared Bats and/or Bog Turtle) will not be required and is beyond the scope of this proposal.*

FEE: \$2,200.00

**TASK 3 - FINAL HYDROLOGY and HYDRAULICS (for Dam Safety Construction Permit)**

1. Prepare a final hydrology and hydraulics report, including revisions to the dam breach modeling, to assess the impact of the proposed increase in water surface elevation on hazard classification and spillway design flood.
2. GPI will prepare the computations for the Dam Safety Permit in accordance with the NJDEP Dam Safety Rules (N.J.A.C. 7:20-1 *et seq.*).

FEE: \$4,400.00

**TASK 4 - PREPARATION OF CONSTRUCTIONS DOCUMENTS**

GPI will prepare plans, specifications, details and cost estimates/quantities as required to implement a stem wall to increase 100-year spillway design flood pool elevation. The stem wall is anticipated to be of concrete gravity wall construction. The existing timber pedestrian bridge substructure elements will be increased in height to allow the existing bridge to be repositioned at a higher elevation to pass additional volume of water over the spillway without overtopping the walkway. The plan set will include a Site/grading plan (including wetlands impact areas), embankment profile and typical cross section(s), and construction details/technical specifications. Specifications will be provided on the plan sheets. Quantities will be provided on the construction plans. Cost estimates will be provided separately.

**Assumptions:**

1. It is assumed that conservative assumptions will be used for the stem wall design and that a geotechnical investigation will not be required.
2. Stem wall shall be a concrete gravity wall founded on a stone bedding below frost line
3. Existing pedestrian bridge is to be re-used.
4. The design and implementation of a new low-level outlet pipe, valve, and valve chamber, which is not anticipated to be needed at this time is excluded.
5. Construction support services (shop drawing review, RFIs, consultation) are excluded.

FEE: \$22,700.00

### TASK 5 - WETLANDS GENERAL PERMIT #18

An NJDEP Freshwater Wetlands (FWW) General Permit (GP) #18 will be required prior to construction. Based on the delineation performed in Task 2, GPI will prepare an application to NDJEP for this GP #18:

1. Complete NJDEP DLUR Application form.
2. Review of existing documentation including NJDEP wetlands mapping, County Soil Survey, aerial photographs, and NJDEP Landscape Project Mapping.
3. Request a NJ Natural Heritage Program records database search for endangered and threatened species.
4. Prepare a FWW impact area plan, FWW checklists, LURP application forms (and supporting figures), photographs, public notifications and compliance statements as required to obtain the FWW GP#18.

GPI will need authorized signatures from RRCC to complete the application package. This scope is based on the current NJAC 7:7A Freshwater Wetlands Rules dated April 16, 2018. *It is assumed that the NJDEP application fee of \$1,000 for this permit will be provided separately by RRCC and is not included in our fee.*

*Changes to these rules/application fees, which may occur during the project development, and which expands this scope of work, are excluded from this scope of work.*

FEE: \$6,000.00

### TASK 6 – NJDEP DAM SAFETY CONSTRUCTION PERMIT

GPI will compile and submit to NJDEP Bureau of Dam Safety all necessary documentation (application forms, supporting plans, reports, and specifications) as required to obtain the NJDEP dam safety construction permit in accordance with the Dam Safety Rules (N.J.A.C. 7:20-1 *et seq.*).

Assumptions:

1. It is assumed that this project will not be a “major development” and compliance with the NJ Stormwater Management Rules (N.J.A.C. 7:8) will not apply.
2. It is presumed that a Flood Hazard Area Permit is not required.
3. Project is in the Highlands Planning Area therefore it is assumed that an NJDEP Highlands permit will not be required. Specifically excluded from this task is preparation of a Highlands Exemption Request Application.
4. Permit application fees (as noted in the applicable tasks above) are specifically excluded from this scope of work.
5. Tree removal, land grading permits, site plan review, etc. will not be required from Denville Township.

FEE: \$3,200.00

**TASK 7 – SOIL EROSION AND SEDIMENT CONTROL PLAN CERTIFICATION (SESC) (To be Determined):**

If the project disturbance exceeds 5,000 square feet, a SESC plan certification from the Morris County Soil Conservation District will be required. GPI will prepare the appropriate plans, details and notes. *It is assumed that the NJDEP application fee of \$725 for this permit will be provided separately by RRCC and is not included in our fee.*

FEE: \$3,800.00

**OPTIONAL/ADDITIONAL SERVICES**

The following post- design optional services can be provided to RRCC upon request and are not included in this proposal.

**BIDDING** - During this phase we can assist the Owner in obtaining bids and negotiating costs for the project. Our scope during the bidding phase would include:

1. Provide copies of the bidding documents, including the final approved plans, specifications, permits, cost estimate and bidding forms to the Owner for copying and distribution.
2. Attend a pre-bid meeting to respond to contractor questions and will provide responses to questions that arise during the bidding process for clarification or addenda, as appropriate.
3. Once bids are received, we will prepare a tabulation of all bidders in a spreadsheet and check for irregularities in the bids, if requested.
4. We will assist in awarding and preparing contracts for construction.

**CONSTRUCTION SERVICES** – Certain services may be needed immediately before, during and upon completion of construction. GPI can provide the following services:

1. Prepare and submit a construction and inspection schedule to NJDEP Bureau of Dam Safety and Flood Control for approval prior to construction.
2. During construction it will be necessary to have full time inspection of the work of an NJ licensed professional engineer.
3. Prepare the Final as-built plan and provide engineer's certification.
4. If lake lowering is needed during construction, GPI can prepare an application for an NJDEP Division of Fish and Wildlife Lake Lowering Permit in advance of construction mobilization.
5. Construction survey/layout/stakeout.
6. Review contractor's shop drawings submittals, respond to contractor's questions, and other consultations.

Note that Items 1, 2 and 3 above will be required to be provided as a condition of the Dam Safety Permit approval.

**PROPOSED FEE**

We propose to undertake the Scope of Services described herein. Our fee for each task will be as follows:

<b>TASK NO.</b>	<b>TASK DESCRIPTION</b>	<b>PROPOSED FEE</b>
1	Supplemental Survey for Dam Rehabilitation and Permitting	\$8,700.00
2	Wetlands/Open Waters Determination	\$2,200.00
3	Final Hydrology and Hydraulics (For Dam Safety Construction Permit)	\$4,400.00
4	Preparation of Constructions Documents	\$22,700.00
5	Wetlands General Permit #18	\$6,000.00
6	NJDEP Dam Safety Construction Permit	\$3,200.00
7	Soil Erosion and Sediment Control Plan Certification (TBD)	\$3,800.00
<b>TOTAL</b>		<b>\$51,000.00</b>

The following services are not anticipated and as such, our response does not include the following services:

- Detailed Investigation and/or Evaluation of any Historic Significance associated with the dam.
- Preparation of a new Emergency Action Plan or Operation and Maintenance Manual.
- Preparation of applications for State Dam Repair Funds (i.e. cost estimates to support an application for State Dam Repair Funds).
- Right-of-way acquisition/takings, flood easement and other mapping services.
- Permit application fees.
- Attendance at public hearings/meetings.

**PROPOSED SCHEDULE**

GPI and K&K can begin work within four to five weeks of your approval of this proposal. We estimate it will then take another four to five weeks to compile and submit the permit applications to NJDEP. Once the applications are filed with NJDEP, it will take several months to receive all permits from NJDEP.

The Morris County SESC certification takes about 4 weeks to obtain and would best be obtained after the NJDEP permits are issued (but a few weeks prior to construction mobilization) so that the time limits do not expire.

**CONDITIONS**

Greenman-Pedersen Inc. accepts no responsibility for the accuracy of any information furnished by the client for use on this project. This includes, but is not limited to, previous boundary and topographic surveys by others, title data, soil logs, percolation tests, and other site information on which GPI is expected to rely.

initial submission to the NJDEP, plus two (2) sets for client use. Any additional copies for subsequent submittals to the regulatory agencies or per client's request will be invoiced in accordance with our printing rate schedule as follows:

<u>Printing</u>	<u>Small</u>	<u>Regular 24" x 36"</u>	<u>Large</u>
Prints (ea.)	\$2.00	\$2.50	\$ 3.50
Mylars (ea.)	\$6.00	\$7.50	\$10.00
Copies (8½ x 11")	\$0.25/each		

All shipments will be sent by carrier of your choice at your expense. GPI will not be responsible for damage or delays occurring during shipment.

Progress billings will be made monthly based on the estimated percentage of completion of the various items outlined herein. In the event revisions are required, unless due to omission of required data, you will be notified in the form of an addendum to this proposal as to the reason for the revisions, the scope of any additional work, and our fee to accomplish these revisions. Upon execution of the aforementioned addendum, we will proceed with the additional work.

Any taxes or fees, enacted by local, state, or federal government subsequent to the date of this Contract, and based on gross receipts or revenues, will be added to amounts due under this Contract, in accordance with any such fees or taxes.

Please review this proposal and should you determine it to be acceptable, please sign this proposal and return it with a retainer in the amount of \$10,000.00.

Very truly yours,



Valerie A. Hrabal, P.E., P.P.  
Manager, Hydrology, Hydraulics and Dam Safety

CC: file



ACCEPTANCE AND AGREEMENT

The undersigned accepts this proposal and the terms and conditions stated herein and authorizes Greenman-Pedersen, Inc. to proceed with the services as outlined. The undersigned accepts full responsibility for payment for services performed as described above.

Accepted this \_\_\_\_\_ day of \_\_\_\_\_, 2019

By \_\_\_\_\_  
(Authorized Signature) (Corporate Title)

\_\_\_\_\_  
(Type or Print Name) (E-Mail Address)

\_\_\_\_\_  
(Phone Number) (Fax Number)