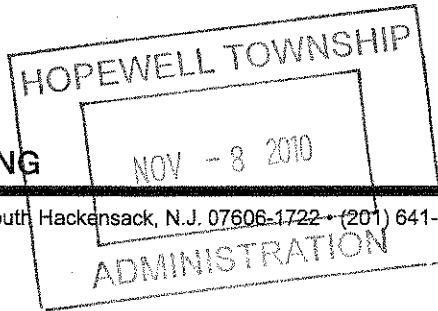




BOSWELL ENGINEERING

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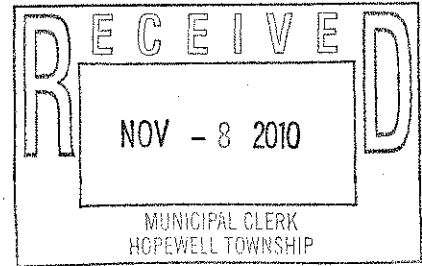
ENGINEERS ■ SURVEYORS ■ PLANNERS ■ SCIENTISTS

*C. Committee
Paul Pogorzelski
W/K SCW*

VIA FEDEX

November 4, 2010

Mr. Stephen Olivera
State of New Jersey
Department of Environmental Protection
Bureau of Land Use Regulation
501 East State Street
Station Plaza Five, Second Floor
P. O. Box 439
Trenton, New Jersey 08625



Re: Response to NJDEP Comments
NJDEP Flood Hazard Area Individual
Permit and Freshwater Wetlands
Individual Permit
Replacement of the Old Mill Road
Bridge over Stony Brook
Bridge No. 230.9
Township of Hopewell
Mercer County, New Jersey
NJDEP File No. 1106-09-0004.1 FHA090002
Our File No. MEC-102

Dear Mr. Olivera:

In accordance with the Department's deficiency notice dated September 4, 2009 we have revised the plans and project scope to comply with the regulations to the greatest extent possible.

In a previous telephone conversation you requested a Phase I Archeological Survey be performed in the vicinity of the project based on SHPO's comments. We provided that survey under separate cover on March 30, 2010 and received a memorandum from SHPO on April 14, 2010. It was concluded that the project would not affect significant archeological resources.

Meanwhile, we revised the plans and are providing a response to your comments as follows on an item by item basis:

1. *The total area of impervious surface proposed and the total land area that will be disturbed.*

The total land disturbance for this project has been calculated at 43,018 s.f. (0.988 acres) and the net increase of impervious

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coverage is 10, 860 s.f. (0.249 acres). A plan entitled, "Replacement of Bridge No. 230.9, Old Mill Road Over Stony Brook, Impervious Areas, Sheet 1 of 1," dated October 11, 2010 has been prepared and included as part of this resubmission package to clearly depict the limits of disturbance and the newly proposed impervious surfaces.

2. *If stormwater management is required pursuant to N.J.A.C. 7:13-11.2, the following information where applicable.*

The scope of the project has been minimized to eliminate the need to provide stormwater management. The project is no longer considered a major development under N.J.A.C. 7:8. The plans have been revised to reflect these changes.

3. *A description of all measures to be taken to reduce temporary and permanent detrimental impacts to each resource listed at N.J.A.C. 7:13-15.5(a)3, whether onsite or offsite.*

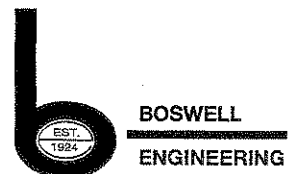
The proposed activities have been designed to create the least amount of disturbances to the resources listed at N.J.A.C. 7:13-15.5(a)3, while providing the necessary horizontal and vertical alignment required by the NJDOT. Please refer to Sheets 19 and 20 (Soil Erosion and Sediment Control), which depicts all measures to be taken to protect the adjacent environmentally sensitive areas during construction.

4. *A plan to mitigate the effects of all unavoidable adverse impacts.*

After the initial submission of the application the Stony Brook was categorized as a category-one (C-1) watercourse, the riparian buffer was increased to 300'. By increasing the regulated area at this location, the applicant was given an additional 15,000 s.f. of allowable disturbance under 'Table C'. As indicated on the enclosed color Flood Hazard Area Permitting Plan all proposed disturbances associated with the reconstructed public roadway and the stormwater outfalls fall below the allowable limits as set forth under Table C. Therefore, since the new roadway design and stormwater outfall do not exceed the limits at Table C, no riparian mitigation is required.

5. *Please submit a copy of the State hydraulic.*

The State hydraulic study was utilized to perform HEC-2 computations for this project. The existing and proposed data has been presented in Section 2 of the enclosed application package.



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6. *Please submit the supplemental surveyed cross-sections.*

The supplemental cross-sections have been attached as part of the resubmission package and can be found within Section 2.

7. *What is the drainage area of the ditch?*

The drainage area of the ditch is approximately 25 acres. A drainage area map can be found in Section 3 of the resubmission package depicting the drainage area.

8. *Please submit pictures of the breached dam.*

A color photograph of the breached dam has been provided in Section 4 of the attached resubmission package.

9. *Please submit details of the proposed gas line relocation.*

The proposed gas line will be relocated and hung on the proposed bridge. A detail of the gas line relocation can be found on Sheet 28 of 37 entitled, "Replacement of Bridge No. 230.9, Old Mill Road Over Stony Brook, Profile and Section, MEC-102-GPE," dated July 19, 2009.

10. *Per N.J.A.C. 7:13-11.7, the stream must span the entire channel. Please revise the plans and calculations accordingly.*

Old Mill Road is an existing travelled roadway. The existing bridge structure is deteriorated and unsafe. The County recently was forced to close the roadway because of fear of possible collapse. There is a compelling need to restore traffic to this section of the Township. There are no other feasible areas of crossing the Stony Brook and provide vehicular passage that would not create a greater impact to sensitive environmental receptors. The proposed bridge eliminates one pier in the channel and lessens the encroachment in the waterway.

The existing 3-span bridge structure has two (2) piers with a 16+ span between piers. The total channel span is 57+ feet. Based on our extensive study of alternative bridge configurations, it was concluded that a single pier, twin 36' span pre-fabricated arch bridge would best demonstrate compliance with the waiver requirements at N.J.A.C. 7:13-11.7(m).

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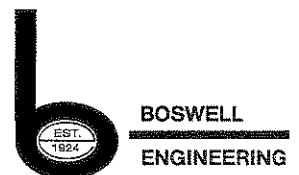
A single 60+ foot bridge would require a much larger superstructure depth. The beams elastic sectional properties are a function of height and width and become an incremental function of beam depth. The beam depth chosen provides the required clearance to allow for passage of the various storm events and comply with the Flood Hazard regulations.

A single span structure would significantly impact the existing roadway profile, increase economic costs of the project and create greater adverse environmental impacts. The proposed twin arch achieves a balance between the environment and public safety.

In order to maintain the existing road profile and minimize wetland and riparian buffer disturbance. The proposed twin arch allows for the balance between the roadway profile, and bridge clearance. A larger spanning structure would impede flow and cause a rise in the water surface elevation which would adversely impact upstream properties.

Enclosed herewith are the following in support of our application:

1. Two (2) copies of an application package entitled, "Supplemental Application Package for Replacement of the Old Mill Road Bridge over the Stony Brook, Bridge No. 230.9, Township of Hopewell, Mercer County, New Jersey," dated November 2010.
 - Original LURP#2.
 - HEC-2 Computations, Roadway Profiles and HEC-2/Roadway Stations, Summary Table of Existing/Proposed Water Surface Elevations, Stream and Water Surface Profiles.
 - Drainage Area Map of the on-site drainage ditch.
 - Color photograph of the breached dam structure.
 - Copy of NJDEP Comments dated September 4, 2009, Copy of SHPO memorandum dated April 14, 2010.
2. One (1) full set of signed and sealed construction plans sheets 1 to 37, dated October, 2010.



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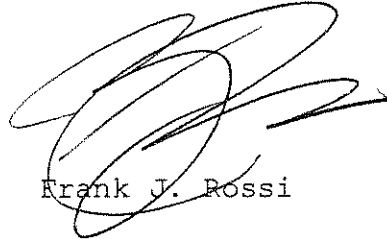
3. Five (5) signed and sealed copies of a plan entitled, "Replacement of Bridge No. 230.9, Old Mill Road Over Stony Brook, Impervious Areas, Sheet 1 of 1," dated October 11, 2010.
4. Five (5) signed and sealed copies of a plan entitled, "Replacement of Bridge No. 230.9, Old Mill Road Over Stony Brook, Flood Hazard Area Permitting Plan, Sheet 1 of 1," dated October 11, 2010.
5. Five (5) signed and sealed copies of a plan entitled, "Replacement of Bridge No. 230.9, Old Mill Road Over Stony Brook, Freshwater Wetland Permitting Plan, Sheet 1 of 1," dated October 11, 2010.

The plans and documents being provided herewith should allow the Department to deem the applications administratively complete and allow the technical review period to proceed.

If you should require any additional information or have any questions or comments, please do not hesitate to contact me directly at (201) 373-8905.

Very truly yours,

BOSWELL ENGINEERING



Frank J. Rossi

FJR/cr
Enclosures

cc: Annette C. Bielawski, RMC, Township Clerk (w/o encs.)
Gregory Sandusky, P.E., County Engineer (w/o encs.)

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