



Wetland Consulting Services

April 26, 2015

Boxford Conservation Commission
7A Spofford Road
Boxford, MA 01921

WCS Proj #: Boxford-26A

RE: Supplemental Information, NOI Application, Culvert Replacement, 49 Woodcrest Road, Boxford, MA (DEP File # 114-1203)

Dear Commissioners:

On April 7, 2015, MA DEP provided comments on the Boxford DPW project to replace the 18" cmp culvert near 49 Woodcrest Road (see DEP comments attached). The project involves replacing an existing 18" cmp with a new 18" high density polyethylene (HDPE) plastic pipe. The existing stone headwalls on each side of the road would remain intact or rebuilt. Approximately 200 s.f. (100 s.f. on each side) of bordering vegetated wetlands (BVW) may temporarily be impacted during the culvert replacement. The application was submitted electronically to DEP on March 6, 2015.

MA DEP's primary concern relates to whether there is an intermittent stream present at the road crossing. MA DEP defines a stream as "a body of running water which moves in a definite channel in the ground" (310 CMR 10.04). Water flow through the pipe borders between ephemeral and intermittent. An eight foot long channel approximately 15" wide with a stone lined bank lies on the inlet side of the culvert. The channel is clearly man-made. Flow above this channel is in the form of sheet flow with no discernable bank and channel.

Flow on the outlet side of the culvert is somewhat dispersed and only partially contained within a channel. If any Bank exists, the Bank is only 2" to 3" high (see Photos A and B). Photo B shows water flow within a shallow channel in early Spring that subsequently disperses after a short distance.

Prior to this road being constructed, water likely flowed across the area through the existing wetland as sheet flow. Once the road was constructed and a culvert installed, water flow was constricted at the crossing resulting in the formation of a very shallow channel. This channel is indefinable when there is no flow (see Photo A). Since a definite channel cannot be observed throughout the year, the channel fades just downslope of the crossing, and no aquatic habitat, especially fish habitat, lies on either side of the road, it is my opinion that this wetland should not be considered an intermittent stream. Consequently, this project does not need to comply with the stream crossing standards.

The remaining comments from DEP are addressed as listed in their comment letter.

How will the 200 s.f. of temporary BVW alterations be restored?

Since the work is occurring at the edge of a BVW we have assumed that 200 s.f. (100 s.f. on each side) of the BVW may temporarily be impacted. This impact could be the result of erosion control installation, slight grading into the BVW during the culvert installation, soil spillage, etc. Any restoration impacts (if

**15 Bisson Lane, Merrimac, MA 01860
978-346-9857 • 978-346-7479 (FAX)**

any) to the BVW would simply require hand raking after erosion control is removed and/or removal of soil spillage. Disturbed soils will simply be seeded. If the headwall on the outlet side of the crossing can be removed as planned, there should be no BVW impact at all.

Will the integrity of the downstream headwall be compromised during the removal of the old pipe and installation of the new pipe?

None of the “bank” on the outlet side of the culvert would be impacted if the project proceeds as proposed, since the DPW plans to leave the existing headwall in place. The DPW believes the existing 18” cmp can be pulled out of the headwall once the pipe is exposed without damaging the headwall. The existing 18” cmp would simply be pulled out of the opening in the headwall and a new 18” HDPE inserted in the opening. Any remaining space between the headwall and the pipe can simply be grouted.

A cross-section should be provided at the culvert inlet and outlet.

The plan has been revised to include these cross-sections. See revised plan dated April 14, 2015.

Silt fence should be replaced with straw wattles.

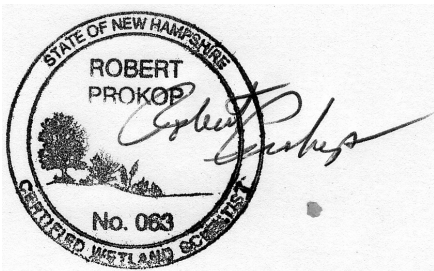
DPW has agreed to replace the silt fence with straw wattles. The plan has been modified to show this change

Is the new HDPE pipe going to be a smooth or corrugated.

DPW plans to use a smooth pipe. Since the grade of the new pipe is so shallow, water flow velocities through the pipe are essentially the same regardless of the type of pipe.

Hopefully, these revisions to the plan satisfy both the Commission and MA DEP. If you have any questions or require any additional information, please feel free to contact me at 978-346-9857 or John Dold of the Boxford DPW at 978-352-6555.

Sincerely,
Wetland Consulting Services,



Robert Prokop
Wetland Scientist/Wildlife Biologist



Photo A. View of the downslope (outlet) side of the culvert at 49 Woodcrest Road in early winter 2014. Photo by B. Prokop.

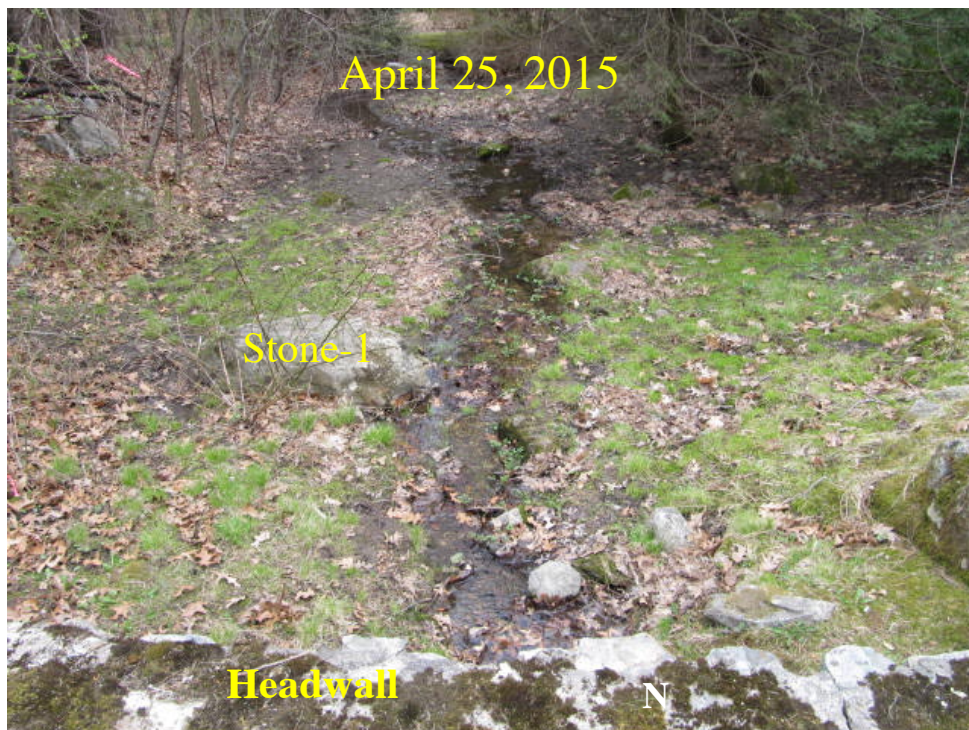


Photo B. View of the downslope side of the culvert at 49 Woodcrest Road in mid-spring 2015. Photo by B. Prokop.



COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NORTHEAST REGIONAL OFFICE
205B LOWELL STREET, WILMINGTON, MA 01887 978-694-3200

CHARLES D. BAKER
Governor

MATTHEW A. BEATON
Secretary

KARYN E. POLITO
Lieutenant Governor

MARTIN SUUBERG
Commissioner

DATE: April 07, 2015

Municipality BOXFORD
(city/town)

RE: NOTIFICATION OF WETLANDS PROTECTION ACT FILE NUMBER

The Department of Environmental Protection has received a Notice of Intent filed in accordance with the Wetlands Protection Act (M.G.L. c. 131, §40):

Applicant: BOXFORD DPW
Address: 7B SPOFFORD ROAD
BOXFORD, MA 01921

Owner: BOXFORD DPW
Address: 7B SPOFFORD ROAD
BOXFORD, MA, 01921

LOCUS: 49 WOODCREST ROAD

This project has been assigned the following file # : NE 114-1203

A FILE NUMBER ONLY INDICATES THAT THE APPLICATION CONTAINS THE MINIMAL SUBMITTAL REQUIREMENTS AND IS ADMINISTRATIVELY COMPLETE - NOT THAT THE INFORMATION IN THE APPLICATION IS ADEQUATE FOR ISSUANCE OF AN ORDER OF CONDITIONS.

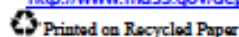
Although a file # is being issued, please note the following:

Is this hydrologic connection an intermittent stream with BVW? If so, Bank should be delineated and performance standards met, including meeting the MA Stream Crossing Standards to the maximum extent. Why will the BVW be altered? How will the 200sf of temporary BVW alterations be restored? Will the integrity of the downstream headwall be compromised during the removal of old pipe and installation of the new pipe? A cross-section of both the inlet and outlet should be provided showing invert elevations and wetland boundaries. Silt fence should be replaced with straw wattles and should be replaced at the inlet and outlet limits of work to contain any sediments from migrating downstream. Is the new HDPE pipe going to be a smooth or corrugated pipe?

If you have any questions regarding this letter, please contact: PAMELA MERRILL @ (978)-694-3249

Cc: Boxford Conservation Commission, Town of Boxford 7A Spofford, Boxford, MA, 01921
Owner: BOXFORD DPW, 7B SPOFFORD ROAD, BOXFORD, MA, 01921
Representative: WETLAND CONSULTING SERVICES, 15 BISSON LANE, MERRIMAC, MA, 01860

This information is available in alternate format. Call Donald M. Gomes, ADA Coordinator at 617-556-1057. TDD# 1-866-539-7622 or 1-617-574-6868.
<http://www.mass.gov/dep>



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7B SPOFFORD ROAD
BOXFORD, MA 01921