

Project Plan

Prior inspection reports completed in 2006 and 2011 considered the Dam to be in Poor condition primarily due to the deteriorated condition of the culverts. These same reports listed other less-critical deficiencies as well. Replacement of the failing culverts and associated minor repairs to the Dam would provide the most cost effective solution.

In response to the deficiencies identified by prior engineering reports and the DCR's Certificate of Non-Compliance and Dam Safety Order, the Town has prepared a project Plan that includes the following work:

- Replace the twin culverts with a precast concrete box culvert or culverts, in accordance with one of the foundation options outlined in the GPR's 2011 Phase II Report. The new culvert or culverts will be sized to pass the required Spillway Design Flood while being structural capable of carrying the loads of Beechwood Street;
- Preservation of the inlet control structures and fish ladder;
- Removal of trees and brush on the upstream and downstream slopes;
- Provide additional riprap slope protection where erosion and/or the slopes are excessively steep below the observed high water level;
- Regrade slopes (decrease pitch) and promote grass growth on the slopes above the riprap;
- Fill erosion holes behind the upstream culvert headwall with compacted granular soil fill and promote grass growth; design and construct permanent repairs to the embankment slopes;
- Implement operations and maintenance criteria consistent with the new design features of the dam.

In addition, the section of Beechwood Street on the dam crest would be improved including maintaining the existing water and gas main crossings, adding pipe sleeves for future sewer main and fiber optic crossings, and improved drainage conveyance/runoff into Bound Brook for environmental and resource protection improvements using stormwater policy best management practices.

The repairs to the Bound Brook Control Dam will improve and protect the roadway on its crest. The addition of curbing, improved drainage components, and slope improvements will increase the quality of stormwater runoff into Bound Brook, thus reducing impacts to environmental resources. Repairs to control structure walls and new culverts will improve the life cycle of the project as it will remove seepage from the area and correct concrete deficiencies. The removal of vegetative overgrowth and enhanced riprap on the upstream and downstream embankments will provide compliant and stable slopes that can be efficiently monitored and maintained thus reducing life cycle costs and maintenance.

In addition, the project could be done in a fashion that would allow for Beechwood Street to remain partially open while maintaining the existing public water supply. The implementation of the proposed repairs to the Bound Brook Control Dam will result in a reduction of the safety issues associated with the dam outlined above, and provide the Town with a safe compliant dam.