

**CONCEPTUAL DESIGN REPORT**

**FOR**

**TOWN PARCEL RETROFITS FOR**  
**STORMWATER QUALITY IMPROVEMENTS**

**FOR THE**

**TOWN OF PEMBROKE, NEW HAMPSHIRE**

**PREPARED BY**

***KV Partners LLC***

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The work contained in this report is conceptual in nature and not intended as a recommendation for construction. No survey, subsurface investigation of other detailed design work was completed as part of this effort. Concepts presented are based only on visual observations and intended to present possible opportunities for future improvements to enhance water quality.



## Town Hall and Library (PRIORITY #2)

### Existing Conditions

The two buildings share a common parking area that has two discharge points. The Library parking lot primarily flows into an infiltration basin that has an overflow connected to the State drainage system on Pembroke Street (Route 3). The southern portion of the parking lot (near Town Hall) drains directly to Pembroke Street (Route 3). The infiltration basin appears to be functioning properly.

### Proposed Conditions

The library parking area should continue to drain to the infiltration basin and no improvements are recommended. The parking lot associated with the Town Hall is scheduled to be reconstructed in the next few years and there is some available space to install water quality BMP. It is recommended that a bio-retention area (rain garden) or some tree box filters be considered as part of the parking lot reconstruction (see figure below).



## Fire Station (PRIORITY #3)

### Existing Conditions

The parking lot in the front of the building flows into a grass swale and then into the State drainage system on Pembroke Street (Route 3). Drainage from the back parking lot flows through a pipe to the front of the building, into the site drainage system, and then into the State drainage system. A few years ago, a stone infiltration system to collect roof runoff was installed on the south end of the building as a safety measure to prevent snow/ice falling from the roof onto pedestrians (not shown on the figure).

### Proposed Conditions

The lawn areas between the fire station parking area and Pembroke Street (Route 3) could be reconstructed to collect parking lot runoff and treat it prior to release into the drainage system. It is recommended that infiltration basins, bio-retention areas (rain gardens), or some tree box filters be considered at this location (see figure below).



## Central Street Parking Lot (PRIORITY #4)

### Existing Conditions

The parking lot is located adjacent to Crescent Street and extends from Central Street to Glass Street. Drainage runoff from the site flows towards Glass Street and is collected by catch basins that tie into the Glass Street drainage system.

### Proposed Conditions

There is a possibility of constructing a water quality BMP beneath the pavement but subsurface geotechnical data would be required to determine this feasibility. Future efforts could include investigation into possible subsurface system construction; however, system installation will be very costly.



### **Mills Falls Parking Lot (PRIORITY #5)**

#### Existing Conditions

The parking lot (5 spaces) is located on the edge of the roadway (backout parking) and there is limited space available for treatment within the Town right-of-way.

#### Proposed Conditions

If space is available within the public right-of-way, a tree box filter could be considered at this location.

### **Union Street Parking Lot (PRIORITY #6)**

#### Existing Conditions

The parking lot is located on the edge of the roadway (back out angle parking) and there is no space available for treatment within the Town right-of-way.

#### Proposed Conditions

No work is recommended at this location.

### **Evergreen Cemetery (PRIORITY #7)**

#### Existing Conditions

The cemetery is located off Buck Street. There is a narrow roadway system associated with this cemetery that has open drainage except for a catch basin at the bottom of the hill on Buck Street.

#### Proposed Conditions

Considering the highly constrained area, no work is recommended at this location.

### **Daughters of the American Revolution Park (PRIORITY #8)**

#### Existing Conditions

The park is located near the intersection of Broadway and Main Street. The only impervious area is a sidewalk with low runoff potential to the drainage system

#### Proposed Conditions

No work is recommended at this location.

**Robert Frost Bench (PRIORITY #9)**

Existing Conditions

The park is off Buck Street and adjacent to the Suncook River. There is no impervious area associated with this park.

Proposed Conditions

No work is recommended at this location.

**Langmaid Monument (PRIORITY #10)**

Existing Conditions

The park is off Academy Road and adjacent to the Suncook River. There is no impervious area associated with this park.

Proposed Conditions

No work is recommended at this location.

**DPW Facility (PRIORITY #11)**

Existing Conditions

The existing conditions are outlined in detail in the Town's SWPPP.

Proposed Conditions

See SWPPP for any recommendations at this location.