

## Representative Projects

### Project Name

**Smith Creek Box Culvert**

### Client

**Town of Dayton**

### Contact

**Robert Wood, Mayor**

### Key Elements

Land Survey

Hydrologic Analysis

Hydraulic Analysis

Structural Design

Material Selection

Design Drawings

Specifications

Construction Administration

## Civil Engineering Services

ECS Engineers was retained by the Town of Dayton to provide professional engineering services for the Smith Creek Box Culvert project.

A flood event in the Spring of 2011 caused Smith Creek to overtop the roadway. A 42" CMP was previously installed, which proved to be too small to handle flood flows of Smith Creek.

ECS conducted hydrologic analysis to determine the peak runoff of the drainage area. ECS then sized a structure to handle the peak runoff of the drainage area.

Structure selection was challenging due to the flat existing grades in the area. Round pipes or a bridge would have required significant reconstruction of the roadway, thus were not an option. ECS determined the best option was to install an aluminum box culvert (ABC). The ABC allowed the existing road grades to be maintained as well as provide passage of design flows.

ECS provided bidding support as well as construction oversight for this project.

