Pepper Pike Bioretention Retrofit Project Goal:

◊ Modify existing drainage swale to install a bioretention system within the right-of-way along a residential street to demonstrate its use to manage road runoff.

◊ Designed to distribute, reduce, and treat storm water runoff before connecting to a storm sewer system.

Design Considerations

Retrofit swale system requirements:

- Construct around existing utilities, including water and sewer lines.
- Connect to existing storm sewer system.
- Reduce flow to storm sewer connection.
- Construction within existing right-of-way.
- Integrate into current landscaping design.
Bioretention Design Details

- Design includes a perforated storm sewer pipe below soil mix to aid drainage.
- The soil mix consists of 70% sand, 30% peat/leaf compost.
- Runoff into the bioretention area filters through soil mix preventing standing water for longer than 48 hours.
- Soil mix and plants acts as a filter system to remove pollutants.
- Stormwater runoff will pond around the catch basin to a maximum of 6”.
- Ponded runoff will overflow into the catch basin during larger storm events to prevent street flooding.