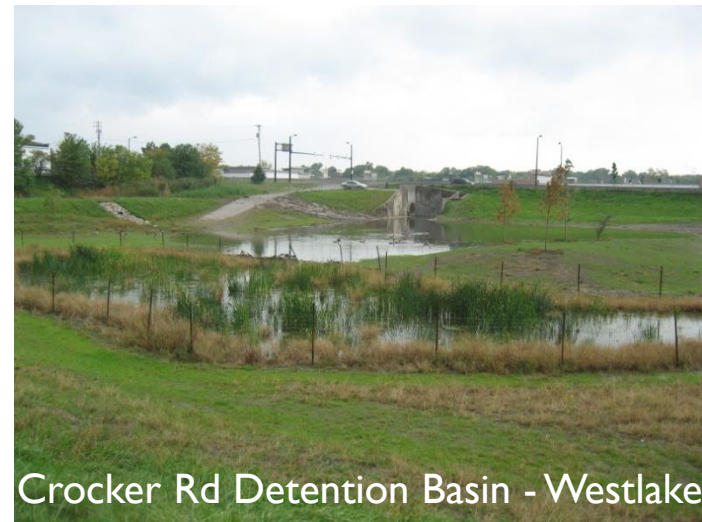


What Is a Storm Water Retrofit?

- ▶ Retrofitting is
 - ▶ Installation of storm water best management practices in areas where none previously existed, or
 - ▶ Improvement of existing storm water management practices so that they provide a water quality function



Sterncrest Road – Orange Village



Crocker Rd Detention Basin - Westlake

Typical Practices Used in Retrofitting



Traditional Detention Pond Before Retrofit

Use Existing Infrastructure

Detention Basin After Retrofit with Water Quality Enhancements



Photos Courtesy of Rutgers University

Typical Practices Used in Retrofitting

Rain Barrel

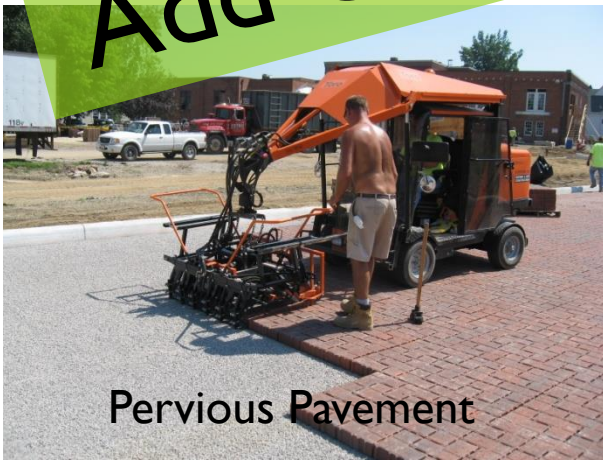


Green Roof



Add Green Infrastructure

Pervious Pavement



Rain Garden



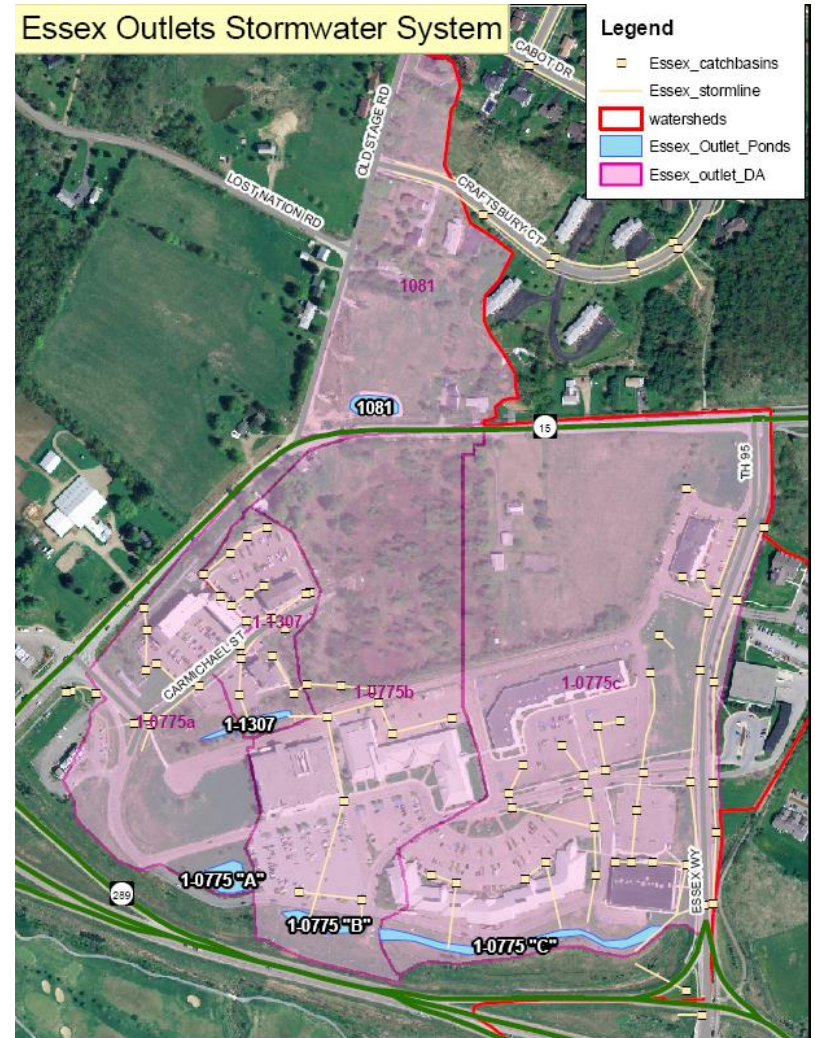
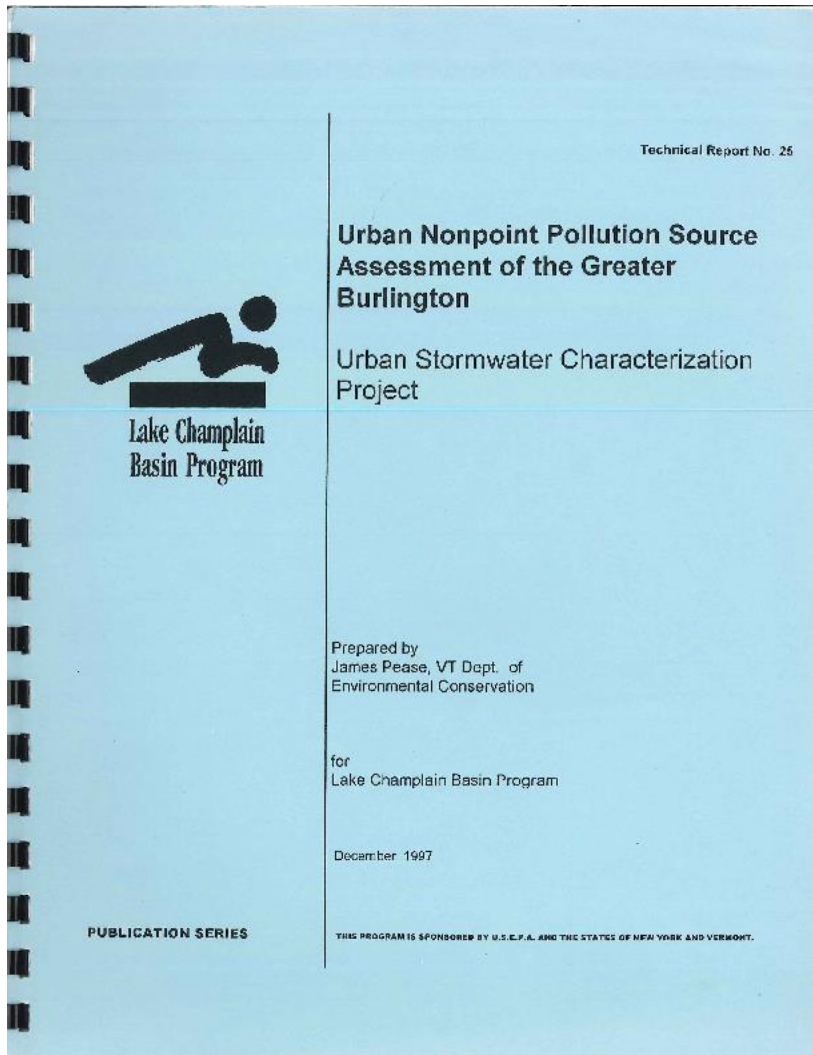
Goals of Storm Water Retrofitting

- ▶ Correction of prior design or performance deficiencies
- ▶ Flood mitigation
- ▶ Disconnection of impervious surfaces
- ▶ Improving groundwater recharge and infiltration capacity
- ▶ Addressing pollutants of concern
- ▶ Demonstrating new technologies
- ▶ Supporting stream restoration activities



University Hts Service Garage

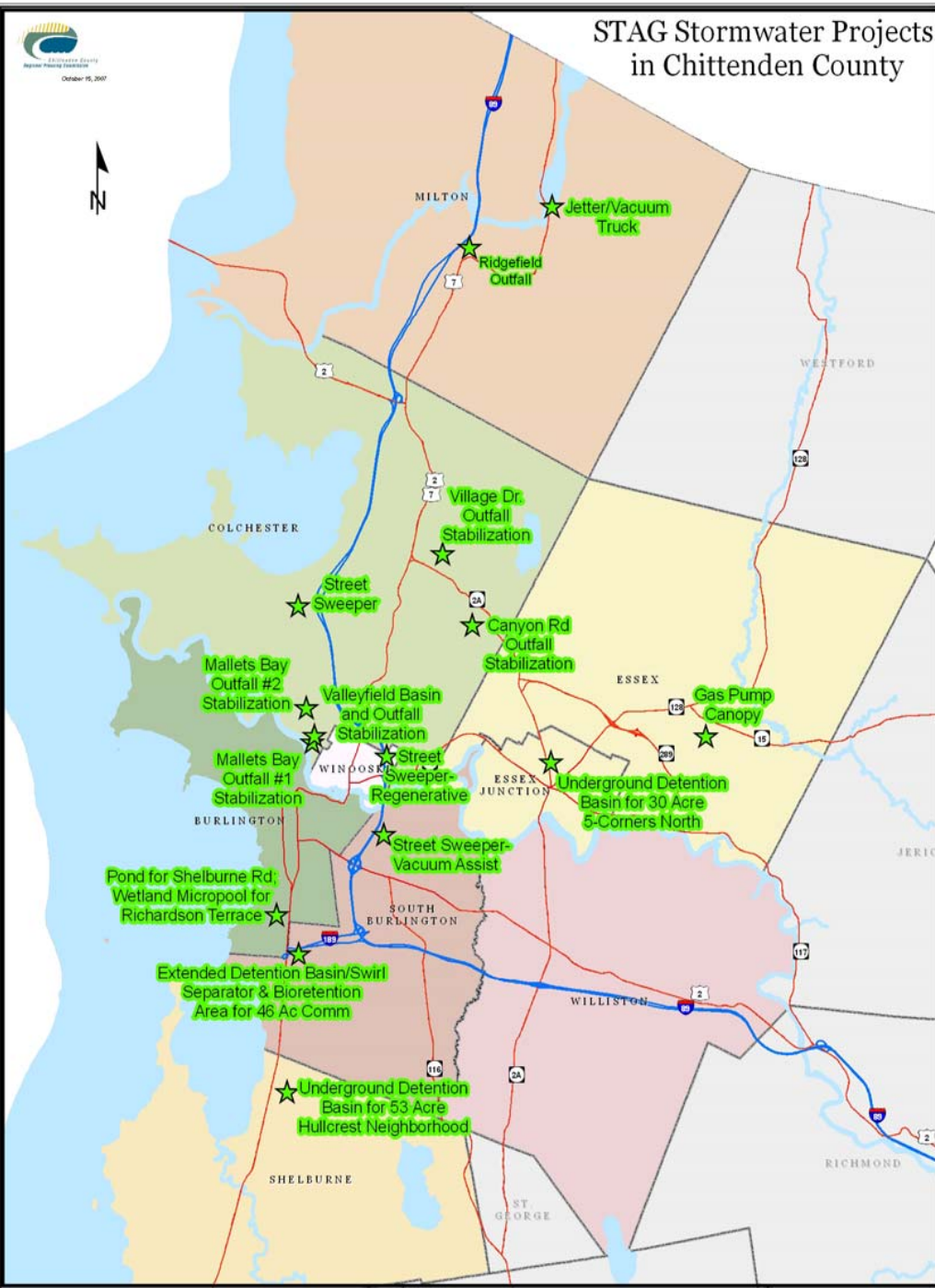
Examples of Stormwater Retrofits in VT



▶ Mapping and Retrofit Recommendations



STAG Stormwater Projects in Chittenden County



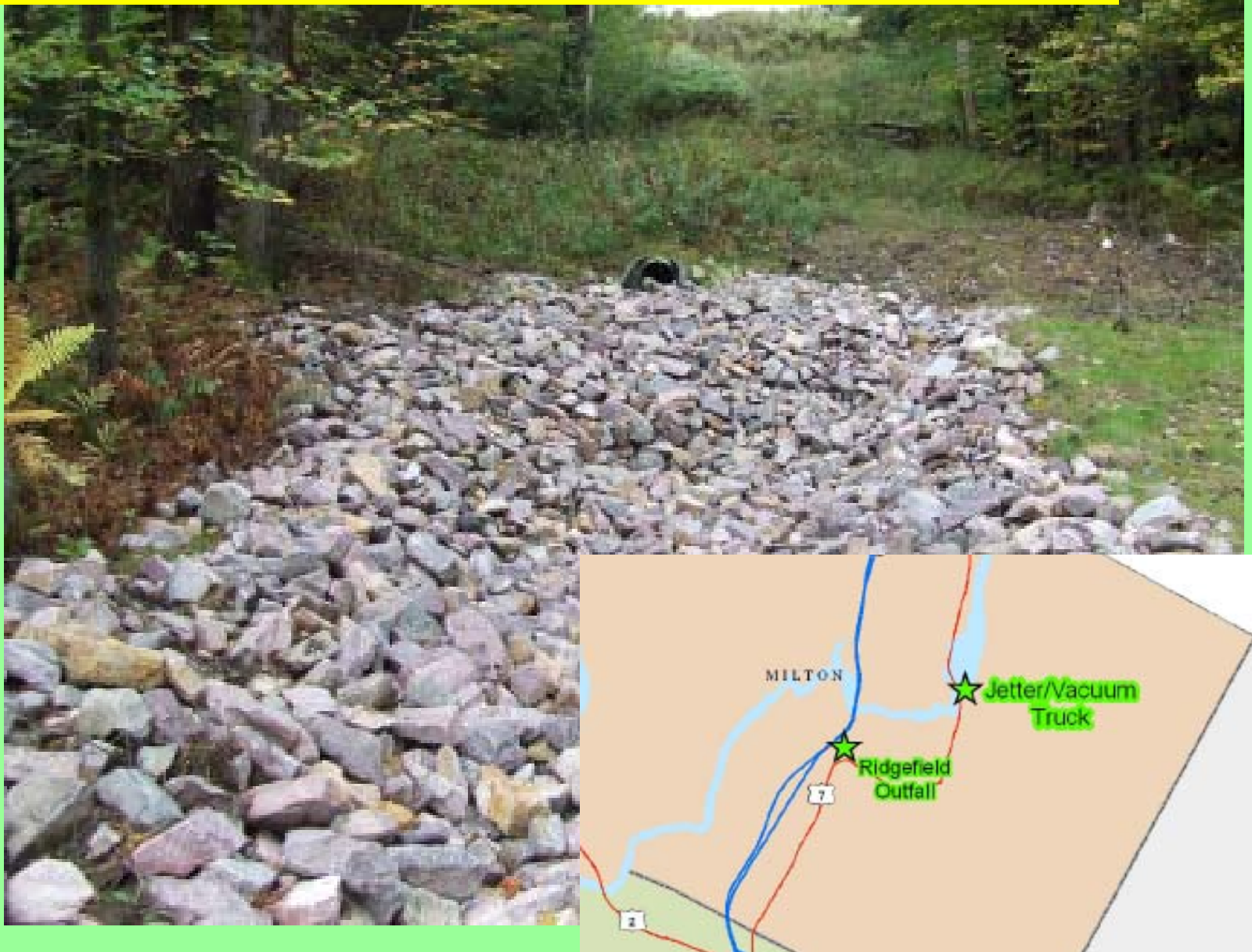
COLCHESTER, Canyon Estates, Before



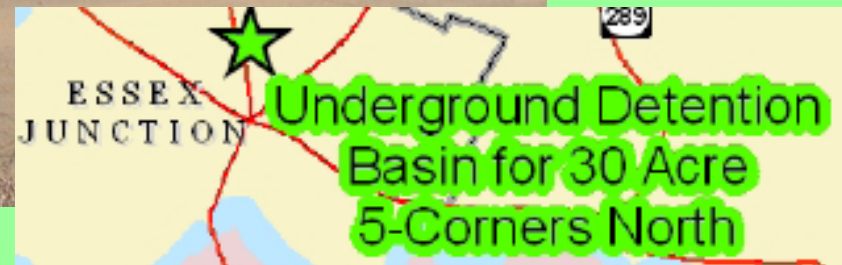
Colchester, Canyon Estates Outfall, After



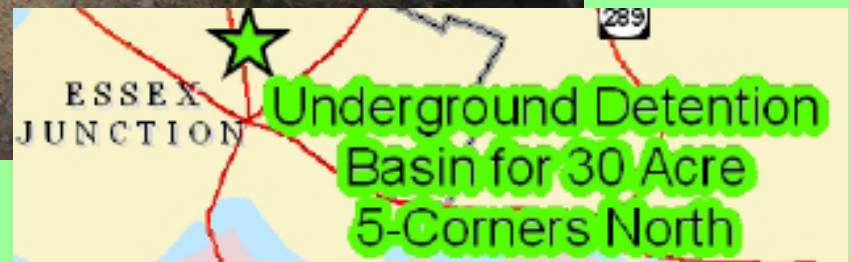
MILTON Ridgefield Estates outfall



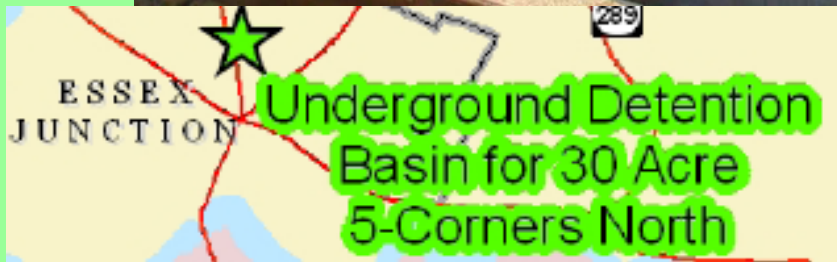
Five Corners North Before



Inlet Diversion



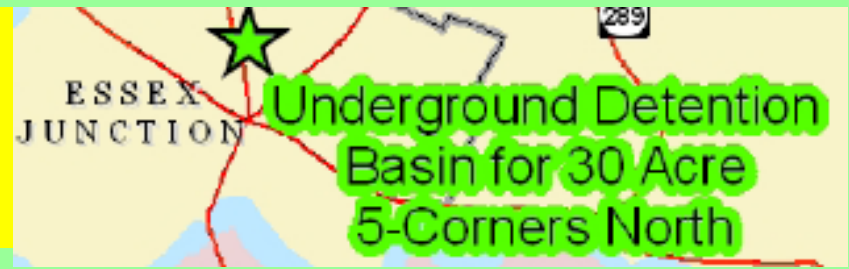
Swirl Separator



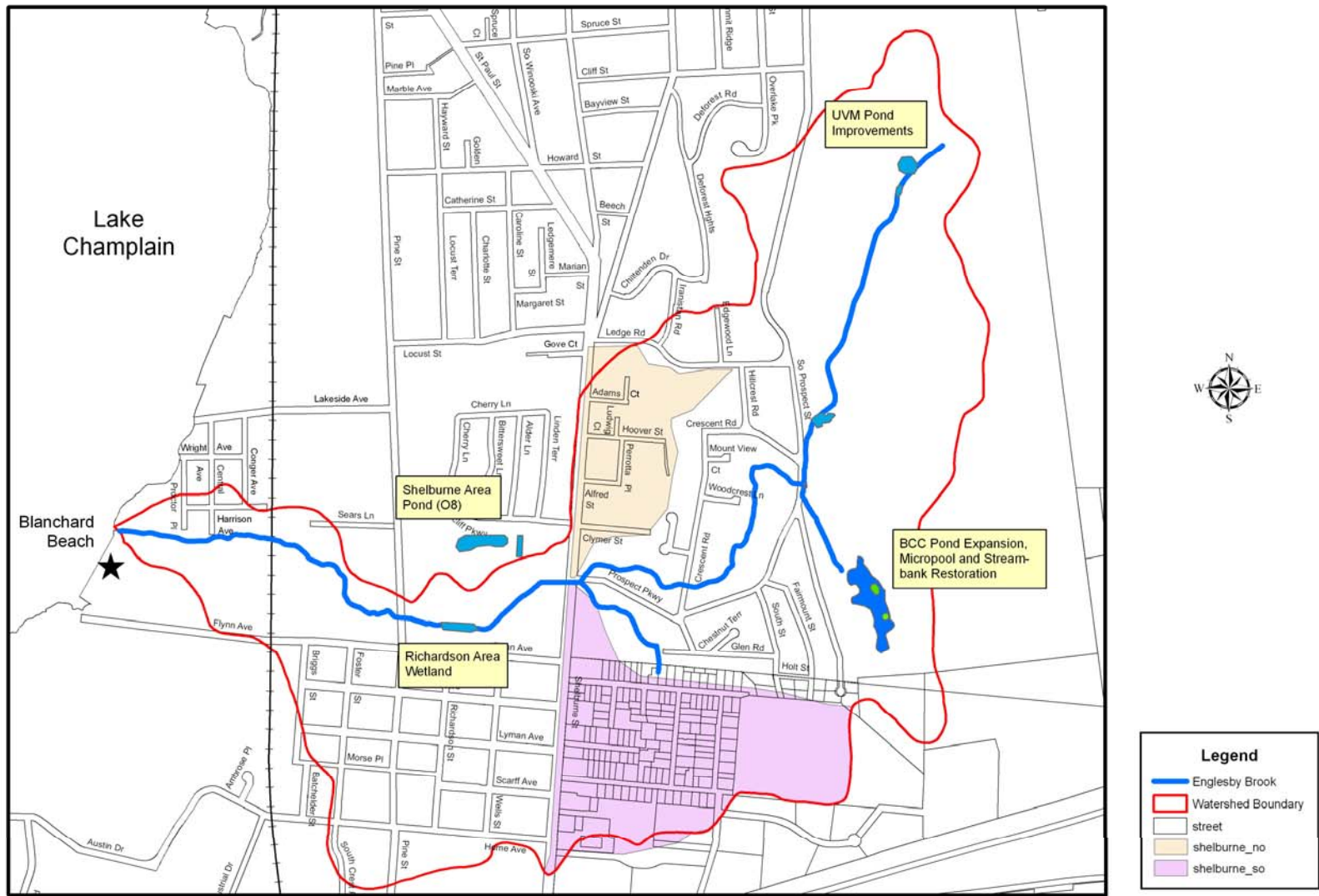
Retention Chambers



Five Corners North AFTER



BURLINGTON: Englesby Brook improvements

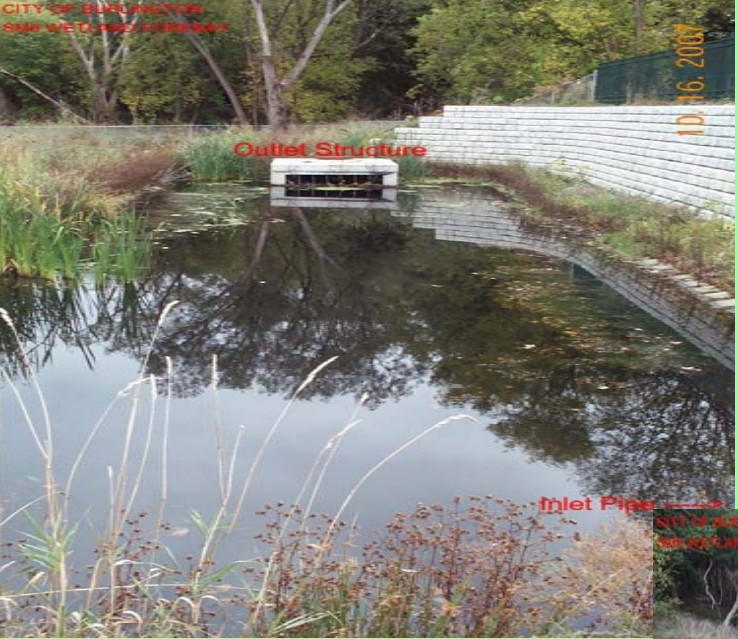


CITY OF BURLINGTON
O8 POND FOREBAY



CITY OF BURLINGTON
O8 POND





Outlet Structure

10.16.2007



Richardson Area Wetland



Inlet Pipe

SITE OF RESTORATION
WETLAND CELL 1



CITY OF BURLINGTON
SMP WETLAND CELL 1



Inlet

Outlet Structure

10.16.2007

South Burlington– Farrell Street Stormwater Detention Pond



South Burlington– Farrell Street Swirl Separator



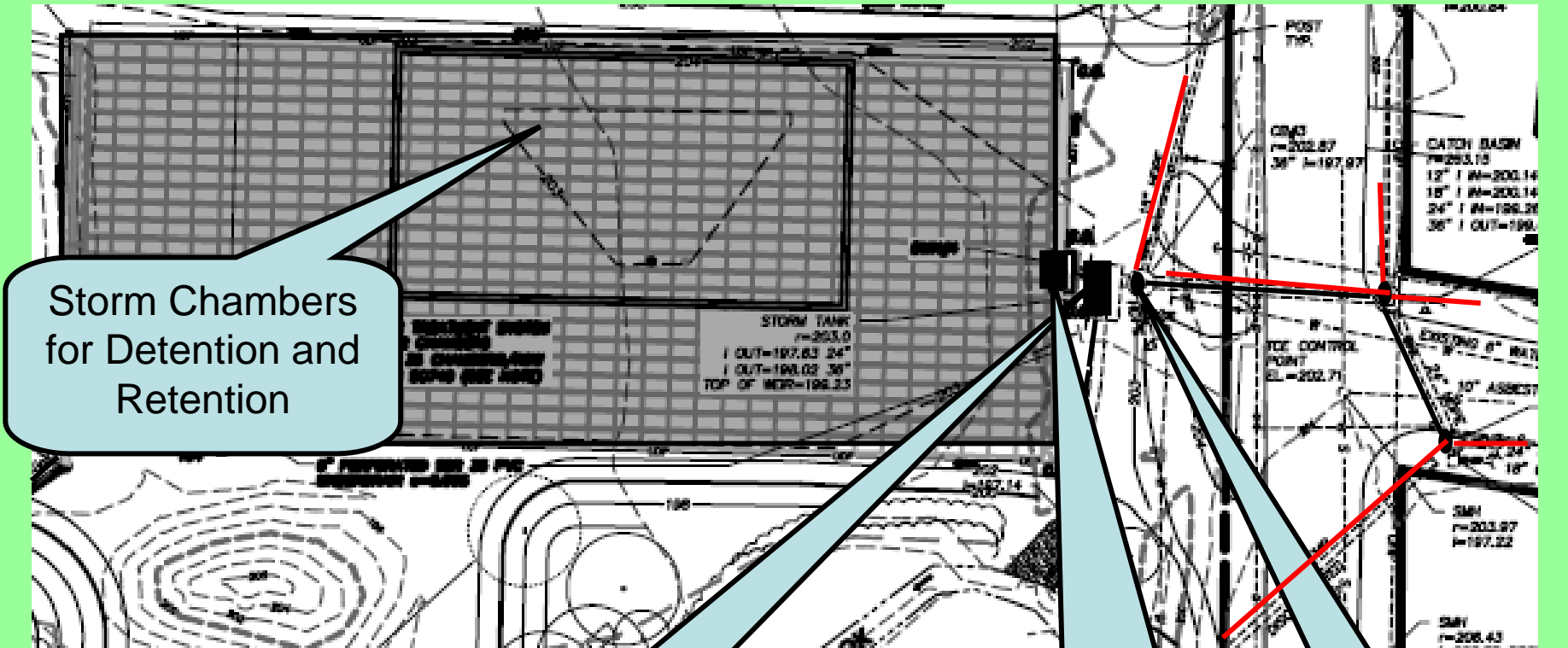
189
★
Extended Detention Basin/Swirl
Separator & Bioretention
Area for 46 Ac Comm

South Burlington– Farrell Street Bioretention Facility



NOTE: No picture of 2,000 s.f. porous asphalt parking area. Not yet constructed.

SHELBURNE: Hullcrest Park detention basin



Storm Chambers for Detention and Retention

Storm Tank for Settling Solids and Overflow

Distribution Manhole for even flow to all chambers

Manholes for Collection

Shelburne, Hullcrest Park, Intake



Shelburne, Hullcrest Park



05/09/2006 2:23 pm



Shelburne, Hullcrest Park, In construction



Shelburne, Hullcrest Park



Shelburne, Hullcrest Park, After



For More Information

- ▶ Webcast “The Art and Science of Storm Water Retrofitting”
 - ▶ Available on YouTube
- ▶ Manual: Managing Wet Weather with Green Infrastructure
 - ▶ Available with search at: <http://www.epa.gov/nscep>
- ▶ Fact Sheets: Stormwater Retrofit Techniques for Restoring Urban Drainages in Massachusetts and New Hampshire
 - ▶ <http://www3.epa.gov/region1/npdes/stormwater/assets/pdfs/BMPRetrofit.pdf>

