



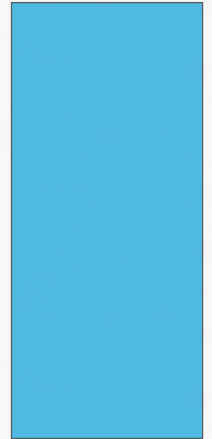
NEW ENGLAND WATER ENVIRONMENT ASSOCIATION

NEWWEA

WORKING FOR WATER QUALITY

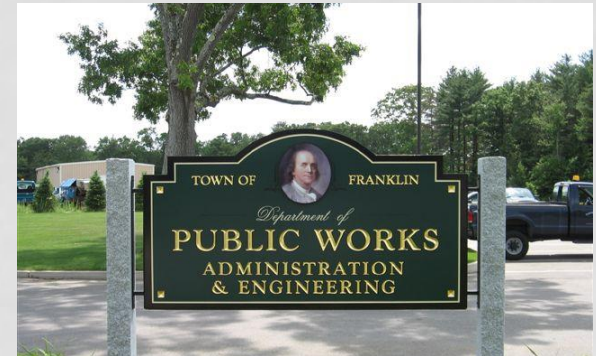
FRANKLIN, MA

ROBERT "BRUTUS" CANTOREGGI
DPW DIRECTOR



FRANKLIN, AT A GLANCE

- **Suburban, Bedroom Community**
- **Population: 34,400+**
- **290 “lane-miles” of roadways**
- **Total Land: 27 Square Miles**
 - 4 Square Miles of Impervious
- **Drinking water supply from groundwater**
- **160 miles of water works**
- **148 miles of sewer works**
- **128+ Miles of Drain Pipe**
 - 7,000+ Catch Basins
 - 600+ Outfalls
 - 200+ Treatment Basins



TRIADIC APPROACH

STORMWATER



WASTEWATER

DRINKING WATER

STORMWATER

THE CHARLES RIVER

Boston



vs.

Franklin



OPTIONS

- **Stormwater Utility**
- **Road Narrowing / Sidewalk Removal**
- **New Technologies (Porous Asphalt/Green Roof/Permeable Pavers)**
- **Pass Local By-laws**
- **Improve Current System**
- **Additional BMPs**



IMPLEMENTATION

- Public Education
- Grants
- Working With Other Towns
- Working With Environmental Groups
- BMPs
- Reduce Impervious Surface
- Low Impact Development



IMPLEMENTATION

Every Project = Stormwater Element

Roadway Reconstruction

- Sidewalk Removal / Narrow Roadway
- BMPs
 - Rain Gardens
 - Tree Wells
 - Bio retention Areas
 - Residential Rain Garden Program



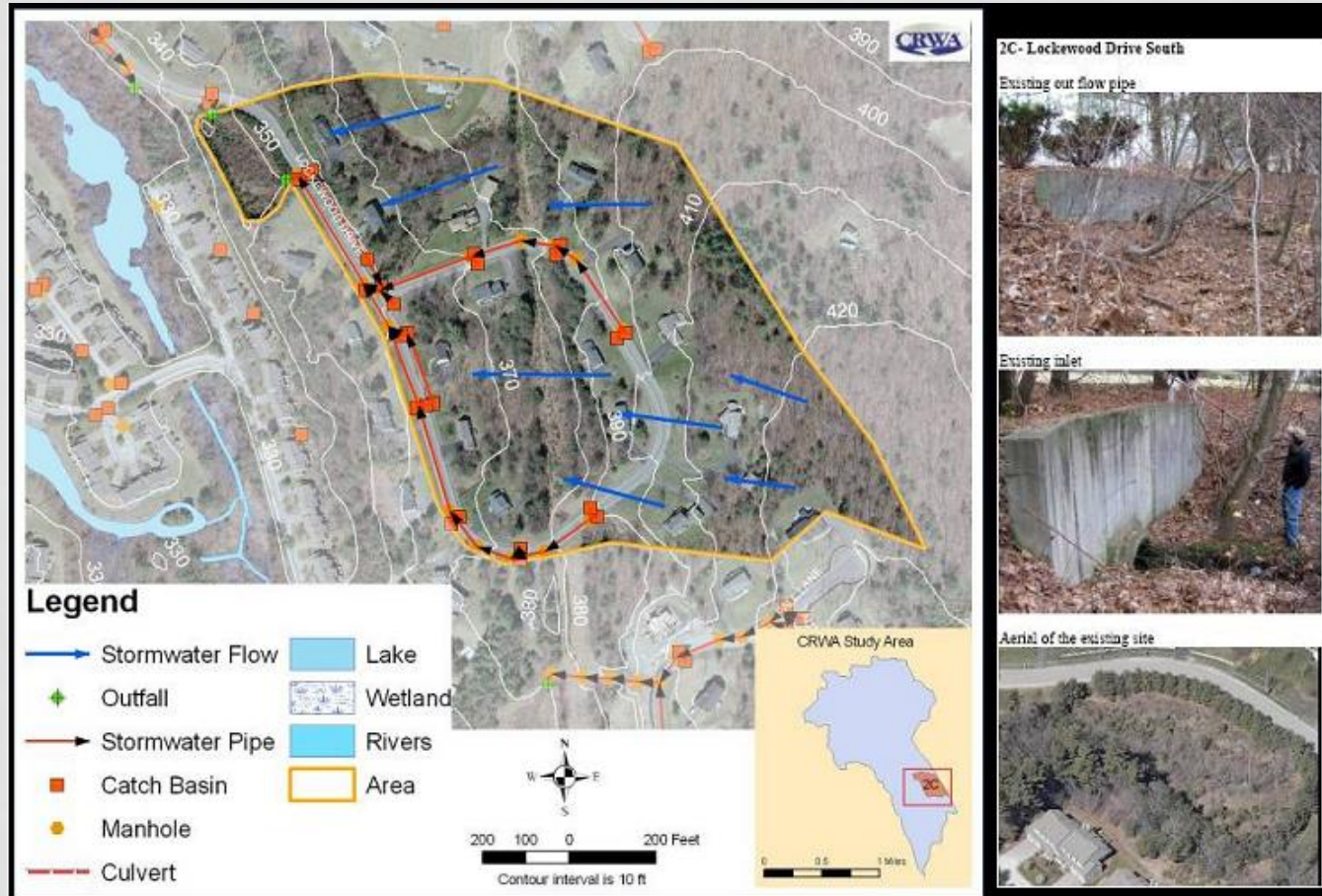
RESULTS / BENEFITS

- **Wachusett Street Reconstruction**
 - Installation of 5 Rain Gardens (\$80,000)
 - Municipal Property Available
 - Roadway Under Construction
 - Financed Through Water Line Replacement



RESULTS / BENEFITS

- **Lockewood Drive**



RESULTS / BENEFITS

- **Lockwood Drive: 319 Grant**



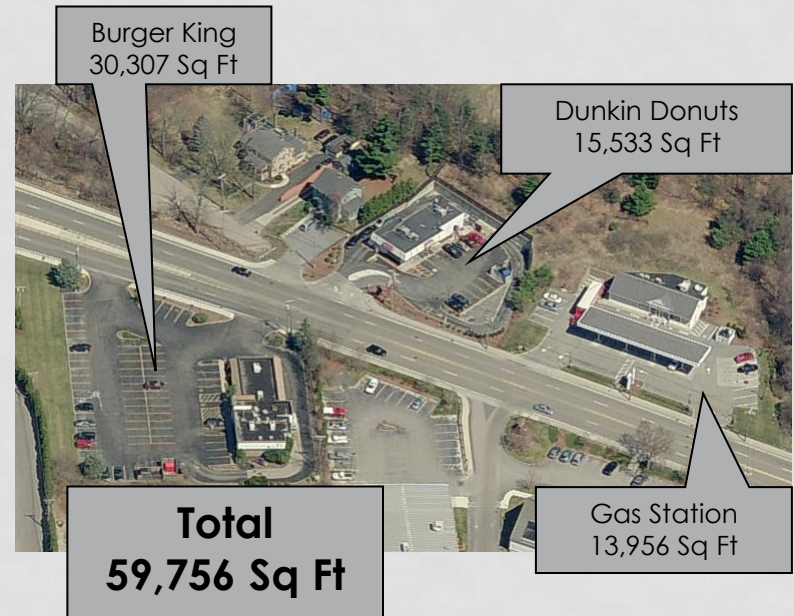
RESULTS / BENEFITS

- **Anchorage Road**



RESULTS / BENEFITS

- **Bright Hill Estates**
- **Before:**
 - Developed Early 1980s
 - Road Width: 32 feet/Sidewalks Both Sides
- **After:**
 - Reduced Pavement Width to 28 ft and Removed One Sidewalk
 - 70,000 Square Foot Reduction In Impervious Surface



RESULTS / BENEFITS

- **Lincoln Street Culvert Reconstruction**
 - Before: Erosion Resulted in Structural Failure at Downstream Culvert Headwall



RESULTS / BENEFITS

- **Lincoln Street Culvert Reconstruction**
 - After: Reconstructed Culvert Headwall and Included the Installation of a Sediments Forebay and Deep Sump Catch Basins



RESULTS / BENEFITS

- **PWED Parking Project**



RESULTS / BENEFITS

- **Pyne Circle**



RESULTS / BENEFITS

- **Island Road**



RESULTS / BENEFITS

- **Greensfield Road Construction**



RESULTS / BENEFITS

- **319 Grant Paired With Town Park = Public Education**



RESULTS / BENEFITS

- **Rain Gardens in Public Areas (Train Station, Parks & Schools)**



TREE WELLS

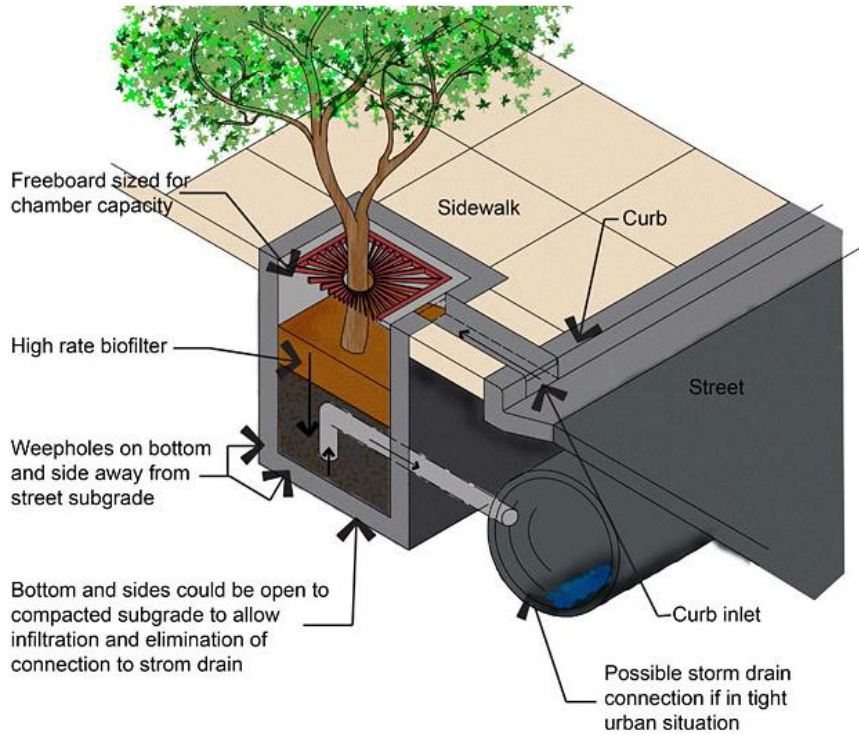
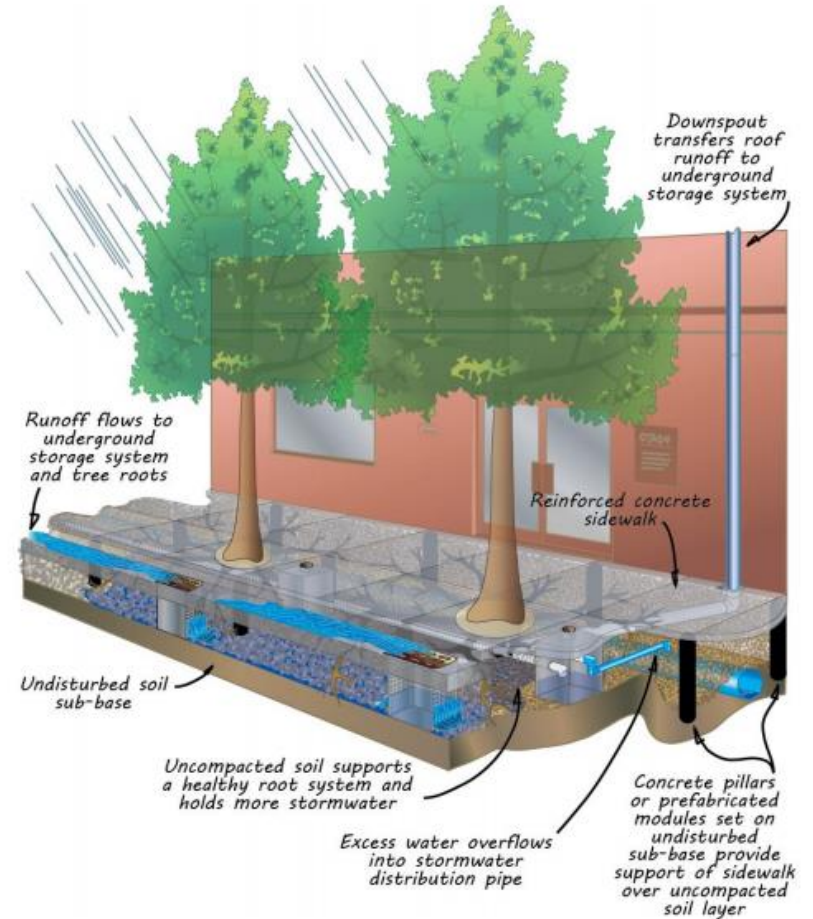
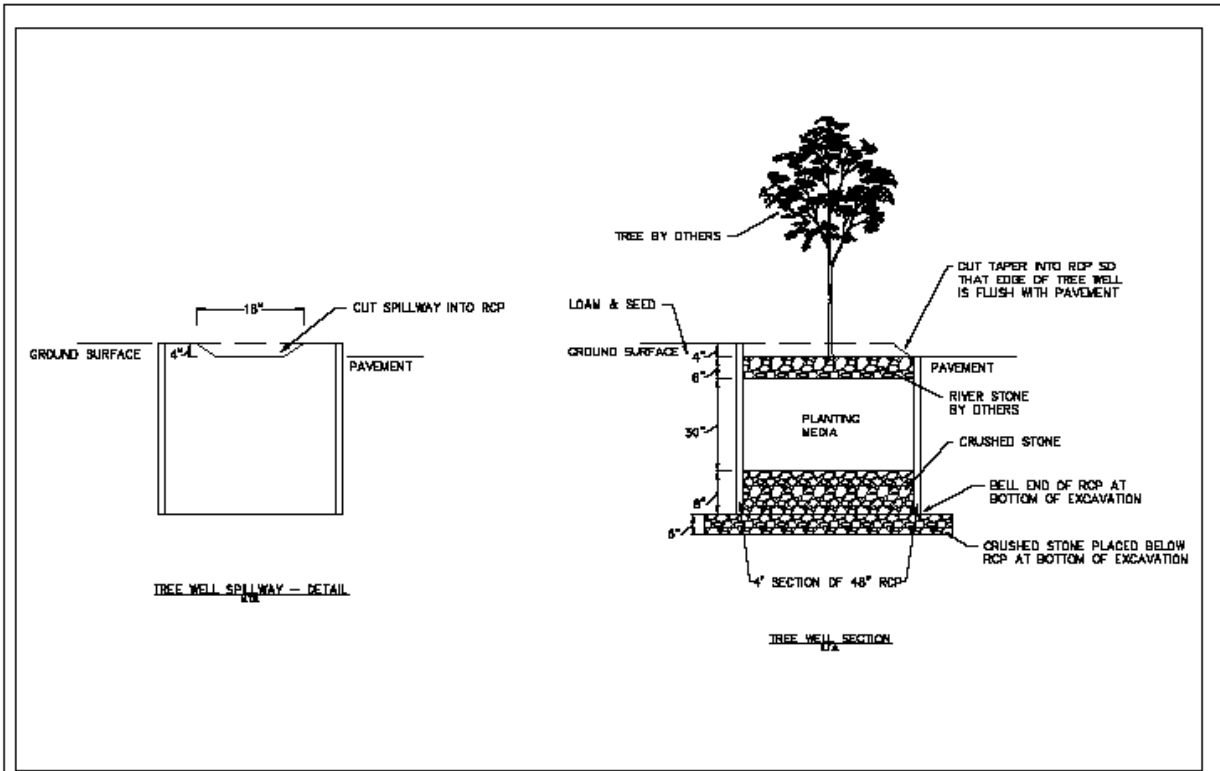


Figure 1. Tree box filters are often placed street-side to capture and filter runoff.



FRANKLIN TREE WELL



Tree Well Detail

TOWN OF FRANKLIN DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

DATE: ---/---/---

SCALE: N.T.S.

FRANKLIN TREE WELL



FRANKLIN TREE WELL



\$2500.00
INSTALLED!

Over 75
Installed all
over Franklin!



QUESTIONS?

