

The Relationship Between Stream Enhancement and Urban Infrastructure

How Do We use Stream Enhancement as a Tool to Protect Infrastructure in Urban Environments?

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Urban Stressors



- Dense Population = Infrastructure Needs
 - Utilities
 - Culverts/Bridges
- Impervious Area
- Stream Encroachments
- Historic Straightening

Projects

- Charlotte Water Stream Bank Stabilization
- Mecklenburg County Stream Restoration
- City of Charlotte Various Water Quality Projects
- City of Charlotte Unspecified Minor Storm Water Drainage Improvement Projects

Existing Infrastructure

- Proximity to streams
- Age of infrastructure
- Vulnerability to failure
- Development standards
- Water/Sewer
- Power
- Structures
- Bridges/Culverts
- Greenways

Existing Infrastructure



Cherry Tree



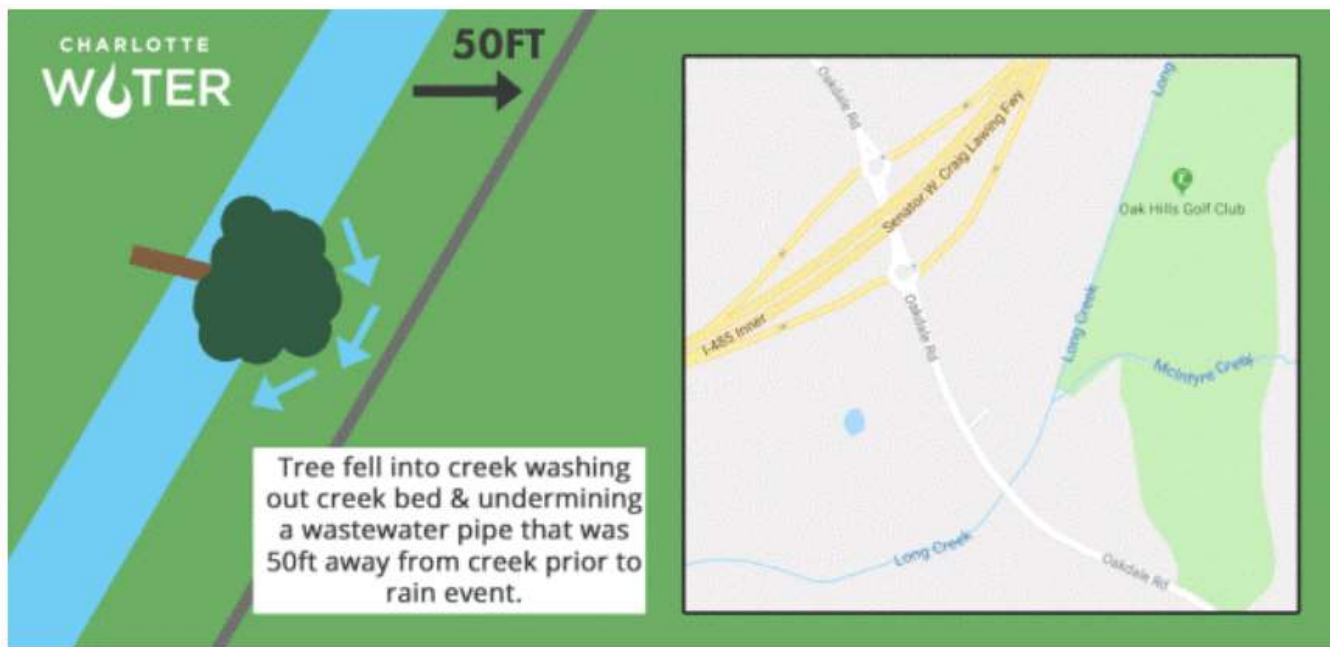
Eastway



Fourmile



Line Break



Depiction of how creek flow washed away the soil around a sewer pipe, causing it to collapse and spill.



Line Break



Long Creek



Long Creek



Cyrus



Stewart Creek



Stewart Creek



Stewart Creek



Little Sugar Creek



Little Sugar Creek



Pleasant Drive



Raintree Golf Course



Raintree Golf Course



Meadow Creek Lane



New Infrastructure

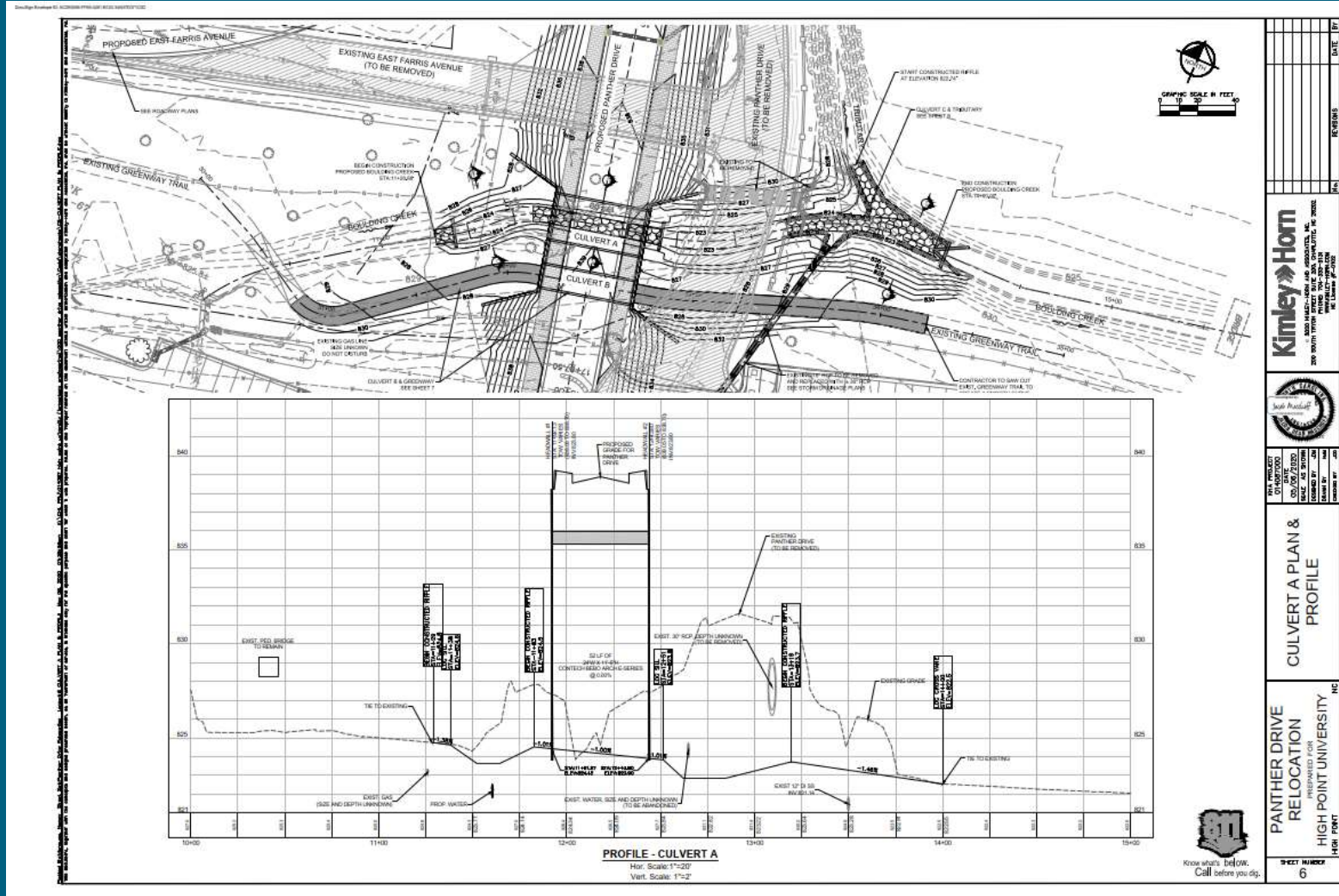
- Reduce implementation costs
- Reduce maintenance costs
- Reduce permit schedules/cost



Lower Little Sugar Creek Greenway



Panther Drive - HPU



Panther Drive - HPU



Toby Creek - UNCC



Toby Creek - UNCC



Toby Creek - UNCC



Tips

- Look up, down, across, and on top
- Assess risk and constraints
- Understand setting
- Maintenance
- Timing

Thank you!

