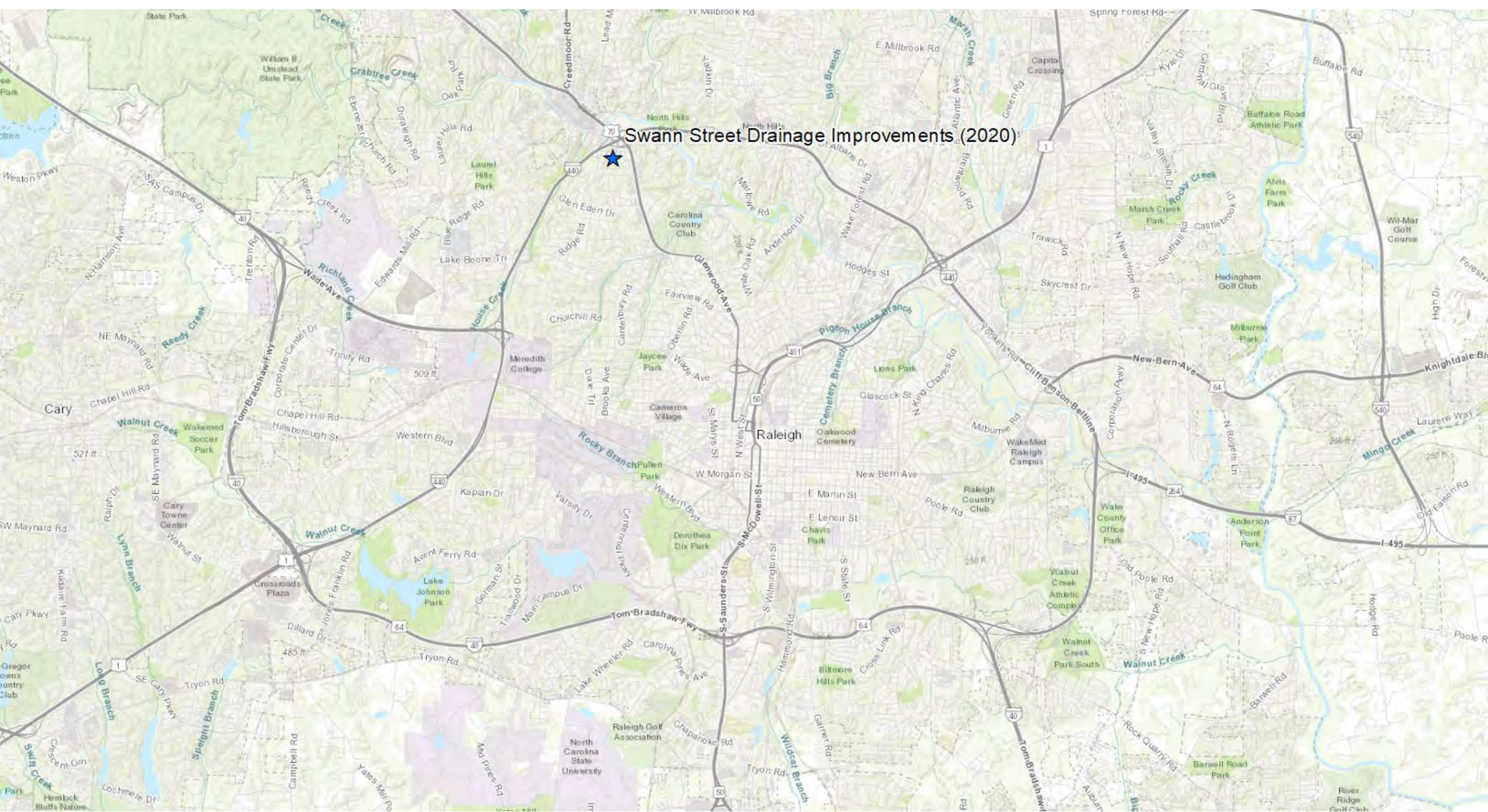




Swann Street Drainage Improvement: Three Keys to Successful Infrastructure Project in Residential Neighborhoods



Swann Street Drainage Improvements (2020)





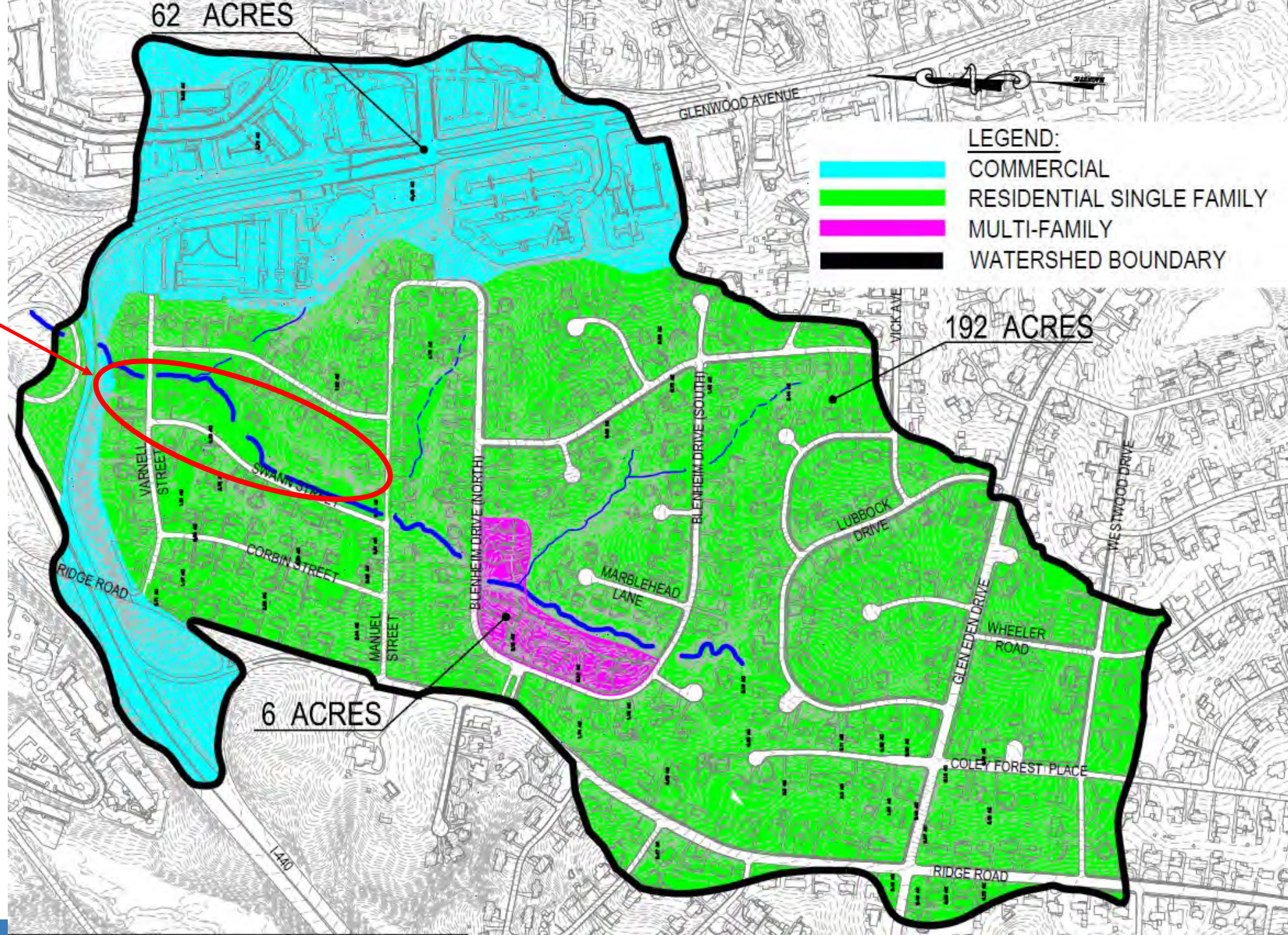
Tropical Storm Andrea (6/7/2013)
totaling 5.14 inches in 24 hours ~
10-year storm event







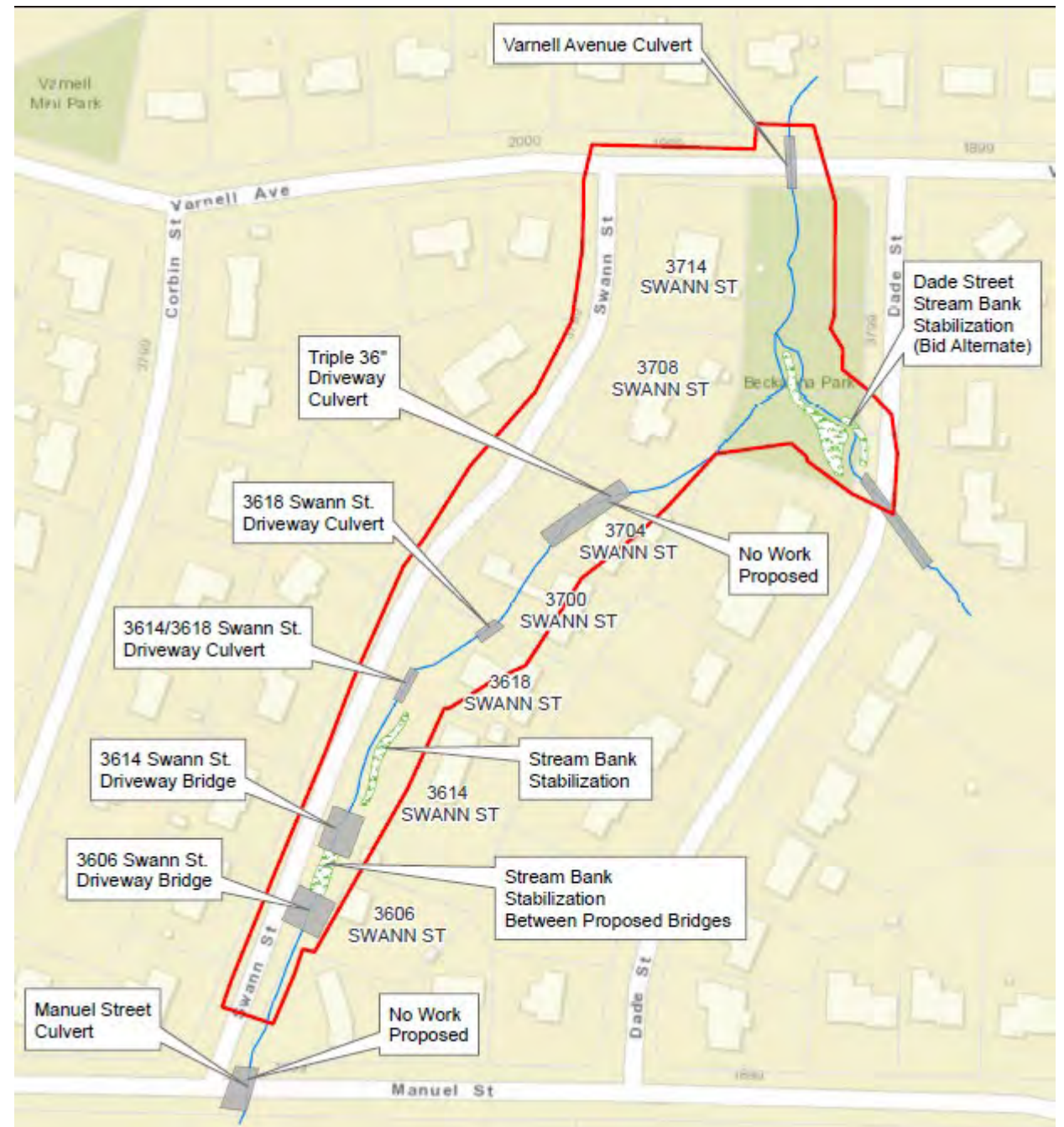
Project
Location
draining
~ 260
acres





Proposed Improvements

Upsizing of main hydraulic pinch-points under private driveway culverts and bridges





Swann Street

Success Factors for City of Raleigh
Neighborhood Improvements



Design
Innovations



Targeted
Residential
Communications
Plan



Detailed
Contractor
Communication

A photograph of a construction site featuring two large, parallel concrete pipes laid out on a prepared surface. The pipes are light gray and have visible joints. In the background, there is a dirt area and some vegetation. The entire image is overlaid with a dark blue gradient. The text 'Design Innovations' is written in white, sans-serif font, positioned in the lower-left quadrant of the image. A thin yellow horizontal line is located directly beneath the text.

Design Innovations

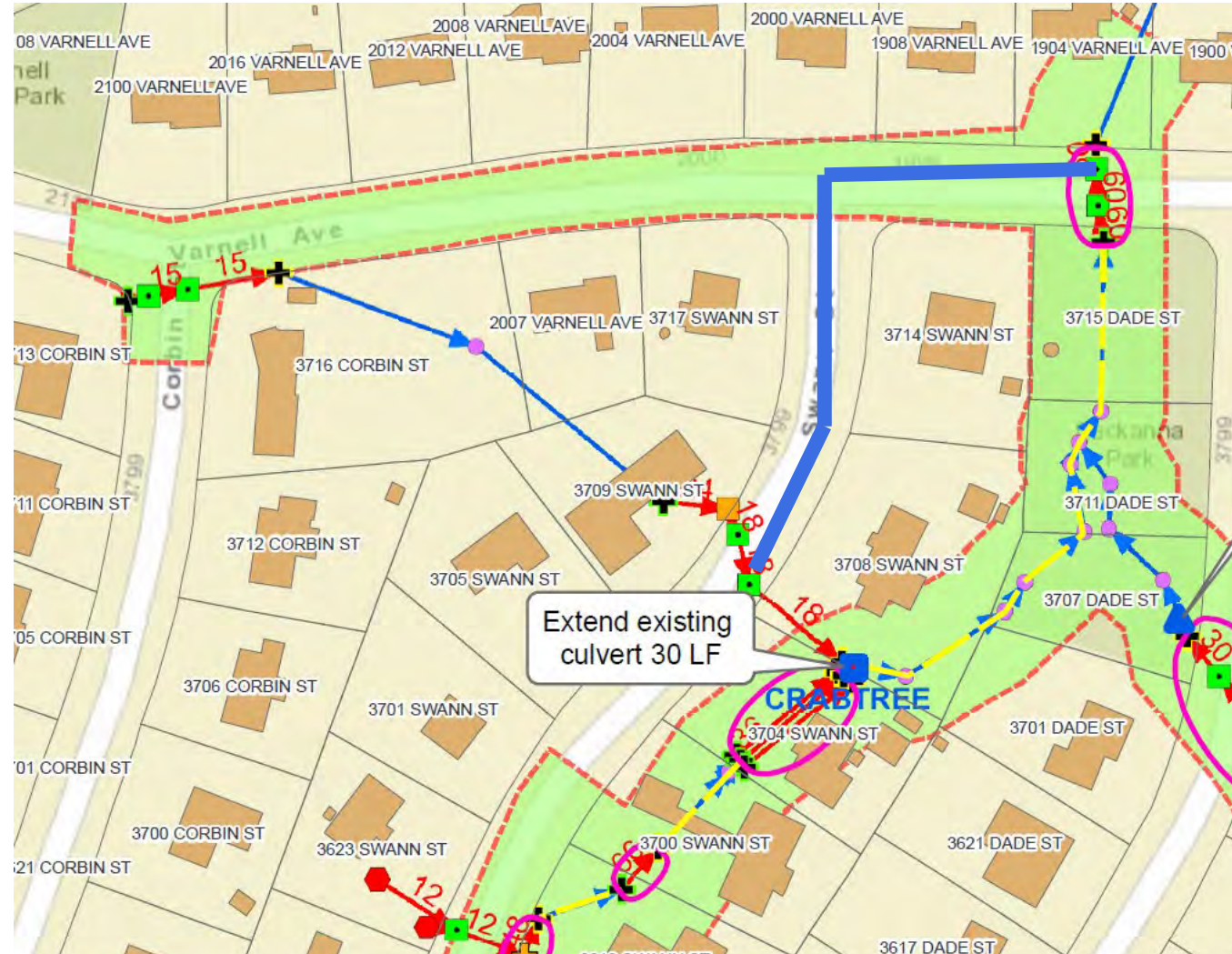
Proposed By-pass System

Reduced the need to upsize Varnell Ave.
culvert (~\$400K in savings)



Table A-3 – Proposed Flow Diversion at Varnell Avenue:

Storm Event				
2-year (cfs)	10-year (cfs)	25-year (cfs)	50-year (cfs)	100-year (cfs)
12.6	18	21	23	25



Open Bottom Culverts



Cast-in-Place Drop Structures

- Eliminated unnecessary channel grading
- Provided support for steep embankments



Cast-in-Place Drop Structures



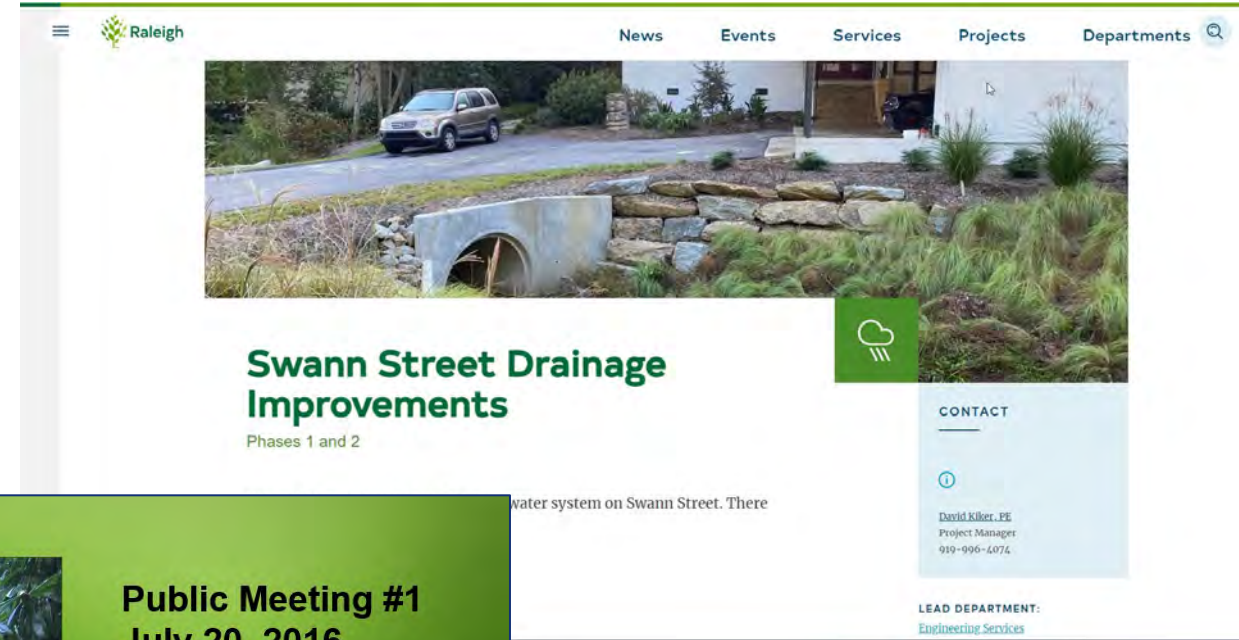


A photograph of a community meeting or public consultation session. In the foreground, a man in a dark suit is looking at a map or document on an easel. Behind him, a woman with glasses is also looking at the document. In the background, other people are visible, some wearing hard hats, suggesting a construction or planning context. The entire image is covered with a semi-transparent blue overlay.

Targeted Residential Communication Plan

Communication Plan

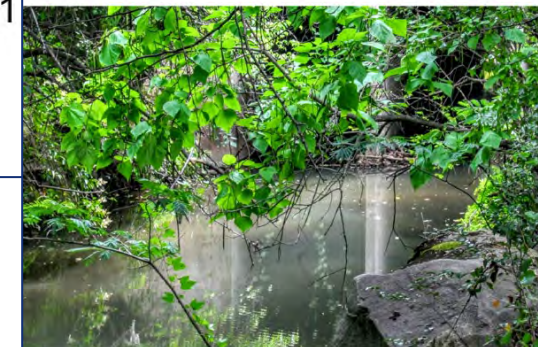
- One-on-One Meetings with Residents
- Letters to General Public and Directly Impacted Residents
- Public Meeting #1
- Public Meeting #2
- Project Webpage
- Email
- Phone Calls & Texts
- E-Builder
- Twitter
- Facebook
- Bi-Weekly Construction Meetings



**Public Meeting #1
July 20, 2016**

City of Raleigh
Engineering
Services
Department

Swann Street Storm Drainage
Improvement Project – Phase 1



One-on-One Meetings with Residents

- Gain Trust & Respect
- Meet Onsite with Property Owners
- Secure Historical Flood Information
- Share Project Design and Goals
- Secure Email & Phone Numbers
- Share Project Timeline
- Show Photos and Details
- 45 Minutes/Meeting



Letters to Public

- Introduce PM, Contact Info, & Website
- Communicate Survey Needs
- Public Meeting Invitations
- Construction Contract Award and Schedule
- Construction Work Hours – Safety Concerns
- Construction Update (Midway)
- Paving & Road Closures
- Punchlist Creation
- End of 1-Year Warranty Period



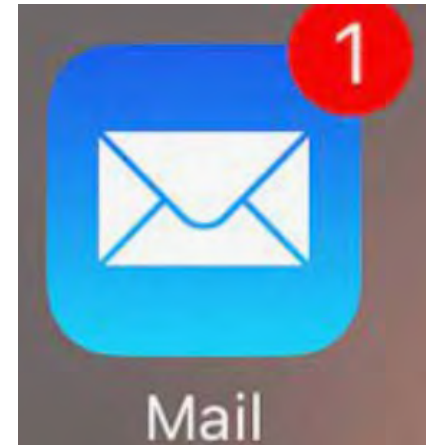
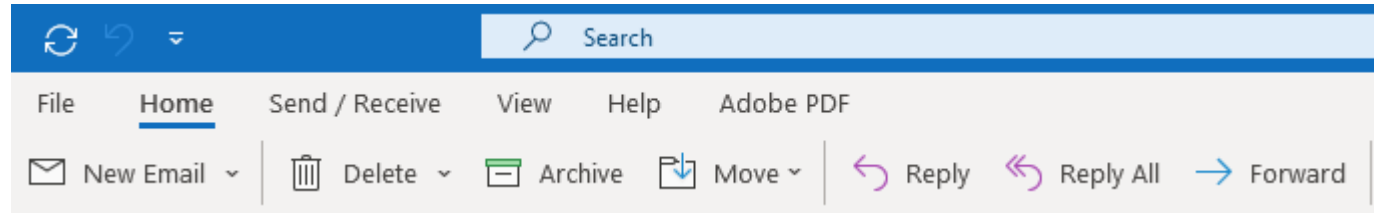
Public Meetings



- Held at Local Community Center
- Introduce Project Team
- Project Goals
- Hydrologic and Hydraulic Modeling (Credibility/Respect)
- Present Some Tables with Results/Benefits
- Discuss Design Alternatives
- Project Budget
- How Valuable Are These Meetings?

Email

- Secure Email at Front End
- Send PDFs of Concepts
- Send Plans or Example Photos
- Faster Than Mail
- Set Up Virtual Meetings
- Document Agreements
- HOA Outreach
- Find Information



Social Media

- Use Twitter for road closures.
- Facebook and Instagram was not used for this project.





Swann Street Drainage Improvements

Phases 1 and 2

We made improvements to the stormwater system on Swann Street. There are two phases to this project.

PROJECT DETAILS

TYPE:

Stormwater



CONTACT



David Kiker, PE
Project Manager
919-996-4074

LEAD DEPARTMENT:

[Engineering Services](#)

SERVICE UNIT:



Bi-Weekly Standing
Coordination Meetings



Detailed Contractor Communication

Project Challenges





Safety First





- Property Owner had legal representation.
- Changing of minds/direction at the last minute.
- Property Owners directing contractor to perform work outside of their scope.



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mhorstman@wkdickson.com ▾



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Hidden Projects

Details

Export Address Book

[Printable Participants Directory](#)

Cancel

Recent Pages...


Details

Project Participants

Sent Items

Forms

Processes


>  Documents

 Schedule

>  Cost

 Contacts Calendar

Submittals

 Submittals

Project Name	Western North Ridge Stormwater Project (Formerly; Western North Ridge Drainage Improvement Phase 1 and 2)
--------------	--

e-Builder Project Administrator	High , Veronica
---------------------------------	-----------------

Project Status	Active
----------------	--------

(view map) Address North Ridge Subdivision
Raleigh, NC 27615

Country	USA
---------	-----

Start Date	06.01.2020
------------	------------

Target Date	03.31.2023
-------------	------------

Description	Culvert and Stream Restoration Improvement Project
-------------	--

Project Webcam

Last Modified By	Rall, Todd
------------------	------------

Date Last Modified	08.30.2021
--------------------	------------

No project photo uploaded.

Custom Fields (36) | Notes (0) | Documents (0) | Forms (0) | Processes (0) | Settings

e-Builder Project Number:	10000067
---------------------------	----------

Department: Engineering Services

Division: Stormwater Management

Project Class:	Capital Project
----------------	-----------------

Division Project ID: SM2020-0004

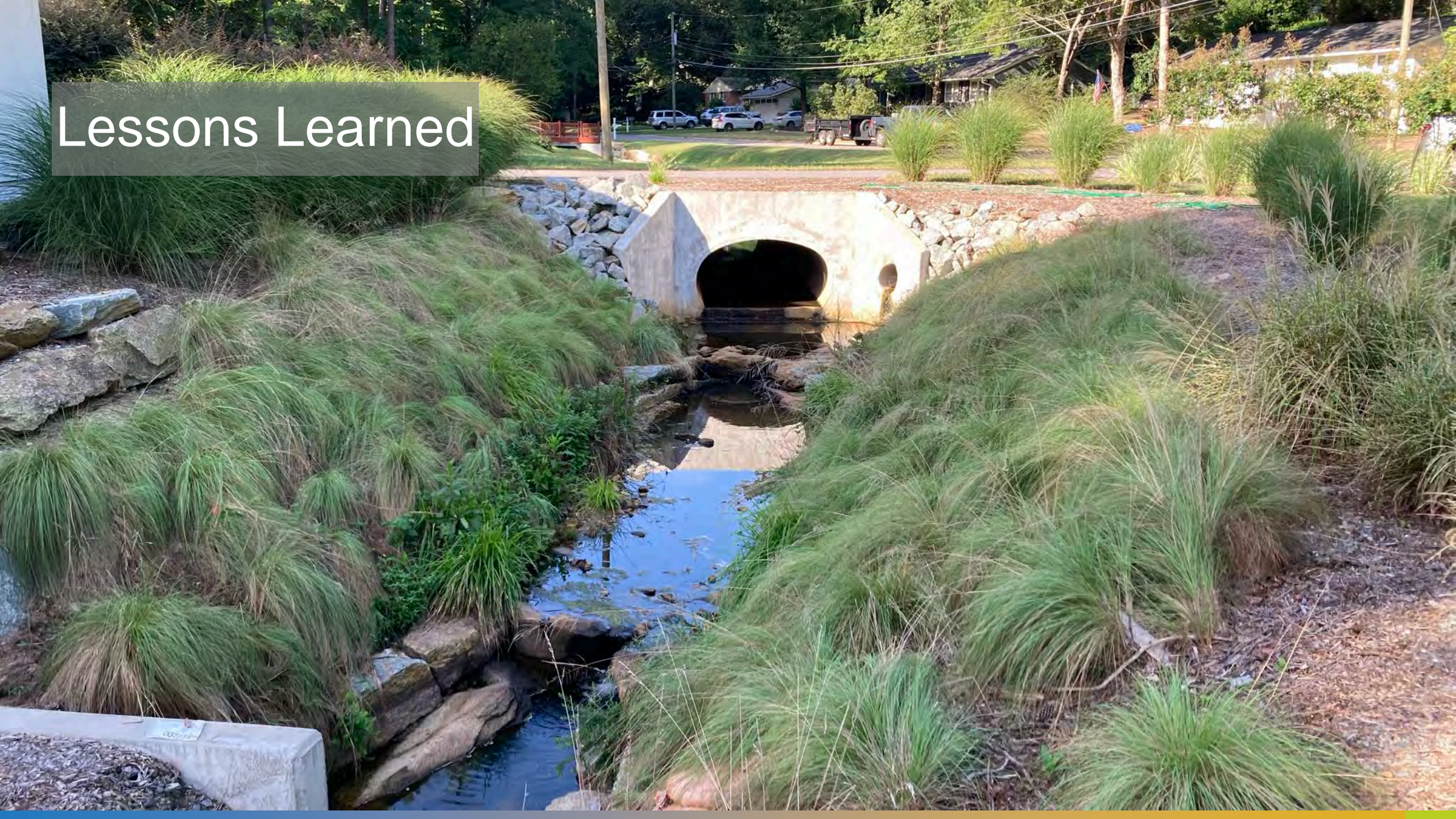
PeopleSoft Project Code: 80230001

Project Manager:	Rall, Todd
------------------	------------

Project Justification:	Complaints of yard, street and structural flooding.
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Project Phase:	Design
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Lessons Learned



Overall Lessons Learned with Neighborhood Projects



Be flexible and responsive in construction.
Phased approach with bid alternatives.
Require and enforce surveying from contractor during construction.



Communicate with entire project corridor and not just directly impacted property owners.



Find main communication conduit and stick with the regular communications, especially related to road closing and openings.

Don't use the standard
NCDOT 838.80 endwalls on
steep slopes!





Thank You

David Kiker, PE, CFM

919.996.4074

David.Kiker@raleighnc.gov

<https://raleighnc.gov/projects/content/PWksStormwater/Articles/SwannStreet.html>



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