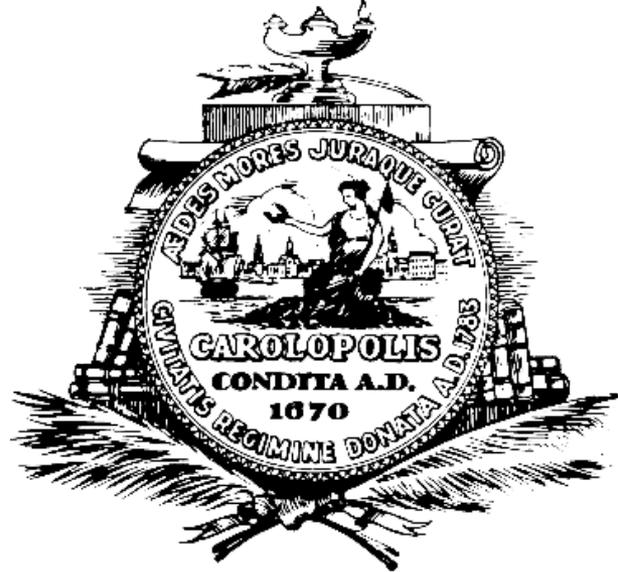
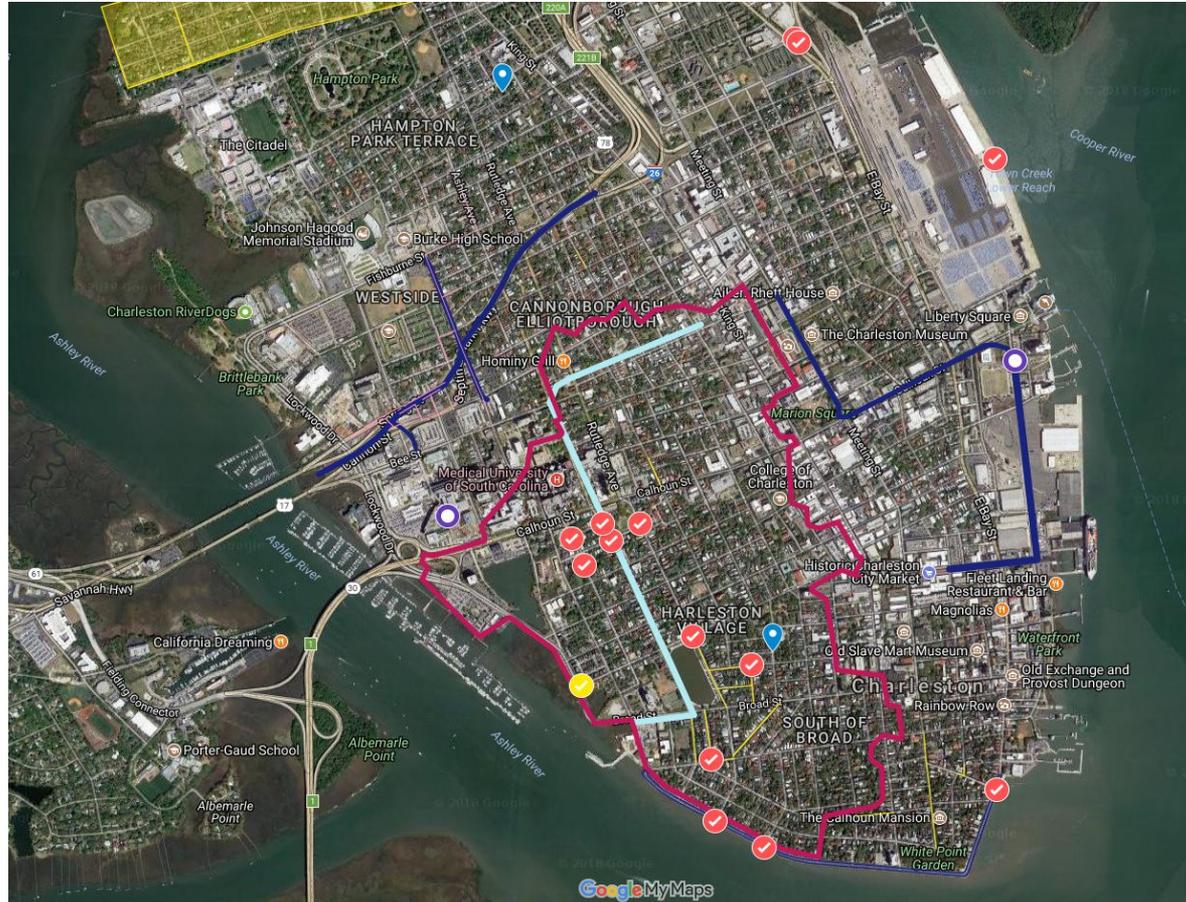


Charlestowne Neighborhood Association

March 12, 2018



Peninsula Flood Reduction Work



Historical Overview

1878 Tidal Drains



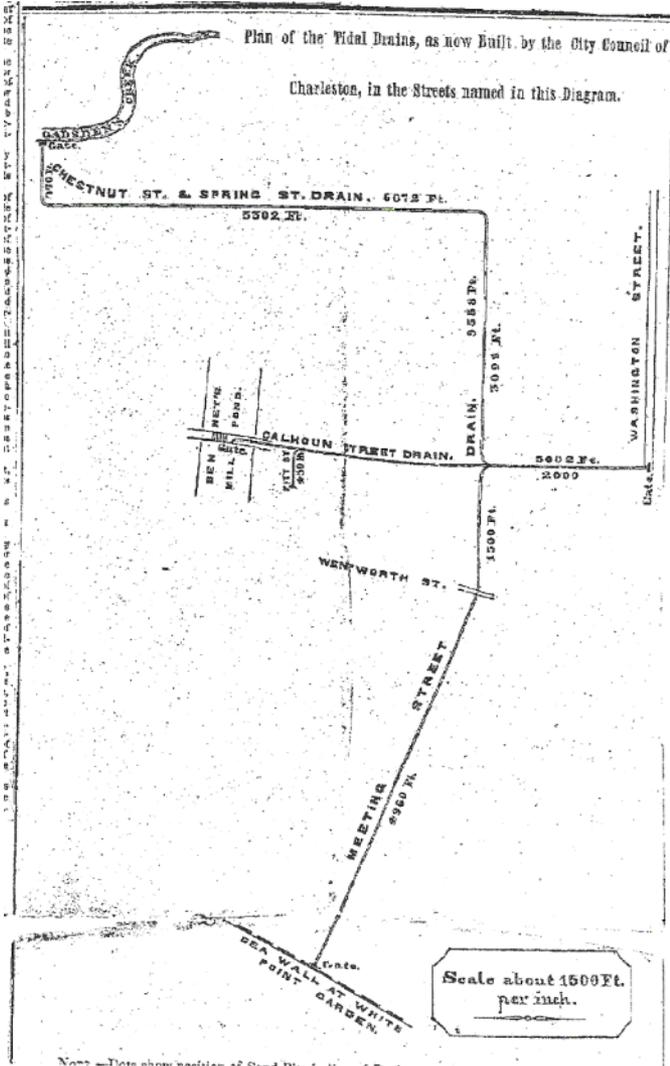
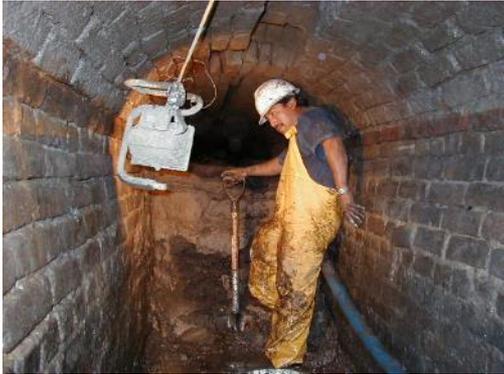
Historical Overview



Historical Overview

1859 Plan of New Tidal Drains

As now Built by the City Council of Charleston



Need for Improvements



Peninsula Drainage System



Master Drainage Plan



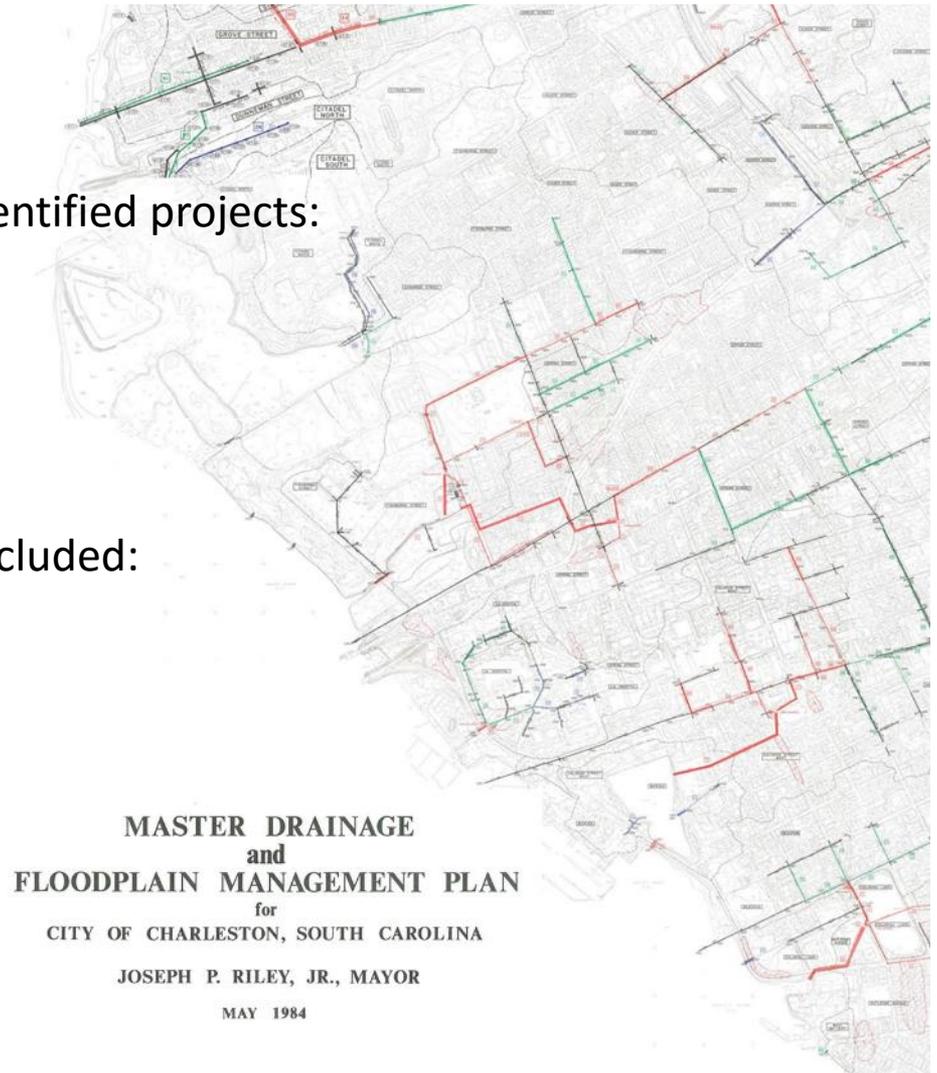
Master Drainage Plan

- City's 1984 Drainage Masterplan identified projects:

- *Calhoun East*
- *Market*
- *Spring/Fishburne*
- *Calhoun West*
- *Beaufain*

- Projects outside of the Peninsula included:

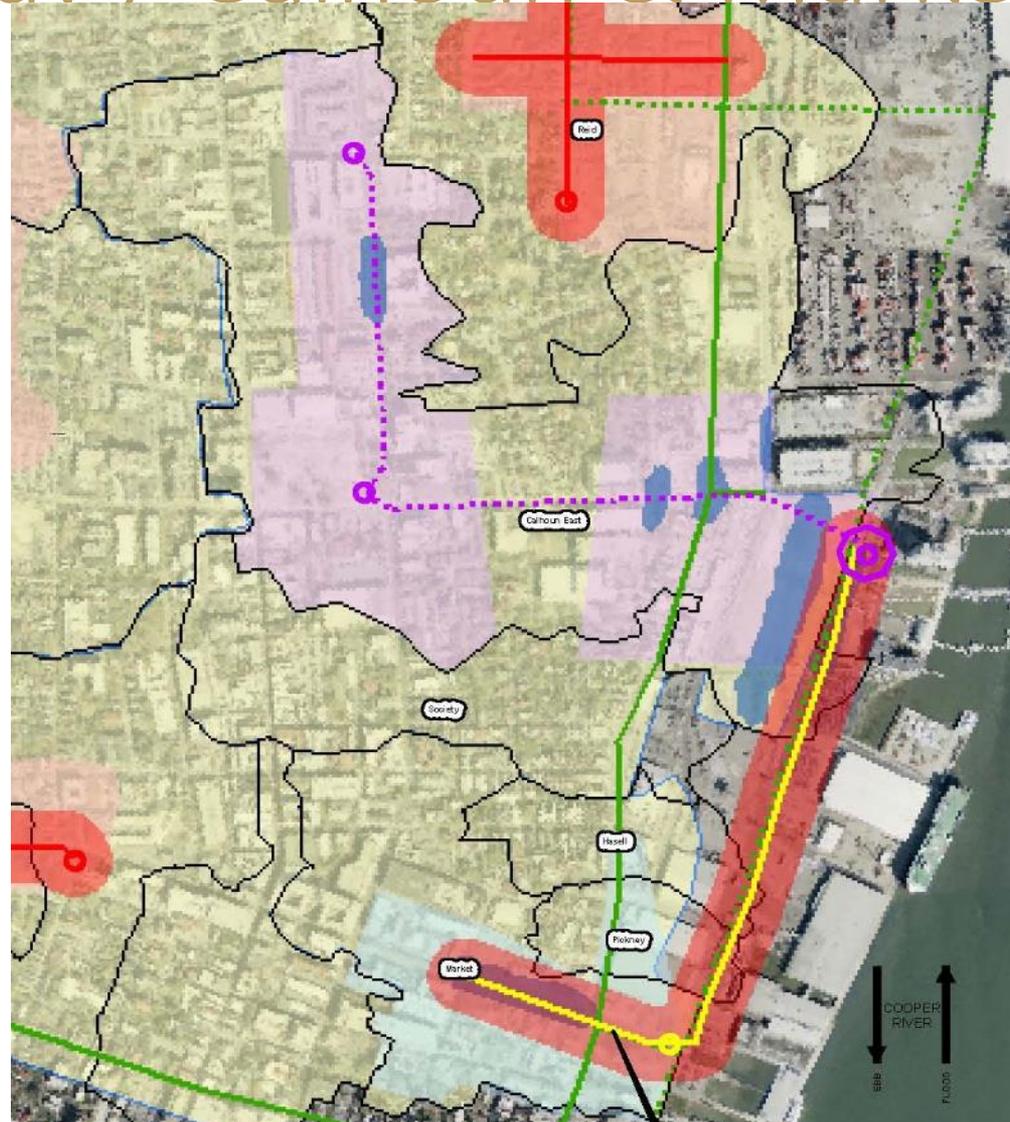
- *Ardmore Canal*
- *Byrnes Downs*
- *Forest Acres*
- *Church Creek*



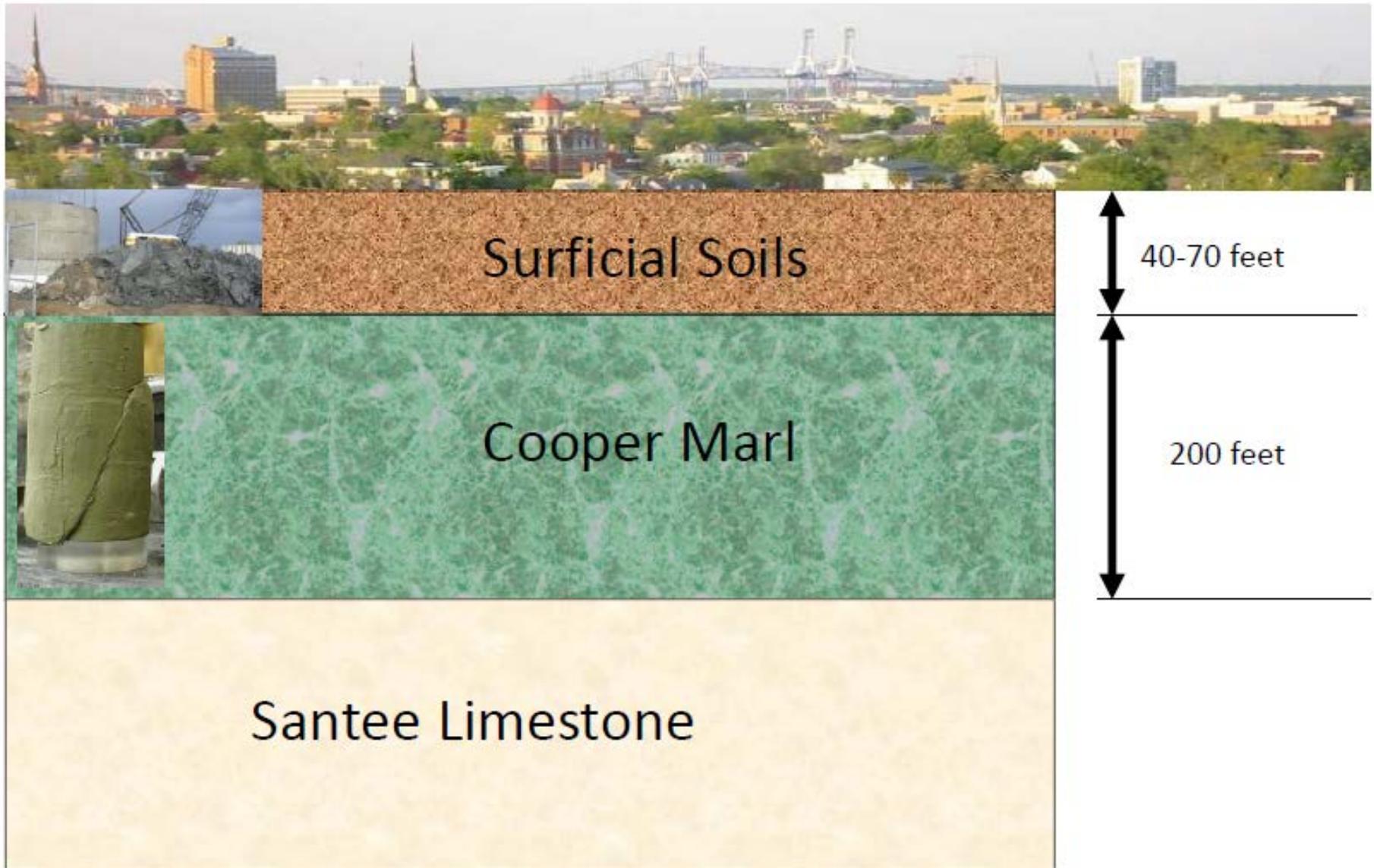
Summary of the City's Drainage Projects



East Bay / Calhoun & Market Street



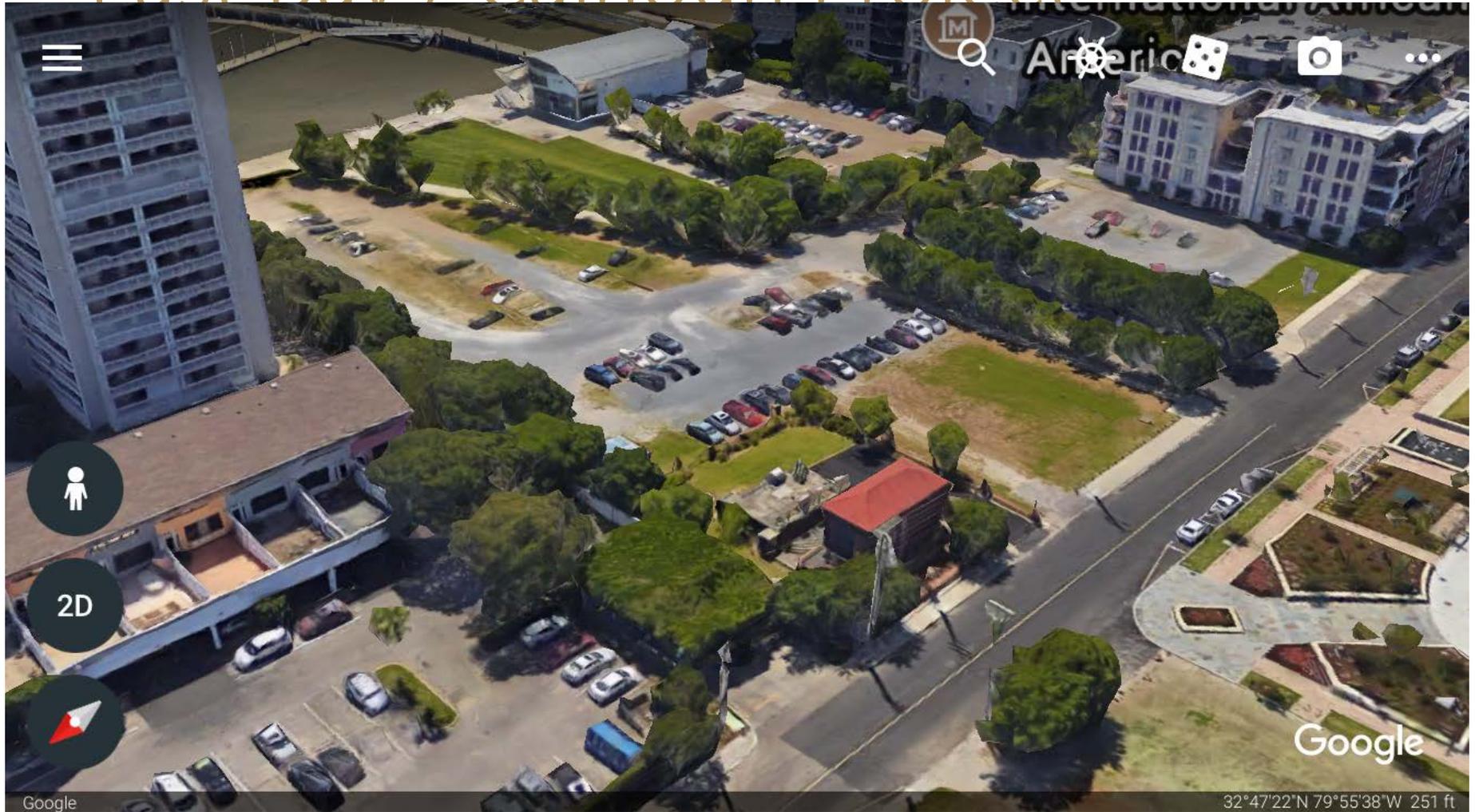
East Bay / Calhoun & Market Street



East Bay / Calhoun Project



Fast Bay / Calhoun Project



Google

Google

32°47'22"N 79°55'38"W 251 ft

Market Street Drainage



Market Street Drainage





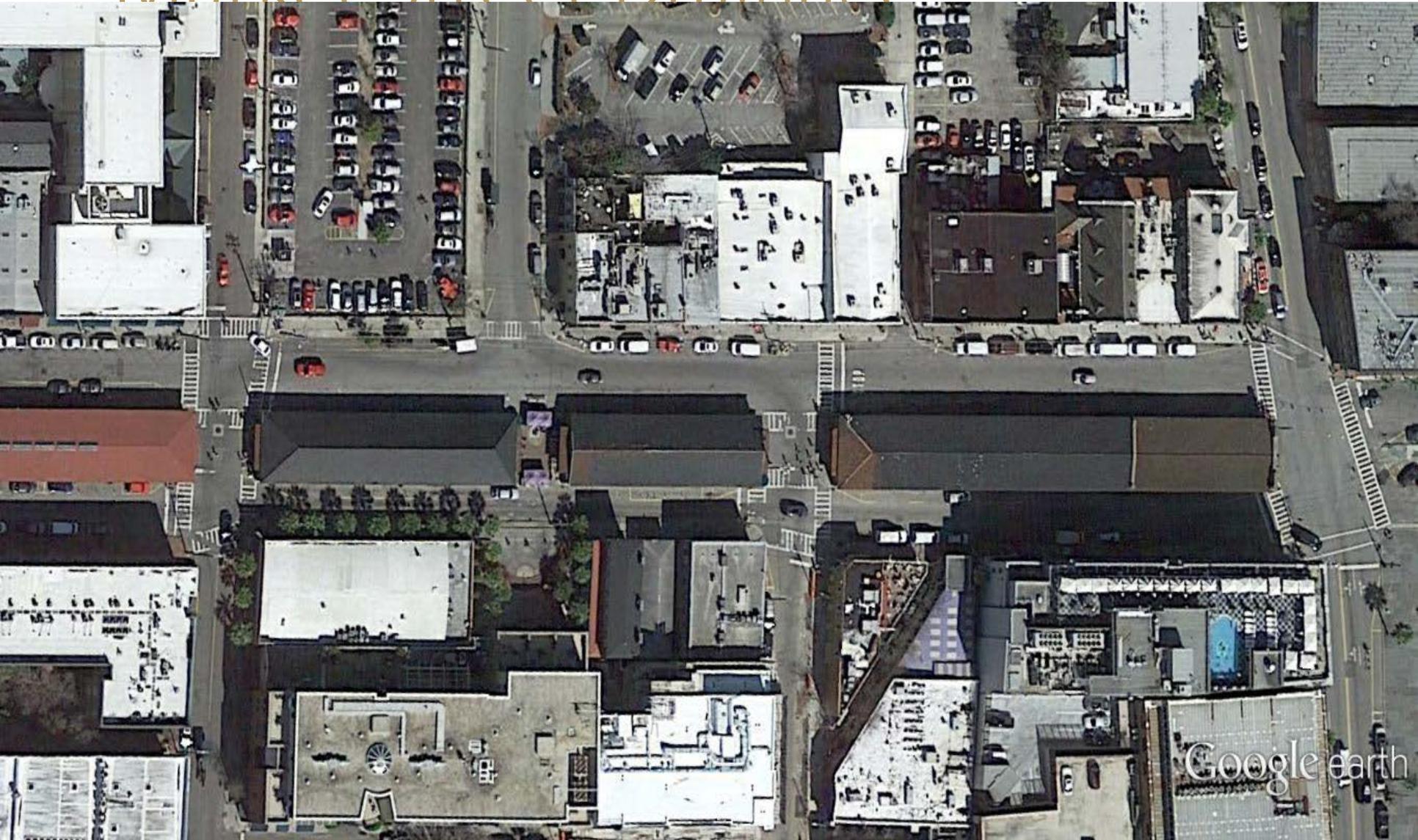
Market Street Drainage



Market Street Drainage



Market Street Drainage



Google earth

Market Street Drainage



Market Street Drainage Improvements



Market Street Drainage Improvements



Market Street Drainage Improvements



Market Street Drainage Improvements



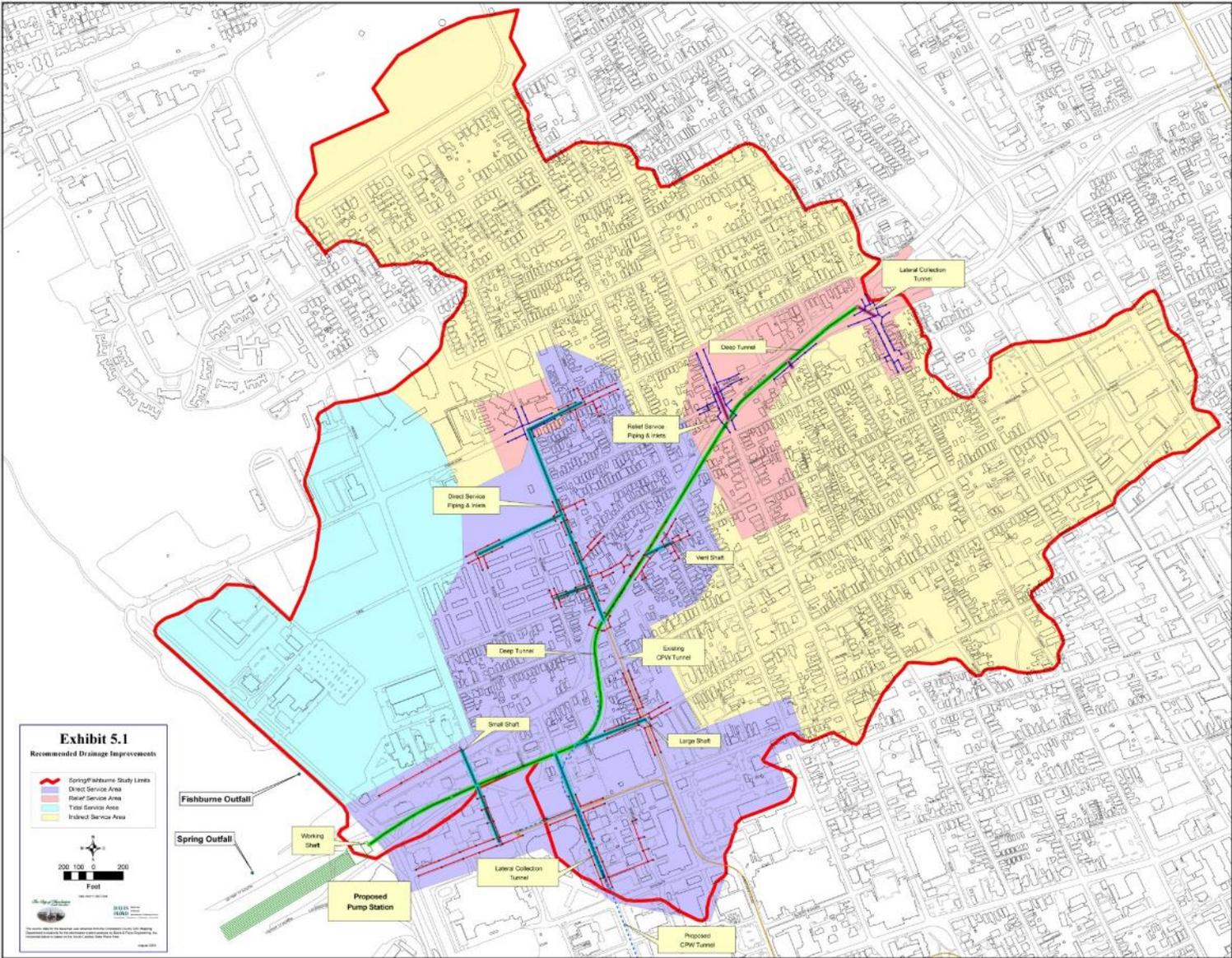
Market Street Drainage Improvements



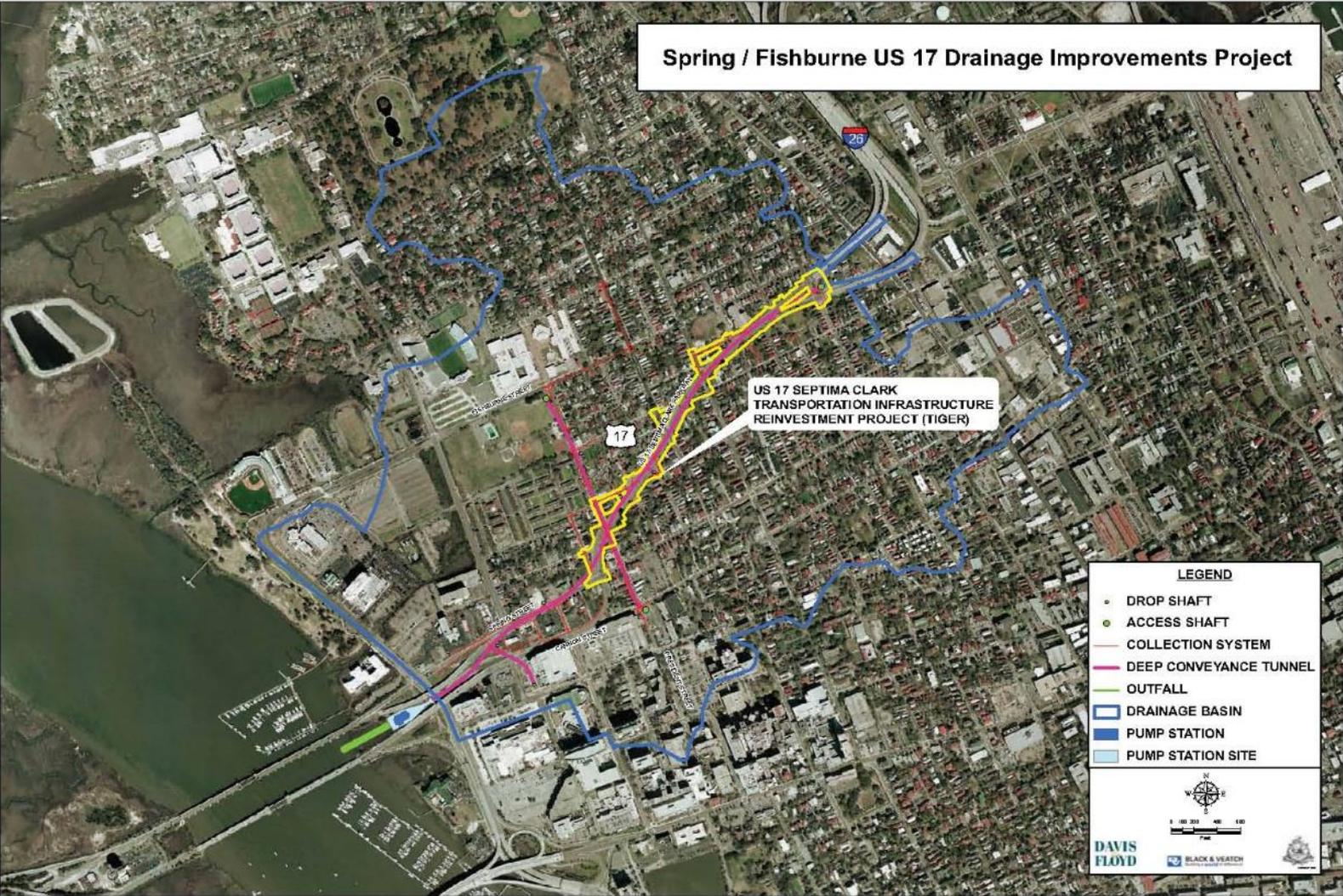
Market Street Drainage Improvements



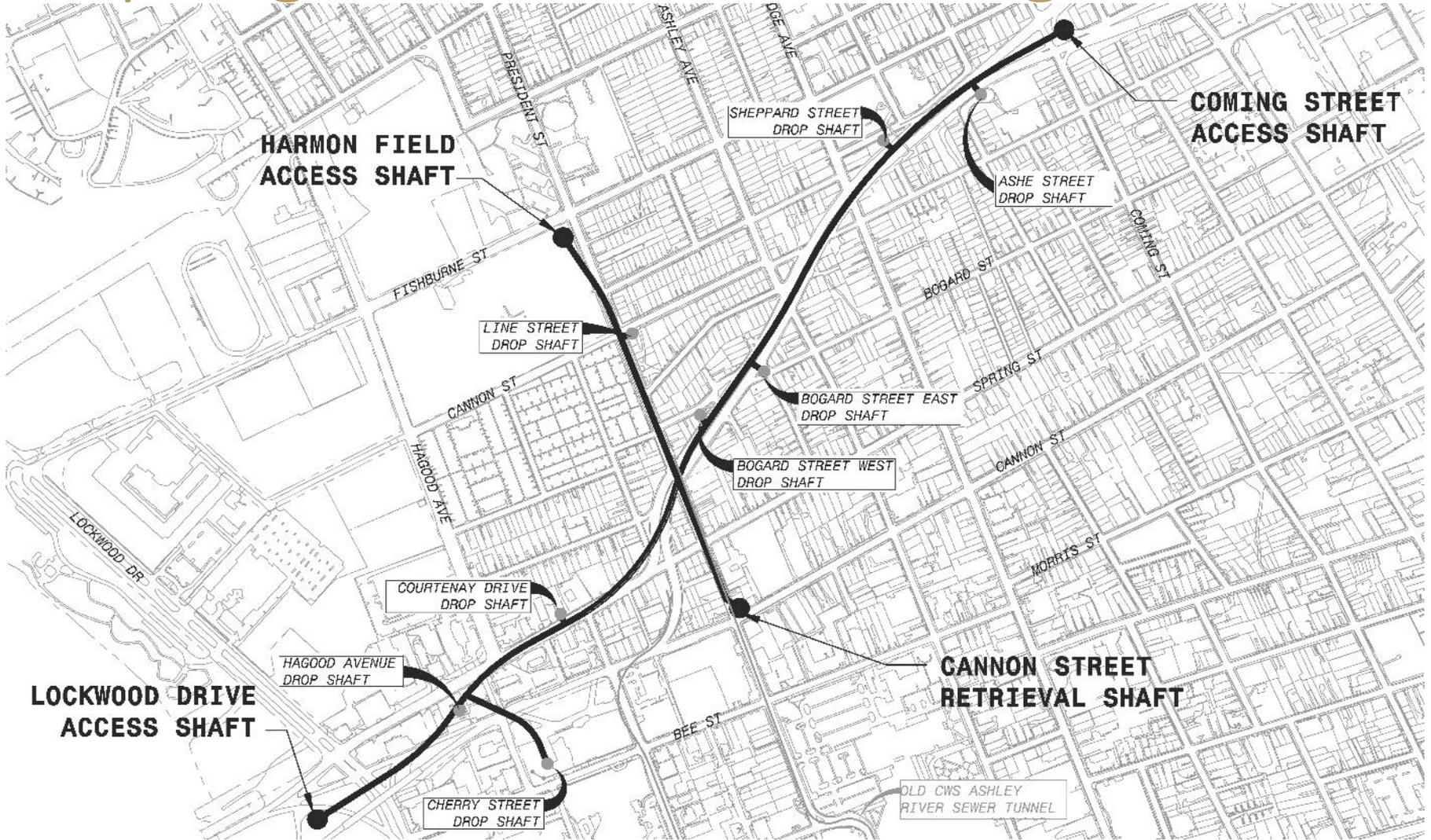
Spring / Fishburne Drainage Improvement



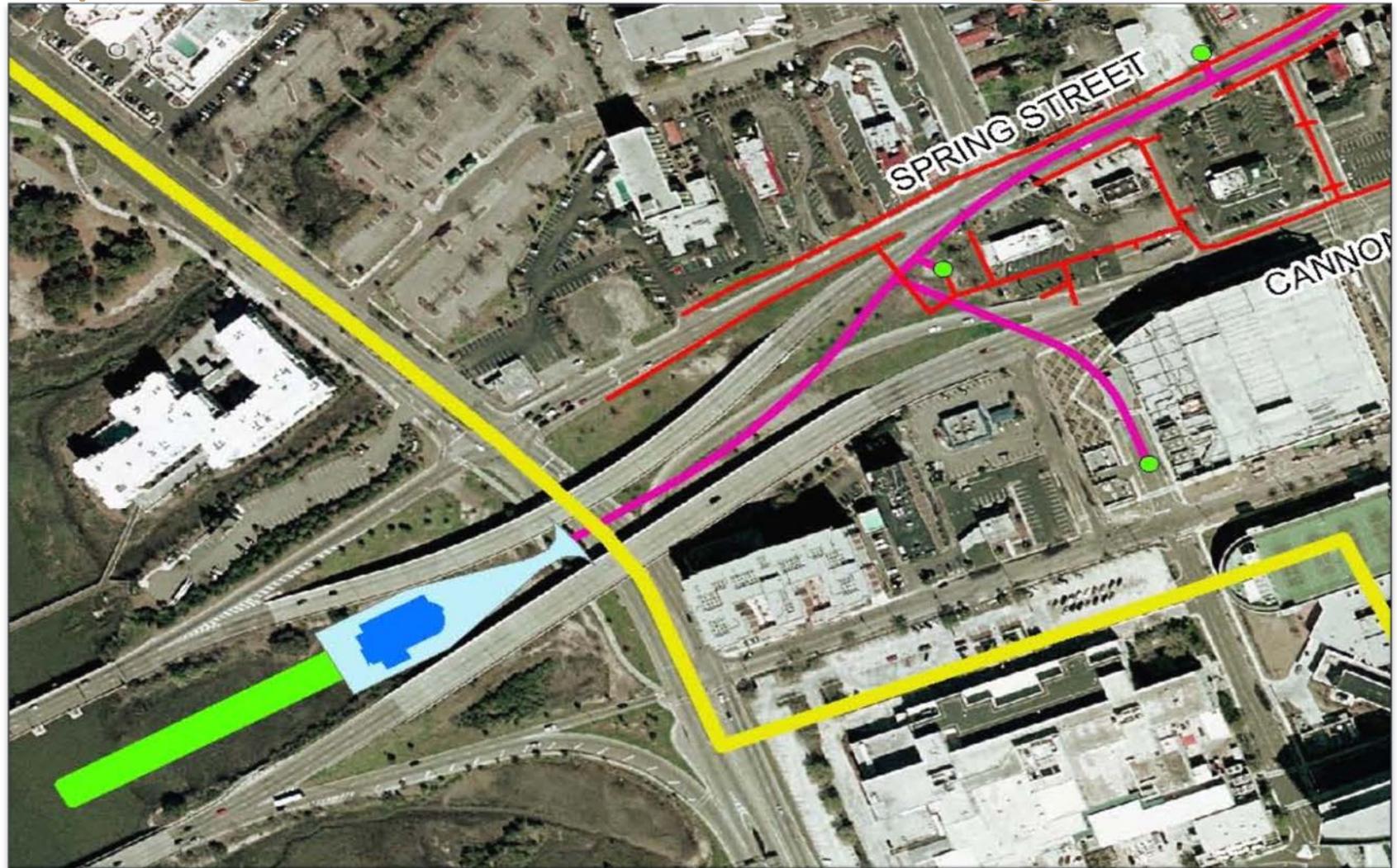
Spring / Fishburne Drainage Improvement



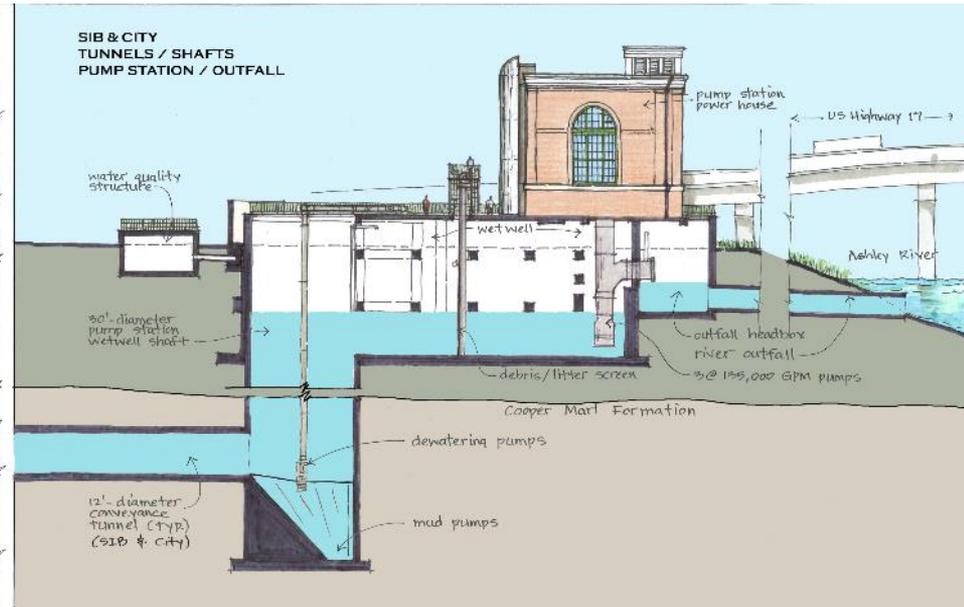
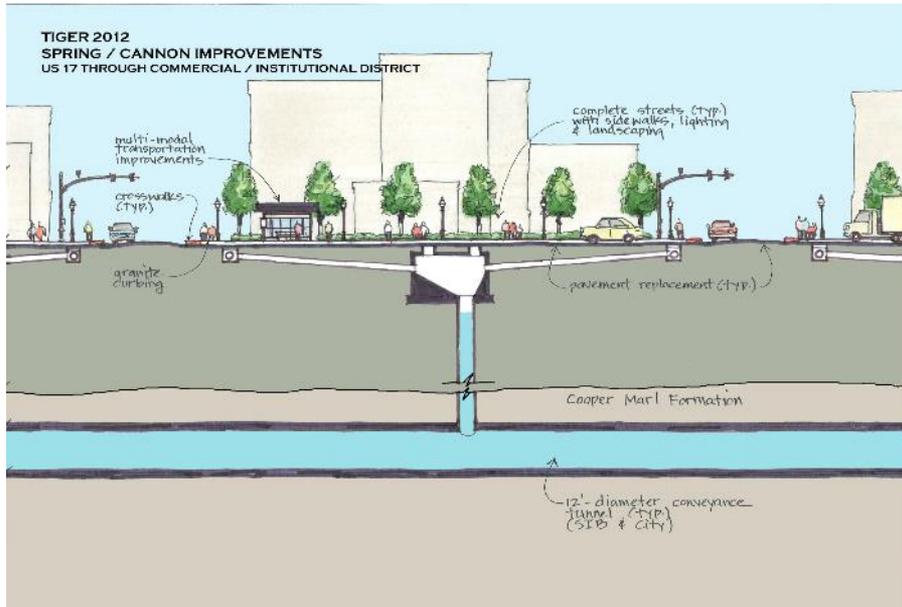
Spring / Fishburne Drainage



Spring / Fishburne Drainage



Spring / Fishburne Drainage Improvements



Spring / Fishburne Drainage Improvements



1
PS4PS4
A102A201

LOCKWOOD DR.
FRONT ELEVATION
SCALE: 1/8" = 1'-0"

Spring /Fishburne Drainage Improvements



Spring / Fishburne Drainage



Spring / Fishburne Drainage Improvements



Spring / Fishburne Drainage Improvements



Spring / Fishburne Drainage Improvements



Spring / Fishburne Drainage Improvements



Spring / Fishburne Drainage Improvements



Spring / Fishburne Drainage Improvements



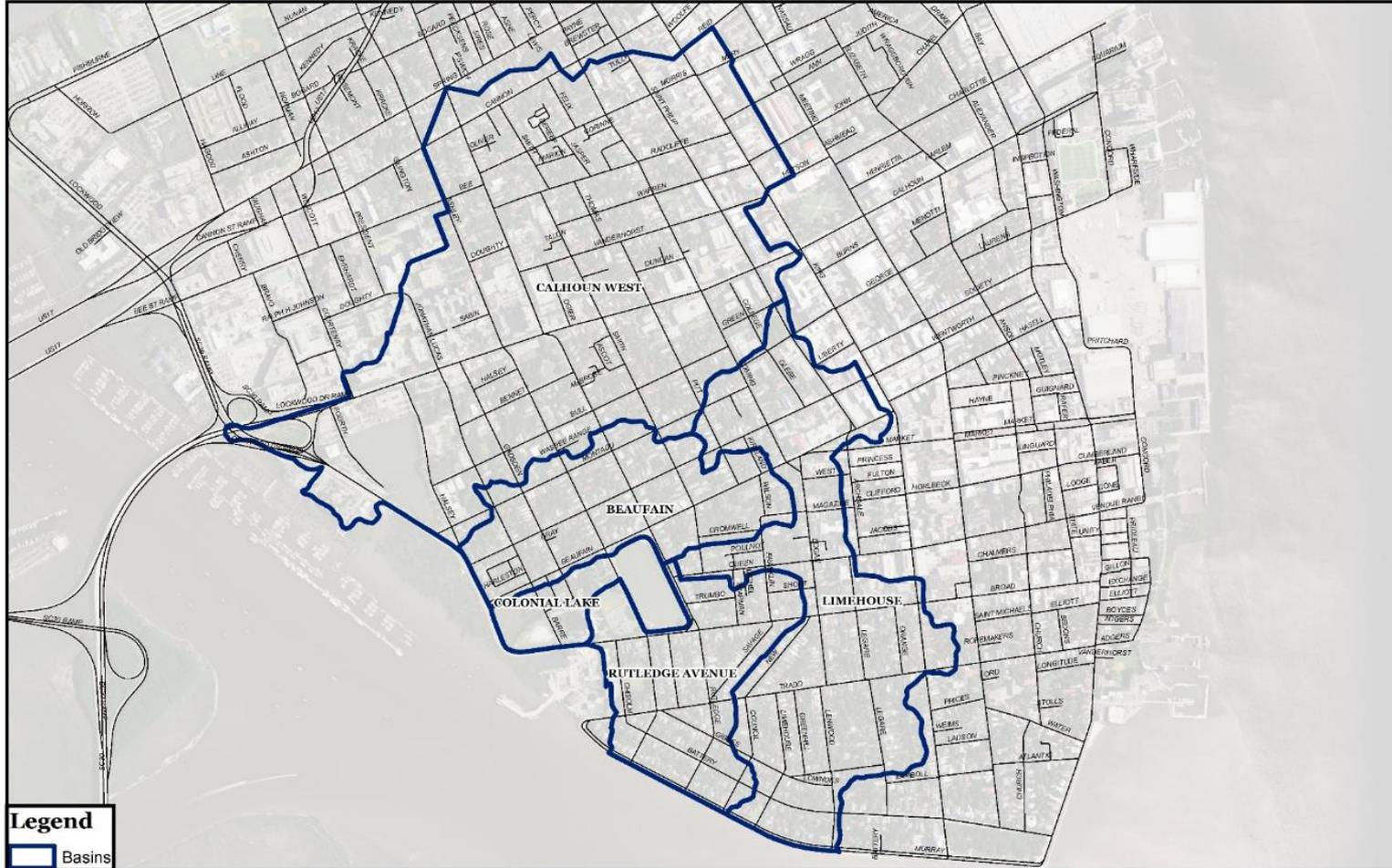
Spring / Fishburne Drainage Improvements



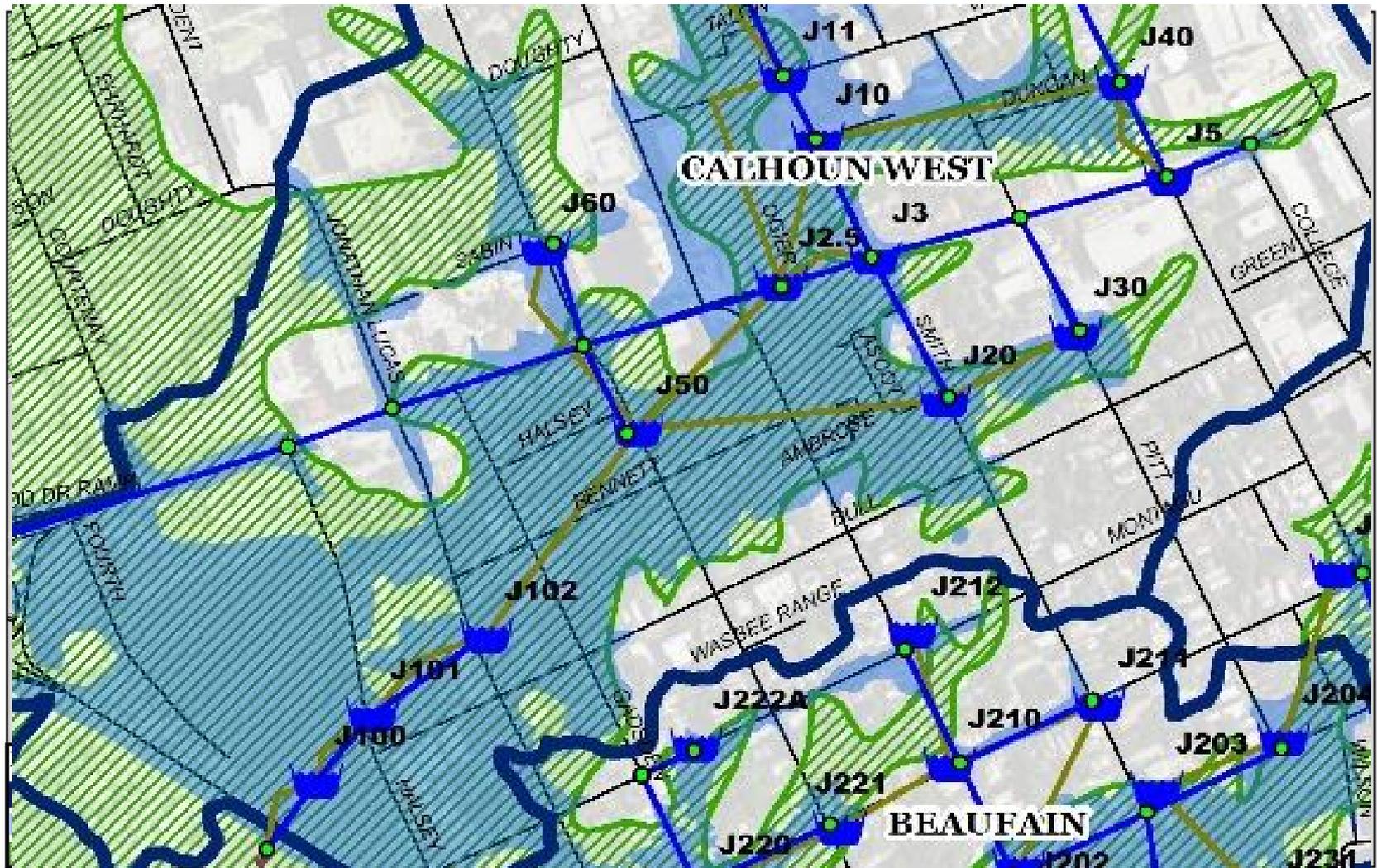
Spring / Fishburne Drainage Improvements



Calhoun West Drainage & Sea Level Rise Mitigation

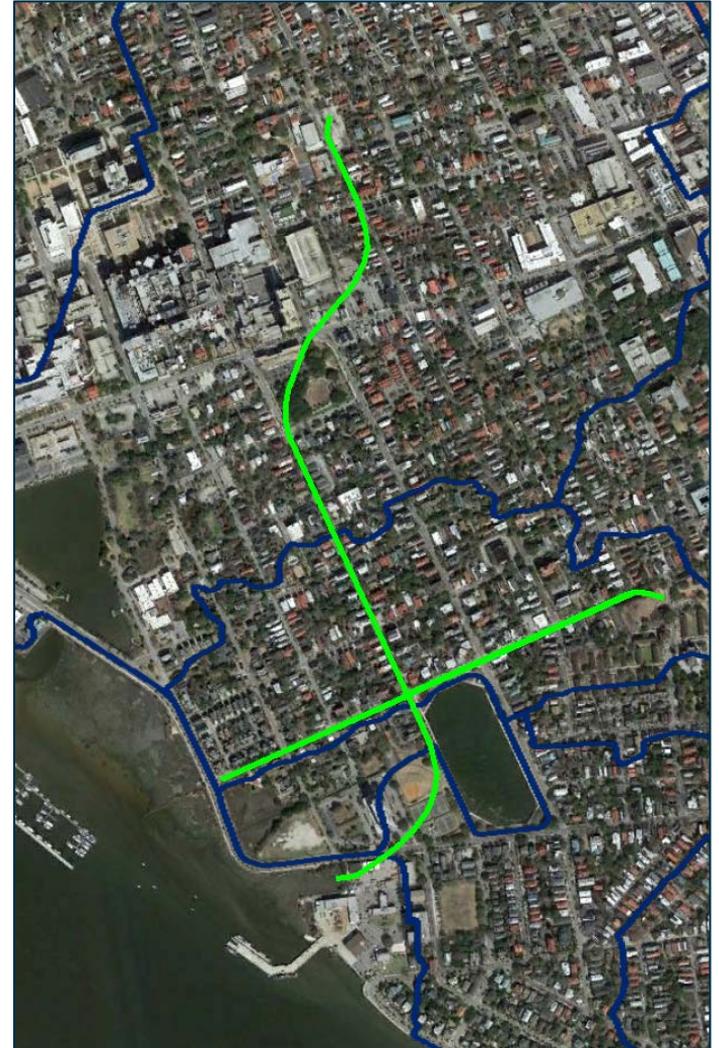


Calhoun West Drainage & Sea Level Rise Mitigation



Calhoun West Drainage & Sea Level Rise Mitigation

- Deep tunnels with pumping appear to be the most viable long-range solutions due to:
 - Remote, low-lying areas
 - Historic urban setting
 - Dense utility grids
 - Poor near-surface soil conditions
- Permitting requirements and funding acquisition will take time
- Design for 2.5' of Sea Level Rise (per City's Sea Level Rise Strategy)



Calhoun West Drainage & Sea Level Rise Mitigation

- Low Battery Wall (± 5000 LF) is being designed for 2.5' SLR
- Potential to raise Lockwood Dr.
- Pump Station & Outfall designed to meet SLR requirements



Calhoun West Drainage & Sea Level Rise Mitigation

- Smaller-scale improvements are being investigated that can be implemented in a shorter time frame
- These include:
 - System inspection, maintenance & repair
 - Temporary pumping
 - Drainage improvements between Alberta Sottile Long Lake and Cannon Park
 - Raising streets where possible
- Tidal valves have been replaced at Rutledge & Limehouse outfalls along the Battery



\$235,000,000 Capital Investment Between 1990 and 2020

- \$81.1M Complete
- \$27.2M Under construction
- \$126.9M Funded

- \$7.1 2016 Maintenance Budget

Aggressive Funding

- ~ 1990 2 mil dedicated to drainage since (\$2.2 million per year - \$9.5 million bond)
- ~ 1992 Hugo HMGP \$2.8 million, \$2.3 million SCDOT
- 1994 Stormwater Utility fees \$4.00
- \$110.5M grants and contributions awarded
 - \$10M ARRA TIGER Grant
 - \$12.5 50/50 Match from SCDOT/FHA
 - \$88M SIB
- Spring/Fishburne - Balance from the Gateway TIF
- 2016 - Additional 2 mil dedicated to drainage

Aggressive Funding

- 2012 \$46 million stormwater revenue bond
- 2016 - Additional 2 mil dedicated to drainage beginning in 2016 (\$2.2 million per year)
- 2017 – HMGP grants for \$8.3 million
- 2018 – Stormwater fee increase to \$8.00 per month
- Future funding Opportunities
 - Possible USACOE funding – shoreline protection and WRDA
 - FEMA-HMGP, FMA, PDM
 - SIB, SCDOT and Accommodation Taxes

Charleston

SOUTH CAROLINA

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Calhoun West Drainage Improvement Project ▶

Forest Acres Drainage Improvement Project ▶

Heathwood Drive Drainage Improvement ▶

Market Street Drainage Improvement Project ▶

Spring/Fishburne Drainage Improvement Project ▶

Wagner Terrace Storm Drainage Repair Project ▶

Low Battery Seawall Repair 2015 ▶

Dupont-Wappoo Watershed Master Plan ▶

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Department of Public Service Projects

Infrastructure Improvement Projects

The City of Charleston recognizes the importance of a comprehensive strategic plan for capital improvements as a vital part of the City's mission to preserve and enhance the quality of life for our citizens. The five-year Capital Improvement Plan (CIP) addresses short and long-term capital needs in all functional areas of City government. Projects include the renovation and preservation of historic buildings; park and recreation improvements; road, bridge, and sidewalk improvements; stormwater drainage projects; construction of new facilities; and equipment needs. The City's Capital Improvements Division manages most buildings, parks, and recreational facilities projects.

The Department of Public Service manages stormwater improvement projects and infrastructure projects related to roads, sidewalks, bridges, and currently the repair of the historic Battery Seawall.

With its myriad flooding and drainage challenges, the City of Charleston has a comprehensive Master Drainage Plan to tackle the large capital projects to improve the quality of life in the City. The City has been tirelessly working on alleviating these drainage problems since the establishment of the Stormwater Utility in 1996 using this money to fund only stormwater projects. In addition, City officials continue to seek new and innovative funding sources to fully leverage our limited resources and stretch the tax payer dollar. This page provides detailed descriptions of capital projects that are in various stages of development.

[Forest Acres Drainage Improvement Project](#)

[Market Street Drainage Improvement Project](#)

[US17 Septima Clark Drainage Improvement Project](#)

[Wagner Terrace Storm Drainage Repair Project](#)

[Seawall Repair](#)

[Dupont-Wappoo Watershed Master Plan](#)



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