



DEPARTMENT *of* ENGINEERING ANNUAL REPORT

2021



Who We Are



1 City Engineer
3 Senior Engineers
1 Engineering Technician



Stormwater Program Administrator



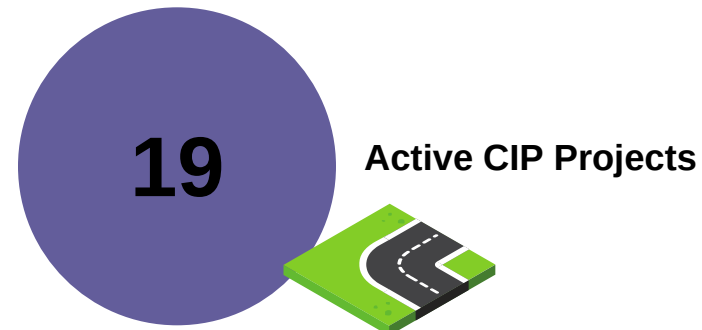
Environmental Program Analyst



2 Site Inspectors

What We Do

- Provide engineering design
- Review site plans
- Inspect sites
- Manage projects and construction
- Ensure public health and safety in storm drainage and flood control
- Provide engineering assistance to other departments



2021 Highlights



- Monthly dam and pond inspections



- Staff increased technical certifications and training
- Developed screening and inspection apps with GIS



- Faster GoGov response to resident concerns
- Faster response to drainage complaints
- More pond maintenance



- Stormwater management program oversight



- Streamlined plan review process for quality control
- Completed Design and Construction Standards Manual (DCSM) rewrite for multiple chapters
- Strengthened relationships with VDOT and Prince William County
- Increased role in excavation permits



- Grant and funding applications

2021 Project Highlights



T-021 Project Status

- Design complete
- Easements in negotiation
- Utility relocation started
- Construction anticipated Fall 2022

Grant Avenue Streetscape and Utility Improvements



This project will create a visually appealing gateway to the City's historic downtown and includes lane reductions between Prince William Street and Wellington Road to create a multi-modal boulevard along Grant Avenue.

The project scope includes:

- Roundabout at Byrd Dr. and Bartow Street
- Multiple Bus Shelters
- Pedestrian facilities on both sides of roadway
- On-street and off-street bike facilities on east side
- Raised landscape median and landscaped buffers
- New flashing signal at pedestrian crossings
- Decorative streetlights
- Upsized watermain
- Undergrounding electrical





T-030 Project Status

- Electric Undergrounding and Utility Relocation Underway
- Construction Contract Awarded
- Anticipated Construction Notice to Proceed in March 2022

Dean Drive Extension

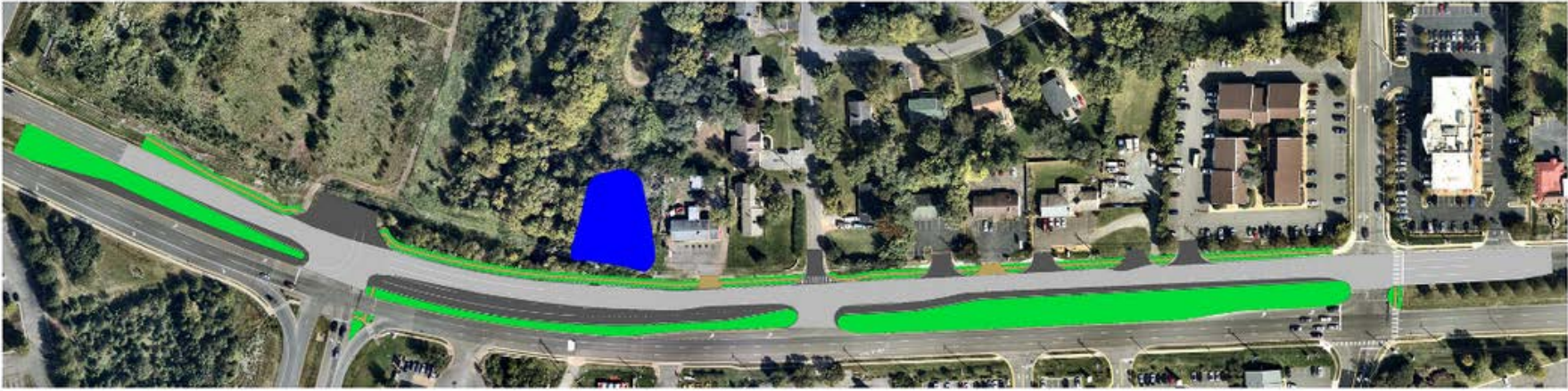


The Dean Drive Project extends Dean Drive approximately 1,500 feet from the existing cul-de-sac, south of Nokesville Road, to the Animal Shelter driveway.

The project scope includes:

- Extend Dean Drive from existing cul-de-sac to the animal shelter
- Add bike lane and curb and gutter
- Improve drainage at intersection of Dean Drive and Foster Drive
- Connect pedestrian paths
- Stormwater management
- Upsized watermain
- Undergrounding electrical

Sudley Road Third Lane



T-015 Project Status

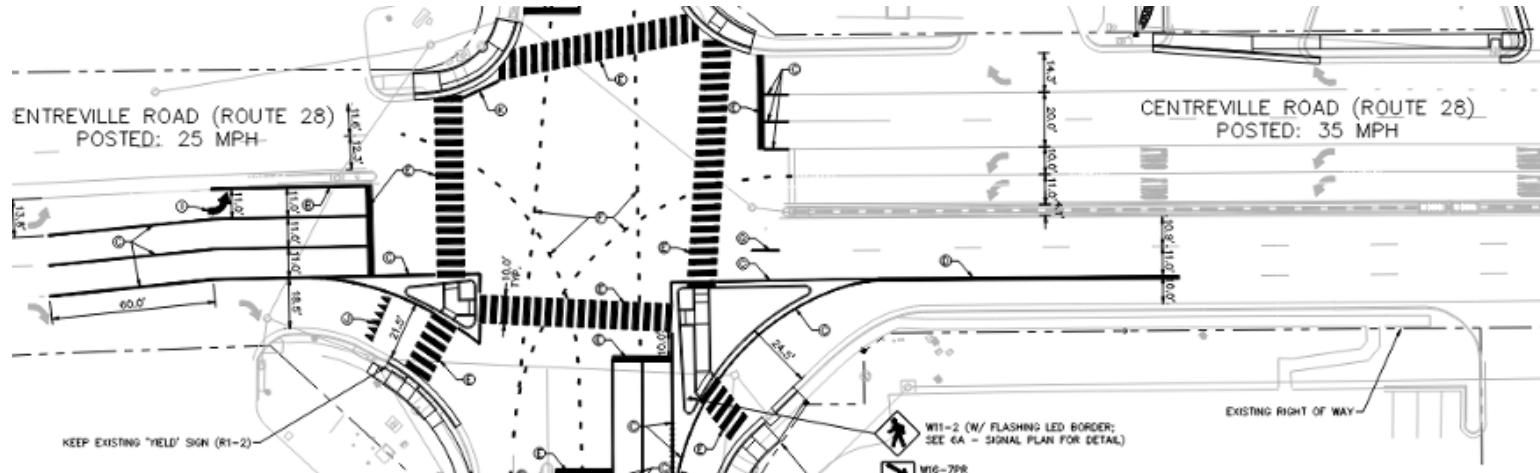
- Engineering ~95% Complete
- Awaiting authorization to acquire Right-of-Way from VDOT and Federal Highway Administration (FHWA)
- Currently coordinating required utility relocations
- Construction estimated to begin in Spring 2023

The third northbound lane will be created in part by new pavement and the remainder will be created by re-striping an existing right turn lane into a through-turn lane. This roadway section will tie into the existing three lane section with a sidewalk that exists in Prince William County. The left turn lane to Godwin Drive will be extended to the south approximately 200 feet.

The project scope includes:

- Adding a third northbound through lane from Grant Avenue to Godwin Drive
- Construct continuous sidewalk and pedestrian safety improvements at intersections
- Construct new crosswalks
- Install pedestrian push-buttons
- Create median refuge islands
- Stormwater management

Centreville Road/Liberia Ave. Intersection Improvements



T-074 Project Status

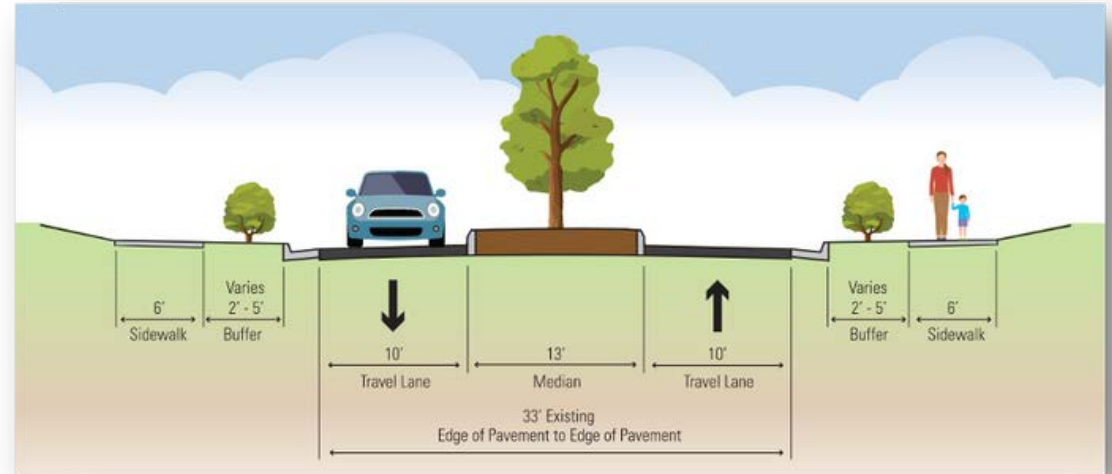
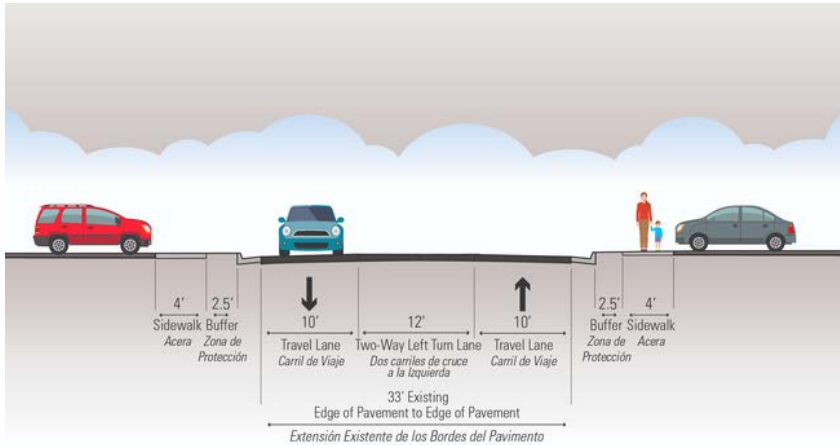
- Engineering complete
- Pending acquisition of one temporary construction easement
- Verifying project estimate and available funding
- Anticipated construction Spring 2023

The third northbound lane will be created in part by new pavement and the remainder will be created by re-striping an existing right turn lane into a through-turn lane. This roadway section will tie into the existing three lane section with a sidewalk that exists in Prince William County. The left turn lane to Godwin Drive will be extended to the south approximately 200 feet.

The project scope includes:

- Improving pedestrian safety at intersection
- New curb ramps and crosswalks
- Pedestrian signal push-buttons
- Median refuge islands
- Re-striping intersection

Mathis Avenue Improvements



T-086 Project Status

- Engineering design 30% Complete
- Public engagement meetings February 23 (virtual) and March 17 (at Prince William Islamic Center)
- Pursuing grant opportunities for full construction funding

Reconstructing Mathis Avenue from Sudley Road to Liberia Avenue as a two-lane facility with a planted median and dedicated turn lanes within the existing right-of-way. This project includes streetscape and pedestrian improvements.

The project scope includes:

- Improving pedestrian safety and connectivity between two historic districts
- Promoting investment in the Mathis Corridor
- Improving traffic safety and implementing traffic calming

Route 28/Nokesville Road Widening



T-042 Project Status

- Delays due to utility conflicts
- Utility relocation work is underway
- Estimated completion in Summer 2023



The project widens Route 28 / Nokesville Road to six lanes from the City limits to Godwin Drive.

The project scope includes:

- Installing a dual left turn lane from northbound Route 28 onto Godwin Drive.
- Installing streetlights on Route 28 from the 234 Bypass to the southern City limits.
- Constructing a shared use path along the north side of Route 28



Dumfries Shared Use Path

Constructed a shared-use path on the west side of Dumfries Road from Donner Drive to Hastings Drive.



T-058 Project Status

- Completed Fall 2021

Wellington Road Shared-Use Path T-088

Constructing a shared-use path along Wellington Road from Nokesville Road to Prince William Street.

The project scope includes:

- Completing 0.35-mile connection in trail system between Prince William Street and Nokesville Rd
- Pedestrian and bike access across railroad tracks to Jennie Dean Elementary, Dean Park, Micron, and other local points of interest

Status:

- Engineering 50% complete
- Design coordination with VDOT and Norfolk Southern is on-going
- Construction estimated to begin Winter 2024/2025



Gateway Boulevard Sidewalk and Trail T-058

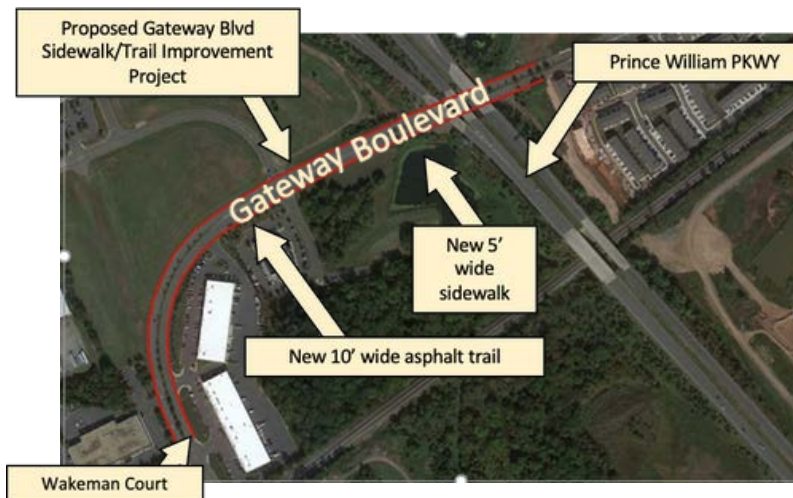
Constructing a 10-foot wide shared-use trail on the north side, and a 5-foot wide sidewalk on the south side of Gateway Boulevard from Wakeman Court to the Manassas Gateway Project (just past the Prince William Parkway overpass).

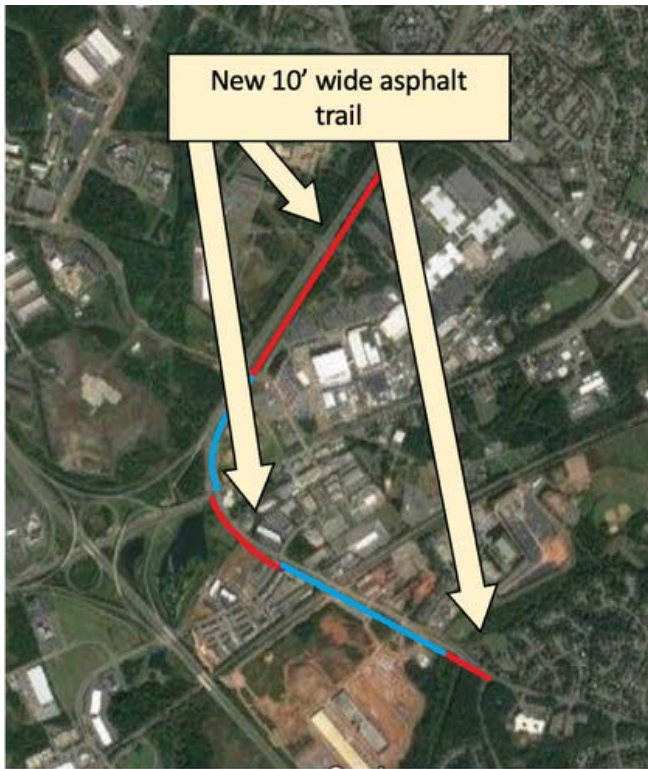
The project scope includes:

- New ADA compliant 2,332 linear feet, 10 foot-wide shared-use trail along the north-side of Gateway Boulevard.
- New ADA compliant 2,332 linear feet, 5 foot-wide sidewalk along the south-side of Gateway Boulevard.
- Increased pedestrian and bicycle safety.
- New walking and biking connections for residents and businesses in the Gateway/Airport area.

Status:

- Right of Way acquisition
- Work paused during eagle nesting season (December 1-July 15)
- Estimated Construction Start: Summer 2022





Godwin Drive Shared-Use Path T-059

Two-way bicycle and pedestrian shared use path (8'-10' wide) from Wellington Road to Winters Branch Trail (approx. 1.5 miles)

Status:

- Right-of-way acquisition: Winter 2022
- Construction is anticipated to begin in Spring 2022



Quarry Street Streetscape Project T-087

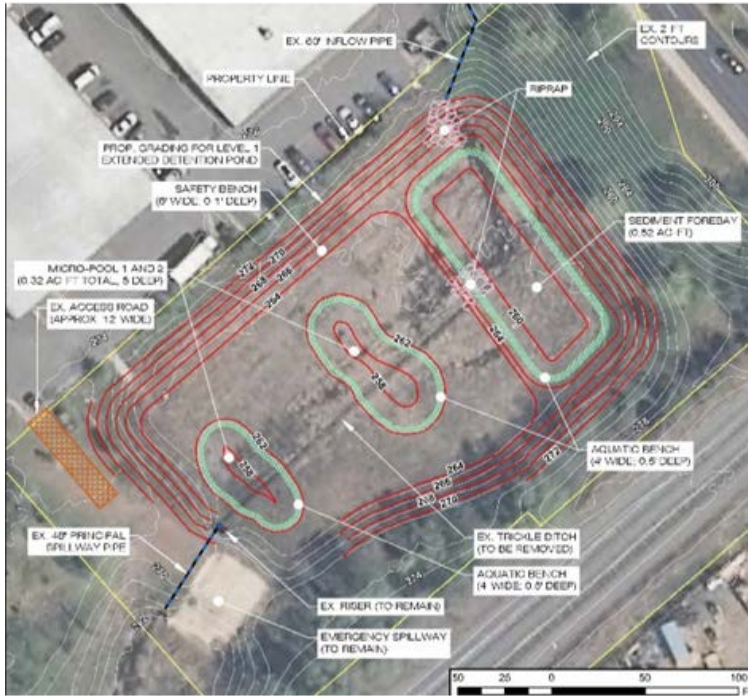
Constructing a new ADA compliant 5 foot-wide sidewalk along the southern portion of Quarry Street.

- This project will replace the existing 4 foot-wide sidewalk along the north-side of Quarry Street.
- Includes new roadway pavement, approximately 450 linear feet, between Main Street and the Messenger Place entrance.

Status:

- Right of Way acquisition
- Utility Undergrounding – April 2022
- Construction Start – Summer 2022

2021 Stormwater Highlights



Euclid/Sills Warehouse SW Pond Retrofit D-009

Retrofit Existing Dry Pond to a Level 1 extended detention pond that will provide water quality and quantity controls.

Status:

- Design- 30%
- Estimated completion in Fall 2023



Liberia House Stream Restoration D-027

Repair the eroded stream beds along Flat Branch Creek through the Liberia Historic Site.

- Property to allow Total Maximum Daily Load (TMDL) credits

Status:

- Design
- Estimated completion in Fall 2023

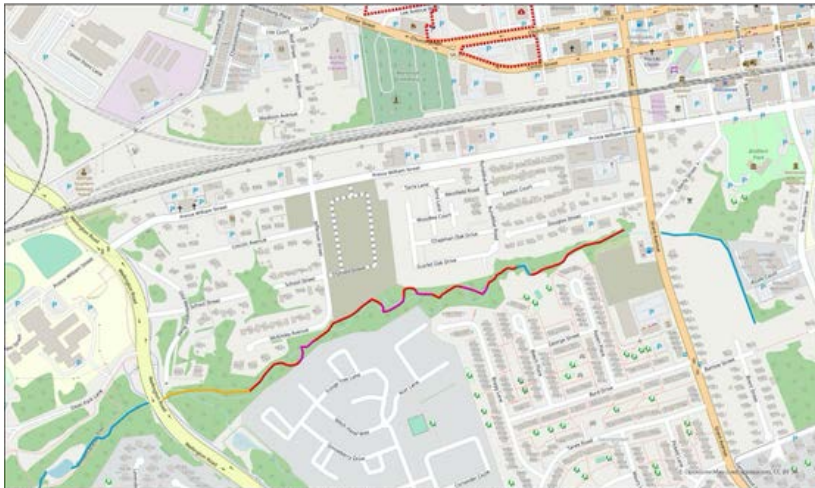


Round Elementary SW Pond Retrofit D-036

Retrofit Existing Dry Pond to a Level 1 extended detention pond that will provide water quality and quantity controls.

Status:

- Conceptual design



Stream Restoration Project Area

Cannon/Winters Branch Stream Restoration

Repair the eroded stream banks of several segments along the Winters Branch tributary of Cannon Branch from Grant Avenue to Wellington Road.

- Property to allow Total Maximum Daily Load (TMDL) credits

Status:

- Conceptual design

Lucasville Regional SW Facility Retrofit D-039

Retrofit wet pond to a Level 2 wet pond that provides water quantity and quality controls.

Status:

- Design- 60% complete
- Estimated completion in Fall 2023



Dean Park C-017

Supporting the addition of four new and two renovated fields at Dean Park with site planning.

Status:

- Phase I is 30% complete
- Construction expected to begin in Fall 2022



Solving Problems for Residents



Staff helped design this stormwater solution at 8906 Stonewall Road.

When residents find pooling water around their properties, the Engineering Department works to find solutions. Engineers assess the conditions, research the ownership of the properties, design cost-effective solutions, and construct the improvements.

Our staff draws on its extensive training as Department of Environmental Quality (DEQ) Certified Erosion Control Specialists, DEQ Certified Stormwater Management Specialists, and Certified Flood Plain Managers to design improvements for our community.

Staff also try to get ahead of problems by monitoring MS-4 Stormwater Permits, illicit discharges, and facility maintenance.

Reviewing Site Plans

Requires many steps and collaboration among departments:



Reviewing the DCSM and Plan Review Checklist



Stormwater Review



Erosion and Sediment Control Review



Transportation Review



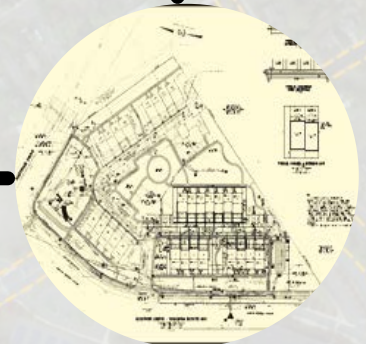
Confirm Compliance with Comprehensive Plan and Trans



Traffic Impact Analysis



Utility Review



General Engineering Review

Engineering Mission Statement

To provide quality engineering design, project management and construction management to ensure that private and public development are well-planned and constructed to serve the Public which enhance the City. Minimize risk to public health and safety through effective operation, management, and maintenance of its storm drainage and flood control assets, to promote appropriate runoff control and reduction practices throughout the City of Manassas, and to restore and enhance water quality in local streams by educating citizens, guiding the development process, and implementing pollution prevention strategies throughout its operation.

