



PUBLIC WORKS  
BUSINESS PLAN

2023



JULY 1, 2022 – JUNE 30, 2023  
TOWN OF CHAPEL HILL



## Letter from the Director



Public Works is truly an external and internal facing department, and our customers are both residents, businesses, and Town staff. We take pride in our department's high levels of service, including providing weekly household solid waste and yard waste collection, maintaining the Town's infrastructure (i.e., streets, sidewalks, creeks) and complete a

variety of traffic and engineering services, to highlight a few. Public Works also manages many special initiatives and capital projects in addition to supporting the Council's Strategic Goals and Initiatives.

Major accomplishments in FY22 included completing Country Club Road Street Reconstruction project in partnership with UNC and nearly completing the Town Hall Roof Replacement project in addition preparing to bid Post Office Roof Replacement and Cupola Improvements Project and Homestead Road and Seawell School Road Sidewalk Projects. Public Works also completed various traffic safety improvements including the installation of rapid flashing beacons and green bike markings along certain roads. As part of the two-thirds General Obligation bond funds received in FY22, the department completed 1,180 square yards of sidewalk repairs at 109 locations in addition to 19 locations using General Fund dollars and resurfaced 7.89 miles of streets.

Public Works continued to advance environmental stewardship with our current initiative of greening our fleet by purchasing electric vehicles and our facilities including reusing materials to reduce construction waste to landfills and managing stormwater quality including coordinating the Clean Water Education Partnership's Regional Creek Week. Staff is also working with Orange County to support the development of a Solid Waste Master Plan for the community that has a zero waste goal by 2045.

My top priorities are to continue providing high customer service, focus on environmental stewardship, and offer great place to live, work and play. To enhance our service levels to the community and the organization, additional resources would be needed for maintenance, environmental stewardship, and staff development.

**Maintenance:** The Town's infrastructure and capital assets are deteriorating across the board, from streets to buildings, vehicles to stormwater drainage structures. Funding for maintenance and core business operations has not kept up with the Town's growth, added buildings, or the cost of doing business. Additional ongoing funding will be critical to catch up on the maintenance backlog. Even with the additional funding, it will take time to catch up and reverse the trend of deteriorating infrastructure.

Additional funding will make a difference. As part of the FY23 budget process, funding was partly restored for street resurfacing in the amount of \$568,515, but there remains a backlog of \$18.5 million. Funding for facility

maintenance was also partly restored in the amount of ~\$330,000, but there remains a current backlog of ~\$10.6 million. Lastly, funding was partly restored for fleet maintenance in the amount of \$345,000, but there remains a backlog of ~\$9.1 million, excluding the funding needed to replace large fire apparatus.

*Environmental Stewardship:* We are experiencing the effects of climate change with increasingly severe inclement weather events, and as our region grows, management of traffic congestion is an increasing priority. We continue to construct data-driven infrastructure improvements to optimize traffic flow, provide alternate transportation options, and improve stormwater systems to mitigate flooding and manage water quality. We also continue to evaluate and improve our own organization's carbon footprint and work to improve energy efficiency relative to our town-owned buildings, fleet, and in other ways we do business (i.e., converting streetlights to LED). We know what we need to do to help preserve our environment, and the Climate Action Plan, managed by the Community Resilience Office, will offer opportunities for the Town.

*Staff Development:* With recent and upcoming retirements, vacancies, and resource gaps, staff has struggled to maintain core services and balance added duties associated with capital projects, and special initiatives. These changes have also provided an opportunity to revisit our department's organizational structure and ensure it reflects how we will need to function in the future. By strategically adding positions and considering changes, we can provide growth opportunities and ensure sufficient staff capacity. We are also enhancing our recruitment and hiring efforts to strengthen the diversity, equity, and inclusion within the department.

In FY23, I look forward to continuing what we do best, while taking the opportunity for a fresh look at what we can change to ensure good future stewardship for our organization and community.

– Lance Norris, Director of Public Works

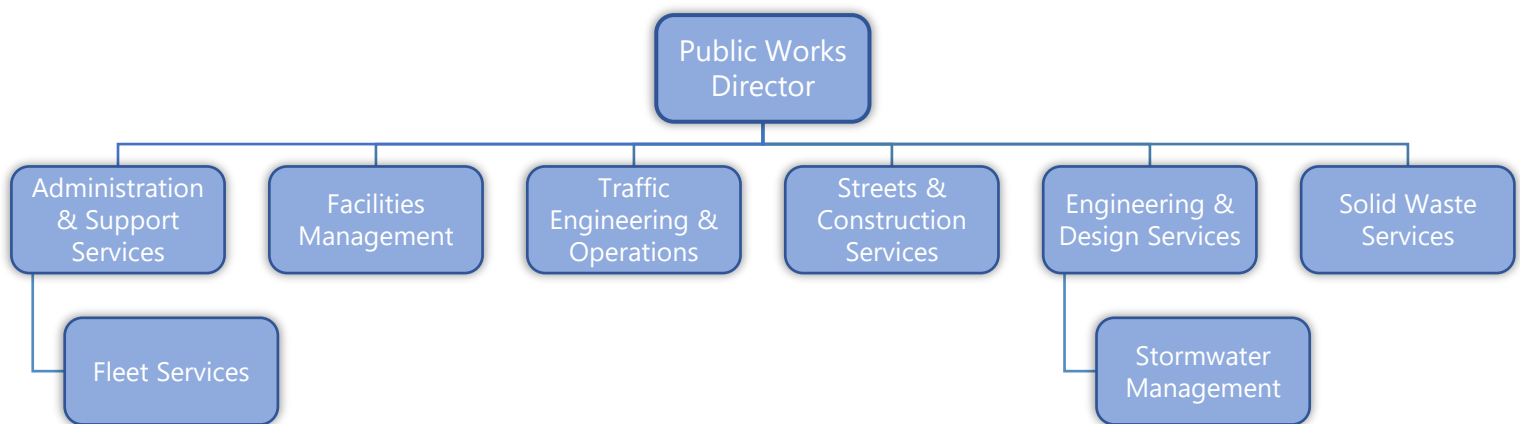
## Our Mission

The Public Works Team strives to provide excellent customer service, emphasizing public safety and environmental stewardship by preserving, maintaining, and enhancing the Town's infrastructure and natural resources.

## Strategic Alignment

The Public Works department addresses [Environmental Stewardship](#); Connected Community; and Collaborative & Innovative Organization Strategic Goals of the Town of Chapel Hill.

## Our Department



**Departmental Performance Measures Overview** (mark 'X' if performance from the most recent data collection period is at or above target)\*

Mission-level Measures		At or above target
1.	Percent of time downtown streets were swept according to schedule, weather permitting (twice per week)	<input checked="" type="checkbox"/>
2.	Percent of time major streets were swept according to schedule, weather permitting (once per week)	<input type="checkbox"/>
3.	Percent of time residential streets were swept according to schedule, not weather permitting (once every seven weeks)	<input type="checkbox"/>
4.	Percent of traffic signal problems addressed within 2 hours	<input checked="" type="checkbox"/>
5.	Percent of town-maintained street system rated 81 or better (sq. yds.)	<input type="checkbox"/>
6.	Tons of Residential Refuse Collected per Collection FTE	<input checked="" type="checkbox"/>
7.	Percent of community "satisfied" or "very satisfied" with quality of trash/yard waste collection services	<input checked="" type="checkbox"/>
8.	Preventive maintenance work orders as a percentage of total annual work orders <i>[for facilities]</i>	<input checked="" type="checkbox"/>
9.	Percent of frontline fleet utilizing alternative fuels or "green" technology	<input type="checkbox"/>
10.	Percent of rolling stock available per day	<input checked="" type="checkbox"/>
11.	Percent of development plan reviews completed by assigned deadline	<input type="checkbox"/>

Program-level Measures		
Program	Performance Measure	At or above target
Stormwater Regulatory Compliance	Percent of investigations of reported pollution initiated within 24 hours of notification	<input checked="" type="checkbox"/>
Stormwater Regulatory Compliance	Percent of SCMs inspected annually	<input type="checkbox"/>
Stormwater Infrastructure	Percent of investigations for drainage service inquiries initiated within three working days	<input type="checkbox"/>
Street Sweeping	Percent of time downtown streets were swept according to Schedule, weather permitting (twice per week)	<input checked="" type="checkbox"/>
Street Sweeping	Percent of time major streets were swept according to schedule, weather permitting (once per week)	<input checked="" type="checkbox"/>
Street Sweeping	Percent of time residential streets were swept according to schedule, not weather permitting (once every seven weeks)	<input type="checkbox"/>
Miscellaneous Construction	Percent of observed and reported sidewalk tripping hazards addressed within 24 hours	<input checked="" type="checkbox"/>
Traffic Signals	Percent of emergency traffic signal problems addressed within 2 hours	<input checked="" type="checkbox"/>
Traffic Signals	Percent of traffic signals on which preventive maintenance is performed twice per year	<input type="checkbox"/>
Traffic Signs / Markings / Calming	Percent of emergency maintenance addressed on critical regulatory traffic control signs (i.e., stop sign, yield sign, one-way sign, do not enter sign) within two hours	<input checked="" type="checkbox"/>
Traffic Signs / Markings / Calming	Percent of permits issued within five business days for traffic control plans for lanes and street closures	<input type="checkbox"/>

Traffic Signs / Markings / Calming	Percent of traffic calming studies completed within six months of receiving the request	<input type="checkbox"/>
Streets and Parking Lots	Percent of town-maintained street system rated 81 or better (square yards)	<input type="checkbox"/>
Streets and Parking Lots	Percent of town-maintained streets (square yards) resurfaced annually*	<input type="checkbox"/>
Streets and Parking Lots	Percent of safety critical potholes reported by the staff and the public repaired within 24 hours	<input checked="" type="checkbox"/>
Streets and Parking Lots	Percent of leaf collection cycle completed between Halloween and Thanksgiving	<input checked="" type="checkbox"/>
Streets and Parking Lots	Percent of leaf collection cycle completed between Thanksgiving and Christmas	<input type="checkbox"/>
Civil Engineering	Percent of properly certified and submitted Survey Plats reviewed and responded to within five (5) working days of receipt	<input checked="" type="checkbox"/>
Civil Engineering	Percent of development plan reviews completed by assigned deadline*	<input type="checkbox"/>
Solid Waste Collection	Tons of Residential Refuse Collected per Collection FTE	<input checked="" type="checkbox"/>
Solid Waste Collection	Percent of commercial collection costs recovered via fees	<input type="checkbox"/>
Solid Waste Collection	Percent of community "satisfied" or "very satisfied" with quality of trash/yard waste collection services*	<input type="checkbox"/>
Inclement Weather	Percent of priority Town roadways pre-treated prior to each anticipated significant inclement weather event	<input checked="" type="checkbox"/>
Inclement Weather	Percent of priority streets where initial snow removal is completed within 48 hours	<input checked="" type="checkbox"/>
Facilities Management and Maintenance	Preventive maintenance work orders as a percent of total annual work orders	<input checked="" type="checkbox"/>
Facilities Management and Maintenance	% of customer repair requests completed within 2 business days of receipt	<input checked="" type="checkbox"/>
Facilities Management and Maintenance	% of emergency work orders that personnel respond to within 1 hour	<input checked="" type="checkbox"/>
Fleet Services	Percent of work orders that are preventive maintenance	<input checked="" type="checkbox"/>
Fleet Services	Percent of work orders that are repeat repairs	<input checked="" type="checkbox"/>
Fleet Services	Percent of preventive maintenances completed as scheduled	<input type="checkbox"/>
Fleet Services	Percent of rolling stock available per day	<input checked="" type="checkbox"/>
Fleet Services	Percent of work orders completed in less than 1 work day	<input type="checkbox"/>
Fleet Services	Percent of work orders completed in excess of 2 work days	<input type="checkbox"/>
Fleet Services	Percent of total fleet utilizing alternative fuels or "green" technology	<input type="checkbox"/>
Fleet Services	% of frontline fleet utilizing alternative fuels or "green" technology	<input type="checkbox"/>
Fleet Services	Metric tons of carbon dioxide equivalent emitted by Town vehicles (excluding Transit) per year	<input type="checkbox"/>

\*Several performance measures have nearly met the target. Please see the performance measures spreadsheet for further details.

DEPARTMENTAL  
STRATEGIC INITIATIVES



## Initiative: Develop Plan to Come into Compliance with NPDES MS4 Permit

Project Manager(s): Stormwater Senior Engineer, Stormwater Analyst, Stormwater Administration Team

### Business Alignment

**Deliverables** provide a summary of deliverables and outcomes that are expected to be achieved during the fiscal year.

Complete Annual Program Evaluation	Evaluate the performance and effectiveness of the Stormwater Management Plan (SWMP) program components at least annually. Results are used to modify the program components as necessary to accomplish the intent of the Stormwater Program. The self-assessment reporting period is the fiscal year (July 1 – June 30).	Completed annual report and submitted to NCDEQ in August 2022.
Develop Plan to Complete Outfall Mapping	Develop a plan for completing major outfall mapping in the Booker Creek, Bolin Creek & Morgan Creek subwatersheds, and complete mapping of Booker Creek Subwatershed. This applies to outfalls that are greater than 36" or drain 50 acres or more ("major outfalls").	Complete mapping of the Booker Creek subwatershed in FY23.
Develop Plan Implement Storm Sewer Outfall Dry Weather Screening Program	Complete outfall screening and develop plan to implement dry weather screening program.	Bid dry weather screening project for Booker Creek Subwatershed in Spring 2023/Summer 2023.
Develop Plan for Documentation System for MS4 Operations and Maintenance Program	Develop tracking mechanism and documentation system for street sweeping and proactive inspections and maintenance of stormwater infrastructure.	Anticipated to be completed in FY23.
Complete Stormwater Control Measure (SCM) Maintenance	Complete inspection and maintenance of the 35 Town-owned stormwater control measures (SCMs).	Inspect all SCMs and complete maintenance of SCMs in poorest conditions in FY23.
Implement Comprehensive Pollution Prevention Training for Town Staff	Per state requirements, train all Town staff on pollution prevention, good housekeeping, and illicit discharge detection via the Town-wide Annual Stormwater 101 training. In addition, train staff on facility-specific issues.	Annual Stormwater 101 Training will be completed in Winter 2022.  Facility-Specific Training will be completed in Spring 2023/Summer 2023.
Evaluate Staff and Funding Needs to Ensure Compliance with MS4 permit	Maintaining adequate funding and staffing is required to implement and manage the provisions of the SWMP and meet all requirements of the MS4 permit.	Identify funding and request additional staff through the FY24 budget process.

### Diversity, Equity and Inclusion Lens

#### How has your department considered a DEI Lens in this initiative?

This initiative serves all members of the community including, but not limited to, residents, visitors, and business owners. This initiative also serves downstream community members, including those who recreate on and drink water from Jordan Lake.



Implementation of the annual Stormwater 101 staff training requirement considers alternate ways of accessing online training for those currently without access to Cornerstone (e.g., those without Town email addresses).

# Initiative: Maintain compliance with Jordan Lake Nutrient Management Strategy Stage One Adaptive Management Program for Existing Development

Project Manager(s): Stormwater Senior Engineer and Stormwater Analyst

## Business Alignment

**Deliverables** provide a summary of deliverables and outcomes that are expected to be achieved during the fiscal year.

Request Funding from the State to Retrofit Opportunities to Reduce Nutrient Loading from Existing Developed Lands	Identify location for at least one (1) retrofit opportunity per year and submit annual report to NCDEQ. This is a requirement to maintain compliance with the Jordan Lake Nutrient Management Strategy. A retrofit opportunity is a location where a Stormwater Control Measure (SCM) can be installed to reduce nutrients from existing development. The landowner where the retrofit is proposed must be willing to have the retrofit installed on their property.  In FY22, staff proposed Church & Caldwell Streets Public Housing as an SCM Retrofit Project.	Complete annual report due to NCDEQ by October 31, 2022.
---	--	--

## Diversity, Equity and Inclusion Lens

### How has your department considered a DEI Lens in this initiative?

All previous retrofit opportunities identified have relied entirely on Town properties due to the requirement that the landowner must be willing to have the retrofit installed. Two retrofit opportunities identified in the past have been located at public housing properties owned by the Town.

# Initiative: Implement the Comprehensive Solid Waste Review Recommendations to Strengthen Current Solid Waste Disposal Services and Develop Options for a Future Solid Waste Disposal

Project Manager(s): Public Works Director and Solid Waste Services Manager

## Business Alignment

**Deliverables** provide a summary of deliverables and outcomes that are expected to be achieved during the fiscal year.

Monitor Disposal Fee Options	Transition disposal operations to lower cost disposal facility.	Completed in FY 2023.
Support the Solid Waste Advisory Group	Support the Solid Waste Advisory Group and work with community partners on future solid waste management options, including the development of the Orange County Solid Waste Master Plan.	FY 2023 and beyond. Solid Waste Master Plan is anticipated to be completed in FY 2023.
Explore Options for Implementing Study Recommendations	Continue to explore funding resources to implement recommendations from the Comprehensive Solid Waste Review and Routing & Technology Study	Will continue in FY 2023 and beyond.
Increase Commercial Fees	Continue phased implementation of commercial fee increases to work towards full cost recovery.	Will continue in FY 2023 and beyond.

## Diversity, Equity and Inclusion Lens

### How has your department considered a DEI Lens in this initiative?

The Community Survey provides useful information about the community's satisfaction with solid waste services. Per the 2022 Community Survey, 87% of respondents were very satisfied or satisfied with the trash and yard waste collection services.

Limited demographic data is available based on the 2022 Community Survey. 429 residents participated in the survey. Survey can be found here - [2022 Town of Chapel Hill Community Survey](#).

A key focus will continue to be the development of new outreach and education materials about solid waste services in different languages, promoting the Town's commitment to language access.

## Initiative: Continuously Monitor and Address Road & Sidewalk Infrastructure Utilization throughout the Town of Chapel Hill

Project Manager(s): Streets Supervisor & Street Inspector (streets), Manager of Engineering & Infrastructure (road construction and sidewalks)

### Business Alignment

**Deliverables** provide a summary of deliverables and outcomes that are expected to be achieved during the fiscal year.

Street Resurfacing	Patching, milling, paving, and striping of ~5.8 miles of Town streets.	Bidding will occur in Fall/Winter 2022 and anticipated to be completed in Spring 2023.
Homestead Road Sidewalk Project	Install new sidewalks and bike lanes from Weaver Dairy Road Extension to existing sidewalks on westside of railroad tracks.	Bidding will occur in Fall 2022 and anticipated to be completed in Spring 2024.
Seawell School Road Sidewalk Project	Install new sidewalk from existing sidewalk on Seawell School Road connecting to existing sidewalk on Homestead Road. Will also include intersection improvements at Seawell School Road/ Homestead Road.	Bidding will occur in Fall 2022 and anticipated to be completed in Spring 2024.
Ephesus Church Sidewalk Project	Install new sidewalk and bike lanes from Pinehurst Drive to traffic circle on Pope Road.	Project is shovel ready. Construction will begin when funding has been identified.
Elliott Road Extension Project	Construct road and roadway improvements, including the addition of water and sewer mains on existing South Elliott Road by extending road to Ephesus Church using roundabout.	Construction is underway. Project will be substantially completed in December 2022/ January 2023.
Sidewalk Maintenance	Continue to maintain and repair sidewalks around Town.	Ongoing

### Diversity, Equity and Inclusion Lens

#### How has your department considered a DEI Lens in this initiative?

Provide various modes of transportation for all types of users (i.e., cyclists, pedestrians, transit riders, and drivers).

The goal is to improve the community's satisfaction of the Town's infrastructure and expand multi-modal network of streets throughout the Town. In the 2022 Community Survey, 62% of respondents were very satisfied or satisfied with the maintenance of our streets compared to 65% of respondents were very satisfied or satisfied with the maintenance of our streets in the 2019 Community Survey.

We will continue to meet with the Transportation Connectivity Advisory Board (TCAB), and Bike Ped Team to share information relative to infrastructure projects, where applicable.

## Initiative: West Franklin Street Lane Reallocation Implementation

Project Manager(s): Assistant Public Works Director and Transportation Planning Manager

### Business Alignment

**Deliverables** provide a summary of deliverables and outcomes that are expected to be achieved during the fiscal year.

Implement Pavement Marking Plan	Implement pavement marking plan including green paint and flexible bollards for curbside bike lanes.	Anticipated to be completed in September 2022.
Traffic Signal Improvements	Accommodate cyclists and motorists through traffic signal head adjustments, timing adjustments, and addition of bike loop detectors.	Traffic signal improvements were completed in Q1, FY23.

### Diversity, Equity and Inclusion Lens

**How has your department considered a DEI Lens in this initiative?**

Implementation of the lane reallocation will lead to improved safety, access, and mobility for all types of road users and modes of transportation.

# Initiative: Implement Facility Maintenance Plan

Project Manager(s): Facilities Manager

## Business Alignment

**Deliverables** provide a summary of deliverables and outcomes that are expected to be achieved during the fiscal year.

Complete Post Office/ Cupola Roof Replacement and Other Exterior Building Envelope Repairs Project	The Post Office/ Courthouse Roof Replacement and Cupola Refurbishment Project includes exterior repairs to the building including masonry repairs and painting. This project is highly complex compared to other Town projects given the historical nature of the building, intricate detail, and repairs needed to the cupola and the building envelope.	Project is planned for a phased approach due to material availability. The cupola and exterior building envelope repairs are scheduled to start in Fall 2022 and continue through Winter 2022. Roof replacement tentatively scheduled to start and complete in Spring 2023.
Repairs to Town Hall Parking Deck	The Town Hall Parking Deck has top surface coating deficiencies which has created safety concerns as well as structural deficiencies identified by an engineering firm. The project will address immediate safety concern by addressing the top surface coating.	Design is complete and the project is anticipated to bid in Fall 2022. Construction is anticipated to begin Winter 2023.
Replacement of Homestead Aquatic Center HVAC	The Homestead Aquatic Center HVAC systems have reached the end of their useful life cycle due to equipment age, ongoing maintenance/reliability issues, and the inability to obtain R-22 refrigerant.	Complete Request for Qualifications in September 2022 and select designer in Fall/Winter 2022.
Complete Facility Condition Assessment of all Town Facilities	A new facility condition assessment will evaluate ~ 50 Town-owned facilities. The last assessment was completed in 2016-2017.	Staff will request proposals from vendors in Winter/ Spring 2023.
Design of HVAC Replacements at Hargraves Community Center and Community Center	Complete design of HVAC replacement at the Hargraves Community Center and at the Community Center.	Complete Request for Qualifications in Winter 2022 and complete design in Spring 2023.
Complete Roof Design of Community Center	Complete roof design of Community Center.	Complete Request for Qualifications in September 2022 and select designer in Fall/Winter 2022.
Complete Fleet Bay Floor Refinishing	Complete Fleet Bay Floor Refinishing.	Complete floor refinishing project in Spring 2023.

## Diversity, Equity and Inclusion Lens

### How has your department considered a DEI Lens in this initiative?

We strive to create accessible, welcoming, and inviting facilities for all our workforce, residents, visitors, and protect taxpayers' investment in the facilities.

Per the 2022 Community Survey, 70% of respondents were very satisfied or satisfied with the maintenance of our buildings, a 2% increase in community satisfaction based on the 2019-2020 Community Survey.

# Initiative: Develop Departmental Succession Planning Strategy for Sustaining the Department through Employee Turnover and Adapting to Changing Business Needs

Project Manager(s): Public Works Succession Planning Team

## Business Alignment

**Deliverables** provide a summary of deliverables and outcomes that are expected to be achieved during the fiscal year.

Revise Job Descriptions	Revise key job descriptions to improve retention so internal employees better understand the skills/experience needed to advance, and so external recruitment is strategic, efficient, and effective.	Ongoing
Evaluate Organizational Structures	Continue to evaluate organizational structures and needs for additional positions to fill gaps and maintain core business programs.	Ongoing
Improve Recruitment Strategies	Evaluate and enhance recruitment strategies in an effort to increase diversity for all positions.	Ongoing

## Diversity, Equity and Inclusion Lens

### How has your department considered a DEI Lens in this initiative?

Develop training and professional development opportunities for employees to narrow skill gaps, promote internal recruitment, and increase retention.

Identify employees who may have the interest, experience, and skills to fill positions as employees retire from Public Works.

Work with the DEI Office to help expand recruitment efforts and increase diversity within the department.

# Initiative: Develop and Implement Strategies to Meet the Goals of the Climate Action Plan: All Electric Fleet by 2050

Project Manager(s): Fleet Manager and Community Resiliency Office

## Business Alignment

**Deliverables** provide a summary of deliverables and outcomes that are expected to be achieved during the fiscal year.

Restore Vehicle Replacement Funding Levels	This initiative will require consistent and sustained funding allocated by Council.	Ongoing efforts that will be requested again through the FY24 budget process.
Evaluate Electric Vehicle Options Offered by Manufacturers	Evaluate electric vehicle (EV) options as they become available for purchase and how it best aligns with operational needs and the Climate Action Plan.	Ongoing
Develop and Implement Charging Infrastructure Plan	Transition to an EV fleet will require planning and funding for a large charging infrastructure. Seven EVs were ordered with FY21 surplus funds and charging infrastructure will be installed at the Public Works campus and at the Police Department.	Work is underway to install electric vehicle charging infrastructure at Public Works and Police Department and anticipated to be completed in Fall/Winter 2022.

## Diversity, Equity and Inclusion Lens

### How has your department considered a DEI Lens in this initiative?

The Fleet Division plays a critical supporting role in nearly all Town-wide initiatives. While we are not front facing with residents of the community, we work hard behind the scenes to ensure the vehicles needed to meet the Town's Mission and Goals are both provided and maintained.

We strive to maintain a welcoming and inviting environment, and to provide quality service for all the Town's employees who rely on vehicles and equipment to do their jobs.

We strive to reduce the Town's carbon footprint as part of the Climate Action Plan that will improve the environment and quality of health of all.



# Initiative: Complete Implementation of Townwide Traffic Software Model

Project Manager(s): Traffic Engineering Manager

## Business Alignment

**Deliverables** provide a summary of deliverables and outcomes that are expected to be achieved during the fiscal year.

Complete Townwide Traffic Software Modeler	Create a townwide traffic model to provide real-time information on traffic measures such as level of service, delay, and capacity levels on street network for vehicles, pedestrians, bicycles, and transit.  Project is near completion and staff will present final report to Council. Council will provide direction on next steps.	Present final report to Council in Fall 2022.
--	---	---

## Diversity, Equity and Inclusion Lens

**How has your department considered a DEI Lens in this initiative?**

Create an inclusive community that enhances safe multi-modal transportation systems.