

Report for the City Manager

Community Services: Engineering

Date: January 12, 2023

The purpose of this document is to summarize the work the City of Dover Engineering Department through **December 31, 2022**.

Service Calls

The Engineering staff has made it a priority to meeting regularly (weekly whenever possible) to review open Service Calls and assign tasks to staff to address them. Work continues on improving the logging in and response time to Service Calls. In 2023, engineering staff is putting a renewed focus on finding ways to improve public outreach to address the most common of service call requests and questions.

Public Outreach:

Shoreline Resiliency Tour (June 2020): Gretchen Young (Env. Projects Manager) worked with Steve Bird from the Planning Department, to give a tour of the Cochecho Waterfront area, to a group of interested community members and local professionals. The focus of the tour was to showcase some of the resiliency planning that was being implemented in the area.

Community Conversations (July 2020): Gretchen Young (Env. Projects Manager) worked with staff from the Piscataqua Regional Estuaries Partnership and the Conservation Law Foundation to host a community conversation about the Great Bay and estuary, and how the work that the city does can impact.

Apple Harvest Day (October 2022): Gretchen Young (Env. Projects Manager) and Ken Mavrogeorge (City Engineer) staffed the Community Service booth at Apple Harvest Day along with staff from the CS Operations team. The booth was well attended and City staff received many positive comments on the items on display and content of the booth. In 2023, the Engineering department will look to build upon the positive feedback from visitors to the booth.

Public Opinion Surveys: City Engineering staff engaged with the staff at Media Services to conduct more targeted public outreach. Outreach includes more frequent updates via the Dover Download and use of interactive polls through Constant Contact and Polco to solicit feedback. In 2023, staff will look to improve the effectiveness of these surveys and start to solicit feedback from others that frequently do business in the City (developers, contractors, consultants, etc).

City Website Updates: In 2022, Engineering staff worked closely with Media Services to update various Engineering related pages on the city website, including the paving program page, to improve transparency to the public on how engineering decisions for infrastructure improvements are made. As we look to 2023, Engineering will identify areas where improved messaging would be useful and implement changes as deemed appropriate.

CIP Projects

Puttering Hill Water Treatment Plant: Construction of the new water treatment plant for the Puttering Hill Aquifer began in 2022. Engineering staff acted as project manager coordinating with the contractor, consultants, review agencies and responsible party. The project has been identified as the most complex water treatment plant in New Hampshire, including UV treatment and Granular Activated Carbon to achieve removal of groundwater contaminants. The project will continue through 2023 with the hope of being online in early 2024.

Tollend Landfill: The Gretchen Young (Env. Project Manager) continued to represent the City of Dover as part of the Dover Landfill Group which are tasked with remediating contaminated groundwater from a landfill that was in service from 1960-1979. The group continued to work with the review agencies to determine the preferred remediation solution.

CIP Planning: During the summer of 2022, the Engineering staff started to revamp the City's cost estimation program for engineering projects using current NHDOT and historical City CIP bid data. Using this information, the Engineering staff reviewed and ranked eighty (80) projects by priority for inclusion in the current CIP document and for future CIP consideration. The estimation analysis was key to identifying potential budget shortfalls due to the current construction bidding climate resulting from the pandemic, supply chain issues and inflation.

Waterfront Redevelopment: The Waterfront Infrastructure Project was put out to bid this past fall and unfortunately received no bids from the prequalified contractors. The City's consultant, Horsely Witten, is finalizing the drawings for the rebid at the end of January 2023 with an anticipated start of construction in late spring/early summer of 2023.

Fifth and Grove Reconstruction: The City's engineering consultant, Woodard & Curran, is advancing drawings for the reconstruction of Fifth and Grove from 30% to 60% with a goal of having biddable documents ready by early 2023. Work has progressed slower than anticipated due to additional coordination with property owners, sewer rehabilitation work, and an emergency water main break in the project limits.

River St Pump Station: The City's engineering consultant, Wright Pierce, has advanced the contract documents to 90% and are working towards 100% biddable documents by the end of January 2023. This final phase of design includes review and approval through the NHDES and coordination with the City's Waterfront project. It is anticipated that the start of construction will occur in summer of 2023.

Henry Law / River St Reconstruction: The City has applied for, and been awarded, a grant to cover the design of a stormwater best management practice within Henry Law Park. The City's engineering consultant, Kleinfelder, has been coordinating with Horsely Witten to incorporate River St infrastructure work (mainly water main replacement) into the Waterfront Infrastructure Project.

Downtown Pedestrian Improvements: The Engineering staff has been working closely with Planning staff on the redesign of the downtown core including reviewing potential changes from one way travel to two-way travel, and improvements to three significant intersections. The City's consultant, Greenman-Pedersen, Inc. will be taking the Downtown Pedestrian and Vehicular Access and Streetscape Study, completed by the Cecil Group in 2015, through construction documents.

Court and Union Reconstruction: The City's engineering consultant, Wright Pierce, has advanced the contract documents to 60% and are working towards 100% biddable documents by the end of February 2023. It is anticipated that the project will be bid in late winter of 2023 and the start of construction will occur in summer of 2023.

Dover Point Roundabout: The City's engineering consultant, Green International, has advanced the contract documents to 90%. The project is on hold at this time until additional project funding can be obtained to cover the costs estimated during the CIP development process.

Dredge Cell Closure: The City's engineering consultants, Verdantas, have developed preliminary drawings for a snow storage facility on top of the existing Dredge Cell adjacent to the waterfront parcel. The snow storage facility will also serve as a surface parking lot with boat trailer parking in the warmer months with stormwater management features, lighting, and pedestrian access to the City's proposed waterfront development. It is anticipated that work on the plans will continue into the new year with construction starting later in 2023 in conjunction with the waterfront development.

Chestnut Street Bridge: The project consists of rehabilitate the 47-year-old Chestnut Street bridge. The project was first bid in March 2022. In which one bid was received that was beyond the allocated funding. The project was rebid in October 2022 with modifications to the temporary traffic control plan with the anticipation that potential bids would be lower. The project was awarded in December 2022 and the bridge closed to all traffic on Tuesday, Jan. 3, 2023. The bridge will open to two lanes of traffic and at least one pedestrian sidewalk by Friday, May 19, 2023. The project consists of removing the pavement, membrane and sidewalks on the bridge, repairing deteriorated concrete in the bridge deck, reconstructing the bridge sidewalks, and installing a new bridge membrane, new bridge pavement and new wearing-course pavement. City Engineering Staff will be providing construction administration and oversight with assistance from the design consultant, GM2.

Whittier Street Sidewalk Improvements: The project consists of completing the missing pedestrian access on Whittier Street between Sixth Street and Glenwood Avenue by construction a sidewalk on the east side of Whittier Street. The project was first advertised in 2019 but cost proposals were higher than anticipated; therefore, the project was rebid in February 2022 and the project was awarded to G.W.Brooks and Son, Inc. Construction started in August 2022 and was completed in September 2022; City Engineering Staff provided construction administration and oversight.

Traffic Calming: The Transportation Advisory Commission selected four priority locations for Rectangular Rapid Flashing Beacons (RRFB). City Engineering Staff developed the Request for Proposals (RFP) to purchase the RRFBs and supported operations in the installation of the first set at the Durham Road and Alumni Drive intersection.

Portland Ave Retaining Wall: The project to replace the Portland Avenue retaining wall was advertised in October 2022; however, one bid was received that was above the allocated funding. City Engineering Staff will coordinate with the design consultant, Wright-Peirce, to modify the project and rebid in 2023.

Oxbow Road: City Engineering Staff supported Operations to narrow Oxbow Road through the Street Paving Program. Engineering determined the required width of the road and assisted in locating new edge of pavement.

Cochecho St Outfall Replacement: The Cochecho St Outfall failed, and while emergency repairs allow stormwater to make its way to the river, the outfall's capacity is reduced; therefore, replacement of the

existing outfall and culvert from the base of the Portland Ave retaining wall to the end of the outfall is required. The City's engineering consultant, Kleinfelder, analyzed the upstream contributing area in order to select the appropriate size box culvert and outfall. The existing outfall is on private property, so City Engineering and Kleinfelder are currently working to select the best outfall alignment to satisfy both City and property owner needs. Lower Central Ave Reconstruction: The City's engineering consultant, Kleinfelder, continued to progress plans and specifications for the reconstruction of Central Ave from Silver St to Jenness St. Plans are >90% complete, only minor changes are required to appropriately coordinate with the Court St Reconstruction project.

Central Ave North Water Upgrade: construction is complete on the Central Ave North project. In 2022, the City's contractor, Granese, completed trench restoration work and a paving overlay on Central Ave from Abbey Sawyer Memorial Hwy to Glenwood Ave

Main St and Washington St Water Upgrade: construction is complete on the Main and Washington project. In 2022, the City's contractor, Granese, completed trench restoration work and a paving overlay on Washington St from Central Ave to Main St, and on Main St from Washington St to Broadway.

Special Projects:

UNH Capstone Project: Throughout 2022, Gretchen Young (Env. Projects Manager) worked with research faculty at the UNH Stormwater Center to lead a project team of UNH Senior Civil and Environmental Engineering students to further investigate stormwater flows, contributing areas, and design parameters related to a Best Management Practice located in the vicinity of Henry Law Park. Students deployed flow meters in strategic locations to gauge volumes and rates of stormwater as it discharges to the Cochecho River. Information gathered as part of this project will be used to inform the design of a BMP in this location.

UNH Capstone Project: In the fall of 2022, Engineering staff worked with a senior capstone project team from UNH to develop a testing program to identify a baseline for PFAS throughout the City. The students have been working closely with a consultant, GZA, on identifying location for and conducting testing of surface water, rainwater, and groundwater. Samples were collected in December 2022 and testing is ongoing. It is expected that results will be presented in early 2023 with the potential of additional sampling locations being recommended through future capstone projects.

400th Crosswalks: City Engineering Staff coordinated with the City's 400th Committee in placing the 400th celebration logo within City cross-walks. Engineering facilitated the Request for Bids (RFB), and ultimately assisted Operations in the installation of the cross-walk designs.

Guppy Park Softball Building Evaluation: The building at the Guppy Park Softball field was condemned by City officials due to the structural integrity of the foundation. City Engineering Staff solicited a design consultant, Wright-Peirce, to evaluate the building and prepare a Memorandum with their observations and recommendations.

Lead Service Line Inventory: City Engineering staff is working with Utility staff and GIS staff to comply with the EPA's updated Lead and Copper Rule, which identifies lead service line replacement as a high priority, and requires that all public water supplies prepare an inventory of service line materials by 10/16/2024. Engineering staff is preparing a grant application to fund the preparation of the service line inventory, and working with others to gather service material data.

Credit for Going Green: City Engineering and Operations staff worked with researchers from the UNH Stormwater Center and the Piscataqua Regional Estuaries Partnership on a project focused on finding nitrogen removal impacts (or credits) associated with various non-structural practices. This year work was largely focused on street sweeping, and street leaf removal. Dover was uniquely able to assist with this effort due to the existing street sweeping practices as well as having access to the truck scale at the recycling center, and the recently constructed catchbasin screening facility. Outcomes from this pilot study will assist communities throughout the watershed as we stride to meet the Great Bay General Nitrogen Permit requirements.

Municipal Alliance for Adaptive Management (MAAM): Gretchen Young (Env. Project Manager) again chaired the MAAM. This year, the group continued to make progress on the previously developed Adaptive Management Plan. The group was also successful in securing \$1,000,000 in grant funding to be dedicated to furthering research in the great bay.

MS4 compliance work: The City of Dover is in the 5th year of the most recent EPA stormwater permit cycle. This year engineering and operations staff worked together to meet permit requirements including outreach and education, routine maintenance and construction project management. In addition, this year staff performed wet-weather analysis of stormwater outfalls as part of the required Illicit Discharge Detection and Elimination program. Gretchen Young (Env. Project Manager) also chaired the Seacoast Stormwater Coalition, meeting and working regularly with NHDES and EPA regulators and assisted other communities in the region with MS4 compliance work.

Permits:

Permit Summary for 2022:

Driveway Permits: 103 total – 63 of that total are Energov.

Utility Licenses: 37 total – 13 of that total are Energov

Paving Licenses: 30 total – 14 of that total are Energov

Excavation Permits: 139 total – 96 of that total are Energov

Obstruction Permits: 18 total – 4 of that total are Energov

Technical Review Committee: In 2022, Engineering staff revamped their review process required as part of the Technical Review Committee. The process now includes input from the Assistant City Engineers, City Engineer, and Utility Supervisor. The review process starts with one individual taking the lead then looping in the remaining staff in a single meeting. The goal with this more inclusive process is a more thorough review that has resulted in better developments that adhere more closely to City standards. Large projects that have been through this process include the Waterfront Development, 47 Chestnut Street, and Bluebird Storage on Littleworth Rd.

Wastewater Connection and Septic Permit Reviews: In 2022, Engineering staff started to assess their review process for wastewater connection and septic permits. Both State (NHDES) issued permits require sign off from the City prior to submission at the State level and thus Engineering staff has begun developing templates and procedures to ensure that permits that are submitted are accompanied by the appropriate materials and adhere to City and State guidelines and

regulations. Moving forward Engineering anticipates incorporating these permit reviews into Energov to better track their progress and accept payment of fees.

Outdoor Dining Permitting: Outdoor dining resulting from the pandemic continues to thrive in the City. Engineering, in conjunction with the Technical Review Committee and Planning is working to revamp the applicant experience when applying for these types of permits.

Construction Oversight: In 2022 our Engineering Technicians continued to support Planning in the oversight of private projects approved at the Planning Board. In addition, our Engineering staff was tasked with tracking the work of Breezeline Communications as they expanded into Dover. This work was challenging as the company had multiple crews, subcontractors, and permits that required oversight and a tremendous amount of public outreach.