

# Report for the City Manager

## Community Services: Engineering

Date: September 14, 2023

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The purpose of this document is to summarize the work the City of Dover Engineering Department through **August 31, 2023**.



**Engineering**

Community Services | Dover, NH

The Engineering Division is comprised of a dedicated team of individuals who work collectively to, as the Division's statement reads, "provide the City of Dover with professional engineering services that ensure long-range comprehensive planning, sound project design, and quality construction management, and to provide technical engineering assistance to other Departments of the City."

Ken Mavrogeorge, PE – City Engineer

Bill Boulanger – Special Projects Advisor

Amelia DeGrace – Assistant City Engineer (Utilities)

Jillian Semprini, PE – Assistant City Engineer (Transportation)

Eric Sanderson – Facilities Project Manager

Gretchen Young, PE – Environmental Projects Manager

Jamie Stevens – Waterfront Construction Manager

Jordan Chambers – Engineering Technician

### **Staff Workload:**

The Engineering Staff is currently managing or involved with over 150 City projects ranging from annual projects such as the General Streets Improvements - Annual Paving Program to projects in the Capital Improvements Program such as the reconstruction of various neighborhoods. Included in that total are projects for other departments including but not limited to Planning (Capital Improvements Program), Recreation (Jenny Thompson Pool Evaluation and New Skate Park), and Library (Renovation).

In addition to their daily project management responsibilities, the City's Engineering staff also participate in the following Commissions, Committees, and Boards as either activate members or staff liaisons.

Dover Utilities Commission (Amelia DeGrace): The Dover Utilities Commission held a joint meeting with the Ordinance Committee on August 16<sup>th</sup> to review progress on the development of a Stormwater Utility. Gretchen Young and Amelia DeGrace were in attendance.

Transportation Advisory Committee (TAC) (Jillian Semprini): The next TAC meeting is scheduled for September 25<sup>th</sup>.

Planning Board (Ken Mavrogeorge): Planning Board met on August 22<sup>nd</sup> where three residential developments were reviewed and approved.

Municipal Alliance for Adaptive Management (MAAM) (Gretchen Young): The MAAM communities and partners worked together on the annual progress update of the Adaptive Management Plan (AMP). The AMP was distributed at the end of the month and will be reviewed at the September 14<sup>th</sup> meeting.

TIF Advisory/Coheco Waterfront Development Committee (CWDAC)/Park Subcommittee (Jamie Stevens): Jamie Stevens has taken over for Steve Bird as a City staff liaison to these groups.

**Customer Service:**

In addition to supporting other City Departments and working on Capital Projects, Engineering staff takes Service Calls from the public and responds to them as quickly as they can. The team meets regularly to review open Service Calls and discuss how to respond.

The Table below shows the total calls year to date and over the past month. There has been an increase in calls this year over past years due to the change in how Admin receives calls to the department. The greatest change this year has been asking callers to provide an email address. This single change has increased the quality and speed of responses.

Time Period	Logged Service Calls	Resolved Service Calls
Year to Date (2023)	286	270
Last Month (Month)	23	33

Some of the most common questions received by the Engineering staff includes:

**Question: There are pot holes up and down my road. Who can I notify of the issues and get them resolved?**

*Answer: The public is encouraged to call the pothole hotline at 603-516-7845 or contact our Community Services office at 603-516-6450 to report a pothole.*

*Once a pothole is reported, Community Services staff will assign the appropriate staff to address the issue typically within 24 hours of the report being received.*

*Please note that State Law RSA 231:90-93 (Revised Statute Annotated) states the following: In accordance with RSA 231:90-93, the City of Dover is not liable for damages caused by an insufficiency unless they received prior notice of such insufficiency and failed to act within a reasonable period of time.*

*The City of Dover relies on the statutory immunity afforded to it under RSA 231:90-93 which in part states:*

*I. A municipality shall not be held liable for damages in an action to recover for personal injury or property damage arising out of its construction, maintenance, or repair of public highways and sidewalks constructed thereupon unless such injury or damage was caused by an insufficiency, as defined by RSA 231:90, and:*

*(a) The municipality received a written notice of such insufficiency as set-forth in RSA 231:90, but failed to act as provided by RSA 231:91.*

**Question: Can a crosswalk be added at a particular location that is not an intersection?**

*Answer: A crosswalk not located at an intersection would be considered an uncontrolled, mid-block crosswalk. This means that motorists are not otherwise required to stop unless there is a pedestrian present and attempting to cross. The City's crosswalk policy and standards do not support adding new uncontrolled crosswalks without other significant measures. Other measures might include a rapid rectangular flashing beacon (RRFB) system. Although a new mid-block crossing at these types of locations with modifications may be beneficial, the city currently has over 50 uncontrolled crosswalks that the Transportation Advisory Commission (TAC) has taken on a role of helping to prioritize these locations where flashing beacon systems (or some variation of it) are best suited. Where there is currently no crosswalk at a particular location, constructing a new mid-block crosswalk would likely not be a priority.*

## Projects

As noted above, the Engineering staff is actively supporting a large number of projects across the City. The following are some highlights on just some of the active projects.

### Bellamy Rd Culvert Replacement:

Engineering staff is working with the NHDES on a design for the replacement of a culvert below Bellamy Road. The culvert removal would allow for aquatic life to pass below the road which the current culvert configuration will not permit.

Hough Street Emergency Culvert Repair: The precast concrete box culvert was installed in August and the road was reopened to traffic shortly thereafter. Hough Street is scheduled to be reclaimed as part of the annual paving program this season and will be completed in September.

### Pudding Hill Water Treatment Plant:

Contractors continued to work on internal piping, electrical, chemical storage areas, and telecommunications. Work continues to be on track for substantial completion in February with some time for start-up and operation in the spring of 2024.



*Figure 1: Newly installed precast concrete box culvert below Hough Street. Crews above the culvert are reconstructing the road in preparation of paving.*



*Figure 2: Interior fit up continues at the new Pudding Hill Water Treatment Plant.*



*Figure 3: Exterior of the new Pudding Hill Water Treatment Plant.*

Street Reconstructions: The Engineering staff continues to advance the designs of multiple street reconstruction projects including the following:

Fifth and Grove: Bid Documents (Plans and Specs) underwent their final review by City staff and are undergoing their final revisions prior to releasing for bid which is anticipated for early fall. Construction is expected to start in early 2024.

Court and Union: 90% design documents were submitted to the City for review. A second Neighborhood Meeting is scheduled for late September to present the design that was prepared based on feedback gathered from the first Neighborhood Meeting and subsequent poll to residents. The project is expected to go out to bid in the fall of 2023 and construction is expected to begin in early 2024.

It is anticipated that these projects will be ready for bid in early fall. Work for these projects are anticipated to occur in spring 2024 and continue through mid-2025. Street Reconstruction projects are Capital Improvement Plan projects that include comprehensive upgrades to water, sewer, drainage, lighting, road surfaces, and sidewalks within neighborhoods. The second neighborhood meeting for the Fifth and Grove St project was held on July 10<sup>th</sup>. It is anticipated that additional public meetings for the other projects will be occurring in August of 2023 prior to going out to bid.

Stormwater and Flood Resiliency Utility: The Dover Utilities Commission (DUC) and Ordinance Committee held a joint meeting August 21<sup>st</sup> to review a draft of the proposed ordinance. Discussions will continue at the September 18<sup>th</sup> joint meeting. With consensus from the joint committees, staff will enhance public outreach to explain the proposed fee structure and crediting process. City Council is poised to hold a first reading for an ordinance to create the utility in November, followed by a public hearing and possible vote in December. If enacted as currently envisioned, the utility would begin at the start of the 2025 fiscal year on July 1, 2024.



Property Examples	Single-Family Home	Commercial	Agricultural	Residential HOA		
Impervious Area (sq. ft)	1,500	4,000	10,700	580,000	7,000	128,800
ERUs	0.5	1.0	3.0	179.0	2.0	40
Est. Annual SW Fee <sup>1</sup>	\$80	\$160	\$480	\$28,611	\$320 <sup>3</sup>	\$160 <sup>4</sup>
Est. Property Tax Amount <sup>2</sup>	\$180	\$275	\$360	\$11,380	\$265	\$200

Notes:

- The estimated stormwater fee is based on the amount of impervious area on the property and the proposed fee structure subject to City Council approval.
- The property tax amount is based on the estimated assessment value provided in Dover City Assessor online MapGeo property database and the portion of the FY24 City tax rate that would be used to fund \$4.5 million in annual stormwater and flood resilience costs. These estimated fees do not include available credit options that could reduce fees by as much as 50% subject to City Council approval.
- This property would be eligible for a 25% low density credit as well as other credit options available to all properties that could reduce the estimated annual stormwater utility fee by as much as 50% or more depending on eligibility criteria and contingent on City Council approval.
- Estimated fee and property tax amount reflects a per unit cost for each residence in the HOA.

Figure 4: Presentation materials for the Stormwater Utility

Stormwater Management Plan: The 2017 MS4 permit has been extended for an additional year as EPA finalizes the draft for the next 5-year permit. It is anticipated a draft of the next permit will be available for review in the fall. Staff continue to work under the existing permit, focusing on illicit discharge detection and elimination. The year-5 annual report is due in September.



Figure 5: Sewer service reconstruction at Woodman Park School.

#### Portland Ave Retaining Wall and Sidewalks

Improvements: City staff met with the design consultant, Wright-Pierce, to move the project toward advertising in the fall of 2023. Construction could start by the end of 2023 and involve some partial road closures in the area of Portland Ave. and Cocheco St.

Woodman Park Sewer Service Repair: Special Project Advisor Bill Boulanger oversaw the reconstruction of the sewer service lateral at Woodman Park School in August prior to the start of the new school year. Trench work was completed prior to the start of school with final paving occurring in early September.

Court Street Emergency Sewer Repair: Community Services Engineering and Operations staff are working together to support the emergency repair of a collapsed sewer main within Court St. The existing 24-inch pipe failure was discovered last year during the data collection phase of the Court Street Reconstruction Project. Upon discovery of the failure, the consultant for the reconstruction project shifted gears to design and permit the emergency repair that is currently being

installed. Modifications to the design have been necessary to avoid existing infrastructure within Court St. but the work is expected to be completed by mid-September.

River Street Pump Station Upgrade: Waterline Industries Corporation was the low bidder for the River Street Pump Station Improvements Project. Pre-construction and pre-electrical meetings were held at the end of August. Waterline is working on submittals to get materials ordered. They are prioritizing submittals for long lead time items, several of which have already been reviewed and released. Improvements to the pump station are expected to take 18 months to complete and coincide with the Waterfront Infrastructure Improvements project.

Cocheco St Outfall Replacement: Engineering continues to meet with staff from Eversource to review a preliminary cost estimate, schedule, and logistics for the construction of the replacement for the existing stormwater outfall. It is anticipated that construction will start in November 2024 and run through March 2025.

Waterfront Redevelopment: The City's contractor, Northeast Earth, continues to mobilize equipment at the Waterfront project and has established site security via construction fencing and site signage. Jamie Stevens, Waterfront Construction Manager, continues to oversee the contractor as they have installed erosion control measures, begun site preparation, and began phase 1 work including subsurface obstruction removal and installation of stormwater system. Engineering staff has continued to provide administrative assistance including review of submittals, review of the first pay requisition, and coordination with the private utility companies. The project will require a temporary closure of the public paddle sports dock in September which will likely last into 2025.

Smith Well Road Elevated Tank: Construction of the tank pedestal is complete and fabrication of the tank has begun at ground level. The Contractor will complete as much work as possible at ground level before the tank is lifted onto the pedestal.

A temporary watermain was installed within Smith Well Rd to provide service to Smith Well Rd and Barry St residents while a new permanent watermain is installed on Smith Well Rd. Installation of watermain, sewer, and drainage on Smith Well Rd will continue through September 2023.



Figure 6: New valve assembly was installed in Glenwood Ave for the new water main in Smith Well Road.



Figure 7: New Smith Well Rd tank fabrication starting at the base of the completed pedestal.

The new 1-million-gallon tank is being constructed to allow the City to take the Garrison Hill tank offline in 2024 for rehabilitation. The new tank is currently on track for final completion in early 2024.

#### Street Paving Program:

Engineering staff coordinated with the Streets and Drains Division to select roads for routine maintenance (crack sealing). A request for bids (RFB) for crack sealing was released in August 2023 with bids due September 21, 2023.

As part of the Street Paving Program, Engineering staff has

been assisting the Streets and Drains Division on laying out the sidewalks on Leathers Lane in accordance with Planning board approval for a new residential development, Copley Commons.

Sidewalk Improvements: Engineering staff developed a Request for Proposals (RFP) for the assessment of the City's sidewalks to help inform future sidewalk reconstruction projects. The RFP was released in early August with bids due September 12, 2023.

#### Traffic Signal Management

The City's traffic engineering consultant, Sebago Technics, held a monthly meeting to review signal concerns received from calls to Community Services or other City Departments. Community Services is working with the consultant to develop a plan for traffic signal management including annual improvements, timing adjustments, and upgrades to include for capital improvement projects.

Cochecho Stormwater Master Plan: Engineering staff met with the NHDES and the City's consultant Kleinfelder on August 28<sup>th</sup> as part of a monthly check in for the Alternative drainage alignments in the Oak/Ham/Ela neighborhoods. This area consists of over 200 acres that drains to the recently installed Broadway culvert that contributes to the Cochecho St. outfall. The City's consultant is in the process of developing opinions of probable cost for the total reconstruction of the neighborhood to aid City staff in the development of Capital Improvement Projects as part of the 2023 CIP update. A preferred

alternative will be recommended by the consultant and selected by City staff by the end of 2023. The preferred alternative will serve as the basis of design for the Oak, Ham, and Ela Neighborhood reconstruction (+/- 100 acres). It is anticipated that the design for the neighborhood reconstruction will begin in 2024.

**Facilities Projects:**

**Fish Ladder Park:** New light pole bases were installed in Fish Ladder Park in advance of final sitework in late September. Once completed, park improvements will include new brick walkways, park bench pads, trash receptacles pads, and landscaping.

**Skate Park:** Artisan Skateparks continued placing concrete for the new skate park in August and will wrap up that work in September. Additional sitework to follow the park's construction includes a new stormwater management basin and sidewalks around the park. Site work finishes are scheduled to be completed in early fall. The demolition of the existing skate park is underway. Once that existing skate park demolition is complete, the City plans on constructing a public parking lot for patrons of Henry Law Park and the new Waterfront Park.



*Figure 8: New skate park.*

**Inspection Services:** Interviews with the two selected bidders were conducted to review their proposals and fee for the expansion of the 271 Mast Road facility. The expansion would house staff from Inspection Services at the Community Services facility. A contractor is expected to be awarded the project late summer with the design and construction to commence once permitting through Planning Board is completed. The project aims to address the needs identified in a space needs Assessment conducted by the Deputy City Manager in 2022. The goal is for Inspection Services to be moved into the expansion in the fall of 2024.



*Figure 9: Bluebird Storage on Littleworth Rd.*

**Permits:**

**Permit Summary for August 2023:**

Driveway Permits:	17
Utility Licenses:	0
Paving Licenses:	3
Excavation Permits:	16
Certificate of Occupancy Inspections:	2
Construction:	1
Obstruction Permits:	6



Figure 10: Residential units at 73 Rutland St.

**Site Review/Project Oversight Support:**

**Technical Review Committee:** Eight (8) projects came to TRC in August that required Engineering review:

- 2 Grove Street – Site Amendment
- 43 Back River Road – Site Improvements for newly expanded daycare
- 34 New Rochester Road – 5 Duplexes adjacent to Copper Dr (under construction)
- 100 Education Way – Exterior and interior renovations to the existing office building
- 914 Central Ave – Proposed Car Wash
- 36 Olive Meadow Lane – Proposed Residential Development
- 1-3 Webb Place – New Bank at Weeks Crossing
- 200 Sterling Way – New Electric Vehicle Charging Station

**Wastewater Permit Review Summary for August 2023:**

Sewer Connection Permit: 1

Septic Design Reviews: 0

**Construction Oversight:** Engineering Technician, Jordan Chambers, continues to conduct oversight of over 60 private construction projects approved by the Planning Board. Projects that are underway or have been completed include:

- Bluebird Self Storage (Littleworth Rd.)
- Rutland St Residential Development (Abbey Ln.)
- Copley Commons Subdivision (Leathers Ln.)
- Tiny Home Development (Back River Rd.)
- Porchlight Dr. Subdivision (Cataract Ave.)
- Copper Drive Subdivision (New Rochester Rd.)
- Sophie Drive Subdivision (Bellamy Rd.)



Figure 11: Tiny Home Development on Back River Rd.

There were no preconstruction kickoff meetings in August.