

City of
Fitchburg



Department of
Public Works

301 Broad Street
Fitchburg, MA 01420
Phone: 978-829-1900

DPW Weekly Update August 31 - September 6, 2020

Dear Mayor, Councilors, and Colleagues;

DPW is pleased to announce this fall's paving list of projects:

Crawford Street (Ward 6) – This project will rehabilitate 1.6 miles of Crawford street from the Leominster line to the Nashua River. Crawford Street is a main arterial roadway serving the Fitchburg Airport and over 20 industrial businesses. Crawford Street also serves as a main gateway into the city with over 9,000 vehicles per day traveling between Leominster and Fitchburg but the pavement is currently in poor condition with a PCI of 53 out of 100. The project will rehabilitate the existing pavement using an innovative Cold-in-Place recycling process that will grind up 4-inches of existing pavement and inject it with a rejuvenating asphalt foam. This process is environmentally friendly and will produce a long-lasting pavement base for one of the most important economic corridors in the city. A new 1.5-inch wearing course will then be placed on top of the recycled asphalt for enhanced rideability and durability. Anticipated cost of \$570,000 will be paid through Chapter 90 funds.

Marshall Road (Ward 5) – This project will repave a 2,000-foot section of Marshall Road from Hollis Hills Farm to Fisher Road. This section of roadway is in very poor condition with a PCI of 38/100. The work will be performed by DPW forces and paid through Chapter 90 funds.

Ashby West Road (Ward 4) – This project will complete a previously started project by placing a 1.5-inch wearing course on the existing pavement from Scott Pond reservoir north to Rindge Road. The work will be performed by DPW forces and paid through Chapter 90 funds.

East Prospect Street (Ward 5) – This project will repave a 500-foot section of East Prospect Street that has severe differential settling. The work will be performed by DPW forces and paid through Chapter 90 funds.

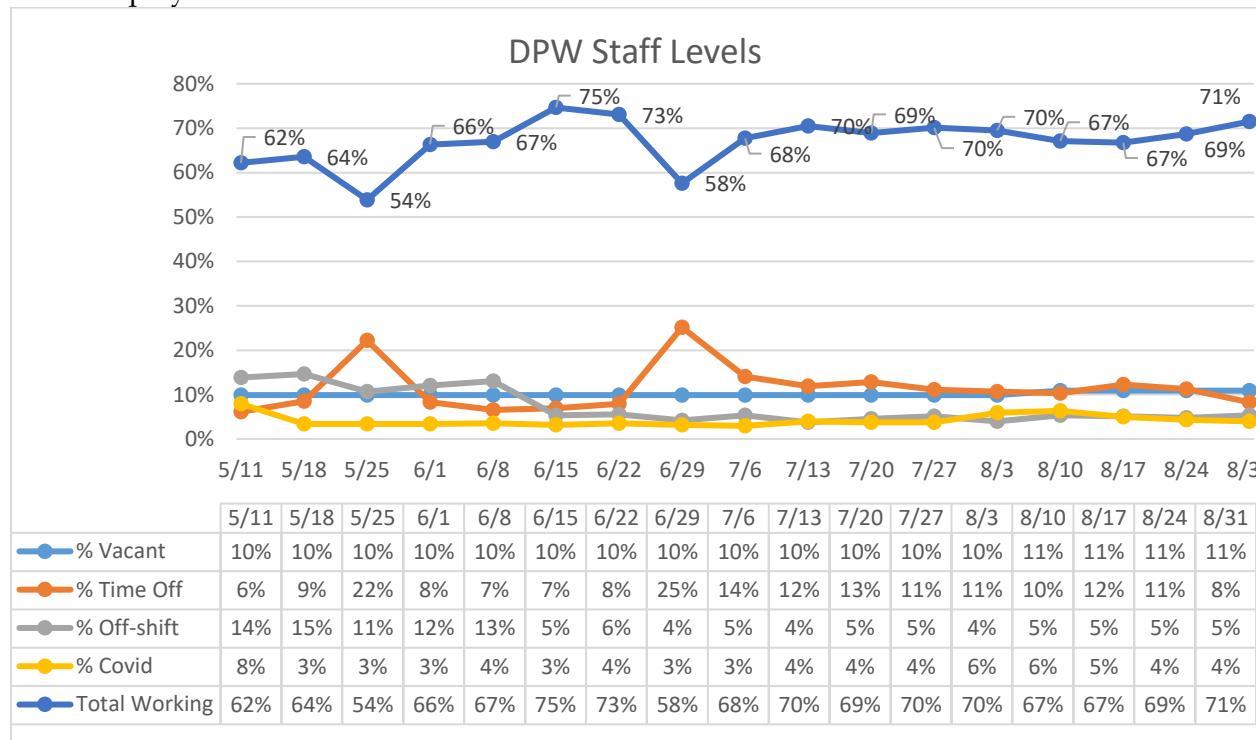
Crack Sealing (various wards) – Preventative maintenance of the city's roadways will continue with crack sealing of various streets.

Sincerely,

Nicolás H. Bosonetto, PE
City Engineer/Commissioner of Public Works

DPW STAFFING

DPW Staffing levels for the past week were at 71%. One member of the Streets Division is being sent to work in the Water Distribution Division to help cover a severe labor shortage that is affecting water issues through the city. Business Manager compiled and sent to HR a list of DPW employees that are short of time due to COVID-19 related childcare issues.



DPW continues to have a high vacancy rate (11%) with 11 open positions across multiple divisions and one Workers Comp extended absence. Nine of the eleven positions are funded in the proposed FY21 budget. The Water Meter Reader position has been re-advertised.

Position	Division	Last Date Worked	Funded in FY21 Budget	Working Days Lost
Civil Engineer	Engineering	7/22/20	Yes	33
DPW Clerk	Administration	3/13/20	Yes	128
Dispatcher	Streets	10/26/19	No	227
Working Foreman	Streets	7/7/19	Yes	307
HSMEO	Streets	9/7/18	Yes	523
Mechanic	Streets	9/7/18	Yes	523
Laborer	Parks	1/6/20	No	177
General Foreman - Collections	Wastewater	3/8/18	Yes	654
Head Water Meter Reader	Water	2/18/20	Yes	146
Water Distribution HSMEO	Water	7/19/16	Yes	1081
Water Distribution LMEO	Water	12/20/19	Yes	188
Recreation Assistant	Recreation	8/11/20	No	21
			Total Person-days lost	4008

STREETS DIVISION
Gary Withington - Superintendent

Due to continued decreased staffing levels, outstanding service requests have increased from 151 on March 1st to 368 on September 6. In the past two weeks DPW received 49 new requests and closed 131 requests. Many of the closed requests were due to automatic closing of tickets that expired. If you had a ticket closed that was not resolved, please resubmit the request. The total outstanding requests backlog is now 368, 82 less than the previous reporting period. Most outstanding requests are for potholes and storm drains.

<u>Reporting Period</u> 8/24/20 - 9/6/20		<u>Previous</u> <u>Period</u>	<u>Change</u>
Previous Request Backlog	450		
New Requests	49	46	3
Completed Requests	131	34	97
Total Request Backlog	368	450	-82
Potholes	136	130	6
Storm Drains	51	93	-42
Tree & Brush Pruning	60	61	-1
Traffic, Signals, Signs	12	12	0
Berm Repairs	18	26	-8
All other categories	91	128	-37
New Requests	49	46	3
Acknowledged	41	25	16
Completed & Closed	6	6	0
Open	43	40	3

The weather last week cooled down significantly with fall temperatures arriving. Some welcomed rain arrived during the last weekend of August to help relieve the drought conditions.

	Saturday 8/29	Sunday 8/30	Monday 8/31	Tuesday 9/1	Wednesday 9/2	Thursday 9/3	Friday 9/4
Rain (in)	0.51	0.00	0.00	0.11	0.16	0.00	0.00
Hi/Lo Temp (F)	63/75	55/72	54/72	57/75	57/70	66/81	61/79

Sources: <https://www.cocorahs.org/ViewData/ListDailyPrecipReports.aspx> (STA MA-WR-22)
<https://www.timeanddate.com/weather/@4936825/historic>

Signals, Signs & Stripes Crew

Continued painting crosswalks and school zones throughout the city.
 Painted crosswalks on Electric Avenue.
 Made and installed new sign for Pine Street.

Replaced all pedestrian push buttons and pedestrian signal heads at the intersection of North Street and Main Street. The old buttons were broken and not functioning properly and the signal heads were outdated. The new buttons are ADA compliant and provide an audio tone and verbal messages. The new pedestrian signal heads have a countdown timer to advise pedestrians on time remaining to complete the crossing. The intersection of Main Street and North Street is currently an exclusive pedestrian phase, meaning all traffic comes to a stop during the walk signal and pedestrian can cross the street in any direction, including diagonally.

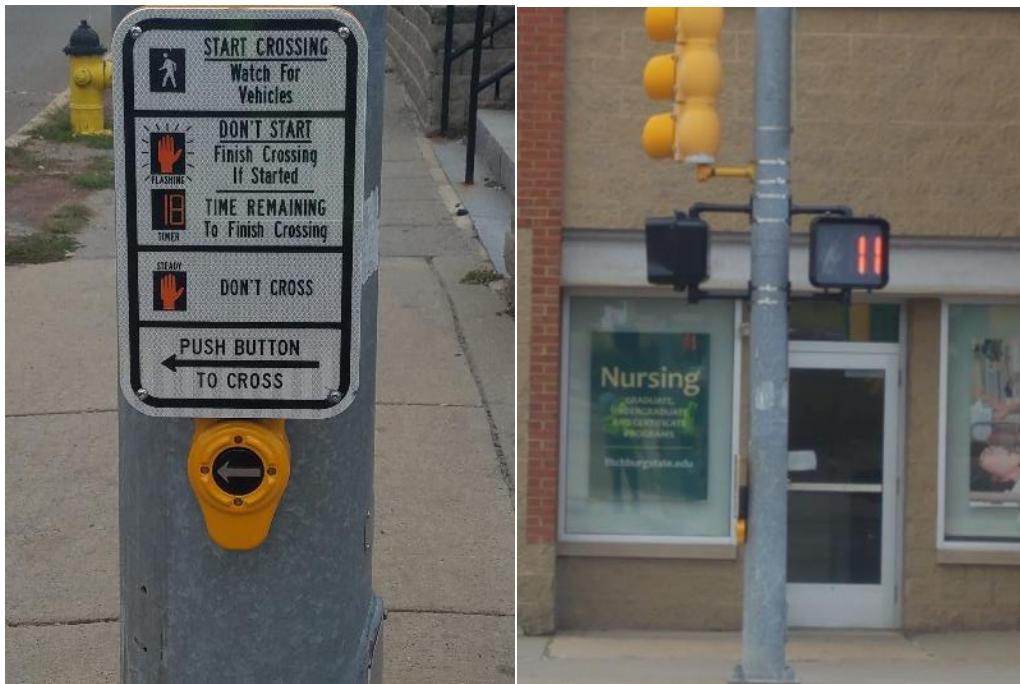


Figure 1 - New Pedestrian Buttons at Main/North St

Paving Crew

Started prepping Ashby West Road by scraping, sweeping and cutting brush along the roadway. Ashby West Road will have a 1.5-inch wearing surface placed over the existing pavement as part of the fall paving program to complete a previously started project.

Pothole patching efforts continued during the week at various locations, including the following:

- Albee Street,
- Bond Street,
- Duck Mill Road,
- George Street,
- High Rock Road,
- Legros Street,
- Maryland Street,

Installed driveway apron on Fox Street.

Supported the Water Division by paving trenches on Blossom Street, Hazel Street, Milk Street, Hurd Street and Reingold Avenue.

Supported the Wastewater Division by paving sewer trenches on Leighton Street.

Structures Crew

Repaired catch basin on Dailey Terrace.

Repaired catch basin on Hannigan Court.

Sidewalk Crew

Continued construction of sidewalk on Clarendon Street.

Completed reconstruction of sidewalk on Daniels Street.



Figure 2 – Clarendon Street and Daniels Street Sidewalk Repair

Trash & Streetsweeping & Brush

- Spot streetsweeping around the City.
- Picked up trash along Main Street.
- Picked up trash and illegal dumping:
 - River Street,
 - Rindge Road,
 - 5th Mass Pike,
 - Blossom Street.

PARKS DIVISION AND RECREATION DEPARTMENT

Nate LaRose – Recreation Director

- Sports are still allowed to permit for use of the fields. Types of use and games are regulated by the EOEEA guidance for Youth and Adult Sports Phase III Step 1.
- Concerts on the Common (at Crocker Field) Schedule:
 - A Fine Connection – September 9, 2020
 - Blue Honey – September 16, 2020
- Continued to mow parks and pick up trash

CEMETERIES DIVISION

Jaquelyn Poirier - Superintendent

The Cemetery crews continued to clean, mow, and maintain the cemetery grounds. Also maintained the walking trails around Forest Hill Cemetery. In addition to routine maintenance and administration tasks, the following were completed:

Full Interments	2
Inurnments.....	1
Up righted monuments.....	0
Uncovered/cleaned flat monuments	0
Foundation marking for monuments.....	7
Catch basin repair	0
Trimmed Trees	5
Trimmed shrubs.....	0
Meeting with Families.....	16
Payments - invoiced/processed.....	6
Family Genealogy	10

ENGINEERING DIVISION

Nicholas Erickson, P.E. – Assistant City Engineer

Engineering

- Met with MassDOT to review 25% plans for the Water Street bridge project. The project is scheduled for 2023 and will completely replace the Water Street Bridge over the RR and replace the superstructure on the Water Street Bridge over the Nashua River. MassDOT was able to incorporate most of DPW comments regarding pedestrian amenities and lighting. Further coordination between DPW and MassDOT will be required regarding utilities. A public meeting will be held shortly to discuss the project, including aesthetic treatments to the new bridge.
- Held DPW utility coordination meeting to discuss various projects. The Twin Cities Rail Trail Project was discussed and the new conceptual plans for the pedestrian bridge at First and Railroad Streets were reviewed. The conceptual plans would impact gas, water, sewer, electric and stormwater utilities with some relocations required. Comments were forwarded to MassDOT design team and requested to clarify who would pay for the utility relocations.

- Designs were finalized for the rehabilitation work on Crawford Street. Continued to coordinate between contractors.
- Attended construction status update meeting for the Narrows Road Hydrogenerator Project via conference call. This is a project to replace a pressure reducing valve along large diameter water line within the distribution system with a Hydrogenerator in order to generate renewable energy. The meeting was attended by Weston & Sampson (Engineer), Waterline Industries (Contractor), and the City (Owner).

Administrative

- Reviewed building permit for demolition of building on Wanoosnoc Rd. There is a plan in place to have a bonded contractor cut and cap the old sewer and water before demolition and to install new utility services from the sewer and water mains to the property line.
- Provided latest list of crack-seal roads to Indus for the upcoming Fall 2020 crack-sealing. To begin on Tuesday September 8th.
- Reviewed insurance claim against Associated Building Wreckers, who Community Development Department contracted to perform demolition of several buildings throughout the City. The claimant damaged her vehicle's tire while driving over road plates on Water Street.
- Reviewed Weston & Sampson invoice for the Arbor Way Retaining Wall Repair Project and approved for payment.
- Conducted records search for 14 Orchard Street per request from Andrysick Land Surveying and sent the resulting plans via email.

Street Lights

- Coordinated with Dagle Electric on various repair estimates.

Road Construction

- **Beech Street Reconstruction Project** - The City's paving contractor, PJ Albert (PJA), continued road and sidewalk reconstruction of Beech Street from Kimball Street to Pratt Street. To date, PJA has completed the following:
 - Lowered drain and sewer catch basin and manhole structures to the elevations required to allow for the proposed finished grades along the roadway.
 - Removed existing sidewalk and unsuitable curbing.
 - Pulverized existing roadway pavement and compacted to ensure it remained drivable.
 - Removed excess material and fine-graded the roadway subgrade to the proper elevations.
 - Applied liquid calcium chloride to the roadway, tilled it in to a depth of six inches, and compacted. The calcium works as a binding agent to create a very dense base, and also aids in dust control.
 - Applied calcium chloride flakes to the roadway as a top dressing/fog-seal, which further promotes moisture absorption, compaction, and controls dust.
 - Paved the binder course of pavement.
 - Began grading and paving driveway aprons.

- Installed an edge drain along the eastern edge of the roadway between House #56 and House #100 to catch all of the groundwater that bleeds out from the City's quarry property. The edge drain consists of an 8" diameter perforated plastic pipe encased in crushed stone that is tied into the drainage system. This will capture the groundwater and help prevent dangerous icing conditions that occur in this area during the winter months.
- Graded sidewalks along the western edge of the roadway and removed excess material in preparation for curb and concrete installations.
- Finished grading and paving driveway aprons.
- Pulverized existing paved aprons along the eastern edge of the roadway from Wall Street to Pratt Street and graded and compacted subgrade.
- Patched trench for edge drain with binder.
- Marked out locations for berm along the western side of the roadway and locations for aprons along the eastern side of the roadway.
- Added berm pad in areas along the eastern edge of the roadway where needed in preparation for berm installation.
- PJA's subcontractor, ROU, raised structures to finished grade (catch basin frames and grates, manhole frames and covers, water gate valve boxes, etc.).
- Installed berm along eastern edge of roadway.
- Dug out several areas behind the berm in preparation for paving an asphalt apron.
- PJA's subcontractor, MTK, installed curbing along the western edge of the roadway.

This past week PJA completed the following:

- Finished grading and compacting sidewalk subgrades.
- Paved binder course for aprons along the eastern shoulder of the road from Wall Street to Pratt Street.
- Paved binder course for a couple of parking areas along the eastern shoulder of the road near the quarry property.
- Adjusted water gate boxes to grade, replaced several that were in poor condition.
- Continued shaping and grading a new parking area at 63 Beech Street.

DPW Engineering performed daily field visits and provided daily construction administration and oversight, including inspection of ADA ramp compliance for crosswalks.

- ***Clarendon Street/Daniels Street Sidewalk Repair*** - Assisted on Clarendon St. sidewalk project with concrete quantity estimates and ADA ramp design.

Permitting

- Continued to work on refining and improving the forms and workflows within ViewPoint Cloud, the City's online permitting software, for road opening permits, trench permits, and sewer connection permits.
- Reviewed requirements for Utility Site Plans with the Building Commissioner.
- Assisted various constituents and contractors with filling out their online permits.
- Performed various application and engineering plan reviews as required.
- Added two Water Division personnel to the software.

Dig Safe

- Dig Safe/site visit to 80-86 Lunenburg St (old Battery Plant foundation) marked-out known sewer services and sewer main on Lunenburg St. and on Congress St. at corner of lot.

Site Visits & Inspections

- Conducted site visit to Elm St. for Blue Diamond excavation of sewer main.
- Conducted site visit to Lincoln at Holman St. to determine the location of 3 dangerous/dying trees. Trees were determined to be in the city owned right of way.
- Conducted site visit to 193/199 St Joseph Ave. to determine location of street line and property line between 193 and 199.
- Conducted site visit to Ashby West Road with the Superintendent of Streets to upcoming paving work.
- Conducted site visit to Airport Road with PJA to discuss upcoming paving work.

Engineering Services			
	Type	Number	Fees
PERMITS	Street Occupation Permits (No Fee)	0	n/a
	Trench Permits (\$75)	0	\$0
	Excavation/Road Opening Permits (\$250/\$350)	8	\$850 ¹
	Driveway/Curb Cut Permits (No Fee)	3	n/a
	Sign Permits (No Fee)	0	n/a
	Sewer Permits (See Ch. 149 for Fees)	0	\$0
	Application Reviews	2	n/a
	Engineering Plan Reviews	5	n/a
INSPECTIONS	Driveway Inspections	1	n/a
	Trench Inspections	1	n/a
	Site Visits/Inspections	15	n/a
	Dig-Safe requests	1	n/a
	Sewer/Drain Inspections	3	n/a
	Street Light Inspection	1	n/a
Totals		40	\$300

Notes:

¹ Includes 1 permit for DPW Water at \$0 (fee waived), 4 permits for DPW WW at \$0 each (fee waived), 2 Utili permits at \$250 each (\$100 inspection fee waived), and 1 permit for a private contractor (\$350).

WASTE WATER DIVISION
Jeff Murawski, P.E. – Deputy Commissioner of Wastewater

The WWTF processed 31.96 million gallons of sewage during the first week of August. In total, 64.1 tons of organics and 166.9 tons of solids were removed and prevented from entering the Nashua River.

Week of 8/23/2020 – 8/29/2020		
Sewage Flow	31.96	Million Gallons
Rainfall	0.55	Inches
Secondary Bypass	0.00	Million Gallons
BOD _{in} (lbs)	130,405	Pounds
BOD _{out} (lbs)	2,206	Pounds
BOD Removal (%)	98.23%	
TSS _{in} (lbs)	236,945	Pounds
TSS _{out} (lbs)	3,085	Pounds
TSS Removal (%)	98.23%	

WWTF Maintenance & Operations:

- Fournier Press No. 1, Compressor: compressor constant run condition was discovered; trouble-shot the condition, and found a faulted tank check valve; ordered a replacement valve to make the repair.
- Secondary Systems Upgrades Project: Contractor is continuing to work (running signal wires) for the Settled Effluent's 'Tate-Andale' Basket Strainer (ongoing, and scheduled to finish next week); Contractor continues to work on Aeration Tank Aerzen Blower #3 issues, and is coordinating for an Aerzen representative to come to the Plant to investigate & correct issues with the Aerzen Blower #3 cooling fan {schedule TBD}....(ongoing); Contractor will perform a "weed & feed" on project-disturbed lawn areas next week; SCADA work is scheduled to be done on Thursday next week.
- Primary Settling Basins Cross Collector Project: six (6) wall bearings are at the machine shop to be reworked (2nd set); waiting for reworked sprockets from the manufacturer.
- Performed Groundskeeping, at East & West Plants.
- Preventative Maintenance rounds were performed this week and last week, by available maintenance staff, using "Staffing Minimization" hours (68.5 person-hours in total, this week and last week).

Work Order Report: August 29th - September 4th, 2020					
Demand Statistics		PM Statistics		Averages	
Rejected Work Orders	0	Rejected Work Orders	0	% Total Work Orders Completed On Time	100.00%
Demand Work Orders	0	PM Work Orders	20	Avg. Days Late / All Work Orders	0
Demand Work Orders Completed Late	0	PM Work Orders Completed Late	0	Avg. Days to Complete / All Work Orders	17.5
Demand Work Orders Completed On Time	0	PM Work Orders Completed On Time	20	Total Maintenance Man Hours	68.5
% Demand Work Orders Completed On Time	0.00%	% PM Work Orders Completed On Time	100.00%		
Avg. Days Late / Demand Work Order	0	Avg. Days Late / PM Work Order	0		
Avg. Days to Complete / Demand Work Order	0	Avg. Days to Complete / PM Work Order	17.5		

- Effluent Total Phosphorus numbers have begun to go down.
- Tested all emergency showers.
- Preventative Maintenance checks on Gravity Belt Thickeners.
- Cleaned the Gravity Thickener.
- Cleaned the Return Activated Sludge Pumps.
- Chemical deliveries:
 - Sodium Hypochlorite (Disinfectant and Odor Neutralizing Chemical); and
 - Bulk Polymer, C321 (Sludge Dewatering Polymer Chemical).

Administration:

- Daily (or more frequent, as needed) conducting video calls with Wastewater Management Team.
- Participated in 'Utility Coordination Meeting', for the 'Rail Trail Project'.
- Sewer Billing Abatements.
- Coordinated with Purchasing Department, for Wastewater procurement needs.
- Submitted electronic (via email) and hard copy (via USPS) submissions of the Consent Decree Semi-Annual Report, to MassDEP and USEPA.

Sewer System

- Successful in abandoning an old manhole on Shea Street at Gloria Avenue that was letting significant amounts of infiltration into sanitary sewer system. Filled the abandoned manhole with crushed stone. Saw-cut pavement around manhole, backfilled, compacted and paved.
- Saw cut sidewalk for pipe repair on Blossom Street.
- Installed butyl mastic to silence a rattling cover at #172/#174 Townsend Street and at #21 Theresa Street.
- Tried to repair leaking fittings at Airport forcemain sewer manhole again. Couplings wouldn't work, so we just replaced with a gasket/sealed frame and cover for now. Sewer Crew will repair in a couple weeks.
- Performed oil change and tires rotation on Sewer System Manager's truck, and put fittings on jet heads. Also went to get an inspection on the new Jet/Vac Truck, but the VIN is wrong on the registration and does not match the truck.
- CCTV'd a City sewer line on Dwight Street. Homeowner's sewer service lateral at the connection to the City sewer is packed with roots. Also marked out location where a new manhole will go.
- CCTV'd sewer on Franklin Road where homeowner was backing up: connection to main line appeared to be fine; Utilil had Croteau Plumbing respond to perform a CCTV push camera of the sewer service; marked out lateral location, appeared that only main gas line crossed lateral, not gas service; discovered a catch basin tied into the sanitary sewer at #466 Franklin Rd.
- McDermott fixed new Jet/Vac Truck.
- Checked known problem areas: no issues were discovered.
- ADS ECHO level sensor picked up a surcharging manhole on Jackson Ave., which is a known problem area. Dispatched the Jet/Vac Truck to clear the blockage. Poor construction methods/sags are the main issues in this area.
- Compiled a yearly CSO summary for a Boston University student studying connections between COVID and CSO releases.
- Filed three (3) trench permits with DPW Engineering.

- Inspected Elm Street Sewer Replacement Project. Sewer bypass is almost set up and complete. Excavation is scheduled to start the week of September 14.
- Consolidated 8 keys into 1 key at various padlock-secured locations that the Sewer Collection Team routinely accesses.
- Continued updating the “Master I/I and ID Spreadsheet”. This is a list of all known private infiltration and inflow sources to the sanitary system that have been discovered by City personnel. It also includes a list of all known sanitary connections to the drainage system (which are “illicit discharge” connections).

DPW ADMINISTRATION

Courtney Lamoureux – Business Manager

- Financial:
 - Reviewed all DPW Department accounts for accuracy and monitored budgets.
 - Reviewed budgeted staffing levels for DPW with City Auditor’s Office.
 - Reconciled CDBG projects and available funds with Community Development Department.
- Administrative:
 - Submitted DPW Department absences due to COVID-19 reasons to the human resources department.
 - Compiled the DPW Department proposed staffing accommodations for individuals with childcare/eldercare issues with the upcoming start of the school year and submitted the HR for review.
 - Discussion with the Fitchburg Greenway Committee regarding a new grant they submitted and several procurement needs.
 - Reviewed the specs received from the City’s consultant for the Broad St roof replacement.
 - All DPW Divisions are working on calculating and compiling Local 39 licenses for the upcoming contractual stipend payment.

Invoicing, Warrants, and Payrolls

	Invoices		Deposits		Billings	Payroll
Division	Number	Total \$	Number	Total \$		
Streets/Admin/Engineering	36	\$ 11,311	*Note 1			
Cemeteries	5	\$ 547				
Parks	3	\$ 1,091				
Recreation	2	\$ 6,438				
Water Supply	22	\$ 63,367				
Waste Water	26	\$ 56,234	*Note 2	\$ 33,115		
			*Note 3			
Total	94	\$ 138,989		\$ 33,115	\$ -	\$ -
*1 - Engineering Permits & Performance Bonds						
*2 - Septage at East Plant (Gallons)		389,588				