

The seal of the Town of Hanover is a circular emblem. It features a central figure, possibly a Native American, holding a bow and arrow. The text "TOWN OF HANOVER" is arched across the top, and "INCORPORATED JUNE 14, 1727" is arched across the bottom. The seal is rendered in a light gray, semi-transparent style.

**Town of Hanover  
Department of Public Works  
FY-23 Capital Improvement Plan**

**November 10, 2021**

# Facility Projects

- Fire HQ Improvements - \$100,000
- Library HVAC Improvements - \$45,000
- Children's Library Entrance - \$40,000
- Library Staff Wheelchair Lift - \$50,000
- Police Station HVAC Improvements - \$195,000
- Forge Pond Park Fence Extensions - \$25,000
- Digitization of Records at Sylvester - \$40,000
- Town Hall Improvements - \$30,000
- Stetson House Improvements - \$30,000

# Field Operations Projects

- Chapter 90 Acceptance - \$519,000 (approximate)
- Pavement Management - \$400,000
- Walnut Hill Improvements - \$150,000
- Broadway/Elm Street Intersection Improvements - \$500,000
- Rte 139/Silver Street/Main Street Intersection (design) - \$250,000
- Large Dump Truck/Sander/Plow - \$220,000
- 4x4 Pickup Truck with Plow - \$45,000
- One Ton Dump Truck with Plow – \$70,000
- Robotic Mower - \$75,000
- Wheel Loader (used) - \$50,000
- Trash Trailer - \$70,000
- Compactor Upgrades - \$500,000
- Transfer Station Fence Upgrades - \$30,000

# Water Projects

- Backhoe - \$180,000
- PFAS Upgrades – Pond Street - \$5 million
- 4x4 Pickup Truck with Plow - \$45,000
- King Street Water Main (design) – \$50,000
- Union Street Tank Rehabilitation - \$2 million
- Beal WTP Filter Media Replacement - \$80,000

# Fire Headquarters Interior Improvements

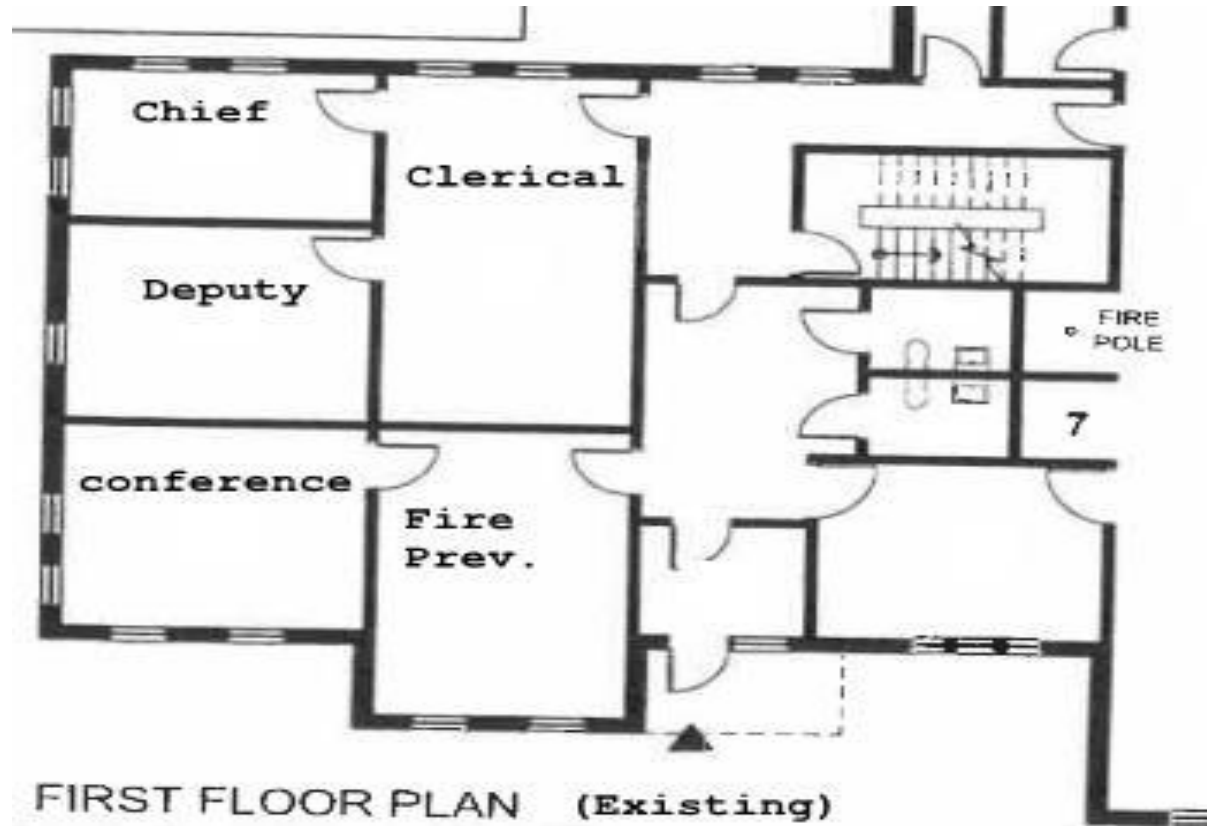
FY-23 Request Amount: \$100K

- This proposal will reconfigure the Administrative Area to improve operational efficiency, staff comfort, and add an additional private office to the area.
- Finishes are dated and showing signs of age/need for attention
- Current layout is congested and could be streamlined



# Fire Headquarters Interior Improvements

FY-23 Request Amount: \$100K



# Fire Headquarters Interior Improvements

FY-23 Request Amount: \$100K



# Library HVAC Upgrades

FY-23 Request Amount: \$45K

- This proposal will provide for updates to the existing HVAC system at the John Curtis Library
- Current system is 20-years-old and has required some recent repairs
- This project aims to modernize components and make improvements for long-term reliability & operation





# Children's Library Entrance

FY-23 Request Amount: \$40K

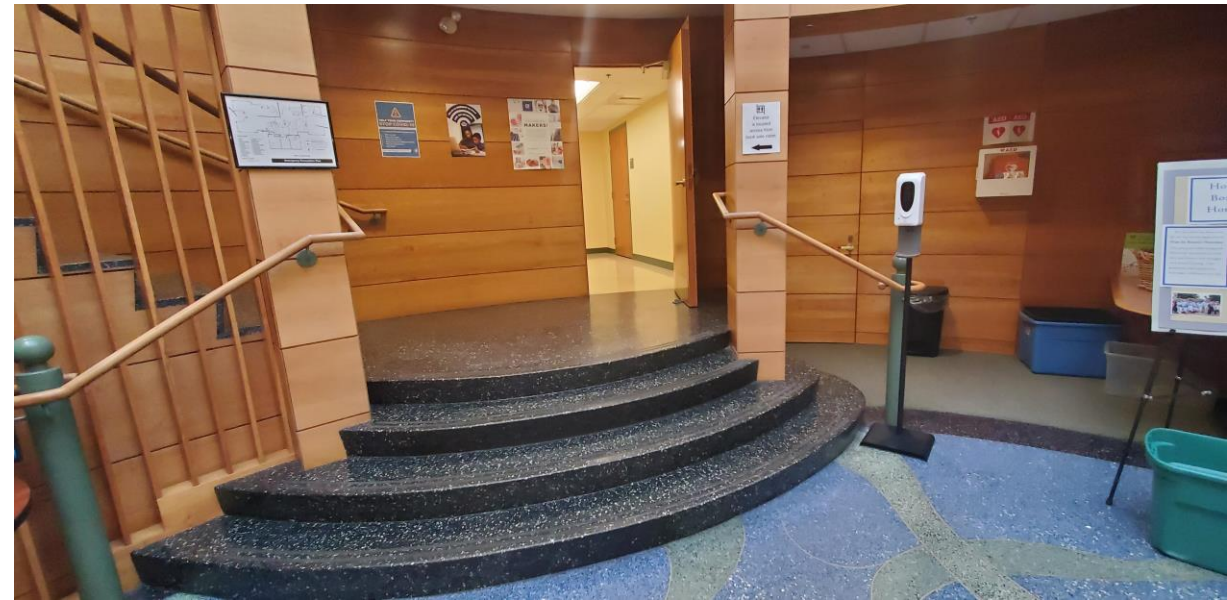
- This proposal will provide a glass entryway/partition to the Children's Library area
- Improvements will increase security and safety for users of the children's area by creating a physical separation from the main library



# Library – Wheelchair Lift to Staff Corridor

FY-23 Request Amount: \$50K

- This proposal will provide for installation of a handicap accessible lift to the staff corridor area in the lower foyer of the John Curtis Library.
- The existing elevator services only the 1<sup>st</sup> and 2<sup>nd</sup> floors
- Proposal will allow for access to entire staff corridor, including a staff bathroom, break room, and storage areas



# Library – Wheelchair Lift to Staff Corridor

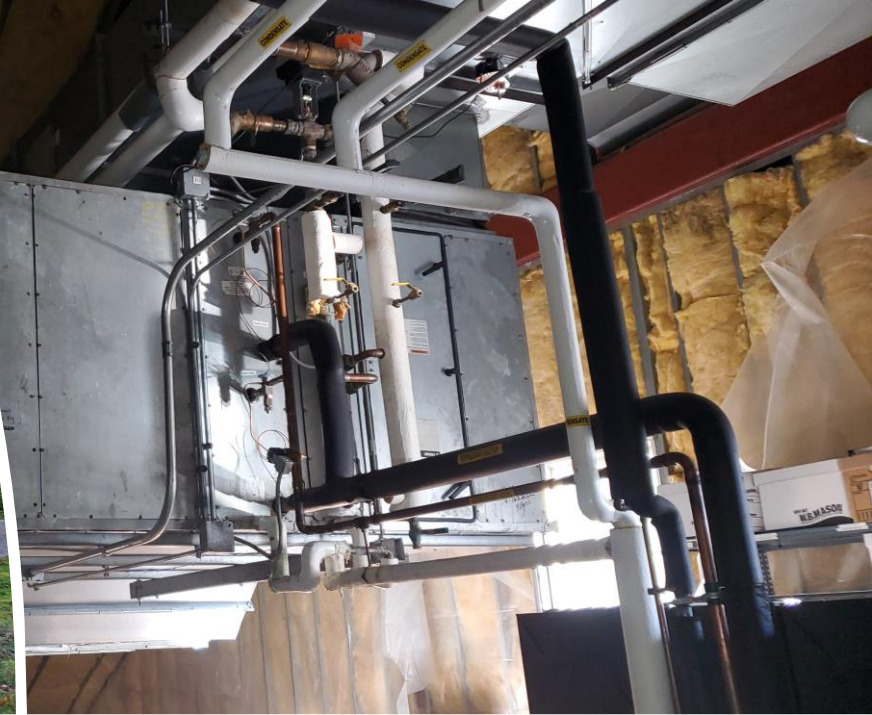
FY-23 Requested Amount: \$50K



# Police Station – HVAC Improvements

FY-23 Request Amount: \$195K

- This proposal will provide for updates to the existing HVAC system at the Police Station
- Current system components are 25-30 years old
- This project aims to modernize components and make improvements for long-term reliability & operation
- Update Building Management System to allow for improved system monitoring and control



# Forge Pond Park Fence Extensions

FY-23 Request Amount: \$25K

- This proposal will provide for fence extensions or safety netting at the Forge Pond Park Softball Fields
- The configuration of the existing backstops allows for foul balls to come over the backstops into adjacent fields or the existing spectator bench area
- Future Project to add additional netting between fields



# Digitization of Records Stored at Sylvester School

FY-23 Request Amount: \$40K

- This proposal will provide for services to digitize records currently being stored in a unused rooms at the Sylvester School
- Digitization will ensure the long-term availability and preservation of the documents
- Town evaluation of record keeping/ongoing business practices should be evaluated



# Digitization of Records Stored at Sylvester School

FY-23 Request Amount: \$40K



# Town Hall Site Improvements

FY-23 Request Amount: \$30K

- Continue program to address needs at the Town Hall to improve aesthetics, operational efficiency, and maintain building character
- Exterior trim on the rear half of the building is in need of repairs and/or replacement





# Town Hall Site Improvements

FY-23 Request Amount: \$30K



# Town Hall Site Improvements



# Stetson House Improvements

FY-23 Request Amount: \$30K

- This project will provide for contracted services to paint the Stetson House and make repairs to minor trim issues
- Project goal is to be proactive in maintaining paint to help reduce the necessity of further/more extensive repairs at a future time



# Stetson House Improvements

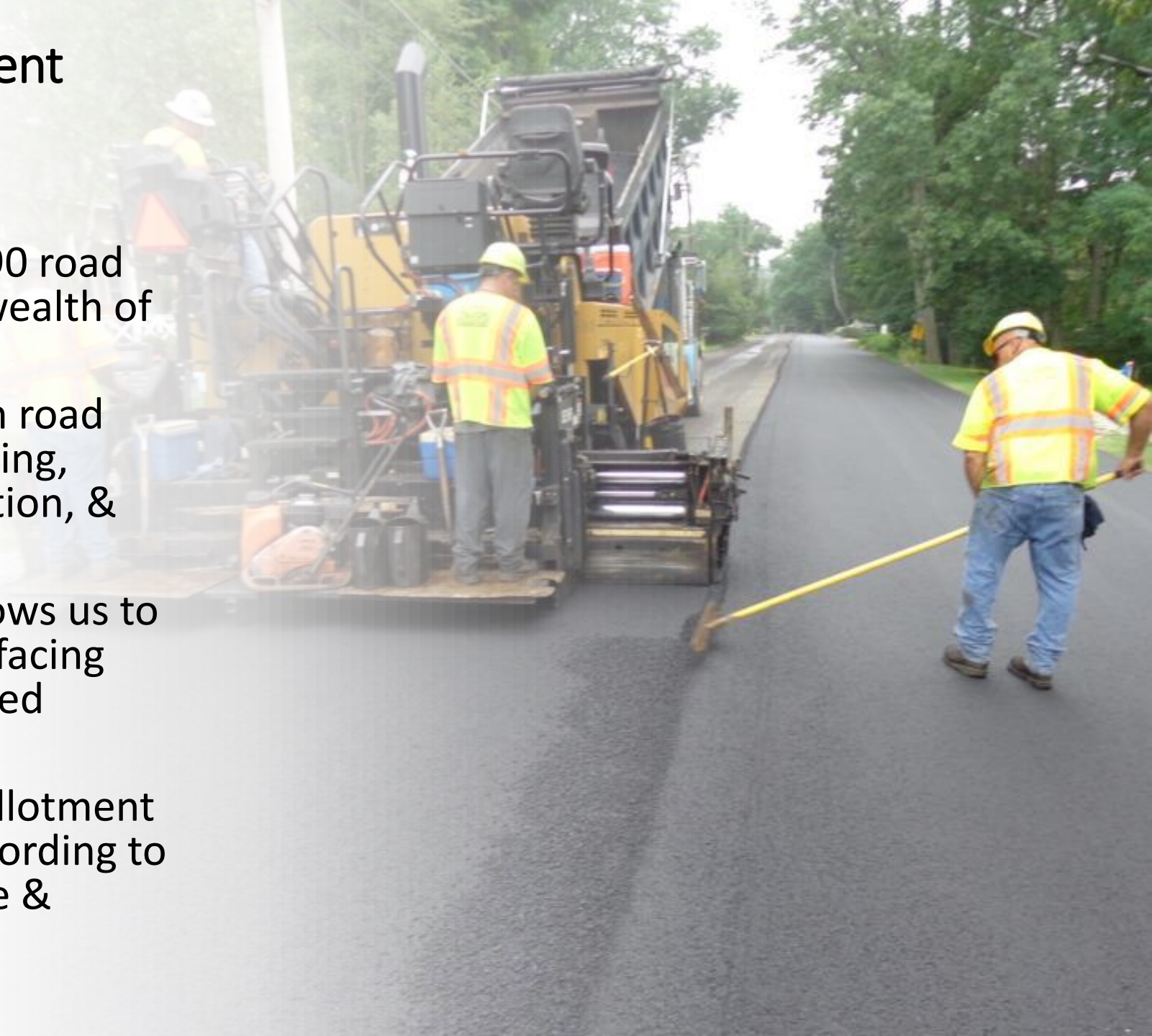
FY-23 Request Amount: \$30K



# Chapter 90 Road Improvement Projects

FY-23 Request Amount: \$519K

- This project will accept Chapter 90 road funds provided by the Commonwealth of Massachusetts
- This funding allows us to perform road maintenance including crack sealing, engineering, pavement preservation, & road overlays throughout Town.
- Historically, this funding level allows us to perform 1-mile of roadway resurfacing and complete a number of planned cracksealing projects
- The state's annual \$200 million allotment is distributed to Towns/Cities according to a formula based on Road Mileage & Employment Statistics.



# Pavement Management

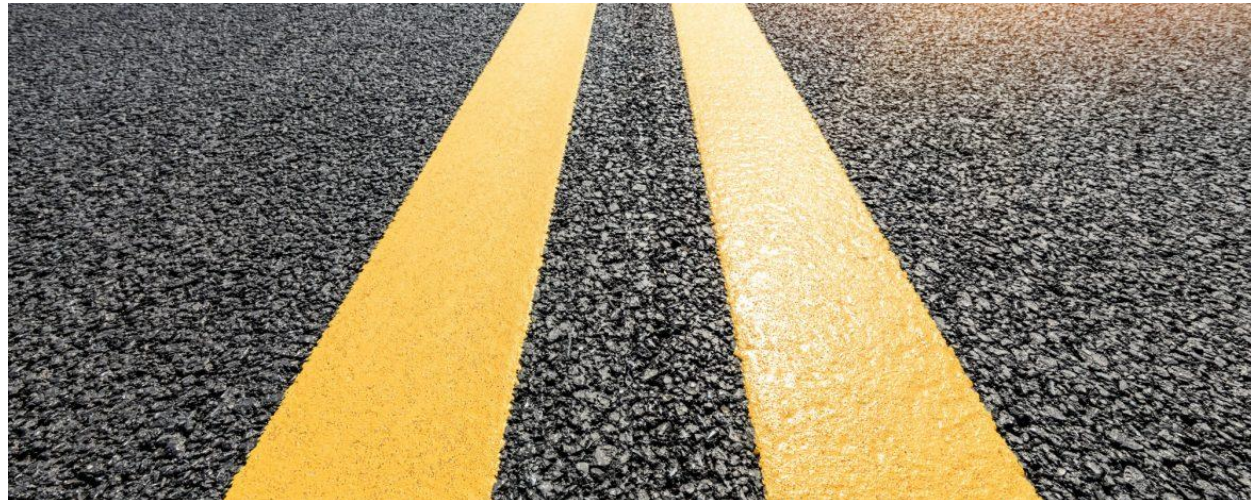
FY-23 Request Amount: \$400K

- DPW is tasked with maintaining nearly 90 miles of public roadways
- Our recent funding model/history only allots Chapter 90 funding for all Town-wide roadway maintenance, rehabilitation, reconstruction activities
  - On average, this funding allows for us to resurface approximately 1 mile of roadway per year
  - At this rate, we will see the condition of our roadways deteriorate over time
- Spending on curbing, sidewalk, intersection/corridor improvements have no established funding source. Cannot be supported by Chapter 90 programming

# Pavement Management

FY-23 Request Amount: \$400K

- Currently working with a firm to develop a more formal Pavement Management Program and Capital Improvement Plan
  - A major goal of the report is to help community understand the current condition of our roadways and funding levels necessary to maintain the current roadway condition
  - Early projections show that we should be budgeting \$1-2 million annually on **roadway** preservation, maintenance, & construction to maintain our current roadway network condition.
  - [Preliminary Pavement Condition Map](#) identifies a current Town-wide Pavement Condition Index of 82.97



# Pavement Management

FY-23 Request Amount: \$400K

- In order to stretch our dollar and extend the lifetime of a roadway from 20 to closer to 30 years, we must restart the use of alternative maintenance & preservation techniques
- Chipseal, Rubber Chipseal, Bonded Wearing Course, Microsurfacing, Etc.
  - Proven surface treatment technologies that have been used by other communities





# Pavement Management

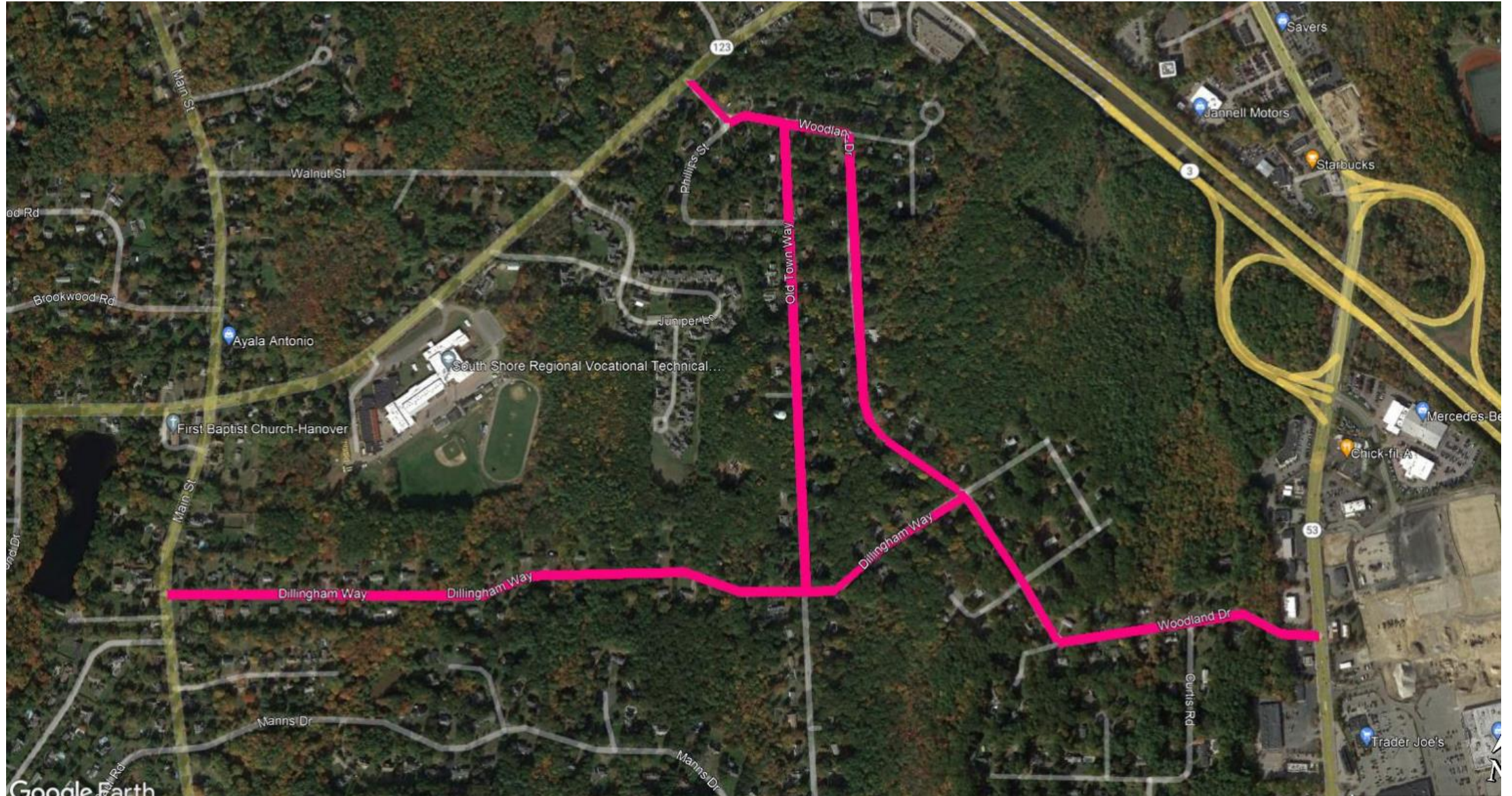
FY-23 Request Amount: \$400K

- Due to change in practice and the appearance of the finished product Public Education/Outreach will be necessary for success of the program
- Additoinal support will be required from Selectboard, Advisory Committee, Town Administration



# Walnut Hill Improvements

FY-23 Request Amount: \$150K



# Walnut Hill Improvements

FY-23 Request Amount: \$150K

- Neighborhood proximate to new mall development, Route 53, Route 123, and Main Street
- Engaged neighborhood group concerned with increased traffic volumes and speeds
- Funding will allow for engineering and implementation of some traffic calming improvements and devices
- Sidewalks will not be supported by this proposal – cost of \$200/LF only allows for 750 feet of sidewalk



# Broadway/Elm Street Intersection Improvements

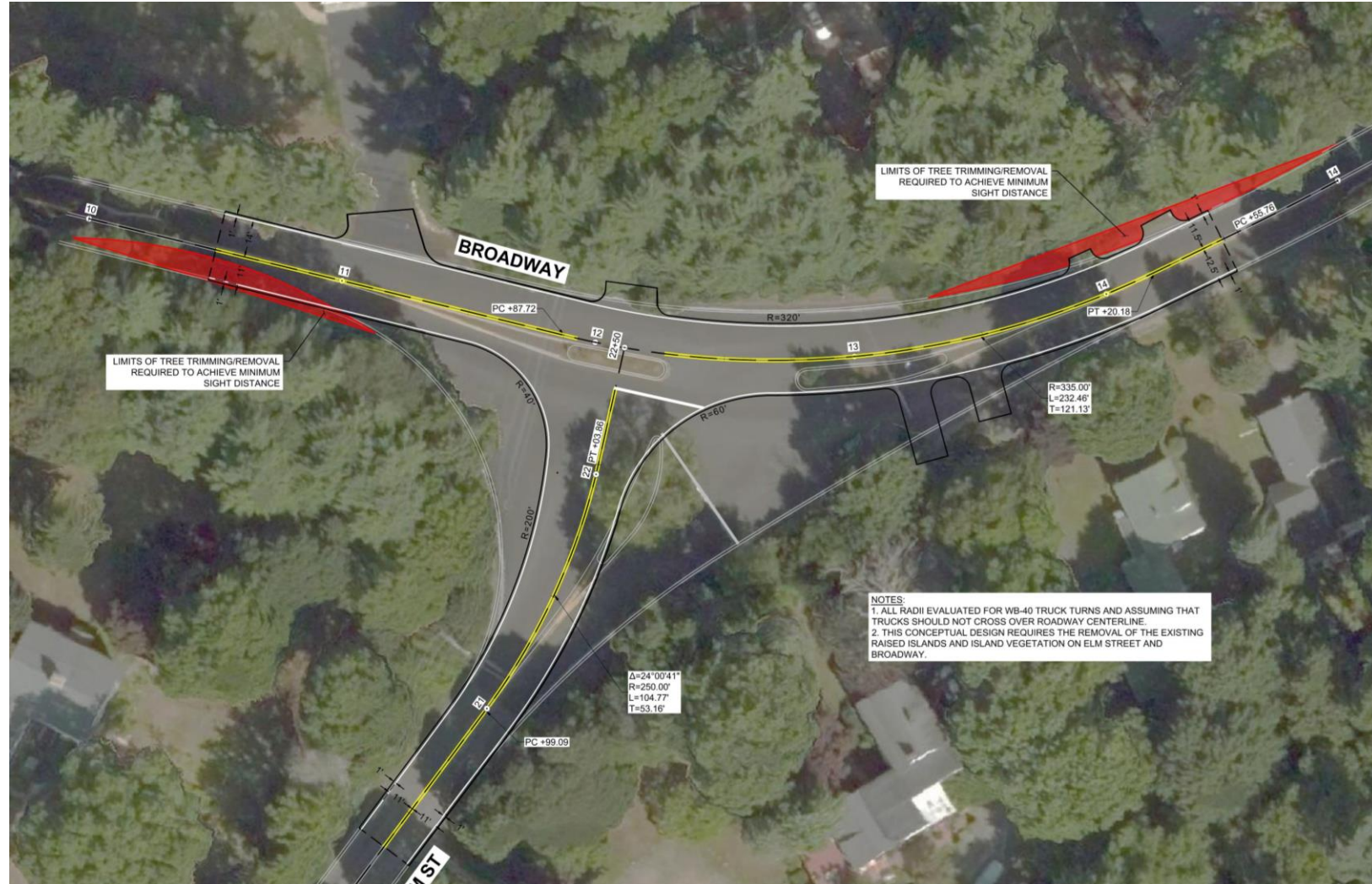
FY-23 Request Amount: \$500K



# Broadway/Elm Street Intersection Improvements

FY-23 Request Amount: \$500K

- Heavily travelled intersection near Route 53 and newly opened Previte's Marketplace with substantial truck traffic
- Expansive intersection lacks traditional design, movements are often confusing, and sightlines are difficult
- Funding will allow for implementation of improvements currently under design



# Route 139/Silver Street/Main Street Intersection

FY-23 Request Amount: \$250K

- This project will allot funding for the Engineering Design of improvements to the intersections of Route 139, Silver Street, Main Street and Center Street
- We are currently soliciting formal proposals for Design Services



# Large Dump Truck, Sander & Plow Replacement

FY-23 Request Amount: \$220K

- This project will purchase and equip a large (37,000 GVW) dump truck, sander, & plow to replace an existing 2001 (21-year-old) vehicle that has reached the end of its useful life.
  - The existing truck has severe corrosion to the body, frame, and firewall
  - At this time is no longer road worthy and has been deemed unsafe for over-the-road travel
- This class of vehicle is used extensively throughout the year by the Department for tasks such as hauling material to and from job sites, supporting water system improvements and repairs, and serves as a frontline vehicle for our snow & ice removal operations.
- Vehicle safety and driver comfort are important during severe weather events when operators are often being asked to operate in inclement weather for extended periods of time.



# Large Dump Truck, Sander & Plow Replacement

FY-23 Request Amount:  
\$220K







# Large Dump Truck, Sander & Plow Replacement

FY-23 Request Amount:  
\$220K



# 4x4 Pickup Replacement

FY-23 Request Amount: \$45K

- This project will purchase and equip a frontline 4x4 Pickup for the Highway Foreman
  - The existing 2015 (7-year-old, 62K Miles) truck to be cycled to the DPW Mechanic to replace a 2008 (14-year-old, 135K Mile) truck that is nearing the end of its useful life.
- The new vehicle will be used by the Highway Foreman to perform daily tasks and respond to off-hour and emergency calls, including weather and special Town events. This is his mobile office and success of our operation is dependent upon vehicle reliability.
- The “downcycled” vehicle will be used by the Mechanic to perform road service calls, deliver and pickup supplies and parts, and provide fuel to off-site Town Equipment and Facilities, such as the Transfer Station.



# 4x4 Pickup Replacement

FY-23 Request Amount: \$45K



# One-Ton Dump Truck Replacement

FY-23 Request Amount: \$70K

- This project will purchase and equip a frontline one-ton dump truck for the Field Operations Group to replace a 2008 (14-year-old, 80K Mile) truck that is nearing the end of its useful service life
- This vehicle is used by crews for daily tasks to maintain roadways & parks. Arguably, the most important use of this vehicle is to serve as a snow plow during winter weather events.
- The existing vehicle that is proposed to be replaced is beginning to show signs of aging and has required some recent repairs
  - Corrosion to the body and frame is beginning to show
  - Recent hydraulic repairs
  - Recent exhaust repairs



# One-Ton Dump Truck Replacement

FY-23 Request Amount: \$70K



# Robotic Mower

FY-23 Request Amount: \$75K (postponed)

- Currently staffing is stretched thin on field maintenance at all Town Parks, Facilities, and Schools
  - Over 90 acres of mowable surfaces
  - Detail work such as weed wacking, trimming, etc suffers
- Demands from recreation, schools, special events, users is higher than ever
  - Sports seasons are longer
- Robotic/Autonomous mowers will allow existing staff to better manage time and focus on detail work
  - <https://www.youtube.com/watch?v=vUyyNiTnL90&t=50s>
- Unfortunately, technology and availability of equipment is not quite market ready for commercial users and will be postponed

# Wheel Loader Replacement

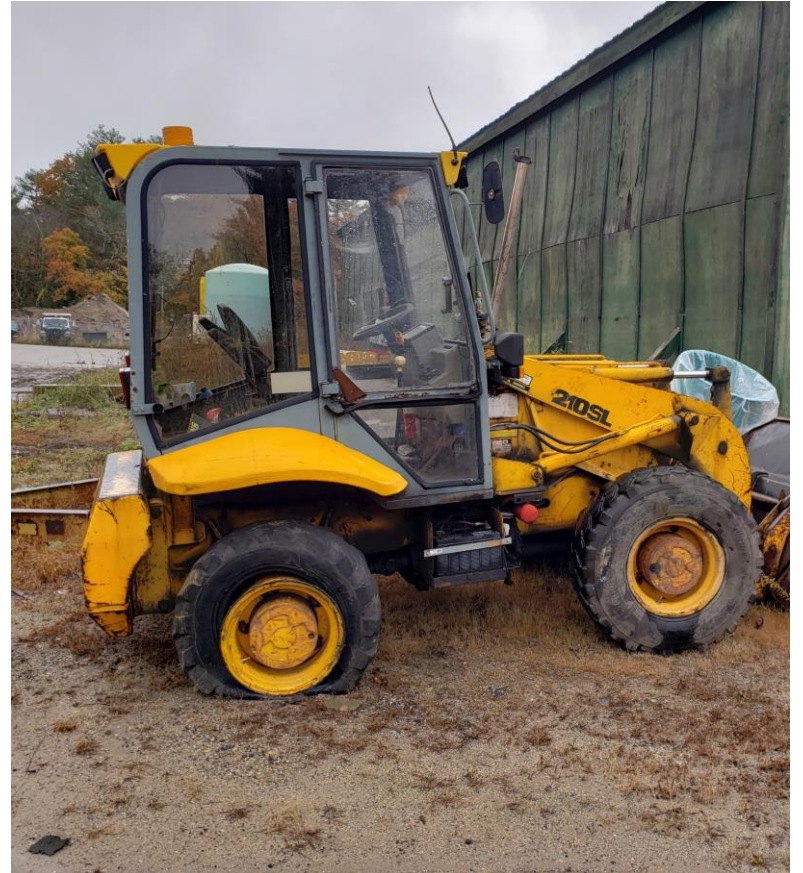
FY-23 Request Amount: \$50K

- This project will purchase and equip a used wheel loader to replace an existing 1995 (27-year-old) machine that is no longer operable.
  - Transmission damaged, unknown hours
  - Repairs to existing machine are not fiscally responsible due to current age and overall condition of the equipment
- This equipment is a specialty vehicle used mainly at the Transfer Station due to its small footprint. This loader loads resident materials and moves recycling containers at the Transfer Station to keep recycling service lines operational.
  - Crews are currently using a backhoe at the station to perform this work, but visibility is decreased, machine is oversized for the task, and with public usage of the station operations and maneuvers are less safe



# Wheel Loader Replacement

FY-23 Request Amount: \$50K





# Trash Trailer Purchase

FY-23 Request Amount: \$70K

- This project will allocate funding to purchase a new trailer to handle municipal solid waste from the Transfer Station
  - These trailers service the main disposal area at the Transfer Station and are necessary for continued operation at the Station
- We currently operate 4 similar trailers that are 14-years-old
  - One fully-operational weekend will fill all 4 existing trailers
  - Existing trailers are starting to age out and all four will likely fail at the same time
  - This purchase will allow us to continue service if trailers are rotated in and out of service to make repairs
- Replacement of four existing trailers will become a cyclical program



# Trash Trailer Purchase

FY-23 Request Amount: \$70K



# Transfer Station Main Compactor Upgrades

FY-23 Request Amount: \$500K

- This project will institute improvements to the main ram compactor at the Transfer Station to increase the ability to load our trailers
  - Currently we are loading our trailers with approximately 20-tons of material. This upgrade will have the goal of meeting the industry standard of 30-tons of material
- Additionally, this upgrade will allow us to expand the possibility of shipping our material out of state by upgrading our compactor to have the ability to load rail car shipping containers



# Transfer Station Main Compactor Upgrades

FY-23 Request Amount: \$500K



# Transfer Station Fencing/Railing Improvements

FY-23 Request Amount: \$30K

- This project will allow the DPW to contract fencing and railing upgrades at the Transfer Station that have been identified as needing attention by recent Transfer Station Inspections.
- These improvements are in an effort to meet safety standards/expectations as well as improve aesthetics at the station
- Existing railings at the recycling area are showing age and in need of attention/replacement. Construction/Demolition disposal area has no railings.
- Main gate and fencing around main disposal area are in need of repairs/attention.



# Water – Backhoe Replacement

FY-23 Request Amount: \$180K

- This project will purchase and equip a backhoe for use by the Department of Public Works.
- We have a current daily demand for two front-line backhoes and one “second-tier” backhoe
  - This type of equipment is widely used on a daily basis by the Department for water infrastructure repairs/maintenance, roadway & sidewalk excavations, tree work, cemetery operations, and storm event responses
- This purchase will cycle a 2000 (22-year-old) backhoe that is approaching the end of its useful life out of service and replace it with a 2005 model that will be moved to our “second-tier” service line.
- The existing backhoe that will be cycled out of service has substantial corrosion to the body and has been repaired a number of times to keep it operable.
  - Due to current condition and the integrity of these repairs/components, this vehicle is being primarily used only at the Transfer Station so as not to engage in over-the-road travel or work



# Water – Backhoe Replacement

FY-23 Request Amount: \$180K



# Water – Backhoe Replacement

FY-23 Request Amount: \$180K





# PFAS Upgrades – Pond Street

FY-23 Request Amount: \$5 Mil

- This project will allot funding to perform upgrades to the Pond Street Water Treatment Plant to meet new drinking water regulations established by MassDEP
  - MassDEP recently (10/2/20) promulgated a new drinking water regulation setting the maximum contaminant level (MCL) of 20 nanograms per liter for the sum of six perfluoroalkyl and polyfluoroalkyl substances (PFAS6)
  - This past summer, we found that water from our Pond Street Treatment Plant is in excess of this new drinking water regulation
    - In response to these results, we currently offer public spigots at our Broadway Water Treatment Plant for residential use
    - In October 2021, we began a pilot study at Pond Street using Granular Activated Carbon (GAC) material in one of our filters
    - Preliminary results of GAC are promising – waiting for additional test results that may make this request unnecessary.

# Water - 4x4 Pickup Replacement

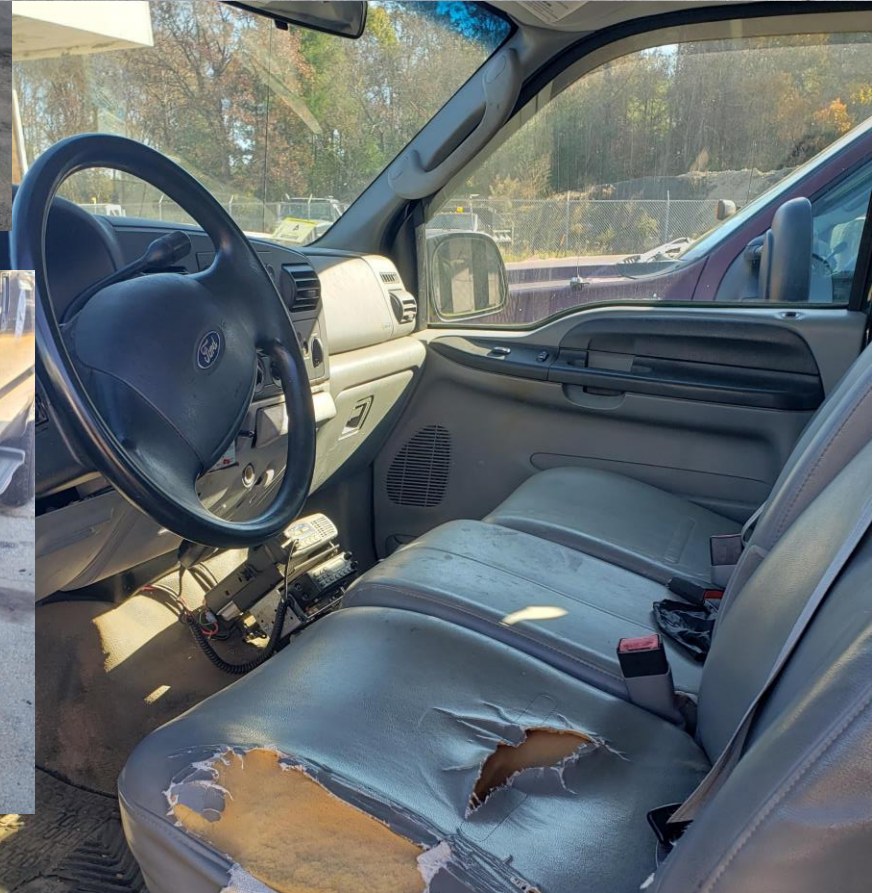
FY-23 Request Amount: \$45K

- This project will purchase and equip a frontline 4x4 Pickup for the Deputy Superintendent of Public Works Water Operations
  - The existing 2015 (7-year-old, 62K Miles) truck to be cycled to the Water Treatment Division to replace a 2008 (14-year-old, 155K Mile) vehicle that has reached the end of its useful life.
- The new vehicle will be used by the Deputy Superintendent to perform daily tasks and respond to off-hour and emergency calls related to the DPW's Water Distribution and Treatment Operations.
- The “downcycled” vehicle is used daily by water treatment staff to access the Town's treatment plants, storage tanks, and wells as well as provide water quality sampling and monitoring across Town.
- Both vehicles are necessary to keep the plants, wells, and tanks clear & accessible during snow and other severe weather events.



# Water - 4x4 Pickup Replacement

FY-23 Request Amount: \$45K



# Water Main Replacement – King Street

FY-23 Request Amount: \$50K

- This project will allow for engineering & preparation of procurement documents for a Water Main Replacement Project on a portion of King Street from Briarwood Drive to the Hanson line.
- A recent Capital Improvement Plan identified approximately 2,000 linear feet of 8” cast iron water main that would improve water quality on King Street and associated side streets
  - We have a history of reported water quality issues in this area likely due to elevated levels of iron and manganese that tend to accumulate in unlined cast iron mains – particularly those at the far extents of a distribution system
  - Due to the accumulation of these minerals, we have to do additional monitoring in this area of Town to ensure an adequate chlorine residual



# Water Storage Tank Replacement/Repainting

FY-23 Request Amount: \$2 Million

- This project will allot funding for an exterior renovation of the 2-million gallon water storage tank on Constitution Way
- The existing tank's protective paint coating is deteriorating, pitting, and blistering. With further deterioration of the protective paint coating, there are concerns over future deterioration of the tank that will require more extensive repairs at a future time
- During an outside firm's inspection of the tank in 2019, recommendations for a full renovation of the tank were made
  - The 2019 report recommended a blast cleaning to remove pitted and damaged paint and application of paint on the exterior of the tank
  - Interior recommendations from the 2019 report include a full blast cleaning and recoating of the interior roof.



# Filter Media Replacement

FY-23 Request Amount: \$80K

- This project will allow for replacement of the existing filter media at the Beal Water Treatment Plant
- The existing media was last replaced in Early 2011. Our historic & recommended life expectancy for traditional filter media is 10 years
- Media breaks down over time and must be periodically replaced to maintain system performance, maintain contaminant removal rates, and maintain backwash intervals



# Questions?

