Capital Stewardship Plan – Public Works Department
FY Years 2019 to 2028
Plan Summary

Roadway & Drainage Improvements Overview – Summary of Improvements in FY 2017/FY 2018

Funds were approved in the FY 2017 budget to commence preliminary design and construction documents for the first phase improvements to Scott Dyer Road and Hill Way. Work on "Phase 1" got underway in August 2017. The work consisted primarily of the full-depth re-construction of Hill Way, which included the replacement of the water main, a new sub-surface drainage system and new sidewalks. On Scott Dyer Road a problematic segment of the sanitary sewer system between Farm Hill Road and Longfellow Drive was replaced along with the sidewalk in the same area. Other enhancements included curbing, drainage and sidewalk improvements. Even though the contractor made good progress, we were unable to put the surface layer down on Hill Way this Fall, so that has been scheduled to be placed in May of 2018, when other minor remaining items will be completed.

Since much of our financial resources were programmed for Hill Way and Scott Dyer Road, a limited amount of overlays were done during the 2017 construction season. The Student Parking lot at the High School was re-paved. This lot is also used by Community Services and had not been paved since the school was completed 1971. Other roads receiving overlays were Windmill Lane, Harrison Road, Waterhouse Road and Bradford Road. If funds permit, it is planned to overlay Beach Bluff Terrace, Cedar Ledge Road, Sweet Fern Road, Gladys Road, Bayberry Lane and Hampton Road before the end of FY 2018.

The storm drain that runs between High Bluff Road and Wood Road was rehabilitated in October of 2017. The corrugated metal drain pipe had a history of problems and so the pipe was replaced with a high density polyethylene pipe (HDPE). The pipe traversed three different properties requiring us to work closely with the affected property owners. One segment of the pipe was pulled or "slip-lined" through the existing pipe which was much less invasive to two of the properties.

We are continuing our efforts to work on a resolution of some historical drainage issues at the end of Hemlock Hill Road. We have been working closely with a property owner on Oakhurst Road who owns the property where most of the surface drainage terminates, but there has been no resolution at the time of this submittal.

We are also working on a plan to address drainage issues on Beverly Terrace. A common cellar drain serving multiple homes has partially malfunctioned and the affected residents are now pumping water out into the street from their basements. This creates an icing hazard in the winter months and standing water in the spring/summer/fall. The Town Engineer has been working with us to look at options to remediate the problem. It is likely that an extension of the existing storm drain system is most feasible options for residents to connect in to since the existing outlet pipe runs under a garage on State Avenue. That estimated cost is $125,000 and project is planned for June of 2018.

Finally, we are in the process of updating our 2013 Pavement Management Report. The original purpose of the study was to develop a maintenance/improvement strategy and develop a schedule for long-term capital maintenance. This is based on both pavement condition ratings and their importance to the Town's roadway system. The study should be completed in early 2018.

Hill Way & Scott Dyer Road – Roadway & Pedestrian Improvements (Phase 2) – $680,000

It was originally intended to complete the Scott Dyer Road Project in two phases, but that does not appear possible given the estimated cost to undertake the improvements needed from Longfellow Drive to Spurwink Avenue. After reviewing the project scope with the Town Engineer, it is now proposed to break the project into two additional phases. Phase 2 would start at Spurwink Avenue and go to Patricia Drive and is proposed to be undertaken in the Spring of 2019. Phase 3 would start at Patricia Drive and then run to Longfellow Drive and is proposed for the Spring of 2020.

The segment between Spurwink Avenue and Patricia Drive does not have adequate drainage and the soils are susceptible to freeze/thaw movements. This leads to significant heaving during the late winter months, especially at the Willow Brook crossing and at the intersection of Starboard Drive. An underdrain system needs to be installed along with new base gravels to extract the groundwater and provide the proper structural base for the new pavement. Given that there are no significant elevation changes along this segment, the underdrain system will have to outlet in Willow Brook, which adds considerable cost to this phase.

A major goal of this project (along with Hill Way) has been to enhance pedestrian safety along this corridor. The existing sidewalk on Scott Dyer Road terminates at the Cape Memory Care facility. As part of this project it is proposed to extend it to Spurwink Avenue on

the southerly side of the road. This would provide residents of Starboard Drive and Wainwright Drive safer access to the school campus and Town Center. The most challenging area to cross will be Willow Brook which requires a retaining wall and safety railing.

The remaining segment (Phase 3) runs from Longfellow Drive to Patricia Drive. That is programmed for the 2020 construction season and has a projected cost of $630,000. All of this is in preparation of the MDOT-PACTS-managed surface paving project, which is now scheduled for the 2020 construction season.

Roadway Overlay & Misc. Paving Program - $200,000

The paving program is based pavement condition ratings listed in our Pavement Management Plan. We also take into consideration any unforeseen opportunities from MDOT, PACTS, deferrals from a previous year, potential utility upgrades and the number of mobilizations for the paving contractor. The plan creates a program for improvements to our collector and local road network.

In addition to the proposed work on Scott Dyer Road, it is planned to undertake a modified pavement preservation project on Eastman Road. It is proposed to shim and overlay the surface, which was last paved in 1998. Like many of our other Feeder Roads it was never built to a modern standard. There is minimal drainage infrastructure and the quality of the sub-base gravel is unknown. There are also some horizontal challenges in one of the sections, so some of the pavement may need to be milled off to reduce the height of any new pavement at some of the driveways.

As funding permits, it is proposed to resurface some of our local neighborhood roads per the Pavement Management Plan. If we don't complete all of the local roads in the Hampton Road neighborhood, those will be programmed for FY 2019 along with Fenway Road, Vernon Road, Wood Road, Rocky Hill Road and Ivie Road.

A small sum is also allocated each year for minor paving, curbing and drainage projects ($20,000).

Sidewalk & Pedestrian Improvements - $40,000

A major segment of the Oakhurst Road sidewalk was replaced in the summer of 2016. Over 600' of existing concrete sidewalks in poor condition were replaced, from Waverly Road to Rocky Knoll Road. It is proposed to replace the remaining segment (280') in the Spring of 2018 at an estimated cost of $18,000.

The extension of sidewalks in the Town Center has been programmed for many years. One project that has been in the queue for several years is the extension of the sidewalk between C Salt Market and Fowler Road. It's not without challenges and would require the installation of drainage basins since a new sidewalk would act as a barrier to current surface drainage patterns. Some preliminary engineering has been completed and it is proposed to work with the abutting residents once the Town Council has authorized the project to move forward. Other items funded by this include pedestrian control devices, such as signage, additional pavement markings and pedestrian bollards.

Funds remaining in the account at the end of each fiscal year have been carried forward. The balance in this account as of December 1st, 2018 is $93,800.

Full-Size Dump Truck Replacement

The department has been keeping its full-size dumps trucks for over 15 years. This extended operational life takes its toll on the undercarriage and frame of the units. Like any vehicle, there is an increase in maintenance costs as the age of a unit surpasses 12 years. Drive train and front-end component repairs can be expensive, not to mention questionable, as a truck reaches the end of its reasonable useful life. It's important to remember that these units operate in the harshest of weather conditions and they are the most critical pieces of equipment in our road maintenance operations program. Looking ahead, it is proposed to replace our 2000 International Dump/Sander combination in FY 2019, which has a severely corroded frame, undercarriage and dump body. Though it is a spare unit it is critical to our winter operations program. Assuming the request is approved, the 2004 unit is in fairly good shape and still has some useful life left to be a spare truck for three years. That unit is programmed to be replaced in FY 2021, along with similar units in FY 2022, FY 2025 and FY 2027.

Medium-Size Truck Replacement

These are smaller dump trucks that are a critical part of our motorized fleet. They perform several different functions over the course of the year, such as road patching, grounds maintenance, snow plowing and the transportation of equipment. A four-door crew cab unit utilized by the Parks Division is programmed for FY 2023.

Pickup Truck Replacement

The next unit proposed for replacement is a 2008 Chevrolet 4WD pickup assigned to the PW Supervisor. It's on the road daily and used in our plowing operations. We had to do some major repairs on it in the last year and the frame is suffering from repeated exposure to the winter elements. Additional units are programmed in FY 2020, FY 2022 and FY 2027.

Additional Pickup Truck - $27,500

The department only has one vehicle (a pickup) that is not assigned to an individual on a daily basis, such as the Supervisor and the Director. This truck is utilized for a multitude of purposes such as daily trips to Town Hall, parts pickup and service calls by the maintenance staff to work on town-owned equipment not located on Cooper Drive. It's also used by the crew in our stormwater inspection program and for tasks where it's more economical to use a pickup versus one of our full-size dump trucks. With only one available truck, it often requires us to postpone trips and/or tasks until the unit is available. Our fleet has not been added to in quite some time but our responsibilities continue to grow, especially with our stormwater program. Therefore, it is proposed to purchase a basic model, 2WD mid-size pickup truck in FY 2019.

Front-End Loader Replacement - $235,000

The next front-end loader in sequence to be replaced is a 1997 unit. We have historically programmed a 20-year useful life on our front-end loaders. It's pushing the limit and we now have to defer this one more year due to the condition of our oldest dump truck that is now proposed to be replaced in FY 2019. The unit is equipped with a snow plow/wing attachment. It is used extensively throughout the year and is now proposed for FY 2020 along with a similar-sized unit in FY 2024.

Loader/Backhoe Replacement - $155,000

This is one of the department's most vital pieces of equipment. It is used extensively in a variety of roadway, drainage and stormwater maintenance functions. It is also the designated piece of equipment to plow the Recycling Center, load winter abrasives and to perform internments at Riverside Cemetery. Though the unit was purchased new in 2013 it has required more repairs than was envisioned given that it is a relatively new machine. To make matters worse, the manufacture no longer makes loader/backhoes which means spare parts could become an issue in the near future. The unit is programmed for replacement in FY 2023.

Skid Steer Loader Replacement - $50,000

This is a small, rubber-tired unit that is used in several applications, including excavations and snow removal operations. It is also used occasionally at Riverside Cemetery for interments. It can be equipped with a snow blower or small backhoe. It is proposed for replacement in FY 2021.

Forklift Replacement - $23,000

The existing forklift is a 1969 model that was purchased used in 2006. It is used to unload deliveries and move universal wastes at the Recycling Center. It is proposed to replace it with a new unit in FY 2019.

Utility Vehicle Replacement - $20,000
The utility vehicle purchased in FY 2010 is proposed for replacement in FY 2025

Mobile Air Compressor Replacement - $22,000
This is a tow-behind unit that was purchased new in 1978. It powers air-operated hand tools such as pumps and jackhammers. It is also used to "winterize" our sub-surface irrigation systems on the athletic fields. It is proposed to purchase a pre-owned unit in FY 2022.

Grounds Maintenance Equipment - $30,000
Mower units are programmed for replacement in FY 2020, FY 2021, FY 2022, FY 2023, FY 2025 and FY 2028. The mower proposed to be replaced in FY 2020 is a front-mounted rotary mower and was purchased in 2006. This is one of three similar units that are used extensively in our mowing program. The mower programmed for replacement in FY 2023 is a wide-area unit that was purchased in 2007. It has been assigned a 15-year useful life and the replacement cost is budgeted at $115,000. The price of the larger diesel mowers are increasing due to the new Federal emission standards that took effect on January 1, 2015.

Fleet & Equipment Management Software Program - $15,000
The department is using the same methodology to track fleet maintenance, inventory and parts purchasing that it did in the mid 1970's. It's an antiquated system that needs to be updated so we can do a better job of equipment record keeping, managing our parts inventory and tracking repair orders. It's a program that uses web-based technology and is being used by some of our neighboring municipalities.

High School Tennis Court Repairs & Coatings - $32,000
The six tennis courts at the High School are programmed for crack repairs and new coatings in FY 2022. They were last done in 2015 and are programmed for new coatings every 5-7 years.

High School Running Track - Shim & Coatings - $35,000
The running track at the High School was shimmed with asphalt filler and re-painted in 2013. The next time it is done it will need more extensive shimming than was needed in 2013. It is proposed for FY 2021.

Fort Williams Park Tennis Court Repairs & Coatings - $18,000
The lower courts are programmed for crack repairs and new coatings in FY 2022.

Hannaford Field Turf Replacement - $500,000
The Hannaford Turf Field was completed in 2008. At that time, the useful life on the synthetic turf mat was anticipated to be 10 to 12 years, contingent on the frequency and intensity of use over that period. The turf mat is beginning to show signs of significant wear, but it would appear that it can used safely for two more playing seasons. Funds have been placed into a dedicated fund each year to help offset the eventual cost of the project. At this point it is proposed to replace the turf mat in the summer of 2020 (FY 2021).

Respectfully, Robert C. Malley, Director of Public Works
December 22, 2017