

Article 11 Capital Budget Requests

Highway Division

Main St Streetlight Upgrades	\$70,000
Road Paving	\$200,000

DPW Capital Improvement Plan Objectives

- The Ayer DPW continues to be committed to the ongoing maintenance and repair of capital assets, recognizing the critical value of the infrastructure to the economic, aesthetic and functional viability of the Town
- The proposed capital projects are requested to continue major rehabilitation of Town infrastructure and improving our community.

Main St Streetlights -\$70,000

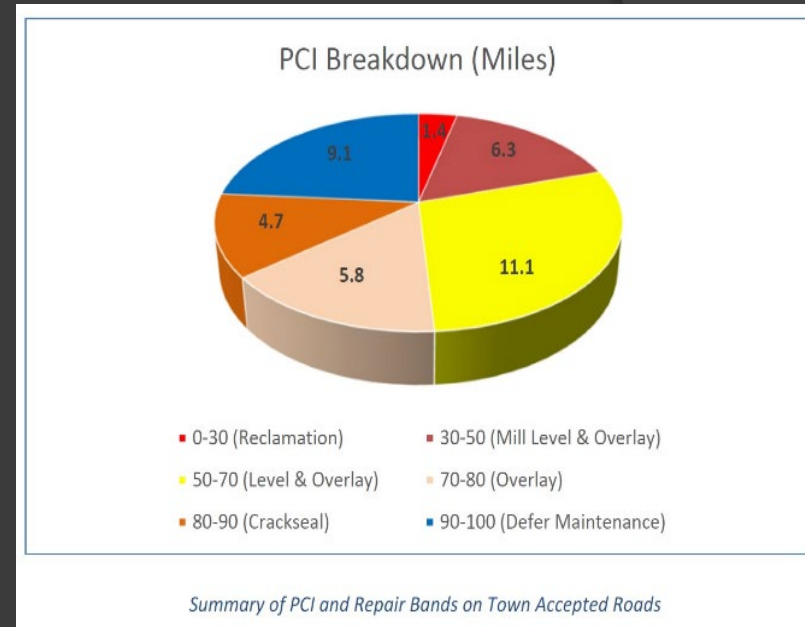


Main St Streetlights - \$70,000

- ⦿ Original downtown streetlights installed in mid-1980s
- ⦿ Have replaced about 2/3 of the old lights
- ⦿ Light Inventory:
 - 6 poles in danger of falling over
 - Total of 15 need replacing
 - FY22 budget is for 8 more poles

Road Paving - \$200,000

- Town has relied on MassDOT Chapt. 90 funding for road paving
- Town apportionment is \$245,000
- Pavement Management Plan determines the Pavement Condition Index for each road
- PCI should be over 80
- Cost to repair roads with PCI lower than 50 = \$2.5M
- Includes W Main St, High St, Groton-Shirley Rd,



Pavement Management Tool

- DPW needed a tool to determine the long term road paving schedule and costs
- Implemented Predictor Model – Life cycle model that can simulate various paving budgets, treatments, degradation profiles, etc., to determine the optimum pavement management strategy
- Able to model other infrastructure to ensure proper work sequence (e.g. replace water main before pavement)

Predictor - Ayer_MA with GIS - 3rd Gen (1).ppf

File Edit Tool Profile Help

Portfolio < Template > Ayer Streets

Predictor

DD New Open Save As

Ayer_MA

- Ayer Streets
 - Data
 - Ayer_GIS
 - Model
 - Base PCI Model
 - Strategy
 - \$400K - Existing Annual Budget
 - \$800K
 - \$800K - \$400K - Front Loaded
 - Calibration

Template Setup Treatment Service Criteria Degradation Profile Treatment Filter Service Index

Template Section

Template is a one-off setup that defines essential elements such as service criteria and treatments. Simulation can be run using different combinations of data, models and strategies in the template.

Template Name : Ayer Streets

Description :

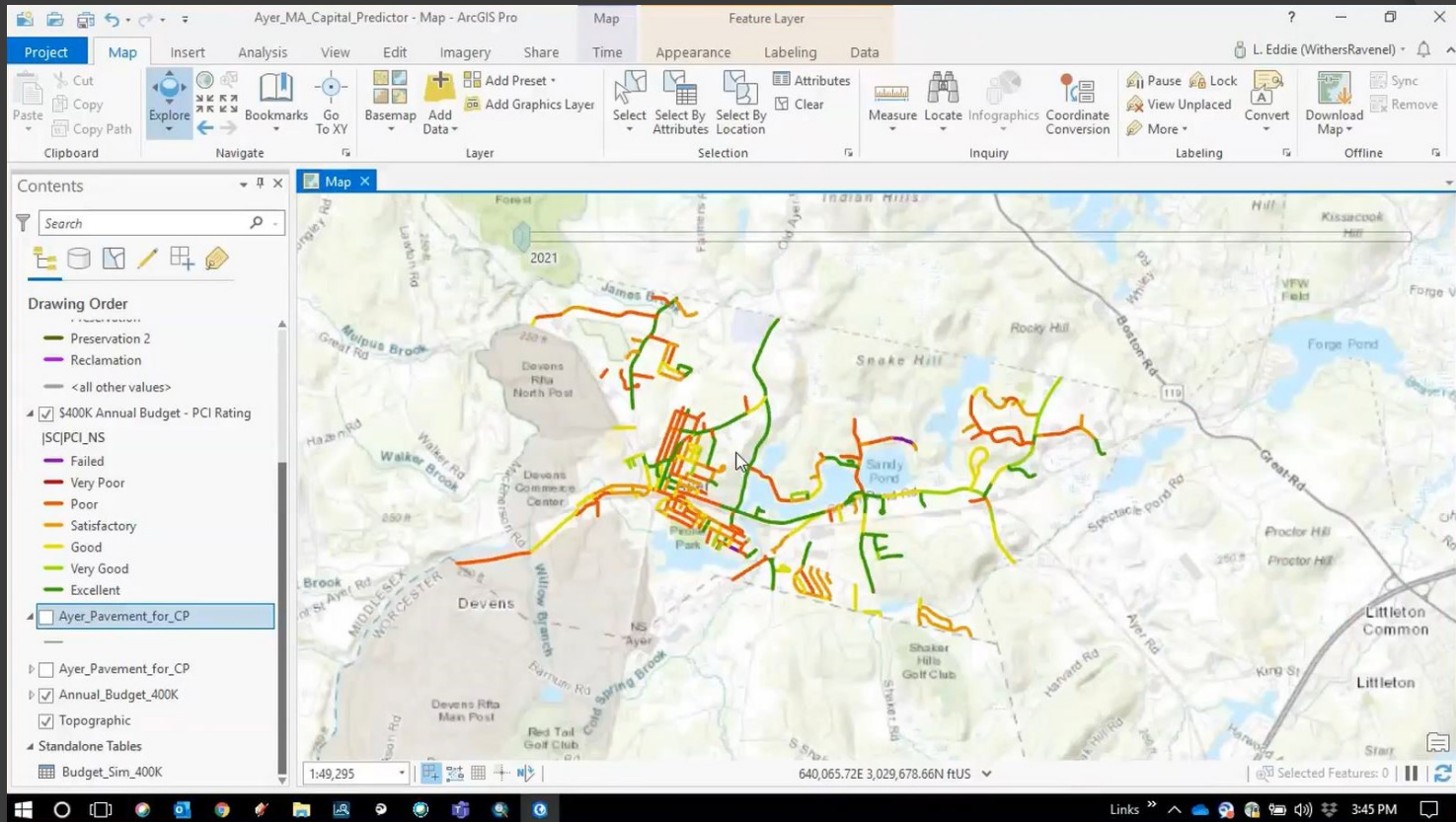
Asset Category : Roads Network Measure Unit: Sq Yrds

General

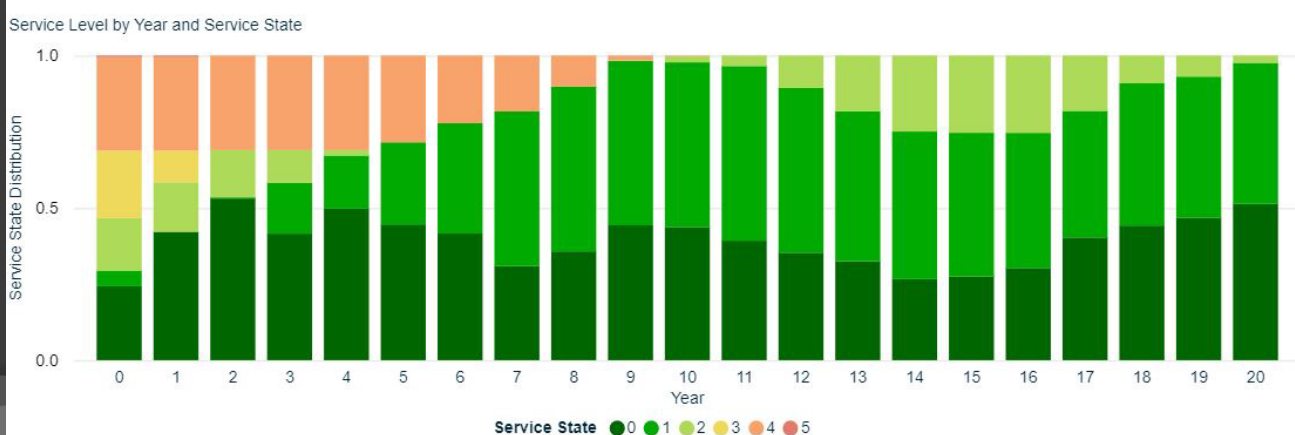
		Years	Rules
<input type="checkbox"/>	Simulation		
<input checked="" type="checkbox"/>	\$400K Budget	20	0
<input type="checkbox"/>	Front Loaded Budget	20	0
<input type="checkbox"/>	\$800K Budget	20	0
<input type="checkbox"/>	Calibration	20	0



Pavement Management Tool



GIS
Output



Article 11 Capital Budget Requests

Wastewater Enterprise Fund

- Wastewater Treatment Plant Upgrades
\$ 2,800,000
- Sewer Inflow / Infiltration Repairs
\$750,000
- Central Ave and Main Pumping Station
Valve & Piping Replacement
\$100,000

Wastewater Treatment Plant Upgrades

- FY17 – FY21 Improvements are complete
- Projects included
 - Building systems upgrades (Building structure, HVAC, Electrical, Fire Sprinkler)
 - Electrical Room Climate Control
 - SCADA Upgrades
 - Tankage repairs
 - Grit removal system upgrade
 - Demolition of old equipment
 - Construction of sludge dewatering room
 - Chemical feed upgrade(required by EPA)
- FY22-FY26 include:
 - Sludge dewatering system
 - Sludge pump replacement
 - Aeration blower and system upgrade
 - Instrumentation and controls
 - Architectural repairs
 - Wastewater Division garage

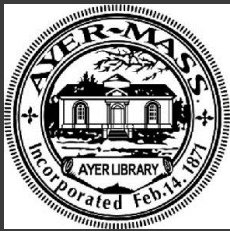


Sewer Collection System Inflow / Infiltration Removal - \$750,000

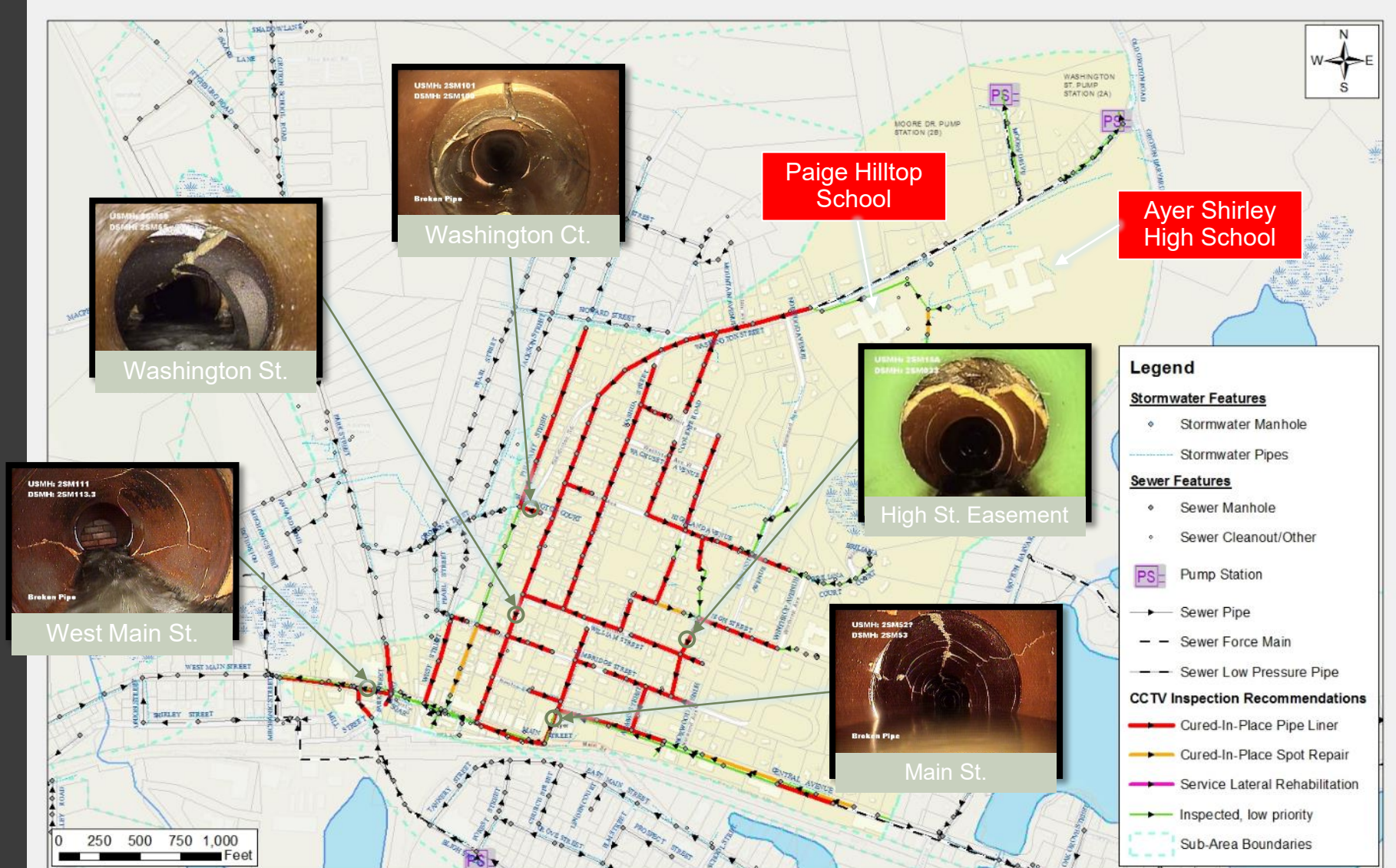
- I/I investigation evaluated most of the pipes in the system
- Problems included high inflow, roots, structural damage
- I/I can add over 1 million gallons of flow to WWTP
- Phase 1 complete and Phase 2 is under construction
- Repair to Sandy Pond Road Sewer is next phase

I/I Costs

Phase	Pipeline Rehabilitation Construction Cost	Manhole Rehabilitation Construction Cost	Total Rehabilitation Construction Cost
Sandy Pond Road	\$ 1,895,970	\$ 37,455	\$ 1,933,425
Phase 1	\$ 799,613	\$ 40,572	\$ 840,184
Phase 2	\$ 737,217	\$ 36,263	\$ 773,480
Phase 3	\$ 745,454	\$ 92,428	\$ 837,881
Phase 4	\$ 624,839	\$ 47,823	\$ 672,662
Phase 5	\$ 586,116	\$ 16,601	\$ 602,717
Phase 6	\$ -	\$ 187,770	\$ 187,770
Total	\$ 5,389,209	\$ 458,911	\$ 5,848,120



Sub-area 2 CCTV Major Defects



Main and Central Ave Valve Replacements

- Pumping Stations have several large “check Valves that are reaching the end of useful life (leaking)
- Replaced one valve in Main Pump Station last year at cost of \$40K



Article 11 Capital Budget Requests

Water Enterprise Fund

- Annual Water Main Replacements \$150,000
- West Main Street Water Main Replacement and Devens Emergency Interconnection (Grant Match) \$100,000

Annual Water Main Replacements

- Annual Capital request to replace aging water mains with poor rating
- Budget for **\$300K** per year (approx. 2000 ft.) - \$150K Capital, \$150K from Water surplus
- FY21 projects include Wright Rd (numerous breaks)
- In-house engineering to maximize pipe replacement value
- Continue to apply for grant funding



West Main St MassWorks Local Share

- ◎ Grant is for \$3,164,201 and Ayer is committed to \$375K local share (Devens share is \$275K)
- ◎ Local share is
 - \$50K for engineering, \$25K for bidding, \$300k for construction
 - Can use water main replacement, stormwater upgrade and road paving funding for local share
 - Request consideration of capital funding
 - \$50K stormwater, \$50K paving, \$100K water main

West Main St MassWorks Funding

- Grant requires \$300K for local share. Request \$100K for water main (total est. cost \$850K)
- Replace 3200 ft of 6 & 8 inch unlined cast iron pipe
- Pipe has significant hydraulic restrictions and water quality complaints
- Second interconnection with Devens will improve emergency water supply capacity
- Will improve redevelopment opportunities for West Main Street

Proposed West Main Street Water Main

