Sudbury Public Schools
FY24 Capital Night Presentation

February 12, 2024

Sudbury Public Schools
FY 25 Town Meeting Warrant Articles

Haynes School Dehumidification HVAC	$150,000
Classroom Instructional Equipment Replacement	$100,000

Haynes School Dehumidification HVAC

The Haynes Elementary has areas that develop condensation on the tile floors during humid weather conditions. This is due to the lack of ability to temper (cool/dry) the air as it enters the building. Humid air is supplied to the building from the exterior then condensates on cool tile surfaces, causing them to be slippery and creating a fall hazard. The requested funds will be used to provide air conditioning/dehumidification equipment that will temper the outside air during high humidity days.

Classroom Instructional Equipment Replacement

The article seeks funding for the purpose of purchasing and replacing classroom instructional equipment in twenty (20) total classrooms in all five (5) school buildings for $100,000.

- Current equipment is 12-15 years old and have exceeded their useful life.
- Technology in instructional spaces to support communication and collaboration, differentiation of instruction, and accessibility options for all students.
- The District's standard set of classroom instructional equipment includes:
    1. an interactive display that provides a visual resource for displaying materials to the entire class with touch components allowing students to interact with educational content with a pen or touch;
    2. wireless video projection for teacher mobility around the classroom while also permitting students to project directly from their devices;
    3. auditory support for classroom instruction ensuring all students can receive instruction with clarity benefitting all students regardless of whether they have an issue with hearing; and,
    4. document cameras allowing for immediate presentation of non-digital resources to the classroom.

Bruce Freeman Rail Trail - Phase 3 as of December 20, 2023

Engineering/Design to Plan/Specification & Estimate

Total Cost (25% through PS&E)	$1,240,000	
Current funds available	$644,000	Actual cost minus funds available
Difference	($596,000)	Actual funds needed

Funding Sources

	Approved	Remaining
ATM 2022 (#48)	$300,000	$152,000
ATM 2023 (#43)	$300,000	$300,000
MassTrails Grant	$192,000	$192,000
Total Funding	$792,000	$644,000

Expenditures

Projected	Actual
2023 Feasibility	$148,000

FUSS & O'NEILL

Anticipated Budget for Project Engineering & Permitting

Parkinson's Field Driveway Improvements - Sudbury, MA

Date: 12/19/2023

Anticipated Construction Cost: $250,000 - $650,000

Anticipated Design Start 7/15/2024

Task	Description	Anticipated Fee	Estimated Calendar Year(s) of Expenditure	Comments
Data Collection / Field Survey				
1	Field Survey	$10,500	2024	Topo/Detail Survey, Includes the existing parking lot at the field
2	Wetland / Reource Delineation	$6,000	2024	includes land adjacent to parking lot. Wetland resource report will also be provided.
3	Utility Research	$1,700	2024	contact utility companies, compile record plans.
	Subtotal	***$18,200***		
Preliminary Design				
5	Plans / Landscape	$9,500	2024	Cover, Key Plan, Legend/General Notes, Layout Plans, Grading, Details, Erosion Control, Landscaping
6	Stormwater / Drainage	$8,900	2024	Stormwater modeling, treatment design, stormwater report
7	Estimate / Coordinate / QAQC	$5,900	2024	Opinion of probable construction cost, coordination meetings with Town Staff, Meeting with Park and Rec, Coordionatoin with TI-Sales
	Subtotal	***$24,300***		
Final Design, Permitting, & Bid Documents				
8	Environmental Permitting	$15,000	2024	Notice of Intent - Task will be hourly
9	Final Design Plans	$14,100	2025	Stamped plans and specifications suitable for public bidding
11	Bid Stage Services	$4,500	2025	Responding to bid inquiries from perspective contractors, Bid review, attendance at Pre-Construction Conference
	Subtotal	***$33,600***		
Total Anticipated Design/Permitting (Complete)*		***$76,100***		Design Fees are based on the upper range of construction cost (paved driveway).
Total Anticipated Design/Permitting (Basic)*		***$62,700***		Design Fees are based on the low range of construction cost (gravel driveway) and no survey of parkinson parking lot.

* Fees do not include potential adjustments due to inflation or changes in project size/scope by others.

Assumptions:

No Retaining walls or geotechnical engineering

Permitting costs do not include Local Historic Commission, Tree Petitions, Historic Section 106 Filings/meetings, or multiple con. Com. Meetings

Design/Engineering of the Parkinson Parking lot is not included (survey and wetlands only)

Right-of-Way plans or plans necessary for easements or acquisitions should they be needed is not included.

Design of public utilities (water service, sewer, electric, other) is not included. Stormwater will be included

Design fees assume no permenant wetland impacts are assumed, therefore Wetland replication is not included

Construction Cost Assumptions:

Low end cost assumes processed gravel road surface with no significant improvements to stormwater treatment/management (ie. Maintain country drainage)

High end cost assumes paved asphalt road surface with new stormwater treatment areas/design

LSRHS

FY25 Capital Warrant Request Items

Presented to:
Sudbury Joint Meeting: Select Board, FINCOM, CIAC
February 12, 2024
Via Zoom
Andrew Stephens, Superintendent/Principal
Kirsteen Patterson, Director of Finance and Operations

Project 1 - Exterior Stairwells

LSRHS has two exterior sections of masonry stairwells adjoining outdoor common areas in AB and BC connectors.
Despite continued repair and maintenance, the overall condition of these stairwells is significantly failing and in need of structural supports.

Photos taken 11/7/22 upper section AB connector - main level to cafeteria level

Photos taken 11/7/22 lower section BC connector - gym/field section

Project Scope:

Replace the original stairwells constructed with new high school in 2004. The expected life expectancy was 20 years but with extreme winters and ground treatments they are significantly failing. They are considered a safety compliance item as the safety of students, faculty and members of the public are impacted.

The exterior walkway from building to building will be updated with more architectural components and materials to reach life expectancy of stairwells.

Total construction cost with contingency is $150,000 with Sudbury's portion at 87.31% or $130,965 and Lincoln at 12.69% or $19,035

Project 2 - Lighting Panel Replacement

This project is the original interior lighting control panels as part of the new high school construction in 2004. The expected life expectancy was 15 years and the analog panels are no longer supported from manufacturer or repair vendors. Analog systems have become obsolete with digital based boards and panels. Due to supply chain and labor shortage issues only a formal bid will be able to determine final cost expected.

Total materials and labor cost with contingency is estimated at $165,600 with Sudbury's portion at 87.31% or $144,585 and Lincoln at 12.69% or $21,015

Thank you for your consideration

Public Works Capital Requests

FY2025

DAN NASON, PUBLIC WORKS DIRECTOR

Public Works Department

Understanding the Public Works Department

- Who we are…Multi-Divisional Team
  - Office/Administration
  - Engineering
  - Highway
  - Drainage
  - Transfer Station
  - Trees & Cemeteries
  - Parks & Grounds

34 Members total

(Still at the same staffing levels as in the 1980's)

Public Works Department

Understanding the Public Works Department

We manage and /or maintain…

- More than **64 Acres** of public open space (Parks & Grounds)
- More than **138 miles** of roadway
  - *Asset value ~* ***$138M*** ***
- More than **44 miles** of walkways
- Nearly **200 crosswalks**
- More than **1,200 regulatory/informational** signs

* *Asset Management and Asset Valuation: The Implications of the Government Accounting Standards Bureau (GASB) Standards for Reporting Capital Assets,* MID-CONTINENT TRANSPORTATION SYMPOSIUM 2000 PROCEEDINGS, Sue McNeil

Public Works Department

We manage and / or maintain…

- More than **4,500 drain structures** (> 2,700 CB's, >1,800 MH's)
- More than **58 miles** or stormwater conveyance systems
- More than **600 stormwater outfalls**
- Approximately **180 culverts**

Tools we need to perform our jobs…

- Total number of vehicles and equipment: > 90
  - Equipment asset value exceeds **$5M**

Capital Equipment Replacement

Vehicle/Equipment replacement concepts

- Year, Make, Model? or Type or Use?
  - Thresholds or standards?

Focus on:

- Daily operations, front-line equipment, critical emergency response vehicles/equipment
  - What are the most heavily utilized equipment?
  - Replacement cycle / costs?

Capital Equipment Replacement

Categories:

- Light / Medium Duty Trucks (<26,000 GVW)
- Heavy Duty Trucks (>26,000 GVW – CDL required)
- Light / Small Equipment (Skid Steers, Rollers, etc.)
- Heavy / Construction Equipment (Loaders, Backhoes, etc.)
- Specialty Equipment (i.e., Sidewalk Machines)

Capital Equipment Replacement

Recommended replacement thresholds:

APWA Replacement Recommendations

VEHICLE TYPE	REPLACEMENT RANGE YEARS	THRESHOLD MILEAGE/HOURS
Administrative Sedans	5	75,000 – 100,000
Emergency Sedans	3	85,000 – 100,000
Pick Up Trucks	7	100,000 – 120,000
Dump Trucks, Diesel	7 – 10	150,000
Back Hoes, Loaders	7 – 10	6,000 – 7,500 hrs

Source: American Public Works Association Vehicle Replacement Guide

Federal Government GSA Replacement Recommendations

VEHICLE TYPE	REPLACEMENT RANGE YEARS	THRESHOLD MILEAGE/HOURS
Sedans	3	60,000
Ambulances	7	60,000
Pick Up Trucks	6	50,000
Light Dump Trucks	7	60,000
Heavy Dump Trucks	9	80,000
4-Wheel Drive Vehicles	6	40,000

Source: Federal Minimum Replacement Standards 41CFR 102-34.280

Capital Equipment Replacement

Recommended replacement thresholds vs. Sudbury

APWA Replacement Recommendations

VEHICLE TYPE	REPLACEMENT RANGE YEARS	THRESHOLD MILEAGE/HOURS
Administrative Sedans	5	75,000 – 100,000
Emergency Sedans	3	85,000 – 100,000
Pick Up Trucks	7	100,000 – 120,000
Dump Trucks, Diesel	7 – 10	150,000
Back Hoes, Loaders	7 – 10	6,000 – 7,500 hrs

Source: American Public Works Association Vehicle Replacement Guide

Federal Government GSA Replacement Recommendations

VEHICLE TYPE	REPLACEMENT RANGE YEARS	THRESHOLD MILEAGE/HOURS
Sedans	3	60,000
Ambulances	7	60,000
Pick Up Trucks	6	50,000
Light Dump Trucks	7	60,000
Heavy Dump Trucks	9	80,000
4-Wheel Drive Vehicles	6	40,000

Source: Federal Minimum Replacement Standards 41CFR 102-34.280

Vehicle Type:	Years:
Administrative	10
Pick Up Trucks	10
Dump Trucks	15
Backhoes/Loaders	12

Sudbury is more fiscally conservative!

Public Works Capital

- Status of Prior Capital Equipment Articles
  - Vehicles / Equipment

VEHICLE DESCRIPTION		ARTICLE ITEM	YEAR	MAKE	MODEL	Vendor	ORDER DATE	STATUS
Dump Truck w/plow & Spreader (Unit PR2)	$ 110,000	(ATM2020:28)	2022	FORD	F350	McGovern	10/21/2021	Covid Cancelled order, chip shortage, vendor reordered 10/21/2021 (Ford not accepting new orders until mid October 2022) Scheduled upfit March 2023 **Delivered & in service 4/2023**
Pick-up Truck with Plow (Unit 2)	$ 70,000	(ATM2021:4)	2022	FORD	F250	McGovern	10/22/2021	Delivered to McGovern **Delivered & in service 2/2023**
6-Wheel Combo Body Dump Truck w/plow & Wing (Unit 6)	$ 285,000	(ATM2021:20)	2022	MACK	CV712	Ballard	5/27/2021	Anticipated build date 7/12/2022 October 2022, VIN# 1M2GR2ACXPM001941 Being upfit 2/2023 **Delivered & in service 6/2023**
Pick-up Truck with Plow (Unit 14)	$ 85,000	(ATM2022:4)	2022	RAM	2500	CMG		**Delivered & in service 2/2023**
Pick-up Truck with Plow (Unit PR4)	$ 85,000	(ATM2022:4)	2022	RAM	2500	CMG		Ford not accepting orders until Nov 2022, cancelled by Ford (RAM) **Delivered & in service 4/2023**
Hybrid Admin Vehicle	$ 45,000	(ATM2022:4)	2023	FORD	PIU	CMG	5/16/2022	Vehicle at CMG **Delivered & in service 1/2023**
Backhoe Loader (Unit 22)	$ 150,000	(ATM2022:36)	2022	JOHN DEERE	410L	United		PO sent - Build date May 2023 - **Delivered & in service 2/2023**
6-Wheel Combo Body Dump Truck w/plow (Unit 5)	$ 285,000	(ATM2022:37)	2023	MACK	CV712	Ballard		Scheduled for delivery to Madigan in March 2023 **(Now March 2024)**
Skidsteer (Unit 26)	$ 130,000	(ATM2022:38)	2022	BOBCAT	T66	Bobcat		PO Sent. Est build date May 2023 **Delivered & in service 8/2023**
Roadside Mower (Unit 35)	$ 140,000	(ATM2022:41)	2022	DIAMOND	50	United		Pending delivery date from manufacturer (~ 1 Year) **Delivered & in service 10/2023**
Pick-up Truck with Plow (Unit 17)	$ 100,000	(ATM2023:4)	2023	Chevy	2500	CMG	12/1/2023	**Delivered & in service 1/2024**
6-Wheel Combo Body Dump Truck w/plow (Unit 38)	$ 185,000	(ATM2023:33)	2024	Ford	F600	CMG	12/1/2023	**Chassis on order**
6-Wheel Combo Body Dump Truck w/plow (Unit 24 5)	$ 210,000	(ATM2023:34)	2024	Ford	F600	CMG	12/1/2023	**Chassis on order**
Sports Field Mower (Unit PR7)	$ 160,000	(ATM2023:35)	2024	TORO	5910	Richey & Clapper		**Pending Delivery**

Public Works Capital

- 2 Swap Body Trucks with Plow & Bodies *(Article 17)*
- Pickup Truck with Plow *(Article 18)*
- Old Sudbury Road Culvert Replacement *(Article 19)*

CPA

- Wayside Inn Road Bridge Reconstruction *(Article 34)*

Capital Equipment Replacement

Heavy Duty Trucks: 18 total

36	TREES & CEMETERY	2000	GMC	T7500	Swap Body w/ Chip, Dump, Flat Bed	
6	HIGHWAY	2006	MACK	CV713	10' Wing 41" & Spreader w/ Ground speed controller	★
12	DRAINAGE	2006	MACK	CV713	10 Wheel Dump	
3	HIGHWAY	2007	MACK	CV712	Spreader w/ Ground Speed Controller	★
18	HIGHWAY	2007	MACK	CV712	Spreader w/ Ground Speed Controller	★
27	HIGHWAY	2007	MACK	CV713	10 Wheel Dump	
5	HIGHWAY	2008	VOLVO	VHD64F	Spreader	★
23	TREES & CEMETERY	2008	INTERNATIONAL	7300	Sander, Chip, Dump Flat	
20	HIGHWAY	2011	VOLVO	VHD42F	Spreader w/ Ground Speed Controller	★
10	HIGHWAY	2012	FREIGHTLINER	114SD	10 Wheel Dump	
4	DRAINAGE	2013	FREIGHTLINER	114SD	6 wheel dump	
11	HIGHWAY	2014	FREIGHTLINER	114SD	6 wheel dump	
19	DRAINAGE	2015	FREIGHTLINER	114SD	Catch Basin Cleaner	
9	DRAINAGE	2016	FREIGHTLINER	114SD	Dump	
34	HIGHWAY	2016	FREIGHTLINER	114SD	10 Wheel Dump	
L1	DRAINAGE	2016	FREIGHTLINER	114SD	10 Wheel Roll off	
44	HIGHWAY	2022	MACK	CV712	6 Wheel Combo Body	
24	HIGHWAY	2023	MACK	GR42F	6 Wheel Combo Body	

Note: 5 dedicated spreaders

Capital Equipment Replacement

Heavy Duty Trucks: 18 total

- Recommended replacement cycle:
  - Sudbury (every 15 years) = 1.2 per year
  - APWA (every 7-10 years) = 1.8 - 2.5 per year
  - Federal (every 9 years) = 2.0 per year

Sudbury needs to replace **at least 1** of these vehicles **every year** to maintain a sustainable fleet (18 years old)

- If we only replace 1 every other year – **36 years old**

Capital Equipment Replacement

Light / Medium Duty Trucks: 17 total

7	HIGHWAY	2015	★	CHEVROLET	SILVERADO 3500	1 Ton Dump
28	HIGHWAY	2015	★	CHEVROLET	SILVERADO 3500	1 Ton Dump
38	HIGHWAY	2015	★	CHEVROLET	SILVERADO 3500	1 Ton Dump
40	DRAINAGE	2015	★	CHEVROLET	SILVERADO 3500	1 Ton Dump
45	DRAINAGE	2015	★	CHEVROLET	SILVERADO 2500	Pickup
PR1	PARKS AND GROUNDS	2015	★	CHEVROLET	SILVERADO CK3500	
PR3	PARKS AND GROUNDS	2015	★	CHEVROLET	SILVERADO CK2500	Pickup
30	HIGHWAY	2017		FORD	F350	Fiberglass Utility body & Compressor
14	HIGHWAY	2019		FORD	SUPER DUTY F250	Pickup
52	TREES & CEMETERY	2020		FORD	F550 Super Duty	Plow & Wing Spreader w/ Ground speed controller chipper box, dump
37	DRAINAGE	2021		FORD	F550 Super Duty	1 Ton Dump
1	DPW	2022		FORD	SUPER DUTY F250	Director of Operations Pickup
2	DRAINAGE	2022		RAM	2500	Pickup
29	TREES & CEMETERY	2022		FORD	F350	1 Ton Dump
PR2	PARKS AND GROUNDS	2022		FORD	F350	
PR4	PARKS AND GROUNDS	2022		RAM	2500	Pickup
17	TREES & CEMETERY	2023		CHEVY	SILVERADO	Pickup with Utility Body

Note: 7 model year 2015 Trucks

Capital Equipment Replacement

Light Duty Trucks: 17 total

- Recommended replacement cycle:
  - Sudbury (every 10 years) = 1.7 per year
  - APWA (every 7 years) = 2.4 per year
  - Federal (every 6 years) = 2.8 per year

Sudbury needs to replace **at least 2** of these vehicles **every year** to maintain a sustainable fleet (10 years old)

- If we only replace 1 every other year – **17 years old**

Public Works Capital

- Equipment Replacement Summary:
  - Proposal to Replace 3 Vehicles:
    - 2 Light Duty Trucks (non CDL rated)
    - 1 Heavy Duty Truck (CDL rated truck)

with

  - 3 Light Duty Vehicles (non CDL rated)
    - 2 Swap Body Trucks
    - 1 Pickup Truck

Swap Body Truck with Plow & Bodies

- Article 17
  - Existing Unit 36
  - 2000 GMC T7500
  - Tree/Cemetery Division
    - Swap Body Truck

Swap Body Truck with Plow & Bodies

- Article 17
  - Existing Unit 20
  - 2011 Volvo VHD42F, w/ plow & dedicated spreader
  - Highway Division
  - Single Season Use

Swap Body Truck with Plow & Bodies

- Article 17
  - **2** Proposed Hook Lift / Swap Body Trucks ($280,000 each)
    - Multiple uses throughout divisions
    - Increase efficiencies (seasonal)
    - Chip Box
    - Open Top
    - Dump Body
    - Flat Bed
    - Spreader
    - Etc.

Pickup Truck with Plow

- Article 18
  - Existing Unit 28
  - 2015 Chevy Silverado 3500
  - Highway Division
    - Stake-body
  - Replace with new similar vehicle
  - $120,000

Town-Wide Culvert Replacement

- Article 19
  - $625,000
  - Construct improvements to two culverts along Old Sudbury Road
  - Corrugated metal drainage pipe deteriorates underground and loses its structural integrity
  - Potential for development of sinkholes and major structural roadway failures
  - Necessary to maintain the integrity of our roadways

Culvert Replacement

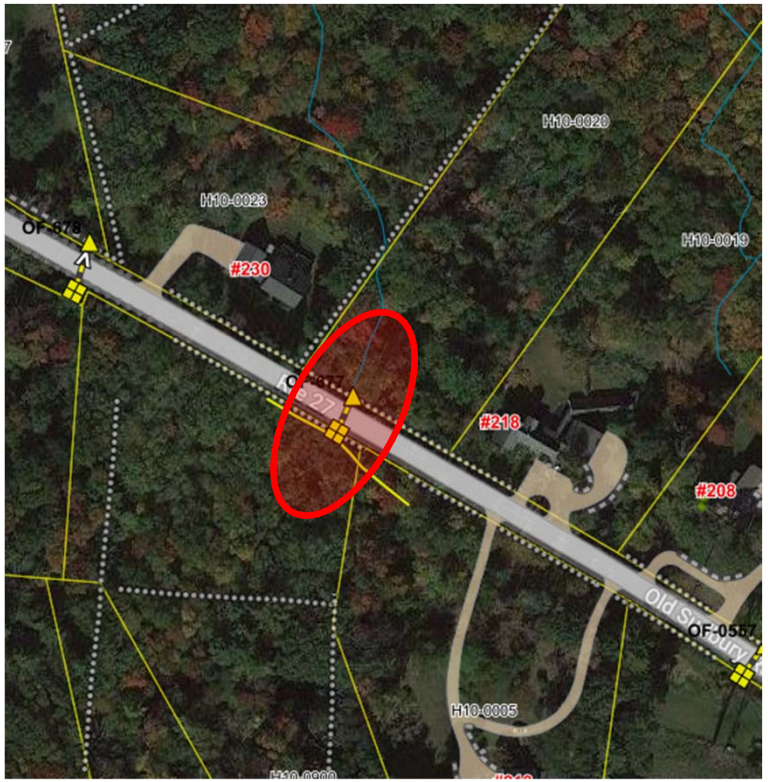
- Old Sudbury Road (two locations)
  - Design was funded in FY2021 (ATM2020:26)

Culvert Replacement

- Both culverts are located in Old Sudbury Historic District
- The construction will replace the existing stone headwalls with a new mortared (for structural integrity) stone headwalls “like-for-like”
- These culverts are not visible from the public way

Culvert Replacement

- Crossing #110
  - Located Between house numbers 218 & 230 Old Sudbury Road
  - Corrugated metal (43’ L)
  - Corroded (100% section loss of pipe)
  - Unmortared dry-stacked headwalls



Culvert Replacement

- Old Sudbury Road (crossing #110)

Upstream Headwall

Downstream Headwall

Debris near upstream headwall

Debris near downstream headwall

Culvert Replacement

- Crossing #149
  - Located near intersection Water Row
  - 3’ Diameter (5’-8’ deep)
  - Corrugated metal (47’ L)
  - Collapsed sections (DS)
  - Significant corrosion
  - Severe section loss (US)
  - Loose Headwall w/gaps

Culvert Replacement

- Old Sudbury Road (crossing #149)

Inside culvert

Debris near downstream headwall

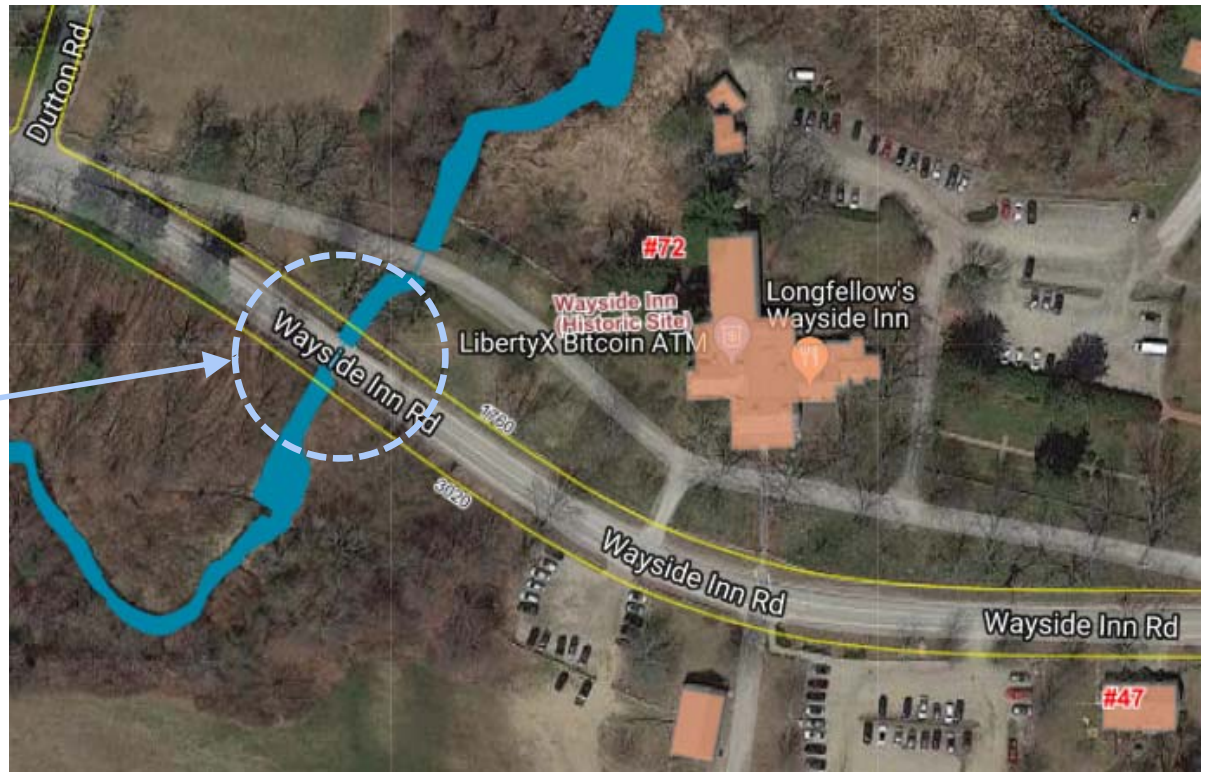
Upstream Headwall

Downstream Headwall

Wayside Inn Road Bridge Reconstruction (CPA)

- Article 34
  - $400,000

Locus



Wayside Inn Road Bridge

- First Constructed in the 1890's
- Reconstructed in 2003 by DPW
  - Deck beams & pavement
  - Stacked granite parapet walls
  - Guardrail
- Emergency repairs in 2019
- Constructed temporary solution in 2020

Wayside Inn Road Bridge

- MVA in July 2019 sheared off the westbound parapet wall

Wayside Inn Road Bridge

- MVA in July 2019 sheared off the westbound parapet wall

Wayside Inn Road Bridge

- 2020 Constructed (temporary) crash-rated repair

Wayside Inn Road Bridge

- Proposed permanent reconstruction

Public Works FY2025 Capital Requests

Thank you for your continued support!