

School Street Sanitary Sewers Public Hearing and Informational Meeting



October 13, 2016

Primary Drivers for Project

- High need area as evaluated within the Sewer Facilities Plan
- Road improvements planned within the Capital Investment Program
 - Widen road and improve sight line at “S” curve
 - Realign intersection at Huckleberry Hill Road
- Scheduled for significant paving as identified in the Pavement Management Plan
- Several “private utilities” within the public ROW now
- Requests from several residents
- Age of Septic Systems in the area
- Area abuts existing public sewer (School ← → Volovski) making connection to existing sewers feasible

Primary Drivers for Project

Sewer Facilities Plan Priorities



Subject Area - Ranks Highest as a priority

Table ES-5: Wastewater Management Plan Needs Matrix

Location		Small Lot Size (1)	Large Number of Repairs (2)	Septic Systems Old (3)	Sanitarian Recommended (4)	Identified in 1977 Facilities Plan (5)	Steep Terrain (6)	Poor Soil Suitability (7)	Shallow Groundwater (8)	Area Served by Private Wells (9)	Future Sewershed (10)	Priority (11)
		3	3	1	5	1	2	4	3	2	Priority Weight	
Started	Haynes Area		■	■	■	■		■	■		Yes	17
	Woodhaven Dr. & Bronson Road Area		■	■	■	■		■	■		Yes	17
	School Street/Verville Area	■	■	■	■	■		■			Yes	17
On hold	Cider Brook Area		■	■	■			■	■		Yes	16
	Deepwood Drive Area		■	■	■			■	■		Yes	16
	Stony Corners Area			■	■	■		■	■		Yes	14
Built	Lower Waterville Area		■				■	■	■	■	No*	14
	Carriage Drive Area			■	■	■		■	■		Yes	14
	Arch Road Area	■	■	■		■			■	■	Yes	13
Desn '17	Wright Drive Area				■		■	■		■	Yes	13
	Oak Bluff Area				■		■	■		■	Yes	13
	Brookmoor Area	■		■		■		■	■		Yes	12
Bid	Paper Chase Area	■		■	■				■		Yes	12
	Tamara Circle Area		■	■	■	■				■	Yes	12
	Lower Huckleberry Hill Area	■	■	■				■			Yes	11
	Woodford Hills Area						■	■	■	■	No	11
	Sunnyridge Area			■	■	■				■	Yes	9
	Upper Huckleberry Hill Area		■	■				■			No	8
	West Ridge Area		■	■				■			Yes	8
	Jackson Inc. Area						■	■		■	Yes	8
	Delbon Lane Area	■						■			Yes	7

Primary Drivers for Project School Street Improvements and Pavement



Project goals:

- **Provide sanitary sewer service to each residence – ideally by gravity**
- **Minimize disturbance to environment**
- **Minimize disturbance to resident's lots**
- **Locate laterals for each lot with owner input**
- **Locate manholes to minimize driver impediments**
- **Complete road overlay after all projects are finished (assuming Town budget approval)**
- **Provide the most reasonable cost alternative to the residents who benefit**

General Project Cost Drivers:

- 1. Depth of sewer – deeper sewer has greater impact, greater restoration and greater cost**
- 2. Size of pipe**
- 3. Number of manholes**
- 4. Existence of ledge rock and groundwater**
- 5. Backfill material – the ability to reuse material that comes out of the trench**
- 6. Access to existing sewer to connect to – private easement and restoration to current conditions**
- 7. Bidding contractor work load**
- 8. Costs of materials**

Gravity Sewer Path:



Issues with Gravity Sewers:

It's physically possible to go by gravity to New Road and north to Smith Road intersection:

- 1. Depths driven by existing conditions: storm drainage culvert at 83 School and existing topography**
- 2. Topography on New Road near intersection with Blanchard will require 20 ft deep sewer**
- 3. Evidence of ledge outcroppings on New Road will likely require blasting**
- 4. Homes on New Road in area of blasting are close to the road and have older foundations**
- 5. Significantly longer construction time and impacts to neighborhood**
- 6. Significantly higher construction costs and therefore costs to benefitting residents**

Pros and Cons of Low Pressure Sewers

Pros:

- **Reduce the cost per foot of the areas raised due to:**
 - **Shallower sewer (force main is 4-5 ft deep)**
 - **Time to construct and material costs reduction**
- **Reduce the impact to entire project area (reduces restoration costs)**
- **Will reduce construction time**
- **Reduces the amount of clean dry backfill required**
- **Will result in a significantly lower assessment**
- **Cost of lateral for pumps is lower and the route more flexible**
- **Will provide basement level access to sewers**

Cons:

- **Will require all homes to pump up to the sewer**
- **Pumps are owned, powered, and maintained by home owners**
- **Pumps generally cost around \$4,000 plus installation**
- **These are powered by electricity – lose power means lose pump unless on a back-up generator**
- **Systems generally have a storage capacity equal to a day – this has options**

Preliminary Project Specifics:

Low Pressure Sewer Project:

- 1. Approximately 1200 ft of sanitary main**
- 2. 3 manholes (2 for clean-out, one for connecting to existing gravity sewer)**
- 3. 18 service lateral stubs**
- 4. Depth of mainline approximately 4.5 ft**
- 5. Road will be partially closed during construction (in construction zone)**
- 6. Construction timeline estimate – approximately 2-3 weeks**
- 7. Temporary pavement over disturbed roadway**
- 8. Complete road overlay commensurate with other roadway projects (Public Works Department – likely Fall 2017 or Spring 2018)**

Current Project Area



Work completed to date:

- 1. Performed soil borings to identify presence of ledge rock, soil types, and ground water depth**
- 2. Identified and evaluated options for the sewer – gravity versus low pressure**
- 3. Prepared preliminary design**
- 4. Met with LPS representative (eOne vendor) to evaluate their system and get their design assistance**
- 5. Spoke to numerous municipalities that have LPS systems to determine pros and cons**
- 6. Prepared preliminary cost estimates – both internally and via local contractor**
- 7. Prepared Public information meeting presentation and materials**

Assessment Estimate

Sewer Construction Budget Estimate (mainline and lateral stubs):

Local Contractor Estimate	\$163,000
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Soft Costs:

Field Survey	By TOA Engineering
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Design	By TOA Engineering
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Borings (Actual)	\$1,820
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Number of properties serviced 18 (*)

(note: 50 and 51 School St. paid assessments when they connected and therefore would likely not be required to pay a full assessment)

Estimated Assessment per property=(\$163,000/16) or (\$163,000/17)

\$10,190 to \$9,590

Note: these are only estimates – it is impossible to determine with confidence what the true costs will be until the project is bid

Other Costs

Other costs incurred at time of connection (*):

Connection Charge	\$2500 (currently)
Connection Cost (to contractor hired by homeowner)	\$3000 - \$6000 (**)
Annual Sewer Use Fee	\$350/yr/home
Sewer permit fee	\$50

(*) Note: These costs occur at the time of connection from house to Town sewer and are the current fees, subject to AWPCA revision

() The cost to connect the lateral stub to each residence varies depending on several factors including length, impediments such as trees and rock, landscaping, and restoration requirements**

NOTE: Residents are not required to connect just because there is sewer available

Possible Project Schedule

- **Finalize Design** **December 2016**
- **Prepare Bid Package and Bid the Project** **January 2017**
- **Review Bids** **January 2017**
- **Public Information meeting** **February 2017**
- **Award Project** **March 2017**
- **Begin Construction** **Spring 2017**
- **Complete Construction** **Spring 2017**

Frequently Asked Questions

Q: If the sewer is installed, am I required to connect?

A: Whereas the AWPCA regulations have certain stipulations concerning this, unless the FVHD requires connection due to failure, you will not be required to connect

Q: What is the assessment and how is it determined?

A: The assessment is a fee charged by the AWPCA to recover the cost of the design and construction of the mainline sewer. It is paid by the property owners whose properties have direct access to the sewer on a pro-rated basis. Historically in Avon this has been determined via a straight-line method such that the costs are divided by the number of benefitting properties with considerations for zoning or other particular factors

Q: What is a typical assessment amount?

A: There is no “typical” – each project has its own costs and unique variables. A couple of

examples: Verville Road sewer – 2008 – approximately \$8,000 per property

Deepwood Drive – 2010 – approximately \$12,000 per property

Recent bids (Paperchase, Winding Lane) – 2016 – likely around \$20,000 per property

Frequently Asked Questions

Q: If I decide to connect what will my costs be?

A: Connection charge = \$2,500, Permit Fee = \$50, Hire a licensed contractor to connect from lateral stub to the home = variable; pump system with controls = \$4,500 (has options and must comply with TOA specifications)

Q: Who will own the pump system?

A: Each resident will own their system

Q: What will I do if my pump system has a problem?

A: It will be each owner's responsibility to manage their system (as they do now) If there is enough interest, the AWPCA will assist with developing an on-call maintenance program with a system representative

Q: How will the Town determine where to locate my lateral connection?

A: Town staff will attempt to meet with every property owner during the final design stage. The purpose of the meeting will be to discuss lateral route options so we can locate the lateral on the design plans

Q: What is the next step?

A: The AWPCA has to decide which direction they would like to pursue – Engineering will provide services accordingly

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Questions?