

Town of Amherst
Department of Public Works
2014 Road Reconstruction
Presentation



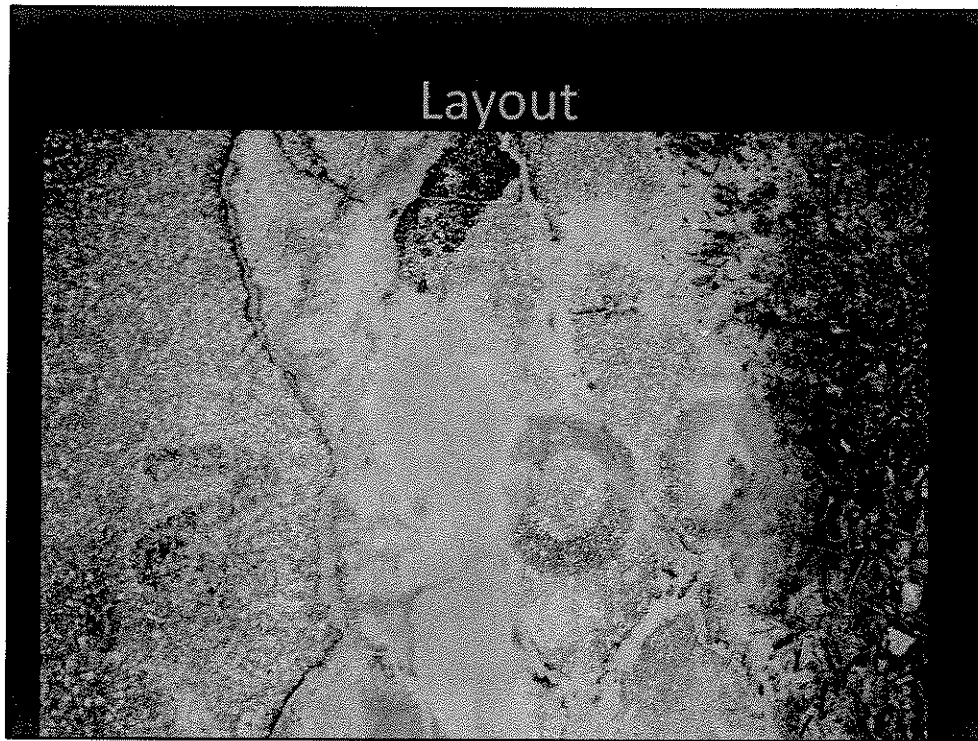
Presented by Director Bruce W. Berry
February 24, 2014

History Recap

- 2010 - Amherst St & Spring Rd
- 2011 – Mack Hill Rd, Mont Vernon Rd, & Austin Rd.
- 2012 – Arrow Lane, Boston Post Rd, Seaverns Bridge Rd, Courthouse Road, General Amherst Rd, Lyndeborough Rd, Middle St, Pierce Ln, Thornton Ferry Rd I, Woodbine Ln
- 2013 – Boston Post Rd, Corduroy Rd, Cross St. Lyndeborough Rd, Middle St, Pine Rd, Walnut Hill Rd.
- This represents an almost halfway point (11.44) of the 22.5 mi identified from the bond.

15 million dollar bond passed in 2010

We have finished four construction seasons and repaired about half if the 22.5 miles



The process starts with centerline measurements in 50' increments and a survey nail usually in the middle of the plus sign

Layout Example continued

County Road (Cricket Corner - Upham)

Station	Field Notes
0+00 - 0+75	Hold existing centerline grade
0+75 - 5+28	Construct 453 linear feet of 6" rigid HDPEP underdrain, 12' left of centerline
2+25	hold utility pole 35-15
4+55	hold utility pole 28-16
0+75 - 6+50	Full box reconstruction, maintain existing centerline elevation, remove 22" of material 13' left and right of centerline. Provide a minimum of 2.5% cross slope in compacted subgrade. Provide 12" if 304.2 bank run gravel, crown minimum of 2.5% and compacted 95+%. Provide 6" of 304.4 crush stone (fine gradation) crown 2.5% and compacted to a minimum of 95%.
4+00 - 6+00	increase 304.2 from 12" to 18" maintaining 2.5% crown and 95% compaction, shoulder to shoulder
5+28	remove 30' 15" aluminum culvert pipe and replace with 30' of HDPEP w/masonry rubble headwalls
6+75	GPS 42° 50' 49.63"N - 71° 35' 14.69" W end of work

From those markings comes all the field notes highlighting the upgrades to be done.

Layout continued

Cost estimate worksheet

Item	Description	Unit	Quantity	Unit Price	Price
201.4	Removing Stumps	EA	2	\$50.00	\$ 100.00
202.41	Removal of Existing Pipe 0-24" Diameter	LF	30	\$10.00	\$ 300.00
203.1	Common Excavation	CY	1200	\$8.00	\$ 9,600.00
203.6	Embankment In Place	CY	60	\$10.00	\$ 600.00
214	Fine Grading	SF	18000	\$0.10	\$ 1,800.00
304.2	Gravel	CY	750	\$21.00	\$15,750.00
304.32	Crushed Gravel for Shoulder Leveling	TON	50	\$16.00	\$ 800.00
304.4	Crushed Stone (Fine Gradation)	CY	350	\$20.00	\$ 7,000.00
403.11	Hot Bituminous Pavement,(2.5" binder	TON	250	\$70.00	\$17,500.00
403.11	Hot Bituminous Pavement,(1.5" wearing	TON	150	\$70.00	\$10,500.00
570.415	MRM Header for 15" Pipe	EA	2	\$650.00	\$ 1,300.00
603.8515UD	15" Plastic Pipe (Smooth Interior)	LF	30	\$35.00	\$ 1,050.00
605.56	6" Perf Underdrain	LF	450	\$16.00	\$ 7,200.00
619.1	Maintenance of Traffic	LS	1	\$3,000.00	\$ 3,000.00
628.2	Sawed Bituminous Pavement	LF	50	\$1.00	\$ 50.00
632.0105	Retroreflective Paint Pave. Marking 4" Line	LF	1350	\$0.16	\$ 216.00
632.3112	Retroreflective Paint Pave. Marking 12" Line	LF	30	\$5.10	\$ 153.00

The item # and description are universal language from the NHDOT Road and Bridge book

The Unit is how the item is figured and the quantity originates from the road markings and field notes

The unit price and price will be blank in the bid document.

2014 Reconstruction Road Projects

- Boston Post, Amherst St. to New Boston Rd. 3,015'
- County Road, Cricket Corner to Upham 675'
- Cricket Corner Rd, Boston Post to County 3,100'
- Cross St, Middle to Boston Post 340'
- Danbury Circle 3,630'
- Foundry St, Boston Post to Christian Hill 1,300'
- North Meadow Rd, 2,495'
- Merrimack Rd. (mill & fill), Boston Post to 122 (6,800')
- Boston Post (6,800') and Foundry (1,100') sidewalk

The quantity estimates for this summers road reconstruction is estimated at \$1,811,843.78 bond work and \$678,876 town budget

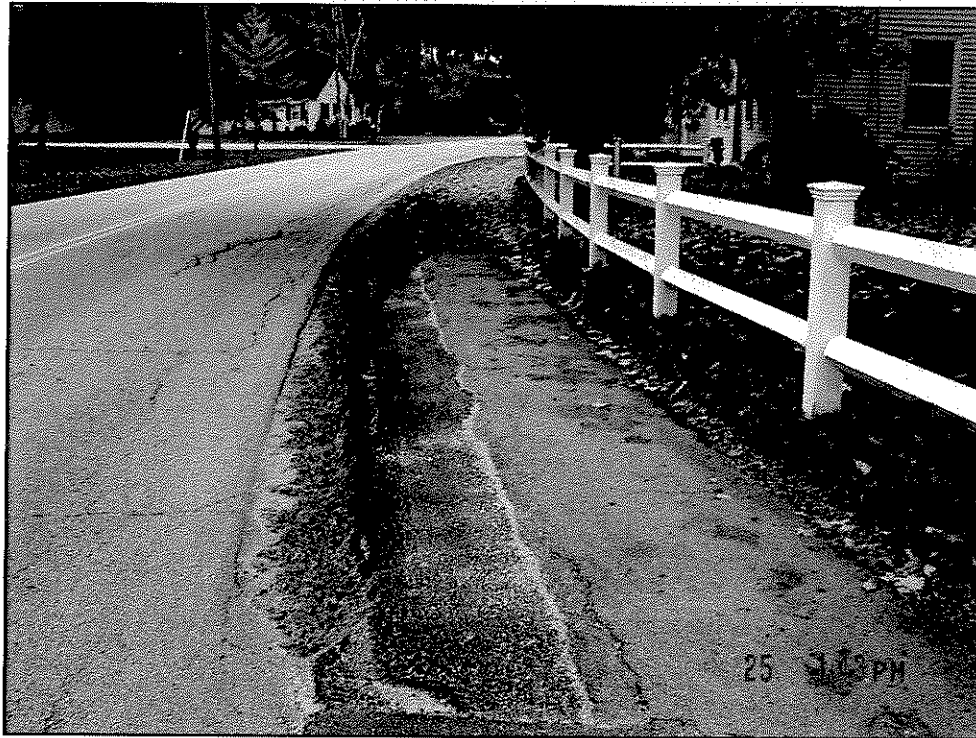
Center of Town Work includes

- New water mains (work done by others)
- 1,505 feet of 15" HDPE culvert pipe
- 910 feet of 18" HDPE culvert pipe
- 675 feet of 24" HDPE culvert pipe
- 24 – 4' new catch basins
- 4 – 4' drain manholes
- 6 – 5' drain manholes

The center of town is flat and existing leaching basins are only marginally successful. Here is a list covering the high points of the drainage work in the center of town.

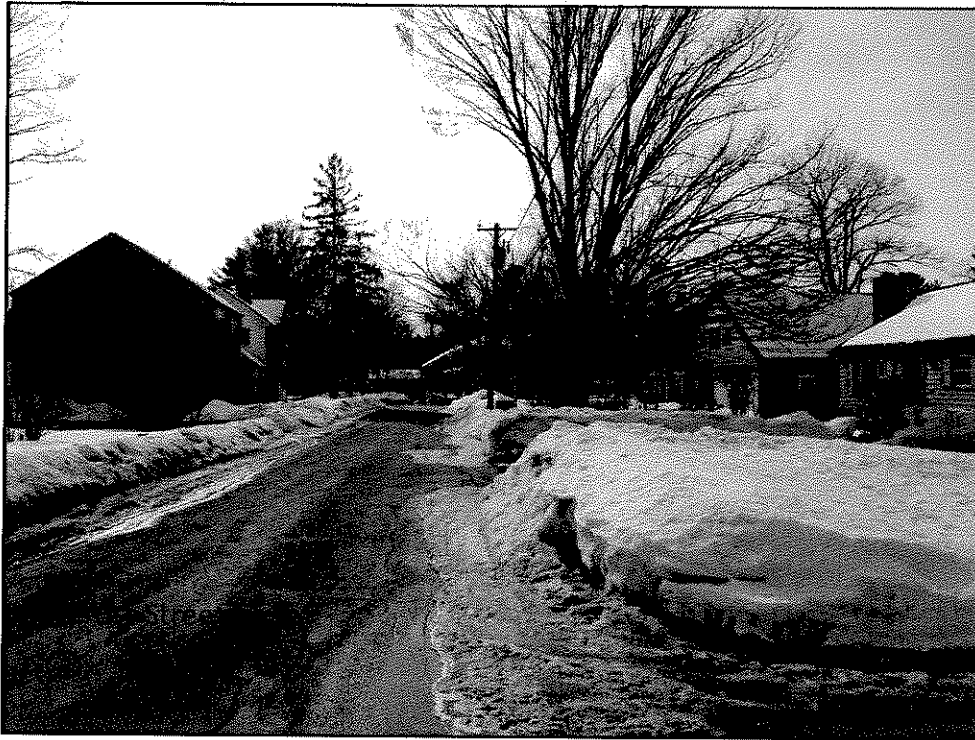


A quick example after a rain event or snowmelt you have all observed.

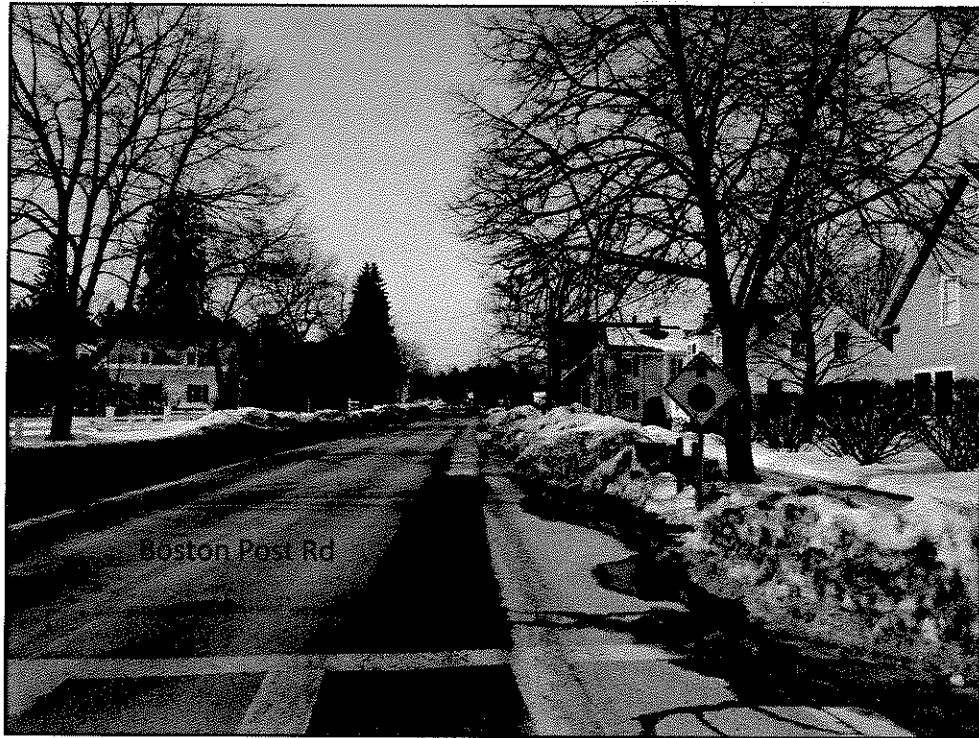


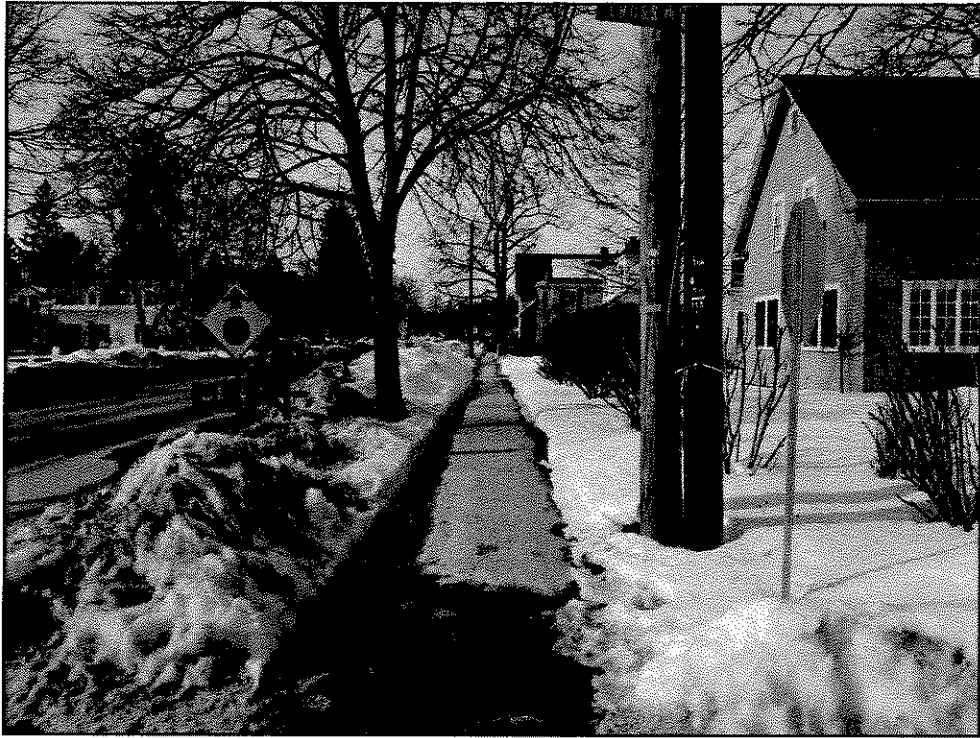


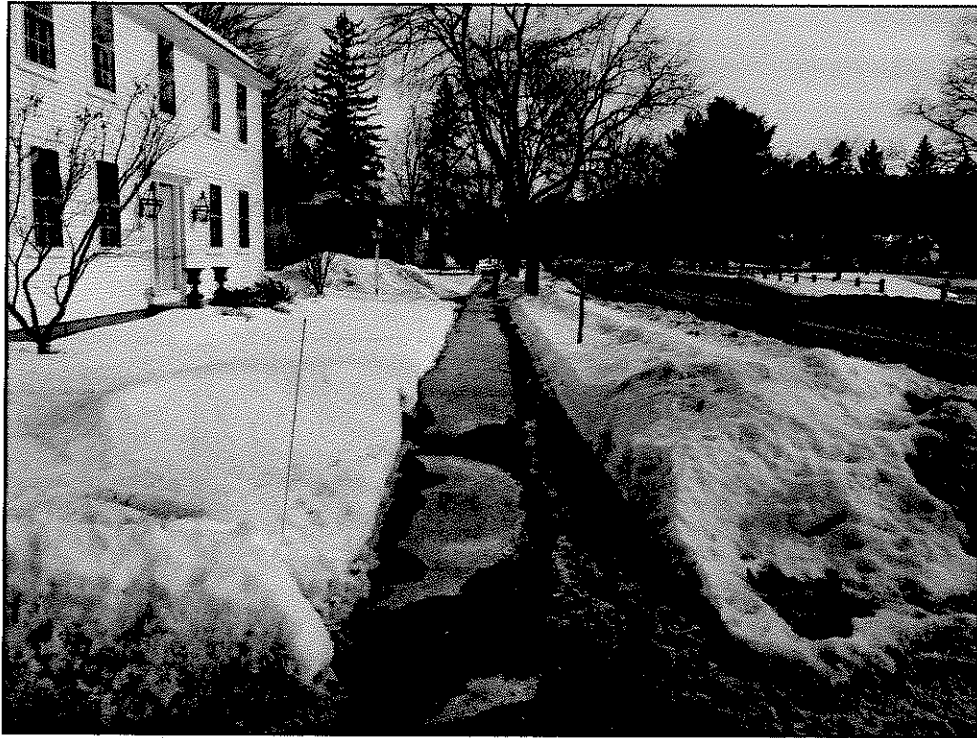
Boston Post, from Amherst Street to New Boston Road
Cross Street, from Middle St to Boston Post
Foundry Street, from Middle Street to Christian Hill

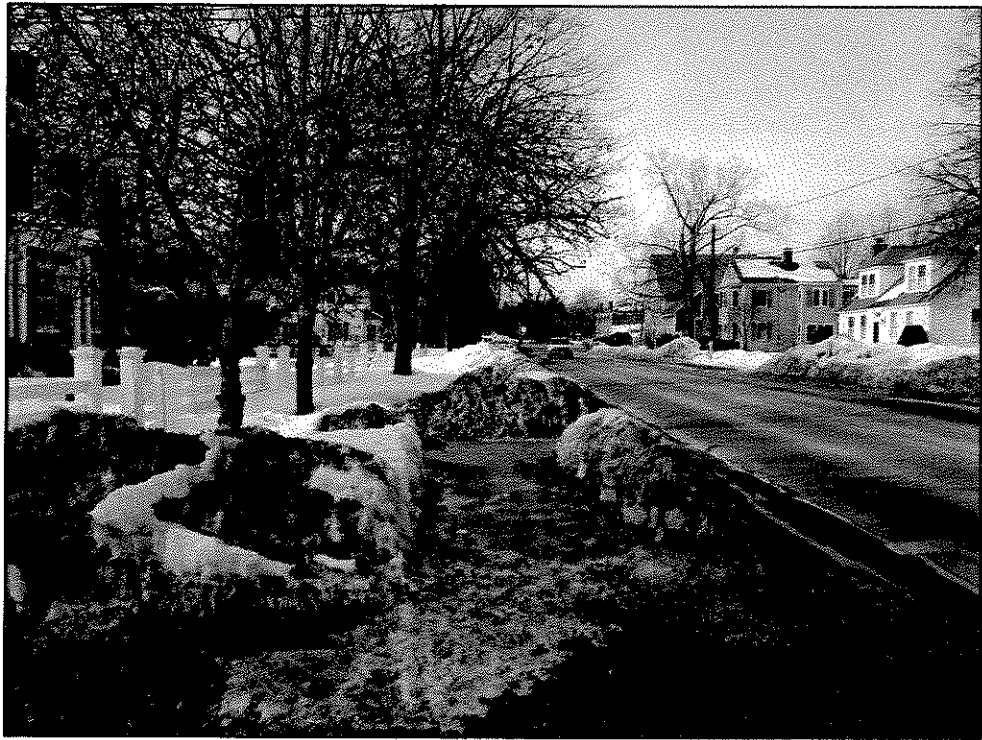






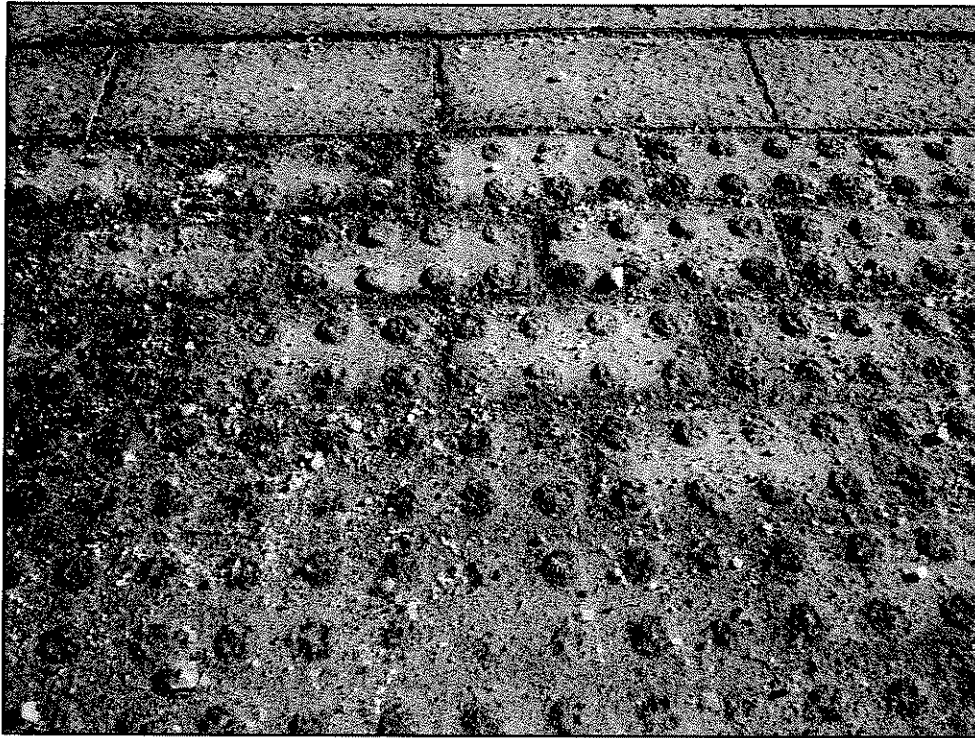


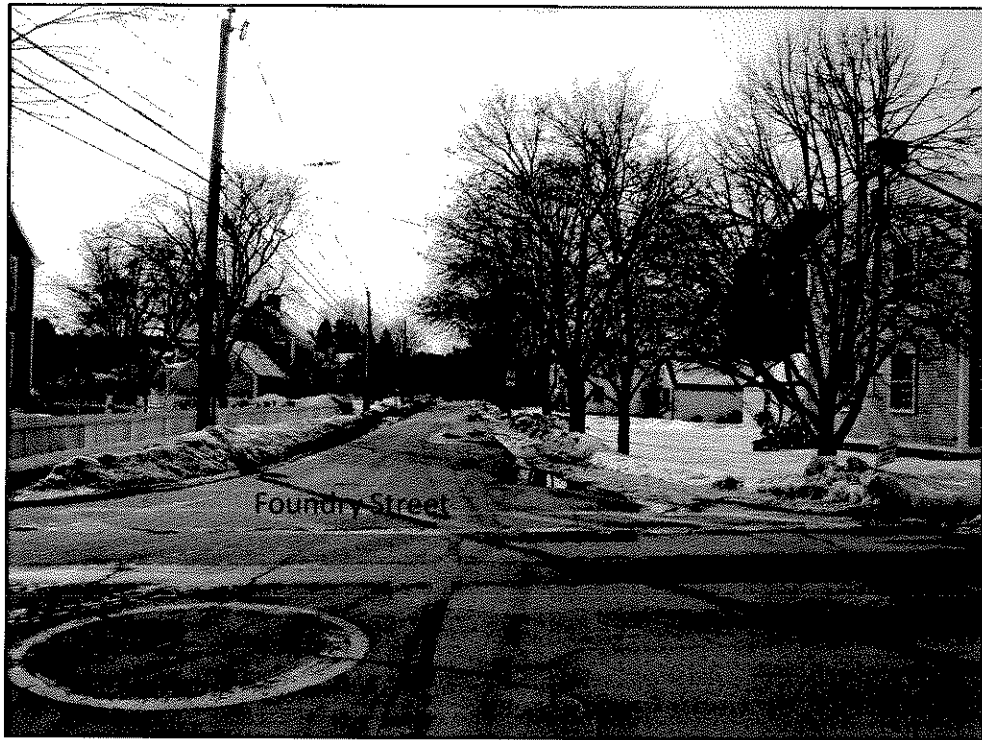


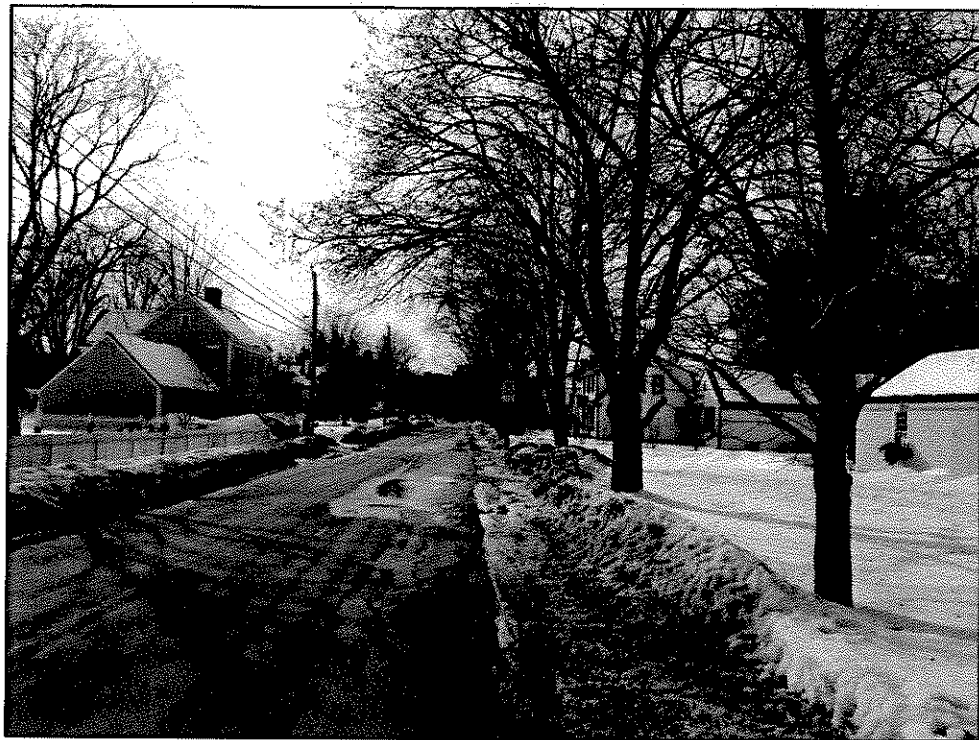




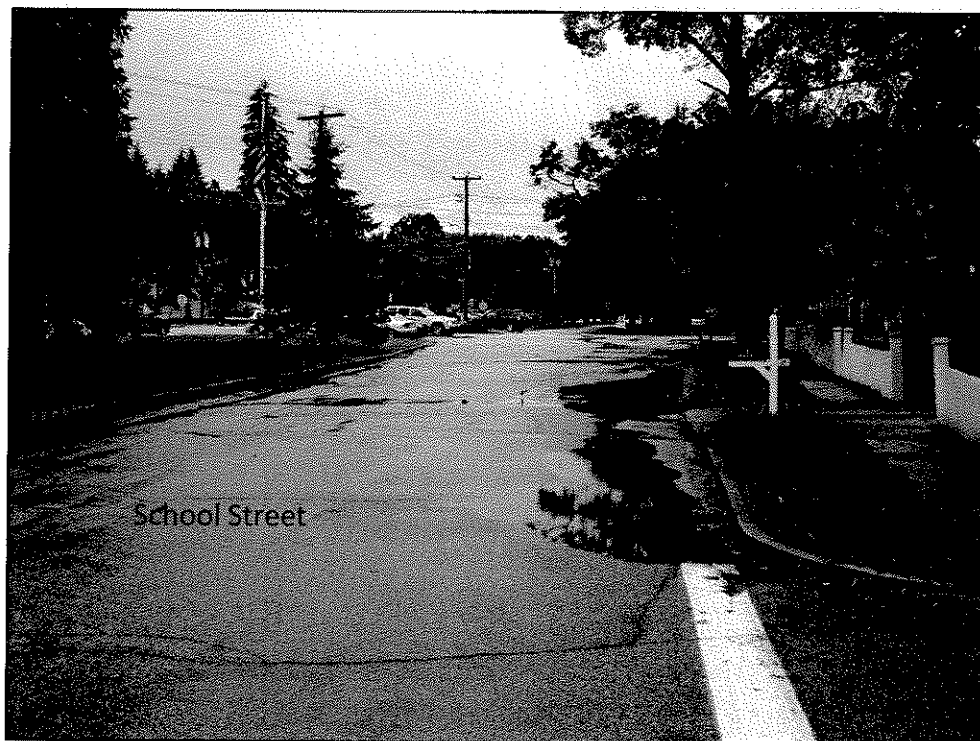








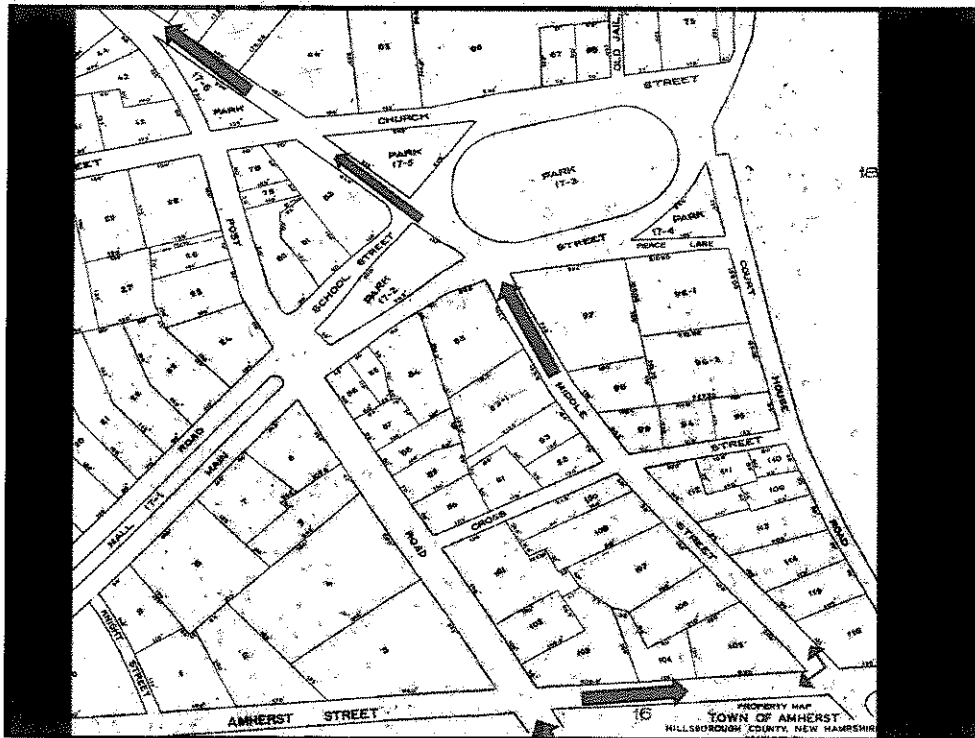




2014 Reconstruction Work cont. Center of Town "Pitfalls"

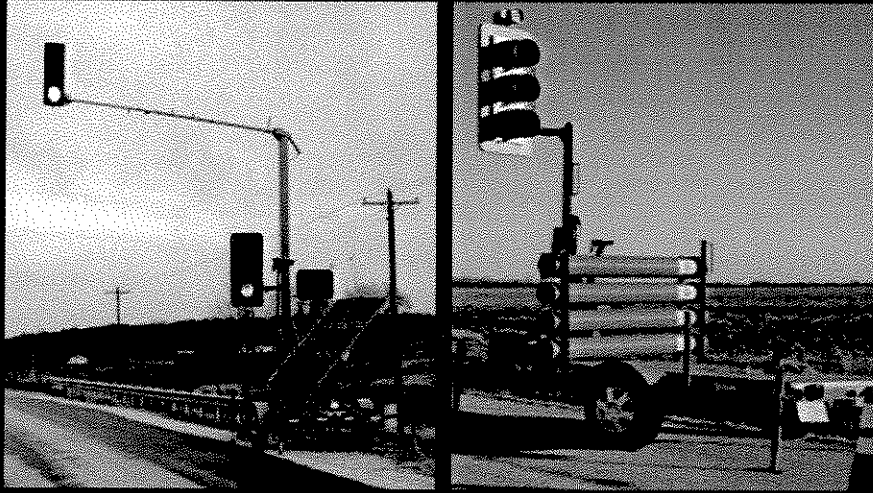
- Pennichuck Watermain replacements.
- Extremely tight construction window for Foundry and parts of Boston Post. (July 5th – Aug 25th).
- The 4th of July parade.
- To make the above work, road closures & detours are a necessity up to and including temp 4 way traffic lights at Middle St. and Amherst St.
- Manchester Road Bridge conflict

For our two month window, this can only be tackled by a company with sufficient resources and it is not without other conflicts.



The center of town is constructed from a sandy road base. We will need to maintain access for property owners, Moulton's and Mike's garage, but we need to detour as much of the through traffic as possible.

Possible Temporary Options



I have reached out to East Coast Signals who recommends "four way fire preemption, four way signal (2 in each direction) with vehicle detection. They have recommended span wire supported by wooden poles. 3 month rental w/electricity is \$17,700. I'm looking for two months.

I have met with the following

- School District
- Bus Company
- Pennichuck Water
- Safe Routes to School
- Amherst Board of Selectmen

I am scheduled to meet with

- Historic District Commission

Leading up to this presentation a dialogue has been started

Process

- The Bid was advertised and posting February 25th
- Mandatory “Pre-bid” meeting here on March 7th.
 - This will include T.F. Moran, Pennichuck, rep from SAU, and Bus Company
- Bids due back and will be opened March 18th.
- Recommendation to award will be March 24th at BOS meeting.

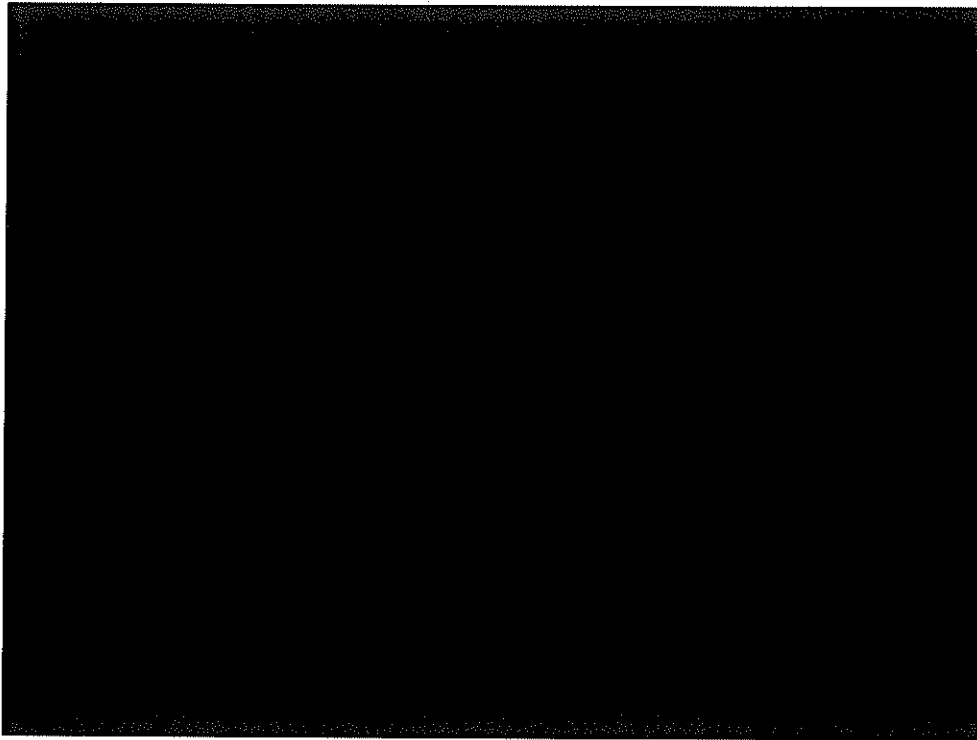
Show document

Process continued

- Information letters will go out to all affected residents describing the process.
- 5 individual information meetings will be held. One for each road or neighborhood.
- Center of Town has specific completion dates to hit built into contract.
- Specific scheduling of remaining roads (timeline) will be submitted for approval at the pre-construction conference.

Questions





DPW Equipment (last Thursday)

• 1996 (Tr-1)	6X2	Sander, Plow, Wing	Transfer Station
• 2008 (Tr-2)	International 6X2	Sander, Plow, Wing	Route
• 2012 (Tr-4)	International 6X2	Sander, Plow, Wing	Route
• 2011 (Tr-5)	Ford F-550 4X4	Sander and	Route
• 1999 (Tr-6)	International 6X2	Sander, Plow, Wing	Route
• 2008 (Tr-8)		Sander, Plow, Wing	Route
• 2006 (Tr-9)	Ford F-550 4X4	Sander and Plow	Route
• 2003 (Tr-10)	International 10X2	Sander, , Wing	Route
• 2005 (Tr-15)	International 6X2	Sander, Plow,	Route
• 2005 (Tr-14)	International 6X2	Sander, Plow, Wing	Route
• 2012 (Tr-17)		Sander, Plow, Wing	Route
• 2008 Rec 1	Ford F-350	Plow	shoveier
• 2004 Rec 3		Sander and Plow	Route
• 2012 Zoning	F-250	Plow	Reserve
• 2011	Ford F-350	Plow	Foreman's vehicle
• 2000		1 1/3 yd bucket	backup plow / bucket loader
• 2008	Loader	2 ¾ yd bucket	Load sanders
• 1996	Grader	Plow and	Backup plow / wing back
• 2007	Massy Tractor	Plow	Town parking lots, Schools
• 2001	Trackless	Blower, Sander	Route (Sidewalks & Roads)

Bridges



Bridge Update

Manchester Road



Horace Greeley Road



Update continued

- Bond passed in 2011
 - Engineering expenses to date have come from the operating budget.

• 2011	\$ 6,429.75
• 2012	\$ 85,027.55
• 2013	<u>\$ 67,679.72</u>
	\$159,137.02
- We are approved for 80% reimbursement of engineering fees after approval of final plans by NHDOT.
- And additional \$125,000 is required to reach final plans

Schedule

- Both bridges require easements and wetland permits.
- To obtain the above, we need to;
 - Go before Amherst Historic District March 20
 - after which submit for approval of “Effect Memo” from NHDOT Cultural Resource Commission

Bid Plan Schedule

- Manchester Road
 - Preliminary Plans March 28th
 - Final Plans April 25th
- Horace Greeley Road
 - Preliminary Plans March 7th
 - Final Plans May 30th

Questions



