

The background features several pushpins of varying colors (white, grey, black) on the left side, with their shadows cast onto the surface below. The shadows are dark and elongated, creating a sense of depth and movement.

2013 Paving Program

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**Commissioner of Public Works &
Interim Superintendent of Highways**

26 June 2013

Agenda

- ☒ How did we create the annual Paving Plan?
 - ➔ The process – its not just about pavement age!
 - ➔ Pavement condition assessments on Town roads
 - ➔ Other considerations we evaluate
- ☒ Why do we repave our streets?
- ☒ Our 2013 Paving Plan
- ☒ What's a Section 284 Agreement? Why is it needed?

Why do we repave? – A dental analogy

Great looking smile...

- But what will the dentist say?



Why do we repave? – A dental analogy

What your dentist sees

- Stress fractures from teeth grinding
- A small cavity on the distal surface of tooth 19
- Enamel erosion



Why do we repave? – A dental analogy

What your dentist sees

- Stress fractures from teeth grinding
- A small cavity on the distal surface of tooth 19
- Enamel erosion



Your dentist sees more!

Why do we repave? – A dental analogy

How typical people see roads

- Nice suburban road
- It's not too bumpy – the tires aren't "thumping"
- There aren't any potholes



Why do we repave? – A dental analogy

How we see roads



- Longitudinal cracking where a seam failed
- Ponding water and drainage issues
- Reflective cracking from underlying pavement joints
- Rutting in the wheel tracks
- Raveling where asphalt binder has deteriorated

Why do we repave? – A dental analogy

How we see roads



- Longitudinal cracking where a seam failed
- Transverse cracking
- Reflective cracking from underlying joints
- Rutting in the wheel tracks
- Raveling where asphalt binder has deteriorated

**We see pavement differently;
we see more detail!**

Why do we repave? – A dental analogy

Your dentist's job

- Your semi-annual appointment is really
**PREVENTATIVE
MAINTENANCE**
- X-rays & exam is a
CONDITION ASSESSMENT
- Cleaning, polishing, plaque removal, etc. are surface treatments
- **GOAL: Improved health without expensive reconstruction**



Why do we repave? – A dental analogy

How this relates to paving



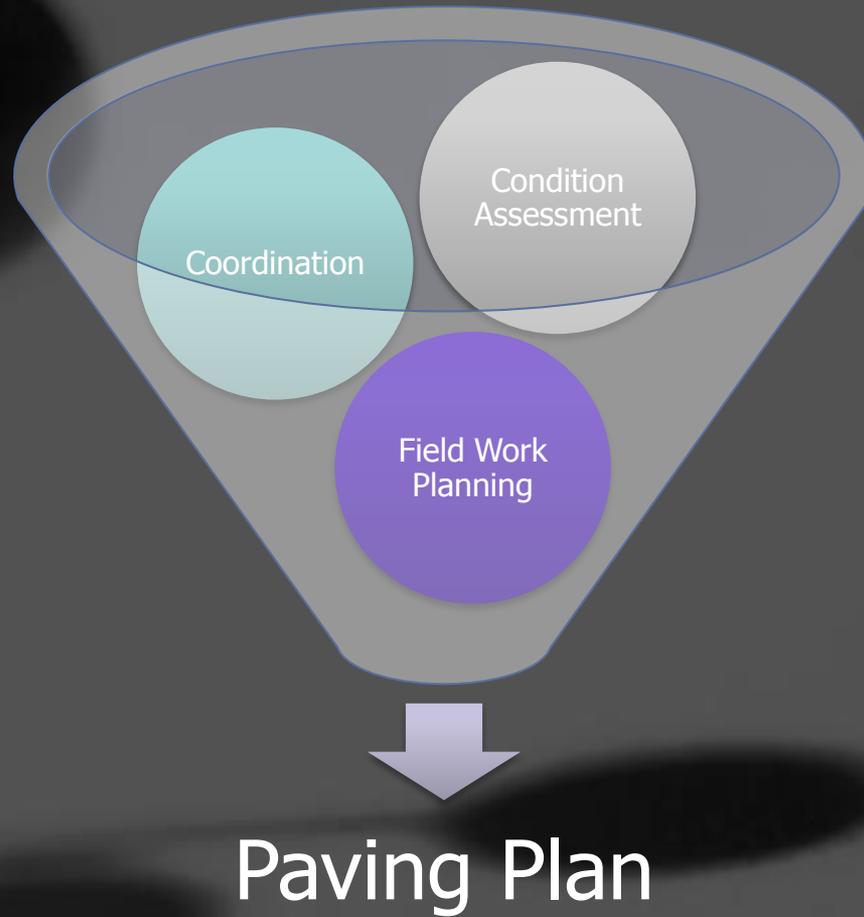
- Our repaving program is PREVENTATIVE MAINTENANCE for the Town's 175 mile road system
- We use a standardized CONDITION ASSESSMENT
- **GOAL:** To maintain our high quality road system cost effectively by avoiding major reconstruction

Our root canal...



An expensive and painful fix!

How was the plan developed?



How was the plan developed?

☒ Update Pavement Condition Assessment

- Intent to only review low-rated roads; Highway Dept. re-assessed condition of all Town streets in April
- Condition Assessment is the foundation of street selection

☒ Coordination

- DPW - water & sewer projects and problem areas
- Capital projects
- Planning Dept. – New developments
- National Grid Gas and Electric
- Bike & Pedestrian Priorities – Complete Streets

How was the plan developed?

☒ Field Work Planning

- Confirmation of street condition and priority
- Assess drainage & adjoining grades – milling required?
- Measurement of streets and planned work areas

Pavement Condition Assessment

☒ PASER – Pavement Surface Evaluation & Rating

→ Developed by University of Wisconsin – Madison

→ Assesses pavement surface condition based on four categories:

◎ Surface Defects – raveling, flushing, polishing

◎ Surface Deformation – rutting, frost heave, settling, shoving, etc.

◎ Cracking – transverse, longitudinal, alligator, etc.

◎ Patches & Potholes

→ Uses a 10 point rating system – 1 = failed; 10 = new

It's not just pavement age!



Ratings based largely on frequency & significance of common surface defects



If we wait too long costs go up quickly



Pavement Condition Informs Maintenance Need		Cost Scale
Ratings 9 & 10	No maintenance	
Rating 8	Little maintenance	
Rating 7	Routine maintenance (e.g., crack sealing, patching, etc.)	\$
Ratings 5 & 6	Preventative treatments - thin overlay (< 2"), etc.	\$\$\$
Ratings 3 & 4	Needs strengthening – milling, patching, reclamation, structural overlay (> 2"), etc.	(3 to 10) x \$
Ratings 1 & 2	Full reconstruction	(40 to 50) x \$

If we wait too long costs go up quickly

Goal:

Maintain good conditions & catch problems early



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Ratings 5 & 6	Preventative treatments - thin overlay (< 2"), etc.	\$\$\$
Ratings 3 & 4	Needs strengthening – milling, patching, reclamation, struct. overlay (> 2"), etc.	(3 to 10) x \$
Ratings 1 & 2	Full reconstruction	(40 to 50) x \$

Regular maintenance = better roads & lower costs

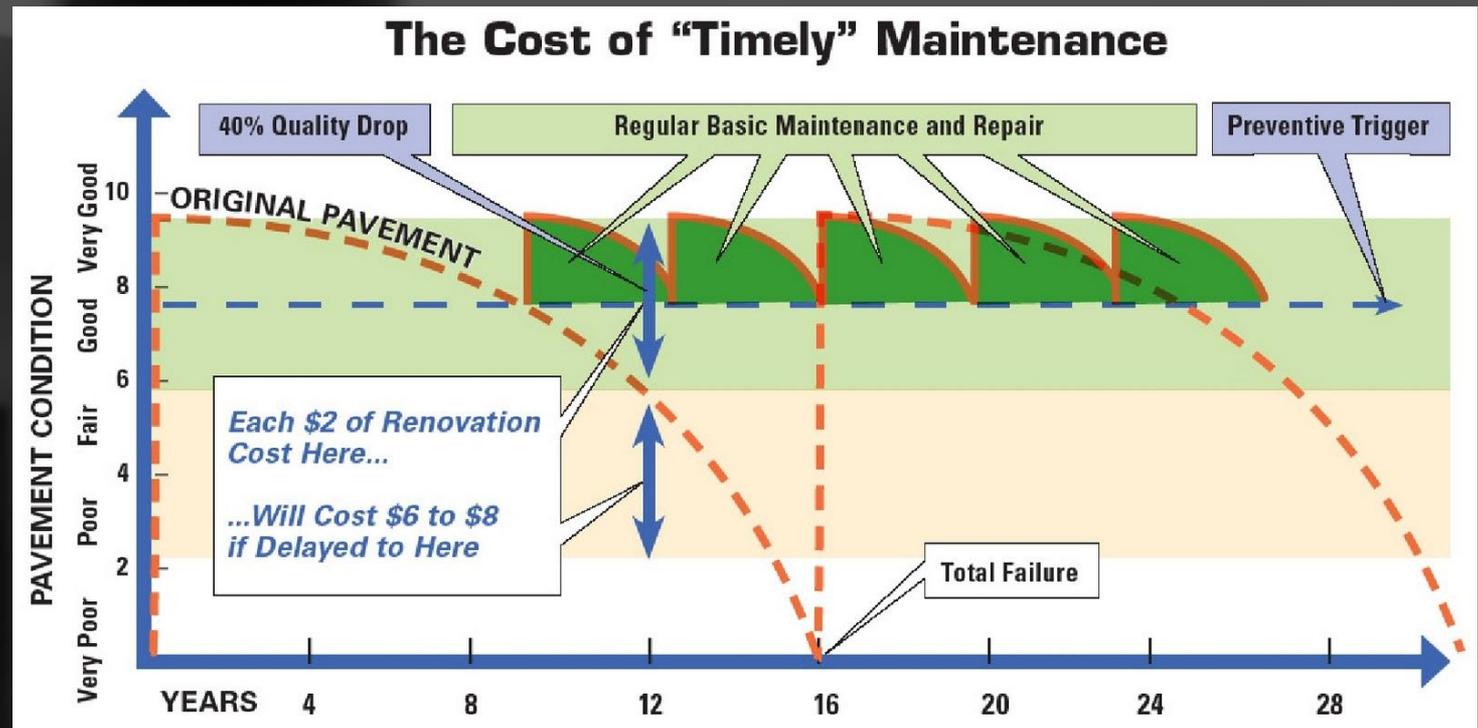
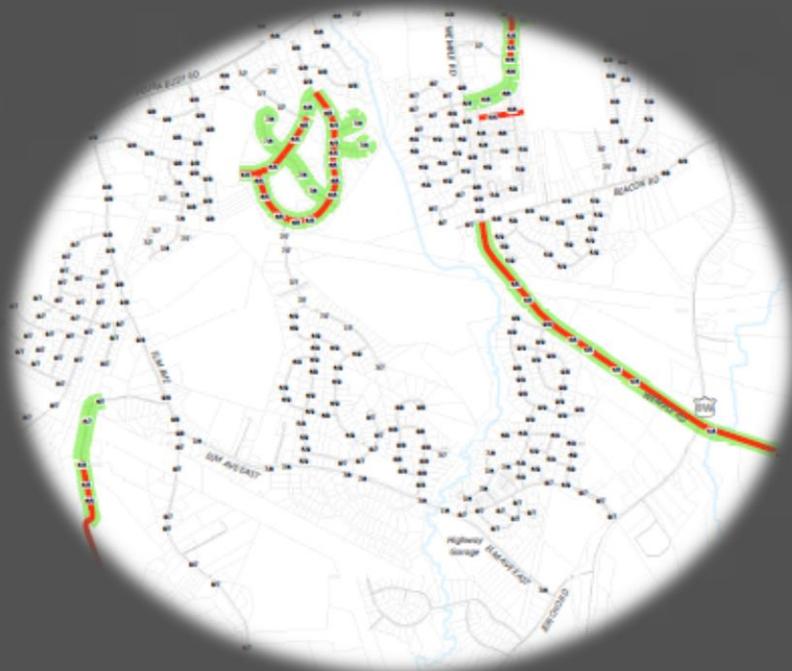
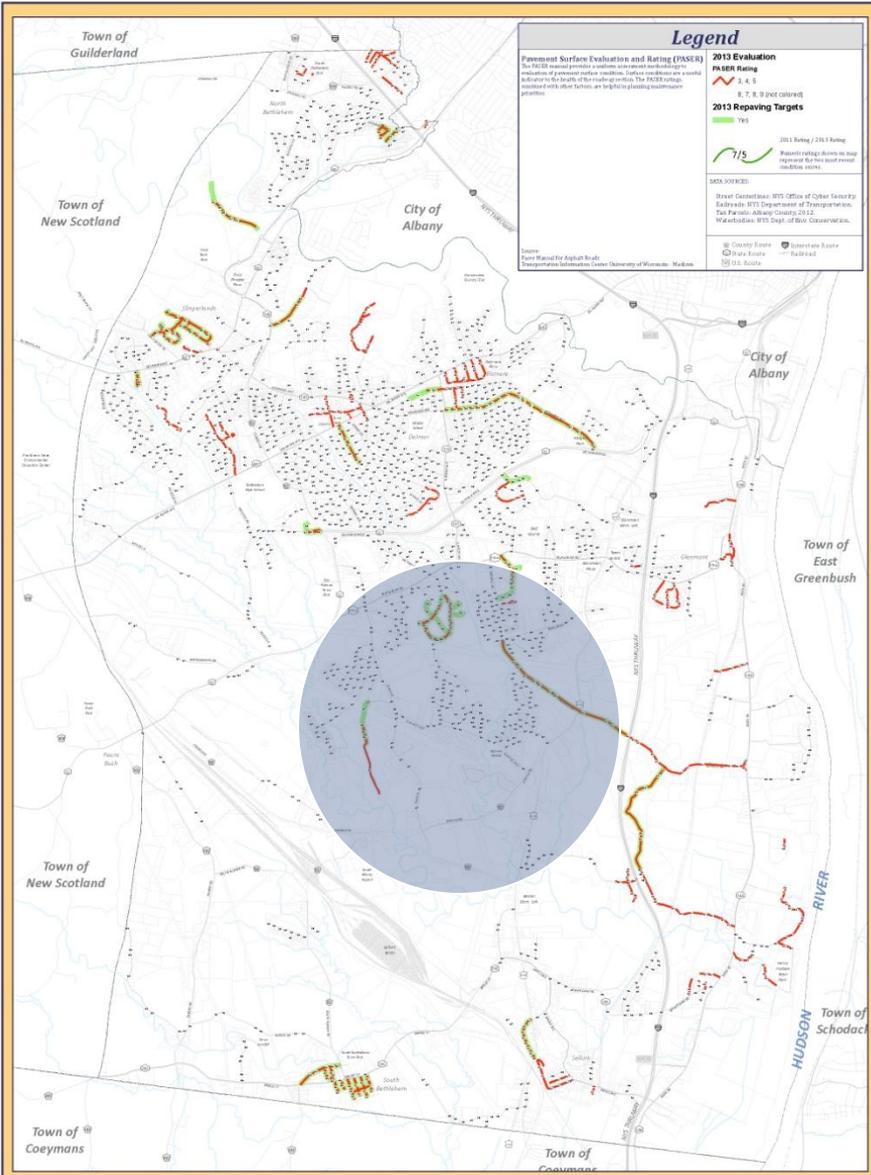


Image Source: Atlantic Southern Paving

2013 Paving Schedule Map



Legend:

Red – Pavement Condition 3, 4 or 5
 Green – Target for 2013 Paving



2013 Proposed Paving Schedule
 Town of Bethlehem - County of Albany - State of New York

Revised: 5/2013

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DISCLAIMER:
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SCALE:
 MAP SCALE: 0.0 0.5 1.0 Miles
 0 1,000 2,000 4,000 Feet
 1 Inch = 2,000 Feet

Paving Program Summary

Street	Begin	End	Length	Thick	B/P	Cost
Surrey Mall	New Scotland Rd.	Stockbridge Rd.	2,300 ft.	1.25 in.	N	\$24,900
Middlesex Dr.	Surrey Mall	Cul-de-sac	3,150	1.25	N	\$34,100
Eustis Ridge	Surrey Mall	Middlesex Dr.	300	1.25	N	\$3,300
Stockbridge Rd.	Font Grove Rd.	Dead End	1,850	1.25	N	\$20,000
Mahican Ct.	Stockbridge Rd.	Cul-de-sac	550	1.25	N	\$6,000
Bittersweet Ln.	Stockbridge Rd.	Stockbridge Rd.	1,800	1.25	N	\$19,500
New St.	Bittersweet Ln.	Dead End	125	1.25	N	\$1,400
So. Helderberg Pkwy	New Scotland Rd.	Dead End	1,175	1.25	N	\$10,600
Yale Ave.	Krumkill Rd.	Dead End	800	1.50	N	\$6,900
Milton St.	Yale Ave.	Lee Ave.	425	1.50	N	\$3,700
Lee Ave.	Yale Ave.	Dead End	475	1.50	N	\$4,200
AND SO ON, AS SHOWN IN THE SECTION 284 AGREEMENT...						
			14.75 mi.			\$802,900

Section 284 Agreement

- ☒ Requirement of NYS Highway Law
- ☒ NYS Highway Law – Section 284: Expenditures for repair and improvement of highways
 - ➔ Requires a written agreement signed by a majority of the Town Board and Superintendent of Highways for:
 - ◎ Expenditure of local tax money
 - ◎ Expenditure of state funds (CHIPS)
 - ◎ For repairs, improvements or renewal of highways
 - ◎ Identifies locations, extent of work, and costs
 - ◎ Must be filed in Town Clerk's and County Highway Superintendent's office