

# 2014 PAVING PROGRAM

Brent Meredith

Town of Bethlehem  
Superintendent of Highways

14 May 2014



# AGENDA

ý Why do we repave our roads?

ý How did we create the annual Paving Plan?

è The process – its not just about pavement age

è Pavement condition assessments on Town roads

è Other considerations we evaluate

ý 2014 Paving Plan

ý Section 284 Agreement

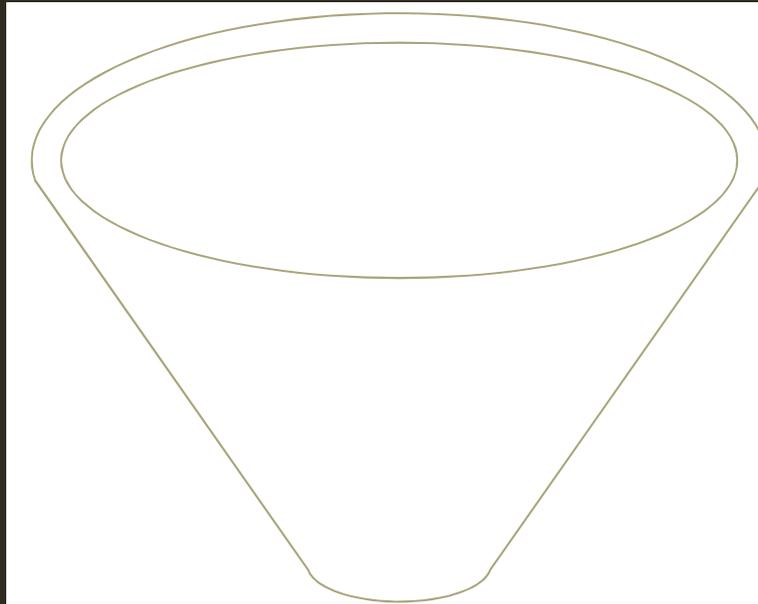
# WHY DO WE REPAVE?

## Paving Program

- Our Paving Program is part of the MAINTENANCE program for the Town's 175 mile road system
- Goal is to maintain our high quality road system at lowest cost and avoid major reconstruction



# HOW WAS THE PAVING PLAN DEVELOPED?



Paving Plan

# HOW WAS THE PAVING PLAN DEVELOPED?

## ý Pavement Condition Assessment

- è Highway Dept. formally re-assessed the condition of all 175 miles of Town roads in April 2013
- è Condition Assessment is the foundation of road selection for Paving Plan

## ý Coordination

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

## ý Field Work Planning

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

# PAVEMENT CONDITION ASSESSMENT

## ✓ PASER – Pavement Surface Evaluation & Rating

è Developed by University of Wisconsin – Madison

è 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

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

✓ Conducted Biennially by the same Highway Department crew to ensure the ratings are consistent

# PAVEMENT CONDITION ASSESSMENT



## How People Typically See Roads

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

# PAVEMENT CONDITION ASSESSMENT



## Upon Closer Inspection....

- 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

# 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

Goal:

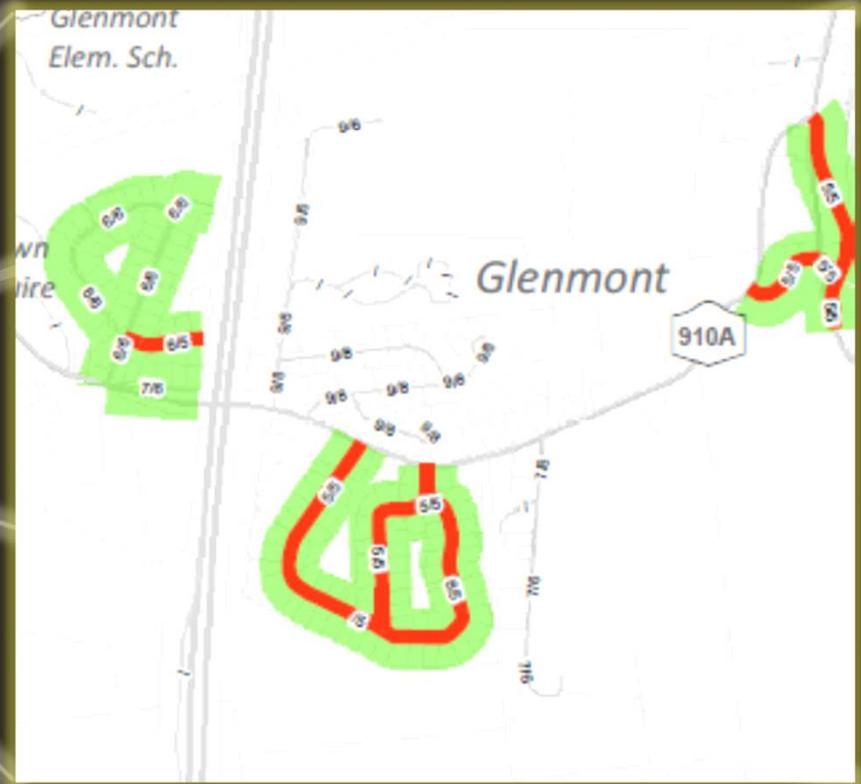
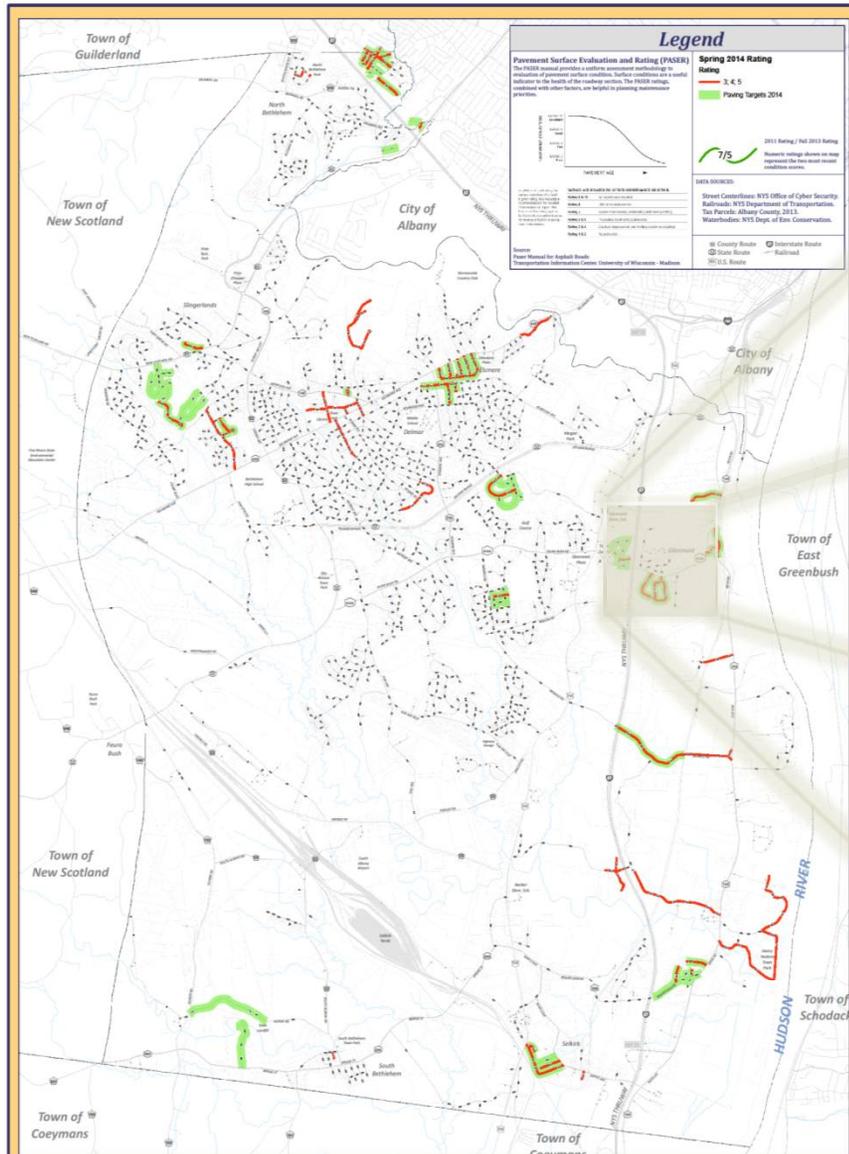
Maintain good conditions & find problems early



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, struct. overlay (> 2"), etc.	(3 to 10) x \$
Ratings 1 & 2	Full reconstruction	(40 to 50) x \$



# 2014 PAVING SCHEDULE MAP



## Legend:

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

**2014 Proposed Paving Schedule**  
Town of Bethlehem - County of Albany - State of New York

Rev. 5/2014

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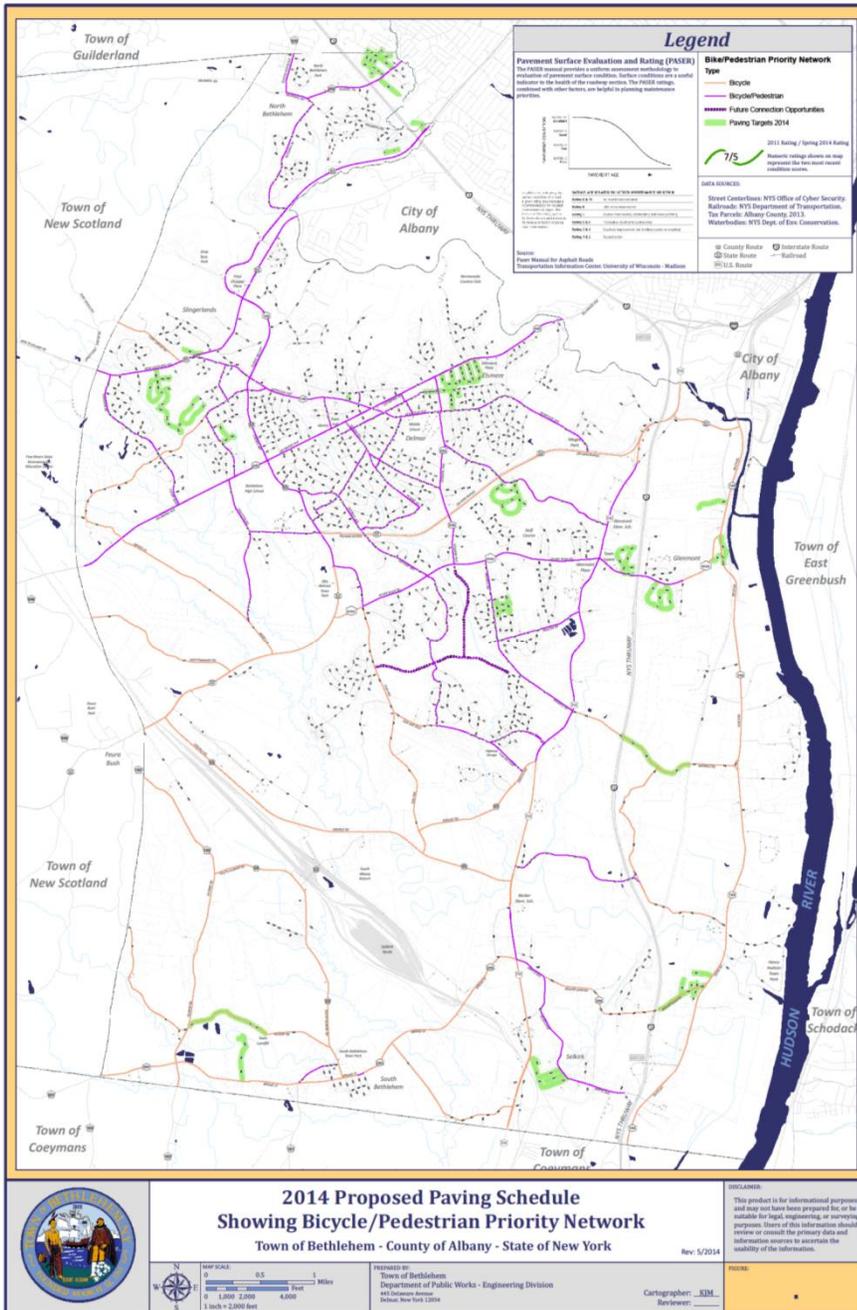
PREPARED BY:  
Town of Bethlehem  
Department of Public Works - Engineering Division  
915 Hudson Avenue  
Bethlehem, New York 12018

CARTOGRAPHY: KJM  
REVIEWER:

MAP SCALE: 0.5 1 Miles  
0 1 2 Kilometers  
0 1 2 Miles  
1 inch = 2,000 feet

FIGURE:

# BIKE & PEDESTRIAN CONSIDERATIONS



Legend:

Green – Target for 2014 Paving

Purple – Bike/Ped. Priority Network

Orange – Bike only Priority Network

# 2014 PAVING PROGRAM SUMMARY

Street Name	Start	End	Length (Ft.)	Depth (In.)	Cost
Mullens Road	New Scotland Road	its dead end	900	1.50	\$6,700
Southwood Drive	New Scotland Road	Thorndale Road	1,800	1.25	\$19,100
Northwood Court	Southwood Drive	its cul-de-sac	800	1.25	\$8,500
Thorndale Road	Southwood Drive	its dead end	2,650	1.25	\$28,200
Forest Hill Road	Thorndale Road	its dead end	1,320	1.25	\$14,000
Devonshire Drive	Forest Hill Road	its cul-de-sac	2,000	1.25	\$21,300
Western Avenue	Greenwood Lane	Devonshire Drive	3,275	1.25	\$34,800
Crystal Lane	Western Avenue	Greenwood Lane	2,375	1.25	\$25,300
Overlook Street	its dead end	its dead end	250	1.50	\$2,100
Hidden Hollow Road	Old Krumkill Road	its dead end	425	1.50	\$2,700
Old Krumkill Road	Krumkill Road	Hidden Hollow Road	750	1.50	\$8,000
<b>AND SO ON AS DETAILED IN THE SECTION 284 AGREEMENT</b>					
<b>Totals</b>			<b>14.97 Miles</b>		<b>\$ 772,000</b>

# SECTION 284 AGREEMENT

ý Requirement of NYS Highway Law

ý NYS Highway Law – Section 284: Expenditures for repair and improvement of highways

è 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