

A faded background image of a white Ram 2500 Heavy Duty truck. The truck has several stickers: a yellow circle, a 'CERTIFIED CLEAN IDLE' decal, a 'RAM 2500 HEAVY DUTY' badge, and a circular logo for 'MARATHON COUNTY WISCONSIN' featuring a tree, a plow, and a person. The name 'Henderson' is visible on the roof. The title 'Crack Sealing: Lessons Learned and Best Practices' is overlaid in large blue text.

Crack Sealing: Lessons Learned and Best Practices

**Kris Baguhn – Operations Superintendent
Marathon County Highway Department**

Overview

- Marathon County
- Why Seal
- What to Seal
- When to Seal
- How to Seal
- Lessons Learned
- Best Practices



Marathon County, WI

- 1,576 Square Miles
 - 50 miles x 30 miles
- 134,000 Population
- 600 Miles of County Roads
- 400 Miles of State Roads
 - All counties are contract in WI
- 78 Highway Department Employees
- County budget: \$24.2 Million
- State Maintenance budge: \$3.2 Million



Why do we seal pavements?

- Keep the water out
- Keep debris out
- Prolong the life of the pavement



What do we seal?

- Types of cracks
 - Working
 - Non Working
 - Transverse
 - Longitudinal
 - Width – too small, too large (1/8", pencil width)
 - Concrete Bridge approach slabs, bridge ends
 - Curb and gutter seal

What do we seal?

- Transverse / Working

Construction joint



- Crack widths – 1/8”



04/19/2016

Joint sealed



*Importance of
sweeping
your C&G*

Too late, joint starting to deteriorate.



What do we seal?

- Bridge ends

What shouldn't get sealed

- Pavements that have too many cracks
- Too much sealant on the road can cause traction issues
- Pavements too old, too cracked up, too far gone
- What happens when cracks are too wide or narrow
- (NN Picture) poor router maintenance

Too many cracks, not much to save



Crew didn't get the message...



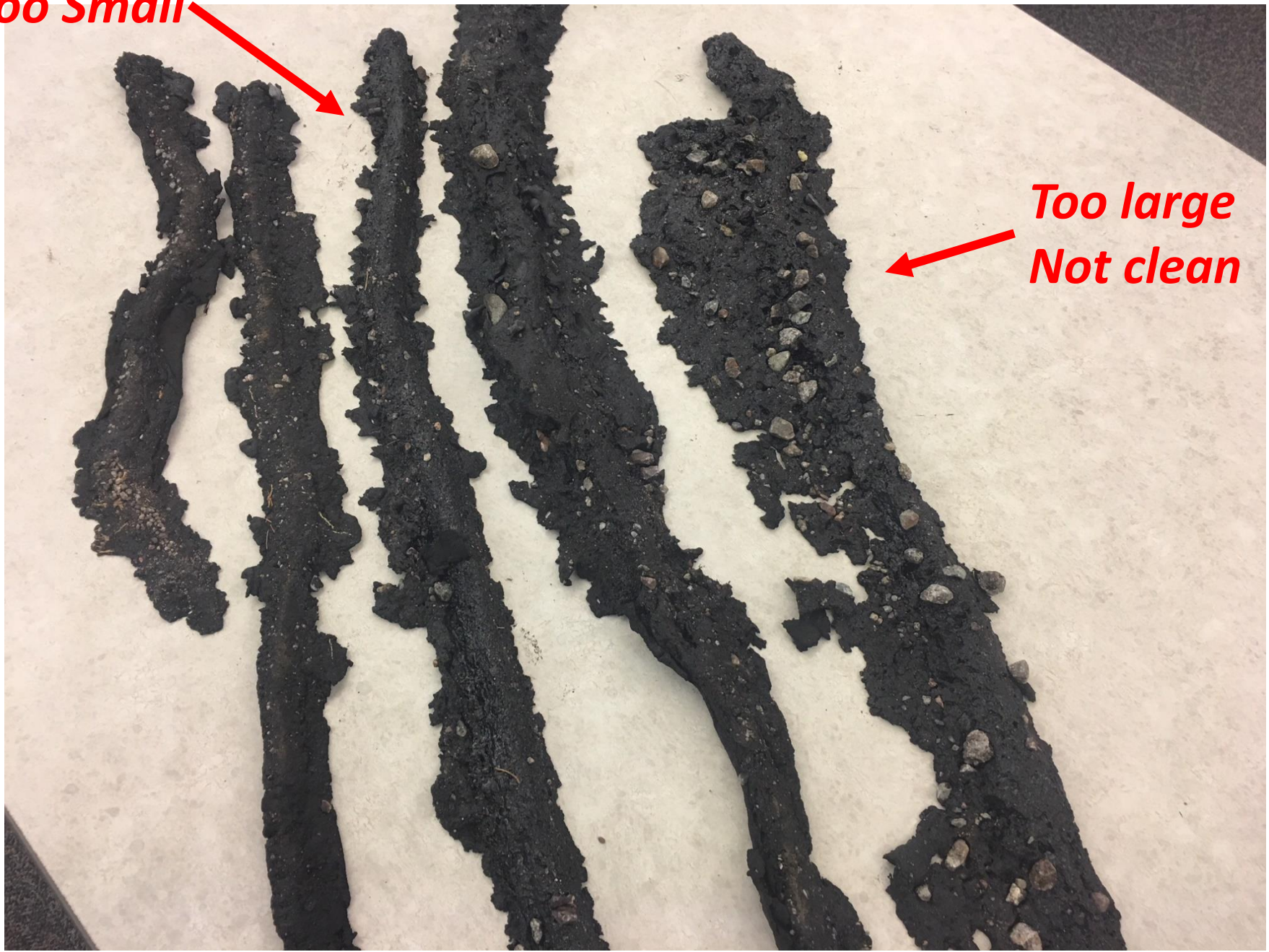
Can't glue the road back together...



Too Small



**Too large
Not clean**



A good artist...



....looks unprofessional on the road

When do we seal?

- State roads typically with in the first 5 years – pavement cracks 1"/yr
- State will reseal in later life of pavements
- County program typically within first 5 years, or prior to chip seal
- 2018 going to proactive chips seals on 1 yr old pavements
- Make 2yr work plan based off of PASER ratings
- Time of year – Spring and Fall primarily, limited in winter

How do we seal?

- Equipment used (router picture, wands, kettle, heat lance)
- Crew size used currently how you came up with it.













Lessons Learned

- What not to do
 - Equipment / Crew / Time of Year / Product
 - Blowing cracks on 4 lane, now use vac truck
- What to do
 - Things learned over the years



Lessons Learned – Keep it Sealed!





2" Overlay (\$100,000/mi)



Route and Sealed every year



Additional 5 years for programming, and down scoped from pavement replacement to resurface.

Best Practices

- Flagger safety and crew safety
- Uses of Vac Truck on 4 Lane
- Lean Process helped define crew duties
- Routine router maintenance
- Having standard operation helps with budgeting.
- Urban areas use tackifier vs blotting paper

Thank You

Kris Baguhn – Marathon County Highway Department