Success with Alternatives to Paving

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Two Methods

• Recycle old blotters or pavements, add virgin base aggregate, and place Otta Seal surfacing. Sometimes a geotextile (fabric) is used for base improvement.

• Recycle old blotters or pavements, add virgin gravel, reshape and compact the surface, establish 4% crown, and treat it as an unpaved road – we call the “RAP Roads”.
Three Examples

• **Day County Rd 12** – Rural Major Collector Classification with ADT at 150 – recycled and rehabilitated with an Otta Seal/Cutback Seal.

• **Day County Rd 4** – Rural Major Collector Classification with ADT ranging from 500 to 600 – same as above, but 1.75 inch overlay placed over past two years.

• **Day County Rd 12-A** – Rural Road Classification with ADT at 50 – recycled, reshaped, one inch of virgin gravel added, is now a “RAP Road”.
Base repair is critical where needed:
Day County Rds 12 and 12-A – Recycle Process

Virgin base course added on roadway prior to recycling.
Finishing base – extremely important for surface seals
Surfacing: Initial surface on an Otta Seal is a very heavy coat of high float emulsion covered by clean, crushed, coarse 5/8 minus aggregate.

There is no prime coat.
Initial surface is very coarse, but durable. A second shot of cut-back asphalt and 3/8 minus pea stone provides a good driving surface.
Final surface – thickness approx one inch
Oil and Aggregate Rates

• Co Rd 12 (first seven miles) –
  – 2.5 inches of virgin base aggregate added.
  – First shot of oil: HFMS-2S shot at .48 gal per sq yd
  – Second shot was MC 3000 shot at .30 gal per sq yd

• Co Rd 12 (next five miles) –
  – 2.5 inches of virgin base aggregate added.
  – First shot of oil: MC-800 shot at .35 gal per sq yd
  – Second shot will be MC-3000 shot at .3 gal per sq yd
Oil and Aggregate Rates (con’t)

- Co Rd 4 (entire 12 mile section)
  - Built on 10 inches of virgin base on new grade
  - First shot of oil: HFMS-2S shot at .48 gal per sq yd
  - Second shot: MC-3000 shot at .30 per sq yd
  - Initial construction in 2008, entire 12 miles was overlayed with 1.75 in of hot-mixed asphalt (five miles in 2011, seven in 2012)
Co Rd 12-A

Condition prior to rehabilitation
Virgin gravel added prior to recycling
Reclaiming process and reshape
Finished section in bottom of slide – work continues at top
Finished surface – very tightly bound “RAP Road”

Recently performed for three weeks in harvest with 200 trucks per day!

No blade maintenance done to date.
Before and After
Aggregate added and process

• Co Rd 12- A five mile section
  – One inch of virgin gravel added
  – Reshape to unpaved road crown at 4%
  – Aggressive use of water and compaction
  – No further work done
We have previous experience with this: turn-back from asphalt to gravel in 2007 here. It has performed well.
Cost Data

• Co Rd #12 (2012)
  – Add 2.5 inch base course - 25 mile haul
  – Mill, shape, compact
  – $18,414/mile

• (2009) Otta seal
  – 5/8" Clean crushed aggregate
  – HFMS-2S
  – $19,174/mile

• Chip seal
  – 3/8" pearock
  – MC-800
  – $20,215/mile
Cost Data (con’t)

• Co Rd #04
  – (2008) Otta seal
  – $18,609/mile
  – (2012) 1.75 inch Asphalt Overlay
  – $122,000/mile
  – MC 3000 Chip Seal 2012 Avg Cost
  – #15,000/mile
Cost Data (con’t)

• Co Rd #12A (2012)
  – Add 1.5 inch base course - 40 mile haul
  – Mill, shape, compact
  – $19,524/mile
Thank You