



**SOUTH DAKOTA**

**DOT**

**6X6 PLOW TRUCK**

**Brad Maupin**

# 6x6 Drive Plow Truck

- Aging Fleet – Oshkosh
- New Technology
- More Mobile
- Meet current standards
- Built to meet legal load limits

# Why do we need 6x6 Trucks??





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# Current Trucks





# Current Trucks



# Process

- Cost factors
- Equipment needed
- Effectiveness / mobility
- Built legal for bridge laws

# Specifications / Engineering

- Written Specification of 36 pages to define how the truck and equipment was to be built.
- 3 ½ months working with the truck and body engineers to get equipment to fit on truck.





# The Fear of specifications



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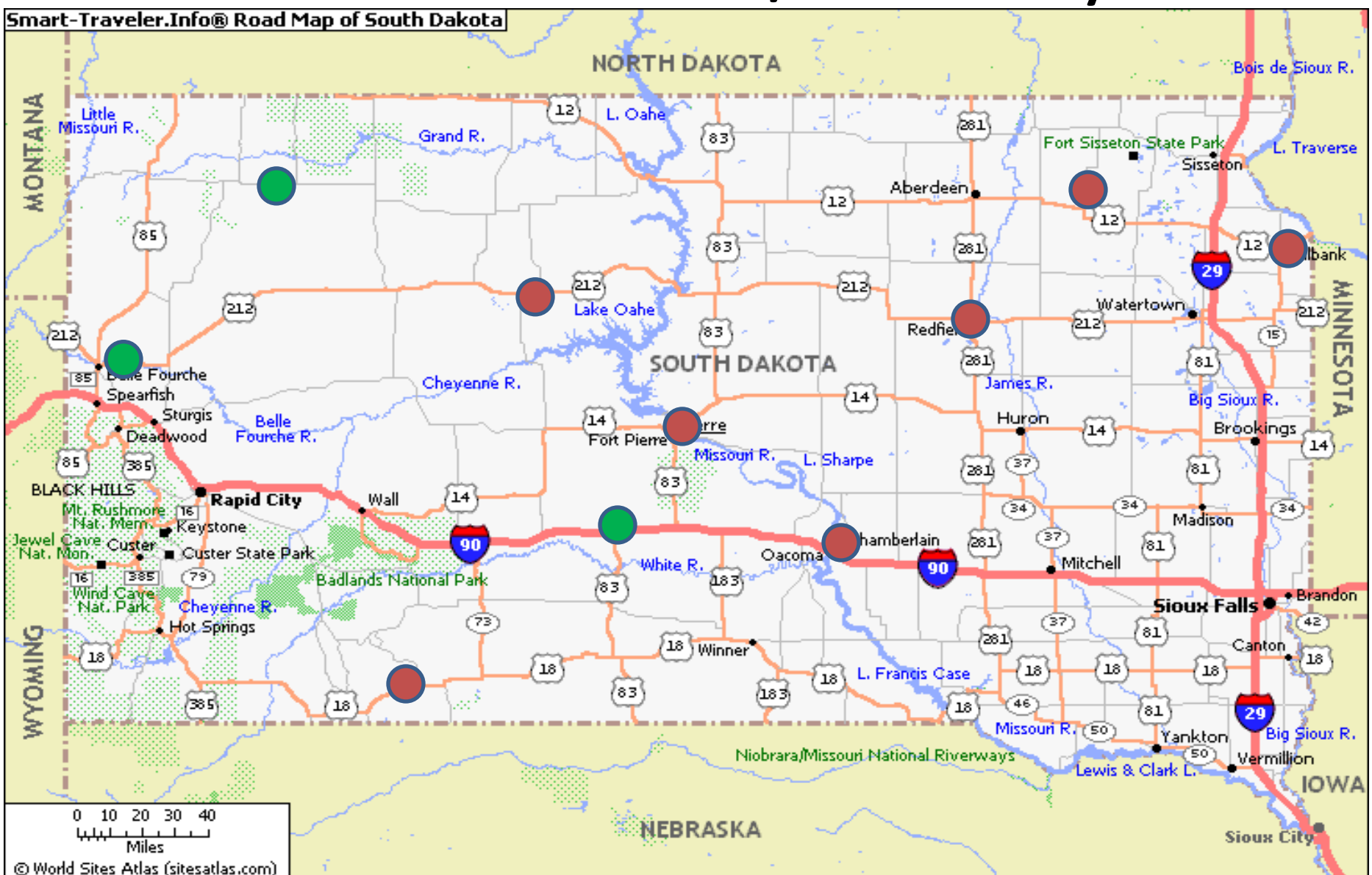


# Cost

- Total Cost of Mack 6x6 with attached equipment - \$277,538
- Included: Truck, Frame mounted sander, 60" steel plow, V-plow, 12' benching wing, hydraulics, warning lights, camera's.



# Effectiveness / Mobility



# Current Standards

- Equipment to meet current standards
- Sander Controls to meet current standards

# Old Technology





# New Technology



# Build for Legal Bridge Laws Issues

- Front axle over weight
  - Front wing causing front axle to be over weight
  - Redesign placement of wing to make axle legal
  - Being able to view the wing (Cameras)

# Final Weights

- Front Axle – 20320 – Legal up to 23,000
- Rear Axles – 20,060 – Legal up to 34,000
- Total Weight 40,520 – Legal up to 57,000
- Legal payload capacity is 16,480
- 8 yards of salt – 12,000
- 400 gallons of salt brine – 3,600
- Fully loaded the truck is 880 pounds of maximum legal weight.



# End Product



# End Product



# End Product





# End Product





A yellow Mack snowplow is shown from a front-facing perspective, positioned behind a large, bright orange snowplow blade. The blade is V-shaped and dominates the foreground. The truck's hood features the 'MACK' logo. The scene is set in a snowy, open area under a clear sky. The word 'Questions' is overlaid in a large, blue, 3D-style font across the center of the image.

**Questions**