See It Before It Is Built

Rhonda G. Faught, P.E.
U.S. System of Roads and Highways

- Infrastructure valued at $1.75 Trillion
- Cost of upgrades and repairs to bring to “good” condition is $2.2 Trillion
- Rising cost of construction with limited financial resources
- Concern for the environment and energy consumption
Three Critical Issues Facing DOT’s Today

1. **MONEY** $
MONEY

• Cost of doing business –
  – Design
  – Environmental Assessments
  – Construction
  – Maintenance
  – Personnel
  – Technology
  – Materials – Availability
  – Energy Consumption
Other Challenges

• Many Heads of DOTs are not from transportation industry
  – Have limited understanding of the highway business
  – Interested in bottom line (cost)
Other Challenges

• Politics is driving decisions
  – Public Perception
  – Media – Headlines
  – Using short term solutions for long-term problems
IMPORTANCE OF TRANSPORTATION

WAL*MART
ALWAYS LOW PRICES.
Always.
Walmart Model

+75% of retail is manufactured outside the United States
See It Before It Is Built

- Environmental Review Process – faster
- Public Participation – visualization
- Design – most cost effective
- Safety – reduced fatalities
- Construction – reduced costs
- Reduction in project delivery times
- Do more with less
Reduce Errors and Omissions

Move the mouse. Move the road. Autodesk Civil 3D.

Change the model

All design documents automatically updated

R. Faught and Associates, LLC / Building Bridges and Breaking Barriers
Automated Machine Guidance

- Move dirt fast
- Accurately
- Move dirt once
- Safely
See It...Build It...

• Transparency
• Media support
• Public support/buy-in
• Special interests/Advocacy Groups
• Political support/buy-in
• Safety
Better Design + Fewer Change Orders = Less Cost
Technology is Here!

- Pavement
  - New construction
  - Rehab
  - Preservation
- Asphalt oil/emulsions
- Aggregate – properties
- Environmental conditions
- Date/Time of placement
Technology is Here!

See It Before It is Built

R.Faught and Associates, LLC  Building Bridges and Breaking Barriers
Rhonda G. Faught, P.E.
R. Faught and Associates, LLC
rhonda@rhondafaught.com
www.rhondafaught.com

6 Spur Cross Place
Santa Fe, NM  87508