Environmental Review and the Design Build Process

MnDOT Stewardship Conference

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Expert Panel

- Terry Ward – MnDOT
- Keri Aufdencamp – MnDOT
- Jim Helgestad – C.S. McCrossan
- Tom Gile – Coon Creek Watershed District
- Charles Cadenhead – HDR
- Andi Moffatt - WSB
Session Agenda

• Design build overview
• Review four projects
• Lessons learned
• Panel discussion and questions
What is Design Build?

**Design-Build Process**
- Owner
- Project Scope
- Preliminary Layout
- Best Value Procurement
- Contractor
- Final Design
- Construction

**Traditional Process**
- Owner
- Project Scope
- Preliminary Design
- Final Design
- Low Bid
- Contractor
- Construction

MnDOT Office of Environmental Stewardship
Role for Contractor - Environment

• Required to have an environmental team as part of the project
• Required to develop an environmental management plan and provide training to workers
• Required to host open house meetings with property owners
US 212

• Eden Prairie, Chanhassen, Chaska & Carver

• Freeway on a new alignment (4-lanes)
  – 12 miles
  – 29 bridges
  – 10 million cubic yards of excess material
US 212 Key Environmental Issues

- First time MnDOT used an internal environmental compliance manager
- Found cultivated illegal plant material
- Modified design to save notable trees
- Asbestos and farm dumps
- Wetlands
- Swallows
US 212 Key Environmental Issues

- Cranberry bog
- Big Woods
- Noxious weeds
- Impaired waters
- Slurry
- PCA stipulation
US 212 Key Environmental Issues

- Value engineering during design build process
  - Decreased impacts to Big Woods
  - Eliminated need for a creek crossing
  - Eliminated need for a city bridge
Mower County Bridges

- I-90 through the City of Austin
- DB selected due to ARRA funding
- Three project elements
  - Flyover
  - Parallel box culverts
  - Crossing of Turtle Creek
Mower County Key Environmental Issues

• In water project & highly sensitive area
• Flood prone
• Impaired waters downstream
• Slurry from bridge deck
• Swallows nesting on bridge
Mower County Key Environmental Issues

• Noxious weeds
• Excessive rain
• Stop work order issued
• No local complaints
• PCA fine
TH 610

- Cities of Brooklyn Park and Maple Grove
- Project ready – ARRA funding prompted DB process
- New freeway
  - 3 miles
  - 4 overpasses/interchanges
  - 1 pedestrian bridge
  - Bridge widening
TH 610 Map

MnDOT Office of Environmental Stewardship
TH 610 Key Environmental Issues

• Invited agencies to the site
• Unexpected contamination – asbestos
• Birds and asbestos
TH 610 Key Environmental Issues

- Soil stockpiles
- Self reporting
TH 610 Key Environmental Issues

- Noise mitigation
- Vibration mitigation
  - Compaction techniques
  - Eliminated pile driving
- Project location concerns from property owners
CSAH 14

- Cities of Coon Rapids and Blaine
- Locally led project – special legislation needed
- Existing roadway expansion (4-lanes)
  - 3 miles long
  - 1 bridge over the railroad
  - Tight right of way constraints
Key Environmental Issues

• Bunker Hills Regional Park – Section 4(f)
  & 6(f)
• Blanding’s Turtles
• Wetlands
  – LGU vs MnDOT
  – Process – iterative, frequent changes
Key Environmental Issues

- Infiltration
- Sensitive
- Swallows
Lessons Learned

- **Continual dialogue**
  - Regular updates to team members

- **Teamwork**
  - Goal to complete project in a timely manner
  - Protect public safety

- **Regular permitting & review agency involvement/reporting**
Lessons Learned

• Involve review and permitting agencies in RFP development
• Recognize there will be conflicts and disagreements – keep focused on goals
• DB can be more flexible than traditional methods
Lessons Learned

• Contractor involvement in the environmental process is stronger and more consistent

• Proactive planning keeps schedule & budget
  – Do what you can ahead of time
  – Introduce teams before project begins
  – Develop contact trees & flow charts
Lessons Learned

• Internal environmental compliance manager
• Utilize critical activity points for environmental review
• Process modifications needed for municipal-led projects – WCA issue
Lessons Learned

• MnDOT viewed as a leader in environmental process for DB
• Opportunities to integrate DB practices into traditional projects