IT’S NEVER TOO LATE TO IMPROVE A PROJECT

KEITH CHADWICK, PE
AARON KETZNER, EI

LOCHMUELLER GROUP
DESIGN CHALLENGES

• **Historic Bridge**

• **Multiple utilities**
  • Two high pressure petroleum lines
  • High voltage power lines 138Kv
  • 42” Sanitary sewer line

• **Railroad**
PRE-CONSTRUCTION CONFERENCE

• Contractor presented a 2-span option
• Lower in cost than 3-span
• Issues with option expressed at pre-con
PRIOR TO CONSTRUCTION

• NUMEROUS MEETING & DESIGN REVIEW

• CONTRACTOR WAS PERSISTENT
DOCUMENTS REVISED

• Section 106 document
• Public hearing
• Environmental document
COST REDUCTION INCENTIVE
STANDARD SPEC 109.04

• INITIAL REQUIREMENTS
• FORMAL PROPOSAL REQUIREMENT
• APPROVAL
CHANGE ORDER

- Adjustments to existing items
- 31 new items added
- Extensive review of existing items
IMPORTANCE OF COMMUNICATION

• Many parties involved
• Potentially avoided costly delays
CONSTRUCTION - DEMOLITION
CONSTRUCTION – PILE DRIVING
CONSTRUCTION – BEAM SETTING
BENEFITS OF THE REDESIGN

• Costs

• New life span of the substructure

• Additional clearance

• Reduced road closures
BENEFITS OF THE REDESIGN

• Eliminated use of lightweight concrete
• Eliminated repair work
• Increased safety
• Minimized future maintenance
FINAL THOUGHTS