



WHO'S WHO

Review of Three Major Bridge Projects

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Introduction

- **TIMED Program**
 - The single largest transportation program in Louisiana state history
- **Three major bridges**
 - John James Audubon Bridge
 - Huey P. Long Bridge
 - Florida Avenue Bridge





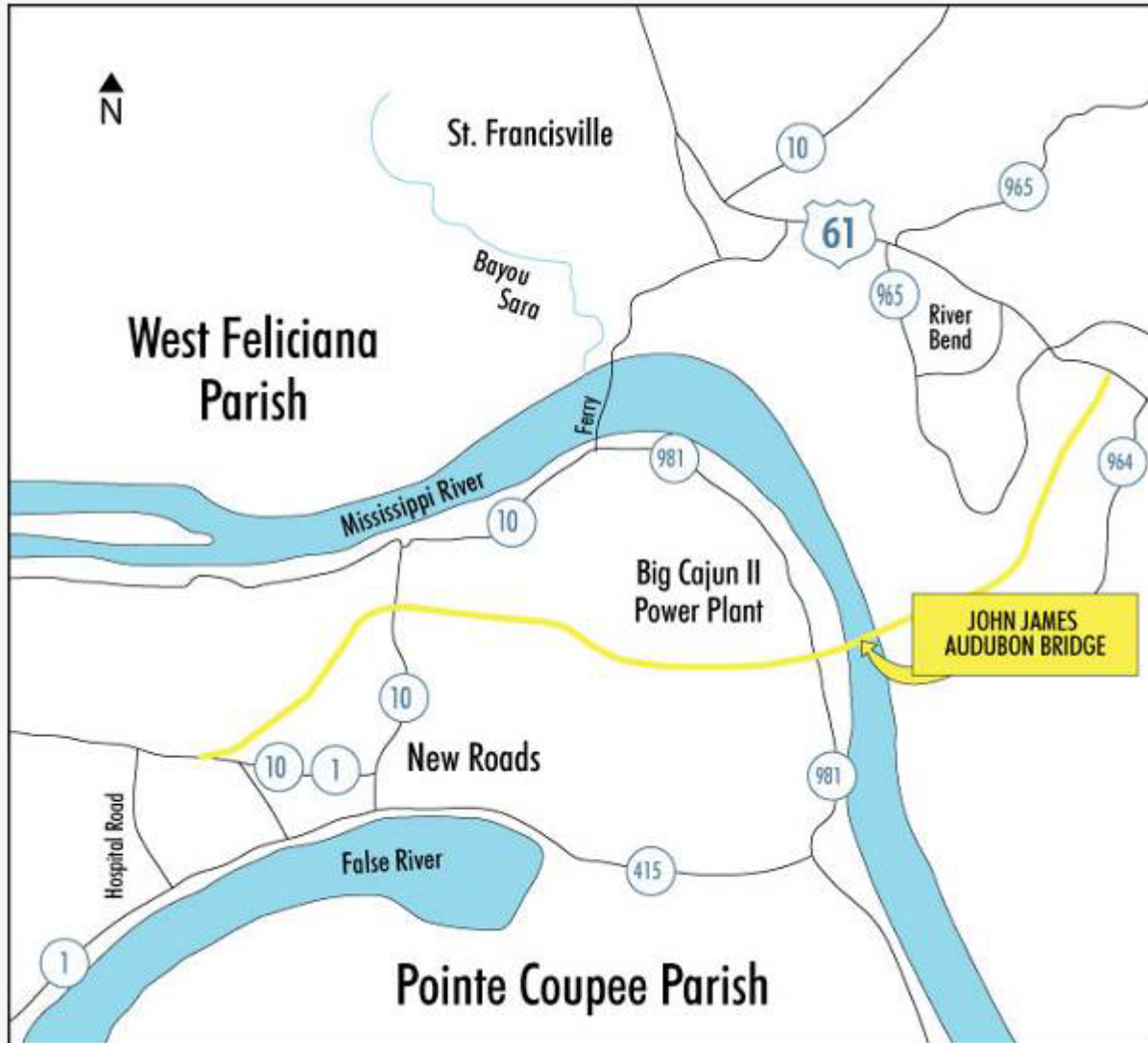
Introduction

- **LOUISIANA TIMED MANAGERS**
 - A joint venture of LPA, PB and GEC
- **KEY BRIDGE ENGINEERS**
- **ROLES AND RESPONSIBILITIES**





John James Audubon Bridge (\$400M)





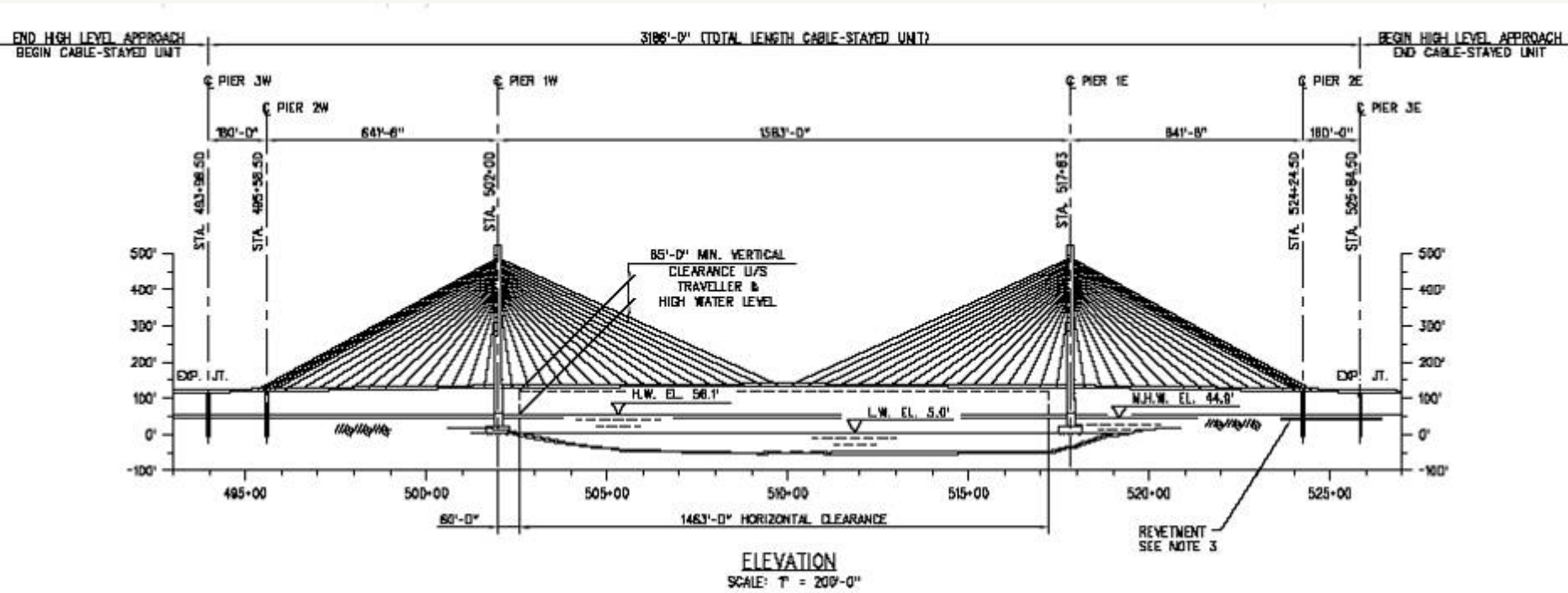
Team Selection

- **Certificate of Merit**





John James Audubon Bridge (\$400M)





John James Audubon Bridge (\$400M)

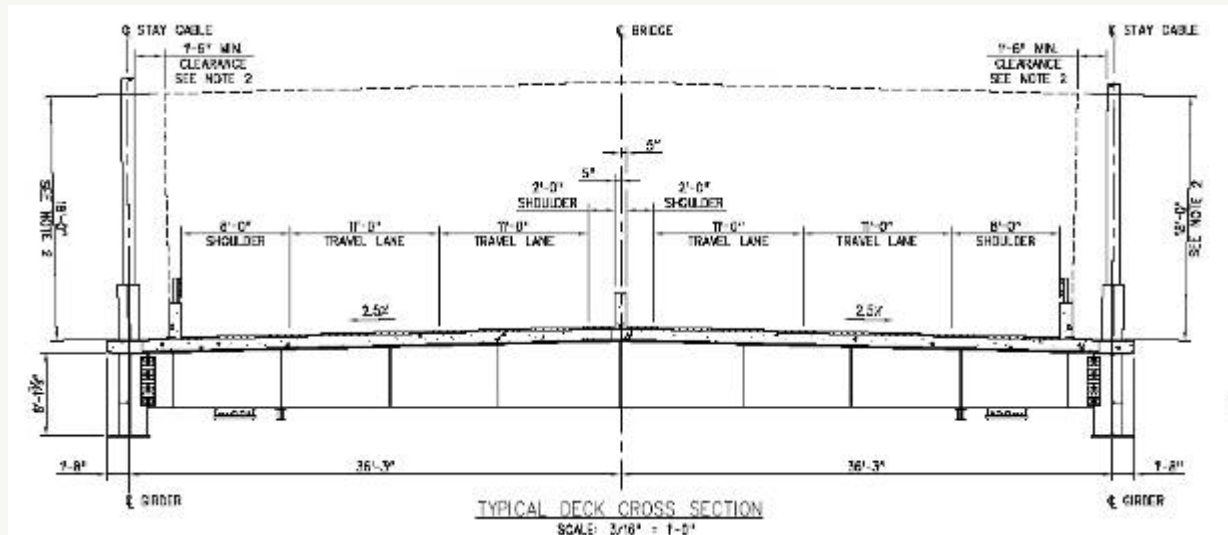
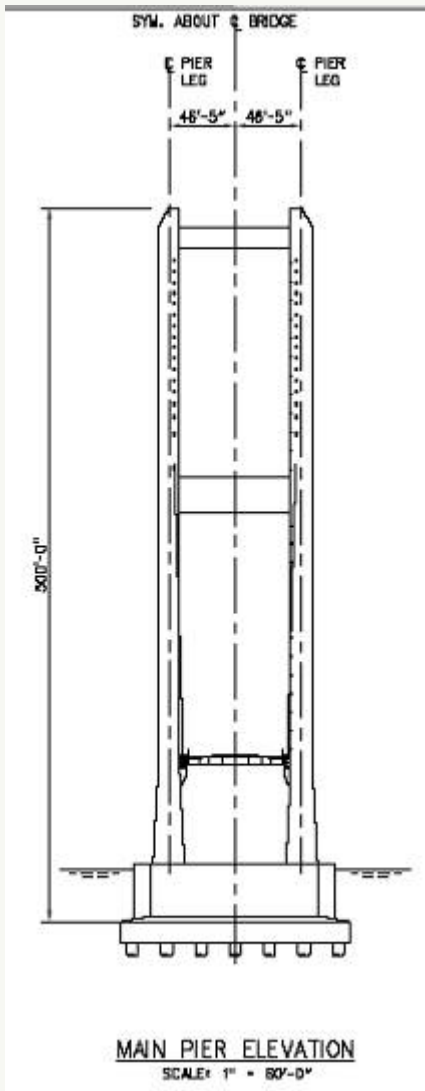


Figure 3a

Figure 3b





John James Audubon Bridge (\$400M)

- **Aerodynamics & Stability**
 - Weather forecast and Hurricane Katrina impact
 - Physical testing vs. Numerical Model
 - Stability, force effects and displacement criteria
 - Construction and temporary supports





John James Audubon Bridge (\$400M)

- **Cable-stayed superstructure**
 - Counter weight
 - Dead end connections
 - Transitions
 - Other significant details





John James Audubon Bridge (\$400M)

- **Drilled shafts**
 - Design
 - Design methods
 - Standard mix vs. new mix
 - Side support prediction vs. test results
 - Tip grouting







John James Audubon Bridge (\$400M)

- **Approaches & eight more bridges**
 - Conventional superstructures
 - Hydraulics and scour
 - Piles geotechnical design
 - Piles placement







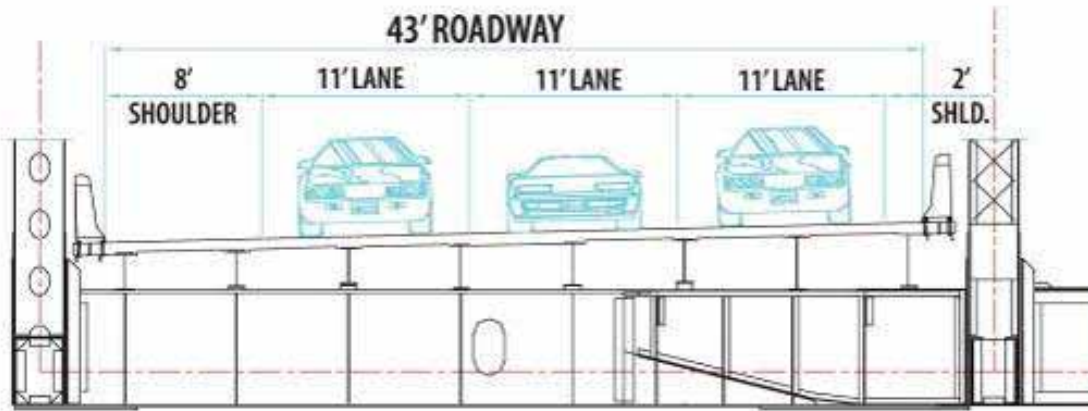
Huey P. Long Bridge (\$1 B)





Huey P. Long Bridge (\$1 B)

Completed Bridge Construction





Huey P. Long Bridge (\$1 B)

- **Why not a new one?**
- **Phased construction relative to contracts**
- **Design-Bid-Build**
- **Justification**





Huey P. Long Bridge (\$1 B)

“The price of steel is continuing to rise, and there is no indication prices will drop. If we re-bid the project to get a better price, we risk having no bidders or receiving an even higher bid. Either scenario puts the entire project in jeopardy.”

LA DOTD Secretary Johnny B. Bradberry





Huey P. Long Bridge (\$1 B)

- **New design of approaches**
 - Possible span optimization
 - Girder type, spacing and cost effective
 - Ways for pile construction cost effective





Huey P. Long Bridge (\$1 B)

- **Railway modification**
 - Plans of higher standards
 - Specifications of higher standards
 - Less money wanted





Florida Avenue Bridge (\$250M)





Florida Avenue Bridge (\$250M)

- **No debating on construction method**
- **Erection sequence can make difference**





Florida Avenue Bridge (\$250M)

- **AASHTO LRFD**
- **Added value from ASBI recommendations**
- **New grouting procedures**





Florida Avenue Bridge (\$250M)

- **Overlay thickness determination**
- **Future wearing surface**
- **Geometry measurement and tolerance**





Florida Avenue Bridge (\$250M)

- How much to pay at project stop





Conclusions

- **Measurement of review quality**
- **Backgrounds of designer or contractor**
- **How important is business goal?**
- **Never yielding if safety is concerned!**
- **Justification**





Conclusions

- **Not a replacement of client**
- **Possible wider discussion**
- **Professional growth philosophy**

“Your input in this area would be very helpful if there is a problem.”





Acknowledgements

- **LTM is acknowledged for full support!**
- **Call me for more information.**





THANK YOU!

- Any questions?

