Construction Logistics

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59/20 Bridges

CONSTRUCTION LOGISTICS

Front End Planning
Logistical coordination on a project of this size and scale is paramount to the overall success of the project.

- First Segmental Bridge Erected in the U.S. Utilizing This Unique Shoring Method
- 400-500 Workers Onsite Daily
  - Conventional Structure Crews
  - Segment Structure Crews
  - Casting Yard Crew
  - Management Staff
- 40+ Subcontractors and Sub Consultants
- Multiple Worksites Coordination
- Fabrication to Construction Coordination

CONSTRUCTION LOGISTICS

With an average of 30 employee / sub crews simultaneously working daily along the alignment having clear and constant communication was key to avoid schedule delays.

- Nine Day Cycle Per Span
  - 10-12 Segments Per Span
  - Complex Coordination at Multiple Sites
  - Quality Control to Minimize Recasting

CONSTRUCTION LOGISTICS

Subcontract Suppliers and Consultants
With an average of 30 employee / sub crews simultaneously working daily along the alignment having clear and constant communication was key to avoid schedule delays.

- VSL (Front End Planning / Post Tensioning)
- McInnis (Conventional / Segment Bridge Construction Support)
- Scott Bridge (Conventional Bridge Construction Support)
- Russo (Driven Shafts and Micro Piles)
- Lindamood Demolition (Demolition)
- Abramson (Barrier Walls)
- McNary Bergeron & Associates (Segmental Consultants)

CONSTRUCTION LOGISTICS

Precast Substructure
An innovative approach to the construction of the substructure piers was implemented by Johnson Bros. This allowed for substantial time savings during the closure periods.

- Minimized Casting Time
- Maximized Efficiency of Cast Form Work
- Maximized Manpower
- Minimized Equipment Utilization During Closure Period
- Minimized onsite Construction Traffic
Casting segments within proximity to the project provided many benefits to the project including the reduced construction time for the project.

- **Casting / Trucking Logistics**
  - 2316 Segments Cast
  - 12 Casting Cells
    - 8 Typical Segments
    - 2 Pier Segments
    - 2 Expansion Joints
  - Averaged 20 Segments Delivered to the Site Per Day During Erection
  - With the Interstate Detour In Place, Utilization of the Local Deputies Was Essential to Timely Delivery

**Casting Logistics**
- Erection Sequence and Planning Must Be Done to Cast Sequentially
- Begin Casting in the Order of Erection Headings and Direction
- Storage Sites Were Carefully Designed to Accommodate the Most Segments Feasible and Allow for Only Moving the Segments One Time Until Erection

**Lessons Learned**
- Traffic Management and Coordination with ALDOT Front End Conversations and Coordination Provided for a more Informed and Less Frustrated Commuter
- Alternate Route Coordination for Traffic and Construction Flow
- Trucking and Team Coordination for Headings Having Constant Conversations to Avoid Delays
- Initial Planning led to Additional Heading Requirements
- Casting Yard Cell Maintenance Provide More Time for Cell Maintenance to reduce recasting
- Safety Performance Front End storage planning provides less construction delays
- Safety Performance Front End Planning and high-level execution led to Johnson Bros. exemplary safety performance