Ohio River Bridges Project
P3 Contract Administration and Oversight

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INDOT Project Manager

Purdue Road School
March 8, 2016
P3 Contract Administration & Oversight

- **Contract Overview**
- **Contract Administration**
  - Document Management
  - Workflow Management
- **Contract Oversight**
  - Contractual Obligations
  - Performance & Quality Verification
  - Final Records
- ?
LSI ORB Project Relationships

- Bi-State Development Agreement
- Downtown Crossing
- East End Crossing

2 Crossings - 1 Project
EEC P3 Contract Relationships

P3 Owner

Owner Rep & Support
EEC P3 Contract Structure - DBFOM

- **Design**
  - 7.8 miles of roadway
  - 18 standard bridges

- **Build**
  - 2500’ cable-stayed bridge
  - 1700’ twin bore tunnel

- **Finance**
  - WVB: $763 M Equity and Bonds
  - IFA: $392 M in 8 Milestone payments

- **Operate**
  - Bridge Inspections, OS/OW Permits, SHM
  - Annual Availability Payments (ROI)

- **Maintain**
  - Pavement, Drainage, Striping, Signs, Guardrail, Mowing, Snow & Ice, +
  - Handback/Residual Life Requirements

- 35 Yr Term
- Performance Req.s
EEC P3 Contract Documents

**IFA**
- Public-Private Agreement w/Exhibits
- Technical Provisions w/Attachments
- Standards, Reference Documents
- IFA holds all Record Documents

**WVB**
- Proposal Commitments
- Project Management Plan
- Schedule
- Approved RFC Plans & Special Provisions
- Work Plans, ITP, Technical Reports
- QC/QA Documentation
EEC Administration

The Challenge

- Organize and Track > 171,000 documents and > 6,500 Workflows
  - 400 Design Submittals
  - 9,800 IFA Dailies
  - 500 Items of Correspondence
  - 670 Technical Reports
  - 370 RFC Documents
  - 900 Field Design Changes
  - 630 Work Plans
  - 480 Inspection & Testing Plans
  - 13,000 Material Approval and Material Received Records

- Among multiple entities and 100s of personnel in multiple locations
EEC Administration

The EEC Solution

- Manage all Contract Documents and Workflows within a Single System

Documents
- RFP, RID, PPA, WVB Proposal
- All Design Records
- All Construction Records
- All Environmental/Permit Records
- All Correspondence
- All Change Management Records
- All file types/sizes
- Email-enabled folders
- Searchable
EEC Administration

The EEC Solution

- Manage all Contract Documents and Workflows within a Single System

Workflows

- Create and customize workflow processes
- Match workflow to contractual requirements
- Assign and track work assignments/ball-in-court
- Documents remain linked in each process
- Track history of each process
- Cross-link processes
- Version control of each document in process
- Permissions by user groups or individual
- Dashboard views by user
Typical Document Process Workflow

15 Days

- WVB RFC Submittal
- IFA Review
- WVB Resubmit
- Comment Resolution
- IFA Comments
- IFA Record Docs

Yes
No
P3 Process Workflow

Typical Document Process Linkage

RFC Plans
  ↓
Prior Submittals
  ↓
Technical Reports
  ↓
FDC NDC
P3 Contract Oversight

**Contractual Obligations**

- **WVB**
  - Perform all Design & Construction QC/QA
    - Design & Construction QC/QA Plans
    - Sampling & Testing Frequency
    - Material Approval & Receiving Procedures
    - Work Plans/Inspection & Testing Procedures

- **IFA**
  - Performance Verification
    - Requirements Verification (spec checklists)
    - Quality Records Database (test results)
    - Process Audits

IFA Approval Req’d.
P3 Contract Performance Verification

**IFA Performance Verification Database**

- All Contract Specs and Requirements Extracted
  - Design & Construction requirements
  - PMP requirements
  - Work Plan requirements
  - Unique Special Provisions
  - Applicable INDOT & KYTC SS, RSPs, Standard Dwg.

- Verification Checklists Created
  - Standardized for frequent usage (pre-pour checks)
  - Customize for specific use (add plan notes, SP req.s, etc)

- Used by both IFA and WVB
P3 Contract Performance Verification

- IFA Performance Verification Database
  - Track all non-conformances to ultimate conformance
    - Requirement Deficiencies (RD)
      - Correctible prior to inclusion, no rework
        - Rebar spacing
        - Failed compaction (prior to next lift)
        - Missing steel certs
        - Includes safety & environmental RDs
    - Non-Conformance Report (NCR)
      - Incorporated in work
      - May require rework or additional investigation
        - Low 28-day breaks
        - Voids/honeycomb
        - Process deficiencies (Audit Findings)
Initial Conformance

20,071 Conformances

86% Initial Conformance

All NC/RDs must be satisfactorily resolved

3,264 Non-Conformances
P3 Contract Quality Verification

Quality Records Database (QRD)
- Input from both IFA and WVB
- Track all Tests to Ultimate Resolution
  - Earthwork
  - Structural Concrete
  - PCCP
- Document all acceptance criteria/results
- Document all failed results (NCR or RD) and retests
- Retain all info relevant to each test
  - Batch tickets
  - Test data
  - Technician info
  - Calculations
<table>
<thead>
<tr>
<th>Report ID</th>
<th>Program</th>
<th>Lab Type</th>
<th>Alignment</th>
<th>Location Desc</th>
<th>InVS</th>
<th>Station</th>
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<td>Cylinder</td>
<td>5</td>
<td>Tower 3 Lift 13 DS</td>
<td>Upper Legs (Lifts B-15)</td>
<td>195±95</td>
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<td>Tower 3 Lift 13 US</td>
<td>Upper Legs (Lifts B-15)</td>
<td>195±95</td>
</tr>
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</table>
10.4 Gal ice per CY added at batch plant. Disregard amount of ice per cubic yard on the billing description of the tickets. W/C rate calculated utilizing actual amount of ice added. The amount of ice (listed in gallons per cubic yard) is handwritten on the top left-hand corner of each ticket.
# Report of Compressive Strength

**ASTM C39**

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<thead>
<tr>
<th>Addressed To</th>
<th>Distributed To</th>
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<tr>
<td>Walsh-VINCI Joint Venture</td>
<td>Walsh-VINCI Joint Venture</td>
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<tr>
<td>1302 Port Road, Jeffersonville, IN 47130</td>
<td>1302 Port Road, Jeffersonville, IN 47130</td>
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<table>
<thead>
<tr>
<th>Project Name</th>
<th>Client</th>
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<tbody>
<tr>
<td>ORB East End Crossing</td>
<td>Walsh-VINCI Joint Venture</td>
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<table>
<thead>
<tr>
<th>Project Number</th>
<th>Date Issued</th>
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<tr>
<td>212195</td>
<td>August 20, 2015</td>
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## Project Information

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<tr>
<th>Placement Date</th>
<th>Structure Type</th>
<th>Total</th>
<th>Location of Placement</th>
<th>Concrete Contractor</th>
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<tr>
<td>7/23/2015</td>
<td>Upper Tower Legs</td>
<td>69 yards³</td>
<td>Tower 4</td>
<td>WVC</td>
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<td></td>
<td></td>
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<td>Lift 10 US</td>
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## Supplier Information

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<tr>
<th>Concrete Supplier</th>
<th>Mix Number</th>
<th>Ticket Number</th>
<th>Truck Number</th>
<th>Placement Time</th>
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<tr>
<td></td>
<td>DT80 #8's</td>
<td>20795</td>
<td>40</td>
<td>10:30 AM</td>
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<td></td>
<td></td>
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</table>

## Plastic Concrete Data

<table>
<thead>
<tr>
<th>Air Temp</th>
<th>Concrete Temp</th>
<th>Unit Weight</th>
<th>Air Content</th>
<th>Truck Volume</th>
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</thead>
<tbody>
<tr>
<td>75°F</td>
<td>78°F</td>
<td>143.4</td>
<td>6.1%</td>
<td>8 yards³</td>
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</table>

## Hardened Concrete Data

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<thead>
<tr>
<th>Test Cylinders Cast By</th>
<th>Specified Strength at 28 days</th>
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<tbody>
<tr>
<td>Al-Kassab, Safaa</td>
<td>6000</td>
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</table>

<table>
<thead>
<tr>
<th>Sample Size</th>
<th>Tested By</th>
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</thead>
<tbody>
<tr>
<td>4 x 8 @ 10</td>
<td>Tony Cieslak</td>
</tr>
</tbody>
</table>
P3 Contract Final Documentation

- **Document Management/Workflow System**
  - Final Construction Record
  - Verify Satisfaction of all Contract Requirements
  - Provide Record for Operations & Maintenance
  - Permanently retained by INDOT
    - Static Version (no new entries or processes)
    - Retain all linkages to documents & processes
    - Contain all Record Drawings
      - As-Builts
      - Working Drawings
      - Technical Reports
    - Contain all Verifications & Quality Records
    - Contain all Material Record information
Launched in 60 Sec

Questions

Thanks