

kcICON Project

Thad Kosmicki, PE
PARSONS



Project Team

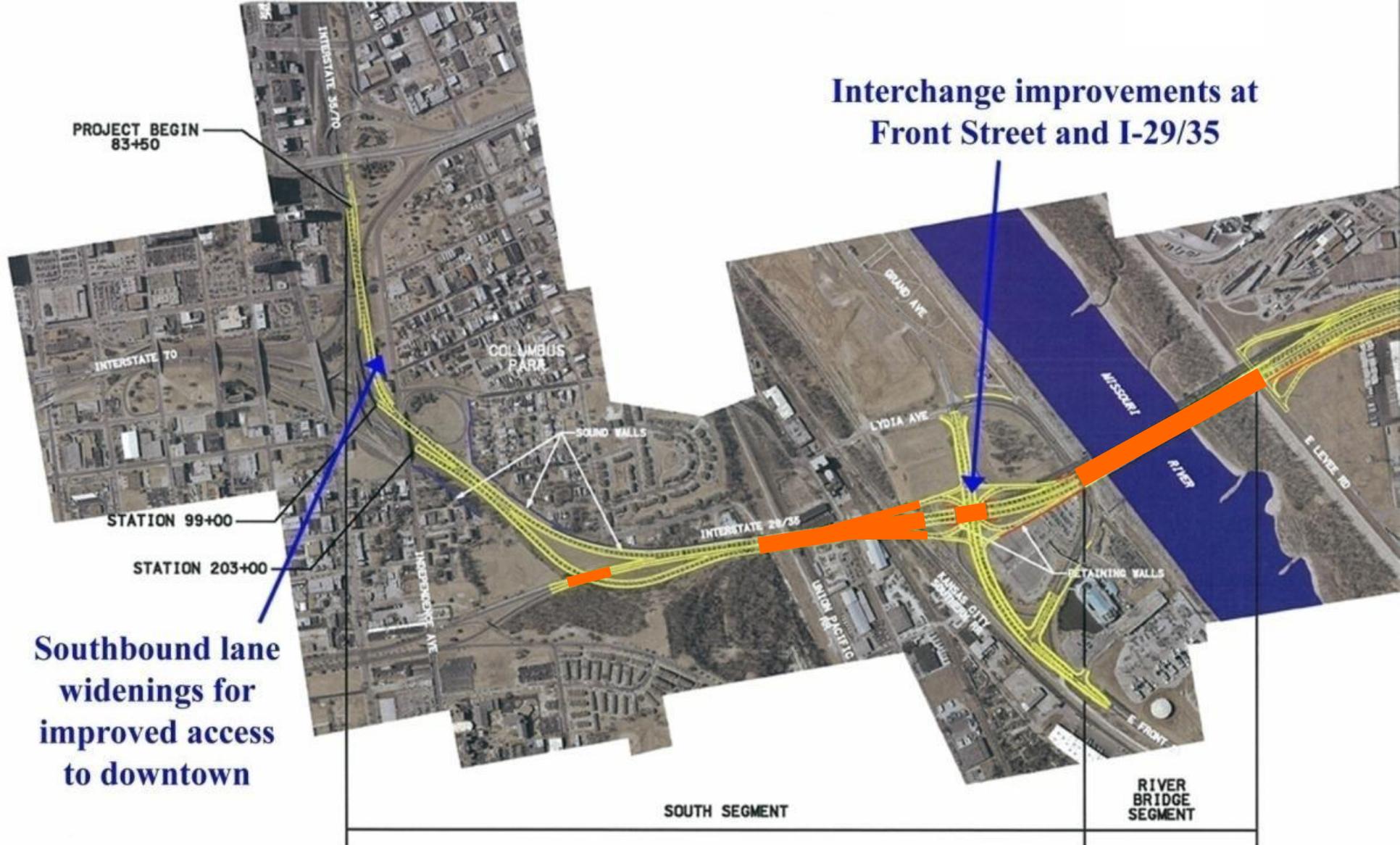
- Owner: **Missouri DOT**
- Design-Build Contractor:
Paseo Corridor Constructors
 - ◆ Clarkson Construction Co.
 - ◆ Massman Construction Co.
 - ◆ Kiewit Construction Co.
- Lead Designer: **Parsons**
 - ◆ TranSystems
 - ◆ 11 other subconsultants

Project Overview

- 4-mile corridor
- Spans 2 cities, counties
- 102,000 vpd
- Landmark bridge



Roadway Improvements – South Segment



Roadway Improvements – North Segment

Improved access between
Levee Road & Bedford Ave.

Ramp improvements
at Armour/210
interchange

Improved northbound
ramp at 16th Ave.

PROJECT END
262+00

NORTH SEGMENT

Purpose & Need

- Safety
- Mobility
- Capacity
- Landmark bridge



Goals

- **Deliver improvement within \$232M budget**
- **Landmark bridge**
- **Maximize safety, mobility, aesthetic and capacity improvements**
- **Engage stakeholders and community**
- **10.31.2011 completion date**

Procurement Process

- Design-Build
- Fixed price, best value
- Environmental clearances, third party agreements, ROW acquisition by MoDOT
- Community Advisory Group

Selection Criteria

Fixed Price (\$232M) – Best Value

Criteria	Points
Project Definition	30
Method of Handling Traffic	15
Completion Schedule	10
Disadvantaged Business Workforce	10
Public Information	5
Landmark Missouri River Bridge – Aesthetics	20*
Landmark Missouri River Bridge – Durability	10
<i>TOTAL:</i>	<i>100</i>

* Scored by CAG

Owner Benefits

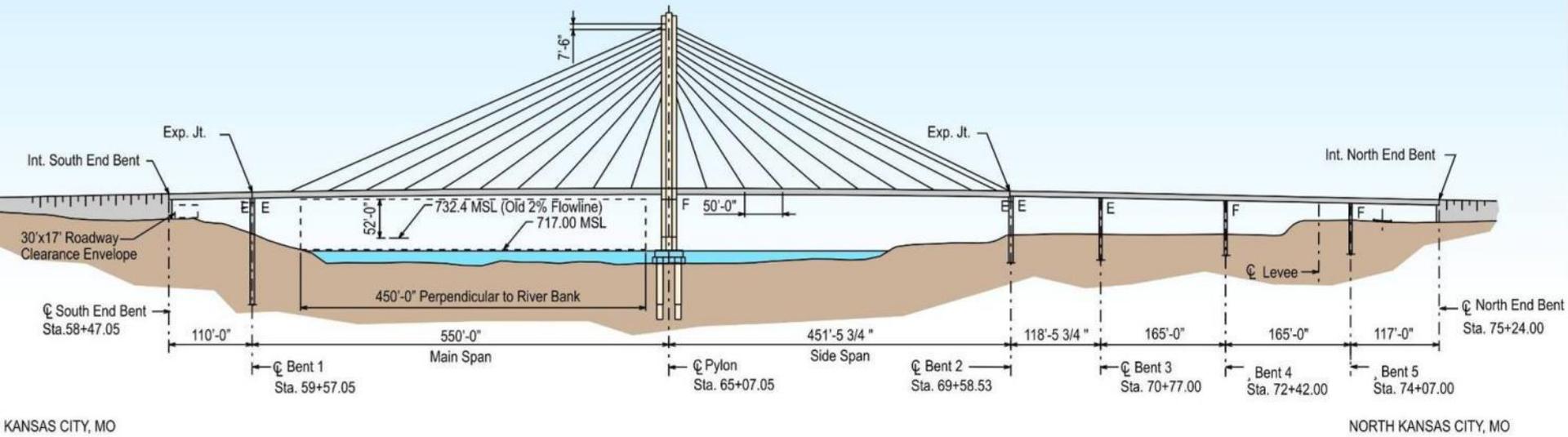
- Price won't exceed available funding
- Performance based approach fosters innovation
- Focuses DB teams on maximizing value/scope delivered to owner

Procurement Challenges

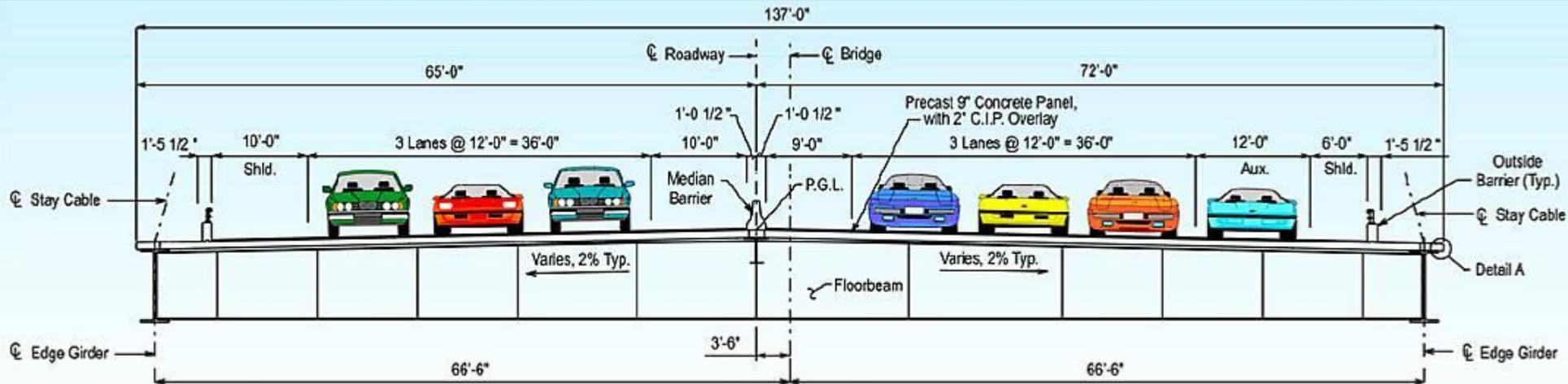
- Rapid pace
- Little time to coordinate with third parties
- Preliminary estimating
- Balancing corridor and landmark bridge costs
- Traffic and level of service forecasts

Design Overview

Elevation



Cross Section



Floor System

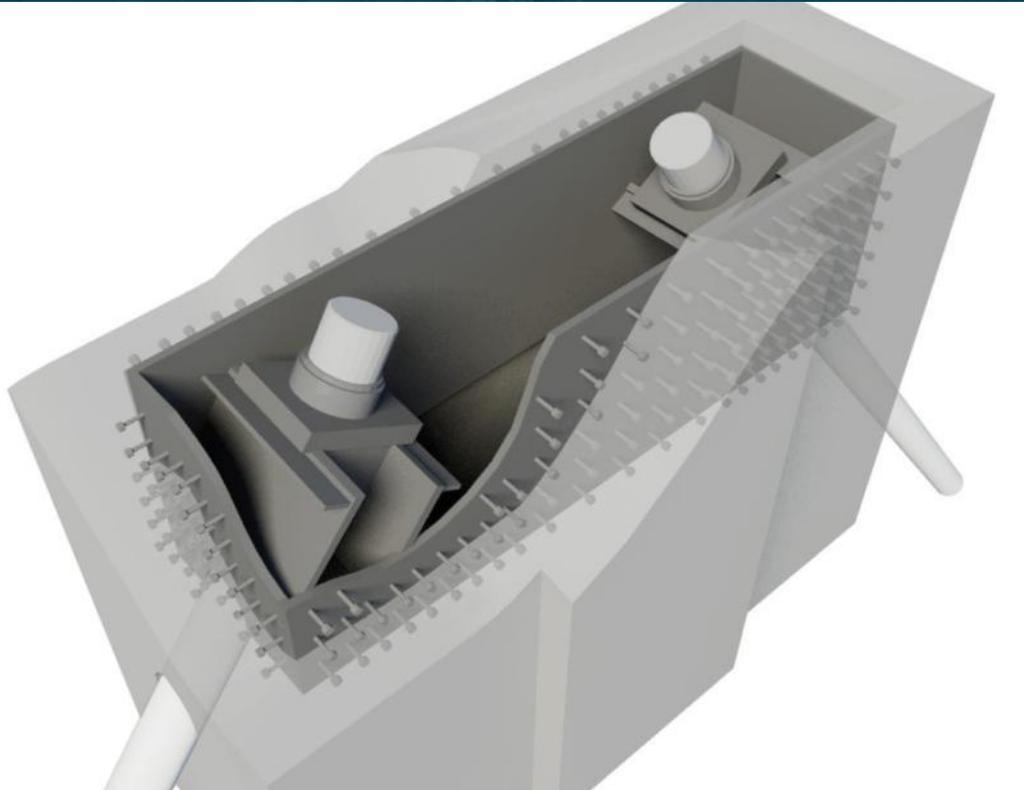
- Composite FB @ 16'-8"
- 9" precast HPC deck panels
- 2" overlay



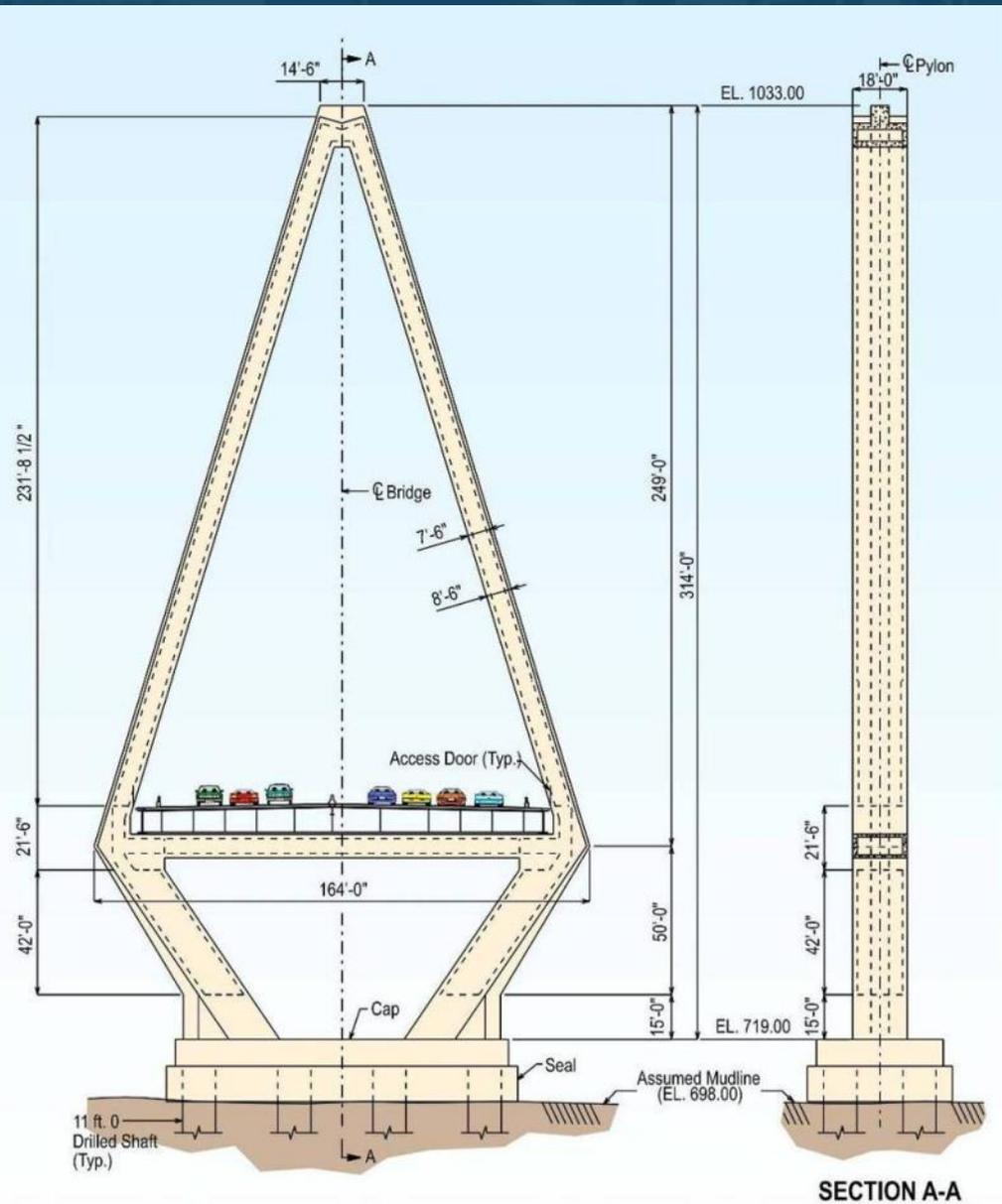
Stay/Edge Girder Connection



Stay/Pylon Connection



Pylon



Post Design Services and Construction Overview

#%*@\$
designers!



Post Design Services

- Review of 554 Construction Submittals
- Responding to RFIs, FDCs and NCRs
 - ◆ 418 Requests For Information
 - ◆ 393 Field Design Changes
 - ◆ 425 Non-Conformance Reports
- As-Builts – 1853 sheets
- Bond Bridge Maintenance Manual

RFIs and FDCs

PCC-RFI-FDC 64

Subject: SV, Bent 16 NB, Existing footing interference
Project: KciCON
Submitted: February 12, 2009 11:20 am
Status: Accepted
Description: The existing footing is extends 17 inches into the new footing and is higher than the as-builts have shown. Is it acceptable to adjust the piling, rebar and resin anchors as shown in the linked sketch?

User Fields

This is an	FDC
Specificaiton Section	Book 2 Sec 15 Structures
Construction Area	South Segment
Construction Discipline	Structures
Sheet No.	SV-BTDT-025, 026
Design Response	REVISED RESPONSE: It is acceptable to adjust the piling and resin anchors as shown in the linked sketch. All vertical reinforcement shall be installed in the footing and wall per plan. Maintain a 12" max. spacing of #6 vertical bars in the wall. Cut bars where they conflict with existing footing, see linked document. The #6 horizontal L bars in the footing may be cut and lap spliced. The min. lap splice should be 1'-8". If the #6 horizontal bar cannot be spliced with sufficient lap, a splice bar (3'-6") shall be required.
Design Mgr Comments	none
Will Revised drawing(s) be Issued?	No
Expected RFC Re-Issue date	
Show in As-Builts	Yes
Does the PCC Proj. Engineer Concur w Eng Comments	Yes

Post Design Challenges

- **Specification Book for Highway Construction**
 - ◆ design-build contract context
 - ◆ engineer?
 - ◆ QC/QA
- **As-Builts**



VICON
MASSMAN
CONSTRUCTION CO.

CR114





03/30/2010





07/24/2010



06/29/2010



Front Street SPUI



Front Street SPUI





The Christopher S. Bond Bridge

An Icon for Kansas City



Bryan Wilkerson PM
Paseo Corridor Constr

TEAM Conference

Branson, MO

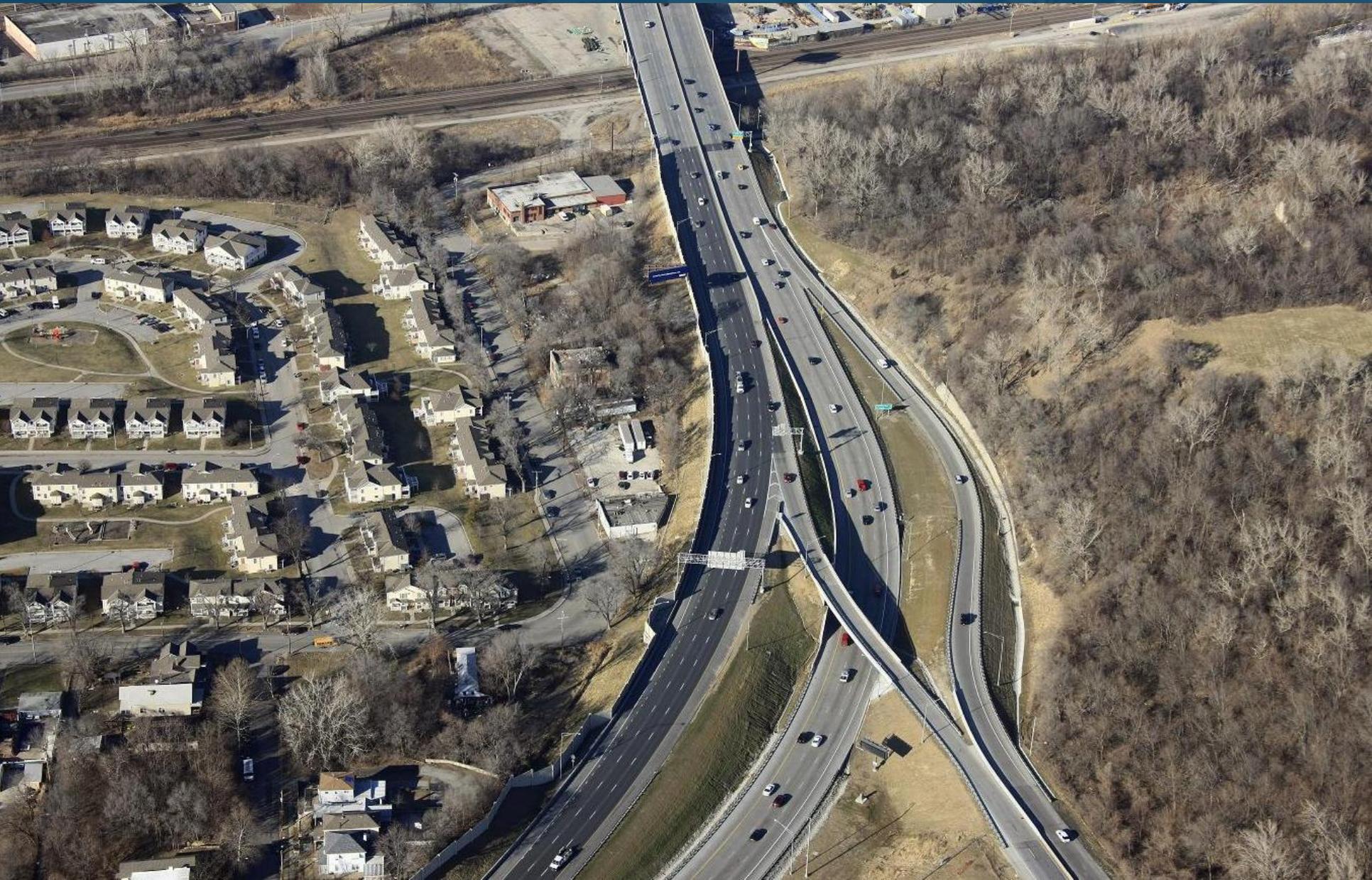
March 17, 2011



South End of Project: March 2008



South End of Project: February 2011



Front Street: March 2008



Front Street: February 2011



River Bridge: March 2008



Foundation Work: September 2008



235 Miles of Rebar: November 2008



1/3 of the Way to the Top: May 2009



Final Stay Cable Installed: August 2010



Bond Bridge Dedication: Sept. 27, 2010



February 2011



Levee Road: March 2008



Levee Road: February 2011



16th Avenue: March 2008



16th Avenue: February 2011



Armour Road: March 2008



Armour Road: February 2011



The Aerial View: 3 Years of Work Delivered 6 Months Early



Project Success

Shared office with owner

- ◆ Over 150 personnel in shared office.
- ◆ Task Forces assigned to meet weekly.
- ◆ Joint staff meetings for Quality Assurance, Schedule, Community Advisory Group, Workforce Development, etc.
- ◆ Hallway meetings

Project Success

Shared Database

- Documentation is a large part of this project.
 - ✦ Each construction team has a place to archive and share working files.
 - ✦ Each task force has a place to archive and share working files.
 - ✦ Everything will be stored for final submittal and retrieval for the next 100 years.

Project Success

Design-Build

- Task Force teams met weekly at the shared office during the design process.
 - ✦ MoDOT encouraged our team to utilize other Dept. of Transportation's specifications and standards for this project.
 - ✦ Flexibility to change design to meet current conditions was a part of this project.

Project Success

Partnering

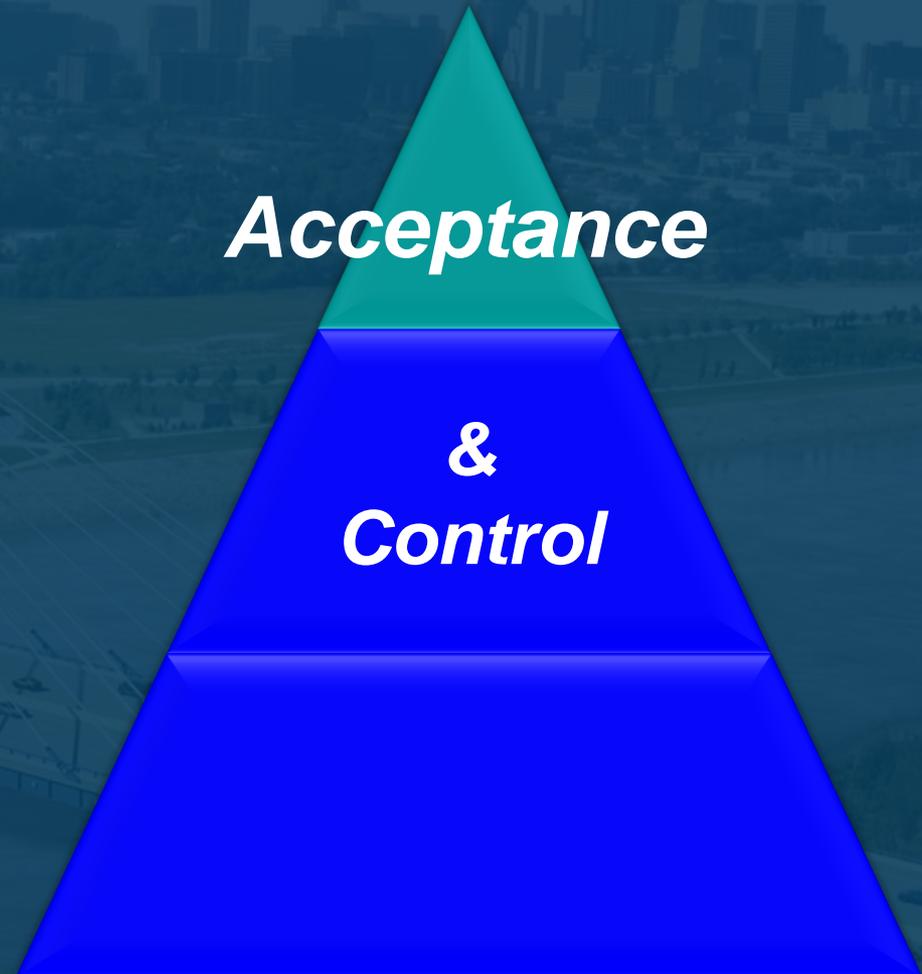
- Worked together as ONE team to achieve our goals
 - ◆ Developed Project Charter
 - ◆ Monthly meetings at sponsor level
 - ◆ Quarterly meetings at executive level
 - ◆ Quarterly field Partnering Surveys

Project Challenges – QC/QA

- Quality Program Structure
More by contractor = Less by MoDOT

Project Challenges – QC/QA

- Traditional
 - ✦ MoDOT Quality Acceptance & Control



Project Challenges – QC/QA

- **kcICON**
 - ✦ **MoDOT Quality Oversight**
 - ✦ **PCC Quality Acceptance Team**
 - ✦ **Contractor/Subs Quality Control Activities**



Project Challenges

● 3rd Party Approvals

- ✦ Railroads – 6 different Railroads
- ✦ Utilities – Master Utility Agreement
- ✦ 2 Levee Districts, Coast Guard
- ✦ Property Owners / Right-of-Way

Project Challenges

Material Procurement

- ◆ Steel mill orders