John A. Roebling Bridge Rehabilitation History

Presented By:
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Introduction

• Original Construction Completed 1867
• First Major Reconstruction - Mid 1890’s
• Second Major Reconstruction - Mid 1950’s
• Third Major Reconstruction - 1990’s
• Structural and Electrical Repairs - 2006
• Bridge Cleaning and Painting - 2010
Original Construction

- Construction began in 1856 and continued until 1858 when halted due to insufficient funds.
- Construction resumed in 1863 during latter years of Civil War.
Original Construction

- Opened to Pedestrians - Dec. 1, 1866
- Opened to Vehicular Traffic - Jan. 1, 1867
Original Construction

• A view of the completed bridge from Covington - 1870’s
Original Construction

• A view of Cincinnati from the Covington Tower
First Major Reconstruction - 1890’s

- Saddle Set of Suspension Cables Added
- Primary Cable Ends in
- Stiffening Truss Added
- Anchorages Reconditioned
First Major Reconstruction - 1890’s

- Photo taken of stiffening truss construction during the summer of 1897
First Major Reconstruction - 1890’s
Second Major Reconstruction-1950’s

- 765 feet of Ohio approach were removed from Third Street to Front Street
- New bus ramps to the Dixie Terminal and new bridge over Second Street were built
- Ohio abutment was constructed
- Timber roadway deck replaced with lighter weight, greater strength, open steel grid
Third Major Reconstruction - 1990’s

- Contract I - Suspender Replacement Plans
- Involved seven separate and distinct contracts designed to address and repair major components of the bridge
- Contract II - Tower Stairways Replaced, Minor Concrete and Steel Repair
- Contract III - Saddle House Replacements, Masonry Stone Repairs
- Contract IV - Ohio Approach Deck Replacement
- Contract V - Anchorage Restoration Plans
- Contract VI - Dramatic Turret Lighting
- Contract VII - Steel Grid Deck Repair
Third Major Reconstruction - 1990’s

- Temporary Hanger during Suspender Cable Removal
Third Major Reconstruction - 1990’s

- Tower Stairs Replacement
Third Major Reconstruction - 1990’s

- Saddle House Restoration
- Existing Tower Dome Saddle House
Third Major Reconstruction - 1990’s

- New Saddle House
- Turret Construction
Third Major Reconstruction - 1990’s

- Gold Leafed Ball and Greek Cross Assembly
Third Major Reconstruction - 1990’s

- Ball and Greek Cross Assembly Installation
Third Major Reconstruction - 1990’s

• Numerous sandstone blocks replaced in Towers and Anchorages
Third Major Reconstruction - 1990’s

- Ohio approach pavement replacement
Third Major Reconstruction - 1990’s

- Anchorage restoration and roof replacement
Third Major Reconstruction - 1990’s

- Dramatic Turret and Saddle house lighting completed to highlight beautiful craftsmanship (Contract VI)
- Deteriorated steel grid deck section repairs completed (Contract VII)
Structural and Electrical Repairs – 2006

• Work began November 13, 2006 and was completed on March 23, 2007
• All electrical wiring and service feeds replaced – (Roadway, Pedestrian, Navigation and Aesthetic)
• Deteriorated steel grid deck sections replaced along with several floor system beam replacements.
Structural and Electrical Repairs – 2006

- New electrical conduit attached to lower chord of bridge truss

- Crews prepare to remove grid sections
Crews prepare to remove grid sections
Painting Project – 2009

- LAST PIECE OF THE PUZZLE
- Cleaning and painting began in the fall of 2009 on the Ohio approaches
- Work completed in the fall of 2010
2009-2010 Bridge Painting

The first phase of the project was the painting of the Ohio approaches in the fall of 2009.
The second phase was the cleaning and painting of the main spans and cables, completed in fall of 2010.
2009-2010 Bridge Painting

- The painting project has been coordinated and phased in conjunction with the Cincinnati Banks Project
John A. Roebling Bridge
Rehabilitation Cost Summary

- Original Construction: $1.8 mil
- First Major Reconstruction: $0.6 mil
- State of KY purchased bridge: $4.2 mil
- Second Major Reconstruction: $5.0 mil
- Third Major Reconstruction: $10 mil
- Structural & Electrical Repairs: $3.1 mil
- Painting Project: $16.2 mil
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