

O'RORKE BRIDGE CONSTRUCTION (STUTSON STREET BRIDGE REPLACEMENT)

Presented to:
**10th STATEWIDE
CONFERENCE on LOCAL
BRIDGES**

Presented by:
**Bo Mansouri, P.E.
Project Manager
Monroe County DOT**

**Dave Thurnherr, PE
Associate/Structural Group Manager
Bergmann Associates**



Presentation Outline

Dave Thurnherr

- *Project Overview*
- *Key Project Elements*

Bo Mansouri

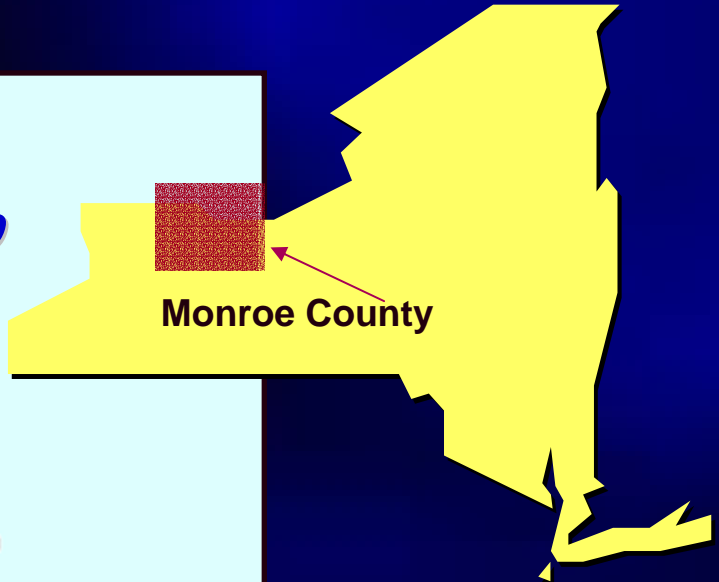
- *Project Coordination*
- *First Challenges Encountered*
- *Project Schedule*

Progress Photos



Project Location

Project Location



Project Overview



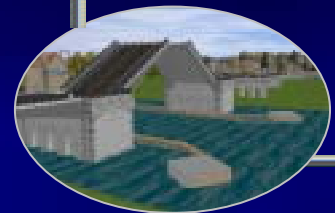
Lake Ontario

Existing Deficient Bridge

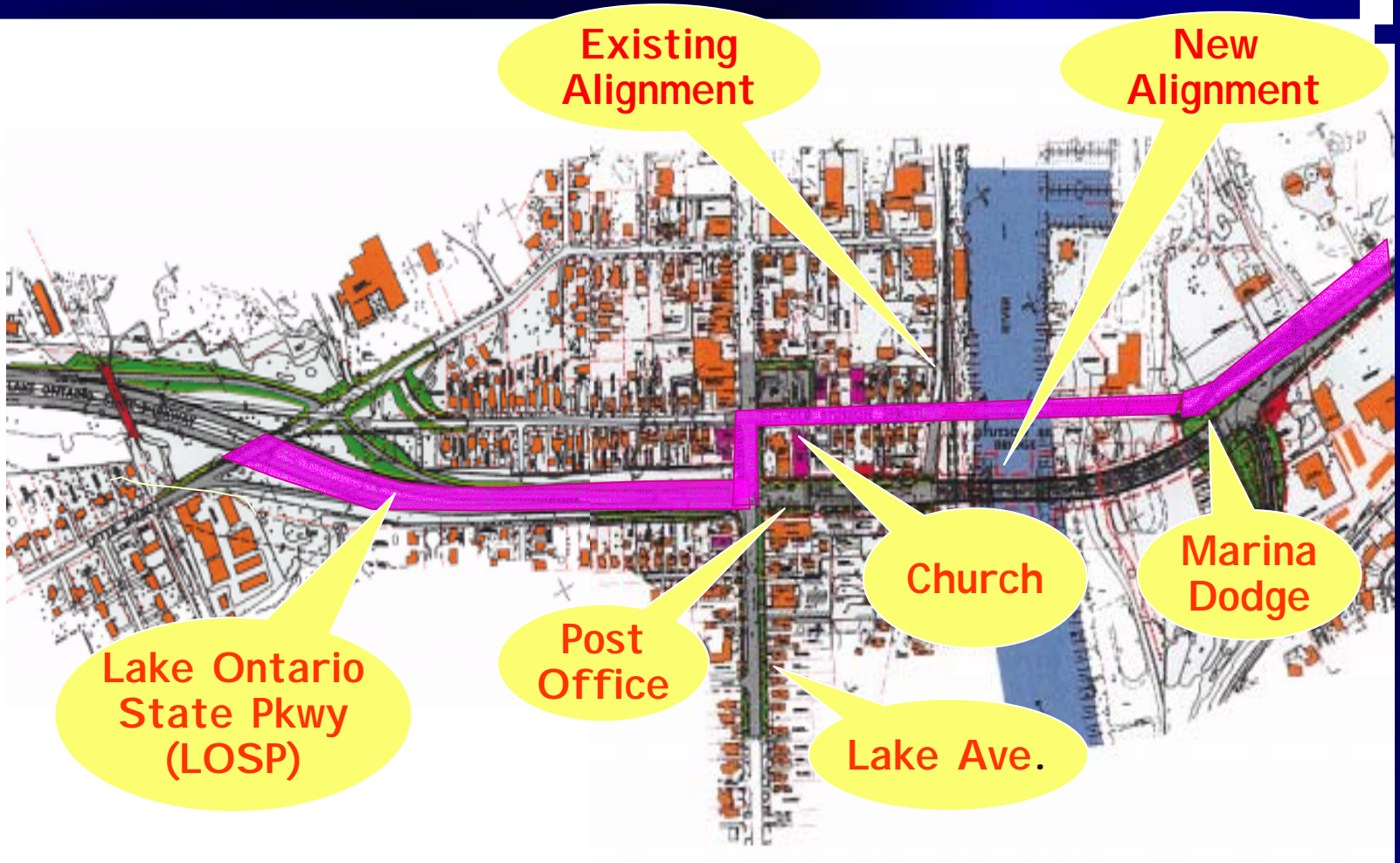


Project Overview

- ***Locally Administered Federal Aid Project***
- ***Jointly Managed by NYSDOT & Monroe County***
- ***City / County / State Roadways***
- ***Within City of Rochester & Town of Irondequoit***
- ***Highly Visible With Extensive Community Involvement***



Project Overview



Lake Ontario
State Pkwy
(LOSP)

Post
Office

Existing
Alignment

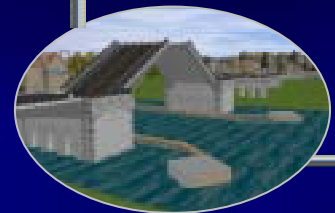
Lake Ave.

Church

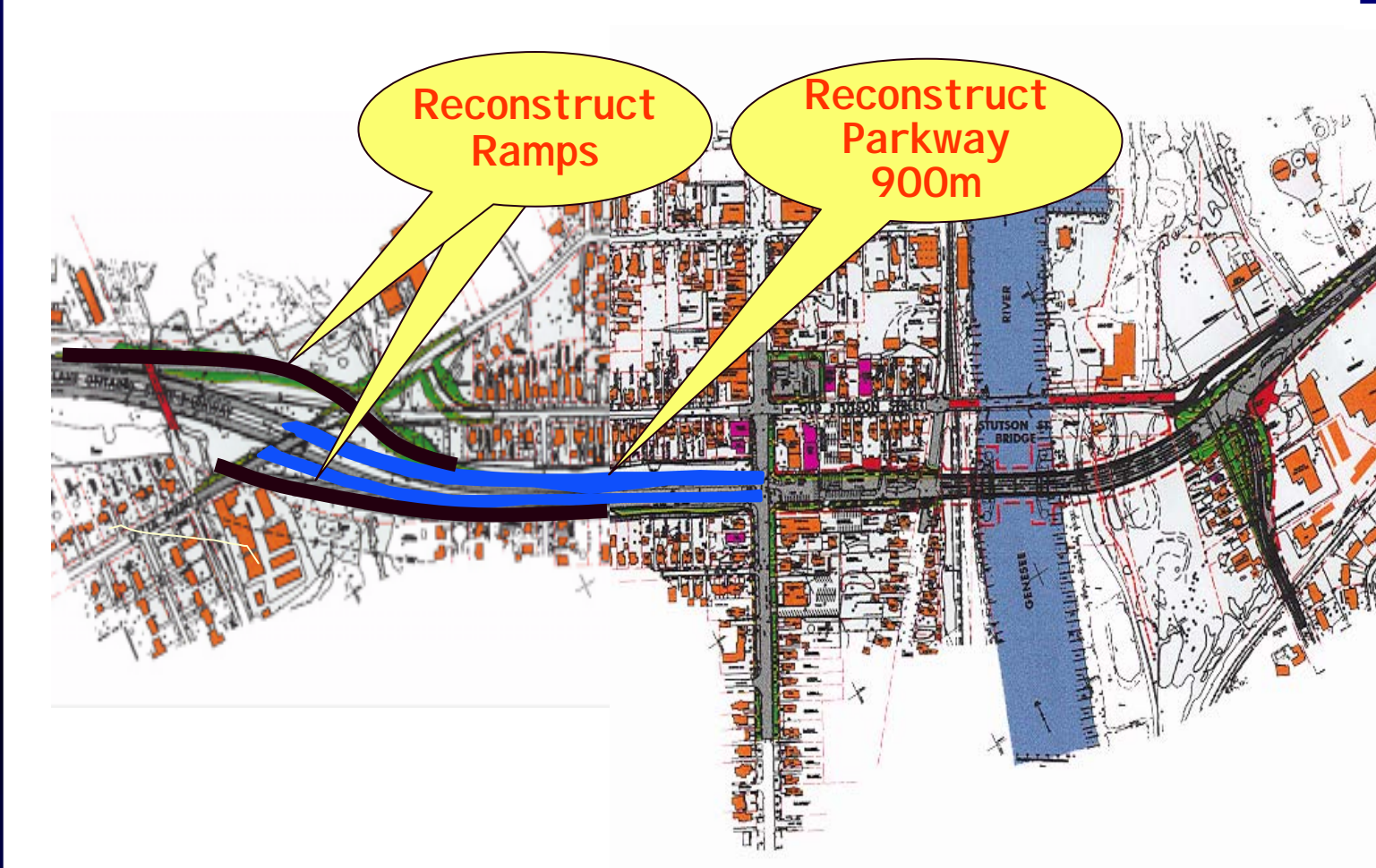
Marina
Dodge

New
Alignment

Existing Alignment



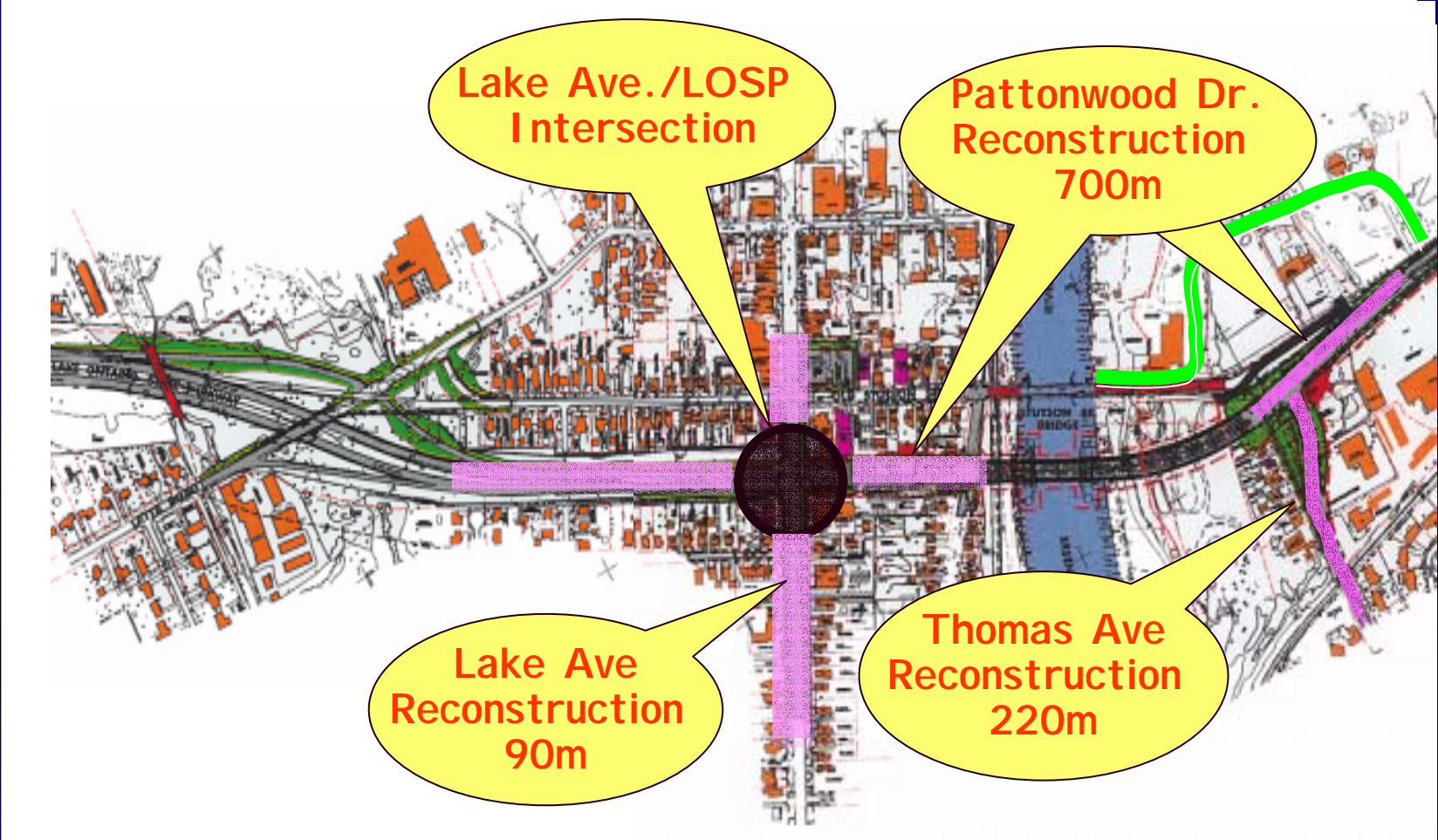
Project Overview



New Construction



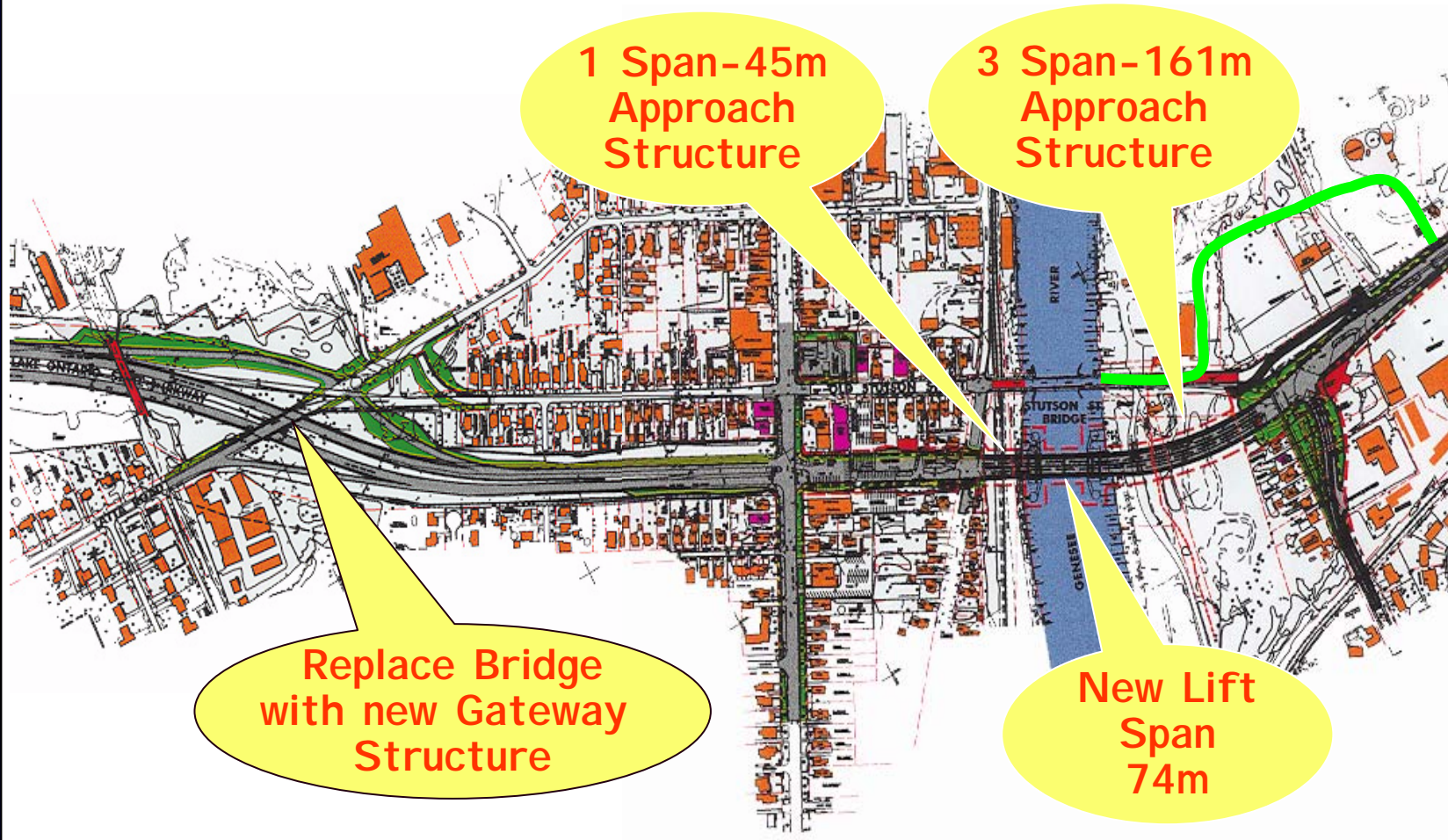
Project Overview



New Construction



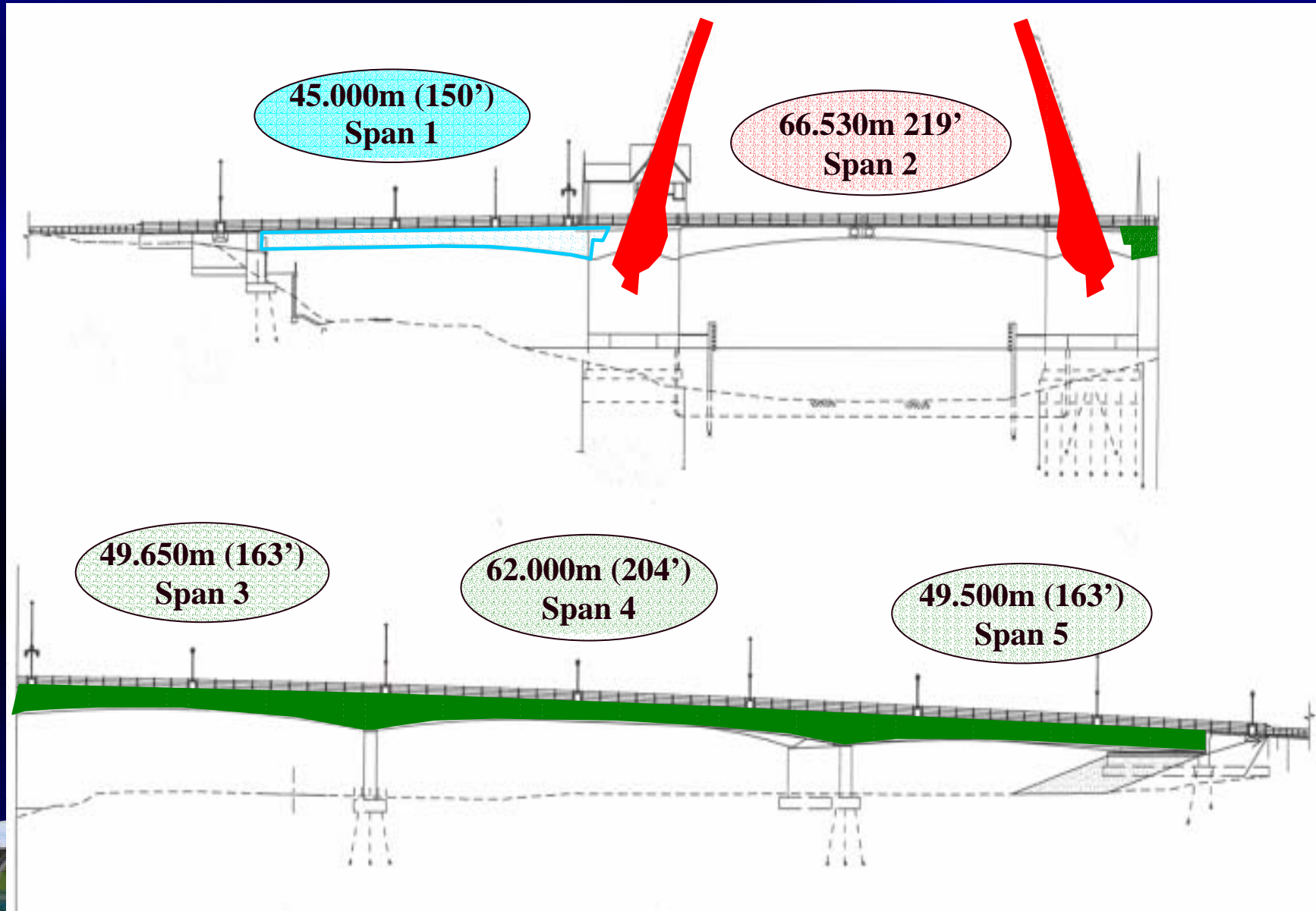
Project Overview



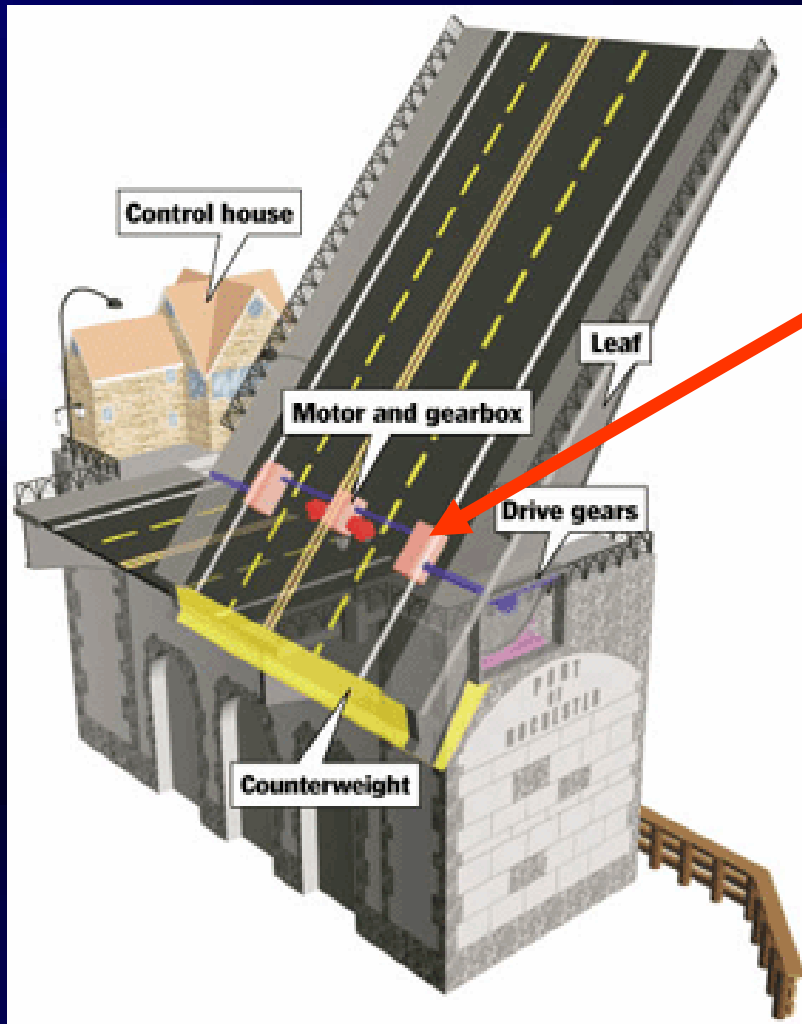
Bridge Construction



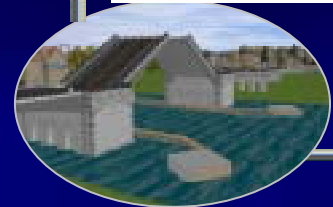
Bridge Configuration



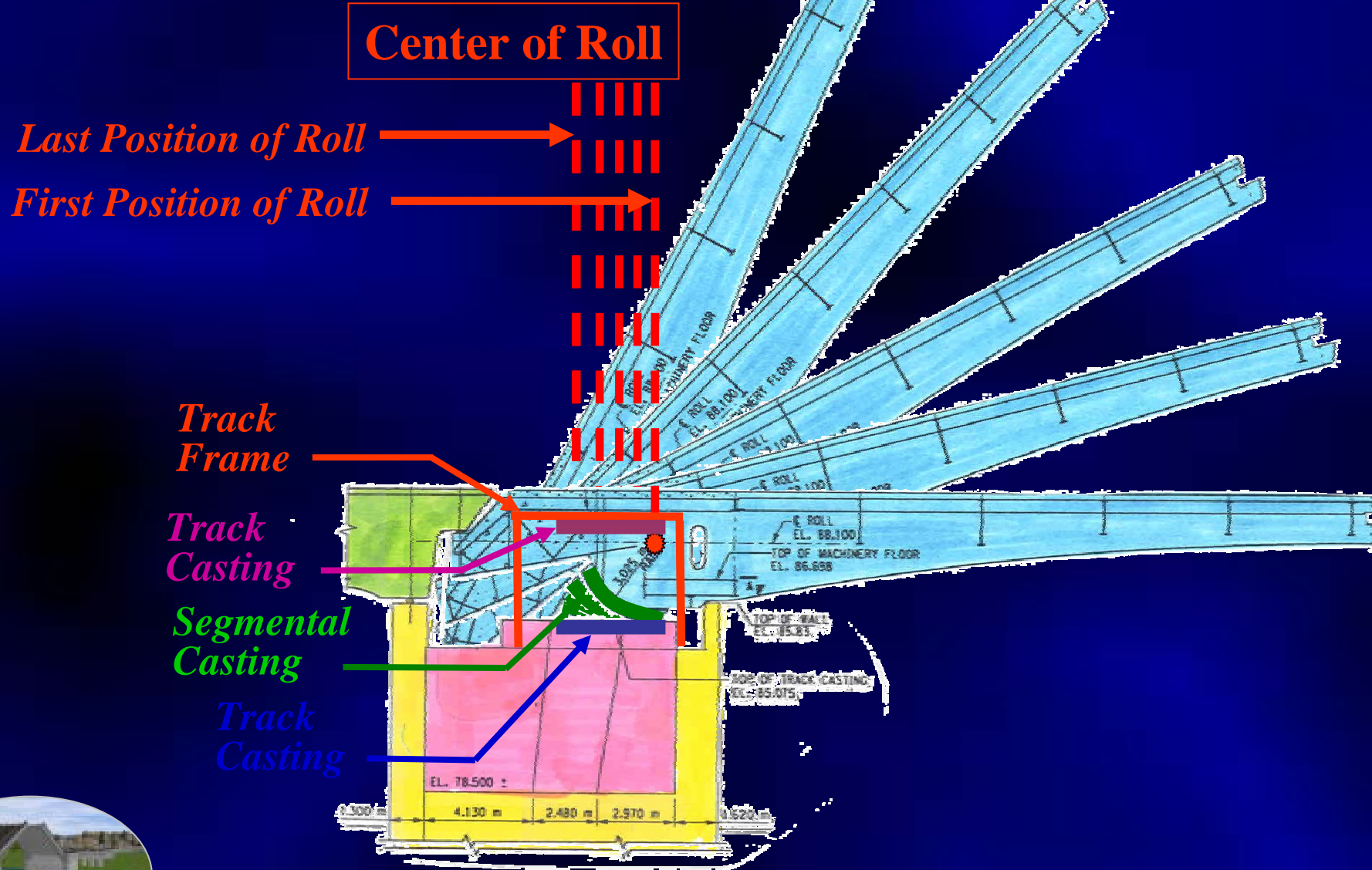
How a Rolling Lift Works



MACHINERY ROOM



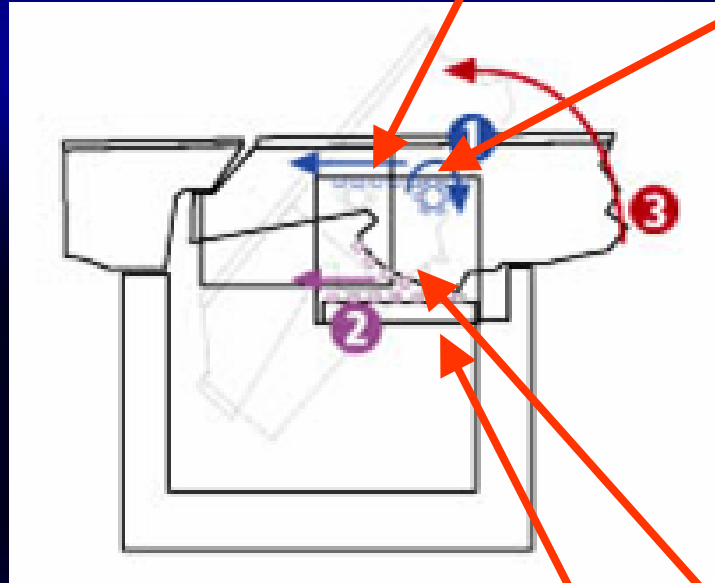
How a Rolling Lift Works



How a Rolling Lift Works

Rack Casting

Rack Pinion



Rack Frame

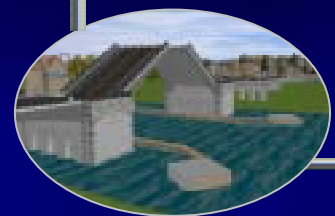
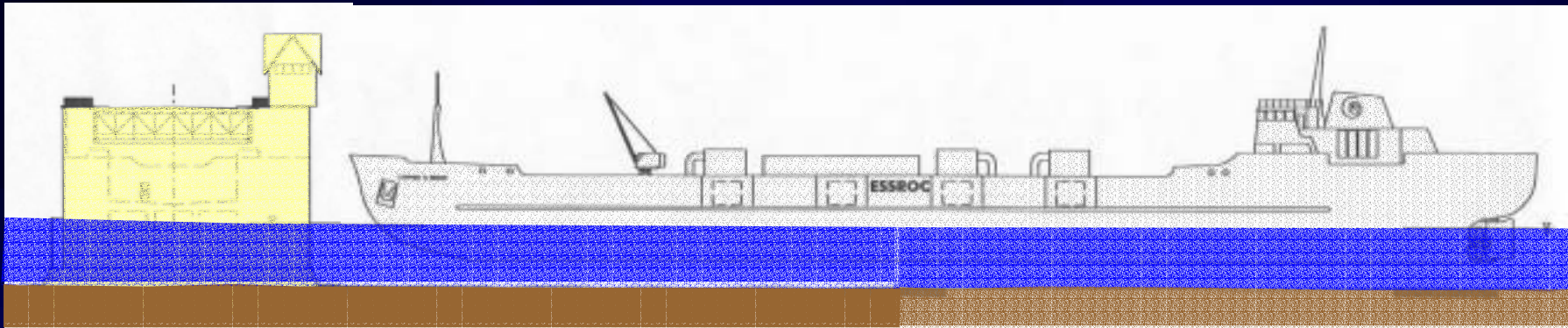
Segmental Casting

Track Casting

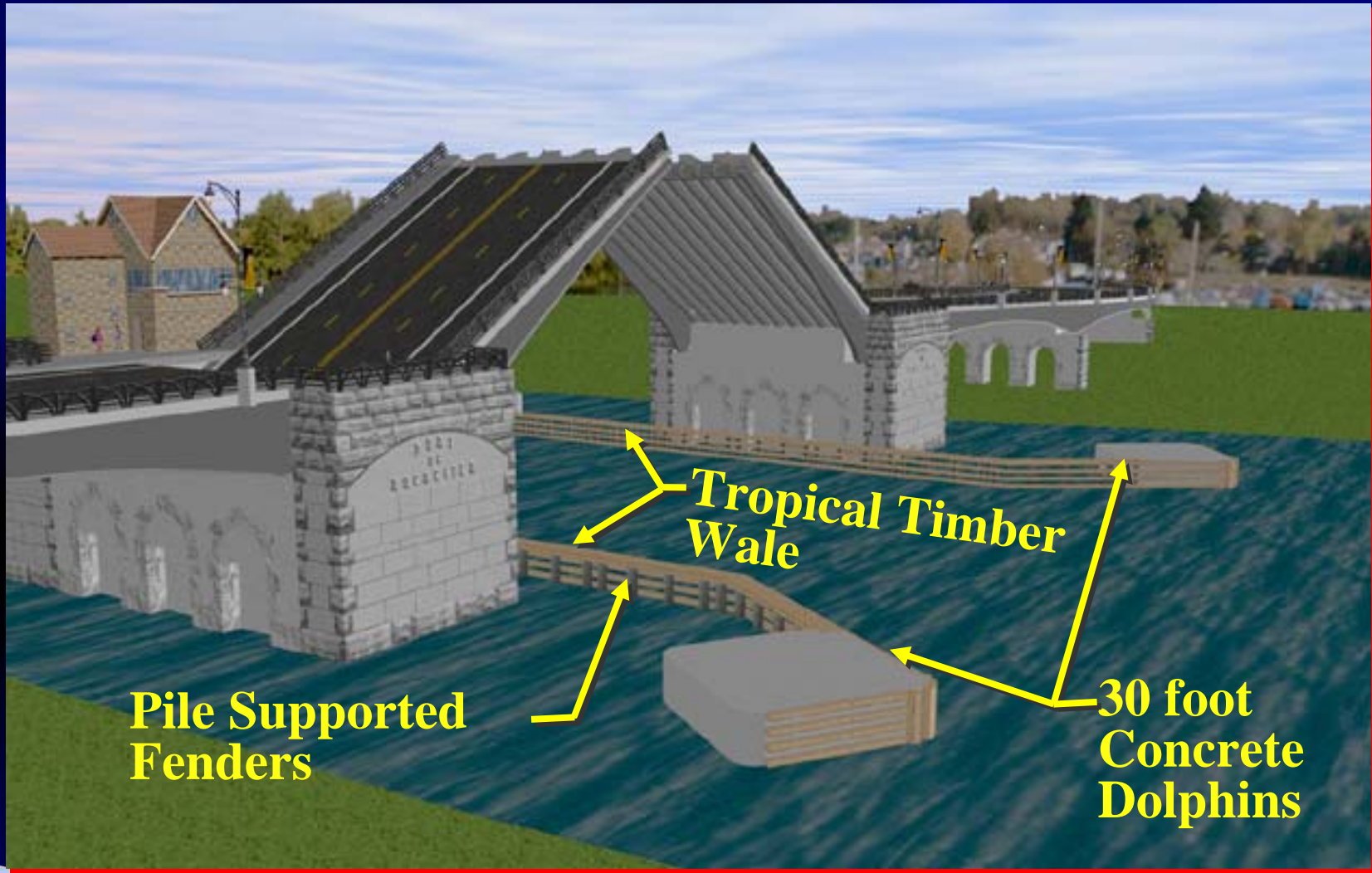


Pier Protection Design Requirements

- ❖ **Head-on and Broadside Impacts**
- ❖ **Must Stop or Redirect Vessel**
- ❖ **Intended to be Sacrificial**
- ❖ **Cells, Islands, Floating System Alternatives**



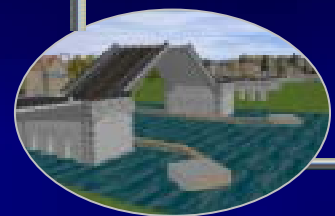
Pier Protection



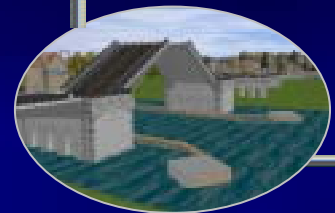
Bridge Aesthetics



EXISTING BRIDGE



Bridge Aesthetics



Presentation Outline

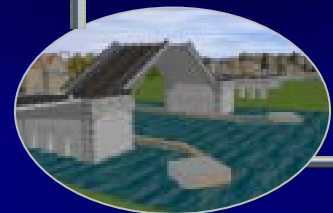
Dave Thurnherr

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Bo Mansouri

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- *Project Schedule*

Progress Photos



Project Roles

**Jointly Managed by
NYSDOT (Karen Brown) & Monroe County (Bo Mansouri)**

**Final Design
Bergmann Associates' Team**

**Construction Inspection Team
Led by NYSDOT EIC**

**Shopdrawing/Submittal Review
NYSDOT/Bergmann Assoc. Team**

**Construction Inspection
Sear Brown Team**



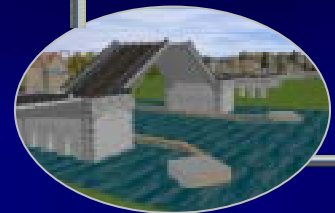
OWNER & BASCULE TEAM LEADERS VISITED SIMILAR SITES

- Talked to Operators & Maintenance Personnel
- Observed Features & Operation



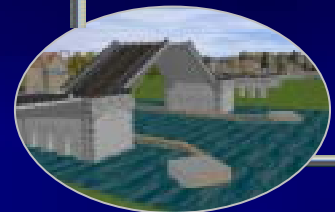
Bidding

- **Advertised and Let By The County**
- **Project Labor Agreement**
- **Dispute Resolution Board**
- **Over 106 Sets of Plans and Proposal Books Sold**



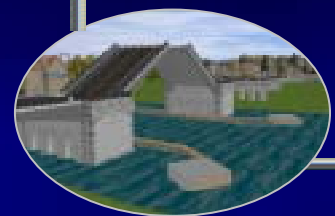
Award

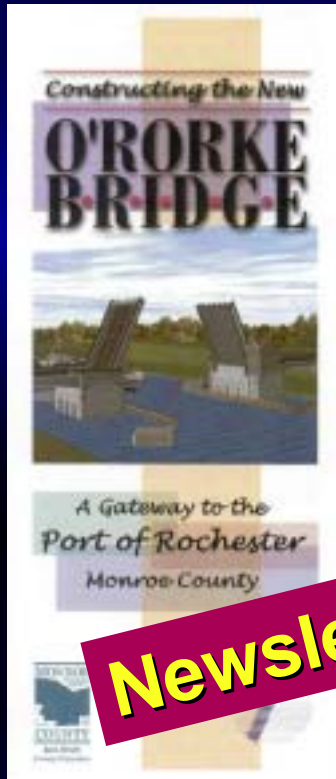
- **Only Two Bids Received**
- **Low Bidder: \$63,888,170.74**
- **Second Bidder: \$75,091,792.00**
- **Contract Award:**
 - **Ground Breaking Ceremony: Sept. 2000**
 - **Notice to Proceed: Sept. 25, 2000**
 - **Work Started: Sept. 2000**



Construction

- **Pay Estimates Upfronted Biweekly by the County**
- **Contractual Modifications Approved Locally**





Newsletter

Constructing the New
**O'RORKE
BRIDGE**

A Gateway to the
Port of Rochester
Monroe County

PROJECT INFORMATION MISSION STATEMENT WHO TO CONTACT

- WHO IS O'RORKE
- PROJECT MAP
- SUMMARY
- SCHEDULE
- HISTORY
- NEW BRIDGE
- PROJECT TEAM

WHO TO CONTACT

- COLLETT ENGINEERS
- PERKINS EASTMAN

WHAT'S NEW

- FEATURED PHOTO
- PROJECT FACTS

NEWS YOU CAN USE

- NEWS
- MEMBER ACCOUNTS
- WHO TO CONTACT
- WHAT'S AHEAD

ENGINEERING INFO

- BRIDGE DESIGN
- CONTRACTS

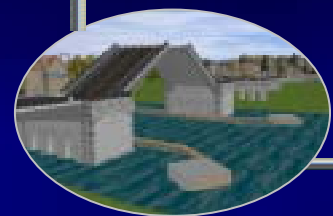
MONROE COUNTY
Just North
County Executive

7

Why the name
O'Rourke?

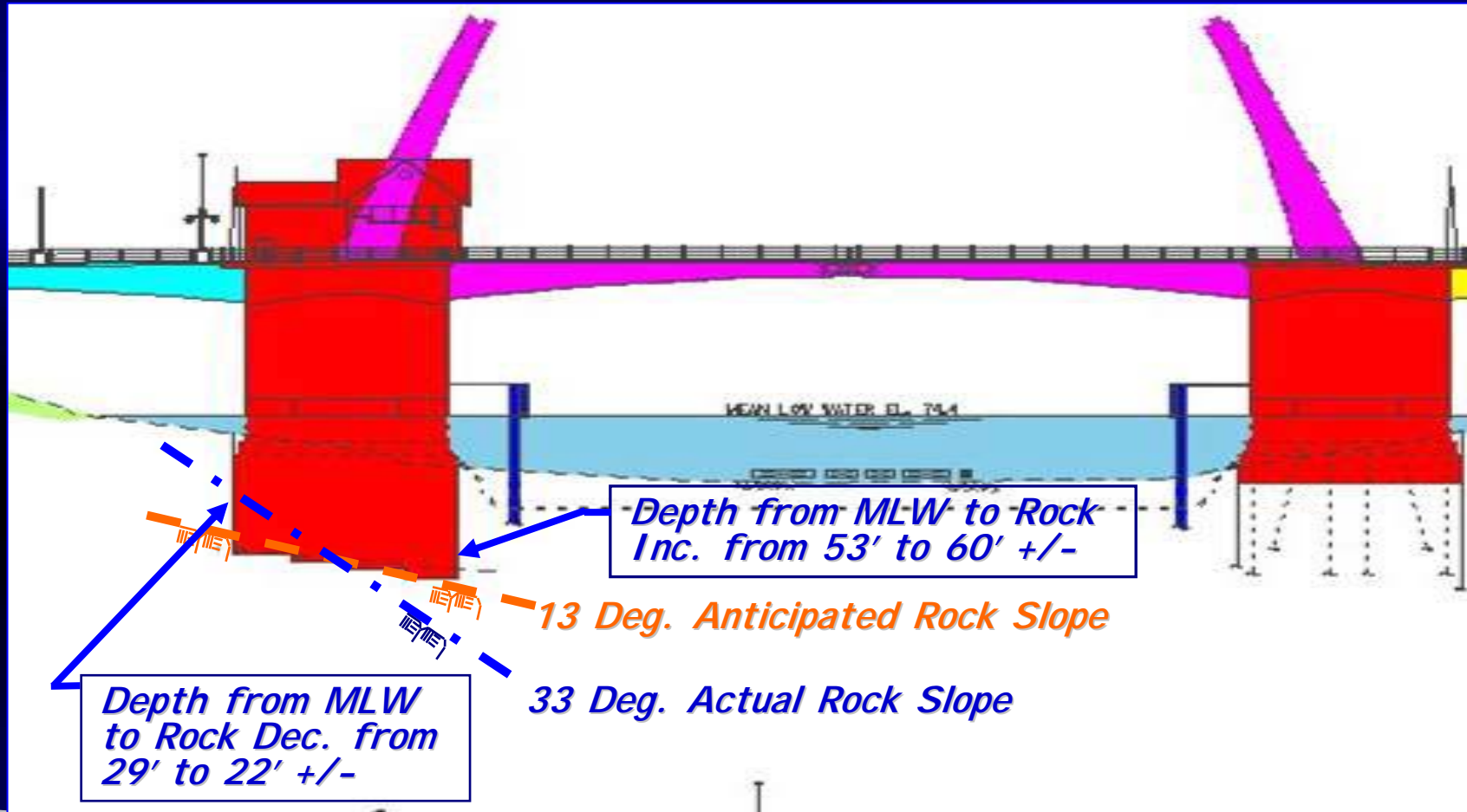
The website screenshot shows a navigation menu on the left, a central content area with a 'CURRENT PROJECT PHOTO' and a portrait of a man, and a right-hand sidebar with various news and contact links. The Monroe County logo and a large number '7' are at the bottom left.

www.Ororkebridge.com



Challenges Encountered

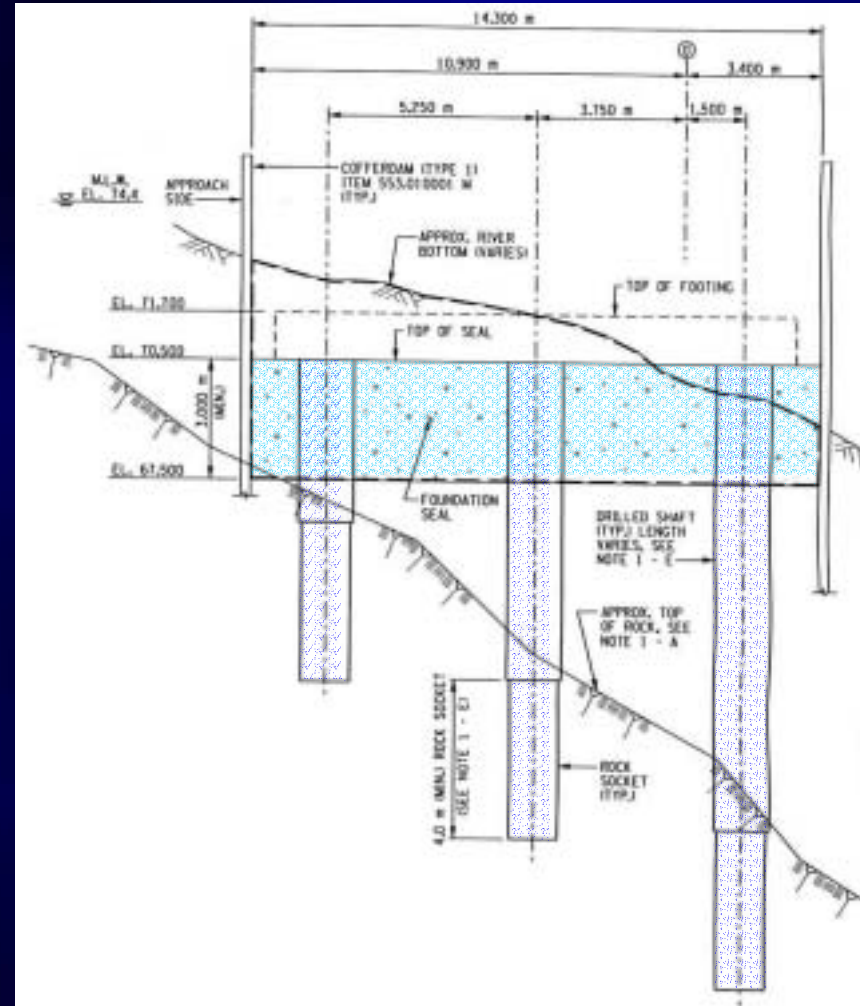
Bascule Pier Foundation Issues



Challenges Encountered

WEST PIER

- **ORIGINAL DESIGN:**
Spread Footing,
Founded on Seal on
Rock, West Pier (Step
with Max. Rise of 2')
- **REDESIGNED AS:**
Three Rows of 54" Dia.
Reinforced Concrete
Drilled Shafts, Embedded
15'-20' into the Bedrock



Project Schedule

| Task Name | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 00 | 01 | 02 | 03 | 04 |
|------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Initiation Phase | █ | | | | | | | | | | | | | | | | |
| Scoping & Preliminary Design | | | | | | █ | | | | | | | | | | | |
| Final Design | | | | | | | | | | █ | | | | | | | |
| Construction | | | | | | | | | | | | | █ | | | | |



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Progress Photos



Genesee Site August 2002



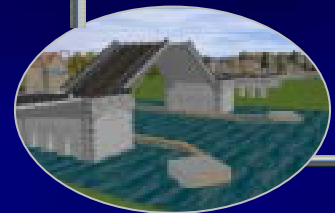
Building Demolition



Building Demolition



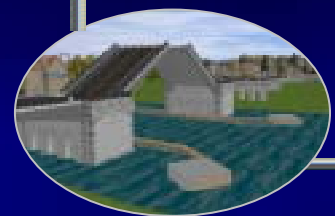
B & O Railroad Bridge Demolition



Latta / LOSP Site



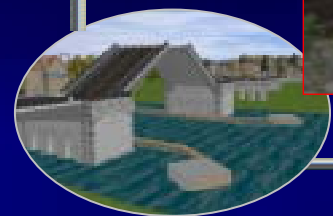
Latta Rd. Bridge Pier



Latta Rd. Bridge Steel



Latta Rd. Bridge - Almost Done



Privacy Walls



Pedestrian Wall



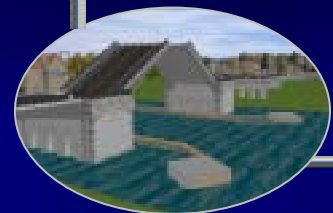
Pedestrian Wall



Trail



Marine Traffic



Pier 2 Cofferdam



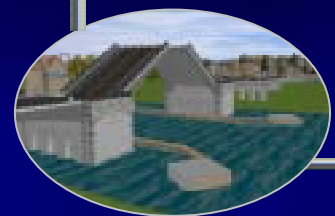
Pier 2 Piles



Pier 2 Rebar



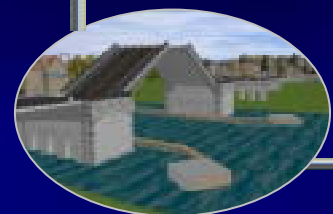
Form Liners



Pier 2 Construction



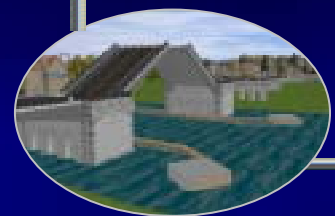
Pier 2 Construction



Land Piers



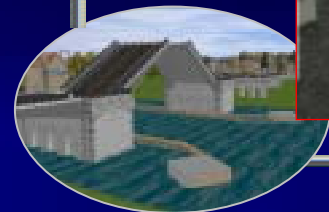
Land Piers



West Span Steel Transport



W. Span Steel Erection



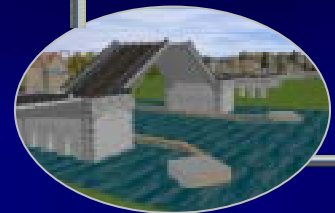
East Approach Deck



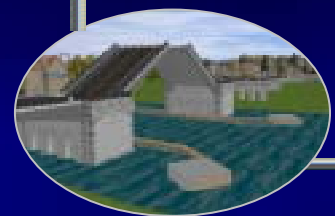
Basculer Girder Shop Erection



Heel Sections of Pit Girder



Crane Accident



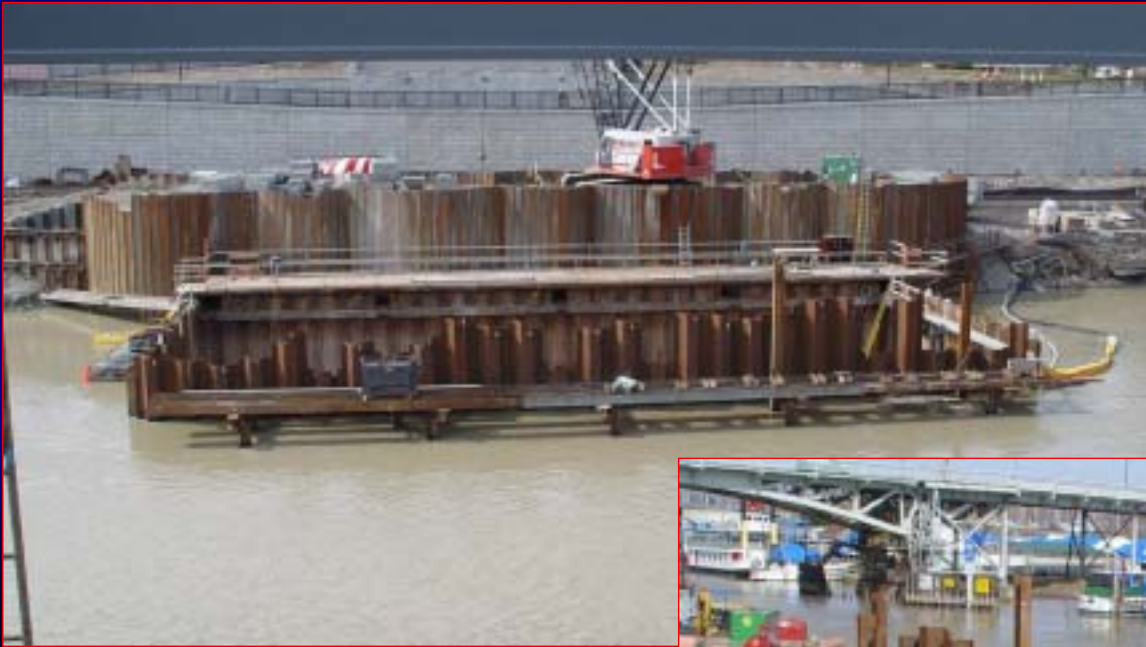
Pier 1 Drilled Shaft



Pier 1 Drilled Shaft



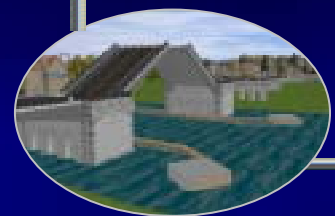
Pier 1 Cofferdam



Pier 1 Construction



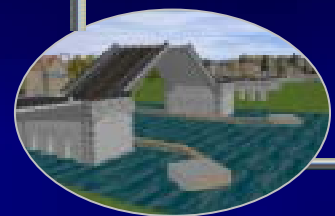
Pier 1 Construction



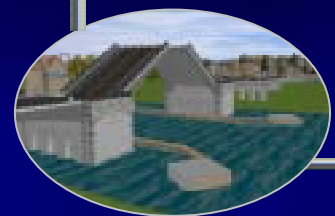
Pier 1 Construction



Machinery Supports



Machinery



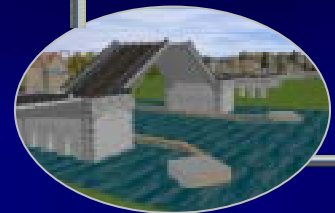
Roll Through



Roll Through



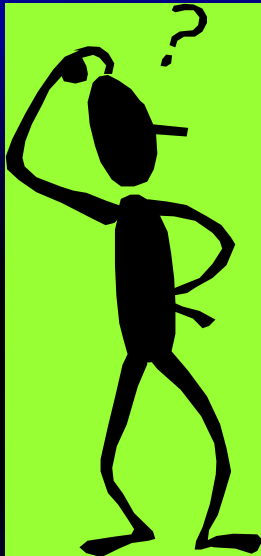
Roll Through



Project Site – October 16, 2003



QUESTIONS:




BERGMANN
associates

