



TEXAS DEPARTMENT OF TRANSPORTATION



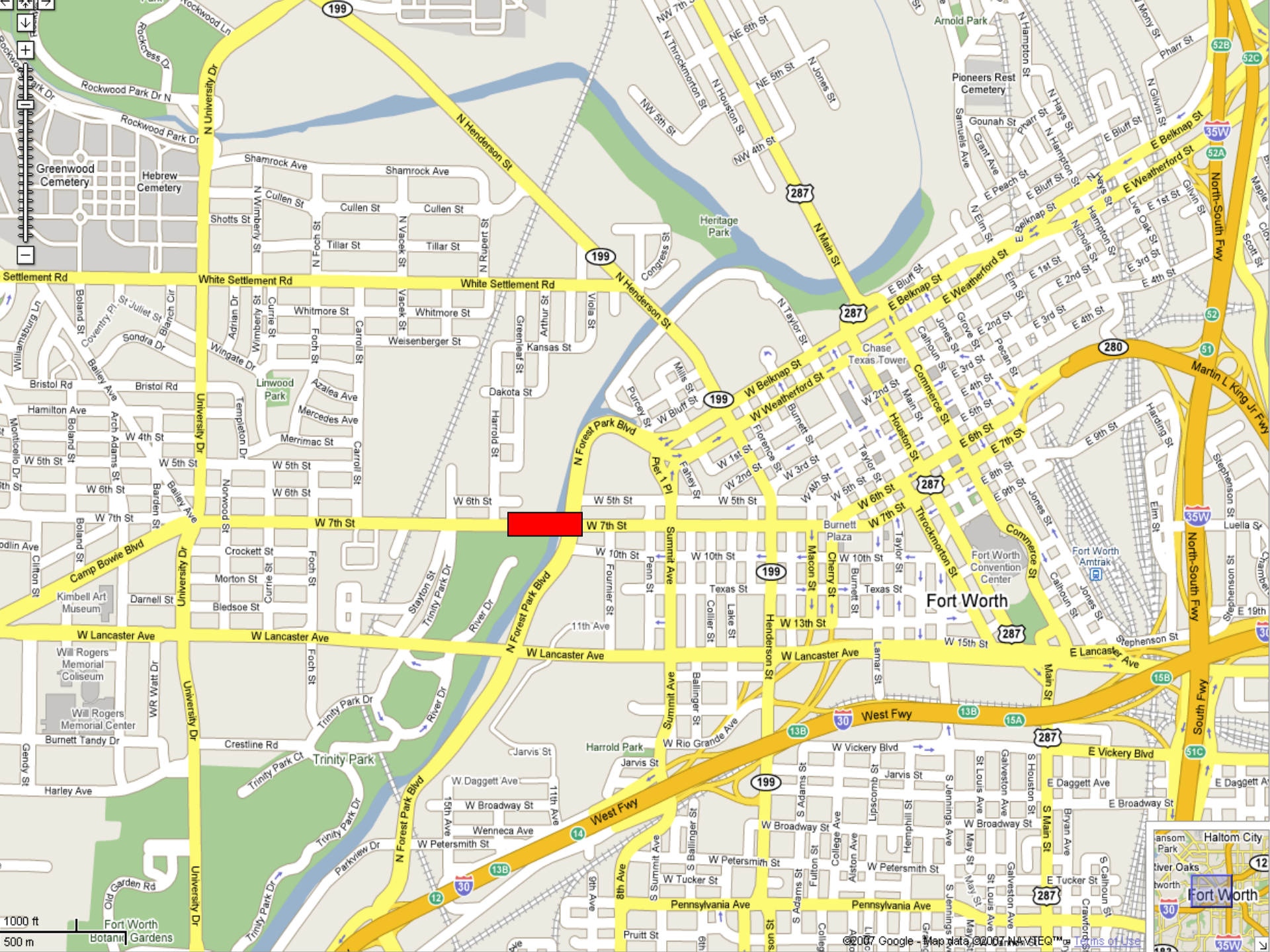
WEST 7TH STREET BRIDGE

Dean Van Landuyt, P. E.

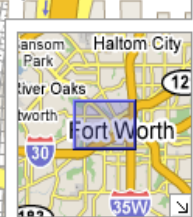


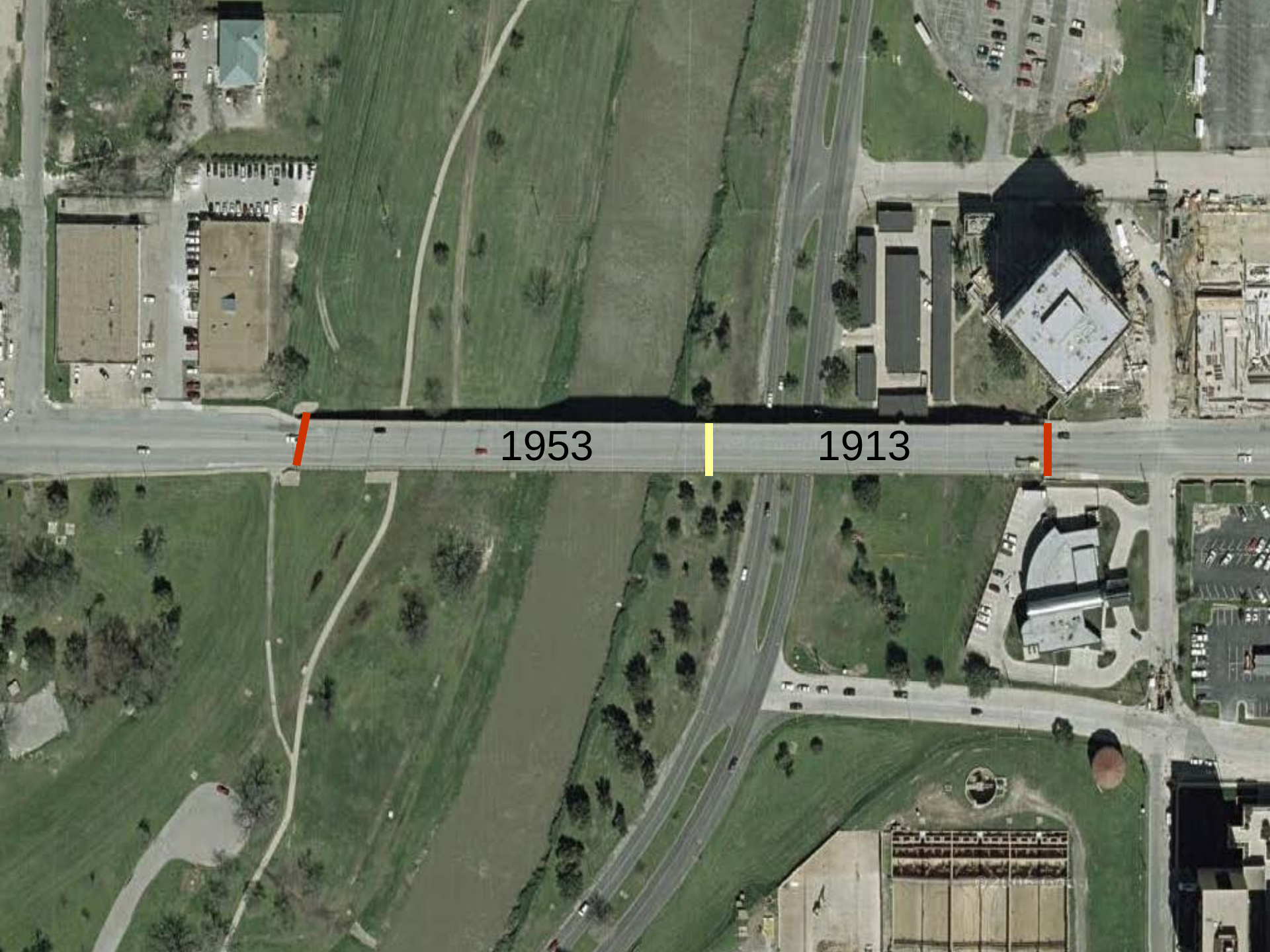






1000 ft
500 m





1953

1913









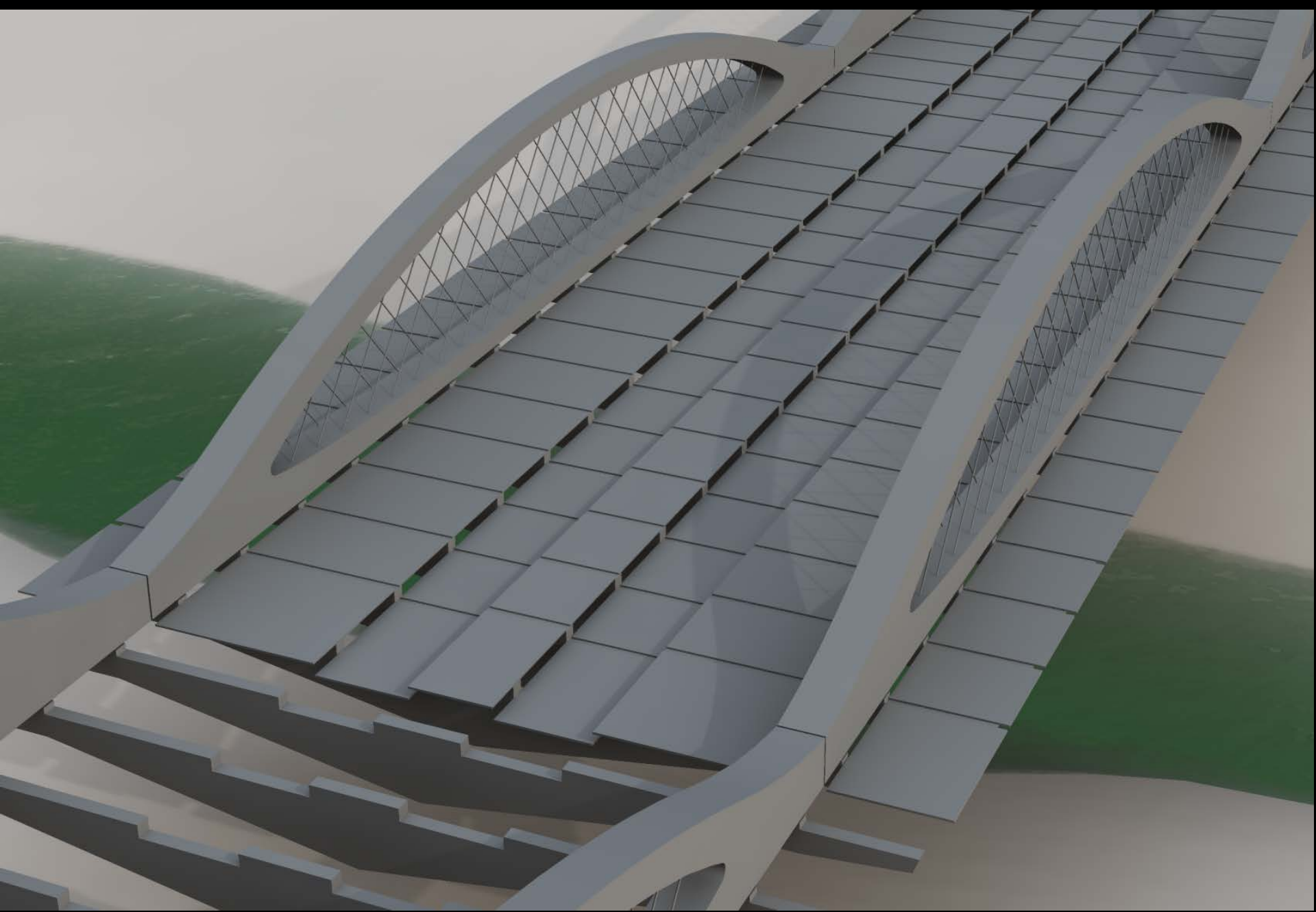
Structural Scheme

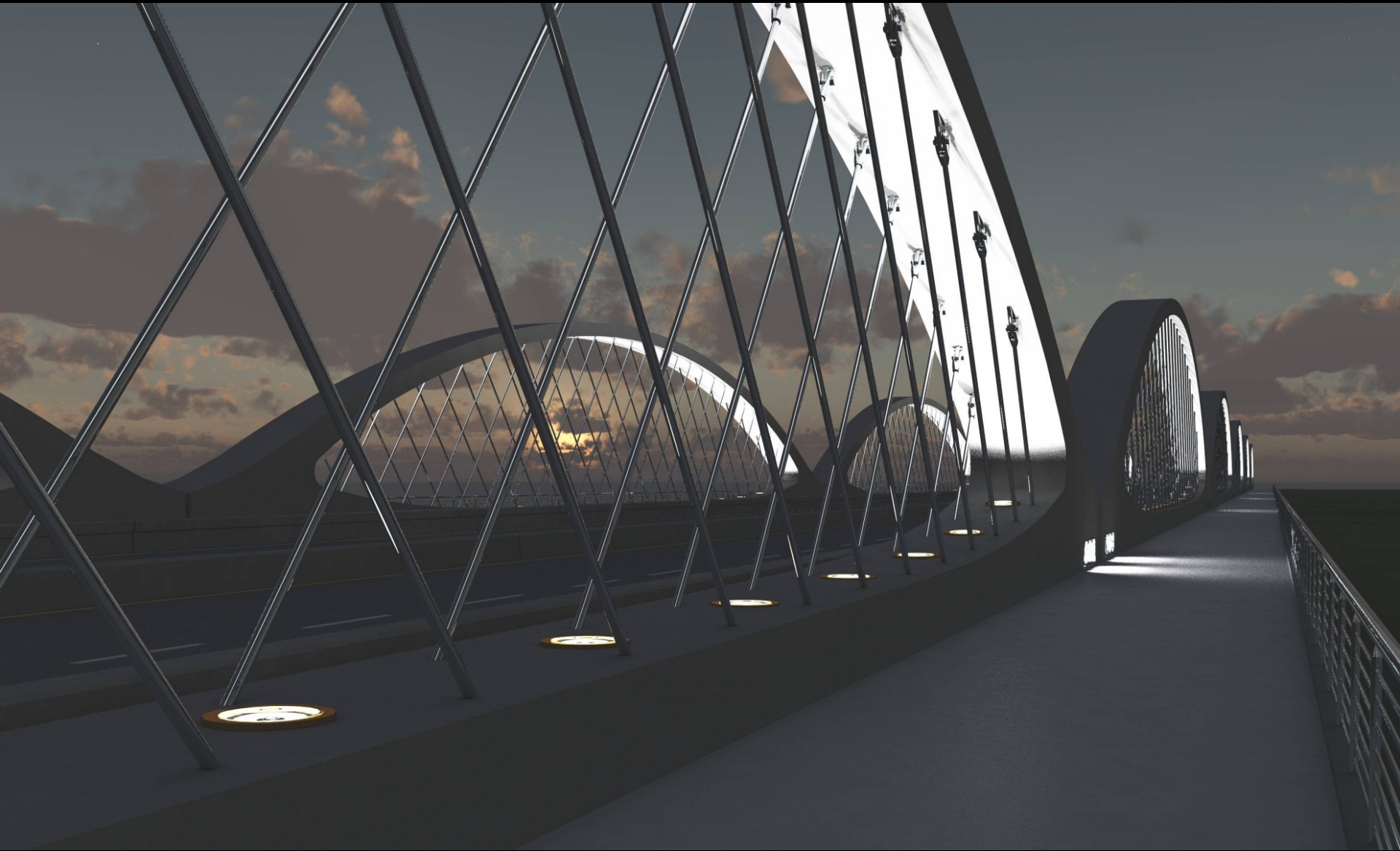


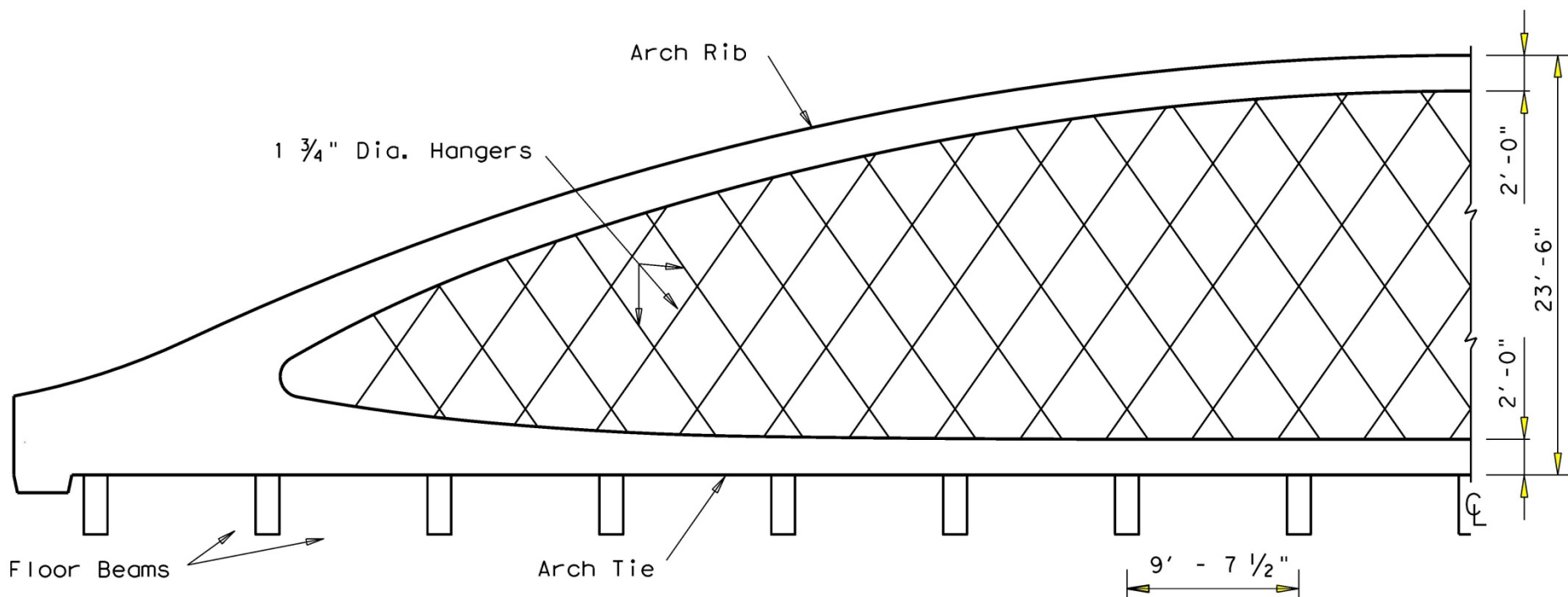


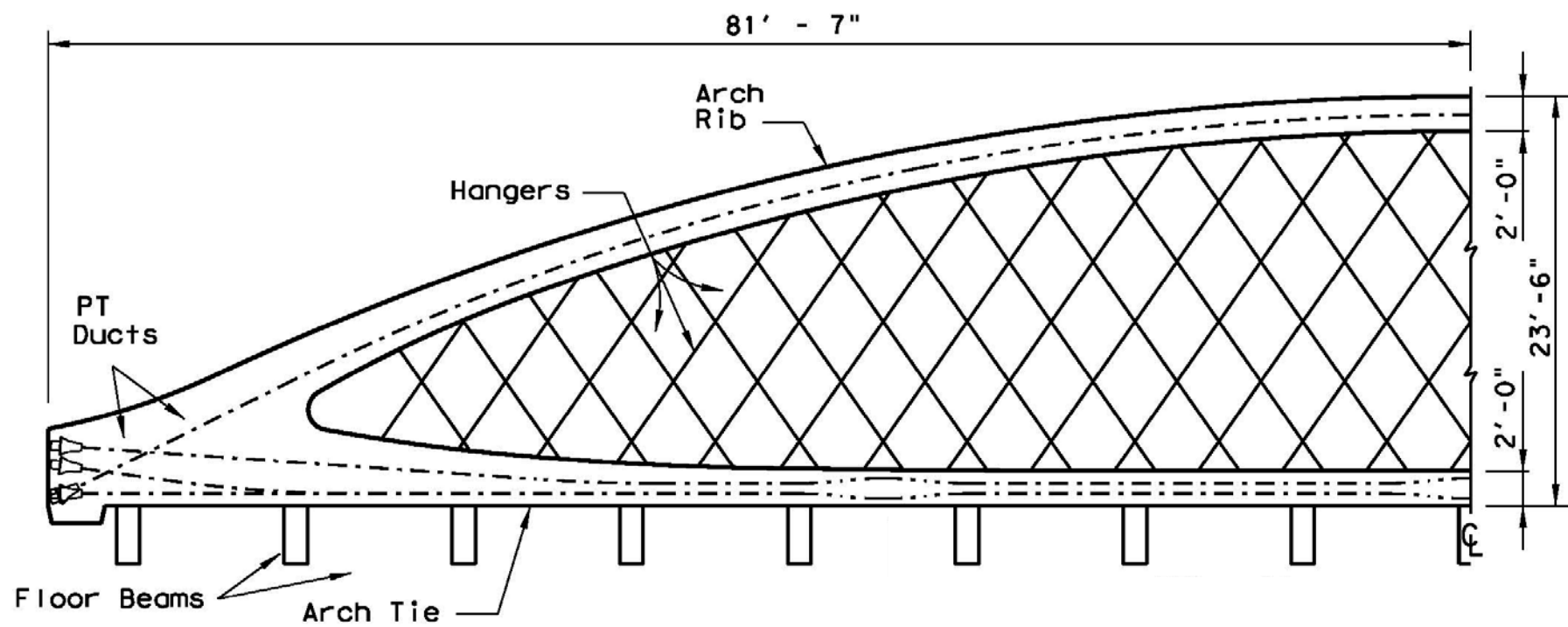


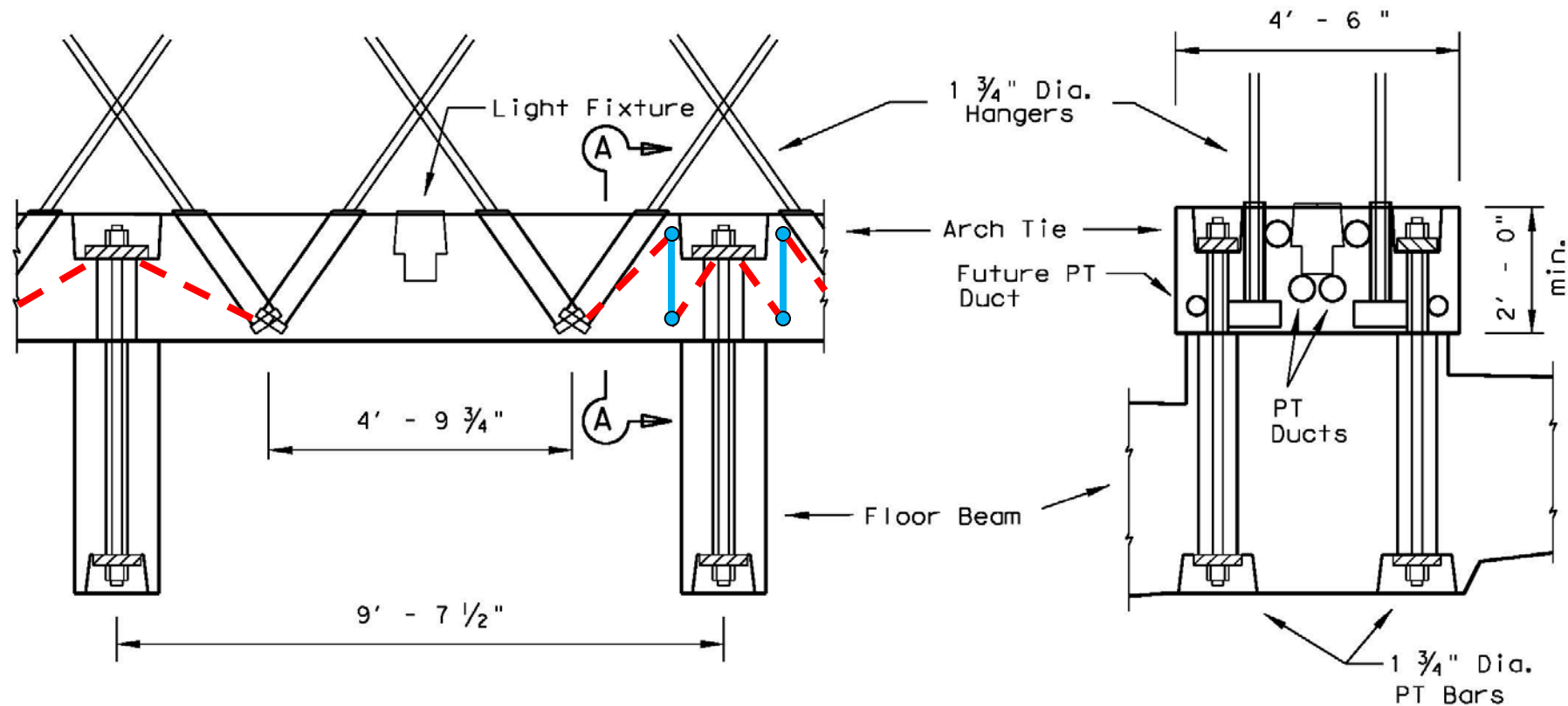






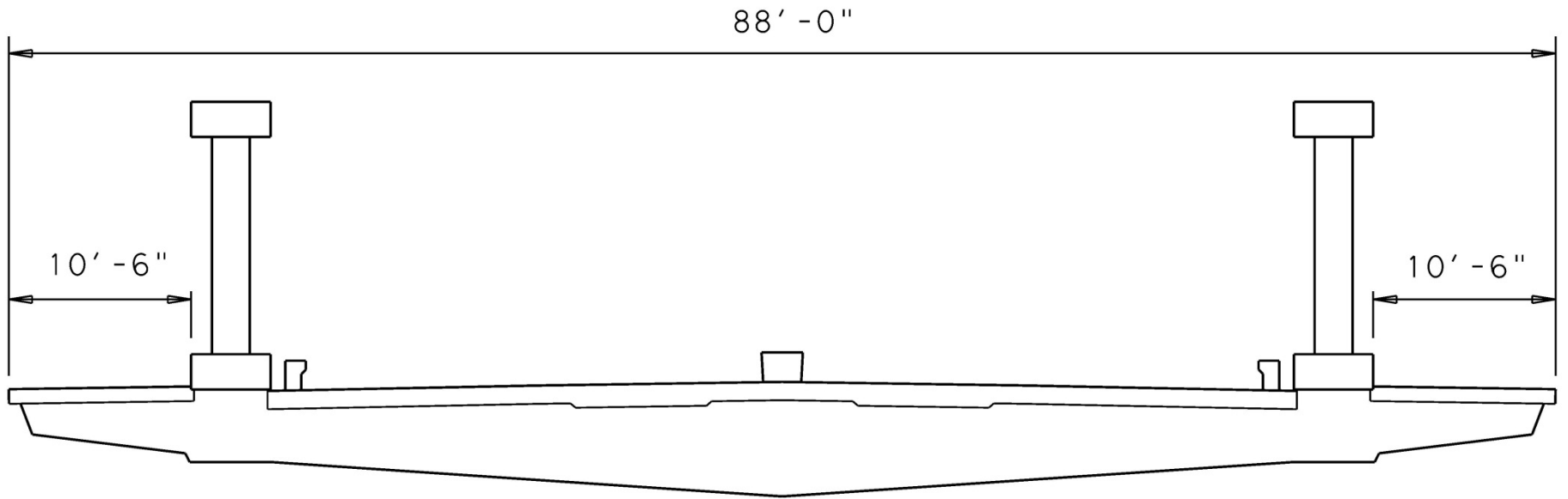




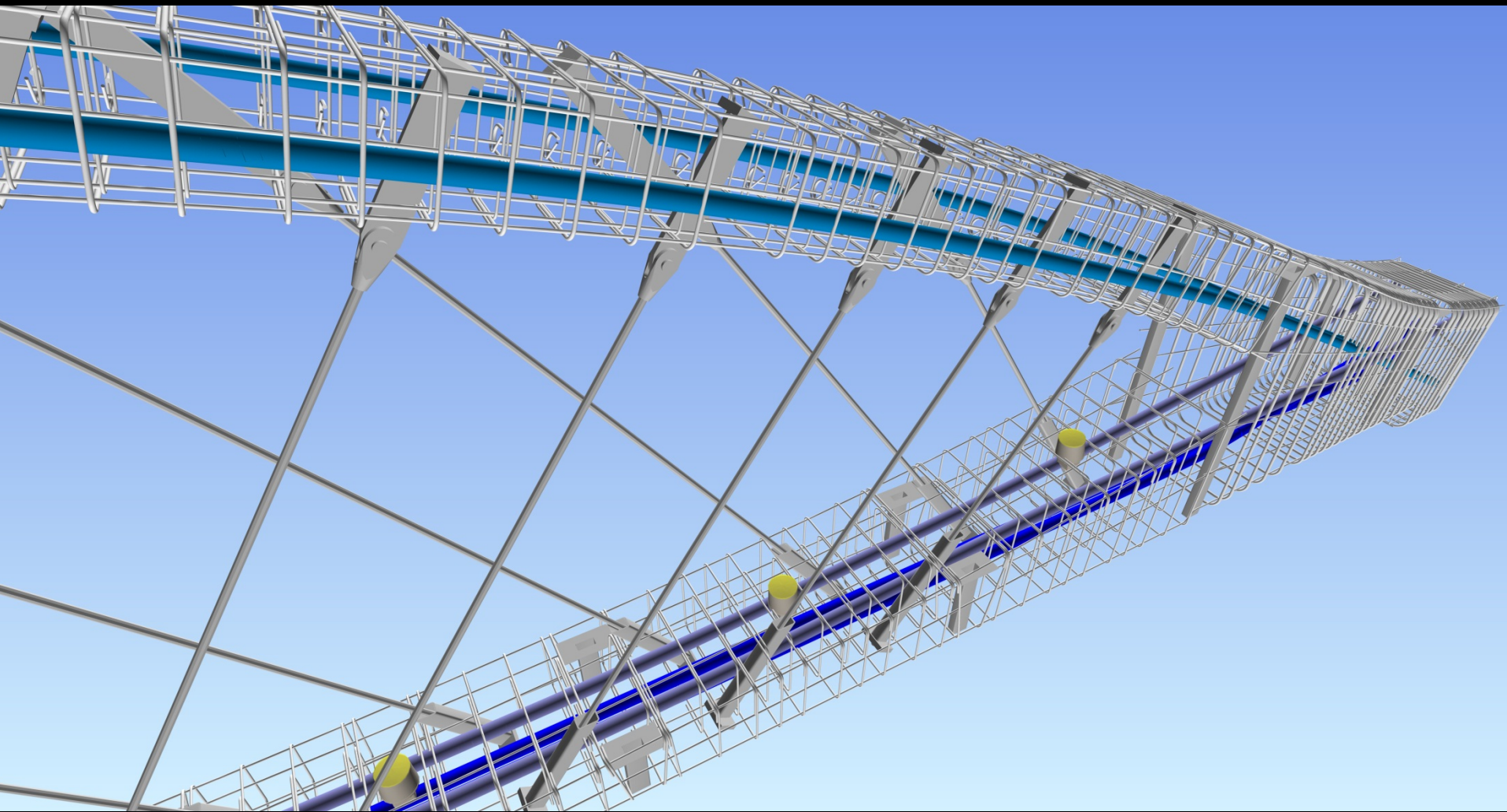


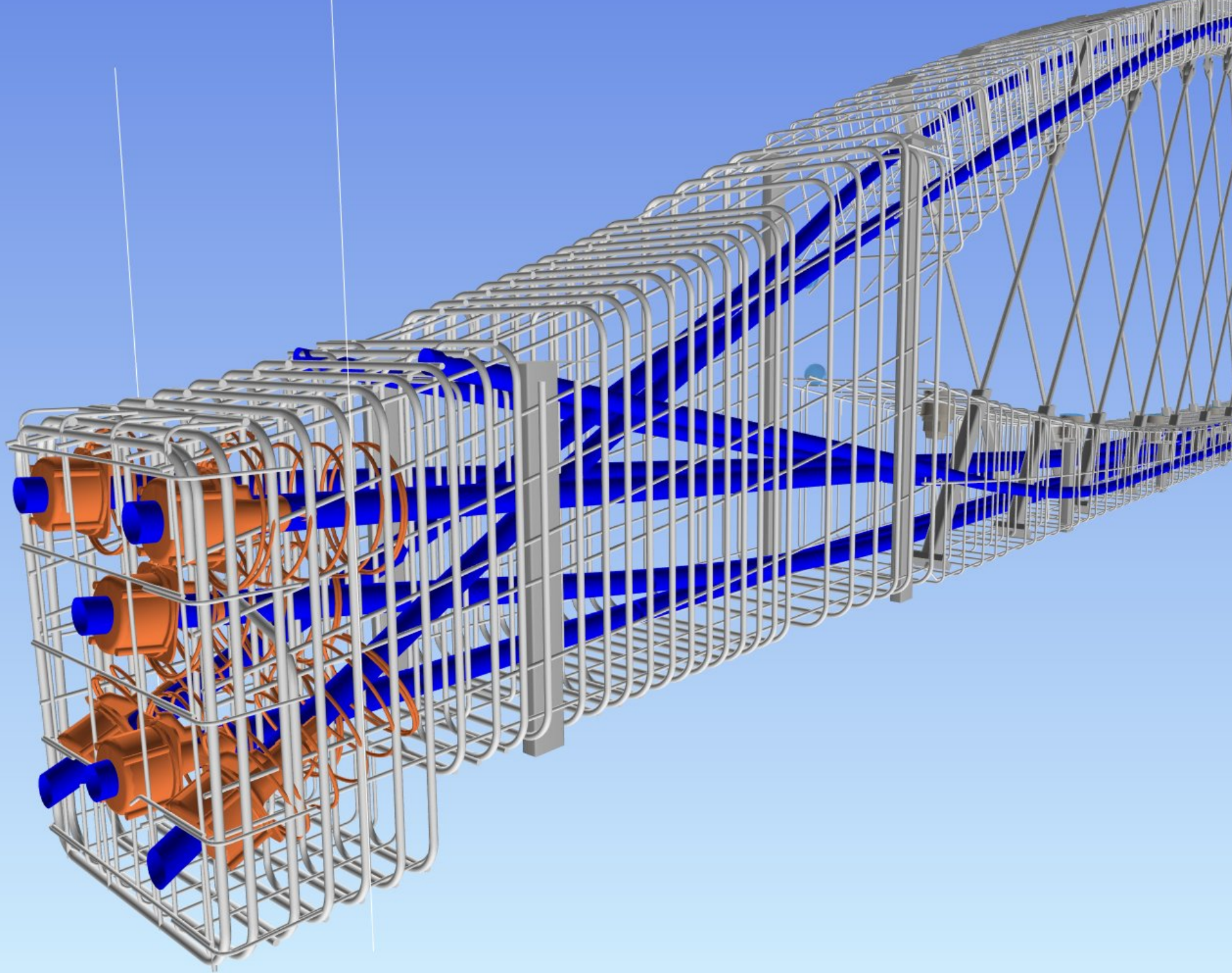
ARCH ELEVATION

SECTION A-A









Arch Construction

June 2012 -- March 2013





Duct for possible
Future Tendon



Light
Fixture



Hanger Tube



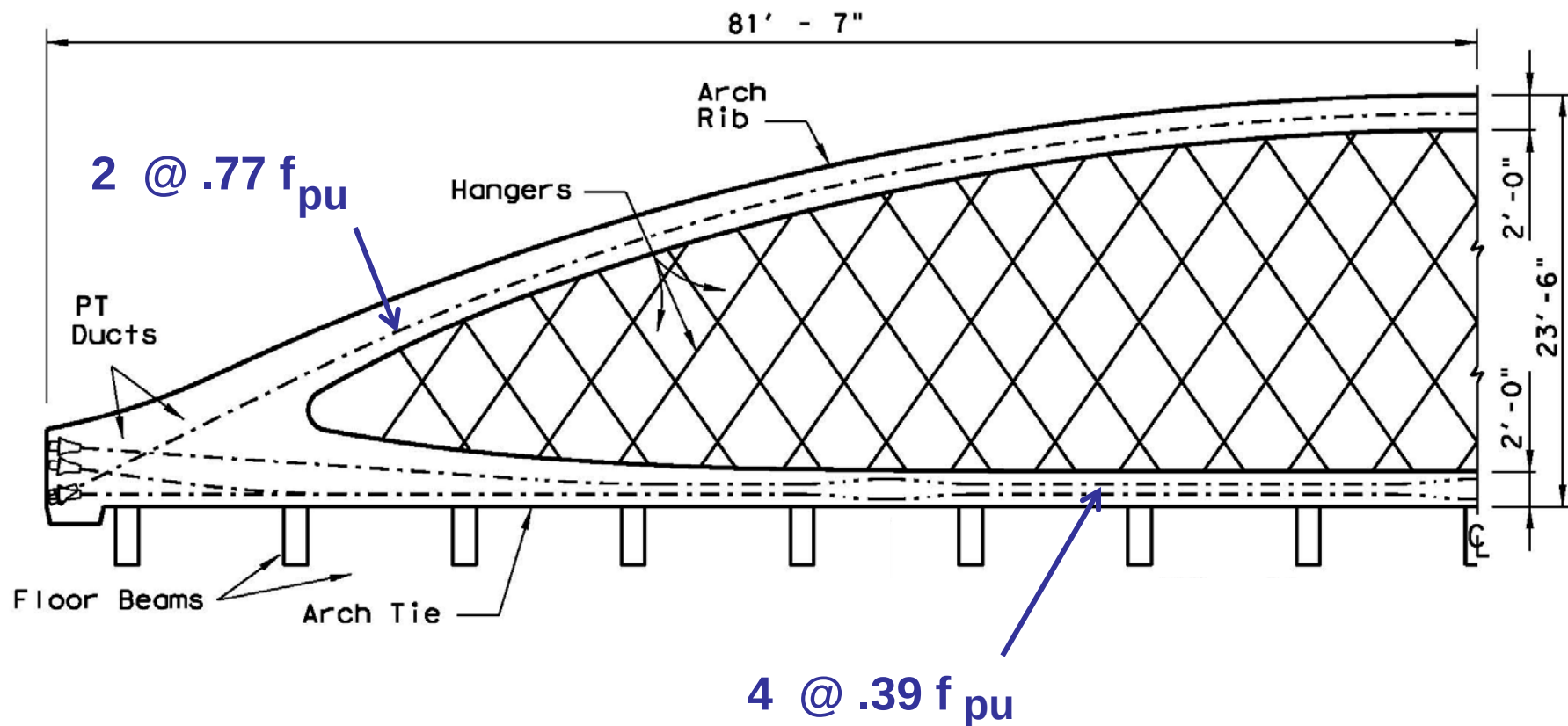
Floor Beam
Tube









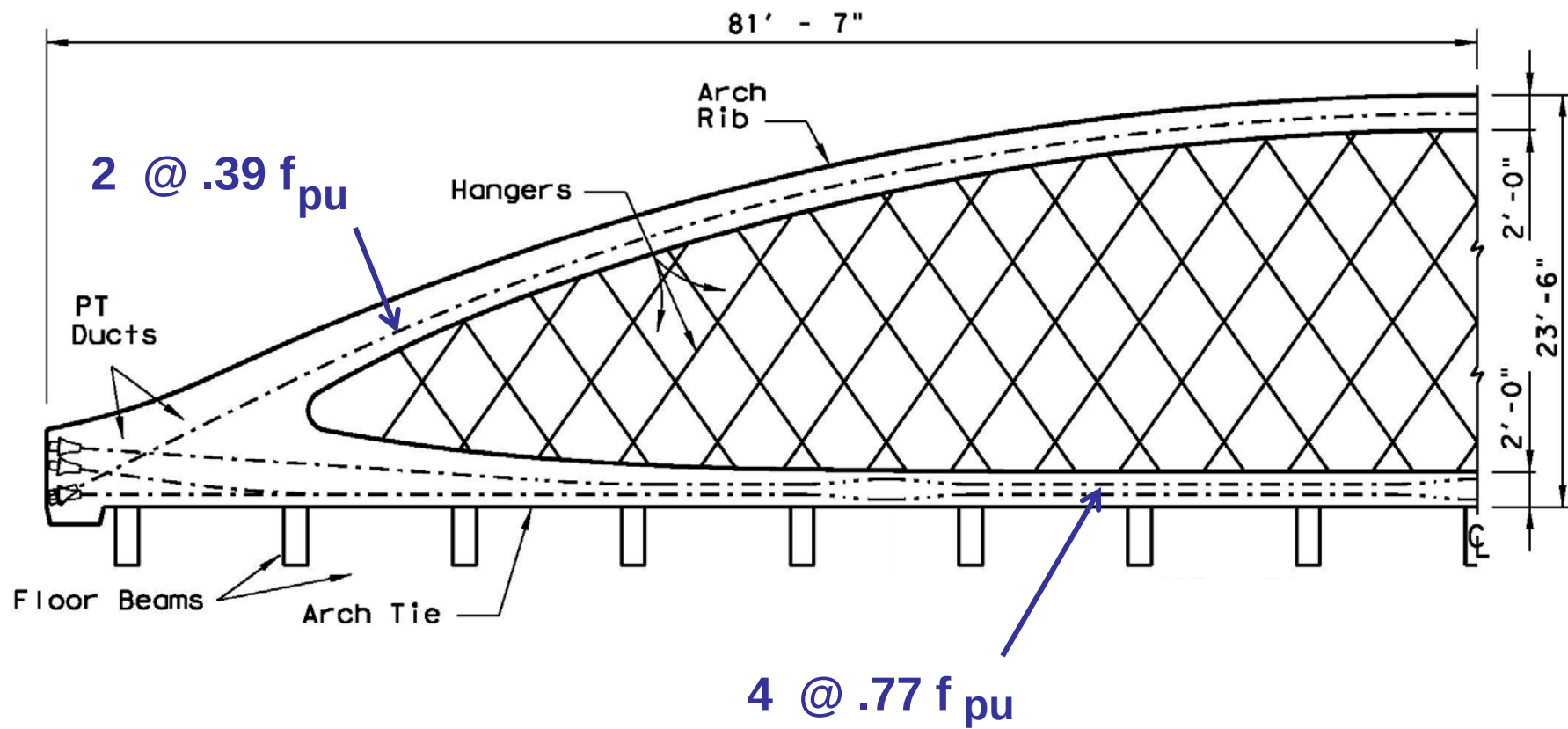


















Substructure

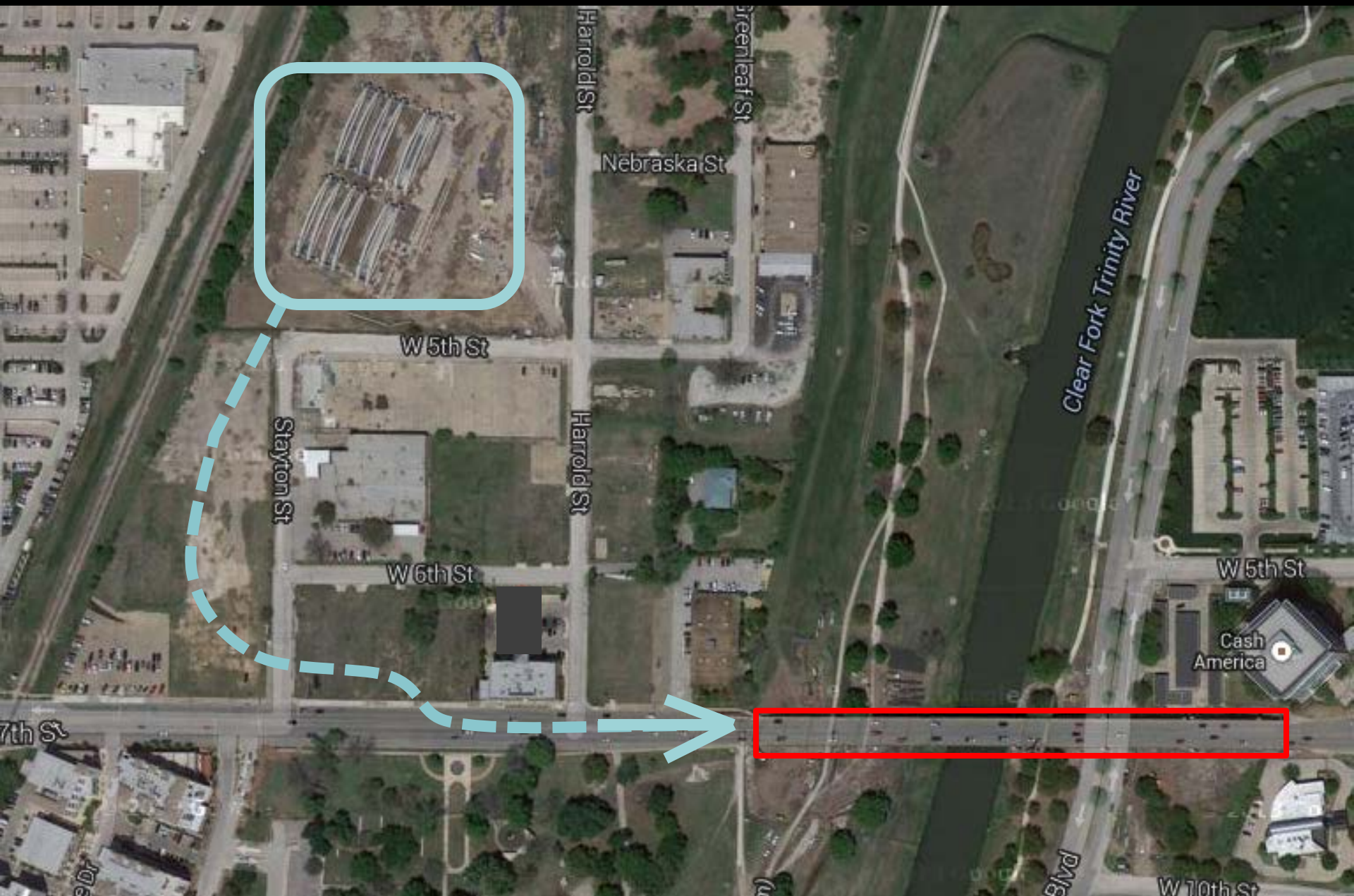
March 2013 -- June 2013

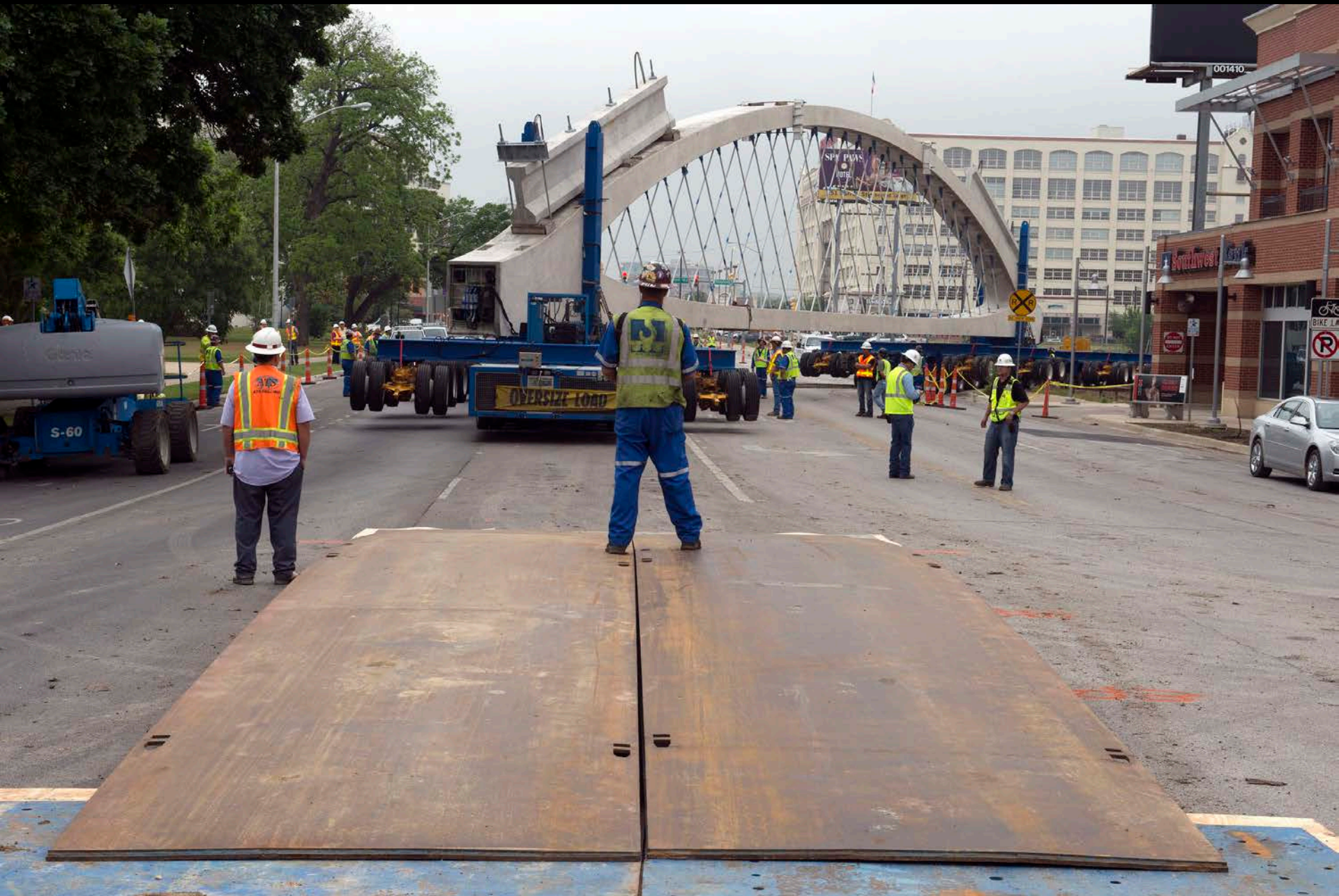




Arch Setting

May 2013 -- June 2013







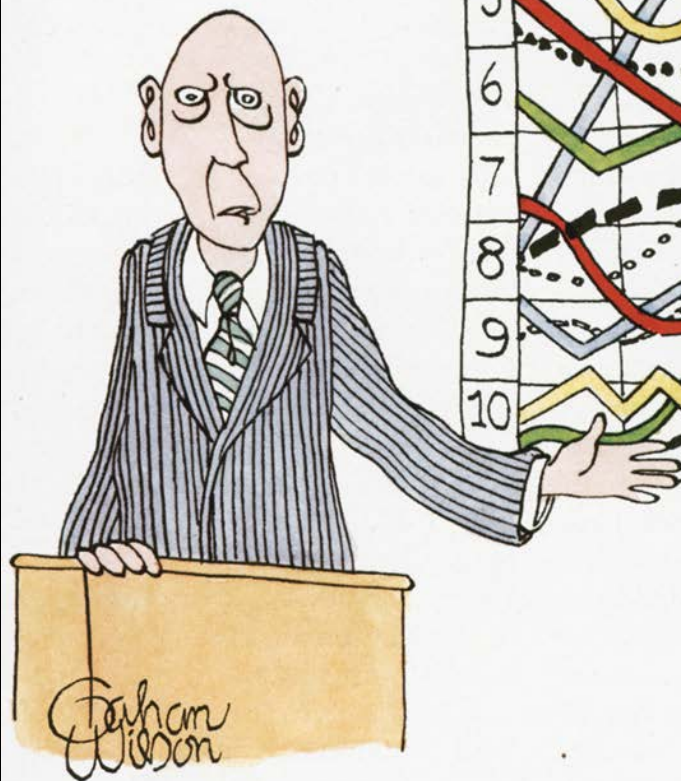






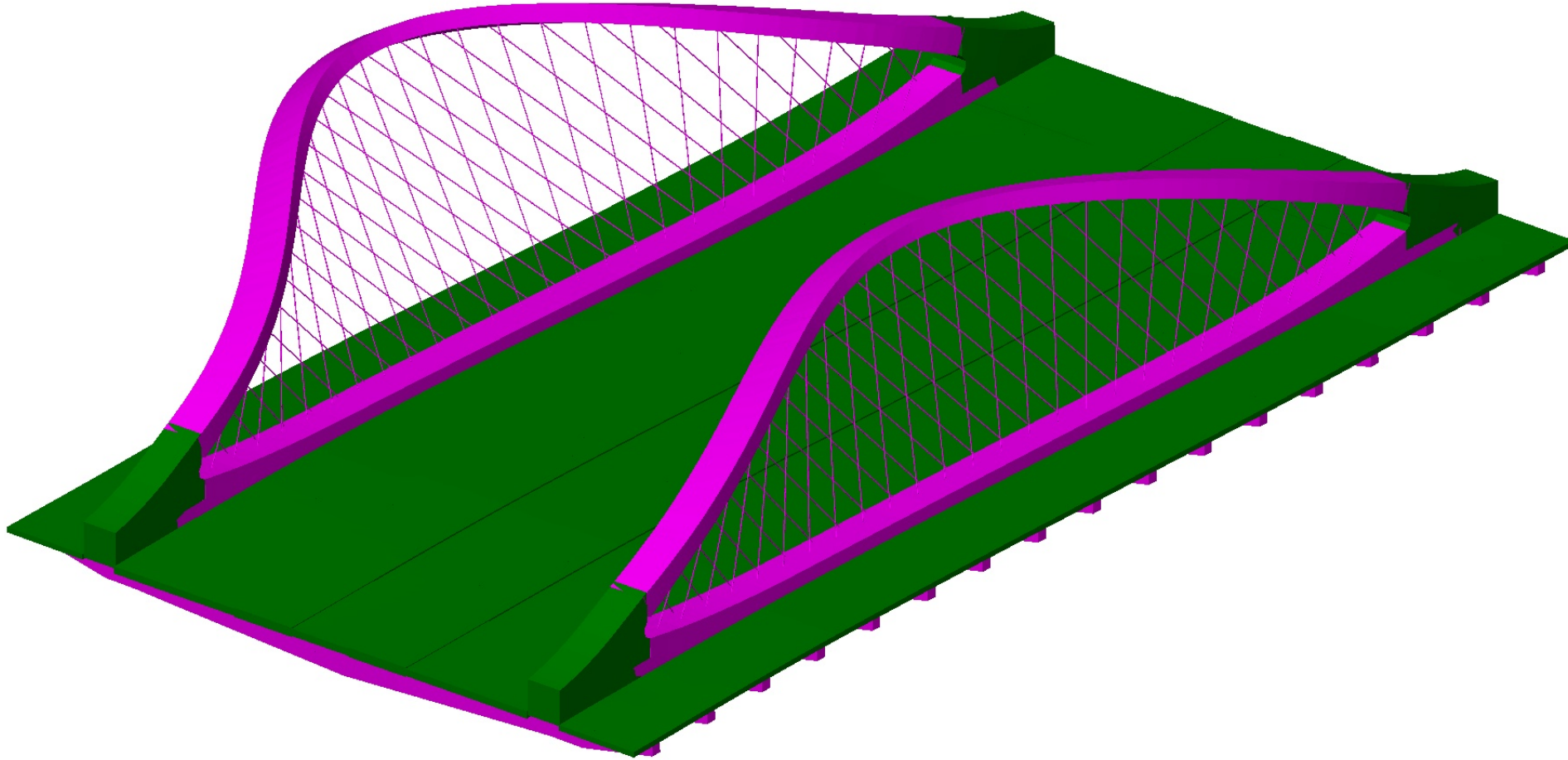






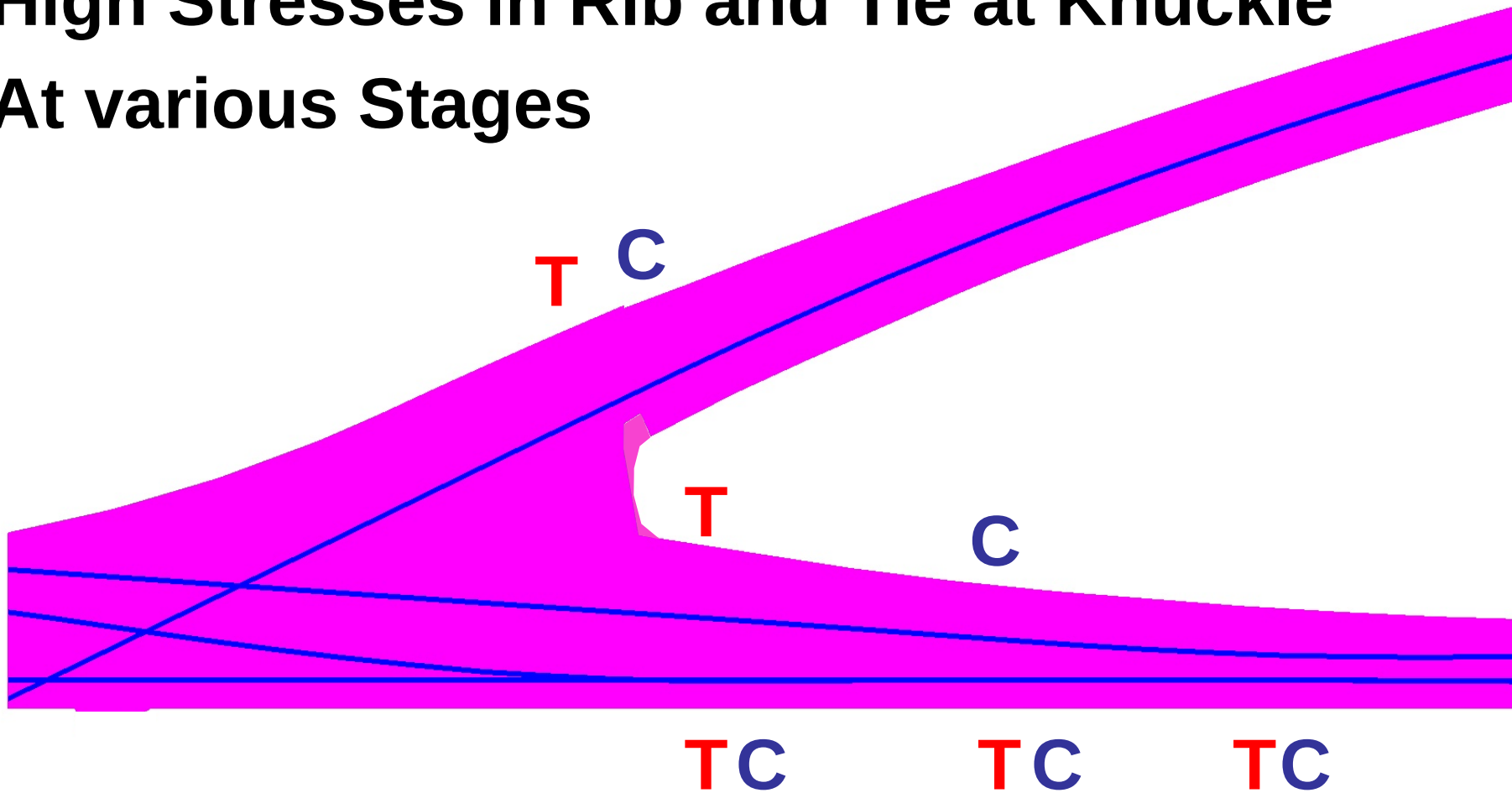
"I'll pause for a moment so you can let this information sink in."

Eigenvalue Buckling Analysis with 4 Lanes and Sidewalk Loading

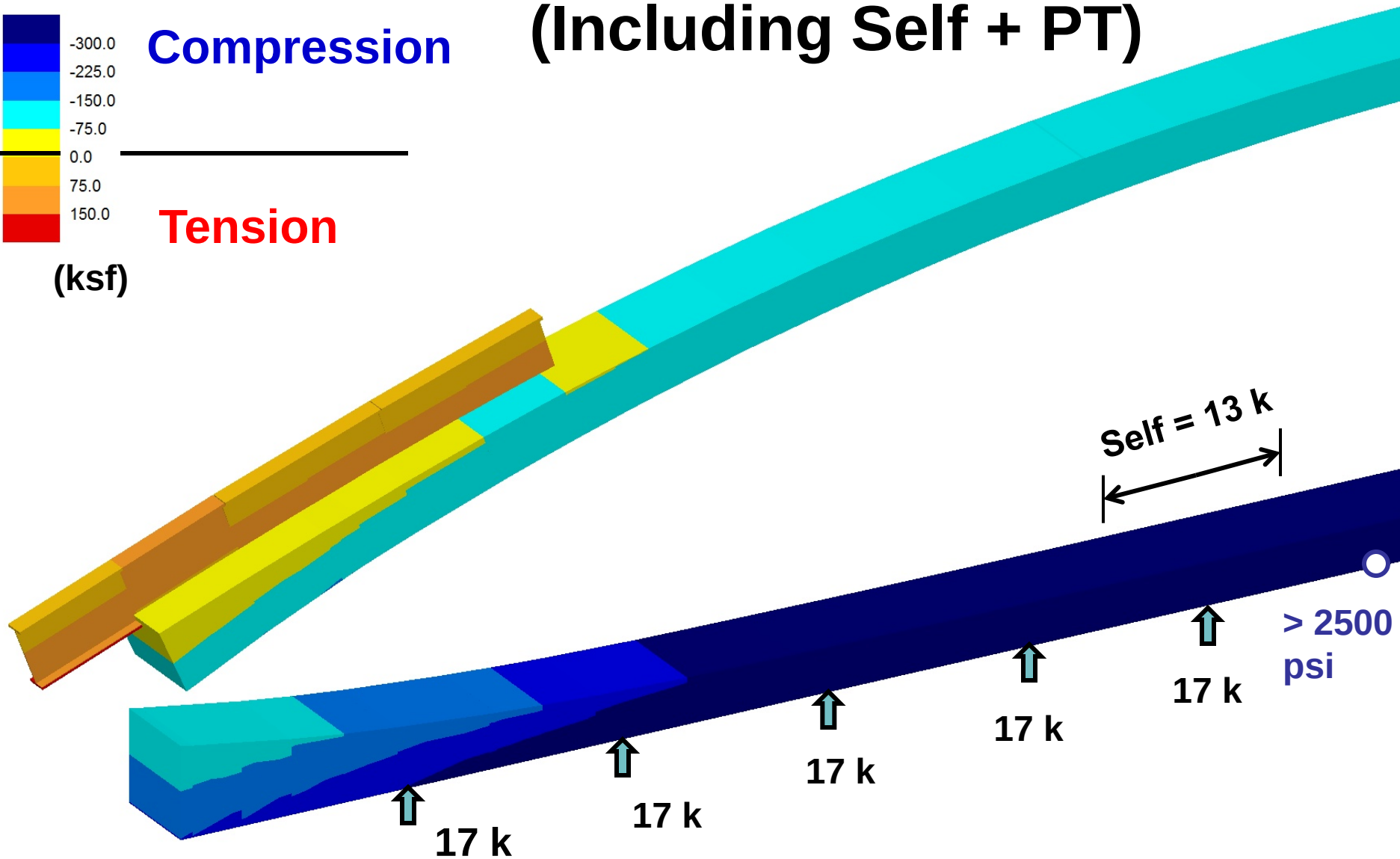
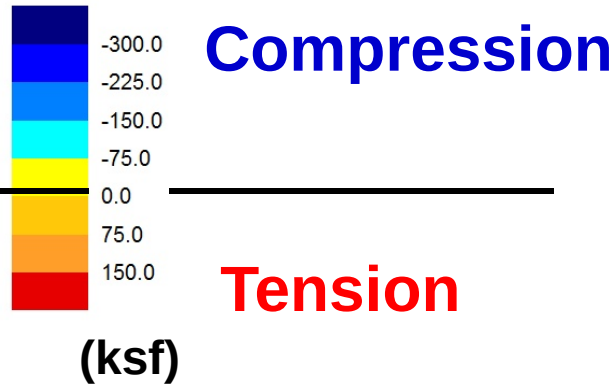


High Stresses in Rib and Tie at Knuckle

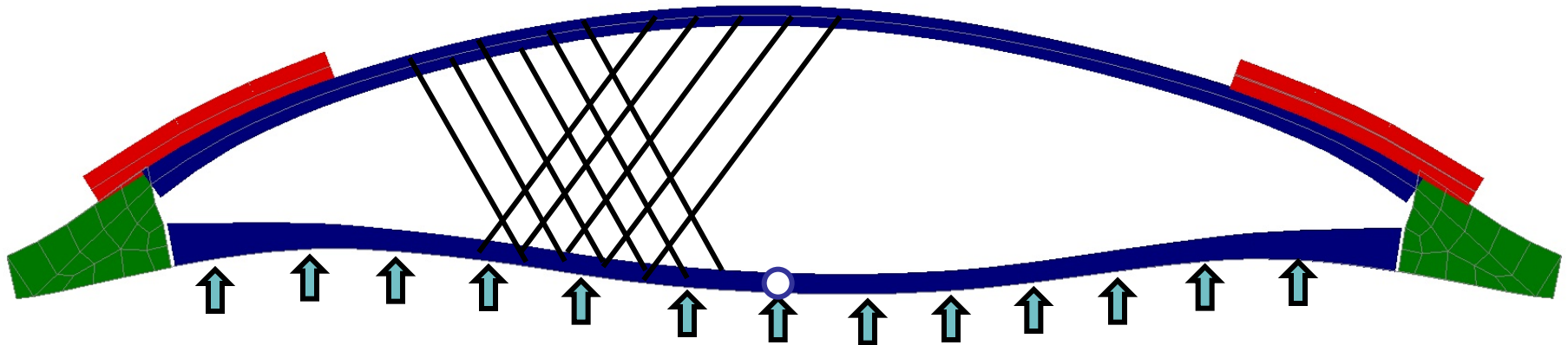
At various Stages



Upward Jacking Stresses (Including Self + PT)

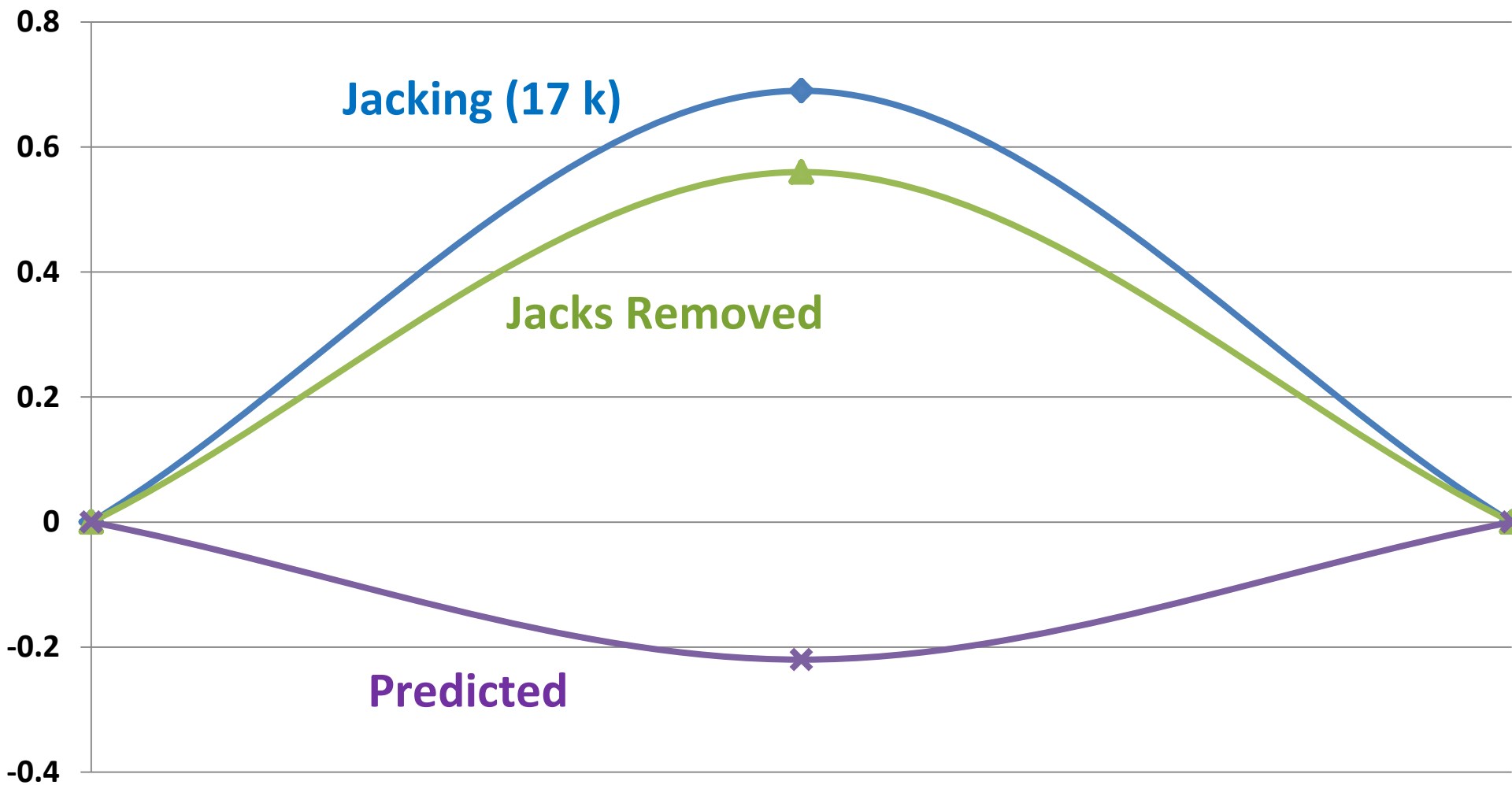


1/4 in. Deflection at Midspan Tie after Securing Hangers

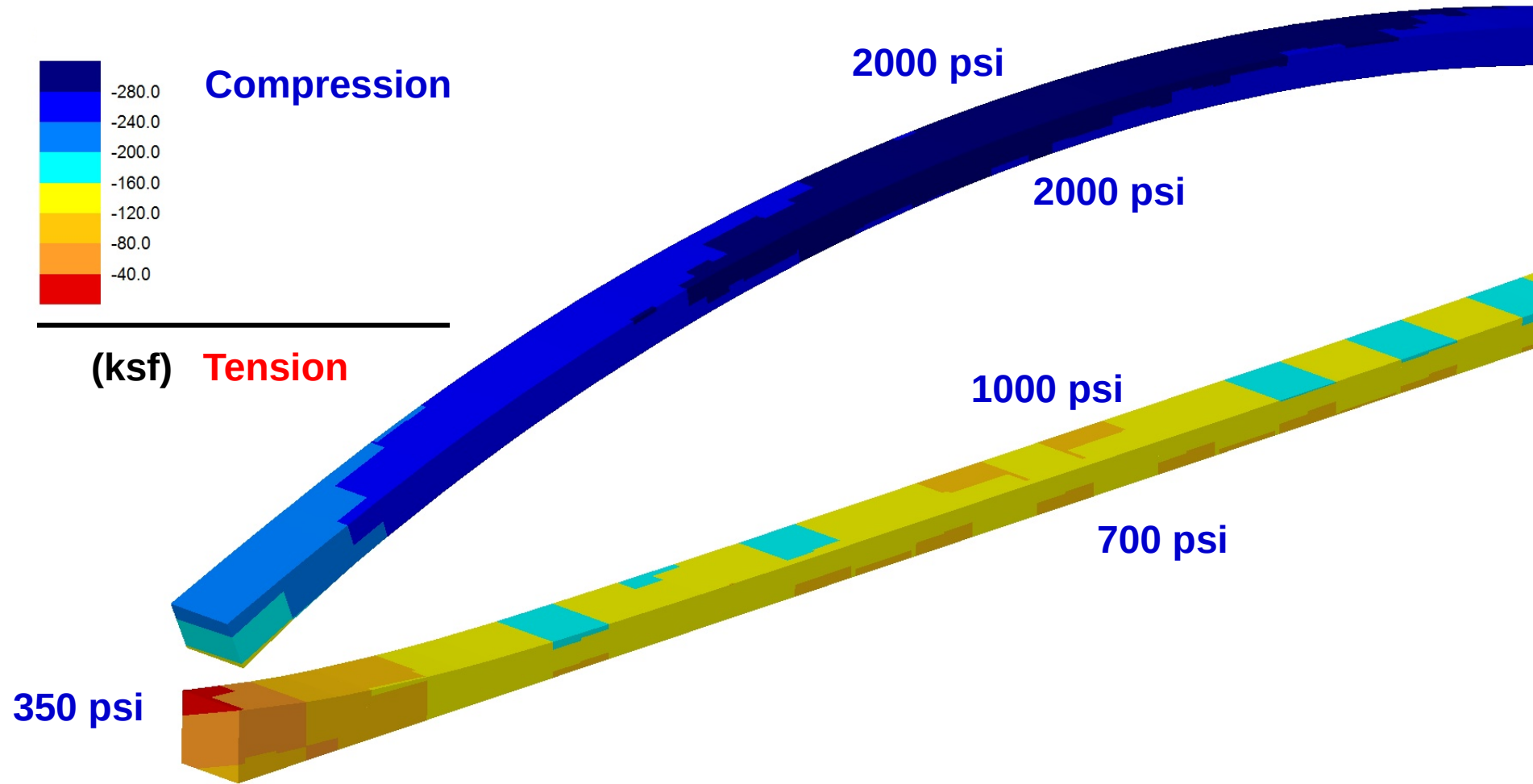


17 Kip Jacking at Floor Beams

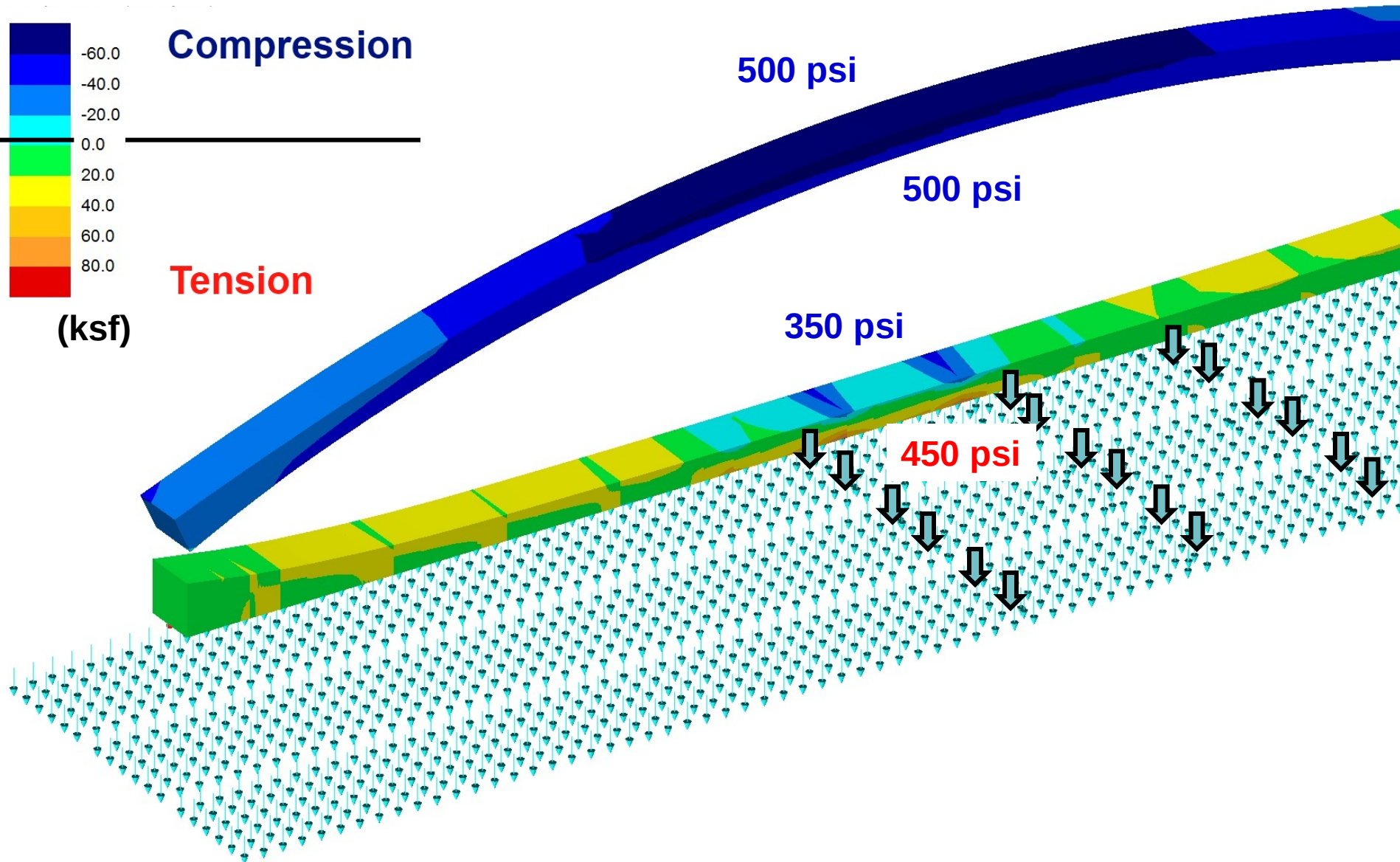
Measured Mid-Span Displacements (inches)



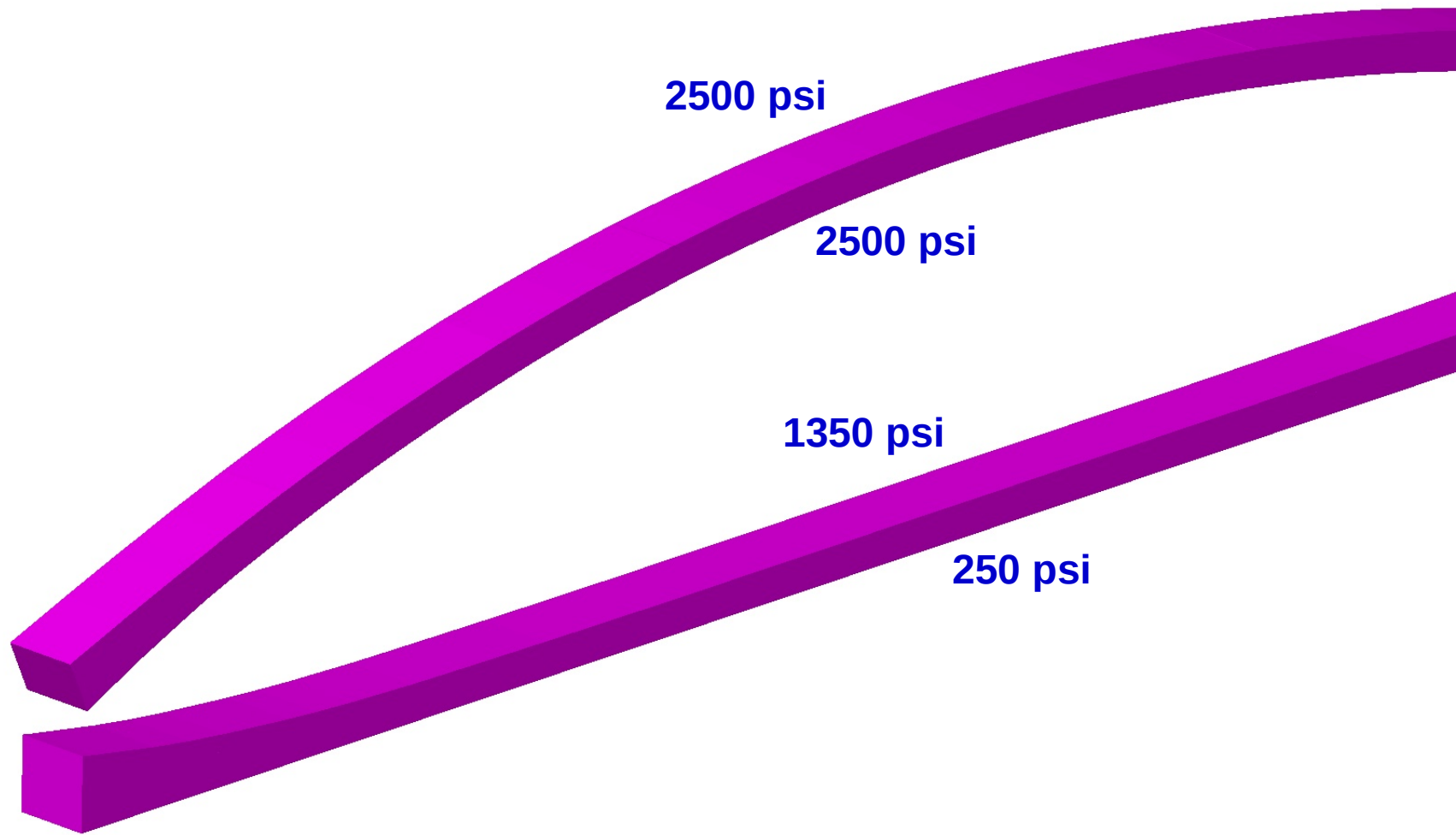
DL and PT Stresses (with losses) at Year 30



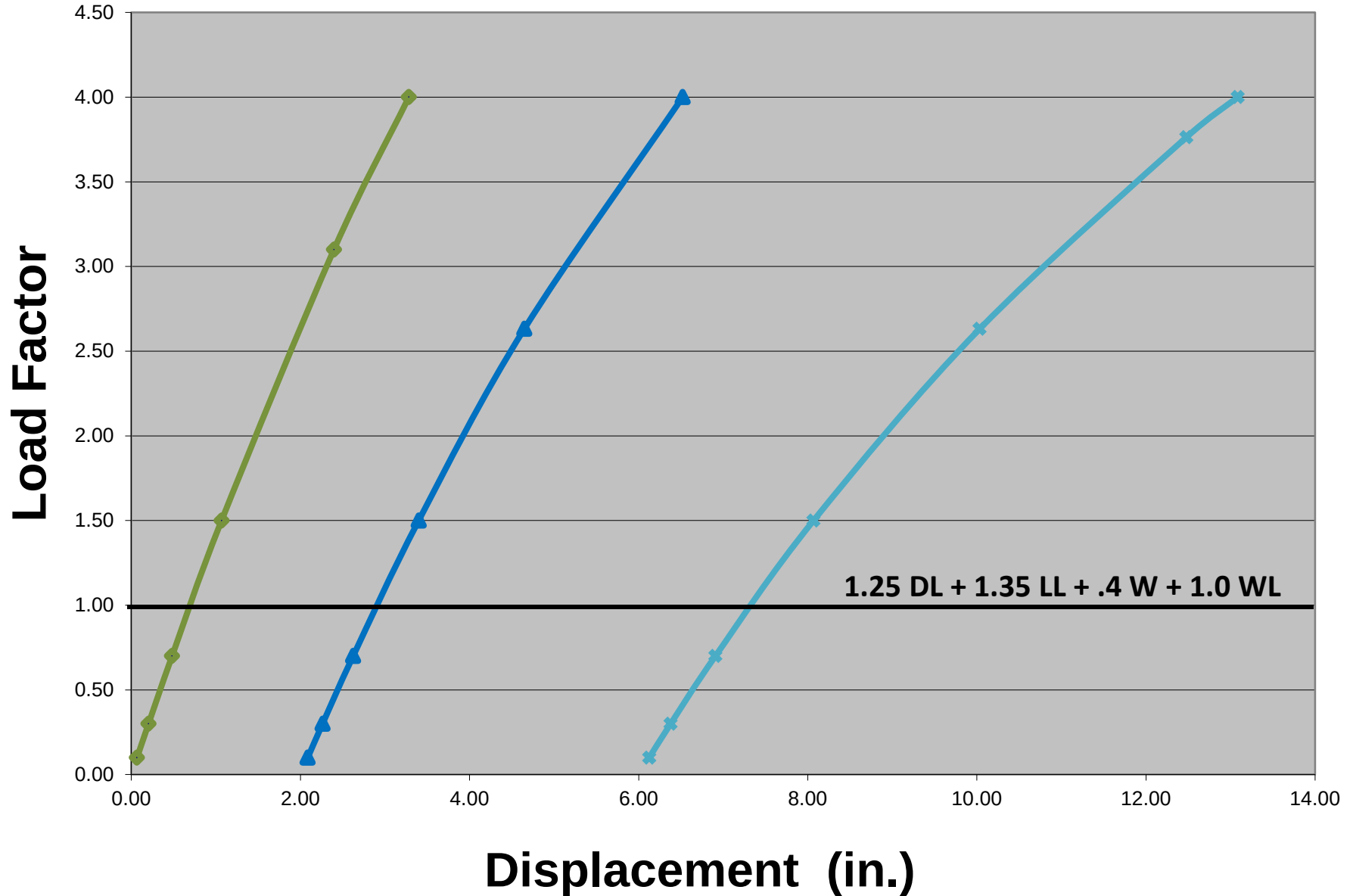
Live Load Stresses



DL, LL & PT Stresses (with losses) at Year 30



Non-Linear Buckling Analysis: Lateral Deflection of Arch Crown

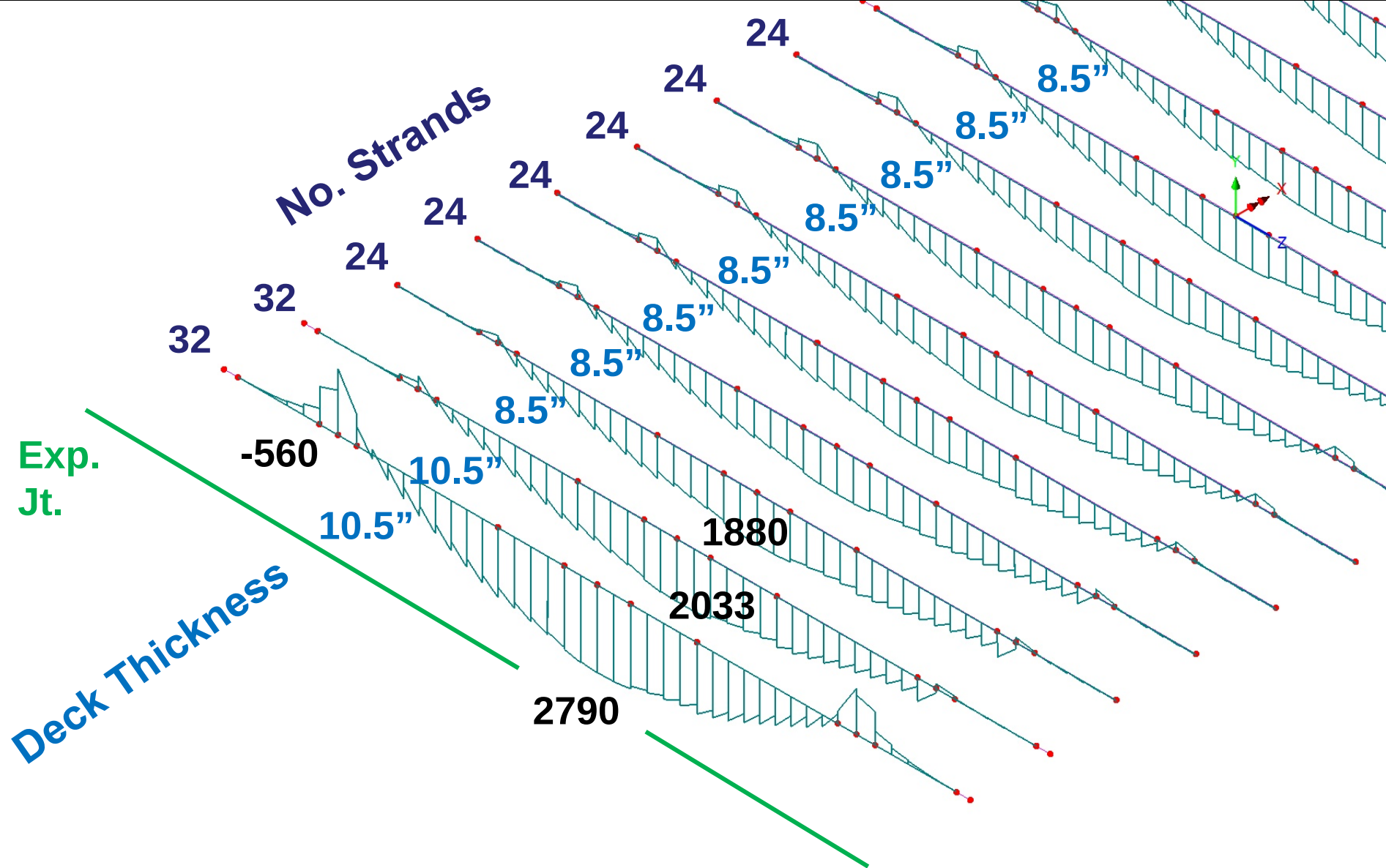


Floor Beams

Casting: Nov. 2012 -- April 2013

Setting: July 2013 -- August 2013





Floor Beam Max Service Moments (k-ft)





Hammer
Form Company, LTD
MADE IN USA

S30

S29

S28

S27

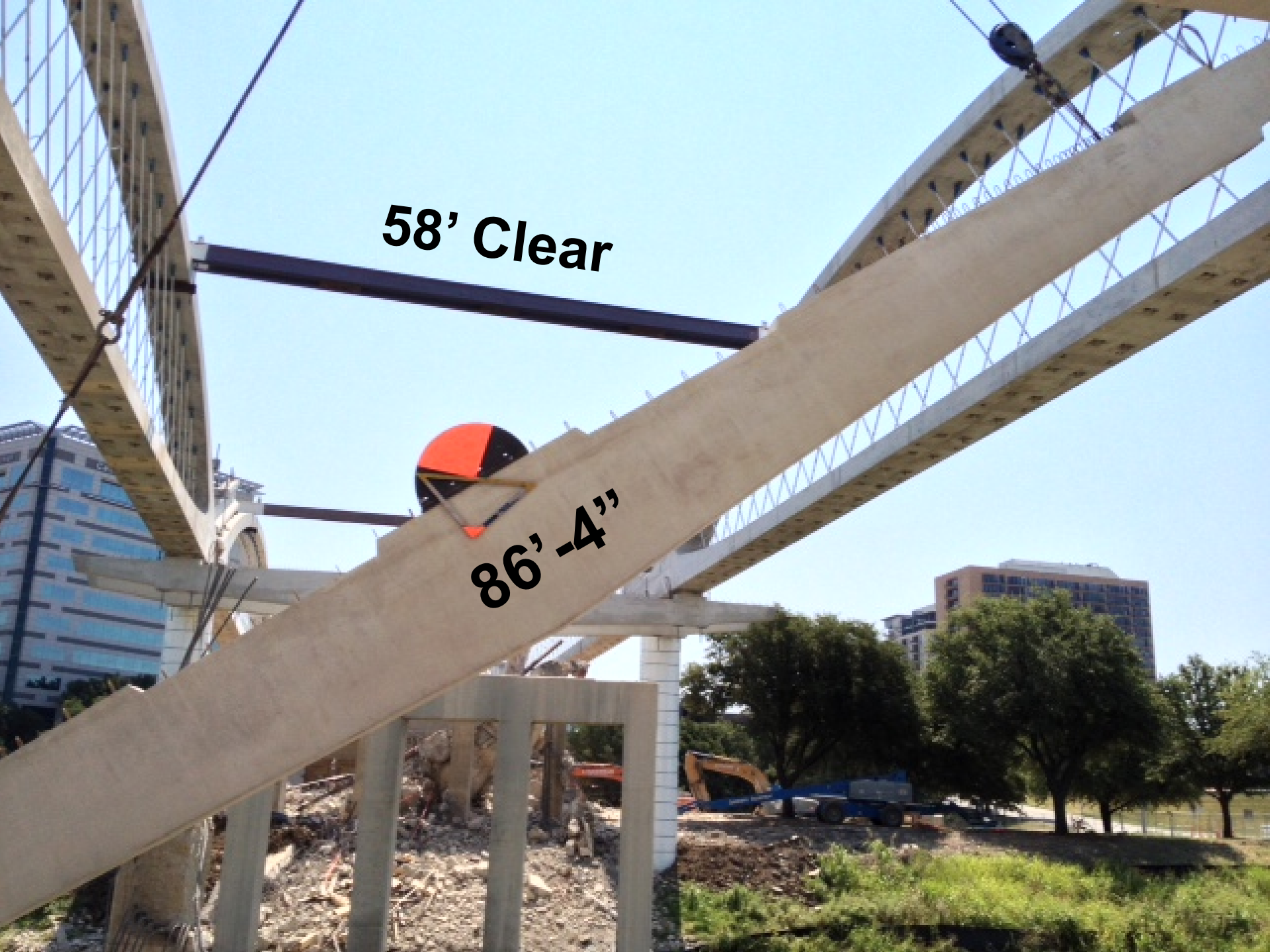






58' Clear

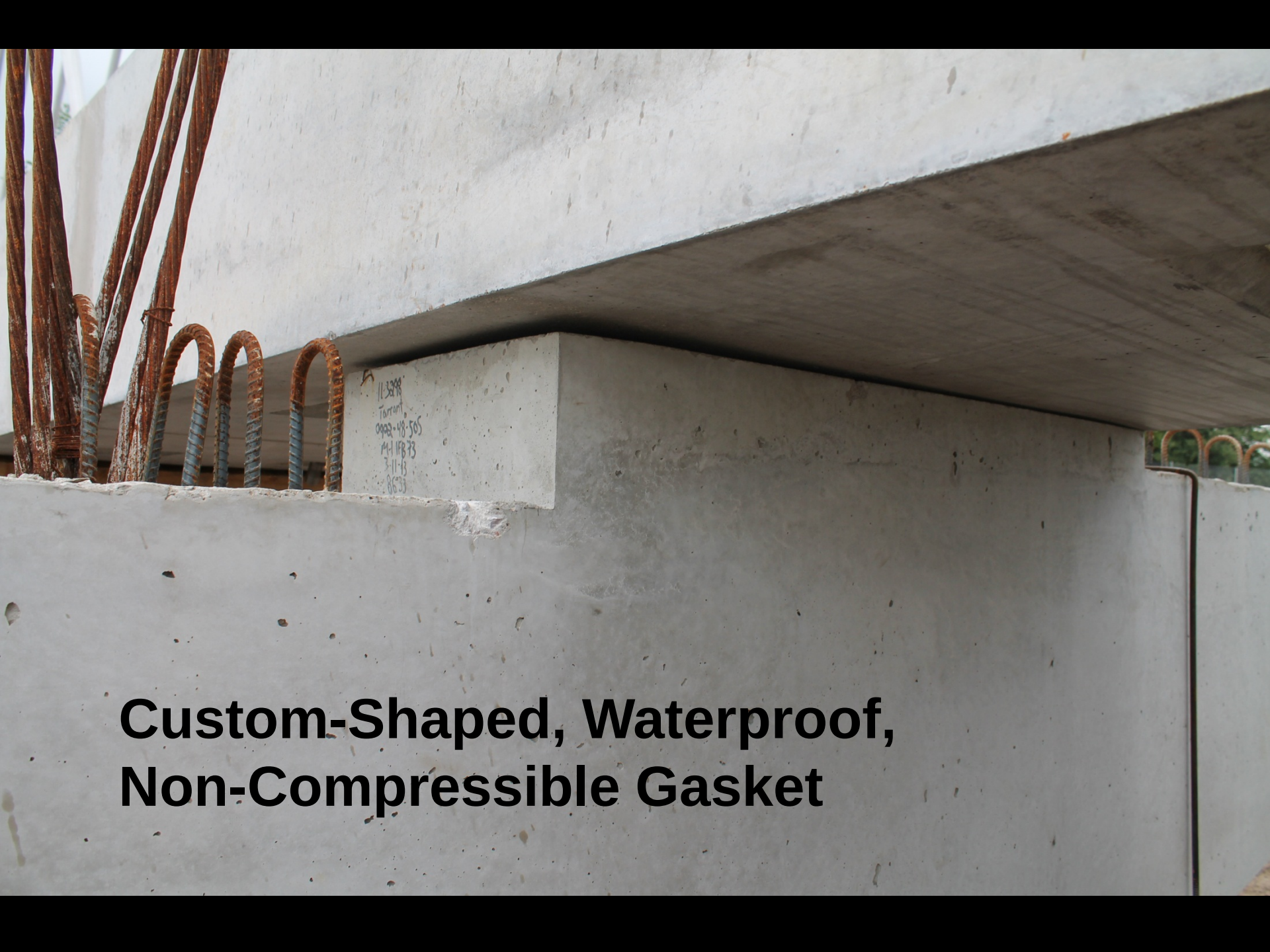
86' -4"







Moment Connection



**Custom-Shaped, Waterproof,
Non-Compressible Gasket**







WARNING
DO NOT EXCEED THE PRESSURE
RATED ON THE CYLINDER. EXCEEDING
THE RATED PRESSURE MAY CAUSE
FAILURE OF THE CYLINDER, RESULTING
IN PERSONAL INJURY OR DEATH.

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50 lb/ft
Maximum allowable
28 mph / 12.5 m/s

ENERPAC

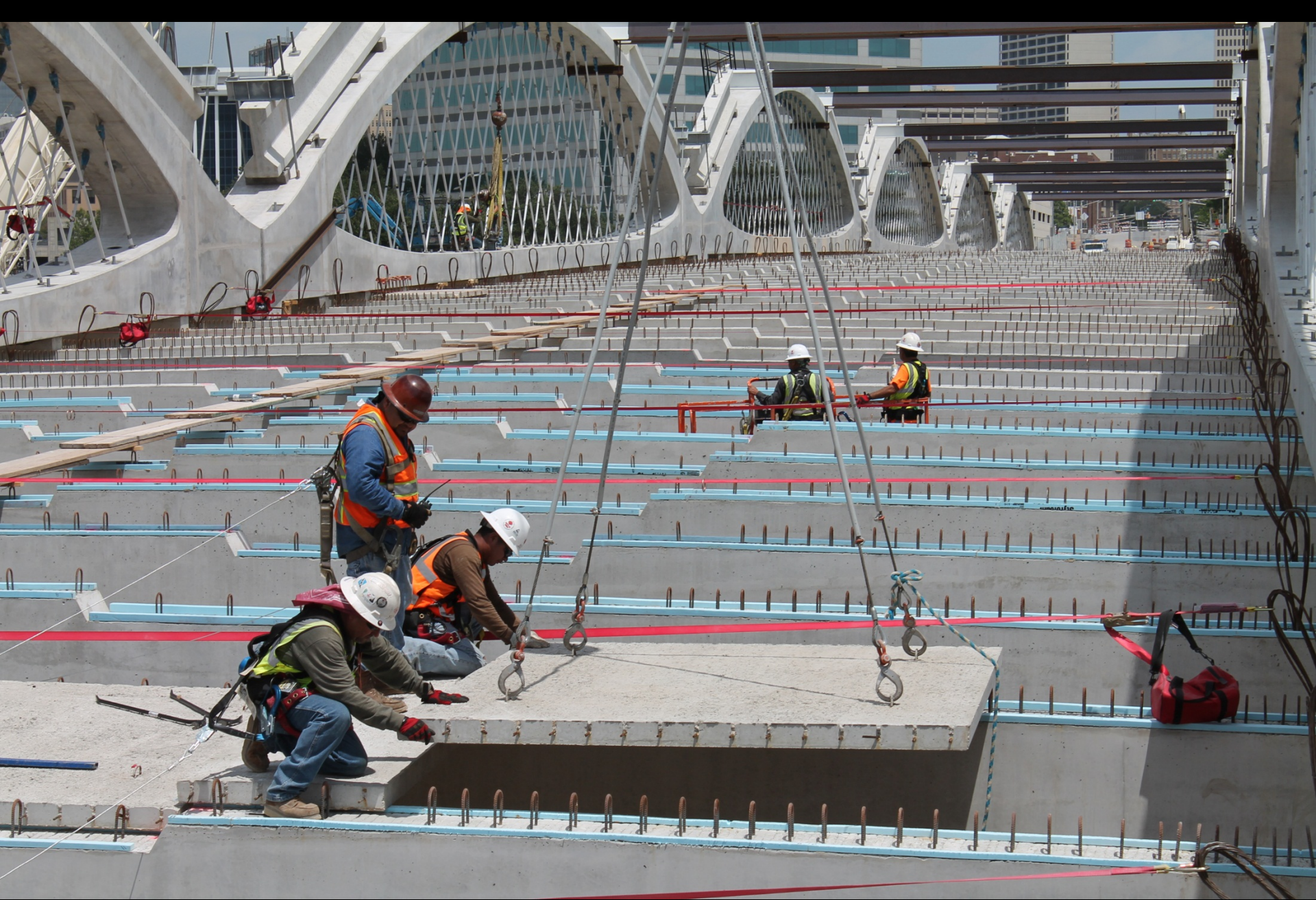
3836





Deck

July 2013 -- October 2013





















30 days early

209 \$/SF



BRG

Gregg Freeby
Courtney Holle
Greg Turco
Taya Retterer
John Delphia
Kevin Pruski
Graham Bettis
Leon Flournoy
Lewis Gamboa
Brian Merrill
Tom Stout
Charles Walker

TRV

Cyndi Griesser

CST

Doug Dupler
Teresa Michalk
Jason Tucker
John Earl Barrett

TRF

Greg Jones
Michael Olivo

FTW

Maribel Chavez
Ricardo Gonzalez
Jaime Aparicio
Fred Valles
Omar Dizon
Larry Gilbreath
Chuck Weir
Richard White
Ralph Browne
Tom Thompson
Kory Clarida
Clarice Westman
Minh Tran