

# Memorandum



CITY OF DALLAS

DATE October 17, 2008

TO Trinity River Committee Members:  
David A. Neumann (Chair)  
Mayor Pro Tem Dr. Elba Garcia (Vice-Chair)  
Deputy Mayor Pro Tem Dwaine Caraway  
Carolyn R. Davis  
Linda Koop

Pauline Medrano  
Mitchell Rasansky  
Steve Salazar

SUBJECT **Sylvan Ave. Bridge Design**

The attached briefing will be presented to the Council Trinity River Corridor Project Committee at the October 21, 2008 meeting. The presenters will be Rebecca Dugger, P.E., Director of the Trinity River Corridor Project Office and Dan Chapman, P.E., Project Manager from the HNTB Corp. The briefing will provide information regarding the design and construction of the Sylvan Avenue Bridge.

If you have additional questions, please let me know.

Jill A. Jordan, P.E.  
Assistant City Manager



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DALLAS

## Attachment

c: Honorable Mayor and Members of the City Council  
Mary K. Suhm, City Manager  
Ryan S. Evans, First Assistant City Manager  
Ramon F. Miguez, P.E., Assistant City Manager  
A. C. Gonzalez, Assistant City Manager  
Forest Turner, Interim Assistant City Manager  
David K. Cook, Chief Financial Officer  
Deborah A. Watkins, City Secretary  
Thomas P. Perkins, Jr., City Attorney  
Craig D. Kinton, City Auditor  
Judge C. Victor Lander  
Helena Stevens-Thompson, Asst. to the City Manager  
Frank Libro, Director, Public Information Office

# Sylvan Ave. Bridge Design

From

## Irving Boulevard to Canada Drive

Trinity River Corridor Project Committee

Prepared by

Engineering Services – Interagency Coordination  
Public Works and Transportation

October 21, 2008



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# Purpose



- Provide information regarding the construction of the Sylvan Avenue Bridge
- Points to consider and discuss
  - Full closure of Sylvan to traffic during construction
  - Sources and pursuit of additional funding
  - Pros to moving forward now
    - Existing bridge condition
    - Safety concerns
    - On-going flooding and road closures



# Background



- Sylvan Avenue Bridge crossing of the Trinity River is the last of the low water crossings
  - Floods on average of 4 times per year
  - Closed on average of 3 days per flood event
  - Longest recent closures were 14 days in June/July 2007 and 19 days in March/April 1997
- Three existing bridges (over the main river channel and over each levee) need replacement because they are inadequate for their intended purpose.
- Sylvan's bridges were previously included in TXDOT's Off-System Bridge Replacement & Rehabilitation Program
- TXDOT to pay 90% of direct construction cost and City to pay 10%
- Sylvan Bridge is now a federal aid project required to meet TXDOT & federal criteria



# Background (cont'd)



- Preliminary design contract (including environmental documentation) and an interlocal agreement with TXDOT were authorized by City Council in January 2004
- Final design contract was authorized by City Council on June 25, 2008
- Scope of final design includes
  - Bridge with architectural enhancements
  - Geotechnical analysis
  - Seepage Analysis
  - Diaphragm walls at levees



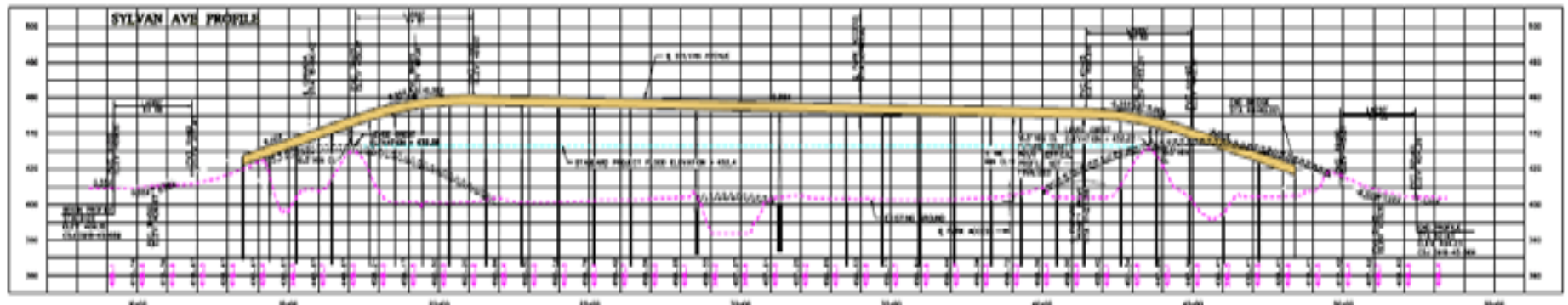
# Project Details and Scope



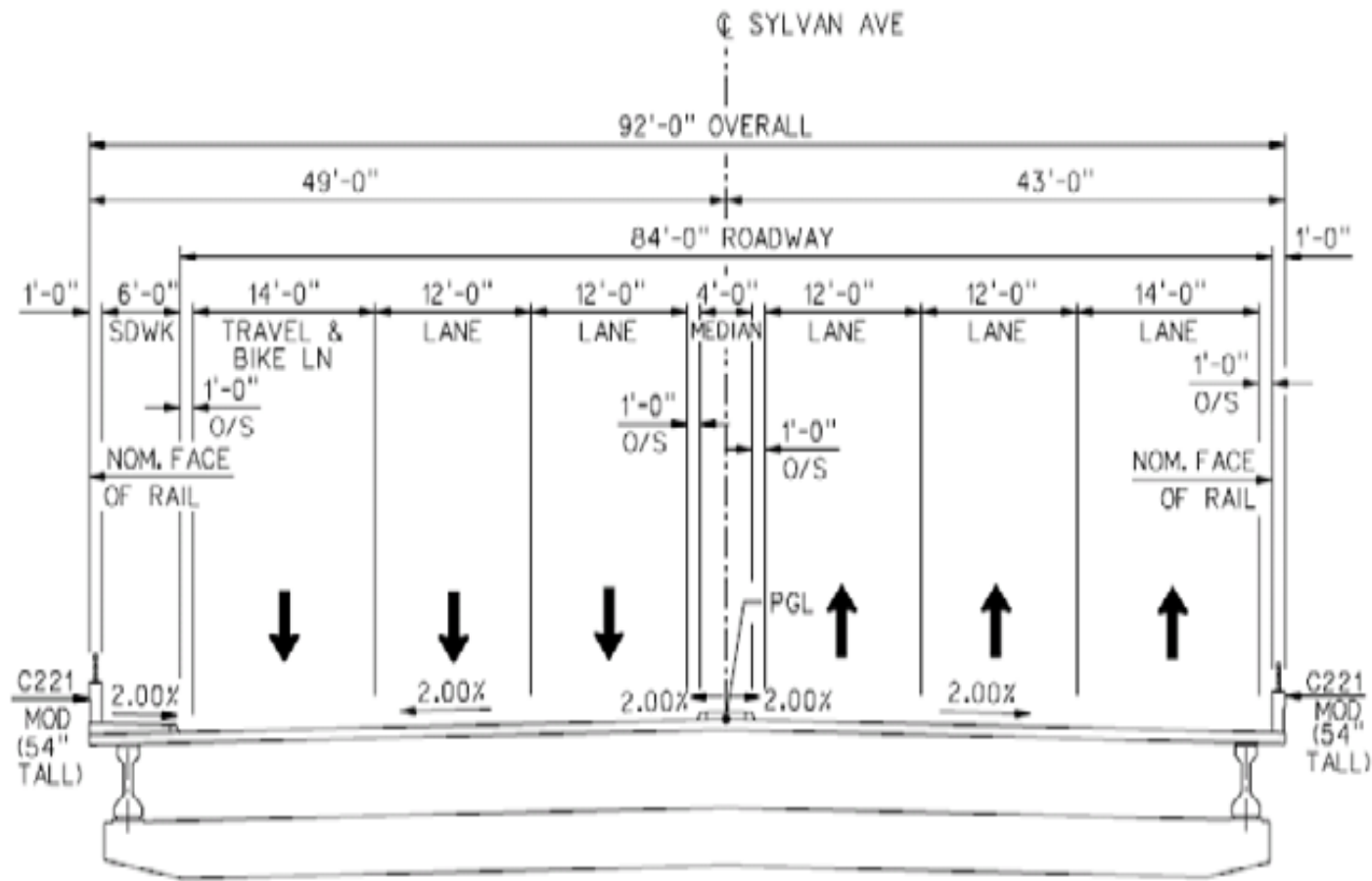
- 3400 ft. long, 28 span bridge
- 6 lanes with 14 ft. travel/bicycle lanes
- 6 ft. wide sidewalks in both directions
- 800 ft. long park access ramp
- Retaining walls at bridge approaches
- Continuous street lighting
- Diaphragm walls and levee modifications



# Bridge Layout – Plan & Profile

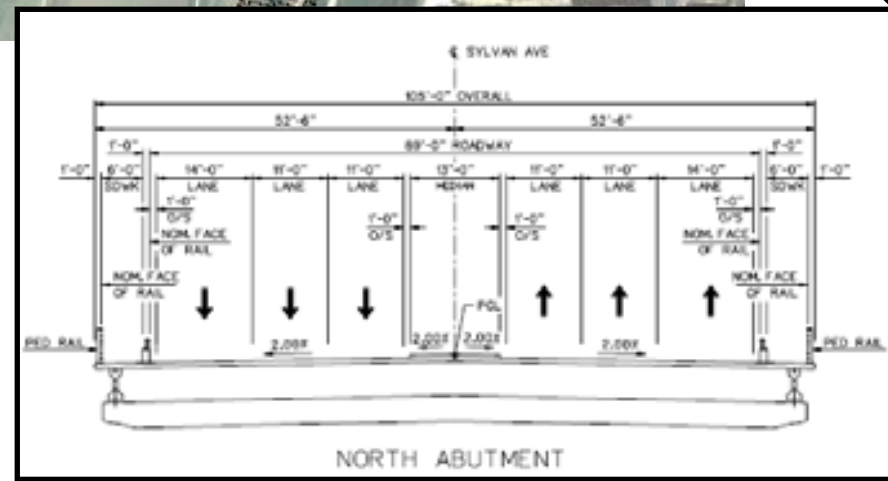
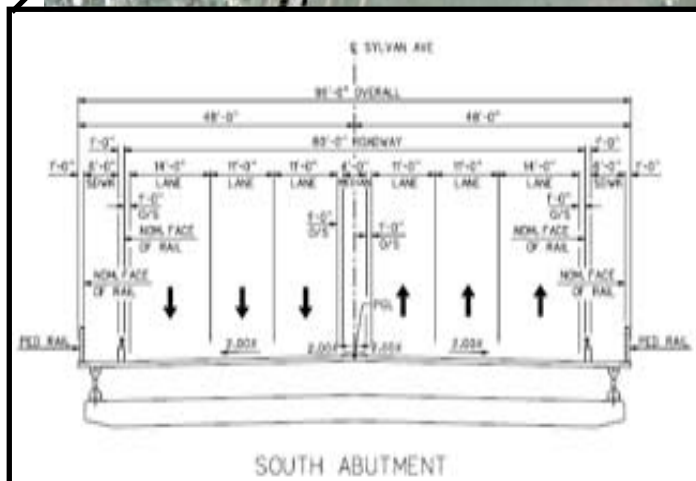
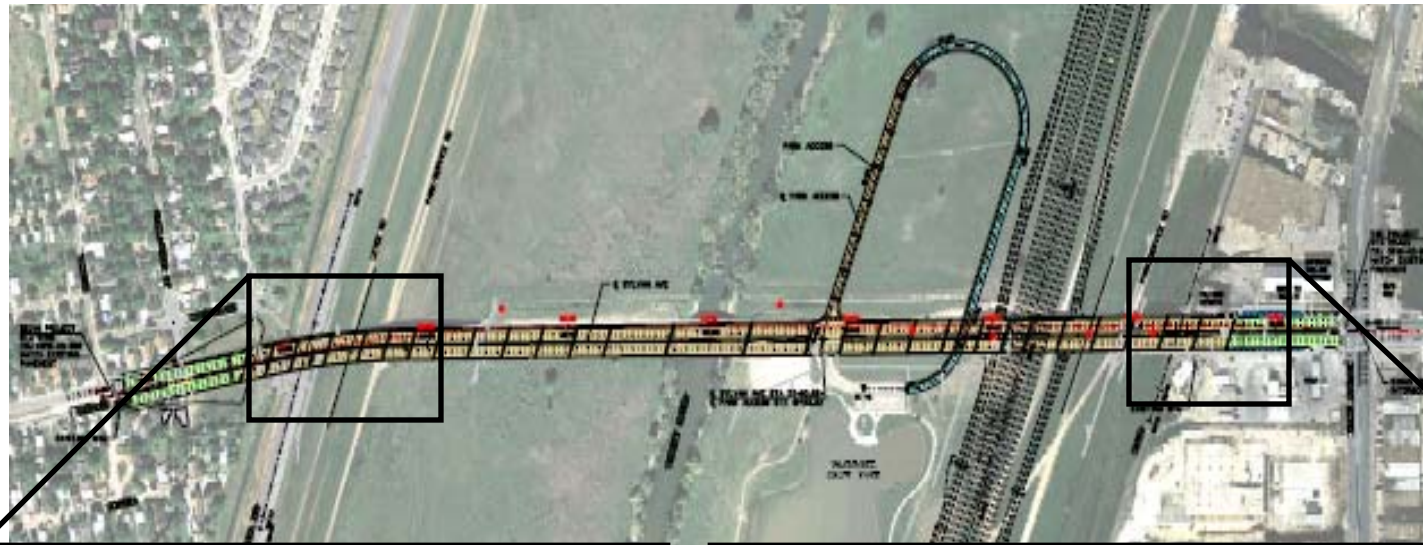


# Original TXDOT Approved Bridge Cross Section

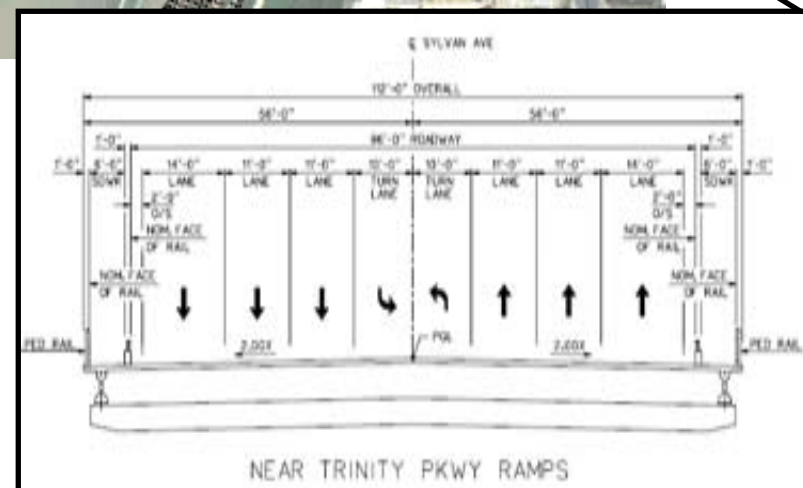
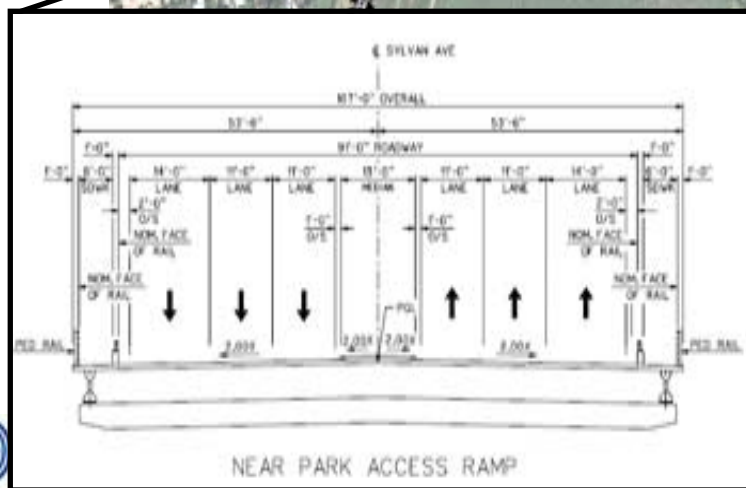
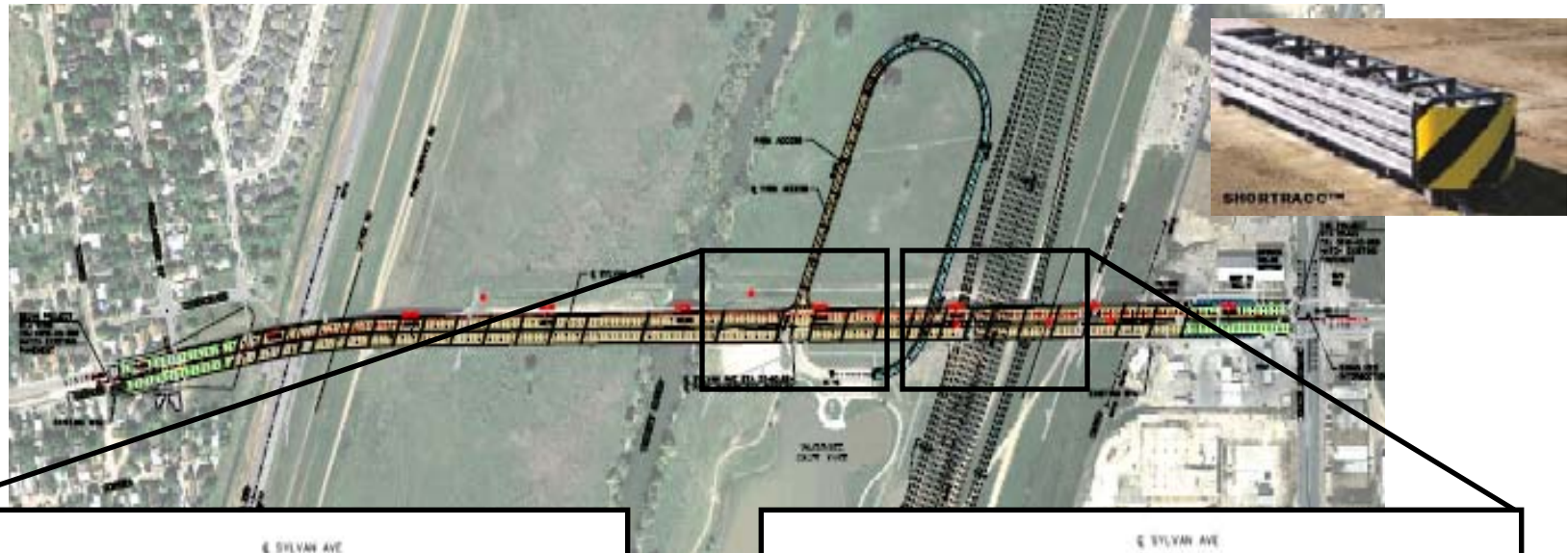




# Proposed Revised Bridge Cross Section



# Proposed Revised Bridge Cross Section



# Budget Issues



- Cost estimate for construction of bridge and park access ramp - \$48 M (Includes inflation to mid 2010, 10% contingency and 10% TXDOT construction administration)
- Cost estimate assumes existing Sylvan Avenue and Trammell Crow Park are closed during construction
- Budget impacted by:
  - Increased bridge width - \$3 M (Proposed varies from 96 ft to 112 ft and includes sidewalks on both sides)
  - Relocation of boat ramp and new low water crossing over Trinity Channel - \$1.5 M (for floodway maintenance and future Trinity Lakes Park road)
  - Diaphragm walls and levee modifications under bridge - \$9 M
  - Construction cost escalation - \$7 M



# Budget Resolution Considerations

## Potential Sources of Additional Funding



- \$7.9 M in advance funding could be paid by COD Parkway Funds and be reimbursed later (per Interlocal Agreement)
  - Park Access Ramp - \$2.5 M (included in \$19.7 M shortfall)
  - Additional bridge width to accommodate Trinity Parkway Ramps - \$1.8 M
  - East levee diaphragm wall - \$3.6 M (also needed for Trinity Parkway Ramps)
- Solicit RTC for additional funding\*:
  - \$9.1 M - \$14.1 M in new funding to keep the Sylvan Ave. Bridge project on schedule which is critical to the Trinity Parkway project (\* No Commitments in place; to be negotiated in future Interlocal Agreement)



# Budget Summary



• Estimated project cost	\$48 M	
• Available funds		
• City 2003 and 2006 bonds	\$9.3 M	
• TXDOT (based on 90% of \$22 M)	<u>\$19 M</u>	
• Total available	\$28.3 M	
• Potential additional funds		
• Park access ramp – NTTA		\$2.5 M
• Diaphragm wall – NTTA		\$3.6 M
• Extra bridge width – NTTA		\$1.8 M
• RTC / NCTCOG		\$9.1 M
• TXDOT increase		<u>\$2.7 M</u>
• Total potential		\$19.7 M
• Estimated shortfall w/o potential new funds	\$19.7 M	
• Estimated shortfall w/o potential new funds if phased	\$24.7 M	



# Phased Construction w/Sylvan Open



- Pros
  - Sylvan Ave. is left open to drivers
  - Access to Trammel Crow Park remains open for all but a short duration
- Cons
  - Increases time of construction by 12 months (total of 2 years construction)
  - Increases cost of construction by +/- \$5 million
  - Project may need to be deferred to 2010 bond program
  - Drivers will endure construction zone traffic





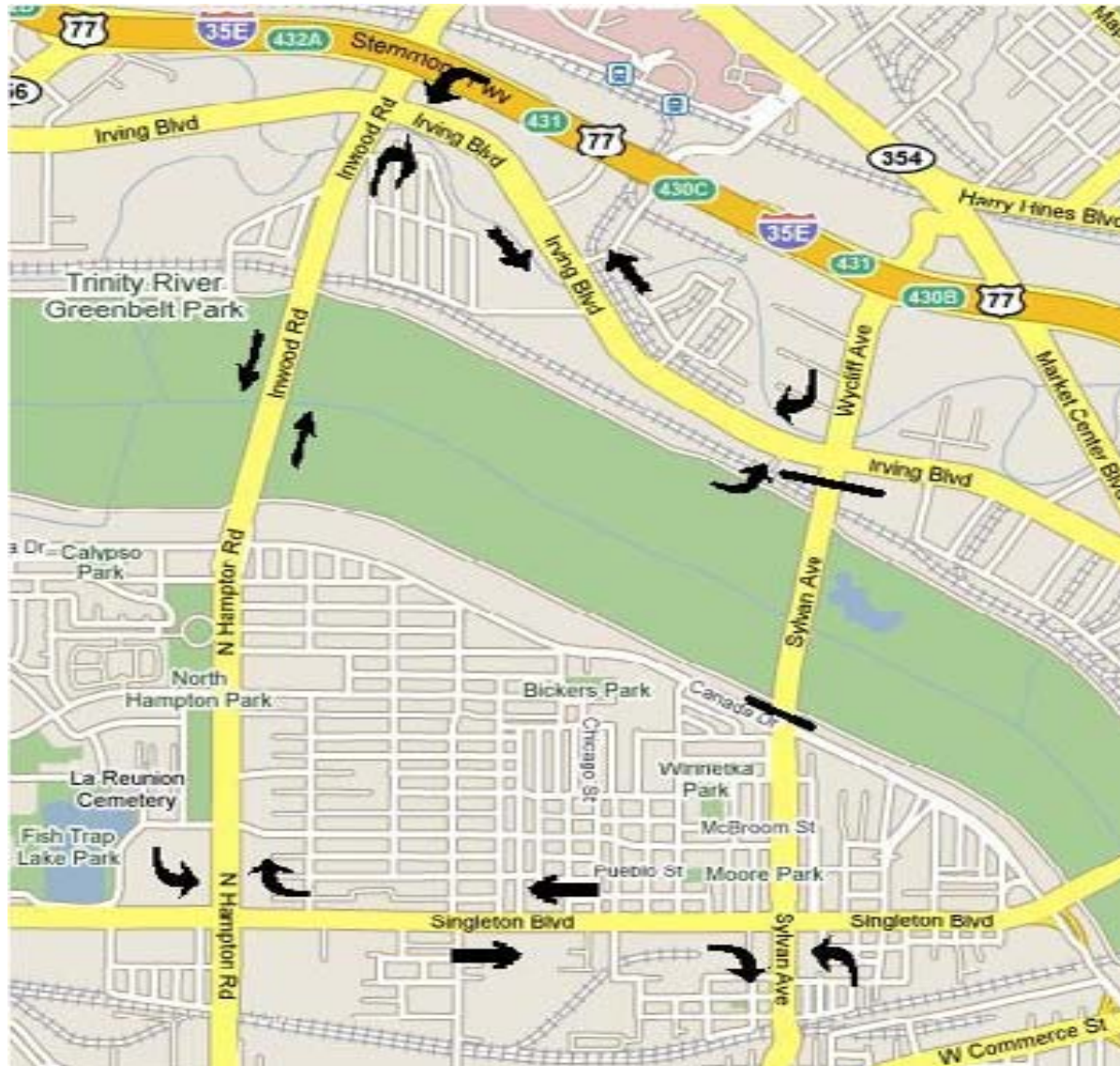
# Non-Phased Construction w/Sylvan Closed



- Pros
  - Decreases cost of construction by +/- \$5 million
  - Reduces time of construction to one year
  - Drivers can rely on new Hampton Bridge to open late 2009
  - Eliminates need to possibly defer project to 2010 bond program
- Cons
  - Sylvan Ave. will be shut down for duration of project
  - Driver delays and detours
  - No access to Trammel Crow Park for duration of project
  - Temporary loss of access to 2 soccer fields



# Potential Closure and Detour Plan





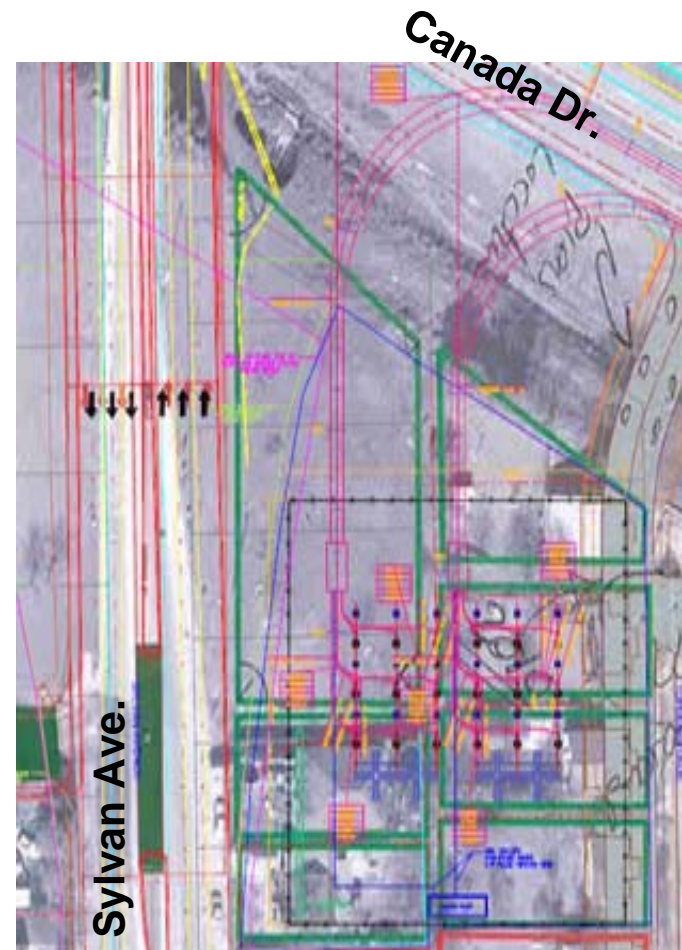
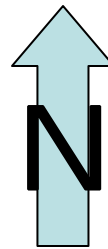
# Other Issues



- Schedule
  - If budget shortfall is funded through next bond program, it will delay project up to 2 years.
  - Needs to be ahead of Trinity Parkway, which begins construction mid-2010
- Proposed ONCOR Transfer Station
- Connection to Canada Drive



# Other Issues (cont.)



Connection to Canada Drive

Proposed ONCOR Transfer Station



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Sylvan Avenue Bridge  
*Context-Sensitive Design*

October 2008





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Sylvan Avenue Bridge  
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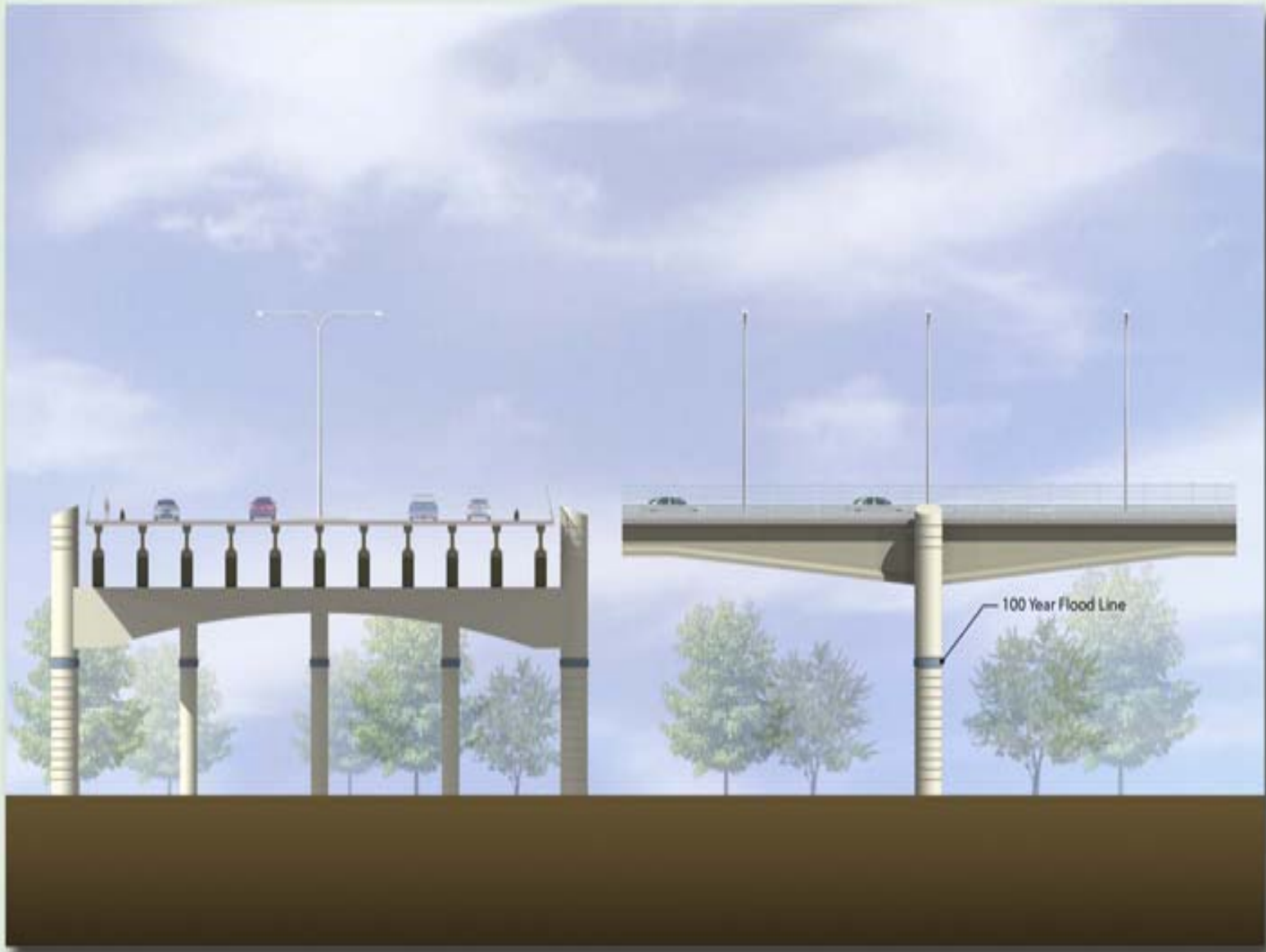
Sylvan Avenue Bridge - Section A1 (Wide Deck) Conceptual Graphics

Context-Sensitive Design

## Trinity River Signature Columns

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Sylvan Avenue Bridge - Section A2 (Narrow Deck) Conceptual Graphics

Context-Sensitive Design

## Trinity River Signature Columns

October 2008





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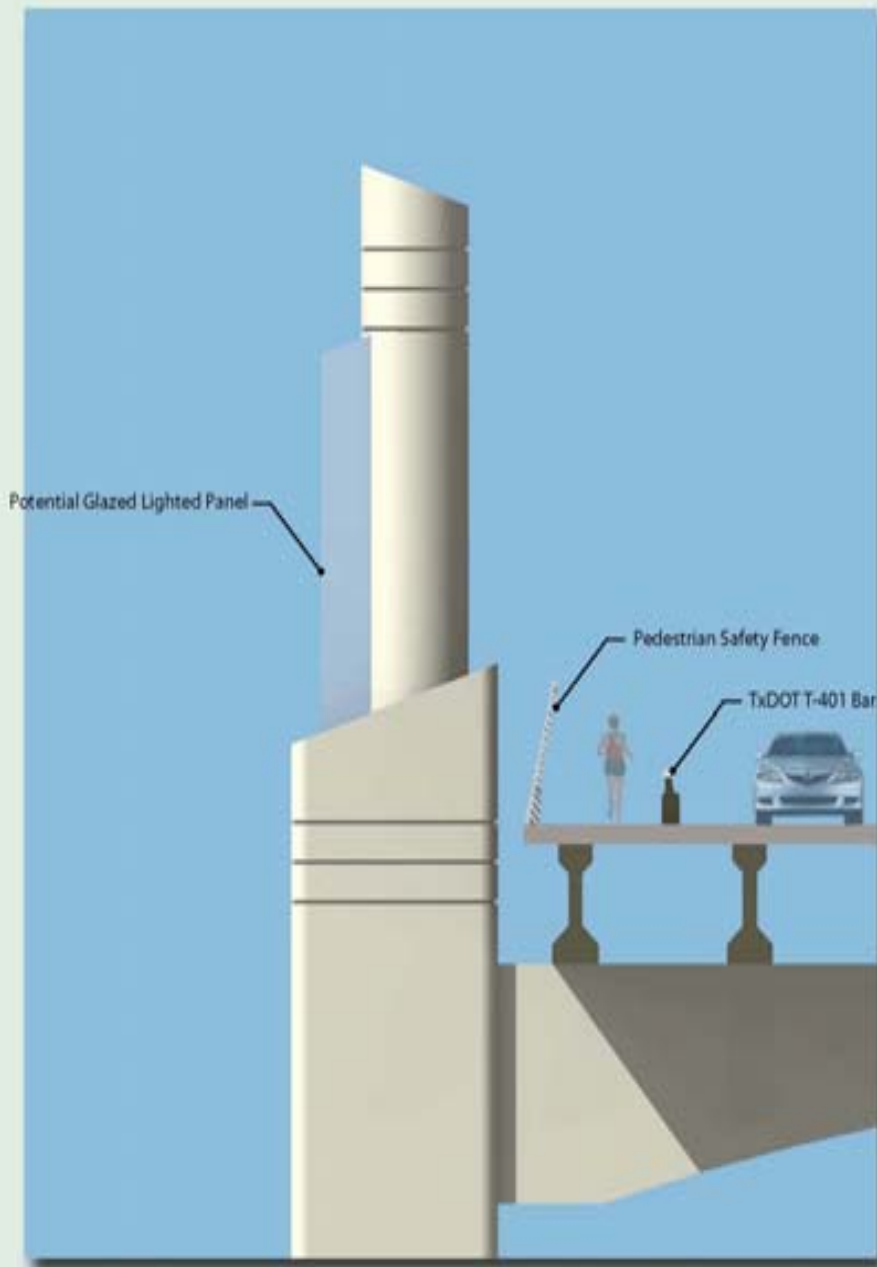
Sylvan Avenue Bridge - Section B Conceptual Graphics

Context-Sensitive Design

Standard Columns

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Sylvan Avenue Bridge - Section Enlargement Conceptual Graphics

Context-Sensitive Design

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# Questions and Discussion

