

HIGH-SPEED



TRANSPORTATION

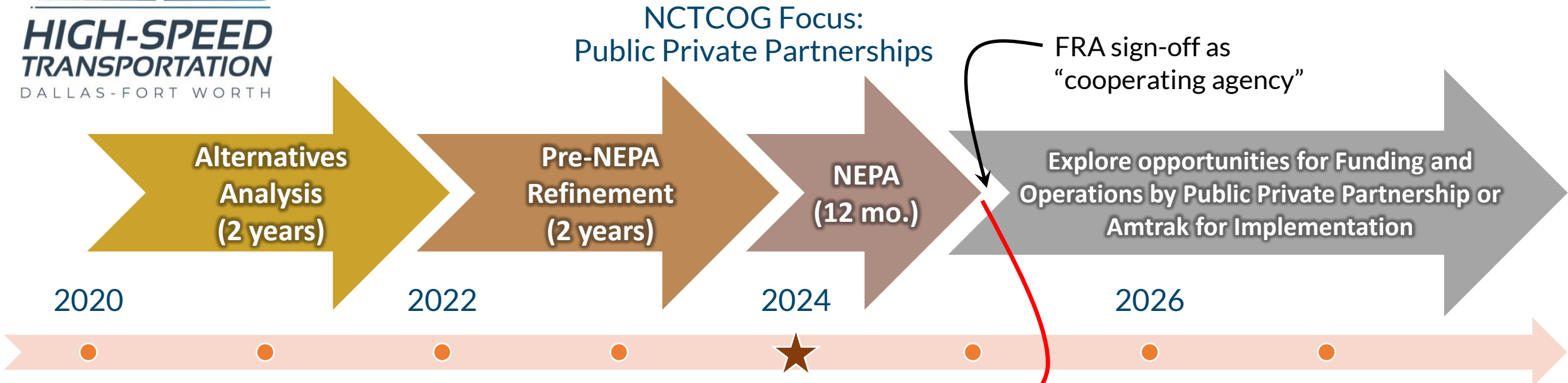
Dallas-Fort Worth



**North Central Texas
Council of Governments**

March 6, 2024 – Dallas City Council

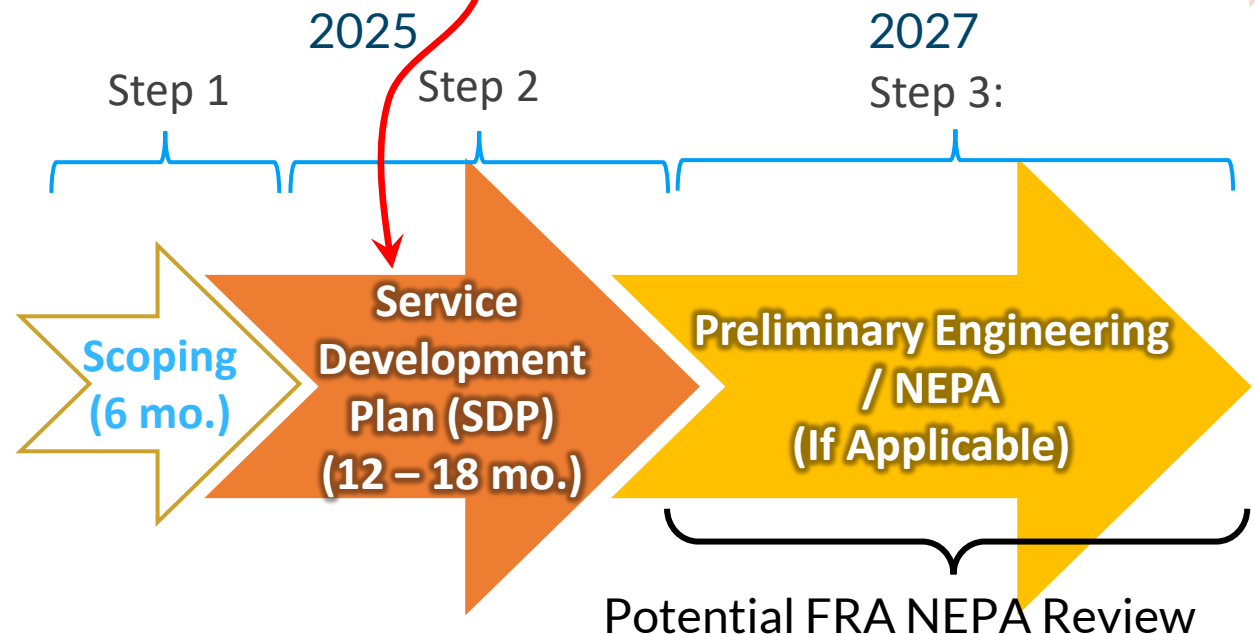
Federal Transit Administration Process



Federal Railroad Administration Process

Corridor ID Program

NCTCOG Focus:
Federal Funding through Federal State Partnership Program



NCTCOG

*NEPA: National Environmental Policy Act

Dallas High-Speed Rail (HSR) Questions (Alternative Alignments)

Were the Following Alignments Reviewed?

Yes

Alignments Previously Rejected; Requested to Review

3. *Elevated* – Use of Existing Rail Corridor East of Hotel Street

4. *Subway* – Coterminous with Approved Dallas HSR Station

5A. *Elevated*/5B. *Subway* – Different Station Location

6. *At-Grade* – Upgraded Trinity Railway Express (TRE)

7. *Elevated* – Trinity Railway Express (TRE) Corridor

Alignments Previously Recommended for NEPA

1. *Elevated* – West of Hyatt Regency Hotel

2A. *Elevated* – East of Hyatt Regency Hotel

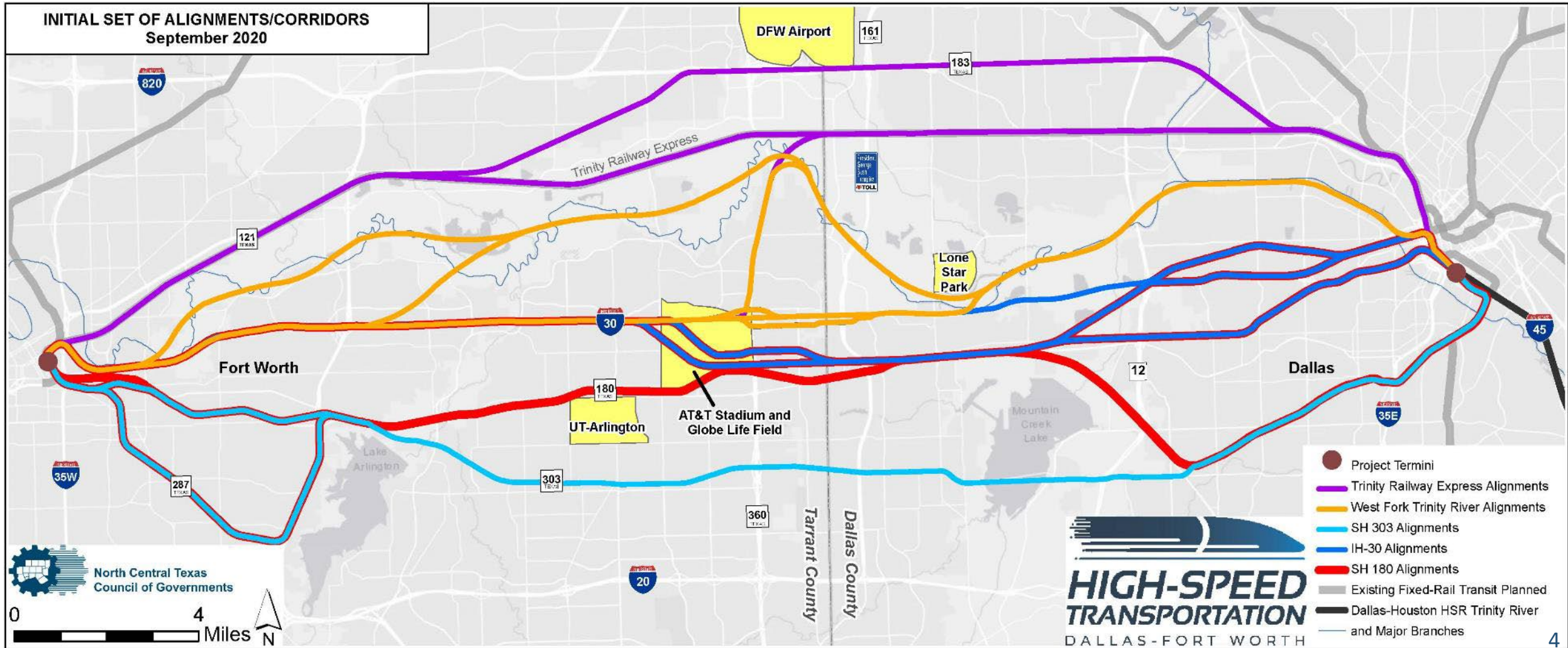
New Alignments Recommended to Review

2B. *Elevated* – East of Hyatt Regency Hotel with Pedestrian Lobby

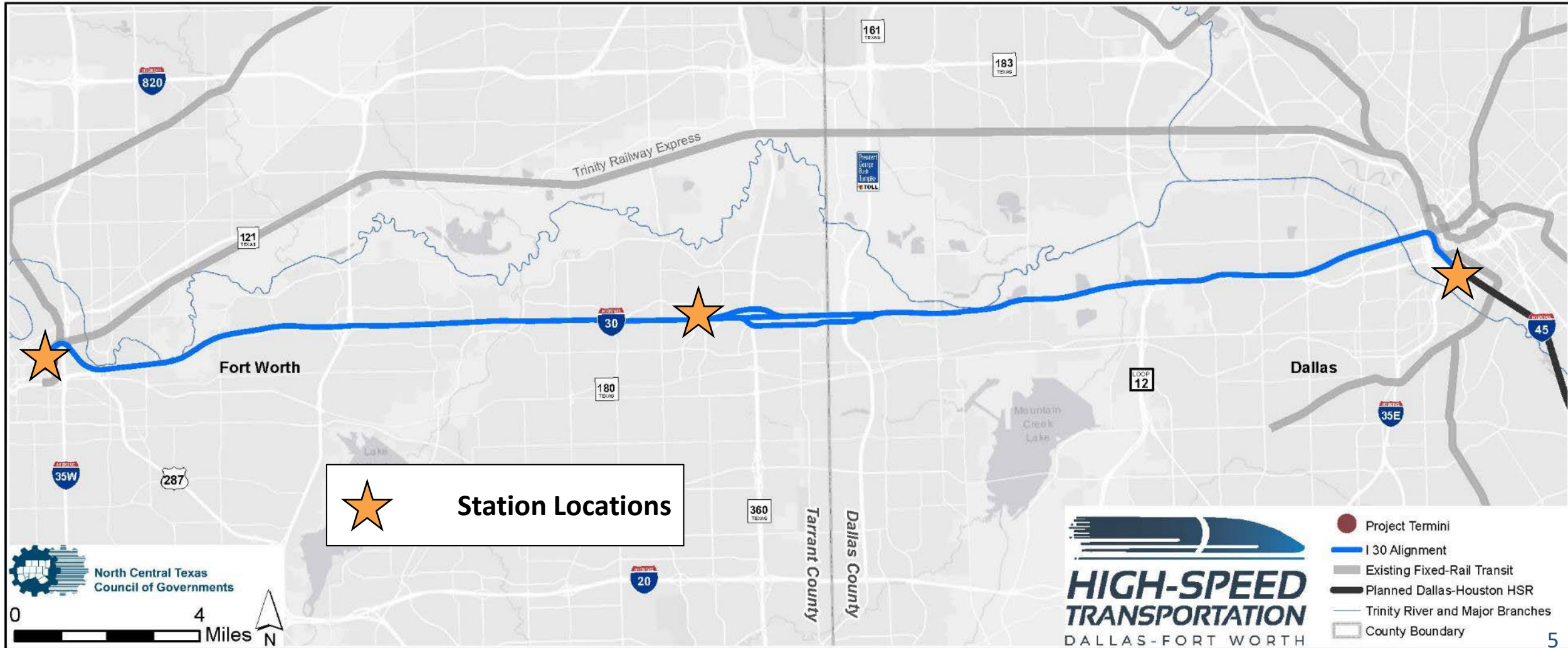
2C. *Elevated* – East of Hyatt Regency Hotel with Pedestrian Lobby and Pedestrian Cap

*Alignments recommended for advancement into NEPA

Initial Set of Alignments/ Corridors (Fall 2020)

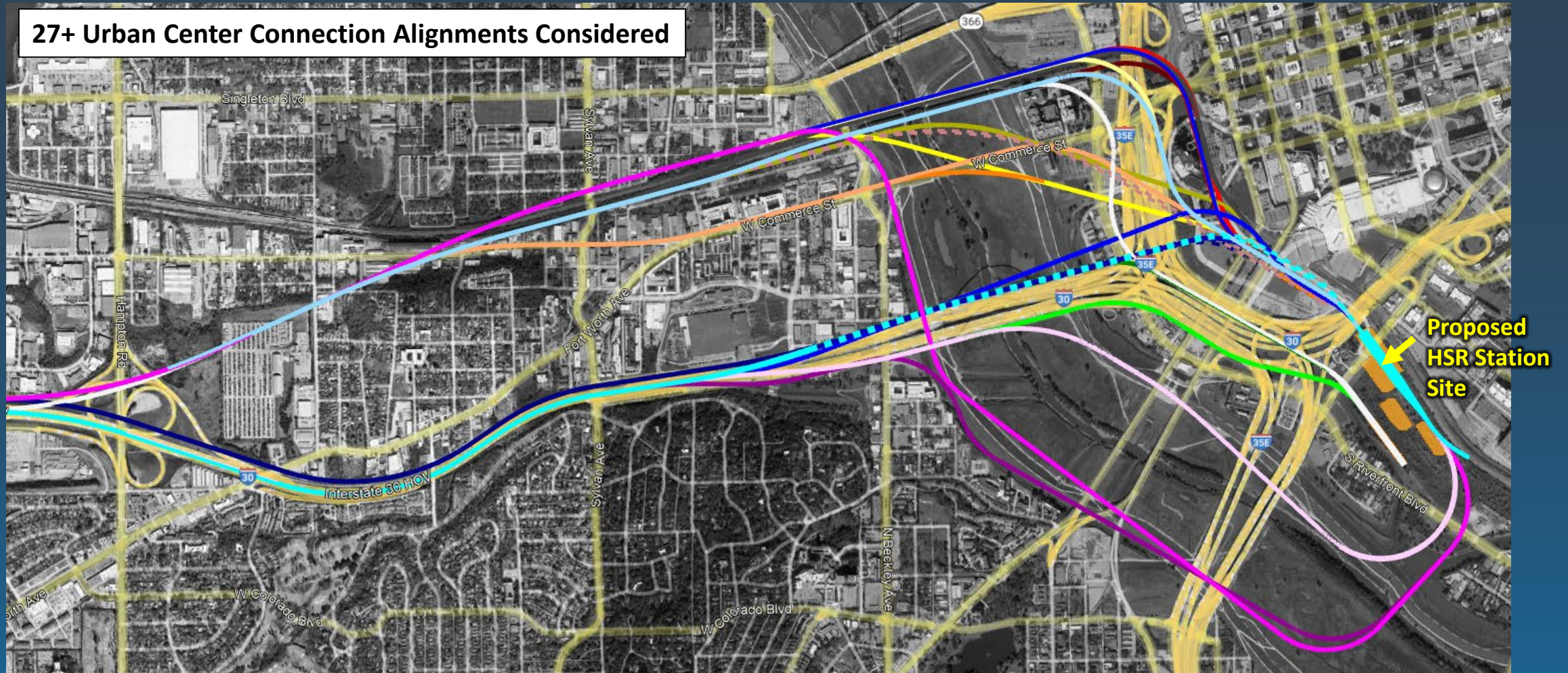


Phase 1 Results – Alignments (Summer 2021)



Dallas Urban Center Connections (Summer 2022)

27+ Urban Center Connection Alignments Considered



Alignments Previously Recommended for NEPA

1. Elevated – West of Hyatt Regency

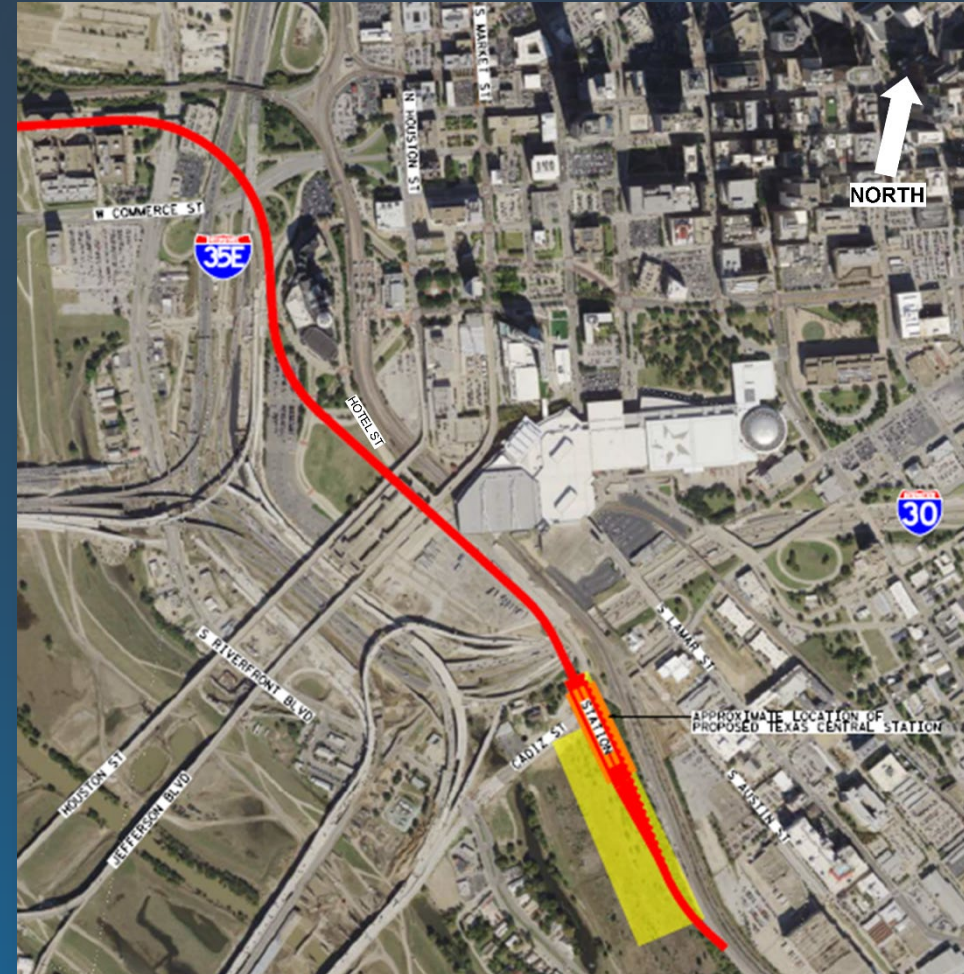
NO FATAL FLAW

Alignment recommended for advancement into NEPA

Originally recommended for further study (Fall 2022)

Requires no changes to approved Dallas HSR Station location

Less favored than new eastern alternatives

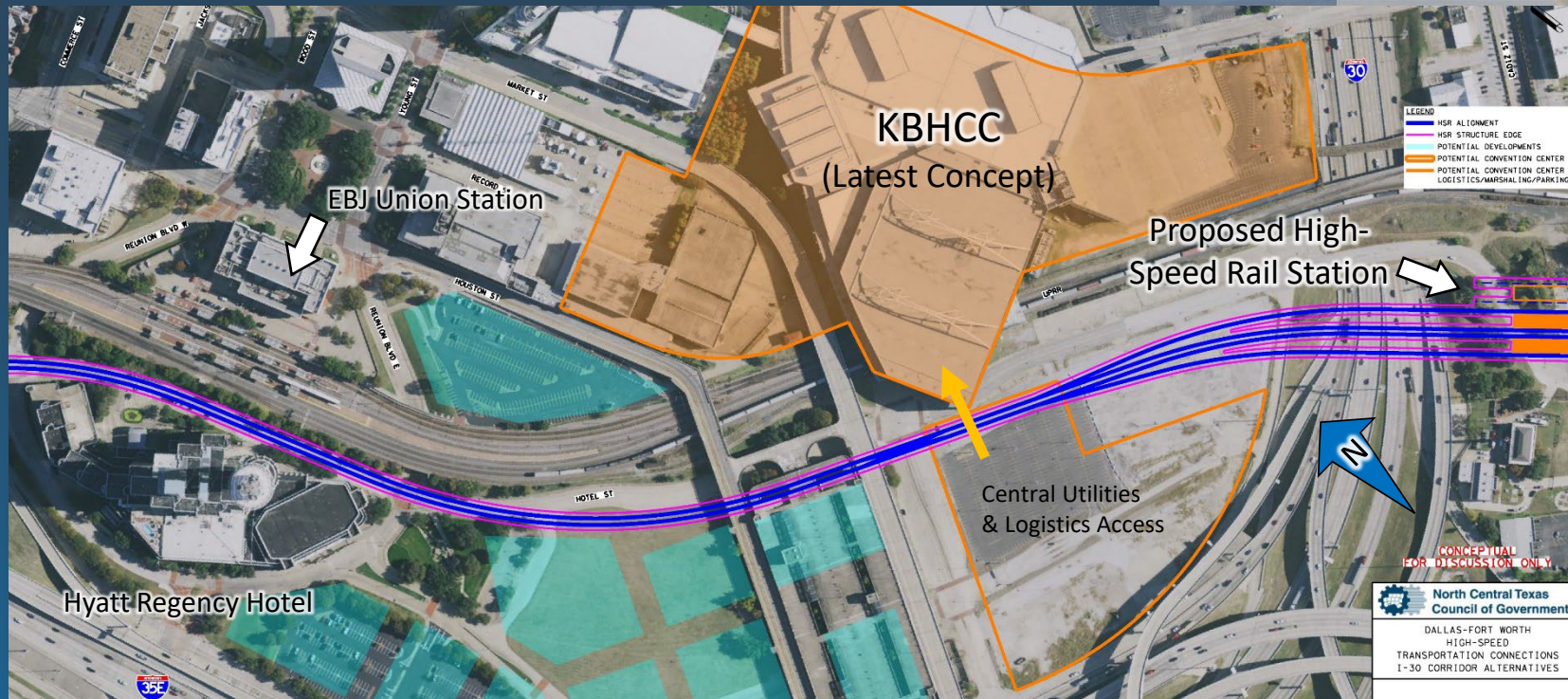
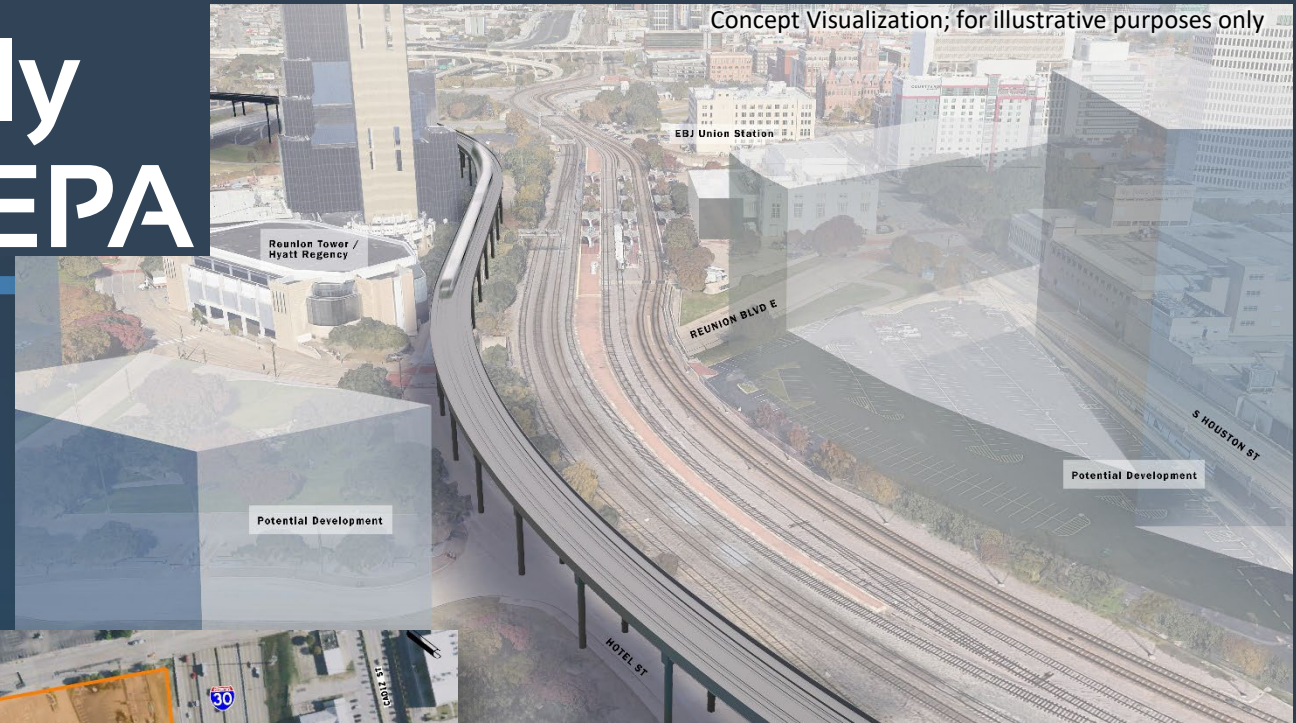


Alignments Previously Recommended for NEPA

2A. Elevated – East of Hyatt Regency

NO FATAL FLAW

Alignment recommended for advancement into NEPA



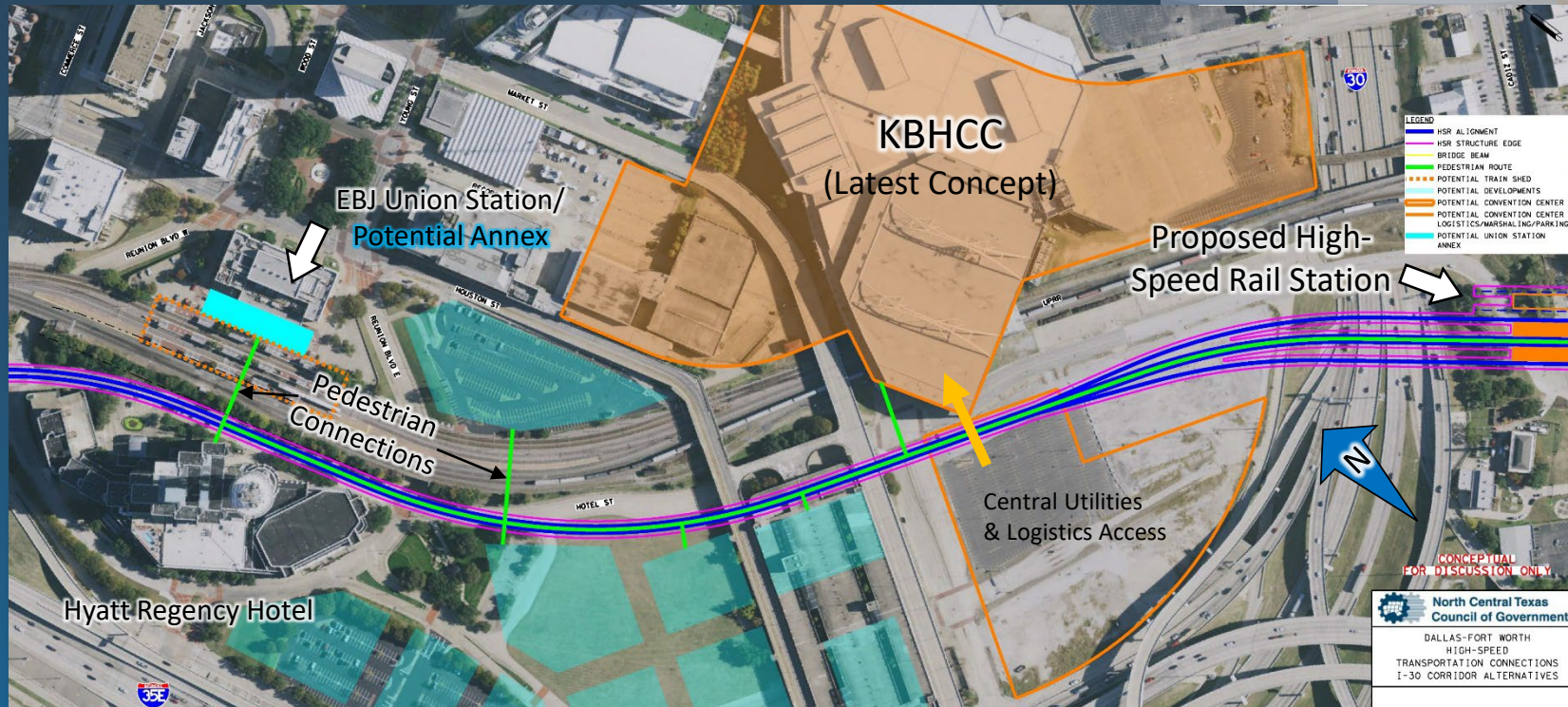
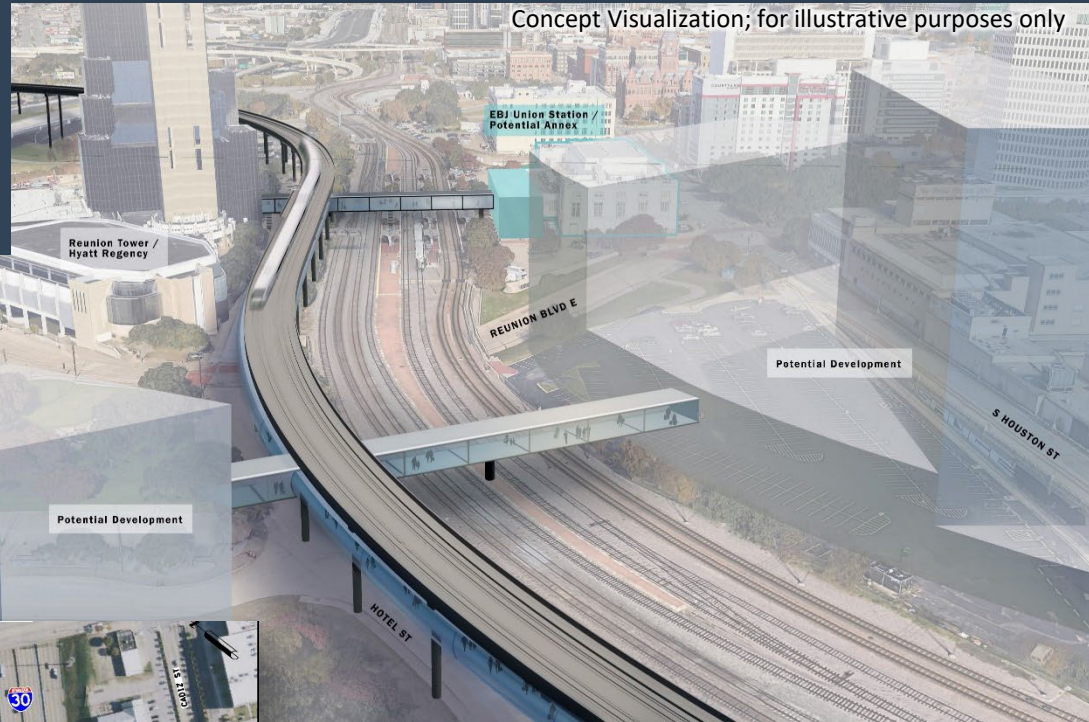
Requires no changes to approved Dallas HSR Station location
Aligns along Hotel St. and adjacent to existing rail corridor
Similar alignment to 2B and 2C alternatives

Alignments Previously Recommended for NEPA

2B. Elevated – East of Hyatt Regency with Pedestrian Lobby

Alignment recommended for advancement into NEPA

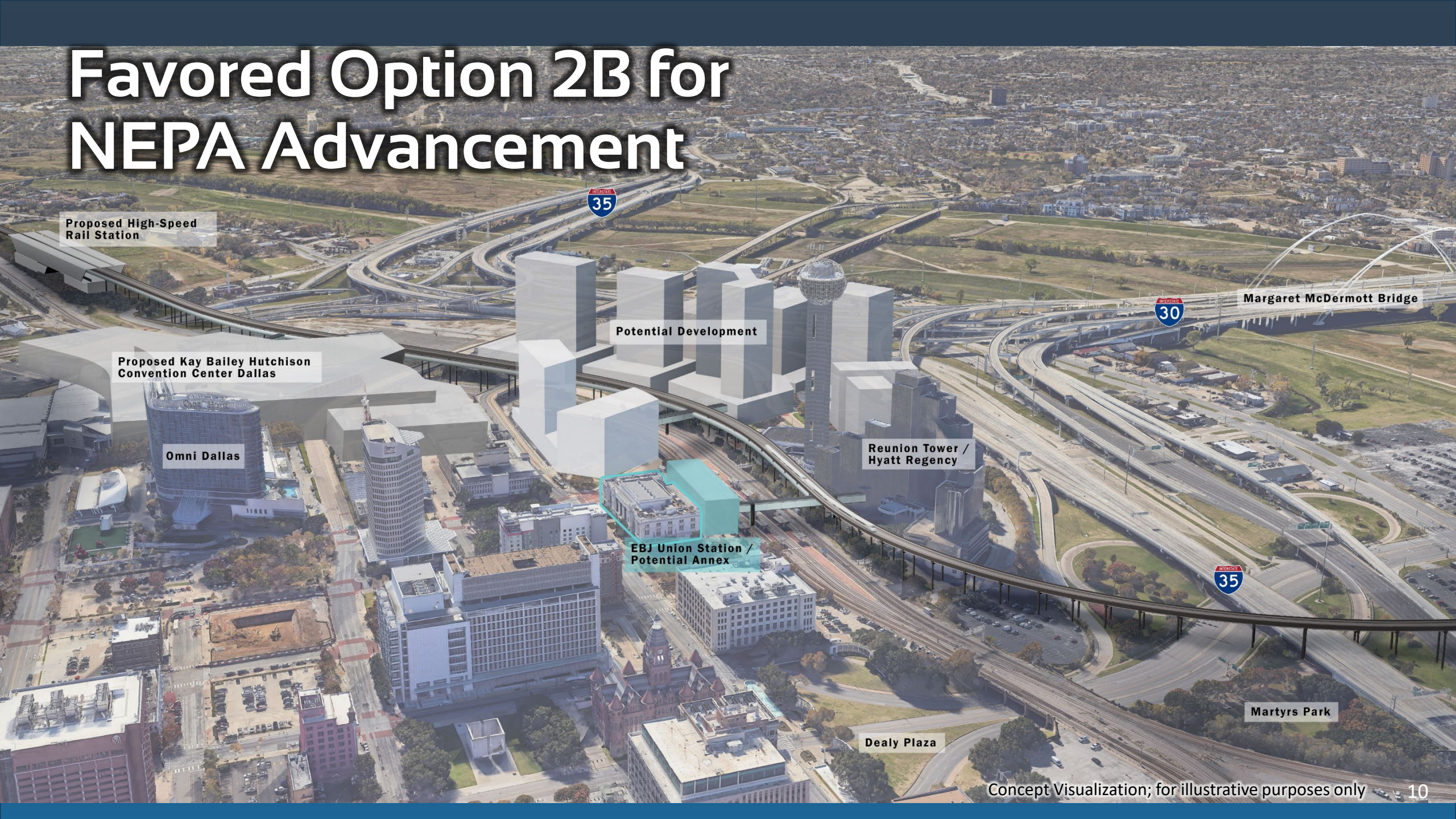
NO FATAL FLAW; FAVORED OPTION



Aligns along Hotel St. and adjacent to existing rail corridor

Provides direct pedestrian connectivity opportunity between approved HSR station, EBJ Union Station, KBHCC, and other developments

Favored Option 2B for NEPA Advancement



Proposed High-Speed Rail Station

Proposed Kay Bailey Hutchison Convention Center Dallas

Omni Dallas

Potential Development

Reunion Tower / Hyatt Regency

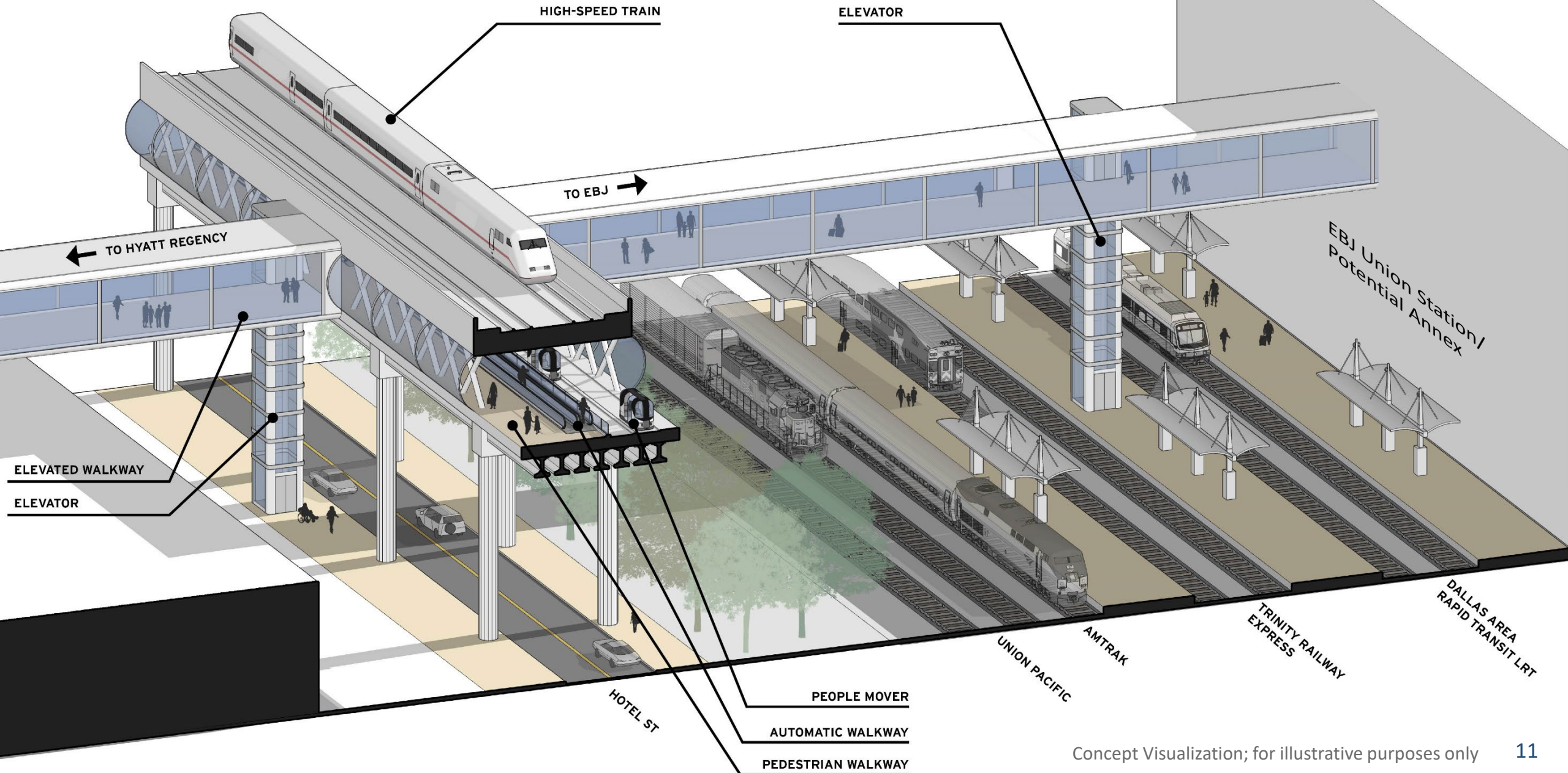
EBJ Union Station / Potential Annex

Dealy Plaza

Margaret McDermott Bridge

Martyrs Park

Favored Option 2B for NEPA Advancement

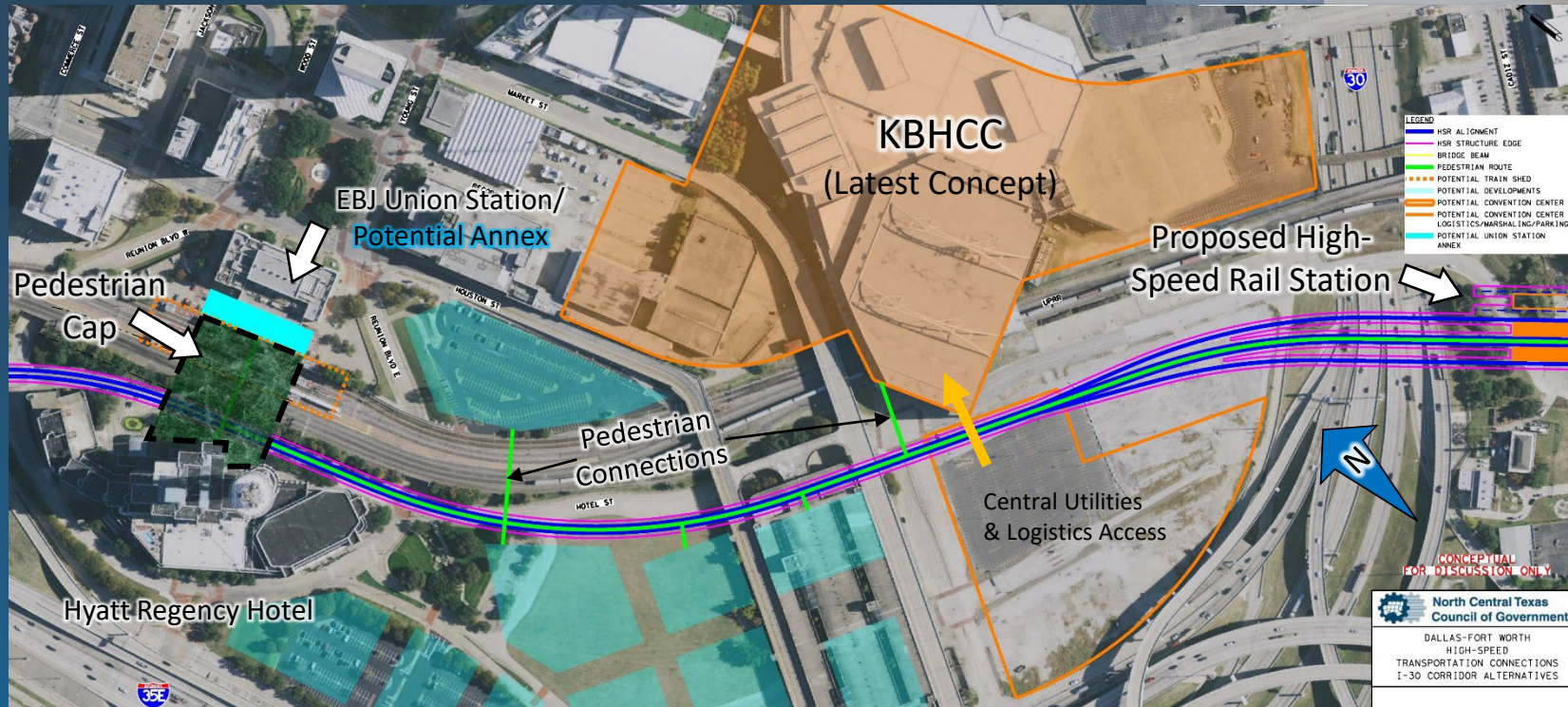
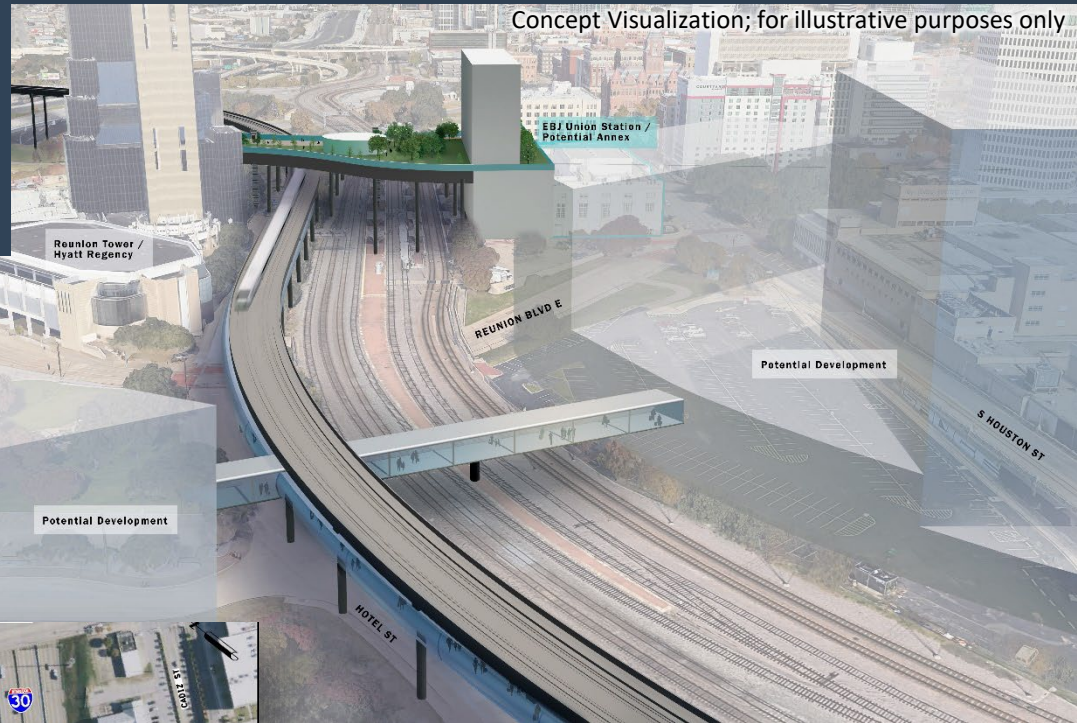


Alignments Previously Recommended for NEPA

2C. Elevated – East of Hyatt Regency with Pedestrian Lobby and Pedestrian Cap

Alignment recommended for advancement into NEPA

NO FATAL FLAW; FAVORED OPTION



Aligns along Hotel St. and adjacent to existing rail corridor

Provides direct pedestrian connectivity opportunity between approved HSR station, EBJ Union Station, KBHCC, and other developments

Provides Pedestrian Cap/Deck Plaza over HSR to improve viewshed

Favored Option 2C for NEPA Advancement



Proposed High-Speed Rail Station

Proposed Kay Bailey Hutchison Convention Center Dallas

Omni Dallas

Potential Development

Reunion Tower / Hyatt Regency

EBJ Union Station / Potential Annex

Dealy Plaza

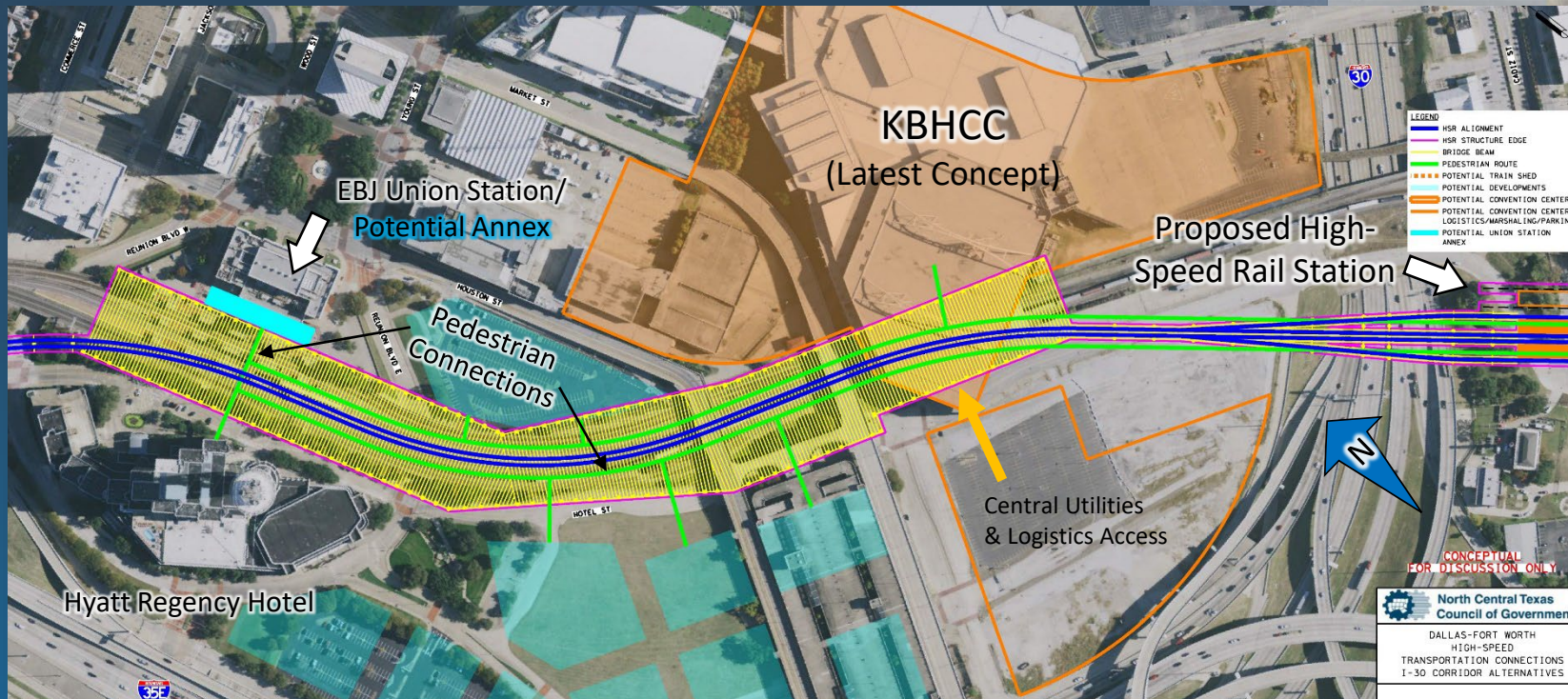
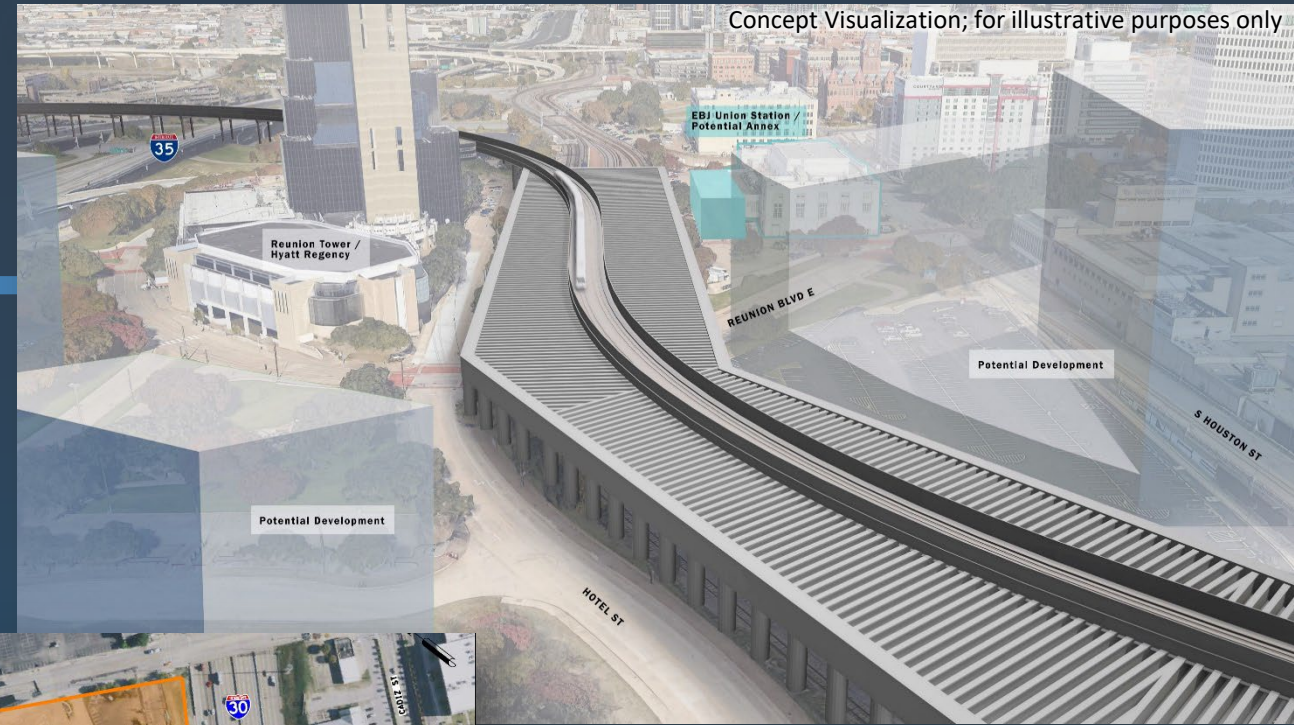
Margaret McDermott Bridge

Martyrs Park

Alignments Previously Rejected; Requested to Review

3. Elevated – Use of Existing Railroad Corridor East of Hotel Street

FATAL FLAW



Corridor actively used for
passenger and freight rail
service

Requires massive pergola structure
overshadowing streetscape

Significant engineering challenges;
loses seamless lobby extension

Alignments

Previously Rejected; Requested to Review

4. Subway – Coterminous with Approved Dallas High-Speed Rail Station

FATAL FLAW

Approx. 185' (17 stories) vertical transfer
adds 20+ minute delay

Delay equivalent to 40-minute travel time
penalty (waiting time vs. time-in-transit
perceived differently)

Violates Regional Transportation Council
Policy – not a “one-seat” ride*

* “One-seat” ride references a direct trip provided by a single transit service that requires no transfers for passengers to reach their final destination; potential ridership drops precipitously with service requiring a transfer(s)

Approved Dallas High-Speed Rail Station with platform at 70'+ above existing ground
Image Credit: Texas Central



5A. Elevated/5B. Subway – Different Station Location

FATAL FLAW

Amtrak proceeding with environmentally-cleared
station location for Dallas to Houston HSR

Transfer penalty worse than Alternative 4

Violates Regional Transportation Council Policy –
not a “one-seat” ride*

Alignments Previously Rejected; Requested to Review

6. At-Grade – Upgraded TRE

FATAL FLAW

Competes for capacity in active corridor and likely fatal flaw in sharing infrastructure

“At-grade” service sets highest speed of corridor at 125 mph and cannot meet HSR standards of safety and reliability

Cannot meet travel time goal of approximately 20 minutes due to geometry of corridor

Violates Regional Transportation Council Policy – not a “one-seat” ride*

7. Elevated – TRE Corridor

FATAL FLAW

Grade-separated tracks would require new right-of-way next to existing tracks/right-of-way

Significant number of displacements expected

Creates similar issue in downtown Dallas as Alternative 3 (use of existing rail corridor)

Significant public opposition

Violates Regional Transportation Council Policy – not a “one-seat” ride*

** “One-seat” ride references a direct trip provided by a single transit service that requires no transfers for passengers to reach their final destination; potential ridership drops precipitously with service requiring a transfer(s)*

Dallas to Fort Worth High-Speed Rail Corridor Characteristics

What are expected travel times along corridor? Can it really get to “high” speed?

Yes – “high” speed is defined as over 125 mph

Fort Worth to Dallas

Express Run: Max Speed = 160 mph, 21-minute travel time

Arlington Stop: Max Speed = 160 mph, 25-minute travel time

Dallas to Houston

Max Speed = 200+ mph, 90-minute travel time

Fort Worth to Houston*

Max Speed = 200+ mph, approximately 2-hour travel time



Benefits of High-Speed Rail to Land Development

Questions:

What density of development does a high-speed rail station attract and what is the effect on land values?

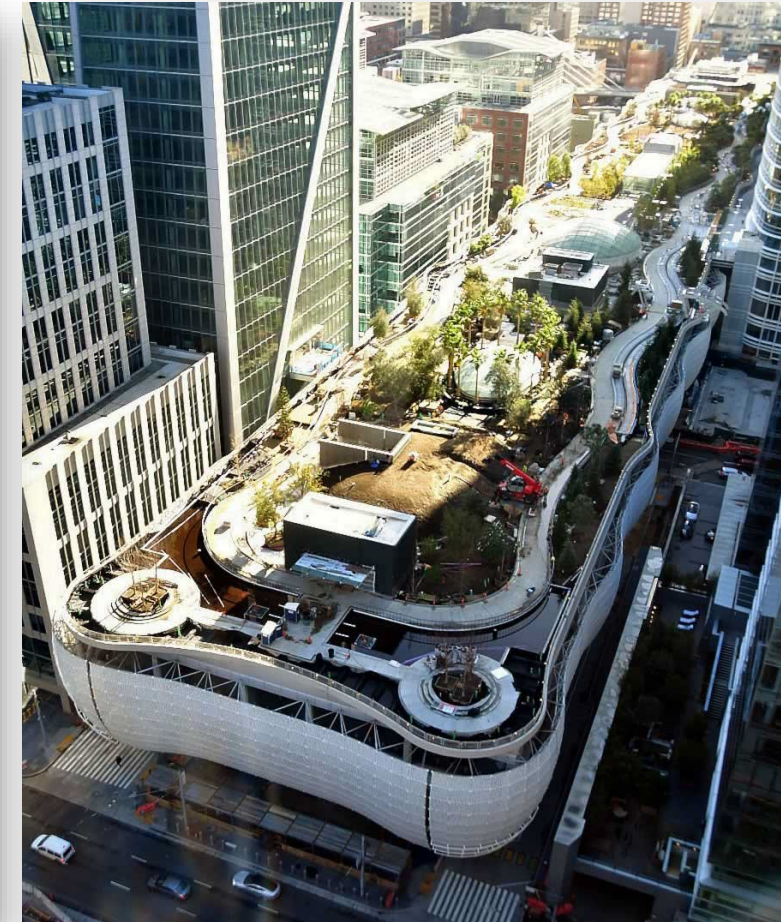
What markets will it serve?

Density Increase Near High-Speed Rail

- Greater Density
- Higher Towers
- More Buildings
- Integrated Mixed Use
- Skywalks (e.g., Dubai, Toronto, Chicago)
- Higher Employment Growth
- Faster Population Growth
- GDP 1-3% Nationwide in China



Source: Transbay Program
media gallery, 2023



**San Francisco Salesforce
Transit Center**



Property Value Increase in High-Speed Rail Markets

Greatest Value Near Station (50%-100%)

Citywide Property Value Increase (6%-14%)

Extent of Value Capture

20-minute walking distance plus regional rail plus light rail plus bike commuters (up to 18 miles)

Dallas HUB/Convention Center Adds to Market Segmentation



High “Speed” Rail by Country

HSR Systems Commonly Studied by Literature and their Top Speeds

Country	Train Name	Top Speed (mph)
China	Shanghai Maglev	286
China	CR Harmony and CR Fuxing	217
Germany	DB ICE	217
France	SCNCF TGV	199
Japan	JR Shinkansen	199
Spain	Renfe AVE 103	193
South Korea	Korail KTX-Sancheon	190
Italy	Trenitalia Frecciarossa 1000	190
Taiwan	Taiwan HSR	185

Source: [The 10 fastest high-speed trains in the world - Railway Technology \(railway-technology.com\)](http://railway-technology.com)



Travel Demand Markets for High-Speed Rail Dallas-Arlington-Fort Worth (Business, Recreational, Entertainment)

1. HSR to Houston, Austin, and San Antonio (reduced/inefficient parking in downtown Dallas)
2. Egress/Access to Dallas Fort Worth International Airport (no second transfer)
3. Fast Travel within Region of 12.4 M in 2050 (currently 8.2M)
4. Better Connection to HUB (at-grade AMTRAK, Streetcar, Light Rail, and Regional Rail)
5. Better Access for Conventions
6. Better Access for Special Events including Fair Park

