



FORT WORTH DISTRICT

District 95 Town Hall, Southeast Connector Update

I-20, I-820 & US 287

November 8, 2018



Photo by Liam Frederick



Agenda

- 1 Comments from July 2018 Public Meeting
- 2 Northbound Meadowbrook Entrance Ramp Alternatives
- 3 Southbound Brentwood Stair Entrance Ramp Alternatives
- 4 Craig Street and Pedestrian Bridge Alternatives
- 5 Project Schedule
- 6 Project Contact Information
- 7 Questions



Comments from July Public Meeting

NB Entrance Ramp from Meadowbrook

– 88 Comments

SB Entrance Ramp from Brentwood Stair

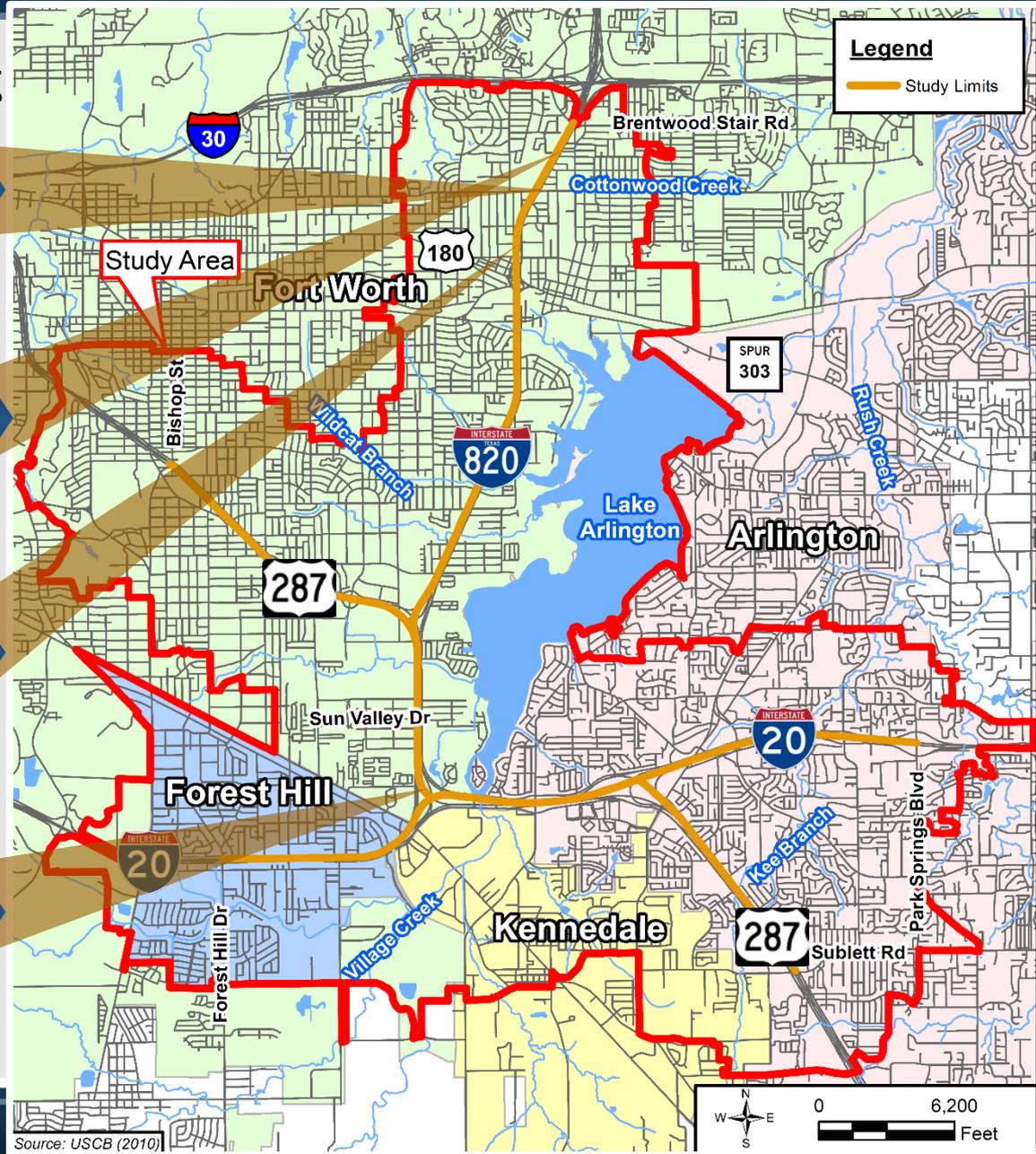
– 49 Comments

Craig Street Bridge Access / Ped Bridge

– 25 Comments

Noise Wall Study

– 51 Comments





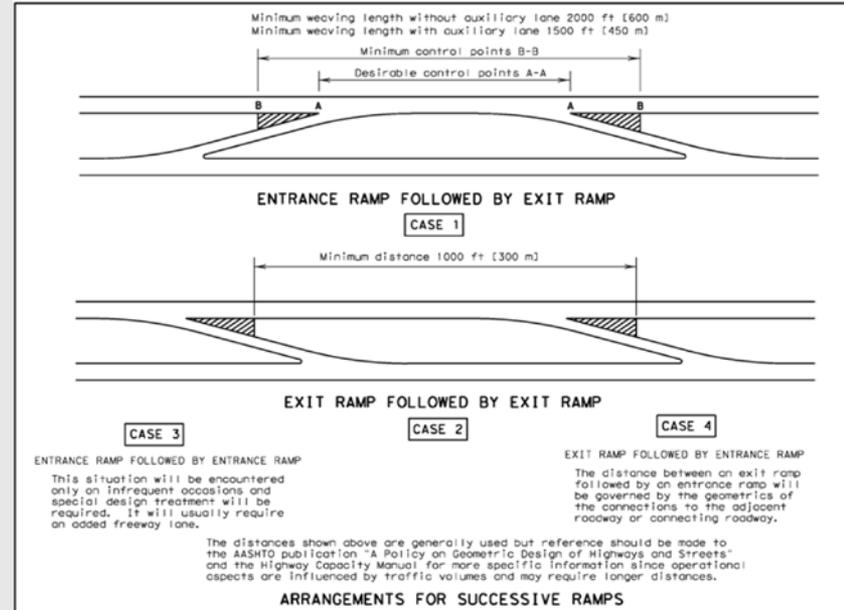
Ramp Spacing per State and National Guidelines

WHY?

- Provide adequate distance between ramps for safe travel movements
- Provide time for acceleration and deceleration

GUIDELINES

- State
 - TxDOT, *Roadway Design Manual*
- National
 - AASHTO, *A Policy on Geometric Design of Highways and Streets*
 - TRB, *Highway Capacity Manual*



Source: TxDOT Roadway Design Manual, April 2018, Figure 3-37

ENTRANCE FOLLOWED BY EXIT

- Desirable 1,500' from tip to tip with Aux Lane*
- Desirable 2,000' from tip to tip without Aux Lane*
- Minimum 1,500' from nose to nose with Aux lane*
- Minimum 2,000' from nose to nose without Aux Lane*



* : used for reference and may be influenced by operations and traffic volumes.



Northbound Entrance Ramp from Meadowbrook



WHY?

- Congestion and Safety
- Conflicts with Exit to Brentwood Stair and I-30 Direct Connections causing heavily congested weaving movements and accidents
- Distance between ramps near minimum spacing lengths described in roadway design guidelines



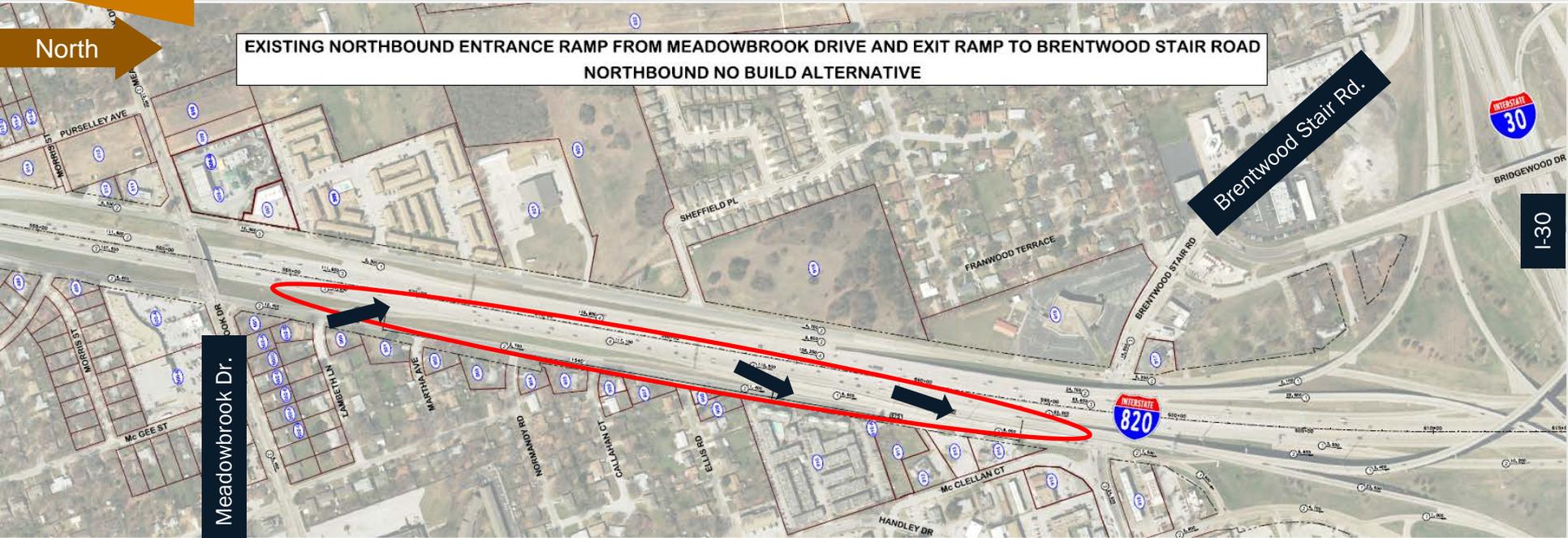
Northbound Entrance Ramp from Meadowbrook

PROPOSED ADDITIONAL ALTERNATIVES TO BE EVALUATED

- **No-Build (Do Nothing) Alternative**
- **A1:** Removal of northbound entrance ramp from Meadowbrook Dr (as shown at Public Meeting)
- **A2:** Reconstruct northbound entrance ramp from Meadowbrook Dr and exit ramp to Brentwood Stair Rd
- **A3:** Construct braided ramps (*ramps that are bridged, one over the other*) for northbound entrance from Meadowbrook Dr and exit to Brentwood Stair Rd
- **A4:** Construct northbound entrance ramp from Meadowbrook Dr and removal of the exit ramp to Brentwood Stair Rd



Northbound Entrance Ramp from Meadowbrook – **No Build Alternative**



Pros:

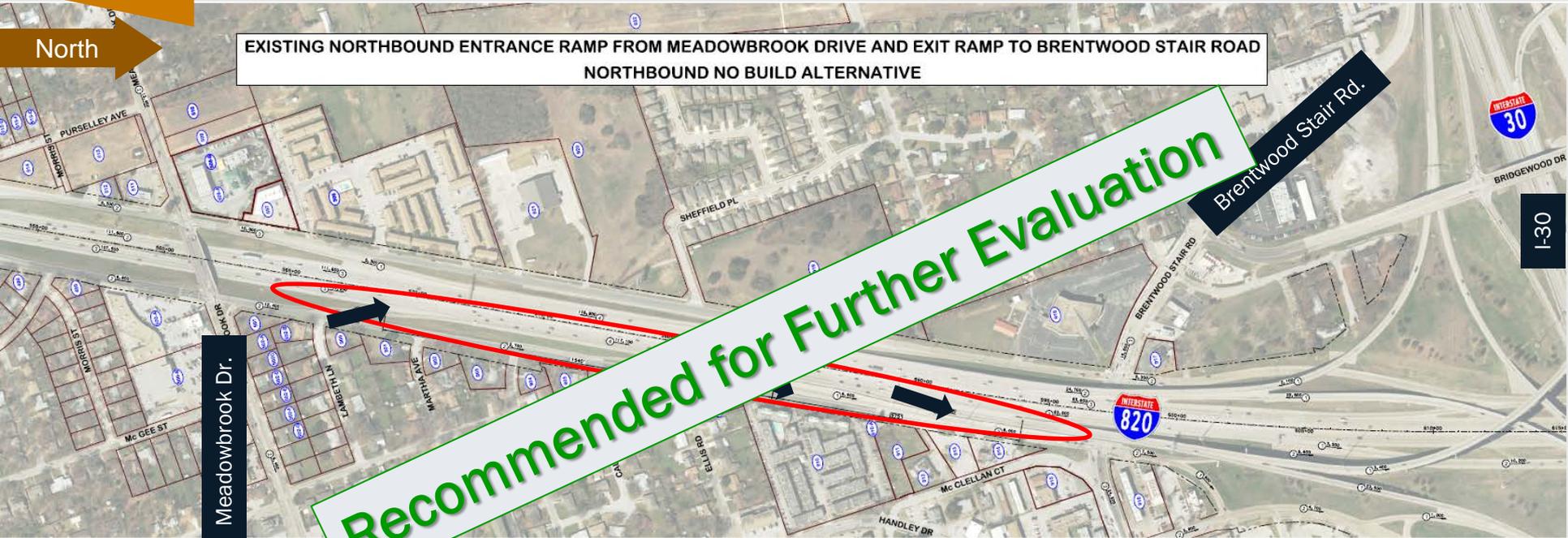
- Access remains as today

Cons:

- Distance between ramps near minimum spacing lengths described in TxDOT and National Guidelines
- Heavily congested weaving movements



Northbound Entrance Ramp from Meadowbrook – **No Build Alternative**



Pros:

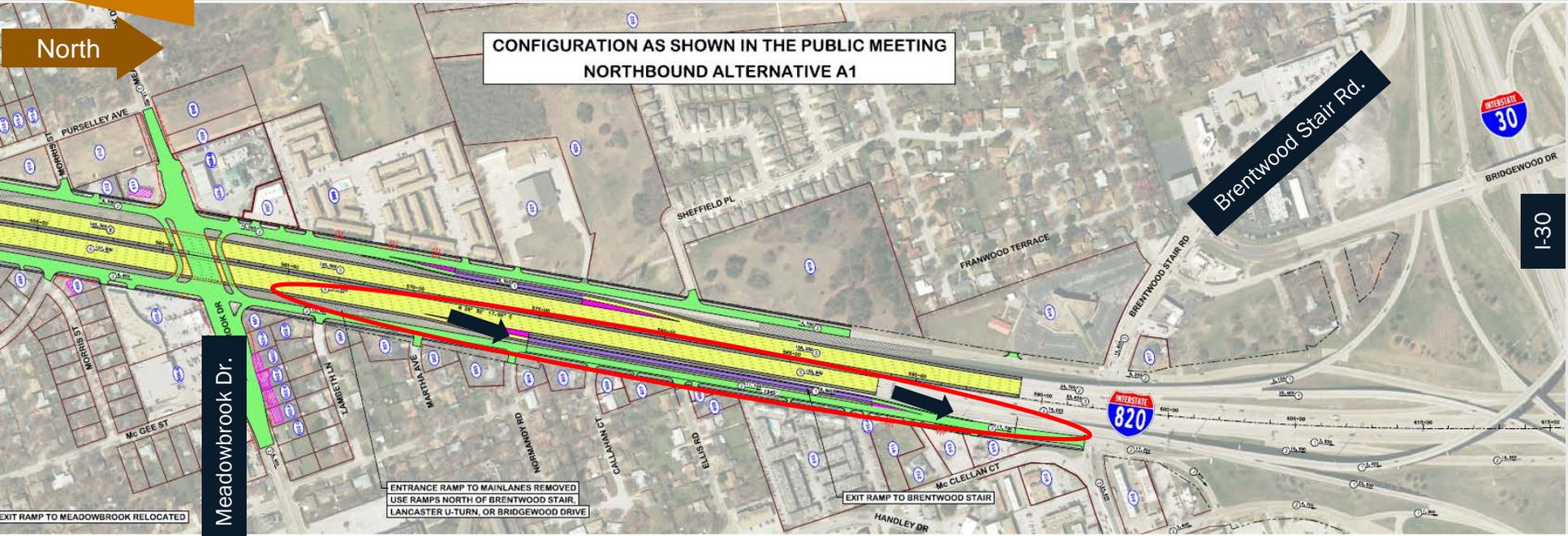
- Access remains as today

Cons:

- Distance between ramps near minimum spacing lengths described in TxDOT and National Guidelines
- Heavily congested weaving movements



Northbound Entrance Ramp from Meadowbrook – Alternative A1



Pros:

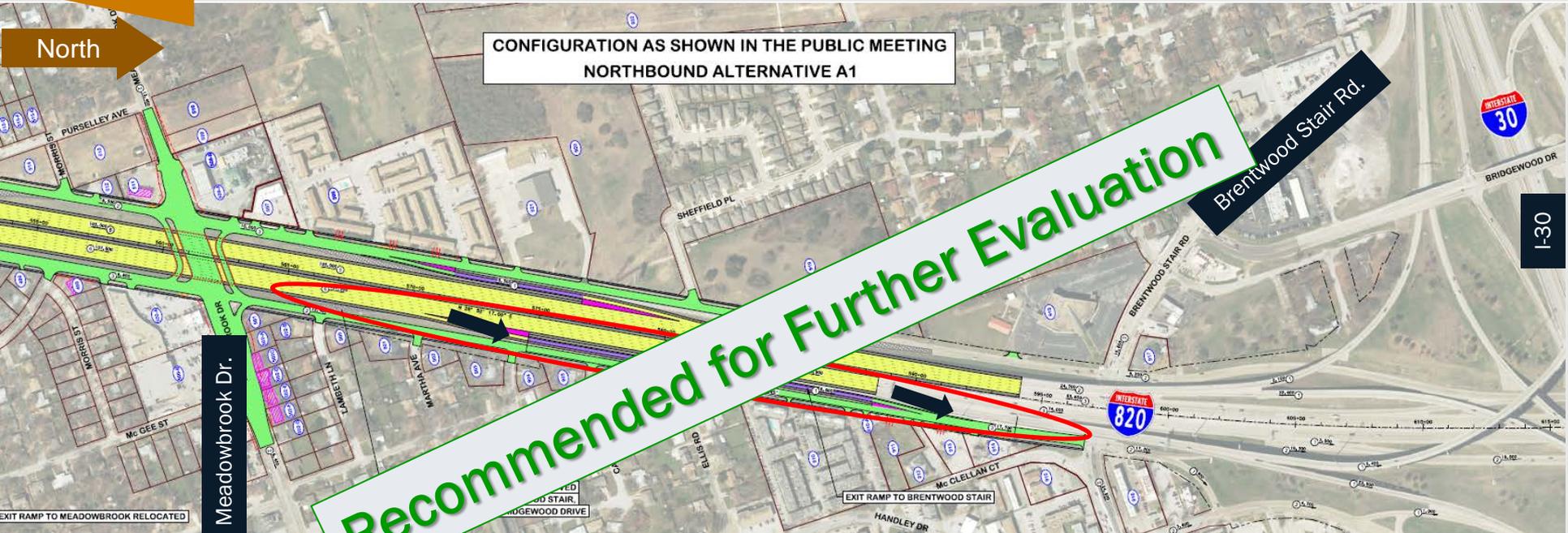
- Eliminates existing mainlane weaving from Meadowbrook entrance ramp reducing congestion and improving safety
- Design meets TxDOT and National Guidelines for ramp spacing criteria

Cons:

- Traffic from Meadowbrook must pass through a signal to access mainlanes



Northbound Entrance Ramp from Meadowbrook – Alternative A1



Pros:

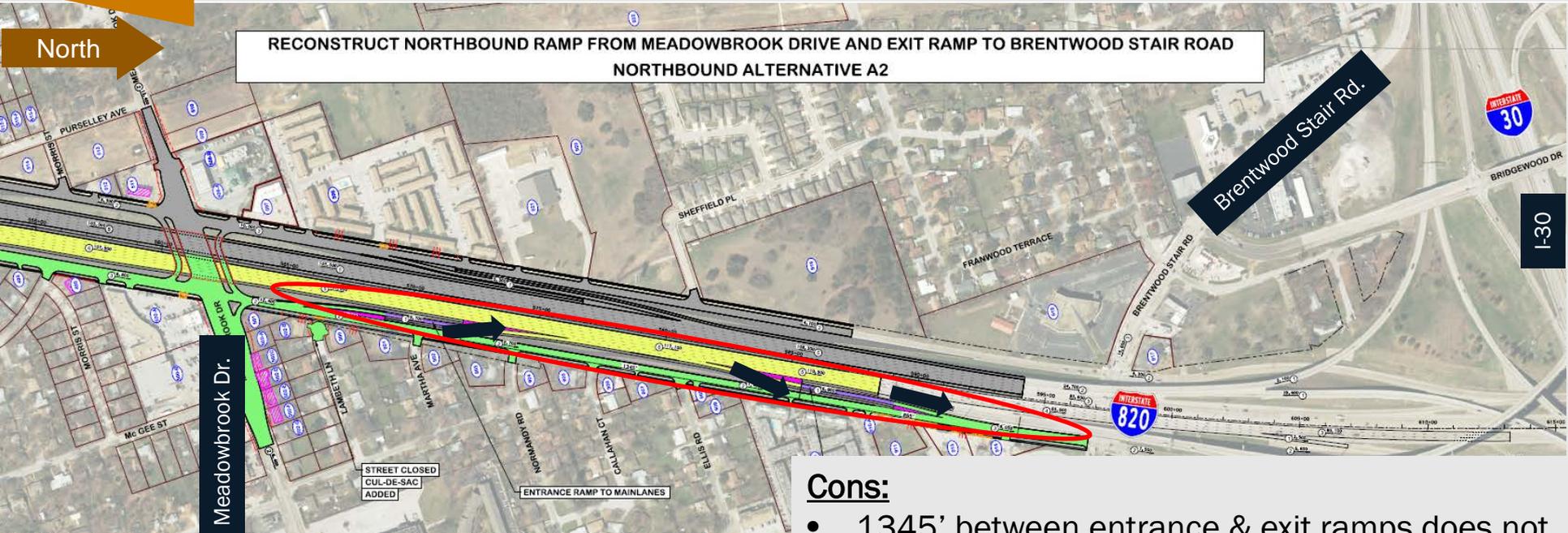
- Eliminates existing mainlane weaving from Meadowbrook entrance ramp reducing congestion and improving safety
- Design meets TxDOT and National Guidelines for ramp spacing criteria

Cons:

- Traffic from Meadowbrook must pass through a signal to access mainlanes



Northbound Entrance Ramp from Meadowbrook – **Alternative A2**



Pros:

- Existing northbound ramps are reconstructed to allow additional mainlanes capacity

Cons:

- 1345' between entrance & exit ramps does not meet minimum TxDOT and National Guidelines
- 865' between exit ramp & direct connection does not meet minimum TxDOT and National Guidelines
- Traffic from the northbound I-820 on-ramp from Meadowbrook wanting to continue northbound on I-820 must weave over 2 lanes in a distance of 1330'
- Reduced shoulders on existing mainlanes



Northbound Entrance Ramp from Meadowbrook – **Alternative A2**



RECONSTRUCT NORTHBOUND RAMP FROM MEADOWBROOK DRIVE AND EXIT RAMP TO BRENTWOOD STAIR ROAD
NORTHBOUND ALTERNATIVE A2

Not Recommended for Further Evaluation

Pros:

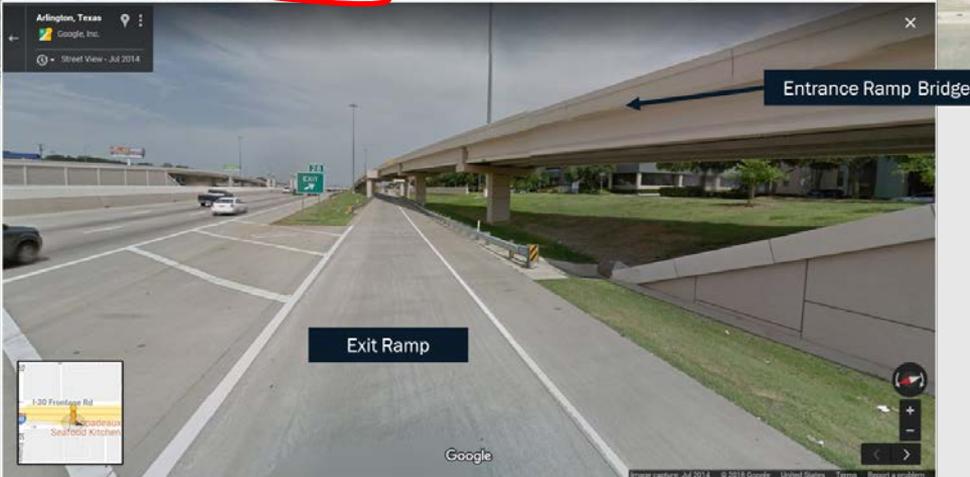
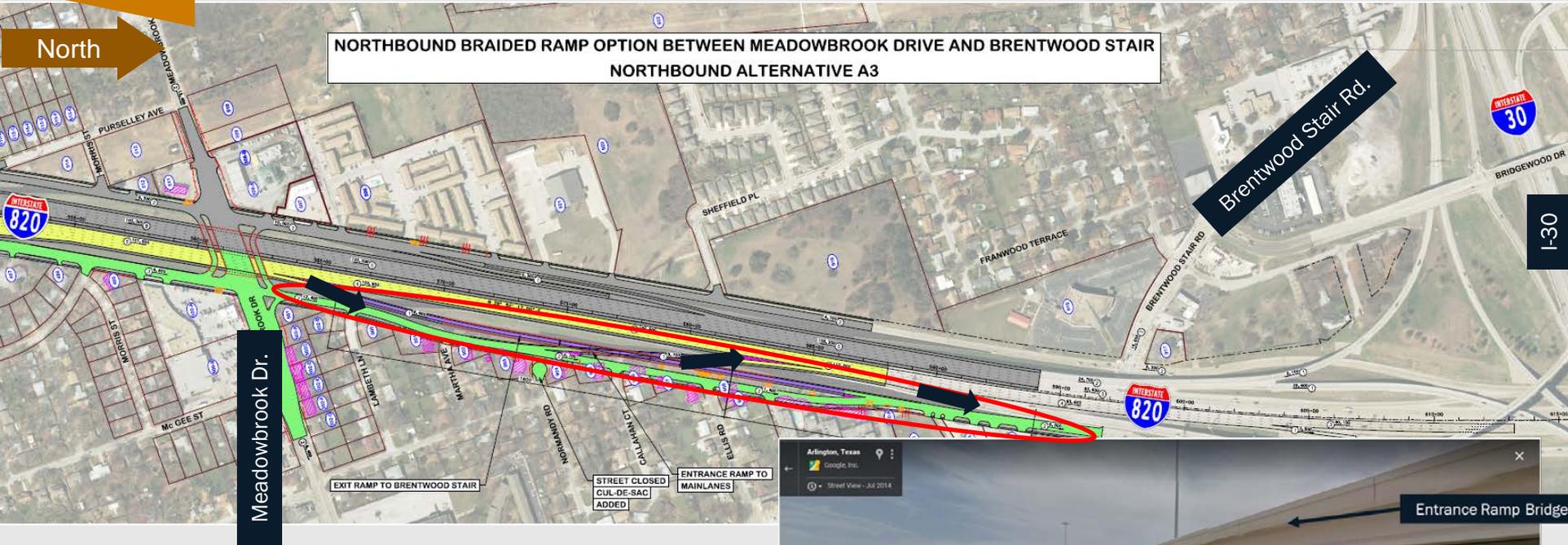
- Existing northbound ramps are reconstructed to allow additional mainlanes capacity

Cons:

- 1345' between entrance & exit ramps does not meet minimum TxDOT and National Guidelines
- 865' between exit ramp & direct connection does not meet minimum TxDOT and National Guidelines
- Traffic from the northbound I-820 on-ramp from Meadowbrook wanting to continue northbound on I-820 must weave over 2 lanes in a distance of 1330'
- Reduced shoulders on existing mainlanes



Northbound Entrance Ramp from Meadowbrook – Alternative A3



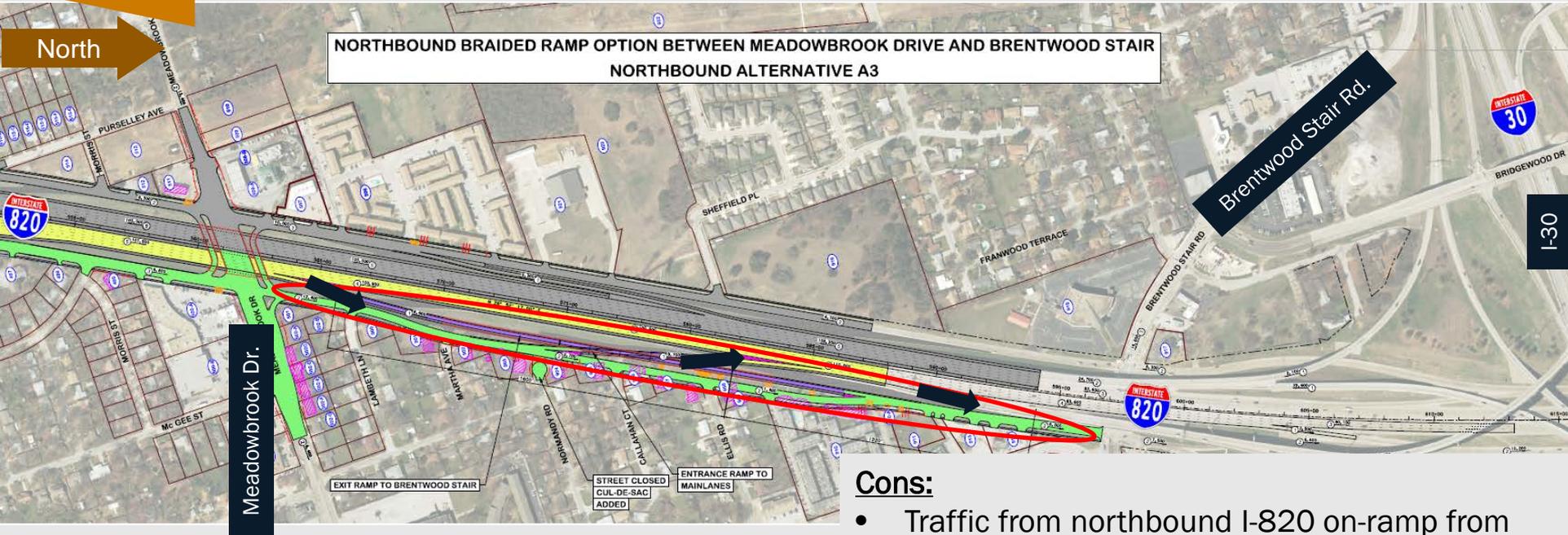
Example of “Braided Ramps”

- Eastbound I-30 exit to Nolan Ryan Expwy/Baird Farm Rd/ AT&T Way in Arlington

Image from Google.com street view



Northbound Entrance Ramp from Meadowbrook – Alternative A3



Pros:

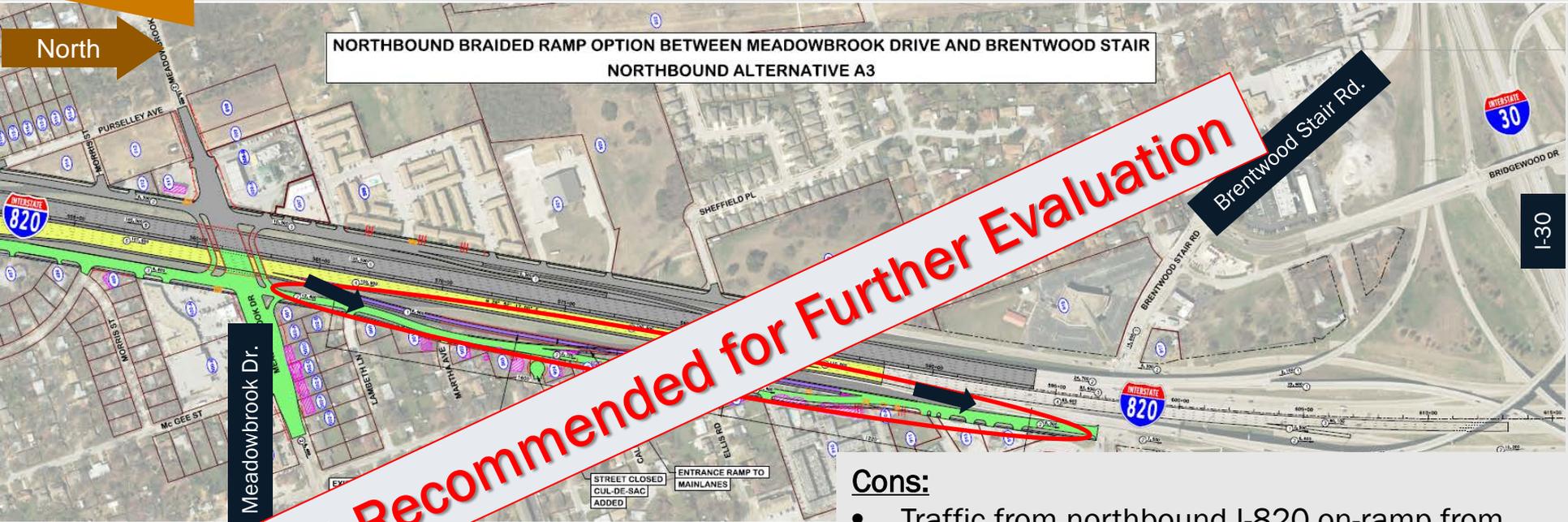
- All direct movements remain available

Cons:

- Traffic from northbound I-820 on-ramp from Meadowbrook wanting to continue northbound on I-820 must weave over 1 lane in 450'
- 1220' ramp spacing would not meet minimum National Guidelines
- Elevated ramp near neighborhood could increase noise levels
- Potential displacements of residents
- Reduced shoulders on mainlanes
- Normandy Road cul-de-sac
- Grades on elevated ramp greater than 4% max



Northbound Entrance Ramp from Meadowbrook – Alternative A3



NORTHBOUND BRAIDED RAMP OPTION BETWEEN MEADOWBROOK DRIVE AND BRENTWOOD STAIR
NORTHBOUND ALTERNATIVE A3

Not Recommended for Further Evaluation

Pros:

- All direct movements remain available

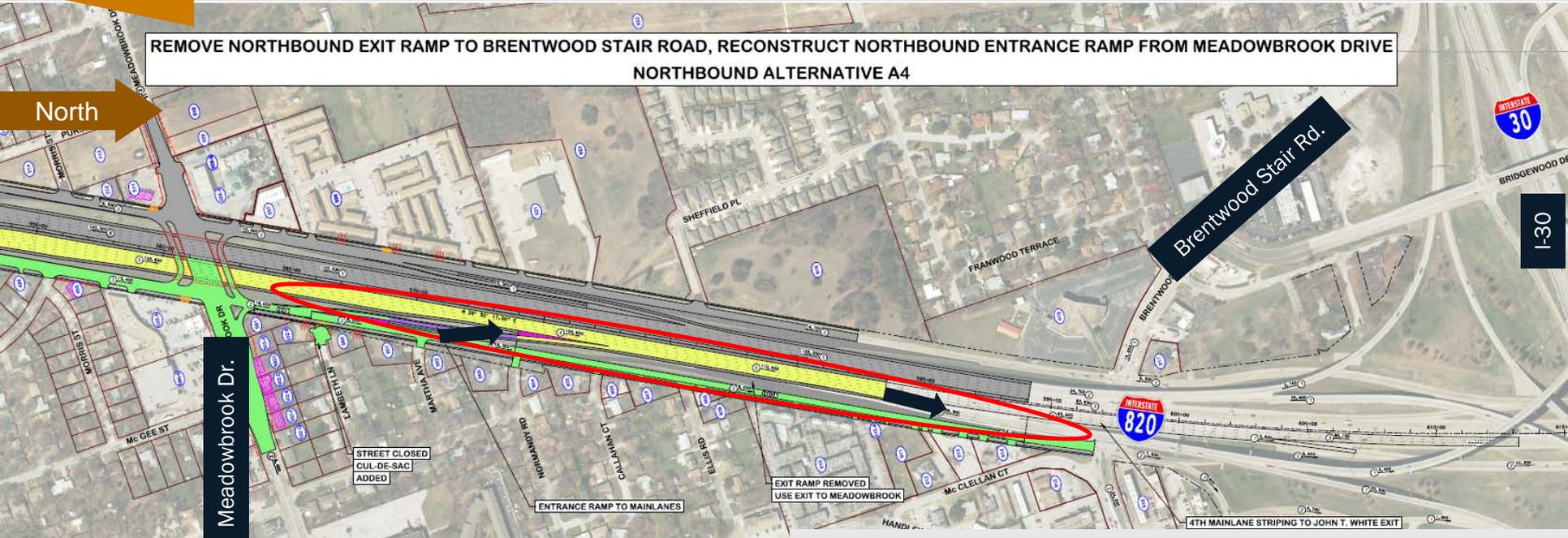
Cons:

- Traffic from northbound I-820 on-ramp from Meadowbrook wanting to continue northbound on I-820 must weave over 1 lane in 450'
- 1220' ramp spacing would not meet minimum National Guidelines
- Elevated ramp near neighborhood could increase noise levels
- Potential displacements of residents
- Reduced shoulders on mainlanes
- Normandy Road cul-de-sac
- Grades on elevated ramp greater than 4% max



Northbound Entrance Ramp from Meadowbrook – Alternative A4

REMOVE NORTHBOUND EXIT RAMP TO BRENTWOOD STAIR ROAD, RECONSTRUCT NORTHBOUND ENTRANCE RAMP FROM MEADOWBROOK DRIVE
NORTHBOUND ALTERNATIVE A4



Pros:

- Ramp spacing would meet minimum TxDOT and National Guidelines
- Weaving and congestion levels would improve compared to the No-Build alternative by maintaining 4 mainlanes until the John T. White exit ramp

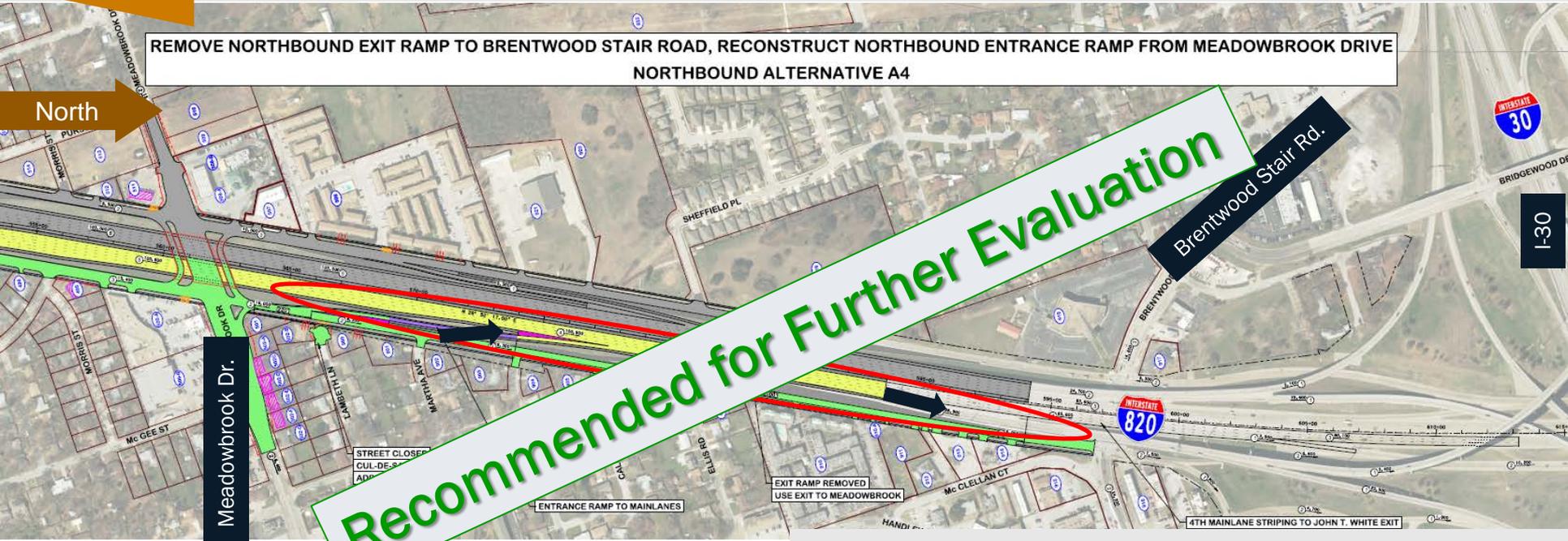
Cons:

- Lambeth Lane would be closed off from frontage road (cul-de-sac)
- Remove exit ramp to Brentwood Stair (traffic must travel through signal at Meadowbrook)
- Increase volume on the northbound exit ramp to Meadowbrook
- Increase traffic volumes at the Meadowbrook intersection
- Reduced shoulders on mainlanes



Northbound Entrance Ramp from Meadowbrook – Alternative A4

REMOVE NORTHBOUND EXIT RAMP TO BRENTWOOD STAIR ROAD, RECONSTRUCT NORTHBOUND ENTRANCE RAMP FROM MEADOWBROOK DRIVE
NORTHBOUND ALTERNATIVE A4



Pros:

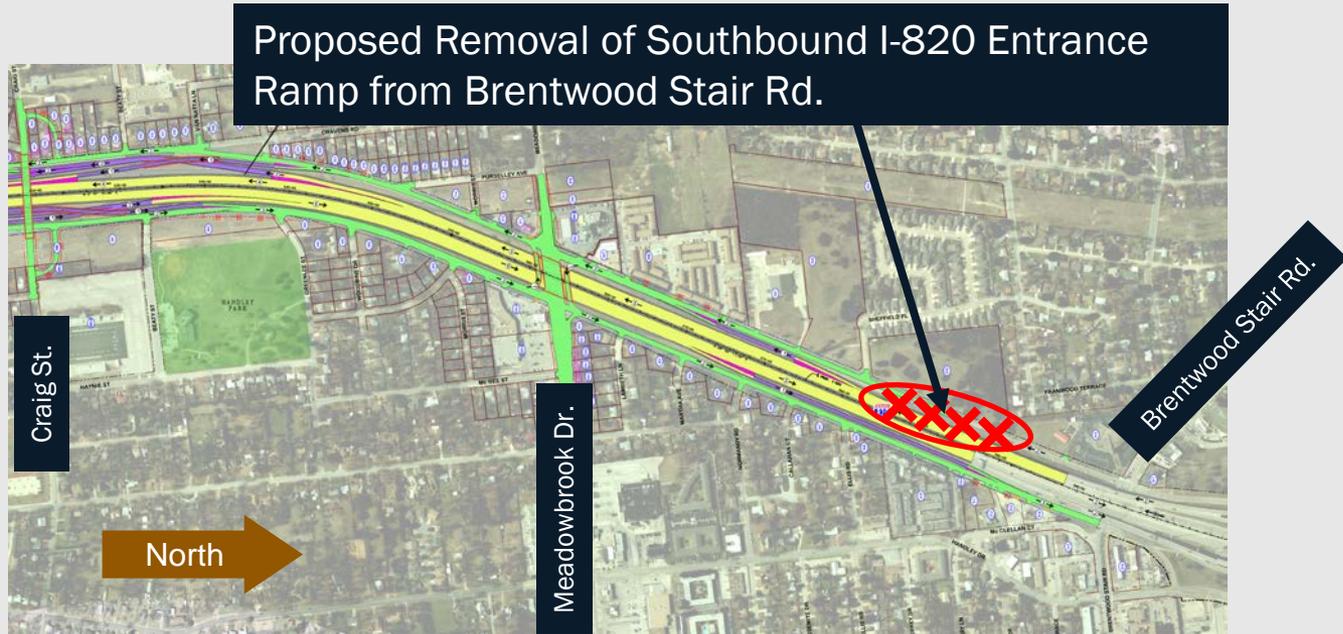
- Ramp spacing would meet minimum TxDOT and National Guidelines
- Weaving and congestion levels would improve compared to the No-Build alternative by maintaining 4 mainlanes until the John T. White exit ramp

Cons:

- Lambeth Lane would be closed off from frontage road (cul-de-sac)
- Remove exit ramp to Brentwood Stair (traffic must travel through signal at Meadowbrook)
- Increase volume on the northbound exit ramp to Meadowbrook
- Increase traffic volumes at the Meadowbrook intersection
- Reduced shoulders on mainlanes



Southbound Entrance Ramp from Brentwood Stair



WHY?

- Congestion and Safety
- Conflicts with I-30 Direct Connections and Exit Ramp to Meadowbrook Dr causing heavily congested weaving movements
- Distance between ramps near minimum spacing lengths described in roadway design guidelines



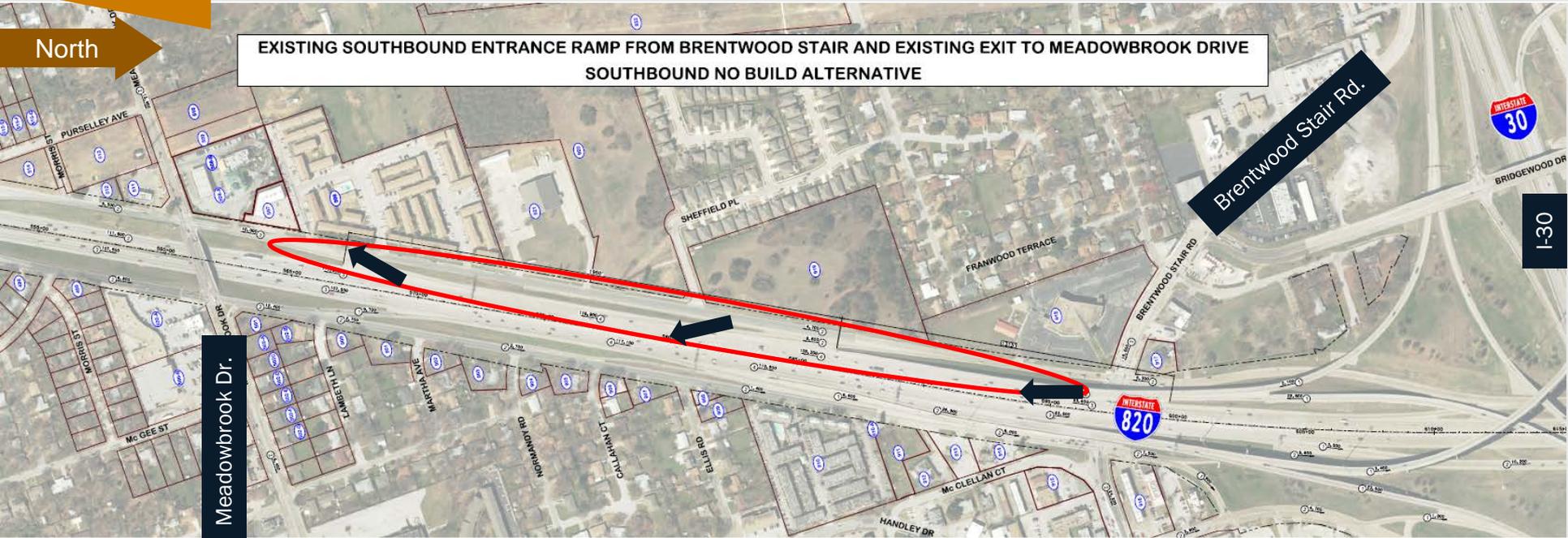
Southbound Entrance Ramp from Brentwood Stair

PROPOSED ADDITIONAL ALTERNATIVES TO BE EVALUATED

- **No-Build (Do Nothing) Alternative**
- **B1:** Removal of southbound entrance ramp from Brentwood Stair Rd (as shown at Public Meeting)
- **B2:** Construct **braided ramps** (*ramps that are bridged, one over the other*) for southbound entrance ramp from Brentwood Stair Rd and exit ramp to Meadowbrook Dr
- **B3:** Removal of southbound entrance ramp from Brentwood Stair Rd but construct southbound **bypass frontage road lane** under Meadowbrook Dr to access southbound I-820 entrance ramp
- **B4:** Reconstruct southbound entrance ramp from Brentwood Stair Rd and exit ramp to Meadowbrook Dr



Southbound Entrance Ramp from Brentwood Stair – **No Build Alternative**



Pros:

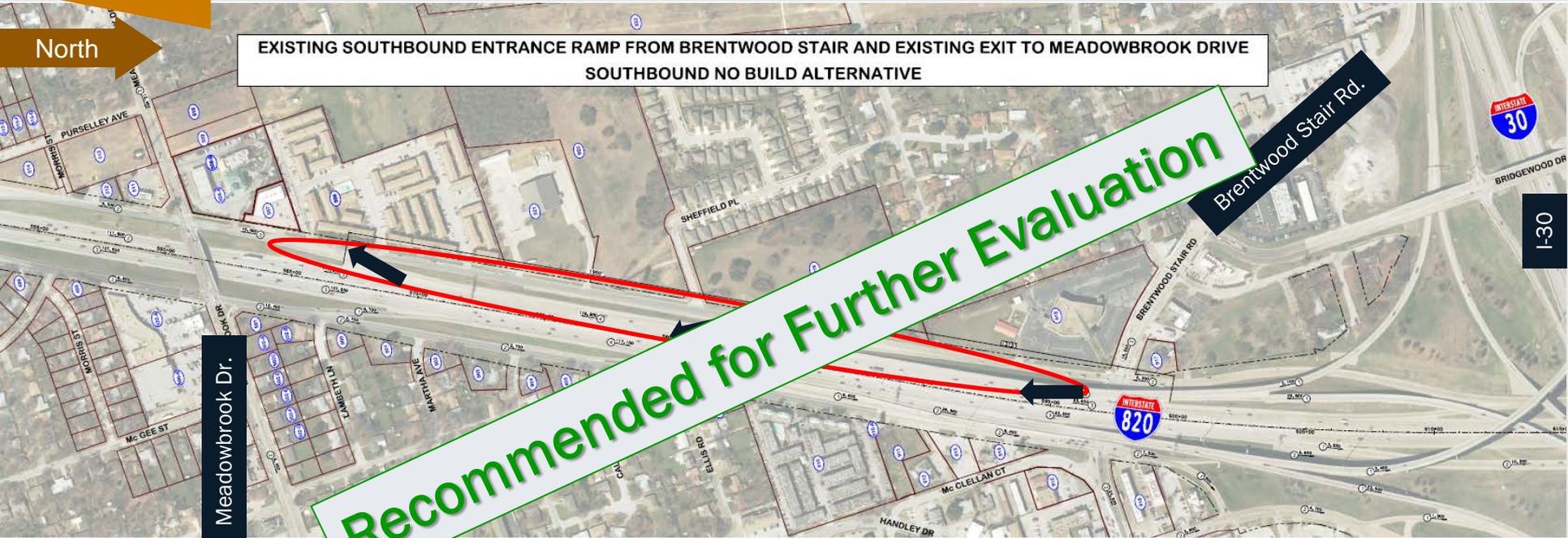
- Access remains as today

Cons:

- Distance between ramps near minimum spacing lengths described in TxDOT and National Guidelines
- Heavily congested weaving movements



Southbound Entrance Ramp from Brentwood Stair – **No Build Alternative**



Pros:

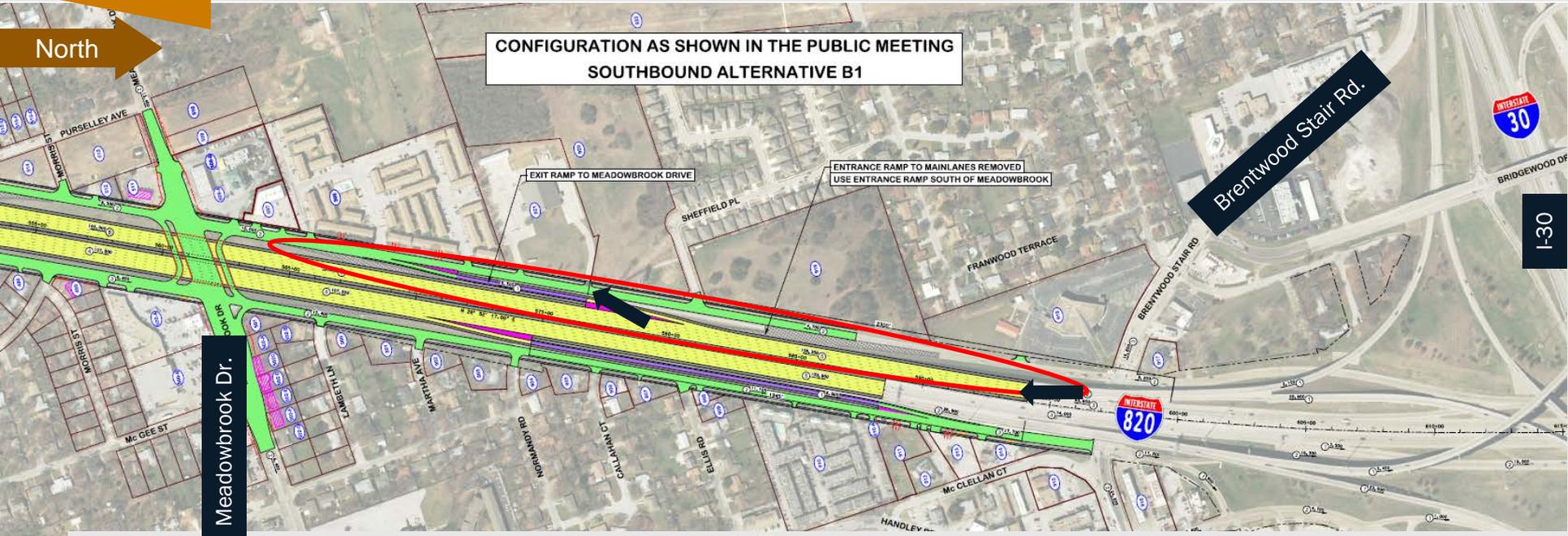
- Access remains as today

Cons:

- Distance between ramps near minimum spacing lengths described in TxDOT and National Guidelines
- Heavily congested weaving movements



Southbound Entrance Ramp from Brentwood Stair – Alternative B1



Pros:

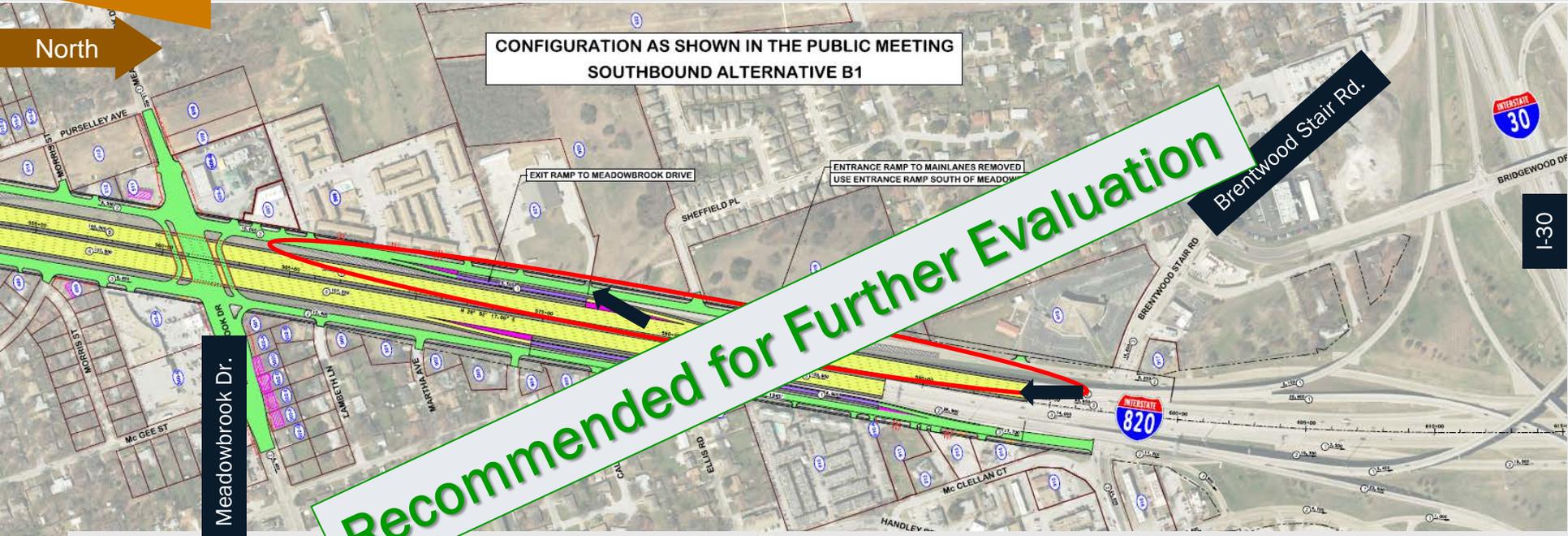
- Eliminates existing mainlane weave from Brentwood Stair entrance ramp reducing congestion and improving safety
- Meets TxDOT and National Guidelines for ramp spacing criteria
- Relocated exit ramp to Meadowbrook provides for additional storage or queueing of vehicles from intersection

Cons:

- Traffic from Brentwood Stair must pass through a signal to enter mainlanes
- Distance between proposed southbound Meadowbrook exit and existing I-30 connections is less than the distance between the existing southbound Meadowbrook exit and I-30 connections



Southbound Entrance Ramp from Brentwood Stair – Alternative B1



Pros:

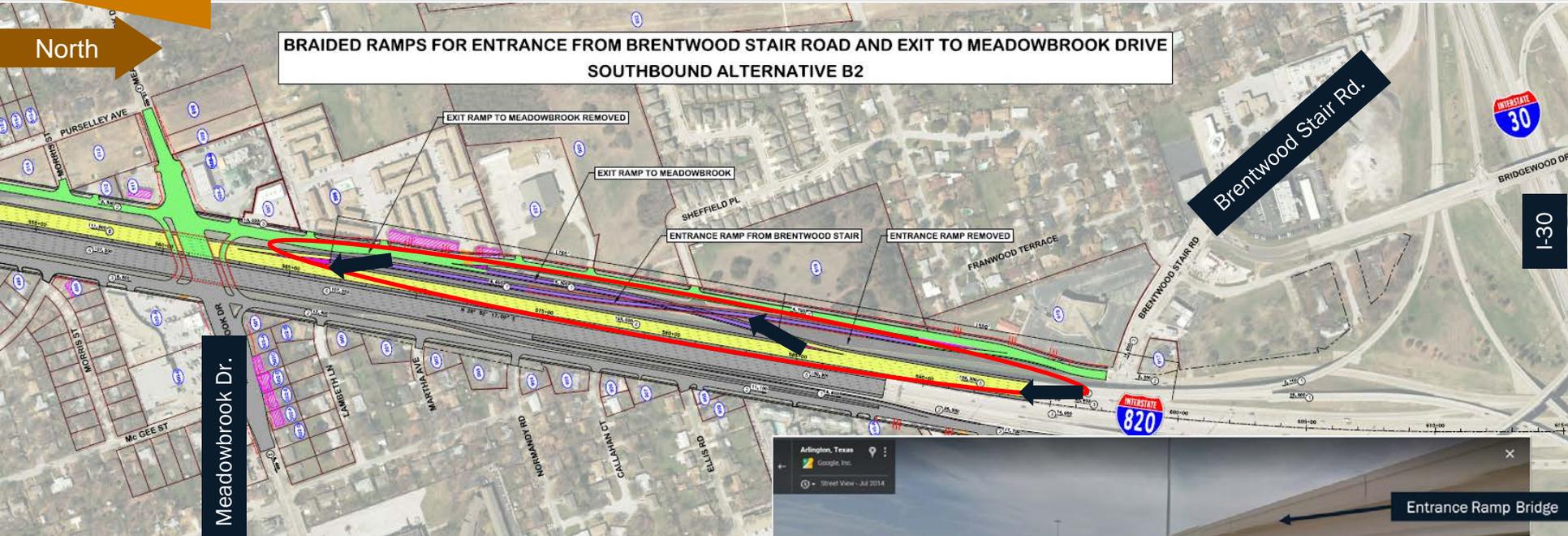
- Eliminates existing mainlane weave from Brentwood Stair entrance ramp reducing congestion and improving safety
- Meets TxDOT and National Guidelines for ramp spacing criteria
- Relocated exit ramp to Meadowbrook provides for additional storage or queueing of vehicles from intersection

Cons:

- Traffic from Brentwood Stair must pass through a signal to enter mainlanes
- Distance between proposed southbound Meadowbrook exit and existing I-30 connections is less than the distance between the existing southbound Meadowbrook exit and I-30 connections



Southbound Entrance Ramp from Brentwood Stair – Alternative B2



Example of “Braided Ramps”

- Eastbound I-30 exit to Nolan Ryan Expwy/Baird Farm Rd/ AT&T Way in Arlington

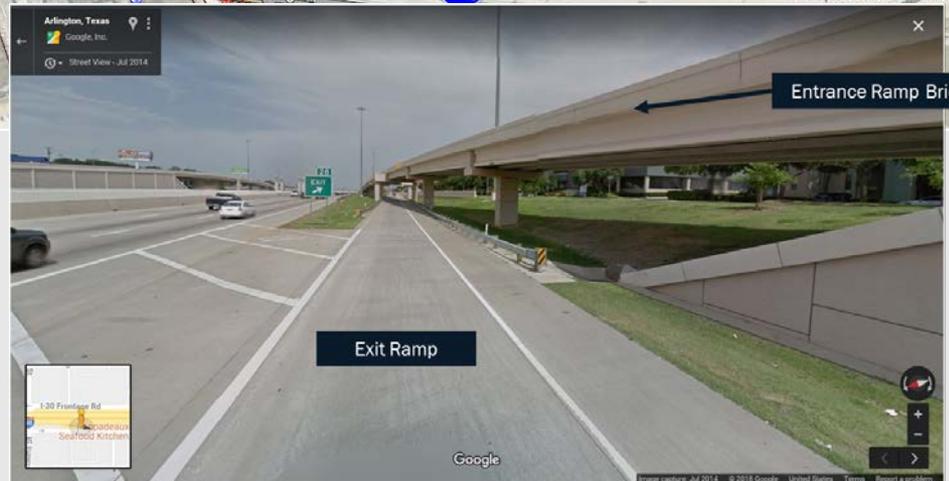
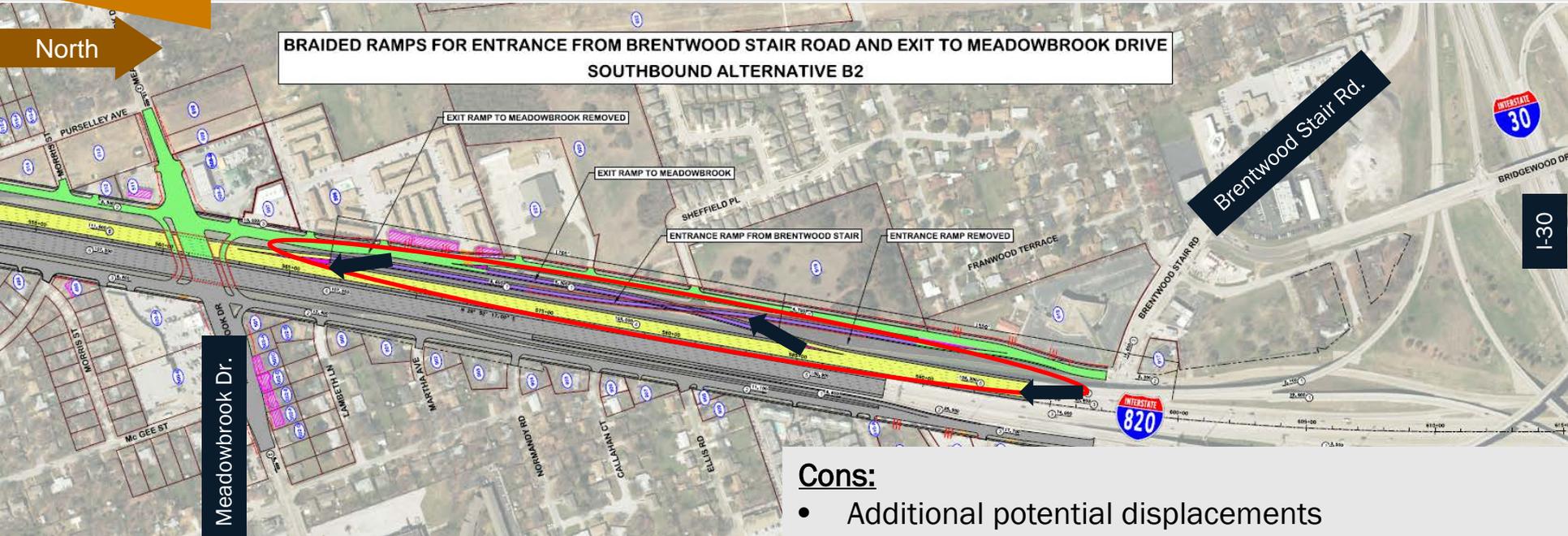


Image from Google.com street view



Southbound Entrance Ramp from Brentwood Stair – **Alternative B2**



Pros:

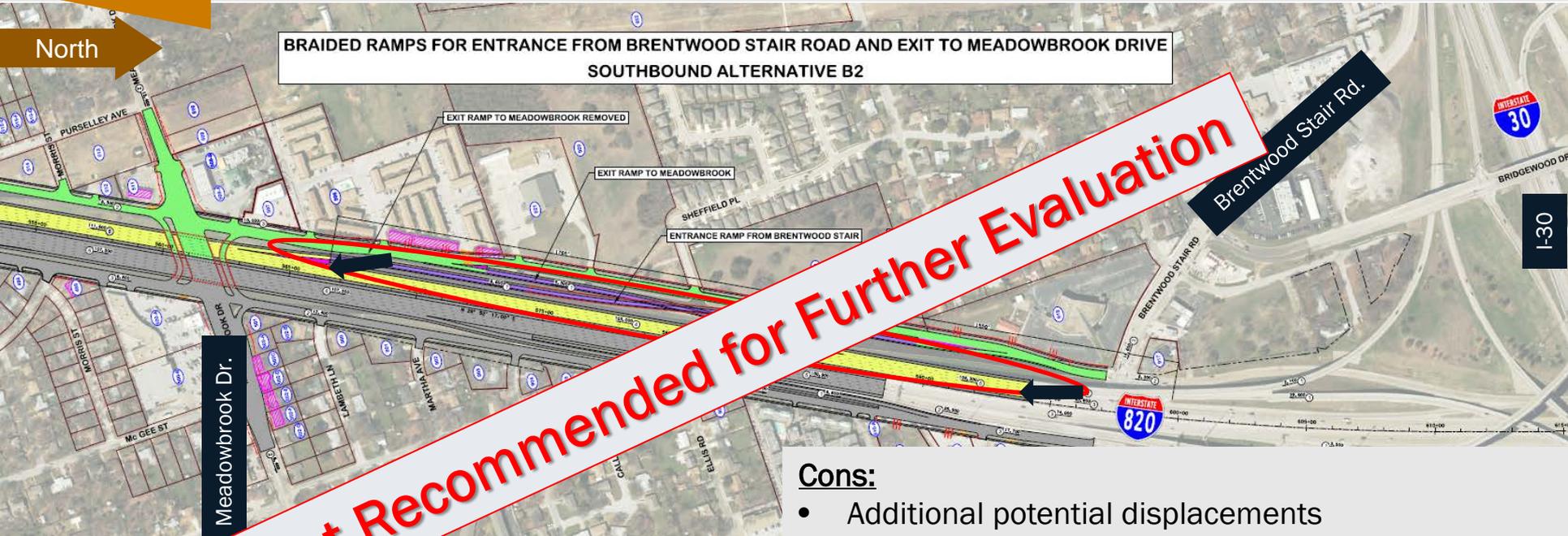
- All direct movements remain available

Cons:

- Additional potential displacements
- Heavy traffic volumes weaving between I-30 direct connectors & exit to Meadowbrook
- 1550' ramp spacing does not meet minimum National Guidelines
- Elevated ramp could cause increased noise
- Existing driveway along frontage road (providing access to property #918) is removed—access maintained via Brentwood Stair
- Grade on elevated ramp greater than 4% maximum that should be used by TxDOT guidelines



Southbound Entrance Ramp from Brentwood Stair – Alternative B2



Pros:

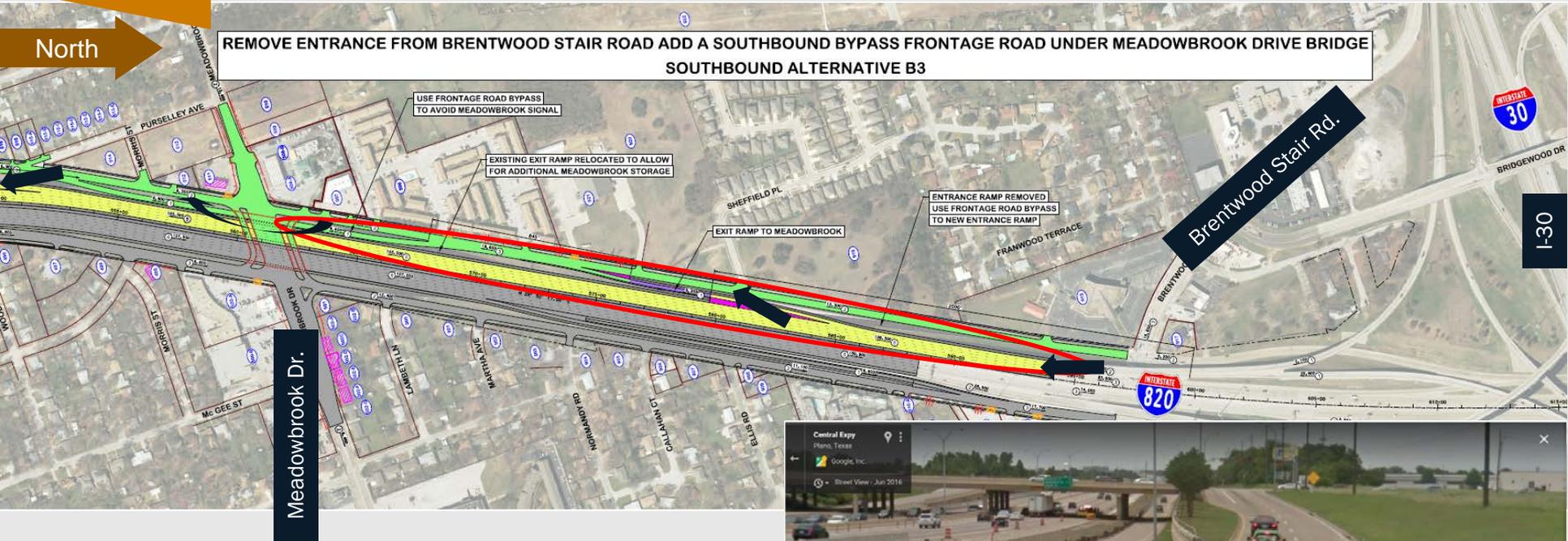
- All direct movements remain available

Cons:

- Additional potential displacements
- Heavy traffic volumes weaving between I-30 direct connectors & exit to Meadowbrook
- 1550' ramp spacing does not meet minimum National Guidelines
- Elevated ramp could cause increased noise
- Existing driveway along frontage road (providing access to property #918) is removed—access maintained via Brentwood Stair
- Grade on elevated ramp greater than 4% maximum that should be used by TxDOT guidelines



Southbound Entrance Ramp from Brentwood Stair – Alternative B3



Example of “Bypass Frontage Road Lane”

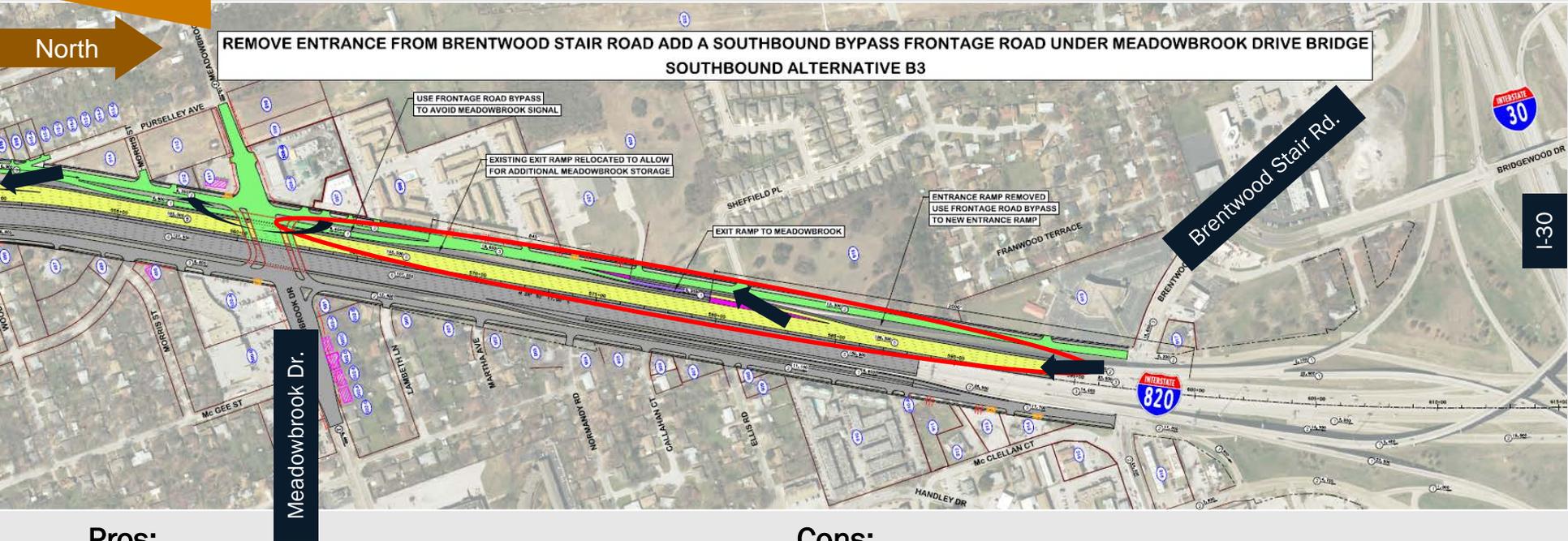
- Northbound US 75 at Legacy Dr in Plano



Image from Google.com street view



Southbound Entrance Ramp from Brentwood Stair – Alternative B3



Pros:

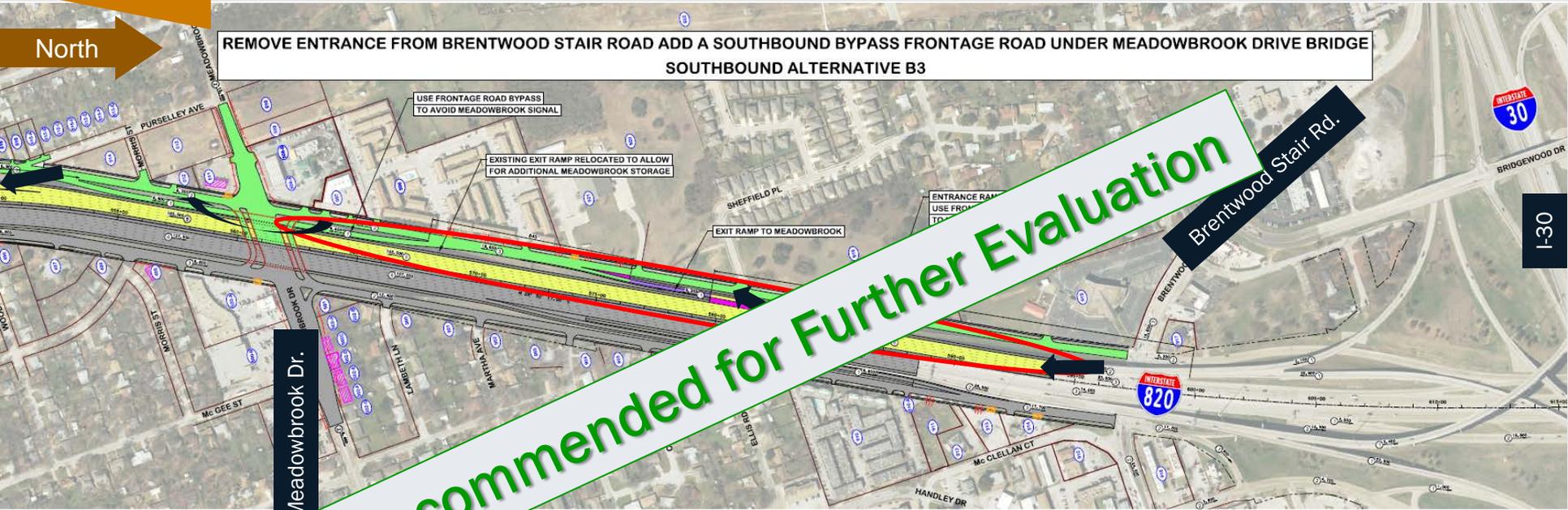
- Traffic southbound from Brentwood Stair bypass Meadowbrook signal
- 2000' ramp spacing meets minimum TxDOT and National Guidelines
- Relocated exit ramp to Meadowbrook provides for additional storage or queueing of vehicles from intersection

Cons:

- Ramp spacing between Meadowbrook exit and frontage road bypass undesirable
- Weaving between exit ramp and frontage road bypass
- Properties #516 and #517 do not meet recommended access control at exit ramp criteria



Southbound Entrance Ramp from Brentwood Stair – Alternative B3



Pros:

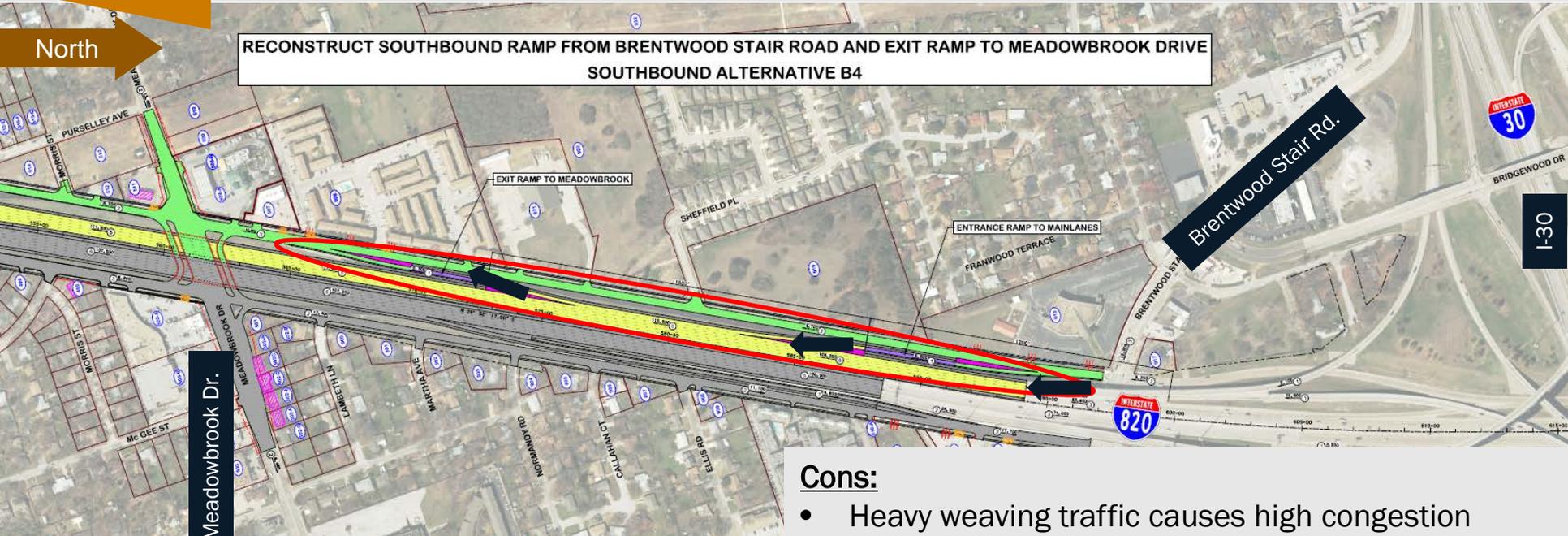
- Traffic southbound from Brentwood Stair bypass Meadowbrook signal
- 2000' ramp spacing meets minimum TxDOT and National Guidelines
- Relocated exit ramp to Meadowbrook provides for additional storage or queueing of vehicles from intersection

Cons:

- Ramp spacing between Meadowbrook exit and frontage road bypass undesirable
- Weaving between exit ramp and frontage road bypass
- Properties #516 and #517 do not meet recommended access control at exit ramp criteria



Southbound Entrance Ramp from Brentwood Stair – Alternative B4



Pros:

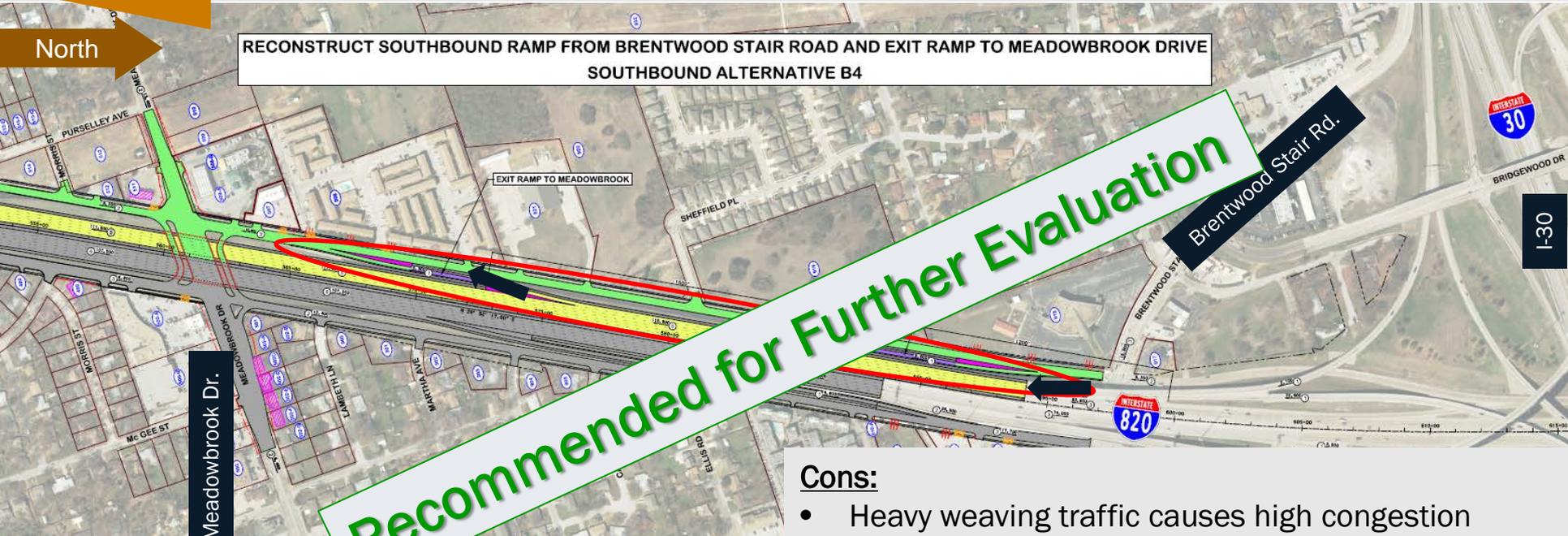
- Southbound ramps would be reconstructed to allow additional mainlane capacity

Cons:

- Heavy weaving traffic causes high congestion
- 1500' ramp spacing does not meet National Guidelines
- Less space from Meadowbrook to exit ramp for vehicle storage from signal
- Requires channelization to prevent access to properties #507 and #508-A from the Meadowbrook exit ramp
- Existing driveway along frontage road providing access to property #918 is removed—access maintained via Brentwood Stair Road



Southbound Entrance Ramp from Brentwood Stair – **Alternative B4**



Pros:

- Southbound ramps would be reconstructed to allow additional mainlane capacity

Cons:

- Heavy weaving traffic causes high congestion
- 1500' ramp spacing does not meet National Guidelines
- Less space from Meadowbrook to exit ramp for vehicle storage from signal
- Requires channelization to prevent access to properties #507 and #508-A from the Meadowbrook exit ramp
- Existing driveway along frontage road providing access to property #918 is removed—access maintained via Brentwood Stair Road



Craig Street Bridge Access / Pedestrian Bridge

- Existing Craig Street bridge has narrow sidewalks



Image from Google.com street view
Looking West on Craig Street

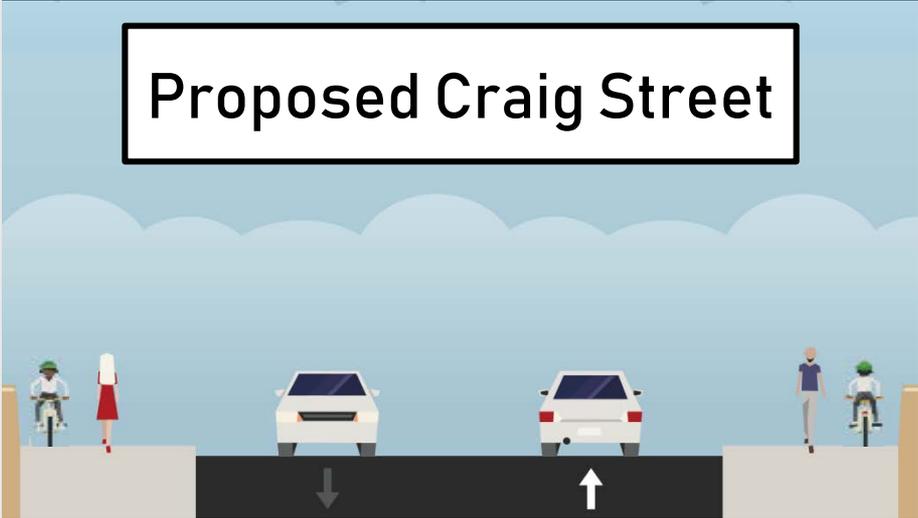


Craig Street Bridge Access / Pedestrian Bridge

- Proposed Craig Street bridge would be wider with shared use lanes (cars and bikes) and wide sidewalks

Proposed Craig St. Bridge: 1 shared use lane in each direction with Wide Sidewalks / Paths (see typical section below)

Proposed Craig Street





Craig Street Bridge Access / Pedestrian Bridge

- Existing pedestrian bridge to be removed because of vertical clearance/height conflicts
- Potential conflicts with overhead/high mast power lines
- Potential pedestrian bridge meeting American with Disability Act (ADA) requirements expected to be very long and high over roadway



Image from Google.com street view
Looking South on I-820



Craig Street Bridge Access / Pedestrian Bridge – Alternative Presented at Public Meeting



Pros:

- Wider Craig St Bridge with wide sidewalks and shared use lanes for bikes
- Cross over frontage roads and mainlanes
- Loop connections would have sidewalks

Cons:

- Removal of existing Pedestrian Bridge



Craig Street Bridge Access / Pedestrian Bridge – Alternative Presented at Public Meeting



Pros:

- Wider Craig St Bridge with wide sidewalks and shared use lanes for bikes
- Cross over frontage roads and mainlanes
- Loop connections would have sidewalks

Cons:

- Removal of existing Pedestrian Bridge



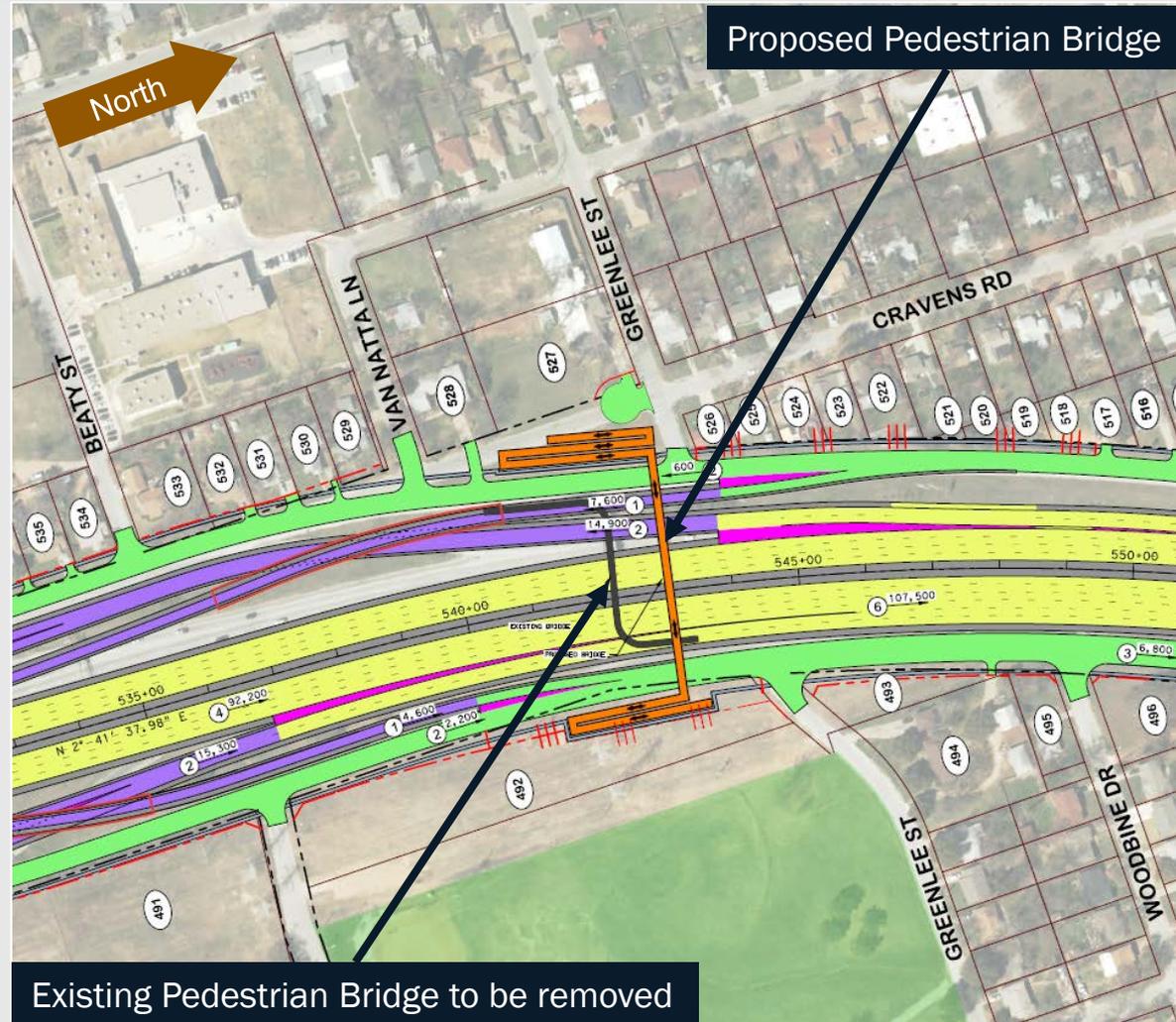
Craig Street Bridge Access / Pedestrian Bridge – **Alternative Pedestrian Bridge Concept**

Pros:

- Pedestrian bridge reconstructed
- Cross over frontage roads

Cons:

- Oncor transmission lines must be relocated much higher to avoid new pedestrian bridge
- Cravens Road access revised (cul-de-sac)
- Additional right-of-way needed
- “Switch-back” ramps required to meet ADA grades adds to travel length





Craig Street Bridge Access / Pedestrian Bridge – Alternative Pedestrian Bridge Concept

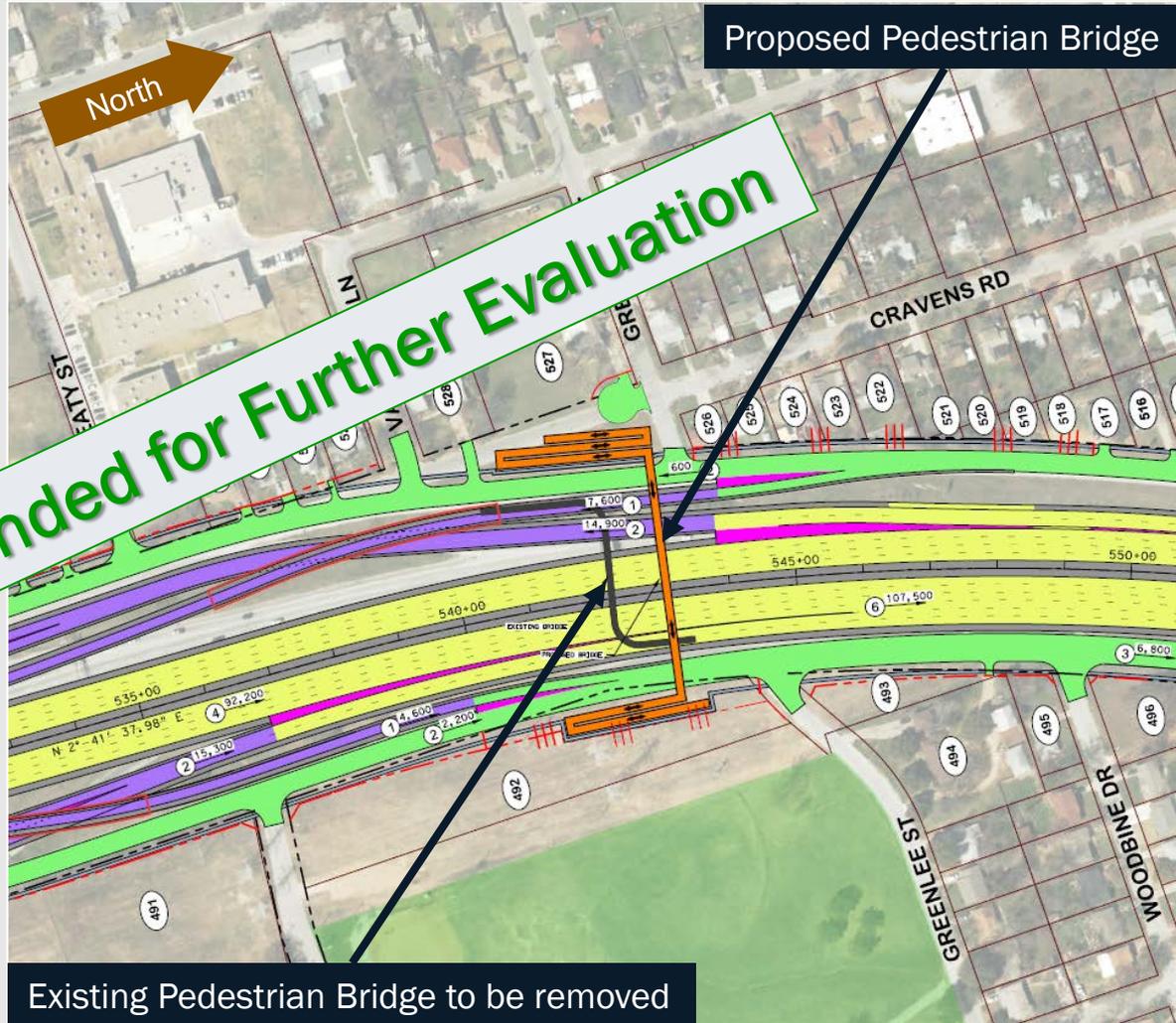
Pros:

- Pedestrian bridge reconstructed
- Cross over frontage roads

Cons:

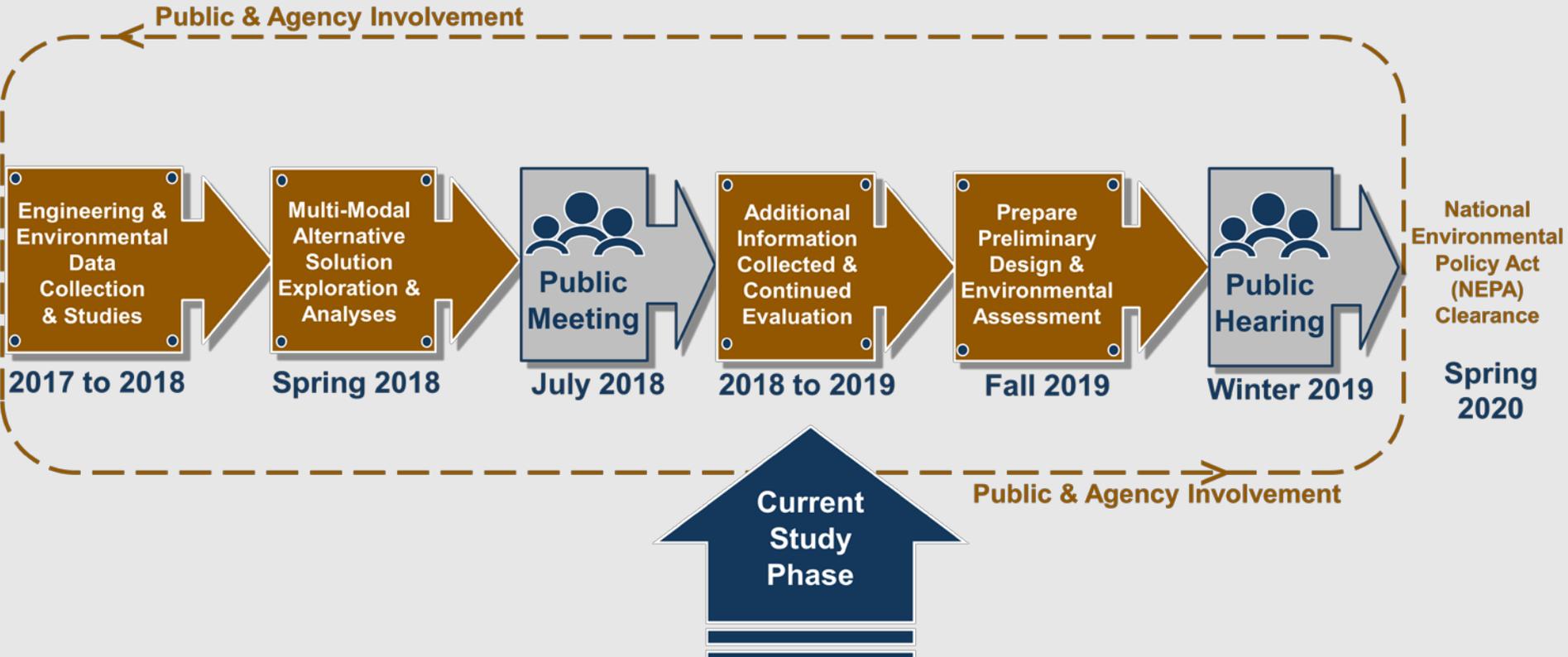
- Oncor transmission lines must be relocated much higher to avoid new pedestrian bridge
- Cravens Road access revised (cul-de-sac)
- Additional right-of-way
- “Switch-back” ramp required to meet ADA grades adds to travel length

Recommended for Further Evaluation





Project Schedule





Public Input Continues

Future Public Hearing

On-Call Presentations

Town Hall Meetings

Meeting with Property Owners

Workshops



Thank You for Attending!

Project Contact Information



www.txdot.gov

Search for: "Southeast Connector"



SoutheastConnector@txdot.gov



817-370-6807

Curtis Loftis, P.E.
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Southeast Connector
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Fort Worth, TX 76133

Naser Abusaad, P.E., AICP
Consultant Project Manager
Southeast Connector
Civil Associates, Inc.
9330 LBJ Frwy., Ste. 1150
Dallas, TX 75243



Questions



Northbound Entrance Ramp from Meadowbrook – **Alternative A5**



E. Lancaster Ave.

Craig St.

Meadowbrook Dr.

Example of “Bypass Frontage Road Lane”

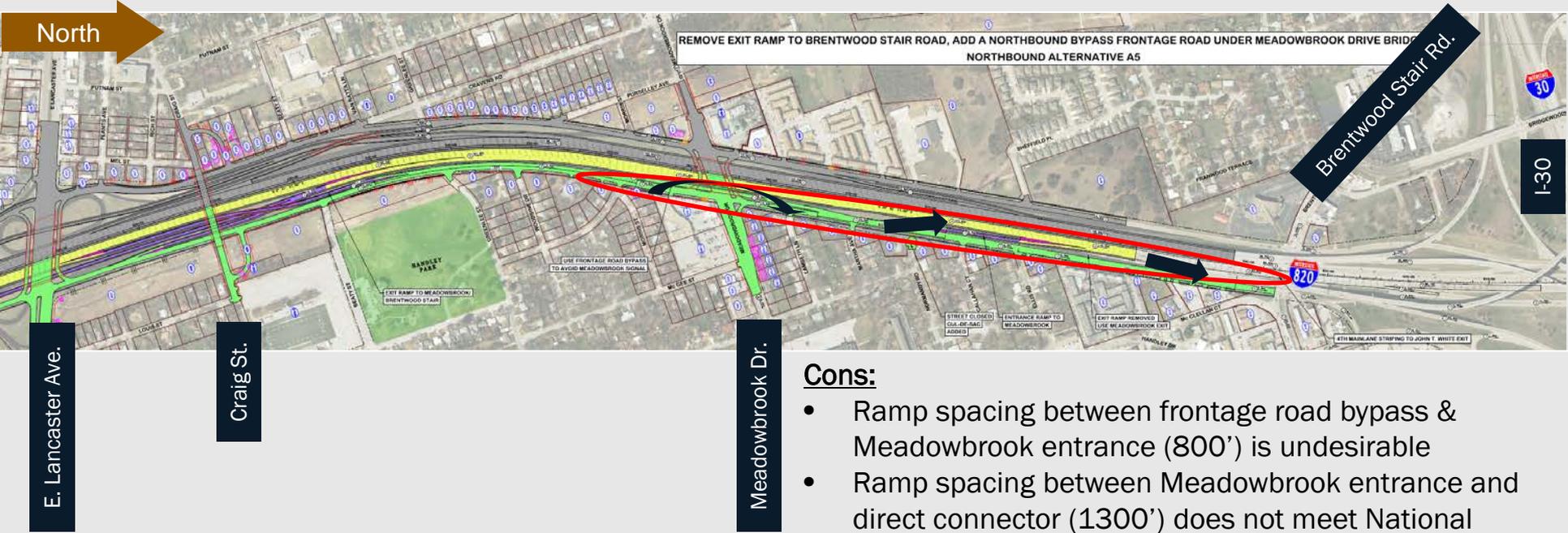
- Northbound US 75 at Legacy Dr in Plano



Image from Google.com street view



Northbound Entrance Ramp from Meadowbrook – **Alternative A5**



Pros:

- Traffic exiting northbound Meadowbrook ramp could bypass Meadowbrook signal to Brentwood Stair
- Meets desirable ramp spacing between northbound Meadowbrook exit and frontage roads bypass

Cons:

- Ramp spacing between frontage road bypass & Meadowbrook entrance (800') is undesirable
- Ramp spacing between Meadowbrook entrance and direct connector (1300') does not meet National Guidelines
- Traffic from northbound I-820 on-ramp from Meadowbrook wanting to continue northbound on I-820 must weave over 1 lane in a distance of 500'
- Access from Normandy Road to frontage road to be removed (cul-de-sac)
- Reduced shoulders on mainlanes