

HUBER ROAD SAFETY IMPROVEMENT DISCUSSION

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History & Background

- 09/2022 – Railroad Quiet Zone feasibility analyzed (Staff Level)
- 02/2024 – Railroad Quiet Zone Professional Services Contract awarded
- 08/2024 – Diagnostic Review Team Meeting
- 10/2022 Development TIA
 - Signal required at Hwy 78 & Huber with first phase
- TxDOT Signal Warrant Study
 - Signal improvements warranted but not yet funded
- TxDOT Rail Division and UPRR recommendations for safety improvements
 - Vertical grade challenged crossing



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Concerns at Huber Road

- Signals within close proximity to a railroad crossing
 - Backing of traffic on tracks leads to train-vehicle collision risk.
- Off-Set Intersection – Huber & Fleming
 - Adds to visibility issue
 - Adds to dual conflict points
- Humped Crossing – Grade issue
 - Risk for vehicles to become stuck on tracks due to rate of change in the roadway grade
 - Adds to visibility issue



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Traffic Signal Concerns

- Traffic Signal Proximity to Crossing
 - Adds significant risk of train collision
 - Vehicles likely to stop on tracks
 - **Humped crossings increase this risk due to lack of visibility**



SEGUIN
TEXAS

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Intersection Horizontal Geometry Concerns

- Off-Set Intersection
 - Adds to visibility issue
 - Adds additional conflict points
 - More complicated signal design



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Vertical Grade Concerns

- Grade issue – Humped Crossing
 - Risks of high-centering
 - Sight distance and visibility challenges
 - The maximum approach grade should not exceed 3 inches of the rail elevation at a point 30 feet away from the center of the nearest rail on both sides of the crossing.
 - **Huber height difference equates to over 10” across 30’**

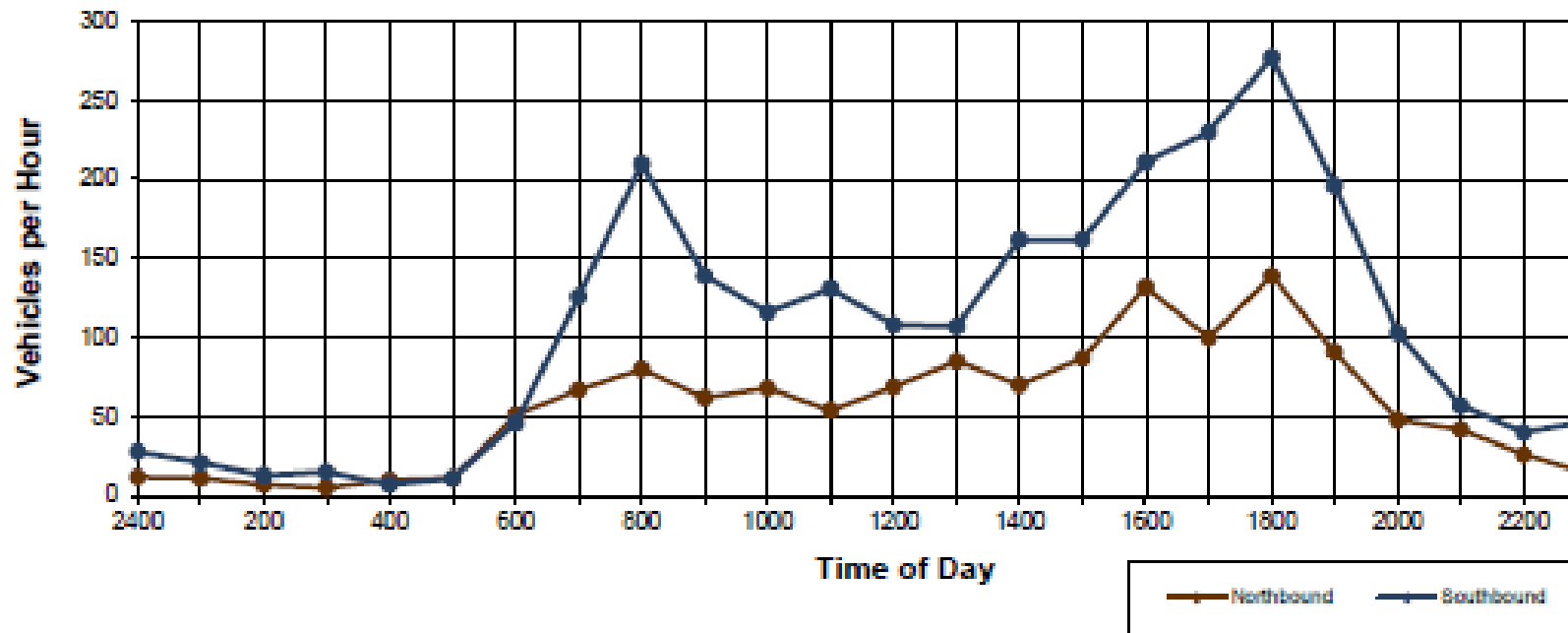


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Traffic Volume



Huber Road Railroad Crossing at New Braunfels Street Northbound and Southbound



Train Data

- 25 Trains a day
 - 13 day
 - 12 night
- Train speed 30 – 60mph
 - Max measured 79mph

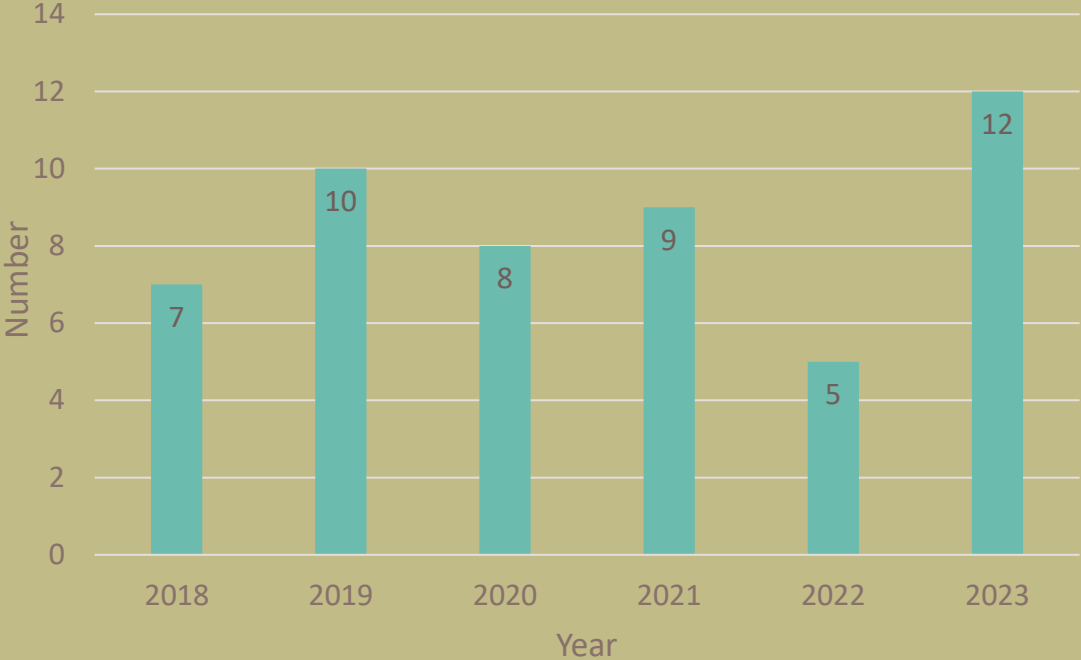
	Northbound Huber Road	Southbound Huber Road
Daily Traffic Data	1,341	2,563
Total ADT	3,904	



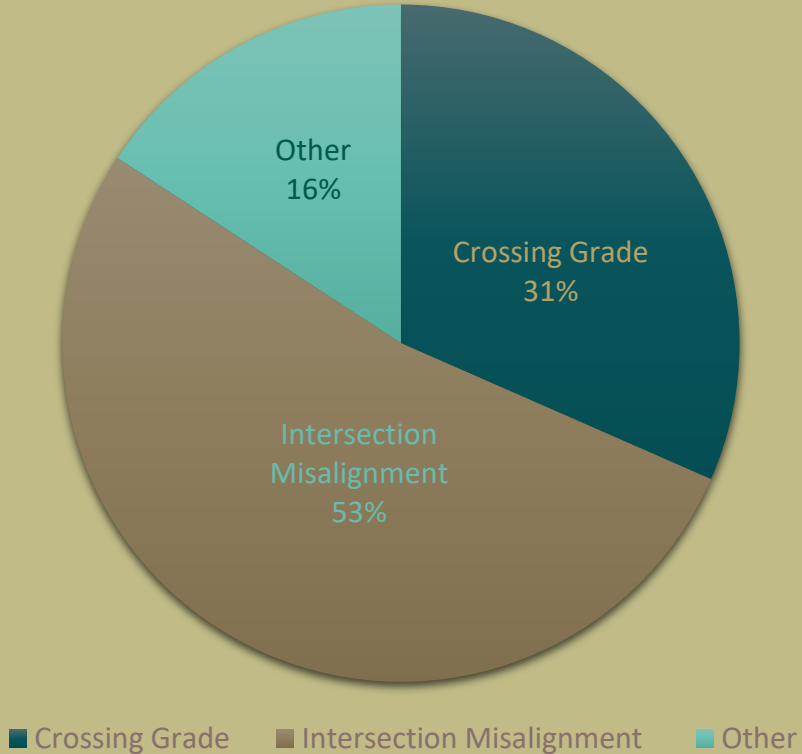
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Traffic Incident Data

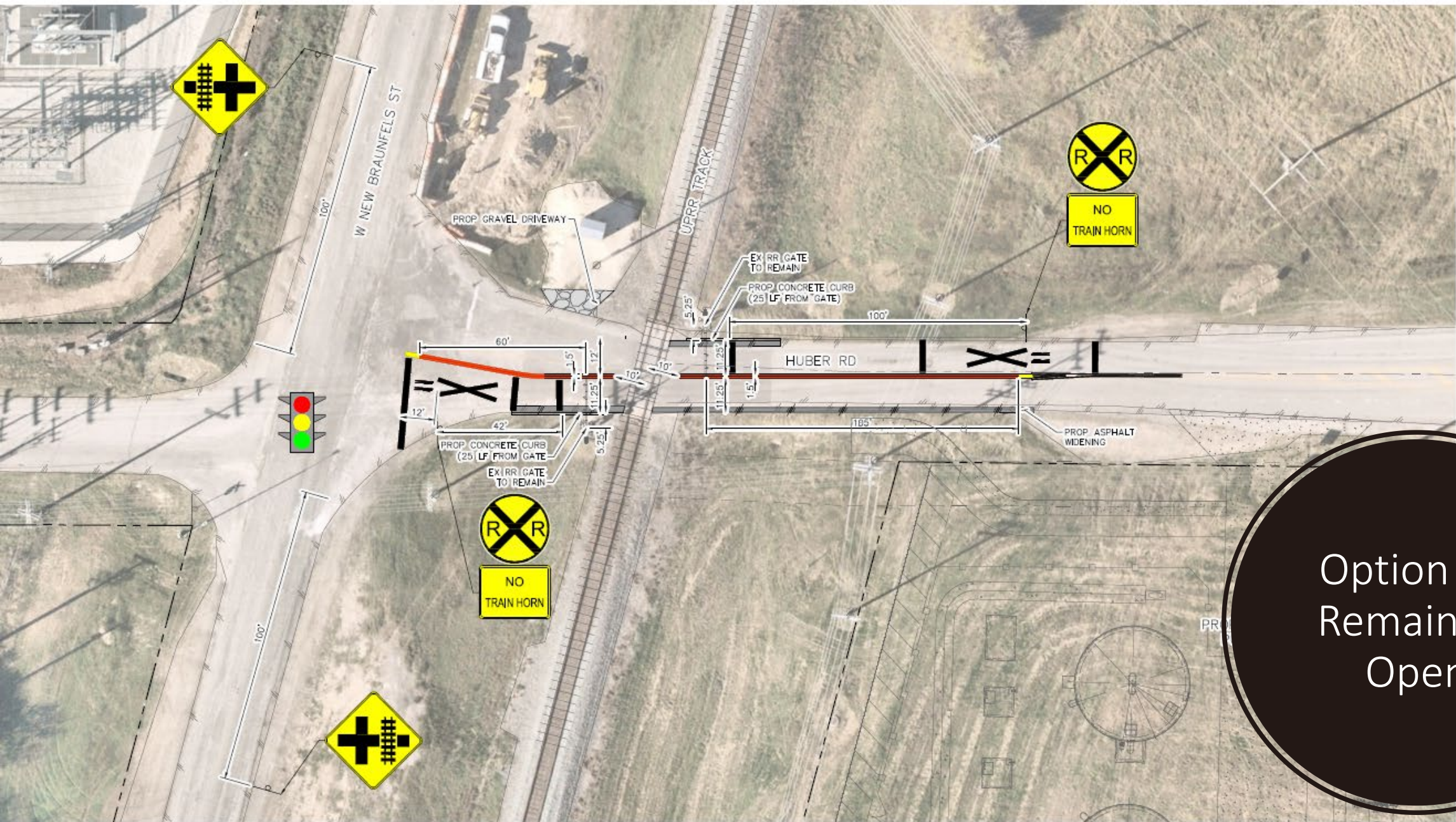
Crash Volume by Year









Incident Attributors



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LEGEND

-  APPAR
-  PROPOS
-  EXISTIN
-  GRAVEL
-  ASPHAL
-  PROPOS
(WARRA
VERIE

Option for
Remaining
Open

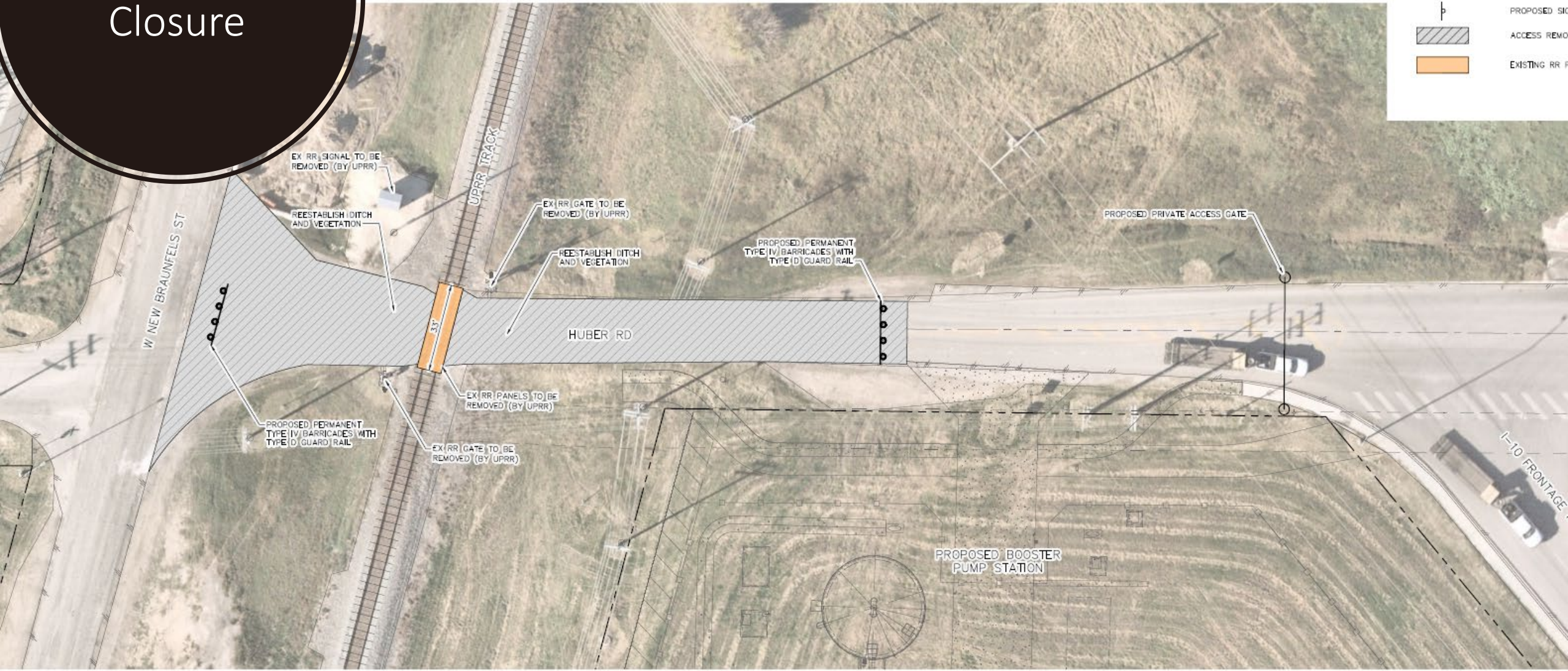
Option for Closure



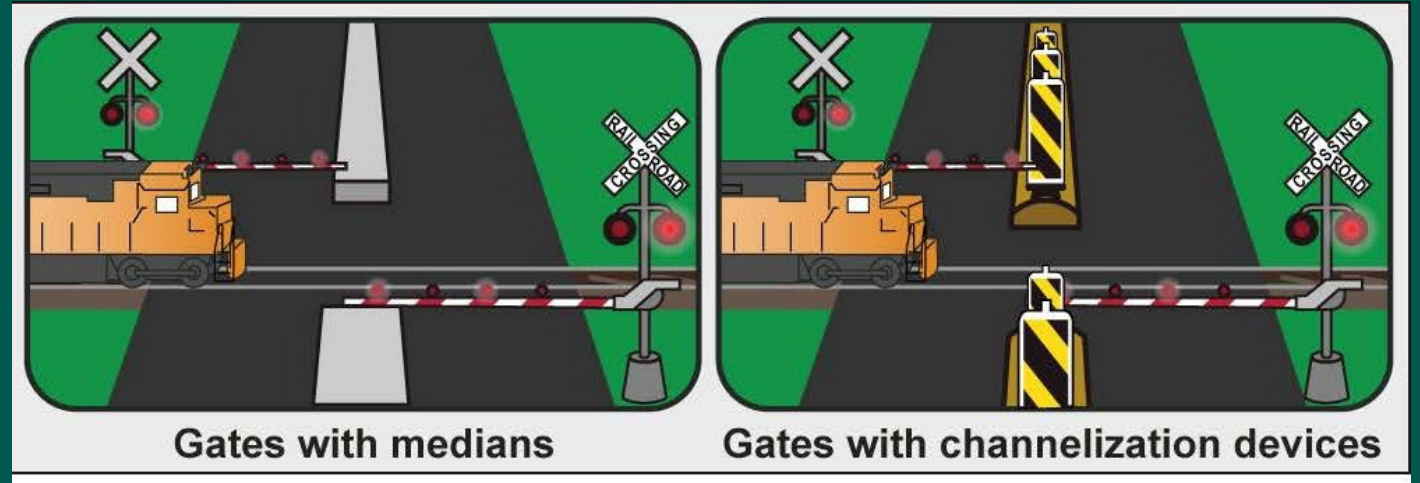
GRAPHIC SCALE
0 10 20
IF SHEET IS 11X17, SCALE

LEGEND

- APPARENT ROAD
- ⊥ PROPOSED SIGN
- ▨ ACCESS REMOVAL
- EXISTING RR F



Quiet Zone Improvement Risk Reductions

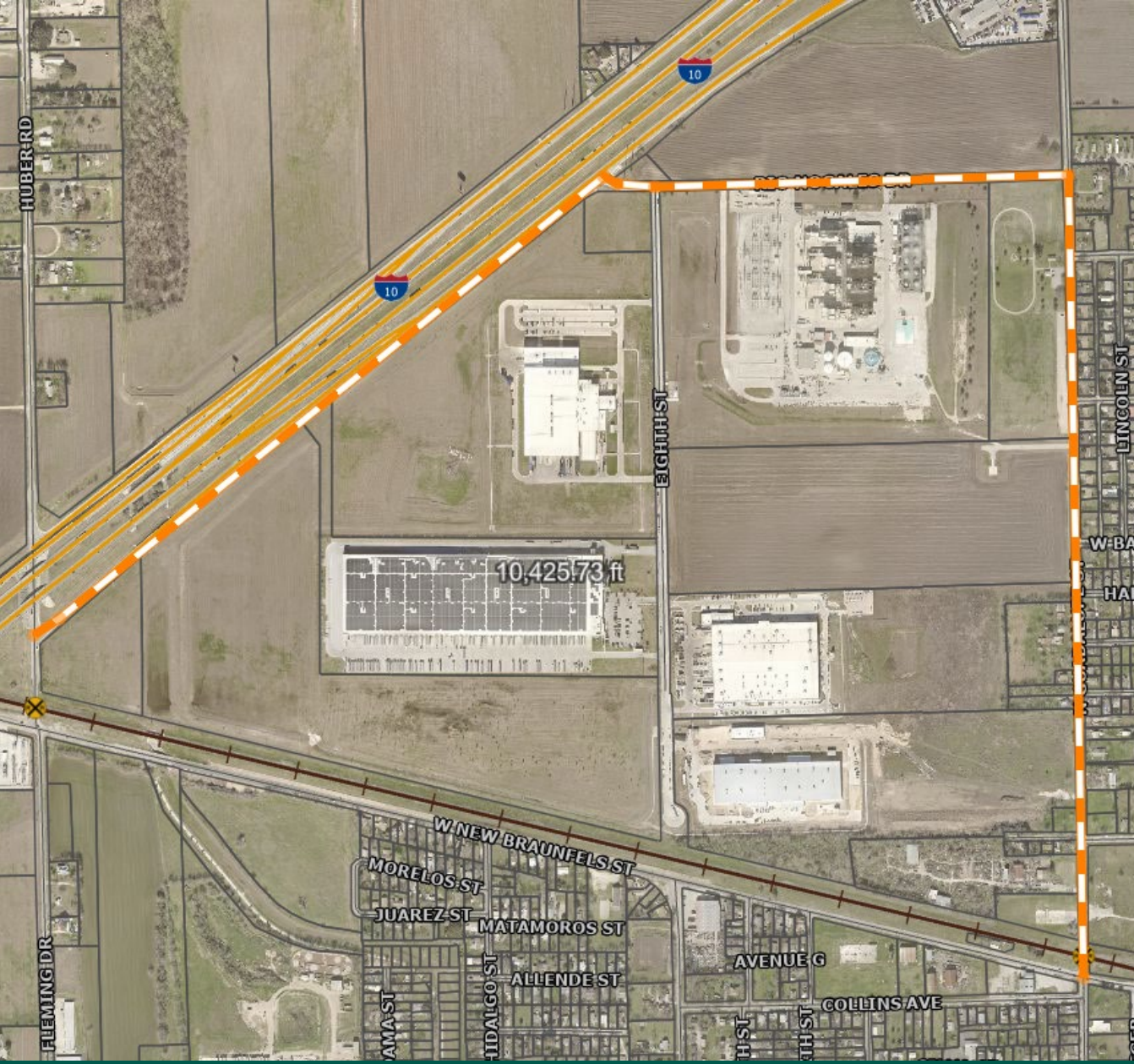


Safety Measure

Estimated Risk (FRA)

Percent Change

Existing Condition (with Horns)	65,329.13	0%
Existing Condition (without Horns)	108,968.99	66.39% (increase)
QZ – Mountable Medians with Channelization Devices	27,242.25	-58.30% (decrease)
QZ – Non-traversable Curb Medians with or without Channelization Devices	21,793.80	-66.64% (decrease)
Closure	0	-100% (decrease)



- Approx. 4,330' difference in length (0.8 miles)
- Less than 2 minutes drive time
- Less stop conditions
- *Closures will be periodic over the course of construction for IH-10*



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- Approx. 9,435' difference in length (1.8 miles)
- Less than 4 minutes drive time
- *Closures will be periodic over the course of construction for IH-10*



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Temporary Continuous Closure of Huber Road Underpass

LEGEND

- Road
- Closure
- Huber Road Southbound Rudeloff Detour
- Huber Road Southbound I-10 WBFR Detour
- Huber Road Northbound Detour



Rudeloff Road

Huber Road

Huber Road

Monday, September 16 to Monday, October 28, from 8 a.m. - 5 p.m. there will be a temporary continuous closure of the Huber Road underpass, between the westbound (WB) and eastbound (EB) frontage roads while the contractor completes bridge work.



Seguin, TX



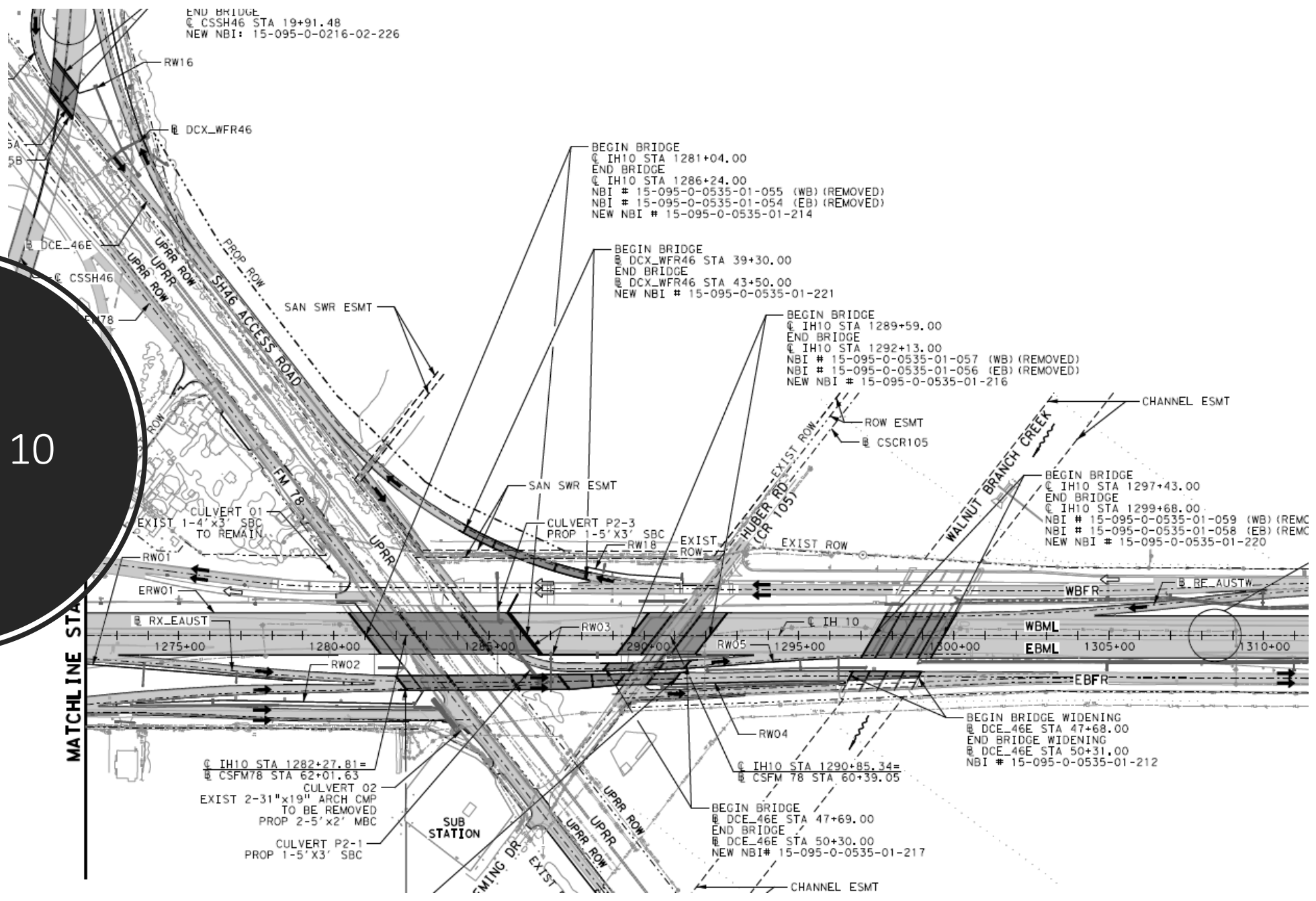
W. New Braunfels



DETOUR INFORMATION

Huber Road SB Rudeloff →
 Huber Road southbound traffic to detour onto SH 46. Traffic should continue to SH46 and turn left onto I-10 EB frontage road at SH 46. Follow the I-10 EB frontage road, turn right onto FM 78, and arrive on Huber Road.

Huber Road SB I-10 WBFR →
 I-10 WB frontage road to Huber Road detour onto I-10 WB frontage road and exit at SH 46. Traffic should take the frontage road and turn around at



TxDOT IH 10

END BRIDGE
 @ CSSH46 STA 19+91.48
 NEW NBI: 15-095-0-0216-02-226

BEGIN BRIDGE
 @ IH10 STA 1281+04.00
 END BRIDGE
 @ IH10 STA 1286+24.00
 NBI # 15-095-0-0535-01-055 (WB) (REMOVED)
 NBI # 15-095-0-0535-01-054 (EB) (REMOVED)
 NEW NBI # 15-095-0-0535-01-214

BEGIN BRIDGE
 @ DCX_WFR46 STA 39+30.00
 END BRIDGE
 @ DCX_WFR46 STA 43+50.00
 NEW NBI # 15-095-0-0535-01-221

BEGIN BRIDGE
 @ IH10 STA 1289+59.00
 END BRIDGE
 @ IH10 STA 1292+13.00
 NBI # 15-095-0-0535-01-057 (WB) (REMOVED)
 NBI # 15-095-0-0535-01-056 (EB) (REMOVED)
 NEW NBI # 15-095-0-0535-01-216

BEGIN BRIDGE
 @ IH10 STA 1297+43.00
 END BRIDGE
 @ IH10 STA 1299+68.00
 NBI # 15-095-0-0535-01-059 (WB) (REMOVED)
 NBI # 15-095-0-0535-01-058 (EB) (REMOVED)
 NEW NBI # 15-095-0-0535-01-220

BEGIN BRIDGE WIDENING
 @ DCE_46E STA 47+68.00
 END BRIDGE WIDENING
 @ DCE_46E STA 50+31.00
 NBI # 15-095-0-0535-01-212

BEGIN BRIDGE
 @ DCE_46E STA 47+69.00
 END BRIDGE
 @ DCE_46E STA 50+30.00
 NEW NBI# 15-095-0-0535-01-217

@ IH10 STA 1282+27.81=
 @ CSFM78 STA 62+01.63

CULVERT 02
 EXIST 2-31"x19" ARCH CMP
 TO BE REMOVED
 PROP 2-5'x2' MBC

CULVERT P2-1
 PROP 1-5'x3' SBC

MATCHLINE STA

SUB STATION

MING DR

CHANNEL ESMT

Financial Incentives

- FRA
 - Railroad Crossing Elimination Grant Program
- TxDOT Section 130 – Closure Program
 - Match railroad contribution up to \$100k to be used for roadway, safety, and operational improvements.
 - Railway-Highway Crossings Program
- Union Pacific Railroad – Bipartisan Infrastructure Law
 - Incentive Payments



U.S. Department of Transportation
Federal Railroad Administration



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Final Thoughts

- Quiet Zone is not dependent on Closure
- Safety concern is primary
- Direction for design option would aid in discussions as Quiet Zone Project progresses.

Questions?



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CURVE PRO100100-16	
PI STATION	21210+76.83
NORTHING	13764007.94
EASTING	2289710.18
DELTA	7°04'29.51" (LT)
RADIUS	2884.00'
D	27°01'41.99"
TANGENT LENGTH	174.58'
CHORD LENGTH	348.71'

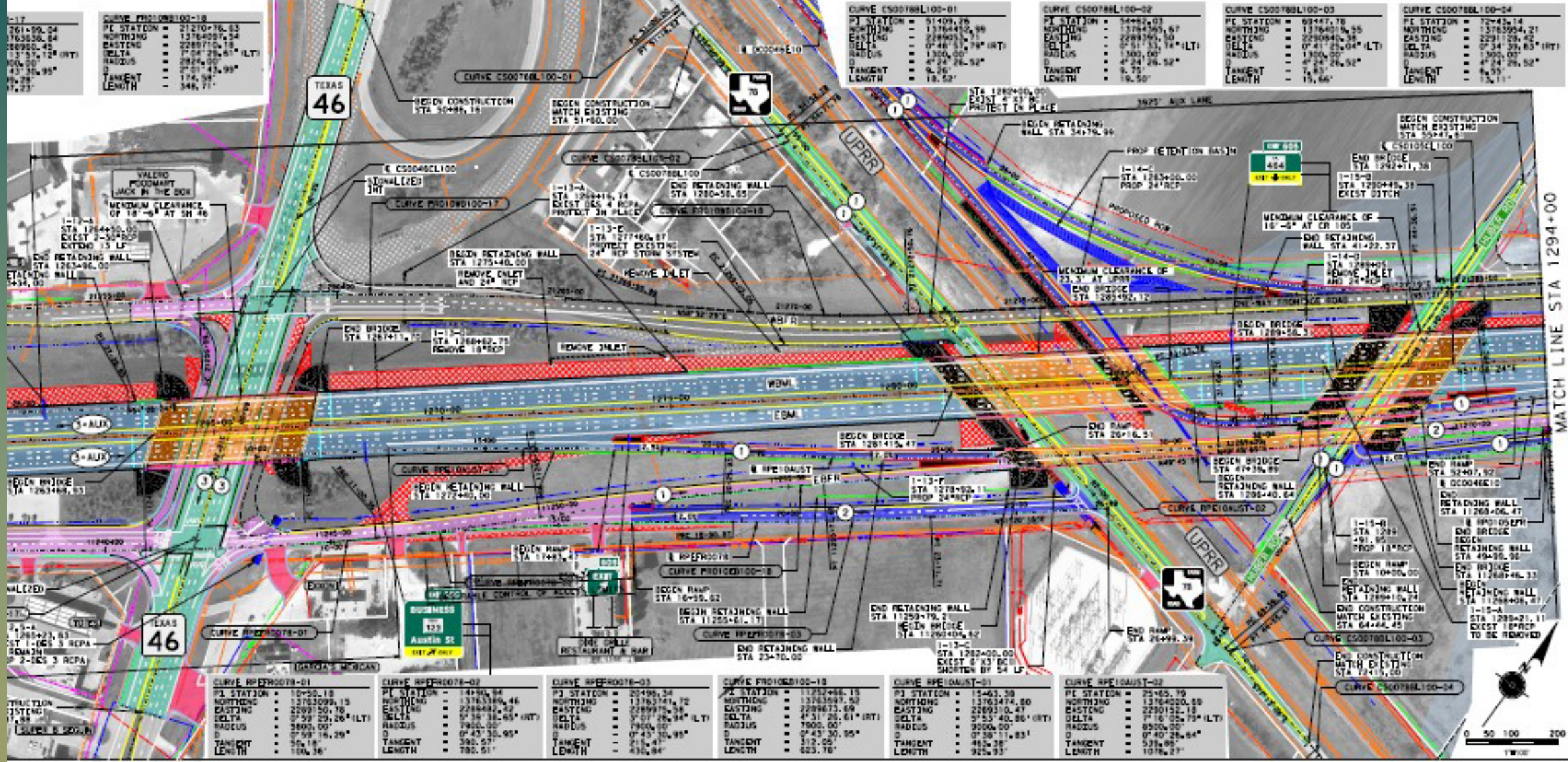
CURVE PRO100100-17	
PI STATION	21210+76.83
NORTHING	13764007.94
EASTING	2289710.18
DELTA	7°04'29.51" (LT)
RADIUS	2884.00'
D	27°01'41.99"
TANGENT LENGTH	174.58'
CHORD LENGTH	348.71'

CURVE CS00788100-01	
PI STATION	51409.28
NORTHING	11784450.98
EASTING	2289703.13
DELTA	0°48'31.74" (RT)
RADIUS	1300.00'
D	4°24'26.52"
TANGENT LENGTH	9.75'
CHORD LENGTH	18.52'

CURVE CS00788100-02	
PI STATION	54442.03
NORTHING	11784393.67
EASTING	2289700.10
DELTA	0°51'31.14" (LT)
RADIUS	1300.00'
D	4°24'26.52"
TANGENT LENGTH	9.75'
CHORD LENGTH	18.50'

CURVE CS00788100-03	
PI STATION	69447.78
NORTHING	11784019.55
EASTING	2289840.38
DELTA	0°41'25.04" (LT)
RADIUS	1300.00'
D	4°24'26.52"
TANGENT LENGTH	7.43'
CHORD LENGTH	15.66'

CURVE CS00788100-04	
PI STATION	72443.14
NORTHING	11783954.21
EASTING	2289129.82
DELTA	0°34'39.83" (RT)
RADIUS	1300.00'
D	4°24'26.52"
TANGENT LENGTH	7.11'
CHORD LENGTH	13.11'



CURVE RPE100078-01	
PI STATION	10+50.18
NORTHING	13763099.13
EASTING	2289150.78
DELTA	5°59'29.26" (LT)
RADIUS	2800.00'
D	0°59'16.29"
TANGENT LENGTH	30.18'
CHORD LENGTH	104.36'

CURVE RPE100078-02	
PI STATION	14+90.84
NORTHING	13763189.46
EASTING	2289682.42
DELTA	5°38'31.65" (RT)
RADIUS	7900.00'
D	0°43'30.95"
TANGENT LENGTH	390.57'
CHORD LENGTH	780.51'

CURVE RPE100078-03	
PI STATION	20+98.34
NORTHING	13763141.72
EASTING	2289673.69
DELTA	5°51'26.61" (RT)
RADIUS	7900.00'
D	0°43'30.95"
TANGENT LENGTH	312.05'
CHORD LENGTH	430.84'

CURVE PRO1002100-18	
PI STATION	11252+466.15
NORTHING	13763497.52
EASTING	2289673.69
DELTA	4°31'26.61" (RT)
RADIUS	7900.00'
D	0°43'30.95"
TANGENT LENGTH	312.05'
CHORD LENGTH	623.78'

CURVE RPE100100-01	
PI STATION	15+63.38
NORTHING	13763474.80
EASTING	2289304.47
DELTA	5°53'40.86" (RT)
RADIUS	9200.00'
D	0°38'11.83"
TANGENT LENGTH	483.38'
CHORD LENGTH	925.93'

CURVE RPE100100-02	
PI STATION	25+65.79
NORTHING	13764020.80
EASTING	2289132.18
DELTA	7°16'05.79" (LT)
RADIUS	8900.00'
D	0°40'26.84"
TANGENT LENGTH	539.89'
CHORD LENGTH	1076.21'

CURVE CS00788100-04	
PI STATION	72443.14
NORTHING	11783954.21
EASTING	2289129.82
DELTA	0°34'39.83" (RT)
RADIUS	1300.00'
D	4°24'26.52"
TANGENT LENGTH	7.11'
CHORD LENGTH	13.11'

MATCH LINE STA 1294+00