



US 67 CORRIDOR MASTER PLAN CSJ 5000-00-116

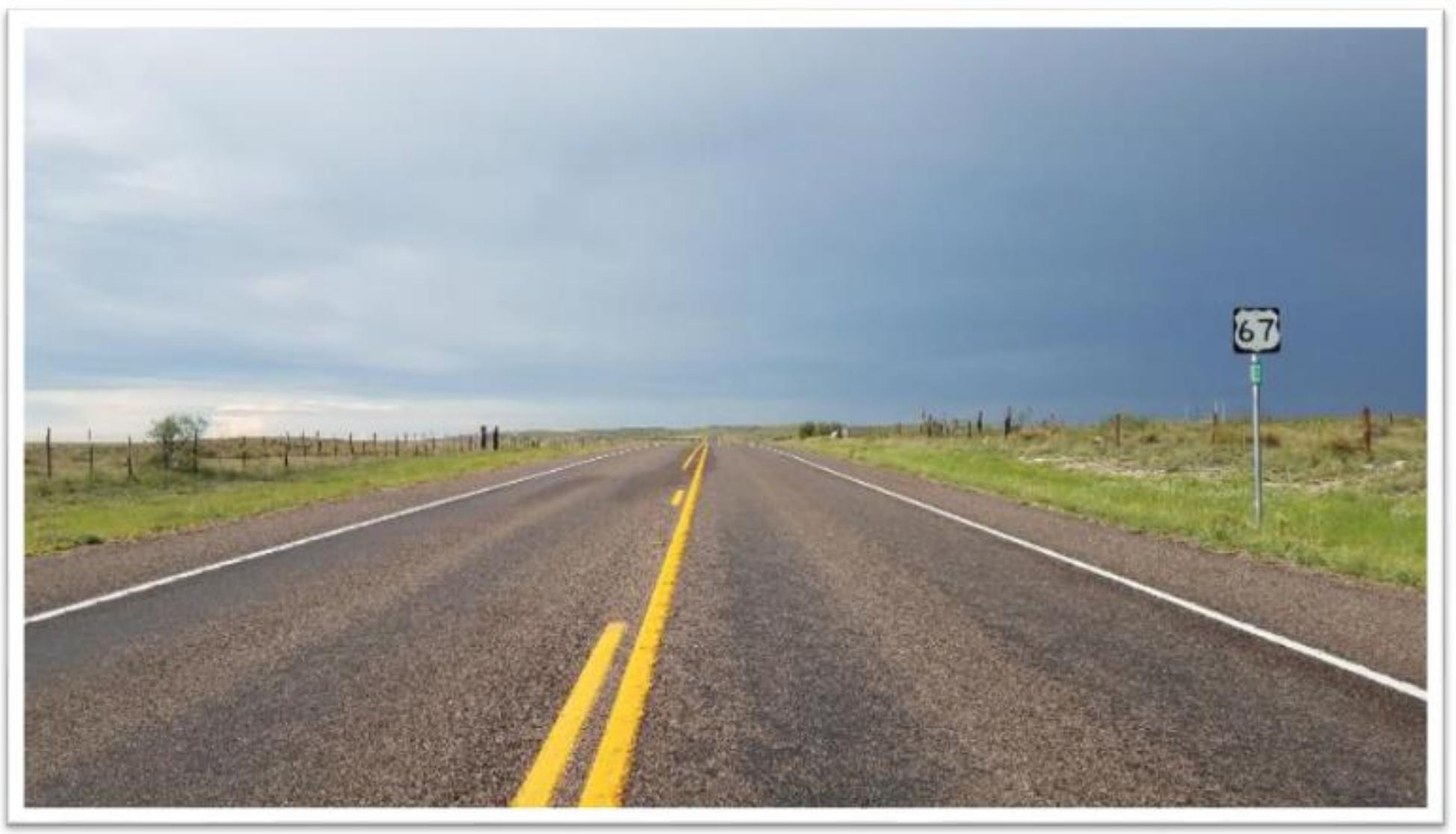
Public Meeting Series No. 3



Agenda

- Background and Context of Study
- Study Updates
- Overview of Corridor Concepts
 - By Type
 - By City
 - Safety/ITS
- Breakout Sessions
 - Presidio
 - Marfa
 - Alpine
 - Rural Areas
- Q&A Session
- Next Steps

Background and Context of Study

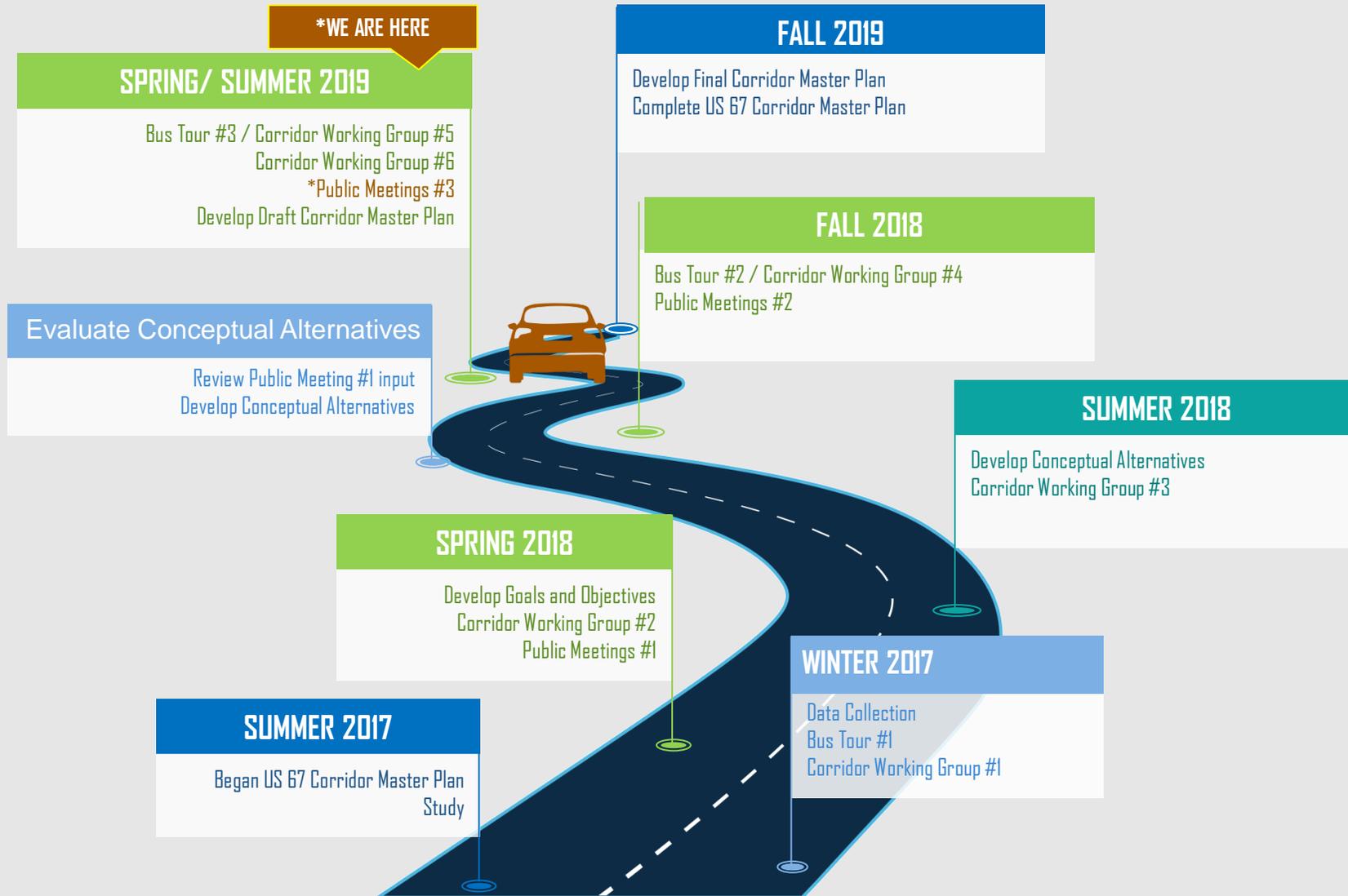


Background and Context of Study

- Develop the community's future **vision** for transportation along the corridor
- Identify current and future **needs** on US 67 with a focus on **safety**
- Develop **projects and strategies** to meet the needs and realize the vision
- Create a **Corridor Master Plan** for US 67

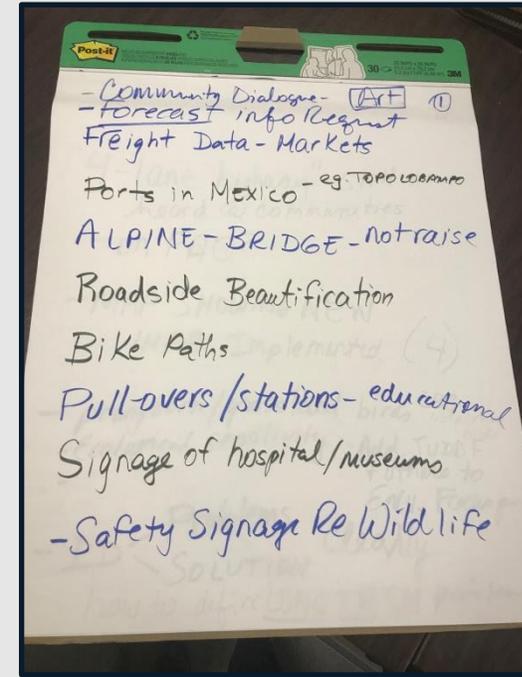
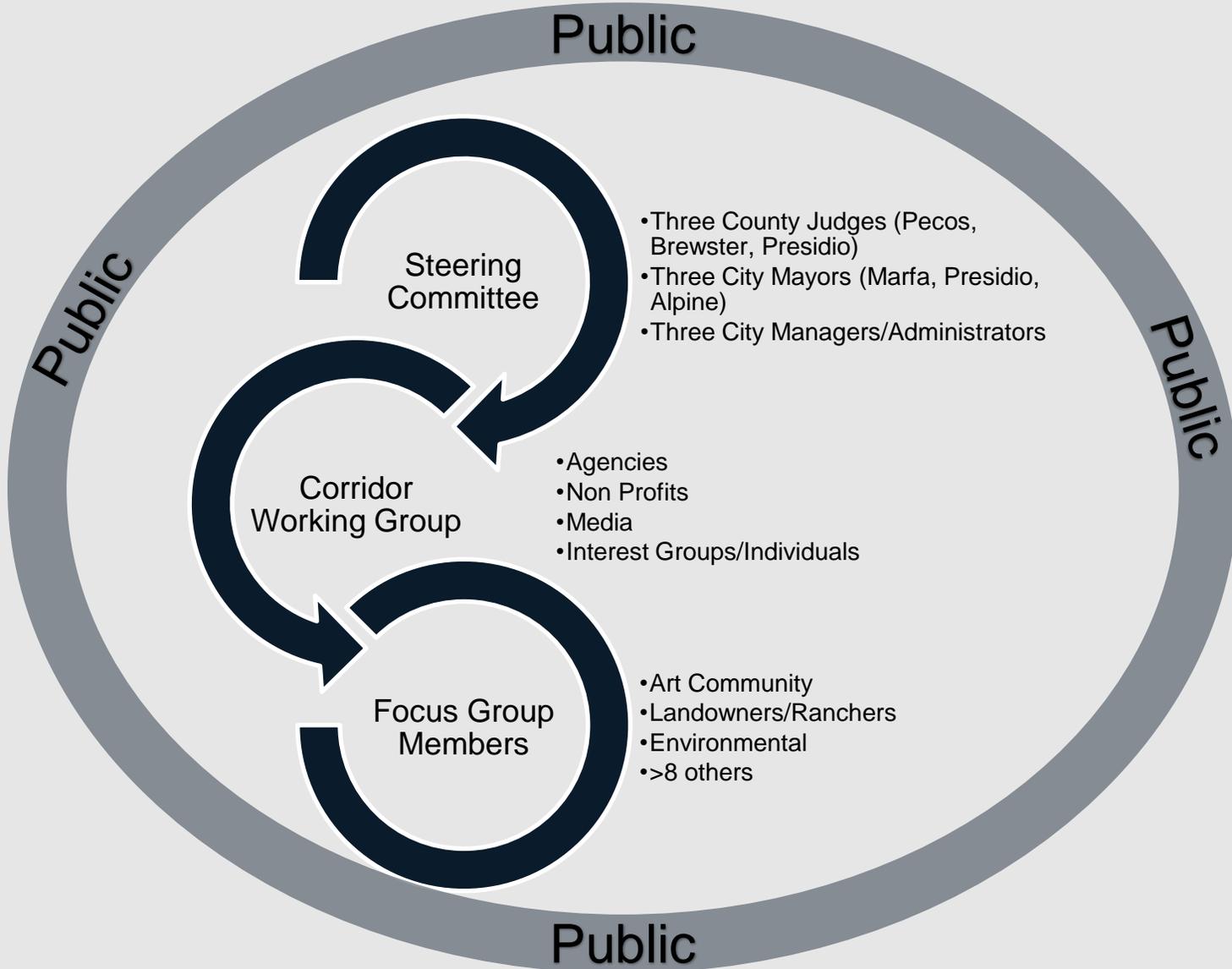


Study Timeline

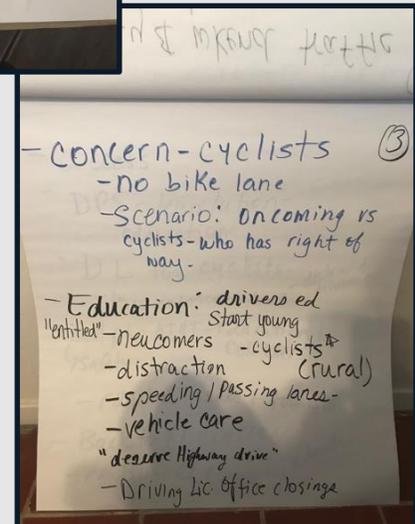


Study Participant Groups

TxDOT Team



Art Focus Group Discussion



Landowners Focus Group Discussion

Public Meeting Series No. 1 - Summary

Four locations on May 14-17, 2018

- 405 attendees:
 - Alpine - 127
 - Fort Stockton - 37
 - Marfa - 109
 - Presidio - 132
- Comment Methods: 523 received
 - Study Web Sites
 - Virtual Public Meeting
 - Dot Exercise
 - Written Comments
 - Comments on Maps
 - Verbal Comments
 - Emails/Letters



Public Meeting Series No. 2 - Summary

Four locations on November 7-15, 2018

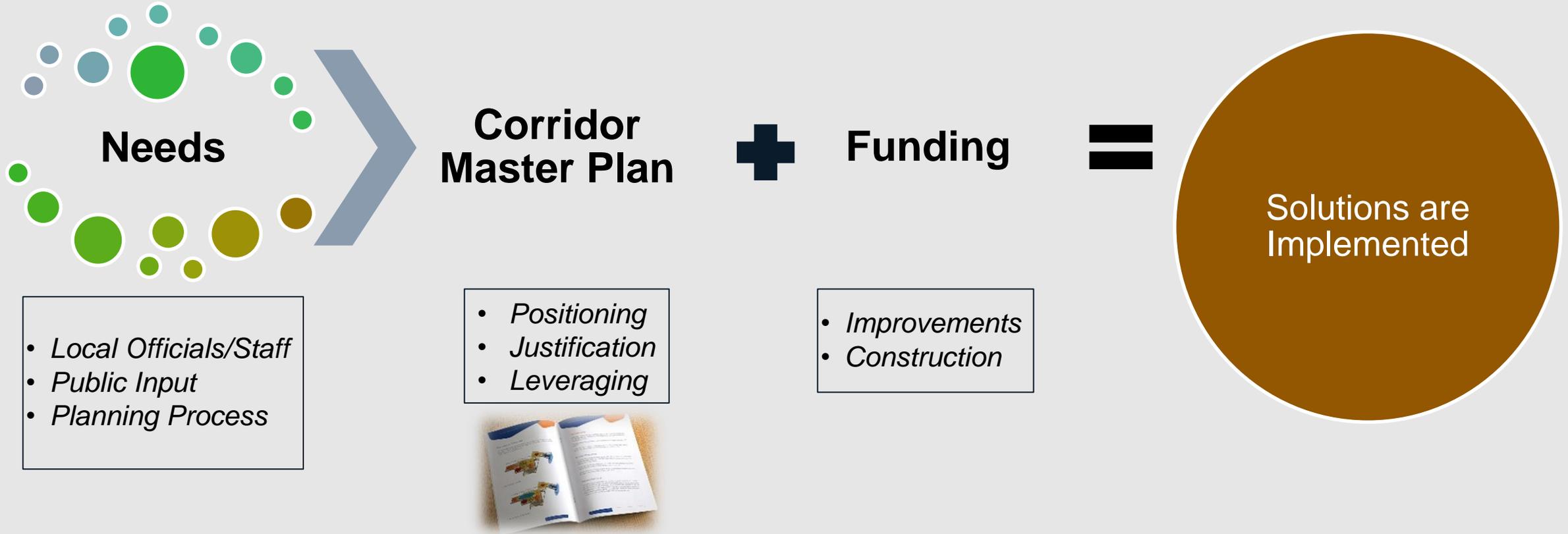
- 257 attendees:
 - Alpine – 61
 - Fort Davis – 39
 - Marfa – 66
 - Presidio – 91
- Surveys Received:
 - 181





OVERVIEW OF CORRIDOR CONCEPTS

Study Overview

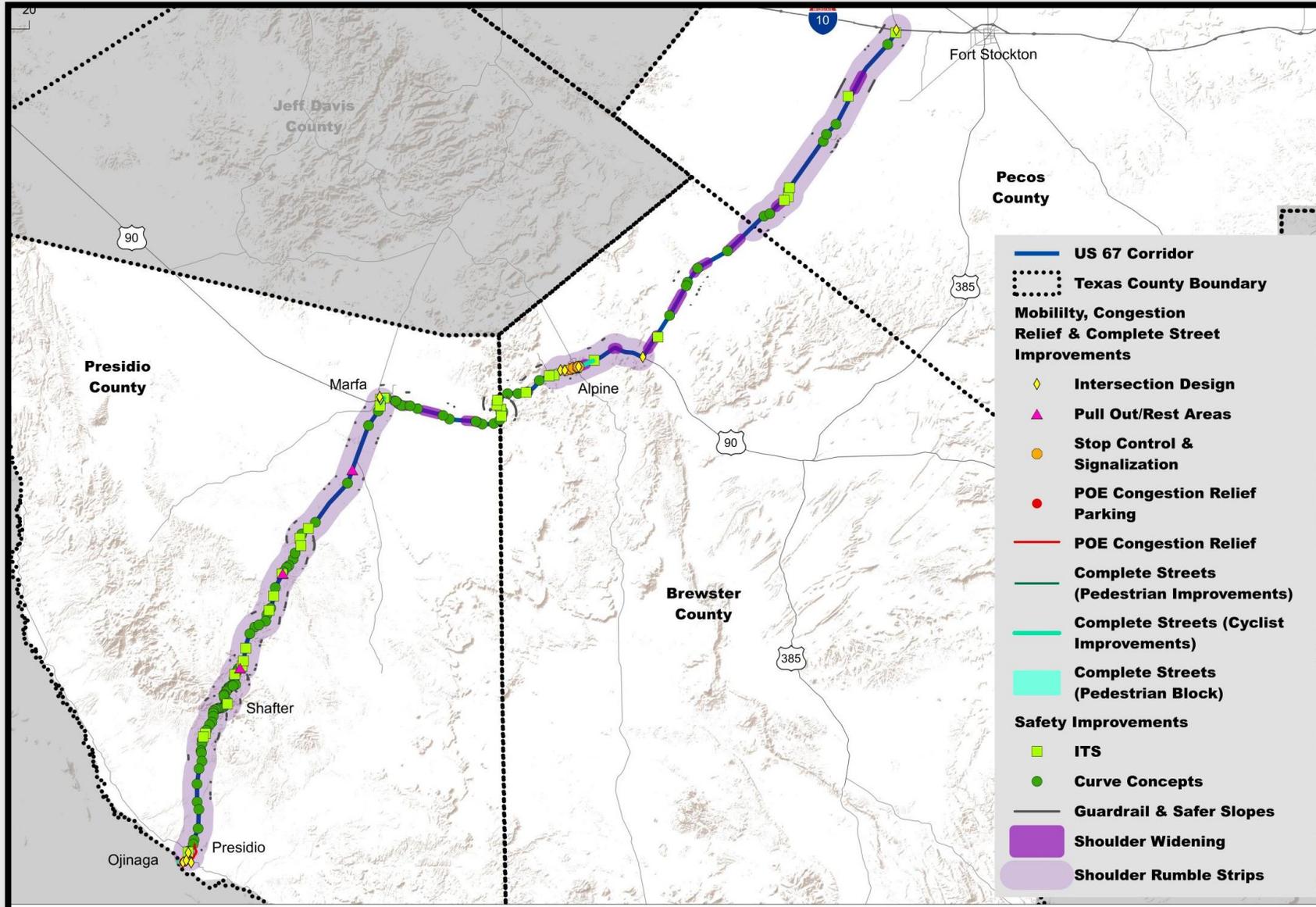


- Two categories of concepts:
 - **Core Concepts.** Do not have any alternative other than “No-Build”. The majority of the Safety, ITS, and Rural concepts fall in this category.
 - **Alternative Concepts.** Have multiple concept options at each location. The majority of the intersection and complete streets concepts fall in this category.

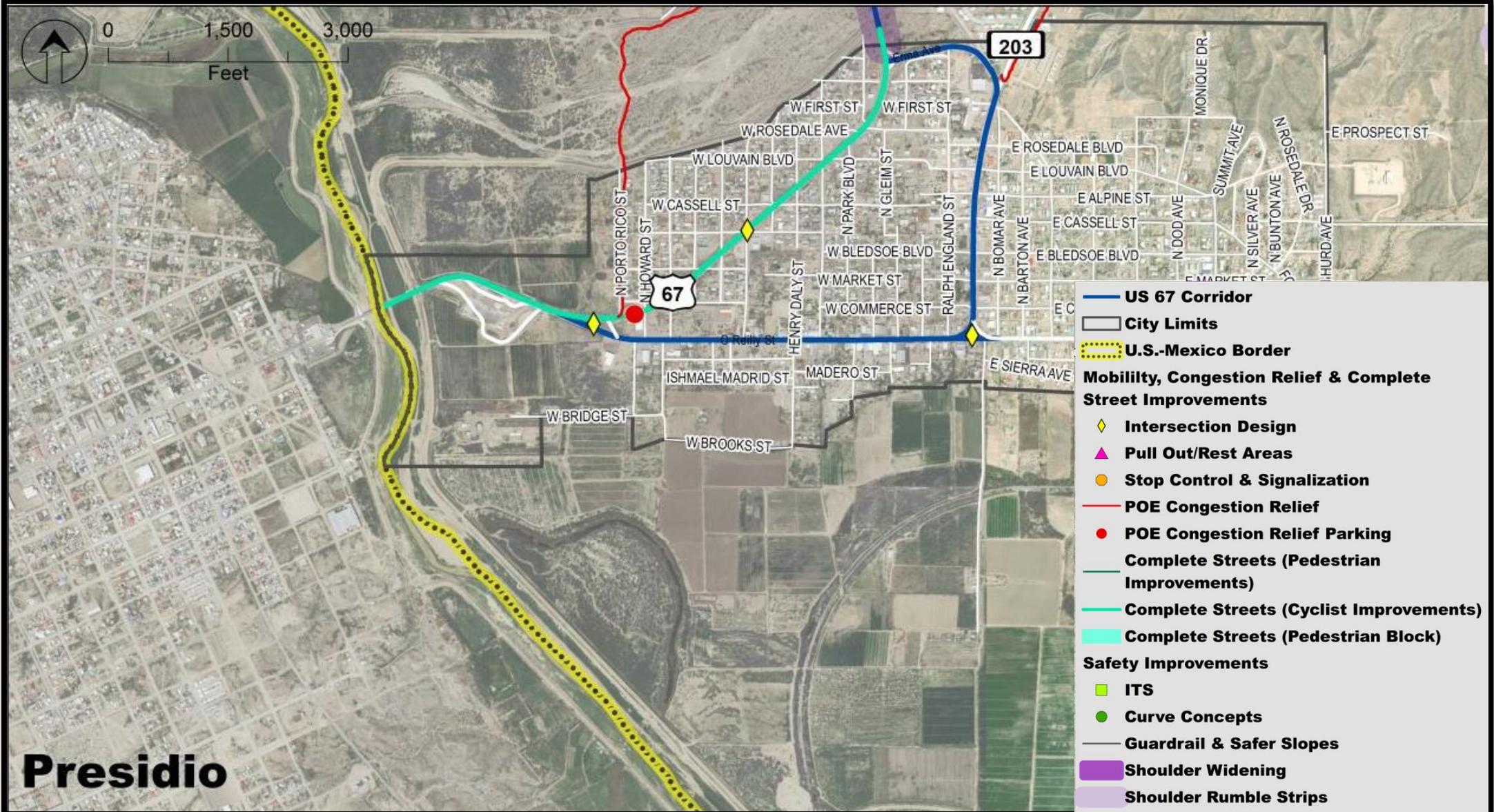
Corridor-Wide: Proposed Concepts by Type

Concept Type	Description	Core/Alternative Concepts	Short/Mid/Long	Source
Intersection Improvements	Improvements to key intersections	Alternative	Mid/Long	Safety/Public/Mobility
POE Congestion Relief Concepts	To provide congestion relief to residents of Presidio due to POE traffic	Alternative	Mid/Long	Public
Complete Streets	Implements a holistic approach to corridor improvements for vehicles, bicyclist, and pedestrians	Alternative	Mid/Long	Public
Traffic Mitigation (Signalized/Stop Controlled Intersections)	Traffic analysis to determine when and where traffic signals and/or stop signs will be required	Core	Mid/Long	Safety/Public
Bicycle/Pedestrian Improvements	Bicycle and pedestrian improvements within and between cities	Alternative	Short/Mid/Long	Safety/Public
ITS Improvements	Implementation of Intelligent Transportation Systems to enhance roadway safety and/or to provide traffic relief	Core	Short/Mid/Long	Safety/Public
Rest Area/Pull Out Locations	Proposed rest areas between Marfa and Presidio	Core	Short/Mid/Long	Public
Safety Roadway Improvements	Various improvements to the roadway geometry to enhance safety along corridor	Core	Short/Mid	Safety

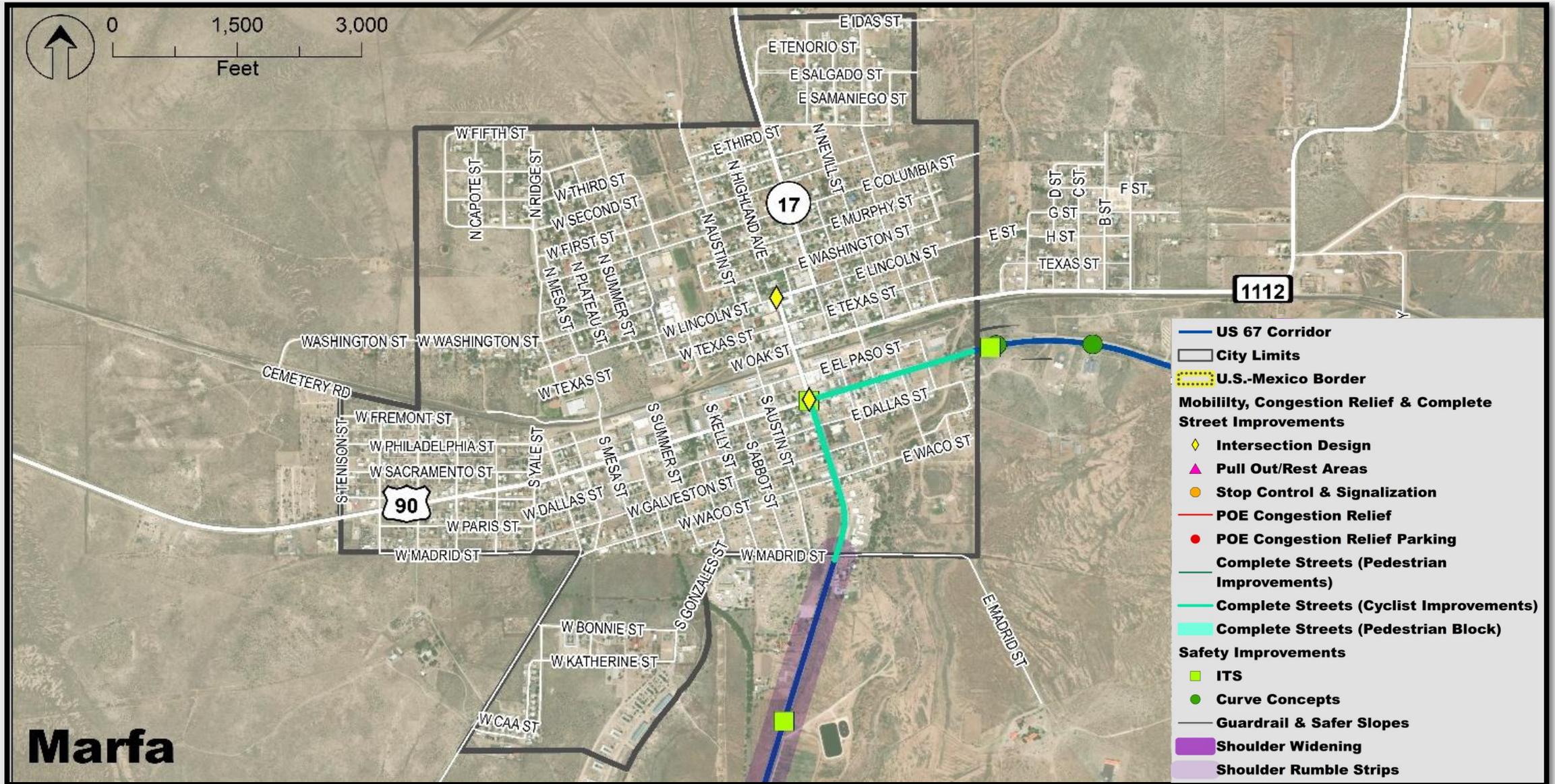
Corridor-Wide: Map of Proposed Concepts by Type



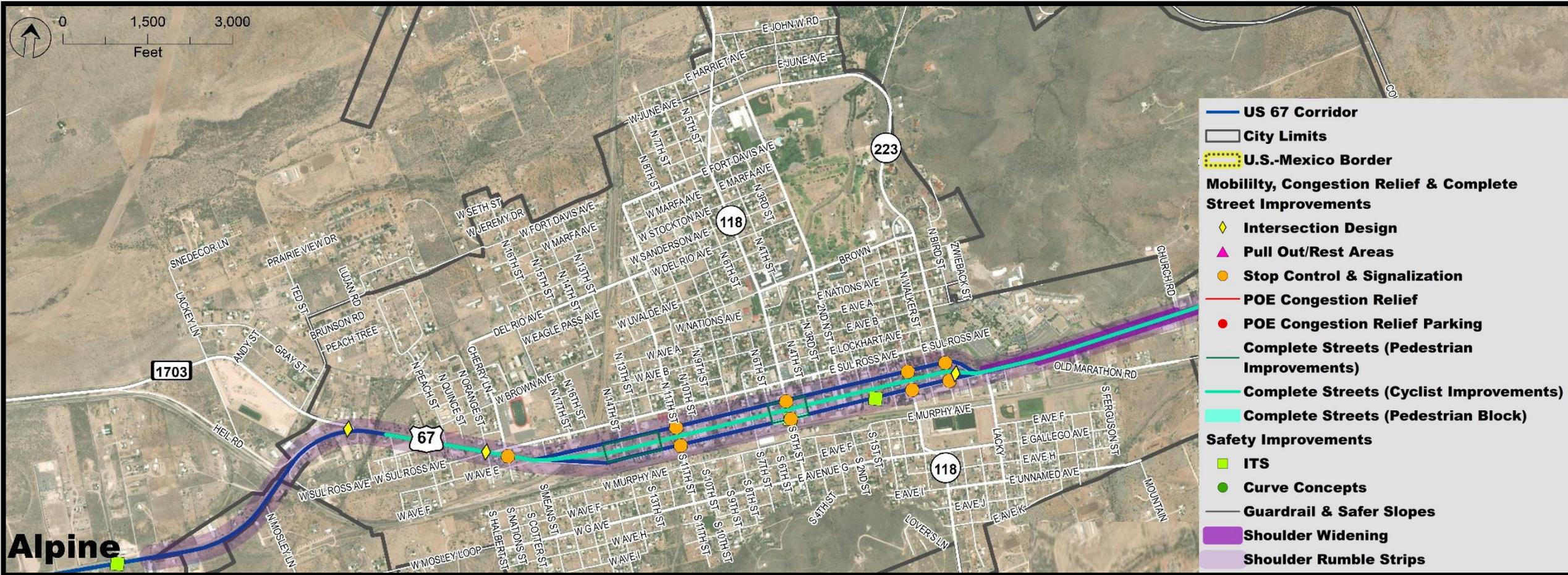
Overview of Presidio Concepts



Overview of Marfa Concepts



Overview of Alpine Concepts



Overview of Rural/Core Concepts

Concept	Location (City)
Rest Area/Pull Out Locations	Between Presidio and Marfa
POE Congestion Relief Concepts	Alpine to I-10/ US 67 Interchange
Bicycle/Pedestrian Improvements	Between cities
Rural Roadway Improvements	Along the corridor excluding cities
Proposed Y-intersection Concepts	Between Alpine and I-10

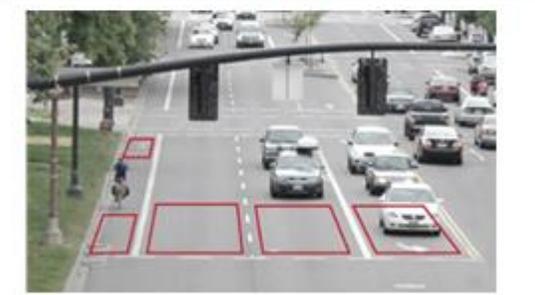
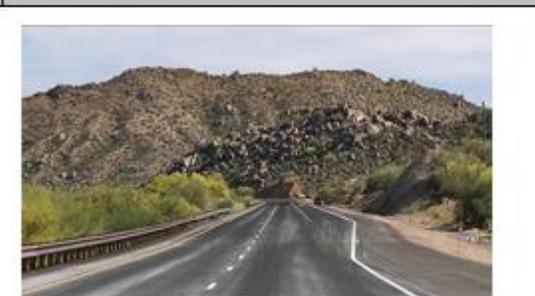
Overview of Proposed ITS/Safety Concepts

ITS/Safety Projects	Short/Mid/Long	ITS	Safety
Animal Warning System	Mid	✓	✓
Bicycle/Pedestrian Warning System	Short	✓	✓
Dynamic Message Signs + Bluetooth Traffic Counters	Short	✓	✓
Highway Rail Crossing Safety System	Mid	✓	✓
Sequential Dynamic Curve Warning Systems	Short	✓	✓
Total Stations (weather warning system, pavement sensor, CCTV, traffic detection, radio tower)	Mid	✓	✓
Next Gen 911	Long	✓	-
Presidio POE Parking & Smart Parking	Short	✓	-
Real time travel time information	Long	✓	-
Rock Slide Warning system	Mid	✓	-
Smartphone Application	Mid	✓	-
Study on data over current radio system	Mid	✓	-
Study to provide enhanced cellular connections through agreements	Short	✓	-

Overview of Proposed ITS/ Safety Concepts

ITS/Safety Projects	Short/Mid/Long	ITS	Safety
Study to Provide Fiber Access Along Corridor	Mid	✓	-
Provide Turnouts	Mid	-	✓
Superelevation Adjustment	Mid	-	✓
High Friction Surface Treatments	Mid	-	✓
Texas Super 2 Passing Lanes	Long	-	✓
Shoulder Widening	Long	-	✓
Centerline and Shoulder Rumble Strips	Short	-	✓
Guardrails	Mid	-	✓
Design Safer Slopes	Mid	-	✓
Signage	Short	-	✓
Striping	Short	-	✓
Tree Trimming/Brush Removal	Short	-	✓
Illumination at Intersections	Mid	-	✓

Overview of ITS/Safety Concepts

ANIMAL WARNING SYSTEM	BICYCLE/PEDESTRIAN WARNING SYSTEM	SEQUENTIAL DYNAMIC CURVE WARNING SYSTEMS	DYNAMIC MESSAGE SIGN AND BLUETOOTH TRAFFIC COUNTERS
			
HIGHWAY RAIL CROSSING SAFETY SYSTEM	ILLUMINATION AT INTERSECTIONS	GUARDRAILS	SUPERELEVATION ADJUSTMENT
			
HIGH FRICTION SURFACE TREATMENT	SUPER 2 PASSING LANES	SHOULDER WIDENING	CENTERLINE / SHOULDER RUMBLE STRIPS
			

Alternate Routes Road Map

- What is an Alternate Route
- Potential Pros and Cons
- Considerations
 - Time Frames
 - Intergovernmental Coordination
 - Cost
 - Studies
- Next Steps (Road Map)

Discussion on Alternate Routes Along US 67 Corridor

US 67 Corridor Master Plan

The US 67 Corridor Master Plan limits stretch 142-miles from 1-10 west of Fort Stockton to the Presidio/Ojinaga Port of Entry on the U.S./Mexico border. US 67 provides access to the towns of Alpine, Marfa, Presidio, and surrounding communities, as well as Big Bend National Park, Sul Ross State University, the Marfa Lights, Big Bend Ranch State Park, Fort Leaton State Park, and Fort Davis attractions. This rural area has experienced significant growth in recent years, and TxDOT is undertaking a Corridor Master Plan study to help determine the current and future transportation needs to best serve the communities along US 67.

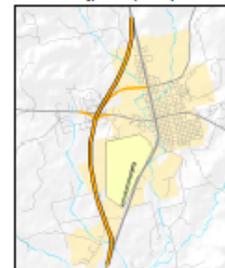


Public Comments on Alternate Routes

Based on responses received at several corridor working groups and two series of public meetings held in May 2018 and November 2018, members of the corridor working groups and the public were interested in considering a bypass (or herein referred to as an Alternate Route) around cities such as Alpine, Marfa, and Presidio. However, the US 67 Corridor Master Plan is focusing on safety improvements to the existing corridor. If supported locally, Alternate Route studies will be conducted separately from the US 67 Corridor Master Plan study.

What is an Alternate Route?

An Alternate Route is a road constructed mostly or entirely on new location around a city/town (example in orange below).



Potential Pros and Cons of Alternate Routes

Pros:

- > Possible reduction in downtown traffic, and therefore a potential decrease in crashes.
- > Potential increase in commercial development/sales along Alternate Route (Thompson et al. 2001).
- > May create opportunities for revitalization of local community (CALTRANS 2008).
- > Possible reduction in downtown traffic, and therefore a potential reduction in the need for road improvement projects in tightly constrained downtown areas.

Cons:

- > Potential decrease in commercial/retail sales in downtown areas (Thompson et al. 2001).
- > Potential significant amount of new right-of-way required.
- > Potential significant impacts to human/natural environment.
- > Possible high right-of-way acquisition and construction cost and lengthy schedule considerations.

Other Considerations

- > Destination areas catering to a small-town atmosphere and/or tourists can benefit from Alternate Routes (CALTRANS 2008) in that they protect the aesthetic character and charm of the area for residents and tourists.
- > The shorter the distance the Alternate Route is from downtown, the less likely it will hurt downtown businesses (CALTRANS 2008).
- > The more visible downtown is from the Alternate Route, the less likely it would hurt downtown businesses and the greater the potential for environmental impacts such as noise and visual impacts (CALTRANS 2008). The further the Alternate Route is from downtown, the more archeological and natural resource impacts it might have.

Next Steps/Roadmap*

- > Residents should coordinate with local officials to express interest or disinterest in Alternate Routes.
- > If Alternate Route studies are pursued as future projects, each project will follow the environmental (NEPA) process including public outreach and NEPA documentation analyzing environmental and socio-economic impacts.
- > If Alternate Route studies are pursued as future projects, assuming the routes would be on new location, the environmental clearance process could range from 5 to 10 years depending on public input and environmental impacts. The construction process, which would follow environmental clearance for each project, could take from 2 to 4 years.
- > US 67 Corridor Master Plan projects will continue their own environmental clearance and public involvement process separate from any possible Alternate Route studies.
- > TxDOT is working on a Roadmap to provide more information on Alternate Routes. When complete, it will be uploaded to the US 67 web site.
- > For more information contact:
Rebecca (Becky) Reyee, TxDOT El Paso District
915.790.4205 or rebecca.reyee@txdot.gov



TEXAS DEPARTMENT OF TRANSPORTATION

COMMUNITY SPECIFIC PRESENTATION (SEE HANDOUT)



TEXAS DEPARTMENT OF TRANSPORTATION

DETERMINING ALTERNATIVES

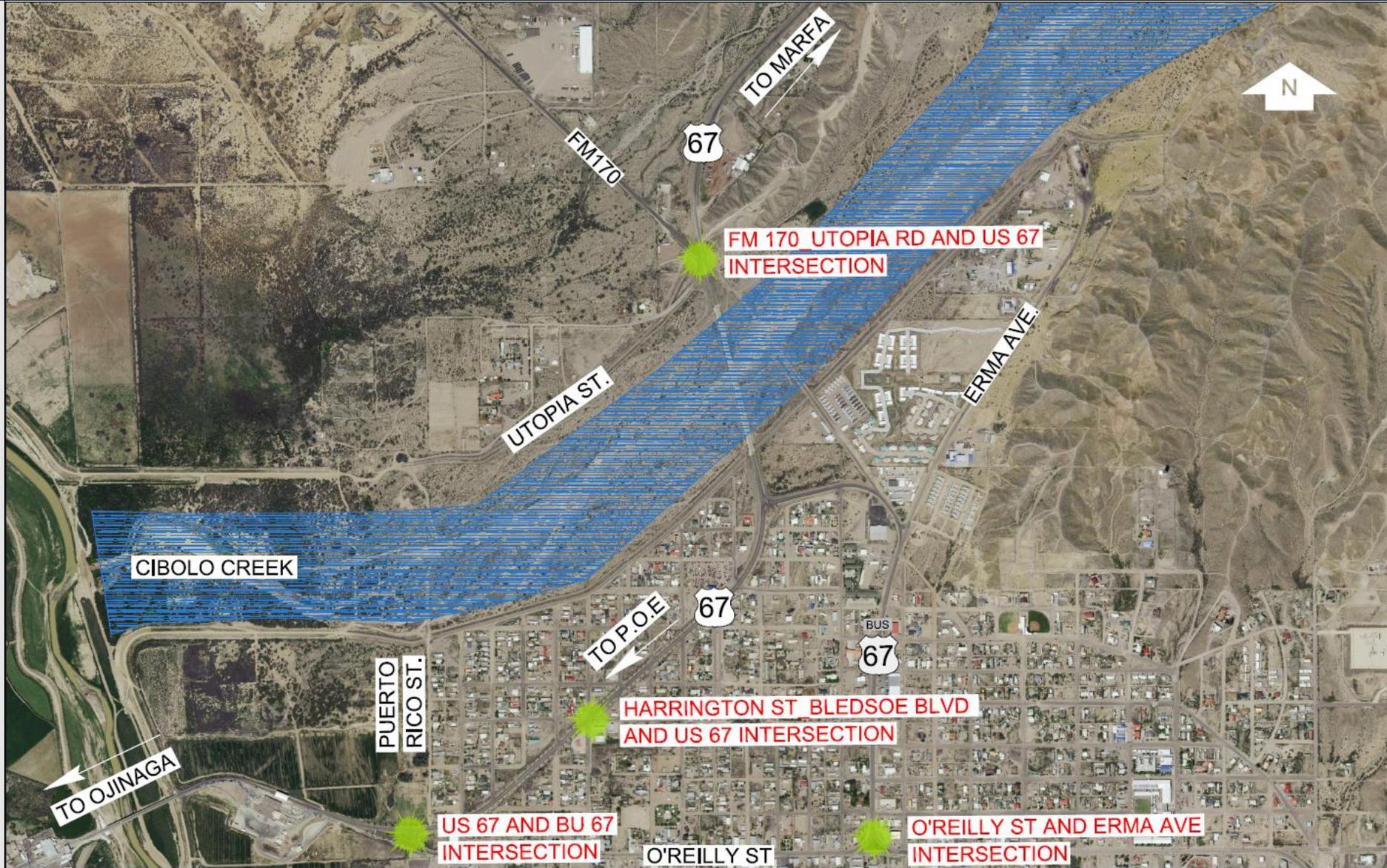
Presidio Intersection Concepts



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PRESIDIO

Intersection Concepts



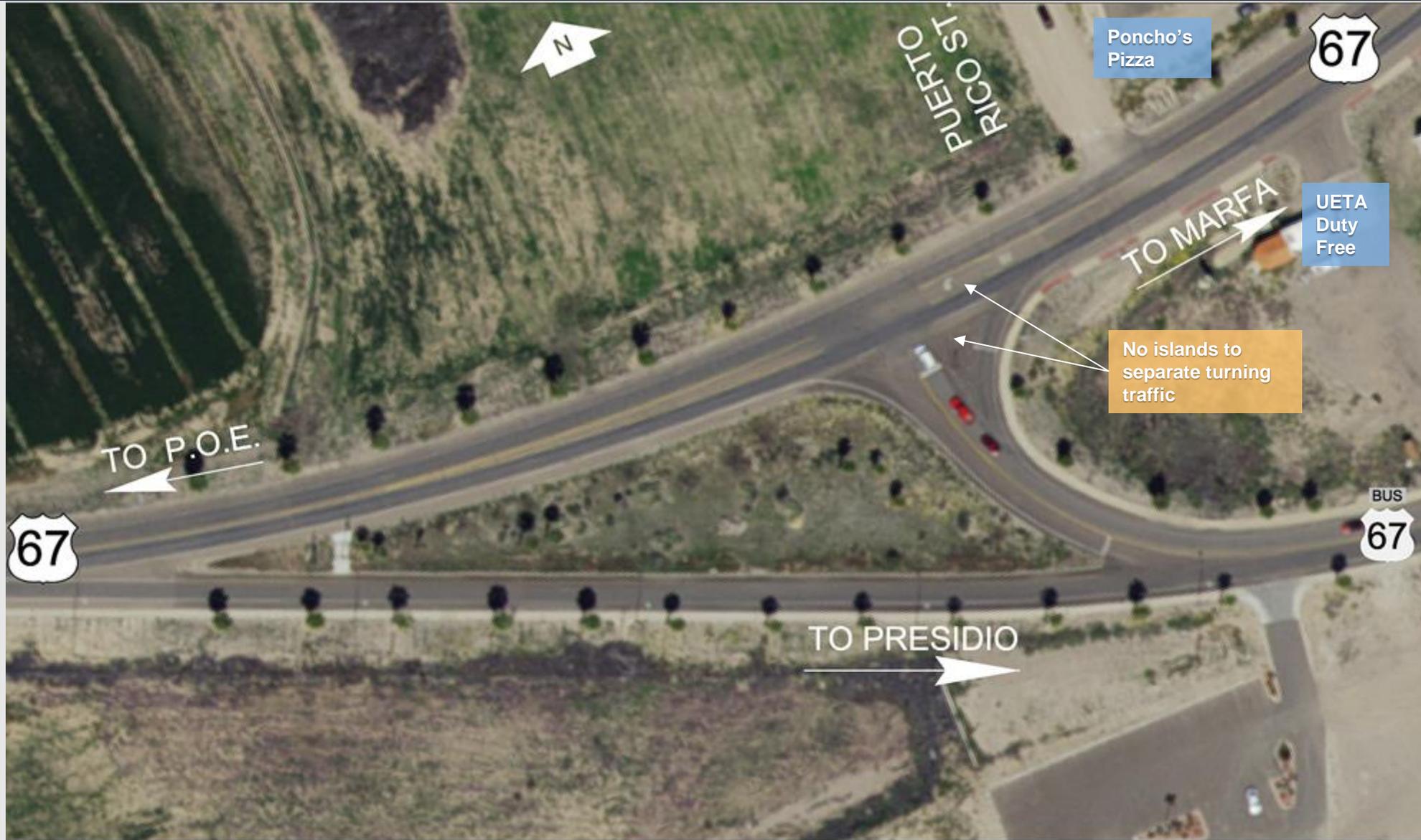


PRESIDIO

Location 1: Intersection US 67 and BU 67

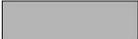
Location 1 US 67 & BU 67 – No-Build Alternative: “Existing Condition”

Presidio

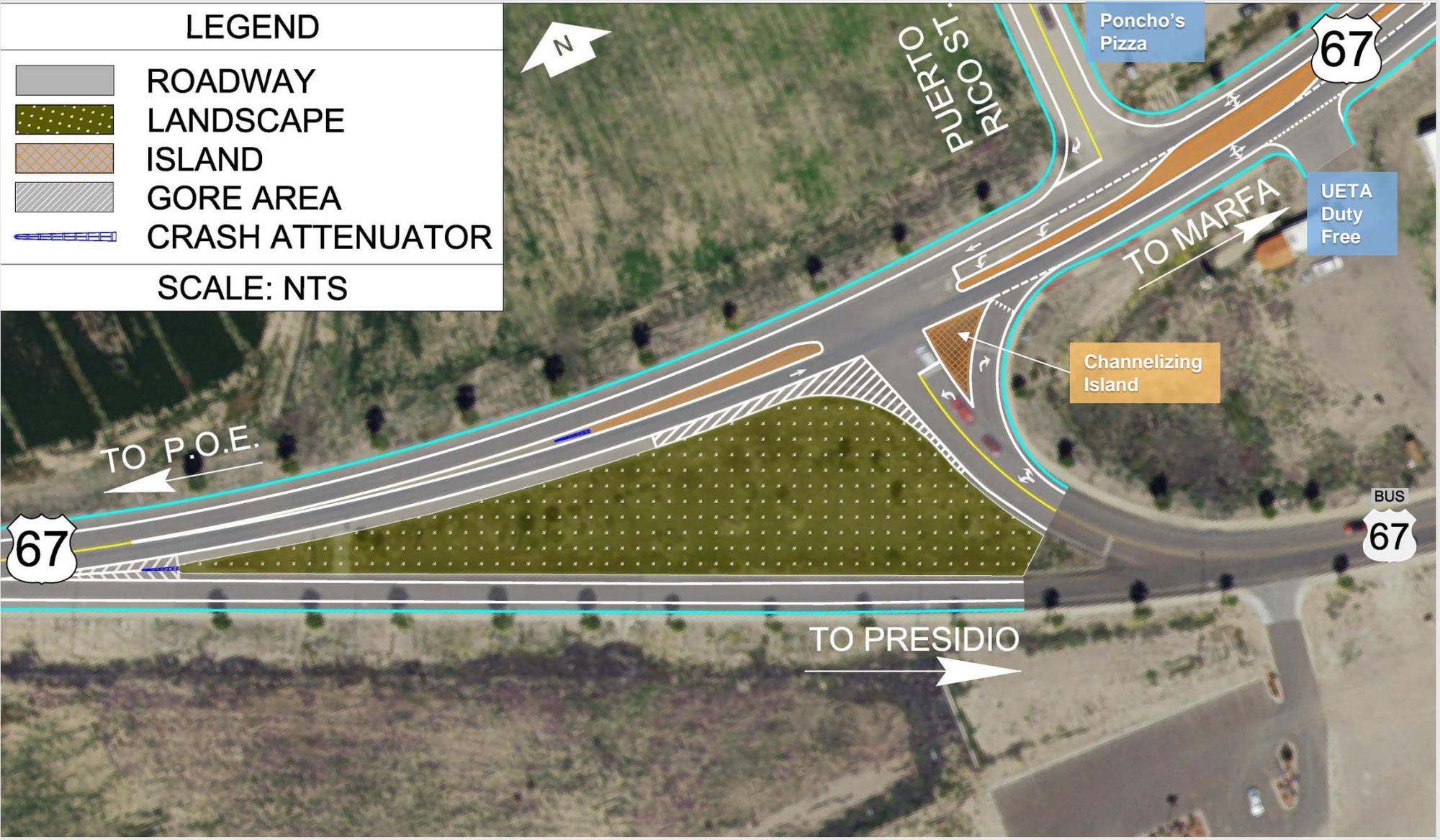


Location 1 US 67 & BU 67 - Alternative A: "T-Intersection"

LEGEND

-  ROADWAY
-  LANDSCAPE
-  ISLAND
-  GORE AREA
-  CRASH ATTENUATOR

SCALE: NTS



Issue Addressed: Safety	
Source of Need: Safety Analysis	
Satisfying Goal Area: Safety	
Right of Way (ROW) required	No

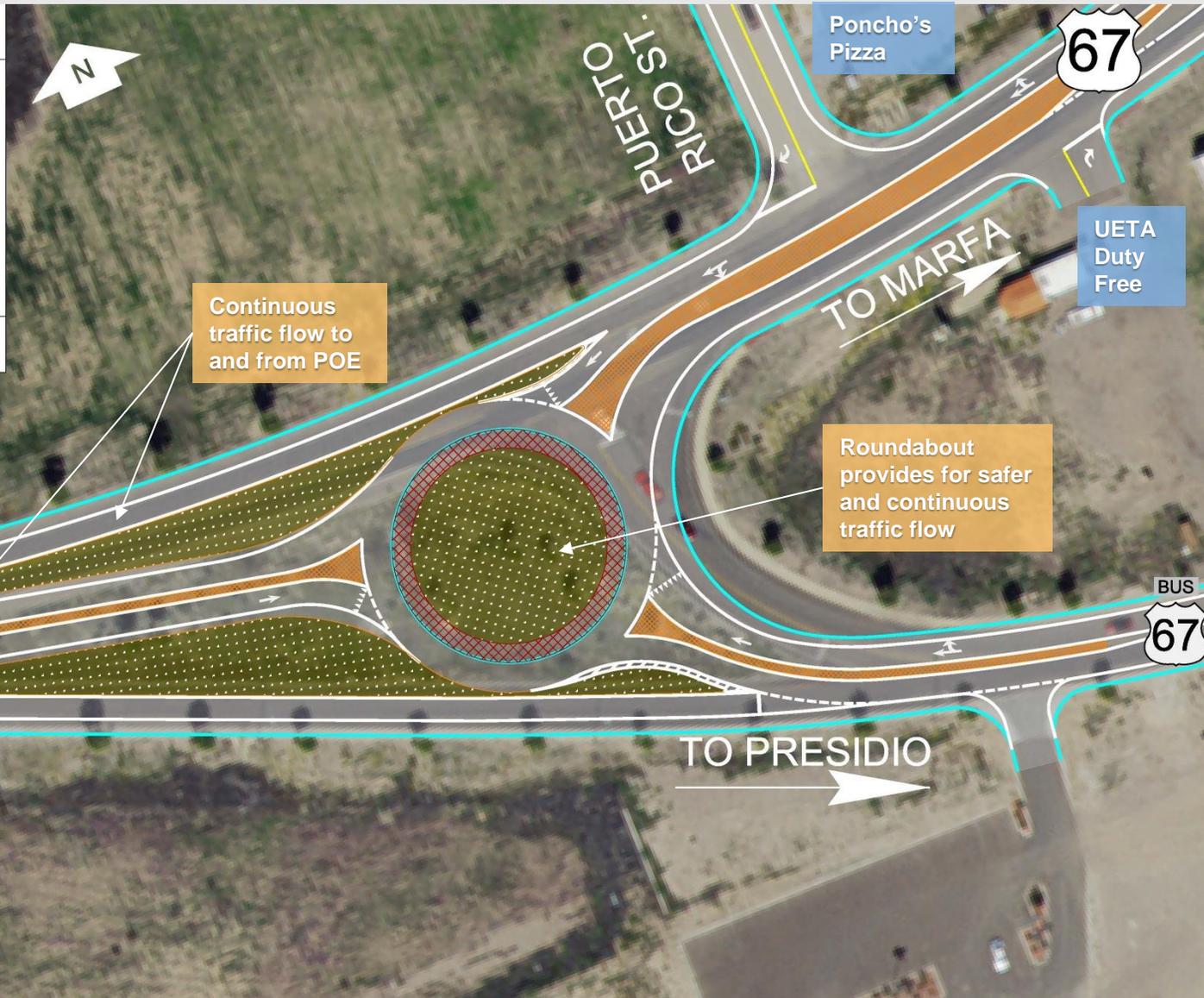
** The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*

Location 1 US 67 & BU 67 - Alternative B: "Roundabout"

LEGEND

-  ROADWAY
-  LANDSCAPE
-  ISLAND
-  TRUCK APRON
-  GORE AREA

SCALE: NTS

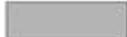


Issue Addressed: Improves Safety/ Reduce Conflict Points	
Source of Need: Safety Analysis	
Satisfying Goal Area: Safety & Mobility	
Right of Way (ROW)	No required

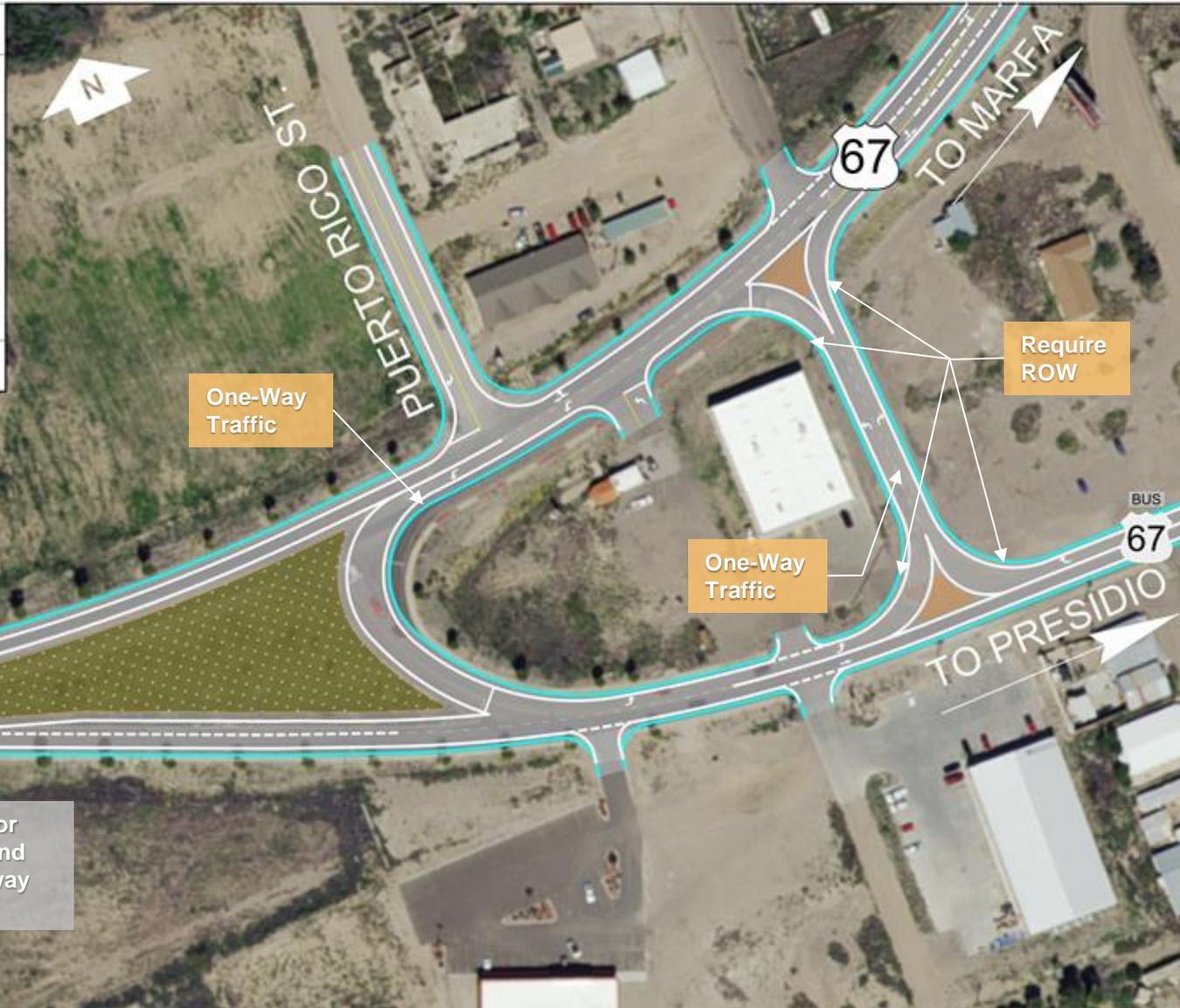
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Location 1 US 67 & BU 67 - Alternative C: "Re-Route"

LEGEND

-  ROADWAY
-  LANDSCAPE
-  ISLAND
-  GORE AREA
-  CRASH ATTENUATOR

SCALE: NTS



This configuration allows for continuous flow of traffic and avoids a traditional 3 or 4 way intersection

Issue Addressed: Safety	
Source of Need: Safety Analysis	
Satisfying Goal Area: Safety & Mobility	
Right of Way (ROW) required *	Yes

* The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.

	No-Build	Alternative A: “T-Intersection”	Alternative B: “Roundabout”	Alternative C: “Re-Route”
Cost	\$0	\$	\$\$	\$\$
Pros	<ul style="list-style-type: none"> - No cost - Does not require ROW 	<ul style="list-style-type: none"> - Addresses safety - Well received by all - Will not require ROW 	<ul style="list-style-type: none"> - Safer option allows for less conflict points than traditional intersection - Allows for movement in all directions - Allows for placemaking opportunity - Will not require ROW 	<ul style="list-style-type: none"> - Creates a one way street around the intersection
Cons	<ul style="list-style-type: none"> - Does not address safety concern 	<ul style="list-style-type: none"> - T-Intersections have more conflict points than Alternative B and C 	<ul style="list-style-type: none"> - May be confusing to residents 	<ul style="list-style-type: none"> - Will require ROW - May be confusing to residents and tourists



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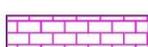
Location 2: Intersection at O'Reilly Street & Erma Avenue



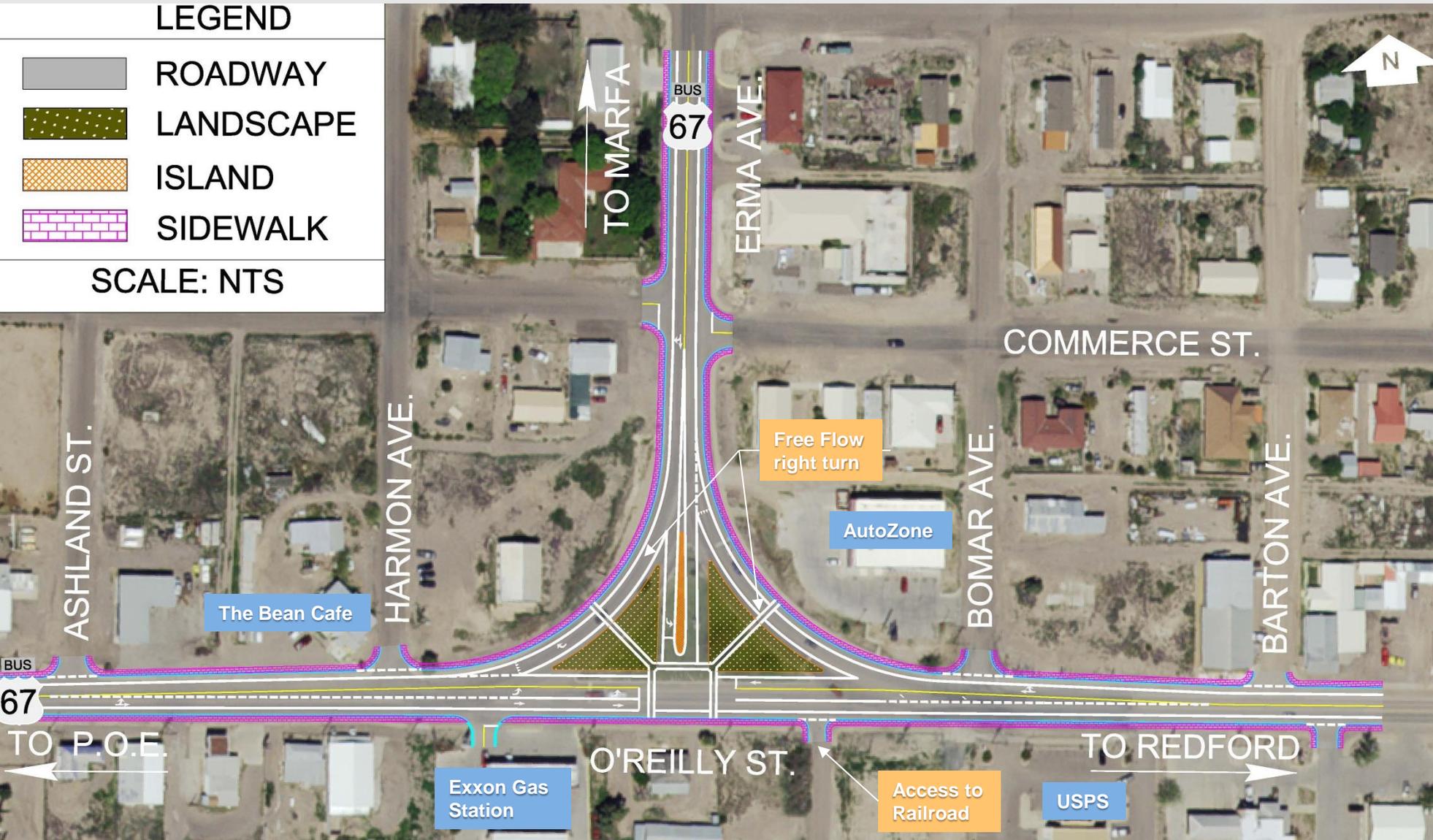
Location 2 O'Reilly St & Erma Ave - Alternative A: "Y-Intersection"

HoloLens Location

LEGEND

-  ROADWAY
-  LANDSCAPE
-  ISLAND
-  SIDEWALK

SCALE: NTS



Issue Addressed: Safety	
Source of Need: Safety Analysis	
Satisfying Goal Area: Safety & Mobility	
Right of Way (ROW) required	No

Non Geometry Concepts (ITS/Safety)	
Install STOP control for left turning traffic from Erma Avenue to O'Reilly Street	

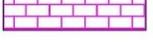
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Location 2 O'Reilly St & Erma Ave – Alternative B: “Roundabout Raised Curb”

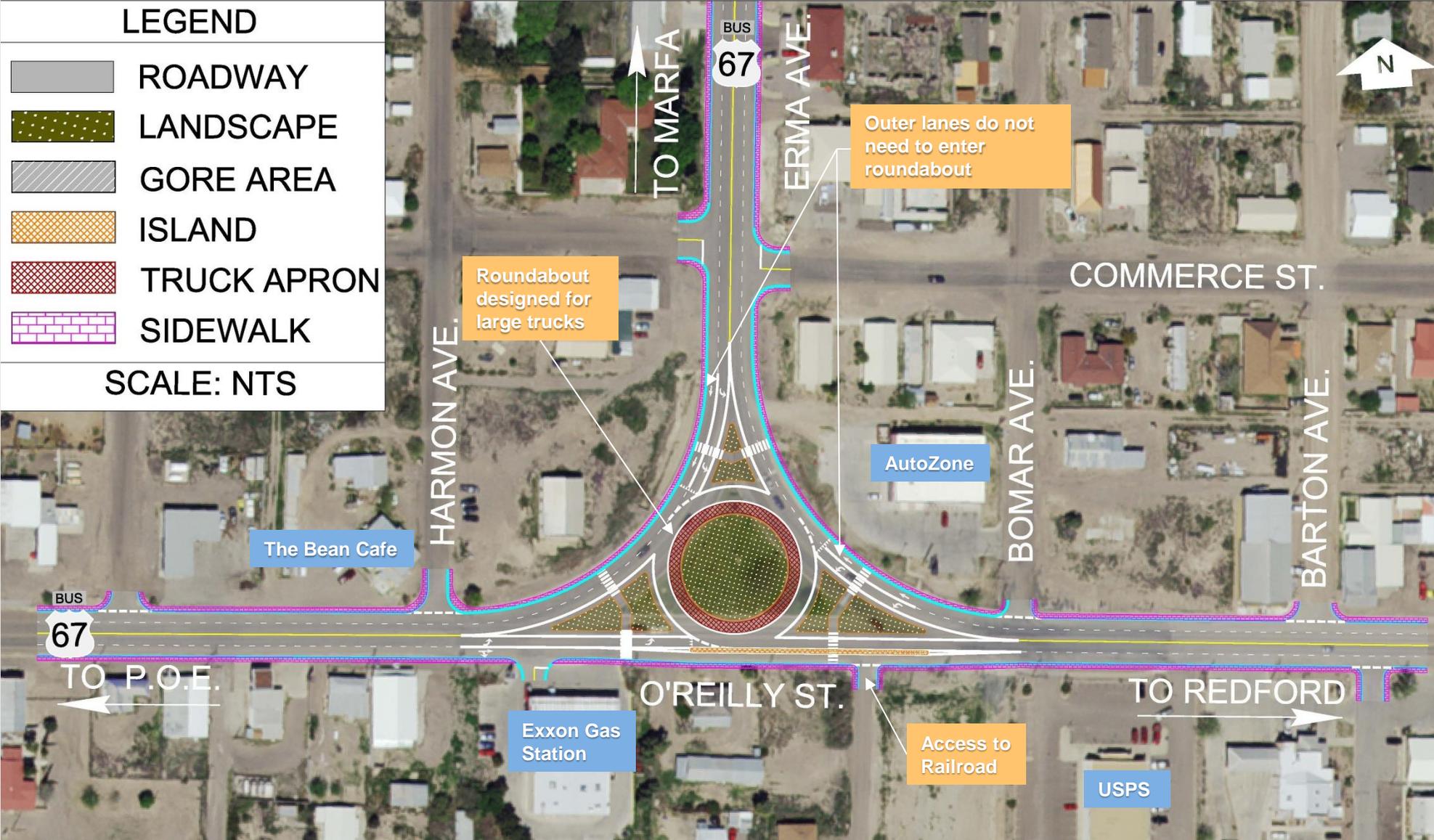
Presidio

HoloLens Location

LEGEND

-  ROADWAY
-  LANDSCAPE
-  GORE AREA
-  ISLAND
-  TRUCK APRON
-  SIDEWALK

SCALE: NTS



Issue Addressed: Improves Safety/ Reduce Conflict Points

Source of Need: Safety Analysis

Satisfying Goal Area: Safety & Mobility

Right of Way (ROW) required	No
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** The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*

Location 2 O'Reilly St & Erma Ave – Alternative C: “Roundabout”

HoloLens Location

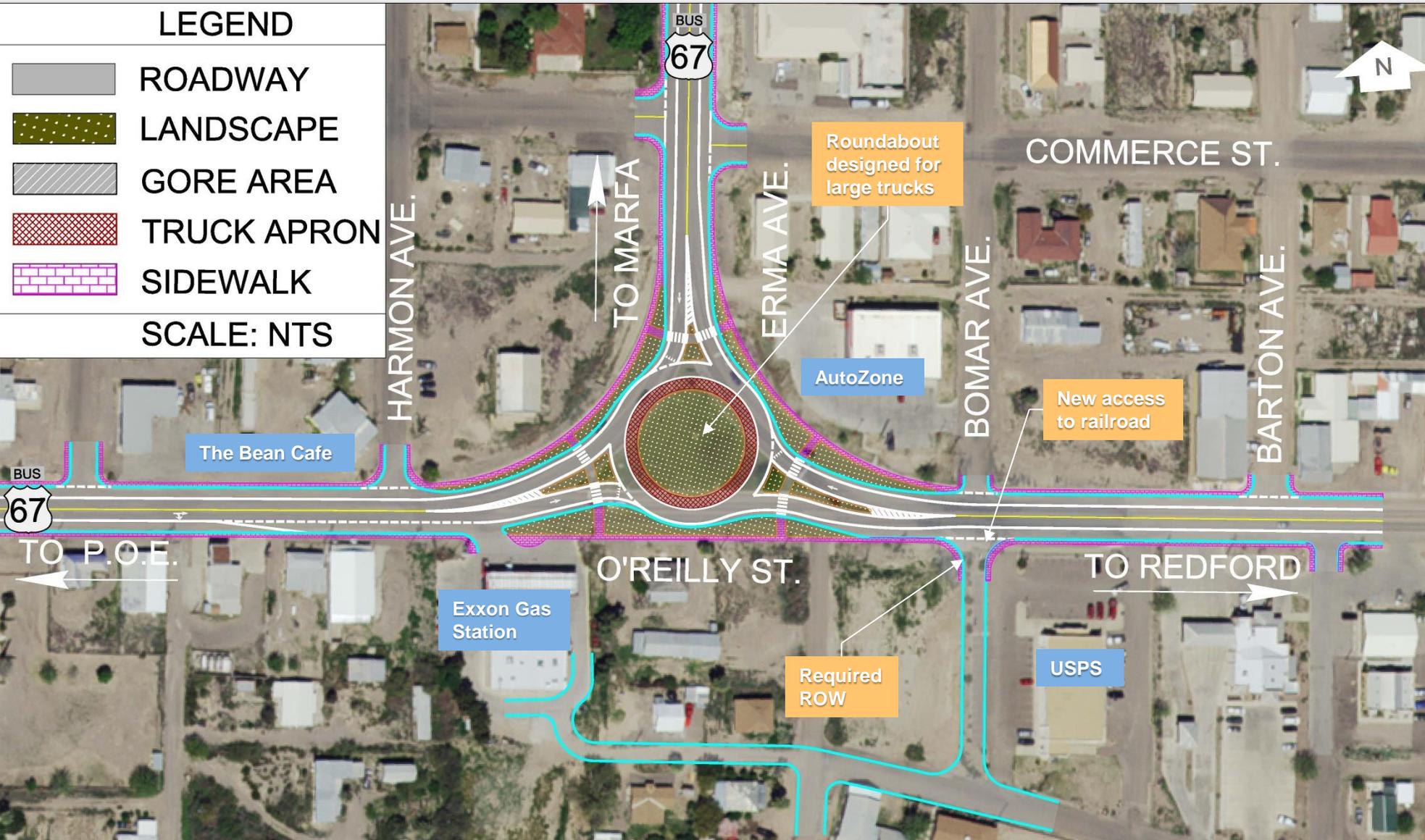
Issue Addressed: Improves Safety/ Reduce Conflict Points

Source of Need: Safety Analysis

Satisfying Goal Area: Safety & Mobility

Right of Way (ROW) required	Yes
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	No-Build	Alternative A: “Y-Intersection”	Alternative B: “Roundabout Raised Curb”	Alternative C: “Roundabout”
Cost	\$0	\$\$	\$\$	\$\$\$
Pros	<ul style="list-style-type: none"> - No cost - Does not require ROW 	<ul style="list-style-type: none"> - Allows movement in all directions - Increases safety - Will not require ROW 	<ul style="list-style-type: none"> - Addresses safety concerns by creating a safer intersection with less conflict points - Placemaking opportunity - Traffic calming - Will not require ROW 	<ul style="list-style-type: none"> - Addresses safety concerns by creating a safer intersection with less conflict points - Placemaking opportunity - Traffic calming
Cons	<ul style="list-style-type: none"> - Does not address safety concern 	<ul style="list-style-type: none"> - Reduces access to new gas station on south side 	<ul style="list-style-type: none"> - Raised curb may not be preferable along US 67 - Reduces access to new gas station on south side - Reduce access for West Bound traffic to the railroad 	<ul style="list-style-type: none"> - Reduces access to new gas station on south side - Maintains access to the railroad via newly re-routed Rio Grand Rd. - Will require ROW

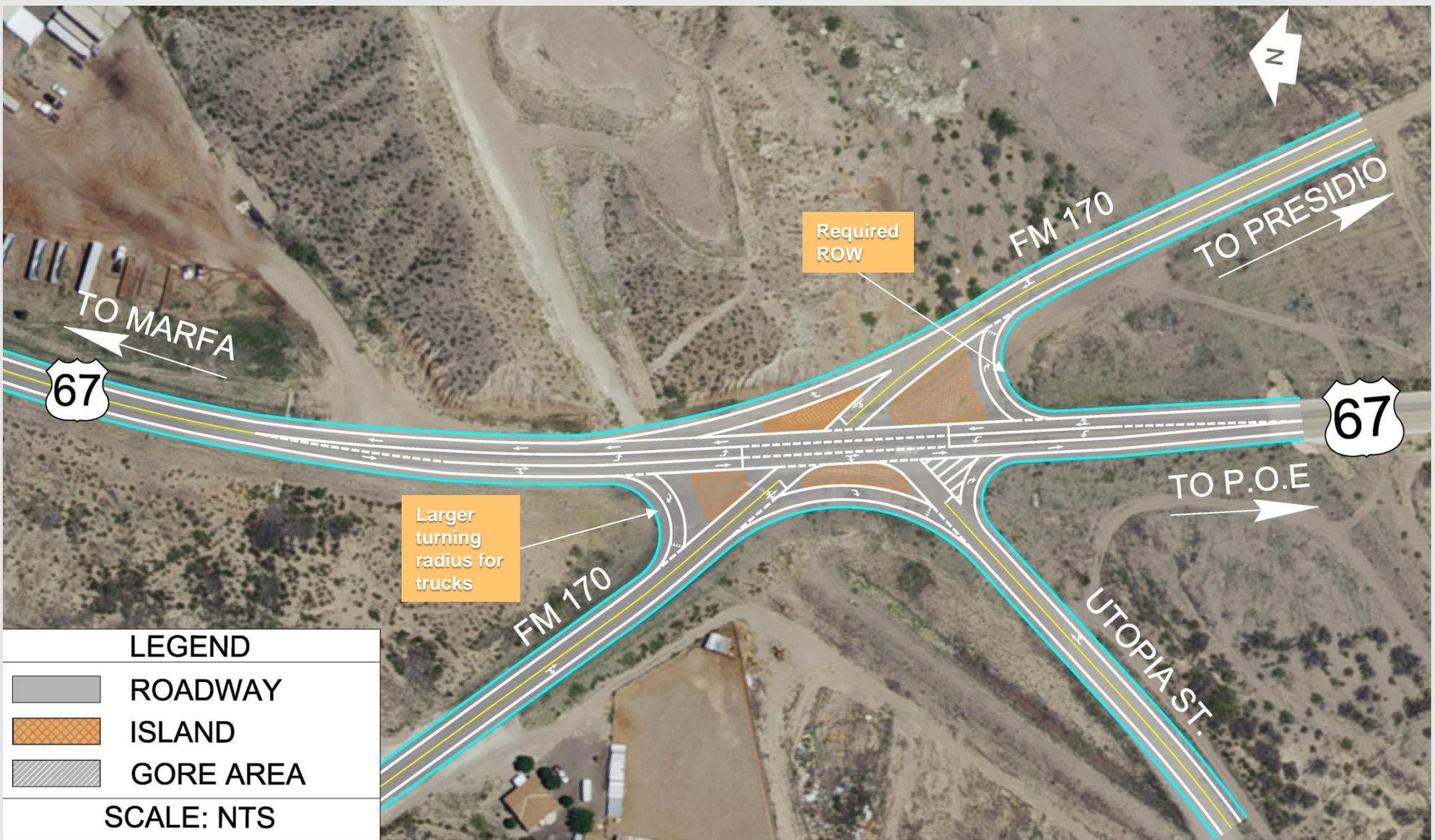


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Location 3: FM 170 and Utopia Street Intersections at US 67



Location 3 FM 170 & Utopia St at US 67 – Alternative A: “4-Way Intersection”



Issue Addressed: Freight Mobility	
Source of Need: Public Input	
Satisfying Goal Area: Emergency Response & Mobility	
Right of Way (ROW) required	Yes

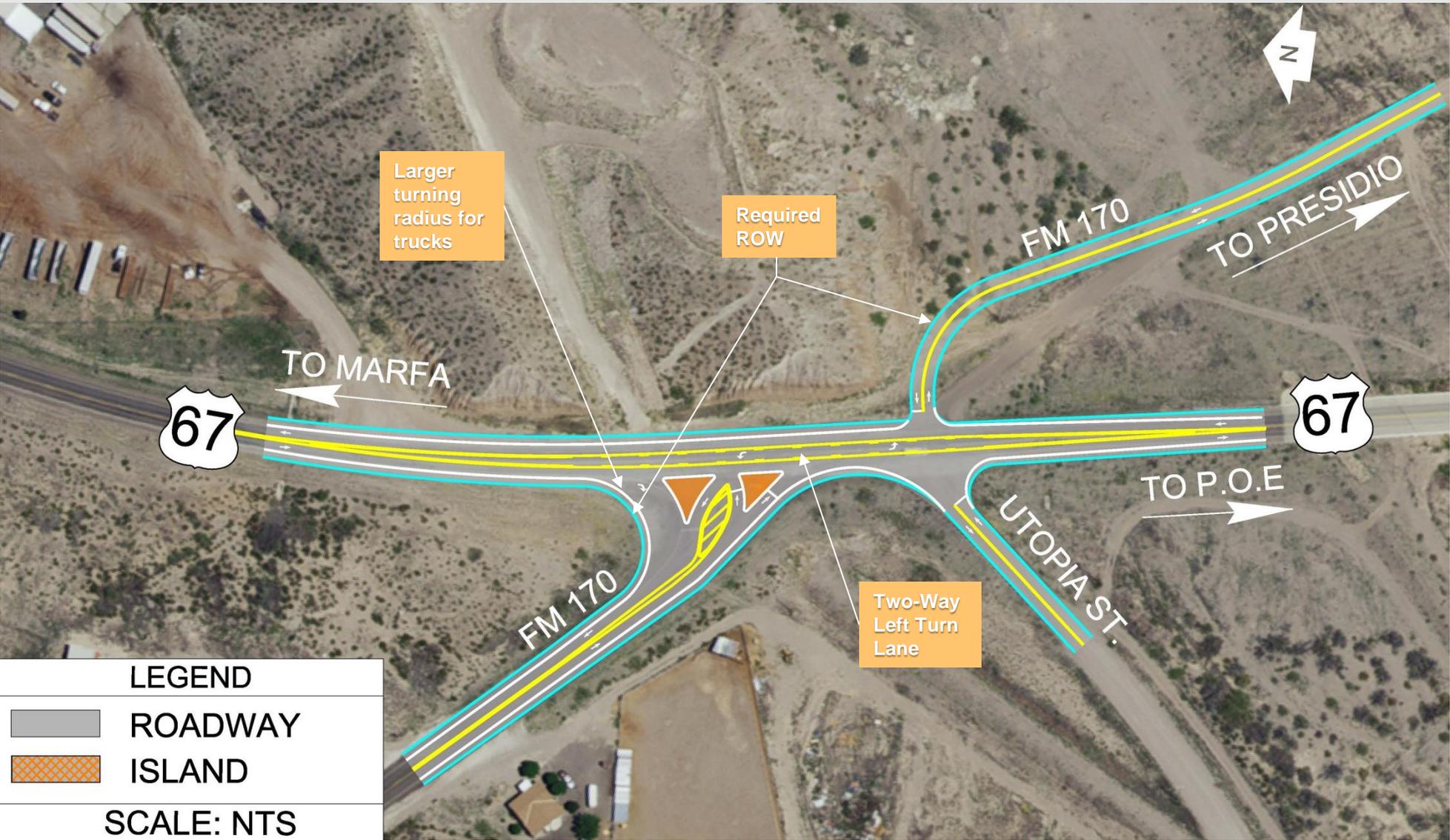
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LEGEND

- ROADWAY
- ISLAND
- GORE AREA

SCALE: NTS

Location 3 FM 170 & Utopia St at US 67 – Alternative B: “Two-Way Left-Turn Lane”

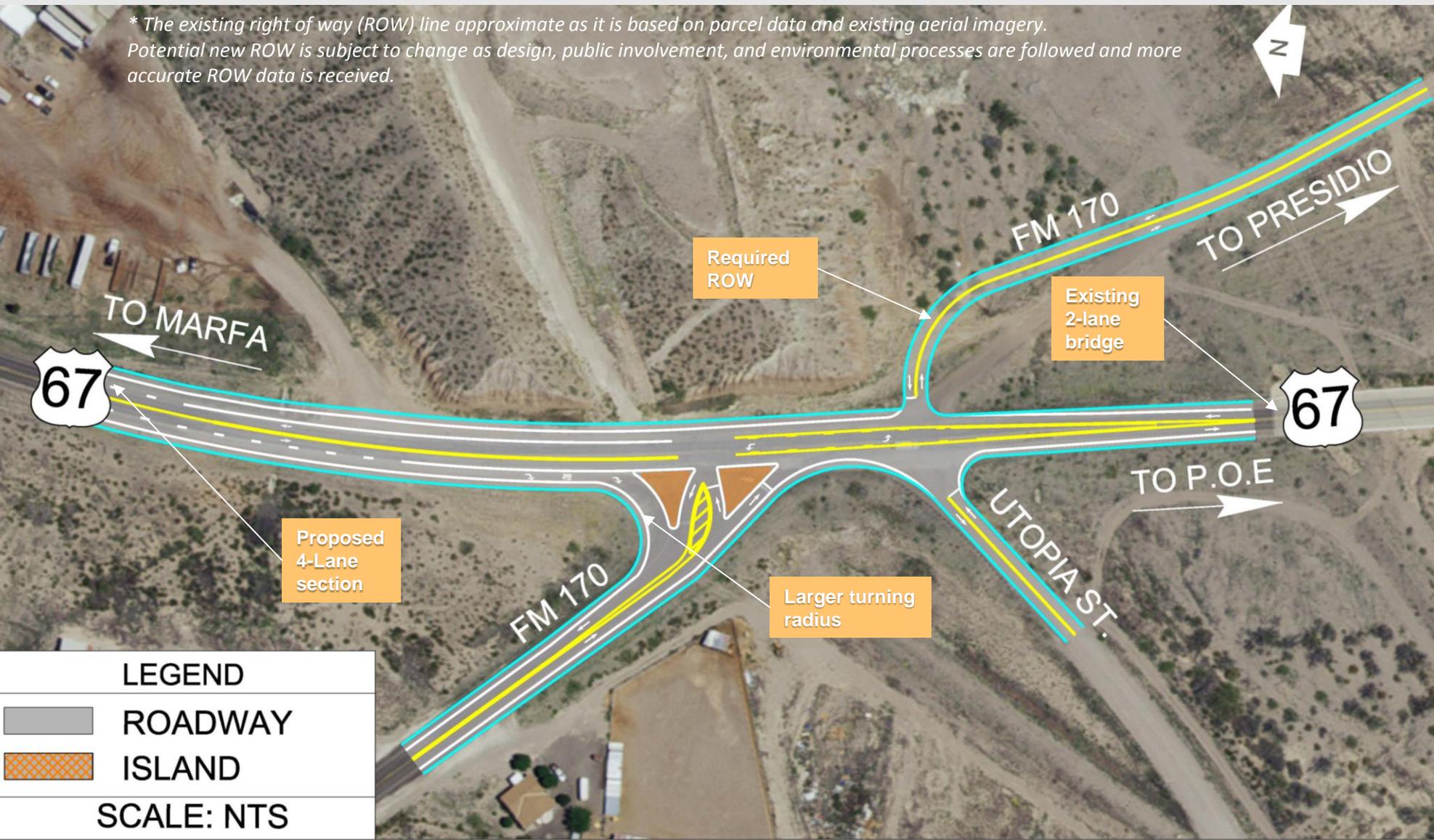


Issue Addressed: Freight Mobility	
Source of Need: Public Input	
Satisfying Goal Area: Emergency Response & Mobility	
Right of Way (ROW) required	Yes

** The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*

Location 3 FM 170 & Utopia St at US 67 – Alternative C: “4-Lane Segment”

* The existing right of way (ROW) line approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.



LEGEND

- ROADWAY
- ISLAND

SCALE: NTS

Issue Addressed: Freight Mobility	
Source of Need: Public Input	
Satisfying Goal Area: Emergency Response & Mobility	
Right of Way (ROW) required	Yes

	No-Build	Alternative A: “4-Way Intersection”	Alternative B: “Two-Way Left-Turn Lane”	Alternative C: “4-Lane Segment”
Cost	\$0	\$\$	\$\$	\$\$\$
Pros	<ul style="list-style-type: none"> - No cost - Does not require ROW 	<ul style="list-style-type: none"> - Improved turning radius from US 67 onto FM 170 - Directional medians 	<ul style="list-style-type: none"> - Simple intersection design will limit driver confusion - Large turning radius for trucks 	<ul style="list-style-type: none"> - Dedicated right turn lane onto FM 170 from US 67
Cons	<ul style="list-style-type: none"> - Does not address safety concern 	<ul style="list-style-type: none"> - Will require ROW 	<ul style="list-style-type: none"> - Will require ROW 	<ul style="list-style-type: none"> - Current traffic projections do not warrant 4-lane section - Will require ROW



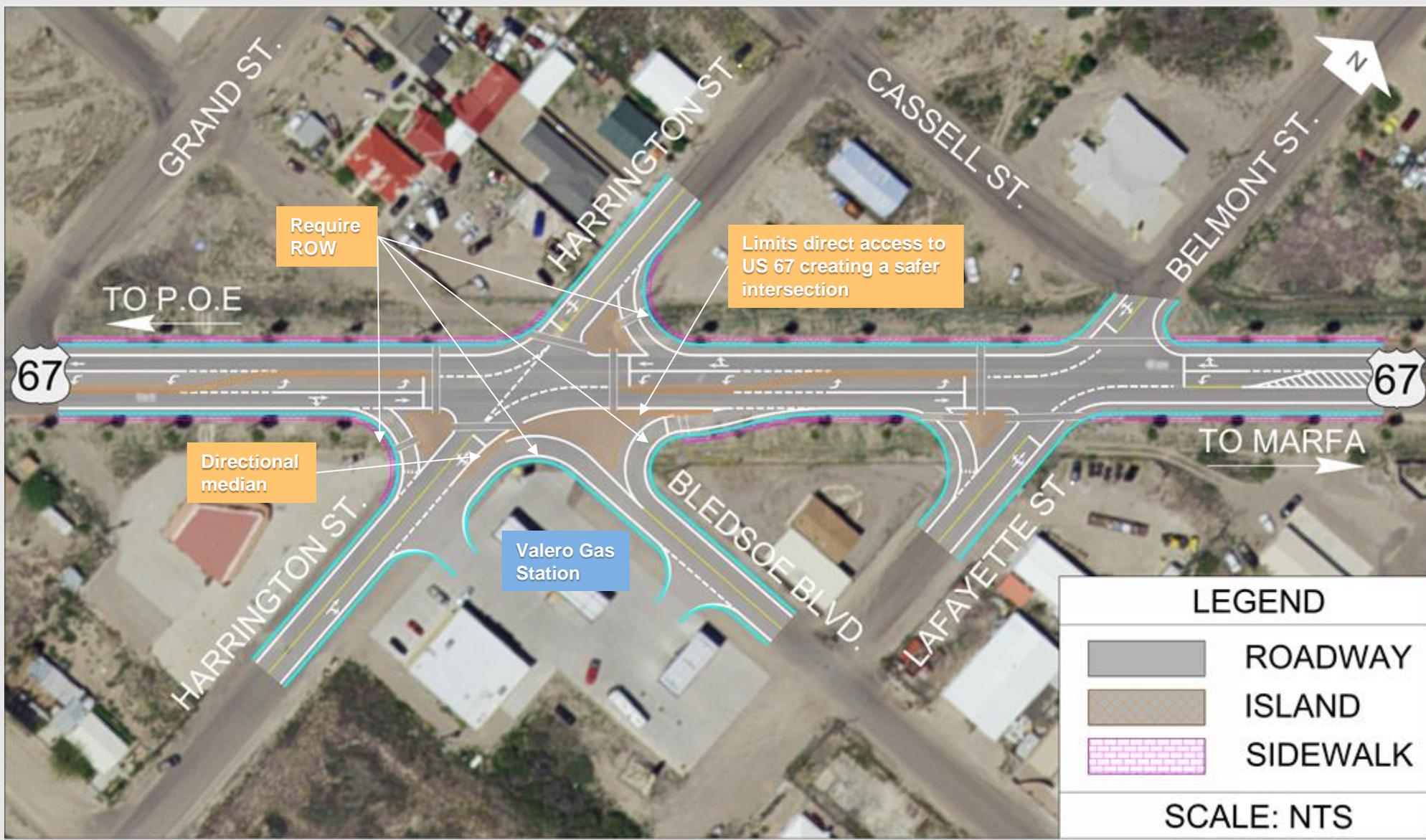
PRESIDIO

Location 4: Harrington Street & Bledsoe Boulevard Intersections at US 67

Location 4 Harrington St & Bledsoe Blvd at US 67 – No-Build Alternative: “Existing Condition” *Presidio*



Location 4 Harrington St & Bledsoe Blvd at US 67 – Alternative A: “4-Way Intersection”



Issue Addressed: Limits access to US 67 and creates a simple 4-legged intersection. Maintains access to truck fueling station

Source of Need: Public Input

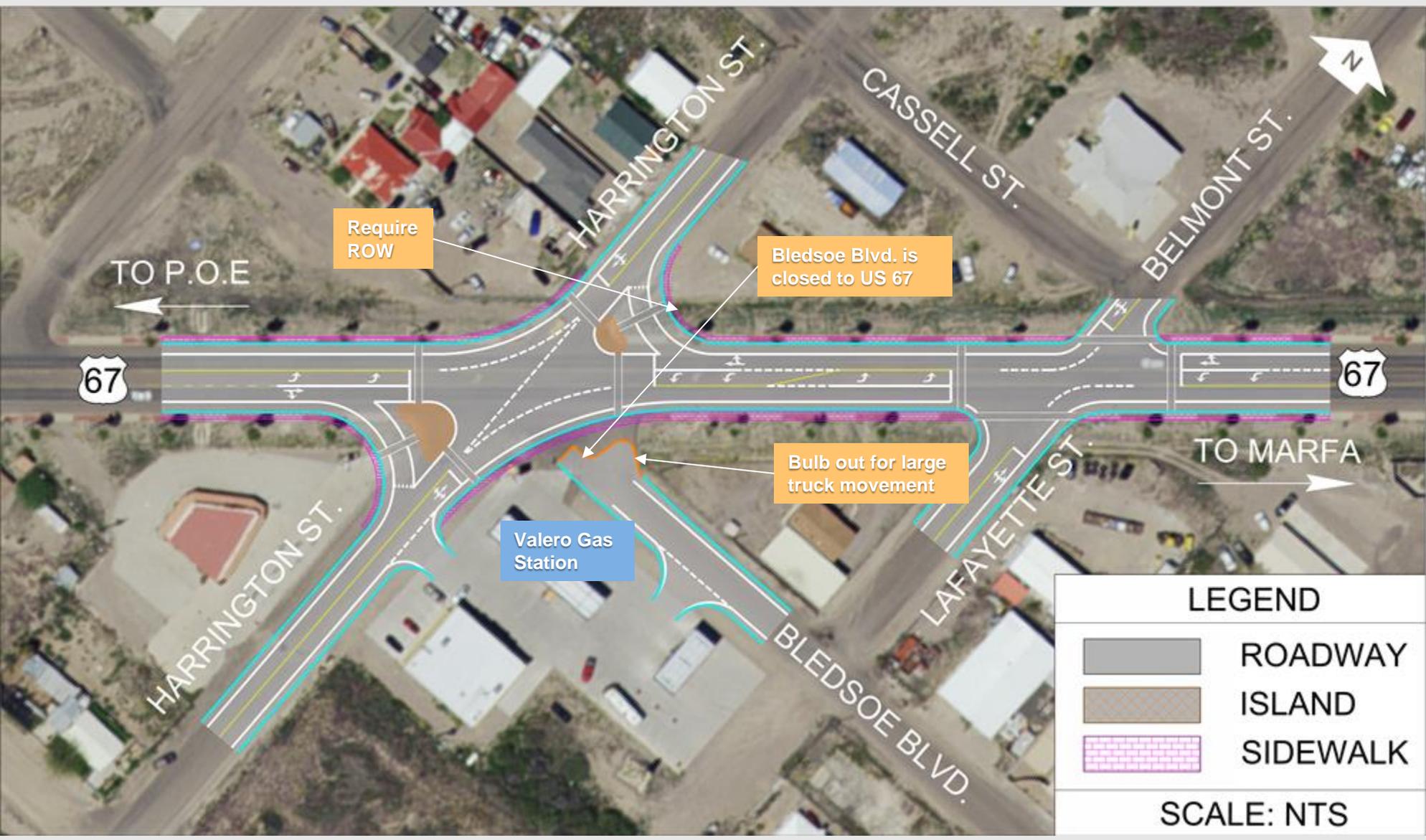
Satisfying Goal Area: Mobility

Right of Way (ROW) required	Yes
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This intersection is **not high priority** based on existing condition

Location 4 Harrington St & Bledsoe Blvd at US 67 – Alternative B: “Closing Bledsoe Blvd” *Presidio*



Issue Addressed: limits access to US 67 and creates a simple 4-legged intersection

Source of Need: Public Input

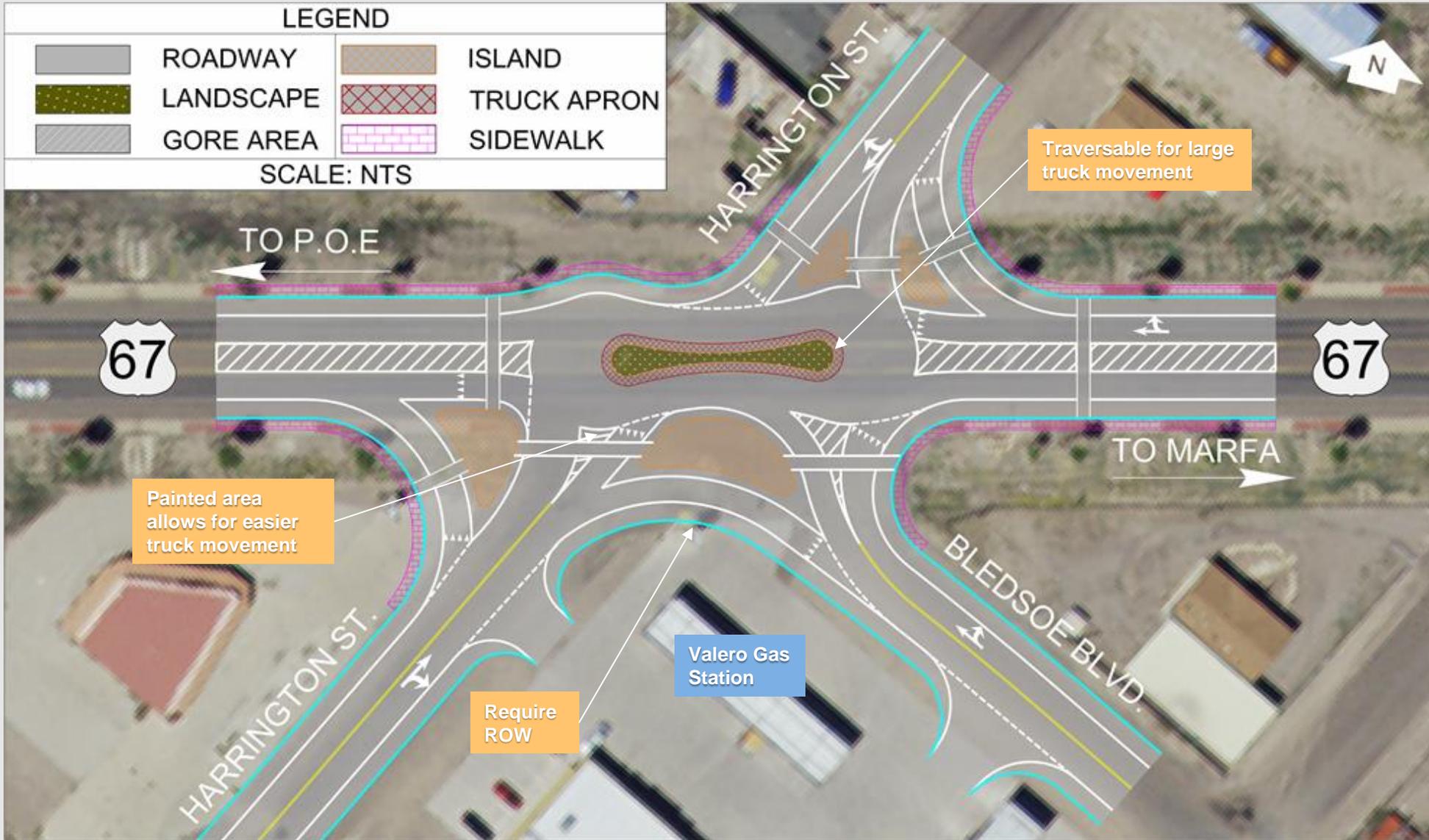
Satisfying Goal Area: Mobility

Right of Way (ROW) required	Yes
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This intersection is **not high priority** based on existing condition

Location 4 Harrington St & Bledsoe Blvd at US 67 – Alternative C: “Peanut”



Issue Addressed: Creates a safer traffic flow	
Source of Need: Public Input	
Satisfying Goal Area: Mobility	
Right of Way (ROW) required	Yes

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- This intersection is **not high priority** based on existing condition

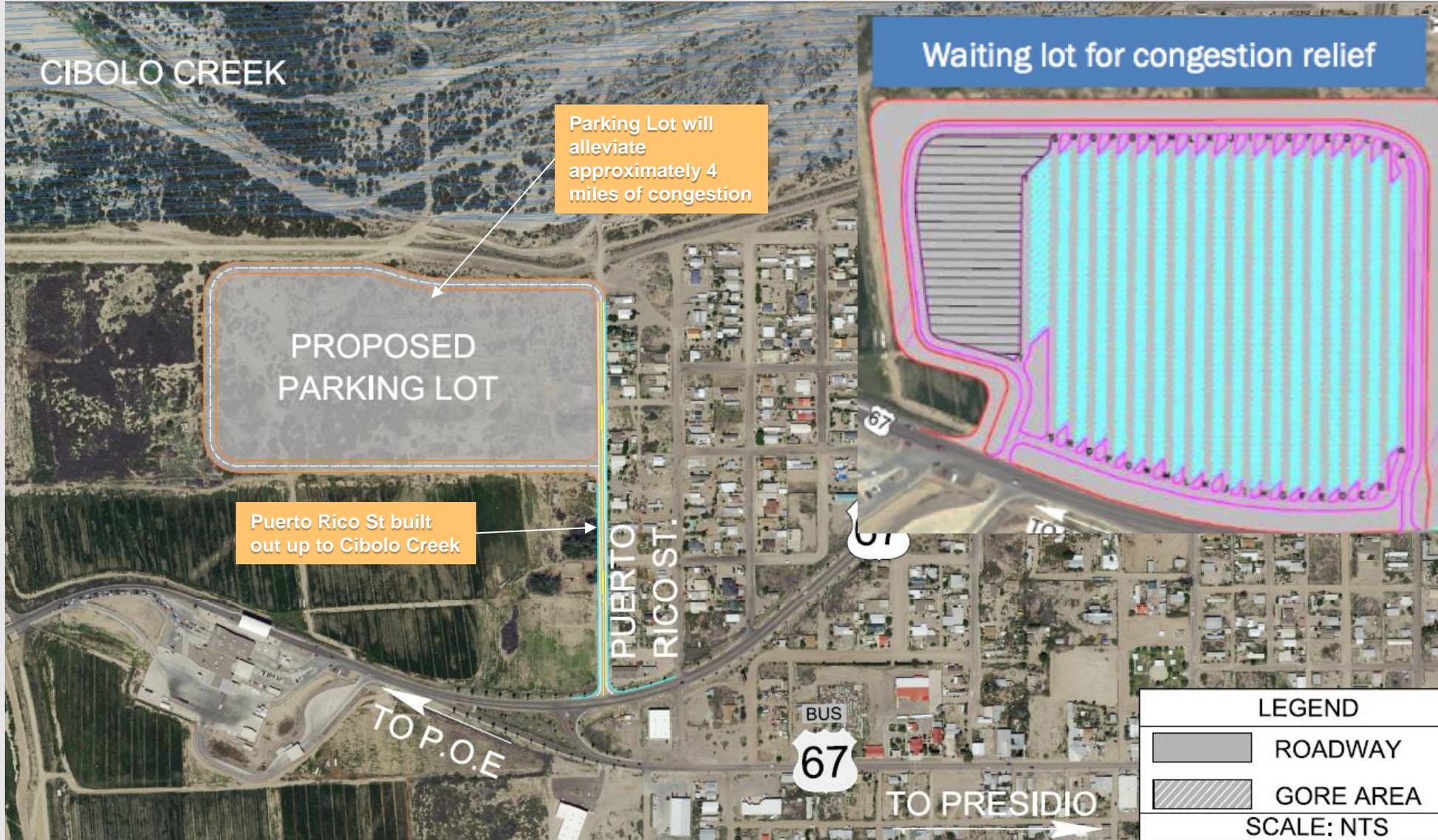
	No-Build	Alternative A: “4-Way Intersection”	Alternative B: “Closing Bledsoe Blvd”	Alternative C: “Peanut”
Cost	\$0	\$\$	\$	\$
Pros	<ul style="list-style-type: none"> – No cost – Does not require ROW 	<ul style="list-style-type: none"> – Allows access to truck fueling station – Avoids 5 legged intersection creating a safer traffic flow 	<ul style="list-style-type: none"> – Provides simple cost efficient solution – Limits access to US 67 addresses safety – Creates a safer intersection with less conflict points than existing intersection 	<ul style="list-style-type: none"> – Improves flow of traffic – Allows for placemaking opportunity – Creates a safer intersection with less conflict points than existing intersection
Cons	<ul style="list-style-type: none"> – Does not address safety & mobility concerns 	<ul style="list-style-type: none"> – Will require ROW 	<ul style="list-style-type: none"> – May be difficult for large trucks accessing gas station at South corner – Will require ROW 	<ul style="list-style-type: none"> – Will require ROW



PRESIDIO

Location 5: Port of Entry (POE) Congestion Relief Concepts

Location 5 POE Congestion Relief - Alternative A: "Parking Capacity at POE"



Issue Addressed: Congestion at POE	
Source of Need: Public Input; CWG	
Satisfying Goal Area: Emergency Response & Mobility	
Right of Way (ROW) required	Yes
- Parking Lot is not under TXDOT Jurisdiction, requires multi-jurisdictional collaboration	

** The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*

Location 5 POE Congestion Relief - Alternative B: "Utopia Street Relief Route" Presidio



Issue Addressed: Congestion at POE	
Source of Need: Public Input	
Satisfying Goal Area: Emergency Response & Mobility	
Right of Way (ROW) required	Yes

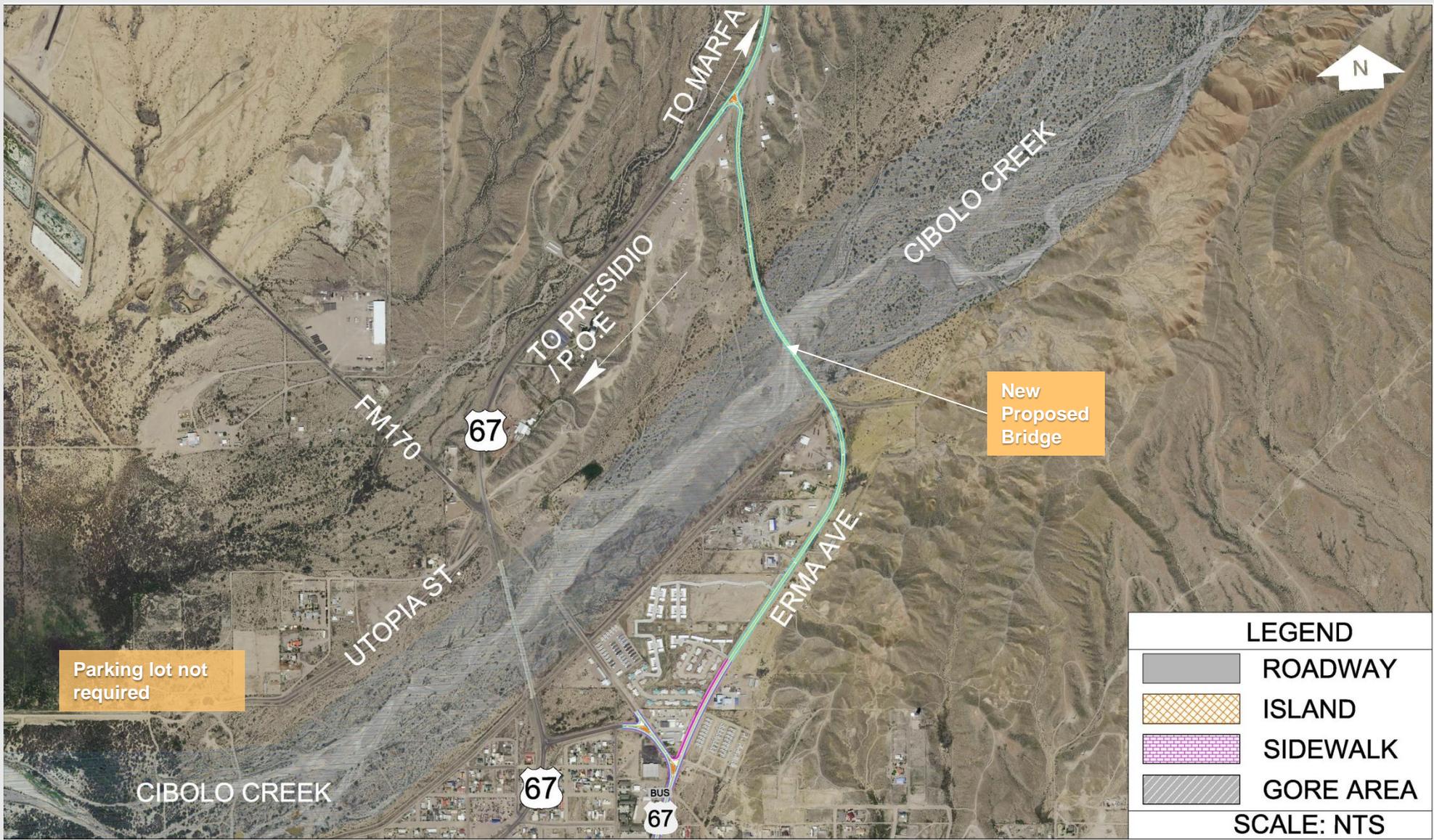
** The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*

LEGEND

- ROADWAY
- ISLAND
- GORE AREA

SCALE: NTS

Location 5 POE Congestion Relief - Alternative C: "Erma Avenue Relief Route over Cibolo Creek"



Parking lot not required

New Proposed Bridge

LEGEND

-  ROADWAY
-  ISLAND
-  SIDEWALK
-  GORE AREA

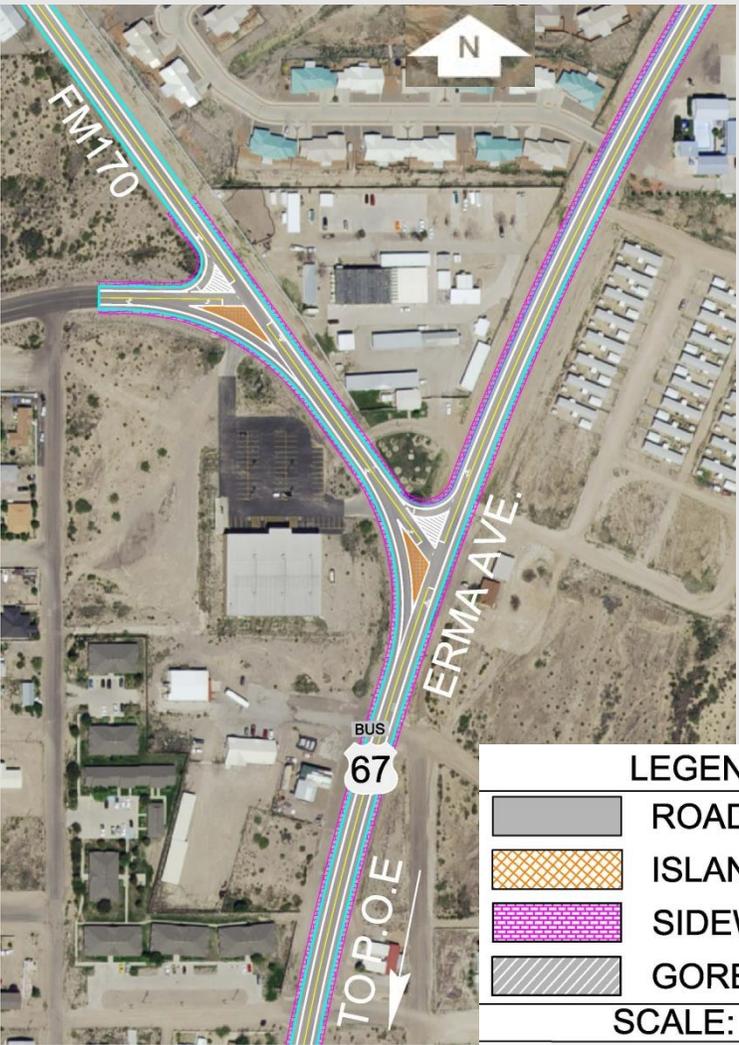
SCALE: NTS

Presidio

Issue Addressed: Congestion at POE	
Source of Need: Public Input	
Satisfying Goal Area: Emergency Response & Mobility	
Right of Way (ROW)	Yes required

** The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*

Location 5 POE Congestion Relief - Alternative C: Continued



LEGEND

- ROADWAY
- ISLAND
- SIDEWALK
- GORE AREA

SCALE: NTS



Presidio

Issue Addressed: Congestion at POE	
Source of Need: Public Input	
Satisfying Goal Area: Emergency Response & Mobility	
Right of Way (ROW) required	Yes

** The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*

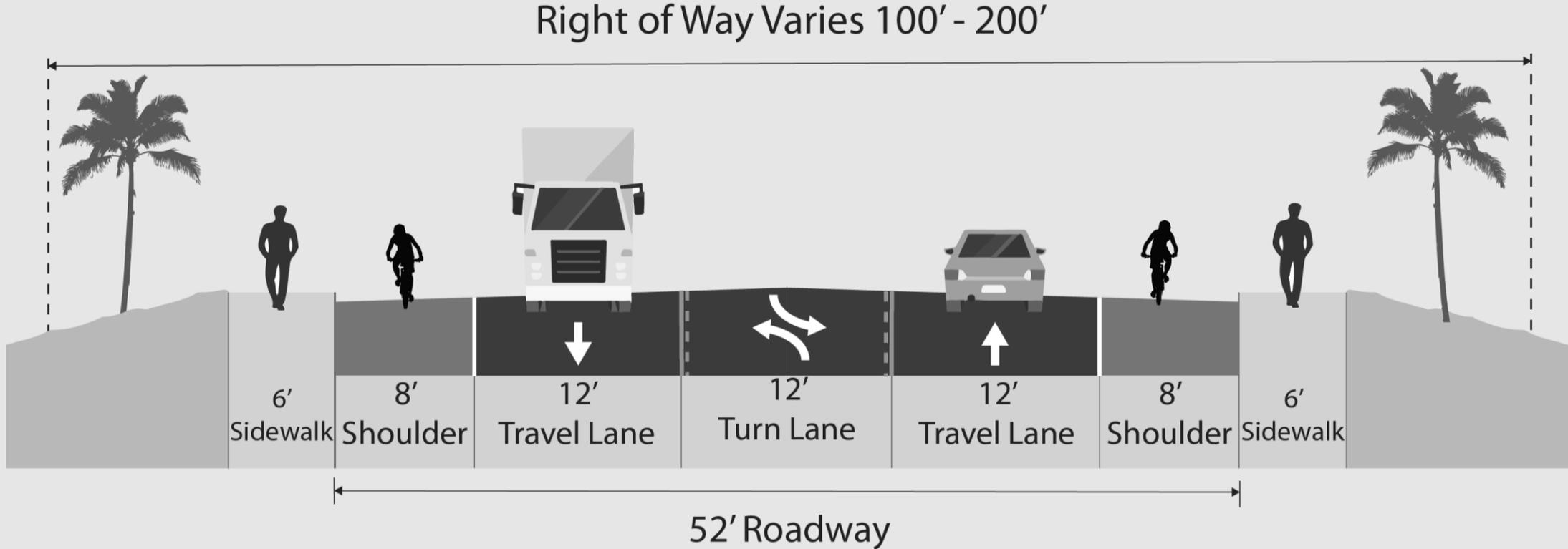
	No-Build	Alternative A: “Parking Capacity at POE”	Alternative B: “Utopia St Relief Route”	Alternative C: “Erma Ave Relief Route”
Cost	\$0	\$	\$\$	\$\$\$
Pros	<ul style="list-style-type: none"> - No cost - Does not require ROW 	<ul style="list-style-type: none"> - Cost efficient - Simple design and will alleviate traffic back up into Presidio 	<ul style="list-style-type: none"> - Will provide some relief to city of Presidio - Can be a phased approach with parking lot being phase 1 with future build out of Utopia St. 	<ul style="list-style-type: none"> - Will provide adequate relief away from city.
Cons	<ul style="list-style-type: none"> - Does not address safety concern 	<ul style="list-style-type: none"> - Not under TxDOT jurisdiction, requires multijurisdictional collaboration 	<ul style="list-style-type: none"> - Detour is close to city limits and will cause traffic to back up through the city - Will require ROW 	<ul style="list-style-type: none"> - Will require significant amount of construction and bridge reconstruction as well - Will require ROW



PRESIDIO

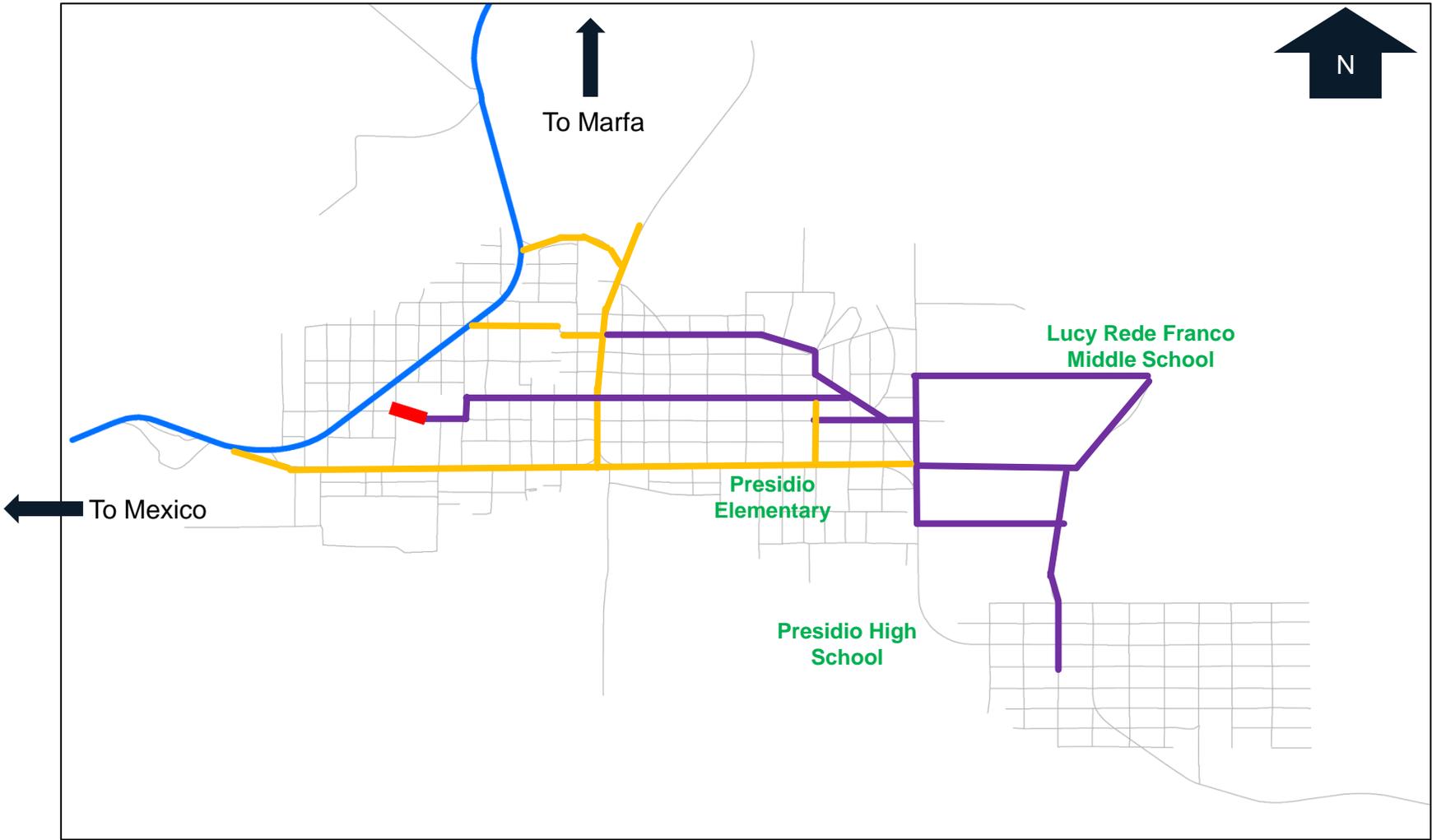
Location 6: Complete Street Alternatives

EXISTING:





SIDEWALK	BIKE LANE	BUFFER	TRAVEL LANE	TURN LANE	TRAVEL LANE	BUFFER	BIKE LANE	SIDEWALK
6'	5'	3'	12'	12'	12'	3'	5'	6'
52' EXISTING ROADWAY								
RIGHT OF WAY VARIES 100' - 200'								



- Legend
- US 67 Corridor
 - Potential Bicycle Network Connectivity
 - Roadway Network Gap
 - Programed Bike/Ped Improvements

	No-Build	Alternative A: “Bike Lane with Striped Buffer”	Alternative B: “Bike Improvements Off US 67”
Cost	\$0	\$	\$
Pros	<ul style="list-style-type: none"> - No cost - Does not require ROW 	<ul style="list-style-type: none"> - Addresses safety - Does not require roadway widening 	<ul style="list-style-type: none"> - Addresses safety - Does not require roadway widening
Cons	<ul style="list-style-type: none"> - Does not address safety concern 	<ul style="list-style-type: none"> - None 	<ul style="list-style-type: none"> - Not under TxDOT jurisdiction, requires multijurisdictional collaboration



MARFA

Intersection Concepts

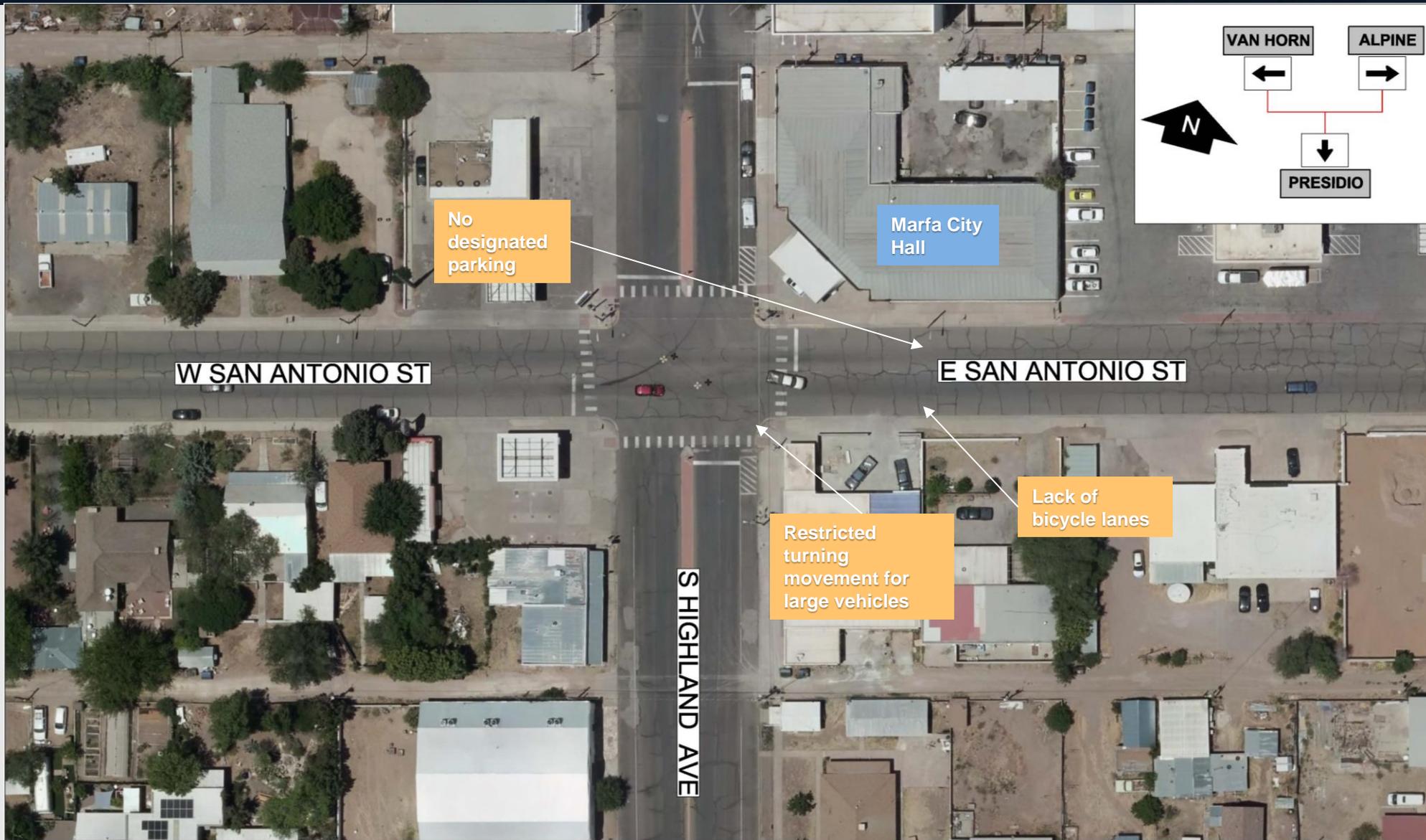




MARFA

Location 1: San Antonio Street & Highland Avenue Intersection

Location 1 San Antonio St & Highland Ave – No-Build Alternative: “Existing Condition”

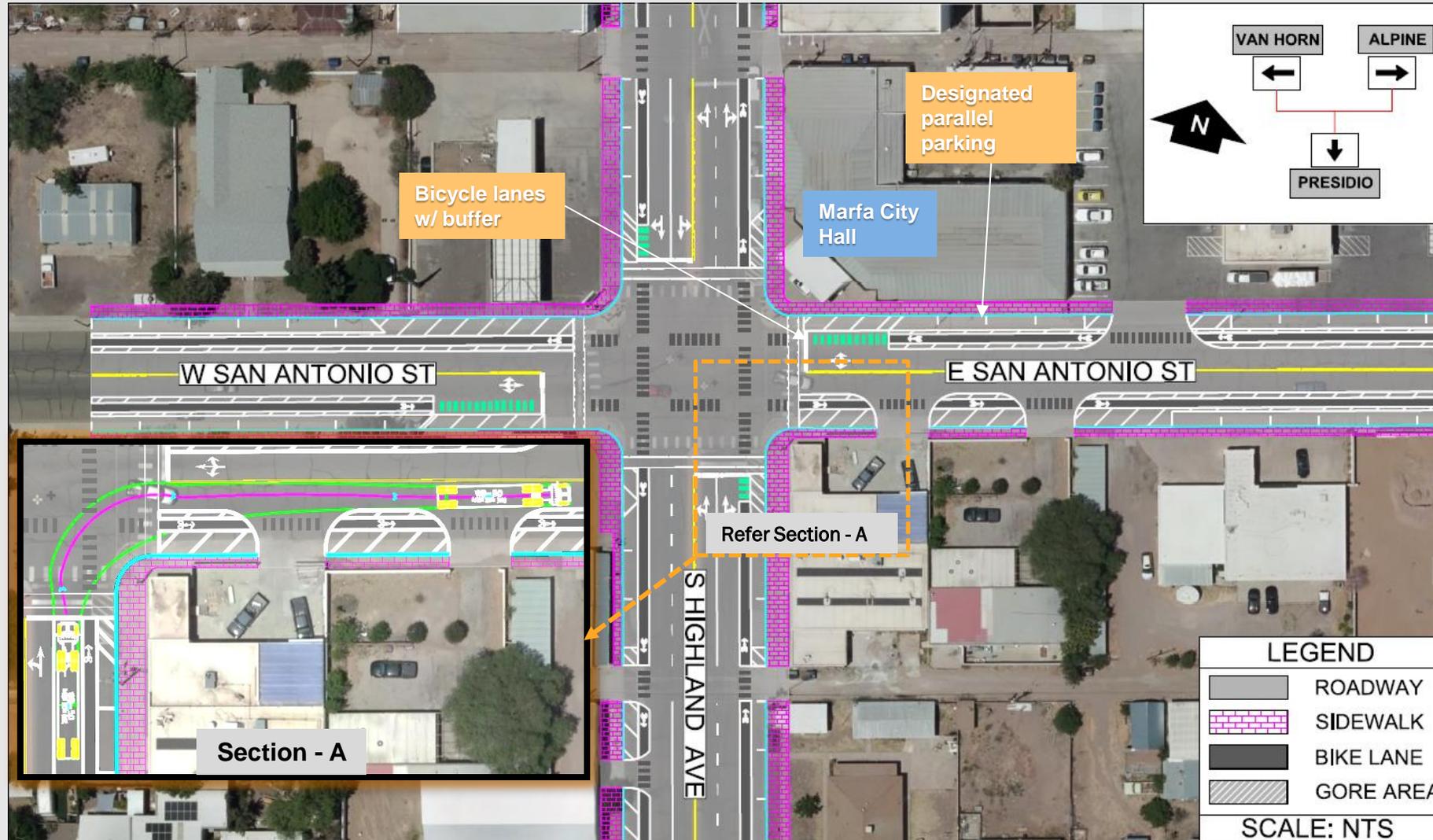


Location 1 San Antonio St & Highland Ave – Alternative A: “With Bike Lanes”

Marfa

Four lanes on Highland Avenue and two lanes on San Antonio Street with bike lanes

HoloLens Location



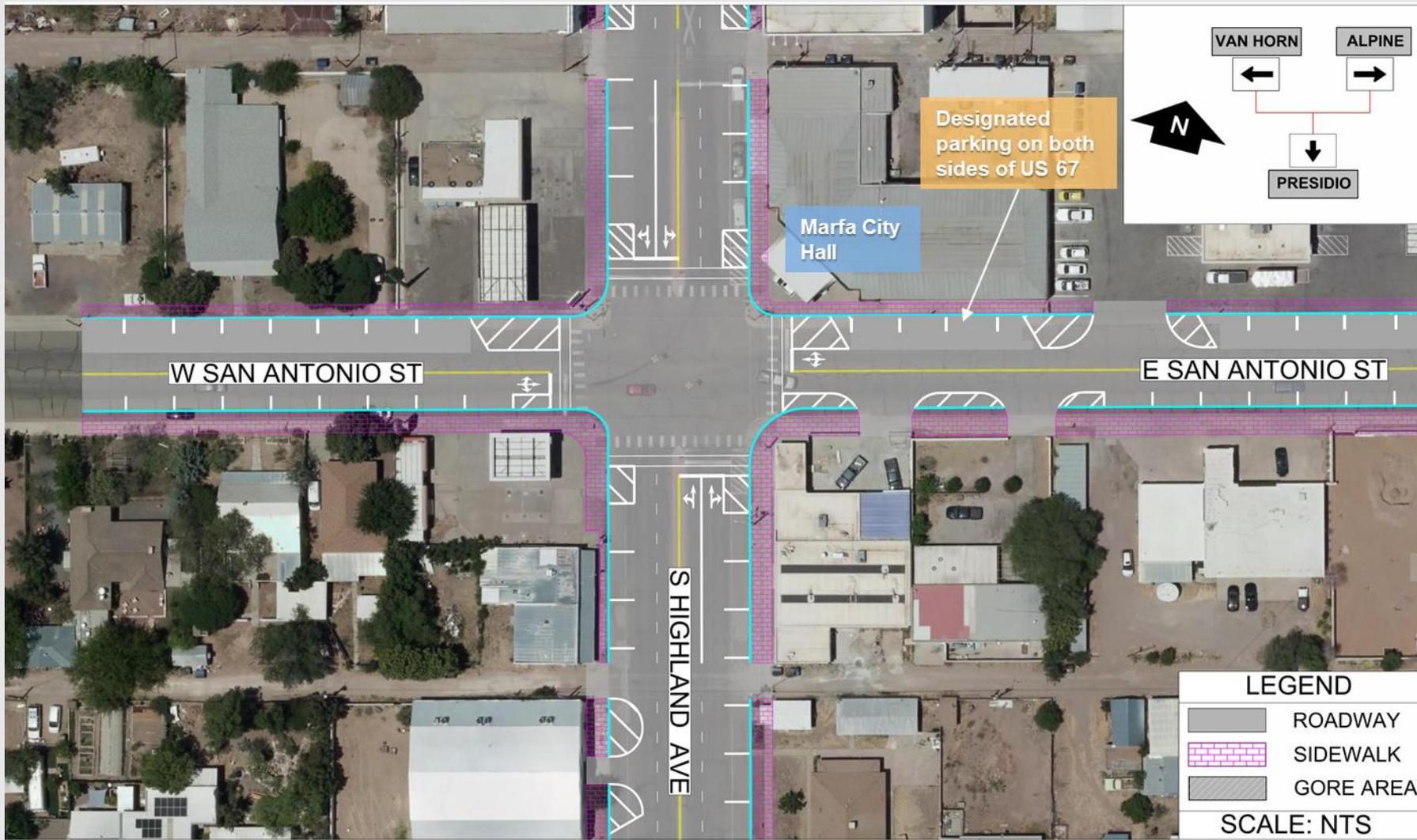
Issue Addressed: Larger turn radii for trucks with improved bike/ped facilities	
Source of Need: Public Input/ Safety Memo	
Satisfying Goal Area: Safety/ Multi-Modal	
Right of Way (ROW) required	No
Non Geometry Concepts (ITS/Safety)	
Install Pedestrian Hybrid Beacon	

* The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.

Project Limits:
Four lane section is between Oak Street intersection in the north and Dallas Street intersection in the south.

Location 1 San Antonio St & Highland Ave – Alternative B: “Without Bike Lanes” Marfa

Four lanes on Highland Avenue and two lanes on San Antonio Street without bike lanes



HoloLens Location

Issue Addressed: Larger turn radii for trucks with improved pedestrian facilities	
Source of Need: Public Input/ Safety Memo	
Satisfying Goal Area: Safety/ Multi-Modal	
Right of Way (ROW) required	No
Non Geometry Concepts (ITS/Safety)	
Install Pedestrian Hybrid Beacon	

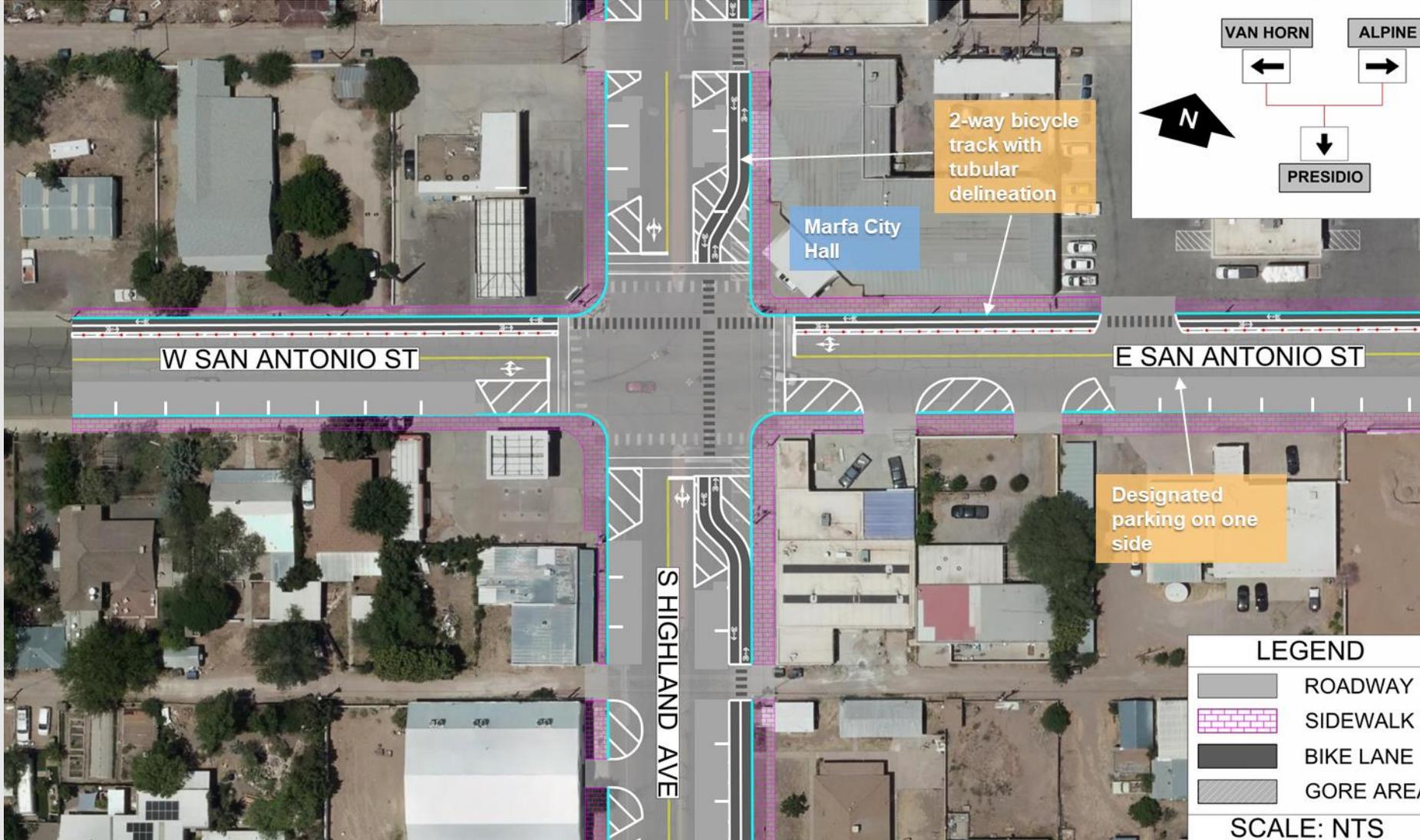
** The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*

Project Limits:
Four lane section is between Oak Street intersection in the north and Dallas Street intersection in the south.

Location 1 San Antonio St & Highland Ave – Alternative C: “Two-Way Cycle Track” Marfa

Two-way cycle track on San Antonio Street and Highland Avenue with two lanes on Highland Avenue

HoloLens Location



Issue Addressed: Larger turn radii for trucks with improved bike/ped facilities

Source of Need: Public Input/ Safety Memo

Satisfying Goal Area: Safety/ Multi-Modal

Right of Way (ROW) required	No
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Non Geometry Concepts (ITS/Safety)

Install Pedestrian Hybrid Beacon

** The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*

Project Limits:
 Four lane section is between Oak Street intersection in the north and Dallas Street intersection in the south.

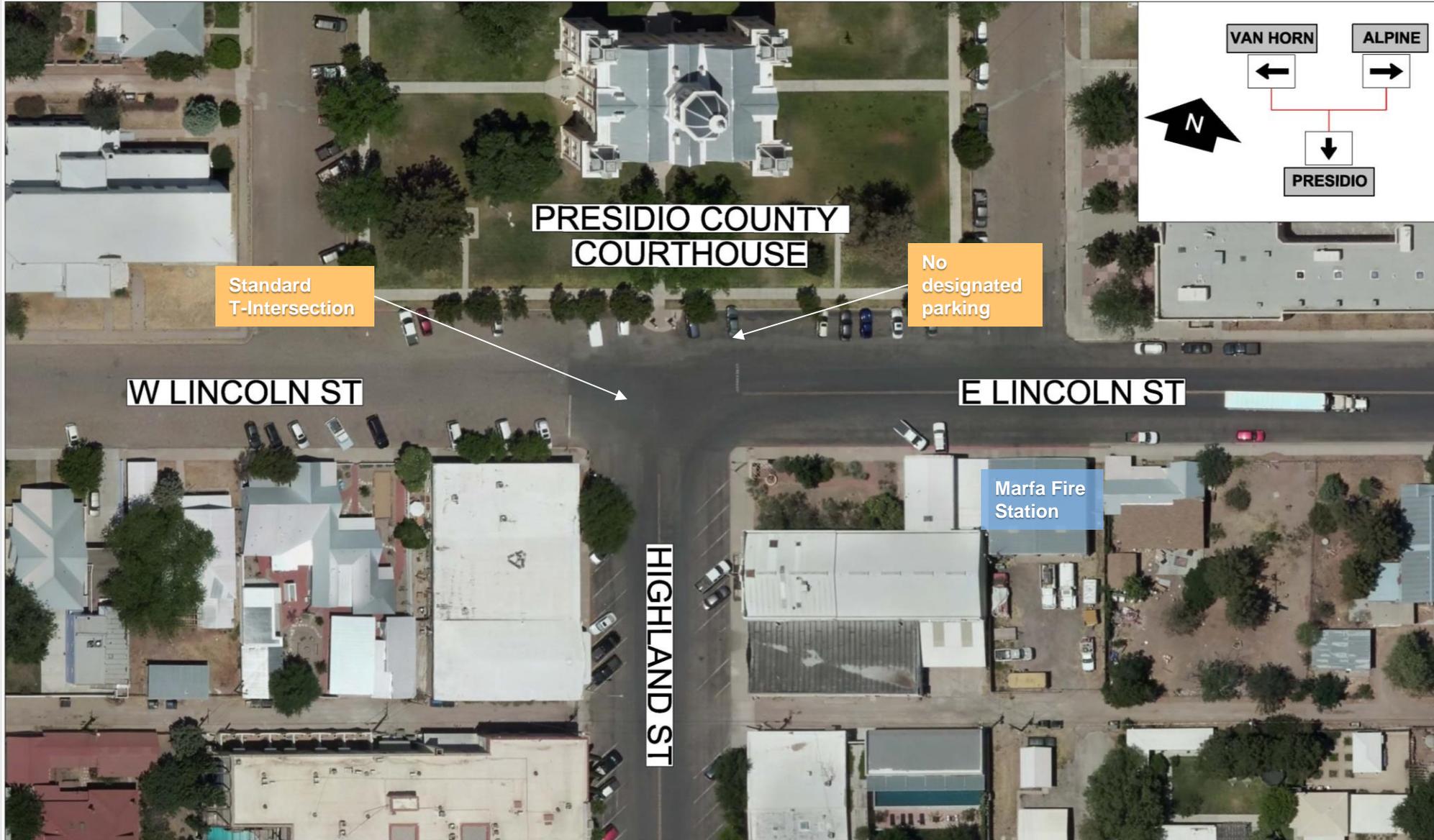
	No-Build	Alternative A: “With Bike Lanes”	Alternative B: “Without Bike Lanes”	Alternative C: “Two-Way Cycle Track”
Cost	\$0	\$\$	\$\$	\$\$
Pros	<ul style="list-style-type: none"> - No cost - Does not require ROW 	<ul style="list-style-type: none"> - Dedicated bicycle lane with buffer for safety - Eliminates parking at intersections for better visibility - Does not require ROW 	<ul style="list-style-type: none"> - Provides parallel parking along San Antonio St. - Does not require ROW 	<ul style="list-style-type: none"> - Dedicated 2-way cycle track - Does not require ROW
Cons	<ul style="list-style-type: none"> - Does not address safety concern 	<ul style="list-style-type: none"> - None 	<ul style="list-style-type: none"> - No bike lane provided 	<ul style="list-style-type: none"> - Decreased parking



MARFA

Location 2: Lincoln & Highland Street Intersection at Marfa Court House

Location 2 Lincoln St & Highland St – No-Build Alternative: “Existing Condition”



Location 2 Lincoln St & Highland St – Alternative A: “Roundabout”

HoloLens Location

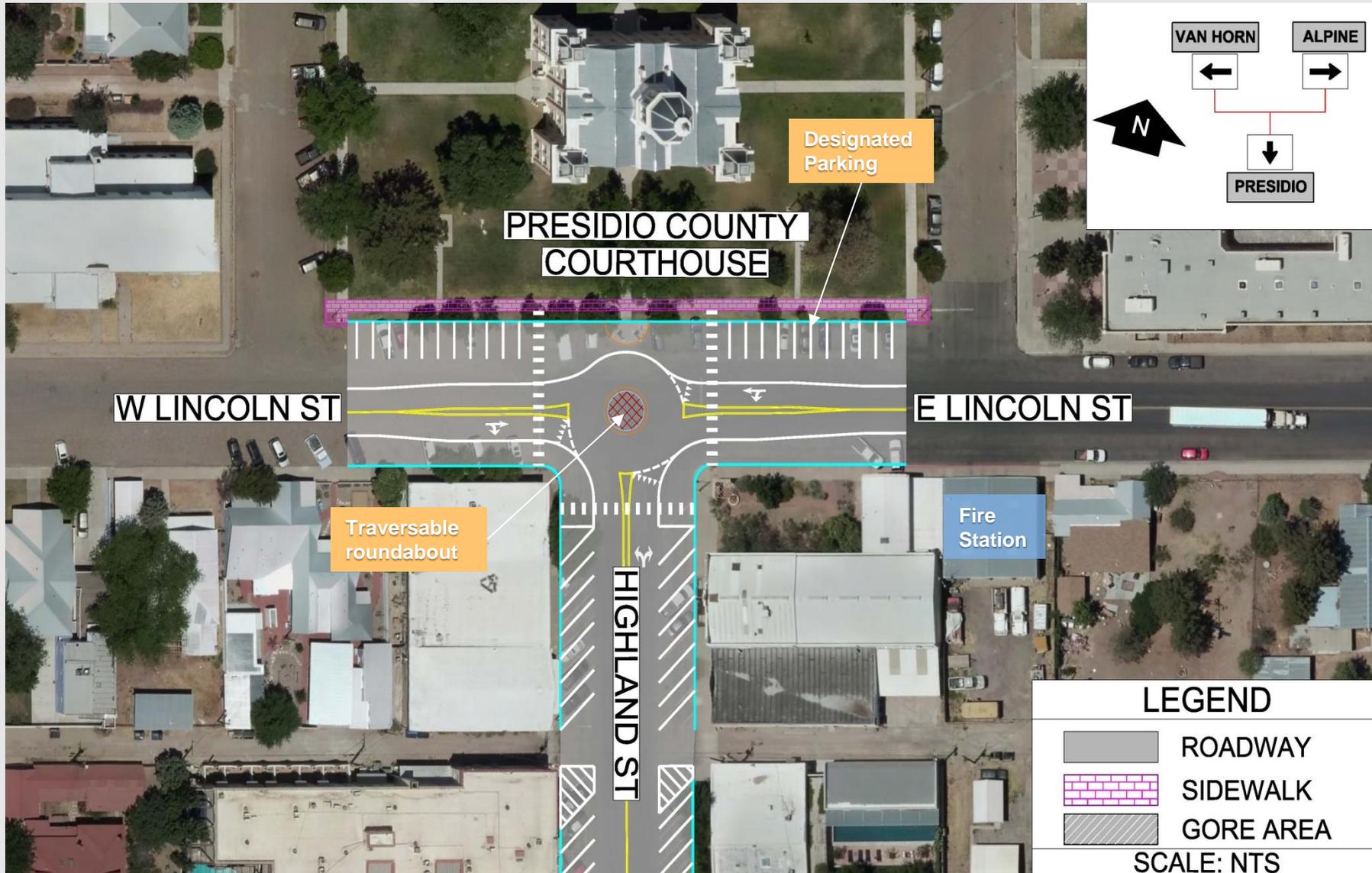
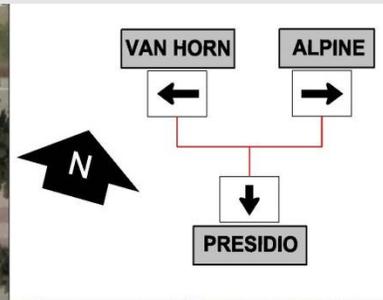
Issue Addressed: Larger turn radii for trucks with improved pedestrian facilities; Improves Safety/ Reduce Conflict Points

Source of Need: Public Input/ Safety Memo

Satisfying Goal Area: Safety/ Multi-Modal

Right of Way (ROW) required	No
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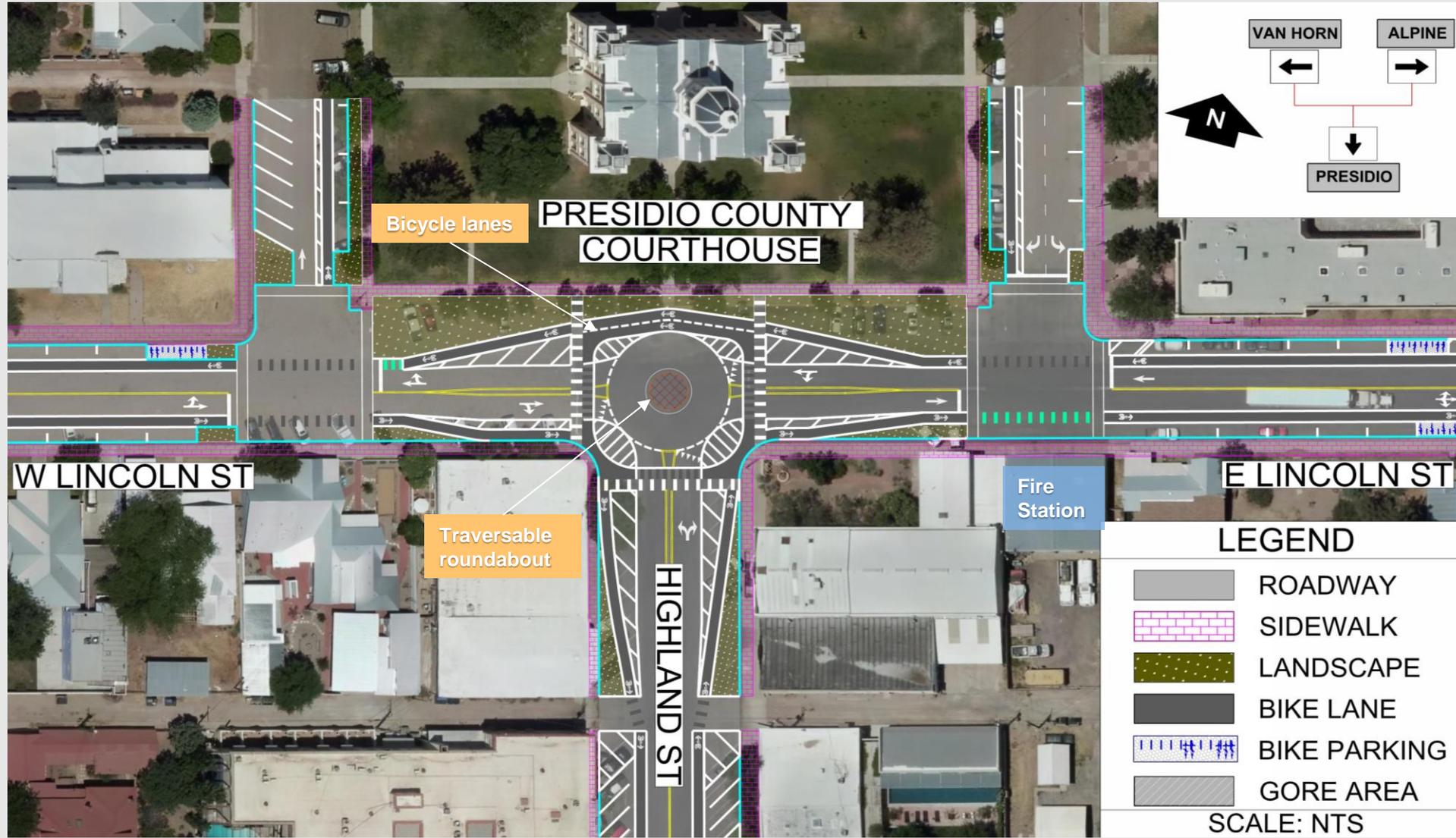
** The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*



LEGEND

- ROADWAY
- SIDEWALK
- GORE AREA

SCALE: NTS



HoloLens Location

Issue Addressed: Larger turn radii for trucks with improved bike/ped facilities; Improves Safety/ Reduce Conflict Points

Source of Need: Public Input

Satisfying Goal Area: Safety/ Multi-Modal

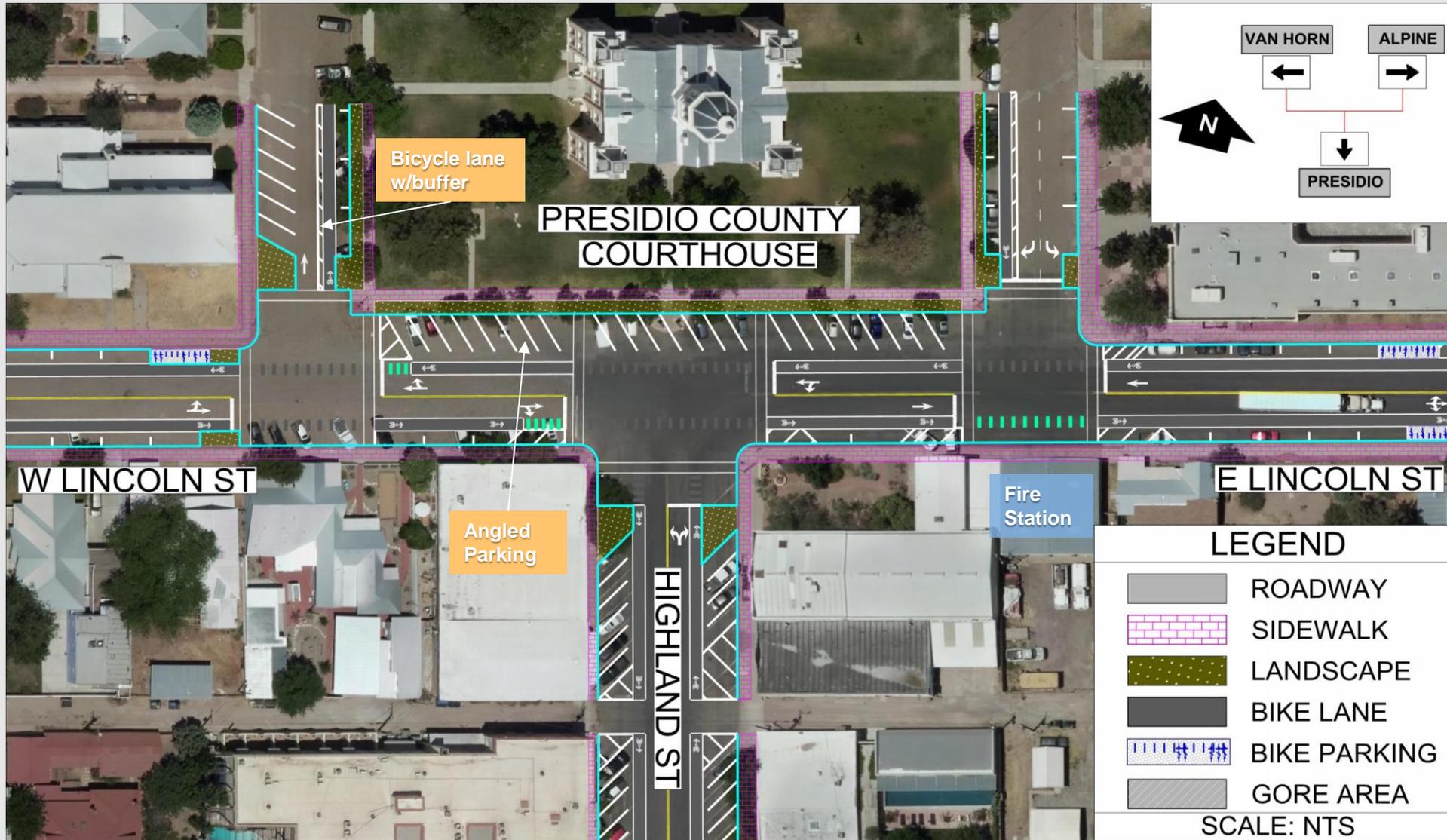
Right of Way (ROW) required	No
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Non Geometry Concepts (ITS/Safety)

Moved parking stalls away from intersections (Safety)

** The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*

Location 2 Lincoln St & Highland St – Alternative C: “T-Intersection”



HoloLens Location

Issue Addressed: Larger turn radii for trucks with improved bike/ped facilities; Improves Safety/ Reduce Conflict Points

Source of Need: Public Input

Satisfying Goal Area: Safety/ Multi-Modal

Right of Way (ROW)	No required
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Non Geometry Concepts (ITS/Safety)

Moved parking stalls away from intersections (Safety)

** The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*

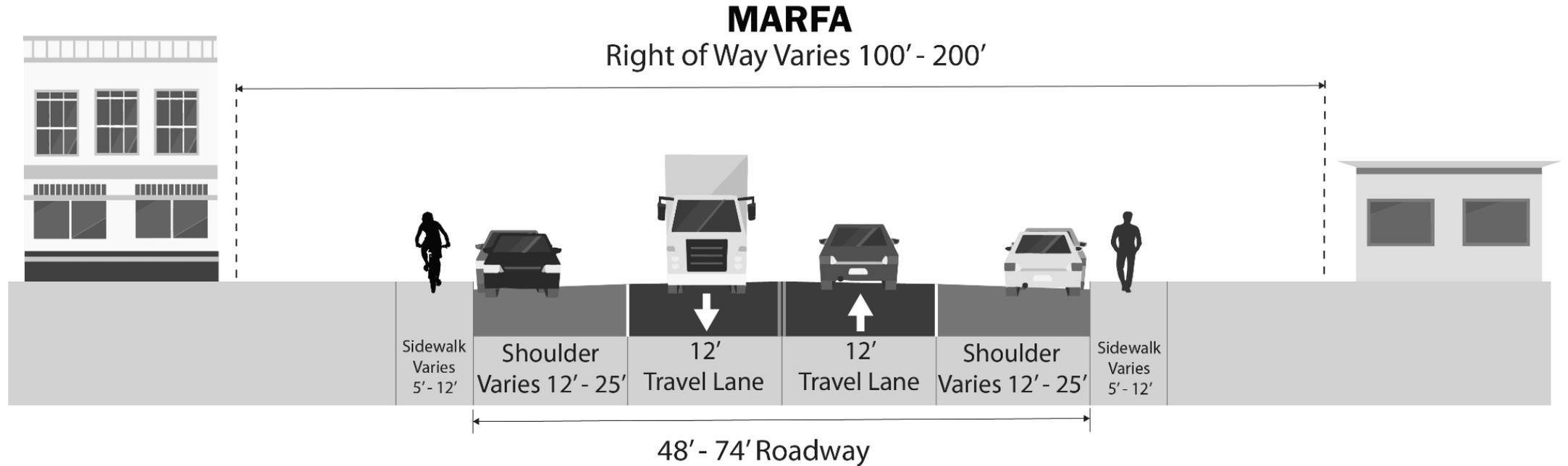
	No-Build	Alternative A: “Roundabout”	Alternative B: “Roundabout with Bike Lanes”	Alternative C: “T-Intersection”
Cost	\$0	NA	\$\$	\$
Pros	<ul style="list-style-type: none"> - No cost - Does not require ROW 	<ul style="list-style-type: none"> - Provides a safer intersection with continuous traffic flow - Traversable center median for ease of large truck movement - Does not require ROW 	<ul style="list-style-type: none"> - Provides a safer intersection with continuous traffic flow - Dedicated bicycle lane - Traversable center median for ease of large truck movement - Does not require ROW 	<ul style="list-style-type: none"> - Provides angled parking along Lincoln St in front of court house - Dedicated bicycle lanes with buffer for safety - No learning curve required due to similar existing geometry - Does not require ROW
Cons	<ul style="list-style-type: none"> - Does not address safety concern 	<ul style="list-style-type: none"> - No designated parking spaces - No bicycle facilities 	<ul style="list-style-type: none"> - No designated parking spaces 	<ul style="list-style-type: none"> - Traditional 3-leg intersection which is generally less safe than a roundabout



MARFA

Location 3: Complete Street Alternatives

EXISTING:



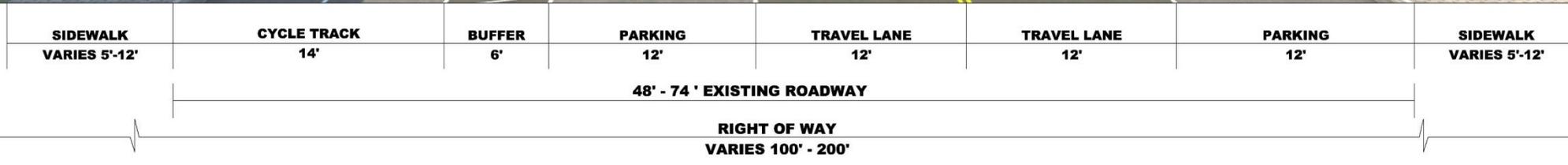


SHARED USE PATH	PARKING	TRAVEL LANE	TRAVEL LANE	PARKING	SHARED USE PATH
12'	15'	12'	12'	15'	12'

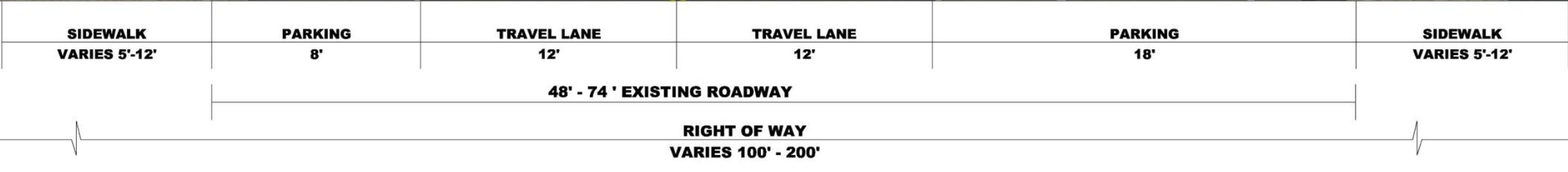
48' - 74' EXISTING ROADWAY

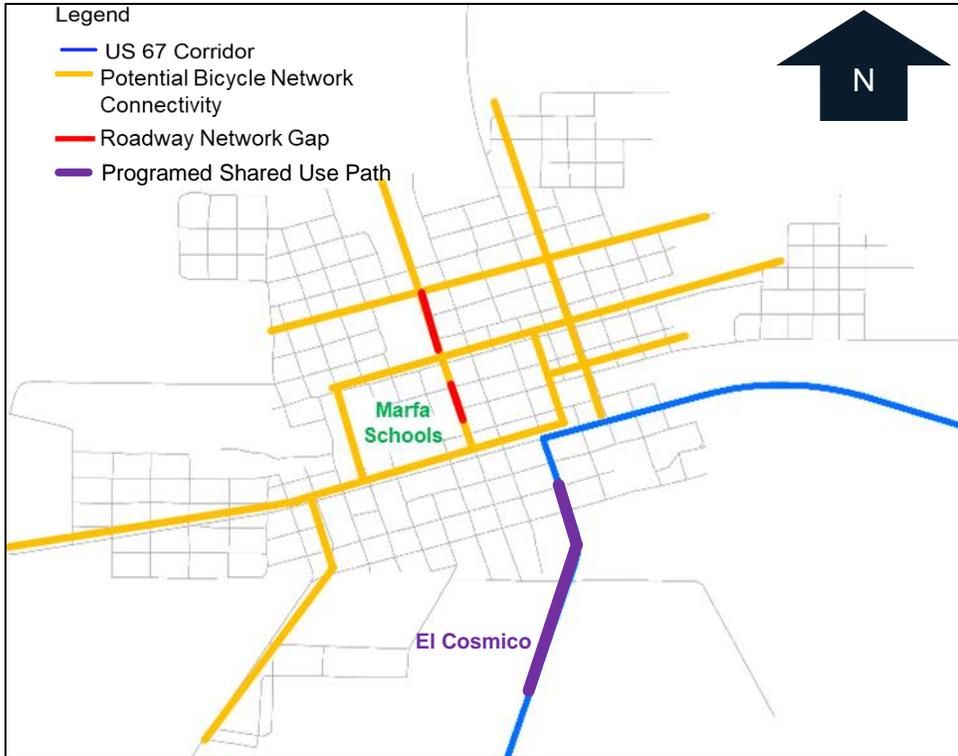
**RIGHT OF WAY
VARIES 100' - 200'**

Location 3 Complete Streets – Alternative B: “Two-Way Cycle Track with Flexible Delineators” *Marfa*

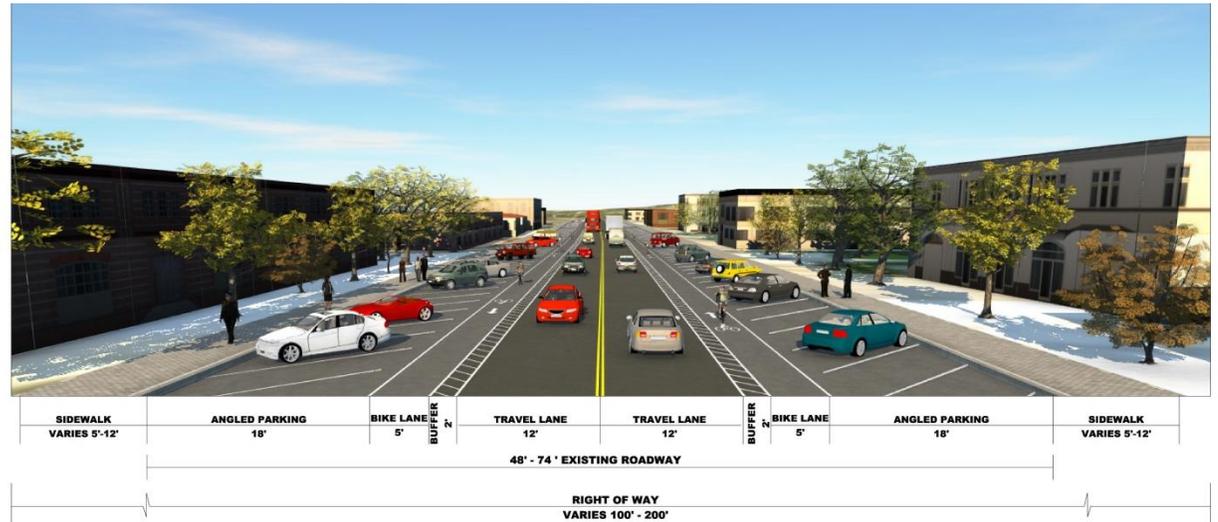


Location 3 Complete Streets – Alternative C: “Angled Parking without Bike Lane” *Marfa*

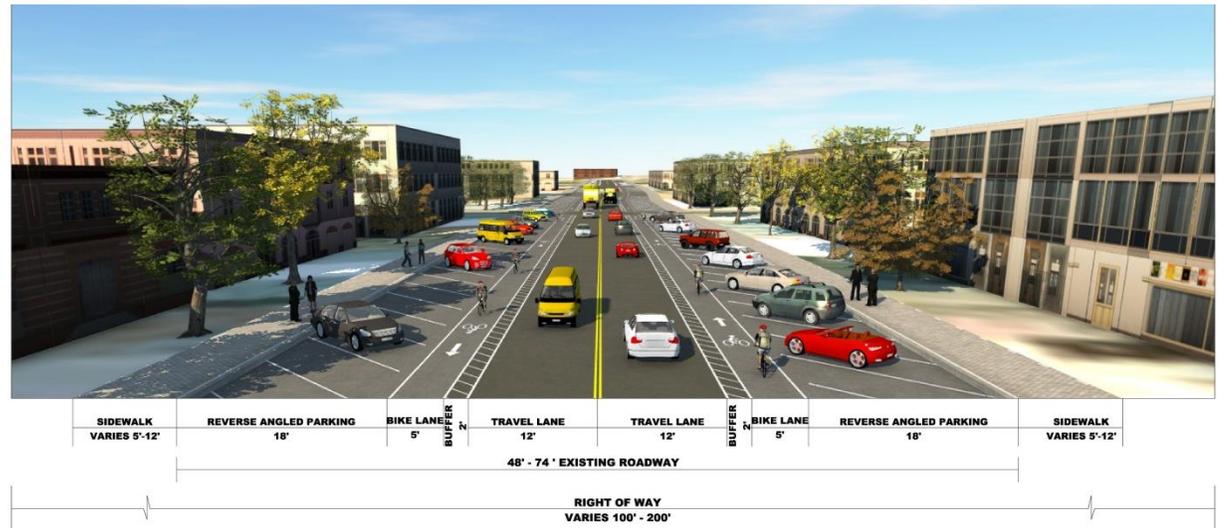




Bike Lane with Striped Buffer, Angled Parking



Bike Lane with Striped Buffer, Reverse Angled Parking



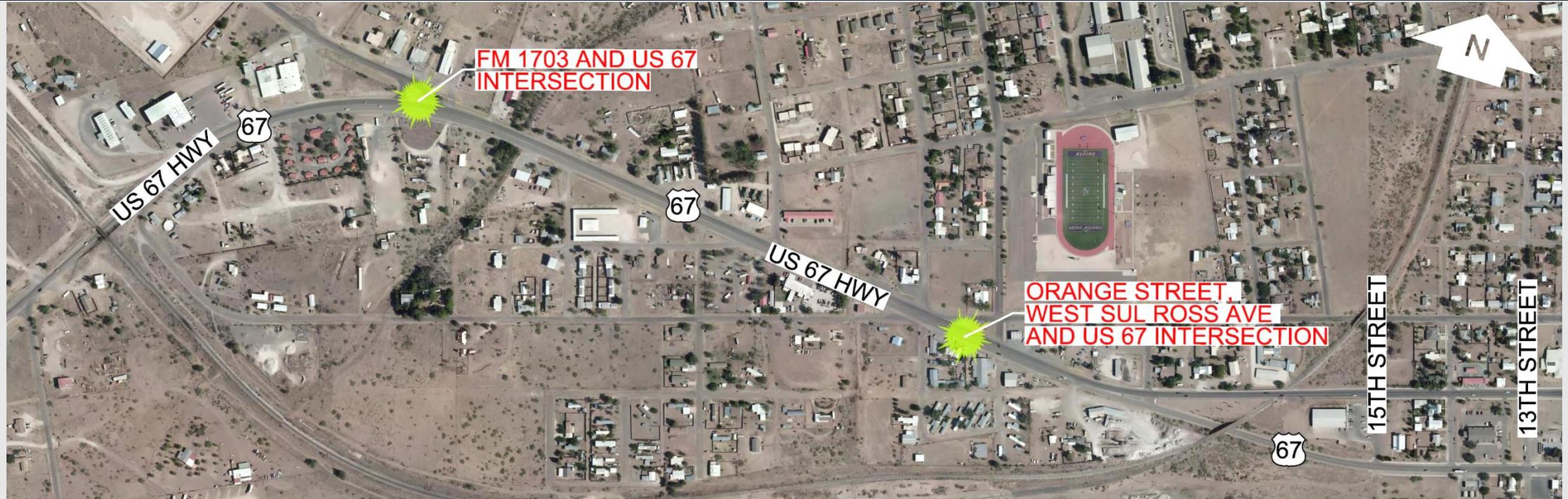
Location 3 Complete Streets – Alternatives Summary

	No-Build	Alternative A: “Shared Use Path”	Alternative B: “Two-Way Cycle Track”	Alternative C: “Angled Parking without Bike Lane”	Alternative D: “Bike Improvements Off US 67”
Cost	\$0	\$\$	\$	\$\$	\$\$\$
Pros	<ul style="list-style-type: none"> No cost Does not require ROW 	<ul style="list-style-type: none"> Addresses safety Segregates modes Users feel safer with physical barrier Does not require ROW Consistent with programmed Shared Use Path along the west side of US 67 from Galveston St to El Cosmico 	<ul style="list-style-type: none"> Addresses safety Segregates modes Users feel safer with physical barrier Does not require ROW Low to Mid cost 	<ul style="list-style-type: none"> Provides designated parking spaces Accommodates community preference for angled parking 	<ul style="list-style-type: none"> Less bicycle conflicts with automobiles Lower stress on bicycle user Access to more destinations Reverse angled parking allows for bike/ped safety
Cons	<ul style="list-style-type: none"> Does not address safety concern 	<ul style="list-style-type: none"> Requires extended sidewalk Possible drainage relocation Multiple curb cuts and driveways add conflict points 	<ul style="list-style-type: none"> Multiple curb cuts, driveways exist Complicates intersection design Requires public education campaign Multiple curb cuts and driveways add conflict points 	<ul style="list-style-type: none"> Does not accommodate bicycle users Safety concerns during exit of parking spaces (backing out toward on-coming vehicles) 	<ul style="list-style-type: none"> Not under TxDOT jurisdiction Requires collaboration with other stakeholders (i.e. railroads) Reverse angled parking may be confusing to navigate



ALPINE

Intersection Concepts





ALPINE

Location 1: FM 1703 and US 67 Intersection

Location 1 FM 1703 & US 67 – No-Build Alternative: “Existing Condition”



Location 1 FM 1703 & US 67 – Alternative A: “Two-Way Left-Turn Lane”

Alpine



Issue Addressed: Creates vehicle refuge area by means of a center turn lane	
Source of Need: Safety Analysis, Brain dump session	
Satisfying Goal Area: Safety	
Right of Way (ROW) required	Yes

** The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*

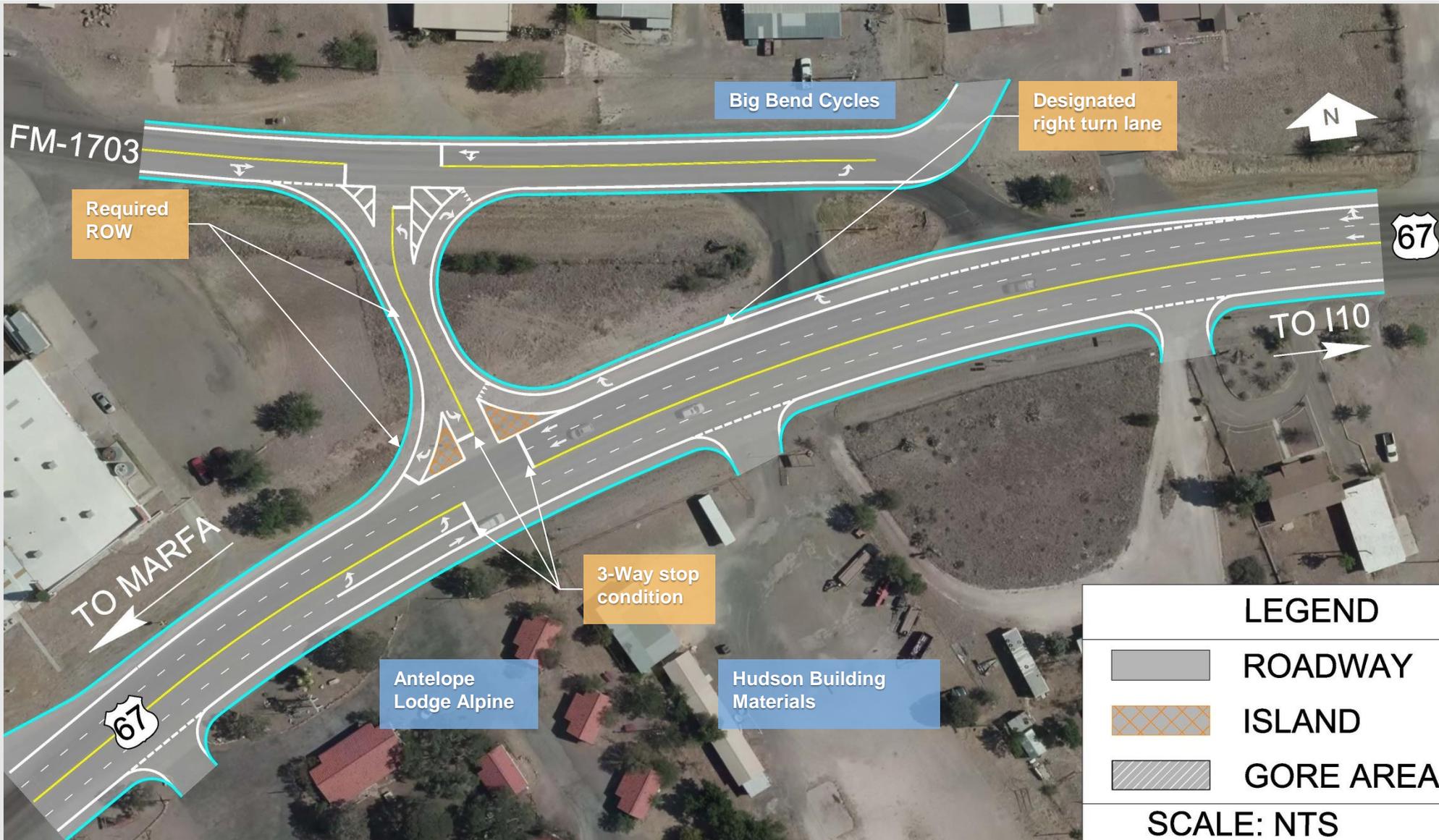
LEGEND

-  ROADWAY
-  ISLAND
-  LANDSCAPE
-  GORE AREA

SCALE: NTS

Location 1 FM 1703 & US 67 – Alternative B: “Three-Way Stop”

Alpine



Issue Addressed: Dedicated right turn lane into FM 1703 and unto US 67 to increase safety	
Source of Need: Safety Analysis	
Satisfying Goal Area: Safety	
Right of Way (ROW) required	Yes

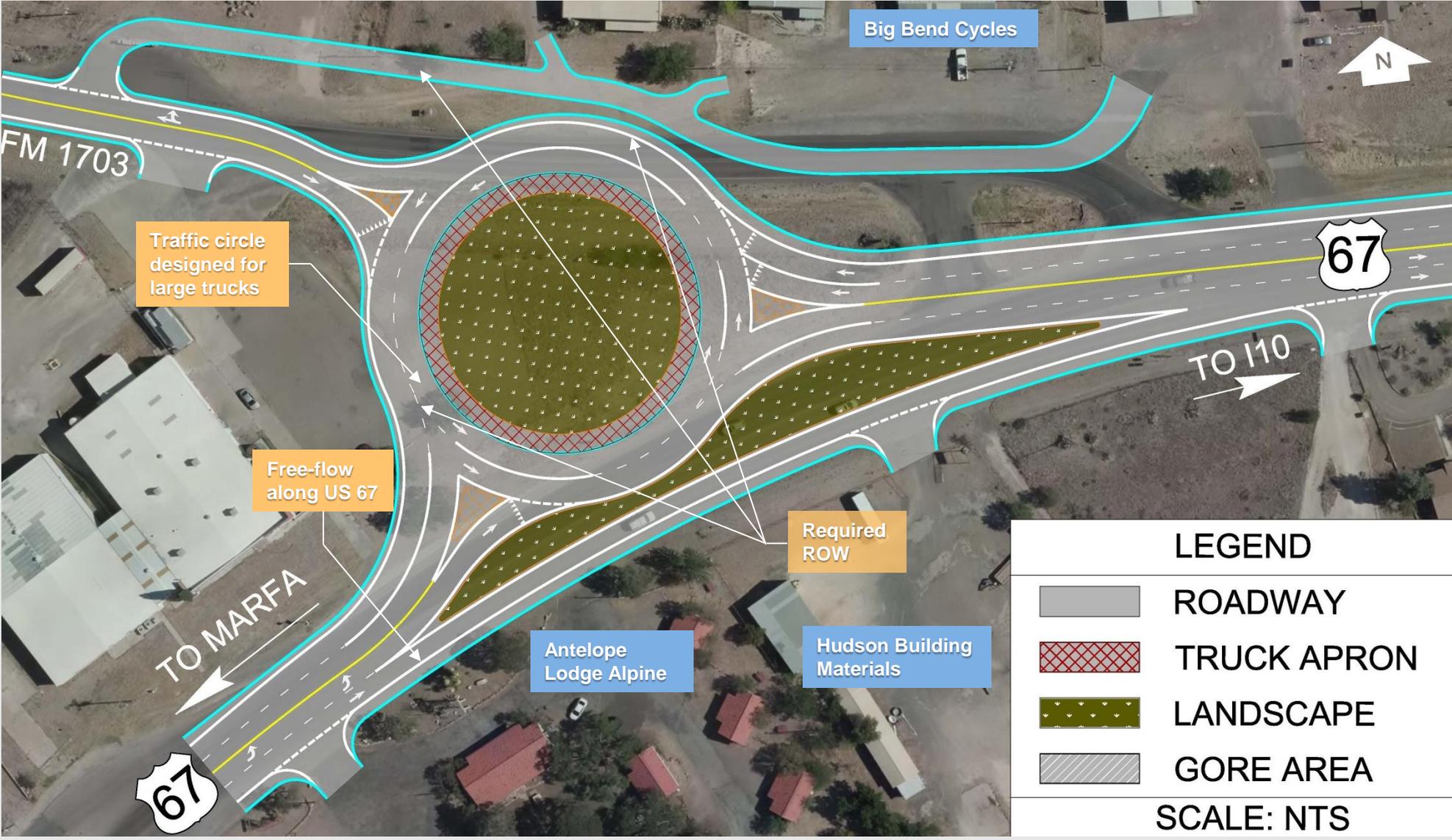
** The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*

LEGEND

- ROADWAY
- ISLAND
- GORE AREA

SCALE: NTS

Location 1 FM 1703 & US 67 – Alternative C: “Roundabout”



Issue Addressed: Improves Safety/ Reduce Conflict Points; Allows for movement in all direction

Source of Need: Safety Analysis

Satisfying Goal Area: Safety

Right of Way (ROW) required	Yes
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** The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*

	No-Build	Alternative A: “Two-Way Left-Turn Lane”	Alternative B: “Three-Way Stop”	Alternative C: “Roundabout”
Cost	\$0	\$\$	\$	\$\$
Pros	<ul style="list-style-type: none"> - No cost - Does not require ROW 	<ul style="list-style-type: none"> - Includes lane drop going towards Marfa - Provides a safe refuge area for vehicles turning left 	<ul style="list-style-type: none"> - Provides turning movements in all directions - Addresses safety concerns - Designated right turn lane onto FM 1703 	<ul style="list-style-type: none"> - Provides turning movements in all directions - Addresses safety concerns - Continuous flow on US 67
Cons	<ul style="list-style-type: none"> - Does not address safety concerns 	<ul style="list-style-type: none"> - Left turn to and from FM 1703 creates a conflict point - Will require ROW 	<ul style="list-style-type: none"> - Creates a stop condition along US 67 - Will require ROW 	<ul style="list-style-type: none"> - Will require ROW - May be confusing to locals - Reduced access to businesses south of US 67 from WB US 67 and EB FM 1703



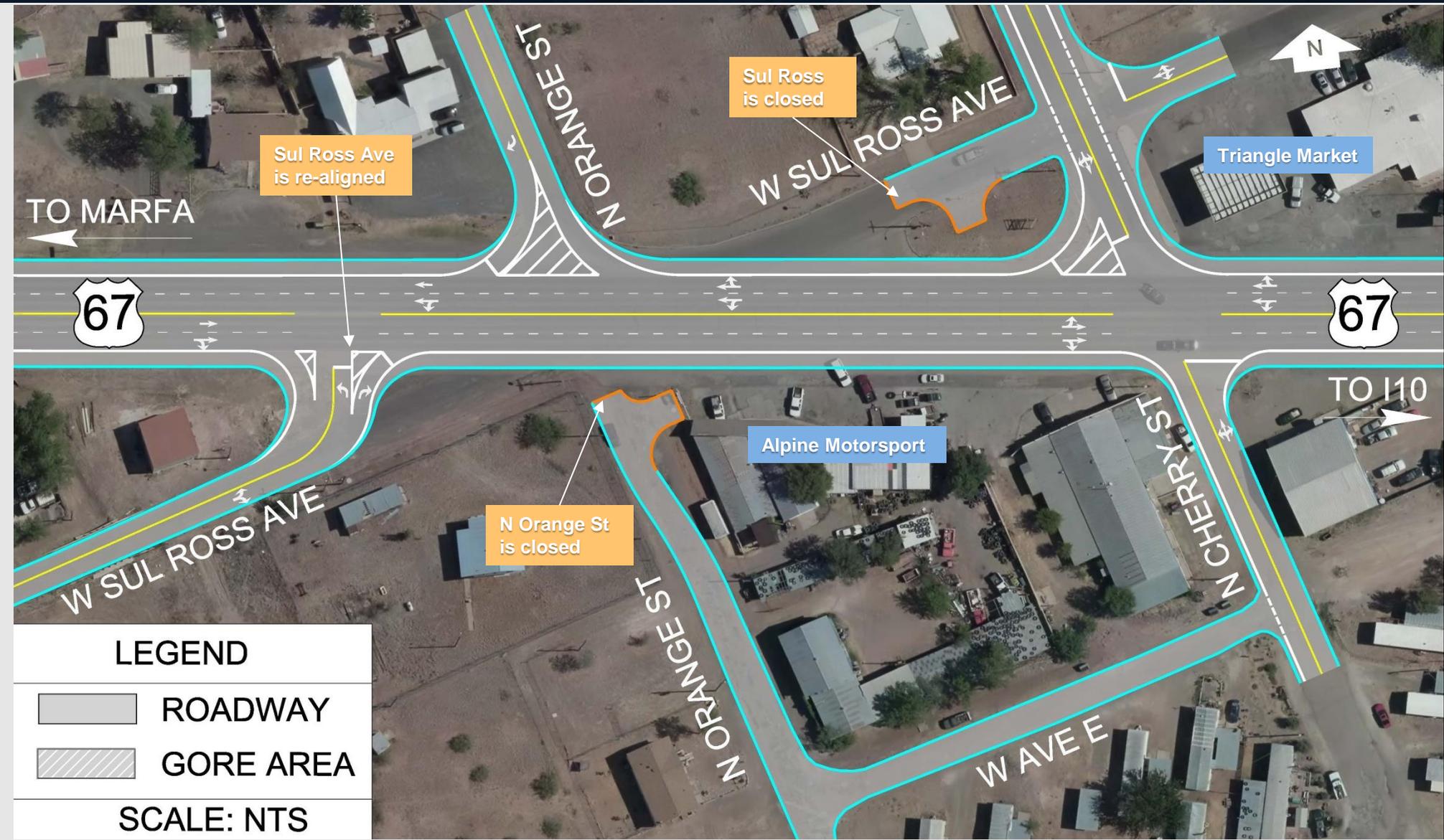
ALPINE

Location 2: Orange Street & Sul Ross Avenue Intersections at US 67

Location 2 Orange St & Sul Ross Ave at US 67 – No-Build Alternative: “Existing Condition” *Alpine*



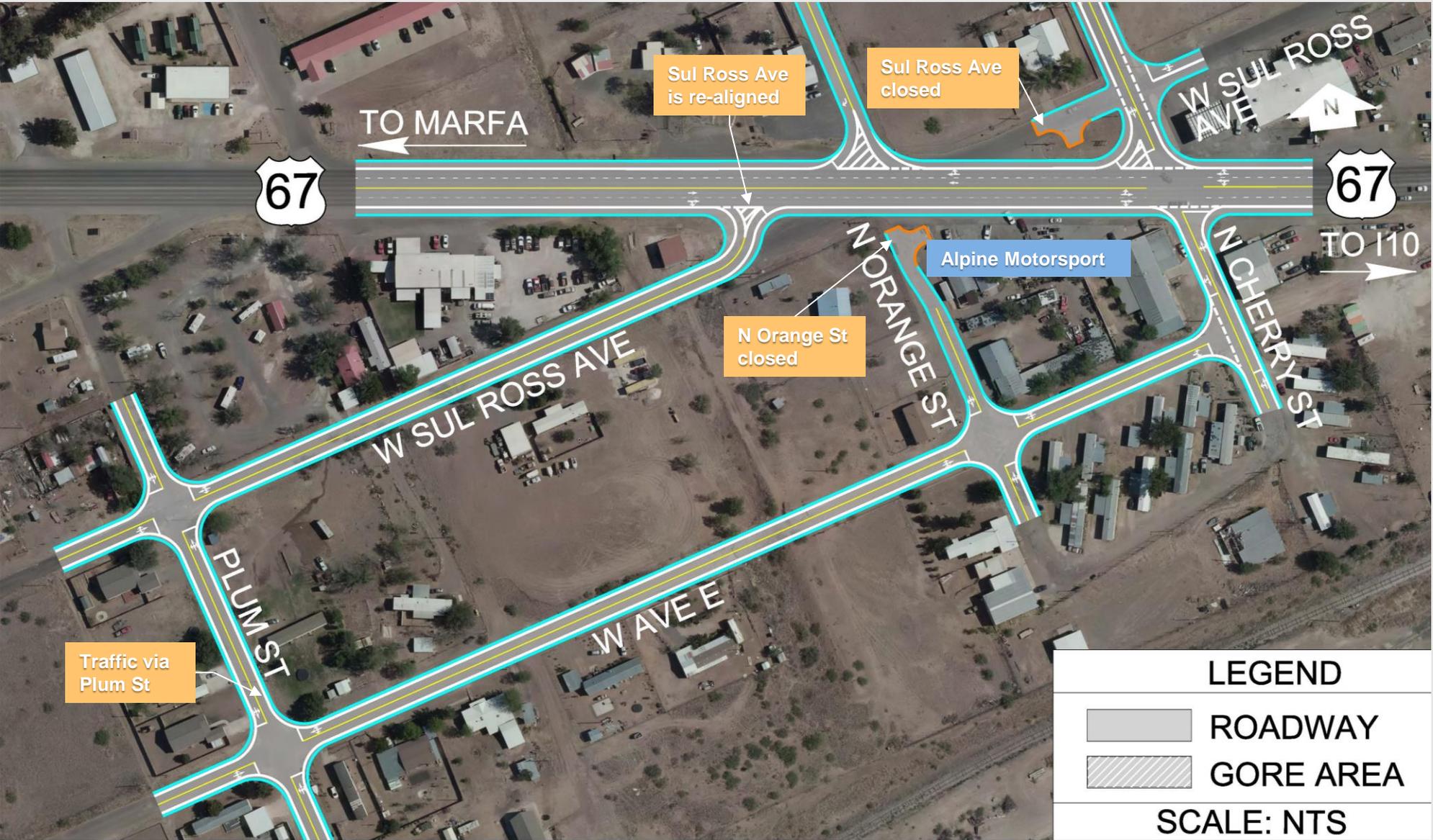
Location 2 Orange St & Sul Ross Ave at US 67 – Alternative A: “Closing Orange St and Sul Ross Ave” *Alpine*



Issue Addressed: Limits access to US 67 and channelized turn movements	
Source of Need: Safety Analysis	
Satisfying Goal Area: Safety	
Right of Way (ROW) No required	No

** The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*

Location 2 Orange St & Sul Ross Ave at US 67 – Alternative B: “Re-Route via Plum Street” *Alpine*



Issue Addressed: Limits access to US 67 and channelized turn movements	
Source of Need: Safety Analysis	
Satisfying Goal Area: Safety	
Right of Way (ROW)	No required

** The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*

Location 2 Orange St & Sul Ross Ave at US 67 – Alternative C: “Re-Route via Peach Street” *Alpine*



Issue Addressed: Limits access to US 67 and channelized turn movements	
Source of Need: Safety Analysis	
Satisfying Goal Area: Safety	
Right of Way (ROW) required	No

** The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*

	No-Build	Alternative A: “Closing Orange St and Sul Ross Ave”	Alternative B: “Re-Route via Plum St”	Alternative C: “Re-Route via Peach St”
Cost	\$0	\$	\$	\$
Pros	<ul style="list-style-type: none"> - No cost - Does not require ROW 	<ul style="list-style-type: none"> - Limits access to US 67 - Cost efficient - Will not require ROW 	<ul style="list-style-type: none"> - Removes offset intersection between W Sul Ross and N Orange - Addresses safety issues - Closes W Sul Ross Ave in the north to US 67 - Will not require ROW 	<ul style="list-style-type: none"> - Removes offset intersection between W Sul Ross and N Orange - Addresses safety issues - Will not require ROW
Cons	<ul style="list-style-type: none"> - Does not address safety concern 	<ul style="list-style-type: none"> - Closes W Sul Ross Ave in the North and N Orange St in the South 	<ul style="list-style-type: none"> - Will re-route traffic in the south all via N Cherry St 	<ul style="list-style-type: none"> - Re-routes traffic on W Sul Ross via Orange St to access US 67



ALPINE

Location 3: Intersection at Sul Ross University and US 67

Location 3 Sul Ross University & US 67 - No-Build Alternative: "Existing Condition"





LEGEND

- ROADWAY
- LANDSCAPE
- ISLAND
- SIDEWALK
- GORE AREA
- CRASH ATTENUATOR

SCALE: NTS

HoloLens Location

Issue Addressed: Increases safety by converting to one-way streets and incorporating pedestrian facilities	
Source of Need: Safety Analysis	
Satisfying Goal Area: Safety/Mobility	
Right of Way (ROW)	No required

** The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*

Location 3 Sul Ross University & US 67 - Alternative B: "Free Flow on US 67"

Alpine

HoloLens Location

LEGEND

-  ROADWAY
-  LANDSCAPE
-  ISLAND
-  GORE AREA

SCALE: NTS

Issue Addressed: Increases safety by converting to one-way streets

Source of Need: Safety Analysis

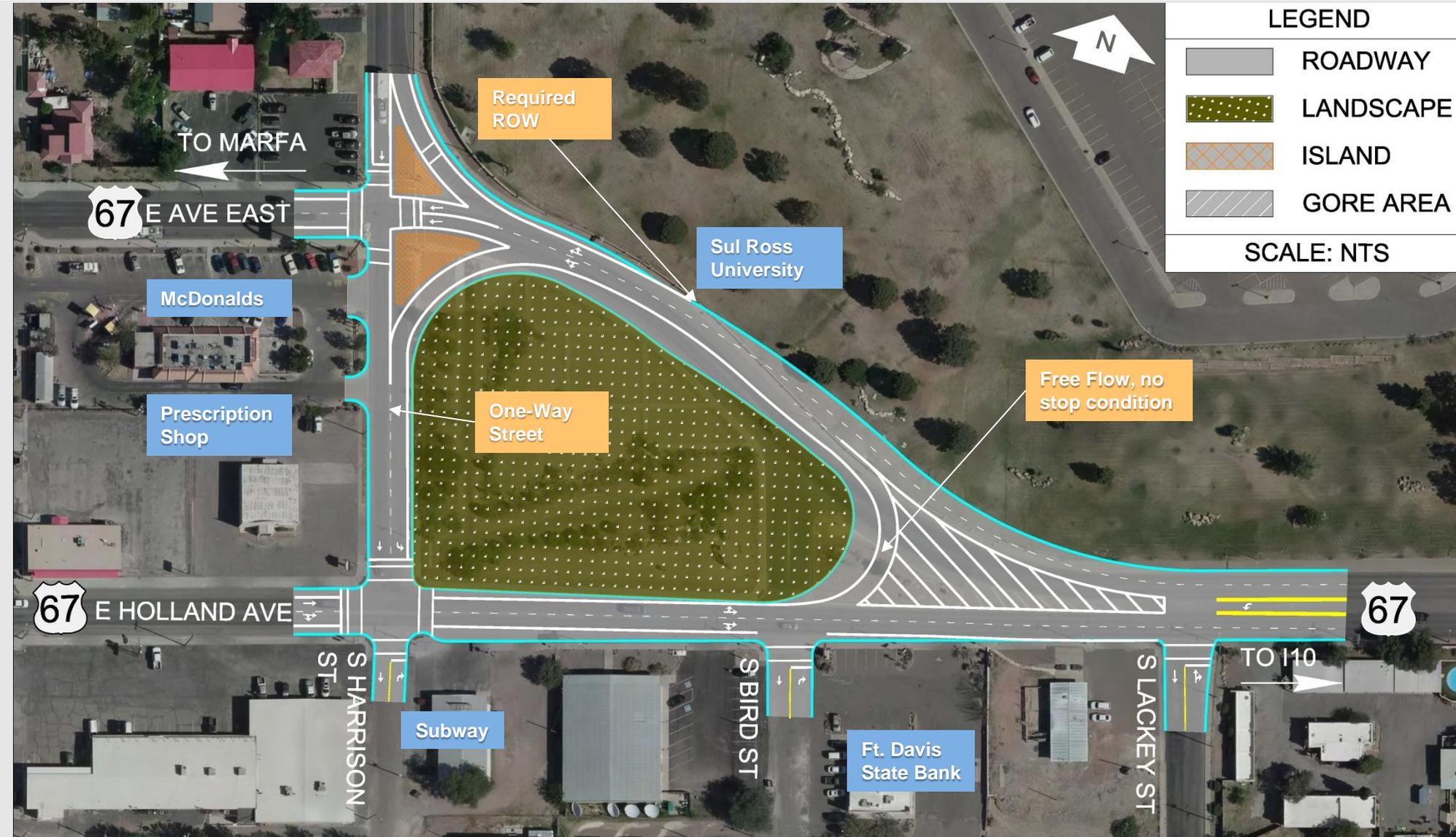
Satisfying Goal Area: Safety/Mobility

Right of Way (ROW) required	Yes
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Non Geometry Concepts (ITS/Safety)

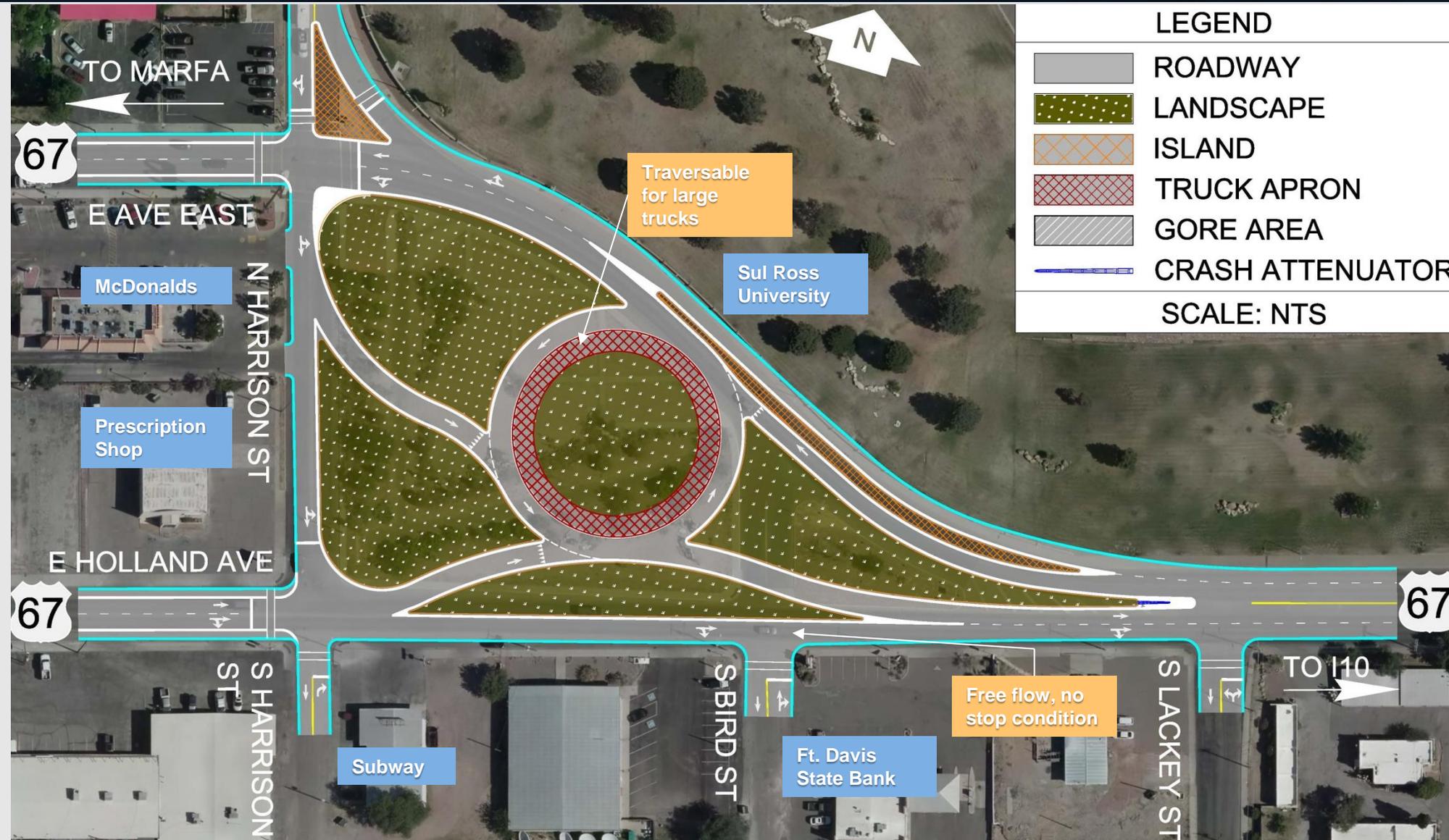
Install Dynamic Speed Feedback System

** The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*



Location 3 Sul Ross University & US 67 - Alternative C: "Roundabout"

Alpine



LEGEND

- ROADWAY
- LANDSCAPE
- ISLAND
- TRUCK APRON
- GORE AREA
- CRASH ATTENUATOR

SCALE: NTS

HoloLens Location

Issue Addressed: Increases safety by eliminating one leg leading into roundabout and converting roads to one way	
Source of Need: Safety Analysis	
Satisfying Goal Area: Safety/Mobility	
Right of Way (ROW)	No required

** The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*

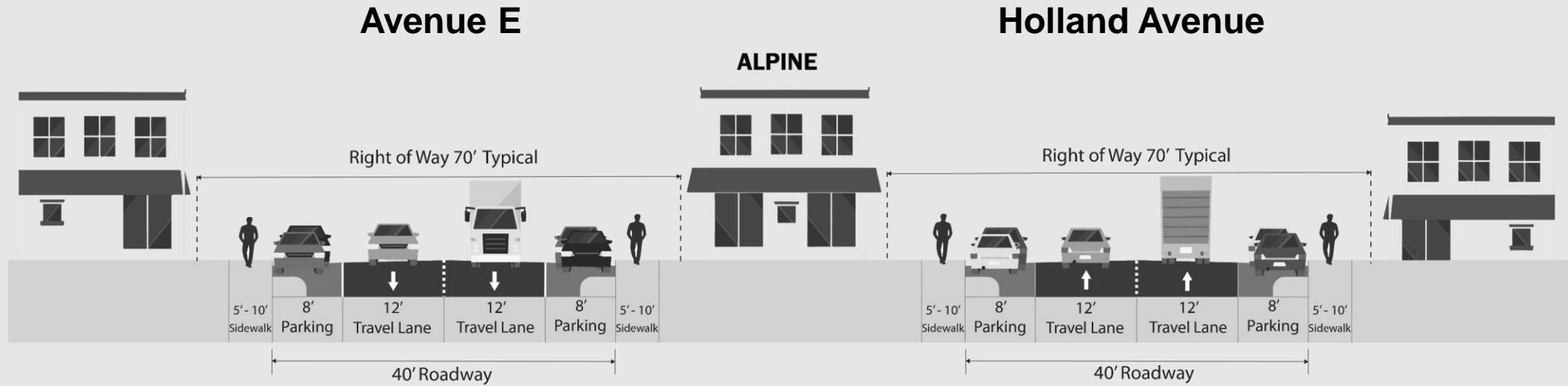
	No-Build	Alternative A: "Pedestrian Ring"	Alternative B: "Free Flow on US 67"	Alternative C: "Roundabout"
Cost	\$0	\$\$	\$\$	\$\$
Pros	<ul style="list-style-type: none"> - No cost - Will not require ROW 	<ul style="list-style-type: none"> - Addresses safety concerns - Provides pedestrian access - Placemaking opportunity - Will not require ROW 	<ul style="list-style-type: none"> - Addresses safety concerns - Closes Bird St through intersection 	<ul style="list-style-type: none"> - Improves safety by reducing conflict points - Closes Bird St through intersection - Provides for placemaking opportunity - Will not require ROW
Cons	<ul style="list-style-type: none"> - Does not address safety concern 	<ul style="list-style-type: none"> - Bird St. still open through intersection 	<ul style="list-style-type: none"> - Requires ROW 	<ul style="list-style-type: none"> - May be confusing for drivers

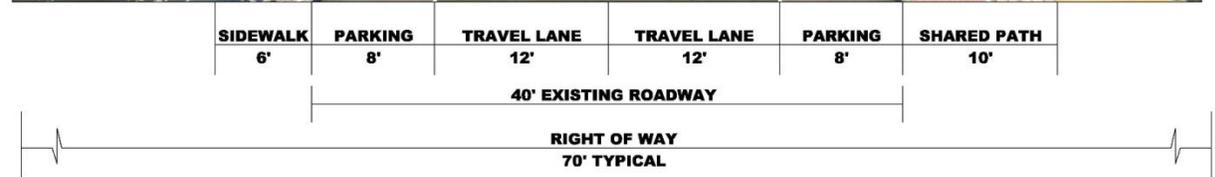
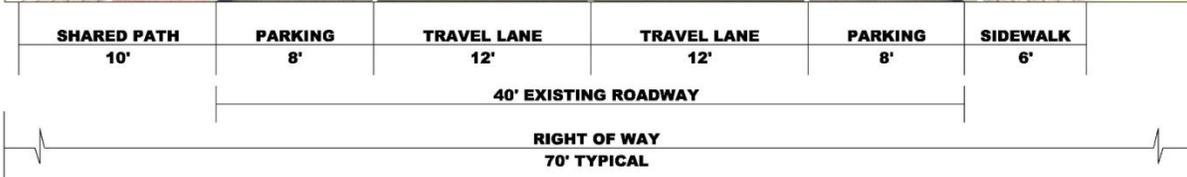


ALPINE

Location 4: Alpine Complete Street Alternatives

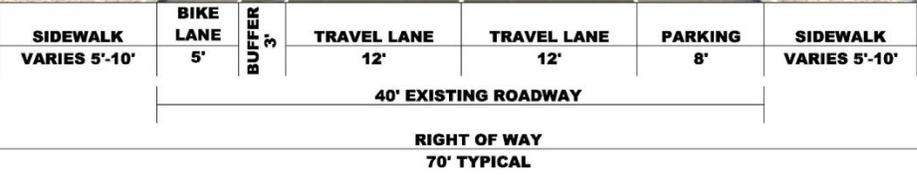
EXISTING:



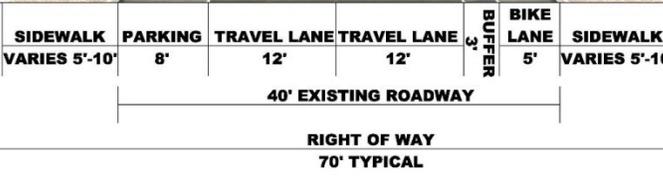


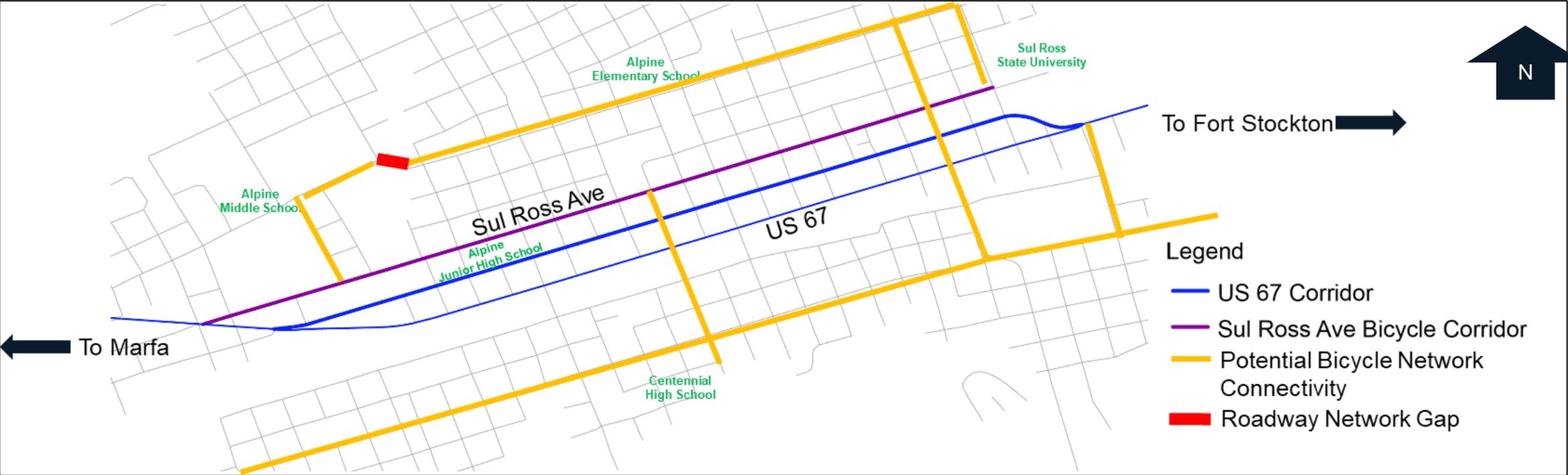


Holland Avenue



Avenue E





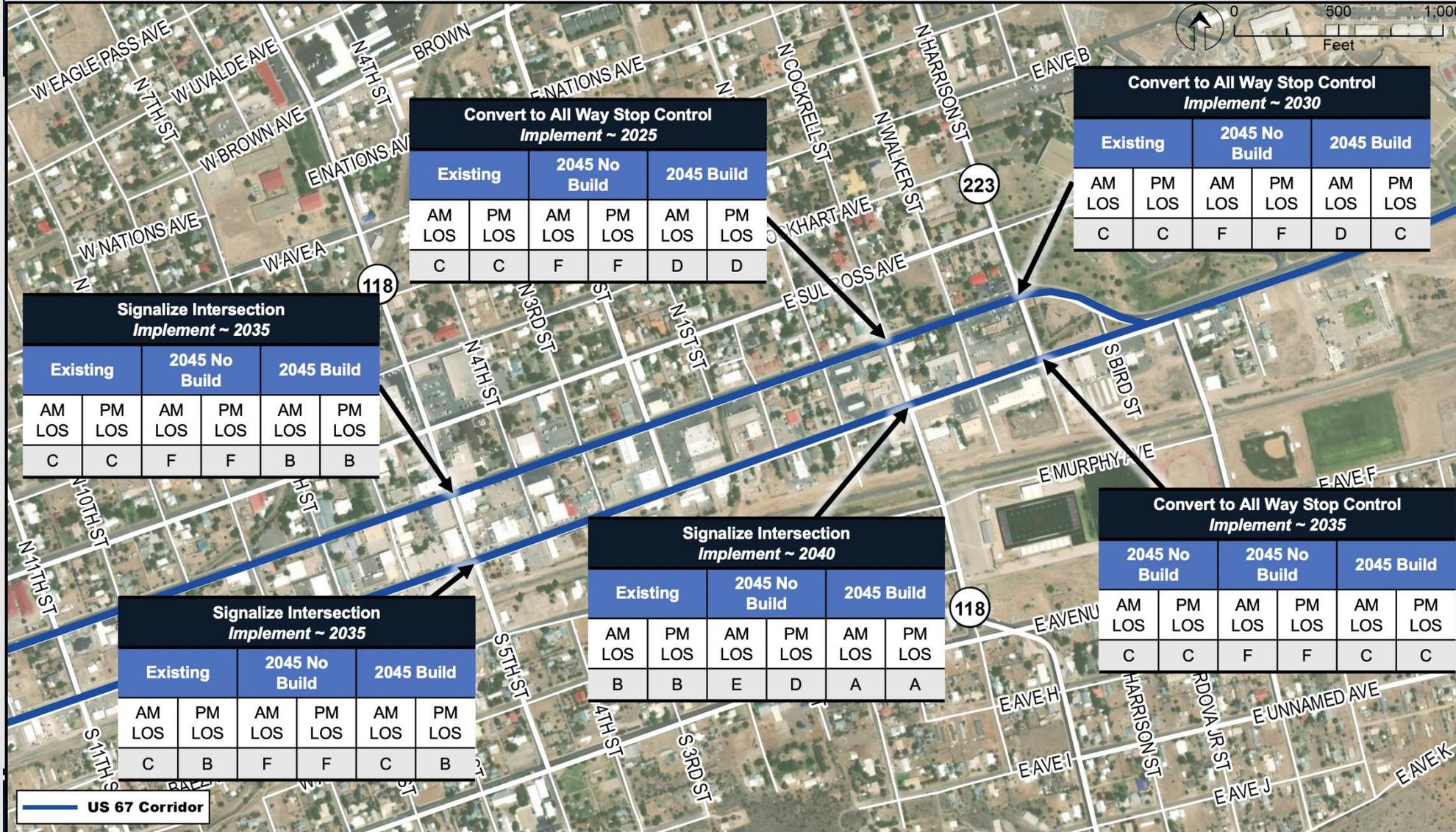
	No-Build	Alternative A: “Shared Use Path”	Alternative B: “Bike Land with Striped Buffer”	Alternative C: “Bike Improvements Off US 67”
Cost	\$0	\$\$	\$\$	\$\$\$
Pros	<ul style="list-style-type: none"> – No cost – Does not require ROW 	<ul style="list-style-type: none"> – Provides designated space for use by both bicyclists and pedestrians – Does not require ROW 	<ul style="list-style-type: none"> – Addresses safety concerns – Segregates modes 	<ul style="list-style-type: none"> – Parallel facility to US 67 that is more appropriate for cycling, less traffic on road – Connects schools within Alpine
Cons	<ul style="list-style-type: none"> – Does not address safety concern 	<ul style="list-style-type: none"> – Might require extended sidewalk – Multiple curb cuts, driveways add conflict points 	<ul style="list-style-type: none"> – Reduces available parking spaces – Requires construction and pavement reconfiguration 	<ul style="list-style-type: none"> – Wayfinding needed to direct bicyclists to Sul Ross from US 67 – More difficult to access businesses due to one-way street pattern



ALPINE

Location 5: Core Concepts-Intersection Stop Control & Signalization

Location 5 - 5th, Cockrell, & Harrison St and US 67



Issue Addressed: Future operational issues

Source of Need: Operational Analysis

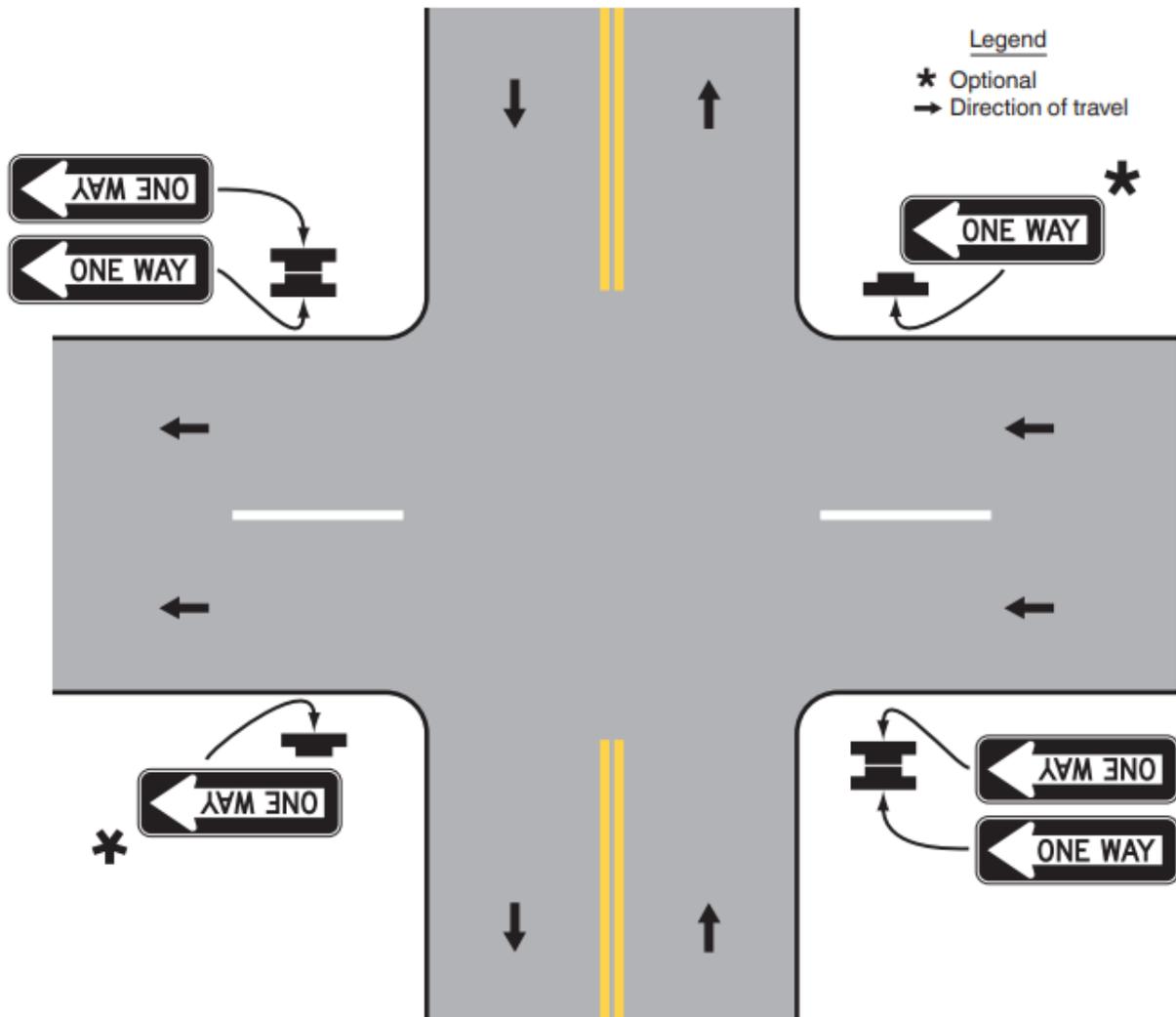
Satisfying Goal Area: Mobility



ALPINE

Location 6 : Core Concepts-One-way Street Configurations

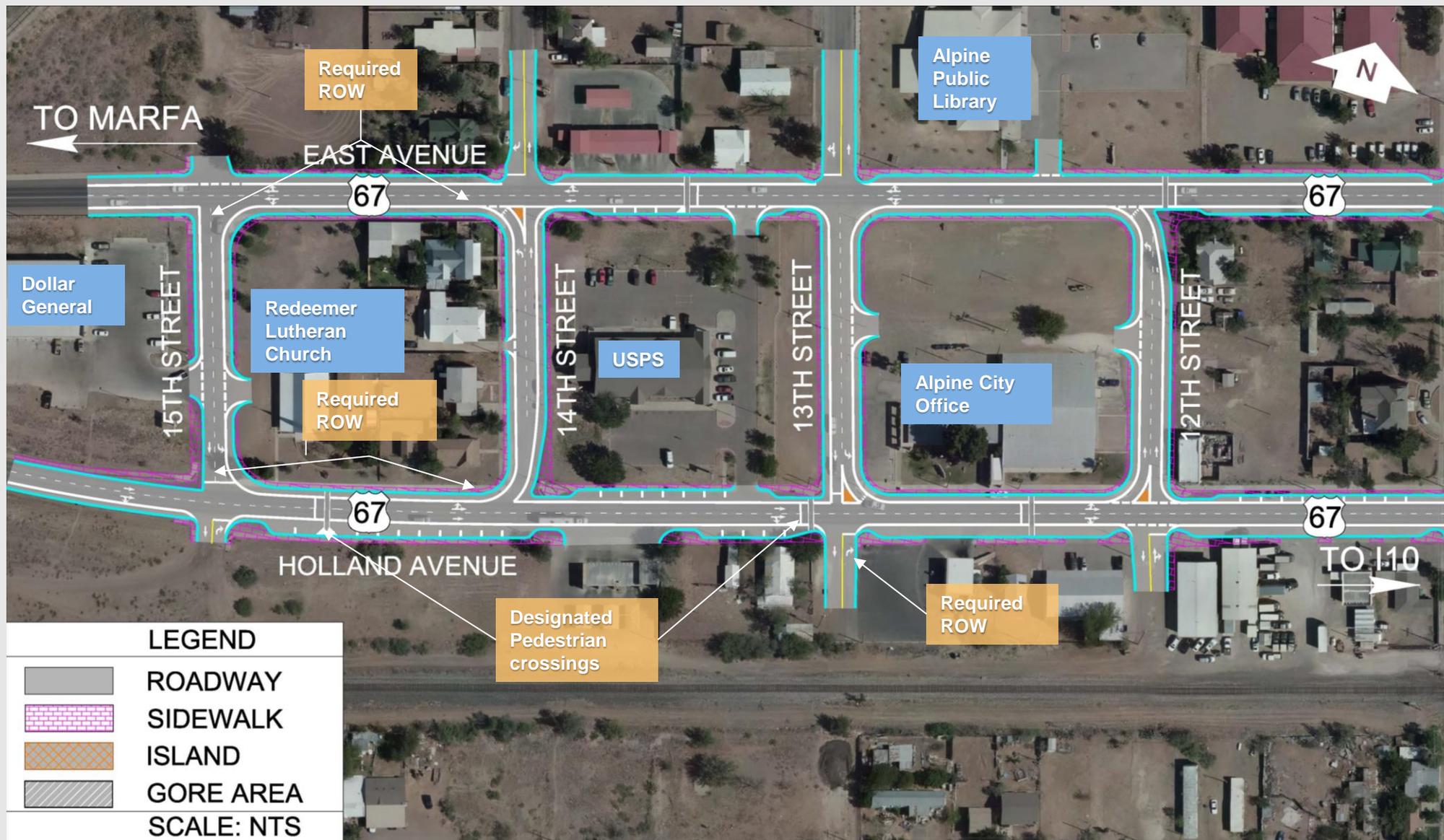
Location 6 MUTCD Standards for One-Way Street Signs



<http://ftp.dot.state.tx.us/pub/txdot-info/trf/tmutcd/2011-rev-2/2b.pdf>

- If used at unsignalized intersections with one-way streets, ONE WAY signs shall be placed on the near right and the far left corners of the intersection facing traffic entering or crossing the one-way street

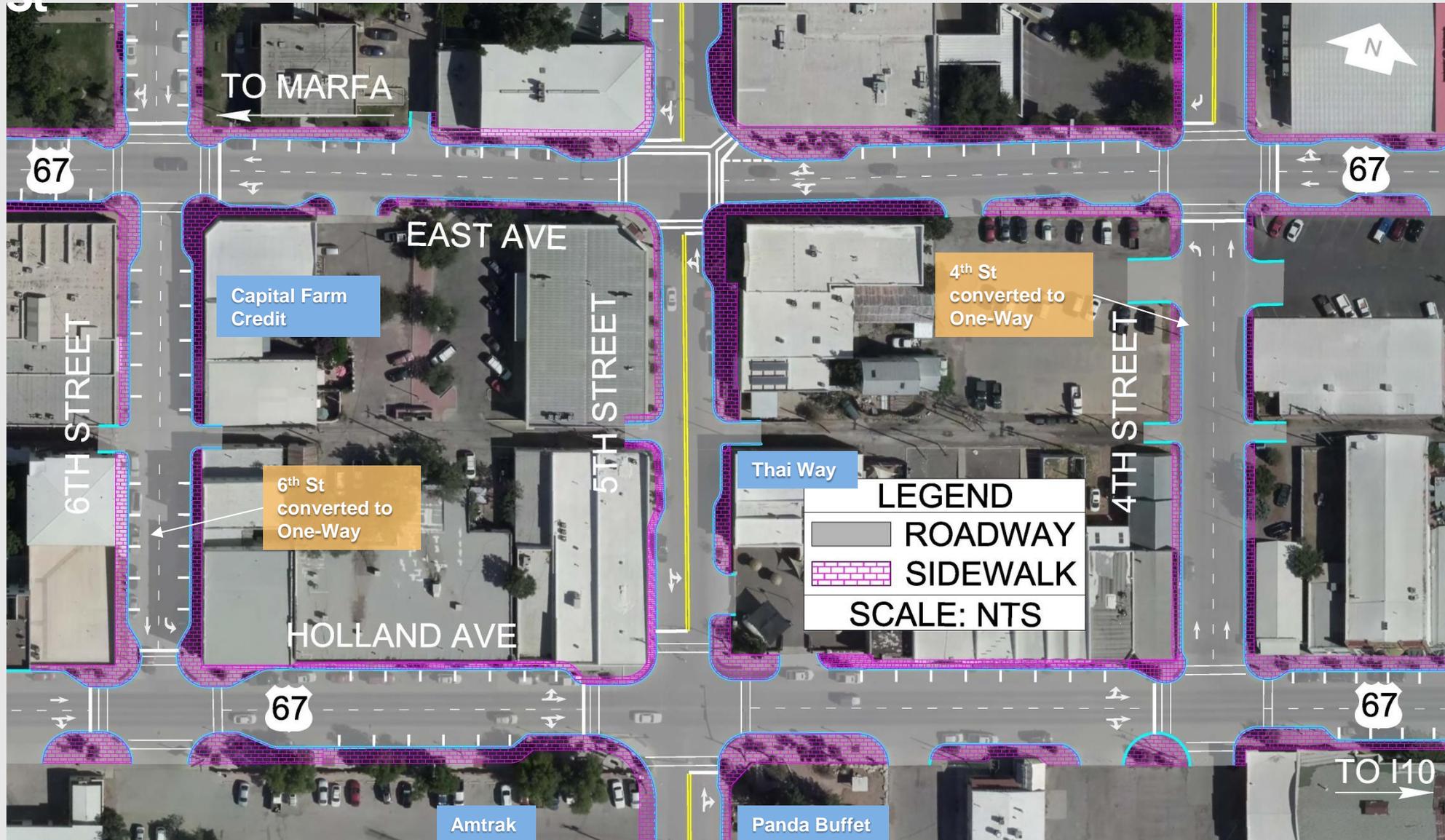
Location 6 One-Way Streets w/Ped Improvements at US 67 and 15th, 14th, 13th, and 12th St *Alpine*



Issue Addressed: Increases safety by converting to one way streets	
Source of Need: Safety Analysis	
Satisfying Goal Area: Safety/Mobility	
Right of Way (ROW) required	Yes

** The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*

Location 6 One-Way Complete Streets w/Ped Improvements at US 67 and 6th, 5th, and 4th Alpine St



HoloLens Location

Issue Addressed: Increases turn radii for large truck movements

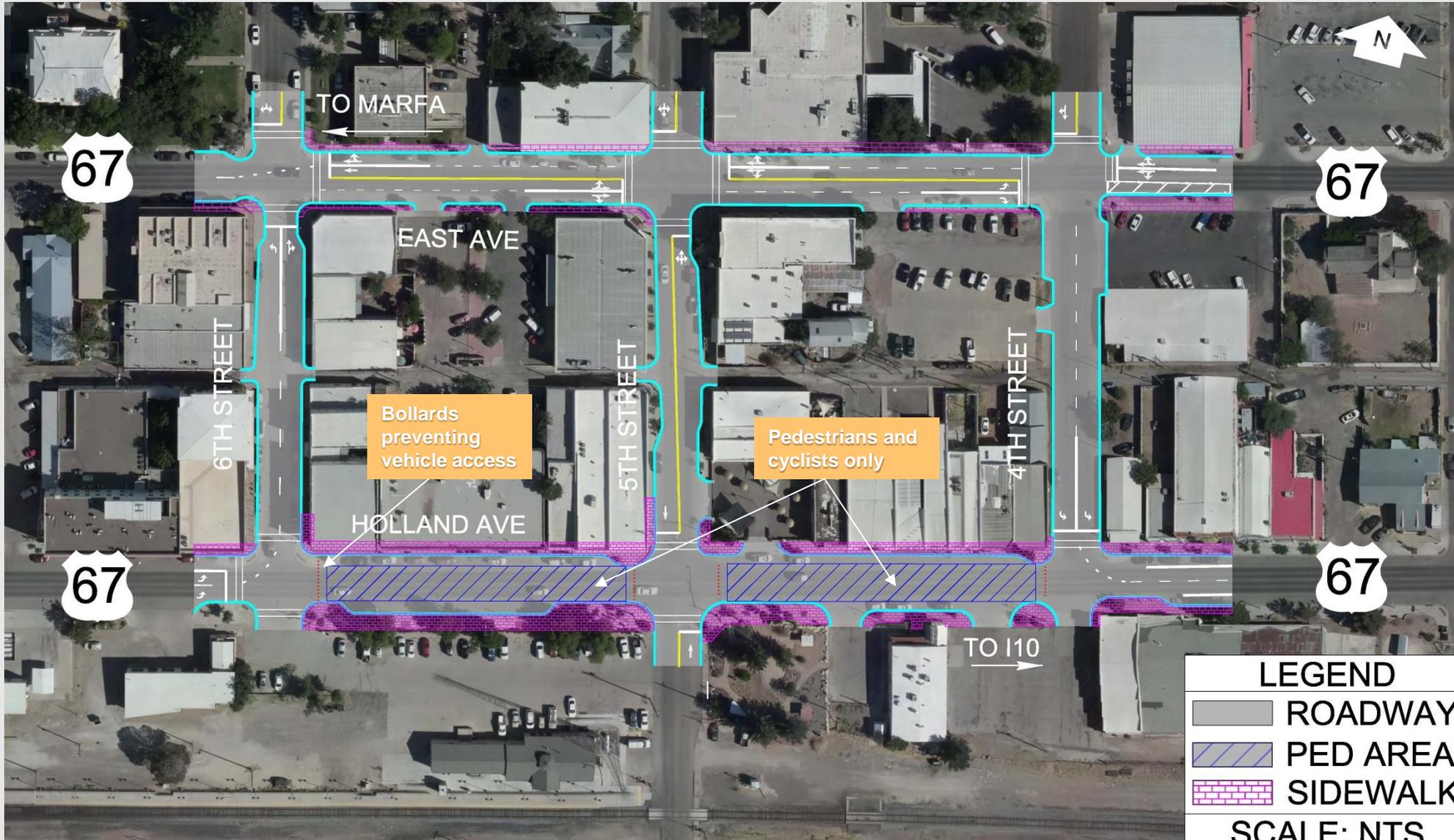
Source of Need: Safety Analysis

Satisfying Goal Area: Safety/Multi-Modal Connectivity

Right of Way (ROW)	No required
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** The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*

Location 6 Ped Block w/Two-Lane Two-Way on Holland Avenue between 4th & 6th Streets *Alpine*



HoloLens Location

Issue Addressed:
Pedestrian Safety

Source of Need: Safety Analysis

Satisfying Goal Area:
Safety/Multi-Modal Connectivity

Right of Way (ROW) required

No

Non Geometry Concepts (ITS/Safety)

Install Pedestrian Hybrid Beacon (Holland Ave)

** The existing right of way (ROW) is line approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*

LEGEND

- ROADWAY
- PED AREA
- SIDEWALK

SCAI F·NTS



ALPINE

Location 6 (cont'd): Core Concepts-Improvements Based on Growth

Location 6 Intersection Improvements at Cherry Street and US 67

Alpine



Issue Addressed: Future operational issues	
Source of Need: Operational Analysis	
Satisfying Goal Area: Mobility	
Right of Way (ROW) required	No

Add Southbound Left Turn Lane and Westbound Right Turn Lane Implement ~ 2045			
2045 No Build		2045 Build	
AM LOS	PM LOS	AM LOS	PM LOS
D	E	C	D

* The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.

Location 6 Add Left Turn Lanes on 11th Street at US 67



Issue Addressed: Future operational issues	
Source of Need: Operational Analysis	
Satisfying Goal Area: Mobility	
Right of Way (ROW) required	No

Add Northbound and Southbound Left Turn Lane on 11th Street Implement ~ 2040

2045 No Build		2045 Build	
AM LOS	PM LOS	AM LOS	PM LOS
E	E	D	D

** The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*

Location 6 Core Concept Summary. One-way Sts. & Alpine Future Traffic Growth

	One-Way Streets with Pedestrian Improvements at US 67 and 15th, 14th, 13th, and 12th Streets	One-Way Complete Streets with Pedestrian Improvements at US 67 and 6th, 5th, and 4th Streets	Pedestrian Block on Holland Avenue between 4th and 6th Streets	Intersection Improvements at Cherry Street and US 67 - Add Turn Lanes - Close Angled Intersection	Add Left Turn Lanes on 11th Street at US 67
Cost	\$\$	\$\$	\$\$\$	\$	\$
Pros	<ul style="list-style-type: none"> - Provide a designated pedestrian crossing - Allows for ITS solutions to be implemented for increased pedestrian safety 	<ul style="list-style-type: none"> - Improves pedestrian safety - Increases parallel parking on 6th street - Does not require ROW 	<ul style="list-style-type: none"> - Addresses pedestrian safety - Creates a unique way of increasing pedestrian traffic and promotes business development - Does not require ROW 	<ul style="list-style-type: none"> - Reduces delay for Cherry St SB approach and improves overall intersection LOS from E to D - Improves safety by eliminating the angled intersection at W Sul Ross Ave - Does not require ROW 	<ul style="list-style-type: none"> - Reduces delay for 11th St NB and SB approaches and improves intersections from E/F to C/D - Does not require ROW
Cons	<ul style="list-style-type: none"> - One way streets may be confusing initially - Will require ROW 	<ul style="list-style-type: none"> - One-way streets may be confusing initially - Reduces parking on 4th street 	<ul style="list-style-type: none"> - Will require a 4 lane segment between 4th St and 6th St on Ave E - Reduces parking 	<ul style="list-style-type: none"> - Drivers waiting in the two lanes on Cherry St SB may block each other's view to observe traffic on US 67 	<ul style="list-style-type: none"> - Drivers waiting in the two lanes on 11th St may block each other's view to observe traffic on US 67



TEXAS DEPARTMENT OF TRANSPORTATION

RURAL LOCATIONS



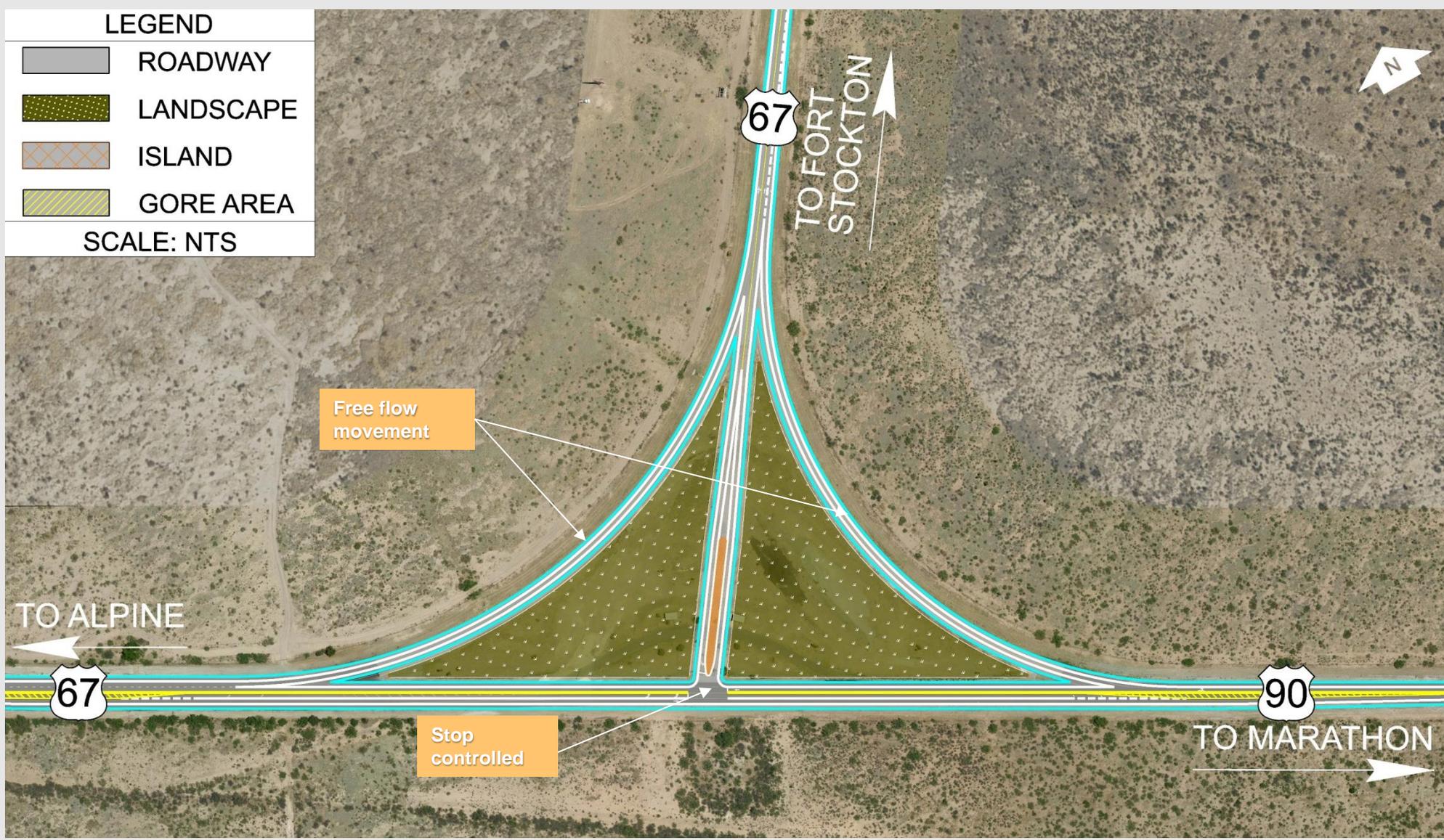
RURAL LOCATIONS

Location 1: US 67/US 90 Intersection

Rural Location 1 US 67/US 90 Y-Intersection – No-Build Alternative: “Existing Condition”



Rural Location 1 US 67/US 90 Y-Intersection - Alternative A: "Free Flow Y-Intersection"



Issue Addressed: Safety

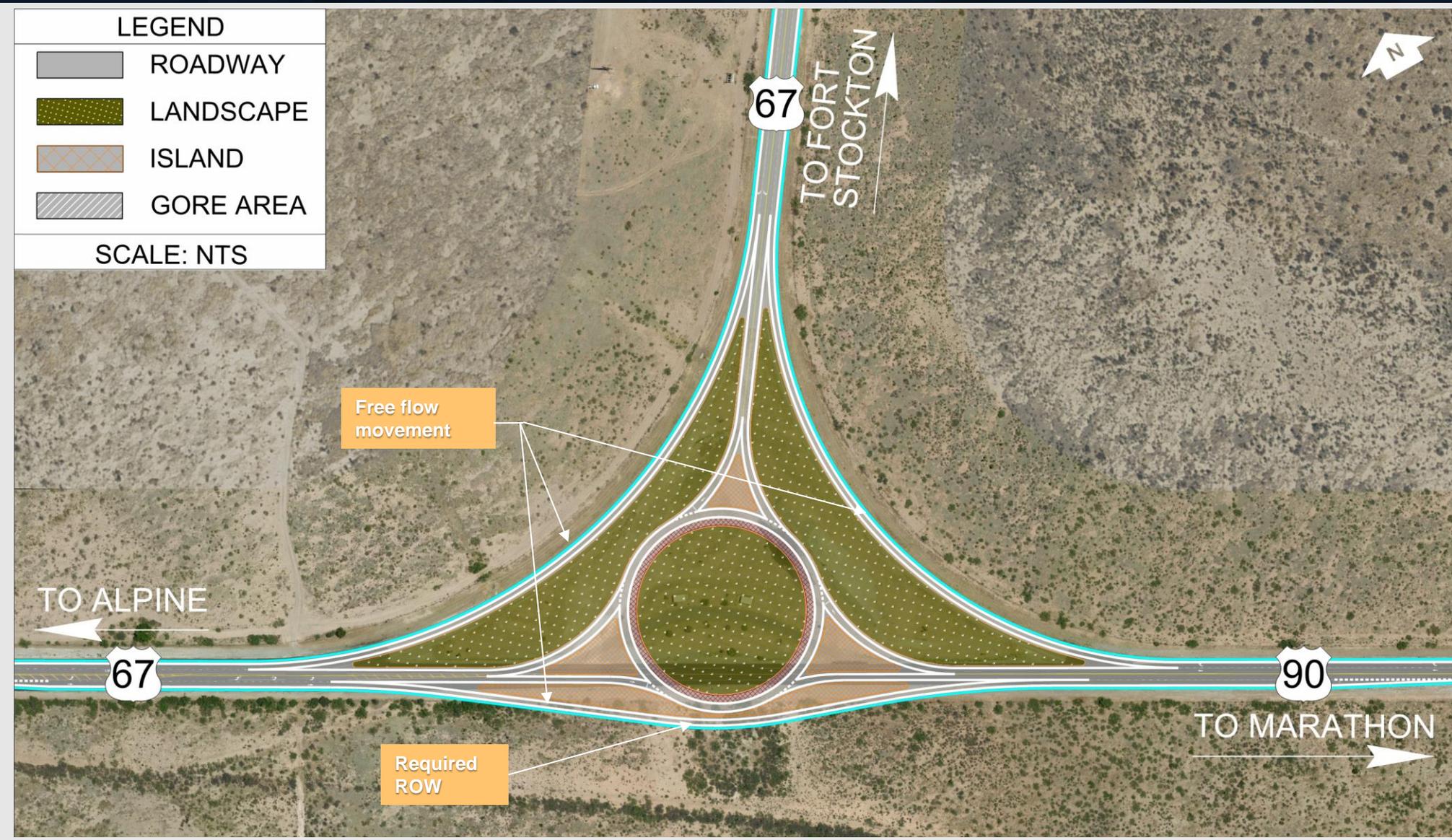
Source of Need: Safety Analysis

Satisfying Goal Area: Safety/Mobility

Right of Way (ROW) required	No
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** The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*

Rural Location 1 US 67/US 90 Y-Intersection - Alternative B: "Roundabout"



Issue Addressed: Improves Safety/ Reduce Conflict Points

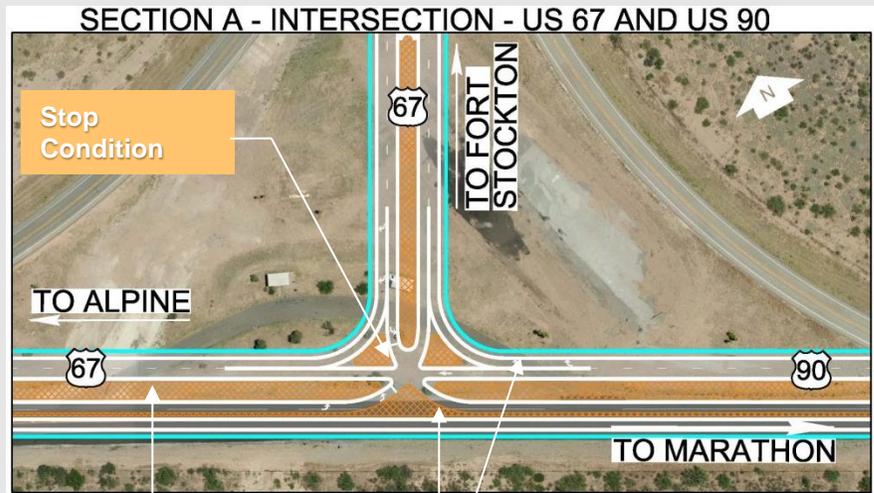
Source of Need: Safety Analysis

Satisfying Goal Area: Safety/Mobility

Right of Way (ROW) required	Yes
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** The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*

Rural Location 1 US 67/US 90 Y-Intersection - Alternative C: "Single Point Intersection"



LEGEND

-  ROADWAY
-  ISLAND
-  GORE AREA

SCALE: NTS

Issue Addressed: Safety	
Source of Need: Safety Analysis	
Satisfying Goal Area: Safety/Mobility	
Right of Way (ROW) required	No

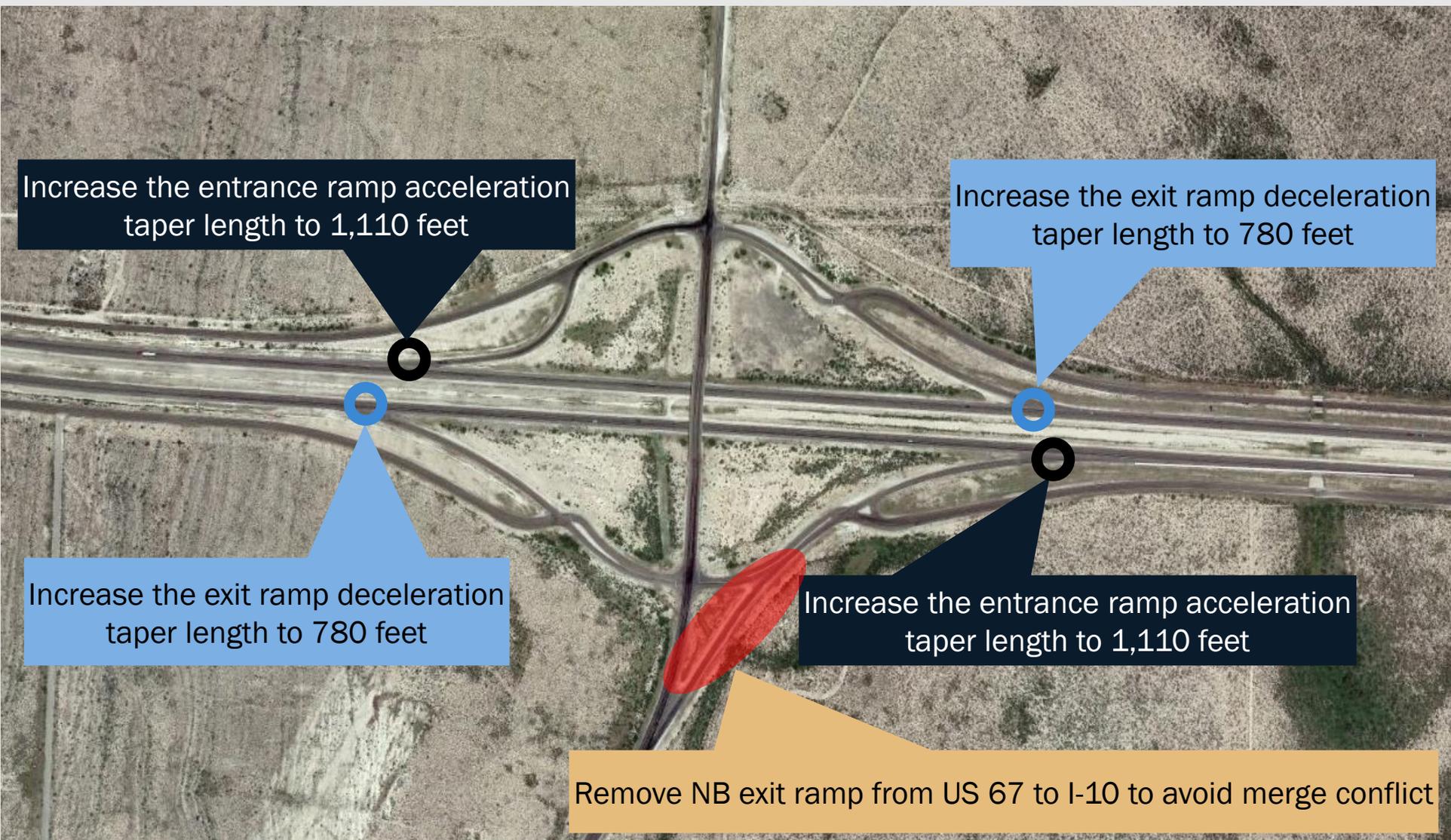
** The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*



RURAL LOCATIONS

Location 2: I-10/US 67 Interchange

Rural Location 2 I-10/US 67 Interchange Concept



Issue Addressed: Safety	
Source of Need: Public Input	
Satisfying Goal Area: Safety	
Right of Way (ROW) required	No

- Propose safety illumination at entrance and exit ramp locations
- Concepts based on TxDOT Roadway Design Manual as per design speed of 75mph (Fig 3-36)

** The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*

Alternatives Summary. Rural Locations 1&2 US 67/US 90 & US 67/I-10

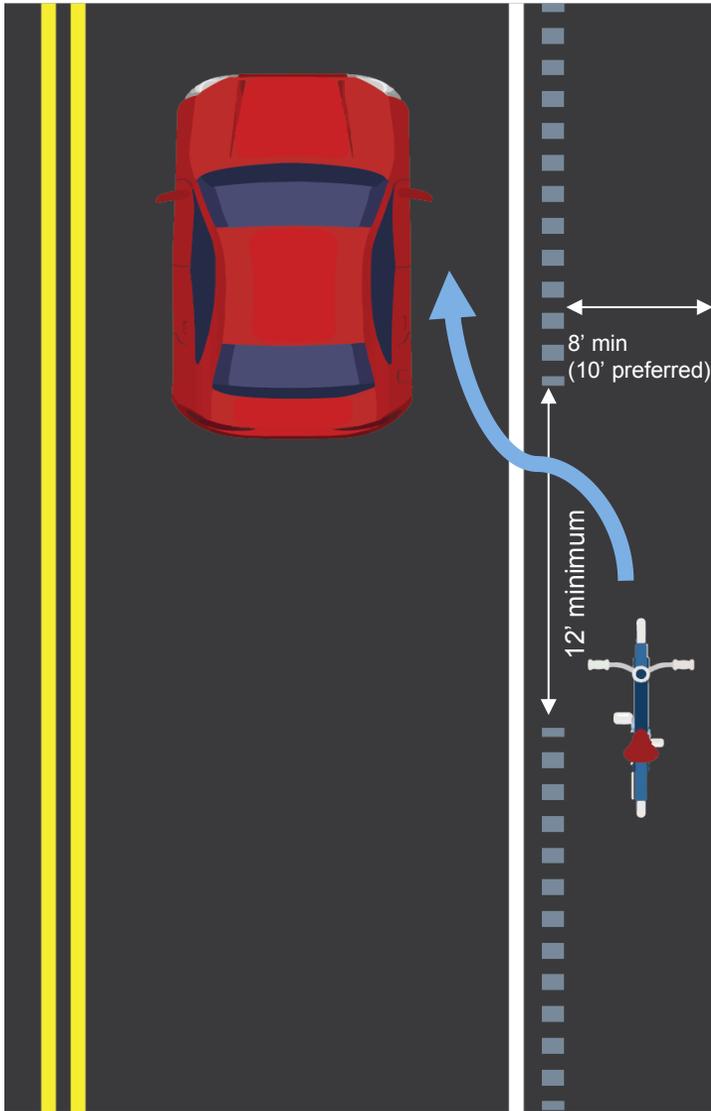
	No-Build	Alternative A: “Y-Intersection”	Alternative B: “Roundabout”	Alternative C: “Single Point Intersection”	I-10/US 67 Interchange
Cost	\$0	\$	\$\$	\$\$	\$
Pros	<ul style="list-style-type: none"> - No cost - Does not require ROW 	<ul style="list-style-type: none"> - Provides turning movement in all directions - Addresses safety concerns - Cost efficient design - Does not require ROW 	<ul style="list-style-type: none"> - Addresses safety concerns - Movement in all directions - Placemaking opportunity 	<ul style="list-style-type: none"> - Addresses safety issues - Simple design easy to follow - Provides continuous free flow along US 67 onto US 90 - Does not require ROW 	<ul style="list-style-type: none"> - Addresses Safety Issues - Provides Illumination at critical intersections - Does not require ROW
Cons	<ul style="list-style-type: none"> - Does not address safety concern 	<ul style="list-style-type: none"> - Can not make a right turn at T-Intersection when coming from SB US 67 	<ul style="list-style-type: none"> - Will require ROW 	<ul style="list-style-type: none"> - Retains T-Intersection design, more conflict points than roundabout (Alt. B) 	<ul style="list-style-type: none"> - None



RURAL LOCATIONS

Location 3: Core Concepts – Complete Street Alternative

Rural Location 3 Complete St Option: Bike Friendly Rumble Strips w/ Enhanced Shoulder



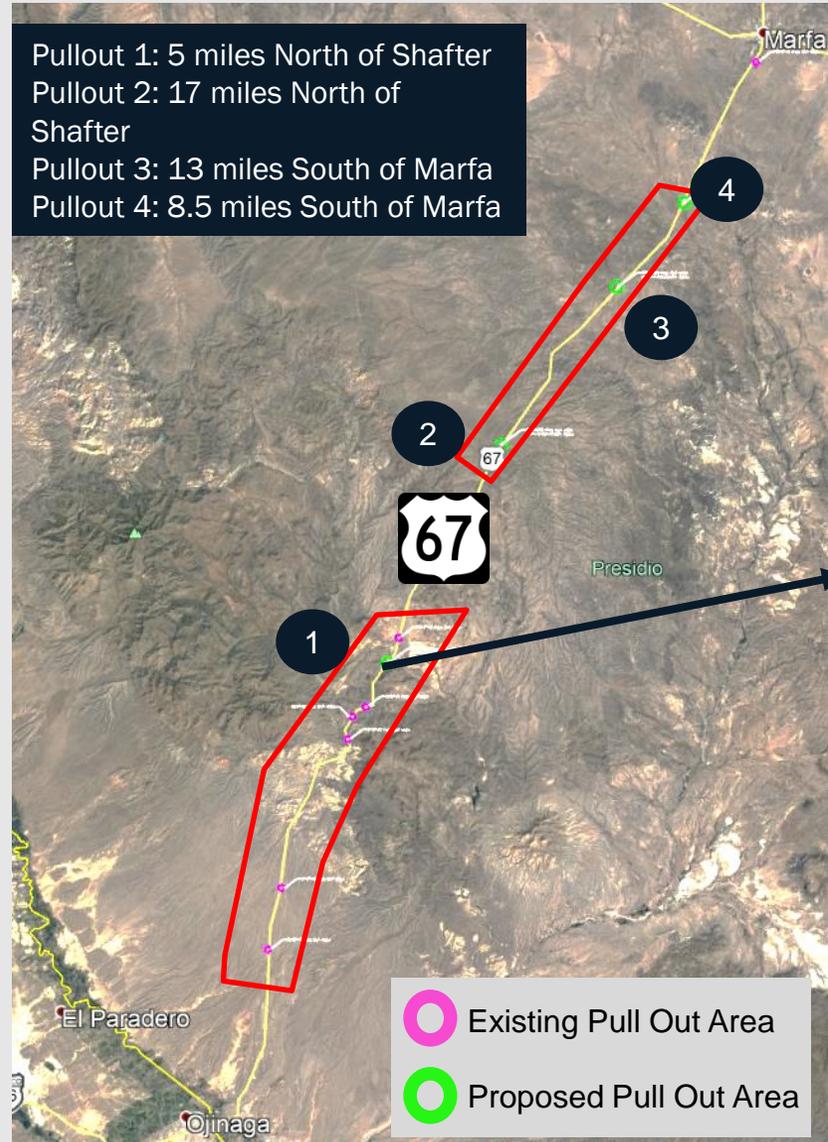
- Rumble strips are proven to reduce roadway departure crashes.
- A bicycle gap pattern allows access into and out of the shoulder for bicyclists.
- The gap pattern consists of 12 feet clear gap followed by rumbles, typically 40-60 feet.
- Bicycle route signage is recommended.



RURAL LOCATIONS

Location 4: Core Concepts - Pull Out/Rest Areas between Marfa & Presidio

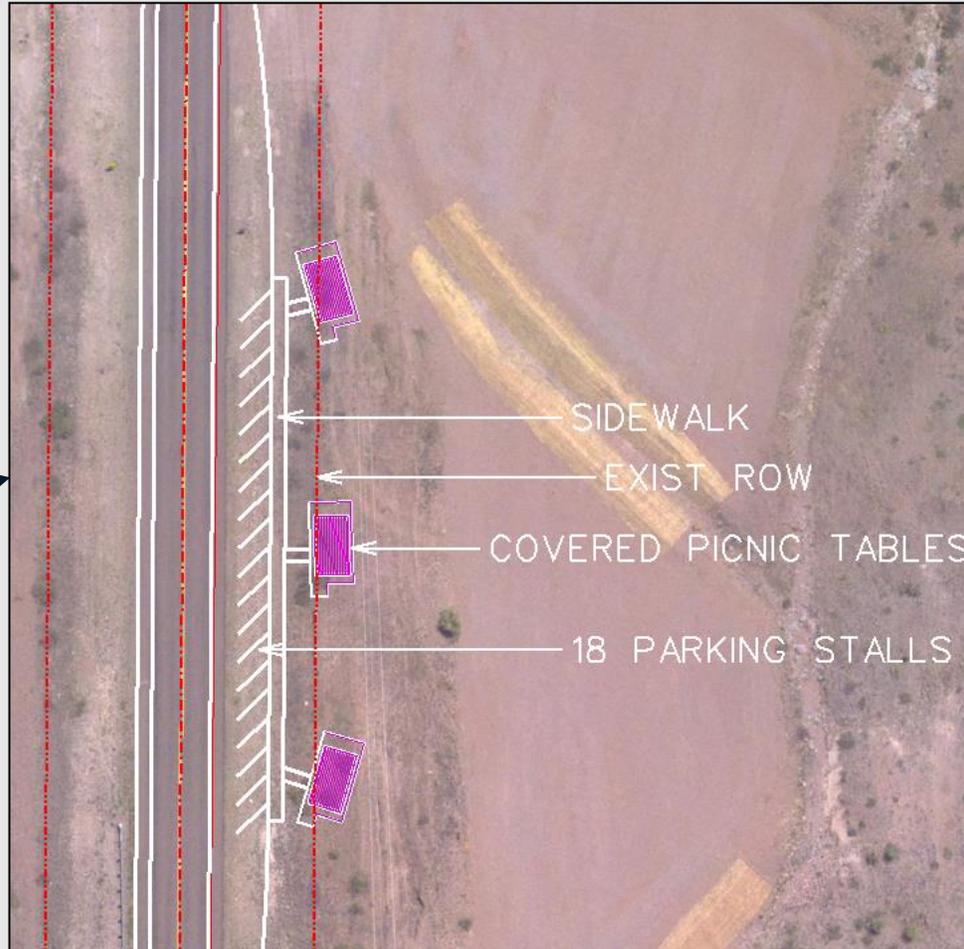
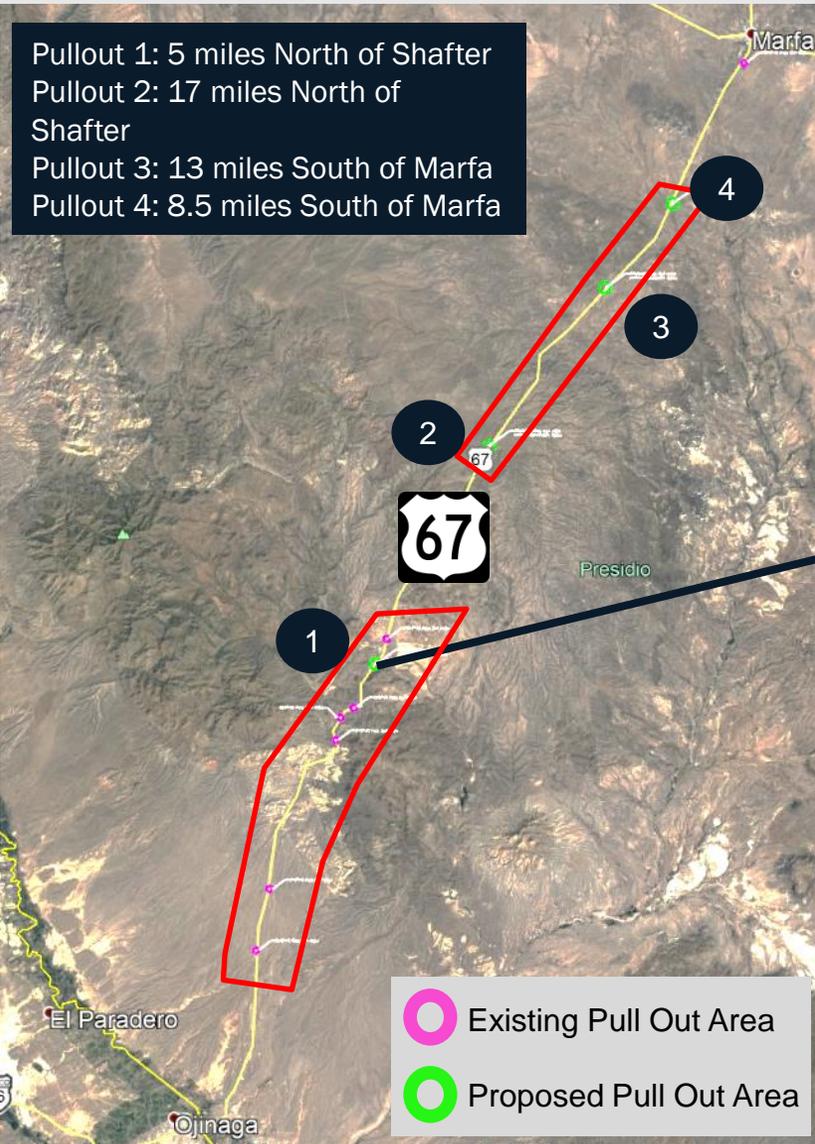
Rural Location 4 Pullout and Rest Areas Between Marfa and Presidio: "Short-Term"



Issue Addressed: Provides a safe vehicle refuge with some parking	
Source: Public Input/ Safety Analysis	
Satisfying Goal Area: Safety/ Emergency Response	
Right of Way (ROW) required	No

** The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*

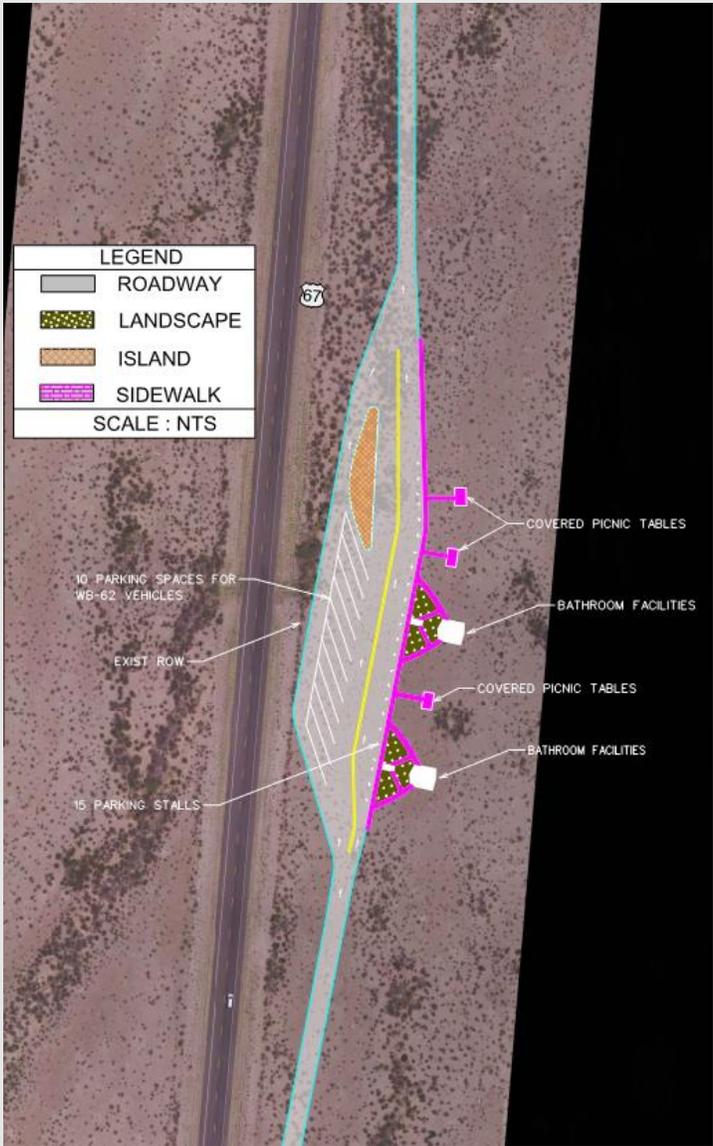
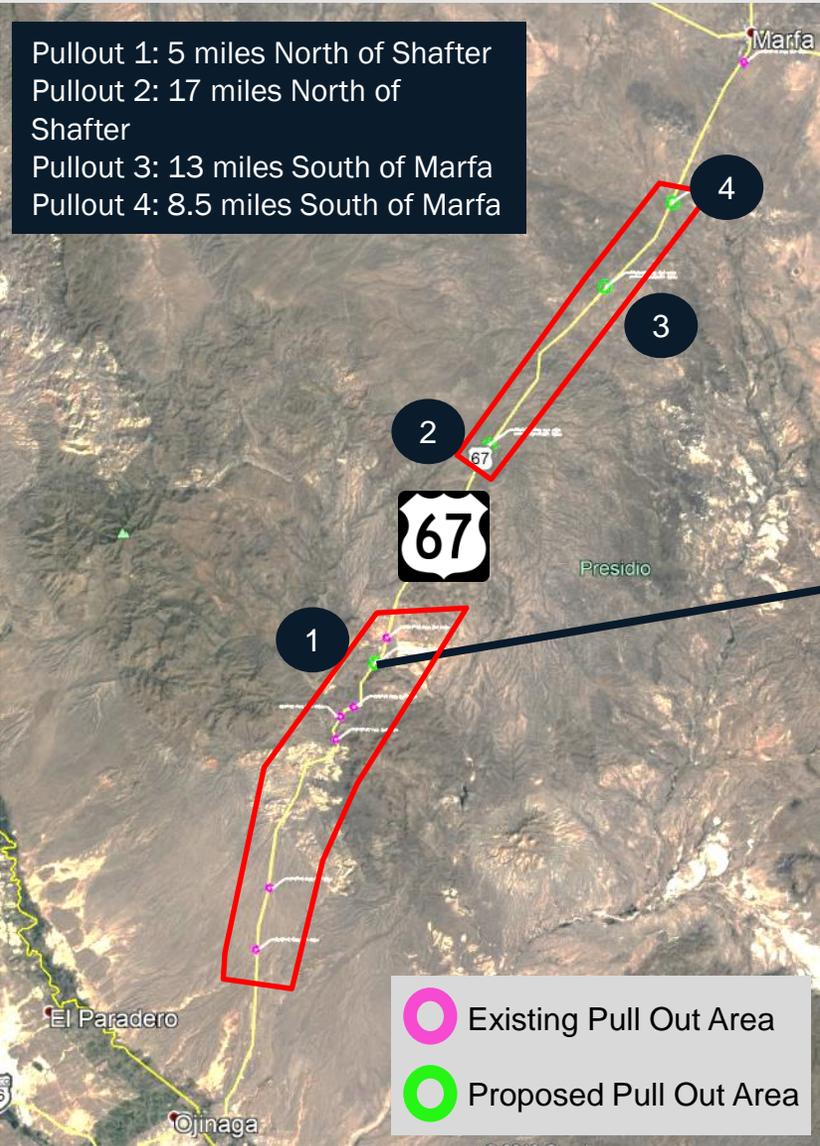
Rural Location 4 Pullout and Rest Areas Between Marfa and Presidio: "Mid-Term"



Issue Addressed: Provides a safe vehicle refuge with picnic benches	
Source: Public Input/ Safety Analysis	
Satisfying Goal Area: Safety/ Emergency Response	
Right of Way (ROW) required	Yes

** The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*

Rural Location 4 Pullout and Rest Areas Between Marfa and Presidio: "Long-Term"



Issue Addressed: Provides a safe vehicle refuge area with parking and picnic benches	
Source: Public Input/ Safety Analysis	
Satisfying Goal Area: Safety/ Emergency Response	
Right of Way (ROW) required	Yes

** The existing right of way (ROW) line is approximate as it is based on parcel data and existing aerial imagery. Potential new ROW is subject to change as design, public involvement, and environmental processes are followed and more accurate ROW data is received.*

Alternatives Summary. Location 4 Pullout/Rest Areas between Marfa and Presidio

	No-Build	Short-Term	Mid-Term	Long-Term
Cost	\$0	\$	\$\$	\$\$\$
Pros	<ul style="list-style-type: none"> - No cost - Does not require ROW 	<ul style="list-style-type: none"> - Provides a safe pull out area and parking facility - Does not require ROW 	<ul style="list-style-type: none"> - Provides a safe pull out area and parking facility - Provides shaded picnic areas and landscaping 	<ul style="list-style-type: none"> - Has all facilities of a efficient rest area with bathrooms and secure parking area
Cons	<ul style="list-style-type: none"> - Does not address safety concern 	<ul style="list-style-type: none"> - Does not provide any rest area facilities 	<ul style="list-style-type: none"> - Requires some ROW 	<ul style="list-style-type: none"> - Requires significant ROW

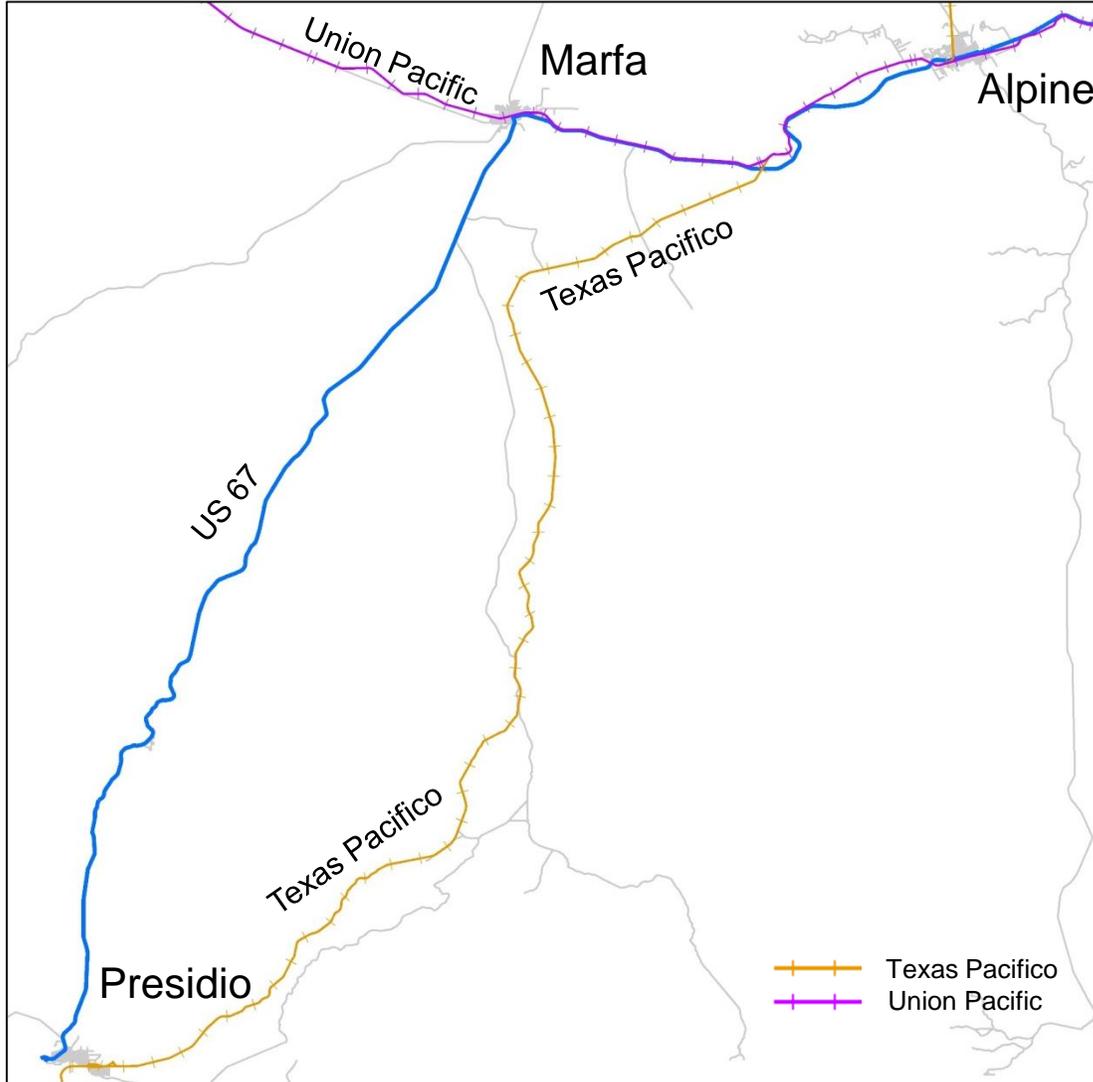


RURAL LOCATIONS

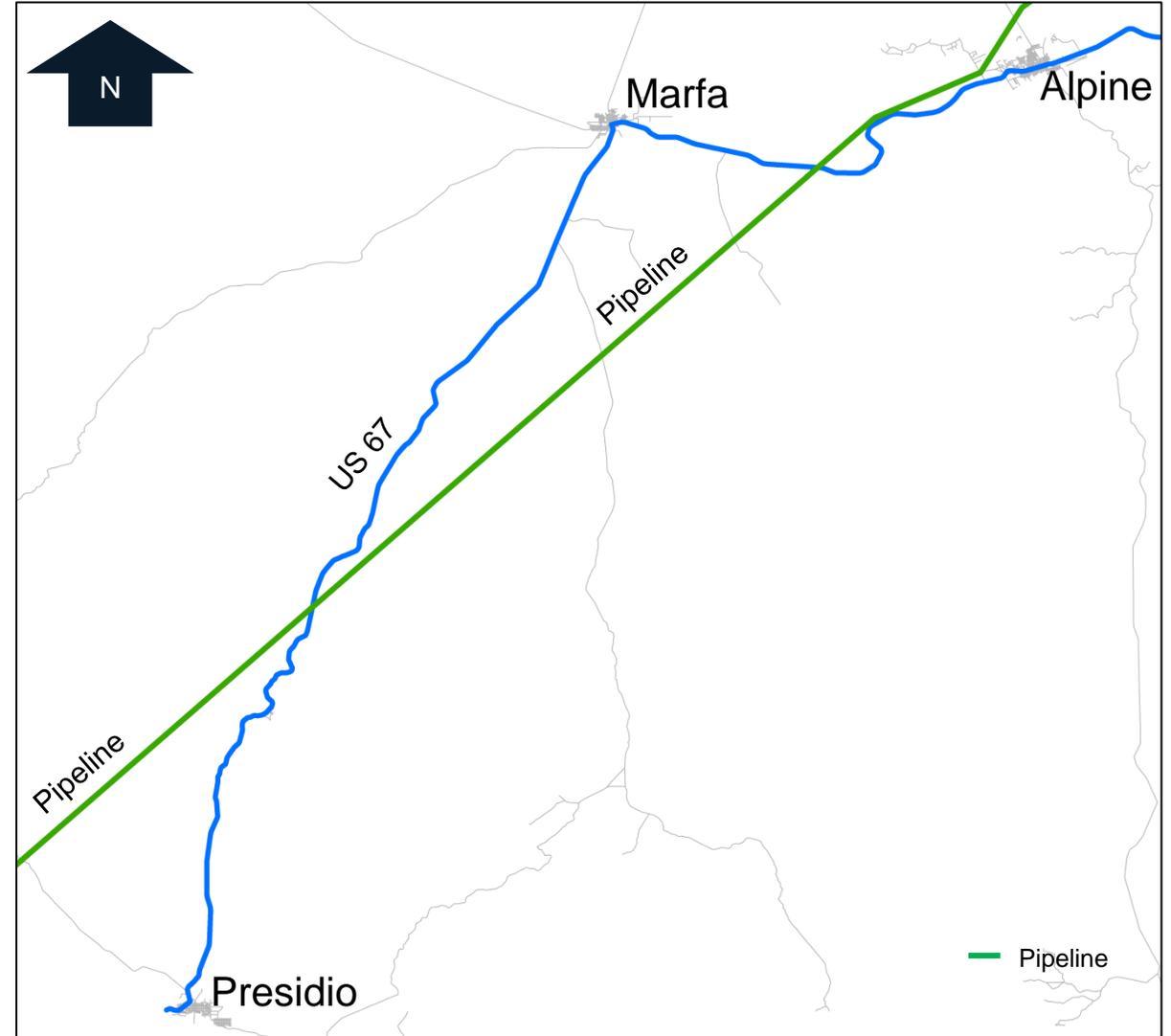
Location 5: Core Concepts - Rural Trail Options

Rural Location 5 Trail Options Off of US 67

Rural Location 5 - Rails with Trails Path



Rural Location 5 - Trails Over Pipeline Easement





TEXAS DEPARTMENT OF TRANSPORTATION

COMMUNITY SPECIFIC BREAKOUT SESSIONS



- Summarize Public Comments Received
- Develop Draft Corridor Master Plan for Public Comment
- Submit Final Corridor Master Plan