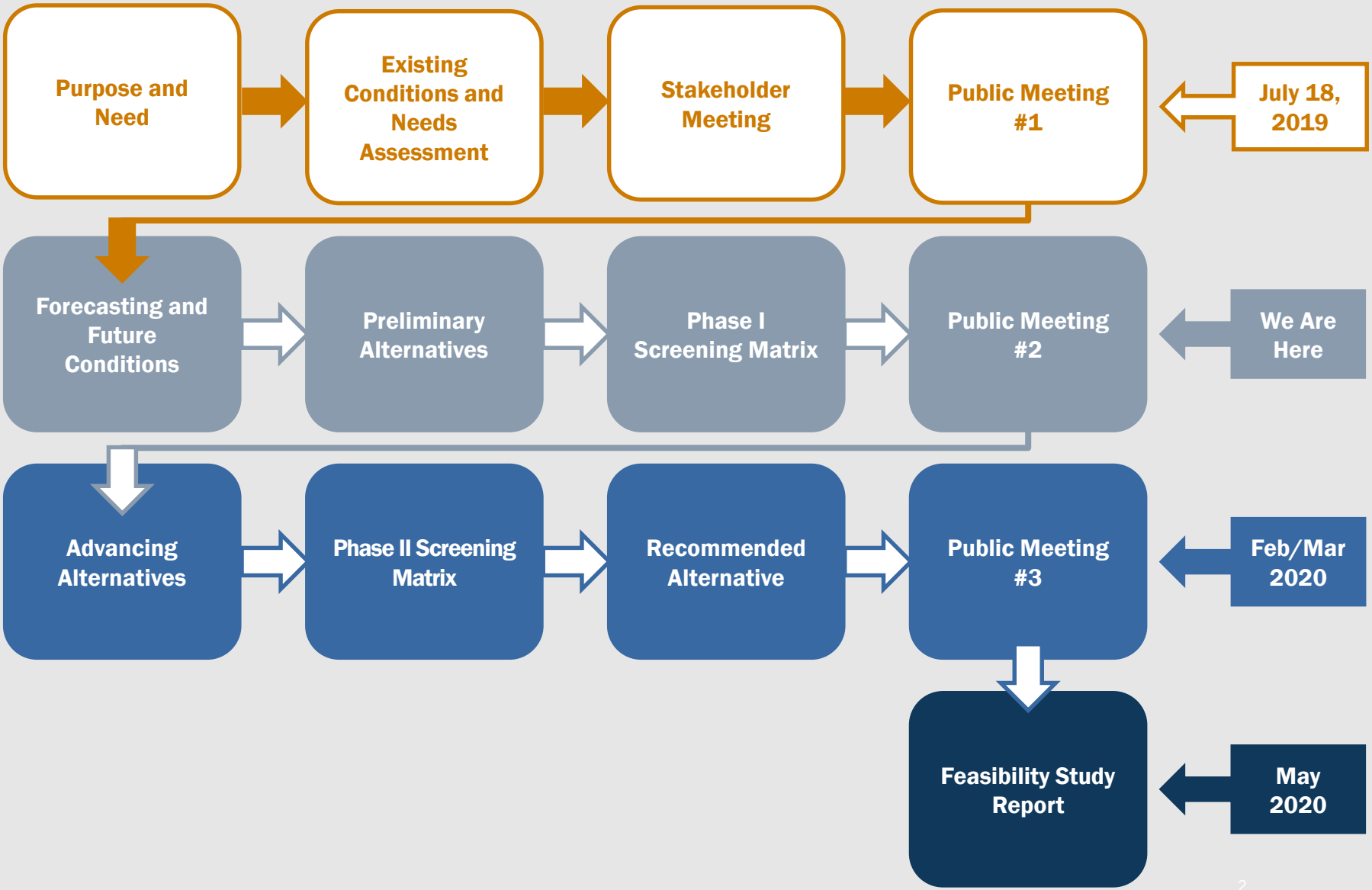
# US 277 Sonora Safety Route Study

## Public Meeting #2

Sutton County Civic Center, Sonora, Texas

October 22, 2019

# Sonora Safety Route Study



# What We Heard From You (Feedback from Public Meeting #1)

- Maintain potential future interstate compatibility.
- Expand the study area to the north.
- Consider oil/gas wells within the study area.

- Limit the study area to the east.
- Preserve the gas station on the east side of Sonora and its economic impact.
- Consider corridor placement in relation to downtown Sonora.

# Purpose and Need

**Provide a safe corridor alternative**

- Existing roadway conditions are substandard or outdated. There are current safety issues with through and freight traffic mixing with local traffic through downtown Sonora.

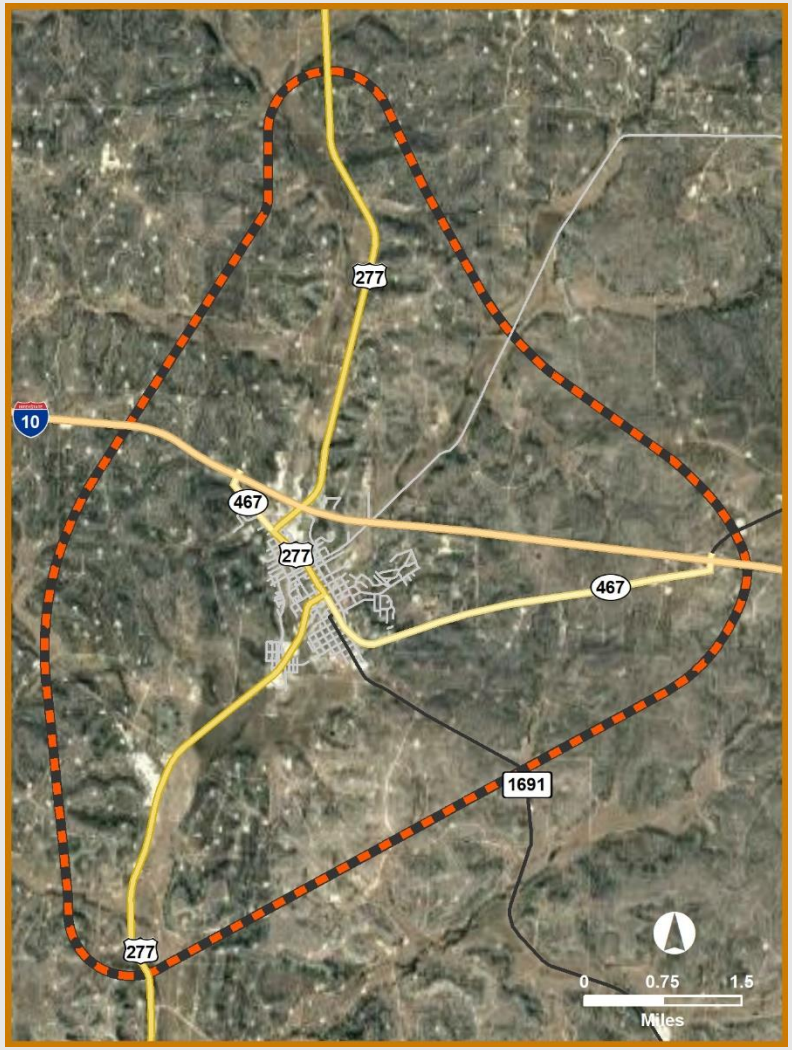
**Provide improved mobility, reduced congestion through construction of alternative route to existing corridor**

- There is a potential increase in hazardous and oversized cargo traveling by freight as traffic increases in the future.
- There are current traffic conflicts with traffic lights, driveways, and right turns through Sonora.

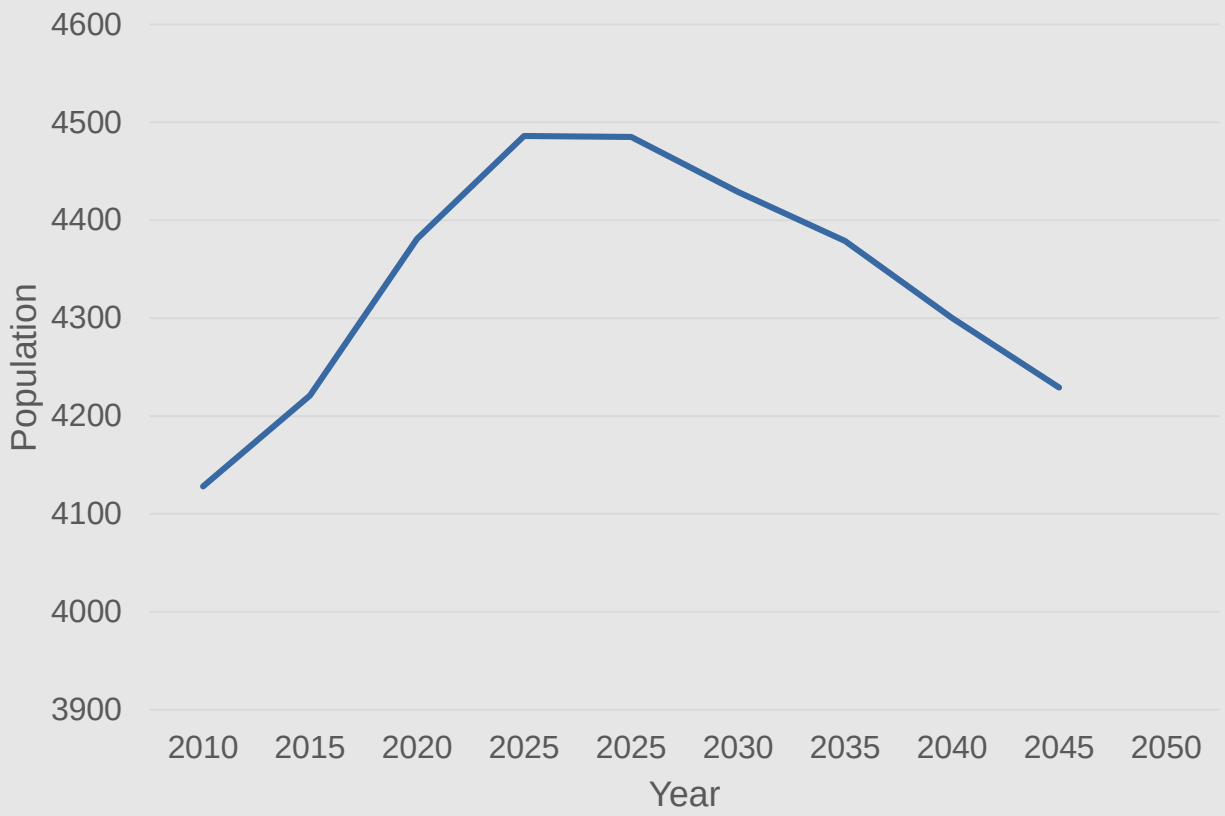
# Study Area

## Original Study Area

## Revised Study Area

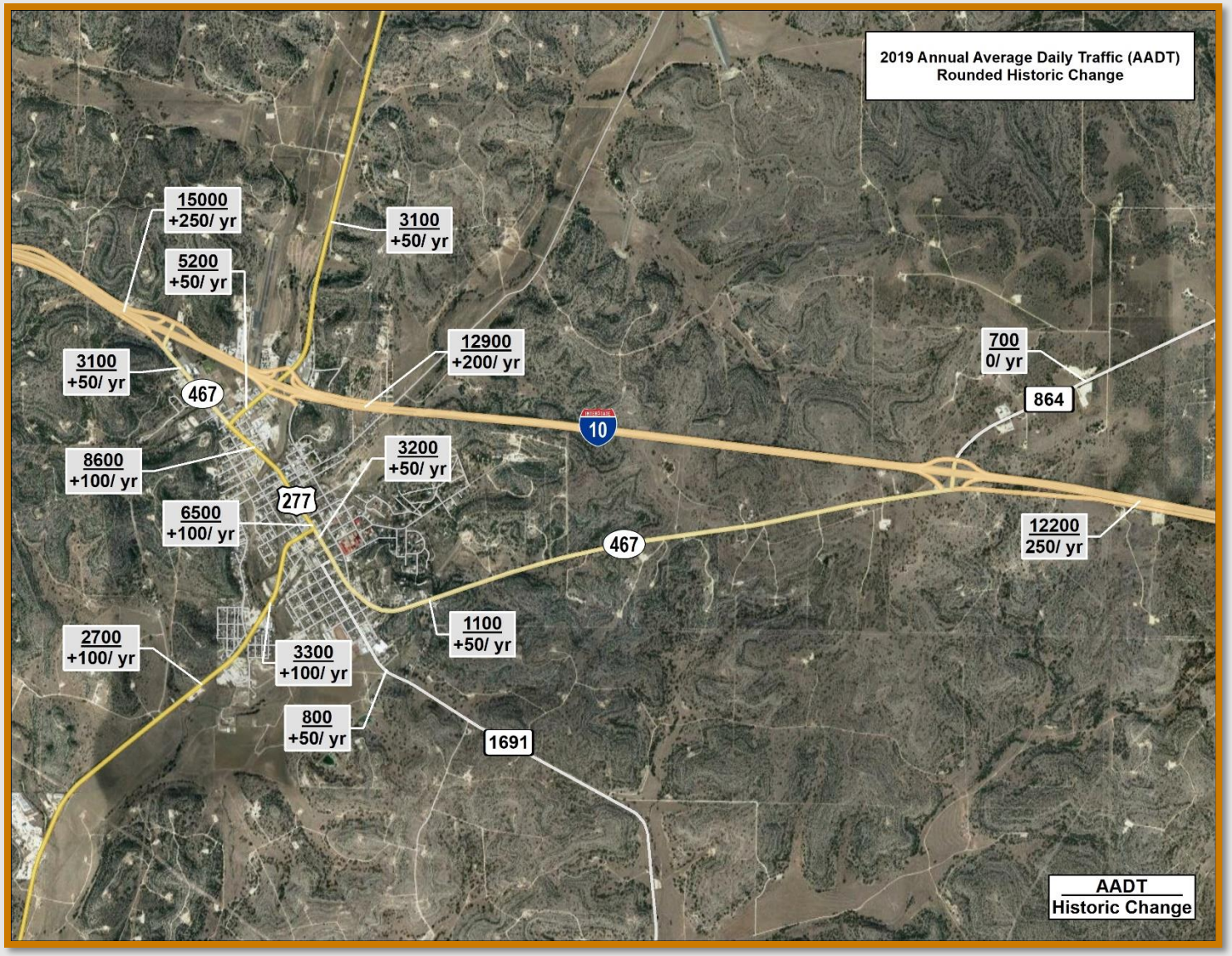


# Population Forecasts in Sutton County (2010-2050)

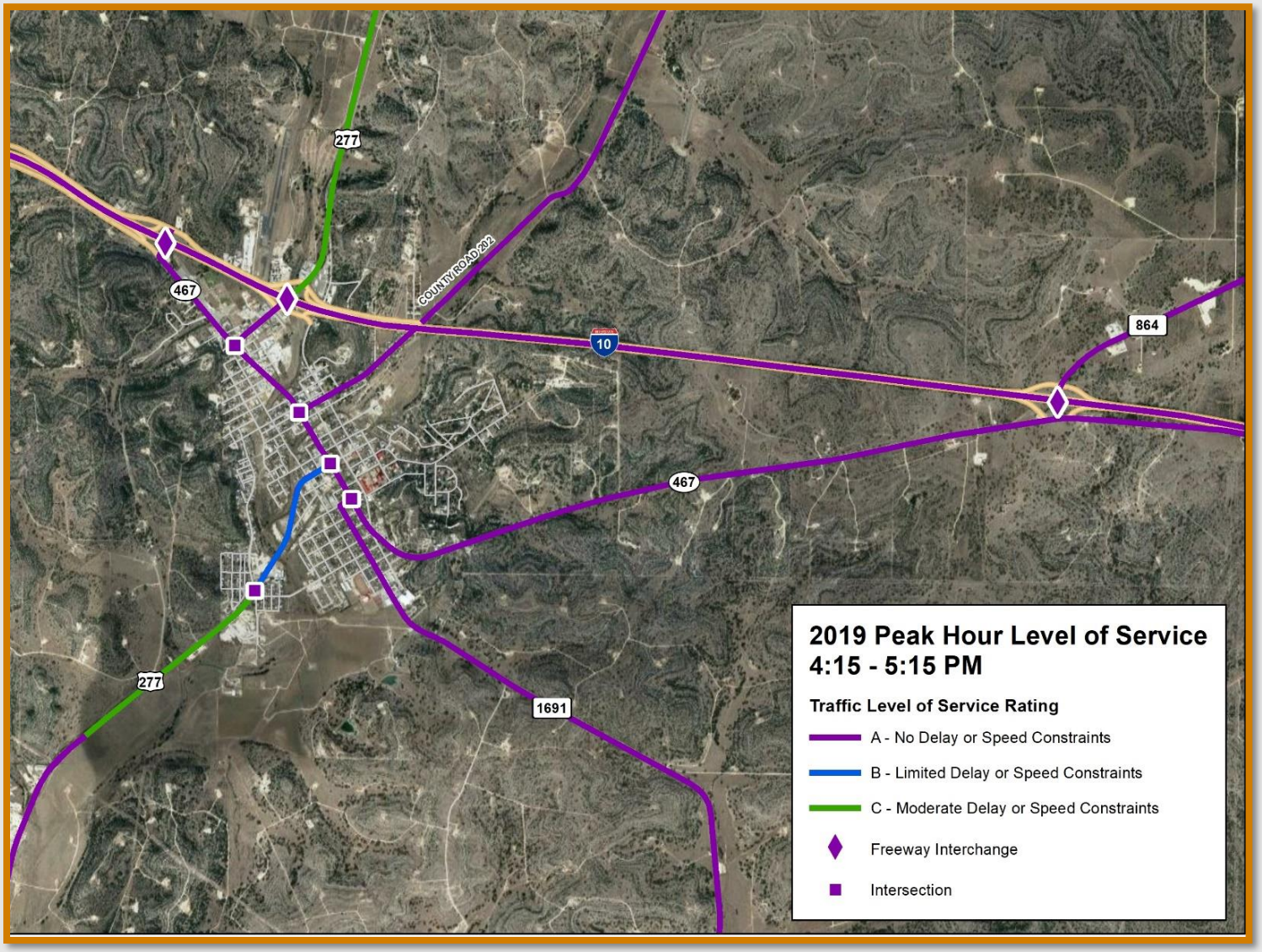



Source: Texas Demographic Center

# 2019 Average Daily Traffic with Historic Change



# Peak Hour Traffic Capacity and Level of Service Analysis



# Summary of the Data Supporting the Project Need

**Public Meeting #1**

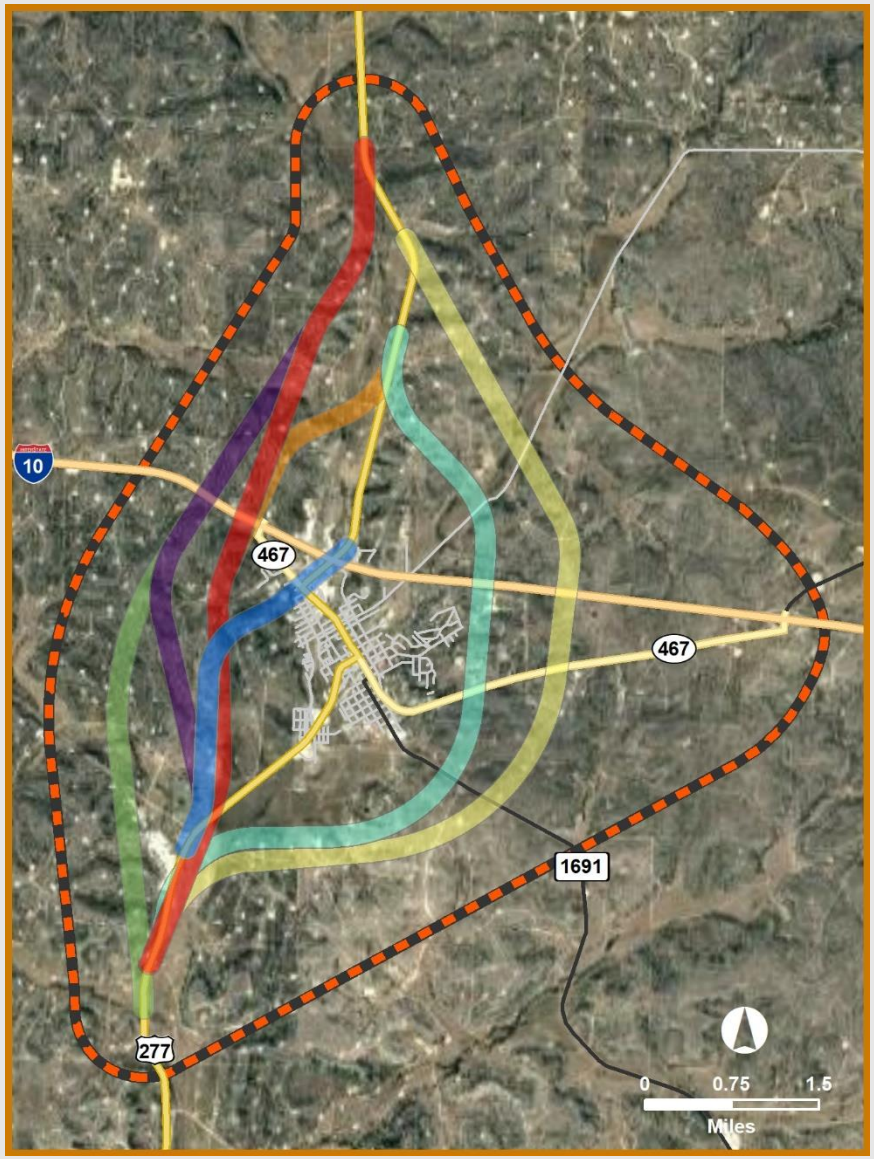
- Historical crash data (2014-2018) was reviewed at the first meeting.
- Higher crash rates than statewide average in the areas of I-10 and US 277.
- Higher crash severity on US 277 through Sonora.

**Public Meeting #2**

- Forecasted population (to 2050) and traffic data (historic and 2019) is being presented at this meeting.
- The population in Sutton County is projected to decline slightly but is not the main influential factor for projected freight movement on US 277.
- Traffic has remained relatively constant.

**The need for this project is driven by safety concerns based off existing and forecasted data.**

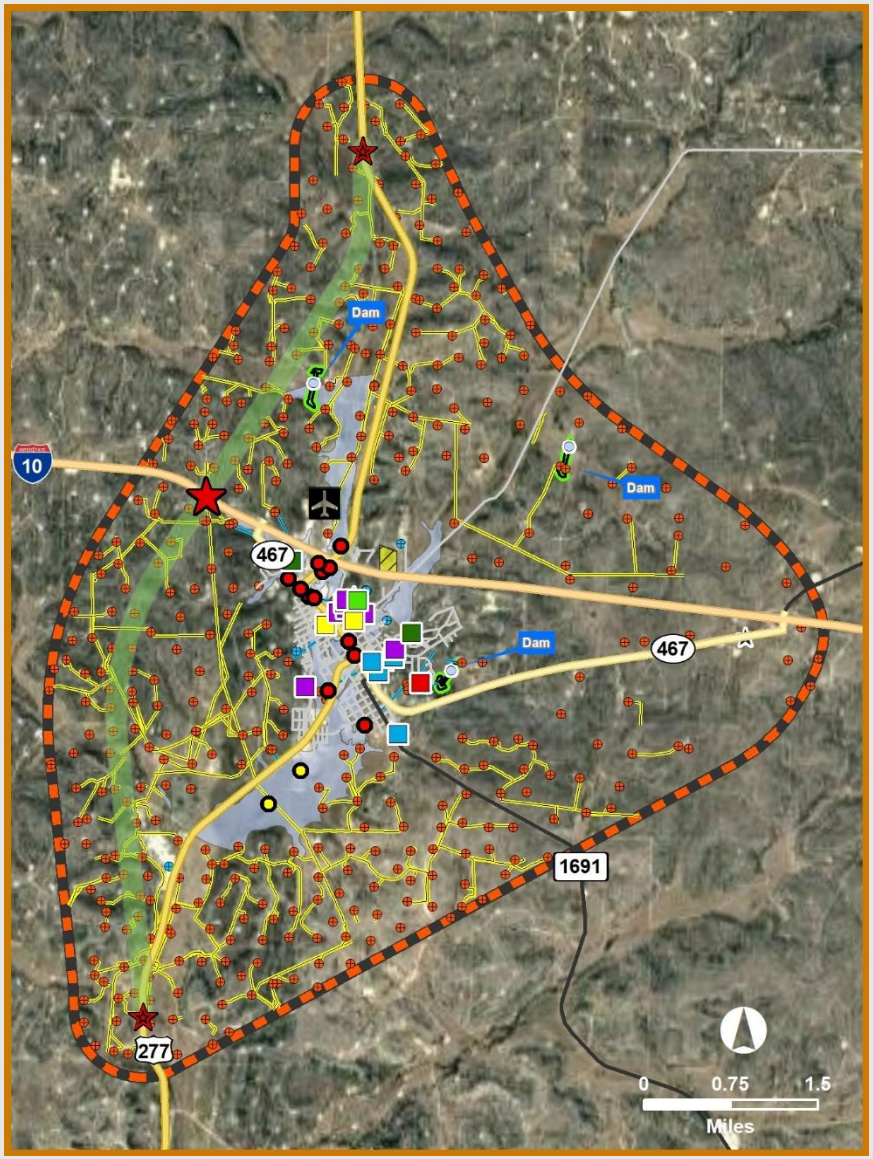
# Alternatives




**What was considered when developing alternatives?**

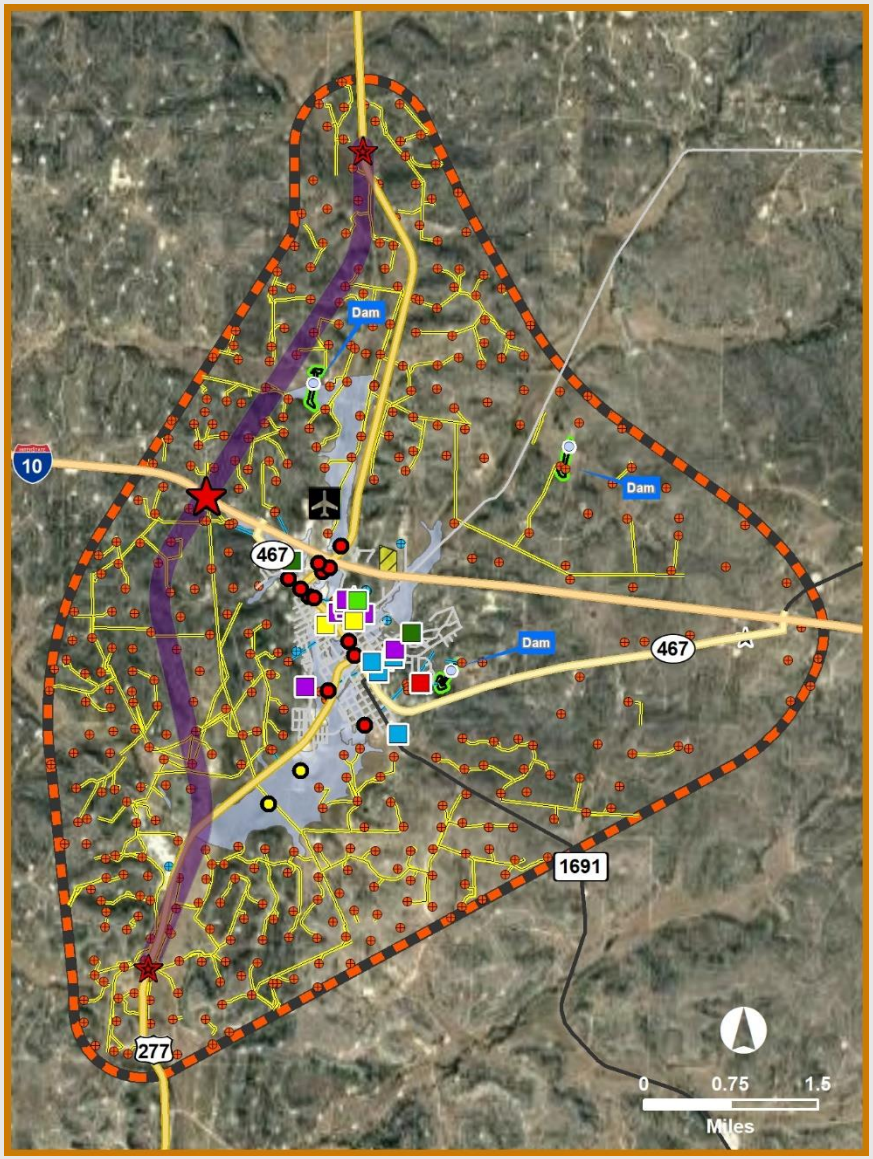
- Purpose and Need
- Study Area Constraints
- Design Criteria - Rural, 4-lane divided highway (not precluding future interstate)
- Stakeholder feedback from Public Meeting #1

# Green Alternative



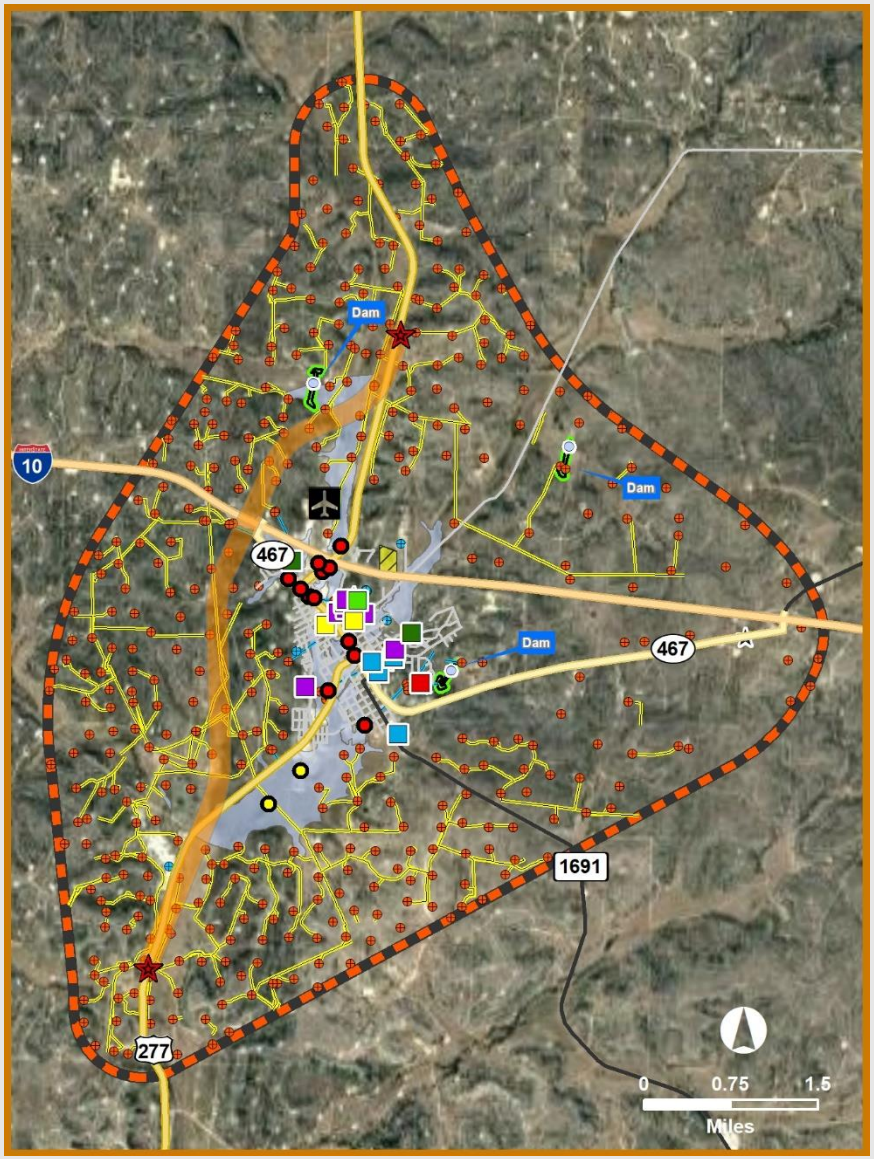

- Length: 8.08 miles
- Requires a new interchange at I-10 (initial phase)
- Requires two new interchanges at US 277 (ultimate phase)
- Avoids floodplain impacts (Dry Devils River)
- Potential impacts to archeological site

# Purple Alternative



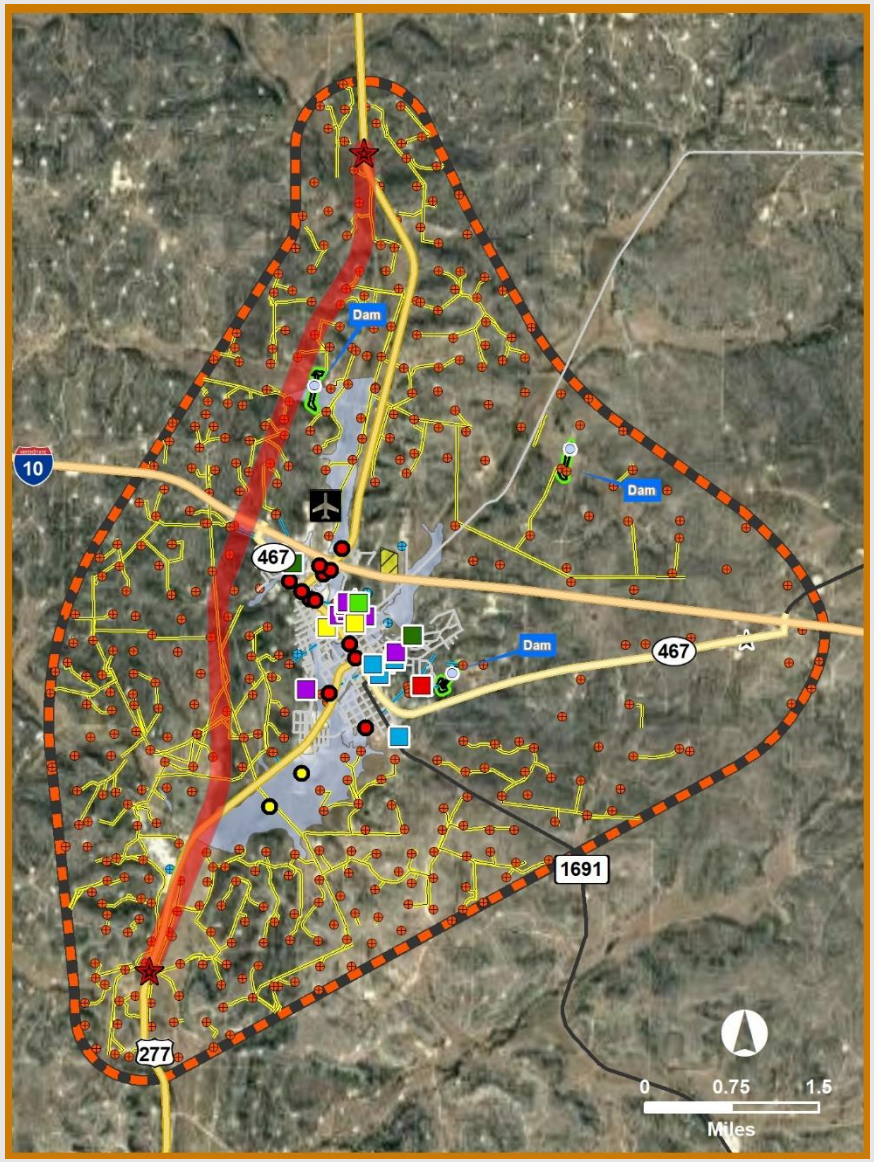

- Length: 7.74 miles
- Requires a new interchange at I-10 (initial phase)
- Requires two new interchanges at US 277 (ultimate phase)
- Similar to the Green Alternative with alteration of the southern portion.
- Crosses upstream of existing dam
- Floodplain impacts
- Potential impacts to archeological site

# Orange Alternative



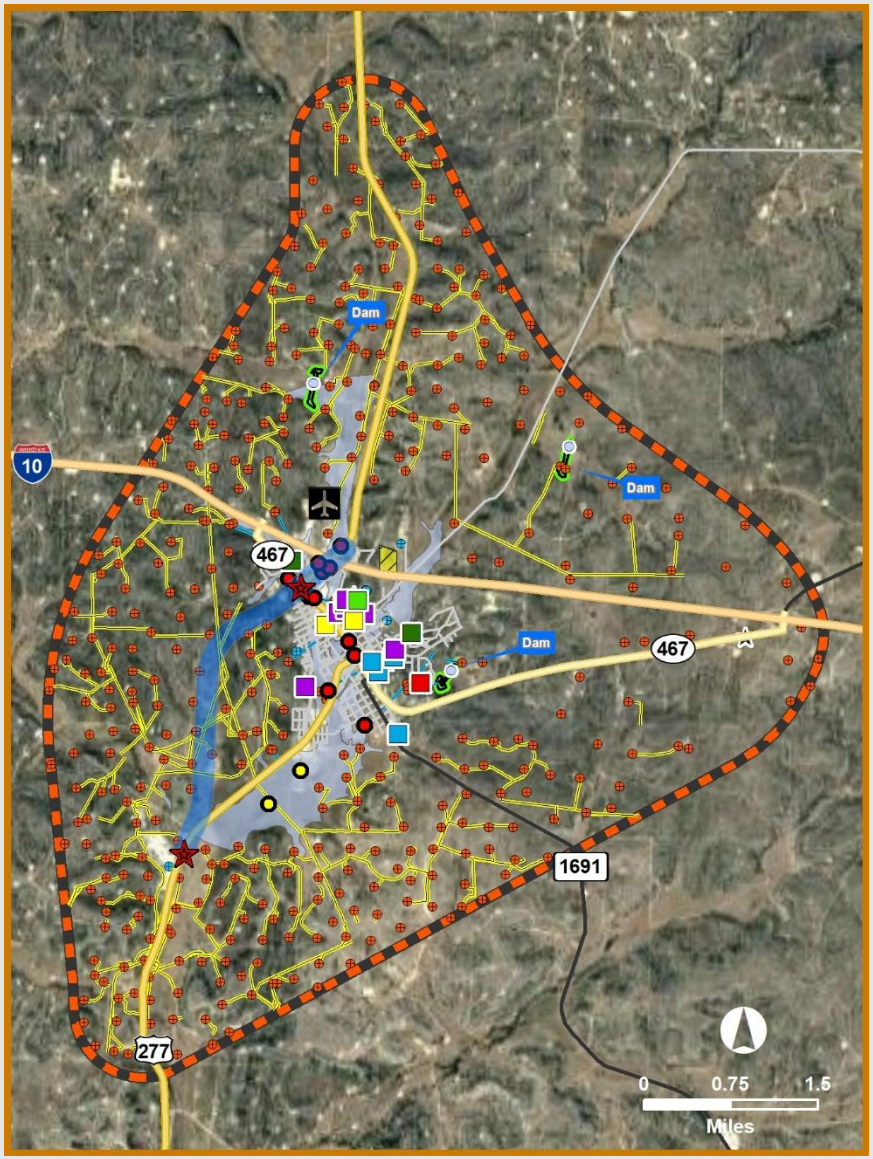

- Length: 6.26 miles
- Utilizes the existing interchange at I-10 (initial phase)
- Requires two new interchanges at US 277 (ultimate phase)
- Crosses downstream of existing dam
- Close to Sonora Municipal Airport, may impact future airport expansion opportunities
- Floodplain impacts
- Potential impacts to archeological site
- Closer to downtown Sonora

# Red Alternative



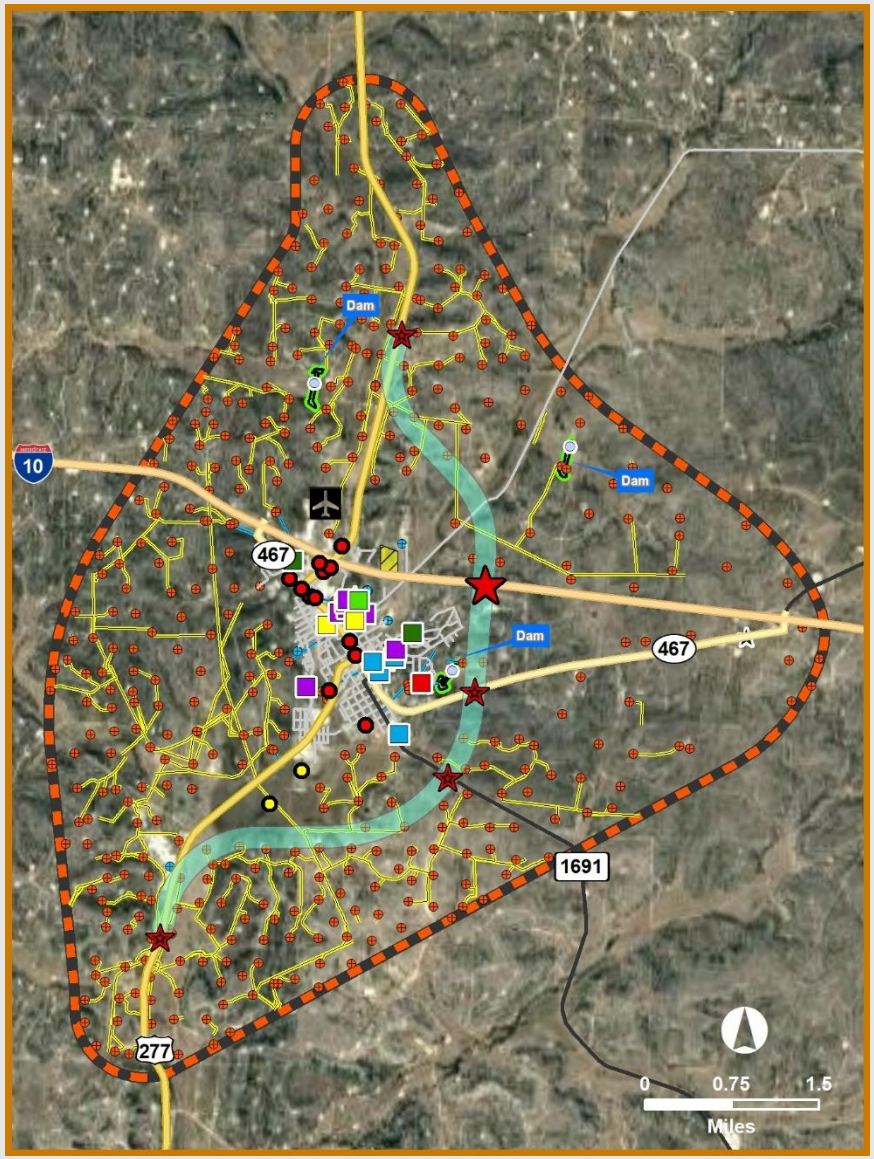

- Length: 7.46 miles
- Utilizes the existing interchange at I-10 (initial phase)
- Requires two new interchanges at US 277 (ultimate phase)
- Similar to the Orange Alternative with modification at the north end
- Connects further north of Sonora Municipal Airport and has less impact on future airport expansion opportunities
- Crosses upstream of existing dam

# Blue Alternative



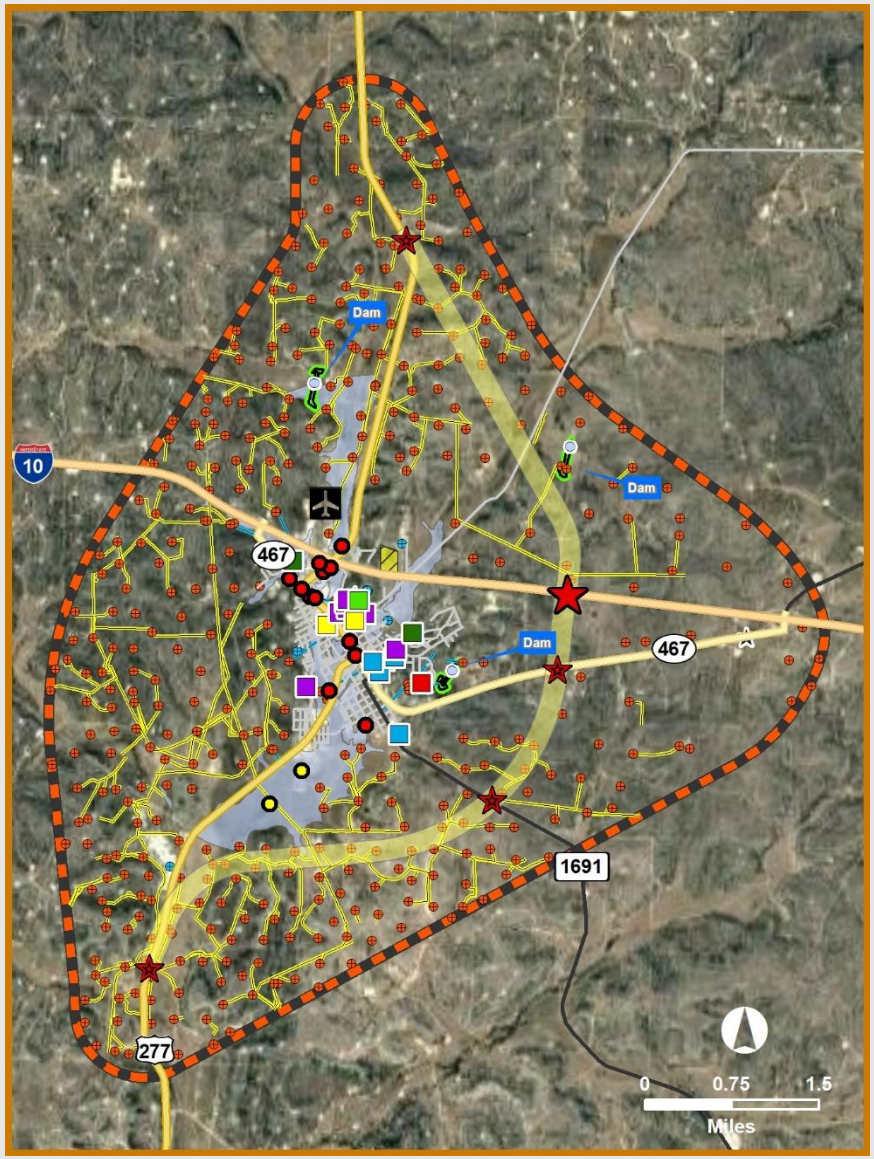

- Length: 2.77 miles (shortest alternative)
- Crosses through town at existing US 277
- Terminates just north of I-10
- Requires a new interchange at US 277 (ultimate phase)
- May limit future interstate potential
- Floodplain impacts
- Potential impacts to archeological site
- Close to downtown Sonora

# Teal Alternative



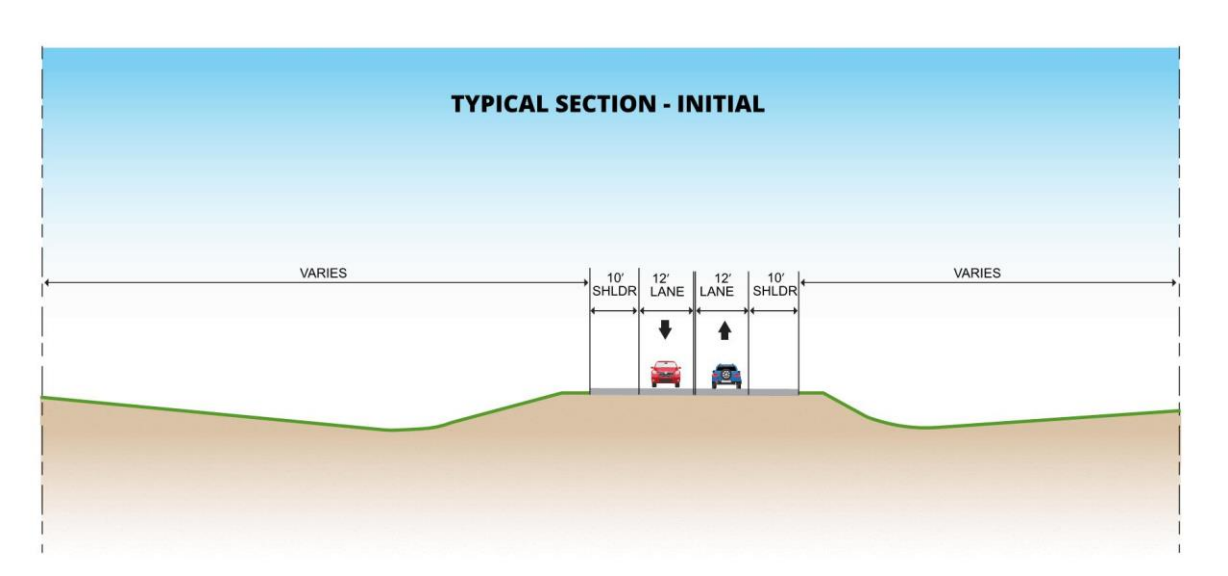

- Length: 7.23 miles
- Minimizes floodplain impacts
- Requires a new interchange at I-10 (initial phase)
- Requires four new interchanges: TX-467, Ranch Road 1691, and two at US 277 (ultimate phase)
- Closer proximity to east side of downtown Sonora

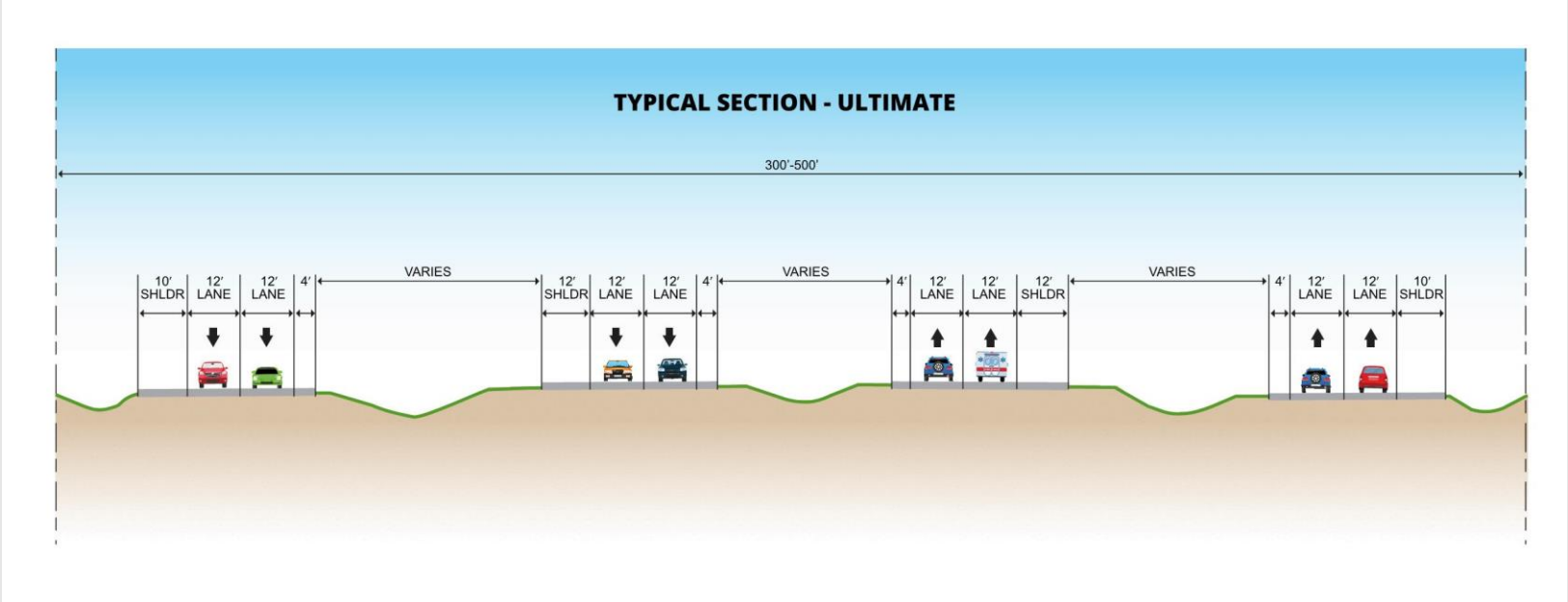
# Yellow Alternative




- Length: 9.03 miles (longest alternative)
- Minimizes floodplain impacts
- Requires a new interchange at I-10 (initial phase)
- Requires four new interchanges: TX-467, Ranch Road 1691, and two at US 277 (ultimate phase)
- Farthest away from downtown Sonora

# Typical Sections



# Evaluation Matrix – Phase I

**Factors used to screen alternatives in Phase I:**

- Acres of floodplain impacted
- Dams within alternative
- Proximity to Golf Course
- Proximity to Archeological Sites
- Within Airport Runway Protection Zone
- Limits Airport Expansion opportunities
- Stakeholder Preference – what we hear from you today

Alternatives that pass this Phase I screening will be further evaluated in a Phase II screening process using additional criteria.

# Matrix Screening – Phase I

| CRITERIA | ALTERNATIVES | | | | | | |
|---|---|---|---|---|---|---|---|
| | Green (8.08 miles) | Purple (7.74 miles) | Red (7.46 miles) | Orange (6.26 miles) | Blue (2.77 miles) | Teal (7.23 miles) | Yellow (9.03 miles) |
| 100-year floodplain (acres) | 6.44 | 23.64 | 47.98 | 91.11 | 8.71 | 46.75 | 6.27 |
| Dams (distance to nearest dam – miles) | 0.94 | 0.1 | 0.1 | 0.05 | 1.41 | 0.07 | 0.08 |
| Archeological Site (distance to nearest archaeological site – miles) | 0.243 | 0 | 0 | 0 | 0 | 0 | 0 |
| Golf Course (distance – miles) | 0.75 | 0.75 | 0.5 | 0.25 | 0 | 0.4 | 1.15 |
| Within Airport Runway Protection Zone (yes/no) | No | No | No | Yes | No | No | No |
| Limits Airport Expansion Opportunities (yes/no) | No | No | No | Yes | No | No | No |
| Proximity to downtown Sonora (Sonora can/cannot be seen from this alternative) | Can | Cannot | Can | Can | Can | Can | Cannot |
| Stakeholder Involvement | | | | | | | |
| Stakeholder Preference ranking)* | | | | | | | |

*This will be determined from feedback at this meeting and the comment period

# Next Steps

- Evaluate comments received at Public Meeting #2 and during the comment period.
- Apply Phase II screening criteria to Advancing Alternatives.
- Identify the Recommended Alternative.
- Public Meeting #3 will be held in February/March 2020 and will present the Recommended Alternative and solicit input on the recommendation.

# Phase II Criteria
# (will be applied to Advancing Alternatives)

**Safety**
- Improves substandard/outdated infrastructure (yes/no)
- Improves access of emergency services to emergency facilities (yes/no)
- Improves access of motorists to emergency services (yes/no)
- Reduces crashes (number)

**Mobility**
- Improves traffic flow through downtown Sonora (yes/no)
- Travel time savings (seconds)
- Interstate compatibility (yes/no)
- Modifications to local connectivity and access (yes/no)

**Cost**
- Right-of-way cost (dollars)
- Construction cost (dollars)

**Environmental**
- Streams (linear feet)
- Oil and gas wells (counts)
- Pipeline crossings (feet)
- Residences (counts)
- Businesses (counts)
- Low income and minority populations (within one mile)
- Parks and recreation areas (acres)

**Stakeholder Involvement**
- Stakeholder Preference (ranking)

# Public Involvement

- Please fill out the comment form and select your Preferred Alternative.
- We will use this data to help determine the Recommended Alternative.