NMDOT Vulnerable Road User Safety Assessment

New Mexico Department of Transportation

NMDOT VRU Safety Assessment
November 6, 2023

NMDOT
NEW MEXICO DEPARTMENT OF TRANSPORTATION

New Mexico DEPARTMENT OF TRANSPORTATION
MOBILITY FOR EVERYONE

November 6, 2023

Dear Division Administrator Vigue,

In accordance with 23 U.S.C. 148(l), as amended by the Infrastructure Investment and Jobs Act (IIJA) (Pub. L. 117-58, also known as the "Bipartisan Infrastructure Law" (BIL)), the New Mexico Department of Transportation (NMDOT) is pleased to submit the Vulnerable Road User Safety Assessment (VRUSA).

The NMDOT VRUSA meets the requirements outlined in the October 21, 2022, guidance issued by the Federal Highway Administration (FHWA), as shown in Appendix H of the document. But most importantly, the NMDOT VRUSA will help guide the use of Highway Safey Improvement Program funding, help center safety as a component of all NMDOT projects, and provide a tool to help reduce the number of fatal and serious injury crashes impacting vulnerable users of the transportation system in New Mexico. With a pedestrian crash rate of 4.77 per 100,000 people (2021) New Mexico leads the nation in terms of the pedestrian fatality rate, and NMDOT must do more to combat this critical statistic.

The VRUSA analysis used crash data from 2012 – 2022. The 2022 crash data is preliminary, as it has not yet been entered into the Fatality Analysis Reporting System (FARS) but using the most recent available crash data helps provide a clearer picture of the crashes involving vulnerable road users. The analysis included all fatal and serious injury crashes on all roads to determine the high injury network. The high injury network is a subset of the full crash analysis and focuses on the roadways with the most fatal and serious injury crashes for pedestrians and bicyclists. In addition to crashes, an equity analysis is also included in the VRUSA. The equity analysis used 11 variables, including race and ethnicity, low-income populations, Tribal land, flood risk, and air quality. The full description of the variables and equity analysis methods is in Appendix A of the VRUSA.

As Cabinet Secretary for the NMDOT, and the Governor's designee, I approve the VRUSA for submittal to the FHWA New Mexico Division. I look forward to your acceptance of the VRUSA and to our continued partnership to improve the safety outcomes for vulnerable road users in New Mexico.

Sincerely,

Digitally signed by Ricky Serna
Date: 2023.11.14 12:47:33 -07'00'

Ricky Serna
Cabinet Secretary

General Office | P. O. Box 1149 | Santa Fe, NM 87504

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Acronyms and Abbreviations

AADT	Annual Average Daily Traffic
ADA	Americans with Disabilities Act
CMF	Crash Modification Factor
DWI	Driving while Intoxicated
eSTIP	(Electronic) Statewide Transportation Improvement Program
FHWA	Federal Highway Administration
GIS	Geographic Information System
HIN	High Injury Network
HSP	Highway Safety Plan
HSIP	Highway Safety Improvement Program
IIJA	Infrastructure Investment and Jobs Act
LPI	Leading Pedestrian Interval
MPH	Miles Per Hour
MPO	Metropolitan Planning Organization
MUTCD	Manual on Uniform Traffic Control Devices
NACTO	National Association of City Transportation Officials
NM Bike Plan	New Mexico *Prioritized Statewide Bicycle Network Plan*
NMDOT	New Mexico Department of Transportation
PHB	Pedestrian Hybrid Beacon
RRFB	Rectangular Rapid Flashing Beacon
RTPO	Regional Transportation Planning Organization
SHSP	Strategic Highway Safety Plan
SSA	Safe System Approach
TIP	Transportation Improvement Program
UCR	Uniform Crash Report
VMT	Vehicle Miles Traveled
VRU	Vulnerable Road User
VRUSA	Vulnerable Road User Safety Assessment

Table 0-1
KABCO Injury Scale

KABCO rating	Definition
K	Killed
A	Incapacitated: Carried from scene
B	Visible injury
C	Complaint of injury, but not visible
O	No apparent injury

The KABCO Injury Scale is used in the New Mexico Uniform Crash Report (UCR). The scale corresponds to the severity of the injuries as assessed by law enforcement responding to investigate the scene.

1. Introduction

What Is a Vulnerable Road User?

"A vulnerable road user is a nonmotorist with a fatality analysis reporting system (FARS) person attribute code for pedestrian, bicyclist, other cyclist, and person on personal conveyance or an injured person that is, or is equivalent to, a pedestrian or pedalcyclist as defined in the ANSI D16.1-2007. (See 23 U.S.C. 148(a)(15) and 23 CFR 490.205). A vulnerable road user may include people walking, biking, or rolling. Please note that a vulnerable road user:

- Includes a highway worker on foot in a work zone, given they are considered a pedestrian.
- Does not include a motorcyclist."

Federal Highway Administration, October 21, 2022

This Vulnerable Road User Safety Assessment focuses on pedestrians and bicyclists, often referred to as pedalcyclists, as the broader definition provided above is compressed into the two categories in the state's reporting systems. In this context, the vulnerability of legal roadway users is in relation to occupants of motor vehicles, who are more protected from the impacts of a vehicle crash.

1.1 Purpose of the VRU Safety Assessment

As of the latest finalized available data (2021), New Mexico has the highest pedestrian fatalities per capita in the nation, a ranking held by New Mexico for six of the seven years preceding 2021. Due to the fact that most roadways are designed and built with a vehicle-centric mindset, the safety of pedestrians and all vulnerable road users (VRUs), needs to become more of a prioritization. In an effort to address the high rate of vulnerable road user fatalities and injuries nationwide, the Infrastructure Investment and Jobs Act added requirements to the Highway Safety Improvement Program, including that "All States are required to develop a Vulnerable Road User Safety Assessment as part of their Highway Safety Improvement Program (HSIP) in accordance with 23 U.S.C. 148(l)." To improve the safety performance outcomes for vulnerable road users, and to meet the IIJA requirements, the New Mexico Department of Transportation (NMDOT) developed this safety assessment.

Specifically, this safety assessment:

- Documents the current state of VRU safety
- Identifies areas of especially high risk
- Analyzes who is most likely to be in a VRU-involved crash
- Prioritizes and categorizes specific corridors and intersections for improvements
- Proposes recommendations for VRU safety improvements

FHWA Requirements

The Infrastructure Investment and Jobs Act (IIJA), passed by the US Congress and signed into law in 2021, added a new requirement for state departments of transportation to conduct a Vulnerable Road User Safety Assessment (VRUSA) every five years. Anchored in the Safe System Approach (SSA, see Figure 1-1), this assessment must use a data-driven process to identify high risk areas and incorporate equity and demographic considerations into the analysis. Official guidance for the VRUSA recommends the use of a high injury network (HIN), predictive, or systemic analyses to identify high risk areas.

Figure 1-1
Safe System Approach

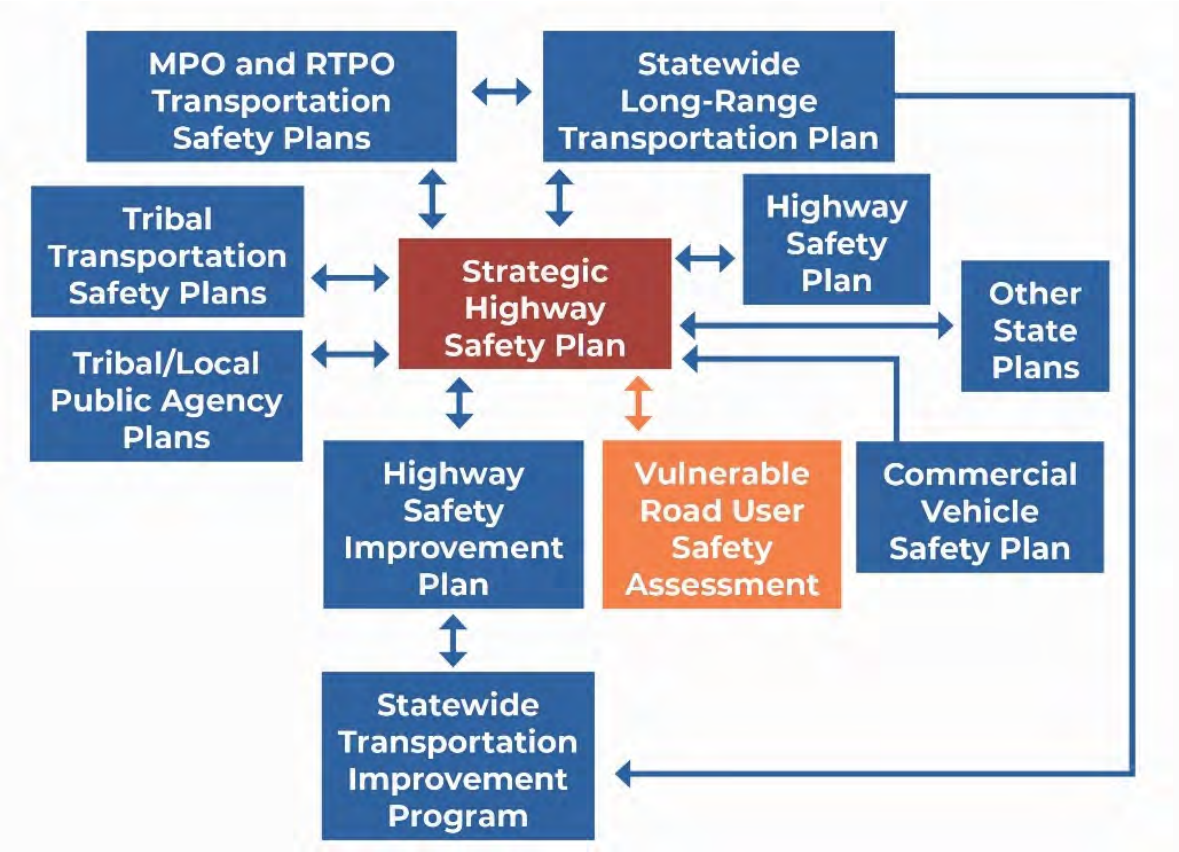
The SSA is a framework developed by the Federal Highway Administration (FHWA) and is built upon the idea that roadway fatalities and serious injuries are not inevitable but are preventable. Decisions around how we build our communities and design our streets, and our own driving behaviors, all have significant impacts on the safety of our roads. By addressing every aspect of a crash, the SSA strives to both prevent crashes from occurring in the first place, and to minimize the harm to those involved when crashes do occur.

NMDOT used the SSA framework to develop this VRU Safety Assessment.

1.1.1 How This Plan Will Be Used

The purpose of the VRUSA is to conduct an in-depth analysis of the state of VRU safety in New Mexico and identify high risk areas and opportunities for improvement. The IIJA and FHWA requires the VRUSA to be incorporated into the Strategic Highway Safety Plan (SHSP), which is focused on improving safety outcomes for transportation system users. The relationships between those plans can be seen in Figure 1-2 below. The SHSP is a comprehensive state-wide safety plan which provides a framework for reducing fatalities and serious injuries. Analyses and recommendations from the VRUSA will be included directly into the SHSP document. For more information about related NMDOT plans, reference Appendix G, for a document and plan review summary.

Figure 1-2
Transportation Plan Relationships



In addition to the VRUSA requirement, the IIJA created a VRU Special Rule where states in which more than 15% of all roadway fatalities are VRUs must spend no less than 15% of their Highway Safety Improvement Program (HSIP) funds on projects that benefit VRUs. The VRU Special Rule applies to New Mexico as determined by FHWA on an annual basis. The identification and prioritization of high-risk areas in this safety assessment will help guide the state's investment of funds to corridors and intersections that will most benefit VRU safety. The analysis results may also aid Metropolitan Planning Organization (MPO), Regional Transportation Planning Organization (RTPO), and Tribal and local public agency prioritization and investment. Using an initial typology framework of intersections and corridors, a suite of proven safety countermeasures is also available in this VURSA for reference, as engineers and planners develop project plans for these priority locations. Additional typology elements other than intersections and corridors would be urban versus rural or major intersection versus minor intersection.

1.2 NMDOT's Approach to the Safe System, Complete Streets, and Proven Safety Countermeasures

New Mexico's most recent long-range statewide transportation plan, *New Mexico 2045 Plan*, includes Complete Streets strategies. Specifically, this plan recommends updating guidance manuals and processes to incorporate Complete Streets principles.

The 2018 *New Mexico Prioritized Statewide Bicycle Network Plan* (NM Bike Plan) builds on the *New Mexico 2045 Plan* by placing more emphasis on improving bike facilities. The NM Bike Plan discusses Complete Streets in terms of the economic development and safety benefits, and it includes a few safety countermeasures in its design guidelines such as road diets, lane narrowing, and the use of rumble strips, especially on rural highways.

The 2021 *Pedestrian Safety Action Plan* recommends a number of proven safety countermeasures to make roads safer for pedestrians, including the installation of Pedestrian Hybrid Beacons (PHBs) and the implementation of Leading Pedestrian Intervals (LPIs) statewide. The plan goes further by recommending the development of an entire countermeasure quick-build guide. There are many more proven safety countermeasures in the *Pedestrian Safety Action Plan*, many of which would benefit all VRUs.

The 2021 SHSP includes a section which discusses the national Toward Zero Deaths effort, a precursor to the US Department of Transportation's adoption of the Safe System Approach.

1.3 Safety Performance Measures

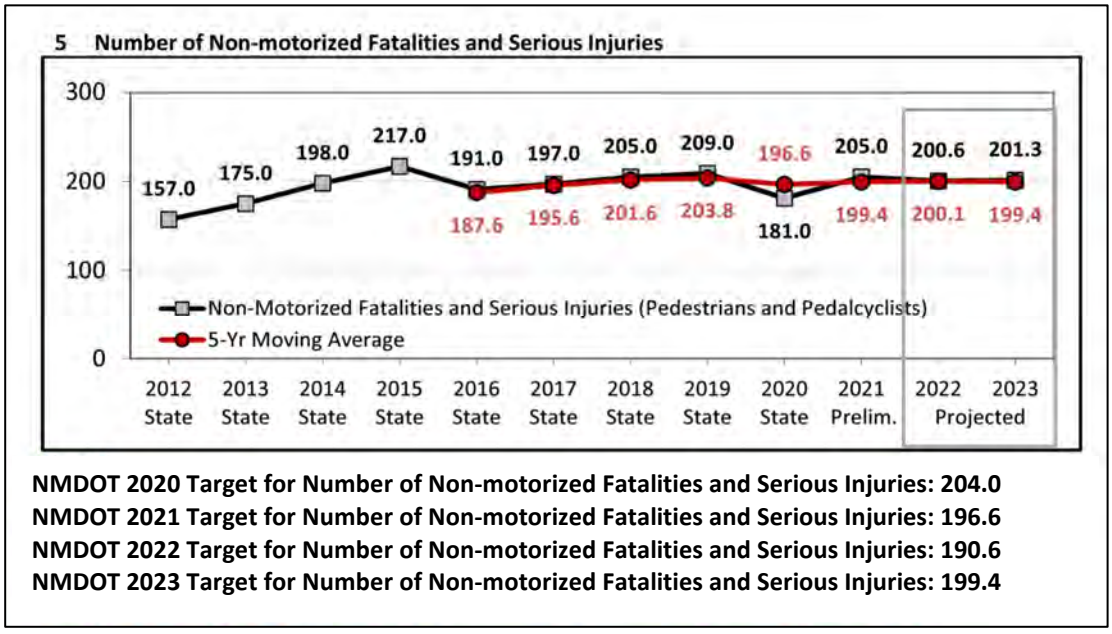
The *2023 NMDOT Performance Measure Target Report* provides an update on the state's progress on roadway safety through the tracking of the following performance measures:

- Number of total fatalities
- Number of serious injuries
- Fatality rate: fatalities per 100 million vehicle miles traveled (VMT)
- Serious injury rate: serious injuries per 100 million VMT
- Number of non-motorized fatalities and serious injuries

NMDOT establishes targets for these safety performance measures, in coordination with statewide stakeholders, to meet federal requirements. Over the last several years, the methodology has slightly changed but is generally developed as a projection based on historic crash data, potential safety impacts of planned projects, and other factors.

Safety performance targets for non-motorized road users (pedestrians and pedalcyclists) have remained steady over the past four years, as shown in Figure 1-3. This measure combines both fatalities and serious injuries for non-motorized users. The state met its target in 2020 but has since missed the target in 2021 and 2022 and is projected to exceed the target in 2023. In general, the number of actual non-motorized fatalities and serious injuries has remained steady since 2016, hovering around 200 fatalities and serious injuries each year.

Figure 1-3
2023 NMDOT Non-Motorized Safety Targets



NMDOT 2020 Target for Number of Non-motorized Fatalities and Serious Injuries: 204.0
NMDOT 2021 Target for Number of Non-motorized Fatalities and Serious Injuries: 196.6
NMDOT 2022 Target for Number of Non-motorized Fatalities and Serious Injuries: 190.6
NMDOT 2023 Target for Number of Non-motorized Fatalities and Serious Injuries: 199.4

2 Data

2.1 What We Analyzed and How

2.1.1 Crash Data Used

The crash data used for this analysis came from the New Mexico Statewide Traffic Records System database, which included 468,784 crashes from 2012 to 2022. At the time of writing this report, the 2022 crash data was still in a preliminary status. These crashes occurred on both state- and locally-owned roadways. Law enforcement officers complete the crash reports, including details regarding date and time of the collision, demographic information, crash characteristics, location, and roadway characteristics.

This analysis focused on crashes that involved either a pedestrian or a bicyclist and resulted in either a fatality (denoted as a "K" crash in the KABCO rating system), or serious injury ("A" crash). These are the outcomes as measured at the scene of the crash and reported by the responding officer. Crashes are measured be the most severe outcome that resulted from the crash for any involved party. There were 2130 of these pedestrian- or bicyclist-involved KA crashes analyzed as part of the crash data. In all but 10 of the crashes, the bicyclist or pedestrian was the party with the most severe outcome, the outcome that resulted in the KA crash rating.

The analysis also relied heavily on NMDOT's roadway data. This data included attributes such as speed limit and annual average daily traffic (AADT). Supplemental data from public data sources, local governments, and Replica, a private data vendor, was also used to ensure a more accurate and comprehensive data set. Crash data was combined with the roadway data using geographic information system (GIS), which provided context on the road conditions on which the crash occurred.

2.1.2 Data Limitations

The provided crash data, derived from the completed UCRs, includes many fields to describe the crash; however, oftentimes there were empty fields on the crash reports, creating some challenges to understanding all of the crash details. Fields with significant quantities of insufficient information were excluded from the crash analyses.

The crash data also lacks some pertinent information entirely. One example of this, which is important to VRU-related data analysis, is the distinction of non-motorist types. The crash data includes pedestrians and pedalcyclists as a mode of transportation but does not mention anything about other wheeled conveyance like skateboards, wheelchairs, or rollerblades.

Additionally, at a statewide level, NMDOT does not have some roadway context data that would be useful for this assessment, such as the presence of sidewalks or crosswalks at crash locations. Another limitation of the roadway data is the lack of statewide design speed data. FHWA guidance identifies design speed data as a required element of the VRU Safety Assessment but currently NMDOT does not have this data.

Other important behavioral data was unavailable, such as if a bicyclist was wearing any type of reflective clothing at the time of a collision that occurred at night.

2.1.3 How We Used the Data

The project team used the data set to analyze historical crash trends, develop a crash severity index and create a High Injury Network (HIN). The HIN helps identify high-priority safety improvement project locations and categorizes the locations by roadway typology.

Historical Crash Trends

Key findings from the historical crash trends analysis are provided in the Pedestrian Safety Analysis and Bicyclist Safety Analysis sections that follow. However, the full Historical Crash Trends Memo and detailed data can be reviewed in Appendix C. The memo outlines key statistics and identifies relationships between multiple variables. The analysis separated pedestrian and bicyclist crashes to identify trends unique to each mode, and it includes the following variables:

Demographics

- Age of vulnerable road user
- Gender of vulnerable road user
- Race/ethnicity of vulnerable road user
- Local or out-of-state driver

Date/Time

- Month of year
- Day of week
- Time of day
- Lighting conditions

Crash Characteristics

- Top Contributing Crash Factor
- Alcohol involvement (both driver and vulnerable road user)
- Drug involvement (both driver and vulnerable road user)
- Hit-and-run
- Vehicle turning movements

Location

- At intersection or along the roadway (non-intersection)
- Near transit
- Near signal
- Urban or rural
- Within Tribal lands

- Population density of crash area

Roadway Characteristics

- Functional classification
- Number of lanes
- Speed limit
- AADT
- Presence of bicycle infrastructure (bicyclist crashes only)

2.1.4 Equity Data and Analysis

The VRUSA equity analysis identified areas of historically underserved communities across the state of New Mexico. This data and analysis were incorporated into the High Injury Network, to prioritize safety improvements in areas where they will benefit people who are disproportionally impacted by vulnerable road user crashes or who have been harmed by transportation infrastructure, pollution, and unequal resource distribution in the past. The factors were weighted according to the parenthetical values next to each factor. The analysis included several variables, including:

- Low-income households (20%) – Source: American Community Survey (2019)
- Youth and senior populations (15%) – Source: American Community Survey (2019)
- No vehicle access (10%) – Source: American Community Survey (2019)
- Race and ethnicity (10%) – Source: American Community Survey (2019)
- Educational attainment (10%) – Source: American Community Survey (2019)
- Flood risk (5%) – Source: FEMA National Risk Index (2019)
- Air quality (10%) – Source: EJScreen.epa.gov
- Economic opportunity (10%) – Source: Opportunity Atlas
- Coronary heart disease (5%) – Source: CDC PLACES (2021)
- Limited English proficiency (5%) – Source: American Community Survey (2019)
- Tribal Land (If block group is located on tribal land, the entire score was inflated 20%. This was applied after the weights had been applied to other variables.) – Source: NMDOT

We combined the equity analysis score with the crash severity index score, described in Section 3 and Appendix A, to create a final prioritization score for corridors and intersections located on the HIN. By combining equity and severity scores, the analysis prioritized locations with both high safety needs and high populations of underserved communities. Statewide and Albuquerque region maps of the equity scores are available below in Figures 2-1 and 2-2. Equity score maps of the four quadrants of New Mexico are also available for review in Appendix B. A digital, zoomable, navigable map of the equity scores and HIN is also online at https://www.dot.nm.gov/planning-research-multimodal-and-safety/planning-division/multimodal-planning-and-programs-bureau/highway-safety-improvement-program/, then choosing the “High Injury Network Web Map”.

Figure 2-1
Equity Analysis – Statewide

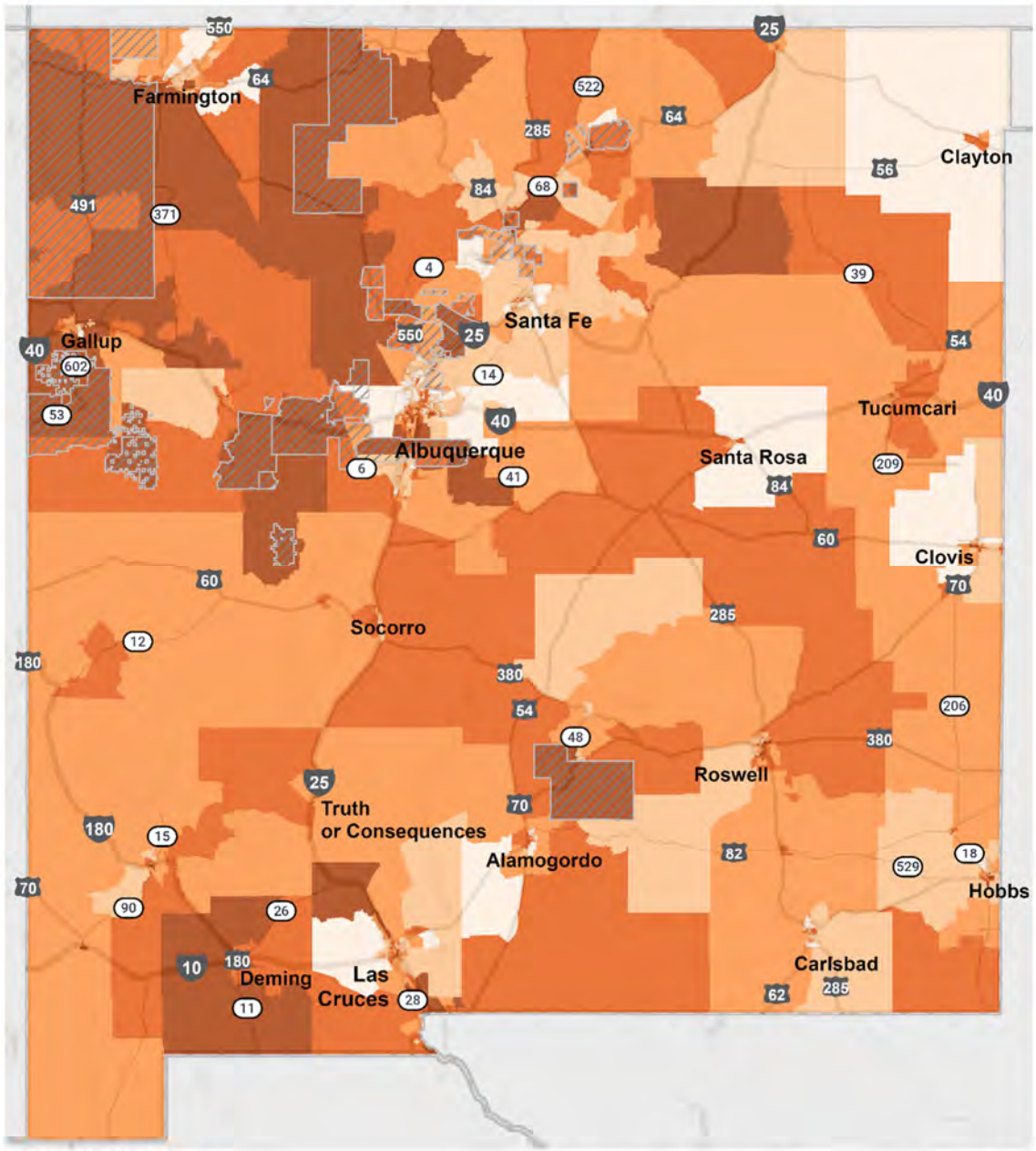
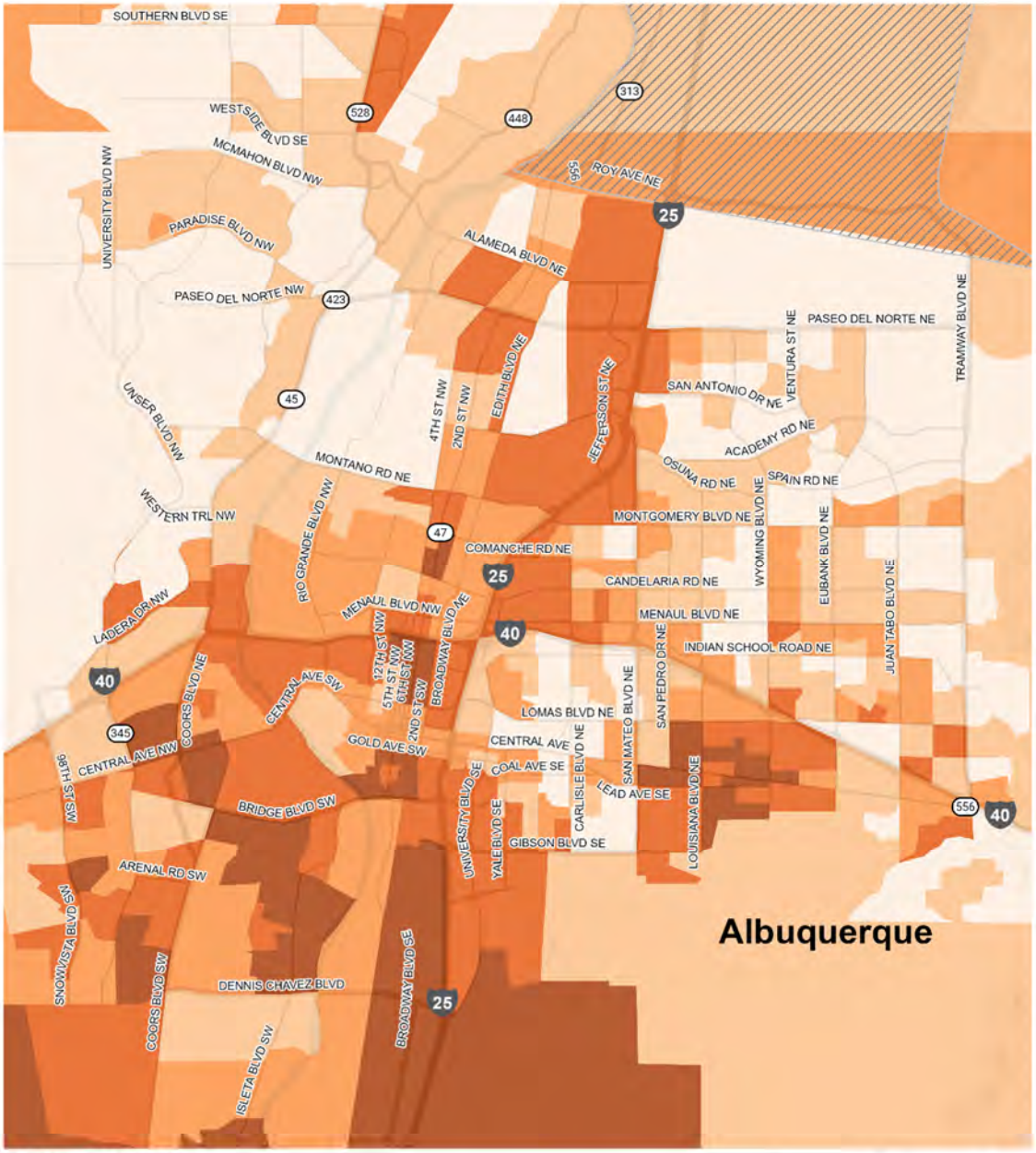


Figure 2-2
Equity Analysis – Albuquerque Metro Area



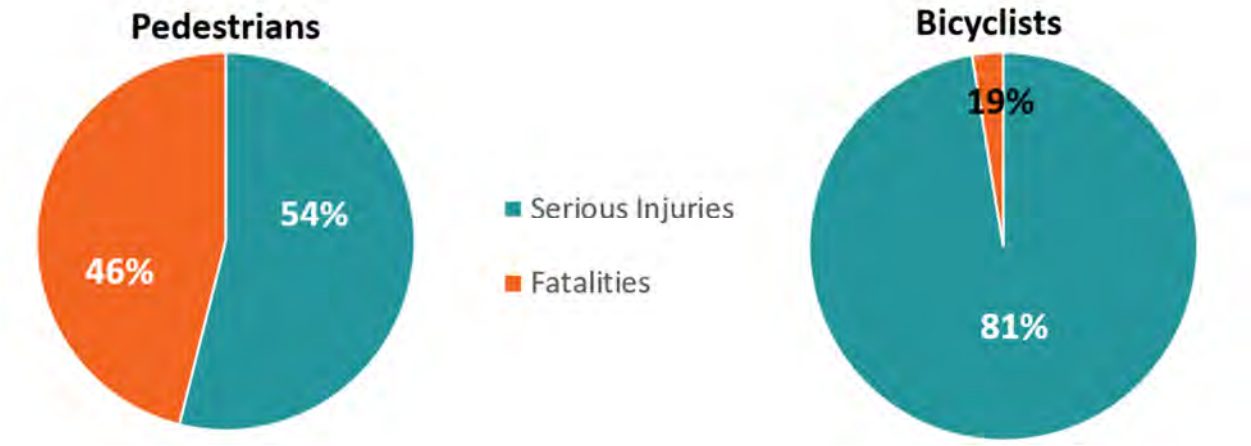
2.2 State of Vulnerable Road User Safety in New Mexico

In this section (2.2), the crash data analysis includes vulnerable road user-involved KA crashes, unless otherwise specified. For brevity, references may just refer to "crashes" rather than "vulnerable road user-involved KA crashes."

From 2012 to 2022, there were 4,311 people killed in traffic-related crashes and an additional 12,948 seriously injured. Of those fatalities and serious injuries, 2,130 were people walking or biking in New Mexico—1,800 pedestrians and 330 bicyclists. Comparing the trend of vulnerable roadway users to the overall safety performance in New Mexico, the number of fatalities and serious injuries of vulnerable road users has been relatively constant, fluctuating between roughly 200 and 220 over the last 10 years. While the trend of number of fatalities has been slowly but steadily increasing since 2013, the trend for overall serious injuries in New Mexico is similar to vulnerable road users where it is generally flat since 2016.

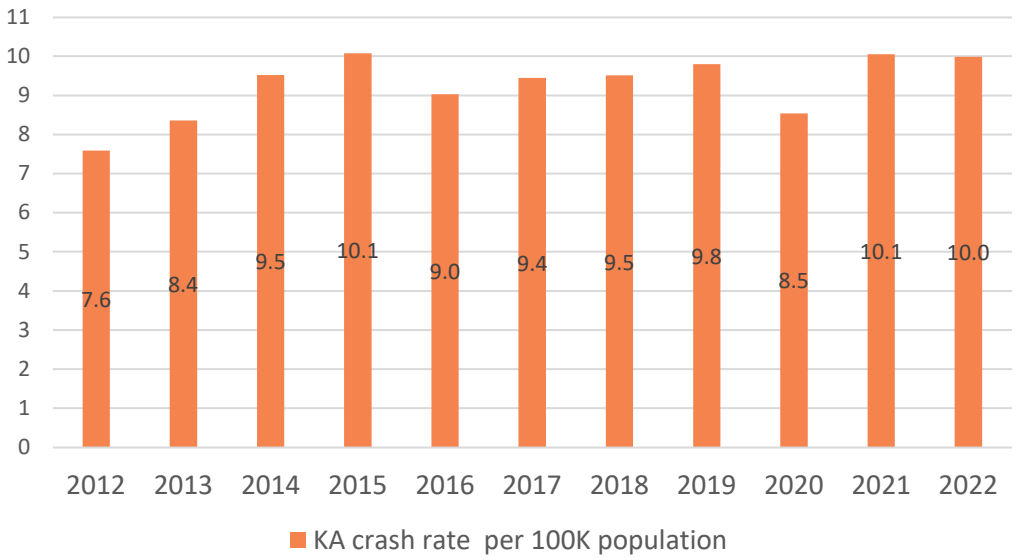
As mentioned in the Data Limitations section, the structure of the New Mexico crash data does not allow for persons in other wheeled conveyance (wheelchair, rollerblades, skateboard, etc.) to be identified. Due to this, Figures, 2.3 through 2.7 show safety outcomes for the vulnerable road user types that *can* be identified in statewide crashes. Figure 2-3 shows the percentage of serious injuries and fatalities for each mode.

Figure 2-3
Vulnerable Road User-Involved KA Crashes in New Mexico



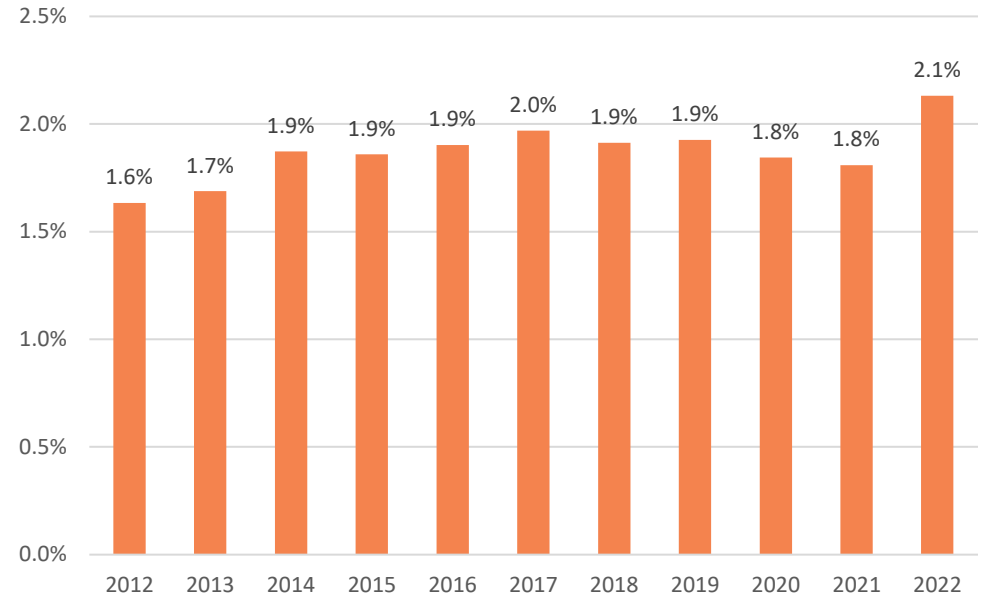
Adjusted for population growth, the rate of vulnerable road user-involved KA crashes has increased over time as depicted in Figure 2-4 below showing the rate of KA crashes per 100,000 people in New Mexico.

Figure 2-4
Vulnerable Road User-Involved KA Crash Rate per 100,000 People



As a percentage of all KABC crashes (crashes that resulted in, at minimum, a possible injury) in New Mexico, the share that involve a vulnerable road user has increased from 1.6% to 2.1%, shown in Figure 2-5.

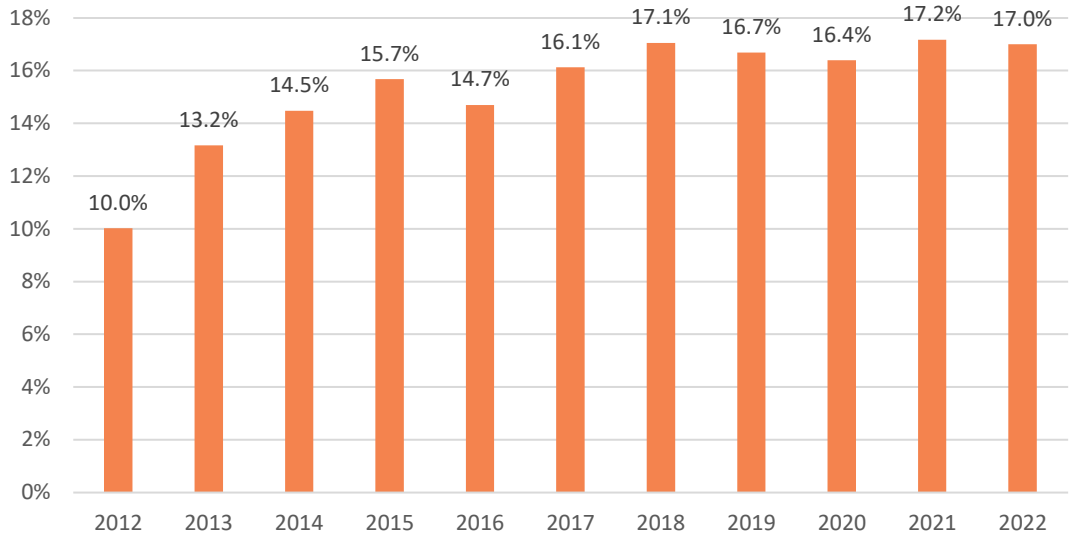
Figure 2-5
Vulnerable Road User-Involved KABC Crashes as a Percentage of All KABC Crashes



However, when reviewing only KA crashes for all users (crashes that resulted in a fatality or serious injury), the share of crashes that involved a vulnerable road user has increased substantially, from 10% to 17% from 2012 to 2022, shown in Figure 2-6. The ratio of vulnerable road user-involved KA crashes as a share of all crashes peaked at 17.2% in 2021.

Figure 2-6

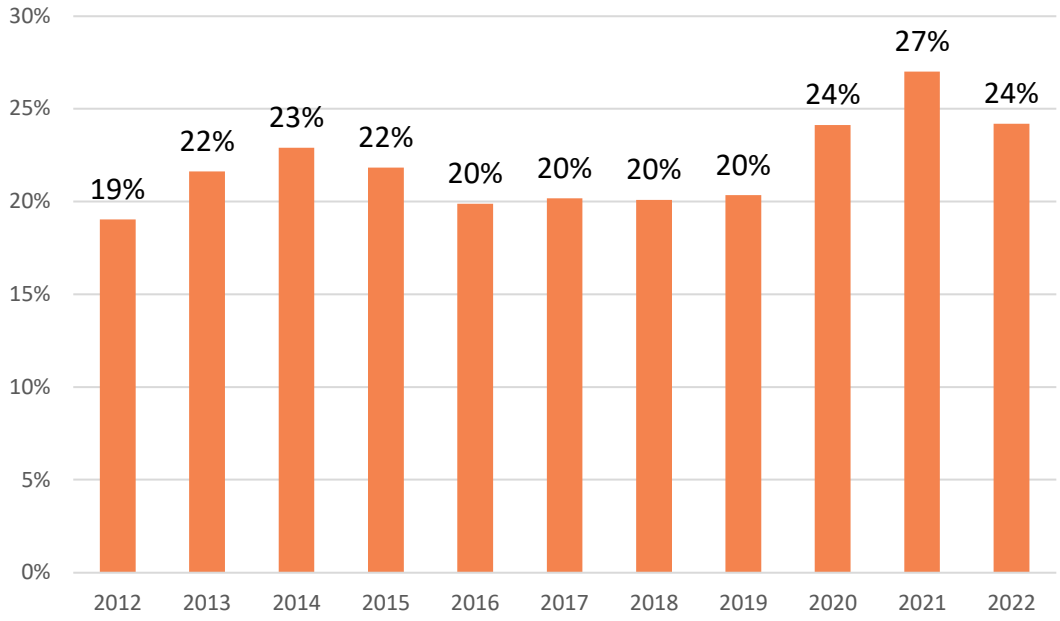
Vulnerable Road User-Involved KA Crashes as a Percentage of All KA Crashes



When a vulnerable road user is involved in a crash, they are now more likely to be killed or seriously injured—about a one in four chance—then they were in 2012. The increasing severity of KA-involved crashes can be seen in Figure 2-7 below.

Figure 2-7

Percentage of Vulnerable Road User-Involved Crashes Resulting in a Fatality or Serious Injury (%)



2.3 Pedestrian Safety Analysis

In this section (2.3), the crash data analysis includes pedestrian-involved KA crashes, unless otherwise specified. For brevity, references may just refer to "crashes" of "KA crashes," rather than "pedestrian-involved KA crashes."

A full analysis of KA crash factors derived from historical crash data is available in Appendix C. Table 2-1 provides a summary of key findings from the historical crash review. Over the 10-year evaluation period, the rate of pedestrian-involved KA crashes has increased significantly from 5.7 per 100,000 people to 8.8 per 100,000 people.

Table 2-1
Pedestrian-Involved KA Crashes

Year	K Crashes	Fatality (K) Crash Rate per 100K People	A Crashes	Serious Injury (A) Crash Rate per 100K People	Total KA Crashes	KA Crash Rate per 100K People
2012	60	2.9	57	2.8	117	**5.7**
2013	54	2.6	92	4.4	146	**7.1**
2014	74	3.6	94	4.5	168	**8.1**
2015	52	2.5	122	5.9	174	**8.3**
2016	75	3.6	84	4.0	159	**7.6**
2017	79	3.8	95	4.6	174	**8.3**
2018	82	3.9	88	4.2	170	**8.1**
2019	83	4.0	92	4.4	175	**8.4**
2020	80	3.8	66	3.1	146	**7.0**
2021	102	4.8	83	3.9	185	**8.8**
2022	88	4.2	98	4.6	186	**8.8**
TOTAL	**829**		**971**		**1,800**	

2.3.1 Who Is Most Impacted by Pedestrian-Involved KA Crashes

Figure 2-8
Pedestrian-Involved Crash Victim Demographics

Race/Ethnicity

Those identified as Native American/American Indian are by far the most overrepresented in KA pedestrian crashes in proportion to their share of the overall population in New Mexico. Despite Native American/American Indian individuals representing 10.3% of the New Mexico population according to the 2020 US Census, they make up 23.1% of KA crash victims. However, this number increases to 26.8% of the victims when victims identified as “unknown” were excluded from consideration. Excluding the “Other” category, the remaining races/ethnicities were either underrepresented or proportional in KA pedestrian crashes to their overall state population, as can be seen in Table 2-2.

Please note, that there is a disparity between how the UCR and the US Census measure race and ethnicity. The UCR reports the race of the victim as identified by the responding police officer. The US Census reports the race and ethnicity of an individual as indicated by themselves. On the US Census, a person can indicate they are of Hispanic or Latino origin, as well as their race. As such, the percentages in Table 2-2 do not add up to 100% for the 2020 Population column. However, “Hispanic” as a category is mutually exclusive of other racial descriptors on the UCR Form and in the crash data.

Table 2-2
Race/Ethnicity of Victims in Pedestrian-Involved KA Crashes

Race/Ethnicity	KA Crashes	Percentage of Pedestrian KA Crash Victims	Percentage of Pedestrian KA crash victims where victim's race is indicated	2020 Population*
American Indian	423	23.1%	26.8%	10.3%
Asian	7	0.4%	0.4%	1.8%
Black	60	3.3%	3.8%	2.2%
White (not Hispanic)	443	24.2%	28.1%	36.5% (1)
Hispanic	445	24.3%	28.2%	47.7% (2)
Other	199	10.9%	12.6%	36% (3)
Unknown	252	13.8%	NA	
Grand Total	**1829**			

**Source 2020 US Census Demographic and Housing Characteristics File*
(1) People who indicated they were white but NOT Hispanic or Latino
(2) People who indicated they were Hispanic of any race.
(3) People who indicated they were "some other race" or "two or more races"

Gender

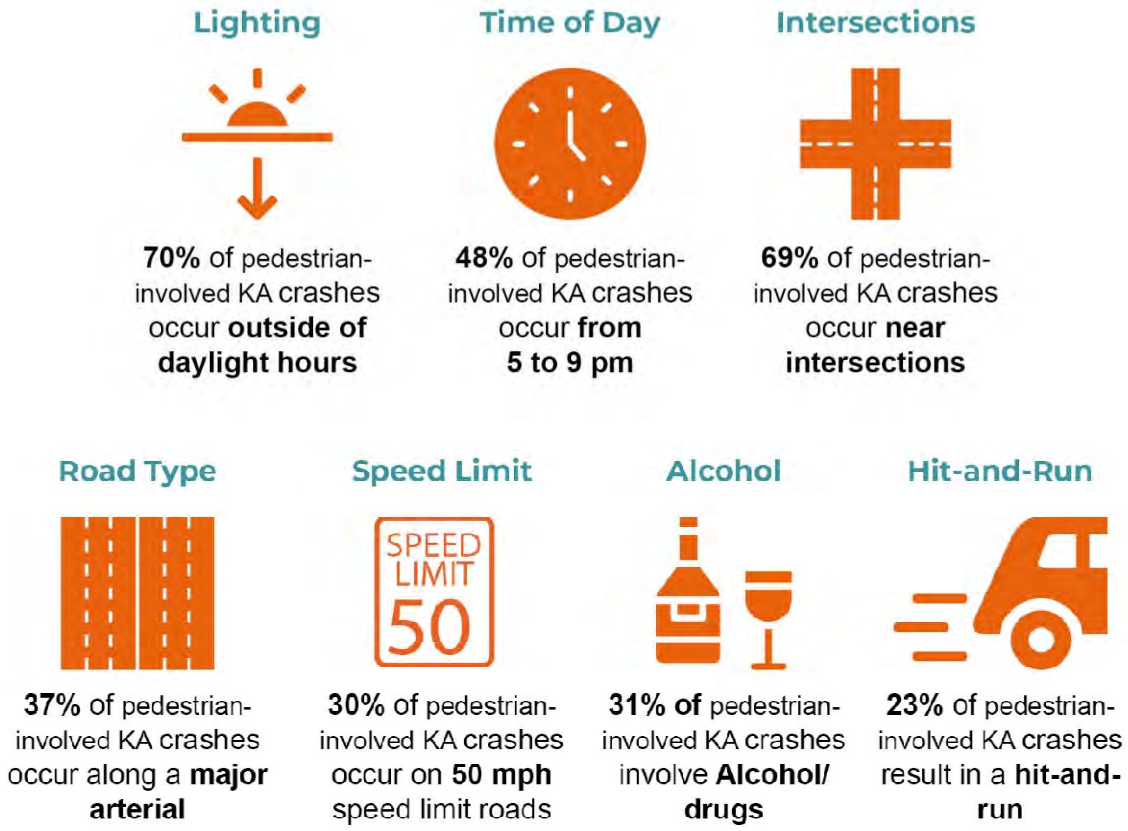
Based on the 10-year data assessment period, men make up 72% of all victims in pedestrian-involved KA crashes.

Age

People ages 35 to 49 make up the highest percentage of victims in pedestrian-involved KA crashes at 25.5%. However, those ages 25 to 34 are the most disproportionately likely to be a victim, in relation to their share of the overall population, which is 18.1% of the population of New Mexico, according to the US Census ACS 2021 5-Year estimates..

2.3.2 Common Pedestrian-Involved KA Crash Factors

Figure 2-9
Pedestrian-Involved Crash Factors



Temporal Factors

Lighting and Time of Day

Only 30% of pedestrian-involved KA crashes occur in pure daylight. Crashes that occur at night are almost evenly split between roadway conditions described as “lighted” and “not lighted.” In these instances, “lighted” would largely be considered crashes that occur at night along roadways that have street lighting, while “not lighted” would be at night with no presence of street lighting.

When analyzing time of day by month, the period from 5 to 9 p.m. is the most common for pedestrian-involved KA crashes: 48% of KA crashes occur within this time window. However, an additional pattern emerges when time of day is cross tabulated by month. The hour most likely for crashes to occur follows the change in sunset time across the year. In January, crashes are most likely at 6 p.m. In June, crashes are most likely at 9 p.m. In December, crashes are most likely at 5 p.m. Sunset appears to be a large factor in pedestrian-involved KA crashes. This may be due to streetlights activating later in the twilight hours, making pedestrians less visible, or it may be due to a low-horizon sun obscuring driver visibility. Tinted windows could also exacerbate these factors. When analyzing crashes during the 5 to 9 p.m. time frame, crashes are slightly more likely to occur when the vehicle is traveling west (26.4%), compared to when the vehicle is traveling east (21.6%).

Roadway Factors

Intersections

Sixty-nine percent of pedestrian-involved KA crashes occur near intersections. “Near” is defined as within 100 feet of the center of an intersection. Of crashes at intersections, 43% occurred where a major arterial intersects with a local roadway despite these types of intersections representing only 3.6% of all intersections in the state.

Along the Roadway (non-intersection crashes)

Pedestrian-involved KA crashes are most likely to occur along a major arterial (37% of crashes occur here). However, the higher the roadway classification, the more disproportionate the number of crashes is in relation to the percentage of centerline miles of that classification in New Mexico. For example, 26% of KA crashes occur on an interstate; however, they represent only 1.8% of New Mexico’s centerline miles. Local roads are 78% of the centerline miles in the state, but only 12% of crashes occur on local roads.

Also, roads with a speed limit of 50 miles per hour (mph) or higher contained the highest proportion of KA crashes along the roadway, at 30%. These roads represent only 13% of the centerline miles in New Mexico.

Behavioral Factors

Alcohol

Alcohol was not involved in 64.3% of pedestrian-involved KA crashes. In 4.5% of pedestrian-involved KA crashes, the driver had imbibed alcohol. In 33.3% of pedestrian-involved KA crashes, the pedestrian had imbibed alcohol. In 2.1% of crashes, both the driver and pedestrian had imbibed alcohol.

Drugs

The consumption of drugs was not involved in 87.7% of pedestrian-involved KA crashes. In 1.3% of pedestrian-involved KA crashes, the driver was impaired by drugs. In 12.3% of pedestrian-involved KA crashes, the pedestrian was impaired by drugs. In .1% of crashes, both the driver and pedestrian were impaired by drugs.

Hit-and-Run

Twenty-three percent of pedestrian-involved KA crashes result in a hit-and-run.

2.4 Bicyclist Safety Analysis

In this section (2.4), the crash data analysis includes bicyclist-involved KA crashes, unless otherwise specified. For brevity, references may just refer to “crashes” of “KA crashes,” rather than “bicyclist-involved KA crashes.”

A full analysis of bicyclist-involved KA crash factors derived from historical crash data is available in Appendix C. Below is a summary of key findings from the historical crash review.

Shown in Table 2-3, the rate of KA crashes has decreased from 1.9 per 100,000 people to 1.2 per 100,000 people between 2012 and 2022. Over that time, the average rate was 1.4. The amount of bicycle facilities in New Mexico is still low but has been increasing over time. However, because many people will not ride a bike unless they feel completely safe, it is unclear how representative these crash rates are of bicycling safety in New Mexico.

Table 2-3
Bicycle-Involved KA Crashes

Year	K Crashes	Fatality (K) Crash Rate per 100K People	A Crashes	Serious Injury (A) Crash Rate per 100K People	Total KA Crashes	KA Crash Rate per 100K Population
2012	7	0.3	32	1.6	39	**1.9**
2013	3	0.1	24	1.2	27	**1.3**
2014	4	0.2	27	1.3	31	**1.5**
2015	7	0.3	29	1.4	36	**1.7**
2016	4	0.2	25	1.2	29	**1.4**
2017	2	0.1	22	1.1	24	**1.2**
2018	11	0.5	18	0.9	29	**1.4**
2019	9	0.4	21	1.0	30	**1.4**
2020	8	0.4	25	1.2	33	**1.6**
2021	5	0.2	22	1.0	27	**1.3**
2022	4	0.2	21	1.0	25	**1.2**
TOTAL	**64**		**266**		**330**	

2.4.1 Who Is Most Impacted by Bicyclist-Involved KA Crashes

Figure 2-10
Bicyclist-Involved Crash Victim Demographics

Race/Ethnicity

Rates of biking vary among people of different races. People identified as white on the crash report are the highest share of victims in KA crashes at 45%. This was followed by people identified as Hispanic (making up 25% of KA crash victims), and then "Other" (making up 10% of KA crash victims). The US Census reports that, in 2020, 36.5% of the population of New Mexico identified as white non-Hispanic, and 47.7% of people identified as Hispanic or Latino of any race.

Please note, that there is a disparity between how the UCR and the US Census measure race and ethnicity. The UCR reports the race of the victim as identified by the police officer. The US Census reports the race and ethnicity of an individual as indicated by themselves. On the US Census, a person can indicate they are of Hispanic or Latino origin, as well as their race. However, "Hispanic" as a category is mutually exclusive of other racial descriptors on the UCR Form and in the crash data.

Gender

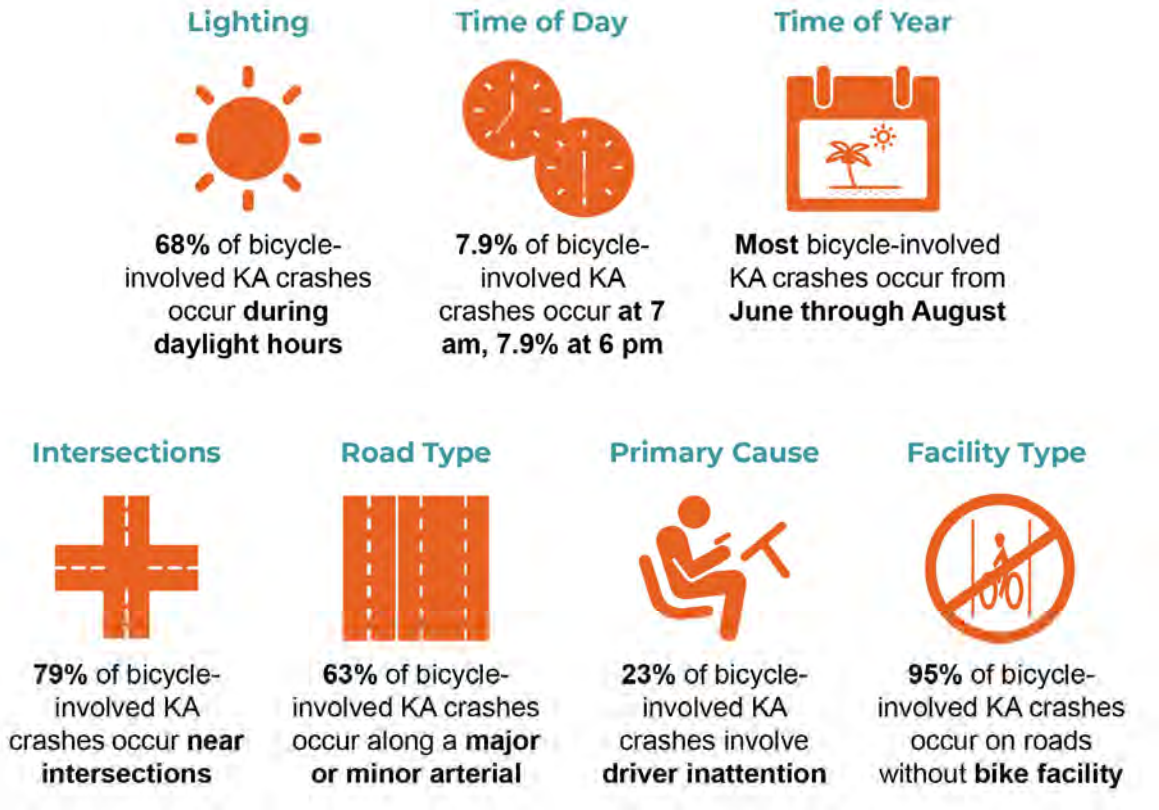
Rates of bicycling also vary between the genders. Men are even more likely to be a victim in a bicyclist-involved KA crash than in a pedestrian-involved KA crash. They make up 84% of bicyclist-involved KA crash victims in New Mexico. While in pedestrian-involved crashes, they make up 72% of the victims.

Age

Until the age of 65, when rates of bicycling would be expected to decline, the older you are in New Mexico, the more likely you are to be the victim in a bicyclist-involved KA crash. Those aged 0 to 14 are 7% of victims. Those aged 50 to 64 are 27% of victims. Those 65+ make up 11.5% of KA crash victims.

2.4.2 Common Bicyclist-Involved KA Crash Factors

Figure 2-11
Bicyclist-Involved Crash Factors



Temporal Factors

Lighting and Time of Day

Most (68%) bicyclist-involved KA crashes occurred during daylight. Bicyclist-involved KA crashes are more evenly distributed throughout the day compared to pedestrian-involved KA crashes. Bicyclist-involved KA crashes appear to follow the commuter 9-to-5 workweek patterns more than pedestrian-involved KA crashes. Bicyclist-involved KA crashes occur most often at 7 a.m. (7.9%), 6 p.m. (7.9%), 7 p.m. (7.9%), and 5 p.m. (7.3%). The most common days of the week for bicycle-involved KA crashes to occur are Tuesday (18.2%), and Thursday and Friday (16.4% each).

Bicyclist-involved KA crashes are concentrated in the warm months. The months that see the most bicyclist-involved KA crashes are June through August—the least are November through February.

Roadway Factors

Intersections

Seventy-nine percent of bicyclist-involved KA crashes occurred near intersections. The intersection of a major arterial and a local road is the intersection type with the highest portion of KA crashes, at 33.5% despite these types of intersections only representing 3.6% of all intersections in the state. The second highest is the intersection of a minor arterial and a local road, with 17% of crashes. These types of intersections make up 5% of the intersections in the state.

Along the Roadway (non-intersection crashes)

Sixty-three percent of bicyclist-involved KA crashes at intersections occur on a major or minor arterial. Arterials are only 8% of the center line miles in New Mexico. Roads with speed limits above 40 MPH represent a disproportionately high percentage of bicyclist-involved KA crashes compared to the share of the state's roadways that have these speed limits. While bike volumes tend to be higher on lower-speed roads, some bicyclists may have little choice but to travel on higher-speed roads to reach their destinations.

Behavioral Factors

Alcohol

Alcohol was not involved in 94.5% of KA crashes. In 4.4% of KA crashes, the driver had imbibed alcohol. In 1.2% of KA crashes, the bicyclist had imbibed alcohol. In .09% of crashes, both the driver and bicyclist had imbibed alcohol.

Drugs

The consumption of drugs was not involved in 97.8% of KA crashes. In 1.5% of crashes, the driver was impaired by drugs. In .7% of KA crashes, the bicyclist was impaired by drugs. In 0% of crashes, both the driver and bicyclist were impaired by drugs.

Contributing Factor – Top Factor in Crash

The "top factor in crash" field was used on the UCR from 2012-2019. In 2020, the field was discontinued and replaced with the "First Harmful Event" field. As such, aggregating data from 2012-22, the "Top Factor in Crash" field was "not available" or blank on 29% of crash report forms. Of the remaining crashes with a top factor listed, the number one factor in a bicyclist-involved KA crash was "driver inattention," representing 23% of crashes. In 19% of KA crashes (with a top factor listed) alcohol or drugs was determined to be the top contributing factor. In 17%, "failed to yield right-of-way" was the top contributing factor.

Bicycle Facility

It is not possible to determine if a bicyclist was riding in a bicycle facility at the time of a crash. However, it can be estimated that in 95% of bicyclist-involved crashes, the bicyclist was riding on a roadway without a bicycle facility present.

Table 2-4

Crash Analysis

Crash Analysis	Number of Bicyclist KA Crashes	% of KA Crashes (with Analysis Field Containing Data)
Vehicle Struck Pedalcyclist at an Angle	136	48.9%
Pedalcyclist Struck Vehicle	56	20.1%
Vehicle Struck Pedalcyclist from Behind	54	19.4%
Vehicle Struck Pedalcyclist Head On	19	6.8%

Pedalcyclist Collision - Unknown/All Other	13	4.7%
Grand Total	**278**	**100%**

3 High Risk Areas

This section identifies high risk geographic areas, which were analyzed through the distribution of crashes by county and through the development of the HIN. We have assigned a Crash Severity Index score to corridor segments and intersections along the HIN to further identify the areas of highest risk to VRUs – text detailing the methodology steps of the Crash Severity Index score are included in Appendix D. The Crash Severity Index score used the weights shown in Table 3-1 to score each location. These scores are provided in Section 5.1.3 Prioritized Infrastructure Recommendations. A longer list of scored High Risk Areas is also available in Appendix D.

Table 3-1
Crash Severity Index Weights

KABCO rating	Definition	Crash Severity Score Weights
K	Killed	20
A	Incapacitated: Carried from scene	5
B	Visible injury	1
C	Complaint of injury, but not visible	1
O	No apparent injury	0

3.1 High Injury Network

HINs illustrate the segments and intersections of roads where most serious and fatal crashes occur on a roadway network. The results often show that improvements to a small number of roadways have the potential to address many life-altering crashes and can help decision makers prioritize improvements. This approach moves beyond typical crash history and allows for a better understanding of the types of roadways in New Mexico where VRUs are most at risk. Of the vulnerable road user crashes on all public roadways in New Mexico, 84% of all injury-causing VRU-involved crashes and 91% of fatal vulnerable road user crashes occurred on roads classified as major collectors or higher, or at intersections with these roads, despite accounting for only 20% of centerline miles in the state.

The other 80% of centerline miles in the state that accounted for 16% of all injury-causing vulnerable road user-involved crashes and 9% of fatal vulnerable road user crashes were included in the initial analysis steps to identify high risk areas. However, since the subset that accounts for 20% of centerline miles captures such a significant amount of the vulnerable road user-related crashes, the next step of the vulnerable road user HIN analysis focused on roads in the state classified as major collectors or higher. Therefore, local roads and minor collectors were not considered for inclusion on the vulnerable road user HIN, even though the vulnerable road user-related crashes that occurred on these roads are included in the historical analysis that is included earlier in this report.

The vulnerable road user Safety Assessment HIN makes up 1.1% of all of New Mexico's road centerline miles and 62% of the state's VRU-involved injury-causing (KABC) crashes.

For the vulnerable road user HIN analysis, the focus was on roads where crashes are most concentrated to identify corridor segments with the most potential for vulnerable road user safety improvements. To

identify these corridors, a geographic analysis was conducted on all vulnerable road user -involved crashes rated a K, A, B, or C on the KABCO scale. The KABCO scale, shown in Table 3-1, categorizes a crash by the worst injury sustained by any individual involved in the crash. Because the VRUSA is designed to prevent injury crashes, property-damage only crashes were not included in the vulnerable road user HIN analysis.

The crash data analyses include data from as far back as 2012, which predates many safety improvements throughout the state, most notably, for example, on Central Avenue in Albuquerque. Therefore, the HIN highlights some segments that may not currently be responsible for the most vulnerable road user injuries. Where the HIN highlights areas that are known to have been improved, examining more recent data post-improvement may help to determine if interventions are helping to improve safety outcomes.

Maps of the HIN at a statewide and Albuquerque area level are included below in Figures 3-1 and 3-2. Additional HIN maps of quadrants of the state are included in Appendix B. A zoomable and navigable map is also available online for easier viewing at https://www.dot.nm.gov/planning-research-multimodal-and-safety/planning-division/multimodal-planning-and-programs-bureau/highway-safety-improvement-program/, then choosing the “High Injury Network Web Map”.

Figure 3-1
High Injury Network – Statewide

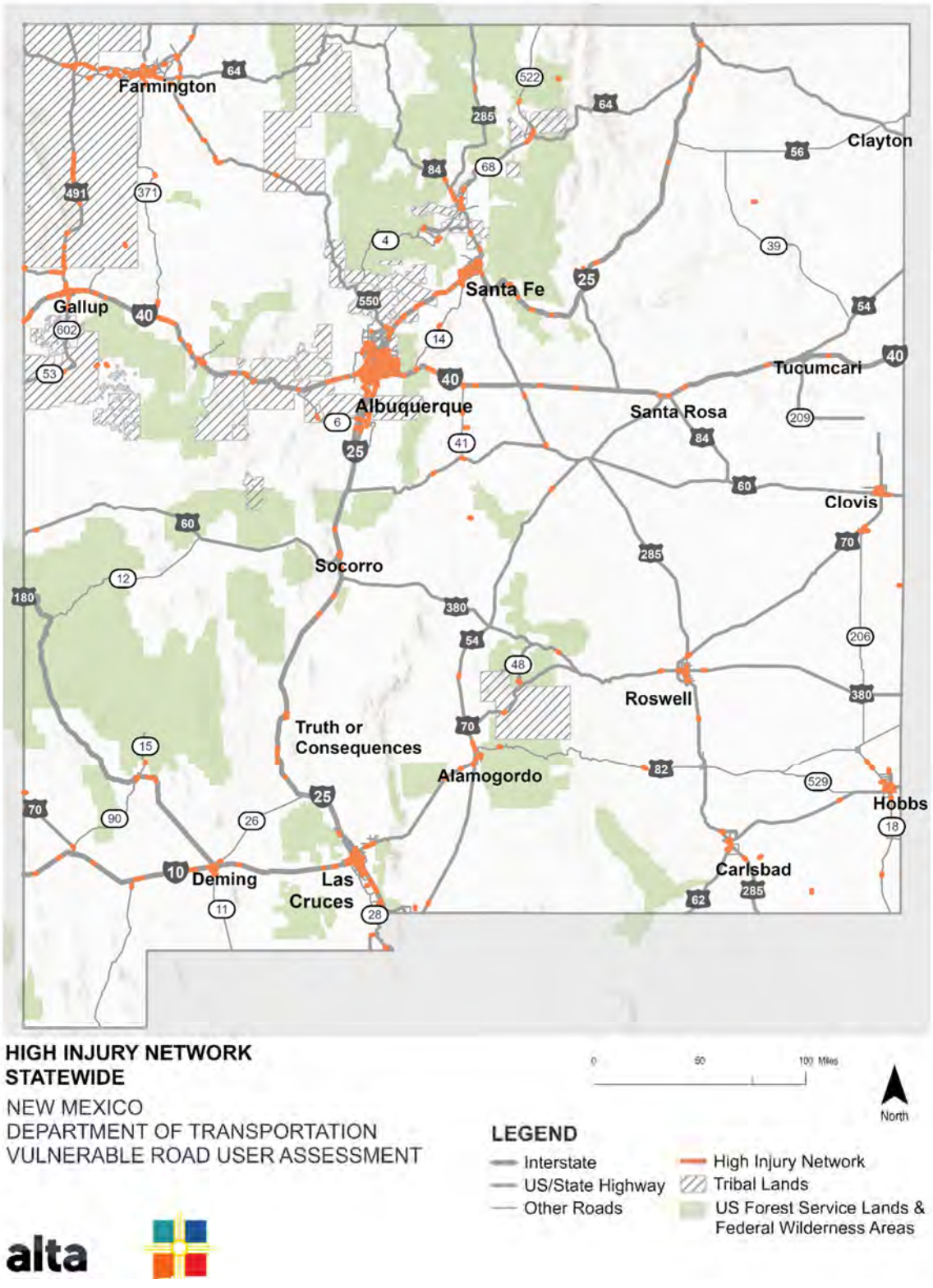
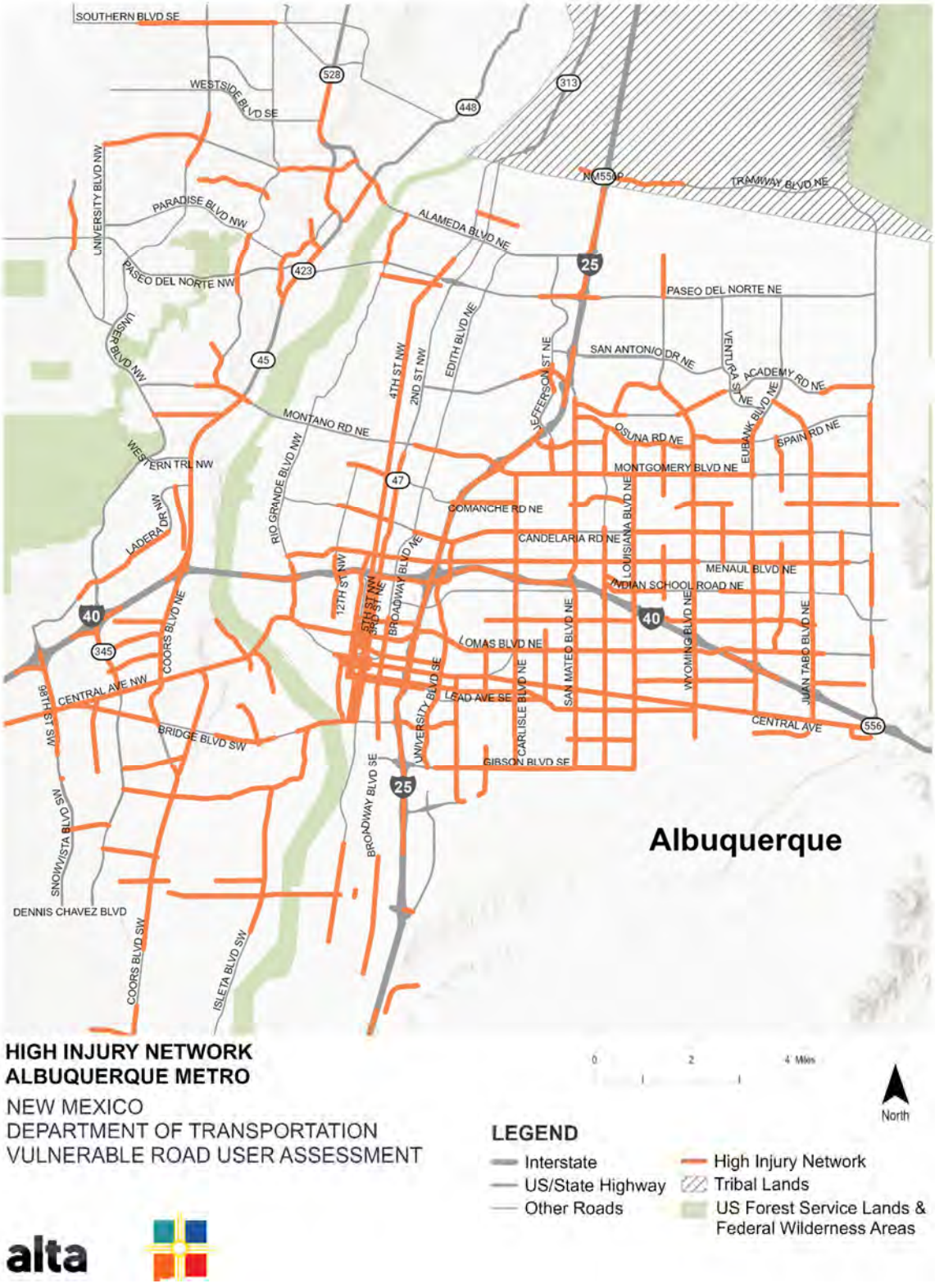


Figure 3-2
High Injury Network – Albuquerque Metro Area



3.2 Crash Counts by County

Table 3-2 shows the geographic distribution of KA and KABC crashes by county from 2012 to 2022. The top three results in each column have been highlighted in light orange to more easily demonstrate high risk areas of the state, based on different methods of analysis.

The "over or under representation" columns show the relationship between a county's share of the states crashes and its share of the state population. Numbers above 1 mean the county contains a higher share of the state's crashes than the county's share of the state's population. Numbers below 1 indicate that the county has a smaller share of the state's crashes than it has population. Take, for example, Chaves County, where 3.1% of the state's population resides and 2.18% of the KA crashes occurred. By dividing 2.18% by 3.1%, we arrive at a representation of 0.7 – indicating there is a smaller percentage of KA crashes occurring in the county compared to its share of the state's residents.

The table has been sorted by the "Percentage of KA Crashes" column.

Table 3-2
Crash Counts by County (2012–2022)

County	KA Crashes	Percentage of KA Crashes	KABC Crashes	Percentage of KABC Crashes	Percentage of State Population (average 2012–2022)	Over or under representation for KA Crashes	Over or under representation for KABC Crashes
Bernalillo	1,048	49.62%	4,572	52.91%	32.2%	1.5	1.64
San Juan	182	8.62%	455	5.27%	6.8%	1.3	0.77
McKinley	155	7.34%	334	3.87%	3.4%	2.1	1.12
Doña Ana	144	6.82%	756	8.75%	10.3%	0.7	0.85
Santa Fe	130	6.16%	702	8.12%	7.2%	0.9	1.13
Chaves	46	2.18%	221	2.56%	3.1%	0.7	0.82
Lea	46	2.18%	192	2.22%	3.4%	0.6	0.66
Sandoval	34	1.61%	205	2.37%	1.3%	1.2	1.79
Valencia	33	1.56%	141	1.63%	3.6%	0.4	0.45
Otero	32	1.52%	140	1.62%	3.2%	0.5	0.51
Eddy	30	1.42%	168	1.94%	2.8%	0.5	0.70
Taos	27	1.28%	81	0.94%	1.6%	0.8	0.59
Grant	23	1.09%	82	0.95%	1.3%	0.8	0.71

County	KA Crashes	Percentage of KA Crashes	KABC Crashes	Percentage of KABC Crashes	Percentage of State Population (average 2012–2022)	Over or under representation for KA Crashes	Over or under representation for KABC Crashes
Rio Arriba	22	1.04%	51	0.59%	1.9%	0.6	0.31
Curry	21	0.99%	104	1.20%	2.4%	0.4	0.51
Torrance	20	0.95%	34	0.39%	0.7%	1.3	0.53
Cibola	18	0.85%	32	0.37%	1.3%	0.7	0.29
Luna	16	0.76%	75	0.87%	1.2%	0.6	0.74
Roosevelt	13	0.62%	36	0.42%	0.9%	0.7	0.45
Sierra	13	0.62%	30	0.35%	0.5%	1.1	0.64
Socorro	11	0.52%	42	0.49%	0.8%	0.6	0.60
San Miguel	10	0.47%	61	0.71%	6.0%	0.1	0.12
Guadalupe	9	0.43%	14	0.16%	0.2%	2.0	0.77
Hidalgo	7	0.33%	10	0.12%	0.2%	1.6	0.56
Lincoln	6	0.28%	24	0.28%	0.9%	0.3	0.29
Colfax	6	0.28%	23	0.27%	0.6%	0.5	0.45
Los Alamos	5	0.24%	40	0.46%	0.9%	0.3	0.52
Quay	2	0.09%	8	0.09%	0.4%	0.2	0.23
Union	1	0.05%	5	0.06%	0.2%	0.2	0.29
Mora	1	0.05%	2	0.02%	0.2%	0.2	0.11
Harding	1	0.05%	1	0.01%	0.0%	1.5	0.36
Catron	1	0.05%	1	0.01%	0.2%	0.3	0.07
De Baca	0	0.00%	2	0.02%	0.1%	0.0	0.27
TOTAL	**2,112**		**8,641**				

4 Stakeholder Input

For a complete synopsis of stakeholder engagement, refer to Appendix E.

4.1 Virtual Stakeholder Meetings

NMDOT and the consultant team conducted three stakeholder meetings in the summer of 2023. The meetings focused on areas of the state that contained the highest percentage of the state's KA crashes from 2012 to 2022.

The three stakeholder meeting focus areas were:

- Albuquerque Metro Area
    - Reasoning: Bernalillo County, which contains the majority of the Albuquerque Metro Area, contains the highest percentage of the state's VRU-involved KA crashes. Most of those KA crashes fall within the Albuquerque Metro Area. Albuquerque is the most densely populated area of the state, which causes it to have unique safety issues from the rest of the state.
- McKinley and San Juan Counties
    - Reasoning: These two counties border one another and contain the second and third highest percentages of the states VRU-Involved KA crashes. The counties contain two mid-sized cities (Gallup and Farmington), Tribal Lands, and encompass rural highways identified in the HIN. Also, these counties are in the Northwest corner of the state, providing input and perspective from this region.
- Doña Ana County
    - Reasoning: Doña Ana County contains the fourth-highest percentage of VRU-Involved KA crashes. The county contains Las Cruces as well as many small towns, covering a diversity of stakeholders and safety issues. Also, this county is in the south of the state, providing input and perspective from this region.

Meetings were virtual, lasted an hour and a half, and consisted of:

- An introductory presentation to frame discussion
- Mentimeter poll questions to gather feedback from participants
- A guided discussion using a virtual white board to record thoughts, experiences, and feedback

4.1.1 Meeting Discussion Themes

Stakeholders were asked guiding questions to focus discussion on topics especially important to the VRUSA. Participant responses were documented on a digital "Jamboard." Jamboard discussion questions and the resulting response themes, are shown in Tables 4-1 through 4-3.

Meetings also involved asking participants questions through the live survey application "Mentimeter." Mentimeter questions focused on identifying priority equity indicators and locations in need of safety improvements. Mentimeter questions and participant responses can be viewed in Appendix E.

Question: What are your top priorities to improve safety for vulnerable road users?

Table 4-1
"Top Priorities" Response Themes

Comment Themes	ABQ	NW Corner	Doña Ana	TOTAL
Pedestrian Infrastructure Improvements	9	9	7	**25**
Bike infrastructure improvements	5	2	4	**11**
Education	3	2	5	**10**
Enforcement	0	2	7	**9**
Speed reduction	2	2	3	**7**
Separation/barriers between vehicles and VRUs	1	4	1	**6**
Planning	0	0	5	**5**
Universal design/Americans with Disabilities Act (ADA)	2	2	1	**5**
Road diets	2	3	0	**5**
Road design	1	2	1	**4**
Signage	1	2	0	**3**
Maintenance	0	1	2	**3**
Shade/weather protection	3	0	0	**3**
Data	1	0	1	**2**
Policy	0	0	2	**2**
Streetlights	1	0	1	**2**

Participants indicated that their top priority for increasing vulnerable road user safety is improved pedestrian infrastructure. Conversations focused on the need to integrate and prioritize VRU-centered design and Universal Design standards in all transportation projects. Participants identified multiple goals associated with pedestrian infrastructure improvements, such as increased separation between pedestrians and vehicles, more frequent crossing opportunities, and improved intersection signalization.

Many comment themes are not mutually exclusive so they may consider multiple areas for concern. One example of this would be “road design”, which could include improvements for both pedestrian and bicyclist facilities. This thought process applies for Tables 4-1, 4-2, and 4-3.

Question: What do you think are the main barriers to implementing strategies, policies, and projects that improve safety outcomes for vulnerable road users?

Table 4-2
“Main Barriers” Response Themes

Comment Themes	ABQ	NW Corner	Doña Ana	TOTAL
NMDOT policies/roadway design	4	2	1	**7**
Car dependency/car-centrism	2	0	5	**7**
Ineffective leadership/collaboration	1	4	0	**5**
Lack of public interest/public attitude	0	2	2	**4**
Road design	1	1	2	**4**
Data tracking	1	0	2	**3**
Staffing/capacity	1	2	0	**3**
Funding	1	1	1	**3**
Priorities	0	2	0	**2**
Education	1	0	1	**2**
Infrastructure	1	0	1	**2**

Participants indicated that NMDOT policy and roadway design is the top barrier to implementing strategies, policies, and projects furthering vulnerable road user safety. There were discussions in each group regarding the inflexibility of NMDOT policy for implementing pedestrian safety improvements along NMDOT roadways. Concerns included the prioritization of level of service over safety, resistance to change, and fear of lawsuits. The next most identified barrier was car-dependency and car-centrism. Participants discussed how this influences public attitudes, driver behavior, policy, and infrastructure. Ineffective leadership and coordination at all levels of government were also discussed as barriers to effective project prioritization and implementation.

Question: What do you believe are the main contributing factors related to vulnerable road user fatalities and serious injuries?

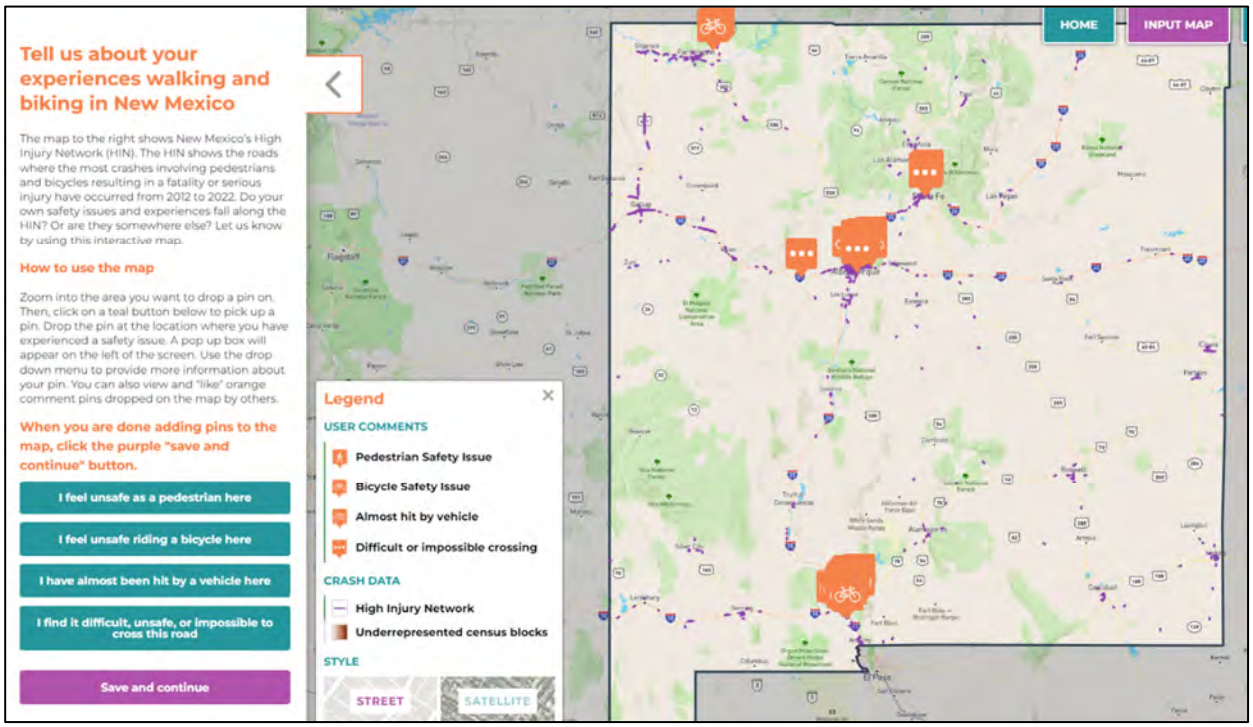
Table 4-3
"Perceived Contributing Factors" Response Themes

Comment Themes	ABQ	NW Corner	Doña Ana	TOTAL
Driver inattention/distracted driving	3	1	6	**10**
Road design	3	3	2	**8**
VRU infrastructure	4	0	3	**7**
Car-centrism/disregard for pedestrian safety	0	0	7	**7**
Speed	2	2	2	**6**
Large vehicles	2	1	2	**5**
Time of day	1	2	2	**5**
Impairment/intoxication	5	0	0	**5**
Equity	3	0	0	**3**
Pedestrian behavior	2	0	0	**2**
Weather	0	0	2	**2**
Planning	0	0	1	**1**
Lack of knowledge about road rules	1	0	0	**1**

The leading response to the above question in Table 4-3 was driver inattention related to cell phone use or other distractions. The next most frequently discussed contributing factors were road design and the quality of vulnerable road user infrastructure. Participants noted that road design currently prioritizes vehicle travel, with wide, high-speed corridors. In all parts of the state, participants described long stretches of road without pedestrian facilities such as crosswalks, pedestrian refuges, or other safety countermeasures, the lack of which contribute to unprotected midblock crossings. Additionally, many participants expressed that pedestrian infrastructure is not equitably distributed throughout their communities, and that there is a relationship between lower income neighborhoods and inadequate infrastructure. Excessive vehicle speed and car-centric attitudes and designs reflective of a disregard for pedestrian safety were the other perceived top contributing factors discussed in the meetings. The increased prevalence of large vehicles was also mentioned as a major contributing factor.

4.2 Web Map and Survey

Figure 4-1
Interactive Web Map and Survey Landing Page



An interactive web map (Figure 4-1) allowed respondents to add location pins and comments that address safety concerns as part of the NMDOT VRUSA. The web map went live on August 1, 2023. The website was hosted at https://newmexicodotshsp.com/ and was open for comment through mid-September 2023. On September 14, 2023, all posted comments and survey responses were collected for inclusion in this VRUSA. Future comments will contribute to the 2024 NMDOT SHSP.

The locations of dropped pins correspond to the locations of stakeholder meetings, with a high number of responses from Bernalillo and Doña Ana Counties. We publicized the web map during stakeholder meetings to solicit feedback.

A total of 24 participants contributed to the web map, dropping 115 pins.

The most-commonly dropped pins on the web map are as follows:

- Unsafe driver behavior and/or speeding occurs here: 24% of pins and likes
  - This was described as both a pedestrian and a bicyclist safety issue.
- There isn't a bicycle facility (e.g., bike lane or shared use path) on this road: 18%
- "Other" bicycle safety issue: 14.4%
- The existing bicycle facility doesn't feel safe to use: 11.5%

5 Recommended Countermeasures and Strategies

This section contains two categories of recommendations: Prioritized Infrastructure Recommendations, and Program, Policy, and Procedure Recommendations. The Prioritized Infrastructure Recommendations have been assigned a Typology to describe location contexts and provide appropriate safety countermeasure recommendations. To provide sufficient context, the Typology categorization structure appears before the Prioritized Infrastructure Recommendations in this Recommendations section. The infrastructure recommendations and their corresponding typologies can be viewed in Figures 5-4 and 5-5, and in Tables 5-1 through 5-8.

5.1 Typologies and Recommended Countermeasure Strategies

Due to the large number of corridor segments and intersections identified and prioritized along the HIN, a typology structure was used to recommend relevant safety countermeasures and project opportunities.

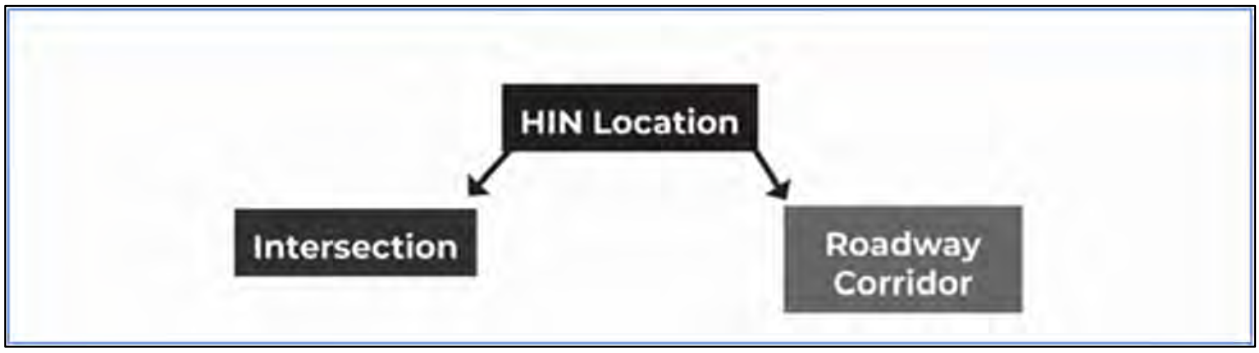
Typologies categorize the roadways and intersections based on various characteristics and design features. They help planners, engineers, and transportation professionals understand the purpose, function, and design requirements of different types of roads. Roadway typology takes into account factors such as the surrounding development context, road capacity, speed limits, the volume and types of traffic they are intended to accommodate, and their physical attributes.

Typologies for priority locations were created and assigned using the decision flow chart that appears in Figures 5-1 through 5-3. The flowchart reflects the wide range of intersection and corridor contexts that exist across New Mexico.

For each typology, this section provides an initial list of safety countermeasures that reduce crashes caused by the safety issues identified at these types of locations in the historical crash analysis. A safety countermeasure refers to a specific action or physical improvement implemented to reduce the risk of crashes, injuries, and fatalities on roadways. These countermeasures are designed to enhance the safety of transportation systems for all road users, including motorists, pedestrians, cyclists, and public transit passengers. Safety countermeasures are a crucial component of traffic safety management and aim to address known hazards and improve overall safety performance.

By referencing the typologies and corresponding countermeasures assigned to the Priority Project Locations, planners and engineers can develop a short list of potential appropriate safety interventions for the identified priority locations. Agency staff should refer to their organization’s design policies and directives on the implementation of specific countermeasures.

Figure 5-1
Typology Decision Matrix

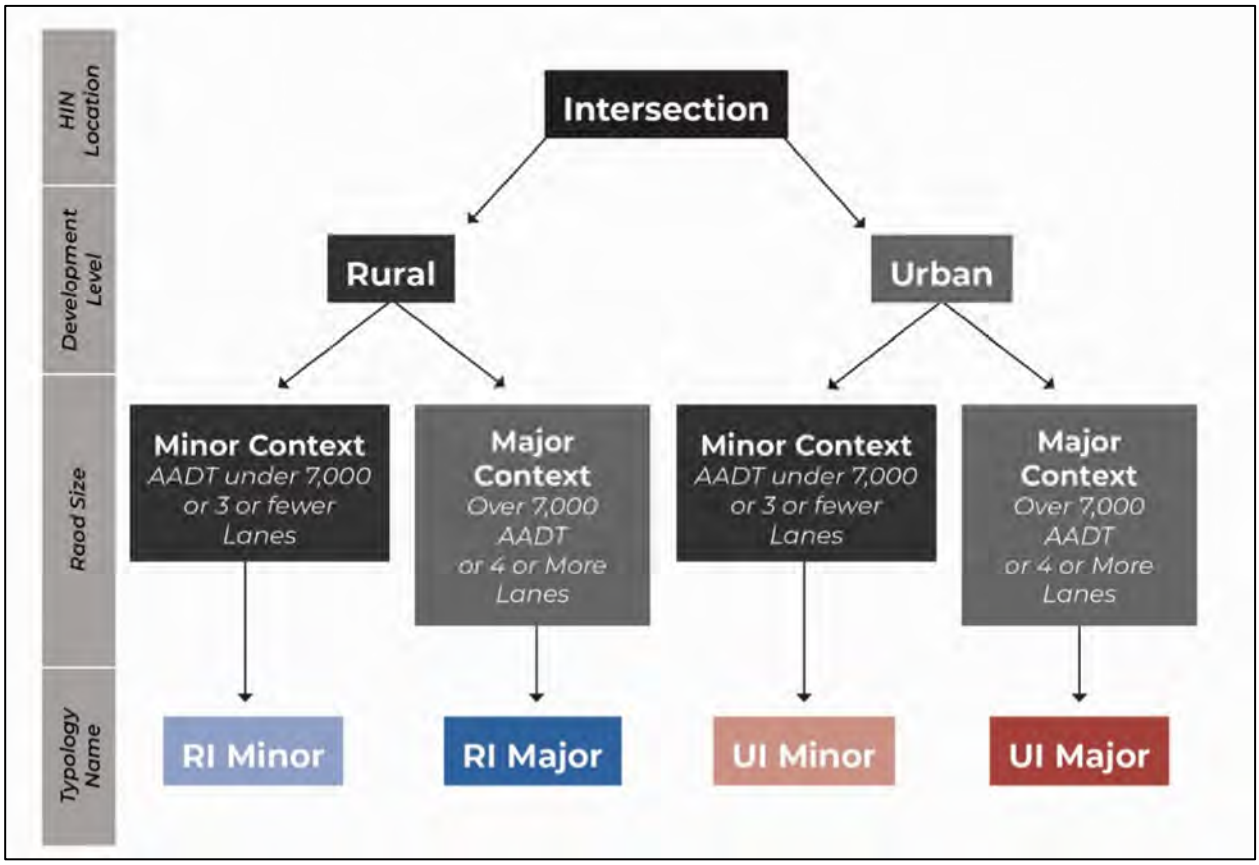


5.1.1 Intersection Typologies and Countermeasure Strategies

Intersection Typologies

We have developed intersection typologies (Figure 5-2) to categorize the various intersection contexts that appear in New Mexico. The typologies sort the contexts into groups using the key variables and decision-making factors that an engineer would use to determine the suitability of countermeasures for a given location. The provided countermeasures that are recommended for application within each typology have been selected using engineering judgment and best practices. Many of the countermeasures fall under the FHWA's list of Proven Safety Countermeasures or are in the FHWA's Guide to for Improving Pedestrian Safety at Uncontrolled Crossings

Figure 5-2
Intersection Typology Decision Matrix



Intersection Countermeasure Strategies

In the intersection countermeasures below (Tables 5-1 through 5-4), the countermeasure is listed in the left column in bold text. The second column contains the Crash Modification Factor (CMF) that was obtained from cmfclearinghouse.org. A CMF is used to indicate the expected reduction in crashes once a countermeasure or improvement has been implemented at a location. For example, if an intersection experiences 5 crashes per year over a 5-year sample size and a safety improvement is implemented which carries a CMF of 60%, the expected number of crashes in future years is expected to average to 3 crashes per year. Take note of the asterisks and other addendum symbols that denote additional decision-making criteria for certain listed countermeasures. Some countermeasures, for example, are only suitable on roadways with a posted speed limit below 35 mph.

Table 5-1

Countermeasures for RI Minor Typology

Typology: RI Minor			
Rural intersection with the major street having AADT under 7,000 or 3 or fewer lanes.			
Countermeasure	CMF	Why It Works	Why We Chose It
Convert intersection to all-way stop control	Reduction by 77%, all fatal and injury crashes (CMF #3128)	Reduces speed approaching the intersection, lowering impact speed of a crash and thus severity. Proven to be effective on high-speed roads as well as on low-speed roads.	Pedestrian safety at rural intersections is not as robustly studied as at urban intersections. However, reducing the speed of vehicles approaching the intersection will make a crossing safer for all users.
Convert intersection to roundabout (single lane)	Reduction by 79%, fatal and injury crashes in rural areas (CMF #10435)	Low entry speed. Fewer conflict points. Safer pedestrian crossing.	Proven safety countermeasure. Although roundabouts have been primarily studied for vehicular crashes, the speed reduction is safer for users of all modes.
Add traffic signal if warranted	Reduction of 44%, all crashes in rural area (CMF #325)	Signalizes intersection, making it safer for users of all modes to cross or turn left onto major street.	Standard countermeasure.
High visibility crosswalks	Reduction by 40%, pedestrian crashes (CMF #4123)	Enhances crosswalk visibility, increasing yielding.	Proven safety countermeasure.
Install advance yield signage and pavement markings in advance of crosswalk	Reduction of 25%, pedestrian crashes (CMF #9017)	Makes crosswalks more conspicuous and puts distance between drivers and crosswalk, increasing safety.	Proven safety countermeasure.
Install Rectangular Rapid Flashing Beacon (RRFB) across uncontrolled leg*	Reduction by 69%, pedestrian crashes (CMF #11158)	Makes crosswalks more conspicuous to drivers, increasing yielding.	RRFBs are a proven safety countermeasure.
Intersection lighting	Reduction by 42%, pedestrian crashes at night (CMF #436)	Makes pedestrians and bicyclists more conspicuous, especially at night.	Proven safety countermeasure. Can be effective at isolated rural intersections, which are plentiful across NM.

*Countermeasures with a * should only be applied when the speed limits are 35 MPH or lower.*

Table 5-2
Countermeasures for RI Major Typology

Typology: RI Major			
Rural intersection with the major street having AADT of 7,000 or higher or 4 or more lanes			
Countermeasure	**CMF**	**Why It Works**	**Why We Chose It**
Add traffic signal if warranted	Reduction of 44%, all crashes in rural area (CMF #325)	Signalizes intersection, making it safer for users of all modes to cross or turn left onto major street.	Standard countermeasure.
Convert intersection to roundabout (single lane)	Reduction by 79%, fatal and injury crashes in rural areas (CMF #10435)	Low entry speed. Fewer conflict points. Safer pedestrian crossing (can be enhanced with an RRFB).	Proven safety countermeasure. Although roundabouts have been primarily studied for vehicular crashes, the speed reduction is safer for users of all modes.
Convert intersection to roundabout (multi-lane)	Reduction by 71%, fatal and injury crashes (CMF #4927)	Low entry speed. Fewer conflict points. Provides pedestrian and bike crossing (can be enhanced with a PHB signal).	Proven safety countermeasure. Although roundabouts have been primarily studied for vehicular crashes, the speed reduction is safer for users of all modes. In addition, this treatment can be used as a “gateway” treatment near a town.
Install Pedestrian Hybrid Beacon (PHB) at uncontrolled crossing**	Reduction of 45%, pedestrian crashes (CMF #10607)	Signalizes the pedestrian crossing and provides enhances visibility. Provides safe crossing for people with vision impairments.	Proven safety countermeasure that works along busy roads and can work along rural divided facilities, especially near edges of towns.

Typology: RI Major			
Rural intersection with the major street having AADT of 7,000 or higher or 4 or more lanes			
Countermeasure	**CMF**	**Why It Works**	**Why We Chose It**
Undercrossing or overcrossing	Reduction by up to 90%, fatal and injury pedestrian crashes (FHWA SA-014)	Fully separated pedestrian/bike movements put pedestrians out of conflict point with cars, particularly across busy roads or freeways.	Can be used as a treatment across high-speed, high-volume rural highways or across freeways.
Intersection lighting	Reduction by 42%, pedestrian crashes at night (CMF #436)	Makes pedestrians more conspicuous, especially at night.	Proven safety countermeasure. Can be effective at isolated rural intersections, which are plentiful across NM.

*Countermeasures with a ** should only be applied when the speed limits are 50 MPH or lower.*

Table 5-3
Countermeasures for UI Minor Typology

Typology: UI Minor			
Urban intersection with the major street having AADT under 7,000 or 3 or fewer lanes.			
Countermeasure	**CMF**	**Why It Works**	**Why We Chose It**
Intersection bike crossing markings	No CMF	Delineates path of bikes through an intersection.	Provides continuity of bike facility through an intersection.
Raised crosswalk*	Reduction by 46%, pedestrian crashes (CMF #136)	Vertical deflection is an effective speed reduction technique. It also puts pedestrians into drivers' view by elevating them. Subtly communicates pedestrian priority by having road elevate to the height of sidewalk, instead of other way around.	Effective traffic calming measure, as well as increasing pedestrian comfort and safety. Improves yielding and has been used by jurisdictions all over the country for many years.

Typology: UI Minor			
Urban intersection with the major street having AADT under 7,000 or 3 or fewer lanes.			
Countermeasure	**CMF**	**Why It Works**	**Why We Chose It**
Intersection daylighting (including curb extensions) on roads with on-street parking	Exact CMF for improving intersection sight distance is a formula and may vary per intersection.	Reduces crossing distance and increases visibility of pedestrians. Removal of obstructions, such as parked cars, from the immediate vicinity of the intersection increases sight distance and safety for users of all modes.	Case studies from numerous cities, such as Hoboken, NJ, have proven that intersection daylighting is an effective treatment. Increasing sight distance at intersections improves safety for all modes.
Protected intersections	CMF is not yet determined; NCHRP 15-63 indicates mixed results.	Physical separation of cyclists and pedestrians on approach to intersection. Increases visibility of pedestrians and cyclists by providing a setback from motor vehicles, putting them in line of sight of drivers. Slows down motor vehicles and reduces conflicts.	A bike network can fail if intersections are not adequately safe or comfortable. Protected intersections are key to having a safe, protected bike network.
Intersection lighting	Reduction by 42%, pedestrian crashes at night (CMF #436)	Makes pedestrians more conspicuous, especially at night.	Proven safety countermeasure. Can be effective at isolated rural intersections, which are plentiful across NM.
Median refuge islands	Reduction by 32%, pedestrian crashes (CMF #8799)	Provides safe crossing for pedestrians by allowing them to focus on traffic in one direction at a time.	Proven safety countermeasure to enhance pedestrian safety, effective on both signalized and unsignalized crossings.
RRFB	Reduction by 69%, pedestrian crashes (CMF #11158)	Makes crosswalks more conspicuous to drivers, increasing yielding.	RRFBs are a proven safety countermeasure to enhance visibility of a crosswalk.
Convert two-way stop intersection to mini-roundabout*	Reduction by 61%, fatal and injury crashes (CMF #11241)	Slows drivers entering intersection on major street. Reduces severity of crashes due to lower speeds	Effective to reduce crashes at low volume intersections with heavy left turn movements.

Typology: UI Minor			
Urban intersection with the major street having AADT under 7,000 or 3 or fewer lanes.			
Countermeasure	**CMF**	**Why It Works**	**Why We Chose It**
Convert two-way stop intersection to all-way stop control.	Reduction by 42%, all fatal and injury crashes (CMF #10520)	Reduces speed approaching the intersection, lowering impact speed of a crash and thus severity. This countermeasure is proven to be effective on high-speed roads as well as on low-speed roads.	Reducing speed of vehicles approaching the intersection will make a crossing safer for all users. It is a low-cost, high effectiveness treatment for low volume urban intersections.
Add traffic signal if warranted	Reduction of 14%, all fatal and injury crashes (CMF #316)	Signalizes intersection, making it safer for users of all modes to cross or turn left onto major street.	Standard countermeasure.
High visibility crosswalks	Reduction by 40%, pedestrian crashes (CMF #4123)	Enhances crosswalk visibility, increasing yielding.	Proven safety countermeasure.
Leading Pedestrian Interval (LPI)* **	Reduction of 19%, pedestrian crashes (CMF #9903)	By having pedestrians begin crossing before cars get a green light, pedestrians are more visible to cars.	Proven safety countermeasure. Operational countermeasure that can be implemented quickly and improve safety.
Increase signal phase length to give more pedestrian crossing time* **	Reduction of 51%, pedestrian crashes (CMF #5252)	Extending crossing time makes crossing more comfortable for older, younger, and disabled pedestrians.	Operational countermeasure that can be implemented quickly.
Exclusive bike or pedestrian signal phase* **	Reduction by 35%, pedestrian crashes (CMF #5244)	Provides temporal separation from motor vehicle traffic, eliminating conflicts with vehicles.	Effective at signalized intersections with significant pedestrian demand.

*Countermeasures with a * should only be applied when the speed limits are 35 MPH or lower.*

Table 5-4

Countermeasures for UI Major Typology

Typology: UI Major			
Urban intersection with the major street having AADT of 7,000 or higher or 4 or more lanes			
Countermeasure	**CMF**	**Why It Works**	**Why We Chose It**
High visibility crosswalks	Reduction by 40%, pedestrian crashes (CMF #4123)	Enhances crosswalk visibility, increasing yielding.	Proven safety countermeasure.
Intersection daylighting (including curb extensions) on roads with on-street parking	Exact CMF for improving intersection sight distance is a formula and may vary per intersection.	Reduces crossing distance and increases visibility of pedestrians. Removal of obstructions, such as parked cars, from the immediate vicinity of the intersection increases sight distance and safety for users of all modes.	Case studies from numerous cities, such as Hoboken, NJ, have proven that intersection daylighting is an effective treatment. Increasing sight distance at intersections improves safety for all modes.
Median refuge islands	Reduction by 32%, pedestrian crashes (CMF #8799)	Provides safe crossing for pedestrians by allowing them to focus on traffic in one direction at a time.	Proven safety countermeasure to enhance pedestrian safety, effective on both signalized and unsignalized crossings.
Install PHB	Reduction of 45%, pedestrian crashes (CMF #10607)	Signalizes the pedestrian crossing and provides enhances visibility. Provides safe crossing for people with vision impairments.	Proven safety countermeasure that works along busy roads and can work along rural divided facilities, especially near edges of towns.
LPI* **	Reduction of 19%, pedestrian crashes (CMF #9903)	By having pedestrians begin crossing before cars get a green light, pedestrians are more visible to cars.	Proven safety countermeasure. Operational countermeasure that can be implemented quickly and improve safety.
Increase signal phase length to give more pedestrian crossing time* **	Reduction of 51%, pedestrian crashes (CMF #5252)	Extending crossing time makes crossing more comfortable for older, younger, and disabled pedestrians.	Operational countermeasure that can be implemented quickly.

Typology: UI Major			
Urban intersection with the major street having AADT of 7,000 or higher or 4 or more lanes			
Countermeasure	**CMF**	**Why It Works**	**Why We Chose It**
Protected intersection	CMF is not yet determined; NCHRP 15-63 indicates mixed results.	Physical separation of cyclists and pedestrians on approach to intersection. Increases visibility of pedestrians and cyclists by providing a setback from motor vehicles, putting them in line of sight of drivers. Slows down motor vehicles and reduces conflicts.	A bike network can fail if intersections are not adequately safe or comfortable. Protected intersections are key to having a safe, protected bike network.
Exclusive bike or pedestrian signal phase* **	Reduction by 35%, pedestrian crashes (CMF #5244)	Provides temporal separation from motor vehicle traffic, eliminating conflicts with vehicles.	Effective at signalized intersections with significant pedestrian demand.
Intersection bike crossing markings	No CMF	Delineates path of bikes through an intersection	Provides continuity of bike facility through an intersection.
Intersection lighting	Reduction by 42%, pedestrian crashes at night (CMF #436)	Makes pedestrians more conspicuous, especially at night.	Proven safety countermeasure. Can be effective at isolated rural intersections, which are plentiful across NM.
Add traffic signal if warranted	Reduction of 14%, all fatal and injury crashes (CMF #316)	Signalizes intersection, making it safer for users of all modes to cross or turn left onto major street.	Standard countermeasure.
Convert signalized intersection to roundabout* **	Reduction by 71%, fatal and injury crashes (CMF #4195)	Reduces speeds of drivers approaching intersections. Fewer conflict points. Safer pedestrian crossing.	Proven safety countermeasure that can be designed to safely accommodate bikes and pedestrians.

*Countermeasures with *** only apply to signalized intersections.*

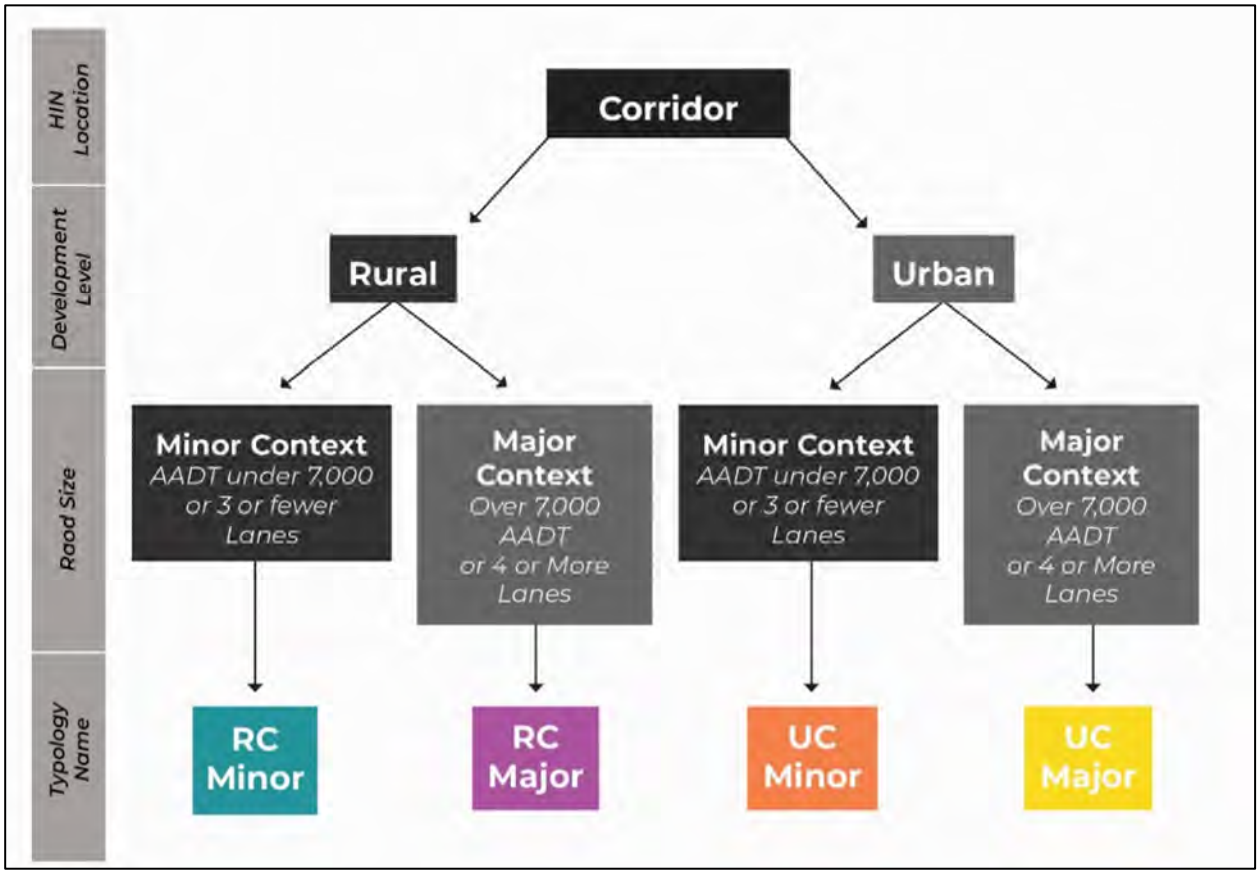
5.1.2 Corridor Typologies and Countermeasure Strategies

Corridor Typologies

Corridors have been divided into a similar structure of typologies as intersections (Figure 5-3). The primary driver is an urban or rural context, followed by the scale of the roadway size. This can be determined by either AADT or the number of lanes. This assessment assigned HIN segment typologies using the available AADT data, not number of lanes.

Figure 5-3

Corridor Typology Decision Matrix



Corridor Countermeasure Strategies

In the corridor countermeasure below (Tables 5-5 through 5-8), the countermeasure is listed in bold. Additional related countermeasures that relate to that countermeasure are listed immediately to the right in italics. The second column contains the CMF. Take note of the asterisks and other addendum symbols that denote additional decision-making criteria for certain listed countermeasures. Some countermeasures for example, are only suitable on roadways with a posted speed limit below 35 mph.

Table 5-5

Countermeasures for RC Minor Typology

Typology: RC Minor				
Rural roadway corridor with an AADT under 7,000 or 3 or fewer lanes				
Countermeasure		**CMF**	**Why It Works**	**Why We Chose It**
Wider edge lines (4 to 6 inch)		CMF 0.63, non-intersection fatal and injury crashes (CMF #4737)	Increases driver perception of edge of travel lane, thus reducing run-off-road crashes.	Proven safety countermeasure.
Widen shoulder (paved) from 0 feet to 4 feet		CMF = 0.86 for fixed object, head on, run off road, sideswipe crashes (CMF #6327)	Paved shoulder gives more room for recovery.	The paved shoulder gives drivers more room to recover before running off the road, increasing safety of a pedestrian who might be walking adjacent to the road.
Longitudinal rumble strips		CMF = 0.85 for run-off-road crashes (CMF #10406)	Alerts drivers of lane departure, causing correction. Reduces run-off-road crashes.	Proven safety countermeasure.
Add sidepath or sidewalk		Sidepath - CMF = 0.75 for bicycle crashes (CMF #9250) Sidewalk - CMF = 0.60 for pedestrian crashes (CMF #11246)	Provides safe space to walk or bike, separated from traffic or shoulders.	Proven safety countermeasure.
Provide or enhance midblock crossings	*Median refuge islands*	CMF = 0.68 for pedestrian crashes (CMF #8799)	Provides safe midblock crossings for pedestrians by allowing them to focus on traffic in one direction at a time.	Proven safety countermeasure to enhance pedestrian safety at midblock crossings.

Typology: RC Minor				
Rural roadway corridor with an AADT under 7,000 or 3 or fewer lanes				
Countermeasure		**CMF**	**Why It Works**	**Why We Chose It**
	High visibility crosswalks	CMF = 0.60 for pedestrian crashes (CMF #4123)	Enhances crosswalk visibility, increasing yielding.	Proven safety countermeasure.
	RRFB	CMF = 0.31 for pedestrian crashes (CMF #11158)	Makes crosswalks more conspicuous to drivers, increasing yielding.	RRFBs are a proven safety countermeasure to enhance visibility of a crosswalk.

Table 5-6
Countermeasures for RC Major Typology

Typology: RC Major			
Rural roadway corridor with either an AADT of 7,000 or greater or 4 or more lanes			
Countermeasure	**CMF**	**Why It Works**	**Why We Chose It**
Wider edge lines (4 to 6 inch)	CMF = 0.63 for non-intersection fatal and injury crashes (CMF #4737)	Increases driver perception of edge of travel lane, thus reducing run-off-road crashes.	Proven safety countermeasure.
Widen shoulder (paved) from 0 feet to 8 feet	CMF = 0.92 for fixed object, head on, run off road, sideswipe crashes (CMF #6371)	Paved shoulder gives more room for vehicles to recover.	Widening a shoulder, while not a pedestrian facility, has a tangential benefit of increasing comfort for cyclists or pedestrians who choose to use the shoulder.
Shoulder rumble strips	CMF = 0.65 for run-off-road crashes (CMF #6651)	Alerts drivers of lane departure, causing correction. Reduces run-off-road crashes.	Proven safety countermeasure.

Typology: RC Major				
Rural roadway corridor with either an AADT of 7,000 or greater or 4 or more lanes				
Countermeasure		**CMF**	**Why It Works**	**Why We Chose It**
Add sidepath or sidewalk		Sidepath - CMF = 0.75 for bicycle crashes (CMF #9250) Sidewalk - CMF = 0.60 for pedestrian crashes (CMF #11246)	Provides safe space to walk or bike, separated from traffic or shoulders.	Proven safety countermeasure.
Provide or enhance midblock crossings	*Median refuge islands*	CMF = 0.68 for pedestrian crashes (CMF #8799)	Provides safe midblock crossings for pedestrians by allowing them to focus on traffic in one direction at a time.	Proven safety countermeasure to enhance pedestrian safety at midblock crossings.
	High visibility crosswalks	CMF = 0.60 for pedestrian crashes (CMF #4123)	Enhances crosswalk visibility, increasing yielding.	Proven safety countermeasure.
	*RRFB^*	CMF = 0.31 for pedestrian crashes (CMF #11158)	Makes crosswalks more conspicuous to drivers, increasing yielding.	RRFBs are a proven safety countermeasure to enhance visibility of a crosswalk.
	Install PHB	CMF = 0.55 for pedestrian crashes (CMF #10607)	Signalizes the pedestrian crossing and provides enhances visibility. Provides safe crossing for people with vision impairments.	Proven safety countermeasure that works along busy roads and can work along rural divided facilities, especially near edges of towns.
	Undercrossing or overcrossing	CMF up to 0.10 for fatal and injury pedestrian crashes (FHWA SA-014)	Fully separated pedestrian/bike movements put pedestrians out of conflict point with cars, particularly across busy roads or freeways.	Can be used as a treatment across high-speed, high-volume roads or across freeways.

Countermeasures with a ^ should not be considered on multilane roads with AADT greater than 15,000 and speed limits 40 MPH or higher.

Table 5-7

Countermeasures for UC Minor Typology

Typology: UC Minor				
Urban roadway corridor with an AADT under 7,000 or 3 or fewer lanes				
Countermeasure		**CMF**	**Why It Works**	**Why We Chose It**
Provide or enhance midblock crossings	*Median refuge islands*	CMF = 0.68 for pedestrian crashes (CMF #8799)	Provides safe midblock crossings for pedestrians by allowing them to focus on traffic in one direction at a time.	Proven safety countermeasure to enhance pedestrian safety at midblock crossings.
	High visibility crosswalks	CMF = 0.60 for pedestrian crashes (CMF #4123)	Enhances crosswalk visibility, increasing yielding.	Proven safety countermeasure.
	Install marked crosswalk with median refuge island	CMF = 0.54 for pedestrian crashes (CMF #175)	Provides a safe location to cross midblock for pedestrians.	Proven safety countermeasure.
	*Raised crosswalk**	CMF = 0.54 for pedestrian crashes (CMF #136)	Vertical deflection is an effective speed reduction technique. It also puts pedestrians into drivers' view by elevating them. Subtly communicates pedestrian priority by having road elevate to the height of sidewalk, instead of other way around.	Effective traffic calming measure, as well as increasing pedestrian comfort and safety. Improves yielding and has been used by jurisdictions all over the country for many years.
	RRFB	CMF = 0.31 for pedestrian crashes (CMF #11158)	Makes crosswalks more conspicuous to drivers, increasing yielding.	RRFBs are a proven safety countermeasure to enhance visibility of a crosswalk.
	Install PHB	CMF = 0.55 for pedestrian crashes (CMF #10607)	Signalizes the pedestrian crossing and provides enhances visibility. Provides safe crossing for people with vision impairments.	Proven safety countermeasure that works along busy roads and can work along rural divided facilities, especially near edges of towns.

Typology: UC Minor				
Urban roadway corridor with an AADT under 7,000 or 3 or fewer lanes				
Countermeasure		**CMF**	**Why It Works**	**Why We Chose It**
	Undercrossing or overcrossing	CMF as low as 0.10 for fatal and injury pedestrian crashes (FHWA SA-014)	Fully separated pedestrian/bike movements put pedestrians out of conflict point with cars, particularly across busy roads or freeways.	Can be used as a treatment across high-speed, high-volume roads or across freeways.
Road diet		CMF ranges between 0.53 and 0.82 (CMF #5554 & 2841)	Reallocates cross section of roadway from cars to add facilities for bikes and pedestrians. Shown to reduce speeds.	Proven safety countermeasure and a standard treatment for roads with 4+ lanes to enhance safety for users of all modes.
Add sidepath or sidewalk		Sidepath - CMF = 0.75 for bicycle crashes (CMF #9250) Sidewalk - CMF = 0.60 for pedestrian crashes (CMF #11246)	Provides safe space to walk or bike, separated from traffic or shoulders.	Proven safety countermeasure.
Add bike lanes		CMF as low as 0.51 for all crashes on 4 lane undivided roads CMF as low as 0.70 on 2-lane collectors (from FHWA)	Provides safe space to bike separated from traffic, either by widening or reallocating the cross section.	Proven safety countermeasure.
Enhance existing bike lane		CMF between 0.47 and 0.82 18% and 53% (CMF #11293 – 11303) Varies based on type of upgrade	Provides even safer bike lane. The more separation from traffic, the more safety provided.	A more separated bike network is key to reducing bike crashes, as well as providing a network comfortable to users of all ages and abilities. Potential for additional safety benefit for all modes.

*Countermeasures with a * should only be considered when the speed limits are 35 MPH or lower.*

Table 5-8
Countermeasures for UC Major Typology

Typology: UC Major				
Urban roadway corridor with an AADT of 7,000 or greater or 4 or more lanes				
Countermeasure		**CMF**	**Why It Works**	**Why We Chose It**
Provide or enhance midblock crossings	*Median refuge islands*	CMF = 0.68 for pedestrian crashes (CMF #8799)	Provides safe midblock crossings for pedestrians by allowing them to focus on traffic in one direction at a time.	Proven safety countermeasure to enhance pedestrian safety at midblock crossings.
	Install marked crosswalk with median refuge island	CMF = 0.54 for pedestrian crashes (CMF #175)	Provides a safe location to cross midblock for pedestrians.	Proven safety countermeasure.
	Raised crosswalk[*]	CMF = 0.54 for pedestrian crashes (CMF #136)	Vertical deflection is an effective speed reduction technique. It also puts pedestrians into drivers' view by elevating them. Subtly communicates pedestrian priority by having road elevate to the height of sidewalk, instead of other way around.	Effective traffic calming measure, as well as increasing pedestrian comfort and safety. Improves yielding and has been used by jurisdictions all over the country for many years.
	RRFB[^]	CMF = 0.71 for pedestrian crashes (CMF #11158)	Makes crosswalks more conspicuous to drivers, increasing yielding.	RRFBs are a proven safety countermeasure to enhance visibility of a crosswalk.
	Install PHB	CMF = 0.55 for pedestrian crashes (CMF #10607)	Signalizes the pedestrian crossing and provides enhances visibility. Provides safe crossing for people with vision impairments.	Proven safety countermeasure that works along busy roads and can work along rural divided facilities, especially near edges of towns.
	Undercrossing or overcrossing	CMF as low as 0.10 for fatal and injury pedestrian crashes (FHWA SA-014)	Fully separated pedestrian/bike movements put pedestrians out of conflict point with cars, particularly across busy roads or freeways.	Can be used as a treatment across high-speed, high-volume roads or across freeways.

Typology: UC Major			
Urban roadway corridor with an AADT of 7,000 or greater or 4 or more lanes			
Countermeasure	**CMF**	**Why It Works**	**Why We Chose It**
Road diet#	CMF ranges between 0.53 and 0.82 (CMF #5554 & 2841)	Reallocates cross section of roadway from cars to add facilities for bikes and pedestrians. Shown to reduce speeds.	Proven safety countermeasure and a standard treatment for roads with 4+ lanes to enhance safety for users of all modes.
Corridor access management	CMF ranges between 0.69 and 0.75 (CMF #179 & 178)	Reduces density of driveway curb-cuts. Fewer access points mean less exposure to traffic for pedestrians and cyclists.	Proven safety countermeasure and increases safety along arterials for users of all modes.
Add buffered or separated bike lanes	CMF as low as 0.51 for all crashes on 4 lane undivided roads Reduction of up to 30%, 2-lane collectors (from FHWA)	Provides safe space to bike separated from traffic, either by widening or reallocating the cross section.	Proven safety countermeasure.
Enhance existing bike lane	CMF ranges between 0.47 and 0.82 (CMF #11293 – 11303) Varies based on type of upgrade	Provides even safer bike lane. The more separation from traffic, the more safety provided.	A more separated bike network is key to reducing bike crashes, as well as providing a network comfortable to users of all ages and abilities. Potential for additional safety benefit for all modes.

*Countermeasures with a * should only be considered when the speed limits are 35 MPH or lower.*
Countermeasures with a ^ should not be considered on multilane roads with AADT greater than 15,000 and speed limits 40 MPH or higher.
Countermeasures with a # might require further study for AADT volume above 10,000.

5.2 Prioritized Project Locations

5.2.1 Project Location Prioritization Analysis

A prioritization analysis identified priority corridor segments and intersections for improving vulnerable road user safety. To determine the corridors and intersections that should be prioritized for investment, we created a VRU Prioritization Score that combines the Crash Severity Index Score and the Equity Analysis Score, shown in Table 5-9. The Crash Severity Index Score accounts for 75%, and the Equity Analysis Score accounts for 25% of the final VRU Prioritization Score. A detailed prioritization methodology memo can be found in Appendix A.

All corridor segments and intersections that fall on the statewide HIN have been scored. This comprised 871 road segments and 3,520 intersections. The top 10% of corridor segments and the top 10% of intersections are considered "priority locations" and can be reviewed in tables in Appendix A. Tables 5-9 through 5-21 list the top five corridors and intersections in each NMDOT district. For intersections, the jurisdiction/ownership of the intersection is listed for the highest agency. For example, the intersection of a state route and local route would be listed as a state jurisdiction route in the upcoming Section 5 tables.

Maps of the priority locations can also be reviewed in Figures 5-4 and 5-5. On a statewide scale, it is difficult to view these locations in printed map format. We recommend reviewing priority locations in more detail at https://www.dot.nm.gov/planning-research-multimodal-and-safety/planning-division/multimodal-planning-and-programs-bureau/highway-safety-improvement-program/, then choosing the "High Injury Network Web Map". This will bring the user to a zoomable and navigable map, as well as in-depth contextual information about each priority location.

Historical and potential projects from the NMDOT's eSTIP and the Mid-Region MPO's MTP that overlap with identified priority locations are identified in the online map at the link above.

Table 5-9
Prioritization Criteria Summary

Criteria	Measures	Data Source	Weight
Safety	The typical intensity of severe, bicycle, and pedestrian crash patterns	New Mexico UCR	75%
Equity	Equity index leveraging a combination of demographic and public health data to identify socially vulnerable populations with high investment need.	Alta Equity Analysis tool	25%

Figure 5-4

Top Prioritized Intersections and Corridors by Typology – Statewide

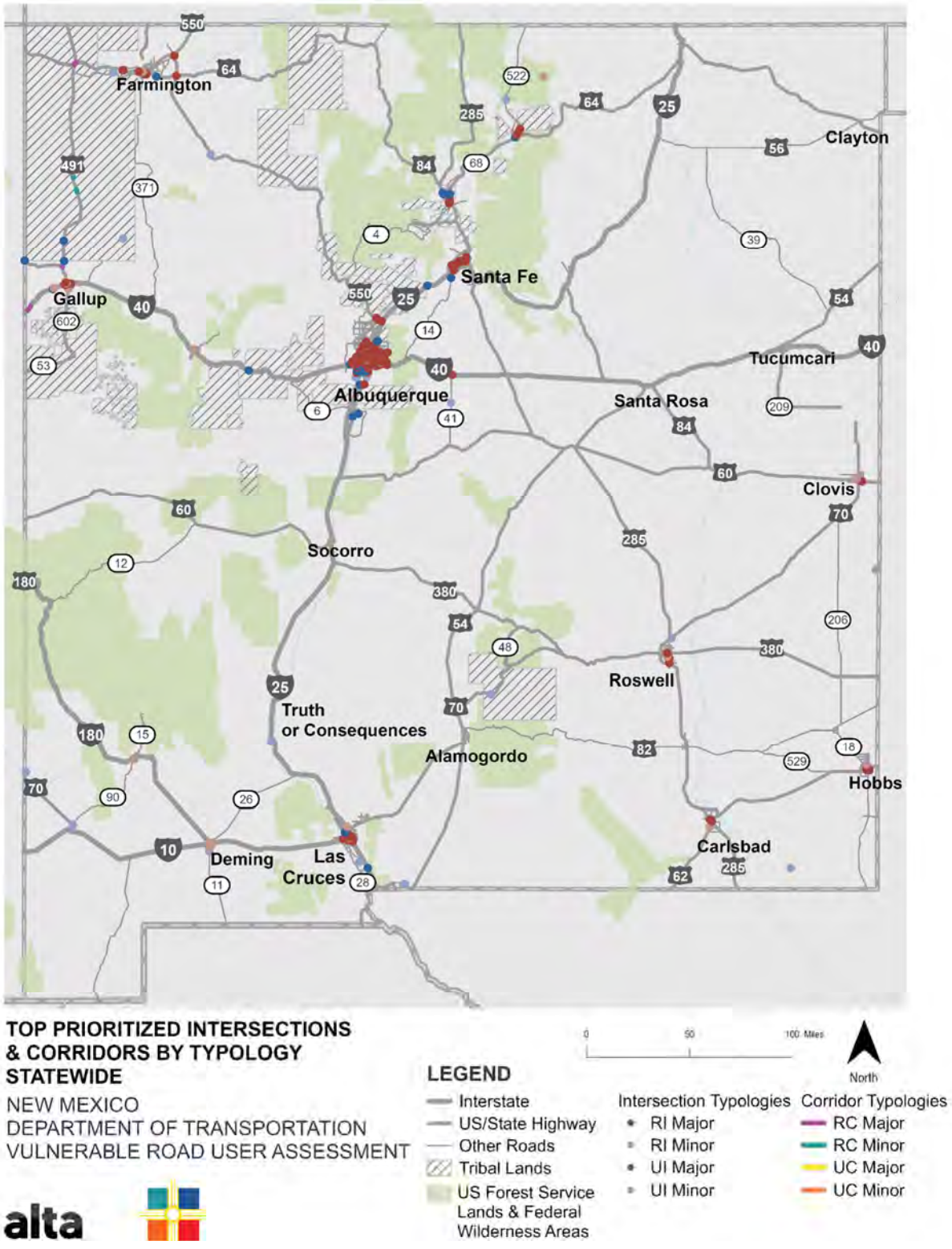


Figure 5-5

Top Prioritized Intersections and Corridors by Typology – Albuquerque Metro Area

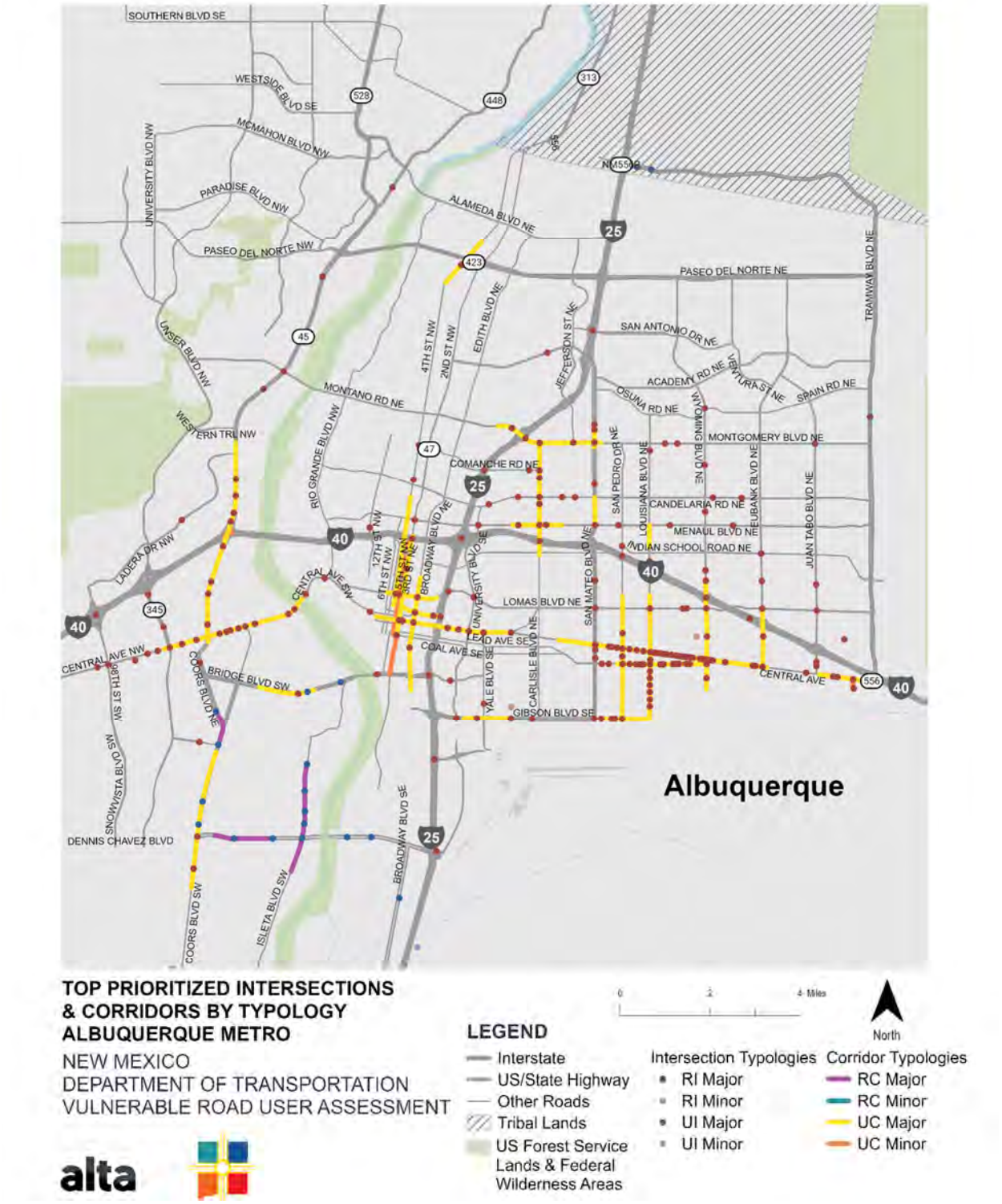


Table 5-10
District 1 Top Priority Intersections

Road 1	Road 2	Ownership	County	Prioritization Score	Equity Score	Crash Severity Index	Typology
East Foster Road	El Paseo Road	City of Las Cruces	Dona Ana	0.9261	0.6700	27	UI Major
East Amador Avenue	South Espina Street	City of Las Cruces	Dona Ana	0.8869	0.6550	22	UI Minor
East Lohman Avenue	South Solano Drive	City of Las Cruces	Dona Ana	0.8528	0.5530	23	UI Major
East Broadway Street	North Bullard Street	City of Silver City	Grant	0.8517	0.5925	21	UI Minor
Harding Road	NM 478	NMDOT	Dona Ana	0.8496	0.7092	20	RI Minor

Table 5-11
District 1 Top Prioritized Corridors

Road Name	From	To	Ownership	Prioritization Score	Equity Score	Crash Severity Index	Typology
El Paseo Road	Montana Avenue	El Molino Boulevard	City of Las Cruces	0.8419	0.6601	62	UC Major
East Lohman Avenue	South Walnut Street	Walton Boulevard	City of Las Cruces	0.8367	0.6023	65	UC Major
East Idaho Avenue	South Solano Drive	South Main Street	City of Las Cruces	0.8330	0.6646	56	UC Major
South Espina Street	Parkview Drive	Arizona Avenue	City of Las Cruces	0.7587	0.6056	43	UC Minor
North Solano Drive	East Chestnut Avenue	North Main Street	City of Las Cruces	0.7568	0.5583	46	UC Major

Table 5-12
District 2 Top Prioritized Intersections

Road 1	Road 2	Ownership	County	Prioritization Score	Equity Score	Crash Severity Index	Typology
East Snyder Street	North Marland Boulevard	NMDOT	Lea	0.9227	0.8153	22	UI Major
North Norris Street	US 60	NMDOT	Curry	0.8808	0.5877	25	UI Major
North Turner Street	East Sanger Street	City of Hobbs	Lea	0.8607	0.5664	23	UI Major
Monsanto Lane	Orla Road	Private	Lea	0.8252	0.6480	20	RI Minor
West Charleston Road	S Main St	Chaves County	Chaves	0.8197	0.6297	20	UI Major

Table 5-13
District 2 Top Prioritized Corridors

Road Name	From	To	Ownership	Prioritization Score	Equity Score	Crash Severity Index	Typology
North Turner Street	West Broadway Street	West Sanger Street	City of Hobbs	0.7915	0.6381	47	UC Major
East 1st Street	North White Sands Boulevard	Railroad Avenue	City of Alamogordo	0.7723	0.5512	51	UC Minor
US 70	Milepost 246	Milepost 244	NMDOT	0.7539	0.7607	37	RC Minor
East Mabry Drive / US 60	Milepost 391	Milepost 389	City of Clovis	0.7029	0.5877	38	UC Major
West Blanco Drive	West Sanger Street	West Bender Boulevard	City of Hobbs	0.6860	0.5222	40	UC Major

Table 5-14
District 3 Top Prioritized Intersections

Road 1	Road 2	Ownership	County	Prioritization Score	Equity Score	Crash Severity Index	Typology
California Street Northeast	Central Avenue Southeast	City of Albuquerque	Bernalillo	0.9889	0.7636	72	UI Major
Central Avenue Southeast	Louisiana Boulevard Southeast	City of Albuquerque	Bernalillo	0.9829	0.7081	89	UI Major
San Pablo Street Northeast	Central Avenue Northeast	City of Albuquerque	Bernalillo	0.9812	0.7062	82	UI Major
Central Avenue Northwest	60th Street Northwest	City of Albuquerque	Bernalillo	0.9803	0.7197	64	UI Major
Pennsylvania Street Southeast	Central Avenue Northeast	City of Albuquerque	Bernalillo	0.9799	0.7597	55	UI Major

Table 5-15
District 3 Top Prioritized Corridors

Road Name	From	To	Ownership	Prioritization Score	Equity Score	Crash Severity Index	Typology
Central Avenue NE	Espanola Street NE	General Arnold Street NE	City of Albuquerque	0.9575	0.6837	572	UC Major
Central Avenue NW	65th Street NW	50th Street NW	City of Albuquerque	0.9464	0.6671	243	UC Major
Central Avenue NE	Valencia Drive Southeast	Espanola Street NE	City of Albuquerque	0.9369	0.6182	524	UC Major
Zuni Road SE	Mesilla Street SE	Cardenas Drive SE	City of Albuquerque	0.9368	0.6850	142	UC Major
Coors Blvd NW	Bataan Drive SW	Avalon Rd NW	NMDOT	0.9366	0.6186	288	UC Major

Table 5-16
District 4 Top Prioritized Intersections

Road 1	Road 2	Ownership	County	Prioritization Score	Equity Score	Crash Severity Index	Typology
US 84	I-40	NMDOT	Guadalupe	0.1932	0.5957	0	UI Minor
I 25 on ramp	NM 3	NMDOT	San Miguel	0.1562	0.5273	0	RI Minor
County Road 23	I 25	NMDOT	San Miguel	0.1520	0.5199	0	RI Major
NM 3	I-25 on ramp	NMDOT	San Miguel	0.1409	0.4953	0	RI Minor
I-25 off ramp	NM 63 frontage road	NMDOT	San Miguel	0.1255	0.4633	0	RI Minor

District 4 did not have any intersections along the HIN that contained crashes. As such, a Crash Severity Index Score could not be calculated.

Table 5-17
District 4 Top Prioritized Corridors

Road Name	From	To	Ownership	Prioritization Score	Equity Score	Crash Severity Index	Typology
I-40	Milepost 278	Milepost 276	NMDOT	0.7960	0.5957	51	UC Major
I-40	Milepost 274	Milepost 272	NMDOT	0.6728	0.5029	40	UC Major
I-25 on Ramp	NM 3	I-25	NMDOT	0.5962	0.4953	32	RC Minor
I-25 off ramp	I-25	NM 63	NMDOT	0.5945	0.4633	33	RC Minor
I-25 off ramp	I-25	NM 569	NMDOT	0.4985	0.3437	30	RC Minor

Table 5-18
District 5 Top Prioritized Intersections

Road 1	Road 2	Ownership	County	Prioritization Score	Equity Score	Crash Severity Index	Typology
Calle Ranchitos	North Riverside Drive	NMDOT	Rio Arriba	0.9225	0.6496	30	UI Major
Zafarano Drive	Cerrillos Road	NMDOT	Santa Fe	0.9187	0.5977	40	UI Major
Calle del Cielo	Cerrillos Road	NMDOT	Santa Fe	0.9185	0.5735	46	UI Major
Richards Avenue	Cerrillos Road	NMDOT	Santa Fe	0.9185	0.5758	45	UI Major
US 285/84	Private Drive 1525	NMDOT	Rio Arriba	0.8870	0.6855	21	RI Major

Table 5-19
District 5 Top Prioritized Corridors

Road Name	From	To	Ownership	Prioritization Score	Equity Score	Crash Severity Index	Typology
Paseo del Pueblo Sur	New Mexico Highway 518	Este es Road	City of Taos	0.8814	0.6096	89	UC Major
US 64	Milepost 43	Milepost 41	San Juan County	0.8543	0.5017	136	UC Major
Cerillos Road	Vegas Verdes Drive	Camino Consuelo	City of Santa Fe	0.8681	0.5292	138	UC Major
US 491	US 64	Uranium Blvd	NMDOT	0.8466	0.7800	50	RC Major
US 491	Milepost 48	Milepost 46	NMDOT	0.8429	0.7820	49	RC Minor

Table 5-20
District 6 Top Prioritized Intersections

Road 1	Road 2	Ownership	County	Prioritization Score	Equity Score	Crash Severity Index	Typology
North 9th Street	West Lincoln Avenue	NMDOT	McKinley	0.9102	0.7247	22	UI Minor
Maloney Avenue	US 491	NMDOT	McKinley	0.9076	0.5904	33	UI Major
US 491	Jefferson Avenue	NMDOT	McKinley	0.8974	0.5904	28	UI Major
Iule Street	NM 53	NMDOT	McKinley	0.8627	0.8078	20	RI Minor
US 491	Tohlaki Rd	NMDOT	McKinley	0.8597	0.7940	20	RI Major

Table 5-21
District 6 Top Prioritized Corridors

Road Name	From	To	Ownership	Prioritization Score	Equity Score	Crash Severity Index	Typology
I-40	Milepost 3	Milepost 4	NMDOT	0.9295	0.8051	84	RC Major
US 264	Milepost 17	Milepost 15	NMDOT	0.8563	0.7940	52	RC Major
US 491	W Jefferson Ave	Hwy 608	City of Gallup	0.8421	0.5446	85	UC Major
I-40	Off-ramp approach to Munoz Dr	NA	NMDOT	0.8377	0.4562	163	UC Minor
US 491	Highway 264 interchange	NA	NMDOT	0.8320	0.7609	48	RC Major

5.3 NMDOT Policy, Process, and Program Strategies

The recommendations listed in Tables 5-22 through 5-28 are advisory in nature. Recommendations are based on the historical crash trends analysis, stakeholder input, and a review of past plans. We have categorized recommendations into subject area groupings, tagged by their alignment with elements of the Safe Systems Approach, as well as by their appearance in past plans. A recommendation did not have to contain the precise wording here to be noted as appearing in a given plan. Recommendations were indicated (with a teal box) as appearing in a plan if the plan contained a recommendation with similar language or one that targeted the same objective. For more information about related NMDOT plans, reference Appendix G, for a document and plan review summary.

Table 5-22

Recommendations – Data Collection and Management

	Alignment with Safe System Approach					Alignment with Previous Plans				
Recommendations	**Safe Roads**	**Safe Speeds**	**Safe Road Users**	**Safe Vehicles**	**Post-Crash Care**	**Pedestrian Safety Action Plan**	**Statewide Transportation Plan**	**NM Bike Plan**	**Highway Safety Plan**	**Strategic Highway Safety Plan**
Data Collection and Management										
Update the UCR form to ensure consistency with National Highway Traffic Safety Administration guidance and usability for law enforcement officers to accurately capture information on VRU-involved crashes.					■	■				■
Develop a methodology for determining current and future pedestrian volumes, as well as latent demand.			■			■				
Create a pedestrian and bicycle count collection strategy and program.			■							
Continue pedestrian and bicycle counter lending program for use by other jurisdictions.			■							
Annually distribute survey seeking feedback on UCR form and integrate feedback into next comprehensive UCR update.	■					■				■

Recommendations	Alignment with Safe System Approach					Alignment with Previous Plans				
	Safe Roads	Safe Speeds	Safe Road Users	Safe Vehicles	Post-Crash Care	Pedestrian Safety Action Plan	Statewide Transportation Plan	NM Bike Plan	Highway Safety Plan	Strategic Highway Safety Plan
Data Collection and Management										
Include pedestrian-involved crash data and equity in project prioritization.										
Explore utility of “top contributing factor” process and definition.										
Integrate the statewide bicycle network with local and regional networks to improve bicycle travel across communities, regardless of jurisdictions or infrastructure ownership and ensure network continuity.										
Create a data dashboard with historical crash data. Crash data should be selectable, downloadable, and updated annually for use by NMDOT engineers and public. Crash data should be complete and contain all relevant roadway, context, and analysis factors necessary to inform infrastructure design.										
Create a statewide sidewalk and crosswalk GIS layer to identify sidewalk gaps and assist in crash analysis.										
Create a statewide bicycle facility GIS layer to identify network gaps and assist in crash analysis.										
Establish a program to continually gain feedback from all user groups on their experience with the transportation system, especially seeking input from disadvantaged or vulnerable communities, commuters, and transit passengers.										

	Alignment with Safe System Approach					Alignment with Previous Plans				
Recommendations	**Safe Roads**	**Safe Speeds**	**Safe Road Users**	**Safe Vehicles**	**Post-Crash Care**	**Pedestrian Safety Action Plan**	**Statewide Transportation Plan**	**NM Bike Plan**	**Highway Safety Plan**	**Strategic Highway Safety Plan**
Data Collection and Management										
Publish a brief, public-facing VRU-involved crash report that compiles each previous year's crash statistics and report on progress.										

Table 5-23

Recommendations – Communication and Education

	Alignment with Safe System Approach					Alignment with Previous Plans				
Recommendations	**Safe Roads**	**Safe Speeds**	**Safe Road Users**	**Safe Vehicles**	**Post-Crash Care**	**Pedestrian Safety Action Plan**	**Statewide Transportation Plan**	**NM Bike Plan**	**Highway Safety Plan**	**Strategic Highway Safety Plan**
Communications and Education										
Continue to develop and lead statewide distracted-driver education campaigns and conduct periodic program evaluation to measure effectiveness.										
Continue to support public information campaigns to reduce alcohol- and drug-impaired driving and conduct periodic program evaluation to measure effectiveness of NMDOT initiatives.										

	Alignment with Safe System Approach					Alignment with Previous Plans				
Recommendations	**Safe Roads**	**Safe Speeds**	**Safe Road Users**	**Safe Vehicles**	**Post-Crash Care**	**Pedestrian Safety Action Plan**	**Statewide Transportation Plan**	**NM Bike Plan**	**Highway Safety Plan**	**Strategic Highway Safety Plan**
Communications and Education										
Expand driver education curriculum with renewed focus on bicyclist and pedestrian vulnerability and safety; support the New Mexico Motor Vehicle Division in integrating related questions into the New Mexico drivers' test.										
Secure funding for and continue delivering an anti-speeding media campaign.										
Develop a public education campaign on the rules and habits to safely ride a bicycle on the road and in traffic.										
Create and deliver a public information campaign on how to safely drive around bicyclists and safe passing behavior.										
Create a targeted information campaign in bars and liquor stores to promote safe ride home and transit services.										
Utilize signage along rural highways to remind drivers to keep an eye out for pedestrians walking along the roadway.										
Work with local communities, schools, universities, and media to continuing implementing the Look For Me pedestrian safety education campaign for communities at higher risk of pedestrian injuries and fatalities, with particular emphasis in identified high risk counties										

Recommendations	Alignment with Safe System Approach					Alignment with Previous Plans				
	Safe Roads	Safe Speeds	Safe Road Users	Safe Vehicles	Post-Crash Care	Pedestrian Safety Action Plan	Statewide Transportation Plan	NM Bike Plan	Highway Safety Plan	Strategic Highway Safety Plan
Communications and Education										
Develop a media toolkit for Public Information Officers and media outlets to use to provide proactive pedestrian safety messages and tips.										

Table 5-24
Recommendations – Infrastructure (NMDOT-Owned Roadways)

Recommendations	Alignment with Safe System Approach					Alignment with Previous Plans				
	Safe Roads	Safe Speeds	Safe Road Users	Safe Vehicles	Post-Crash Care	Pedestrian Safety Action Plan	Statewide Transportation Plan	NM Bike Plan	Highway Safety Plan	Strategic Highway Safety Plan
Infrastructure on NMDOT-Owned Roadways										
Install and track implementation of ADA-compliant curb ramps as part of maintenance projects, in accordance with federal guidance										
Continue to implement (and update as needed) the NMDOT *ADA Transition Plan for Public Rights-of-Way*.										
Improve project scoping, review, and approval to better account for pedestrian access and safety.										

	Alignment with Safe System Approach					Alignment with Previous Plans				
Recommendations	**Safe Roads**	**Safe Speeds**	**Safe Road Users**	**Safe Vehicles**	**Post-Crash Care**	**Pedestrian Safety Action Plan**	**Statewide Transportation Plan**	**NM Bike Plan**	**Highway Safety Plan**	**Strategic Highway Safety Plan**
Infrastructure on NMDOT-Owned Roadways										
Ensure future updates to existing NMDOT manuals align with national best practices in planning and design, as captured in the 2020 *NMDOT Design Manual*.	■					■				
Install 10 or more PHB signals on state roads.	■		■			■				
Install LPIs at 10 or more intersections.	■		■			■				
Develop a countermeasure quick-build guide for use by NMDOT staff and outside agencies.	■					■				
Incorporate roundabouts, gateways, and other traffic calming measures that slow traffic, through design, on approaches into rural towns.	■	■								
For segments of the HIN that contain transit routes, review pedestrian facilities for ADA compliance and accessibility.			■							■
Utilize quick-build projects to rapidly improve vulnerable road user safety until more permanent materials and installations can be funded.	■		■							
Advance a system of safe, high-quality, and comfortable bicycle facilities.	■		■					■		
Integrate Complete Streets approaches into the development process of new construction and reconstruction projects.	■		■				■			
Implement active speed warning signs, including dynamic message boards at rural-to-urban transitions.		■								■

Recommendations	Alignment with Safe System Approach					Alignment with Previous Plans				
	Safe Roads	Safe Speeds	Safe Road Users	Safe Vehicles	Post-Crash Care	Pedestrian Safety Action Plan	Statewide Transportation Plan	NM Bike Plan	Highway Safety Plan	Strategic Highway Safety Plan
Infrastructure on NMDOT-Owned Roadways										
Increase the minimum crossing time per traffic lane at intersections on NMDOT roads in NMDOT design guidance.			■							
Include safe interaction and connectivity of transit, pedestrian, and bicycle modes in the planning, design, and construction of transportation facilities.	■									■
Create recommended street light activation times for each month of the year to ensure streetlights turn on sufficiently in advance of sunset. Review light sensor sensitivity levels to ensure they comply with scheduled activation times.	■		■							
Evaluate illumination standards for NMDOT roadways for shadows, minimum coverage, and lumen levels to ensure areas of high risk for vulnerable road users are adequately lit.	■		■							■
Reduce fatalities and serious injuries of bicyclists on NM highways through implementation of crash reduction measures (e.g., installing dedicated bicycling facilities, providing wide shoulders on bicycling routes, and improving intersection crossing conditions for bicyclists).	■		■					■		■
Conduct a permeability study on interstate sections of the HIN to assess opportunities for additional vulnerable road user crossings or safety improvements.	■									

Table 5-25

Recommendations – Infrastructure (State- and Locally Owned Roadways)

	Alignment with Safe System Approach					Alignment with Previous Plans				
Recommendations	**Safe Roads**	**Safe Speeds**	**Safe Road Users**	**Safe Vehicles**	**Post-Crash Care**	**Pedestrian Safety Action Plan**	**Statewide Transportation Plan**	**NM Bike Plan**	**Highway Safety Plan**	**Strategic Highway Safety Plan**
Infrastructure, on Both State- and Locally Owned Roadways										
Develop strategies to integrate targeted vulnerable road user safety improvements into all eSTIP, TIP, and state-funded projects when located on the statewide HIN.	■		■							
Conduct a permeability study on high AADT arterials along the HIN to assess crossing frequencies and potential improvements.	■									
Identify operations and roadway facility improvements for transit safety, such as location and types of stops, improved communications (such as use of geographic information systems), and signal pre-empt for transit to be consistent with the NM Statewide Public Transportation Plan.			■							■
Increase funding for, and target safety improvements at, transit stops. (For example for the installation of curb ramps to ensure ADA access to transit stops.)			■							■

Table 5-26

Recommendations – NMDOT Process, Programs, and Actions

	Alignment with Safe System Approach					Alignment with Previous Plans				
Recommendations	**Safe Roads**	**Safe Speeds**	**Safe Road Users**	**Safe Vehicles**	**Post-Crash Care**	**Pedestrian Safety Action Plan**	**Statewide Transportation Plan**	**NM Bike Plan**	**Highway Safety Plan**	**Strategic Highway Safety Plan**
NMDOT Process, Programs, and Actions										
Continue providing an internal continuing education requirement for NMDOT staff (particularly design and planning staff) to watch vulnerable road user safety trainings annually.	■					■				
Adopt a Complete Streets policy and formally integrate Complete Streets into NMDOT Practices, Policies, and Plans (SHSP, statewide transportation plan).	■		■			■	■			■
Revisit speed limit setting policies and speed limit design tables.		■				■				
Adopt a statewide Toward Zero Deaths vision.	■		■			■				
Update the 2018 NM Bike Plan to increase the recommended bicycle facility protection and comfort level guidance in relation to various roadway configurations to increase bicyclist safety to match current best practices.	■		■							
Create a statewide vehicle inspection program to ensure vehicles are safe to operate and do not contain faults that would impede the safety of VRUs. (For example, are all windows unblocked by cracks or other obstructions? Is a safe bumper present? Is the vehicle “lifted” above the legal limit?)				■						
Increase vehicle registration costs for larger and heavier vehicles.				■						

Recommendations	Alignment with Safe System Approach					Alignment with Previous Plans				
	Safe Roads	Safe Speeds	Safe Road Users	Safe Vehicles	Post-Crash Care	Pedestrian Safety Action Plan	Statewide Transportation Plan	NM Bike Plan	Highway Safety Plan	Strategic Highway Safety Plan
NMDOT Process, Programs, and Actions										
Host annual focus group meetings with disability advocates to understand mobility and safety issues.										
Increase organizational capacity for safety management and HSIP execution.										
Implement recommendations from the NM Bike Plan for reconstruction and rehabilitation projects to increase safety for local and tourist cyclists and reduce VMT.										
Implement recommendations from the NMDOT *Pedestrian Safety Action Plan*.										
Develop an NMDOT Climate Change Plan to develop adaptation and resiliency strategies. Include heat mitigation solutions for VRUs.										
Implement recommendations of forthcoming 2024 Complete Streets Strategic Plan and support next phases of implementation.										

Table 5-27
Recommendations – Partnerships

	Alignment with Safe System Approach					Alignment with Previous Plans				
Recommendations	Safe Roads	Safe Speeds	Safe Road Users	Safe Vehicles	Post-Crash Care	Pedestrian Safety Action Plan	Statewide Transportation Plan	NM Bike Plan	Highway Safety Plan	Strategic Highway Safety Plan
Partnerships										
Continue conducting annual trainings on the UCR with local and state law enforcement officers.					■	■			■	■
Develop or support Pedestrian Safety Technical Assistance Program for tribal nations and local governmental agencies.	■					■	■			
Support New Mexico legislative actions that improve pedestrian safety.			■			■				
Create and provide an annual in-depth technical vulnerable road user safety training program on the planning and design of infrastructure, open to engineers and planners at MPOs, counties, municipalities, and local agencies. Include content on NACTO, FHWA proven safety countermeasures, and other rapidly evolving national best practices. Encourage participants to look for resources beyond the MUTCD and remain up to date and adaptable.	■									
Support federal regulatory actions that improve pedestrian safety.			■			■				
Support the adoption of a state five-foot passing law around bicyclists.			■							
Increase coordination and engagement with Tribal Nations as part of infrastructure project selection and design.	■						■			■

	Alignment with Safe System Approach					Alignment with Previous Plans				
Recommendations	**Safe Roads**	**Safe Speeds**	**Safe Road Users**	**Safe Vehicles**	**Post-Crash Care**	**Pedestrian Safety Action Plan**	**Statewide Transportation Plan**	**NM Bike Plan**	**Highway Safety Plan**	**Strategic Highway Safety Plan**
Partnerships										
Partner with state and local law enforcement agencies to target enforcement along the 2023 vulnerable road user statewide HIN and identified high risk areas.										
Explore partnerships with American Planning Association, Institute of Transportation Engineers, other professional organizations, advocacy organizations, and local engineers and planners to lead vulnerable road user safety presentations to county and local government officials to educate them about traffic safety issues and concepts.										
Host a vulnerable road user safety meeting between the NMDOT Tribal Liaison and Tribal Nations and representatives to identify solutions to increase coordination between the NMDOT and Tribal Nations.										
Promote and support the expansion of vanpooling services to close transit service gaps, improve mobility, and reduce VMT.										
Provide law enforcement agencies with technical assistance via law enforcement liaisons and the Traffic Safety Resource Prosecutors, and providing other resources to help law enforcement agencies identify, prioritize, and address traffic safety problem areas.										

	Alignment with Safe System Approach					Alignment with Previous Plans				
Recommendations	**Safe Roads**	**Safe Speeds**	**Safe Road Users**	**Safe Vehicles**	**Post-Crash Care**	**Pedestrian Safety Action Plan**	**Statewide Transportation Plan**	**NM Bike Plan**	**Highway Safety Plan**	**Strategic Highway Safety Plan**
Partnerships										
Encourage the National Highway Traffic Safety Administration to regulate the design of vehicles to improve vulnerable road user outcomes in the event of a crash. For example, lowering the height and angle of the hood, reducing vehicle weight, and reducing blind spots.										

Table 5-28

Recommendations – Funding and Grants

	Alignment with Safe System Approach					Alignment with Previous Plans				
Recommendations	**Safe Roads**	**Safe Speeds**	**Safe Road Users**	**Safe Vehicles**	**Post-Crash Care**	**Pedestrian Safety Action Plan**	**Statewide Transportation Plan**	**NM Bike Plan**	**Highway Safety Plan**	**Strategic Highway Safety Plan**
Funding and Grants										
Develop projects and programs to utilize dedicated HSIP funding for pedestrian improvements.										
Tie grant funding to addressing critical safety issues identified in the VRUSA, such as pedestrian safety in proximity to transit, and long distances between safe crossings.										
Increase funding for transit operations to increase transit frequency.										
Create a funding program administered through the HSIP to provide funding to jurisdictions and agencies to implement quick-build projects focused on vulnerable road user safety.										
Allocate funding to provide technical and administration support to under-resourced communities in project implementation.										
Add the 2023 statewide HIN and identified high risk areas as a locational scoring criterion on relevant NMDOT grant applications.										

NMDOT VRU Safety Assessment Appendix A: Methods Technical Memo

New Mexico Department of Transportation

NMDOT Vulnerable Road User Assessment
October 23, 2023

NMDOT
NEW MEXICO DEPARTMENT OF TRANSPORTATION

Introduction

This memo summarizes Alta's technical analyses for the New Mexico Vulnerable Road Users Safety Assessment (VRUSA) analysis of bicycle and pedestrian-involved crashes in the state. Alta completed the following four technical analyses:

- Crash Trends Analysis
- Equity Analysis
- High Injury Network
- Crash Profiles

These four technical assessments served as the foundation for the subsequent Prioritization Analysis. Detailed methodology on each analysis and information on data used is provided below.

Crash Data Preparation

Alta was provided an export of all crashes from the NM Uniform Crash Report, which included 468,784 crashes recorded from 2012-2022. This dataset played a pivotal role in Alta's analytical processes, particularly in the development of crash profiles, crash trend analyses, and prioritization assessments. The data was utilized across three distinct levels:

- Crash Level
- Vehicle/Unit Level
- Person Level

In some cases, data was further filtered by injury severity. There were 8,769 crashes involving a bike or pedestrian that resulted in an injury. Alta prepared the analysis dataset with the following steps:

1. **Filter by mode:** Remove any crashes that did not involve a pedestrian or bicycle.
2. **Join crash data:** Using R Studio, join important person- and vehicle-level variables, such as driver or vulnerable road user alcohol involvement or vehicle turning movement, to crash data using the CID field. Where more than one person or vehicle is associated with one crash, join the data point that was most likely to contribute to a crash. For example, if more than one driver is involved in a crash and only one had alcohol impairment, indicate driver alcohol impairment for that crash.
3. **Join roadway data**: Spatially join contextual data, such as roadway class, speed limit, and AADT, to each crash point using roadway data in GIS.

Crashes on all public roadways in the state were included for analysis unless otherwise stated.

Roadway Data

Alta also relied heavily on roadway data provided by the New Mexico DOT. This data included attributes such as speed limit, AADT, and number of lanes. NMDOT also provided polygon datasets of various local jurisdictions and point data of highway mileposts. Alta supplemented data with other datasets as well in order to ensure the dataset's comprehensiveness and accuracy. This data was obtained from public data sources like Open Street Map and the Smart Location Database, local governments, and Replica, a private data vendor.

Unit of Analysis

The crash trends and prioritization analyses required summarizing data at the roadway level. Alta created two separate datasets for roadway-level analysis: one of road segments, usually 1 mile long, and one of intersections, which are the areas within 100 feet of the centerline intersection. Road segments may pass through intersections and as a result, some crashes that occurred at intersections were attributed to both the intersection and the road segment on which they occurred. This approach acknowledges that intersections may have unique safety improvement needs, but segments with many crashes, whether at intersections or not, need to be highlighted. It also ensures that when a crash occurs at an intersection of two streets, the attributes of both streets are accounted for in the analysis rather than only one street. The intersection analysis allowed Alta to examine the attributes of AADT, speed limit, number of lanes, and functional class for both roadways involved in an intersection crash rather than just one.

Crash Trends Analysis

Purpose

The crash trends analysis highlights key trends among the vehicles, people, and actions involved in crashes on a statewide level. It summarizes key statistics and identifies relationships between key variables.

Methodology

This analysis relied on the crash-level dataset explained in the Introduction. Analysis steps included the following:

1. **Filter for severity:** Apply filter to display crashes that resulted in a person being killed or seriously injured based on the KABCO field values of K and A. While the focus of the Vulnerable Road User Safety Assessment is on fatalities and serious injuries, a summary of all vulnerable road user crashes was also included for context.
2. **Filter by mode:** Apply separate filters for pedestrian-involved and bicyclist-involved crashes. Pedestrian and bicyclist crashes were analyzed separately to identify trends unique to each mode.
3. **Tabulation in Excel**: Tabulate results in Excel for different combinations of variables.

In total, there were 1800 pedestrian KA crashes and 330 bicyclist KA crashes between 2012 and 2022. Data from person-level and vehicle-level tables were also joined to crash-level data where possible to facilitate analysis. Variables used in analysis included:

- **Demographics**
  - Age of vulnerable road user
  - Gender of vulnerable road user
  - Race/Ethnicity of vulnerable road user
  - Local or Out-of-State Driver
- **Date/Time**
  - Month of Year
  - Day of Week
  - Time of Day
  - Lighting Conditions
- **Crash Characteristics**
  - Primary Crash Factor

- Alcohol Involvement (both driver and vulnerable road user)
- Drug Involvement (both driver and vulnerable road user)
- Hit-and-Run
- Vehicle Turning Movements
- Using Bicycle Infrastructure (Bicyclist Crashes Only)
- Crash Location within the right of way.

- **Location**
  - Intersection or Non-Intersection
  - Near Transit
  - Near Signal
  - Urban or Rural
  - Tribal Jurisdiction
  - Population Density of Crash Area
- **Roadway Characteristics**
  - Functional Classification
  - Number of Lanes
  - Speed Limit
  - AADT
  - Lane Width

Variables that lacked sufficient information to support the analysis were excluded, such as where 80% of cells were blank. Some data which may be correlated with crash rates was not available, such as the presence of sidewalks or crosswalks at crash locations. The analysis also considered vehicle type information but found it to be inconclusive due to the categorization groupings of vehicles.

In assessing vulnerable road user crashes as a whole, as well as rates by mode, two key metrics were also calculated over time:

- The change in crash rate per 100,000 population of both KA and KABCO crashes over time. This provides a standardizes measure of vulnerable road user crash frequency relative to state population size.

- The share of KA crashes out of all KABCO crashes. This provides a measure of severe crash outcomes over time.

Crash Profiles

Purpose

Crash profiles identify groups of crashes with similar characteristics with the goal of identifying a few trends that together account for the majority of injury crashes. The crash profile identification and analysis were informed by TCRP Report 955, “Guide for Quantitative Approaches to Systemic Safety Analysis.” The crash profiles presented in this memo highlight key statistics based on an analysis of crash data and related environmental factors. The process builds on the preceding crash trends analysis and High Injury Network analysis.

It is important to note that crash profiles are not intended to account for all crashes, nor are they mutually exclusive. Some crashes could belong to multiple crash profiles; for example, a crash could belong in both profile 2, “pedestrian crashes, in the dark, on state roads” and profile 3, “pedestrian crashes, at unsignalized intersections, in high density areas.” Alta has made an effort to create profiles that explore the relationship of different variables to crash numbers, so some overlap is expected.

Data Preparation

The crash profiles were developed based on all injury crashes in the region involving bicyclists and pedestrians using crash data from 2012 – 2022 and prepared as described above. Alta developed separate profiles for KA crashes and minor injury (B and C on the KABCO scale) crashes.

Methodology

Alta analyzed crash data and developed thirteen crash profiles for serious and fatal crashes, and six crash profiles for minor injury crashes. Six serious injury profiles and three minor injury profiles have been identified as priority profiles because they account for the most crashes and are most aligned with factors that can be addressed through countermeasures.

After compiling the analysis dataset, Alta performed an exploratory crash pattern analysis of the factors using a hierarchical clustering algorithm in R Studio. This process identified 6-8 groups of crashes for each injury category that have shared characteristics with the goal of finding groups that were as dissimilar to each other as possible. Using the clusters as a guide, Alta used both quantitative and qualitative evaluation and cross-tabulations of varying crash characteristics to make a final selection of profiles. Alta paid special attention to ensuring that selected profiles point to actionable crash trends that either comprised substantial subsets of collisions or connected to specific countermeasures to address them.

Each crash profile was defined by one or more mode crash factors and/or contextual factors. Crash factors included data from the NM State Traffic Records System as well as data on signals and intersections derived from GIS analysis. The variables that defined the final selected crash profiles were:

- **Modes Involved in Crash**
  - Pedestrian
  - Bicycle
- **Crash Factors**
  - Collision Type
  - Driver failure to yield
  - Driver maneuver: Turning right, left, or going straight
  - Hit and run
  - Darkness/daylight
  - Roadway lighting
  - Alcohol involvement – both driver and vulnerable road user
  - Intersection or mid-block crash
  - Presence of traffic signal
- **Contextual Factors**
  - Road Functional Classification
  - Proximity to an interstate
  - AADT
  - Number of Lanes
  - Speed Limit

- State/non-state road
- Proximity to a bike facility
- Population density of census tract
  - High
  - Medium
  - Low
- Location on tribal land
- Proximity to transit

In some cases, Alta considered other variables when developing clusters, but this data did not exhibit enough variability to be a useful way to define clusters. For example, most crashes happened when the weather was clear; there were not enough bad-weather crashes to comprise a meaningful profile or identify a trend.

The variables that were not used in crash profiles included:

- Weather
- Road surface condition
- Free-flow speed of roadway compared to speed limit
- Roadway grade or hillcrest

The resulting profiles will be paired with general safety countermeasures most appropriate for the crash and location context. These countermeasure recommendations are not site-specific.

Equity Analysis

Purpose

The purpose of the equity analysis is to identify areas of underserved communities across the state of New Mexico. This data can help to prioritized safety improvements in areas where they will benefit people who have been harmed by the transportation system, from pollution, and unequal resource distribution in the past. The equity analysis was combined with crash severity data and the High Injury Network (HIN) to identify corridors with both high safety needs and high populations of underserved communities and generate the final Vulnerable Road User Safety Assessment (VRUSA) Prioritization Score.

Variable Selection

The initial data was gathered using an in-house tool developed by Alta, known as Site Explorer, which aggregates various socio-economic, health and environmental data at the census block group level. Alta also added variables for flood risk and location on a tribal land and weighted every variable to reflect the importance of the variable to identifying underserved communities. Table 1 shows every variable used in this analysis and its weighting.

Table 1: Selected variables and weights

Variable	Weight	Source	Definition
Low-Income Households	20%	American Community Survey (ACS) 2019	Percent of households with an income below 200% of the Federal Poverty Level
Youth and Senior	15%	ACS 2019	Percentage of population under age 18 or over age 65. Many of these populations cannot drive. They may also be more vulnerable when crossing the street or walking.
No Vehicle Access	10%	ACS 2019	Percentage of households with no vehicles at home.
Race and Ethnicity	10%	ACS 2019	Percentage of the population that is either a person of color and/or Hispanic. This includes any person who is not a non-Hispanic white.
Educational Attainment	10%	ACS 2019	Percentage of population with no high school diploma or equivalent or no education past high school.
Flood Risk	5%	FEMA National Risk Index, 2019	Annualized risk of river flooding
Air Quality	10%	EJScreen	Levels of PM 2.5 air pollution
Economic Opportunity	10%	Opportunity Atlas	Percent of children growing up in a block group who end up living in a low-poverty neighborhood as adults.
Coronary Heart Disease	5%	CDC PLACES, 2021	Prevalence of coronary heart disease among adults 18 years and over
Limited English Proficiency	5%	ACS 2019	The percentage of people who speak English less than “very well.”
Tribal land	*	NMDOT	If block group is located on tribal land, the entire score was inflated 20%. This was applied after the weights had been applied to other variables.

Variables Excluded

- People with disabilities: ACS data about disabilities is highly unreliable, with margins of error often exceeding the estimated values.

Variable Comparison to Federal Datasets

Alta's equity dataset is derived from many of the same variables that comprise federal datasets such as EJScreen, USDOT Transportation Disadvantaged Census Block groups, and the CDC Social Vulnerability Index. Like Site Explorer, these tools are composites of data from the Census as well as other sources. Figure 1 compares Alta's selected variables with those provided in other tools. Site Explorer contains variables related to health, environment, housing, transportation, resilience, and socioeconomics.

Figure 1: Variable Comparison

		Alta Equity Tool	EJ Screen: Environmental Justice Screening and Mapping Tool	Socioeconomics and Equity Analysis	Transportation Disadvantaged Census Tracts	Climate and Economic Justice Screening Tool	Social Vulnerability Index
Creator		Alta Planning + Design	EPA	FHWA	USDOT	CEQ	CDC
Geography		Census Block Group	Census Block Group	County	Census Tract	Census Tract	Census Tract
Socioeconomic	Low-Income Households	X	X	X	X	X	X
	People of Color	X	X	X		X	X
	Youth	X	X				X
	Seniors	X	X	X	X		X
	Economic Opportunity	X					
	English Proficiency	X	X	X	X	X	X
	Unemployment		X	X	X	X	X
	People with Disabilities			X	X		X
	Tribal Land	X					
	Educational Attainment	X	X	X	X	X	X
Housing	Housing Cost Burden				X	X	X
	Units per Square Mile		X				
	Crowding						X
Transportation	No Vehicle Access	X		X	X		X
	Commute Time		X	X			
	Transit Trips		X				
Environmental	Air Quality	X	X	X	X	X	
	Lead Exposure		X			X	
	Superfund Site Proximity		X			X	
	Traffic Proximity				X	X	
	Hazardous Waste Proximity		X			X	
	Wastewater Discharge		X			X	
Resilience	Lack of Tree Canopy				X		
	Green Space					X	
	Food Deserts			X			
	Flood Risk	X				X	
	Wildfire Risk					X	
Health	Coronary Heart Disease	X				X	
	Diabetes					X	
	Asthma					X	
	Cancer				X		

Methodology

Alta's Site Explorer weights and sums selected variables to generate a composite equity index. Generating the composite index is a multi-step process, some of which is automated by the tool:

- Acquire raw values for each census block group for each of the categories using the sources shown. Values are ordered so that higher values indicate higher equity priority or higher need.
- Within each category, percentile-rank values on a statewide level to put them on a standard scale.
- Multiply each census block group's percentile-ranked score is by the chosen weight for that category to generate a weighted score. For example, if income is weighted 20% of the overall score, then a block group that was in the 80th percentile for low-income population would get a weighted income score of (.80 * .250) = 0.16.

- Sum weighted scores for each variable to generate an equity composite index of between 0 and 1 for each block group.

In order to take into account the tribal lands of the 23 federally recognized indigenous tribes in the state, another calculation was applied to the equity composite index. Any block groups located on tribal lands (completely or partially) had 20% added to their scores. Other block groups did not. The result was the final equity score.

High Injury Network

Purpose

High injury networks (HIN) illustrate that often a small number of improvable roadways can address the majority of life-altering crashes. This approach moves beyond typical crash history and allows for a better understanding of the types of roadways in New Mexico where vulnerable road users are most at risk.

This section explains Alta's approach to analyzing crash data and developing the HIN for vulnerable road users only.

Vehicle Mode

This HIN exclusively considered crashes involving vulnerable road users. Vulnerable road users include pedestrians and cyclists and exclude motorcyclists. Road workers who are struck while working on the roadway would be considered pedestrians as well.

Geographic area

Alta conducted one statewide HIN for vulnerable road user crashes. Alta began by examining vulnerable road user crashes on all public roadways in the state and found that 84% of all injury-causing vulnerable road users -involved crashes and 91% of fatal vulnerable road user crashes occurred on roads classified as Major Collectors or higher, or at intersections with those roads. These roads accounted for only 20% of centerline miles in the state. For the VRUSA HIN analysis, Alta decided to focus on these roads where crashes are most concentrated in order to identify a connected network with the most potential for vulnerable road user safety improvements while considering the practical constraints of analyzing a large statewide road network. Other tasks in the VRUSA analysis, such as Crash Profiles and Crash Trends Analysis, analyzed crashes on all public roadways in the state.

Injury Crashes

The decision of which crashes to include in a VRUSA HIN analysis is an important one.

In this case, 1,887 serious and fatal crashes involving vulnerable road users occurred on the roadways under study during the 11 years of crash data. This represented 0.4% of the more than 468,000 crashes of all modes in the state during this time and was a low enough sample size that it could limit the ability to identify areas of high crash severity on a statewide level. On the other hand, the VRUSA analysis must prioritize the most serious crashes.

To address this challenge, Alta decided to incorporate moderate and minor-injury crashes to increase the sample size but utilized a method that prioritized serious and fatal crashes using weighting. This included all crashes rated a K, A, B, or C on the KABCO scale. The KABCO scale, shown in Table 2, is used to indicate the worst injury sustained by any individual involved in the crash. Because the VRUSA analysis is designed to prevent injury crashes, property-damage only crashes were not included in the VRUSA HIN analysis.

Table 2: KABCO scale for New Mexico (FHWA, n.d.)

KABCO rating	Definition	Weight used in analysis
K	Killed	20
A	Incapacitated: Carried from scene	5
B	Visible injury	1
C	Complaint of injury, but not visible	1
O	No apparent injury	0

Under this approach, 7,390 crashes were ultimately used in the analysis. Each crash was assigned a weight based on its severity, as shown in Table 2. This effectively prioritizes areas where more serious crashes are occurring in order to identify areas where the most serious injuries can be reduced. These weights are based on the ratio of the average cost to society from fatal and serious crashes.[1] More details about how these weights are used in the analysis are given in the Methodology section.

Inputs

VRUSA HIN development required two data sets:

Crash layer: 11-year crash data (2012 – 2022) of all crashes in New Mexico, prepared by Jacobs and provided by the NM State Traffics Records System.

- Filter data to include only crashes involving bicyclists or pedestrians.
- Filter data to include only crashes resulting injuries (K, A, B, and C on the KABCO scale).
- Typical HINs may use a shorter time span. However, focusing on vulnerable road users only greatly reduces the number of eligible crashes, so using a longer time span ensures we have enough crashes for robust analysis.

Prepared Roadway Network: Street centerline file, provided by NMDOT.

- For a statewide HIN, filter the roadway network to roads with a functional classification of major collector or higher.

[1] There are many calculations of average cost of severe and fatal crashes. The ratio shown here is based off of the FHWA's *Crash Costs for Safety Analysis* (2018), Tables 14 and 19. In Table 14, the ratio of fatal costs to the average of severe, critical, and serious costs was 3.1. In Table 19, the ratio of the mean cost of K (killed) and A (serious) crashes was 5.5. The ratio of 4 was chosen as a median of these. Source: https://safety.fhwa.dot.gov/hsip/docs/fhwasa17071.pdf.

Methodology

Alta's methodology is explained here and summarized in Figure 3.

1. **Prepare Street Network:**
   Prepare the street network used in GIS analysis in a way that allows for accurate comparisons between corridors. To determine which corridors experience the most crashes, streets must be divided into equal-sized segments to allow for apples-to-apples comparison. However, a common problem in HIN development is that where these breaks happen to fall can impact the results, causing certain segments to arbitrarily stand out. Alta outlines an approach that effectively smooths out this effect to mitigate this bias.

   a. Consolidate dual-carriageway roads so each road is represented by one line.

   b. Use the "unsplit lines" tool to merge road segments based on road name and functional classification. This eliminates any arbitrary splits in the centerline shapefile.

   c. Divide centerlines into segments of approximately one-mile segments, to show the crash numbers normalized by roadway length. Crashes were not normalized by traffic volumes. This allows the VRUSA HIN to identify areas that, when improved, will reduce the greatest number of injuries and fatalities.

   d. Use a "rolling window approach" to mitigate the influence of arbitrary segmentation in the roadway network. Create line extensions on the centerline network that extend each 1-mile road segment 1/4 mile in each direction for the analysis (for a total segment length of 1-1/2 mile). Extend segments in a straight line based on the average heading determined from the last 20% of the segment and join crashes within 50 feet of each extended segment to that segment. While this may not capture all crashes on neighboring segments on very curvy roads, the 50-foot search radius around the line extension will capture most of them. Curved-line extensions along the roadway are not feasible.

2. **Prepare Crash Data:**
   a. Weight each crash based on the KABCO rating shown in Table 2.
   b. Snap all crashes within 250 feet of the roadway network to the prepared street network. This distance generally accounts for collisions on dual carriage roadways that occur far from the now-consolidated centerline (such as wide highways) but is not long enough to capture collisions that occurred in parking lots or adjacent roadways.

3. **Apply Rolling Window Analysis:**
   a. Calculate rolling window statistics on each extended road segment by summing the crash weights on each segment and dividing by the segment length to obtain the rolling crash severity index per mile of road segment. This process reduces the impact that dead-end streets, network segmentation artifacts, or anomalous crashes have on the final VRUSA HIN.

   a. Spatially join the crash layer to the rolling window road network to associate crashes within 50 feet of the rolling network.

b. Calculate the summed rolling crash weight for each rolling road segment based on the weight of each crash on the segment. This sums the weight of crashes on each rolling segment to reflect total crash severity on each segment. For example, a segment with three fatal crashes (worth 20 points each) and five serious crashes (worth 5 points each) would receive a rolling crash weight of 85.

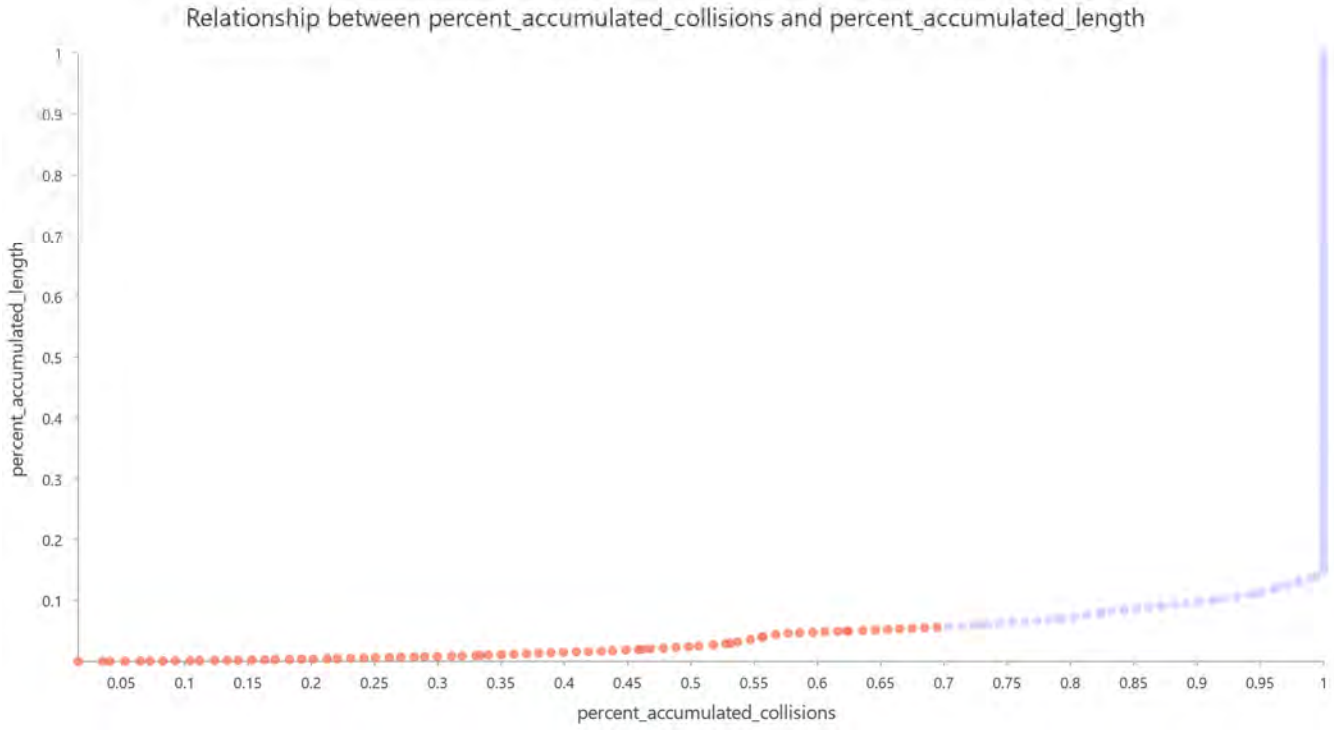
c. Join the rolling crash weight from the rolling window layer back to the original centerline network to show rolling crash weight per road mile on each segment, resulting in a crash severity index for each road segment. This normalizes the crash weight for the road length. However, for the purpose of calculating crash weight per road mile, count any rolled segments of less than 0.2 miles as 0.2 miles for the analysis, to avoid overrepresenting crashes on small road segments (dividing by very small numbers yields very large numbers).

4. **Accumulate Crashes:**

b. Beginning with segments with the highest crash severity index, use Alta's custom-built HIN Generation tool to progressively add segments to the HIN. This tool calculates the length in miles for each segment as it is added and keeps track of the cumulative miles in the HIN and the number of crashes occurring on those segments. It stops when the designated threshold of collisions has accumulated. The tool also generates a table that shows the number of crashes and the number of roadway miles accounted for with each HIN segment.

c. The graph below was used to help determine the HIN threshold, or the percent of collisions that the VRUSA HIN should include, by comparing accumulated collisions with accumulated roadway centerline miles. The slight steepening of the graph around x = 0.55 shows that after accumulating 55% of collisions, the VRUSA HIN must accumulate more roadway length in order to find more collisions to include as collisions become sparser. This means there are diminishing returns if the goal is to find a small number of roadways that account for the most crashes. However, manual cleaning may add or subtract road segments from the VRUSA HIN.

Figure 2: Crash Accumulation and Accumulated Length

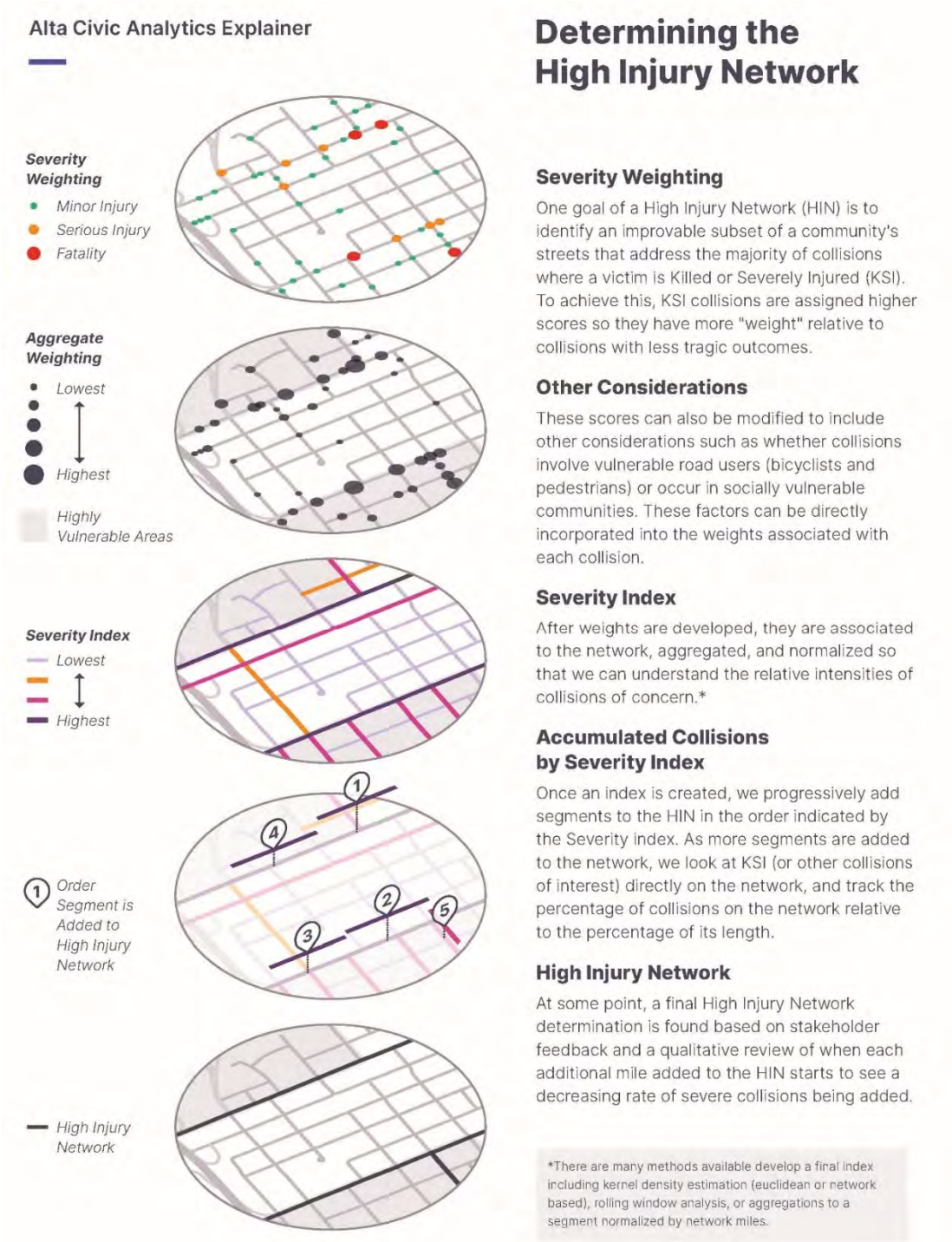


5. **Final Refinement:**
    d. Examine the map of qualifying VRUSA HIN segments and perform manual cleaning output from the tool. This step eliminates segments that the tool may have selected where no crashes have occurred, such as on roads perpendicular to a high-crash corridor. It also fills small gaps in otherwise contiguous networks. This results in a small number of segments being selected for the HIN that did not themselves have any crashes but were in the middle of high-crash corridors.

Limitations

The VRUSA HIN includes crash data beginning in 2012, which predates many safety improvements throughout the state, most notably on Central Avenue in Albuquerque. Therefore, the HIN highlights some segments that may not currently be responsible for the most vulnerable road user injuries. Where the HIN highlights areas that are known to have been improved, examining more recent data post-improvements will help to determine if improvements are helping to drive crash rates down.

Figure 3: Alta's HIN Development Process



Prioritization Analysis

Purpose

The goal of the prioritization spatial analysis is to inform the prioritization of safety improvement project locations for the New Mexico Vulnerable Road Users Safety Assessment (VRUSA). The analysis methodology is informed by the High Injury Network and crash profiles (Tasks 8.2 and 8.3, respectively). This technical approach outlines key aspects of the analysis methodology to suggest priority locations for improving vulnerable road user safety. The final deliverable is a list of the corridors and segments that should be given highest priority for improvements to bicycle and pedestrian infrastructure in order to reduce risk to vulnerable road users.

Summary

To determine the roadways that should be prioritized for investment, Alta calculated a VRUSA prioritization score based on the Crash Severity Index and the Equity Analysis. Scores for safety and equity were combined using a weighted average to obtain a weighted score for every segment on the High Injury Network. Because the crash severity index was originally on a scale of 0 – 572 and the equity index was on a scale of 0 – 0.93, the safety and equity scores for each segment were first percentile-ranked so that they were uniformly distributed on a 100-point scale. Each segment's safety and equity scores were then weighted and summed to generate a final VRUSA Prioritization score. Weights are listed in Table 3.

Table 3: Prioritization Criteria Summary

Criteria	Measures	Data Source	Weight
Safety	The typical intensity of severe, bicycle and pedestrian crash patterns	NM Uniform Crash Report	75%
Equity	Equity index leveraging a combination of demographic and public health data to identify socially vulnerable populations with high investment need.	Alta Equity Analysis tool, or another if preferred	25%

Methodology

Alta created a comprehensive prioritization dataset to gather all key roadway-level attributes in one place. Alta considered all segments on the High Injury Network or intersections that intersect with the High Injury Network as its study area for this dataset. This comprised 926 road segments and 3,702 intersections.

Alta created most attributes of this table by using spatial join tools in ArcGIS Pro with data provided by NMDOT and partners along with data derived for other tasks in the VRUSA analysis. Alta spatially joined data to roadway segments and intersections. This data included:

- Roadway features
- Local jurisdictions and planning organizations
- Roadway projects underway along the corridor
- Crash profiles represented on that corridor

- Location along the roadway. For segments along roadways with mileposts, the nearest milepost on each side of the segment were reported. Since most 1-mile segments would intersect a milepost, the reported mileposts were one mile before and one mile after this milepost.
- Crash severity index
- Equity index
- Final VRUSA prioritization score

Using the attributes featured in this dataset, NMDOT staff can apply filters by geography and obtain ranked lists of segments and intersections ripe for safety investment. This data is available in both GIS shapefile and Excel format. For a complete list of attributes in this dataset, please see the data dictionary.

As noted in the High Injury Network section, a small number of segments were included on the HIN that did not themselves have crashes but were in the middle of high-crash corridors. As such, a small portion of the segments on this list have a crash severity index of zero. In addition, some intersections have a crash severity index of zero because they were selected based on intersecting with the HIN, even if no crashes occurred at that intersection.

As a final step to coalesce the corridor segments of the HIN into a reduced, and comprehensible list of priority locations, Alta reviewed the final corridor-level dataset for irregularities. Where small segments less than 30 feet long appeared at the end of roadways, these were removed. Alta then examined instances of small segments in the middle of larger corridors and merged them into larger segments, adjusting the crash severity index accordingly. These adjustments will ensure that the prioritized list identifies meaningful segments as candidates for safety improvements.

References

Federal Highway Administration (FHWA), n.d. “KABCO Injury Classification Scale and Definitions.” *FHWA.* Available at: https://safety.fhwa.dot.gov/hsip/spm/conversion_tbl/pdfs/kabco_ctable_by_state.pdf.

NMDOT VRU Safety Assessment Appendix B: Safety Assessment Maps

New Mexico Department of Transportation

NMDOT Vulnerable Road User Safety Assessment
October 23, 2023

NMDOT
NEW MEXICO DEPARTMENT OF TRANSPORTATION

1 Introduction

1.1 Digital Maps Available

The maps in this appendix are included for reference only. For a more optimal viewing experience, zoomable and navigable maps are available online at https://nmdot.maps.arcgis.com/home/index.html, then choosing the "Vulnerable Road User Safety Assessment" tool from the available list of resources.

If digital review is infeasible due to technological limitations, contact the NMDOT planning division at 505-795-1401 or https://www.dot.nm.gov/contact-us/ for assistance. Staff at your local MPO or RTPO are also available to provide assistance.

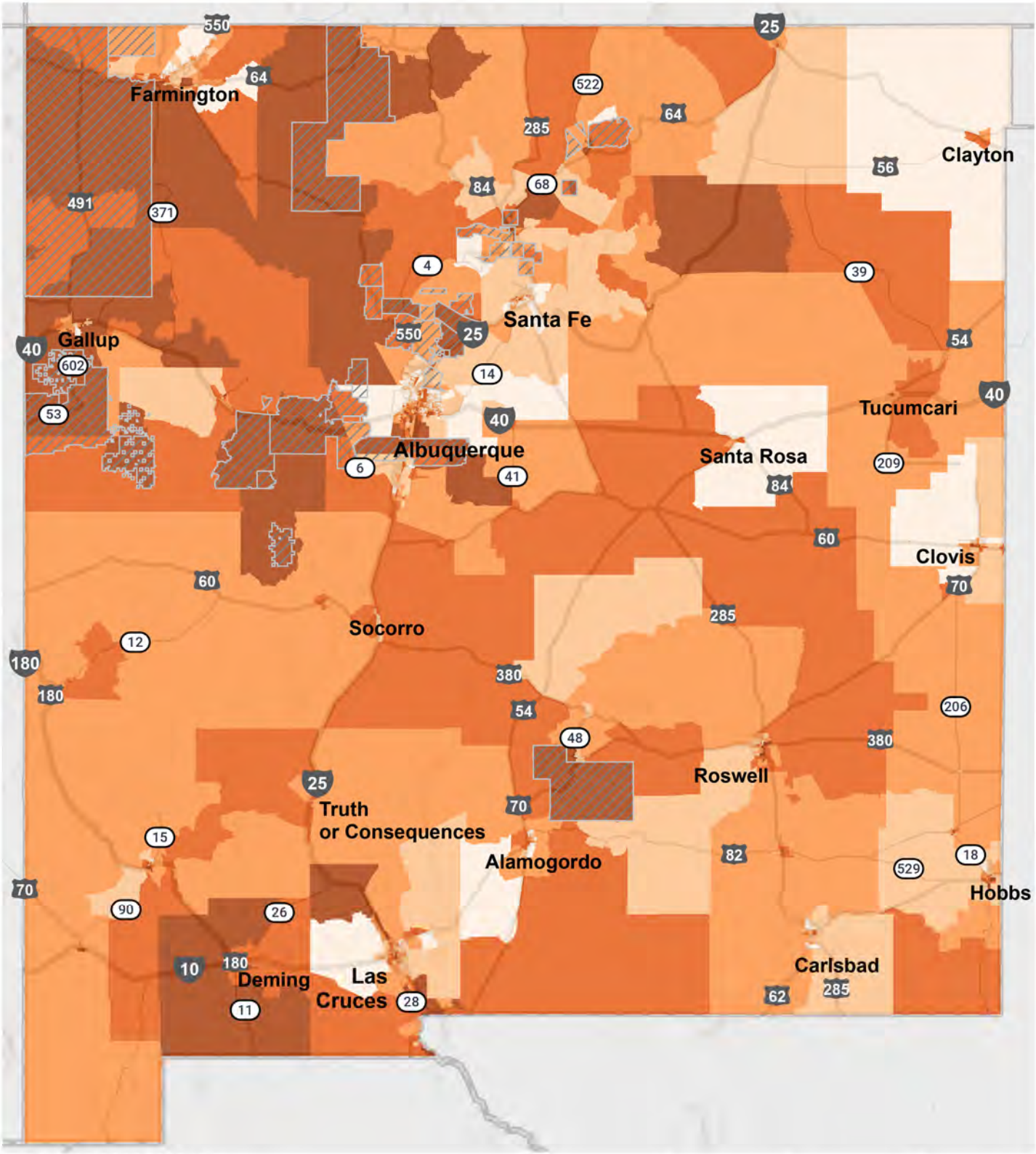
1.2 Typologies

Due to the large number of corridor segments and intersections identified and prioritized along the HIN, a typology structure was used to recommend relevant safety countermeasures and project opportunities. The typology for the top 10% of prioritized intersections and corridors is indicated on the accompanying maps. The codes in the legends of the "Prioritized Intersections and Corridors by Typology" maps are defined as follows:

- RI Major: Rural intersection, major context
- RI Minor: Rural intersection, minor context
- UI Major: Urban intersection, major context
- UI Minor: Urban intersection, minor context
- RC Major: Rural corridor, major context
- RC Minor: Rural corridor, minor context
- UC Major: Urban corridor, major context
- UC Minor: Urban corridor, minor context

Major and minor context are defined by the AADT and number of lanes that a corridor or intersection contains.

Contents



EQUITY ANALYSIS
STATEWIDE
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
VULNERABLE ROAD USER ASSESSMENT

0 50 100 Miles

North

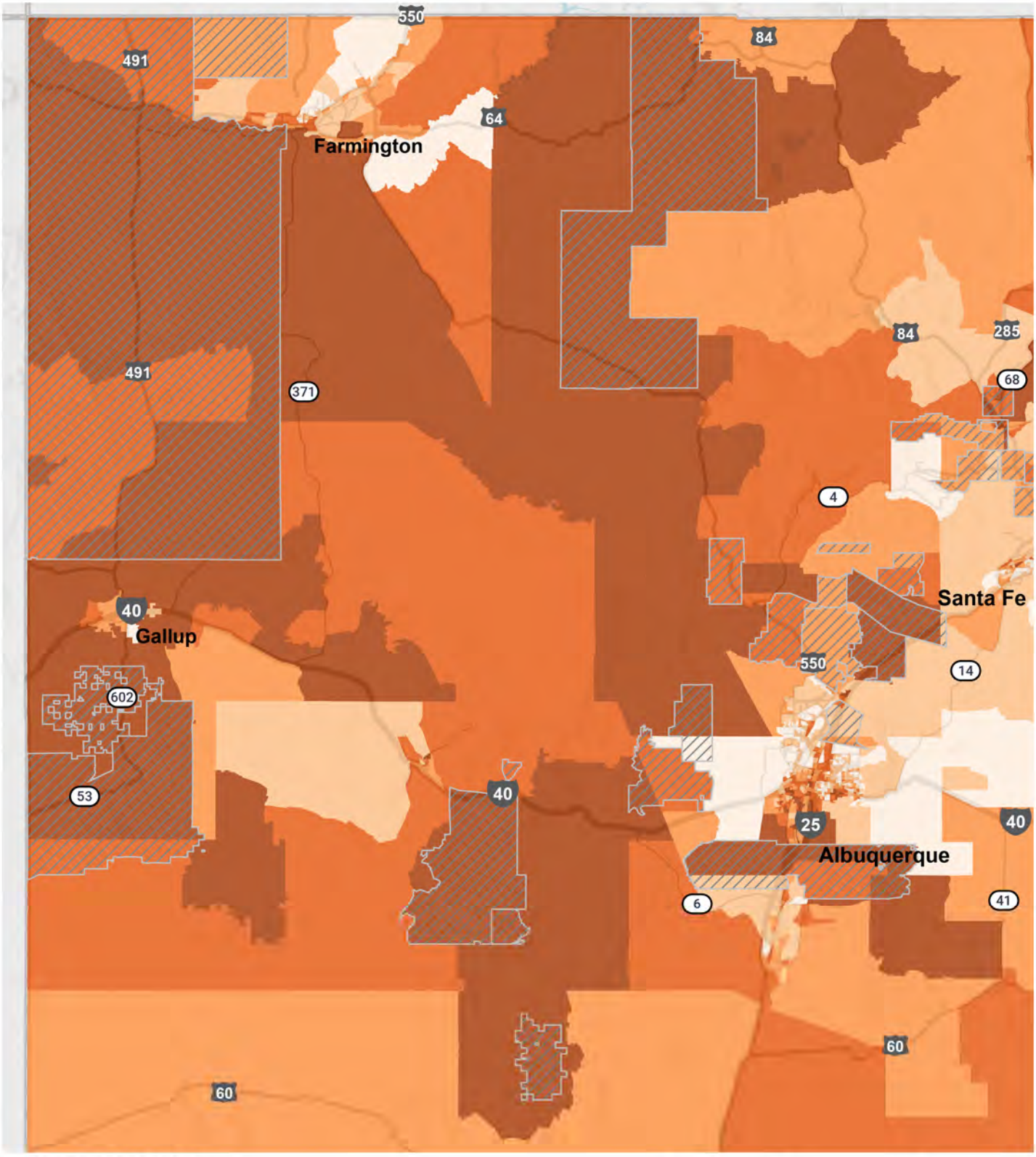
LEGEND

Roads
- Interstate
- US/State Highway
- Other Roads
- Tribal Lands

Final Equity Score
- 0 - 0.30 (Lower Equity Need)
- 0.30 - 0.42
- 0.42 - 0.54
- 0.54 - 0.67
- 0.67 - 1.00 (Higher Equity Need)

alta

NMDOT



EQUITY ANALYSIS
NORTHWEST REGION
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
VULNERABLE ROAD USER ASSESSMENT

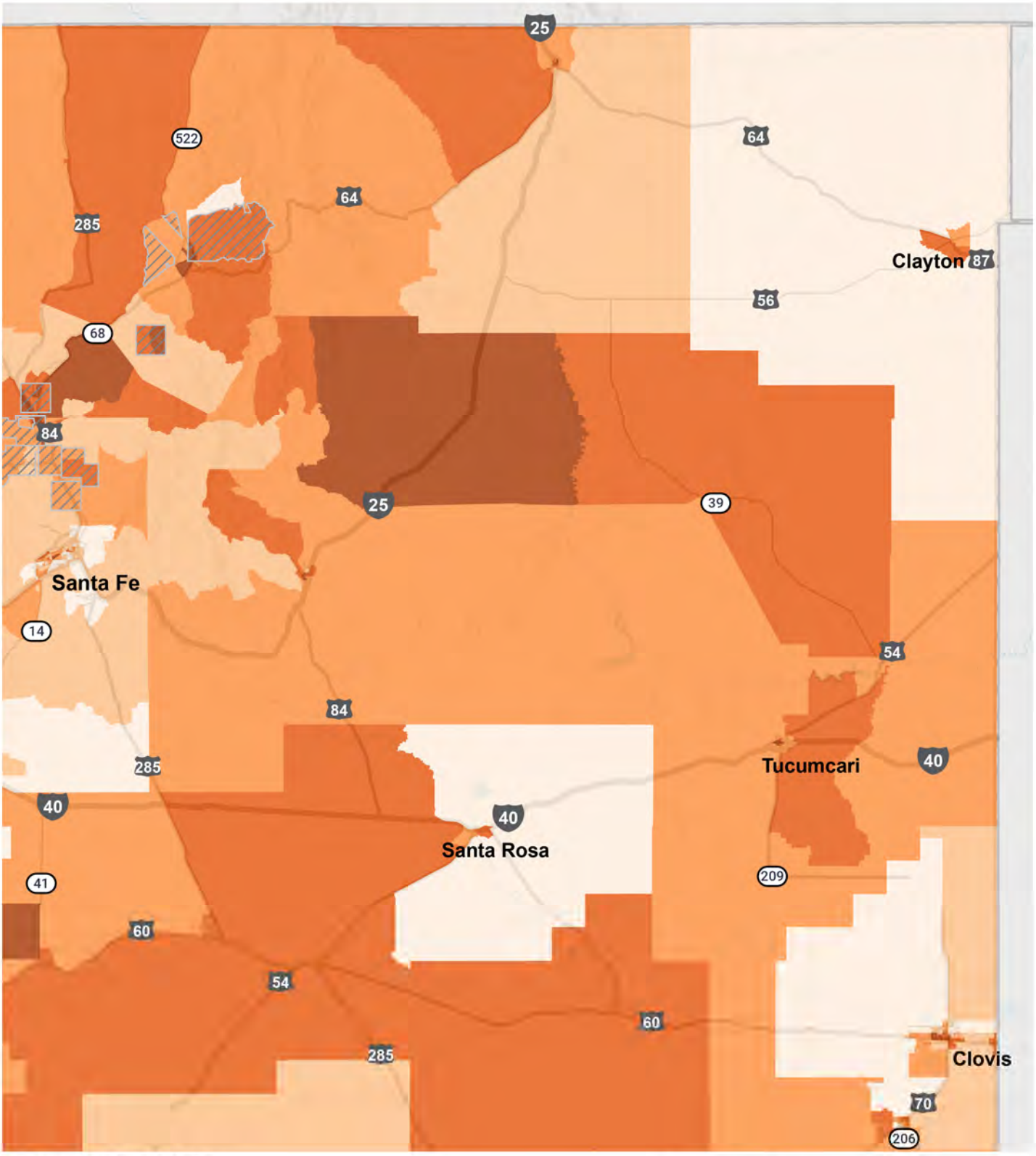
LEGEND

Roads
- Interstate
- US/State Highway
- Other Roads
- Tribal Lands

Final Equity Score
- 0 - 0.30 (Lower Equity Need)
- 0.30 - 0.42
- 0.42 - 0.54
- 0.54 - 0.67
- 0.67 - 1.00 (Higher Equity Need)

alta

NMDOT



EQUITY ANALYSIS
NORTHEAST REGION
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
VULNERABLE ROAD USER ASSESSMENT

0 25 50 Miles

North

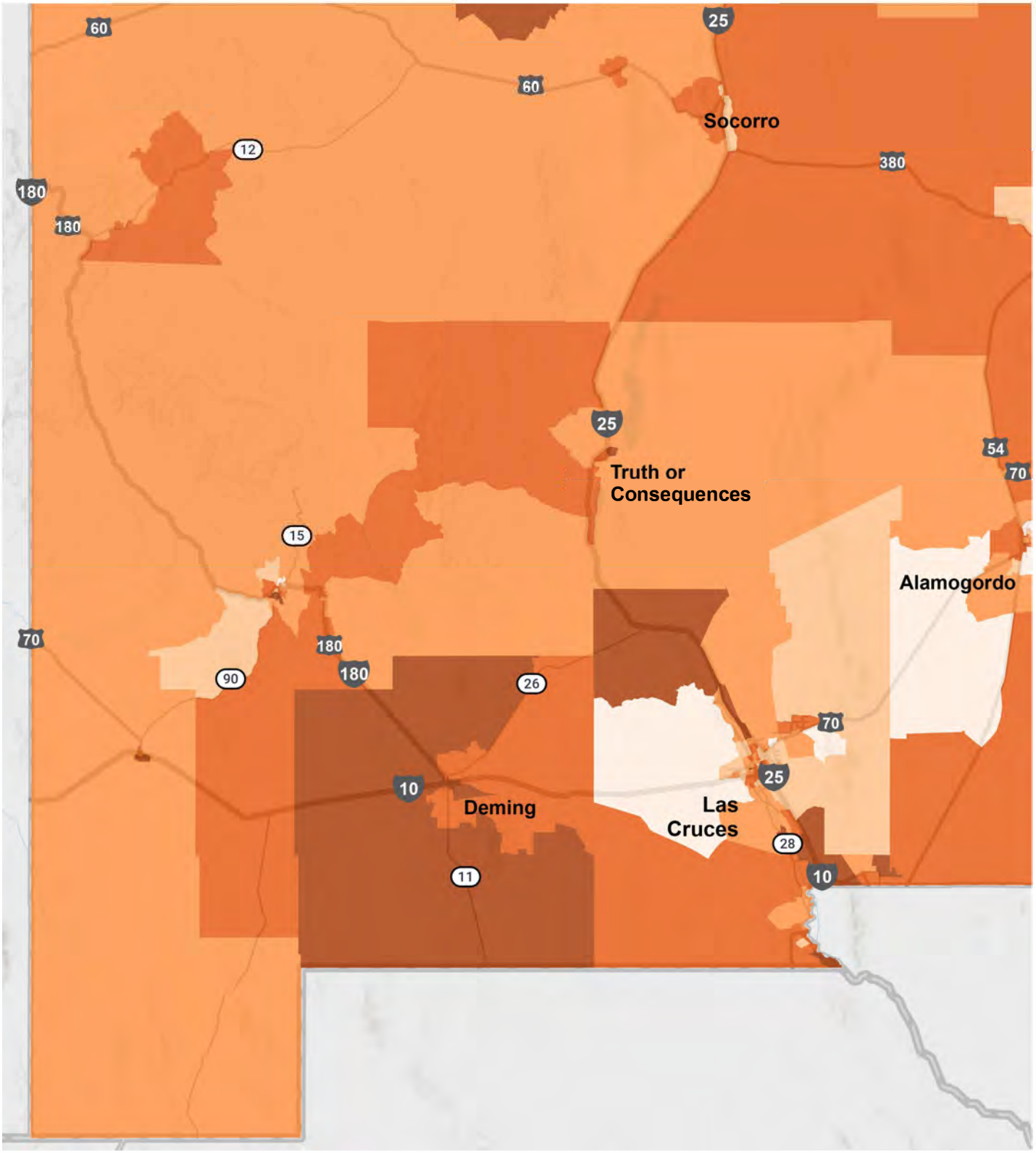
LEGEND

Roads
- Interstate
- US/State Highway
- Other Roads
- Tribal Lands

Final Equity Score
- 0 - 0.30 (Lower Equity Need)
- 0.30 - 0.42
- 0.42 - 0.54
- 0.54 - 0.67
- 0.67 - 1.00 (Higher Equity Need)

alta

NMDOT



EQUITY ANALYSIS
SOUTHWEST REGION
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
VULNERABLE ROAD USER ASSESSMENT

0 25 50 Miles

North

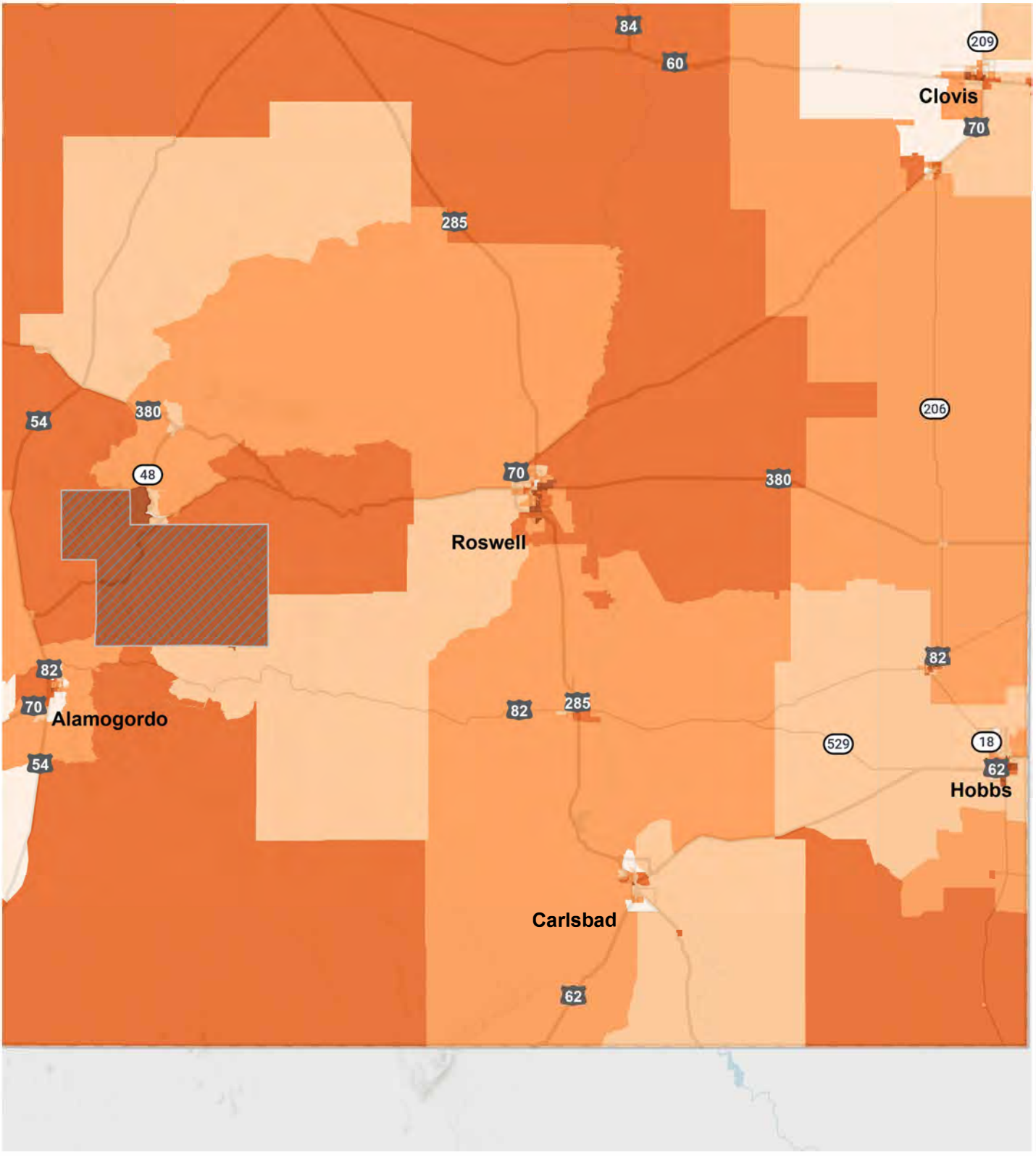
LEGEND

Roads
- Interstate
- US/State Highway
- Other Roads
- Tribal Lands

Final Equity Score
- 0 - 0.30 (Lower Equity Need)
- 0.30 - 0.42
- 0.42 - 0.54
- 0.54 - 0.67
- 0.67 - 1.00 (Higher Equity Need)

alta

NMDOT



EQUITY ANALYSIS
SOUTHEAST REGION
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
VULNERABLE ROAD USER ASSESSMENT

0 20 40 Miles

North

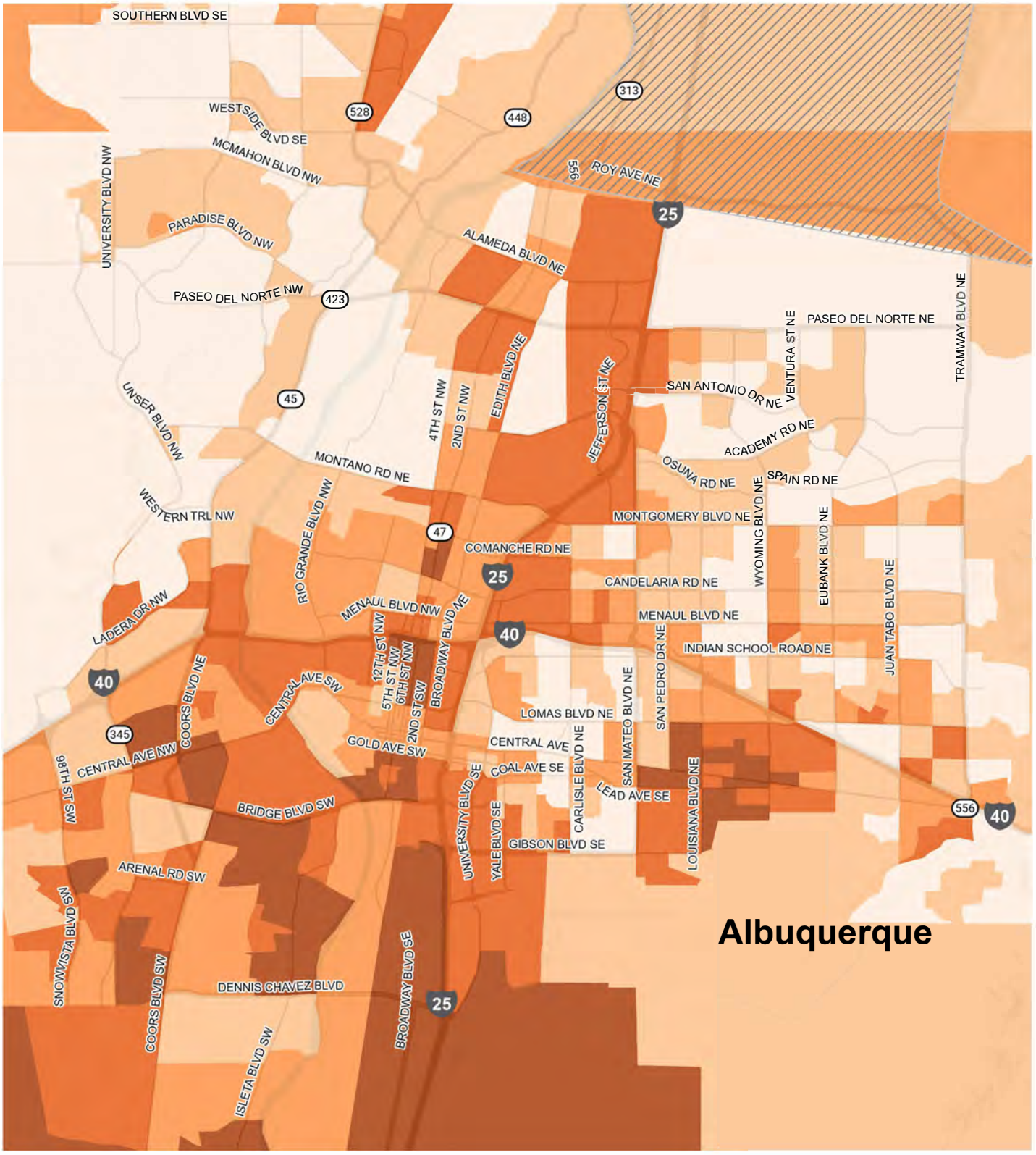
LEGEND

Roads
- Interstate
- US/State Highway
- Other Roads
- Tribal Lands

Final Equity Score
- 0 - 0.30 (Lower Equity Need)
- 0.30 - 0.42
- 0.42 - 0.54
- 0.54 - 0.67
- 0.67 - 1.00 (Higher Equity Need)

alta

NMDOT



EQUITY ANALYSIS
ALBUQUERQUE METRO
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
VULNERABLE ROAD USER ASSESSMENT

0 2 4 Miles

North

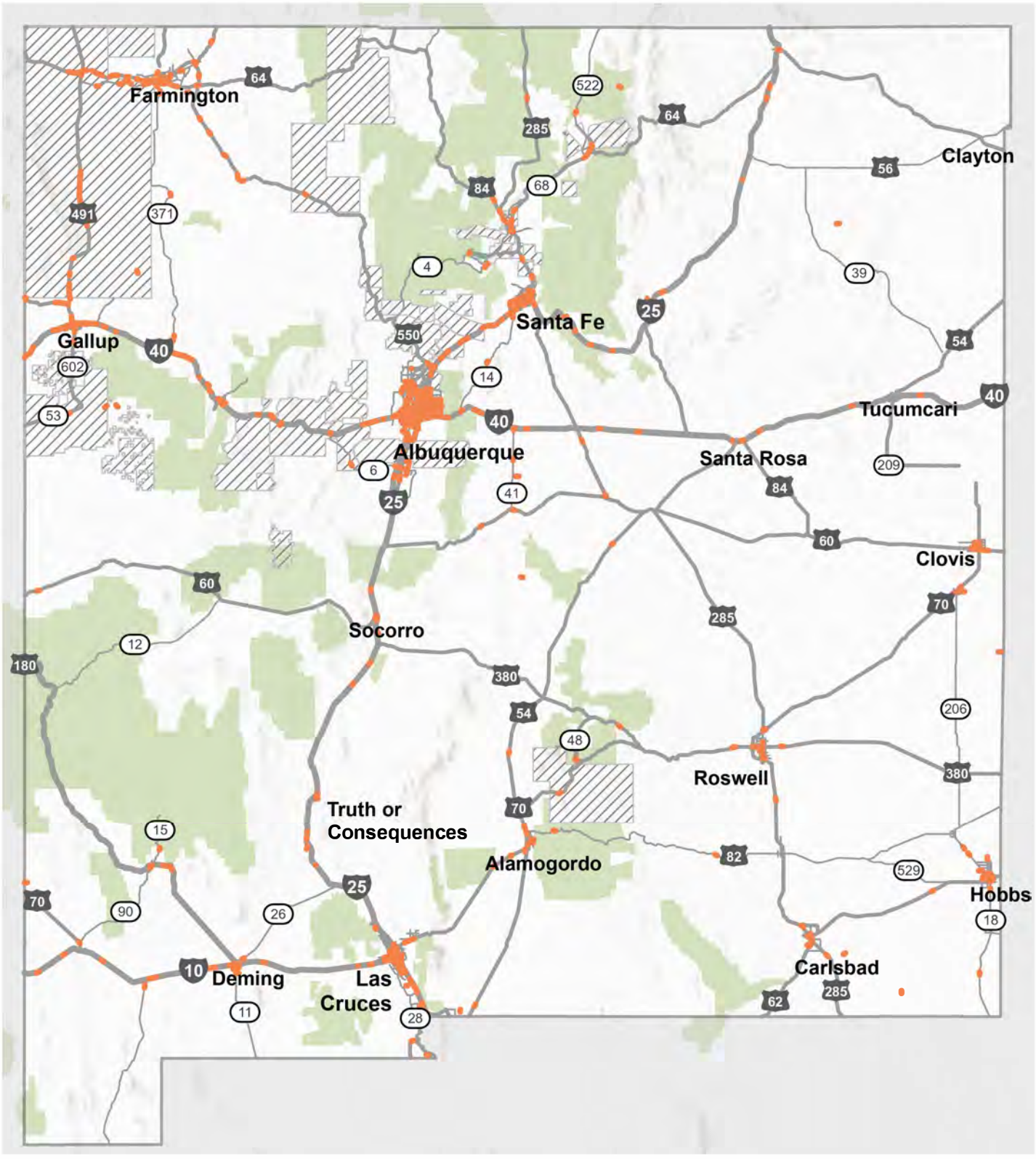
LEGEND

Roads
- Interstate
- US/State Highway
- Other Roads
- Tribal Lands

Final Equity Score
- 0 - 0.30 (Lower Equity Need)
- 0.30 - 0.42
- 0.42 - 0.54
- 0.54 - 0.67
- 0.67 - 1.00 (Higher Equity Need)

alta

NMDOT



HIGH INJURY NETWORK
STATEWIDE

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
VULNERABLE ROAD USER ASSESSMENT

LEGEND

- Interstate
- US/State Highway
- Other Roads
- High Injury Network
- Tribal Lands
- US Forest Service Lands & Federal Wilderness Areas

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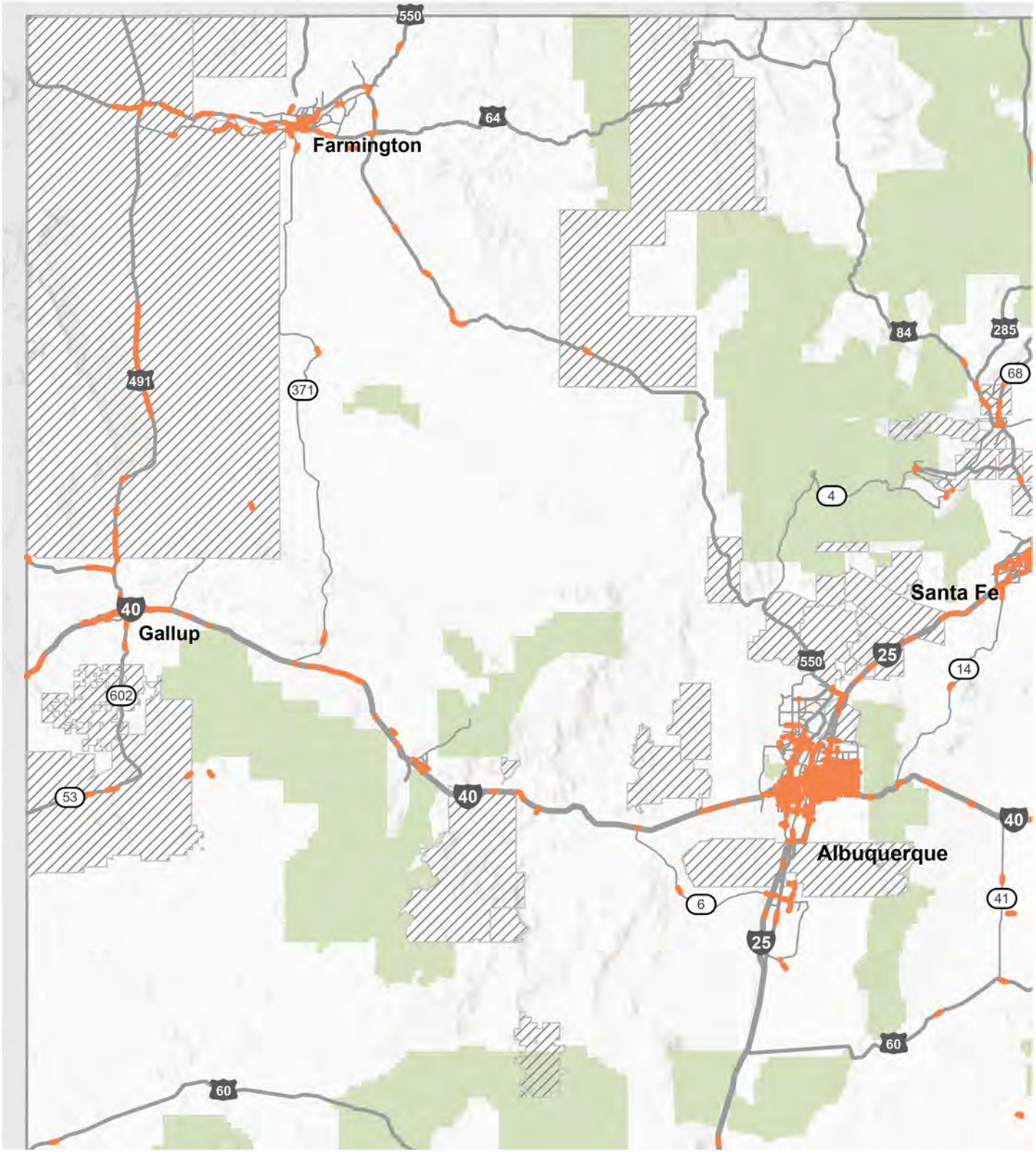
NMDOT



HIGH INJURY NETWORK
NORTHWEST REGION

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
VULNERABLE ROAD USER ASSESSMENT

0 25 50 Miles

North

LEGEND

- Interstate
- US/State Highway
- Other Roads
- High Injury Network
- Tribal Lands
- US Forest Service Lands & Federal Wilderness Areas

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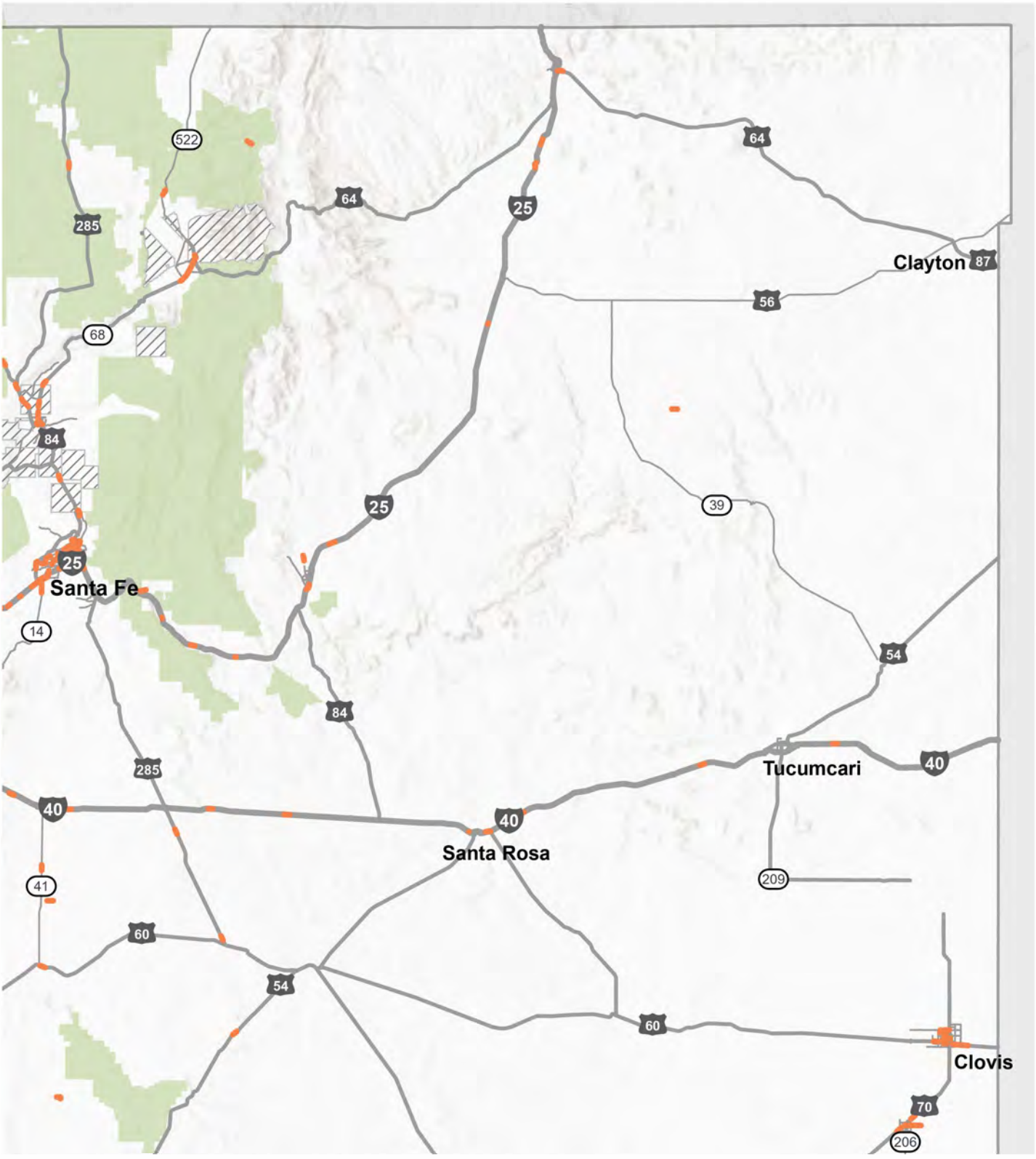
NMDOT



HIGH INJURY NETWORK
NORTHEAST REGION

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
VULNERABLE ROAD USER ASSESSMENT

0 25 50 Miles

North

LEGEND

- Interstate
- US/State Highway
- Other Roads
- High Injury Network
- Tribal Lands
- US Forest Service Lands & Federal Wilderness Areas

alta

NMDOT

HIGH INJURY NETWORK
SOUTHWEST REGION

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
VULNERABLE ROAD USER ASSESSMENT

LEGEND

- Interstate
- US/State Highway
- Other Roads
- High Injury Network
- Tribal Lands
- US Forest Service Lands & Federal Wilderness Areas

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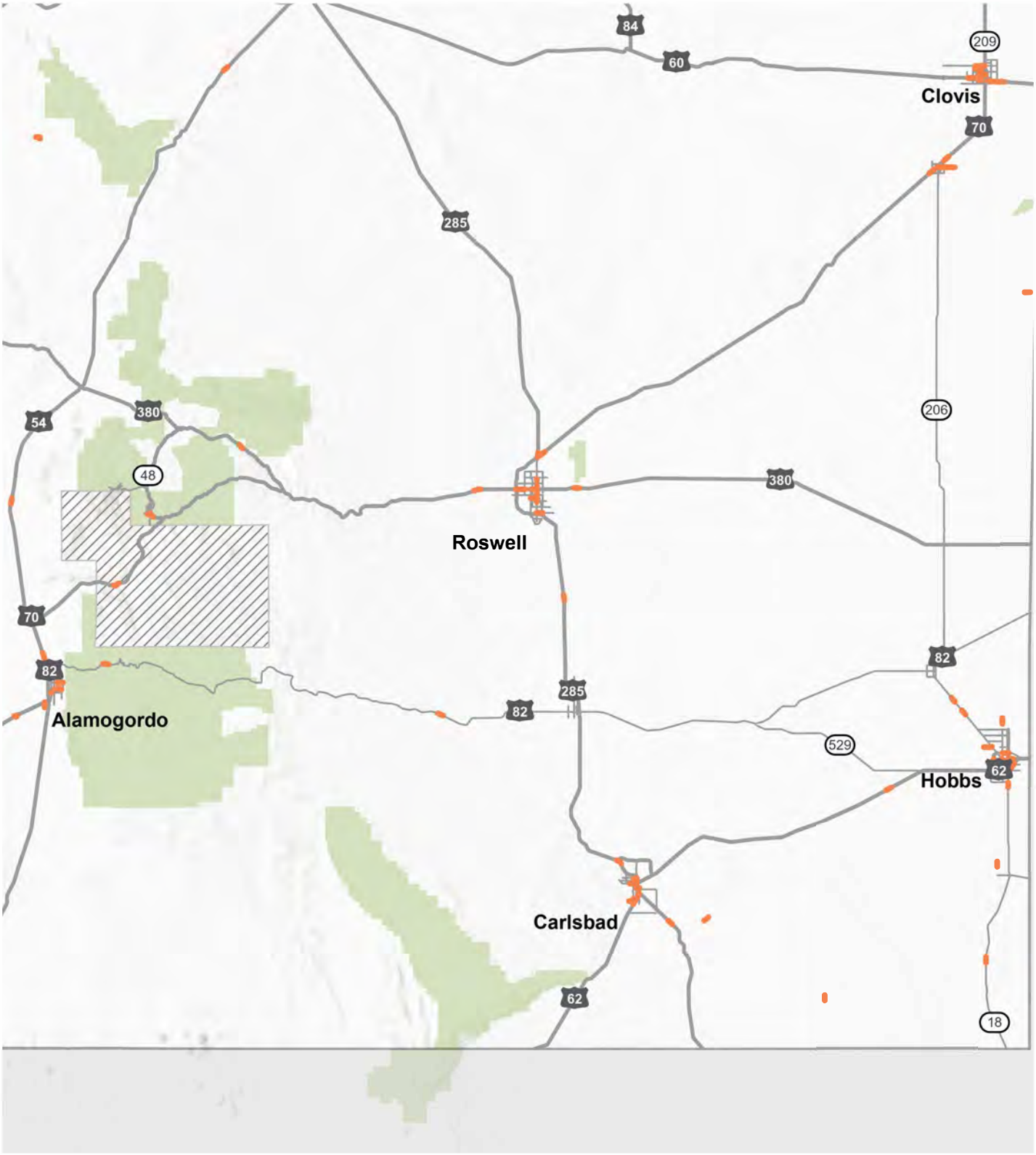
NMDOT



HIGH INJURY NETWORK
SOUTHEAST REGION

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
VULNERABLE ROAD USER ASSESSMENT

0 20 40 Miles

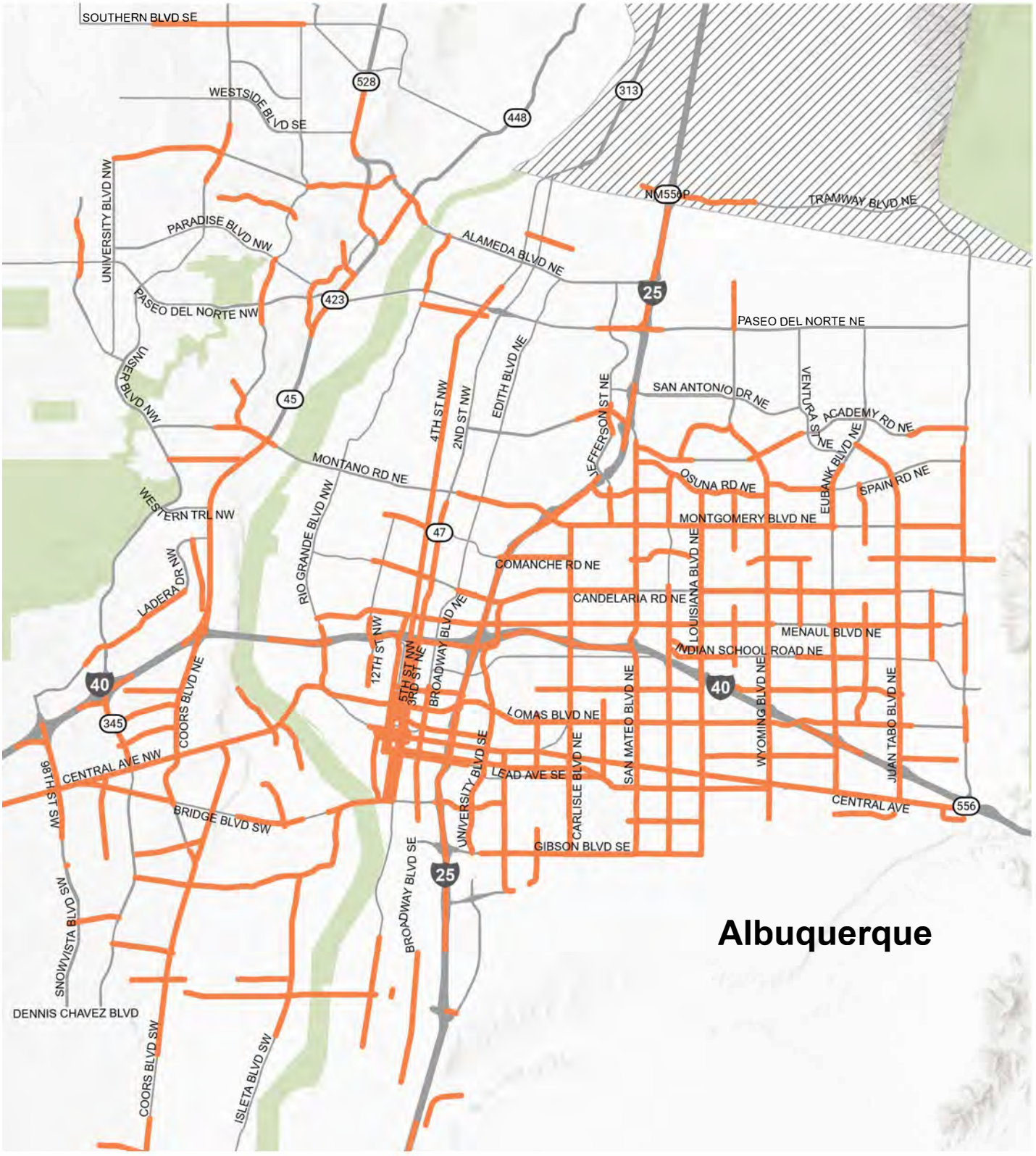
North

LEGEND

- Interstate
- US/State Highway
- Other Roads
- High Injury Network
- Tribal Lands
- US Forest Service Lands & Federal Wilderness Areas

alta

NMDOT



HIGH INJURY NETWORK
ALBUQUERQUE METRO

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
VULNERABLE ROAD USER ASSESSMENT

0 2 4 Miles

North

LEGEND

- Interstate
- US/State Highway
- Other Roads
- High Injury Network
- Tribal Lands
- US Forest Service Lands & Federal Wilderness Areas

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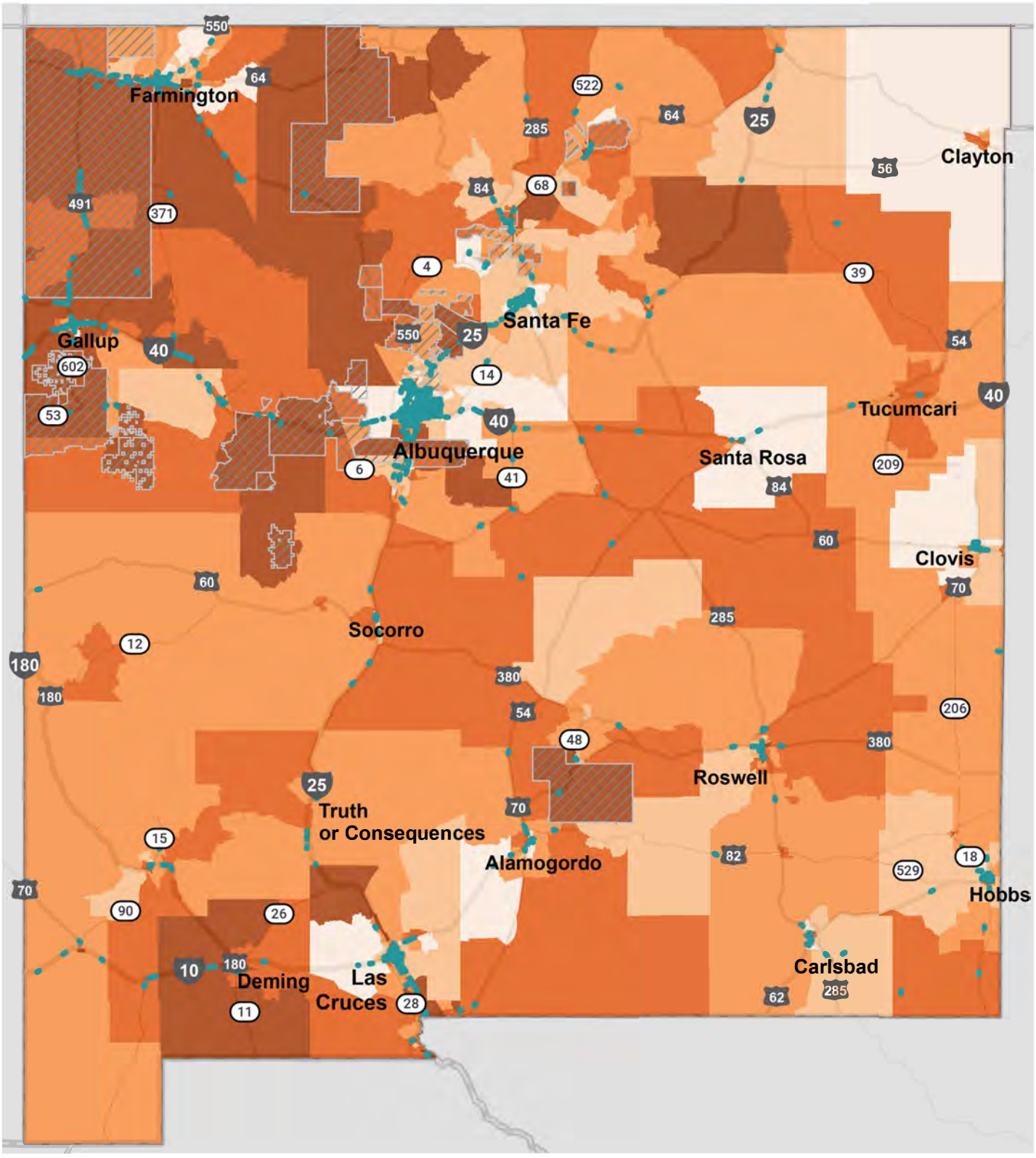
NMDOT



EQUITY ANALYSIS & HIGH INJURY NETWORK STATEWIDE

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
VULNERABLE ROAD USER ASSESSMENT

LEGEND

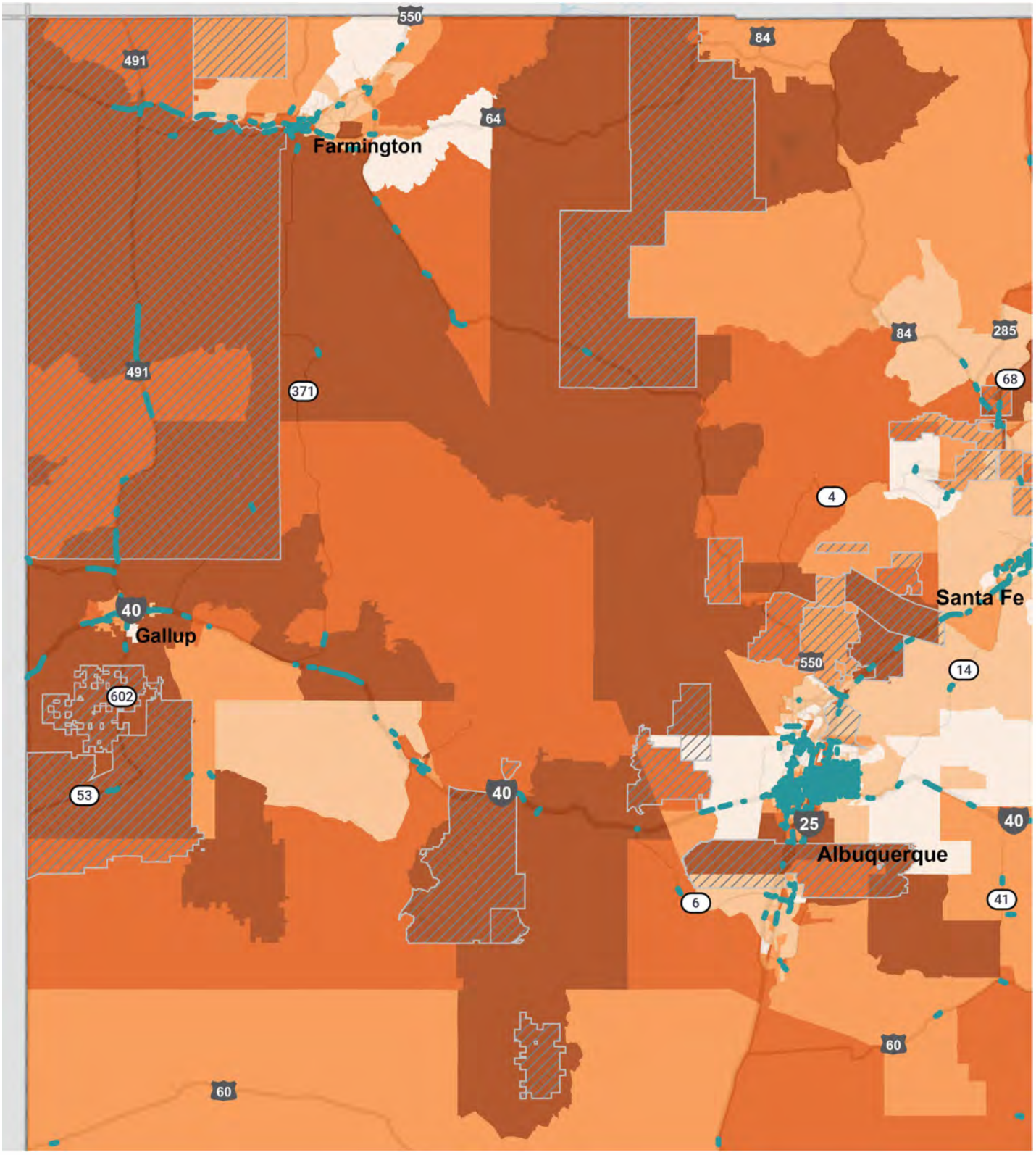
- Interstate
- US/State Highway
- Other Roads
- High Injury Network
- Tribal Lands

Final Equity Score

- 0 - 0.30 (Lower Equity Need)
- 0.30 - 0.42
- 0.42 - 0.54
- 0.54 - 0.67
- 0.67 - 1.00 (Higher Equity Need)

alta

NMDOT



EQUITY ANALYSIS & HIGH INJURY NETWORK NORTHWEST REGION

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
VULNERABLE ROAD USER ASSESSMENT

0 25 50 Miles

North

LEGEND

- Interstate
- US/State Highway
- Other Roads
- High Injury Network
- Tribal Lands

Final Equity Score

- 0 - 0.30 (Lower Equity Need)
- 0.30 - 0.42
- 0.42 - 0.54
- 0.54 - 0.67
- 0.67 - 1.00 (Higher Equity Need)

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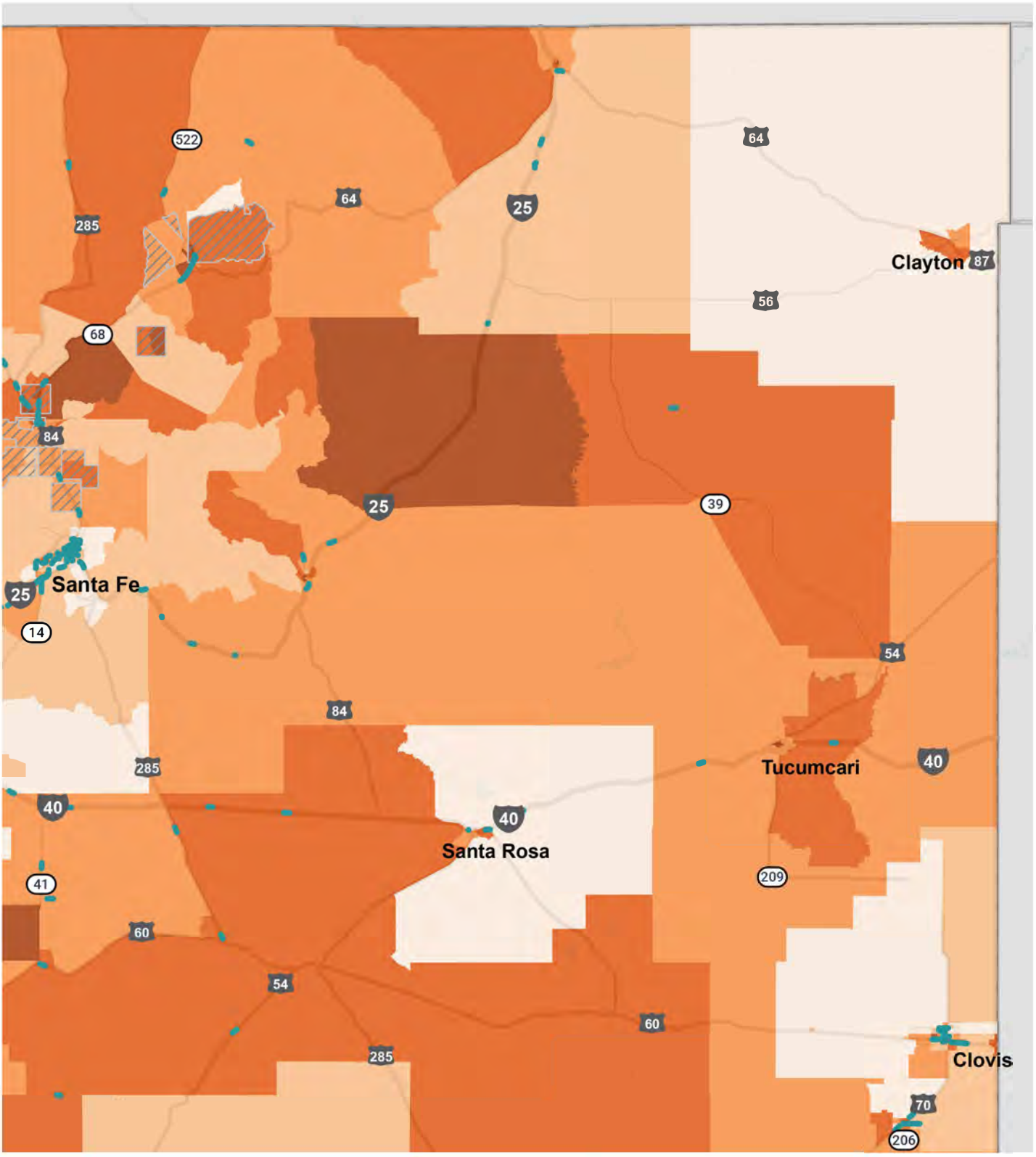
NMDOT



EQUITY ANALYSIS & HIGH INJURY NETWORK NORTHEAST REGION

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
VULNERABLE ROAD USER ASSESSMENT

0 25 50 Miles

North

LEGEND

- Interstate
- US/State Highway
- Other Roads
- High Injury Network
- Tribal Lands

Final Equity Score

- 0 - 0.30 (Lower Equity Need)
- 0.30 - 0.42
- 0.42 - 0.54
- 0.54 - 0.67
- 0.67 - 1.00 (Higher Equity Need)

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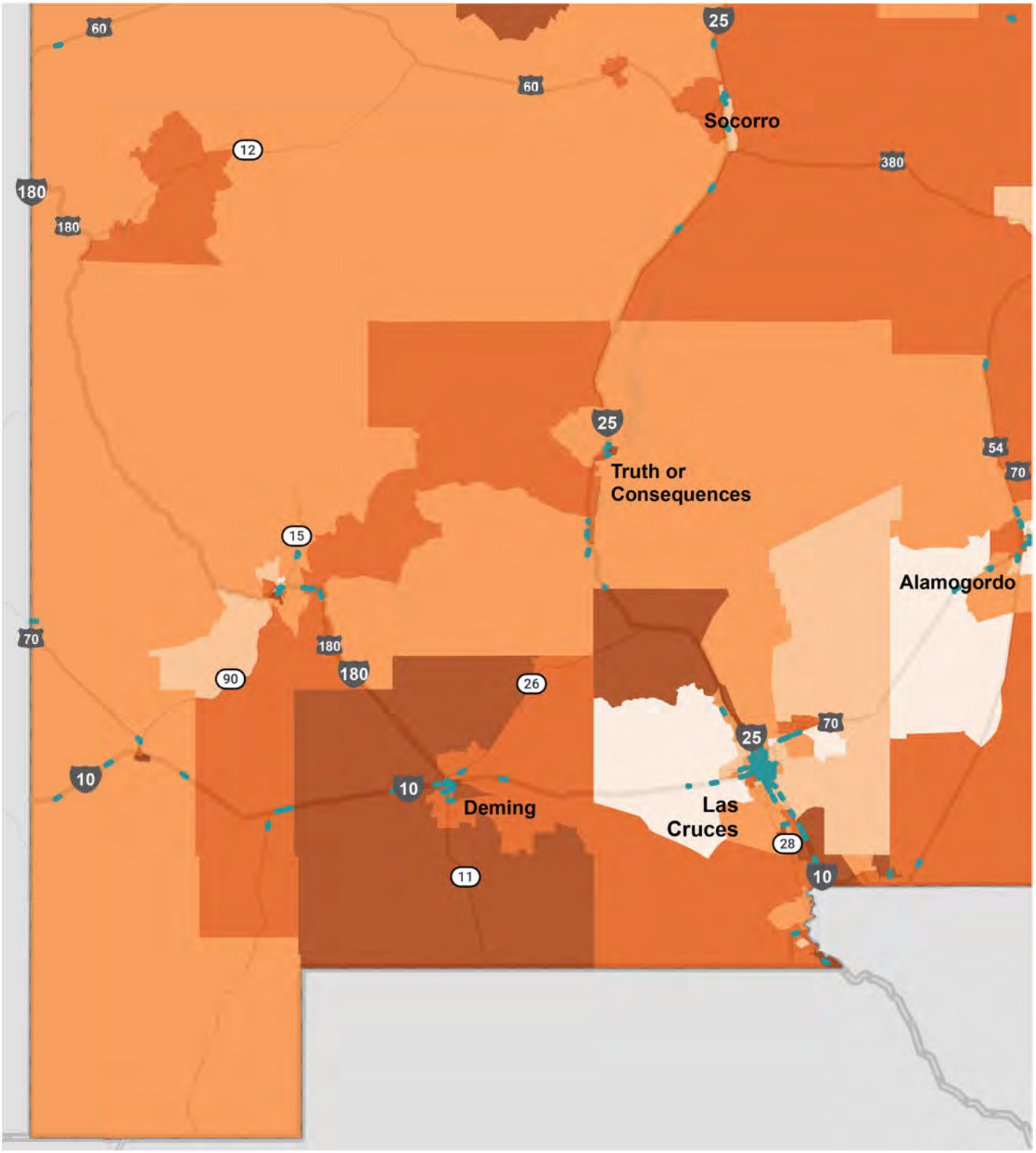
NMDOT



EQUITY ANALYSIS & HIGH INJURY NETWORK SOUTHWEST REGION

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
VULNERABLE ROAD USER ASSESSMENT

0 25 50 Miles

North

LEGEND

- Interstate
- US/State Highway
- Other Roads
- High Injury Network
- Tribal Lands

Final Equity Score

- 0 - 0.30 (Lower Equity Need)
- 0.30 - 0.42
- 0.42 - 0.54
- 0.54 - 0.67
- 0.67 - 1.00 (Higher Equity Need)

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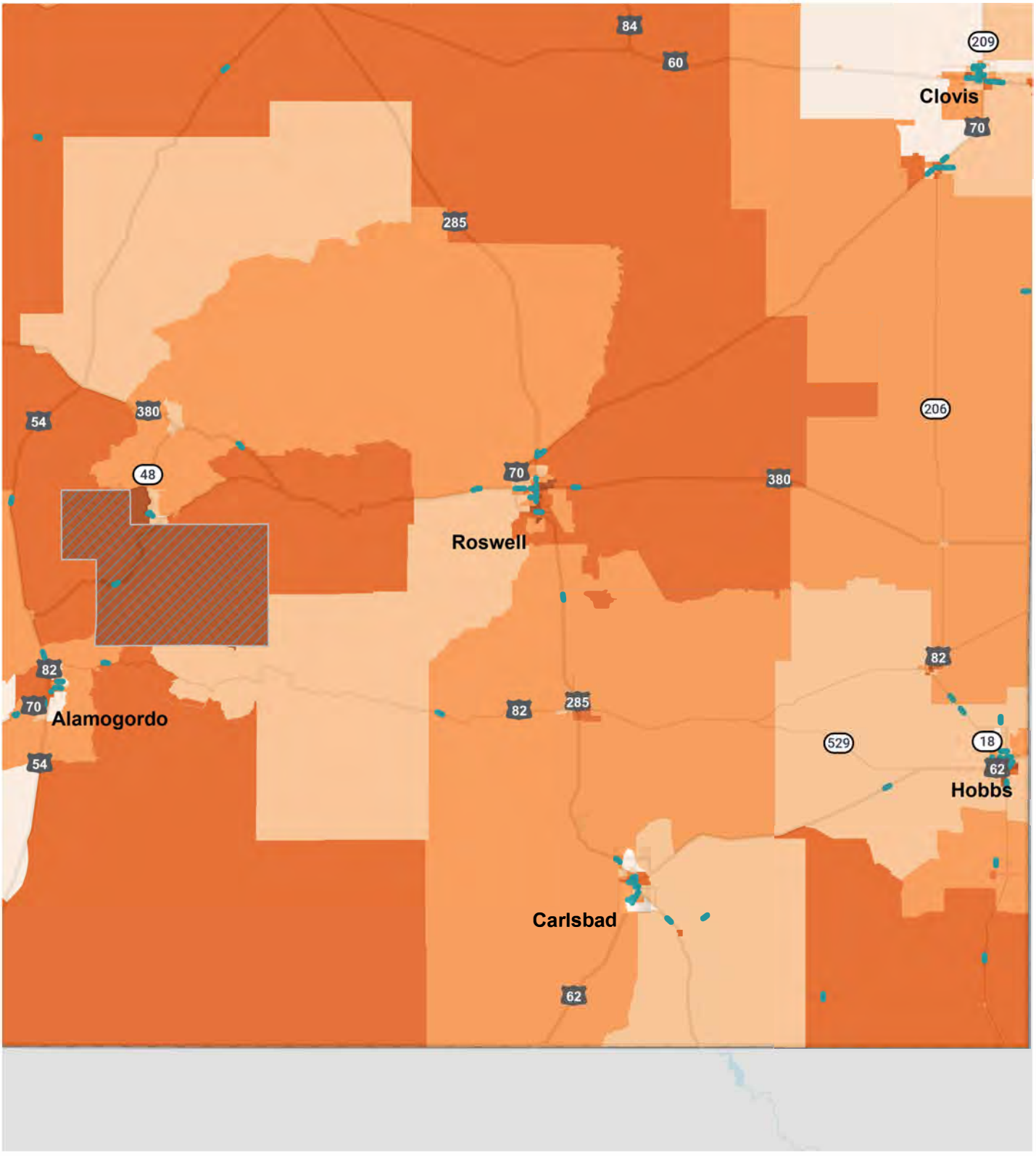
NMDOT



EQUITY ANALYSIS &
HIGH INJURY NETWORK
SOUTHEAST REGION

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
VULNERABLE ROAD USER ASSESSMENT

0 20 40 Miles

North

LEGEND

- Interstate
- US/State Highway
- Other Roads
- High Injury Network
- Tribal Lands

Final Equity Score

- 0 - 0.30 (Lower Equity Need)
- 0.30 - 0.42
- 0.42 - 0.54
- 0.54 - 0.67
- 0.67 - 1.00 (Higher Equity Need)

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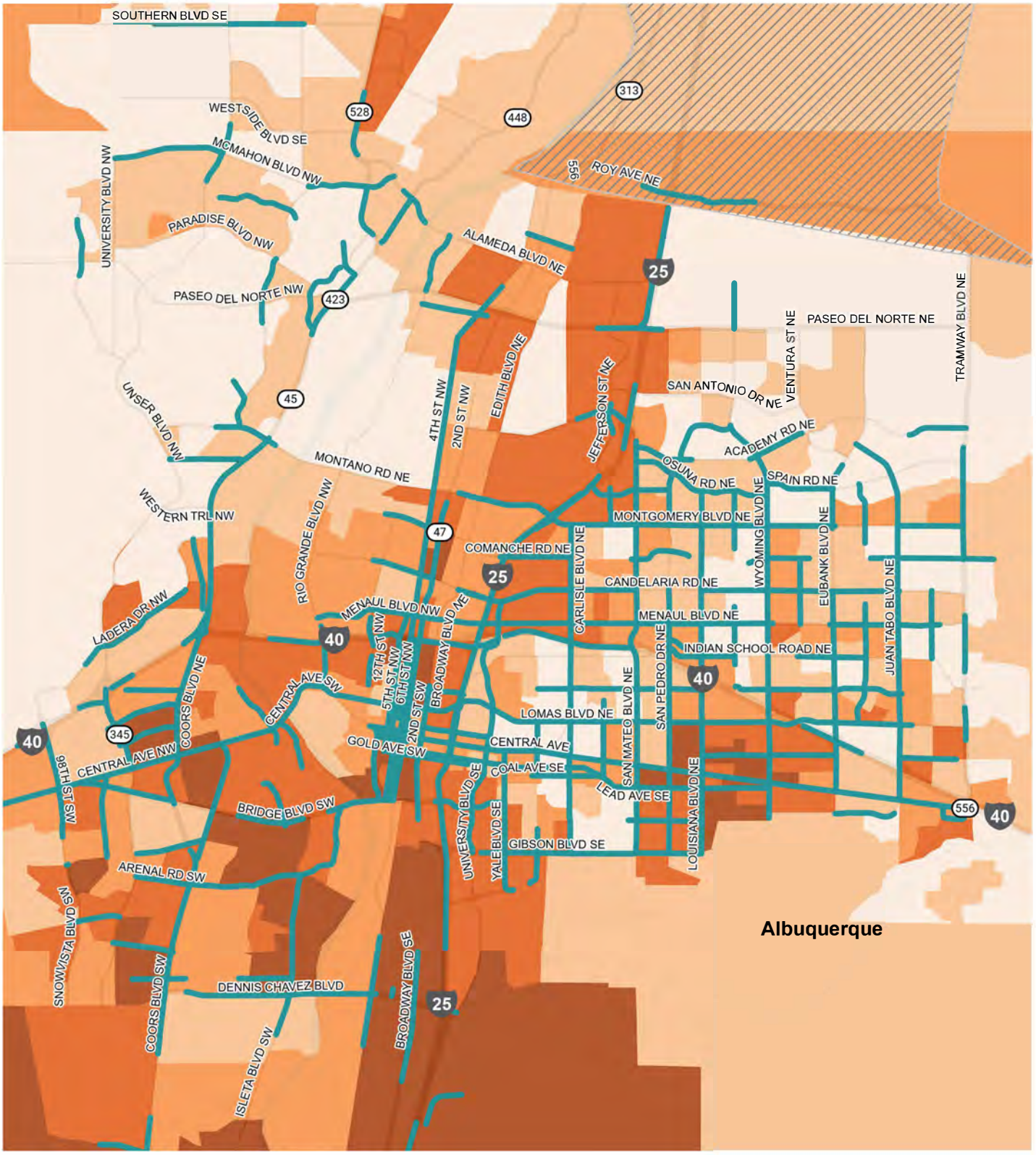
NMDOT



EQUITY ANALYSIS & HIGH INJURY NETWORK ALBUQUERQUE METRO

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
VULNERABLE ROAD USER ASSESSMENT

0 2 4 Miles

North

LEGEND

- Interstate
- US/State Highway
- Other Roads
- High Injury Network
- Tribal Lands

Final Equity Score

- 0 - 0.30 (Lower Equity Need)
- 0.30 - 0.42
- 0.42 - 0.54
- 0.54 - 0.67
- 0.67 - 1.00 (Higher Equity Need)

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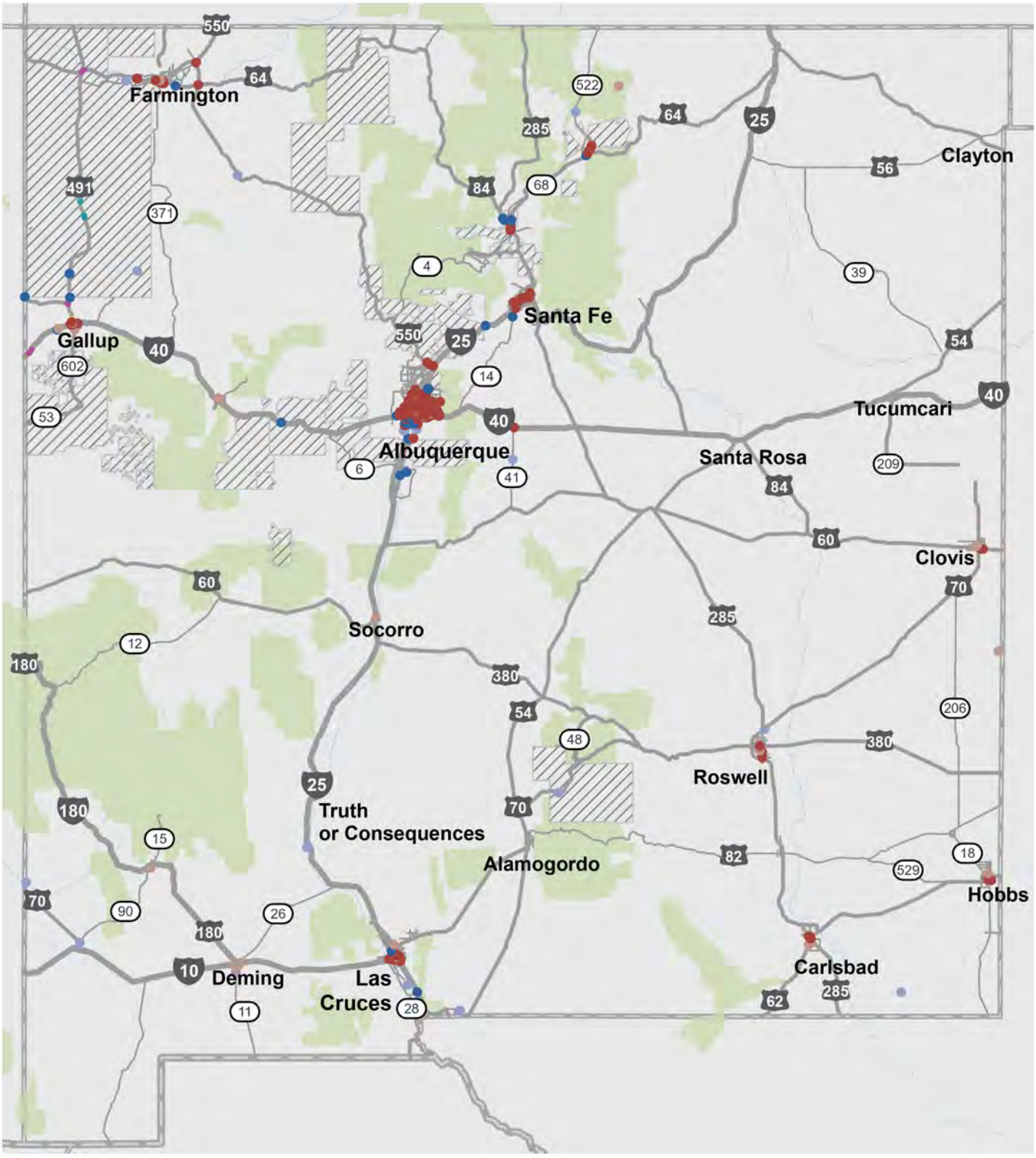
NMDOT



TOP PRIORITIZED INTERSECTIONS & CORRIDORS BY TYPOLOGY STATEWIDE

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
VULNERABLE ROAD USER ASSESSMENT

0 50 100 Miles

North

LEGEND

- Interstate
- US/State Highway
- Other Roads
- Tribal Lands
- US Forest Service Lands & Federal Wilderness Areas

Intersection Typologies
- RI Major
- RI Minor
- UI Major
- UI Minor

Corridor Typologies
- RC Major
- RC Minor
- UC Major
- UC Minor

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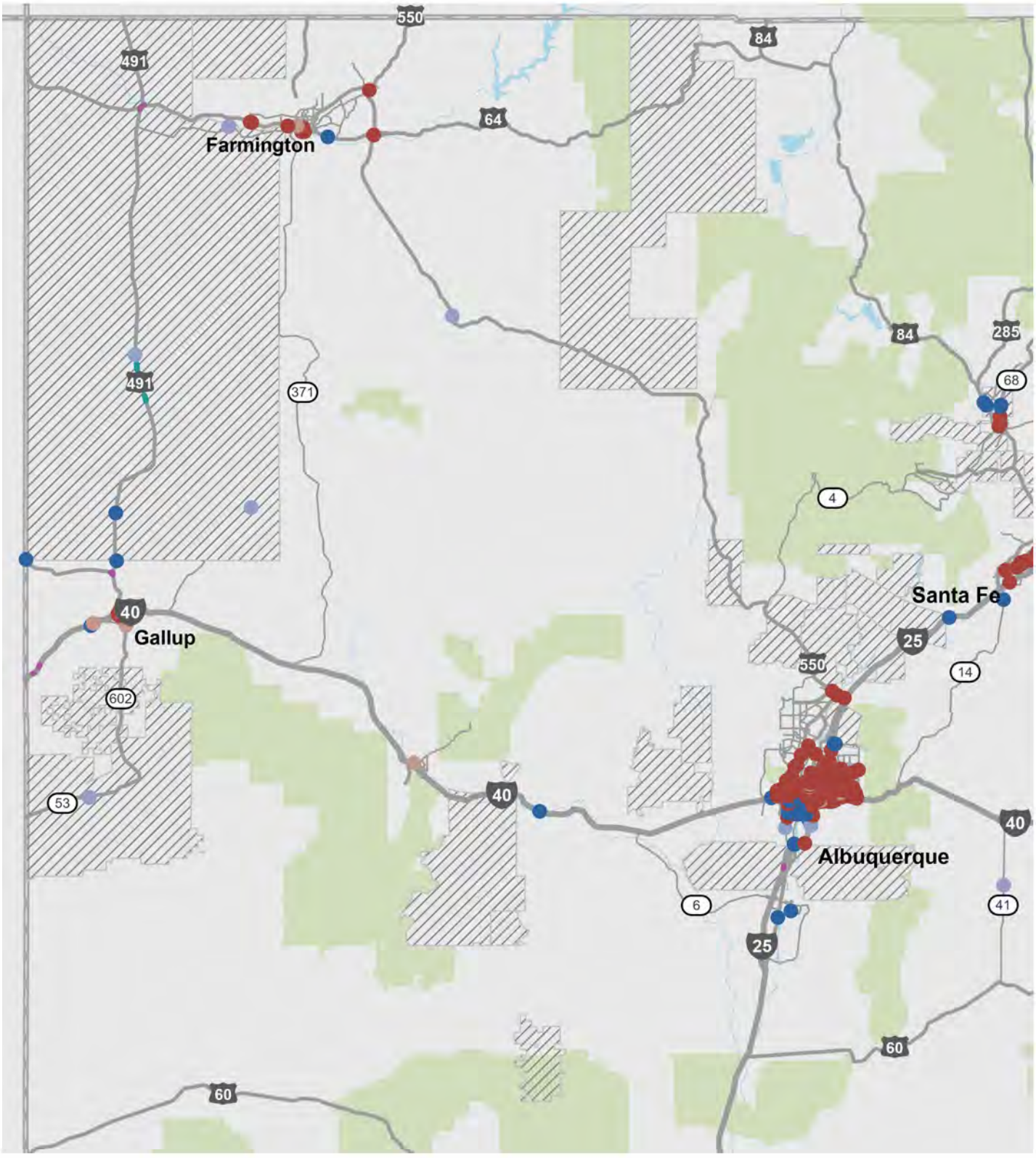

TOP PRIORITIZED INTERSECTIONS & CORRIDORS BY TYPOLOGY NORTHWEST REGION

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
VULNERABLE ROAD USER ASSESSMENT

0 25 50 Miles

North

LEGEND

- Interstate
- US/State Highway
- Other Roads
- Tribal Lands
- US Forest Service Lands & Federal Wilderness Areas

Intersection Typologies
- RI Major
- RI Minor
- UI Major
- UI Minor

Corridor Typologies
- RC Major
- RC Minor
- UC Major
- UC Minor

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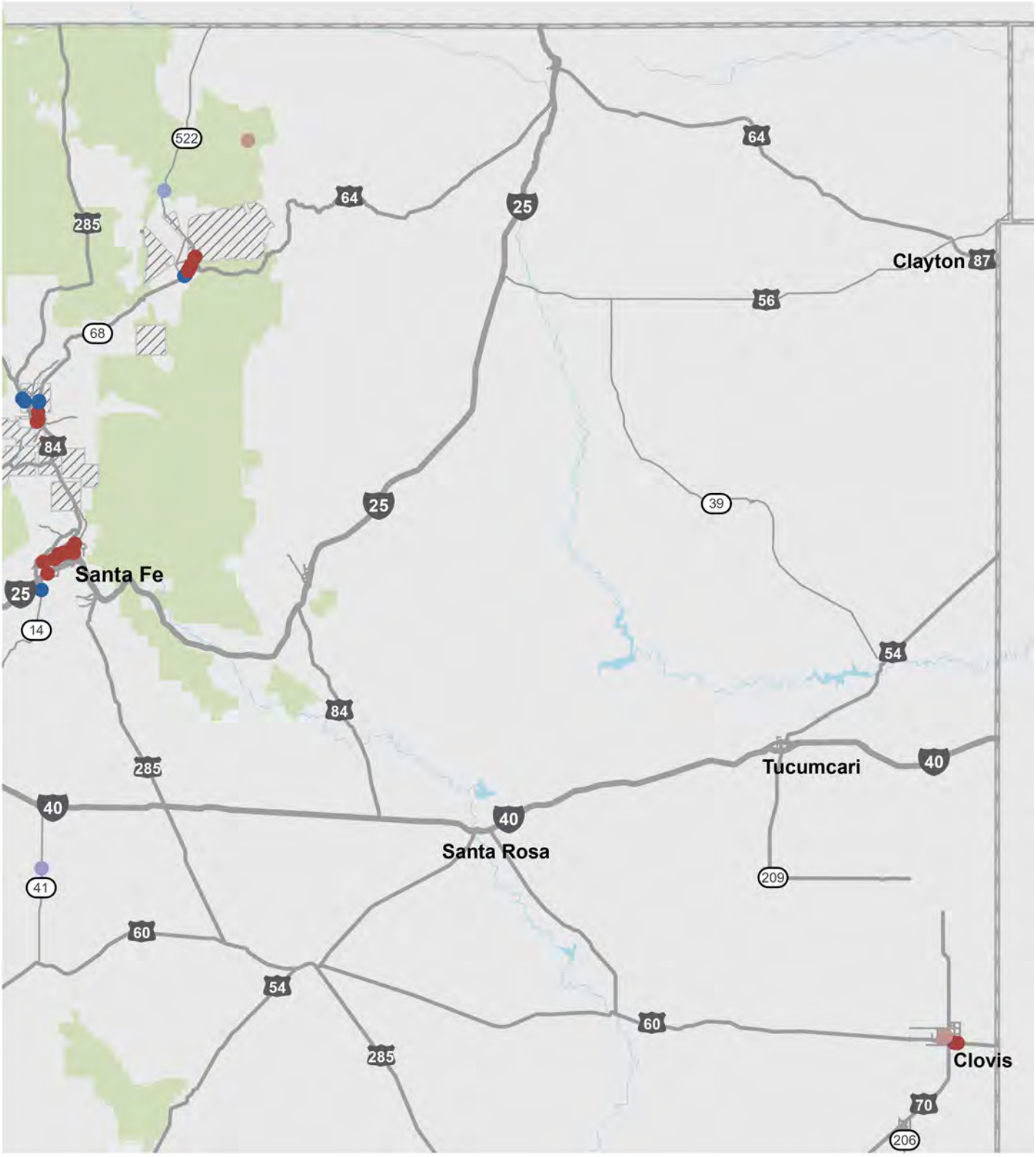
NMDOT



TOP PRIORITIZED INTERSECTIONS & CORRIDORS BY TYPOLOGY NORTHEAST REGION

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
VULNERABLE ROAD USER ASSESSMENT

0 25 50 Miles

North

LEGEND

- Interstate
- US/State Highway
- Other Roads
- Tribal Lands
- US Forest Service Lands & Federal Wilderness Areas

Intersection Typologies
- RI Major
- RI Minor
- UI Major
- UI Minor

Corridor Typologies
- RC Major
- RC Minor
- UC Major
- UC Minor

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TOP PRIORITIZED INTERSECTIONS & CORRIDORS BY TYPOLOGY SOUTHWEST REGION

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
VULNERABLE ROAD USER ASSESSMENT

0 25 50 Miles

North

LEGEND

- Interstate
- US/State Highway
- Other Roads
- Tribal Lands
- US Forest Service Lands & Federal Wilderness Areas

Intersection Typologies
- RI Major
- RI Minor
- UI Major
- UI Minor

Corridor Typologies
- RC Major
- RC Minor
- UC Major
- UC Minor

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TOP PRIORITIZED INTERSECTIONS & CORRIDORS BY TYPOLOGY SOUTHEAST REGION

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
VULNERABLE ROAD USER ASSESSMENT

0 20 40 Miles

North

LEGEND

- Interstate
- US/State Highway
- Other Roads
- Tribal Lands
- US Forest Service Lands & Federal Wilderness Areas

Intersection Typologies
- RI Major
- RI Minor
- UI Major
- UI Minor

Corridor Typologies
- RC Major
- RC Minor
- UC Major
- UC Minor

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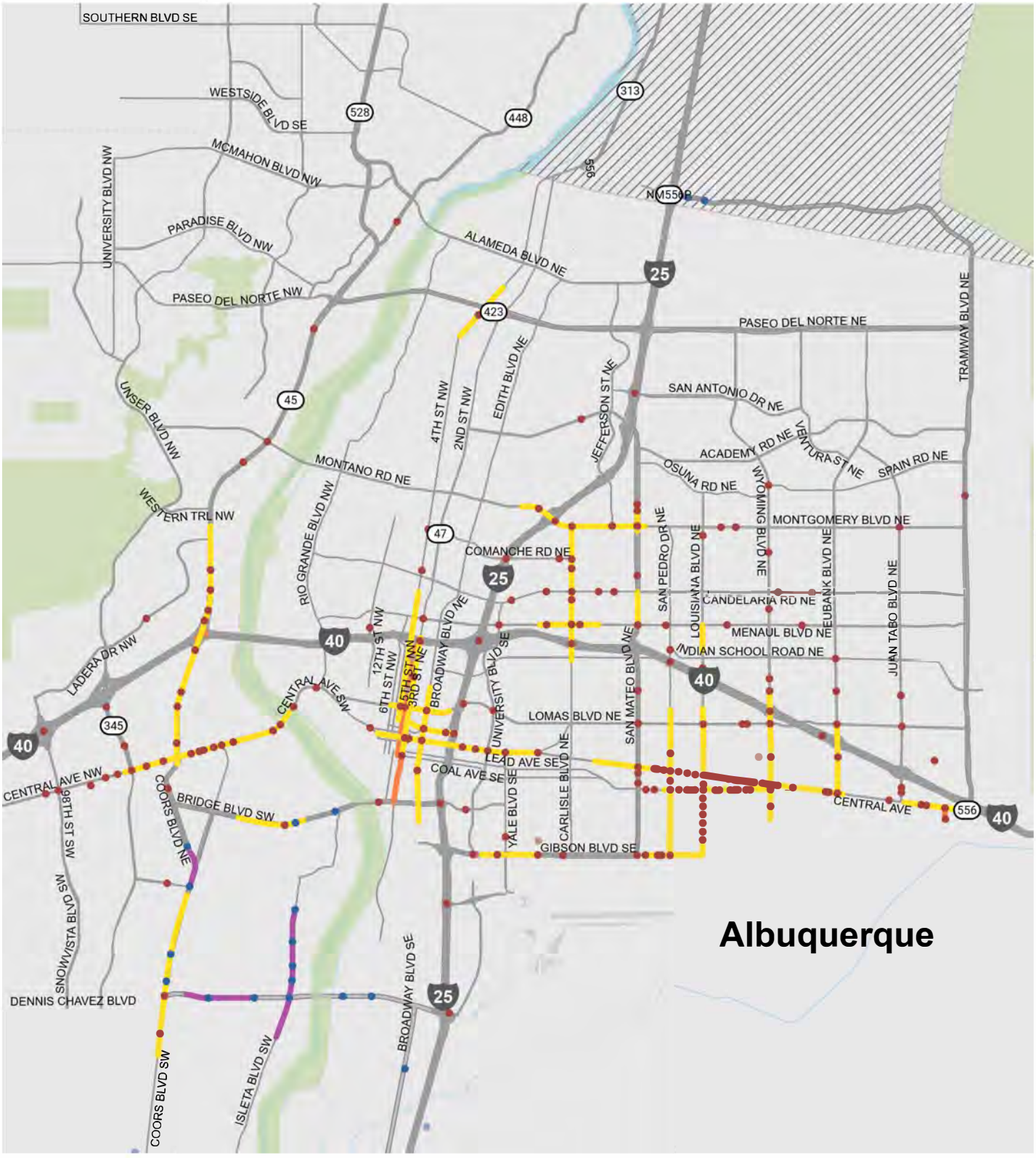

TOP PRIORITIZED INTERSECTIONS & CORRIDORS BY TYPOLOGY ALBUQUERQUE METRO

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
VULNERABLE ROAD USER ASSESSMENT

0 2 4 Miles

North

LEGEND

- Interstate
- US/State Highway
- Other Roads
- Tribal Lands
- US Forest Service Lands & Federal Wilderness Areas

Intersection Typologies

- RI Major
- RI Minor
- UI Major
- UI Minor

Corridor Typologies

- RC Major
- RC Minor
- UC Major
- UC Minor

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NMDOT VRU Safety Assessment Appendix C: Historical Crash Trends Analysis

New Mexico Department of Transportation

NMDOT Vulnerable Road User Assessment
October 9, 2023

NMDOT
NEW MEXICO DEPARTMENT OF TRANSPORTATION

Introduction

This memo provides an analysis of historical vulnerable road user (VRU) crashes in New Mexico. For the purpose of this memo, vulnerable road users will be defined as pedestrians and bicyclists. The crash trends analysis was conducted on crash data from years 2012 to 2022 - note: 2022 data is preliminary. In those years, a total of 8,769 crashes involved pedestrians or bicyclists. Tables and raw data that support this analysis are contained in a comprehensive spreadsheet that provides a complete look at the available data. The conclusions deemed most salient have been included in the analysis.

The following information was not available or was not complete enough to consider for analysis:

- Presence of sidewalks on roadway
- Presence of crosswalk at intersection

A separate equity analysis analyzed the demographic and underrepresented population characteristics of high crash locations within the state. Also, crash profiles determined correlation patterns between a number of the crash variables described below.

Within this memo, the KABCO categorization system is used to label crash severity. Crashes are categorized within the system by designating each crash by the most severe injury or fatality that occurred to anyone involved in the crash.

- K – Killed
- A – Serious Injury
- B – Suspected Minor Injury
- C – Complaint of Injury
- O – No Apparent Injury

Special consideration is given to analyzing crashes that resulted in a fatality or serious injury. These will be referred to as KA crashes for the duration of the memo.

VRU Crash Rates Over Time

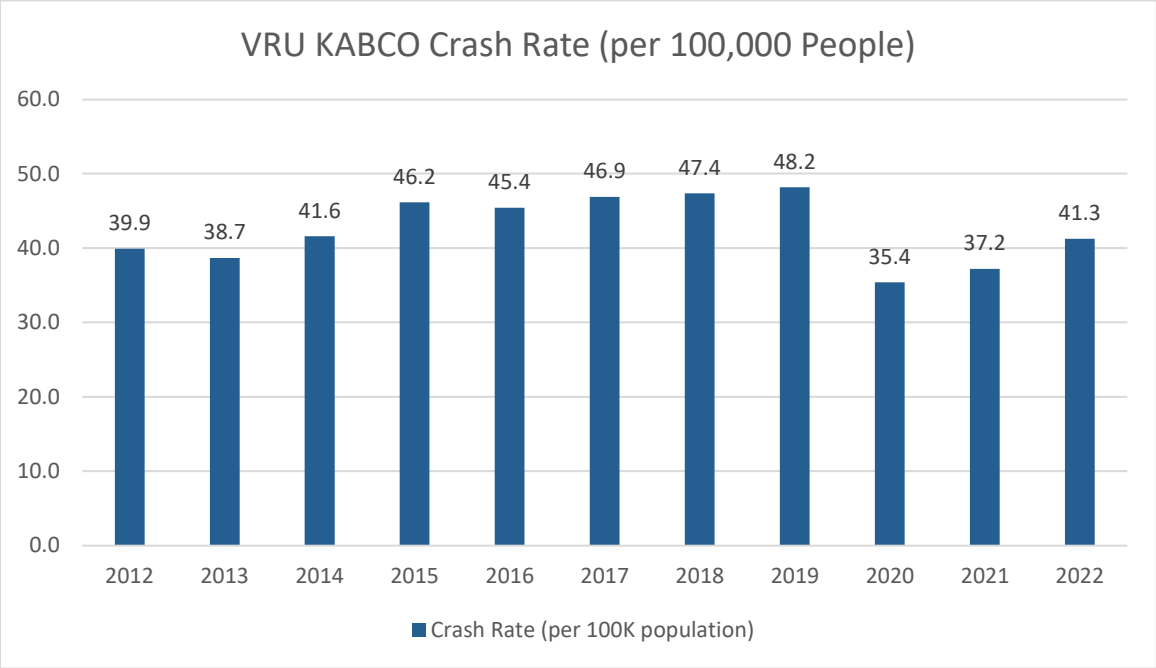
Between 2012 and 2022, a total of 8,769 crashes occurred that involved pedestrians or bicyclists. Of the vulnerable road user crashes, 6,172 (or 63%) involved pedestrians and 3,604 (37%) involved bicyclists. Some crashes involved both bicyclists and pedestrians, making the number of total vulnerable road user crashes fewer than the sum of each mode.

The vulnerable road user-involved crashes represent 1.9% of all roadway crashes (468,784) that occurred in New Mexico during these years.

A portion of crashes involved multiple pedestrians, bicyclists, or other victims. As such, the grand totals for the demographic data tables in the mode-specific analysis below exceeds that of the grand total number of crashes for the time period.

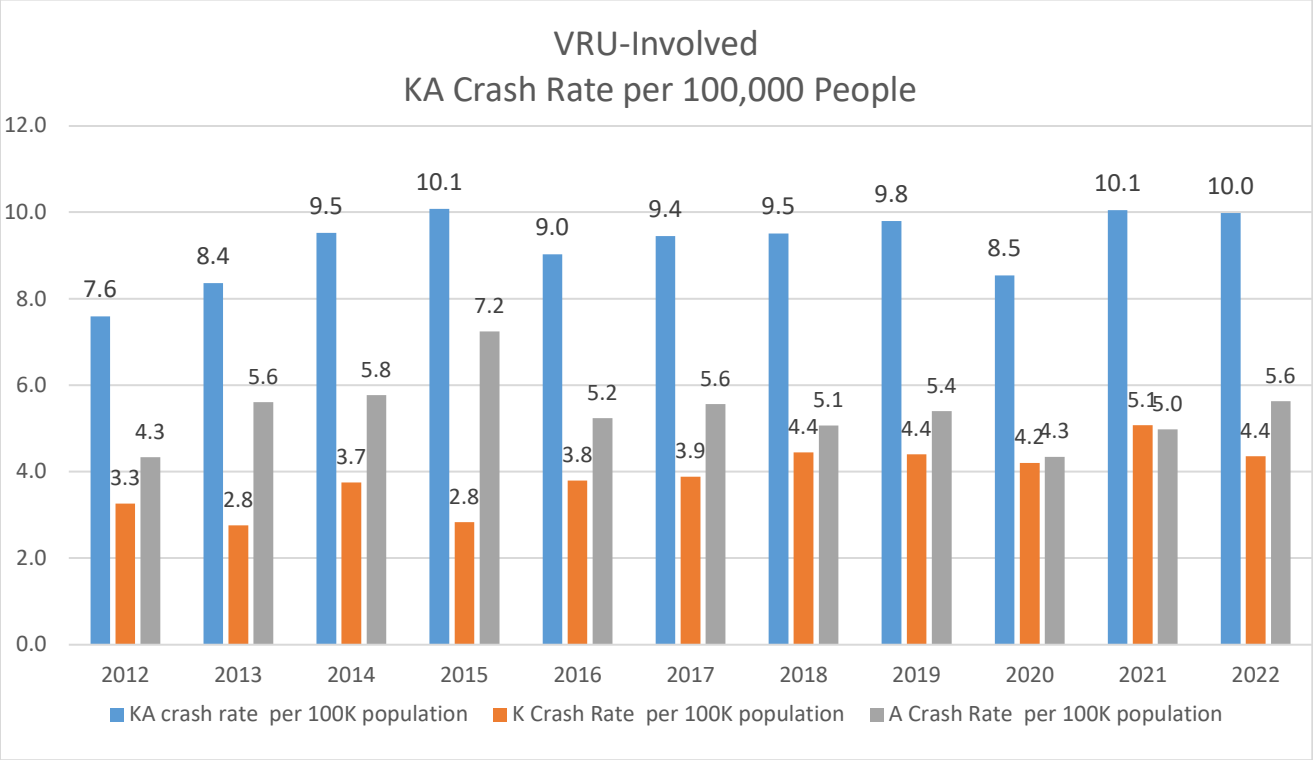
The KABCO per capita crash rate over time can be seen in Figure 1. The crash rate for all vulnerable road user-involved crashes averaged 42.5 crashes per 100,000 people per year from 2012 to 2022.

Figure 1: VRU KABCO Crash Rate



There were a total of 2,130 vulnerable road user-involved KA crashes between 2012 and 2022—resulting in 893 fatalities and 1,235 serious injuries. Of these crashes, 1,800 involved pedestrians, and 330 involved a bicyclist. Two crashes involved both a pedestrian and a bicyclist. The vulnerable road user-involved KA crash rate averaged 9.3 per 100,000 people per year from 2012 to 2022. The KA crash rate over time can be seen in Figure 2.

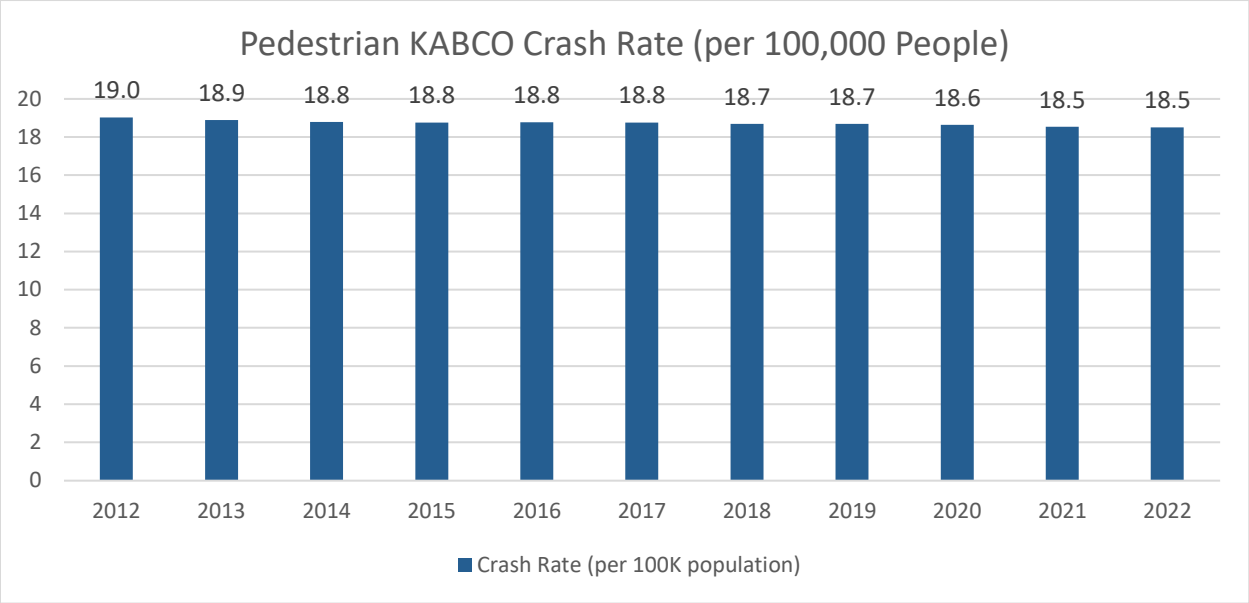
Figure 2: VRU-Involved KA Crash Rate



Overall, from 2012 to 2022, KA crashes made up 22% of all vulnerable road user-involved crashes in New Mexico. While the rate of all KABCO vulnerable road user-involved crashes has declined since 2019, the rate of KA crashes increased after a dip in 2020 to roughly tie the all-time high.

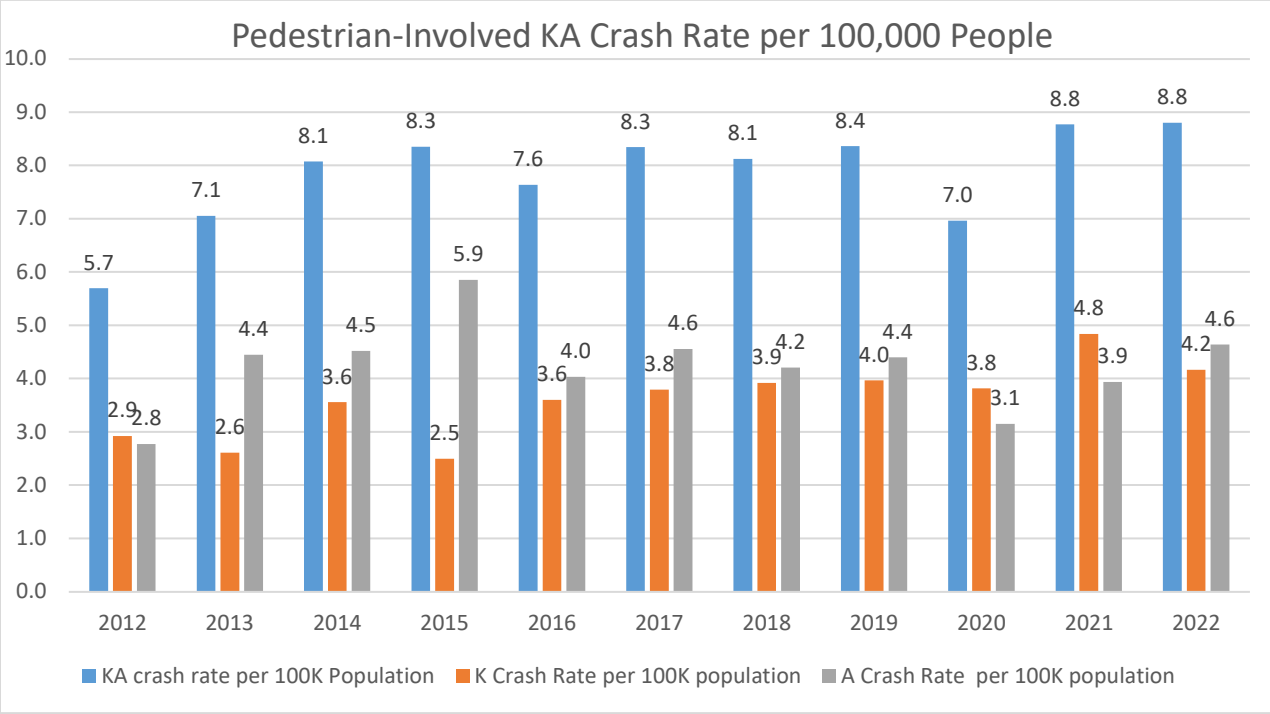
Pedestrian

Figure 3: Pedestrian KABCO Crash Rate



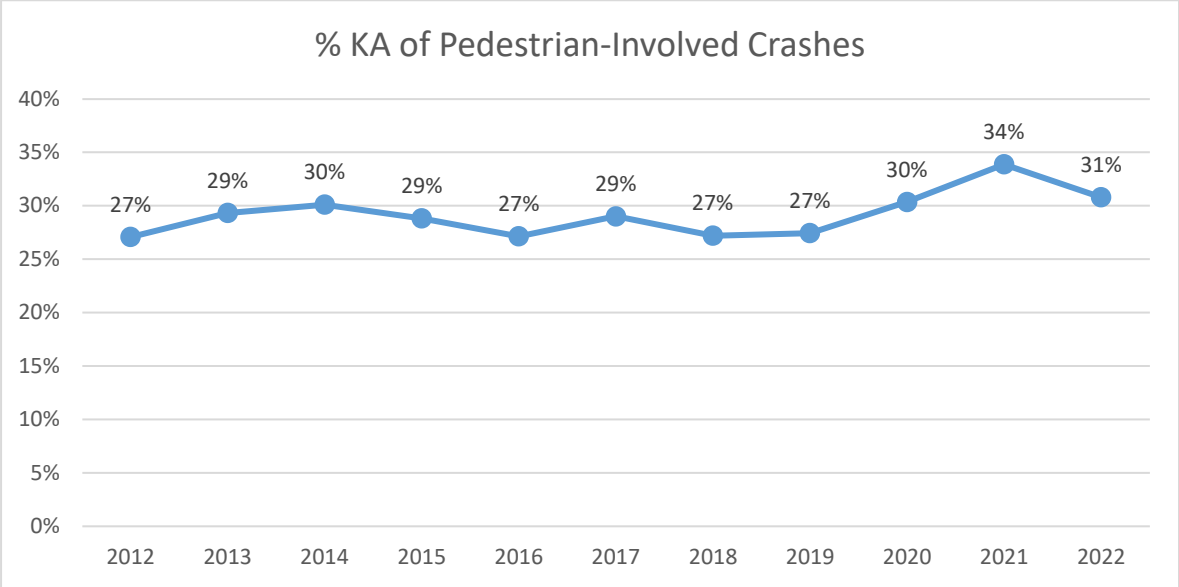
The rate of pedestrian-involved crashes per 100,000 people has remained relatively stable over the 11-year analysis period, declining by 0.5 crashes as shown in Figure 3.

Figure 4: Pedestrian-Involved KA Crash Rate



Meanwhile, the rate of pedestrian-involved KA crashes has steadily increased over time—apart from 2020 when New Mexico experienced reduced mobility due to the COVID-19 pandemic, as shown in Figure 4. This indicates that the outcomes of pedestrian-involved crashes in New Mexico are becoming more severe over time. Where KA crashes accounted for 27% of all pedestrian-involved crashes in 2012, they now make up 31% of all pedestrian-involved crashes in 2022, as shown in Figure 5.

Figure 5: % KA of Pedestrian-Involved Crashes



Crash Locations

Urban or Rural Context

Of pedestrian-involved KA crashes, 19.5% occurred in a rural context, as identified in the crash data by the University of New Mexico during geocoding.

Population Density

Looking at residential population density, most KA crashes occurred in a low population density context, followed by high-density and then medium-density settings, as shown in Table 1.

Table 1: Population Density of Pedestrian KA crashes

	High Density	Medium Density	Low Density	Unknown	Total
A	375	210	379	7	971
K	198	134	492	5	829
Total	**573**	**344**	**871**	**12**	**1,800**
% of KA Crashes	**32%**	**19%**	**48%**	**1%**	**100%**
% of Total Land Area in the State	**0.1%**	**0.1%**	**99.8%**	**0%**	**100%**

Density was measured at the census block group level. We have defined the population density brackets as:

- High = Greater than 6 people per acre
- Medium = Between 3 and 6 people per acre
- Low = Less than 3 people per acre

These brackets were determined based on the distribution of population densities in cities and towns. While most rural areas fall in the low-density category, the threshold was set so that densities in cities and towns are roughly split between high and medium density.

Tribal Jurisdiction

Seven percent of KA crashes occurred on tribal land, as shown in Table 2. The percentage of KA crashes occurring on tribal land is less than would be expected in relation to the percentage of center line miles and population that reside within tribal land. It should be pointed out that many people who are not Native American also live on tribal land.

Table 2: Tribal Jurisdiction of Pedestrian KA Crashes

Tribal Jurisdiction	A	K	Total	% of Pedestrian-Involved KA Collisions	% of NM Centerline Miles on Tribal Land	% of NM Population Living on Tribal Land
Not on Tribal Land	936	747	1,683	**94%**	**91.3%**	89.6%
On Tribal Land	35	82	117	**7%**	**8.7%**	10.4%
Grand Total	**971**	**829**	**1,800**	**100%**	100%	100%

Near Transit

The percentage of pedestrian-involved KA crashes that occurred near transit is highly overrepresented, as shown in Table 3. “Near transit” is defined as within 100 meters of a bus or rail stop. 16% of pedestrian-involved KA crashes occurred near transit and 57% of those were on Central Avenue in Albuquerque, along what is now the Albuquerque Rapid Transit corridor. In comparison, less than 1% of New Mexico’s road network lies within 100 meters of a known transit stop. Due to possibly incomplete bus stop data, the actual number of crashes near transit and share of roadways near transit may be higher.

Table 3: Transit Proximity of Pedestrian KA Crashes

Near Transit	KA Crashes	% of KA Crashes	% of Center Line Miles within 100m of Transit	% of NM Lane Miles within 100m of Transit
No	1,509	83.8%	99.1%	99.2%
Yes	291	16.2%	0.9%	0.8%
Grand Total	**1,800**	**100.0%**	**100.0%**	**100.0%**

Roadway Characteristics

Intersection vs. Non-Intersection

Of 1,800 pedestrian-involved KA crashes, 1,123 (62.4%) occurred at intersections. 32% occurred on roadways not at intersections. To determine this factor, a buffer analysis was conducted in ArcGIS to determine the proximity of a crash to an intersection. Crashes were determined to have occurred at an intersection if they were within 100 feet of the intersection of two roadway line segments. The remaining crashes occurred in other locations, including about 95 crashes near underpasses, overpasses, or ramps of interstates where it could not be easily determined on which roadway the crash occurred and if an intersection was involved. Also included in the balance are crashes that occurred off designated roadways, such as in parking lots or alleys.

Intersection Crashes

Near a Signalized Intersection

28.3% of all pedestrian-involved KA crashes occurred near a signalized intersection. 45% of pedestrian KA crashes at intersections were near a signalized intersection. The remaining 55% of intersection crashes were therefore at unsignalized intersections. “Near” is defined as within 100 feet of a traffic signal, which was the typical length of the approach lanes at a signal.

Intersection Lighting

The level of lighting at the intersection did not correlate with crash rates at intersection. Of KA crashes at an intersection, unlighted intersections at night represented 22%, lighted intersections at night represented 38% of crashes, and 34% occurred in daylight.

Roadway Classifications of KA Crashes at Intersections

42.9% of pedestrian-involved KA crashes at intersections occurred where a major arterial intersects with a local roadway, as shown in Table 4. However, only 3.6% of all intersections in New Mexico are the junction of a major arterial and a local road, as shown in Table 5. Meanwhile, only 8.3% were at intersections between two local roads, while this intersection class type makes up 78% of all intersections in the state.

Table 4: Pedestrian KA Crashes at Intersections by Road Class

Class of Roadways at Intersection	Major Arterial	Minor Arterial	Major Collector	Minor Collector	Local
Major Arterial	89 (7.9%)	71 (6.3%)	110 (9.8%)	22 (2.0%)	482 (42.9%)
Minor Arterial	--	13 (1.2%)	26 (2.3%)	--	128 (11.4%)
Major Collector	--	--	2 (0.2%)	4 (0.4%)	72 (6.4%)
Minor Collector	--	--	--	--	10 (.9%)
Local	--	--	--	--	93 (8.3%)
Grand Total*	**774** (69%)	**238** (21.2%)	**214** (19.1%)	**36** (3.2%)	**785** (70%)

*(% of crashes that involve at least one street of this classification)

Table 5: All Roadway Intersections in New Mexico by Road Class

Class of Roadways at Intersection	Major Arterial	Minor Arterial	Major Collector	Minor Collector	Local
Major Arterial	0.27%	0.20%	0.33%	0.12%	3.61%
Minor Arterial	--	0.20%	0.31%	0.11%	5.20%
Major Collector	--	--	0.34%	0.16%	7.31%
Minor Collector	--	--	--	0.23%	3.10%
Local	--	--	--	--	78.28%

Speed Limit of Crashes at Intersections

Most pedestrian-involved KA crashes involve at least one road with a speed limit between 30 and 45 mph, see Table 6.

Table 6: Speed limit of Pedestrian KA Crashes at Intersections

Speed Limit of Roadways at Intersection	<20	20–25	30–35	40–45	50+	Unknown
<20	0	--	--	--	--	0
20–25	3 (0.3%)	17 (1.5%)	--	--	--	3 (0.3%)
30–35	28 (2.5%)	115 (10.2%)	322 (28.7%)	--	--	26 (2.3%)
40–45	11 (1.0%)	64 (5.7%)	249 (22.2%)	136 (12.1%)	--	63 (5.6%)
50+	2 (0.2%)	3 (0.3%)	33 (2.9%)	25 (2.2%)	11 (1.0%)	12 (1.1%)
Grand Total*	**44** (3.9%)	**205** (18.3%)	**773** (68.8%)	**548** (48.8%)	**86** (7.7%)	**104** (9.3%)

(% of crashes that involve at least one street of this speed limit)

AADT of Crashes at Intersections

Intersection crashes were most likely to occur between low-volume roads (under 2,000 annual average daily traffic [AADT]) and higher volume roads (Over 10,000 AADT), as shown in Table 7.

Table 7: AADT of Pedestrian KA Crashes at Intersections

AADT of Roadways at Intersection	<2,000	2,000–5,000	5,001–10,000	10,001–20,000	20,001–50,000	>50,000
<2,000	114 (10.2%)	76 (6.8%)	110 (9.8%)	235 (20.9%)	263 (23.4%)	17 (1.5%)
2,000–5,000		3 (0.3%)	21 (1.9%)	40 (3.6%)	38 (3.4%)	5 (0.4%)
5,000–10,000			4 (0.4%)	16 (1.4%)	43 (3.8%)	0
10,000–20,000				13 (1.2%)	98 (8.7%)	0
20,000–50,000					23 (2%)	4 (0.4%)
>50,000						0
Grand Total*	**815** (72.5%)	**183** (16.3%)	**194** (17.3%)	**402** (35.8%)	**469** (41.8%)	**26** (2.3%)

*(% of crashes that involve at least one street of this AADT)

Number of Lanes of Crashes at Intersections

90.4% of pedestrian-involved KA crashes at intersections involve a two-lane road, as shown in Table 8.

Table 8: Lane Count of Intersections – Pedestrian KA Crashes

Total Lane Count of Roadways at Intersections	1	2	3	4	5	6	8
1	1 (.1%)			2 (.2%)		4 (.4%)	
2		309 (27.5%)	4 (0.4%)	351 (31.3%)	19 (1.7%)	318 (28.3%)	15 (1.3%)
4				21 (1.9%)	0	30 (2.7%)	1 (0.1%)
5					0	14 (1.3%)	0
6						34 (3.0%)	0
Grand Total*		**1,016** (90.4%)	**4** (.4%)	**405** (36%)	**33** (2.9%)	**396** (35.6%)	**16** (1.4%)

*(% of crashes that involve at least one street with this number of lanes)

Non-Intersection Crashes

575 pedestrian KA crashes occurred outside of intersections.

Roadway Classification of KA Crashes Not at Intersections

Non-intersection pedestrian-involved KA crashes disproportionately occurred on interstates and major arterials, which together account for two-thirds of these non-intersection crashes, as shown in Table 9

Table 9: Non-Intersection Pedestrian KA Crashes by Roadway Class

Road Class	Number of Crashes	Share of Crashes	% of NM Centerline Miles	% of NM Lane Miles
Interstate	150	26.1%	1.8%	2.9%
Major Arterial	215	37.4%	3.6%	5.7%
Minor Arterial	67	11.7%	4.2%	4.4%
Major Collector	51	8.9%	7.3%	7.2%
Minor Collector	21	3.7%	4.7%	4.5%
Local	71	12.3%	78.2%	75.1%
Unknown	-	-	0.2%	0.02%
Grand Total	575	100%	100%	100%

Speed Limit of Crashes Not at Intersections

Table 10: Pedestrian KA Crashes Not at Intersections by Roadway Speed Limit

Reported Speed Limit	Number of A Crashes	Number of K Crashes	Total	% of KA Crashes	% of Known Speed Crashes	% of NM Centerline Miles	% of NM Lane Miles
<20	1	0	1	0.2%	0.2%	1.6%	1.6%
20–25	8	2	10	1.7%	2.1%	1.5%	1.5%
30–35	86	59	145	25.2%	26.4%	72.7%	70.2%
40–45	47	92	139	24.2%	31.2%	9.5%	9.8%
50+	41	131	172	29.9%	40.1%	12.8%	15.2%
Unknown	33	75	108	18.8%	NA	1.9%	1.8%
Grand Total	**216**	**359**	**575**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: NMDOT Roadways layer and Replica Free Flow Speeds module, 2022. Local roads without speed data were presumed to have a speed limit of 30 MPH.

Pedestrian-involved KA crashes that occur along the roadway (not at an intersection) are most likely to occur on roadways with speed limits of 50 + mph, as shown in Table 10.

Looking only at KA crashes on roads with known speed limits, roads with speed limits above 40 mph represent a disproportionately high percent of KA crashes compared to the share of the state's roadways that have these speed limits. Roads with speed limits between 20 and 25 mph are also slightly overrepresented, but this likely reflects the roads that have higher volumes of pedestrians.

AADT of Crashes Not at Intersections

Roads with 0-2000 AADT represent 86.9% of New Mexico's center line miles across the state, as shown in Table 11. Despite their ubiquity, only 20.2% of pedestrian-involved KA crashes occurred on these low AADT roads. Above 2000 AADT, a clear relationship emerges, the higher the AADT range, the more disproportionate the share of KA crashes is.

Table 11: Roadway AADT of Pedestrian KA Crash Locations

AADT	Number of KA Crashes	% of KA Crashes	% of Centerline Miles in NM	% of Lane Miles in NM
0–2,000	116	20.2%	86.9%	60.7%
2,001–5,000	77	13.4%	3.9%	15.3%
5,001–10,000	87	15.1%	2.0%	9.4%
10,001–20,000	131	22.8%	1.5%	8.0%
>20,000	164	28.5%	0.8%	4.4%
Unknown	-	-	4.9%	2.2%
Grand Total	**575**	**100.0%**	**100.0%**	**100.0%**

Number of Lanes of Crashes Not at Intersections

Crashes along the roadway most frequently occur on two-lane roads, as shown in Table 12. Followed by four-lane roads. This, despite higher AADT correlating with a more disproportionate number of KA crashes. These lower-lane-count roads, are likely to still carry a high number of vehicles per day.

Table 12: Number of Lanes on Roadway for Pedestrian KA Non-Intersection Crashes

Number of Lanes	Number of KA Crashes	% of KA Crashes
1	11	1.9%
2	298	51.8%
3	5	.9%
4	200	34.8%
5	6	1%
6	44	7.7%
10	3	1.2%
12	1	.5%
Grand Total	**575**	**100.0%**

Temporal Frequency and Context

Lighting Conditions

64.4% of pedestrian-involved KA crashes occurred at night, as shown in Table 13. Roughly half of those occurred with street lighting present, half without. 30.2% of crashes occurred in lighting described as "daylight."

Table 13: Lighting Conditions of Pedestrian KA Crashes

Lighting Conditions	Number of KA Crashes	% of KA Crashes
Dark-Lighted	564	**31.3%**
Dark-Not Lighted	596	**33.1%**
Dark-Unknown Lighting	3	**0.2%**
Dawn	20	**1.1%**
Daylight	543	**30.2%**
Dusk	50	**2.8%**
Other	11	**0.6%**
Unknown or Not Reported	13	**0.7%**
Grand Total	**1,800**	**100.0%**

Hour and Day of the Week

KA crashes are most likely to occur between 5 and 9 pm on all days of the week. Within that hour range, Friday and Saturday evenings (again, from 5 to 9pm) are the most likely portion of the week for KA crashes. If divided evenly, one would expect 14.29% of crashes to occur on any given day. 17.1% of crashes occurred on a Friday. 15.9% of crashes occurred on a Saturday. All other days of the week saw between 11.9% and 14.7% of crashes.

Hour and Month

When analyzing time of day by month, the period from 5 to 9pm is the most common for pedestrian-involved KA crashes. 48% of KA crashes occur within this time window. However, an additional pattern emerges where the hour most likely for crashes to occur follows the change in sunset time across the year. In January, crashes are most likely at 6pm. In June, crashes are most likely at 9pm. In December, crashes are most likely at 5pm. The most common time and month for crashes is 7pm in October. Sunset appears to be a large factor in pedestrian-involved KA crashes. This may be due to streetlights turning on later in the twilight hours, making pedestrians less visible, or it may be due to a low hanging sun shining in the eyes of drivers. When analyzing crashes during the 5 to 9pm timeframe, crashes are slightly more likely to occur when the vehicle is traveling West (26.4%), compared to when the vehicle is traveling East (21.6%).

Table 14: Pedestrian KA Crashes by Hour and Month

Count of CID	Month													
Hour of Crash	January	February	March	April	May	June	July	August	September	October	November	December	Grand Total	Percent of KA Crashes
12 a.m.	5	3	4	4	1	8	8	2	6	7	4	3	55	3.1%
1 a.m.	6	4	1	1	1	10	4	6	3	4	2	4	46	2.6%
2 a.m.	5	5	1	4	4	2	4	3	3	5	1	1	38	2.1%
3 a.m.		4	1	2		2	5	4	4	2		1	25	1.4%
4 a.m.	5	3	1	1	3	4	2	3	3		1	1	27	1.5%
5 a.m.	2	3		1	5	3	2	7	2	4	2	5	36	2.0%
6 a.m.	3	3	4			3		2	5	6	5	7	38	2.1%
7 a.m.	6	2	4	4	6		5	2	4	8	2	4	47	2.6%
8 a.m.	7	2	1	2	3	2	1		6	1	1	2	28	1.6%
9 a.m.	6	1	2	2	3	1	3	3	3	2	5	5	36	2.0%
10 a.m.	1	4	1	3	1		4	5	1	3	4	3	30	1.7%
11 a.m.	2	5		2	3	3	7	2	2	6	3	1	36	2.0%
12 p.m.	2		7	5	2	5	4	6	4	5	2	4	46	2.6%
1 p.m.	1	3	6	12	2	2	2	5	9	3	4	5	54	3.0%
2 p.m.	1	3	5	3	2	3	1	5	1	11	2	4	41	2.3%
3 p.m.	4	9	4	3	3	4	2	6	6	3	3	11	58	3.2%
4 p.m.	6	10	4	3	5	3	4	4	7	6	3	9	64	3.6%
5 p.m.	18	14	3	4	2	3	8	6	4	5	20	31	118	6.6%
6 p.m.	30	26	9	3	4	4	6	6	7	8	31	28	162	9.0%
7 p.m.	19	13	22	8	5	7	8	11	25	43	14	19	194	10.8%
8 p.m.	16	13	20	27	18	13	10	17	15	21	18	13	201	11.2%
9 p.m.	11	3	20	15	23	32	22	16	8	13	17	11	191	10.6%
10 p.m.	11	7	12	11	14	11	12	7	17	9	10	6	127	7.1%
11 p.m.	4	10	6	5	16	13	11	7	3	6	12	5	98	5.4%
Left Blank			1						1				2	0.1%
Invalid Code	1			1									2	0.1%
Grand Total	**172**	**150**	**139**	**126**	**126**	**138**	**135**	**135**	**149**	**181**	**166**	**183**	**1800**	**100.0%**
Percent of KA crashes	**9.6%**	**8.3%**	**7.7%**	**7.0%**	**7.0%**	**7.7%**	**7.5%**	**7.5%**	**8.3%**	**10.1%**	**9.2%**	**10.2%**	**100%**	

Day of the Week and Month

The most dangerous months for pedestrians are December, October, and January, as shown in Table 14. Within these months, Fridays are the most dangerous day of the week. The darkness and holidays that occur in these months likely contribute to the higher number of KA crashes. Fridays in October are the most dangerous day of the week of any month.

Behavioral Factors

Alcohol Involvement

Alcohol was not involved in 64.3% of pedestrian-involved KA crashes. In 4.5% of KA crashes, the driver has consumed alcohol. In 33.28% of KA crashes the pedestrian had consumed alcohol. In 2.1% of crashes both the driver and pedestrian had consumed alcohol. It is unclear how officers are determining and reporting pedestrian alcohol involvement-- whether this is on-scene or determined later through testing at the hospital.

Drug Involvement

Drugs were not involved in 86.5% of pedestrian-involved KA crashes. In 1.3% of KA crashes the driver had consumed drugs, in 12.3% the pedestrian, and in 0.1% of KA crashes both the driver and pedestrian had consumed drugs.

Primary Crash Factor

The primary crash factor was unavailable for 29.9% of pedestrian-involved KA crashes. In 44.5% of KA crashes, alcohol or drugs was determined to be the primary crash factor. In 28.7% of crashes, pedestrian error was the primary factor. However, the NMDOT Pedestrian Safety Action Plan specifies that the accuracy of this metric is suspect due to possible challenges in relation to officer reporting of circumstances, as well as it is a broad category that could represent many pedestrian behaviors. The third most likely primary crash factor was driver inattention, which was the primary crash factor in 8.5% of KA crashes.

Crash Analysis

Table 15: Crash Analysis of Pedestrian KA Crashes

Crash Analysis	Number of KA Crashes	% of KA Crashes (with analysis field containing data)
Pedestrian Collision - Vehicle Going Straight	1,137	77.5%
Pedestrian Collision - All Others and Not Known	117	8.0%
Pedestrian Collision - Vehicle Turning Left	99	6.7%
Pedestrian Collision - Vehicle Turning Right	71	4.8%
Pedestrian Collision - Vehicle Backing	35	2.4%
Other	9	0.6%
Grand Total	**1,468**	**100.0%**

The top 5 most reported crash analysis descriptions are listed in Table 15. The crash analysis was left blank, or had an invalid or unrelated code, in 332 of 1800 crash reporting forms. Percents shown in the table are displayed as a fraction of the 1468 crashes with a filled in crash analysis field. The most common crash description in pedestrian-involved KA crashes is that the vehicle was traveling forward and straight at the time of the crash.

Turning Movements

In the majority of pedestrian-involved KA crashes, the direction of travel is described as “straight,” representing 88.5% of KA crashes. KA crashes are slightly more likely for left turns (7.1%) than for right turns (4.4%).

Hit and Run Occurrence

Hit and runs occur in 23% of pedestrian-involved crashes, as shown in Table 16.

Table 16: Hit and Run Pedestrian KA Crashes

Hit and Run	Number of A Crashes	Number of K Crashes	Total	% of KA Crashes
No	754	641	1,395	78%
Yes	217	188	405	23%
Grand Total	**971**	**829**	**1,800**	**100%**

Demographics of Pedestrian Crash Victims

Age of Victim

In Table 17, the age of victims in pedestrian-involved KABC crashes can be seen. People ages 35-49 are the most likely to be involved in a pedestrian-involved crash. However, those ages 25-34 are the most disproportionately likely, in relation to their share of the overall population.

Table 17: Age of Victims in Pedestrian-Involved KABC Crashes

Age	Killed (K)	Suspected Serious Injury (A)	Suspected Minor Injury (B)	Complaint of Injury (C)	No Apparent Injury (O)	Grand Total	% of Pedestrian Crash Victims	2022 Population
0–14	18	57	258	142	43	518	8.1%	19.0%
15–24	91	143	373	332	82	1,021	15.9%	13.3%
25–34	177	187	378	354	94	1,190	18.6%	13.3%
35–49	222	245	448	393	85	1,393	21.7%	18.1%
50–64	224	204	399	380	69	1,276	19.9%	18.9%
65+	102	84	227	141	43	597	9.3%	17.6%
Unknown	4	71	87	99	154	415	6.5%	
Total	838	991	2,170	1,841	570	6,410	100.0%	
% of Grand Total	13.1%	15.5%	33.9%	28.7%	8.9%	100.0%		

However, if involved in a crash, the older someone is, the more severe the outcome, as shown in Table 18. The cells in each column have been color coded from highest to lowest percent to show which age range is the most represented within that crash severity. Those 50 and above are killed in over 17% of crashes they are involved in. For those 0-14, they are killed in only 3.5% of crashes they are involved in.

Table 18: Likelihood of Severity Outcome for Each Age Range – Pedestrian Involved KA Crashes

Age	Killed (K)	% of Age Range Crashes (K)	Suspected Serious Injury (A)	% of Age Range Crashes (A)	Complaint of Injury or Minor Injury	% of Age Range Crashes (B or C)	No Apparent Injury (O)	% of Age Range Crashes (O)	Grand Total
0–14	18	3.5%	57	11.0%	400	77.2%	43	8.3%	518
15–24	91	8.9%	143	14.0%	705	69.0%	82	15.8%	1,021
25–34	177	14.9%	187	15.7%	732	61.5%	94	18.1%	1,190
35–49	222	15.9%	245	17.6%	841	60.4%	85	16.4%	1,393
50–64	224	17.6%	204	16.0%	779	61.1%	69	13.3%	1,276
65+	102	17.1%	84	14.1%	368	61.6%	43	8.3%	597
Unknown	4	1.0%	71	17.1%	186	44.8%	154	29.7%	415
TOTAL	**838**		**991**		**4,011**		**570**	**6,410**	

When looking at just victims of KA crashes, those 35 to 49 are the most disproportionately represented in relation to their share of the population, as shown in Table 19. The second most disproportionately represented is the 25- to 34-year-old age range.

Table 19: Age of Victim in Pedestrian KA Crashes

Age	Killed (K)	Suspected Serious Injury (A)	Grand Total	% of Pedestrian KA Crash Victims	2022 Population %
0–14	18	57	75	4.1%	19.0%
15–24	91	143	234	12.8%	13.3%
25–34	177	187	364	19.9%	13.3%
35–49	222	245	467	25.5%	18.1%
50–64	224	204	428	23.4%	18.9%
65+	102	84	186	10.2%	17.6%
Unknown	4	71	75	4.1%	-
TOTAL	**838**	**991**	**1829**	**100%**	**100%**

Race/Ethnicity of Victim

The race of the pedestrian-involved victim in pedestrian-involved KA crashes was unknown in 13.8% of crashes, as shown in Table 20. Those identifying as Native American/American Indian are by far the most overrepresented in KA crashes in proportion to their share of the overall population. Despite being Native American/American Indian being 11.2% of the New Mexico population, they are 23.1% of vulnerable road user KA crash victims, 26.8% of victims when the "unknown" category is removed. The "other" category is also overrepresented.

Table 20: Race/Ethnicity of Victim in Pedestrian KA Crashes

Race/Ethnicity	Killed (K)	Suspected Serious Injury (A)	Grand Total	% of Pedestrian KA Crash Victims	% of Known Race Pedestrian KA Crash Victims	2022 Population
American Indian/ Alaskan Native	216	207	423	23.1%	26.8%	11.2%
Asian	2	5	7	0.4%	0.4%	2.0%
Black/African American	24	36	60	3.3%	3.8%	2.7%
White	184	259	443	24.2%	28.1%	35.7%
Hispanic (Non-White)	219	226	445	24.3%	28.2%	50.2%
Other	73	126	199	10.9%	12.6%	3.0%
Unknown	120	132	252	13.8%	-	-
Total	**838**	**991**	**1,829**			

Gender

Men are much more likely to be victims in pedestrian-involved KA crashes than women, as shown in Table 21.

Table 21: Gender of Victim in Pedestrian KA Crashes.

Gender	Killed (K)	Suspected Serious Injury (A)	Grand Total	% of Pedestrian-Involved KA Crash Victims
Female	206	294	500	27.3%
Male	632	686	1,318	72.1%
Unknown	-	11	11	0.6%
Grand Total	**838**	**991**	**1,829**	**100.0%**

Driver Residency

Non-Local drivers are not a significant factor in KA crashes, as shown in Table 22.

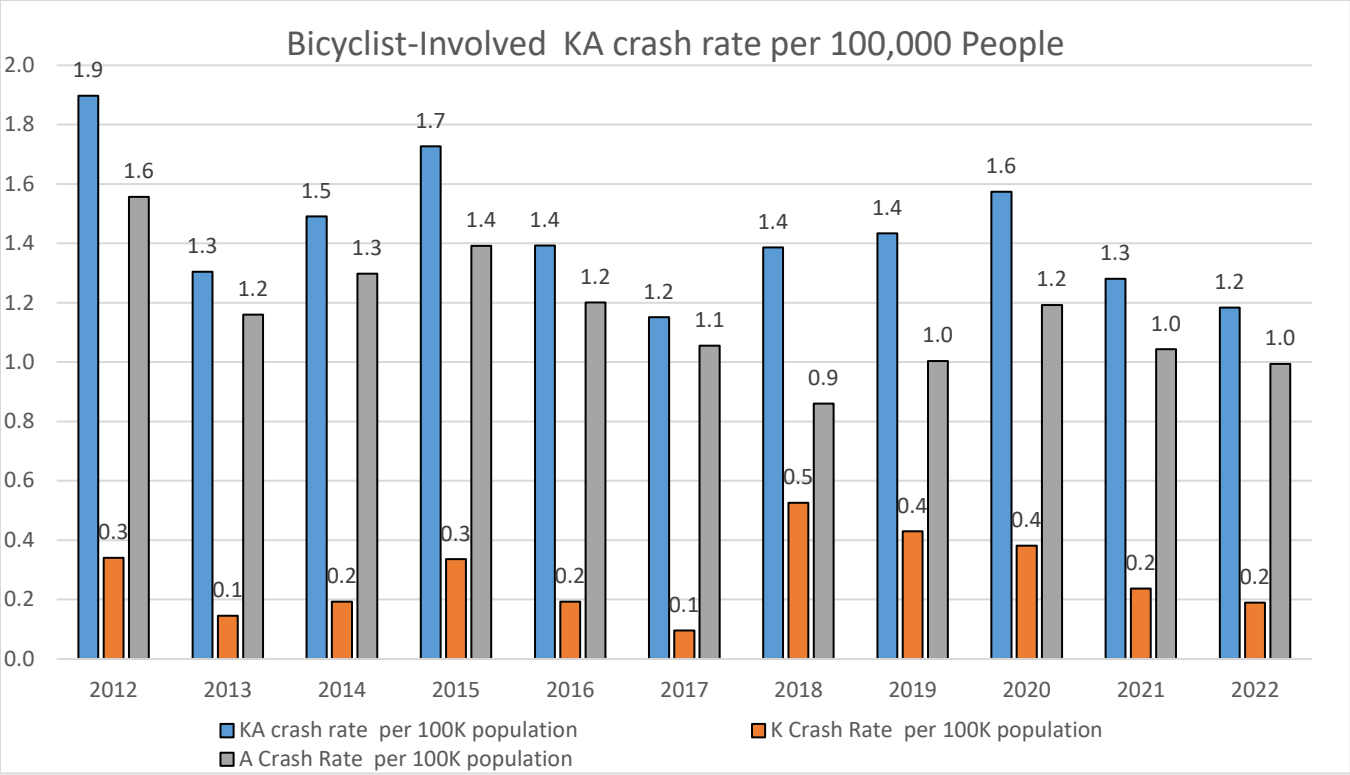
Table 22: Residency of Driver in Pedestrian KA Crashes.

State Residency of Vehicle Drivers	KA Crashes	% of KA Crashes
Both Local and Out of State	158	8.8%
Local Drivers	1,523	84.6%
Not Available	41	2.3%
Out of State	78	4.3%
Grand Total	**1,800**	**100.0%**

Bicyclist

The rate of bicyclist-involved crashes per 100k population has peaked, declined during the COVID-19 pandemic, and is currently rising again, as shown in Figure 6. The 2022 bicyclist-involved crash rate is currently 6.9 (crashes per 100,000 population) below the all-time high in 2019.

Figure 6: Bicyclist-Involved KA Crash Rate



Meanwhile, the rate of bicyclist-involved KA crashes has decreased over time, excepting the 2020 COVID-19 pandemic. At this time, KA crashes rose from 8.1% of all bicyclist-involved crashes, to 12.6% of all crashes. In 2022, KA crashes were 9.3% of all bicyclist-involved crashes.

Crash Locations

Urban or Rural Context

13.3% of bicyclist-Involved KA crashes occurred in a rural context as identified by the University New Mexico during geocoding, using FHWA definitions, per the UNM Crash-level Data Dictionary.

Population Density

Looking at residential population density, KA crashes were most likely to occur in a low population density context, followed by high density. They were least likely to occur in a medium population density setting, as shown in Table 23.

Table 23: Population density of Bicyclist KA Crashes

Severity	High Density	Medium Density	Low Density	(blank)	Grand Total
A	107	68	88	3	266
K	13	16	35		64
Grand Total	**120**	**84**	**123**	**3**	**330**
% of KA Crashes	**36.4%**	**25.5%**	**37.3%**	**0.9%**	**100.0%**

We have defined the population density brackets as:

- High = Greater than 6 people per acre
- Medium = Between 3 and 6 people per acre
- Low = Less than 3 people per acre

Tribal Jurisdiction

Only 1.8% percent of KA collisions occurred on tribal land, as shown in Table 24. The percentage of KA crashes occurring on tribal land is less than would be expected in relation to the percentage of center line miles and population that reside within tribal land. It should be pointed out that many people who are not Native American also live on tribal land. Please review the Race/Ethnicity tables of vulnerable road user crash victims for further context.

Table 24: Tribal Jurisdiction of Bicyclist KA Crashes

Tribal Jurisdiction	Number of A Crashes	Number of K Crashes	Grand Total	% of KA Crashes	% of NM Centerline Miles on Tribal Land	% of NM Lane Miles on Tribal Land	% of NM Population Living on Tribal Land
Not on Tribal Land	261	63	324	98.2%	91.3%	90.9	89.6%
Occurred on Tribal Land	5	1	6	1.8%	8.7%	9.10%	10.4%
Grand Total	**266**	**64**	**330**	100%		100%	

Near Transit

The percentage of pedestrian-involved KA crashes that occurred near transit is highly overrepresented, as shown in Table 25. "Near transit" is defined as within 100 meters of a bus or rail stop. 9.1% of KA crashes occurred near transit. While less than 1% of New Mexico's road network lies within 100 meters of a transit stop.

Table 25: Proximity to Transit: Bicyclist KA Crashes

Near Transit	Number of A Crashes	Number of K Crashes	Grand Total	% of KA Crashes	% of Centerline Miles within 100m of Transit	% of NM Lane Miles within 100m of Transit
No	227	59	286	86.7%	99.1%	99.2%
Yes	39	5	44	13.3%	0.9%	0.8%
Total	**266**	**64**	**330**	**100.0%**	**100.0%**	**100.0%**

Roadway Characteristics

Crash Location within or outside a Roadway

80% of crash reports did not list the precise location within the right-of-way at which the crash occurred. Of the crash reports that did list a location, 90.9% occurred "on roadway." The second most common location for a crash occurrence was "On Shoulder" at 6.1%.

Intersection vs. Non-Intersection

Of 330 bicycle-involved KA crashes, 79% occurred at intersections. 19% occurred on roadways that were not intersections, with the balance occurring off roadways, such as in parking lots, or in locations that could not be determined. To determine this factor, a buffer analysis was conducted in ArcGIS to determine the proximity of a crash to an intersection. Crashes were determined to have occurred at an intersection if they were within 100 feet of the intersection of two roadway line segments.

Intersection Crashes

Intersection Lighting

The majority of crashes at intersections occurred in daylight (70%).

Near a Signalized Intersection

28.7% of all bicyclist-involved KA crashes occurred near a traffic signal. Of crashes at intersections, 36% of were near a signal. "Near" is defined as within 100 feet of a traffic signal, which was the typical length of the approach lanes at a signal. The remaining 64% of intersection crashes occurred at unsignalized intersections.

Roadway Classifications of KA Crashes at Intersections

33% of bicycle-involved KA crashes at intersections occurred at intersections between major arterials and local roads, as shown in Table 26. This follows the same pattern as pedestrian-involved KA crashes, where the intersection of smaller and larger roads is the intersection type with the highest risk. It is possible that in many cases the larger road contains no traffic signal to provide the bicyclist with a safe opportunity to cross and continue their journey on the more minor road.

Table 26: Bicycle KA Crashes at Intersections by Road Class

Class of Roadways at Intersection	Major Arterial	Minor Arterial	Major Collector	Minor Collector	Local
Major Arterial	16 (6.2%)	11 (4.2%)	14 (5.4%)	7 (2.7%)	87 (33.5%)
Minor Arterial	--	8 (3.1%)	8 (3.1%)	--	44 (16.9%)
Major Collector	--	--	1 (0.4%)	--	29 (11.2%)
Minor Collector	--	--	----	--	2 (0.8%)
Local	--	----	--	--	33 (12.7%)
Grand Total*	**135** (51.9%)	**71** (27.3%)	**52** (20%)	**9** (3.5%)	**195** (75%)

*(% of crashes that involve at least one street with this classification)

In contrast, 78% of intersections in the state are between two local roads, as shown in Table 27.

Table 27: All Roadway Intersections by Road Class

Class of Roadways at Intersection	Major Arterial	Minor Arterial	Major Collector	Minor Collector	Local
Major Arterial	0.27%	0.20%	0.33%	0.12%	3.61%
Minor Arterial	--	0.20%	0.31%	0.11%	5.20%
Major Collector	--	--	0.34%	0.16%	7.31%
Minor Collector	--	--	--	0.23%	3.10%
Local	--	--	--	--	78.3%

Speed Limit of Crashes at Intersections

Table 28: Bike KA Crashes at Intersections by Speed Limit

Speed Limit of Roadways at Intersection	<20	20–25	30–35	40–45	50+	Unknown
<20	0	0	13 (5%)	1 (0.4%)	0	0
20–25		1 (0.4%)	37 (14.2%)	16 (6.2%)	2 (0.8%)	0
30–35			91 (35%)	48 (18.5%)	5 (1.9%)	6 (2.3%)
40–45				24 (9.2%)	2 (0.8%)	5 (1.9%)
50+					6 (2.3%)	3 (1.1%)
Grand Total*	**14** (5.4%)	**56** (21.5%)	**200** (76.9%)	**96** (36.9%)	**18** (6.9%)	**14** (5.4%)

***(% of crashes that involve at least one street with this speed limit)

AADT of Crashes at Intersections

Table 29: Bicyclist KA Crashes at Intersections by AADT

AADT of Roadways at Intersection	<2,000	2,000–5,000	5,000–10,000	10,000–20,000	20,000–50,000	>50,000
<2,000	49 (18.8%)	22 (8.5%)	26 (10%)	54 (20.8%)	48 (18.5%)	3 (1.2%)
2,000–5,000		0	3 (1.2%)	1 (0.4%)	10 (3.8%)	0
5,000–10,000			2 (0.8%)	10 (3.8%)	8 (3.1%)	0
10,000–20,000				4 (1.5%)	19 (7.3%)	0
20,000–50,000					1 (0.4%)	0
>50,000						0
Grand Total*	**202** (77.7%)	**36** (13.8%)	**49** (18.8%)	**88** (33.8%)	**86** (33%)	**3** (1.1%)

*(% of crashes that involve at least one street with this AADT)

The intersection of low AADT roadways (below 2,000 AADT) and high AADT roadways (above 10,000 AADT) is the intersection type with the highest risk, as shown in Table 29. This correlates with the findings from the roadway classification table. Fully 77.7% of bicyclist-involved KA crashes occur at an intersection with a roadway with an AADT below 2,000.

Number of Lanes of Crashes at Intersections

Table 30: Number of Lanes at Intersection Crashes – Bicyclist KA Crashes

Lane Count of Roadways at Intersection	1	2	4	5	6	7	8
2	--	102 (39.2%)	95 (36.5%)	5 (1.9%)	36 (13.8%)	1 (0.4%)	1 (0.4%)
4	--	--	4 (1.5%)	0	7 (2.7%)	0	0
5	--	--	--	0	1 (0.4%)	0	0
6	1 (.4%)	--	--	--	6 (2.3%)	0	1 (0.4%)
Grand Total*	**1** (.4%)	**240** (92.3%)	**106** (40.8%)	**6** (2.3%)	**52** (20%)	**1** (.4%)	**2** (.8%)

*(% of crashes that involve at least one street with this number of lanes)

Non-Intersection Crashes

63 bicycle KA crashes occurred on roadways that were not intersections.

Roadway Classification of KA Crashes Not at Intersections

Non-intersection crashes disproportionately occurred on major and minor arterials, which together account for 63% of bicyclist KA crashes. Two KA crashes occurred on interstates, as shown in Table 31

Table 31: Non-Intersection Bicycle KA Crashes by Roadway Class

Road Class	Number of Crashes	Share of Crashes	% of NM Centerline Miles	% of NM Lane Miles
Interstate	2	3.2%	1.8%	2.9%
Major Arterial	28	44.4%	3.6%	5.7%
Minor Arterial	12	19.0%	4.2%	4.4%
Major Collector	10	15.9%	7.3%	7.2%
Minor Collector	4	6.3%	4.7%	4.5%
Local	7	11.1%	78.2%	75.1%
Unknown	0	0	0.2%	0.02%
Total	**63**	**100%**	**100%**	**100%**

Speed Limit of Crashes Not at Intersections

Table 32: Non-intersection Bicyclist KA Crashes – Speed Limit

Reported Speed Limit	Number of A Crashes	Number of K Crashes	Grand Total	% of KA Crashes	% of NM Centerline Miles	% of NM Lane Miles
<20	**0**	**0**	**0**	**0%**	1.6%	1.6%
20–25	2	2	4	6.3%	1.5%	1.5%
30–35	17	3	20	31.7%	72.7%	70.2%
40–45	10	5	15	23.8%	9.5%	9.8%
50+	8	10	18	28.6%	12.8%	15.2%
Unknown	4	2	6	9.5%	1.9%	1.8%
Total	**41**	**22**	**63**	**100.0%**	**100.0%**	**100.0%**

Source: Replica Free Flow Speeds module, 2022.

As shown in Table 32, Bicyclist-involved KA crashes are most likely to occur on roadways with speed limits of 30-35 mph, but the share of crashes on these roads is low compared to their proportion of centerline miles in the state. Despite serious injuries and deaths being more likely the higher a road's speed limit, roads with limits of 30-35 mph are more likely to host commercial, residential, and/or bicyclist activity than roads of higher speed limits.

Roads with speed limits above 40 mph represent a disproportionately high percent of KA crashes compared to the share of the state's roadways that have these speed limits. While bike volumes tend to be higher on lower-speed roads, some cyclists may have little choice but to travel on higher-speed roads to reach their destinations.

AADT of Crashes Not at Intersections

Roads with 0-2000 AADT represent 86.9% of New Mexico's center line miles across the state, as shown in Table 33. Despite their ubiquity, only 22% of KA crashes occurred on these low AADT roads. Roads with an AADT of 10,001-20,000 have the most disproportionate share of bicyclist-involved KA crashes. Many more KA crashes (24%) occur on these roads than their share of center line miles (1.5%) would predict.

Table 33: AADT of roadways of Bicyclist KA Crashes

AADT	Number of A Crashes	Number of K Crashes	Grand Total	% of KA Crashes	% of Centerline Miles in NM	% of Lane Miles in NM
0–2,000	9	5	14	22.2%	86.9%	60.7%
2,001–5,000	9	5	14	22.2%	3.9%	15.3%
5,001–10,000	12	2	14	22.2%	2.0%	9.4%
10,001–20,000	6	9	15	23.8%	1.5%	8.0%
>20,000	5	1	6	9.5%	0.8%	4.4%
Unknown	0	0	0	0	4.9%	2.2%
Total	**41**	**22**	**63**	**100.0%**	**100.0%**	**100.0%**

Number of Lanes of Crashes Not at Intersections

Most bicycle-involved KA crashes that occurred outside of intersections were on roads with two lanes, as shown in Table 34.

Table 34: Number of Lanes for Bicycle KA Crashes Not at Intersections

Number of Lanes	Number of KA Crashes	% of KA Crashes
1	1	1.6%
2	38	60.3%
3	1	1.6%
4	21	33.3%
6	1	1.6%
8	1	1.6%
Grand Total	**63**	**100%**

Temporal Frequency and Context

Lighting Conditions

67.6% of bicyclist-involved KA crashes occurred in daylight, as shown in Table 35. Of nighttime crashes, 61.2% occurred where street lighting was present.

Table 34: Lighting Conditions of Bicyclist KA Crashes

Lighting Conditions	KA Crashes	% of KA Crashes
Dark-Lighted	52	**15.8%**
Dark-Not Lighted	33	**10.0%**
Dawn	6	**1.8%**
Daylight	223	**67.6%**
Dusk	13	**3.9%**
Other	1	**0.3%**
Unknown or Not Reported	2	**0.6%**
Grand Total	**330**	**100.0%**

Hour and Day of the Week

Bicyclist-involved KA crashes are more evenly distributed throughout the day and time than pedestrian-involved KA crashes. Bicyclist-involved KA crashes appear to follow more commuter 9-5 workweek patterns than pedestrian-involved KA crashes. Bicyclist-involved KA crashes occur the most at 7am (7.9%), 6pm (7.9%), 7pm (7.9%), 5pm (7.3%). The most common days of the week to ride are Tuesday (18.2%), Thursday and Friday (16.4% each). If divided evenly, one would expect 14.29% of crashes to occur on any given day, and 4.17% of crashes to occur at any given hour of the day. The most common time and day of the week for crashes, with seven crashes each, were:

- Wednesday at 7am and 6pm
- Tuesday at Noon, 3pm, and 5pm
- Friday at 7pm.

Hour and Month

Bicyclist-involved KA crashes do not display the same distinct crash pattern related to sunset as do pedestrian-involved KA crashes. There is a slight pattern in the months of July through October, where the most crashes per hour roughly increase from 8pm in July to 6pm in October. However, the patten is much less concentrated than with pedestrian-involved KA crashes. This is due to bicyclist-involved crashes being much more concentrated in the warm months. The months that see the most KA crashes are June through August. The months with the fewest KA crashes are November through February. The month and time with the highest number of KA crashes is 7am in August, with seven crashes.

Day of the Week and Month

During the summer months (May-August), bicyclist-involved KA crashes are concentrated on Monday through Friday. This indicates that many people bike to work in New Mexico by choice when the weather is more pleasant.

Behavioral Factors

Alcohol Involvement

Alcohol was not involved in 94.5% of bicyclist-involved KA crashes. In 4.4% of KA crashes, the driver had imbibed alcohol. In 1.2% of KA crashes the bicyclist had imbibed alcohol. In.09% of crashes both the driver and pedestrian had imbibed alcohol.

Drug Involvement

Drugs were not involved in 9.3% of pedestrian-involved KA crashes. In 1.5% of KA crashes the driver had consumed drugs, and in.7% the bicyclist had.

Primary Crash Factor

The primary crash factor was unavailable or “none” for 33% of bicyclist-involved KA crashes. The number one primary factor in a bicyclist-involved KA crash was “driver inattention,” representing 22.6% of crashes where a primary crash factor was provided. In 19% of (known primary factor) KA crashes, alcohol or drugs was determined to be the primary crash factor. In 17.2% of (known primary factor) KA crashes “failed to yield right-of-way” was the primary factor.

Crash Analysis

The top 5 most reported crash analysis descriptions are listed in Table 36. The crash analysis was left blank, or had an invalid or unrelated code, in 52 of 330 crash reporting forms. Percents shown in the table are displayed as a fraction of the 278 crashes with a filled in crash analysis field. The most common crash description in bicyclist-involved KA crashes is that the vehicle struck the bicyclist at an angle.

Table 36: Crash Analysis of Bicyclist KA Crashes

Crash Analysis	Number of KA Crashes	% of KA Crashes (with analysis field containing data)
Vehicle Struck Pedalcyclist at Angle	136	48.9%
Pedalcyclist Struck Vehicle	56	20.1%
Vehicle Struck Pedalcyclist from Behind	54	19.4%
Vehicle Struck Pedalcyclist Head On	19	6.8%
Pedalcyclist Collision - Unknown/All Other	13	4.7%
Grand Total	**278**	**100%**

Turning Movements

In the majority of bicyclist-involved KA crashes, the direction of travel of the vehicle is described as “straight,” representing 73.4% of KA crashes. KA crashes are slightly more likely for right turns (14.3%) than for left turns (12.4%).

Hit and Run Occurrence

Hit and runs occur in 16.1% of bicyclist-involved KA crashes, as shown in Table 37.

Table 37: Hit and Runs in Bicyclist KA Crashes

Hit and Run	Number of A Crashes	Number of K Crashes	Grand Total	% of KA Crashes
No	224	53	277	83.9%
Yes	42	11	53	16.1%
Grand Total	**266**	**64**	**330**	**100%**

Presence of a Bicycle Facility

In 95.2% of KA crashes, the bicyclist was not riding on a road with a bicycle facility. As bicycle facilities are not present on most roads, this proportion is expected.

Demographics of Bicyclists-Involved KA Crash Victims

Age of Victim

In Table 38, the most likely outcome of a crash can be seen for people of the different age ranges. People ages 35-49 are the most likely to be involved in a bicyclist-involved crash. Those aged 25-34 are the most disproportionately likely to be involved in a bicyclist-involved crash, in relation to their share of the overall population.

Table 38: Age of Victim in Bicyclist KABC Crashes

Age	Killed (K)	Suspected Serious Injury (A)	Suspected Minor Injury (B)	Complaint of Injury (C)	No Apparent Injury (O)	Grand Total	% of Bicyclist Crash Victims	2022 Population
0–14	3	21	194	98	46	362	**9.9%**	19.0%
15–24	3	38	319	222	103	685	**18.7%**	13.3%
25–34	12	42	328	224	81	687	**18.8%**	13.3%
35–49	15	63	319	249	87	733	**20.0%**	18.1%
50–64	17	71	319	246	79	732	**20.0%**	18.9%
65+	14	24	92	63	20	213	**5.8%**	17.6%
Unknown		7	29	44	170	250	**6.8%**	
Total	**64**	**266**	**1,600**	**1,146**	**586**	**3,662**	**100.0%**	
% of Total	1.7%	7.3%	43.7%	31.3%	16.0%	100.0%		

If involved in a crash, the older someone is, the more severe the outcome, as shown in Table 39. The cells in each column have been colored from red (most likely) or green (least likely). Those 65 and above are killed in over 6.6% of crashes in which they are involved. For those under 24, they are killed in less than 1% of crashes in which they are involved.

Table 39: Age Representation for Bicyclist Crash Severity Outcomes.

Age	Killed (K)	% of Age Range Crashes (K)	Suspected Serious Injury (A)	% of Age Range Crashes (A)	Complaint of Injury or Minor Injury	% of Age Range Crashes (B or C)	No Apparent Injury (O)	% of Age Range Crashes (O)	Grand Total
0–14	**3**	0.8%	**21**	5.8%	292	80.7%	**46**	**12.7%**	**518**
15–24	**3**	0.4%	**38**	5.5%	541	79.0%	**103**	**15.0%**	**1,021**
25–34	**12**	1.7%	**42**	6.1%	552	80.3%	**81**	**11.8%**	**1,190**
35–49	**15**	2.0%	**63**	8.6%	568	77.5%	**87**	**11.9%**	**1,393**
50–64	**17**	2.3%	**71**	9.7%	565	77.2%	**79**	**10.8%**	**1,276**
65+	14	6.6%	24	11.3%	155	72.8%	20	**9.4%**	**597**
Unknown		0.0%	**7**	2.8%	73	29.2%	**170**	**68.0%**	**415**
TOTAL	64	1.7%	266	7.3%	2,746	75%	**586**	**16%**	3,662

When looking at just victims of KA crashes, as shown in Table 40, those 50-64 are the most disproportionately represented in relation to their share of the population. The second most disproportionately represented is the 35- to 49-year-old age range.

Table 40: Age of Victim in Bicyclist KA Crashes

Age	Killed (K)	Suspected Serious Injury (A)	Grand Total	% of Bicyclist KA Crash Victims	2022 Population %
0–14	3	21	24	**7.3%**	**19.0%**
15–24	3	38	41	**12.4%**	**13.3%**
25–34	12	42	54	**16.4%**	**13.3%**
35–49	15	63	78	**23.6%**	**18.1%**
50–64	17	71	88	**26.7%**	**18.9%**
65+	14	24	38	**11.5%**	**17.6%**
Unknown	0	7	7	**2.1%**	-
TOTAL	**64**	**266**	**330**		

Race/Ethnicity of Victim

The race of the bicyclist victim in bicyclist-involved KA crashes was unknown in 7.9% of crashes, as shown in Table 41. Those identifying as White are by far the most overrepresented in KA crashes in proportion to their share of the overall population. Despite being 35.7 %of the New Mexico population, they are 44.8% of bicyclist KA crash victims. The "other" category is also overrepresented. It is unclear, which demographic group(s) this would most likely refer to in New Mexico.

Table 41: Race/Ethnicity of Victim in Bicyclist KA Crashes

Race/Ethnicity	Killed (K)	Suspected Serious Injury (A)	Grand Total	% of Bicyclist KA Crash Victims	2022 Population
American Indian/Alaskan Native	3	24	27	8.2%	11.2%
Asian	3	1	4	1.2%	2.0%
Black/African American	1	8	9	2.7%	2.7%
White	27	121	148	44.8%	35.7%
Hispanic (Non-White)	21	61	82	24.8%	50.2%
Other	5	29	34	10.3%	3.0%
Unknown	4	22	26	7.9%	-
Total	**64**	**266**	**330**		

Gender

Men are over 5 times more likely to be victims in bicyclist-involved KA crashes than women, as shown in Table 42.

Table 42: Gender of Victim in Bicyclist KA Crashes.

Gender	Killed (K)	Suspected Serious Injury (A)	Grand Total	% of Bicyclist KA Crash Victims
Female	2	49	51	15.5%
Male	62	214	276	83.6%
Unknown	0	3	3	0.9%
Grand Total	**64**	**266**	**330**	**100.0%**

Driver Residency

Non-Local drivers are not a significant factor in KA crashes, as shown in Table 43.

Table 43: Residency of Driver in Bicyclist KA Crashes.

State Residency of Driver	KA Crashes	% of KA Crashes
Both Local and Out of State	17	5.2%
Local Drivers	303	91.8%
Not Available	3	0.9%
Out of State	7	2.1%
Grand Total	**330**	**100.0%**

NMDOT VRU Safety Assessment Appendix D: Prioritized Intersections and Corridors

New Mexico Department of Transportation

NMDOT Vulnerable Road User Assessment
November 6, 2023

NMDOT
NEW MEXICO DEPARTMENT OF TRANSPORTATION

Top 10% of Prioritized Intersections Along the HIN

APPENDIX D

Top 10% Prioritized Intersections

Rank	First road name	Second road name	City	County	MPO or RTPO	NMDOT District	Ownership Detail	VRU Priority Ranking Score	Equity Score	Crash Severity Index	VRU injury crash (KABC) count	Bike KA crash count	Ped KA crash count	Typology
1	California Street Northeast	Central Avenue Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9889	0.7636	72	7	1	6	UI Major
2	Central Avenue Southeast	Louisiana Boulevard Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9829	0.7081	89	38	4	34	UI Major
3	San Pablo Street Northeast	Central Avenue Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9812	0.7062	82	9	2	7	UI Major
4	Central Avenue Northwest	60th Street Northwest	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9803	0.7197	64	14	2	12	UI Major
5	Pennsylvania Street Southeast	Central Avenue Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9799	0.7597	55	20	2	18	UI Major
6	Dallas Street Southeast	Central Avenue Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9751	0.7062	59	9	1	8	UI Major
7	Charleston Street Southeast	Central Avenue Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9737	0.7062	56	17	4	13	UI Major
8	Dallas Street Southeast	Zuni Road Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9697	0.7565	43	5	0	5	UI Major
9	63rd Street Northwest	Central Avenue Southwest	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9681	0.7197	45	7	0	7	UI Major
10	Trumbull Avenue Southeast	Louisiana Boulevard Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9659	0.6797	56	10	1	9	UI Major
11	Coors Boulevard Northwest	Avalon Road Northwest	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.9580	0.6473	110	14	1	13	UI Major
12	Tennessee Street Northeast	Central Avenue Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9561	0.7151	35	8	1	7	UI Major
13	Continental Loop Southeast	Louisiana Boulevard Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9535	0.6666	46	4	0	4	UI Major
14	Wyoming Boulevard Southeast	Central Avenue Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9531	0.6307	85	34	4	30	UI Major
15	Rail Runner Avenue	Spartan Alley	Bernalillo	Sandoval	Mid-Region MPO	3	NMDOT	0.9503	0.6949	34	7	0	7	UI Major
16	Central Avenue Northeast	Florida Street Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9467	0.7636	27	8	2	6	UI Major
17	San Pedro Boulevard Southeast	Central Avenue NE	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9441	0.6317	50	12	2	10	UI Major
18	I-40	2nd Street Northwest	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.9423	0.6129	59	13	1	12	UI Major
19	Central Avenue Northeast	Indiana Street Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9418	0.7636	26	7	2	5	UI Major
20	Wisconsin Street Southeast	Central Avenue Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9403	0.6704	33	10	0	10	UI Major
21	Rhode Island Street Northeast	Central Avenue Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9401	0.7597	26	7	1	6	UI Major

APPENDIX D

Top 10% Prioritized Intersections

Rank	First road name	Second road name	City	County	MPO or RTPO	NMDOT District	Ownership Detail	VRU Priority Ranking Score	Equity Score	Crash Severity Index	VRU injury crash (KABC) count	Bike KA crash count	Ped KA crash count	Typology
22	Richmond Drive Northeast	Candelaria Road Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9362	0.6479	41	3	1	2	UI Major
23	Texas Street Northeast	Central Avenue Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9361	0.6704	31	11	2	9	UI Major
24	Montgomery Boulevard Northeast	I-25 / Pan American Freeway Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.9358	0.6296	44	6	2	4	UI Major
25	Alvarado Drive Southeast	Zuni Road Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9341	0.6098	47	9	3	6	UI Major
26	Goff Boulevard Southwest	Bridge Boulevard Southwest	Albuquerque	Bernalillo	Mid-Region MPO	3	Bernalillo County	0.9333	0.6697	30	7	3	4	UI Major
27	Conchas Street Southeast	Central Avenue Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9302	0.5708	78	13	0	13	UI Major
28	Acoma Road Southeast	San Pedro Boulevard Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9291	0.7284	25	6	1	5	UI Major
29	Kathryn Avenue Southeast	Louisiana Boulevard Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9288	0.6506	32	13	3	10	UI Major
30	San Pedro Drive Northeast	Copper Avenue Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9284	0.6010	45	3	0	3	UI Major
31	Mountain Road Northwest	3rd Street Northwest	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9272	0.6626	29	10	4	6	UI Minor
32	Charleston Street Southeast	Zuni Road Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9265	0.7565	24	5	1	4	UI Major
33	Mesilla Street Northeast	Central Avenue Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9263	0.6526	31	8	2	6	UI Major
34	General Bradley Street Northeast	Central Avenue Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9263	0.6108	41	3	0	3	UI Major
35	General Marshall Street Northeast	Central Avenue Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9263	0.6108	41	3	0	3	UI Major
36	East Foster Road	El Paseo Road	Las Cruces	Dona Ana	Las Cruces MPO	1	City of Las Cruces	0.9261	0.6700	27	4	1	3	UI Major
37	Atrisco Drive Northwest	Central Avenue Southwest	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9240	0.5817	48	17	5	12	UI Major
38	East Snyder Street	North Marland Boulevard	Hobbs	Lea	Southeast RTPO	2	NMDOT	0.9227	0.8153	22	3	0	3	UI Major
39	Calle Ranchitos	North Riverside Drive	Espanola	Rio Arriba	Northern Pueblos RTPO	5	NMDOT	0.9225	0.6496	30	3	0	3	UI Major
40	Española Street Southeast	Zuni Road Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9218	0.6902	25	2	0	2	UI Major
41	Rio Bravo Boulevard Southwest	Isleta Boulevard Southwest	unincorporated	Bernalillo	Mid-Region MPO	3	NMDOT	0.9209	0.6143	34	7	3	4	RI Major

APPENDIX D

Top 10% Prioritized Intersections

Rank	First road name	Second road name	City	County	MPO or RTPO	NMDOT District	Ownership Detail	VRU Priority Ranking Score	Equity Score	Crash Severity Index	VRU injury crash (KABC) count	Bike KA crash count	Ped KA crash count	Typology
42	Española Street Northeast	Central Avenue Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9203	0.6526	28	12	3	9	UI Major
43	Zafarano Drive	Cerrillos Road	Santa Fe	Santa Fe	Santa Fe MPO	5	NMDOT	0.9187	0.5977	40	13	6	7	UI Major
44	Calle del Cielo	Cerrillos Road	Santa Fe	Santa Fe	Santa Fe MPO	5	NMDOT	0.9185	0.5735	46	8	3	5	UI Major
45	Richards Avenue	Cerrillos Road	Santa Fe	Santa Fe	Santa Fe MPO	5	NMDOT	0.9185	0.5758	45	18	10	8	UI Major
46	Barcelona Road Southwest	Isleta Boulevard Southwest	unincorporated	Bernalillo	Mid-Region MPO	3	Bernalillo County	0.9151	0.7604	22	3	2	1	RI Major
47	Iliff Road Northwest	Coors Boulevard Northwest	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.9132	0.5436	94	17	2	15	UI Major
48	Airport Drive Northwest	Central Avenue Southwest	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9119	0.6455	27	4	0	4	UI Major
49	North 9th Street	West Lincoln Avenue	Gallup	McKinley	Northwest RTPO	6	NMDOT	0.9102	0.7247	22	3	0	3	UI Minor
50	Maloney Avenue	US 491	Gallup	McKinley	Northwest RTPO	6	NMDOT	0.9076	0.5904	33	6	2	4	UI Major
51	Arenal Road Southwest	Coors Boulevard Southwest	unincorporated	Bernalillo	Mid-Region MPO	3	NMDOT	0.9072	0.5953	31	4	2	2	RI Major
52	4th Street Northwest	Lomas Boulevard Northwest	Albuquerque	Bernalillo	Mid-Region MPO	3	Bernalillo County	0.9054	0.5507	48	13	2	11	UI Major
53	Trumbull Avenue Southeast	Wyoming Boulevard Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9036	0.6251	26	3	2	1	UI Major
54	Rosendo Court Southwest	Isleta Boulevard Southwest	unincorporated	Bernalillo	Mid-Region MPO	3	Bernalillo County	0.9017	0.7604	21	2	0	2	RI Major
55	US 491	Jefferson Avenue	Gallup	McKinley	Northwest RTPO	6	NMDOT	0.8974	0.5904	28	8	0	8	UI Major
56	Virginia Street Southeast	Central Avenue Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8961	0.6704	22	3	0	3	UI Major
57	Silver Avenue Southeast	San Mateo Boulevard Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8921	0.5350	44	6	1	5	UI Major
58	Espejo Street Northeast	Central Avenue Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8911	0.5708	28	5	1	4	UI Major
59	Unser Boulevard Northwest	Bluewater Road Northwest	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.8870	0.5299	43	5	2	3	UI Major
60	US 285/84	Private Drive 1525	unincorporated	Rio Arriba	Northern Pueblos RTPO	5	NMDOT	0.8870	0.6855	21	2	0	2	RI Major
61	East Amador Avenue	South Espina Street	Las Cruces	Dona Ana	Las Cruces MPO	1	City of Las Cruces	0.8869	0.6550	22	3	1	2	UI Minor
62	Ross Avenue Southeast	Yale Boulevard Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8835	0.5511	31	4	1	3	UI Major
63	I-25	I-40	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.8835	0.4957	60	3	0	3	UI Major
64	Highland Avenue Southeast	San Mateo Boulevard Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8833	0.5350	37	10	1	9	UI Major
65	South Saint Francis Drive	West San Mateo Road	Santa Fe	Santa Fe	Santa Fe MPO	5	NMDOT	0.8832	0.5281	41	3	1	2	UI Major
66	Dorado Place Southeast	Central Avenue Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8823	0.4968	57	11	0	11	UI Major

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Top 10% Prioritized Intersections

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67	General Chennault Street Northeast	Zuni Road Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8811	0.6108	23	4	1	3	UI Major
68	Sunstar Boulevard Southwest	Rio Bravo Boulevard Southwest	unincorporated	Bernalillo	Mid-Region MPO	3	NMDOT	0.8811	0.5285	40	2	0	2	RI Major
69	Eubank Boulevard Southeast	Central Avenue Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8810	0.5052	47	20	3	17	UI Major
70	North Norris Street	US 60	Clovis	Curry	Southeast RTPO	2	NMDOT	0.8808	0.5877	25	2	0	2	UI Major
71	Montgomery Boulevard Northeast	Carlisle Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8801	0.4834	64	14	2	12	UI Major
72	Hazeldine Avenue Southeast	Broadway Boulevard Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.8794	0.6646	21	2	0	2	UI Major
73	Valencia Drive Northeast	Central Avenue Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8780	0.5658	26	7	3	4	UI Major
74	Indian School Road Northeast	San Pedro Drive Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8779	0.4821	62	5	2	3	UI Major
75	Central Avenue SE	San Mateo Boulevard Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8774	0.4695	114	44	5	39	UI Major
76	Cerrillos Road	Camino Consuelo	Santa Fe	Santa Fe	Santa Fe MPO	5	NMDOT	0.8769	0.6005	23	4	0	4	UI Major
77	Copper Avenue Northeast	Wyoming Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8762	0.6193	22	3	1	2	UI Major
78	Sunset Road Southwest	Central Avenue Northwest	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8744	0.6121	22	3	0	3	UI Major
79	US 64	Road 6500	Kirtland	San Juan	Farmington MPO	5	NMDOT	0.8735	0.5017	43	5	1	4	UI Major
80	Coors Boulevard Southwest	Las Estancias Drive Southwest	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.8718	0.5083	40	2	0	2	UI Major
81	Coal Avenue Southwest	2nd Street Southwest	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8711	0.5539	26	3	1	2	UI Major
82	Coors Boulevard Northwest	Sequoia Road Northwest	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.8711	0.4645	64	14	1	13	UI Major
83	Coors Boulevard Southwest	Gonzales Road Southwest	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.8705	0.6024	22	3	0	3	UI Major
84	Richmond Drive Northeast	Menaul Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8699	0.6479	21	2	1	1	UI Major
85	98th Street Northwest	Central Avenue Southwest	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8684	0.4963	41	10	1	9	UI Major
86	Carlisle Boulevard Northeast	Menaul Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8682	0.5113	34	7	1	6	UI Major
87	Coors Boulevard Northwest	Ouray Road Northwest	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.8674	0.5233	31	8	4	4	UI Major
88	Wyoming Boulevard Northeast	I-40	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.8665	0.4844	44	6	2	4	UI Major
89	Barcelona Road Southwest	Coors Boulevard Southwest	unincorporated	Bernalillo	Mid-Region MPO	3	NMDOT	0.8645	0.6227	21	2	0	2	RI Major

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Top 10% Prioritized Intersections

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90	Lomas Boulevard Northeast	Broadway Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.8637	0.5437	26	7	5	2	UI Major
91	Girard Boulevard Southeast	Gibson Boulevard Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8635	0.4783	44	6	1	5	UI Major
92	US 491	Navajo Route 5011	unincorporated	San Juan	Northwest RTPO	5	NMDOT	0.8631	0.8099	20	1	0	1	RI Minor
93	Brooks Street	Paseo del Pueblo Norte	Taos	Taos	Northern Pueblos RTPO	5	NMDOT	0.8627	0.6189	21	2	1	1	UI Major
94	Iule Street	NM 53	unincorporated	McKinley	Northwest RTPO	6	NMDOT	0.8627	0.8078	20	1	0	1	RI Minor
95	North Turner Street	East Sanger Street	Hobbs	Lea	Southeast RTPO	2	City of Hobbs	0.8607	0.5664	23	4	0	4	UI Major
96	Alvarado Drive Southeast	Central Avenue NE	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8603	0.5658	23	15	7	8	UI Major
97	US 491	Tohlaki RD	unincorporated	McKinley	Northwest RTPO	6	NMDOT	0.8597	0.7940	20	1	0	1	RI Major
98	Zuni Road Southeast	Madeira Drive Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8596	0.6098	21	2	0	2	UI Major
99	Rio Bravo Boulevard Southwest	2nd Street Southwest	unincorporated	Bernalillo	Mid-Region MPO	3	NMDOT	0.8595	0.5494	25	6	4	2	RI Major
100	Montgomery Boulevard Northeast	San Mateo Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8587	0.4449	68	37	7	30	UI Major
101	Carlisle Boulevard Northeast	I-40	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.8585	0.4500	61	4	1	3	UI Major
102	US 491	Navajo Route 30	unincorporated	McKinley	Northwest RTPO	6	NMDOT	0.8575	0.7643	20	1	0	1	RI Major
103	Paseo del Canon West	Paseo del Pueblo Sur	Taos	Taos	Northern Pueblos RTPO	5	NMDOT	0.8567	0.5707	22	3	1	2	UI Major
104	Floyd Lane	Paseo del Pueblo Sur	Taos	Taos	Northern Pueblos RTPO	5	NMDOT	0.8561	0.5693	22	3	1	2	UI Major
105	Saunders Road Southwest	Isleta Boulevard Southwest	unincorporated	Bernalillo	Mid-Region MPO	3	Bernalillo County	0.8561	0.7604	20	1	0	1	RI Major
106	Fortuna Road Northwest	Coors Boulevard Northwest	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.8555	0.5419	25	6	2	4	UI Major
107	3rd Street Northwest	Lomas Boulevard Northwest	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8549	0.5507	24	12	3	9	UI Major
108	Navajo Route 9	Standing Rock - Housing Road	unincorporated	McKinley	Northwest RTPO	6	Tribe	0.8546	0.7500	20	1	0	1	RI Minor
109	North Court Avenue	East Main Street	Farmington	San Juan	Farmington MPO	5	City of Farmington	0.8541	0.5155	27	4	1	3	UI Major
110	Veranda Road Northwest	4th Street Northwest	Albuquerque	Bernalillo	Mid-Region MPO	3	Bernalillo County	0.8538	0.5675	22	3	1	2	UI Major

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111	Central Avenue Southwest	Victory Lane Southwest	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8528	0.4639	41	3	0	3	UI Major
112	US 550	Road 7800	unincorporated	San Juan	Northwest RTPO	5	NMDOT	0.8528	0.7354	20	1	0	1	RI Minor
113	East Lohman Avenue	South Solano Drive	Las Cruces	Dona Ana	Las Cruces MPO	1	City of Las Cruces	0.8528	0.5530	23	4	2	2	UI Major
114	Camino del Sol	East Calle Questa Lane	Espanola	Rio Arriba	Northern Pueblos RTPO	5	NMDOT	0.8522	0.7314	20	1	0	1	UI Major
115	Los Arboles Avenue Northeast	Carlisle Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8518	0.5211	26	3	0	3	UI Major
116	East Broadway Street	North Bullard Street	Silver City	Grant	Southwest RTPO	1	City of Silver City	0.8517	0.5925	21	2	1	1	UI Minor
117	San Mateo Lane Northeast	San Mateo Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8516	0.5006	28	5	3	2	UI Major
118	Harding Road	NM 478	unincorporated	Dona Ana	El Paso MPO	1	NMDOT	0.8496	0.7092	20	1	1	0	RI Minor
119	I 40 on ramp	NM 371	unincorporated	McKinley	Northwest RTPO	6	NMDOT	0.8488	0.7064	20	1	0	1	RI Minor
120	Luna Azul Drive	County Line Drive	unincorporated	Otero	El Paso MPO	1	Otero County	0.8473	0.7024	20	1	0	1	RI Minor
121	Cactus Avenue	North Solano Drive	Las Cruces	Dona Ana	Las Cruces MPO	1	City of Las Cruces	0.8470	0.7004	20	1	0	1	UI Major
122	South Santa Monica Street	East Poplar Street	Deming	Luna	Southwest RTPO	1	City of Deming	0.8464	0.6978	20	1	0	1	UI Minor
123	Unser Boulevard Northwest	Unser Boulevard Southwest	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.8458	0.5540	22	10	2	8	UI Major
124	Georgia Street Southeast	Zuni Road Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8448	0.6911	20	1	0	1	UI Major
125	90th Street Southwest	Bridge Boulevard Southwest	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8441	0.5716	21	2	1	1	UI Major
126	Indian School Road Northwest	12th Street Northwest	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8429	0.5174	25	6	0	6	UI Major
127	I-25	Broadway Boulevard Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.8422	0.6862	20	1	0	1	UI Major
128	Prosperity Avenue Southeast	Broadway Boulevard Southeast	unincorporated	Bernalillo	Mid-Region MPO	3	NMDOT	0.8422	0.6862	20	1	1	0	RI Major
129	Dr Martin Luther King Jr Avenue Northeast	Broadway Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.8418	0.4631	32	5	5	0	UI Major
130	US 85	B Street	Socorro	Socorro	South Central RTPO	1	NMDOT	0.8417	0.5129	25	2	0	2	UI Minor
131	US 285	Private Drive 1520	unincorporated	Rio Arriba	Northern Pueblos RTPO	5	NMDOT	0.8414	0.6855	20	1	0	1	RI Major
132	North Pearl Street	East 4th Street	Deming	Luna	Southwest RTPO	1	City of Deming	0.8399	0.6771	20	1	1	0	UI Minor

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133	Solano Road Southeast	Columbus Road	unincorporated	Luna	Southwest RTPO	1	NMDOT	0.8397	0.5666	21	2	0	2	RI Minor
134	Graham Road	East Murray Drive	Farmington	San Juan	Farmington MPO	5	NMDOT	0.8394	0.6766	20	1	0	1	UI Major
135	East Birch Street	South Country Club Road	Deming	Luna	Southwest RTPO	1	NMDOT	0.8380	0.6721	20	1	0	1	UI Minor
136	East Cedar Street	East Pine Street	Deming	Luna	Southwest RTPO	1	NMDOT	0.8380	0.6721	20	1	0	1	UI Major
137	Pajarito Road Southwest	Donna Alberta Drive Southwest	unincorporated	Bernalillo	Mid-Region MPO	3	Bernalillo County	0.8373	0.6706	20	1	0	1	RI Minor
138	Munoz Drive	Park Avenue	Gallup	McKinley	Northwest RTPO	6	NMDOT	0.8370	0.4461	40	2	0	2	UI Minor
139	Doctor Martin Luther King Junior Avenue Northeast	Oak Street Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.8357	0.4228	49	7	2	5	UI Major
140	South Espina Street	East Idaho Avenue	Las Cruces	Dona Ana	Las Cruces MPO	1	City of Las Cruces	0.8354	0.6691	20	1	0	1	UI Major
141	Figueroa Street Northeast	Central Avenue Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8340	0.4968	25	6	2	4	UI Major
142	Landers Road	North 4th Street	Anthony	Dona Ana	El Paso MPO	1	City of Anthony	0.8335	0.6643	20	1	1	0	UI Minor
143	Dorado Place Southeast	Wenonah Avenue Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8323	0.5053	24	5	0	5	UI Major
144	Kinley Avenue Northwest	2nd Street Northwest	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8316	0.6626	20	1	0	1	UI Major
145	Hannett Avenue Northwest	3rd Street Northwest	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8316	0.6626	20	1	1	0	UI Minor
146	Gibson Boulevard Southeast	San Pedro Drive Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8307	0.5128	23	4	0	4	UI Major
147	Utah Avenue	El Paseo Road	Las Cruces	Dona Ana	Las Cruces MPO	1	City of Las Cruces	0.8265	0.6502	20	1	0	1	UI Major
148	Wellesley Drive Northeast	Comanche Road Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8263	0.5476	21	2	1	1	UI Major
149	Kings Court Southwest	Central Avenue Southwest	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8256	0.5463	21	2	0	2	UI Major
150	Lomas Boulevard Northeast	Eubank Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8255	0.4083	48	17	6	11	UI Major
151	Monsanto Lane	Orla Road	unincorporated	Lea	Southeast RTPO	2	Private	0.8252	0.6480	20	1	0	1	RI Minor
152	Siler Road	Cerrillos Road	Santa Fe	Santa Fe	Santa Fe MPO	5	NMDOT	0.8245	0.3911	63	13	2	11	UI Major
153	Martin Street	Avenida de Mesilla	Las Cruces	Dona Ana	Las Cruces MPO	1	NMDOT	0.8228	0.5390	21	2	1	1	UI Major
154	75th Street Southwest	Central Avenue Southwest	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8226	0.6455	20	1	0	1	UI Major
155	West Kennedy	New Mexico State Highway 68	unincorporated	Rio Arriba	Northern Pueblos RTPO	5	NMDOT	0.8222	0.6438	20	1	0	1	RI Major

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Top 10% Prioritized Intersections

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156	Valencia Drive Southeast	Gibson Boulevard Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8219	0.5368	21	2	1	1	UI Major
157	Cedar Street Northeast	Central Avenue Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8213	0.4463	28	5	1	4	UI Major
158	Arizona Avenue	South Espina Street	Las Cruces	Dona Ana	Las Cruces MPO	1	City of Las Cruces	0.8213	0.6382	20	1	0	1	UI Minor
159	Popay Avenue	New Mexico State Highway 68	unincorporated	Rio Arriba	Northern Pueblos RTPO	5	NMDOT	0.8211	0.6380	20	1	0	1	RI Major
160	Uptown Loop Road Northeast	Louisiana Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.8210	0.4826	24	5	1	4	UI Major
161	I-25	Sunport Boulevard Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.8203	0.6315	20	1	0	1	UI Major
162	West Charleston Road	S Main St	Roswell	Chaves	Southeast RTPO	2	Chaves County	0.8197	0.6297	20	1	0	1	UI Major
163	Montaño Road Northeast	Culture Drive Northeast / Ken Sanchez Way Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8193	0.4910	23	4	1	3	UI Major
164	Llano Street	Saint Michaels Drive	Santa Fe	Santa Fe	Santa Fe MPO	5	NMDOT	0.8190	0.4789	24	5	3	2	UI Major
165	North Turner Street	East Park Street	Hobbs	Lea	Southeast RTPO	2	City of Hobbs	0.8185	0.6213	20	1	0	1	UI Major
166	Will Street	Historic US Highway 66	Gallup	McKinley	Northwest RTPO	6	NMDOT	0.8176	0.6197	20	1	0	1	UI Major
167	1st Street Northwest	Central Avenue NE	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8169	0.4387	28	5	0	5	UI Major
168	Arenal Road Southwest	Don Aragon Drive Southwest	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8153	0.6114	20	1	0	1	UI Major
169	Central Avenue Northwest	Broadway Boulevard Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.8151	0.4298	31	8	6	2	UI Major
170	San Jose Boulevard	South Canal Street	Carlsbad	Eddy	Southeast RTPO	2	NMDOT	0.8144	0.5246	21	2	0	2	UI Major
171	Paseo del Pueblo Sur	Sandoval Lane	unincorporated	Taos	Northern Pueblos RTPO	5	NMDOT	0.8135	0.6096	20	1	0	1	RI Major
172	Roy Road	Paseo del Pueblo Sur	Taos	Taos	Northern Pueblos RTPO	5	NMDOT	0.8135	0.6096	20	1	0	1	UI Major
173	Constitution Avenue Northeast	Wyoming Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8134	0.4352	28	9	2	7	UI Major
174	Del Rio Road Southwest	Rio Bravo Boulevard Southwest	unincorporated	Bernalillo	Mid-Region MPO	3	NMDOT	0.8132	0.6092	20	1	0	1	RI Major
175	US 64	Road 6361	Kirtland	San Juan	Farmington MPO	5	NMDOT	0.8114	0.5180	21	2	0	2	UI Major
176	Menaul Boulevard Northeast (Frontage Road)	Menaul Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8105	0.4174	32	5	2	3	UI Major
177	Rio Bravo Boulevard Southeast	I-25 on-ramp	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.8085	0.5960	20	1	0	1	UI Major

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Top 10% Prioritized Intersections

Rank	First road name	Second road name	City	County	MPO or RTPO	NMDOT District	Ownership Detail	VRU Priority Ranking Score	Equity Score	Crash Severity Index	VRU injury crash (KABC) count	Bike KA crash count	Ped KA crash count	Typology
178	East Gallina Road	Clovis Highway	unincorporated	Chaves	Southeast RTPO	2	NMDOT	0.8075	0.5942	20	1	1	0	RI Minor
179	Gibson Boulevard Southeast	San Mateo Boulevard Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8065	0.4012	35	8	5	3	UI Major
180	Chelwood Park Boulevard Northeast	Copper Avenue Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8060	0.4318	27	4	0	4	UI Major
181	Central Avenue Southwest	Tingley Drive Southwest	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8059	0.4317	27	4	1	3	UI Major
182	Central Avenue Northwest	Clayton Street Southwest	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8051	0.4359	26	3	1	2	UI Major
183	Constitution Avenue Northeast	Juan Tabo Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8044	0.4280	27	4	1	3	UI Major
184	Doctor Martin Luther King Junior Avenue Northeast	Elm Street Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8037	0.4753	22	10	8	2	UI Major
185	Rio de Arenas Road	Silver Heights Boulevard	unincorporated	Grant	Southwest RTPO	1	NMDOT	0.8030	0.5873	20	1	0	1	RI Major
186	East Pear Street	Columbus Road	Deming	Luna	Southwest RTPO	1	NMDOT	0.7999	0.5749	20	1	0	1	UI Minor
187	South Main Street	West Onyx Street	Roswell	Chaves	Southeast RTPO	2	City of Roswell	0.7992	0.5730	20	1	0	1	UI Major
188	Riverside Drive	Santa Cruz Road	Espanola	Santa Fe	Northern Pueblos RTPO	5	NMDOT	0.7989	0.8008	11	3	1	2	UI Major
189	Maple Street Southeast	Central Avenue Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7951	0.4463	23	4	1	3	UI Major
190	Zuni Road Southeast	Indiana Street Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7950	0.6911	13	5	2	3	UI Major
191	Tennessee Street Southeast	Zuni Road Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7947	0.6701	15	3	0	3	UI Major
192	I-25	Comanche Road Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.7946	0.5673	20	1	0	1	UI Major
193	Amherst Drive Southeast	Gibson Boulevard Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7939	0.3762	40	2	0	2	UI Major
194	Central Avenue Northeast	Laguayra Drive Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7936	0.5658	20	1	0	1	UI Major
195	Academy Parkway Northeast	Osuna Road Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7910	0.5630	20	1	1	0	UI Major
196	Rhode Island Street Northeast	Lomas Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7898	0.5617	20	1	0	1	UI Major
197	Julie Street Northeast	Montgomery Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7895	0.3410	61	4	1	3	UI Major
198	San Pedro Drive Northeast	I-40	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.7885	0.4097	26	3	0	3	UI Major
199	Utah Street Southeast	Central Avenue Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7874	0.6704	13	9	2	7	UI Major
200	Paseo de Peralta	South Guadalupe Street	Santa Fe	Santa Fe	Santa Fe MPO	5	City of Santa Fe	0.7869	0.3456	48	6	0	6	UI Major

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Top 10% Prioritized Intersections

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201	Solano Drive Northeast	Menaul Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7855	0.4431	22	3	2	1	UI Major
202	2nd Street Southwest	Santa Fe Avenue Southwest	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7851	0.6526	15	11	2	9	UI Major
203	San Mateo Boulevard Northeast	Menaul Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7835	0.3995	26	18	6	12	UI Major
204	Cherokee Road Northeast	Carlisle Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7833	0.5503	20	1	0	1	UI Major
205	Louisiana Boulevard Southeast	Zuni Road Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7831	0.6749	12	8	1	7	UI Major
206	North 7th Street	West Maloney Avenue	Gallup	McKinley	Northwest RTPO	6	NMDOT	0.7830	0.7247	10	2	0	2	UI Major
207	North 4th Street	West Maloney Avenue	Gallup	McKinley	Northwest RTPO	6	NMDOT	0.7830	0.7247	10	2	0	2	UI Major
208	2nd Street Southwest	Central Avenue Northwest	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7829	0.4387	22	10	3	7	UI Major
209	Southern Avenue Southeast	Louisiana Boulevard Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7815	0.7143	10	6	0	6	UI Major
210	West Cordova Road	South Saint Francis Drive	Santa Fe	Santa Fe	Santa Fe MPO	5	NMDOT	0.7813	0.3739	31	12	4	8	UI Major
211	Acoma Road Southeast	Louisiana Boulevard Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7812	0.7081	10	2	0	2	UI Major
212	Dona Ana Road	Kristin Drive	unincorporated	Dona Ana	Las Cruces MPO	1	Dona Ana County	0.7809	0.5477	20	1	0	1	RI Major
213	University Boulevard Northeast	Lomas Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7805	0.3353	48	6	2	4	UI Major
214	Bell Avenue Southeast	Louisiana Boulevard Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7798	0.6416	15	7	1	6	UI Major
215	Menaul Boulevard Northeast	University Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7789	0.6479	14	6	3	3	UI Major
216	West 10th Street	North Thornton Street	Clovis	Curry	Southeast RTPO	2	City of Clovis	0.7782	0.5420	20	1	0	1	UI Minor
217	East Murray Drive	South Miller Avenue	Farmington	San Juan	Farmington MPO	5	NMDOT	0.7778	0.6766	11	3	1	2	UI Major
218	Chama Street Northeast	Central Avenue Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7776	0.6526	13	5	2	3	UI Major
219	East Fiesta Drive	South Canal Street	Carlsbad	Eddy	Southeast RTPO	2	NMDOT	0.7773	0.4207	23	4	1	3	UI Major
220	West Vega Drive	N Turner Walking Trail	Hobbs	Lea	Southeast RTPO	2	City of Hobbs	0.7770	0.5390	20	1	0	1	UI Major
221	Aspen Avenue Northeast	Wyoming Boulevard Northeast (Frontage Road)	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7765	0.3880	26	3	2	1	UI Major
222	Eubank Boulevard Northeast	Constitution Avenue Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7753	0.4089	24	5	1	4	UI Major

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223	North Motel Boulevard	West Amador Avenue	Las Cruces	Dona Ana	Las Cruces MPO	1	City of Las Cruces	0.7745	0.4477	21	2	2	0	UI Major
224	East Idaho Avenue	El Paseo Road	Las Cruces	Dona Ana	Las Cruces MPO	1	City of Las Cruces	0.7739	0.6601	12	8	3	5	UI Major
225	Griegos Road Northwest	4th Street Northwest	Albuquerque	Bernalillo	Mid-Region MPO	3	Bernalillo County	0.7730	0.4256	22	3	2	1	UI Major
226	Civic Plaza Drive	Paseo del Pueblo Norte	Taos	Taos	Northern Pueblos RTPO	5	NMDOT	0.7717	0.6189	14	6	1	6	UI Major
227	Buena Vista Drive Southeast	Gibson Boulevard Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7717	0.5285	20	1	0	1	UI Major
228	South Esperanza Street	East Idaho Avenue	Las Cruces	Dona Ana	Las Cruces MPO	1	City of Las Cruces	0.7712	0.6628	11	3	1	2	UI Major
229	East Madrid Avenue	North Solano Drive	Las Cruces	Dona Ana	Las Cruces MPO	1	City of Las Cruces	0.7703	0.6307	13	5	2	3	UI Major
230	Coors Boulevard Southwest	Blake Road Southwest	unincorporated	Bernalillo	Mid-Region MPO	3	NMDOT	0.7676	0.6196	13	5	1	4	RI Major
231	Cardenas Drive Southeast	Gibson Boulevard Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7671	0.5205	20	1	0	1	UI Major
232	Camino Carlos Rey	Cerrillos Road	Santa Fe	Santa Fe	Santa Fe MPO	5	NMDOT	0.7667	0.3911	24	5	0	5	UI Major
233	Mentmore Road	West Historic Highway 66	Gallup	McKinley	Northwest RTPO	6	NMDOT	0.7667	0.5199	20	1	0	1	UI Minor
234	10th Street Southwest	Central Avenue Northwest	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7665	0.4360	21	2	0	2	UI Major
235	Continental Loop Southeast	Louisiana Boulevard Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7661	0.6666	10	2	0	2	UI Major
236	Central Avenue Southwest	122nd Street Southwest	unincorporated	Bernalillo	Mid-Region MPO	3	City, unincorporated	0.7657	0.5180	20	1	0	1	RI Major
237	John Grisham Drive	Ashtray Road	unincorporated	Dona Ana	Las Cruces MPO	1	NMDOT	0.7655	0.5177	20	1	0	1	RI Minor
238	Vail Avenue Southeast	Girard Boulevard Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7652	0.4336	21	2	1	1	UI Minor
239	NM 522	Lawrence Ranch Road	unincorporated	Taos	Northern Pueblos RTPO	5	NMDOT	0.7648	0.5155	20	1	0	1	RI Minor
240	Buena Ventura Road Northeast	Juan Tabo Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7639	0.4118	22	3	1	2	UI Major
241	Turquoise Trail	Camino Justicia	unincorporated	Santa Fe	Santa Fe MPO	5	NMDOT	0.7632	0.3705	26	3	0	3	RI Major
242	Historic US Highway 66	We Street	Gallup	McKinley	Northwest RTPO	6	NMDOT	0.7618	0.6197	12	4	0	4	UI Major
243	Avenida César Chávez Southeast	Bradbury Drive Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7615	0.5058	20	1	0	1	UI Major

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244	72nd Street Northwest	Ladera Drive Northwest	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7613	0.4282	21	2	0	2	UI Major
245	Lomas Boulevard Northeast	Louisiana Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7595	0.5748	16	12	3	9	UI Major
246	Central Avenue Northwest	57th Street Southwest	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7591	0.7015	8	4	3	1	UI Major
247	Bloomfield Highway / US 64	Road 5720	unincorporated	San Juan	Farmington MPO	5	NMDOT	0.7585	0.3730	25	2	1	1	RI Major
248	Historic US 66	Cerrillos Road	Santa Fe	Santa Fe	Santa Fe MPO	5	NMDOT	0.7573	0.3718	25	2	1	1	UI Major
249	Pennsylvania Street Northeast	Montgomery Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7567	0.3263	32	9	3	6	UI Major
250	Indian School Road Northeast	Eubank Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7563	0.3593	26	3	1	2	UI Major
251	Coors Boulevard Northwest	Los Volcanes Road Northwest	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.7562	0.5924	13	5	0	5	UI Major
252	Montgomery Boulevard Northeast	Juan Tabo Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7561	0.3199	34	11	4	7	UI Major
253	San Antonio Drive Northeast	I-25	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.7545	0.4175	21	2	0	2	UI Major
254	West Apache Street	West Main Street	Farmington	San Juan	Farmington MPO	5	NMDOT	0.7543	0.4943	20	1	0	1	UI Major
255	South 1st Street	East Historic Highway 66	Gallup	McKinley	Northwest RTPO	6	NMDOT	0.7540	0.5667	16	4	0	4	UI Major
256	Sage Road Southwest	Coors Boulevard Southwest	unincorporated	Bernalillo	Mid-Region MPO	3	NMDOT	0.7518	0.4883	20	1	0	1	RI Major
257	Glade Place	West Apache Street	Farmington	San Juan	Farmington MPO	5	City of Farmington	0.7517	0.4882	20	1	0	1	UI Minor
258	I-40	Crestview Road	unincorporated	McKinley	Northwest RTPO	6	NMDOT	0.7515	0.4880	20	1	0	1	RI Major
259	Rio Bravo Boulevard Southwest	Dean Drive Southwest	unincorporated	Bernalillo	Mid-Region MPO	3	NMDOT	0.7515	0.4126	21	2	0	2	RI Major
260	East Lohman Avenue	Walton Boulevard	Las Cruces	Dona Ana	Las Cruces MPO	1	City of Las Cruces	0.7514	0.6545	9	9	3	6	UI Major
261	Munoz Drive	Old Zuni Road	Gallup	McKinley	Northwest RTPO	6	NMDOT	0.7512	0.4876	20	1	0	1	UI Minor
262	Malpais Road Southwest	Isleta Boulevard Southwest	unincorporated	Bernalillo	Mid-Region MPO	3	Bernalillo County	0.7508	0.4869	20	1	0	1	RI Major
263	Judy Drive Southwest	Isleta Boulevard Southwest	unincorporated	Bernalillo	Mid-Region MPO	3	Bernalillo County	0.7508	0.4869	20	1	0	1	RI Major
264	San Pedro Boulevard Southeast	Zuni Road Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7508	0.6505	9	5	1	4	UI Major
265	Seven Bar Loop Northwest	Coors Boulevard Northwest	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.7500	0.3871	22	3	1	2	UI Major
266	Cagua Drive Northeast	Menaul Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7496	0.3742	23	4	1	3	UI Major

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267	South Esperanza Street	East Lohman Avenue	Las Cruces	Dona Ana	Las Cruces MPO	1	City of Las Cruces	0.7493	0.6016	11	3	1	2	UI Major
268	Coors Boulevard Northwest	Montaño Road Northwest	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.7489	0.2848	42	11	3	8	UI Major
269	North Melendres Street	West Picacho Avenue	Las Cruces	Dona Ana	Las Cruces MPO	1	NMDOT	0.7464	0.4760	20	8	1	7	UI Major
270	Montgomery Boulevard Northeast	Tramway Trail Blvd NE	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.7457	0.2946	35	8	2	6	UI Major
271	Main Street	Copper King Trail	Red River	Taos	Northern Pueblos RTPO	5	NMDOT	0.7428	0.4706	20	1	0	1	UI Minor
272	Wyoming Boulevard Southeast	Zuni Road Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7416	0.6202	9	5	0	5	UI Major
273	98th Street Northwest	I-40	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.7416	0.3449	25	2	0	2	UI Major
274	Shirley Street Southeast	Central Avenue NE	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7407	0.3433	25	2	1	1	UI Major
275	Wyoming Boulevard Northeast	Spain Road Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7383	0.3071	29	10	0	10	UI Major
276	NM 187	Moyle Lane	unincorporated	Sierra	South Central RTPO	1	NMDOT	0.7377	0.4594	20	1	1	0	RI Minor
277	Zuni Road Southeast	Florida Street Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7368	0.6911	7	3	0	3	UI Major
278	Princeton Drive Northeast	Candelaria Road Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7362	0.6479	8	4	2	2	UI Major
279	Menaul Boulevard Northwest	2nd Street Northwest	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7361	0.5632	12	4	2	2	UI Major
280	I-40	Howard Cavasos Boulevard North	Moriarty	Torrance	Mid-Region RTPO	5	NMDOT	0.7359	0.4578	20	1	0	1	UI Major
281	Central Avenue Northwest	86th Street Southwest	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7332	0.4536	20	1	0	1	UI Major
282	West 2nd Street	North Delaware Avenue	Roswell	Chaves	Southeast RTPO	2	NMDOT	0.7331	0.4534	20	1	0	1	UI Major
283	San Mateo Boulevard Northeast	Lomas Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7330	0.3272	25	13	4	9	UI Major
284	Yucca Drive Northwest	Central Avenue Southwest	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7328	0.6358	8	4	1	3	UI Major
285	Coors Boulevard Northwest	Learning Road Northwest / Dellyne Avenue Northwest	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.7312	0.2854	29	6	3	3	UI Major
286	Texas Street Southeast	Zuni Road Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7311	0.6252	8	4	0	4	UI Major
287	Monte Vista Boulevard Northeast	Central Avenue NE	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7309	0.2428	37	10	4	6	UI Major
288	Tramway Boulevard Northeast	Manitoba Drive Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.7308	0.3229	25	2	0	2	UI Major

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289	West Hobbs Street	Wildy Drive	Roswell	Chaves	Southeast RTPO	2	City of Roswell	0.7304	0.4492	20	1	0	1	UI Minor
290	Hartline Road Southwest	Bridge Boulevard Southwest	unincorporated	Bernalillo	Mid-Region MPO	3	Bernalillo County	0.7299	0.6205	8	4	2	2	RI Major
291	52nd Street Northwest	Central Avenue Southwest	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7295	0.5514	12	4	3	1	UI Major
292	El Pueblo Road Northwest	4th Street Northwest	Los Ranchos de Albuquerque	Bernalillo	Mid-Region MPO	3	Bernalillo County	0.7293	0.4479	20	1	0	1	UI Major
293	Montana Avenue	El Paseo Road	Las Cruces	Dona Ana	Las Cruces MPO	1	City of Las Cruces	0.7287	0.6700	7	3	1	2	UI Major
294	NM 321	South Roosevelt Road C	Causey	Roosevelt	Southeast RTPO	2	NMDOT	0.7277	0.4450	20	1	0	1	UI Minor
295	North 3rd Street	West Broadway Avenue	Bloomfield	San Juan	Farmington MPO	5	NMDOT	0.7275	0.4448	20	1	0	1	UI Major
296	La Camila Road Northeast	Candelaria Road Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7273	0.4441	20	1	1	0	UI Major
297	Louisiana Boulevard Northeast	Natalie Avenue Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7244	0.3459	22	3	2	1	UI Major
298	Eagle Ranch Road Northwest	Coors Boulevard Northwest	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.7235	0.2698	28	5	0	5	UI Major
299	North Hudson Street	East Broadway	Silver City	Grant	Southwest RTPO	1	NMDOT	0.7213	0.5697	9	5	1	4	UI Major
300	Mesilla Street Southeast	Zuni Road Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7209	0.6586	7	3	1	2	UI Major
301	Salt Mission Trail	Juana Lane	unincorporated	Torrance	Mid-Region RTPO	5	NMDOT	0.7208	0.4359	20	1	0	1	RI Minor
302	Copper Avenue Northeast	Eubank Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7205	0.5084	15	7	1	6	UI Major
303	Carlisle Boulevard Northeast	Candelaria Road Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7191	0.4984	19	11	3	8	UI Major
304	South Halagueno Street	West Lea Street	Carlsbad	Eddy	Southeast RTPO	2	NMDOT	0.7184	0.4328	20	1	0	1	UI Major
305	Mitchell Street	West 14th Street	Clovis	Curry	Southeast RTPO	2	City of Clovis	0.7180	0.5311	12	4	0	4	UI Minor
306	East Colorado Avenue	South Solano Drive	Las Cruces	Dona Ana	Las Cruces MPO	1	City of Las Cruces	0.7178	0.5530	10	2	1	1	UI Major
307	I-40	Coors Boulevard Northwest Northbound Onramp	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.7177	0.4326	20	1	0	1	UI Major
308	I-25 Frontage Road	Lomas Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.7176	0.3149	24	5	3	2	UI Major
309	Charleston Street Northeast	Menaul Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7164	0.3566	21	2	1	1	UI Major
310	Plaza Street	South Canyon Street	Carlsbad	Eddy	Southeast RTPO	2	City of Carlsbad	0.7158	0.4295	20	1	0	1	UI Major
311	Altez Street Northeast	Candelaria Road Northeast (Frontage Road)	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7157	0.2908	25	2	0	2	UI Major

APPENDIX D

Top 10% Prioritized Intersections

Rank	First road name	Second road name	City	County	MPO or RTPO	NMDOT District	Ownership Detail	VRU Priority Ranking Score	Equity Score	Crash Severity Index	VRU injury crash (KABC) count	Bike KA crash count	Ped KA crash count	Typology
312	North Valley Drive	West Hadley Avenue	Las Cruces	Dona Ana	Las Cruces MPO	1	NMDOT	0.7147	0.5867	8	4	0	4	UI Major
313	Henry Lynch Road	Richards Avenue	Santa Fe	Santa Fe	Santa Fe MPO	5	City of Santa Fe	0.7128	0.5773	8	4	1	3	UI Major
314	South Bradley Street	West Historic Highway 66	Gallup	McKinley	Northwest RTPO	6	NMDOT	0.7122	0.5471	10	2	0	2	UI Major
315	Valverde Drive Southeast	Candelaria Road Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7117	0.4216	20	1	0	1	UI Major
316	Unser Boulevard Northwest	I-40 Off Ramp Southbound	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.7116	0.4213	20	1	0	1	UI Major
317	Madeira Drive Southeast	Gibson Boulevard Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7115	0.5453	10	2	0	2	UI Major
318	Perry Road Southwest	Isleta Boulevard Southwest	unincorporated	Bernalillo	Mid-Region MPO	3	Bernalillo County	0.7114	0.7401	6	2	1	1	RI Major
319	Eagle Rock Avenue Northeast	I-25	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.7107	0.4208	20	1	0	1	UI Major
320	East Chuska Street	South Main Avenue	Aztec	San Juan	Farmington MPO	5	NMDOT	0.7103	0.4203	20	1	0	1	UI Major
321	Boyd Drive	West Lea Street	Carlsbad	Eddy	Southeast RTPO	2	NMDOT	0.7100	0.6204	7	3	1	2	UI Major
322	Lomas Boulevard Northeast	Wyoming Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7093	0.5519	9	5	2	3	UI Major
323	Herdner Road	Paseo del Pueblo Sur	Taos	Taos	Northern Pueblos RTPO	5	NMDOT	0.7090	0.5693	8	4	3	1	UI Major
324	Central Avenue Southeast	University Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7078	0.3420	21	13	5	8	UI Major
325	Estancia Drive Northwest	Central Avenue Southwest	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7077	0.7197	6	2	0	2	UI Major
326	Del Rey Boulevard	Engler Road	Las Cruces	Dona Ana	Las Cruces MPO	1	City of Las Cruces	0.7069	0.4143	20	1	0	1	UI Minor
327	US 550	Homestead Lane	Bernalillo	Sandoval	Mid-Region MPO	3	NMDOT	0.7065	0.4133	20	1	0	1	UI Major
328	Burma Drive Northeast	Central Avenue Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7059	0.4745	18	6	0	6	UI Major
329	I-40	Eubank Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.7058	0.4126	20	1	0	1	UI Major
330	Skyline Road Northeast	Juan Tabo Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7050	0.4118	20	1	0	1	UI Major
331	Saint Michaels Drive	Calisteo Street	Santa Fe	Santa Fe	Santa Fe MPO	5	NMDOT	0.7046	0.4113	20	1	0	1	UI Major
332	South Triviz Drive	Missouri Avenue	Las Cruces	Dona Ana	Las Cruces MPO	1	City of Las Cruces	0.7044	0.5302	10	6	4	2	UI Major
333	San Mateo Boulevard Northeast	Constitution Avenue Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7043	0.2599	25	6	4	2	UI Major
334	Main Street Southwest	Sun Ranch Village Road	Los Lunas	Valencia	Mid-Region MPO	3	NMDOT	0.7036	0.3340	21	2	1	1	UI Major

APPENDIX D

Top 10% Prioritized Intersections

Rank	First road name	Second road name	City	County	MPO or RTPO	NMDOT District	Ownership Detail	VRU Priority Ranking Score	Equity Score	Crash Severity Index	VRU injury crash (KABC) count	Bike KA crash count	Ped KA crash count	Typology
335	Pennsylvania Street Southeast	Zuni Road Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7036	0.6977	6	2	1	1	UI Major
336	Harwood Avenue Northeast	Wyoming Boulevard Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7029	0.3329	21	2	0	2	UI Major
337	California Street Southeast	Zuni Road Southeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7023	0.6911	6	2	1	1	UI Major
338	Boyd Drive	Hidalgo Road	Carlsbad	Eddy	Southeast RTPO	2	City of Carlsbad	0.7018	0.4039	20	1	0	1	UI Minor
339	Lomas Boulevard Northeast	Tennessee Street Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7017	0.5617	8	4	0	4	UI Major
340	NM 602	Dee Ann Avenue	Gallup	McKinley	Northwest RTPO	6	NMDOT	0.7015	0.4036	20	1	0	1	UI Minor
341	Hamilton Street	National Parks Highway	Carlsbad	Eddy	Southeast RTPO	2	NMDOT	0.7012	0.4024	20	1	0	1	UI Minor
342	Carlisle Boulevard Northeast	Comanche Road Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7005	0.4849	13	9	5	4	UI Major
343	Jefferson Street Northeast	Candelaria Road Northeast	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7005	0.4015	20	1	0	1	UI Major
344	Safelite Boulevard Northeast	Main Street	Rio Rancho	Sandoval	Mid-Region MPO	3	NMDOT	0.6999	0.4009	20	1	0	1	UI Major
345	New Mexico State Highway 90	Duncan Highway	unincorporated	Hidalgo	Southwest RTPO	1	NMDOT	0.6993	0.4005	20	1	0	1	RI Minor
346	NM 92	J S Ranch Drive	unincorporated	Hidalgo	Southwest RTPO	1	NMDOT	0.6993	0.4005	20	1	0	1	RI Minor
347	Avenida Dolores Huerta Southwest	8th Street Southwest	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.6990	0.5342	9	5	4	1	UI Major
348	Camino Tierra Real	Airport Road	Santa Fe	Santa Fe	Santa Fe MPO	5	City of Santa Fe	0.6977	0.3965	20	1	0	1	UI Major
349	Cerrillos Road	Wellness Way	Santa Fe	Santa Fe	Santa Fe MPO	5	NMDOT	0.6975	0.3205	21	2	0	2	UI Major
350	Saint Michaels Drive	Pacheco Street	Santa Fe	Santa Fe	Santa Fe MPO	5	NMDOT	0.6970	0.5171	10	6	1	5	UI Major

Top 10% of Prioritized Corridors Along the HIN

APPENDIX D

Top 10% Prioritized Corridor Segments

Rank	Road name	From street	To street	Milepost start	Milepost end	City	County	MPO or RTPO	NMDOT District	Ownership	VRU Priority Ranking Score	Equity Score	Crash Severity Index	Typology
1	Central Avenue NE	Espanola Street NE	General Arnold Street Northeast			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9575	0.6837	572	UC Major
2	Central Avenue Northwest	65th Street Northwest	50th Street Northwest			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9464	0.6671	243	UC Major
3	Central Avenue Northeast	Valencia Drive Southeast	Espanola Street Northeast			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9369	0.6182	524	UC Major
4	Zuni Road Southeast	Mesilla Street Southeast	Cardenas Drive Southeast			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9368	0.6850	142	UC Major
5	Coors Blvd NW	Bataan Drive SW	Avalon Rd NW			Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.9366	0.6186	288	UC Major
6	Coors Boulevard Southwest	Flora Vista Ave SW	Rio Bravo Sq SW	10	8	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.9318	0.6678	144	UC Major
7	Louisiana Boulevard Southeast	Gibson Boulevard Southeast	Bell Avenue Southeast			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9315	0.6398	169	UC Major
8	Zuni Road SE	Wyoming Boulevard Southeast	Mesilla Street Southeast			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9301	0.6546	153	UC Major
9	I-40	NA	NA	3	4	unincorporated	McKinley	Northwest RTPO	6	NMDOT	0.9295	0.8051	84	RC Major
10	Louisiana Boulevard Northeast	Bell Avenue Southeast	Marquette Avenue Northeast			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9243	0.6664	133	UC Major
11	Central Avenue Northwest	Victory Lane Southwest	65th Street Southwest			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.9209	0.5955	205	UC Major
12	Coors Boulevard Northwest	Pheasant Avenue Northwest	Quail Road Northwest			Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.8980	0.5481	242	UC Major
13	Wyoming Boulevard Northeast	Virginia Ct SE	Lomas Blvd NE			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8974	0.6023	119	UC Major
14	Coors Boulevard Northwest	NA	NA	14	12	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.8935	0.5337	248	UC Major
15	Central Avenue NE	General Arnold Street Northeast	Eubank Blvd NE			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8932	0.5419	227	UC Major
16	Coors Boulevard Bypass Northwest	NA	NA	15	14	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8844	0.5627	126	UC Major
17	Paseo del Pueblo Sur	New Mexico Highway 518	Este es Road	43	41	Taos	Taos	Northern Pueblos RTPO	5	City of Taos	0.8814	0.6096	89	UC Major
18	Coors Boulevard Northwest	Quail Road NW	Hanover Road NW	16	14	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8784	0.5210	205	UC Major
19	3rd Street Northwest	I-40	Marble Avenue Northwest			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8713	0.6626	76	UC Minor
20	Central Avenue Northeast	Juan Tabo Boulevard Northeast	Tramway Boulevard Northeast			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8706	0.4968	227	UC Major
21	Menaul Blvd NE	North Diversion Trail	Graceland Drive NE			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8687	0.5698	93	UC Major

APPENDIX D

Top 10% Prioritized Corridor Segments

Rank	Road name	From street	To street	Milepost start	Milepost end	City	County	MPO or RTPO	NMDOT District	Ownership	VRU Priority Ranking Score	Equity Score	Crash Severity Index	Typology
22	Montano Road NE/Montgomery Blvd NE	Alexander Blvd Northeast	Carlisle Blvd Northeast			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8687	0.5134	163	UC Major
23	San Pedro Blvd SE	Gibson Blvd SE	Central Ave SE			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8682	0.6158	80	UC Major
24	Cerillos Road	Vegas Verdes Drive	Camino Consuelo	51	49	Santa Fe	Santa Fe	Santa Fe MPO	5	City of Santa Fe	0.8681	0.5292	138	UC Major
25	Carlisle Boulevard Northeast	Candelaria Road Northeast	Indian School Road Northeast			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8672	0.5058	164	UC Major
26	Carlisle Boulevard Northeast	Montgomery Boulevard Northeast	Candelaria Road Northeast			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8658	0.5217	140	UC Major
27	I-40 on ramp	Coors Boulevard NW	I-40			Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.8650	0.4977	179	UC Major
28	2nd St NW	Marble Ave NW	I-40			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8621	0.6129	77	UC Major
29	2nd St SW	Marble Ave NW	Coal Ave SW			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8615	0.5507	97	UC Major
30	Dorado Place Southeast	Wenonah Avenue Southeast	Central Avenue Northeast			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8581	0.5053	140	UC Minor
31	US 264	NA	NA	17	15	unincorporated	McKinley	Northwest RTPO	6	NMDOT	0.8563	0.7940	52	RC Major
32	Coors Boulevard Southwest	NA	NA	11	9	Albuquerque	Bernalillo	Mid-Region MPO	3	Bernalillo County	0.8558	0.6165	72	UC Major
33	US 64	NA	NA	43	41	Kirtland	San Juan	Farmington MPO	5	San Juan County	0.8543	0.5017	136	UC Major
34	2nd St SW	Avenida Cesar Chavez Southwest	Coal Avenue Southwest			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8529	0.6643	65	UC Minor
35	San Pedro Drive Northeast	Central Avenue Northeast	Mountain Road Northeast			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8524	0.5421	94	UC Major
36	Rio Bravo Boulevard Southwest	Loris Drive Southwest	Del Rio Road Southwest	9	7	unincorporated	Bernalillo	Mid-Region MPO	3	Bernalillo County	0.8515	0.5716	81	RC Major
37	3rd Street Northwest	Coal Avenue Southwest	Granite Avenue Northwest			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8515	0.5901	76	UC Minor
38	4th Street Northwest	Hannett Avenue Northwest	Matthew Avenue Northwest			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8509	0.5671	81	UC Major
39	Broadway Blvd SE	Kathryn Ave SE	Lead Ave SW	49	47	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8476	0.6074	69	UC Major
40	US 491	US 64	Uranium Blvd			unincorporated	San Juan	Northwest RTPO	5	NMDOT	0.8466	0.7800	50	RC Major
41	Central Avenue Southwest	50th Street Northwest	Tingley Drive Southwest			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8459	0.5235	97	UC Major
42	Coors Boulevard Southwest	Rosebeary Road Southwest	Rio Bravo Blvd Southwest	9	7	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.8430	0.5083	106	UC Major

APPENDIX D

Top 10% Prioritized Corridor Segments

Rank	Road name	From street	To street	Milepost start	Milepost end	City	County	MPO or RTPO	NMDOT District	Ownership	VRU Priority Ranking Score	Equity Score	Crash Severity Index	Typology
43	US 491	NA	NA	48	46	unincorporated	San Juan	Northwest RTPO	5	NMDOT	0.8429	0.7820	49	RC Minor
44	Wyoming Boulevard Northeast	San Joaquin Avenue Southeast	Constitution Avenue Northeast			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8428	0.5801	75	UC Major
45	Central Avenue Northwest	8th Street Northwest	1st Street Southwest			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8427	0.4790	132	UC Major
46	US 491	W Jefferson Ave	Hwy 608	2	0	Gallup	McKinley	Northwest RTPO	6	City of Gallup	0.8421	0.5446	85	UC Major
47	El Paseo Road	Montana Avenue	El Molino Boulevard			Las Cruces	Dona Ana	Las Cruces MPO	1	City of Las Cruces	0.8419	0.6601	62	UC Major
48	US 491	NA	NA	42	40	unincorporated	San Juan	Northwest RTPO	5	Bureau of Indian Affairs	0.8397	0.7489	49	RC Minor
49	I-40	Off-ramp approach to Munoz Dr	NA			Gallup	McKinley	Northwest RTPO	6	NMDOT	0.8377	0.4562	163	UC Minor
50	East Lohman Avenue	South Walnut Street	Walton Boulevard			Las Cruces	Dona Ana	Las Cruces MPO	1	City of Las Cruces	0.8367	0.6023	65	UC Major
51	East Idaho Avenue	South Solano Drive	South Main Street			Las Cruces	Dona Ana	Las Cruces MPO	1	City of Las Cruces	0.8330	0.6646	56	UC Major
52	US 491	Highway 264 interchange	NA			unincorporated	McKinley	Northwest RTPO	6	NMDOT	0.8320	0.7609	48	RC Major
53	Eubank Boulevard Northeast	Hotel Avenue Northeast	Central Avenue Northeast			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8314	0.4645	124	UC Major
54	US 66/1-40 BL	NA	NA	17	15	Gallup	McKinley	Northwest RTPO	6	NMDOT	0.8311	0.4880	103	UC Minor
55	Lomas Blvd NW	6th St NW	Woodward Place NE			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8307	0.4683	120	UC Major
56	Coors Boulevard Southwest	Flora Vista Avenue Southwest	Bareback Place Southwest			Albuquerque	Bernalillo	Mid-Region MPO	3	Bernalillo County	0.8303	0.6196	59	UC Major
57	Central Avenue Northeast	Sierra Drive Northeast	Valencia Drive Southeast			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8288	0.4246	226	UC Major
58	San Mateo Boulevard Northeast	Menaul Boulevard Northeast	Candelaria Rd NE			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8269	0.4412	147	UC Major
59	Gibson Boulevard Southeast	Palomas Drive Southeast	Louisiana Boulevard Southeast			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8242	0.5248	81	UC Major
60	Bridge Blvd Southwest	Gatewood Ave SW	Perez Rd SW			Albuquerque	Bernalillo	Mid-Region MPO	3	Bernalillo County	0.8231	0.6929	48	UC Major
61	US 84	NA	NA	195	193	unincorporated	Rio Arriba	Northern Pueblos RTPO	5	Private	0.8217	0.6855	50	RC Major
62	Coors Boulevard Southwest	Bataan Drive SW	Bridge Boulevard Southwest	12	10	unincorporated	Bernalillo	Mid-Region MPO	3	Bernalillo County	0.8214	0.5741	64	RC Major
63	Isleta Blvd SW	Barcelona Road SW	Camino Del Valle			unincorporated	Bernalillo	Mid-Region MPO	3	Bernalillo County	0.8197	0.6573	53	RC Major
64	Isleta Boulevard Southwest	Barcelona Road SW	McEwen Ct SW			unincorporated	Bernalillo	Mid-Region MPO	3	Bernalillo County	0.8190	0.7062	46	RC Major

APPENDIX D Top 10% Prioritized Corridor Segments

Rank	Road name	From street	To street	Milepost start	Milepost end	City	County	MPO or RTPO	NMDOT District	Ownership	VRU Priority Ranking Score	Equity Score	Crash Severity Index	Typology
65	4th Street Northwest	Marquette Avenue Northwest	Hannett Avenue Northwest			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8186	0.5507	70	UC Major
66	Mount Taylor Blvd	Hesperus Peak Blvd	US 64	23	21	unincorporated	San Juan	Northwest RTPO	5	NMDOT	0.8181	0.7566	44	RC Major
67	Louisiana Boulevard Northeast	Marquette Avenue Northeast	Uptown Boulevard Northeast			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8161	0.5166	79	UC Major
68	I-25	NA	NA	209	210	unincorporated	Bernalillo	Mid-Region MPO	3	NMDOT	0.8154	0.6892	48	RC Major
69	Central Ave	2nd Street Southwest	1st Street Southwest			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8148	0.4387	126	UC Minor
70	Coors Blvd NW	Milne Road NW	Quail Road NW	17	15	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8137	0.4077	168	UC Major
71	Broadway Blvd SE	I-25	James Allen Place SE	42	40	Albuquerque	Bernalillo	Mid-Region MPO	3	NMDOT	0.8127	0.6862	48	UC Major
72	Central Avenue Northeast	1st Street Southwest	Sycamore Street Southeast			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8116	0.4353	126	UC Major
73	Broadway Blvd SE	Lead Avenue SE	Rosemont Ave NE	50	48	Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8109	0.4753	86	UC Major
74	Calle del Pajarito Northwest	Ranchitos Road Northwest	Private Road			Los Ranchos de Albuquerque	Bernalillo	Mid-Region MPO	3	City of Los Ranchos de Albuquerque	0.8095	0.5396	68	UC Major
75	Richards Avenue	Siringo Road	Rufina Street			Santa Fe	Santa Fe	Santa Fe MPO	5	City of Santa Fe	0.8044	0.5758	56	UC Minor
76	Central Avenue Southeast	Sycamore Street Southeast	Vassar Drive Southeast			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8023	0.4239	121	UC Major
77	Dr Martin Luther King Jr Ave NE	2nd St NW	Oak St NE			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8016	0.4260	112	UC Major
78	Montgomery Boulevard Northeast	Carlisle Blvd NE	San Mateo Blvd NE			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.8011	0.4167	125	UC Major
79	Gibson Boulevard Southeast	Broadstone Way Southeast	Girard Boulevard Southeast			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7999	0.5511	62	UC Major
80	Paseo Del Pueblo Sur	Old Talpa Canon Road	Sipapu Street	45	43	Taos	Taos	Northern Pueblos RTPO	5	City of Taos	0.7997	0.5693	55	UC Major
81	Arenal Road Southwest	Unser Boulevard Southwest	Coors Boulevard Southwest			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7993	0.5933	52	UC Major
82	NM 68	Sage Lane	North McCurdy Road	5	3	unincorporated	Rio Arriba	Northern Pueblos RTPO	5	Tribe	0.7991	0.6380	48	RC Major
83	Central Ave NW	San Pasquale Ave NW	Tingley Drive SW			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7984	0.4331	102	UC Major
84	I-40 on ramp	Munoz drive	I-40			Gallup	McKinley	Northwest RTPO	6	NMDOT	0.7983	0.4562	88	UC Minor
85	I-40	NA	NA	278	276	Santa Rosa	Guadalupe	Northeast RTPO	4	NMDOT	0.7960	0.5957	51	UC Major

APPENDIX D Top 10% Prioritized Corridor Segments

Rank	Road name	From street	To street	Milepost start	Milepost end	City	County	MPO or RTPO	NMDOT District	Ownership	VRU Priority Ranking Score	Equity Score	Crash Severity Index	Typology
86	Zuni Road SE	Ortiz Drive SE	Jefferson Street Southeast			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7958	0.4483	91	UC Major
87	San Mateo Boulevard Southeast	Marquette Avenue Northeast	Bell Avenue Southeast			Albuquerque	Bernalillo	Mid-Region MPO	3	City of Albuquerque	0.7936	0.3675	193	UC Major

NMDOT VRU Safety Assessment Appendix E: Stakeholder Input Summary

New Mexico Department of Transportation

NMDOT Vulnerable Road User Safety Assessment
October 23, 2023

NMDOT
NEW MEXICO DEPARTMENT OF TRANSPORTATION

1 Activities

1.1 Stakeholder Meetings

Three stakeholder meetings were conducted in the summer of 2023. The stakeholder meetings included participants from areas with the highest percentage of the state's KA crashes from 2012 to 2022. The first stakeholder meeting was Bernalillo County, the area with the highest percentage of KA crashes statewide. However, given the reality that the population of the greater Albuquerque metro area extends across multiple counties, stakeholders included representatives and interests from the broader metro region and were not limited to Bernalillo County itself.

For the second two meetings, county boundaries were used to determine the area of data analysis for the meeting, and the stakeholders who should participate. By using county boundaries, communities in a range of sizes and densities were included, as well as representatives from tribal nations and regional organizations.

Meetings were virtual, lasted an hour and a half, and consisted of:

- An introductory presentation to frame discussion
- Mentimeter poll questions to gather feedback from participants
- A guided discussion using a virtual white board to record thoughts

Meeting 1:

Focus Area: Albuquerque Metro Area
August 9th, 2023
10-11:30am

Meeting 2:

Focus Area: McKinley and San Juan Counties
August 30th, 2023
12-1:30pm

Meeting 3:

Focus Area: Doña Ana County
September 11th, 2023
12-1:30pm

1.1.1 Meeting Themes

Stakeholder Discussion

During the NMDOT Vulnerable Road User Safety Assessment (VRUSA), three (3) virtual meetings were conducted with stakeholder groups in different geographic regions around the state: Albuquerque area,

Northwest (McKinley and San Juan Counties), and Doña Ana County. The primary objective of these meetings was to share an overview on the VRUSA process and provide opportunities for meaningful dialogue that could inform decision making and the final products of the planning process.

After presenting the data analysis used to identify areas of high risk to vulnerable road users, the conversation was opened to participants. The project team facilitated group discussions to gather input on a series of topics. Questions were organized into three (3) categories: Strategies, Policies, & Projects; Comparing Data; and Involvement in Transportation Planning. Google Jamboard was used to capture stakeholder comments.

Group Discussion Questions

Strategies, Policies & Projects

- What are your top priorities to improve safety for vulnerable road users?
- What do you think are the main barriers to implementing strategies, policies, and projects that improve safety outcomes for vulnerable road users?

Comparing Data

- How does the High Injury Network (HIN) data we shared compared to data you've seen? Does it reflect what you've seen?
- What do you believe are the main contributing factors related to vulnerable road user fatalities and serious injuries (speed of traffic, time of day, etc.)?

Involvement in Transportation Planning

- Do you feel that your group is adequately represented in statewide transportation planning?

What we heard around New Mexico

This section provides a virtual meeting discussion overview. Reflective of prevalent challenges and consistent priorities for state-wide transportation safety, there were commonalities between all three (3) stakeholder meeting discussions.

Top Priorities

Participants from all three (3) regions around the state indicated that their top priority for increasing vulnerable road user safety is improved pedestrian infrastructure. Conversations focused on the need to integrate and prioritize VRU-centered design and Universal Design standards in all transportation projects. Participants identified multiple goals associated with pedestrian infrastructure improvements, such as increased separation between pedestrians and vehicles, more frequent crossing opportunities, and improved intersection signalization. In order, the other priorities mentioned most often were bike infrastructure improvement, public education, enforcement, and speed reduction.

Main Barriers

Participants in all three (3) regions indicated that NMDOT policy and roadway design is the top barrier to implementing strategies, policies, and projects furthering vulnerable road user safety. There were discussions in each group regarding the inflexibility of DOT policy for implementing pedestrian safety improvements along DOT roadways. Concerns included the prioritization of level of service over safety, resistance to change, and fear of lawsuits. The next most identified barrier was car-dependency and car-

centrism. Participants discussed how this influences public attitudes, driver behavior, policy, and infrastructure. Ineffective leadership and coordination were also discussed as barriers to effective project prioritization and implementation.

Comparing the Data

Participants in all three (3) regions indicated that the data presented was consistent with what they had seen, while many others noted that they had never seen this analysis specifically for vulnerable road users. There was interest in seeing additional data related to various equity indicators.

Contributing Factors

When asked what people believed were the top contributing factors to vulnerable road user safety, the leading response was driver inattention related to cell phone use or other distractions. The next most frequently discussed contributing factors were road design and the quality of vulnerable road user infrastructure. Participants noted that road design currently prioritizes vehicle travel, with wide, high-speed corridors. In all parts of the state, participants described long stretches of road without pedestrian facilities such as crosswalks, pedestrian refuges, or other safety countermeasures, the lack of which contribute to unprotected mid-block crossings. Additionally, many participants expressed that pedestrian infrastructure is not equitably distributed throughout their communities, and that there is a relationship between lower income neighborhoods and inadequate infrastructure.

Excessive vehicle speed and car-centric attitudes and designs reflective of a disregard for pedestrian safety were the other top contributing factors discussed in the meetings. The increased prevalence of large vehicles was also mentioned as a major contributing factor.

Participation in Transportation Planning

Discussion about participation in transportation planning reflected the diversity of stakeholders present in the meetings. In each region, participants discussed that there hasn't been much genuine opportunity for the communities most harmfully impacted by transportation infrastructure to participate in planning. Participants discussed the need for better coordination and partnership with Tribal government and communities as well as greater efforts to align statewide plans with local plans. Multiple participants mentioned that this was the first time their group had been included in statewide transportation planning and that they appreciated the opportunity to be involved. Stakeholders representing pedestrian and cyclist advocacy groups, disabled communities, and Tribal communities expressed the desire to be involved in the Strategic Highway Safety Plan.

What we heard in each region

Stakeholders in the different virtual meetings shared priorities and concerns reflective of the unique nature of transportation safety issues in each region.

Top Priorities

Albuquerque Area – Central NM

In Albuquerque, the conversation about priorities focused heavily on improvements to pedestrian and bicycling infrastructure, particularly on busy corridors such as Central Ave and Coors Ave. In terms of infrastructure improvements, participants prioritized increased separation between pedestrians, cyclists, and motor vehicles to minimize the exposure of vulnerable road users. Specific improvements suggested included protected bike lanes, pedestrian refuges, and protected mid-block crossings with the use of High-Intensity Activated CrossWalk (HAWK) signals.

Multiple participants noted that major infrastructure improvements have taken place in Albuquerque, but that they would like to see improved connectivity between existing facilities. Participants expressed interest in education and outreach within the most impacted communities and recommended specific education initiatives around proven safety counter measures. Participants also expressed support for road diets and speed reduction, which was discussed at greater length during the conversation about contributing factors.

McKinley and San Juan Counties – Northwest NM

In McKinley and San Juan Counties, the conversation focused heavily on pedestrian infrastructure improvements particularly on routes such as U.S. 491 between Shiprock and Gallup, U.S. 64 between Shiprock and Farmington, and Old Route 66 in Gallup. Participants noted the need for increased separation between pedestrians/bicyclists and motor vehicles, particularly along high-speed rural routes. They also noted that lacking or insufficient pedestrian infrastructure such as crosswalks, pedestrian refuge zones, and crossing signals was leading to unsafe crossings. Multiple participants expressed interest in road diets within Main Street corridors.

Doña Ana County – Southern NM

In Doña Ana County, participants identified pedestrian infrastructure improvements as a top priority. The conversation focused heavily on the need for increased crossing opportunities and signalized crossing improvements. Participants noted the prevalence of long stretches between protected crossings that result in unsafe mid-block crossings. Concern was expressed over a lack of enforcement of speed laws and inaccurate reporting of traffic incidents. Additionally, multiple participants spoke to a need for more coordination between local planning efforts such as affordable housing planning and transportation infrastructure improvements.

Barriers

Albuquerque Area – Central NM

In Albuquerque, participants identified NMDOT policy and road design requirements as the top barrier to implementing strategies and projects to enhance vulnerable road user safety. Participants shared that they perceive resistance on the part of DOT engineers to reducing the speed or reducing level of service for vehicles on DOT roadways. Participants called upon the DOT to prioritize pedestrian safety over level of service and to consider community-identified and proven safety countermeasures. Other barriers discussed included car-centric design and how funding allocation is prioritized.

McKinley and San Juan Counties – Northwest NM

In the McKinley and San Juan Counties participants identified lack of leadership and ineffective partnerships as the greatest barrier to implementing strategies and projects to enhance vulnerable road user safety. Participants discussed a lack of leadership and coordination with Tribal governments and communities. There is also a perception that there is a lack of communication and coordination about priorities between the NMDOT Planning Bureau and the local District.

Participants discussed that NMDOT road design policies aren't flexible or responsive to the needs of communities. It can be challenging for communities to get approval of flow reduction on DOT highways that serve as Main Streets. This leads to an unsafe environment in the commercial core of communities and limits economic development opportunities.

Doña Ana County – Southern NM

In Doña Ana County, participants identified car dependency and car-centric design as interrelated barriers to implementing strategies and projects to enhance vulnerable road user safety. Participants discussed

that the prominence of car culture in their communities leads to disregard of vulnerable road users and victim blaming when accidents occur. Participants discussed a needed shift towards prioritizing vulnerable road users in roadway design.

Contributing Factors

Albuquerque Area – Central NM

In Albuquerque, the conversation about the factors that contribute to vulnerable road user fatalities and injuries centered on infrastructure inequity. Participants expressed concern that the quality and distribution of multi-modal infrastructure is inequitably distributed throughout the city leading to inequitable outcomes in different communities. Participants discussed how in communities such as the International District, there are long stretches of multi-lane roads without frequent protected crossing opportunities, increasing the vulnerability of pedestrians.

Participants discussed how roads are designed for speed and that wide roads create an inhospitable environment for pedestrians. Driver and pedestrian impairment were also noted as a contributing factor, particularly along Central Ave; notably, other participants expressed concern that the focus on impairment can lead people to ignore other contributing factors and deter them from pursuing infrastructure improvements.

Northwest Corner Region – Northwest NM

In Farmington, participants identified road design and distracted driving as the top contributing factors to vulnerable road user fatalities and injuries. Participants discussed the lack of separation between vulnerable road users and roads that promote excessive speeds as the main road design challenges in the region and discussed how the consequences of distracted driving are heightened due to road design and speed. Participants also expressed concern about pedestrian impairment and time of day as contributing factors.

Doña Ana County – Southern NM

In Doña Ana County, participants identified car-centrism and distracted driving as the top contributing factors related to vulnerable road user fatalities and serious injuries. Participants discussed how due to the design of road infrastructure, current facilities prioritize vehicle use exclusively, and thus drivers feel that only vehicles should be on roads. It was discussed that this car-centric attitude, paired with roadway design leads to disregard for pedestrian and cyclist safety.

Participation in Transportation Planning

Albuquerque Area – Central NM

In Albuquerque, participants expressed appreciation for the ability to participate in the VRU Safety Assessment process. Participants requested additional efforts to engage and plan with Tribal and other community groups that are most impacted by traffic fatalities and injuries. A participant from Presbyterian Healthcare Services and the Health Equity Council offered to support efforts to reach Hispanic and Native American communities in future outreach.

McKinley and San Juan Counties – Northwest NM

In McKinley and San Juan Counties, participants requested additional efforts to engage and plan with Tribal stakeholders. It was also discussed that the NMDOT seems to be missing a disability related liaison and that there should be more efforts to consider how the state is planning for Universal Design and ADA accessibility.

Doña Ana County – Southern NM

In Doña Ana County, multiple participants representing vulnerable road user stakeholder groups indicated that they had never been included in statewide planning processes in the past and appreciated inclusion in the VRU Safety Assessment. Cycling, vulnerable road users, and homeless advocacy groups expressed interest in further participation in the Strategic Highway Safety Plan. A City of Las Cruces official recommended that it would be beneficial for the DOT to include housing developers in the planning process to support alignment of planned developments and transportation infrastructure projects. Some participants expressed concern that planning processes can go well, but often don't translate to implementation.

1.1.2 Meeting 1 Notes: Albuquerque

Attendees

NMDOT

Rosa Kozub, NMDOT
Jason Coffey, NMDOT

Project Team

Tommy Myszka, Jacobs
Kim Kolody, Jacobs
Brandon Gonzalez, Alta
Krista Flynt, Alta
Kelly Dunn, Alta
Anthony Rios Gurrola, Alta
Amy Bell, Groundwork Studio
Maren Neldam, Groundwork Studio
Claire Jordy, Groundwork Studio

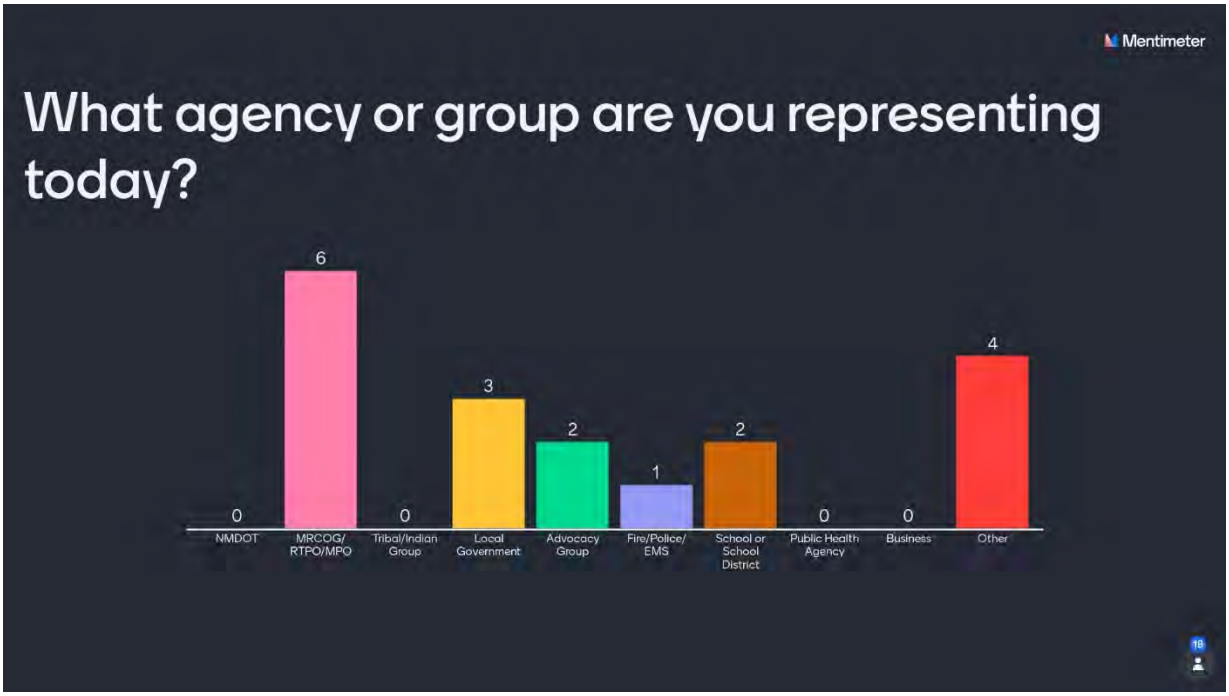
Stakeholders

Amira Rasheed, NMAG
Mark McConnell, Bernalillo County
Richard Meadows, Bernalillo County
Jennifer Lopez, Aubaquerque Public Schools
Forest Replogle, MRCOG
Clare Haley, BHI Inc.
Aaron Moore, MRRTPO
Peach Anderson-Tauzer, MRMPO
Tara Cok, MRMPO/MRCOG
Karen Waconda, Presbyterian Community Health
Kendra Montanari, MRCOG
Rebecca Bolen, CABQ Planning
Willy Simon, MRCOG
Katt Valencia Soria, UNM
Jeff Hertz, CABQ Planning
Christopher Ramirez, Together for Brothers
Tatiana Falcon-Rodriguez, Presbyterian Community Health
Cordell Bock, Albuquerque Public Schools
Hao Yin, NMDOT
Rebecca Montoya, The Arc NM
Amy Morse, Environmental defense Fund
Tiffany Stevens, First Choice Community Healthcare
John Hamiga
Mark Aasmundstad
Jennifer Lucero
Scott Hale

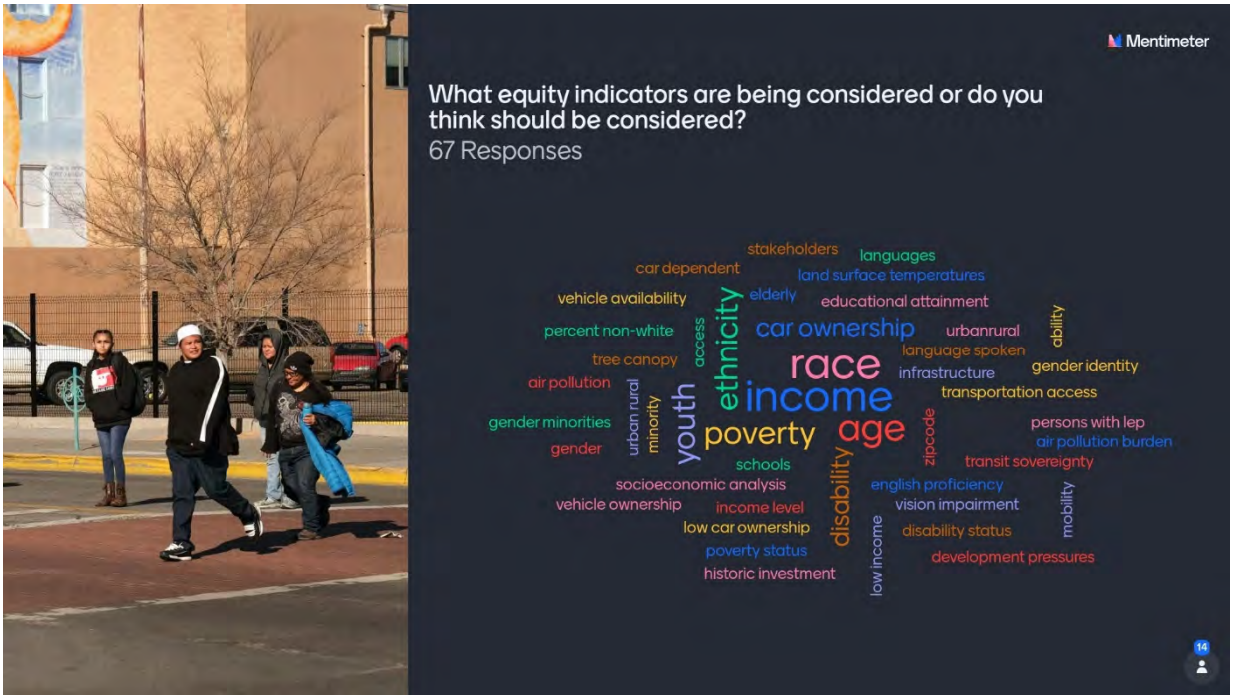
Discussion and Questions During Overview Presentation

- Question 1: How is qualitative data also being included in addition to numbers? If “vulnerable communities” are the focus, how are their stories and feedback being centered?
- Question 2: Isn’t that statewide number (15%) higher in some communities? Like Central Avenue?
- Question 3: Within that 15% do we know how many are people with a disability or using wheelchairs, walkers, or other devices?
- Question 4: Is the proximity to the intersection because that is where all the people are or because it is more dangerous than a mid-block crossing?
- Stakeholder: Concerned about high-speed corridors (50 mph)
- Stakeholder: What was the context for intersections? Signalized? Does this included all intersections including local streets?
- Stakeholder: How do we consider equity in infrastructure? How do we document sidewalk presence and sidewalk condition? He says he has noticed that this could be the reason why people cross. As a bus rider, he’s seen people dashing across the road to catch the bus. I also want to mention that in some parts of Central it’s so wide (six or more lanes) that it’s also a BIG factor.
- Stakeholder: Noting the disproportionate share of Native American people wonders if more KA collisions happen when people living in rural areas come into urban areas (e.g. Gathering of the Nations); she grew up on the reservation and until college, did not know bike laws existed. Could we supplement data with tribal enrollment data.
- Stakeholder: Wanted to reiterate inequity in infrastructure. Also asked about the
- Stakeholder: Pointed us to a professor at NMSU whose research focuses on bike/ped infrastructure in ABQ area.
- Stakeholder: Two major safety studies; shown that safety improvements are needed on E Central Ave.

Mentimeter Responses



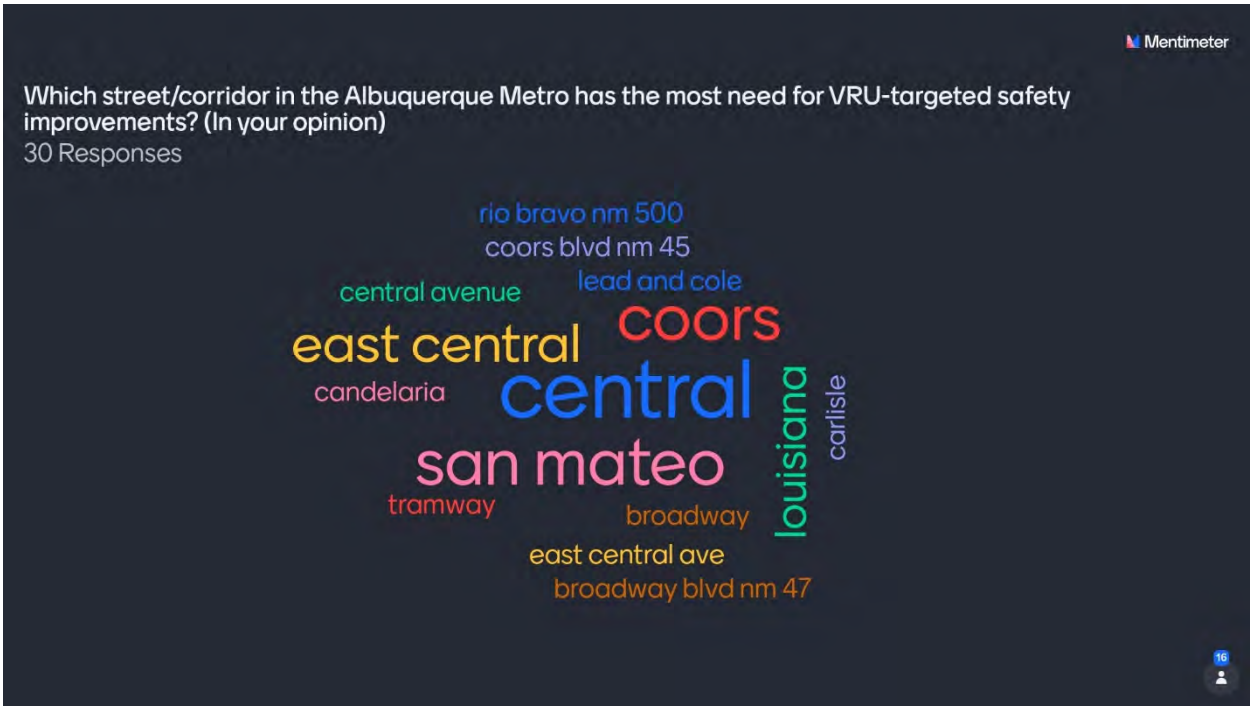
Equity



Most frequent equity indicator suggestions:

- Income: 10 instances
- Age: 6
- Race: 6
- Car ownership: 3
- Ethnicity: 3
- Poverty: 3
- Youth: 3

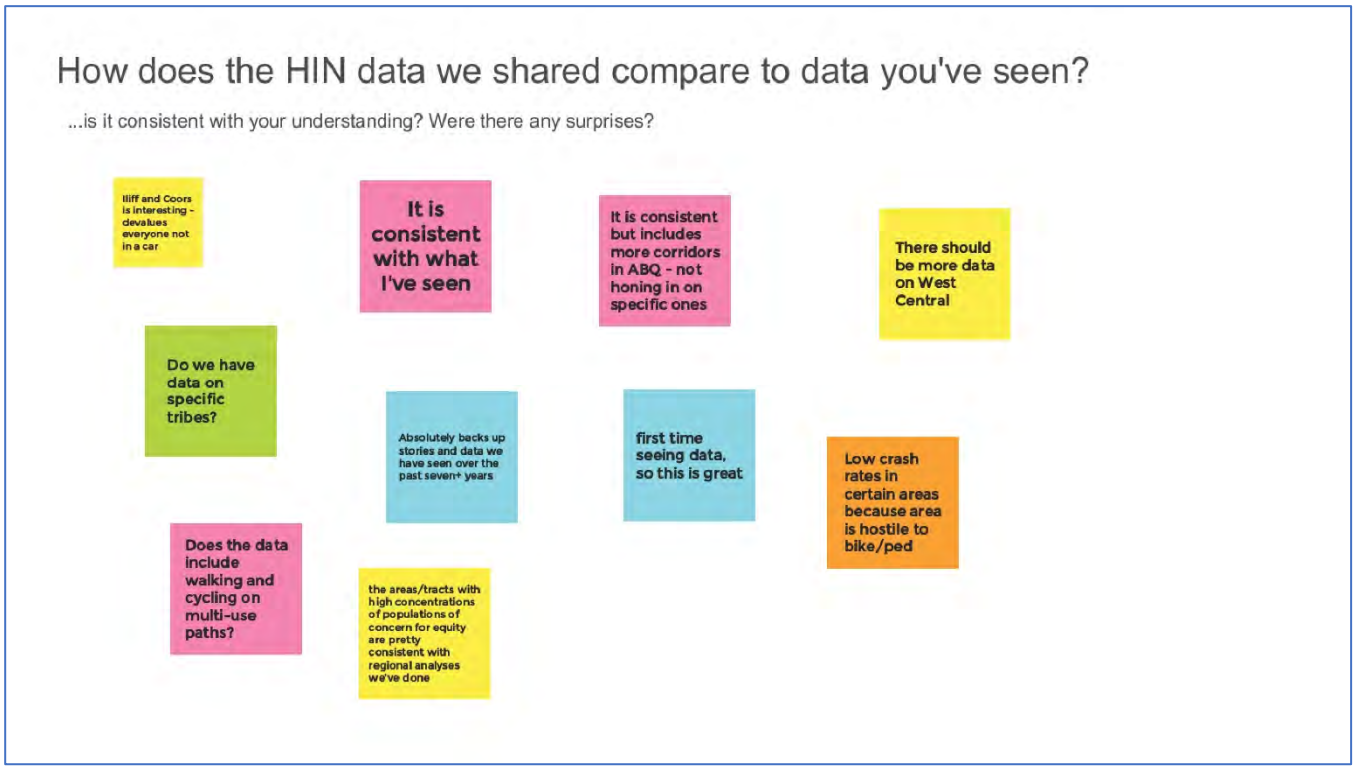
Corridors Most in Need of Improvement



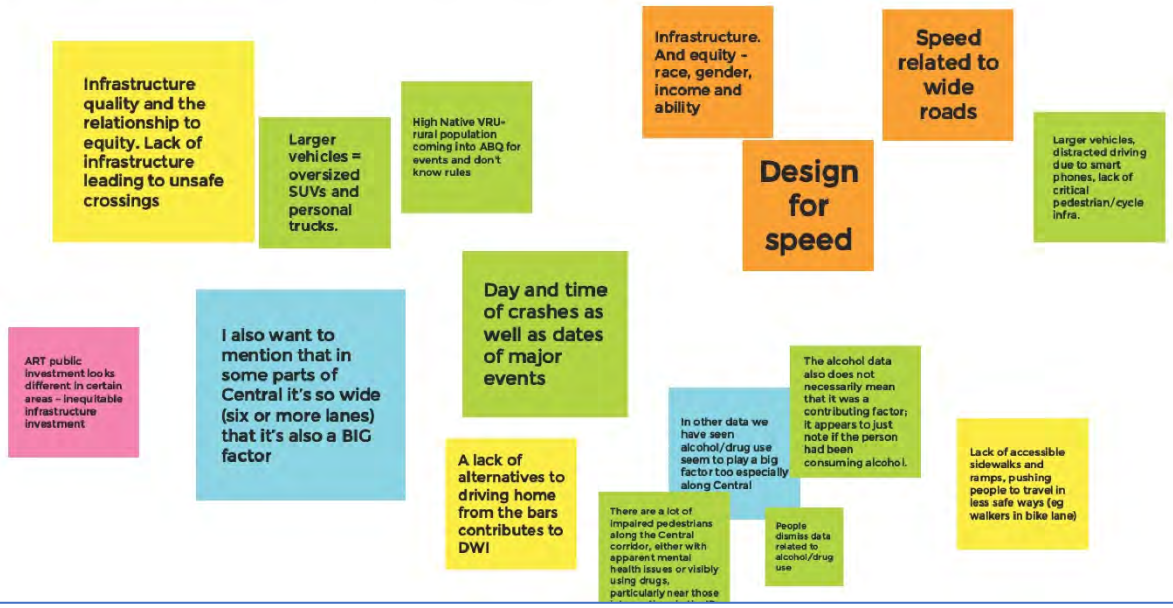
Most frequently suggested corridors in need of improvement:

- Central: 11 instances
- Coors: 6
- San Mateo: 5
- East Central: 4

Jamboard Comments



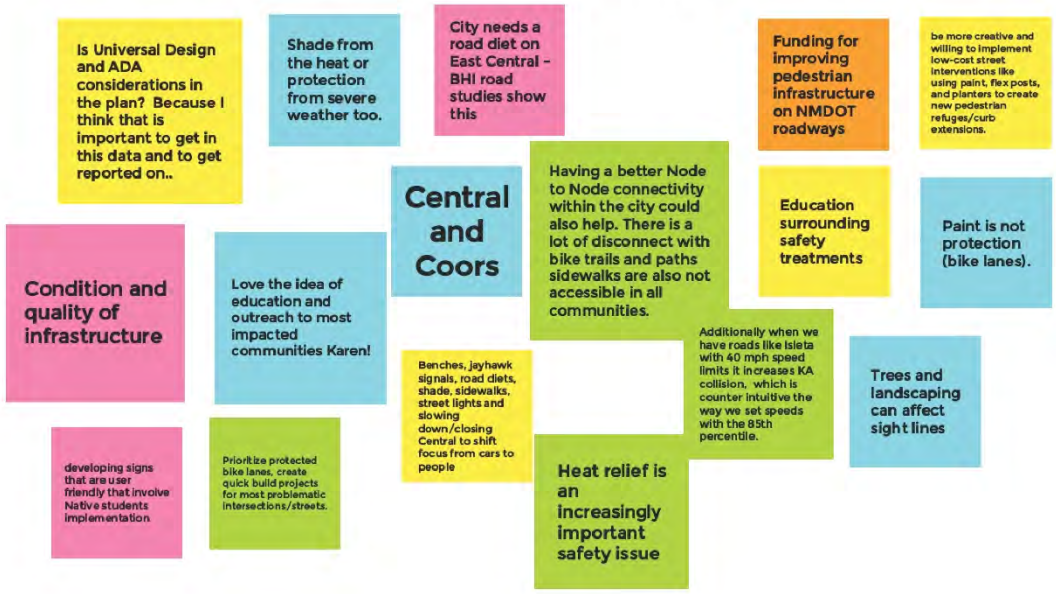
What do you believe are the main contributing factors related to VRU fatalities and serious injuries (speed of traffic, time of day, etc.)?



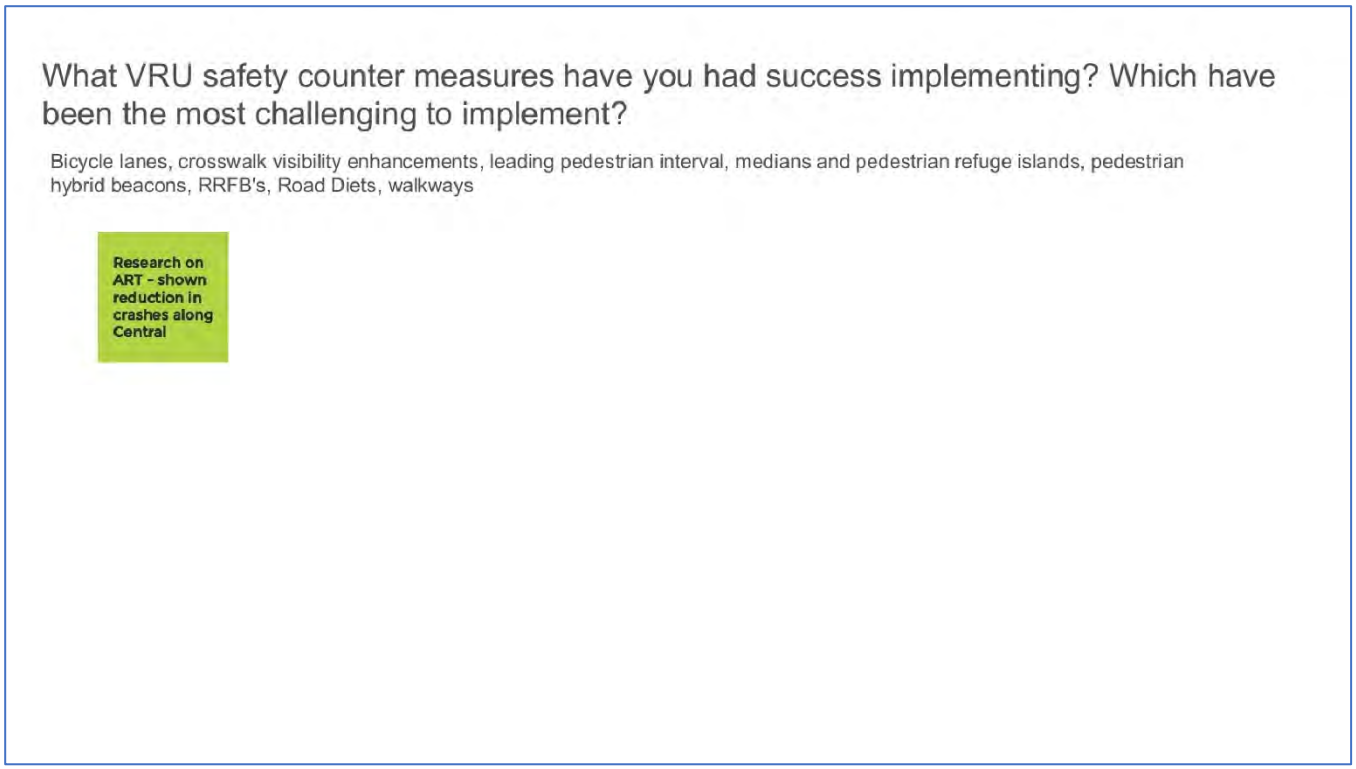
Do you feel that your group is adequately represented in statewide transportation planning? What has been effective? What could work better (in the next phase of this project)?

Please include the group you are representing in your answer (advocacy, youth, etc.).

What are your top priorities to improve safety for vulnerable road users?



What do you think are the main barriers to implementing strategies, policies, and projects that improve safety outcomes for vulnerable road users?



1.1.3 Meeting 2 Notes: McKinley and San Juan Counties

Attendees

NMDOT

Rosa Kozub, NMDOT
Jason Coffey, NMDOT

Project Team

Kim Kolody, Jacobs
Brandon Gonzalez, Alta Planning + Design
Krista Flynt, Alta Planning + Design
Kelly Dunn, Alta Planning + Design
Anthony Rios-Gurrola, Alta Planning + Design
Amy Bell, Groundwork Studio
Maren Neldam, Groundwork Studio
Claire Jordy, Groundwork Studio

Stakeholders

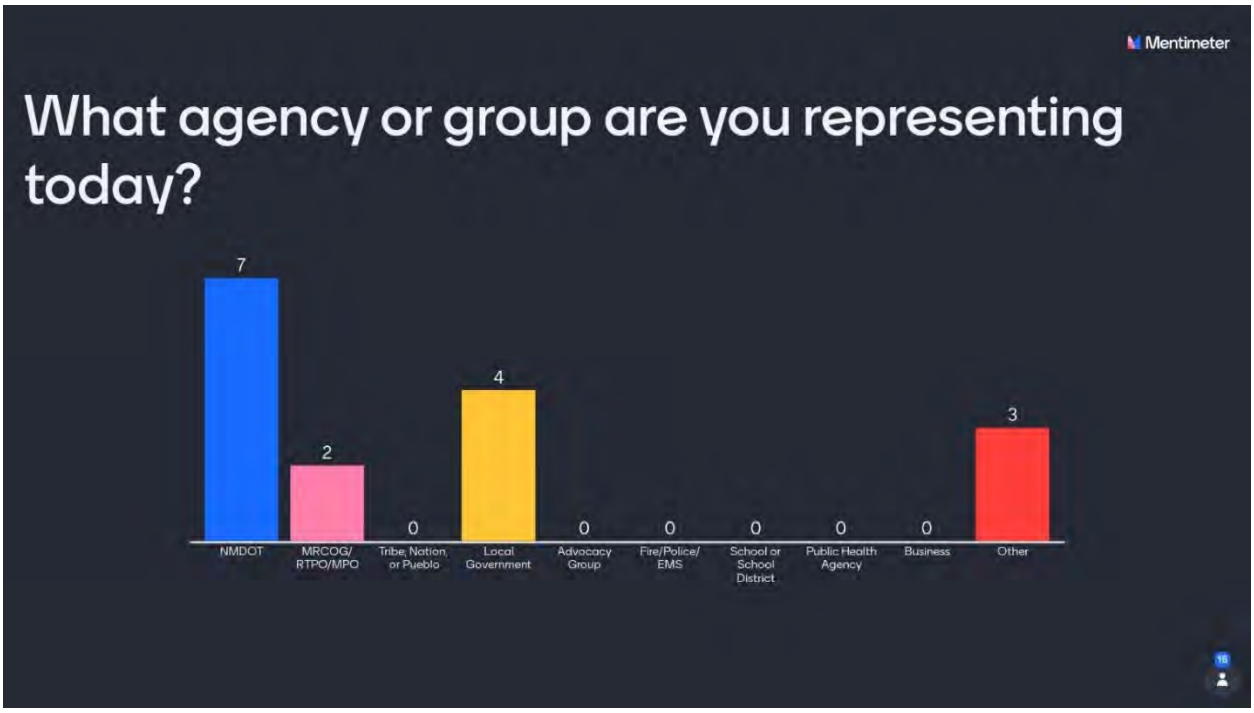
Luis Melgoza, FHWA
Neala Kreuger, NMDOT
Jayson Grover, NMDOT District 6 Traffic Engineer
Lisa Vega, NMDOT District 6 Engineer
Angelica Trujillo, NMDOT CMAQ Coordinator
Sullivan Moore, NMDOT

Alicia Ortiz, NMDOT, Acting Modal Executive Director
JoAnn Garcia, NMDOT
Peter Koeppel, Farmington MPO
Lt Tammy Houghtaling, McKinley County Sheriff's Office
Rodney, McKinley County Roads
Dustin Middleton, Cibola County Office of Emergency Management
Sheriff James Maiorano III, McKinley County Sheriff's Office (based in Gallup)
Alicia Santiago, City of Gallup
Prudence Brady, City of Bloomfield
Lou Ann Davis, Town of Kirtland
Robert Hamblen, City of Gallup
Casey Yazzie, City of Gallup GIS Department Coordinator
Demetrius Henry - City of Farmington
Dale Davis, 505 Cycles/Endeavor NM
Debra Yazzie
Michael, Gallup Main Street
Robin Garrison and Jennine Sanchez Disability Rights NM
William Yarborough, Grants MainStreet Project
Karen Waconda-Lewis, Presbyterian Community Health

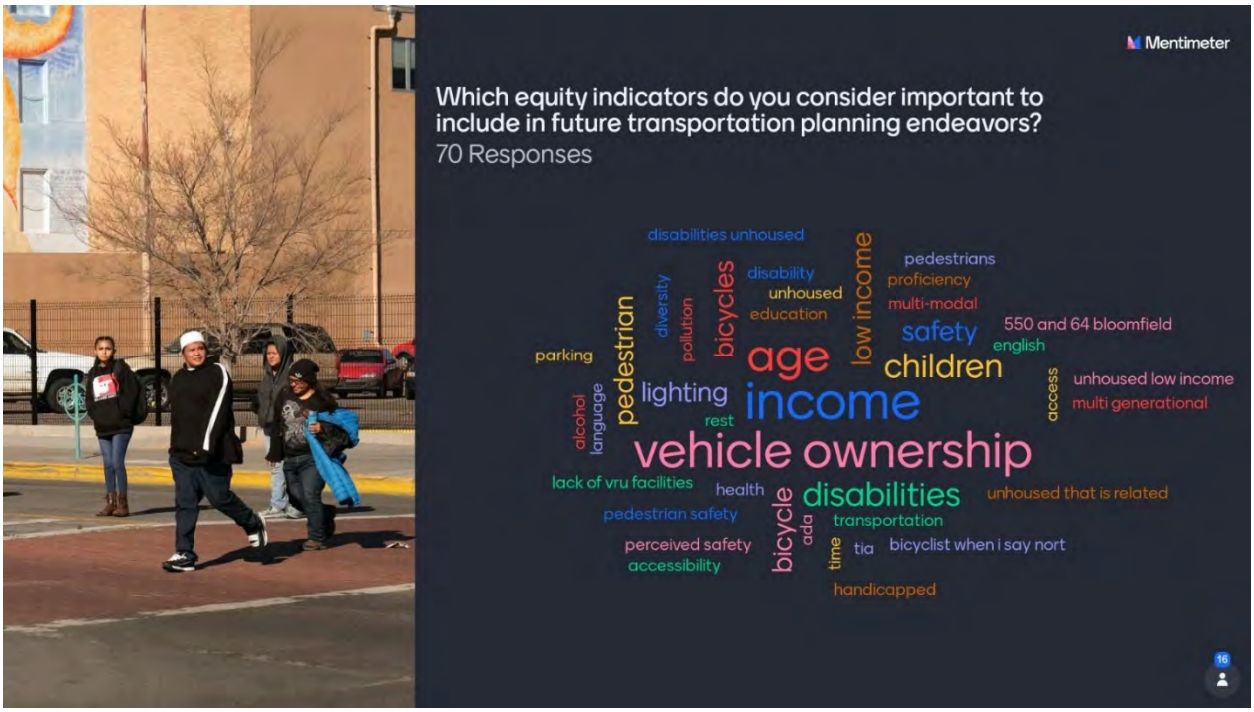
Discussion and Questions During Overview Presentation

Comment 1: Mentimeter isn't accessible to everyone; consider accommodations and/or alternatives for the disability community.
Question 1: Why wasn't Cibola County included in the study?
Response: McKinley and San Juan were in the top two; Cibola did not rise to the top; we do have other ways to engage and participate; we had to follow the data; clarification that the statewide analysis does include Cibola County
Comment 2: I thought the Mentimeter was a great way to involve us.
Comment 3: I think there are many households in the Native community do not have access to a car or they share cars so that may be why, as pedestrians, they are disproportionately affected.
Question 2: Does it include motorcycles?
Response: No. The definition of vulnerable road user *came from IIJA/BIL.*
Question 3: There are long stretches of rural highways with wildlife. Does the data include collisions involving wildlife?
Response: No, collisions were only included if they involved a pedestrian or bicyclists.
Comment 4: "There are more people using scooters and electric bikes...slow moving, with fast moving vehicles."
Comment 5: It has already discussed with NMDOT, but for the Gallup area, many of the collisions deal with inebriated individuals. The sheriff asked if the data detailed who was intoxicated, pedestrian/bicyclist or motorist? Project team stated the data provided did distinguish. Someone from sheriff's office checked if that is addressed in the collision report form. The sheriff wanted to make sure we made it clear that it's not always the driver who is under the influence in collisions.

Mentimeter Responses



Equity



Most frequent equity indicator suggestions:

- Income (9 instances)
- Vehicle Ownership (7)
- Age (6)
- Children (3)
- Disabilities (3)

Corridor Most in Need of Improvement

Most frequently suggested corridor most in need of improvement:

- US 64 through various towns (4)
- US 491 in Gallup (3)
- NM 516 in Farmington (2)
- US 66 in Gallup (2)
- I-40 (2)
- Aztec Ave in Farmington (2)

Intersection Most in Need of Improvement

Most frequently Submitted Intersections in Need of Improvement:

- 64 and 550 in Bloomfield was the only intersection to be listed more than once. It was submitted three times.
- Many other intersections with Hwy 54 were also submitted.

Jamboard Discussion and Comments

Jamboard Question 1: What are your top priorities to improve safety for VRUs?

- In Grants, they are looking at improving crossing on Santa Fe Ave. This is predominantly a commercial corridor where drivers are more likely to interact with pedestrians; many people crossing illegally, and the two legal crossings are difficult to get to and/or are too far apart; individual hears from commercial vendors that they don't get a lot of pedestrian patrons because of the roads are unsafe so a safer pedestrian experience could have a positive impact on economic development. On High Street, individual stated they see people buying alcohol at the liquor store on 1st Street and then cross the street midblock to the park; East Santa Fe has a lot of alcohol establishments which may contribute to the high incidence of collisions.

- One individual said he has asked for more signage on the roadways telling motorists to share the road with bicyclists (he stated he is an avid bicyclist); it would be a low-cost solution, but it has not been implemented; He also noted that better sidewalks are needed. In some areas there are gaps or existing sidewalks have fallen into disrepair.

- Pedestrian islands are needed at busy intersections along Old Route 66 in Gallup; currently, the north side of the street is not pedestrian friendly; it is right next to the railroad so there's not enough room for sidewalks; pedestrian islands are also needed in places in the downtown area where there are multilane roadways intersect; pedestrian islands would be especially helpful for people using a wheelchair.

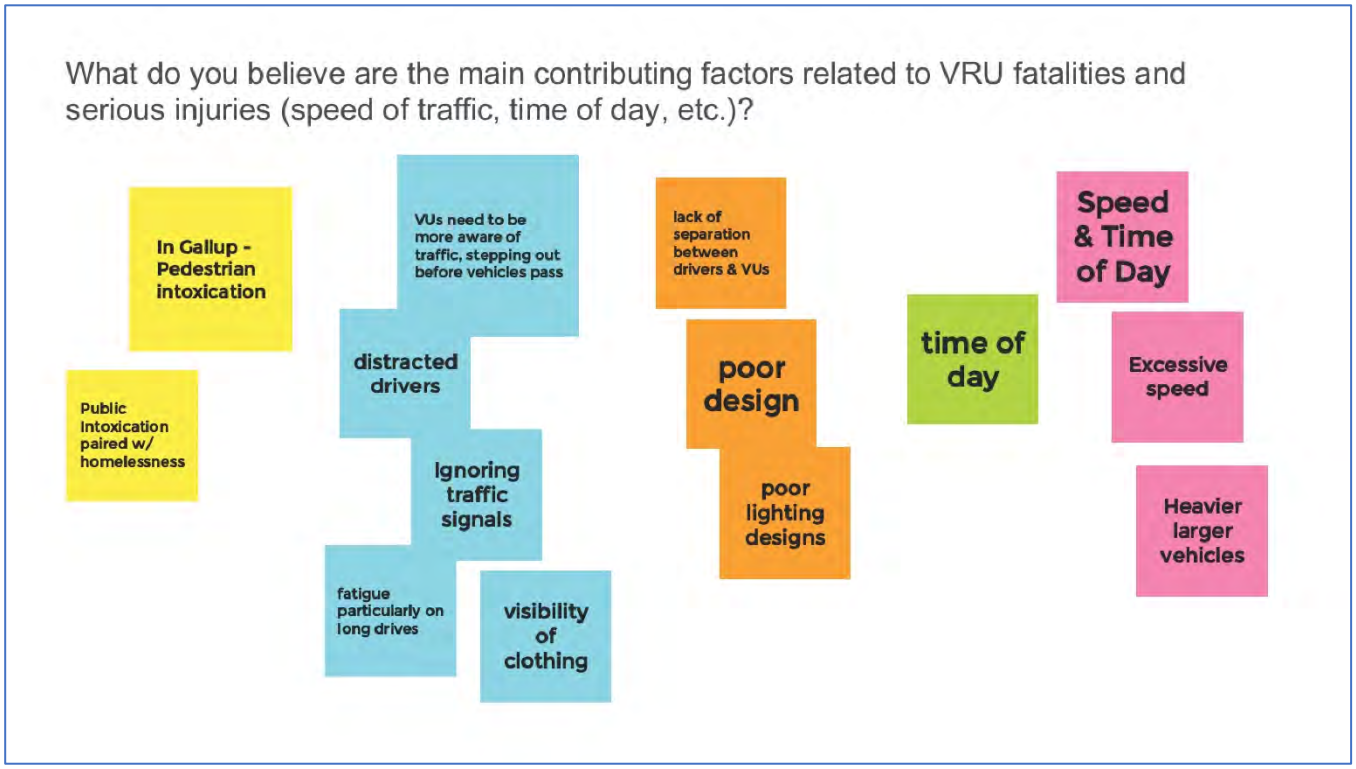
- One participant wrote: "smart road design" in the chat. The consultant team asked for elaboration. They responded saying they were new to transportation planning, so they were not quite able to give examples, but NMDOT has considered incorporating crash data and traffic count data in their planning efforts; ultimately, they want to use data to inform the design of their roads whenever potential projects are identified. They also want to address other areas such as seatbelt usage and high pedestrian corridors.

- One individual noted there is a pedestrian hybrid beacon (PHB) on one major corridor (I think it was in Grants). They also stated that they have seen close calls but thinks in general they help reduce collisions.
    - NMDOT reassured the individual that NMDOT plans to install more PHBs in the next 5-10 years across the state.
- Another individual said there was a study that was conducted to consider the addition of bike facilities on a specific roadway. Note taker was not able to hear to which roadway they were referring (check recording).

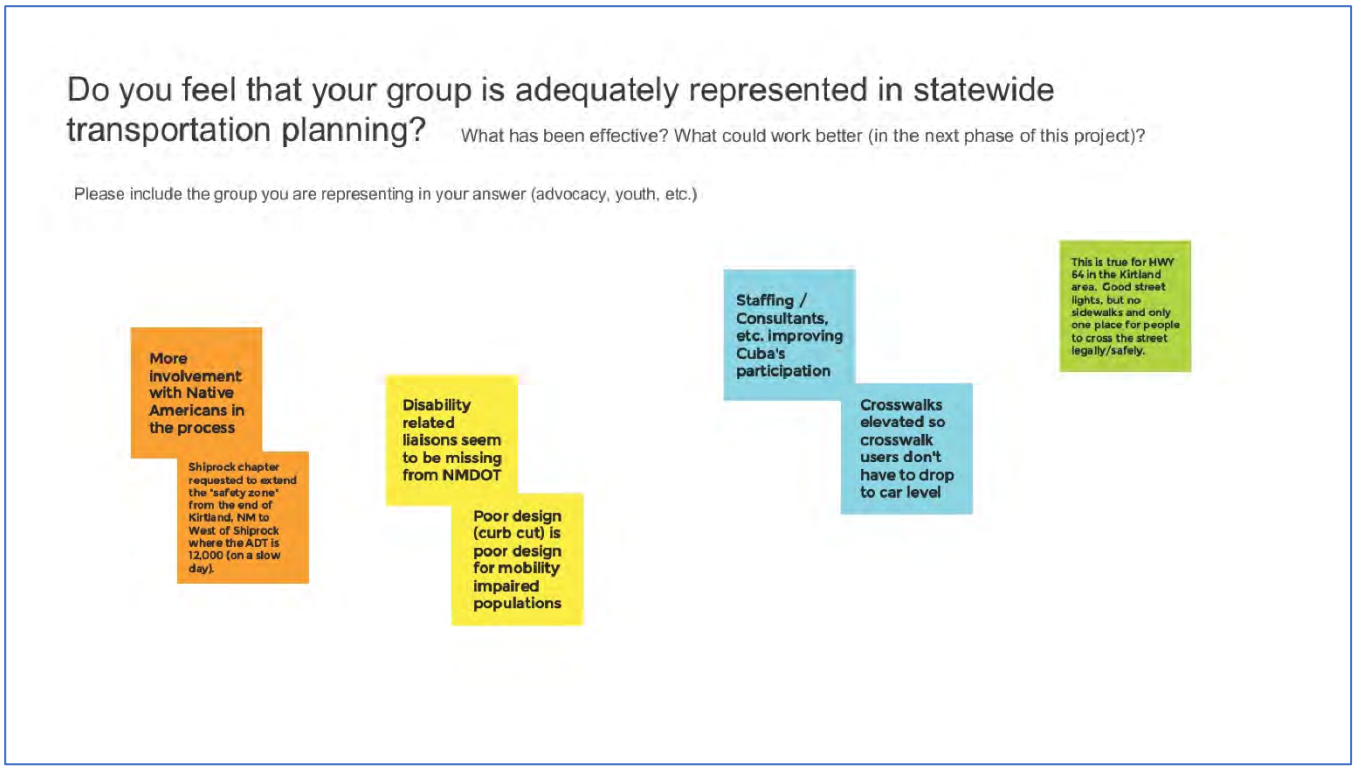
Jamboard Question 2: What do you think are the main barriers to implementing strategies, policies and projects that improve safety outcomes for VRUs?

- It was stated that NMDOT does not allow lane reductions. At the local government level, they want to reduce lanes to make the roadway safer for pedestrians but, it's at odds with keeping traffic moving.
- The project team asked if there was anyone from tribal areas with questions or comments but there was no response.
- Someone entered in the chat: "lack of support from leadership". When asked for clarification, they noted it was tribal leadership.
- Someone from NMDOT noted that there were great ideas expressed by different agencies/departments, but the information doesn't get passed up. More coordination is needed.

Jamboard Question 3: What do you believe are the main contributing factors related to vulnerable road user fatalities and serious injuries?



- Group 1 did not have enough time to get to this question, but participants were still encouraged to add responses after the Jamboard session ended.
- **Jamboard Question 4: Do you feel that your group is adequately represented in statewide transportation planning?**



- Group 1 did not have enough time to get to this question, but participants were still encouraged to add responses after the Jamboard session ended.

1.1.4 Meeting 3 Notes: Doña Ana County

Attendees

Client

Rosa Kozub, NMDOT
Jason Coffey, NMDOT
Shannon Glendenning, NMDOT

Project Team

Tommy Myszka, Jacobs
Kim Kolody, Jacobs
Brandon Gonzalez, Alta Planning + Design
Krista Flynt, Alta Planning + Design
Anthony Rios-Gurrola, Alta Planning + Design
Amy Bell, Groundwork Studio
Maren Neldam, Groundwork Studio

Stakeholders

Luis Melgoza, FHWA NM

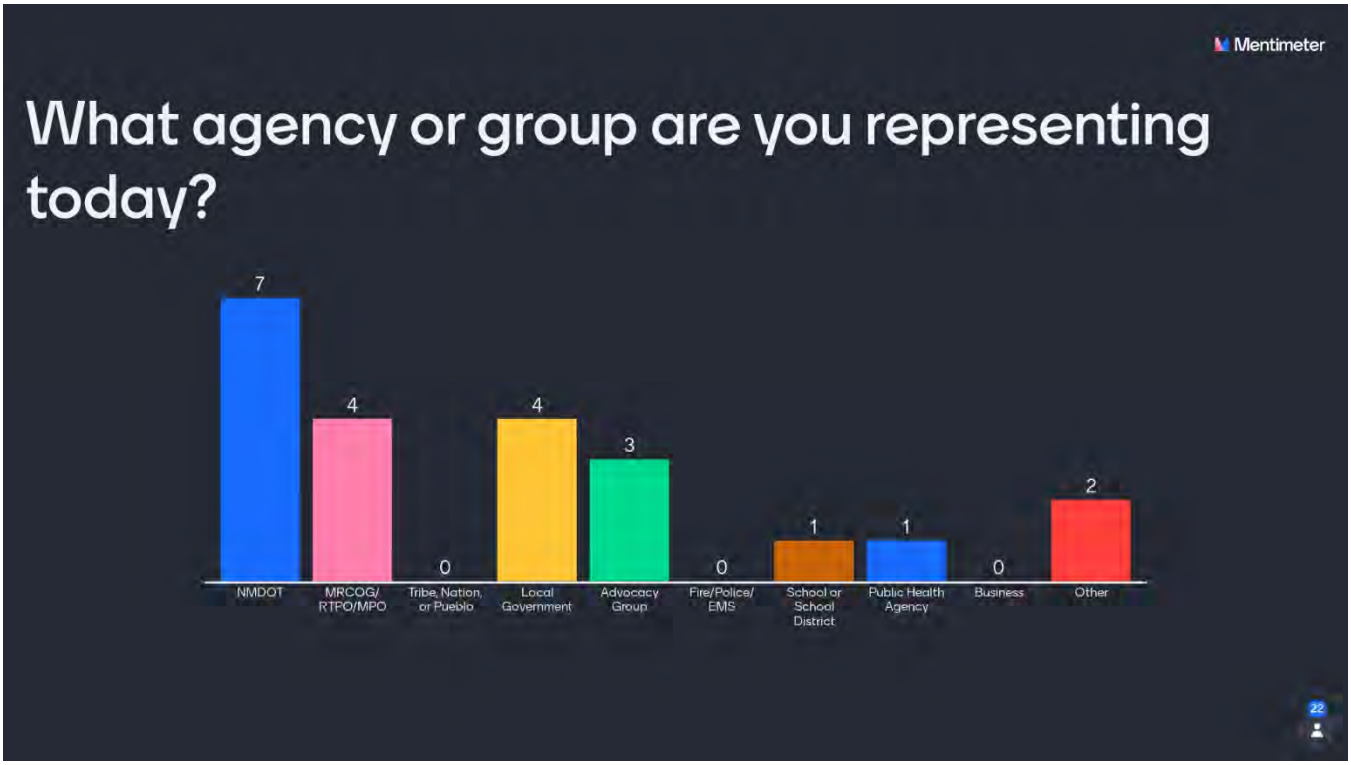
Angelica Rubio, State Legislator, District 35, Las Cruces
Jessica Griffin, NMDOT Planning Division Director
JoAnn Garcia, NMDOT Planning Division
Valerie Sherman, NMDOT-Las Cruces Planning
Ami Evans, District 1, PIO
Aaron Chavarria, District 1 Engineer
Andrew Guerra, District 1, Traffic
Anne Guayante, El Paso MPO
Gerardo Fierro, El Paso MPO
Liz Reed, Dona Ana County Community and Constituent Services Department
Susie Cordero, Doña Ana County, Community and Constituent Services Department
Mark Aasmundstad, Southwest Bike Initiative
Donald Wilson, Velo Cruces and VRUNM
Barbara Toth, Founder and Executive Director of VRUNM
Kat Provenghi, Mesilla Valley MPO
Dominic Loya, Mesilla Valley MPO
Andrew Wray, Mesilla Valley MPO
George Pearson, Velo Cruces
Nicole Martinez, MV Community of Hope, Las Cruces
Olaf Kula, Resident and Wheelchair/Handcycle User

Presentation Questions/Comments

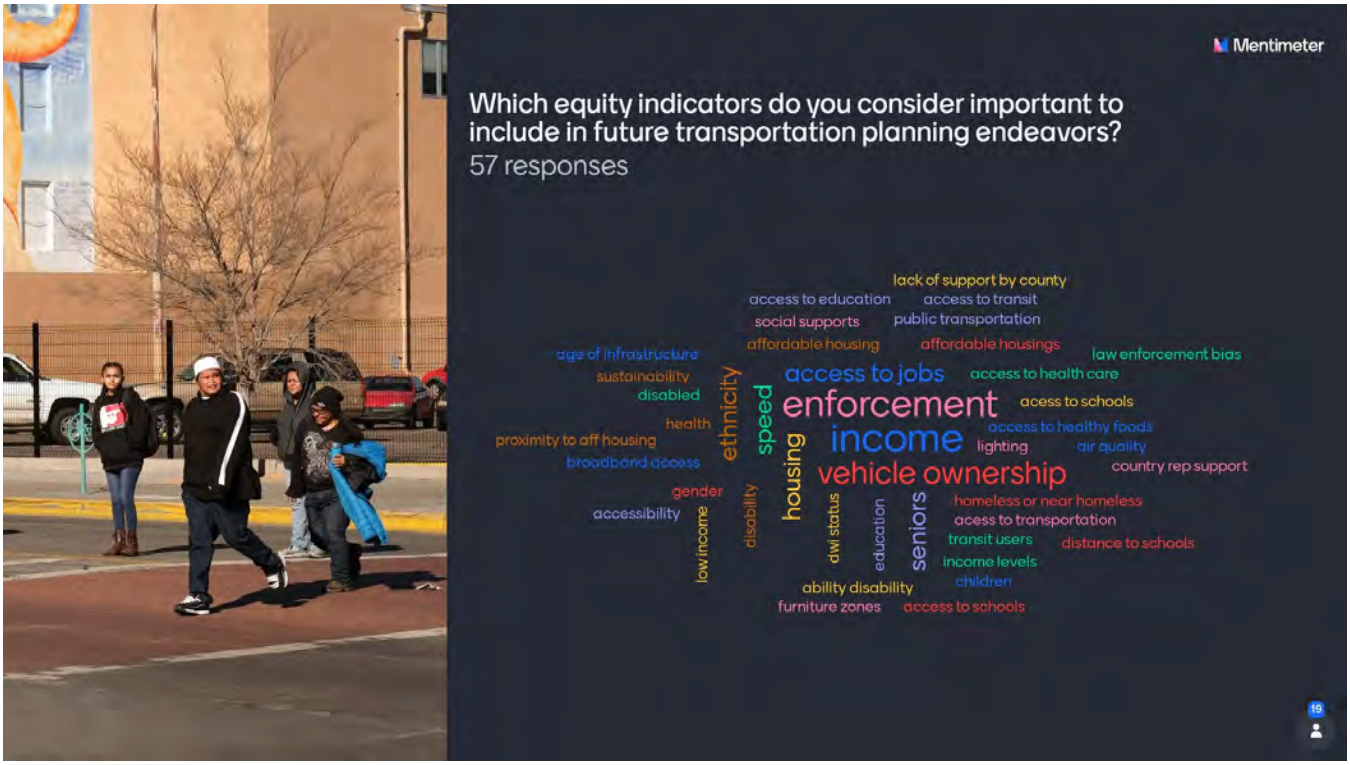
Comment 1: "Husband nearly killed on bicycle. Obvious driver fault. No citation. Not investigation. Not termed serious injury, although it WAS. Since husband was hurt, conversations with law enforcement have been largely unsatisfactory. Rather a lot of victim-shaming/blaming related to his episode and others in our community. Knowing that at least OUR situation not even represented as "serious injury" is galling. Broken back, partially severed spinal cord."
Question 1: Are KA numbers all vulnerable road user or just pedestrians?
Response: The data was combined in this presentation, but an analysis was done of each mode separately.
Comment 2: Many shared use roadways with an indicated bike lane, do not extend the bike lane through the intersection.

Mentimeter Responses

Responses to Mentimeter questions have been included below.



Equity



Most Frequent Submissions for Equity Indicators:

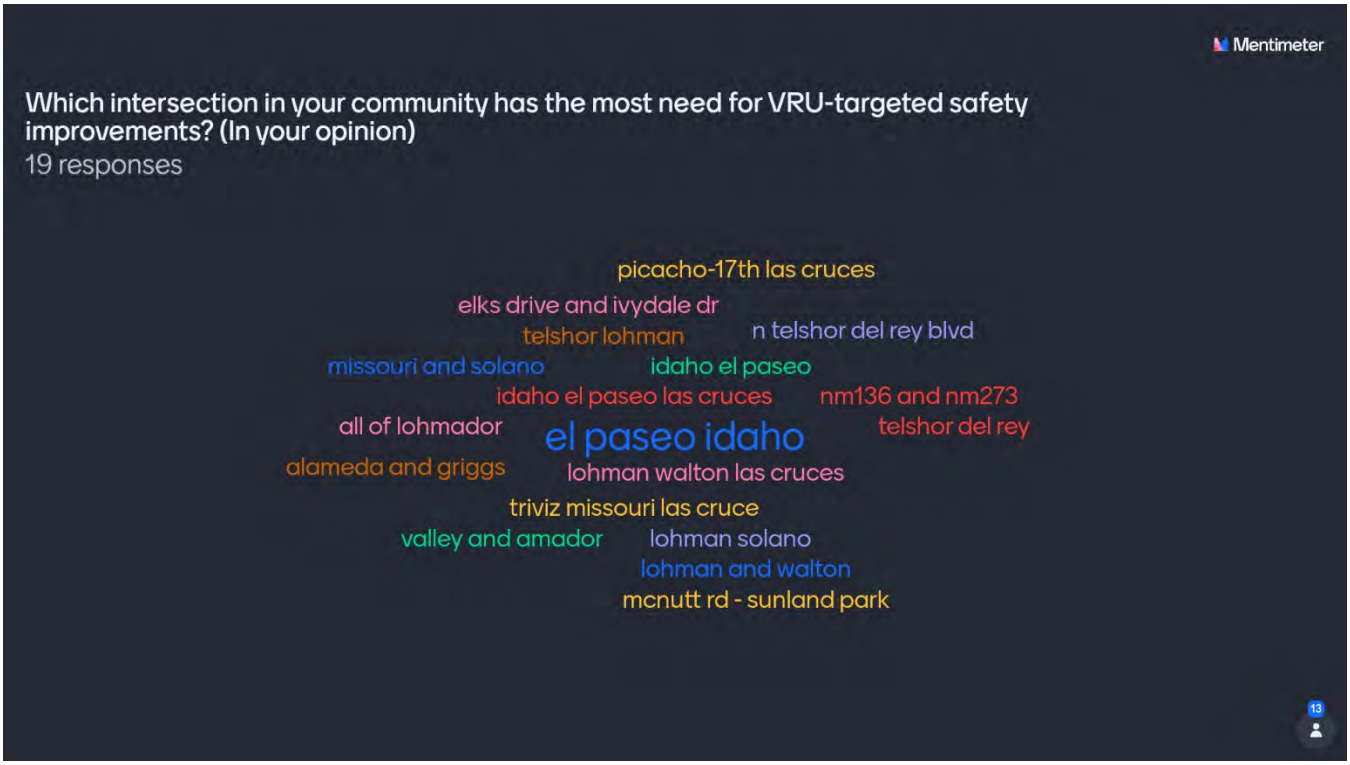
- Access (8) (respondents were referring to access to transportation, schools, transit, jobs etc.)
- Income (7)
- Affordable housing (4)
- Vehicle Ownership (3)
- Schools (3)

Corridors Most in Need of Improvement

Most Frequent Submissions for Corridors Most in Need of Improvement

- Lohman in Las Cruces (5 submissions)
- Picacho in Las Cruces (3)
- Amador in Las Cruces (3)
- Telshor in Las Cruces (3)

Intersections Most In Need of Improvement



Most Frequent Submissions for Intersections Most in Need of Improvement:

- El Paseo and Idaho Ave in Las Cruces was submitted three times.
- Telshor and Del Rey Blvds in Las Cruces (2)

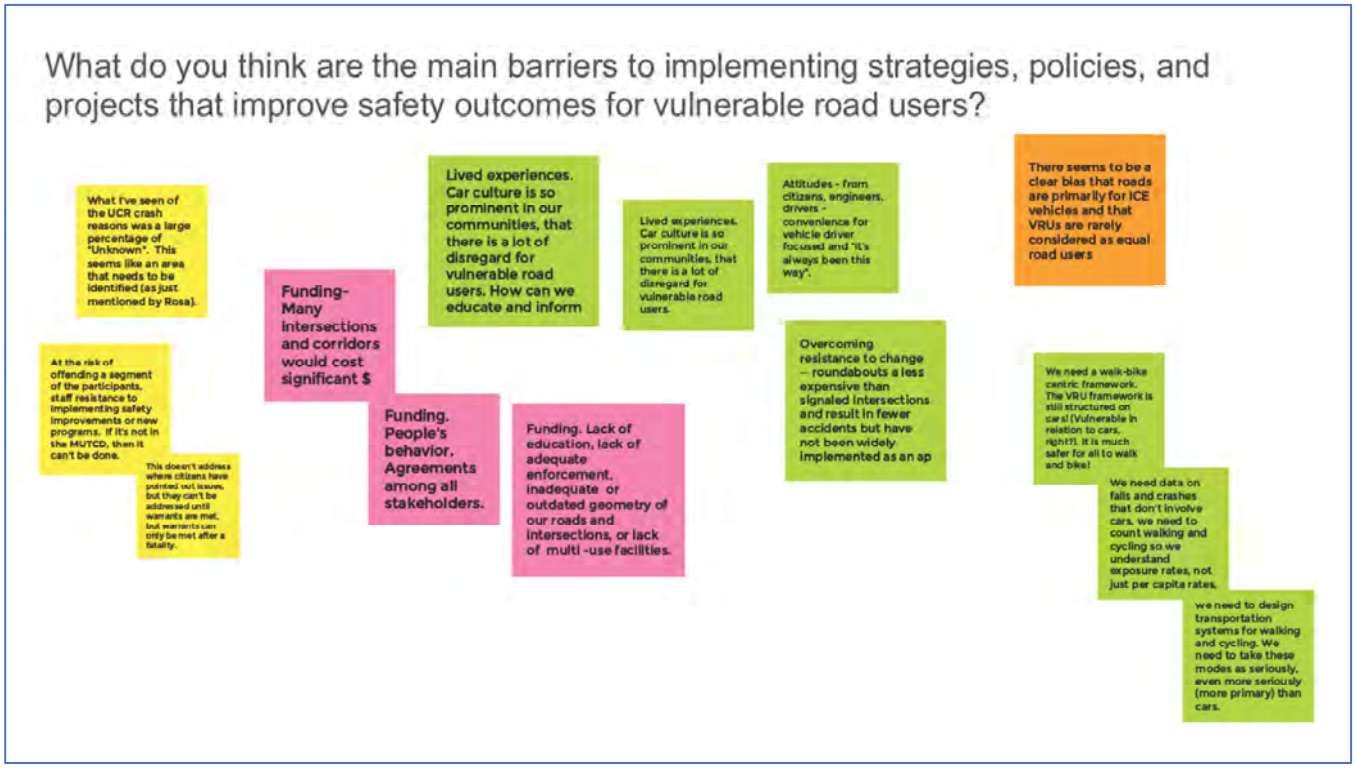
Jamboard Discussion and Comments

Jamboard Question 1: What are your top priorities to improve safety for VRUs?

- One participant noted that there used to be better connectivity in Las Cruces. He feels current planning is making it more convenient for cars but less safe for pedestrians.
- One NMDOT employee stated he sees a lot of times where pedestrians do not wait for traffic signals to cross or he sees people waiting in median.
- One participant who works at a shelter stated that their shelter is across the street from another shelter and people routinely travel between the two. She asked for improvements for safer crossings including adding a button at the traffic signal.
- One participant asked if a mechanism similar to Amber Alerts exists for texting safety reminders to motorists?
- Response: The project team stated they were not aware of any sort of mechanism.
- One participant said she knows there are federal funds available for transportation projects which considers nearby affordable housing. She asked if there is an opportunity to collaborate to tap into those resources?
- Someone asked if New Mexico law state that pedestrians in crosswalks have right-of-way.
- NMDOT replied NM is a yield state so drivers must yield to pedestrians when crossing at a crosswalk.
- "Earlier today, there was discussion about an approach that allows pedestrians a few seconds to enter the crosswalk before vehicles are given a green light. Are there any statistics about how many collisions are caused by cars turning right on red?"
- Response: Data on right on red turns was not available. The data showed collisions were more likely to happen when driver was travelling straight.
- One participant asked if stats were available for motorists who turn in front of bikes, motorcyclists, etc.?

- The data did have information which could be cross tabulated to answer that question but there was not enough the time to look at every specific collision.
- One participant asked if lowering the speed limit could be investigated. The current 40 mph limit is in the 80% to 90% fatality rate.
- Those speed limits are set at the municipal level. A traffic impact analysis would not look at lowering speed; tends to focus on volumes and traffic patterns.
- Someone noted traffic counts should be conducted this month.
- A participant asked who identifies the 15% Pedestrian Error in the crash reports? Is it the officer? It would be at the officer's discretion which may be biased.
- It is the officer, and it is based on their own assessment. There are discussions regarding additional training for on filling out collision reports.
- A large percentage of the UCR crash reasons were marked "Unknown". This seems like an area that needs to be identified.
- One person noticed the Chair for the County of Doña Ana might be on this call and City of Las Cruces staff. They asked if the county and city have a masterplan to prioritize pedestrian safety currently?
- The group was reminded that the focus of this is NMDOT roads.

Jamboard Question 2: What do you think are the main barriers to implementing strategies, policies and projects that improve safety outcomes for VRUs?

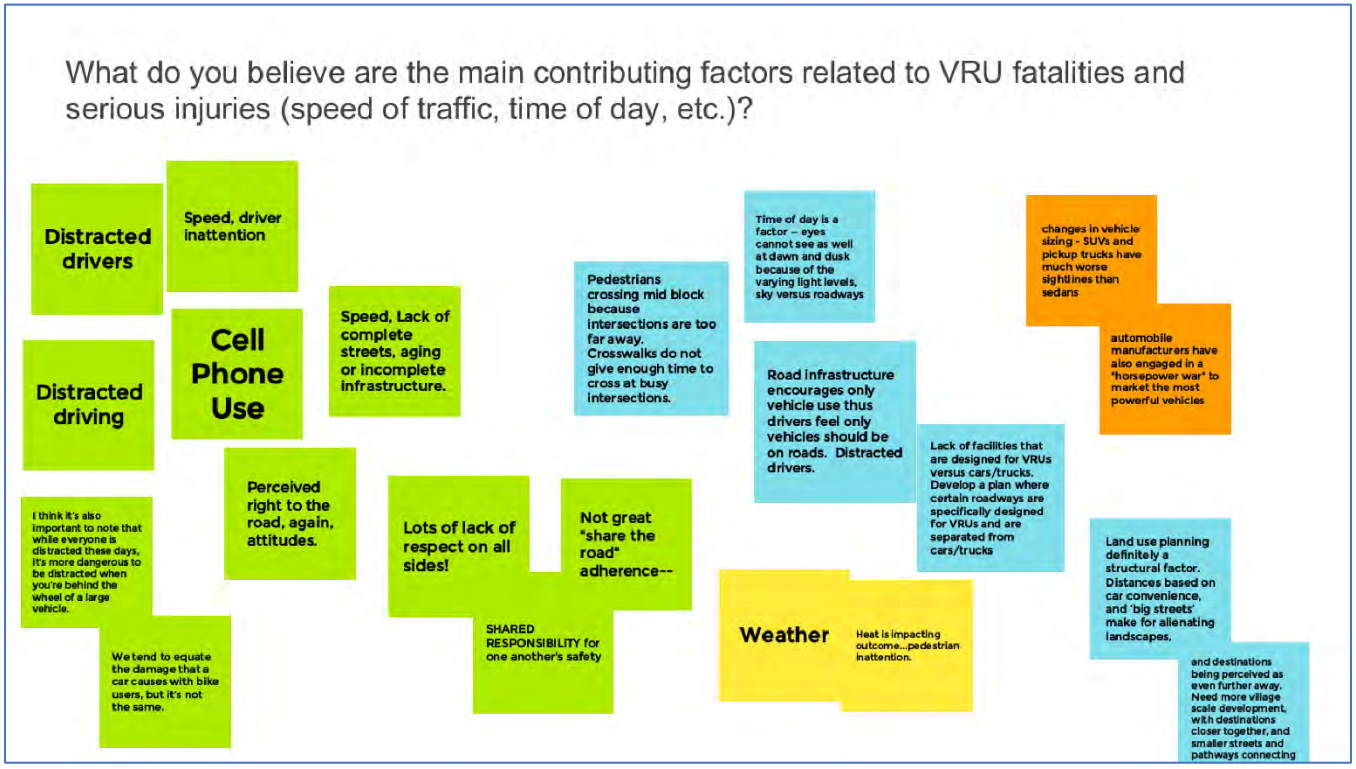


- One participant state it is the lived experience. Car culture is so prominent in the communities, that there is a lot of disregard for vulnerable road users. How can we educate and inform that is more effective?

- No specific response.

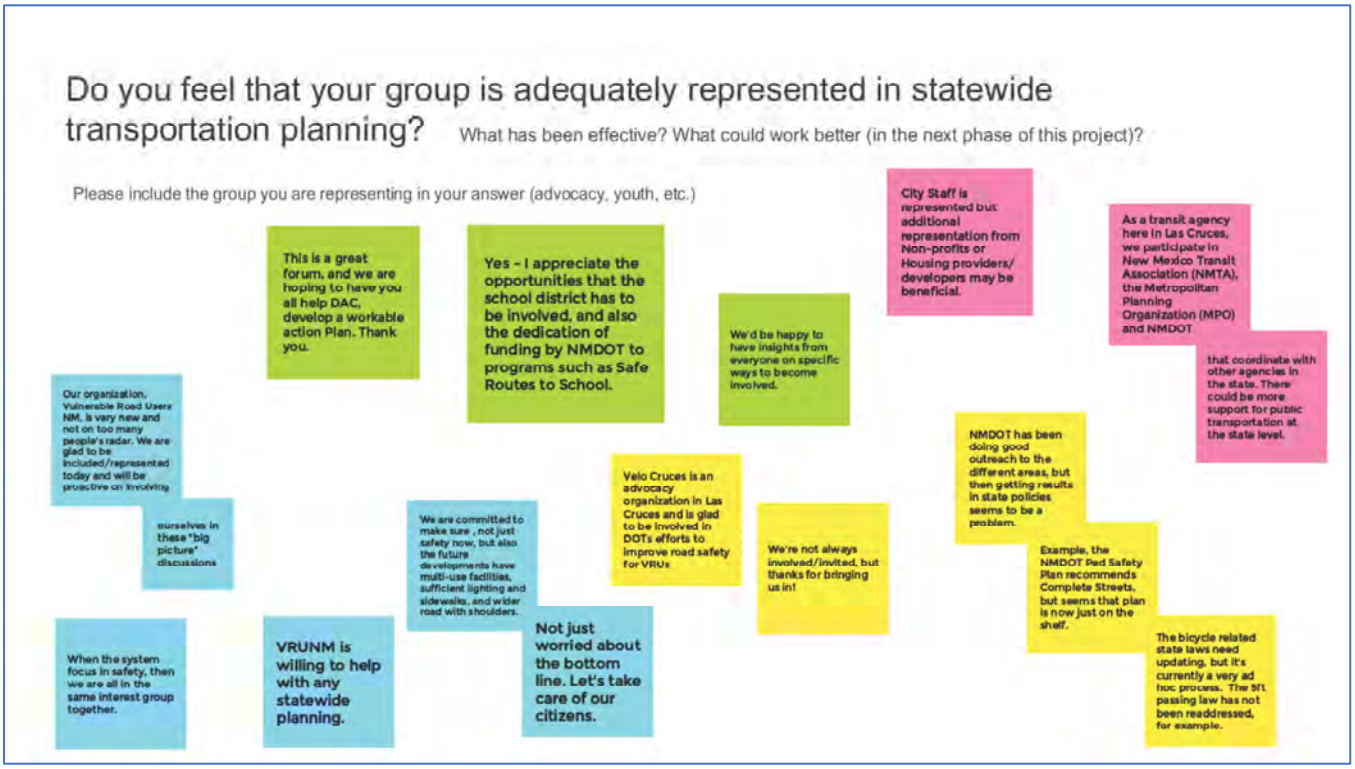
- "100% agree. Blank entries or unknowns or NA are not very useful for us on any analysis tasks. Our analysis can't do much with that type of info. When we talk with law enforcement, we always encourage them to fill out a complete report with no blanks or unknowns."
- If there are projects in the pipeline, if there is an area in need of safety improvement, is that taken into account?
- Short answer: yes. They try to integrate into their HSIP.

Jamboard Question 3: What do you believe are the main contributing factors related to vulnerable road user fatalities and serious injuries?



- No particular questions asked out loud; all comments recorded in Jamboard

Jamboard Question 4: Do you feel that your group is adequately represented in statewide transportation planning?



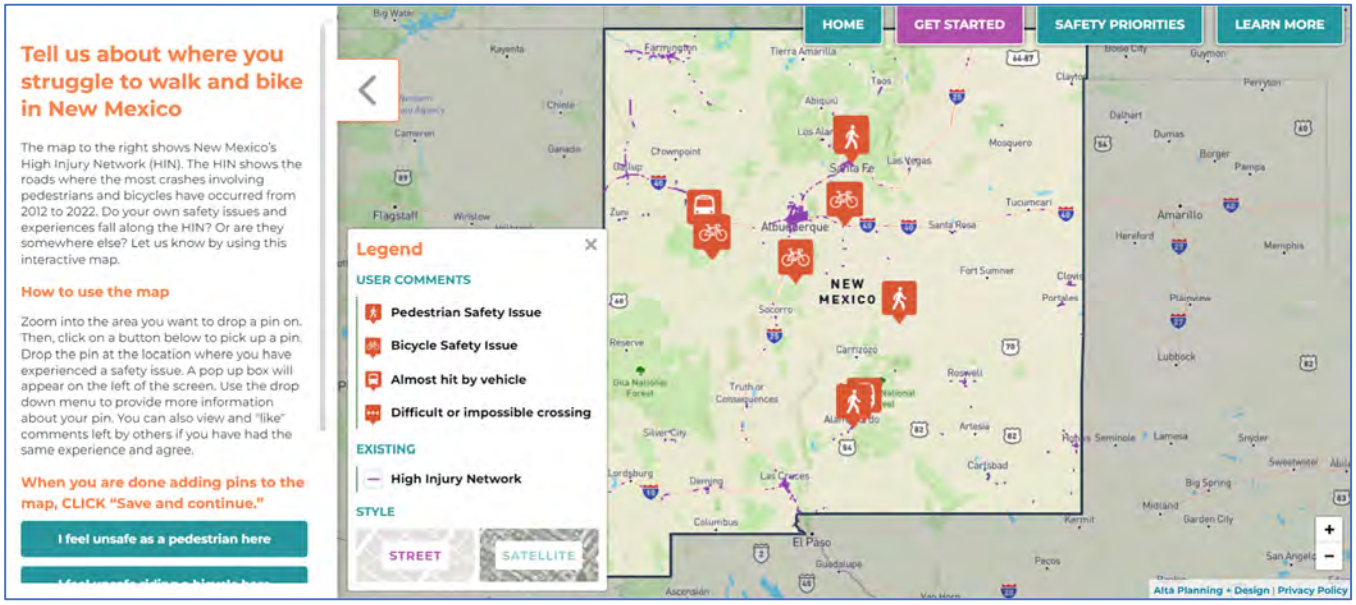
- One participant stated that NMDOT has been doing good outreach to the different areas, but then getting results in state policies seems to be a problem. For example, the NMDOT Pedestrian Safety Plan recommends Complete Streets, but seems that plan is now just on the shelf. They also stated that bicycle-related state laws need to be updated, but it's currently a very ad hoc process. The 5ft passing law has not been readdressed, for example.

- NMDOT responded that there is internal work being done to integrate Complete Streets in other processes. As far as state laws, those need to be changed by the state legislature.

Jamboard Question 5: Additional Comments

1.2 Virtual Engagement

1.2.1 Web Map and Survey



The following memo summarizes the comments received via the interactive web map which allowed visitors to add location pins and comments that address safety concerns as part of the NMDOT Vulnerable Road User Assessment. A total of 24 participants contributed to the web map.

The web map went live on August 1, 2023. The website was hosted at https://nmdotvru.altaplanning.cloud/ and is still open and available for comment as of September 2023. On September 14th, 2023, all posted comments and survey responses were collected for inclusion in the NMDOT VRU Safety Assessment. Future comments will contribute to the 2024 NMDOT Strategic Highway Safety Plan.

Spatial Distribution

In total, 115 comments were recorded on the web map. The geographic distribution of the comment was:

- Las Cruces Metro: 48 (44.4%)
- Albuquerque Metro: 45 (41.7%)
- Santa Fe: 9 (8.3%)
- Aztec: 5 (4.6%)
- Other: 1 (0.9%)

These locations correspond to the areas where stakeholder meetings were conducted. The web map was publicized during the stakeholder meetings to solicit feedback.

Comment Categories

Participants were first prompted to select the type of issue. A total of 115 comments were recorded. Participants were then prompted for more specific comments to describe the issue. There was also the ability to “like” or “dislike” an already recorded comment. A total of 24 “likes” were recorded. The percentages below reflect the percentages of comments and likes that were made about each safety issue.

Pedestrian Safety Issue

- Unsafe driver behavior and/or speeding occurs here: 20 (14.4%)
- There isn’t a sidewalk: 8 (5.8%)
- It's difficult for pedestrians and drivers to see each other at this location: 6 (4.3%)
- There isn't a crosswalk: 2 (1.4%)
- Other: 2 (1.4%)
- The sidewalk is broken, has obstacles, is narrow, or is uncomfortably close to traffic: 1 (0.7%)

Bicycle Safety Issue

- There isn’t a bicycle facility (ex. bike lane or shared use path) on this road: 25 (18.0%)
- Other: 20 (14.4%)
- The existing bicycle facility doesn’t feel safe to use: 16 (11.5%)
- Unsafe driver behavior and/or speeding occurs here: 8 (5.8%)

Almost Hit by Vehicle

- I was on a bicycle: 4 (2.9%)
- I was walking or using a mobility assistance device like a wheelchair: 3 (2.2%)

Difficult or Impossible to Cross

- There is no place to cross the road: 6 (4.3%)
- The existing crossing feels unsafe to use: 5 (3.6%)
- There isn’t enough time at this intersection to cross: 4 (2.9%)
- Other: 2 (1.4%)

Comment

- Open-ended responses: 7 (5.1%)

Open-ended and “other” web map pin comment Themes

Participants were given the option to enter open ended responses using the map pins. This section will describe themes from those 26 comments.

Safety Issues

A common theme which applied to both pedestrians and bicyclists was safety. Comments noted the lack of lighting on trails which made them feel unsafe. Participants also complained about poor asphalt conditions, specifically cracks and potholes. These conditions are difficult for bicyclists and unsafe to people with disabilities to navigate. For bicyclists, the presence of debris or gravel from access roads make for unsafe conditions in the bike lane. Lastly, many comments advocated for safer streets for all users. Improvements such as medians, sidewalks and quality bike facilities would slow down traffic and make pedestrians and bicyclists feel safer.

Traffic Signals

Comments relating to traffic signals were exclusively entered as a bicycle safety issue. Most commonly, participants were frustrated by the fact that most signals do not detect bicyclists at intersections. Long wait times result in bicyclists crossing intersections on a red light, putting them in dangerous situations. Another participant noted that traffic signals change too quickly from yellow to red which does not allow enough time to brake safely (it is unclear if they meant it was not enough time for motorists or bicyclists).

Bike Facilities

The last common theme was related to bike lanes, the lack of, or safety of, existing lanes. Some comments addressed the lack of continuity and safety of existing bike facilities. In some areas, the bike lane ends abruptly or there is a need for buffered bike lanes to make bicyclists feel safer from fast moving traffic. Road diets were also suggested for segments in Albuquerque where possible.

Survey Responses

A three-question survey followed the web map to gather further information from stakeholders and the public. 8 of the 24 web page visitors completed the survey.

Question 1: My community Needs...

This question was a check box question. Respondents could select up to 3 of the available options. Responses varied between respondents, with most responses only received one selection.

- Safer intersections for people walking or biking (4 responses)
- Safer bike facilities (4 responses)
- The ability to walk and bike safely to more destinations around town (3 responses)
- More bike facilities (2 responses)
- More safe places to cross busy roads (2 responses)
- Better and safer driver behavior (1)
- Increased enforcement of roadway rules/laws to reduce vehicle speeds (1)
- To reduce vehicle speeding (1)
- Students to be able to walk and bike safely to school (1)

Question 2: Is there anything else the NMDOT should know about walking and biking in your community? We want to hear from you in your own words.

- Shoulders on numerous roads and highways are inadequate for pedestrian and/or bicycle traffic. Gravels and debris clutter the shoulders (if any), forcing travel towards the vehicular lanes. Vehicles do not yield, slow down or pass appropriately for any number of road users. Right on red at intersections is one of the more dangerous situations as few ever stop and or yield to pedestrian and bicycle. Bicycle riders can have a tendency to pass vehicles on the right at stop signs, not obeying traffic rules.
- There are dangerous gaps in the bike commuting network. The streets are designed for drivers - specifically speed, not safety. As a driver, I find it difficult to maintain the posted speed limit in the ABQ metro. The streets are designed for and encourage speeding. Improved and consistent bike infra would slow drivers - and make all streets safer for everyone, drivers, peds, and cyclists.
- There are main roads to the schools that lack bike lanes, crosswalks, and sidewalks.
- ….until we have accessible facilities everywhere, dirt trails/sidepaths, and wide shoulders are better than nothing.
- The bike infrastructure is fractured on the East Mesa in Las Cruces--there are bike lanes but most don't connect. There are bike lanes on Engler Rd for example but no lanes on Jornada or Mesa Grande--main roads that connect to schools and towards commercial centers. There are bike lanes on the frontage roads along I-70 but no bike lanes or multi-users paths into the Rinconada commercial center. Also, there's a multi-user path on a section of Sonoma Ranch but only on the West side. There are no bike lanes or multi-user paths on Sonoma Ranch between Bataan Memorial E and Northrise only a sidewalk--making it unsafe to bike through. Downtown is 8 miles away from where I live but biking there safely requires a convoluted route through subdivisions. I'd love to leave my car at home and be able to bike downtown or even to the grocery store safely.
- The bike lanes are often filled with gravel and trash pushed aside by traffic with many dead birds and built-up feces in the bike lanes under bridges that make biking unpleasant.

Question 3: Are there any recently completed projects in your community that have improved your ability to walk and bike safely? Where is the new project?

- The Arroyo Hondo Trail and underpass under I-25 is essential.
- The multi-user paths along Red Hawk Golf Rd and the northern part of Sonoma Ranch.

OBJECT ID	Pin Category	Pin Subcategory	Additional Comments	Likes	Address of Pin (Approximate)	City	County
37	Bicycle Safety Issue	The existing bicycle facility doesn't feel safe to use	None	2	316, Girard Boulevard Southeast, Nob Hill, Albuquerque, Bernalillo County, New Mexico, 87106	Albuquerque	Bernalillo
90	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	2	Christian Challenge - NMSU, 1313, East University Avenue, Las Cruces, Doña Ana County, New Mexico, 88001	Las Cruces	Dona Ana
107	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	2	7400, Dripping Springs Road, Organ Mesa Ranch, Doña Ana County, New Mexico, 88011	Organ Mesa Ranch	Dona Ana
106	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	2	6543, Dripping Springs Road, Doña Ana County, New Mexico, 88011	unknown	Dona Ana
34	Bicycle Safety Issue	Other	On trash day, there are trash cans in the bike lane and you have to ride into traffic	2	1573, Lead Avenue Southeast, Lucaya House Apartments, Downtown Albuquerque, Albuquerque, Bernalillo County, New Mexico, 87106	Albuquerque	Bernalillo
35	Bicycle Safety Issue	Other	Bike lane suddenly merges with traffic	1	1302, Carlisle Boulevard Northeast, Nob Hill, Albuquerque, Bernalillo County, New Mexico, 87110	Albuquerque	Bernalillo
50	Bicycle Safety Issue	The existing bicycle facility doesn't feel safe to use	None	1	7631, Comanche Road Northeast, Vista Encantada, Albuquerque, Bernalillo County, New Mexico, 87110	Albuquerque	Bernalillo
47	Bicycle Safety Issue	The existing bicycle facility doesn't feel safe to use	None	1	5799, Osuna Road Northeast, Albuquerque, Bernalillo County, New Mexico, 87109	Albuquerque	Bernalillo
52	Bicycle Safety Issue	The existing bicycle facility doesn't feel safe to use	None	1	1898, University Boulevard Southeast, Kirtland Addition, Albuquerque, Bernalillo County, New Mexico, 87106	Albuquerque	Bernalillo
29	Difficult or impossible crossing	There isn't enough time at this intersection to cross	None	1	7099, Lomas Boulevard Northeast, East End Addition, Albuquerque, Bernalillo County, New Mexico, 87110	Albuquerque	Bernalillo

OBJECT ID	Pin Category	Pin Subcategory	Additional Comments	Likes	Address of Pin (Approximate)	City	County
27	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	1	San Mateo Boulevard Northeast, Albuquerque, Bernalillo County, New Mexico, 87110	Albuquerque	Bernalillo
28	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	1	San Mateo Boulevard Northeast, Albuquerque, Bernalillo County, New Mexico, 87110	Albuquerque	Bernalillo
48	Bicycle Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	1	Extra Space Storage, 4909, Juan Tabo Boulevard Northeast, Eisenhower Area, Albuquerque, Bernalillo County, New Mexico, 87111	Albuquerque	Bernalillo
38	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	1	4698, 4th Street Northwest, Lee Acres, Albuquerque, Bernalillo County, New Mexico, 87107	Albuquerque	Bernalillo
25	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	1	4317, Hannett Avenue Northeast, Albuquerque, Bernalillo County, New Mexico, 87110	Albuquerque	Bernalillo
108	Bicycle Safety Issue	The existing bicycle facility doesn't feel safe to use	None	1	NMSU Center for the Arts, 1000, East University Avenue, Las Cruces, Doña Ana County, New Mexico, 88001	Las Cruces	Dona Ana
97	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	1	4007, Colt Road, Telbrook, Las Cruces, Doña Ana County, New Mexico, 88011	Las Cruces	Dona Ana
54	Bicycle Safety Issue	Other	The diversion ditch bike trial has many underpasses. They are unlit and often have homeless people living there. the city needs to light the underpasses and someone from the city needs to come through daily to clear the path. It is not safe for the homel	1	Pan American Freeway, Albuquerque, Bernalillo County, New Mexico, 87107	Albuquerque	Bernalillo
46	Bicycle Safety Issue	Other	The traffic signal on Constitution does not detect bicycle traffic. So if a car does not trigger the light, bicycles are invisible, and wait indefinitely, as bicycles are disregarded in the cycle. The traffic engineers recently added shadows on Constitut	1	Constitution Avenue Northeast, Mesa Village, Albuquerque, Bernalillo County, New Mexico, 87112	Albuquerque	Bernalillo

OBJECT ID	Pin Category	Pin Subcategory	Additional Comments	Likes	Address of Pin (Approximate)	City	County
84	Bicycle Safety Issue	Other	Due to low traffic volume, adding a buffered bike lane would be beneficial on this road segment between Jefferson and San Pedro.	0	4758, McLeod Road Northeast, Albuquerque, Bernalillo County, New Mexico, 87109	Albuquerque	Bernalillo
78	Bicycle Safety Issue	Other	Efforts should be considered in regards to dieting this road from 6 lanes to 4 lanes with a protected bike lane on each side as well as wider sidewalks.	0	1514, Avenida CÃ©sar ChÃ¡vez Southeast, Nob Hill, Albuquerque, Bernalillo County, New Mexico, 87106	Albuquerque	Bernalillo
132	Bicycle Safety Issue	Other	It is difficult from a bike to see oncoming traffic while trying to merge into the bike lane	0	Bataan Memorial West, Spaceport City, Las Cruces, Doña Ana County, New Mexico, 88052	Las Cruces	Dona Ana
79	Bicycle Safety Issue	Other	It makes no sense seeing that one side of Central has a buffered bike lane on one side but the other side the buffered bike lane dissapears the more eastbound you go from Unser to Coors.	0	Central Avenue Southwest, Albuquerque, Bernalillo County, New Mexico, 87121	Albuquerque	Bernalillo
82	Pedestrian Safety Issue	Other	Lots of aggressive driver behavior and very outdated asphalt. Must be miserable for disabled folks to use this intersection when they have no other option.	0	6800, Indian School Road Northeast, Uptown, Albuquerque, Bernalillo County, New Mexico, 87110	Albuquerque	Bernalillo
80	Bicycle Safety Issue	Other	NMDOT needs to find a way to either keep the multi use path, under the I-40 bridge clean of dangerous debris or to find a more viable way to extend the bike lane going under I-40 instead of merging with traffic.	0	497, Tramway Boulevard Northeast, La Cuesta, Albuquerque, Bernalillo County, New Mexico, 87123	Albuquerque	Bernalillo
45	Almost hit by vehicle	I was on a bicycle	None	0	3599, Coal Avenue Southeast, Nob Hill, Albuquerque, Bernalillo County, New Mexico, 87106	Albuquerque	Bernalillo
26	Almost hit by vehicle	I was walking or using a mobility assistance device like a wheelchair	None	0	Indian School @ San Mateo, Indian School Road Northeast, Albuquerque, Bernalillo County, New Mexico, 87110	Albuquerque	Bernalillo

OBJECT ID	Pin Category	Pin Subcategory	Additional Comments	Likes	Address of Pin (Approximate)	City	County
71	Almost hit by vehicle	I was walking or using a mobility assistance device like a wheelchair	None	0	133, University Boulevard Northeast, Albuquerque, Bernalillo County, New Mexico, 87106	Albuquerque	Bernalillo
43	Pedestrian Safety Issue	It's difficult for pedestrians and drivers to see each other at this location	None	0	UNM Resident Theatre Group`, 1705, Mesa Vista Road Northeast, Nob Hill, Albuquerque, Bernalillo County, New Mexico, 87131	Albuquerque	Bernalillo
73	Pedestrian Safety Issue	It's difficult for pedestrians and drivers to see each other at this location	None	0	Saint Charles Borromeo Catholic Church, 1818, Coal Place Southeast, Silver Hill, Nob Hill, Albuquerque, Bernalillo County, New Mexico, 87106	Albuquerque	Bernalillo
33	Pedestrian Safety Issue	It's difficult for pedestrians and drivers to see each other at this location	None	0	Louisiana Boulevard Southeast, International District, Albuquerque, Bernalillo County, New Mexico, 87108	Albuquerque	Bernalillo
44	Pedestrian Safety Issue	The sidewalk is broken, has obstacles, is narrow, or is uncomfortably close to traffic	None	0	1128, University Boulevard Northeast, Netherwood Park, Albuquerque, Bernalillo County, New Mexico, 87102	Albuquerque	Bernalillo
30	Difficult or impossible crossing	There is no place to cross the road	None	0	Cafe Trang, 230, Louisiana Boulevard Southeast, International District, Albuquerque, Bernalillo County, New Mexico, 87108	Albuquerque	Bernalillo
32	Difficult or impossible crossing	There is no place to cross the road	None	0	7639, Central Avenue Southeast, International District, Albuquerque, Bernalillo County, New Mexico, 87108	Albuquerque	Bernalillo
76	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	0	Burger King, 2110, Carlisle Boulevard Northeast, Netherwood Park, Albuquerque, Bernalillo County, New Mexico, 87110	Albuquerque	Bernalillo
72	Difficult or impossible crossing	There isn't enough time at this intersection to cross	None	0	CNM Main Campus, University Boulevard Southeast, Silver Hill, Albuquerque, Bernalillo County, New Mexico, 87131	Albuquerque	Bernalillo
40	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	University Boulevard Northeast, Nob Hill, Albuquerque, Bernalillo County, New Mexico, 87131	Albuquerque	Bernalillo

OBJECT ID	Pin Category	Pin Subcategory	Additional Comments	Likes	Address of Pin (Approximate)	City	County
49	Bicycle Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	Tramway Trail, Antelope Run, Albuquerque, Bernalillo County, New Mexico, 87111	Albuquerque	Bernalillo
74	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	Saint Charles Borromeo Catholic Church, 1818, Coal Place Southeast, Silver Hill, Nob Hill, Albuquerque, Bernalillo County, New Mexico, 87106	Albuquerque	Bernalillo
41	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	Planning and Campus Development, 1837, Lomas Boulevard Northeast, Nob Hill, Albuquerque, Bernalillo County, New Mexico, 87131	Albuquerque	Bernalillo
70	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	Central Avenue Southeast, Silver Hill, Albuquerque, Bernalillo County, New Mexico, 87131	Albuquerque	Bernalillo
42	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	801, Yale Boulevard Northeast, Nob Hill, Albuquerque, Bernalillo County, New Mexico, 87106	Albuquerque	Bernalillo
51	Bicycle Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	7609, Montgomery Boulevard Northeast, Albuquerque, Bernalillo County, New Mexico, 87109	Albuquerque	Bernalillo
39	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	1340, Lomas Boulevard Northeast, Martineztown-Santa Barbara, Netherwood Park, Albuquerque, Bernalillo County, New Mexico, 87102	Albuquerque	Bernalillo
55	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	Speedway, 416, North Main Avenue, Aztec, San Juan County, New Mexico, 87410	Aztec	San Juan
104	Bicycle Safety Issue	The existing bicycle facility doesn't feel safe to use	None	0	4498, Remington Road, Cassidy at Sundance Acres, Doña Ana County, New Mexico, 88011	Cassidy at Sundance Acres	Dona Ana
101	Almost hit by vehicle	I was on a bicycle	None	0	7737, North Frontage Road, Las Cruces, Doña Ana County, New Mexico, 88007	Las Cruces	Dona Ana
134	Almost hit by vehicle	I was walking or using a mobility assistance device like a wheelchair	None	0	5258, Peachtree Hills Road, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana

OBJECT ID	Pin Category	Pin Subcategory	Additional Comments	Likes	Address of Pin (Approximate)	City	County
135	Pedestrian Safety Issue	It's difficult for pedestrians and drivers to see each other at this location	None	0	Rincon Mesa, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
130	Pedestrian Safety Issue	It's difficult for pedestrians and drivers to see each other at this location	None	0	McGuffey Street, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
133	Pedestrian Safety Issue	It's difficult for pedestrians and drivers to see each other at this location	None	0	5363, Peachtree Hills Road, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
102	Bicycle Safety Issue	The existing bicycle facility doesn't feel safe to use	None	0	941, South Melendres Street, J A Gustafson, Las Cruces, Doña Ana County, New Mexico, 88005	Las Cruces	Dona Ana
124	Difficult or impossible crossing	The existing crossing feels unsafe to use	None	0	Sonoma Ranch Boulevard, Las Cruces, Doña Ana County, New Mexico, 88011	Las Cruces	Dona Ana
103	Difficult or impossible crossing	The existing crossing feels unsafe to use	None	0	682, West Picacho Avenue, Las Cruces, Doña Ana County, New Mexico, 88005	Las Cruces	Dona Ana
109	Difficult or impossible crossing	There is no place to cross the road	None	0	4855, Mesa Grande Drive, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
129	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	0	Northrise Drive, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
116	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	0	Mesa Grande Drive, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
118	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	0	Mesa Grande Drive, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
121	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	0	Circle K, 4675, Sonoma Ranch Boulevard, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
127	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	0	Bataan Memorial East, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
99	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	0	7264, South Main Street, Mesilla Park, Las Cruces, Doña Ana County, New Mexico, 88047	Las Cruces	Dona Ana

OBJECT ID	Pin Category	Pin Subcategory	Additional Comments	Likes	Address of Pin (Approximate)	City	County
120	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	0	4201, Sonoma Ranch Boulevard, Las Cruces, Doña Ana County, New Mexico, 88011	Las Cruces	Dona Ana
128	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	0	3393, Rinconada Boulevard, Las Cruces, Doña Ana County, New Mexico, 88011	Las Cruces	Dona Ana
94	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	0	301, South Reymond Street, Brownlee, Las Cruces, Doña Ana County, New Mexico, 88005	Las Cruces	Dona Ana
91	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	0	185, South Reymond Street, Brownlee, Las Cruces, Doña Ana County, New Mexico, 88005	Las Cruces	Dona Ana
98	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	0	1700, South Fairacres Road, Las Cruces, Doña Ana County, New Mexico, 88005	Las Cruces	Dona Ana
110	Difficult or impossible crossing	There isn't enough time at this intersection to cross	None	0	5001, Midway Avenue, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
131	Pedestrian Safety Issue	There isn't a crosswalk	None	0	5300, McGuffey Street, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
115	Pedestrian Safety Issue	There isn't a crosswalk	None	0	4898, Engler Road, Dos Suenos Estates, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
117	Pedestrian Safety Issue	There isn't a sidewalk	None	0	Mesa Grande Drive, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
122	Pedestrian Safety Issue	There isn't a sidewalk	None	0	Mesa Grande Drive, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
111	Pedestrian Safety Issue	There isn't a sidewalk	None	0	7989, North Jornada Road, Los Enamorados Estates, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana

OBJECT ID	Pin Category	Pin Subcategory	Additional Comments	Likes	Address of Pin (Approximate)	City	County
112	Pedestrian Safety Issue	There isn't a sidewalk	None	0	7959, North Jornada Road, Los Enamorados Estates, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
113	Pedestrian Safety Issue	There isn't a sidewalk	None	0	6889, North Jornada Road, Los Enamorados Estates, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
114	Pedestrian Safety Issue	There isn't a sidewalk	None	0	6821, North Jornada Road, Los Enamorados Estates, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
125	Pedestrian Safety Issue	There isn't a sidewalk	None	0	6618, North Jornada Road, Los Enamorados Estates, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
126	Pedestrian Safety Issue	There isn't a sidewalk	None	0	6527, North Jornada Road, Los Enamorados Estates, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
136	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	Las Cruces Gospel Rescue Mission, 1050, West Amador Avenue, Las Cruces, Doña Ana County, New Mexico, 88005	Las Cruces	Dona Ana
119	Bicycle Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	Bataan Memorial East, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
123	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	6757, Mesa Grande Drive, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
89	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	1098, Ivydale Drive, Country Club Estates, Las Cruces, Doña Ana County, New Mexico, 88005	Las Cruces	Dona Ana
63	Almost hit by vehicle	I was on a bicycle	None	0	West Alameda Street, Santa Fe, Santa Fe County, New Mexico, 87501	Santa Fe	Santa Fe
68	Difficult or impossible crossing	The existing crossing feels unsafe to use	None	0	3570, Yucca Street, Santa Fe, Santa Fe County, New Mexico, 87505	Santa Fe	Santa Fe
67	Difficult or impossible crossing	The existing crossing feels unsafe to use	None	0	2499, Rodeo Road, Santa Fe, Santa Fe County, New Mexico, 87505	Santa Fe	Santa Fe

OBJECT ID	Pin Category	Pin Subcategory	Additional Comments	Likes	Address of Pin (Approximate)	City	County
64	Difficult or impossible crossing	The existing crossing feels unsafe to use	None	0	2, 1807, 2nd Street, Santa Fe, Santa Fe County, New Mexico, 87505	Santa Fe	Santa Fe
65	Difficult or impossible crossing	There is no place to cross the road	None	0	Saint Michaels Drive, Santa Fe, Santa Fe County, New Mexico, 87605	Santa Fe	Santa Fe
62	Difficult or impossible crossing	There is no place to cross the road	None	0	999, Railfan Road, Santa Fe, Santa Fe County, New Mexico, 87505	Santa Fe	Santa Fe
53	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	South Saint Francis Drive, Santa Fe, Santa Fe County, New Mexico, 87504	Santa Fe	Santa Fe
66	Bicycle Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	Santa Fe High School, 2100, Yucca Street, Santa Fe, Santa Fe County, New Mexico, 87505	Santa Fe	Santa Fe
69	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	Santa Fe British Motors, 990, West Cordova Road, Santa Fe, Santa Fe County, New Mexico, 87505	Santa Fe	Santa Fe
92	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	0	5201, Remington Road, Telbrook, Doña Ana County, New Mexico, 88011	Telbrook	Dona Ana
59	Almost hit by vehicle	I was on a bicycle	None	0	179, Road 3000, San Juan County, New Mexico, 87410	unknown	San Juan
105	Bicycle Safety Issue	The existing bicycle facility doesn't feel safe to use	None	0	Sonoma Ranch Boulevard, Doña Ana County, New Mexico, 88004	Unknown	Dona Ana
100	Bicycle Safety Issue	The existing bicycle facility doesn't feel safe to use	None	0	Baylor Canyon Drive, Doña Ana County, New Mexico	Unknown	Dona Ana
24	Difficult or impossible crossing	There is no place to cross the road	None	0	I 40, Cibola County, New Mexico, 87026	Unknown	Cibola
96	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	0	5199, Snow Road, Doña Ana County, New Mexico, 88005	unknown	Dona Ana
60	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	0	166, Road 3000, San Juan County, New Mexico, 87410	unknown	San Juan

OBJECT ID	Pin Category	Pin Subcategory	Additional Comments	Likes	Address of Pin (Approximate)	City	County
61	Bicycle Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	338, Road 3000, San Juan County, New Mexico, 87410	unknown	San Juan
58	Bicycle Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	134, Road 3100, San Juan County, New Mexico, 87410	unknown	San Juan
87	Difficult or impossible crossing	Other	The light signals don't detect bicycles.	0	Rio Bravo Boulevard Southeast, Albuquerque, Bernalillo County, New Mexico	Albuquerque	Bernalillo
86	Bicycle Safety Issue	Other	The new traffic light changes too frequently and changes from yellow to red too quickly to brake safely. I don't believe this new light has made this stretch of Lead/Coal any safer. It's done the opposite by giving road users more to think about. Adding	0	401, Walter Street Southeast, Martineztown-Santa Barbara, Downtown Albuquerque, Albuquerque, Bernalillo County, New Mexico, 87102	Albuquerque	Bernalillo
83	Bicycle Safety Issue	Other	There is no good reason why the bike lane should end after Indian School. After the lane ends, you are either forced to share the road with drivers who can sometimes become impatient with your presence on a bicycle or you ride on the sidewalk and risk ge	0	2200, San Pedro Drive Northeast, Uptown, Albuquerque, Bernalillo County, New Mexico, 87110	Albuquerque	Bernalillo
93	Bicycle Safety Issue	Other	This is absolutely crazy, so cars can go faster the shoulder was shoved to one side only while the other side has nothing.	0	5201, Remington Road, Telbrook, Doña Ana County, New Mexico, 88011	Telbrook	Dona Ana
95	Bicycle Safety Issue	Other	This is crazy concrete barriers were added so that cars have to go around. No considerations for cycling.	0	Mesilla Industrial Machining, 995, West Hadley Avenue, Las Cruces, Doña Ana County, New Mexico, 88005	Las Cruces	Dona Ana

OBJECT ID	Pin Category	Pin Subcategory	Additional Comments	Likes	Address of Pin (Approximate)	City	County
85	Bicycle Safety Issue	Other	This segment of Jefferson needs to be dieted from 4 lanes to 2 lanes due to low traffic volume. Sidewalk desperately needs to be widened especially for disabled folks who might live nearby.	0	4671, Jefferson Street Northeast, Albuquerque, Bernalillo County, New Mexico, 87109	Albuquerque	Bernalillo
81	Difficult or impossible crossing	Other	Traffic light does not detect bicycles. Have almost been hit because of vehicles speeding and disobeying red lights. I feel like changing this intersection to a roundabout would be a safer option to deter speeding and cyclist won't have to wait at a ligh	0	1798, San Pedro Drive Northeast, Winrock South, Albuquerque, Bernalillo County, New Mexico, 87110	Albuquerque	Bernalillo
77	Bicycle Safety Issue	Other	We need to make an effort to diet University Blvd. from 6 lanes to 4 lanes with protected bicycle ways and wider, smoother sidewalks.	0	194, University Boulevard Southeast, Silver Hill, Albuquerque, Bernalillo County, New Mexico, 87106	Albuquerque	Bernalillo
88	Pedestrian Safety Issue	Other	Yale should reevaluate the median design to be more pedestrian friendly. A median with vegetation and pedestrian crossings to avoid intersections would make this stretch of Yale feel more safer.	0	Guava Tree Cafe, 216, Yale Boulevard Southeast, Nob Hill, Albuquerque, Bernalillo County, New Mexico, 87106	Albuquerque	Bernalillo

What are your top priorities to improve safety for vulnerable road users?

	Comments	Pedesrian Infrastructure improvements	Bike Infrastructure Improvements	Education	Enforcement	Speed reduction	Separation/ Barriers between vehicles and VRUs	Universal design/ADA	Road diets	Planning	Road Design	Signage	Shade/weather protection	Maintenance	Street lights	Data	Policy	Additional notes
ALBUQUERQUE	Is Universal Design and ADA considerations in the plan? Because I think that is important to get in this data and to get reported on ••							1								1		
	Shade from the heat or protection from severe weather too												1					
	City needs a road diet on East Central - BHI road studies show this								1									Infrastructure improvements that reflect road safety audits
	Funding for improving pedestrian infrastructure on NMDOT roadways	1																
	Be more creative and willing to implement low-cost street interventions like using paint, flex posts, and planters to create new pedestrian refuge/curb extensions	1																Low cost interventions to create new pedestrian infrastructure
	Condition and quality of infrastructure	1																
	Love the idea of education and outreach to the most impacted communities			1														
	Central and Coors	1																Improvements to Central and Coors intersection
	Having a better Node to Node connectivity within the city could also help. There is a lot of disconnect with bike trails and paths. Sidewalks are also not accessibile in all communities	1	1															Bike network connectivitiy
	Education surrounding safety treatments			1														
	Paint is not protection for bike lanes		1				1											Physical barriers for bike lanes
	Developing signs that are user friendly that involve Native students implementation											1						
	Prioritize protected bike lanes, create quick build projects for most problematic intersections/streets.	1	1															Quick build projects - low cost interventions
	Benches, jayhawk signals, road diets, shade, sidewalks, street lights and slowing down/closing Central to shift focus from cars to people	1				1		1	1				1		1			Pedestrian-centered design
	Additionally when we have roads like Isleta with 40 mph speed limits it increases KA collision, which is counter intuitive the way we set speeds with the 85th percentile					1												
	Trees and landscaping can affect sight lines																	Make sure trees and landscaping don't impede sitelines
	Heat relief is an increasingly important safety issue												1					
	Taking a systemic approach to facilitating , cycling and rolling travel, taking as seriously as travel to design for as we take for cars	1	1								1							Pededstrian/cyclist centered design
	Prioritize outreach to multimodal users community wide. Experiential input can point to many simple ways to minimize vulnerable user exposure			1														
	Focus on walking and cycling modes for their own qualities, dynamics, and merits, not just in relation to motorized travel, They are basic and fundamental to transportation and human life	1	1															Pededstrian/cyclist centered design
	ABQ TOTAL	**9**	**5**	**3**	**0**	**2**	**1**	**2**	**2**	**0**	**1**	**1**	**3**	**0**	**1**	**1**	**0**	
Northwest Corner	Liquor stores not selling by x time				1													
	Sidewalks are in disrepair	1																
	Cleaning of shoulder of roads would encourage use by bicyclists													1				cleaning of road shoulder
	More regular enforcement of posted speed limits would help in the Kirtland area				1													Kirtland area speed enforcement
	Vehicle/pedestrian barriers along the US 491 (3 miles route) in Shiprock, NM	1																
	Pedestrian Hybrid Beacons	1																Pedestrian Hybrid Beacons
	School Zone, vehicle/pedestrian west of US 491/US 64 intersection in Shiprock					1												School zone - US 491
	In Grants - increasing safe crossings, crosswalks along Santa Fe ave. Commercial corridor. Pedestrians don't use legal crossings because they aren't convenient. You have to walk a mile	1																Grants mainstreet - safe crossings
	Raised pedestrian crossings or pedestrian bridges	1					1											Pedestrian bridges
	more pedestrian reguge zones on larger roads	1					1											
	Road diet on Rt 66 Gallup								1									Gallup road diet - Rt 66
	Include medians as part of road diet - maybe on 491	1							1									US 491 road diet and pedestrian improvements
	Intersection safety - Audio Safety improvements at crossings. Native Americans have a higher rate of glaucoma							1										Audio improvements at crossings
	Improve intersection timing to allow for varied mobility.							1										Intersection timing
	Bike paths have protected crossings		1															
	Smart road design										1							
	Buffer for cyclists, ridges and reflectors for warning drivers		1				1											
	Center street pedestrian islands would help on wide roads in busy intersections (mid-crossing) in Gallup, downtown on old Rt 66	1					1											Gallup downtown pedestrian improvements - reguge islands
	Reduce Speeds					1												
	Improve pedestrian access	1																

	Comments	Pedesrian Infrastructure improvements	Bike Infrastructure Improvements	Education	Enforcement	Speed reduction	Separation/ Barriers between vehicles and VRUs	Universal design/ADA	Road diets	Planning	Road Design	Signage	Shade/weather protection	Maintenance	Street lights	Data	Policy	Additional notes
	Safe systems approach - looking at ways that we can mitigate and reduce injuries and fatalities associated with crashes, rethinking how we design our roads.										1							
	Road diets								1									
	4 way crossing at Burnham Jct of US 491/N5. Need signage on 491 approaching the intersection											1						Signage at Burnham Jct
	Public education and outreach			1														
	Health education			1														
	Signage											1						
	Seat belt usage																	
	Northwest Corner TOTAL	**9**	**2**	**2**	**2**	**2**	**4**	**2**	**3**	**0**	**2**	**2**	**0**	**1**	**0**	**0**	**0**	
	Las Cruces - There used to be better connectivity. It seems like now the bike lane or shoulder just disappears. Planners failing to recognize they are impeding safety of VRUs		1							1								Connectivity
	How does the discussion we are having today interact with Vision Zero? Has the NM DOT adopted Vision Zero? Has Dona Ana County adopted Vision Zero?									1								Alignment with local plans
	Reduce speed					1												
	Are their any statistics about how many collisions are caused by cars turning right on red?															1		
	I see the Chair for the County of Doña Ana might be on this call and City of Las Cruces staff. Does the county and city have a masterplan to prioritize pedestrian safety currently?									1								Planning coordination
	Does New Mexico law include that pedestrians in crosswalks have right a way? I'm originally from New York State and that is the law there. There is various signs in downtown area Protecting pedestrian right-of-way through intersections. When vehicles turn across pedestrian traffic when peds have the right of way, it undermines confidence in marked																1	Pedestrian-centered policy
	Crosswalks and signal effectiveness (including when right on red is permitted)	1																Signals
	I'd like to see consistent use of the term VRU, inclusive rather than simply pedestrians			1													1	Signal effectiveness
	Dona Ana County just received $400K, grant money for SS4A, to create a Safety Action Plan, which includes all these items, but in the unincorporated areas.									1								
	There isn't a button to push to cross the street near the shelter. Hopefully this isn't a conversation blaming VRUs. Drivers are not very mindful of pedestrians																	Need for signalized crossing
	Earlier today George talked about an approach that allows pedestrians a few seconds to enter the crosswalk before vehicles are given a green light	1																Signal timing - leading pedestrian interval
	Bike lanes on Amador!		1															Bikes lanes on Amador
	Top priorities: Protected bike lanes.		1				1											
	In road/hwy planning, would be good to reevaluate how to improve infrastructure, and not just an add-on, but true inclusive design.	1						1										Universal Design
	Adding (and regularly maintaining) striping/signage for crosswalks/bicycle lanes	1	1											1				
	Look to solutions such as crosswalks	1																
	Bike lanes are not maintained. Bike lanes often have broken pavement or other road hazards.													1				
	Bus is another issue. Some people mention going from bus to medical appointment and being forced to cross against traffic as the crosswalk is not near enough	1																Crossings near bus stops
	Education of both VRUs and vehicle drivers.			1														
	Education for VRUs and vehicle drivers. Have observed pedestrians walk into street, not looking both ways.			1														
	EDUCATION and raise awareness			1														
	Specific education for local governing bodies. For example the Doña Ana County Commissioners could benefit from a toolkit to understand these items. They have recently had problems			1														Transportation safety tool kit for local leaders
	Co-location of Improvements and Affordable Housing, Improvements to Amador/Lohman especially near MVCoH, El Paseo Rehab, TIA is pending for that area hopefully we can identify improvements.	1								1								Coordinate improvements with affordable housing development
	Better engineering and lighting.										1				1			
	RE: TIA by Community of Hope: Will lowering the speed limit be investigated. Currently 40mph (isn't flashing light for 30mph just advisory?) which is in the 80% to 90% fatality rate.					1												
	Stronger enforcement (speed) on Elks Drive from the Elks Lodge heading north for approx. 1/2 mile. It's become a drag strip. A lot of the vehicles are running well over 90 to 100 mph				1	1												
	Enforcement.				1													
	I understand that there are a few areas that are REQUIRING investigation if a VRU is involved. In some places it's specificly if someone is killed or seriously injured, sometimes anytime first responders were called, sometimes ANY VRU involvement. Lack of investigation is problematic				1													
	Enforcement				1													
	Consistent investigation would give much-needed info for addressing various issues				1													
	Enforcement - lack of citations is often referred to by folks who talk about VRUs				1													
	Who identifies the 15% Pedestrian Error in the crash reports? Probably officer? This could tend to prejudice the reporting based on officers opinion.				1													Police bias against pedestrians, assume pedestrian error or fault
DOÑA ANA	**DOÑA ANA TOTAL**	**7**	**4**	**5**	**7**	**3**	**1**	**1**	**0**	**5**	**1**	**0**	**0**	**2**	**1**	**1**	**2**	
	GRAND TOTAL	**25**	**11**	**10**	**9**	**7**	**6**	**5**	**5**	**5**	**4**	**3**	**3**	**3**	**2**	**2**	**2**	

What do you think are the main barriers to implementing strategies, policies, and projects that improve safety outcomes for vulnerable road users?

	Comments	NMDOT Policies/ roadway design	Car dependency/ car centrism	Ineffective leadership/ collaboration	lack of public interest/public attitude	Road design	Data tracking	Staffing/ capacity	Funding	Priorities	Education	Infrastructure	Additional Comments
ALBUQUERQUE	Speed of roadways on DOT roadways and resistance to lowering speed limits	1											
	Car dependency and vintage street design. Stroads		1			1							
	We need data on walking a cycling crashes and falls that not involve motor vehicles						1						
	Lack of support for strategies that implement tactical urbanism or creative, grassroots, and community based approaches that can show big impact from affordable and quick build interventions	1											
	Alignment behind shared responsibility among multiple stakeholders (enforcement, engineering, planning, etc.)			1									
	Resistance to road diets/reducing LOS for vehicles - safety should be a priority over LOS	1											Safety should be prioritized over LOS
	Language and interpretation barriers, especially representing NA										1		
	Fear of trying something different (new/different) because of lawsuits	1											fear of lawsuits preventing change
	Aging Infrastructure											1	
	Limited pots of funding - get diverted to squeeky wheels from privileged places								1				
	Politics, not prioritizing safe streets for all users		1										
	Lack of staff to implement projects							1					
	ABQ TOTAL	**4**	**2**	**1**	**0**	**1**	**1**	**1**	**1**	**0**	**1**	**1**	
Northwest Corner	Often not enough room for sidewalks												Mentioned during conversation about rail lines
	Roadway design standards are strict, not felxible	1											
	Restrictions that DOT has on how the highway can be used. It can be difficult to get approval reduce flow on highways which are also mainstreet	1											
	Roadway design - numbers of lanes, difficult to change design for pedestrian safety					1							
	NM 118 West side Gallup by Truck Stops, no sidewalks, very poor lighting, pedestrians walking on roadways and crossing roadway after dark												
	Limited or lack of partnership with tribes			1									
	Funding								1				
	local capacity even when there is funding							1					
	limited funding often a constrant on implementing strategies to improve vulnerable road users so executing plans that accommodate limited funding to prioritize p							1					
	Disabilities and low-income populations are frequently considered lower priority									1			
	Priorities and competing needs									1			
	lack of leadership support. Tribal leadership having other priorities			1									
	Lack of communication, particularly with Tribal land policies. Timing is delayed			1									
	We perceive a lack of communication/coordination between the NMDOT planning bureau and the local district with regard to what is prioritized			1									
	Lack of public participation for safety				1								
	It appears that people just don't or are not concerned about others, or signs or laws				1								
	Northwest Corner TOTAL	**2**	**0**	**4**	**2**	**1**	**0**	**2**	**1**	**2**	**0**	**0**	

	Comments	NMDOT Policies/ roadway design	Car dependency/ car centrism	Ineffective leadership/ collaboration	lack of public interest/public attitude	Road design	Data tracking	Staffing/ capacity	Funding	Priorities	Education	Infrastructure	Additional Comments
DOÑA ANA	But will the Chair and Commission support or will they fight against it and allow developers to do whatever they want at the risk of road/street safety? Did the Commission just not vote to not have to install lights and sidewalks in a community recently? It is unclear what their priority is.												
	understand roads and safety design and care more about industrial parks than communities and also want to pave dead end roads.												
	What I've seen of the UCR crash reasons was a large percentage of "Unknown". This seems like an area that needs to be identified (as just mentioned by Rosa).						1						
	At the risk of offending a segment of the participants, staff resistance to implementing safety improvements or new programs. If it's not in the MUTCD, then it can't be done. This doesn't address where citizens have pointed out issues, but they can't be addressed until warrants are met, but warrants can only be met after a fatality.	1											
	Funding- Many intersections and corridors would cost significant $												
	Funding. People's behavior. Agreements among all stakeholders.												
	Funding. Lack of education, lack of adequate enforcement, inadequate or outdated geometry of our roads and intersections, or lack of multi -use facilities.					1			1		1	1	
	Lived experiences. Car culture is so prominent in our communities, that there is a lot of disregard for vulnerable road users. How can we educate and inform		1										
	Attitudes - from citizens, engineers, drivers - convenience for vehicle driver focused and "it's always been this way".				1								
	Overcoming resistance to change — roundabouts a less expensive than signaled intersections and result in fewer accidents but have not been widely implemented as an ap		1		1								
	We need a walk-bike centric framework. The VRU framework is still structured on cars! (Vulnerable in relation to cars, right?). It is much safer for all to walk and bike!		1										
	We need data on falls and crashes that don't involve cars, we need to count walking and cycling so we understand exposure rates, not just per capita rates,						1						
	We need to design transportation systems for walking and cycling. We need to take these modes as seriously, even more seriously (more primary) than cars.		1			1							
	There seems to be a clear bias that roads are primarily for ICE vehicles and that VRUs are rarely considered as equal road users		1										
	DOÑA ANA TOTAL	**1**	**5**	**0**	**2**	**2**	**2**	**0**	**1**	**0**	**1**	**1**	
	GRAND TOTAL	**7**	**7**	**5**	**4**	**4**	**3**	**3**	**3**	**2**	**2**	**2**	

What are the main contributing factors related to VRU fatalities and serious injuries?

	Comments	Driver inattention/Distracted Driving	Road Design	VRU Infrastructure	Car centrism/ Disregard for pedestrian safety	Speed	Large vehicles	Time of Day	Impairment/ Intoxication	Equity	Pedestrian behavior	Weather	Planning	Lack of knowledge about road rules	Additional notes
ALBUQUERQUE	Infrastructure quality and the relationship to equity. Lack of infrastructure leading to unsafe crossings			1						1					Inequitable infrastructure
	Larger vehicles - oversized SUVs and personal trucks						1								
	High Native VRU rural population coming into ABQ for events and don't know rules													1	Inequitable infrastructure
	Infrastructure and equity - race, gender, income and ability			1						1					
	Speed related to wide roads		1			1									
	Design for speed		1			1									
	Larger vehicles						1								
	Distracted Driving	1													
	lack of critical pedestrian/cyclist infrastructure			1											Lack of infrastructure
	ABQ Rapid Transit (ART) public investment looks different in certain areas - inequitable infrastructure investment			1						1					Inequitable infrastructure
	I also want to mention that in some parts of Central it's so wide (six or more lanes) that it's also a big factor		1												
	Day and time of crashes as well as dates of major events							1							
	A lack of alternatives to driving home from the bars contributes to DWI								1						Lack of transportation options
	There are a lot of impaired pedestrians along the Central Corridor, either with apparent mental health issues or visibly using drugs								1						
	In other data we have seen alcohol/drug use seem to play a big factor too especially along central								1						
	people dismiss data related to alcohol/drug use														Concern that if drugs/alcohol are a contributing factor, then it won't be considered an issue of road design and other solutions won't be explored
	ABQ TOTAL	**1**	**3**	**4**	**0**	**2**	**2**	**1**	**3**	**3**	**0**	**0**	**0**	**1**	
Northwest Corner	In Gallup - pedestrian intoxication								1						
	Public intoxication paired w/homelessness								1						
	VRUs neet to be more aware of traffic, stepping out before vehicles pass										1				
	ignoring traffic signals	1													
	fatigue, particularly on long drives	1													
	visibility of clothing										1				
	lack of separation between drivers & VRUs		1												lack of separation between VRUs and cars
	poor design		1												
	poor lighting design		1												
	Time of day							1							
	Speed & time of day					1		1							
	excessive speed					1									
	heavier larger vehicles						1								
	Distracted drivers	1													

	Comments	Driver inattention/Distracted Driving	Road Design	VRU Infrastructure	Car centrism/ Disregard for pedestrian safety	Speed	Large vehicles	Time of Day	Impairment/ Intoxication	Equity	Pedestrian behavior	Weather	Planning	Lack of knowledge about road rules	Additional notes
	Northwest Corner TOTAL	**3**	**3**	**0**	**0**	**2**	**1**	**2**	**2**	**0**	**2**	**0**	**0**	**0**	
DOÑA ANA	Distracted drivers	1													
	Distracted driving	1													
	Speed, driver inattention	1				1									
	Cell Phone Use	1													
	Speed, Lack of complete streets, aging or incomplete infrastructure.		1	1		1									
	I think it's also important to note that while everyone is distracted these days, it's more dangerous to be distracted when you're behind the wheel of a large vehicle. We tend to equate the damage that a car causes with bike users, but it's not the same.	1													
	Lots of lack of respect on all sides!				1										
	Not great "share the road" adherence--				1										
	SHARED RESPONSIBILITY for one another's safety				1										
	Time of day is a factor — eyes cannot see as well at dawn and dusk because of the varying light levels, sky versus roadways							1							
	Road infrastructure encourages only vehicle use thus drivers feel only vehicles should be on roads. Distracted drivers.	1			1										
	Lack of facilities that are designed for VRUs versus cars/trucks. Develop a plan where certain roadways are specifically designed for VRUs and are separated from cars/trucks				1										
	Land use planning definitely a structural factor. Distances based on car convenience, and 'big streets' make for alienating landscapes, and destinations being perceived as even further away. Need more village scale development, with destinations closer together, and smaller streets and pathways connecting				1								1		
	changes in vehicle sizing - SUVs and pickup trucks have much worse sightlines than sedans						1								
	automobile manufacturers have also engaged in a "horsepower war" to market the most powerful vehicles						1								
	Pedestrians crossing mid block because intersections are too far away. Crosswalks do not give enough time to cross at busy intersections.		1	1											Infrequent crossings encourage unsafe behavior
	Time of day is a factor — eyes cannot see as well at dawn and dusk because of the varying light levels, sky versus roadways							1							
	Lack of facilities that are designed for VRUs versus cars/trucks. Develop a plan where certain roadways are specifically designed for VRUs and are separated from cars/trucks			1											lack of pedestrain infrastructure
	Weather											1			
	Heat is impacting outcomes - pedestrian inattention											1			
	Perceived right to the road, again, attitudes.				1										
	DOÑA ANA TOTAL	**6**	**2**	**3**	**7**	**2**	**2**	**2**	**0**	**0**	**0**	**2**	**1**	**0**	
	GRAND TOTAL	**10**	**8**	**7**	**7**	**6**	**5**	**5**	**5**	**3**	**2**	**2**	**1**	**1**	

Do you feel that your group is adequately represented in statewide transportation planning?

	Comments	More tribal engagement needed	More engagement with impacted communities	Better incorporation of outreach into policy	More engagement with disabled communities	Additional Comments
ALBUQUERQUE	Want more engagement with tribal students	1				
	Yes, great coordination. Supporting complimentary planning efforts and integrating/referencing plans - MRCOG					
	Presbyterian Health Source (through REACH) - we can assist in Hispanic, Native American and low income population areas for bike, walk, and other education	1				
	A multi-modal road user - conversant in all modes and how they work together					
	No. Need more engagement with most impacted communities		1			
	I do think we need to do more to engage Native and tribal communities and organization especially connected to Central Ave	1				
	ABQ TOTAL	**3**	**1**	**0**	**0**	
DOÑA ANA	Our organization, Vulnerable Road Users NM, is very new and not on too many people's radar. We are glad to be included/represented today and will be proactive on involving ourselves in these "big picture" discussions					
	When the system focus in safety, then we are all in the same interest group together.					
	VRUNM is willing to help with any statewide planning.					
	We are committed to make sure , not just safety now, but also the future developments have multi-use facilities, sufficient lighting and sidewalks, and wider road with shoulders. Not just worried about the bottom line. Let's take care of our citizens.					
	Velo Cruces is an advocacy organization in Las Cruces and is glad to be involved in DOTs efforts to improve road safety for VRUs					

	Comments	More tribal engagement needed	More engagement with impacted communities	Better incorporation of outreach into policy	More engagement with disabled communities	Additional Comments
	We're not always involved/invited, but thanks for bringing us in!		1			
	NMDOT has been doing good outreach to the different areas, but then getting results in state policies seems to be a problem. Example, the NMDOT Ped Safety Plan recommends Complete Streets, but seems that plan is now just on the shelf.			1		
	The bicycle related state laws need updating, but it's currently a very ad hoc process. The 5ft passing law has not been readdressed, for example.					
	City Staff is represented but additional representation from Non-profits or Housing providers/ developers may be beneficial.					Involve development/housing community
	As a transit agency here in Las Cruces, we participate in New Mexico Transit Association (NMTA), the Metropolitan Planning Organization (MPO) and NMDOT that coordinate with other agencies in the state. There could be more support for public transportation at the state level.					More support for public transit
	Yes - I appreciate the opportunities that the school district has to be involved, and also the dedication of funding by NMDOT to programs such as Safe Routes to School.					
	This is a great forum, and we are hoping to have you all help DAC, develop a workable action Plan. Thank you.					
	DOÑA ANA TOTAL	**0**	**1**	**1**	**0**	
	GRAND TOTAL	**3**	**2**	**1**	**0**	

NMDOT VRU Safety Assessment
Appendix F: Crash Profiles Memo

New Mexico Department of Transportation

NMDOT Vulnerable Road User Safety Assessment
November 6, 2023

NMDOT
NEW MEXICO DEPARTMENT OF TRANSPORTATION

About Crash Profiles

Crash profiles identify groups of crashes with similar characteristics with the goal of identifying a few trends that account for the majority of injury crashes. Processes informed by the Guide for Quantitative Approaches to Systemic Safety Analysis were applied to the historical crash data from 2012-2022 supplied by the NMDOT. This is the same data that produced the crash trends analysis and High Injury Network analysis. All crash profiles were developed by analyzing specifically KA crashes.

Crash profiles are not intended to account for all crashes or contributing factors associated with the crash, nor are they mutually exclusive. Some crashes could belong to multiple crash profiles; for example, a crash could belong in both profile 2, “pedestrian crashes, in the dark, on state roads” and profile 3, “pedestrian crashes, at unsignalized intersections, in high density areas.” The project team has made an effort to create profiles that explore the relationship of different variables to crash numbers, so some overlap of profiles is expected.

Each crash profile was defined by one or more mode crash factors and/or contextual factors. Special attention was taken to develop crash profiles for both state-owned and local roads – and for both pedestrian and bicyclist modes. A total of 13 crash profiles were developed.

We recommend reviewing the crashes categorized by crash profile to understand geographic trends in the online web map. Head to https://www.dot.nm.gov/planning-research-multimodal-and-safety/planning-division/multimodal-planning-and-programs-bureau/highway-safety-improvement-program/, then choose the “High Injury Network Web Map.”

Table 1

Crash Profiles

ID	Mode	Crash Factor	Contextual Factor(s)	Number of Crashes	Share of all KAs	Share of KAs for this mode
1	Pedestrian	Alcohol Involved	On local-owned road	361	17%	20%
2	Pedestrian	Dark, with no lighting Mid-block crash	On state-owned road	257	12%	14%
3	Pedestrian	At unsignalized intersection	High population density (>6 people/acre)	252	12%	14%
4	Bicycle	-	On or intersecting with major collector or arterial road. No bike facility present.	259	12%	78%

ID	Mode	Crash Factor	Contextual Factor(s)	Number of Crashes	Share of all KAs	Share of KAs for this mode
5	Pedestrian	-	On or around interstate Low population density (<3 people/acre)	120	6%	7%
6	Pedestrian/Bicycle	Left-turning vehicle Near traffic signal	-	91	4%	4%
7	Bicycle	At intersection	On local-owned road	228	11%	69%
8	Pedestrian	-	Near transit stop. On local-owned road	171	8%	10%
9	Pedestrian	Pedestrian alcohol involvement	Dark outside, no roadway lighting. On or intersecting with roadway with speed limit over 45 MPH.	82	4%	5%
10	Pedestrian	-	On or intersecting with roadway with 6+ lanes Hit and run	129	6%	7%
11	Pedestrian	Right-turning vehicle	Daylight	54	3%	3%
12	Bicycle	At intersection	Low population density	80	4%	24%
13	Pedestrian	-	On Tribal land. On or intersecting with an arterial. State-owned road.	55	3%	3%

NMDOT VRU Safety Assessment Appendix G: Summary of Document and Plan Review

New Mexico Department of Transportation

NMDOT Vulnerable Road User Assessment
October 23, 2023

NMDOT
NEW MEXICO DEPARTMENT OF TRANSPORTATION

Summary

The review of documents and plans specific to New Mexico Department of Transportation (NMDOT) involves a thorough examination of relevant state, local, and MPO documents. This process is essential for ensuring that the goals, priorities, and projects are consistent across various safety plans and programs. For NMDOT, a series of safety-related programs have been introduced in recent years, each addressing different areas of concern. The primary areas of focus include the safety of bicyclists and pedestrians, as well as equity concerns.

The NMDOT Pedestrian Safety Action Plan and Pedestrian and Bicyclist Safety Program Plan are notable examples, aiming to improve the safety of and facilities for pedestrians and bicyclists. These plans rely on data-driven methods to understand the root causes of crashes and aim to raise public awareness about sharing the road through outreach efforts. Other significant plans published between 2015 and 2022 that address the safety of bicyclists and pedestrians include the NMDOT Prioritized Statewide Bike Plan, Mid-Region MPO Regional Transportation Safety Action Plan, various Local Road Safety Plans, Mesilla Valley MPO Safety Report, Gallup Area Transportation Safety Plan, and plans produced by the Navajo Nation. These plans are dedicated to enhancing numerous safety-related aspects and policies, including:

1. The development of a comprehensive system of biking infrastructure.
2. Creating a data-driven framework that incorporates the Safe System Approach.
3. The prioritization of safety improvements on local streets and roads.
4. Launching safety campaigns tailored for law enforcement agencies, engineers, community leaders, and pedestrian advocates, among others.

Figure 1 provides a visual representation of both the discussion level and frequency of each of the three primary areas of concern (pedestrians, bicyclists, and equity) in the 17 documents and plans that were reviewed by the project team. If a primary area of concern was not discussed in a document or plan, then a tally would be assigned to the light blue bar for “Not Discussed” – indicating the primary area of concern was not mentioned in the document/plan. If a primary area of concern was the main topic of discussion of a document or plan (Example: the NMDOT Pedestrian Safety Action Plan focusing primarily on pedestrian related discussions), then a tally would be assigned to the green bar since it was the focus of discussion.

As seen in the figure, the safety of vulnerable road users, particularly bicyclists and pedestrians, is a top priority amongst many of the documents and plans that were reviewed. This is illustrated by showing that bicyclists were the focus of discussion (left green bar) nine times in a document/plan, as pedestrians were discussed the focus of discussion (middle green bar) eleven times in the 17 documents/plans that were reviewed.

Although equity has not been a consistent area of concern historically, it is noteworthy that equity has become a prominent topic for discussion in the documents/plans published after 2018 and has gained significant attention in recent years.

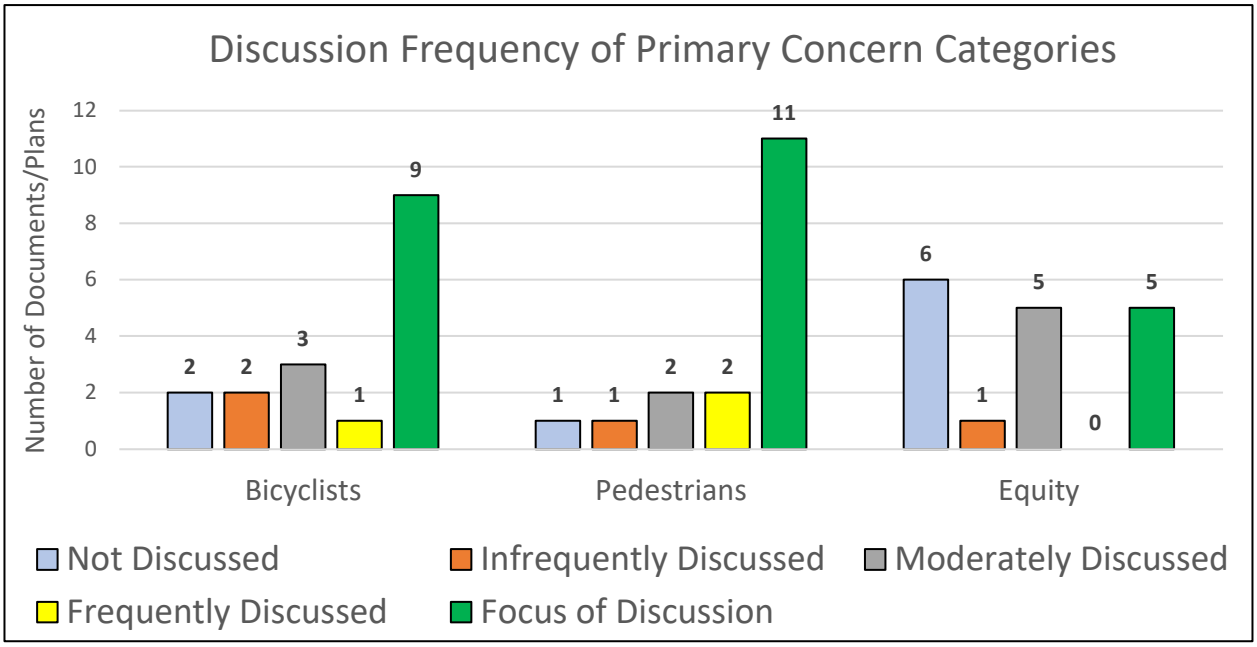


Figure 1

Secondary areas of concern focus on ADA compliance, environmental justice, and the coordination of diverse strategic priorities and plans. While prioritizing projects and strategies has consistently been given significant attention, areas like ADA compliance and environmental justice have not been as prominently featured in many safety-related plans. However, plans such as the NMDOT Strategic Highway Safety Plan, NMDOT Highway Safety Plan, NMDOT Prioritized Statewide Bike Plan, various Metropolitan Transportation Plans, and various Local Road Safety Plans have addressed these secondary concerns comprehensively. These plans have targeted various aspects of safety including:

1. Reducing fatal and incapacitating crashes.
2. Development and funding of statewide and community-level strategies with the most significant impact on reducing crashes and fatalities.
3. The establishment of a data-driven framework that integrates the Safe System Approach.

Although ADA compliance and environmental justice have historically received limited attention, various Metropolitan Transportation Plans and the NMDOT ADA Transition Plan have played a crucial role in elevating these concerns in recent years. The core objectives of these plans involve equipping NMDOT staff and the residents of New Mexico with policies, procedures, and practices that meet the requirements of Section 504 of the Rehabilitation Act of 1973 and Title II of the Americans with Disabilities Act of 1990. They also promote alternative fuels and alternative modes of transportation for significantly reducing the environmental impact of built environment. Figure 2 illustrates these various secondary concern categories and their frequency of being addressed in different plans and programs.

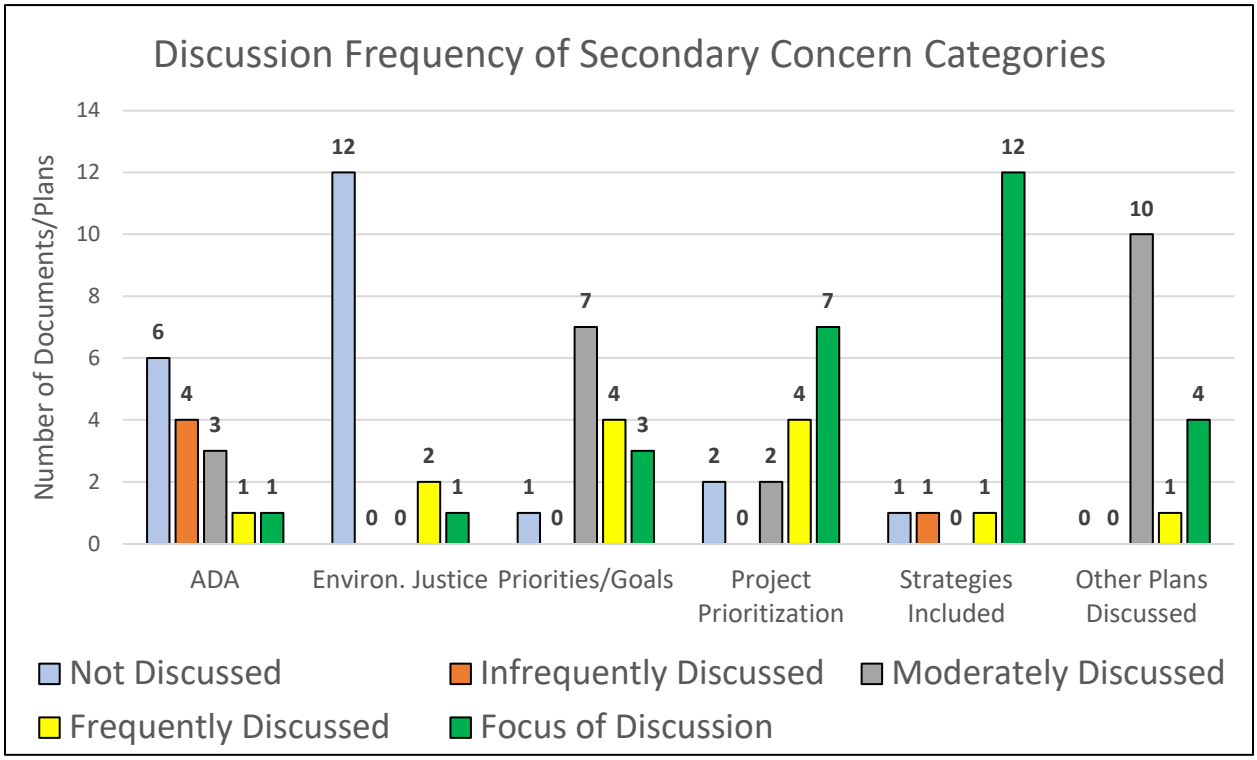


Figure 2

A complete list of the 17 documents and plans that were reviewed is included below.

1. NMDOT's 2021 Strategic Highway Safety Plan
2. NMDOT's Statewide Transportation Plan (Long Range Plan/NM 2045 Plan)
3. NMDOT's Highway Safety Plan
4. NMDOT's Pedestrian Safety Action Plan
5. NMDOT's Pedestrian and Bicyclist Safety Program Plan
6. NMDOT's Prioritized Statewide Bike Plan
7. NMDOT's Location Studies Procedures
8. NMDOT's Design Manual
9. Mid-Region MPO's Metropolitan Transportation Plan
10. Mid-Region MPO's Regional Transportation Safety Action Plan
11. Farmington MPO's Local Road Safety Plan
12. Santa Fe MPO's Local Road Safety Plan
13. Mesilla Valley MPO's Safety Report (2013)
14. NMDOT's Gallup Area Transportation Safety Plan

15. Navajo Nation's Corridor Safety Analysis and Recommendations (FHWA Local Road Technical Assistance)
16. NMDOT's ADA Transition Plan
17. NMDOT and University of New Mexico's Center for Injury Prevention, Research and Education "Look For Me" Program

NMDOT VRU Safety Assessment Appendix H: FHWA Guidance Compliance Checklist

New Mexico Department of Transportation

NMDOT Vulnerable Road User Assessment
October 23, 2023

NMDOT
NEW MEXICO DEPARTMENT OF TRANSPORTATION

Summary

This appendix section includes details regarding where particular FHWA requirement are located in this VRUSA report. This is included to ensure all items are met, locatable, and provide the necessary information to FHWA to assist in the approval process.

The columns for "Category" and "Requirement" were obtained from FHWA's memorandum dated October 21, 2022 with a subject of "ACTION: Vulnerable Road User Safety Assessment Guidance (Due Date: November 15, 2023)". The column for "Section/Page #" gives the reader an idea of where the particular requirement is discussed within the VRUSA report.

Vulnerable Road User Safety Assessment Template		
Category	**Requirement**	**Section Page #**
Overview of Vulnerable Road User Safety Performance	Present historical trends for vulnerable road user fatalities and serious injuries over the past five years (or longer).	Section 2.2 Page 2-11
	Disaggregate trends by user type	Section 2.2 Page 2-11 Figure 2-3
	Compare vulnerable road user safety performance to overall safety performance	Section 2.2 Page 2-11
	Describe progress towards meeting or making significant progress toward meeting safety performance targets for nonmotorized users.	Section 1.3 Page 2-5
Summary of Quantitative Analysis	Describe data, methodology and time-period of analysis used to identify high-risk areas to vulnerable road users	Section 2.1.1 Page 2-6 & Appendix A
	Describe how demographics were considered as part of the quantitative analysis	Section 2.1.4 Page 2-8
	Provide a list of the high-risk areas to vulnerable road users identified based on the data and demographics information	Section 3 Page 3-23
Summary of Consultation	Describe the process used to consult with required entities and other stakeholders about high-risk areas	Section 4 Page 4-30
	Provide a summary of the outcomes (i.e., safety concerns and potential solutions) of the consultation for each high-risk area	Section 4.1.1 Page 4-30
Program of Projects or Strategies	Identify the program of projects and strategies to reduce the safety risks for vulnerable road users in the high-risk areas. States may consider developing an online interactive map identifying high-risk areas and proposed projects or strategies to address them.	Section 5 Page 5-35

Vulnerable Road User Safety Assessment Template		
Category	**Requirement**	**Section Page #**
Safe System Approach	Describe how the Safe System Approach was considered as part of the Vulnerable Road User Safety Assessment. Note: This could be a separate section of the Assessment or integrated throughout as appropriate.	Section 5.3 Page 5-62